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DoD Type I Data Package

Prepared for:

Tidewater, Inc.
3761 Attucks Drive
Powell OH 43065

Project: Great Kills Park Phase I RI OU2
Groundwater and Water Samples
Collected on 10/29/18-10/30/18

SDG# TID14

GROUP	SAMPLE NUMBERS
2004155	9876331-9876342

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: **12/20/2018**

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

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b. Quality Control and Calibration Summary Forms 2863
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e. Raw QC Data 3342
f. Extraction Logs 3477
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b. Sample Data 3486
c. Quality Control and Calibration Summary Forms 3498
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ii. ICP-MS Data 3701
iii. Mercury Data 3961
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Sample Reference List for SDG Number TID14 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
9876331	OU2TB102918-002	10/29/2018 13:55	10/31/2018 10:05
9876332	OU2-1-MW010	10/29/2018 15:40	10/31/2018 10:05
9876333	OU2-1-MW010-F	10/29/2018 15:40	10/31/2018 10:05
9876334	OU2-1-MW008I	10/30/2018 10:40	10/31/2018 10:05
9876335	OU2-1-MW008I MS	10/30/2018 10:40	10/31/2018 10:05
9876336	OU2-1-MW008I MSD	10/30/2018 10:40	10/31/2018 10:05
9876337	OU2-1-MW008I DUP	10/30/2018 10:40	10/31/2018 10:05
9876338	OU2-1-MW008I-F	10/30/2018 10:40	10/31/2018 10:05
9876339	OU2-1-MW008I-F MS	10/30/2018 10:40	10/31/2018 10:05
9876340	OU2-1-MW008I-F MSD	10/30/2018 10:40	10/31/2018 10:05
9876341	OU2-1-MW008I-F DUP	10/30/2018 10:40	10/31/2018 10:05
9876342	OU2EB103018-001	10/30/2018 15:10	10/31/2018 10:05

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Sample pH Log

SDG: TID14

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
9876331	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:23AM	9052
9876332	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:35:59PM	12665
9876332	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052
9876332	043A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:59:18PM	1201
9876332	043B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:55:13PM	1201
9876332	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:22PM	1201
9876332	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:16PM	1201
9876332	153C		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:36PM	1201
9876332	153D		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:55PM	1201
9876332	153E		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:48PM	1201
9876332	243A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:03:55PM	1201
9876332	243B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:03:41PM	1201
9876333	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:34:14PM	12665
9876334	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:19:39PM	12665
9876334	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052
9876334	043A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:56:28PM	1201
9876334	043B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:53:55PM	1201
9876334	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:29PM	1201
9876334	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:48:42PM	1201
9876334	153C		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:47:49PM	1201
9876334	153D		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:47:43PM	1201
9876334	153E		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:45:26PM	1201
9876334	243A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:00:06PM	1201
9876334	243B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:04:04PM	1201
9876335	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:32:13PM	12665
9876335	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052
9876335	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052
9876335	043A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:54:46PM	1201
9876335	043B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:00:58PM	1201
9876335	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:45:20PM	1201
9876335	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:45:14PM	1201
9876335	153C		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:47:35PM	1201
9876335	153D		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:44:34PM	1201
9876335	153E		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:44:26PM	1201
9876335	243A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:00:52PM	1201
9876335	243B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:59:47PM	1201
9876336	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:22:25PM	12665
9876336	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052

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
9876336	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052
9876336	043A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:56:15PM	1201
9876336	043B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:56:21PM	1201
9876336	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:44:04PM	1201
9876336	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:44:18PM	1201
9876336	153C		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:47:29PM	1201
9876336	153D		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:45:07PM	1201
9876336	153E		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:47:22PM	1201
9876336	243A	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:59:56PM	1201
9876336	243B	7	7-9	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 9:03:48PM	1201
9876338	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:15:22PM	12665
9876339	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:24:41PM	12665
9876340	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:26:26PM	12665
9876342	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 7:28:18PM	12665
9876342	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	11/6/2018 11:12:24AM	9052
9876342	043A	6	7-9	UP	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:43:34PM	1201
9876342	043B	6	7-9	UP	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:43:26PM	1201
9876342	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:44:13PM	1201
9876342	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:44:04PM	1201
9876342	153C		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:47:54PM	1201
9876342	153D		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:43:57PM	1201
9876342	153E		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/31/2018 8:44:59PM	1201
9876342	243A	6	7-9	UP	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:42:49PM	1201
9876342	243B	6	7-9	UP	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	10/31/2018 8:42:34PM	1201

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

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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.

00259 Mercury

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

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

10635 ICP-WW, 3005A (tot rec) - U4

The sample is digested with nitric acid and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3005A, July 1992

10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

13495 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.

06023 Aluminum
06024 Antimony
06025 Arsenic
06026 Barium
06027 Beryllium
06028 Cadmium
06029 Calcium
06031 Chromium

06032 Cobalt
06033 Copper
06034 Iron
06035 Lead
06036 Magnesium
06037 Manganese
06039 Nickel
06040 Potassium
06041 Selenium
06042 Silver
06043 Sodium
06045 Thallium
13501 Uranium
06048 Vanadium
06049 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.

10591 PCBs in Water by 8082A

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, Rev.1, February 2007.

10589 OC Pesticides in Water

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.

00816 Water Sample Herbicide Extract

The water sample is hydrolyzed and solvent cleanup is performed. The sample is then acidified and solvent extracted. The chlorophenoxy acids, phenols and related compounds are converted to methyl esters using derivatization with diazomethane The extract is exchanged to hexane and florisil cleanup is performed to minimize interference.

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

11121 PCB Waters Update IV Ext
11120 Pesticide Waters Update IV Ext

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 3510C, Rev 3, December 1996

10407 Herb water 8151A Master

The sample is hydrolyzed, acidified, and solvent extracted. The chlorophenoxy acids, phenols and related target compounds are converted to the methyl esters. 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 8151A, December 1996.

11010 8270D BNA Extraction
10466 BNA Water Extraction SIM

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

14244 SIM SVOAs 8270D MINI

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.

14241 SVOAs 8270D MINI

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.

10914 Dioxins/Furans in Water - SepF

Aqueous samples are extracted with methylene chloride in a separatory funnel. The extract is concentrated for cleanup 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)

12936 Dioxins/Furans in Water - 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)

Analysis Reports / Field Chain of Custody

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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: December 03, 2018 11:45

Project: Great Kills Park Phase I RI OU2

Account #: 43062
Group Number: 2004155
SDG: TID14
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.



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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE
OU2TB102918-002 Water	10/29/2018 13:55	9876331
OU2-1-MW010 Grab Groundwater	10/29/2018 15:40	9876332
OU2-1-MW010-F Filtered Grab Groundwater	10/29/2018 15:40	9876333
OU2-1-MW008I Grab Groundwater	10/30/2018 10:40	9876334
OU2-1-MW008I MS Grab Groundwater	10/30/2018 10:40	9876335
OU2-1-MW008I MSD Grab Groundwater	10/30/2018 10:40	9876336
OU2-1-MW008I DUP Grab Groundwater	10/30/2018 10:40	9876337
OU2-1-MW008I-F Filtered Grab Groundwater	10/30/2018 10:40	9876338
OU2-1-MW008I-F MS Filtered Grab Groundwater	10/30/2018 10:40	9876339
OU2-1-MW008I-F MSD Filtered Grab Groundwater	10/30/2018 10:40	9876340
OU2-1-MW008I-F DUP Filtered Grab Groundwater	10/30/2018 10:40	9876341
OU2EB103018-001 Grab Water	10/30/2018 15:10	9876342

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

Project Name: Great Kills Park Phase I RI OU2
ELLE Group #: 2004155

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 25mL purge, GC/MS Volatiles

Sample #s: 9876331, 9876334

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 #s: 9876342

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 referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Acetone.

Sample #s: 9876332

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 referenced method allows a maximum of 20% of the analytes

in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: Chloromethane, Acetone.

Batch #: H183094AA (Sample number(s): 9876331-9876332, 9876334-9876336, 9876342 UNSPK: 9876334)

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-Trichloroethane

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9876334, 9876335, 9876336

The surrogate recoveries were outside of QC limits. The matrix spike sample was analyzed and surrogate recoveries were within QC limits but were low. Also, the matrix spike duplicate sample was analyzed and surrogate recoveries were outside of QC limits or within QC limits but low, all indicating a matrix effect.

Batch #: 18305WAM026 (Sample number(s): 9876332, 9876334-9876336, 9876342 UNSPK: 9876334)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: Phenol, 2,4-Dichlorophenol

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: 4-Methylphenol, 2-Chlorophenol, Phenol, 2,4-Dichlorophenol, 4-Chloro-3-methylphenol, 2-Methylphenol

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9876334, 9876336, MSD

SW-846 8270D SIM, GC/MS Semivolatiles

Sample #s: 9876332

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 the first trial.

Sample #s: 9876334, 9876342

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

Batch #: 18305WAN026 (Sample number(s): 9876332, 9876334-9876336, 9876342 UNSPK: 9876334)

The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: bis(2-Chloroethyl)ether

The recovery(ies) for the following analyte(s) in the MS and/or MSD exceeded the acceptance window indicating a positive bias: bis(2-Chloroethyl)ether

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: bis(2-Ethylhexyl)phthalate

The relative percent difference(s) for the following analyte(s) in the MS/MSD were outside acceptance windows: bis(2-Ethylhexyl)phthalate

SW-846 8081B, Pesticides

Sample #s: 9876334, 9876335, 9876336

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

Sample #s: 9876332, 9876342

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The client was contacted and the data reported.

Batch #: 183050009A (Sample number(s): 9876332, 9876334-9876336, 9876342 UNSPK: 9876334)

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: Alpha Chlordane, Heptachlor, Aldrin, Heptachlor Epoxide, Endosulfan I, Endosulfan Sulfate

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9876332, 9876342, LCS

SW-846 8082A, PCBs

Batch #: 183050010A (Sample number(s): 9876332, 9876334-9876336, 9876342 UNSPK: 9876334)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9876332

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

SW-846 8151A, Herbicides

Batch #: 183050043A (Sample number(s): 9876332, 9876334-9876336, 9876342 UNSPK: 9876334)

The recovery(ies) for the following analyte(s) in the MS and/or MSD were below the acceptance window: 2,4,5-TP, 2,4,5-T, Dicamba, MCPP, MCPA

SW-846 6020A, Metals

Batch #: 183061063901A (Sample number(s): 9876332, 9876334-9876337, 9876342 UNSPK: 9876334 BKG: 9876334)

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

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

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Antimony, Chromium, Nickel

Batch #: 183061063901B (Sample number(s): 9876332, 9876334-9876337, 9876342 UNSPK: 9876334 BKG: 9876334)

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

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

Batch #: 183061063901D (Sample number(s): 9876332, 9876334-9876337, 9876342 UNSPK: 9876334 BKG: 9876334)

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

SW-846 6020A, Metals Dissolved

Batch #: 183061063902A (Sample number(s): 9876333, 9876338-9876341 UNSPK: 9876338 BKG: 9876338)

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

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

The duplicate RPD for the following analyte(s) exceeded the acceptance window: Antimony, Zinc

Batch #: 183061063902B (Sample number(s): 9876333, 9876338-9876341 UNSPK: 9876338 BKG: 9876338)

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

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

Batch #: 183061063902D (Sample number(s): 9876333, 9876338-9876341 UNSPK: 9876338 BKG: 9876338)

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

Batch #: 183191063901A (Sample number(s): 9876333, 9876338-9876341 UNSPK: 9876338 BKG: 9876338)

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

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

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

Sample Description: **OU2TB102918-002 Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 13:55
SDG□: TID14-01TB

Tidewater, Inc.
ELLE Sample #: **WW 9876331**
ELLE Group #: **2004155**
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: **OU2TB102918-002 Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 13:55
SDG□: TID14-01TB

Tidewater, Inc.
ELLE Sample #: WW 9876331
ELLE Group #: 2004155
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 06:40	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 06:39	□oel G Chachapo□a	1

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

Sample Description: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

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	2.8 □	0.9	2.0	5.0	1
11996	Ben□ene	71-43-2	0.3 □	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	0.7 □	0.6	2.0	5.0	1
11996	Carbon Disulfide	75-15-0	0.08 □	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	0.6	0.09	0.2	0.5	1
11996	Chloromethane	74-87-3	0.07 □	0.06	0.2	0.5	1
11996	C□clohexane	110-82-7	0.2 □	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	0.06 □	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	0.1 □	0.05	0.2	0.5	1
11996	Meth□lene Chloride	75-09-2	0.3 □	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: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

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	0.2 □	0.07	0.2	0.5	1
11996	1□2□4-Trichloroben□ene	120-82-1	0.08 □	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	0.2 □	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.

The referenced method allows a maximum of 20□ of the anal□tes in the calibration to exceed the 20□ Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following anal□te(s) is estimated: Chloromethane□Acetone.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	Aniline	62-53-3	N.D.	3	9	11	1
14241	Ben□□l alcohol	100-51-6	N.D.	11	21	32	1
14241	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.5	1	2	1
14241	Carba□ole	86-74-8	N.D.	0.5	1	2	1
14241	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.5	1	2	1
14241	4-Chloroaniline	106-47-8	N.D.	4	9	11	1
14241	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.5	1	2	1
14241	2-Chloronaphthalene	91-58-7	N.D.	0.4	0.8	1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.5	1	2	1
14241	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.5	1	2	1
14241	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.5	1	2	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.						
14241	Diben□ofuran	132-64-9	N.D.	0.5	1	2	1
14241	1□2-Dichloroben□ene	95-50-1	N.D.	0.5	1	2	1
14241	1□3-Dichloroben□ene	541-73-1	N.D.	0.5	1	2	1
14241	1□4-Dichloroben□ene	106-46-7	N.D.	0.5	1	2	1
14241	3□3□-Dichloroben□idine	91-94-1	N.D.	3	9	11	1

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

Sample Description: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	2□4-Dichlorophenol	120-83-2	N.D.	0.5	1	2	1
14241	Dieth□lphthalate	84-66-2	N.D.	2	4	5	1
14241	2□4-Dimeth□lphenol	105-67-9	N.D.	3	9	11	1
14241	Dimeth□lphthalate	131-11-3	N.D.	2	4	5	1
14241	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	8	21	22	1
14241	2□4-Dinitrophenol	51-28-5	N.D.	15	29	32	1
14241	2□4-Dinitrotoluene	121-14-2	N.D.	1	2	5	1
14241	2□6-Dinitrotoluene	606-20-2	N.D.	0.5	1	2	1
14241	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	2	1
14241	Hexachloroc□clopentadiene	77-47-4	N.D.	5	11	12	1
14241	Hexachloroethane	67-72-1	N.D.	1	2	5	1
14241	Isophorone	78-59-1	N.D.	0.5	1	2	1
14241	2-Meth□lnaphthalene	91-57-6	N.D.	0.1	0.2	0.5	1
14241	2-Meth□lphenol	95-48-7	N.D.	0.5	1	2	1
14241	4-Meth□lphenol	106-44-5	N.D.	0.5	1	2	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.						
14241	2-Nitroaniline	88-74-4	N.D.	2	6	7	1
14241	3-Nitroaniline	99-09-2	N.D.	3	6	7	1
14241	4-Nitroaniline	100-01-6	N.D.	0.9	2	3	1
14241	Nitroben□ene	98-95-3	N.D.	0.5	1	2	1
14241	2-Nitrophenol	88-75-5	N.D.	3	9	11	1
14241	4-Nitrophenol	100-02-7	N.D.	11	21	32	1
14241	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.7	2	3	1
14241	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.7	2	3	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.						
14241	Di-n-oct□lphthalate	117-84-0	N.D.	5	11	12	1
14241	Pentachlorophenol	87-86-5	N.D.	1	4	5	1
14241	Phenol	108-95-2	N.D.	0.5	1	2	1
14241	P□ridine	110-86-1	N.D.	2	4	5	1
14241	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.5	1	2	1
14241	2□4□5-Trichlorophenol	95-95-4	N.D.	0.5	1	2	1
14241	2□4□6-Trichlorophenol	88-06-2	N.D.	0.5	1	2	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Acenaphthene	83-32-9	N.D.	0.01	0.03	0.05	1
14244	Acenaphth□lene	208-96-8	N.D.	0.01	0.03	0.05	1
14244	Anthracene	120-12-7	0.03 □	0.01	0.03	0.05	1
14244	Ben□o(a)anthracene	56-55-3	0.02 □	0.01	0.03	0.05	1
14244	Ben□o(a)p□rene	50-32-8	0.02 □	0.01	0.03	0.05	1

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

Sample Description: OU2-1-MW010 Grab Groundwater
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Ben□o(b)fluoranthene	205-99-2	0.03 □	0.01	0.03	0.05	1
14244	Ben□o(g□h□i)per□lene	191-24-2	0.02 □	0.01	0.03	0.05	1
14244	Ben□o(□)fluoranthene	207-08-9	0.01 □	0.01	0.03	0.05	1
14244	Di-n-but□lphthalate	84-74-2	0.2 □	0.05	0.1	1	1
14244	bis(2-Chloroeth□l)ether	111-44-4	0.04 □	0.02	0.06	0.07	1
14244	Chr□sene	218-01-9	0.03 □	0.01	0.03	0.05	1
14244	Diben□(a□h)anthracene	53-70-3	N.D.	0.02	0.06	0.07	1
14244	1□4-Dioxane	123-91-1	N.D.	0.1	0.2	0.3	1
14244	bis(2-Eth□lhex□l)phthalate	117-81-7	1	0.08	0.2	1	1
14244	Fluoranthene	206-44-0	0.05 □	0.01	0.03	0.05	1
14244	Fluorene	86-73-7	0.02 □	0.01	0.03	0.05	1
14244	Hexachloroben□ene	118-74-1	N.D.	0.01	0.03	0.05	1
14244	Indeno(1□2□3-cd)p□rene	193-39-5	0.02 □	0.01	0.03	0.05	1
14244	Naphthalene	91-20-3	0.09	0.03	0.06	0.07	1
14244	Phenanthrene	85-01-8	0.08	0.03	0.06	0.07	1
14244	P□rene	129-00-0	0.04 □	0.01	0.03	0.05	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 the first trial.

Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10407	2□4-D	94-75-7	N.D. D2	0.24	0.47	0.57	1
10407	Dalapon	75-99-0	N.D. D2	1.7	3.4	3.8	1
10407	2□4-DB	94-82-6	N.D. D1	0.59	1.2	1.4	1
10407	Dicamba	1918-00-9	N.D. D1	0.075	0.15	0.28	1
10407	Dinoseb	88-85-7	N.D. D2	0.17	0.38	0.47	1
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10407	2□4-DP (Dichloroprop)	120-36-5	N.D. D1	0.15	0.30	0.47	1
10407	MCPA	94-74-6	N.D. D1	47	94	190	1
10407	MCPP	93-65-2	N.D. D1	47	94	190	1
10407	2□4□5-T	93-76-5	N.D. D1	0.061	0.12	0.14	1
10407	2□4□5-TP	93-72-1	0.013 □D1	0.0094	0.028	0.047	1

PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1221	11104-28-2	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1232	11141-16-5	N.D. D1	0.16	0.32	0.40	1
10591	PCB-1242	53469-21-9	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1248	12672-29-6	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1254	11097-69-1	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1260	11096-82-5	N.D. D1	0.12	0.24	0.40	1

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

Sample Description: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1262	37324-23-5	N.D. D1	0.16	0.32	0.40	1
10591	PCB-1268	11100-14-4	N.D. D1	0.13	0.25	0.40	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10589	Aldrin	309-00-2	N.D. D1	0.0020	0.0070	0.010	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0030	0.0070	0.010	1
10589	Beta BHC	319-85-7	N.D. D2	0.0034	0.0070	0.010	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0020	0.0070	0.010	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0030	0.0070	0.010	1
10589	Chlordane	57-74-9	N.D. D2	0.16	0.32	0.50	1
10589	Gamma Chlordane	5103-74-2	N.D. D2	0.0070	0.020	0.020	1
10589	p□p-DDD	72-54-8	N.D. D1	0.0050	0.010	0.020	1
10589	p□p-DDE	72-55-9	N.D. D1	0.0050	0.010	0.020	1
10589	p□p-DDT	50-29-3	N.D. D1	0.0052	0.010	0.020	1
10589	Delta BHC	319-86-8	N.D. D1	0.0034	0.0070	0.010	1
10589	Dieldrin	60-57-1	N.D. D1	0.0053	0.010	0.020	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0043	0.0090	0.010	1
10589	Endosulfan II	33213-65-9	N.D. D1	0.015	0.030	0.030	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0058	0.012	0.020	1
10589	Endrin	72-20-8	N.D. D1	0.0081	0.020	0.020	1
10589	Endrin Aldeh□de	7421-93-4	N.D. D1	0.020	0.040	0.10	1
10589	Endrin Ketone	53494-70-5	N.D. D1	0.0050	0.010	0.020	1
10589	Heptachlor	76-44-8	N.D. D2	0.0020	0.0070	0.010	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0023	0.0070	0.010	1
10589	Methox□chlor	72-43-5	N.D. D2	0.030	0.070	0.10	1
10589	Toxaphene	8001-35-2	N.D. D1	0.30	0.60	1.0	1

The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□. The client was contacted and the data reported.

The recover□for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summar□. The client was contacted and the data reported.

Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.971	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.0035	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0042	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.13	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1

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

Sample Description: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals		**SW-846 6020A**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	0.00064 □	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	221	0.299	1.00	3.50	5
06031	Chromium	7440-47-3	0.0160	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.0050	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	0.0311 □	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	5.83	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0322	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	31.8	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	0.448	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0384	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	31.1	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	0.00024 □	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	53.0	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0014	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.0060	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.199	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

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

Sample Description: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		ng/l	ng/l	ng/l	ng/l	
12936	2378-TCDD	1746-01-6	N.D.	0.0008	0.002	0.005	1
12936	12378-PeCDD	40321-76-4	N.D.	0.003	0.01	0.024	1
12936	123478-HxCDD	39227-28-6	N.D.	0.002	0.01	0.024	1
12936	123678-HxCDD	57653-85-7	0.004 □	0.002	0.01	0.024	1
12936	123789-HxCDD	19408-74-3	N.D.	0.002	0.01	0.024	1
12936	1234678-HpCDD	35822-46-9	0.10	0.004	0.01	0.024	1
12936	OCDD	3268-87-9	0.96	0.035	0.070	0.11	1
12936	2378-TCDF	51207-31-9	N.D.	0.0008	0.002	0.005	1
12936	12378-PeCDF	57117-41-6	N.D.	0.003	0.01	0.024	1
12936	23478-PeCDF	57117-31-4	N.D.	0.002	0.01	0.024	1
12936	123478-HxCDF	70648-26-9	N.D.	0.002	0.01	0.024	1
12936	123678-HxCDF	57117-44-9	N.D.	0.002	0.01	0.024	1
12936	123789-HxCDF	72918-21-9	N.D.	0.002	0.01	0.024	1
12936	234678-HxCDF	60851-34-5	N.D.	0.002	0.01	0.024	1
12936	1234678-HpCDF	67562-39-4	0.046	0.002	0.01	0.024	1
12936	1234789-HpCDF	55673-89-7	N.D.	0.002	0.01	0.024	1
12936	OCDF	39001-02-0	0.032 □	0.006	0.019	0.048	1

Labeled Compounds	**%Rec**	**Windows**	**LOD (ng/l)**
13C12-2378-TCDD	69	40 - 135	0.002
13C12-12378-PeCDD	62	40 - 135	0.01
13C12-123478-HxCDD	70	40 - 135	0.01
13C12-123678-HxCDD	63	40 - 135	0.01
13C12-123789-HxCDD	58	40 - 135	0.01
13C12-1234678-HpCDD	60	40 - 135	0.01
13C12-OCDD	60	40 - 135	0.07
13C12-2378-TCDF	52	40 - 135	0.002
13C12-12378-PeCDF	56	40 - 135	0.01
13C12-23478-PeCDF	58	40 - 135	0.01
13C12-123478-HxCDF	57	40 - 135	0.01
13C12-123678-HxCDF	55	40 - 135	0.01
13C12-234678-HxCDF	49	40 - 135	0.01
13C12-123789-HxCDF	64	40 - 135	0.01
13C12-1234678-HpCDF	58	40 - 135	0.01
13C12-1234789-HpCDF	56	40 - 135	0.01
13C12-OCDF	52	40 - 135	0.02

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-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	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-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

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 02:22	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 02:21	□oel G Chachapo□a	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18305WAM026	11/08/2018 01:46	Ashle□R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18305WAN026	11/05/2018 21:46	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18305WAN026	11/02/2018 08:30	Logan M Brosemer	1
11010	8270D BNA Extraction	SW-846 3510C	1	18305WAM026	11/02/2018 08:30	Logan M Brosemer	1
10407	Herb water 8151A Master	SW-846 8151A	1	183050043A	11/07/2018 21:43	Richard A Shober	1
10591	PCBs in Water b□8082A	SW-846 8082A	1	183050010A	11/04/2018 13:32	Covenant Mutu□u	1
10589	OC Pesticides in Water	SW-846 8081B	1	183050009A	11/05/2018 15:14	Andrea L □ones	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183050010A	11/01/2018 18:40	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183050009A	11/01/2018 18:40	Christine E Gleim	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	183050043A	11/02/2018 15:25	Eli□abeth E Donovan	1
12936	Dioxins/Furans in Water - 8290	SW-846 8290A Feb 2007 Rev 1	1	18313007	11/10/2018 10:23	Michael □iegler	1
10914	Dioxins/Furans in Water - SepF	SW-846 8290A Feb 2007 Rev 1	2	18313007	11/09/2018 11:39	Deborah M □immerman	1
13495	Thorium	SW-846 6010C	1	183061063501	11/09/2018 12:17	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06025	Arsenic	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063901D	11/05/2018 19:03	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063901B	11/08/2018 19:30	Bradle□M Berlot	5
06031	Chromium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06032	Cobalt	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063901B	11/05/2018 19:03	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06045	Thallium	SW-846 6020A	1	183061063901B	11/05/2018 19:03	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063901A	11/09/2018 19:38	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW010 Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-02

Tidewater, Inc.
ELLE Sample #: WW 9876332
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06048	Vanadium	SW-846 6020A	1	183061063901A	11/05/2018 19:03	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063901A	11/08/2018 19:28	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183130571301	11/12/2018 11:45	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063501	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063901	11/05/2018 05:32	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571305	11/02/2018 08:35	Denise L Trimb□	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	183130571301	11/12/2018 08:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW010-F Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-03

Tidewater, Inc.
ELLE Sample #: WW 9876333
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.219 □	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.0035	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0025	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.10	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	0.00041 □	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	237	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0065	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.0046	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	0.0133 □	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	1.80	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0095	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	30.6	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	0.428	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0376	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	29.8	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	N.D. K3K4	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	53.4	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0017	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.0024	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.171	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13495	Thorium	SW-846 6010C	1	183061063502	11/10/2018 06:34	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW010-F Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/29/2018 15:40
SDG□: TID14-03

Tidewater, Inc.
ELLE Sample #: WW 9876333
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063902D	11/08/2018 23:42	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063902B	11/27/2018 13:59	Choon □ Tian	1
06031	Chromium	SW-846 6020A	1	183191063901A	11/20/2018 08:42	Choon □ Tian	1
06032	Cobalt	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063902B	11/08/2018 23:42	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06045	Thallium	SW-846 6020A	1	183061063902B	11/08/2018 23:42	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063902A	11/14/2018 10:30	Choon □ Tian	1
06048	Vanadium	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063902A	11/08/2018 23:42	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183050571306	11/05/2018 08:13	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063502	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063902	11/05/2018 05:47	□ames L Mert□	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	2	183191063901	11/16/2018 03:14	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571306	11/02/2018 09:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

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	0.2 □	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	0.2 □	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: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

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.						
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	Aniline	62-53-3	N.D.	3	9	10	1
14241	Ben□□l alcohol	100-51-6	N.D.	10	20	31	1
14241	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.5	1	2	1
14241	Carba□ole	86-74-8	N.D.	0.5	1	2	1
14241	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.5	1	2	1
14241	4-Chloroaniline	106-47-8	N.D.	4	9	10	1
14241	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.5	1	2	1
14241	2-Chloronaphthalene	91-58-7	N.D.	0.4	0.8	1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.5	1	2	1
14241	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.5	1	2	1
14241	2□2□ox□bis(1-Chloropropane)	108-60-1	N.D.	0.5	1	2	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.						
14241	Diben□ofuran	132-64-9	N.D.	0.5	1	2	1
14241	1□2-Dichloroben□ene	95-50-1	N.D.	0.5	1	2	1
14241	1□3-Dichloroben□ene	541-73-1	N.D.	0.5	1	2	1
14241	1□4-Dichloroben□ene	106-46-7	N.D.	0.5	1	2	1
14241	3□3□-Dichloroben□idine	91-94-1	N.D.	3	9	10	1
14241	2□4-Dichlorophenol	120-83-2	N.D.	0.5	1	2	1
14241	Dieth□lphthalate	84-66-2	N.D.	2	4	5	1
14241	2□4-Dimeth□lphenol	105-67-9	N.D.	3	9	10	1
14241	Dimeth□lphthalate	131-11-3	N.D.	2	4	5	1
14241	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	8	20	22	1
14241	2□4-Dinitrophenol	51-28-5	N.D.	14	29	31	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	2□4-Dinitrotoluene	121-14-2	N.D.	1	2	5	1
14241	2□6-Dinitrotoluene	606-20-2	N.D.	0.5	1	2	1
14241	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	2	1
14241	Hexachloroc□clopentadiene	77-47-4	N.D.	5	10	11	1
14241	Hexachloroethane	67-72-1	N.D.	1	2	5	1
14241	Isophorone	78-59-1	N.D.	0.5	1	2	1
14241	2-Meth□lnaphthalene	91-57-6	N.D.	0.1	0.2	0.5	1
14241	2-Meth□lphenol	95-48-7	N.D.	0.5	1	2	1
14241	4-Meth□lphenol	106-44-5	N.D.	0.5	1	2	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.						
14241	2-Nitroaniline	88-74-4	N.D.	2	6	7	1
14241	3-Nitroaniline	99-09-2	N.D.	3	6	7	1
14241	4-Nitroaniline	100-01-6	N.D.	0.9	2	3	1
14241	Nitroben□ene	98-95-3	N.D.	0.5	1	2	1
14241	2-Nitrophenol	88-75-5	N.D.	3	9	10	1
14241	4-Nitrophenol	100-02-7	N.D.	10	20	31	1
14241	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.7	2	3	1
14241	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.7	2	3	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.						
14241	Di-n-oct□lphthalate	117-84-0	N.D.	5	10	11	1
14241	Pentachlorophenol	87-86-5	N.D.	1	4	5	1
14241	Phenol	108-95-2	N.D.	0.5	1	2	1
14241	P□ridine	110-86-1	N.D.	2	4	5	1
14241	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.5	1	2	1
14241	2□4□5-Trichlorophenol	95-95-4	N.D.	0.5	1	2	1
14241	2□4□6-Trichlorophenol	88-06-2	N.D.	0.5	1	2	1
	The surrogate recoveries were outside of QC limits. The matrix spi□e sample was anal□□ed and surrogate recoveries were within QC limits but were low. Also□the matrix spi□e duplicate sample was anal□□ed and surrogate recoveries were outside of QC limits or within QC limits but low□all indicating a matrix effect.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Acenaphthene	83-32-9	0.05 □	0.01	0.03	0.05	1
14244	Acenaphth□lene	208-96-8	N.D.	0.01	0.03	0.05	1
14244	Anthracene	120-12-7	0.01 □	0.01	0.03	0.05	1
14244	Ben□o(a)anthracene	56-55-3	N.D.	0.01	0.03	0.05	1
14244	Ben□o(a)p□rene	50-32-8	N.D.	0.01	0.03	0.05	1
14244	Ben□o(b)fluoranthene	205-99-2	N.D.	0.01	0.03	0.05	1
14244	Ben□o(g□h□i)per□lene	191-24-2	N.D.	0.01	0.03	0.05	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Ben□o(□)fluoranthene	207-08-9	N.D.	0.01	0.03	0.05	1
14244	Di-n-but□phthalate	84-74-2	0.2 □	0.05	0.1	1	1
14244	bis(2-Chloroeth□l)ether	111-44-4	0.03 □	0.02	0.06	0.07	1
14244	Chr□sene	218-01-9	N.D.	0.01	0.03	0.05	1
14244	Diben□(a□h)anthracene	53-70-3	N.D.	0.02	0.06	0.07	1
14244	1□4-Dioxane	123-91-1	0.1 □	0.1	0.2	0.3	1
14244	bis(2-Eth□lhex□l)phthalate	117-81-7	0.3 □	0.08	0.2	1	1
14244	Fluoranthene	206-44-0	0.01 □	0.01	0.03	0.05	1
14244	Fluorene	86-73-7	0.03 □	0.01	0.03	0.05	1
14244	Hexachloroben□ene	118-74-1	N.D.	0.01	0.03	0.05	1
14244	Indeno(1□2□3-cd)p□rene	193-39-5	N.D.	0.01	0.03	0.05	1
14244	Naphthalene	91-20-3	0.06 □	0.03	0.06	0.07	1
14244	Phenanthrene	85-01-8	0.05 □	0.03	0.06	0.07	1
14244	P□rene	129-00-0	N.D.	0.01	0.03	0.05	1
	The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□. Since the recover□is high and the target anal□te(s) was not detected in the sample□the data is reported.						
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10407	2□4-D	94-75-7	N.D. D1	0.24	0.47	0.57	1
10407	Dalapon	75-99-0	N.D. D2	1.7	3.4	3.8	1
10407	2□4-DB	94-82-6	N.D. D1	0.60	1.2	1.4	1
10407	Dicamba	1918-00-9	N.D. D1	0.076	0.15	0.28	1
10407	Dinoseb	88-85-7	N.D. D1	0.17	0.38	0.47	1
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10407	2□4-DP (Dichloroprop)	120-36-5	N.D. D1	0.15	0.30	0.47	1
10407	MCPA	94-74-6	N.D. D1	47	95	190	1
10407	MCPP	93-65-2	N.D. D1	47	95	190	1
10407	2□4□5-T	93-76-5	N.D. D1	0.062	0.12	0.14	1
10407	2□4□5-TP	93-72-1	N.D. D1	0.0095	0.028	0.047	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D1	0.083	0.25	0.41	1
10591	PCB-1221	11104-28-2	N.D. D1	0.083	0.25	0.41	1
10591	PCB-1232	11141-16-5	N.D. D1	0.17	0.33	0.41	1
10591	PCB-1242	53469-21-9	N.D. D1	0.083	0.25	0.41	1
10591	PCB-1248	12672-29-6	N.D. D1	0.083	0.25	0.41	1
10591	PCB-1254	11097-69-1	N.D. D1	0.083	0.25	0.41	1
10591	PCB-1260	11096-82-5	N.D. D1	0.12	0.25	0.41	1
10591	PCB-1262	37324-23-5	N.D. D1	0.17	0.33	0.41	1
10591	PCB-1268	11100-14-4	N.D. D1	0.13	0.27	0.41	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10589	Aldrin	309-00-2	N.D. D1	0.0017	0.0058	0.0083	1
10589	Alpha BHC	319-84-6	0.0064 □D1	0.0025	0.0058	0.0083	1
10589	Beta BHC	319-85-7	N.D. D2	0.0028	0.0058	0.0083	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0017	0.0058	0.0083	1
10589	Alpha Chlordane	5103-71-9	N.D. D1	0.0025	0.0058	0.0083	1
10589	Chlordane	57-74-9	N.D. D2	0.13	0.27	0.41	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0058	0.017	0.017	1
10589	p□p-DDD	72-54-8	N.D. D1	0.0041	0.0083	0.017	1
10589	p□p-DDE	72-55-9	N.D. D2	0.0041	0.0083	0.017	1
10589	p□p-DDT	50-29-3	N.D. D1	0.0043	0.0083	0.017	1
10589	Delta BHC	319-86-8	N.D. D2	0.0028	0.0058	0.0083	1
10589	Dieldrin	60-57-1	N.D. D1	0.0044	0.0083	0.017	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0036	0.0075	0.0083	1
10589	Endosulfan II	33213-65-9	N.D. D1	0.012	0.025	0.025	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0048	0.010	0.017	1
10589	Endrin	72-20-8	N.D. D1	0.0067	0.017	0.017	1
10589	Endrin Aldeh□de	7421-93-4	N.D. D1	0.017	0.033	0.083	1
10589	Endrin Ketone	53494-70-5	N.D. D1	0.0041	0.0083	0.017	1
10589	Heptachlor	76-44-8	N.D. D2	0.0017	0.0058	0.0083	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0019	0.0058	0.0083	1
10589	Methox□chlor	72-43-5	N.D. D2	0.025	0.058	0.083	1
10589	Toxaphene	8001-35-2	N.D. D1	0.25	0.50	0.83	1

The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□. The following action was ta□en:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

Metals	**SW-846 6010C**		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
	SW-846 6020A		**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.0415 □	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.00053 □	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0079	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.04	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	79.4	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0416	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.0029	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	7.63	0.0228	0.0800	0.100	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals		**SW-846 6020A**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06035	Lead	7439-92-1	0.0042	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	64.7	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.52	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0225	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	24.8	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	88.7	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0015	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.00049 □	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.0102 □	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		ng/l	ng/l	ng/l	ng/l	
12936	2378-TCDD	1746-01-6	N.D.	0.0008	0.002	0.005	1
12936	12378-PeCDD	40321-76-4	N.D.	0.003	0.01	0.024	1
12936	123478-HxCDD	39227-28-6	N.D.	0.002	0.01	0.024	1
12936	123678-HxCDD	57653-85-7	N.D.	0.002	0.01	0.024	1
12936	123789-HxCDD	19408-74-3	N.D.	0.002	0.01	0.024	1
12936	1234678-HpCDD	35822-46-9	N.D.	0.004	0.01	0.024	1
12936	OCDD	3268-87-9	N.D.	0.034	0.069	0.10	1
12936	2378-TCDF	51207-31-9	N.D.	0.0008	0.002	0.005	1
12936	12378-PeCDF	57117-41-6	N.D.	0.003	0.01	0.024	1
12936	23478-PeCDF	57117-31-4	N.D.	0.002	0.01	0.024	1
12936	123478-HxCDF	70648-26-9	N.D.	0.002	0.01	0.024	1
12936	123678-HxCDF	57117-44-9	N.D.	0.002	0.01	0.024	1
12936	123789-HxCDF	72918-21-9	N.D.	0.002	0.01	0.024	1
12936	234678-HxCDF	60851-34-5	N.D.	0.002	0.01	0.024	1
12936	1234678-HpCDF	67562-39-4	N.D.	0.002	0.01	0.024	1
12936	1234789-HpCDF	55673-89-7	N.D.	0.002	0.01	0.024	1
12936	OCDF	39001-02-0	N.D.	0.006	0.019	0.048	1

Labeled Compounds	%Rec	Windows	LOD (ng/l)
13C12-2378-TCDD	64	40 - 135	0.002
13C12-12378-PeCDD	75	40 - 135	0.01
13C12-123478-HxCDD	72	40 - 135	0.01
13C12-123678-HxCDD	69	40 - 135	0.01
13C12-123789-HxCDD	67	40 - 135	0.01
13C12-1234678-HpCDD	75	40 - 135	0.01
13C12-OCDD	72	40 - 135	0.07
13C12-2378-TCDF	57	40 - 135	0.002
13C12-12378-PeCDF	67	40 - 135	0.01
13C12-23478-PeCDF	68	40 - 135	0.01
13C12-123478-HxCDF	61	40 - 135	0.01
13C12-123678-HxCDF	60	40 - 135	0.01
13C12-234678-HxCDF	58	40 - 135	0.01
13C12-123789-HxCDF	71	40 - 135	0.01
13C12-1234678-HpCDF	68	40 - 135	0.01
13C12-1234789-HpCDF	68	40 - 135	0.01
13C12-OCDF	65	40 - 135	0.02

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-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	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-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

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 02:44	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 02:43	□oel G Chachapo□a	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18305WAM026	11/08/2018 02:14	Ashle□R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18305WAN026	11/05/2018 22:15	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18305WAN026	11/02/2018 08:30	Logan M Brosemer	1
11010	8270D BNA Extraction	SW-846 3510C	1	18305WAM026	11/02/2018 08:30	Logan M Brosemer	1
10407	Herb water 8151A Master	SW-846 8151A	1	183050043A	11/07/2018 20:04	Richard A Shober	1
10591	PCBs in Water b□8082A	SW-846 8082A	1	183050010A	11/04/2018 13:43	Covenant Mutu□u	1
10589	OC Pesticides in Water	SW-846 8081B	1	183050009A	11/05/2018 15:27	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183050010A	11/01/2018 18:40	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183050009A	11/01/2018 18:40	Christine E Gleim	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	183050043A	11/02/2018 15:25	Eli□abeth E Donovan	1
12936	Dioxins/Furans in Water - 8290	SW-846 8290A Feb 2007 Rev 1	1	18313007	11/10/2018 11:20	Michael □iegler	1
10914	Dioxins/Furans in Water - SepF	SW-846 8290A Feb 2007 Rev 1	2	18313007	11/09/2018 11:39	Deborah M □immerman	1
13495	Thorium	SW-846 6010C	1	183061063501	11/09/2018 11:38	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06025	Arsenic	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063901D	11/05/2018 18:33	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063901B	11/08/2018 19:05	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06032	Cobalt	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063901B	11/05/2018 18:33	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06045	Thallium	SW-846 6020A	1	183061063901B	11/05/2018 18:33	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063901A	11/09/2018 19:28	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04BKG

Tidewater, Inc.
ELLE Sample #: WW 9876334
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06048	Vanadium	SW-846 6020A	1	183061063901A	11/05/2018 18:33	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063901A	11/08/2018 19:05	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183130571301	11/12/2018 11:37	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063501	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063901	11/05/2018 05:32	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571305	11/02/2018 08:35	Denise L Trimb□	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	183130571301	11/12/2018 08:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

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	37	0.9	2.0	5.0	1
11996	Ben□ene	71-43-2	5.0	0.05	0.2	0.5	1
11996	Bromodichloromethane	75-27-4	5.0	0.05	0.2	0.5	1
11996	Bromoform	75-25-2	5.0	0.3	0.5	1.0	1
11996	Bromomethane	74-83-9	3.8	0.07	0.2	0.5	1
11996	2-Butanone	78-93-3	42	0.6	2.0	5.0	1
11996	Carbon Disulfide	75-15-0	4.5	0.06	0.2	1.0	1
11996	Carbon Tetrachloride	56-23-5	5.3	0.07	0.2	0.5	1
11996	Chloroben□ene	108-90-7	5.4	0.06	0.2	0.5	1
11996	Chloroethane	75-00-3	4.1	0.07	0.2	0.5	1
11996	Chloroform	67-66-3	5.3	0.09	0.2	0.5	1
11996	Chloromethane	74-87-3	4.0	0.06	0.2	0.5	1
11996	C□clohexane	110-82-7	4.8	0.05	0.2	0.5	1
11996	C□clohexanone	108-94-1	100	1.8	7.2	25	1
11996	1□2-Dibromo-3-chloropropane	96-12-8	6.0	0.1	0.4	0.5	1
11996	Dibromochloromethane	124-48-1	5.2	0.07	0.2	0.5	1
11996	1□2-Dibromoethane	106-93-4	5.3	0.06	0.2	0.5	1
11996	1□2-Dichloroben□ene	95-50-1	5.1	0.06	0.2	0.5	1
11996	1□3-Dichloroben□ene	541-73-1	5.2	0.06	0.2	0.5	1
11996	1□4-Dichloroben□ene	106-46-7	5.3	0.07	0.2	0.5	1
11996	Dichlorodifluoromethane	75-71-8	3.5	0.05	0.2	0.5	1
11996	1□1-Dichloroethane	75-34-3	5.0	0.07	0.2	0.5	1
11996	1□2-Dichloroethane	107-06-2	4.7	0.05	0.2	0.5	1
11996	1□1-Dichloroethene	75-35-4	5.2	0.06	0.2	0.5	1
11996	cis-1□2-Dichloroethene	156-59-2	5.1	0.05	0.2	0.5	1
11996	trans-1□2-Dichloroethene	156-60-5	5.2	0.06	0.2	0.5	1
11996	1□2-Dichloropropane	78-87-5	5.0	0.06	0.2	0.5	1
11996	cis-1□3-Dichloropropene	10061-01-5	4.9	0.05	0.2	0.5	1
11996	trans-1□3-Dichloropropene	10061-02-6	5.3	0.06	0.2	0.5	1
11996	Eth□lben□ene	100-41-4	5.4	0.06	0.2	0.5	1
11996	Freon 113	76-13-1	4.7	0.06	0.2	0.5	1
11996	2-Hexanone	591-78-6	29	0.6	2.0	5.0	1
11996	Isoprop□lben□ene	98-82-8	5.4	0.05	0.2	0.5	1
11996	Meth□l Acetate	79-20-9	5.0	0.1	0.2	1.0	1
11996	Meth□l Tertiar□But□l Ether	1634-04-4	4.6	0.05	0.2	0.5	1
11996	4-Meth□l-2-Pentanone	108-10-1	28	0.7	2.0	5.0	1
11996	Meth□lc□clohexane	108-87-2	4.7	0.05	0.2	0.5	1
11996	Meth□lene Chloride	75-09-2	4.7	0.07	0.2	0.5	1
11996	St□rene	100-42-5	5.3	0.05	0.2	0.5	1
11996	1□1□2□2-Tetrachloroethane	79-34-5	5.2	0.07	0.2	0.5	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

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	5.5	0.06	0.2	0.5	1
11996	Toluene	108-88-3	5.4	0.07	0.2	0.5	1
11996	1□2□4-Trichloroben□ene	120-82-1	4.6	0.06	0.2	0.5	1
11996	1□1□1-Trichloroethane	71-55-6	5.1	0.06	0.2	0.5	1
11996	1□1□2-Trichloroethane	79-00-5	5.3	0.06	0.2	0.5	1
11996	Trichloroethene	79-01-6	5.0	0.06	0.2	0.5	1
11996	Trichlorofluoromethane	75-69-4	4.1	0.05	0.2	0.5	1
11996	Vin□l Chloride	75-01-4	4.2	0.1	0.2	0.5	1
11996	□□lene (Total)	1330-20-7	16	0.1	0.4	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	ug/l	
14241	Aniline	62-53-3	23	3	9	10	1
14241	Ben□□l alcohol	100-51-6	42	10	20	30	1
14241	4-Bromophen□l-phen□lether	101-55-3	48	0.5	1	2	1
14241	Carba□ole	86-74-8	48	0.5	1	2	1
14241	4-Chloro-3-meth□lphenol	59-50-7	38	0.5	1	2	1
14241	4-Chloroaniline	106-47-8	32	4	9	10	1
14241	bis(2-Chloroethox□)methane	111-91-1	43	0.5	1	2	1
14241	2-Chloronaphthalene	91-58-7	44	0.4	0.8	1	1
14241	2-Chlorophenol	95-57-8	25	0.5	1	2	1
14241	4-Chlorophen□l-phen□lether	7005-72-3	44	0.5	1	2	1
14241	2□2-ox□bis(1-Chloropropane)	108-60-1	41	0.5	1	2	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.						
14241	Diben□ofuran	132-64-9	45	0.5	1	2	1
14241	1□2-Dichloroben□ene	95-50-1	40	0.5	1	2	1
14241	1□3-Dichloroben□ene	541-73-1	39	0.5	1	2	1
14241	1□4-Dichloroben□ene	106-46-7	40	0.5	1	2	1
14241	3□3-Dichloroben□idine	91-94-1	28	3	9	10	1
14241	2□4-Dichlorophenol	120-83-2	28	0.5	1	2	1
14241	Dieth□lphthalate	84-66-2	40	2	4	5	1
14241	2□4-Dimeth□lphenol	105-67-9	33	3	9	10	1
14241	Dimeth□lphthalate	131-11-3	45	2	4	5	1
14241	4□6-Dinitro-2-meth□lphenol	534-52-1	45	8	20	21	1
14241	2□4-Dinitrophenol	51-28-5	84	14	28	30	1
14241	2□4-Dinitrotoluene	121-14-2	41	1	2	5	1
14241	2□6-Dinitrotoluene	606-20-2	46	0.5	1	2	1
14241	Hexachlorobutadiene	87-68-3	39	0.5	1	2	1
14241	Hexachloroc□clopentadiene	77-47-4	66	5	10	11	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	Hexachloroethane	67-72-1	38	1	2	5	1
14241	Isophorone	78-59-1	44	0.5	1	2	1
14241	2-Meth□lnaphthalene	91-57-6	42	0.1	0.2	0.5	1
14241	2-Meth□lphenol	95-48-7	34	0.5	1	2	1
14241	4-Meth□lphenol	106-44-5	30	0.5	1	2	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.						
14241	2-Nitroaniline	88-74-4	48	2	6	7	1
14241	3-Nitroaniline	99-09-2	39	3	6	7	1
14241	4-Nitroaniline	100-01-6	38	0.9	2	3	1
14241	Nitroben□ene	98-95-3	42	0.5	1	2	1
14241	2-Nitrophenol	88-75-5	41	3	9	10	1
14241	4-Nitrophenol	100-02-7	21 □	10	20	30	1
14241	N-Nitroso-di-n-prop□lamine	621-64-7	45	0.7	2	3	1
14241	N-Nitrosodiphen□lamine	86-30-6	45	0.7	2	3	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.						
14241	Di-n-oct□lphthalate	117-84-0	44	5	10	11	1
14241	Pentachlorophenol	87-86-5	50	1	4	5	1
14241	Phenol	108-95-2	15	0.5	1	2	1
14241	P□ridine	110-86-1	20	2	4	5	1
14241	1□2□4-Trichloroben□ene	120-82-1	40	0.5	1	2	1
14241	2□4□5-Trichlorophenol	95-95-4	35	0.5	1	2	1
14241	2□4□6-Trichlorophenol	88-06-2	34	0.5	1	2	1
	The surrogate recoveries were outside of QC limits. The matrix spi□e sample was anal□□ed and surrogate recoveries were within QC limits but were low. Also□the matrix spi□e duplicate sample was anal□□ed and surrogate recoveries were outside of QC limits or within QC limits but low□all indicating a matrix effect.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Acenaphthene	83-32-9	0.8	0.01	0.03	0.05	1
14244	Acenaphth□lene	208-96-8	0.7	0.01	0.03	0.05	1
14244	Anthracene	120-12-7	0.9	0.01	0.03	0.05	1
14244	Ben□o(a)anthracene	56-55-3	0.9	0.01	0.03	0.05	1
14244	Ben□o(a)p□rene	50-32-8	0.9	0.01	0.03	0.05	1
14244	Ben□o(b)fluoranthene	205-99-2	0.9	0.01	0.03	0.05	1
14244	Ben□o(g□h□i)per□lene	191-24-2	0.7	0.01	0.03	0.05	1
14244	Ben□o(□)fluoranthene	207-08-9	0.9	0.01	0.03	0.05	1
14244	Di-n-but□lphthalate	84-74-2	1	0.05	0.1	1	1
14244	bis(2-Chloroeth□l)ether	111-44-4	1	0.02	0.06	0.07	1
14244	Chr□sene	218-01-9	0.9	0.01	0.03	0.05	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
14244	Diben□(a□h)anthracene	53-70-3	0.7		0.02	0.06	0.07	1
14244	1□4-Dioxane	123-91-1	0.8		0.1	0.2	0.3	1
14244	bis(2-Eth□lhex□l)phthalate	117-81-7	0.8	□	0.08	0.2	1	1
14244	Fluoranthene	206-44-0	1		0.01	0.03	0.05	1
14244	Fluorene	86-73-7	0.8		0.01	0.03	0.05	1
14244	Hexachloroben□ene	118-74-1	0.9		0.01	0.03	0.05	1
14244	Indeno(1□2□3-cd)p□rene	193-39-5	0.8		0.01	0.03	0.05	1
14244	Naphthalene	91-20-3	1		0.03	0.06	0.07	1
14244	Phenanthrene	85-01-8	1		0.03	0.06	0.07	1
14244	P□rene	129-00-0	0.8		0.01	0.03	0.05	1
Herbicides	**SW-846 8151A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10407	2□4-D	94-75-7	2.5	D1	0.24	0.47	0.56	1
10407	Dalapon	75-99-0	4.4	D1	1.7	3.4	3.8	1
10407	2□4-DB	94-82-6	2.4	D1	0.59	1.2	1.4	1
10407	Dicamba	1918-00-9	N.D.	D1	0.075	0.15	0.28	1
10407	Dinoseb	88-85-7	1.3	D1	0.17	0.38	0.47	1
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.							
10407	2□4-DP (Dichloroprop)	120-36-5	2.2	D1	0.15	0.30	0.47	1
10407	MCPA	94-74-6	130	□PD1	47	94	190	1
10407	MCPP	93-65-2	N.D.	VD1	60	120	190	1
10407	2□4□5-T	93-76-5	N.D.	D2	0.22	0.44	0.45	1
10407	2□4□5-TP	93-72-1	N.D.	D1	0.0094	0.028	0.047	1
PCBs	**SW-846 8082A**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	4.6	D2	0.084	0.25	0.42	1
10591	PCB-1221	11104-28-2	N.D.	D1	0.084	0.25	0.42	1
10591	PCB-1232	11141-16-5	N.D.	D1	0.17	0.34	0.42	1
10591	PCB-1242	53469-21-9	N.D.	D1	0.084	0.25	0.42	1
10591	PCB-1248	12672-29-6	N.D.	D1	0.084	0.25	0.42	1
10591	PCB-1254	11097-69-1	N.D.	D1	0.084	0.25	0.42	1
10591	PCB-1260	11096-82-5	4.7	D2	0.13	0.25	0.42	1
10591	PCB-1262	37324-23-5	N.D.	D1	0.17	0.34	0.42	1
10591	PCB-1268	11100-14-4	N.D.	D1	0.14	0.27	0.42	1
Pesticides	**SW-846 8081B**		**ug/l**		**ug/l**	**ug/l**	**ug/l**	
10589	Aldrin	309-00-2	0.070	D1	0.0016	0.0056	0.0080	1
10589	Alpha BHC	319-84-6	0.090	D1	0.0024	0.0056	0.0080	1
10589	Beta BHC	319-85-7	0.078	D1	0.0027	0.0056	0.0080	1
10589	Gamma BHC - Lindane	58-89-9	0.081	D1	0.0016	0.0056	0.0080	1
10589	Alpha Chlordane	5103-71-9	0.076	D1	0.0024	0.0056	0.0080	1
10589	Chlordane	57-74-9	N.D.	D2	0.13	0.26	0.40	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10589	Gamma Chlordane	5103-74-2	0.078 PD1	0.0056	0.016	0.016	1
10589	p□p-DDD	72-54-8	0.17 D2	0.0040	0.0080	0.016	1
10589	p□p-DDE	72-55-9	0.15 D2	0.0040	0.0080	0.016	1
10589	p□p-DDT	50-29-3	0.16 D2	0.0042	0.0080	0.016	1
10589	Delta BHC	319-86-8	0.079 D2	0.0027	0.0056	0.0080	1
10589	Dieldrin	60-57-1	0.17 D2	0.0042	0.0080	0.016	1
10589	Endosulfan I	959-98-8	0.077 D1	0.0034	0.0072	0.0080	1
10589	Endosulfan II	33213-65-9	0.16 D1	0.012	0.024	0.024	1
10589	Endosulfan Sulfate	1031-07-8	0.17 D2	0.0046	0.0096	0.016	1
10589	Endrin	72-20-8	0.18 D2	0.0065	0.016	0.016	1
10589	Endrin Aldeh□de	7421-93-4	0.15 D2	0.016	0.032	0.080	1
10589	Endrin Ketone	53494-70-5	0.17 D2	0.0040	0.0080	0.016	1
10589	Heptachlor	76-44-8	0.072 D1	0.0016	0.0056	0.0080	1
10589	Heptachlor Epoxide	1024-57-3	0.080 D1	0.0018	0.0056	0.0080	1
10589	Methox□chlor	72-43-5	0.88 D2	0.024	0.056	0.080	1
10589	Toxaphene	8001-35-2	N.D. D1	0.24	0.48	0.80	1

The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□ The following action was ta□en:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	0.506	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	2.10	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.0064	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0187	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.09	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	0.0040	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	0.0051	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	85.5	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0497	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.245	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	0.0508	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	8.69	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0199	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	68.1	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.59	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0561	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	35.5	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	0.0107	0.00065	0.0016	0.0020	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals		**SW-846 6020A**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06042	Silver	7440-22-4	0.0519	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	101	0.250	1.00	4.50	5
06045	Thallium	7440-28-0	0.0020	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0272	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.0523	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.512	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	0.00090	0.000050	0.00010	0.00020	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		ng/l	ng/l	ng/l	ng/l	
12936	2378-TCDD	1746-01-6	0.20	0.0008	0.002	0.005	1
12936	12378-PeCDD	40321-76-4	0.99	0.003	0.01	0.024	1
12936	123478-HxCDD	39227-28-6	1.0	0.002	0.01	0.024	1
12936	123678-HxCDD	57653-85-7	0.96	0.002	0.01	0.024	1
12936	123789-HxCDD	19408-74-3	0.98	0.002	0.01	0.024	1
12936	1234678-HpCDD	35822-46-9	0.97	0.004	0.01	0.024	1
12936	OCDD	3268-87-9	2.0	0.034	0.069	0.10	1
12936	2378-TCDF	51207-31-9	0.18	0.0008	0.002	0.005	1
12936	12378-PeCDF	57117-41-6	0.96	0.003	0.01	0.024	1
12936	23478-PeCDF	57117-31-4	0.97	0.002	0.01	0.024	1
12936	123478-HxCDF	70648-26-9	1.0	0.002	0.01	0.024	1
12936	123678-HxCDF	57117-44-9	1.0	0.002	0.01	0.024	1
12936	123789-HxCDF	72918-21-9	0.99	0.002	0.01	0.024	1
12936	234678-HxCDF	60851-34-5	1.0	0.002	0.01	0.024	1
12936	1234678-HpCDF	67562-39-4	1.0	0.002	0.01	0.024	1
12936	1234789-HpCDF	55673-89-7	1.0	0.002	0.01	0.024	1
12936	OCDF	39001-02-0	2.0	0.006	0.019	0.048	1

Labeled Compounds	%Rec	Windows	LOD (ng/l)
13C12-2378-TCDD	69	40 - 135	0.002
13C12-12378-PeCDD	68	40 - 135	0.01
13C12-123478-HxCDD	73	40 - 135	0.01
13C12-123678-HxCDD	71	40 - 135	0.01
13C12-123789-HxCDD	66	40 - 135	0.01
13C12-1234678-HpCDD	72	40 - 135	0.01
13C12-OCDD	71	40 - 135	0.07
13C12-2378-TCDF	57	40 - 135	0.002
13C12-12378-PeCDF	63	40 - 135	0.01
13C12-23478-PeCDF	62	40 - 135	0.01
13C12-123478-HxCDF	64	40 - 135	0.01
13C12-123678-HxCDF	63	40 - 135	0.01
13C12-234678-HxCDF	55	40 - 135	0.01
13C12-123789-HxCDF	69	40 - 135	0.01
13C12-1234678-HpCDF	66	40 - 135	0.01
13C12-1234789-HpCDF	64	40 - 135	0.01
13C12-OCDF	62	40 - 135	0.02

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-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	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-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

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 03:05	□oel G Chachapo□a	1
11996	VOCs- 25ml Water b□8260C	SW-846 8260C 25mL purge	1	H183094AA	11/06/2018 03:48	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 03:04	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H183094AA	11/06/2018 03:47	□oel G Chachapo□a	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18305WAM026	11/08/2018 02:42	Ashle□R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18305WAN026	11/05/2018 22:51	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18305WAN026	11/02/2018 08:30	Logan M Brosemer	1
11010	8270D BNA Extraction	SW-846 3510C	1	18305WAM026	11/02/2018 08:30	Logan M Brosemer	1
10407	Herb water 8151A Master	SW-846 8151A	1	183050043A	11/07/2018 20:37	Richard A Shober	1
10591	PCBs in Water b□8082A	SW-846 8082A	1	183050010A	11/04/2018 13:54	Covenant Mutu□u	1
10589	OC Pesticides in Water	SW-846 8081B	1	183050009A	11/05/2018 15:40	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183050010A	11/01/2018 18:40	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183050009A	11/01/2018 18:40	Christine E Gleim	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	183050043A	11/02/2018 15:25	Eli□abeth E Donovan	1
12936	Dioxins/Furans in Water - 8290	SW-846 8290A Feb 2007 Rev 1	1	18313007	11/10/2018 12:16	Michael □iegler	1
10914	Dioxins/Furans in Water - SepF	SW-846 8290A Feb 2007 Rev 1	2	18313007	11/09/2018 11:39	Deborah M □immerman	1
13495	Thorium	SW-846 6010C	1	183061063501	11/09/2018 11:47	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06025	Arsenic	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063901D	11/05/2018 18:39	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063901B	11/08/2018 19:11	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06032	Cobalt	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063901B	11/05/2018 18:39	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I MS Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MS

Tidewater, Inc.
ELLE Sample #: WW 9876335
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06043	Sodium	SW-846 6020A	1	183061063901A	11/08/2018 19:20	Bradle□M Berlot	5
06045	Thallium	SW-846 6020A	1	183061063901B	11/05/2018 18:39	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063901A	11/09/2018 19:33	Bradle□M Berlot	1
06048	Vanadium	SW-846 6020A	1	183061063901A	11/05/2018 18:39	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063901A	11/08/2018 19:11	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183130571301	11/12/2018 11:41	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063501	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063901	11/05/2018 05:32	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571305	11/02/2018 08:35	Denise L Trimb□	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	183130571301	11/12/2018 08:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

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	36	0.9	2.0	5.0	1
11996	Ben□ene	71-43-2	5.2	0.05	0.2	0.5	1
11996	Bromodichloromethane	75-27-4	5.3	0.05	0.2	0.5	1
11996	Bromoform	75-25-2	5.7	0.3	0.5	1.0	1
11996	Bromomethane	74-83-9	4.0	0.07	0.2	0.5	1
11996	2-Butanone	78-93-3	43	0.6	2.0	5.0	1
11996	Carbon Disulfide	75-15-0	4.8	0.06	0.2	1.0	1
11996	Carbon Tetrachloride	56-23-5	5.5	0.07	0.2	0.5	1
11996	Chloroben□ene	108-90-7	6.0	0.06	0.2	0.5	1
11996	Chloroethane	75-00-3	4.3	0.07	0.2	0.5	1
11996	Chloroform	67-66-3	5.5	0.09	0.2	0.5	1
11996	Chloromethane	74-87-3	4.1	0.06	0.2	0.5	1
11996	C□clohexane	110-82-7	5.0	0.05	0.2	0.5	1
11996	C□clohexanone	108-94-1	90	1.8	7.2	25	1
11996	1□2-Dibromo-3-chloropropane	96-12-8	6.1	0.1	0.4	0.5	1
11996	Dibromochloromethane	124-48-1	6.0	0.07	0.2	0.5	1
11996	1□2-Dibromoethane	106-93-4	5.9	0.06	0.2	0.5	1
11996	1□2-Dichloroben□ene	95-50-1	5.5	0.06	0.2	0.5	1
11996	1□3-Dichloroben□ene	541-73-1	5.5	0.06	0.2	0.5	1
11996	1□4-Dichloroben□ene	106-46-7	5.6	0.07	0.2	0.5	1
11996	Dichlorodifluoromethane	75-71-8	3.8	0.05	0.2	0.5	1
11996	1□1-Dichloroethane	75-34-3	5.2	0.07	0.2	0.5	1
11996	1□2-Dichloroethane	107-06-2	5.0	0.05	0.2	0.5	1
11996	1□1-Dichloroethene	75-35-4	5.5	0.06	0.2	0.5	1
11996	cis-1□2-Dichloroethene	156-59-2	5.4	0.05	0.2	0.5	1
11996	trans-1□2-Dichloroethene	156-60-5	5.4	0.06	0.2	0.5	1
11996	1□2-Dichloropropane	78-87-5	5.3	0.06	0.2	0.5	1
11996	cis-1□3-Dichloropropene	10061-01-5	5.3	0.05	0.2	0.5	1
11996	trans-1□3-Dichloropropene	10061-02-6	6.0	0.06	0.2	0.5	1
11996	Eth□lben□ene	100-41-4	6.0	0.06	0.2	0.5	1
11996	Freon 113	76-13-1	5.0	0.06	0.2	0.5	1
11996	2-Hexanone	591-78-6	30	0.6	2.0	5.0	1
11996	Isoprop□lben□ene	98-82-8	6.1	0.05	0.2	0.5	1
11996	Meth□l Acetate	79-20-9	5.3	0.1	0.2	1.0	1
11996	Meth□l Tertiar□But□l Ether	1634-04-4	4.9	0.05	0.2	0.5	1
11996	4-Meth□l-2-Pentanone	108-10-1	28	0.7	2.0	5.0	1
11996	Meth□lc□clohexane	108-87-2	4.9	0.05	0.2	0.5	1
11996	Meth□lene Chloride	75-09-2	5.0	0.07	0.2	0.5	1
11996	St□rene	100-42-5	6.0	0.05	0.2	0.5	1
11996	1□1□2□2-Tetrachloroethane	79-34-5	5.6	0.07	0.2	0.5	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

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	6.2	0.06	0.2	0.5	1
11996	Toluene	108-88-3	6.1	0.07	0.2	0.5	1
11996	1□2□4-Trichloroben□ene	120-82-1	4.8	0.06	0.2	0.5	1
11996	1□1□1-Trichloroethane	71-55-6	5.5	0.06	0.2	0.5	1
11996	1□1□2-Trichloroethane	79-00-5	6.1	0.06	0.2	0.5	1
11996	Trichloroethene	79-01-6	5.5	0.06	0.2	0.5	1
11996	Trichlorofluoromethane	75-69-4	4.4	0.05	0.2	0.5	1
11996	Vin□l Chloride	75-01-4	4.5	0.1	0.2	0.5	1
11996	□□lene (Total)	1330-20-7	18	0.1	0.4	0.5	1
GC/MS Semivolatiles	**SW-846 8270D**		ug/l	ug/l	ug/l	ug/l	
14241	Aniline	62-53-3	21	3	9	10	1
14241	Ben□□l alcohol	100-51-6	41	10	20	30	1
14241	4-Bromophen□l-phen□lether	101-55-3	45	0.5	1	2	1
14241	Carba□ole	86-74-8	46	0.5	1	2	1
14241	4-Chloro-3-meth□lphenol	59-50-7	29	0.5	1	2	1
14241	4-Chloroaniline	106-47-8	30	4	9	10	1
14241	bis(2-Chloroethox□)methane	111-91-1	42	0.5	1	2	1
14241	2-Chloronaphthalene	91-58-7	43	0.4	0.8	1	1
14241	2-Chlorophenol	95-57-8	19	0.5	1	2	1
14241	4-Chlorophen□l-phen□lether	7005-72-3	43	0.5	1	2	1
14241	2□2-ox□bis(1-Chloropropane)	108-60-1	39	0.5	1	2	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.						
14241	Diben□ofuran	132-64-9	43	0.5	1	2	1
14241	1□2-Dichloroben□ene	95-50-1	38	0.5	1	2	1
14241	1□3-Dichloroben□ene	541-73-1	36	0.5	1	2	1
14241	1□4-Dichloroben□ene	106-46-7	37	0.5	1	2	1
14241	3□3-Dichloroben□idine	91-94-1	24	3	9	10	1
14241	2□4-Dichlorophenol	120-83-2	21	0.5	1	2	1
14241	Dieth□lphthalate	84-66-2	39	2	4	5	1
14241	2□4-Dimeth□lphenol	105-67-9	30	3	9	10	1
14241	Dimeth□lphthalate	131-11-3	44	2	4	5	1
14241	4□6-Dinitro-2-meth□lphenol	534-52-1	43	8	20	21	1
14241	2□4-Dinitrophenol	51-28-5	77	14	28	30	1
14241	2□4-Dinitrotoluene	121-14-2	40	1	2	5	1
14241	2□6-Dinitrotoluene	606-20-2	45	0.5	1	2	1
14241	Hexachlorobutadiene	87-68-3	38	0.5	1	2	1
14241	Hexachloroc□clopentadiene	77-47-4	66	5	10	11	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	Hexachloroethane	67-72-1	36	1	2	5	1
14241	Isophorone	78-59-1	44	0.5	1	2	1
14241	2-Meth□lnaphthalene	91-57-6	41	0.1	0.2	0.5	1
14241	2-Meth□lphenol	95-48-7	26	0.5	1	2	1
14241	4-Meth□lphenol	106-44-5	22	0.5	1	2	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.						
14241	2-Nitroaniline	88-74-4	47	2	6	7	1
14241	3-Nitroaniline	99-09-2	38	3	6	7	1
14241	4-Nitroaniline	100-01-6	38	0.9	2	3	1
14241	Nitroben□ene	98-95-3	41	0.5	1	2	1
14241	2-Nitrophenol	88-75-5	38	3	9	10	1
14241	4-Nitrophenol	100-02-7	20 □	10	20	30	1
14241	N-Nitroso-di-n-prop□lamine	621-64-7	43	0.7	2	3	1
14241	N-Nitrosodiphen□lamine	86-30-6	42	0.7	2	3	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.						
14241	Di-n-oct□lphthalate	117-84-0	45	5	10	11	1
14241	Pentachlorophenol	87-86-5	46	1	4	5	1
14241	Phenol	108-95-2	10	0.5	1	2	1
14241	P□ridine	110-86-1	19	2	4	5	1
14241	1□2□4-Trichloroben□ene	120-82-1	38	0.5	1	2	1
14241	2□4□5-Trichlorophenol	95-95-4	30	0.5	1	2	1
14241	2□4□6-Trichlorophenol	88-06-2	30	0.5	1	2	1
	The surrogate recoveries were outside of QC limits. The matrix spi□e sample was anal□□ed and surrogate recoveries were within QC limits but were low. Also□the matrix spi□e duplicate sample was anal□□ed and surrogate recoveries were outside of QC limits or within QC limits but low□all indicating a matrix effect.						
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Acenaphthene	83-32-9	0.9	0.01	0.03	0.05	1
14244	Acenaphth□lene	208-96-8	0.8	0.01	0.03	0.05	1
14244	Anthracene	120-12-7	1	0.01	0.03	0.05	1
14244	Ben□o(a)anthracene	56-55-3	1	0.01	0.03	0.05	1
14244	Ben□o(a)p□rene	50-32-8	0.9	0.01	0.03	0.05	1
14244	Ben□o(b)fluoranthene	205-99-2	1	0.01	0.03	0.05	1
14244	Ben□o(g□h□i)per□lene	191-24-2	0.8	0.01	0.03	0.05	1
14244	Ben□o(□)fluoranthene	207-08-9	0.9	0.01	0.03	0.05	1
14244	Di-n-but□lphthalate	84-74-2	1	0.05	0.1	1	1
14244	bis(2-Chloroeth□l)ether	111-44-4	1	0.02	0.06	0.07	1
14244	Chr□sene	218-01-9	0.9	0.01	0.03	0.05	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Diben□(a□h)anthracene	53-70-3	0.8	0.02	0.06	0.07	1
14244	1□4-Dioxane	123-91-1	0.8	0.1	0.2	0.3	1
14244	bis(2-Eth□lhex□l)phthalate	117-81-7	1	0.08	0.2	1	1
14244	Fluoranthene	206-44-0	1	0.01	0.03	0.05	1
14244	Fluorene	86-73-7	0.8	0.01	0.03	0.05	1
14244	Hexachloroben□ene	118-74-1	0.9	0.01	0.03	0.05	1
14244	Indeno(1□2□3-cd)p□rene	193-39-5	0.9	0.01	0.03	0.05	1
14244	Naphthalene	91-20-3	1	0.03	0.06	0.07	1
14244	Phenanthrene	85-01-8	1	0.03	0.06	0.07	1
14244	P□rene	129-00-0	0.8	0.01	0.03	0.05	1
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10407	2□4-D	94-75-7	2.8 D1	0.24	0.47	0.57	1
10407	Dalapon	75-99-0	3.6 □D1	1.7	3.4	3.8	1
10407	2□4-DB	94-82-6	2.8 D1	0.59	1.2	1.4	1
10407	Dicamba	1918-00-9	N.D. D1	0.075	0.15	0.28	1
10407	Dinoseb	88-85-7	1.4 D1	0.17	0.38	0.47	1
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10407	2□4-DP (Dichloroprop)	120-36-5	2.4 D1	0.15	0.30	0.47	1
10407	MCPA	94-74-6	99 □PD1	47	94	190	1
10407	MCPP	93-65-2	N.D. D1	47	94	190	1
10407	2□4□5-T	93-76-5	N.D. VD2	0.23	0.46	0.47	1
10407	2□4□5-TP	93-72-1	N.D. D1	0.0094	0.028	0.047	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	4.6 D2	0.080	0.24	0.40	1
10591	PCB-1221	11104-28-2	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1232	11141-16-5	N.D. D1	0.16	0.32	0.40	1
10591	PCB-1242	53469-21-9	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1248	12672-29-6	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1254	11097-69-1	N.D. D1	0.080	0.24	0.40	1
10591	PCB-1260	11096-82-5	4.7 D2	0.12	0.24	0.40	1
10591	PCB-1262	37324-23-5	N.D. D1	0.16	0.32	0.40	1
10591	PCB-1268	11100-14-4	N.D. D1	0.13	0.26	0.40	1
Pesticides	**SW-846 8081B**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10589	Aldrin	309-00-2	0.056 D1	0.0016	0.0056	0.0080	1
10589	Alpha BHC	319-84-6	0.076 D1	0.0024	0.0056	0.0080	1
10589	Beta BHC	319-85-7	0.066 D1	0.0027	0.0056	0.0080	1
10589	Gamma BHC - Lindane	58-89-9	0.069 D1	0.0016	0.0056	0.0080	1
10589	Alpha Chlordane	5103-71-9	0.064 D1	0.0024	0.0056	0.0080	1
10589	Chlordane	57-74-9	N.D. D2	0.13	0.25	0.40	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10589	Gamma Chlordane	5103-74-2	0.066 PD1	0.0056	0.016	0.016	1
10589	p□p-DDD	72-54-8	0.15 D2	0.0040	0.0080	0.016	1
10589	p□p-DDE	72-55-9	0.13 D2	0.0040	0.0080	0.016	1
10589	p□p-DDT	50-29-3	0.15 D2	0.0041	0.0080	0.016	1
10589	Delta BHC	319-86-8	0.067 D2	0.0027	0.0056	0.0080	1
10589	Dieldrin	60-57-1	0.14 D2	0.0042	0.0080	0.016	1
10589	Endosulfan I	959-98-8	0.067 D1	0.0034	0.0072	0.0080	1
10589	Endosulfan II	33213-65-9	0.14 D1	0.012	0.024	0.024	1
10589	Endosulfan Sulfate	1031-07-8	0.15 D2	0.0046	0.0096	0.016	1
10589	Endrin	72-20-8	0.15 D2	0.0065	0.016	0.016	1
10589	Endrin Aldeh□de	7421-93-4	0.13 D2	0.016	0.032	0.080	1
10589	Endrin Ketone	53494-70-5	0.16 D2	0.0040	0.0080	0.016	1
10589	Heptachlor	76-44-8	0.060 D1	0.0016	0.0056	0.0080	1
10589	Heptachlor Epoxide	1024-57-3	0.068 D1	0.0018	0.0056	0.0080	1
10589	Methox□chlor	72-43-5	0.76 D2	0.024	0.056	0.080	1
10589	Toxaphene	8001-35-2	N.D. D1	0.24	0.48	0.80	1

The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□. The following action was ta□en:
The sample was re-extracted and the QC is again outside of the acceptance limits. The data is reported from the initial trial.

Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	0.493 □	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	2.11	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.0066	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0183	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.10	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	0.0042	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	0.0053	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	82.4	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0502	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.255	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	0.0520	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	8.50	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0205	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	67.7	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.57	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0566	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	35.1	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	0.0105	0.00065	0.0016	0.0020	1

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

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Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals		**SW-846 6020A**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06042	Silver	7440-22-4	0.0530	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	99.8	0.250	1.00	4.50	5
06045	Thallium	7440-28-0	0.0020	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0278	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.0531	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.526	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	0.00087	0.000050	0.00010	0.00020	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		ng/l	ng/l	ng/l	ng/l	
12936	2378-TCDD	1746-01-6	0.20	0.0008	0.002	0.005	1
12936	12378-PeCDD	40321-76-4	1.0	0.003	0.01	0.024	1
12936	123478-HxCDD	39227-28-6	1.0	0.002	0.01	0.024	1
12936	123678-HxCDD	57653-85-7	1.0	0.002	0.01	0.024	1
12936	123789-HxCDD	19408-74-3	1.0	0.002	0.01	0.024	1
12936	1234678-HpCDD	35822-46-9	0.99	0.004	0.01	0.024	1
12936	OCDD	3268-87-9	2.0	0.034	0.069	0.10	1
12936	2378-TCDF	51207-31-9	0.19	0.0008	0.002	0.005	1
12936	12378-PeCDF	57117-41-6	1.0	0.003	0.01	0.024	1
12936	23478-PeCDF	57117-31-4	0.99	0.002	0.01	0.024	1
12936	123478-HxCDF	70648-26-9	1.0	0.002	0.01	0.024	1
12936	123678-HxCDF	57117-44-9	1.0	0.002	0.01	0.024	1
12936	123789-HxCDF	72918-21-9	1.0	0.002	0.01	0.024	1
12936	234678-HxCDF	60851-34-5	1.0	0.002	0.01	0.024	1
12936	1234678-HpCDF	67562-39-4	1.0	0.002	0.01	0.024	1
12936	1234789-HpCDF	55673-89-7	1.0	0.002	0.01	0.024	1
12936	OCDF	39001-02-0	2.1	0.006	0.019	0.048	1

Labeled Compounds	%Rec	Windows	LOD (ng/l)
13C12-2378-TCDD	72	40 - 135	0.002
13C12-12378-PeCDD	76	40 - 135	0.01
13C12-123478-HxCDD	78	40 - 135	0.01
13C12-123678-HxCDD	76	40 - 135	0.01
13C12-123789-HxCDD	70	40 - 135	0.01
13C12-1234678-HpCDD	76	40 - 135	0.01
13C12-OCDD	69	40 - 135	0.07
13C12-2378-TCDF	59	40 - 135	0.002
13C12-12378-PeCDF	69	40 - 135	0.01
13C12-23478-PeCDF	68	40 - 135	0.01
13C12-123478-HxCDF	71	40 - 135	0.01
13C12-123678-HxCDF	69	40 - 135	0.01
13C12-234678-HxCDF	60	40 - 135	0.01
13C12-123789-HxCDF	67	40 - 135	0.01
13C12-1234678-HpCDF	72	40 - 135	0.01
13C12-1234789-HpCDF	67	40 - 135	0.01
13C12-OCDF	64	40 - 135	0.02

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-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

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

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Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

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 03:26	□oel G Chachapo□a	1
11996	VOCs- 25ml Water b□8260C	SW-846 8260C 25mL purge	1	H183094AA	11/06/2018 04:09	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 03:25	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H183094AA	11/06/2018 04:08	□oel G Chachapo□a	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18305WAM026	11/08/2018 03:10	Ashle□R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18305WAN026	11/05/2018 23:21	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18305WAN026	11/02/2018 08:30	Logan M Brosemer	1
11010	8270D BNA Extraction	SW-846 3510C	1	18305WAM026	11/02/2018 08:30	Logan M Brosemer	1
10407	Herb water 8151A Master	SW-846 8151A	1	183050043A	11/07/2018 21:10	Richard A Shober	1
10591	PCBs in Water b□8082A	SW-846 8082A	1	183050010A	11/04/2018 14:05	Covenant Mutu□u	1
10589	OC Pesticides in Water	SW-846 8081B	1	183050009A	11/05/2018 15:53	Lisa A Reinert	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183050010A	11/01/2018 18:40	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183050009A	11/01/2018 18:40	Christine E Gleim	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	183050043A	11/02/2018 15:25	Eli□abeth E Donovan	1
12936	Dioxins/Furans in Water - 8290	SW-846 8290A Feb 2007 Rev 1	1	18313007	11/10/2018 13:13	Michael □iegler	1
10914	Dioxins/Furans in Water - SepF	SW-846 8290A Feb 2007 Rev 1	2	18313007	11/09/2018 11:39	Deborah M □immerman	1
13495	Thorium	SW-846 6010C	1	183061063501	11/09/2018 11:50	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06025	Arsenic	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063901D	11/05/2018 18:41	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063901B	11/08/2018 19:13	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06032	Cobalt	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063901B	11/05/2018 18:41	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I MSD Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04MSD

Tidewater, Inc.
ELLE Sample #: WW 9876336
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06043	Sodium	SW-846 6020A	1	183061063901A	11/08/2018 19:26	Bradle□M Berlot	5
06045	Thallium	SW-846 6020A	1	183061063901B	11/05/2018 18:41	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063901A	11/09/2018 19:35	Bradle□M Berlot	1
06048	Vanadium	SW-846 6020A	1	183061063901A	11/05/2018 18:41	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063901A	11/08/2018 19:13	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183130571301	11/12/2018 11:43	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063501	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063901	11/05/2018 05:32	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571305	11/02/2018 08:35	Denise L Trimb□	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	183130571301	11/12/2018 08:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW008I DUP Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04DUP

Tidewater, Inc.
ELLE Sample #: WW 9876337
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	0.0371 □	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.00043 □	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0084	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.05	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	81.4	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.00083 □	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.0024	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	7.76	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0044	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	66.2	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.58	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0035 □	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	25.6	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	91.3	0.250	1.00	4.50	5
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0015	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.00042 □	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.0104 □	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

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

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

Sample Description: **OU2-1-MW008I DUP Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-04DUP

Tidewater, Inc.
ELLE Sample #: WW 9876337
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13495	Thorium	SW-846 6010C	1	183061063501	11/09/2018 11:44	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06025	Arsenic	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063901D	11/05/2018 18:37	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063901B	11/08/2018 19:09	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06032	Cobalt	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063901B	11/05/2018 18:37	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063901A	11/08/2018 19:18	Bradle□M Berlot	5
06045	Thallium	SW-846 6020A	1	183061063901B	11/05/2018 18:37	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063901A	11/09/2018 19:31	Bradle□M Berlot	1
06048	Vanadium	SW-846 6020A	1	183061063901A	11/05/2018 18:37	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063901A	11/08/2018 19:09	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183130571301	11/12/2018 11:39	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063501	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063901	11/05/2018 05:32	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571305	11/02/2018 08:35	Denise L Trimb□	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	183130571301	11/12/2018 08:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW008I-F Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05BKG

Tidewater, Inc.
ELLE Sample #: WW 9876338
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	N.D.	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.00046 □	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0075	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.03	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	81.1	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0038 □	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.0026	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	7.28	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	63.9	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.43	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0035 □	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	24.5	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	N.D. K3K4	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	89.4	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0016	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.00030 □	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	N.D.	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13495	Thorium	SW-846 6010C	1	183061063502	11/10/2018 05:46	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I-F Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05BKG

Tidewater, Inc.
ELLE Sample #: WW 9876338
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063902D	11/08/2018 23:29	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063902B	11/08/2018 23:29	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183191063901A	11/20/2018 08:31	Choon □ Tian	1
06032	Cobalt	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063902B	11/08/2018 23:29	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06045	Thallium	SW-846 6020A	1	183061063902B	11/08/2018 23:29	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063902A	11/14/2018 10:16	Choon □ Tian	1
06048	Vanadium	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063902A	11/08/2018 23:29	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183050571306	11/05/2018 08:05	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063502	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063902	11/05/2018 05:47	□ames L Mert□	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	2	183191063901	11/16/2018 03:14	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571306	11/02/2018 09:05	Denise L Trimb□	1

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

Sample Description: **OU2-1-MW008I-F MS Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05MS

Tidewater, Inc.
ELLE Sample #: WW 9876339
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	0.519	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	2.00	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.0070	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0185	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.09	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	0.0040	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	0.0052	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	86.4	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0686	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.243	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	0.0501	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	8.44	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0155	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	65.8	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.51	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0551	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	34.4	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	0.0102	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	0.0411	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	112	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	0.0021	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0295	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.0502	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.523	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	0.00093	0.000050	0.00010	0.00020	1

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13495	Thorium	SW-846 6010C	1	183061063502	11/10/2018 05:55	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I-F MS Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05MS

Tidewater, Inc.
ELLE Sample #: WW 9876339
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063902D	11/08/2018 23:35	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063902B	11/08/2018 23:35	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183191063901A	11/20/2018 08:36	Choon □ Tian	1
06032	Cobalt	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063902B	11/08/2018 23:35	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063902A	11/14/2018 10:23	Choon □ Tian	1
06043	Sodium	SW-846 6020A	1	183061063902A	11/14/2018 10:23	Choon □ Tian	1
06045	Thallium	SW-846 6020A	1	183061063902B	11/08/2018 23:35	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063902A	11/14/2018 10:23	Choon □ Tian	1
06048	Vanadium	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063902A	11/08/2018 23:35	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183050571306	11/05/2018 08:09	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063502	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063902	11/05/2018 05:47	□ames L Mert□	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	2	183191063901	11/16/2018 03:14	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571306	11/02/2018 09:05	Denise L Trimb□	1

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

Sample Description: OU2-1-MW008I-F MSD Filtered Grab Groundwater
Great Kills Park, NY

Project Name: Great Kills Park Phase I RI OU2

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05MSD

Tidewater, Inc.
ELLE Sample #: WW 9876340
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	0.512	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	1.96	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	0.0065	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0183	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.11	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	0.0042	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	0.0051	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	84.6	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0521	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.248	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	0.0507	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	8.16	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	0.0157	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	64.7	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.50	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0556	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	33.9	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	0.0106	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	0.0413	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	115	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	0.0021	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0289	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.0505	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.541	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	0.00091	0.000050	0.00010	0.00020	1

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13495	Thorium	SW-846 6010C	1	183061063502	11/10/2018 05:57	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I-F MSD Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05MSD

Tidewater, Inc.
ELLE Sample #: WW 9876340
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063902D	11/08/2018 23:37	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063902B	11/08/2018 23:37	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183191063901A	11/20/2018 08:38	Choon □ Tian	1
06032	Cobalt	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063902B	11/08/2018 23:37	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063902A	11/14/2018 10:26	Choon □ Tian	1
06043	Sodium	SW-846 6020A	1	183061063902A	11/14/2018 10:26	Choon □ Tian	1
06045	Thallium	SW-846 6020A	1	183061063902B	11/08/2018 23:37	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063902A	11/14/2018 10:26	Choon □ Tian	1
06048	Vanadium	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063902A	11/08/2018 23:37	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183050571306	11/05/2018 08:11	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063502	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063902	11/05/2018 05:47	□ames L Mert□	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	2	183191063901	11/16/2018 03:14	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571306	11/02/2018 09:05	Denise L Trimb□	1

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

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Analysis Report

Sample Description: **OU2-1-MW008I-F DUP Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05DUP

Tidewater, Inc.
ELLE Sample #: WW 9876341
ELLE Group #: 2004155
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals Dissolved		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	N.D.	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	N.D.	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	0.0079	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	1.02	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	80.1	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	0.0017 □	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	0.0025	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	7.36	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	62.7	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	2.46	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	0.0029 □	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	24.2	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	N.D. K3K4	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	87.6	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	0.0016	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.00030 □	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	0.0064 □	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

Sample Comments

The following anal□te(s) is not covered under our DoD ELAP accreditation:
Thorium b□SW-846 6010C
This sample was field filtered for dissolved metals.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13495	Thorium	SW-846 6010C	1	183061063502	11/10/2018 05:52	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1

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

Sample Description: **OU2-1-MW008I-F DUP Filtered Grab Groundwater**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 10:40
SDG□: TID14-05DUP

Tidewater, Inc.
ELLE Sample #: WW 9876341
ELLE Group #: 2004155
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06025	Arsenic	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063902D	11/08/2018 23:33	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063902B	11/08/2018 23:33	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	2	183191063901A	11/20/2018 08:35	Choon □ Tian	1
06032	Cobalt	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063902B	11/08/2018 23:33	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06045	Thallium	SW-846 6020A	1	183061063902B	11/08/2018 23:33	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063902A	11/14/2018 10:21	Choon □ Tian	1
06048	Vanadium	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063902A	11/08/2018 23:33	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183050571306	11/05/2018 08:07	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063502	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063902	11/05/2018 05:47	□ames L Mert□	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	2	183191063901	11/16/2018 03:14	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571306	11/02/2018 09:05	Denise L Trimb□	1

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

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: **WW 9876342**
ELLE Group #: **2004155**
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	3.8 □	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	0.2 □	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	0.1 □	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	0.07 □	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: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
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.

The referenced method allows a maximum of 20□ of the anal□tes in the calibration to exceed the 20□ Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following anal□te(s) is estimated:
Acetone.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	Aniline	62-53-3	N.D.	3	9	10	1
14241	Ben□□l alcohol	100-51-6	N.D.	10	20	30	1
14241	4-Bromophen□l-phen□lether	101-55-3	N.D.	0.5	1	2	1
14241	Carba□ole	86-74-8	N.D.	0.5	1	2	1
14241	4-Chloro-3-meth□lphenol	59-50-7	N.D.	0.5	1	2	1
14241	4-Chloroaniline	106-47-8	N.D.	4	9	10	1
14241	bis(2-Chloroethox□)methane	111-91-1	N.D.	0.5	1	2	1
14241	2-Chloronaphthalene	91-58-7	N.D.	0.4	0.8	1	1
14241	2-Chlorophenol	95-57-8	N.D.	0.5	1	2	1
14241	4-Chlorophen□l-phen□lether	7005-72-3	N.D.	0.5	1	2	1
14241	2□2□-ox□bis(1-Chloropropane)	108-60-1	N.D.	0.5	1	2	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.						
14241	Diben□ofuran	132-64-9	N.D.	0.5	1	2	1
14241	1□2-Dichloroben□ene	95-50-1	N.D.	0.5	1	2	1
14241	1□3-Dichloroben□ene	541-73-1	N.D.	0.5	1	2	1
14241	1□4-Dichloroben□ene	106-46-7	N.D.	0.5	1	2	1
14241	3□3□-Dichloroben□idine	91-94-1	N.D.	3	9	10	1

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

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14241	2□4-Dichlorophenol	120-83-2	N.D.	0.5	1	2	1
14241	Dieth□lphthalate	84-66-2	N.D.	2	4	5	1
14241	2□4-Dimeth□lphenol	105-67-9	N.D.	3	9	10	1
14241	Dimeth□lphthalate	131-11-3	N.D.	2	4	5	1
14241	4□6-Dinitro-2-meth□lphenol	534-52-1	N.D.	8	20	21	1
14241	2□4-Dinitrophenol	51-28-5	N.D.	14	28	30	1
14241	2□4-Dinitrotoluene	121-14-2	N.D.	1	2	5	1
14241	2□6-Dinitrotoluene	606-20-2	N.D.	0.5	1	2	1
14241	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	2	1
14241	Hexachloroc□clopentadiene	77-47-4	N.D.	5	10	11	1
14241	Hexachloroethane	67-72-1	N.D.	1	2	5	1
14241	Isophorone	78-59-1	N.D.	0.5	1	2	1
14241	2-Meth□lnaphthalene	91-57-6	N.D.	0.1	0.2	0.5	1
14241	2-Meth□lphenol	95-48-7	N.D.	0.5	1	2	1
14241	4-Meth□lphenol	106-44-5	N.D.	0.5	1	2	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.						
14241	2-Nitroaniline	88-74-4	N.D.	2	6	7	1
14241	3-Nitroaniline	99-09-2	N.D.	3	6	7	1
14241	4-Nitroaniline	100-01-6	N.D.	0.9	2	3	1
14241	Nitroben□ene	98-95-3	N.D.	0.5	1	2	1
14241	2-Nitrophenol	88-75-5	N.D.	3	9	10	1
14241	4-Nitrophenol	100-02-7	N.D.	10	20	30	1
14241	N-Nitroso-di-n-prop□lamine	621-64-7	N.D.	0.7	2	3	1
14241	N-Nitrosodiphen□lamine	86-30-6	N.D.	0.7	2	3	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.						
14241	Di-n-oct□lphthalate	117-84-0	N.D.	5	10	11	1
14241	Pentachlorophenol	87-86-5	N.D.	1	4	5	1
14241	Phenol	108-95-2	N.D.	0.5	1	2	1
14241	P□ridine	110-86-1	N.D.	2	4	5	1
14241	1□2□4-Trichloroben□ene	120-82-1	N.D.	0.5	1	2	1
14241	2□4□5-Trichlorophenol	95-95-4	N.D.	0.5	1	2	1
14241	2□4□6-Trichlorophenol	88-06-2	N.D.	0.5	1	2	1
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Acenaphthene	83-32-9	N.D.	0.01	0.03	0.05	1
14244	Acenaphth□lene	208-96-8	N.D.	0.01	0.03	0.05	1
14244	Anthracene	120-12-7	N.D.	0.01	0.03	0.05	1
14244	Ben□o(a)anthracene	56-55-3	N.D.	0.01	0.03	0.05	1
14244	Ben□o(a)p□rene	50-32-8	N.D.	0.01	0.03	0.05	1

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

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
GC/MS Semivolatiles	**SW-846 8270D SIM**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
14244	Ben□o(b)fluoranthene	205-99-2	N.D.	0.01	0.03	0.05	1
14244	Ben□o(g□h□i)per□lene	191-24-2	N.D.	0.01	0.03	0.05	1
14244	Ben□o(□)fluoranthene	207-08-9	N.D.	0.01	0.03	0.05	1
14244	Di-n-but□lphthalate	84-74-2	0.3 □	0.05	0.1	1	1
14244	bis(2-Chloroeth□l)ether	111-44-4	N.D.	0.02	0.06	0.07	1
14244	Chr□sene	218-01-9	N.D.	0.01	0.03	0.05	1
14244	Diben□(a□h)anthracene	53-70-3	N.D.	0.02	0.06	0.07	1
14244	1□4-Dioxane	123-91-1	N.D.	0.1	0.2	0.3	1
14244	bis(2-Eth□lhex□l)phthalate	117-81-7	0.3 □	0.08	0.2	1	1
14244	Fluoranthene	206-44-0	N.D.	0.01	0.03	0.05	1
14244	Fluorene	86-73-7	N.D.	0.01	0.03	0.05	1
14244	Hexachloroben□ene	118-74-1	N.D.	0.01	0.03	0.05	1
14244	Indeno(1□2□3-cd)p□rene	193-39-5	N.D.	0.01	0.03	0.05	1
14244	Naphthalene	91-20-3	0.04 □	0.03	0.06	0.07	1
14244	Phenanthrene	85-01-8	N.D.	0.03	0.06	0.07	1
14244	P□rene	129-00-0	N.D.	0.01	0.03	0.05	1
	The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□ Since the recover□is high and the target anal□te(s) was not detected in the sample□the data is reported.						
Herbicides	**SW-846 8151A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10407	2□4-D	94-75-7	N.D. D1	0.24	0.47	0.56	1
10407	Dalapon	75-99-0	N.D. D2	1.7	3.4	3.8	1
10407	2□4-DB	94-82-6	N.D. D1	0.59	1.2	1.4	1
10407	Dicamba	1918-00-9	N.D. D1	0.075	0.15	0.28	1
10407	Dinoseb	88-85-7	N.D. D1	0.17	0.38	0.47	1
	The QC window for dinoseb is advisor□due to the erratic performance of the anal□te using this method.						
10407	2□4-DP (Dichloroprop)	120-36-5	N.D. D1	0.15	0.30	0.47	1
10407	MCPA	94-74-6	N.D. D1	47	94	190	1
10407	MCPP	93-65-2	N.D. D1	47	94	190	1
10407	2□4□5-T	93-76-5	N.D. D2	0.061	0.12	0.14	1
10407	2□4□5-TP	93-72-1	N.D. D2	0.0094	0.028	0.047	1
PCBs	**SW-846 8082A**		**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1016	12674-11-2	N.D. D2	0.079	0.24	0.40	1
10591	PCB-1221	11104-28-2	N.D. D1	0.079	0.24	0.40	1
10591	PCB-1232	11141-16-5	N.D. D1	0.16	0.32	0.40	1
10591	PCB-1242	53469-21-9	N.D. D1	0.079	0.24	0.40	1
10591	PCB-1248	12672-29-6	N.D. D2	0.079	0.24	0.40	1
10591	PCB-1254	11097-69-1	N.D. D1	0.079	0.24	0.40	1
10591	PCB-1260	11096-82-5	N.D. D1	0.12	0.24	0.40	1

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

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
PCBs		**SW-846 8082A**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10591	PCB-1262	37324-23-5	N.D. D1	0.16	0.32	0.40	1
10591	PCB-1268	11100-14-4	N.D. D1	0.13	0.25	0.40	1
Pesticides		**SW-846 8081B**	**ug/l**	**ug/l**	**ug/l**	**ug/l**	
10589	Aldrin	309-00-2	N.D. D1	0.0020	0.0069	0.0099	1
10589	Alpha BHC	319-84-6	N.D. D1	0.0030	0.0069	0.0099	1
10589	Beta BHC	319-85-7	N.D. D2	0.0034	0.0069	0.0099	1
10589	Gamma BHC - Lindane	58-89-9	N.D. D1	0.0020	0.0069	0.0099	1
10589	Alpha Chlordane	5103-71-9	N.D. D2	0.0030	0.0069	0.0099	1
10589	Chlordane	57-74-9	N.D. D2	0.16	0.32	0.50	1
10589	Gamma Chlordane	5103-74-2	N.D. D1	0.0069	0.020	0.020	1
10589	p□p-DDD	72-54-8	N.D. D1	0.0050	0.0099	0.020	1
10589	p□p-DDE	72-55-9	N.D. D1	0.0050	0.0099	0.020	1
10589	p□p-DDT	50-29-3	N.D. D1	0.0052	0.0099	0.020	1
10589	Delta BHC	319-86-8	N.D. D2	0.0034	0.0069	0.0099	1
10589	Dieldrin	60-57-1	N.D. D1	0.0053	0.0099	0.020	1
10589	Endosulfan I	959-98-8	N.D. D1	0.0043	0.0089	0.0099	1
10589	Endosulfan II	33213-65-9	N.D. D1	0.015	0.030	0.030	1
10589	Endosulfan Sulfate	1031-07-8	N.D. D1	0.0058	0.012	0.020	1
10589	Endrin	72-20-8	N.D. D2	0.0080	0.020	0.020	1
10589	Endrin Aldeh□de	7421-93-4	N.D. D1	0.020	0.040	0.099	1
10589	Endrin Ketone	53494-70-5	N.D. D1	0.0050	0.0099	0.020	1
10589	Heptachlor	76-44-8	N.D. D2	0.0020	0.0069	0.0099	1
10589	Heptachlor Epoxide	1024-57-3	N.D. D1	0.0023	0.0069	0.0099	1
10589	Methox□chlor	72-43-5	N.D. D2	0.030	0.069	0.099	1
10589	Toxaphene	8001-35-2	N.D. D1	0.30	0.60	0.99	1

The recover□for a target anal□te(s) in the Laborator□Control Spi□e(s) is outside the QC acceptance limits as noted on the QC Summar□. The client was contacted and the data reported.

The recover□for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summar□. The client was contacted and the data reported.

Metals		**SW-846 6010C**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
13495	Thorium	7440-29-1	N.D.	0.205	0.400	0.500	1
		SW-846 6020A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06023	Aluminum	7429-90-5	N.D.	0.0197	0.0500	0.400	1
06024	Antimon□	7440-36-0	N.D.	0.00041	0.0010	0.0020	1
06025	Arsenic	7440-38-2	N.D.	0.00068	0.0016	0.0020	1
06026	Barium	7440-39-3	N.D.	0.00075	0.0020	0.0040	1
06027	Ber□llium	7440-41-7	N.D.	0.000091	0.00025	0.00050	1

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

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Analysis Report

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Metals		**SW-846 6020A**	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
06028	Cadmium	7440-43-9	N.D.	0.00015	0.00050	0.0010	1
06029	Calcium	7440-70-2	N.D. K1K2K4	0.0598	0.200	0.700	1
06031	Chromium	7440-47-3	N.D.	0.00070	0.0020	0.0040	1
06032	Cobalt	7440-48-4	N.D.	0.00016	0.00050	0.0010	1
06033	Copper	7440-50-8	N.D.	0.0099	0.0200	0.0400	1
06034	Iron	7439-89-6	N.D.	0.0228	0.0800	0.100	1
06035	Lead	7439-92-1	N.D.	0.0011	0.0024	0.0030	1
06036	Magnesium	7439-95-4	N.D.	0.0104	0.0250	0.100	1
06037	Manganese	7439-96-5	N.D.	0.0049	0.0080	0.0100	1
06039	Nic□el	7440-02-0	N.D.	0.00060	0.0020	0.0040	1
06040	Potassium	7440-09-7	N.D.	0.107	0.200	0.400	1
06041	Selenium	7782-49-2	N.D.	0.00065	0.0016	0.0020	1
06042	Silver	7440-22-4	N.D.	0.00017	0.00040	0.00050	1
06043	Sodium	7440-23-5	N.D.	0.0500	0.200	0.900	1
06045	Thallium	7440-28-0	N.D.	0.00011	0.00025	0.00050	1
13501	Uranium	7440-61-1	N.D.	0.00011	0.00050	0.00050	1
06048	Vanadium	7440-62-2	0.00052 □	0.00024	0.00050	0.0010	1
06049	□inc	7440-66-6	N.D. K1K2K4	0.0062	0.0120	0.0150	1
		SW-846 7470A	**mg/l**	**mg/l**	**mg/l**	**mg/l**	
00259	Mercur□	7439-97-6	N.D.	0.000050	0.00010	0.00020	1

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

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Dioxins/Furans	**SW-846 8290A Feb 2007 Rev 1**		ng/l	ng/l	ng/l	ng/l	
12936	2378-TCDD	1746-01-6	N.D.	0.0008	0.002	0.005	1
12936	12378-PeCDD	40321-76-4	N.D.	0.003	0.01	0.024	1
12936	123478-HxCDD	39227-28-6	N.D.	0.002	0.01	0.024	1
12936	123678-HxCDD	57653-85-7	N.D.	0.002	0.01	0.024	1
12936	123789-HxCDD	19408-74-3	N.D.	0.002	0.01	0.024	1
12936	1234678-HpCDD	35822-46-9	N.D.	0.004	0.01	0.024	1
12936	OCDD	3268-87-9	N.D.	0.034	0.069	0.10	1
12936	2378-TCDF	51207-31-9	N.D.	0.0008	0.002	0.005	1
12936	12378-PeCDF	57117-41-6	N.D.	0.003	0.01	0.024	1
12936	23478-PeCDF	57117-31-4	N.D.	0.002	0.01	0.024	1
12936	123478-HxCDF	70648-26-9	N.D.	0.002	0.01	0.024	1
12936	123678-HxCDF	57117-44-9	N.D.	0.002	0.01	0.024	1
12936	123789-HxCDF	72918-21-9	N.D.	0.002	0.01	0.024	1
12936	234678-HxCDF	60851-34-5	N.D.	0.002	0.01	0.024	1
12936	1234678-HpCDF	67562-39-4	N.D.	0.002	0.01	0.024	1
12936	1234789-HpCDF	55673-89-7	N.D.	0.002	0.01	0.024	1
12936	OCDF	39001-02-0	N.D.	0.006	0.019	0.048	1

Labeled Compounds	%Rec	Windows	LOD (ng/l)
13C12-2378-TCDD	62	40 - 135	0.002
13C12-12378-PeCDD	71	40 - 135	0.01
13C12-123478-HxCDD	76	40 - 135	0.01
13C12-123678-HxCDD	70	40 - 135	0.01
13C12-123789-HxCDD	67	40 - 135	0.01
13C12-1234678-HpCDD	72	40 - 135	0.01
13C12-OCDD	70	40 - 135	0.07
13C12-2378-TCDF	56	40 - 135	0.002
13C12-12378-PeCDF	63	40 - 135	0.01
13C12-23478-PeCDF	66	40 - 135	0.01
13C12-123478-HxCDF	61	40 - 135	0.01
13C12-123678-HxCDF	59	40 - 135	0.01
13C12-234678-HxCDF	57	40 - 135	0.01
13C12-123789-HxCDF	68	40 - 135	0.01
13C12-1234678-HpCDF	65	40 - 135	0.01
13C12-1234789-HpCDF	65	40 - 135	0.01
13C12-OCDF	62	40 - 135	0.02

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: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	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: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

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 04:31	□oel G Chachapo□a	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H183094AA	11/06/2018 04:30	□oel G Chachapo□a	1
14241	SVOAs 8270D MINI	SW-846 8270D	1	18305WAM026	11/08/2018 03:38	Ashle□R Transue	1
14244	SIM SVOAs 8270D MINI	SW-846 8270D SIM	1	18305WAN026	11/05/2018 23:50	Catherine E Bachman	1
10466	BNA Water Extraction SIM	SW-846 3510C	1	18305WAN026	11/02/2018 08:30	Logan M Brosemer	1
11010	8270D BNA Extraction	SW-846 3510C	1	18305WAM026	11/02/2018 08:30	Logan M Brosemer	1
10407	Herb water 8151A Master	SW-846 8151A	1	183050043A	11/07/2018 22:16	Richard A Shober	1
10591	PCBs in Water b□8082A	SW-846 8082A	1	183050010A	11/04/2018 14:16	Covenant Mutu□u	1
10589	OC Pesticides in Water	SW-846 8081B	1	183050009A	11/05/2018 16:06	Andrea L □ones	1
11121	PCB Waters Update IV Ext	SW-846 3510C	1	183050010A	11/01/2018 18:40	Christine E Gleim	1
11120	Pesticide Waters Update IV Ext	SW-846 3510C	1	183050009A	11/01/2018 18:40	Christine E Gleim	1
00816	Water Sample Herbicide Extract	SW-846 8151A	1	183050043A	11/02/2018 15:25	Eli□abeth E Donovan	1
12936	Dioxins/Furans in Water - 8290	SW-846 8290A Feb 2007 Rev 1	1	18313007	11/10/2018 14:09	Michael □iegler	1
10914	Dioxins/Furans in Water - SepF	SW-846 8290A Feb 2007 Rev 1	2	18313007	11/09/2018 11:39	Deborah M □immerman	1
13495	Thorium	SW-846 6010C	1	183061063501	11/09/2018 12:20	Lisa □Coo□e	1
06023	Aluminum	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06024	Antimon□	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06025	Arsenic	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06026	Barium	SW-846 6020A	1	183061063901D	11/05/2018 19:05	Bradle□M Berlot	1
06027	Ber□llium	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06028	Cadmium	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06029	Calcium	SW-846 6020A	1	183061063901B	11/05/2018 19:05	Bradle□M Berlot	1
06031	Chromium	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06032	Cobalt	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06033	Copper	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06034	Iron	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06035	Lead	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06036	Magnesium	SW-846 6020A	1	183061063901A	11/08/2018 19:33	Bradle□M Berlot	1
06037	Manganese	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06039	Nic□el	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06040	Potassium	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06041	Selenium	SW-846 6020A	1	183061063901B	11/05/2018 19:05	Bradle□M Berlot	1
06042	Silver	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06043	Sodium	SW-846 6020A	1	183061063901A	11/08/2018 19:33	Bradle□M Berlot	1
06045	Thallium	SW-846 6020A	1	183061063901B	11/05/2018 19:05	Bradle□M Berlot	1
13501	Uranium	SW-846 6020A	1	183061063901A	11/09/2018 19:40	Bradle□M Berlot	1

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

Sample Description: **OU2EB103018-001 Grab Water**
Great Kills Park, NY

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

Submittal Date/Time: 10/31/2018 10:05
Collection Date/Time: 10/30/2018 15:10
SDG□: TID14-06EB

Tidewater, Inc.
ELLE Sample #: WW 9876342
ELLE Group #: 2004155
Matrix: Water

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06048	Vanadium	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
06049	□inc	SW-846 6020A	1	183061063901A	11/05/2018 19:05	Bradle□M Berlot	1
00259	Mercur□	SW-846 7470A	1	183130571301	11/12/2018 11:47	Damar□Valentin	1
10635	ICP-WW□3005A (tot rec) - U4	SW-846 3005A	1	183061063501	11/05/2018 06:18	Annamaria Kuhns	1
10639	ICPMS - Water□3020A - U4	SW-846 3020A	1	183061063901	11/05/2018 05:32	□ames L Mert□	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	183050571305	11/02/2018 08:35	Denise L Trimb□	1
05713	WW SW846 Hg Digest	SW-846 7470A	2	183130571301	11/12/2018 08:05	Denise L Trimb□	1

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

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Quality Control Summary

Client Name: Tidewater Inc.
Reported: 12/03/2018 11:45

Group Number: 2004155

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
	ug/l	ug/l	ug/l	ug/l
Batch number: H183094AA	Sample number(s): 9876331-9876332 9876334-9876336 9876342			
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
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

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: 12/03/2018 11:45

Group Number: 2004155

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	ug/l	ug/l	ug/l	ug/l
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
Batch number: 18305WAM026	Sample number(s): 9876332 9876334-9876336 9876342			
Aniline	N.D.	3	9	10
Ben l alcohol	N.D.	10	20	30
4-Bromophen l-phen lether	N.D.	0.5	1	2
Carba ole	N.D.	0.5	1	2
4-Chloro-3-meth lphenol	N.D.	0.5	1	2
4-Chloroaniline	N.D.	4	9	10
bis(2-Chloroethox)methane	N.D.	0.5	1	2
2-Chloronaphthalene	N.D.	0.4	0.8	1
2-Chlorophenol	N.D.	0.5	1	2
4-Chlorophen l-phen lether	N.D.	0.5	1	2
2 2 -ox bis(1-Chloropropane)	N.D.	0.5	1	2
Diben ofuran	N.D.	0.5	1	2
1 2-Dichloroben ene	N.D.	0.5	1	2
1 3-Dichloroben ene	N.D.	0.5	1	2
1 4-Dichloroben ene	N.D.	0.5	1	2
3 3 -Dichloroben idine	N.D.	3	9	10
2 4-Dichlorophenol	N.D.	0.5	1	2
Dieth lphthalate	N.D.	2	4	5
2 4-Dimeth lphenol	N.D.	3	9	10
Dimeth lphthalate	N.D.	2	4	5
4 6-Dinitro-2-meth lphenol	N.D.	8	20	21
2 4-Dinitrophenol	N.D.	14	28	30
2 4-Dinitrotoluene	N.D.	1	2	5
2 6-Dinitrotoluene	N.D.	0.5	1	2
Hexachlorobutadiene	N.D.	0.5	1	2
Hexachloroc clopentadiene	N.D.	5	10	11
Hexachloroethane	N.D.	1	2	5
Isophorone	N.D.	0.5	1	2
2-Meth lnaphthalene	N.D.	0.1	0.2	0.5
2-Meth lphenol	N.D.	0.5	1	2
4-Meth lphenol	N.D.	0.5	1	2
2-Nitroaniline	N.D.	2	6	7
3-Nitroaniline	N.D.	3	6	7

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: 2004155
Reported: 12/03/2018 11:45

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	ug/l	ug/l	ug/l	ug/l
4-Nitroaniline	N.D.	0.9	2	3
Nitroben ene	N.D.	0.5	1	2
2-Nitrophenol	N.D.	3	9	10
4-Nitrophenol	N.D.	10	20	30
N-Nitroso-di-n-prop lamine	N.D.	0.7	2	3
N-Nitrosodiphen lamine	N.D.	0.7	2	3
Di-n-oct lphthalate	N.D.	5	10	11
Pentachlorophenol	N.D.	1	4	5
Phenol	N.D.	0.5	1	2
P ridine	N.D.	2	4	5
1 2 4-Trichloroben ene	N.D.	0.5	1	2
2 4 5-Trichlorophenol	N.D.	0.5	1	2
2 4 6-Trichlorophenol	N.D.	0.5	1	2
Batch number: 18305WAN026	Sample number(s): 9876332 9876334-9876336 9876342			
Acenaphthene	N.D.	0.01	0.03	0.05
Acenaphth lene	N.D.	0.01	0.03	0.05
Anthracene	N.D.	0.01	0.03	0.05
Ben o(a)anthracene	N.D.	0.01	0.03	0.05
Ben o(a)p rene	N.D.	0.01	0.03	0.05
Ben o(b)fluoranthene	0.01	0.01	0.03	0.05
Ben o(g h i)per lene	0.01	0.01	0.03	0.05
Ben o( )fluoranthene	0.01	0.01	0.03	0.05
Di-n-but lphthalate	0.08	0.05	0.1	1
bis(2-Chloroeth l)ether	N.D.	0.02	0.06	0.07
Chr sene	N.D.	0.01	0.03	0.05
Diben (a h)anthracene	N.D.	0.02	0.06	0.07
1 4-Dioxane	N.D.	0.1	0.2	0.3
bis(2-Eth lhex l)phthalate	0.3	0.08	0.2	1
Fluoranthene	N.D.	0.01	0.03	0.05
Fluorene	N.D.	0.01	0.03	0.05
Hexachloroben ene	N.D.	0.01	0.03	0.05
Indeno(1 2 3-cd)p rene	0.01	0.01	0.03	0.05
Naphthalene	N.D.	0.03	0.06	0.07
Phenanthrene	N.D.	0.03	0.06	0.07
P rene	N.D.	0.01	0.03	0.05
Batch number: 183050043A	Sample number(s): 9876332 9876334-9876336 9876342			
2 4-D	N.D.	0.25	0.50	0.60
Dalapon	N.D.	1.8	3.6	4.0
2 4-DB	N.D.	0.63	1.3	1.5
Dicamba	N.D.	0.080	0.16	0.30
Dinoseb	N.D.	0.18	0.40	0.50
2 4-DP (Dichloroprop)	N.D.	0.16	0.32	0.50
MCPA	N.D.	50	100	200
MCPP	N.D.	50	100	200

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: 12/03/2018 11:45

Group Number: 2004155

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	ug/l	ug/l	ug/l	ug/l
2 4 5-T	N.D.	0.065	0.13	0.15
2 4 5-TP	N.D.	0.010	0.030	0.050
Batch number: 183050010A	Sample number(s): 9876332 9876334-9876336 9876342			
PCB-1016	N.D.	0.080	0.24	0.40
PCB-1221	N.D.	0.080	0.24	0.40
PCB-1232	N.D.	0.16	0.32	0.40
PCB-1242	N.D.	0.080	0.24	0.40
PCB-1248	N.D.	0.080	0.24	0.40
PCB-1254	N.D.	0.080	0.24	0.40
PCB-1260	N.D.	0.12	0.24	0.40
PCB-1262	N.D.	0.16	0.32	0.40
PCB-1268	N.D.	0.13	0.26	0.40
Batch number: 183050009A	Sample number(s): 9876332 9876334-9876336 9876342			
Aldrin	N.D.	0.0016	0.0056	0.0080
Alpha BHC	N.D.	0.0024	0.0056	0.0080
Beta BHC	N.D.	0.0027	0.0056	0.0080
Gamma BHC - Lindane	N.D.	0.0016	0.0056	0.0080
Alpha Chlordane	N.D.	0.0024	0.0056	0.0080
Chlordane	N.D.	0.13	0.26	0.40
Gamma Chlordane	N.D.	0.0056	0.016	0.016
p p-DDD	N.D.	0.0040	0.0080	0.016
p p-DDE	N.D.	0.0040	0.0080	0.016
p p-DDT	N.D.	0.0042	0.0080	0.016
Delta BHC	N.D.	0.0027	0.0056	0.0080
Dieldrin	N.D.	0.0042	0.0080	0.016
Endosulfan I	N.D.	0.0034	0.0072	0.0080
Endosulfan II	N.D.	0.012	0.024	0.024
Endosulfan Sulfate	N.D.	0.0046	0.0096	0.016
Endrin	N.D.	0.0065	0.016	0.016
Endrin Aldeh de	N.D.	0.016	0.032	0.080
Endrin Ketone	N.D.	0.0040	0.0080	0.016
Heptachlor	N.D.	0.0016	0.0056	0.0080
Heptachlor Epoxide	N.D.	0.0018	0.0056	0.0080
Methox chlor	N.D.	0.024	0.056	0.080
Toxaphene	N.D.	0.24	0.48	0.80
	mg/l	mg/l	mg/l	mg/l
Batch number: 183050571306	Sample number(s): 9876333 9876338-9876341			
Mercur	N.D.	0.000050	0.00010	0.00020
Batch number: 183061063501	Sample number(s): 9876332 9876334-9876337 9876342			
Thorium	N.D.	0.205	0.400	0.500
Batch number: 183061063502	Sample number(s): 9876333 9876338-9876341			
Thorium	N.D.	0.205	0.400	0.500

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: 12/03/2018 11:45

Group Number: 2004155

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/l	mg/l	mg/l	mg/l
Batch number: 183061063901A	Sample number(s): 9876332 9876334-9876337 9876342			
Aluminum	N.D.	0.0197	0.0500	0.400
Antimon	N.D.	0.00041	0.0010	0.0020
Arsenic	N.D.	0.00068	0.0016	0.0020
Ber llium	N.D.	0.000091	0.00025	0.00050
Cadmium	N.D.	0.00015	0.00050	0.0010
Chromium	N.D.	0.00070	0.0020	0.0040
Cobalt	N.D.	0.00016	0.00050	0.0010
Copper	N.D.	0.0099	0.0200	0.0400
Iron	N.D.	0.0228	0.0800	0.100
Lead	N.D.	0.0011	0.0024	0.0030
Magnesium	N.D.	0.0104	0.0250	0.100
Manganese	N.D.	0.0049	0.0080	0.0100
Nic el	N.D.	0.00060	0.0020	0.0040
Potassium	N.D.	0.107	0.200	0.400
Silver	N.D.	0.00017	0.00040	0.00050
Sodium	N.D.	0.0500	0.200	0.900
Uranium	N.D.	0.00011	0.00050	0.00050
Vanadium	N.D.	0.00024	0.00050	0.0010
inc	N.D.	0.0062	0.0120	0.0150
Batch number: 183061063901B	Sample number(s): 9876332 9876334-9876337 9876342			
Calcium	N.D.	0.0598	0.200	0.700
Selenium	N.D.	0.00065	0.0016	0.0020
Thallium	N.D.	0.00011	0.00025	0.00050
Batch number: 183061063901D	Sample number(s): 9876332 9876334-9876337 9876342			
Barium	N.D.	0.00075	0.0020	0.0040
Batch number: 183061063902A	Sample number(s): 9876333 9876338-9876341			
Aluminum	N.D.	0.0197	0.0500	0.400
Antimon	N.D.	0.00041	0.0010	0.0020
Arsenic	N.D.	0.00068	0.0016	0.0020
Ber llium	N.D.	0.000091	0.00025	0.00050
Cadmium	N.D.	0.00015	0.00050	0.0010
Cobalt	N.D.	0.00016	0.00050	0.0010
Copper	N.D.	0.0099	0.0200	0.0400
Iron	N.D.	0.0228	0.0800	0.100
Lead	N.D.	0.0011	0.0024	0.0030
Magnesium	N.D.	0.0104	0.0250	0.100
Manganese	N.D.	0.0049	0.0080	0.0100
Nic el	0.0010	0.00060	0.0020	0.0040
Potassium	N.D.	0.107	0.200	0.400
Silver	N.D.	0.00017	0.00040	0.00050
Sodium	N.D.	0.0500	0.200	0.900
Uranium	N.D.	0.00011	0.00050	0.00050

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: 12/03/2018 11:45

Group Number: 2004155

Method Blank (continued)

Analysis Name	Result	DL**	LOD	LOQ
	mg/l	mg/l	mg/l	mg/l
Vanadium	N.D.	0.00024	0.00050	0.0010
inc	N.D.	0.0062	0.0120	0.0150
Batch number: 183061063902B	Sample number(s): 9876333 9876338-9876341			
Calcium	N.D.	0.0598	0.200	0.700
Selenium	N.D.	0.00065	0.0016	0.0020
Thallium	N.D.	0.00011	0.00025	0.00050
Batch number: 183061063902D	Sample number(s): 9876333 9876338-9876341			
Barium	N.D.	0.00075	0.0020	0.0040
Batch number: 183130571301	Sample number(s): 9876332 9876334-9876337 9876342			
Mercur	N.D.	0.000050	0.00010	0.00020
Batch number: 183191063901A	Sample number(s): 9876333 9876338-9876341			
Chromium	0.0018	0.00070	0.0020	0.0040

Analysis Name	Result	DL**	LOD	LOQ
	ng/l	ng/l	ng/l	ng/l
Batch number: 18313007	Sample number(s): 9876332 9876334-9876336 9876342			
2378-TCDD	N.D.	0.0009	0.002	0.005
12378-PeCDD	N.D.	0.003	0.010	0.025
123478-HxCDD	N.D.	0.003	0.010	0.025
123678-HxCDD	N.D.	0.003	0.010	0.025
123789-HxCDD	N.D.	0.003	0.010	0.025
1234678-HpCDD	N.D.	0.005	0.010	0.025
OCDD	N.D.	0.036	0.073	0.11
2378-TCDF	N.D.	0.0008	0.002	0.005
12378-PeCDF	N.D.	0.003	0.010	0.025
23478-PeCDF	N.D.	0.003	0.010	0.025
123478-HxCDF	N.D.	0.003	0.010	0.025
123678-HxCDF	N.D.	0.003	0.010	0.025
123789-HxCDF	N.D.	0.003	0.010	0.025
234678-HxCDF	N.D.	0.003	0.010	0.025
1234678-HpCDF	N.D.	0.003	0.010	0.025
1234789-HpCDF	N.D.	0.003	0.010	0.025
OCDF	N.D.	0.006	0.020	0.050

LCS/LCSD

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
Batch number: H183094AA	Sample number(s): 9876331-9876332 9876334-9876336 9876342								

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.
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(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 12/03/2018 11:45

Group Number: 2004155

LCS/LCSD

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
Acetone	37.5	29.68			79		39-160		
Ben ene	5.00	4.53			91		79-120		
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		

Outside of specification
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(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 12/03/2018 11:45

Group Number: 2004155

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
1 1 2-Trichloroethane	5.00	5.18			104		80-119		
Trichloroethene	5.00	4.52			90		79-123		
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		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18305WAM026	Sample number(s): 9876332 9876334-9876336 9876342								
Aniline	50	26.75			54		29-101		
Ben l alcohol	50	42.42			85		31-112		
4-Bromophen l-phen lether	50	45.75			92		55-124		
Carba ole	50	46.2			92		60-122		
4-Chloro-3-meth lphenol	50	43.99			88		52-119		
4-Chloroaniline	50	33.98			68		33-117		
bis(2-Chloroethox)methane	50	43.37			87		48-120		
2-Chloronaphthalene	50	43.21			86		40-116		
2-Chlorophenol	50	40.58			81		38-117		
4-Chlorophen l-phen lether	50	41.38			83		53-121		
2 2 -ox bis(1-Chloropropane)	50	40.36			81		48-118		
Diben ofuran	50	42.84			86		53-118		
1 2-Dichloroben ene	50	38.94			78		32-111		
1 3-Dichloroben ene	50	37.05			74		28-110		
1 4-Dichloroben ene	50	38.15			76		29-112		
3 3 -Dichloroben idine	50	38.04			76		27-129		
2 4-Dichlorophenol	50	42.47			85		47-121		
Dieth lphthalate	50	37.13			74		56-125		
2 4-Dimeth lphenol	50	34.64			69		31-124		
Dimeth lphthalate	50	38.76			78		45-127		
4 6-Dinitro-2-meth lphenol	50	41.5			83		44-137		
2 4-Dinitrophenol	100	78.11			78		23-143		
2 4-Dinitrotoluene	50	40.74			81		57-128		
2 6-Dinitrotoluene	50	44.2			88		57-124		
Hexachlorobutadiene	50	36.91			74		22-124		
Hexachloroc clopentadiene	100	45.04			45		10-117		
Hexachloroethane	50	34.77			70		21-115		
Isophorone	50	44.63			89		42-124		
2-Meth lnaphthalene	50	41.73			83		40-121		
2-Meth lphenol	50	39.3			79		30-117		
4-Meth lphenol	50	37.71			75		25-120		
2-Nitroaniline	50	46.15			92		55-127		
3-Nitroaniline	50	36.39			73		41-128		
4-Nitroaniline	50	33.47			67		53-111		
Nitroben ene	50	42.17			84		45-121		
2-Nitrophenol	50	42.01			84		47-123		

Outside of specification
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(3) The surrogate spi e amount was less than the LOD.

Quality Control Summary

Client Name: Tidewater Inc.
Reported: 12/03/2018 11:45

Group Number: 2004155

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
4-Nitrophenol	50	19.98			40		28-88		
N-Nitroso-di-n-prop lamine	50	43.3			87		49-119		
N-Nitrosodiphen lamine	50	49.34			99		51-123		
Di-n-oct lphthalate	50	37.7			75		51-140		
Pentachlorophenol	50	40.49			81		35-138		
Phenol	50	23.14			46		23-82		
P ridine	50	22.44			45		13-83		
1 2 4-Trichloroben ene	50	38.87			78		29-116		
2 4 5-Trichlorophenol	50	45.71			91		53-123		
2 4 6-Trichlorophenol	50	45.55			91		50-125		
Batch number: 18305WAN026	Sample number(s): 9876332 9876334-9876336 9876342								
Acenaphthene	1.00	0.934			93		48-114		
Acenaphth lene	1.00	0.894			89		35-121		
Anthracene	1.00	0.833			83		53-119		
Ben o(a)anthracene	1.00	0.991			99		59-120		
Ben o(a)p rene	1.00	1.02			102		53-120		
Ben o(b)fluoranthene	1.00	1.03			103		53-126		
Ben o(g h i)per lene	1.00	0.949			95		44-128		
Ben o( )fluoranthene	1.00	1.02			102		54-125		
Di-n-but lphthalate	1.00	1.07			107		60-145		
bis(2-Chloroeth l)ether	1.00	1.23			123		40-116		
Chr sene	1.00	0.968			97		57-120		
Diben (a h)anthracene	1.00	0.974			97		44-131		
1 4-Dioxane	1.00	0.713			71		10-113		
bis(2-Eth lhex l)phthalate	1.00	1.06			106		55-173		
Fluoranthene	1.00	0.861			86		58-120		
Fluorene	1.00	0.875			88		50-118		
Hexachloroben ene	1.00	0.826			83		46-124		
Indeno(1 2 3-cd)p rene	1.00	1.05			105		48-130		
Naphthalene	1.00	0.927			93		43-114		
Phenanthrene	1.00	0.985			99		53-115		
P rene	1.00	0.851			85		53-121		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183050043A	Sample number(s): 9876332 9876334-9876336 9876342								
2 4-D	2.50	2.47			99		45-152		
Dalapon	6.26	3.18			51		19-139		
2 4-DB	2.51	2.36			94		35-153		
Dicamba	0.250	0.230			92		50-141		
Dinoseb	1.25	1.22			98		19-133		
2 4-DP (Dichloroprop)	2.50	2.47			99		46-159		
MCPA	503.93	482.03			96		35-144		
MCPP	250.58	278.59			111		33-157		

Outside of specification
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(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: 12/03/2018 11:45

Group Number: 2004155

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
2 4 5-T	0.250	0.282			113		42-147		
2 4 5-TP	0.250	0.272			109		51-134		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183050010A	Sample number(s): 9876332 9876334-9876336 9876342								
PCB-1016	5.01	2.41			48		46-129		
PCB-1260	5.00	2.28			46		45-134		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 183050009A	Sample number(s): 9876332 9876334-9876336 9876342								
Aldrin	0.100	0.0386			39		45-134		
Alpha BHC	0.102	0.0614			60		54-138		
Beta BHC	0.100	0.0622			62		56-136		
Gamma BHC - Lindane	0.102	0.0618			61		59-134		
Alpha Chlordane	0.100	0.0587			59		60-129		
Gamma Chlordane	0.100	0.0601			60		56-136		
p p-DDD	0.204	0.139			68		56-143		
p p-DDE	0.200	0.116			58		57-135		
p p-DDT	0.204	0.120			59		51-143		
Delta BHC	0.100	0.0596			60		52-142		
Dieldrin	0.204	0.127			62		60-136		
Endosulfan I	0.102	0.0604			59		62-126		
Endosulfan II	0.200	0.122			61		52-135		
Endosulfan Sulfate	0.202	0.124			61		62-133		
Endrin	0.202	0.131			65		60-138		
Endrin Aldeh de	0.202	0.115			57		51-132		
Endrin Ketone	0.200	0.123			61		58-134		
Heptachlor	0.102	0.0541			53		54-130		
Heptachlor Epoxide	0.100	0.0600			60		61-133		
Methox chlor	1.02	0.616			61		54-145		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 183050571306	Sample number(s): 9876333 9876338-9876341								
Mercur	0.00100	0.000897			90		82-119		
Batch number: 183061063501	Sample number(s): 9876332 9876334-9876337 9876342								
Thorium	0.500	0.521			104		88-113		
Batch number: 183061063502	Sample number(s): 9876333 9876338-9876341								
Thorium	0.500	0.526			105		88-113		
Batch number: 183061063901A	Sample number(s): 9876332 9876334-9876337 9876342								
Aluminum	2.00	2.01			101		84-117		
Antimon	0.00600	0.00625			104		85-117		
Arsenic	0.0100	0.0105			105		84-116		

Outside of specification
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(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: 12/03/2018 11:45

Group Number: 2004155

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ber llium	0.00400	0.00393			98		83-121		
Cadmium	0.00500	0.00517			103		87-115		
Chromium	0.0500	0.0496			99		85-116		
Cobalt	0.250	0.247			99		86-115		
Copper	0.0500	0.0497			99		85-118		
Iron	1.00	0.995			99		87-118		
Lead	0.0150	0.0152			101		88-115		
Magnesium	2.00	1.94			97		83-118		
Manganese	0.0500	0.0513			103		87-115		
Nic el	0.0500	0.0523			105		85-117		
Potassium	10	10.05			100		87-115		
Silver	0.0500	0.0536			107		85-116		
Sodium	10	10.02			100		85-117		
Uranium	0.0250	0.0250			100		86-115		
Vanadium	0.0500	0.0509			102		86-115		
inc	0.500	0.503			101		83-119		
Batch number: 183061063901B	Sample number(s): 9876332 9876334-9876337 9876342								
Calcium	4.00	3.93			98		87-118		
Selenium	0.0100	0.0101			101		80-120		
Thallium	0.00200	0.00194			97		82-116		
Batch number: 183061063901D	Sample number(s): 9876332 9876334-9876337 9876342								
Barium	0.0500	0.0506			101		86-114		
Batch number: 183061063902A	Sample number(s): 9876333 9876338-9876341								
Aluminum	2.00	1.97			99		84-117		
Antimon	0.00600	0.00621			103		85-117		
Arsenic	0.0100	0.0107			107		84-116		
Ber llium	0.00400	0.00401			100		83-121		
Cadmium	0.00500	0.00507			101		87-115		
Cobalt	0.250	0.240			96		86-115		
Copper	0.0500	0.0501			100		85-118		
Iron	1.00	1.01			101		87-118		
Lead	0.0150	0.0151			100		88-115		
Magnesium	2.00	1.89			95		83-118		
Manganese	0.0500	0.0508			102		87-115		
Nic el	0.0500	0.0515			103		85-117		
Potassium	10	9.81			98		87-115		
Silver	0.0500	0.0509			102		85-116		
Sodium	10	9.85			98		85-117		
Uranium	0.0250	0.0265			106		86-115		
Vanadium	0.0500	0.0507			101		86-115		
inc	0.500	0.517			103		83-119		

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: 2004155
Reported: 12/03/2018 11:45

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 183061063902B	Sample number(s): 9876333 9876338-9876341								
Calcium	4.00	3.94			98		87-118		
Selenium	0.0100	0.0101			101		80-120		
Thallium	0.00200	0.00195			97		82-116		
Batch number: 183061063902D	Sample number(s): 9876333 9876338-9876341								
Barium	0.0500	0.0498			100		86-114		
Batch number: 183130571301	Sample number(s): 9876332 9876334-9876337 9876342								
Mercur	0.00100	0.000900			90		82-119		
Batch number: 183191063901A	Sample number(s): 9876333 9876338-9876341								
Chromium	0.0500	0.0526			105		85-116		

Analysis Name	OPR Spike Added ng/l	OPR Conc ng/l	OPRD Spike Added ng/l	OPRD Conc ng/l	OPR %REC	OPRD %REC	OPR/OPRD Limits	RPD	RPD Max
Batch number: 18313007	Sample number(s): 9876332 9876334-9876336 9876342								
2378-TCDD	0.200	0.205			102		71-125		
12378-PeCDD	1.00	1.08			108		76-121		
123478-HxCDD	1.00	1.05			105		80-126		
123678-HxCDD	1.00	1.05			105		78-134		
123789-HxCDD	1.00	1.06			106		76-137		
1234678-HpCDD	1.00	1.05			105		79-122		
OCDD	2.00	2.06			103		81-135		
2378-TCDF	0.200	0.206			103		72-138		
12378-PeCDF	1.00	1.04			104		82-130		
23478-PeCDF	1.00	1.05			105		77-129		
123478-HxCDF	1.00	1.10			110		80-130		
123678-HxCDF	1.00	1.09			109		79-131		
123789-HxCDF	1.00	1.06			106		83-130		
234678-HxCDF	1.00	1.09			109		81-130		
1234678-HpCDF	1.00	1.09			109		81-130		
1234789-HpCDF	1.00	1.09			109		77-128		
OCDF	2.00	2.11			105		66-150		

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max

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: 12/03/2018 11:45

Group Number: 2004155

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H183094AA	Sample number(s): 9876331-9876332 9876334-9876336 9876342 UNSPK: 9876334									
Acetone	N.D.	37.5	36.8	37.5	36.3	98	97	39-160	1	20
Ben ene	N.D.	5.00	4.95	5.00	5.22	99	104	79-120	5	20
Bromodichloromethane	N.D.	5.00	5.01	5.00	5.30	100	106	79-125	6	20
Bromoform	N.D.	5.00	5.01	5.00	5.69	100	114	66-130	13	20
Bromomethane	N.D.	5.00	3.80	5.00	3.96	76	79	53-141	4	20
2-Butanone	N.D.	37.5	42.24	37.5	43.38	113	116	56-143	3	20
Carbon Disulfide	N.D.	5.00	4.49	5.00	4.81	90	96	64-133	7	20
Carbon Tetrachloride	N.D.	5.00	5.29	5.00	5.51	106	110	72-136	4	20
Chloroben ene	0.210	5.00	5.44	5.00	6.02	105	116	82-118	10	20
Chloroethane	N.D.	5.00	4.09	5.00	4.31	82	86	60-138	5	20
Chloroform	0.216	5.00	5.27	5.00	5.52	101	106	79-124	5	20
Chloromethane	N.D.	5.00	3.95	5.00	4.14	79	83	50-139	5	20
C clohexane	N.D.	5.00	4.77	5.00	5.04	95	101	71-130	5	20
C clohexanone	N.D.	125	100.15	125	89.55	80	72	26-147	11	30
1 2-Dibromo-3-chloropropane	N.D.	5.00	5.97	5.00	6.13	119	123	62-128	3	20
Dibromochloromethane	N.D.	5.00	5.25	5.00	5.98	105	120	74-126	13	20
1 2-Dibromoethane	N.D.	5.00	5.27	5.00	5.95	105	119	77-121	12	20
1 2-Dichloroben ene	N.D.	5.00	5.08	5.00	5.50	102	110	80-119	8	20
1 3-Dichloroben ene	N.D.	5.00	5.21	5.00	5.51	104	110	80-119	6	20
1 4-Dichloroben ene	N.D.	5.00	5.26	5.00	5.57	105	111	79-118	6	20
Dichlorodifluoromethane	N.D.	5.00	3.55	5.00	3.76	71	75	32-152	6	20
1 1-Dichloroethane	N.D.	5.00	5.02	5.00	5.24	100	105	77-125	4	20
1 2-Dichloroethane	N.D.	5.00	4.74	5.00	5.04	95	101	73-128	6	20
1 1-Dichloroethene	N.D.	5.00	5.24	5.00	5.48	105	110	71-131	5	20
cis-1 2-Dichloroethene	N.D.	5.00	5.06	5.00	5.43	101	109	78-123	7	20
trans-1 2-Dichloroethene	N.D.	5.00	5.22	5.00	5.45	104	109	75-124	4	20
1 2-Dichloropropane	N.D.	5.00	5.05	5.00	5.28	101	106	78-122	5	20
cis-1 3-Dichloropropene	N.D.	5.00	4.93	5.00	5.28	99	106	75-124	7	20
trans-1 3-Dichloropropene	N.D.	5.00	5.28	5.00	6.01	106	120	73-127	13	20
Eth lben ene	N.D.	5.00	5.36	5.00	5.96	107	119	79-121	11	20
Freon 113	N.D.	5.00	4.71	5.00	5.02	94	100	70-136	6	20
2-Hexanone	N.D.	25	28.59	25	29.89	114	120	57-139	4	20
Isoprop lben ene	N.D.	5.00	5.41	5.00	6.11	108	122	72-131	12	20
Meth l Acetate	N.D.	5.00	5.05	5.00	5.32	101	106	56-136	5	20
Meth l Tertiar But l Ether	N.D.	5.00	4.61	5.00	4.90	92	98	71-124	6	20
4-Meth l-2-Pentanone	N.D.	25	28.42	25	28.47	114	114	67-130	0	20
Meth lc clohexane	N.D.	5.00	4.70	5.00	4.91	94	98	72-132	4	20
Meth lene Chloride	N.D.	5.00	4.74	5.00	4.96	95	99	74-124	4	20
St rene	N.D.	5.00	5.33	5.00	6.03	107	121	78-123	12	20
1 1 2 2-Tetrachloroethane	N.D.	5.00	5.17	5.00	5.55	103	111	71-121	7	20
Tetrachloroethene	N.D.	5.00	5.45	5.00	6.20	109	124	74-129	13	20
Toluene	N.D.	5.00	5.41	5.00	6.06	108	121	80-121	11	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: 12/03/2018 11:45

Group Number: 2004155

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1 2 4-Trichloroben ene	N.D.	5.00	4.63	5.00	4.83	93	97	69-130	4	20
1 1 1-Trichloroethane	N.D.	5.00	5.14	5.00	5.47	103	109	74-131	6	20
1 1 2-Trichloroethane	N.D.	5.00	5.33	5.00	6.11	107	122	80-119	14	20
Trichloroethene	N.D.	5.00	5.01	5.00	5.46	100	109	79-123	9	20
Trichlorofluoromethane	N.D.	5.00	4.12	5.00	4.43	82	89	65-141	7	20
Vin l Chloride	N.D.	5.00	4.21	5.00	4.49	84	90	58-137	6	20
lene (Total)	N.D.	15	16.15	15	18.1	108	121	79-121	11	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18305WAM026	Sample number(s): 9876332 9876334-9876336 9876342 UNSPK: 9876334									
Aniline	N.D.	50.61	23.36	50.2	21.14	46	42	29-101	10	20
Ben l alcohol	N.D.	50.61	41.94	50.2	41.31	83	82	31-112	2	20
4-Bromophen l-phen lether	N.D.	50.61	48.03	50.2	45.3	95	90	55-124	6	20
Carba ole	N.D.	50.61	48.42	50.2	46.1	96	92	60-122	5	20
4-Chloro-3-meth lphenol	N.D.	50.61	37.72	50.2	28.98	75	58	52-119	26	20
4-Chloroaniline	N.D.	50.61	31.98	50.2	29.88	63	60	33-117	7	20
bis(2-Chloroethox)methane	N.D.	50.61	42.83	50.2	41.59	85	83	48-120	3	20
2-Chloronaphthalene	N.D.	50.61	43.66	50.2	42.83	86	85	40-116	2	20
2-Chlorophenol	N.D.	50.61	25.38	50.2	18.95	50	38	38-117	29	20
4-Chlorophen l-phen lether	N.D.	50.61	44.04	50.2	43.22	87	86	53-121	2	20
2 2 -ox bis(1-Chloropropane)	N.D.	50.61	40.85	50.2	39.28	81	78	48-118	4	30
Diben ofuran	N.D.	50.61	45.42	50.2	43.46	90	87	53-118	4	20
1 2-Dichloroben ene	N.D.	50.61	40.07	50.2	37.79	79	75	32-111	6	20
1 3-Dichloroben ene	N.D.	50.61	38.57	50.2	36.48	76	73	28-110	6	20
1 4-Dichloroben ene	N.D.	50.61	40.16	50.2	37.33	79	74	29-112	7	20
3 3 -Dichloroben idine	N.D.	50.61	27.78	50.2	24.03	55	48	27-129	15	20
2 4-Dichlorophenol	N.D.	50.61	27.7	50.2	20.9	55	42	47-121	28	20
Dieth lphthalate	N.D.	50.61	40.25	50.2	39.37	80	78	56-125	2	20
2 4-Dimeth lphenol	N.D.	50.61	32.9	50.2	30.15	65	60	31-124	9	20
Dimeth lphthalate	N.D.	50.61	44.52	50.2	43.55	88	87	45-127	2	20
4 6-Dinitro-2-meth lphenol	N.D.	50.61	45.37	50.2	42.71	90	85	44-137	6	20
2 4-Dinitrophenol	N.D.	101.21	84.16	100.4	77.06	83	77	23-143	9	20
2 4-Dinitrotoluene	N.D.	50.61	40.7	50.2	39.74	80	79	57-128	2	20
2 6-Dinitrotoluene	N.D.	50.61	45.7	50.2	45.27	90	90	57-124	1	20
Hexachlorobutadiene	N.D.	50.61	38.75	50.2	38.21	77	76	22-124	1	20
Hexachloroc clopentadiene	N.D.	101.21	66.17	100.4	65.7	65	65	10-117	1	20
Hexachloroethane	N.D.	50.61	38.21	50.2	35.9	76	72	21-115	6	20
Isophorone	N.D.	50.61	44.4	50.2	43.61	88	87	42-124	2	20
2-Meth lnaphthalene	N.D.	50.61	42.17	50.2	41.29	83	82	40-121	2	20
2-Meth lphenol	N.D.	50.61	33.94	50.2	26.21	67	52	30-117	26	20
4-Meth lphenol	N.D.	50.61	30.05	50.2	21.73	59	43	25-120	32	20
2-Nitroaniline	N.D.	50.61	48.11	50.2	47.11	95	94	55-127	2	20
3-Nitroaniline	N.D.	50.61	38.7	50.2	38.08	76	76	41-128	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: 12/03/2018 11:45

Group Number: 2004155

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
4-Nitroaniline	N.D.	50.61	37.54	50.2	38.32	74	76	53-111	2	20
Nitrobenzene	N.D.	50.61	41.59	50.2	40.73	82	81	45-121	2	20
2-Nitrophenol	N.D.	50.61	41.04	50.2	38.03	81	76	47-123	8	20
4-Nitrophenol	N.D.	50.61	21.32	50.2	19.52	42	39	28-88	9	20
N-Nitroso-di-n-propylamine	N.D.	50.61	45.01	50.2	43.13	89	86	49-119	4	20
N-Nitrosodiphenylamine	N.D.	50.61	45.4	50.2	42.25	90	84	51-123	7	20
Di-n-octylphthalate	N.D.	50.61	43.98	50.2	45.05	87	90	51-140	2	20
Pentachlorophenol	N.D.	50.61	50.16	50.2	45.9	99	91	35-138	9	20
Phenol	N.D.	50.61	15.27	50.2	9.70	30	19	23-82	45	20
Pyridine	N.D.	50.61	19.77	50.2	19.04	39	38	13-83	4	20
1,2,4-Trichlorobenzene	N.D.	50.61	40.17	50.2	38.42	79	77	29-116	4	20
2,4,5-Trichlorophenol	N.D.	50.61	35.14	50.2	29.75	69	59	53-123	17	20
2,4,6-Trichlorophenol	N.D.	50.61	34.5	50.2	29.68	68	59	50-125	15	20
Batch number: 18305WAN026	Sample number(s): 9876332,9876334-9876336,9876342 UNSPK: 9876334									
Acenaphthene	0.0448	1.02	0.812	1.02	0.922	75	86	48-114	13	20
Acenaphthylene	N.D.	1.02	0.737	1.02	0.806	73	79	35-121	9	20
Anthracene	0.0124	1.02	0.926	1.02	0.951	90	92	53-119	3	20
Benzo(a)anthracene	N.D.	1.02	0.915	1.02	0.980	90	96	59-120	7	20
Benzo(a)pyrene	N.D.	1.02	0.855	1.02	0.918	84	90	53-120	7	20
Benzo(b)fluoranthene	N.D.	1.02	0.878	1.02	0.956	86	93	53-126	8	20
Benzo(ghi)perylene	N.D.	1.02	0.714	1.02	0.797	70	78	44-128	11	20
Benzo(k)fluoranthene	N.D.	1.02	0.883	1.02	0.943	87	92	54-125	7	20
Di-n-butylphthalate	0.180	1.02	1.31	1.02	1.33	111	112	60-145	2	20
bis(2-Chloroethyl)ether	0.0293	1.02	1.25	1.02	1.10	120	105	40-116	12	20
Chrysene	N.D.	1.02	0.886	1.02	0.920	87	90	57-120	4	20
Dibenz(a,h)anthracene	N.D.	1.02	0.689	1.02	0.803	68	78	44-131	15	20
1,4-Dioxane	0.140	1.02	0.784	1.02	0.789	63	63	10-113	1	20
bis(2-Ethylhexyl)phthalate	0.306	1.02	0.777	1.02	1.48	46	114	55-173	62	20
Fluoranthene	0.0143	1.02	1.02	1.02	1.02	99	98	58-120	1	20
Fluorene	0.0281	1.02	0.752	1.02	0.804	71	76	50-118	7	20
Hexachlorobenzene	N.D.	1.02	0.895	1.02	0.916	88	89	46-124	2	20
Indeno(1,2,3-cd)pyrene	N.D.	1.02	0.780	1.02	0.881	77	86	48-130	12	20
Naphthalene	0.0577	1.02	1.05	1.02	1.03	97	95	43-114	2	20
Phenanthrene	0.0530	1.02	1.15	1.02	1.22	108	114	53-115	6	20
Pyrene	0.0103	1.02	0.806	1.02	0.837	78	81	53-121	4	20
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183050043A	Sample number(s): 9876332,9876334-9876336,9876342 UNSPK: 9876334									
2,4-D	N.D.	2.35	2.51	2.36	2.82	107	120	45-152	11	30
Dalapon	N.D.	5.89	4.41	5.90	3.63	75	62	19-139	19	30
2,4-DB	N.D.	2.36	2.35	2.37	2.80	100	118	35-153	17	30
Dicamba	N.D.	0.235	N.D.	0.236	N.D.	0	0	50-141	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: 12/03/2018 11:45

Group Number: 2004155

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Dinoseb	N.D.	1.18	1.33	1.18	1.38	113	117	16-163	3	30
2 4-DP (Dichloroprop)	N.D.	2.35	2.25	2.36	2.44	95	103	46-159	8	30
MCPA	N.D.	474.06	129.94	475.4	98.79	27	21	35-144	27	30
MCPP	N.D.	235.72	N.D.	236.39	N.D.	0	0	33-157	0	30
2 4 5-T	N.D.	0.235	N.D.	0.236	N.D.	0	0	42-147	0	30
2 4 5-TP	N.D.	0.235	N.D.	0.236	N.D.	0	0	51-134	0	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183050010A	Sample number(s): 9876332 9876334-9876336 9876342 UNSPK: 9876334									
PCB-1016	N.D.	5.28	4.61	5.01	4.60	87	92	46-129	0	30
PCB-1260	N.D.	5.27	4.68	5.00	4.74	89	95	45-134	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 183050009A	Sample number(s): 9876332 9876334-9876336 9876342 UNSPK: 9876334									
Aldrin	N.D.	0.100	0.0699	0.0996	0.0561	70	56	45-134	22	30
Alpha BHC	0.00644	0.102	0.0900	0.102	0.0760	82	68	54-138	17	30
Beta BHC	N.D.	0.100	0.0777	0.0996	0.0664	78	67	56-136	16	30
Gamma BHC - Lindane	N.D.	0.102	0.0807	0.102	0.0688	79	68	59-134	16	30
Alpha Chlordane	N.D.	0.100	0.0762	0.0996	0.0643	76	65	60-129	17	30
Gamma Chlordane	N.D.	0.100	0.0784	0.0996	0.0665	78	67	56-136	16	30
p p-DDD	N.D.	0.204	0.168	0.203	0.145	83	71	56-143	15	30
p p-DDE	N.D.	0.200	0.154	0.199	0.127	77	64	57-135	19	30
p p-DDT	N.D.	0.204	0.164	0.203	0.151	80	74	51-143	9	30
Delta BHC	N.D.	0.100	0.0786	0.0996	0.0670	79	67	52-142	16	30
Dieldrin	N.D.	0.204	0.166	0.203	0.141	81	70	60-136	16	30
Endosulfan I	N.D.	0.102	0.0775	0.102	0.0674	76	66	62-126	14	30
Endosulfan II	N.D.	0.200	0.158	0.199	0.140	79	70	52-135	12	30
Endosulfan Sulfate	N.D.	0.202	0.171	0.201	0.148	85	73	62-133	15	30
Endrin	N.D.	0.202	0.175	0.201	0.152	87	76	60-138	14	30
Endrin Aldeh de	N.D.	0.202	0.154	0.201	0.134	76	67	51-132	13	30
Endrin Ketone	N.D.	0.200	0.174	0.199	0.156	87	78	58-134	11	30
Heptachlor	N.D.	0.102	0.0722	0.102	0.0604	71	59	54-130	18	30
Heptachlor Epoxide	N.D.	0.100	0.0803	0.0996	0.0681	80	68	61-133	17	30
Methox chlor	N.D.	1.02	0.882	1.01	0.761	87	75	54-145	15	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 183050571306	Sample number(s): 9876333 9876338-9876341 UNSPK: 9876338									
Mercur	N.D.	0.00100	0.000932	0.00100	0.000912	93	91	82-119	2	20
Batch number: 183061063501	Sample number(s): 9876332 9876334-9876337 9876342 UNSPK: 9876334									
Thorium	N.D.	0.500	0.506	0.500	0.493	101	99	75-125	3	20
Batch number: 183061063502	Sample number(s): 9876333 9876338-9876341 UNSPK: 9876338									

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: 12/03/2018 11:45

Group Number: 2004155

MS/MSD (continued)

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

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Thorium	N.D.	0.500	0.519	0.500	0.512	104	102	75-125	1	20
Batch number: 183061063901A	Sample number(s): 9876332 9876334-9876337 9876342 UNSPK: 9876334									
Aluminum	0.0415	2.00	2.10	2.00	2.11	103	104	84-117	1	20
Antimon	0.000534	0.00600	0.00642	0.00600	0.00662	98	102	85-117	3	20
Arsenic	0.00788	0.0100	0.0187	0.0100	0.0183	108	104	84-116	2	20
Ber llium	N.D.	0.00400	0.00399	0.00400	0.00421	100	105	83-121	6	20
Cadmium	N.D.	0.00500	0.00510	0.00500	0.00526	102	105	87-115	3	20
Chromium	0.0416	0.0500	0.0497	0.0500	0.0502	16	17	85-116	1	20
Cobalt	0.00289	0.250	0.245	0.250	0.255	97	101	86-115	4	20
Copper	N.D.	0.0500	0.0508	0.0500	0.0520	102	104	85-118	2	20
Iron	7.63	1.00	8.69	1.00	8.50	106 (2)	87 (2)	87-118	2	20
Lead	0.00424	0.0150	0.0199	0.0150	0.0205	105	109	88-115	3	20
Magnesium	64.66	2.00	68.07	2.00	67.74	171 (2)	154 (2)	83-118	0	20
Manganese	2.52	0.0500	2.59	0.0500	2.57	146 (2)	104 (2)	87-115	1	20
Nic el	0.0225	0.0500	0.0561	0.0500	0.0566	67	68	85-117	1	20
Potassium	24.77	10	35.52	10	35.1	107	103	87-115	1	20
Silver	N.D.	0.0500	0.0519	0.0500	0.0530	104	106	85-116	2	20
Sodium	88.7	10	100.84	10	99.83	121 (2)	111 (2)	85-117	1	20
Uranium	0.00153	0.0250	0.0272	0.0250	0.0278	103	105	75-125	2	20
Vanadium	0.000485	0.0500	0.0523	0.0500	0.0531	104	105	86-115	1	20
inc	0.0102	0.500	0.512	0.500	0.526	100	103	83-119	3	20
Batch number: 183061063901B	Sample number(s): 9876332 9876334-9876337 9876342 UNSPK: 9876334									
Calcium	79.43	4.00	85.49	4.00	82.41	151 (2)	75 (2)	87-118	4	20
Selenium	N.D.	0.0100	0.0107	0.0100	0.0105	107	105	80-120	2	20
Thallium	N.D.	0.00200	0.00196	0.00200	0.00202	98	101	82-116	3	20
Batch number: 183061063901D	Sample number(s): 9876332 9876334-9876337 9876342 UNSPK: 9876334									
Barium	1.04	0.0500	1.09	0.0500	1.10	96 (2)	117 (2)	86-114	1	20
Batch number: 183061063902A	Sample number(s): 9876333 9876338-9876341 UNSPK: 9876338									
Aluminum	N.D.	2.00	2.00	2.00	1.96	100	98	84-117	2	20
Antimon	0.000464	0.00600	0.00705	0.00600	0.00647	110	100	85-117	9	20
Arsenic	0.00749	0.0100	0.0185	0.0100	0.0183	110	108	84-116	1	20
Ber llium	N.D.	0.00400	0.00401	0.00400	0.00421	100	105	83-121	5	20
Cadmium	N.D.	0.00500	0.00519	0.00500	0.00510	104	102	87-115	2	20
Cobalt	0.00259	0.250	0.243	0.250	0.248	96	98	86-115	2	20
Copper	N.D.	0.0500	0.0501	0.0500	0.0507	100	101	85-118	1	20
Iron	7.28	1.00	8.44	1.00	8.16	116 (2)	88 (2)	87-118	3	20
Lead	N.D.	0.0150	0.0155	0.0150	0.0157	103	104	88-115	1	20
Magnesium	63.92	2.00	65.75	2.00	64.69	92 (2)	38 (2)	83-118	2	20
Manganese	2.43	0.0500	2.51	0.0500	2.50	157 (2)	135 (2)	87-115	0	20
Nic el	0.00345	0.0500	0.0551	0.0500	0.0556	103	104	85-117	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: 12/03/2018 11:45

Group Number: 2004155

MS/MSD (continued)

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

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Potassium	24.5	10	34.43	10	33.95	99	94	87-115	1	20
Silver	N.D.	0.0500	0.0411	0.0500	0.0413	82	83	85-116	1	20
Sodium	89.44	10	112.23	10	114.55	228 (2)	251 (2)	85-117	2	20
Uranium	0.00159	0.0250	0.0295	0.0250	0.0289	112	109	75-125	2	20
Vanadium	0.000295	0.0500	0.0502	0.0500	0.0505	100	100	86-115	1	20
inc	N.D.	0.500	0.523	0.500	0.541	105	108	83-119	3	20
Batch number: 183061063902B	Sample number(s): 9876333 9876338-9876341 UNSPK: 9876338									
Calcium	81.15	4.00	86.39	4.00	84.55	131 (2)	85 (2)	87-118	2	20
Selenium	N.D.	0.0100	0.0102	0.0100	0.0106	102	106	80-120	3	20
Thallium	N.D.	0.00200	0.00211	0.00200	0.00207	106	103	82-116	2	20
Batch number: 183061063902D	Sample number(s): 9876333 9876338-9876341 UNSPK: 9876338									
Barium	1.03	0.0500	1.09	0.0500	1.11	125 (2)	157 (2)	86-114	1	20
Batch number: 183130571301	Sample number(s): 9876332 9876334-9876337 9876342 UNSPK: 9876334									
Mercur	N.D.	0.00100	0.000898	0.00100	0.000870	90	87	82-119	3	20
Batch number: 183191063901A	Sample number(s): 9876333 9876338-9876341 UNSPK: 9876338									
Chromium	0.00376	0.0500	0.0686	0.0500	0.0521	130	97	85-116	27	20

Analysis Name	Unspiked Conc ng/l	MS Spike Added ng/l	MS Conc ng/l	MSD Spike Added ng/l	MSD Conc ng/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18313007	Sample number(s): 9876332 9876334-9876336 9876342 UNSPK: 9876334									
2378-TCDD	N.D.	0.190	0.199	0.190	0.197	105	104	71-125	1	20
12378-PeCDD	N.D.	0.952	0.991	0.952	1.01	104	106	76-121	2	20
123478-HxCDD	N.D.	0.952	0.999	0.952	0.999	105	105	72-131	0	20
123678-HxCDD	N.D.	0.952	0.961	0.952	0.998	101	105	78-134	4	20
123789-HxCDD	N.D.	0.952	0.983	0.952	0.998	103	105	76-137	1	20
1234678-HpCDD	N.D.	0.952	0.972	0.952	0.992	102	104	79-122	2	20
OCDD	N.D.	1.90	1.96	1.90	2.02	103	106	81-135	3	20
2378-TCDF	N.D.	0.190	0.184	0.190	0.194	97	102	72-138	5	20
12378-PeCDF	N.D.	0.952	0.963	0.952	1.00	101	105	82-130	4	20
23478-PeCDF	N.D.	0.952	0.970	0.952	0.994	102	104	77-129	2	20
123478-HxCDF	N.D.	0.952	1.01	0.952	1.03	106	109	80-130	2	20
123678-HxCDF	N.D.	0.952	1.01	0.952	1.04	106	109	79-131	2	20
123789-HxCDF	N.D.	0.952	0.991	0.952	1.01	104	106	83-130	1	20
234678-HxCDF	N.D.	0.952	1.01	0.952	1.04	106	109	81-130	2	20
1234678-HpCDF	N.D.	0.952	1.02	0.952	1.04	108	109	81-130	1	20
1234789-HpCDF	N.D.	0.952	1.01	0.952	1.03	106	108	77-128	1	20
OCDF	N.D.	1.90	2.01	1.90	2.05	105	108	66-150	2	20

Outside of specification
This limit was used in the evaluation of the final result for the blan
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(3) The surrogate spi e amount was less than the LOD.

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Quality Control Summary

Client Name: Tidewater Inc.
Reported: 12/03/2018 11:45

Group Number: 2004155

Laboratory Duplicate

Background (BKG) the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 183050571306	Sample number(s): 9876333 9876338-9876341 BKG: 9876338			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183061063501	Sample number(s): 9876332 9876334-9876337 9876342 BKG: 9876334			
Thorium	N.D.	N.D.	0 (1)	20
Batch number: 183061063502	Sample number(s): 9876333 9876338-9876341 BKG: 9876338			
Thorium	N.D.	N.D.	0 (1)	20
Batch number: 183061063901A	Sample number(s): 9876332 9876334-9876337 9876342 BKG: 9876334			
Aluminum	0.0415	0.0371	11 (1)	20
Antimony	0.000534	0.000433	21 (1)	20
Arsenic	0.00788	0.00844	7 (1)	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	0.0416	0.000826	192 (1)	20
Cobalt	0.00289	0.00245	16 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Iron	7.63	7.76	2	20
Lead	0.00424	0.00439	3 (1)	20
Magnesium	64.66	66.2	2	20
Manganese	2.52	2.58	2	20
Nickel	0.0225	0.00354	145 (1)	20
Potassium	24.77	25.65	3	20
Silver	N.D.	N.D.	0 (1)	20
Sodium	88.7	91.31	3	20
Uranium	0.00153	0.00149	3 (1)	20
Vanadium	0.000485	0.000416	15 (1)	20
Zinc	0.0102	0.0104	2 (1)	20
Batch number: 183061063901B	Sample number(s): 9876332 9876334-9876337 9876342 BKG: 9876334			
Calcium	79.43	81.4	2	20
Selenium	N.D.	N.D.	0 (1)	20
Thallium	N.D.	N.D.	0 (1)	20
Batch number: 183061063901D	Sample number(s): 9876332 9876334-9876337 9876342 BKG: 9876334			
Barium	1.04	1.05	1	20
Batch number: 183061063902A	Sample number(s): 9876333 9876338-9876341 BKG: 9876338			
Aluminum	N.D.	N.D.	0 (1)	20
Antimony	0.000464	N.D.	200 (1)	20
Arsenic	0.00749	0.00787	5 (1)	20
Beryllium	N.D.	N.D.	0 (1)	20
Cadmium	N.D.	N.D.	0 (1)	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. Group Number: 2004155
Reported: 12/03/2018 11:45

Laboratory Duplicate (continued)

Background (BKG) the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Cobalt	0.00259	0.00247	5 (1)	20
Copper	N.D.	N.D.	0 (1)	20
Iron	7.28	7.36	1	20
Lead	N.D.	N.D.	0 (1)	20
Magnesium	63.92	62.73	2	20
Manganese	2.43	2.46	1	20
Nickel	0.00345	0.00295	16 (1)	20
Potassium	24.5	24.17	1	20
Silver	N.D.	N.D.	0 (1)	20
Sodium	89.44	87.65	2	20
Uranium	0.00159	0.00164	3 (1)	20
Vanadium	0.000295	0.000302	2 (1)	20
Zinc	N.D.	0.00643	200 (1)	20
Batch number: 183061063902B	Sample number(s): 9876333 9876338-9876341 BKG: 9876338			
Calcium	81.15	80.05	1	20
Selenium	N.D.	N.D.	0 (1)	20
Thallium	N.D.	N.D.	0 (1)	20
Batch number: 183061063902D	Sample number(s): 9876333 9876338-9876341 BKG: 9876338			
Barium	1.03	1.02	1	20
Batch number: 183130571301	Sample number(s): 9876332 9876334-9876337 9876342 BKG: 9876334			
Mercury	N.D.	N.D.	0 (1)	20
Batch number: 183191063901A	Sample number(s): 9876333 9876338-9876341 BKG: 9876338			
Chromium	0.00376	0.00168	76 (1)	20

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- 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)
9876331	94	0.5	99	0.5	103	0.5	97	0.5
9876332	96	0.5	103	0.5	103	0.5	98	0.5
9876334	104	0.5	105	0.5	101	0.5	98	0.5
9876335	97	0.5	102	0.5	104	0.5	99	0.5

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: 12/03/2018 11:45

Group Number: 2004155

Surrogate Quality Control

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- 25ml Water b 8260C
Batch number: H183094AA

	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
9876336	95	0.5	100	0.5	110	0.5	105	0.5
9876342	97	0.5	102	0.5	103	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
MS	97	0.5	102	0.5	104	0.5	99	0.5
MSD	95	0.5	100	0.5	110	0.5	105	0.5
Limits:	80-119		81-118		89-112		85-114	

Anal sis Name: SVOAs 8270D MINI
Batch number: 18305WAM026

	Phenol-d6		2-Fluorophenol		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
9876332	29	84	32	84	63	84	49	42	54	42	61	42
9876334	5	82	4	82	32	82	44	41	47	41	57	41
9876335	26	81	25	81	66	81	80	40	83	40	78	40
9876336	16	80	16	80	61	80	80	40	81	40	80	40
9876342	34	81	47	81	78	81	75	40	76	40	93	40
Blan	35	80	47	80	64	80	70	40	74	40	83	40
LCS	41	80	58	80	80	80	82	40	84	40	89	40
MS	26	81	25	81	66	81	80	40	83	40	78	40
MSD	16	80	16	80	61	80	80	40	81	40	80	40
Limits:	10-72		19-119		43-140		44-120		44-119		50-134	

Anal sis Name: SIM SVOAs 8270D MINI
Batch number: 18305WAN026

	Fluoranthene-d10		Benzo(a)pyrene-d12		1-Methylnaphthalene-d10	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
9876332	91	0.4	75	0.4	79	0.4
9876334	64	0.4	54	0.4	69	0.4
9876335	98	0.4	76	0.4	84	0.4
9876336	100	0.4	80	0.4	90	0.4
9876342	83	0.4	71	0.4	73	0.4
Blan	59	0.4	62	0.4	65	0.4
LCS	88	0.4	91	0.4	100	0.4
MS	98	0.4	76	0.4	84	0.4

Outside of specification
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(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: 12/03/2018 11:45

Group Number: 2004155

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 MINI
Batch number: 18305WAN026

	Fluoranthene-d10		Benzo(a)pyrene-d12		1-Methylnaphthalene-d10	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
MSD	100	0.4	80	0.4	90	0.4
Limits:	38-119		18-129		29-112	

Anal sis Name: OC Pesticides in Water
Batch number: 183050009A

	Tetrachloro-m-xylene-D1		Decachlorobiphenyl-D1		Tetrachloro-m-xylene-D2		Decachlorobiphenyl-D2	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
9876332	31	0.030	23	0.030	27	0.030	25	0.030
9876334	63	0.025	44	0.025	56	0.025	46	0.025
9876335	77	0.024	56	0.024	71	0.024	57	0.024
9876336	66	0.024	40	0.024	63	0.024	43	0.024
9876342	34	0.030	67	0.030	31	0.030	70	0.030
Blan	61	0.024	42	0.024	56	0.024	43	0.024
LCS	61	0.024	17	0.024	57	0.024	19	0.024
MS	77	0.024	56	0.024	71	0.024	57	0.024
MSD	66	0.024	40	0.024	63	0.024	43	0.024
Limits:	44-124		32-149		44-124		32-149	

Anal sis Name: PCBs in Water b 8082A
Batch number: 183050010A

	Tetrachloro-m-xylene-D1		Decachlorobiphenyl-D1		Tetrachloro-m-xylene-D2		Decachlorobiphenyl-D2	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
9876332	140	0.024	89	0.024	134	0.024	91	0.024
9876334	120	0.025	67	0.025	117	0.025	67	0.025
9876335	86	0.025	57	0.025	86	0.025	59	0.025
9876336	85	0.024	61	0.024	85	0.024	62	0.024
9876342	137	0.024	115	0.024	132	0.024	114	0.024
Blan	98	0.024	59	0.024	94	0.024	59	0.024
LCS	33	0.024	31	0.024	32	0.024	30	0.024
MS	86	0.025	57	0.025	86	0.025	59	0.025
MSD	85	0.024	61	0.024	85	0.024	62	0.024
Limits:	33-137		10-148		33-137		10-148	

Anal sis Name: Herb water 8151A Master
Batch number: 183050043A

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: 12/03/2018 11:45

Group Number: 2004155

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: Herb water 8151A Master
Batch number: 183050043A

	2,4-DCAA-D1		2,4-DCAA-D2	
	%Rec	LOD (ug/l)	%Rec	LOD (ug/l)
9876332	80	0.19	71	0.19
9876334	71	0.19	61	0.19
9876335	85	0.19	72	0.19
9876336	90	0.19	75	0.19
9876342	78	0.19	65	0.19
Blan	65	0.20	56	0.20
LCS	92	0.20	84	0.20
MS	85	0.19	72	0.19
MSD	90	0.19	75	0.19
Limits:	32-138		32-138	

Analysis Name: Dioxins/Furans in Water - 8290
Batch number: 18313007

	13C12-2378-TCDD		13C12-12378-PeCDD		13C12-123478-HxCDD		13C12-123678-HxCDD		13C12-123789-HxCDD		13C12-1234678-HpCDD	
	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)
9876332	69	0.002	62	0.01	70	0.01	63	0.01	58	0.01	60	0.01
9876334	64	0.002	75	0.01	72	0.01	69	0.01	67	0.01	75	0.01
9876335	69	0.002	68	0.01	73	0.01	71	0.01	66	0.01	72	0.01
9876336	72	0.002	76	0.01	78	0.01	76	0.01	70	0.01	76	0.01
9876342	62	0.002	71	0.01	76	0.01	70	0.01	67	0.01	72	0.01
Blan	72	0.002	71	0.01	73	0.01	70	0.01	66	0.01	73	0.01
MSDRE	72	0.002	76	0.01	78	0.01	76	0.01	70	0.01	76	0.01
MSRE	69	0.002	68	0.01	73	0.01	71	0.01	66	0.01	72	0.01
OPR	71	0.002	69	0.01	73	0.01	70	0.01	65	0.01	66	0.01
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 (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)
9876332	60	0.07	52	0.002	56	0.01	58	0.01	57	0.01	55	0.01
9876334	72	0.07	57	0.002	67	0.01	68	0.01	61	0.01	60	0.01
9876335	71	0.07	57	0.002	63	0.01	62	0.01	64	0.01	63	0.01
9876336	69	0.07	59	0.002	69	0.01	68	0.01	71	0.01	69	0.01
9876342	70	0.07	56	0.002	63	0.01	66	0.01	61	0.01	59	0.01
Blan	70	0.07	61	0.002	67	0.01	68	0.01	64	0.01	63	0.01
MSDRE	69	0.07	59	0.002	69	0.01	68	0.01	71	0.01	69	0.01
MSRE	71	0.07	57	0.002	63	0.01	62	0.01	64	0.01	63	0.01

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: 12/03/2018 11:45

Group Number: 2004155

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 Water - 8290
Batch number: 18313007

	13C12-OCDD		13C12-2378-TCDF		13C12-12378-PeCDF		13C12-23478-PeCDF		13C12-123478-HxCDF		13C12-123678-HxCDF	
	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)
OPR	59	0.07	56	0.002	65	0.01	63	0.01	67	0.01	65	0.01
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	
	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)	%Rec	LOD (ng/l)
9876332	49	0.01	64	0.01	58	0.01	56	0.01	52	0.02
9876334	58	0.01	71	0.01	68	0.01	68	0.01	65	0.02
9876335	55	0.01	69	0.01	66	0.01	64	0.01	62	0.02
9876336	60	0.01	67	0.01	72	0.01	67	0.01	64	0.02
9876342	57	0.01	68	0.01	65	0.01	65	0.01	62	0.02
Blan	58	0.01	71	0.01	67	0.01	67	0.01	65	0.02
MSDRE	60	0.01	67	0.01	72	0.01	67	0.01	64	0.02
MSRE	55	0.01	69	0.01	66	0.01	64	0.01	62	0.02
OPR	56	0.01	66	0.01	66	0.01	61	0.01	56	0.02
Limits:	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.

Environmental Analysis Request/Chain of Custody

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Acct. # 43062 Group # 2004155 Sample # 9876331-42

COC # 561376

Client Information

Client: Tidewater	Acct. #:
Project Name/#: Phase 1 RI OU2 Great Kills Park	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

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	VOCs (8260C) H	SVOCs (8270D)	PAHs (8270D-SIM)	Inorganics (6020A) N	Mercury (7470A) N	Pesticides (8081B)	PCBs (8082A)	Herbicides (8151A)	Dioxins/Furans (8290A)		Remarks
OU2TB102918-002	102918	1355	X			TB		2	X										trip blank
OU2-1-MW010	102918	1540	X			X		13	X	X	X	X	X	X	X	X	X		
OU2-1-MW010-F	102918	1540	X			X		1				X	X						field filtered
OU2-1-MW008I	103018	1040	X			X		39	X	X	X	X	X	X	X	X	X		MS/MSD
OU2-1-MW008I-F	103018	1040	X			X		3				X	X						field filtered, MS/MSD
OU2EB103018-001	103018	1510	X			EB		13	X	X	X	X	X	X	X	X	X		equip blank pump # 21461

10/30/18

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

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@tideh2o.net

E-mail address: devon.chicoine@aecom.com

Relinquished by	Date	Time	Received by	Date	Time
[signature]	103018	1830	FedEx	102018	1830
			[signature]	10/31/18	1005

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 0.9-1.2 °C

TIDEWATER INC
RADIOLOGICAL SERVICES

2004155

Location	Great Kills Park	Survey Type	Shipping		Survey Log #	GKP- 023
Cooler No	GKP-023	Surveyor	H. White		Date	10/30/18

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	5
Back	<MDA	<MDA	Back Side	5
Left	<MDA	<MDA	Left Side	5
Front Side	<MDA	<MDA	Front Side	5
Top	<MDA	<MDA	Top	5
Bottom	<MDA	<MDA	Bottom	5

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 5



Surveyor:	H. White	10/30/18	Reviewer:	B. Cole	10/30/18
Signature:	Ham W	Date	Signature:	B Cole	Date

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Sample Administration Receipt Documentation Log

Doc Log ID: 231610

Group Number(s): 2604155

Client: Tidewater

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	10/31/2018 10:05
Number of Packages:	4	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 Leah Foreman (12616) at 11:51 on 10/31/2018

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	DT42-01	1.1	DT	Wet	Y	Bagged	N
2	DT42-01	0.9	DT	Wet	Y	Bagged	N
3	DT42-01	1.2	DT	Wet	Y	Bagged	N
4	DT42-01	1.1	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
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.

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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

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Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9876331	OU2TB102918-002	X		1	Trip Blank
9876332	OU2-1-MW010	X		1	
9876334	OU2-1-MW008I	X		1	Unspiked
9876335	OU2-1-MW008I MS	X		1	Matrix Spike
9876336	OU2-1-MW008I MSD	X		1	Matrix Spike Duplicate
9876342	OU2EB103018-001	X		1	Equipment Blank

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): 9876331-9876332, 9876334-9876336, 9876342: 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.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Batch#: H183094AA (Sample number(s): 9876331-9876332, 9876334-9876336, 9876342, UNSPK: 9876334)
The recovery(ies) for the following analyte(s) in the MSD exceeded the acceptance window indicating a positive bias:1,1,2-Trichloroethane, Isopropylbenzene, Styrene, Tetrachloroethene, Toluene, Xylene (Total)

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Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Volatiles

Fraction: Volatiles by GC/MS

SAMPLE ANALYSIS:

(Sample number(s): 9876332: 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.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Chloromethane, Acetone.

(Sample number(s): 9876342: 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.
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
Acetone.

(Sample number(s): 9876331, 9876334: 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.

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

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Tidewater, Inc.
SDG: TID14

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
		9876331	11/06/2018 06:40
		9876332	11/06/2018 02:22
		9876334 UNSPK	11/06/2018 02:44
		9876335 MS	11/06/2018 03:05
		9876335 MS	11/06/2018 03:48
		9876336 MSD	11/06/2018 03:26
		9876336 MSD	11/06/2018 04:09
		9876342	11/06/2018 04:31

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: TID14
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: TID14
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
9876331	99	81 - 118	97	85 - 114	94	80 - 119	103	89 - 112
9876332	103	81 - 118	98	85 - 114	96	80 - 119	103	89 - 112
9876334 UNSPK	105	81 - 118	98	85 - 114	104	80 - 119	101	89 - 112
9876335 MS	102	81 - 118	99	85 - 114	97	80 - 119	104	89 - 112
9876336 MSD	100	81 - 118	105	85 - 114	95	80 - 119	110	89 - 112
9876342	102	81 - 118	97	85 - 114	97	80 - 119	103	89 - 112

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9876334 MS: 9876335 MSD: 9876336 **Analyte**	Batch: **H183094AA** (Sample number(s): 9876331-9876332, 9876334-9876336, 9876342)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	3.55	3.76	71	75	43-123	6	30
Chloromethane	5.00	N.D.	3.95	4.14	79	83	56-124	5	30
Vinyl Chloride	5.00	N.D.	4.21	4.49	84	90	60-125	6	30
Bromomethane	5.00	N.D.	3.80	3.96	76	79	60-136	4	30
Chloroethane	5.00	N.D.	4.09	4.31	82	86	63-120	5	30
Trichlorofluoromethane	5.00	N.D.	4.12	4.43	82	89	62-136	7	30
1,1-Dichloroethene	5.00	N.D.	5.24	5.48	105	110	80-131	5	30
Freon 113	5.00	N.D.	4.71	5.02	94	100	75-133	6	30
Acetone	37.5	N.D.	36.8	36.3	98	97	60-146	1	30
Carbon Disulfide	5.00	N.D.	4.49	4.81	90	96	67-130	7	30
Methyl Acetate	5.00	N.D.	5.05	5.32	101	106	59-143	5	30
Methylene Chloride	5.00	N.D.	4.74	4.96	95	99	80-120	4	30
trans-1,2-Dichloroethene	5.00	N.D.	5.22	5.45	104	109	80-120	4	30
Methyl Tertiary Butyl Ether	5.00	N.D.	4.61	4.90	92	98	69-120	6	30
1,1-Dichloroethane	5.00	N.D.	5.02	5.24	100	105	74-120	4	30
2-Butanone	37.5	N.D.	42.24	43.38	113	116	59-141	3	30
cis-1,2-Dichloroethene	5.00	N.D.	5.06	5.43	101	109	80-120	7	30
Chloroform	5.00	0.216 J	5.27	5.52	101	106	80-120	5	30
1,1,1-Trichloroethane	5.00	N.D.	5.14	5.47	103	109	78-126	6	30
Cyclohexane	5.00	N.D.	4.77	5.04	95	101	69-120	5	30
Carbon Tetrachloride	5.00	N.D.	5.29	5.51	106	110	64-141	4	30
Benzene	5.00	N.D.	4.95	5.22	99	104	80-120	5	30
1,2-Dichloroethane	5.00	N.D.	4.74	5.04	95	101	69-122	6	30
Trichloroethene	5.00	N.D.	5.01	5.46	100	109	80-120	9	30
Methylcyclohexane	5.00	N.D.	4.70	4.91	94	98	80-120	4	30
1,2-Dichloropropane	5.00	N.D.	5.05	5.28	101	106	80-120	5	30
Bromodichloromethane	5.00	N.D.	5.01	5.30	100	106	73-124	6	30
cis-1,3-Dichloropropene	5.00	N.D.	4.93	5.28	99	106	67-121	7	30
4-Methyl-2-Pentanone	25	N.D.	28.42	28.47	114	114	55-140	0	30
Toluene	5.00	N.D.	5.41	6.06	108	121 *	80-120	11	30
trans-1,3-Dichloropropene	5.00	N.D.	5.28	6.01	106	120	61-129	13	30
1,1,2-Trichloroethane	5.00	N.D.	5.33	6.11	107	122 *	80-120	14	30
Tetrachloroethene	5.00	N.D.	5.45	6.20	109	124 *	80-120	13	30
2-Hexanone	25	N.D.	28.59	29.89	114	120	52-140	4	30
Dibromochloromethane	5.00	N.D.	5.25	5.98	105	120	64-138	13	30
1,2-Dibromoethane	5.00	N.D.	5.27	5.95	105	119	80-120	12	30
Chlorobenzene	5.00	0.210 J	5.44	6.02	105	116	80-120	10	30
Ethylbenzene	5.00	N.D.	5.36	5.96	107	119	80-120	11	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.

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9876334 MS: 9876335 MSD: 9876336 **Analyte**	Batch: **H183094AA** (Sample number(s): 9876331-9876332, 9876334-9876336, 9876342)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Xylene (Total)	15	N.D.	16.15	18.1	108	121 *	80-120	11	30
Styrene	5.00	N.D.	5.33	6.03	107	121 *	80-120	12	30
Bromoform	5.00	N.D.	5.01	5.69	100	114	49-144	13	30
Isopropylbenzene	5.00	N.D.	5.41	6.11	108	122 *	80-120	12	30
Cyclohexanone	125	N.D.	100.15	89.55	80	72	26-147	11	30
1,1,2,2-Tetrachloroethane	5.00	N.D.	5.17	5.55	103	111	75-123	7	30
1,3-Dichlorobenzene	5.00	N.D.	5.21	5.51	104	110	80-120	6	30
1,4-Dichlorobenzene	5.00	N.D.	5.26	5.57	105	111	80-120	6	30
1,2-Dichlorobenzene	5.00	N.D.	5.08	5.50	102	110	80-120	8	30
1,2-Dibromo-3-chloropropane	5.00	N.D.	5.97	6.13	119	123	56-148	3	30
1,2,4-Trichlorobenzene	5.00	N.D.	4.63	4.83	93	97	68-122	4	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: TID14
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSH96	Batch: **H183094AA** (Sample number(s): 9876331-9876332, 9876334-9876336, 9876342)							
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): 9876331-9876332, 9876334-9876336, 9876342)							
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): 9876331-9876332, 9876334-9876336, 9876342)							
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

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

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: 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.

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
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/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): 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.

FORM VIII VOA

Sample Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s87.d Injection date and time: **06-NOV-2018 06:40**
Data file Sample Info. Line: 14T01;9876331;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:50 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	4.470(0.012)	473	65	111627	(-9)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2439294	(-5)	10.00	
97) Chlorobenzene-d5	11.378(0.006)	1606	117	1804412	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	904519	(-2)	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	576645	9.379	94%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.525(0.000)	102	105738	9.866	99%		81 - 118
82) Toluene-d8	(3)	9.945(0.000)	98	2386529	10.276	103%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	816415	9.656	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

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s87.d Injection date and time: **06-NOV-2018 06:40**
Data file Sample Info. Line: 14T01;9876331;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:50 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

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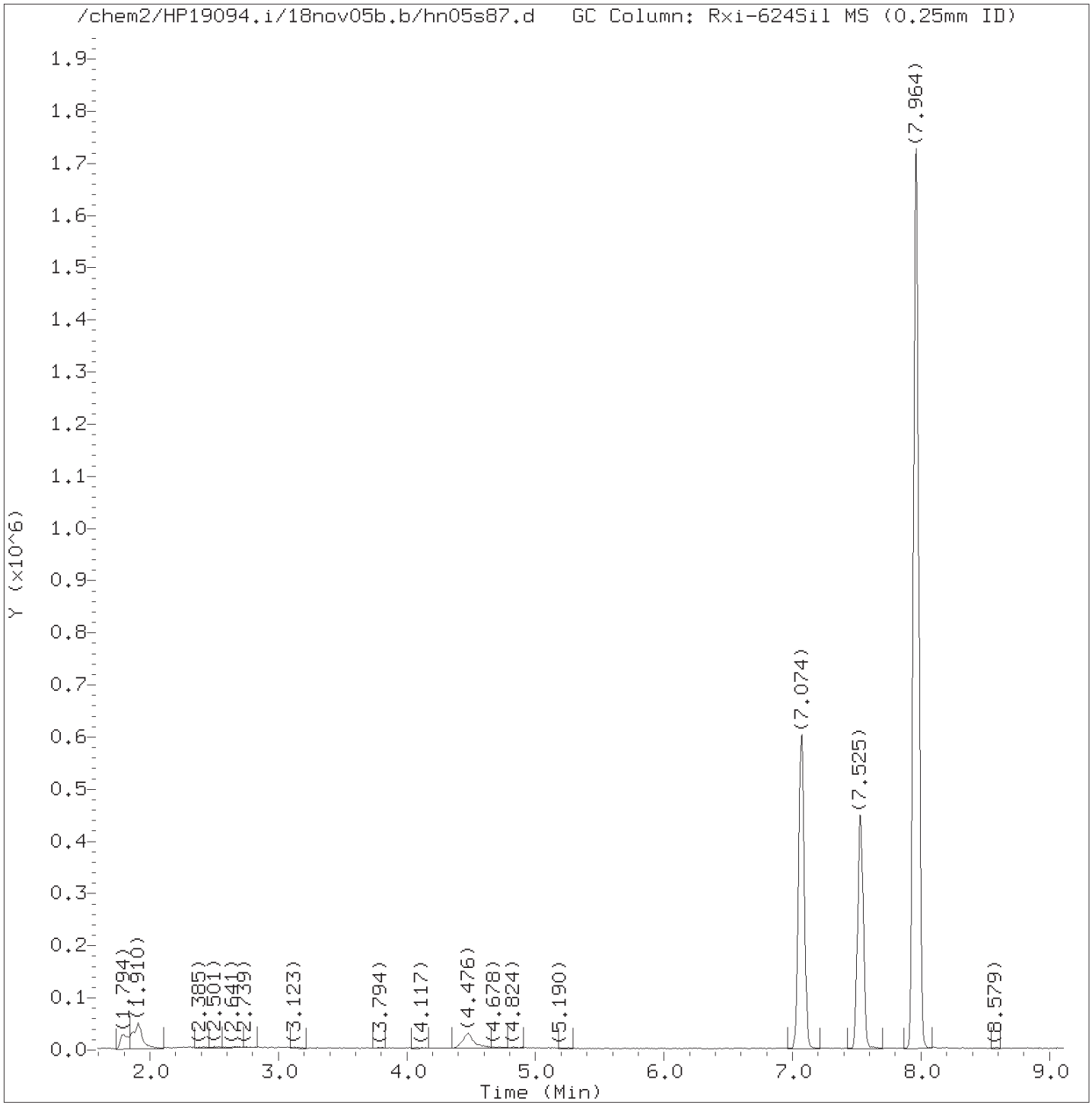
Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s87.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 06:40 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 10:50 jkh09052

Sample Name: 14T01 Lab Sample ID: 9876331

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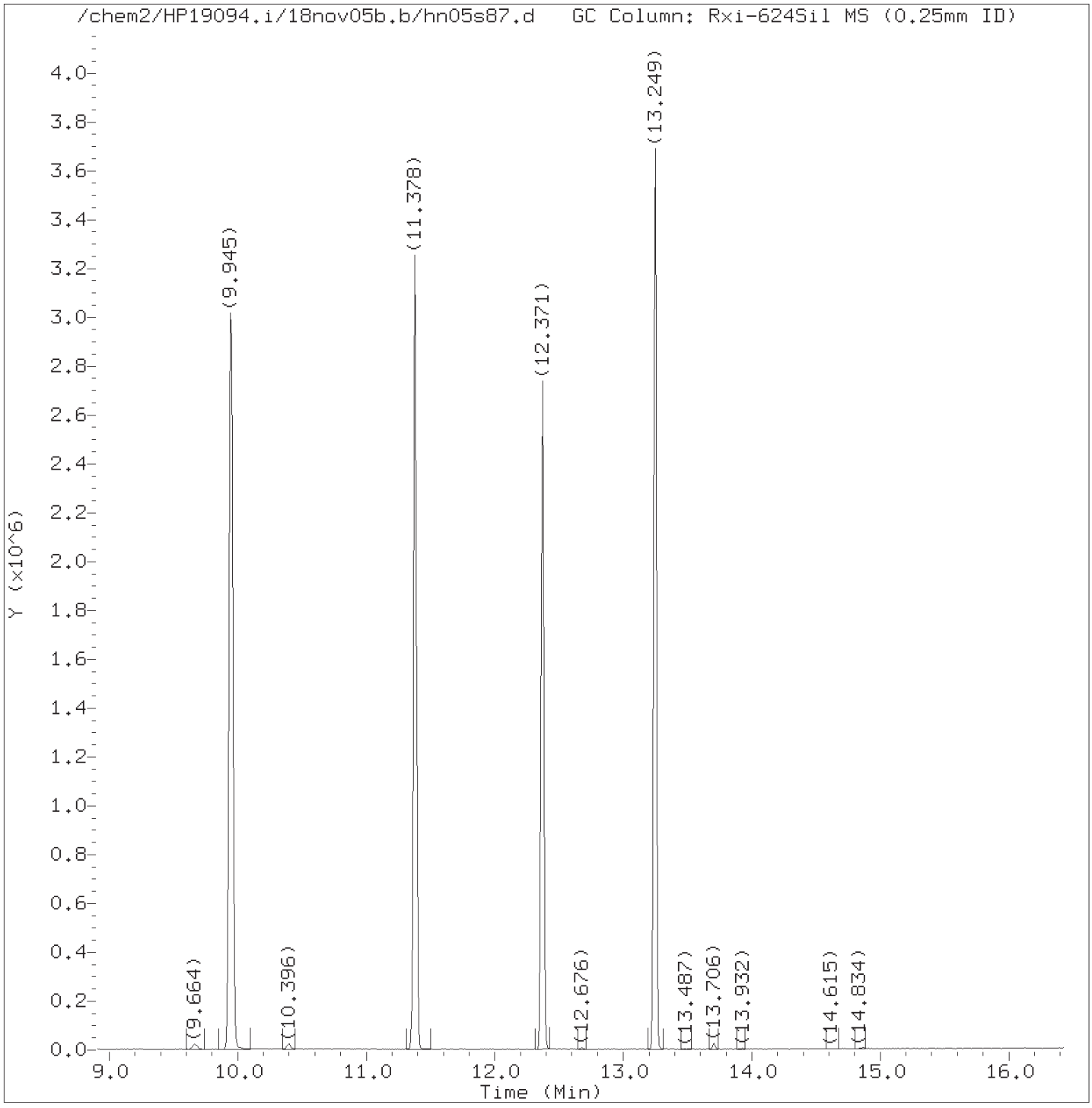
on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s87.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 06:40 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 10:50 jkh09052

Sample Name: 14T01 Lab Sample ID: 9876331

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/hn05s87.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 06:40 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 10:50 jkh09052

Sample Name: 14T01 Lab Sample ID: 9876331

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.470	65	111627	50.000
50)$Dibromofluoromethane	(2)	7.074	113	576645	9.379
57)$1,2-Dichloroethane-d4	(2)	7.525	102	105738	9.866
63)*Fluorobenzene	(2)	7.964	96	2439294	10.000
82)$Toluene-d8	(3)	9.945	98	2386529	10.276
97)*Chlorobenzene-d5	(3)	11.378	117	1804412	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	816415	9.656
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	904519	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

Data file: /chem2/HP19094.i/18nov05b.b/hn05s75.d Injection date and time: **06-NOV-2018 02:22**
Data file Sample Info. Line: 14T02;9876332;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:43 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;9048

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483(0.000)	475	65	72413	(-41)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2522280	(-1)	10.00	
97) Chlorobenzene-d5	11.378(0.006)	1606	117	1831375	(-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	936825	(2)	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	607193	9.551	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531(-0.001)	102	113667	10.256	103%		81 - 118
82) Toluene-d8	(3)	9.951(0.000)	98	2431251	10.315	103%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	843374	9.828	98%		85 - 114

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)			Not Detected					0.05	0.5
2) Chloromethane	(2)	2.276(-0.000)	50	7061	0.073	0.07		J	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)	3.812(-0.002)	43	12037	2.789	2.79		J	0.9	5
18) Carbon Disulfide	(2)	4.086(-0.001)	76	12950	0.082	0.08		J	0.06	1
21) Methyl Acetate	(1)			Not Detected					0.1	1
23) Methylene Chloride	(2)	4.477(-0.001)	84	14830	0.266	0.27		J	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)	6.385(-0.001)	96	3687	0.060	0.06		J	0.05	0.5
38) 2-Butanone	(1)	6.348(-0.000)	43	4947	0.700	0.70		J	0.6	5
49) Chloroform	(2)	6.860(-0.000)	83	61197	0.619	0.62			0.09	0.5
51) 1,1,1-Trichloroethane	(2)			Not Detected					0.06	0.5
52) Cyclohexane	(2)	7.177(0.000)	56	20741	0.188	0.19		J	0.05	0.5
54) Carbon Tetrachloride	(2)			Not Detected					0.07	0.5
58) Benzene	(2)	7.567(-0.000)	78	73050	0.309	0.31		J	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)	8.750(-0.000)	83	12534	0.109	0.11		J	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)	10.024(-0.000)	92	22648	0.167	0.17		J	0.07	0.5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s75.d Injection date and time: **06-NOV-2018 02:22**
Data file Sample Info. Line: 14T02;9876332;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:43 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)	11.597(-0.000)	106	10107	0.103	0.10		J	0.1	0.5
104) o-Xylene	(3)	11.932(-0.001)	106	6967	0.074	0.07		J	0.05	0.5
105) Xylene (Total)	(3)		106	17074	0.177	0.18		J	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)	14.615(-0.000)	180	5416	0.080	0.08		J	0.06	0.5

Total number of targets = 51

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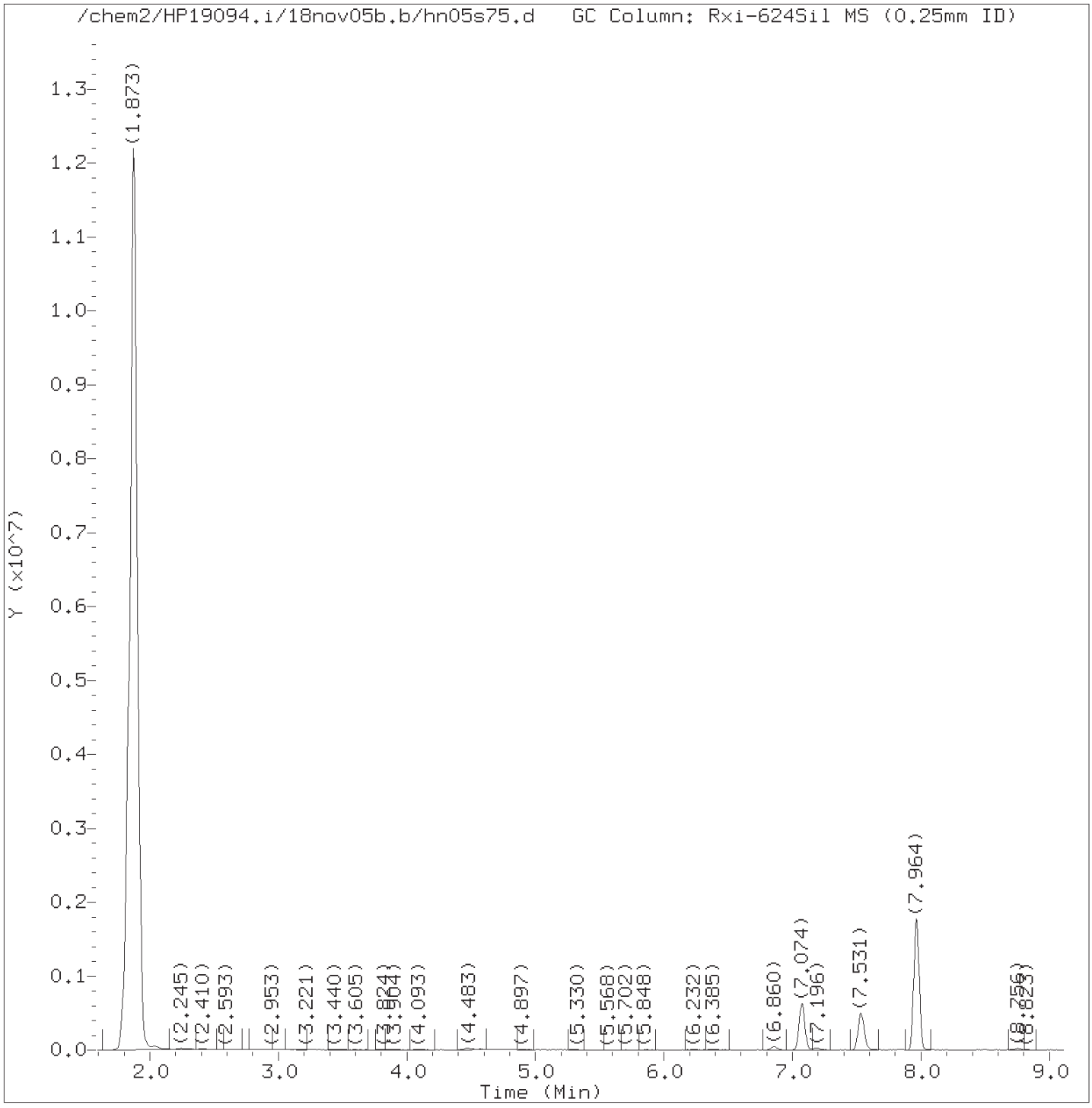
Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

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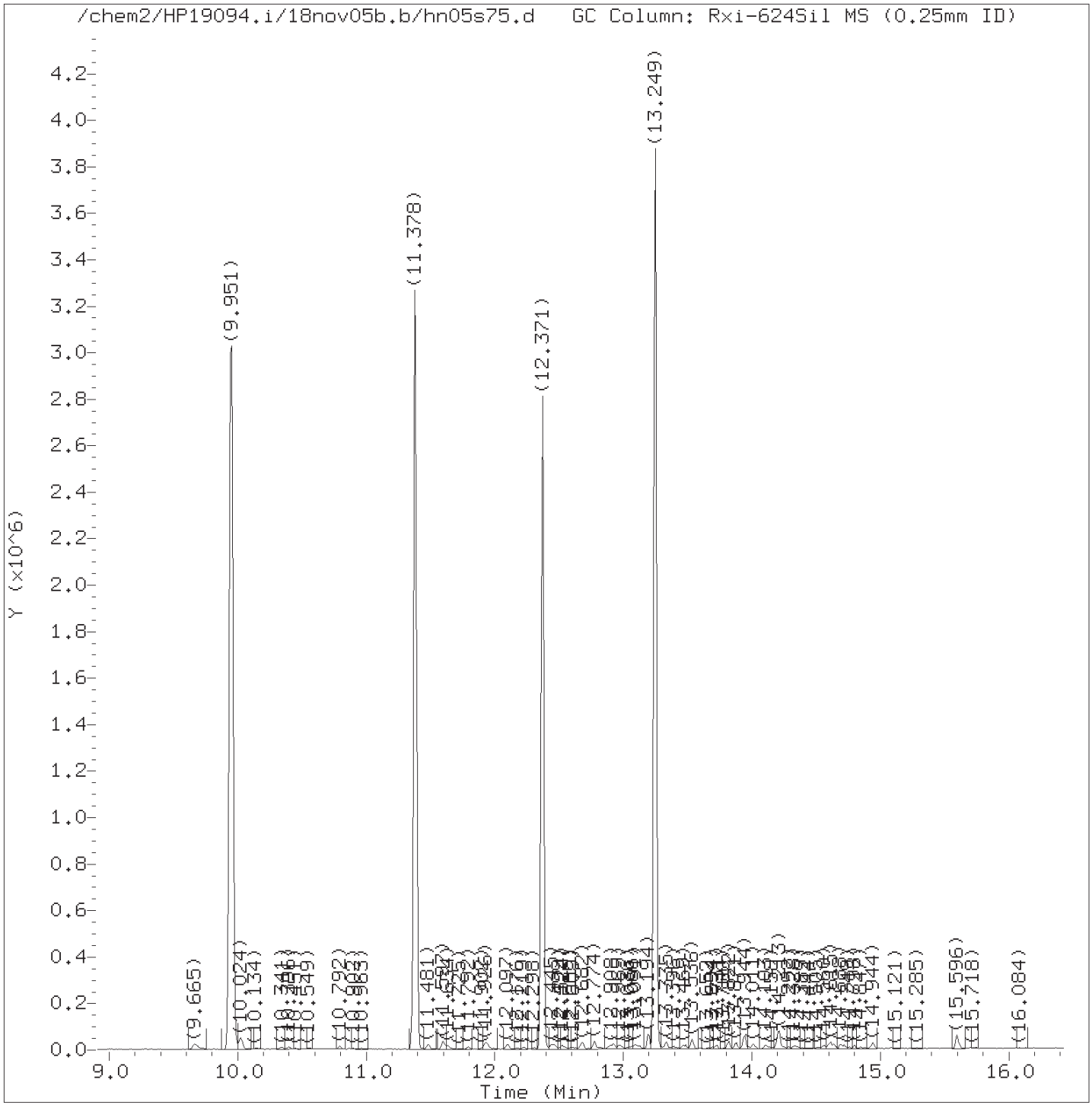
on 11/06/2018 at 10:52.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

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Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Chloromethane	(2)	2.276	50	7061	0.073
14) Acetone	(1)	3.812	43	12037	2.789
18) Carbon Disulfide	(2)	4.086	76	12950	0.082
23) Methylene Chloride	(2)	4.477	84	14830	0.266
26)*t-Butyl Alcohol-d10	(1)	4.483	65	72413	50.000
38) 2-Butanone	(1)	6.348	43	4947	0.700
39) cis-1,2-Dichloroethene	(2)	6.385	96	3687	0.060
49) Chloroform	(2)	6.860	83	61197	0.619
50)$Dibromofluoromethane	(2)	7.074	113	607193	9.551
52) Cyclohexane	(2)	7.177	56	20741	0.188
57)$1,2-Dichloroethane-d4	(2)	7.531	102	113667	10.256
58) Benzene	(2)	7.567	78	73050	0.309
63)*Fluorobenzene	(2)	7.964	96	2522280	10.000
69) Methylcyclohexane	(2)	8.750	83	12534	0.109
82)$Toluene-d8	(3)	9.951	98	2431251	10.315
83) Toluene	(3)	10.024	92	22648	0.167
97)*Chlorobenzene-d5	(3)	11.378	117	1831375	10.000
101) m+p-Xylene	(3)	11.597	106	10107	0.103
105) Xylene (Total)	(3)		106	17074	0.177
104) o-Xylene	(3)	11.932	106	6967	0.074
111)$4-Bromofluorobenzene	(3)	12.371	95	843374	9.828
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	936825	10.000
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	5416	0.080

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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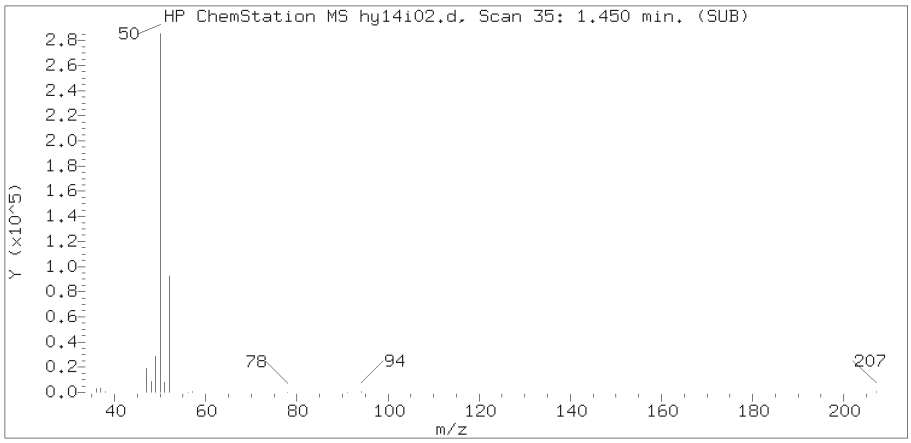
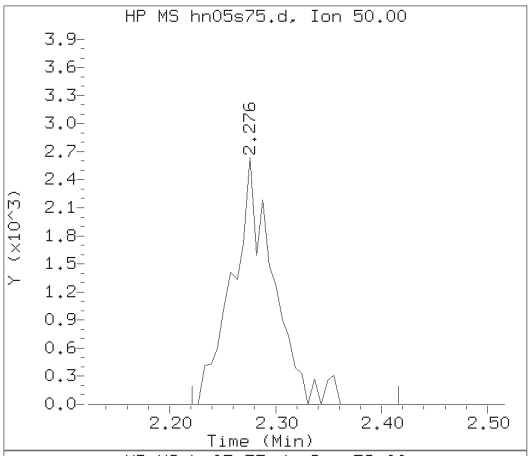
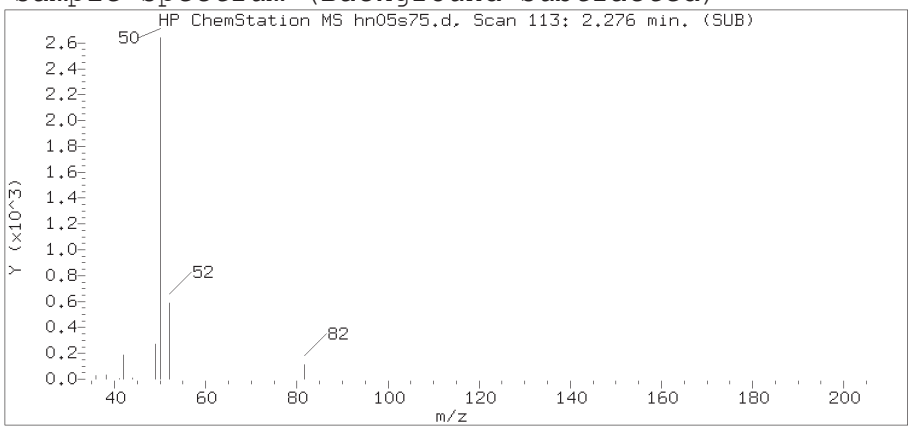
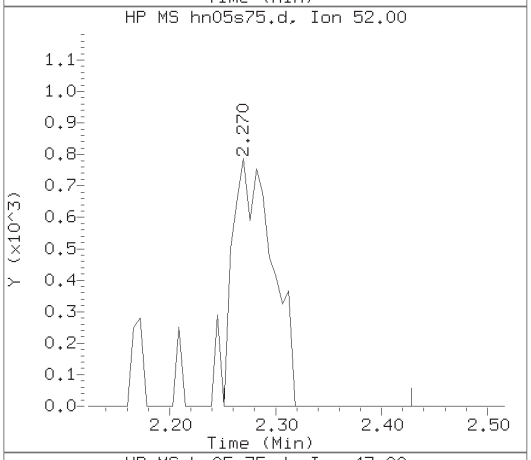
Reference Standard Spectrum for Chloromethane



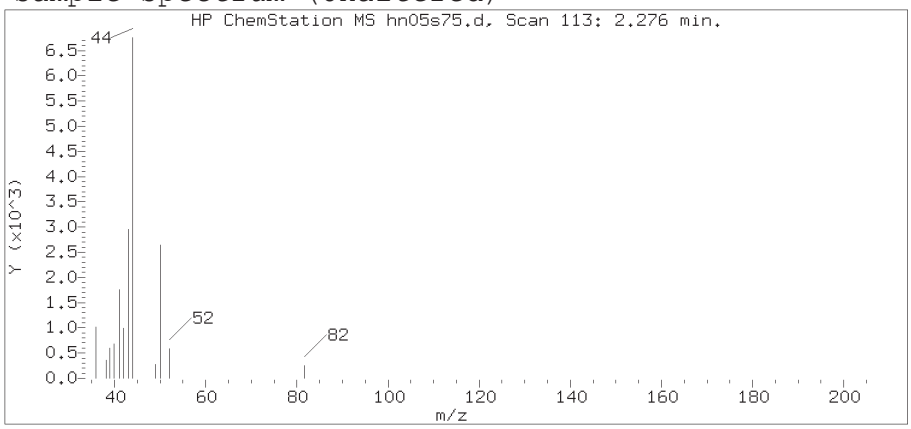


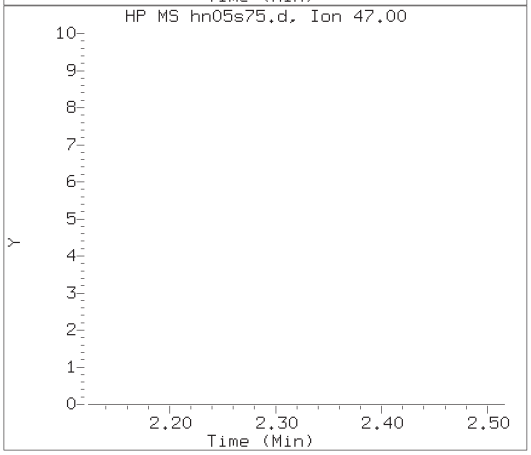
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 2
Compound Name : Chloromethane
Scan Number : 113
Retention Time (minutes): 2.276
Relative Retention Time :-0.00022
Quant Ion : 50.00
Area (flag) : 7061
On-Column Amount (ng) : 0.0731

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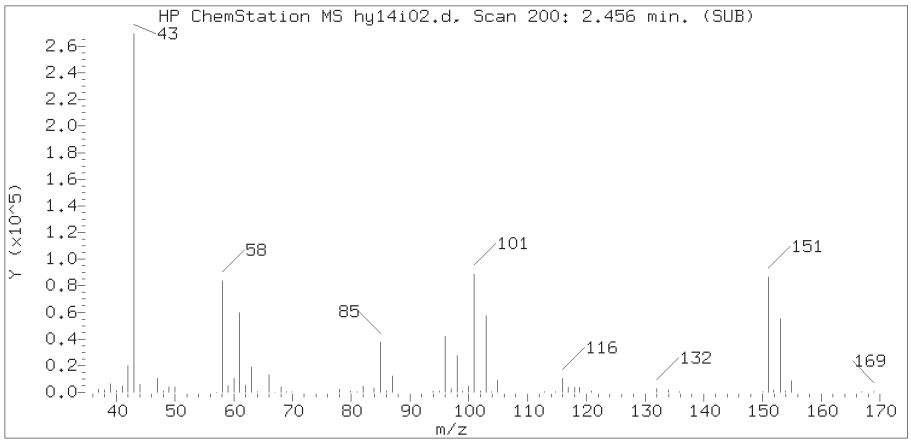
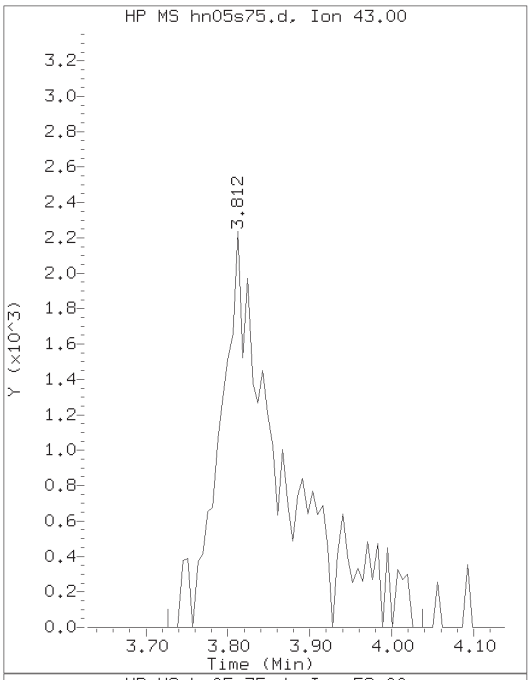
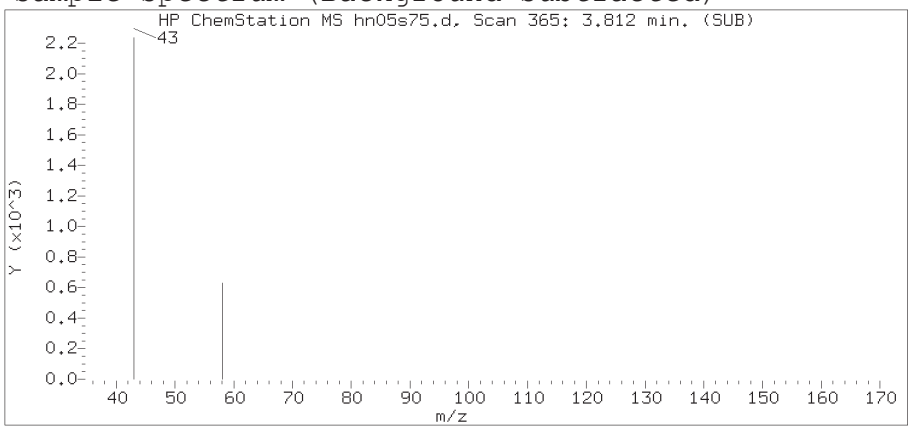
Target 3.5 esignature user ID: jkh09052

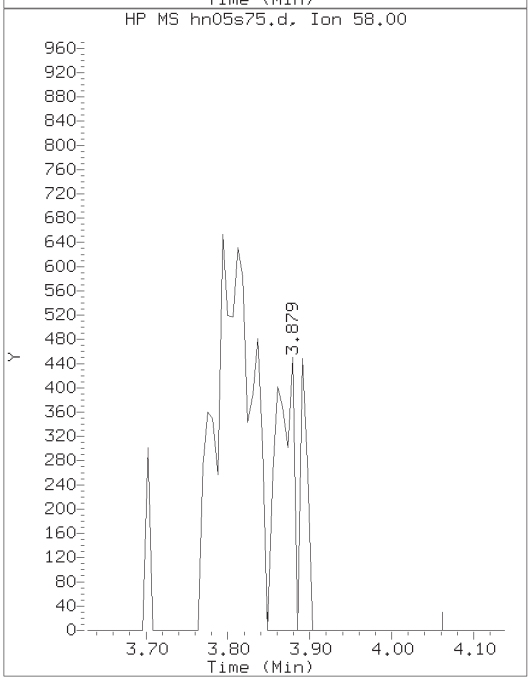
Reference Standard Spectrum for Acetone



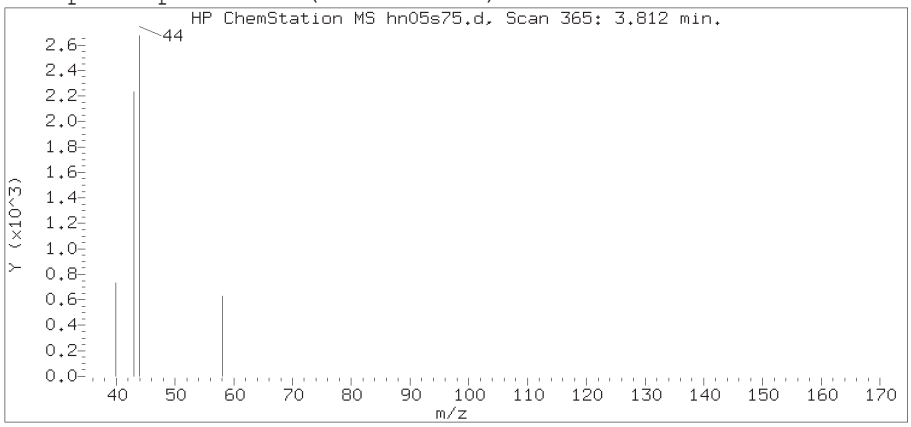


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 14
Compound Name : Acetone
Scan Number : 365
Retention Time (minutes): 3.812
Relative Retention Time :-0.00272
Quant Ion : 43.00
Area (flag) : 12037
On-Column Amount (ng) : 2.7889

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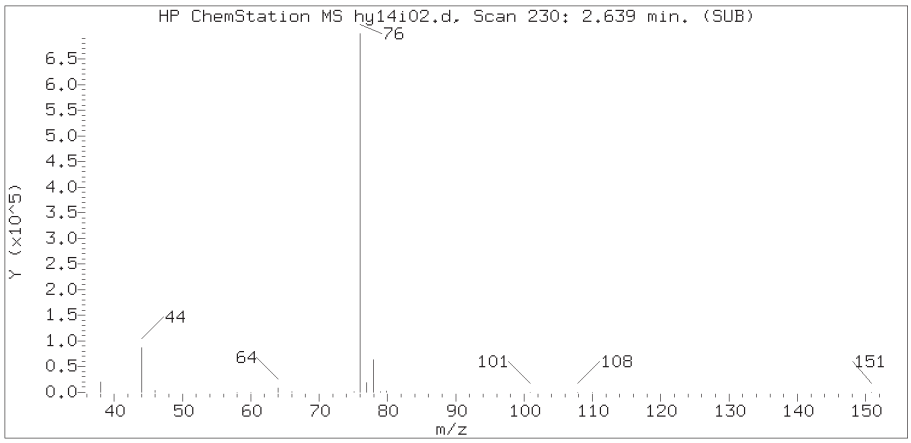
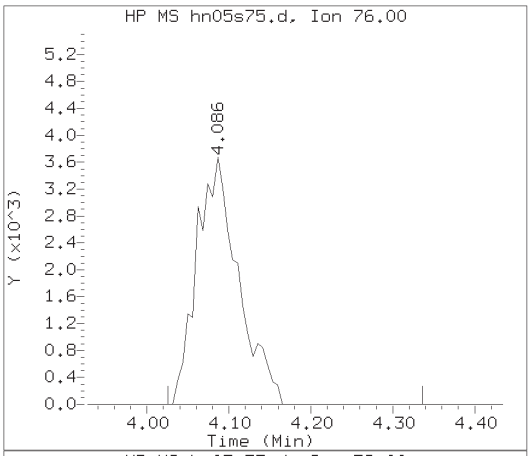
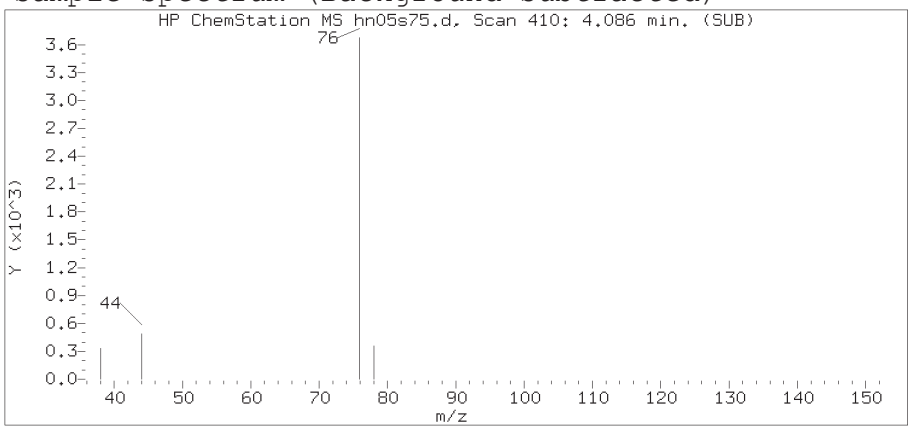
Target 3.5 esignature user ID: jkh09052

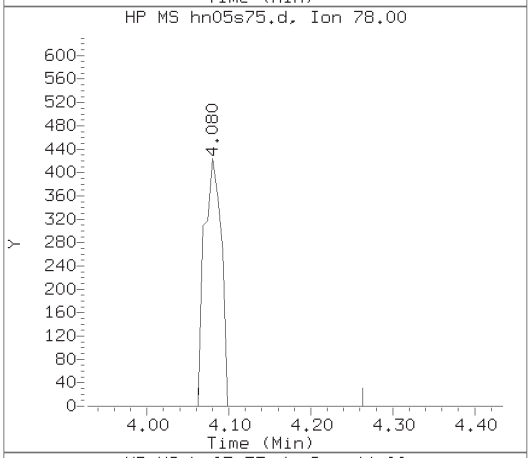
Reference Standard Spectrum for Carbon Disulfide



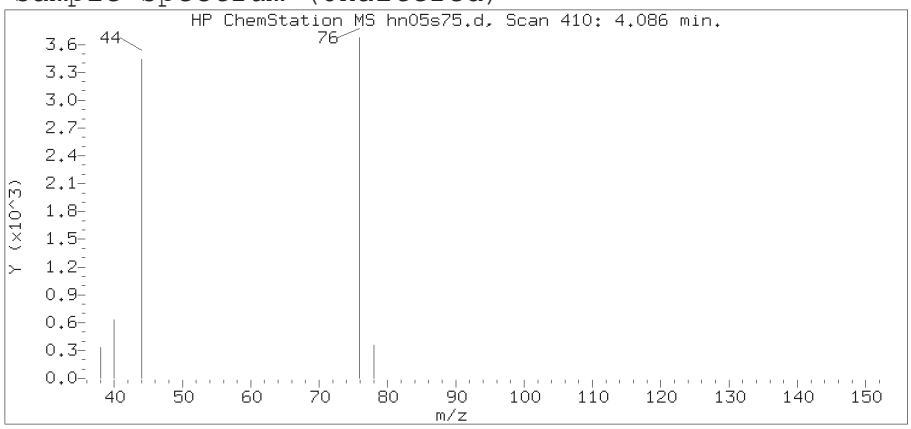


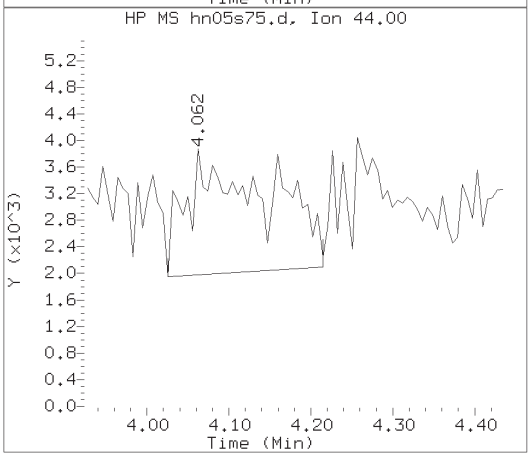
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 410
Retention Time (minutes): 4.086
Relative Retention Time :-0.00116
Quant Ion : 76.00
Area (flag) : 12950
On-Column Amount (ng) : 0.0823

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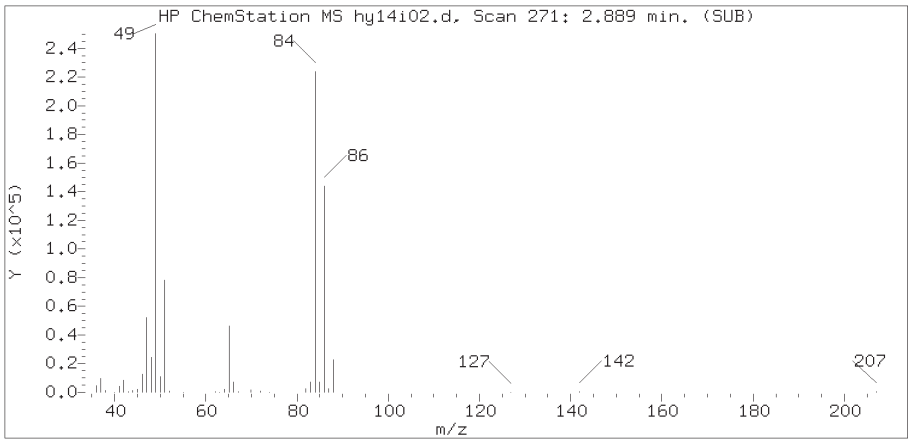
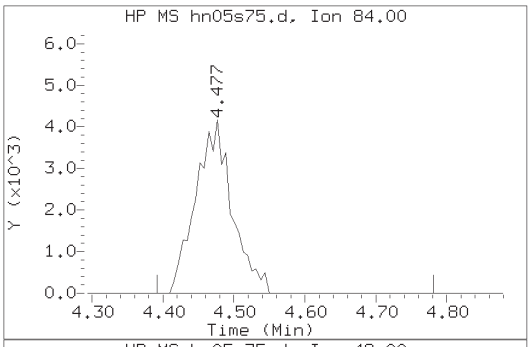
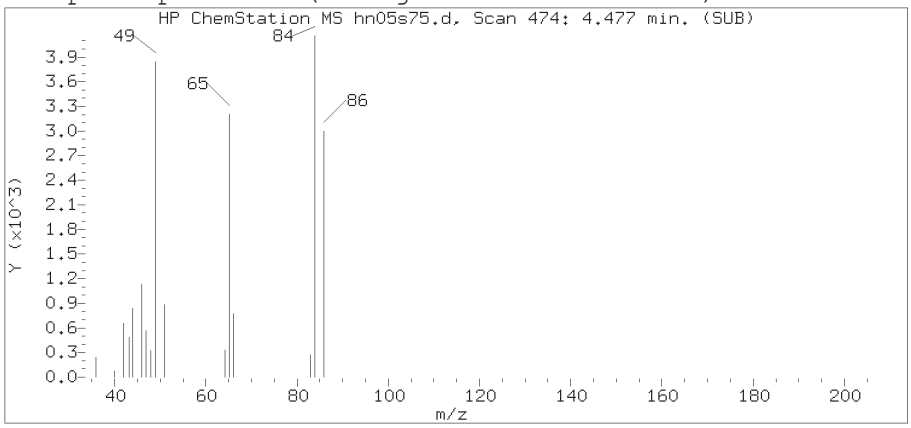
Target 3.5 esignature user ID: jkh09052

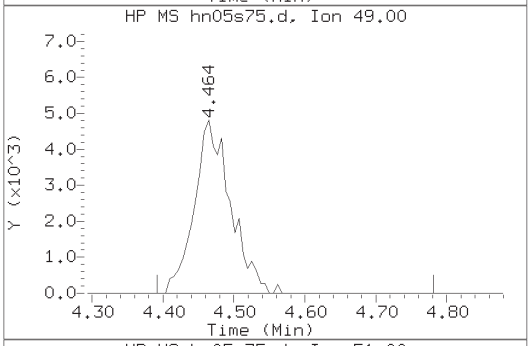
Reference Standard Spectrum for Methylene Chloride

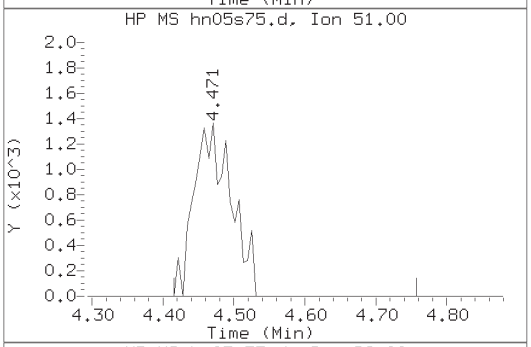




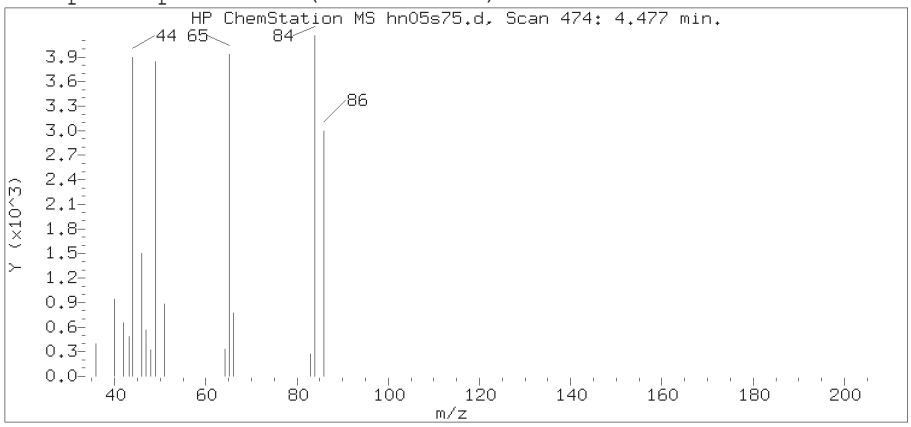
Sample Spectrum (Background Subtracted)

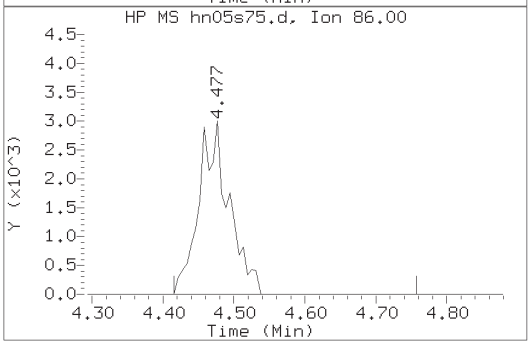






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 474
Retention Time (minutes): 4.477
Relative Retention Time :-0.00196
Quant Ion : 84.00
Area (flag) : 14830
On-Column Amount (ng) : 0.2658

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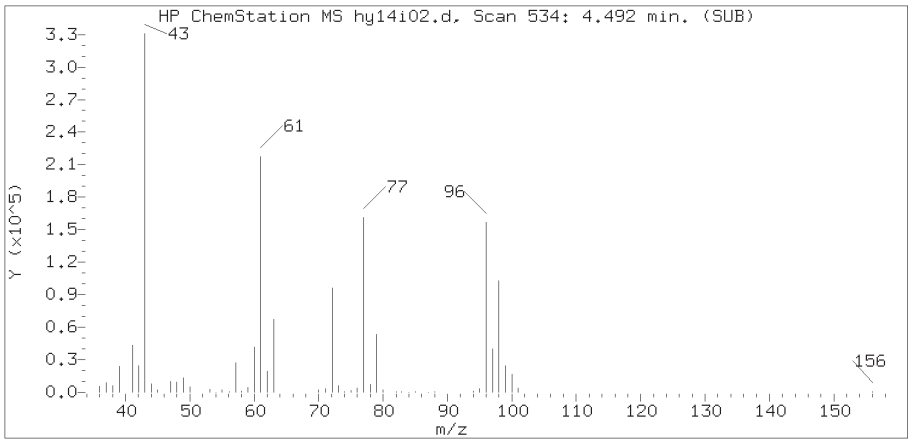
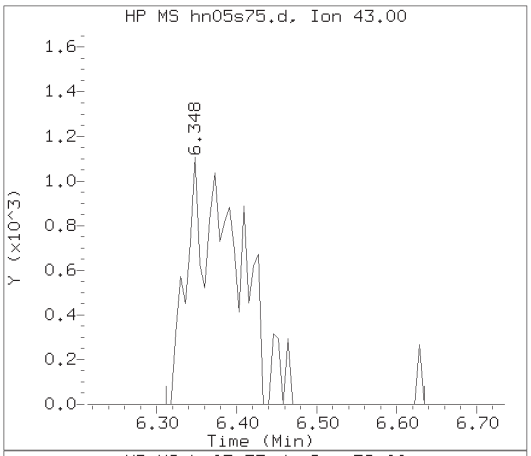
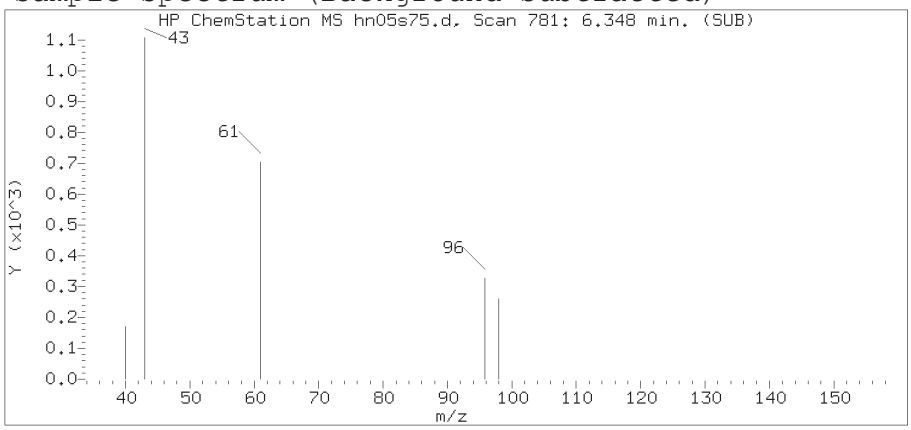
Target 3.5 esignature user ID: jkh09052

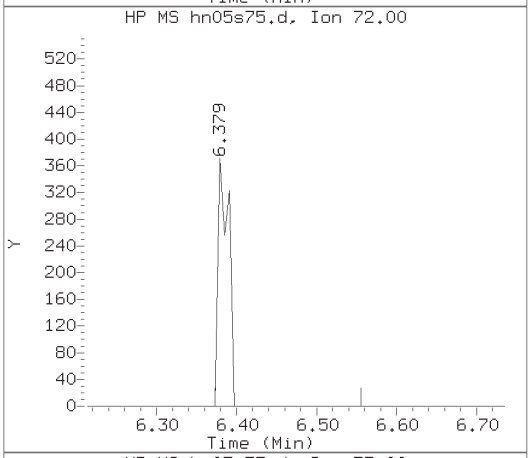
Reference Standard Spectrum for 2-Butanone



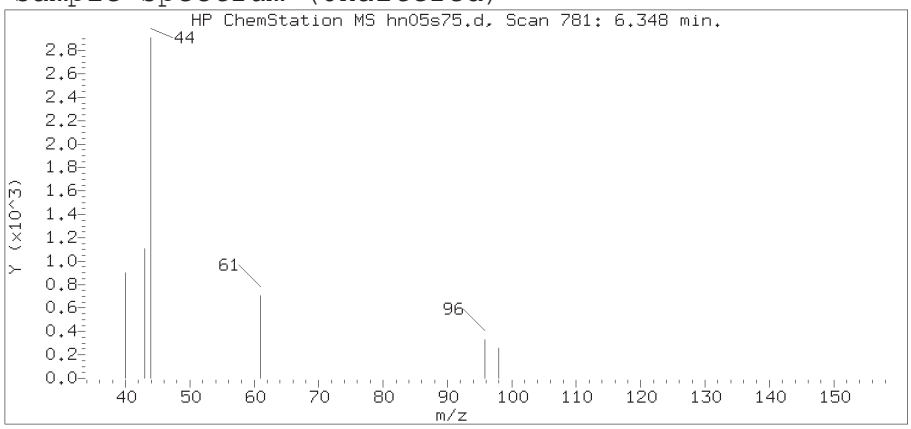


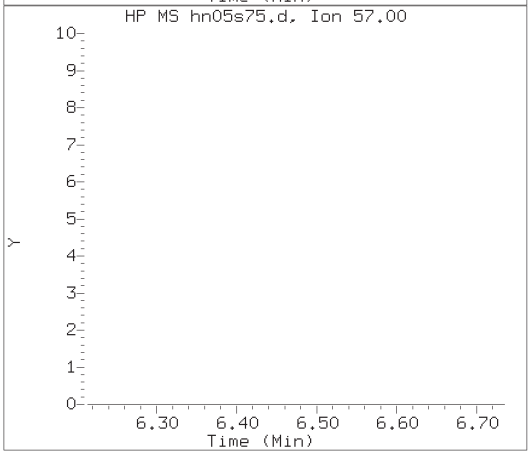
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 38
Compound Name : 2-Butanone
Scan Number : 781
Retention Time (minutes): 6.348
Relative Retention Time :-0.00000
Quant Ion : 43.00
Area (flag) : 4947
On-Column Amount (ng) : 0.7002

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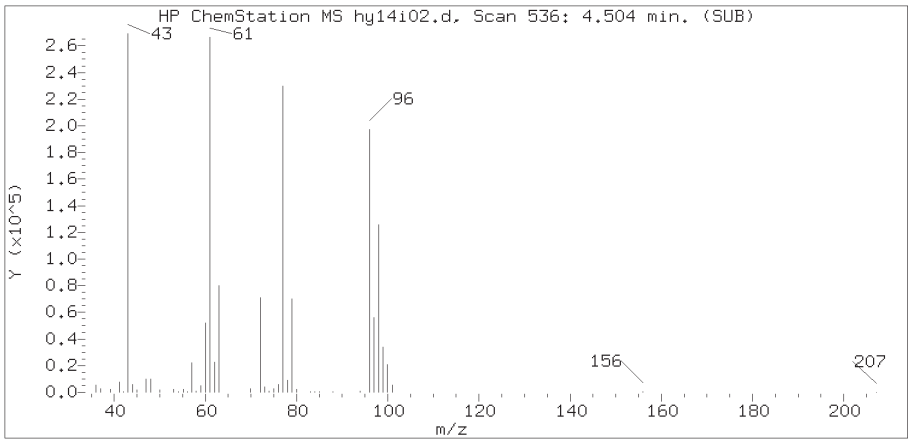
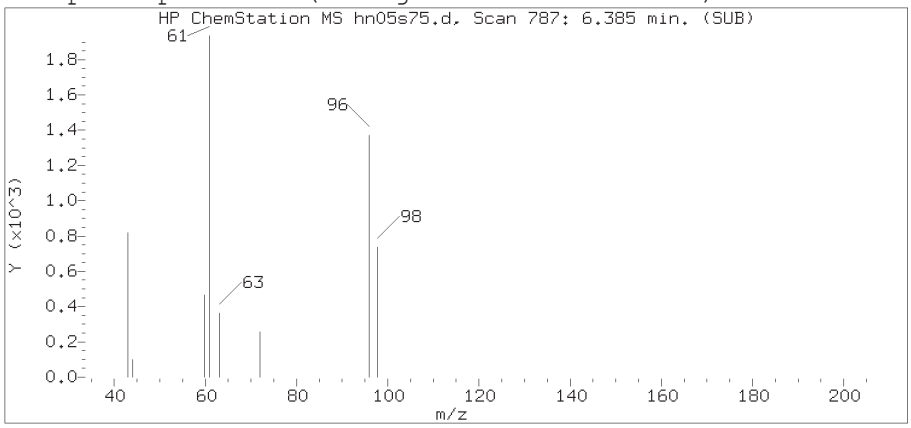
Target 3.5 esignature user ID: jkh09052

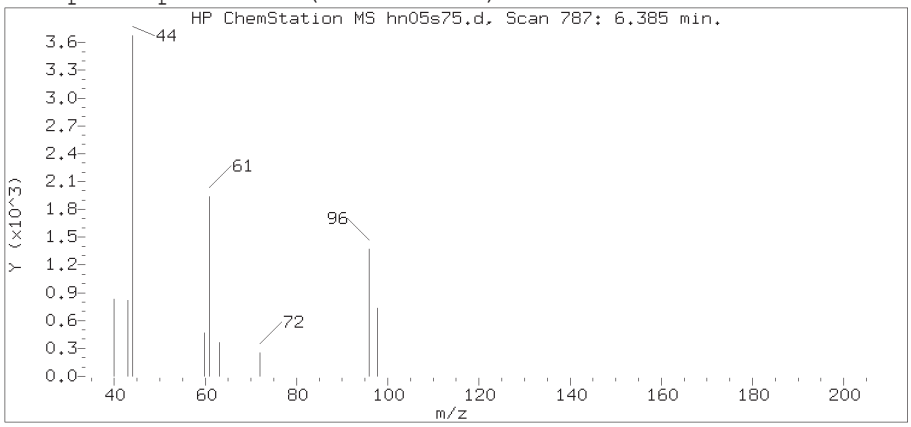
Reference Standard Spectrum for cis-1,2-Dichloroethene

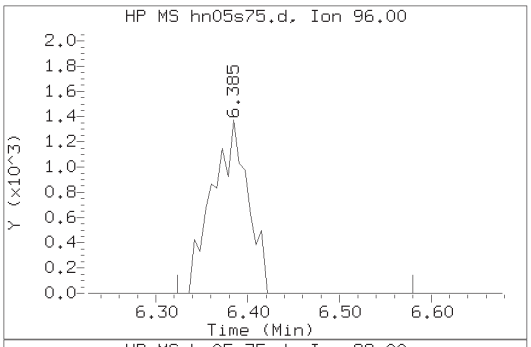


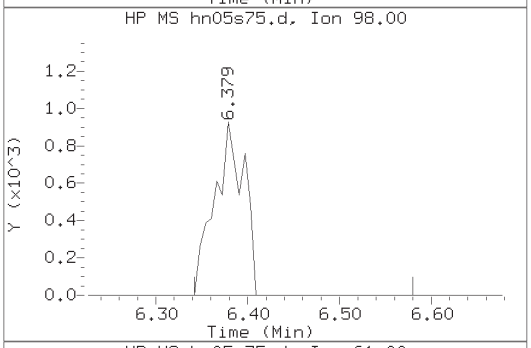
Sample Spectrum (Background Subtracted)

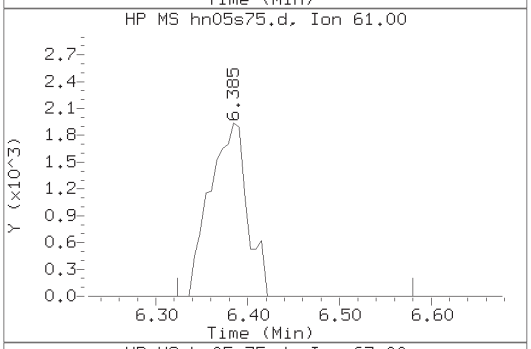


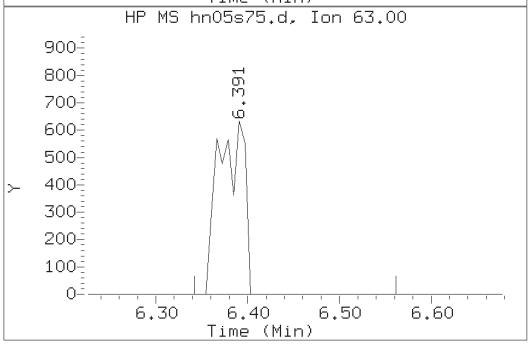
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 39
Compound Name : cis-1,2-Dichloroethene
Scan Number : 787
Retention Time (minutes): 6.385
Relative Retention Time :-0.00138
Quant Ion : 96.00
Area (flag) : 3687
On-Column Amount (ng) : 0.0598

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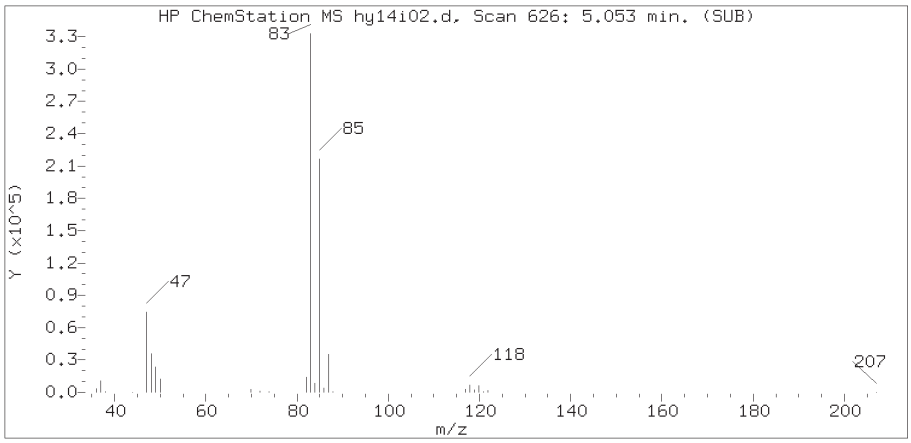
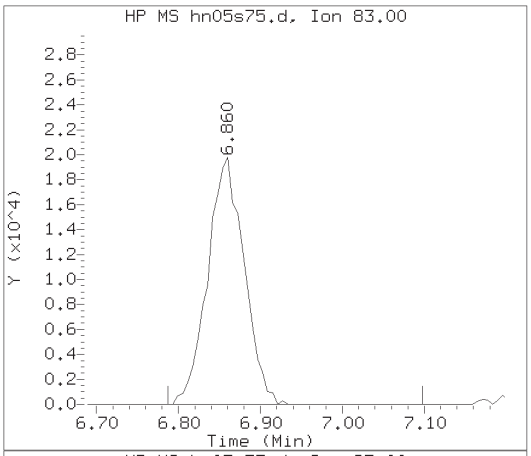
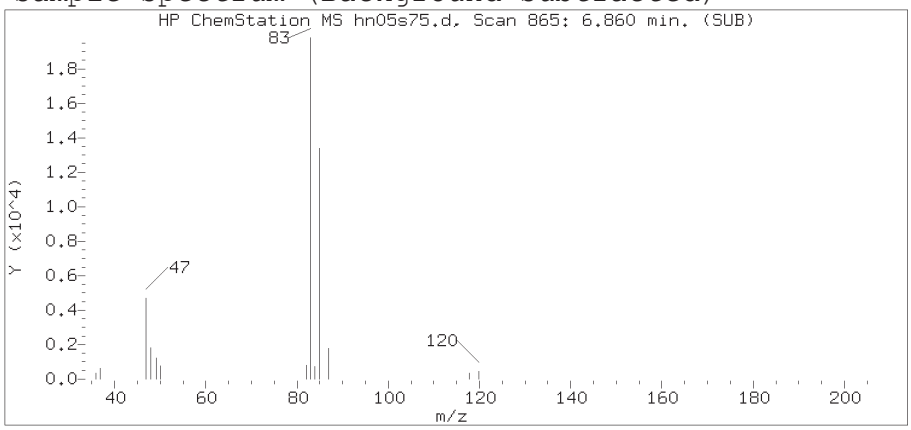
Target 3.5 esignature user ID: jkh09052

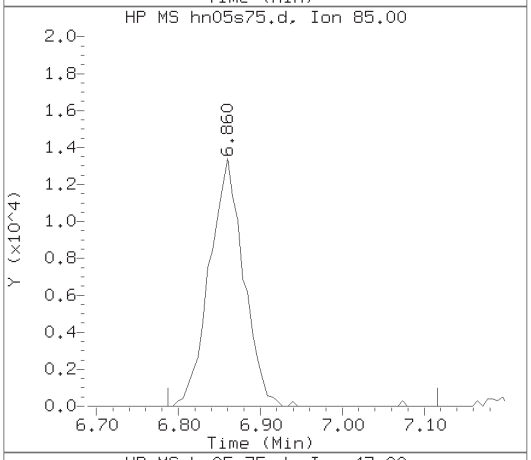
Reference Standard Spectrum for Chloroform



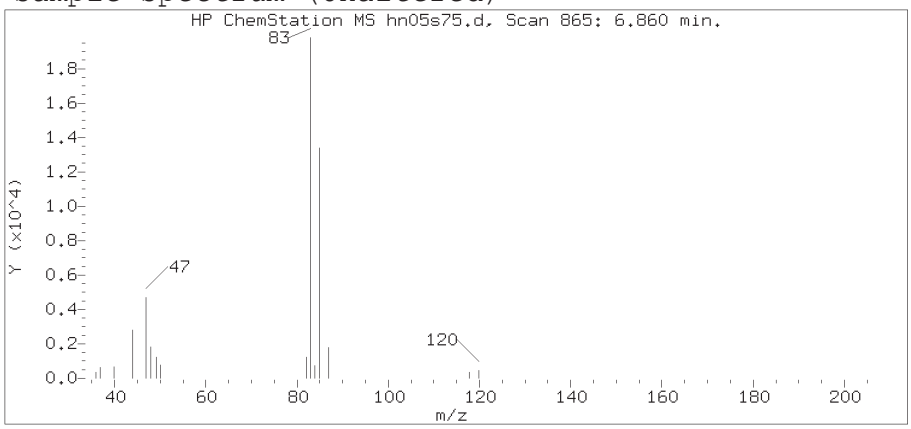


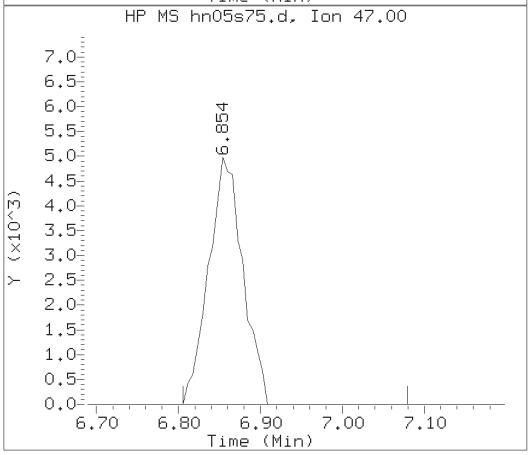
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 49
Compound Name : Chloroform
Scan Number : 865
Retention Time (minutes): 6.860
Relative Retention Time :-0.00066
Quant Ion : 83.00
Area (flag) : 61197
On-Column Amount (ng) : 0.6194

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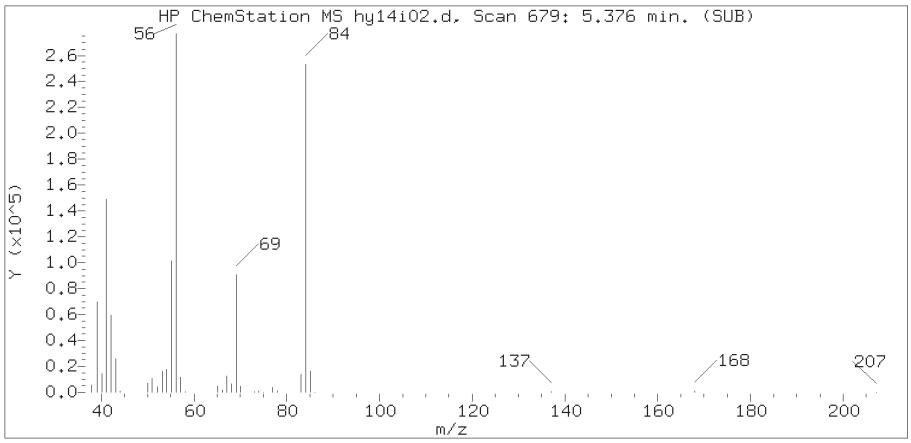
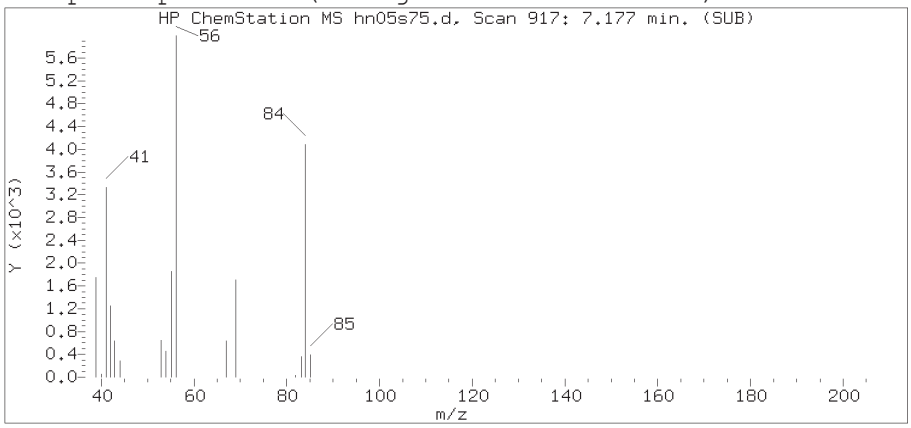
Target 3.5 esignature user ID: jkh09052

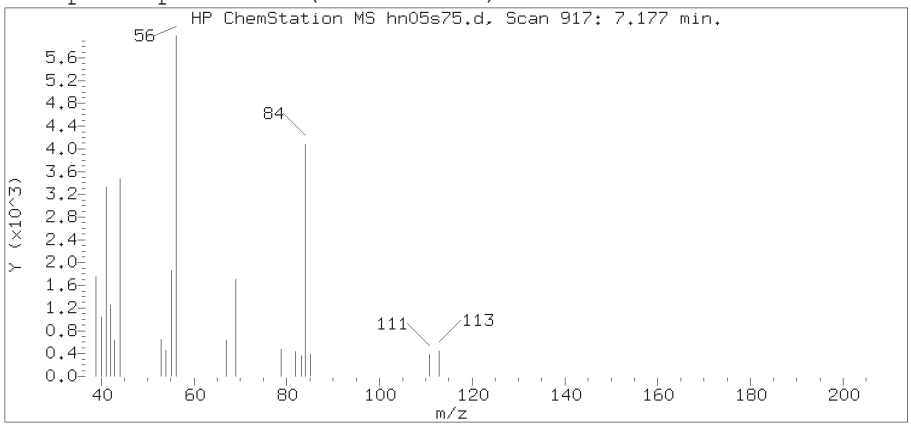
Reference Standard Spectrum for Cyclohexane

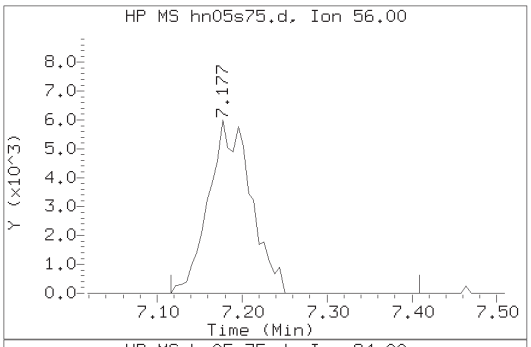


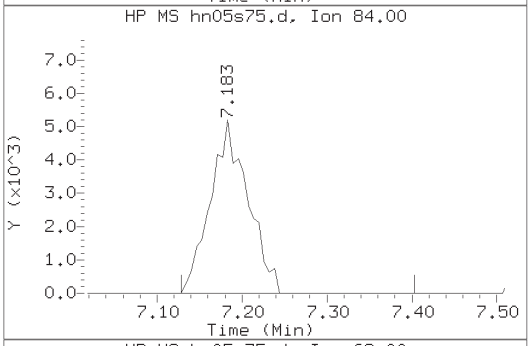
Sample Spectrum (Background Subtracted)

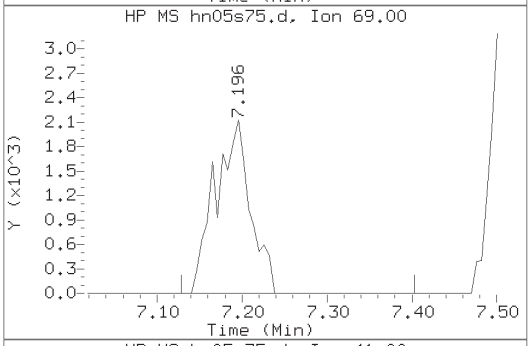


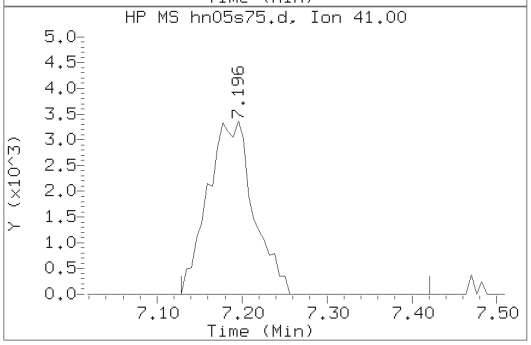
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 52
Compound Name	: Cyclohexane
Scan Number	: 917
Retention Time (minutes)	: 7.177
Relative Retention Time	: 0.00084
Quant Ion	: 56.00
Area (flag)	: 20741
On-Column Amount (ng)	: 0.1880

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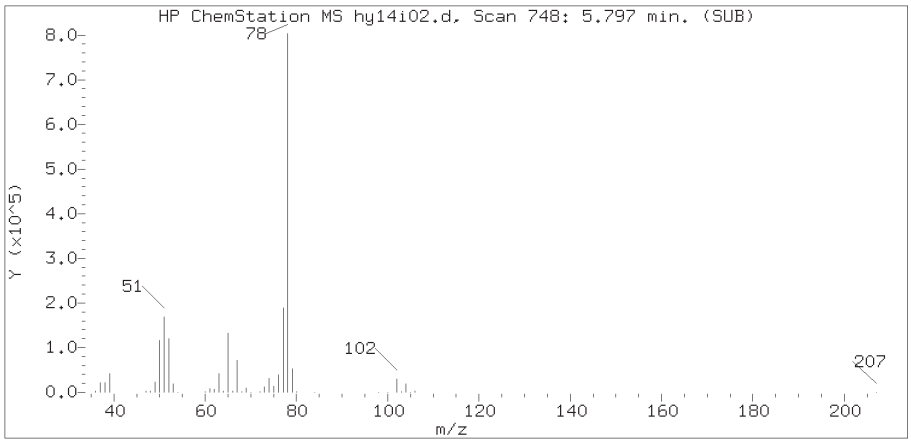
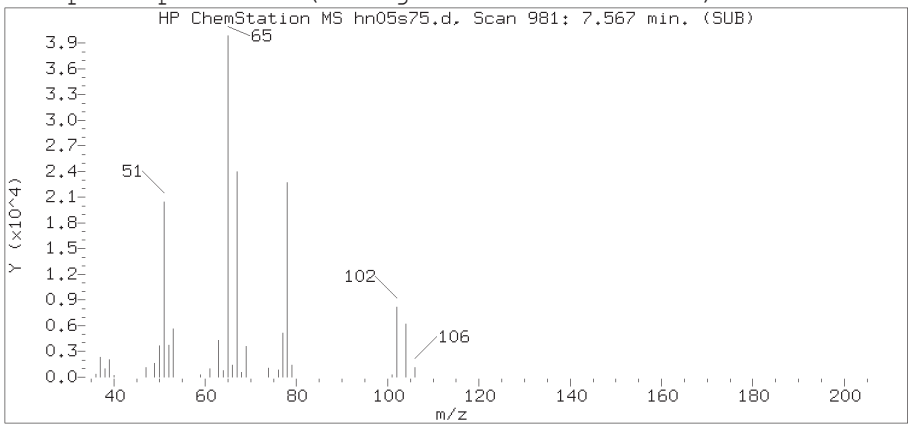
Target 3.5 esignature user ID: jkh09052

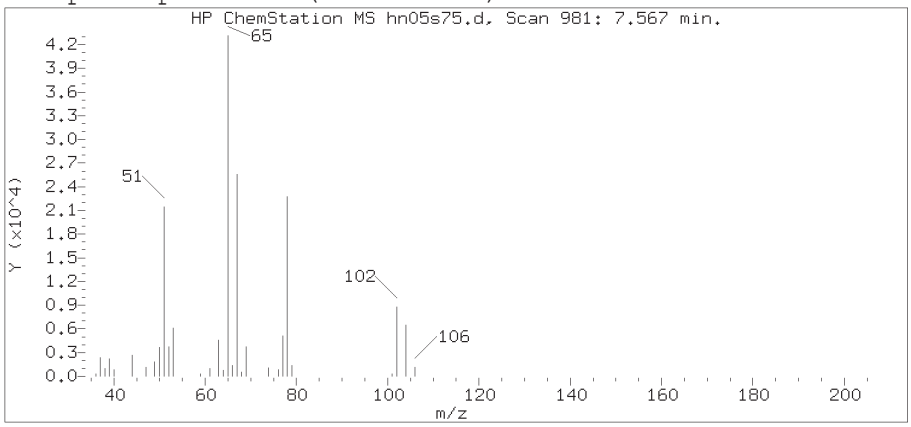
Reference Standard Spectrum for Benzene

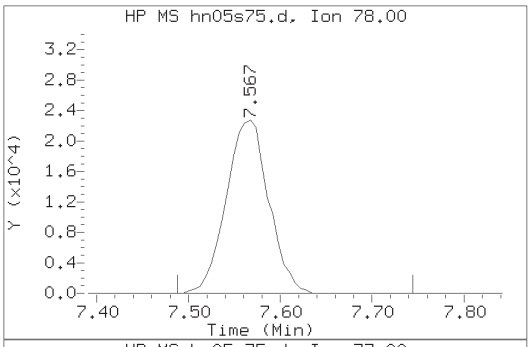


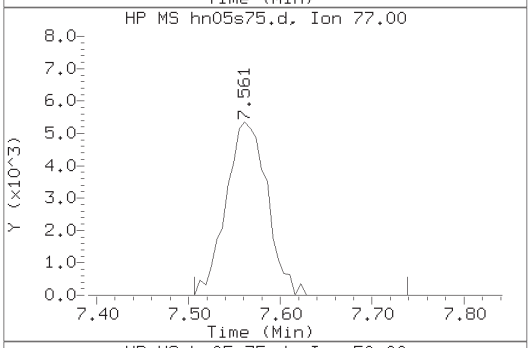
Sample Spectrum (Background Subtracted)

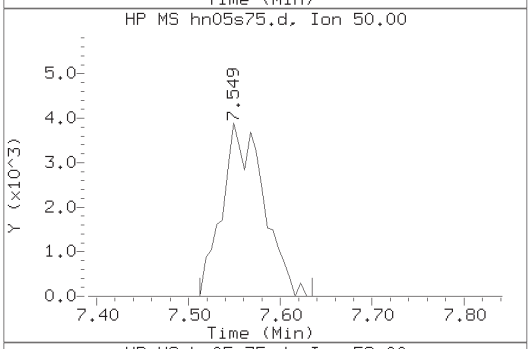


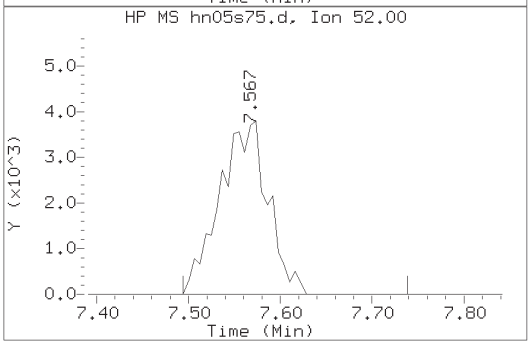
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 58
Compound Name : Benzene
Scan Number : 981
Retention Time (minutes): 7.567
Relative Retention Time :-0.00073
Quant Ion : 78.00
Area (flag) : 73050
On-Column Amount (ng) : 0.3086

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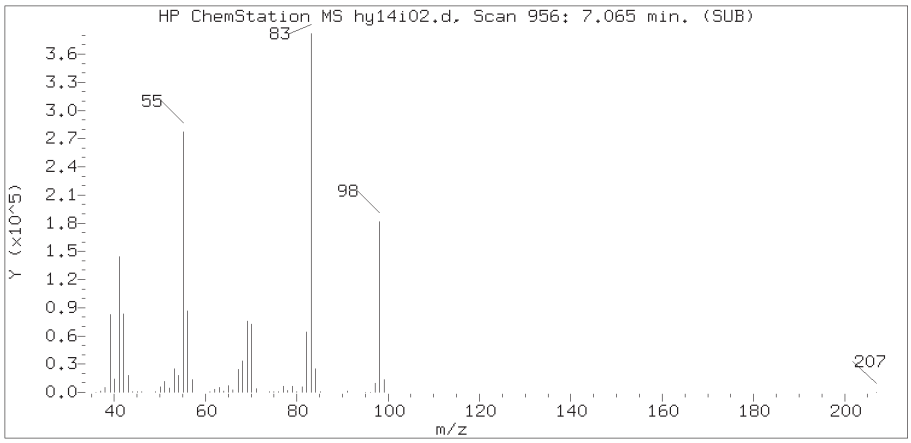
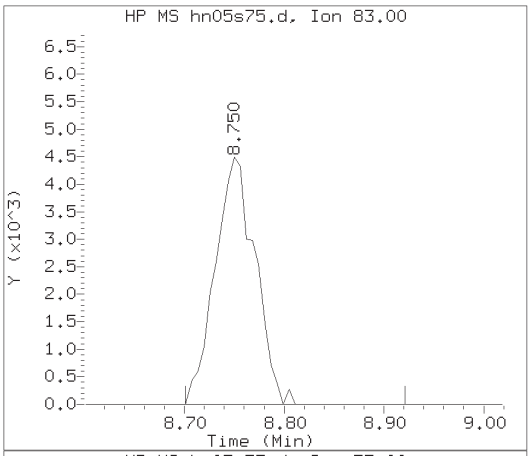
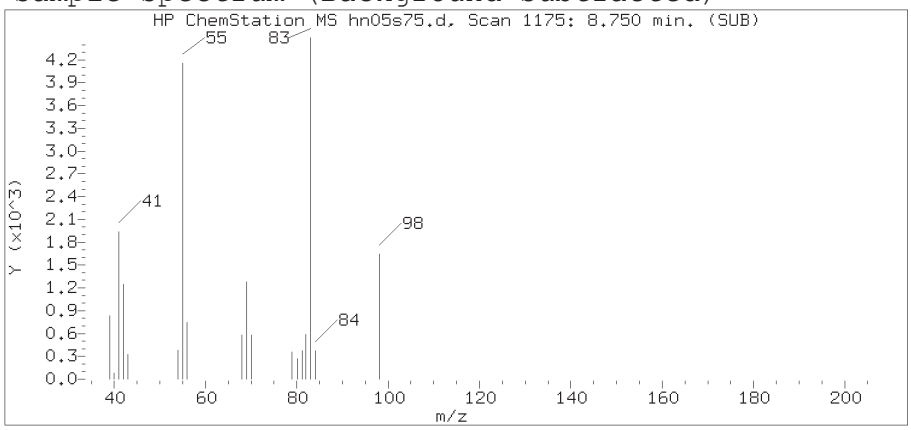
Target 3.5 esignature user ID: jkh09052

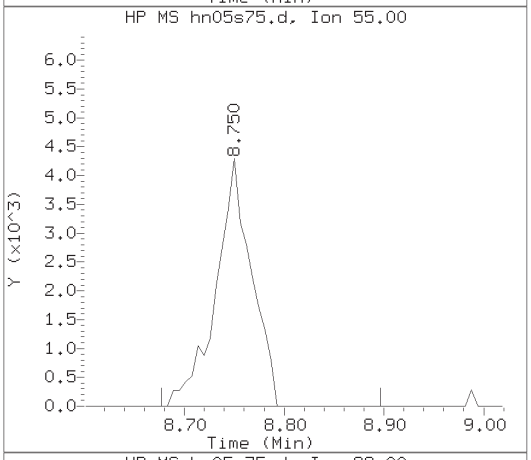
Reference Standard Spectrum for Methylcyclohexane



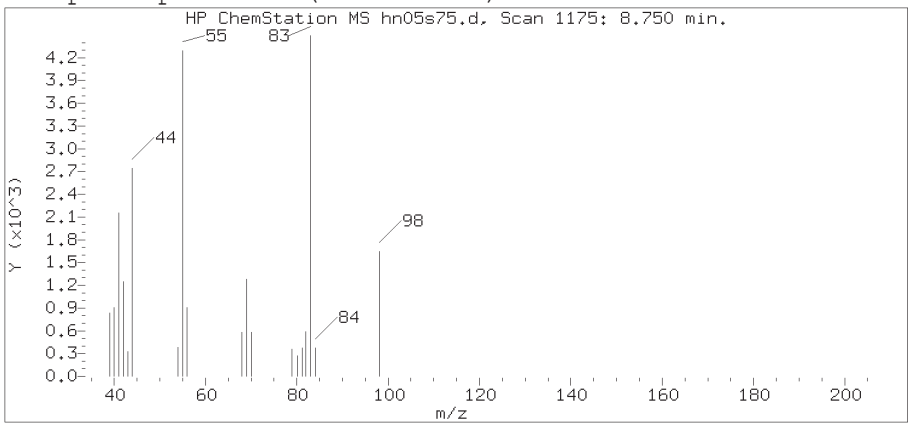


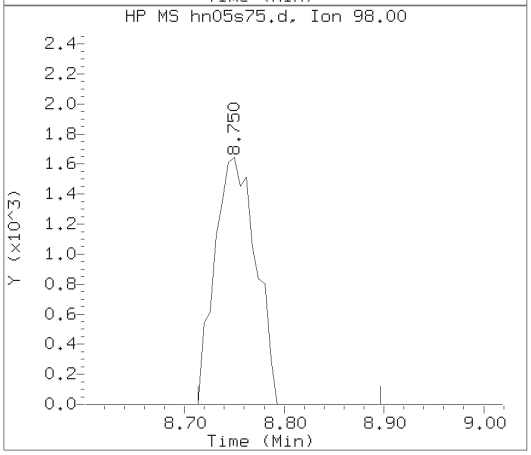
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 69
Compound Name : Methylcyclohexane
Scan Number : 1175
Retention Time (minutes): 8.750
Relative Retention Time :-0.00084
Quant Ion : 83.00
Area (flag) : 12534
On-Column Amount (ng) : 0.1095

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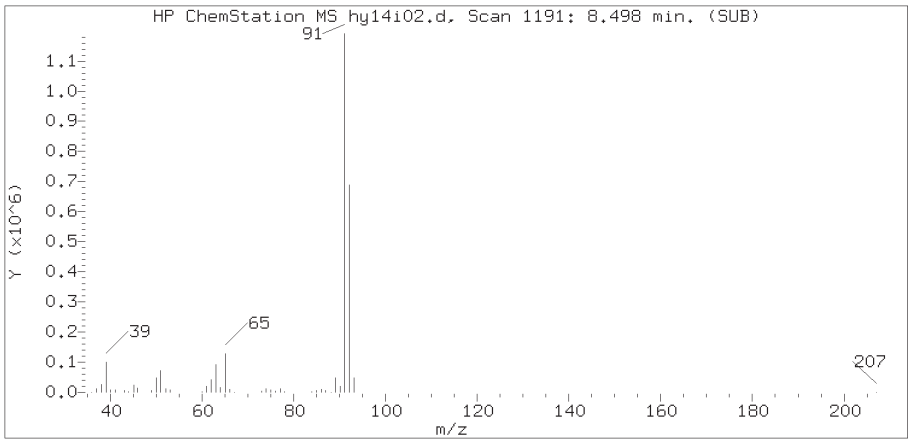
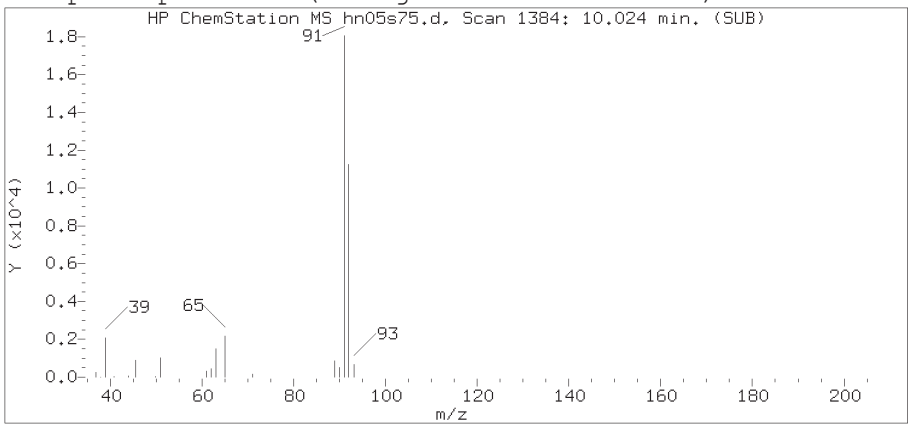
Target 3.5 esignature user ID: jkh09052

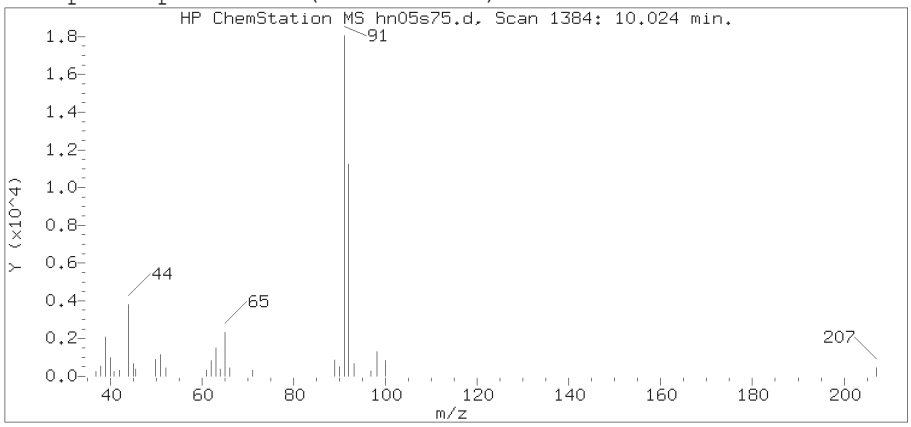
Reference Standard Spectrum for Toluene

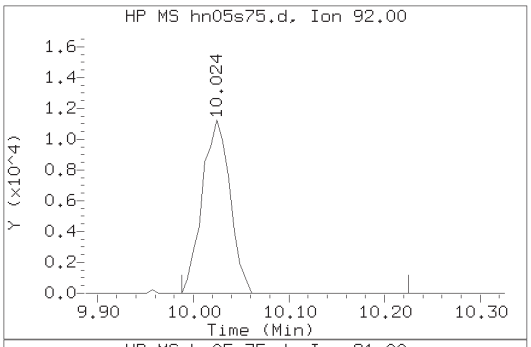


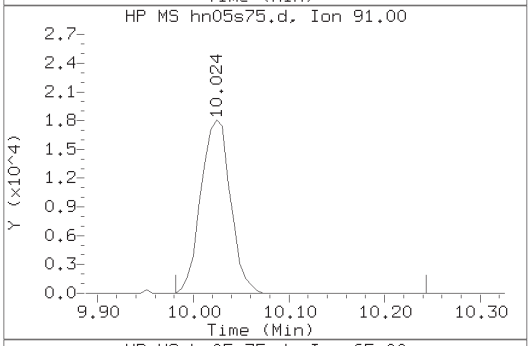
Sample Spectrum (Background Subtracted)

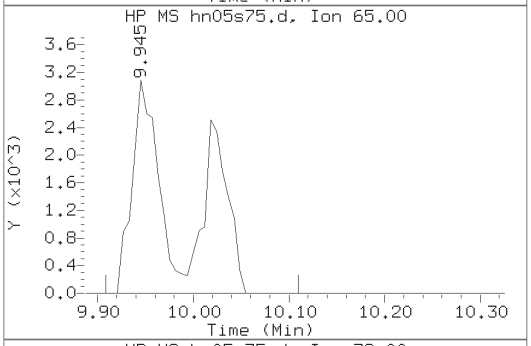


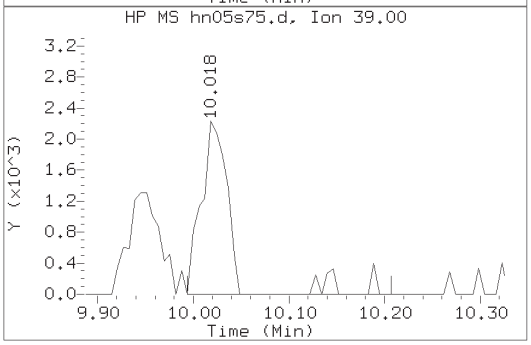
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 83
Compound Name : Toluene
Scan Number : 1384
Retention Time (minutes): 10.024
Relative Retention Time :-0.00047
Quant Ion : 92.00
Area (flag) : 22648
On-Column Amount (ng) : 0.1666

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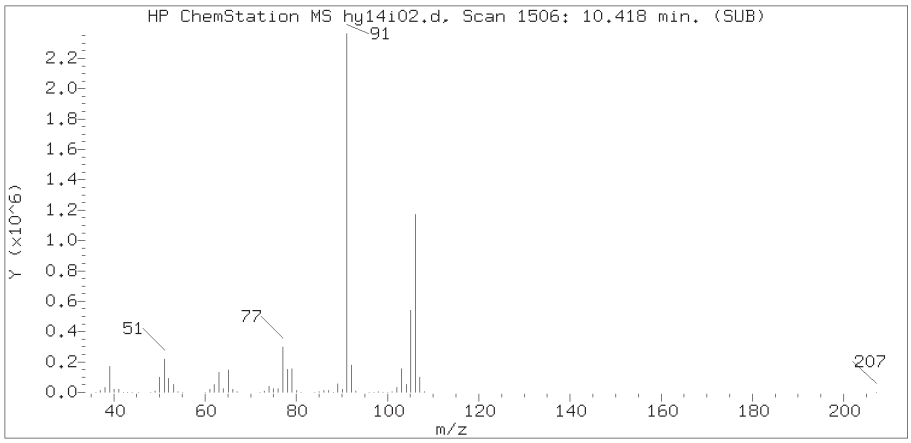
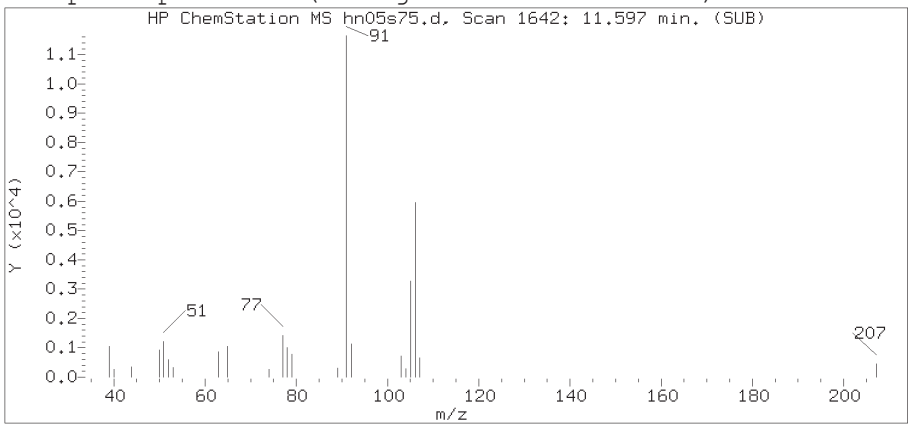
Target 3.5 esignature user ID: jkh09052

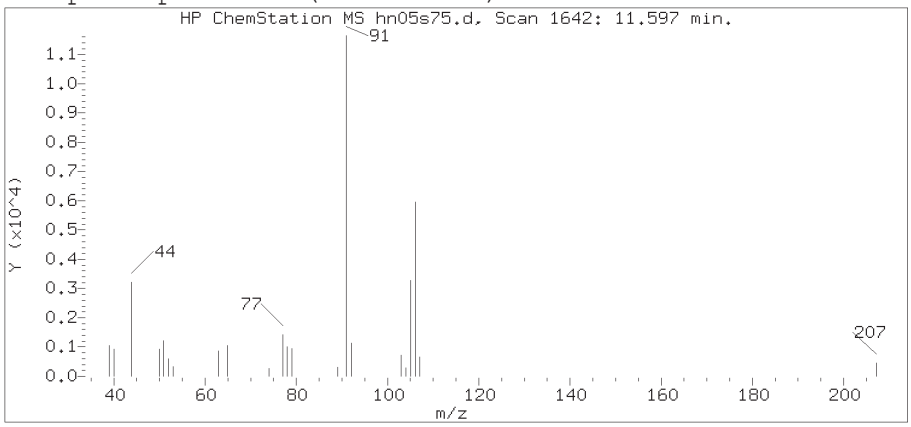
Reference Standard Spectrum for m+p-Xylene

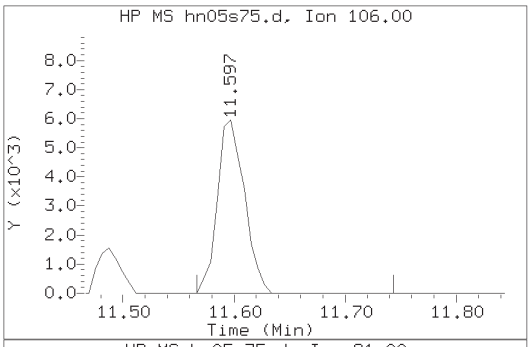


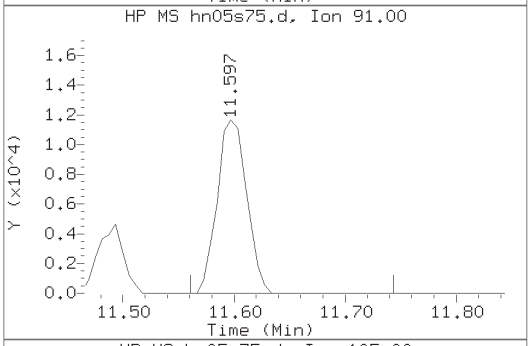
Sample Spectrum (Background Subtracted)

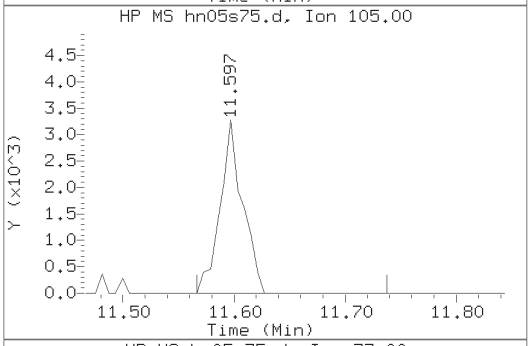


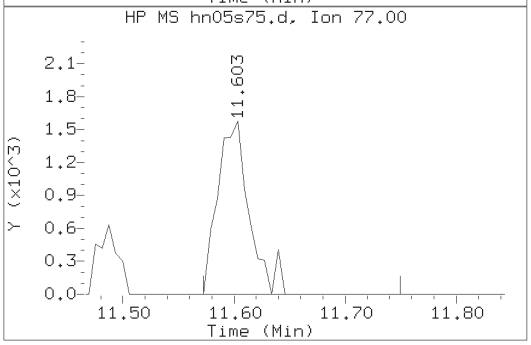
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 101
Compound Name : m+p-Xylene
Scan Number : 1642
Retention Time (minutes): 11.597
Relative Retention Time :-0.00001
Quant Ion : 106.00
Area (flag) : 10107
On-Column Amount (ng) : 0.1026

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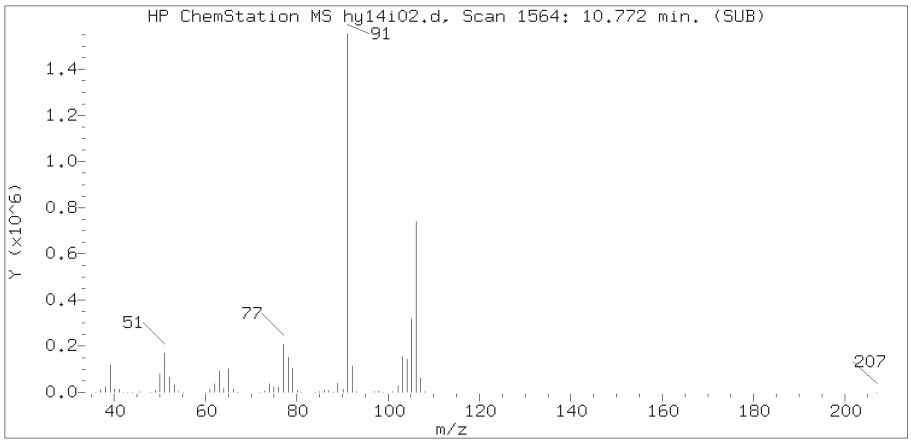
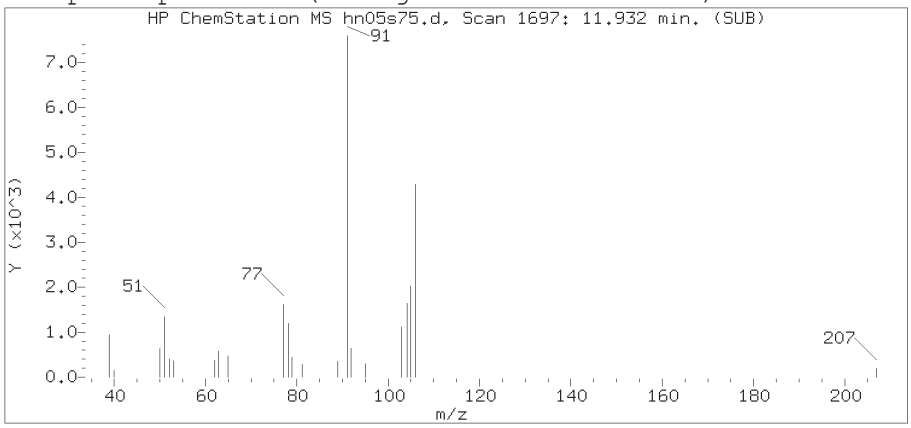
Target 3.5 esignature user ID: jkh09052

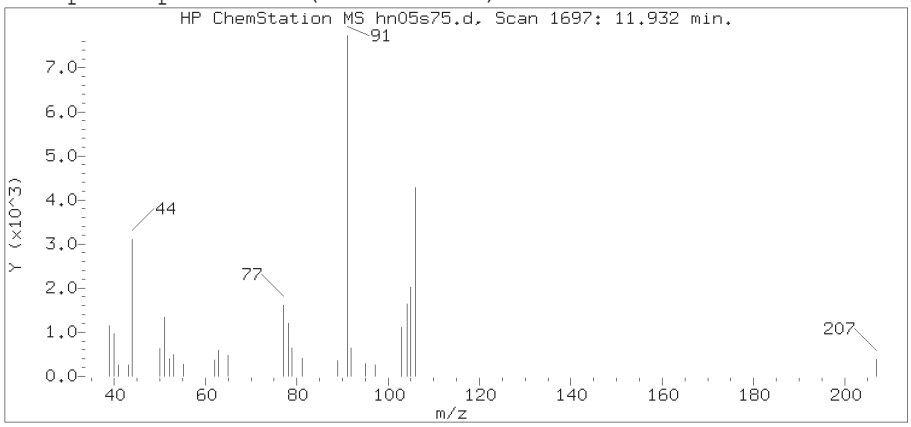
Reference Standard Spectrum for o-Xylene

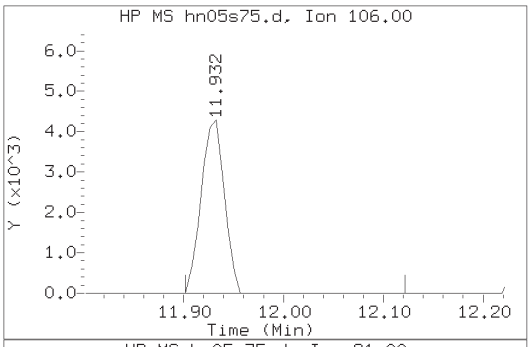


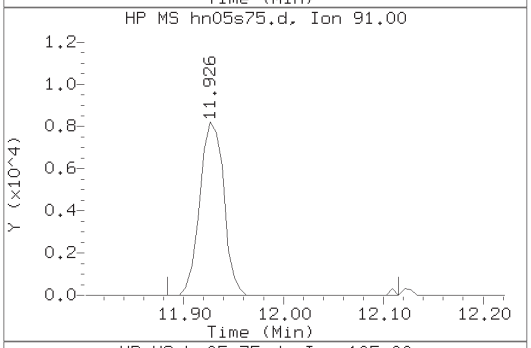
Sample Spectrum (Background Subtracted)

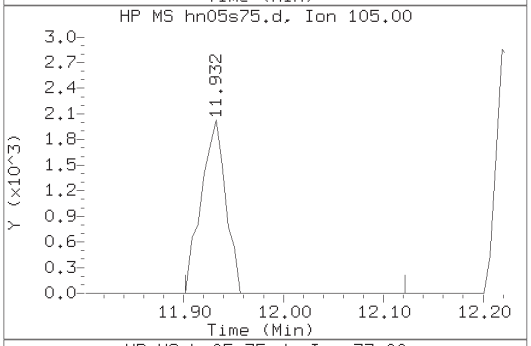


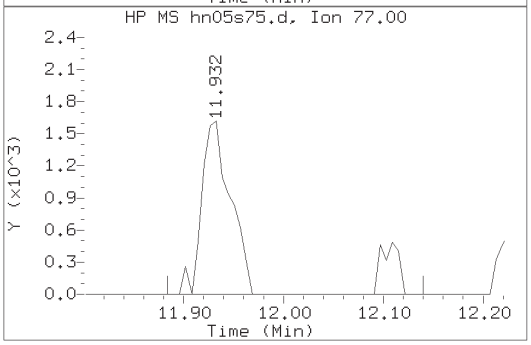
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 104
Compound Name : o-Xylene
Scan Number : 1697
Retention Time (minutes): 11.932
Relative Retention Time :-0.00110
Quant Ion : 106.00
Area (flag) : 6967
On-Column Amount (ng) : 0.0740

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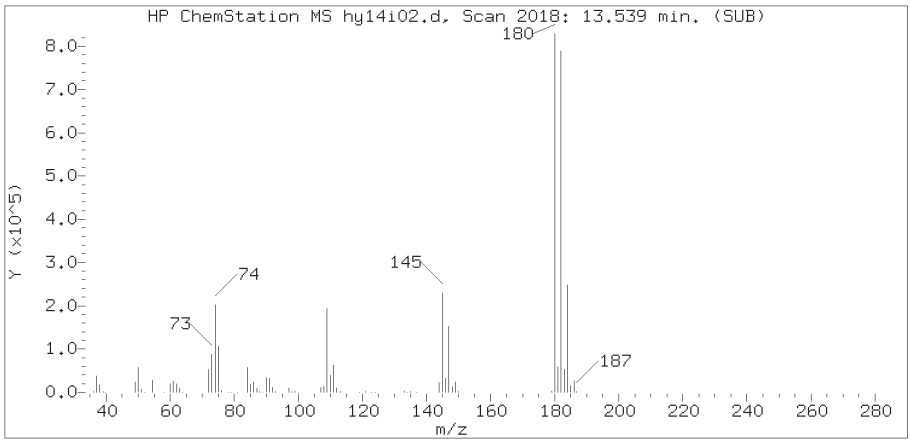
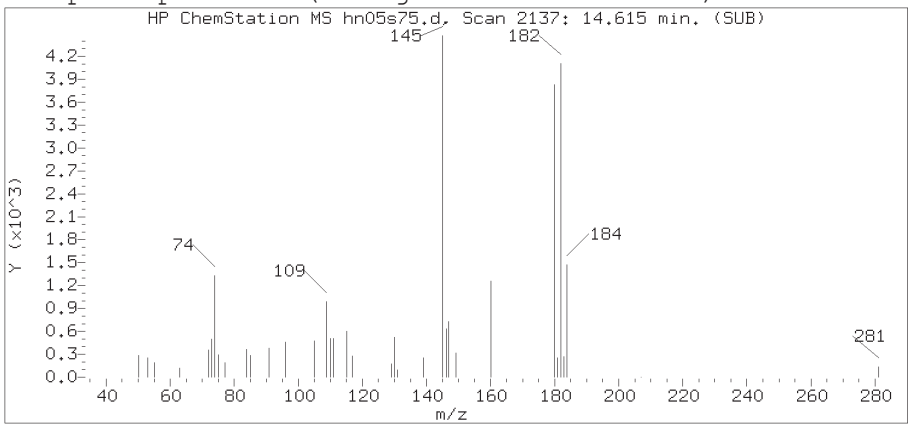
Target 3.5 esignature user ID: jkh09052

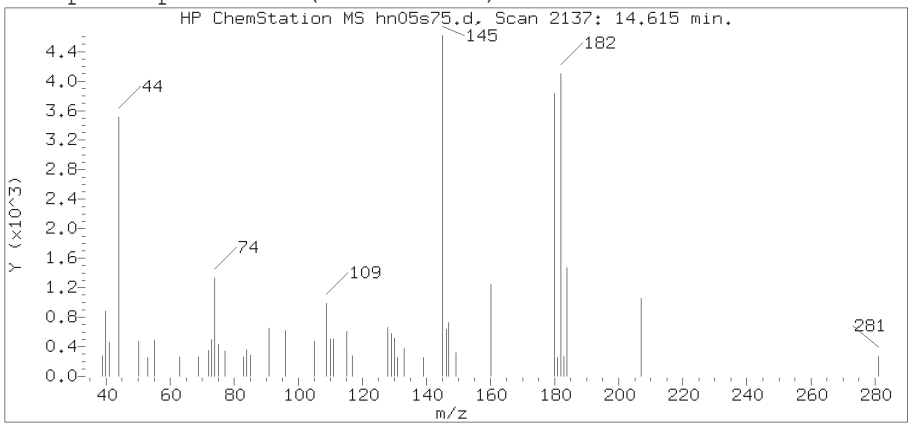
Reference Standard Spectrum for 1,2,4-Trichlorobenzene

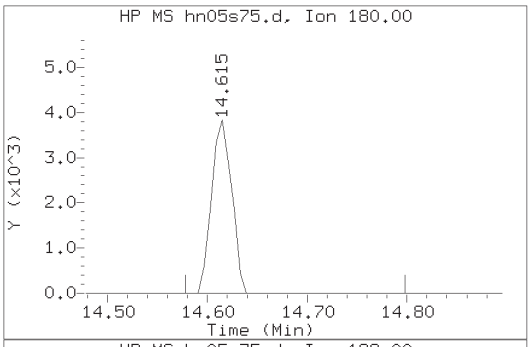


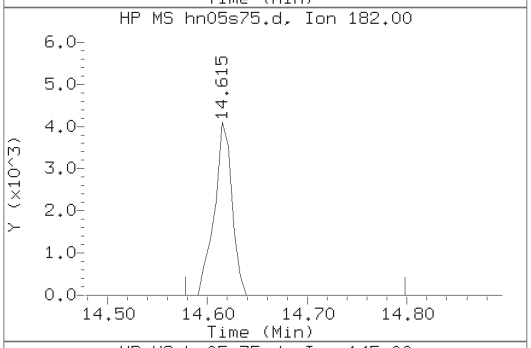
Sample Spectrum (Background Subtracted)

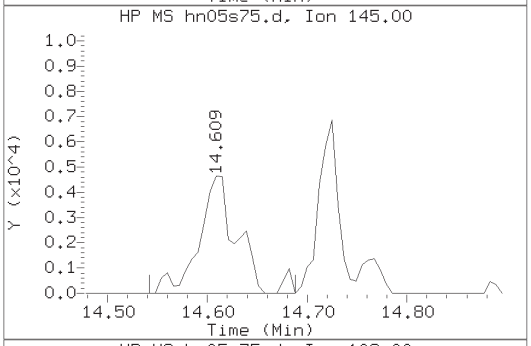


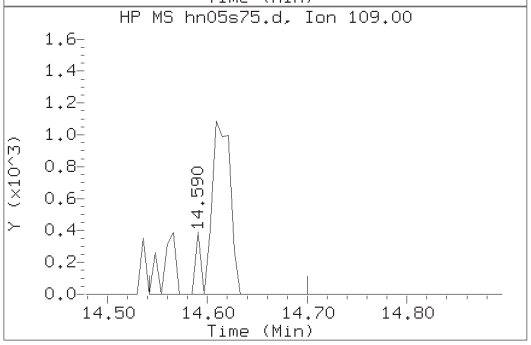
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s75.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:22 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 10:43 jkh09052

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number : 145
Compound Name : 1,2,4-Trichlorobenzene
Scan Number : 2137
Retention Time (minutes): 14.615
Relative Retention Time :-0.00000
Quant Ion : 180.00
Area (flag) : 5416
On-Column Amount (ng) : 0.0796

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Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18nov05b.b/hn05s76.d Injection date and time: **06-NOV-2018 02:44**
Data file Sample Info. Line: 14T04;9876334;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 12-Nov-2018 14:06 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	4.489	(-0.006)	476	65	120833	(-2)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2270871	(-11)	10.00	
97) Chlorobenzene-d5	11.377	(0.006)	1606	117	1835228	(-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	937159	(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	594181	10.382	104%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531	(-0.001)	102	104370	10.460	105%		81 - 118
82) Toluene-d8	(3)	9.951	(0.000)	98	2394652	10.138	101%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	846667	9.845	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
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)	6.848	(0.000)	83	19211	0.216	0.22		J	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

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s76.d Injection date and time: **06-NOV-2018 02:44**
Data file Sample Info. Line: 14T04;9876334;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 12-Nov-2018 14:06 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)	11.402(-0.000)	112	30376	0.210	0.21		J	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

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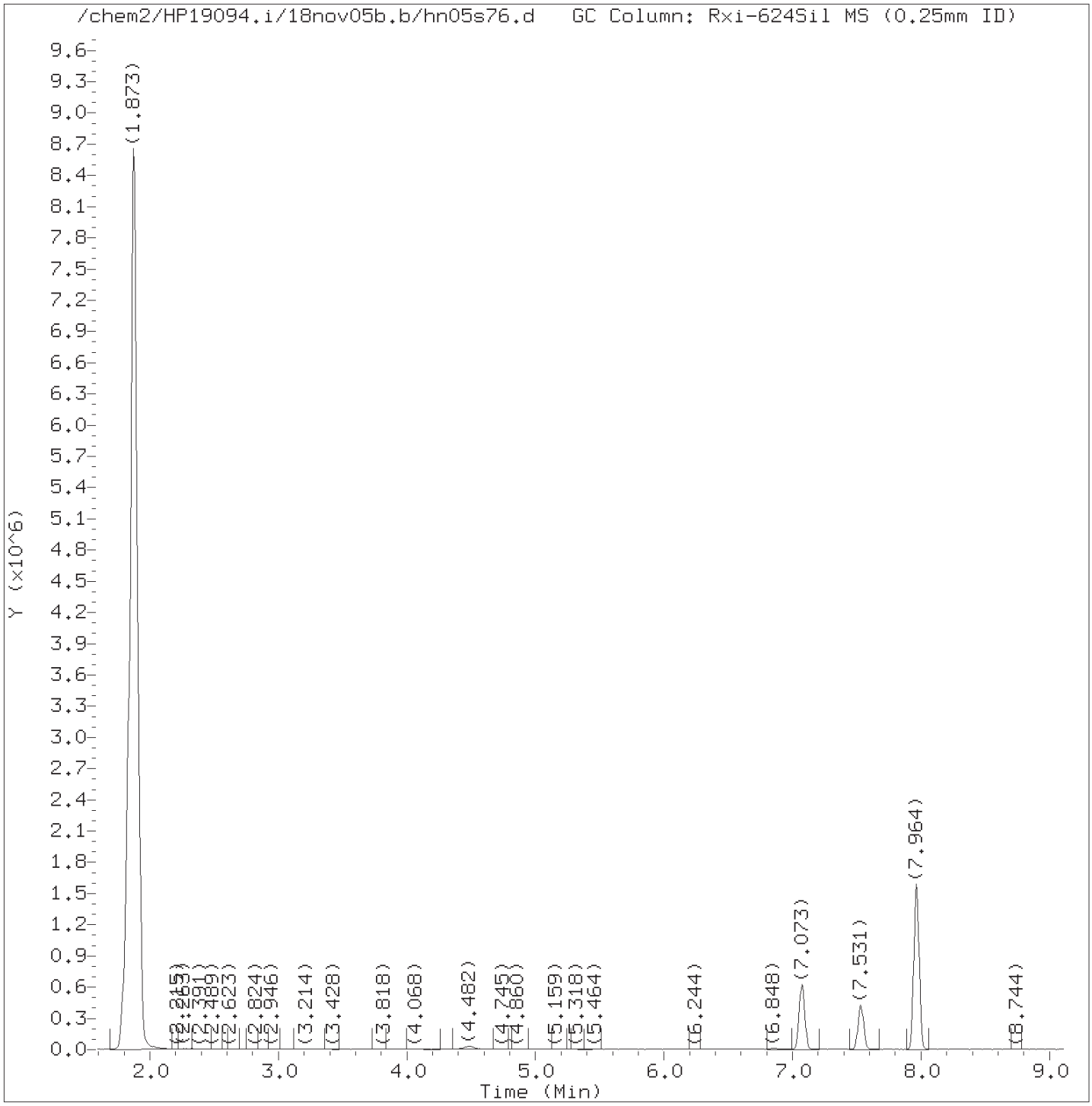
Secondary review performed and digitally signed by Chad A. Moline on 11/13/2018 at 08:44. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

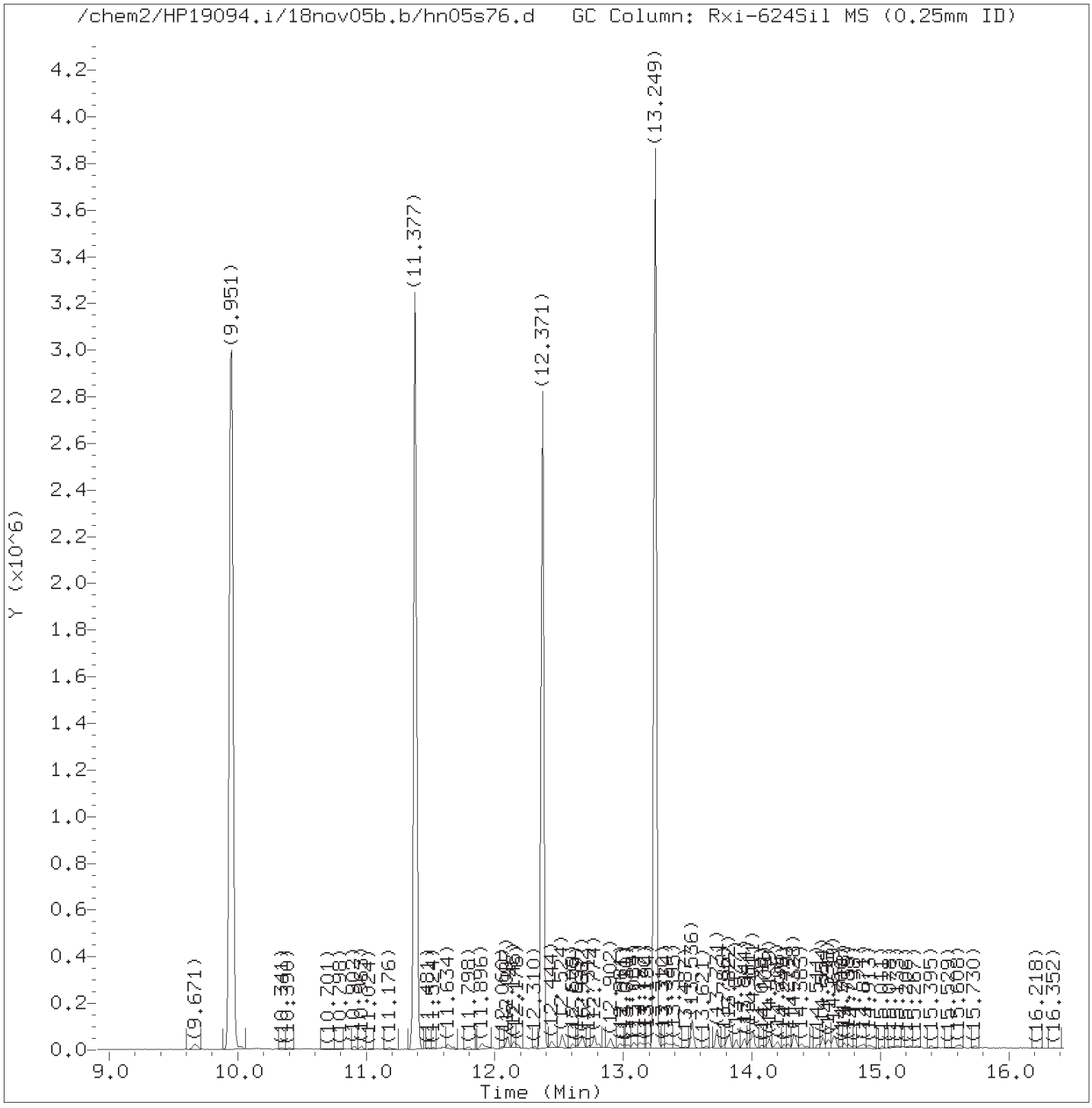
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s76.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:44 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: 12-Nov-2018 14:06 jkh09052

Sample Name: 14T04 Lab Sample ID: 9876334

Digitally signed by Jennifer K. Howe
on 11/12/2018 at 14:06.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s76.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:44 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: 12-Nov-2018 14:06 jkh09052

Sample Name: 14T04 Lab Sample ID: 9876334

Digitally signed by Jennifer K. Howe
on 11/12/2018 at 14:06.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s76.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:44 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: 12-Nov-2018 14:06 jkh09052

Sample Name: 14T04 Lab Sample ID: 9876334

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.489	65	120833	50.000
49) Chloroform	(2)	6.848	83	19211	0.216
50)$Dibromofluoromethane	(2)	7.073	113	594181	10.382
57)$1,2-Dichloroethane-d4	(2)	7.531	102	104370	10.460
63)*Fluorobenzene	(2)	7.964	96	2270871	10.000
82)$Toluene-d8	(3)	9.951	98	2394652	10.138
97)*Chlorobenzene-d5	(3)	11.377	117	1835228	10.000
98) Chlorobenzene	(3)	11.402	112	30376	0.210
111)$4-Bromofluorobenzene	(3)	12.371	95	846667	9.845
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	937159	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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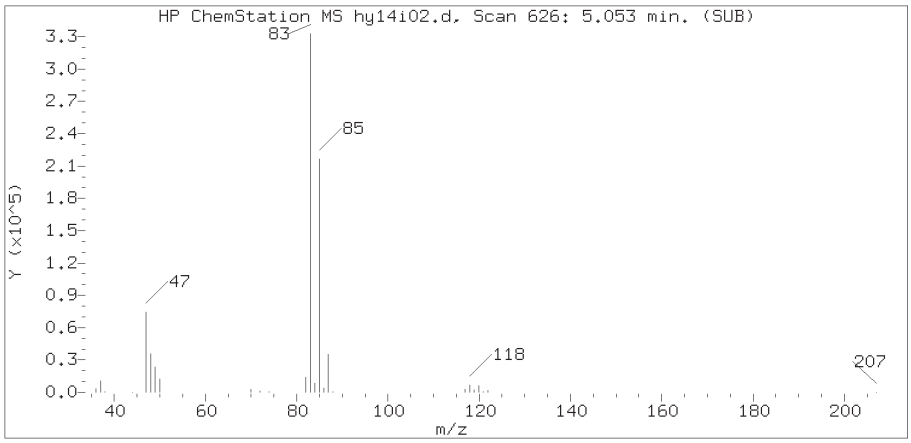
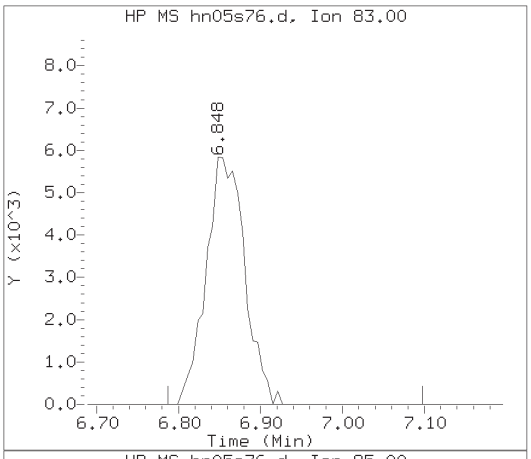
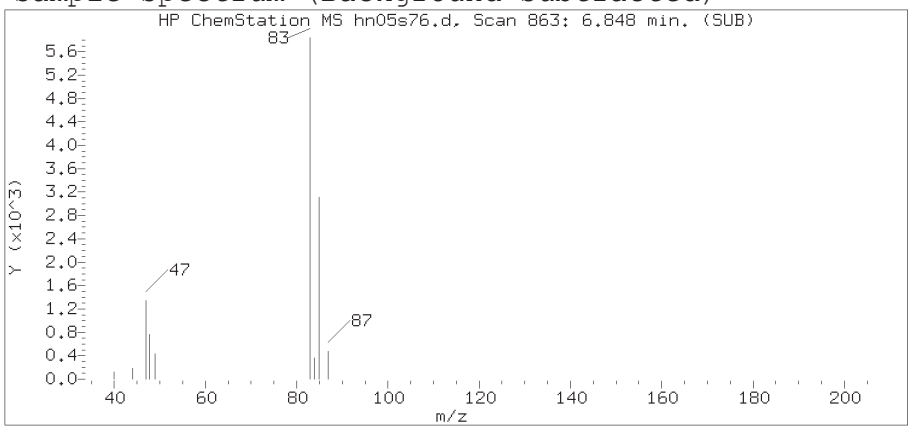
on 11/12/2018 at 14:06.
Target 3.5 esignature user ID: jkh09052

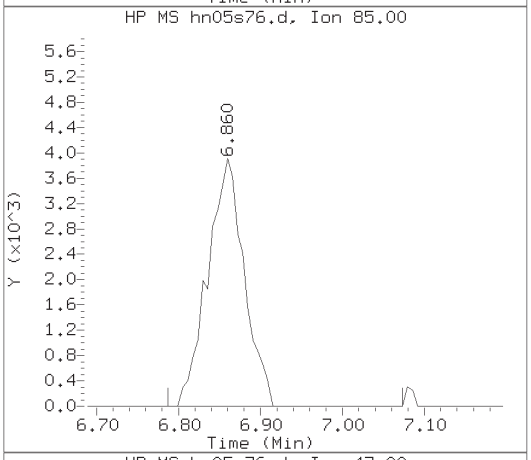
Reference Standard Spectrum for Chloroform



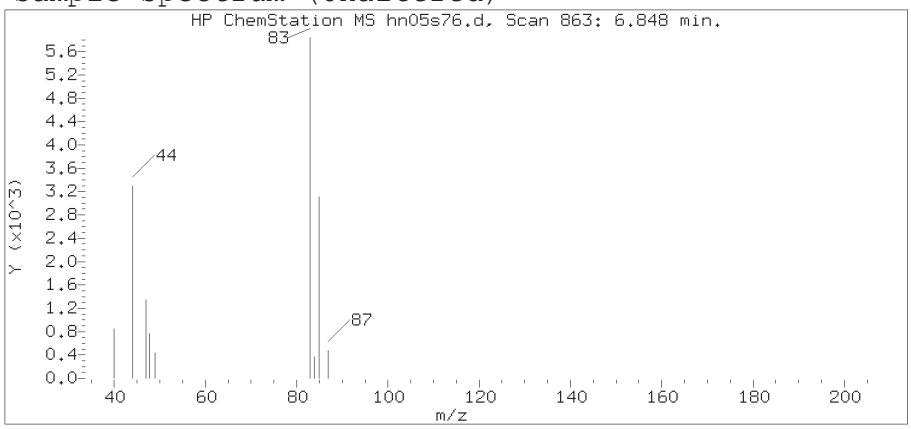


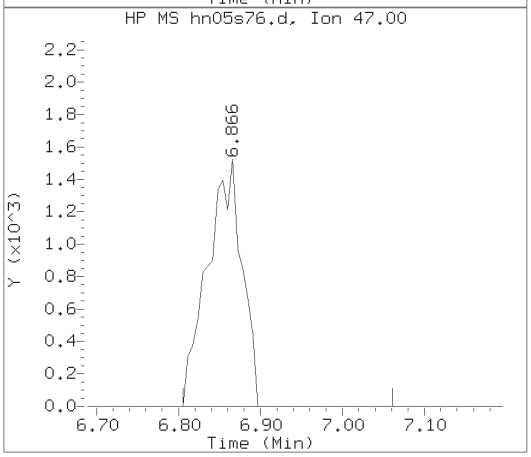
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s76.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:44 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: 12-Nov-2018 14:06 jkh09052

Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 49
Compound Name	: Chloroform
Scan Number	: 863
Retention Time (minutes)	: 6.848
Relative Retention Time	: 0.00088
Quant Ion	: 83.00
Area (flag)	: 19211
On-Column Amount (ng)	: 0.2160

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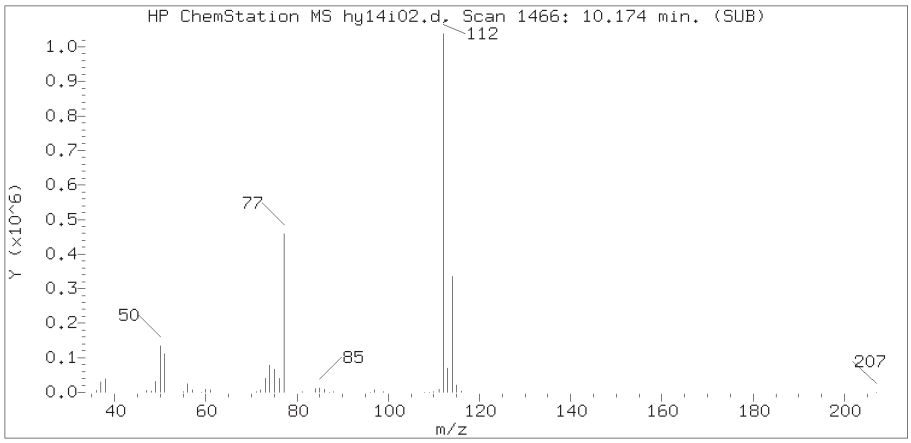
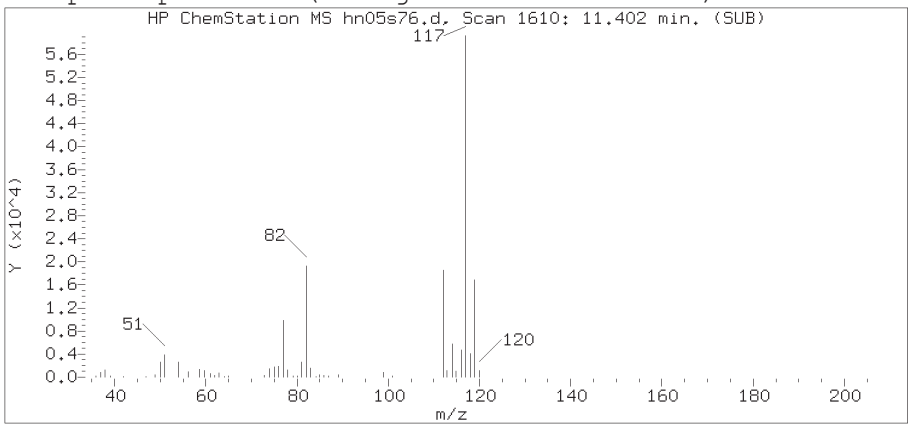
Target 3.5 esignature user ID: jkh09052

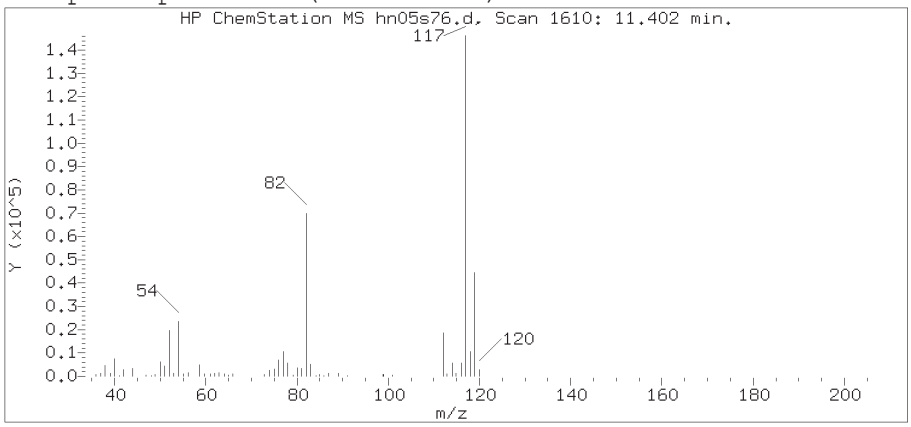
Reference Standard Spectrum for Chlorobenzene

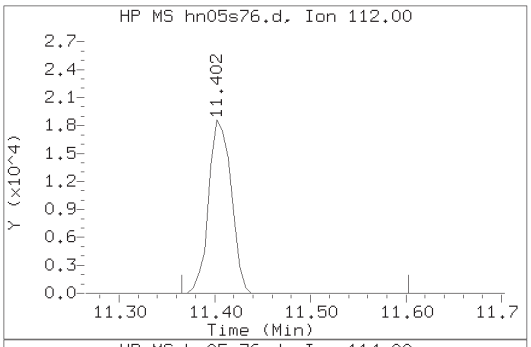


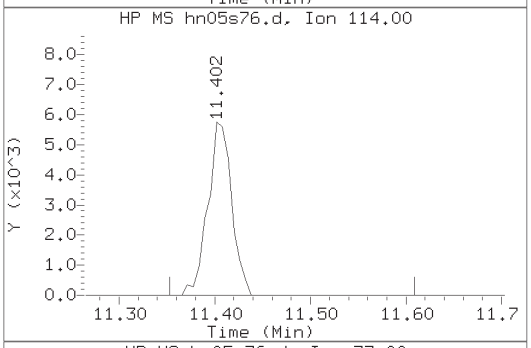
Sample Spectrum (Background Subtracted)

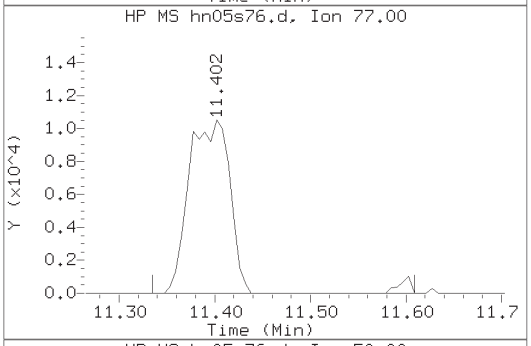


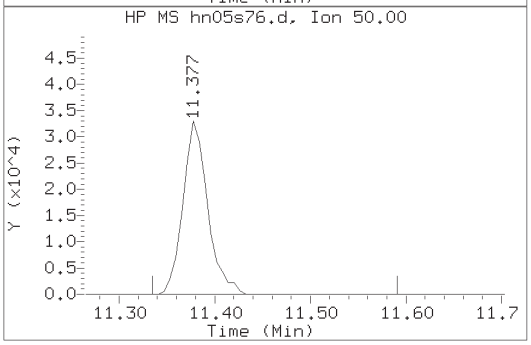
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s76.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 02:44 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: 12-Nov-2018 14:06 jkh09052

Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number : 98
Compound Name : Chlorobenzene
Scan Number : 1610
Retention Time (minutes): 11.402
Relative Retention Time :-0.00000
Quant Ion : 112.00
Area (flag) : 30376
On-Column Amount (ng) : 0.2102

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Target 3.5 esignature user ID: jkh09052

14T06 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9876342

Data file: /chem2/HP19094.i/18nov05b.b/hn05s81.d Injection date and time: **06-NOV-2018 04:31**
Data file Sample Info. Line: 14T06;9876342;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:48 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 ;9048

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.495(-0.012)	477	65	119137 (-3)	50.00	
63) Fluorobenzene	7.970(0.000)	1047	96	2519988 (-1)	10.00	
97) Chlorobenzene-d5	11.378(0.006)	1606	117	1843317 (-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	927171 (1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074(0.000)	113	614156	9.670	97%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531(0.000)	102	113193	10.223	102%		81 - 118
82) Toluene-d8	(3)	9.951(0.000)	98	2443455	10.299	103%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	835228	9.670	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)	3.812(-0.000)	43	27231	3.835	3.83		J	0.9	5
18) Carbon Disulfide	(2)	4.092(-0.001)	76	33282	0.212	0.21		J	0.06	1
21) Methyl Acetate	(1)			Not Detected					0.1	1
23) Methylene Chloride	(2)	4.470(-0.000)	84	4146	0.074	0.07		J	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)	6.860(-0.000)	83	11825	0.120	0.12		J	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

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s81.d Injection date and time: **06-NOV-2018 04:31**
Data file Sample Info. Line: 14T06;9876342;1;0;;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 10:48 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

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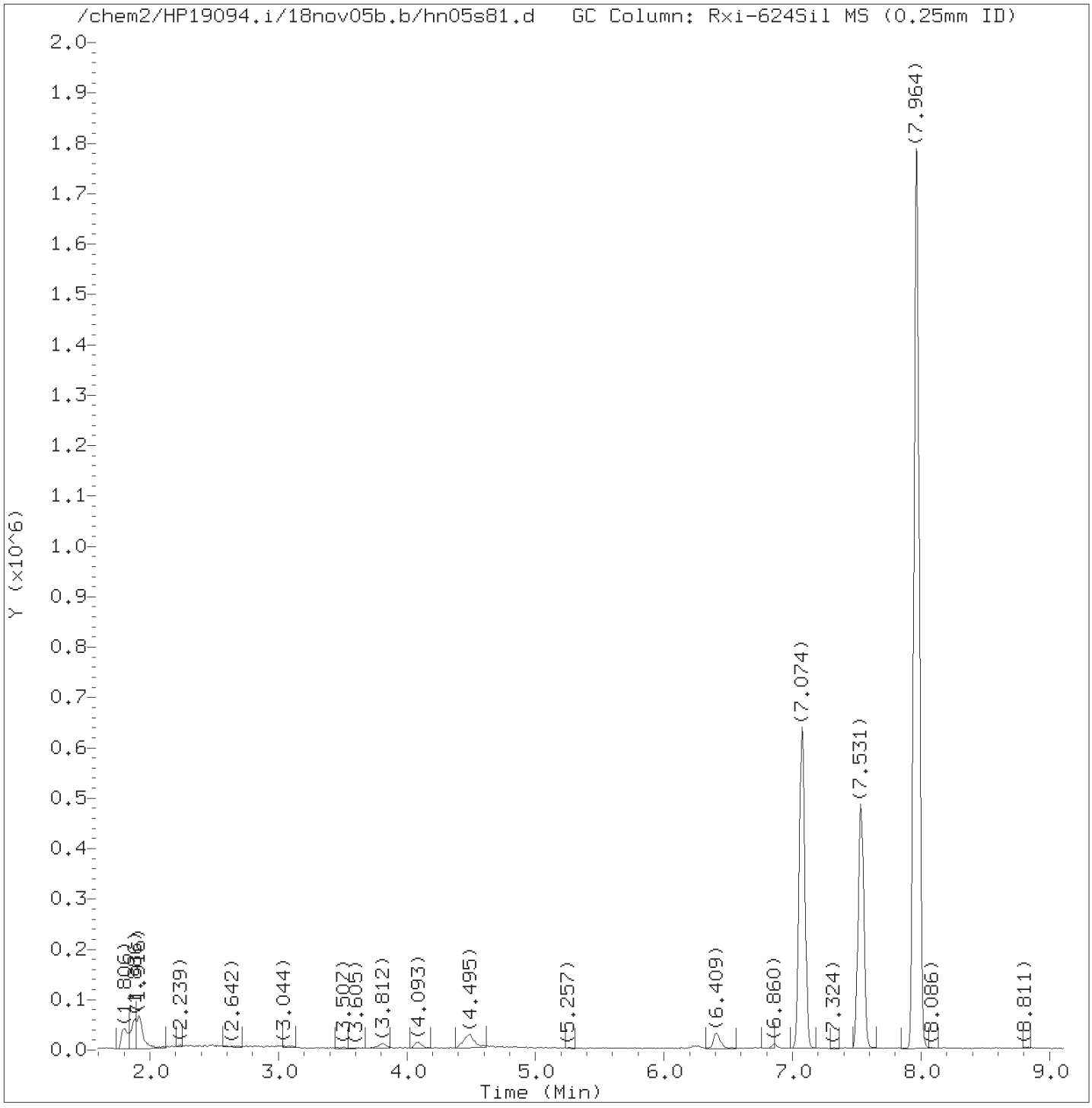
Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

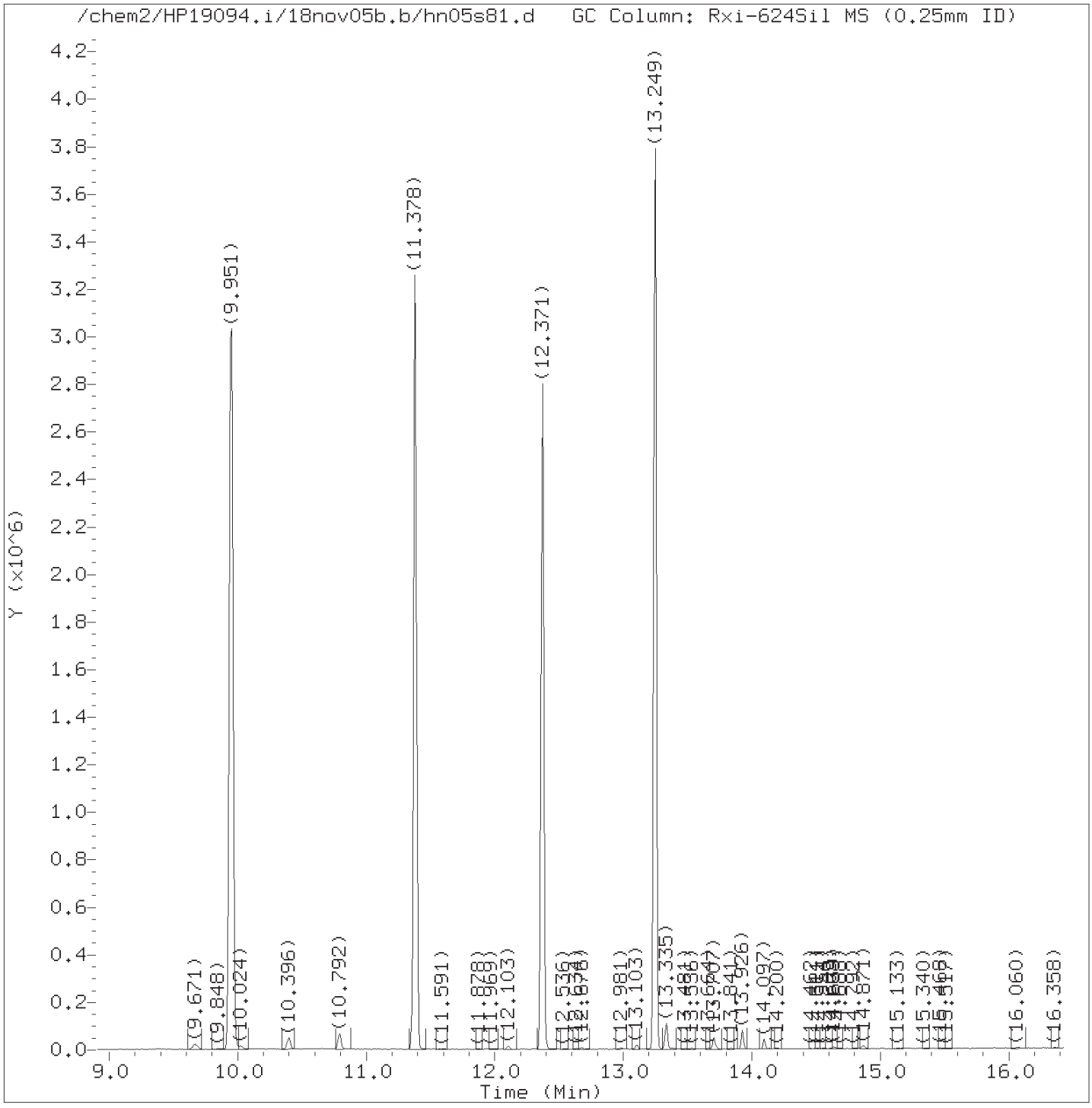
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 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 10:48 jkh09052

Sample Name: 14T06 Lab Sample ID: 9876342

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/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 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 10:48 jkh09052

Sample Name: 14T06 Lab Sample ID: 9876342

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/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 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 10:48 jkh09052

Sample Name: 14T06 Lab Sample ID: 9876342

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
14) Acetone	(1)	3.812	43	27231	3.835
18) Carbon Disulfide	(2)	4.093	76	33282	0.212
23) Methylene Chloride	(2)	4.471	84	4146	0.074
26)*t-Butyl Alcohol-d10	(1)	4.495	65	119137	50.000
49) Chloroform	(2)	6.860	83	11825	0.120
50)$Dibromofluoromethane	(2)	7.074	113	614156	9.670
57)$1,2-Dichloroethane-d4	(2)	7.531	102	113193	10.223
63)*Fluorobenzene	(2)	7.970	96	2519988	10.000
82)$Toluene-d8	(3)	9.951	98	2443455	10.299
97)*Chlorobenzene-d5	(3)	11.378	117	1843317	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	835228	9.670
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	927171	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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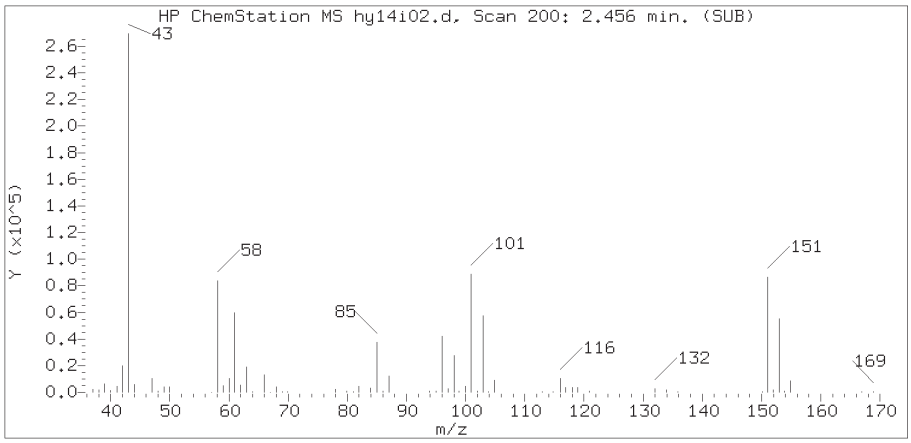
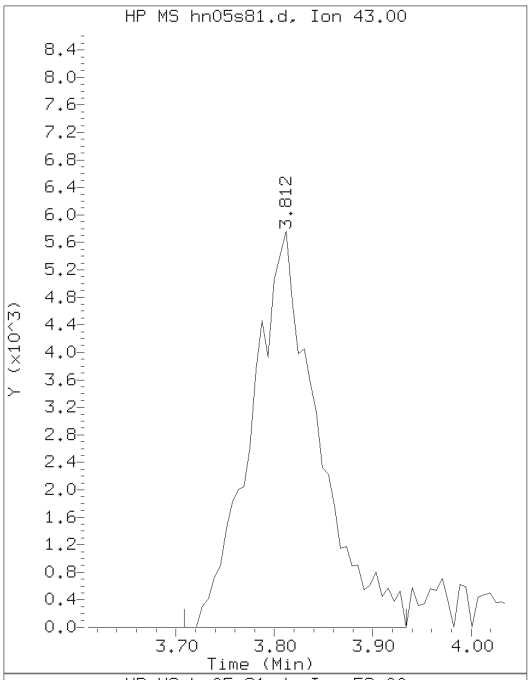
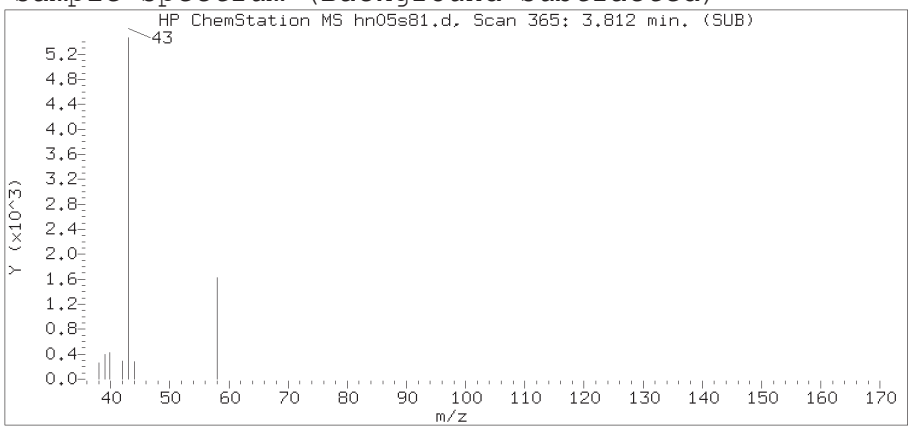
on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052

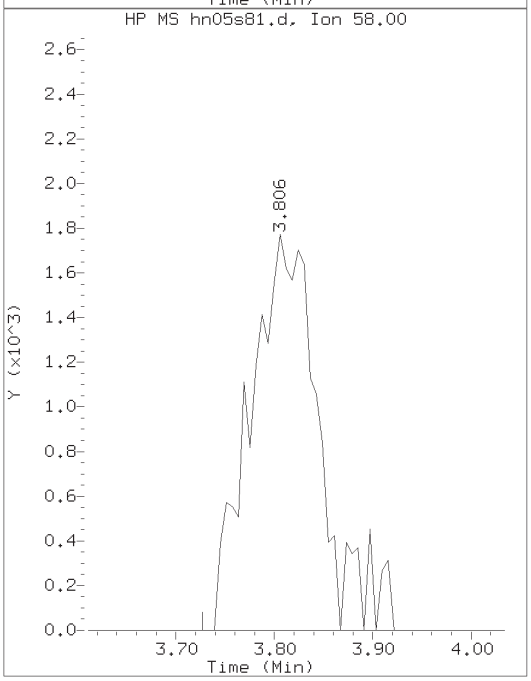
Reference Standard Spectrum for Acetone



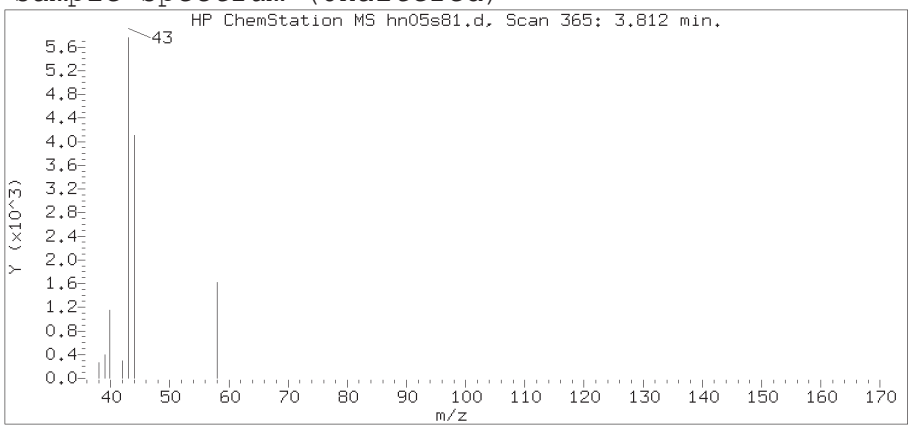


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18nov05b.b/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 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 10:48 jkh09052

Sample Name: 14T06 Lab Sample ID: 9876342

Compound Number : 14
Compound Name : Acetone
Scan Number : 365
Retention Time (minutes): 3.812
Relative Retention Time :-0.00041
Quant Ion : 43.00
Area (flag) : 27231
On-Column Amount (ng) : 3.8349

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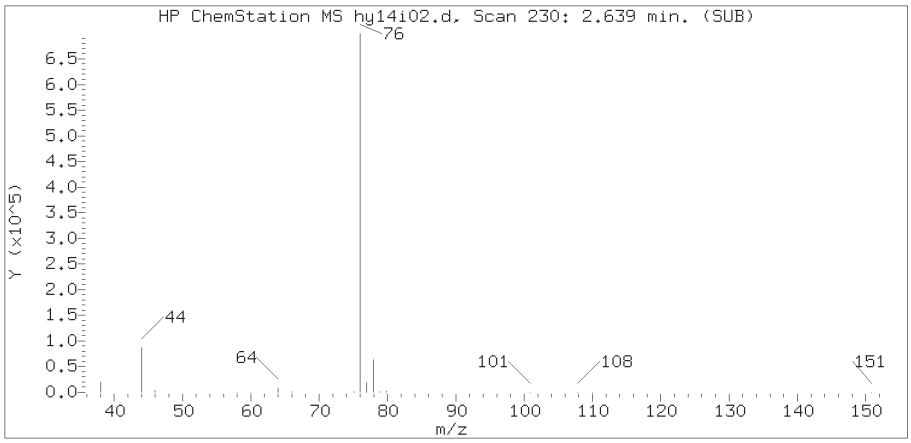
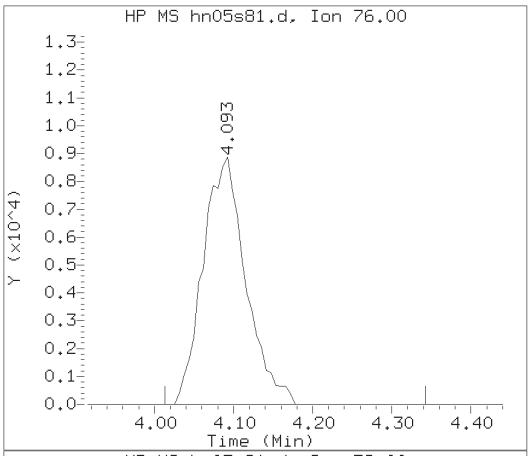
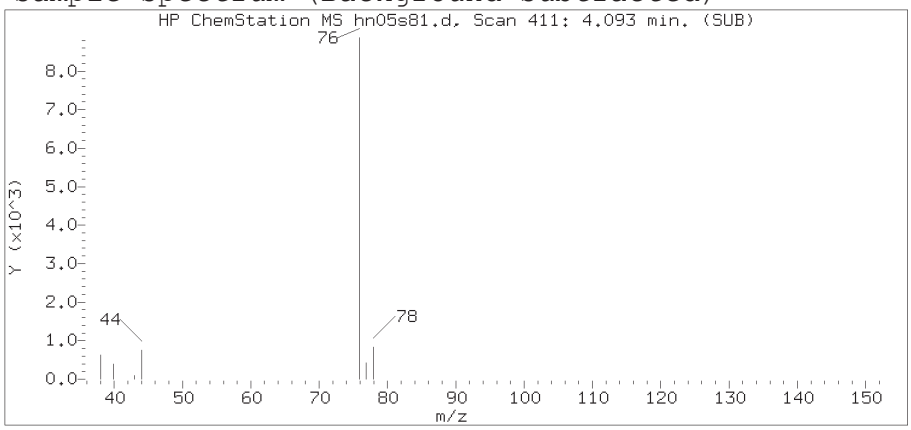
Target 3.5 esignature user ID: jkh09052

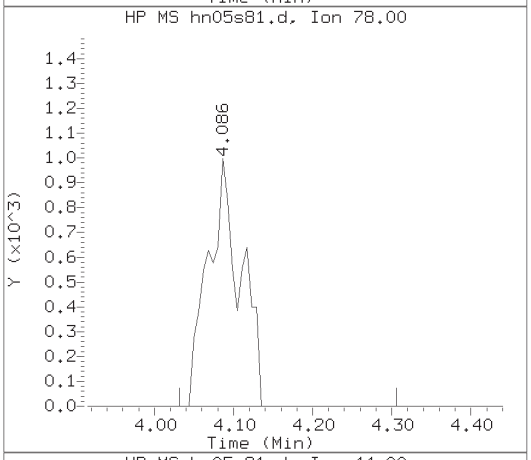
Reference Standard Spectrum for Carbon Disulfide



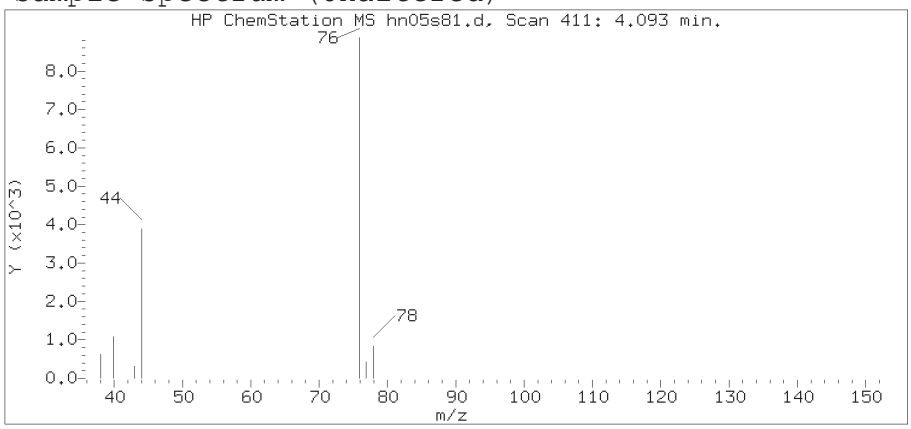


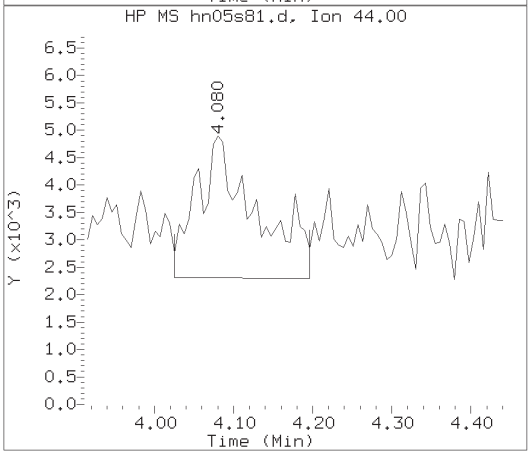
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 Analyst ID: JGC14951

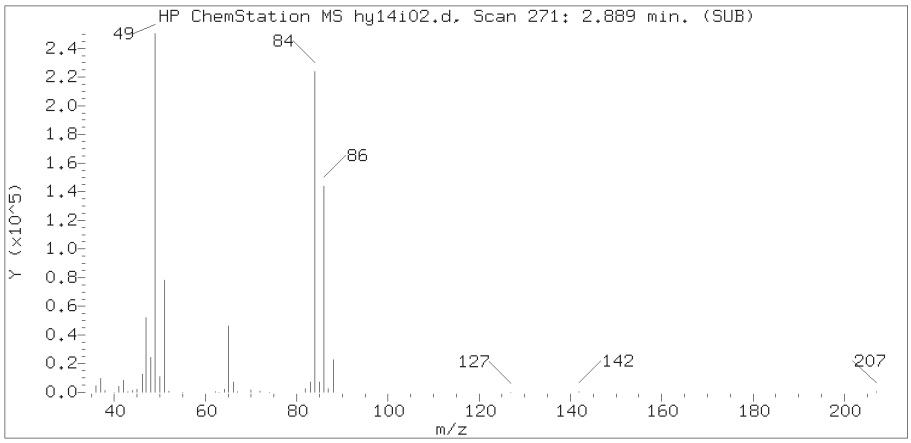
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 10:48 jkh09052

Sample Name: 14T06 Lab Sample ID: 9876342

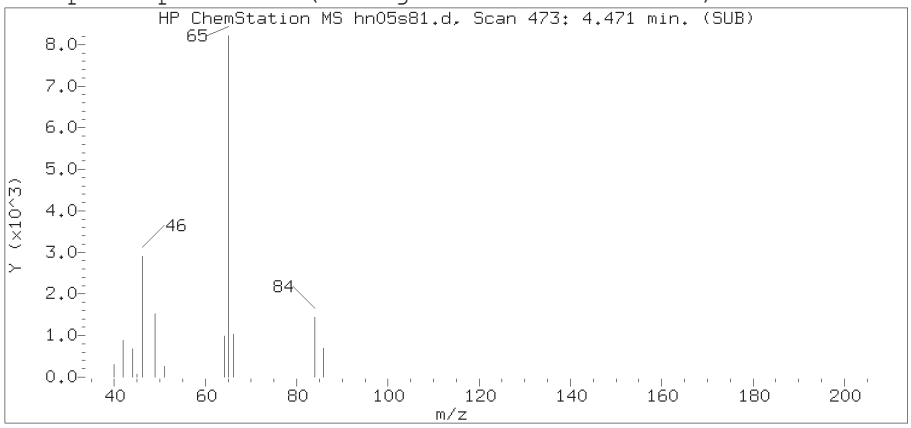
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 411
Retention Time (minutes): 4.093
Relative Retention Time :-0.00153
Quant Ion : 76.00
Area (flag) : 33282
On-Column Amount (ng) : 0.2117

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052

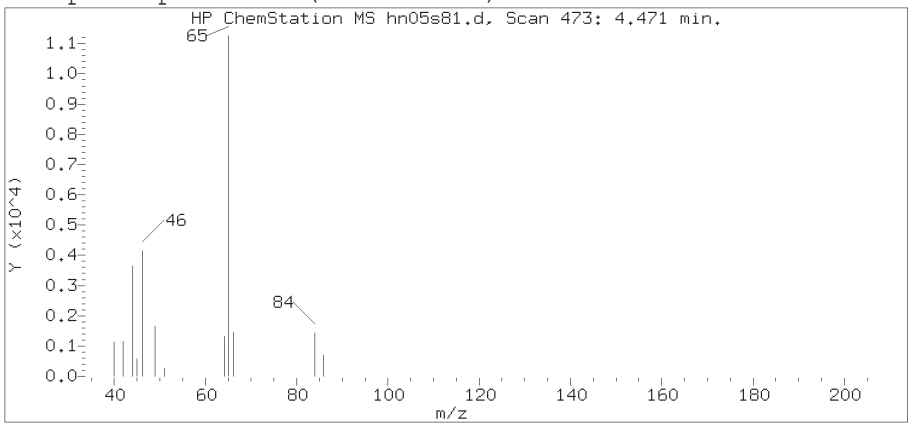
Reference Standard Spectrum for Methylene Chloride

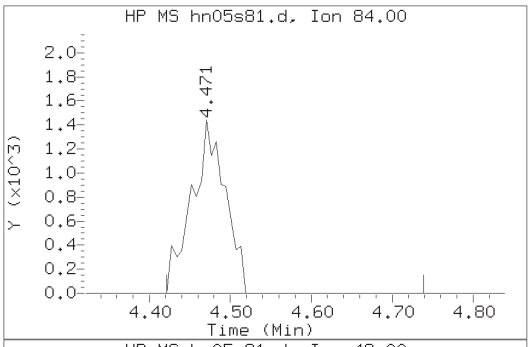


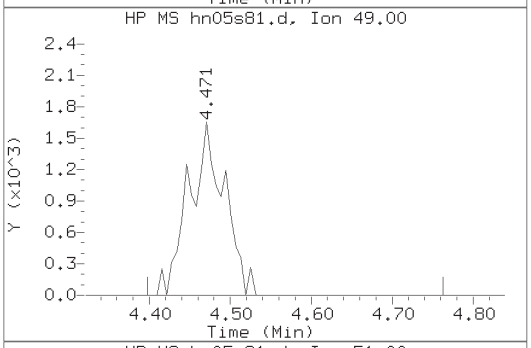
Sample Spectrum (Background Subtracted)

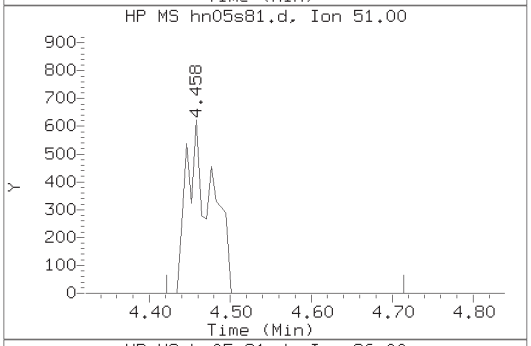


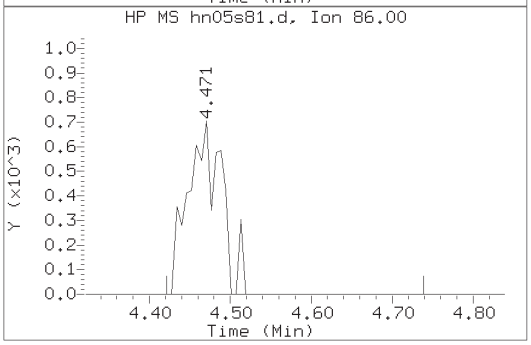
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18nov05b.b/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 Analyst ID: JGC14951

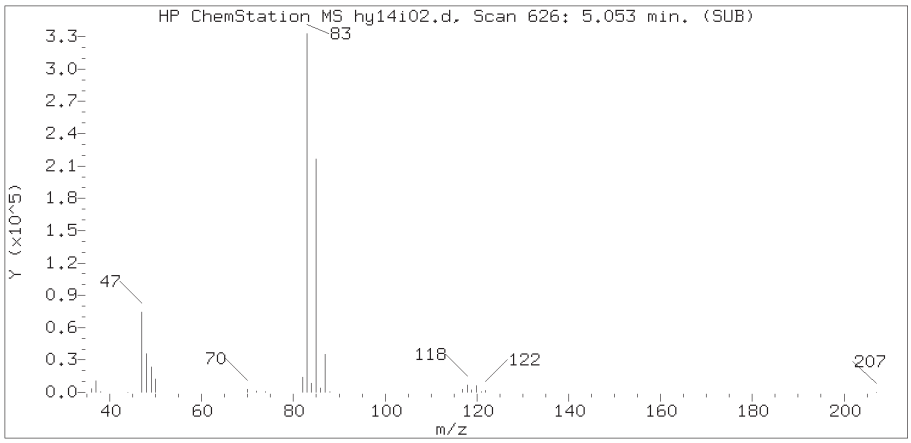
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 10:48 jkh09052

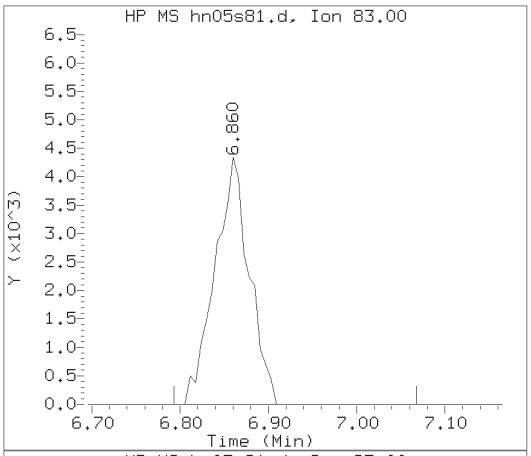
Sample Name: 14T06 Lab Sample ID: 9876342

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 473
Retention Time (minutes): 4.471
Relative Retention Time :-0.00076
Quant Ion : 84.00
Area (flag) : 4146
On-Column Amount (ng) : 0.0744

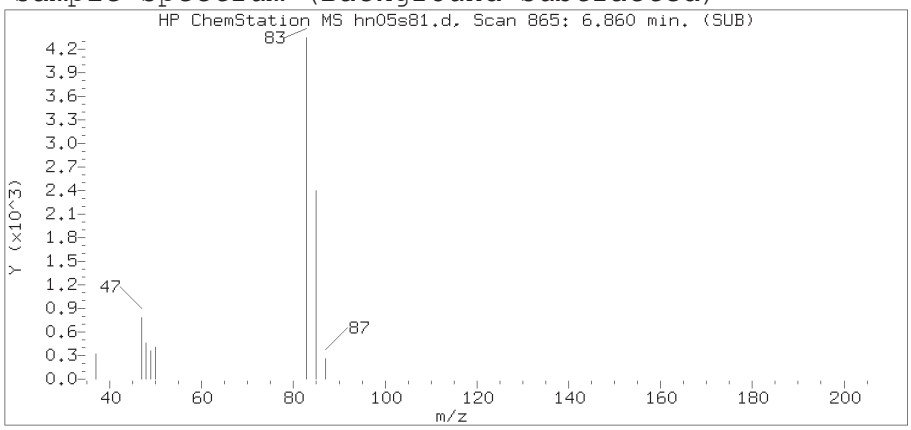
Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052

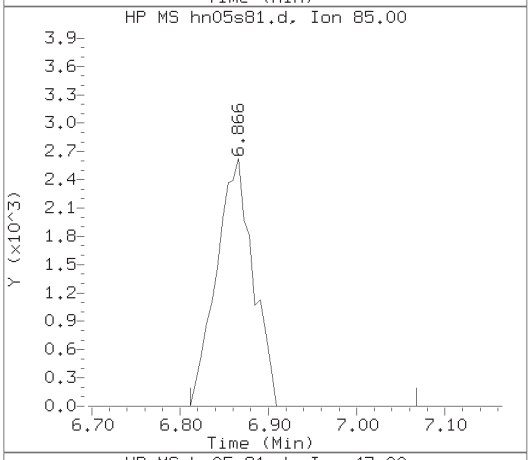
Reference Standard Spectrum for Chloroform



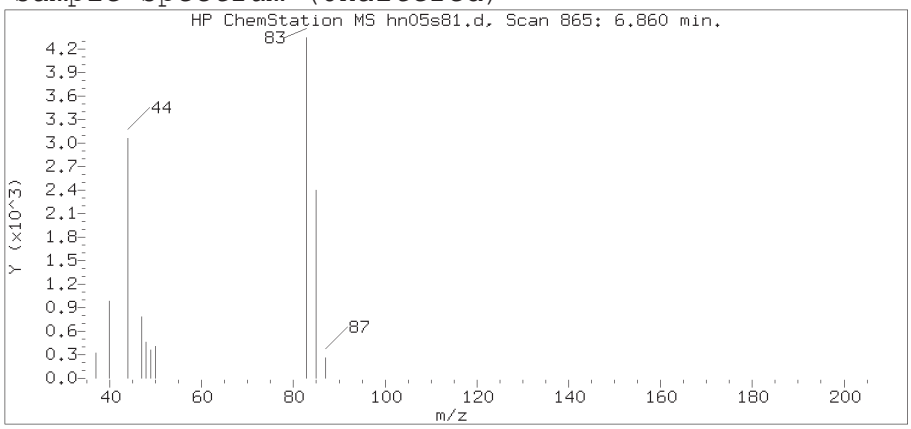


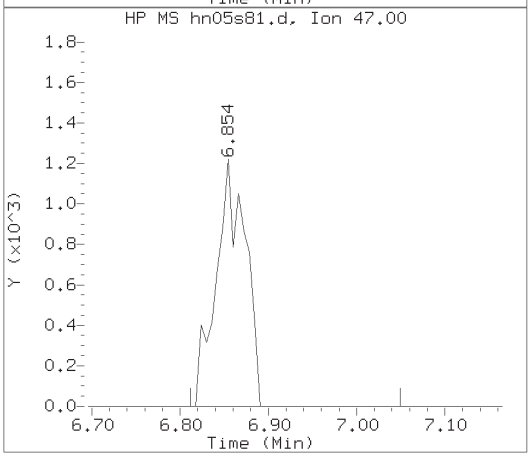
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18nov05b.b/hn05s81.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:31 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 10:48 jkh09052

Sample Name: 14T06 Lab Sample ID: 9876342

Compound Number : 49
Compound Name : Chloroform
Scan Number : 865
Retention Time (minutes): 6.860
Relative Retention Time :-0.00000
Quant Ion : 83.00
Area (flag) : 11825
On-Column Amount (ng) : 0.1198

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:53.
Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

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 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/HP19094.i/18sep24i.b/hs24t05.d

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

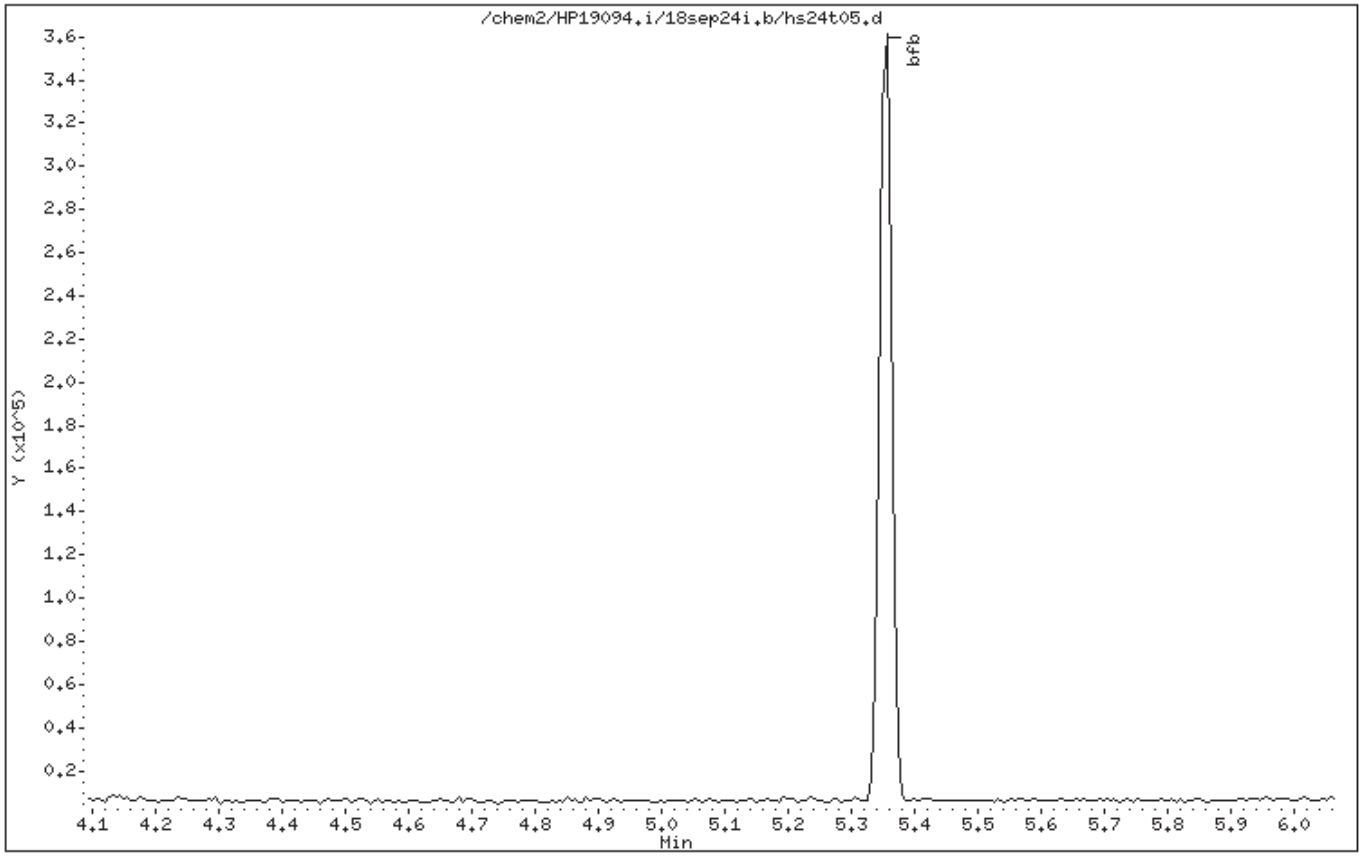
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



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

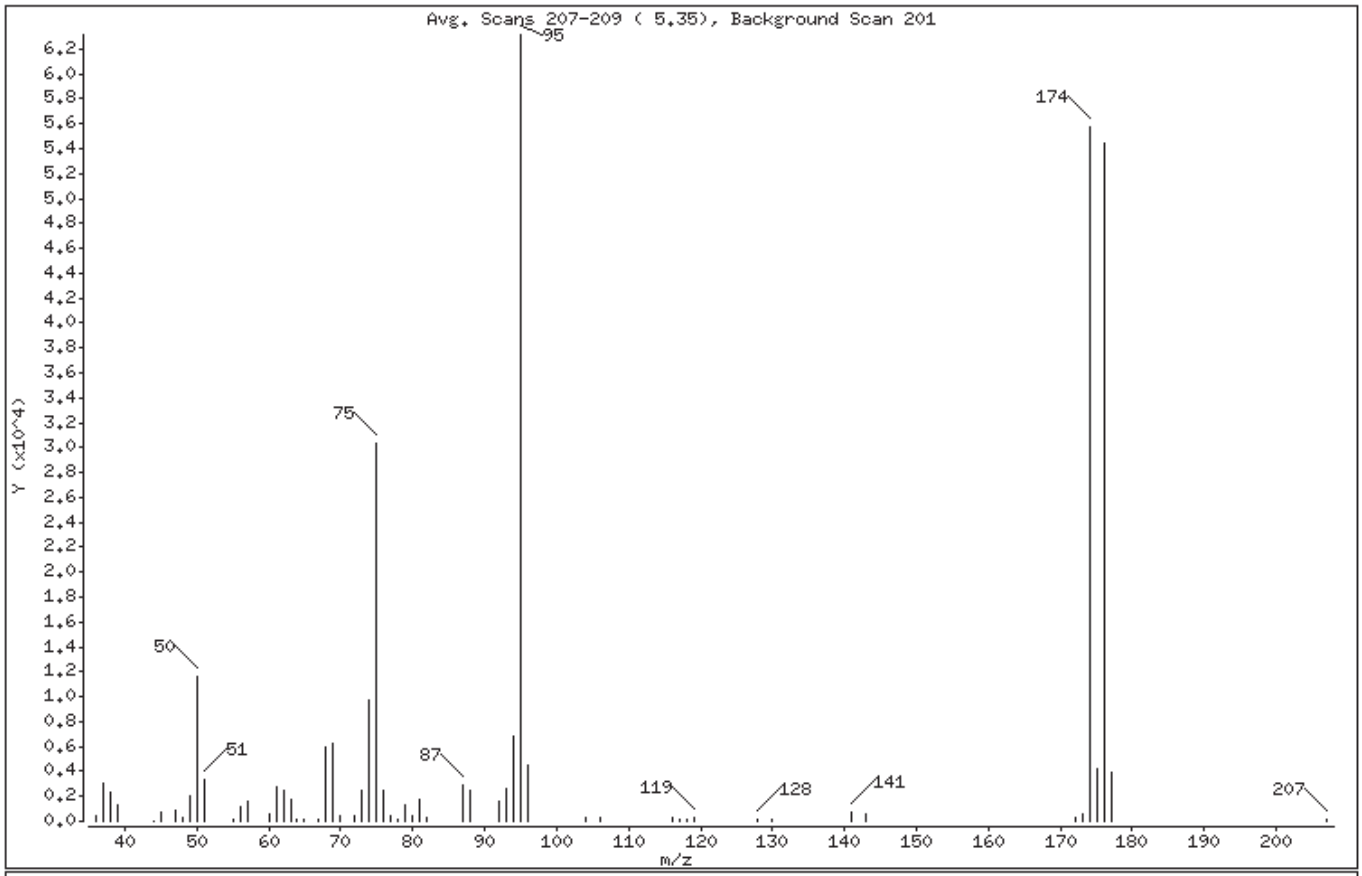
Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

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;;;;;

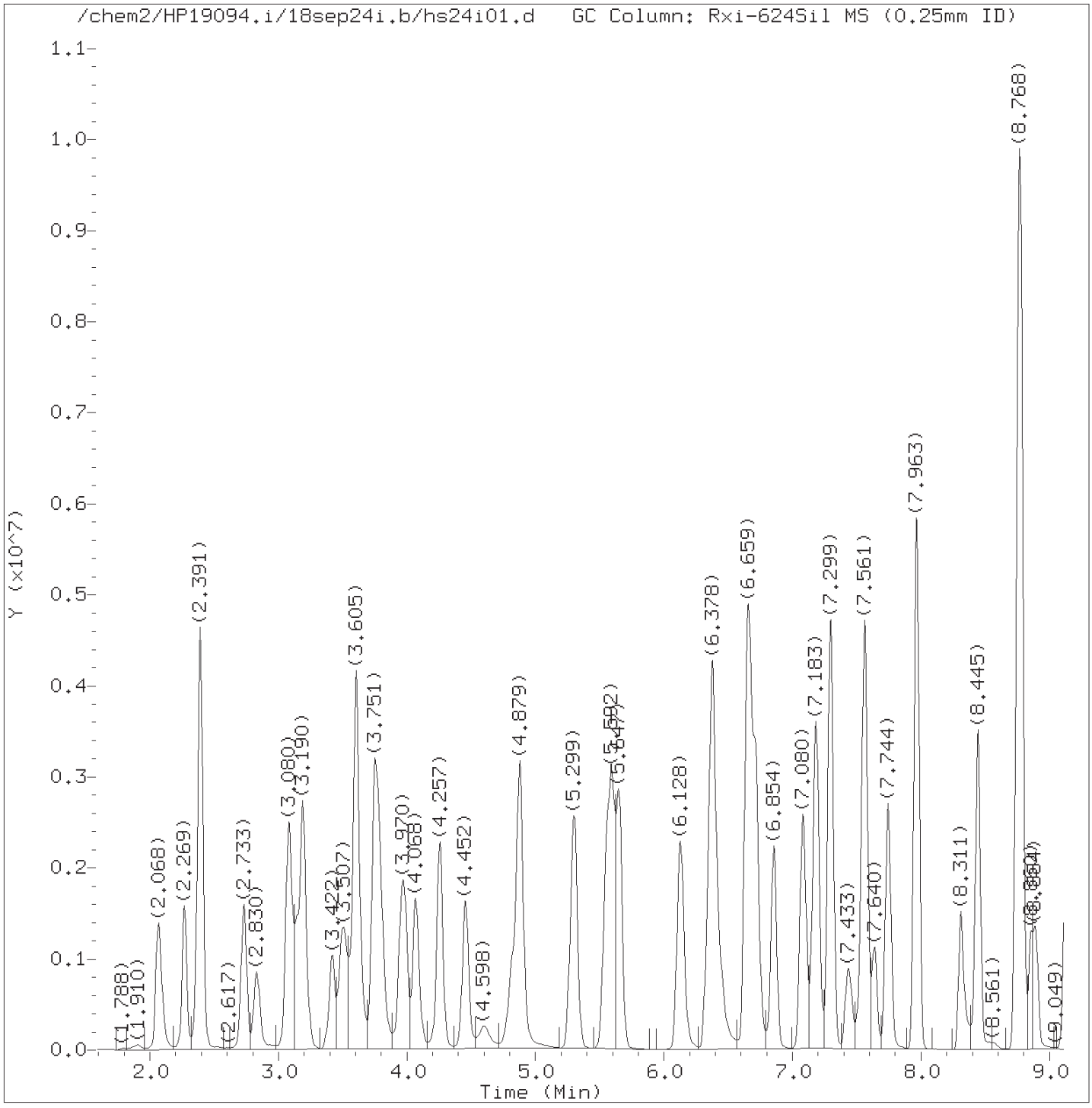
Operator: jkh09052

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)

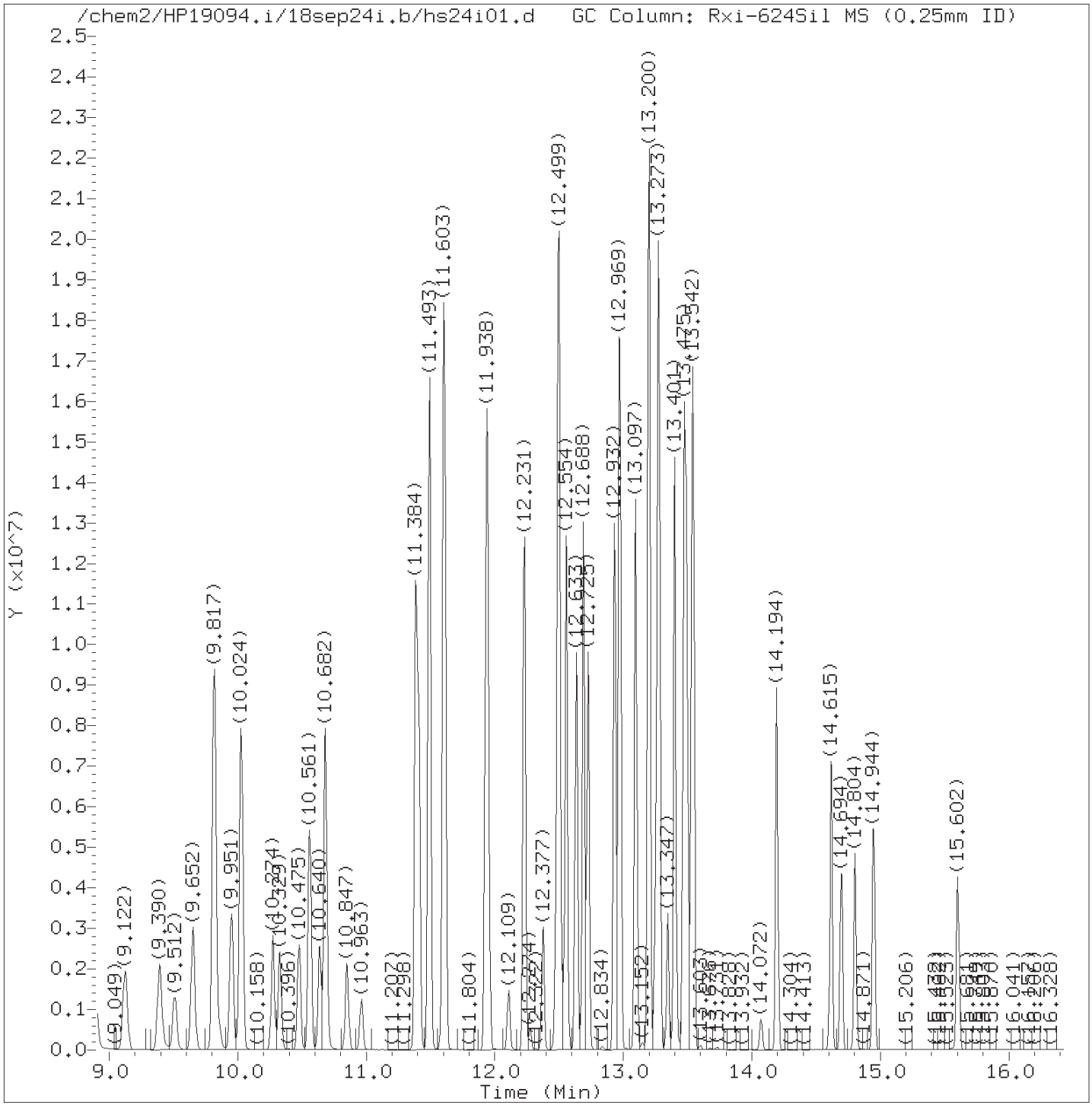
Target Revision 3.5

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.
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$ = Compound is a surrogate standard.

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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

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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

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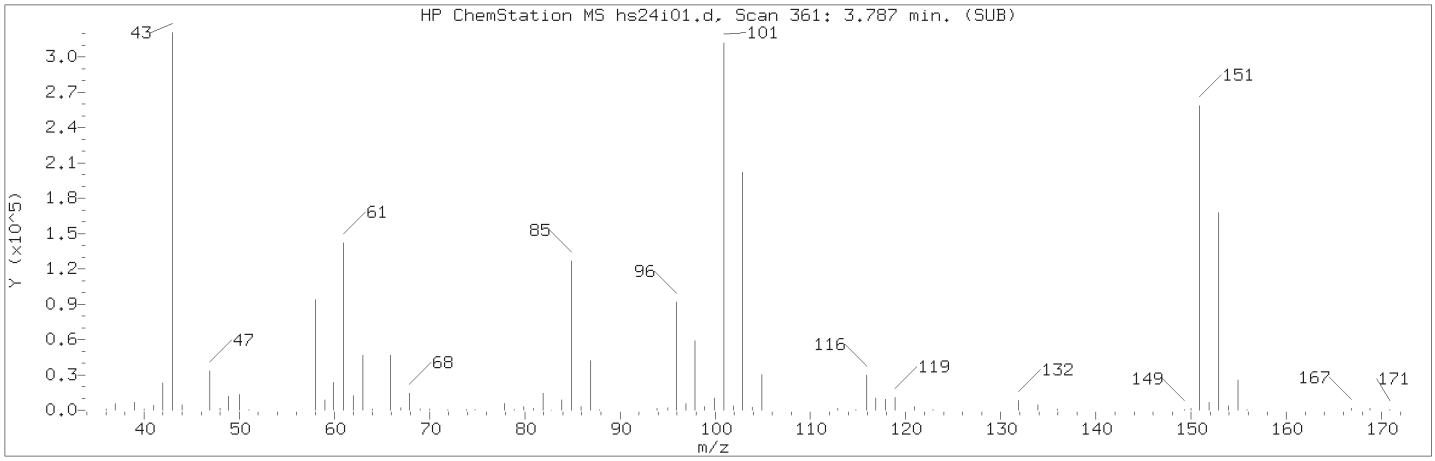
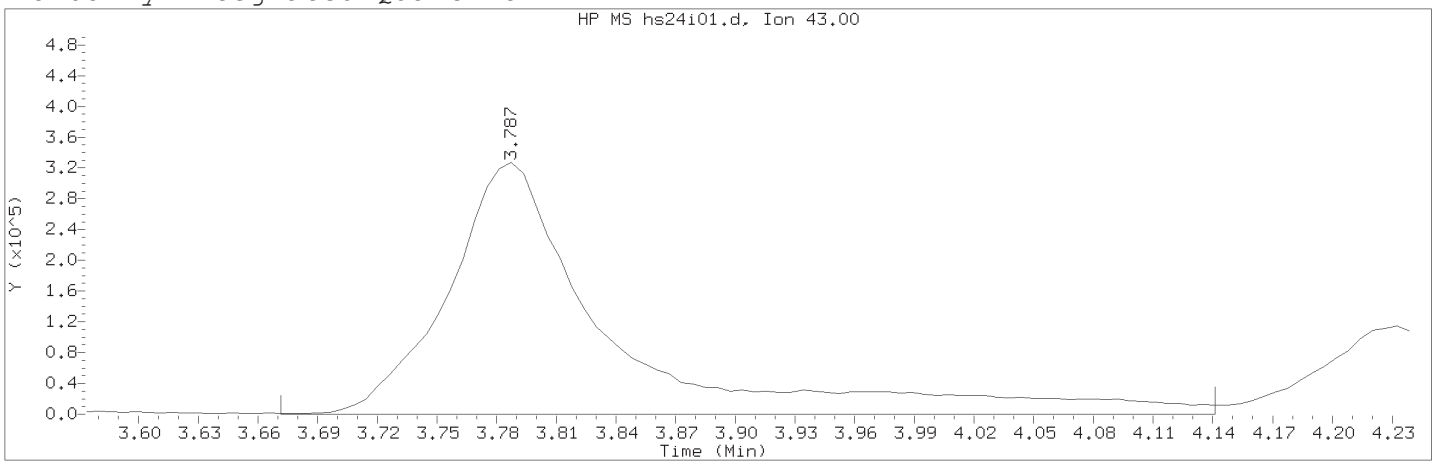
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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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

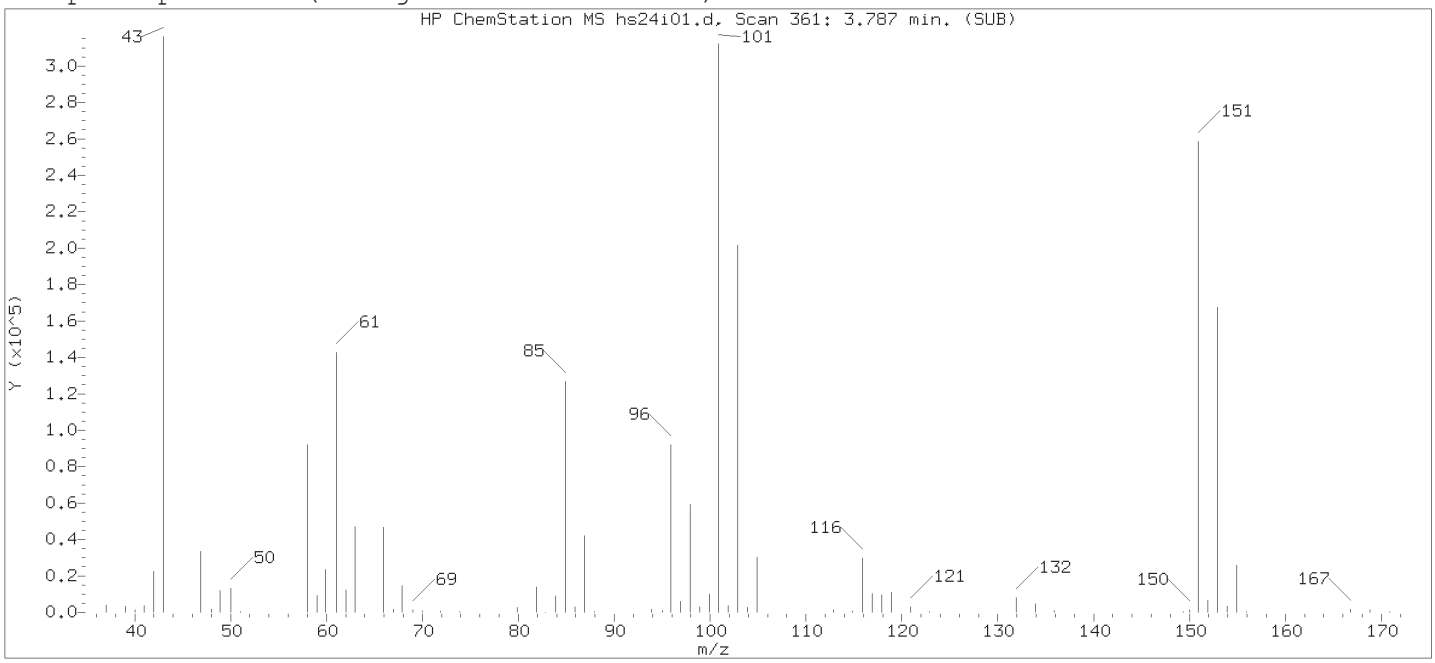
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 1847599M
On-Column Amount (ng) : 250.4543
Integration start scan : 341 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

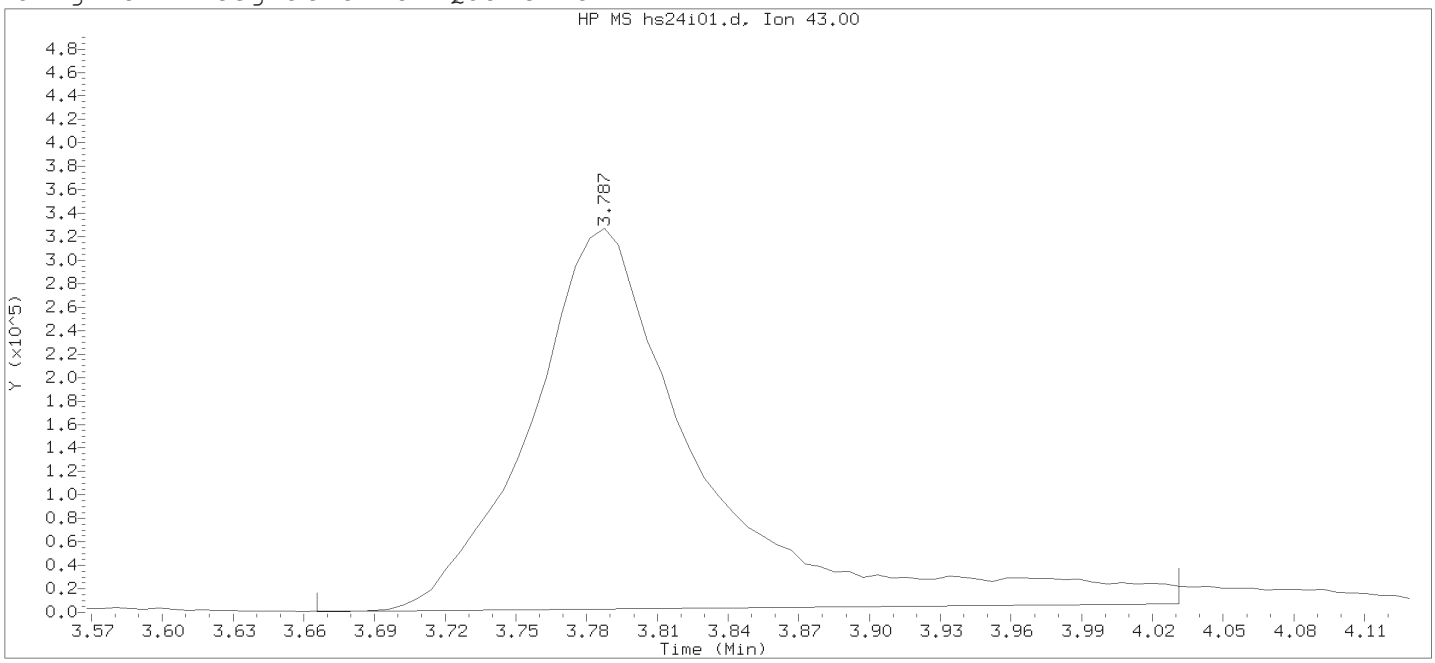
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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



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Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

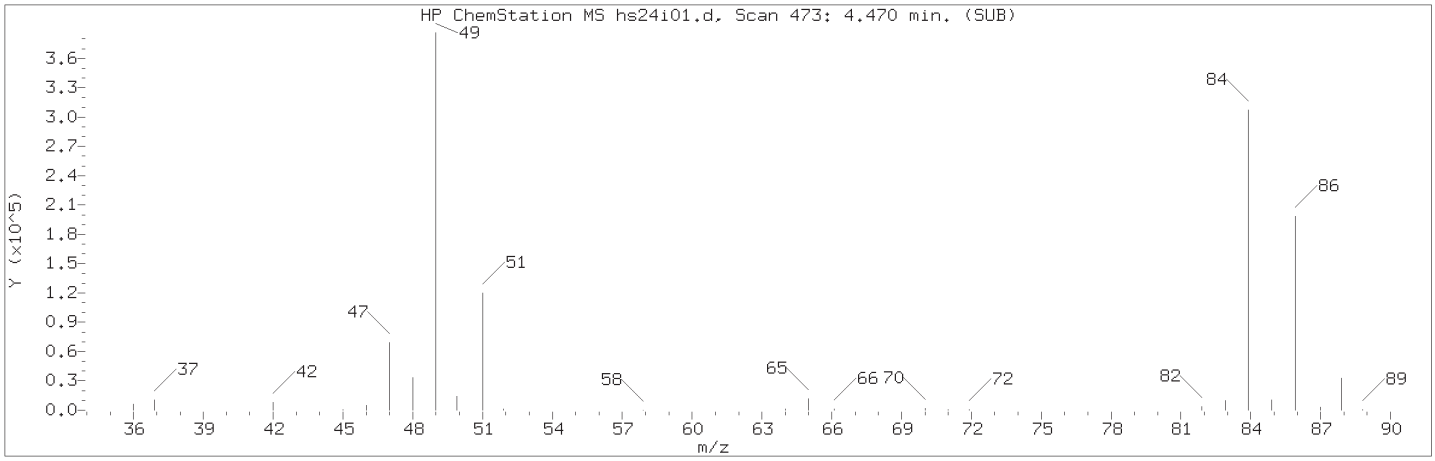
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

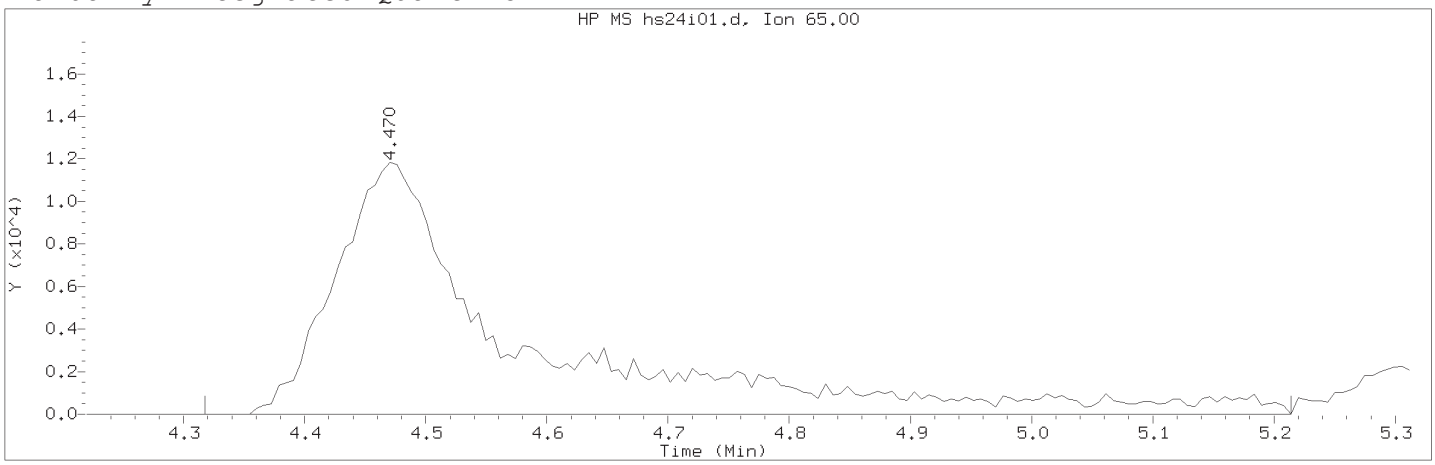
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area : 1639725
On-column Amount (ng) : 243.3952
Integration start scan : 340 Integration stop scan: 400
Y at integration start : 625 Y at integration end: 7448

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

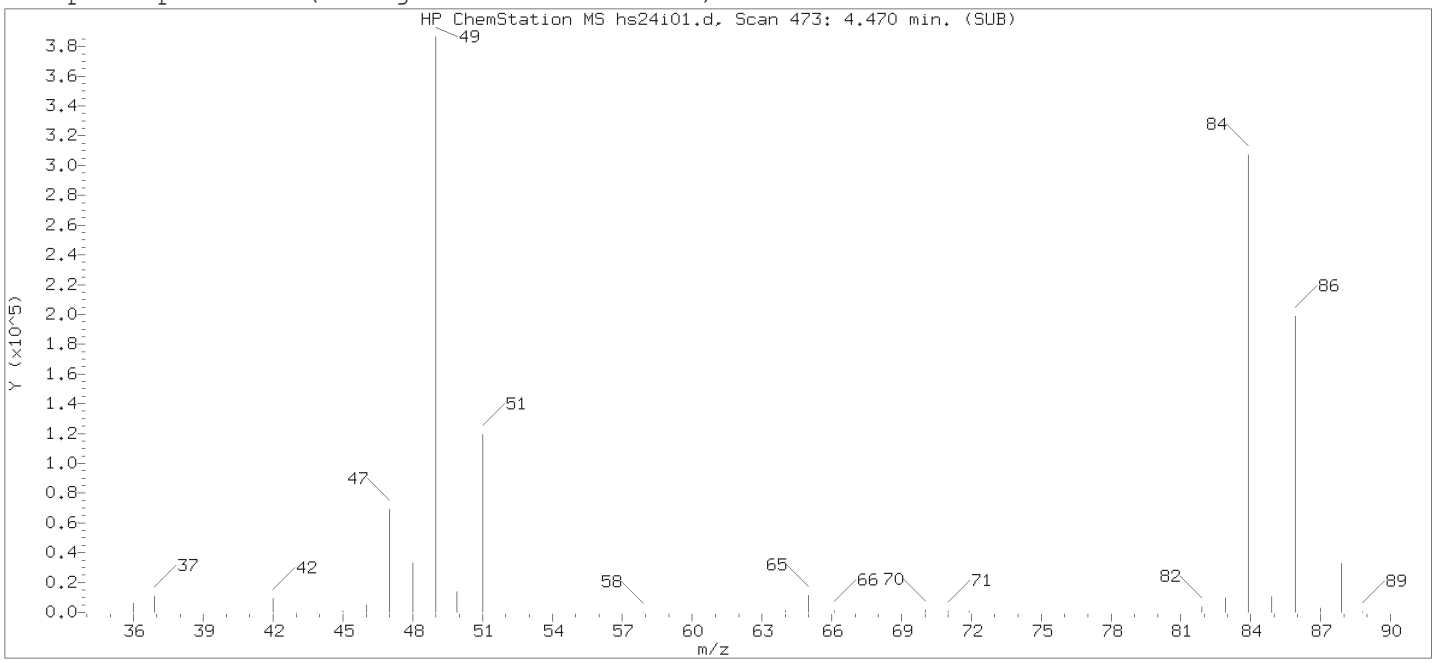
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 123769M
On-Column Amount (ng) : 50.0000
Integration start scan : 447 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

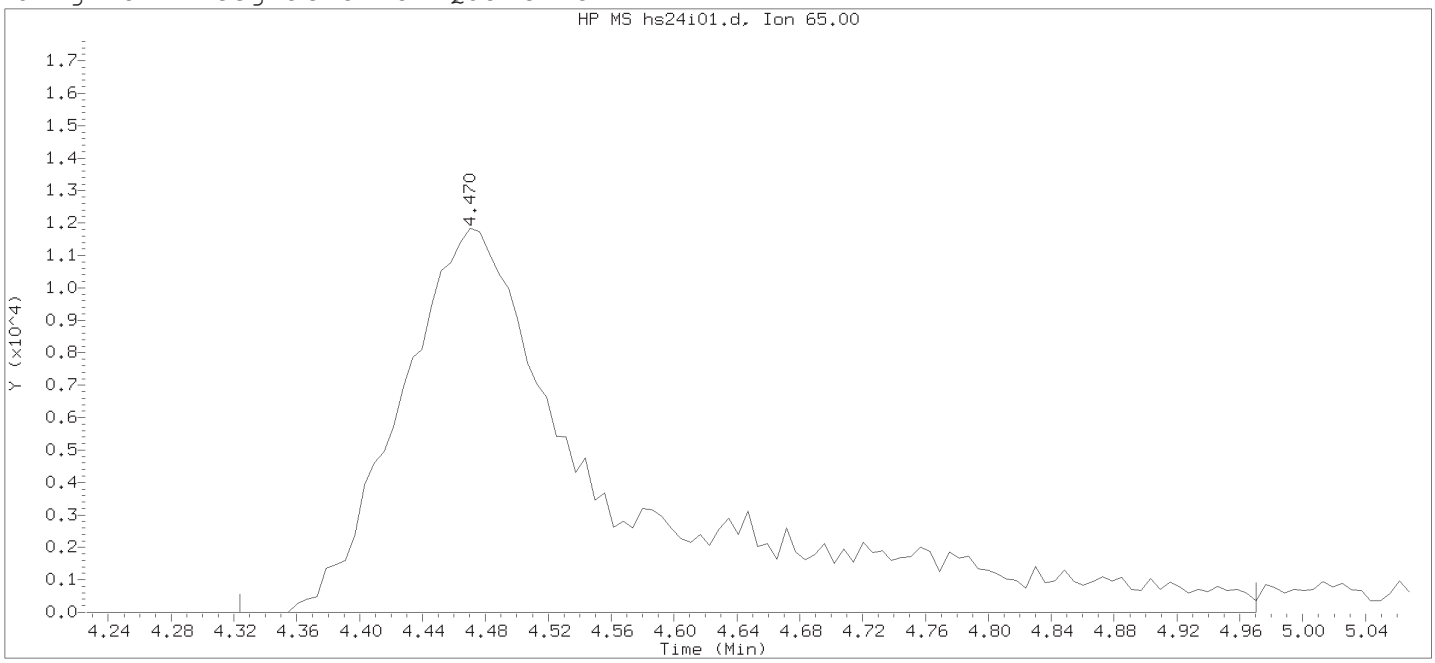
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

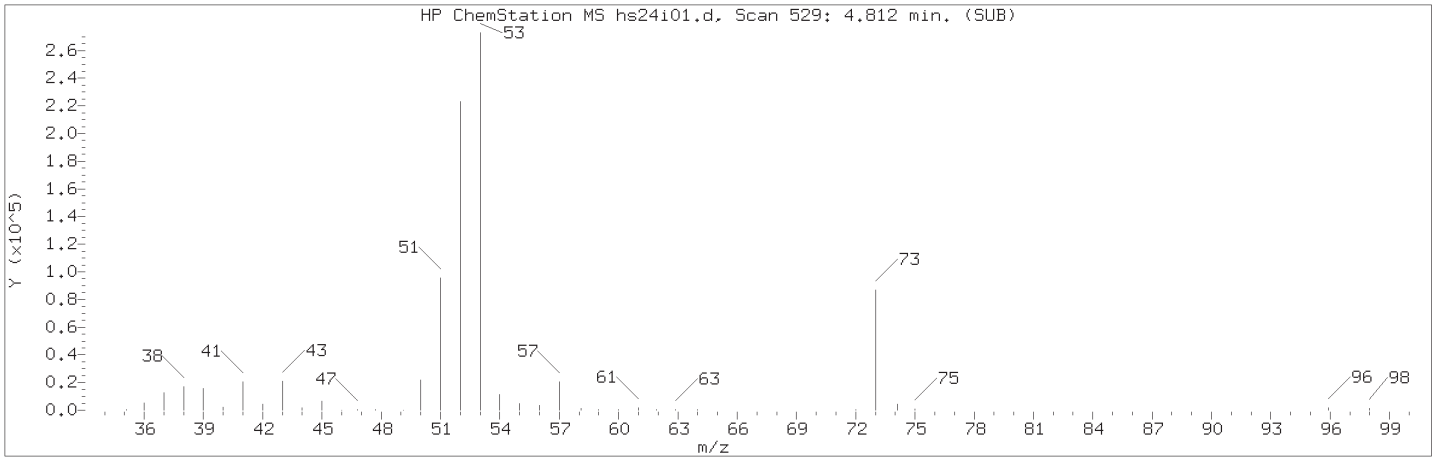
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

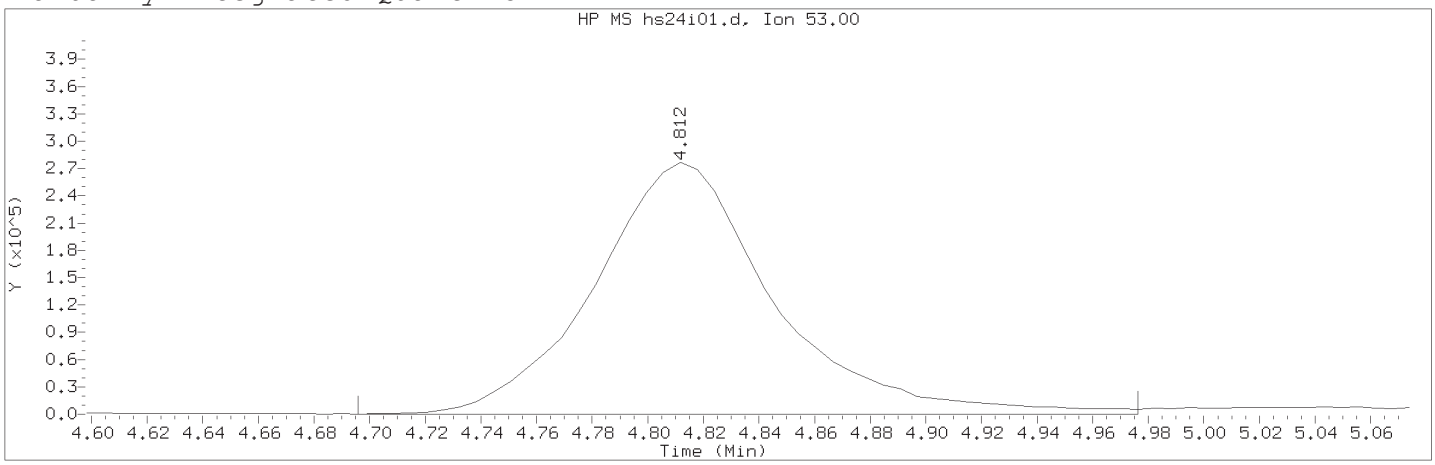
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 114590
On-column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 554
Y at integration start : 0 Y at integration end: 0

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

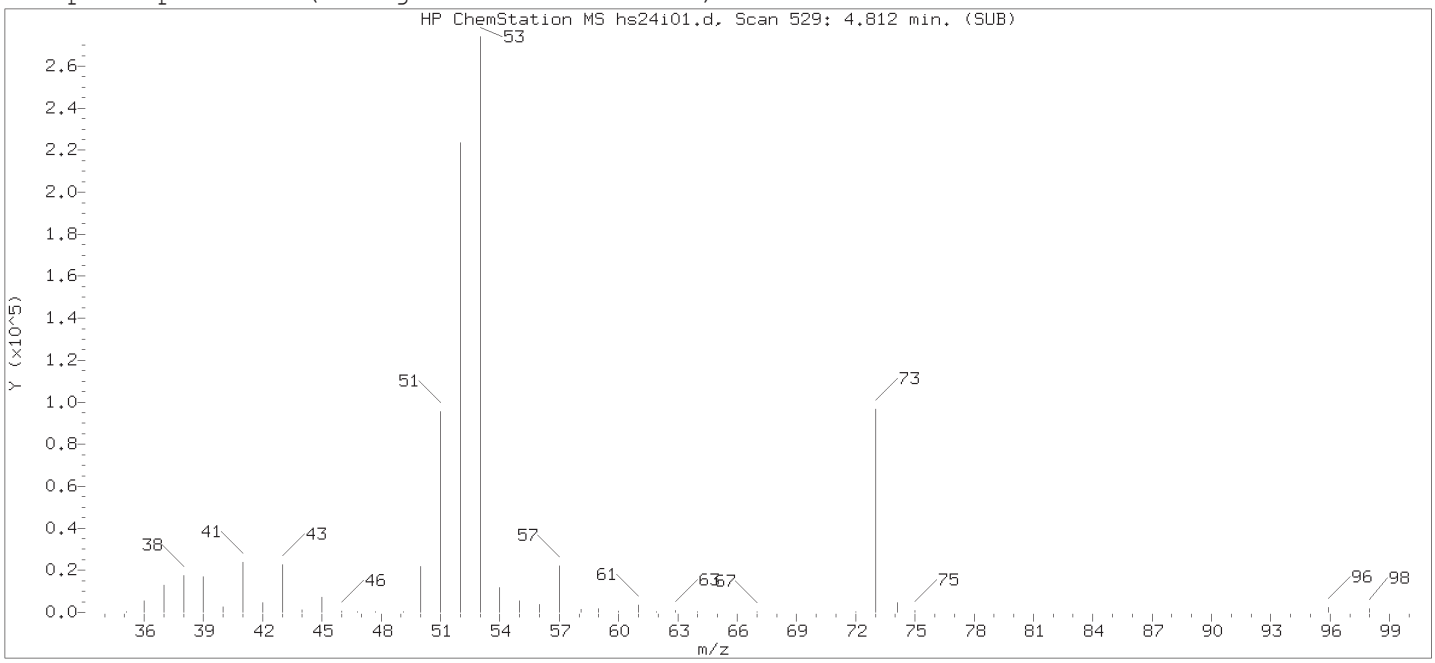
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area (flag) : 1235214M
On-Column Amount (ng) : 129.6558
Integration start scan : 509 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

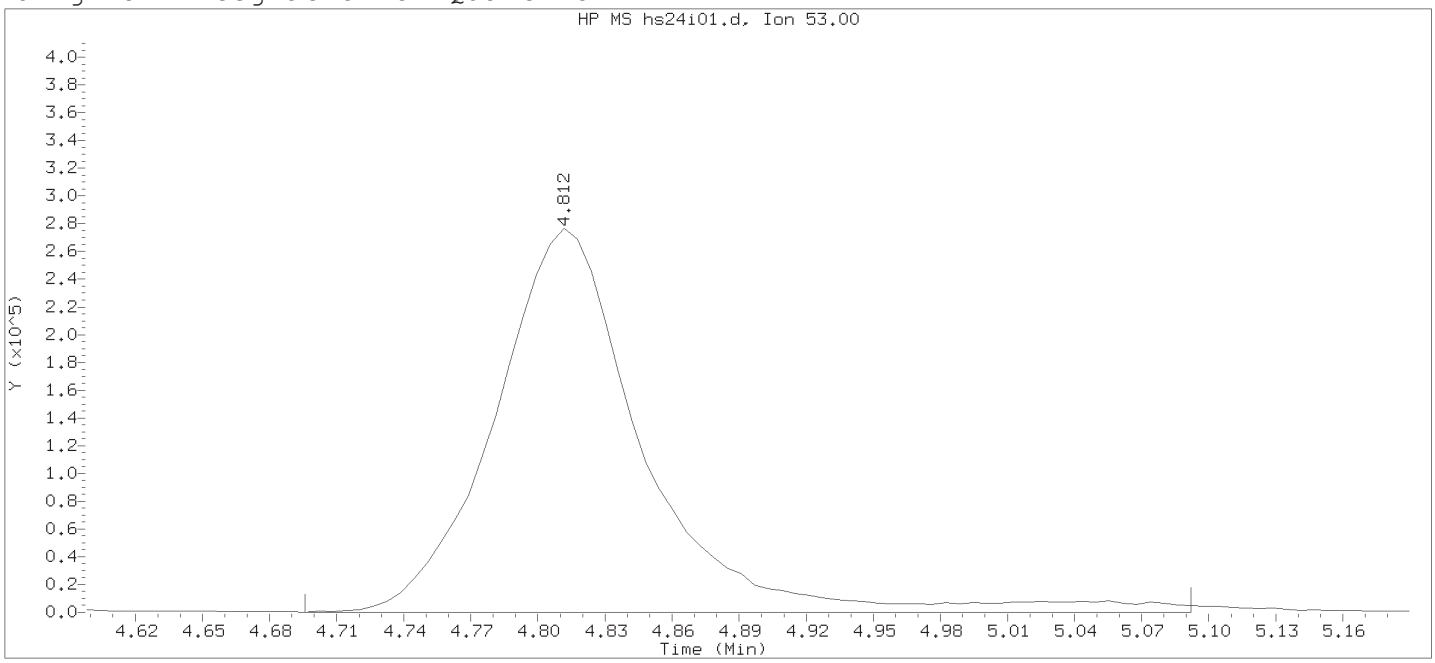
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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



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Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

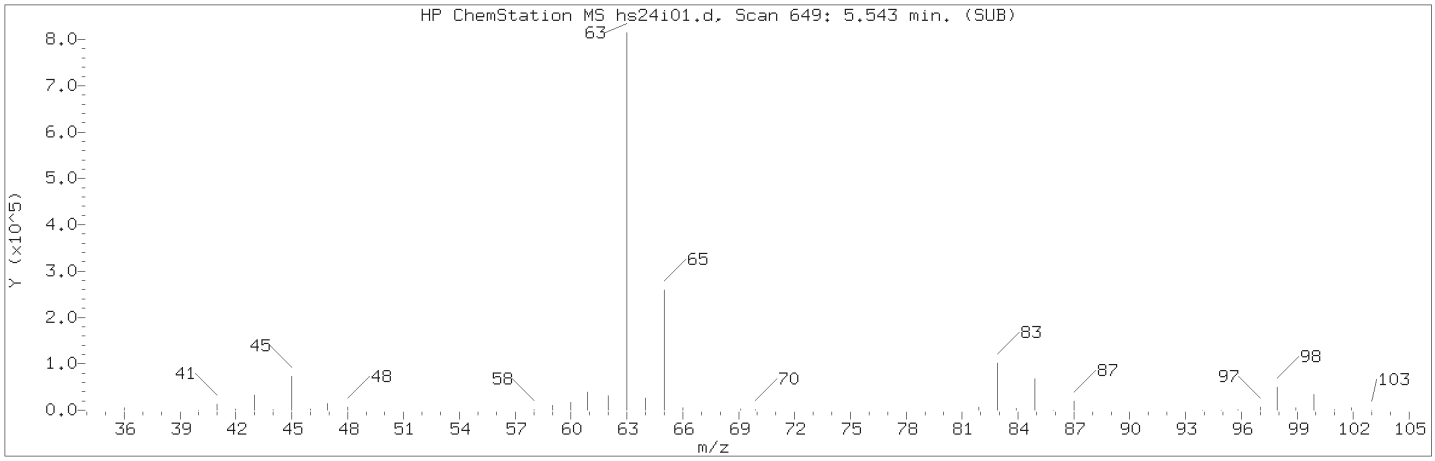
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

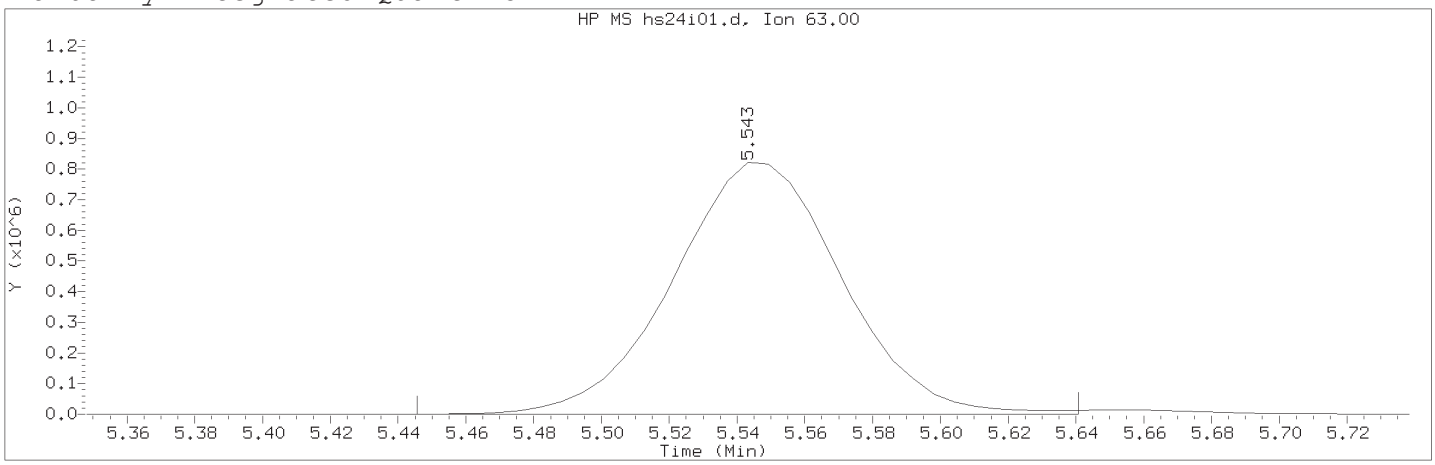
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area : 1282020
On-column Amount (ng) : 129.1888
Integration start scan : 509 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

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

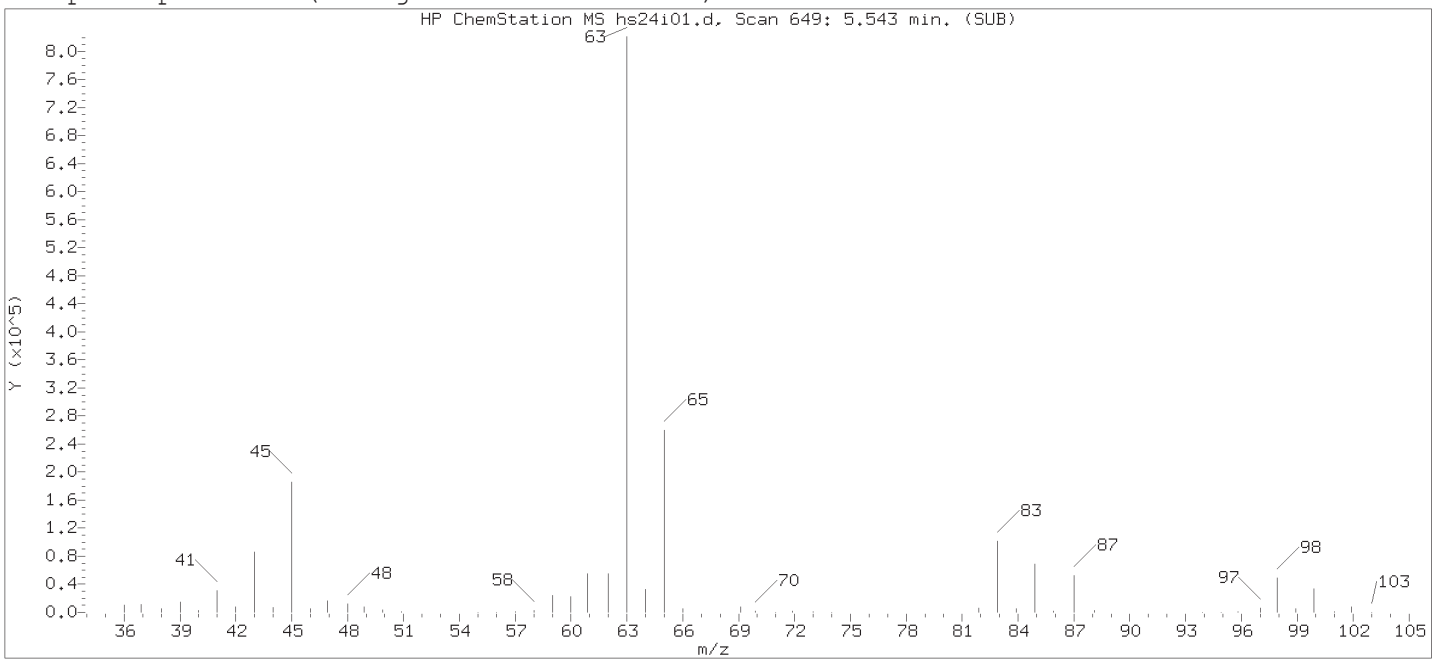
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area (flag) : 2842374M
On-Column Amount (ng) : 25.8511
Integration start scan : 632 Integration stop scan: 664
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

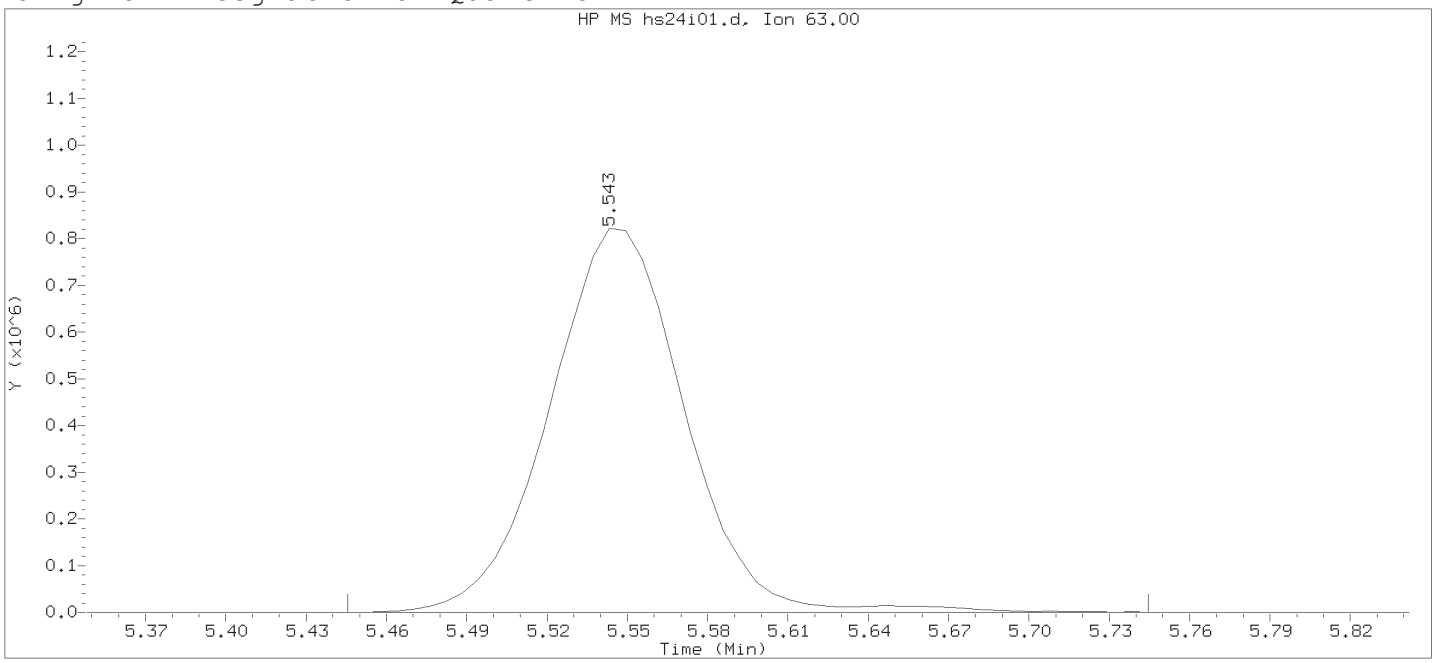
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

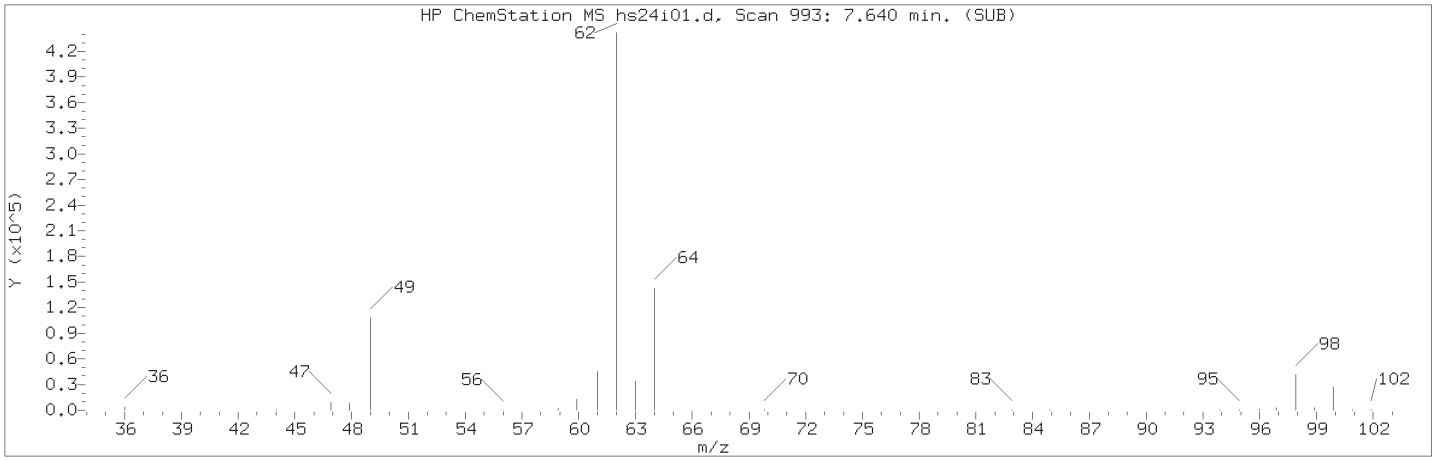
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

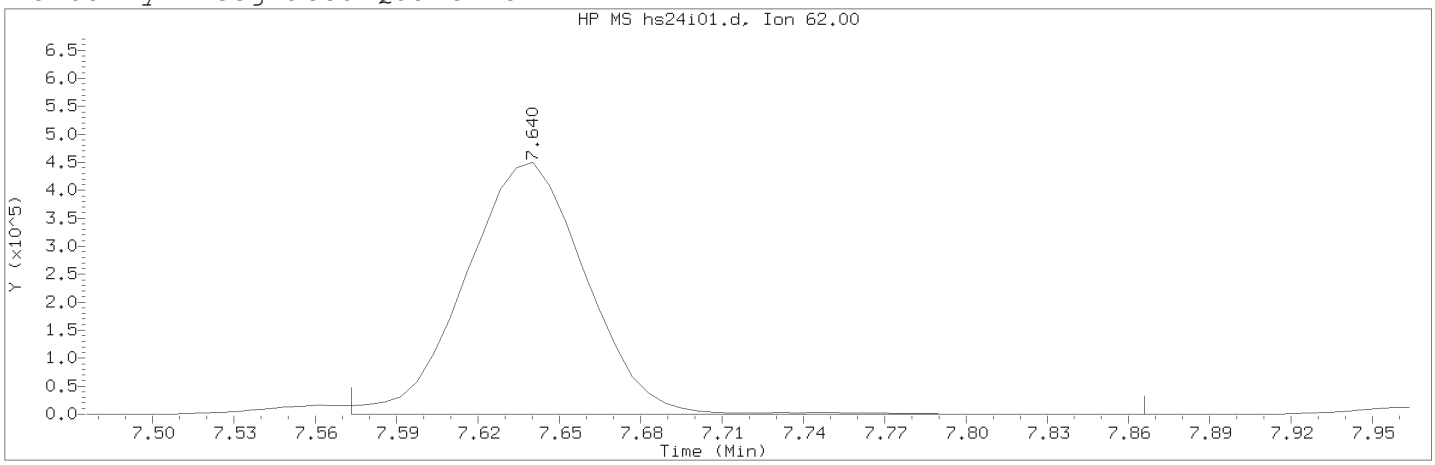
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area : 2874978
On-column Amount (ng) : 24.9330
Integration start scan : 632 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

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

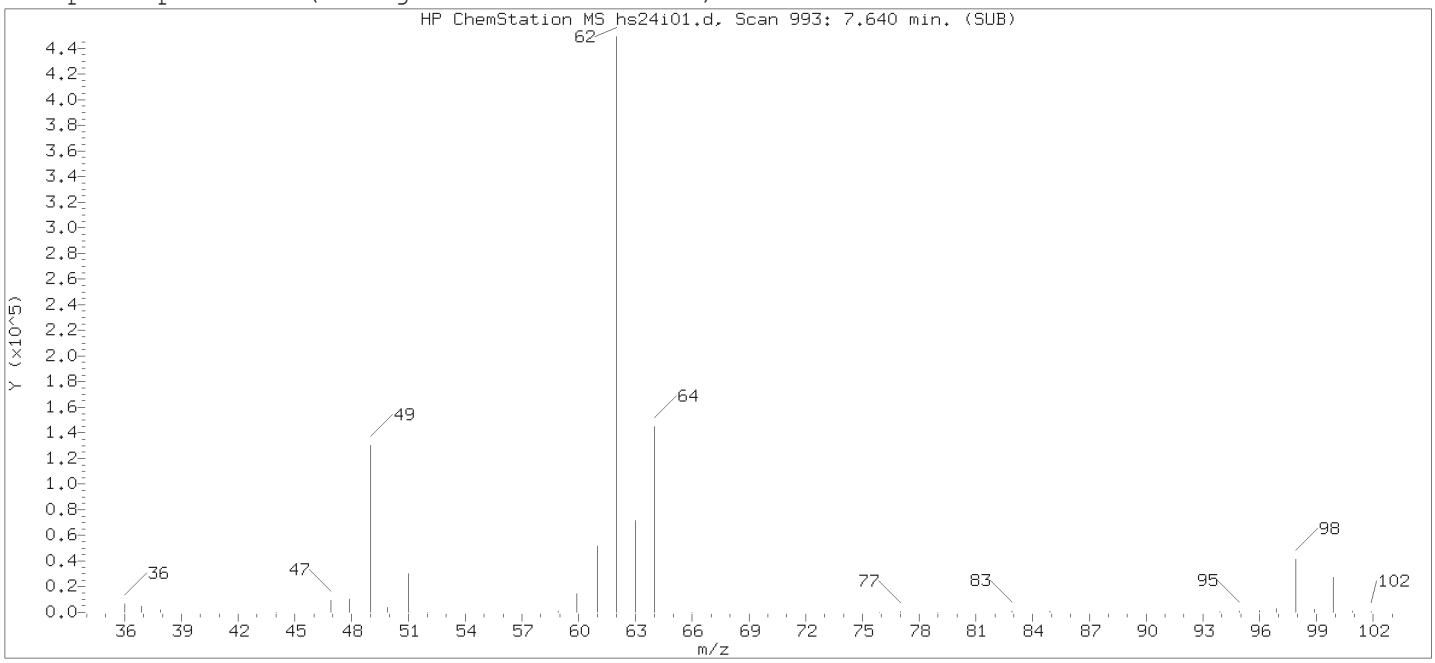
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area (flag) : 1386008M
On-Column Amount (ng) : 24.5870
Integration start scan : 981 Integration stop scan: 1029
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

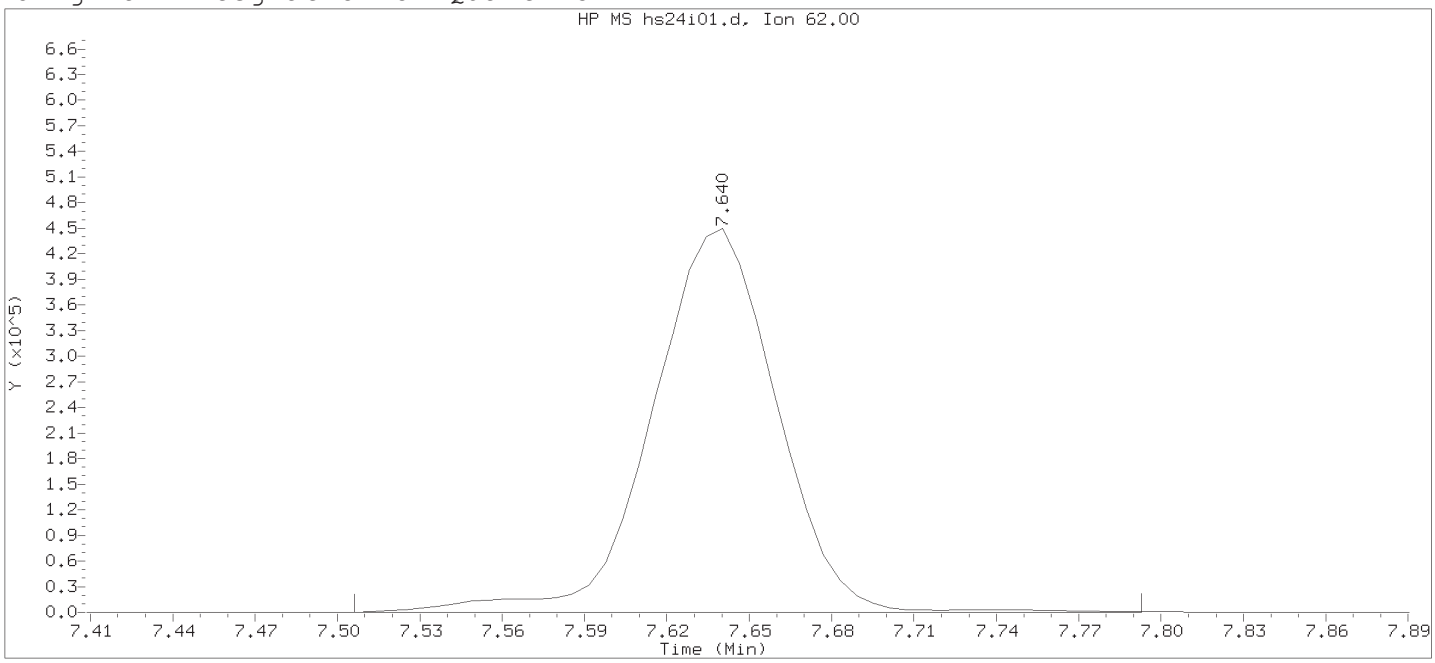
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

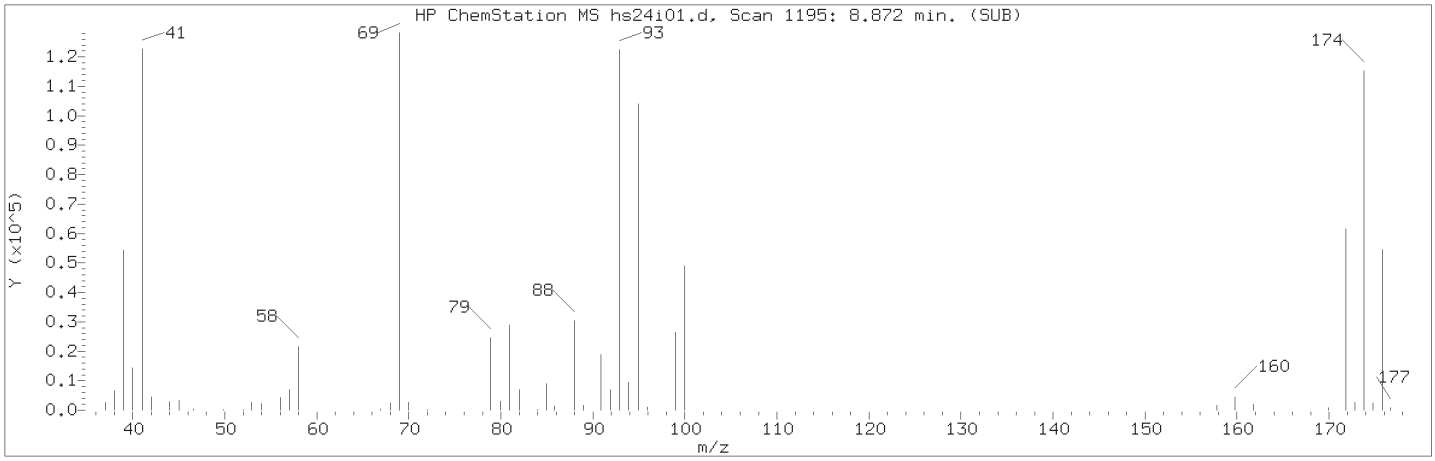
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

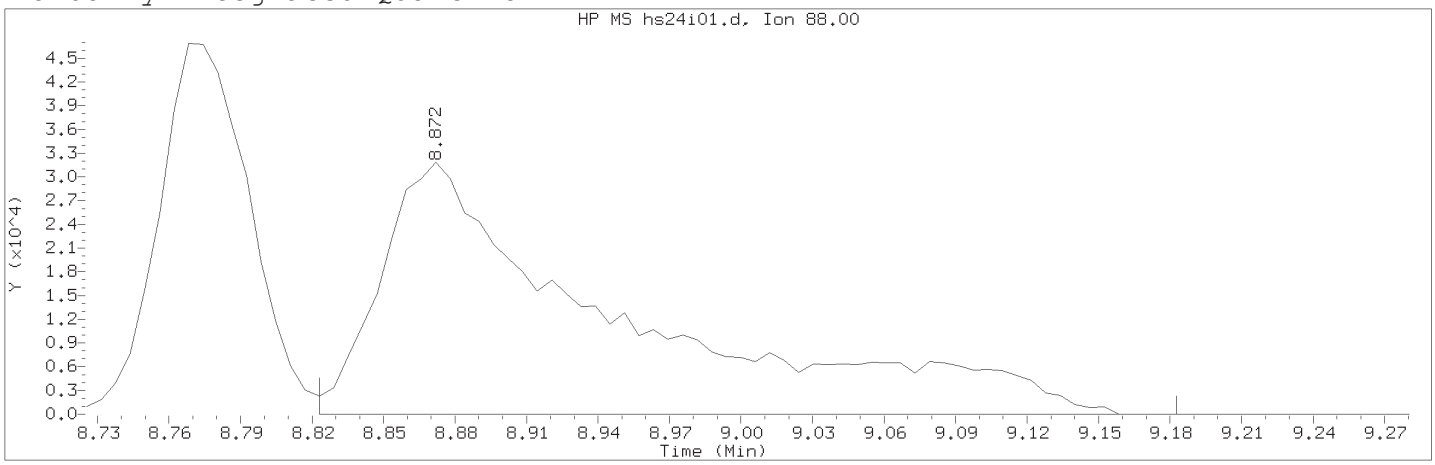
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area : 1414553
On-column Amount (ng) : 25.1444
Integration start scan : 970 Integration stop scan: 1017
Y at integration start : 0 Y at integration end: 260

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

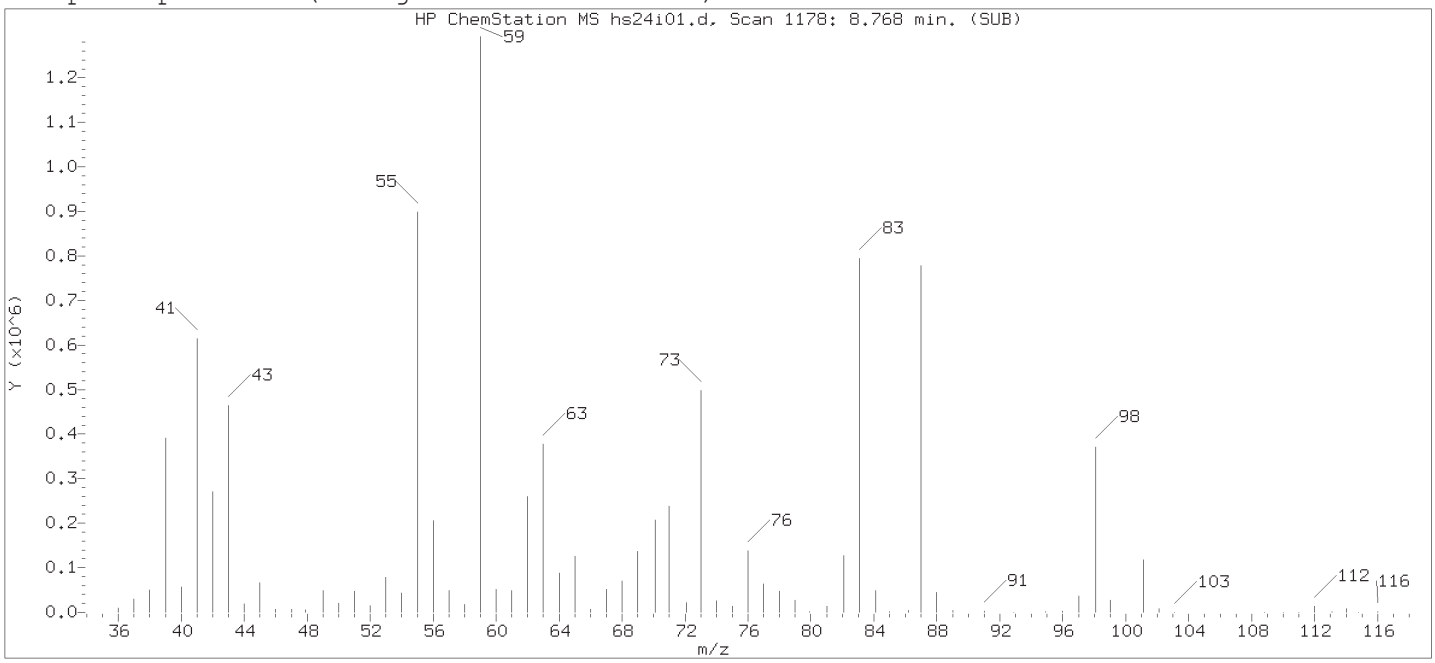
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 216251M
On-Column Amount (ng) : 1300.5754
Integration start scan : 1186 Integration stop scan: 1245
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

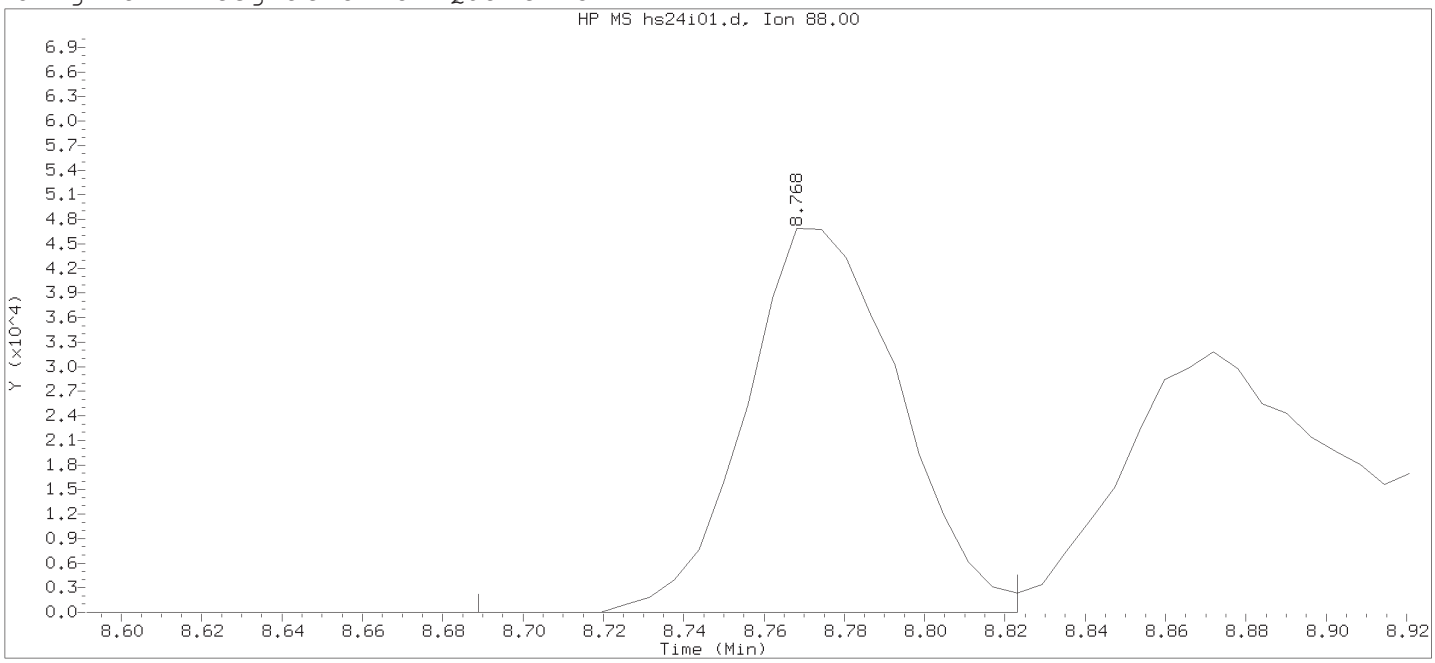
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

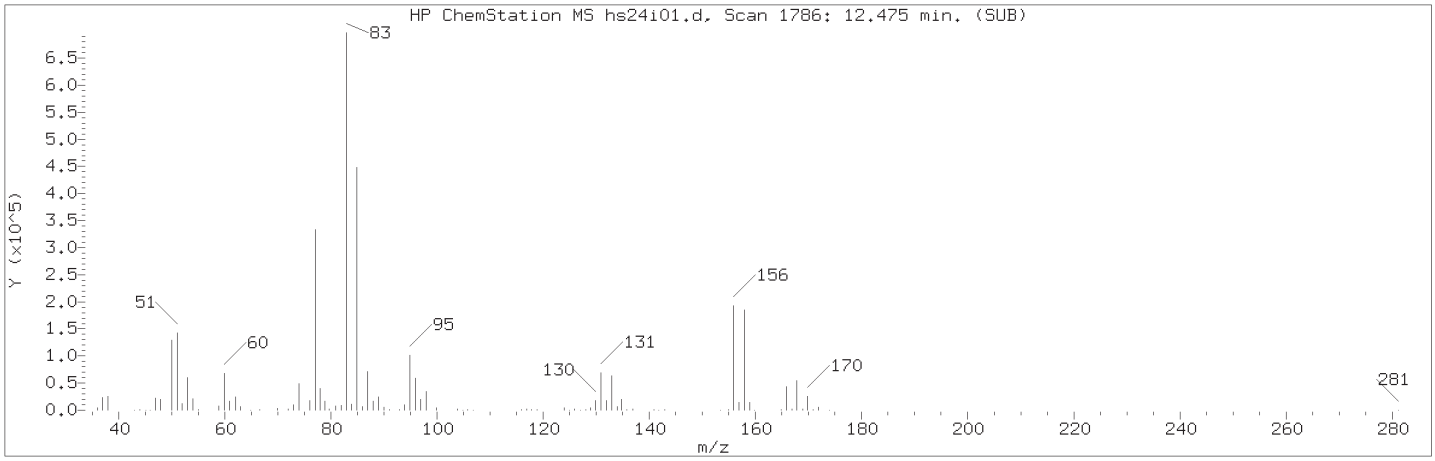
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

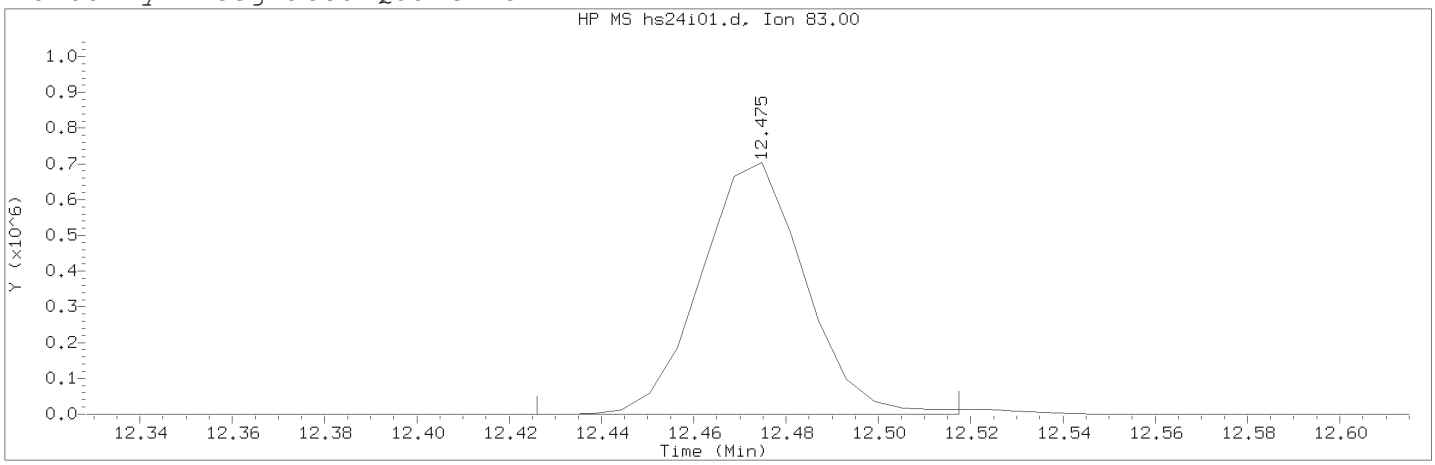
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1178
Retention Time (minutes): 8.768
Quant Ion : 88.00
Area : 124030
On-column Amount (ng) : 962.4201
Integration start scan : 1164 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

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

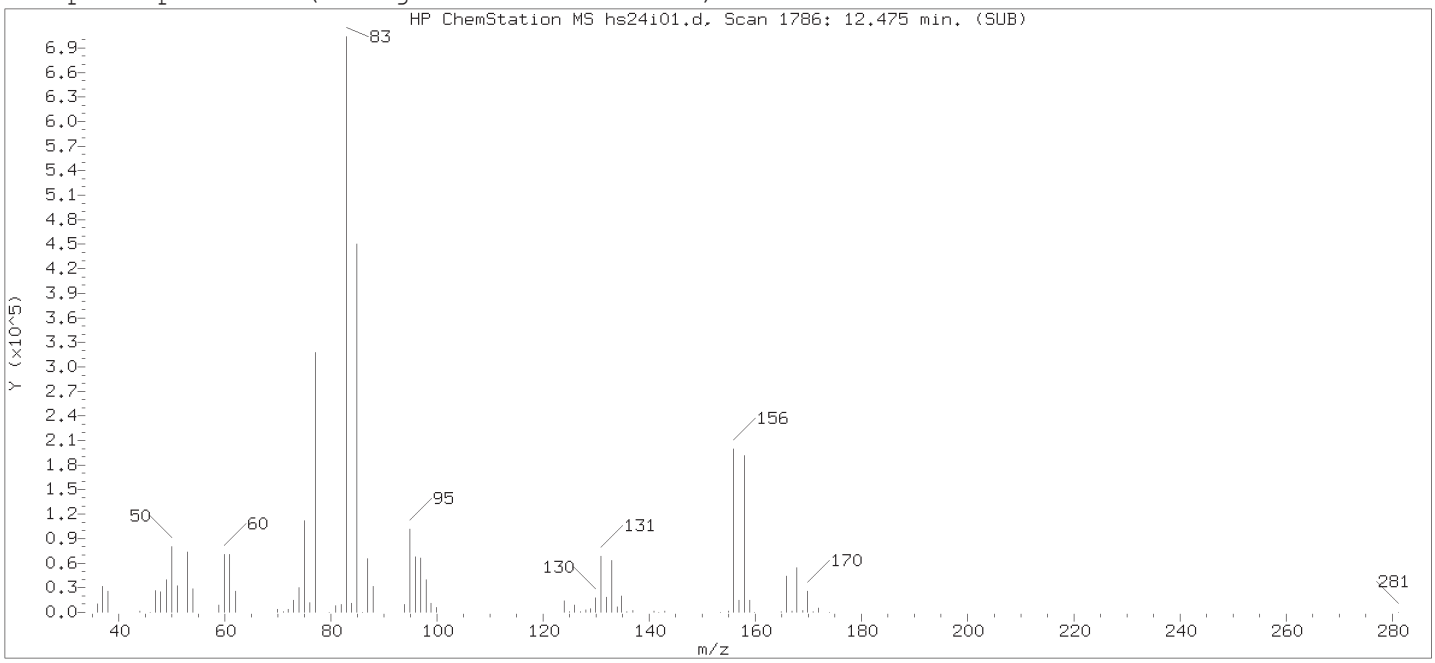
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 1100327M
On-Column Amount (ng) : 26.6273
Integration start scan : 1777 Integration stop scan: 1792
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

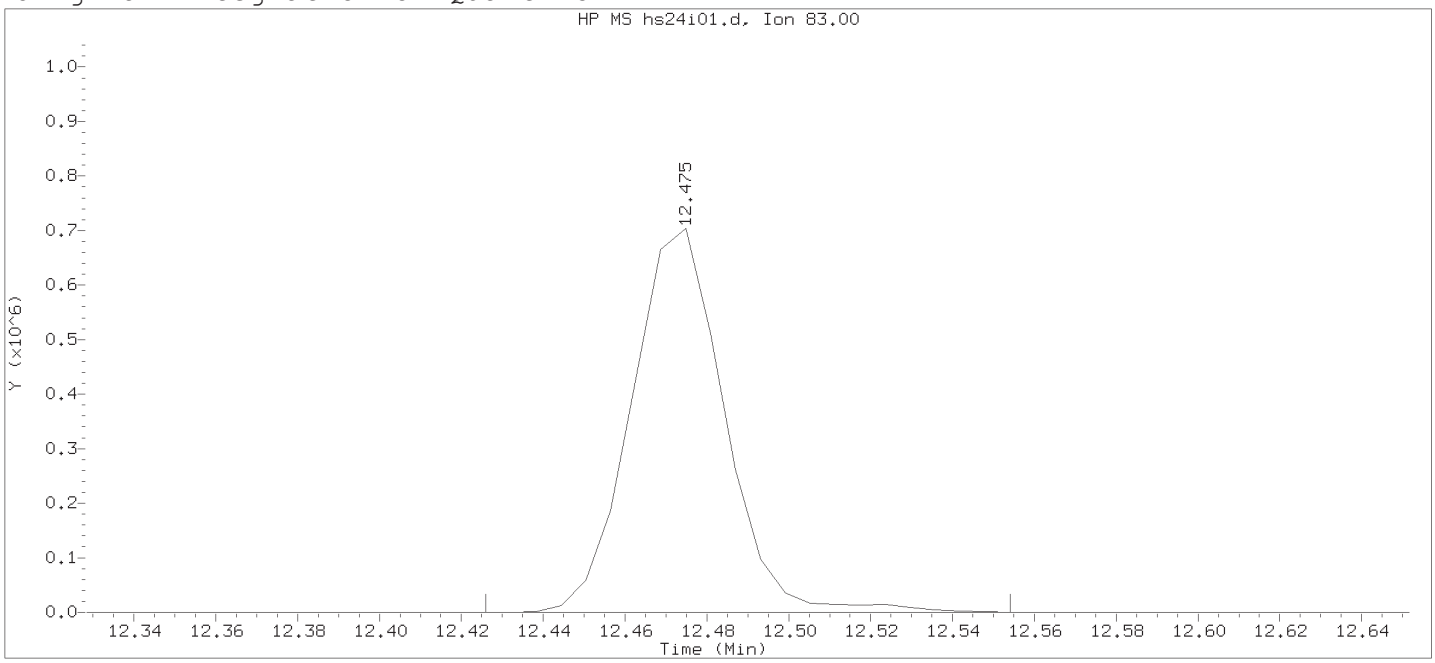
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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



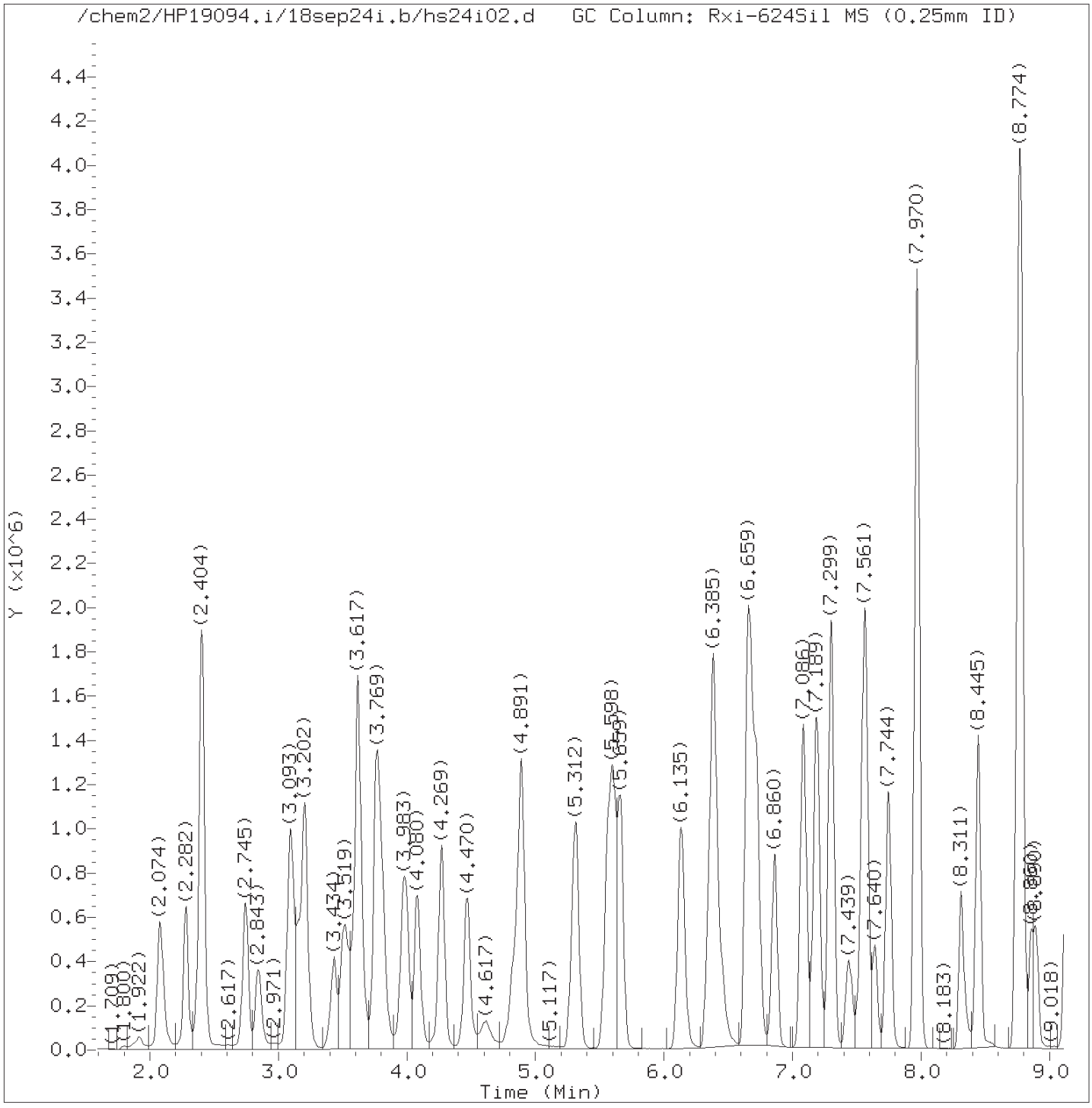
Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

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)

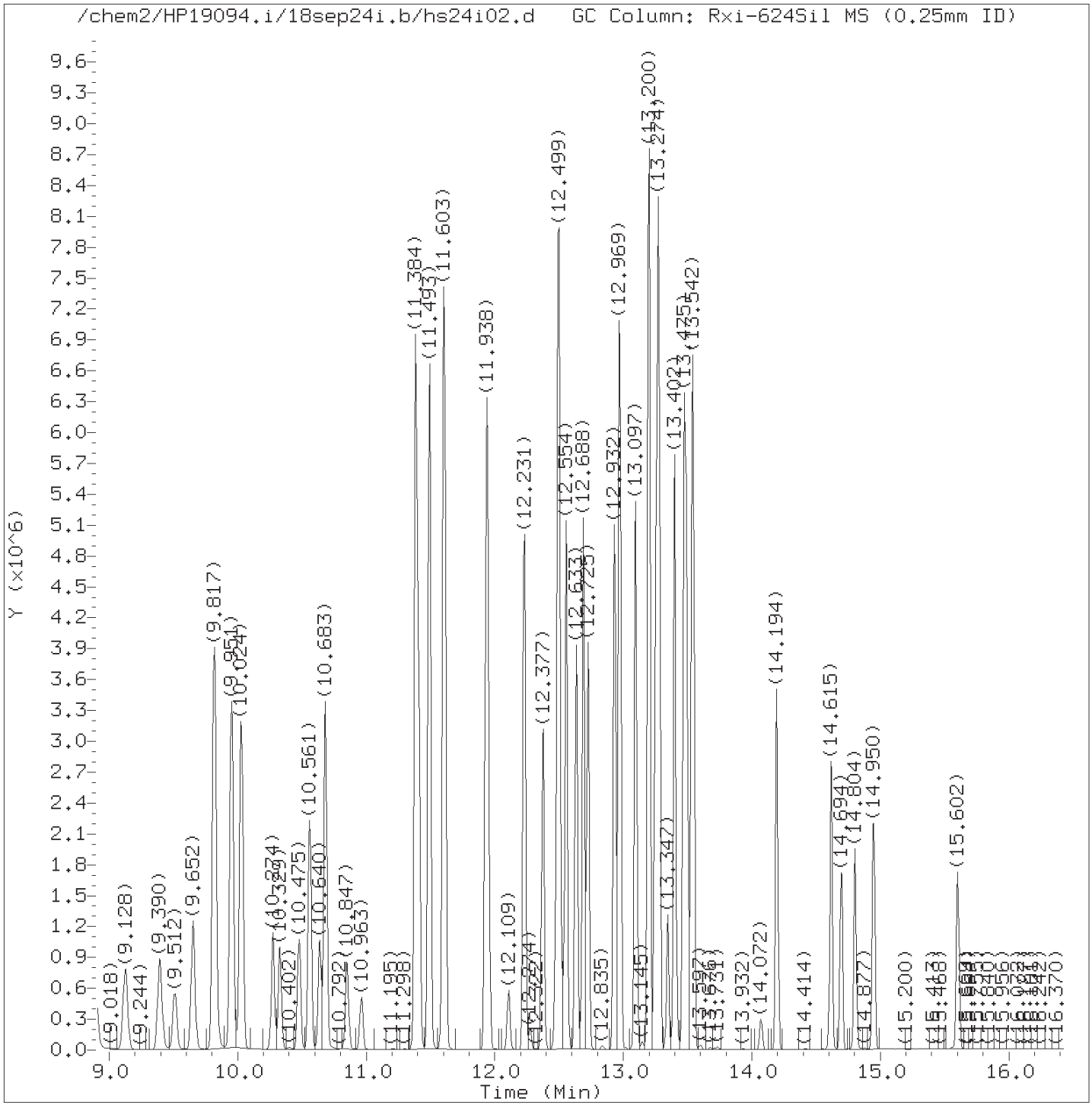
Target Revision 3.5

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

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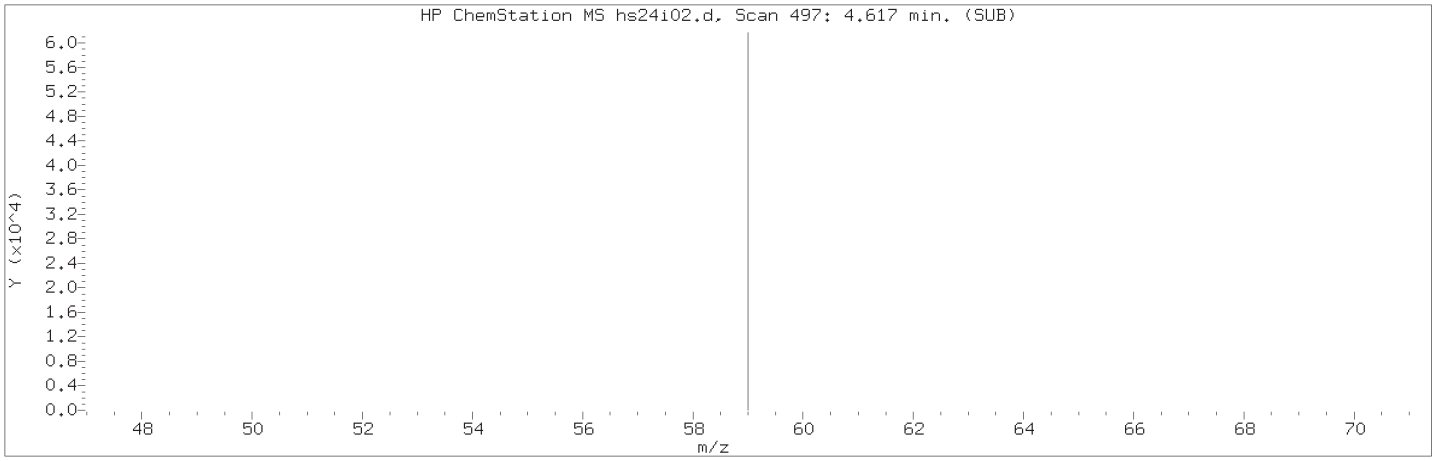
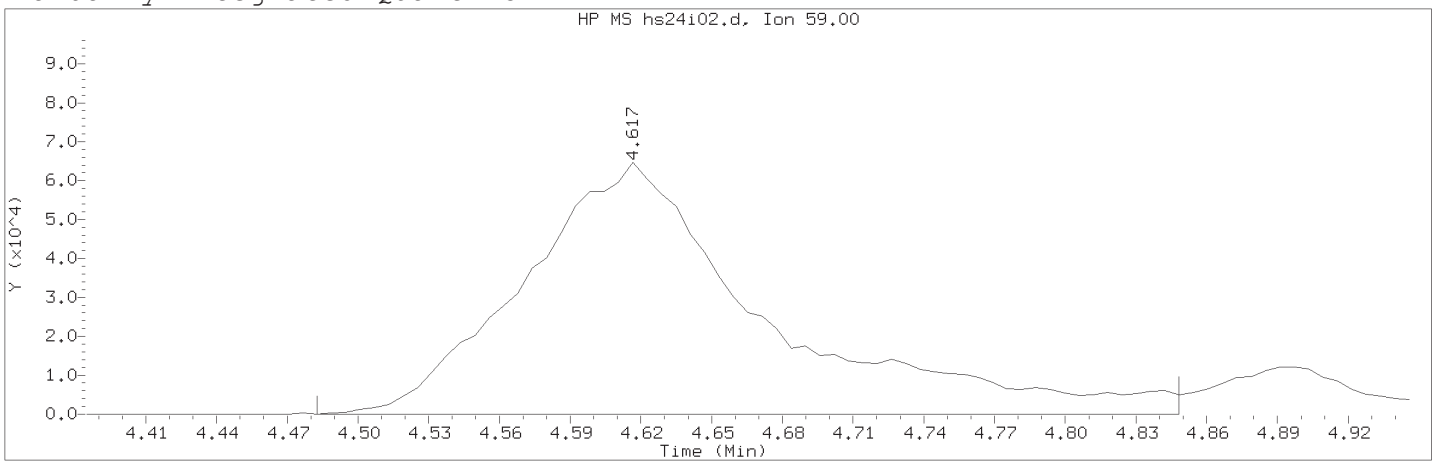
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

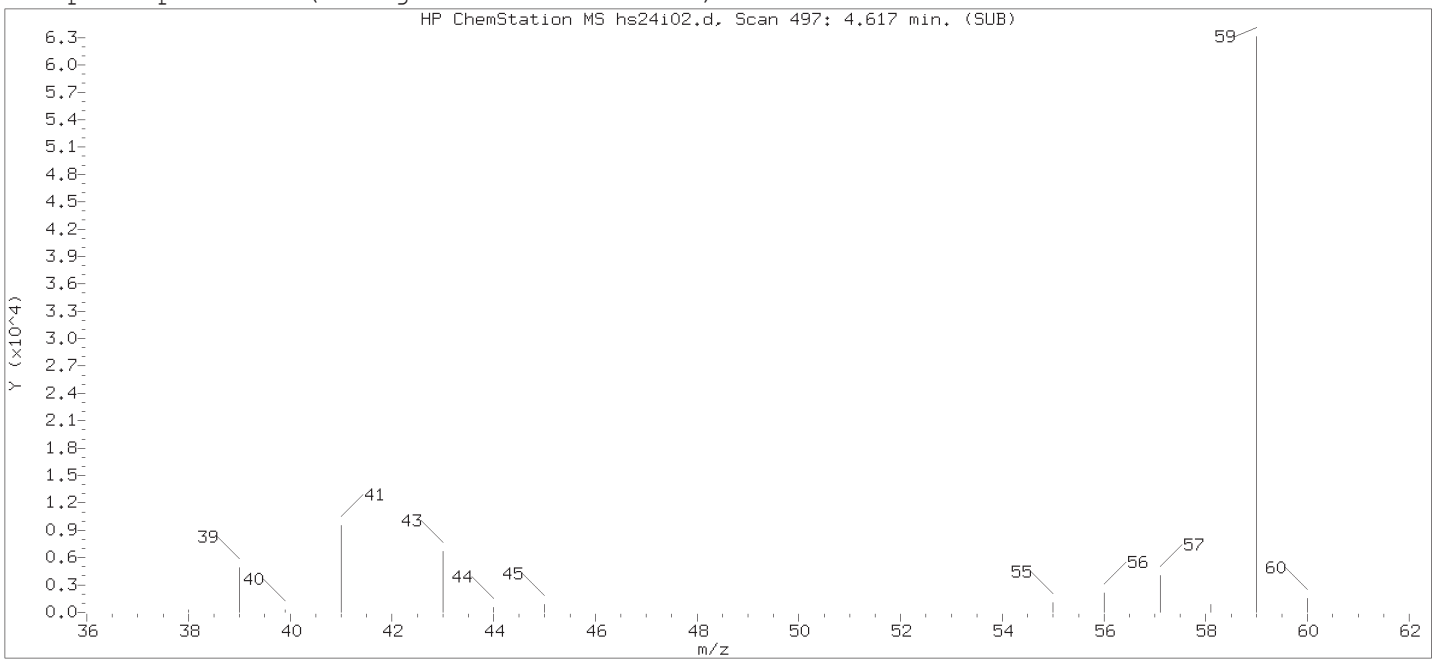
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area (flag) : 455794M
On-Column Amount (ng) : 211.2399
Integration start scan : 474 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

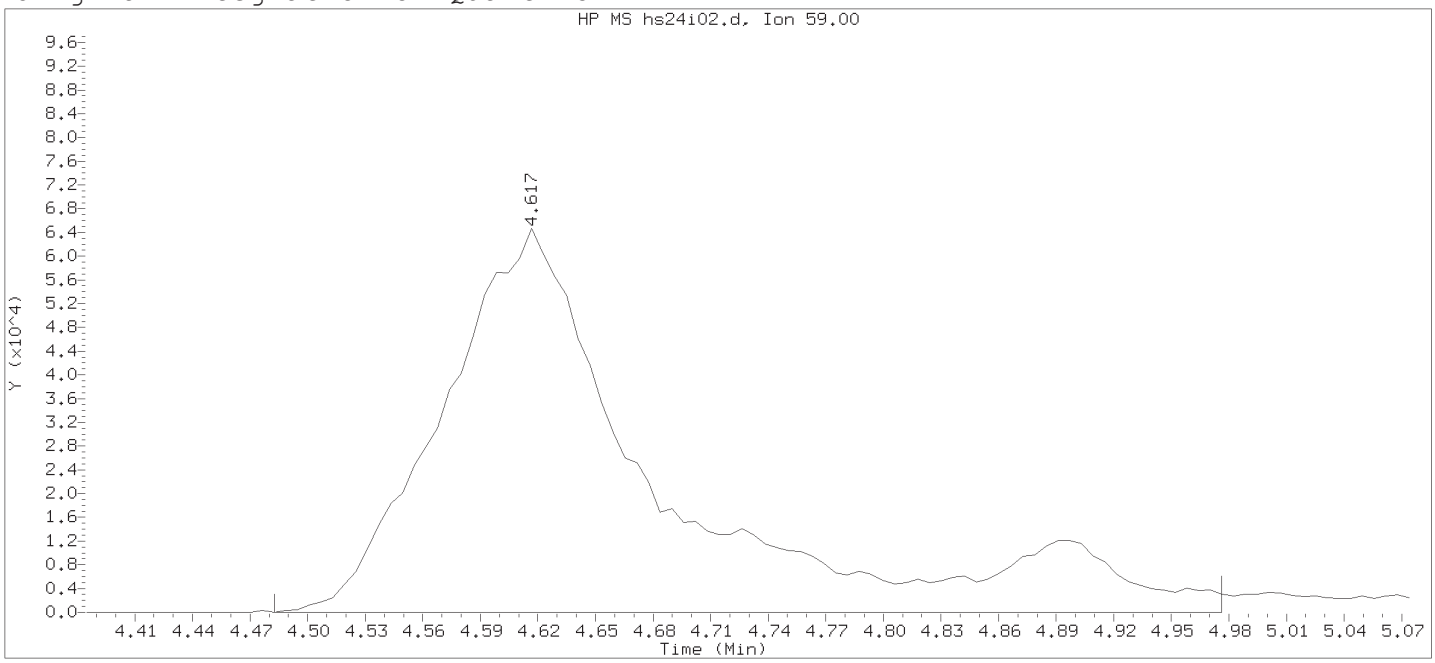
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

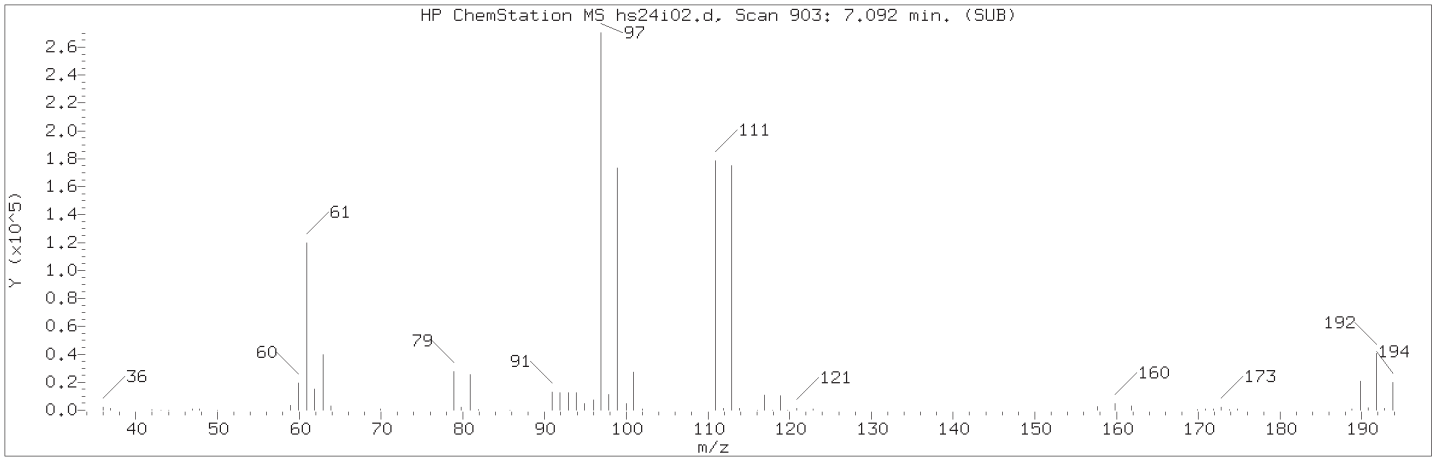
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

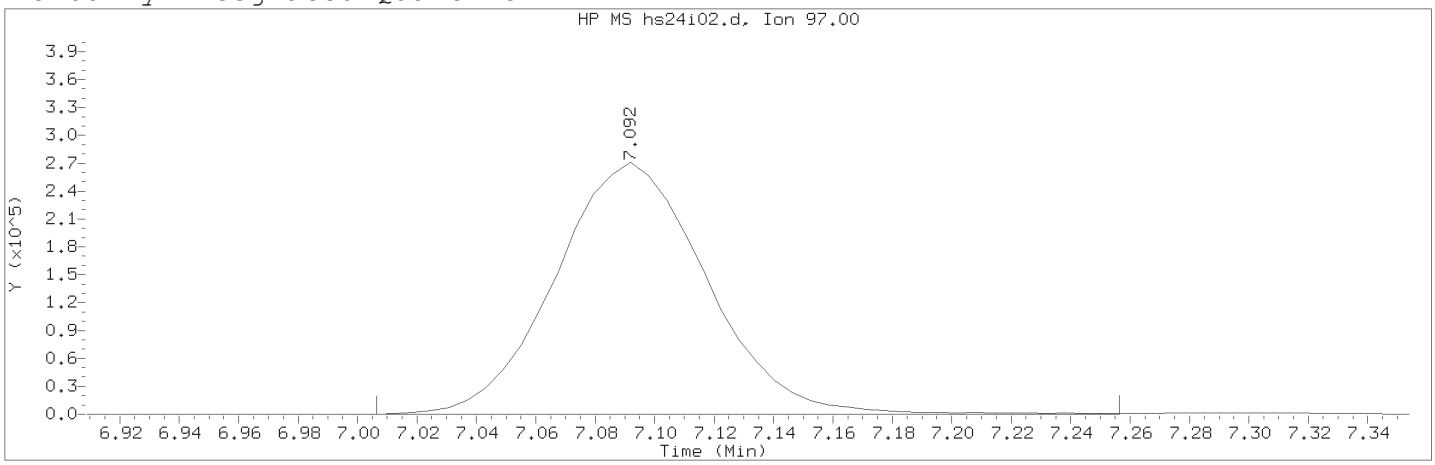
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area : 508509
On-column Amount (ng) : 200.0000
Integration start scan : 474 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

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

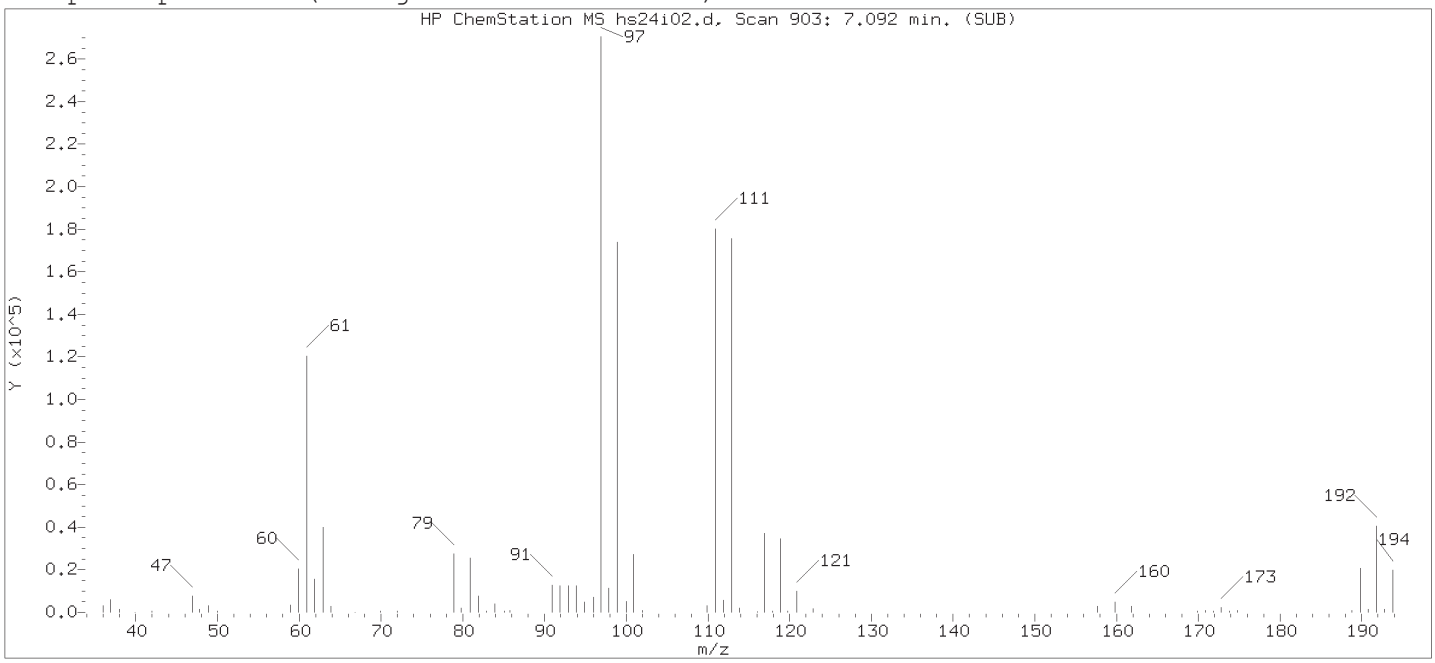
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area (flag) : 954892M
On-Column Amount (ng) : 10.6514
Integration start scan : 888 Integration stop scan: 929
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

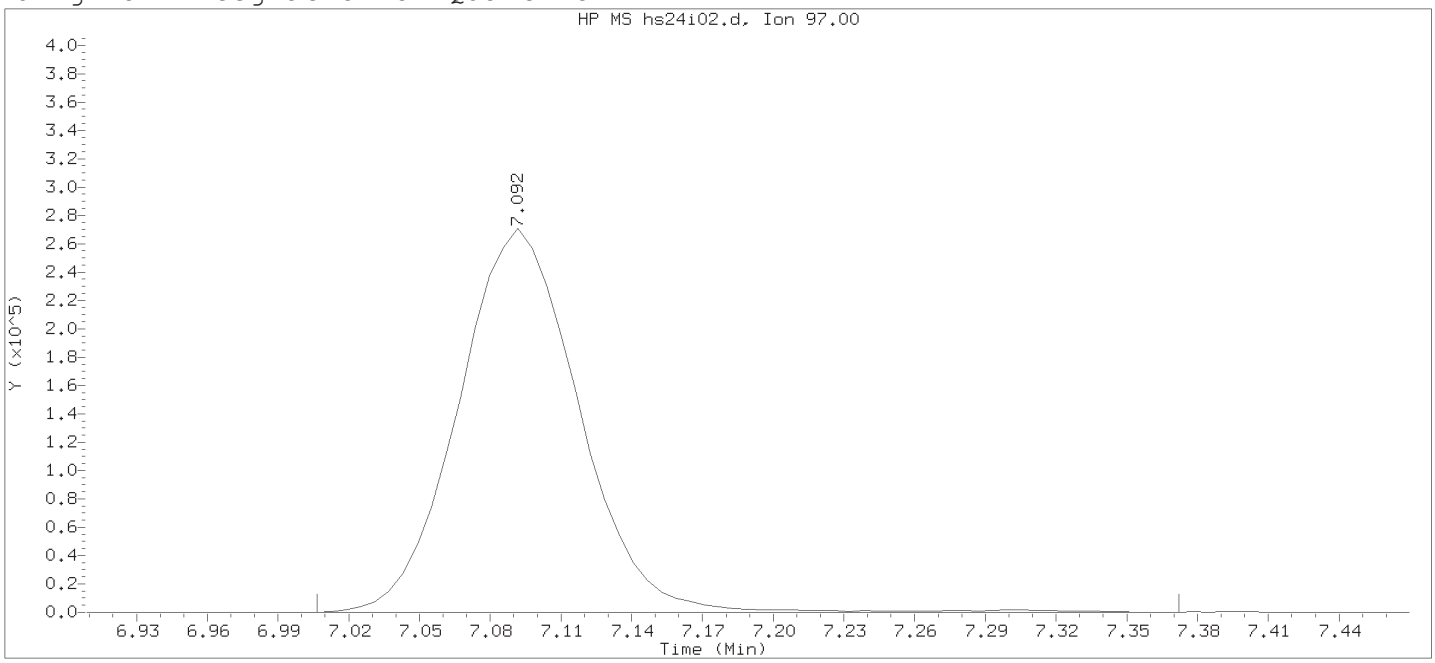
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

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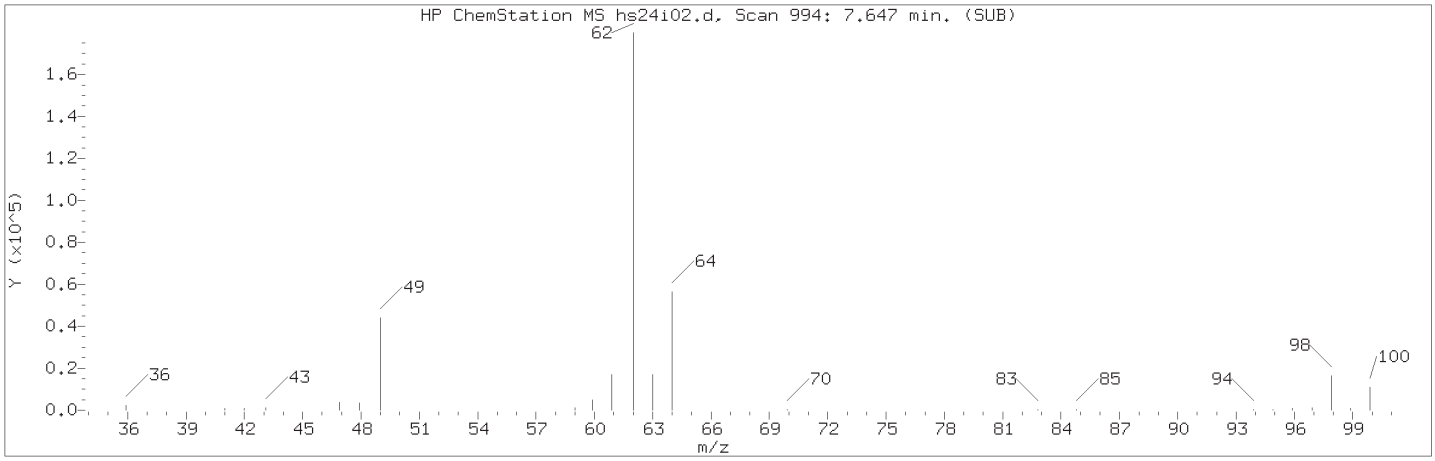
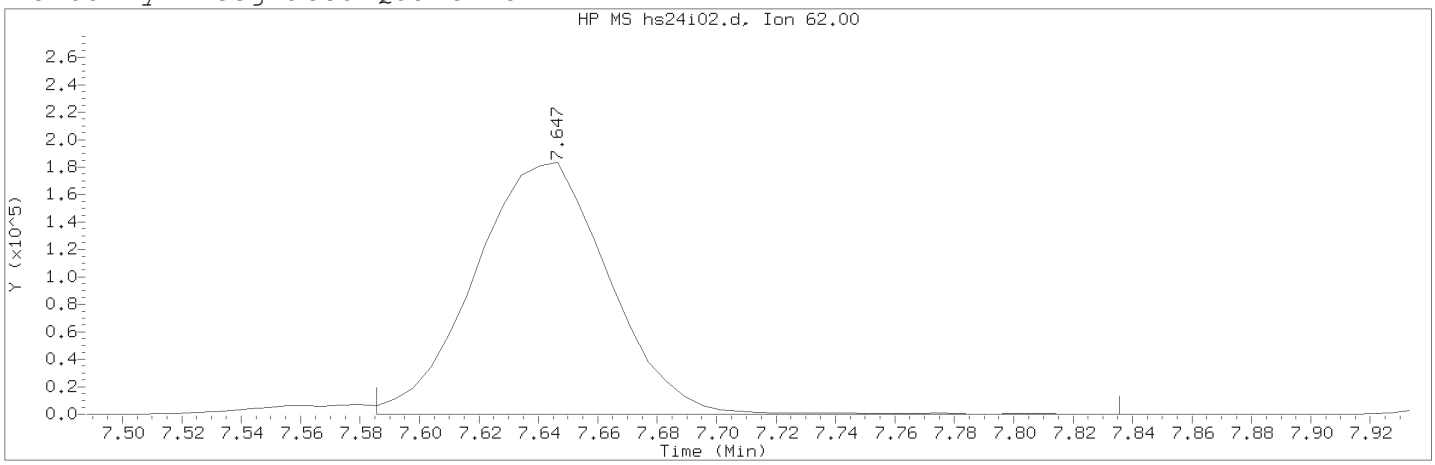
Target 3.5 esignature user ID: jkh09052

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

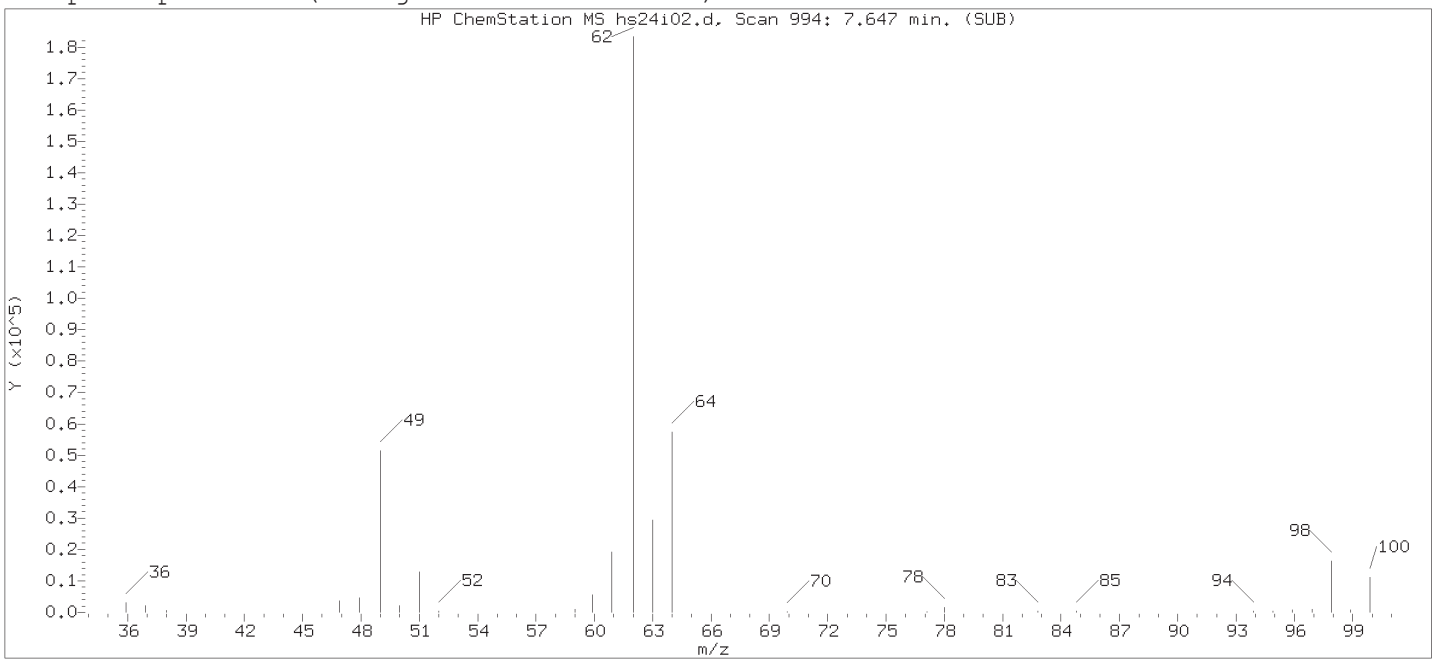
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area (flag) : 573462M
On-Column Amount (ng) : 9.9220
Integration start scan : 983 Integration stop scan: 1024
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

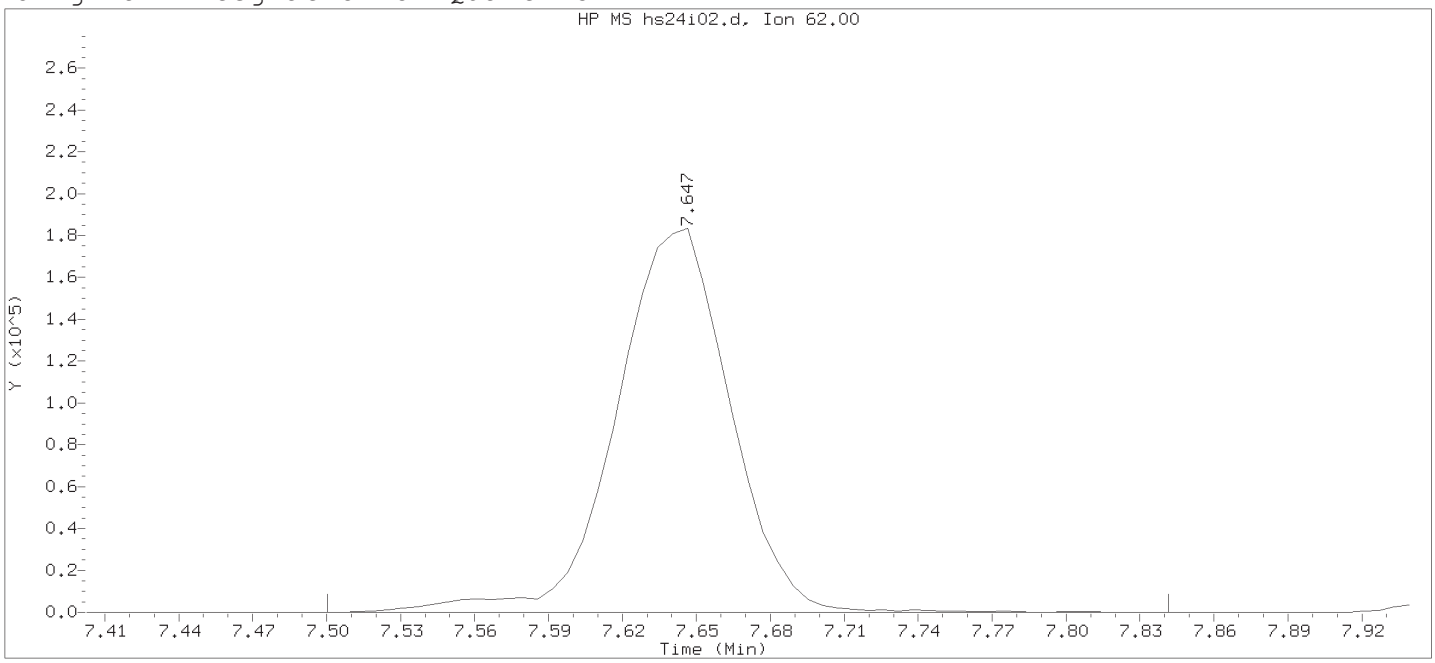
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

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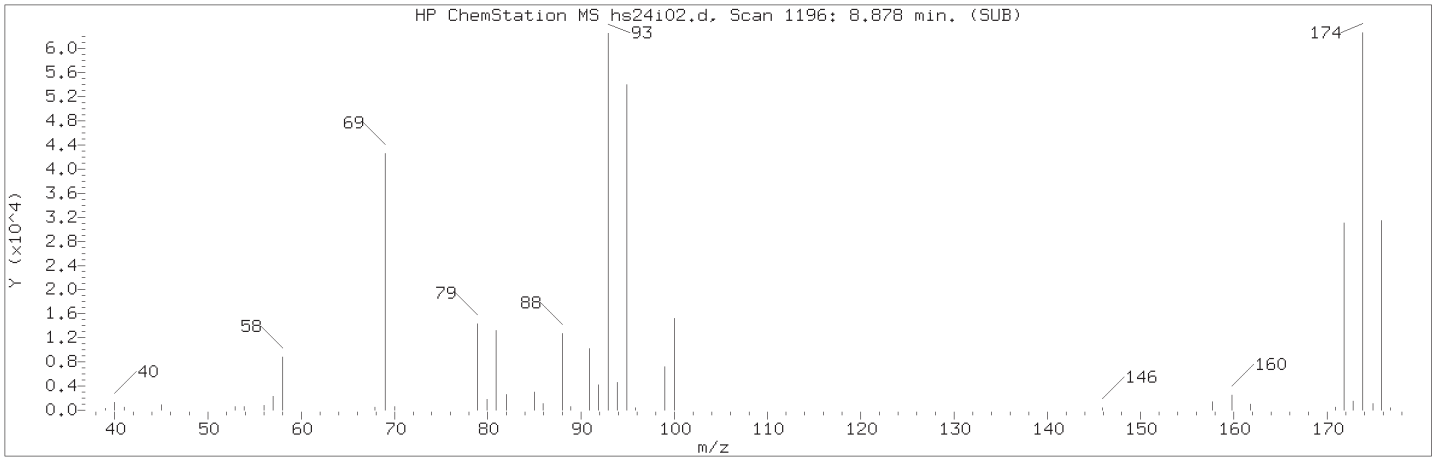
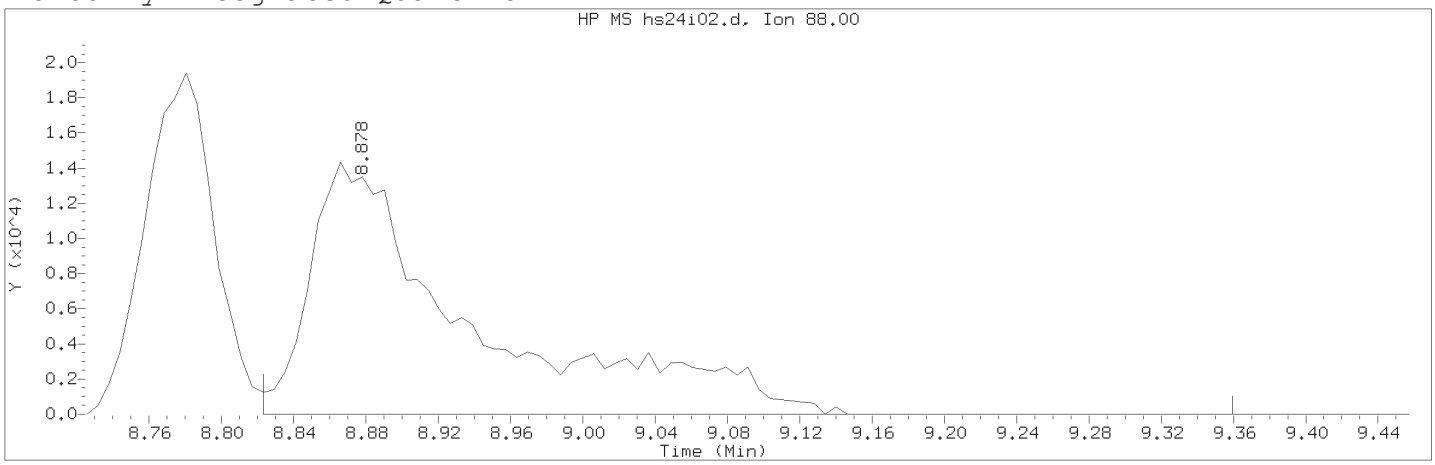
Target 3.5 esignature user ID: jkh09052

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

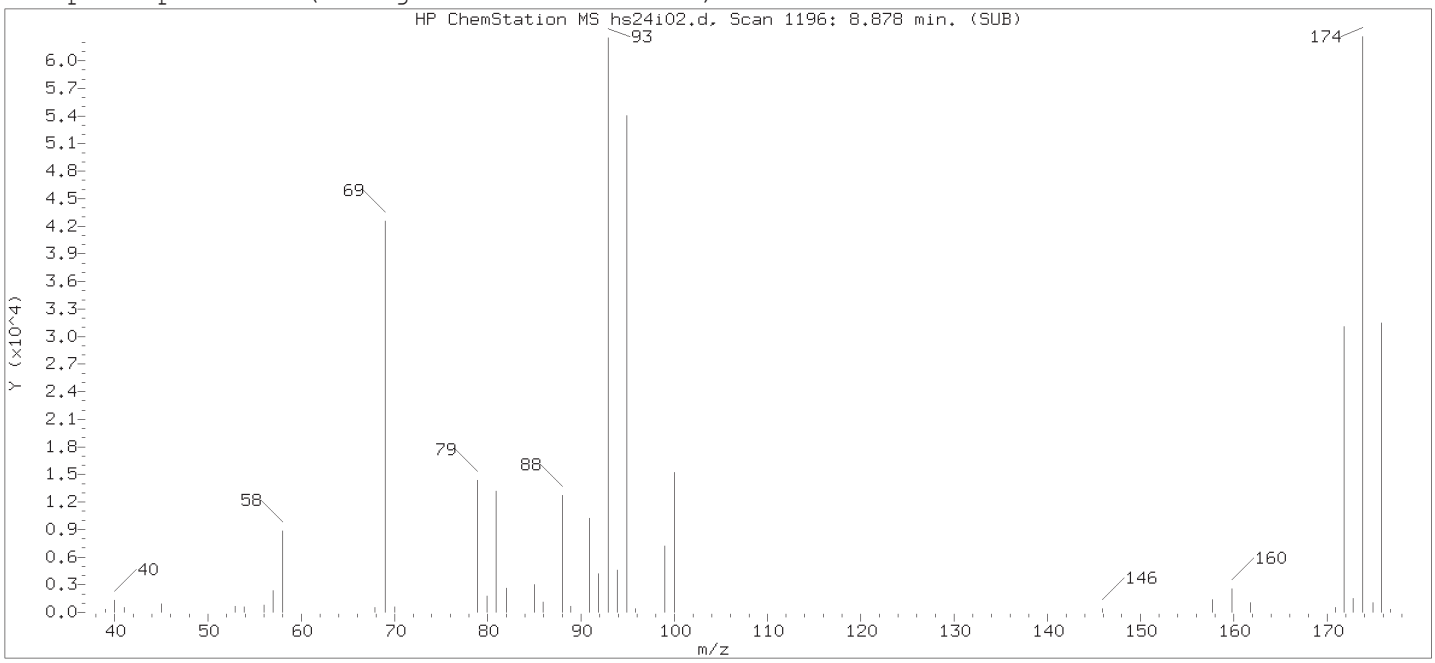
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 87437M
On-Column Amount (ng) : 514.8766
Integration start scan : 1186 Integration stop scan: 1274
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

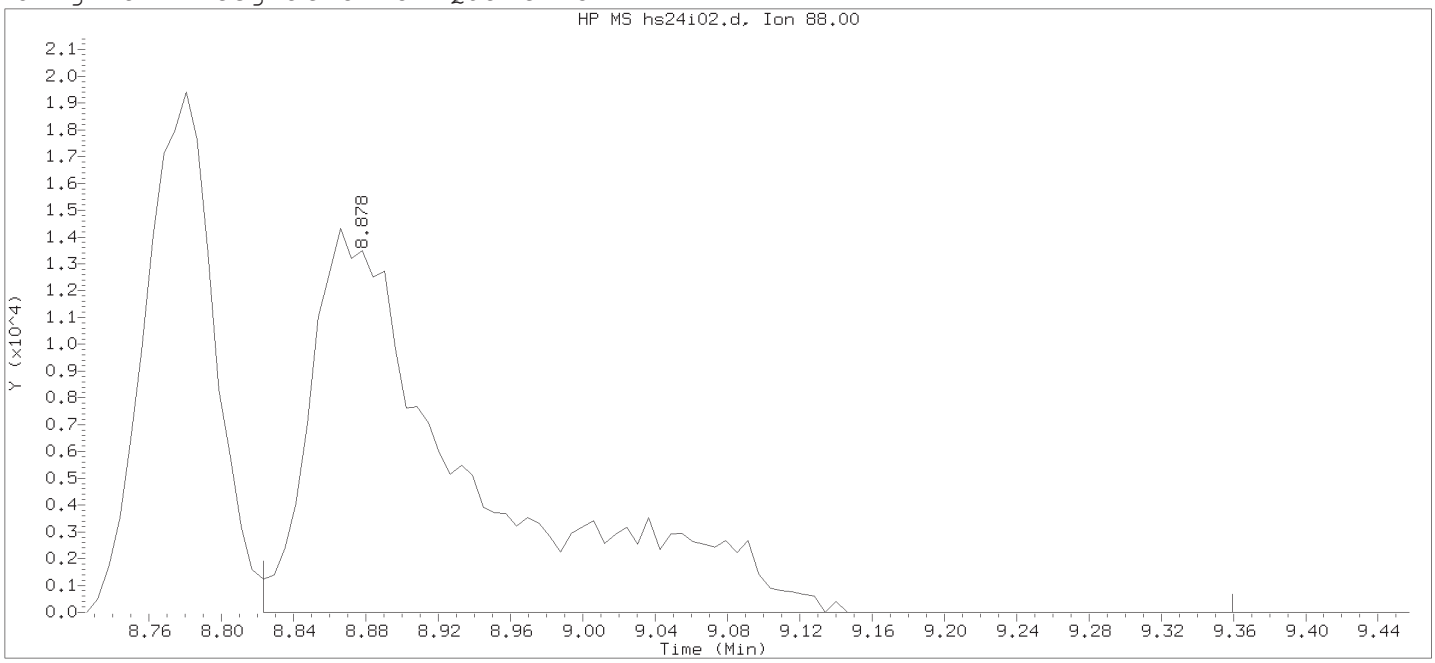
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

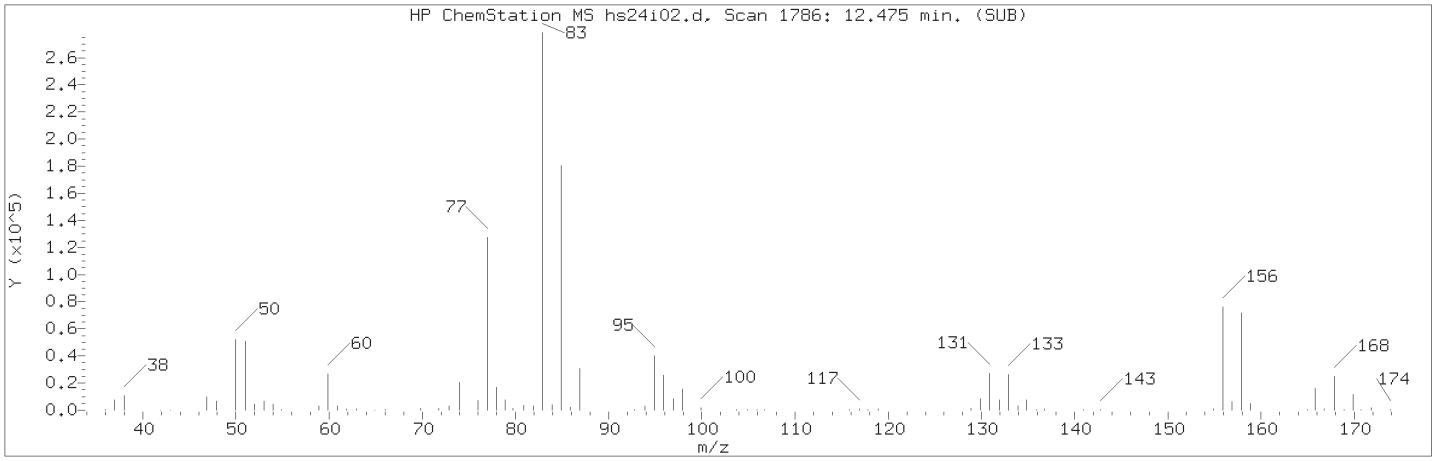
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

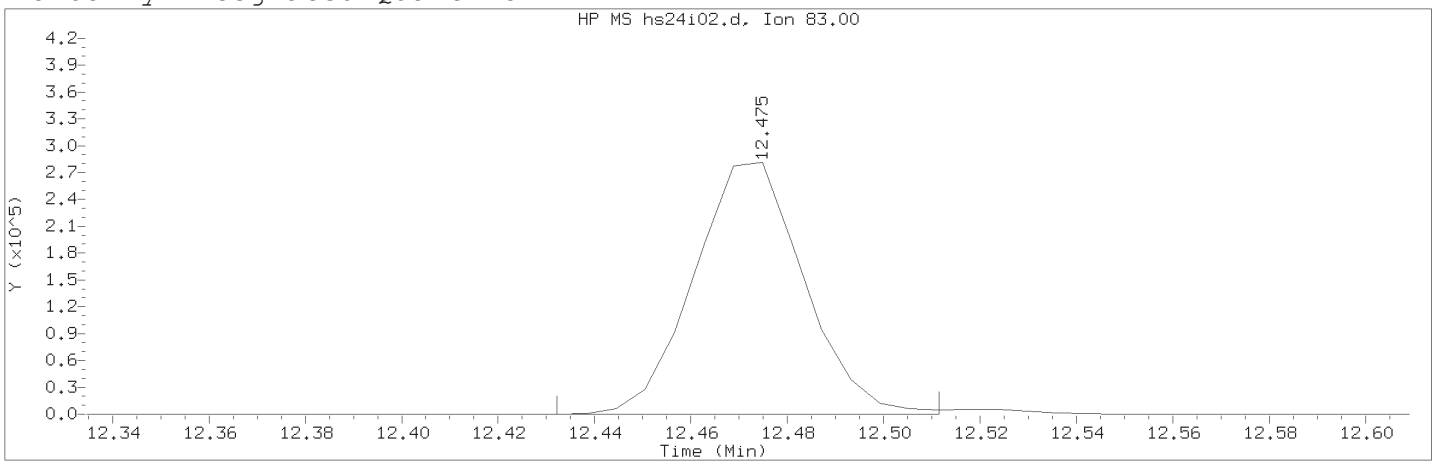
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area : 87437
On-column Amount (ng) : 500.0000
Integration start scan : 1186 Integration stop scan: 1274
Y at integration start : 0 Y at integration end: 0

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

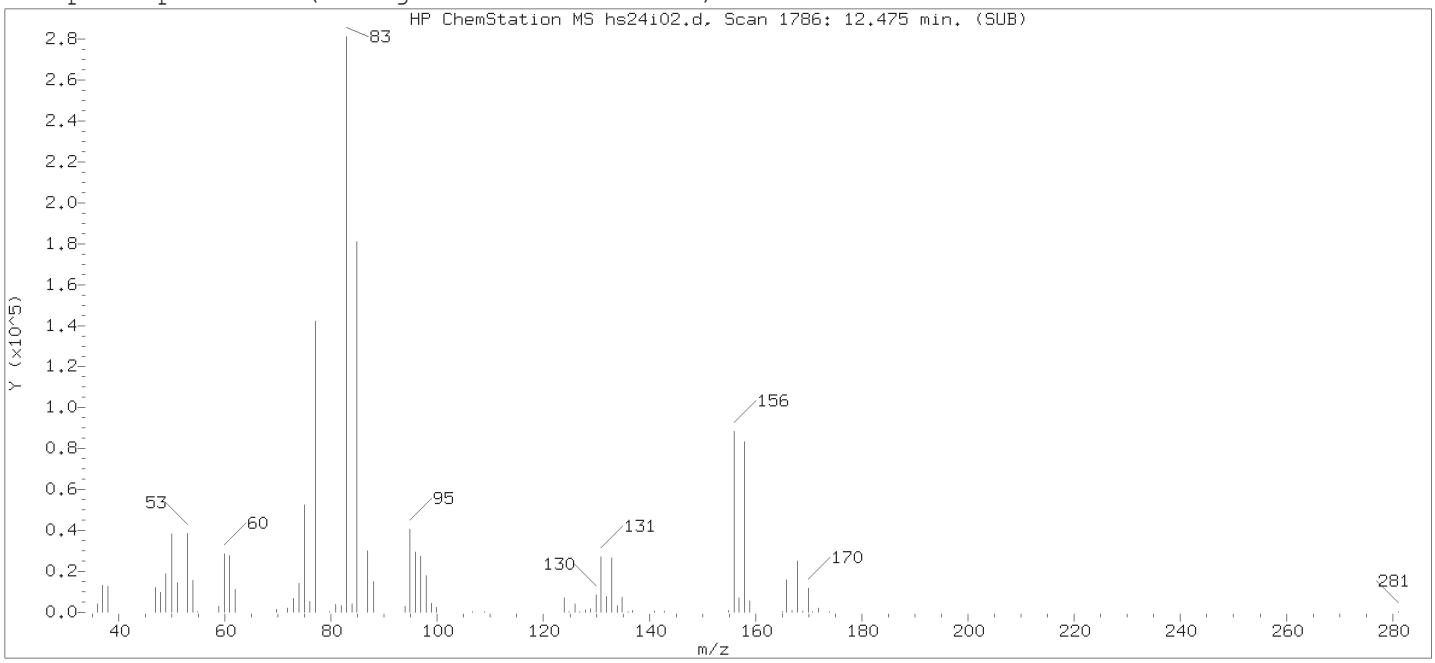
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 446396M
On-Column Amount (ng) : 10.4466
Integration start scan : 1778 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

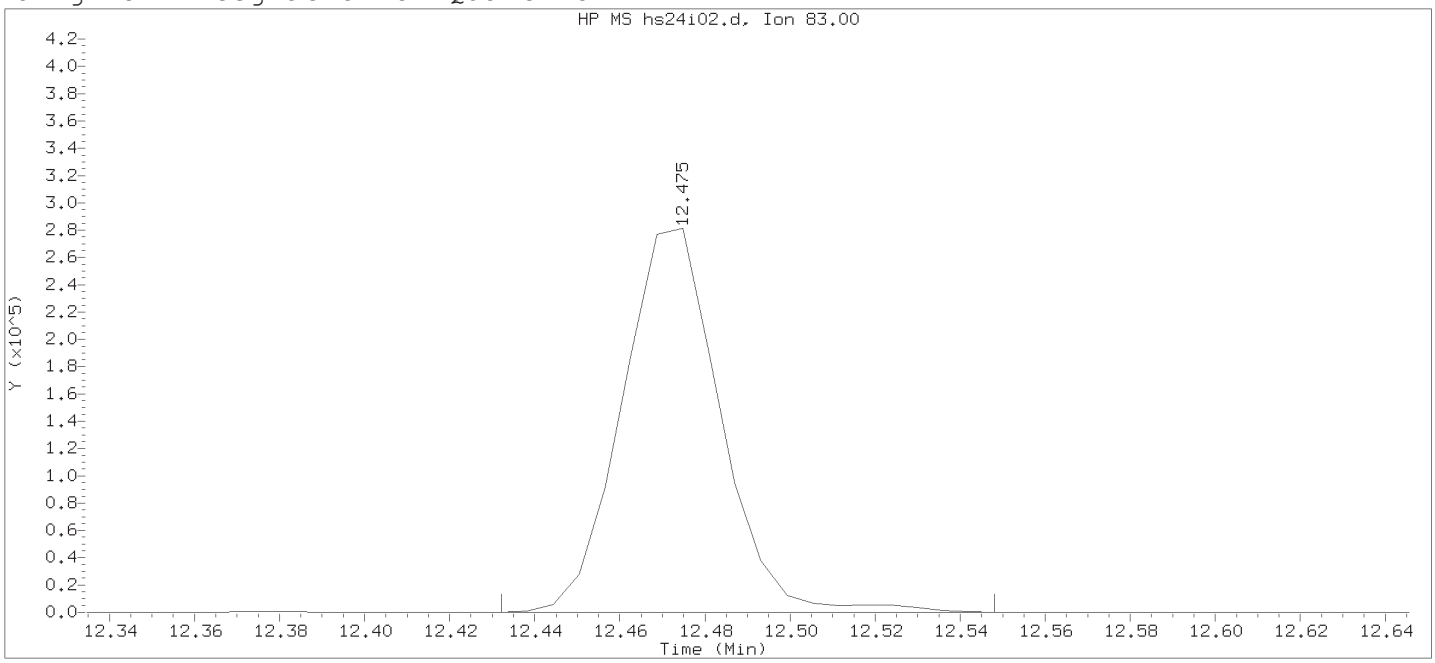
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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

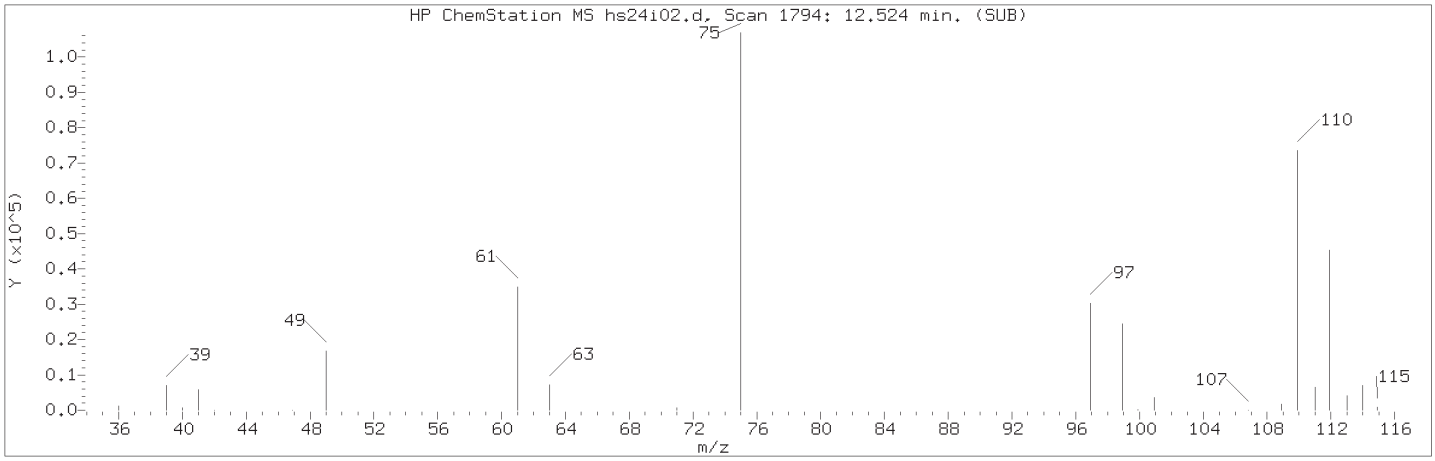
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

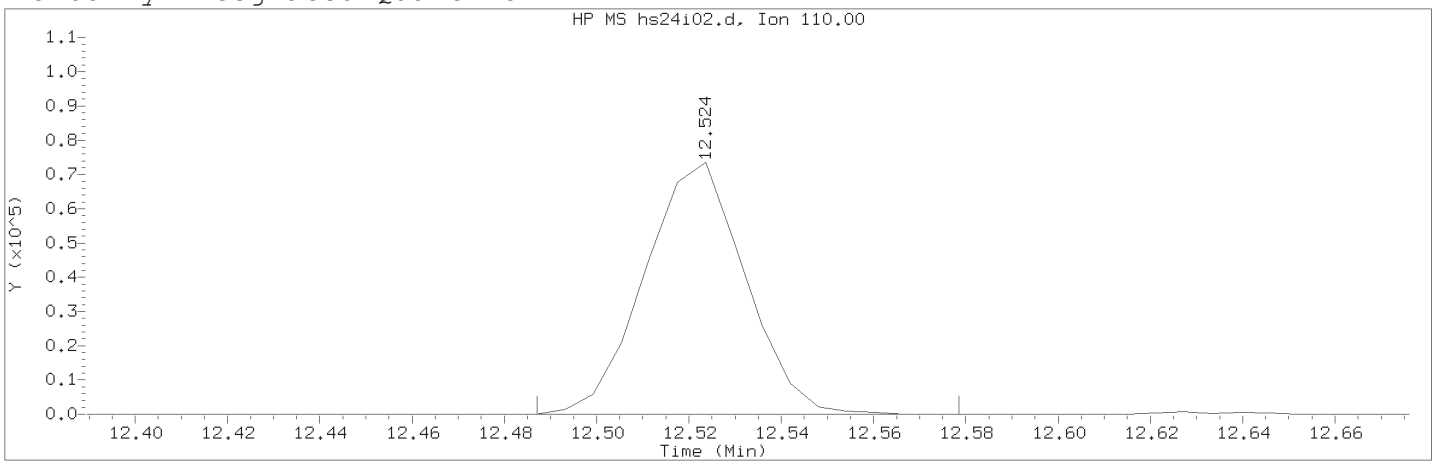
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 452299
On-column Amount (ng) : 10.0000
Integration start scan : 1778 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

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

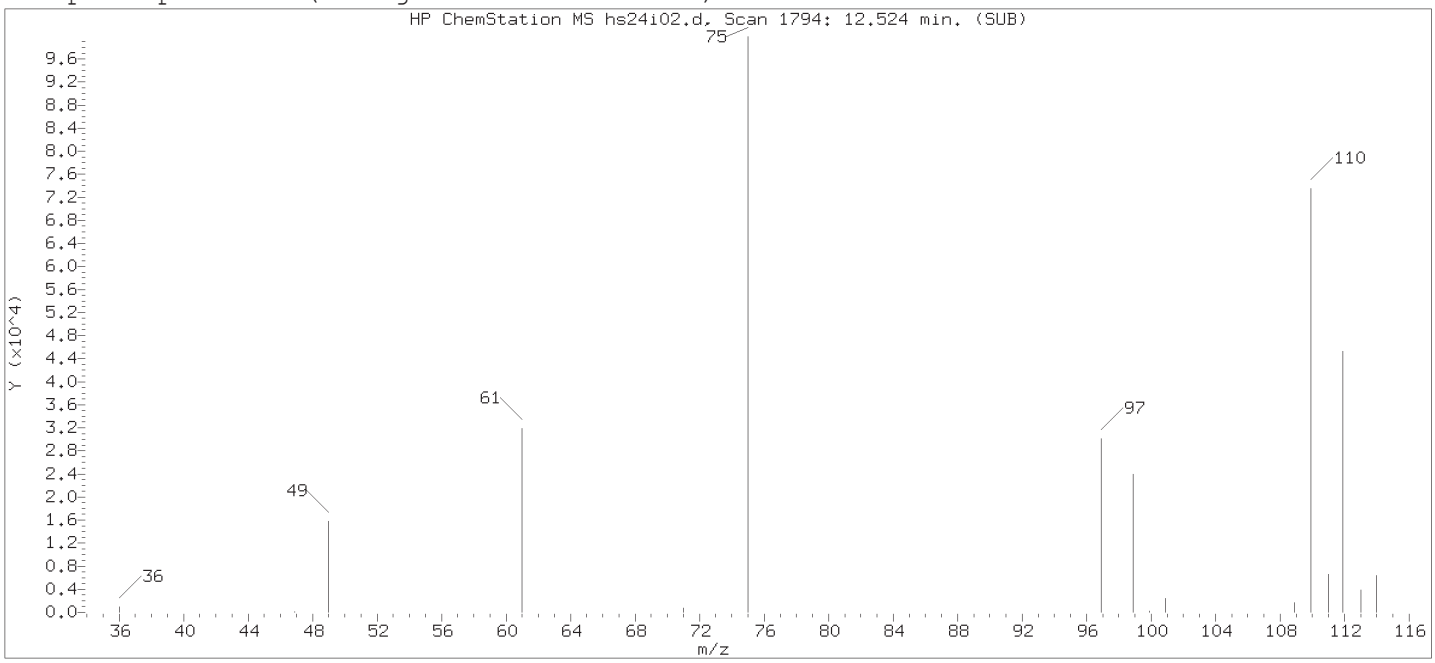
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 111265M
On-Column Amount (ng) : 10.0716
Integration start scan : 1787 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

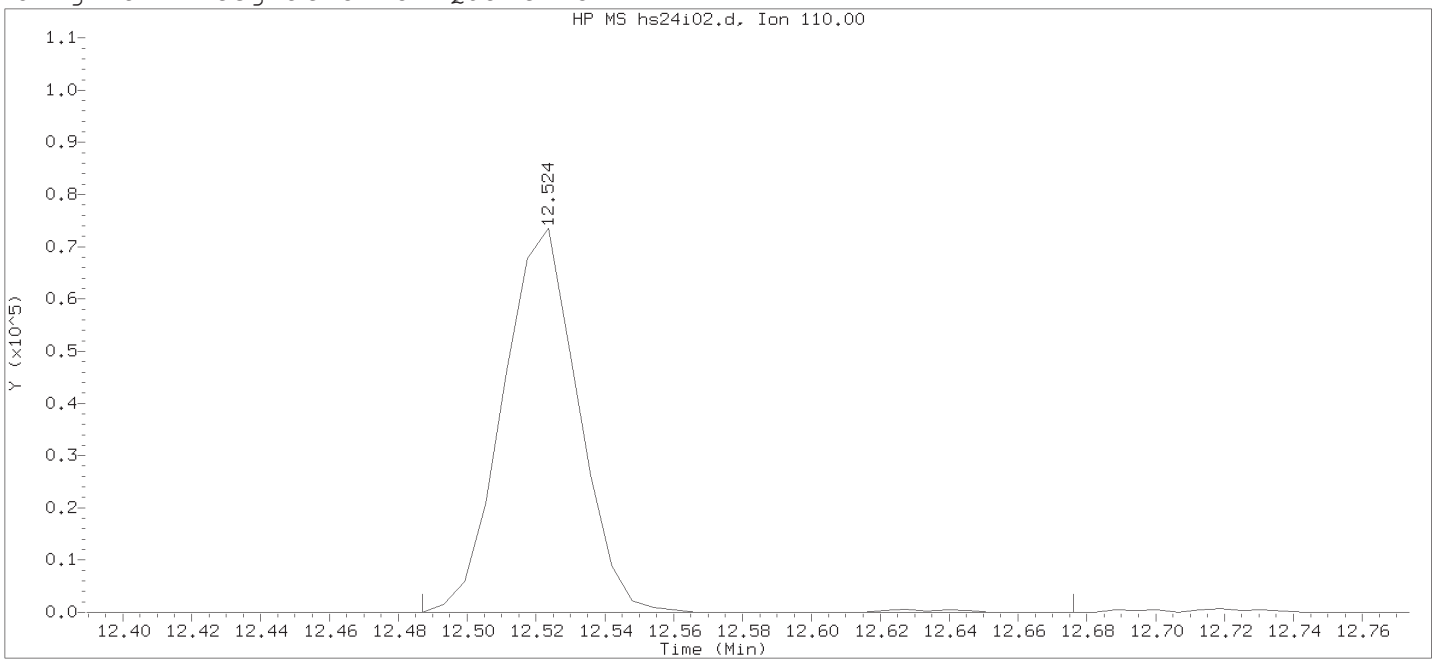
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

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



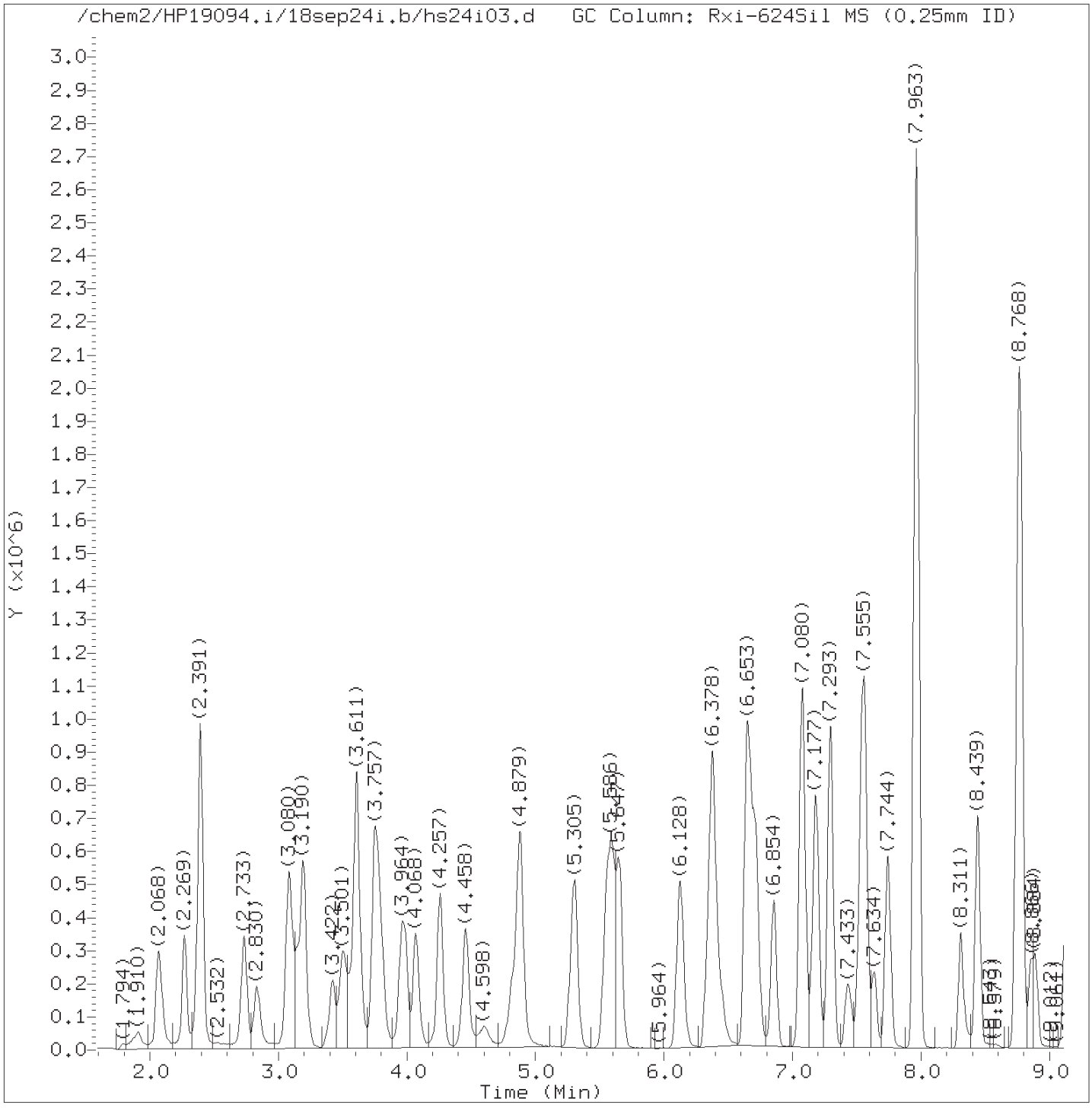
Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

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

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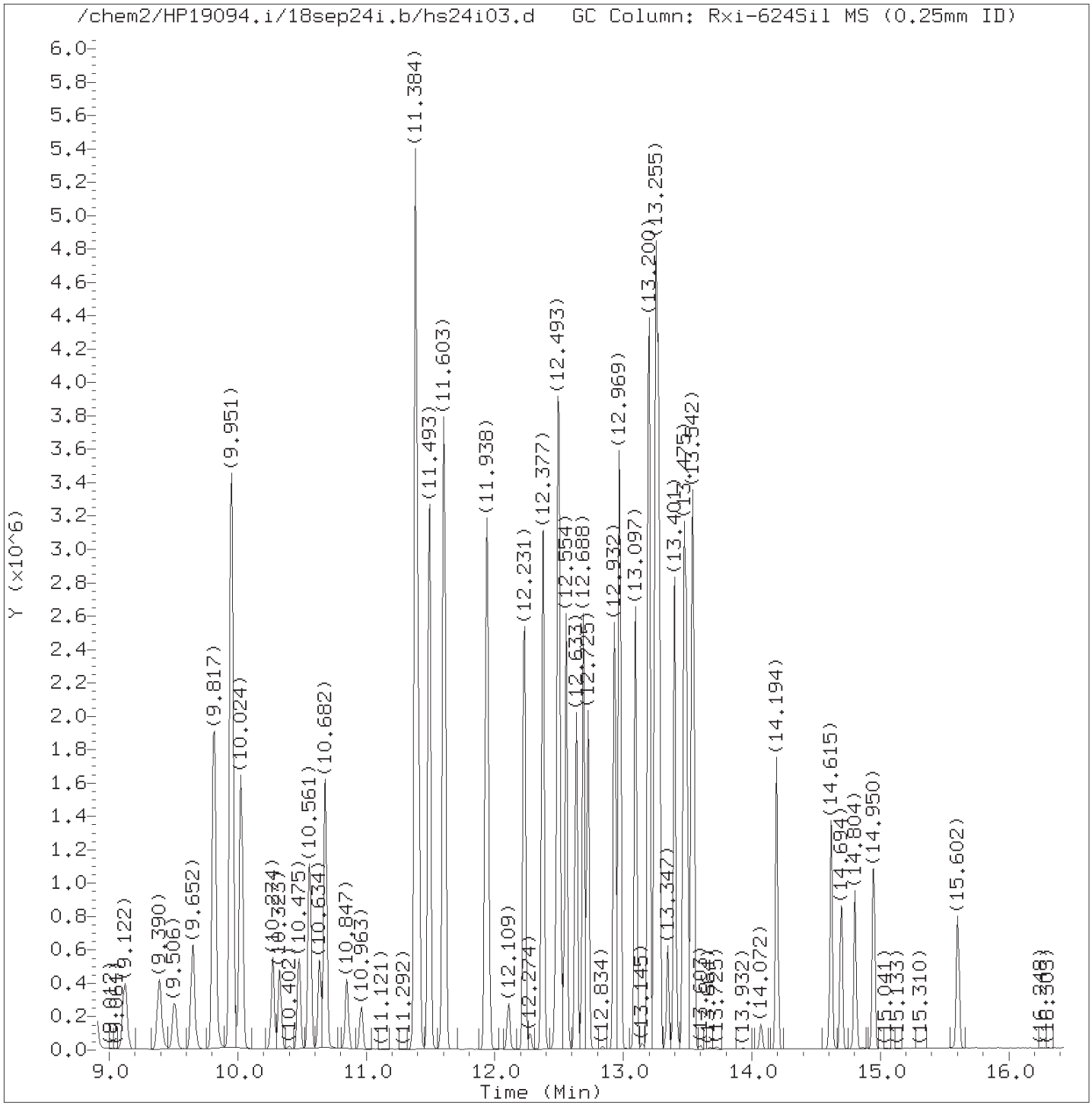
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



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.

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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.

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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.

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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

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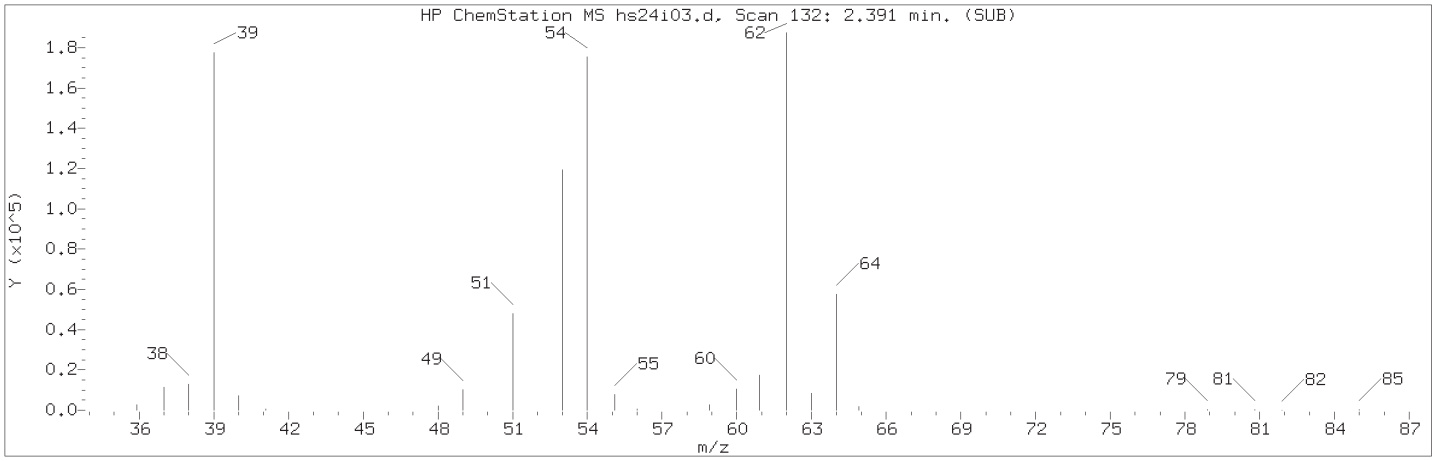
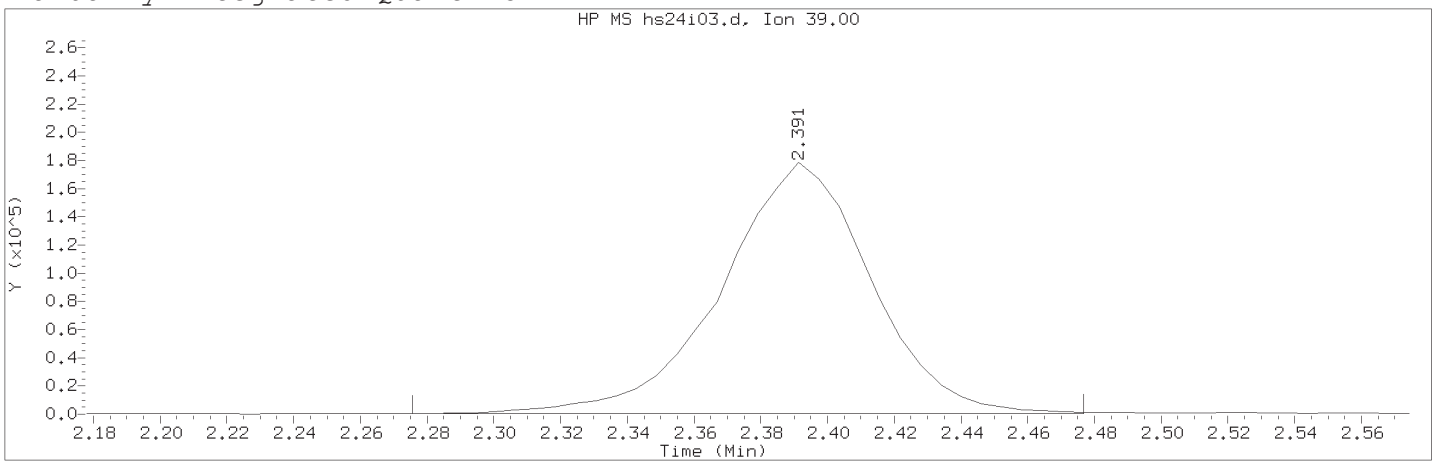
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

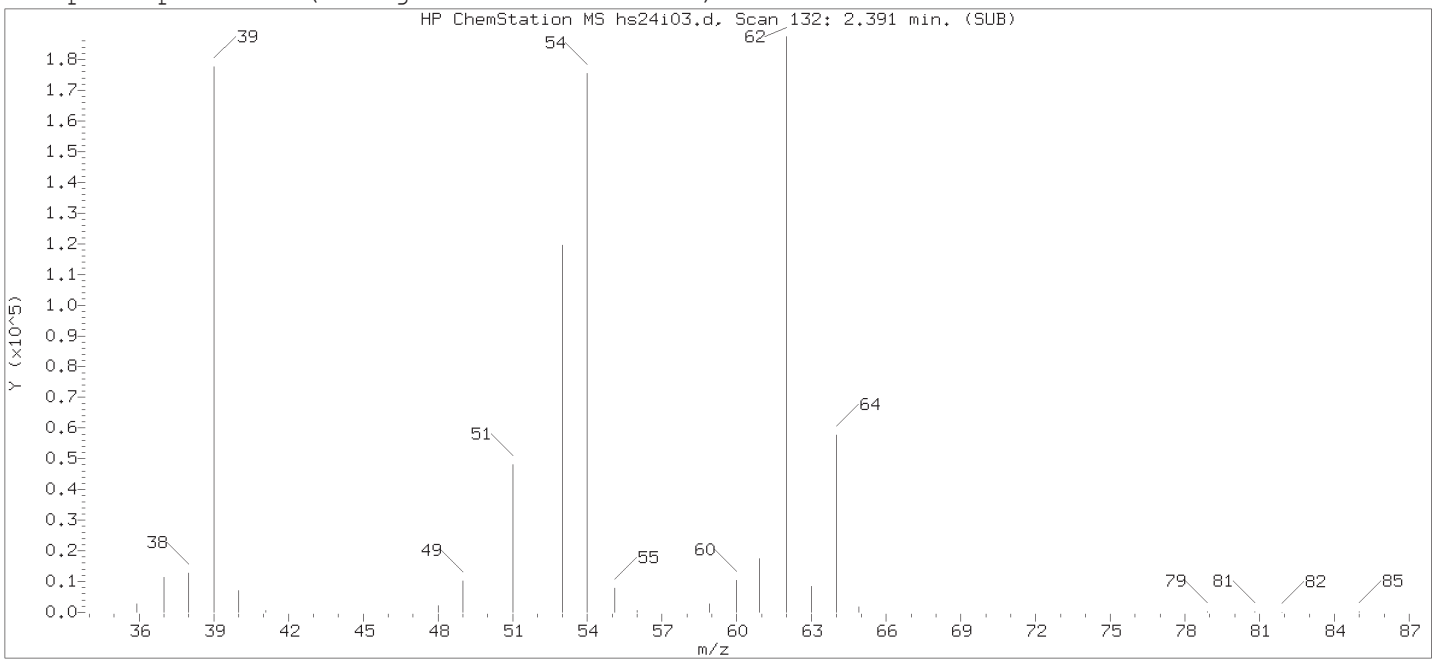
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 552344M
On-Column Amount (ng) : 4.9561
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 458 Y at integration end: 458

Reason for manual integration: improper integration

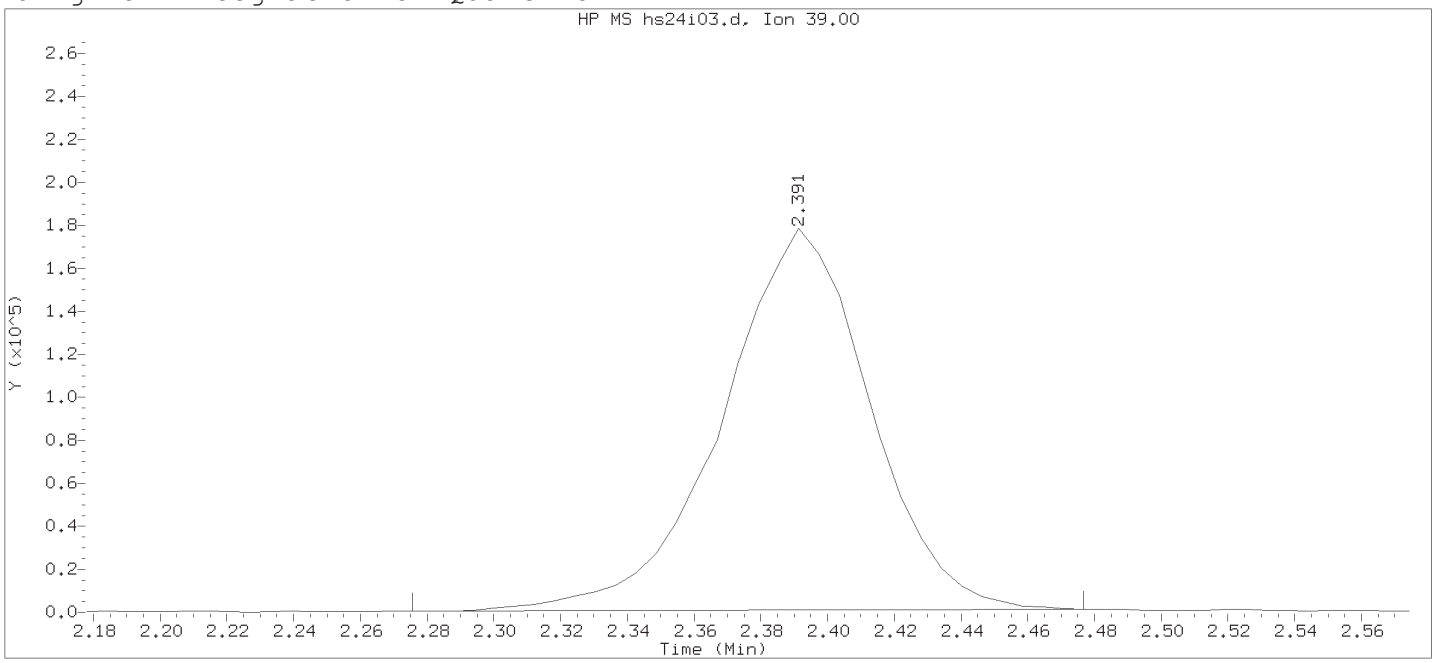
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

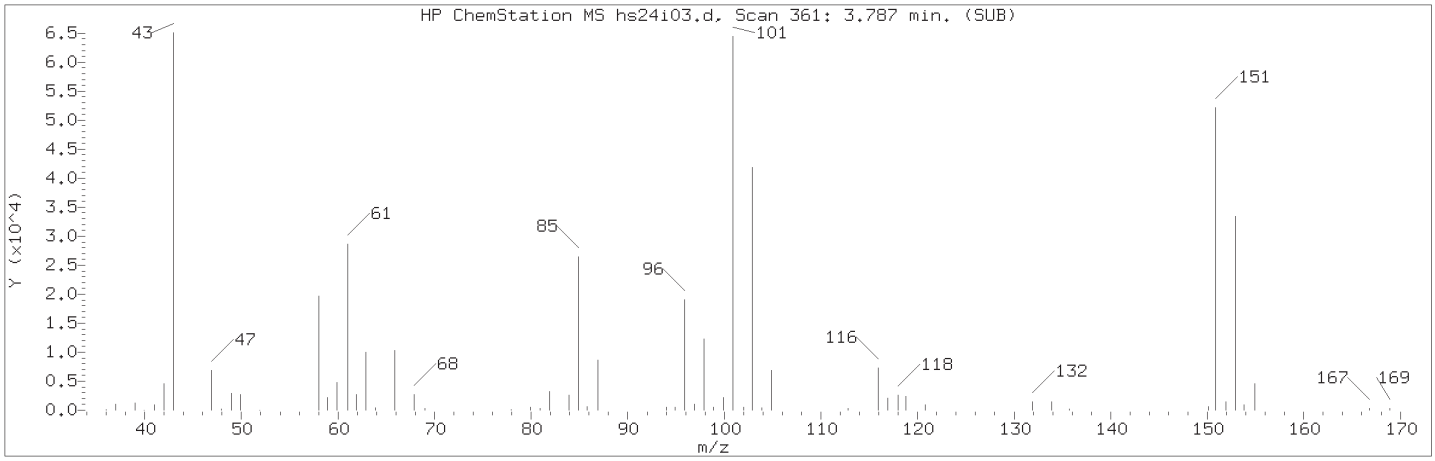
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

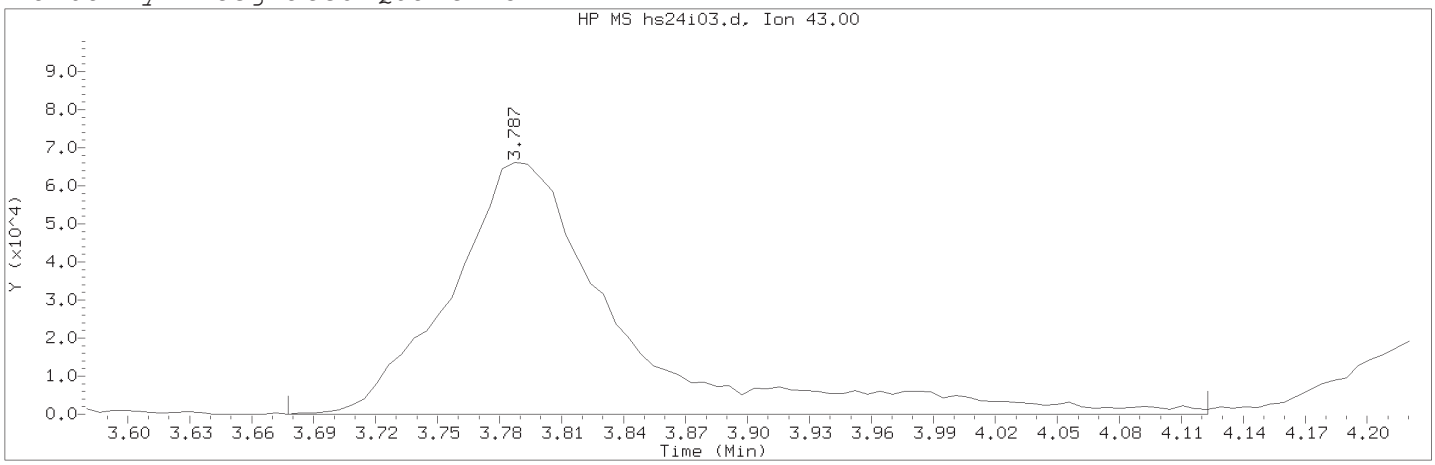
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 547218
On-column Amount (ng) : 4.9849
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 437 Y at integration end: 1303

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

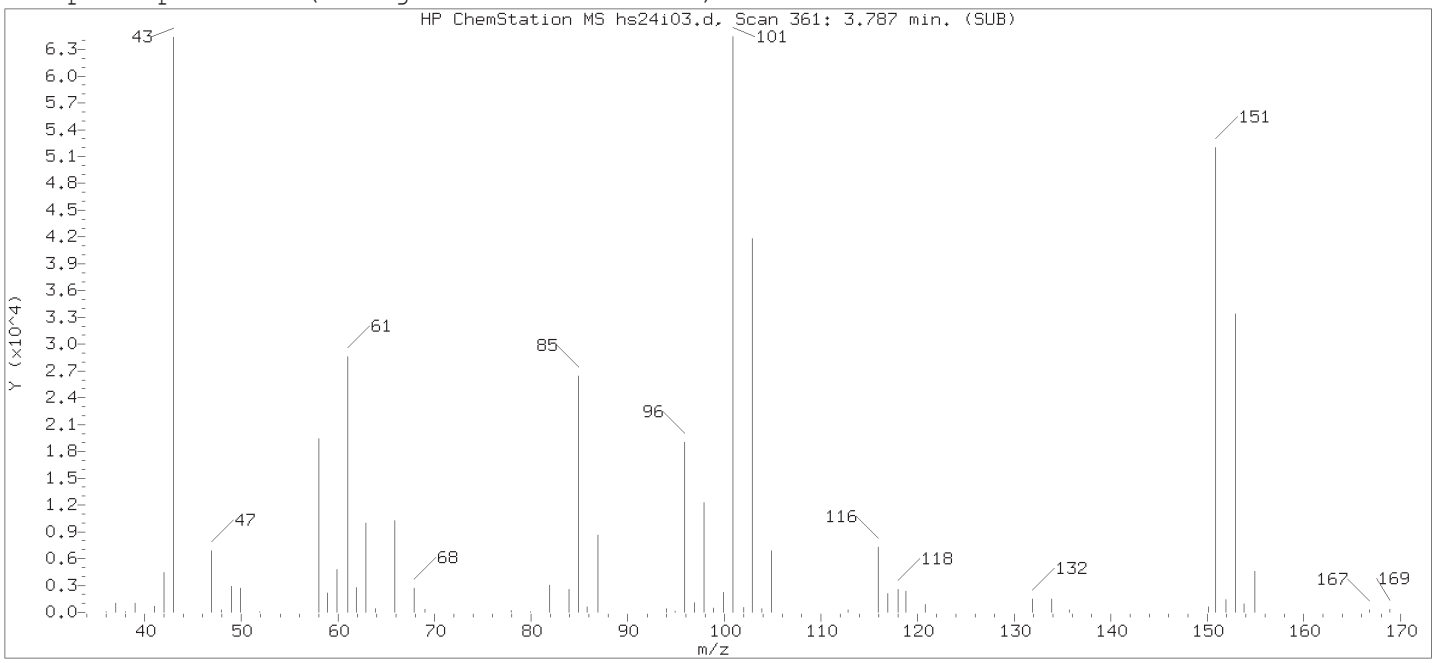
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 378399M
On-Column Amount (ng) : 49.9188
Integration start scan : 342 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

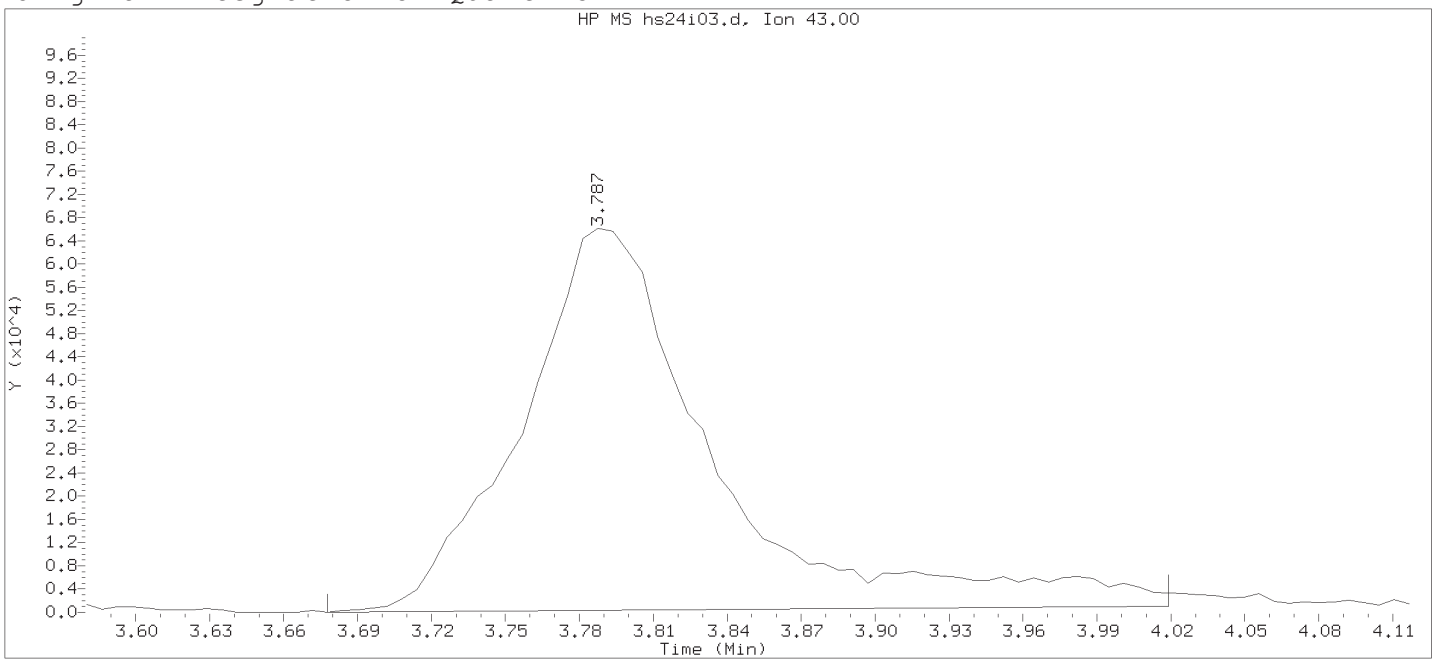
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

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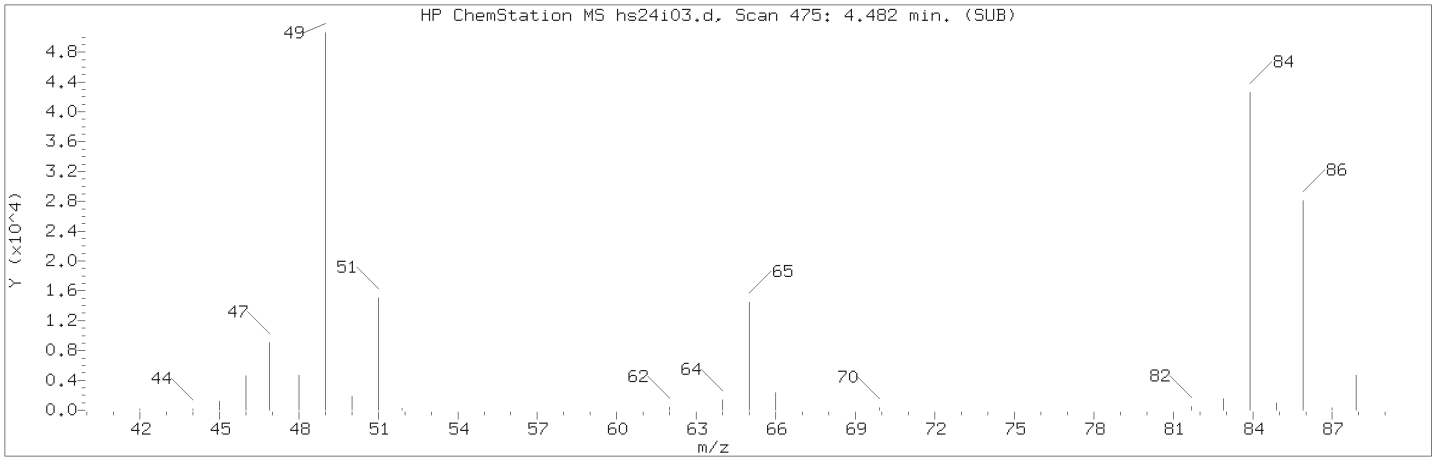
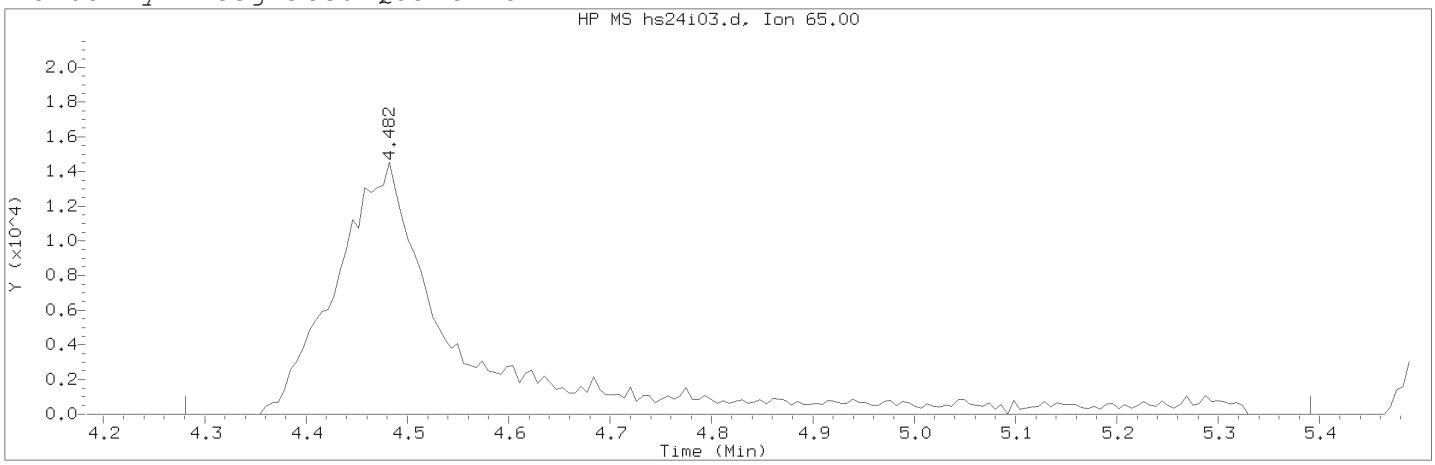
Target 3.5 esignature user ID: jkh09052

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

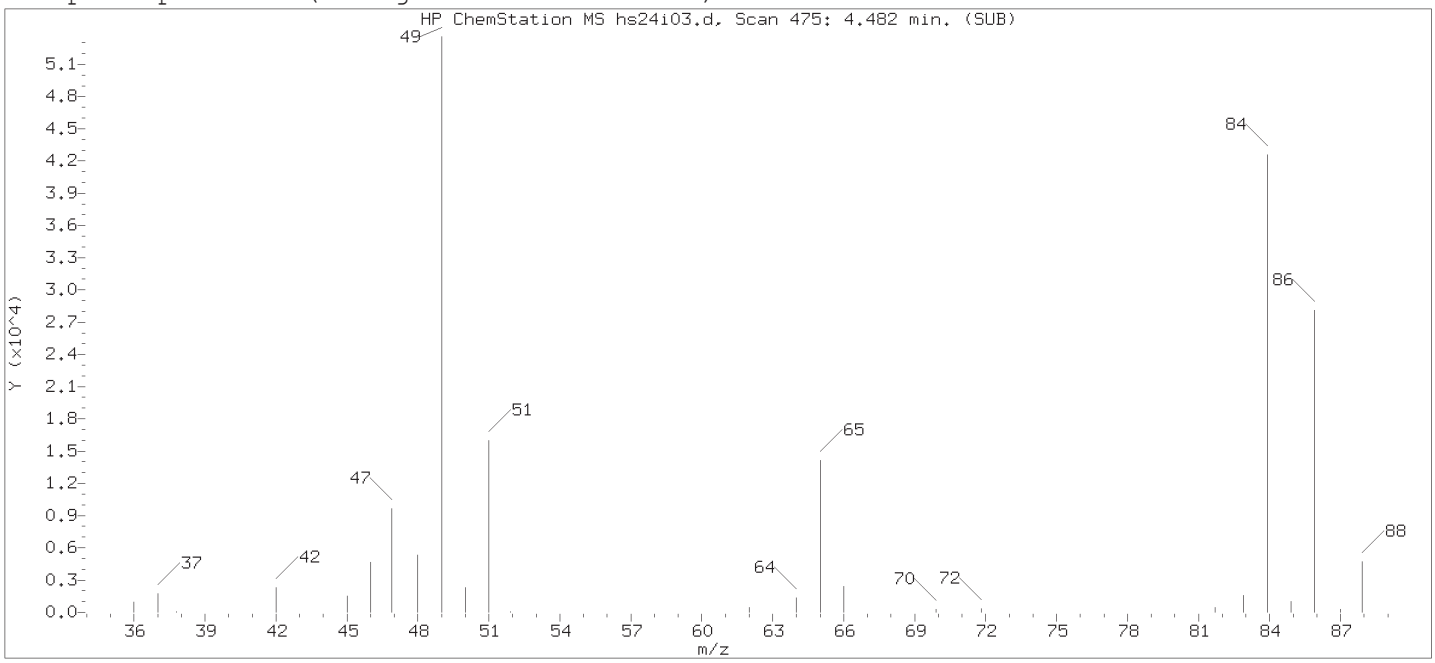
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.482
Quant Ion : 65.00
Area (flag) : 127180M
On-Column Amount (ng) : 50.0000
Integration start scan : 441 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

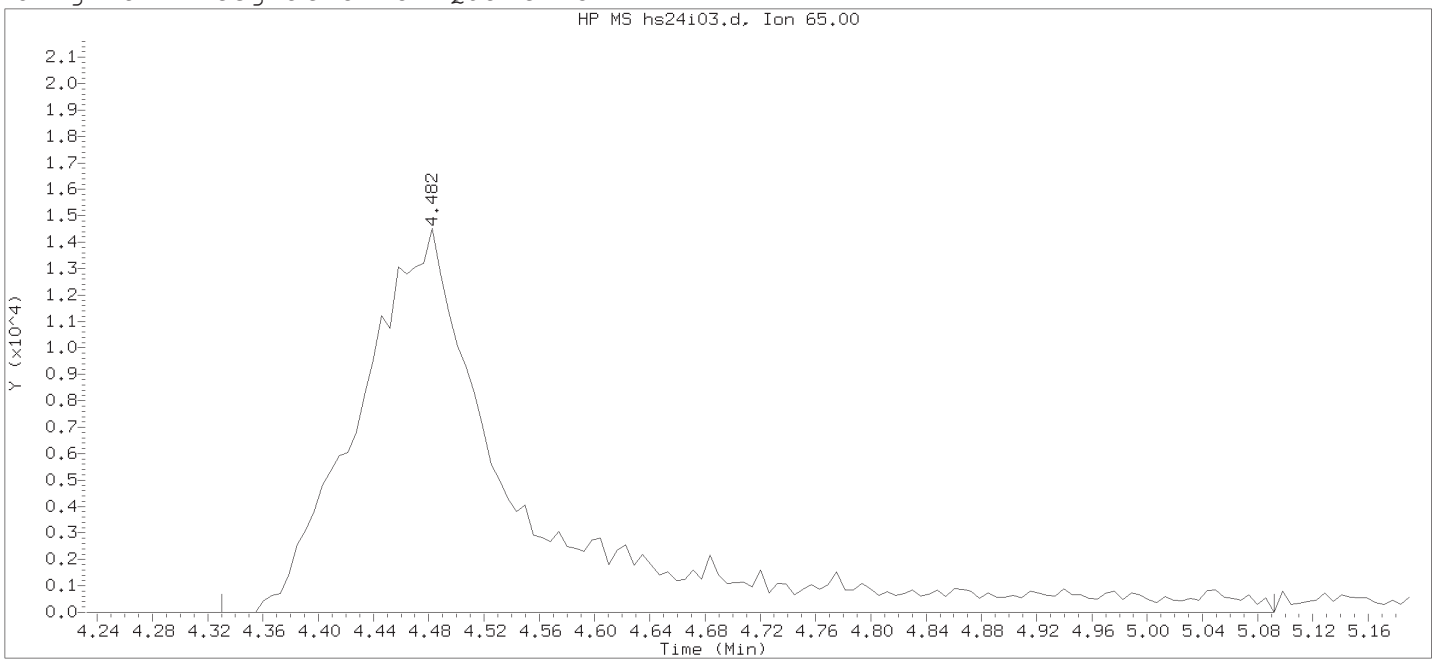
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

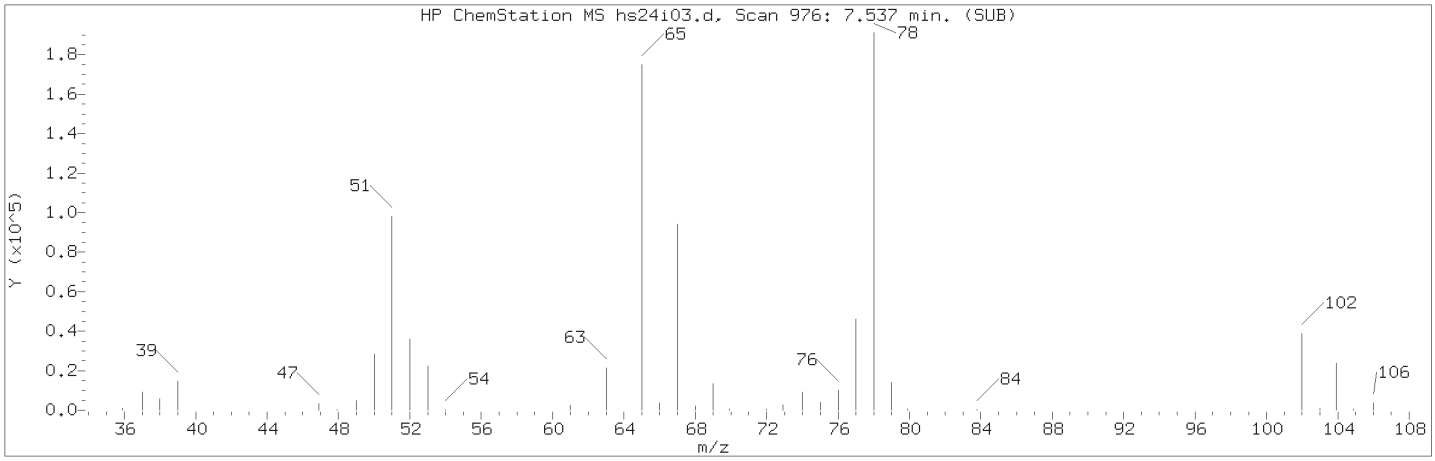
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

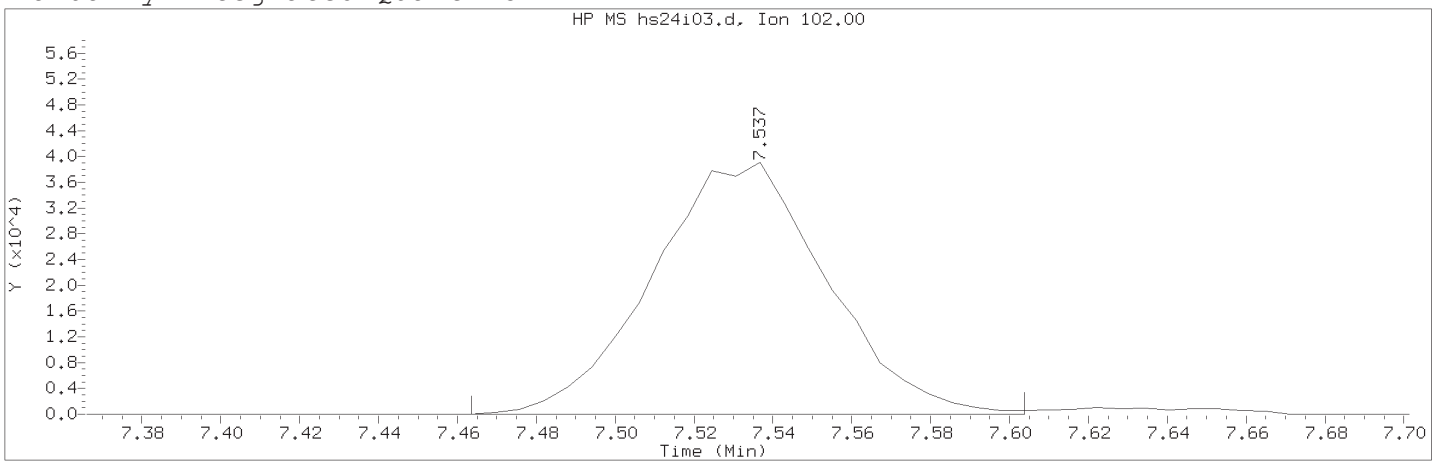
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 475		
Retention Time (minutes)	: 4.482		
Quant Ion	: 65.00		
Area	: 119408		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 449	Integration stop scan:	574
Y at integration start	: 0	Y at integration end:	0

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

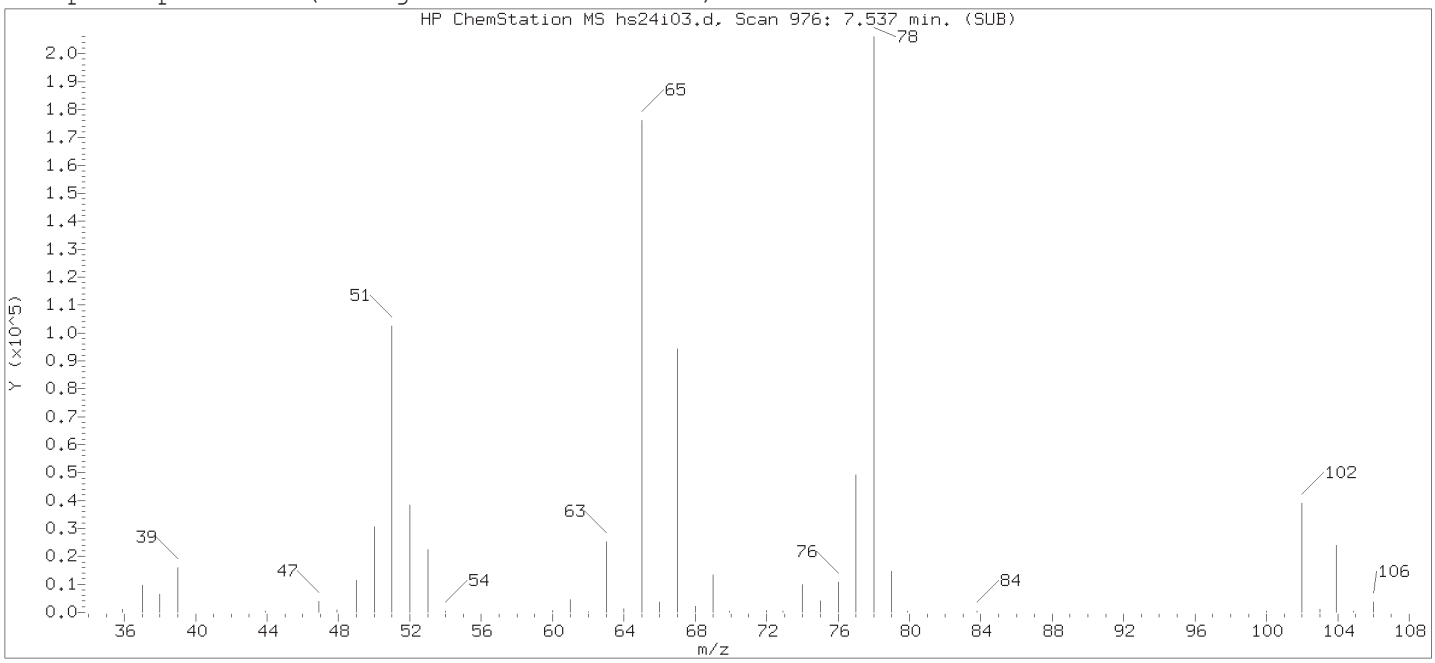
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 119553M
On-Column Amount (ng) : 9.9122
Integration start scan : 963 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

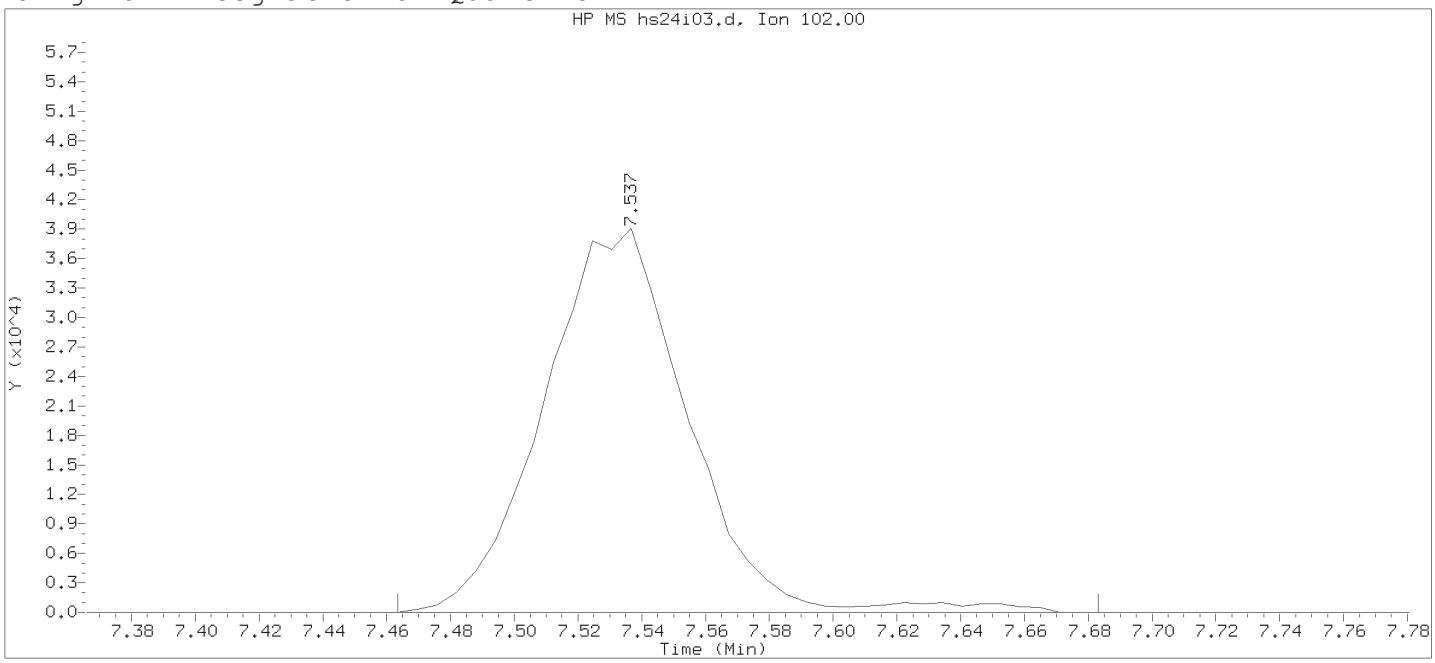
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

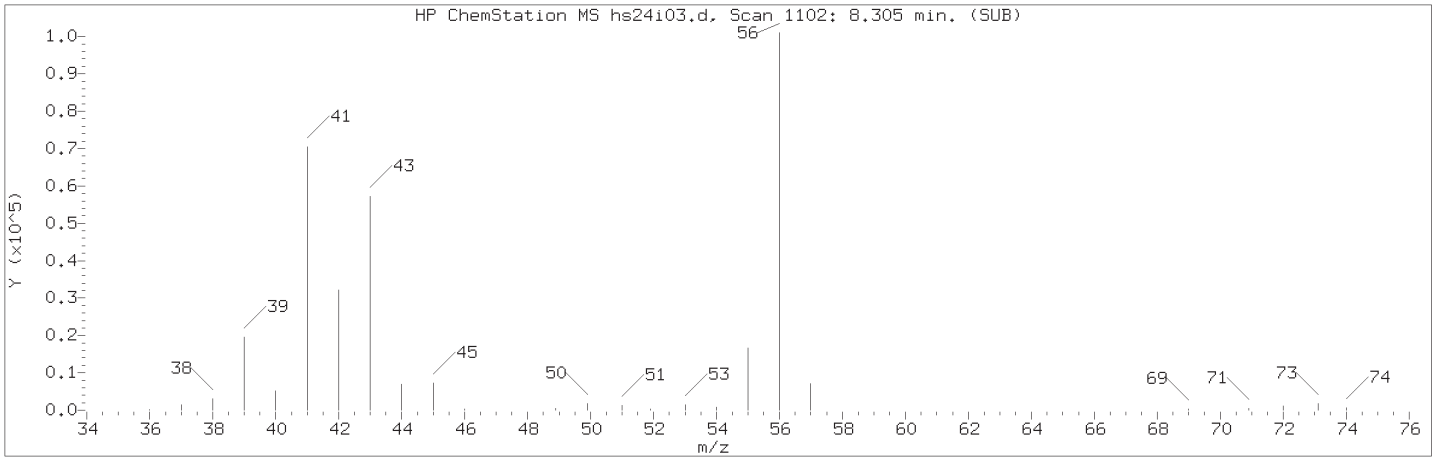
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

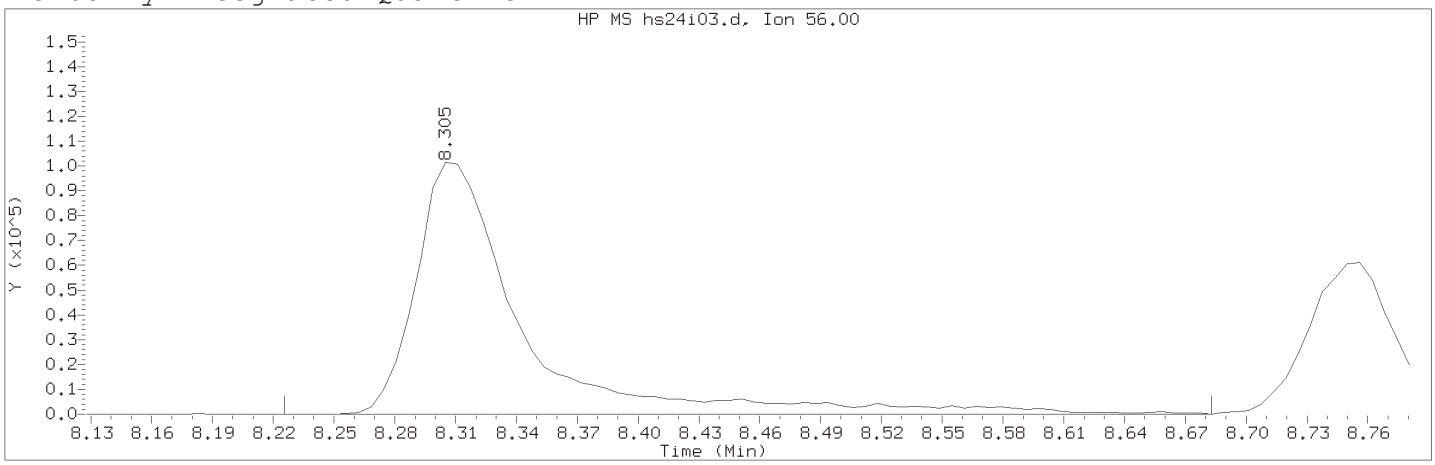
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 122323
On-column Amount (ng) : 10.0921
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

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

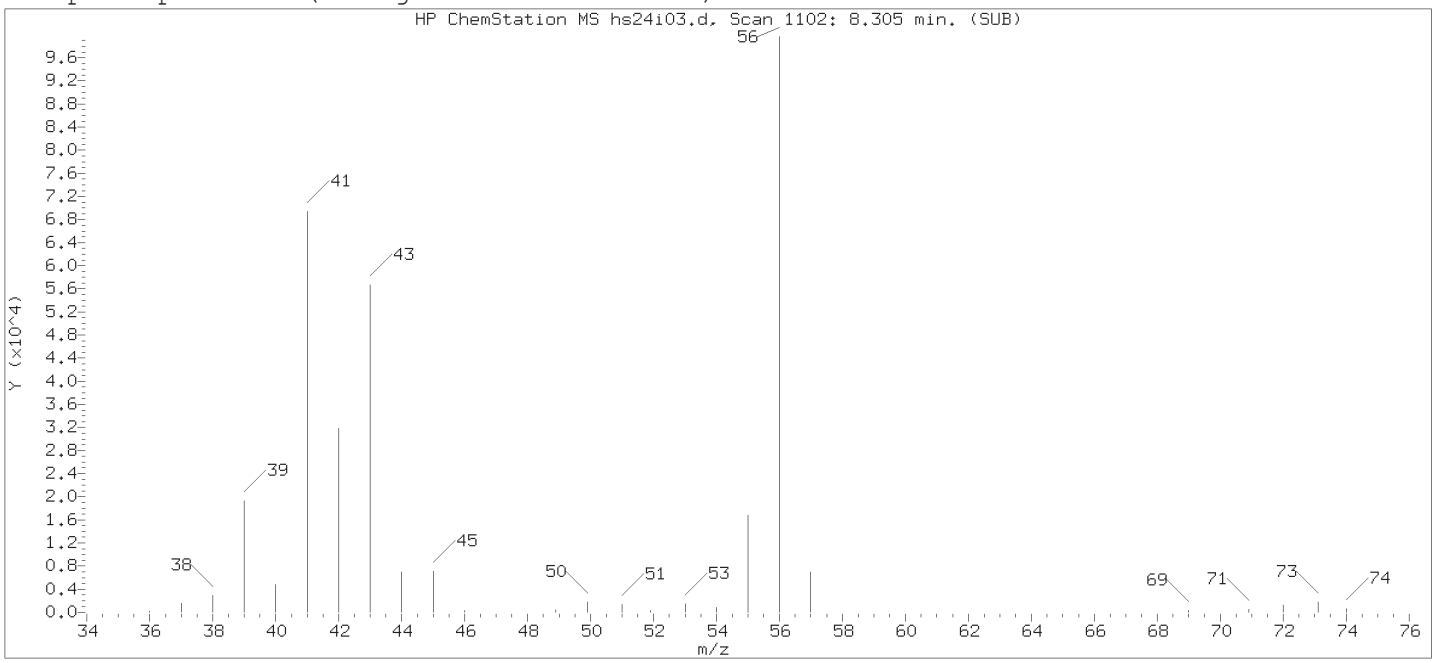
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 371428M
On-Column Amount (ng) : 523.4201
Integration start scan : 1088 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

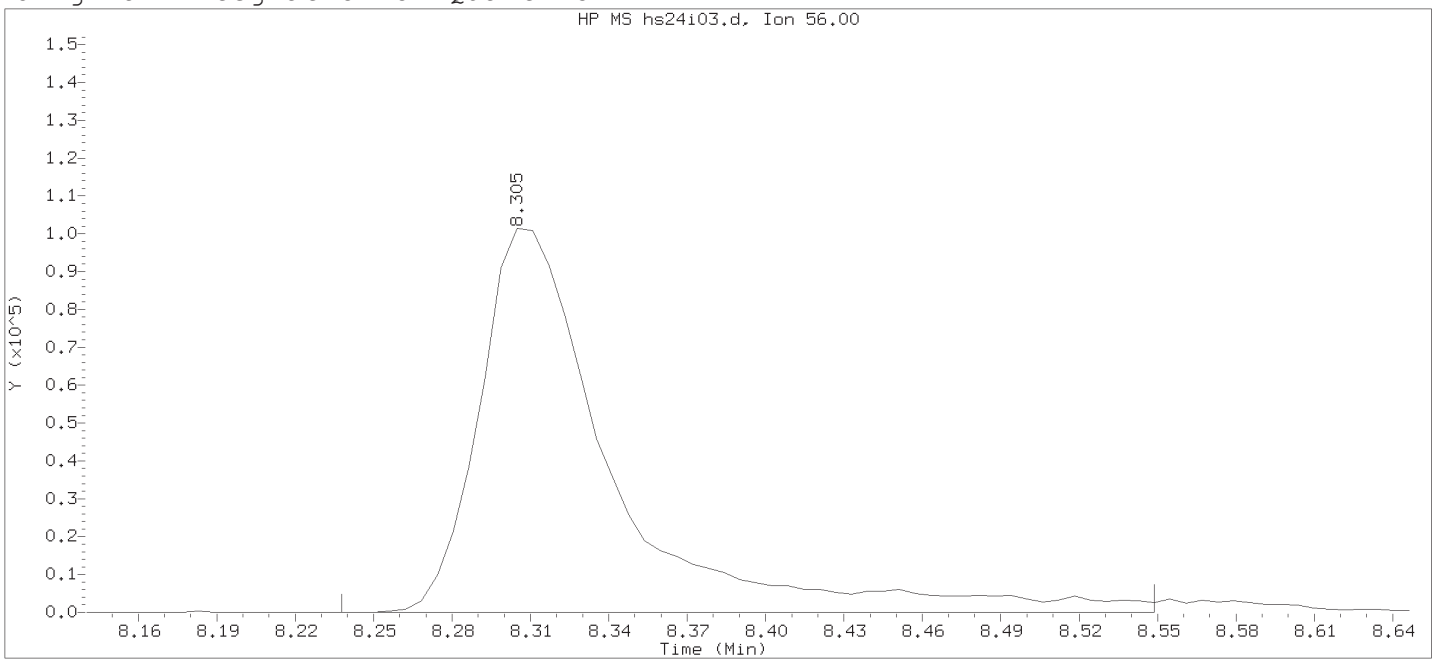
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

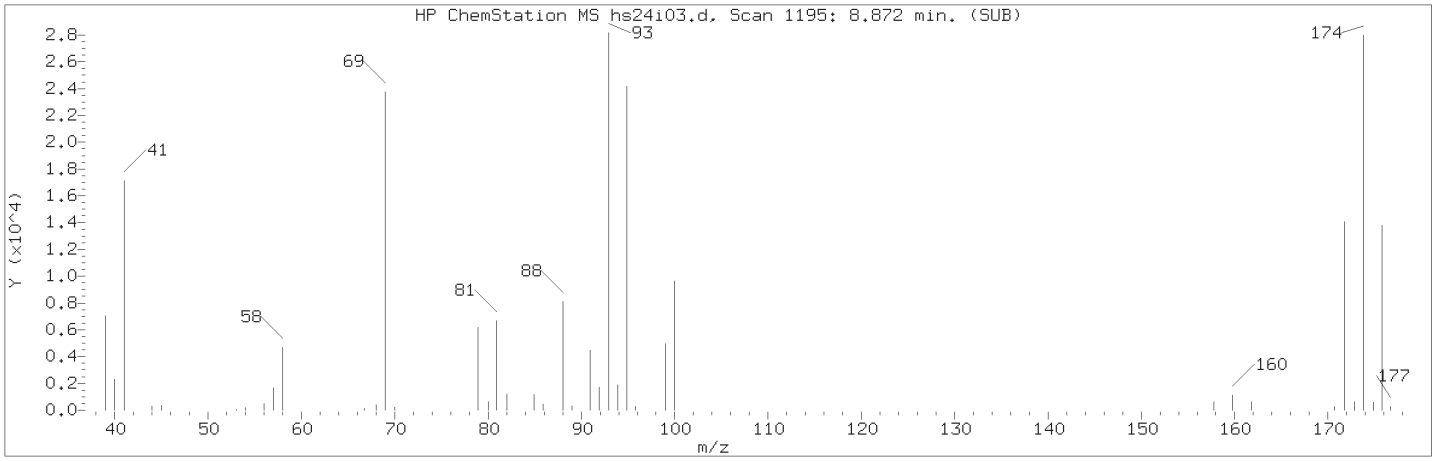
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

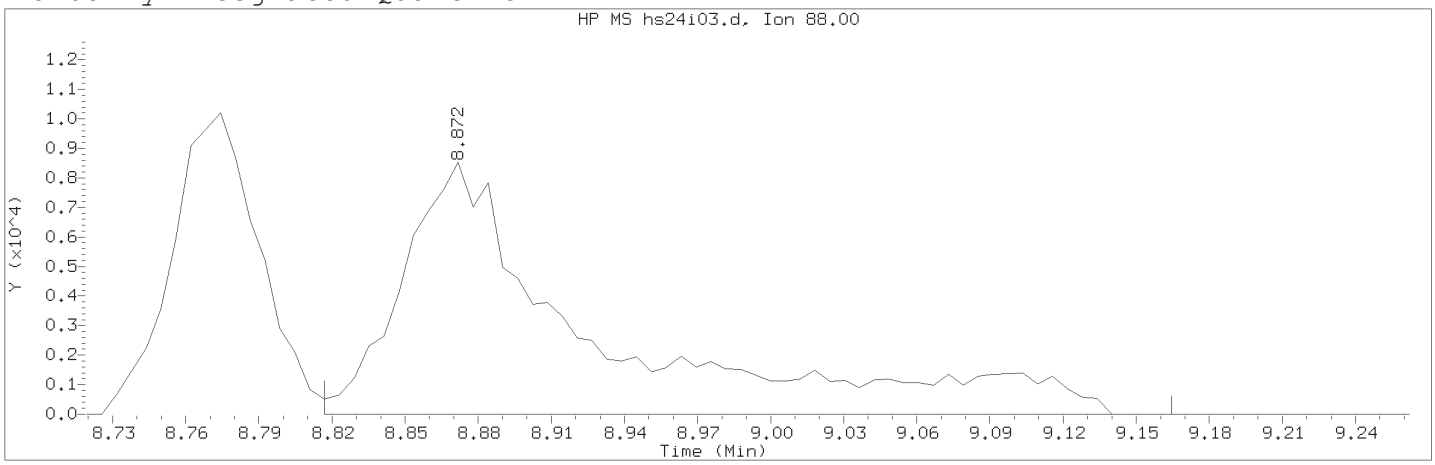
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 359413		
On-column Amount (ng)	: 483.9616		
Integration start scan	: 1090	Integration stop scan:	1141
Y at integration start	: 0	Y at integration end:	0

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

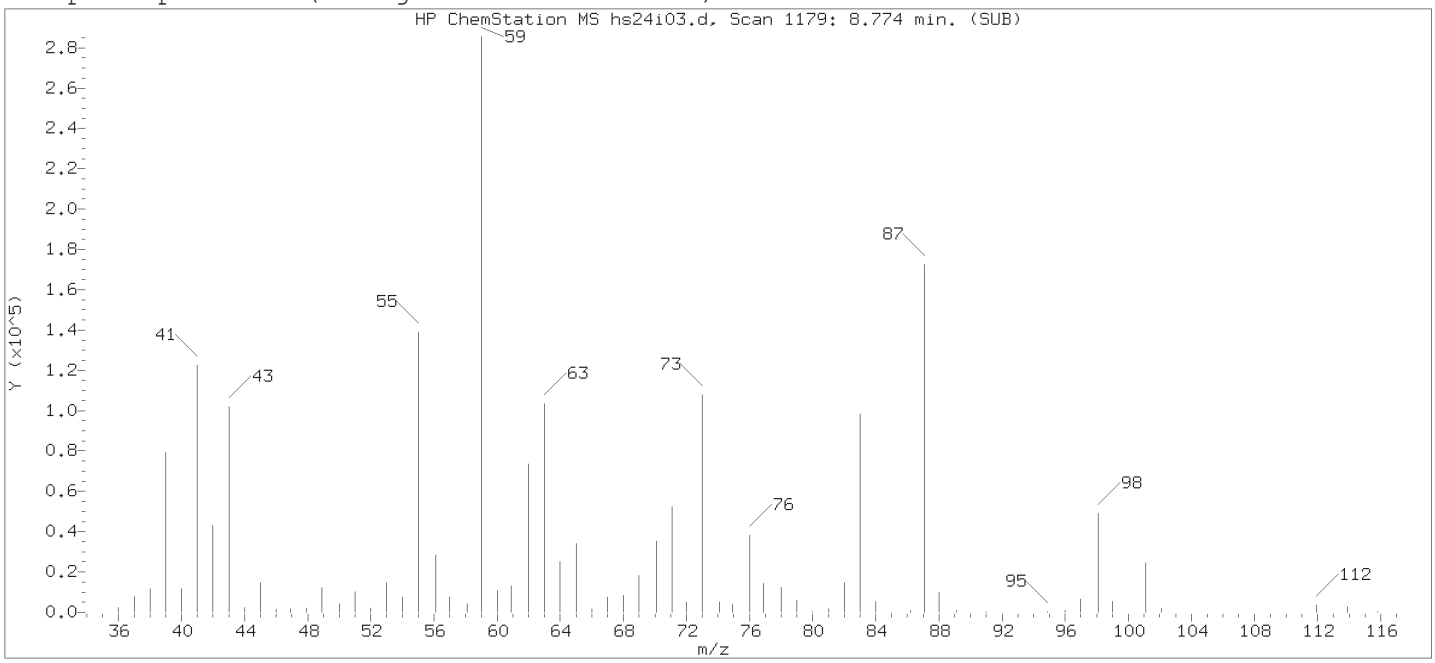
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 45616M
On-Column Amount (ng) : 266.9855
Integration start scan : 1185 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

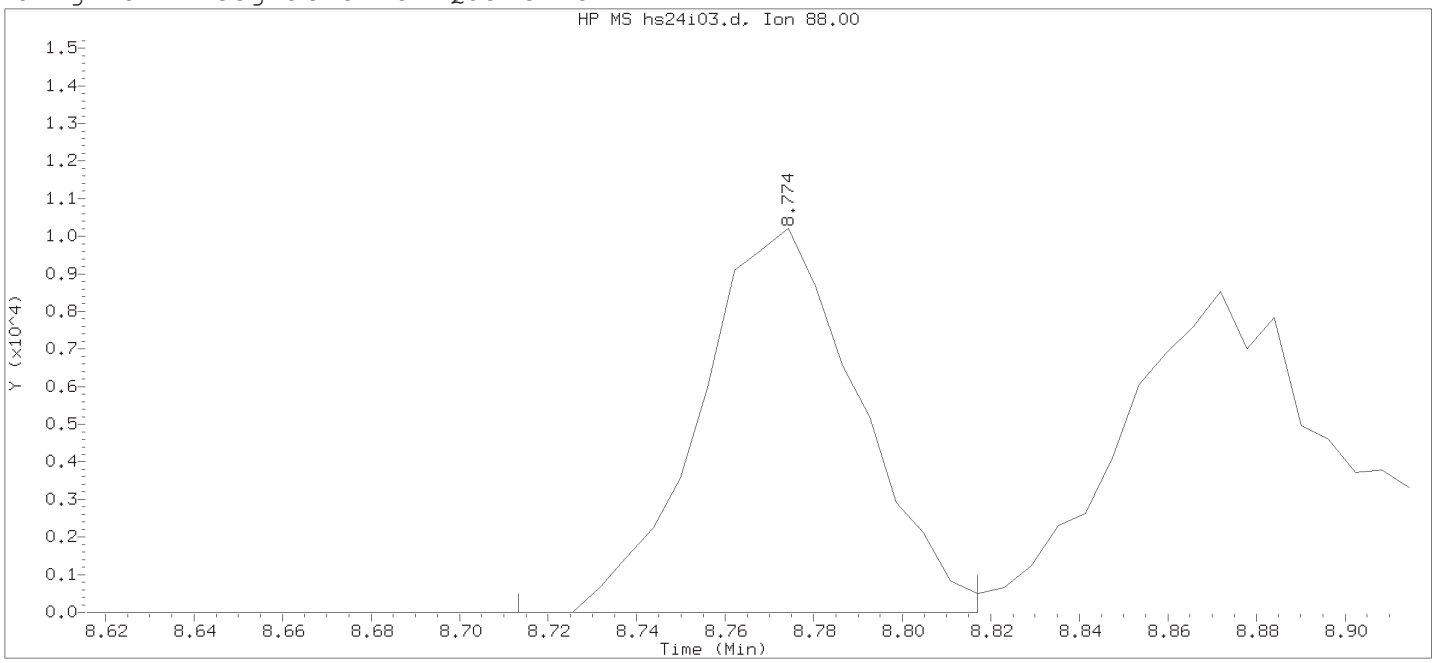
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

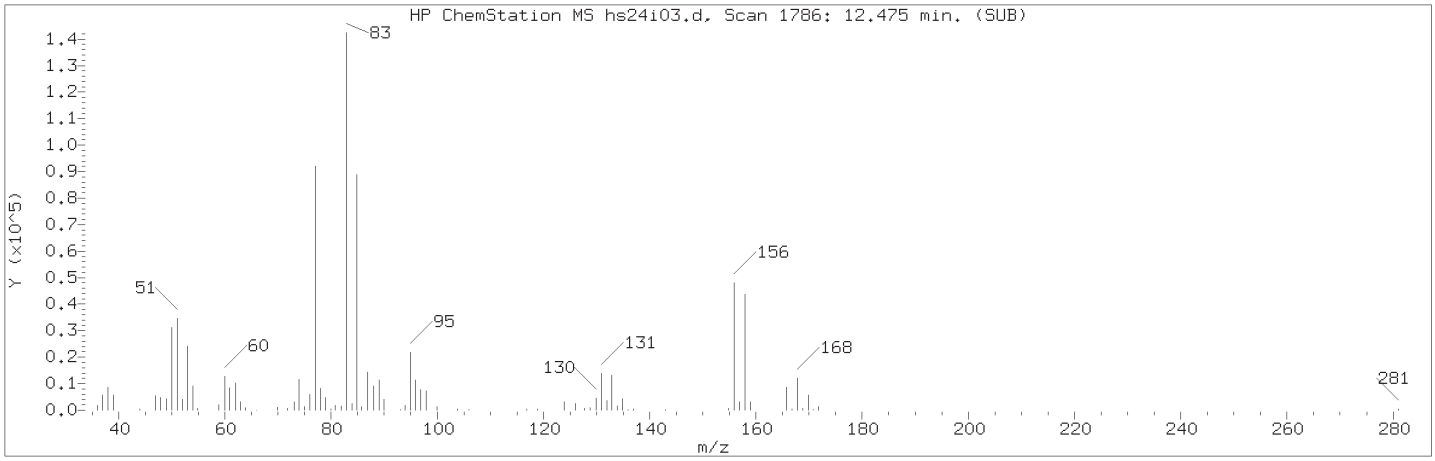
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

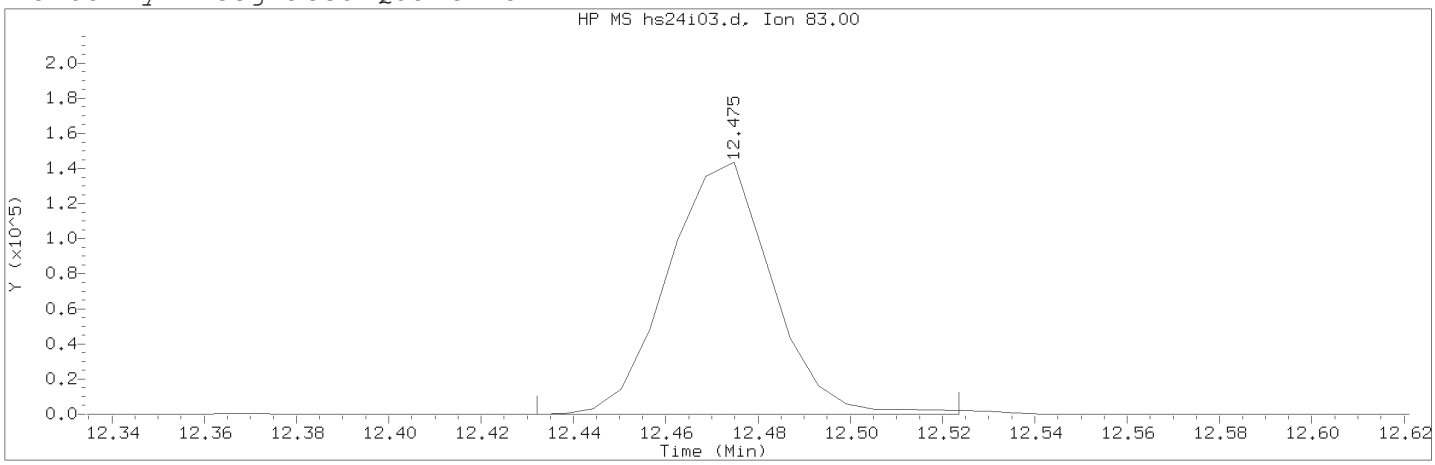
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.774
Quant Ion : 88.00
Area : 25388
On-column Amount (ng) : 205.7756
Integration start scan : 1168 Integration stop scan: 1185
Y at integration start : 0 Y at integration end: 0

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

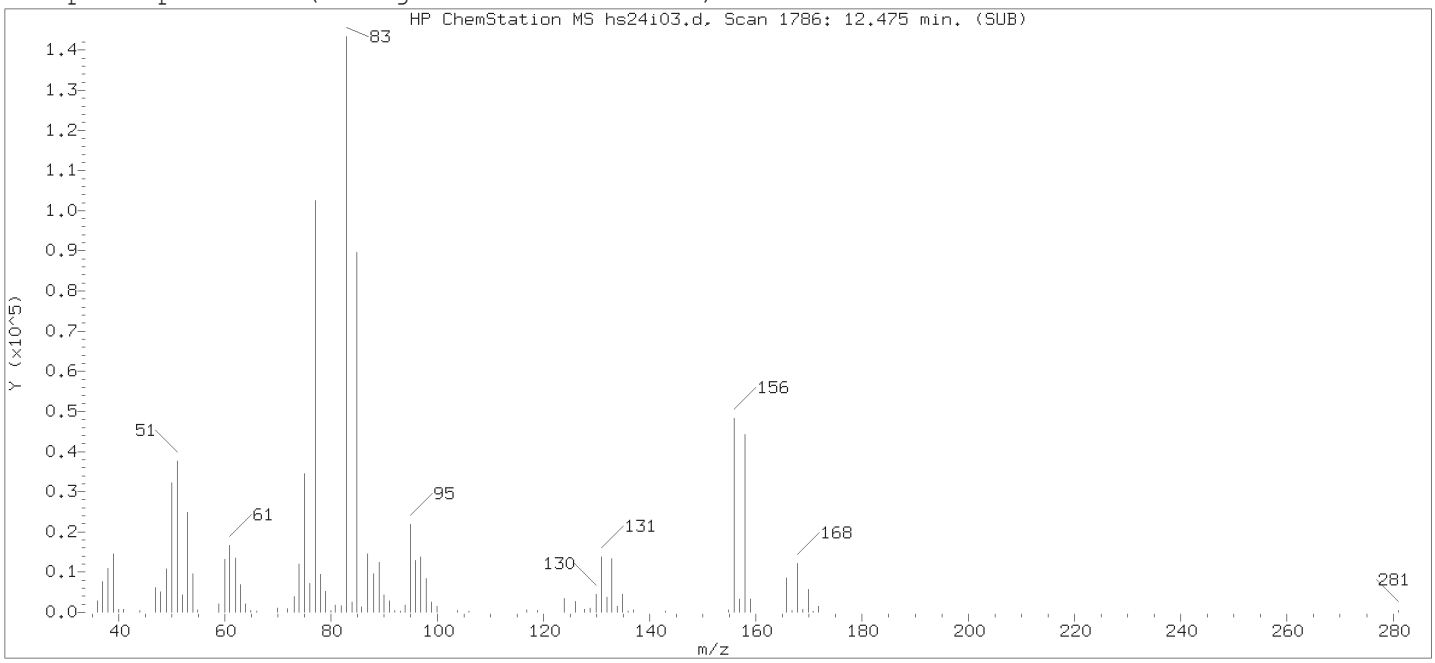
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 224515M
On-Column Amount (ng) : 5.1965
Integration start scan : 1778 Integration stop scan: 1793
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

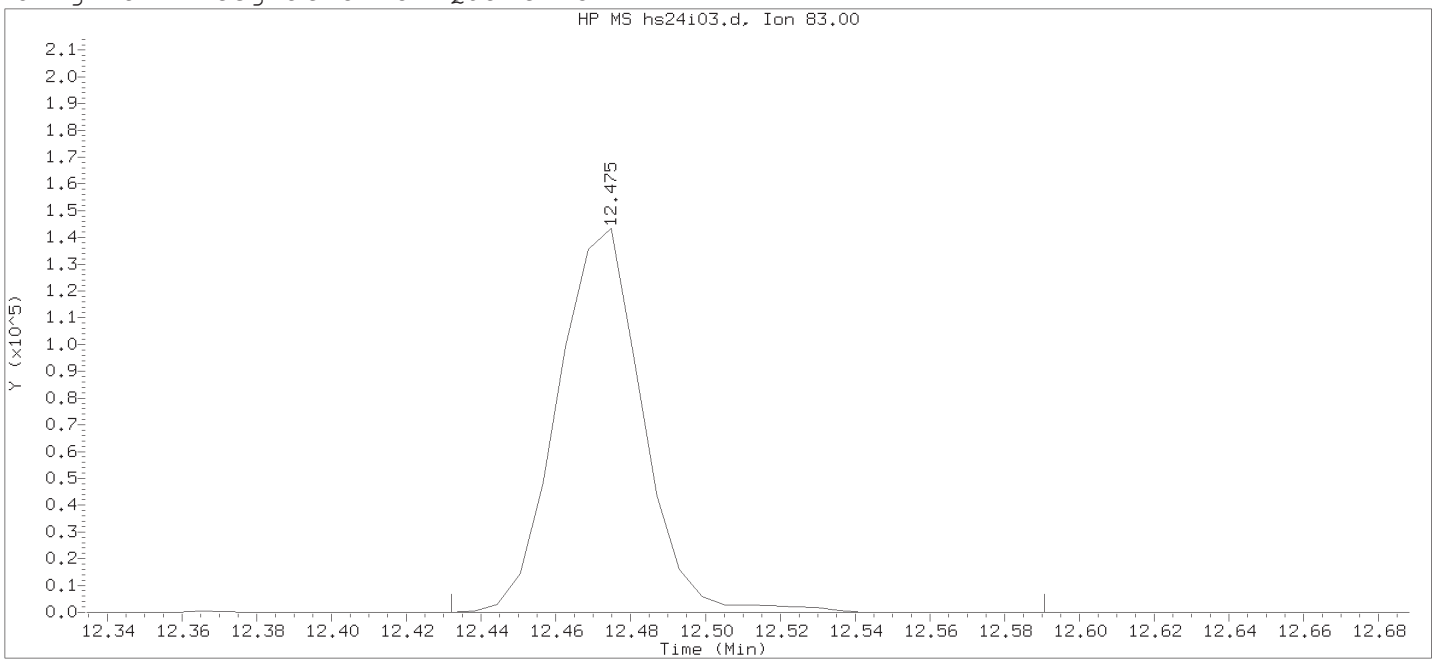
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

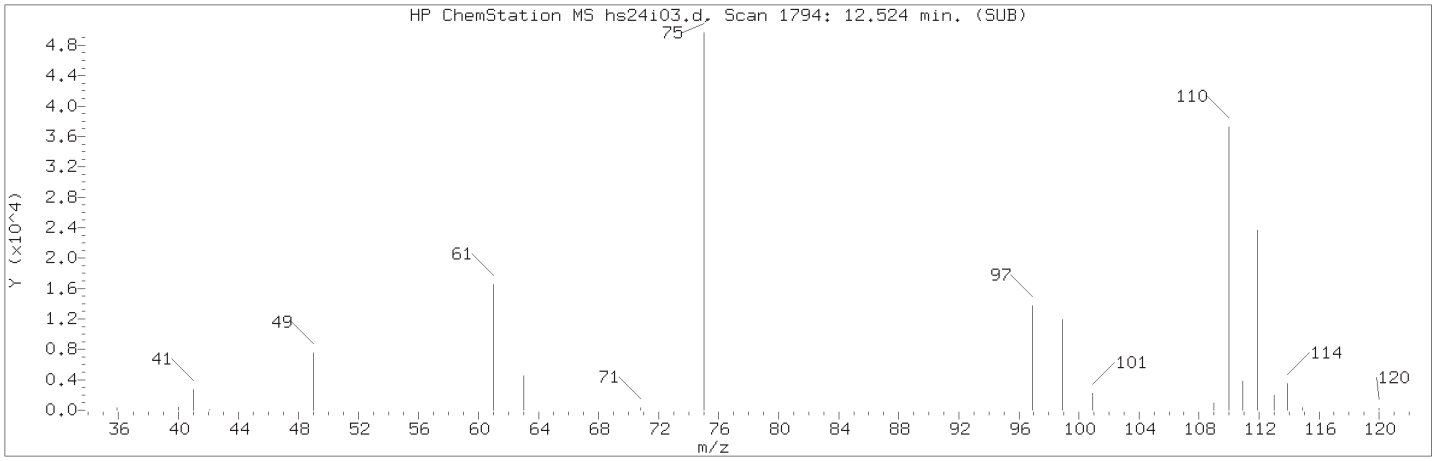
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

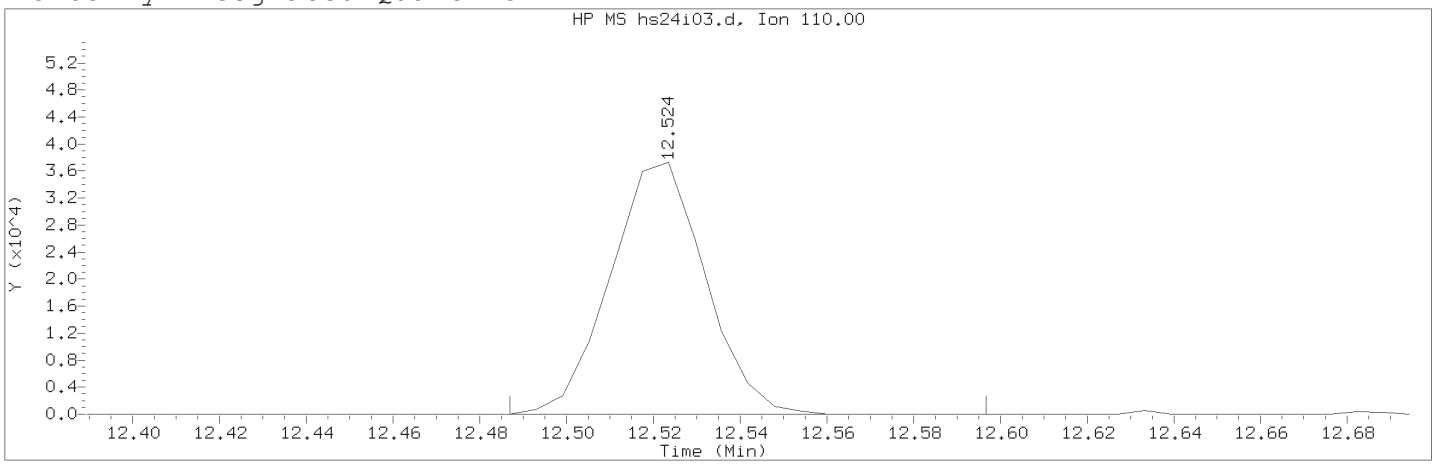
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 225435
On-column Amount (ng) : 4.9474
Integration start scan : 1778 Integration stop scan: 1804
Y at integration start : 0 Y at integration end: 0

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

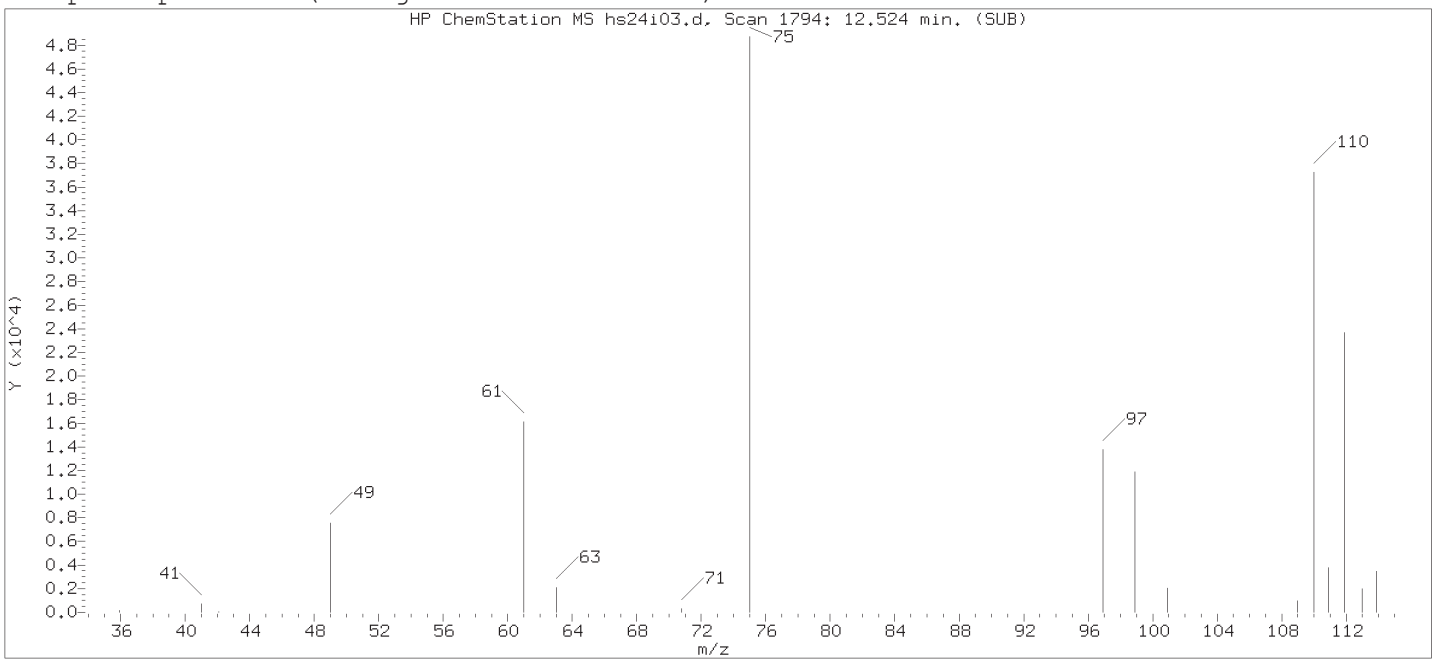
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 56735M
On-Column Amount (ng) : 5.0793
Integration start scan : 1787 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

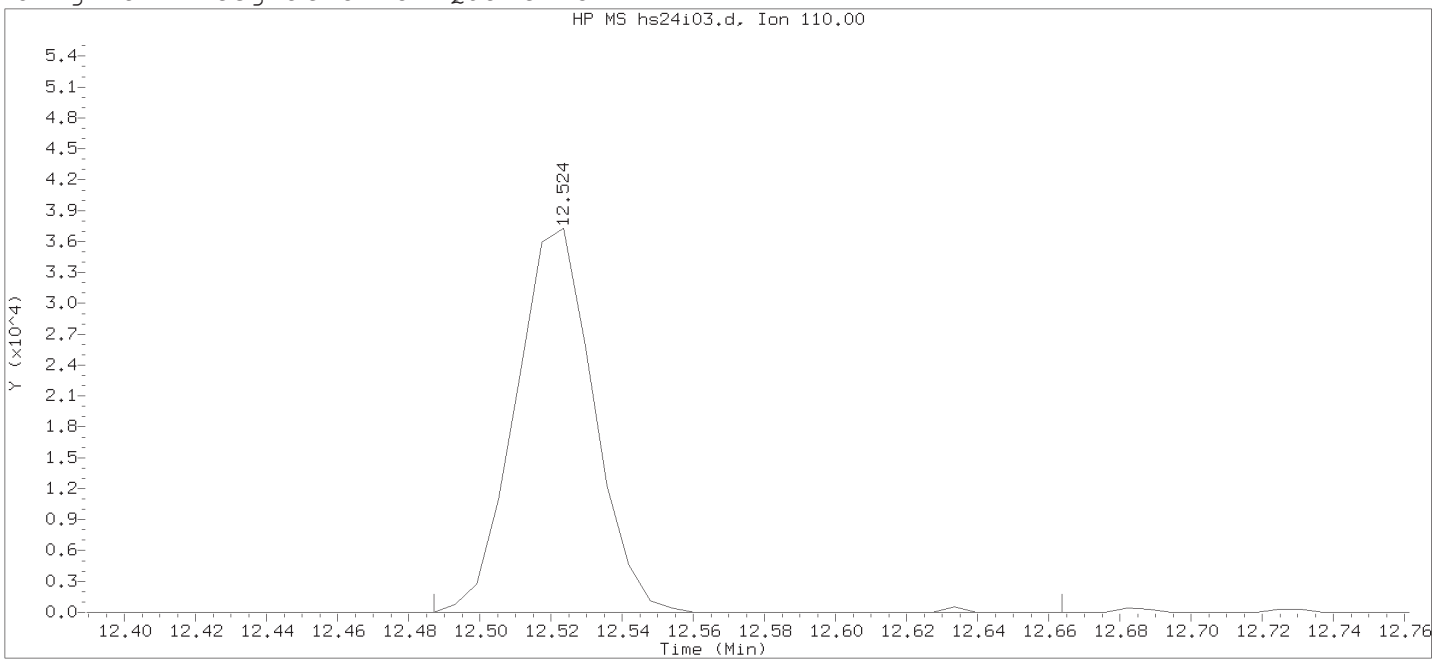
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



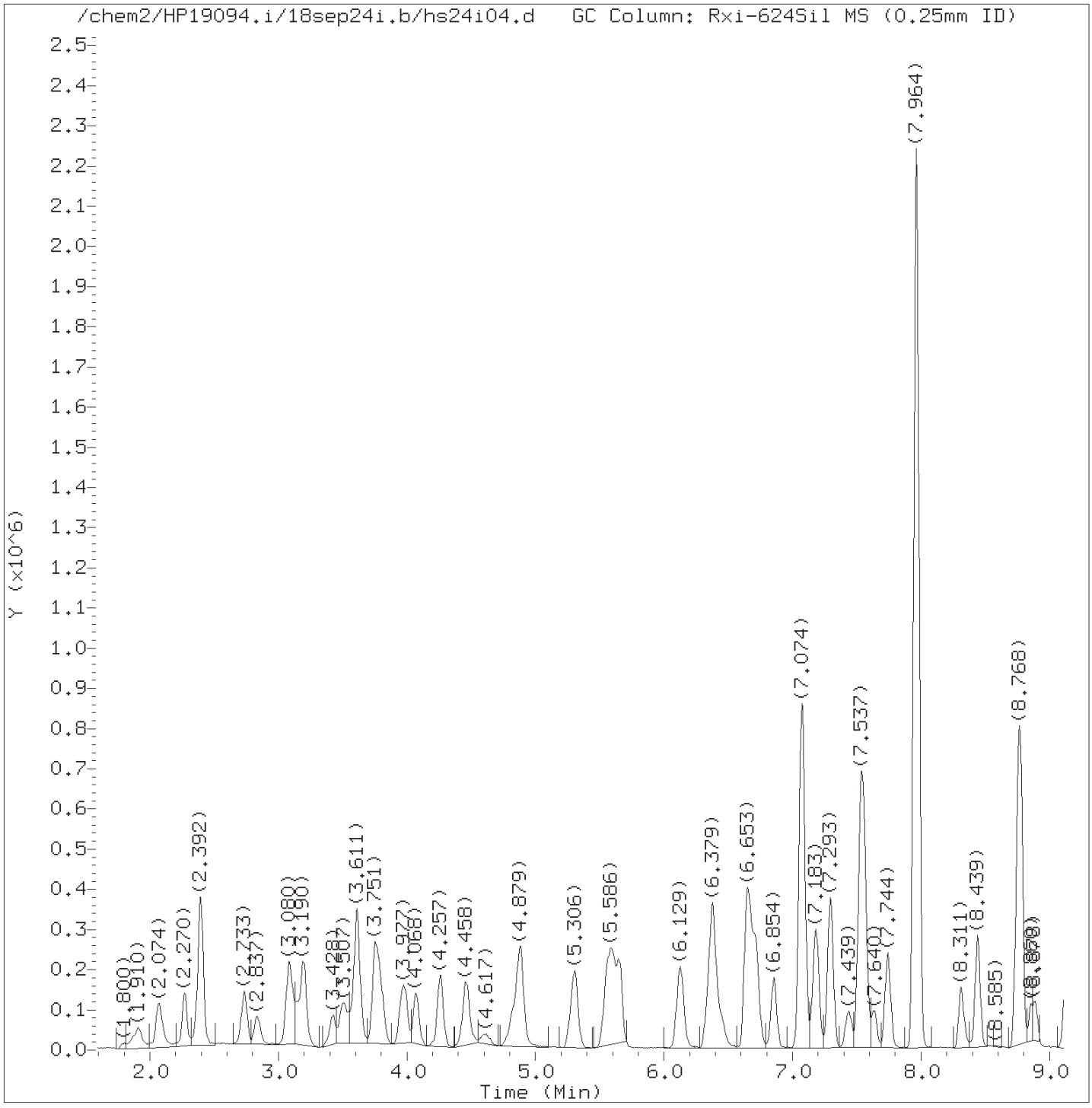
Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

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)

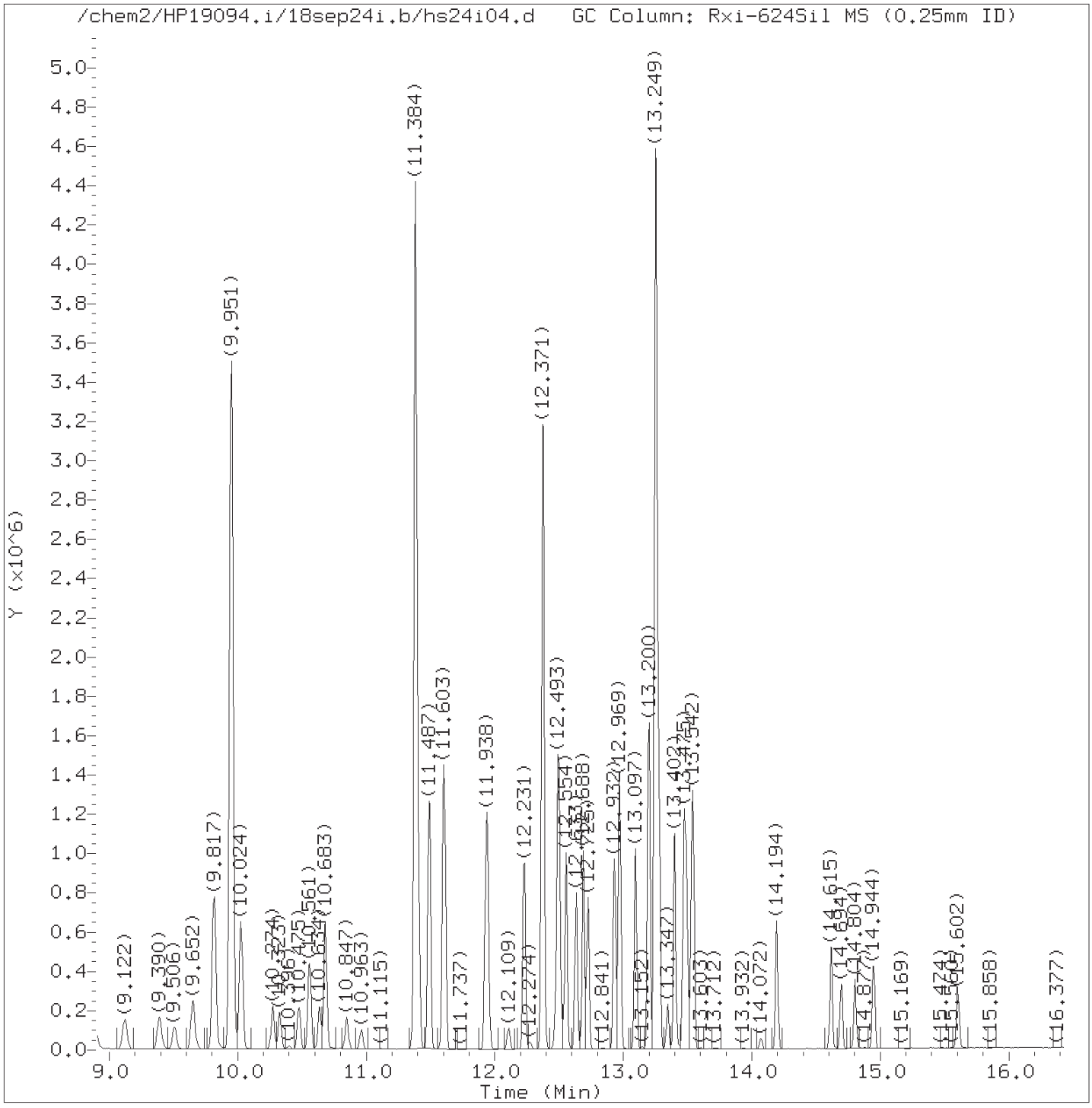
Target Revision 3.5

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

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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

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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

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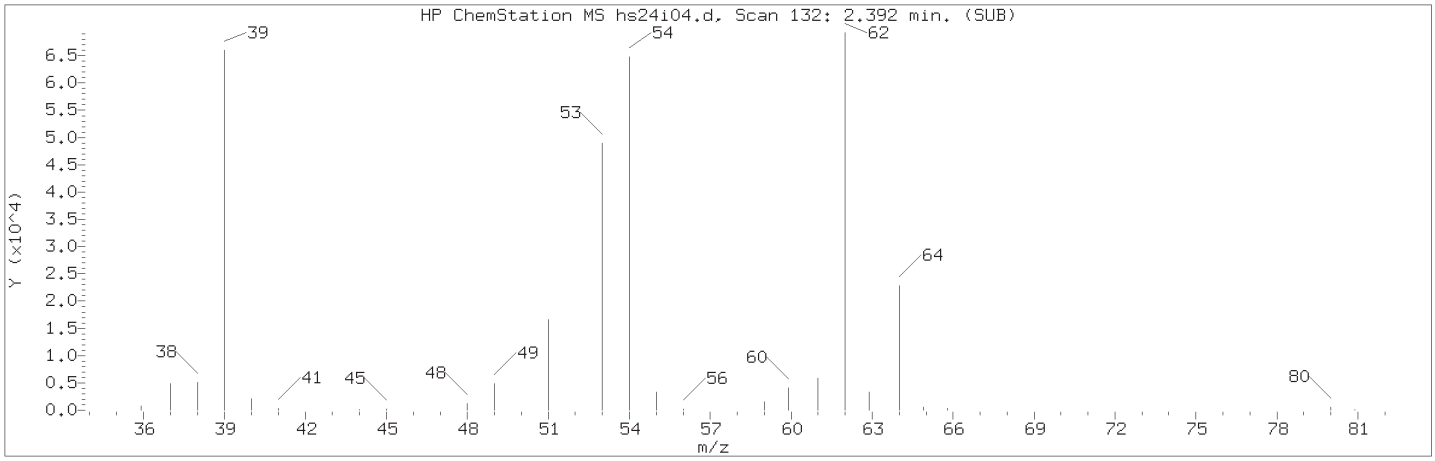
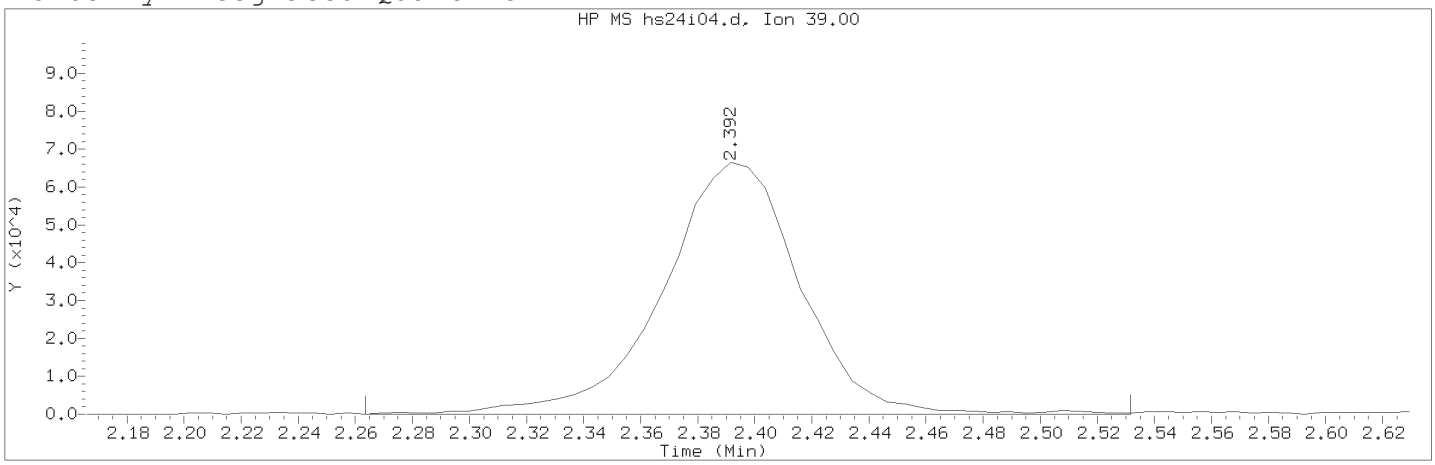
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

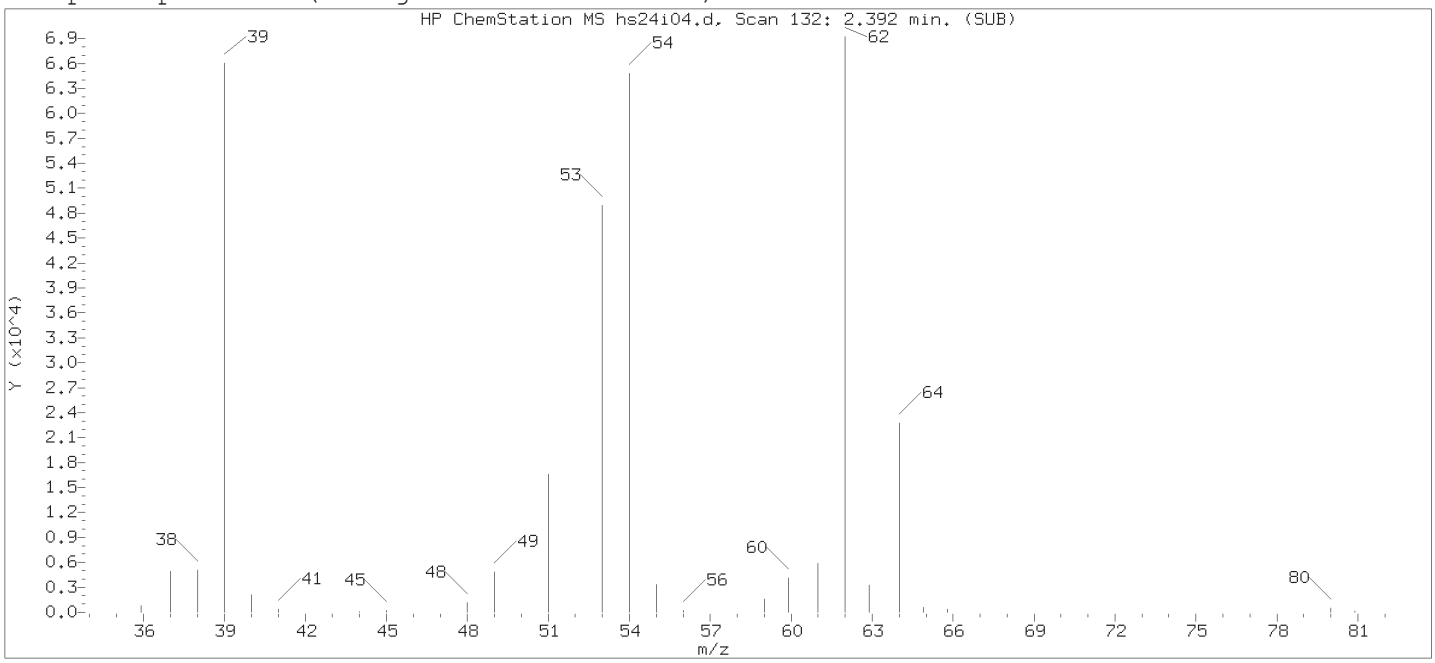
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 223122M
On-Column Amount (ng) : 1.9830
Integration start scan : 110 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

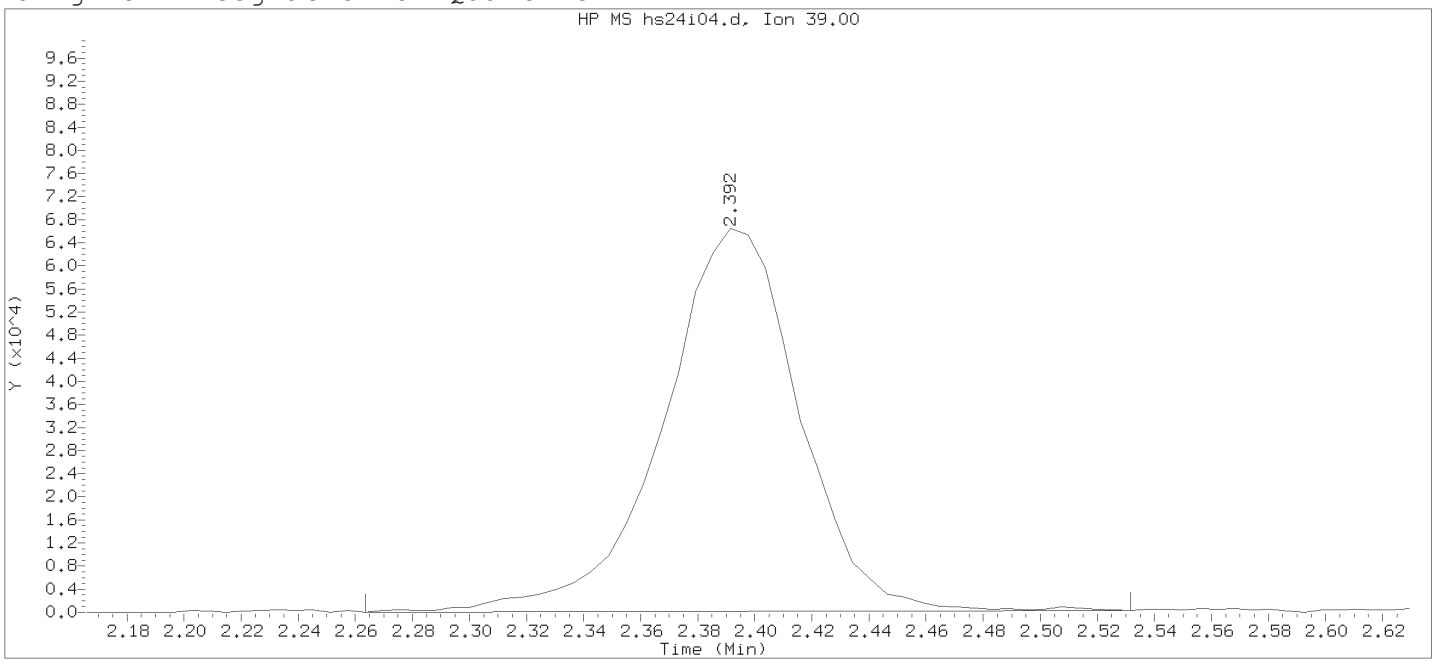
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

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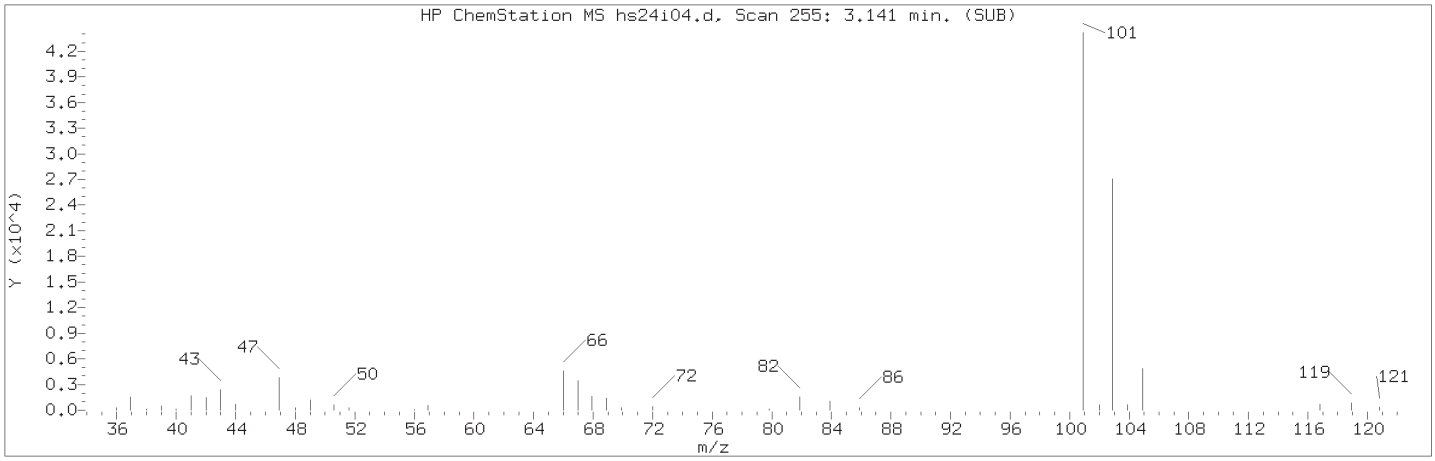
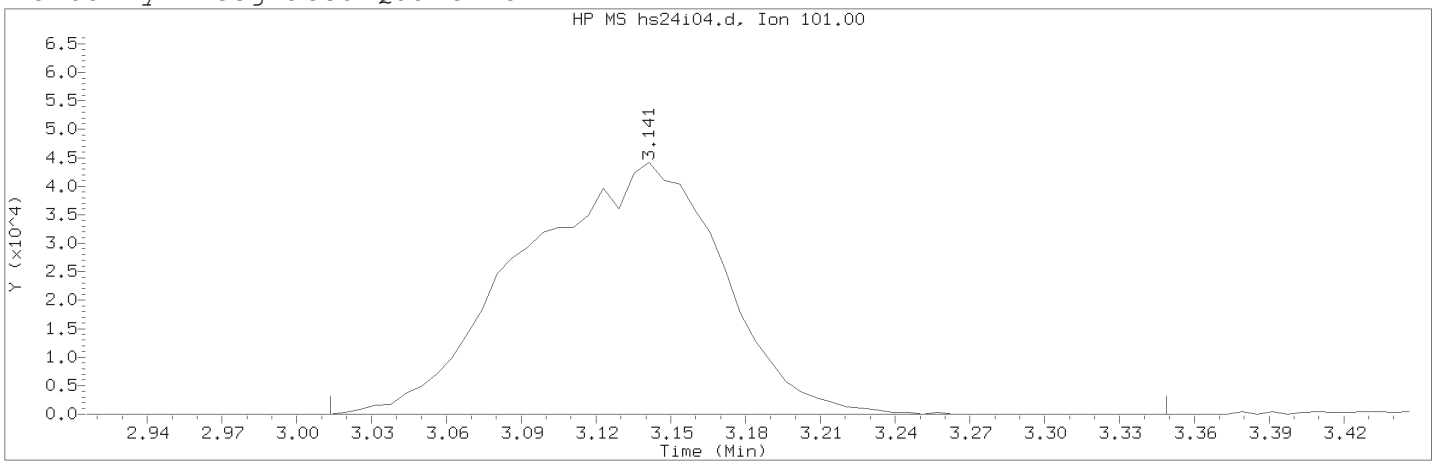
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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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

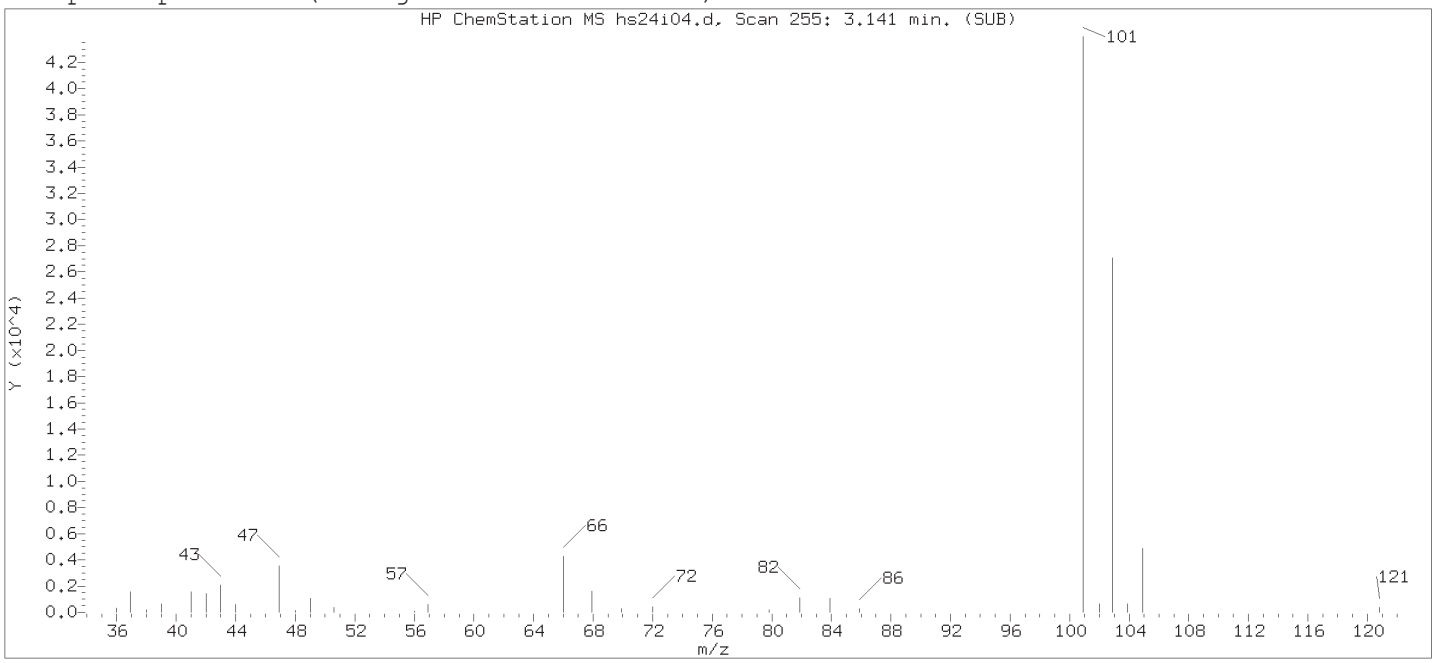
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area (flag) : 245427M
On-Column Amount (ng) : 1.9558
Integration start scan : 233 Integration stop scan: 288
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

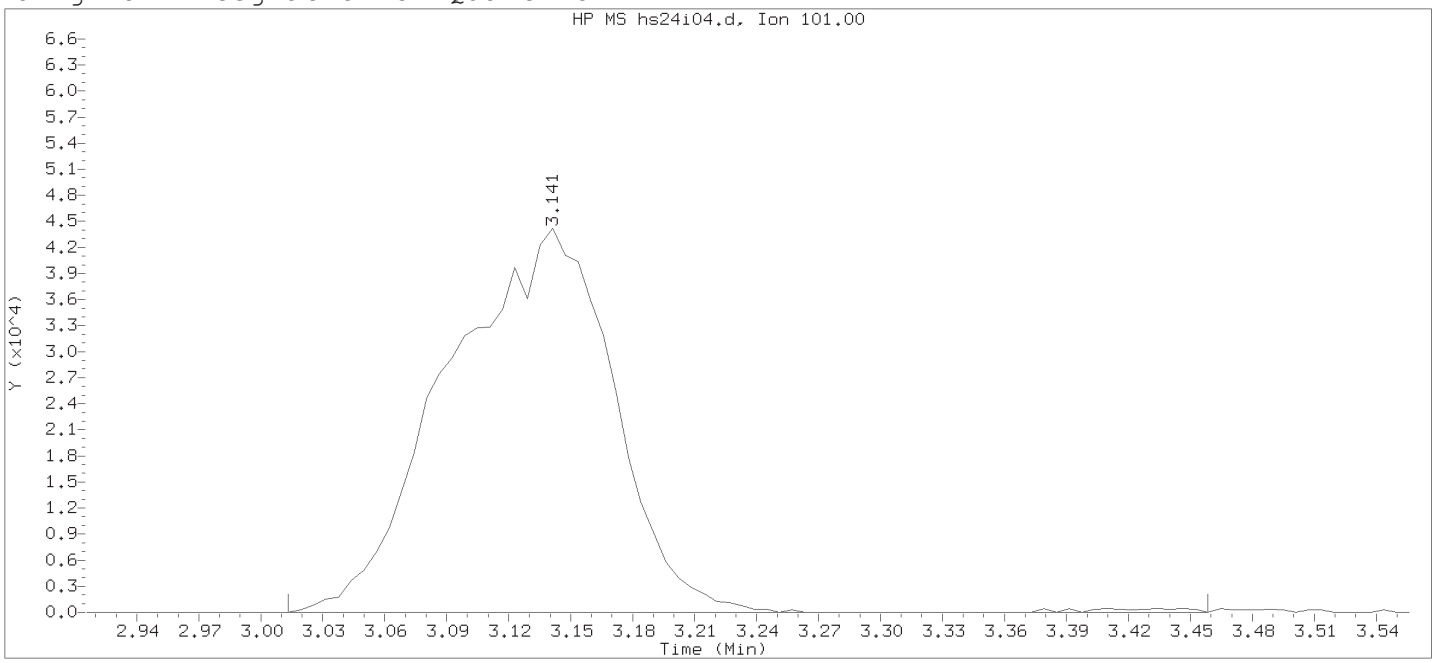
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

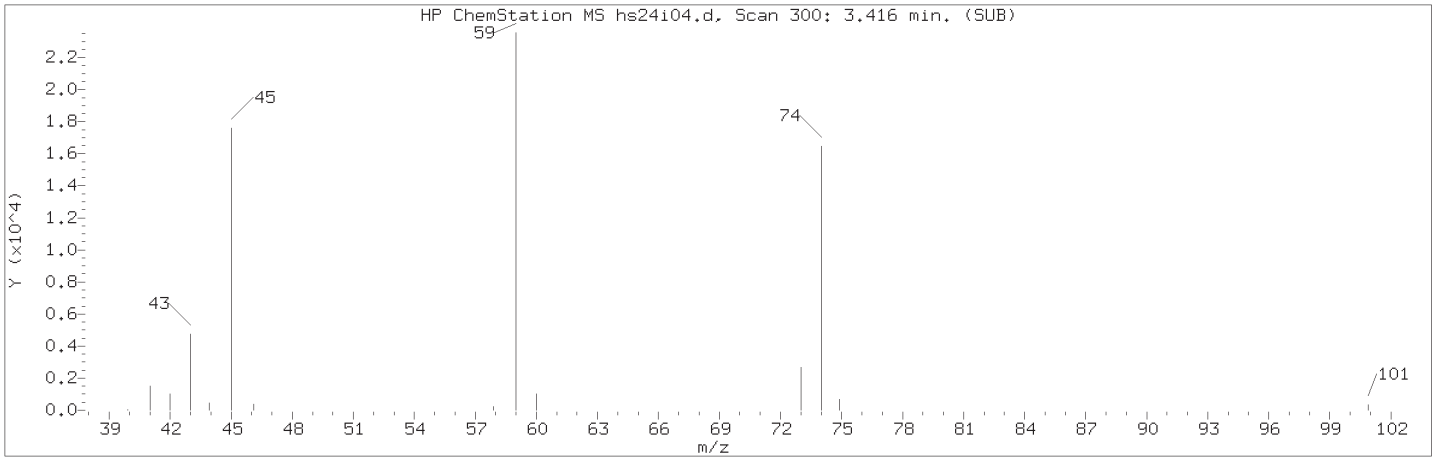
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

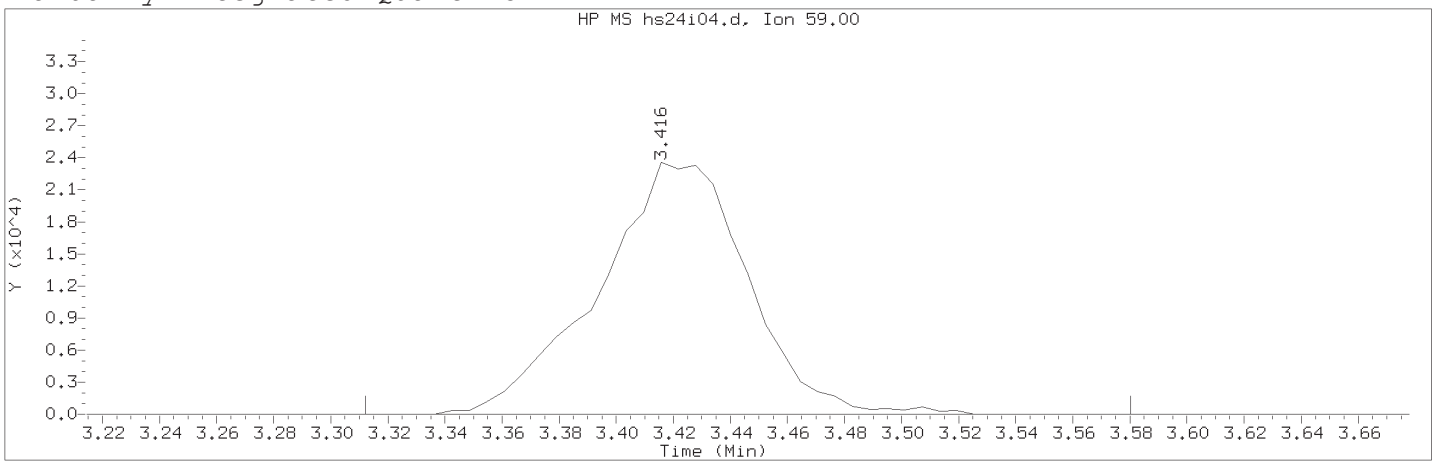
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area : 246940
On-column Amount (ng) : 1.9182
Integration start scan : 233 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

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

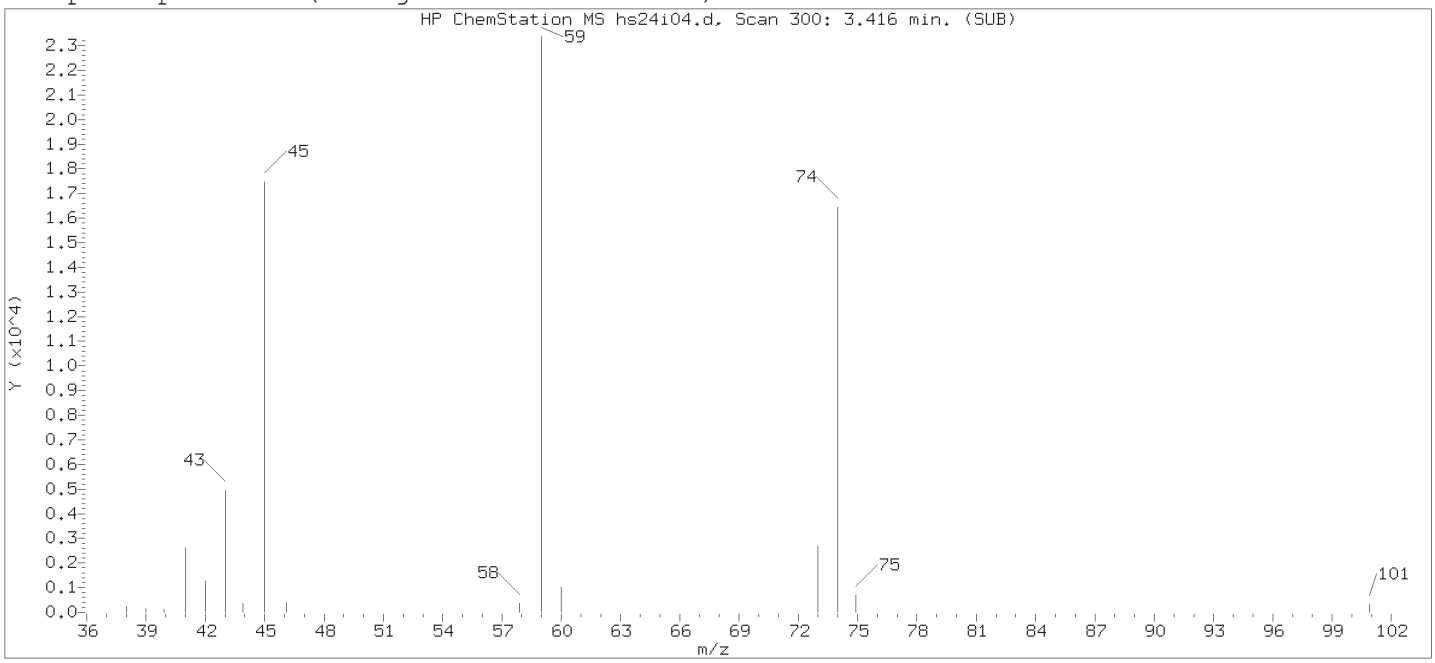
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area (flag) : 85465M
On-Column Amount (ng) : 2.0086
Integration start scan : 282 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

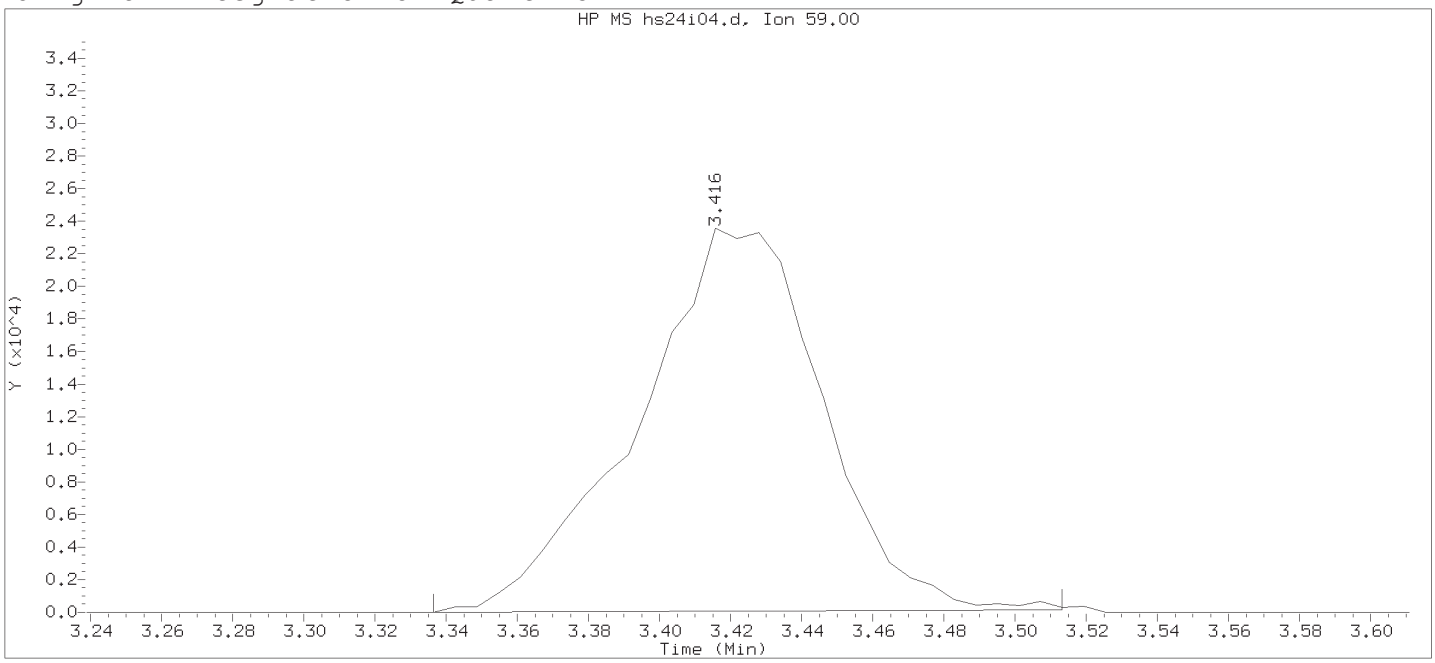
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

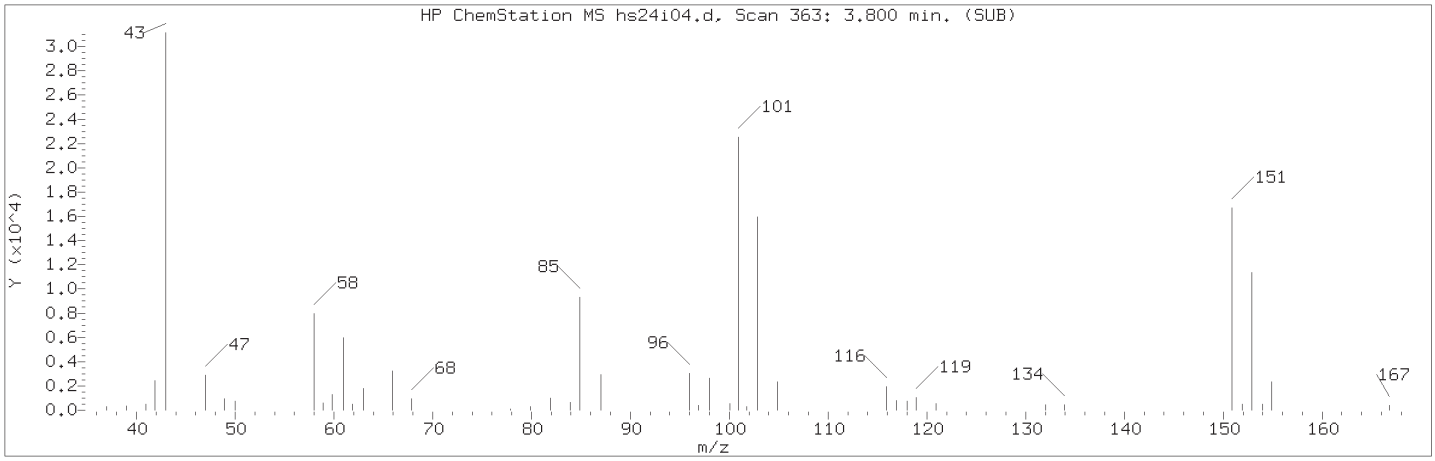
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

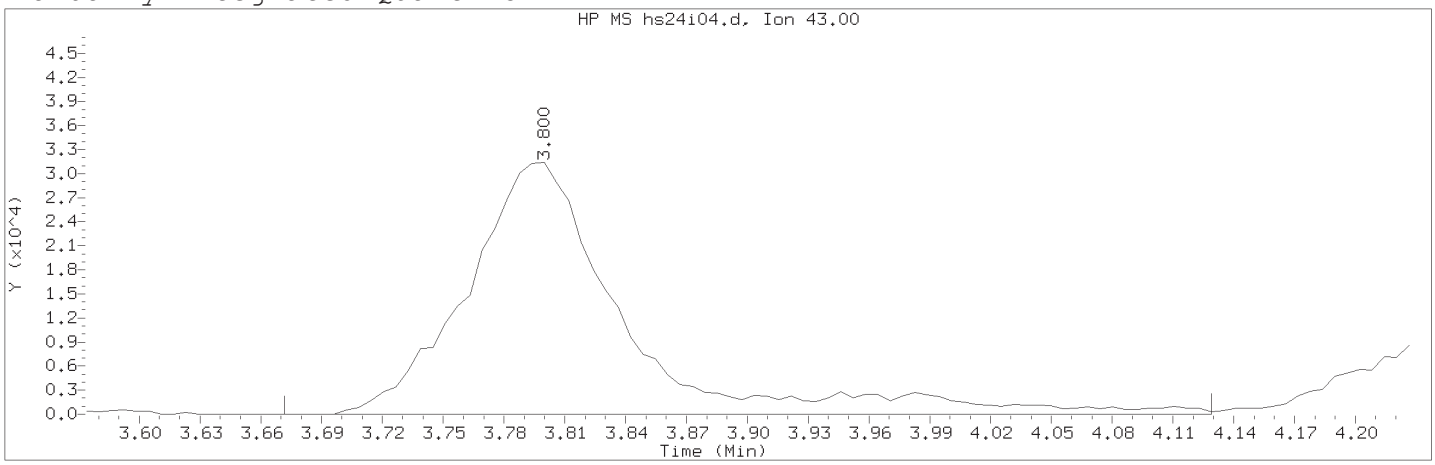
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area : 84538
On-column Amount (ng) : 1.9630
Integration start scan : 286 Integration stop scan: 315
Y at integration start : 0 Y at integration end: 140

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

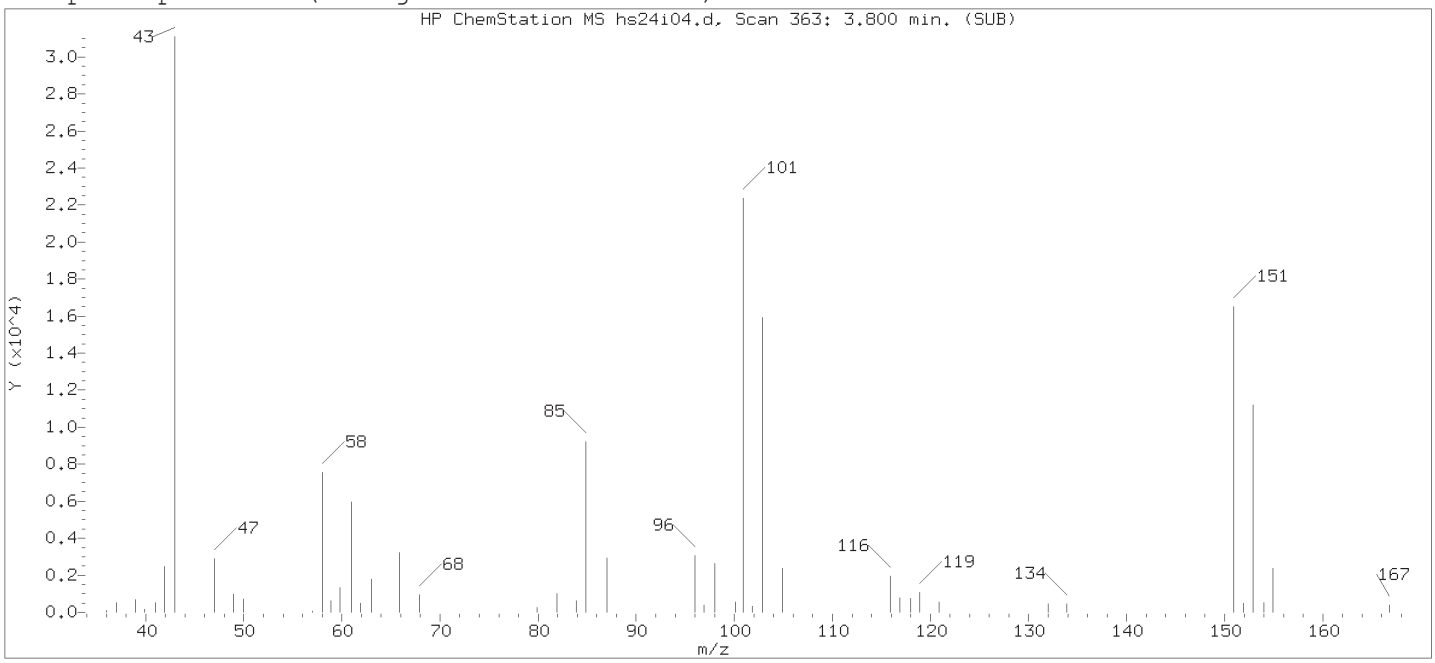
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 167715M
On-Column Amount (ng) : 19.0303
Integration start scan : 341 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

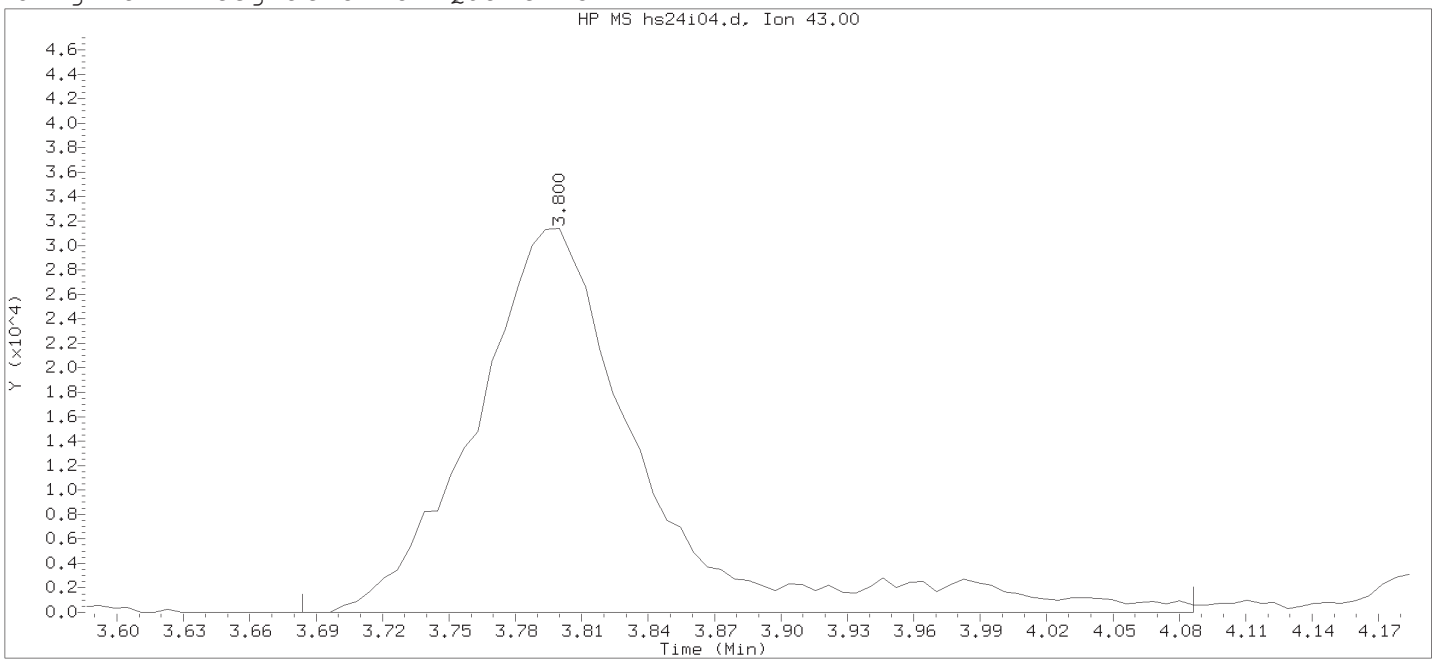
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

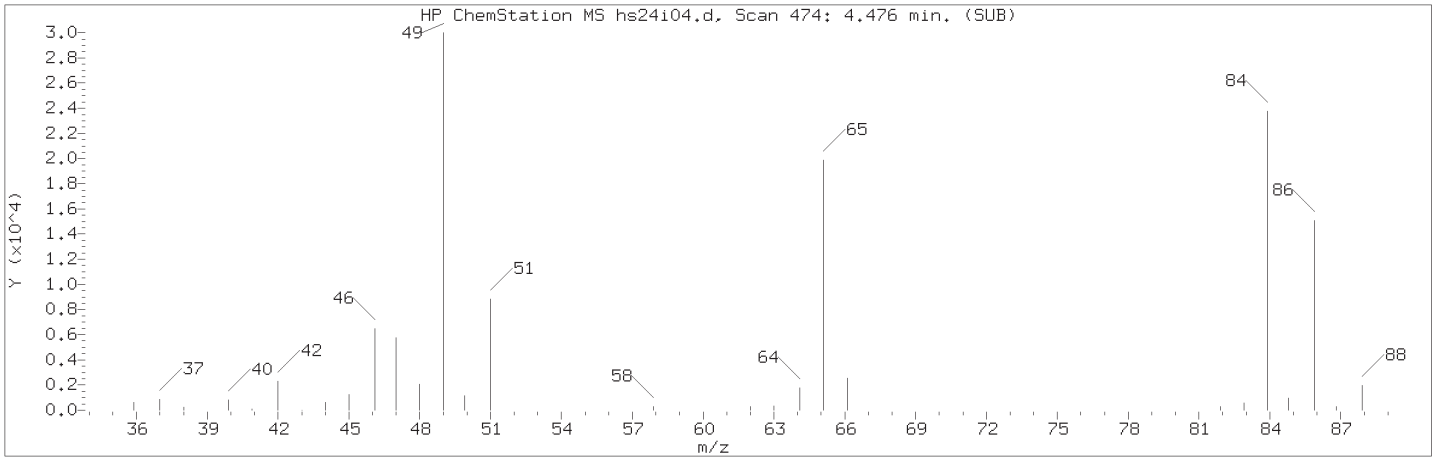
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

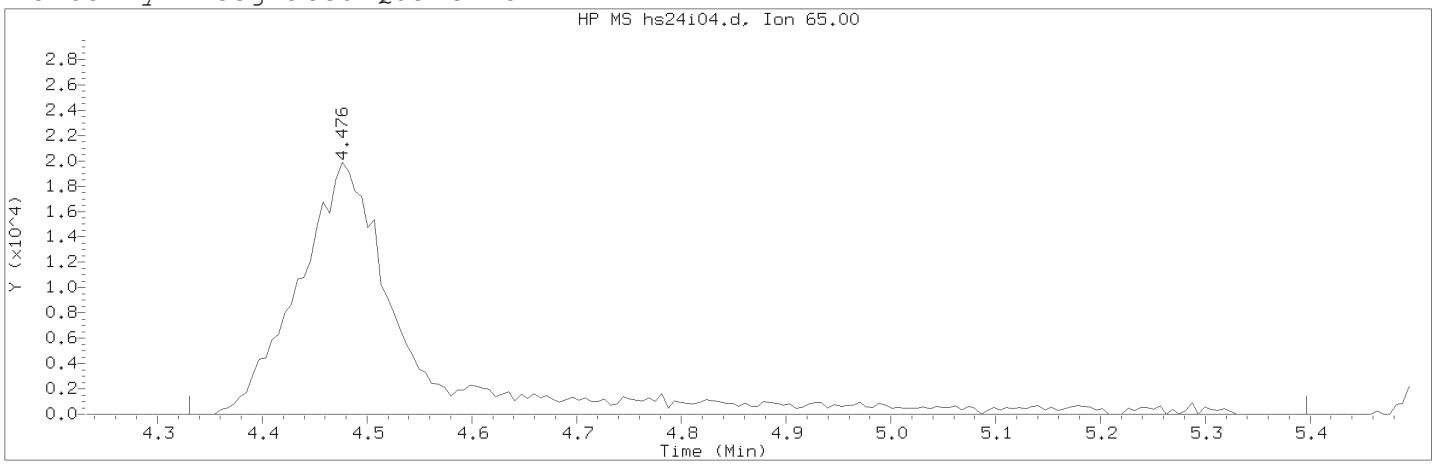
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area : 165832
On-column Amount (ng) : 19.2516
Integration start scan : 343 Integration stop scan: 409
Y at integration start : 0 Y at integration end: 0

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

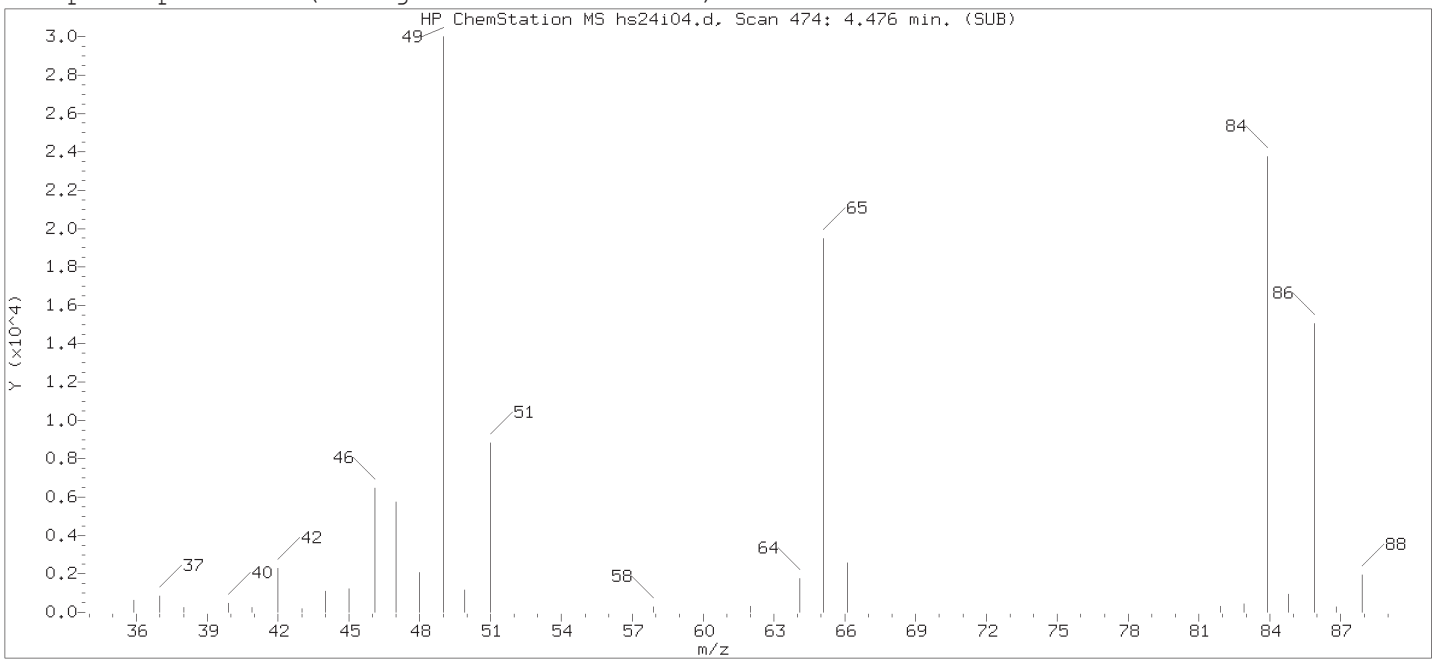
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area (flag) : 147863M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

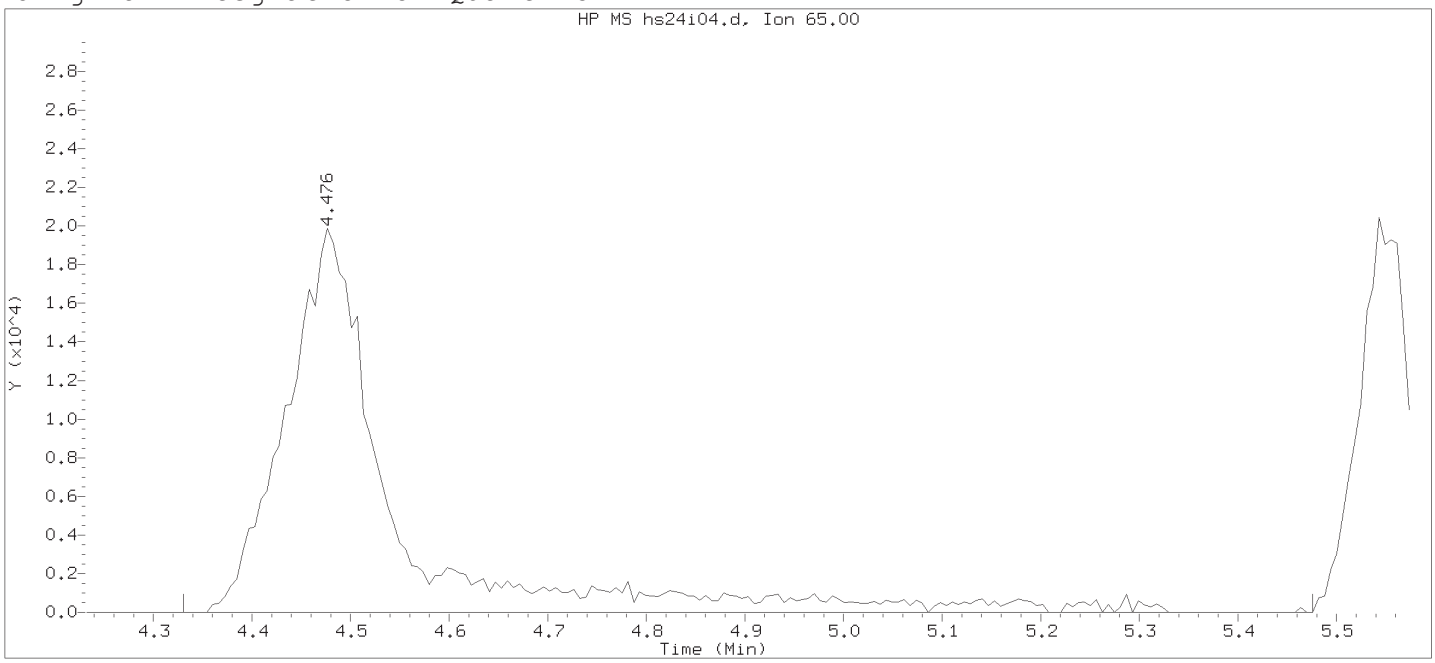
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

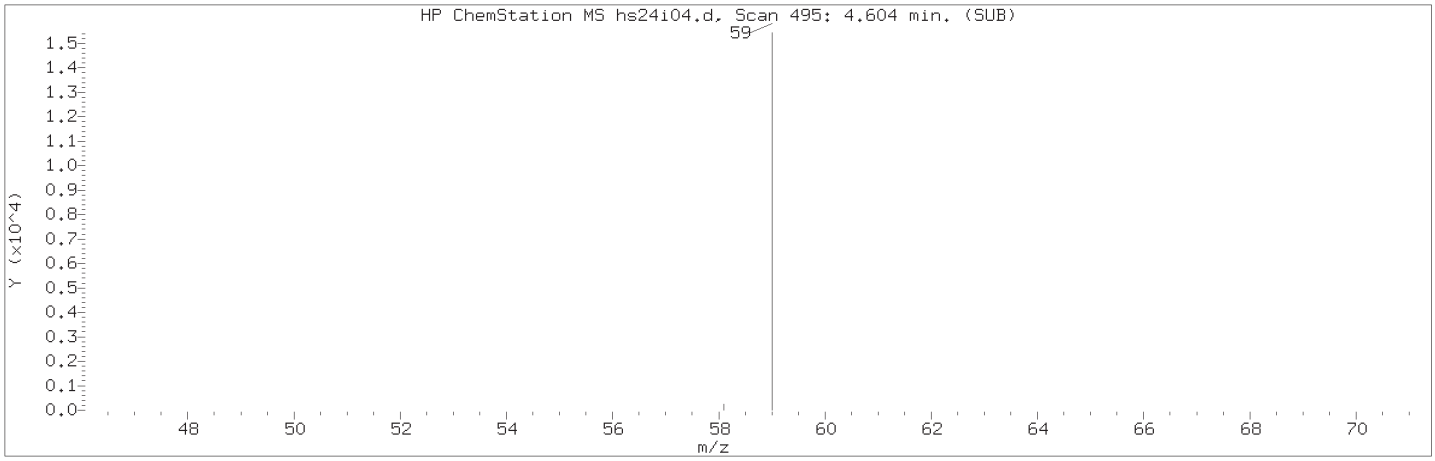
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

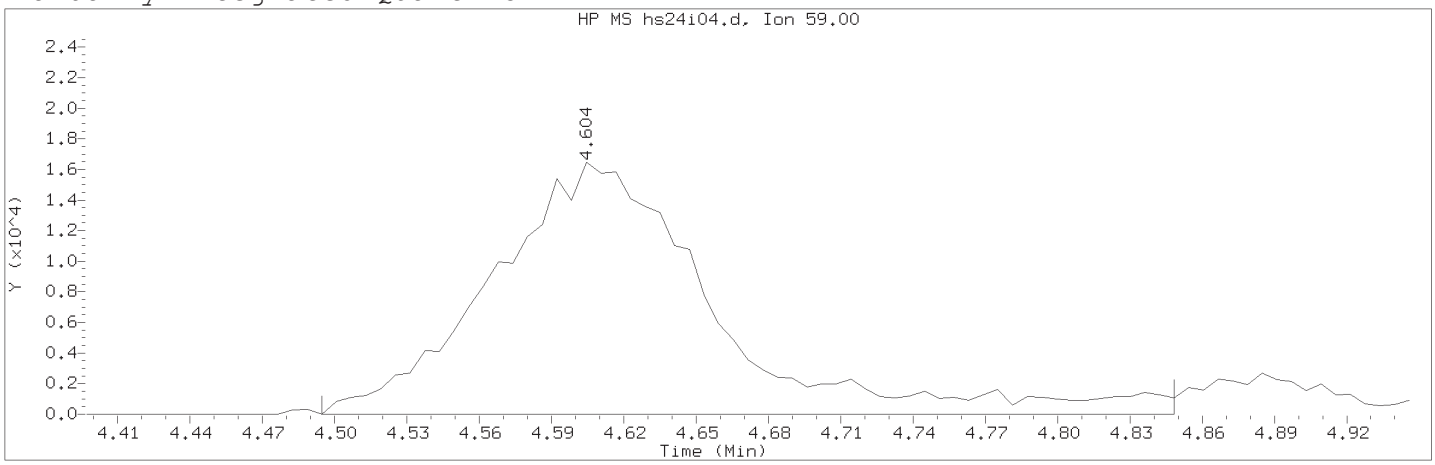
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area : 147958
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 637
Y at integration start : 0 Y at integration end: 0

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

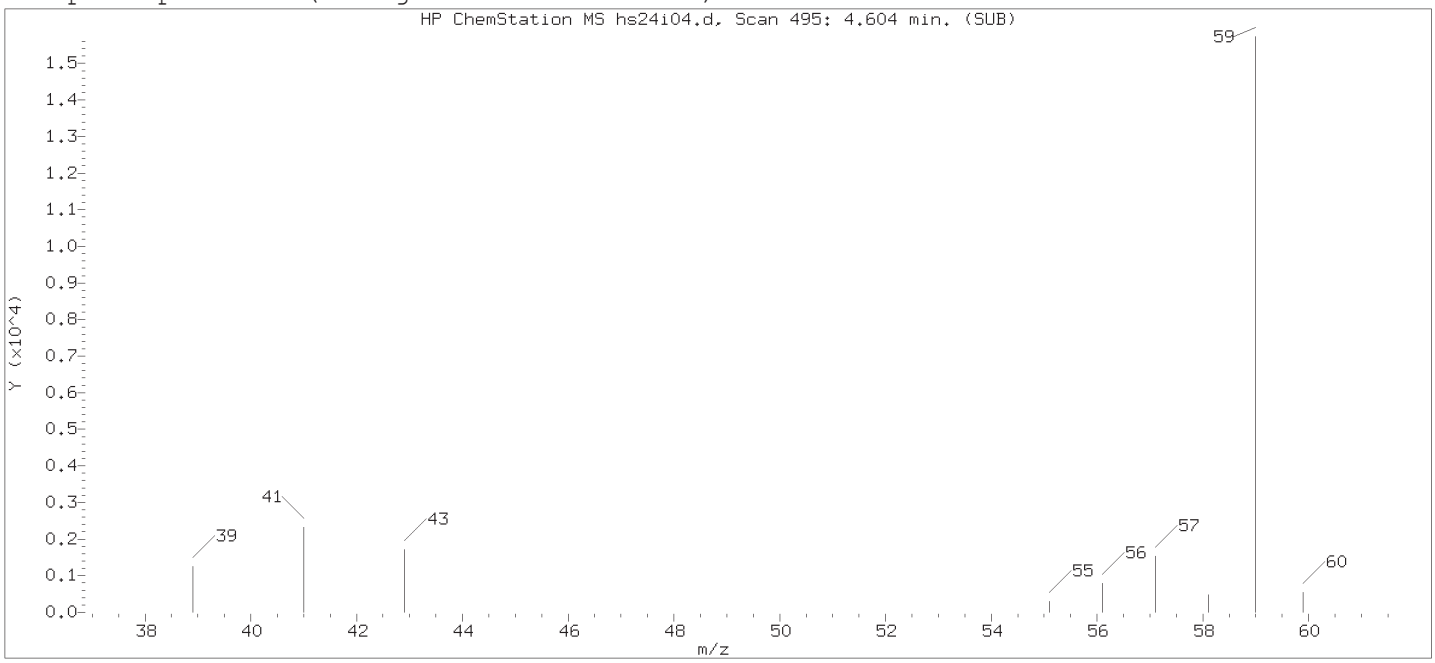
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 104728M
On-Column Amount (ng) : 41.4946
Integration start scan : 476 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

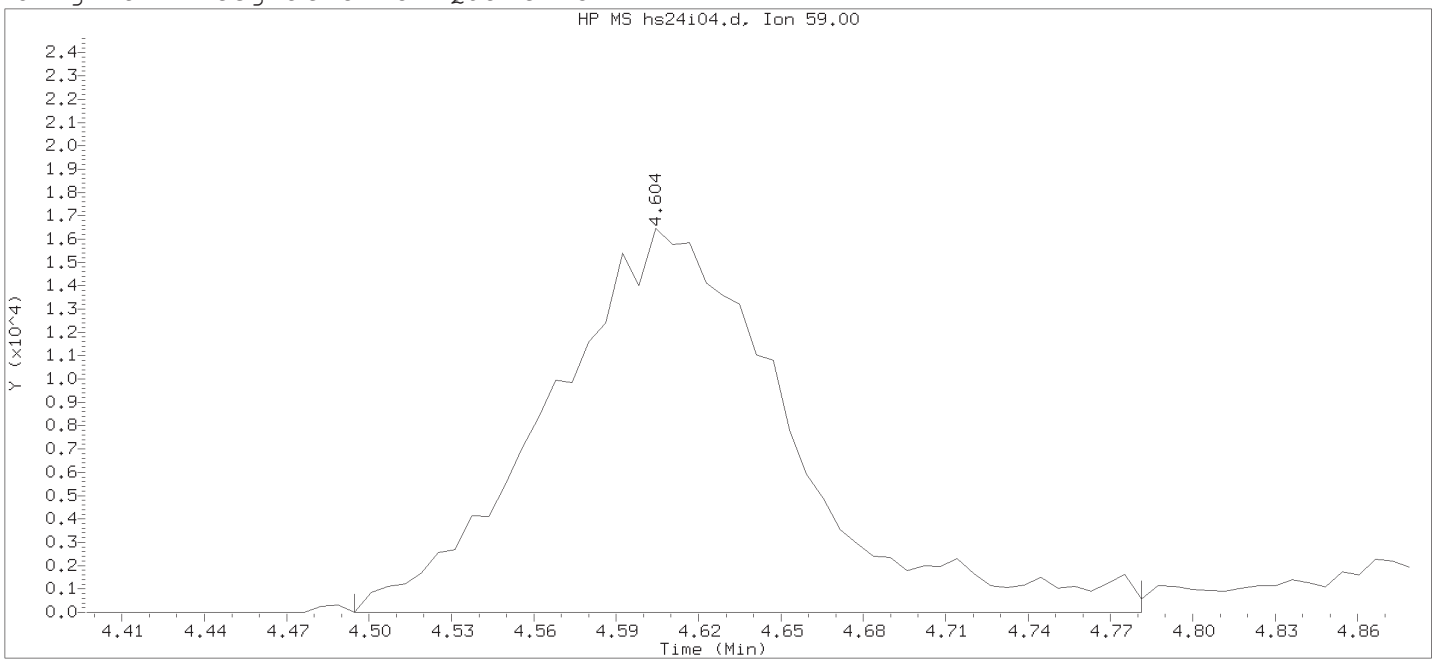
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

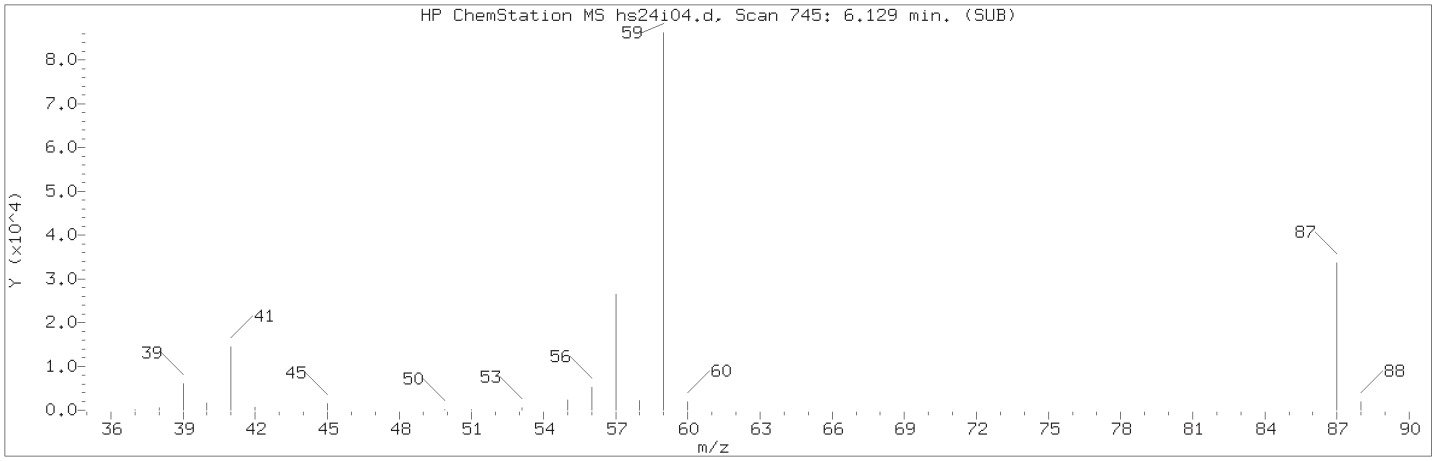
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

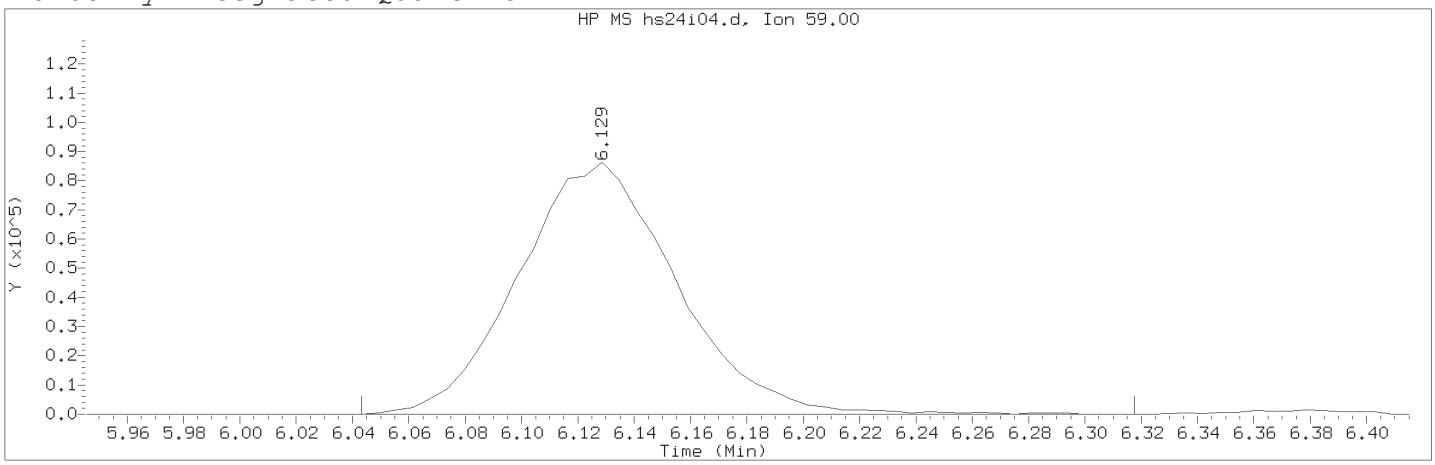
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 495		
Retention Time (minutes)	: 4.604		
Quant Ion	: 59.00		
Area	: 100186		
On-column Amount (ng)	: 38.4816		
Integration start scan	: 476	Integration stop scan:	523
Y at integration start	: 0	Y at integration end:	0

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

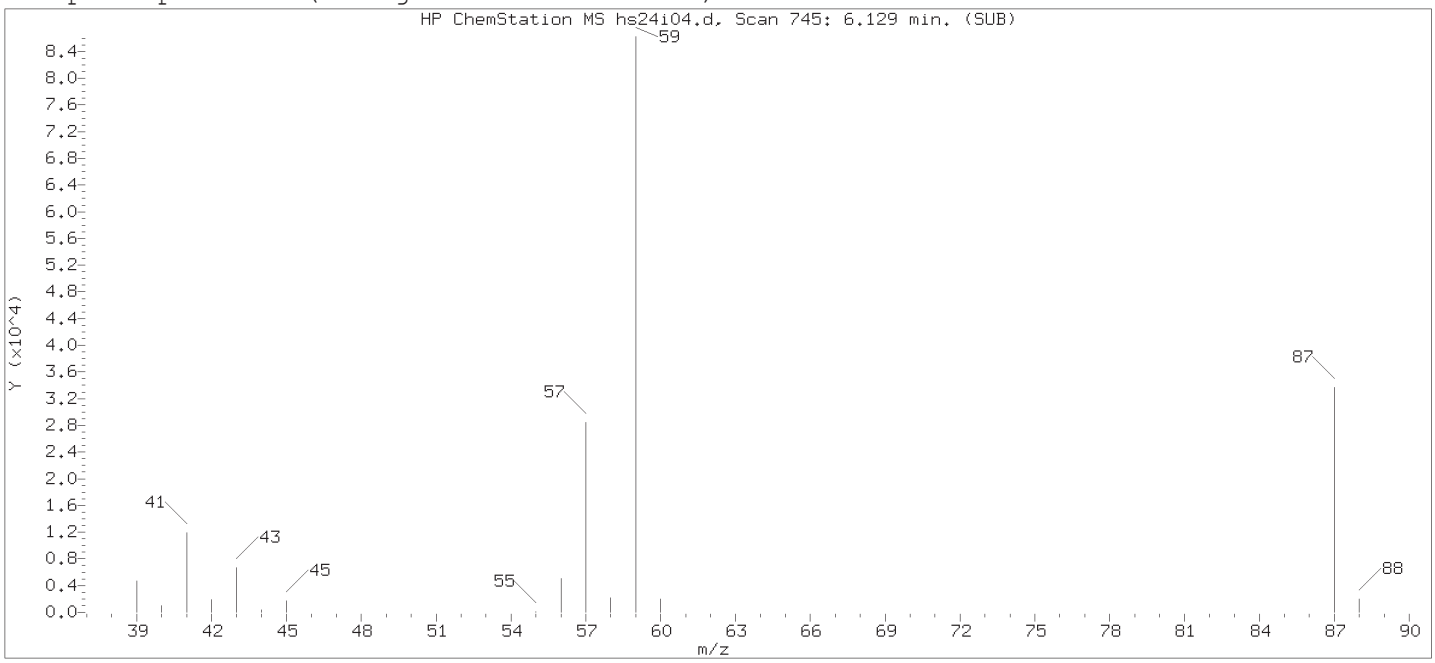
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area (flag) : 334132M
On-Column Amount (ng) : 2.0315
Integration start scan : 730 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

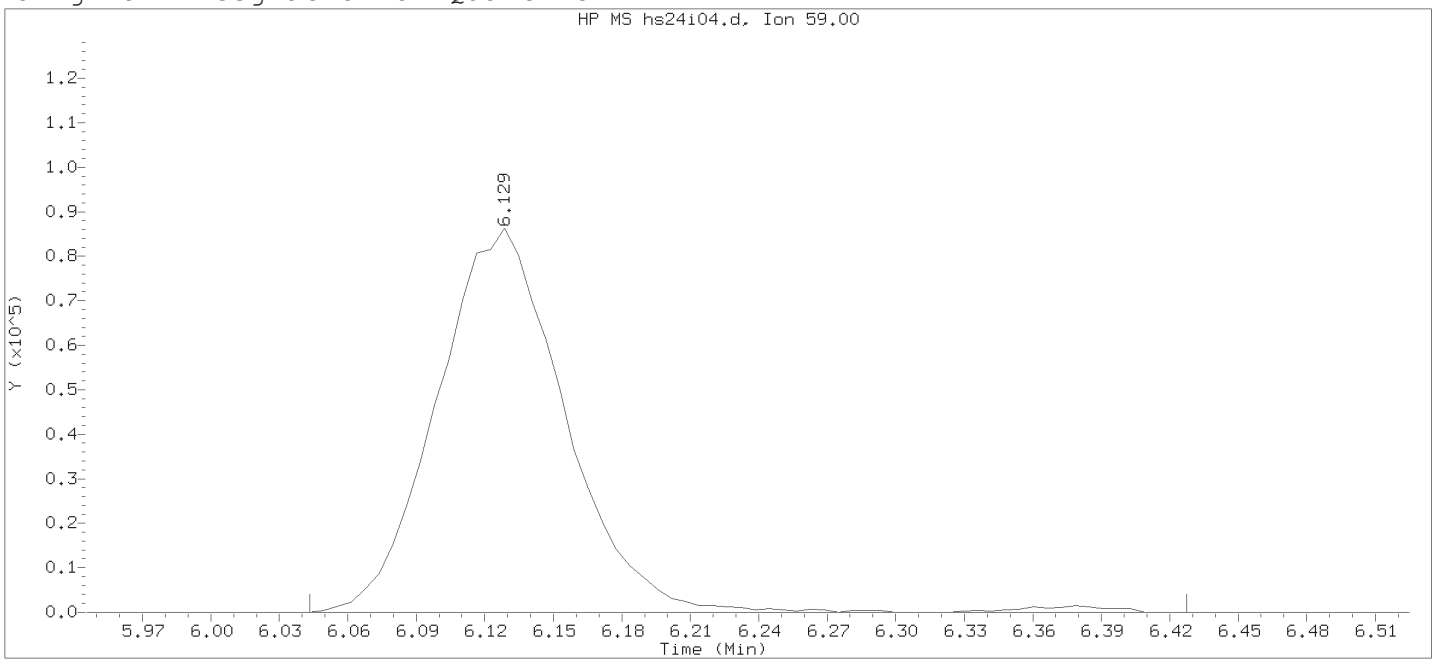
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

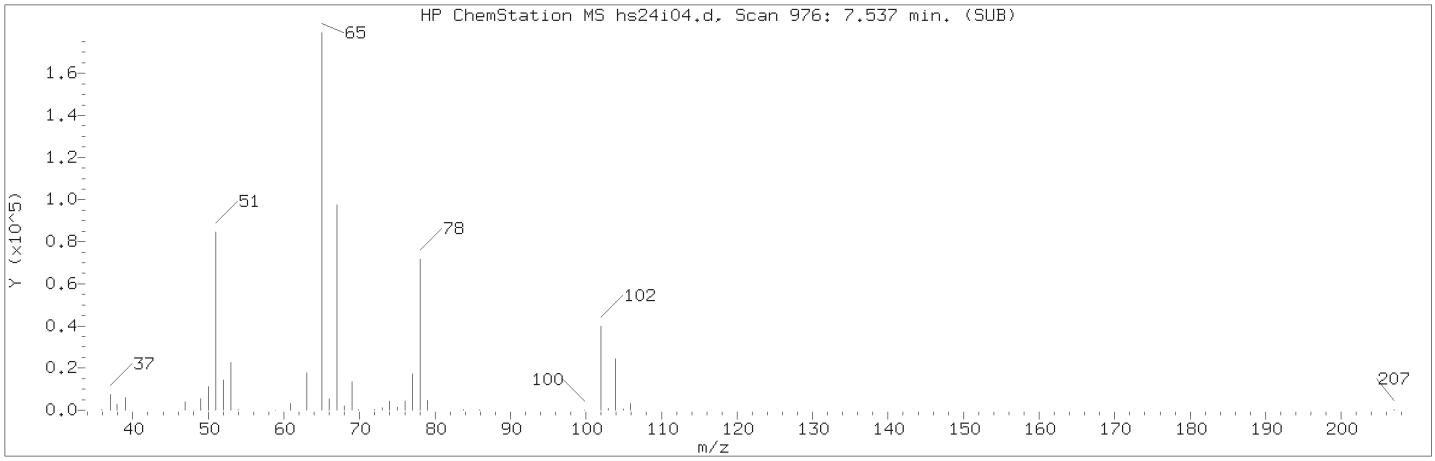
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

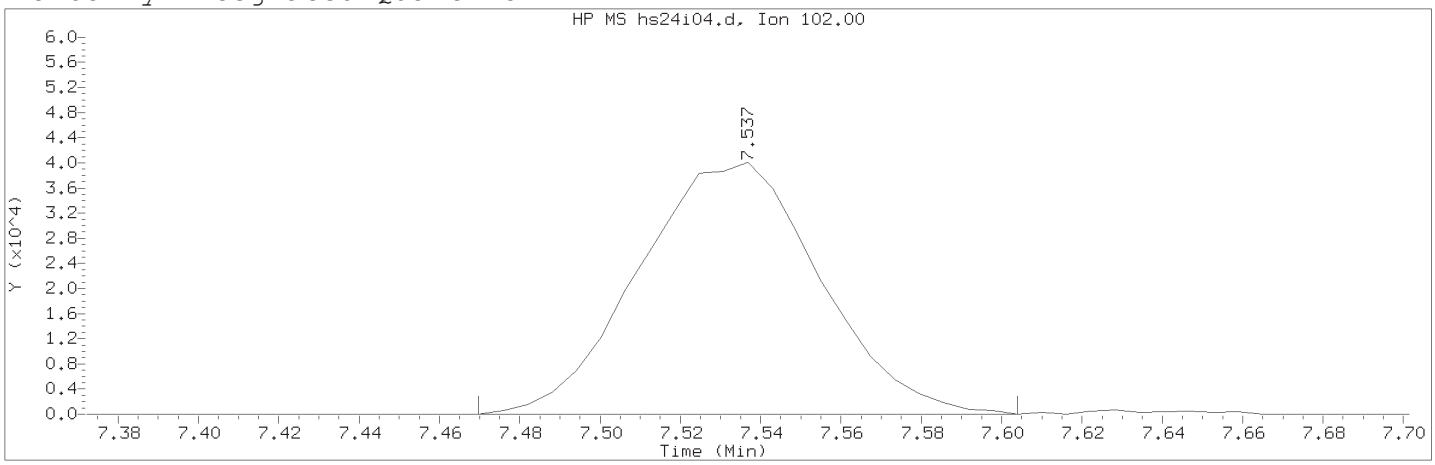
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area : 338010
On-column Amount (ng) : 1.9953
Integration start scan : 730 Integration stop scan: 793
Y at integration start : 0 Y at integration end: 0

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

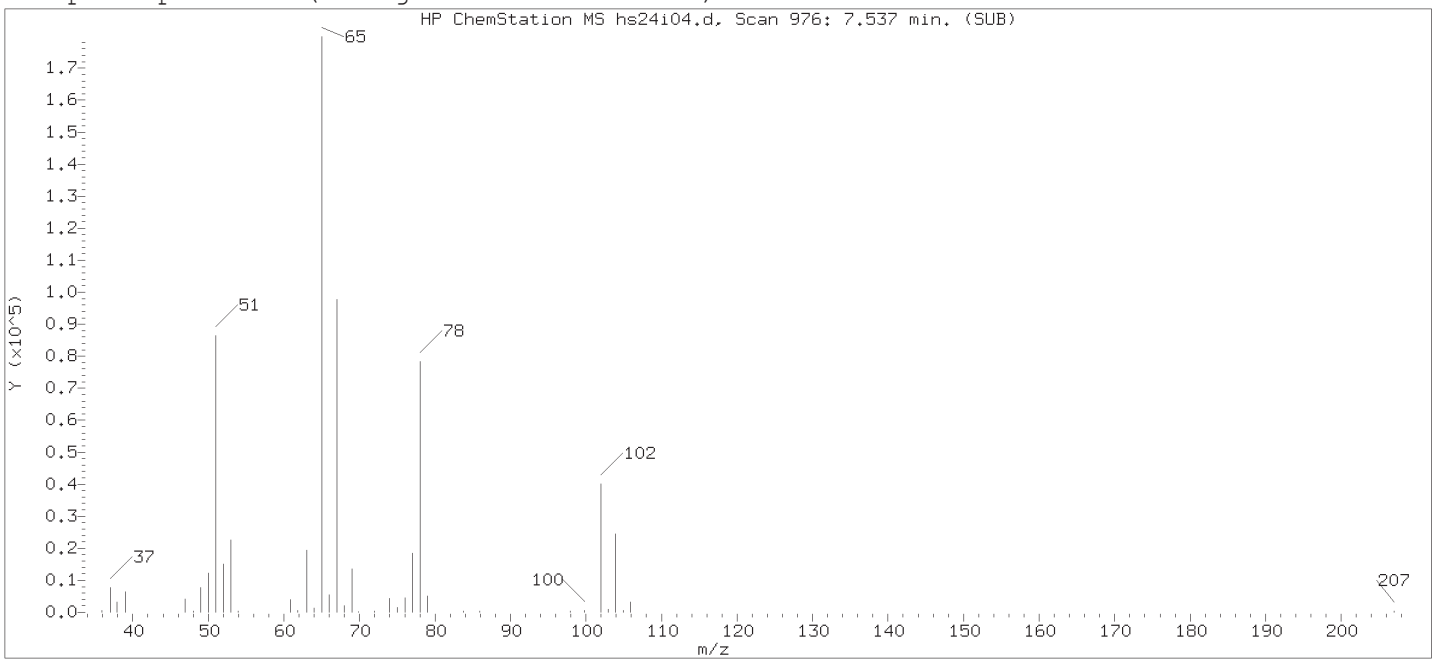
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 125039M
On-Column Amount (ng) : 10.2684
Integration start scan : 964 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

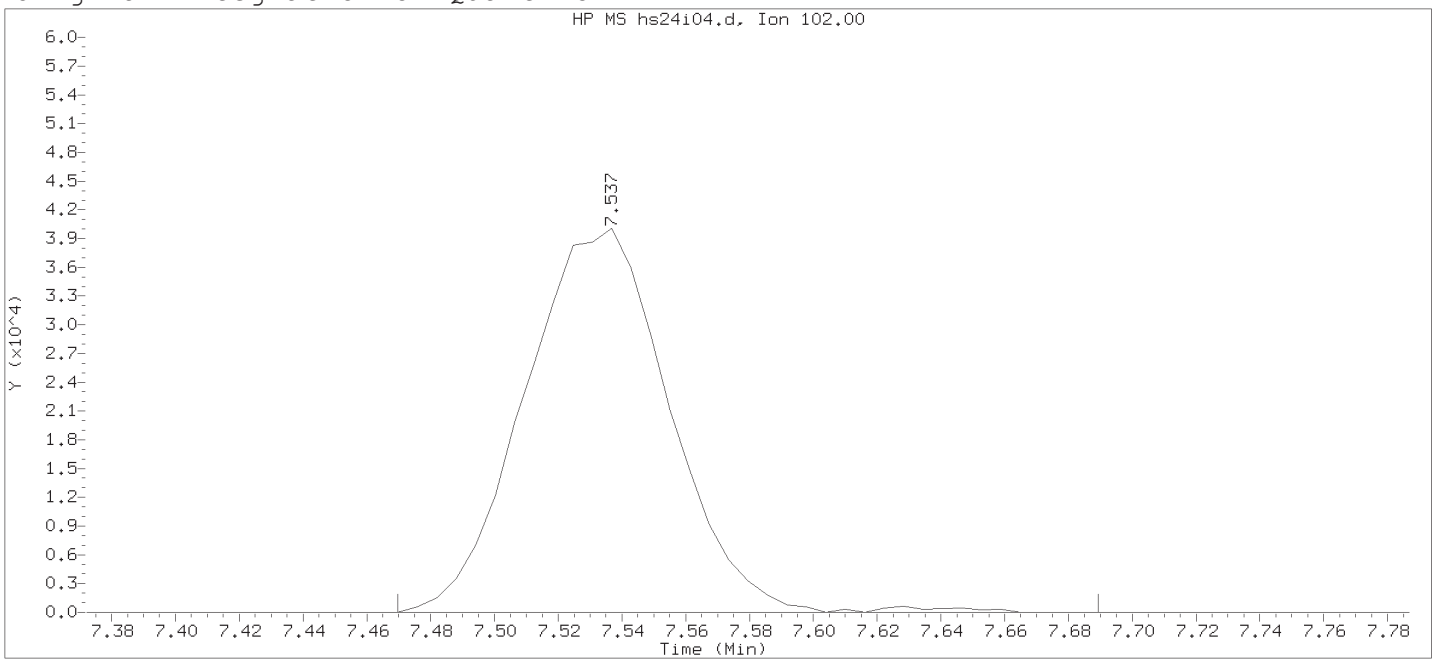
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

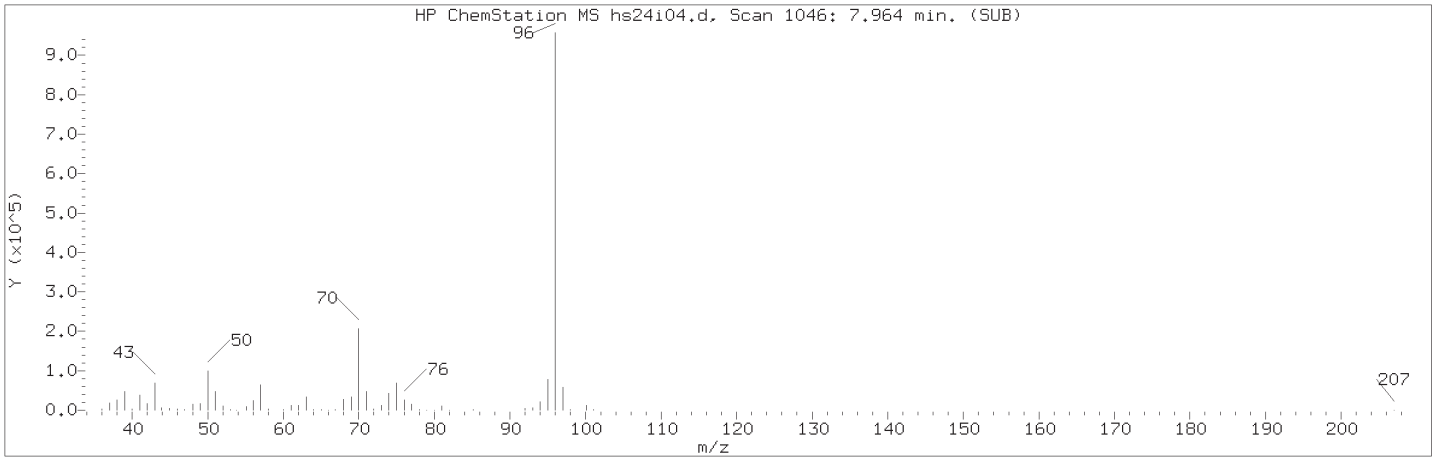
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

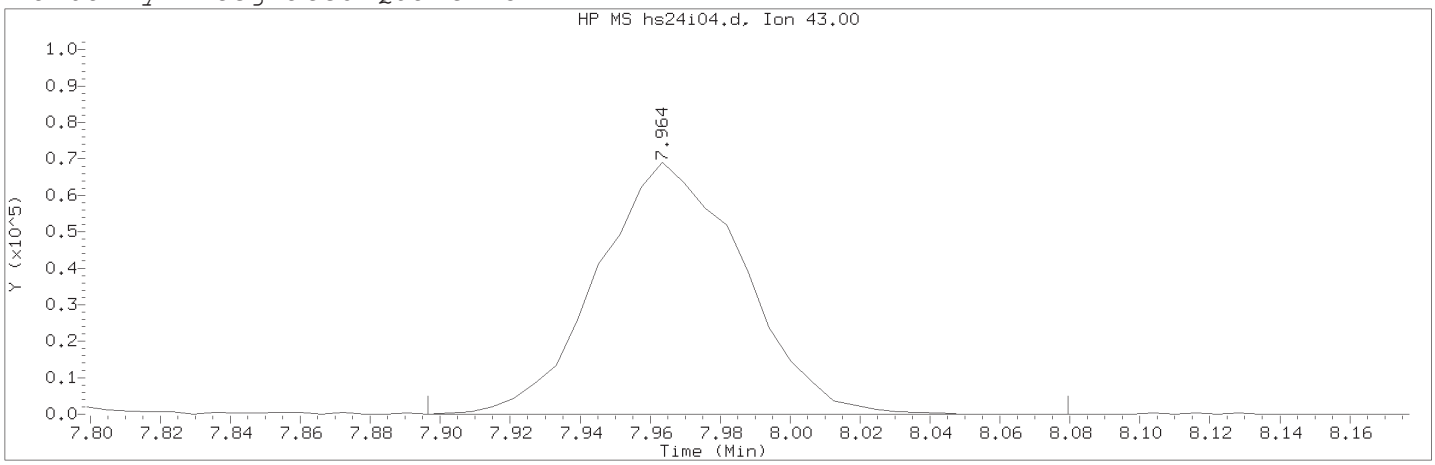
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 126184
On-column Amount (ng) : 10.2319
Integration start scan : 964 Integration stop scan: 1000
Y at integration start : 0 Y at integration end: 0

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

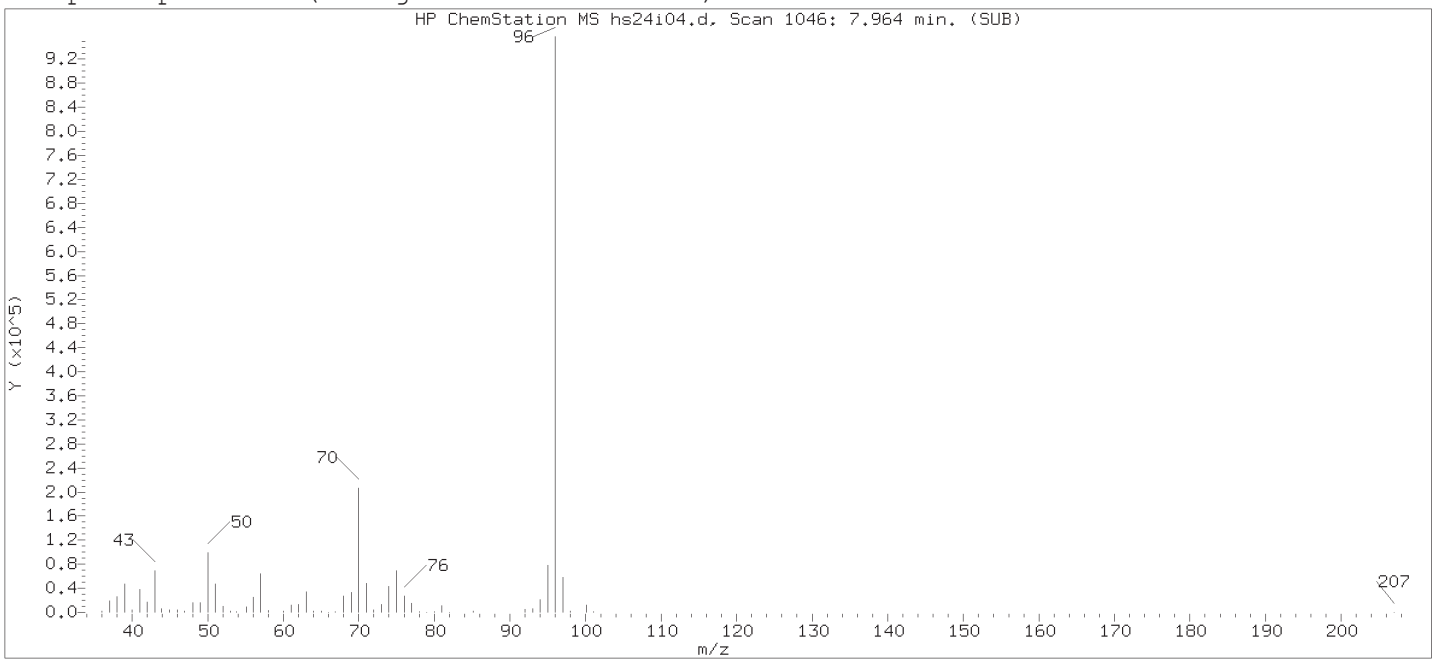
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 198879M
On-Column Amount (ng) : 1.9780
Integration start scan : 1034 Integration stop scan: 1064
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

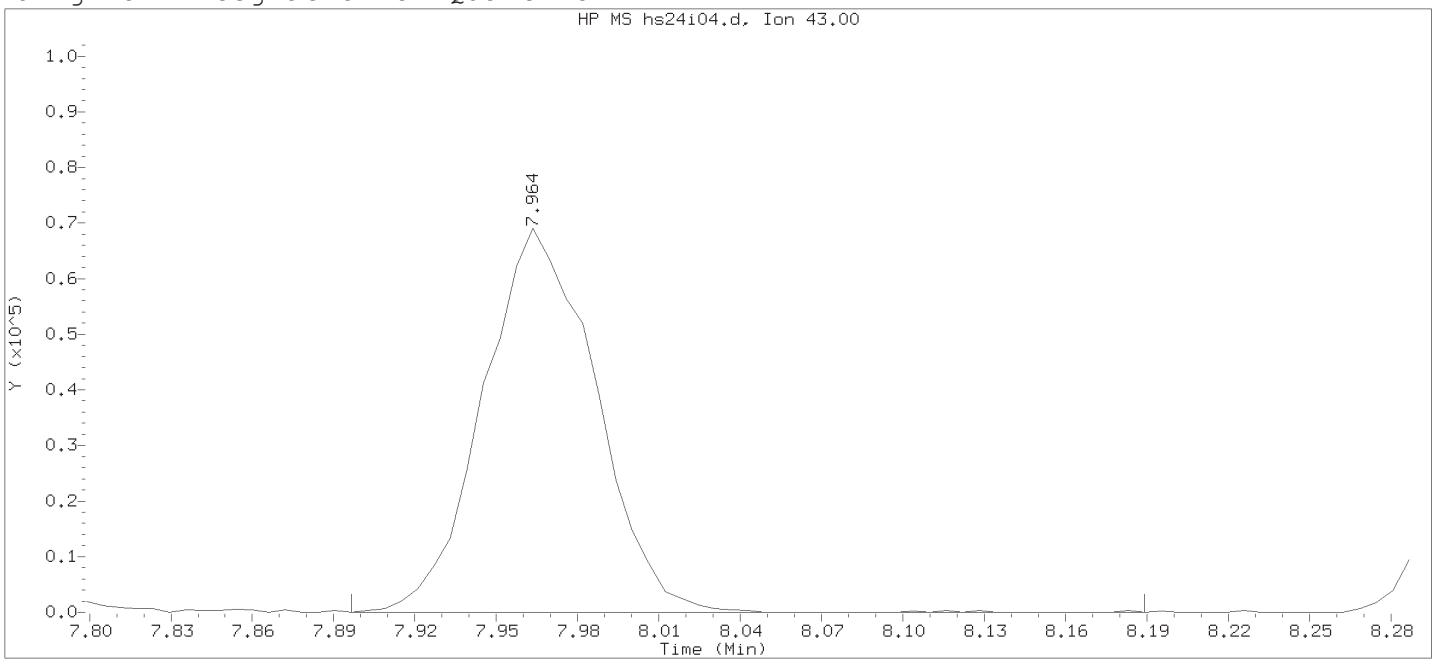
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

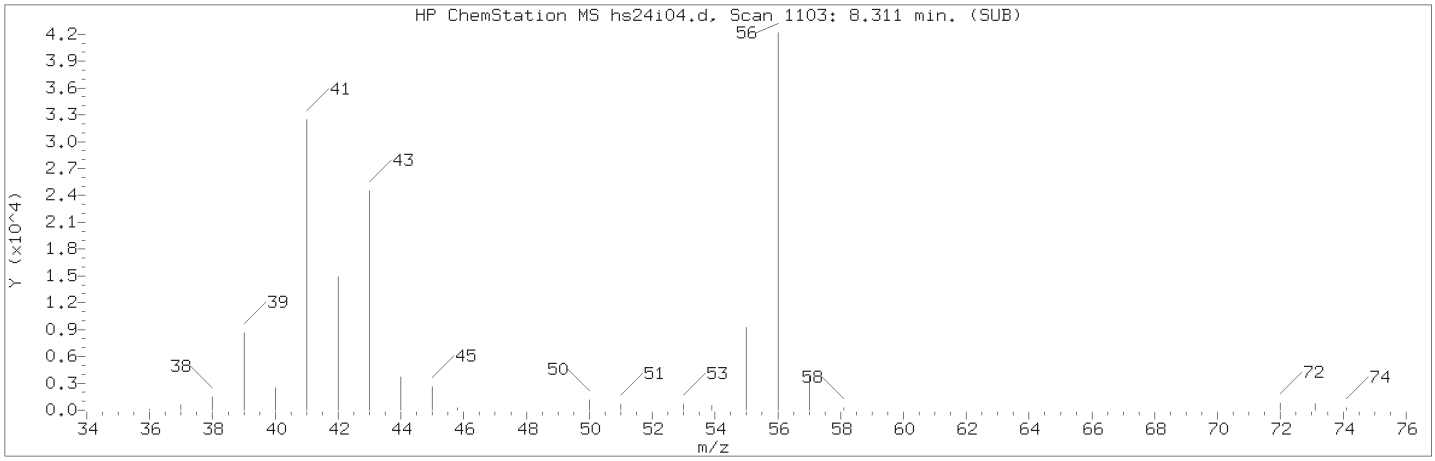
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

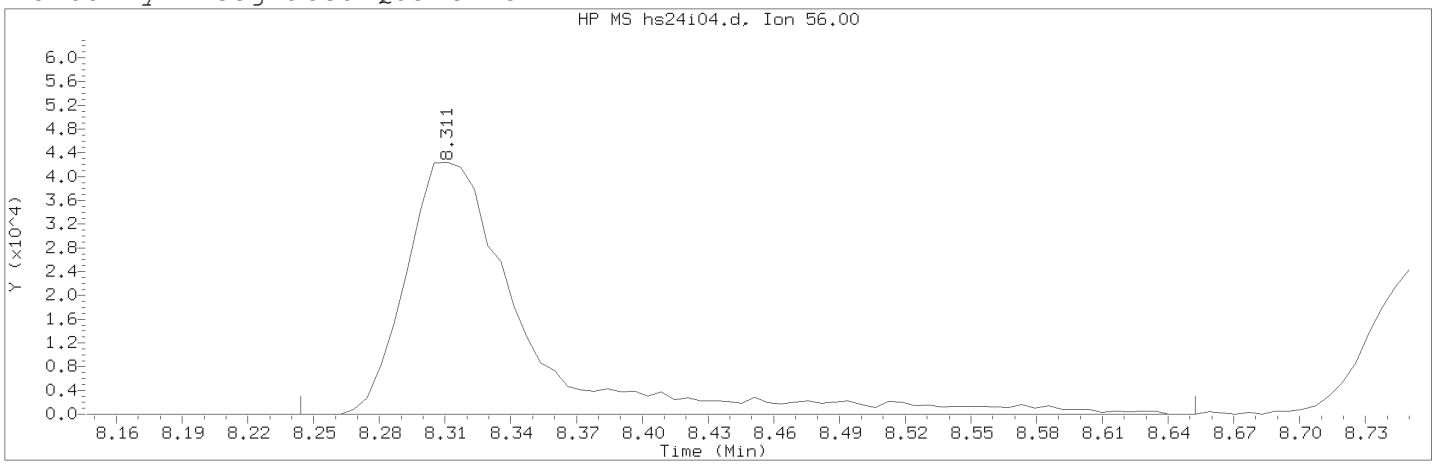
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area : 199330
On-column Amount (ng) : 1.8366
Integration start scan : 1034 Integration stop scan: 1082
Y at integration start : 0 Y at integration end: 0

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

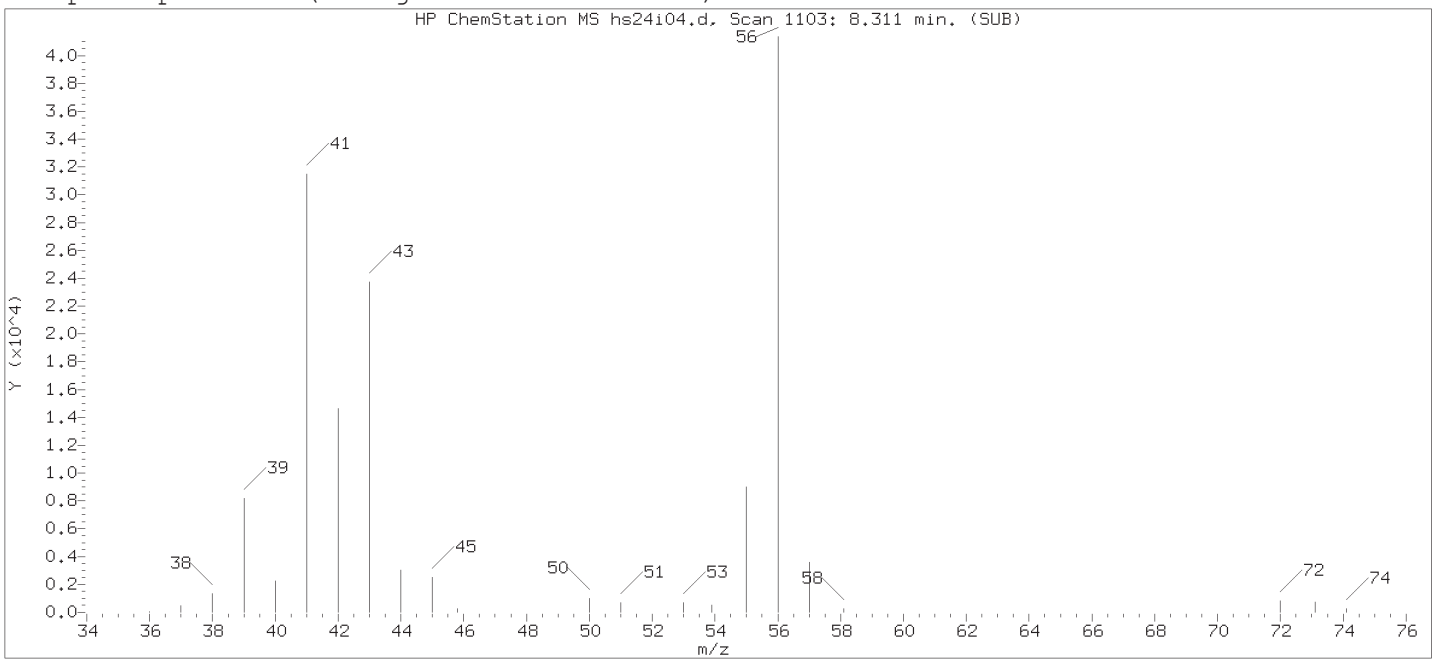
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area (flag) : 160778M
On-Column Amount (ng) : 194.8775
Integration start scan : 1091 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

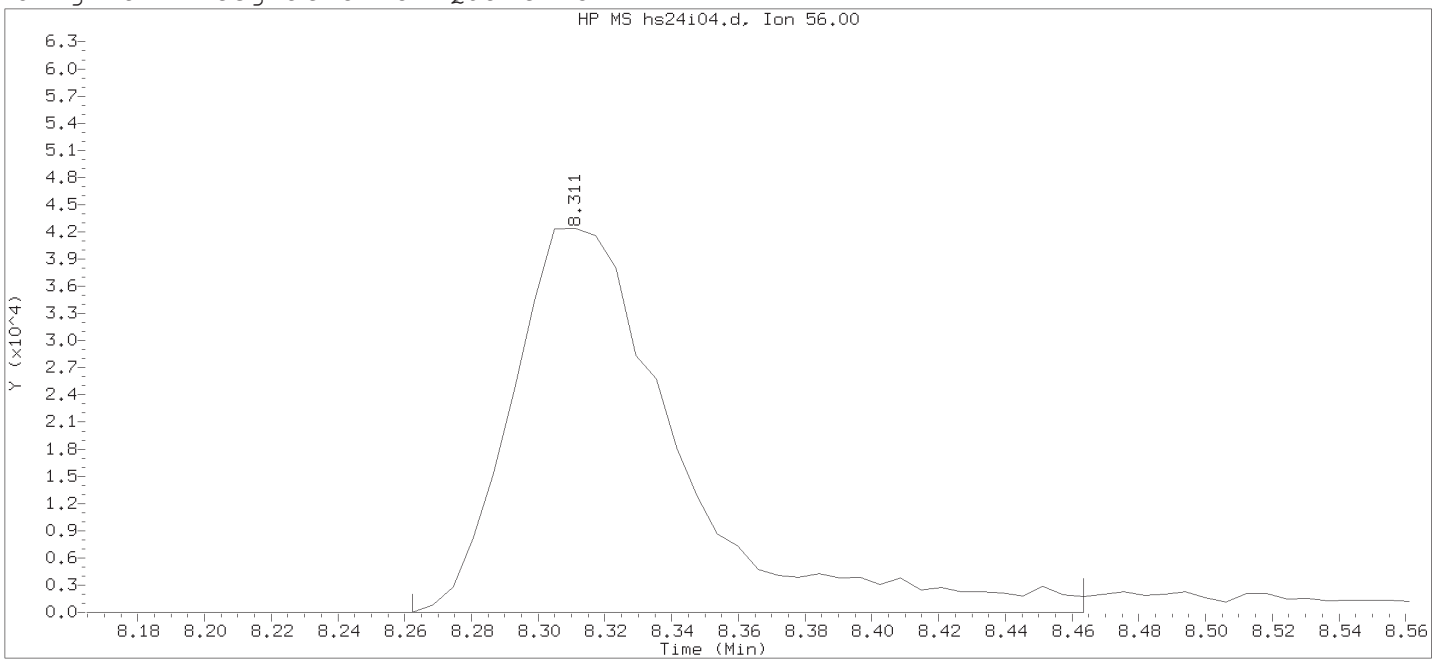
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

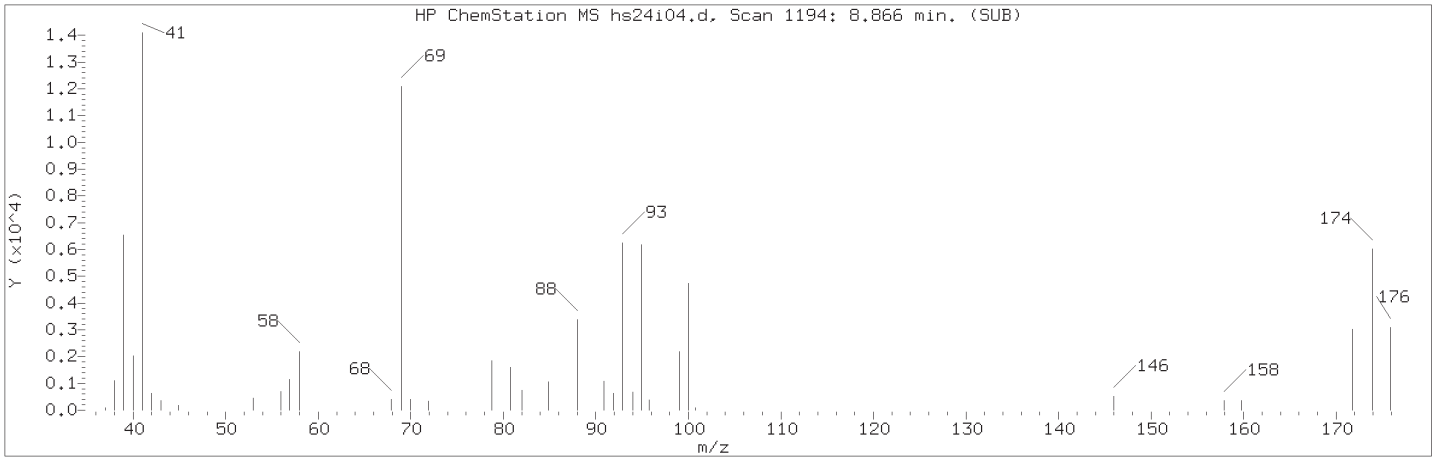
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

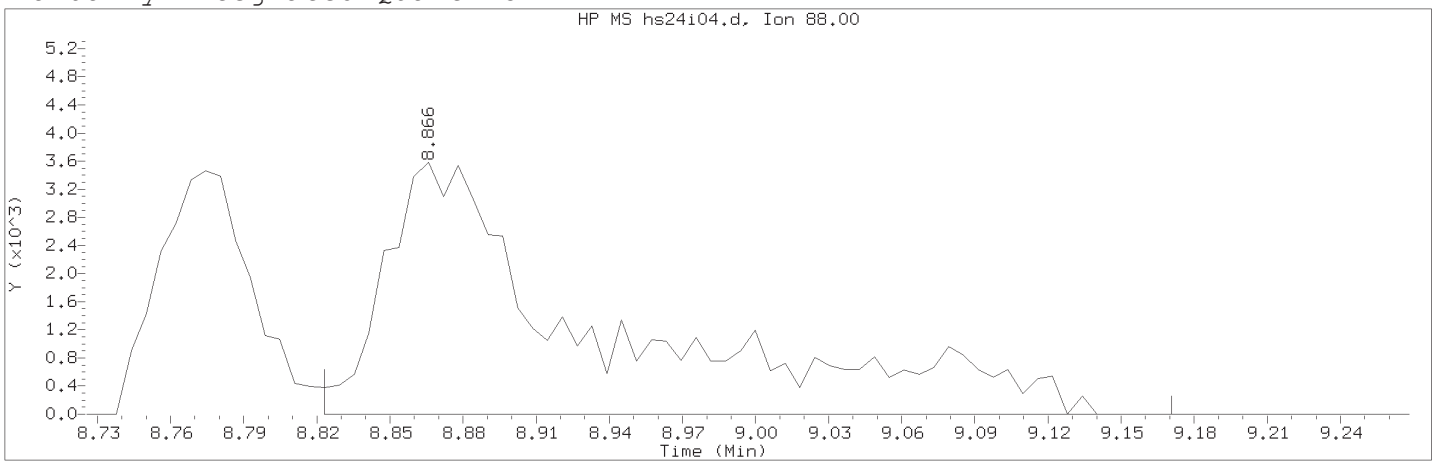
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area : 147095
On-column Amount (ng) : 168.2954
Integration start scan : 1094 Integration stop scan: 1127
Y at integration start : 0 Y at integration end: 0

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

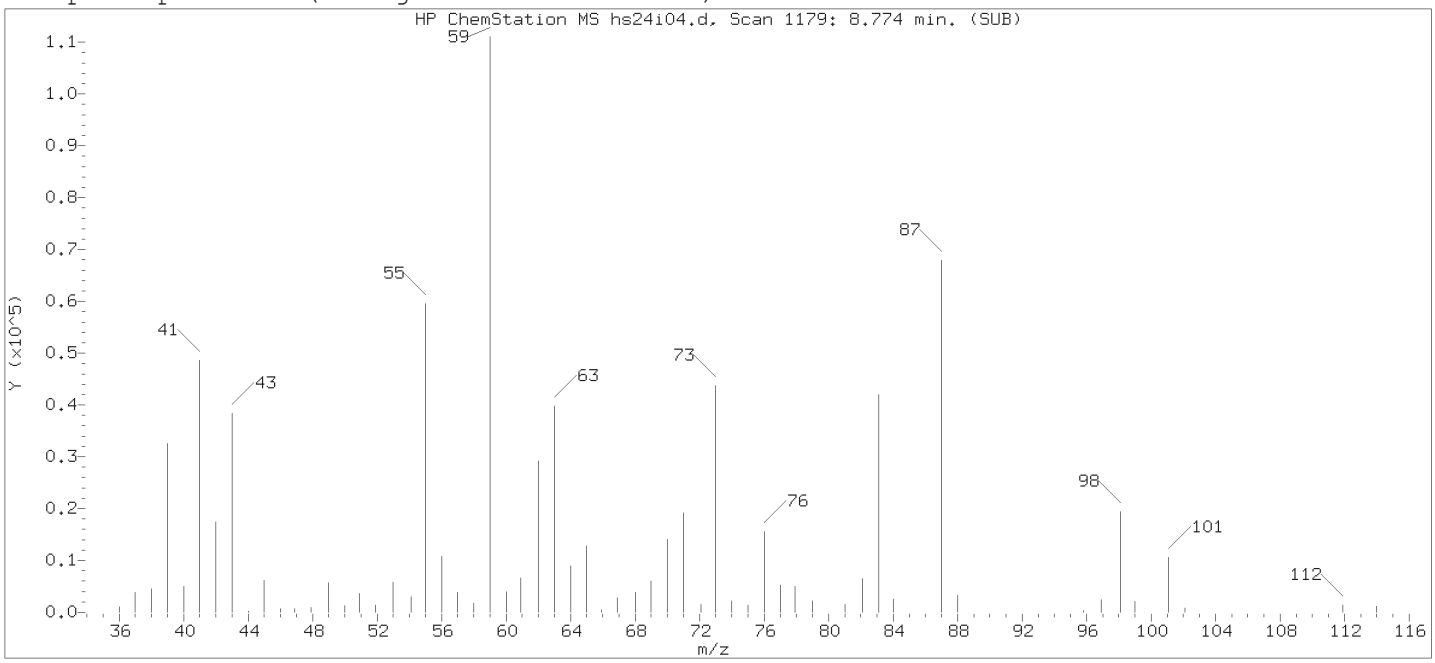
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 21749M
On-Column Amount (ng) : 109.4886
Integration start scan : 1186 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

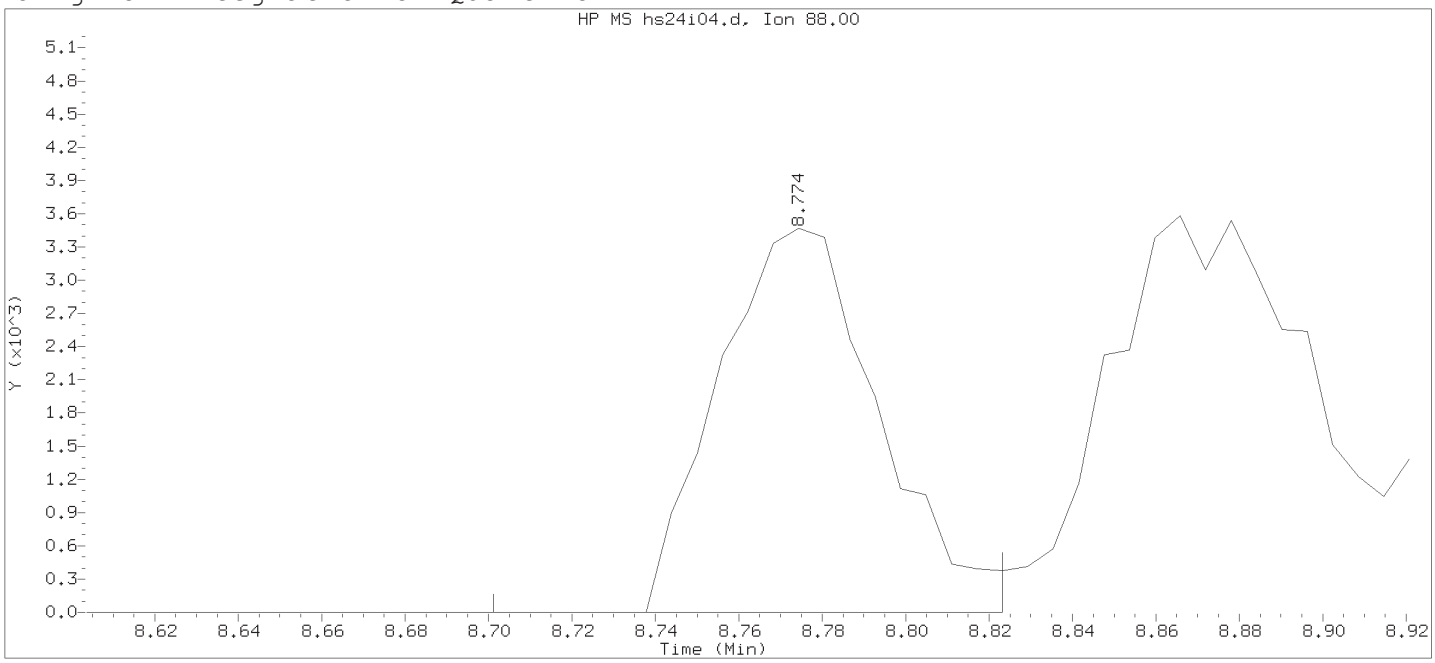
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

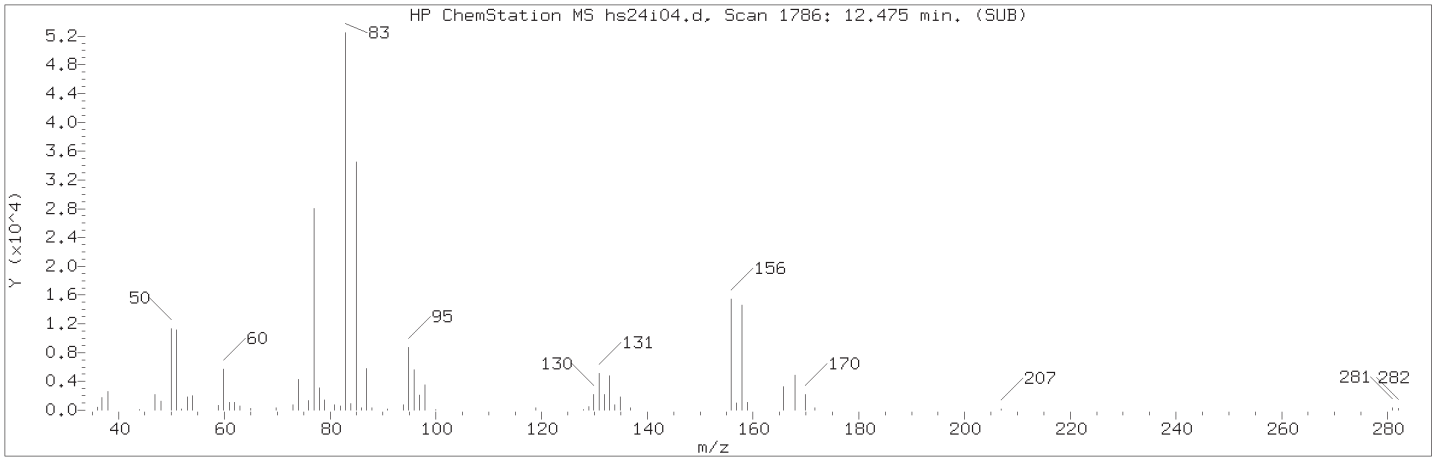
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

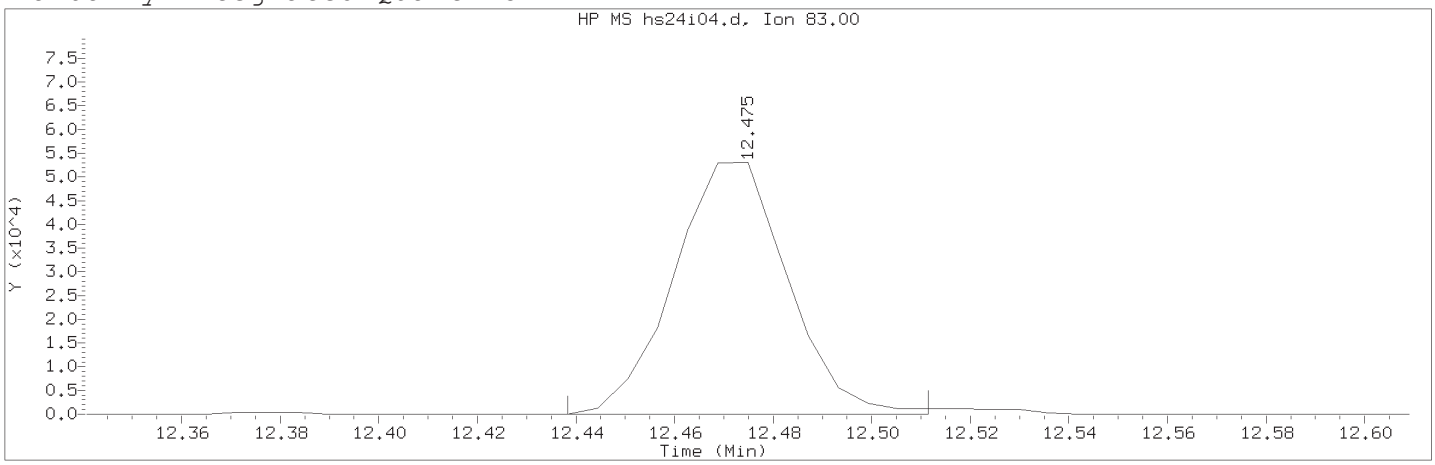
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 9210		
On-column Amount (ng)	: 66.8956		
Integration start scan	: 1166	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

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

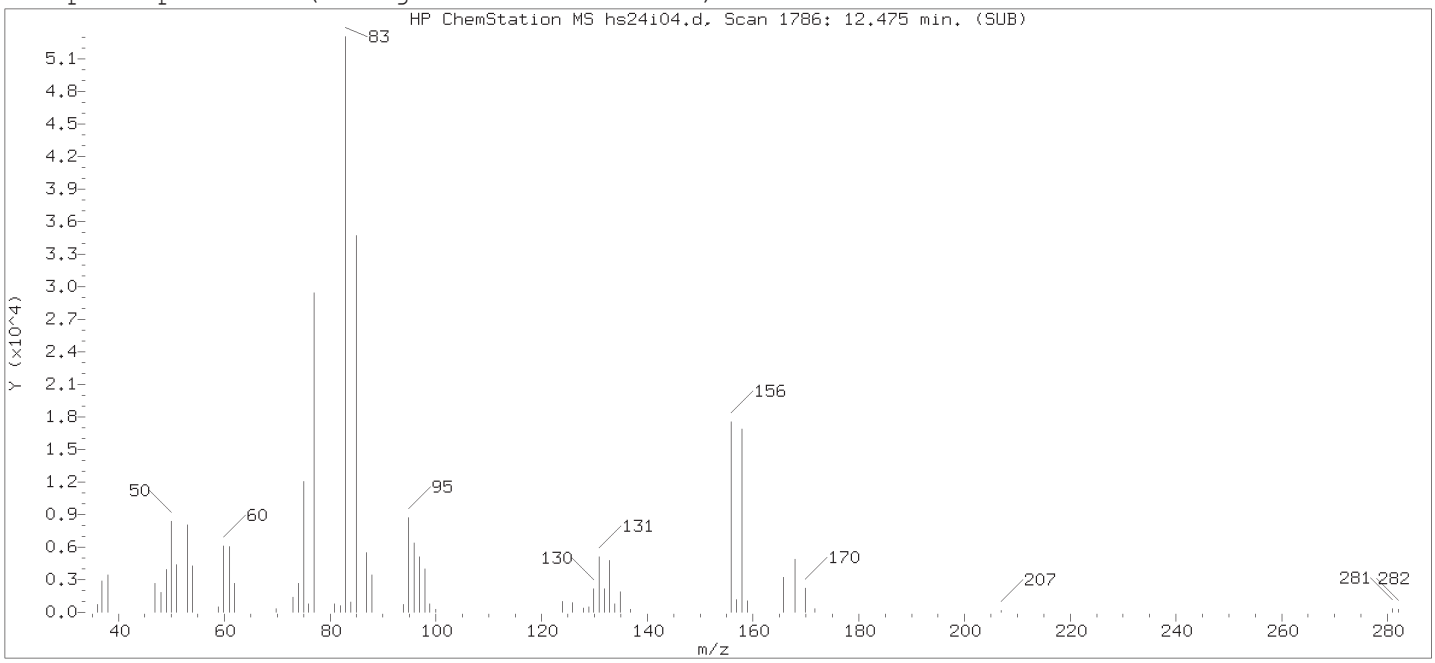
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 85286M
On-Column Amount (ng) : 1.9375
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

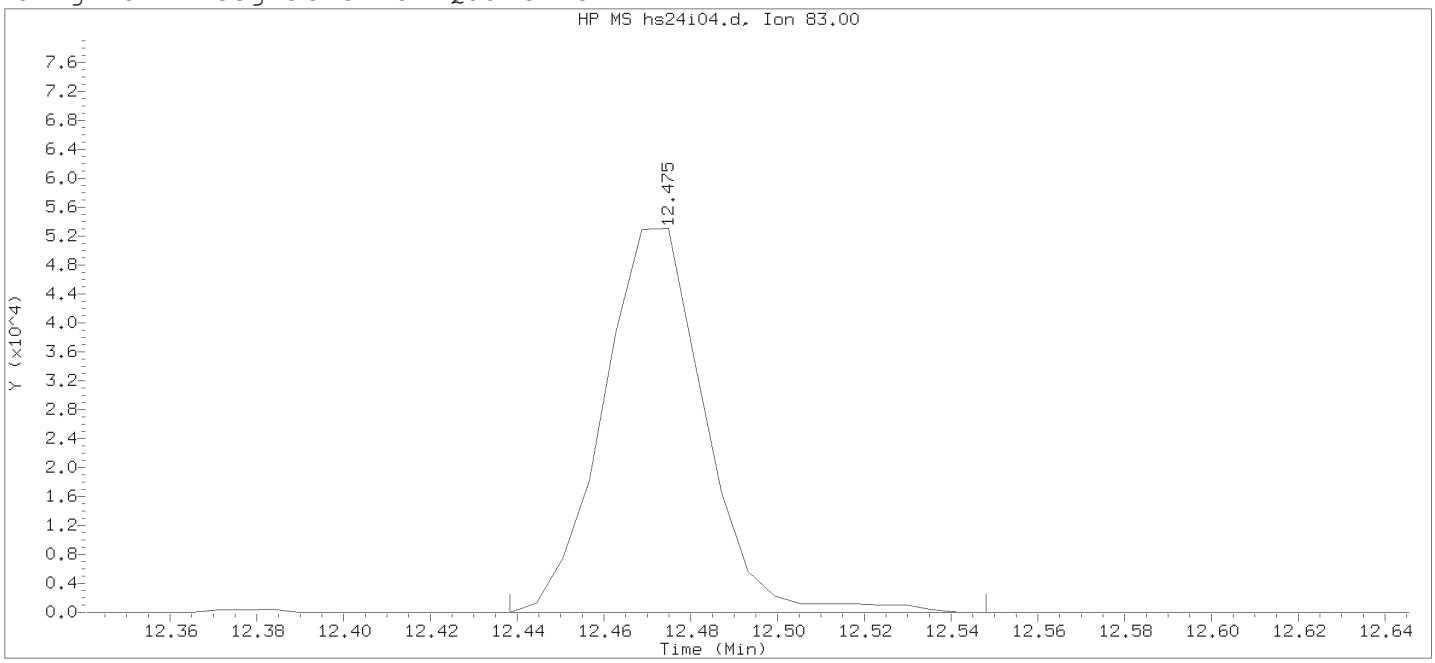
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

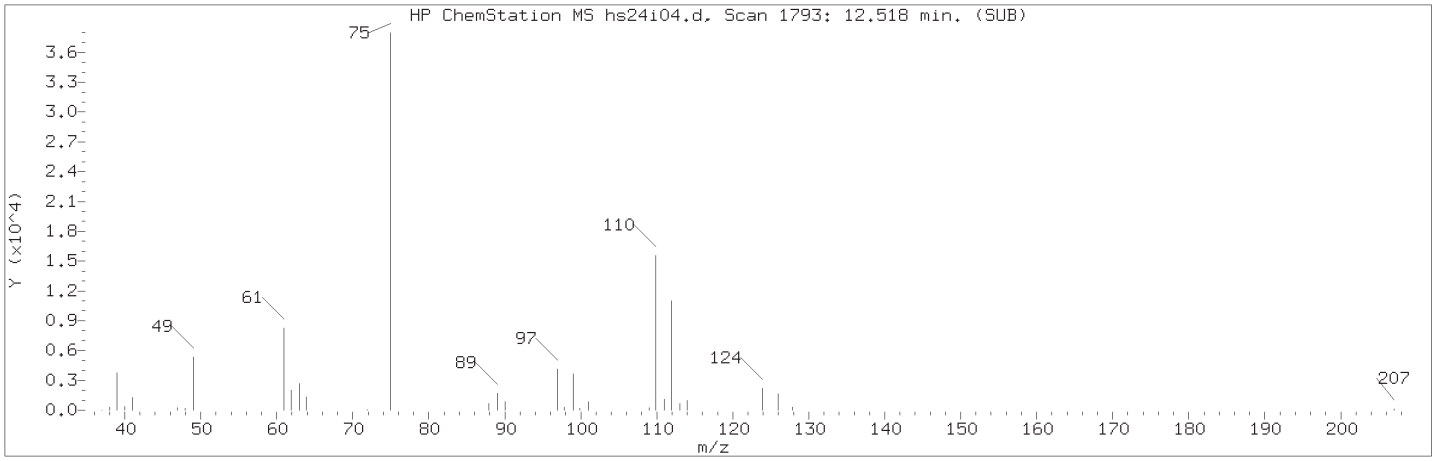
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

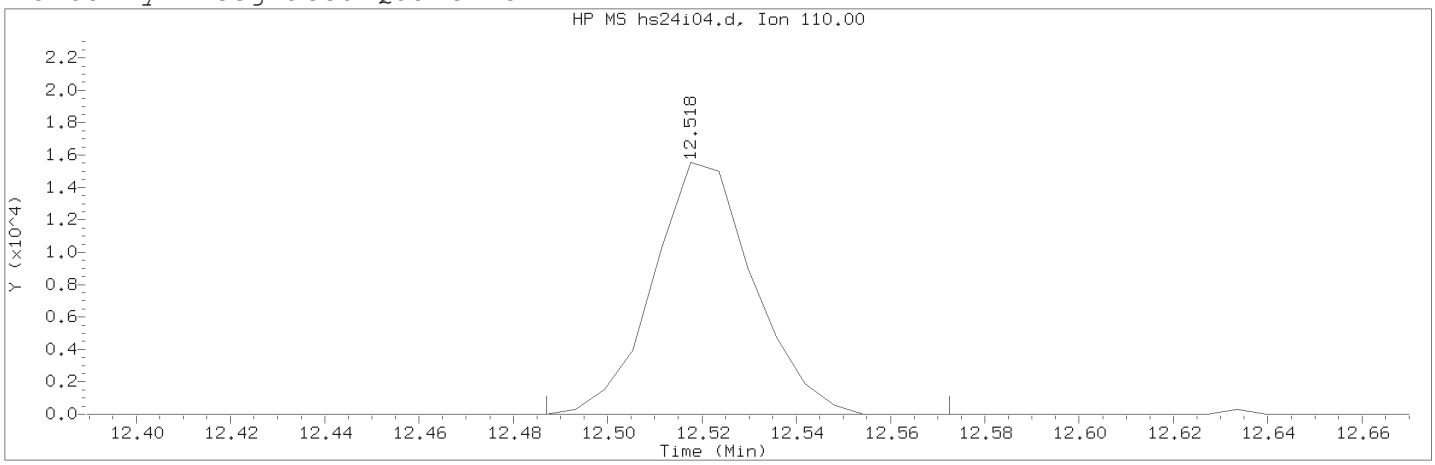
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 86557
On-column Amount (ng) : 1.8966
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

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



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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

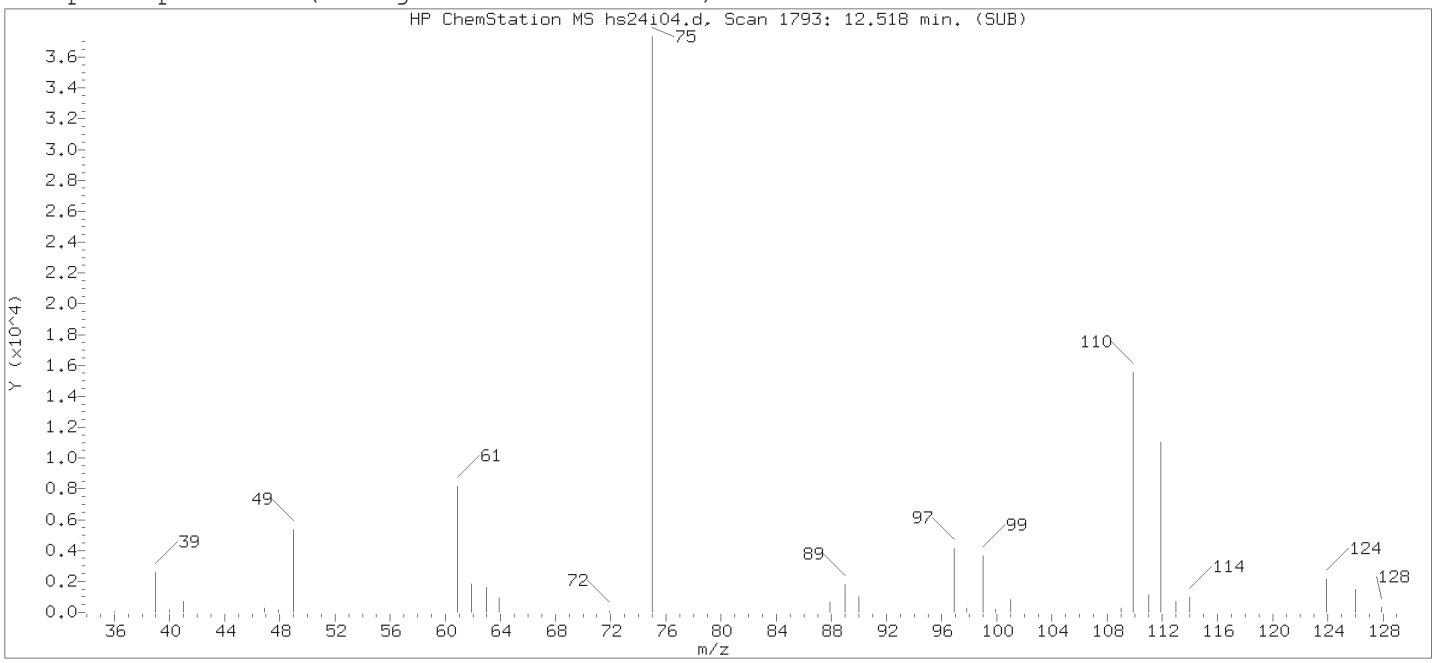
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area (flag) : 22957M
On-Column Amount (ng) : 2.0173
Integration start scan : 1787 Integration stop scan: 1801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

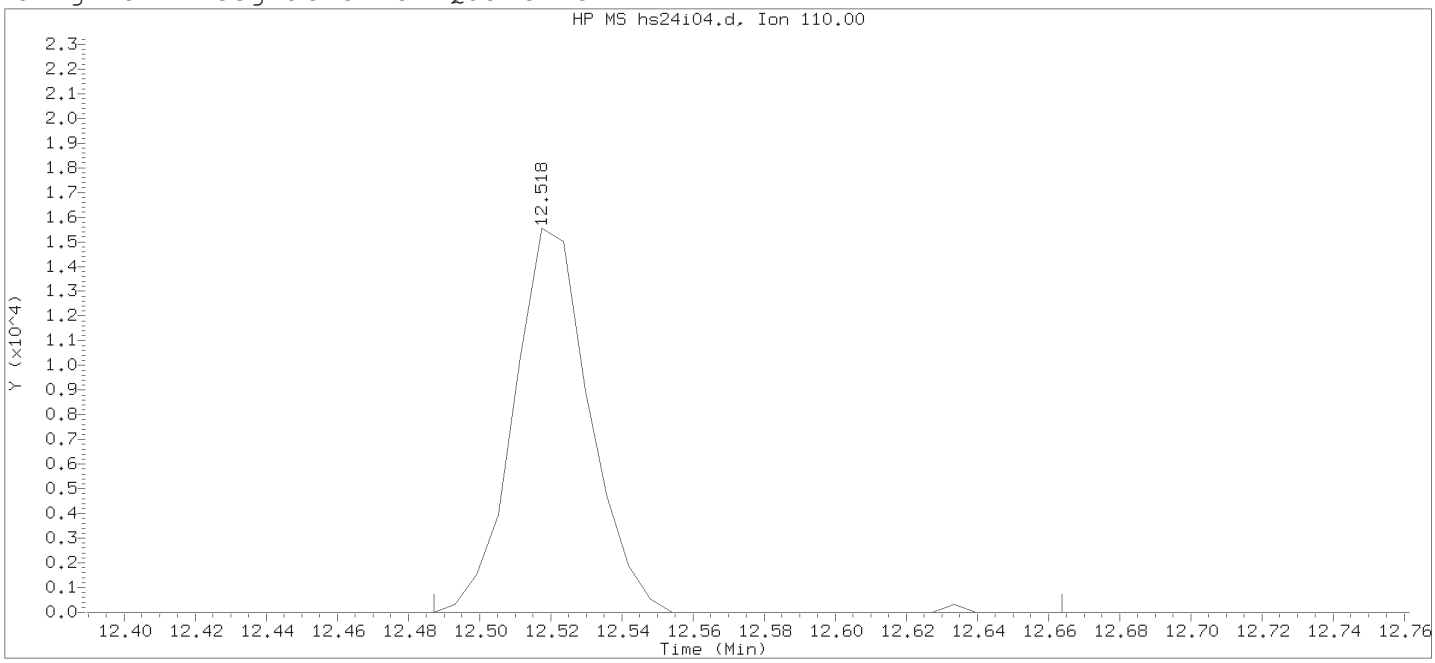
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

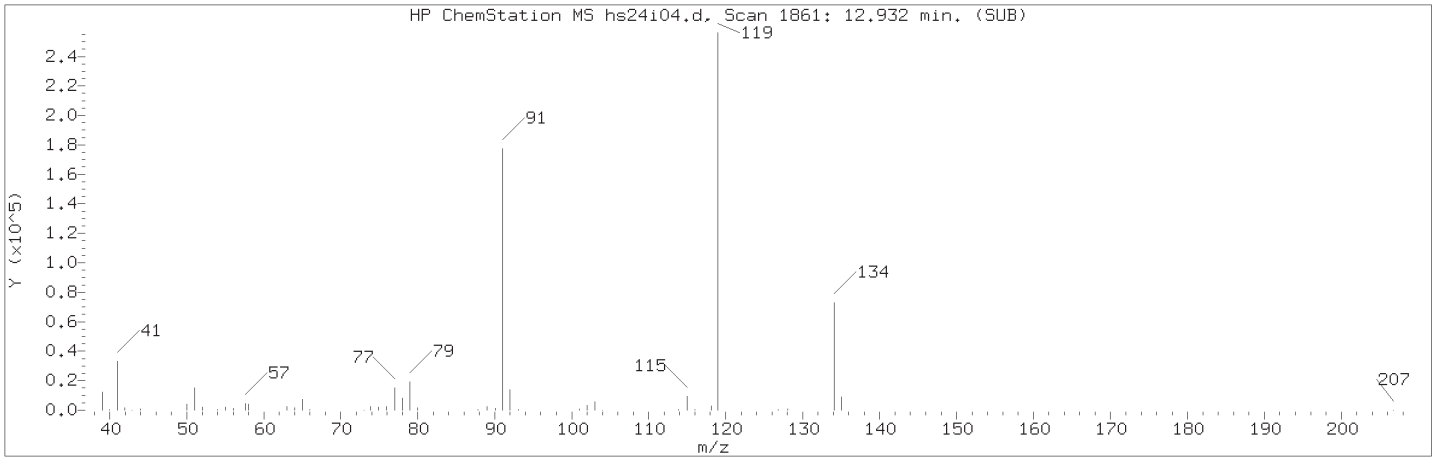
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

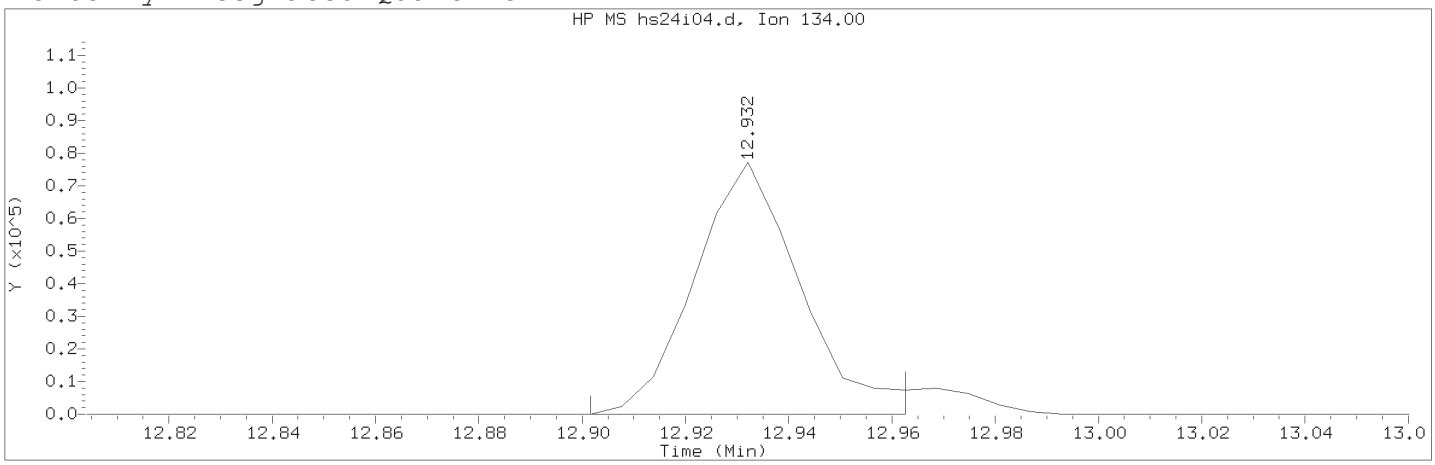
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area : 23069
On-column Amount (ng) : 2.0019
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

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

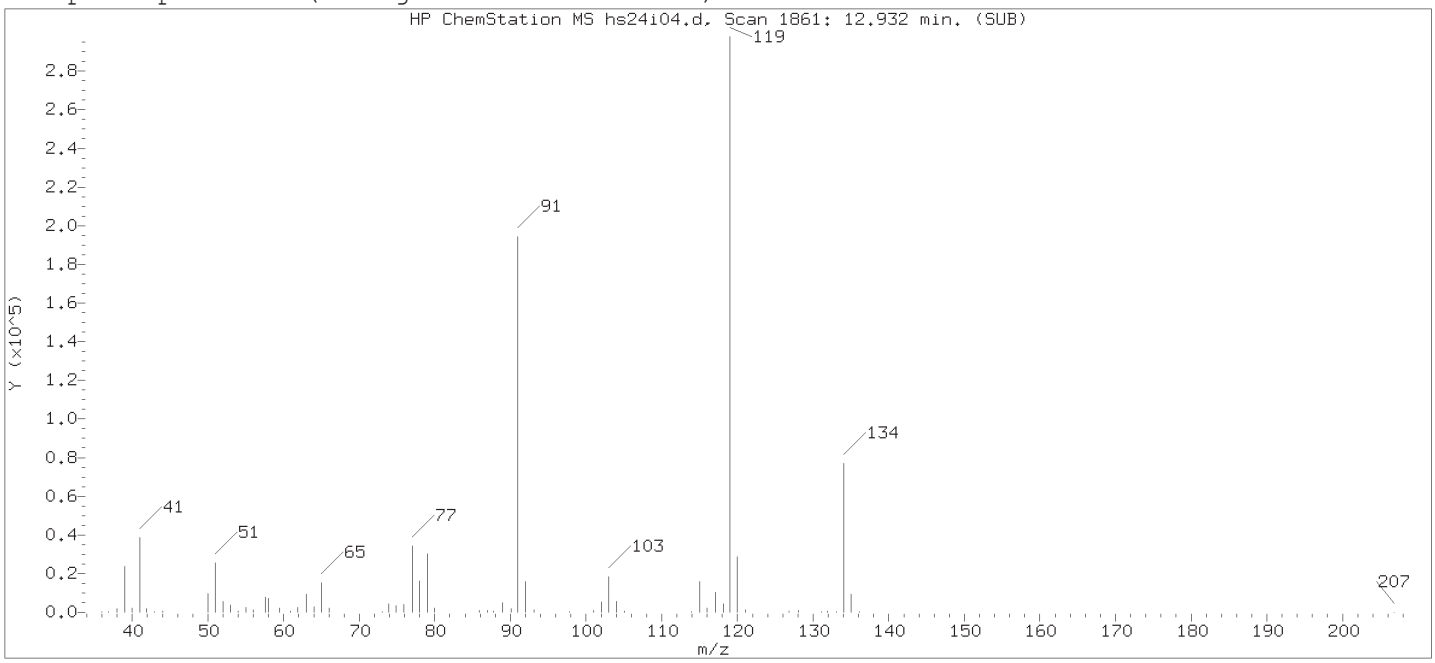
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 110083M
On-Column Amount (ng) : 2.0535
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

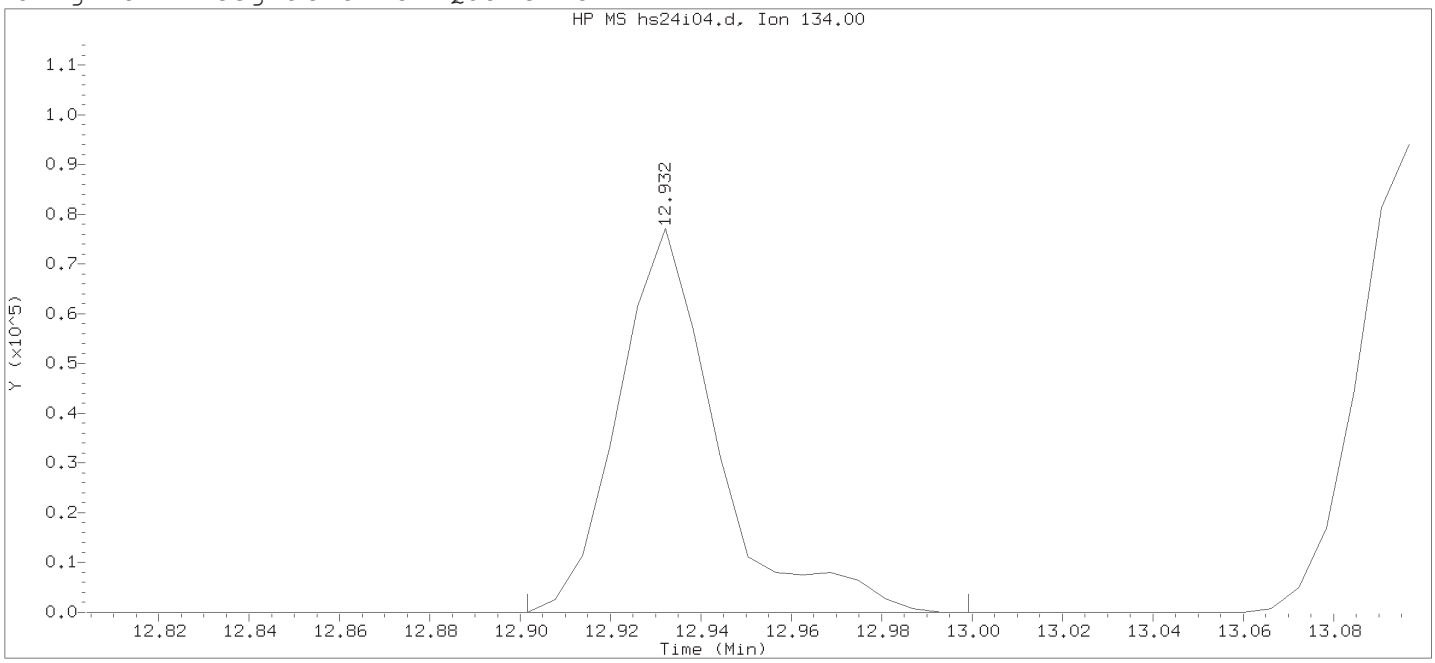
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

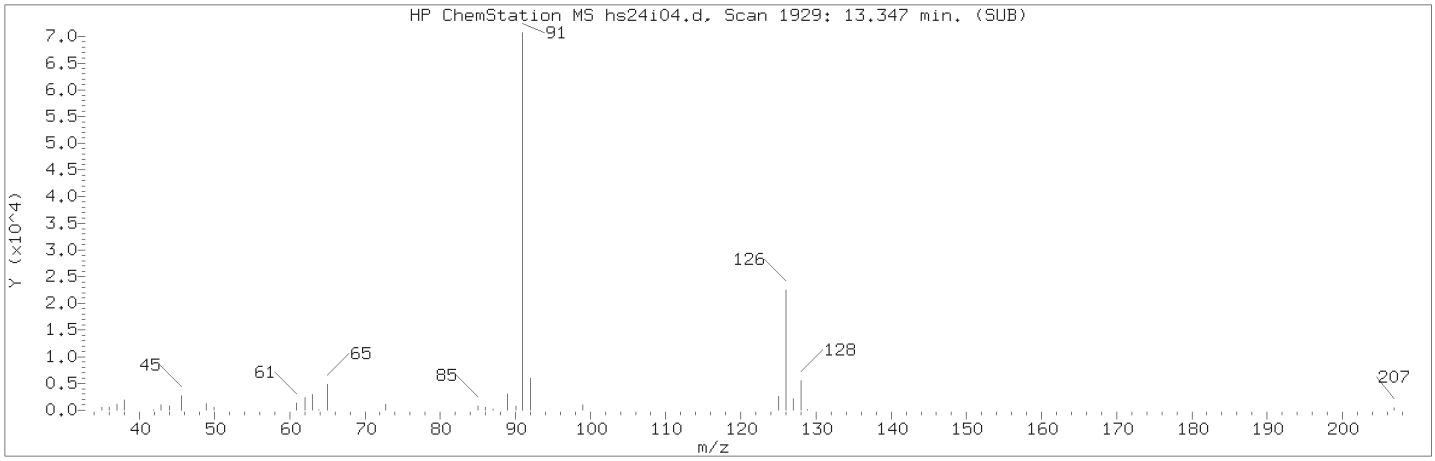
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

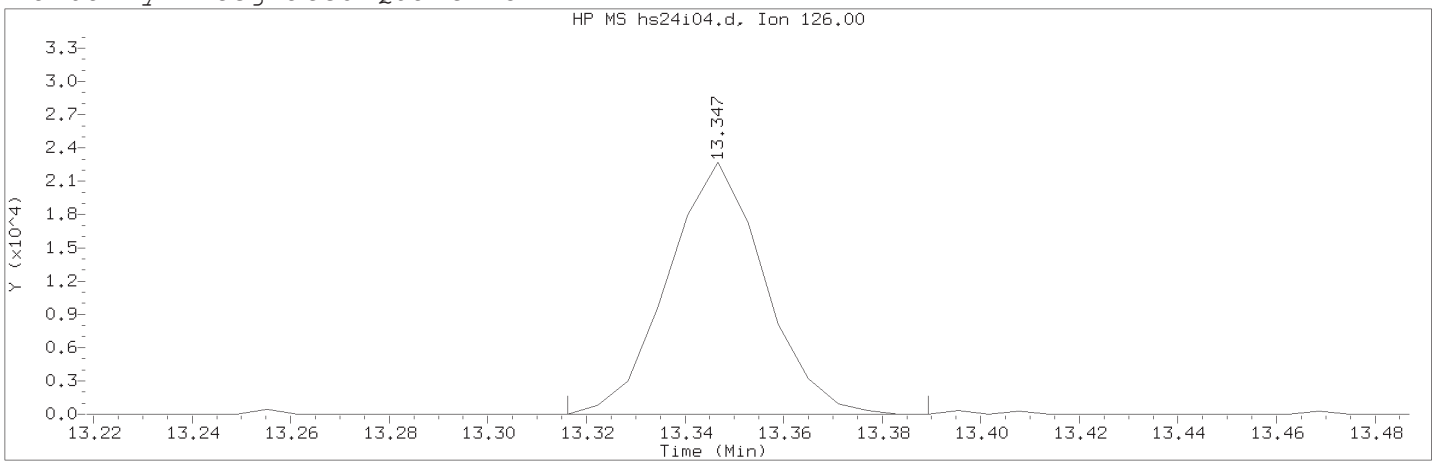
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 116606
On-column Amount (ng) : 2.0344
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

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

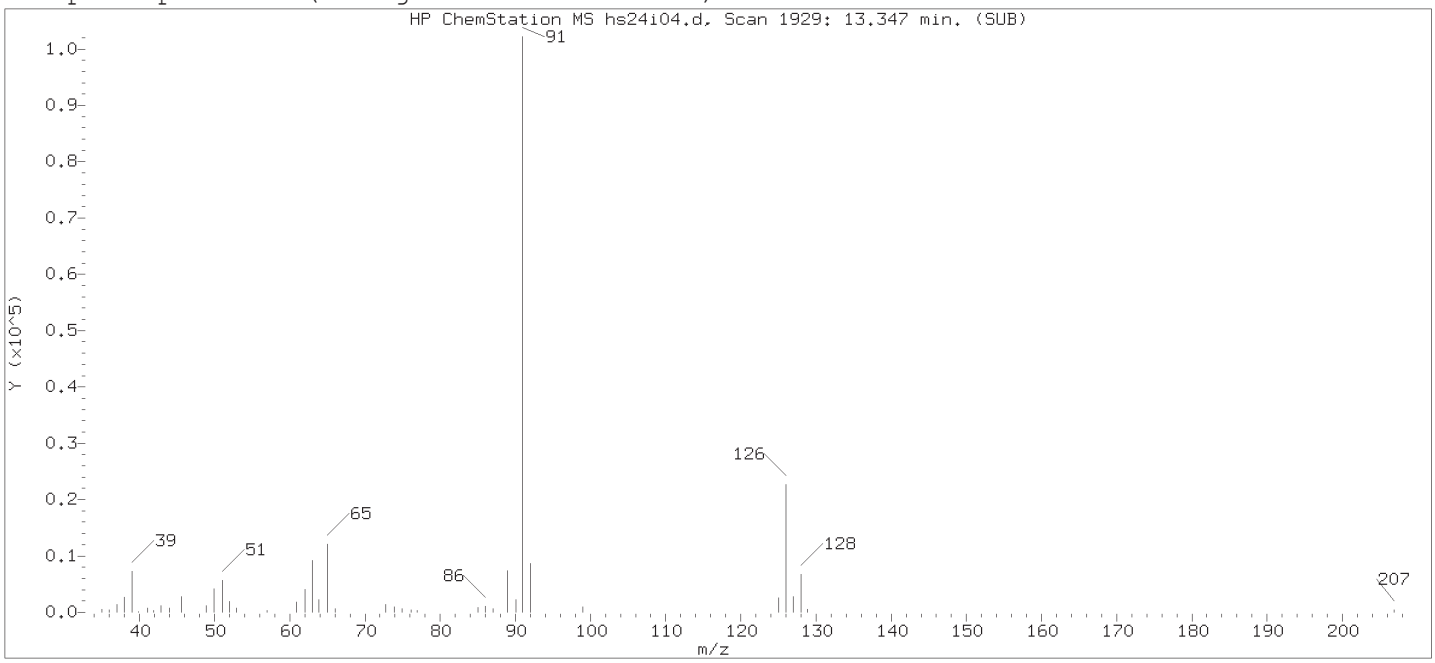
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 30686M
On-Column Amount (ng) : 1.9284
Integration start scan : 1923 Integration stop scan: 1935
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

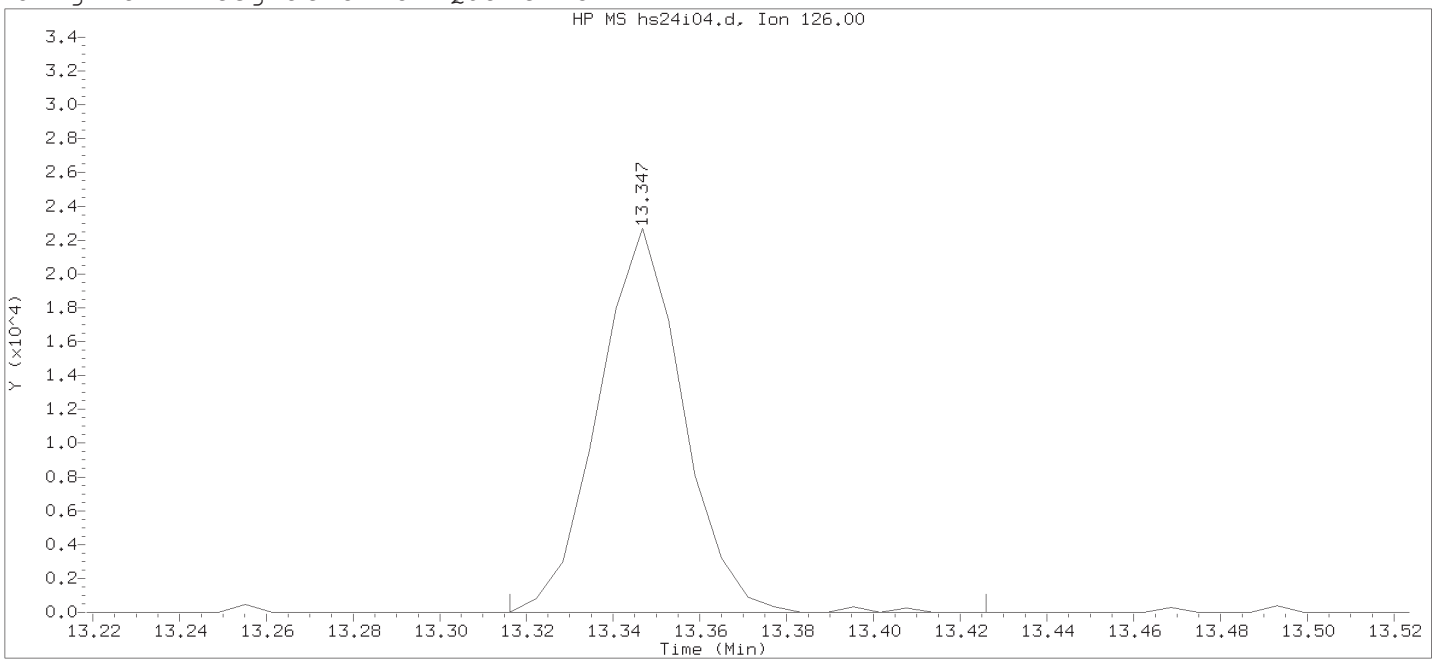
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



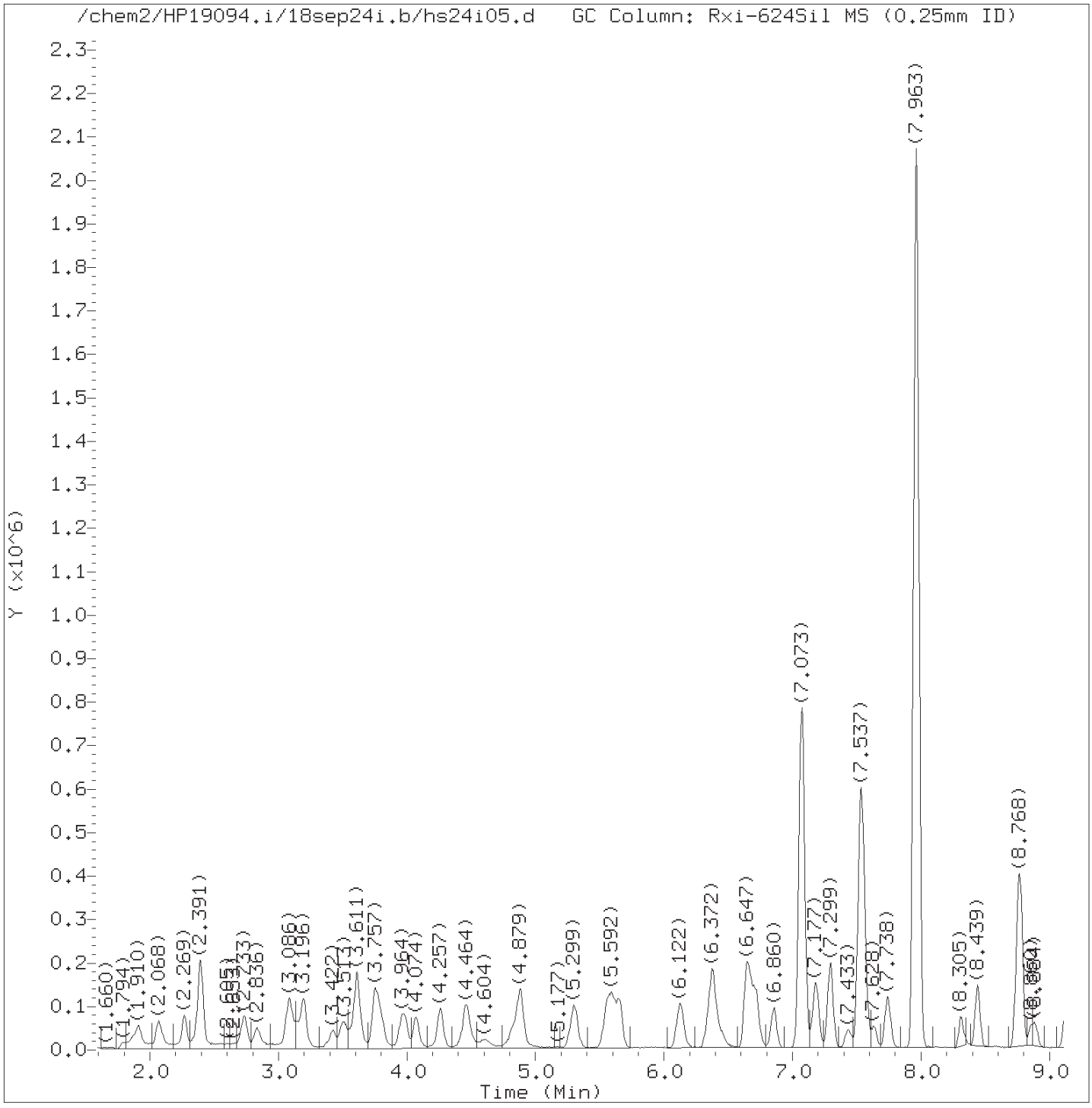
Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

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)

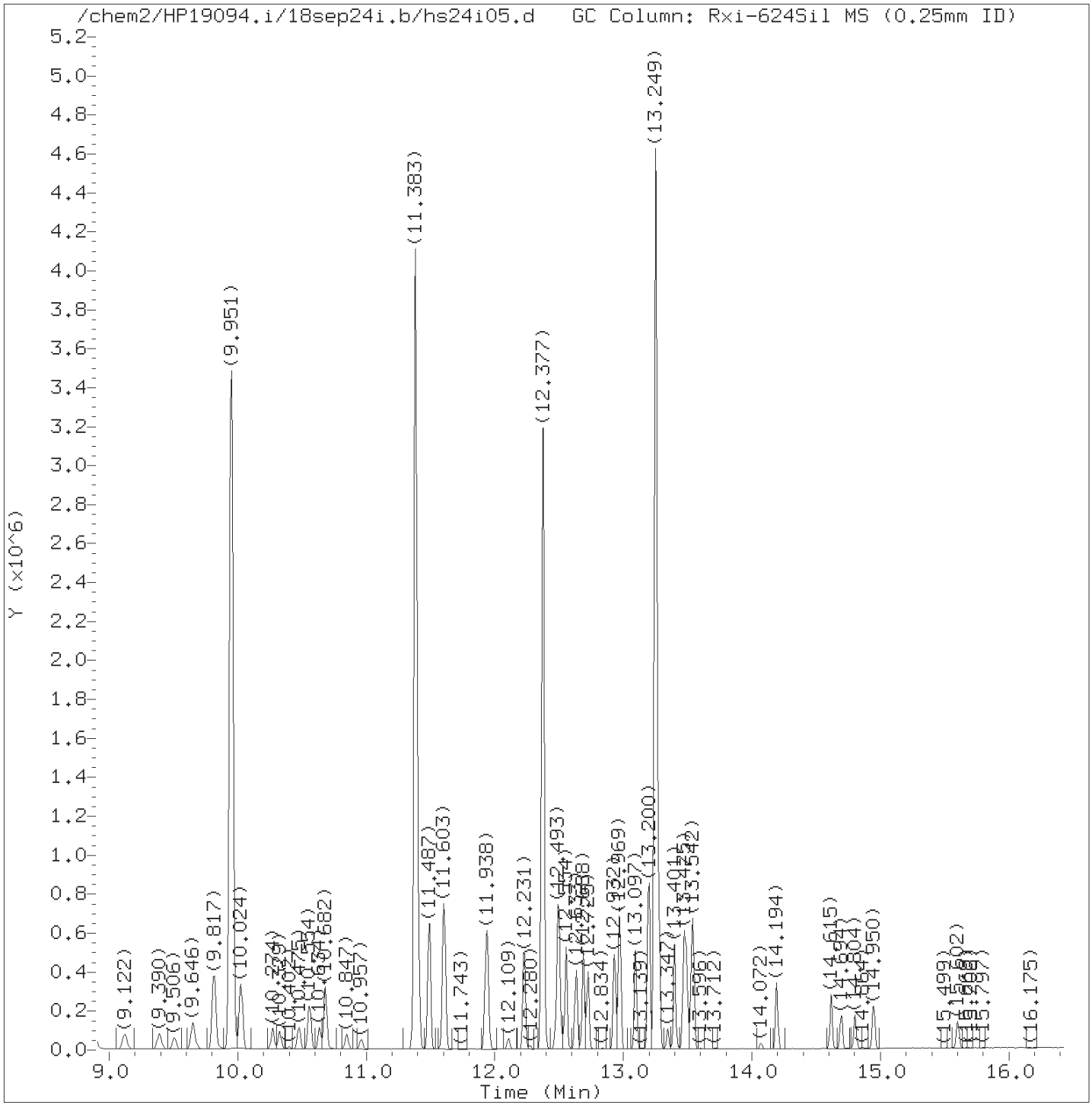
Target Revision 3.5

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.

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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.
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$ = Compound is a surrogate standard.

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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

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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

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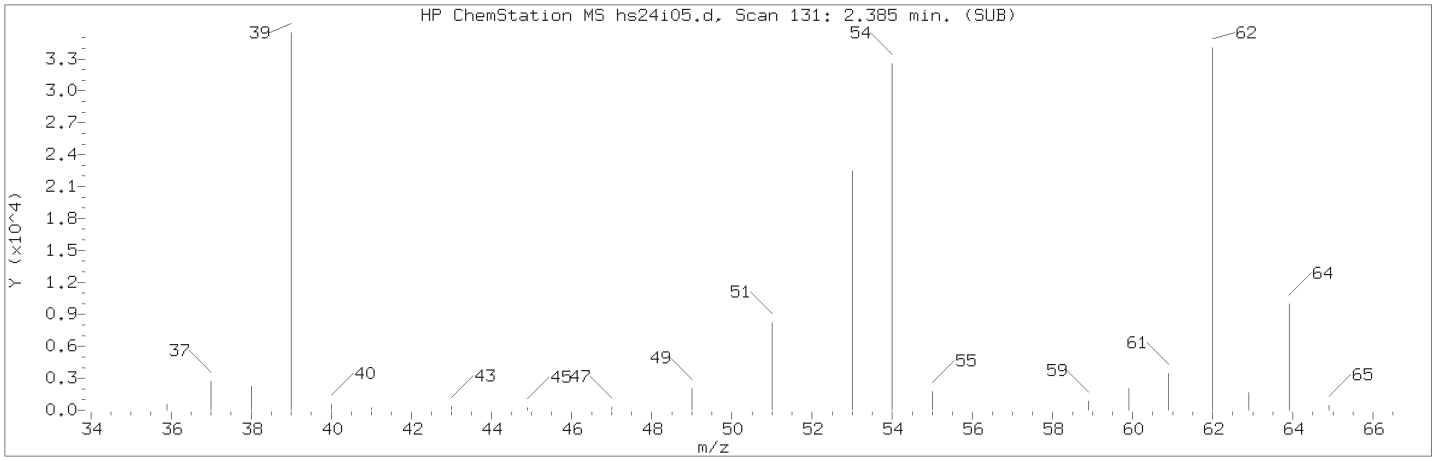
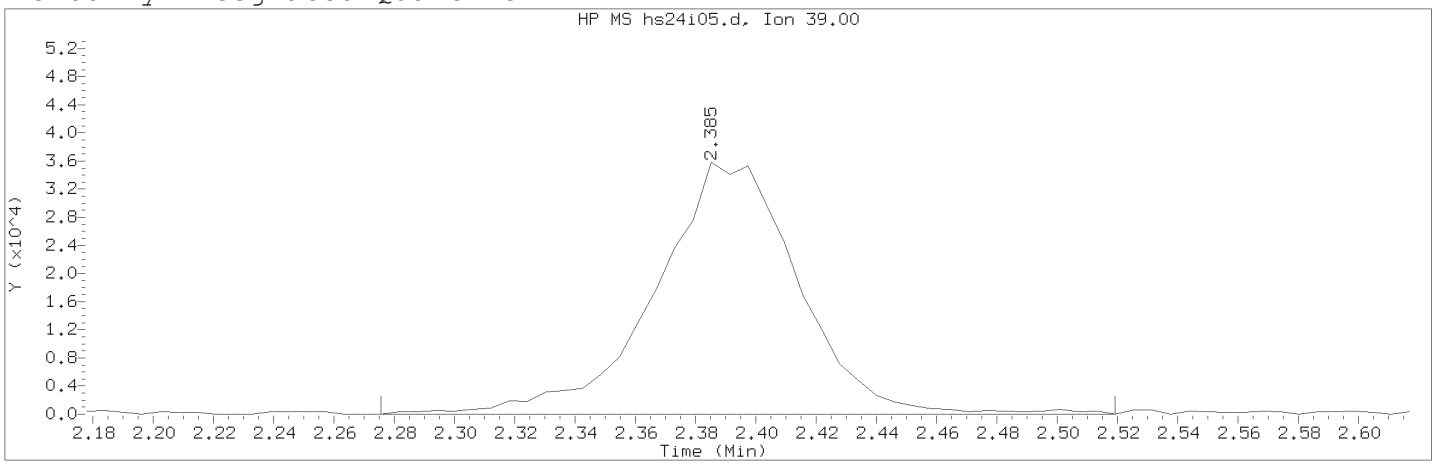
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

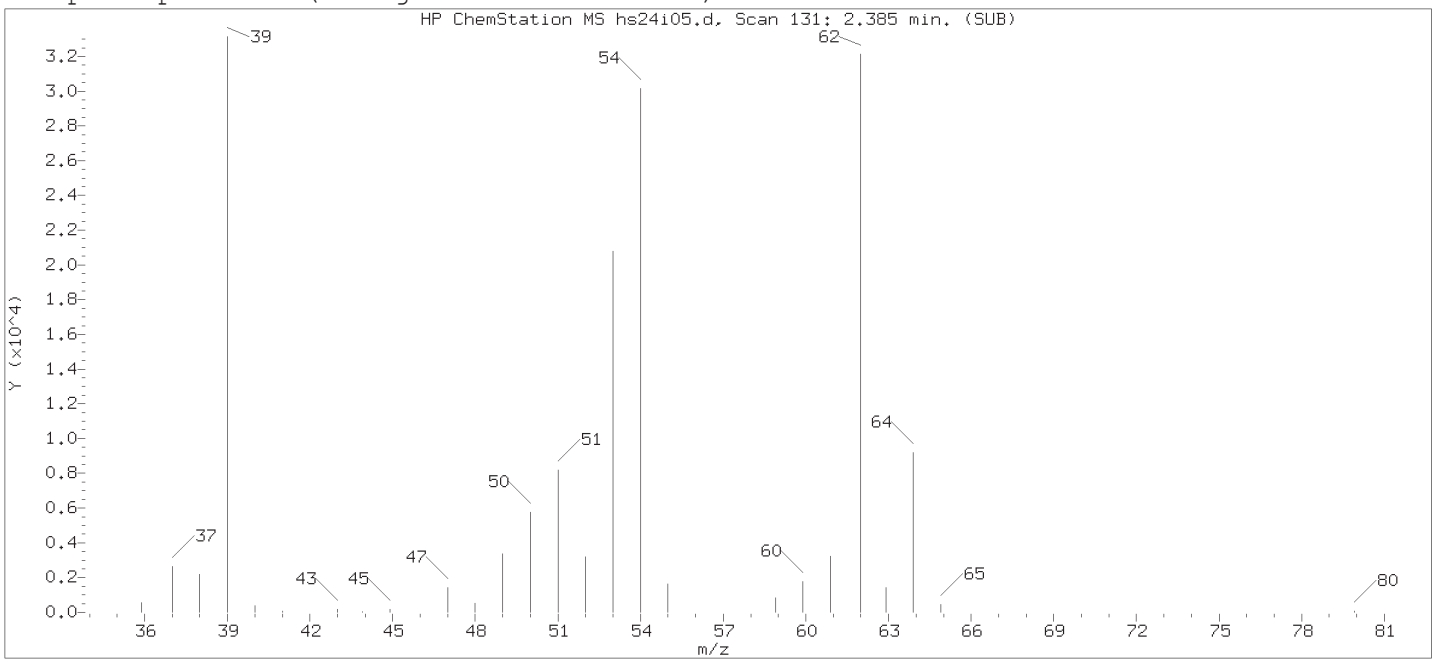
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area (flag) : 118482M
On-Column Amount (ng) : 1.0578
Integration start scan : 112 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

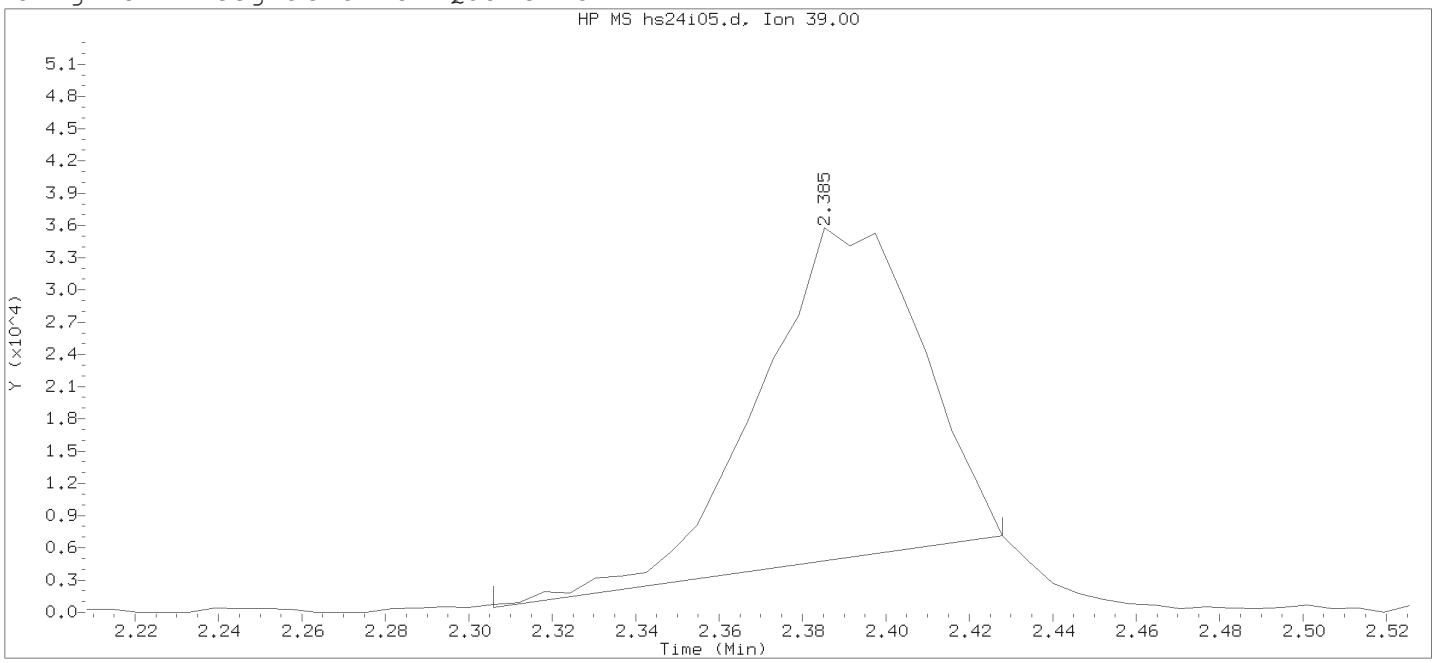
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



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Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

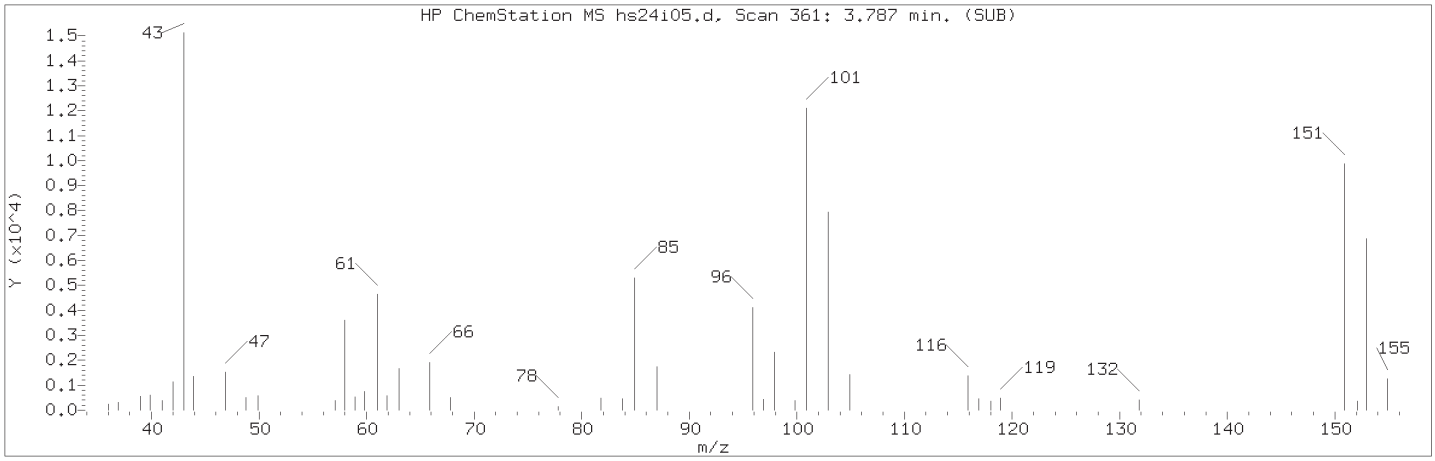
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

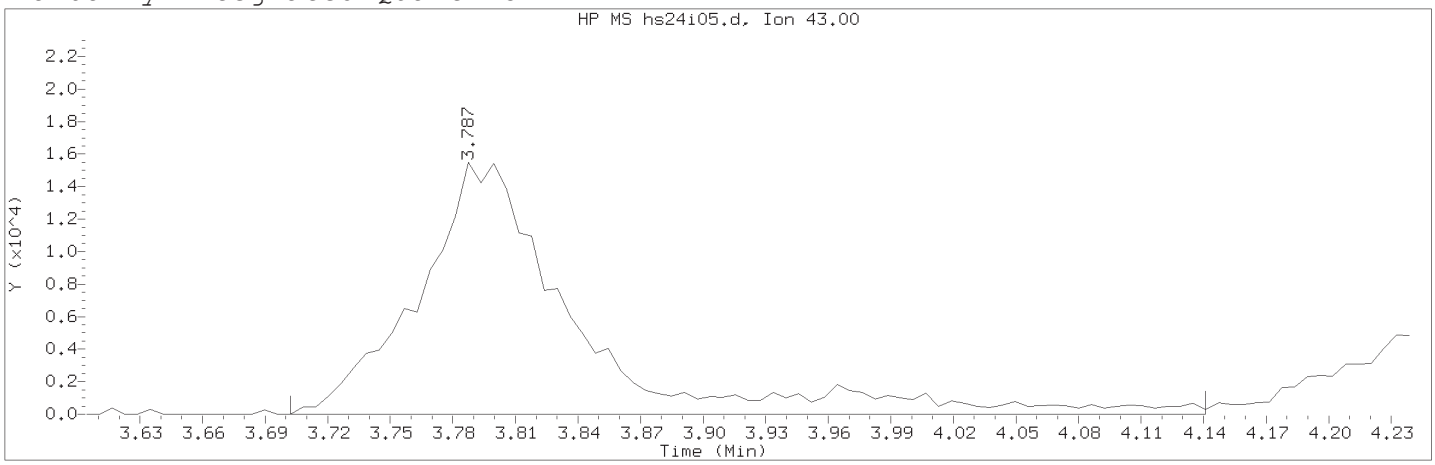
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area : 83022
On-column Amount (ng) : 0.7928
Integration start scan : 117 Integration stop scan: 137
Y at integration start : 469 Y at integration end: 7133

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

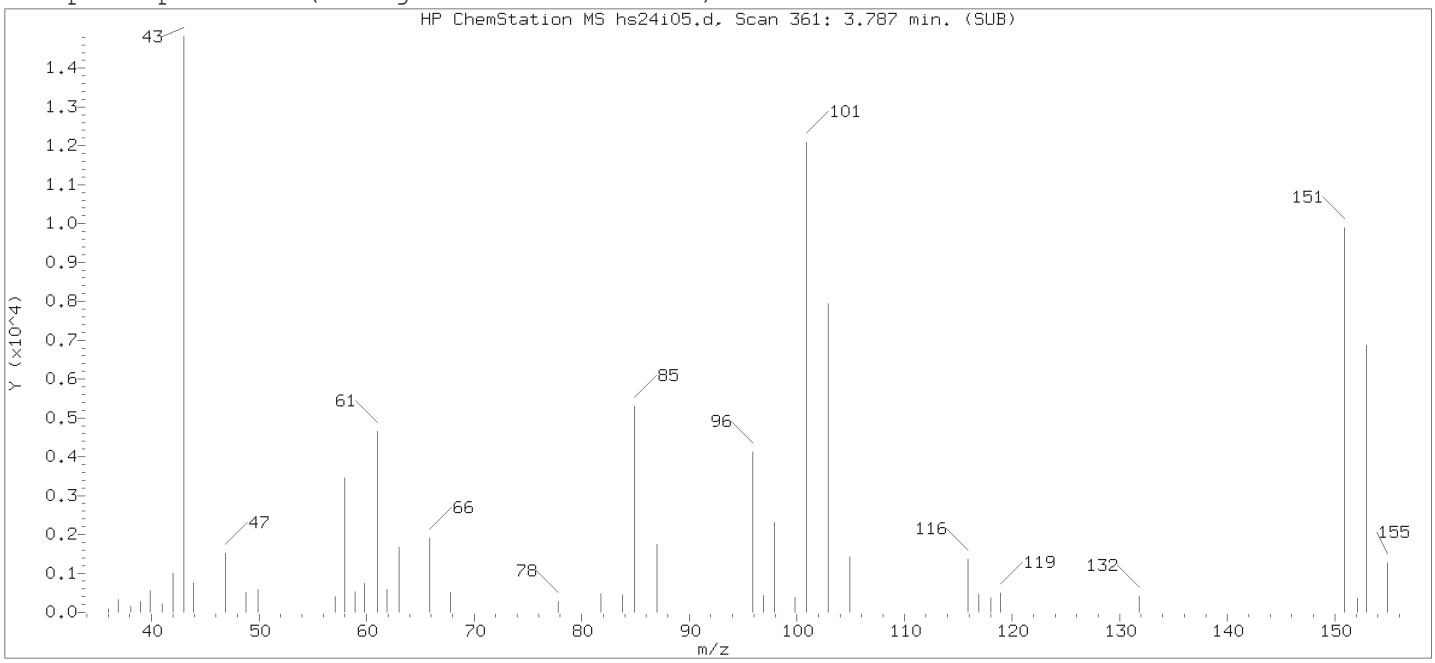
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 80897M
On-Column Amount (ng) : 9.9053
Integration start scan : 346 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

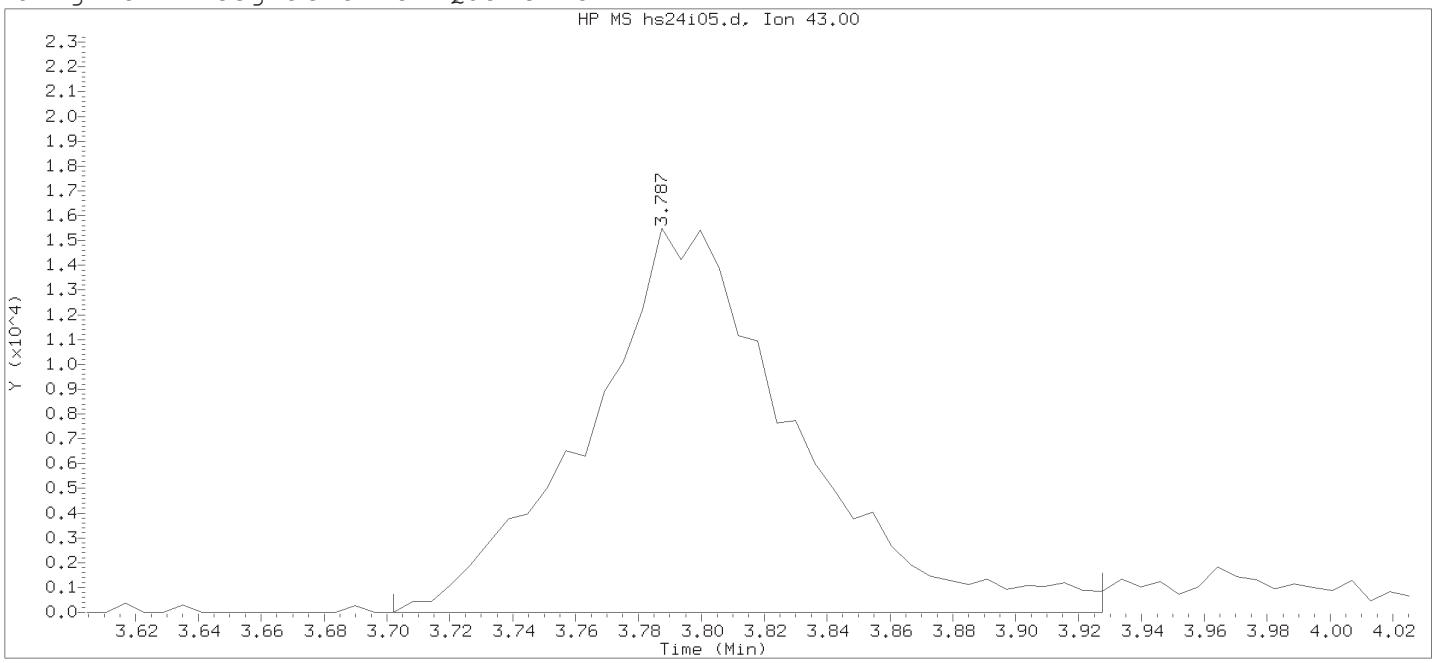
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

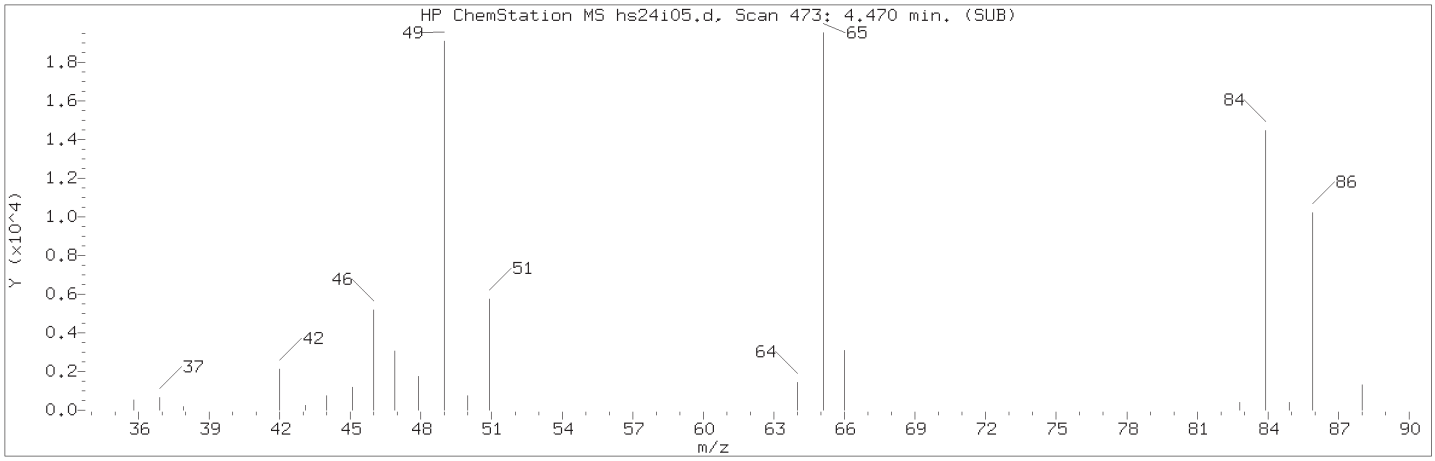
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

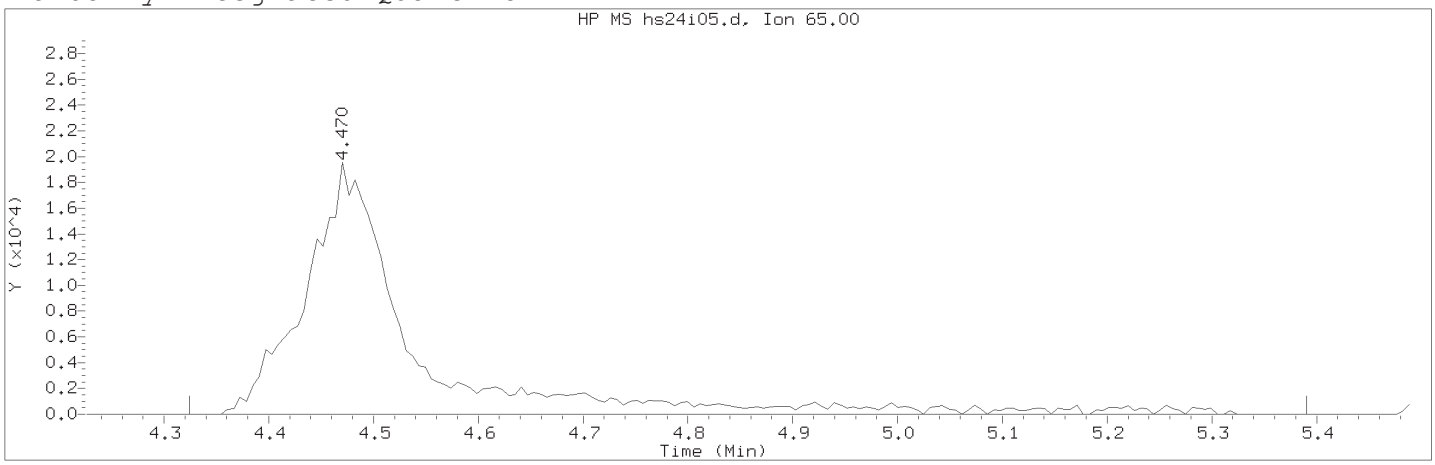
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 70990		
On-column Amount (ng)	: 9.1768		
Integration start scan	: 346	Integration stop scan:	383
Y at integration start	: 0	Y at integration end:	0

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

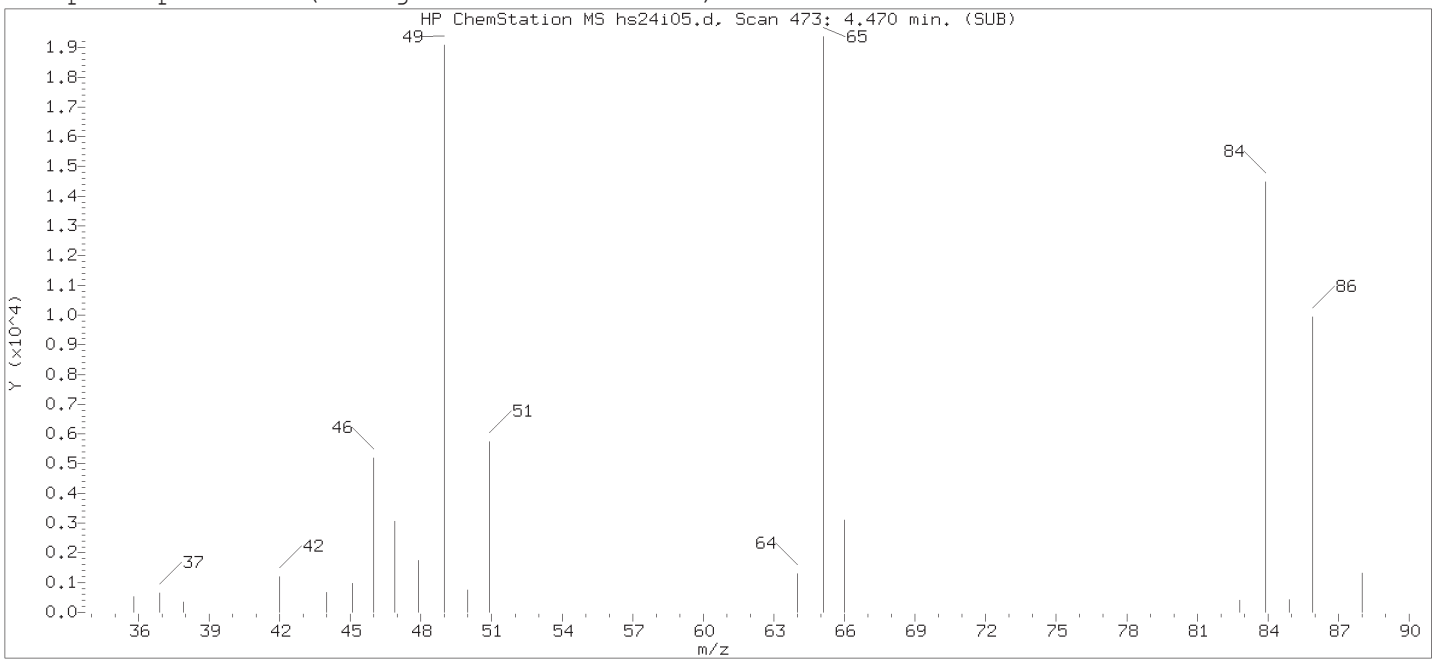
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 137024M
On-Column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

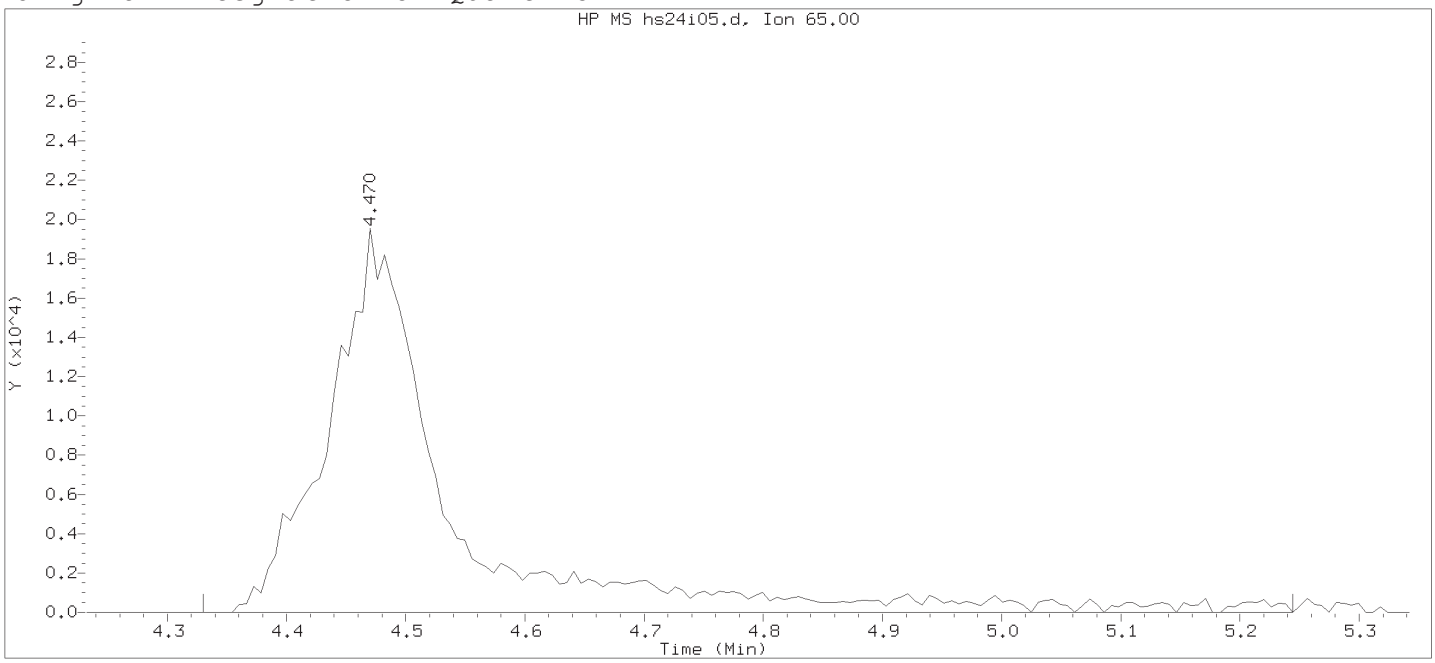
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

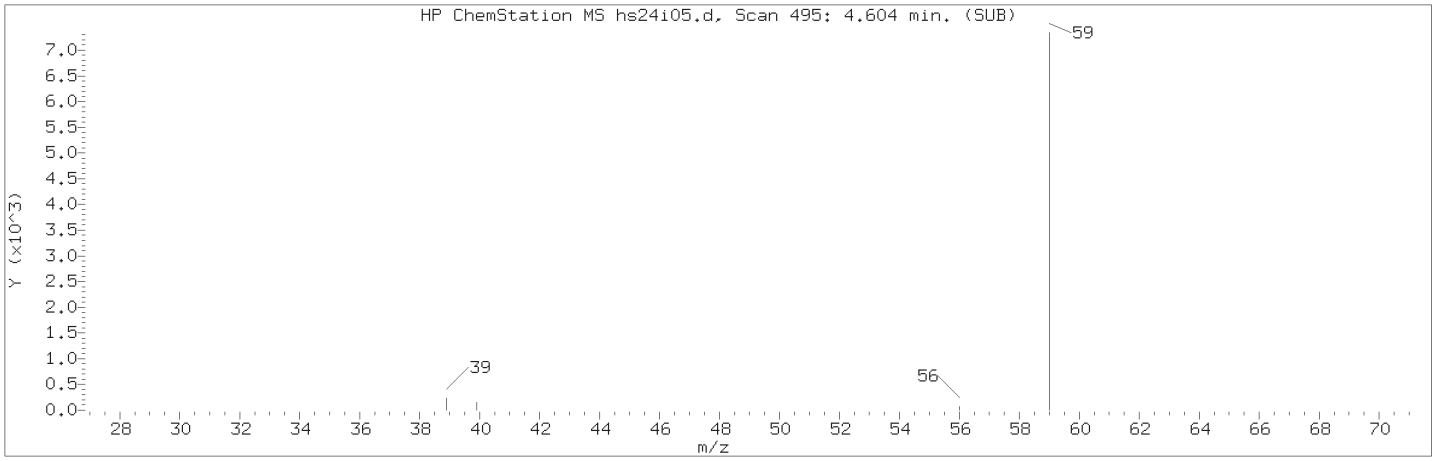
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

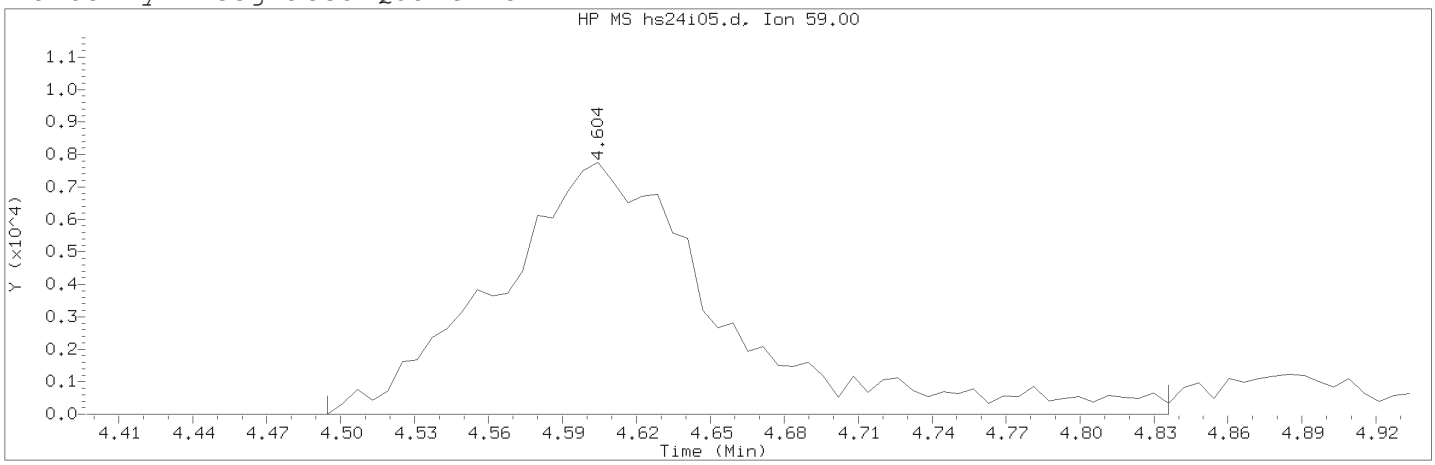
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 473		
Retention Time (minutes)	: 4.470		
Quant Ion	: 65.00		
Area	: 135610		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 449	Integration stop scan:	599
Y at integration start	: 0	Y at integration end:	0

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

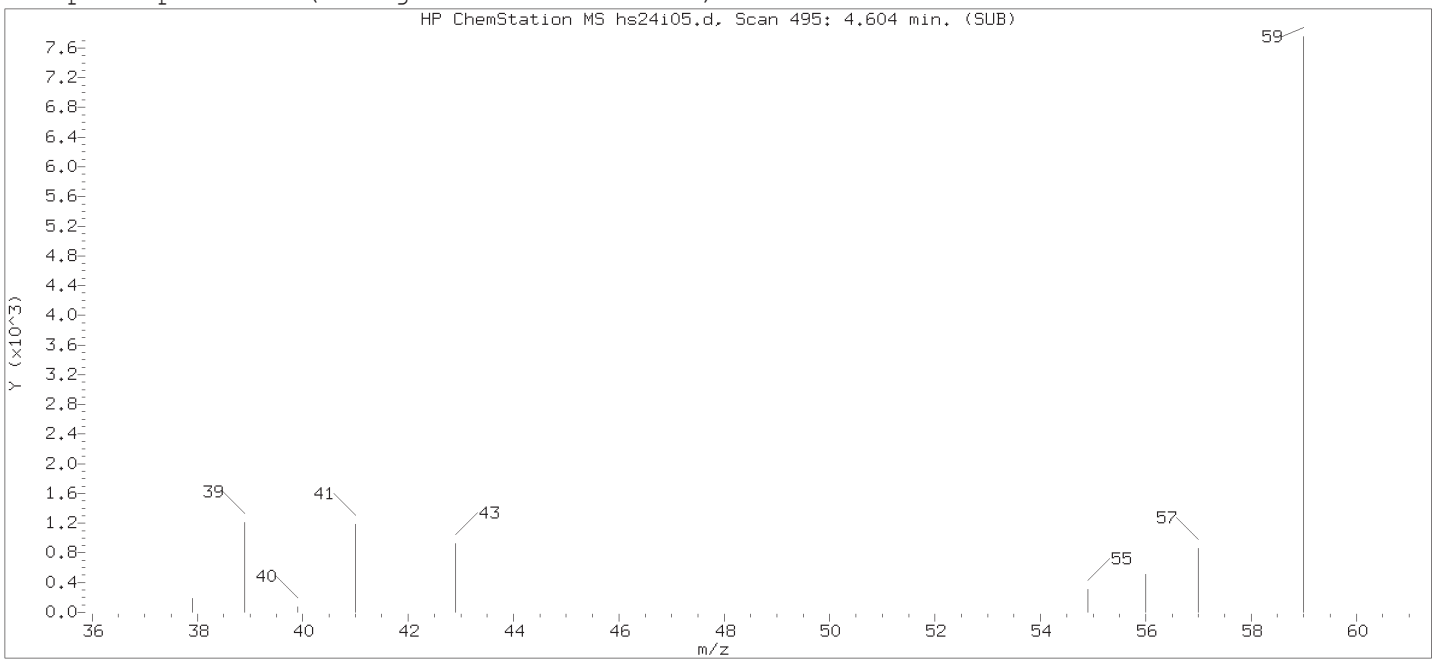
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 49275M
On-Column Amount (ng) : 21.0678
Integration start scan : 476 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

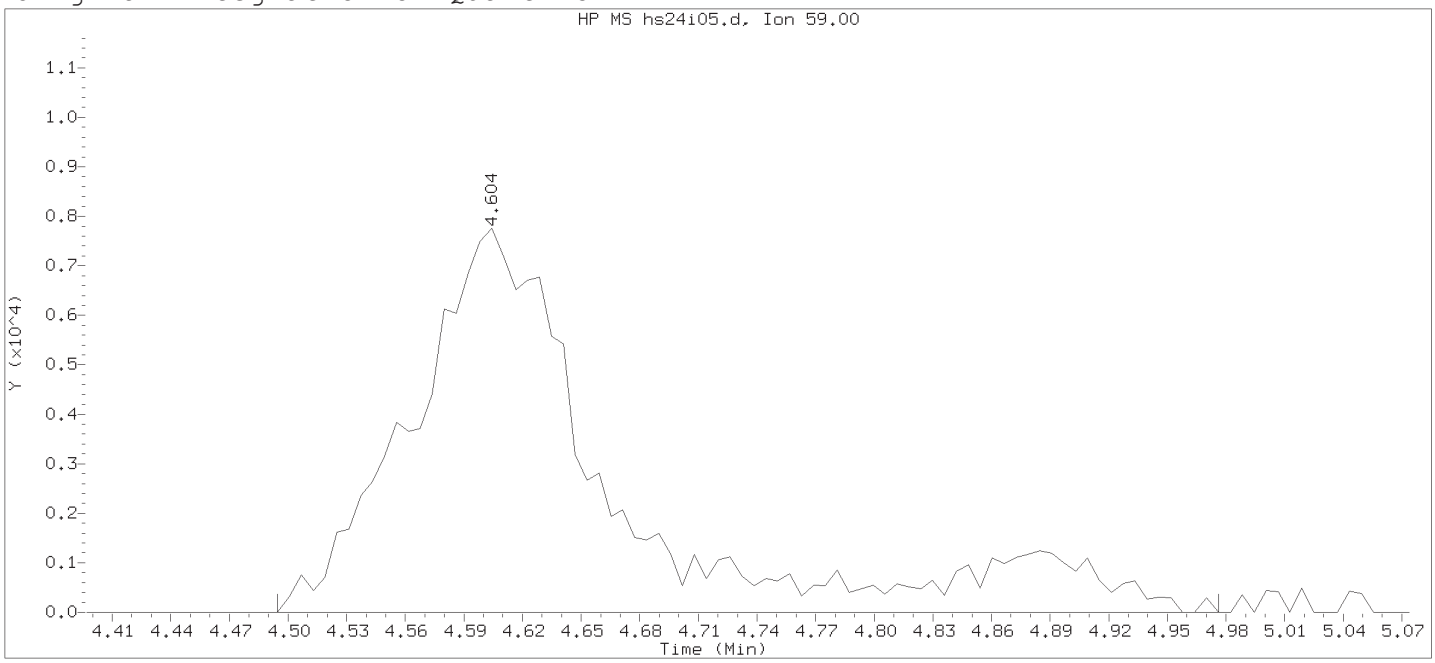
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

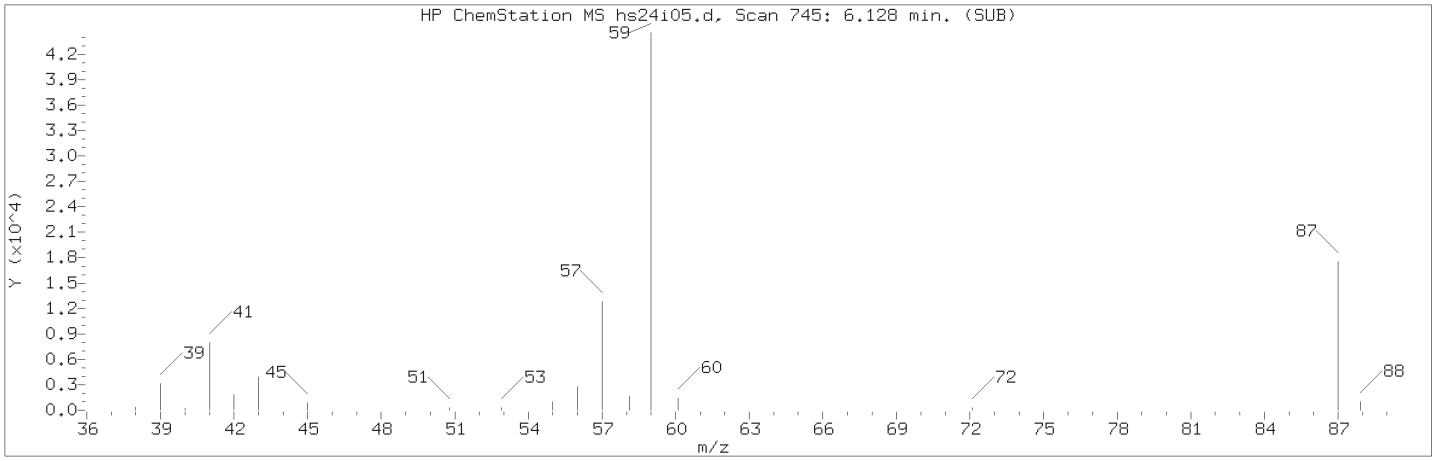
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

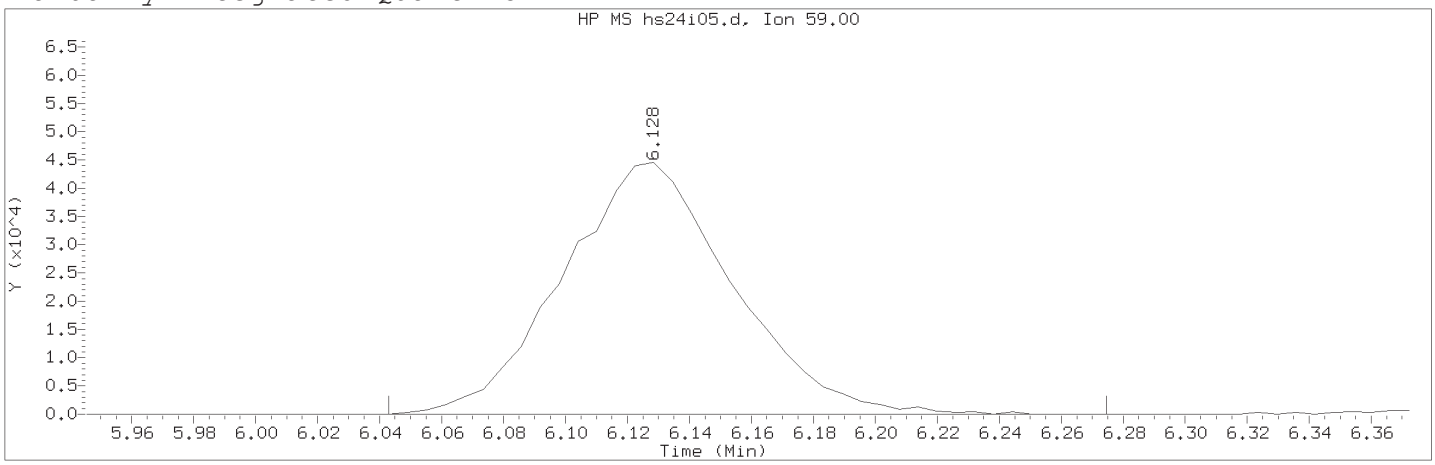
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area : 54917
On-column Amount (ng) : 22.3410
Integration start scan : 476 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user: 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

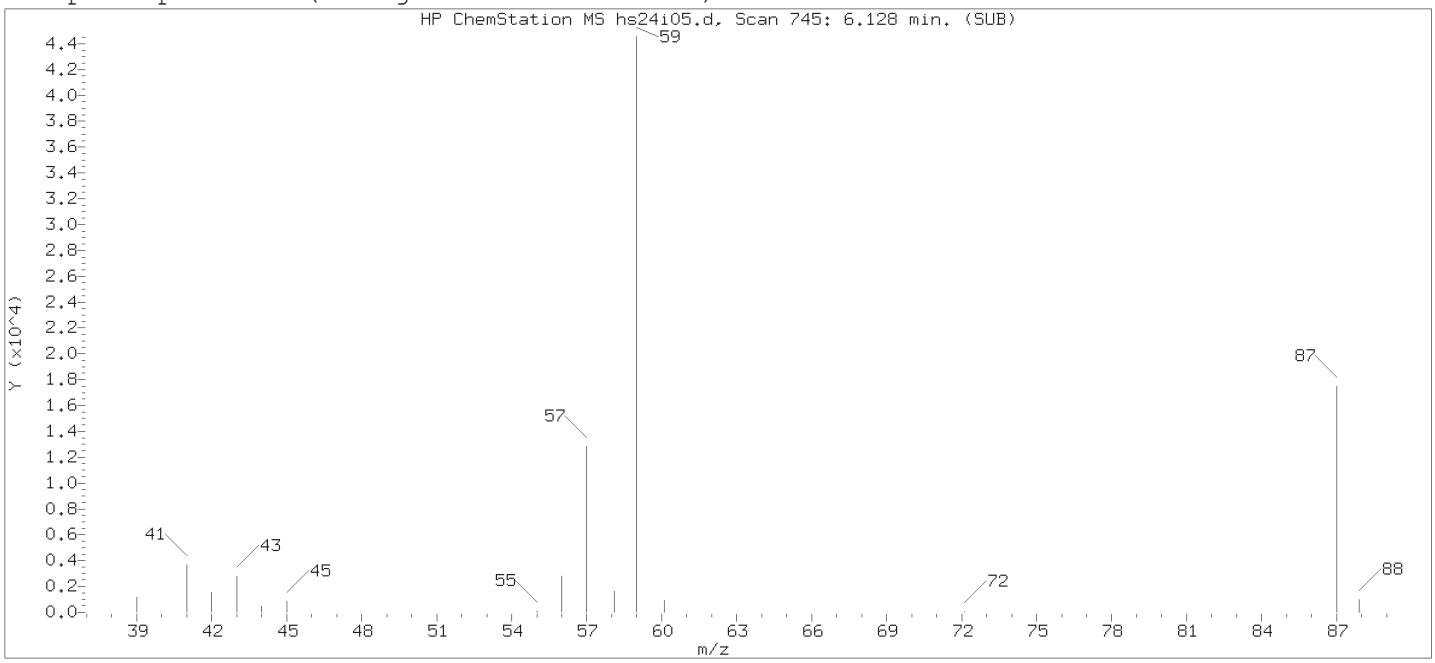
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area (flag) : 168973M
On-Column Amount (ng) : 1.0320
Integration start scan : 730 Integration stop scan: 768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

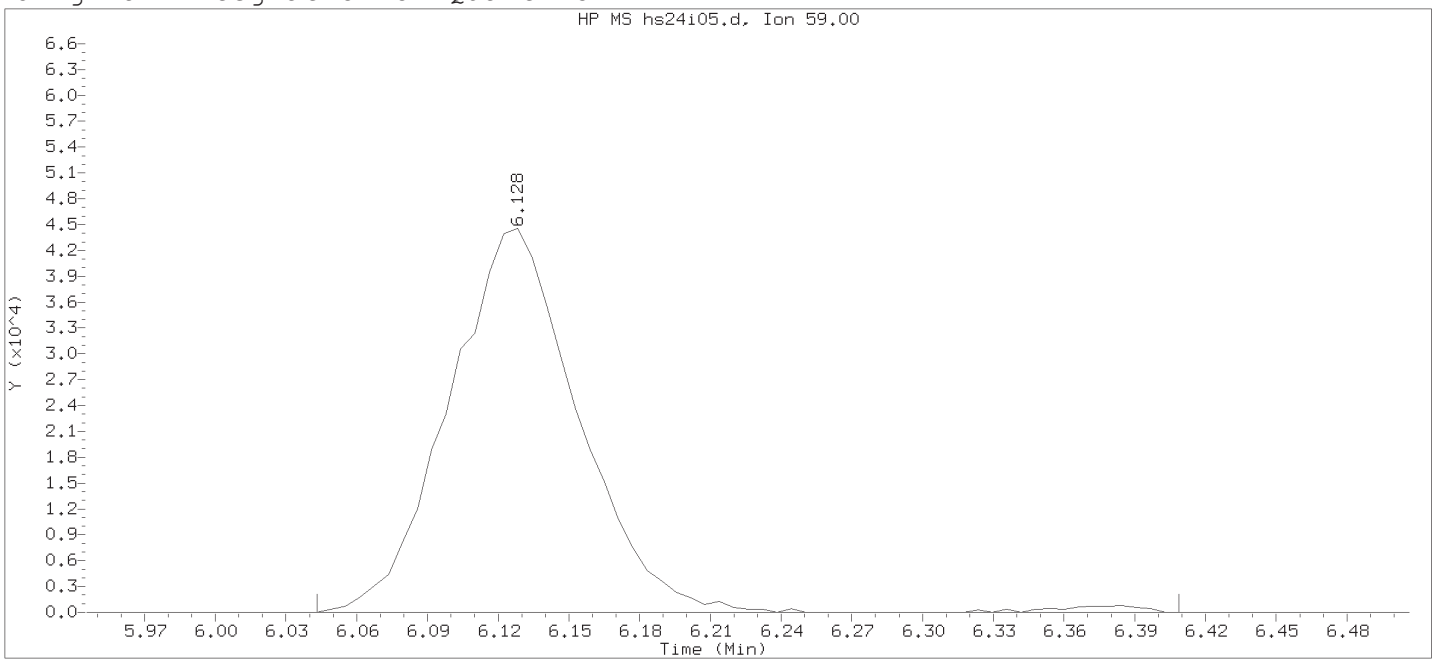
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

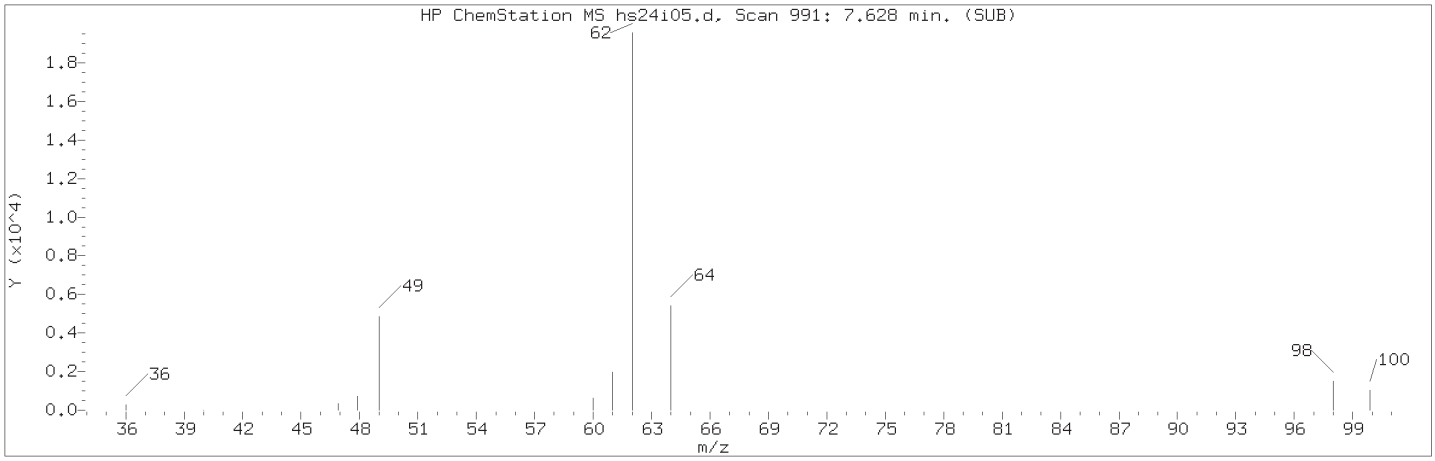
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

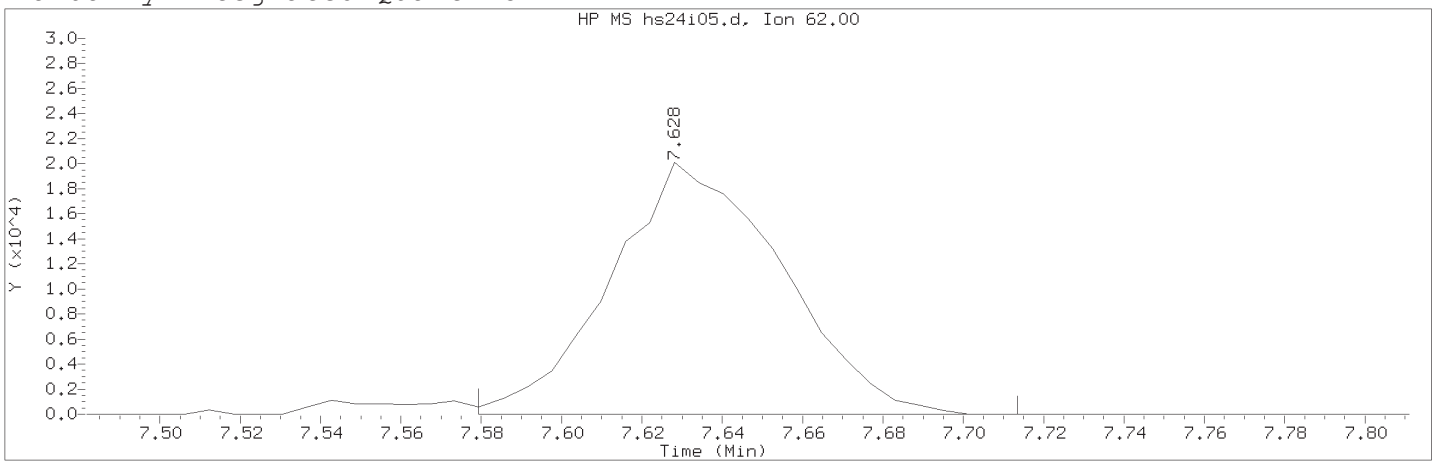
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area : 170974
On-column Amount (ng) : 1.0111
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

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

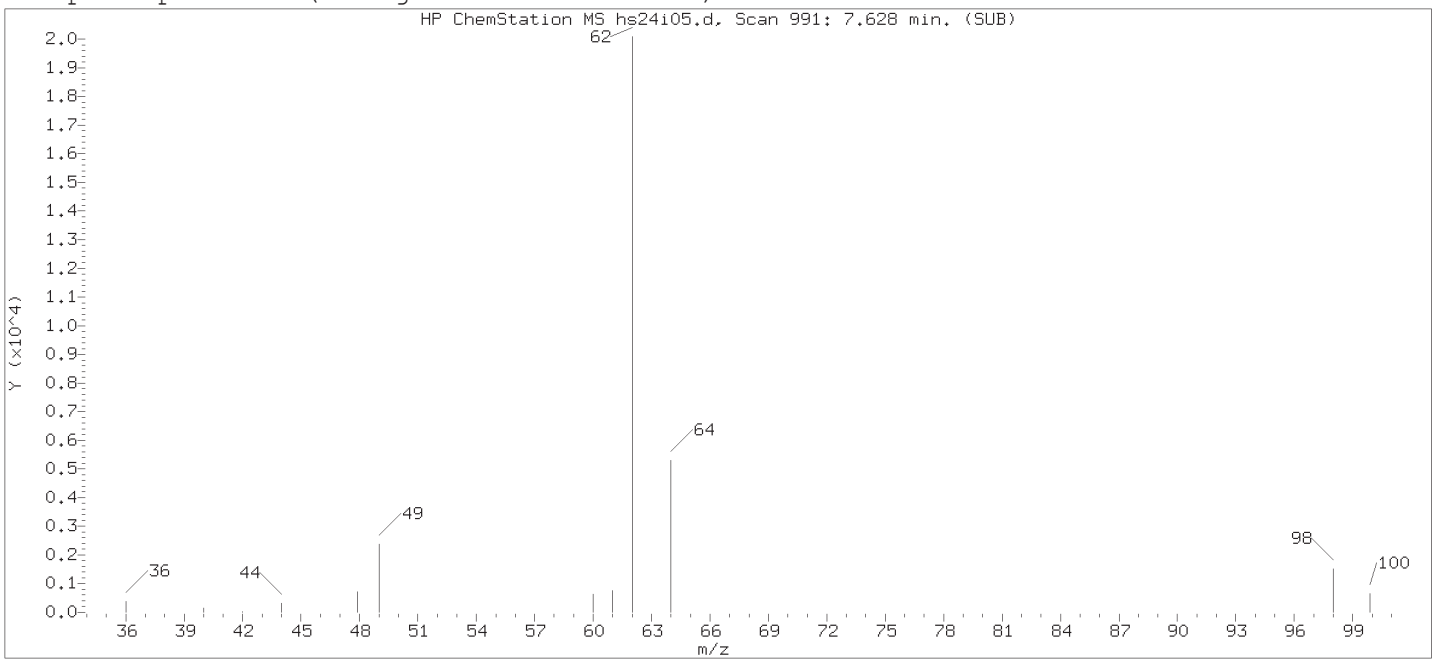
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 59426M
On-Column Amount (ng) : 0.9971
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

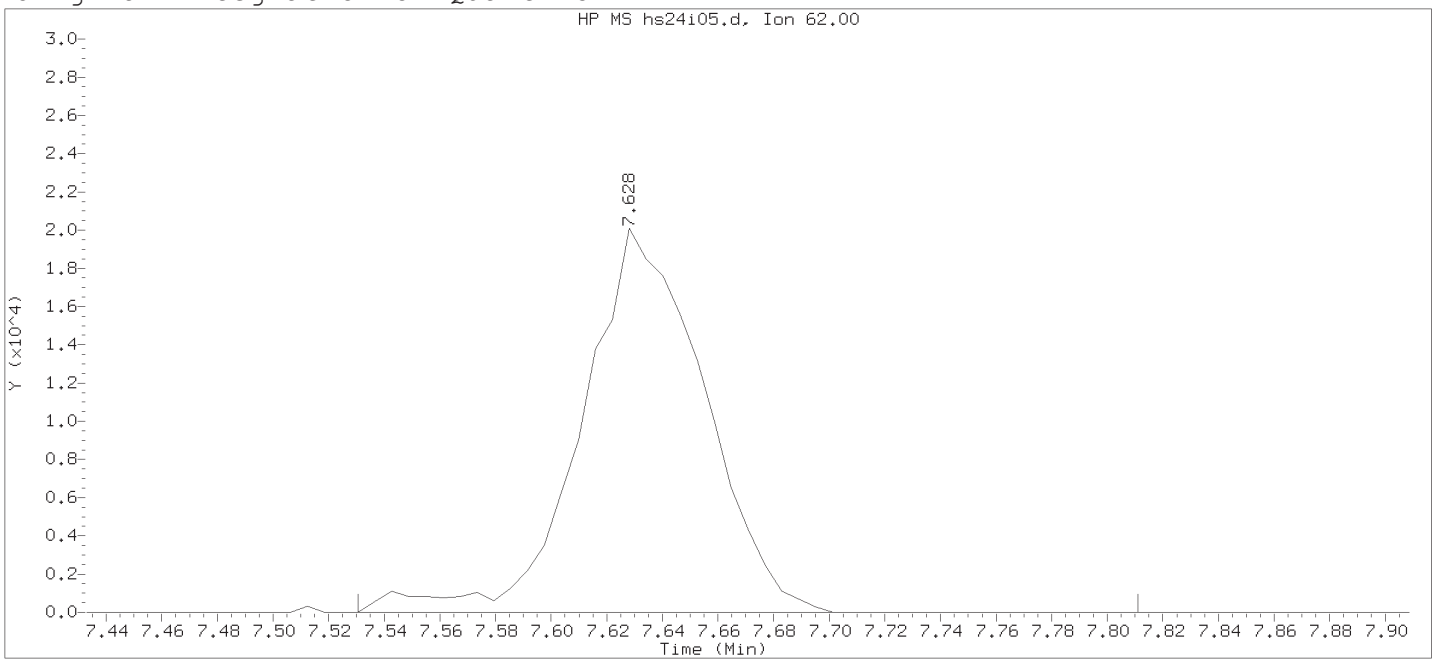
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

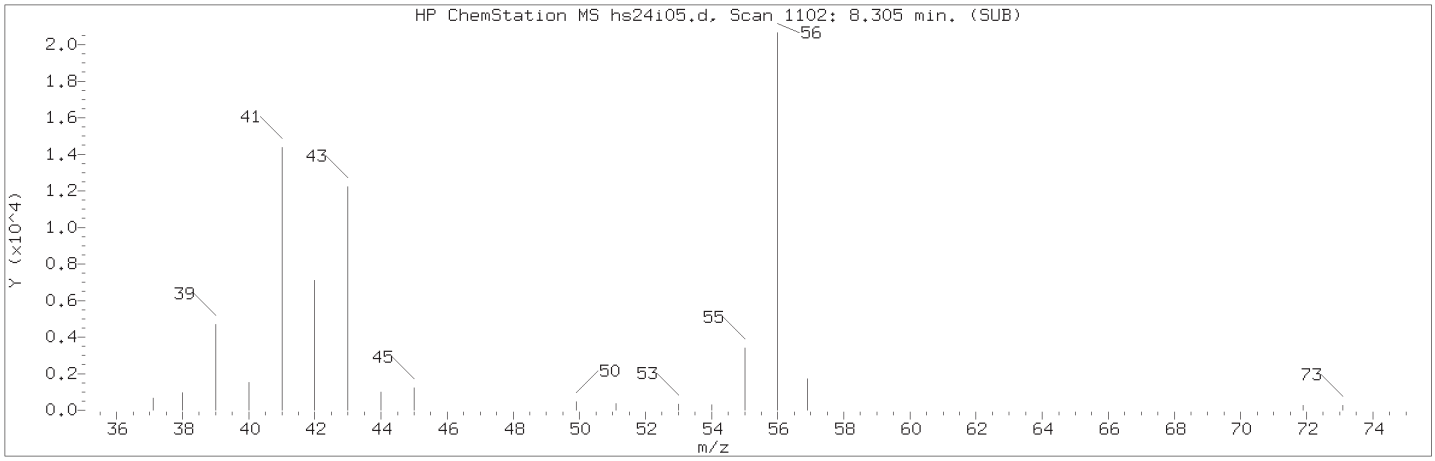
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

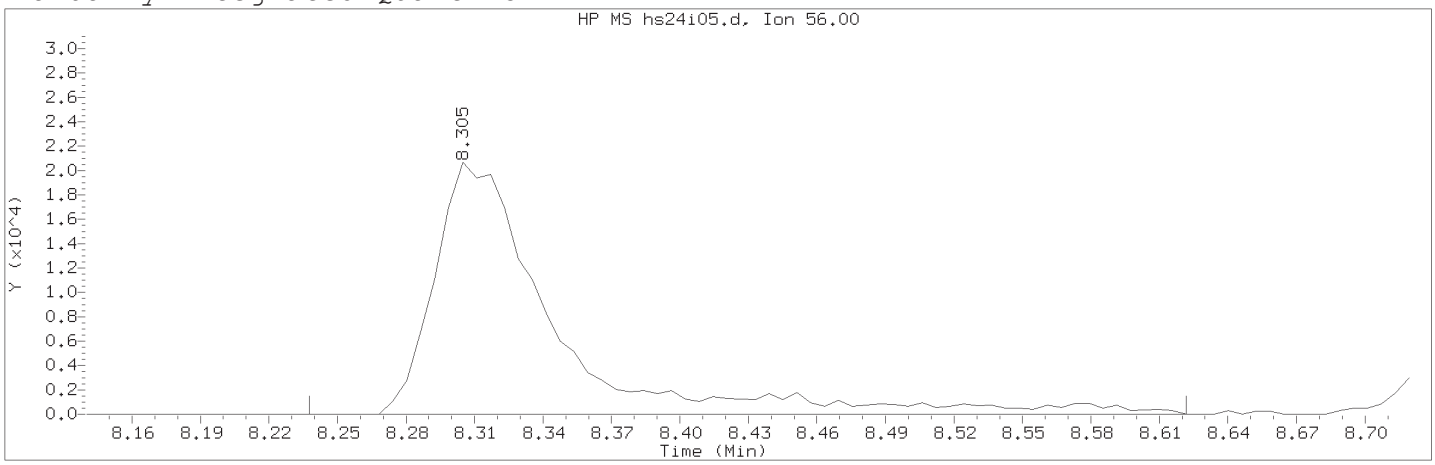
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 61591
On-column Amount (ng) : 1.0425
Integration start scan : 974 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

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

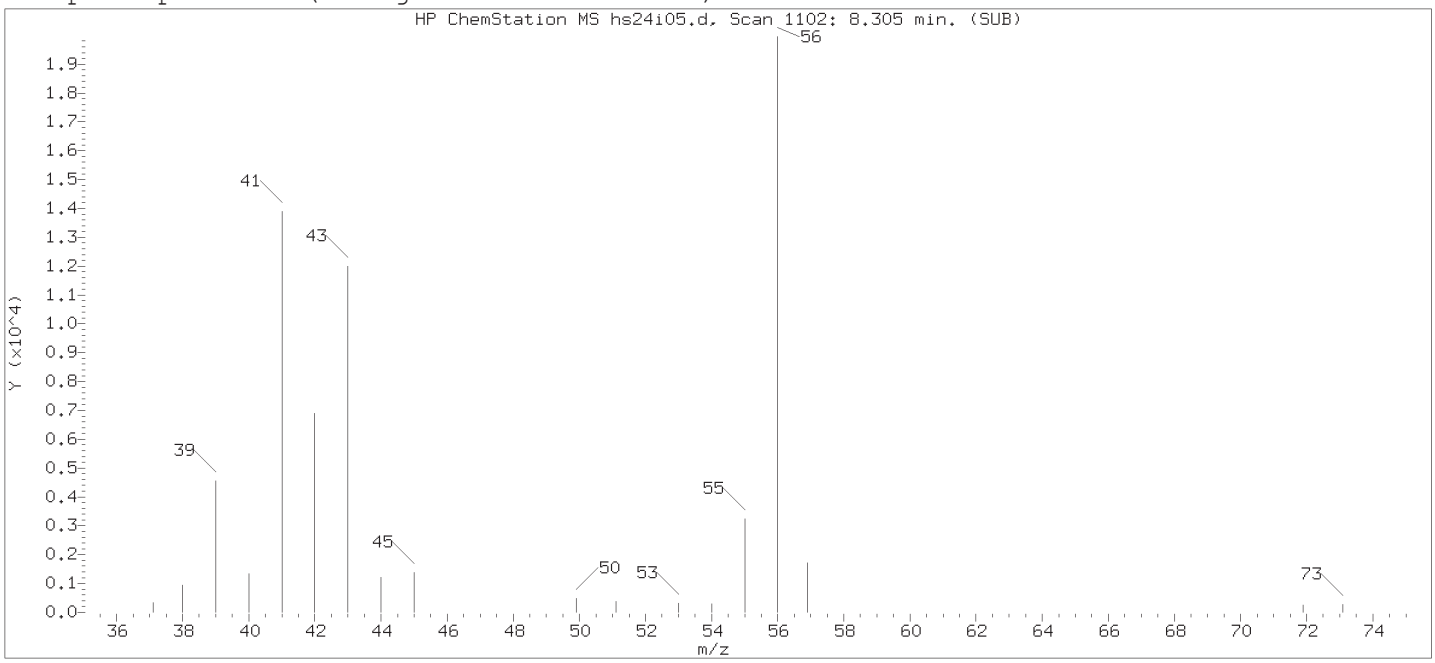
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 74668M
On-Column Amount (ng) : 97.6635
Integration start scan : 1090 Integration stop scan: 1153
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

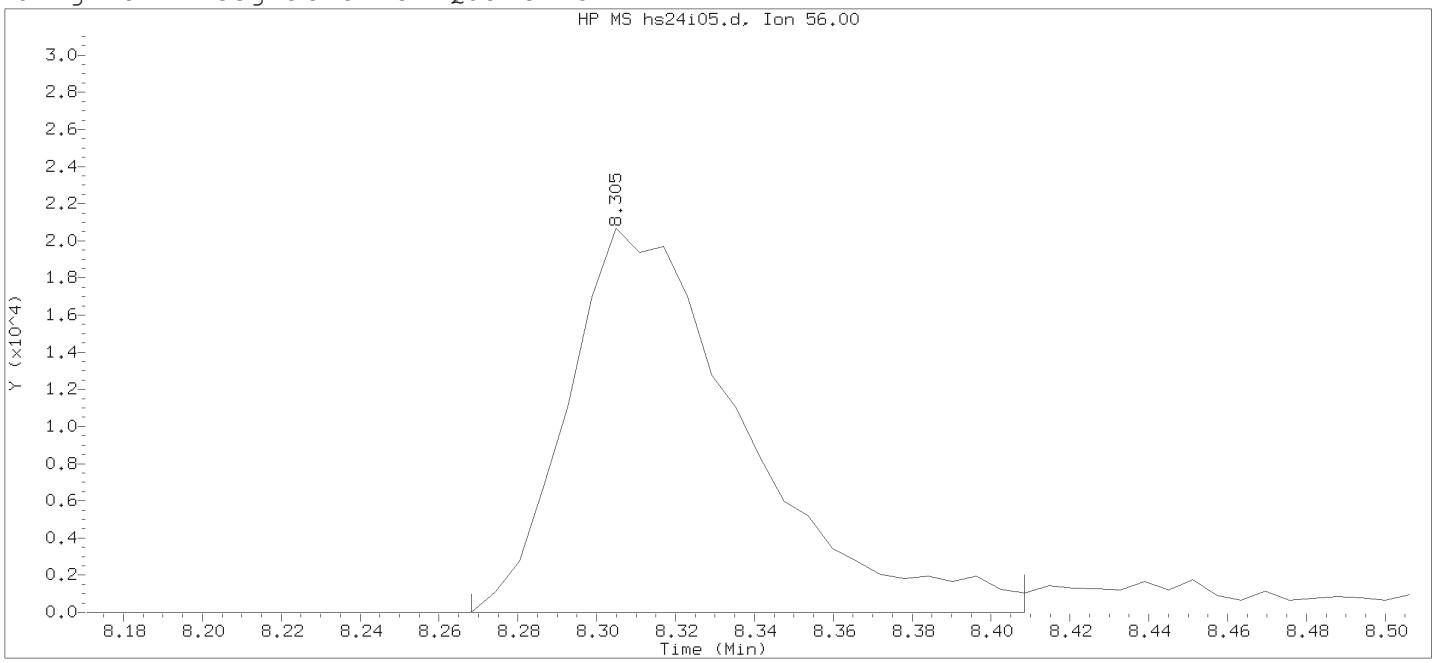
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

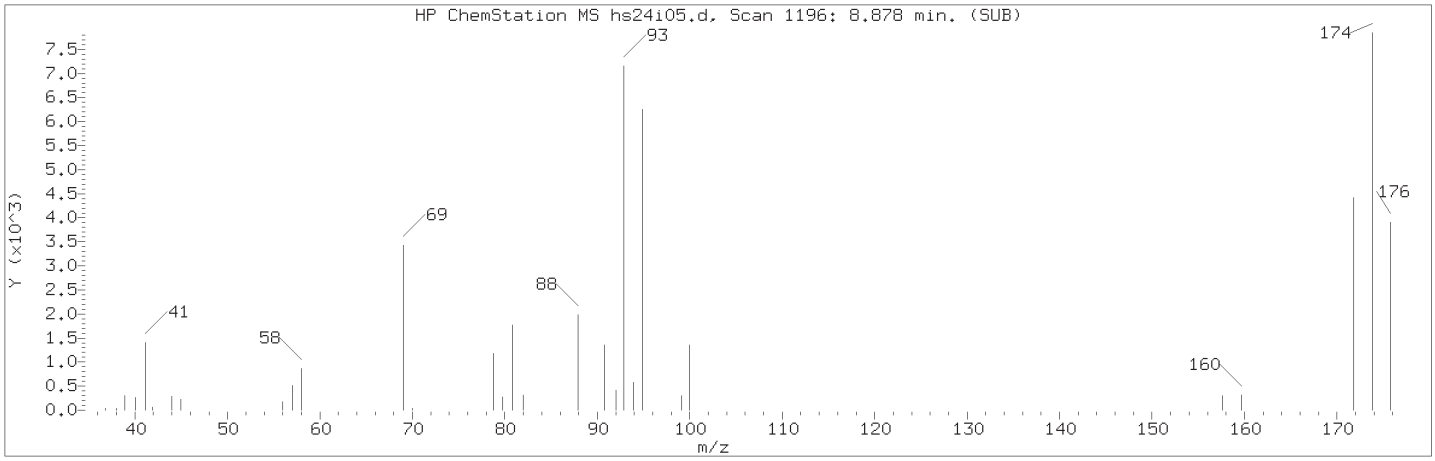
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

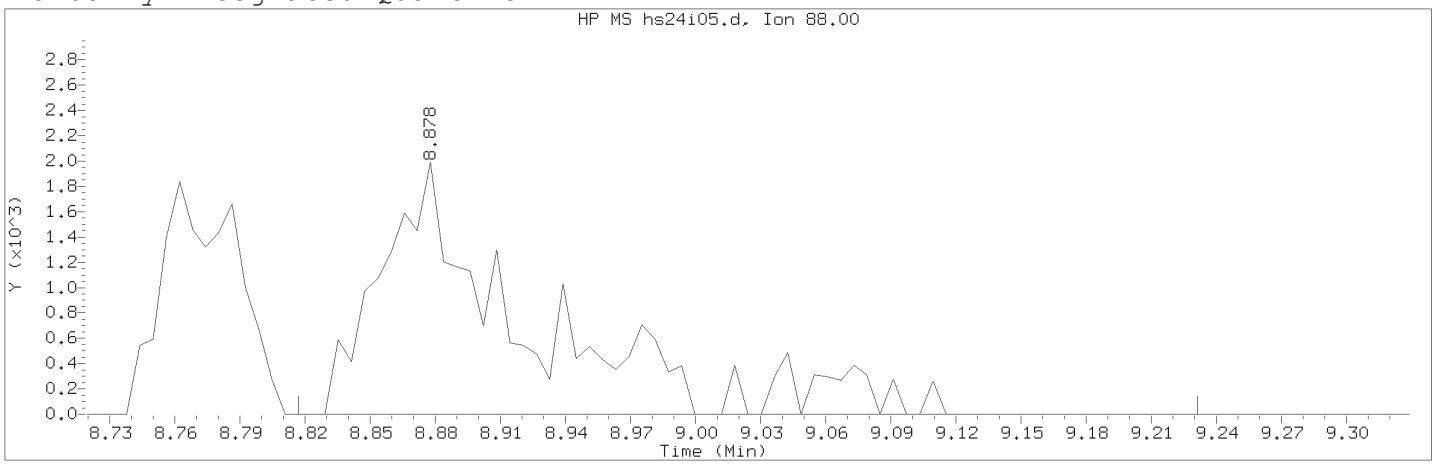
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area : 64395
On-column Amount (ng) : 83.6678
Integration start scan : 1095 Integration stop scan: 1118
Y at integration start : 0 Y at integration end: 0

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

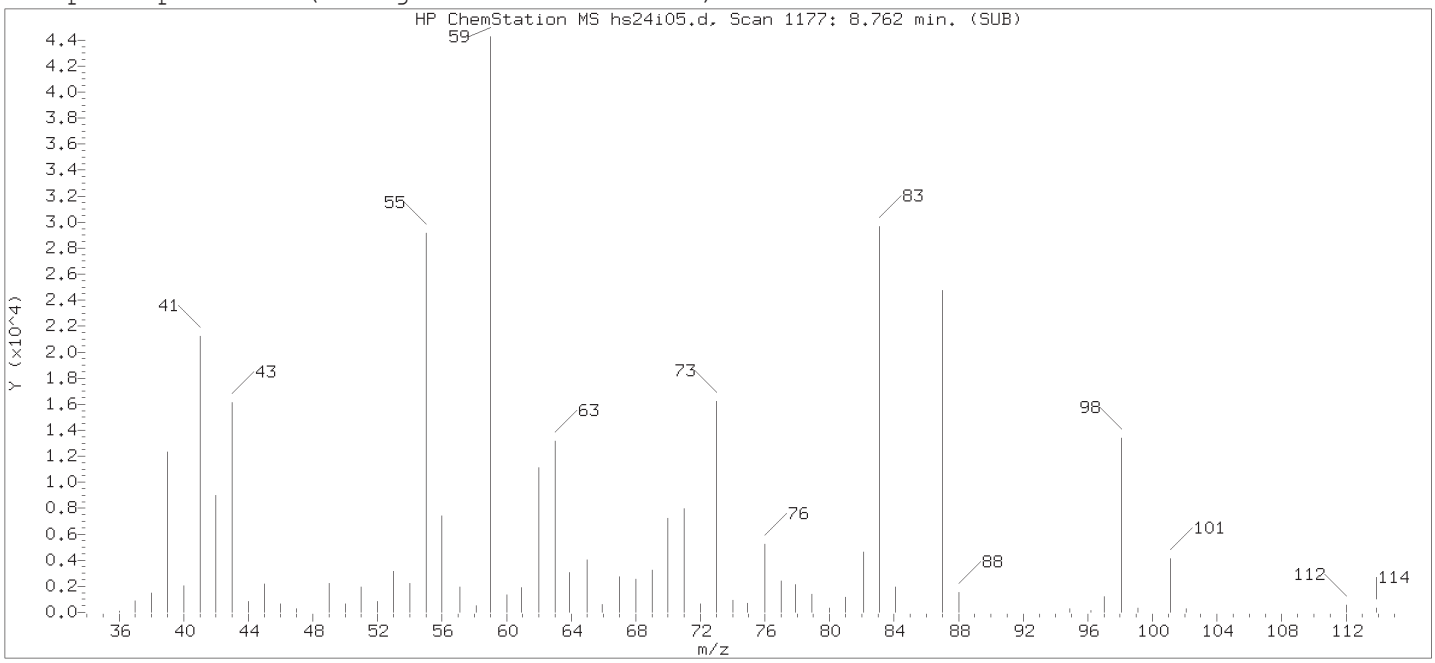
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 9241M
On-Column Amount (ng) : 50.2009
Integration start scan : 1185 Integration stop scan: 1253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

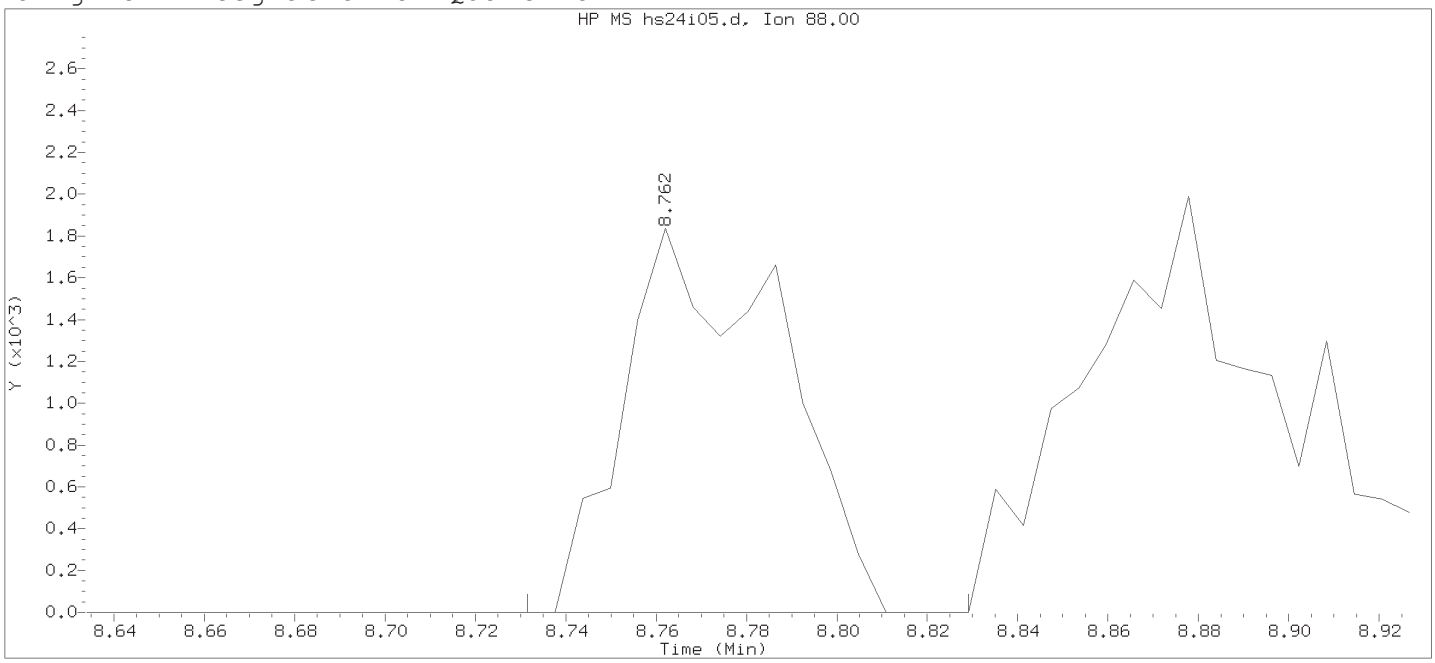
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

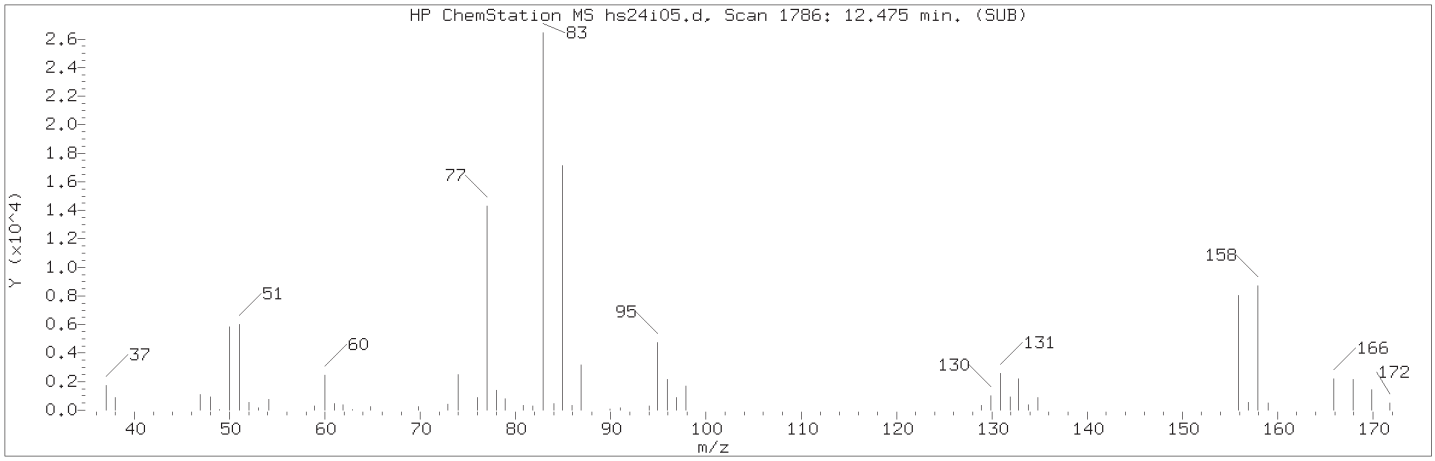
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

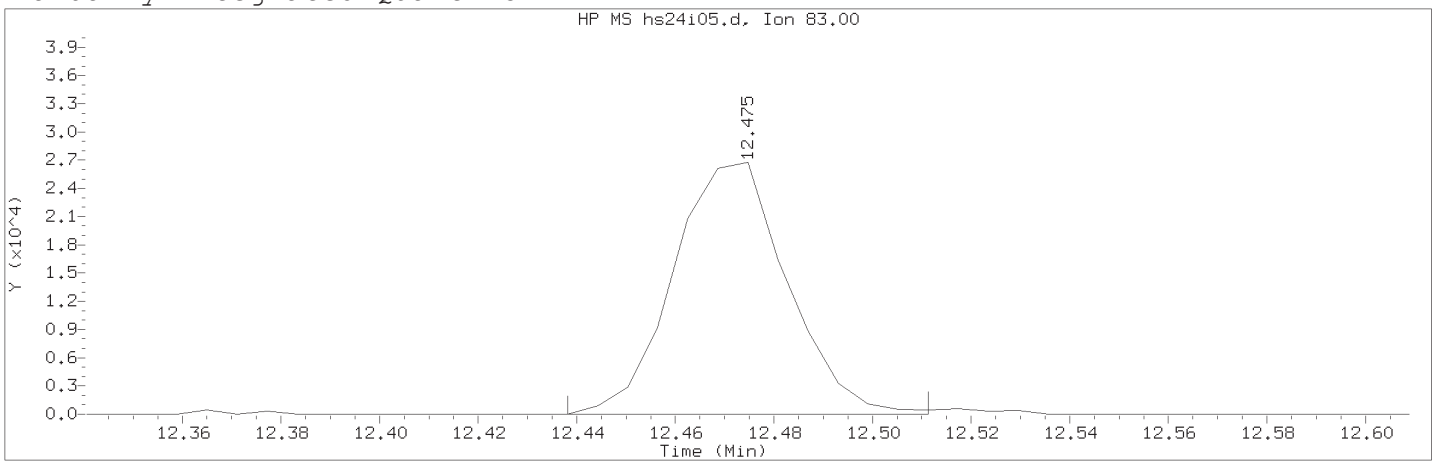
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1177
Retention Time (minutes): 8.762
Quant Ion : 88.00
Area : 4467
On-column Amount (ng) : 37.5984
Integration start scan : 1171 Integration stop scan: 1187
Y at integration start : 0 Y at integration end: 0

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

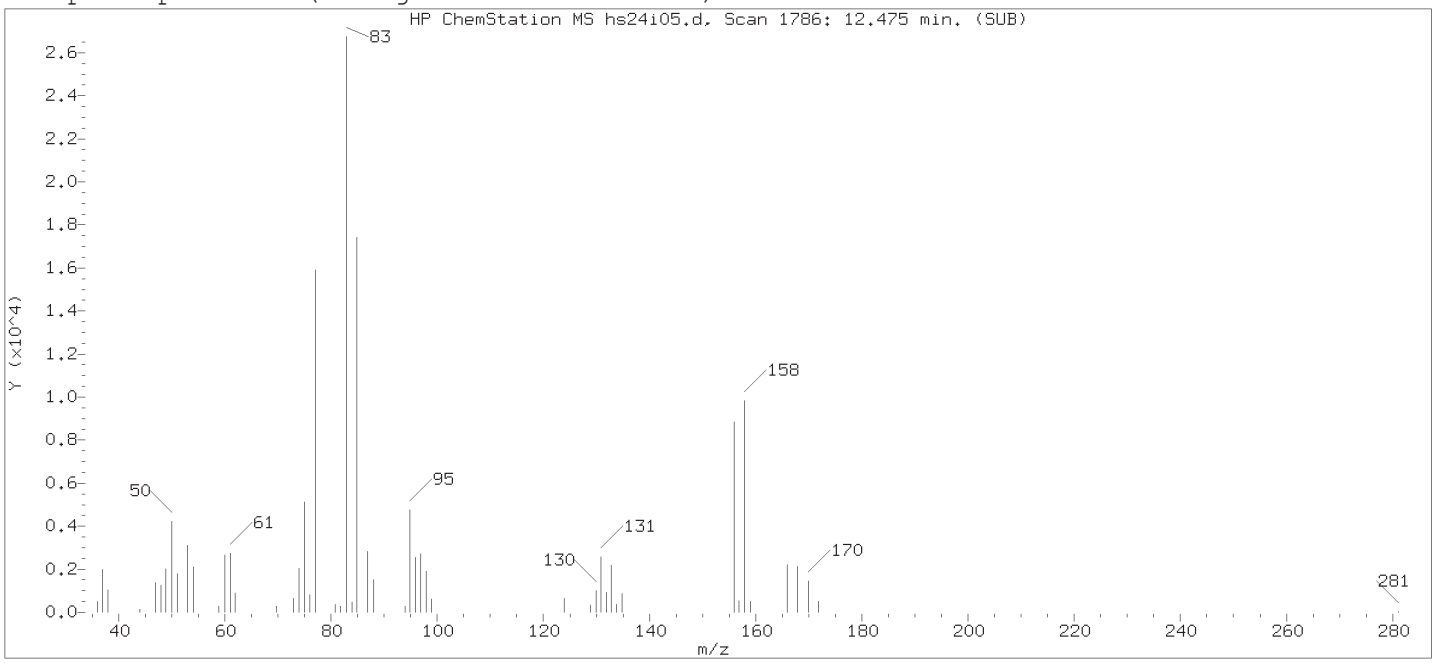
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 42904M
On-Column Amount (ng) : 0.9628
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

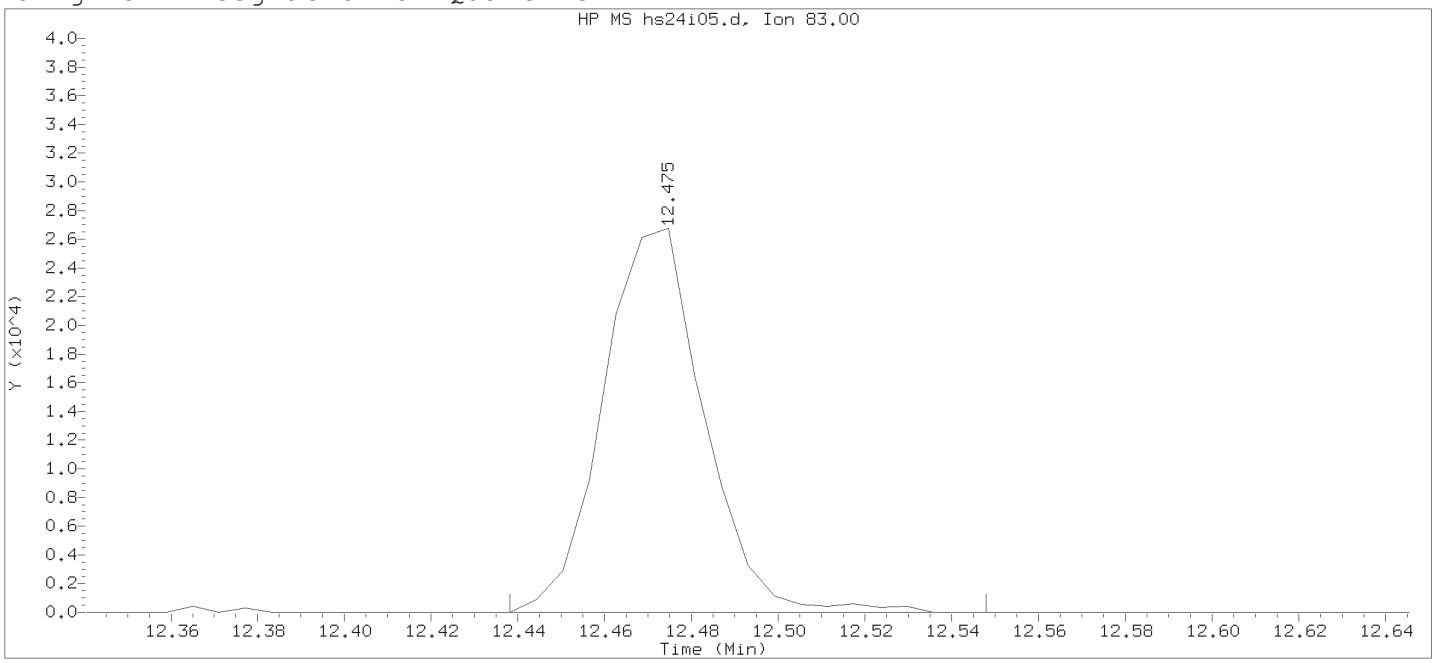
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

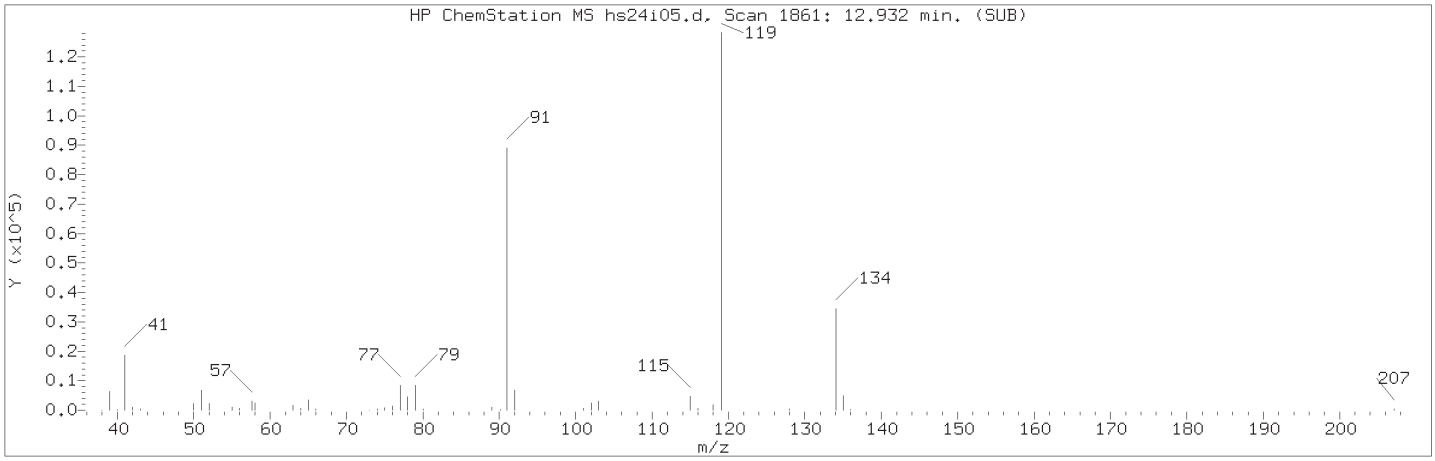
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

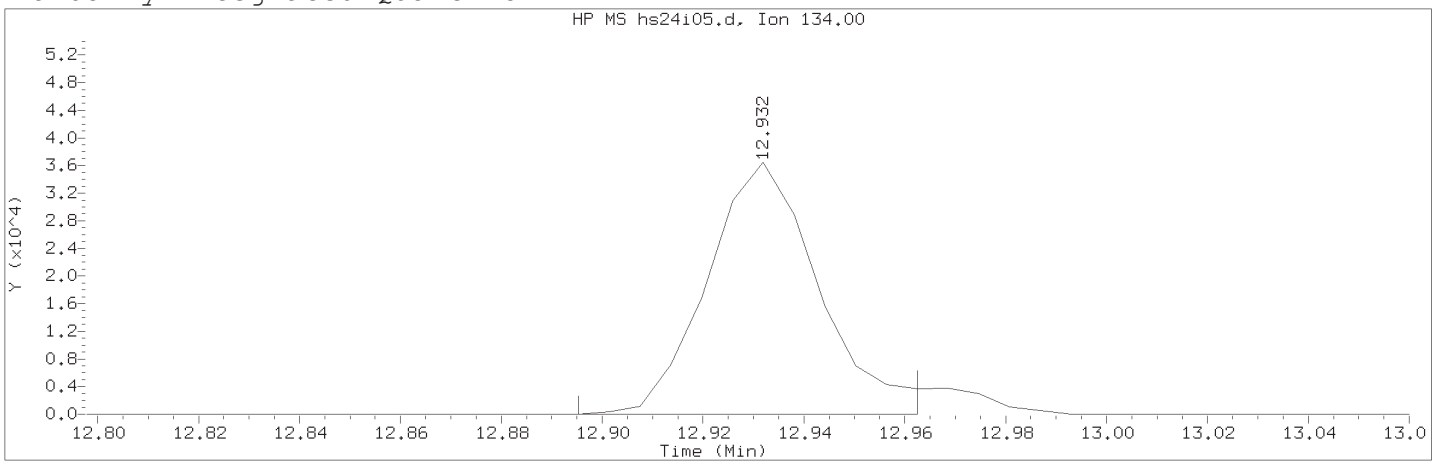
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 43396
On-column Amount (ng) : 0.9508
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

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

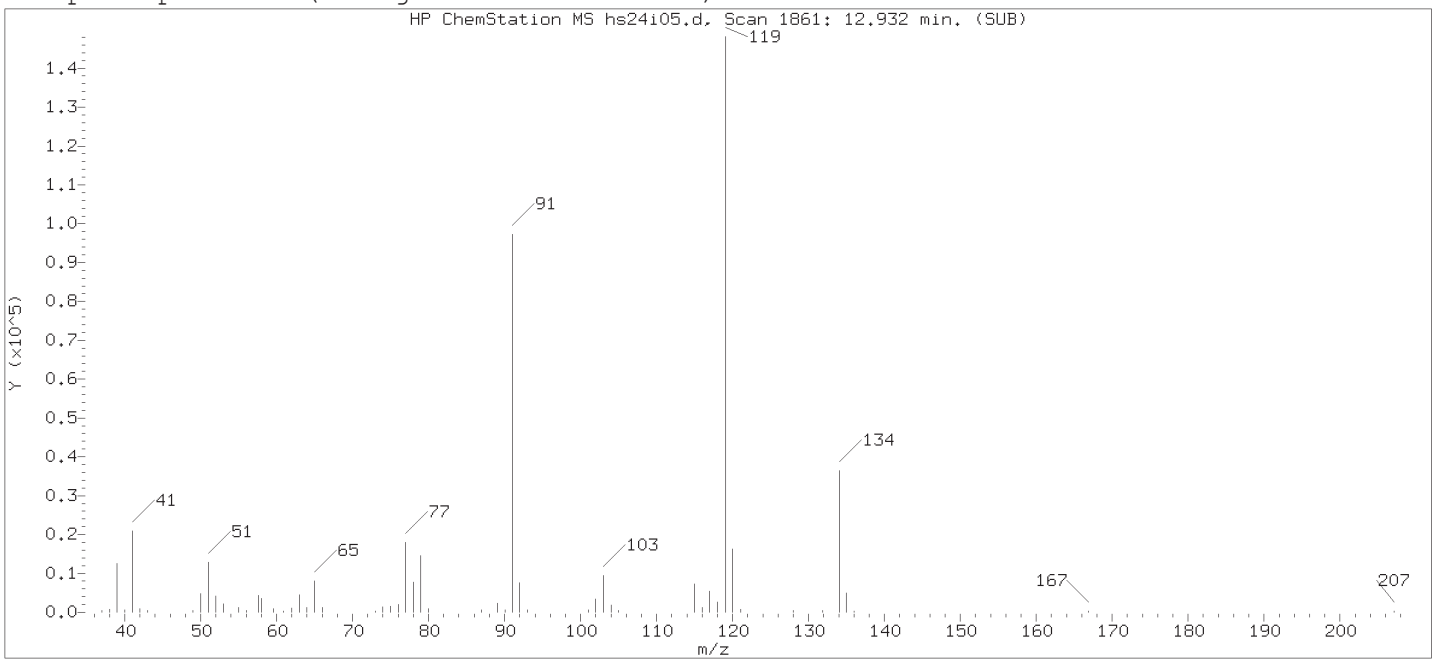
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 55631M
On-Column Amount (ng) : 1.0251
Integration start scan : 1854 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

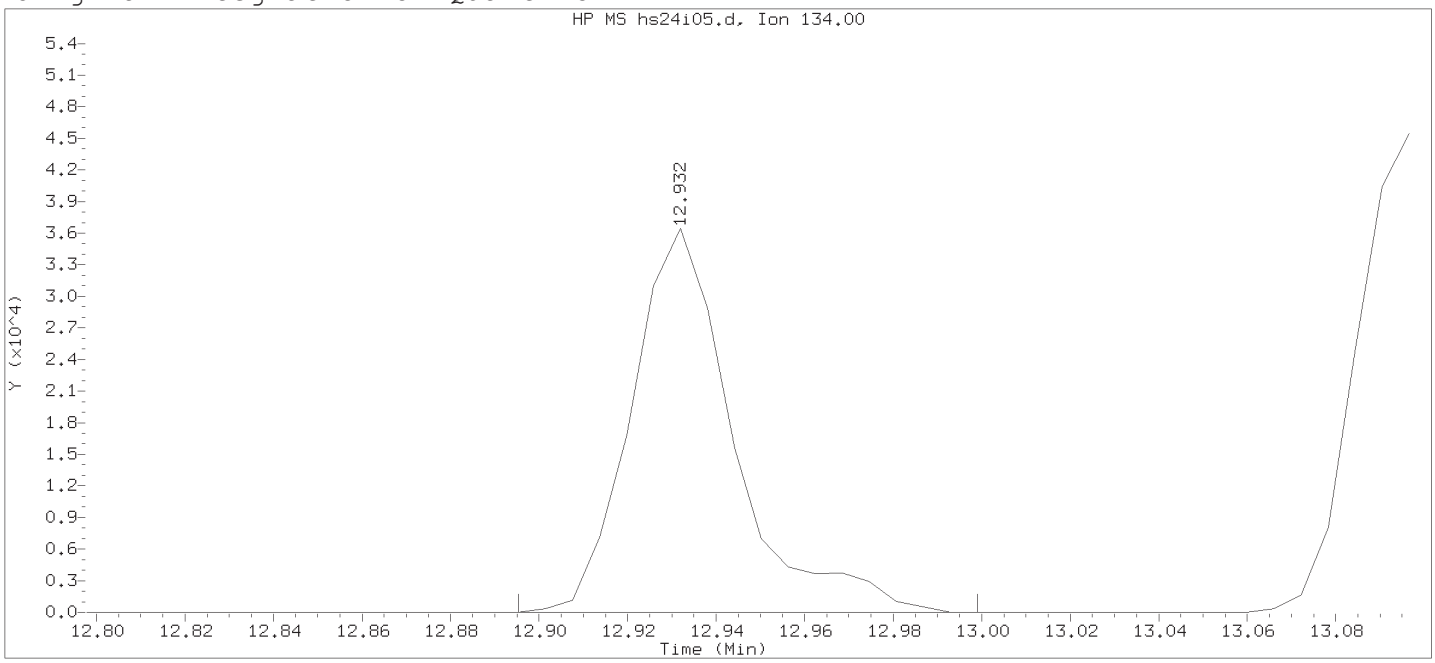
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

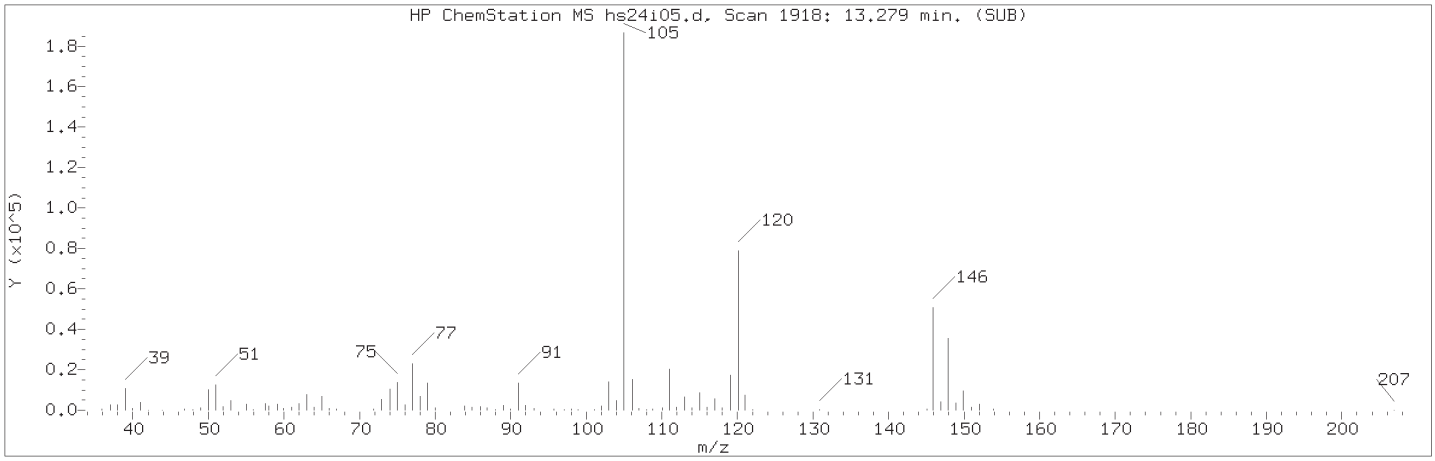
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

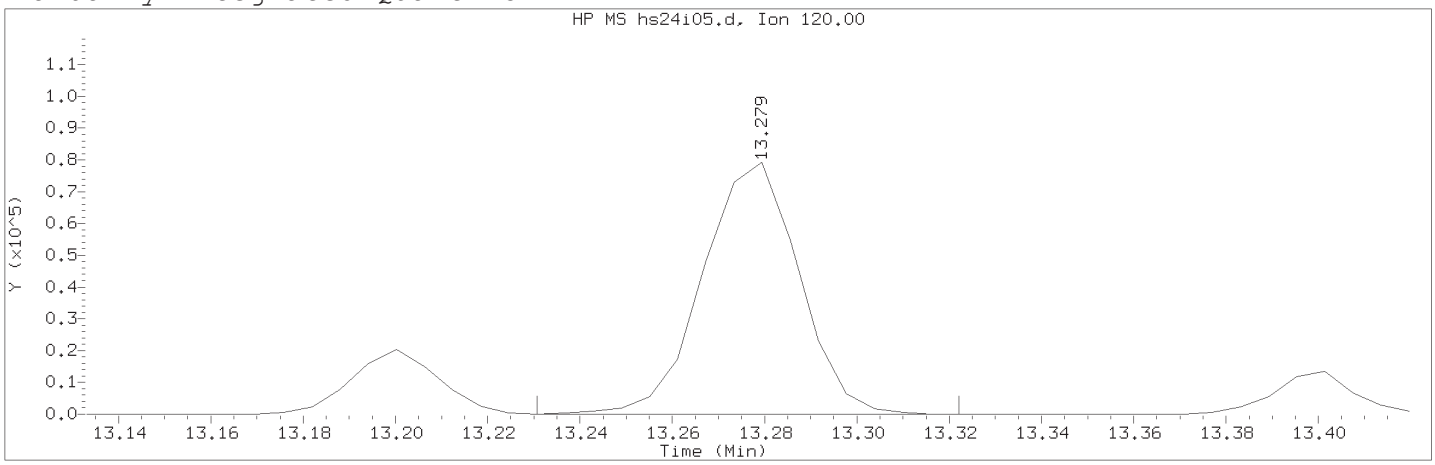
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 58647
On-column Amount (ng) : 1.0086
Integration start scan : 1854 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

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

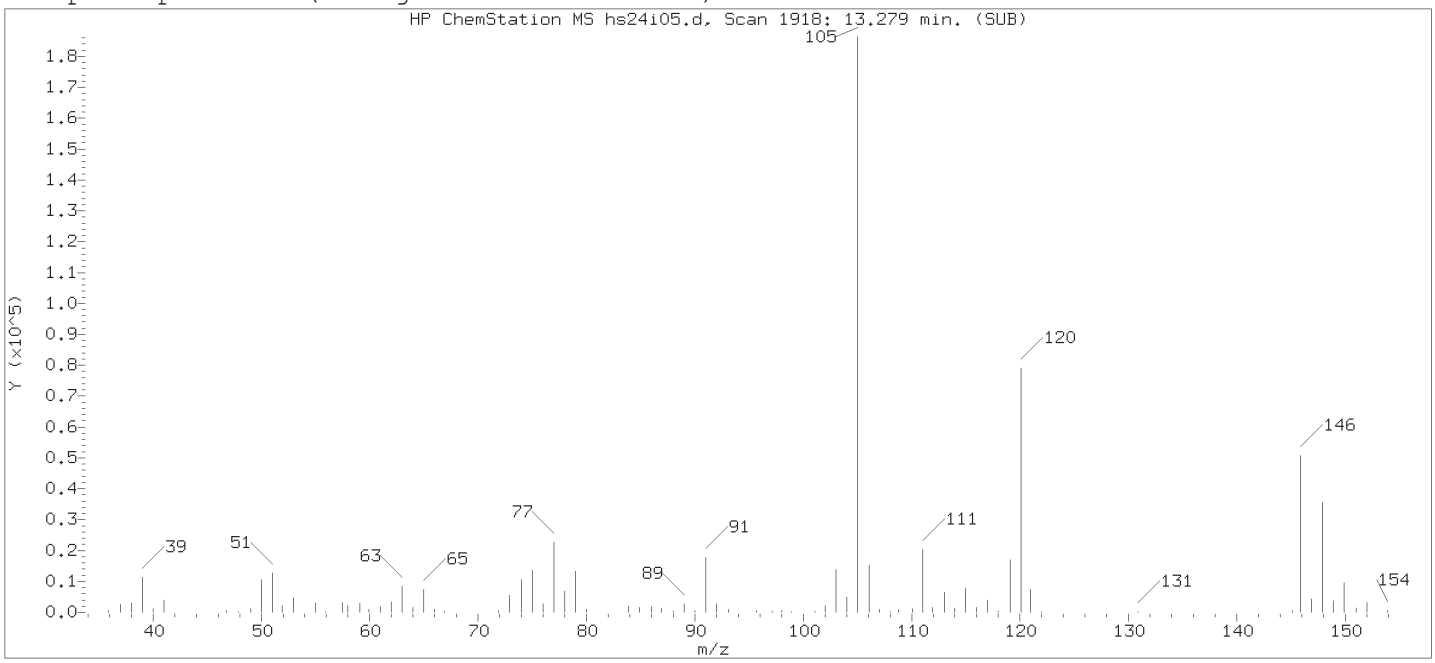
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area (flag) : 114395M
On-Column Amount (ng) : 0.9792
Integration start scan : 1909 Integration stop scan: 1924
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

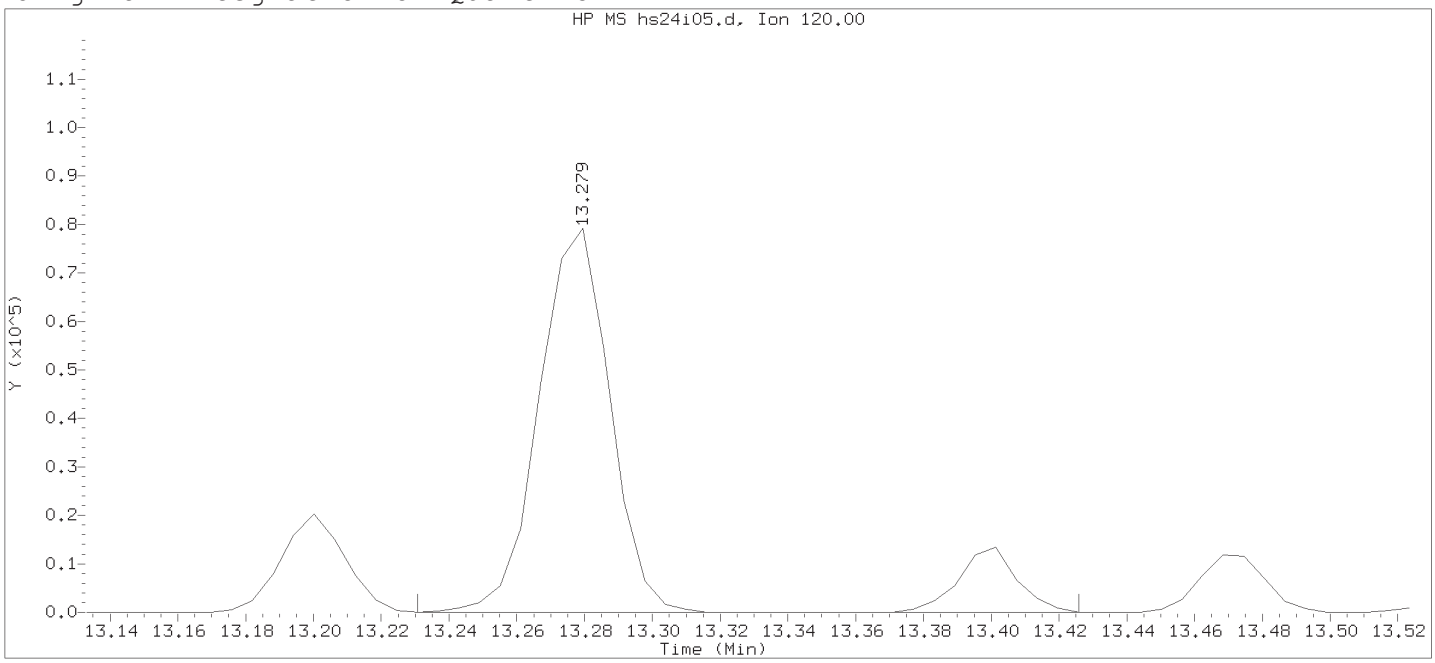
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



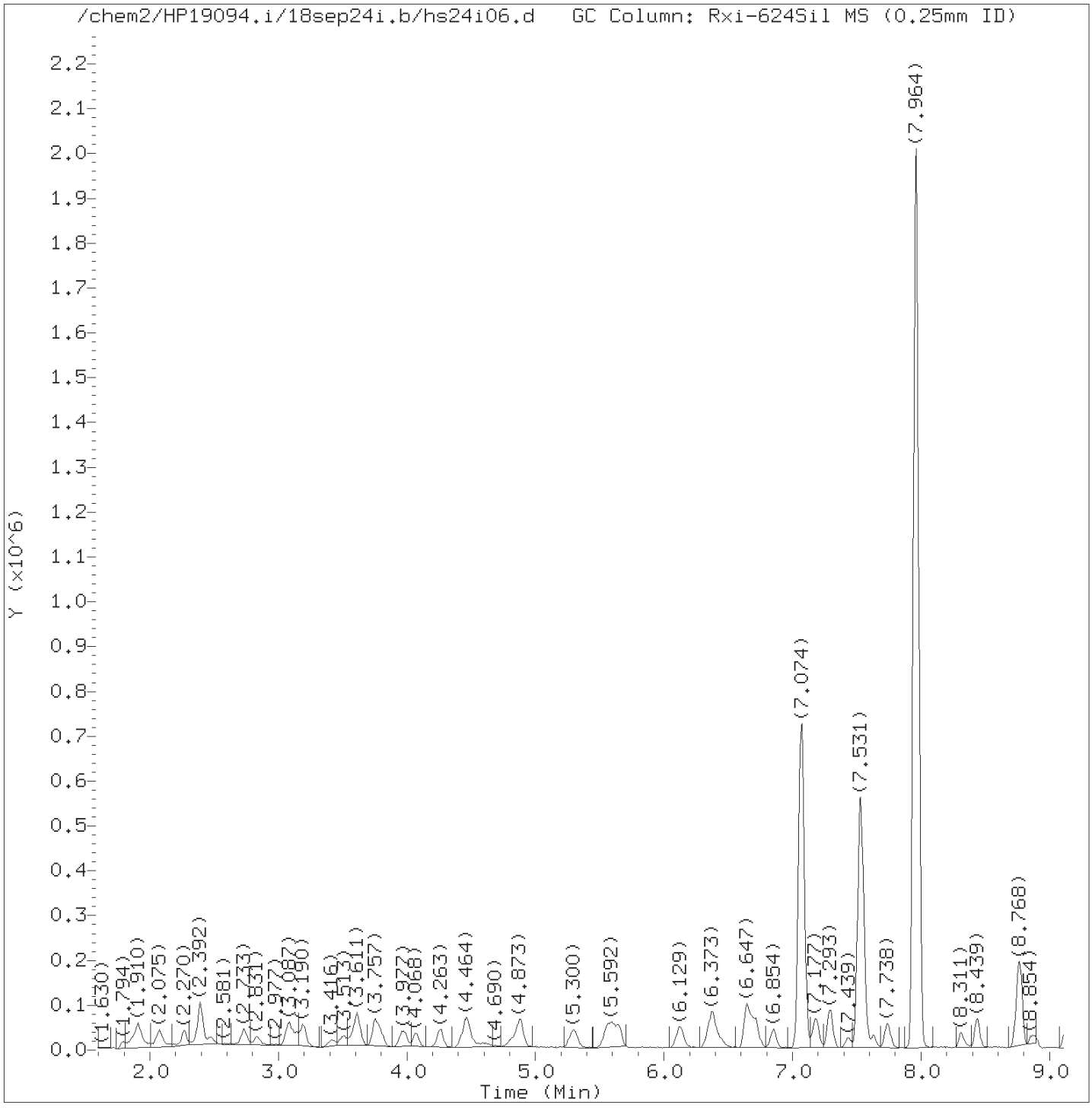
Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

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)

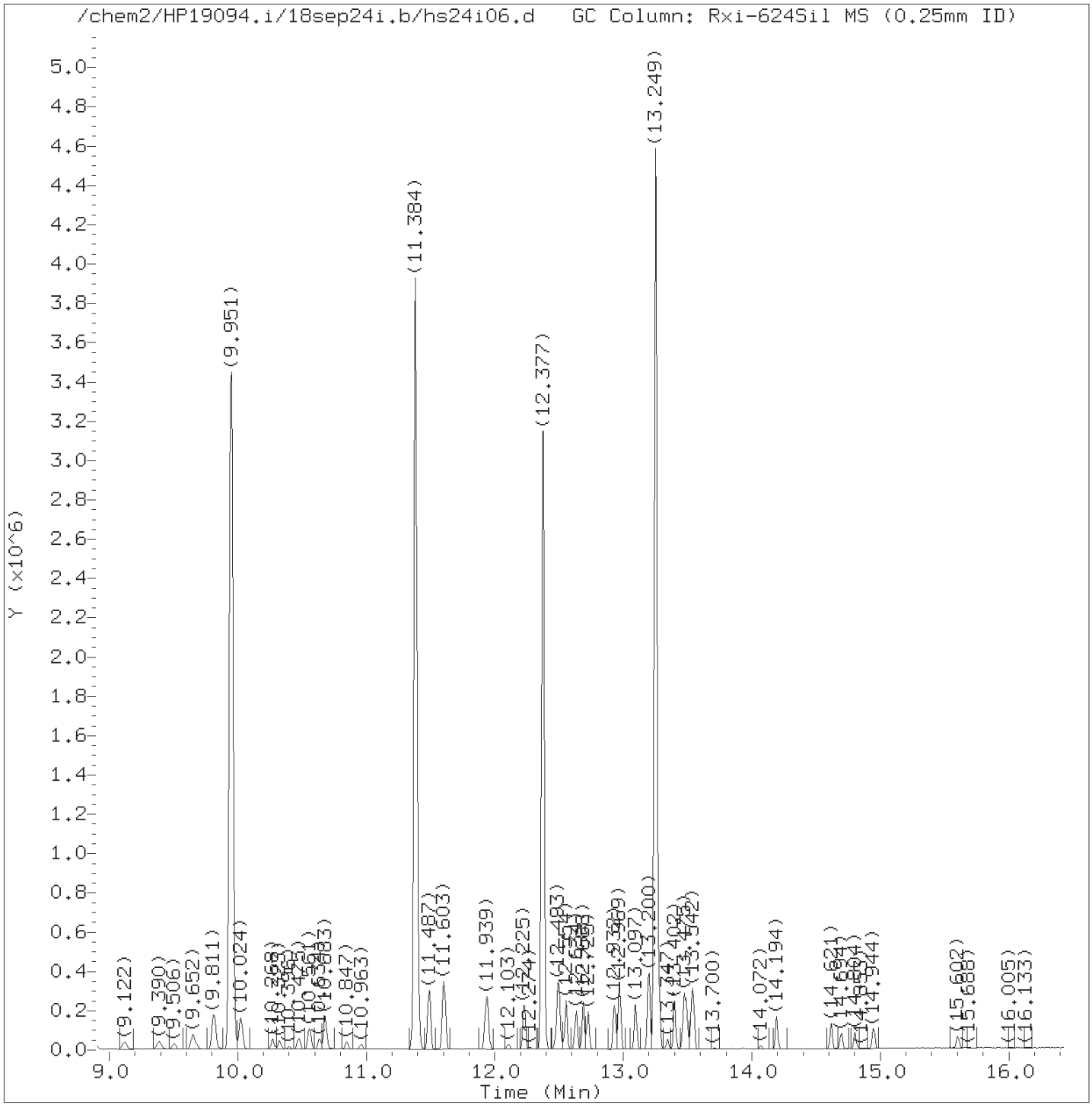
Target Revision 3.5

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

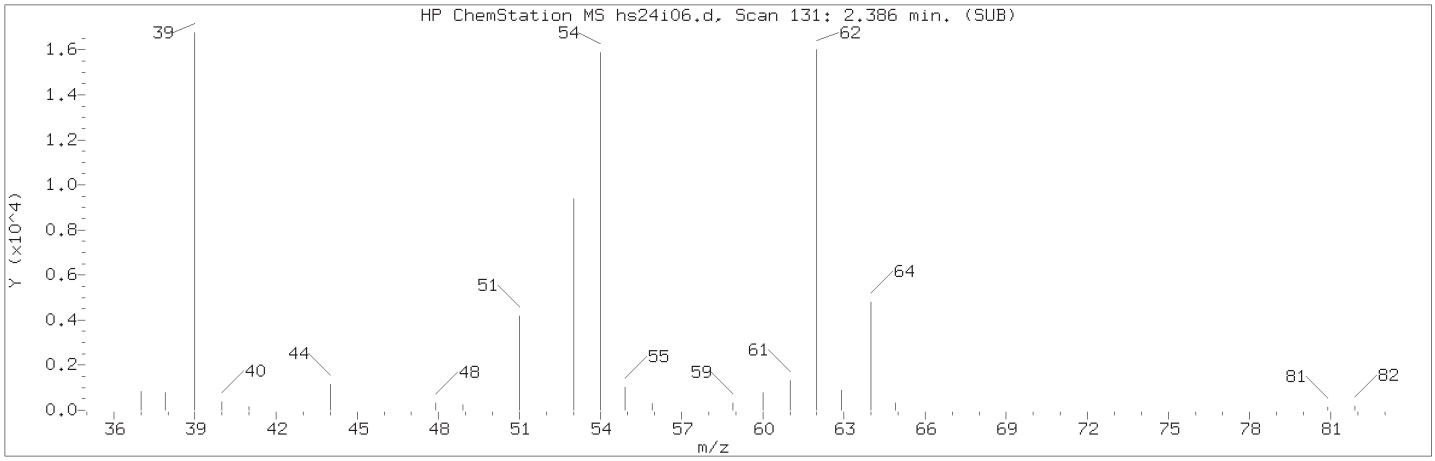
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

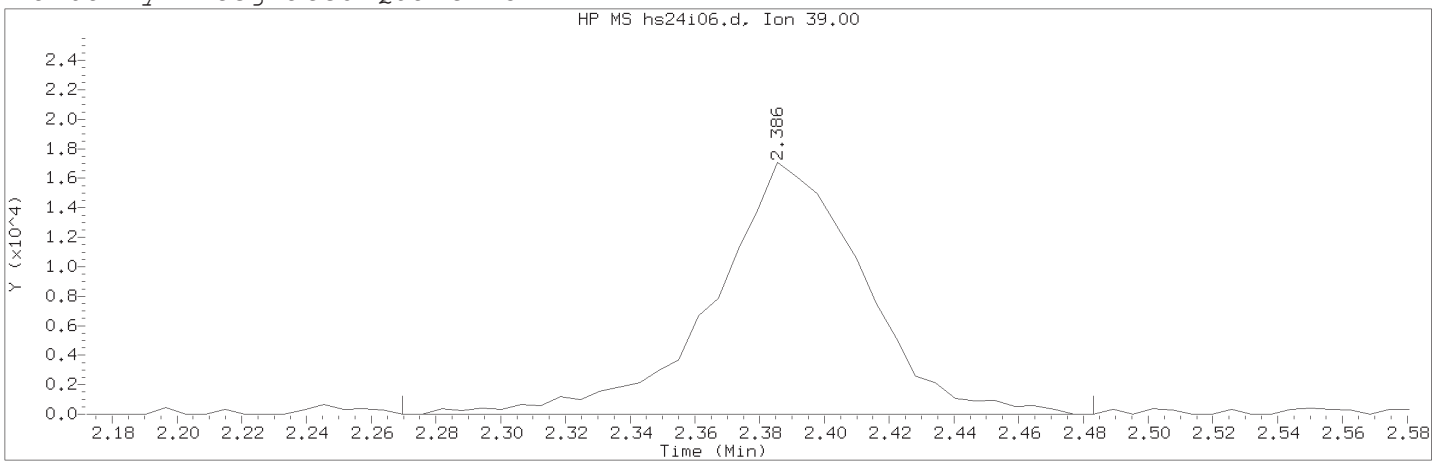
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	14287	0.465
147) Naphthalene	(4)	14.804	128	57089	0.444
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	31271	0.468

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

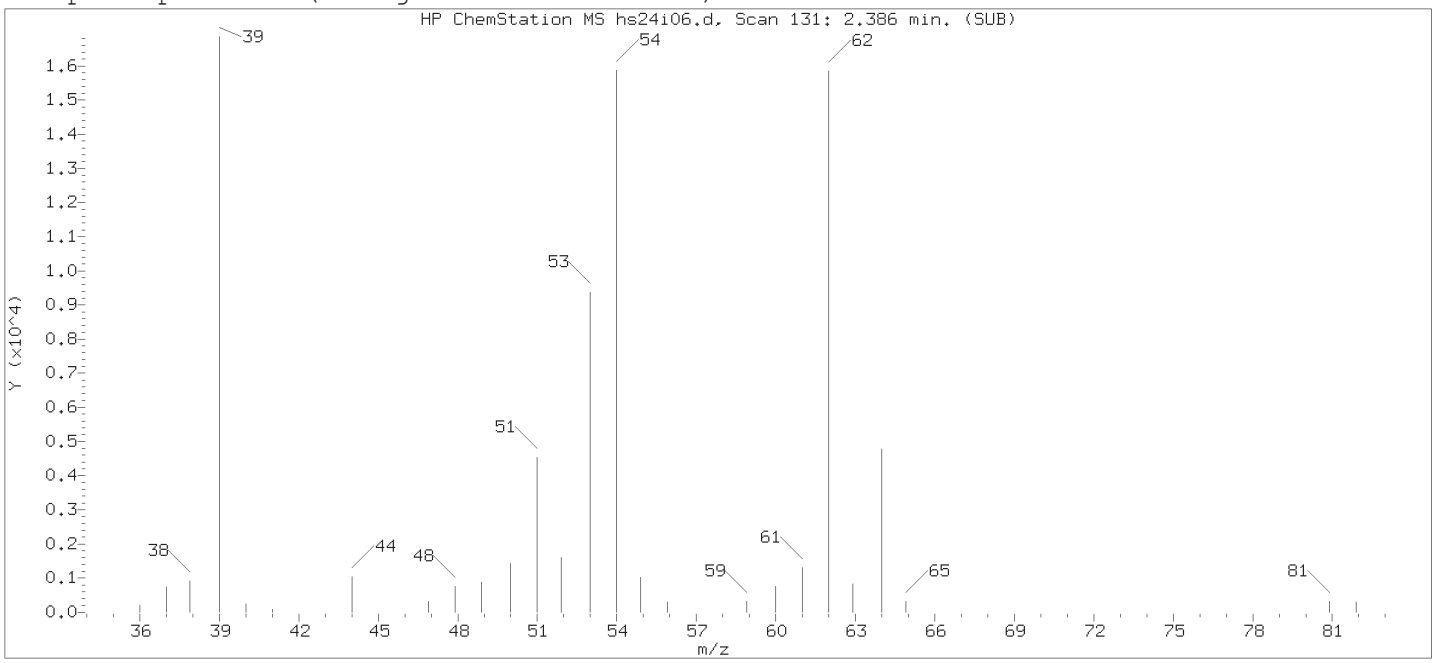
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area (flag) : 54776M
On-Column Amount (ng) : 0.4918
Integration start scan : 111 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

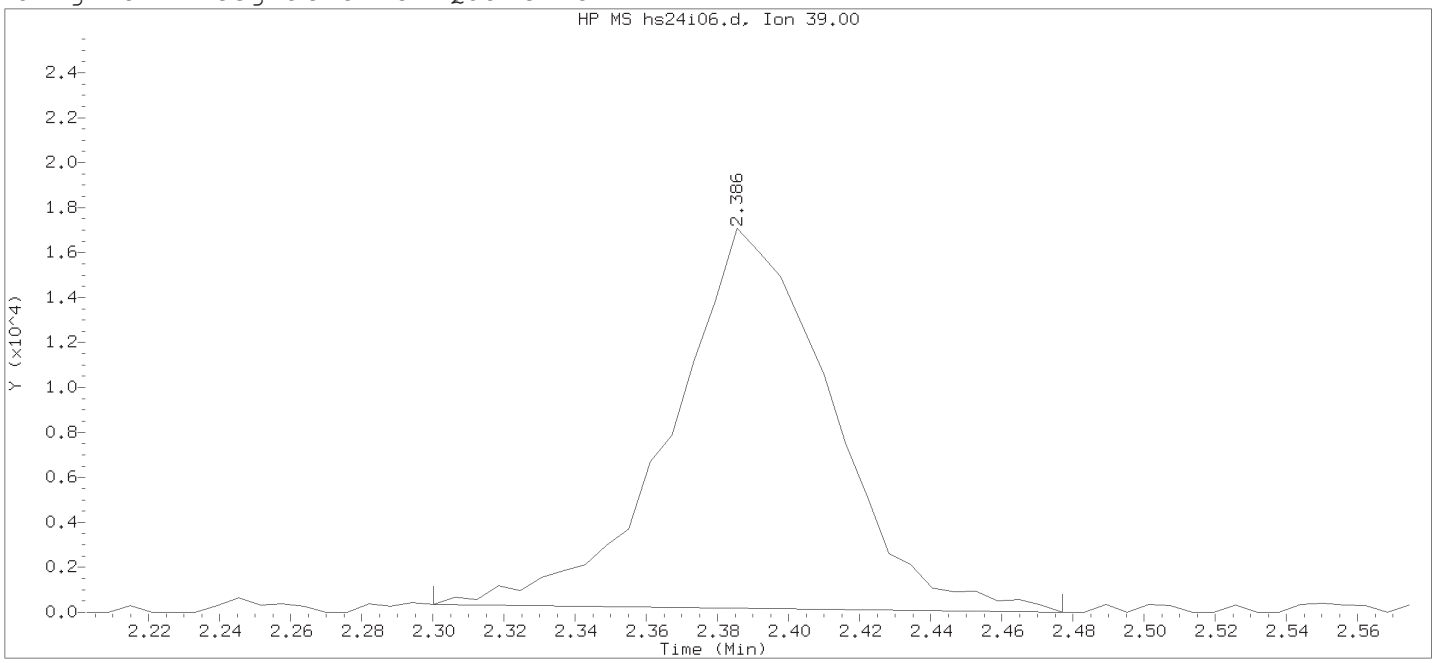
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

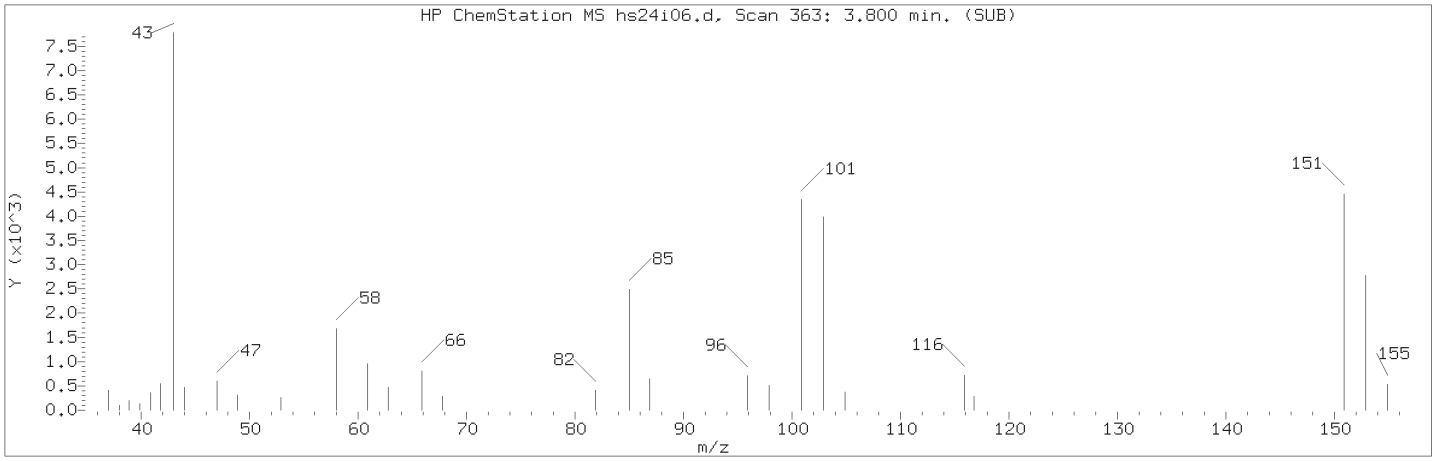
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

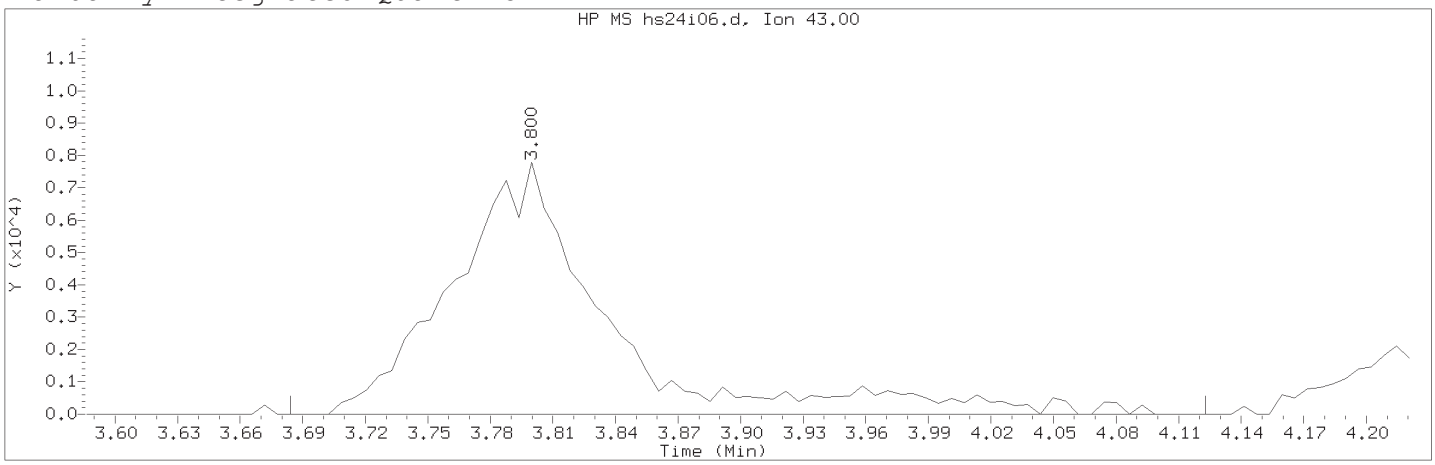
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area : 52477
On-column Amount (ng) : 0.5033
Integration start scan : 116 Integration stop scan: 145
Y at integration start : 348 Y at integration end: 0

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

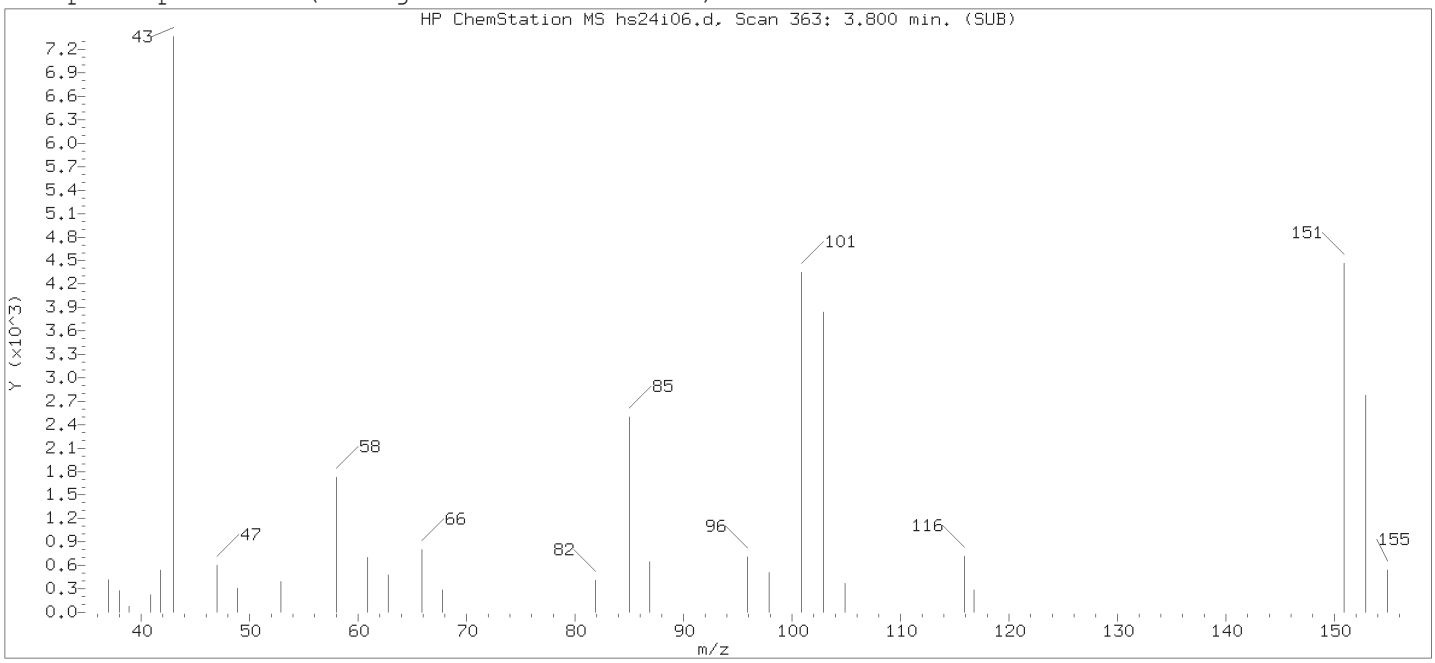
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 39805M
On-Column Amount (ng) : 4.7640
Integration start scan : 343 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

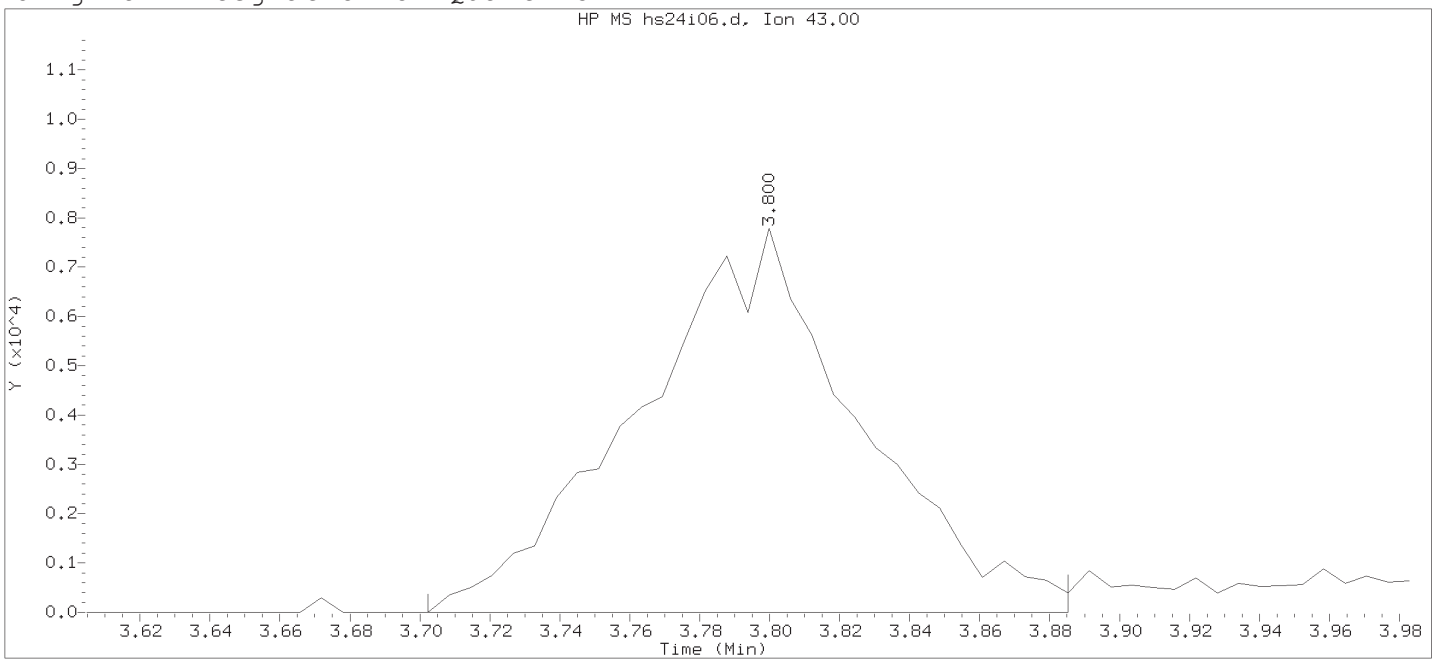
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

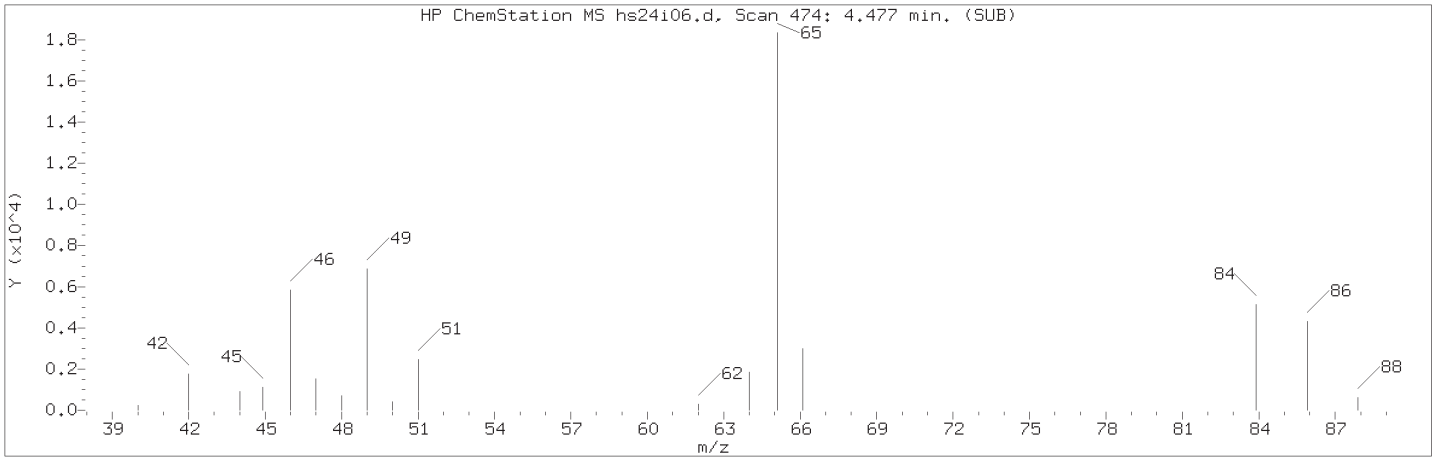
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

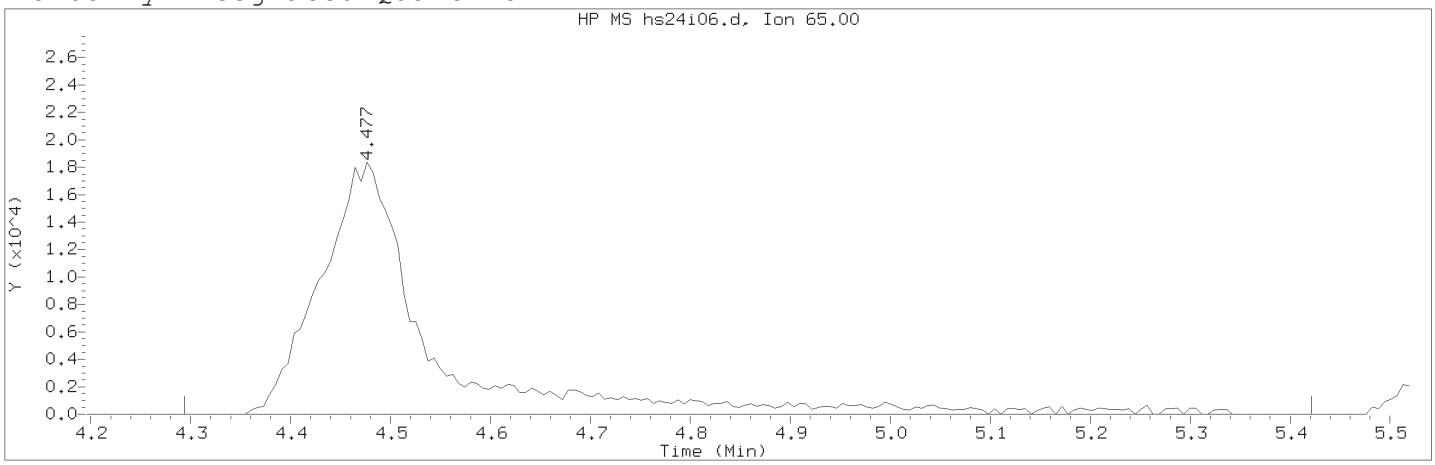
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area : 34206
On-column Amount (ng) : 4.4016
Integration start scan : 346 Integration stop scan: 376
Y at integration start : 0 Y at integration end: 0

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

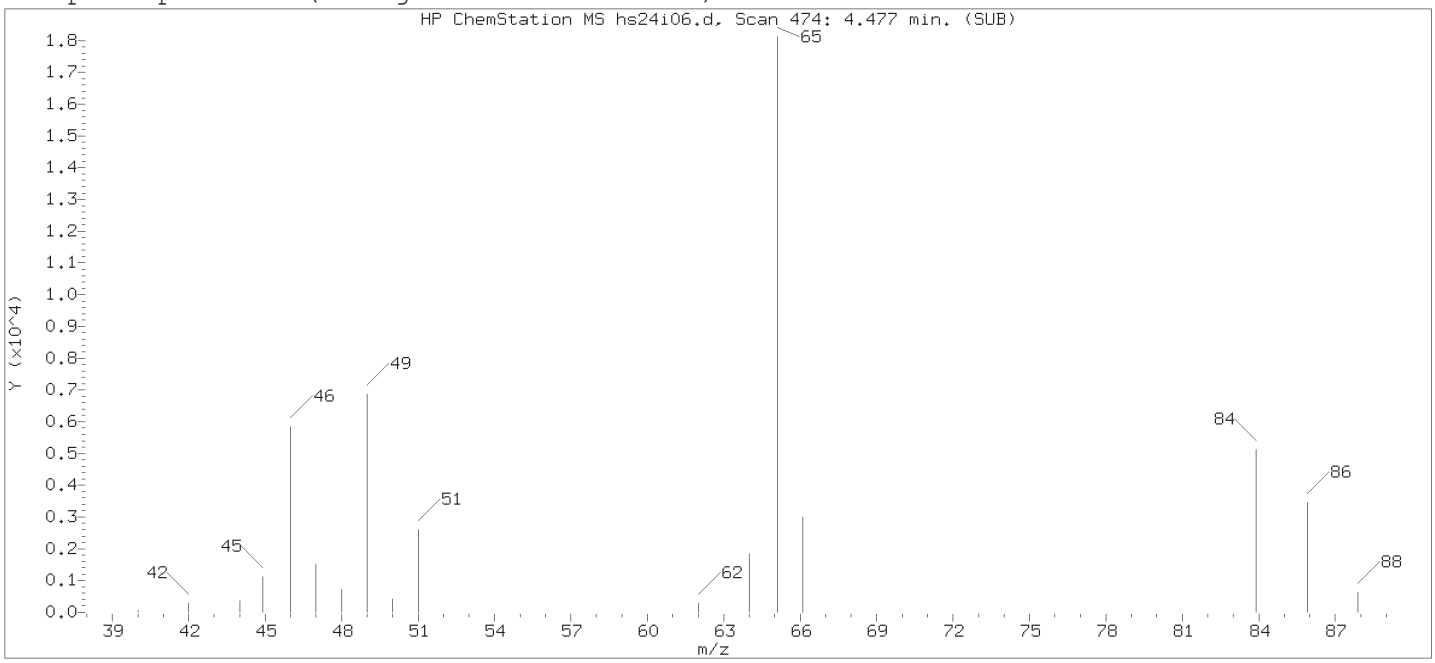
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 140183M
On-Column Amount (ng) : 50.0000
Integration start scan : 443 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

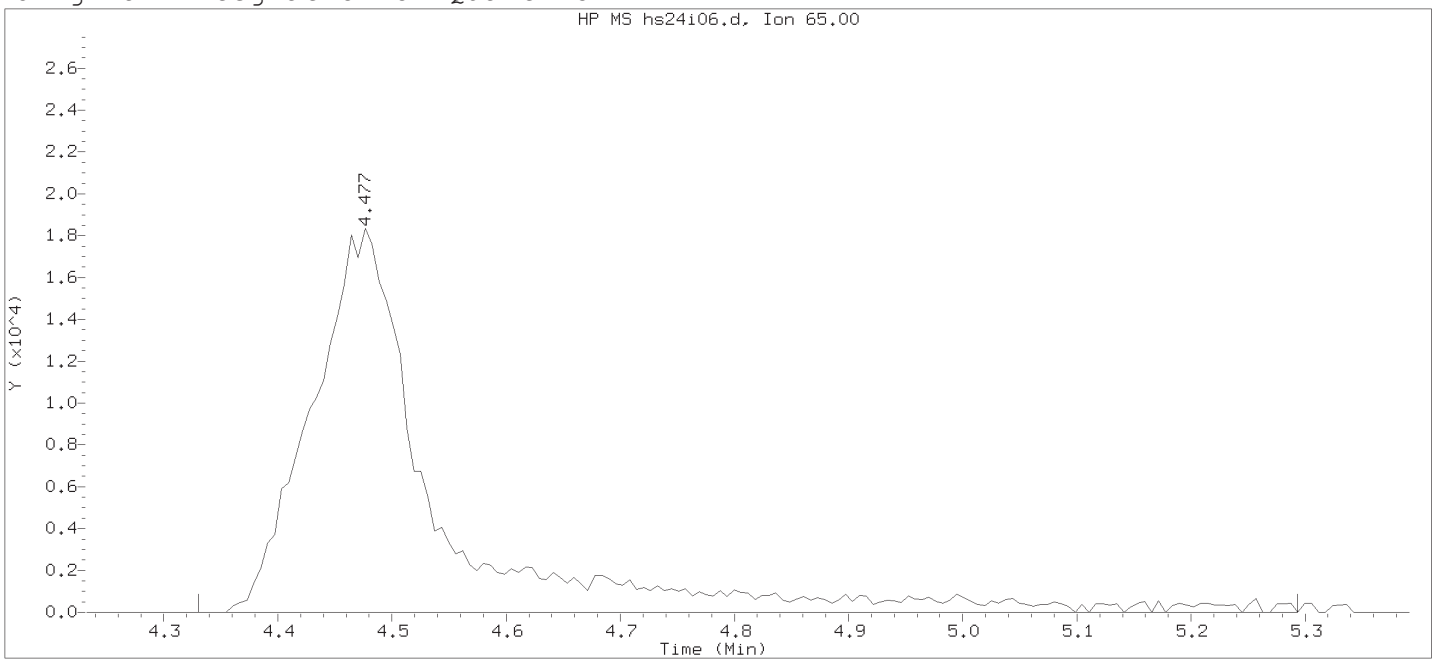
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

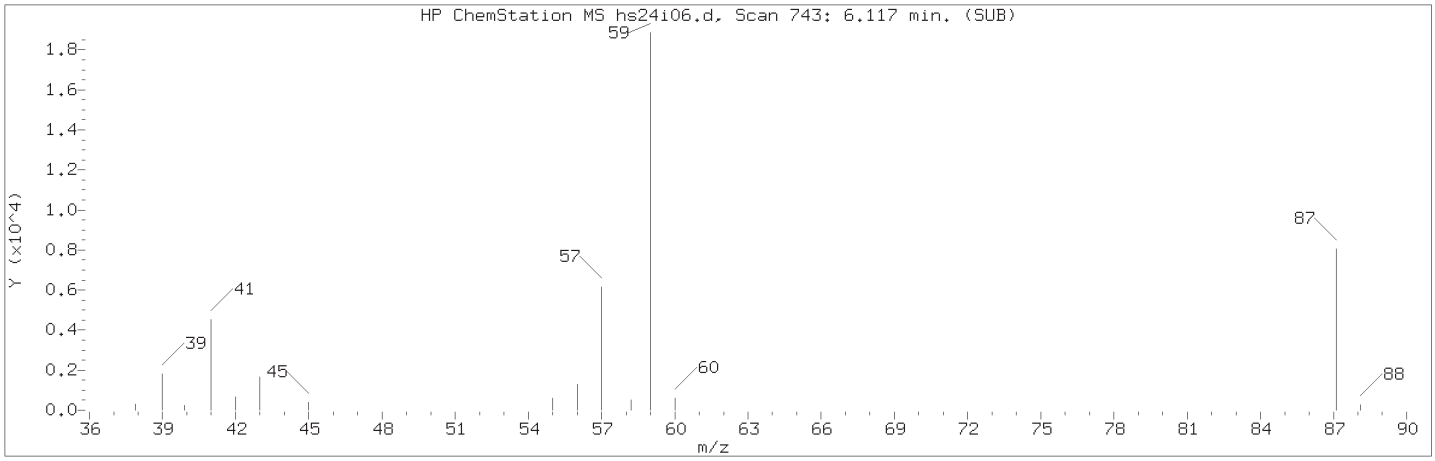
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

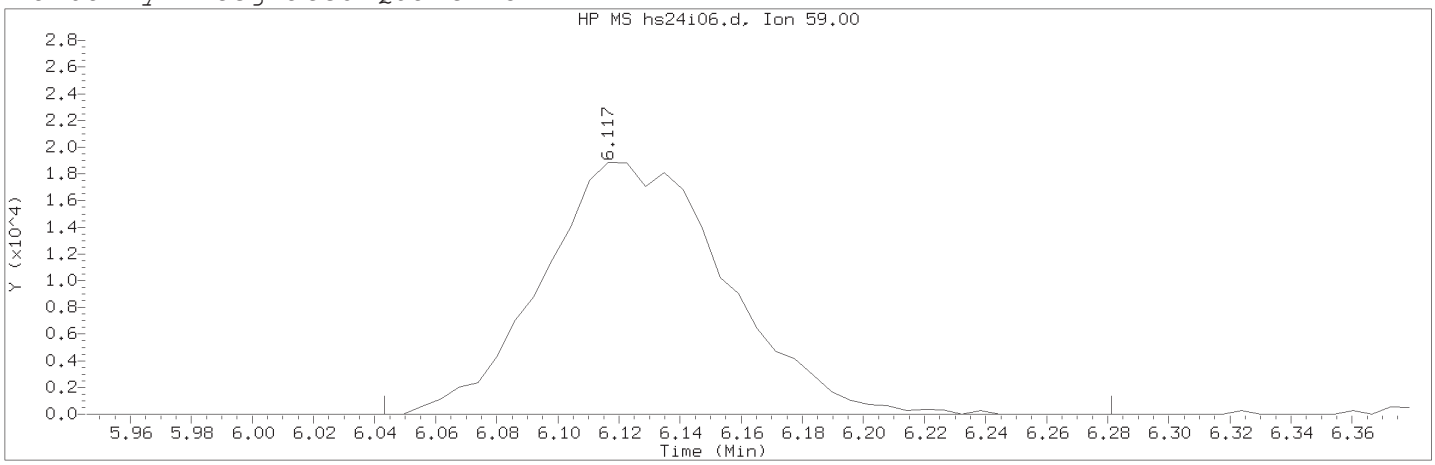
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 474		
Retention Time (minutes)	: 4.477		
Quant Ion	: 65.00		
Area	: 139492		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 449	Integration stop scan:	607
Y at integration start	: 0	Y at integration end:	0

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

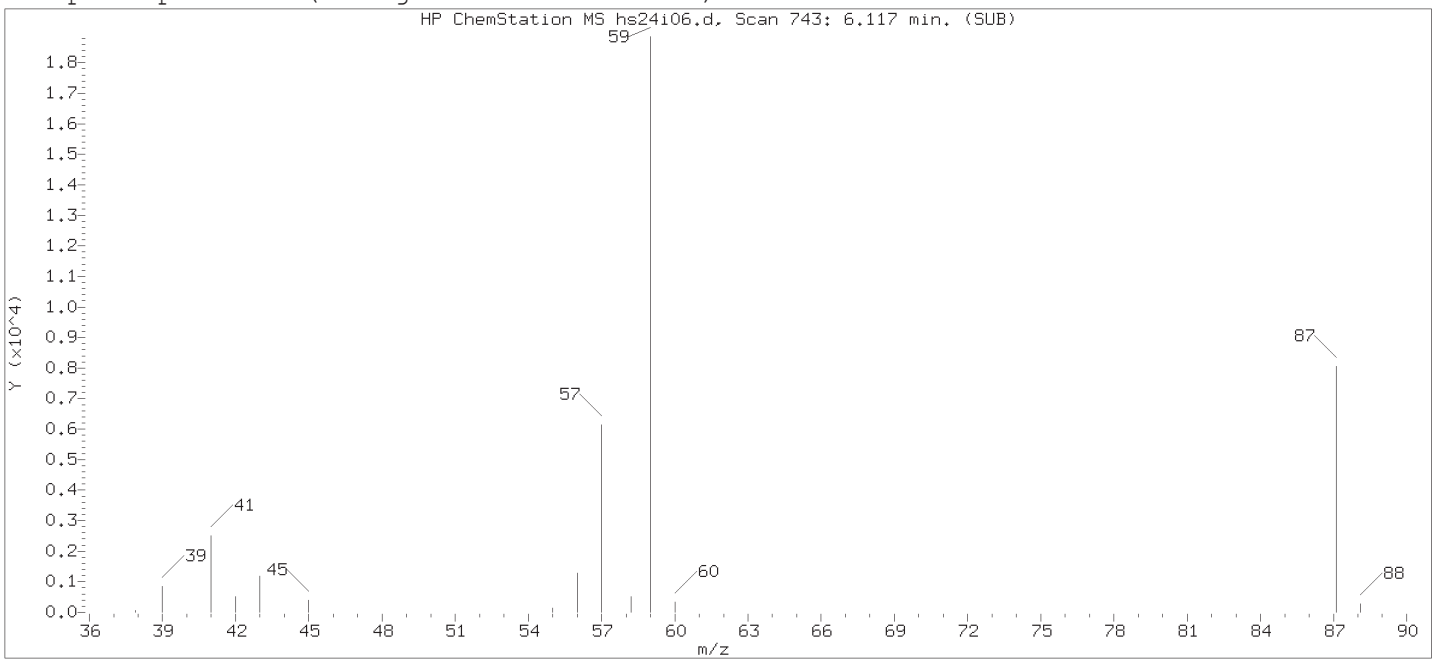
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area (flag) : 79009M
On-Column Amount (ng) : 0.4853
Integration start scan : 730 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

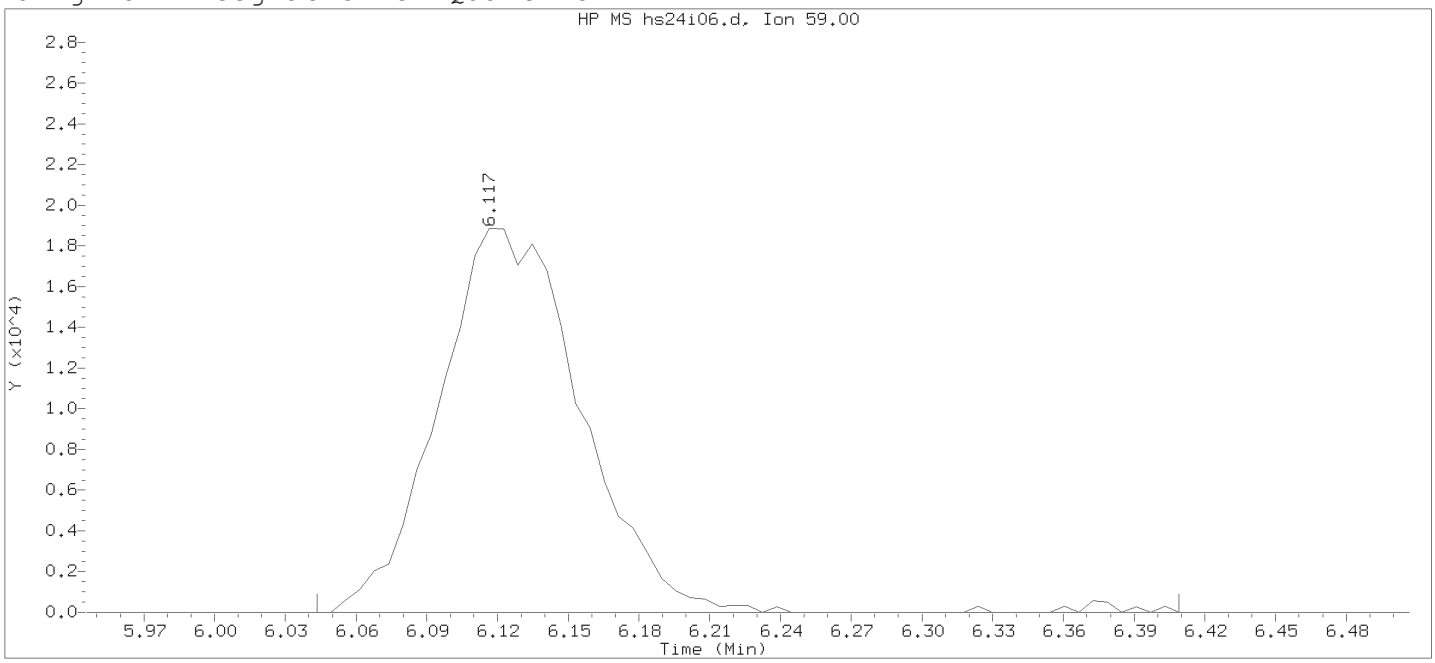
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

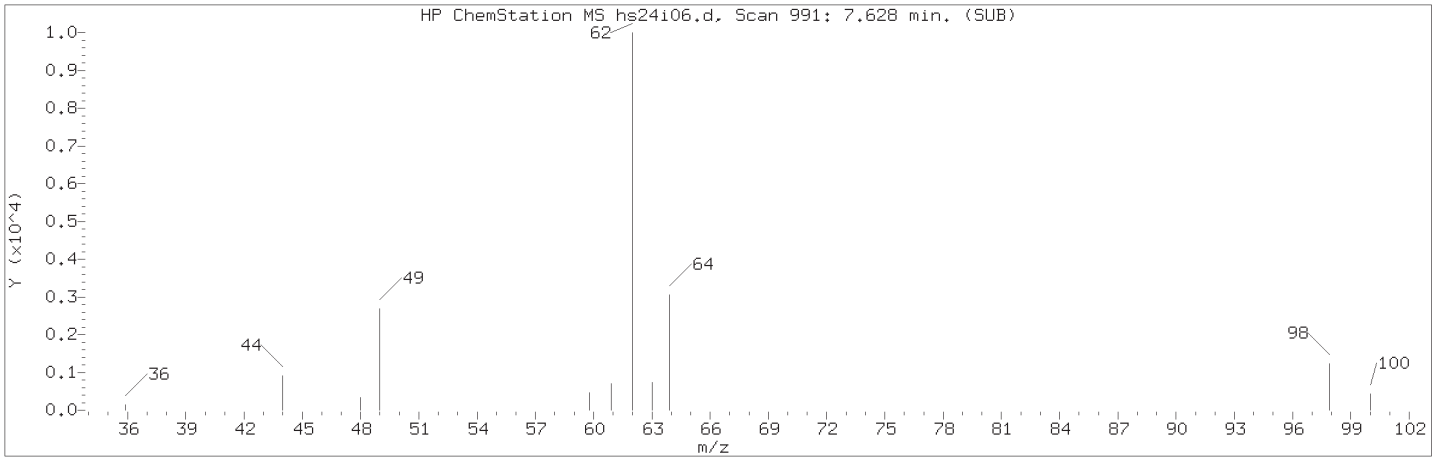
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

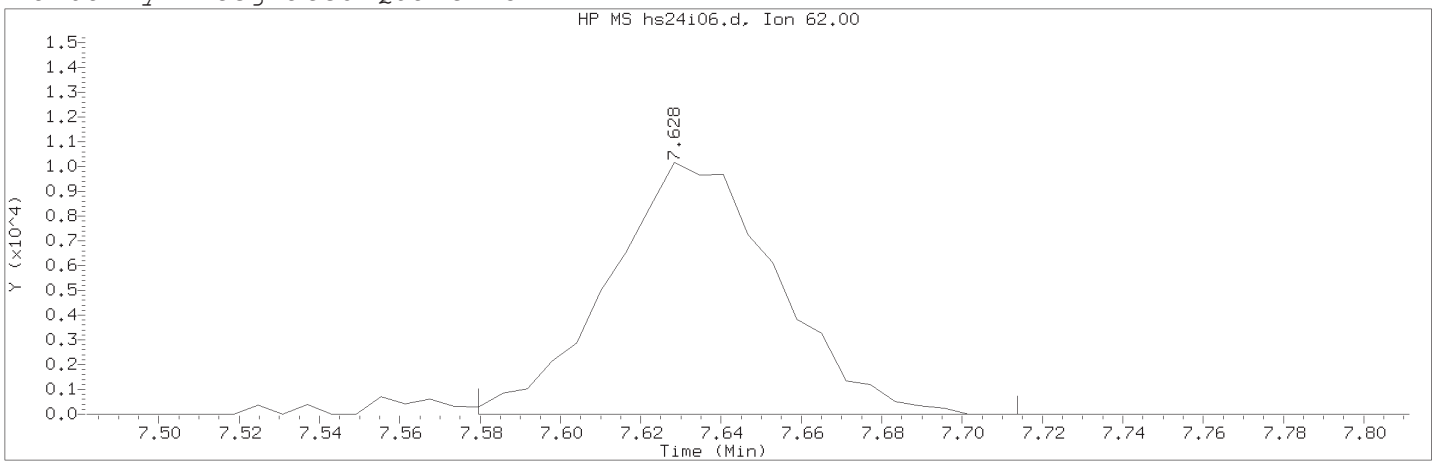
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area : 79805
On-column Amount (ng) : 0.4787
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

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

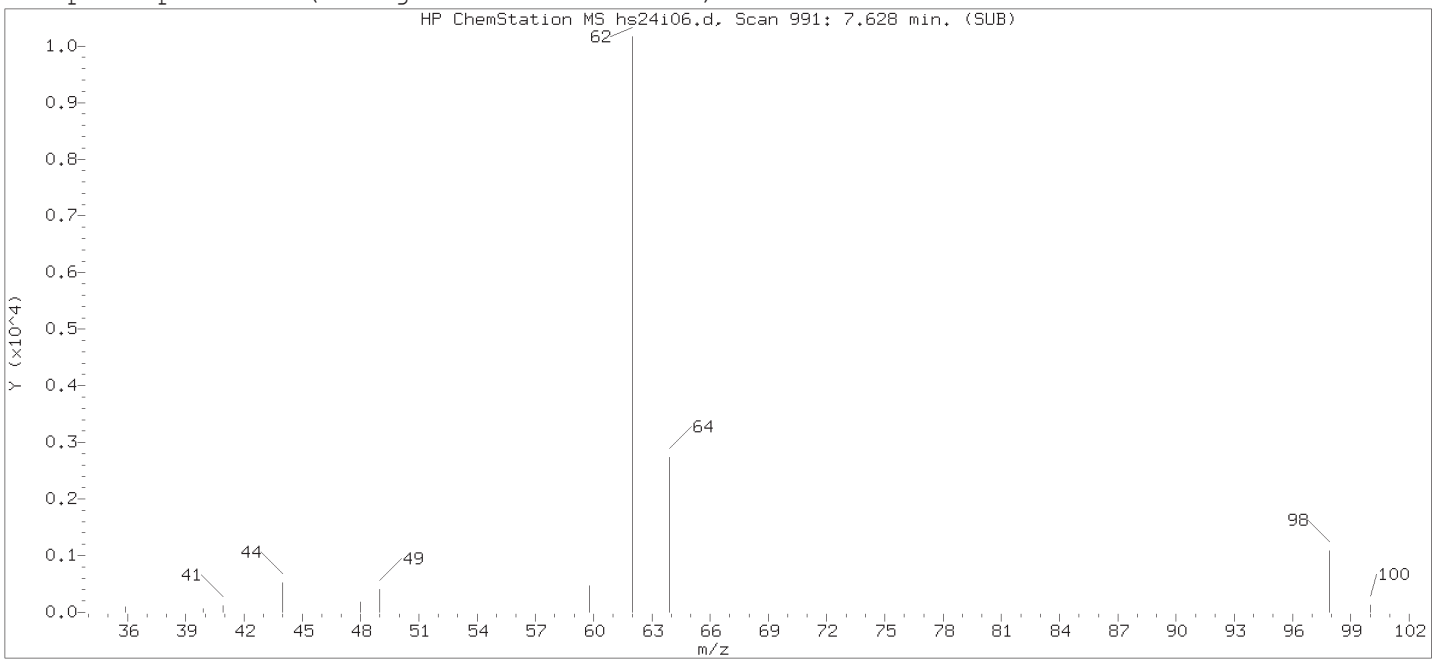
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 29519M
On-Column Amount (ng) : 0.4982
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

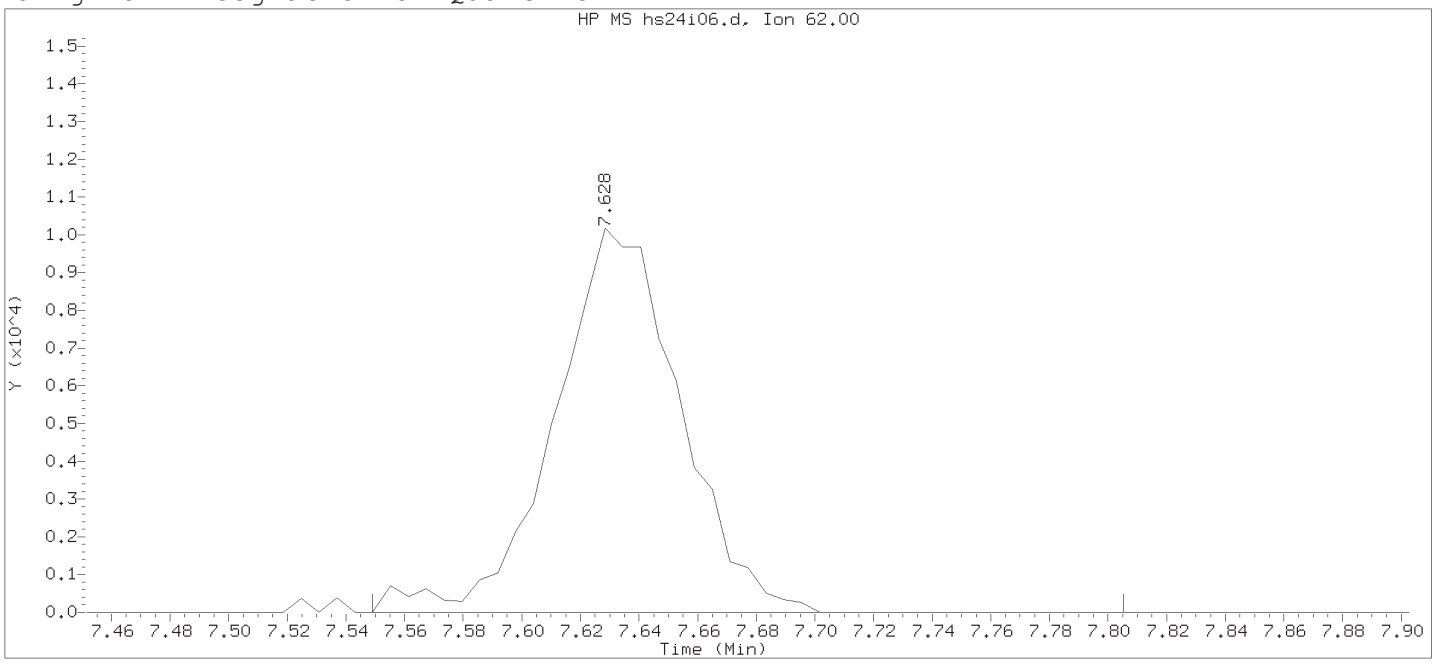
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

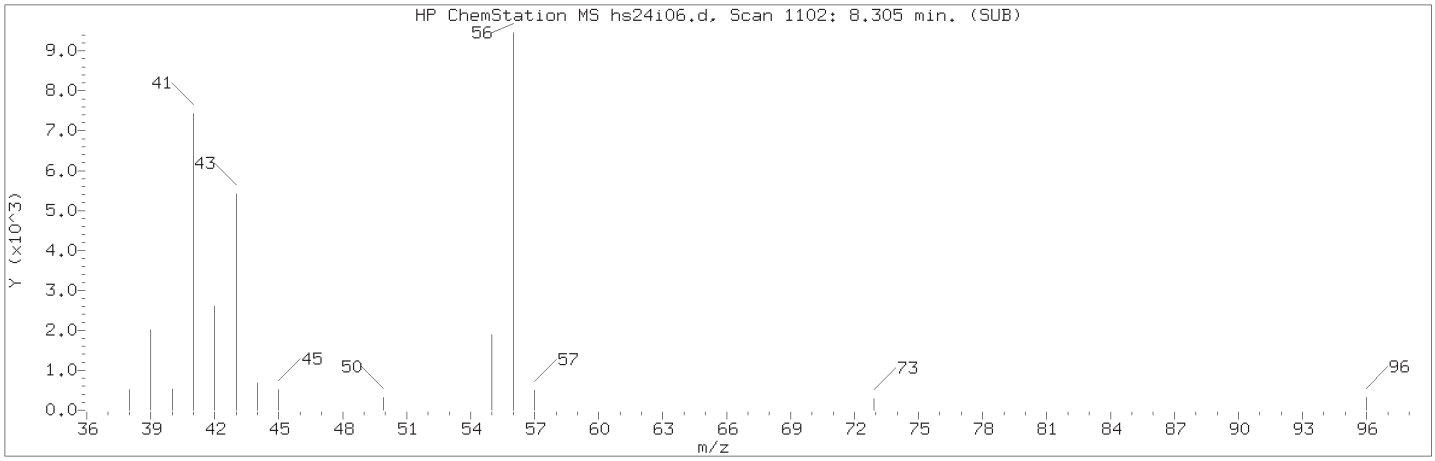
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

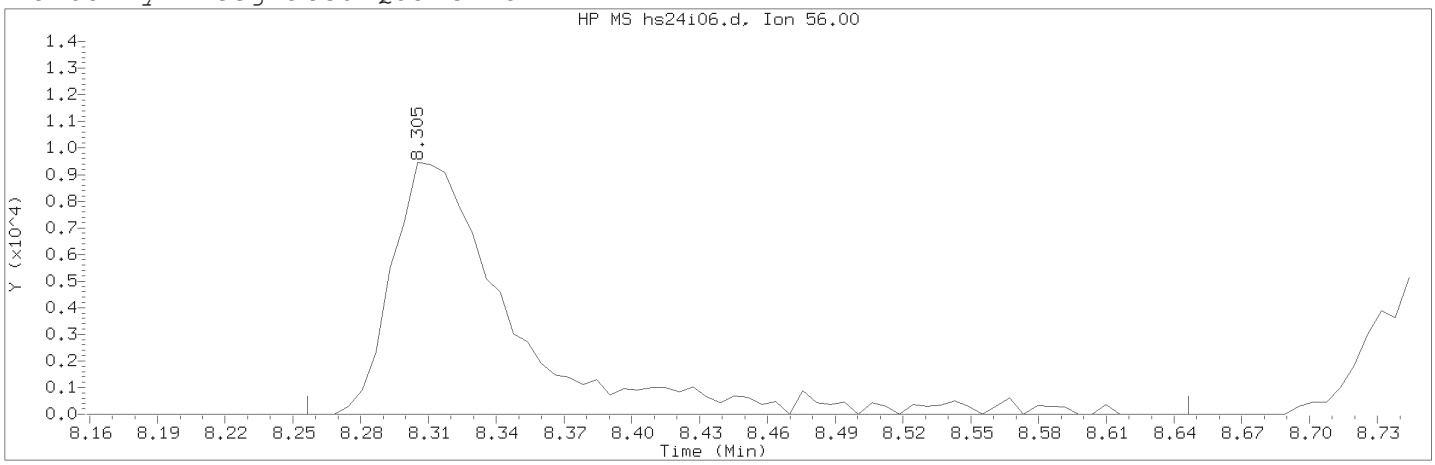
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 30276
On-column Amount (ng) : 0.5128
Integration start scan : 977 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

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

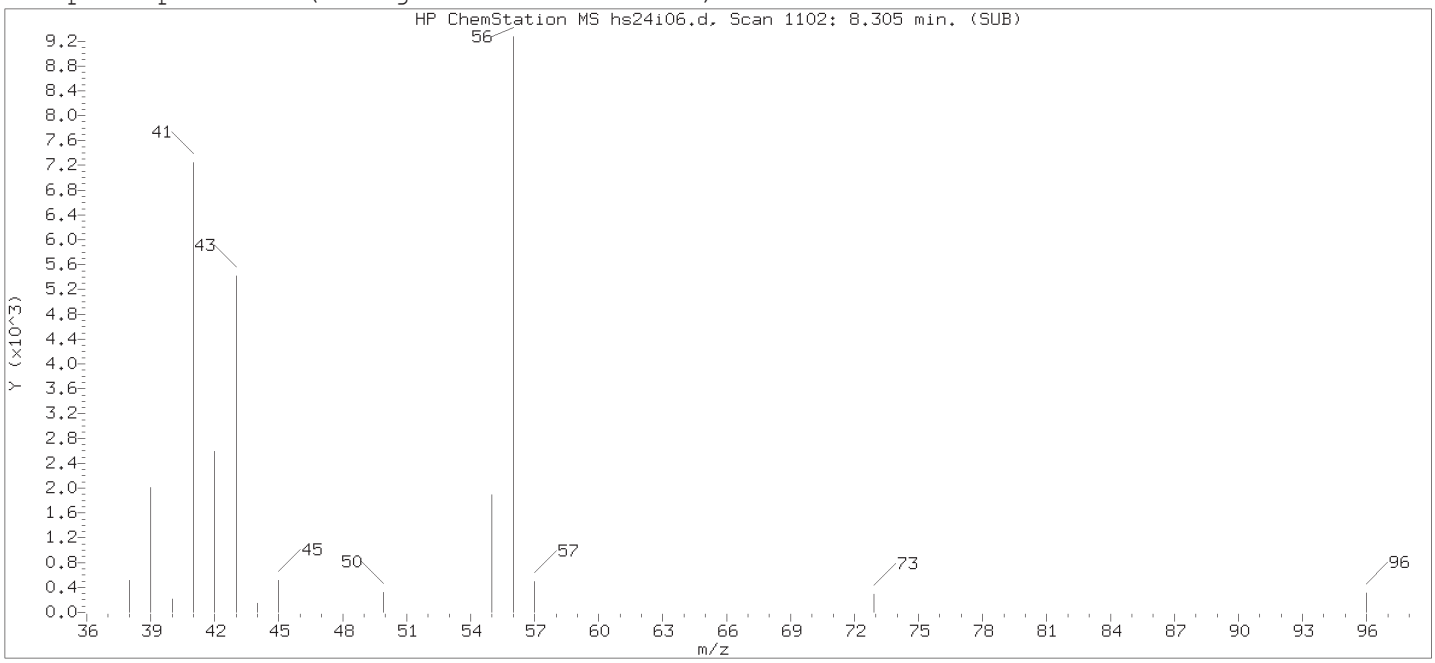
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 35795M
On-Column Amount (ng) : 45.7637
Integration start scan : 1093 Integration stop scan: 1157
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

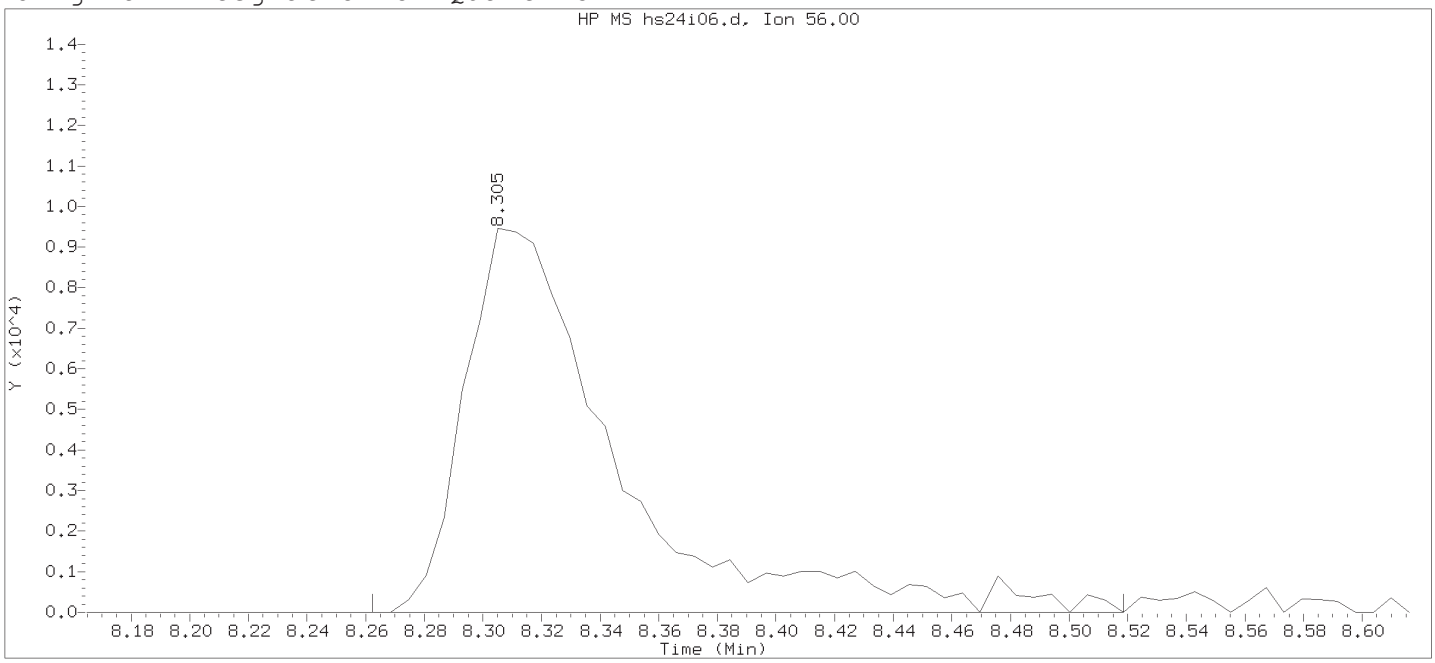
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

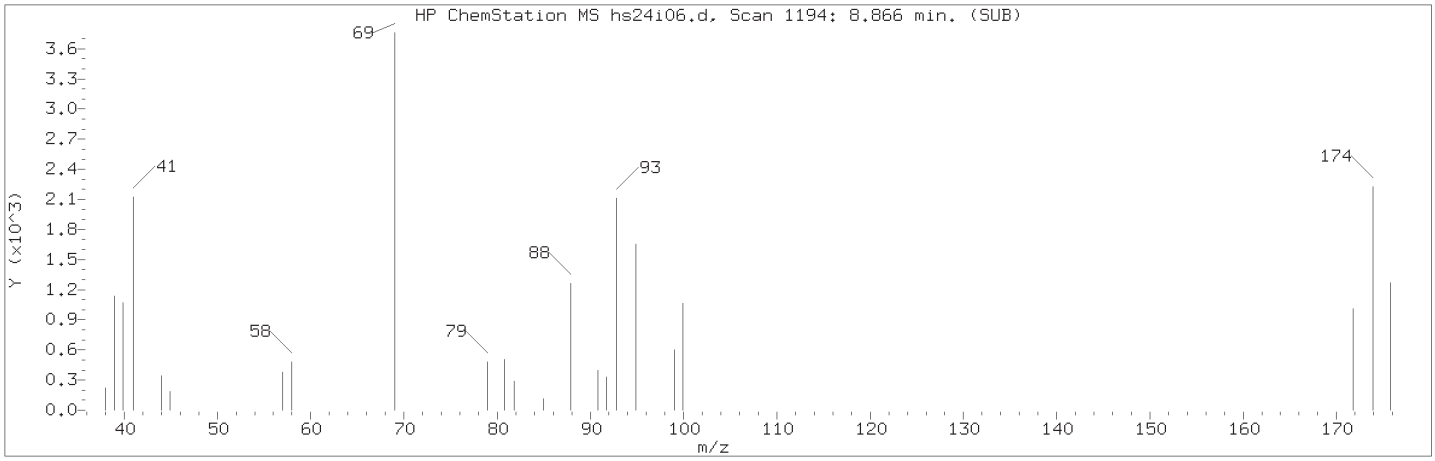
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

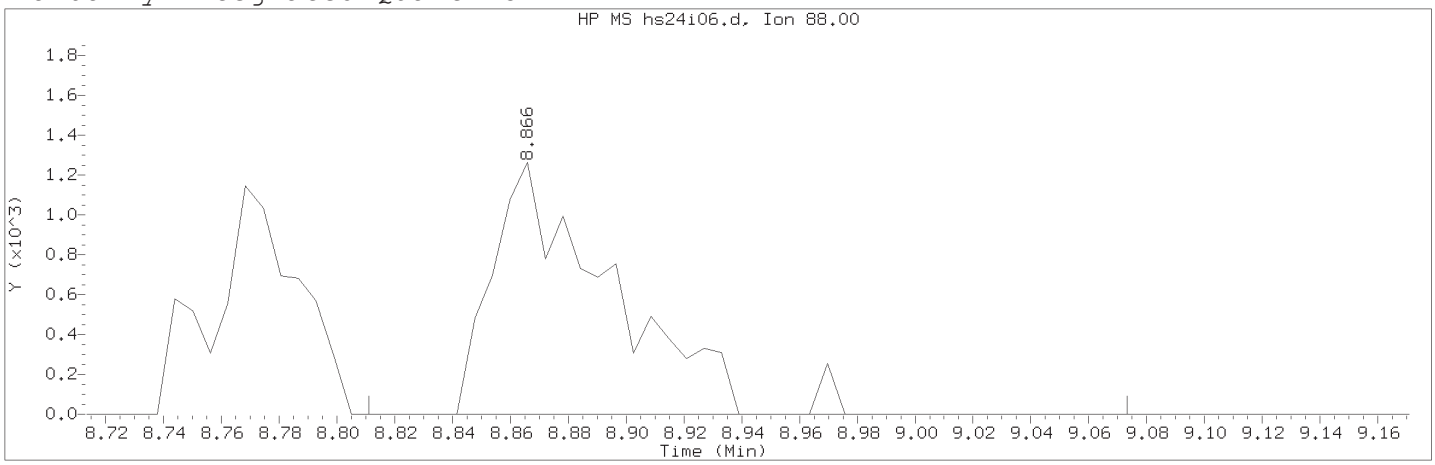
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area : 34344
On-column Amount (ng) : 44.3600
Integration start scan : 1094 Integration stop scan: 1136
Y at integration start : 0 Y at integration end: 0

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

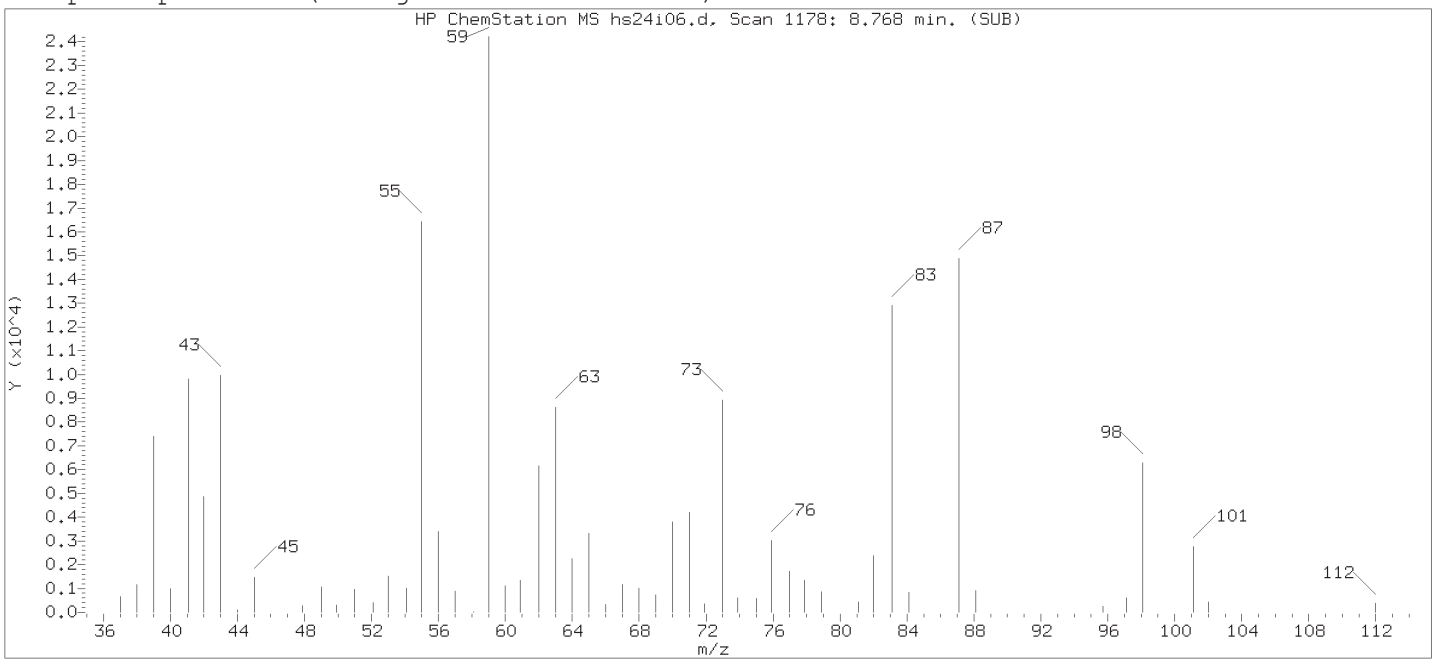
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 3592M
On-Column Amount (ng) : 19.0735
Integration start scan : 1184 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

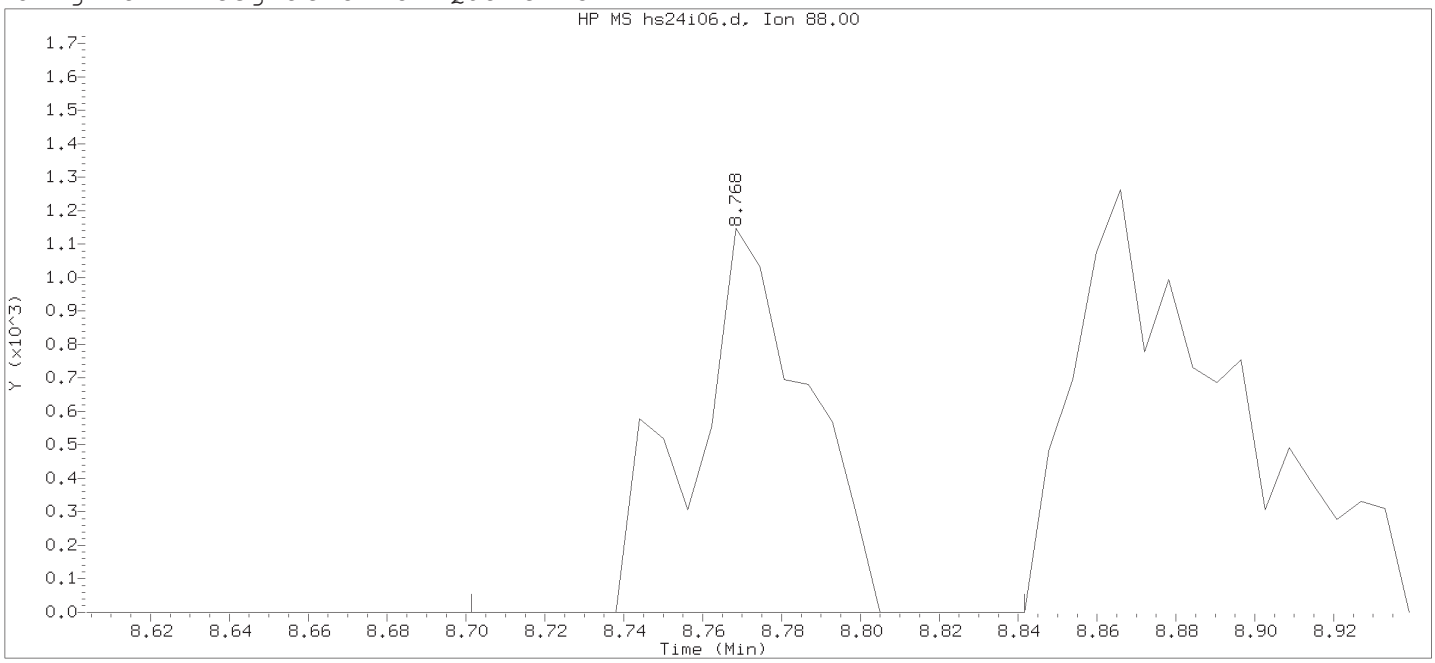
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

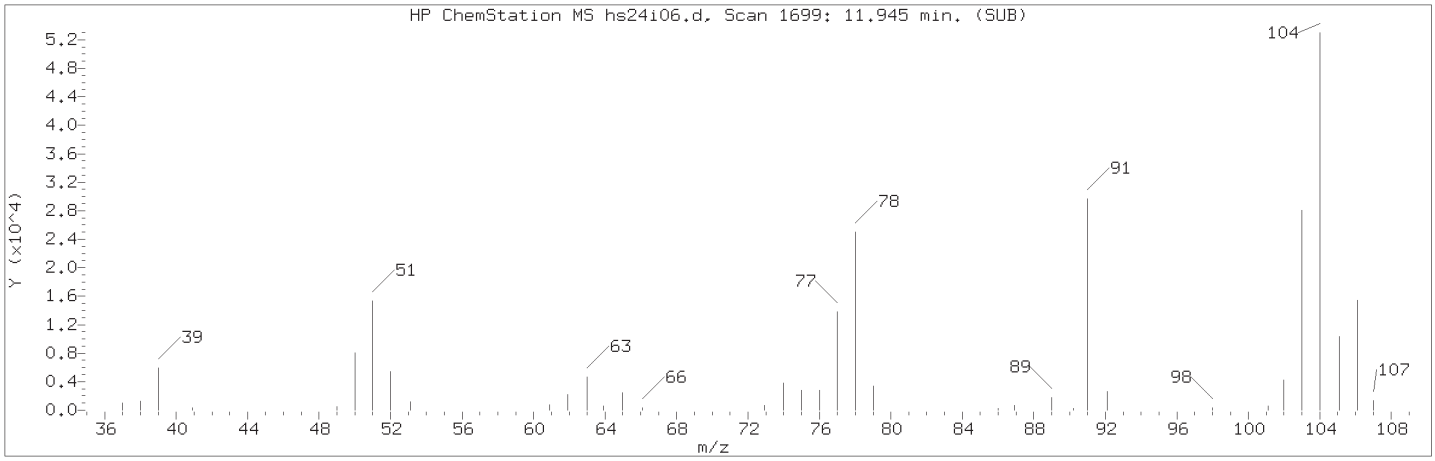
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

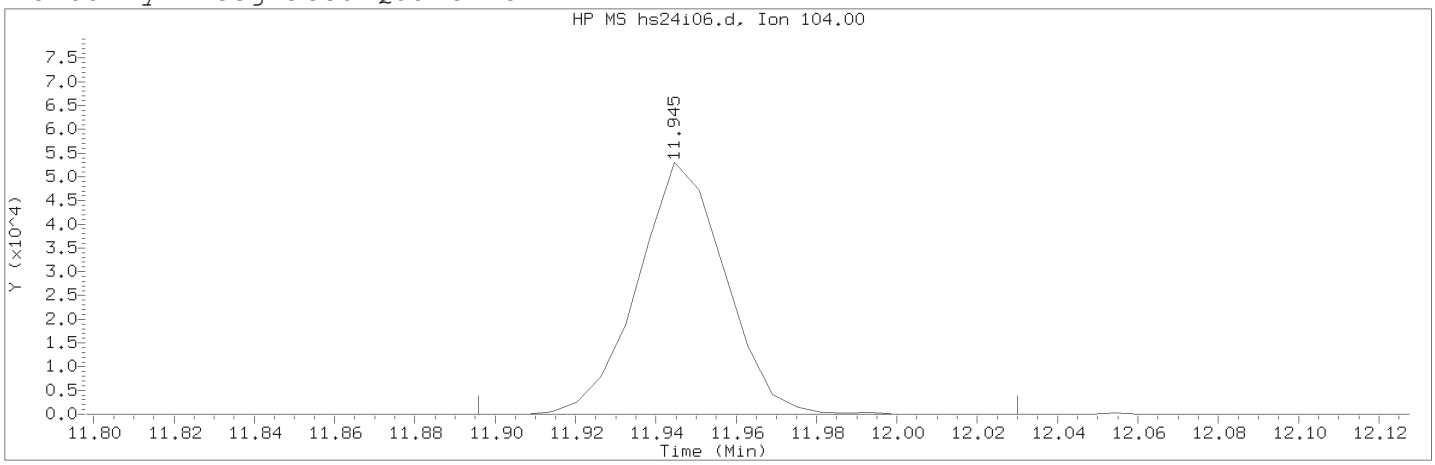
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 2332		
On-column Amount (ng)	: 19.8680		
Integration start scan	: 1166	Integration stop scan:	1189
Y at integration start	: 0	Y at integration end:	0

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

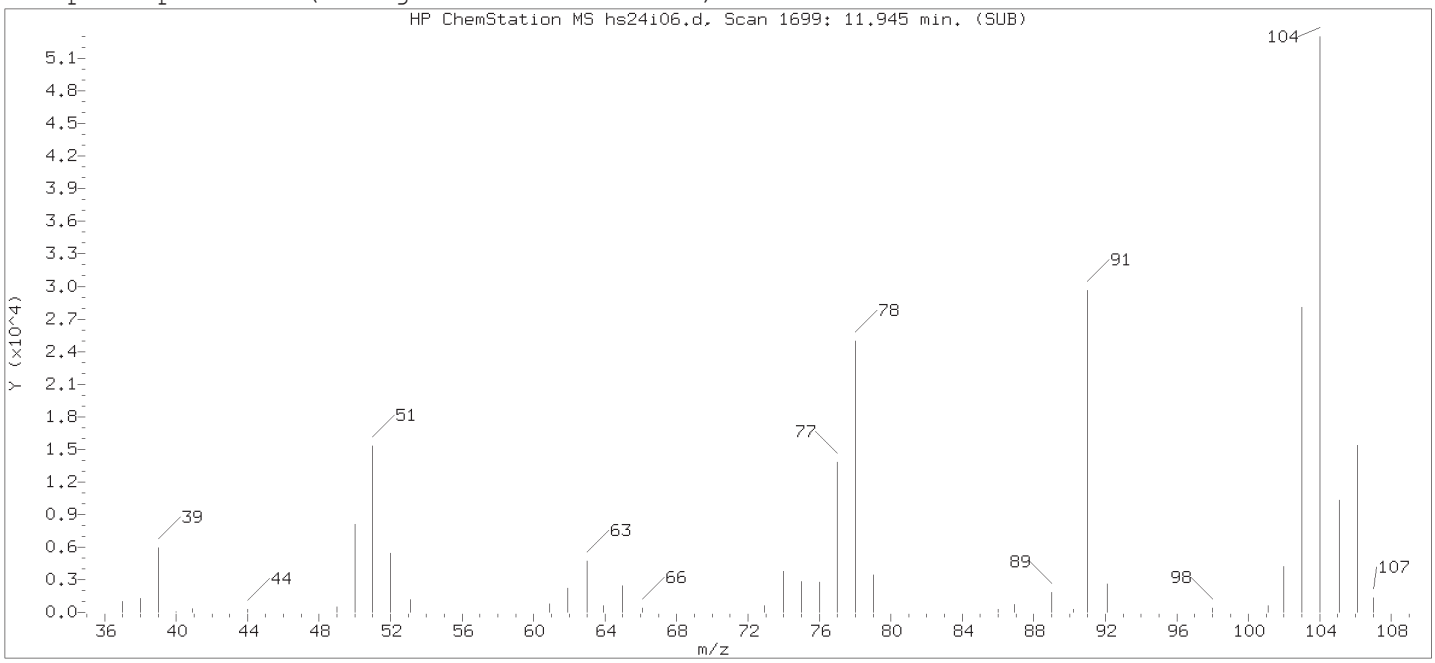
Compound Number : 106
Compound Name : Styrene
Scan Number : 1699
Retention Time (minutes): 11.945
Quant Ion : 104.00
Area (flag) : 80057M
On-Column Amount (ng) : 0.4536
Integration start scan : 1690 Integration stop scan: 1712
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

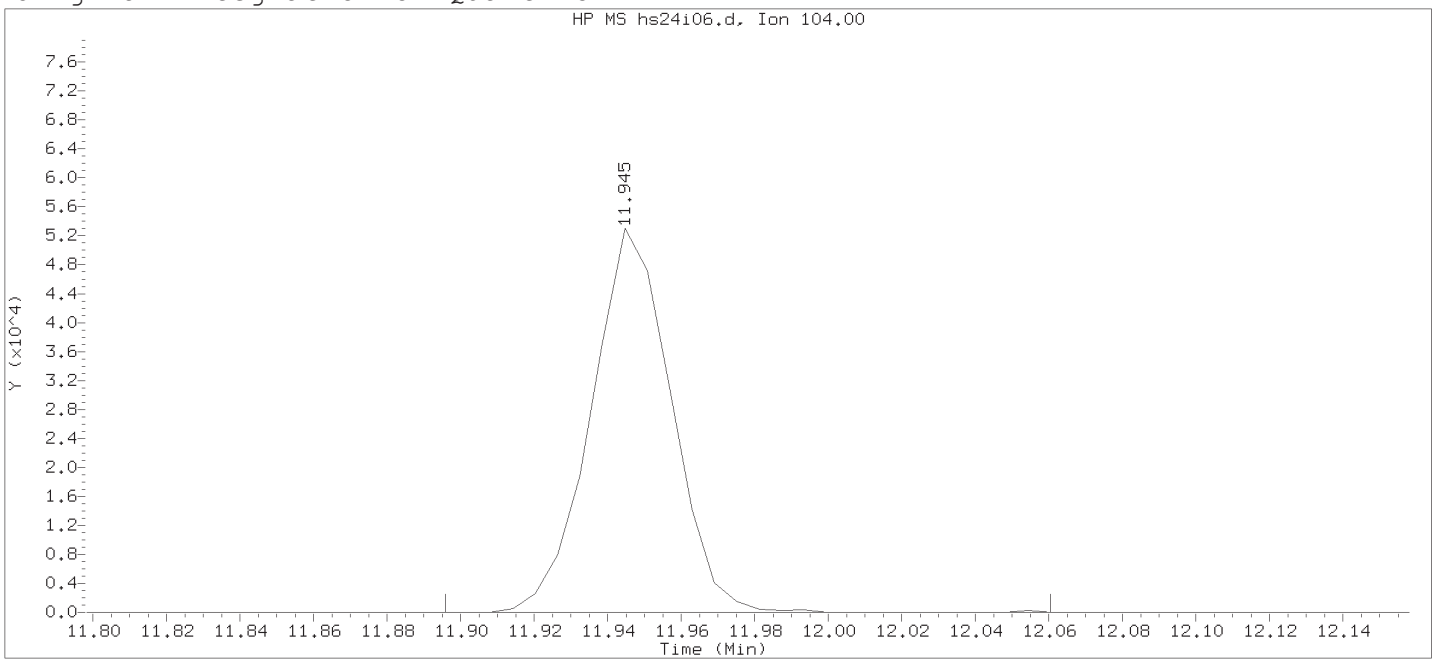
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

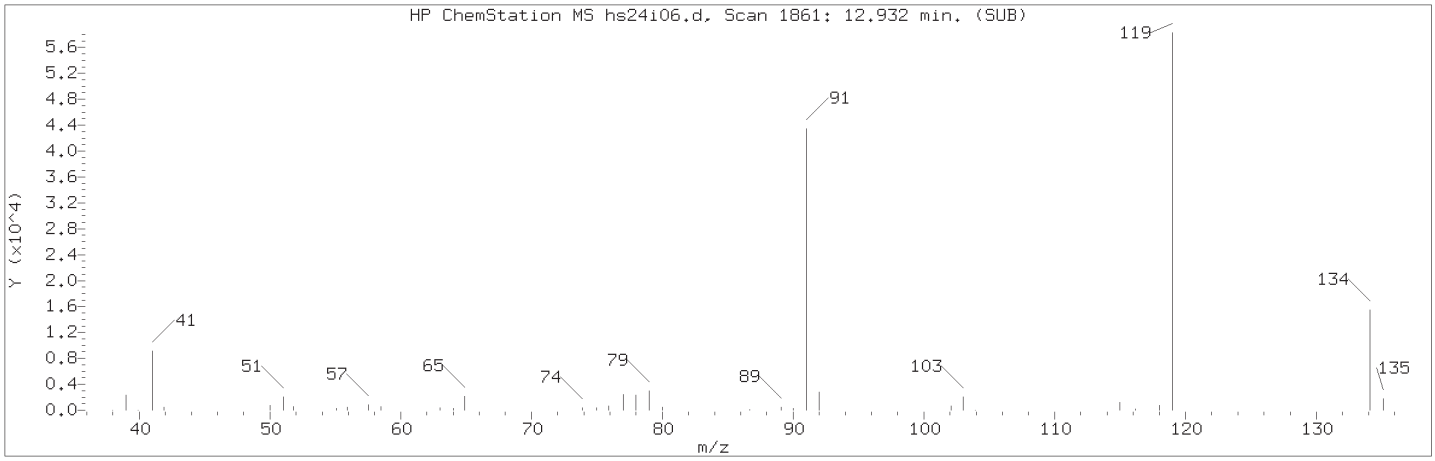
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

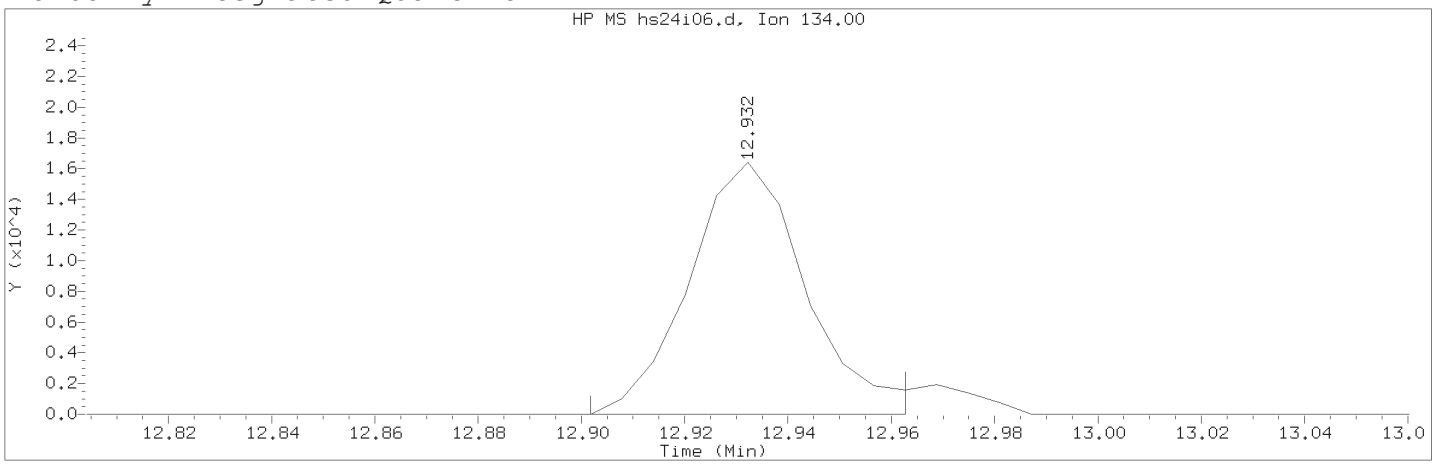
Compound Number : 106
Compound Name : Styrene
Scan Number : 1699
Retention Time (minutes): 11.945
Quant Ion : 104.00
Area : 80151
On-column Amount (ng) : 0.4420
Integration start scan : 1690 Integration stop scan: 1717
Y at integration start : 0 Y at integration end: 0

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

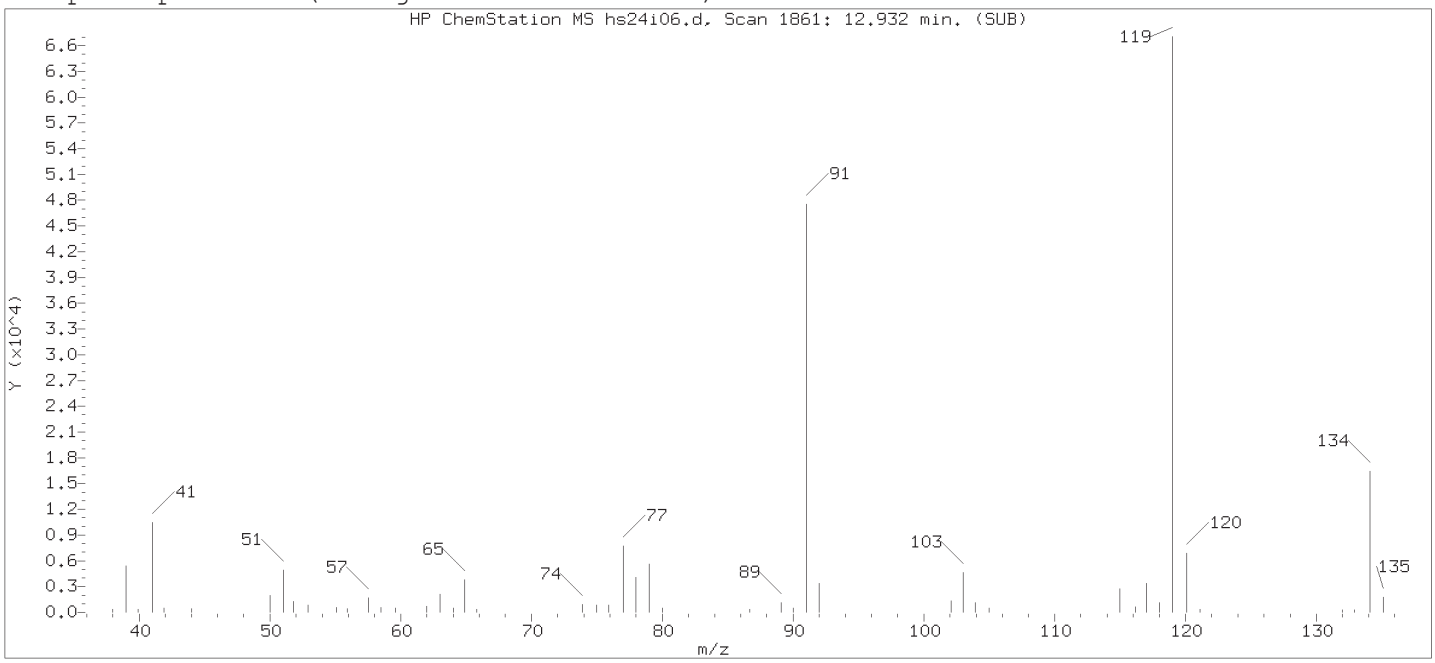
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 25726M
On-Column Amount (ng) : 0.4759
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

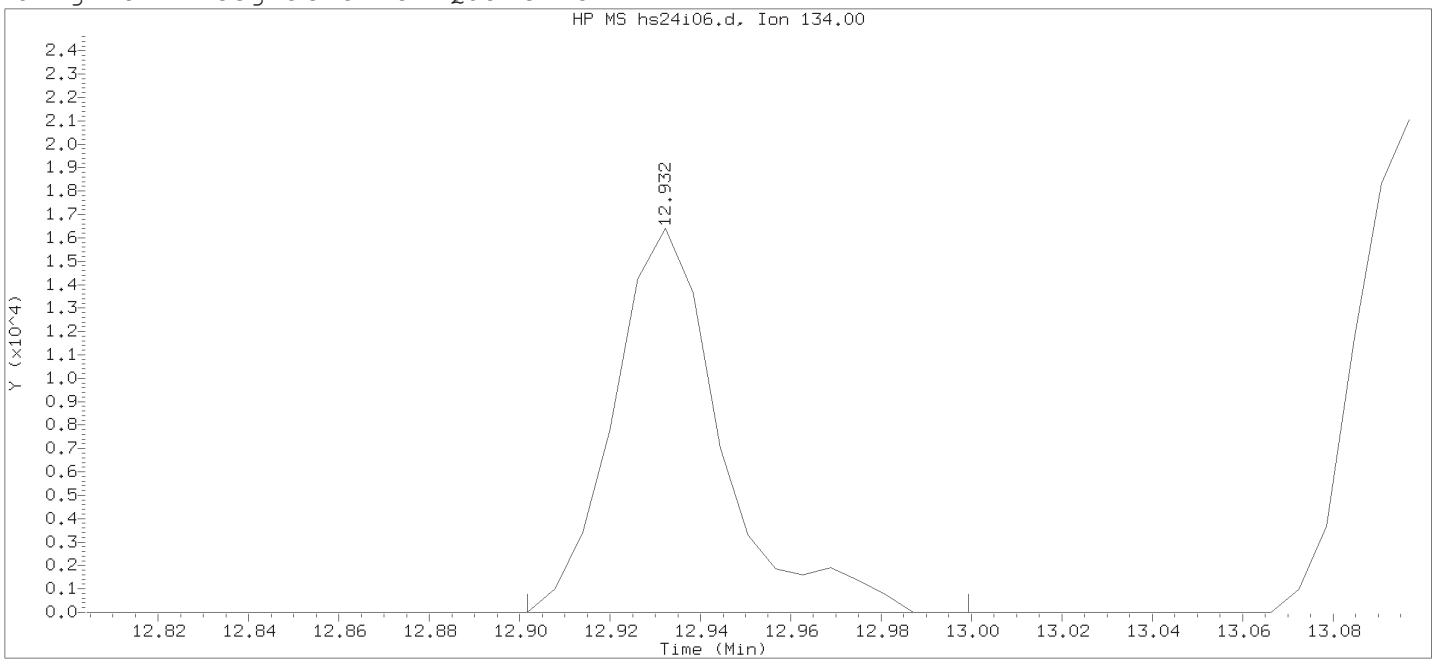
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



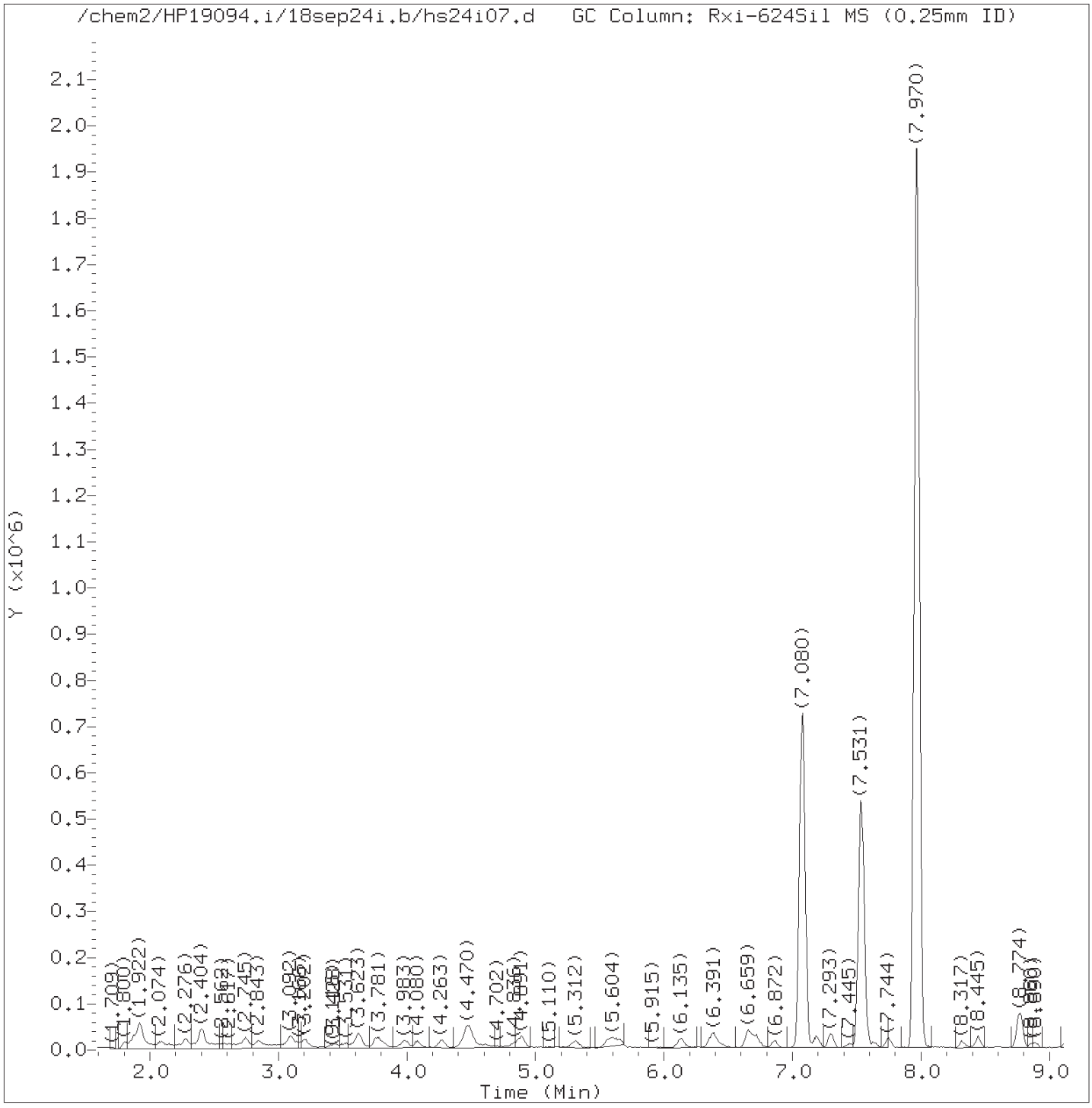
Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

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)

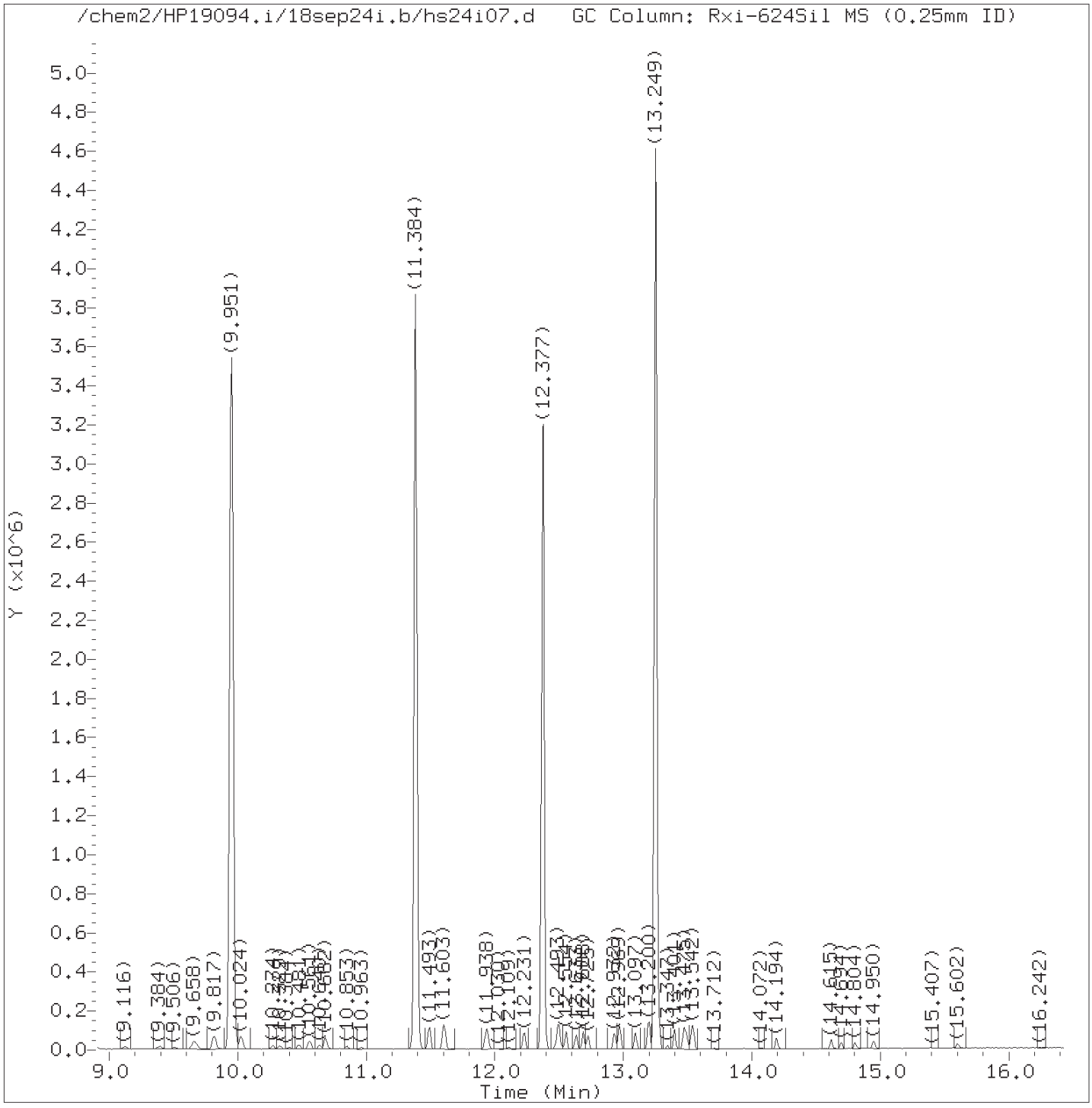
Target Revision 3.5

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

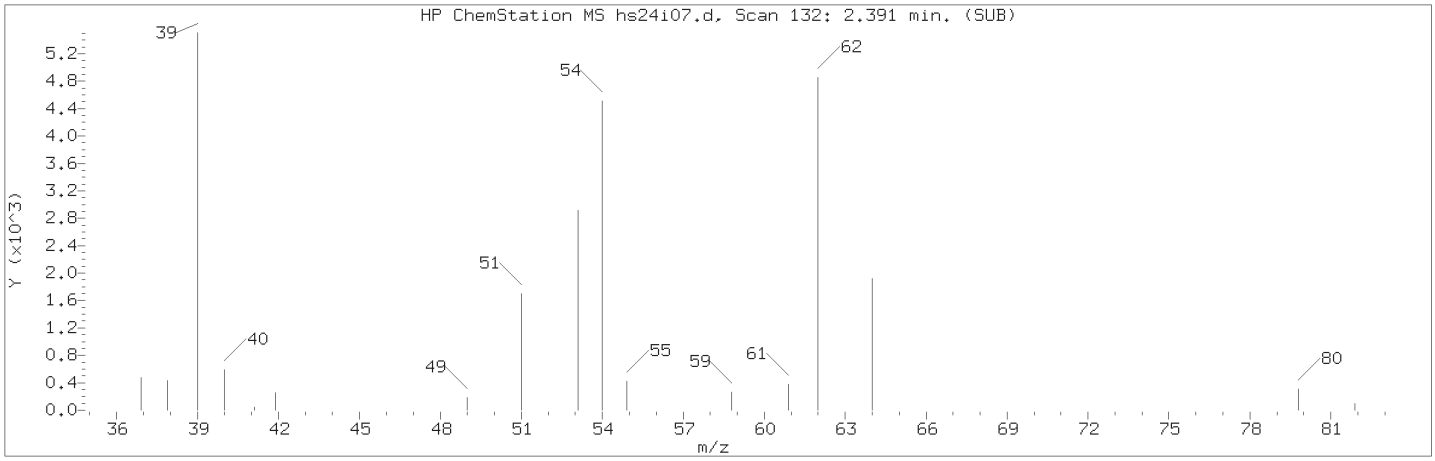
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

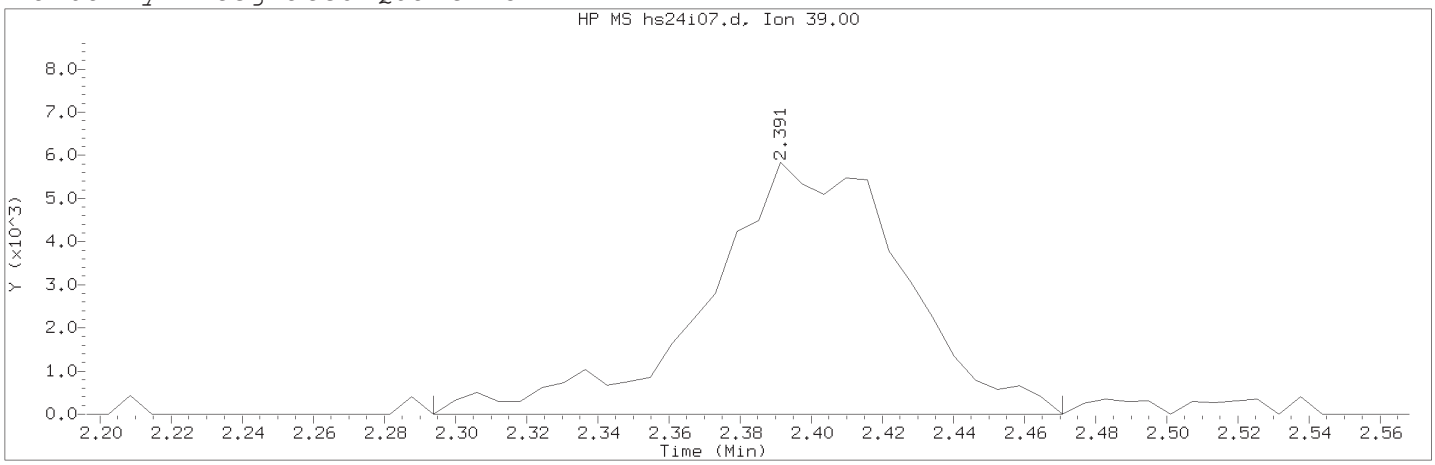
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	5770	0.186
147) Naphthalene	(4)	14.804	128	21320	0.164
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	11734	0.174

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

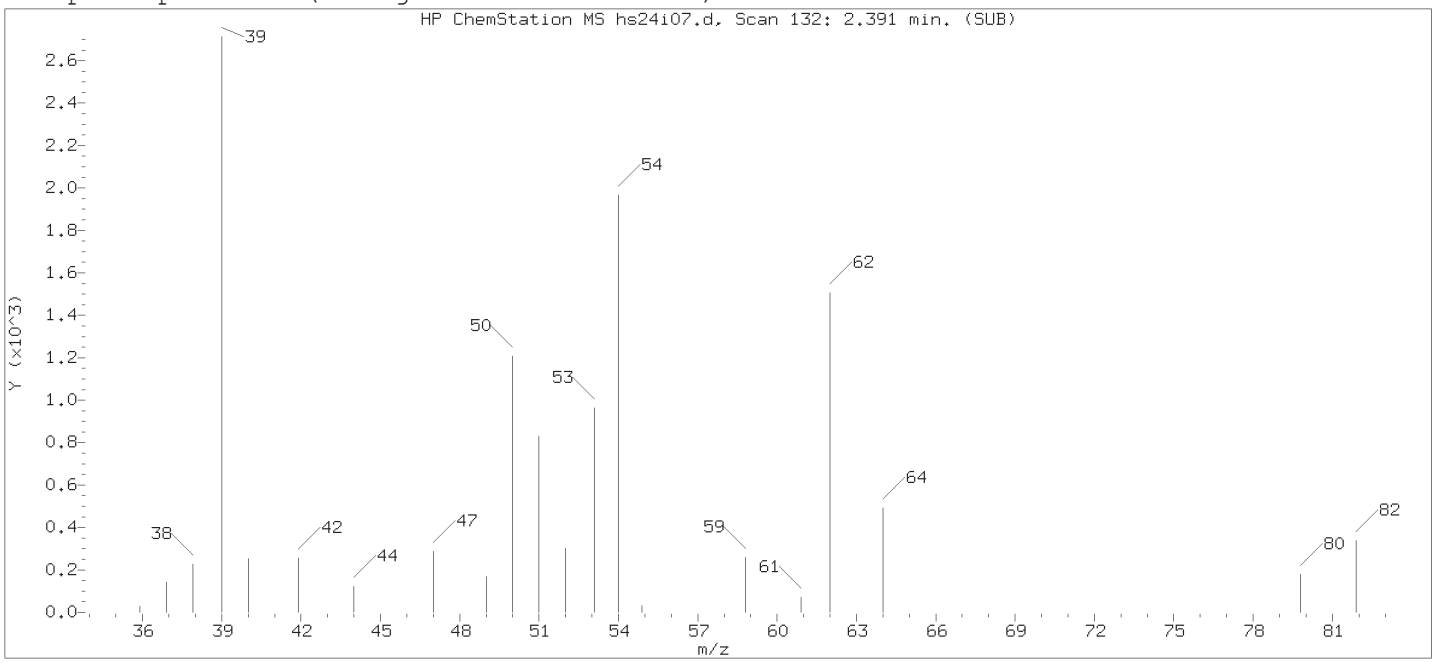
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 22506M
On-Column Amount (ng) : 0.2006
Integration start scan : 115 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

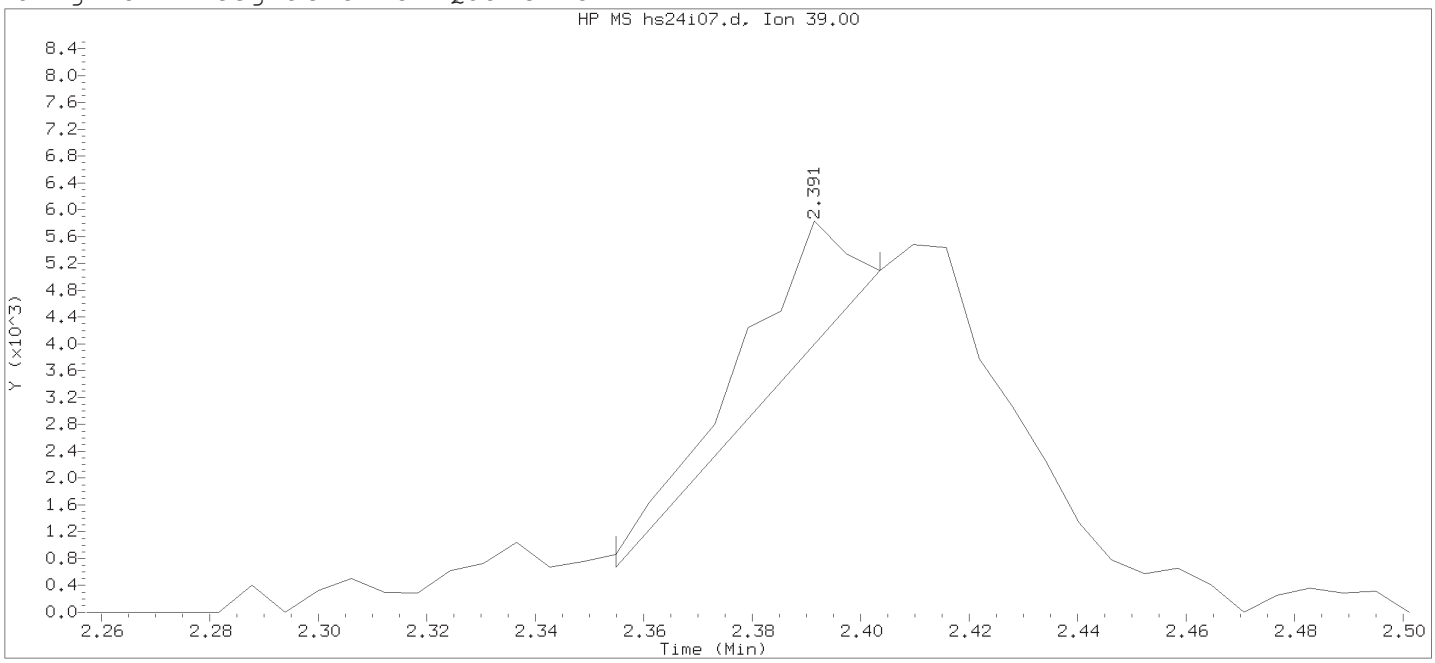
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

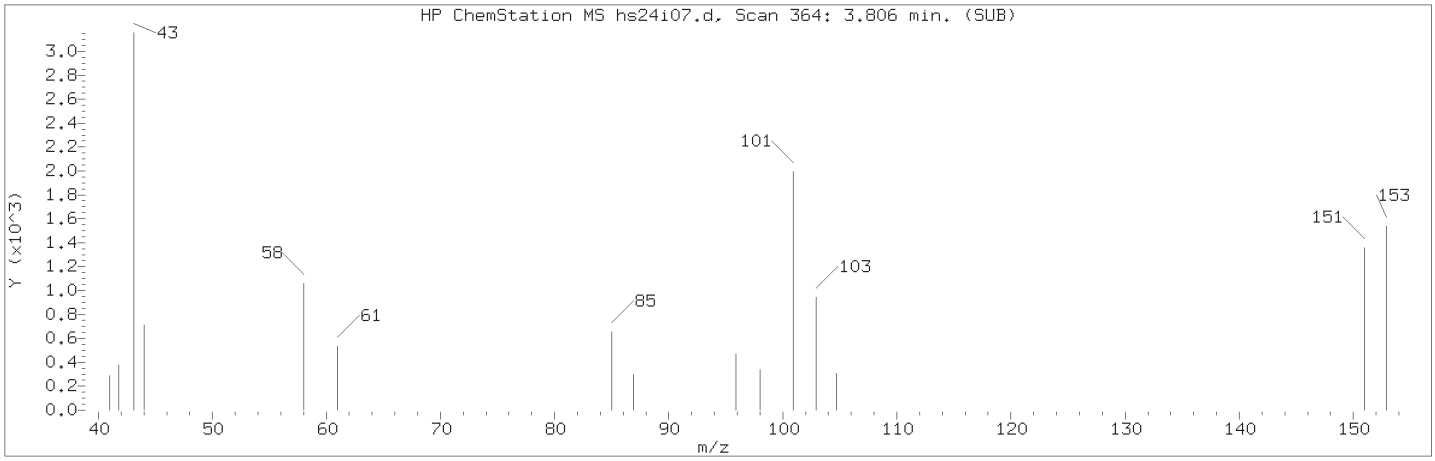
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

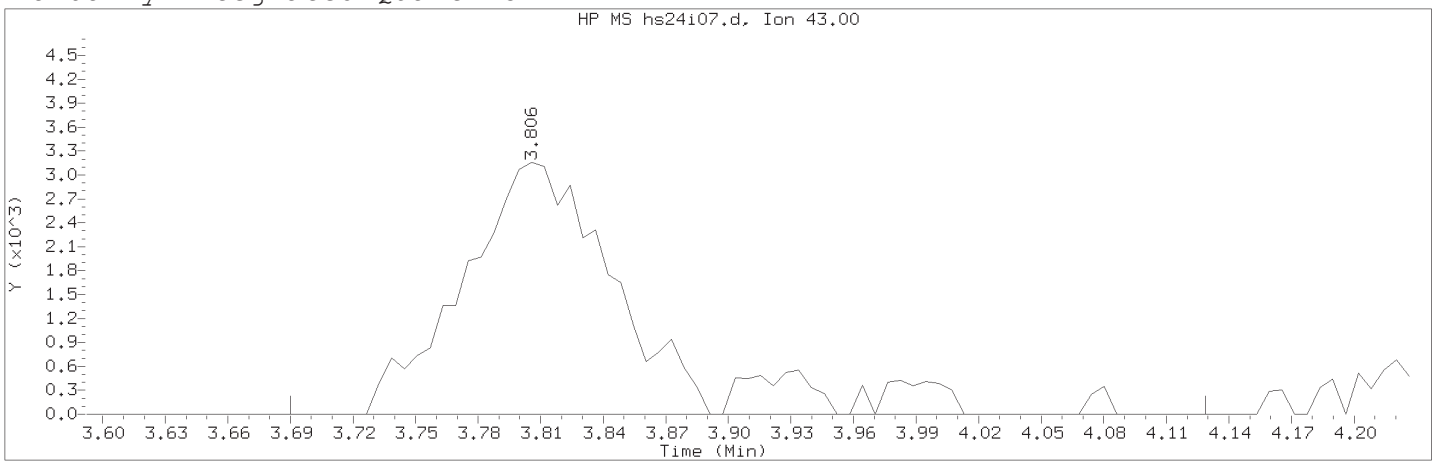
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 2354
On-column Amount (ng) : 0.0257
Integration start scan : 125 Integration stop scan: 133
Y at integration start : 678 Y at integration end: 5096

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

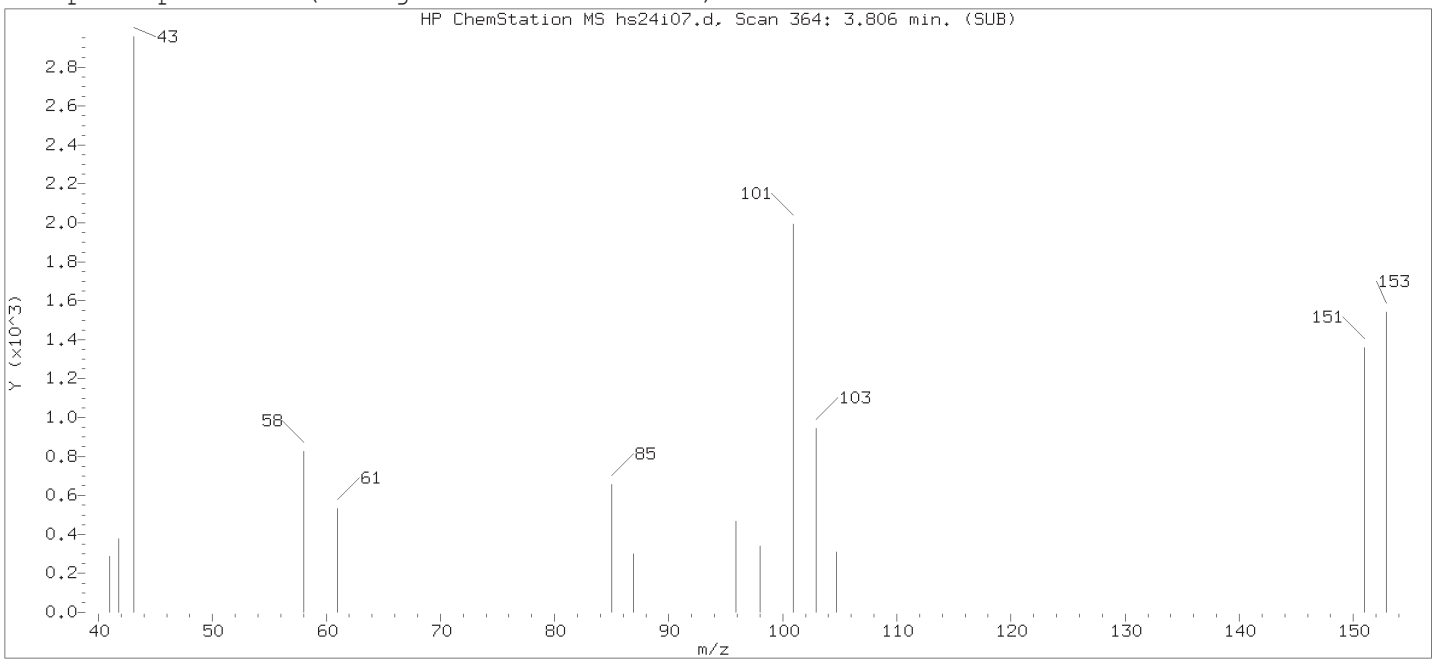
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area (flag) : 17774M
On-Column Amount (ng) : 2.1850
Integration start scan : 344 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

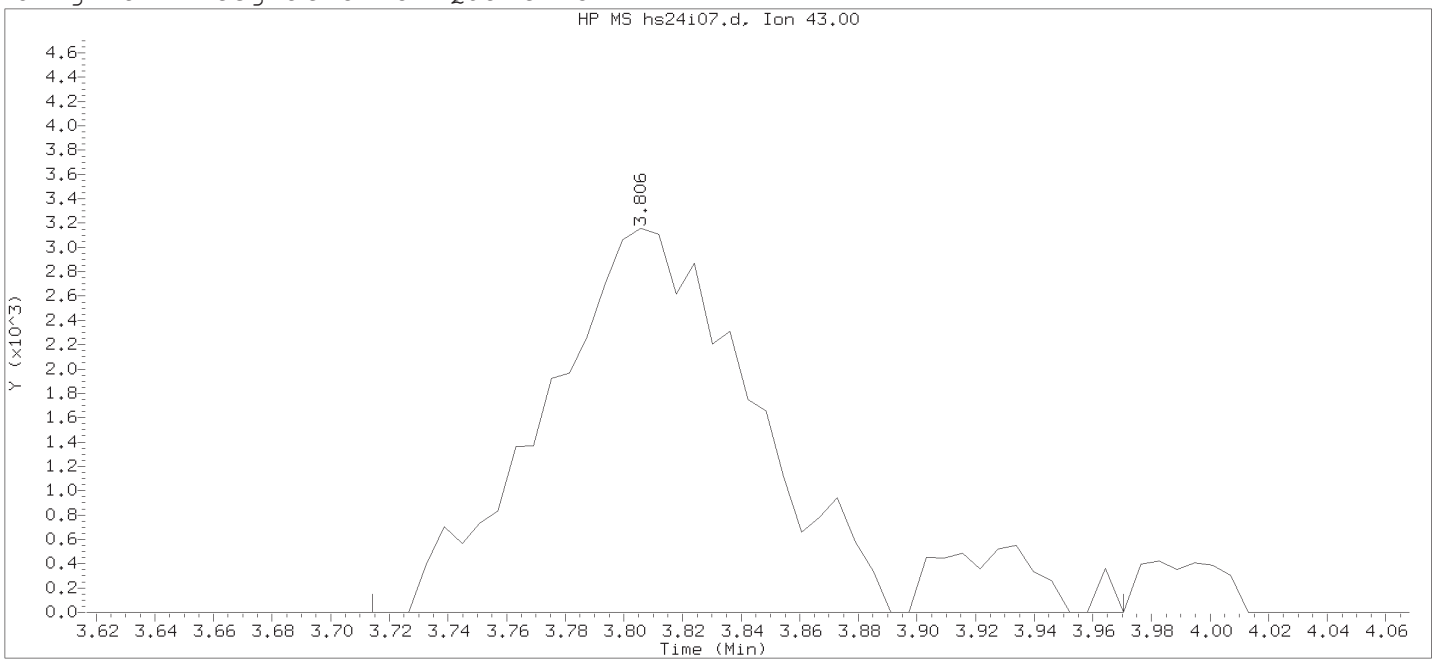
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

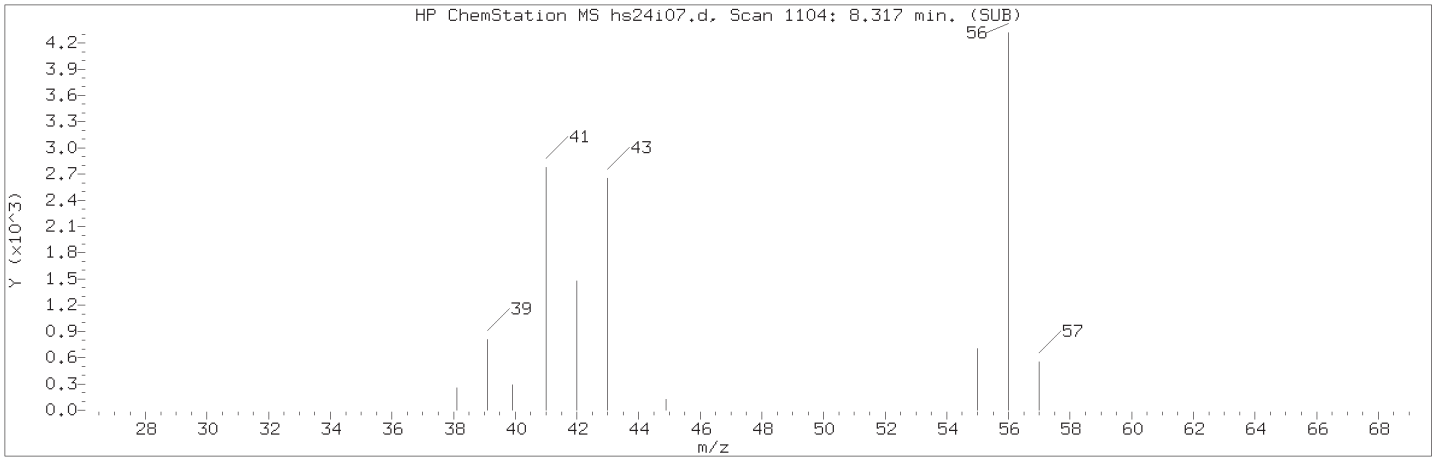
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

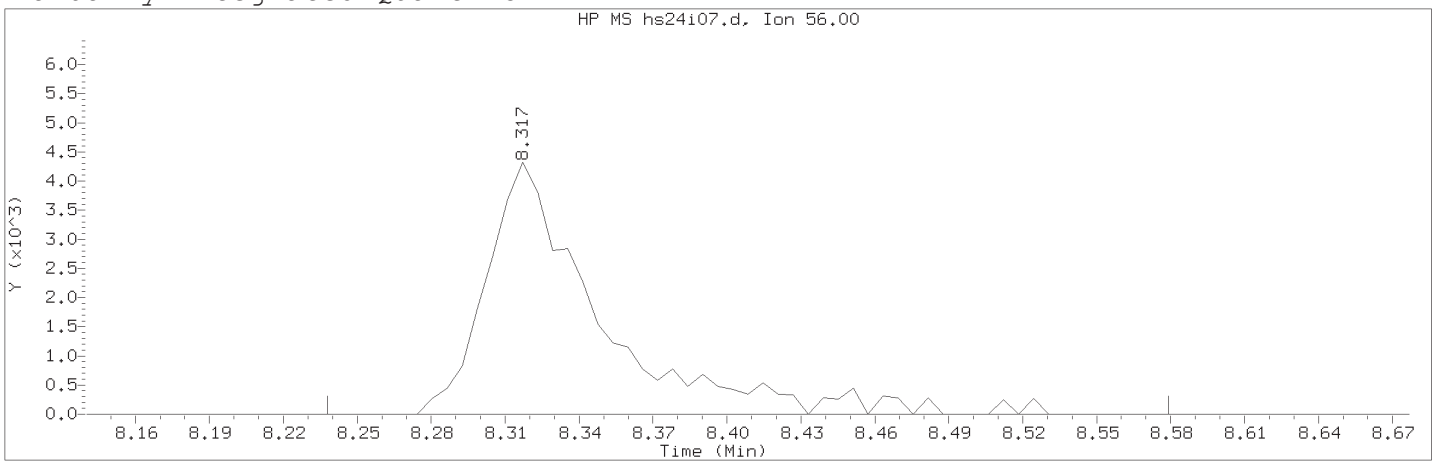
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area : 16725
On-column Amount (ng) : 2.1688
Integration start scan : 348 Integration stop scan: 390
Y at integration start : 0 Y at integration end: 0

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

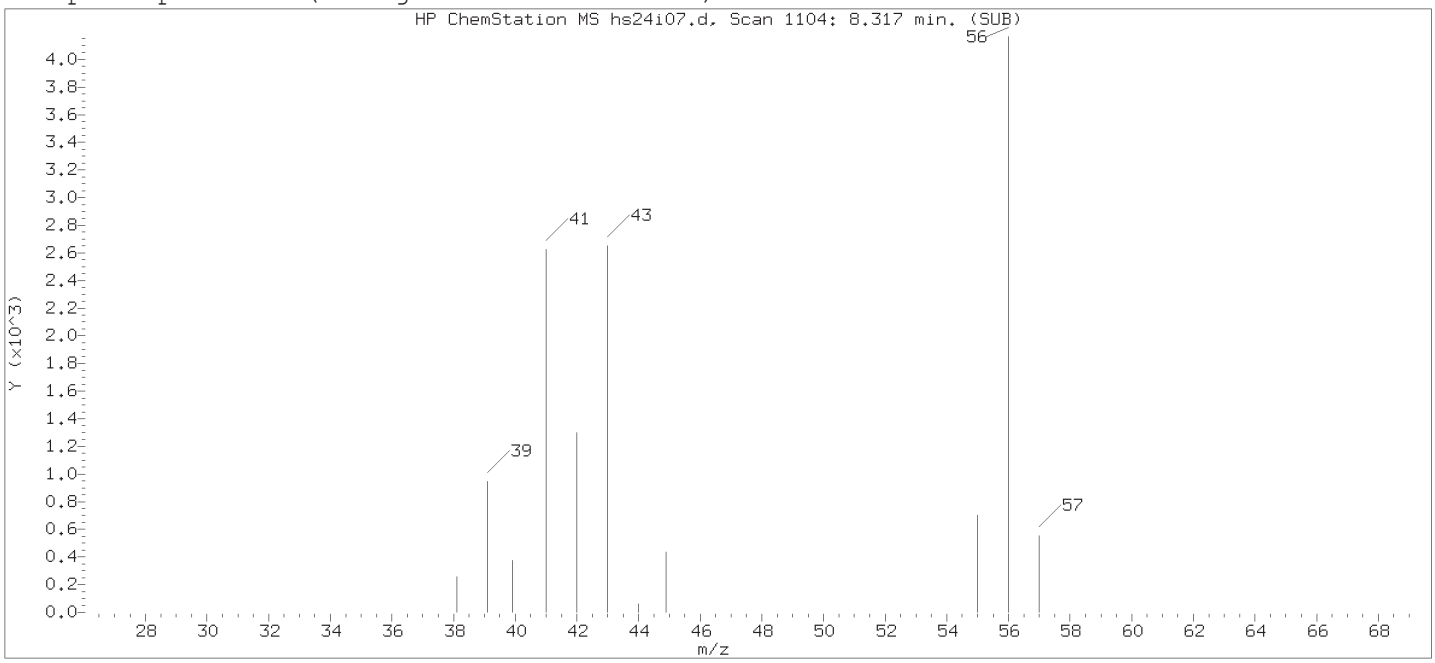
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1104
Retention Time (minutes): 8.317
Quant Ion : 56.00
Area (flag) : 13835M
On-Column Amount (ng) : 18.1683
Integration start scan : 1090 Integration stop scan: 1146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

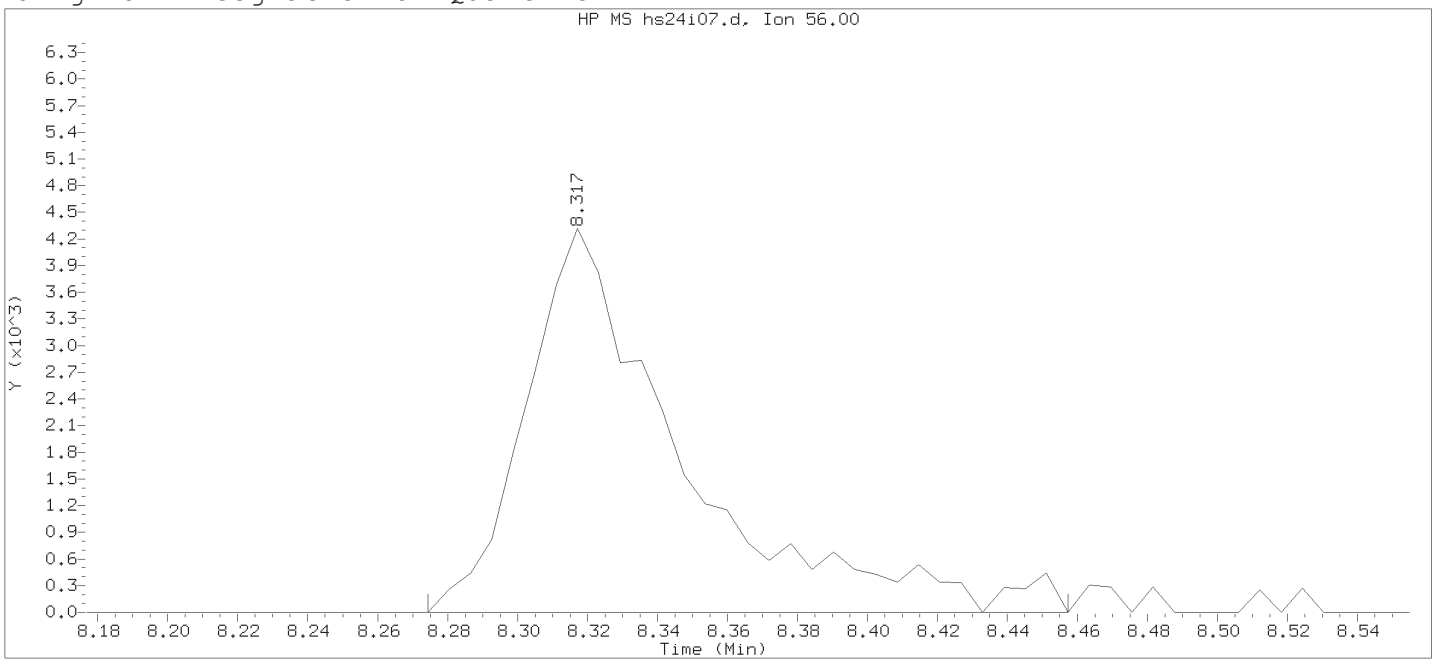
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

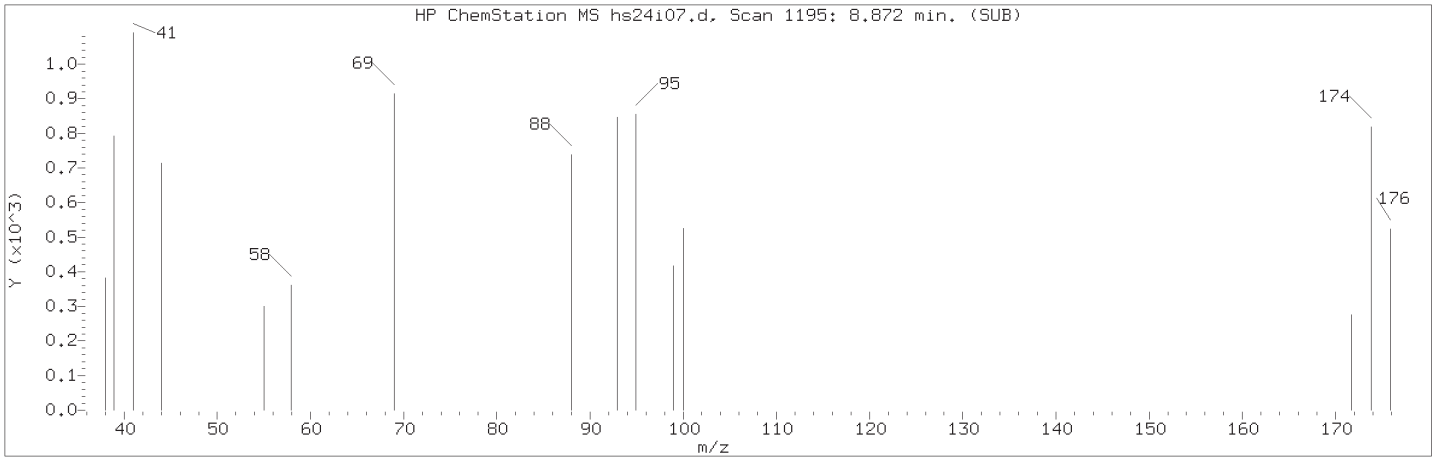
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

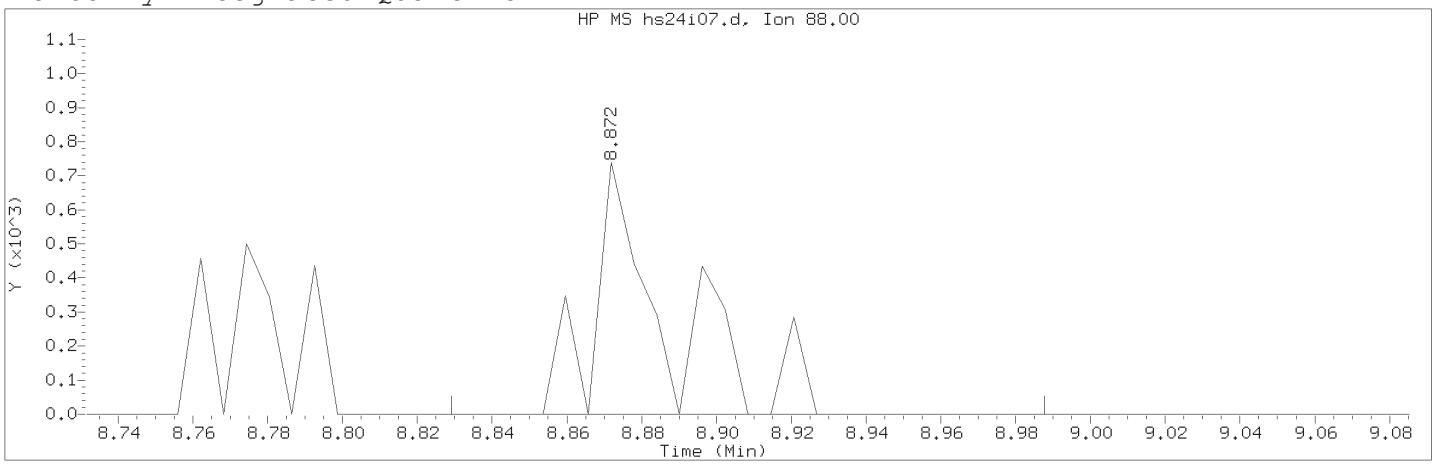
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1104		
Retention Time (minutes)	: 8.317		
Quant Ion	: 56.00		
Area	: 13324		
On-column Amount (ng)	: 17.8982		
Integration start scan	: 1096	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

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

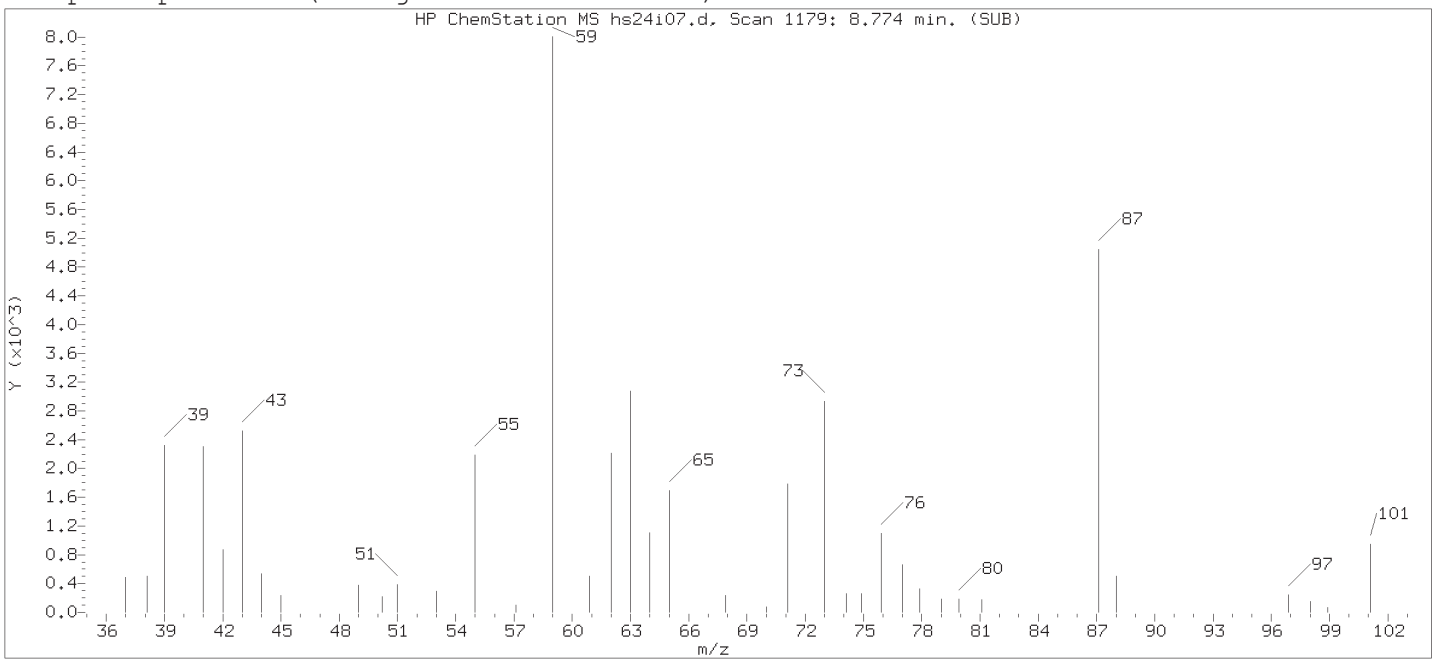
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 1041M
On-Column Amount (ng) : 5.6778
Integration start scan : 1187 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

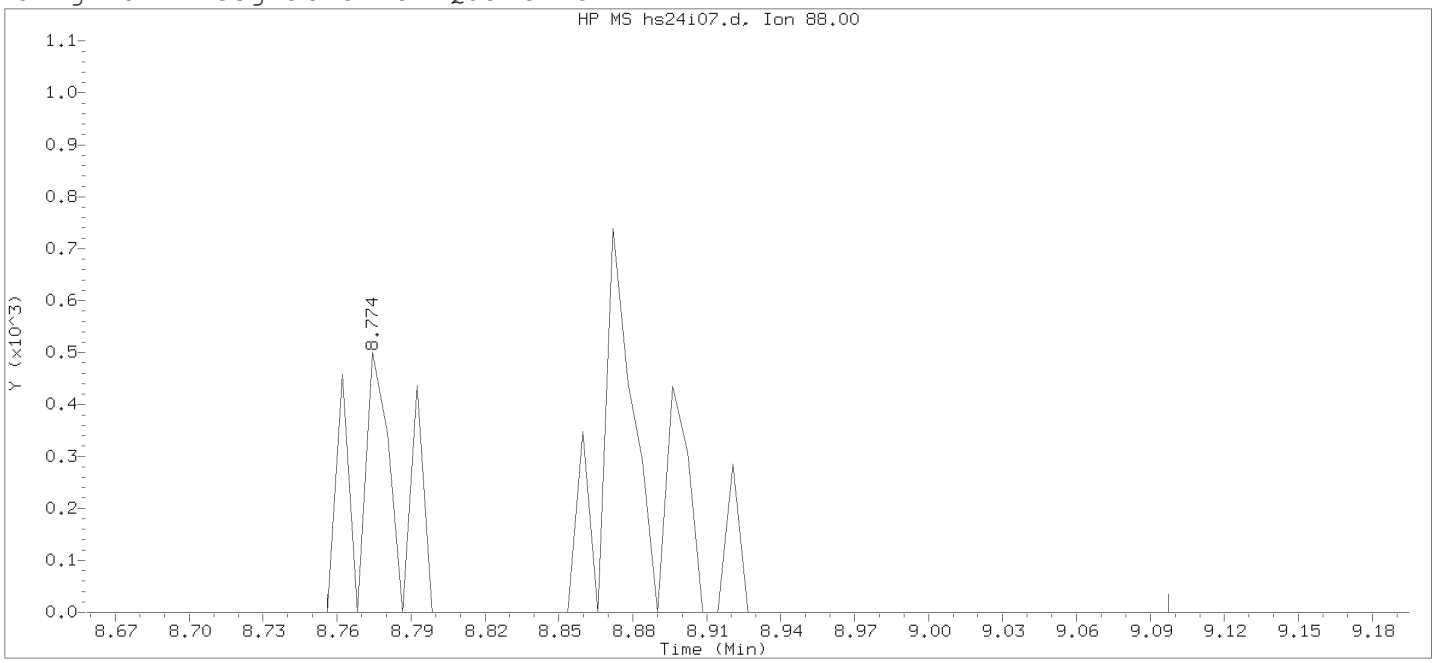
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

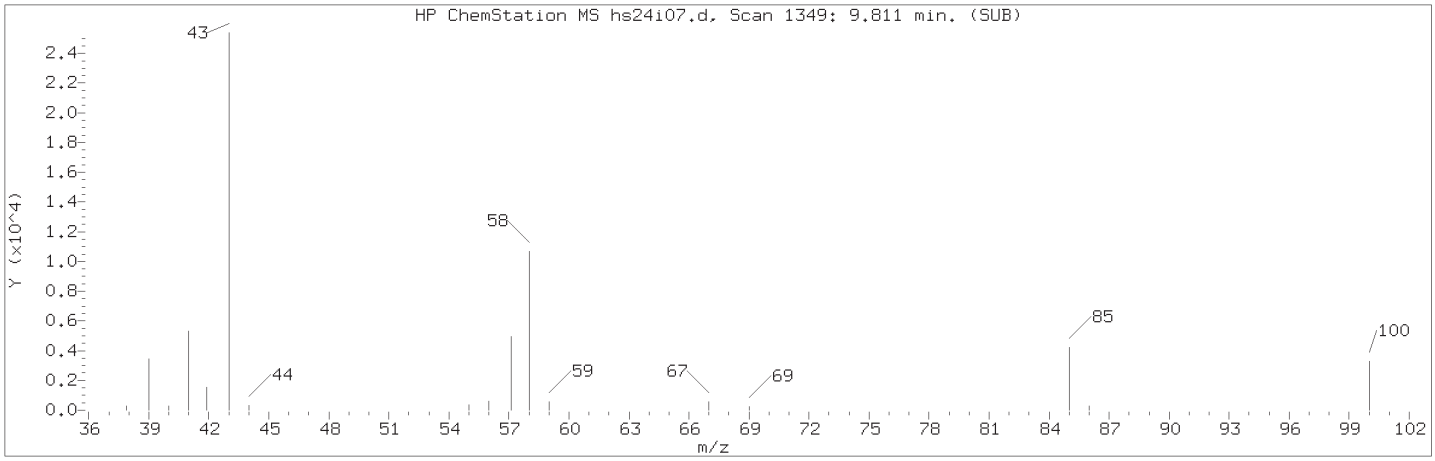
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

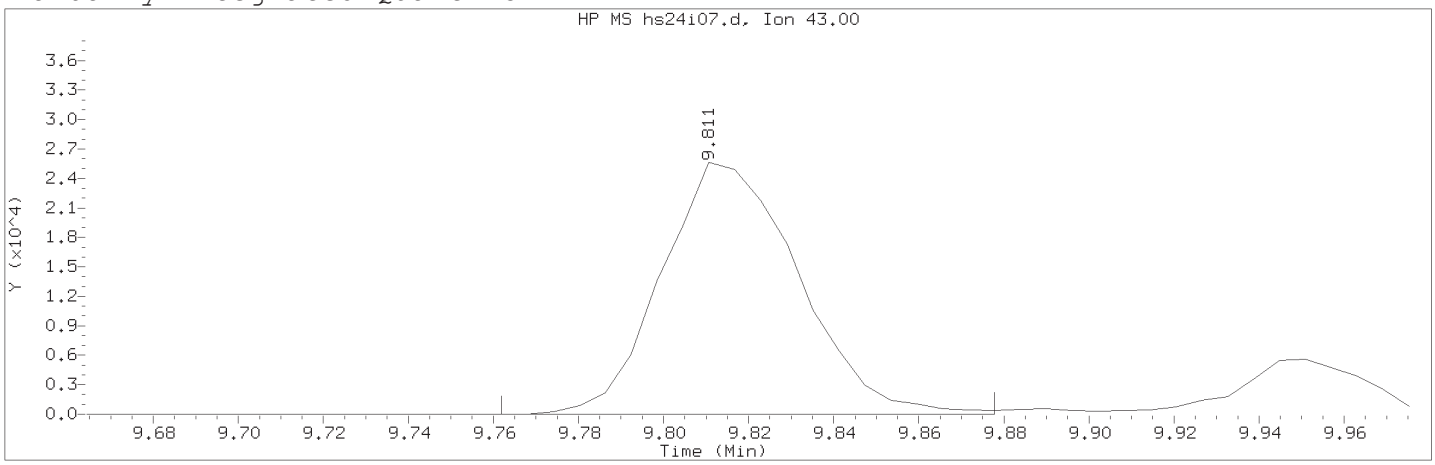
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 1677		
On-column Amount (ng)	: 13.7029		
Integration start scan	: 1175	Integration stop scan:	1231
Y at integration start	: 0	Y at integration end:	0

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

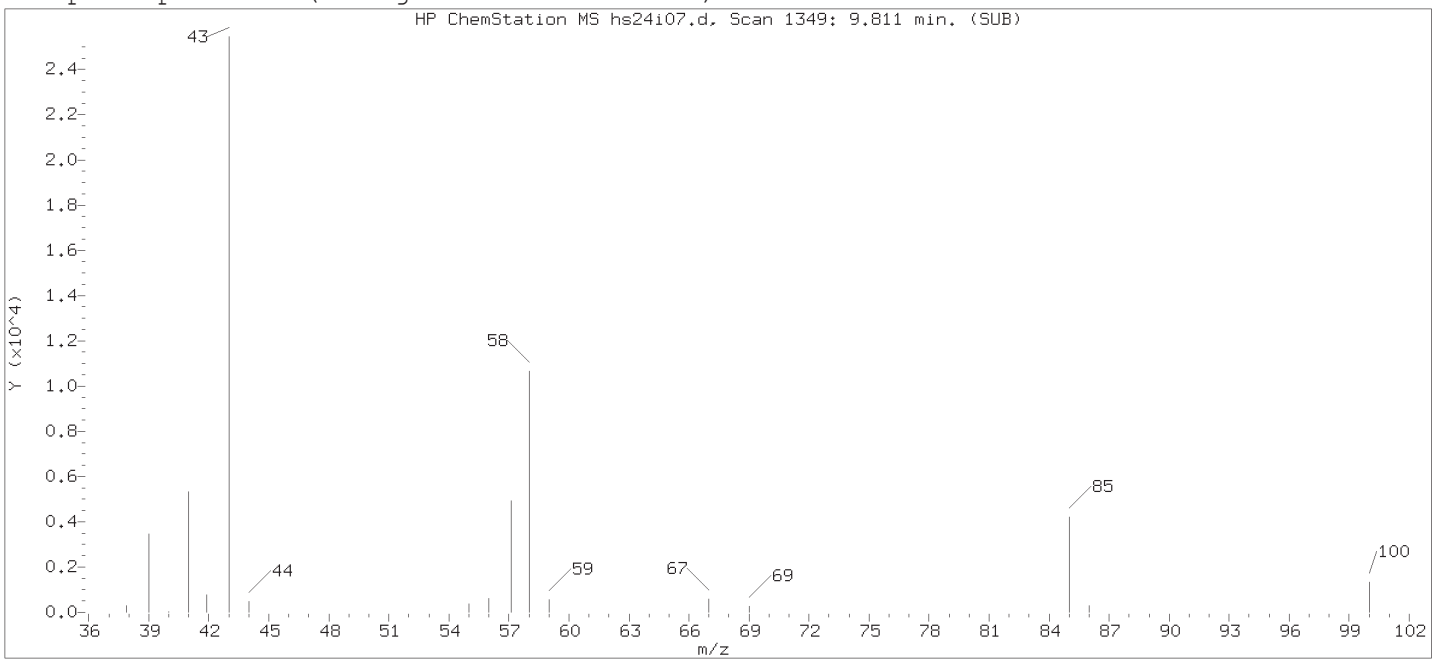
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 56901M
On-Column Amount (ng) : 1.7180
Integration start scan : 1340 Integration stop scan: 1359
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

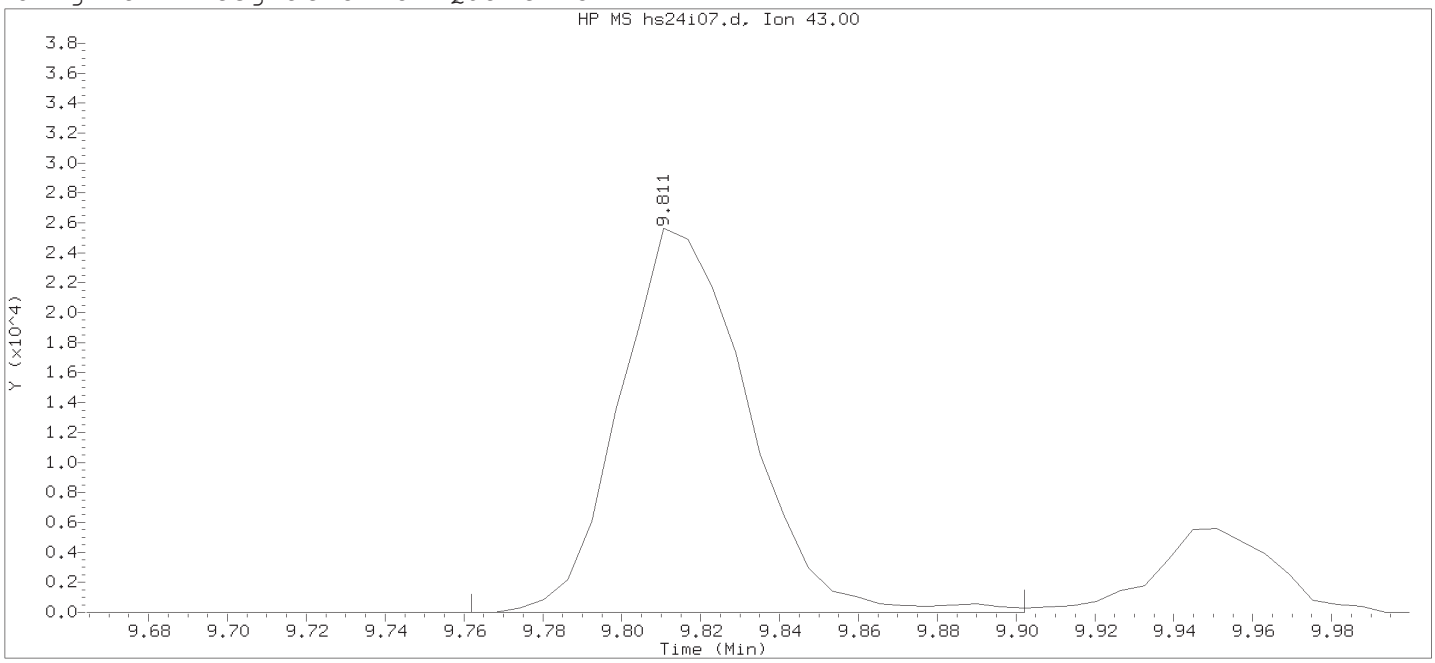
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

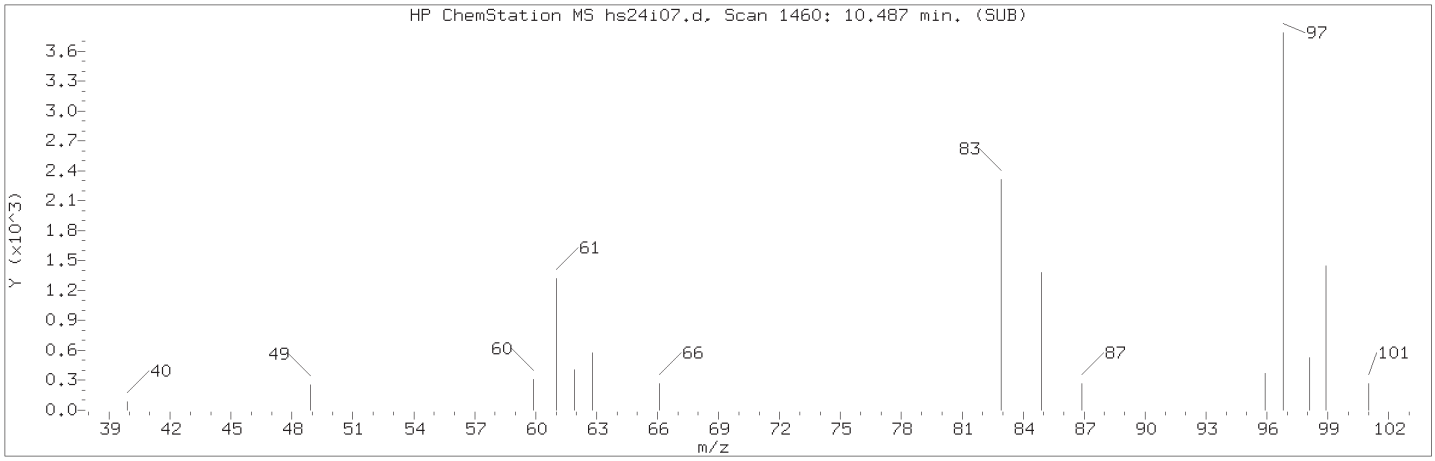
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

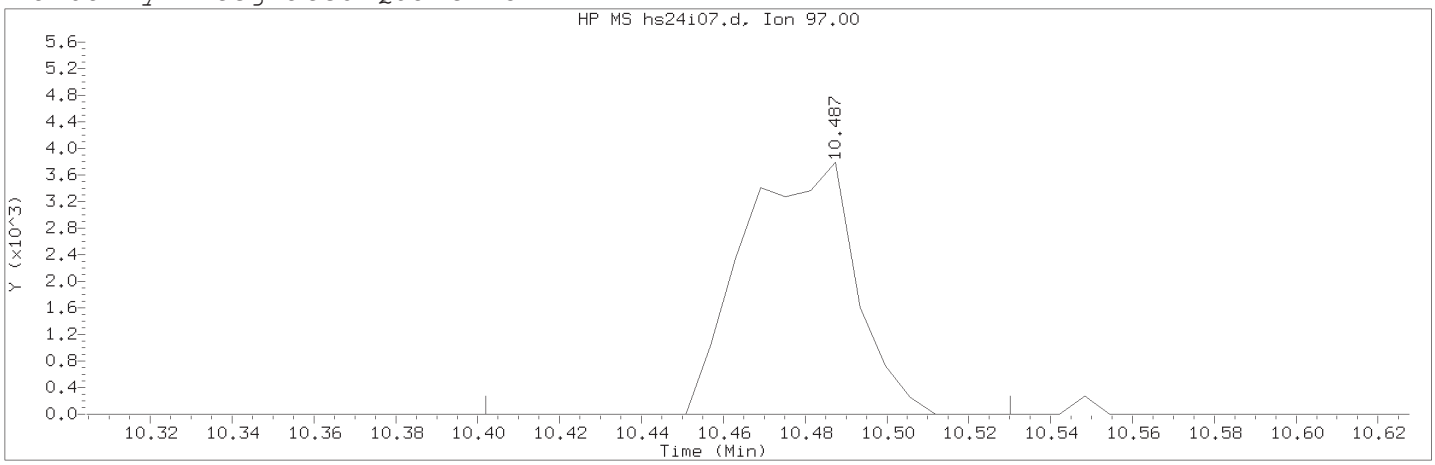
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area : 57465
On-column Amount (ng) : 1.6906
Integration start scan : 1340 Integration stop scan: 1363
Y at integration start : 0 Y at integration end: 0

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

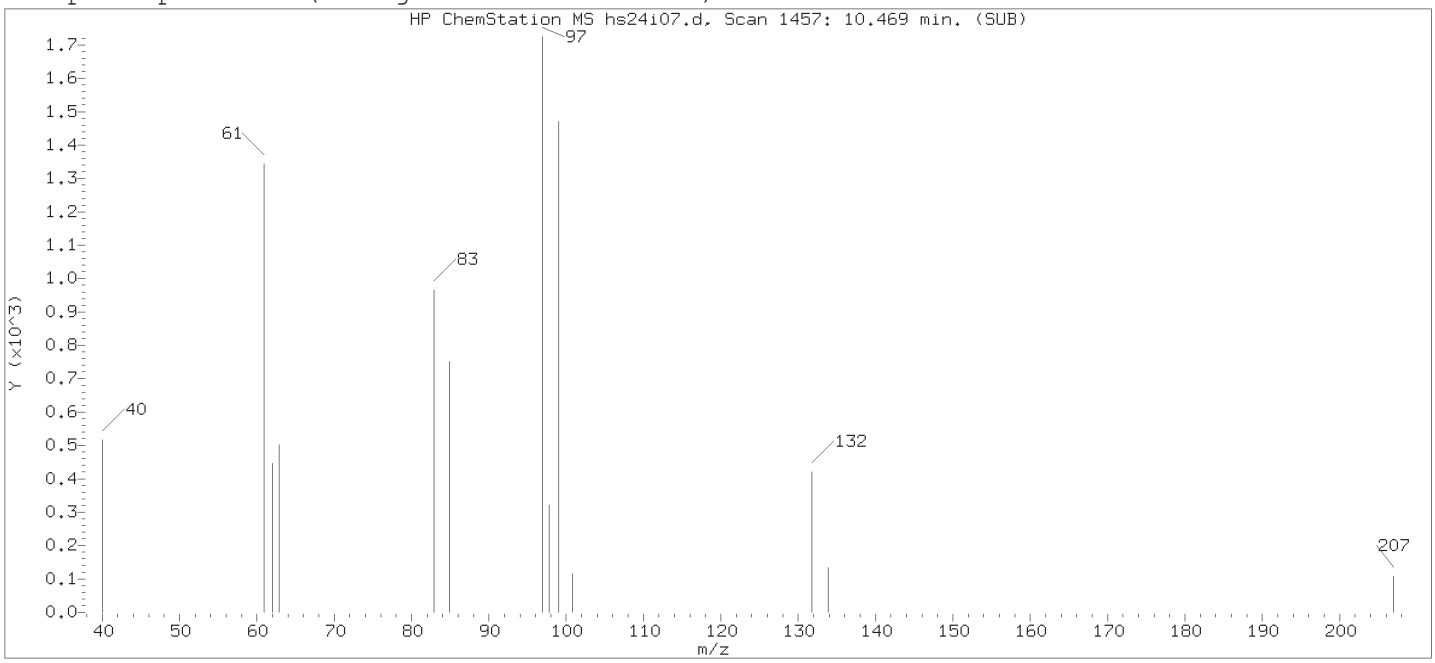
Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1460
Retention Time (minutes): 10.487
Quant Ion : 97.00
Area (flag) : 7236M
On-Column Amount (ng) : 0.1981
Integration start scan : 1445 Integration stop scan: 1466
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

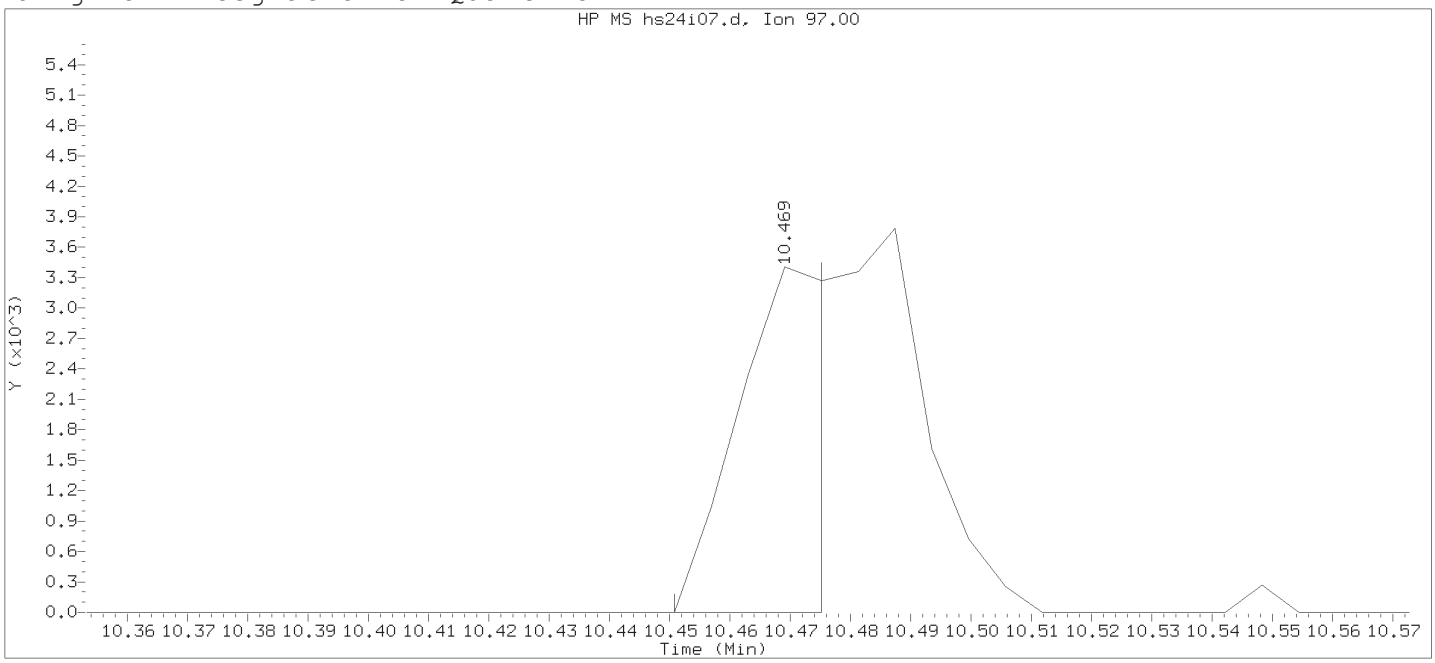
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

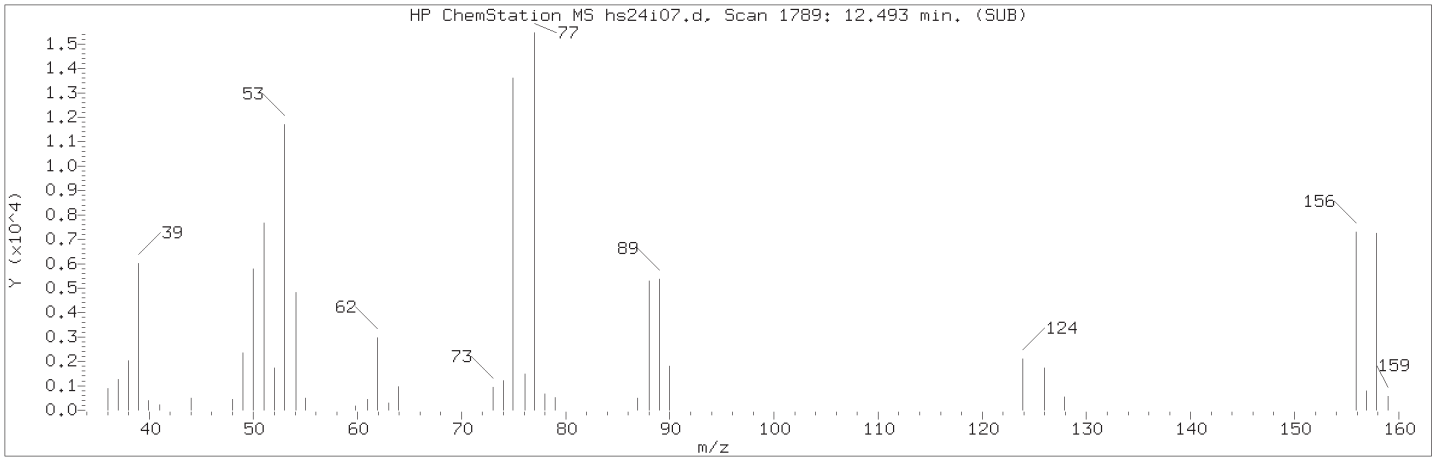
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

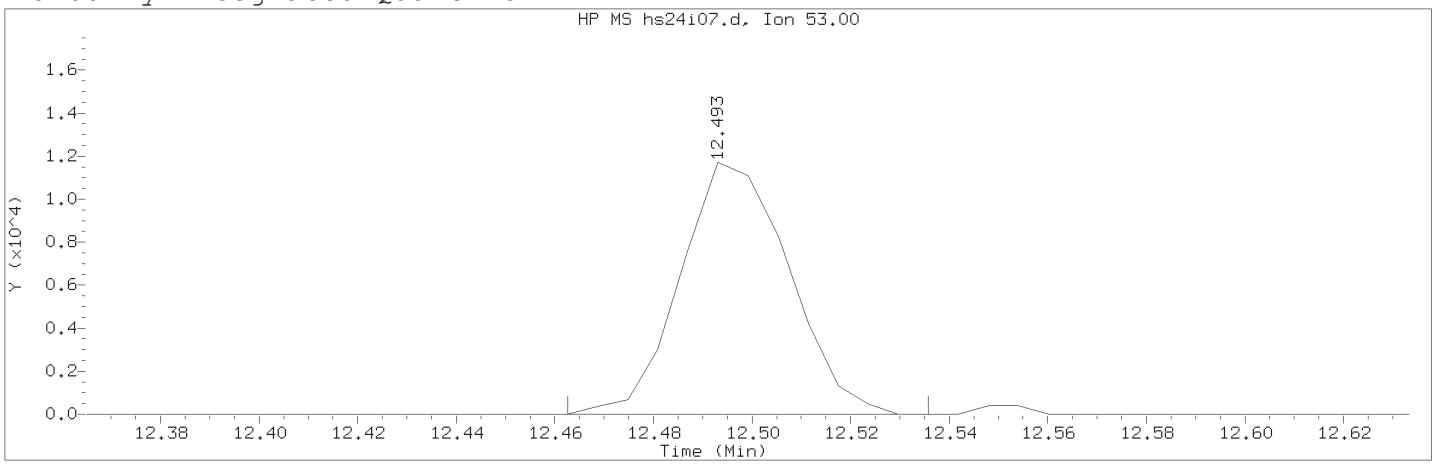
Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1457
Retention Time (minutes): 10.469
Quant Ion : 97.00
Area : 3077
On-column Amount (ng) : 0.0917
Integration start scan : 1453 Integration stop scan: 1457
Y at integration start : 0 Y at integration end: 0

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

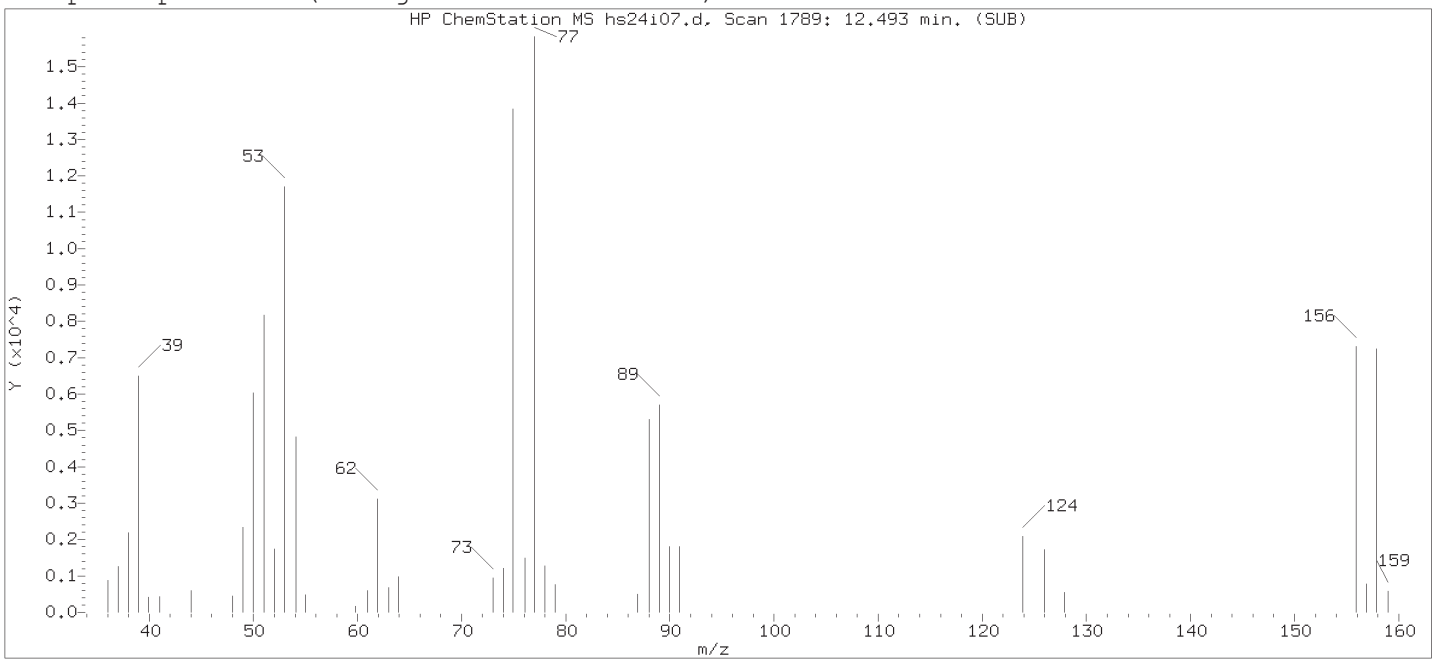
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 17855M
On-Column Amount (ng) : 1.7212
Integration start scan : 1783 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

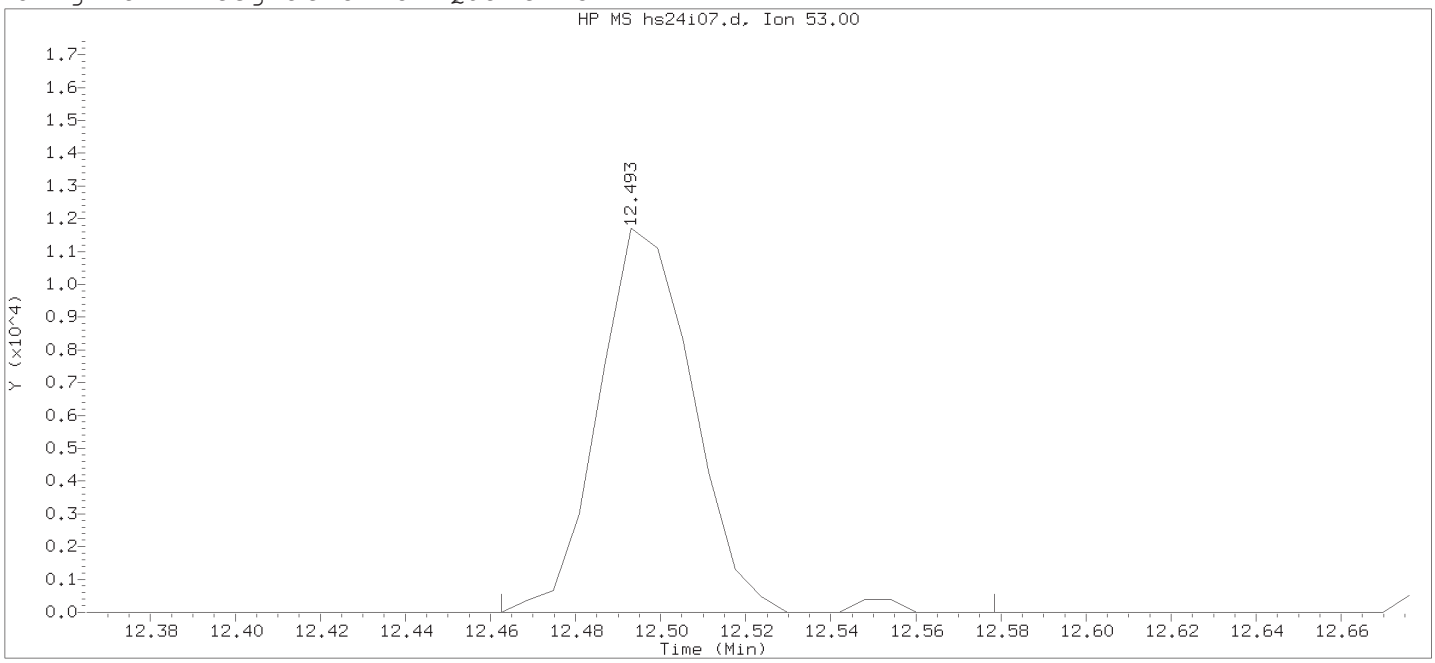
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

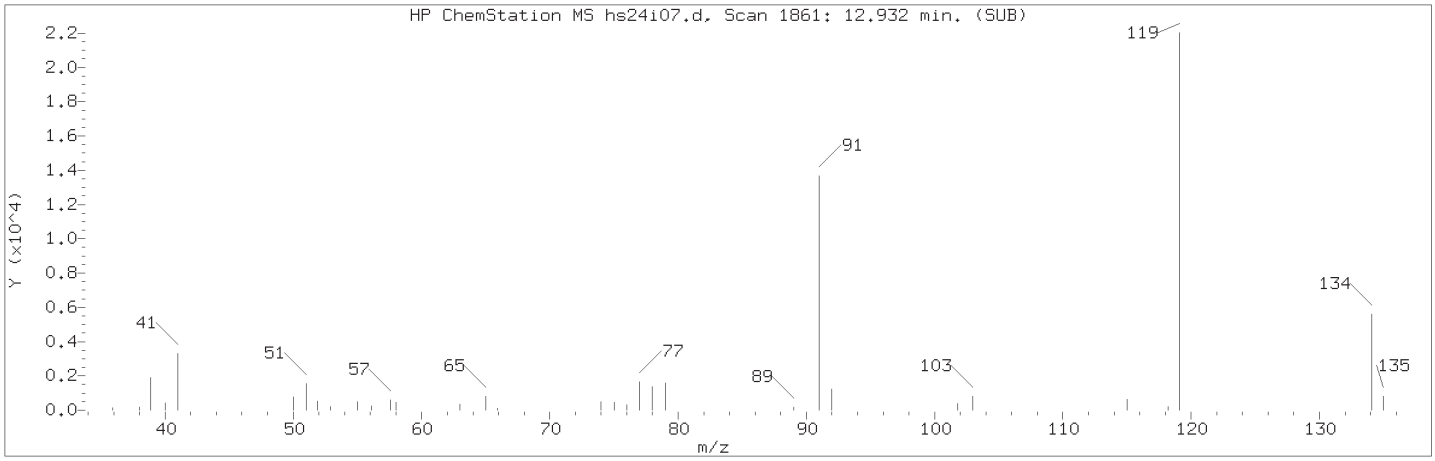
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

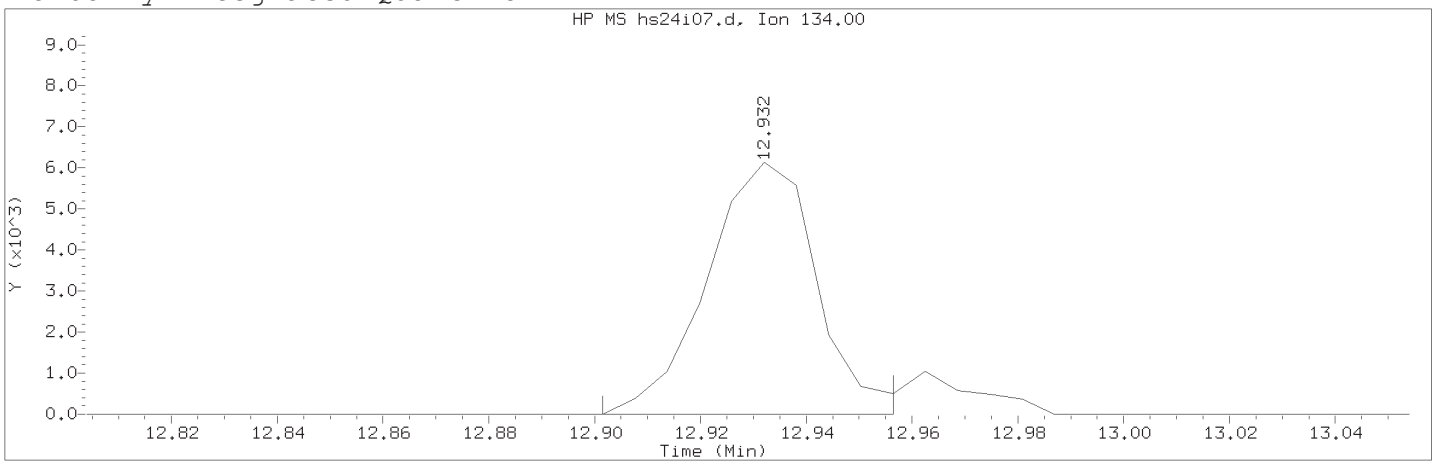
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area : 18137
On-column Amount (ng) : 1.7018
Integration start scan : 1783 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

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

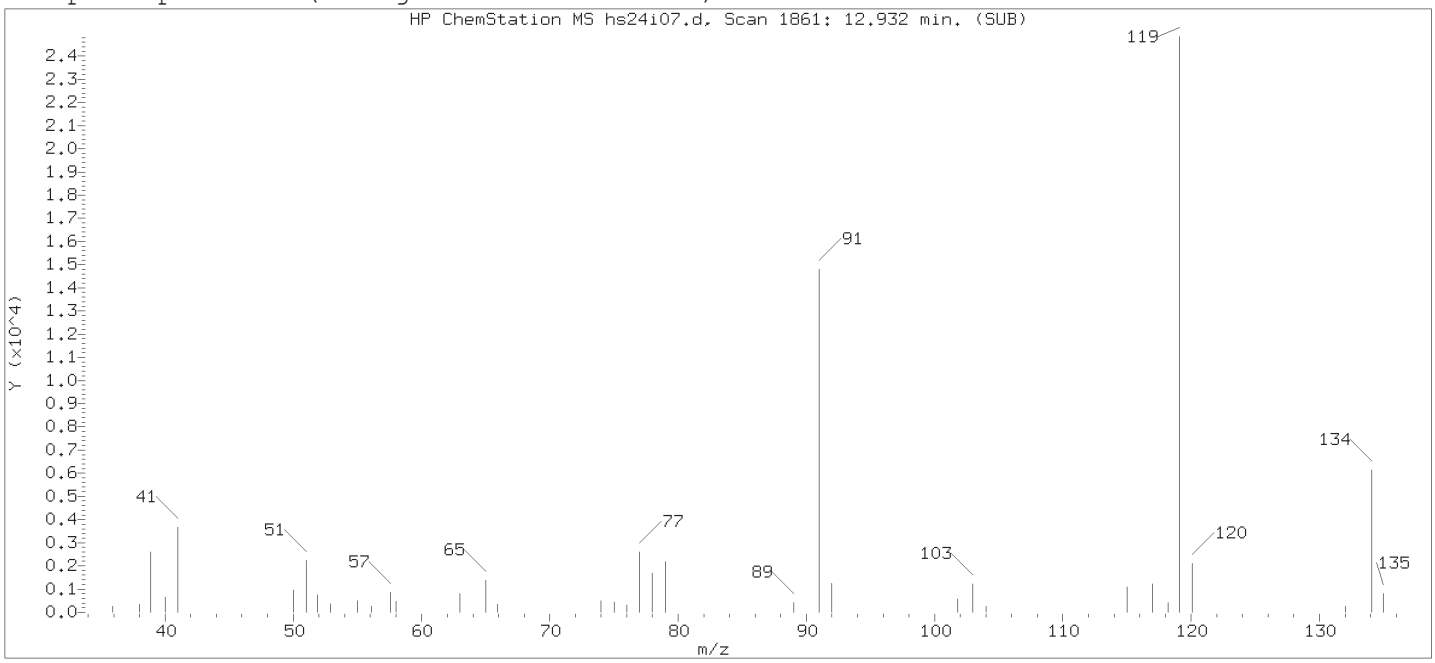
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 8830M
On-Column Amount (ng) : 0.1614
Integration start scan : 1855 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

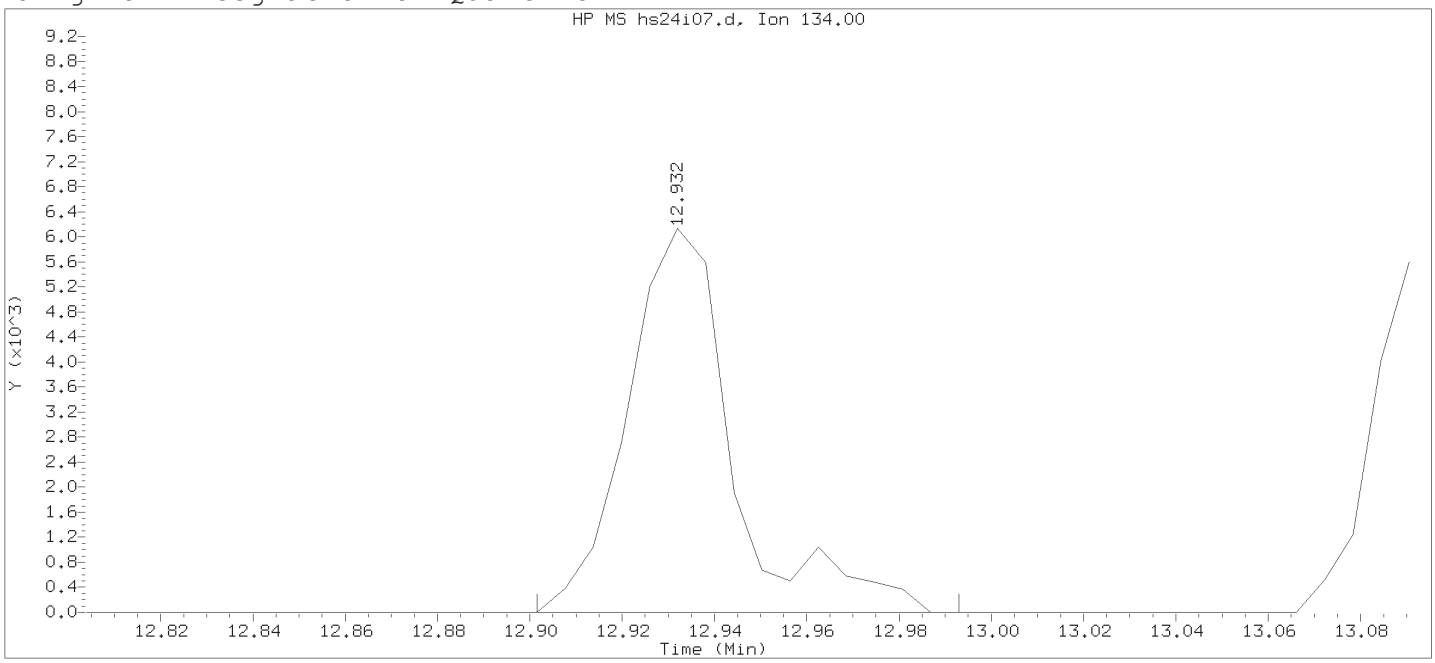
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

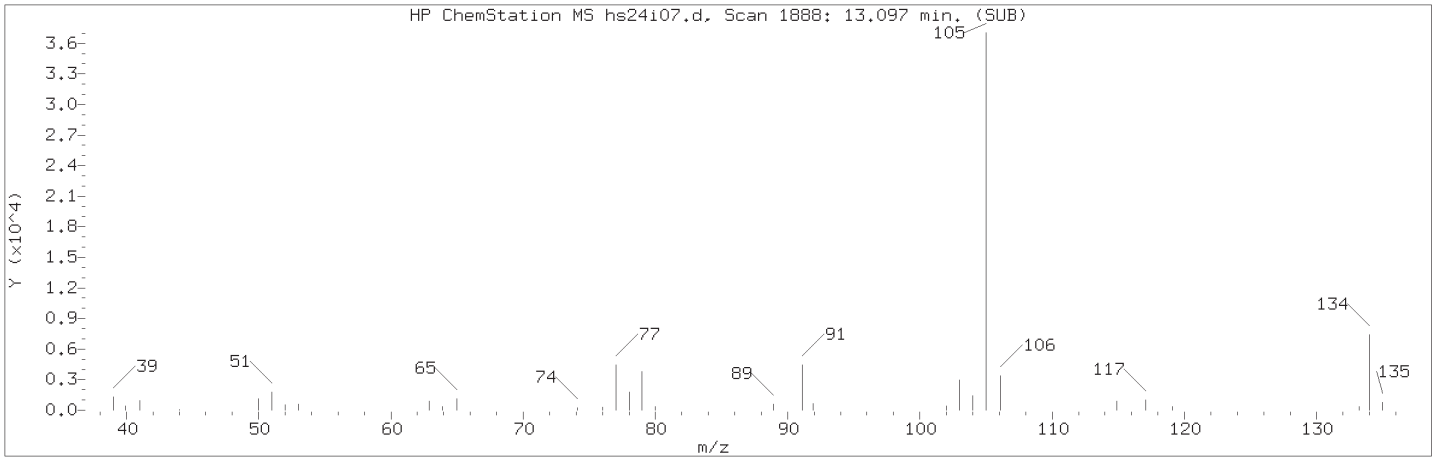
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

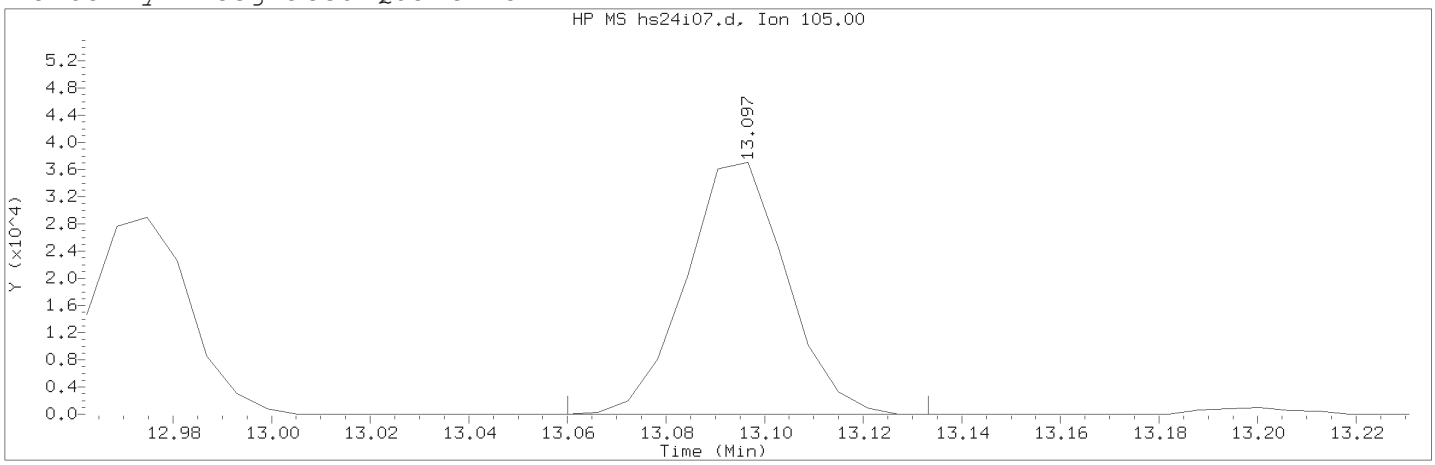
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 9731
On-column Amount (ng) : 0.1717
Integration start scan : 1855 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

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

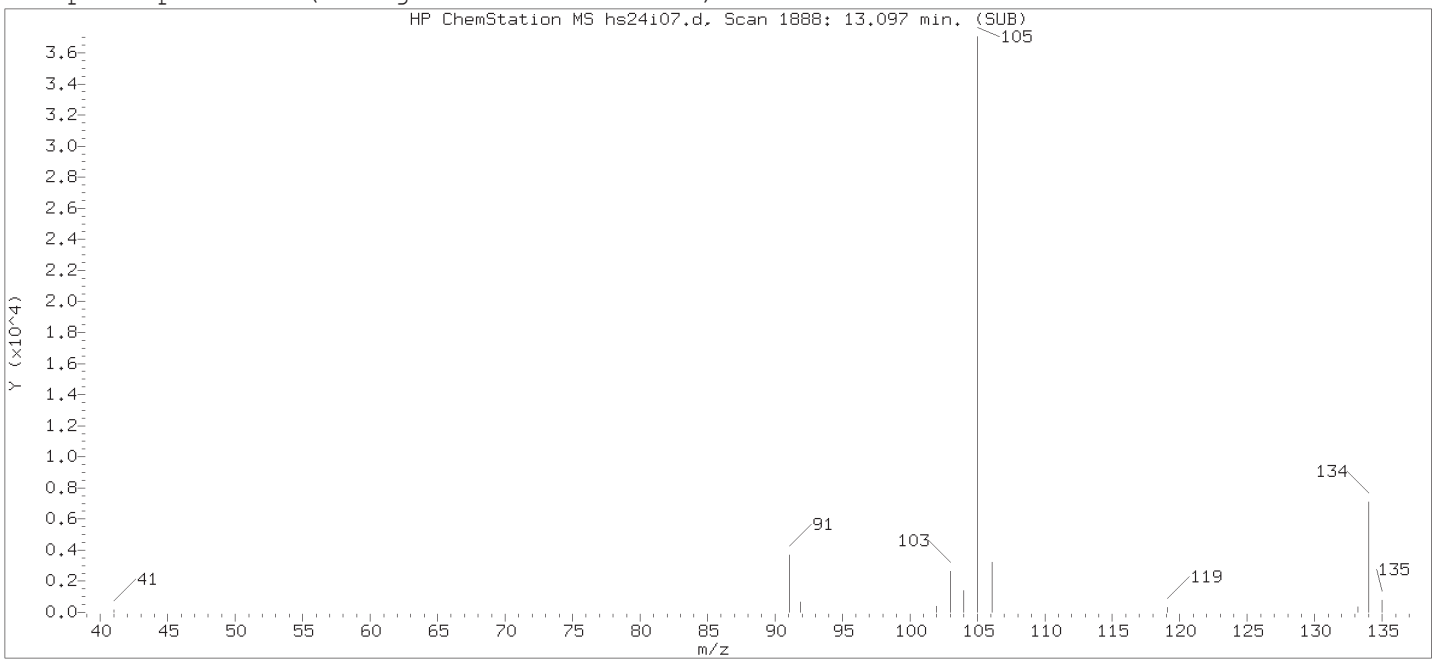
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area (flag) : 52250M
On-Column Amount (ng) : 0.1603
Integration start scan : 1881 Integration stop scan: 1893
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

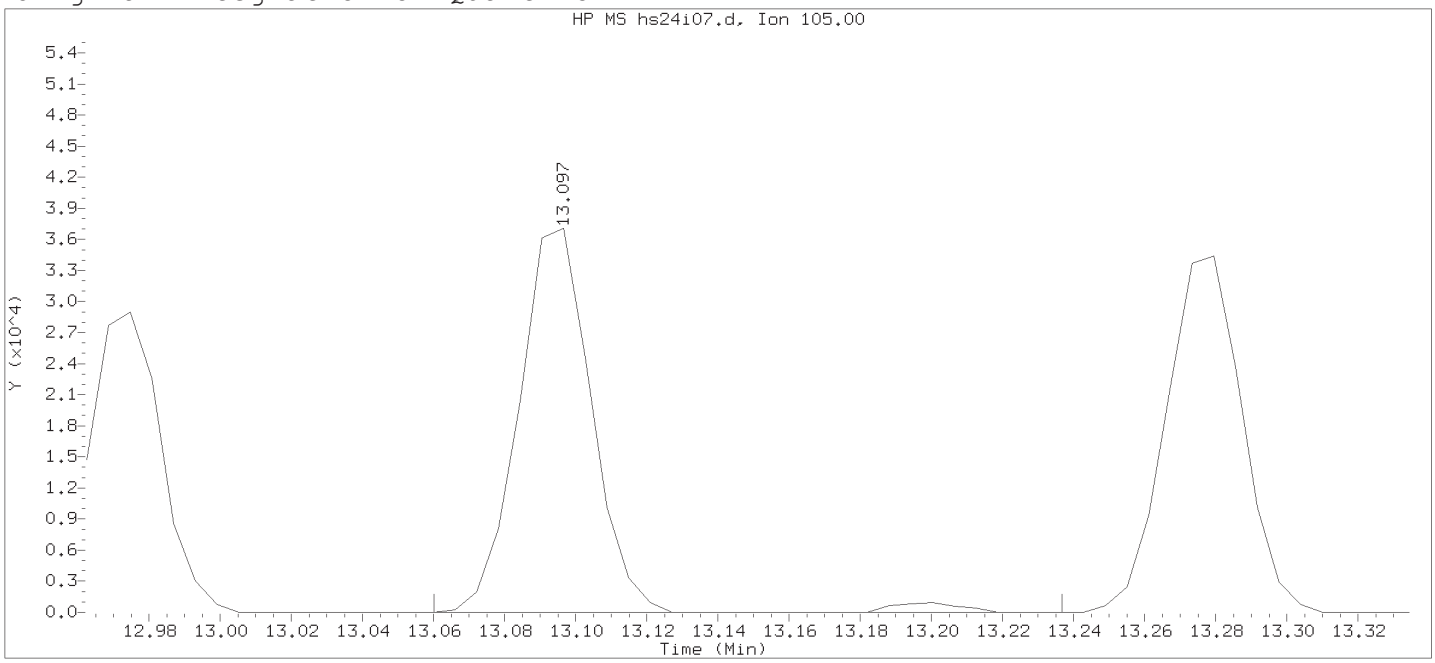
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



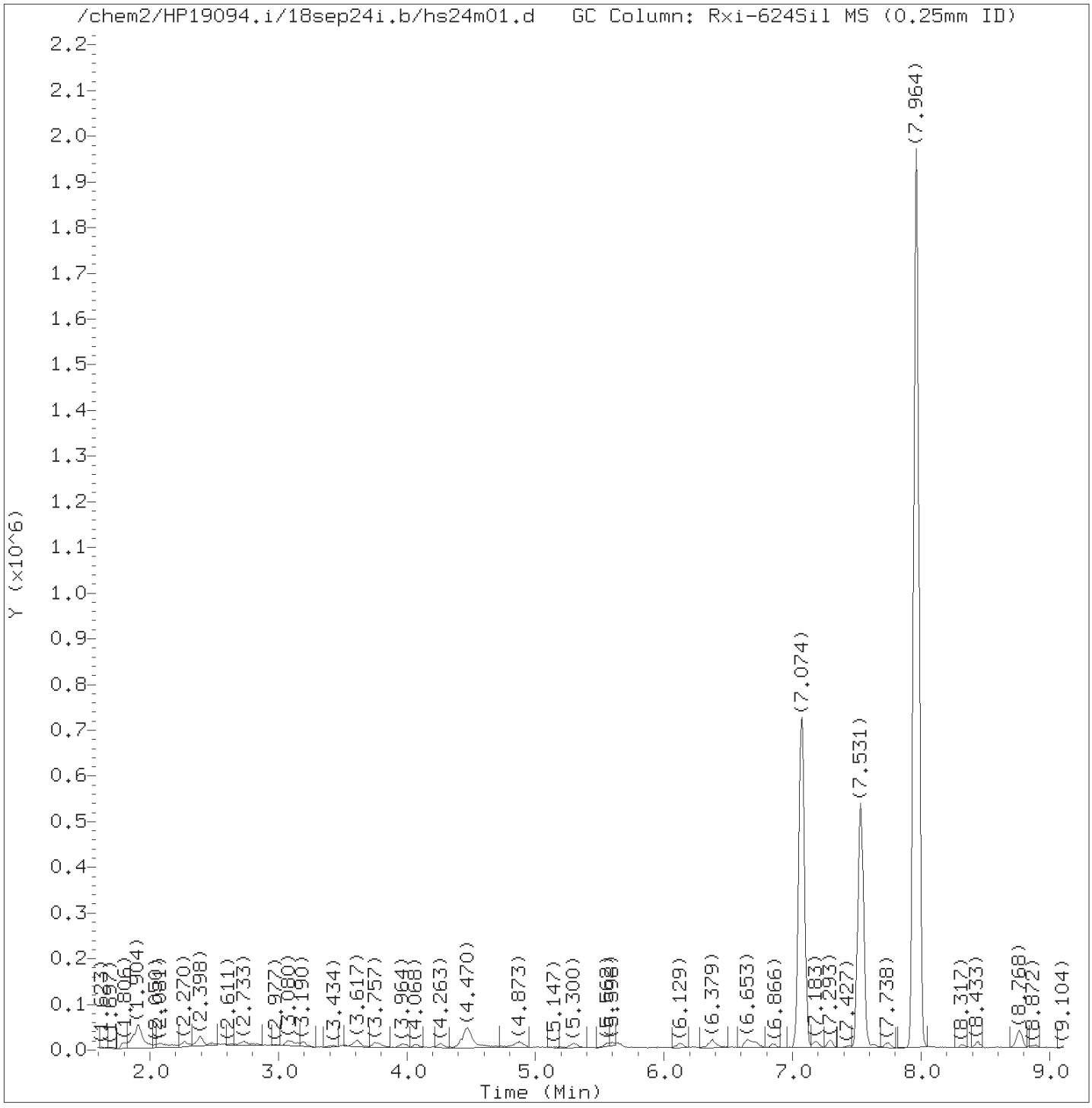
Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

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)

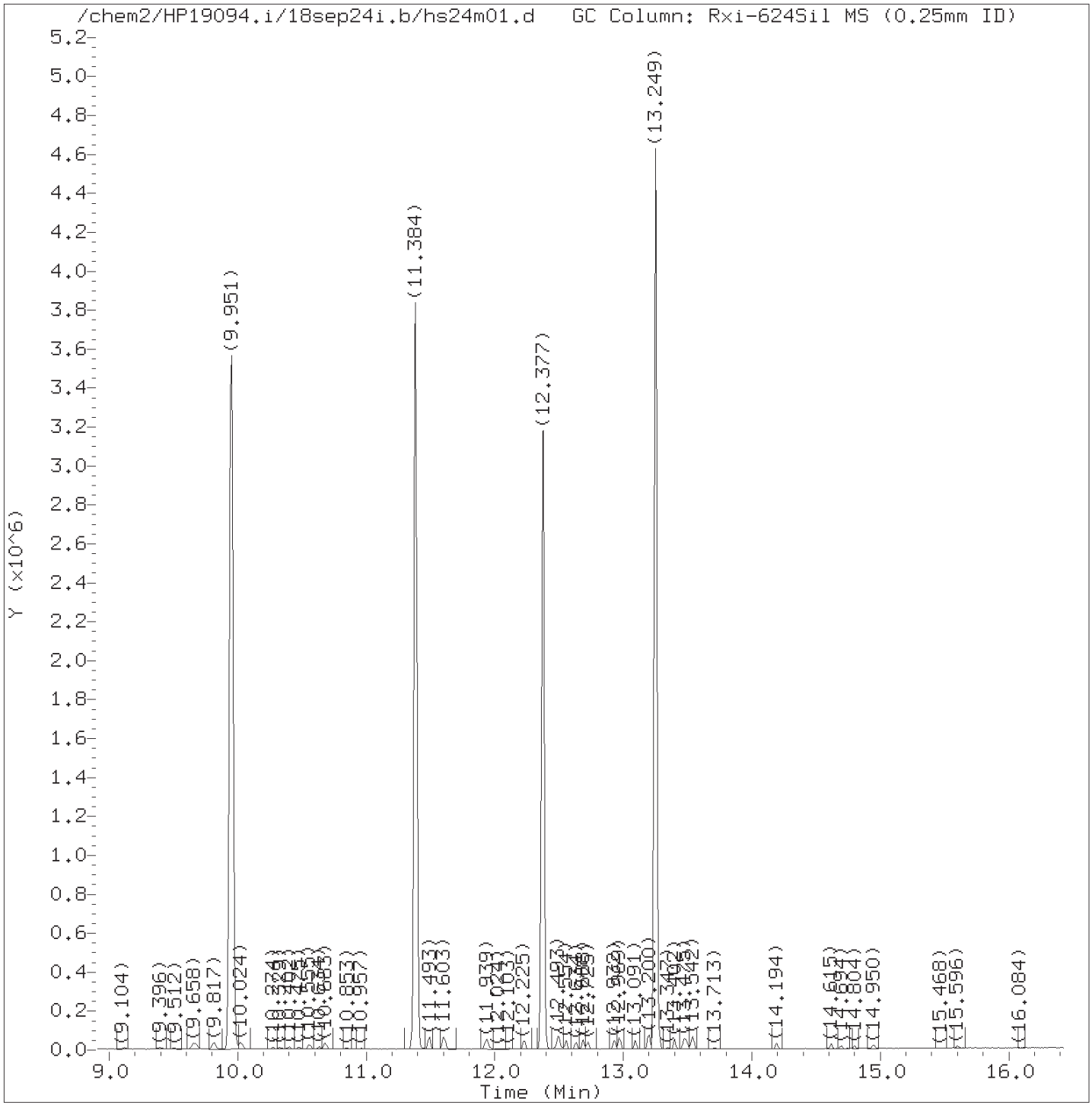
Target Revision 3.5

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

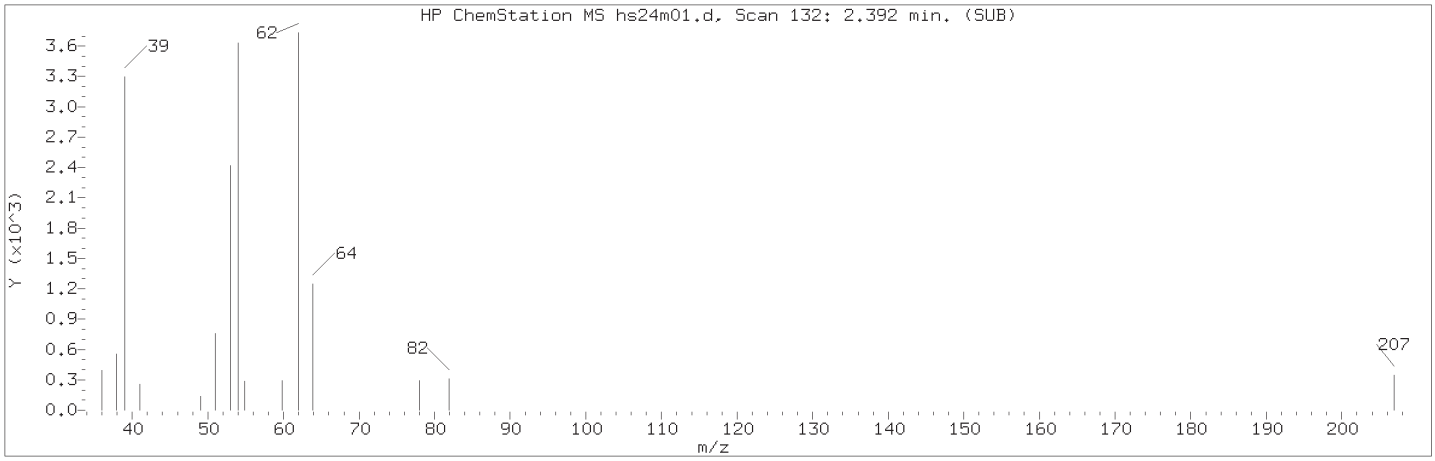
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

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

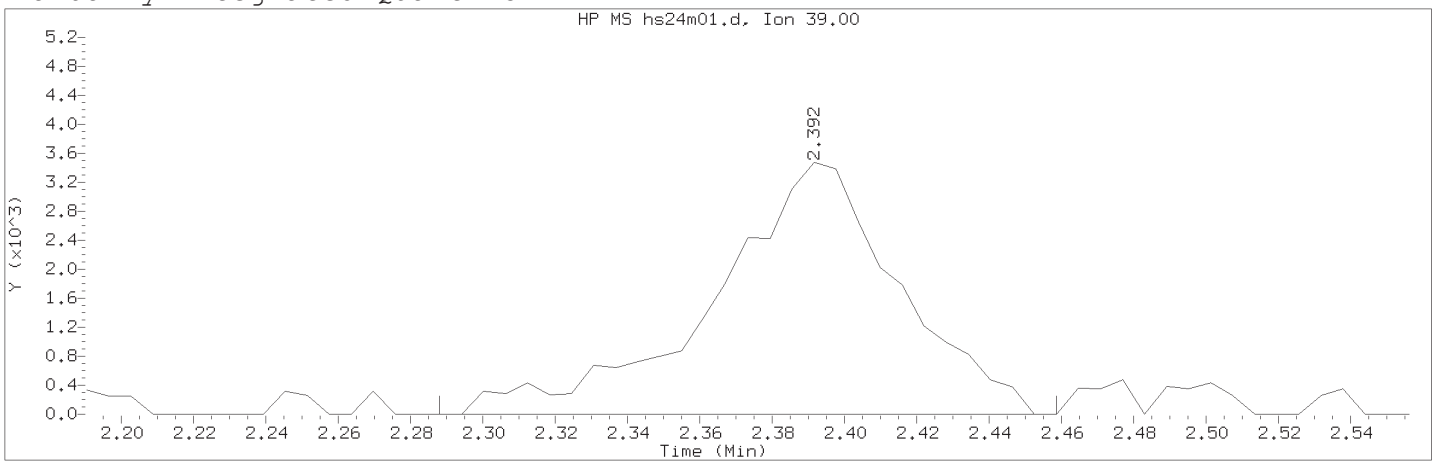
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

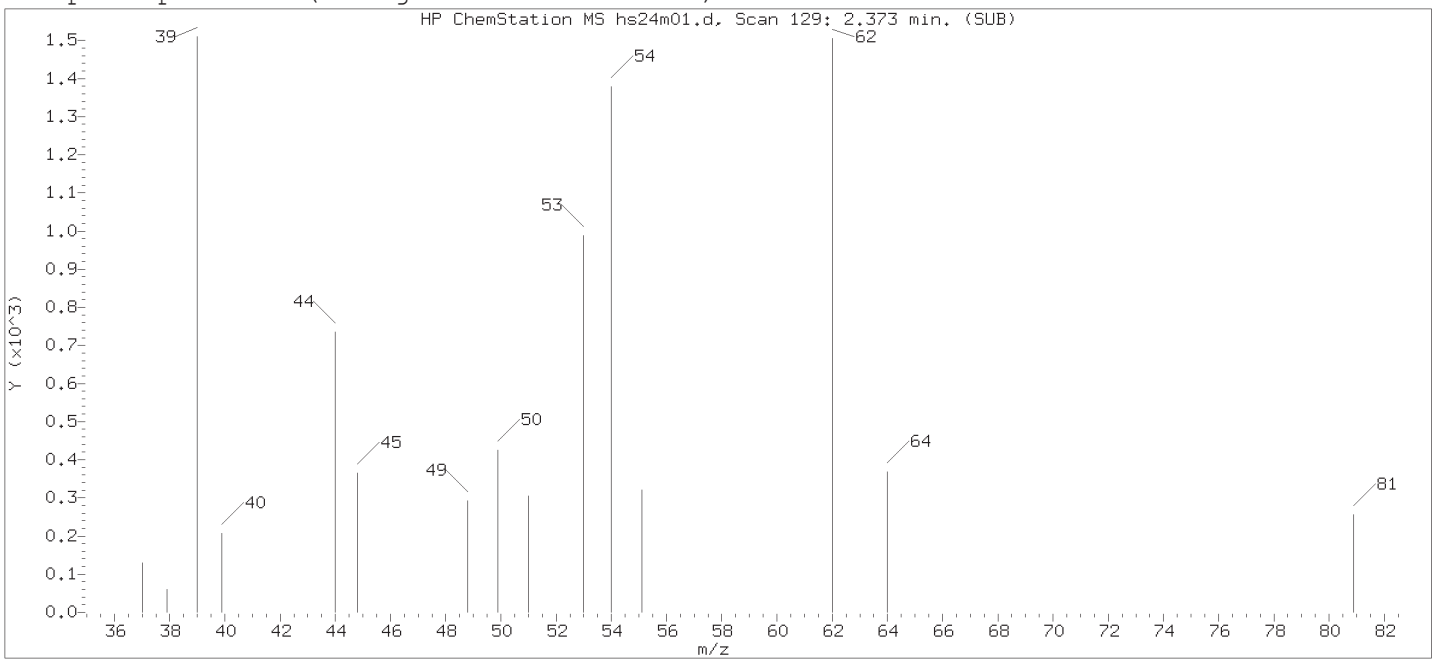
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 12302M
On-Column Amount (ng) : 0.1089
Integration start scan : 114 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

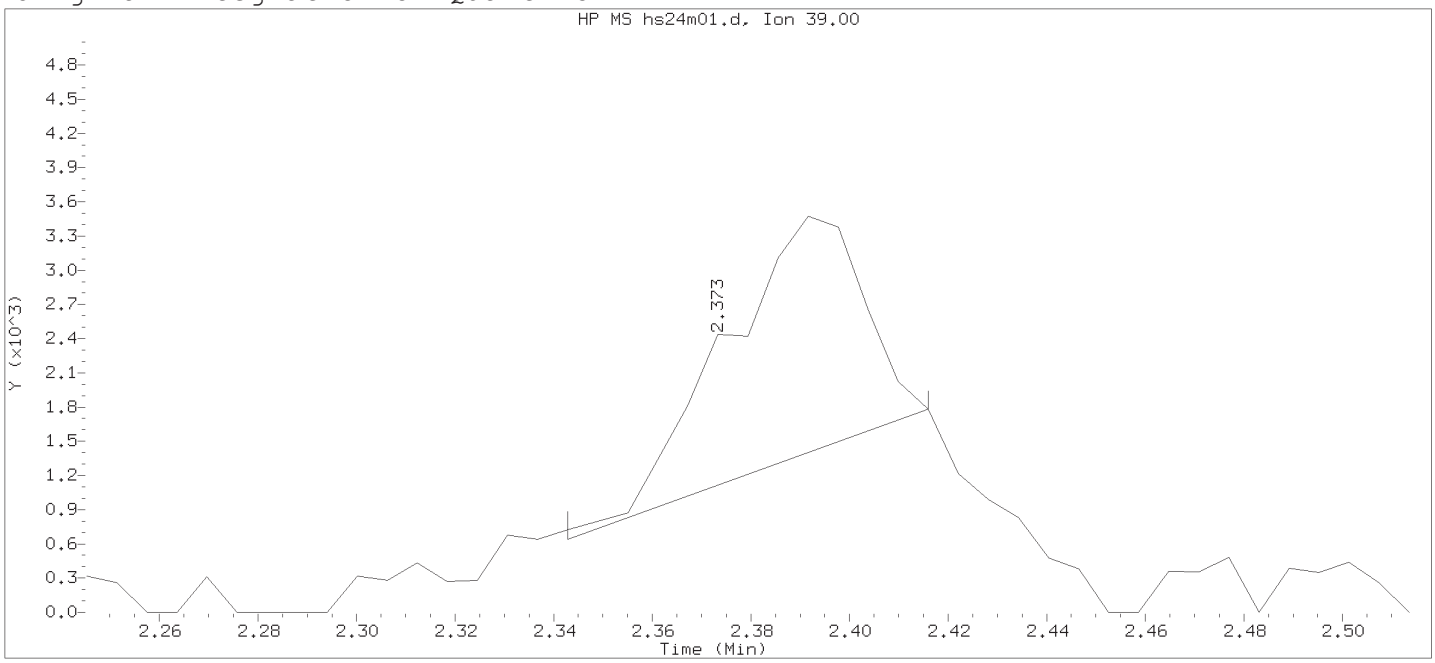
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

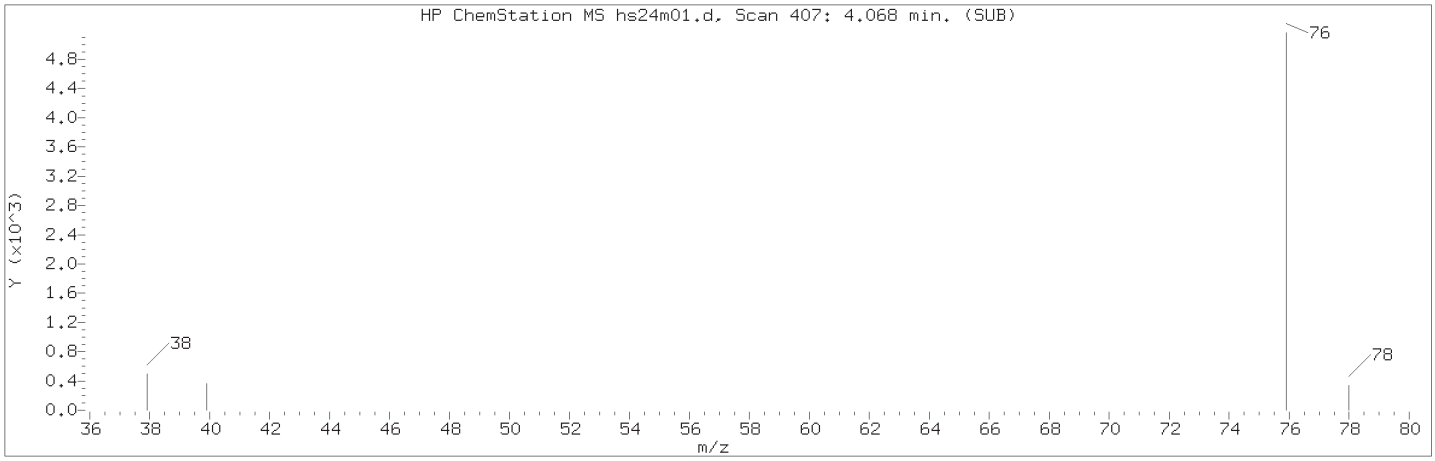
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

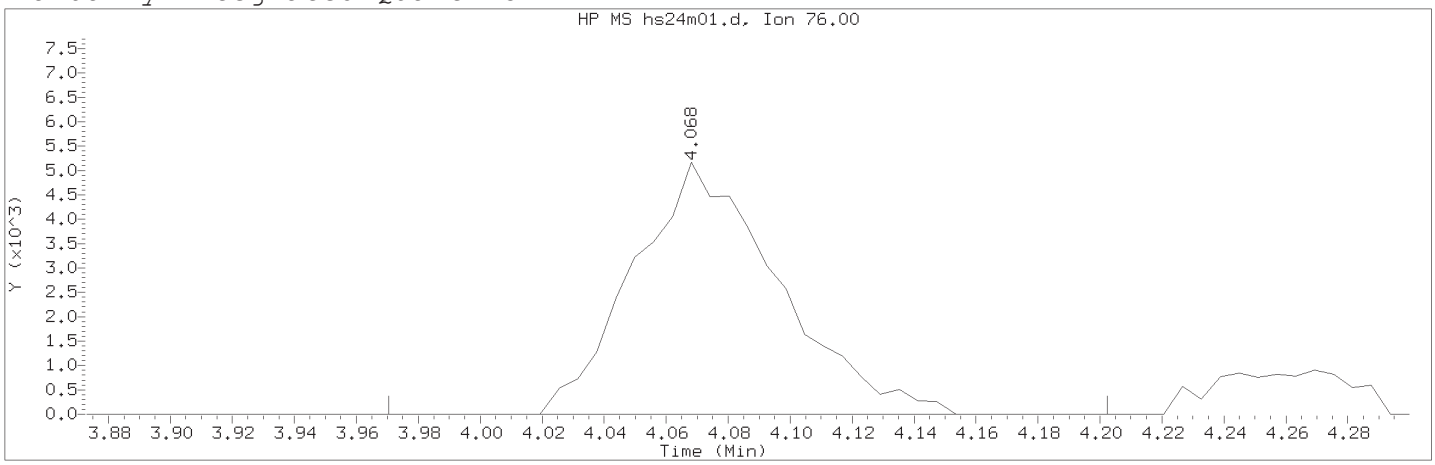
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 129
Retention Time (minutes): 2.373
Quant Ion : 39.00
Area : 4048
On-column Amount (ng) : 0.0438
Integration start scan : 123 Integration stop scan: 135
Y at integration start : 640 Y at integration end: 1780

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

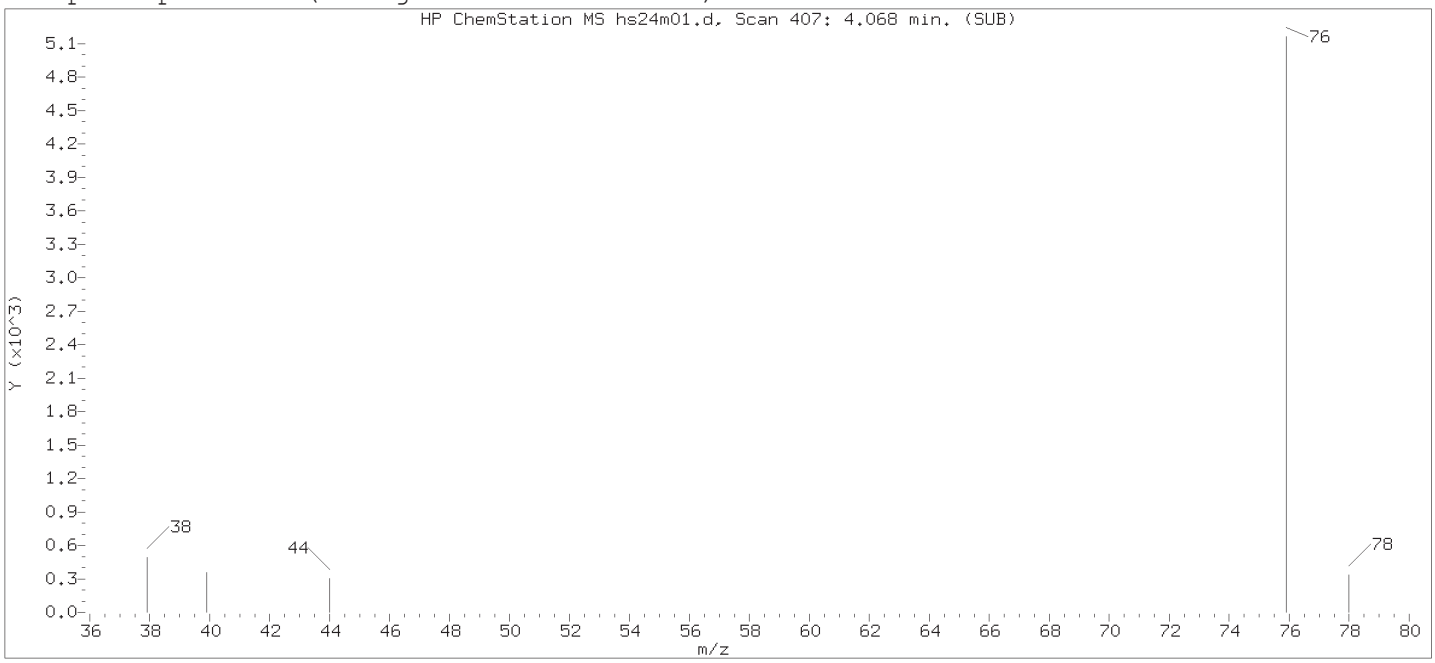
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area (flag) : 16735M
On-Column Amount (ng) : 0.0964
Integration start scan : 390 Integration stop scan: 428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

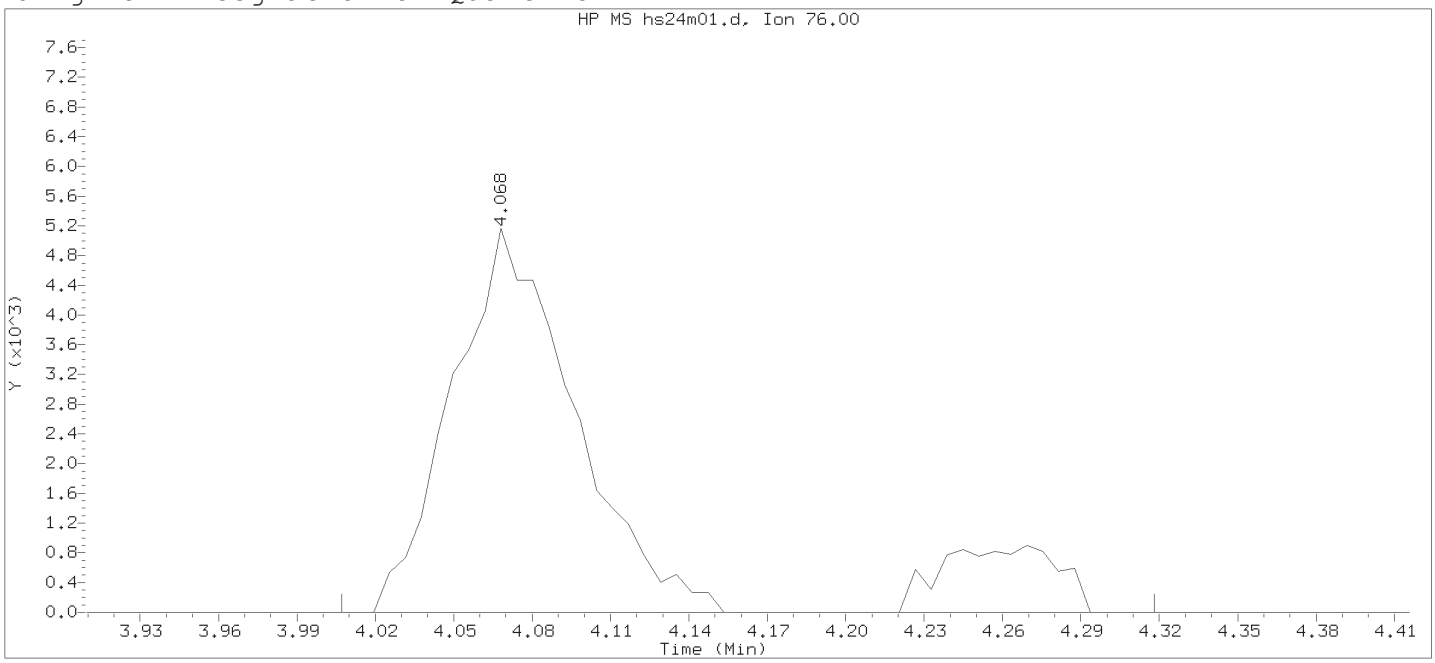
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

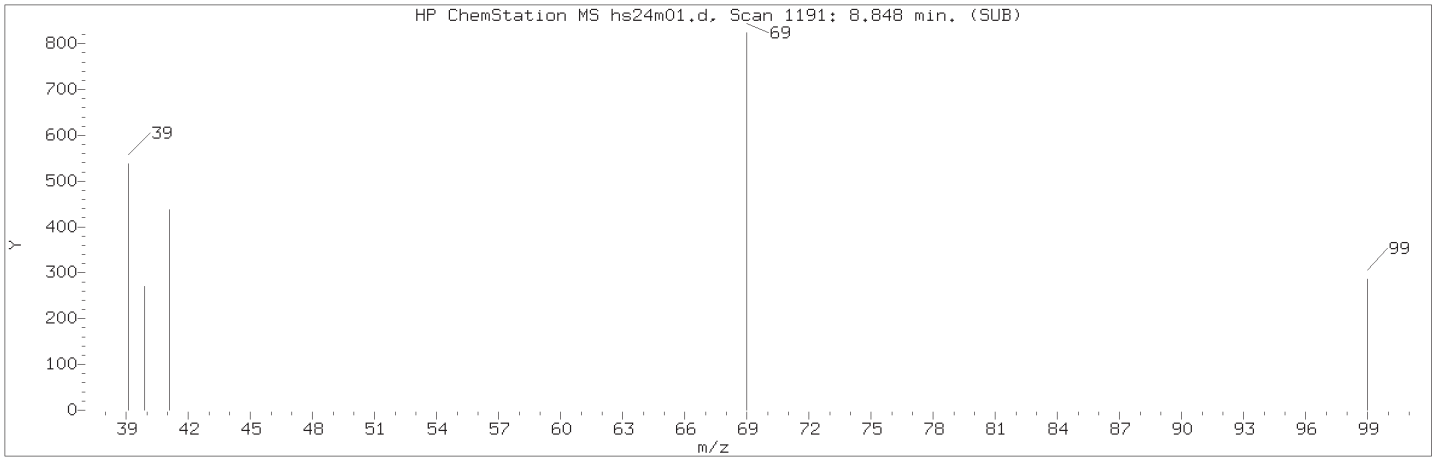
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

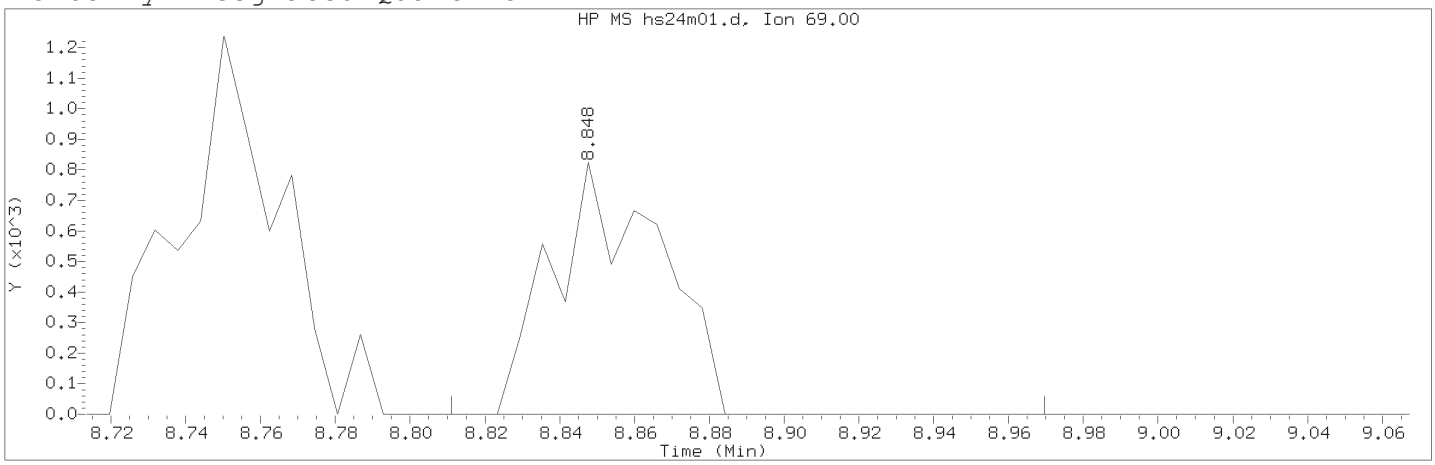
Compound Number	: 18		
Compound Name	: Carbon Disulfide		
Scan Number	: 407		
Retention Time (minutes)	: 4.068		
Quant Ion	: 76.00		
Area	: 19554		
On-column Amount (ng)	: 0.1126		
Integration start scan	: 396	Integration stop scan:	447
Y at integration start	: 0	Y at integration end:	0

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

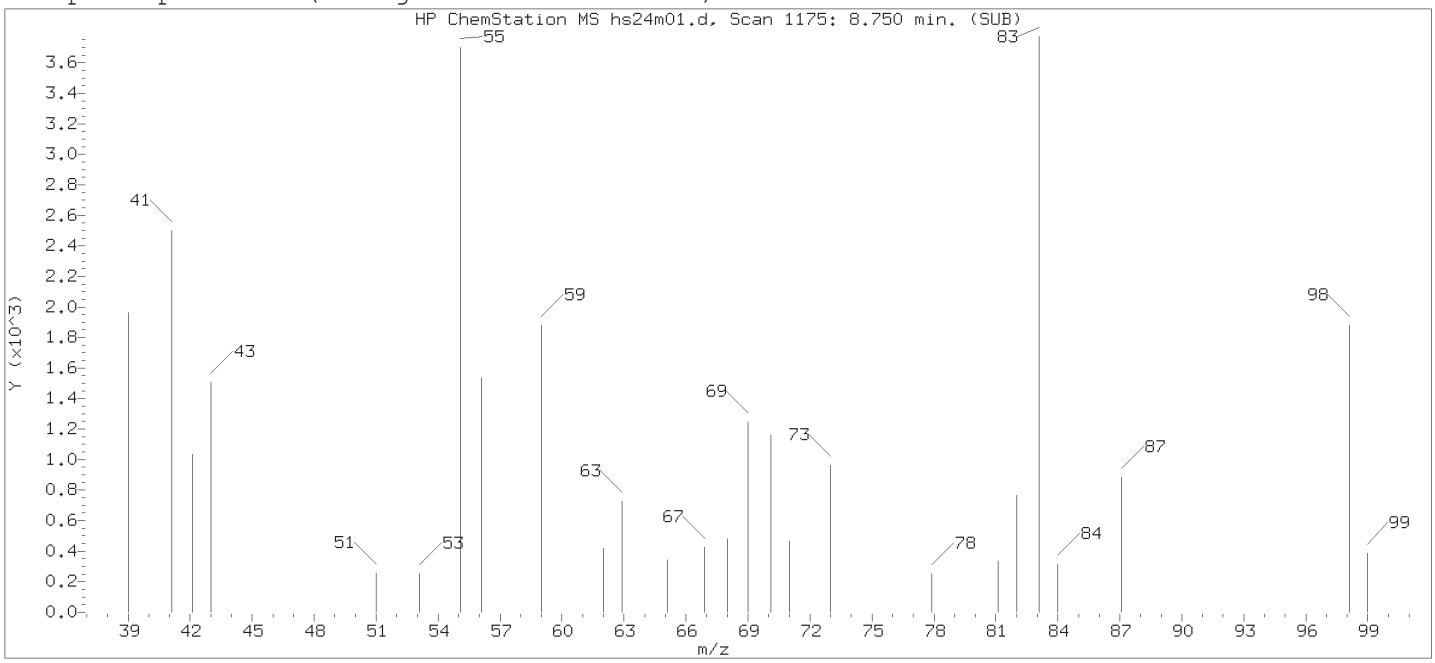
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1191
Retention Time (minutes): 8.848
Quant Ion : 69.00
Area (flag) : 1661M
On-Column Amount (ng) : 0.0666
Integration start scan : 1184 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

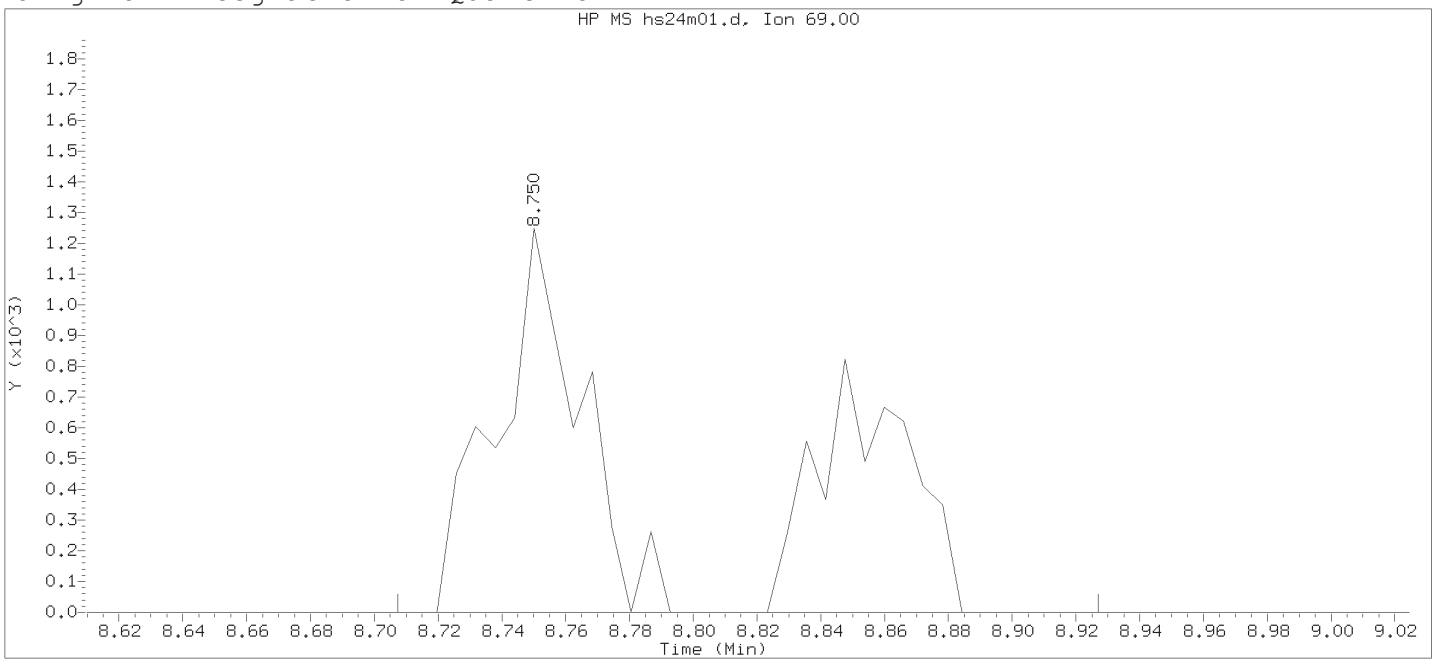
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

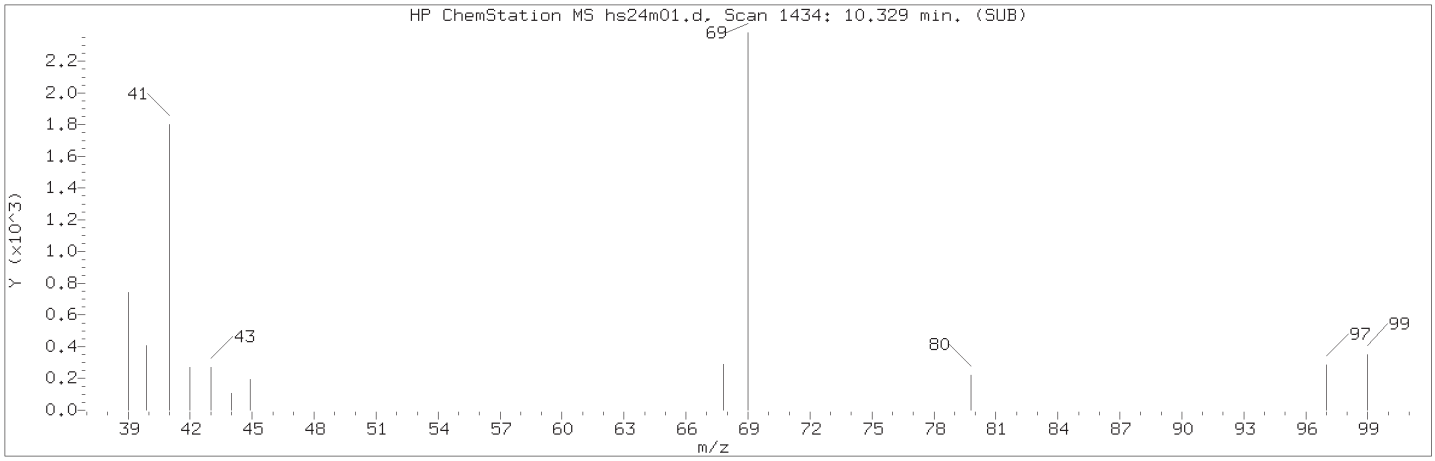
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

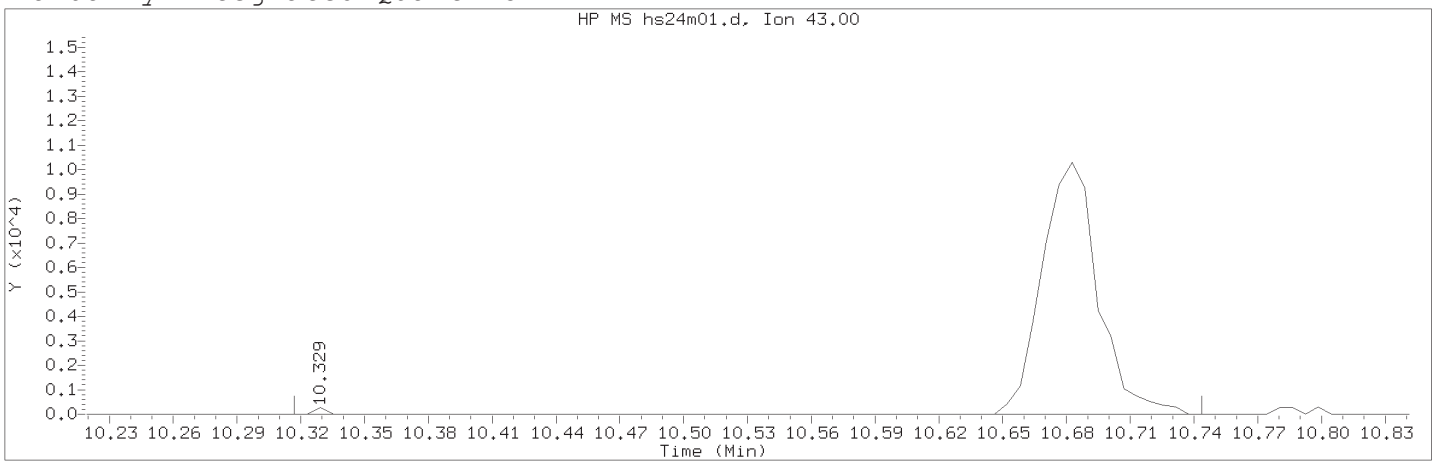
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1175
Retention Time (minutes): 8.750
Quant Ion : 69.00
Area : 3973
On-column Amount (ng) : 0.1576
Integration start scan : 1167 Integration stop scan: 1203
Y at integration start : 0 Y at integration end: 0

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

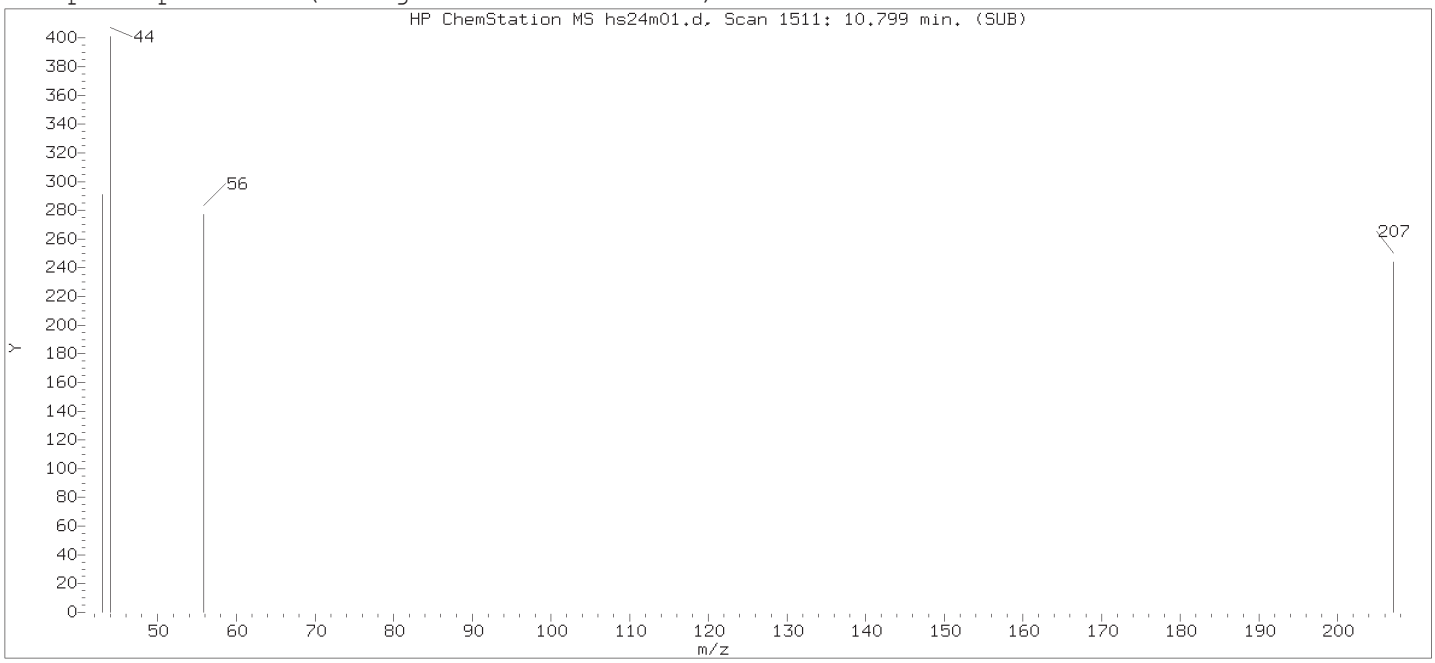
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1434
Retention Time (minutes): 10.329
Quant Ion : 43.00
Area (flag) : 19024A
On-Column Amount (ng) : 0.8165
Integration start scan : 1431 Integration stop scan: 1501
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

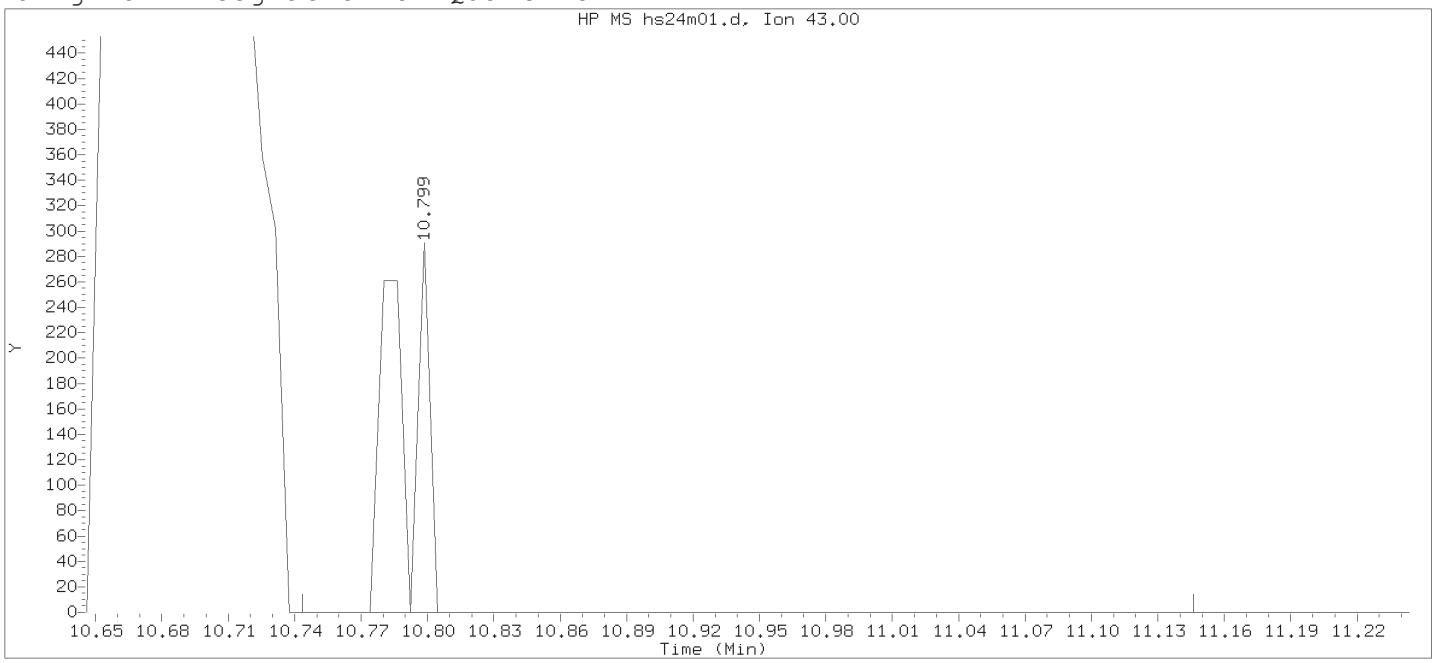
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

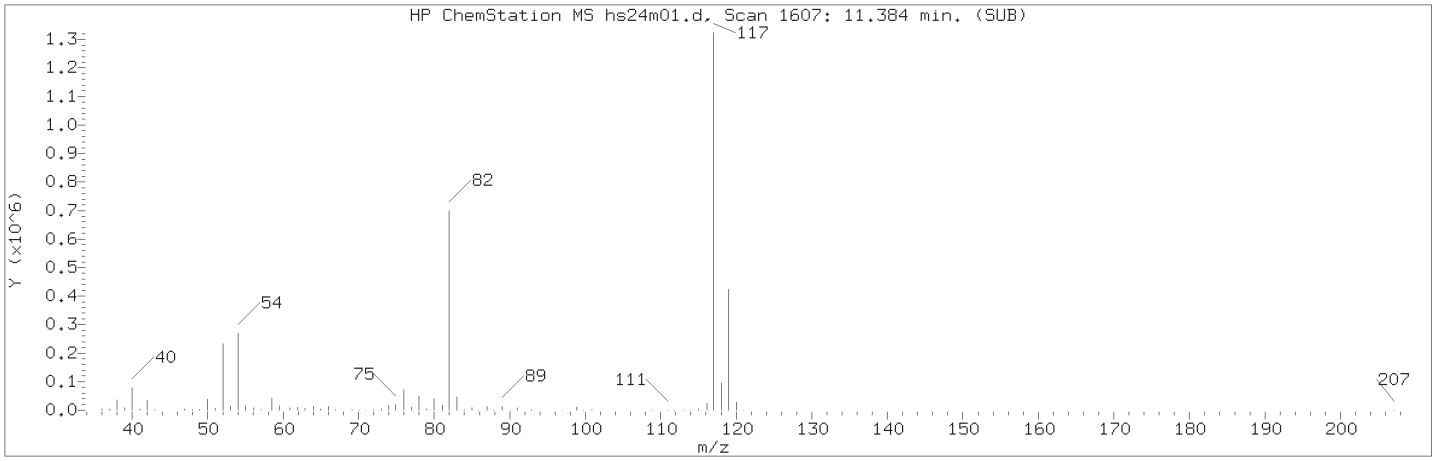
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

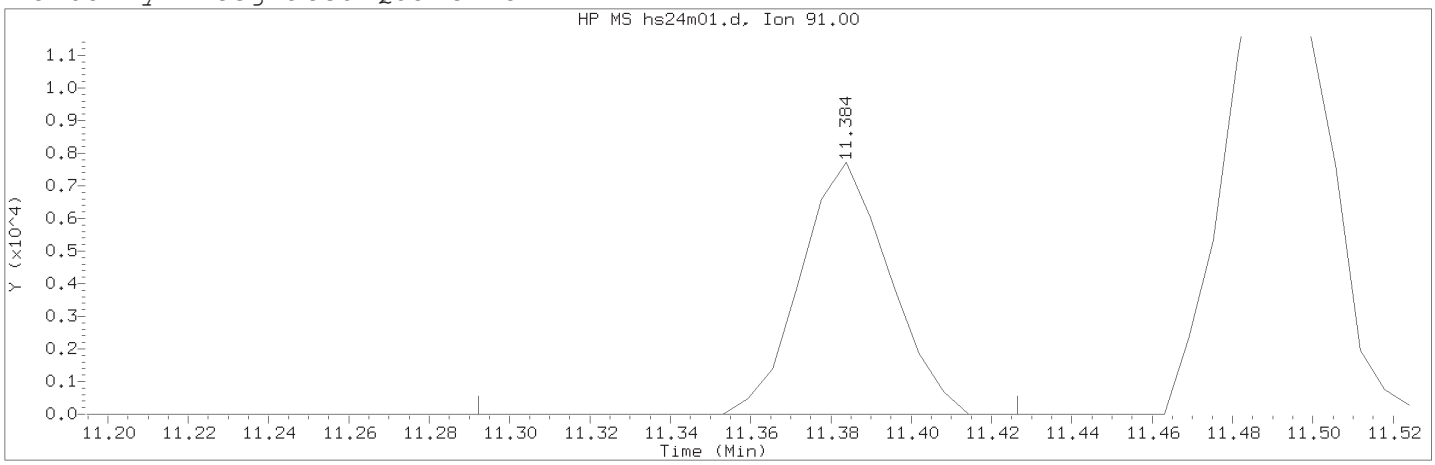
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1511
Retention Time (minutes): 10.799
Quant Ion : 43.00
Area : 297
On-column Amount (ng) : 0.0128
Integration start scan : 1501 Integration stop scan: 1567
Y at integration start : 0 Y at integration end: 0

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

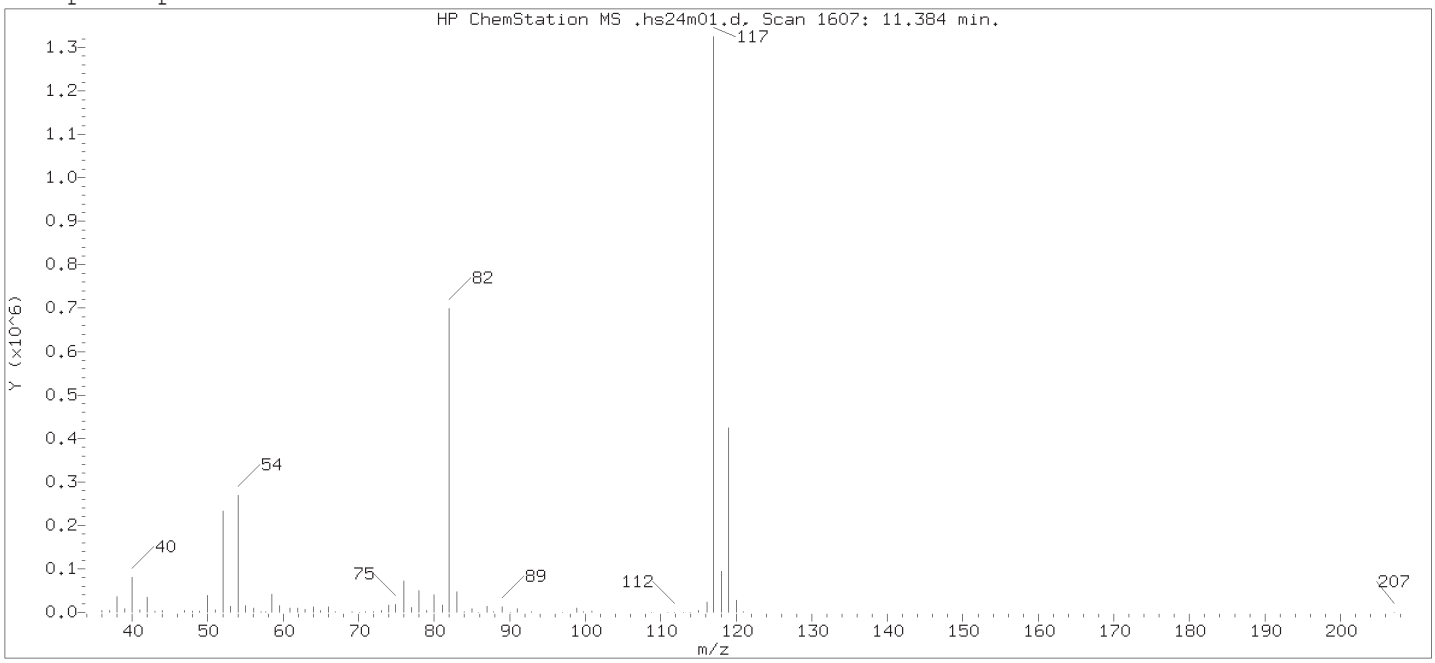
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 11869M
On-Column Amount (ng) : 0.1239
Integration start scan : 1591 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

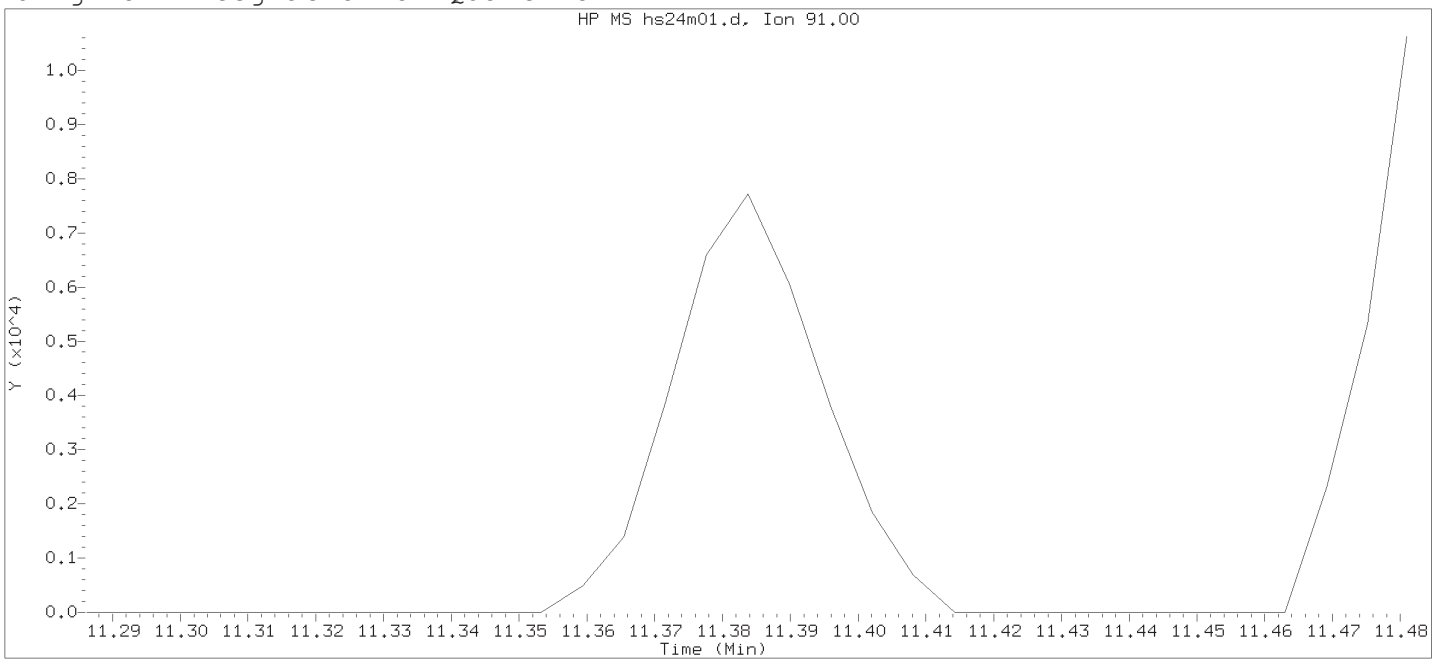
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

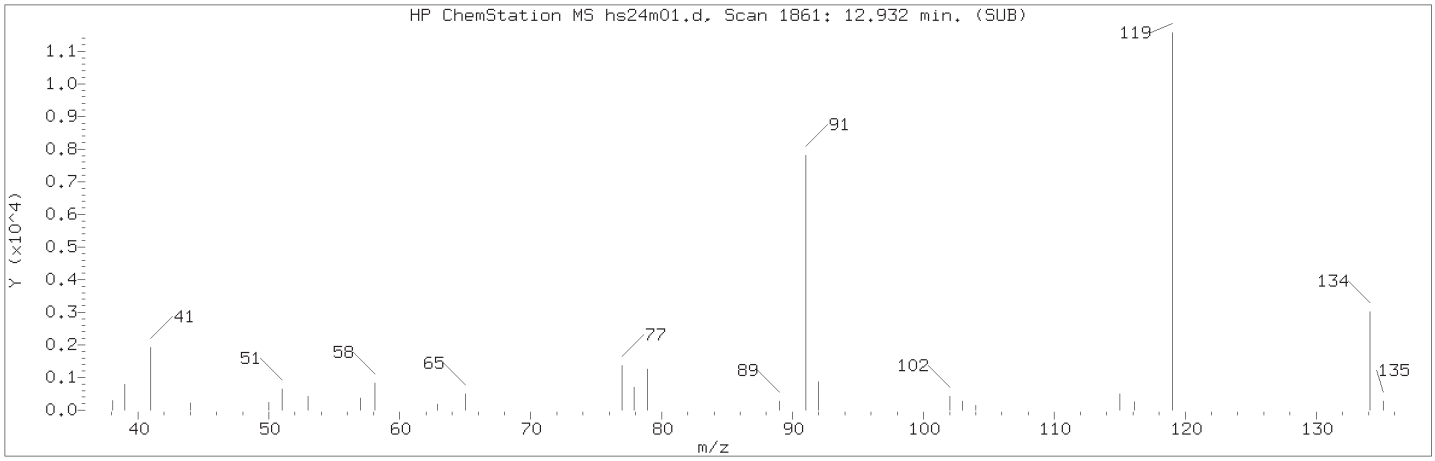
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

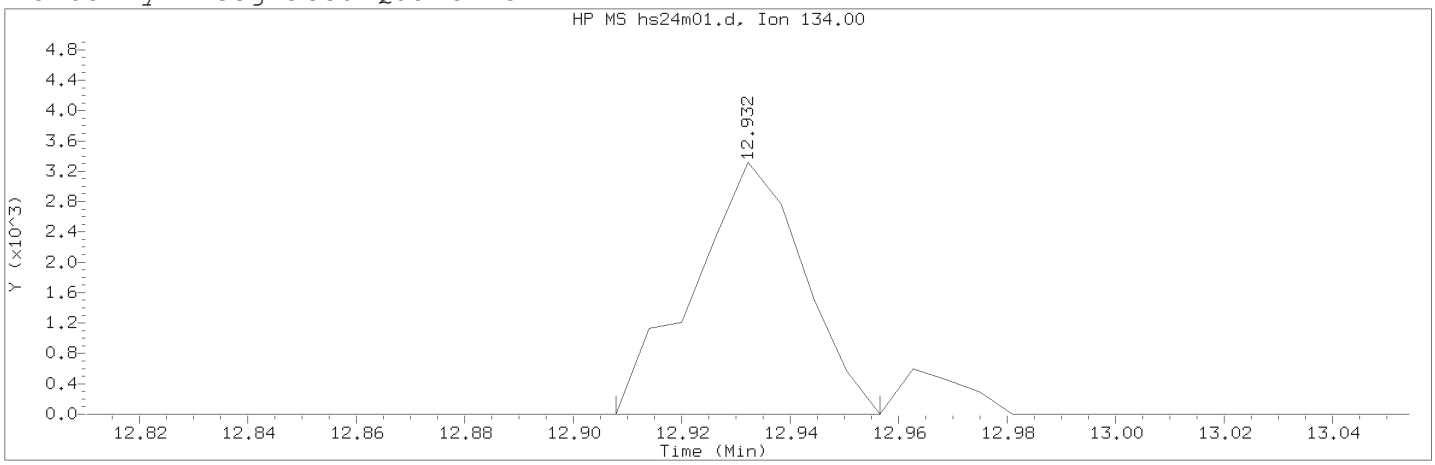
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

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

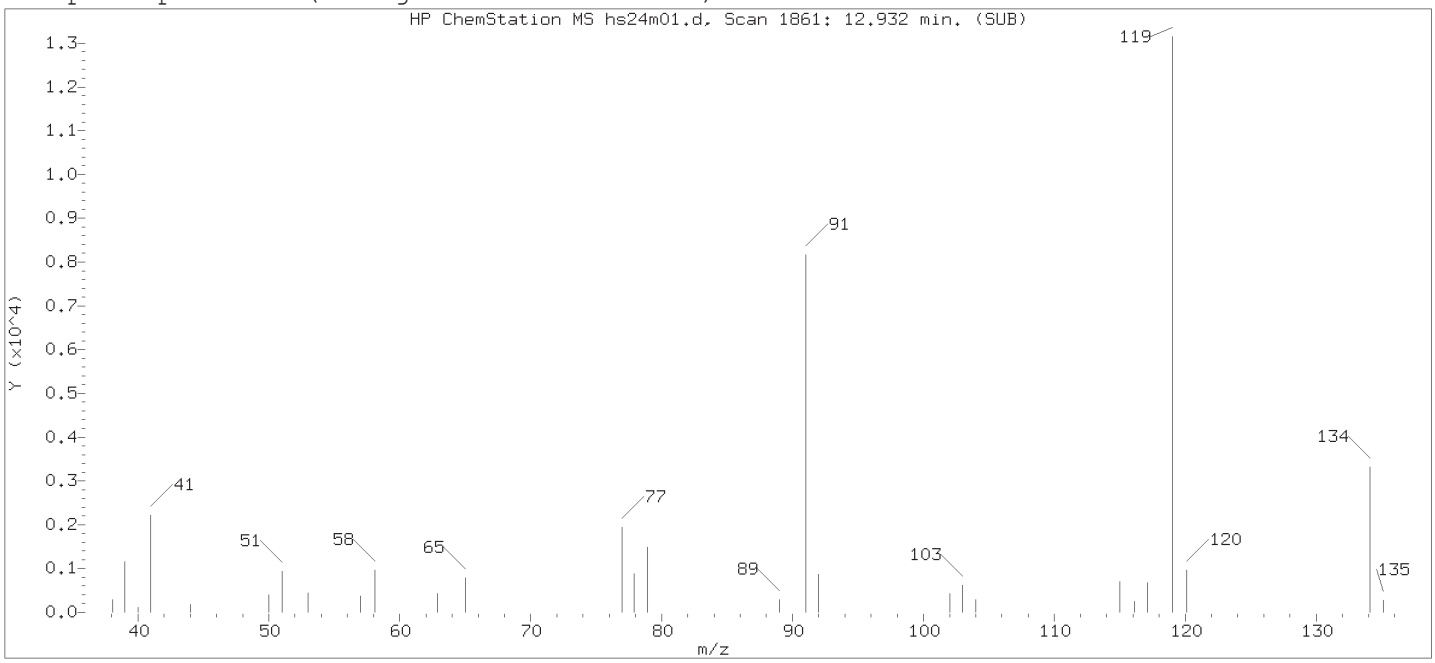
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 4681M
On-Column Amount (ng) : 0.0853
Integration start scan : 1856 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

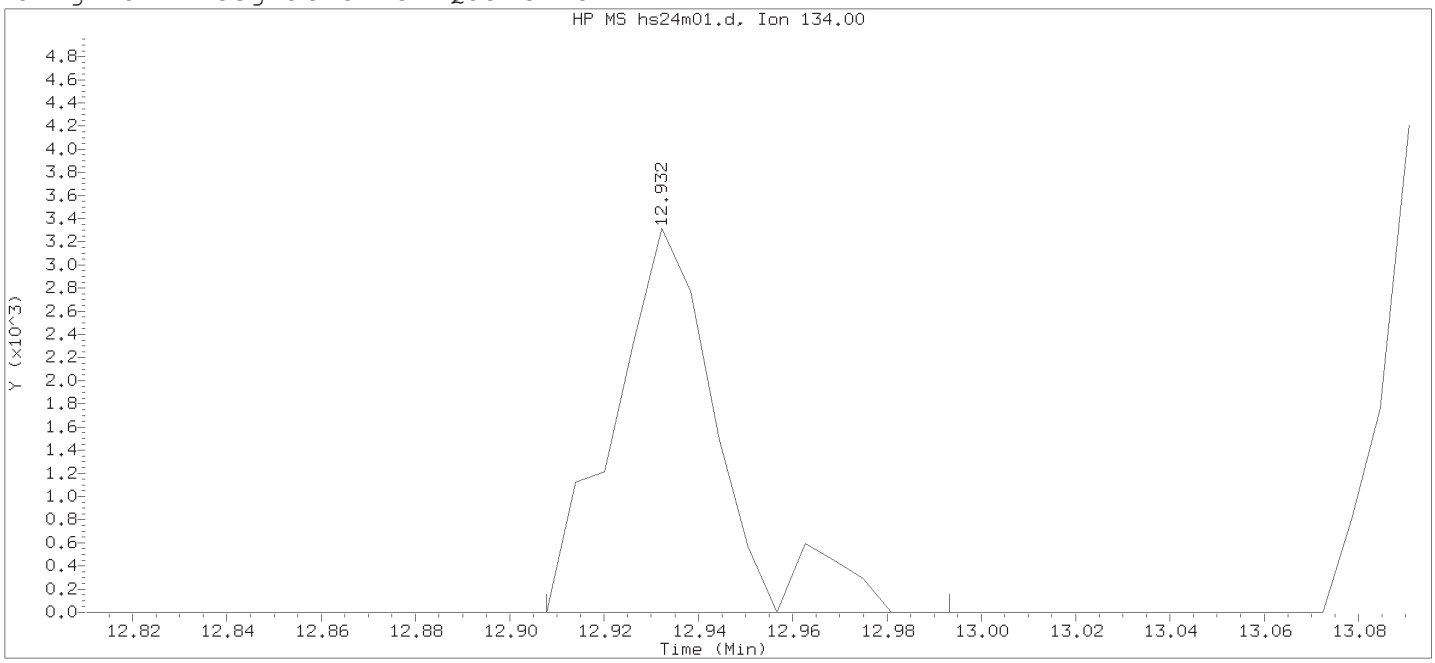
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

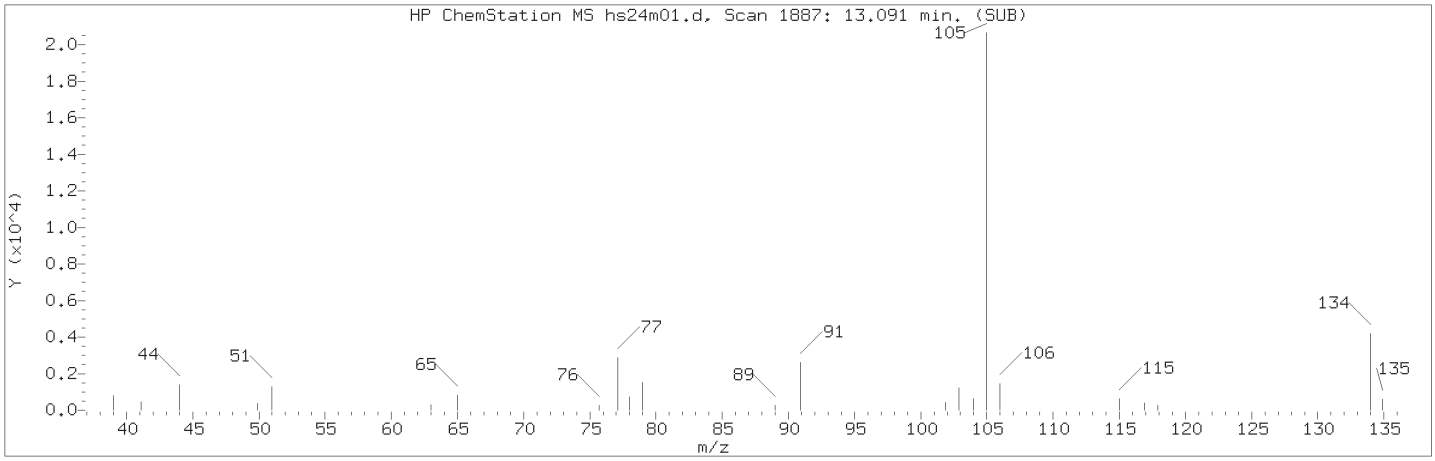
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

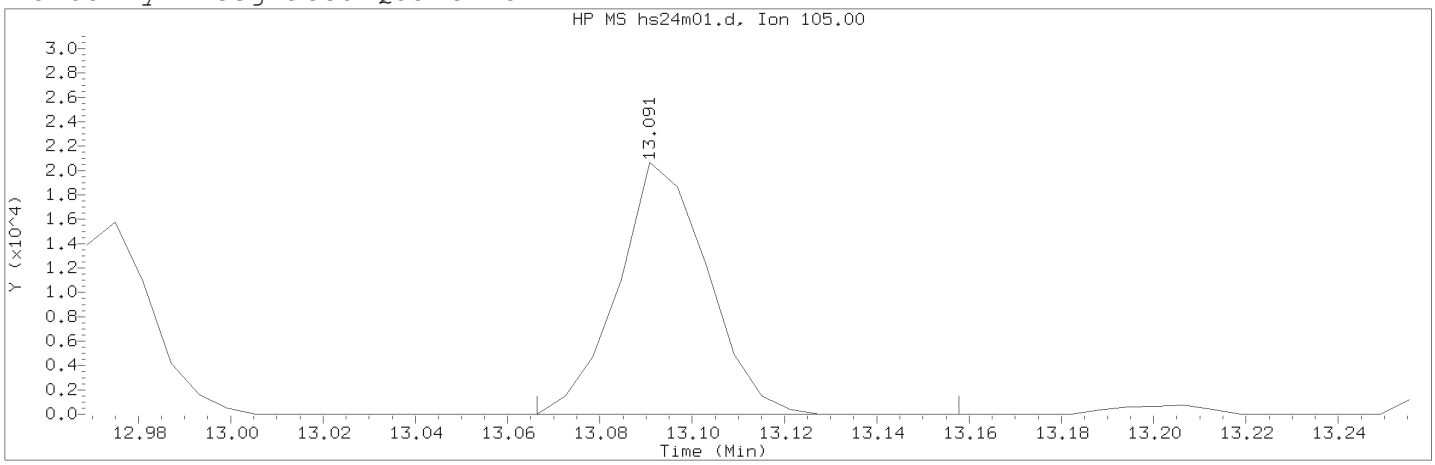
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 5170
On-column Amount (ng) : 0.0909
Integration start scan : 1856 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

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

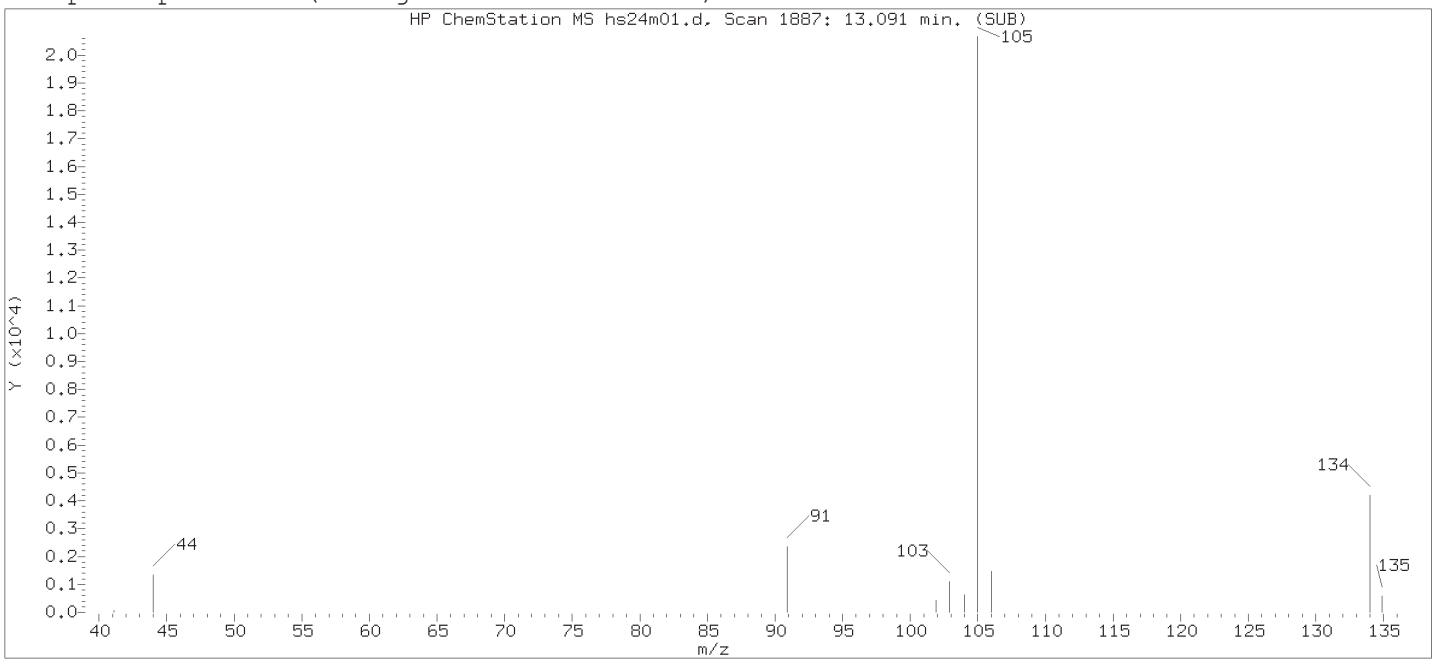
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area (flag) : 27687M
On-Column Amount (ng) : 0.0847
Integration start scan : 1882 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

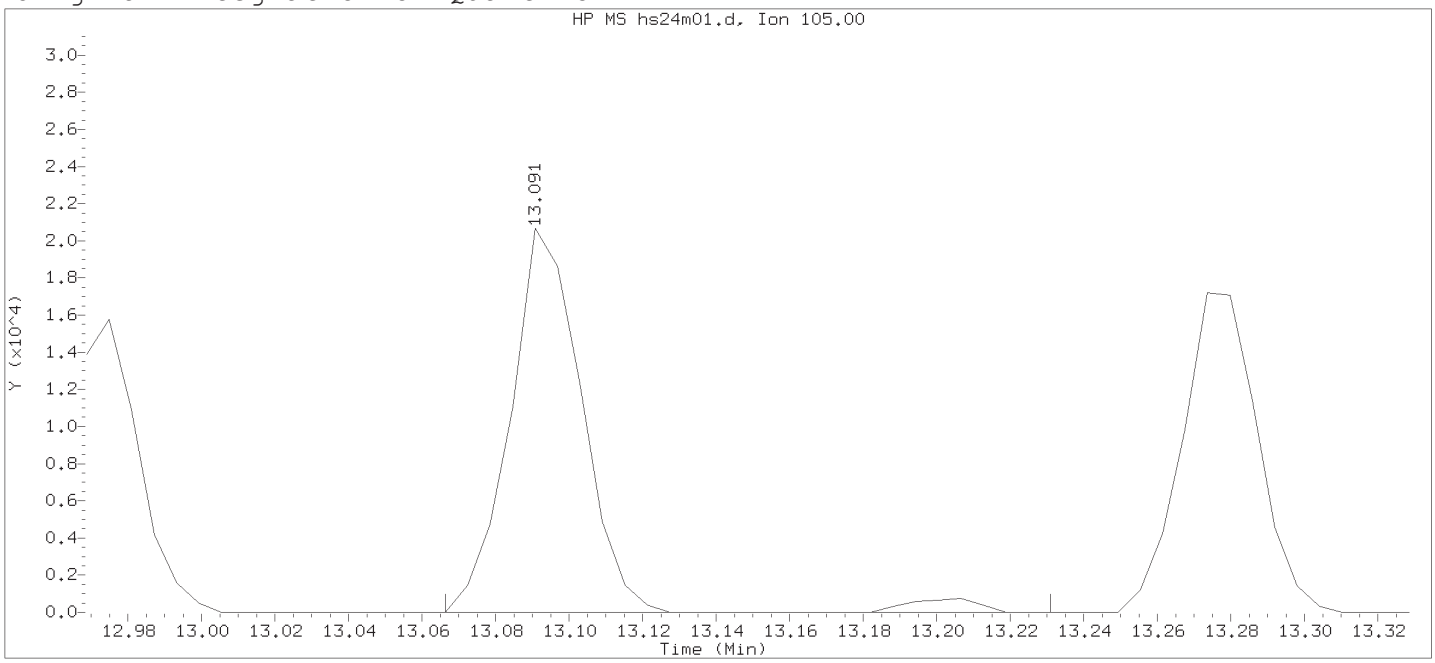
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

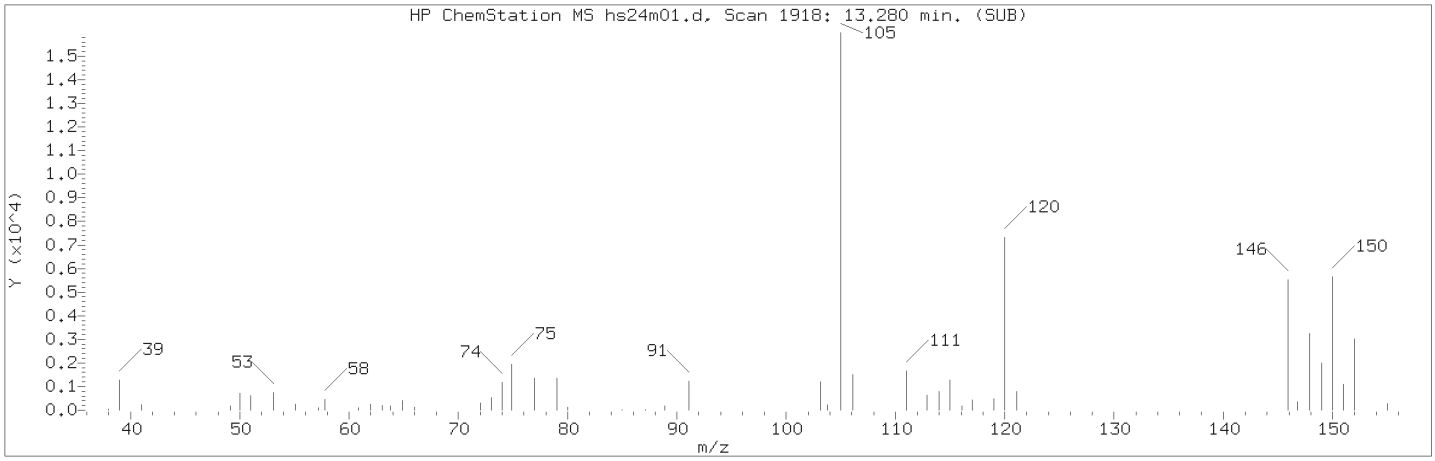
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

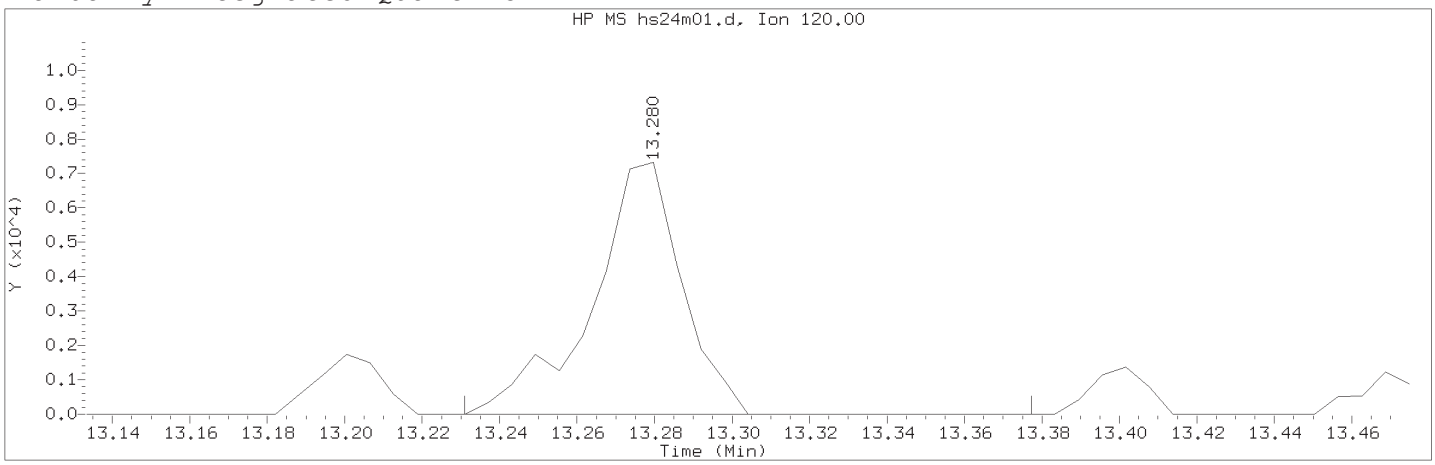
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area : 28686
On-column Amount (ng) : 0.0875
Integration start scan : 1882 Integration stop scan: 1909
Y at integration start : 0 Y at integration end: 0

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

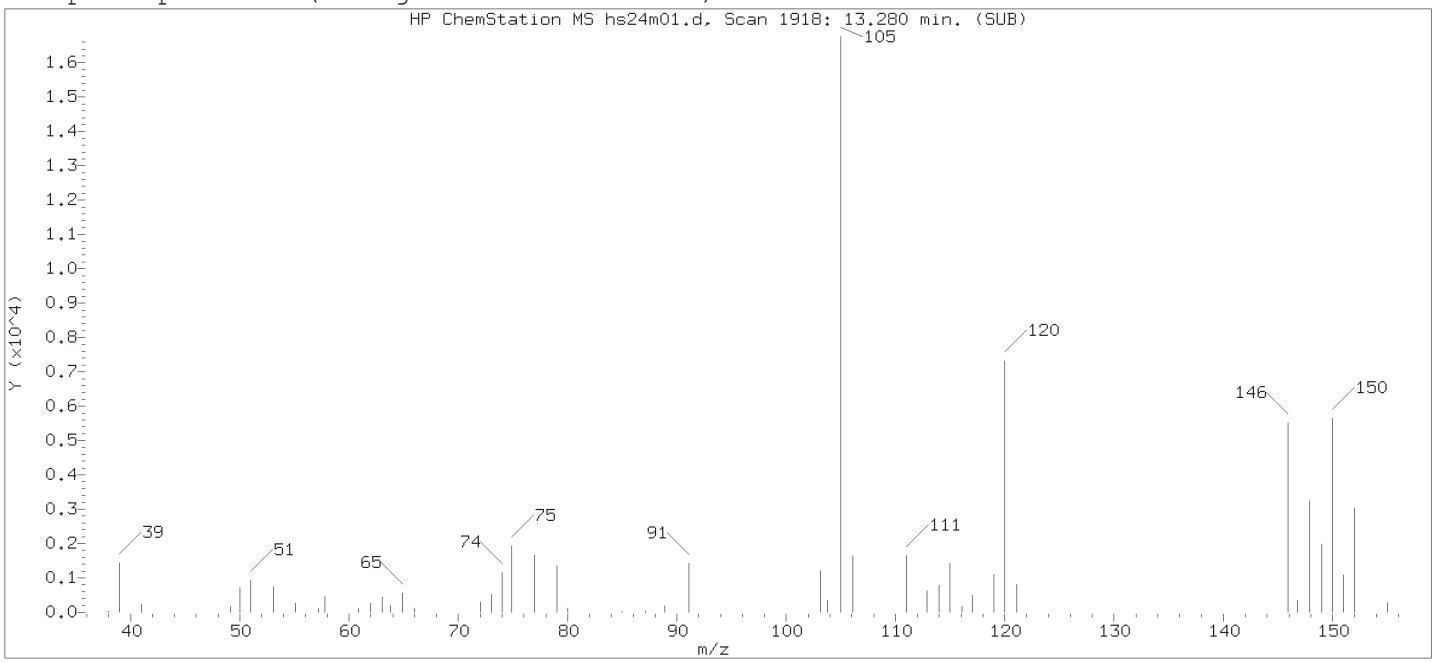
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area (flag) : 11819M
On-Column Amount (ng) : 0.1001
Integration start scan : 1909 Integration stop scan: 1933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

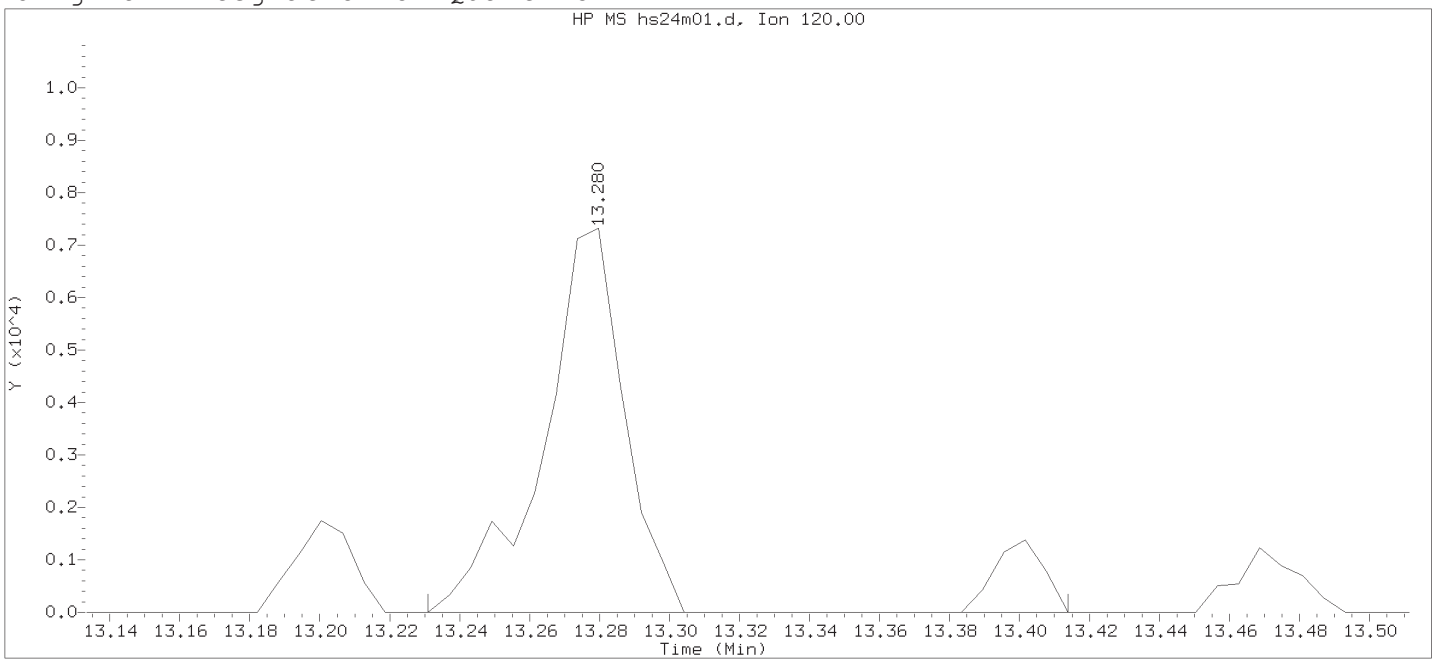
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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

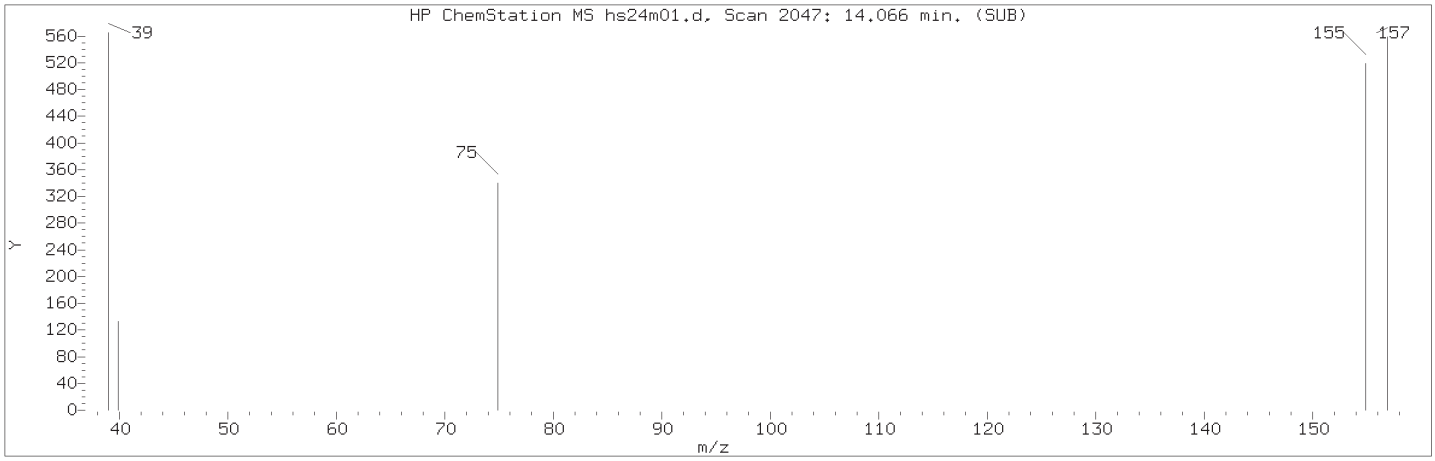
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

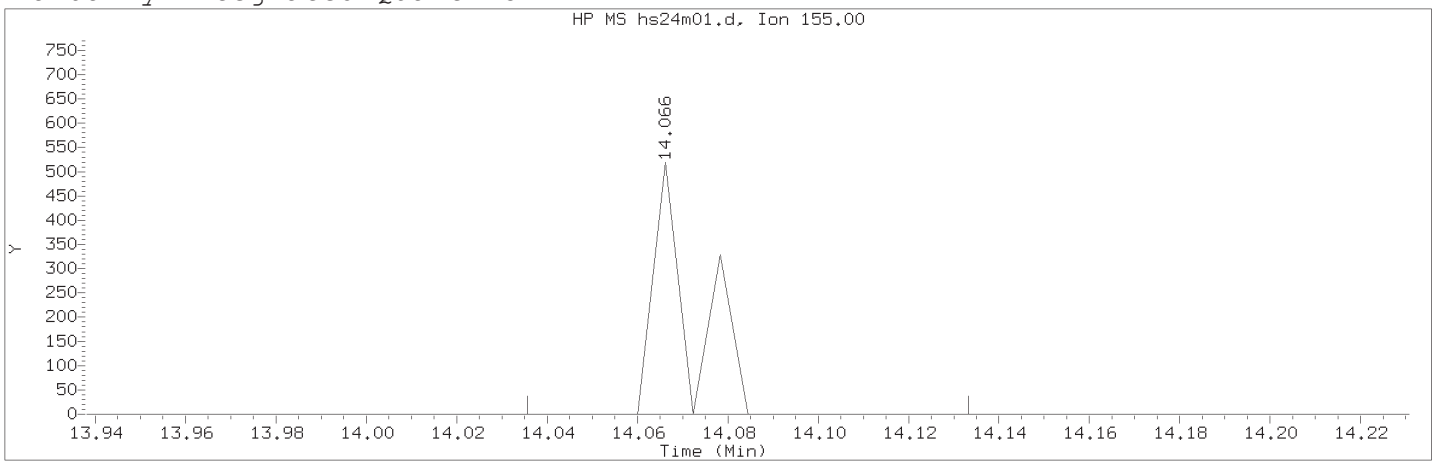
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area : 13186
On-column Amount (ng) : 0.1095
Integration start scan : 1909 Integration stop scan: 1939
Y at integration start : 0 Y at integration end: 0

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

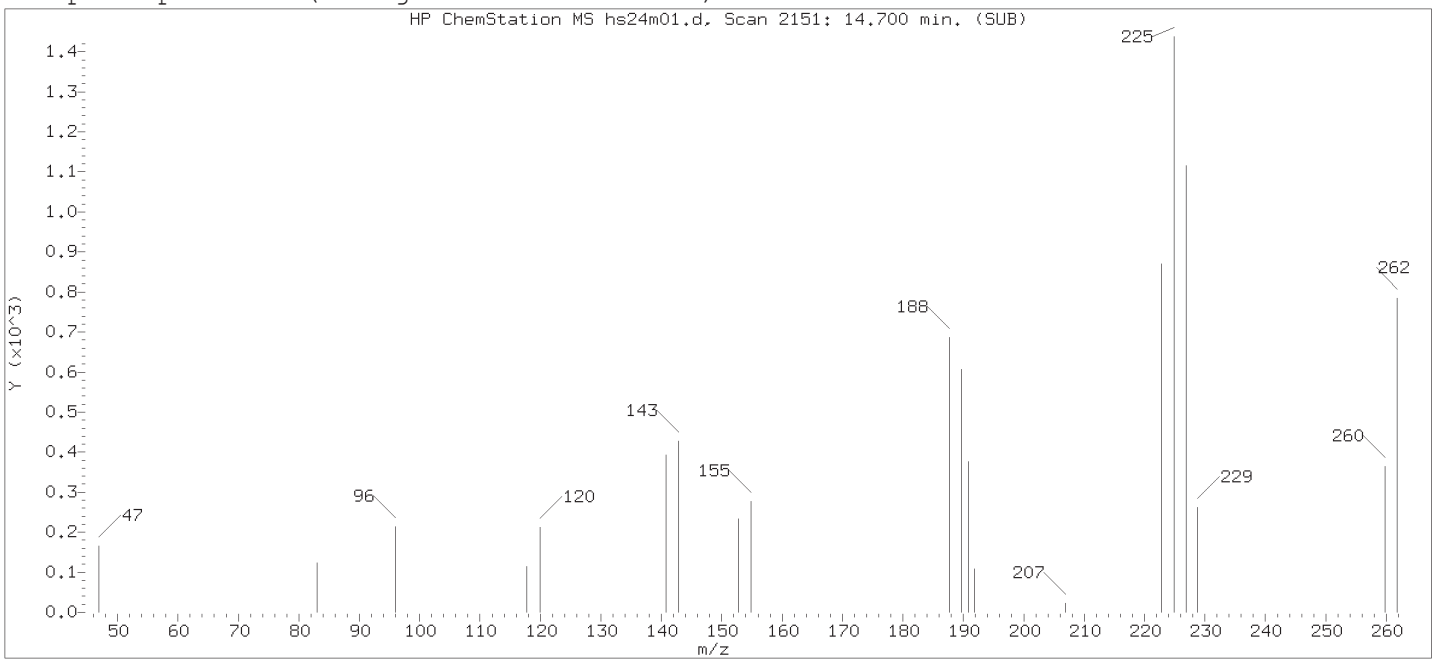
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2047
Retention Time (minutes): 14.066
Quant Ion : 155.00
Area (flag) : 310M
On-Column Amount (ng) : 0.0535
Integration start scan : 2041 Integration stop scan: 2057
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

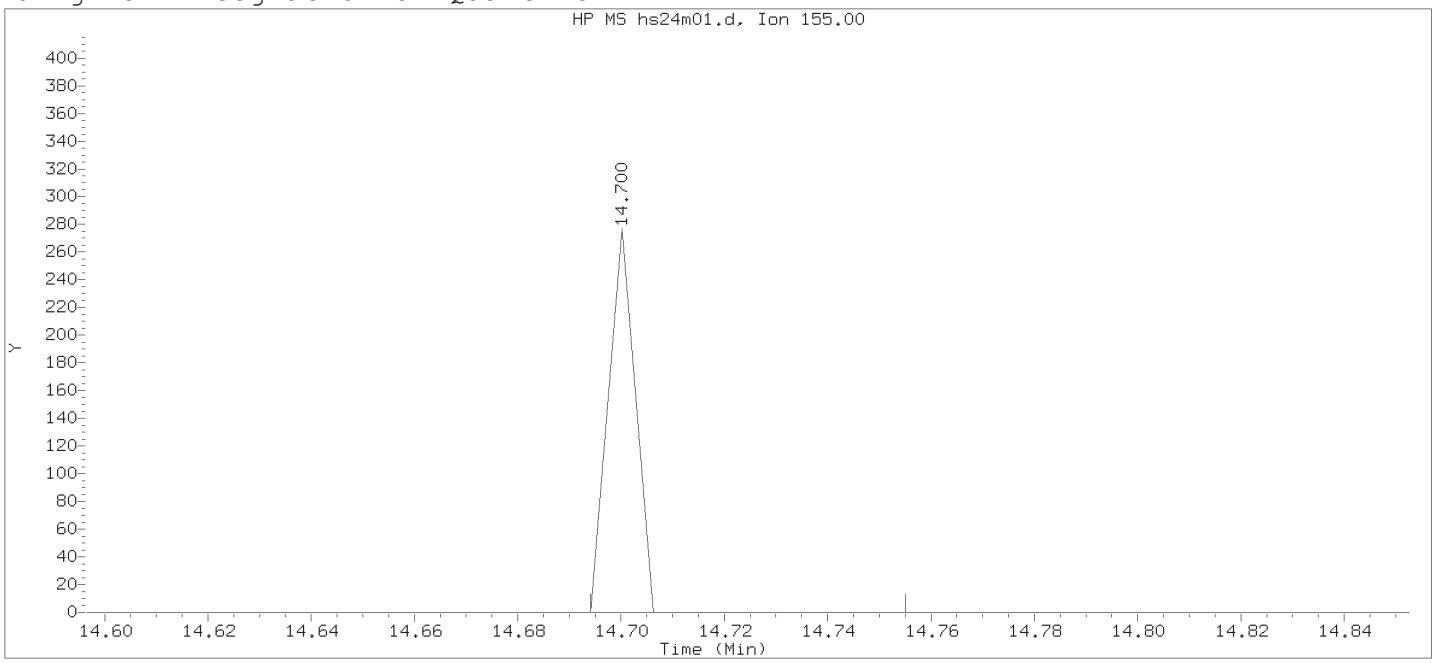
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

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



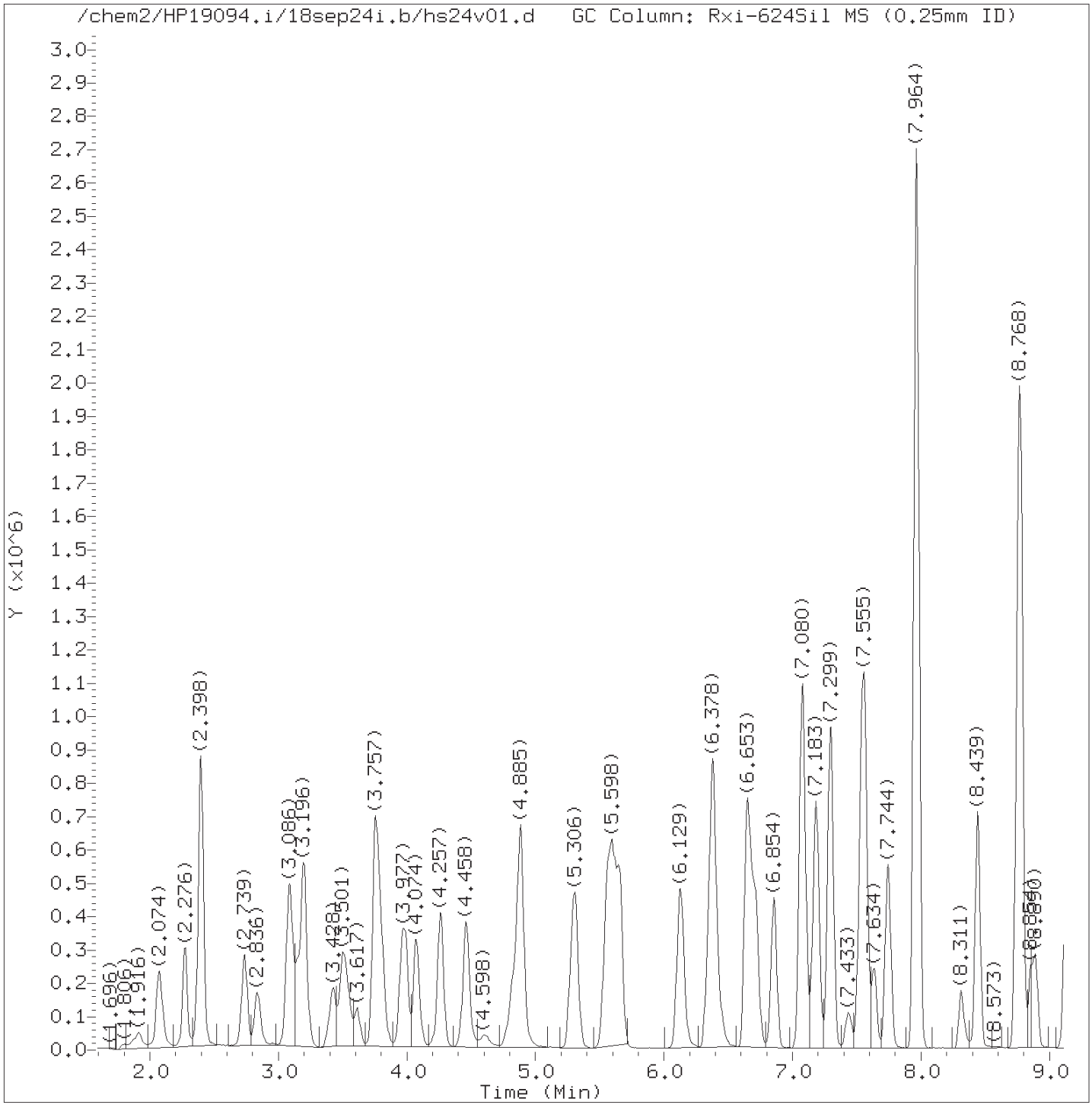
Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

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)

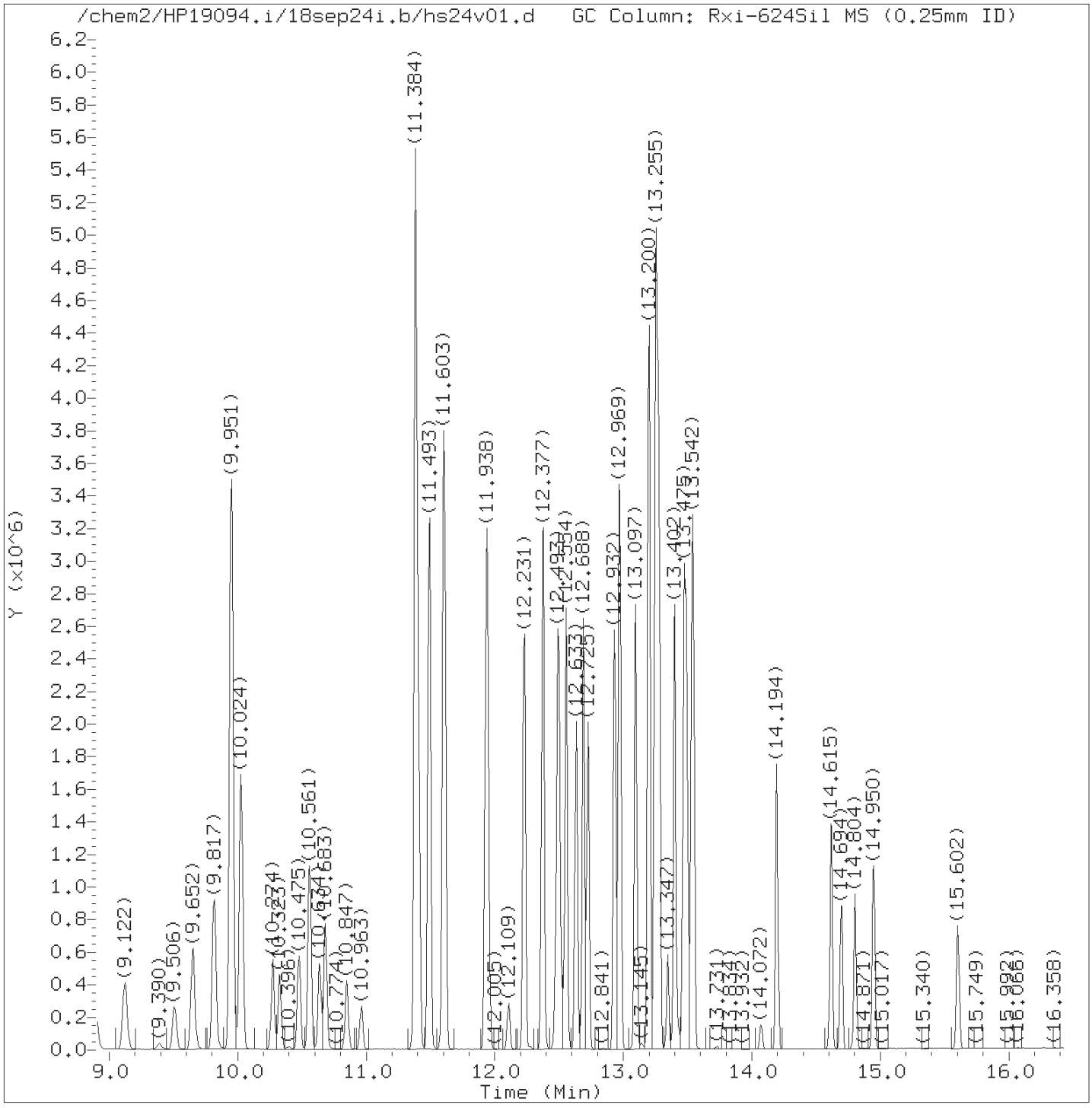
Target Revision 3.5

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

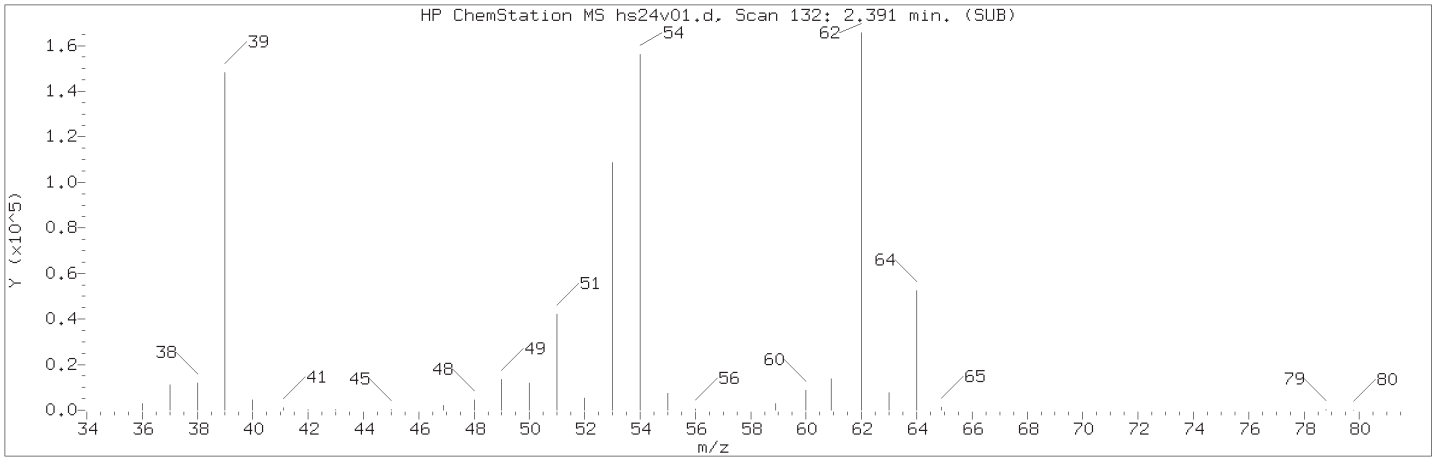
Sample Name: ICVHLG Lab Sample ID: ICVHLG

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

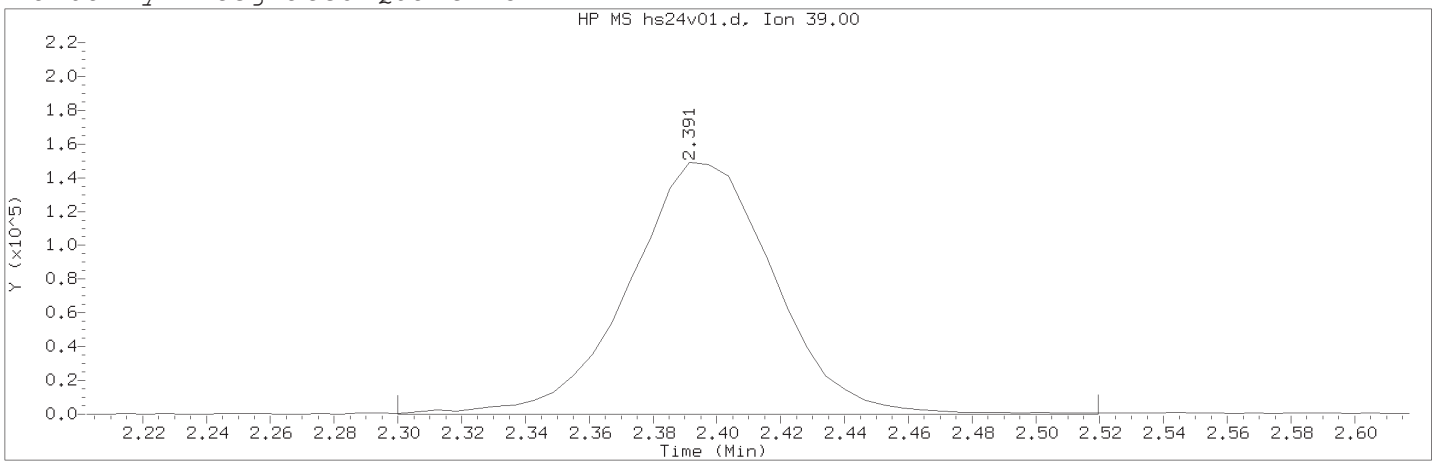
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

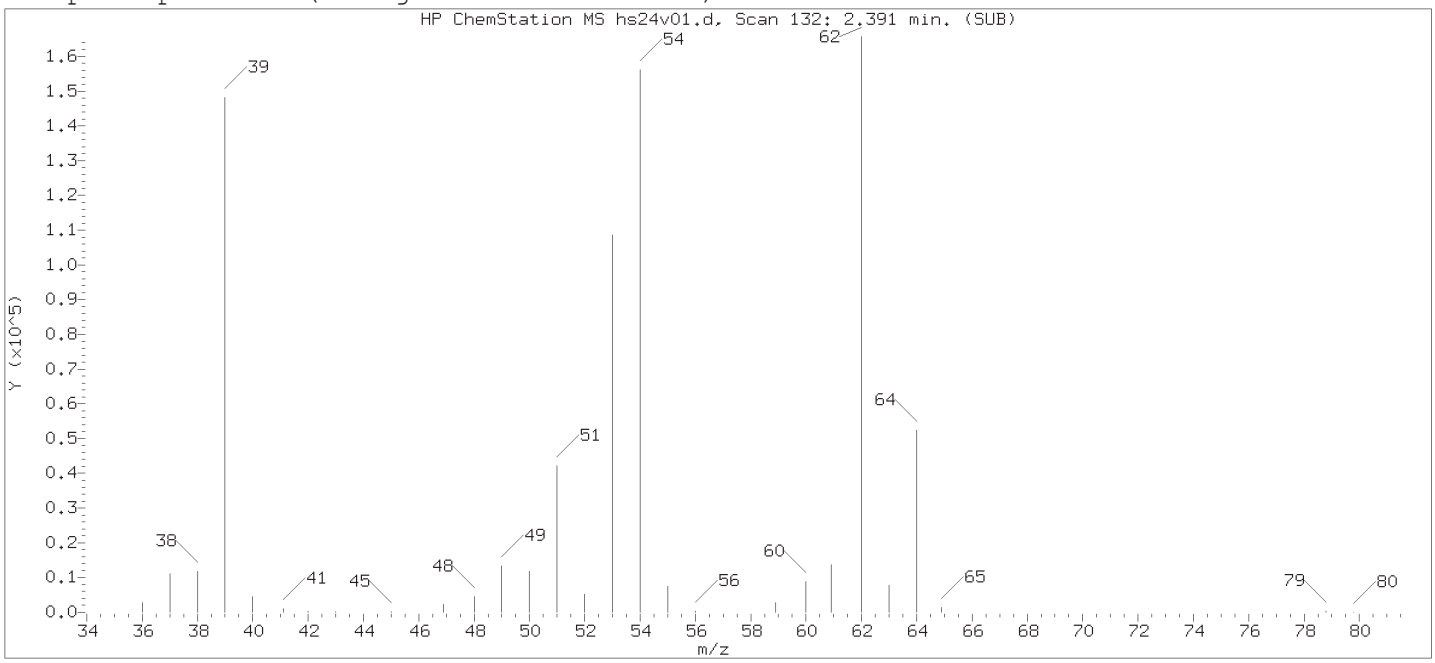
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 470828M
On-Column Amount (ng) : 4.1709
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

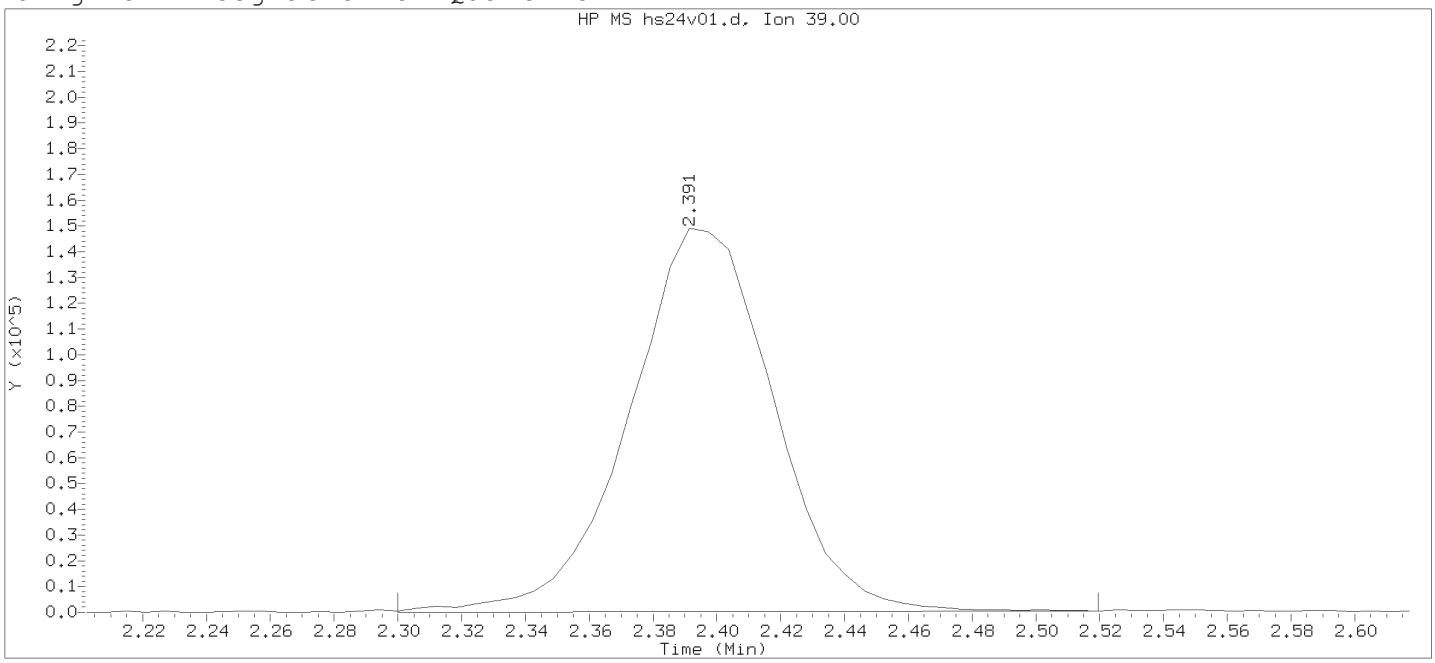
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

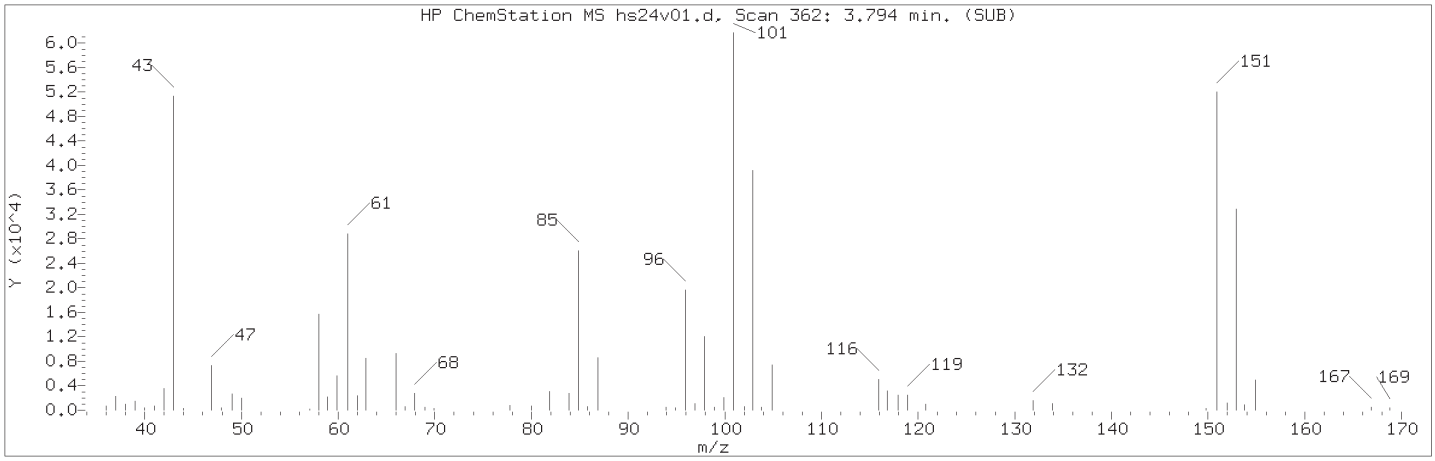
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

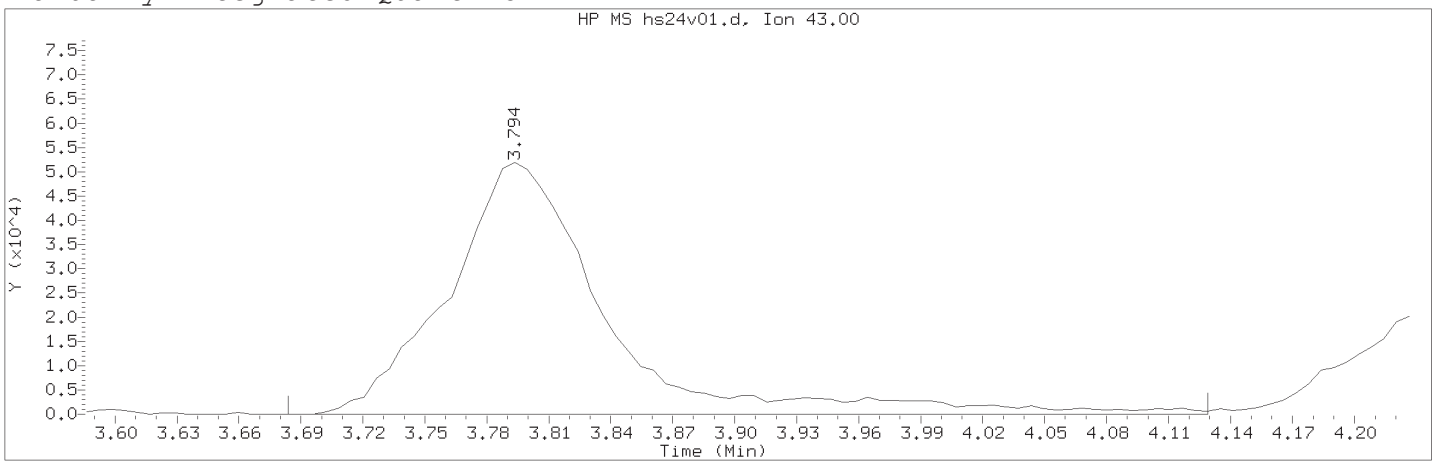
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 466594
On-column Amount (ng) : 5.0567
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 43 Y at integration end: 572

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

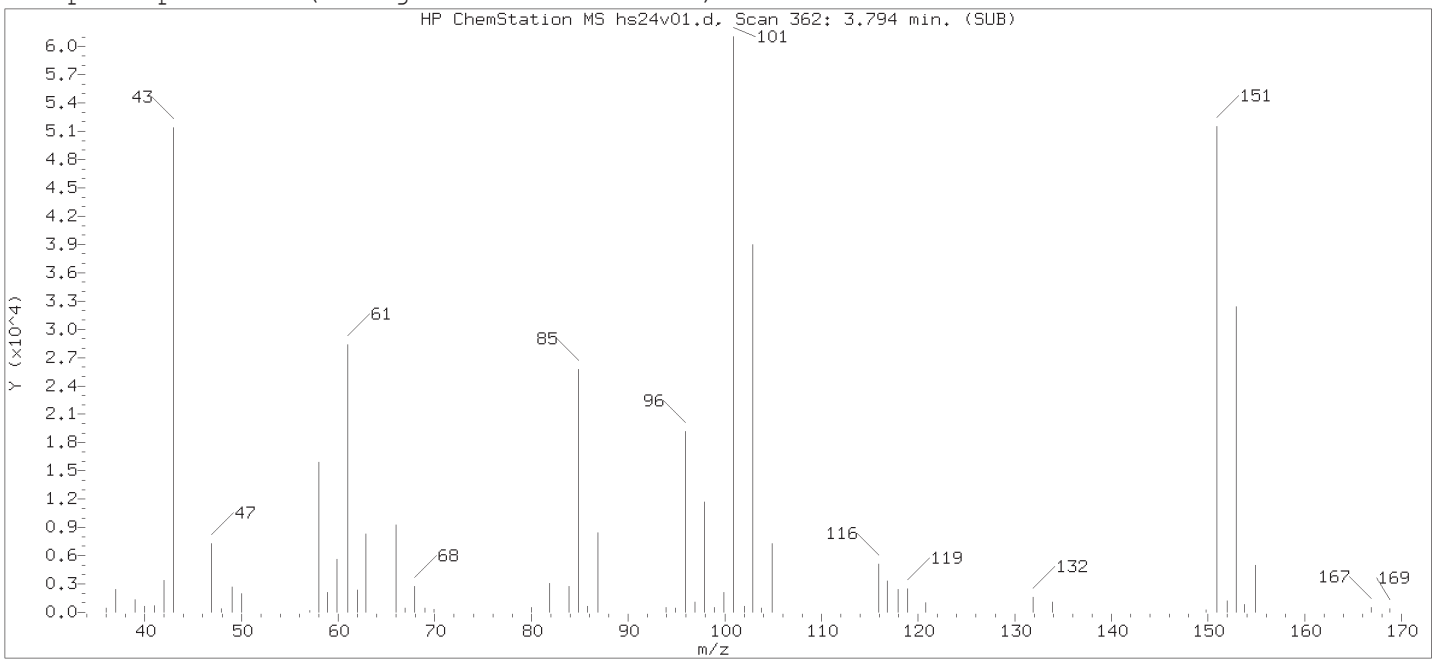
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 273073M
On-Column Amount (ng) : 32.3626
Integration start scan : 343 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

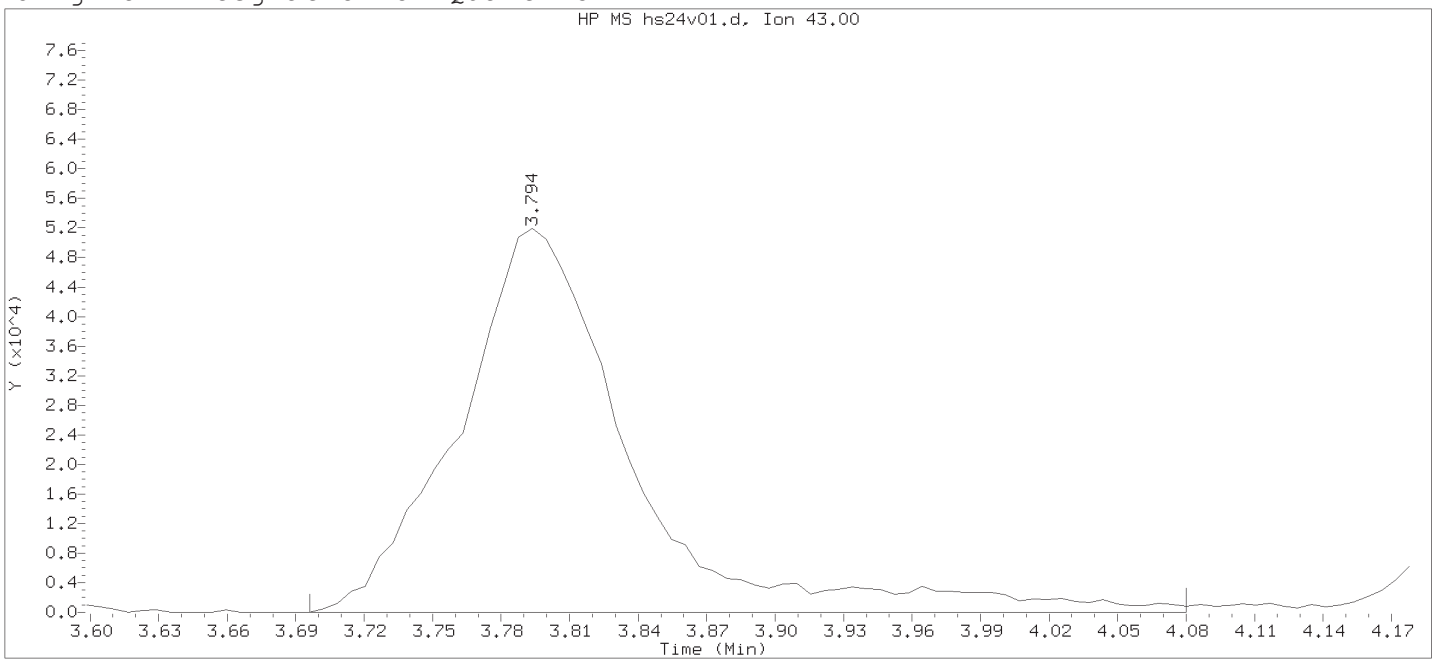
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

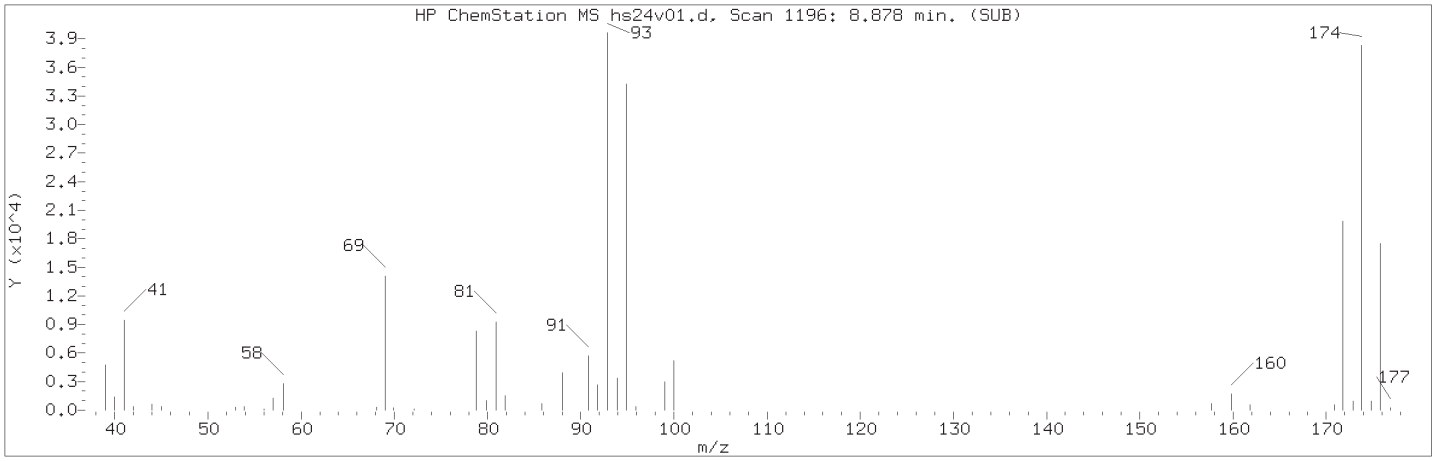
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

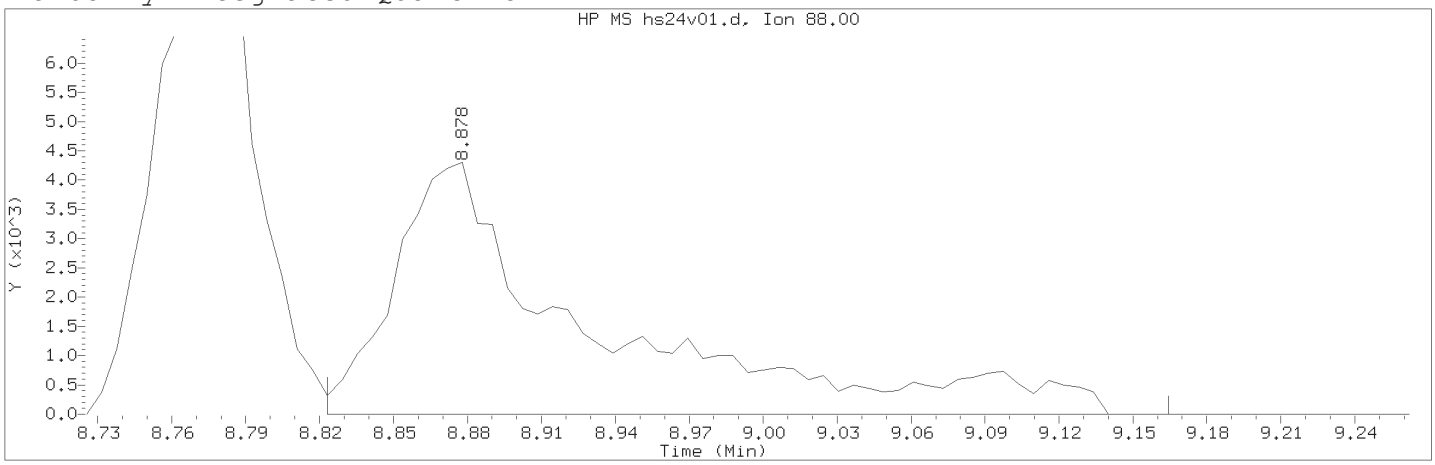
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 362		
Retention Time (minutes)	: 3.794		
Quant Ion	: 43.00		
Area	: 270202		
On-column Amount (ng)	: 34.6600		
Integration start scan	: 345	Integration stop scan:	408
Y at integration start	: 0	Y at integration end:	0

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

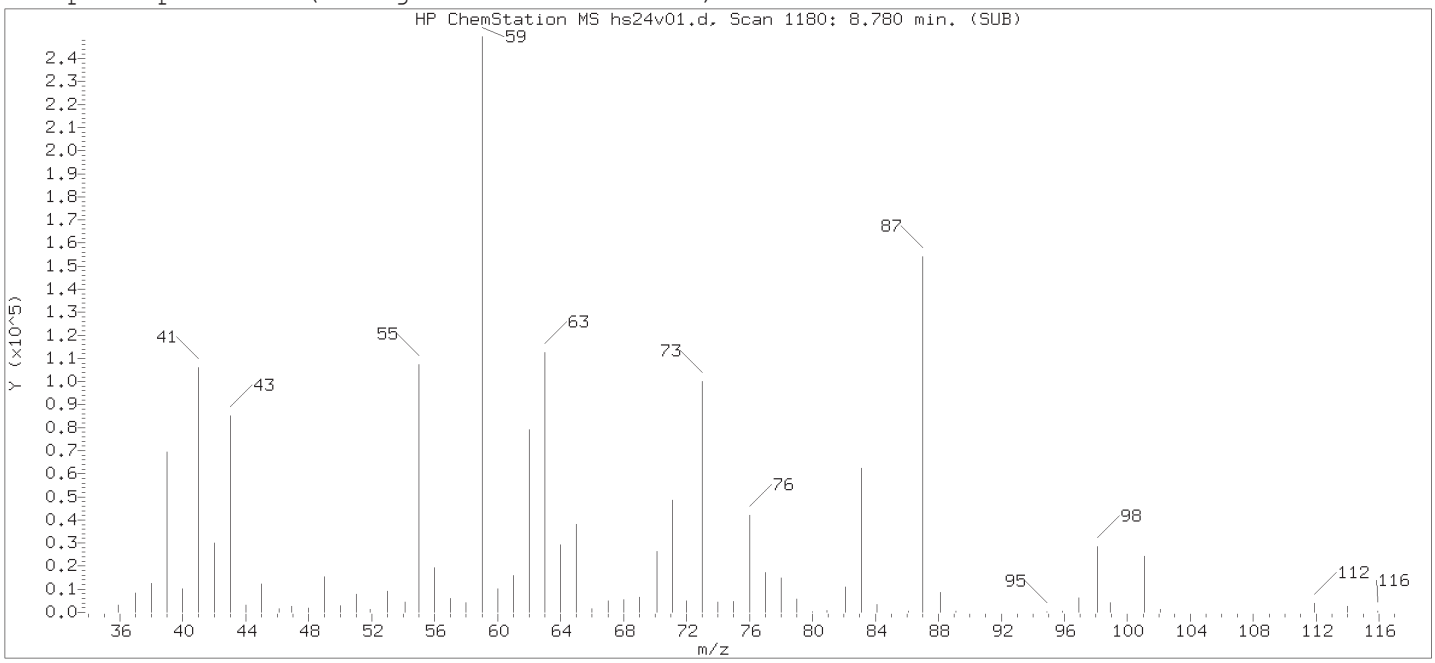
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 23983M
On-Column Amount (ng) : 126.1028
Integration start scan : 1186 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

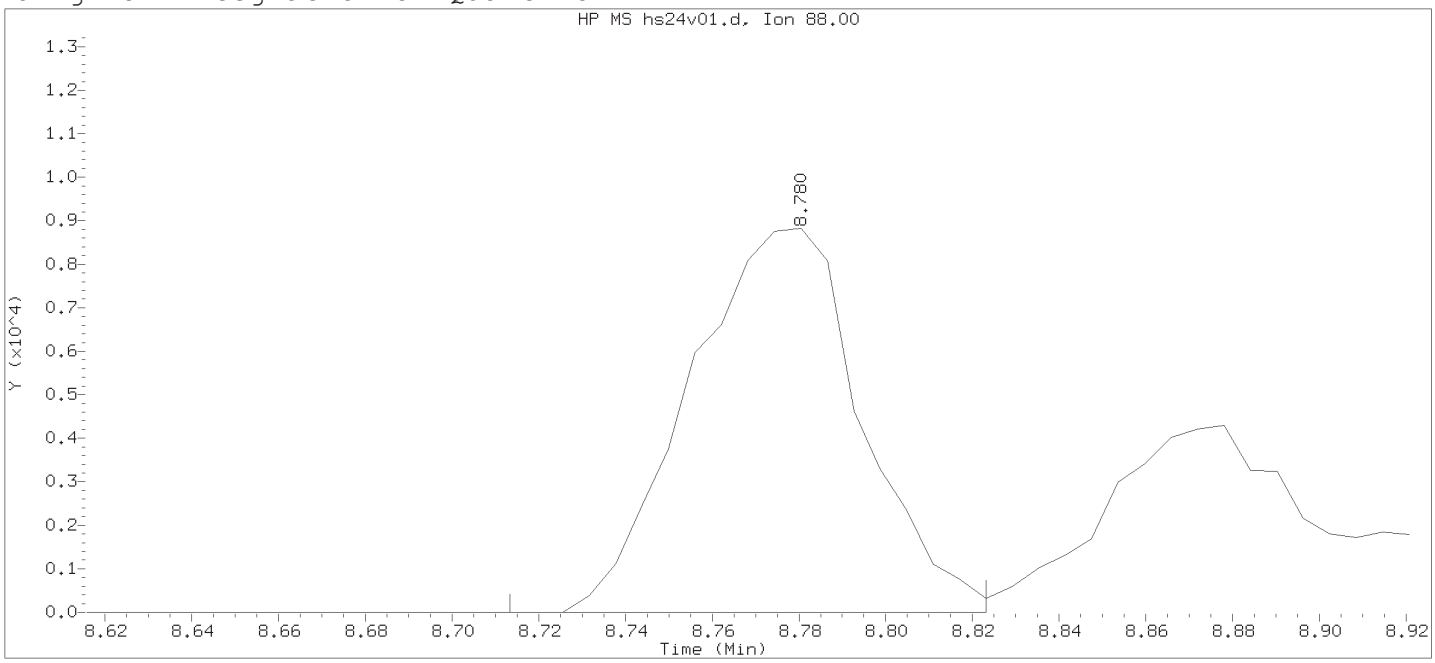
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

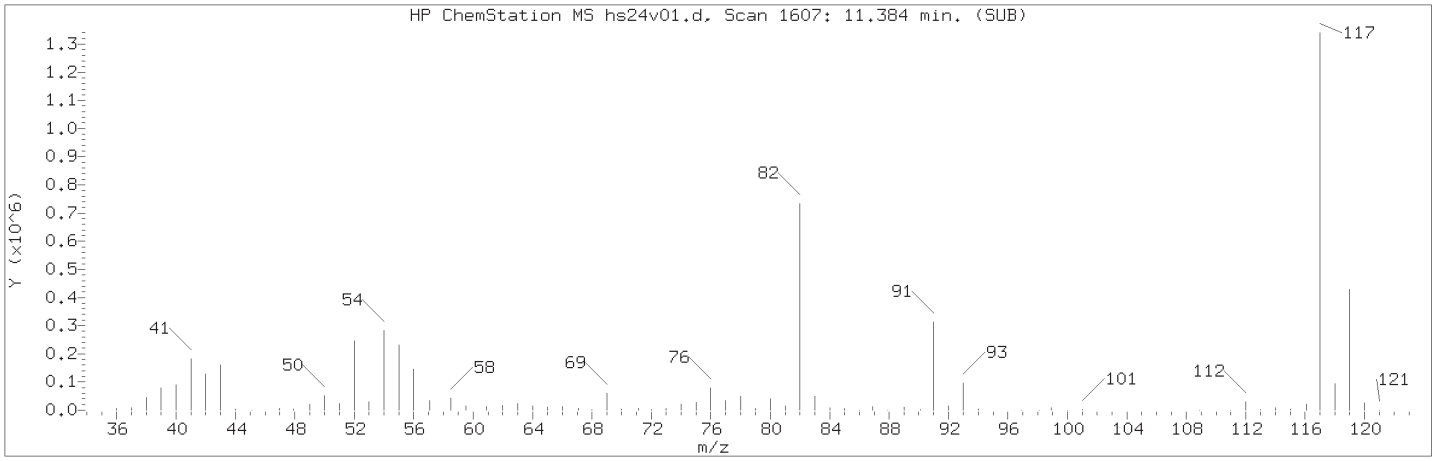
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

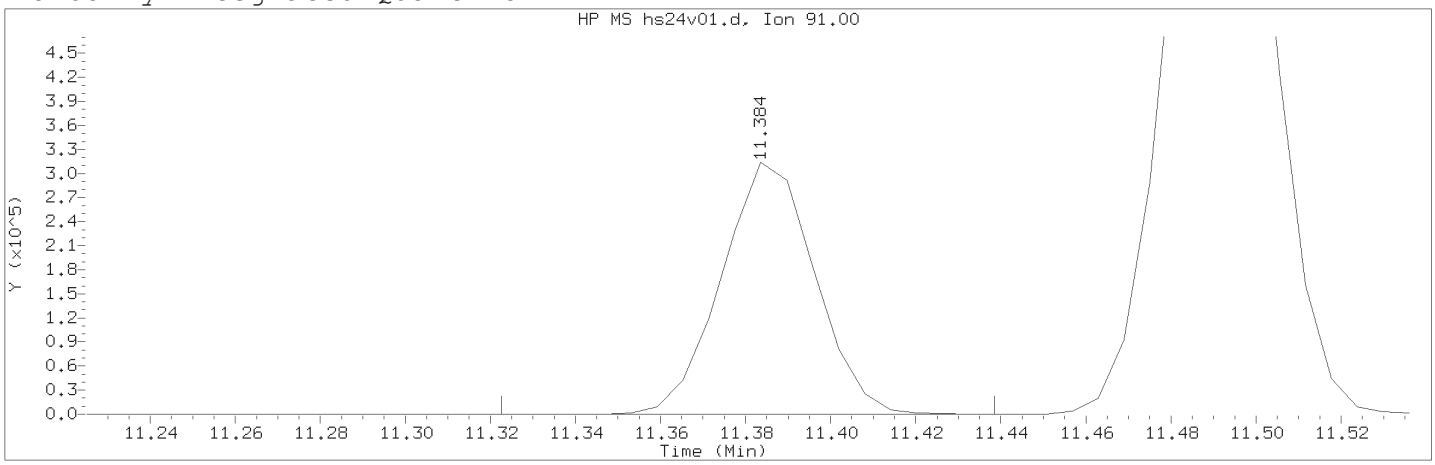
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1180
Retention Time (minutes): 8.780
Quant Ion : 88.00
Area : 24295
On-column Amount (ng) : 144.0216
Integration start scan : 1168 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

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

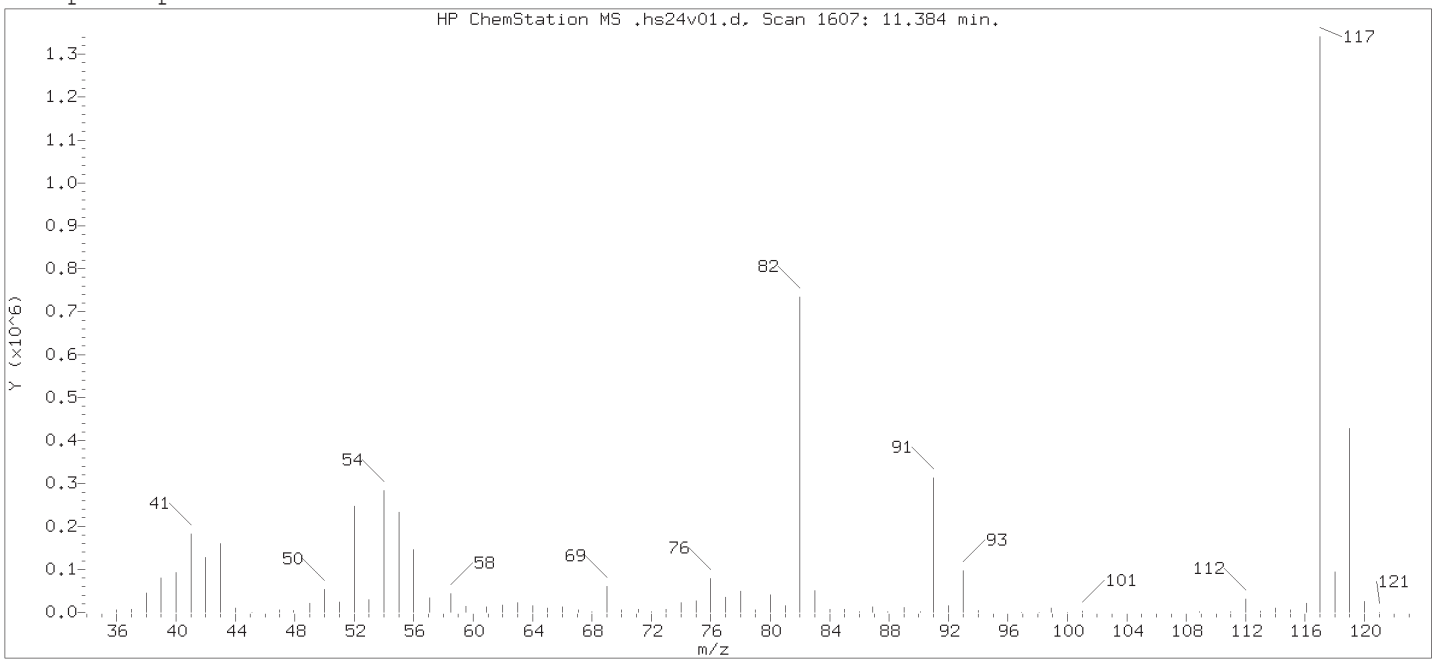
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 476940M
On-Column Amount (ng) : 4.9395
Integration start scan : 1596 Integration stop scan: 1615
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

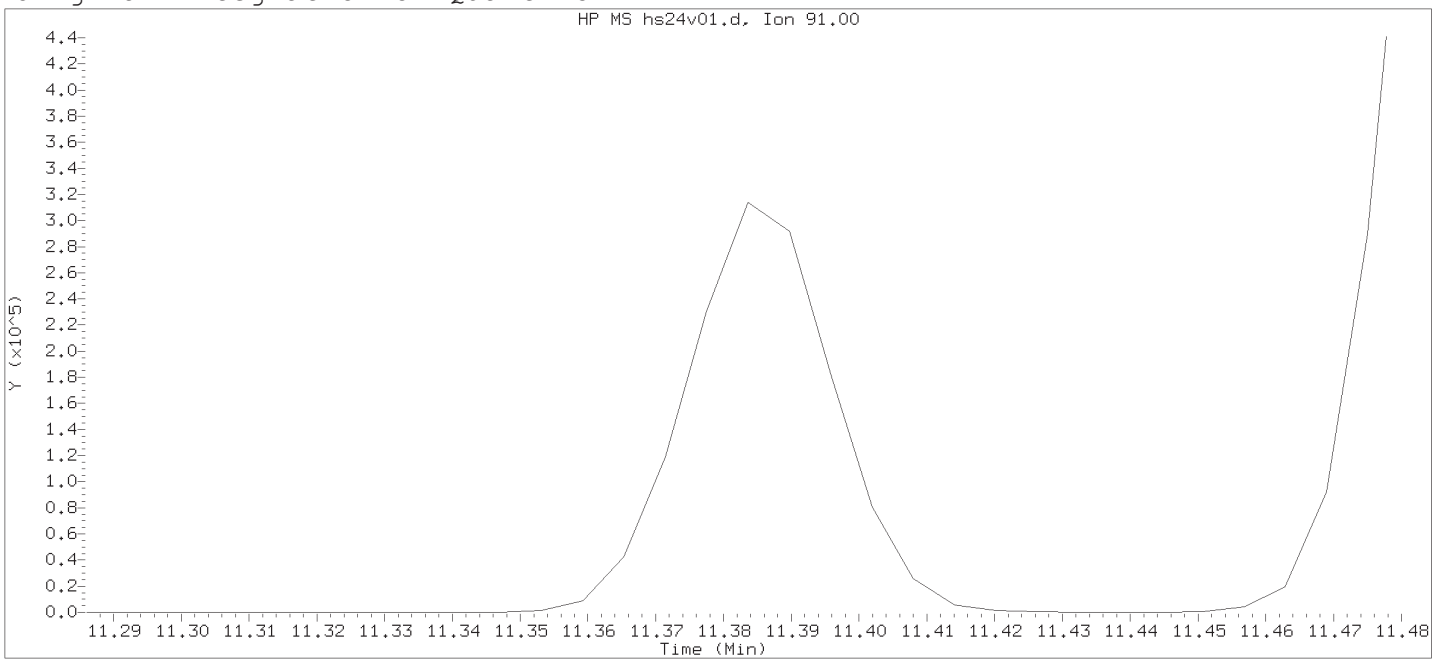
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

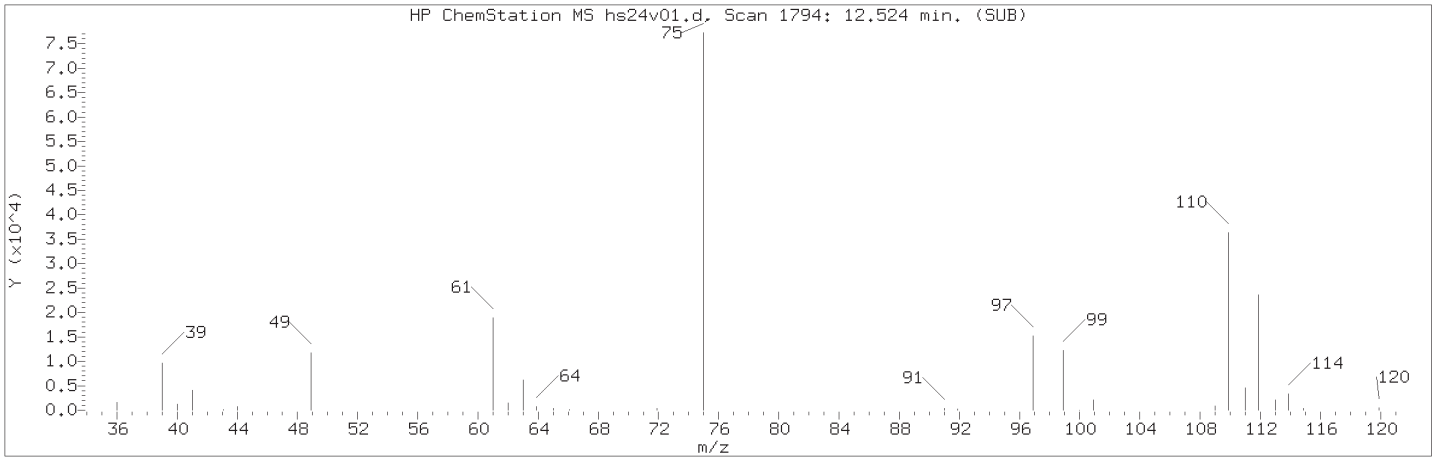
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

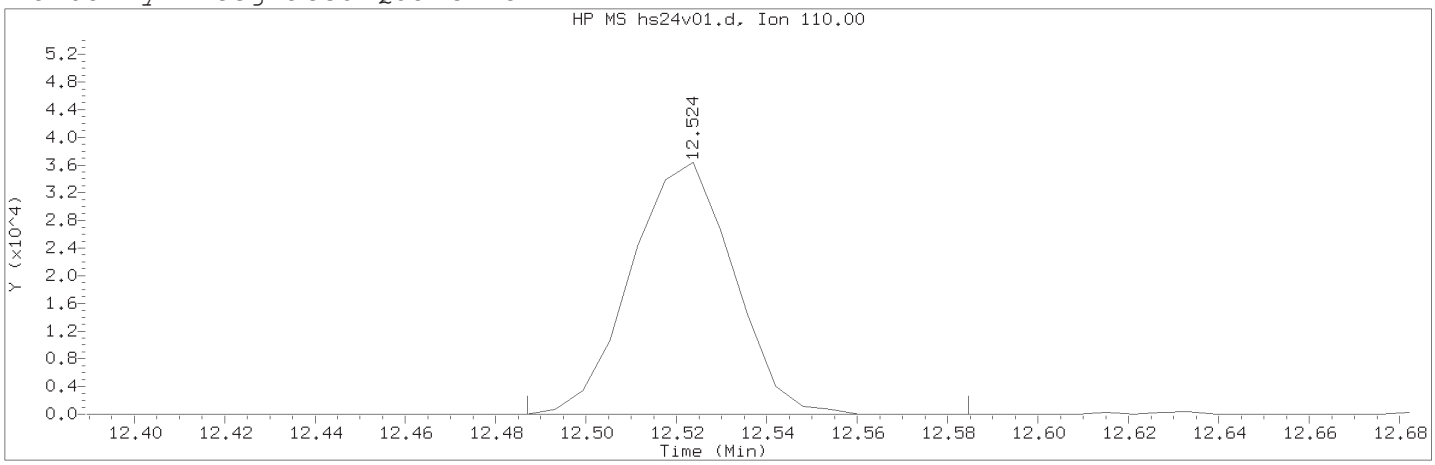
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

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

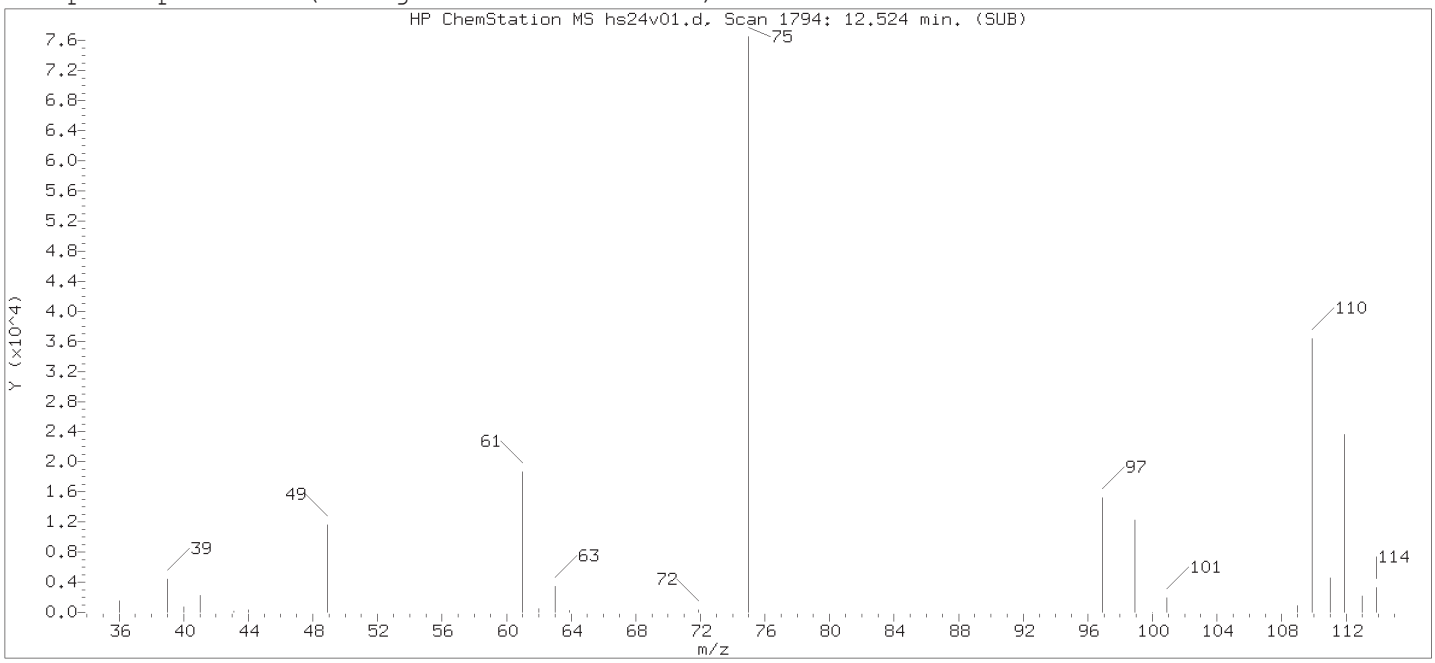
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 57126M
On-Column Amount (ng) : 4.9234
Integration start scan : 1787 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

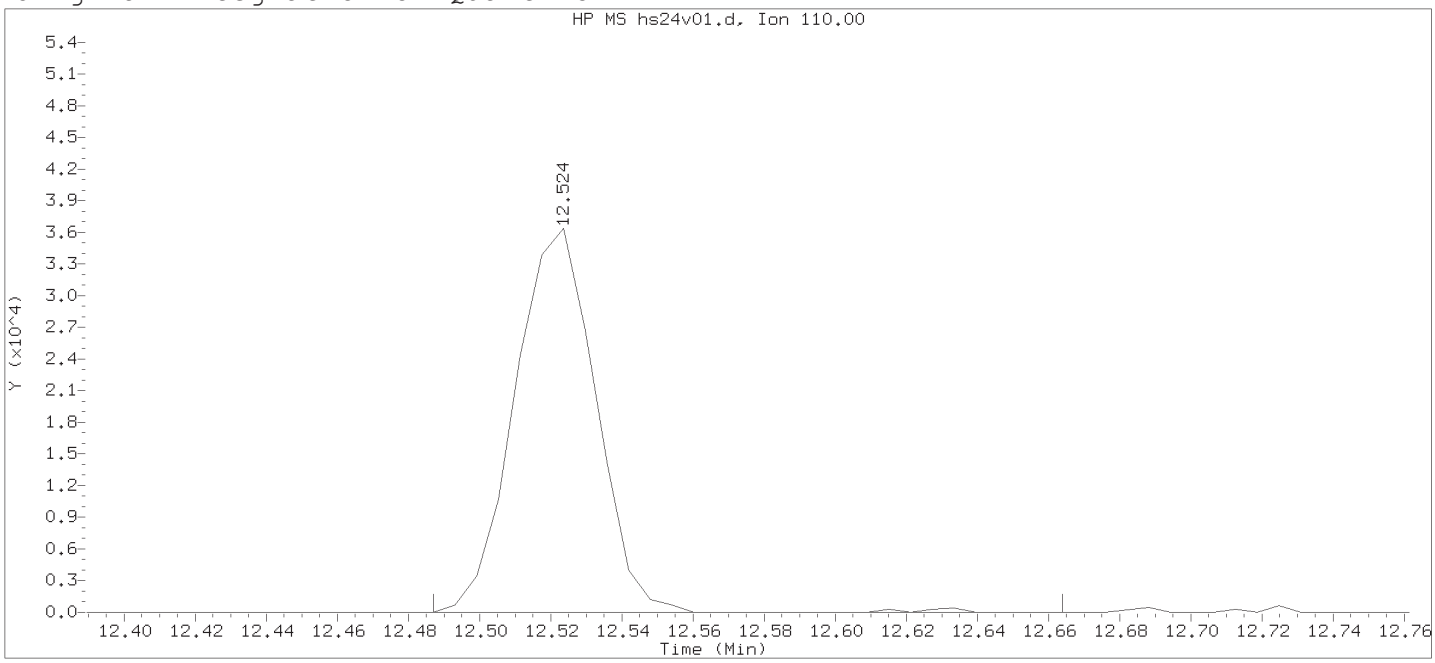
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

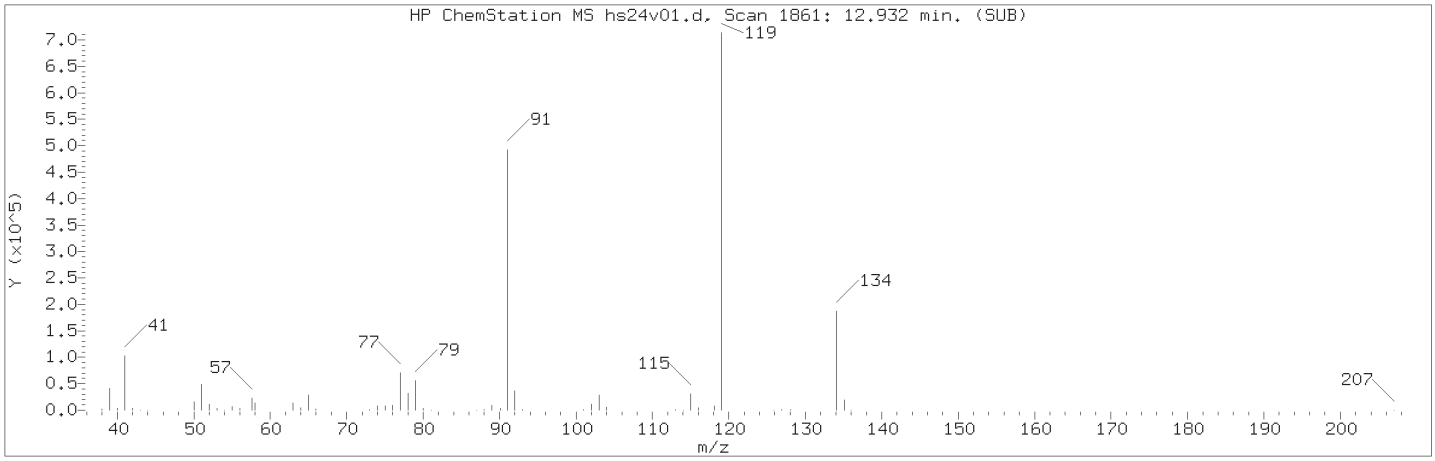
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

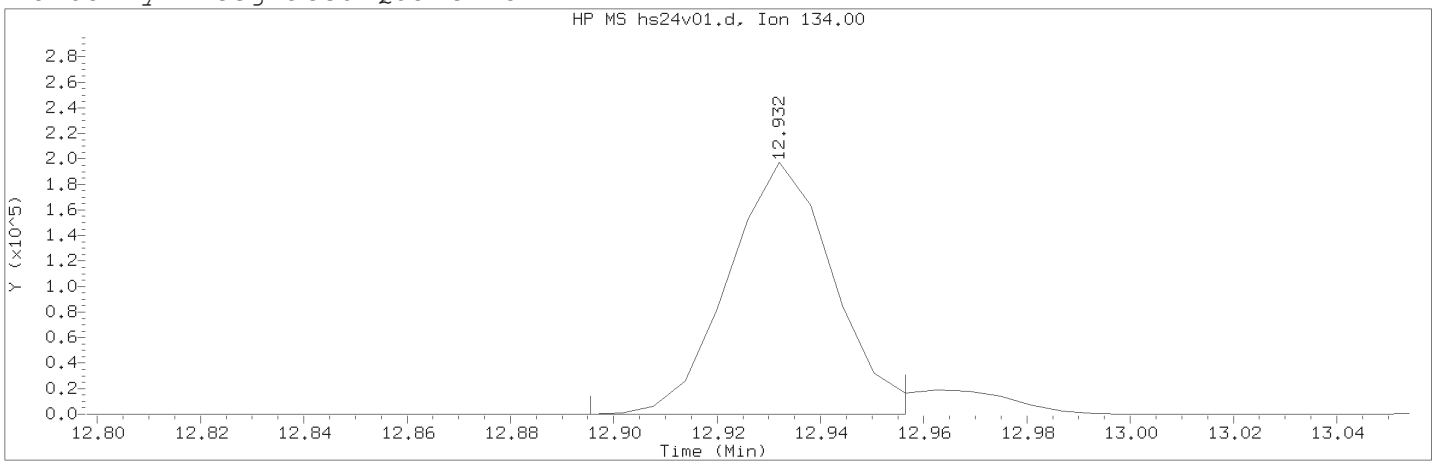
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 57467
On-column Amount (ng) : 4.9421
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

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

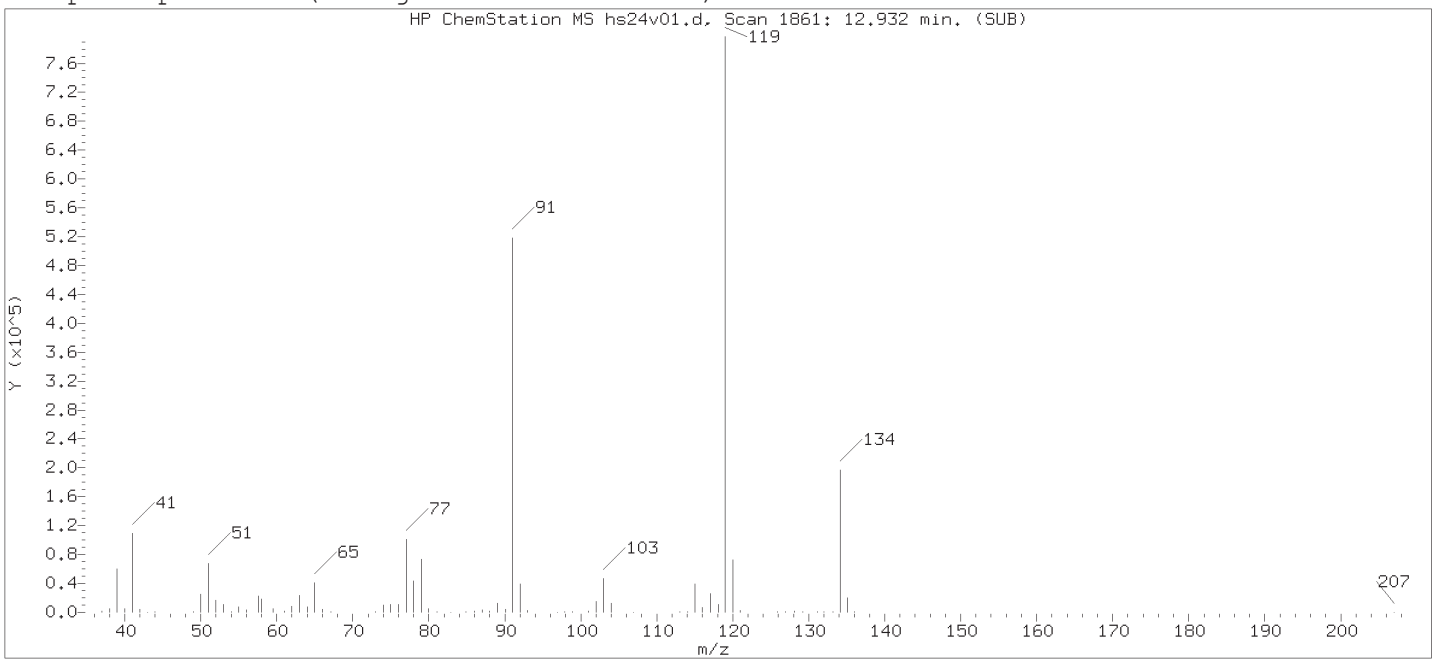
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 278567M
On-Column Amount (ng) : 5.0967
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

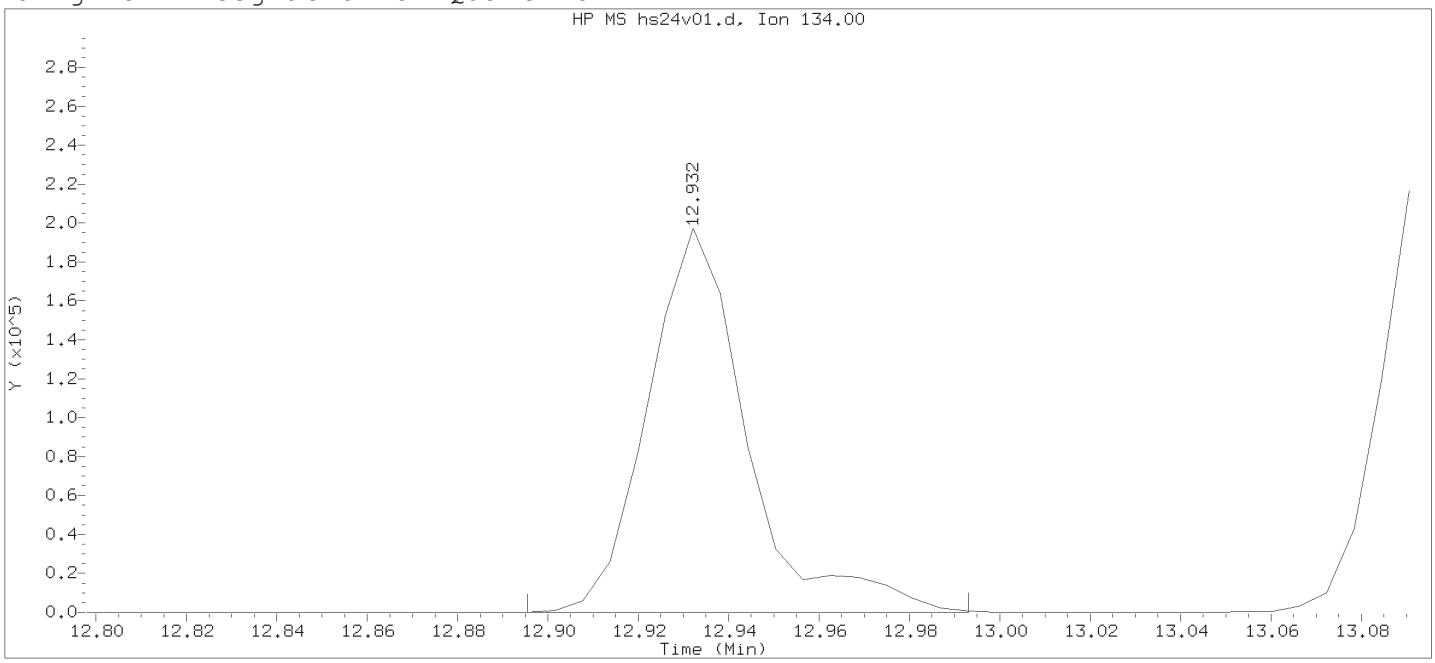
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

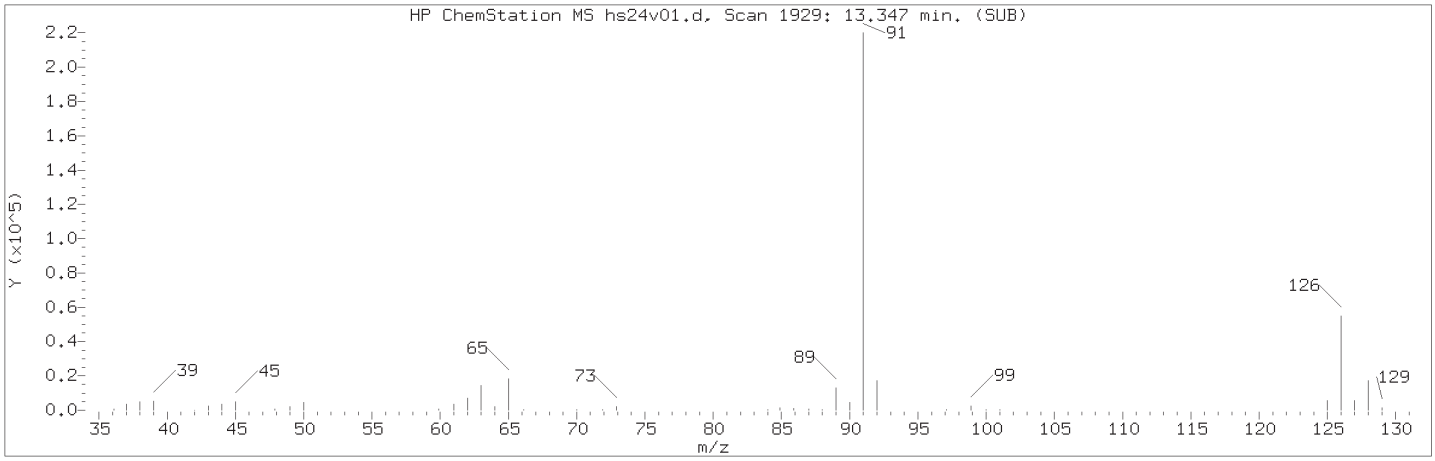
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

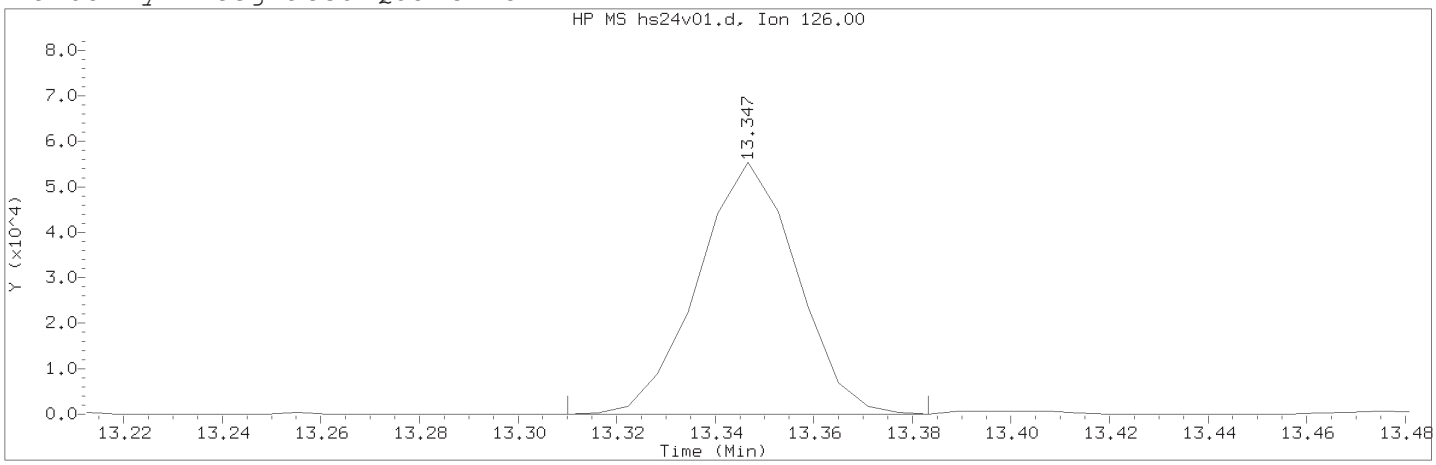
Compound Number	: 125
Compound Name	: tert-Butylbenzene
Scan Number	: 1861
Retention Time (minutes)	: 12.932
Quant Ion	: 134.00
Area	: 300676
On-column Amount (ng)	: 5.3090
Integration start scan	: 1854 Integration stop scan: 1870
Y at integration start	: 0 Y at integration end: 0

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

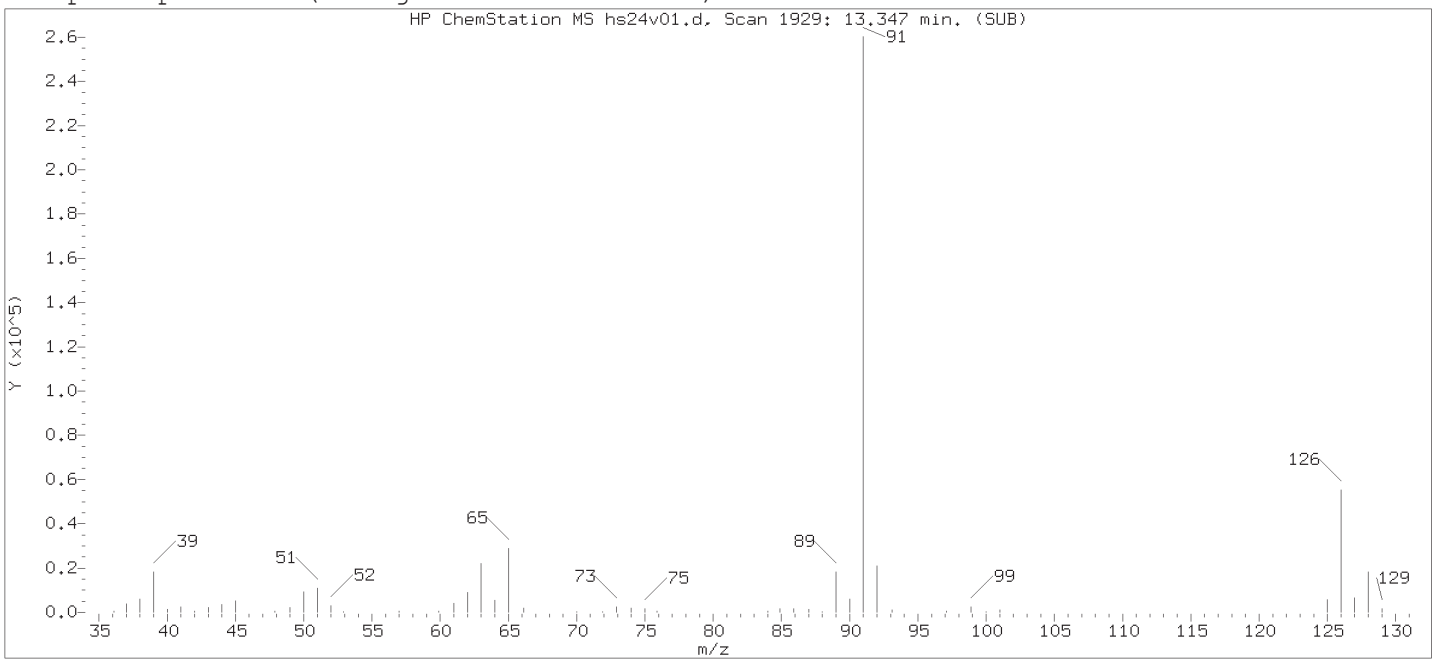
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 76709M
On-Column Amount (ng) : 4.7280
Integration start scan : 1922 Integration stop scan: 1934
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

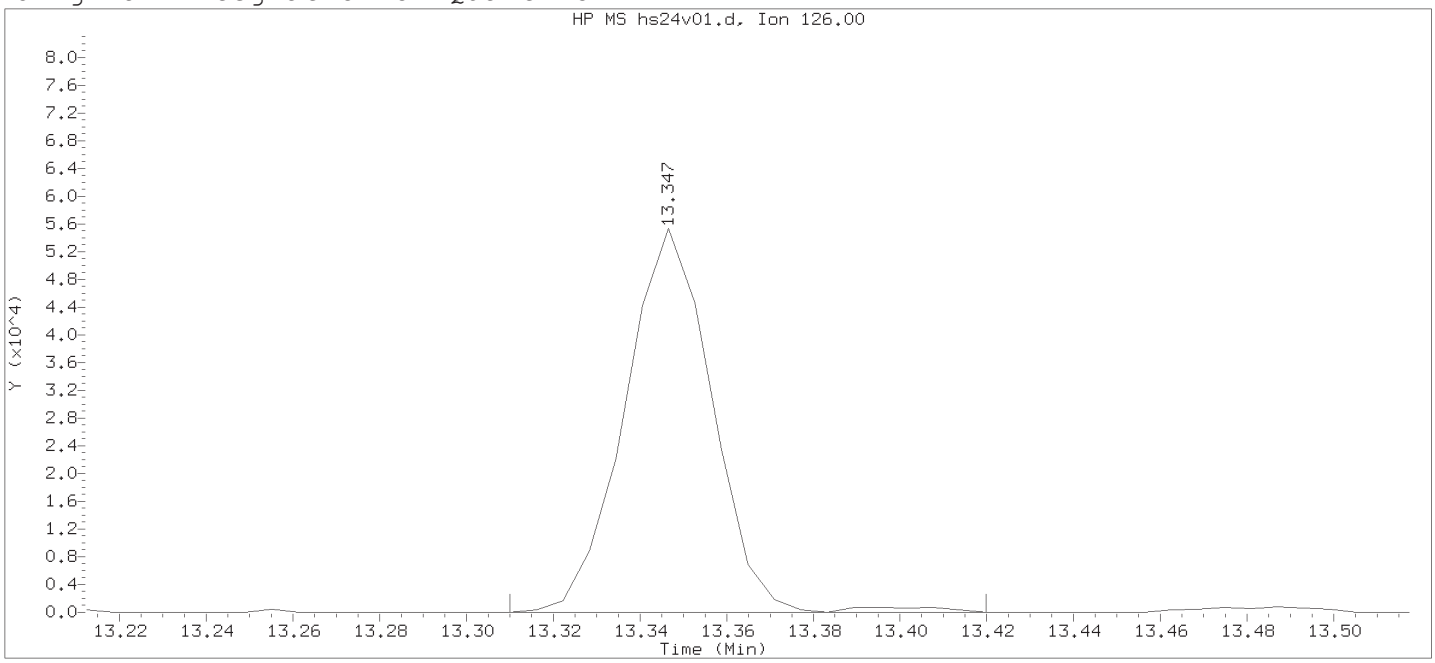
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

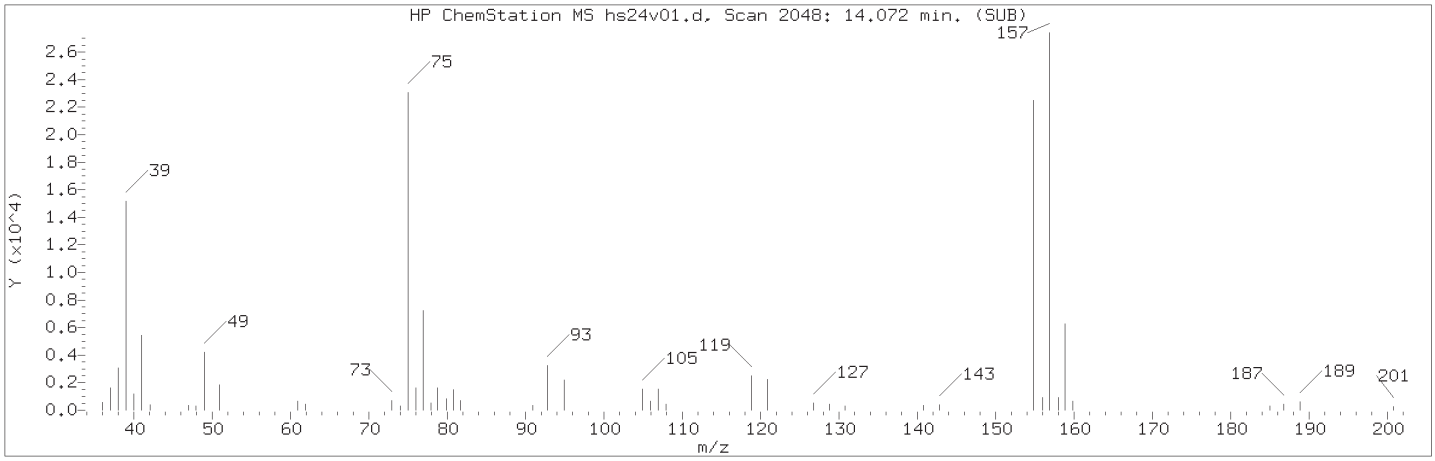
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

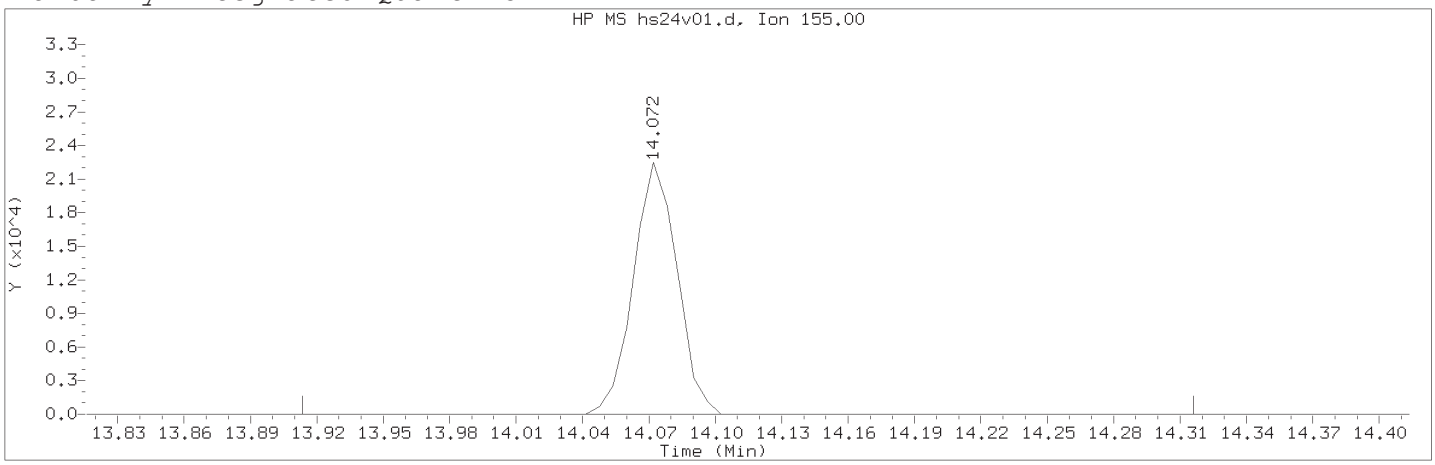
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 77799
On-column Amount (ng) : 5.0401
Integration start scan : 1922 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

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

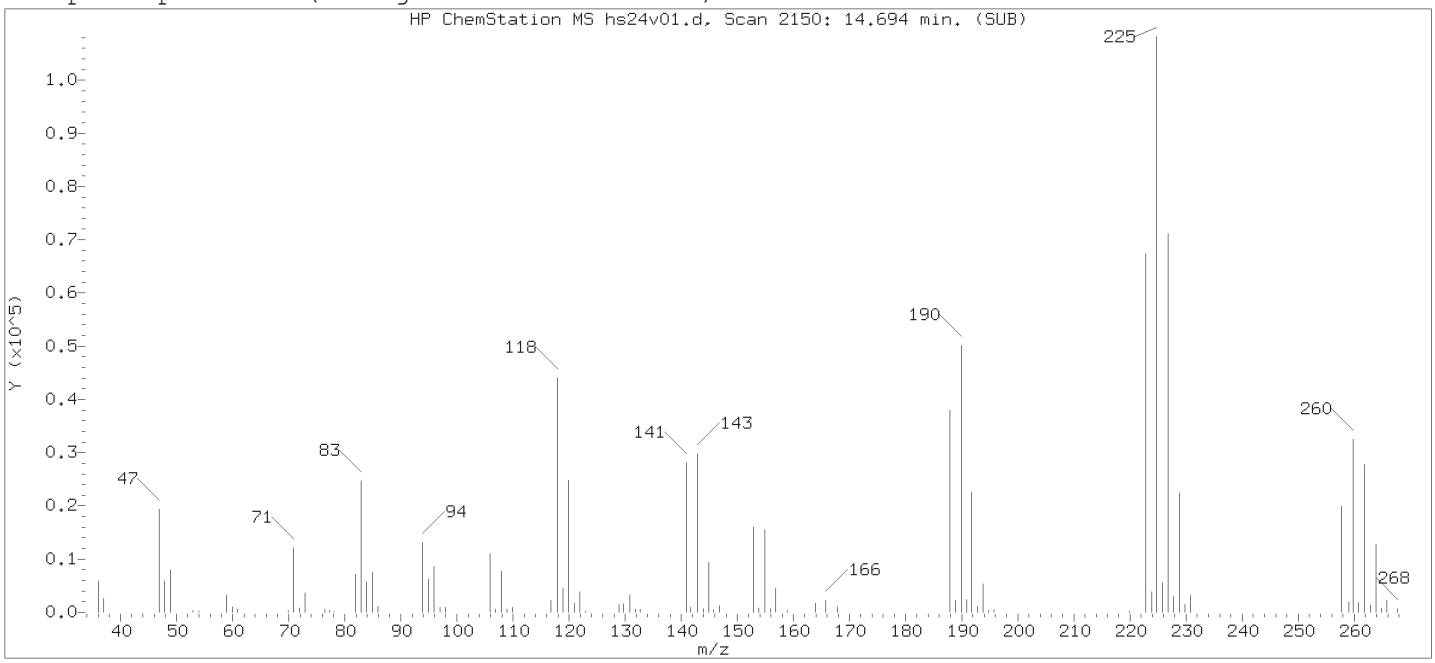
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2048
Retention Time (minutes): 14.072
Quant Ion : 155.00
Area (flag) : 30890M
On-Column Amount (ng) : 5.3040
Integration start scan : 2021 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

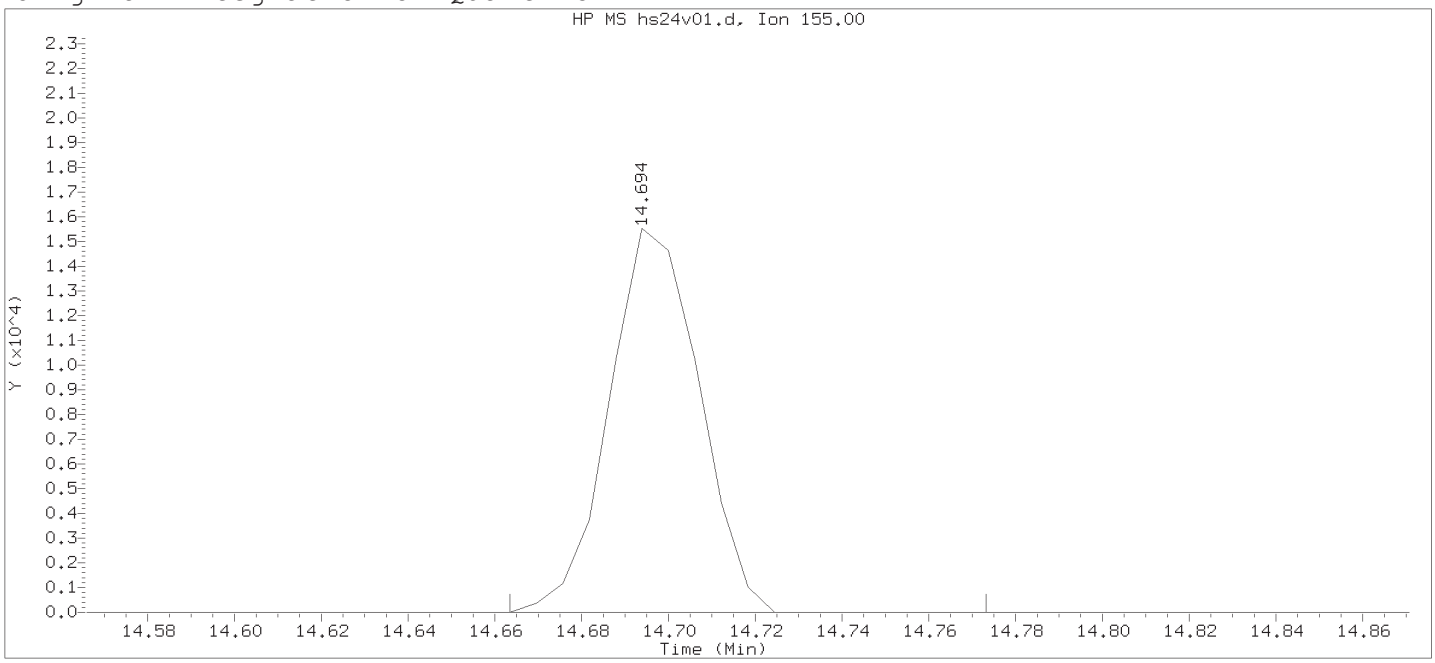
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

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

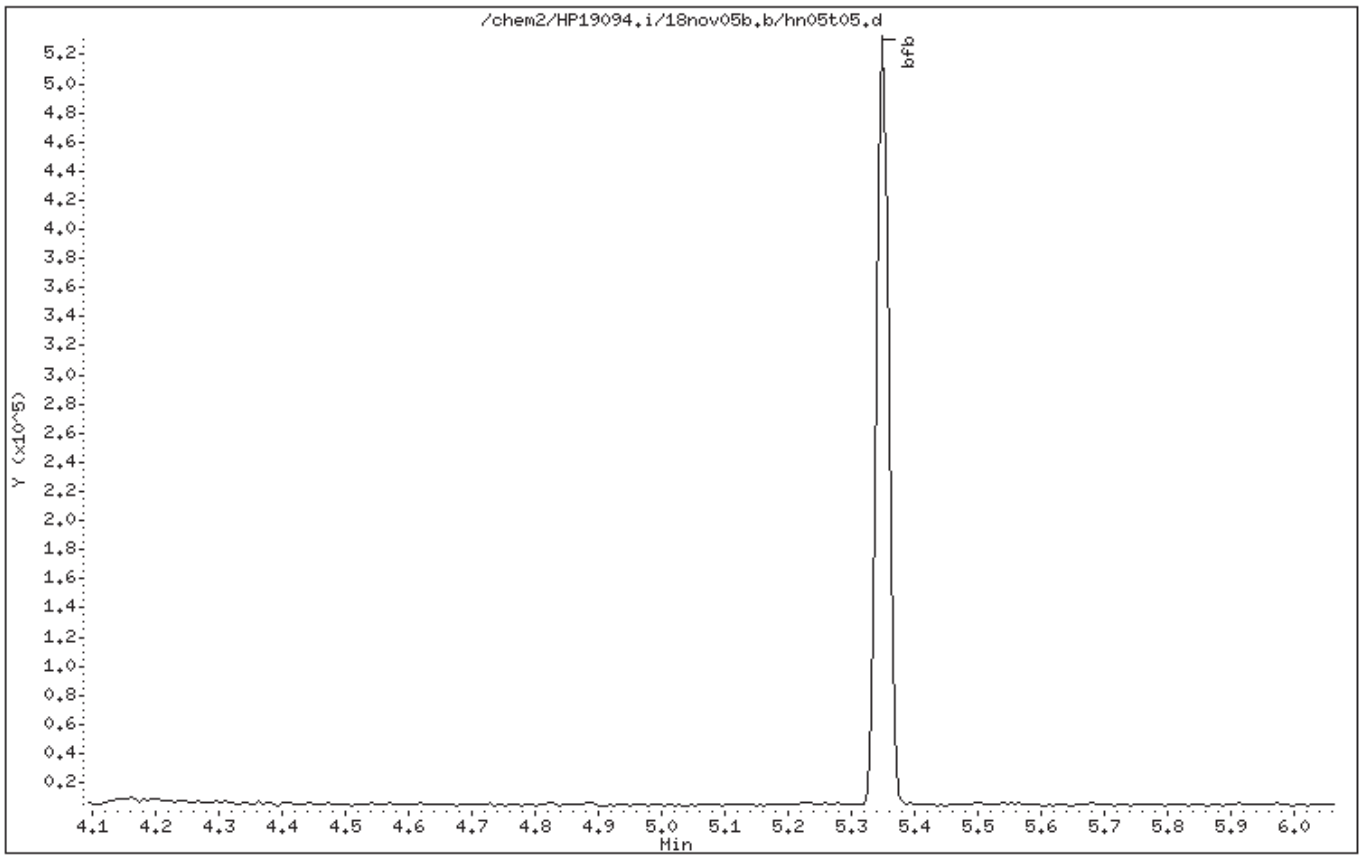
Instrument: HP19094.i

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

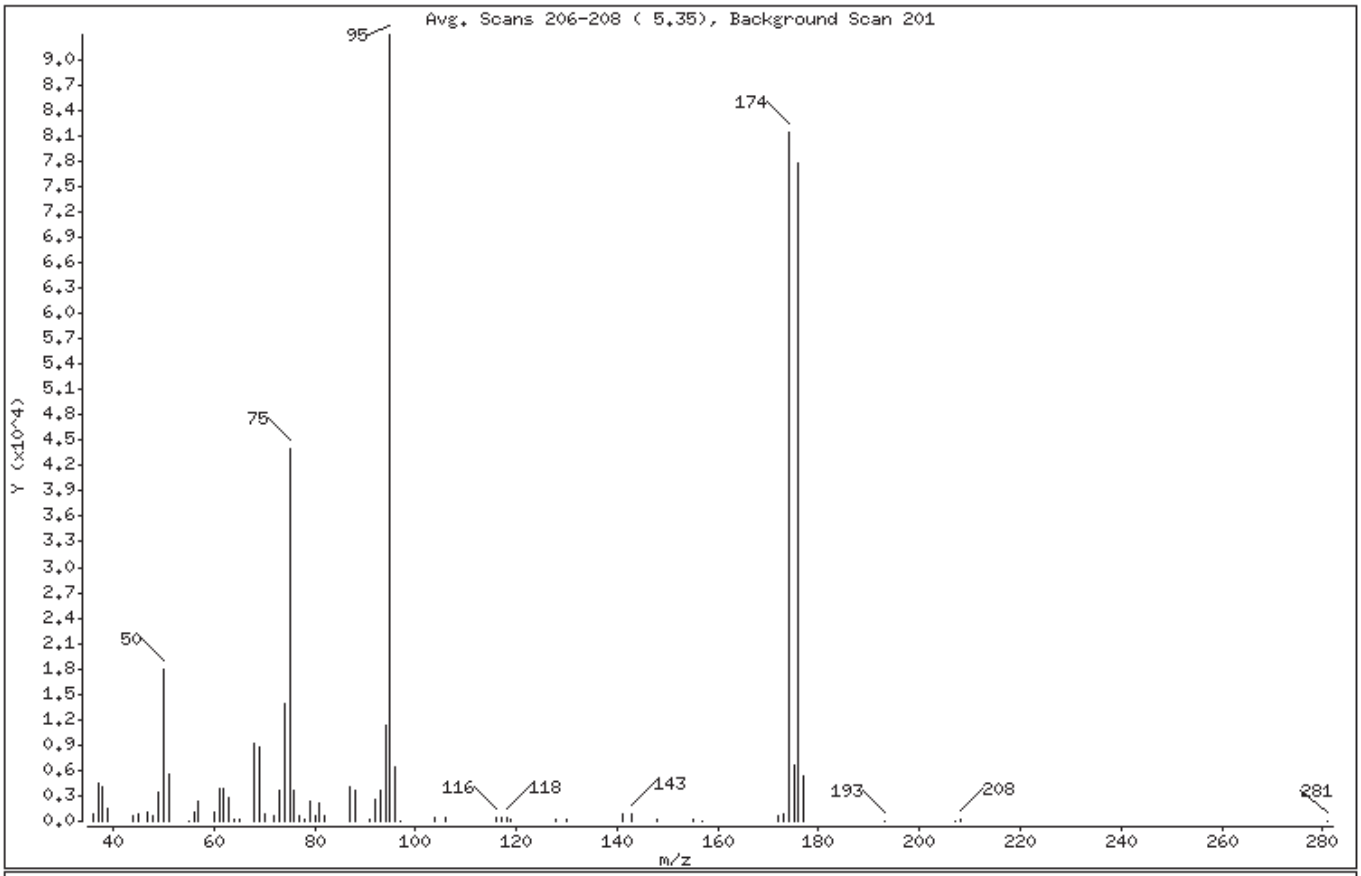
Sample Info: aug7-18;50NGBFB;1;3;;;;;;

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		

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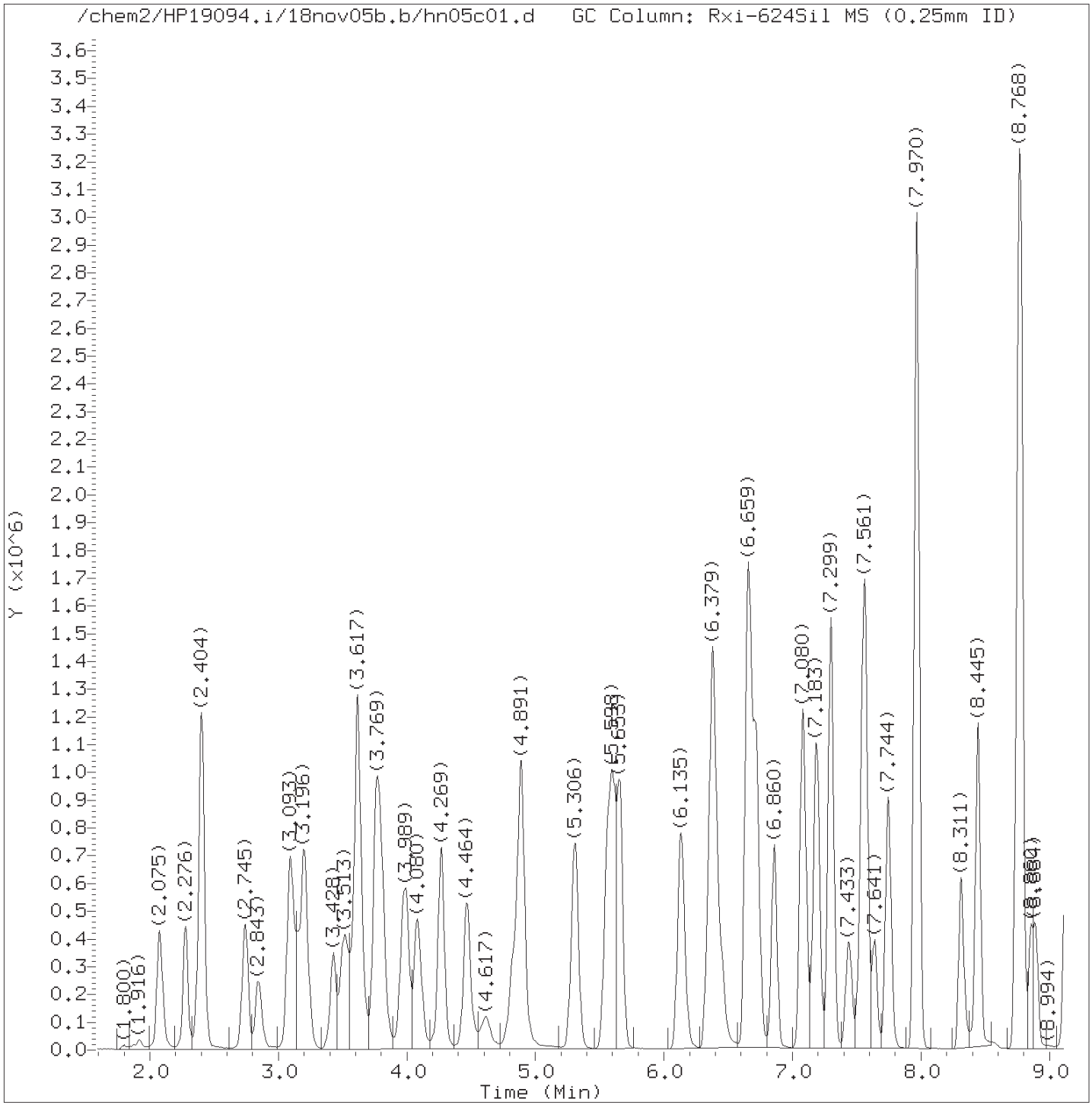
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

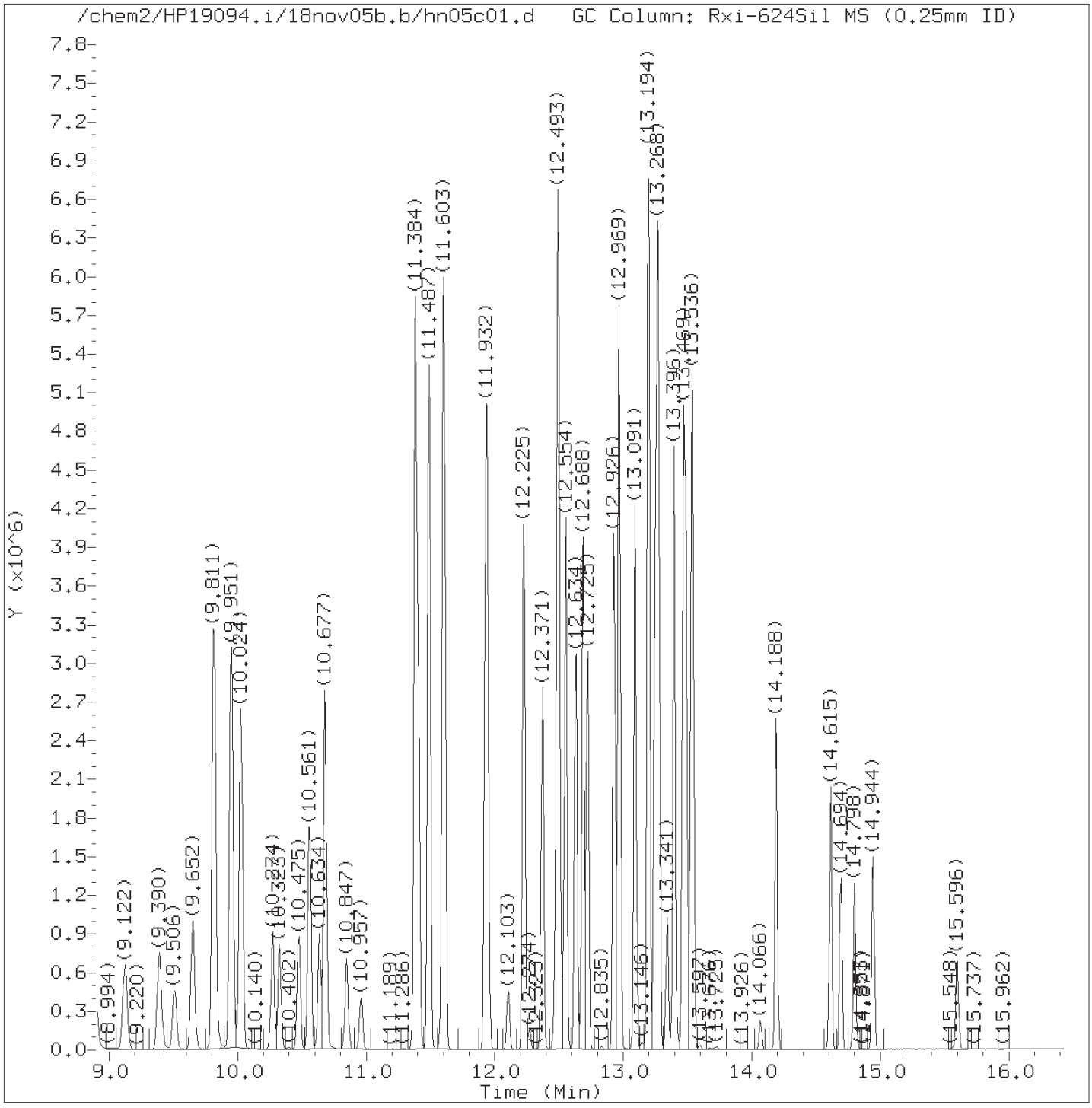
Target Revision 3.5

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.

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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.

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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.
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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

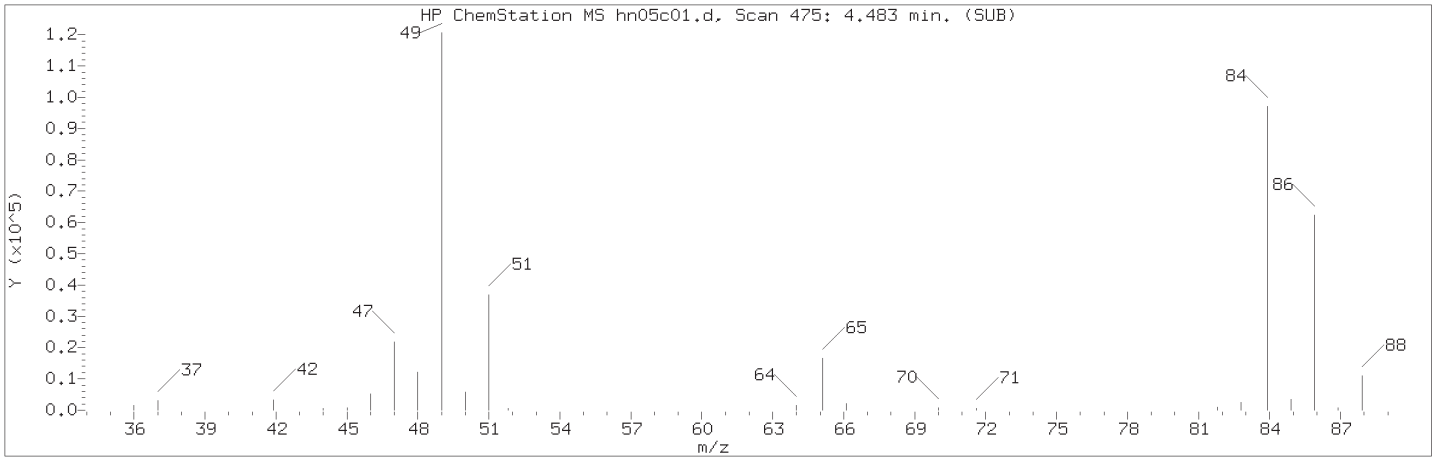
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:52
Date, time and analyst ID of latest file update: 05-Nov-2018 20:52 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

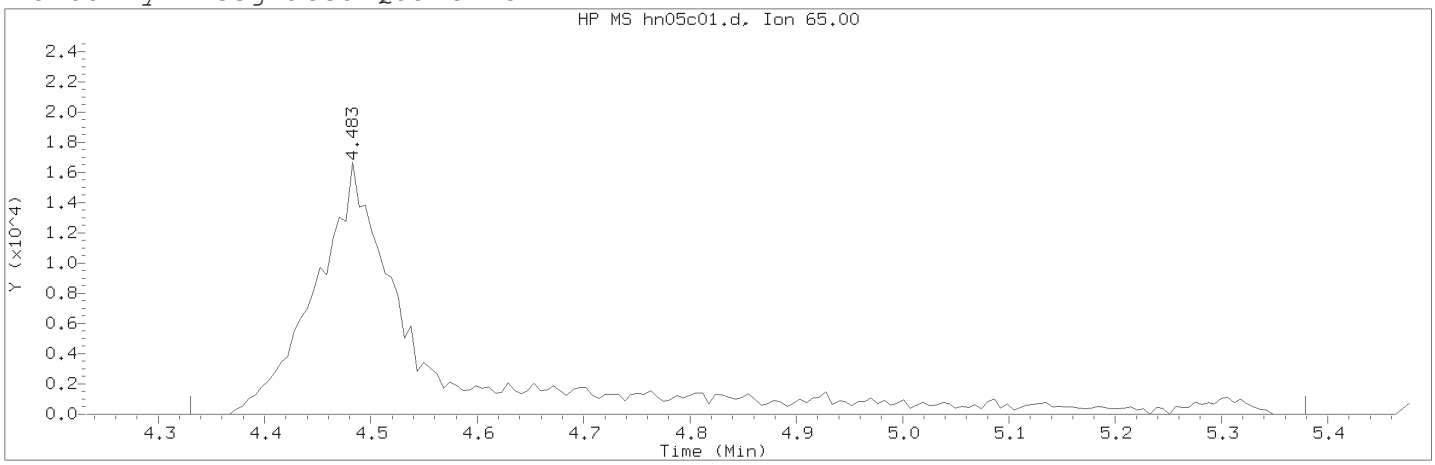
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	228528	9.029
147) Naphthalene	(4)	14.798	128	914643	8.632
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	452520	8.219

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

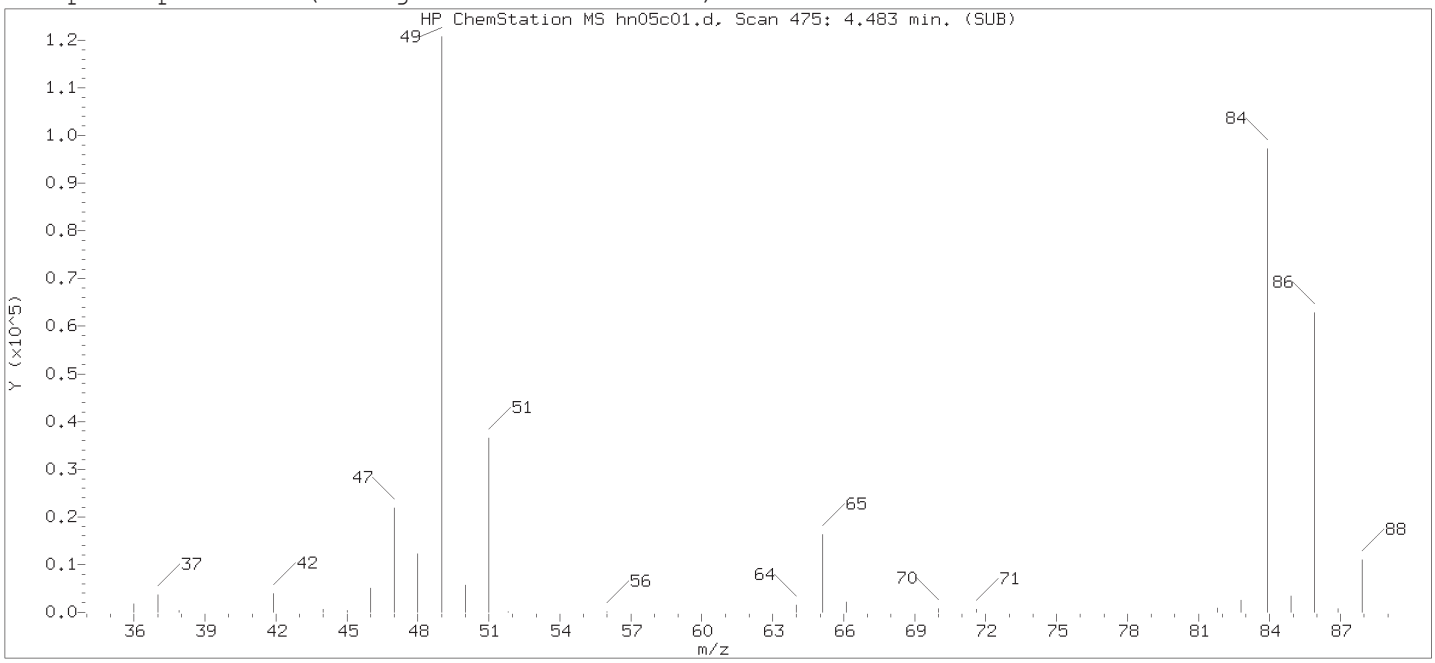
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 122842M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 621
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

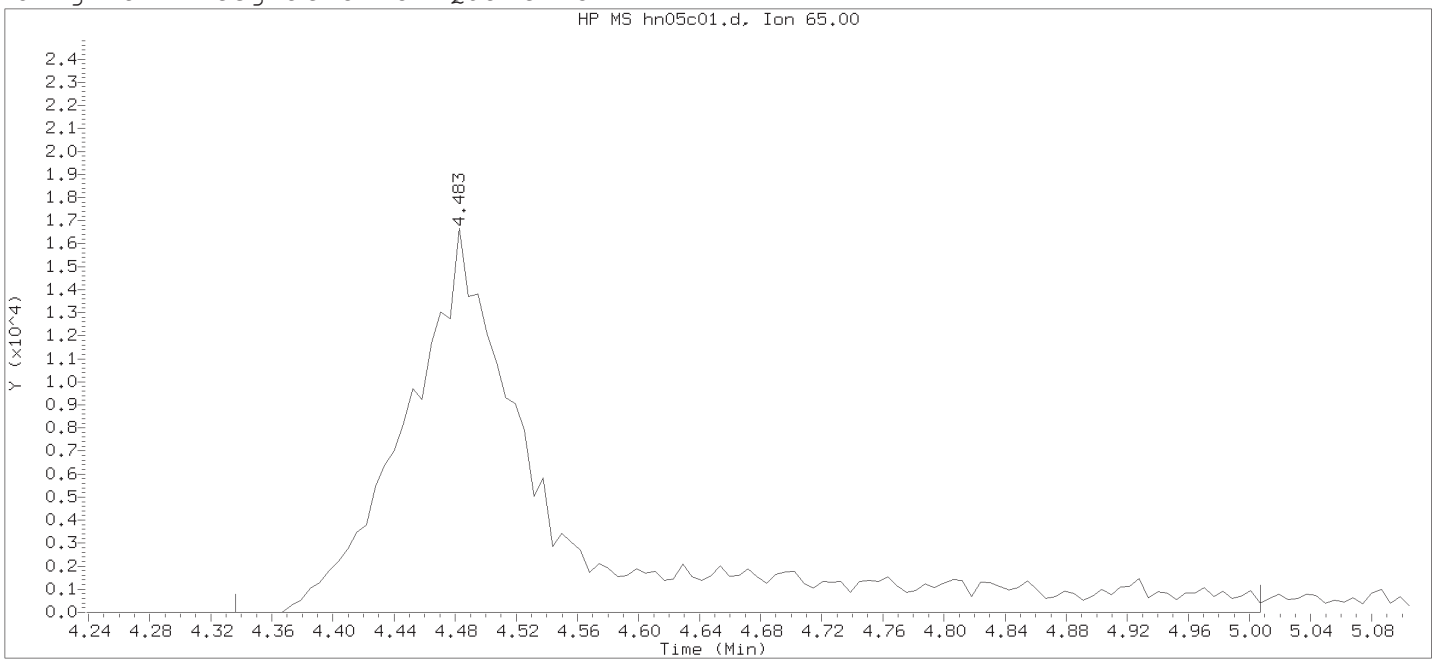
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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



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Injection date and time: 05-NOV-2018 20:18 Analyst ID: JGC14951

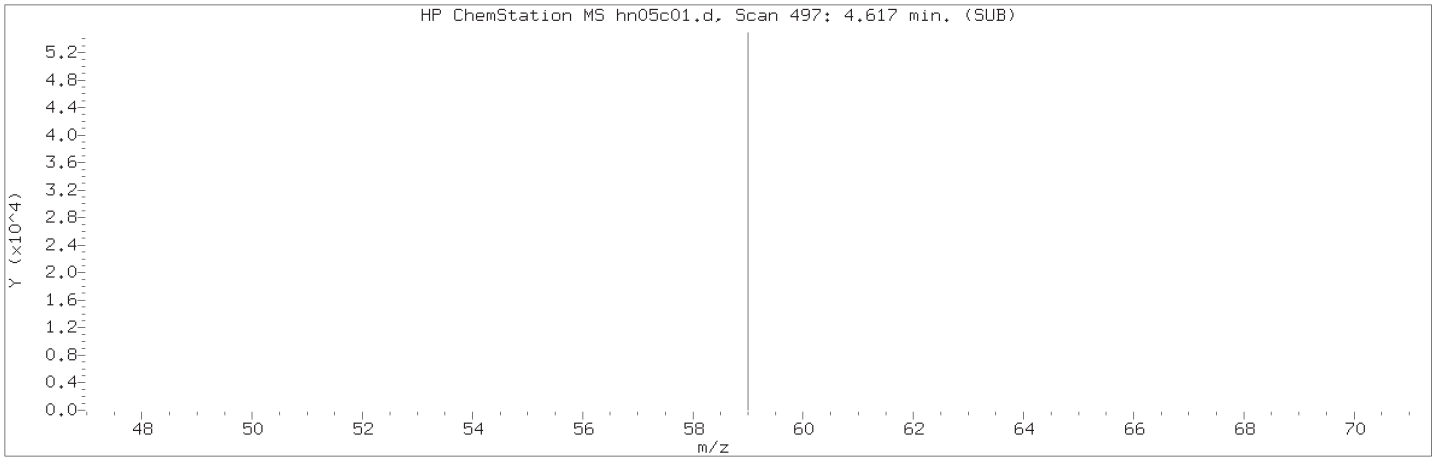
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

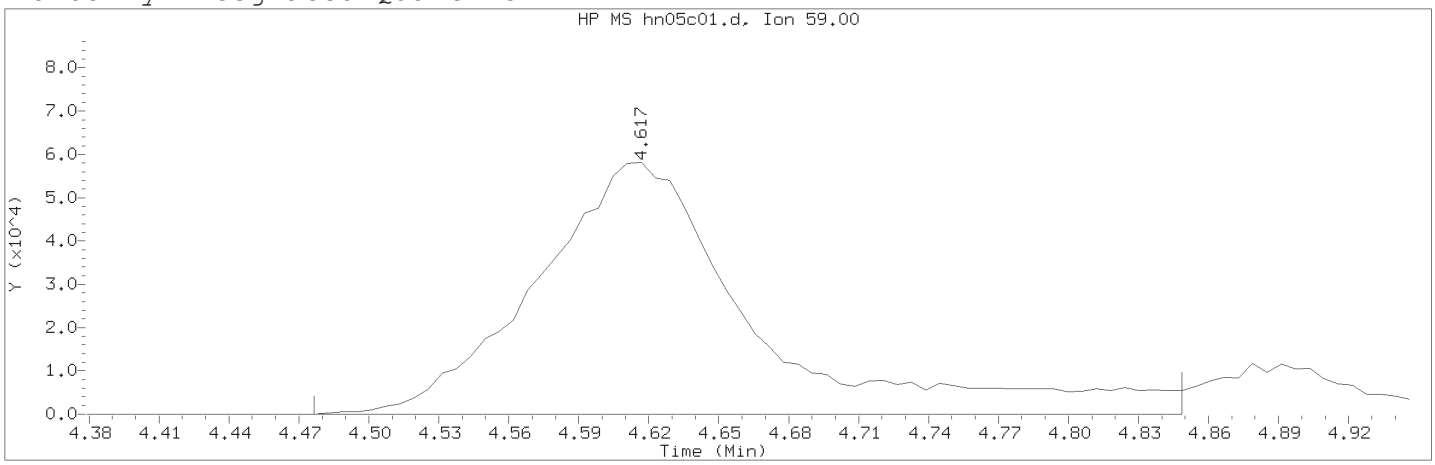
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area : 111834
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 560
Y at integration start : 0 Y at integration end: 0

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

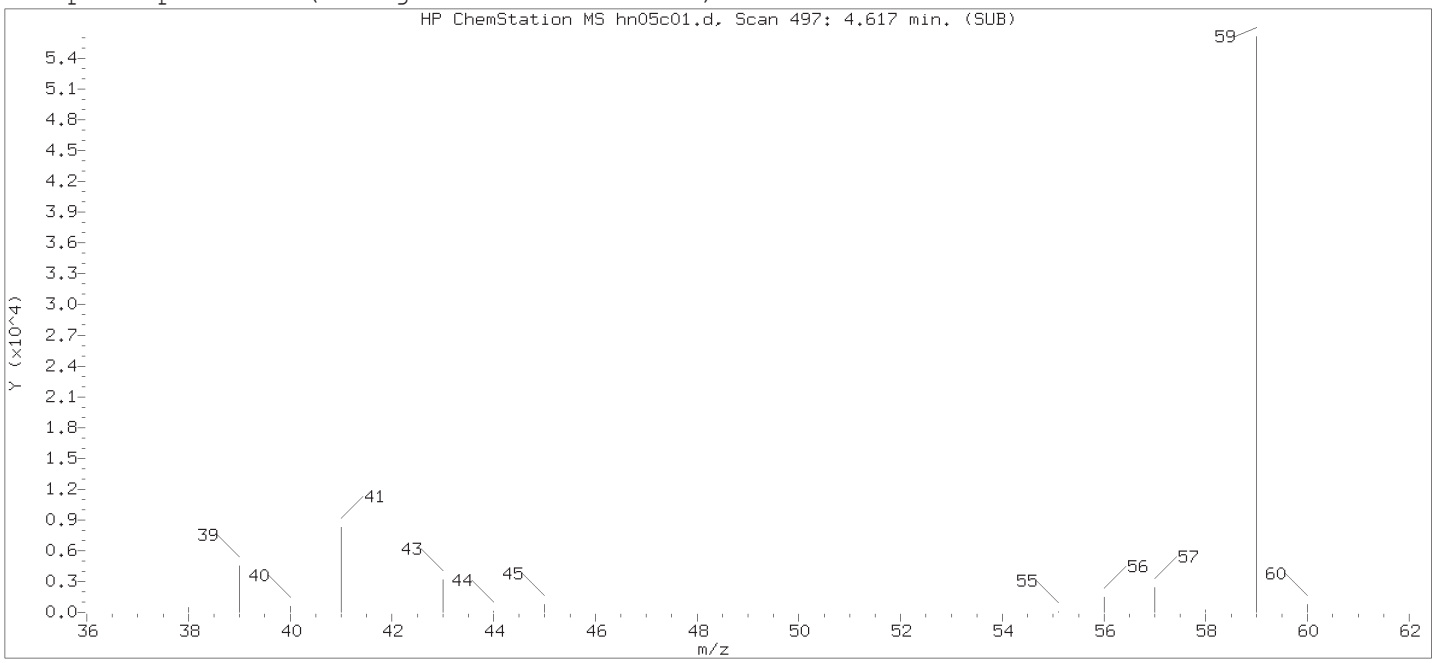
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area (flag) : 374572M
On-Column Amount (ng) : 178.6394
Integration start scan : 473 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

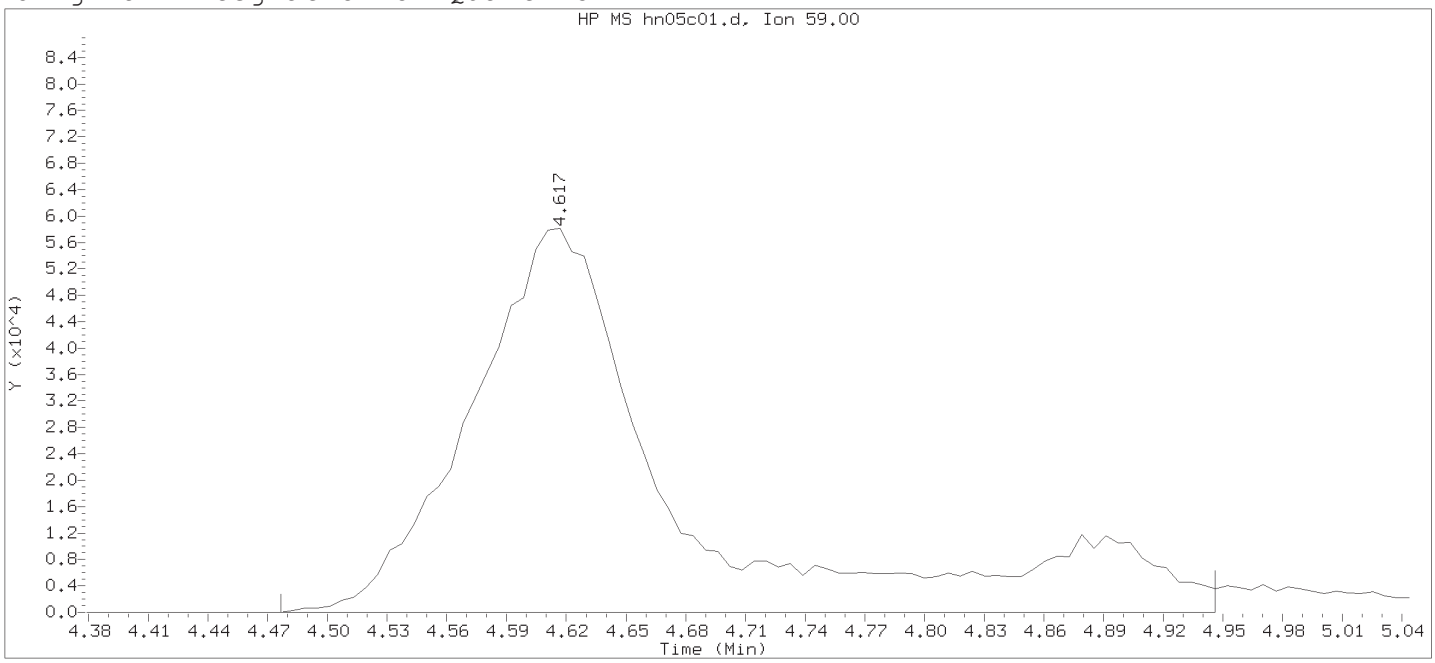
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

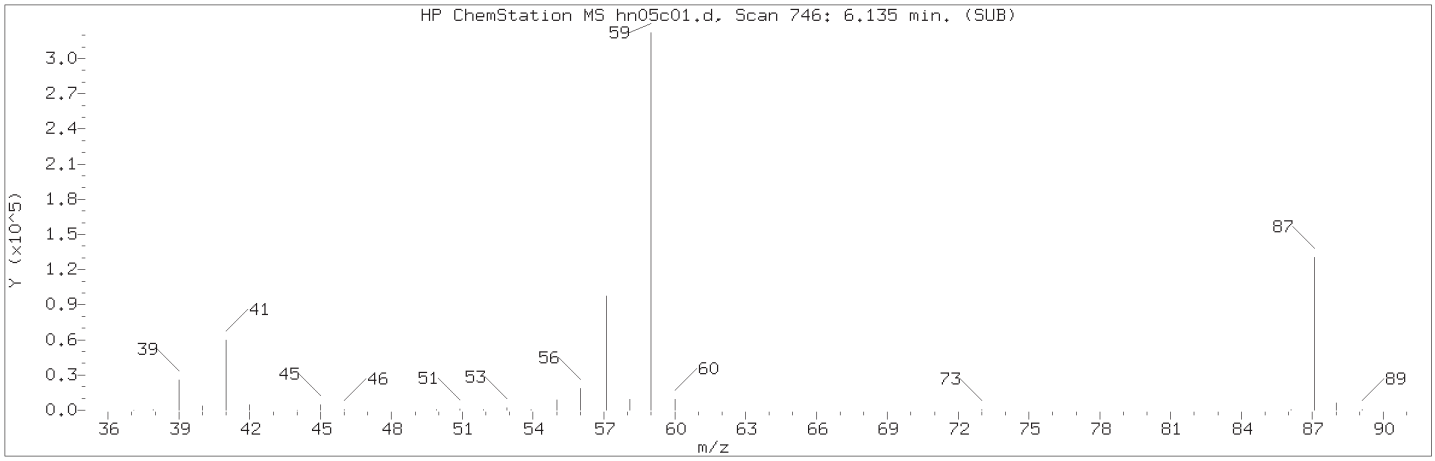
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

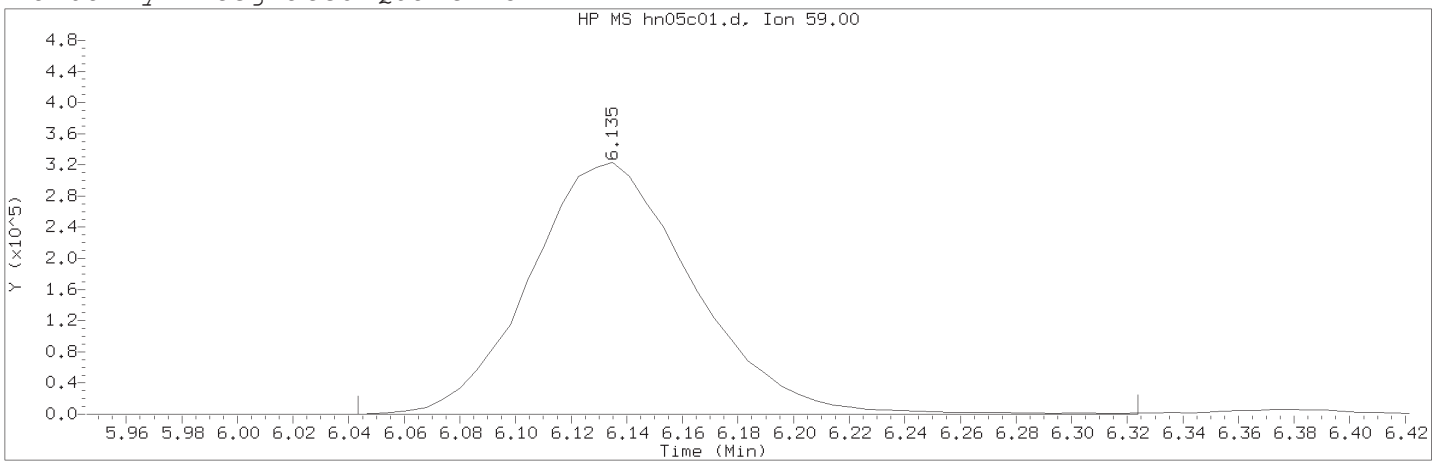
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area : 419255
On-column Amount (ng) : 219.6296
Integration start scan : 473 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

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

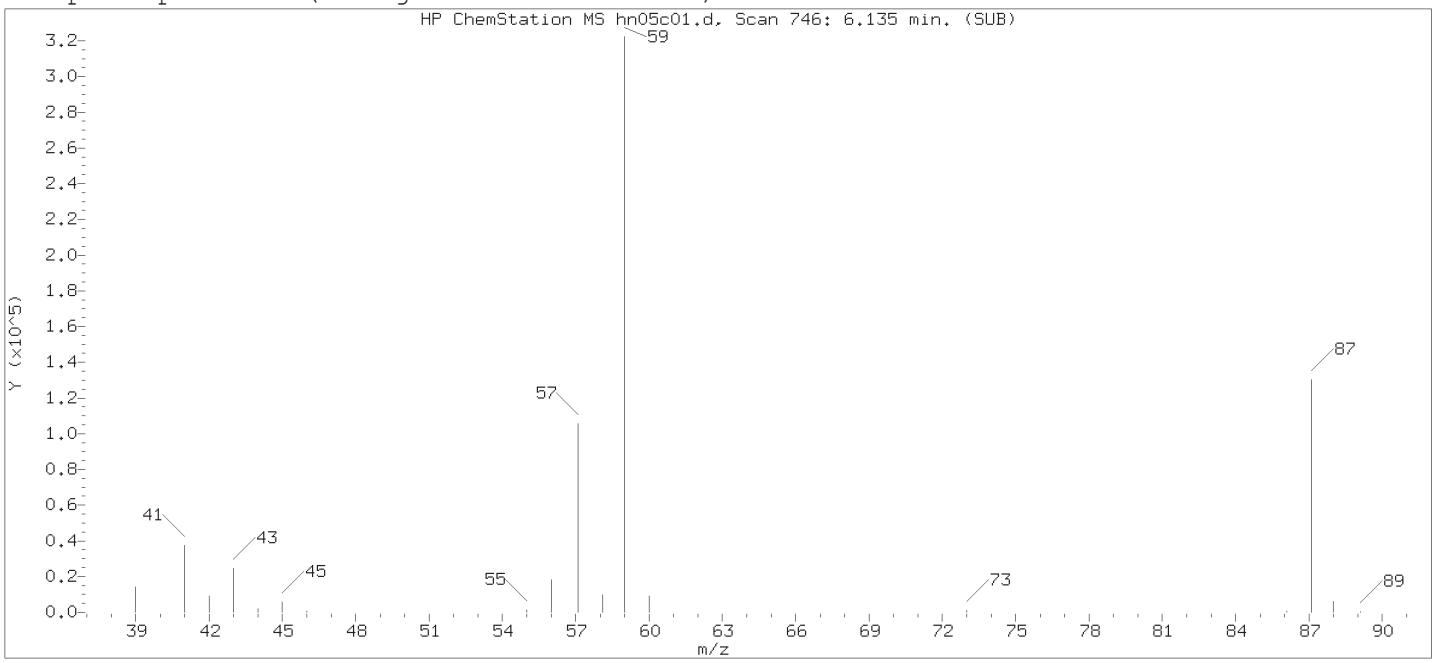
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 746
Retention Time (minutes): 6.135
Quant Ion : 59.00
Area (flag) : 1306041M
On-Column Amount (ng) : 8.6082
Integration start scan : 730 Integration stop scan: 776
Y at integration start : 0 Y at integration end: 363

Reason for manual integration: improper integration

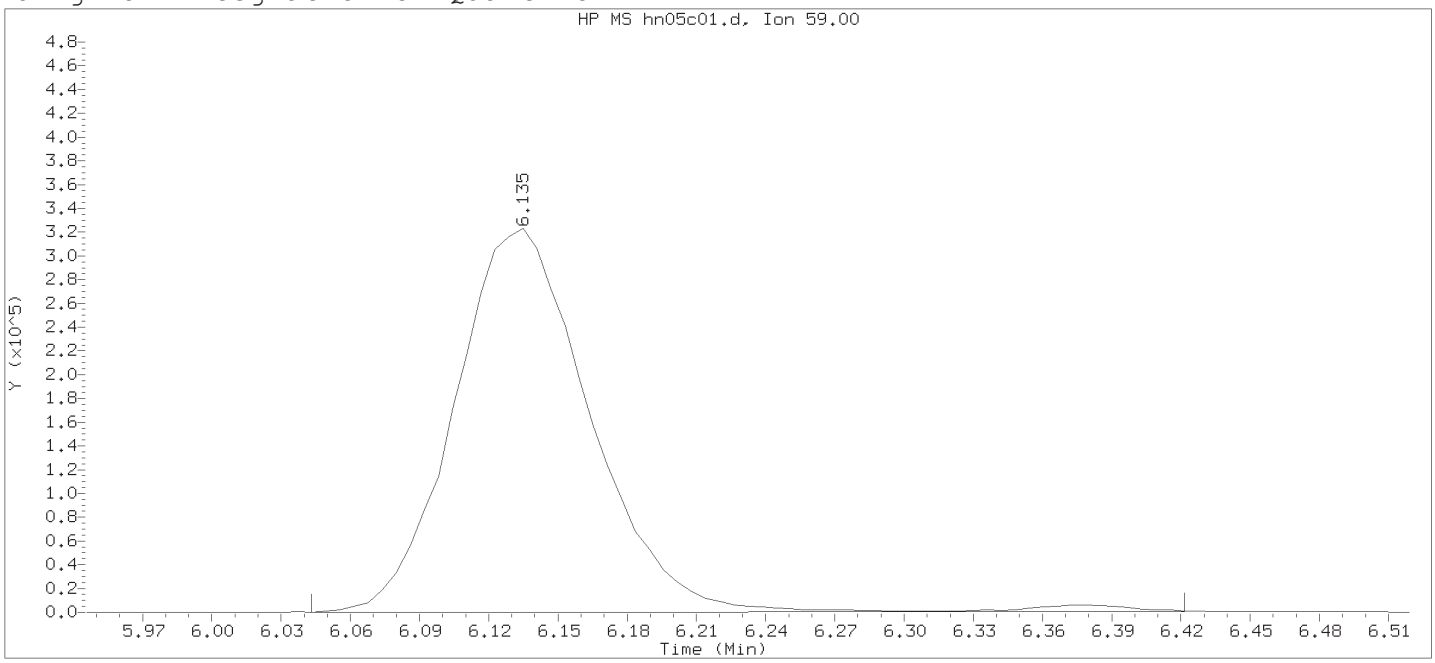
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

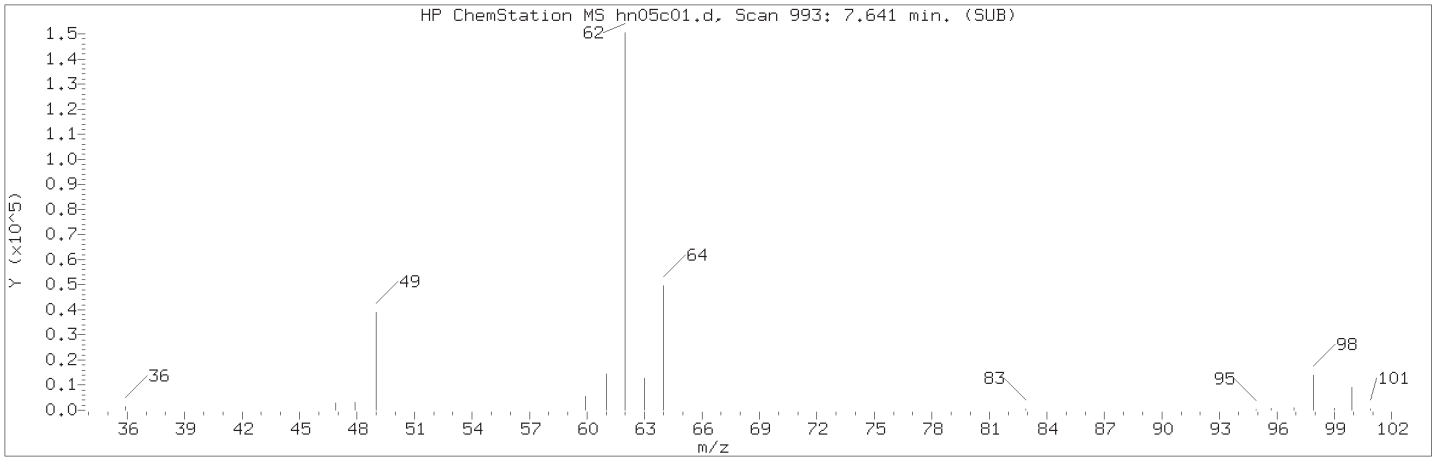
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

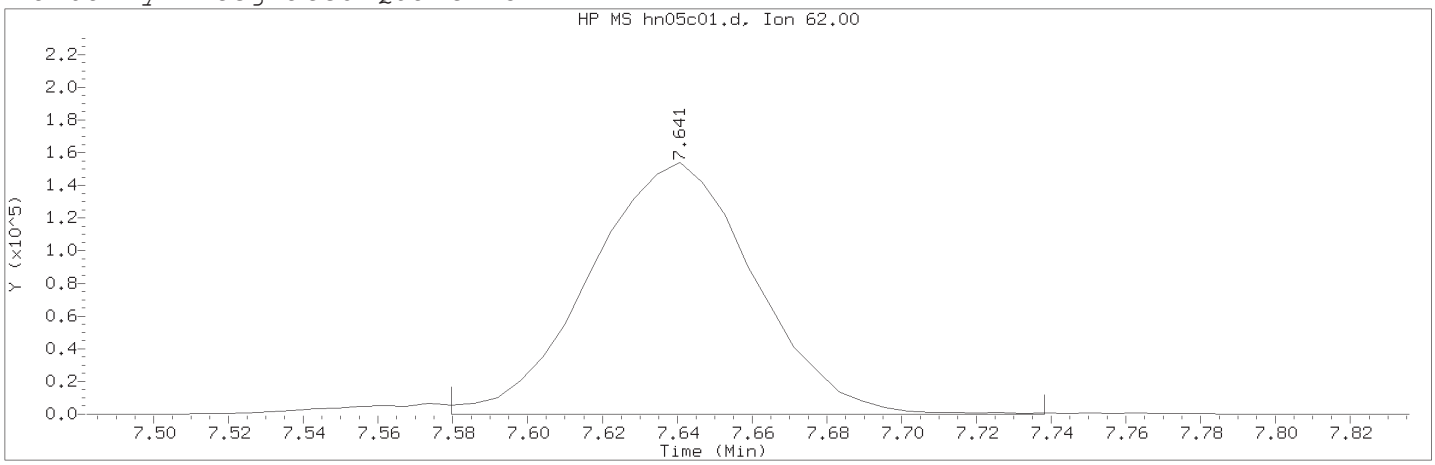
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 746
Retention Time (minutes): 6.135
Quant Ion : 59.00
Area : 1323280
On-column Amount (ng) : 8.7218
Integration start scan : 730 Integration stop scan: 792
Y at integration start : 0 Y at integration end: 490

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

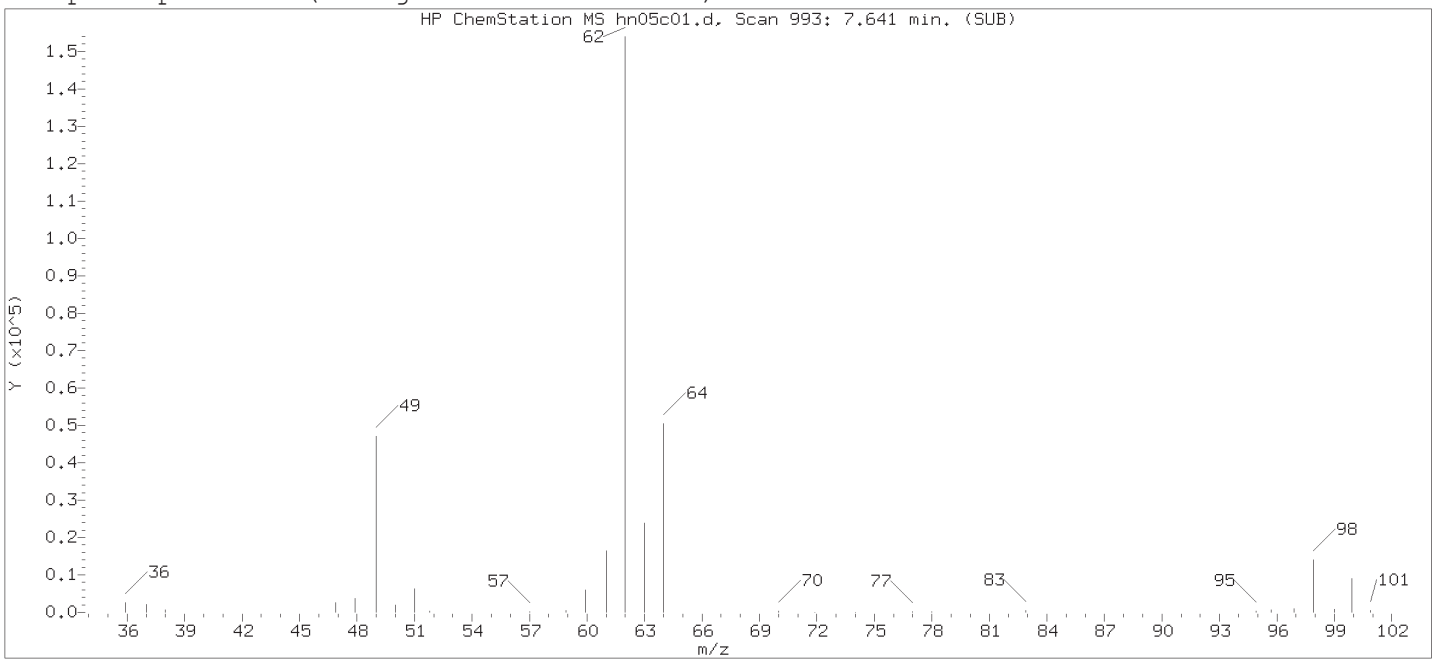
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area (flag) : 469475M
On-Column Amount (ng) : 8.5012
Integration start scan : 982 Integration stop scan: 1008
Y at integration start : 30 Y at integration end: 30

Reason for manual integration: improper integration

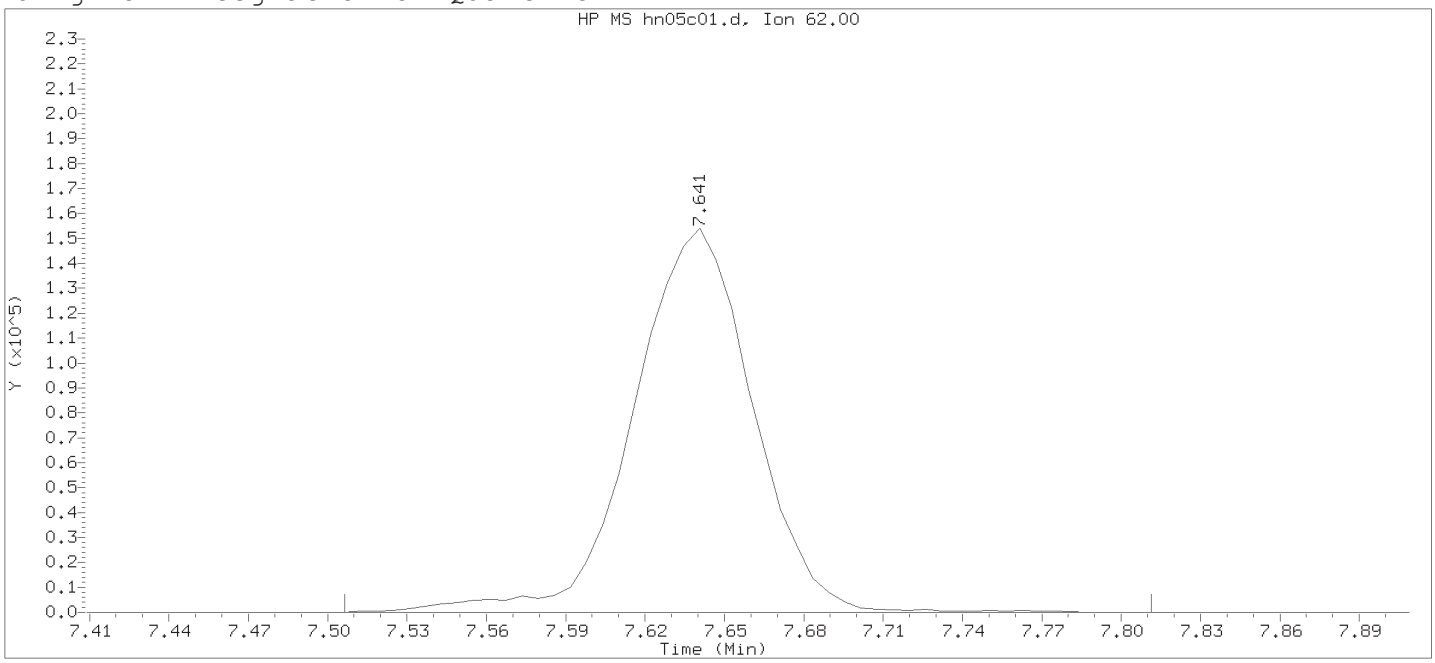
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

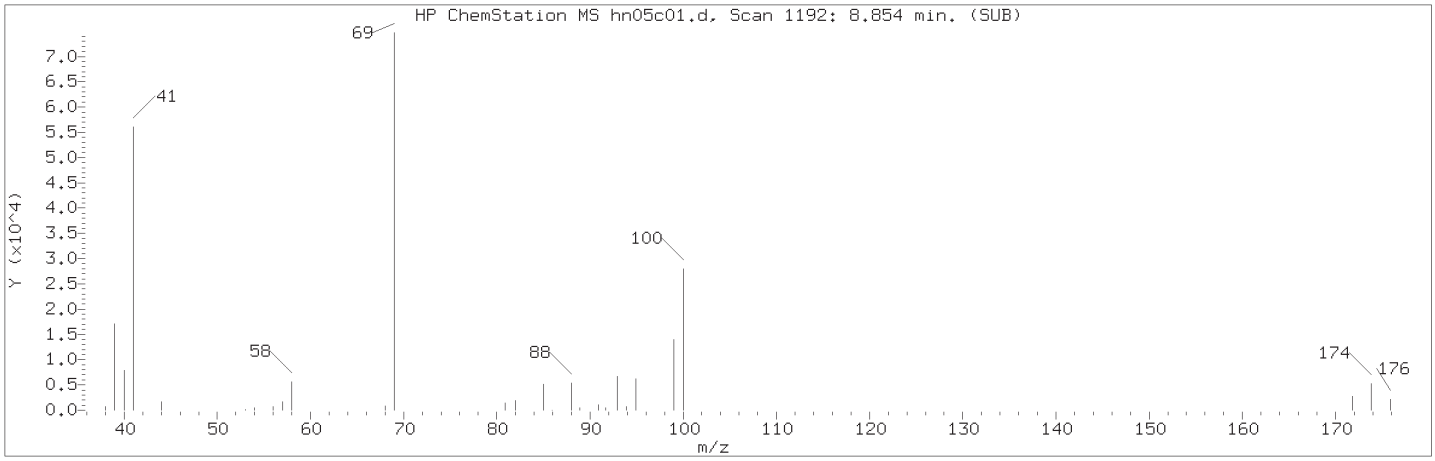
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

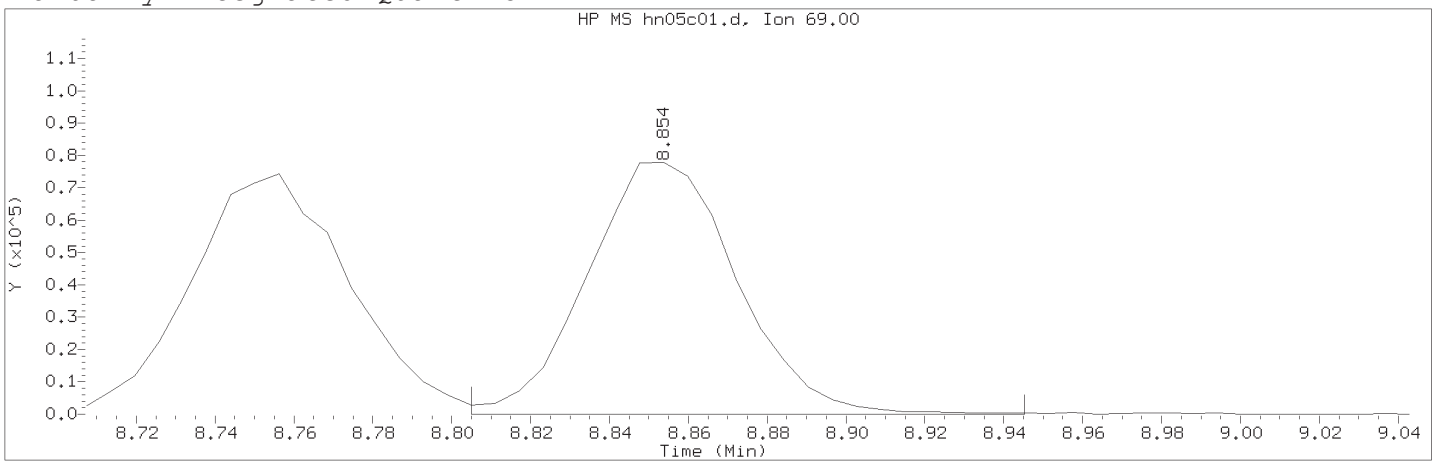
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area : 483514
On-column Amount (ng) : 8.7554
Integration start scan : 970 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

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

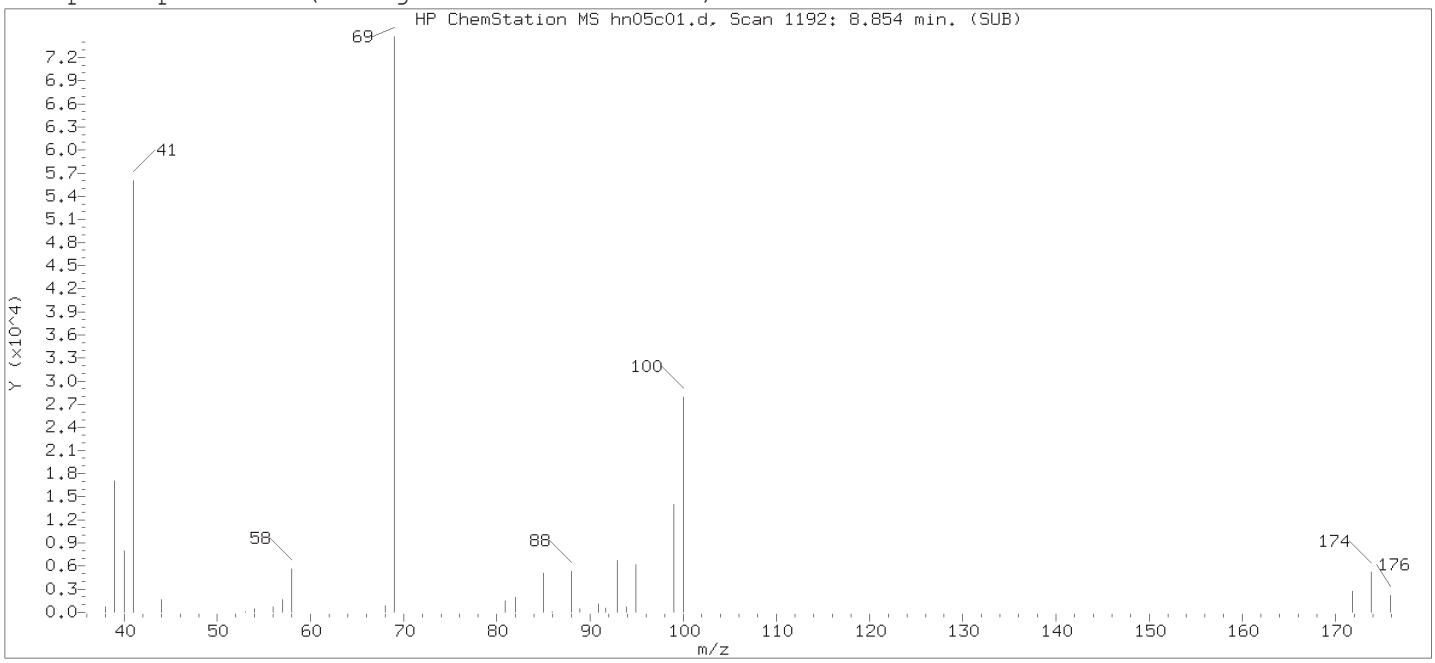
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 69.00
Area (flag) : 205697M
On-Column Amount (ng) : 9.4738
Integration start scan : 1183 Integration stop scan: 1206
Y at integration start : 7 Y at integration end: 7

Reason for manual integration: improper integration

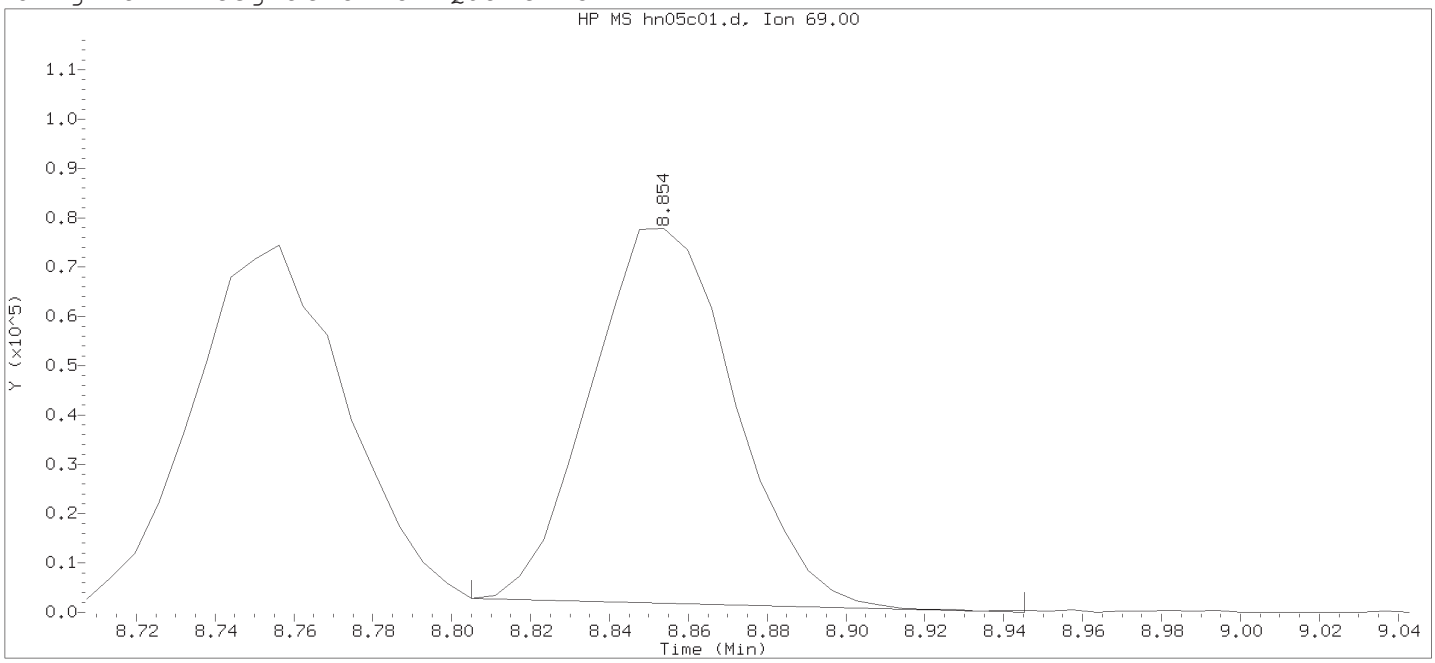
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

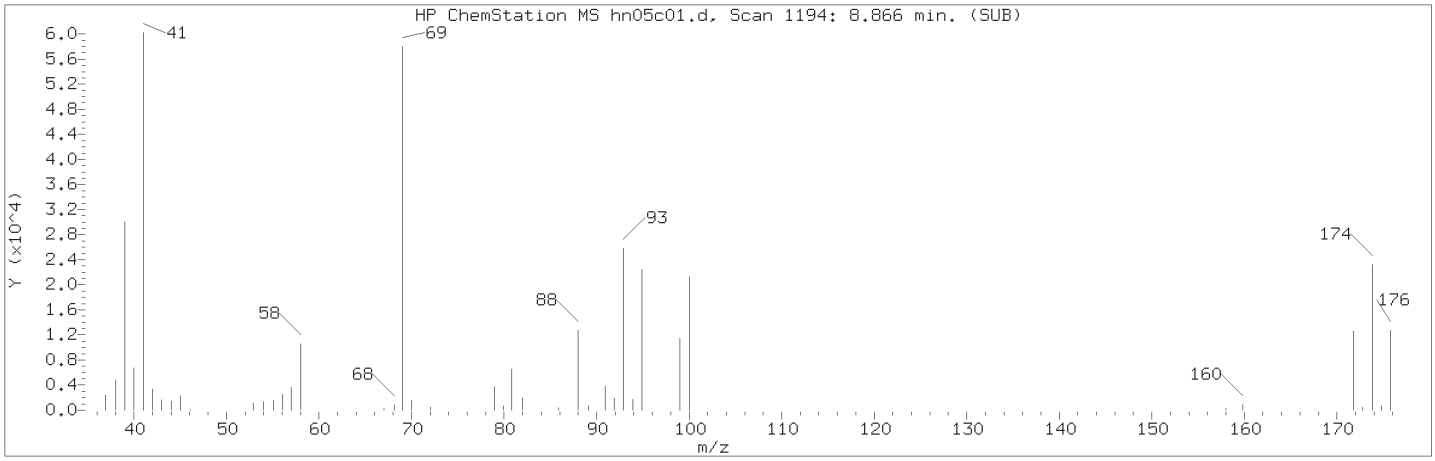
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

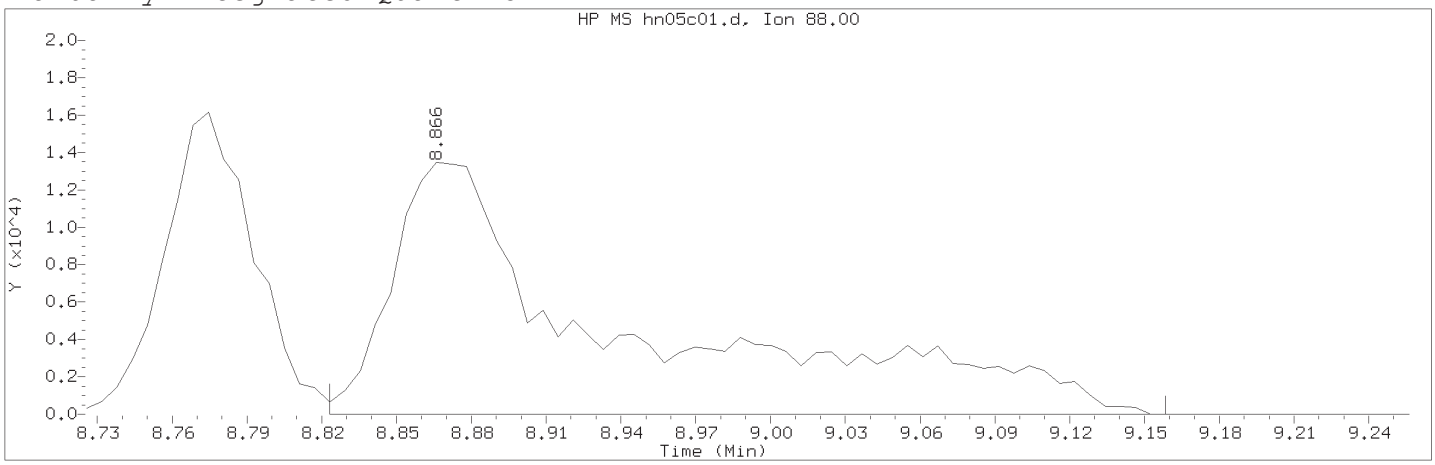
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 69.00
Area : 193439
On-column Amount (ng) : 9.7861
Integration start scan : 1183 Integration stop scan: 1206
Y at integration start : 2793 Y at integration end: 0

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

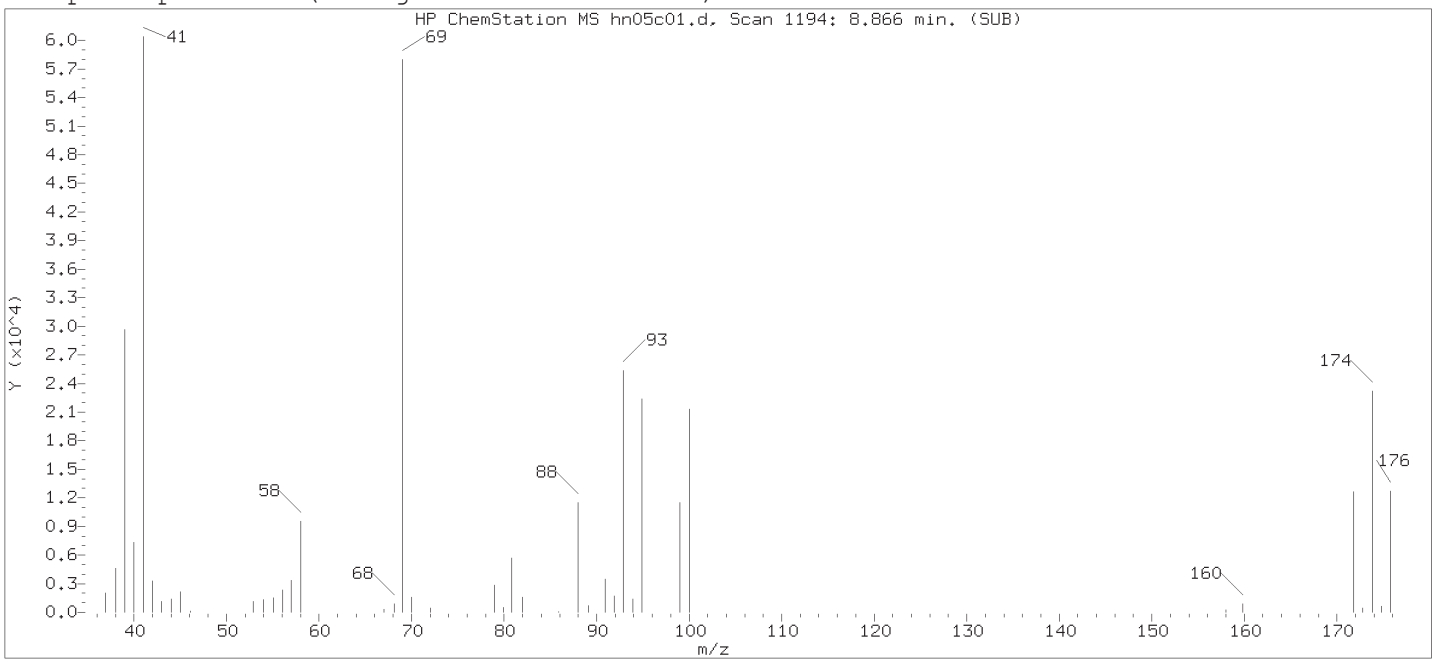
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 84962M
On-Column Amount (ng) : 514.8339
Integration start scan : 1186 Integration stop scan: 1241
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

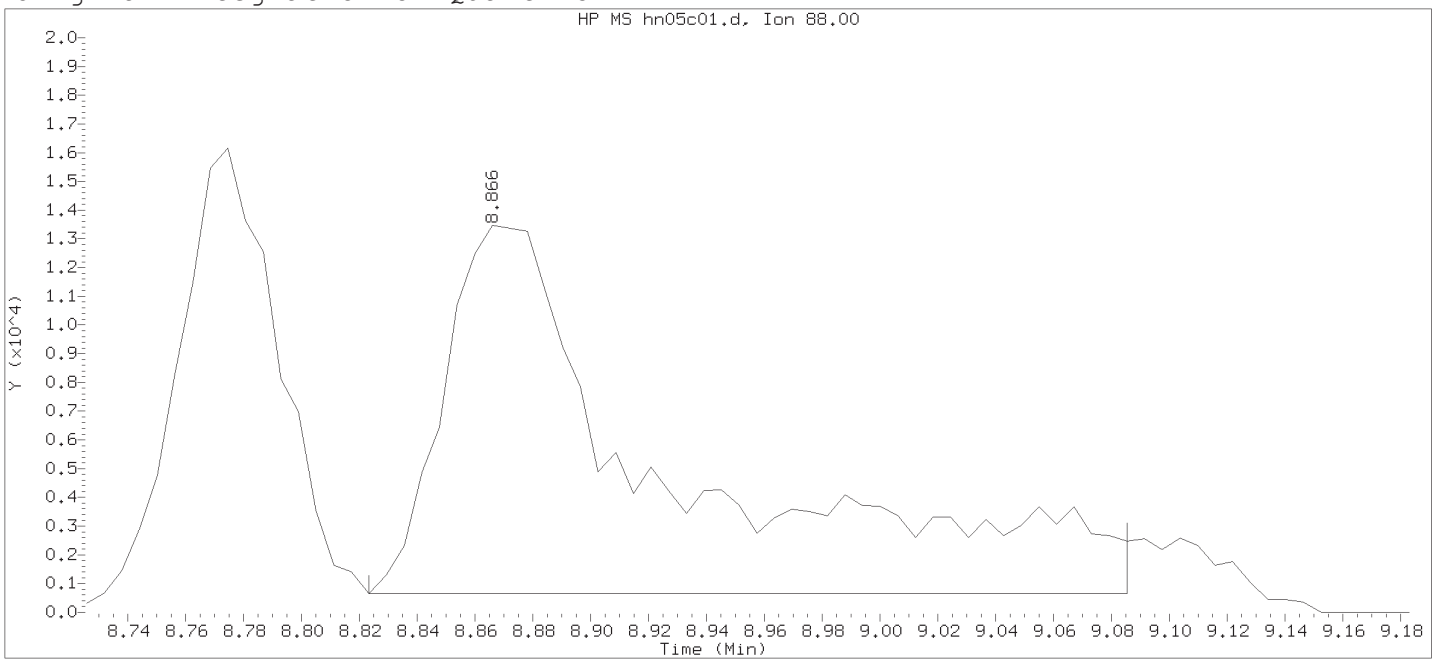
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

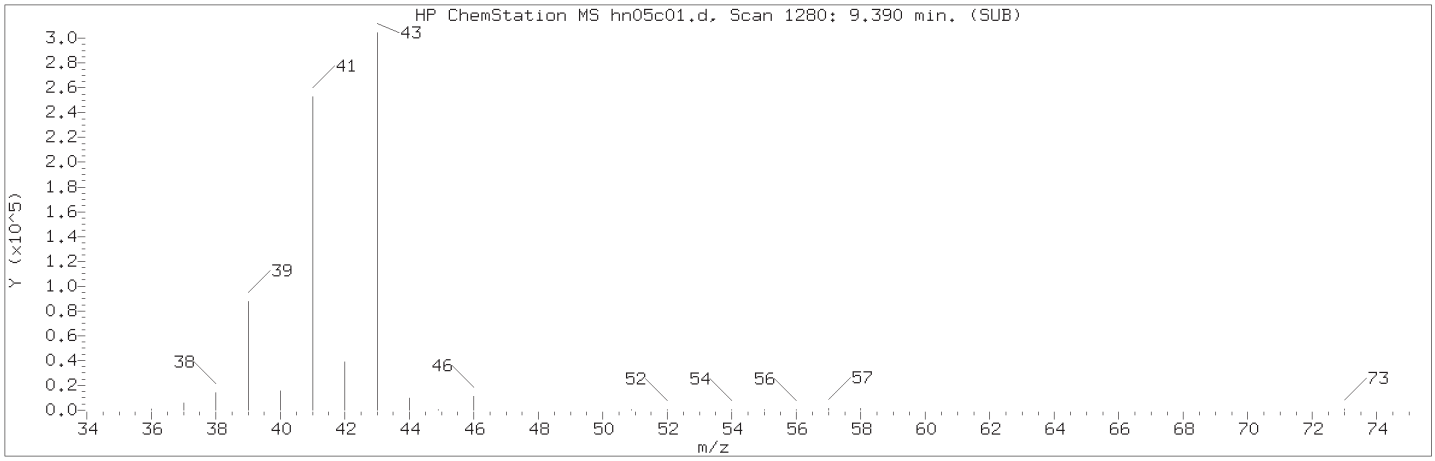
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

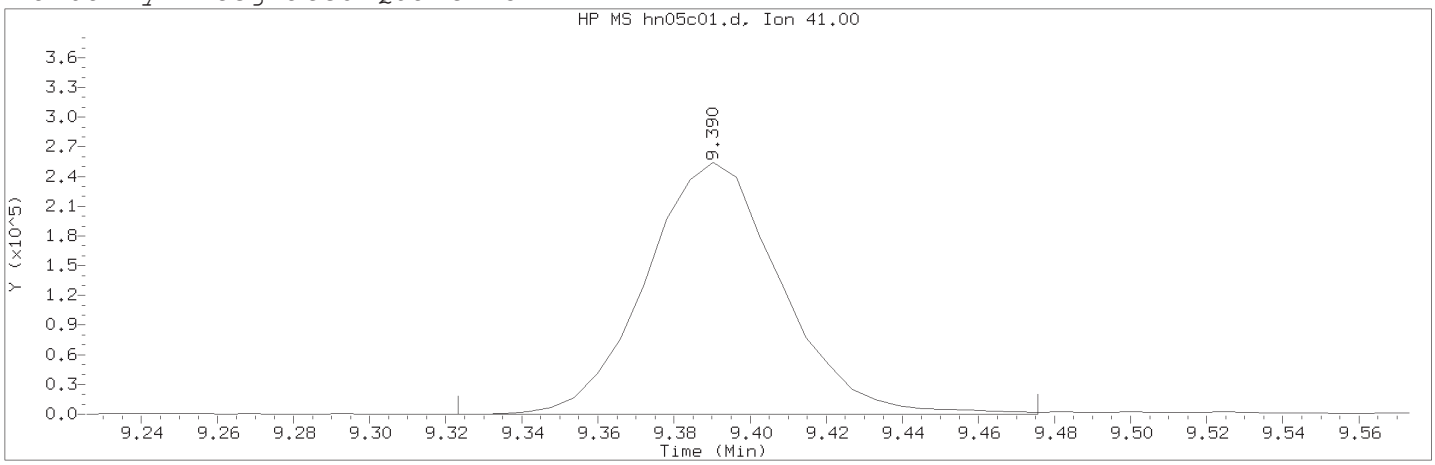
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1194		
Retention Time (minutes)	: 8.866		
Quant Ion	: 88.00		
Area	: 68616		
On-column Amount (ng)	: 456.7133		
Integration start scan	: 1186	Integration stop scan:	1229
Y at integration start	: 647	Y at integration end:	647

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

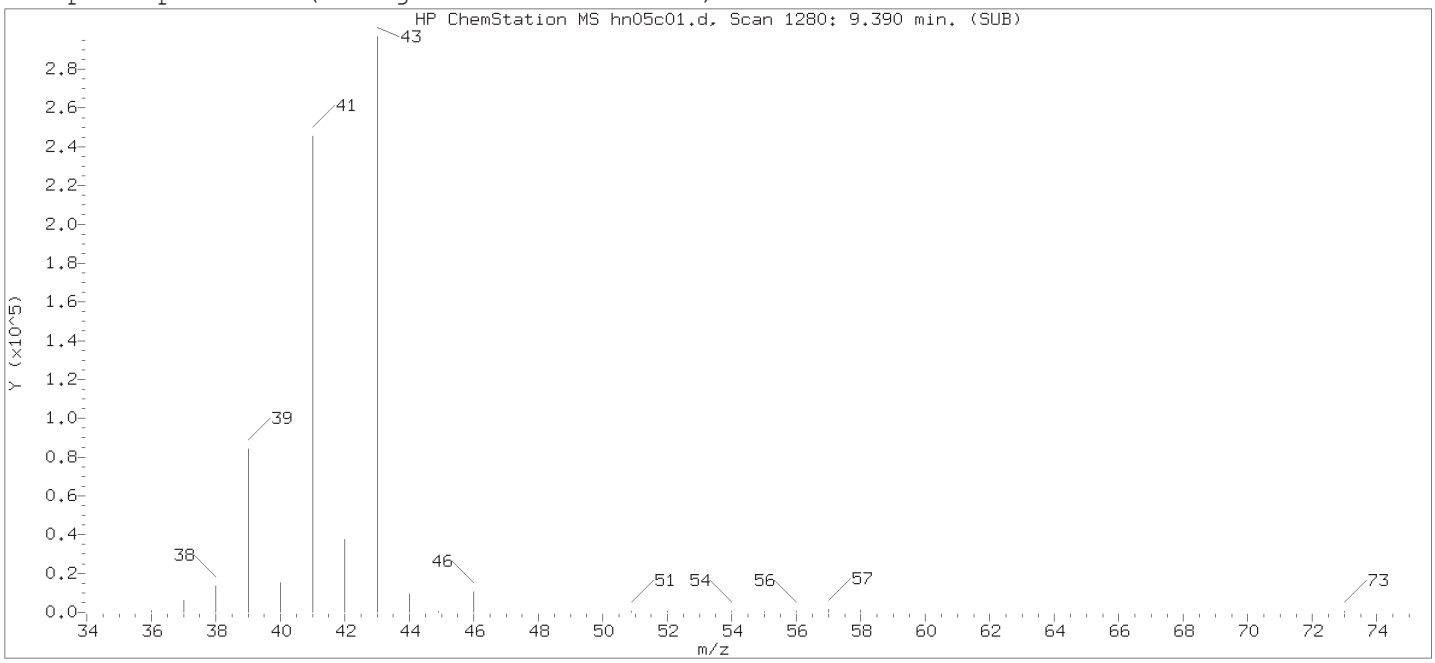
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 624165M
On-Column Amount (ng) : 101.4844
Integration start scan : 1268 Integration stop scan: 1293
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

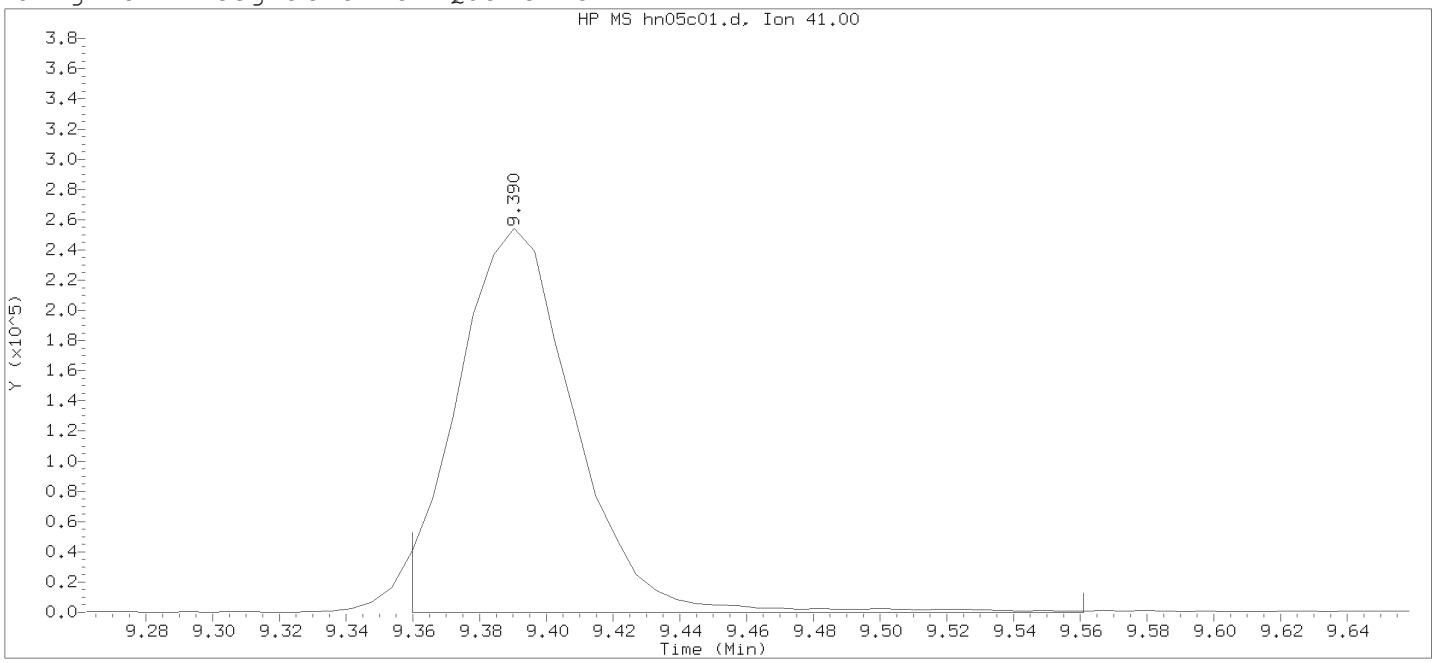
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

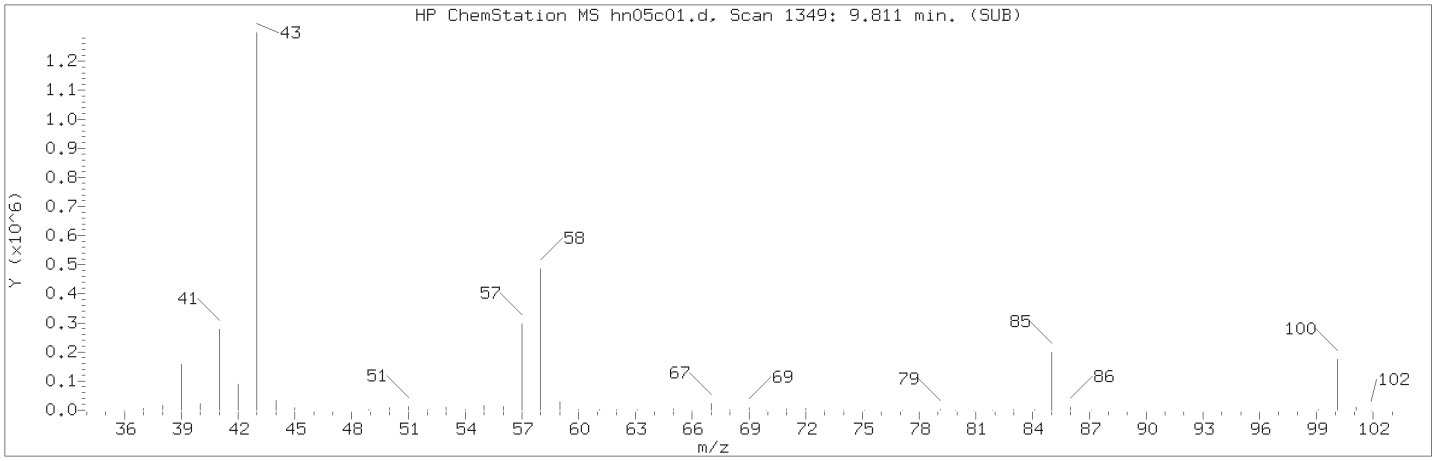
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

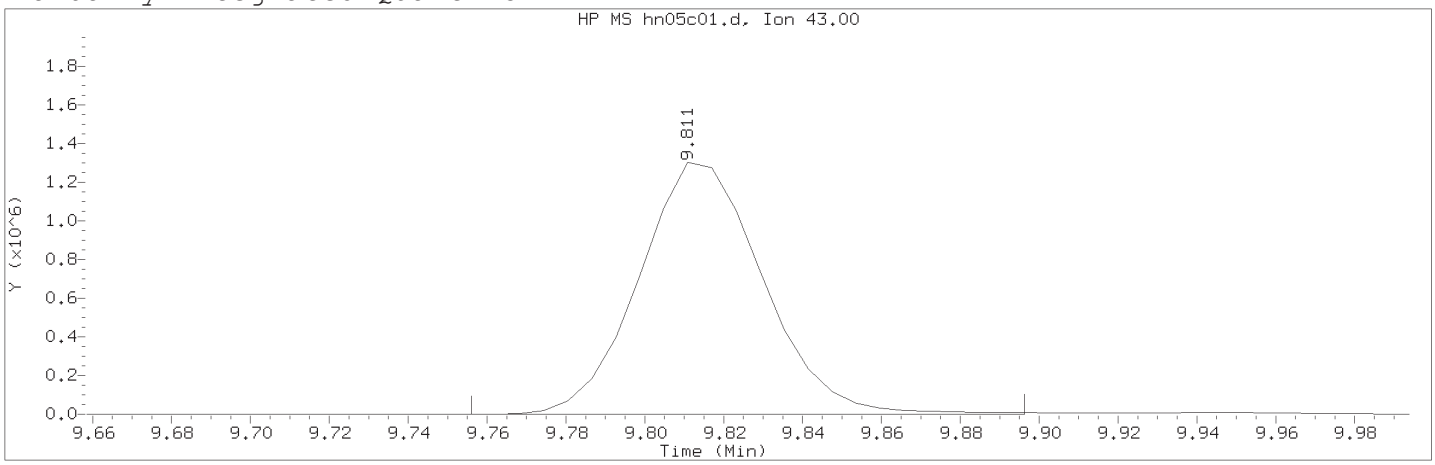
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 615345
On-column Amount (ng) : 109.8977
Integration start scan : 1274 Integration stop scan: 1307
Y at integration start : 0 Y at integration end: 0

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

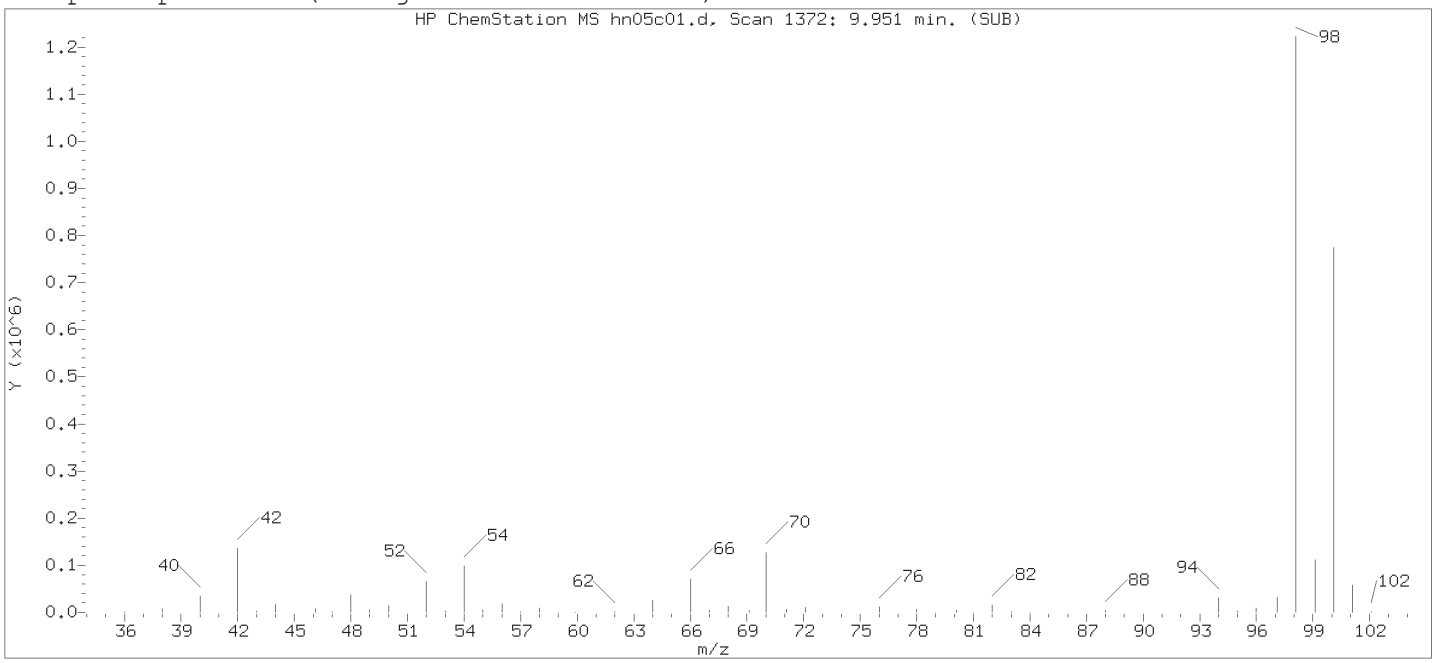
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 2845952M
On-Column Amount (ng) : 95.4628
Integration start scan : 1339 Integration stop scan: 1362
Y at integration start : 5 Y at integration end: 5

Reason for manual integration: improper integration

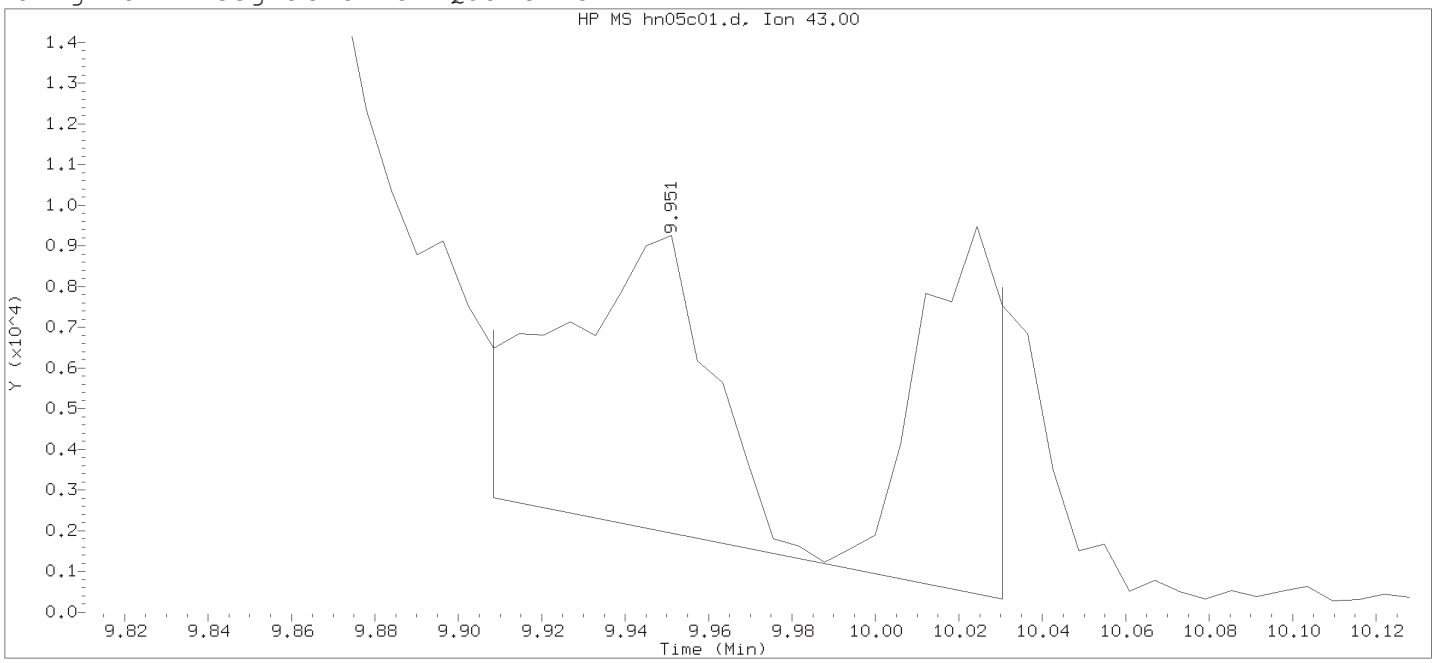
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

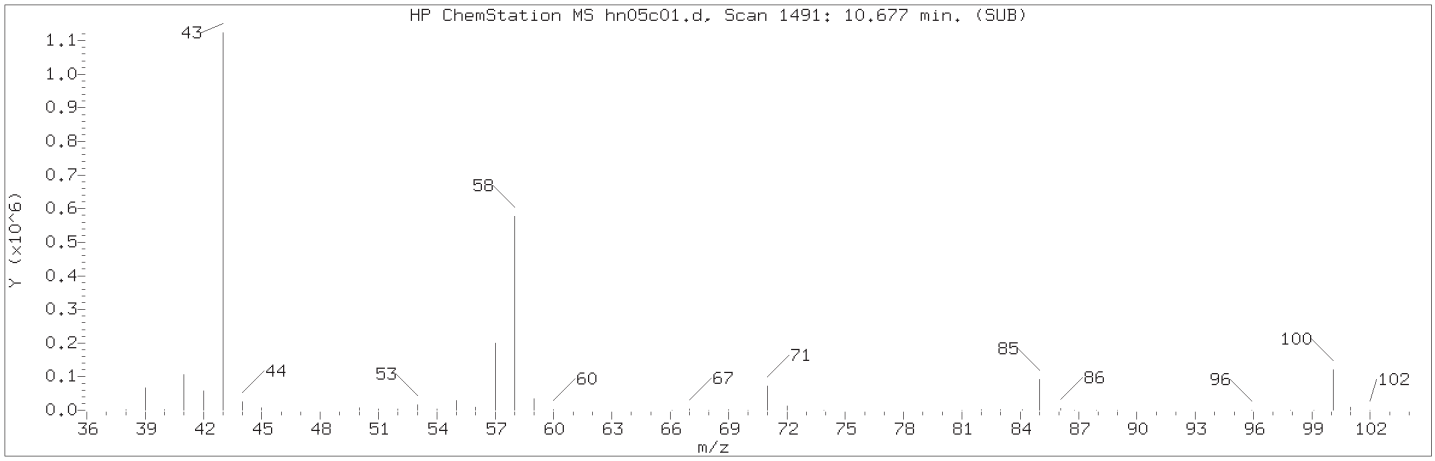
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

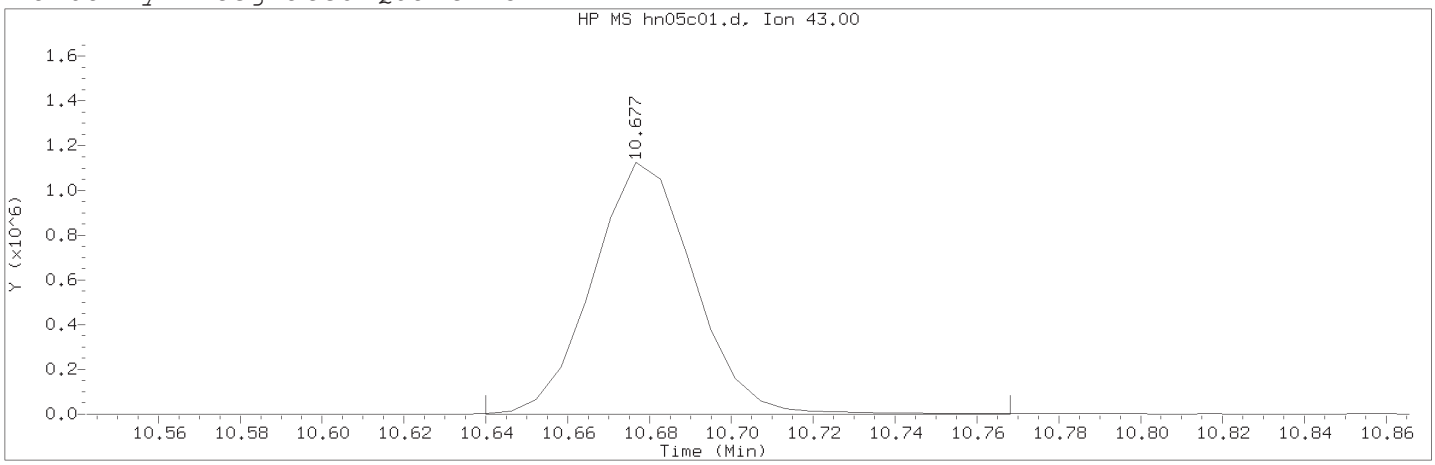
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1372
Retention Time (minutes): 9.951
Quant Ion : 43.00
Area : 30038
On-column Amount (ng) : 1.1068
Integration start scan : 1364 Integration stop scan: 1384
Y at integration start : 2808 Y at integration end: 320

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

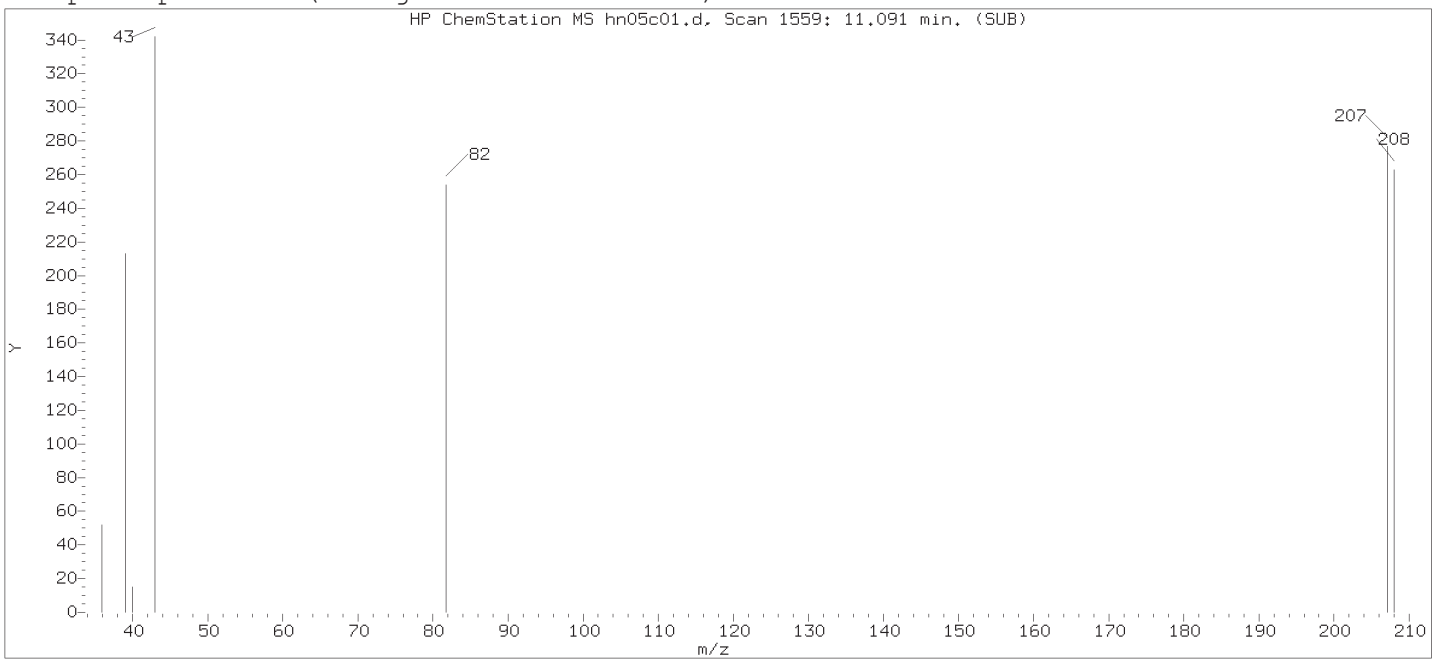
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area (flag) : 1921932M
On-Column Amount (ng) : 94.7091
Integration start scan : 1484 Integration stop scan: 1505
Y at integration start : 181 Y at integration end: 181

Reason for manual integration: improper integration

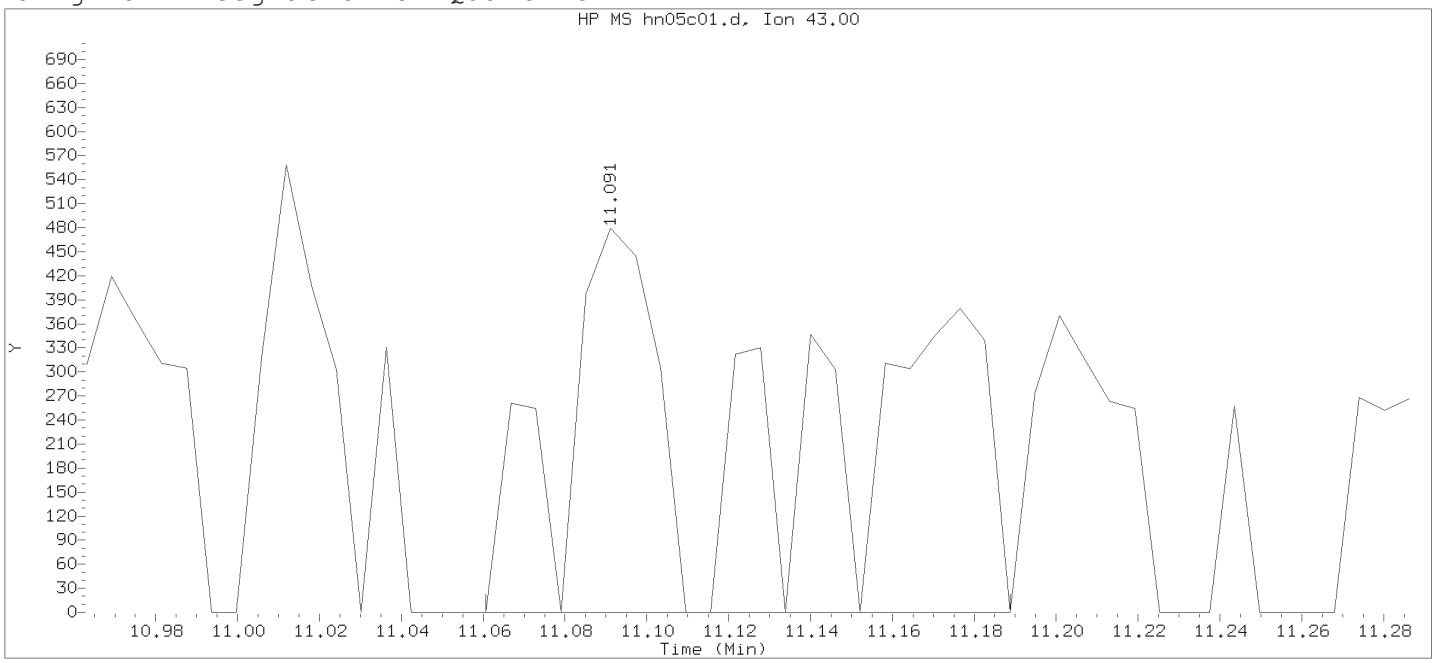
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

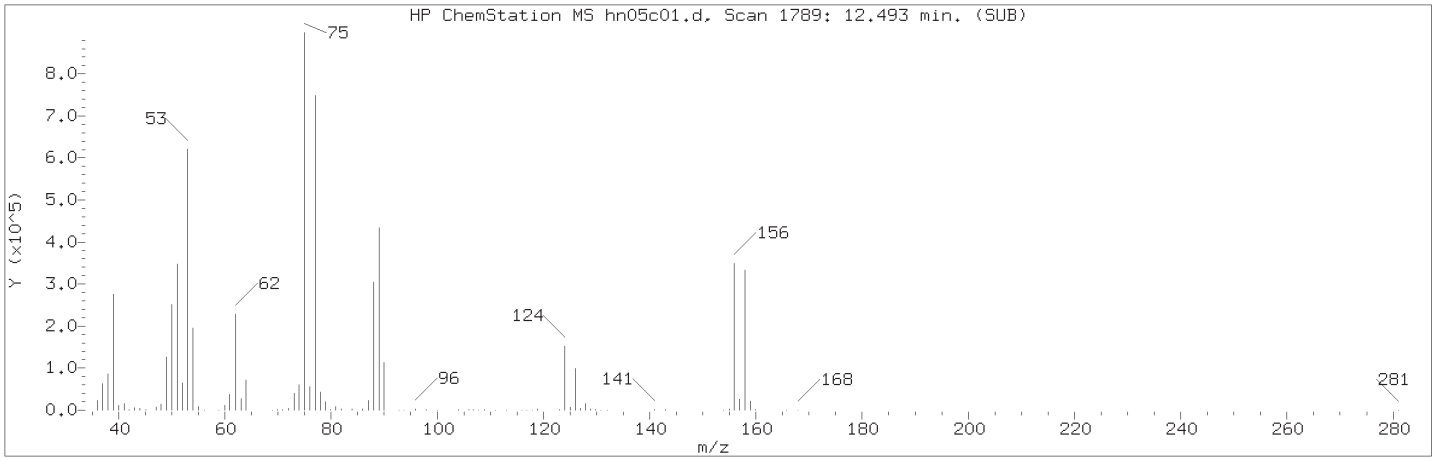
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

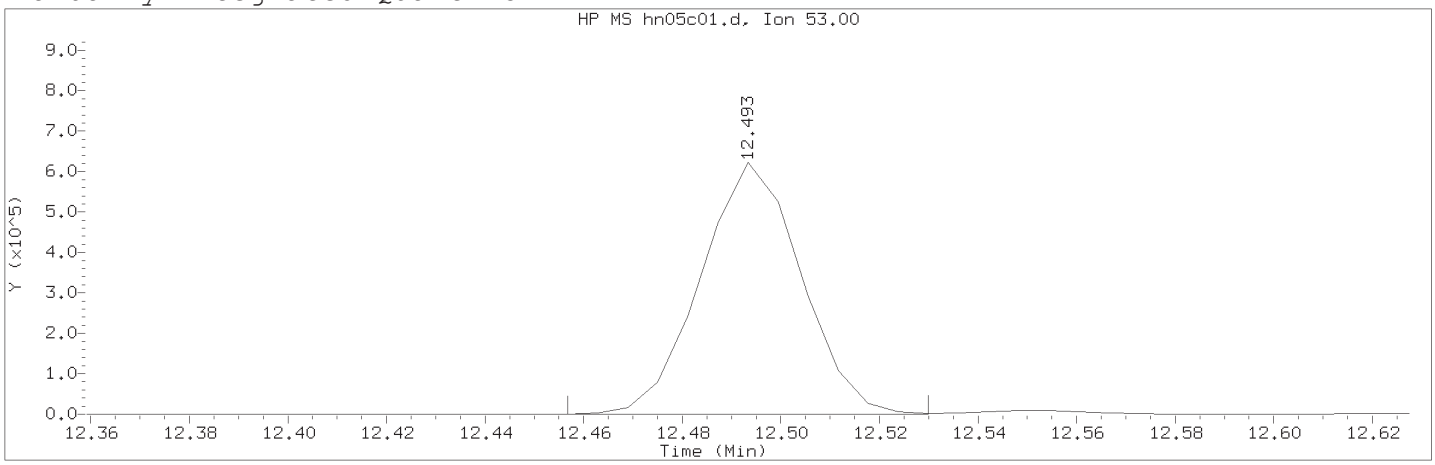
Compound Number	: 91		
Compound Name	: 2-Hexanone		
Scan Number	: 1559		
Retention Time (minutes)	: 11.091		
Quant Ion	: 43.00		
Area	: 1873		
On-column Amount (ng)	: 0.1014		
Integration start scan	: 1553	Integration stop scan:	1574
Y at integration start	: 0	Y at integration end:	0

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

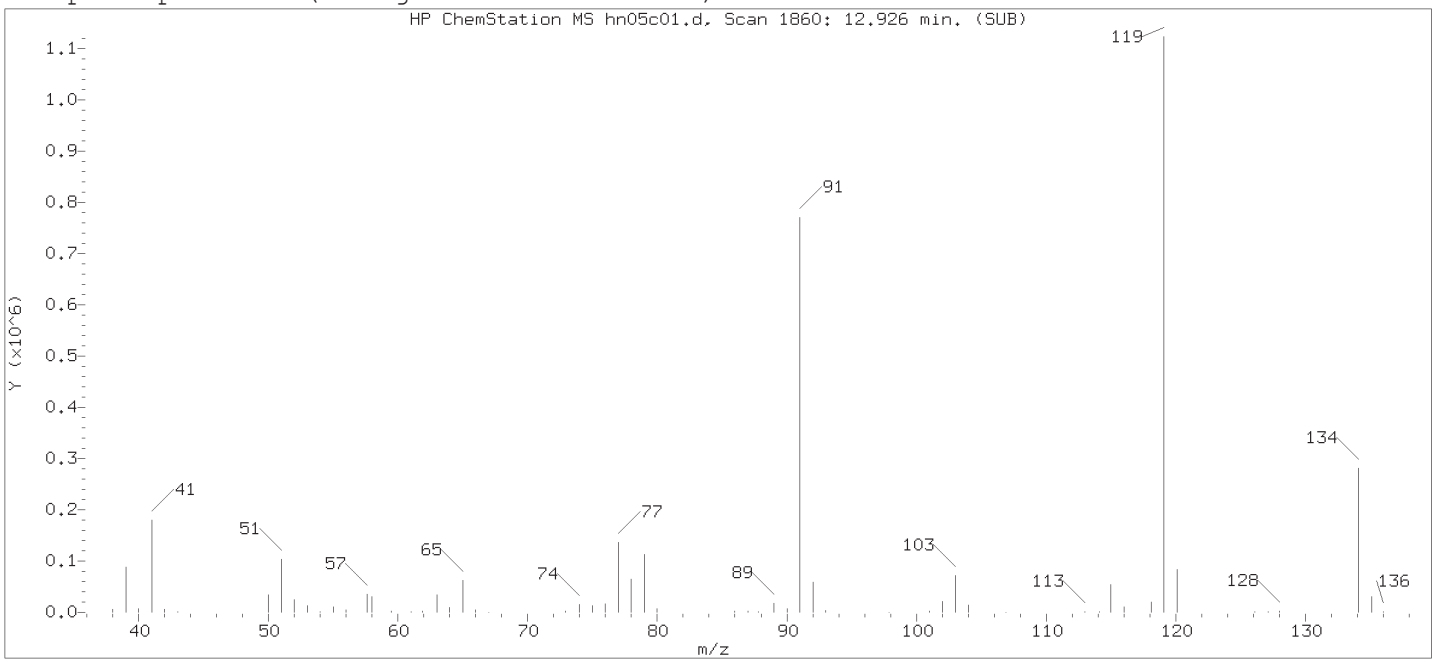
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 876544M
On-Column Amount (ng) : 93.8763
Integration start scan : 1782 Integration stop scan: 1794
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

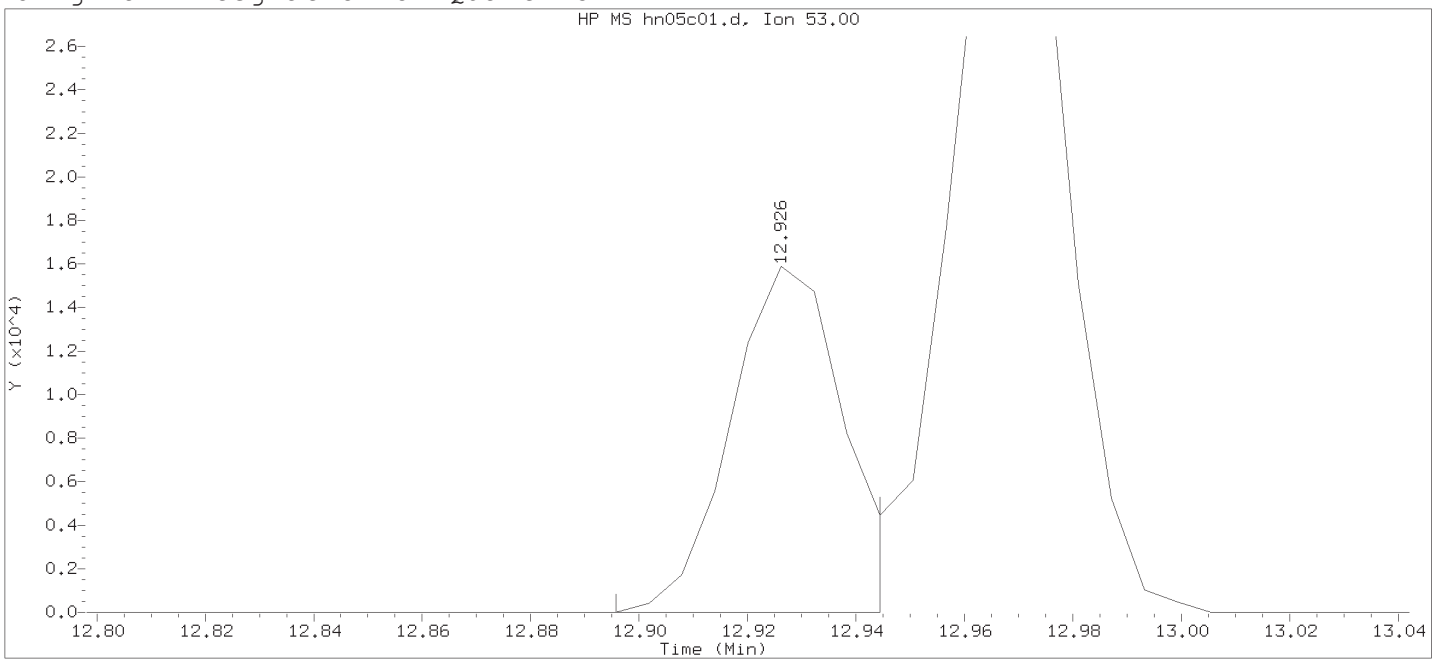
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

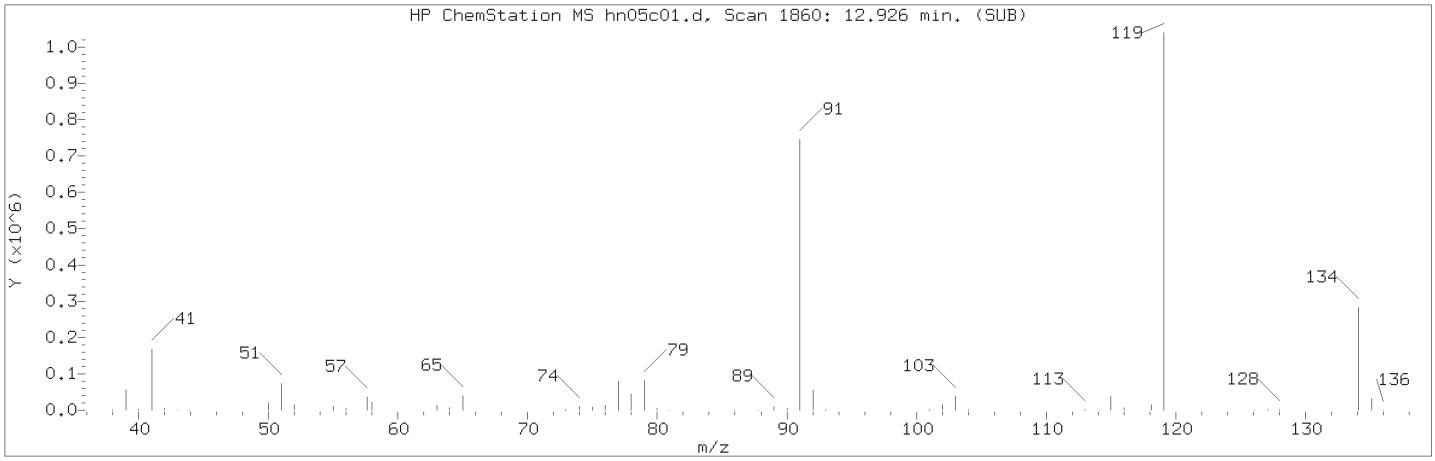
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

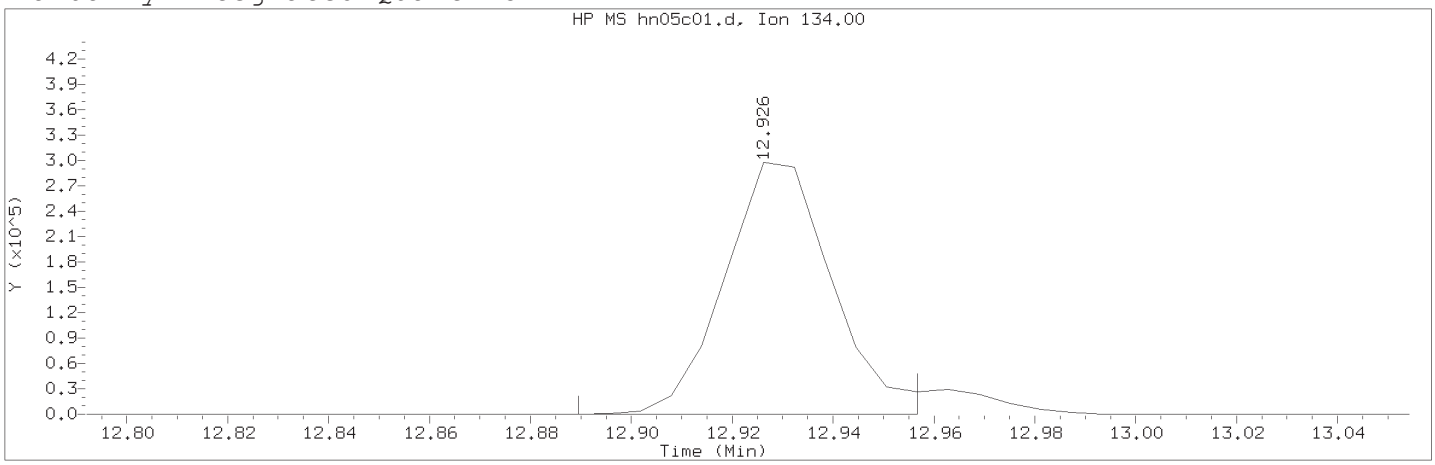
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 53.00
Area : 22366
On-column Amount (ng) : 2.6311
Integration start scan : 1854 Integration stop scan: 1862
Y at integration start : 0 Y at integration end: 0

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

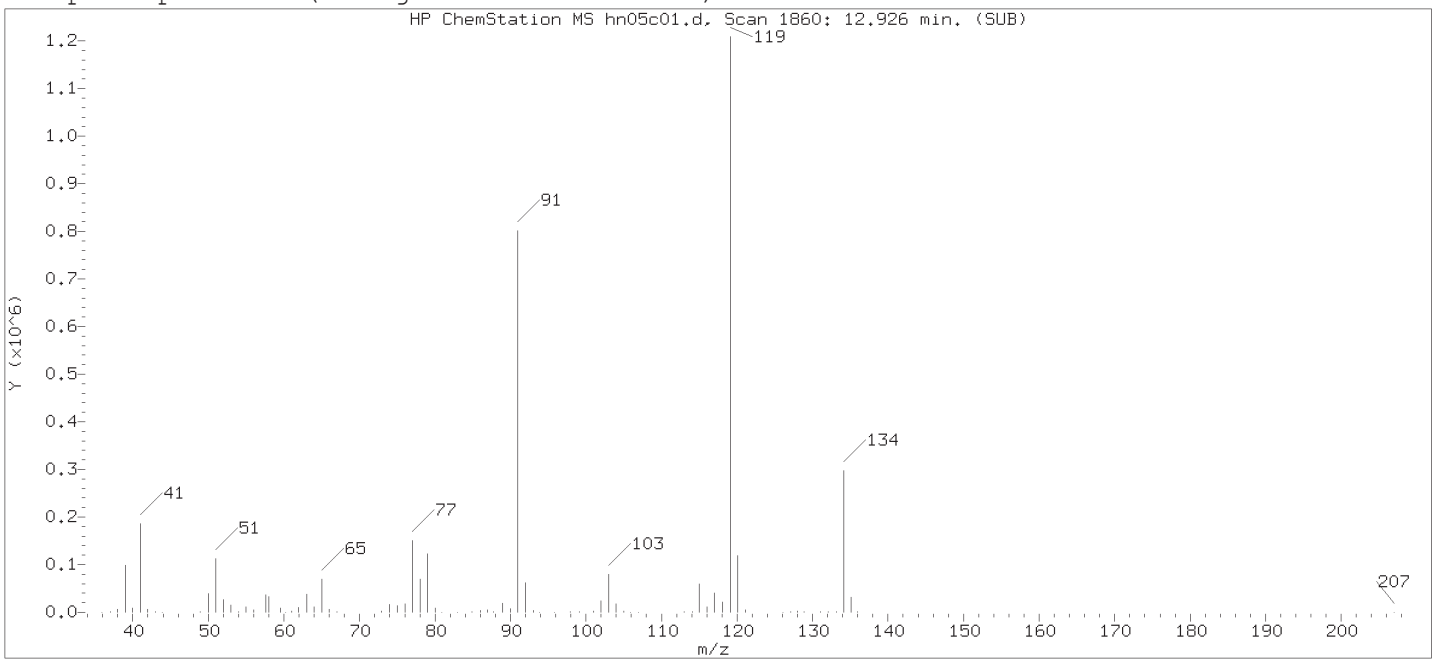
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area (flag) : 441481M
On-Column Amount (ng) : 9.9089
Integration start scan : 1853 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

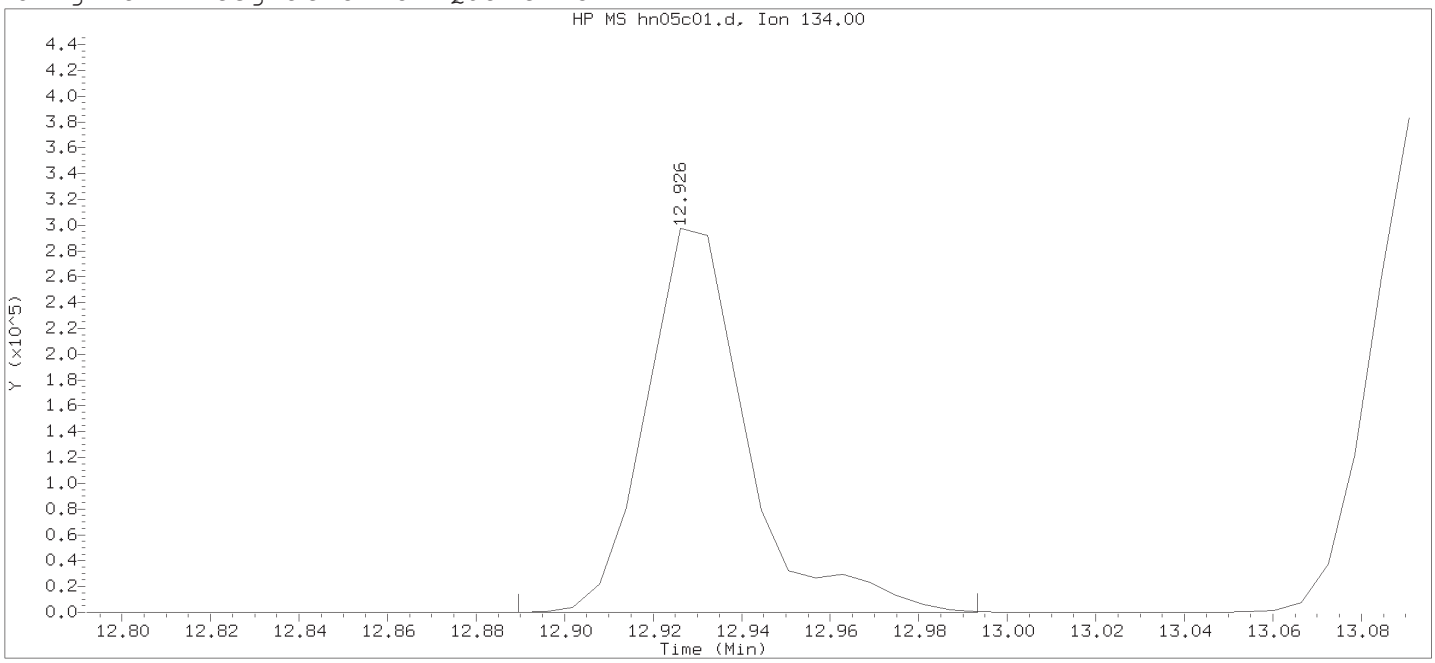
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

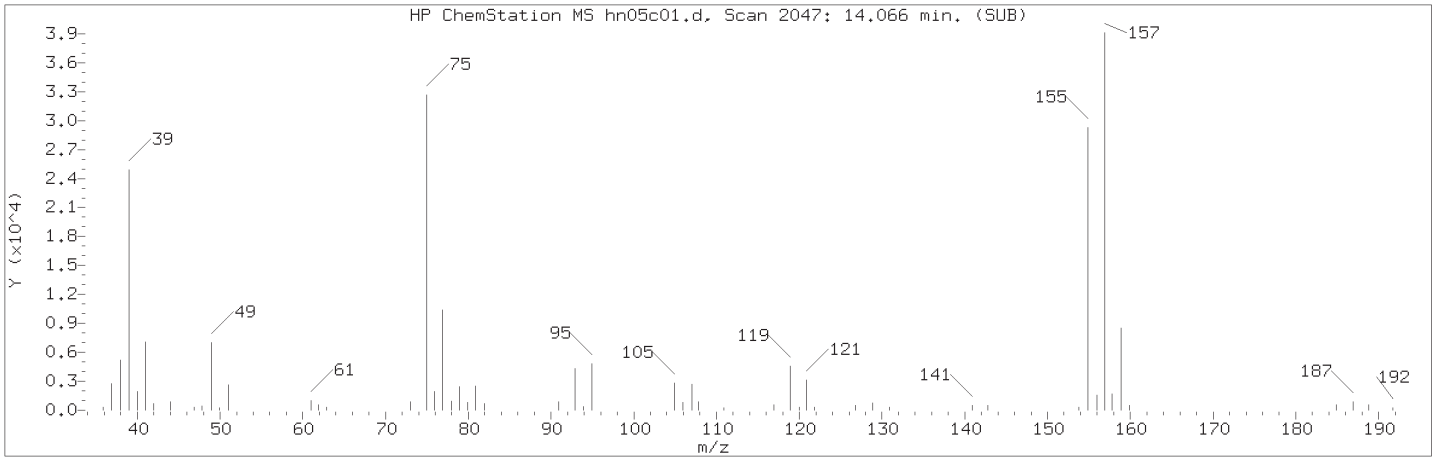
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 05-NOV-2018 20:36
Date, time and analyst ID of latest file update: 05-Nov-2018 20:36 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

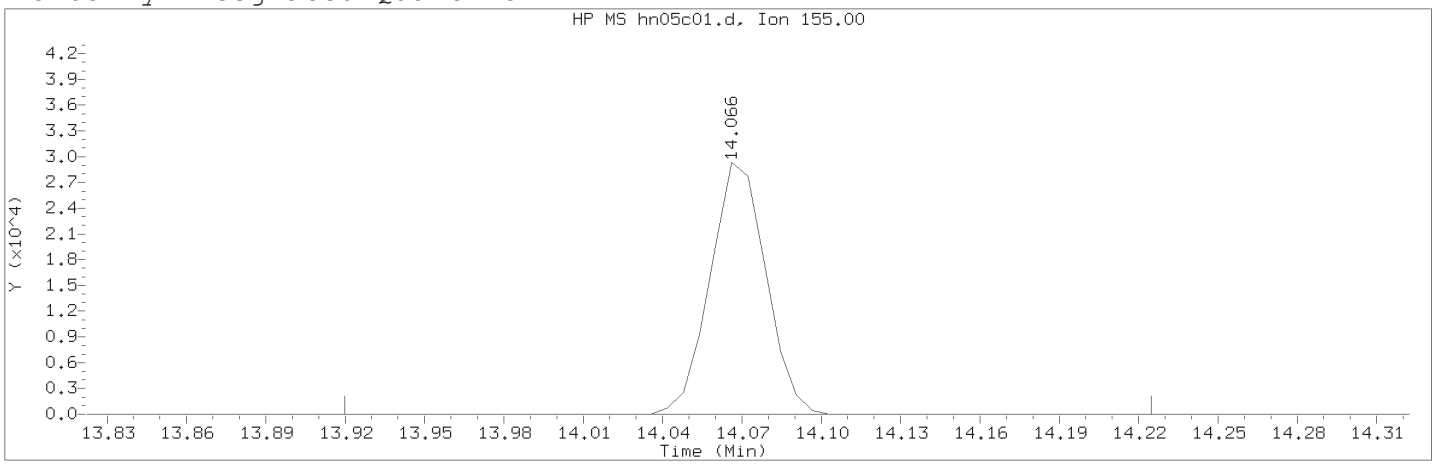
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 134.00
Area : 468421
On-column Amount (ng) : 10.5136
Integration start scan : 1853 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

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

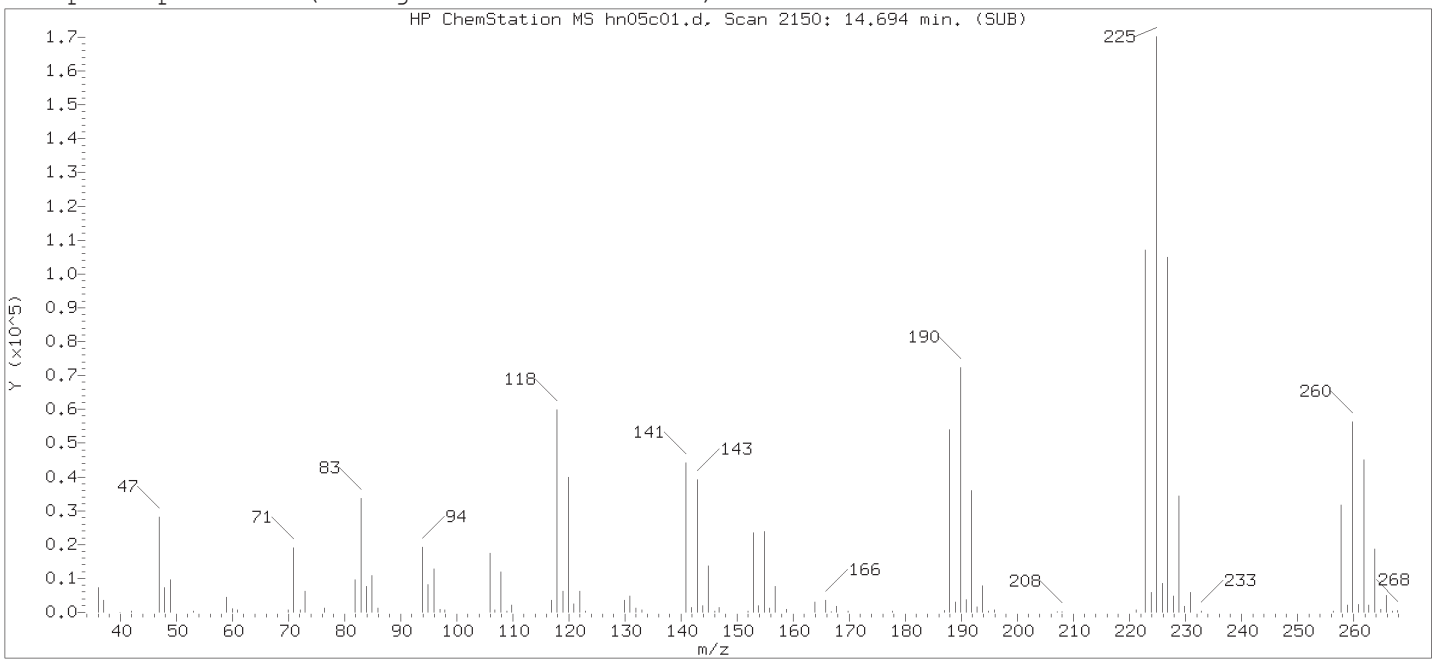
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2047
Retention Time (minutes): 14.066
Quant Ion : 155.00
Area (flag) : 42745M
On-Column Amount (ng) : 8.4585
Integration start scan : 2022 Integration stop scan: 2072
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

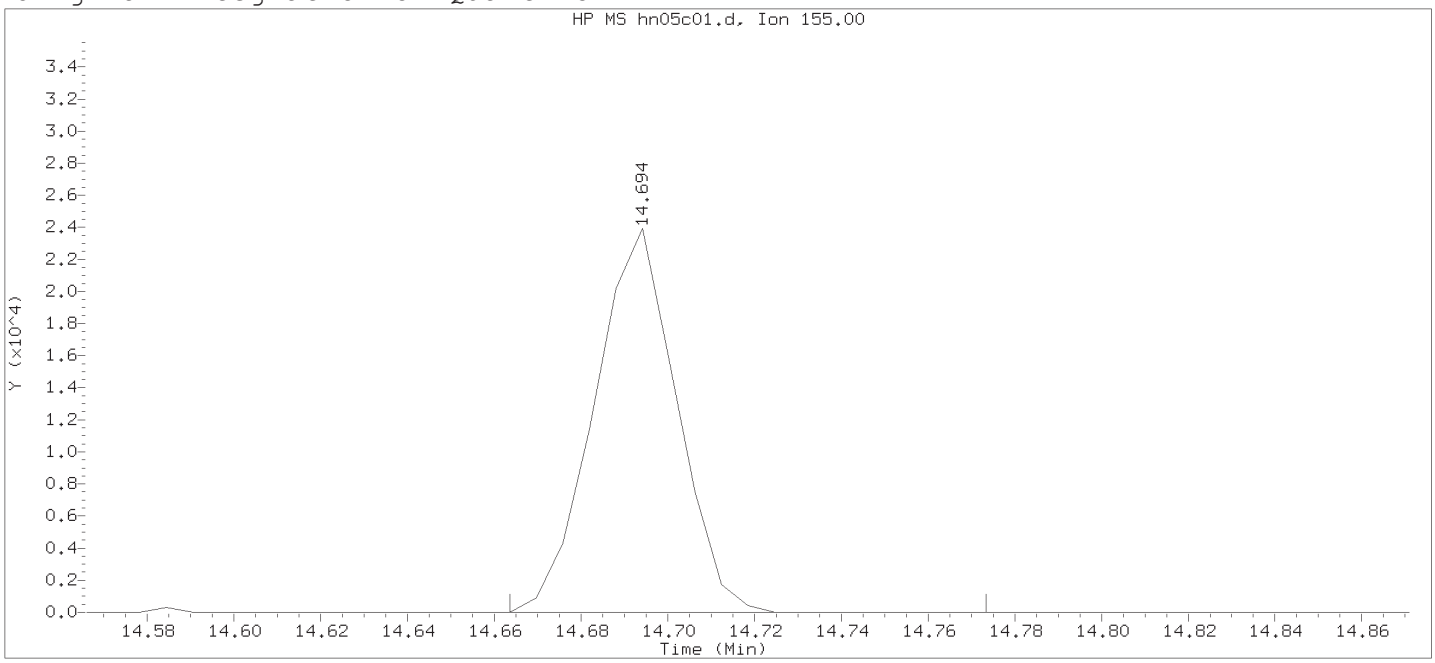
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 20:53.
Target 3.5 esignature user ID: jgc14951

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

Analysis Summary for GC/MS Volatiles

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
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

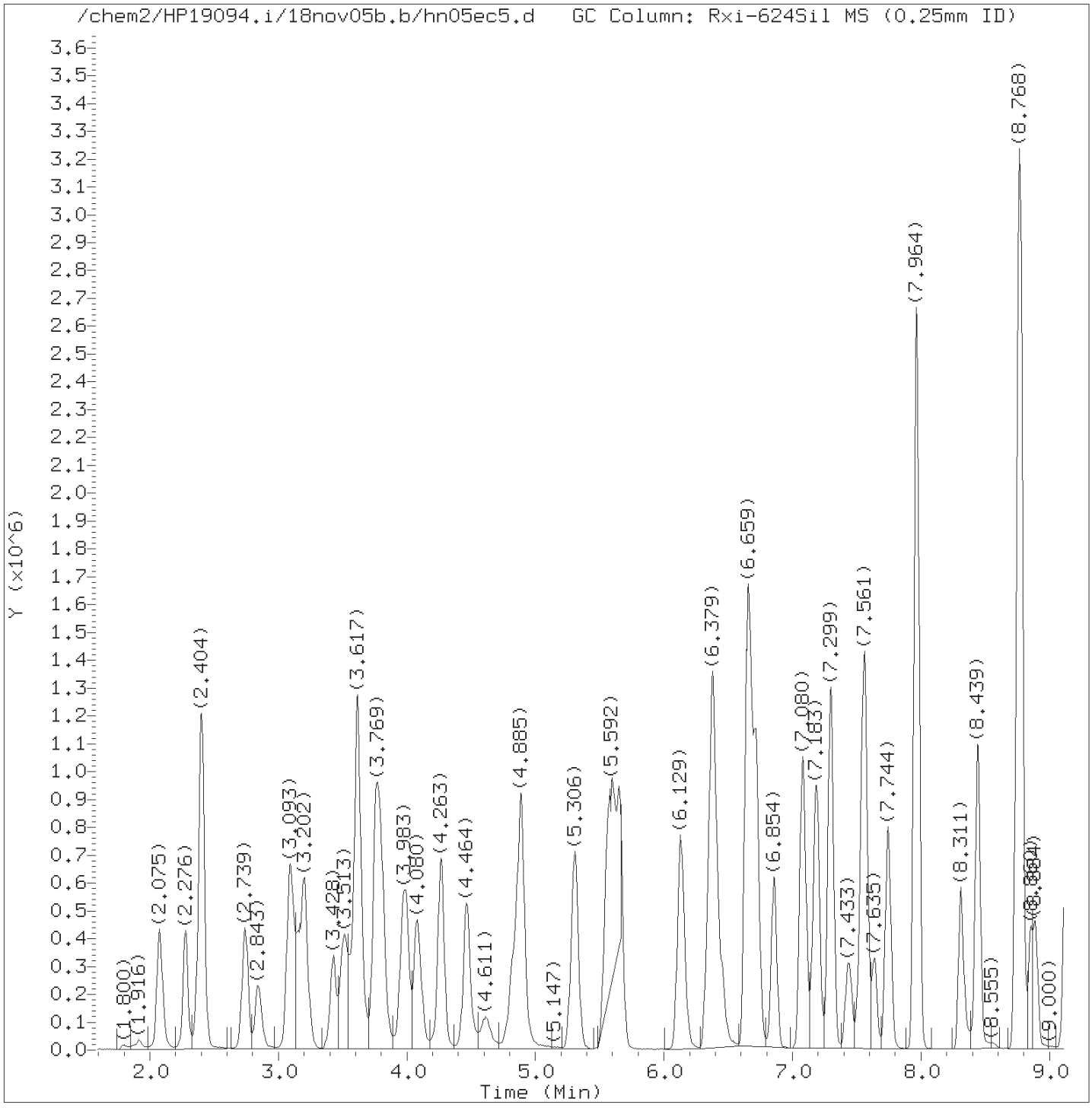
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
84) trans-1,3-Dichloropropene	(3)	10.268(0.000)	75	525507	9.970	9.97			0.06	0.5
88) 1,1,2-Trichloroethane	(3)	10.475(-0.000)	97	299981	9.530	9.53			0.06	0.5
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)

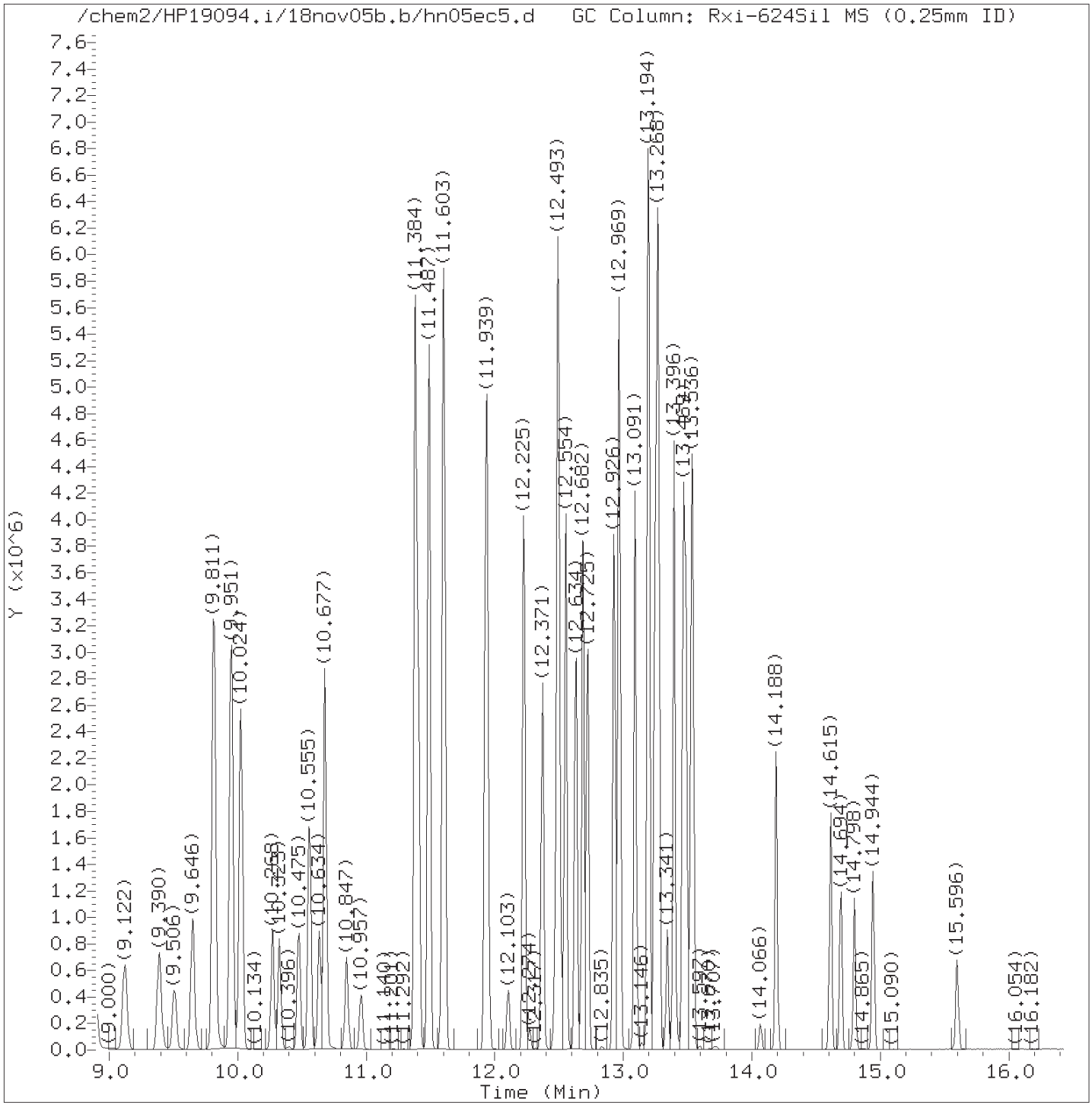
Target Revision 3.5

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

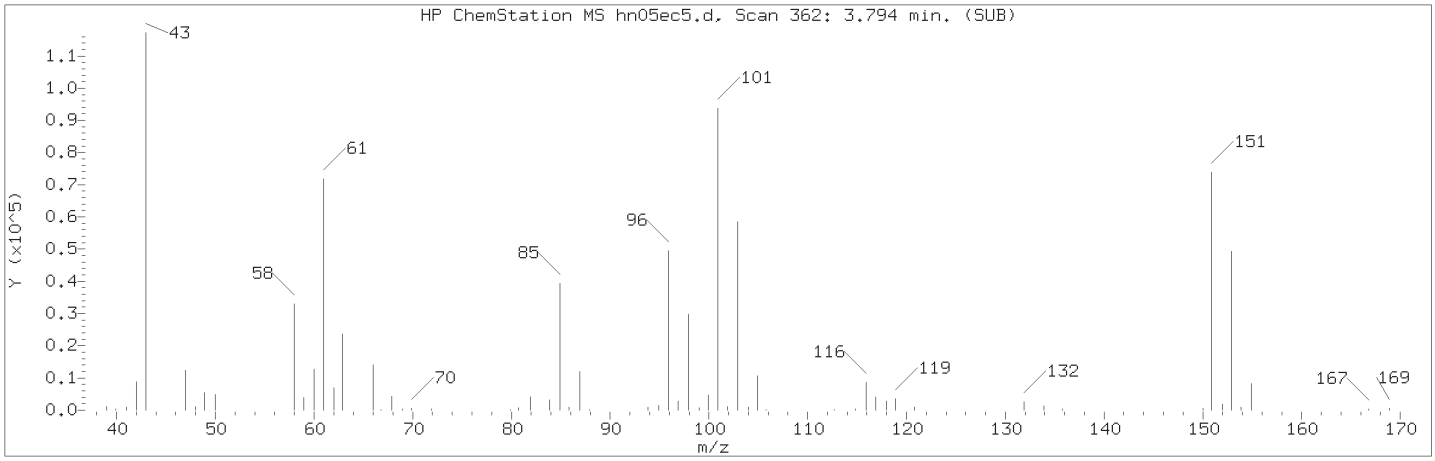
Sample Name: SECC010 Lab Sample ID: SECC010

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

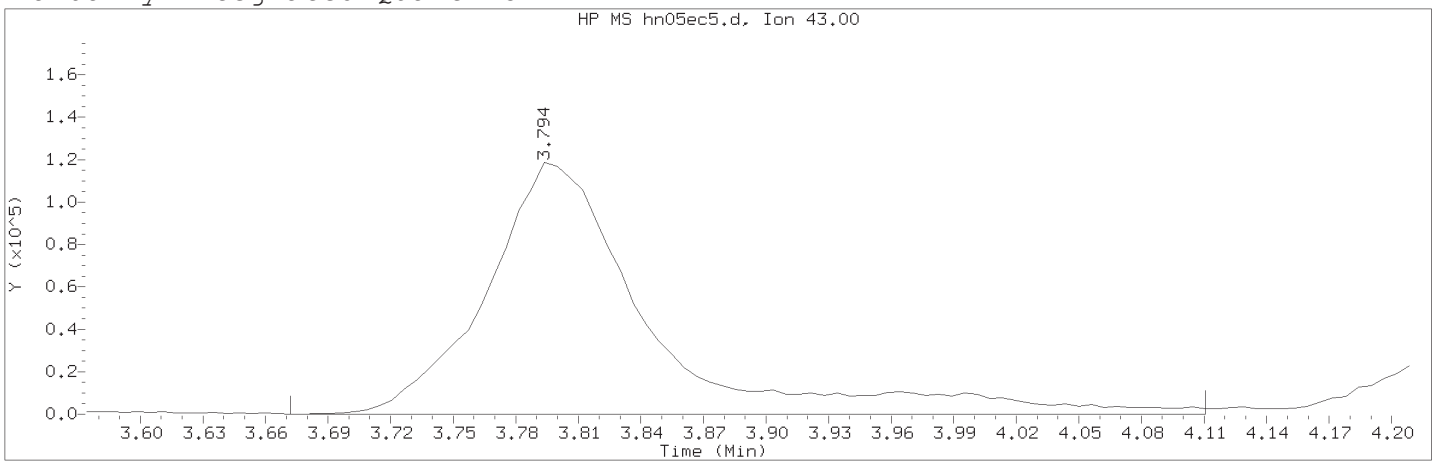
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

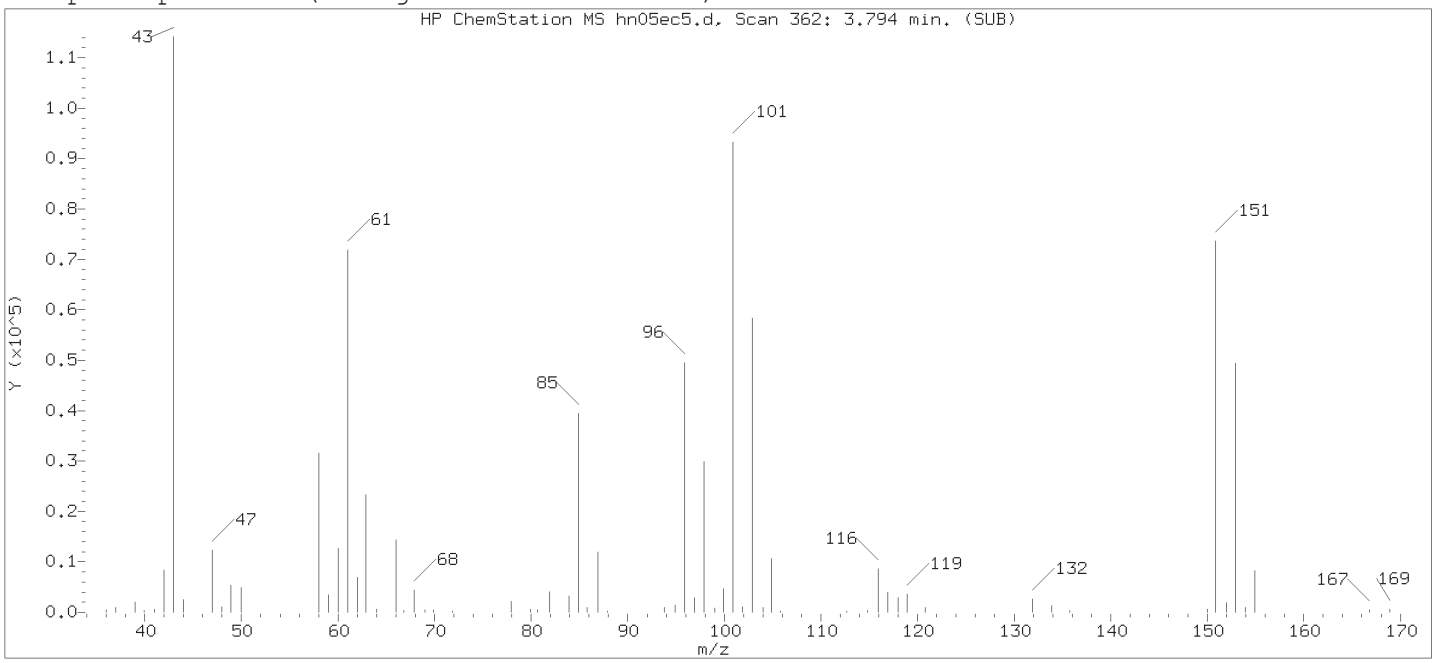
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 641257M
On-Column Amount (ng) : 88.7531
Integration start scan : 341 Integration stop scan: 413
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

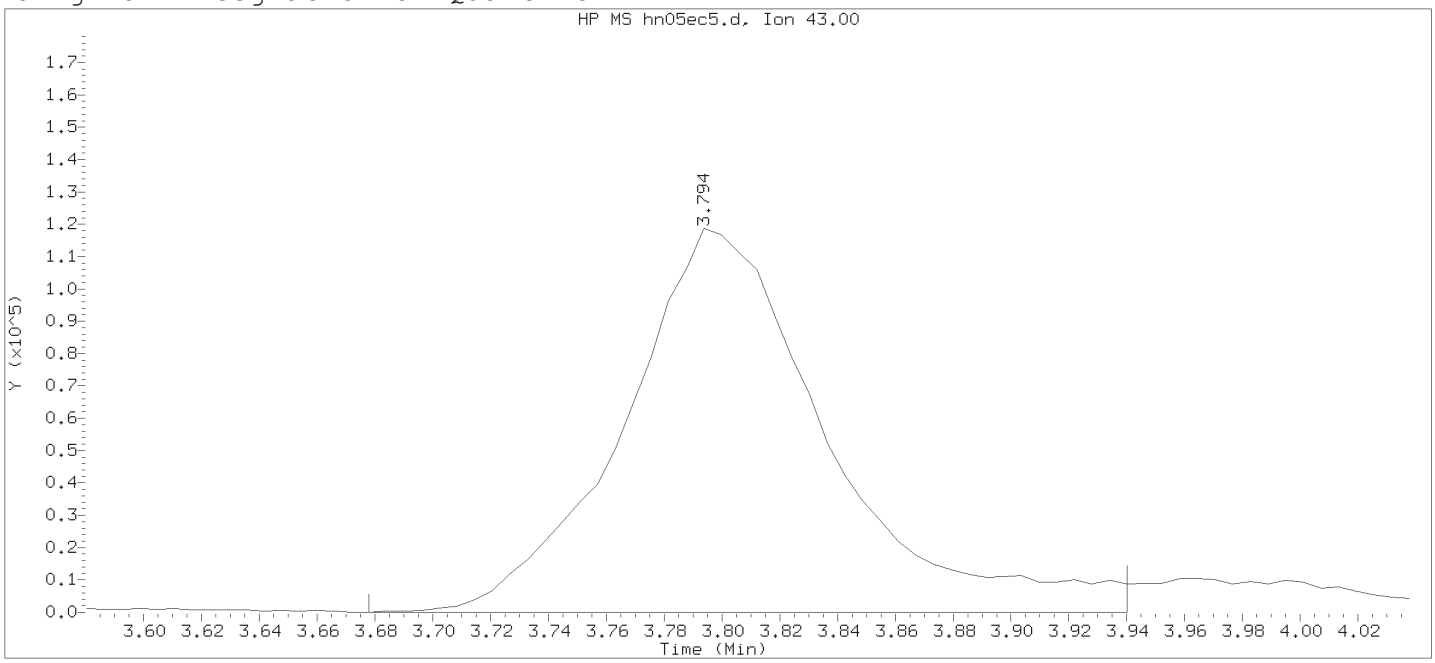
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

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

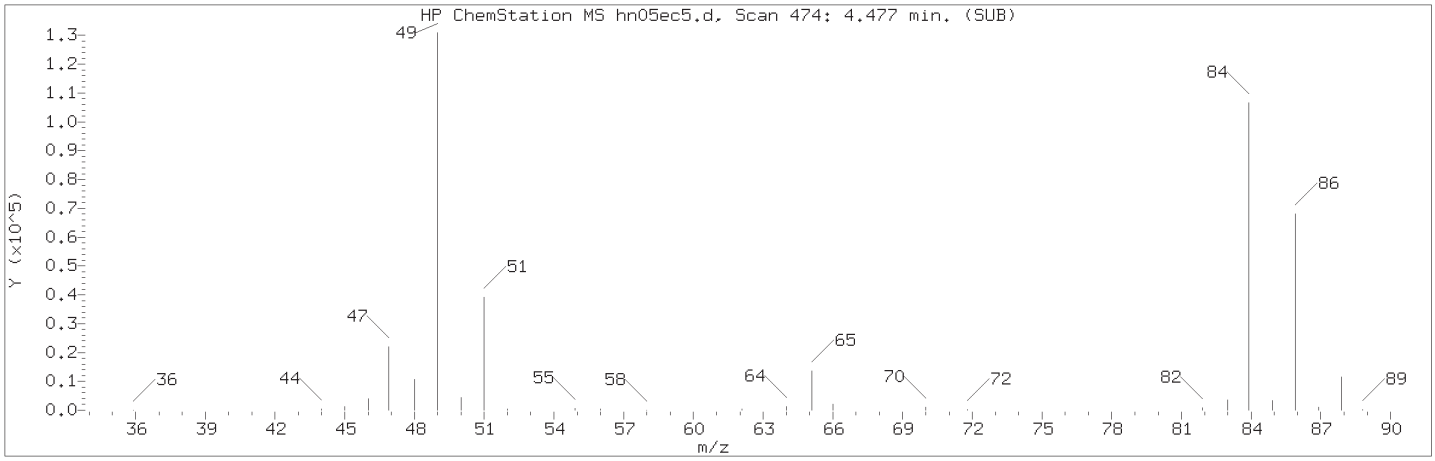
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

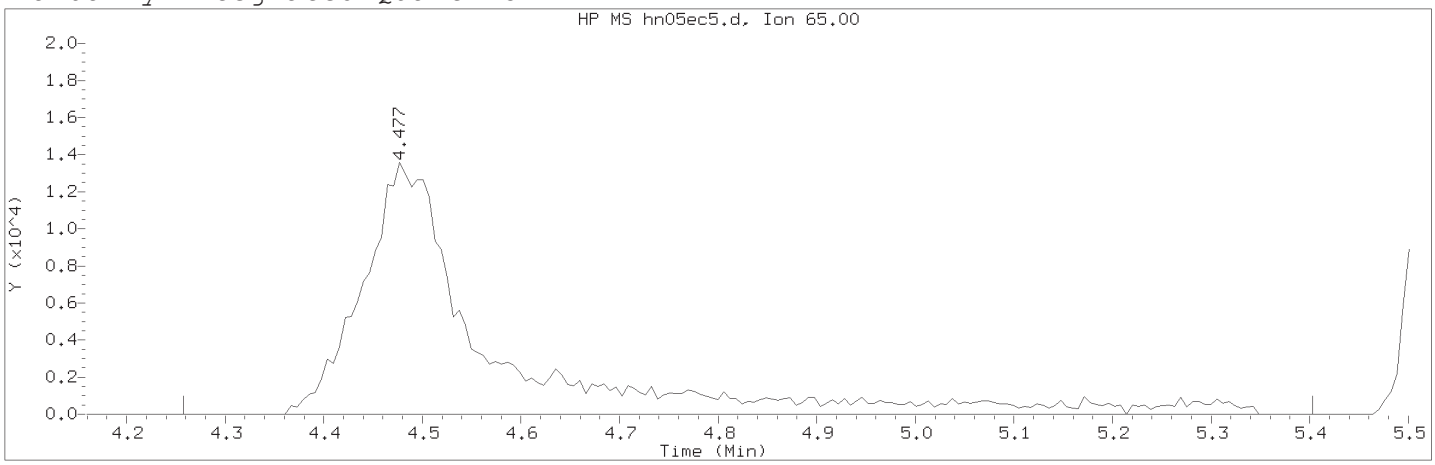
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area : 576857
On-column Amount (ng) : 82.5527
Integration start scan : 342 Integration stop scan: 385
Y at integration start : 0 Y at integration end: 0

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

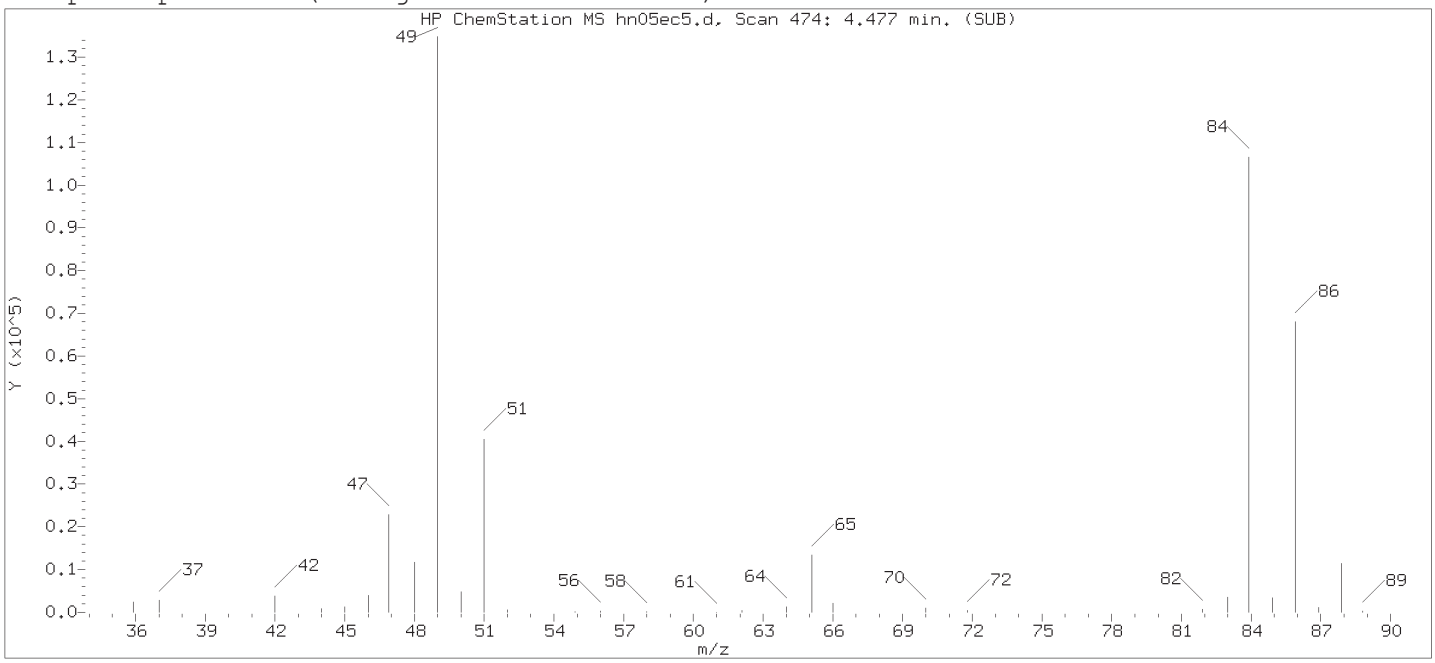
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 121222M
On-Column Amount (ng) : 50.0000
Integration start scan : 437 Integration stop scan: 625
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

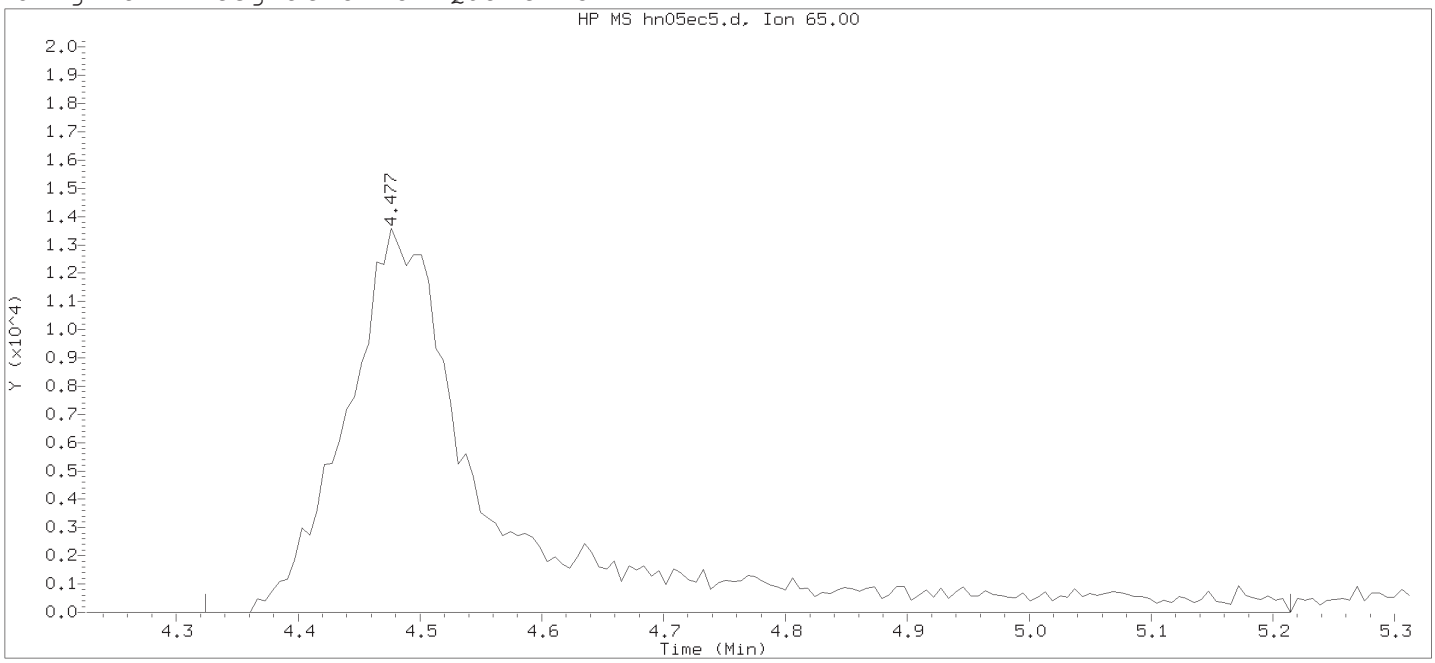
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

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

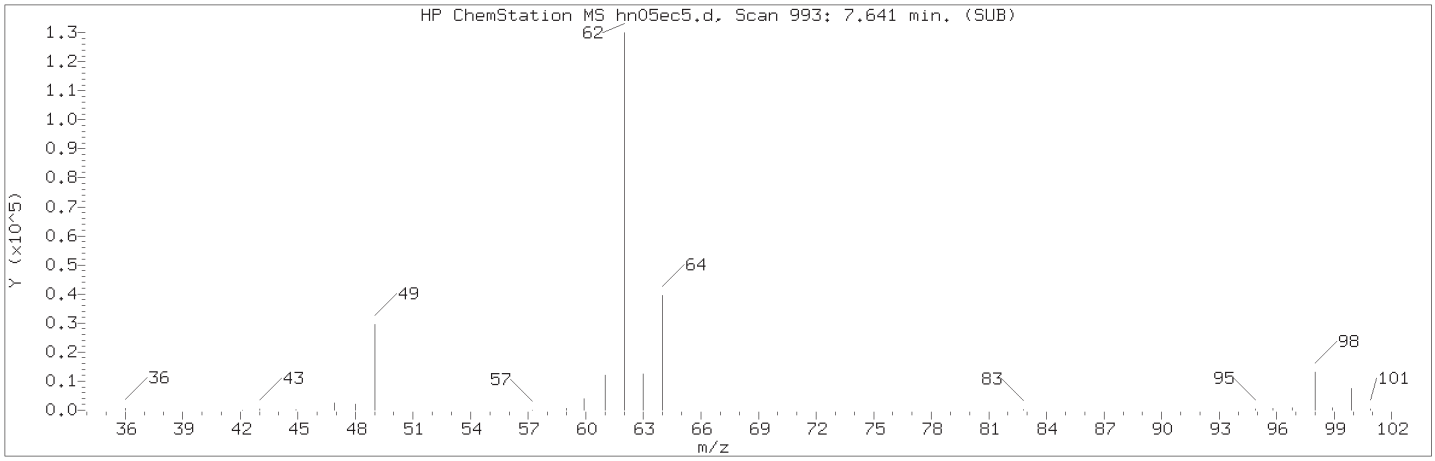
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

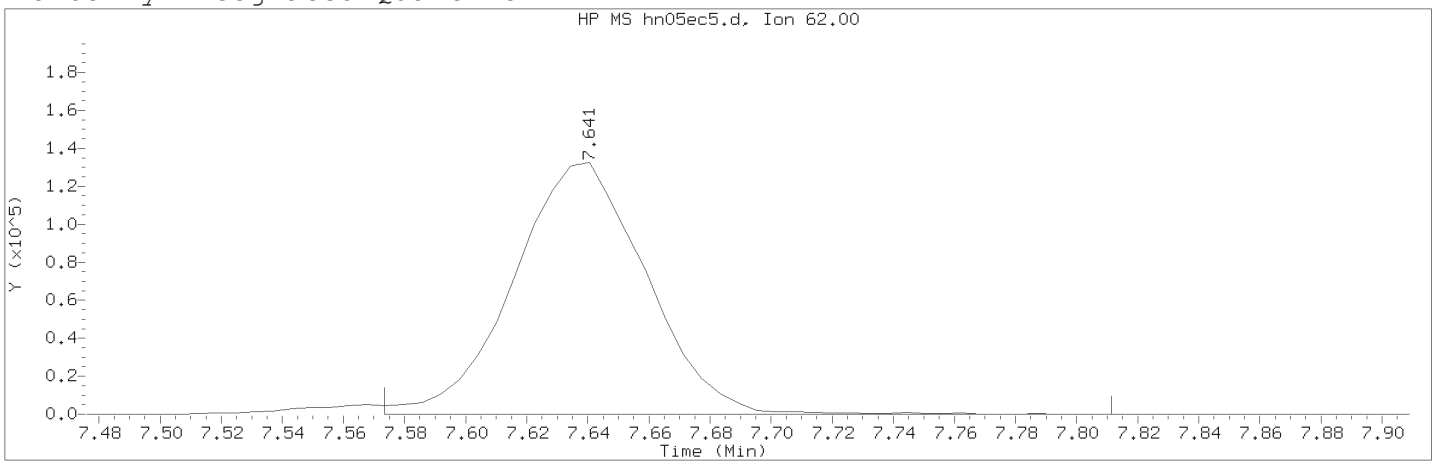
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area : 117238
On-column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

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

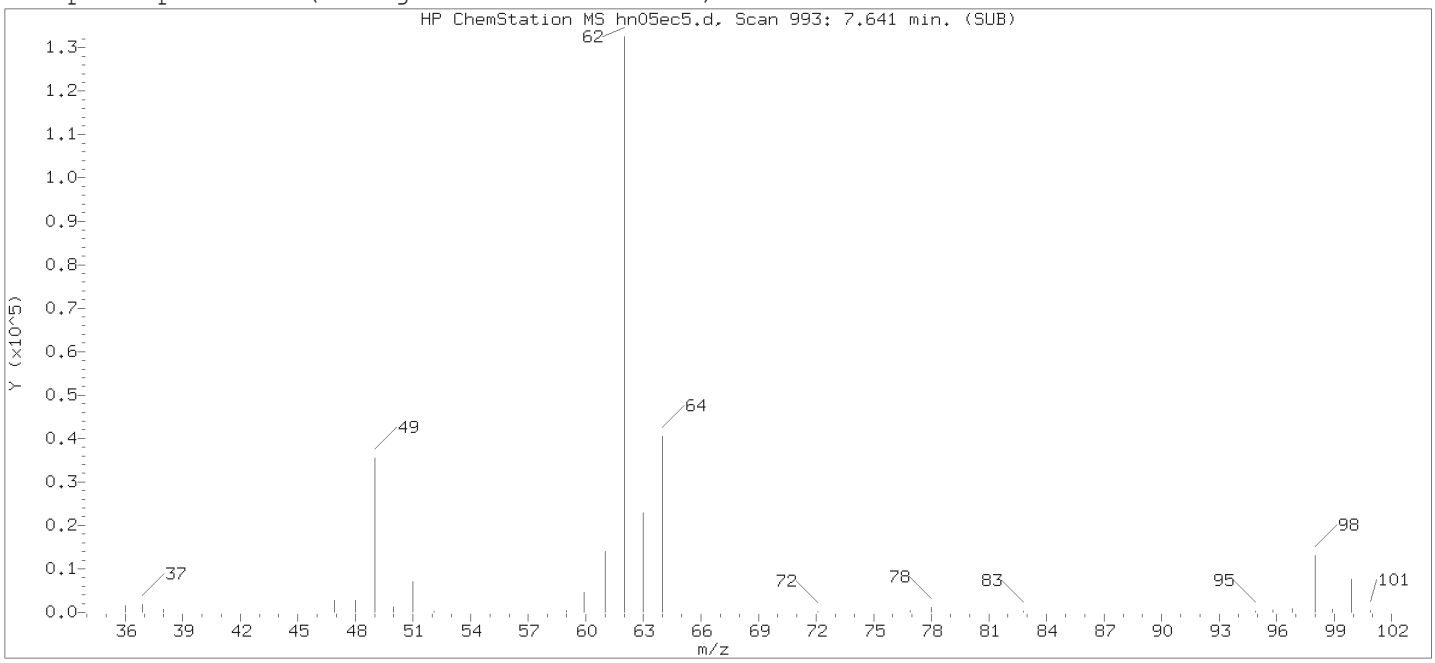
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area (flag) : 399847M
On-Column Amount (ng) : 7.7809
Integration start scan : 981 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

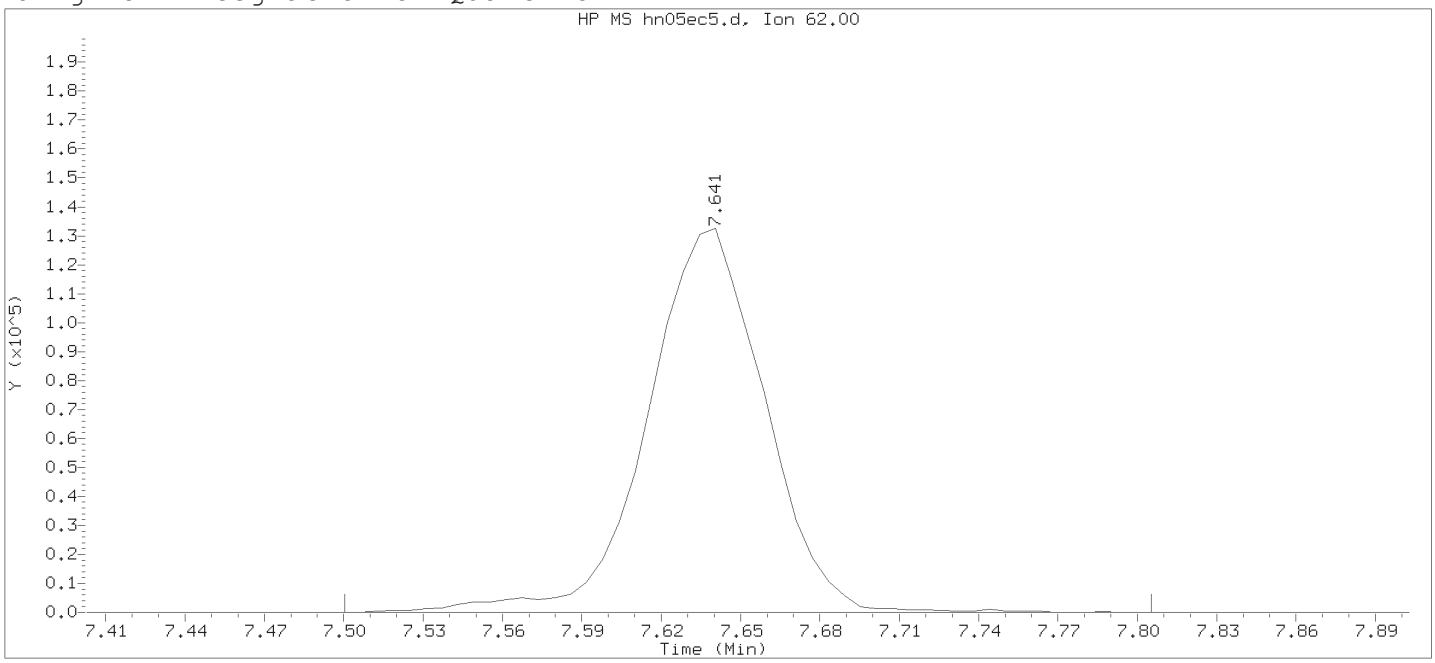
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

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

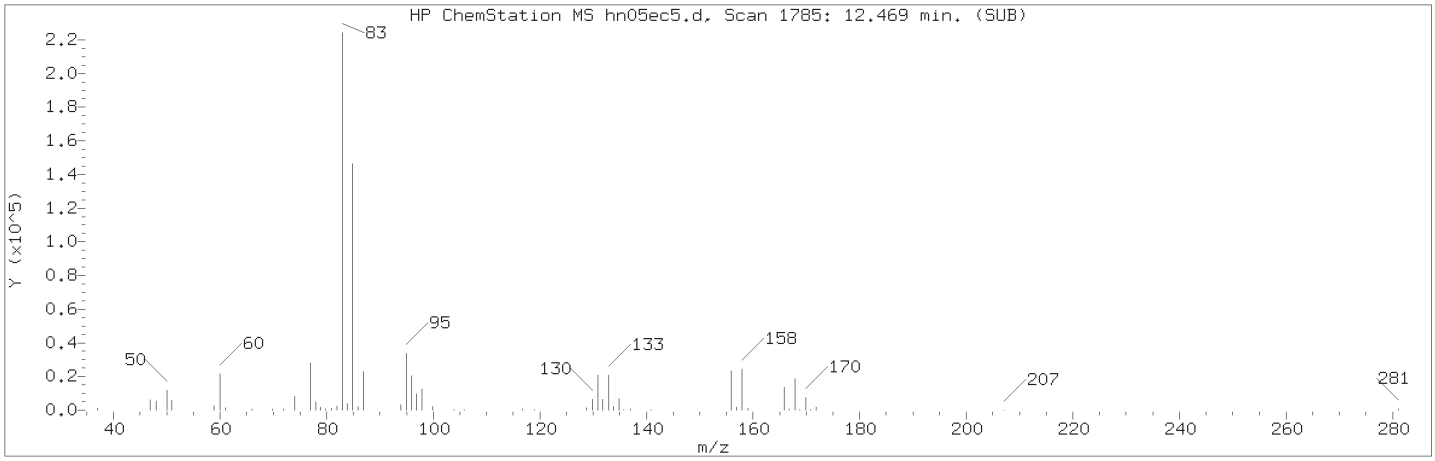
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789
Calibration date and time: 05-NOV-2018 22:04
Date, time and analyst ID of latest file update: 06-Nov-2018 07:19 Automation

Sample Name: SECC010 Lab Sample ID: SECC010

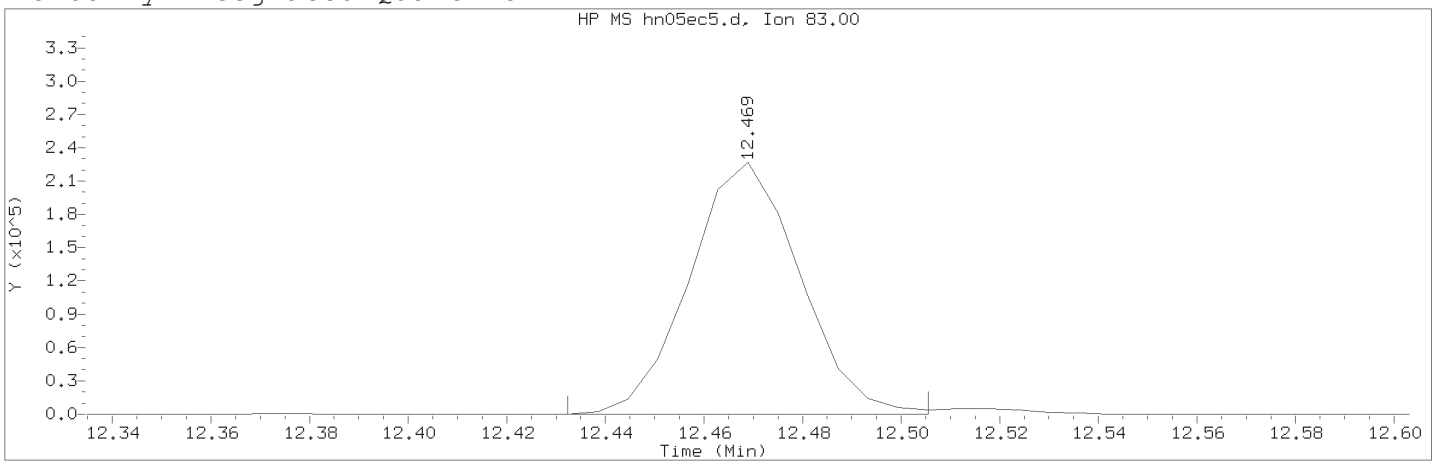
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area : 408576
On-column Amount (ng) : 7.9507
Integration start scan : 969 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: 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

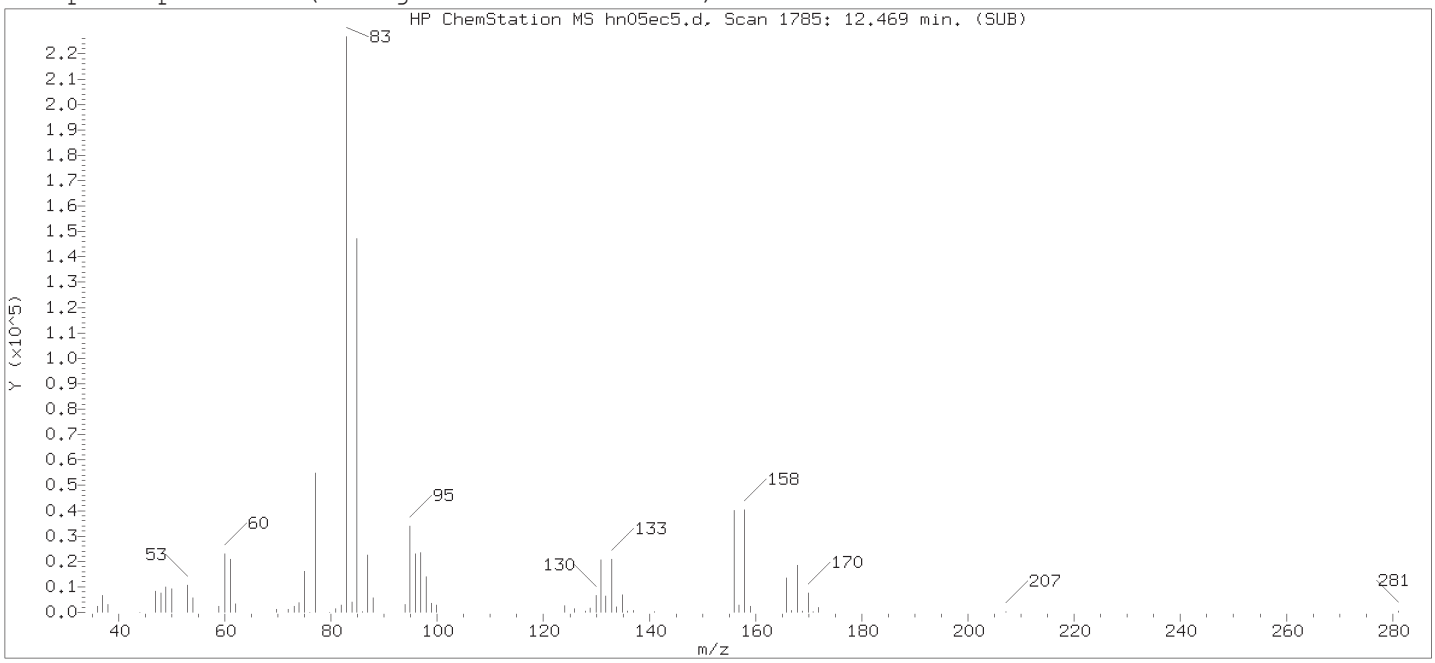
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 352122M
On-Column Amount (ng) : 9.7951
Integration start scan : 1778 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

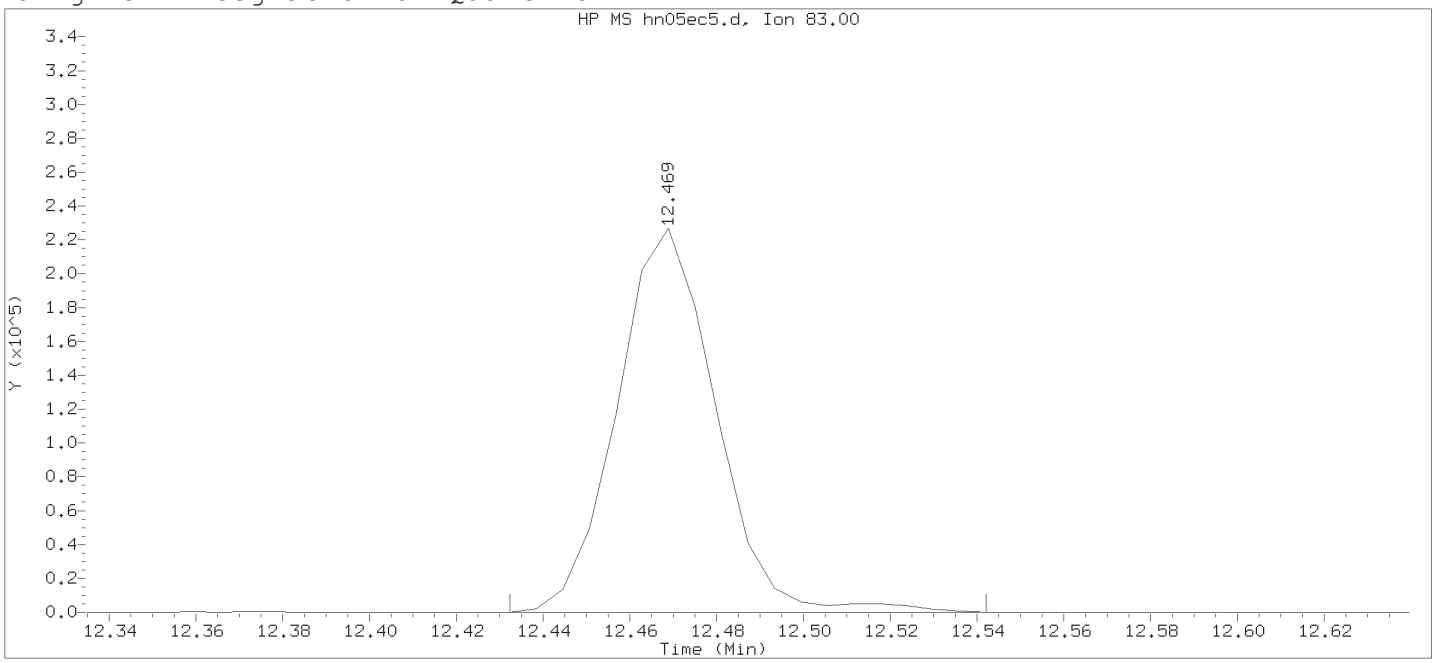
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 10:54.
Target 3.5 esignature user ID: jkh09052

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: jkhowe

Data File: /chem2/HP19094.i/18may02b.b/hy02t07.d

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng

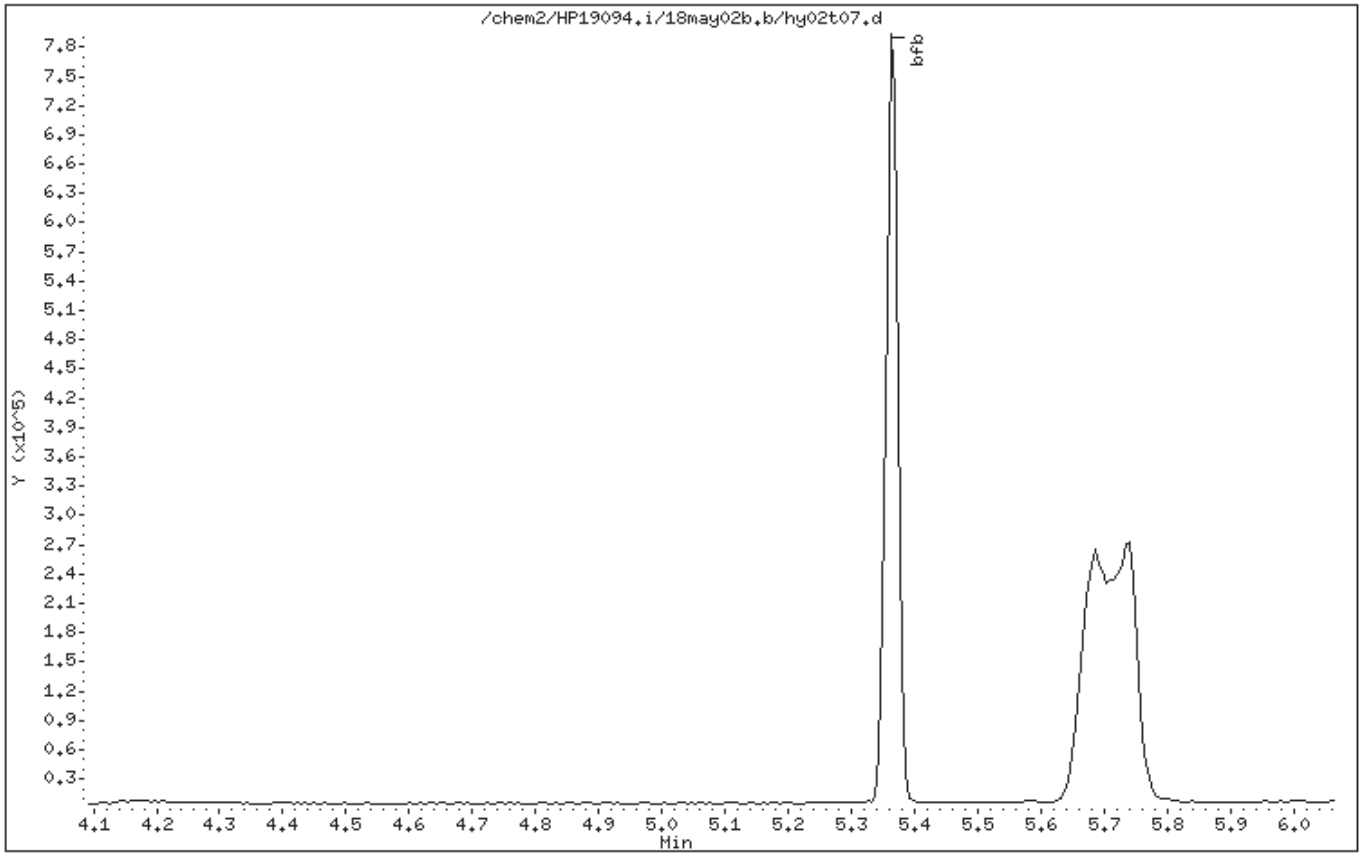
Instrument: HP19094.i

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

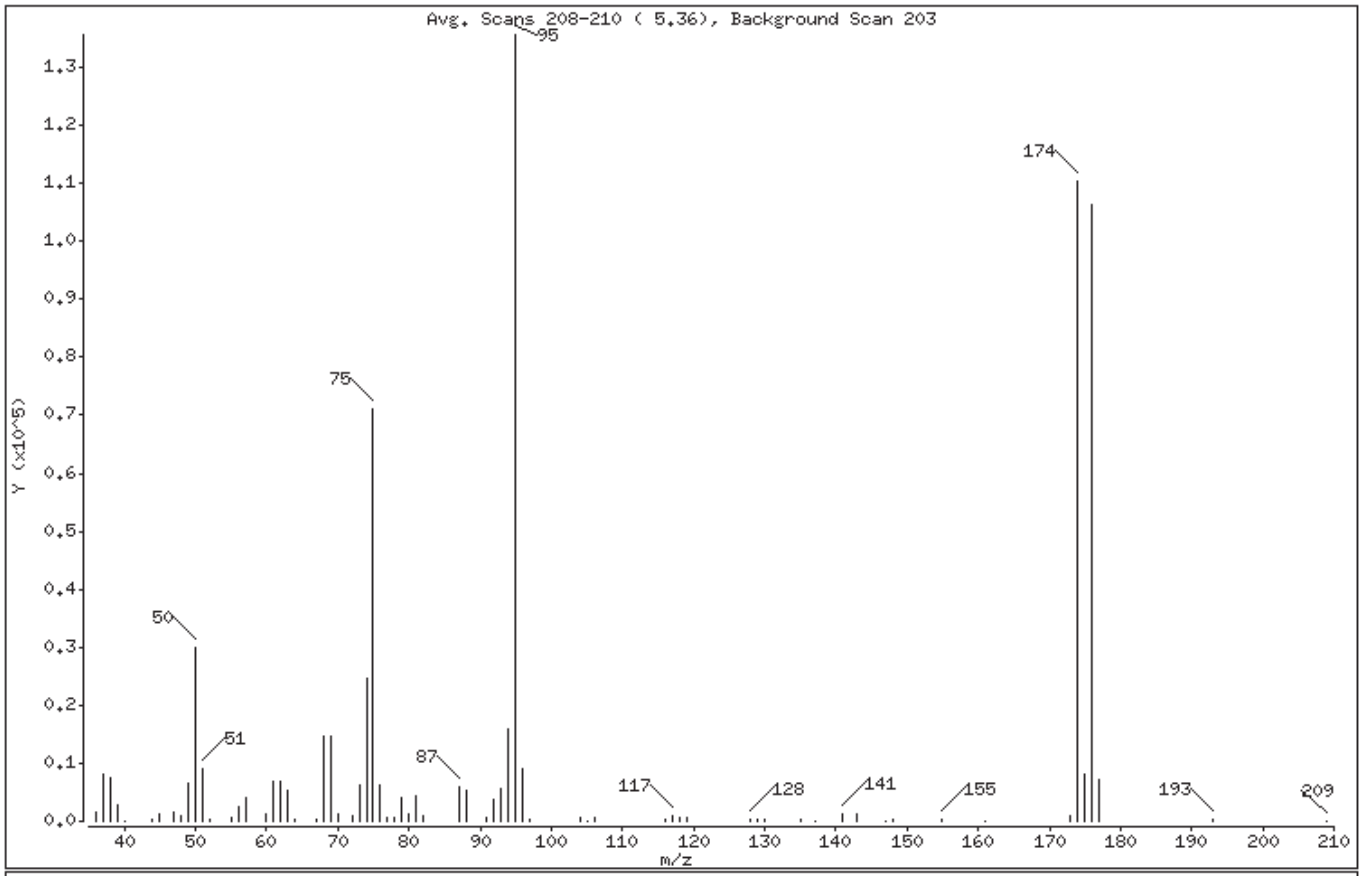
Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

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;;;;;

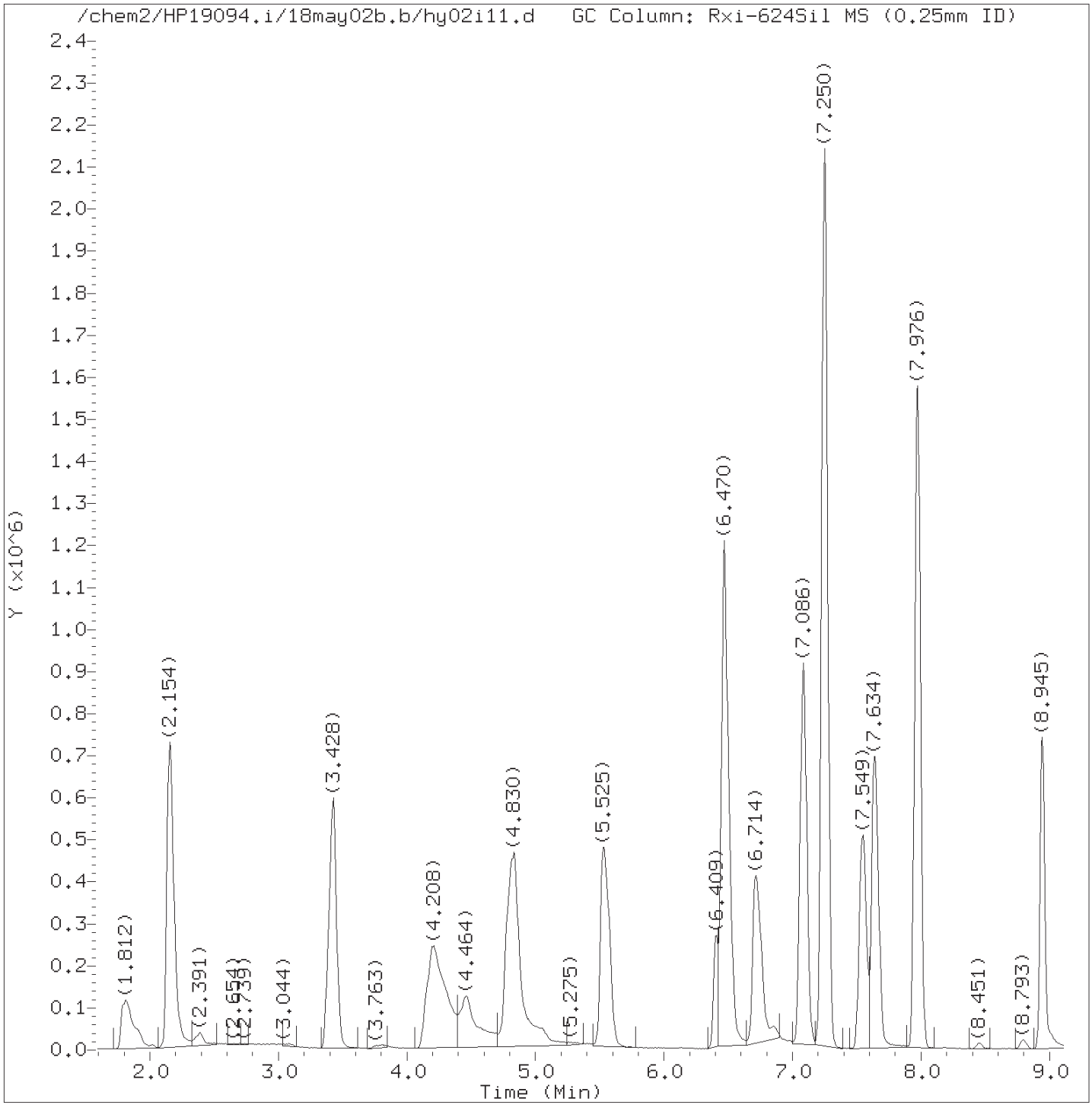
Operator: DVV10203

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)

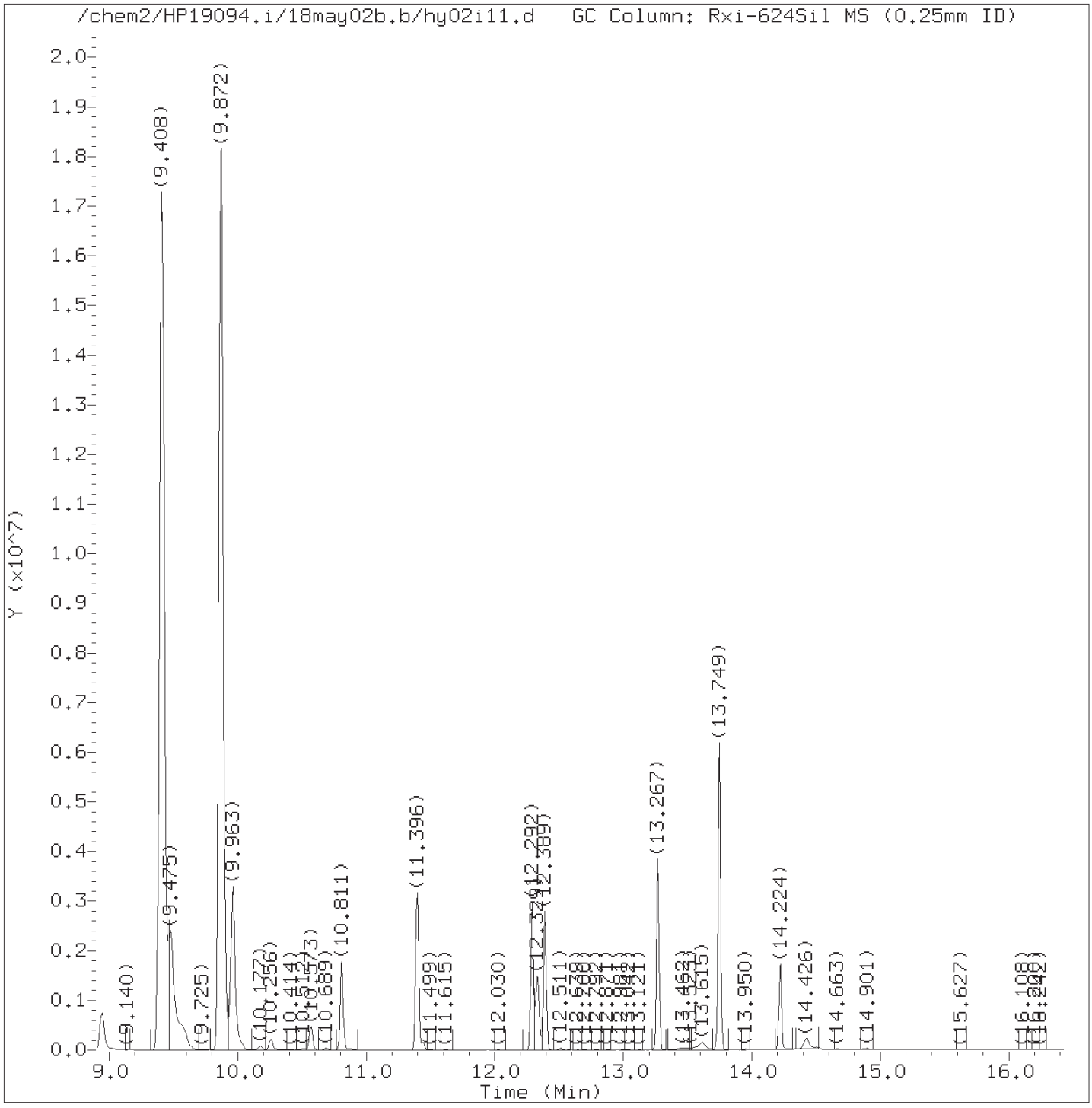
Target Revision 3.5

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

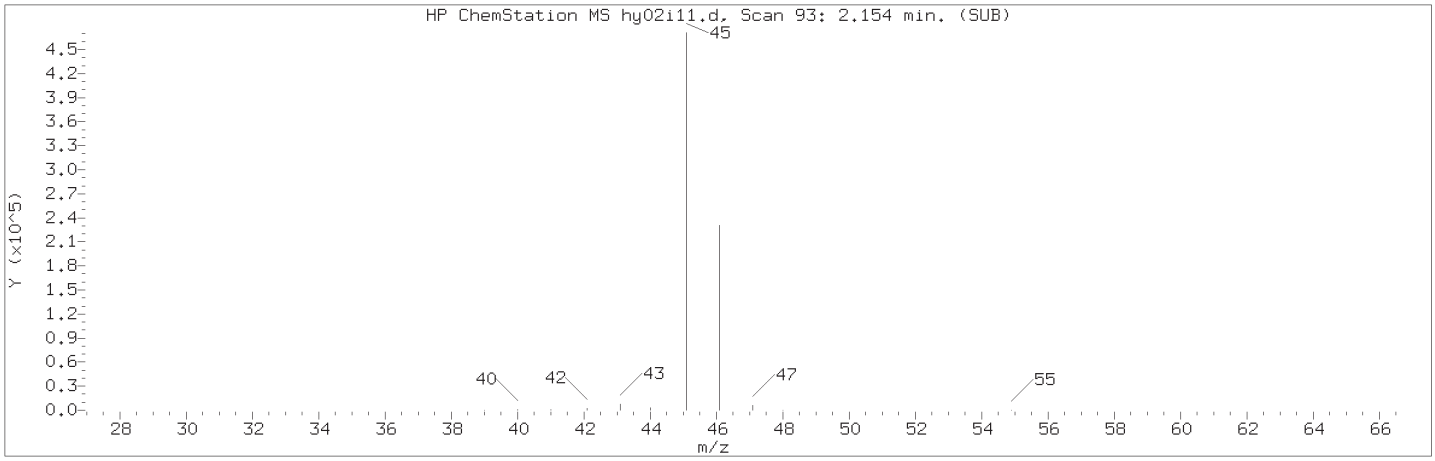
Sample Name: VSTD025 Lab Sample ID: VSTD025

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

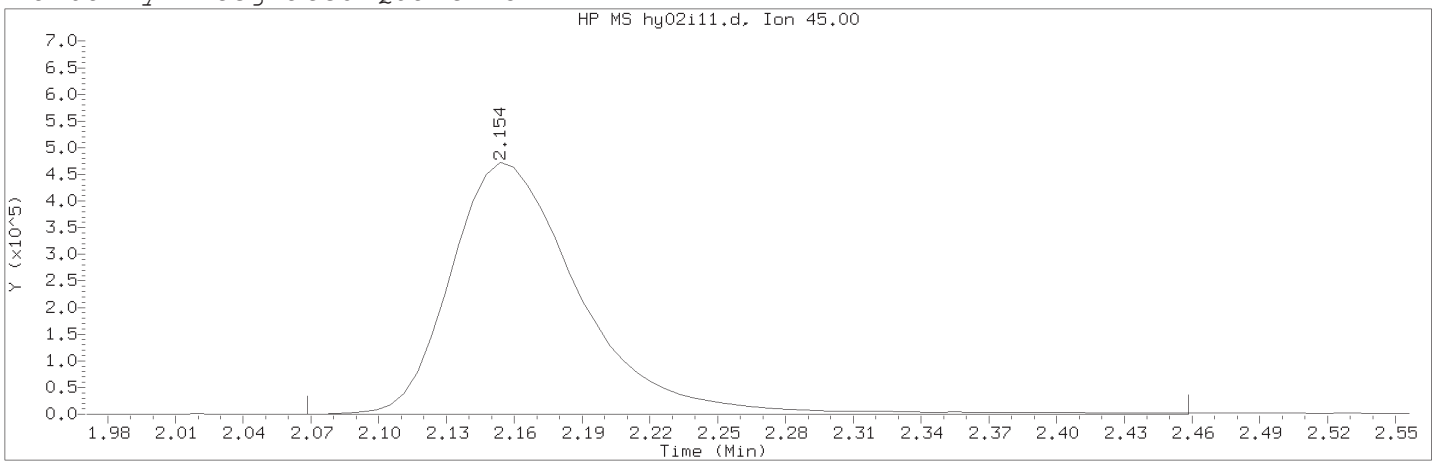
M = Compound was manually integrated.
* = Compound is an internal standard.

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

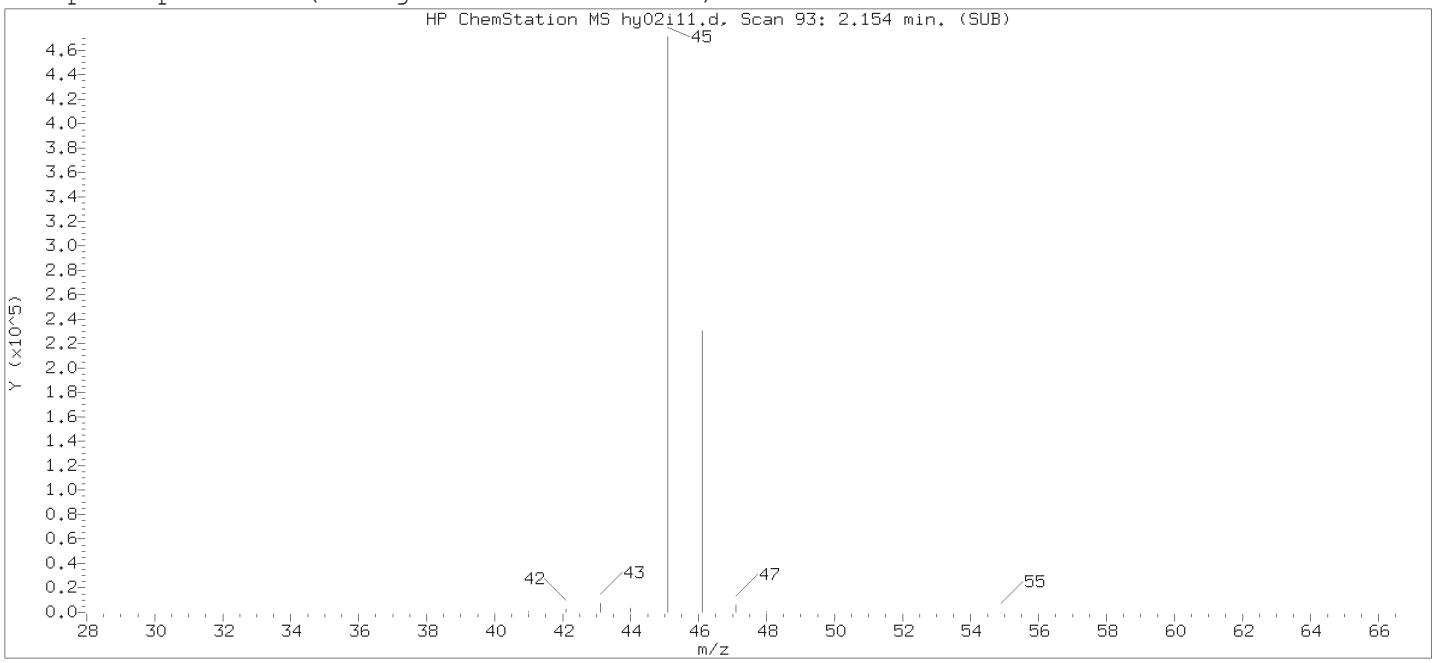
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 1873450M
On-Column Amount (ng) : 25.3318
Integration start scan : 78 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

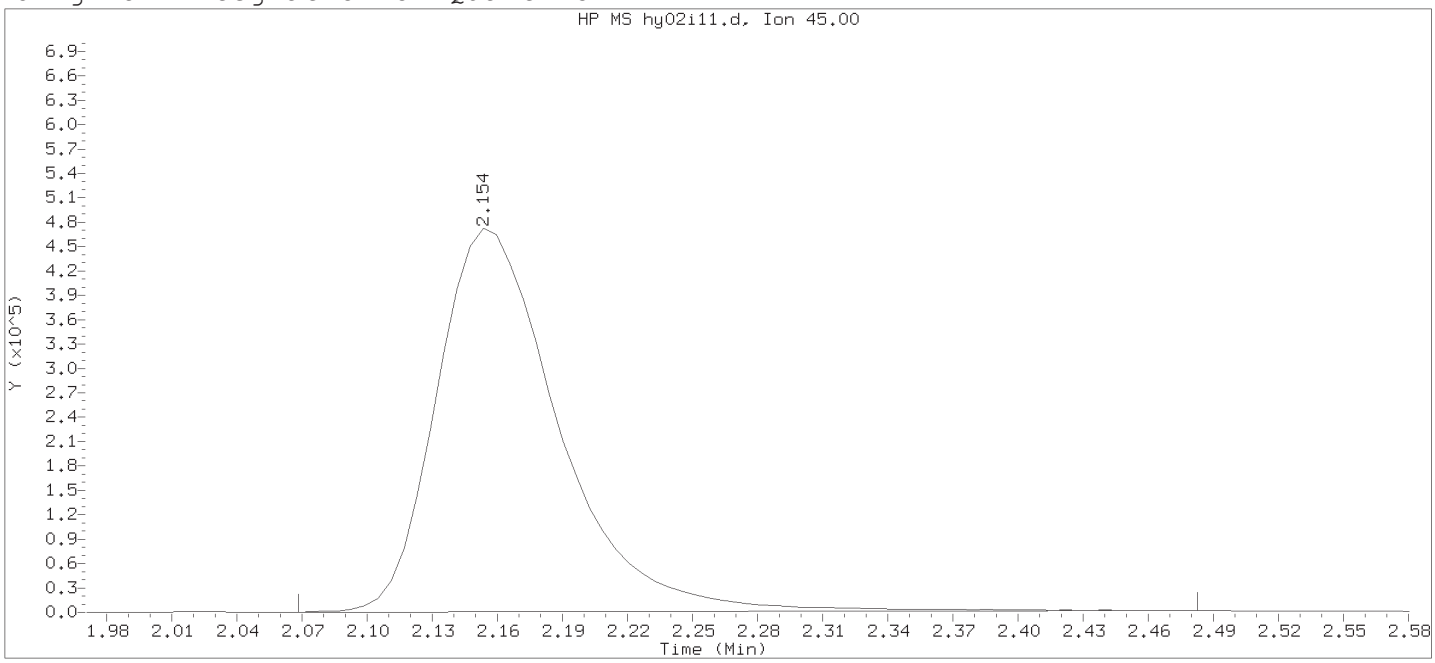
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

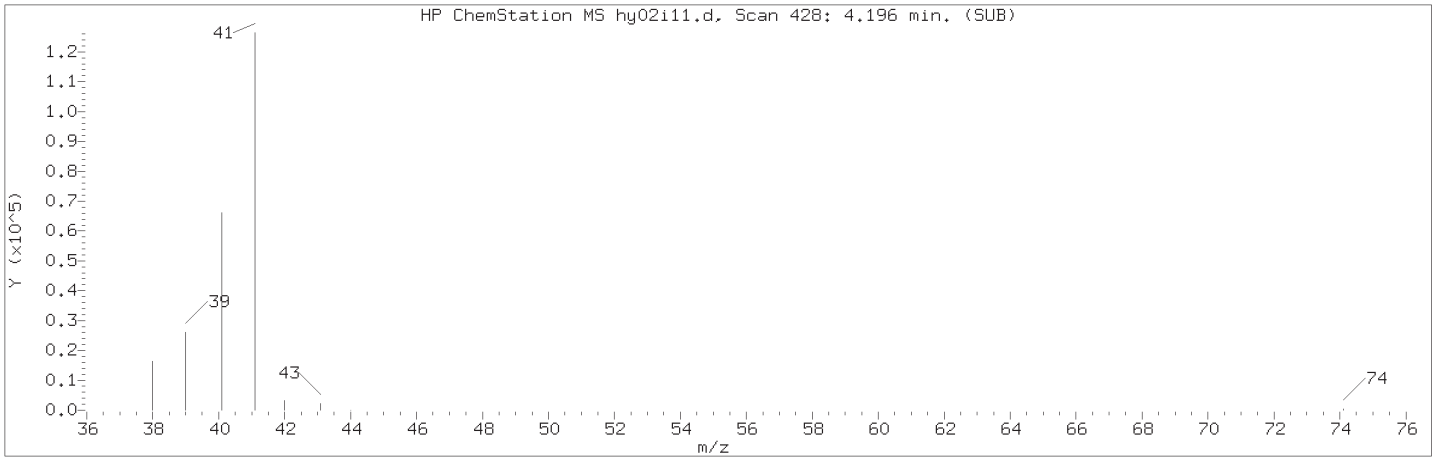
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

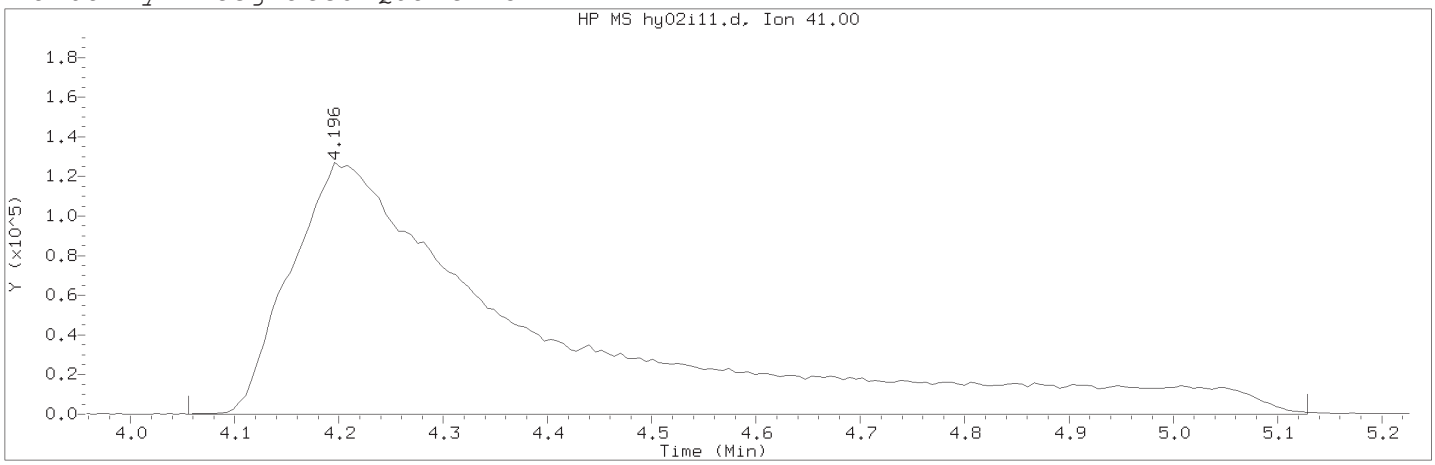
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 93		
Retention Time (minutes)	: 2.154		
Quant Ion	: 45.00		
Area	: 1849760		
On-column Amount (ng)	: 24.0567		
Integration start scan	: 78	Integration stop scan:	146
Y at integration start	: 0	Y at integration end:	2143

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

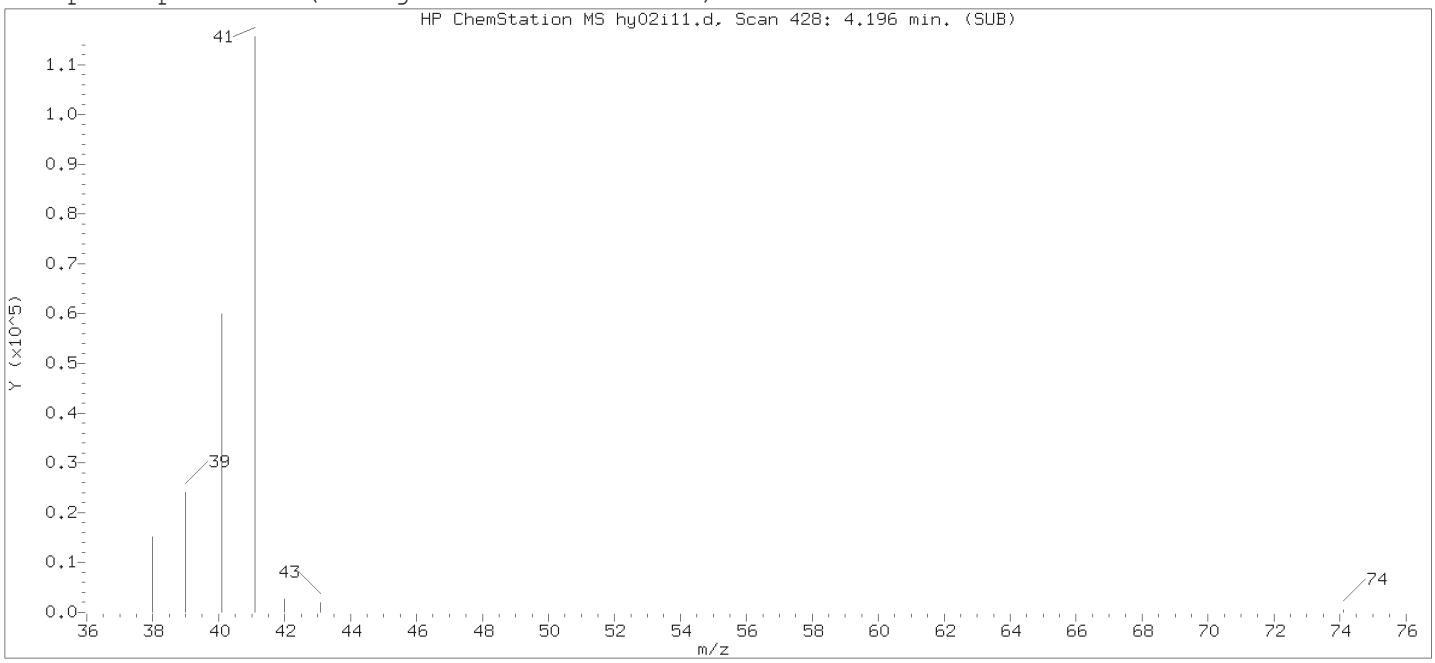
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area (flag) : 2114112M
On-Column Amount (ng) : 889.4345
Integration start scan : 404 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

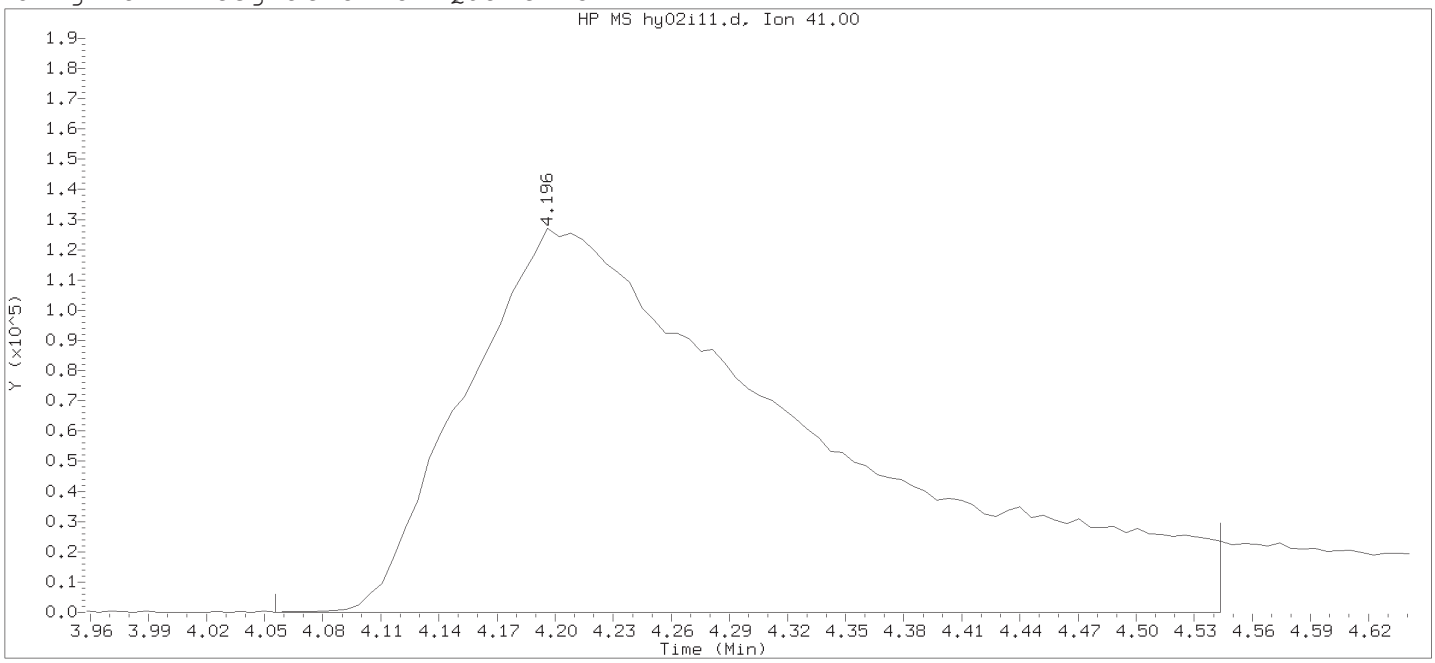
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

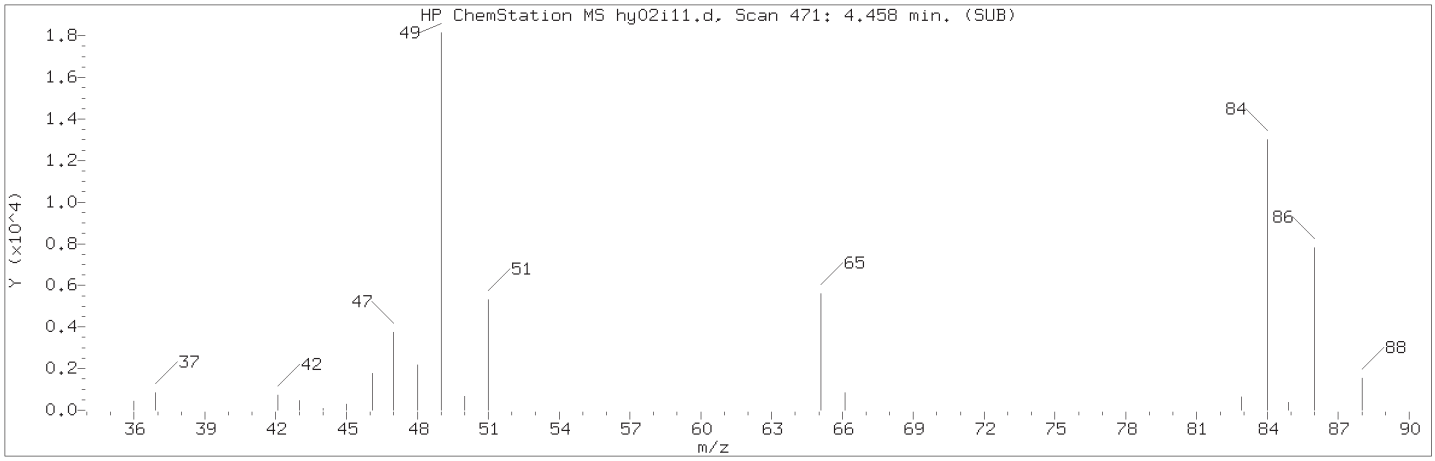
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

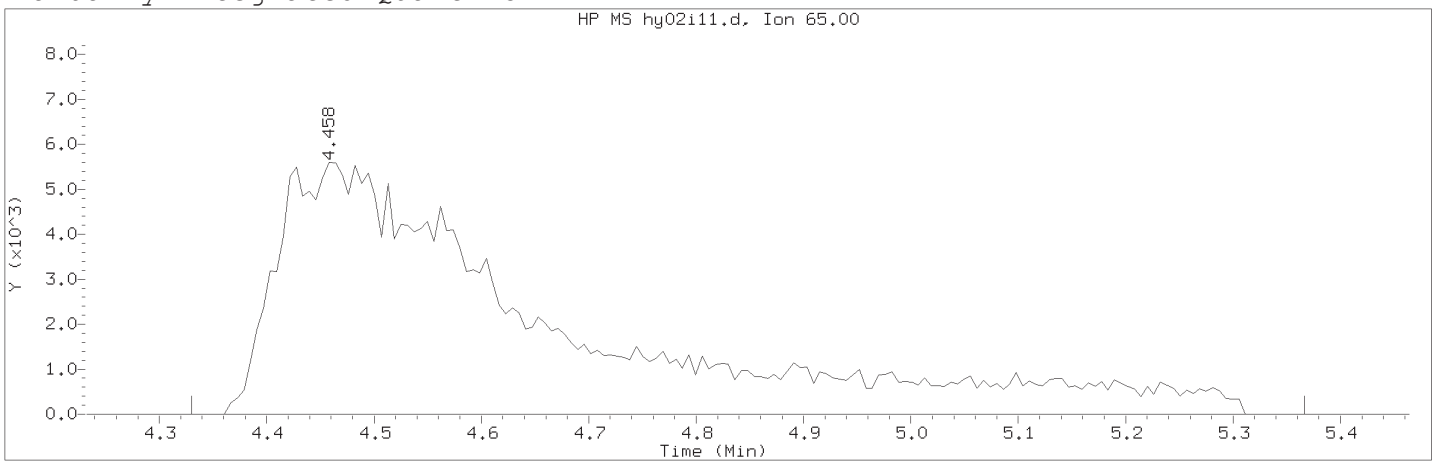
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area : 1586970
On-column Amount (ng) : 557.8895
Integration start scan : 404 Integration stop scan: 484
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV

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

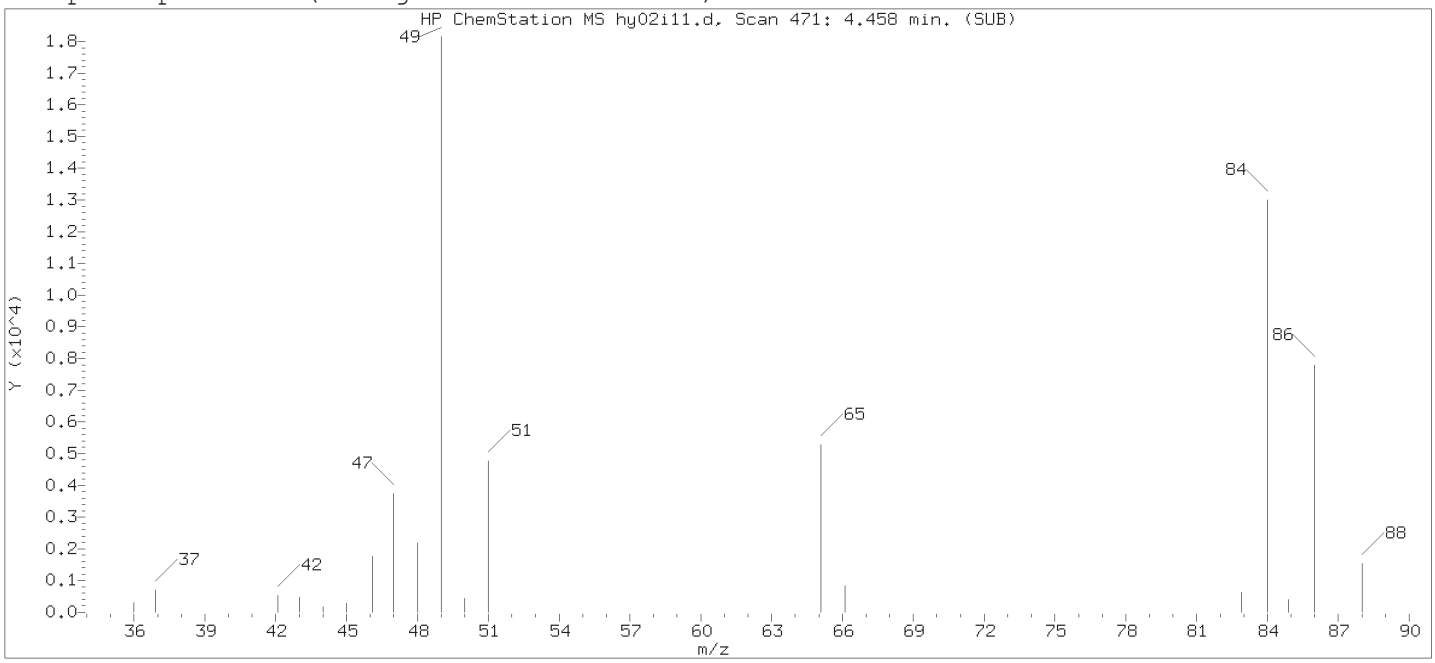
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 98437M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 619
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

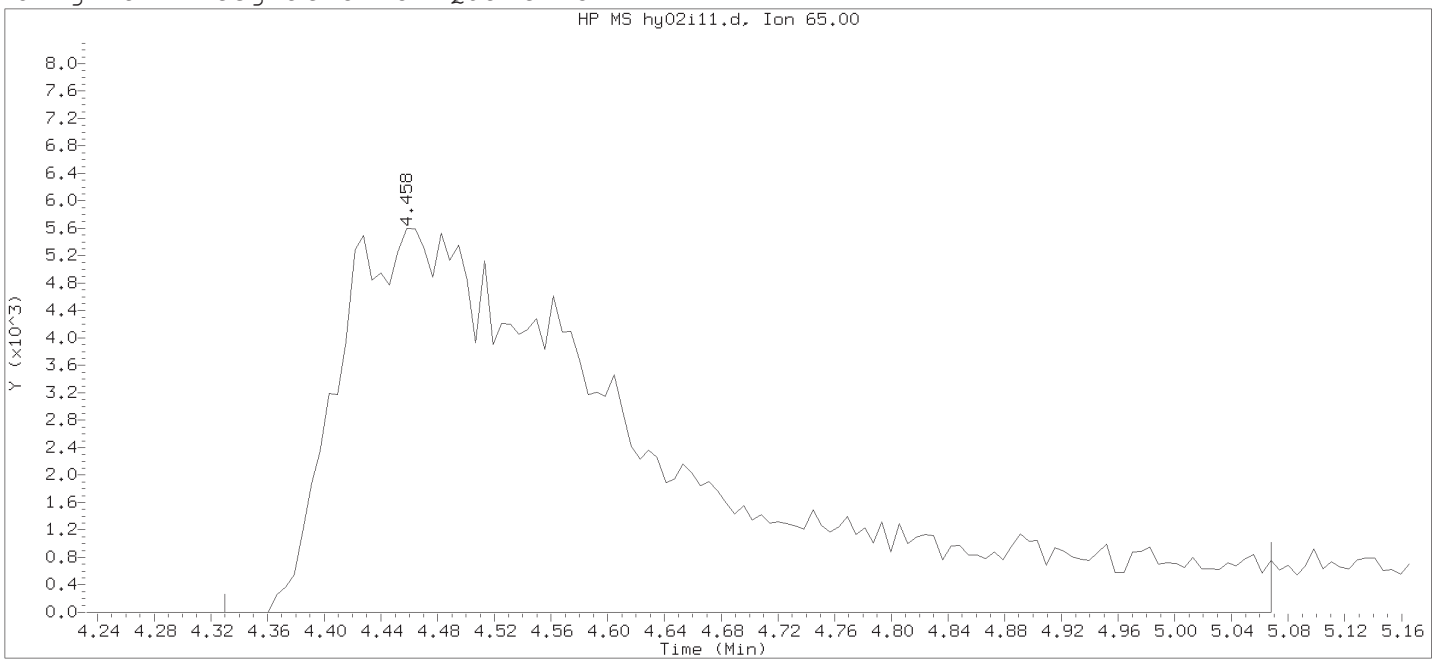
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

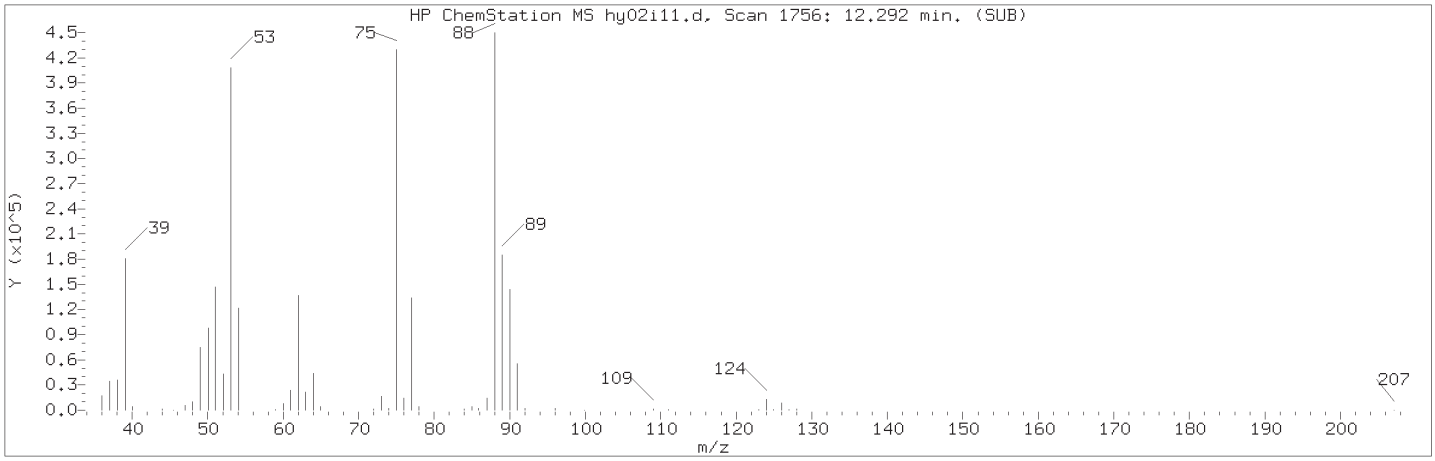
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

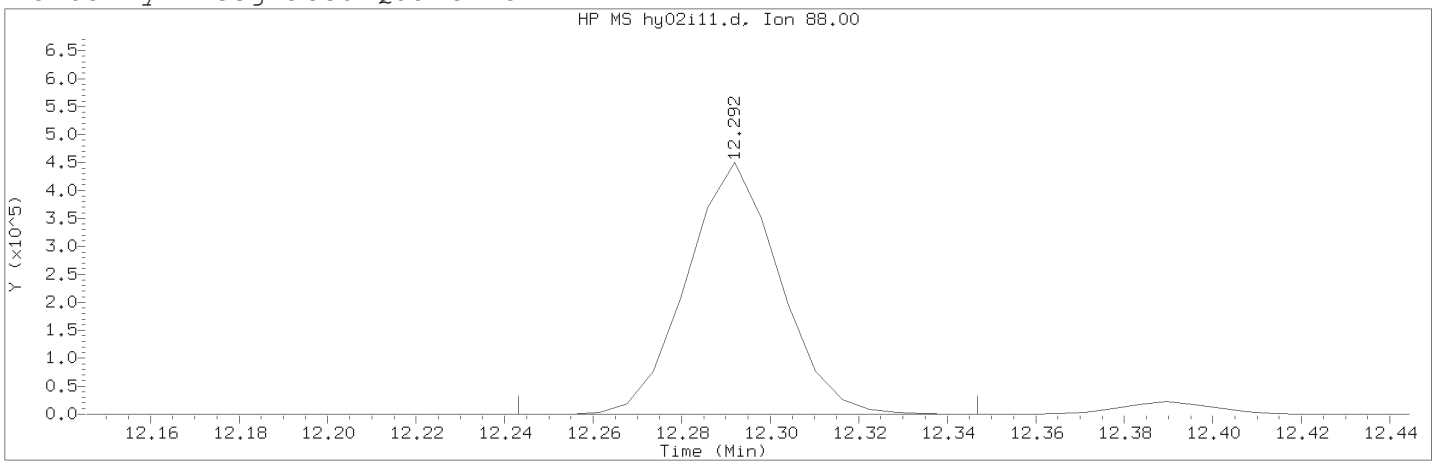
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area : 89717
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV

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

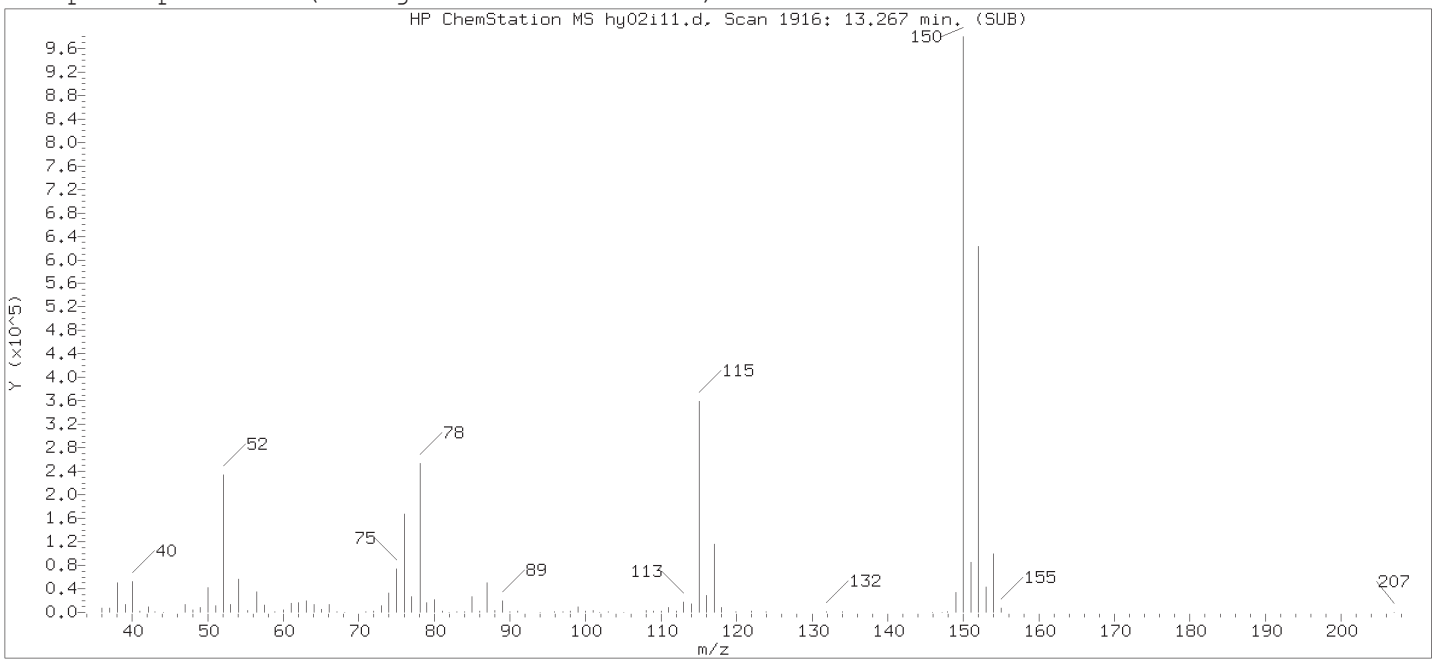
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 653577M
On-Column Amount (ng) : 51.2675
Integration start scan : 1747 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

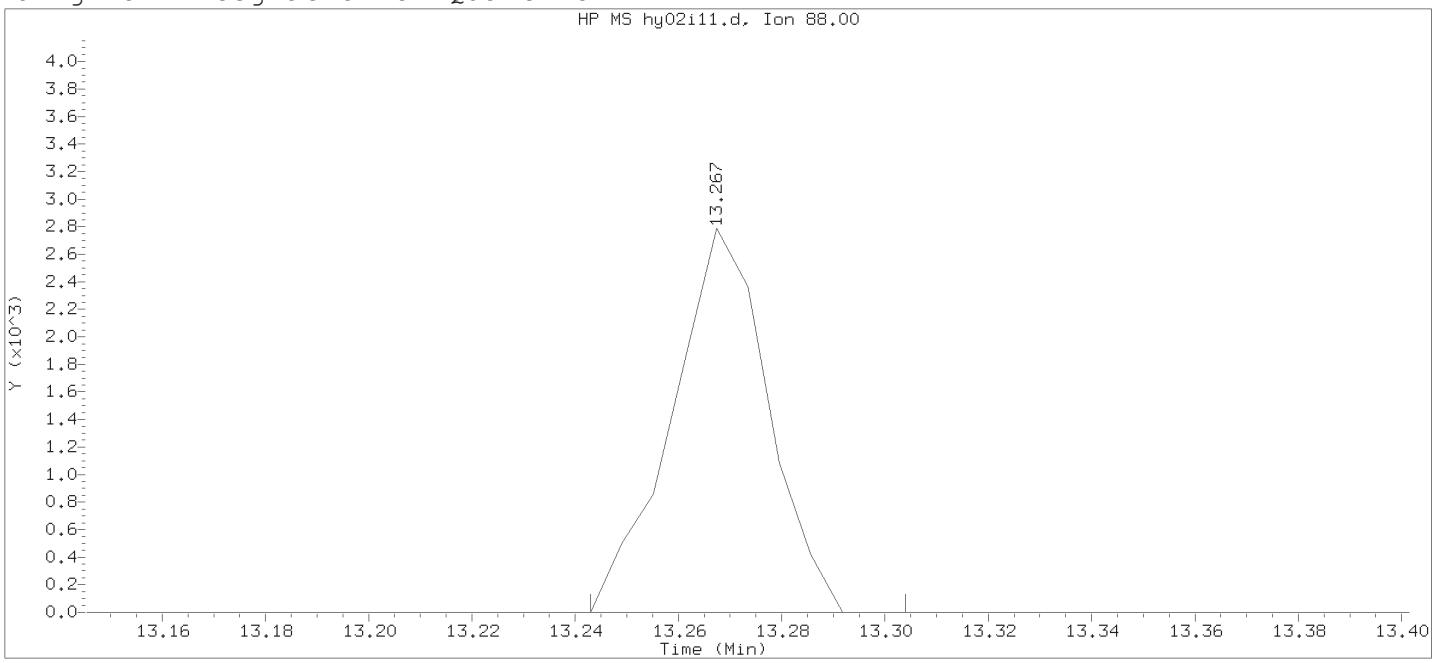
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

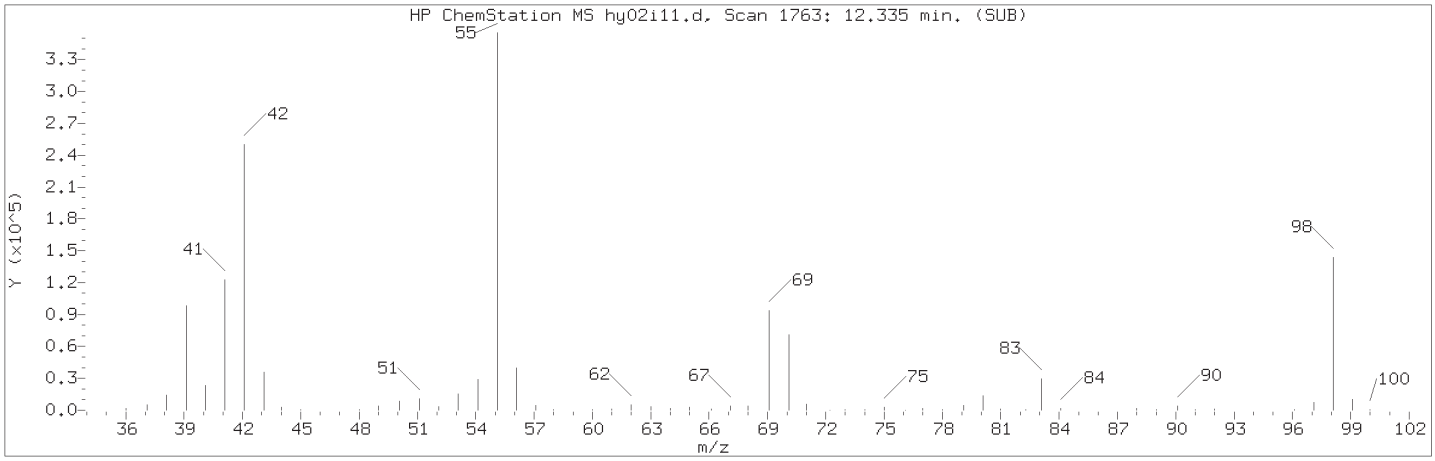
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

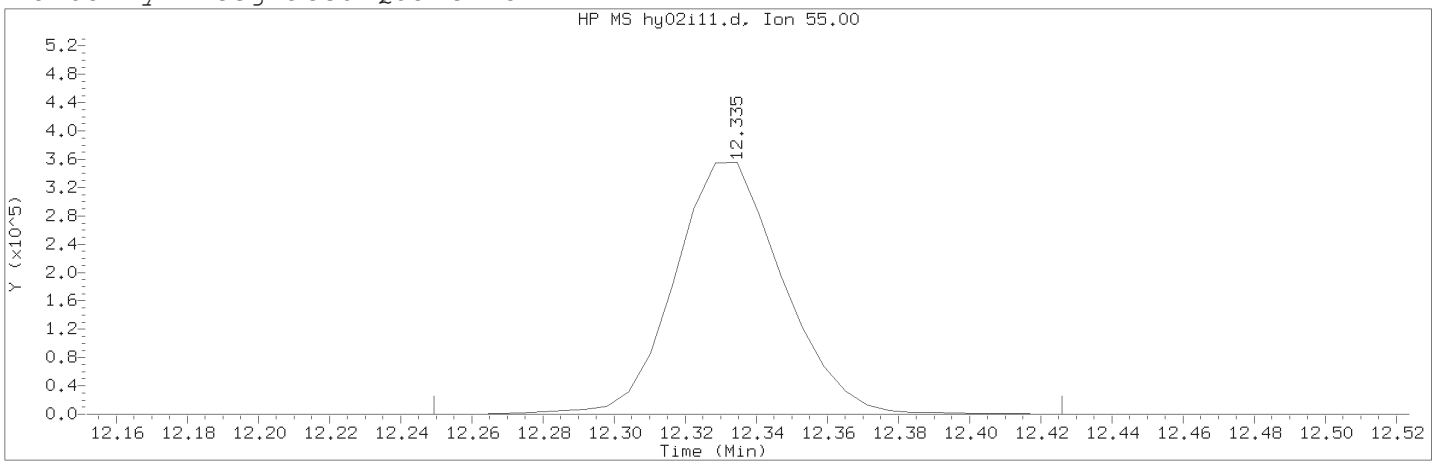
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 3604
On-column Amount (ng) : 0.2776
Integration start scan : 1911 Integration stop scan: 1921
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: DVV

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

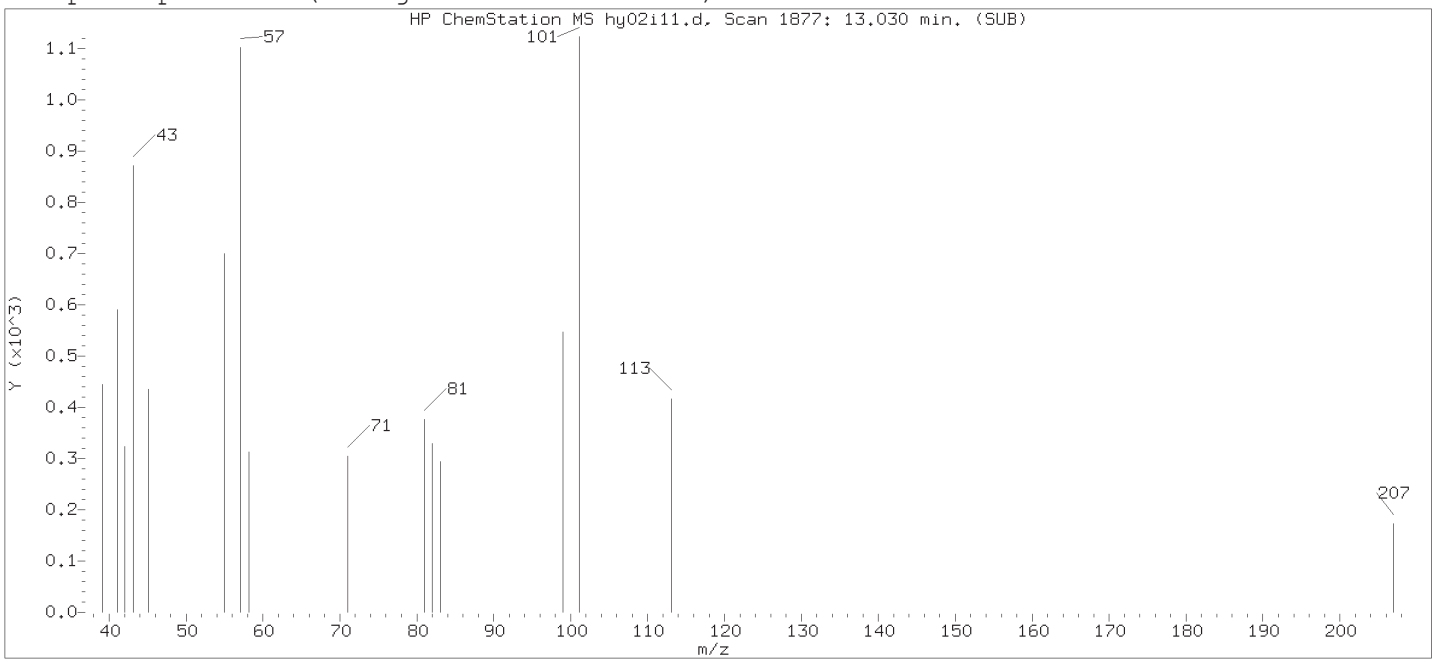
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 55.00
Area (flag) : 752493M
On-Column Amount (ng) : 1160.6564
Integration start scan : 1748 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

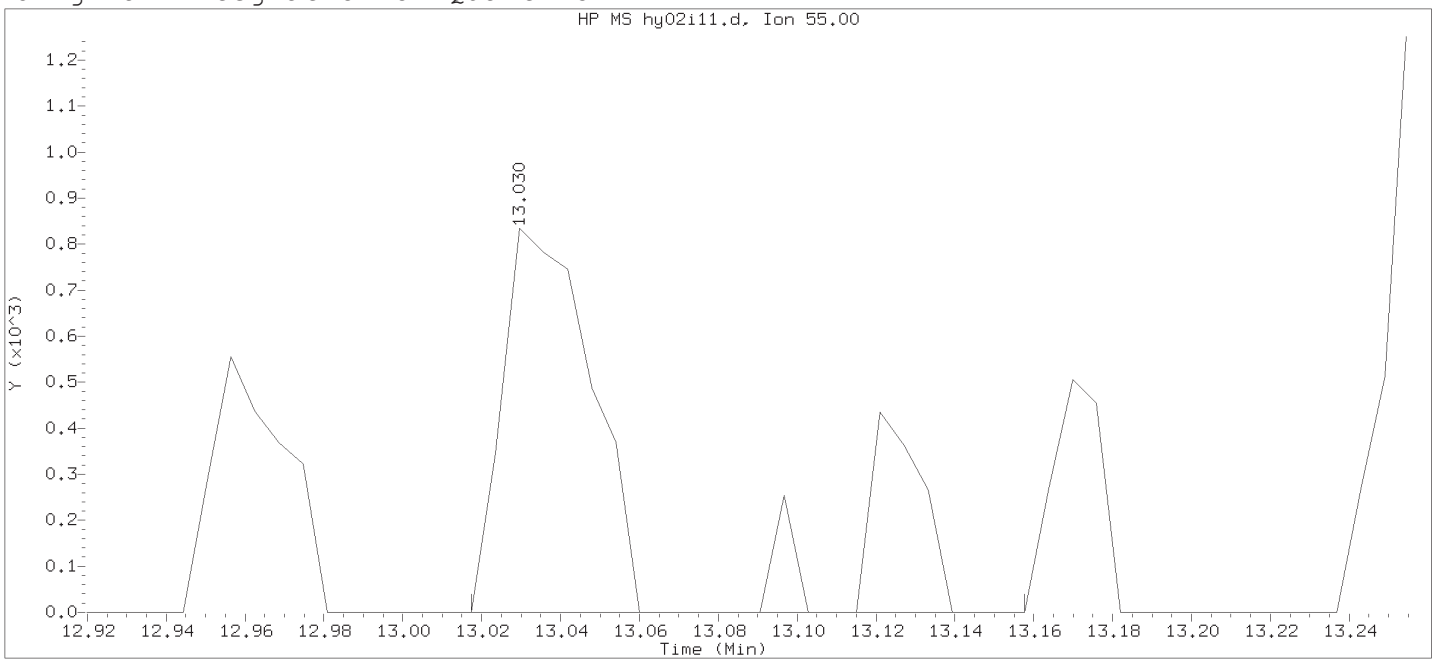
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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



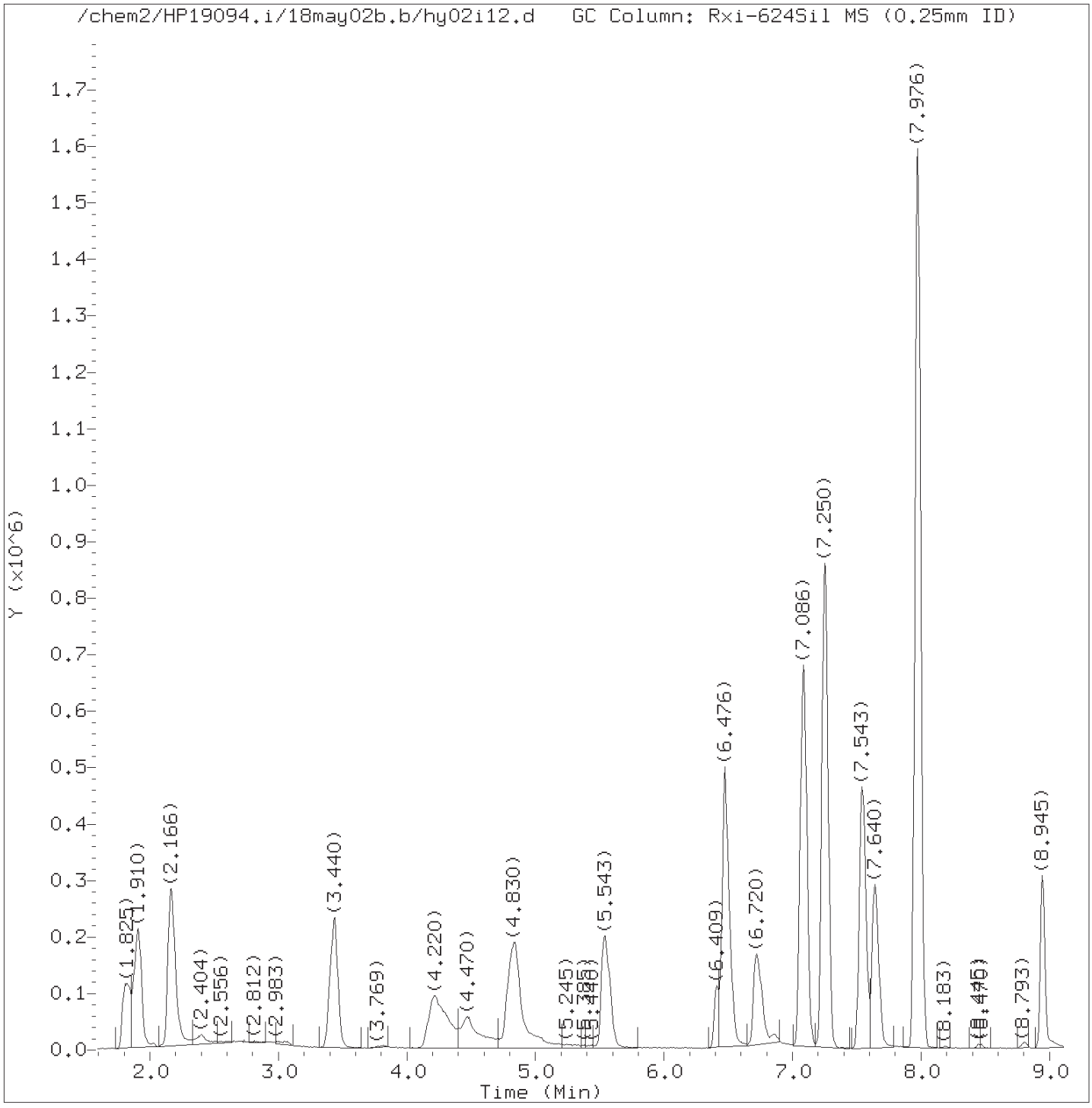
Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

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: DVV



Total Ion Chromatogram (TIC)

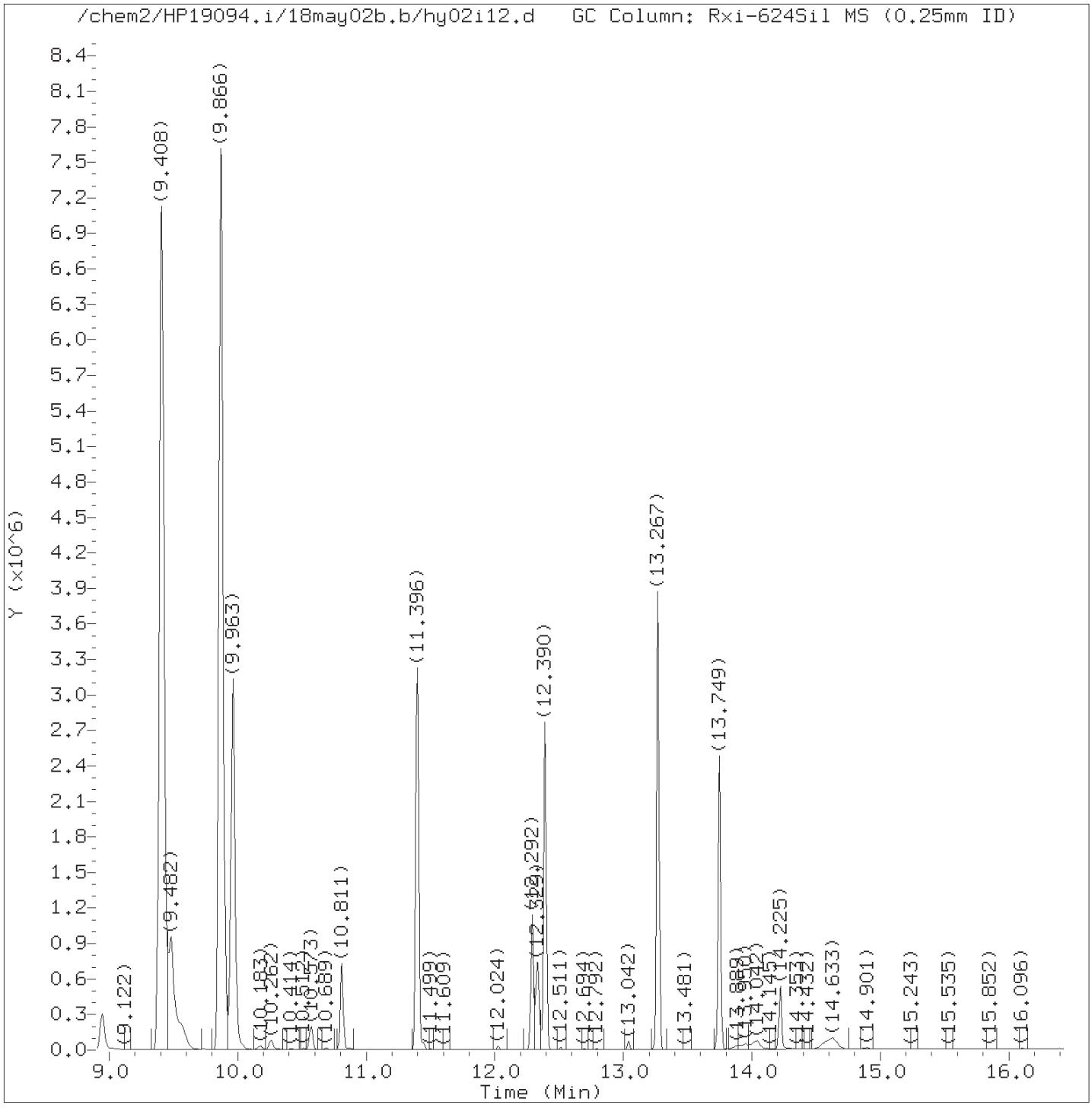
Target Revision 3.5

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

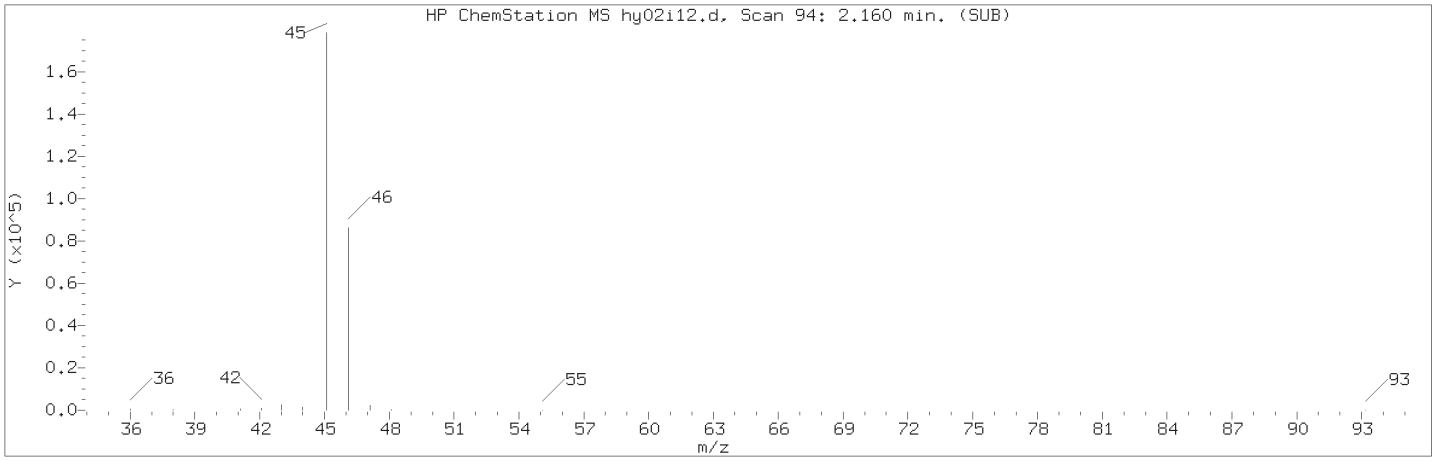
Sample Name: VSTD010 Lab Sample ID: VSTD010

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

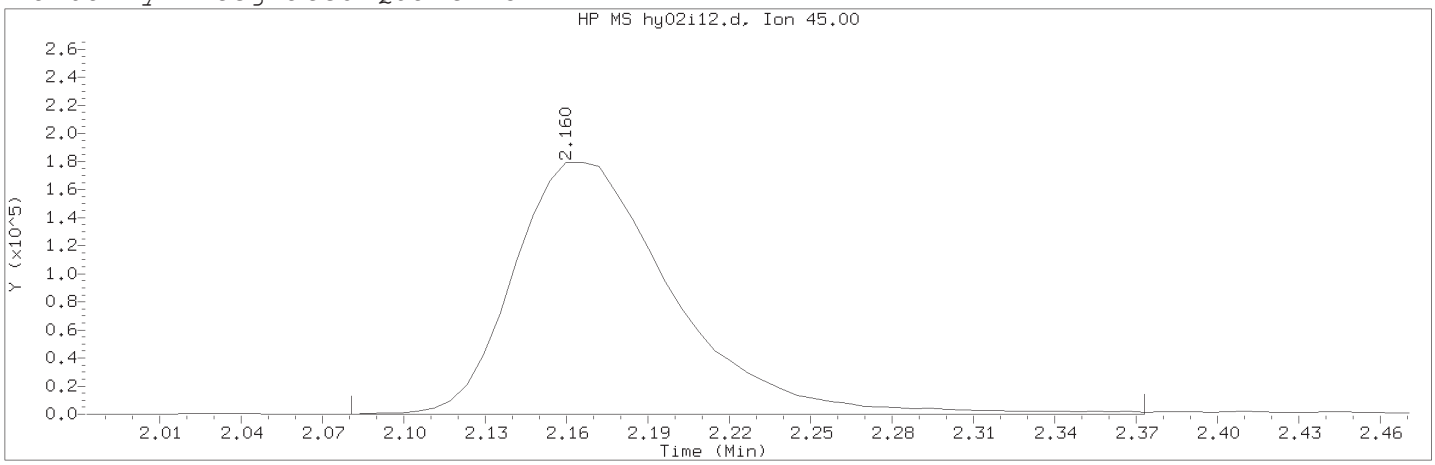
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

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

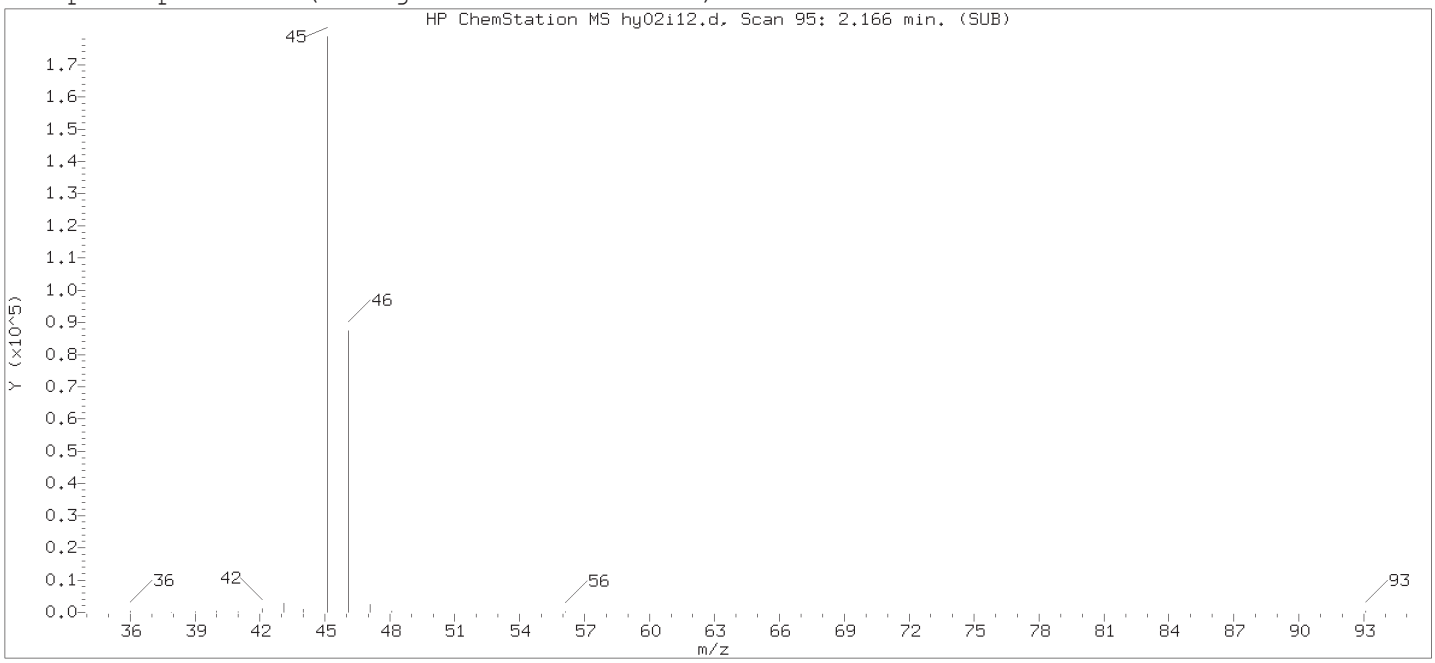
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 730585M
On-Column Amount (ng) : 9.8052
Integration start scan : 80 Integration stop scan: 128
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

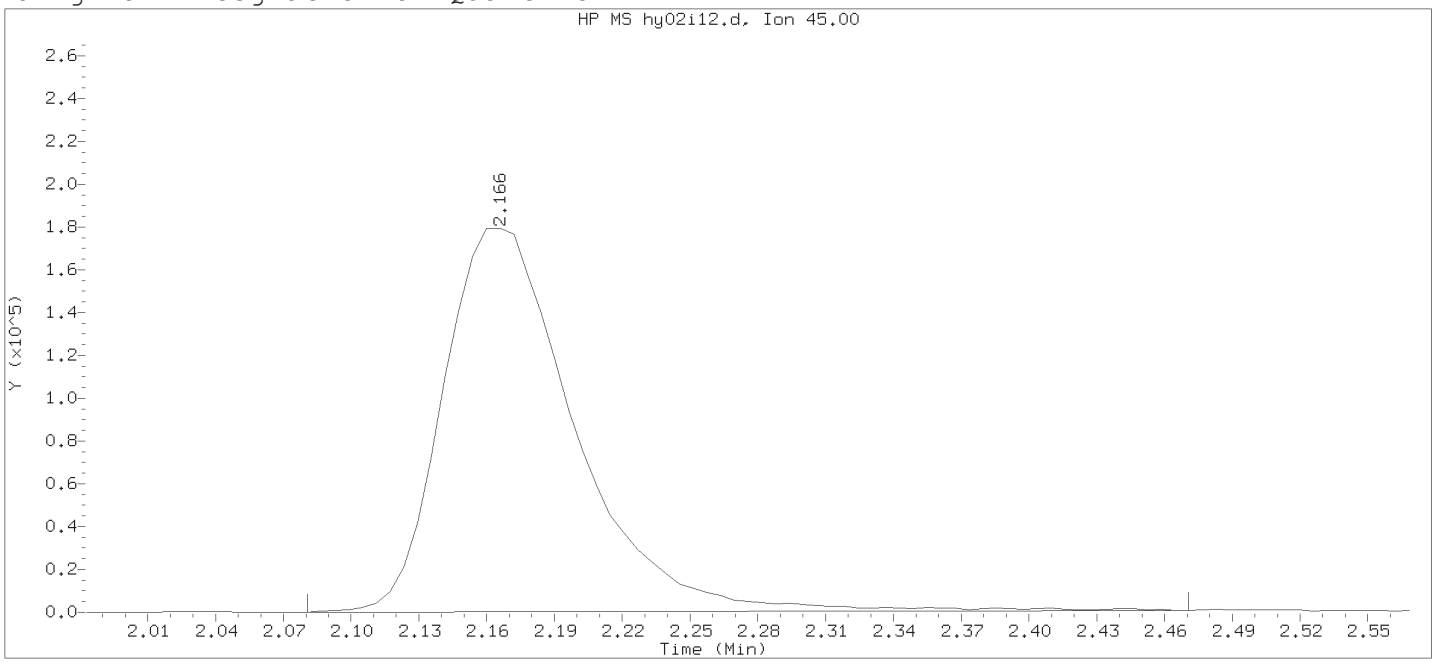
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

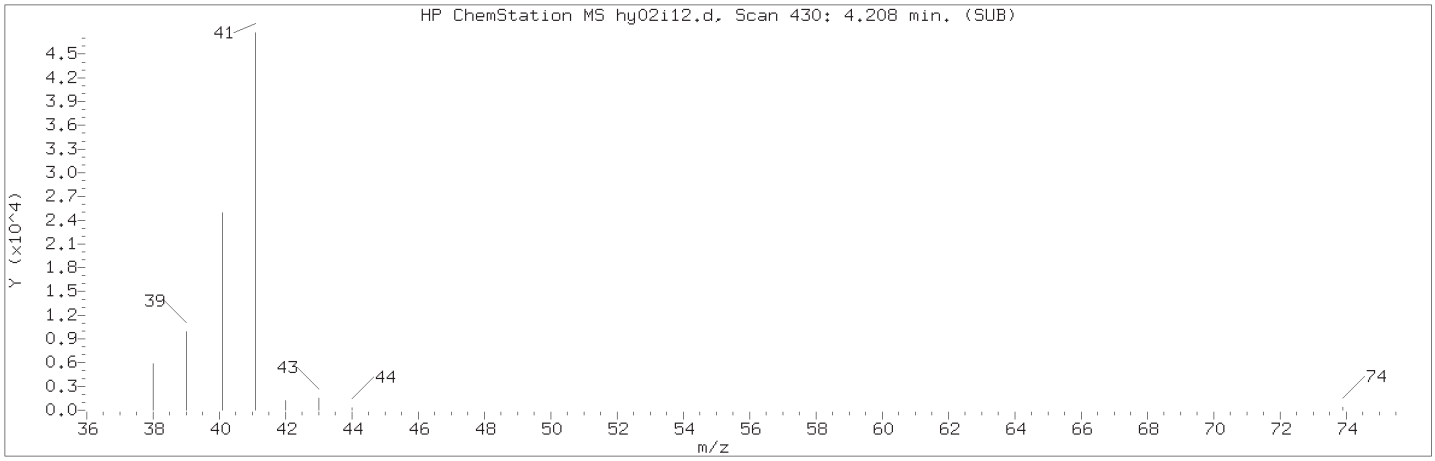
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

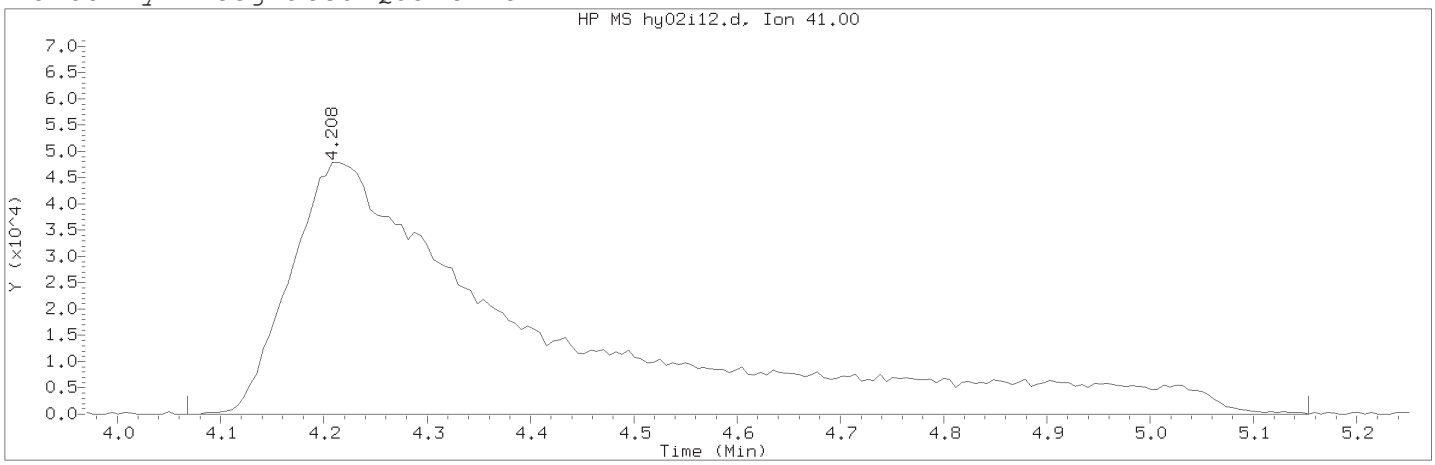
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 95		
Retention Time (minutes)	: 2.166		
Quant Ion	: 45.00		
Area	: 728833		
On-column Amount (ng)	: 9.4714		
Integration start scan	: 80	Integration stop scan:	144
Y at integration start	: 0	Y at integration end:	872

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

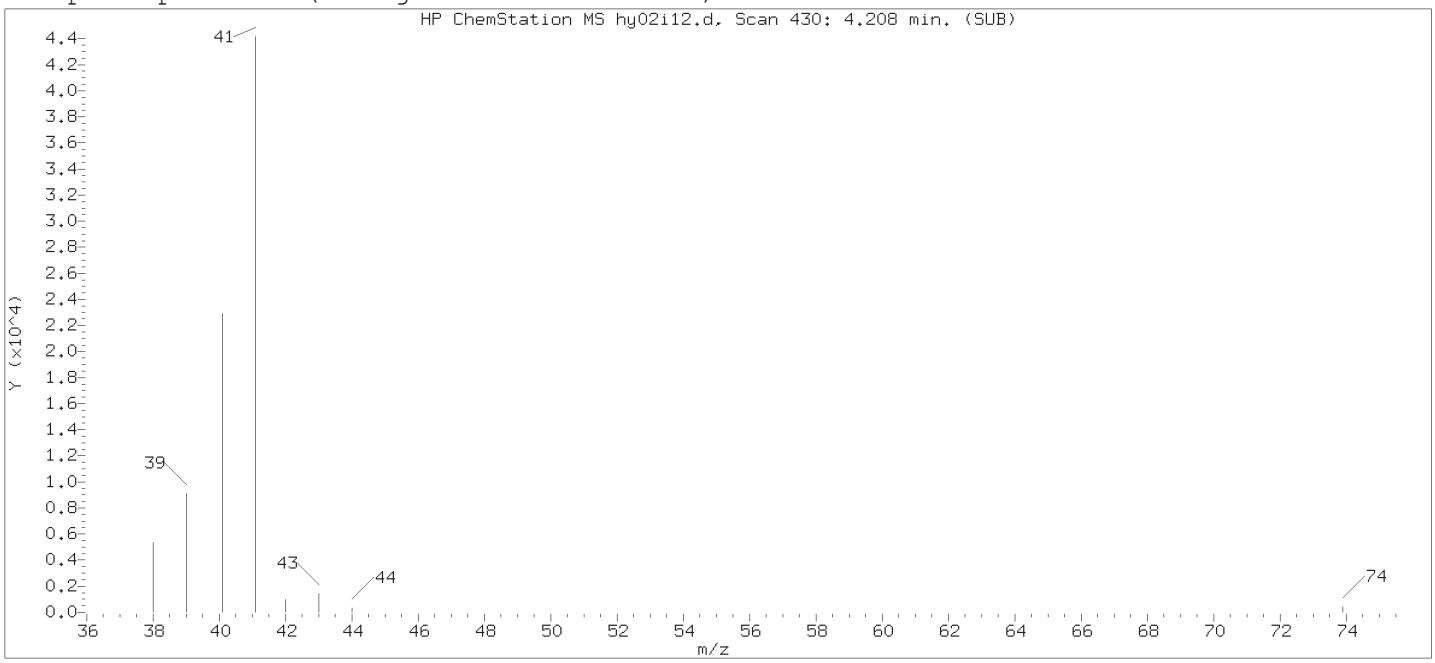
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 800300M
On-Column Amount (ng) : 361.9106
Integration start scan : 406 Integration stop scan: 584
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

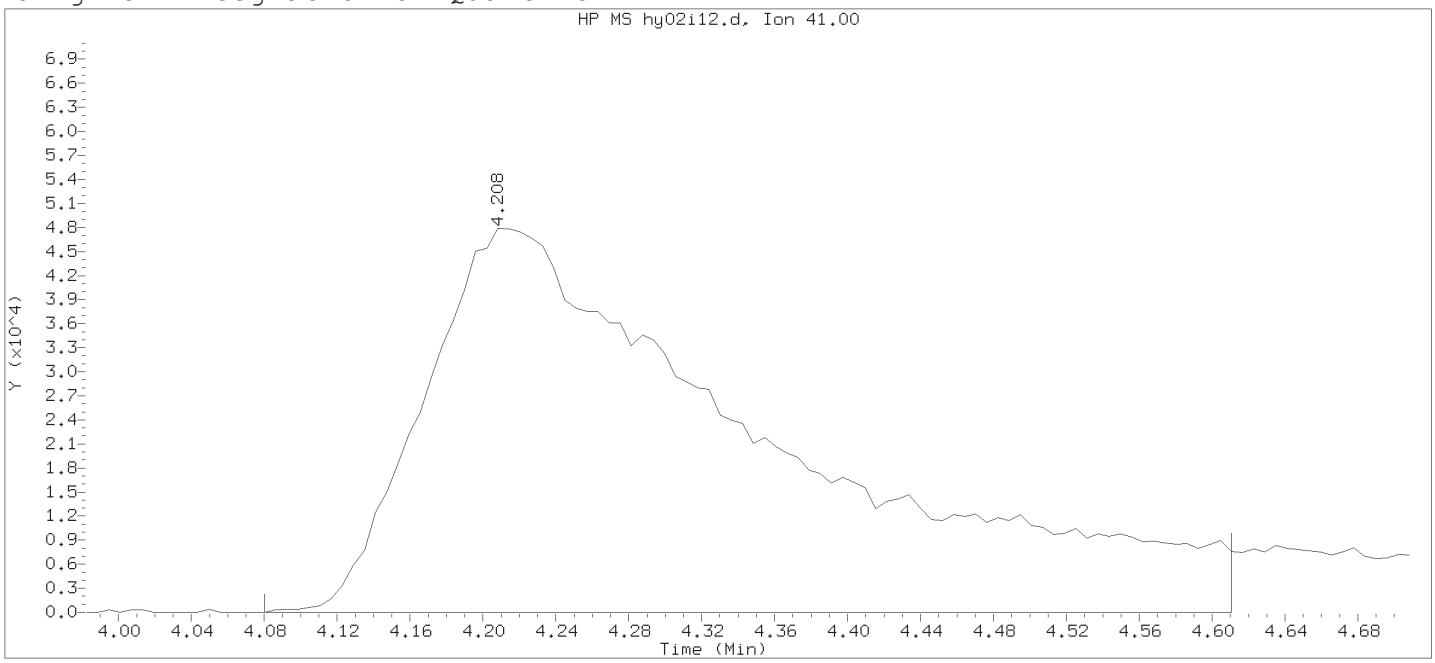
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

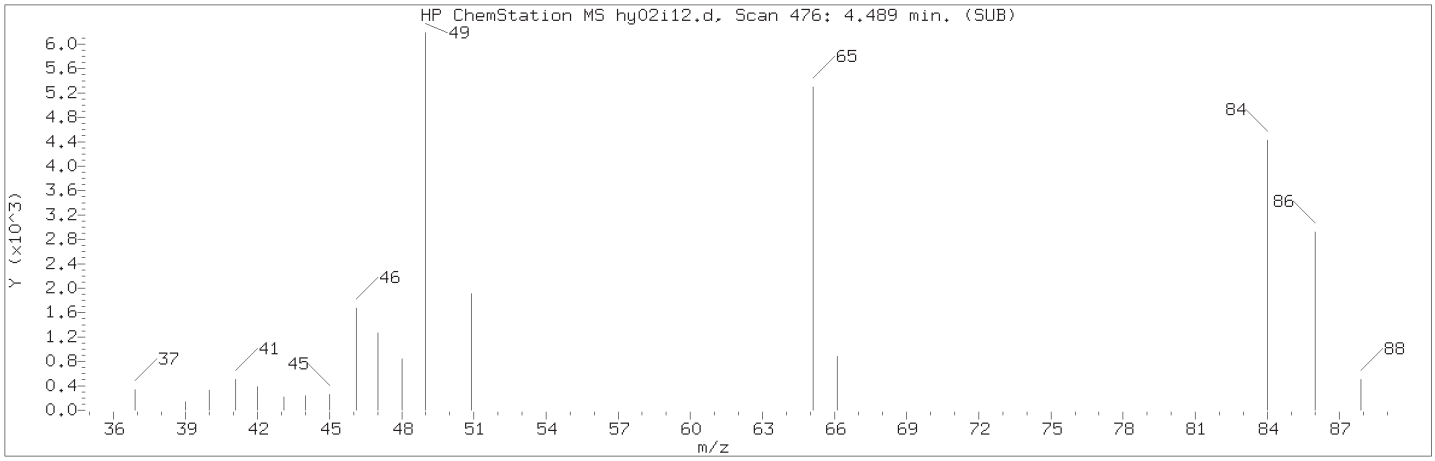
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

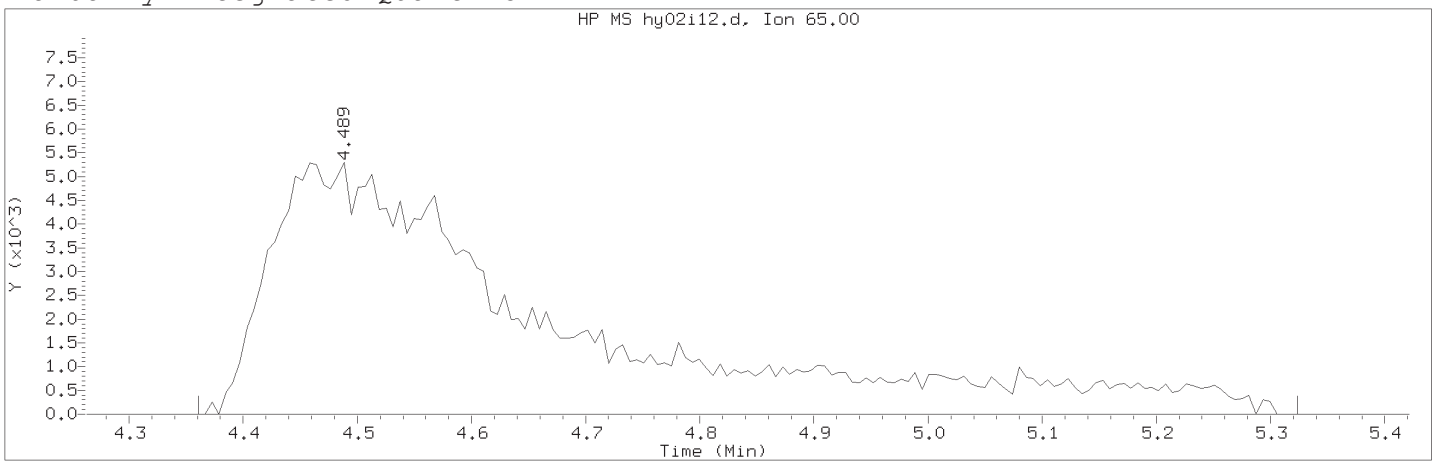
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 627768
On-column Amount (ng) : 250.5418
Integration start scan : 408 Integration stop scan: 495
Y at integration start : 0 Y at integration end: 0

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

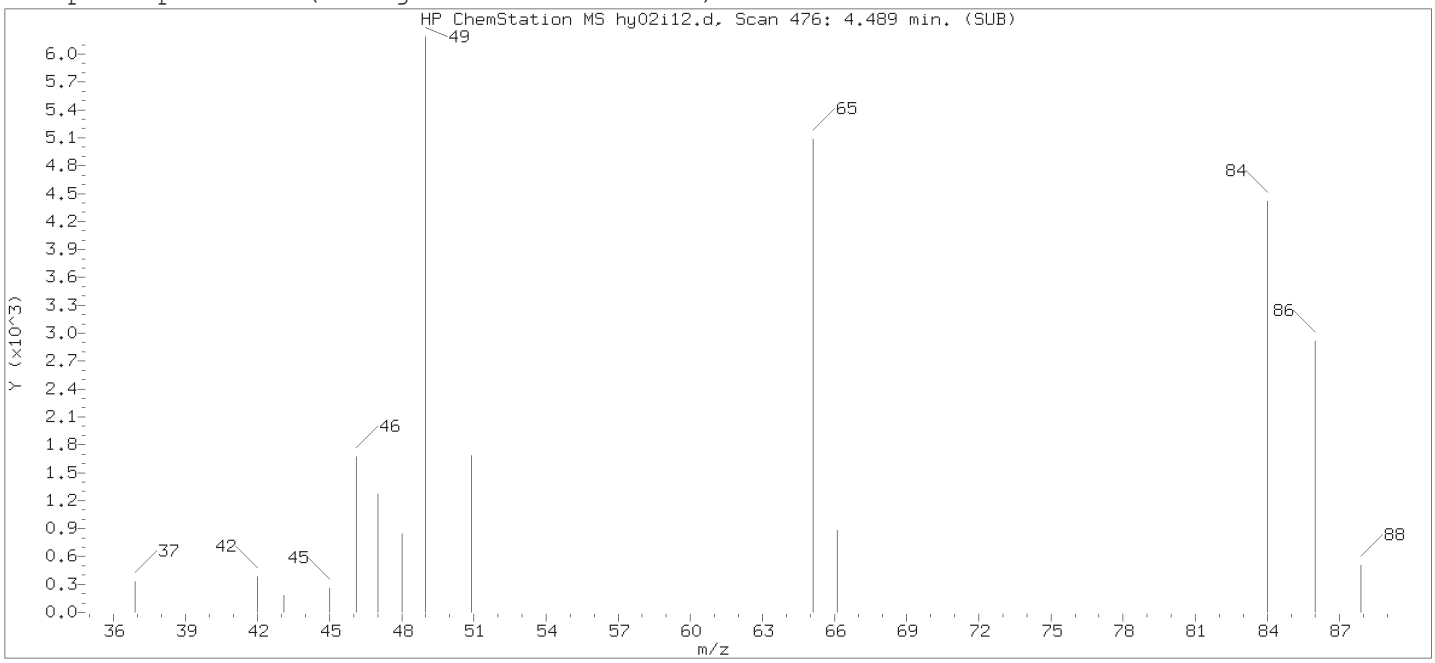
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area (flag) : 91579M
On-Column Amount (ng) : 50.0000
Integration start scan : 454 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

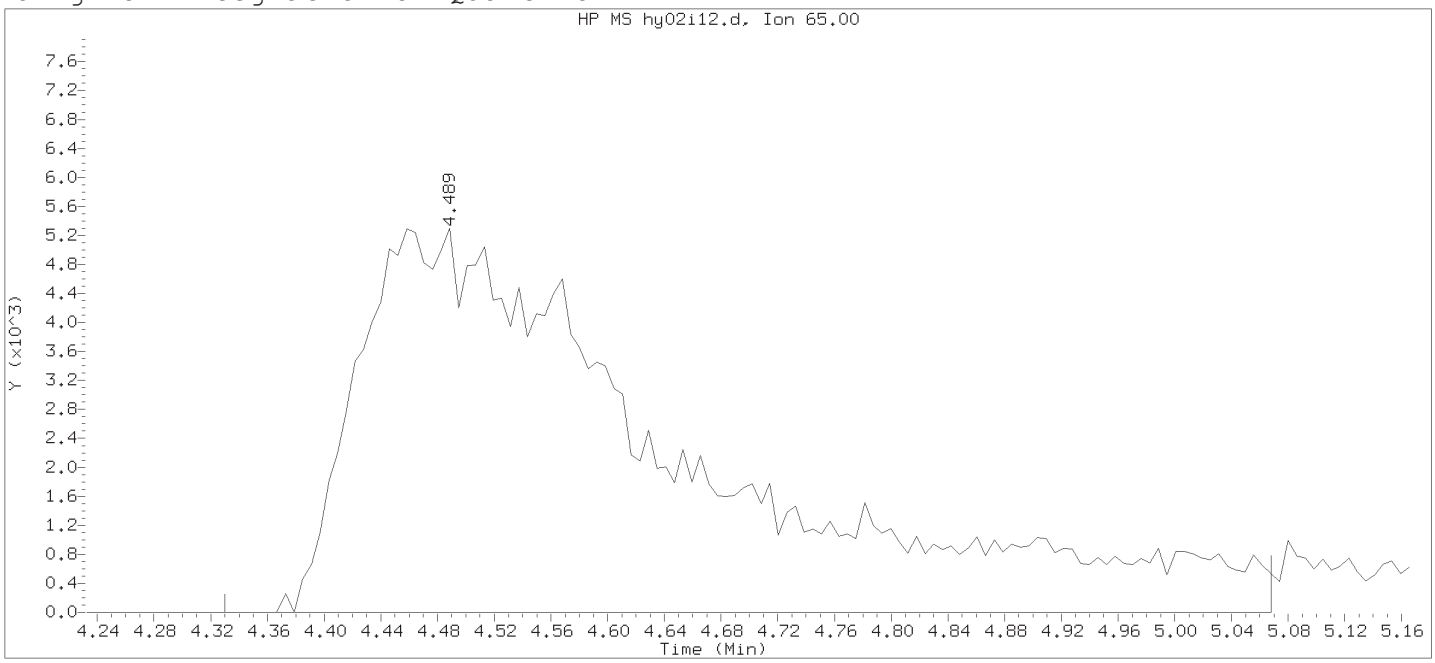
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

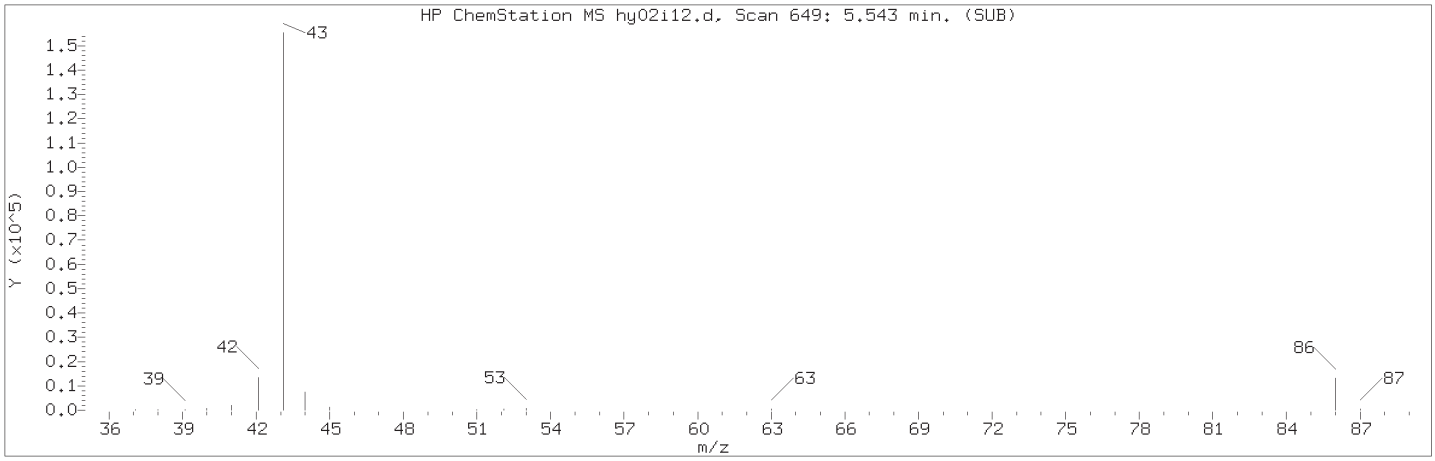
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

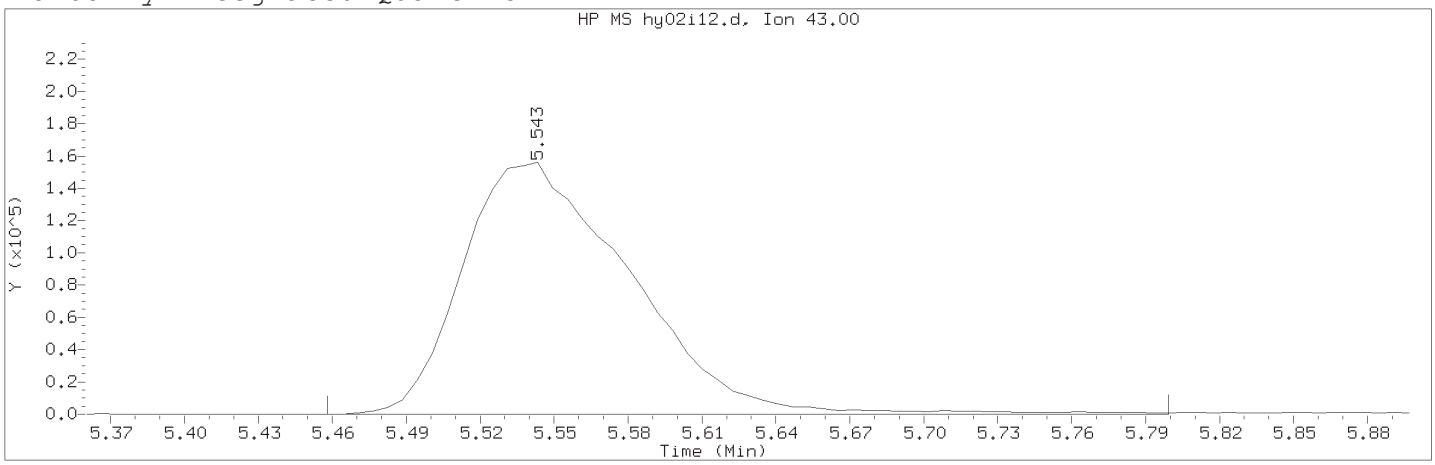
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area : 83894
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

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

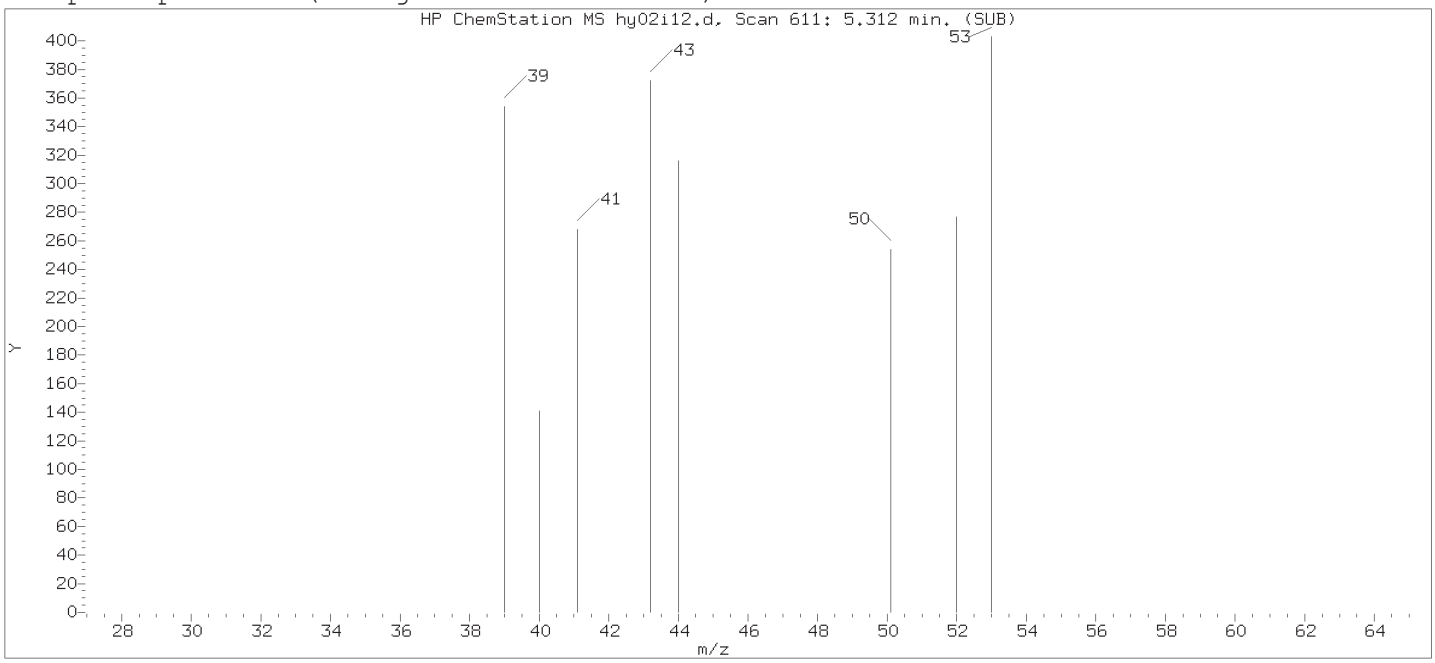
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 43.00
Area (flag) : 736143A
On-Column Amount (ng) : 10.3701
Integration start scan : 634 Integration stop scan: 690
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

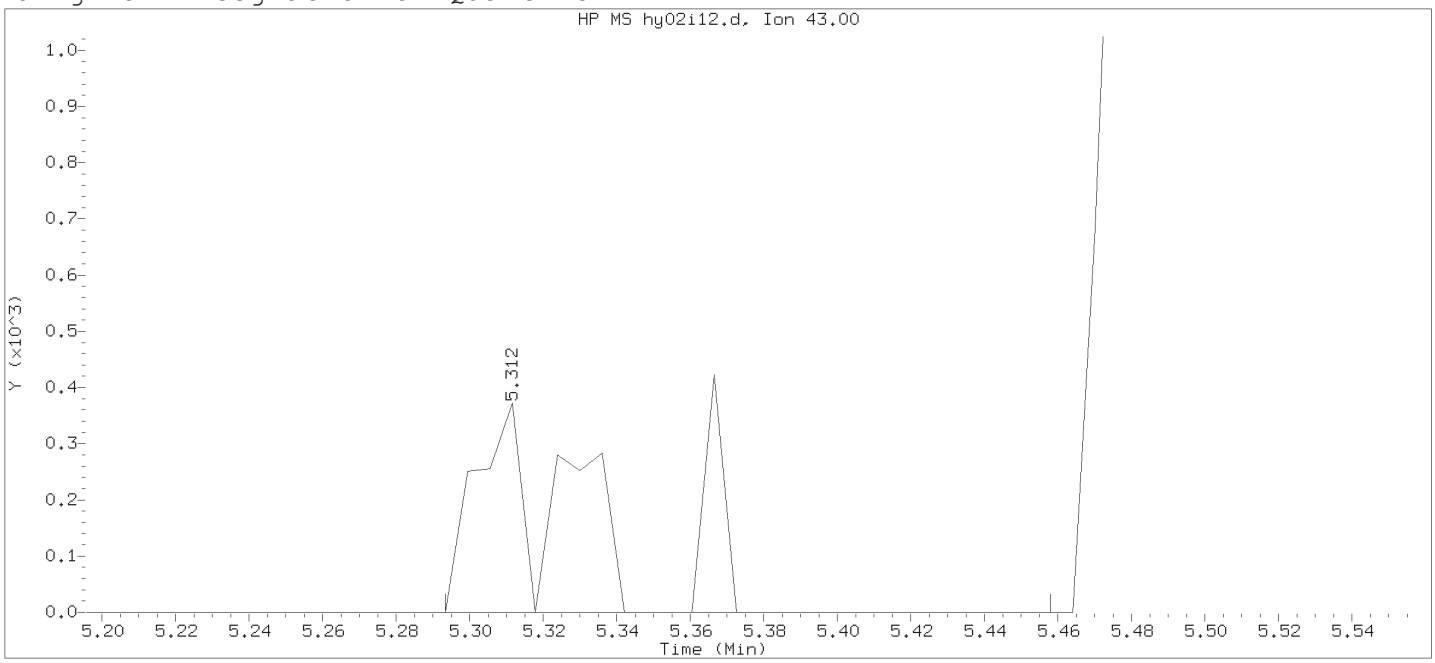
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

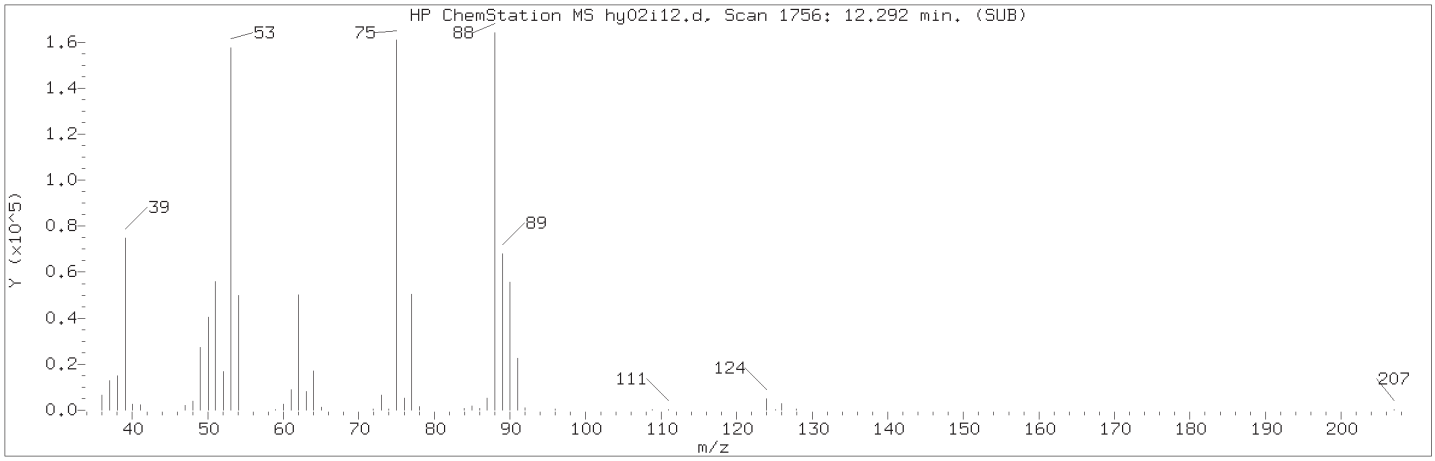
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

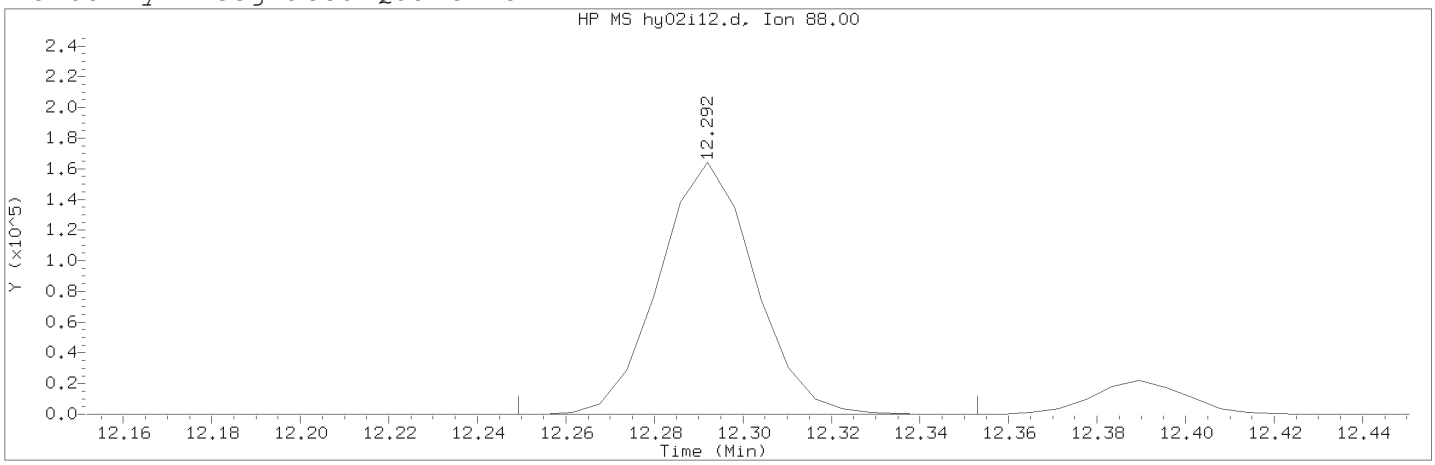
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 611
Retention Time (minutes): 5.312
Quant Ion : 43.00
Area : 774
On-column Amount (ng) : 0.0131
Integration start scan : 607 Integration stop scan: 634
Y at integration start : 0 Y at integration end: 0

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

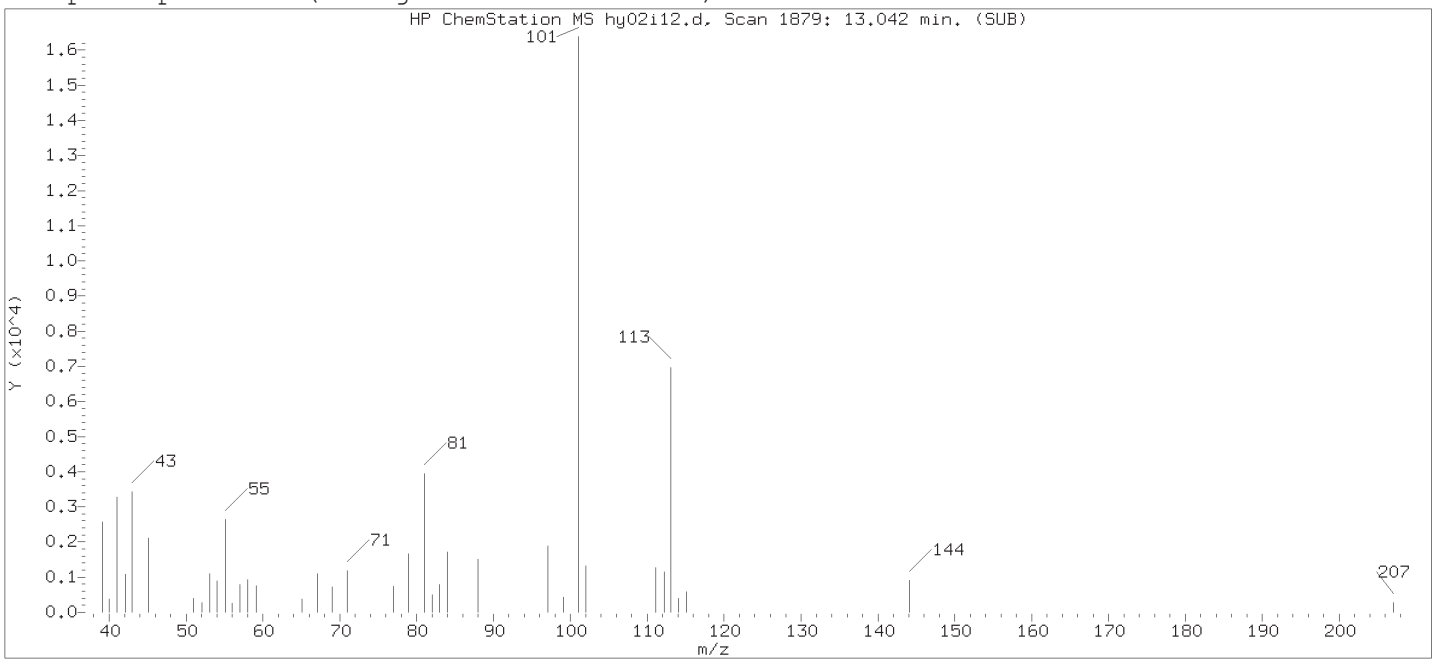
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 244920M
On-Column Amount (ng) : 20.6506
Integration start scan : 1748 Integration stop scan: 1765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

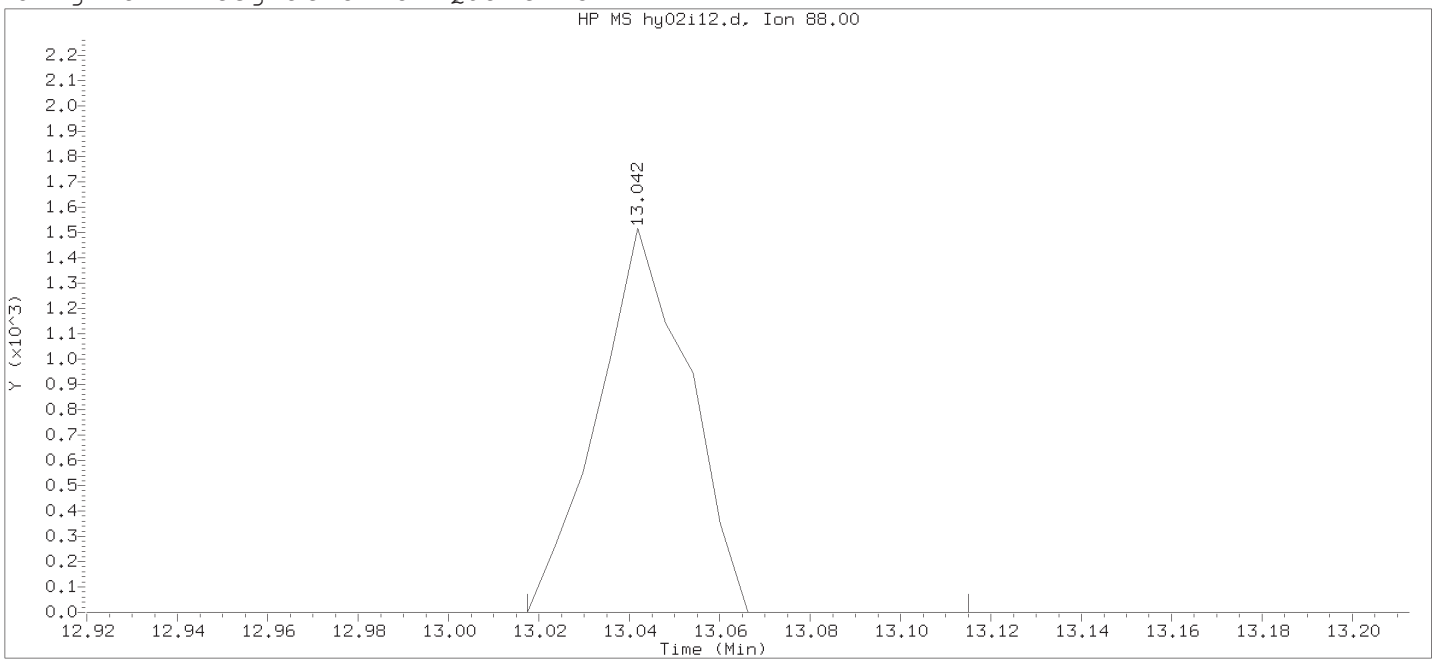
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

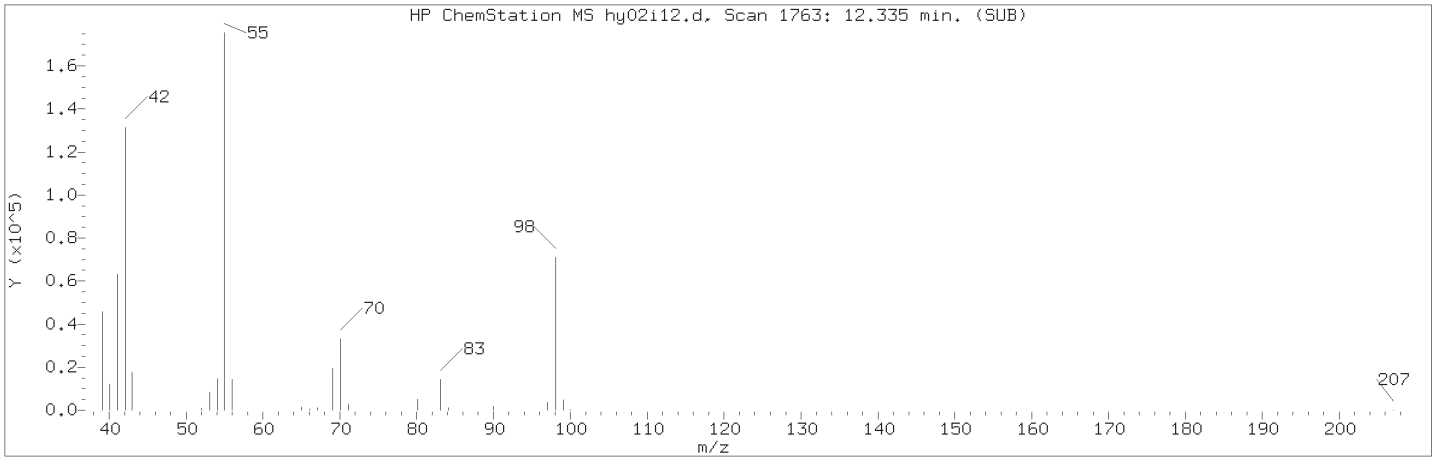
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

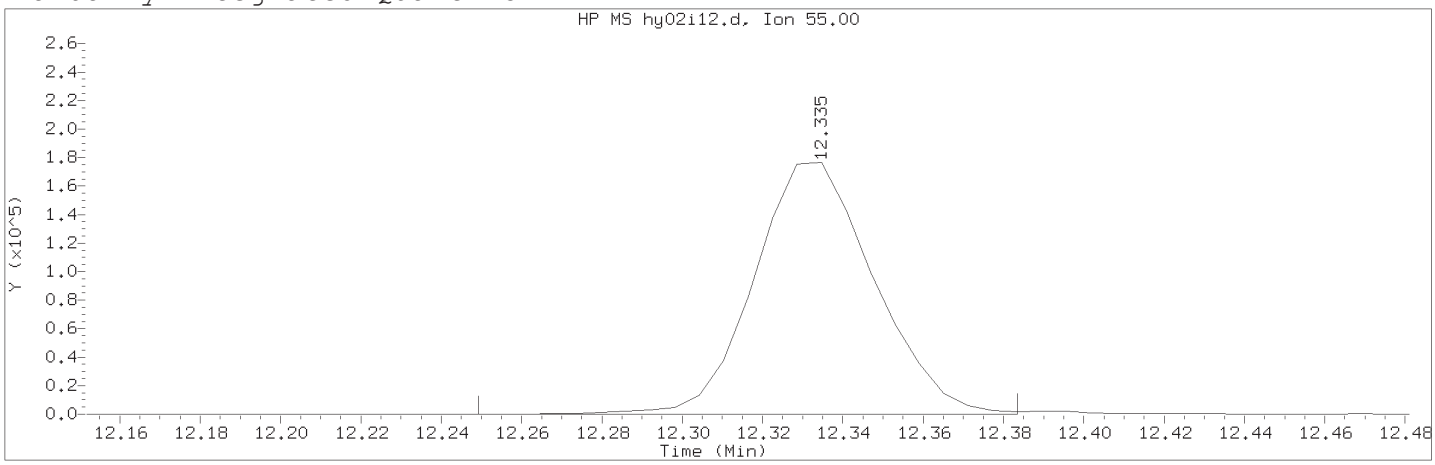
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 88.00
Area : 2111
On-column Amount (ng) : 0.2156
Integration start scan : 1874 Integration stop scan: 1890
Y at integration start : 0 Y at integration end: 0

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

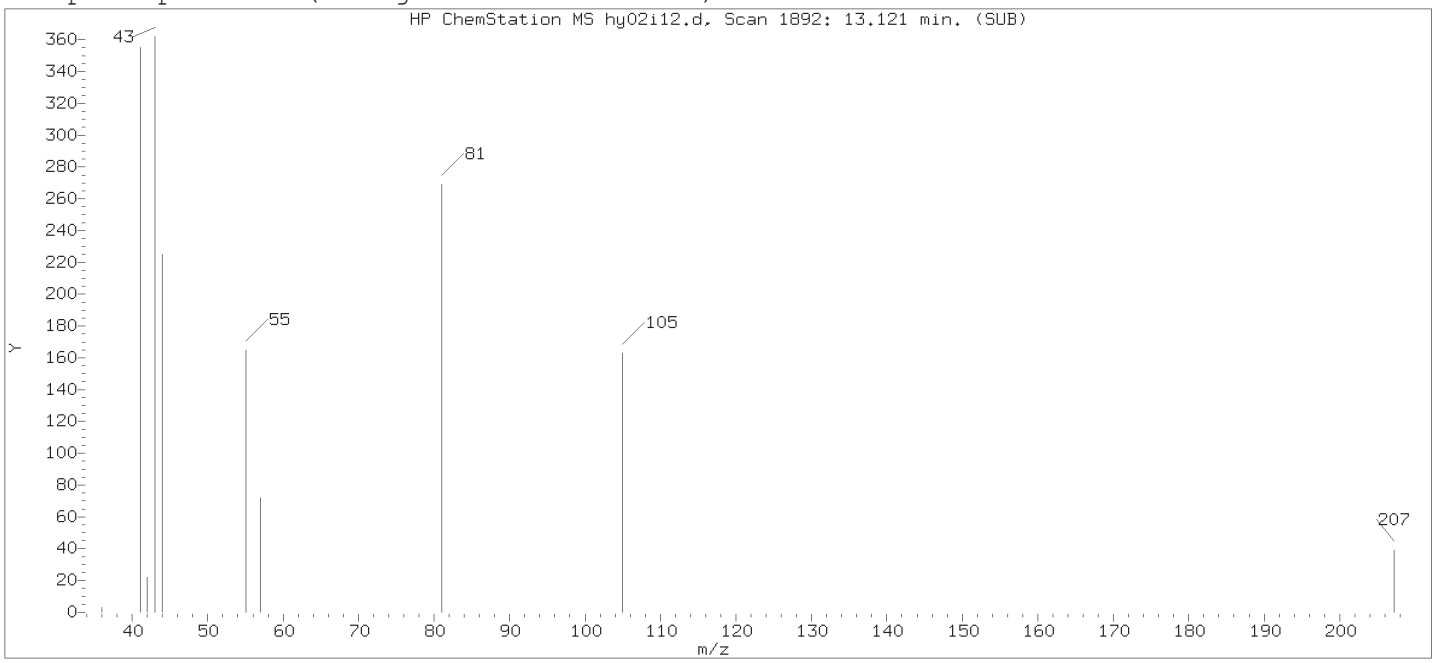
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 55.00
Area (flag) : 365686M
On-Column Amount (ng) : 606.2783
Integration start scan : 1748 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

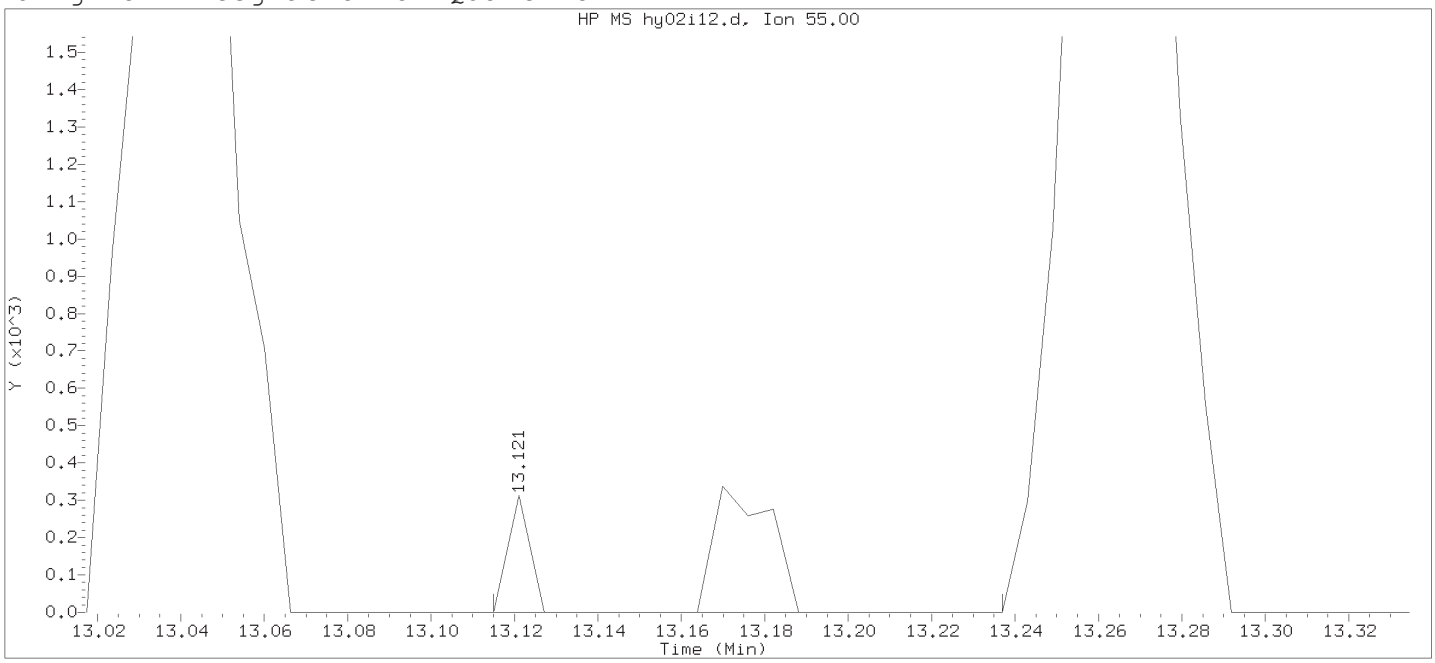
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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



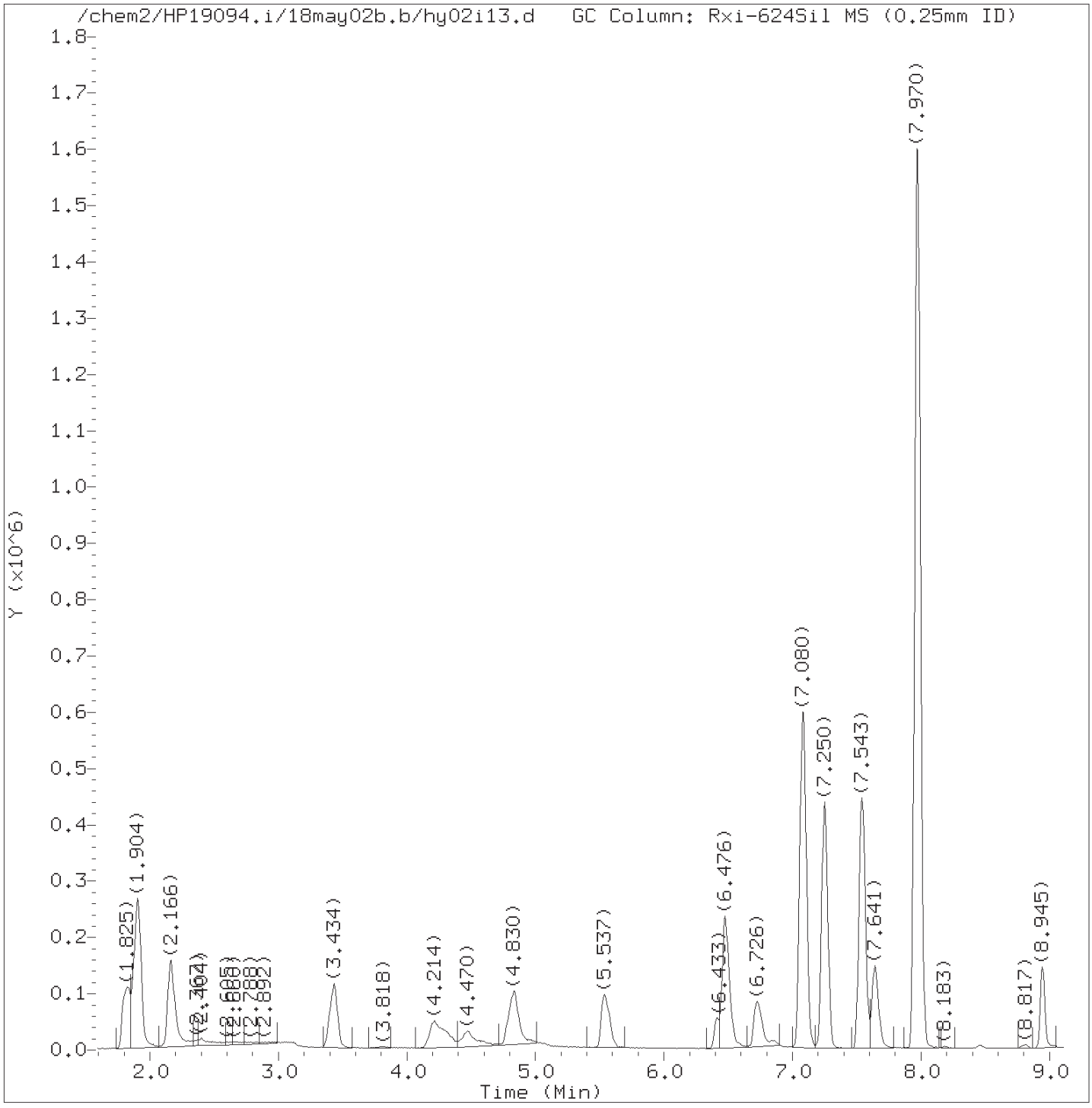
Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

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)

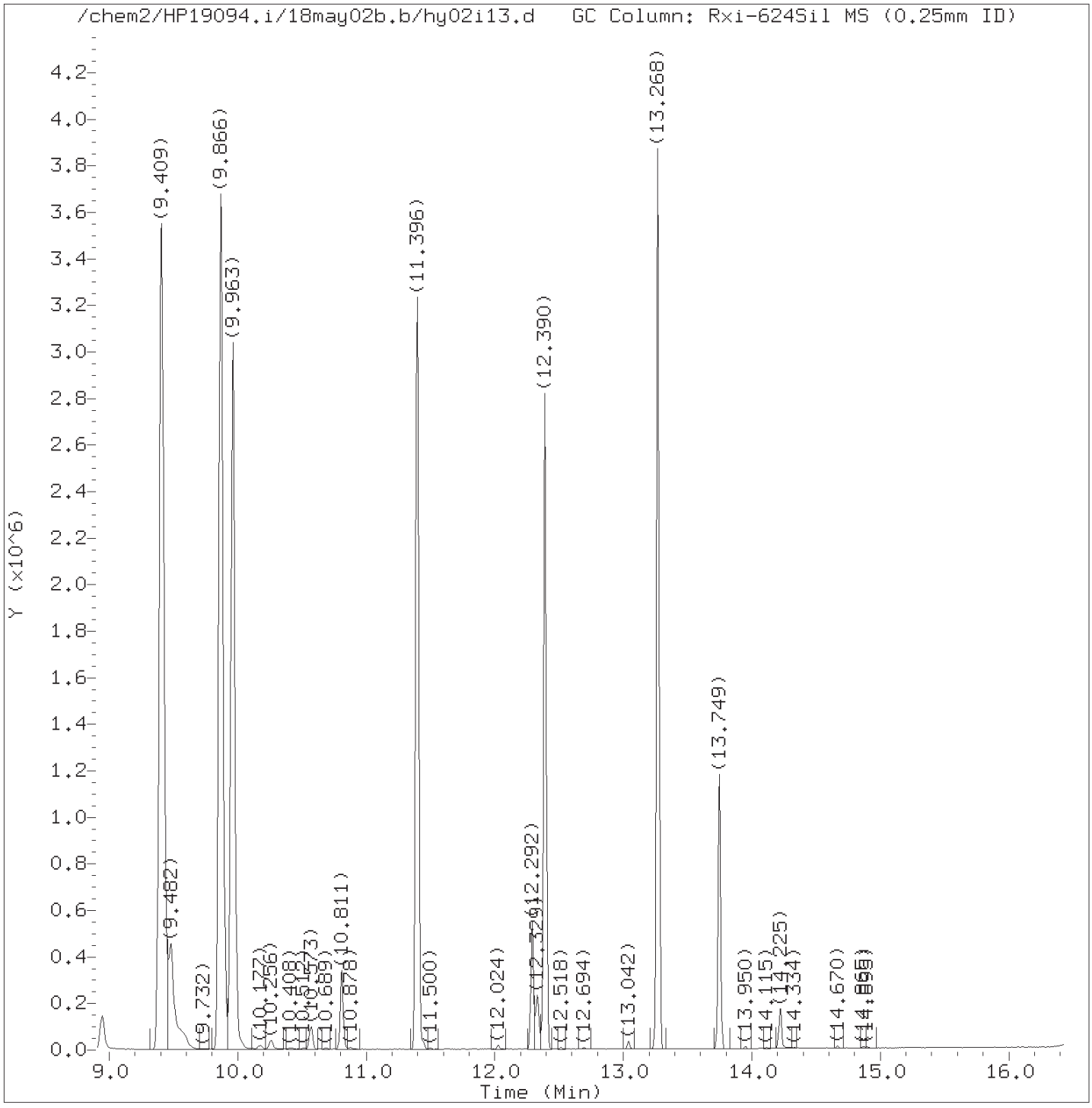
Target Revision 3.5

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

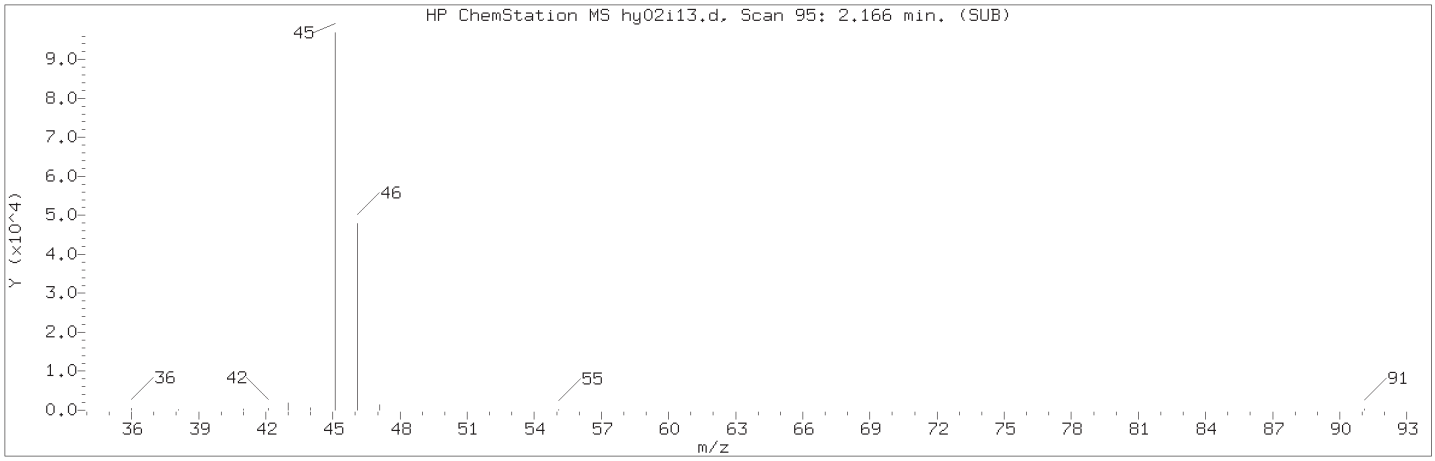
Sample Name: VSTD005 Lab Sample ID: VSTD005

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

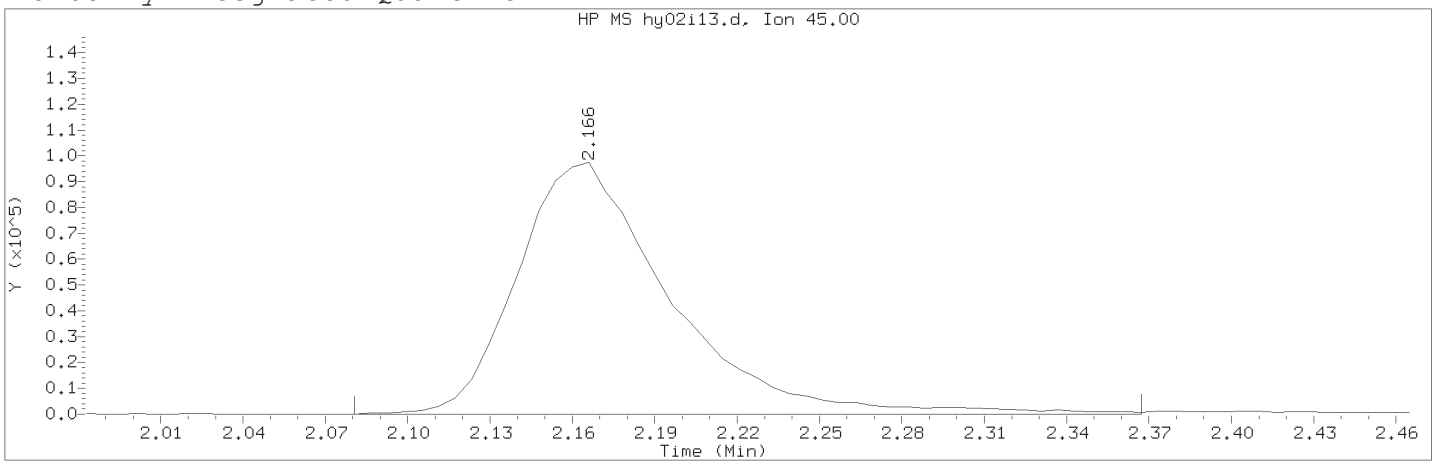
M = Compound was manually integrated.
* = Compound is an internal standard.

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

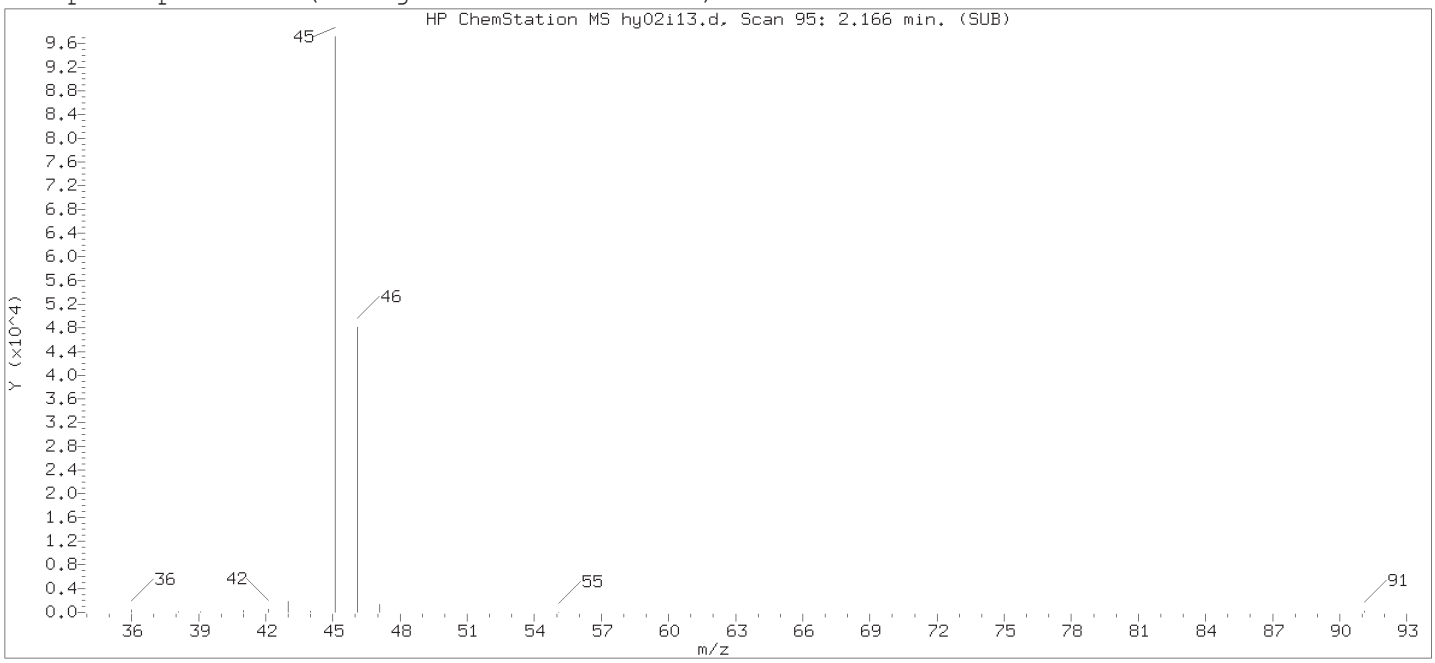
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area (flag) : 376311M
On-Column Amount (ng) : 5.0388
Integration start scan : 80 Integration stop scan: 127
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

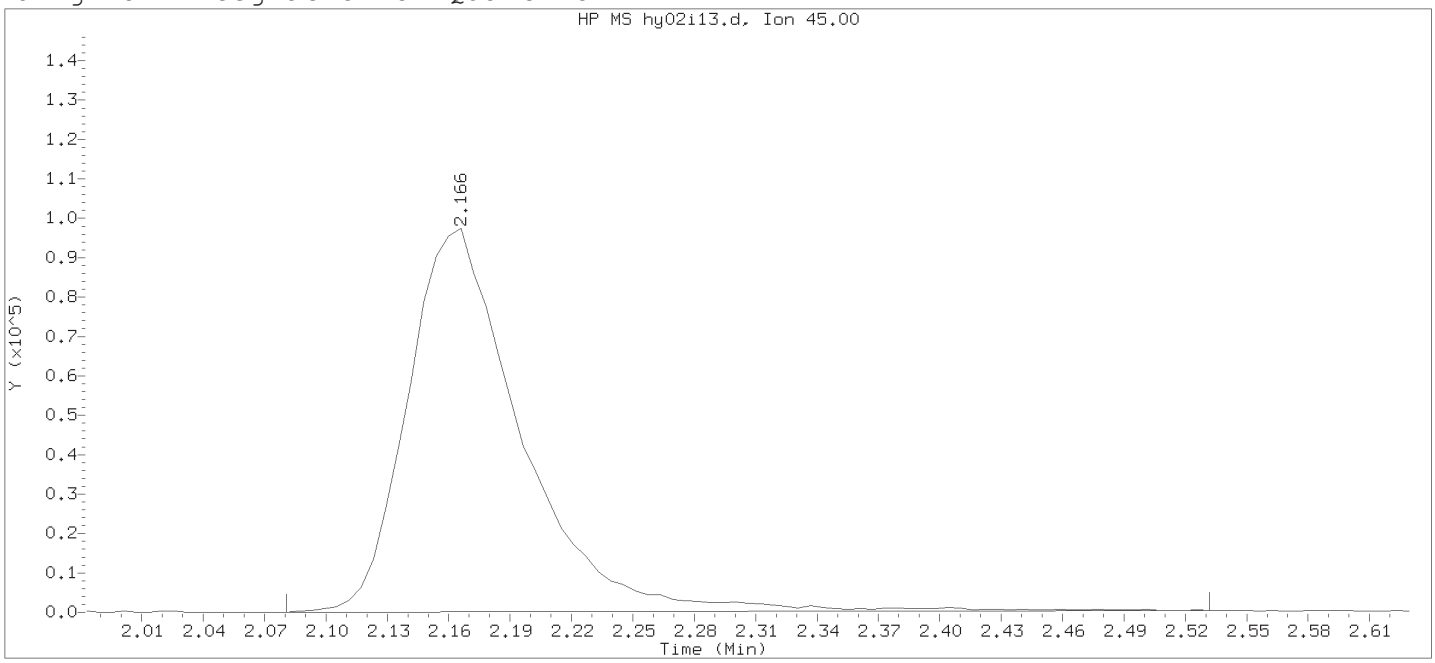
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

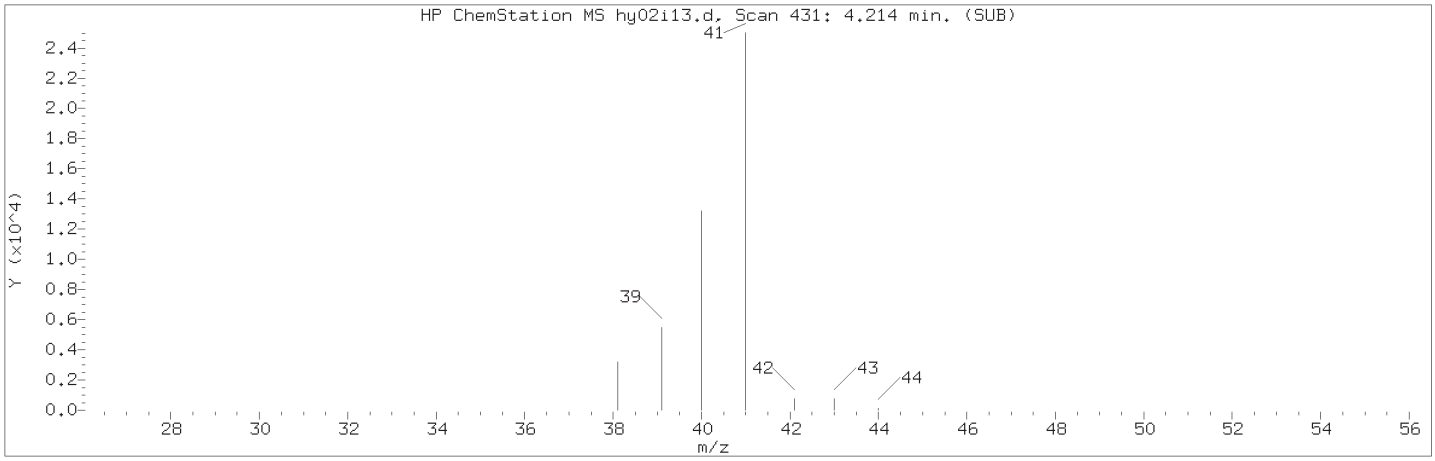
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

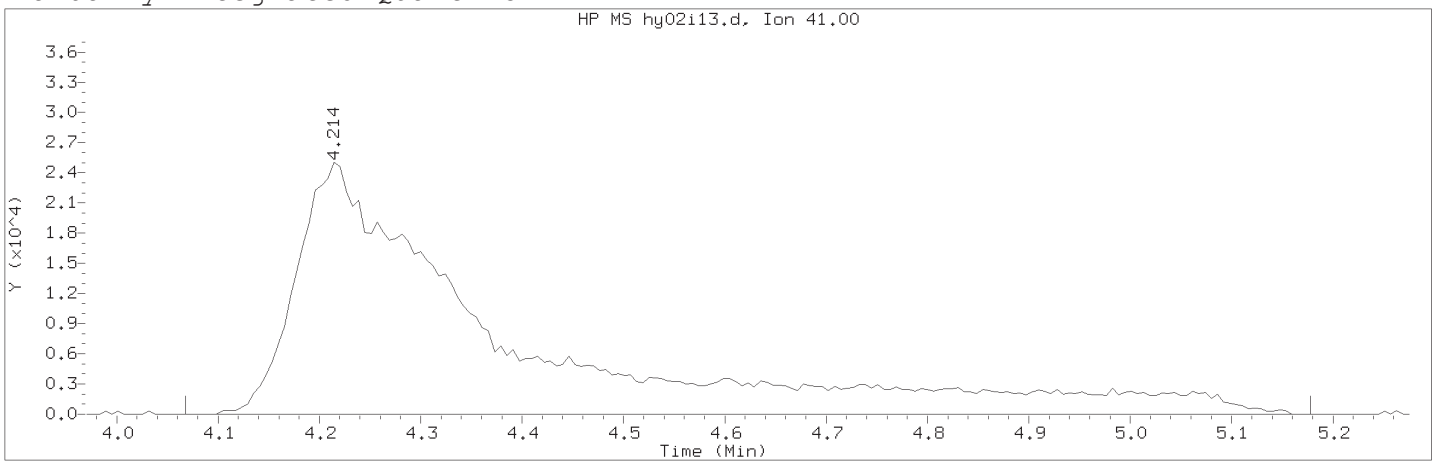
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 95		
Retention Time (minutes)	: 2.166		
Quant Ion	: 45.00		
Area	: 377915		
On-column Amount (ng)	: 4.9207		
Integration start scan	: 80	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	409

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

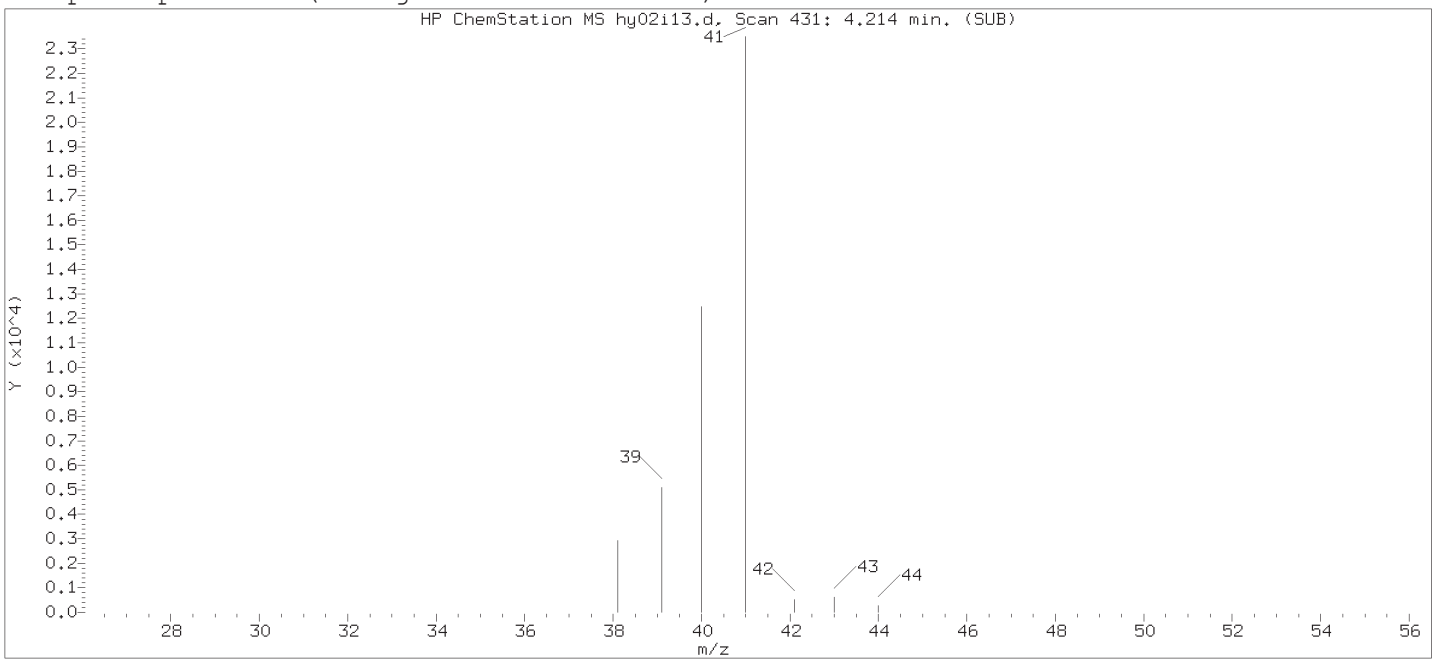
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 346001M
On-Column Amount (ng) : 192.7625
Integration start scan : 406 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

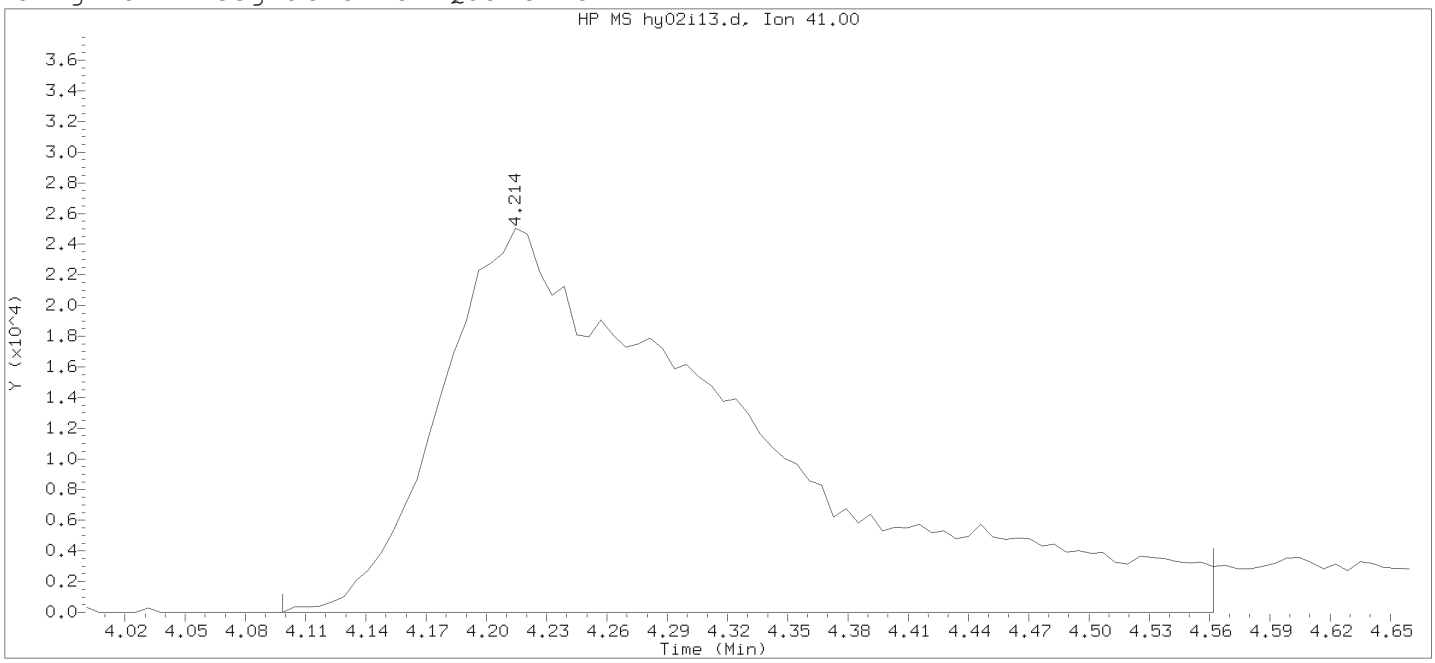
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

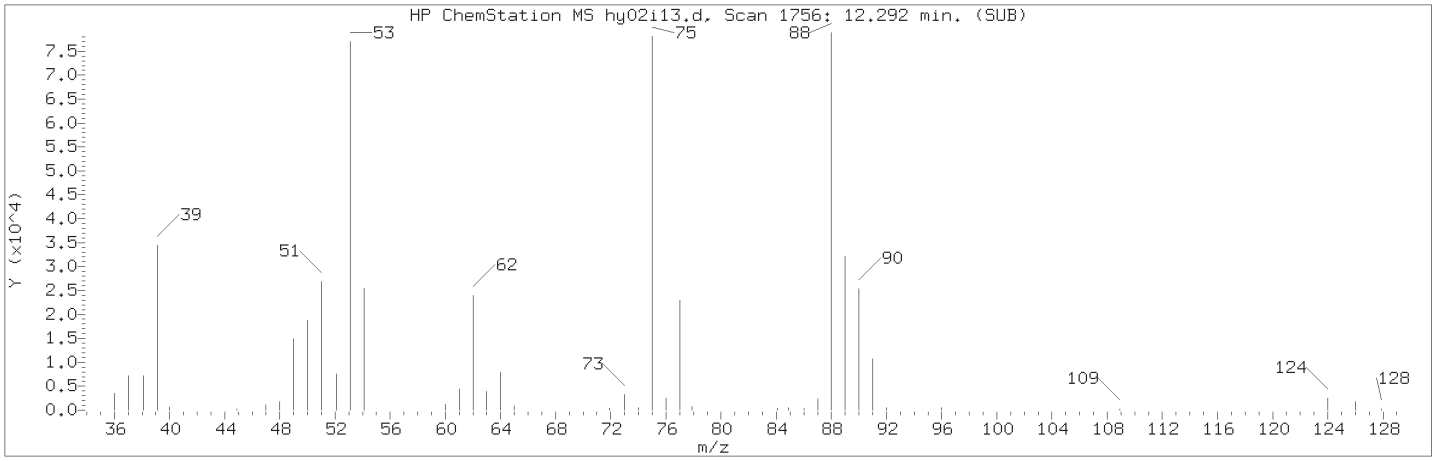
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

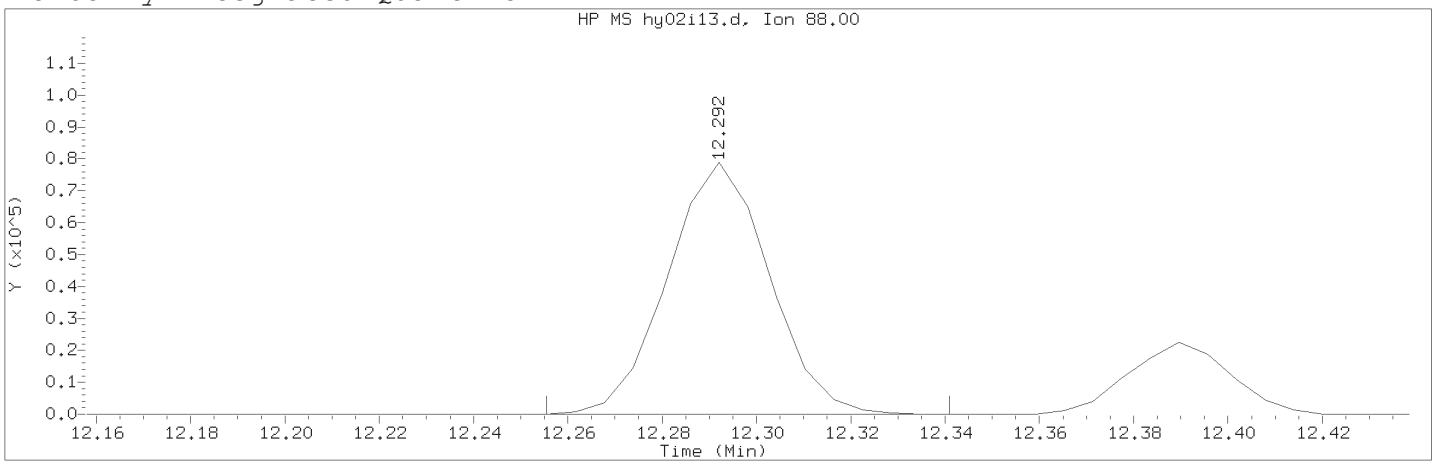
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 265890
On-column Amount (ng) : 127.0548
Integration start scan : 411 Integration stop scan: 487
Y at integration start : 0 Y at integration end: 0

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

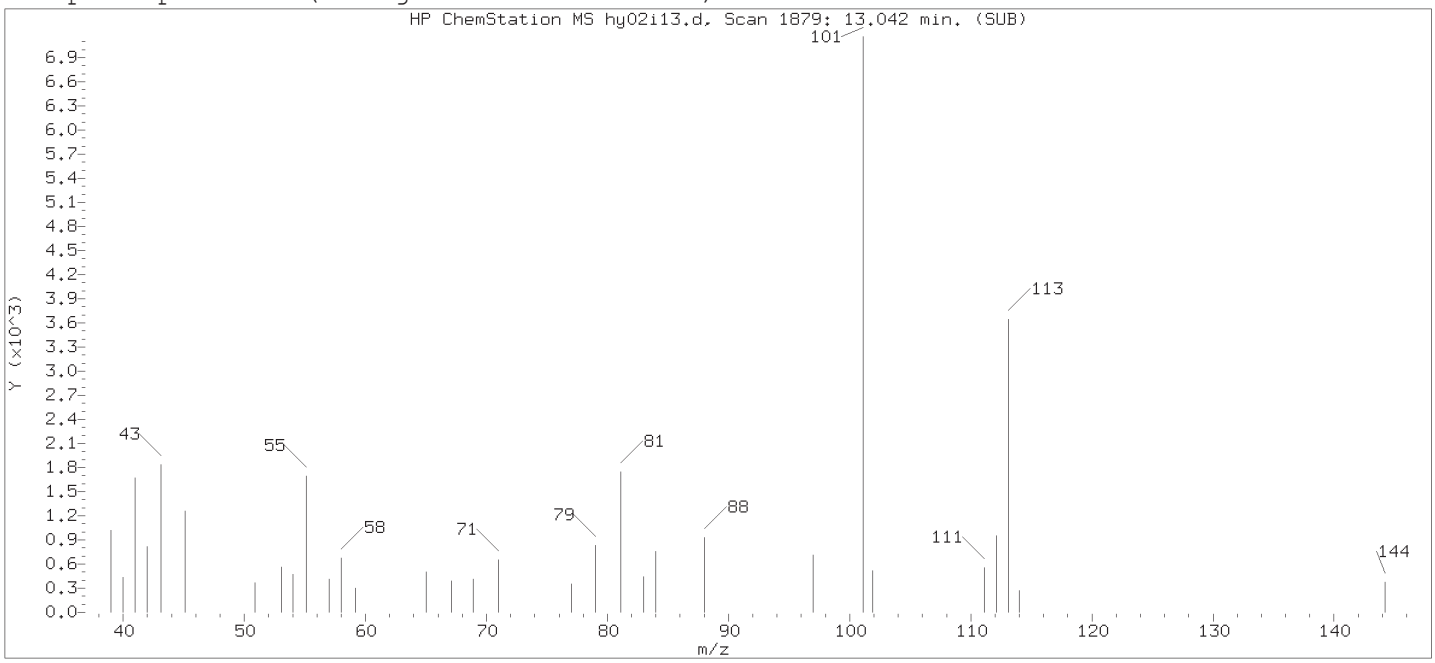
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 118032M
On-Column Amount (ng) : 12.2604
Integration start scan : 1749 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

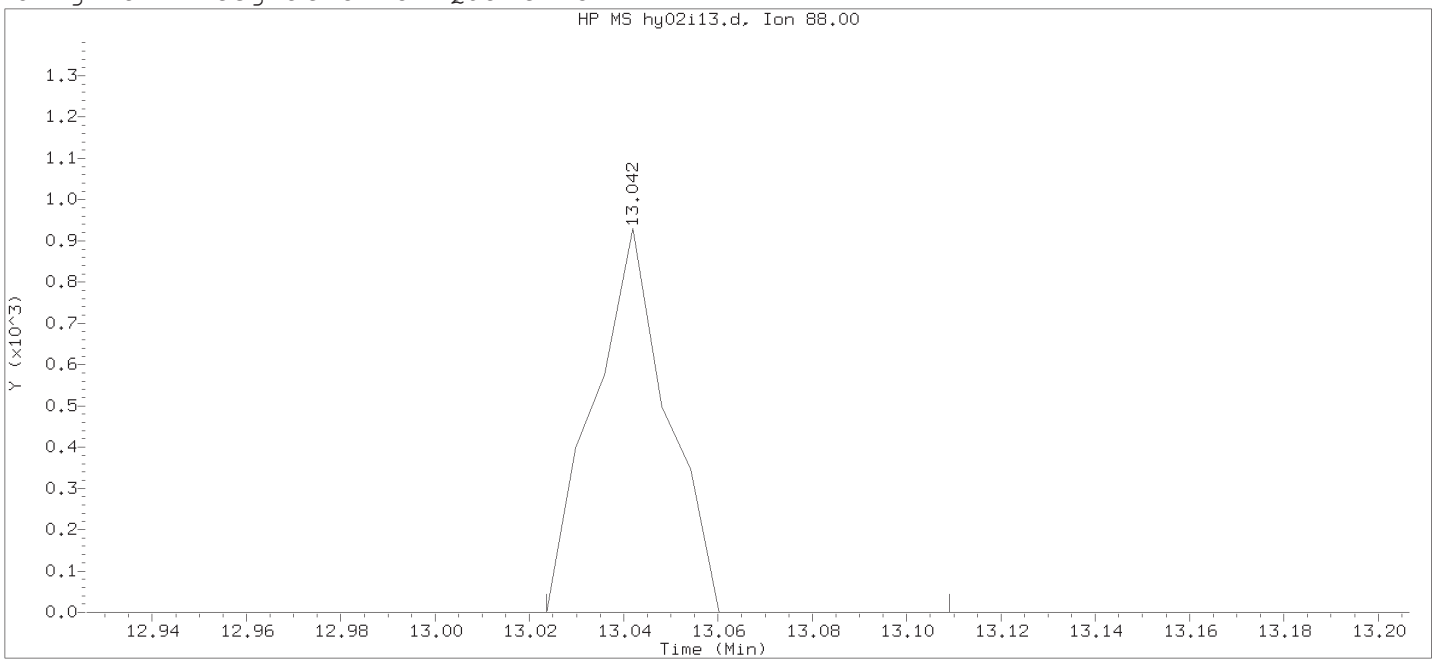
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

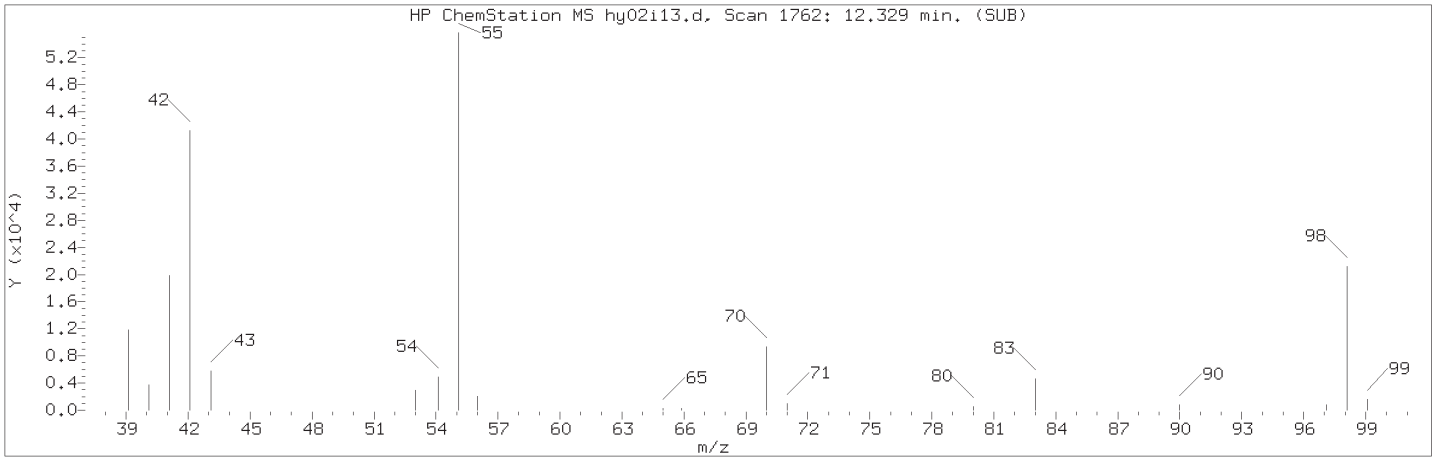
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

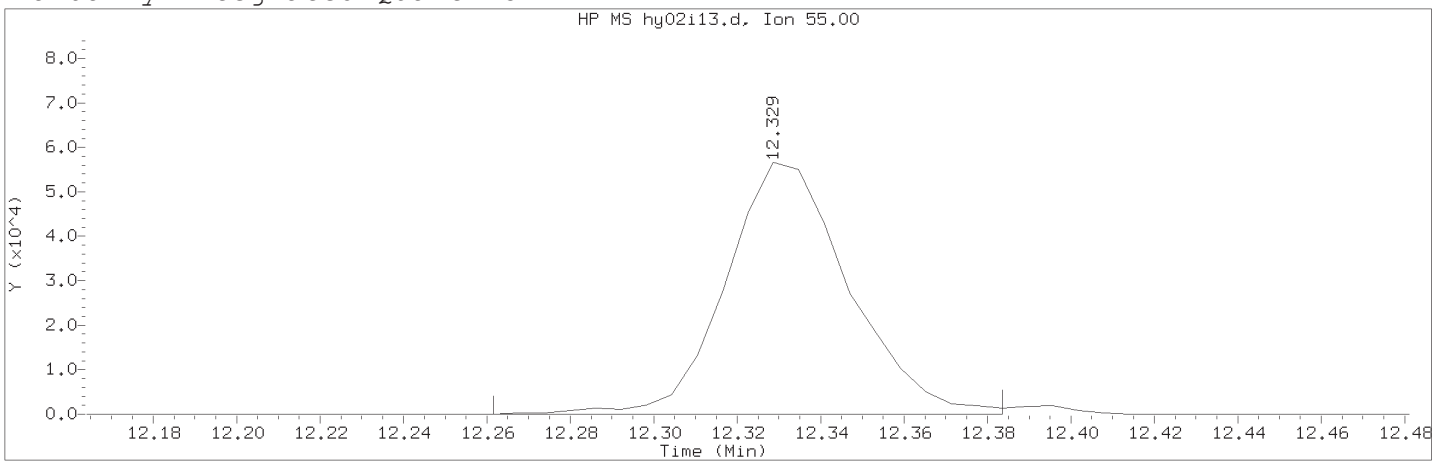
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 88.00
Area : 1005
On-column Amount (ng) : 0.1485
Integration start scan : 1875 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 0

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

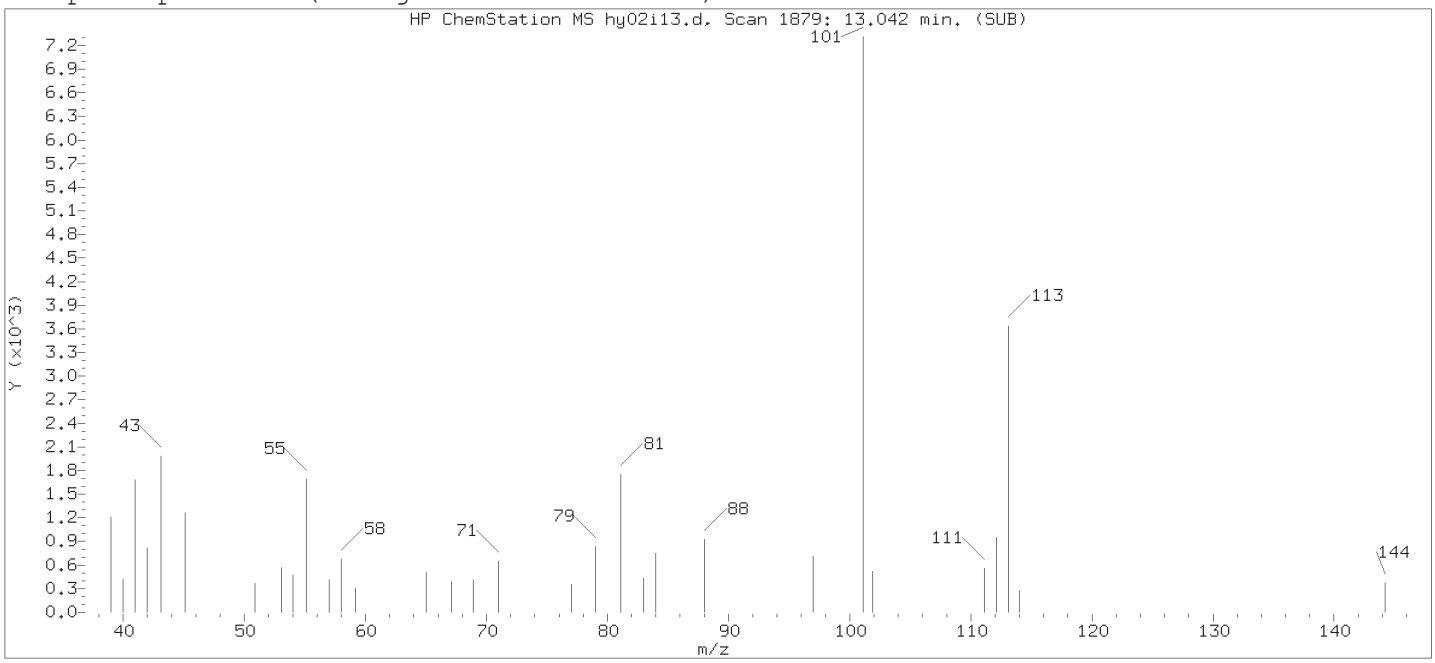
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 116048M
On-Column Amount (ng) : 237.0271
Integration start scan : 1750 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

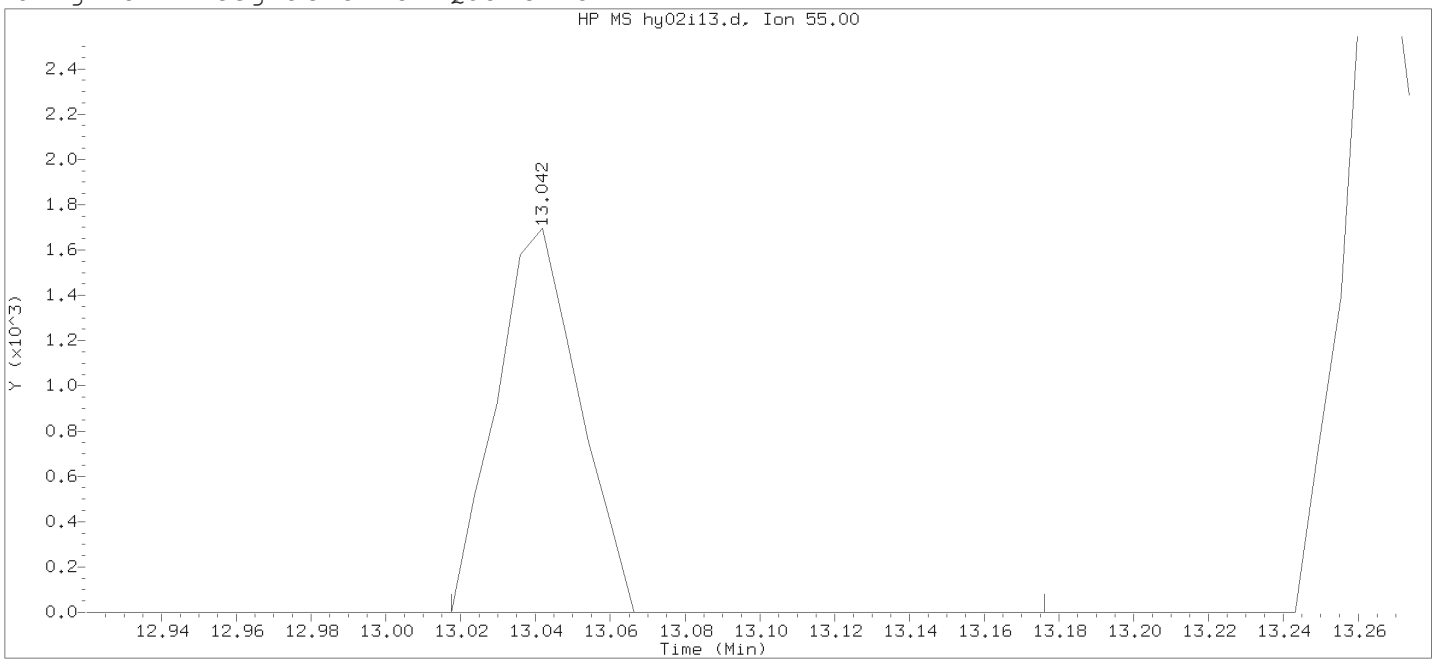
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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



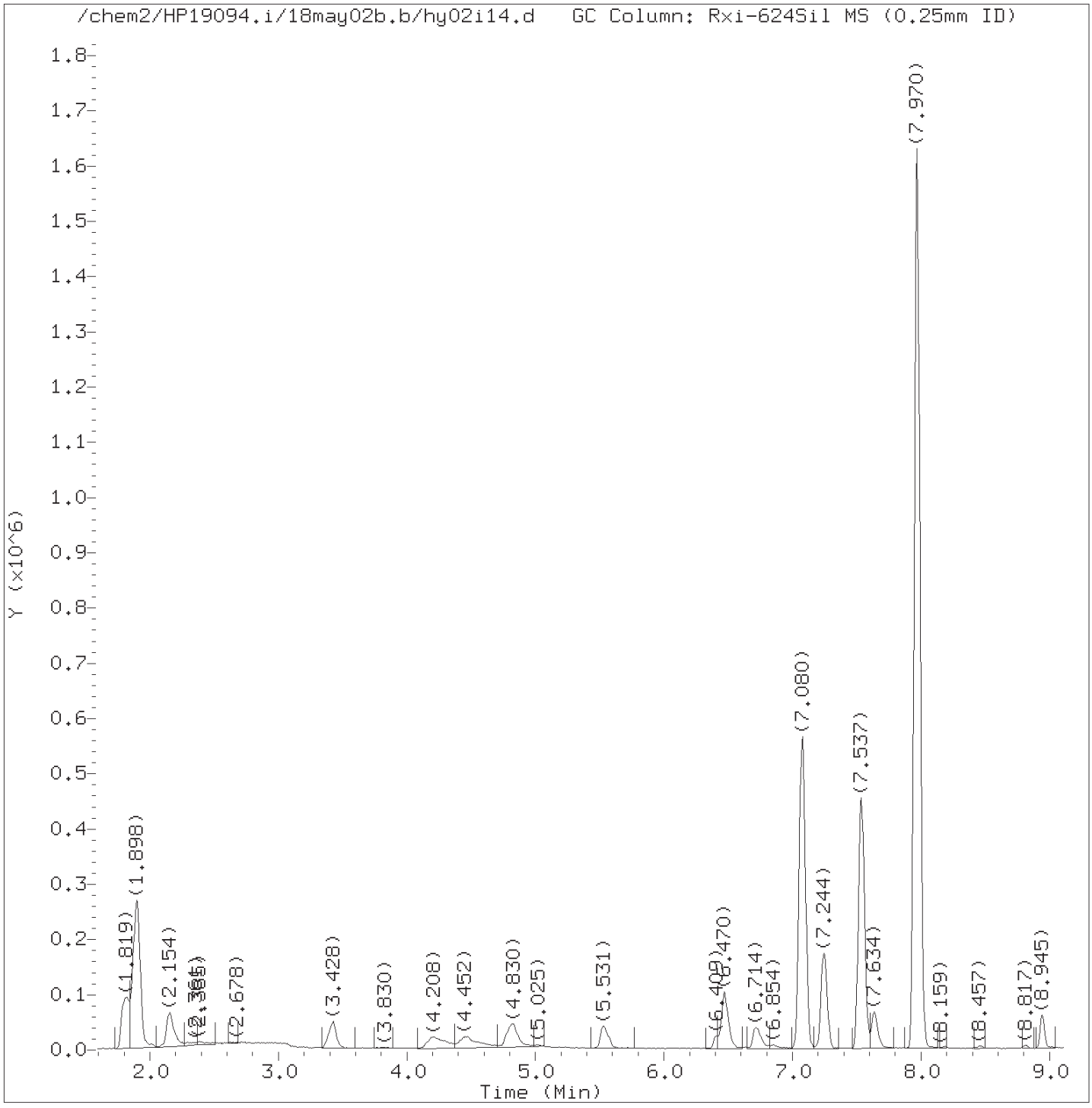
Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

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)

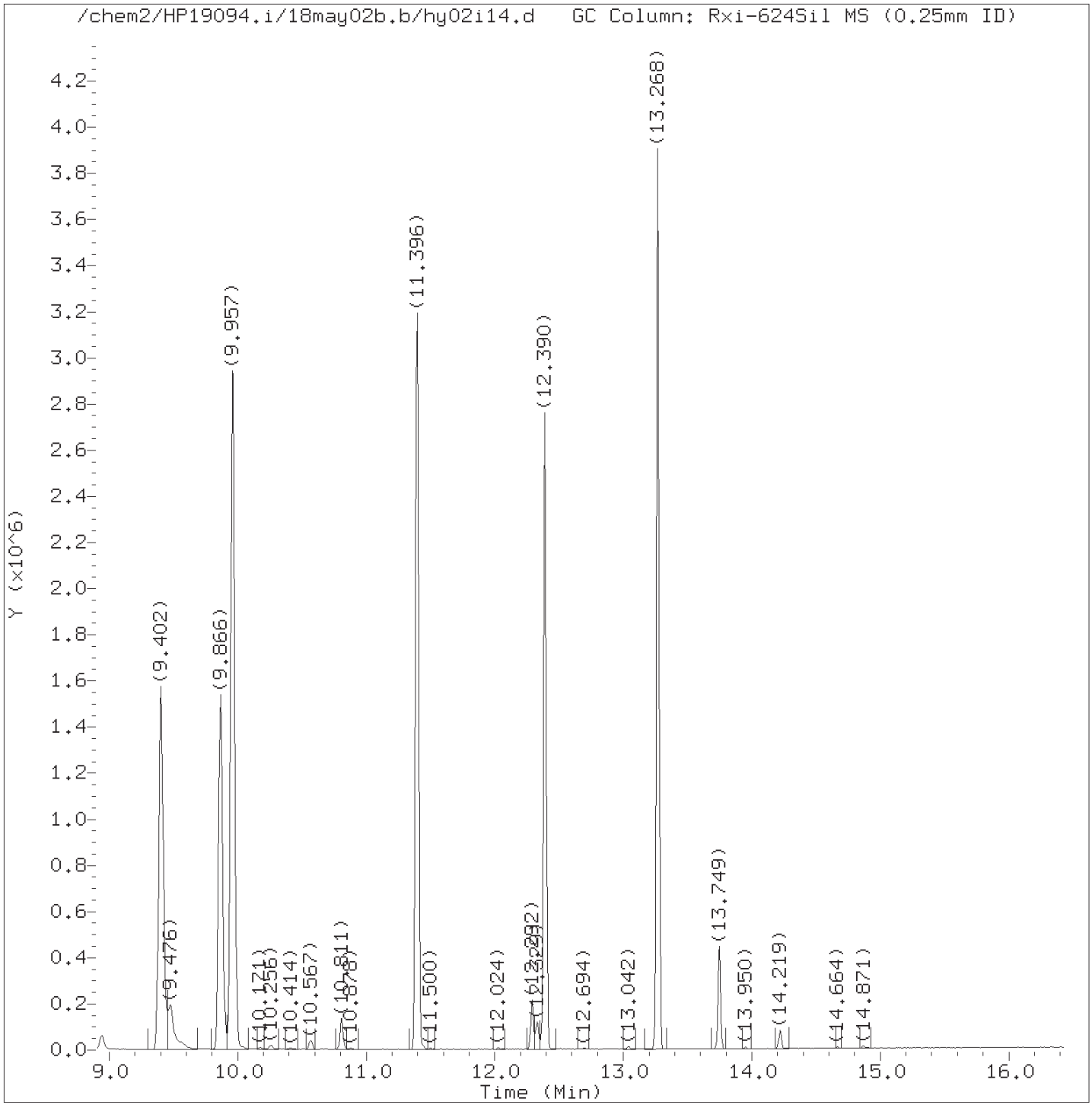
Target Revision 3.5

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

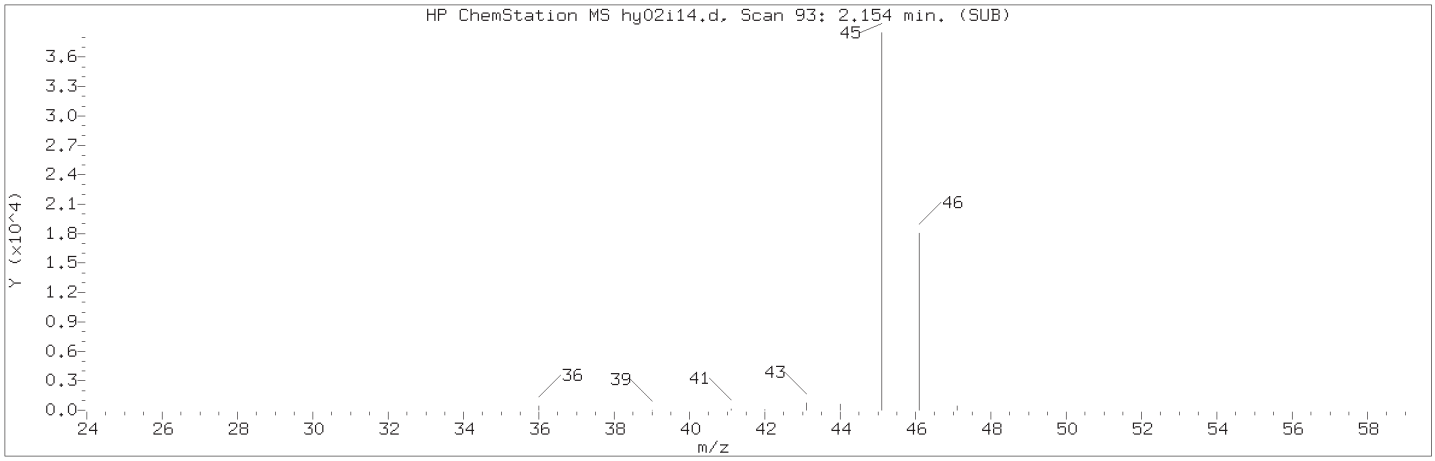
Sample Name: VSTD002 Lab Sample ID: VSTD002

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

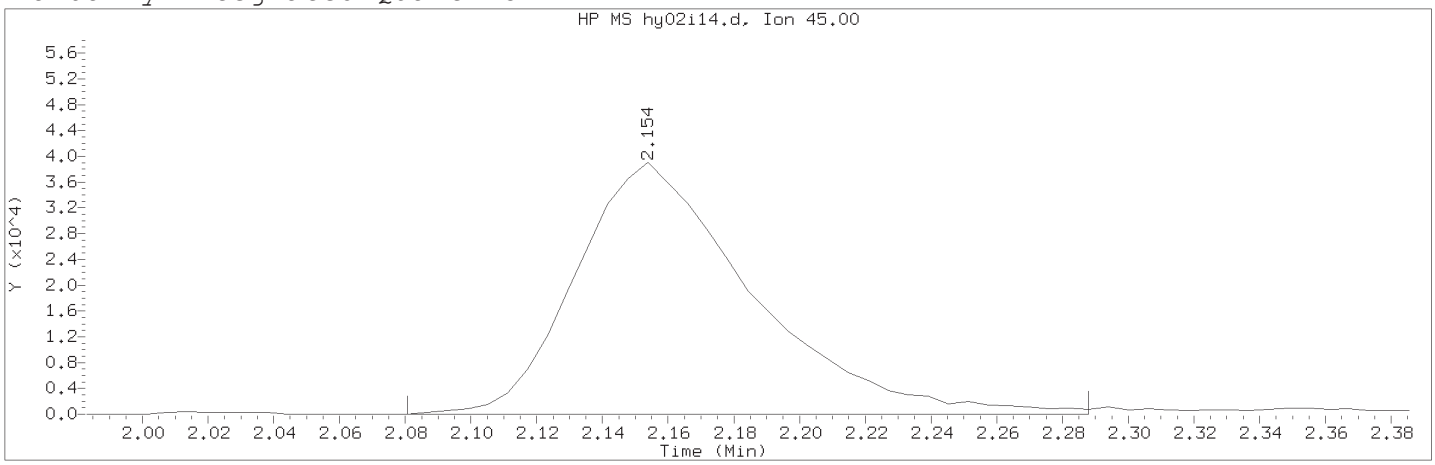
M = Compound was manually integrated.
* = Compound is an internal standard.

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

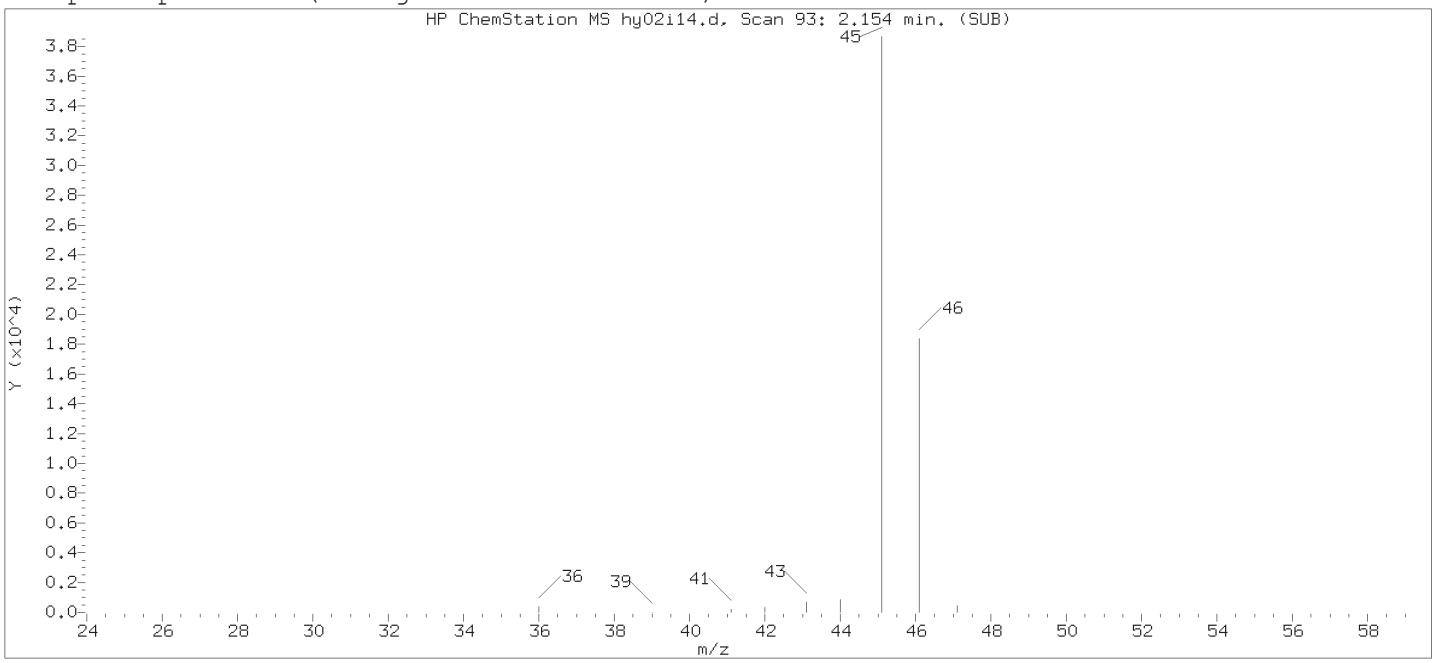
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 145626M
On-Column Amount (ng) : 1.9710
Integration start scan : 80 Integration stop scan: 114
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

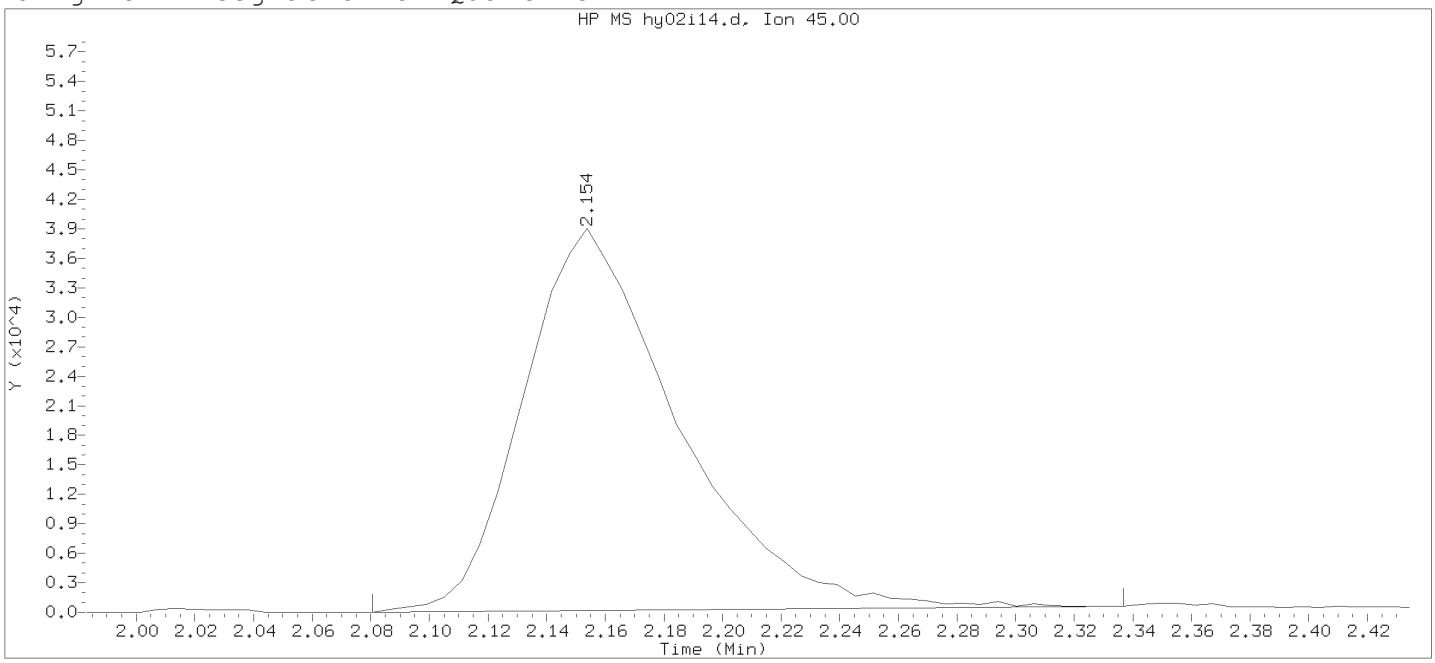
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

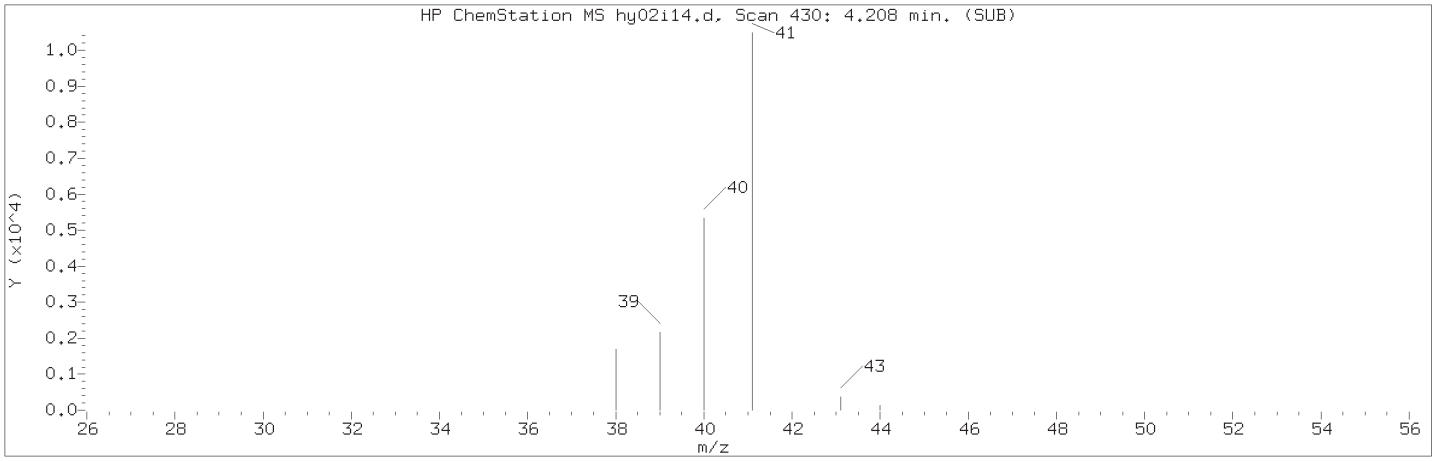
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

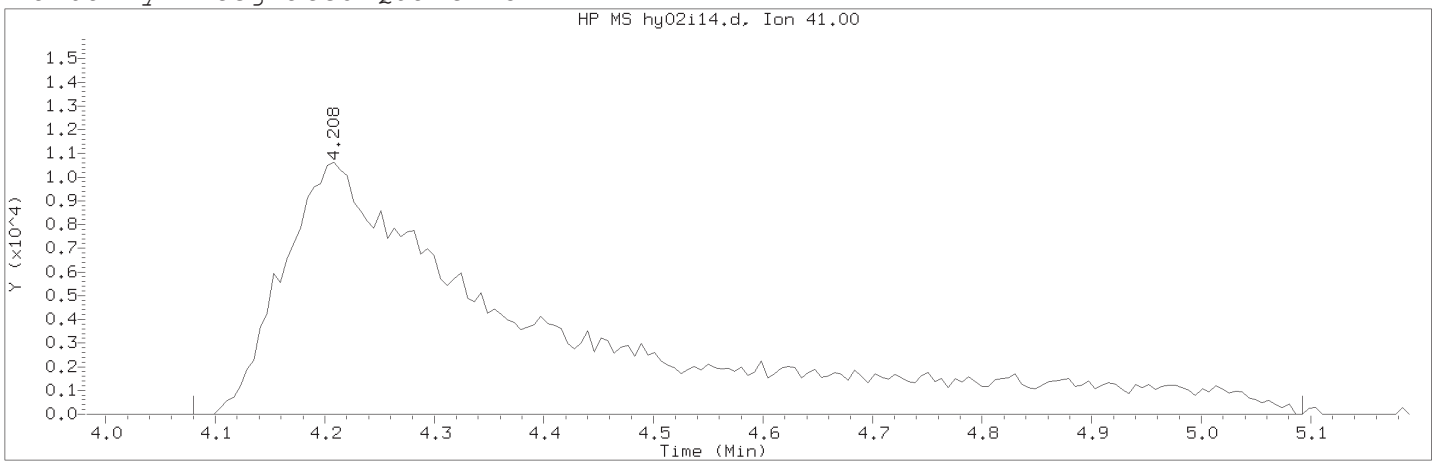
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 93		
Retention Time (minutes)	: 2.154		
Quant Ion	: 45.00		
Area	: 143014		
On-column Amount (ng)	: 1.8848		
Integration start scan	: 80	Integration stop scan:	122
Y at integration start	: 0	Y at integration end:	597

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

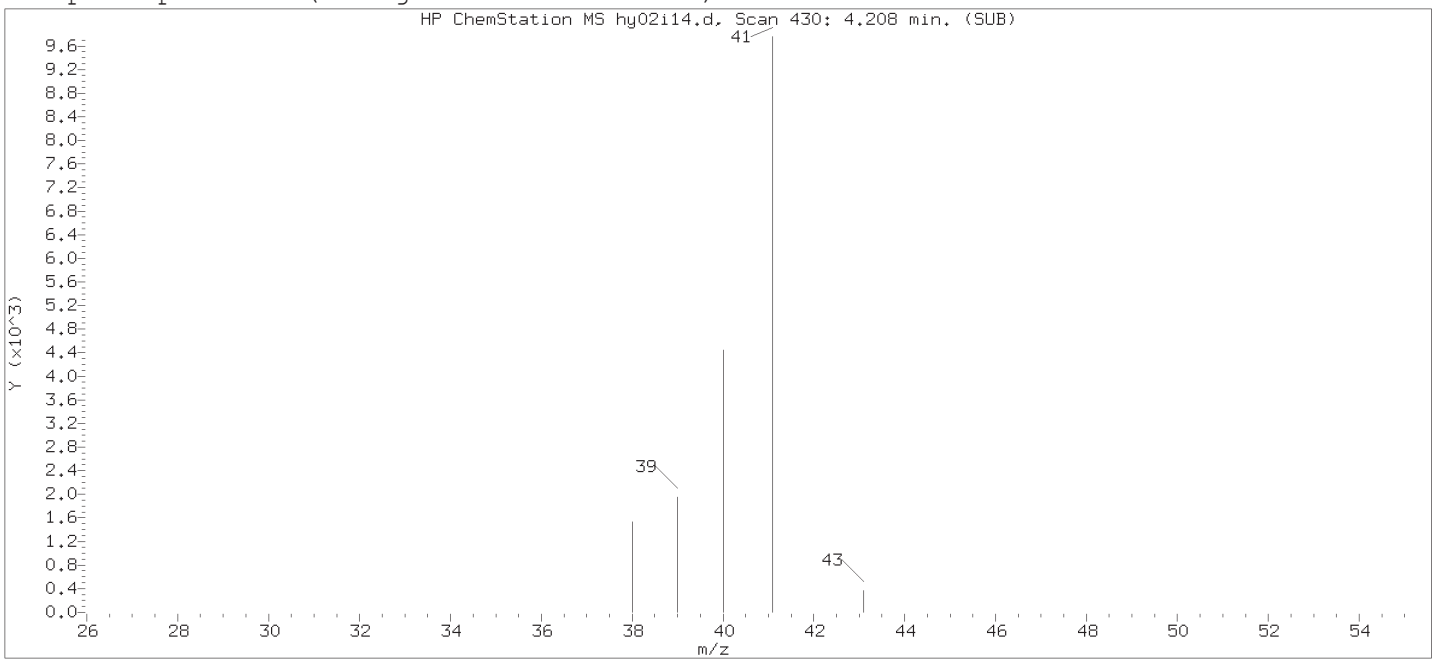
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 174320M
On-Column Amount (ng) : 78.2209
Integration start scan : 408 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

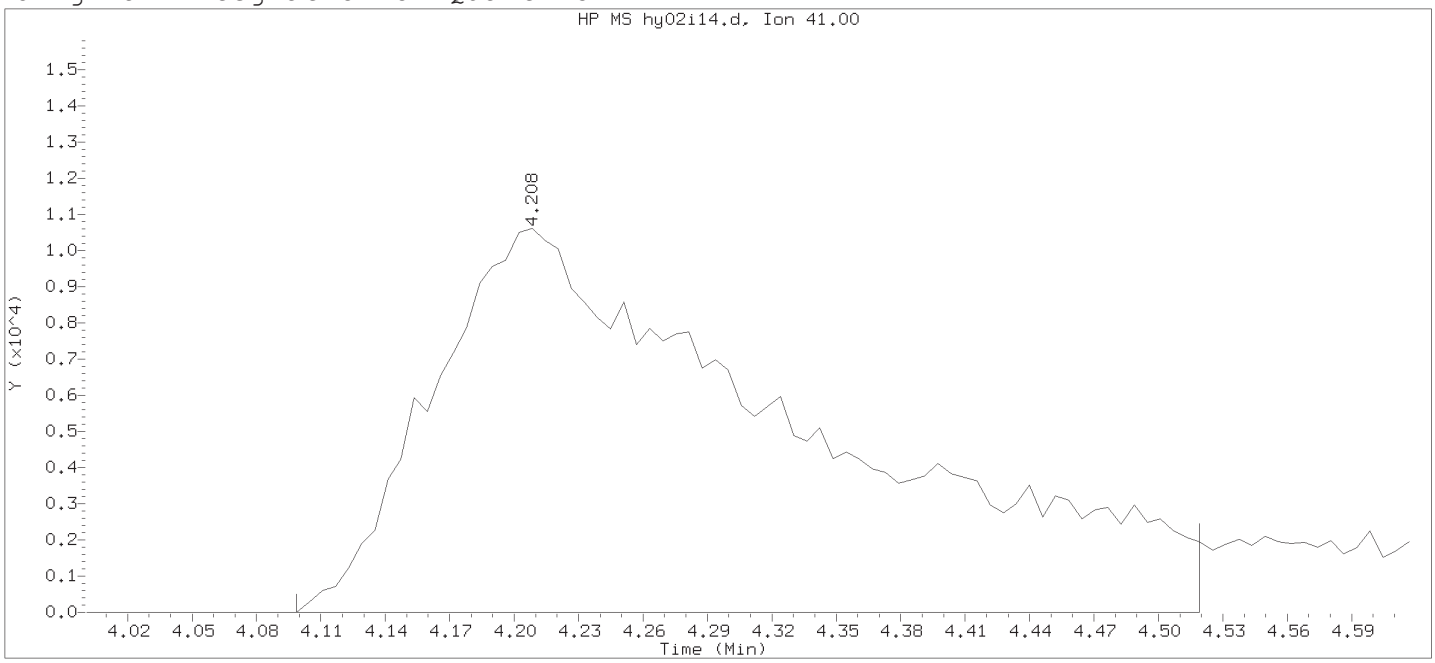
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

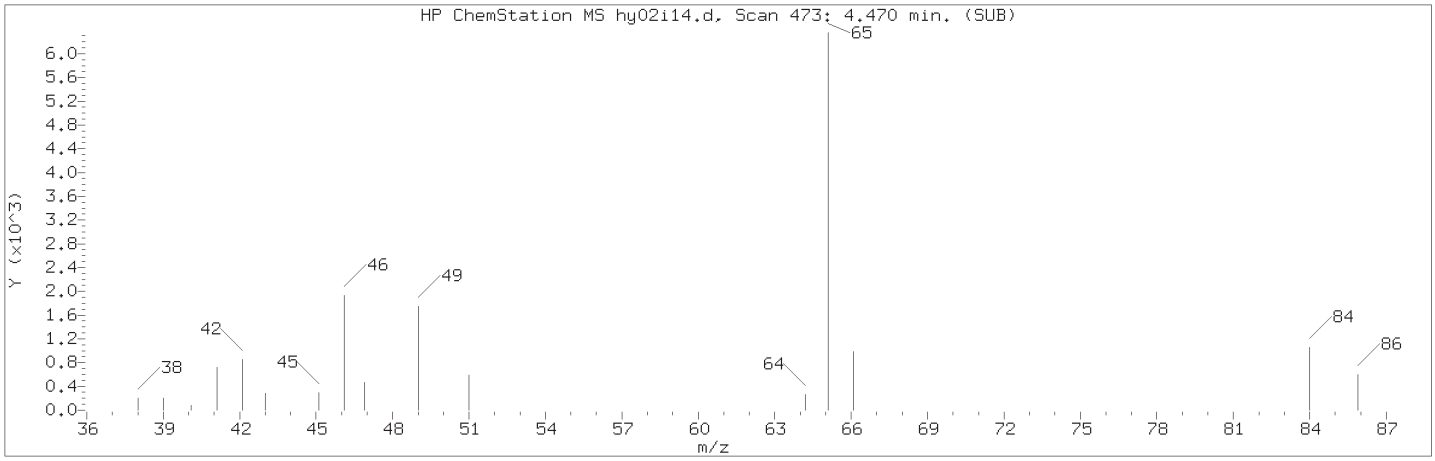
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

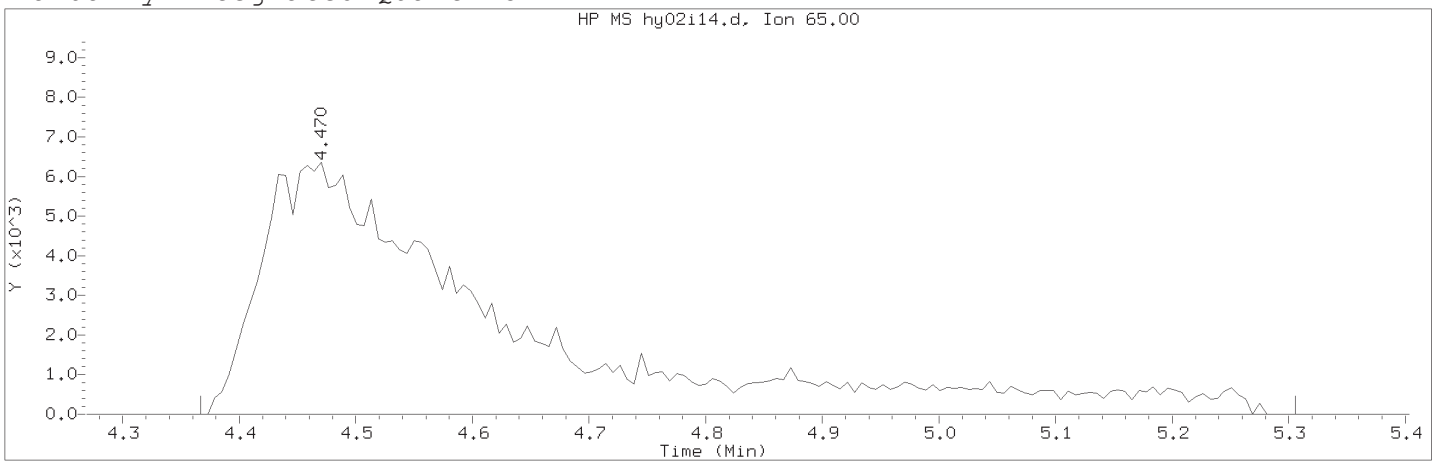
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 430		
Retention Time (minutes)	: 4.208		
Quant Ion	: 41.00		
Area	: 127478		
On-column Amount (ng)	: 55.3756		
Integration start scan	: 411	Integration stop scan:	480
Y at integration start	: 0	Y at integration end:	0

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

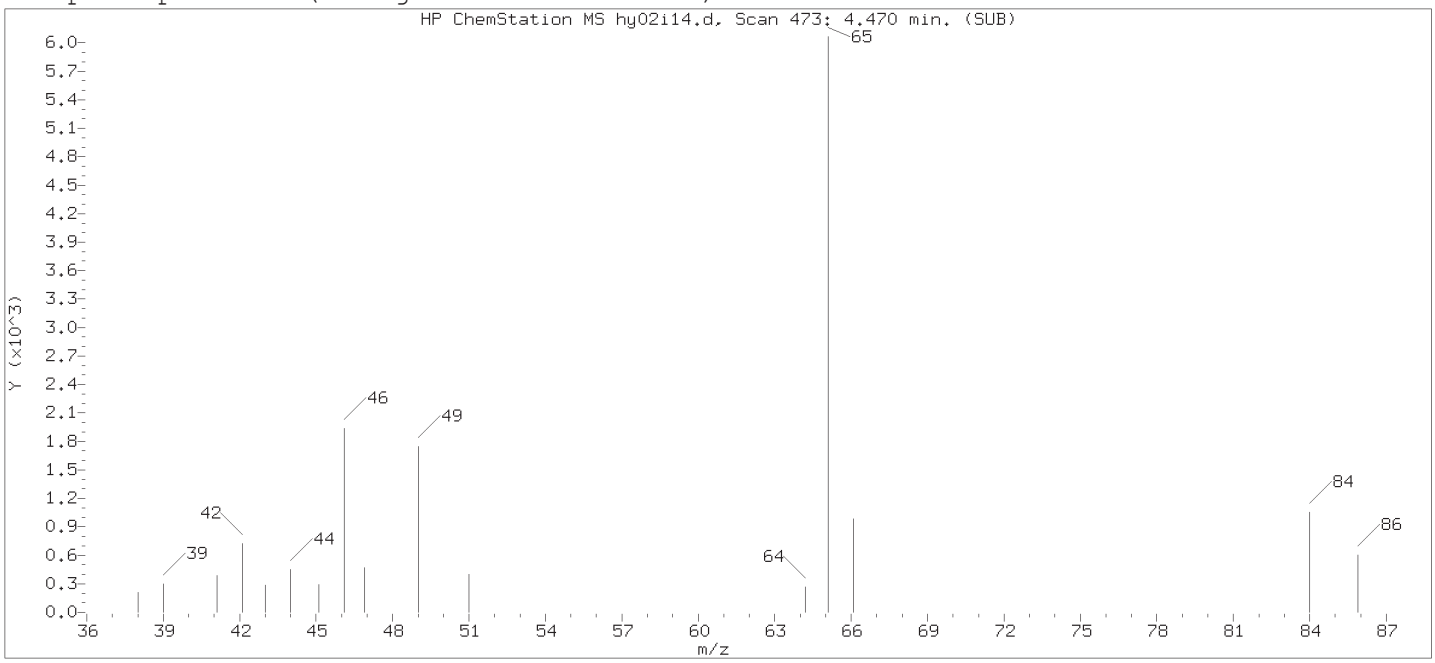
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 92293M
On-Column Amount (ng) : 50.0000
Integration start scan : 455 Integration stop scan: 609
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

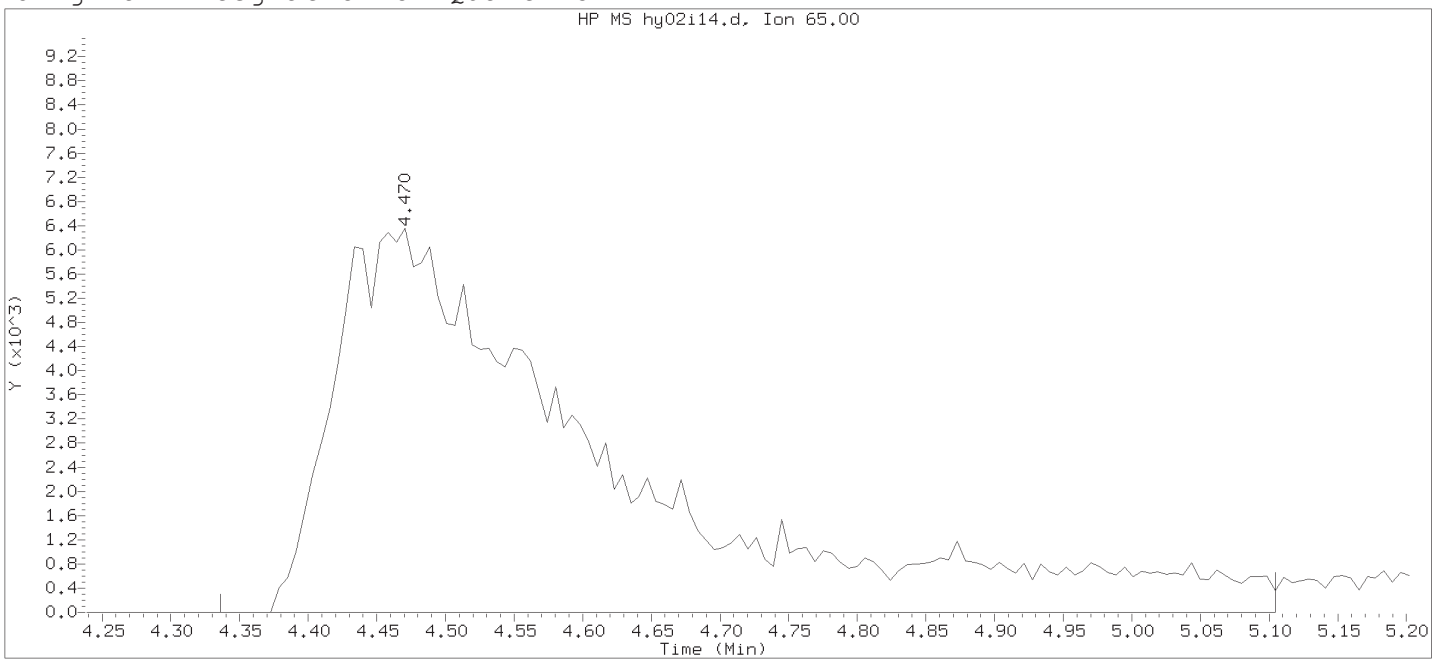
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

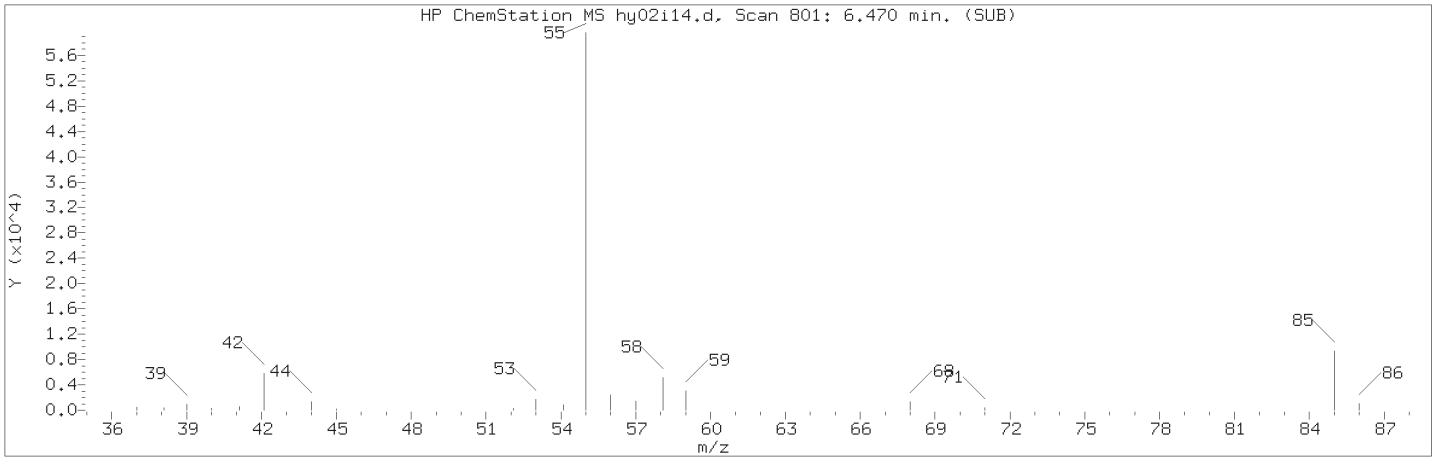
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

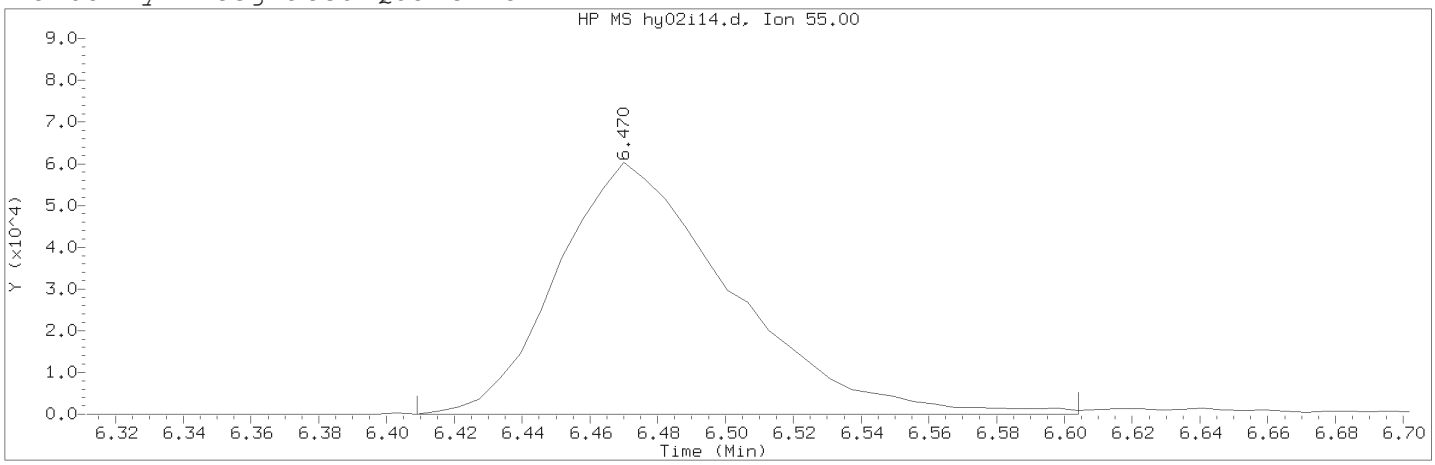
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 87182
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 576
Y at integration start : 0 Y at integration end: 0

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

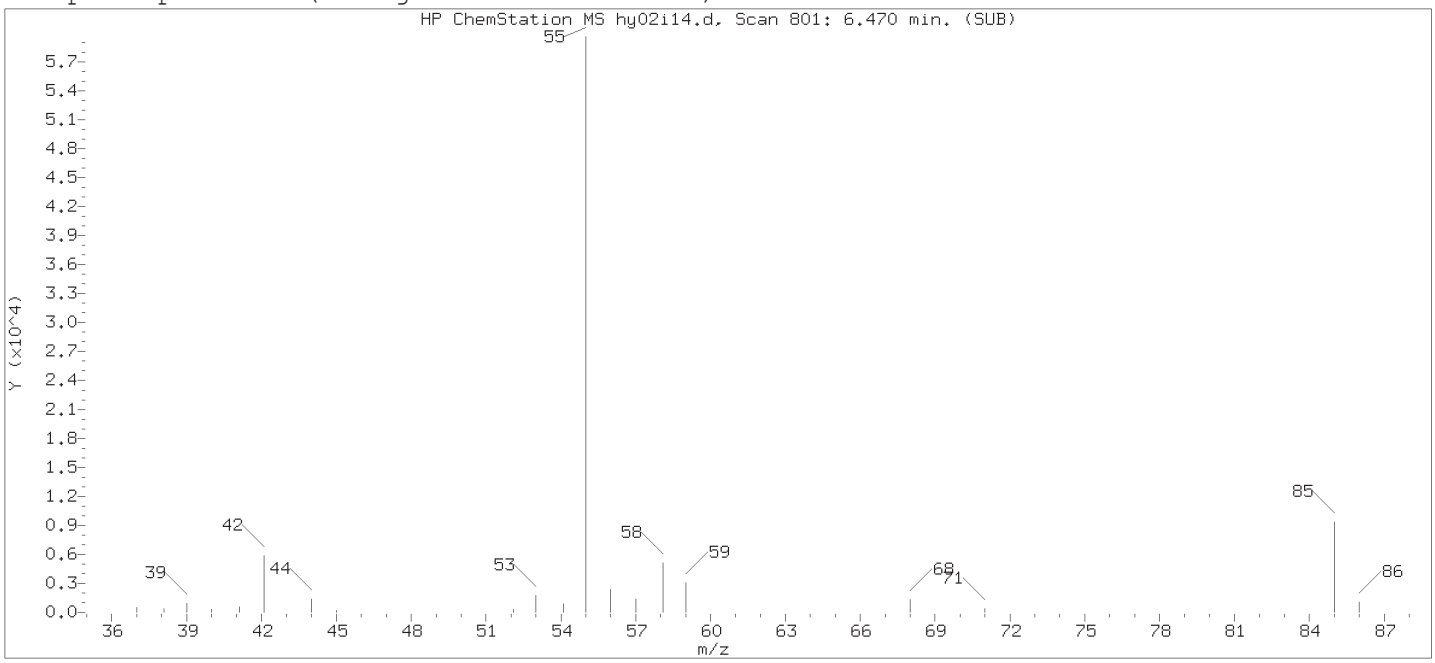
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 801
Retention Time (minutes): 6.470
Quant Ion : 55.00
Area (flag) : 214639M
On-Column Amount (ng) : 9.8825
Integration start scan : 790 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

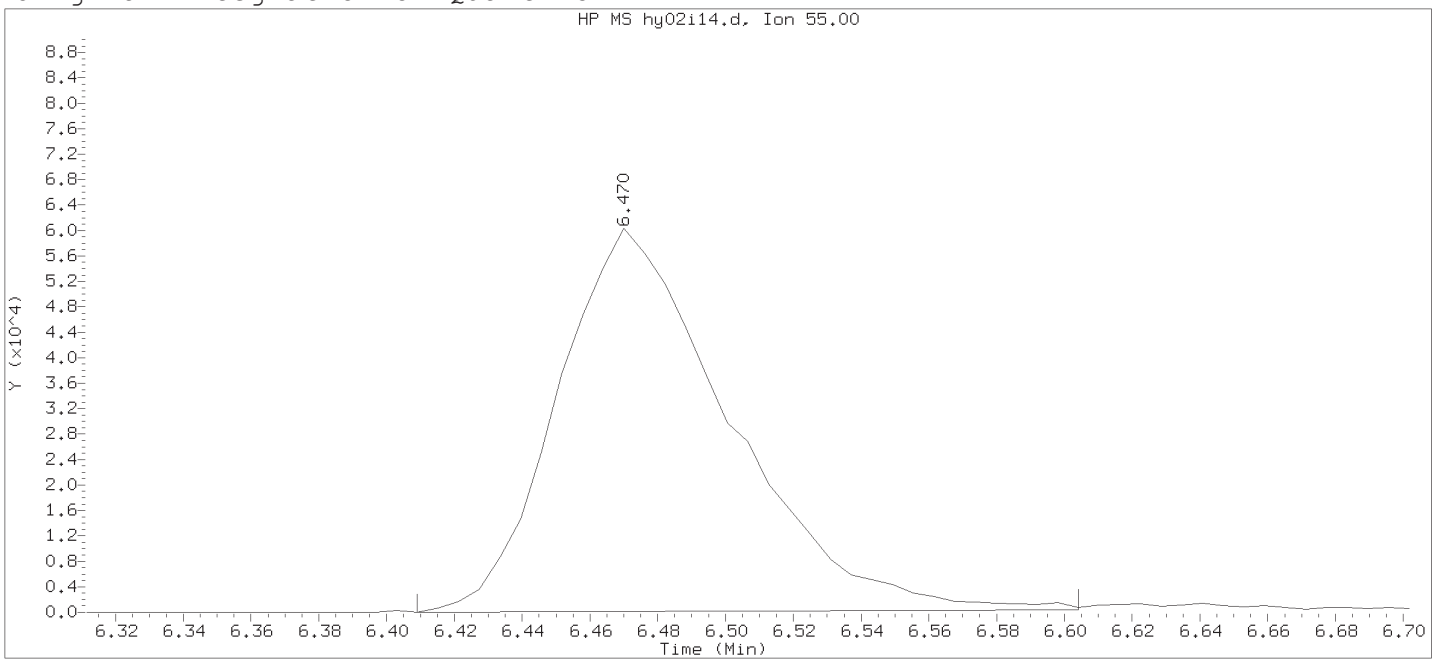
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

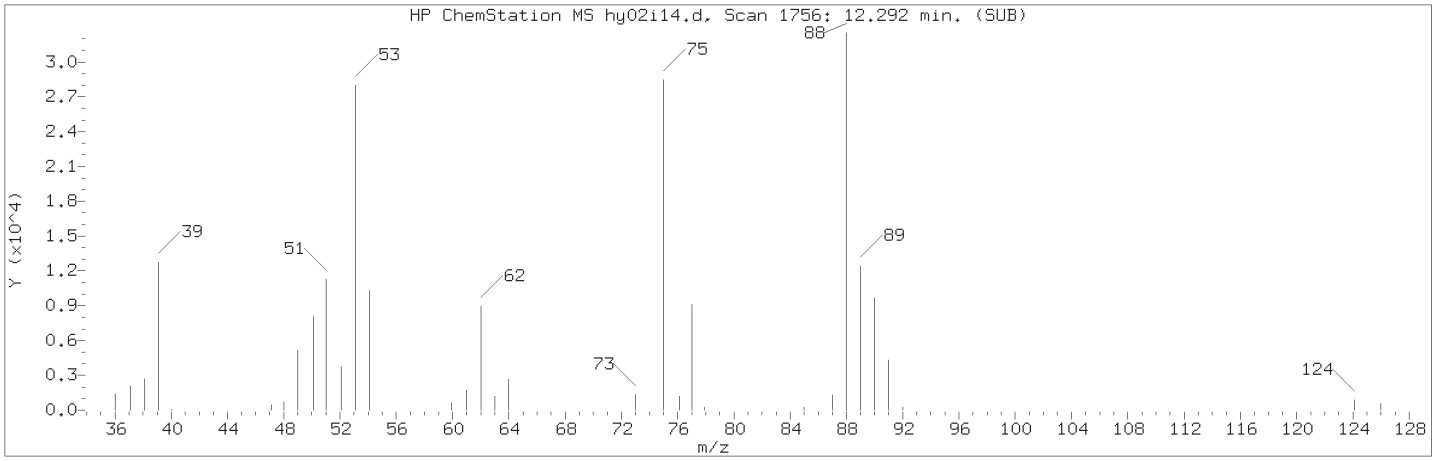
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

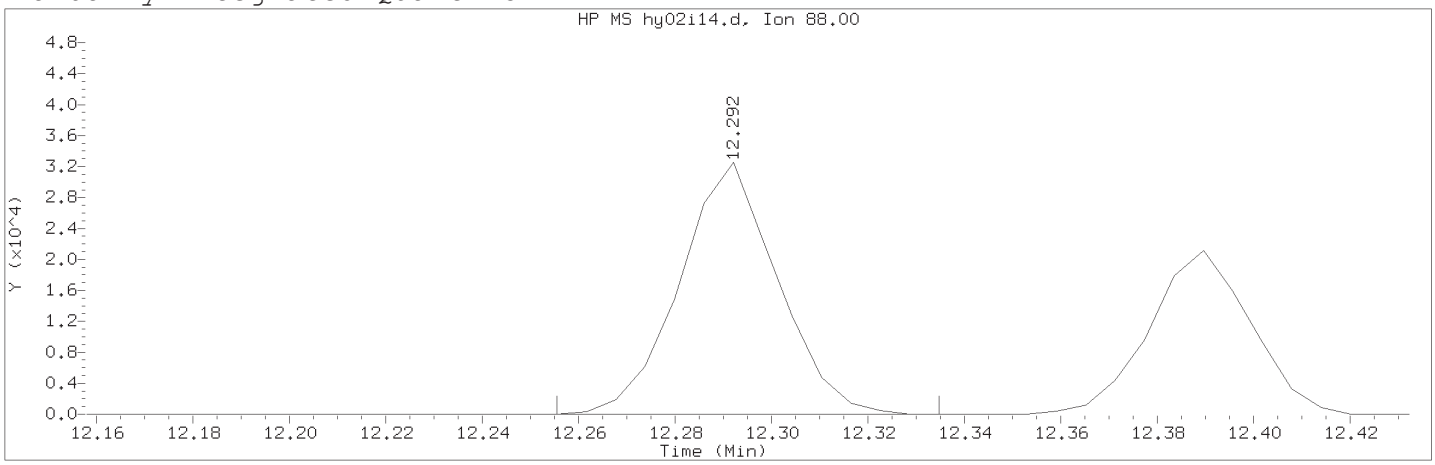
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 801
Retention Time (minutes): 6.470
Quant Ion : 55.00
Area : 212156
On-column Amount (ng) : 9.7793
Integration start scan : 790 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 400

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

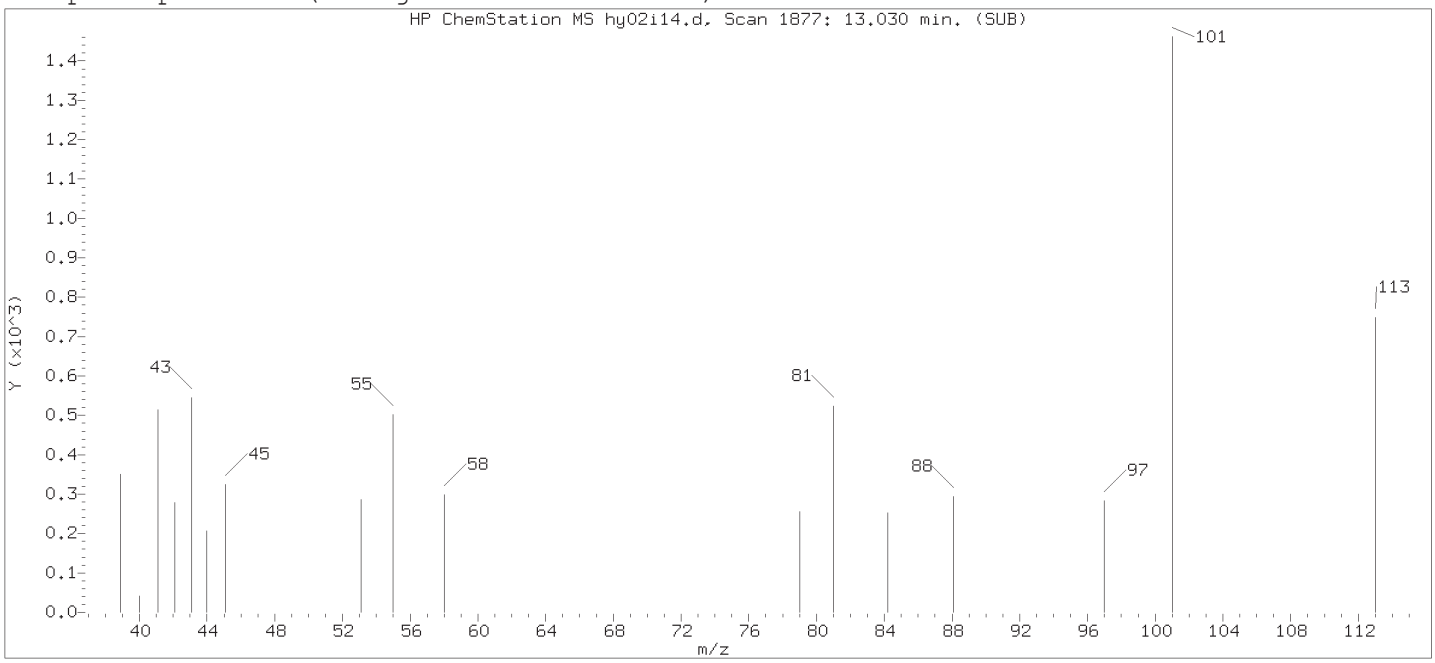
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 45666M
On-Column Amount (ng) : 3.8206
Integration start scan : 1749 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

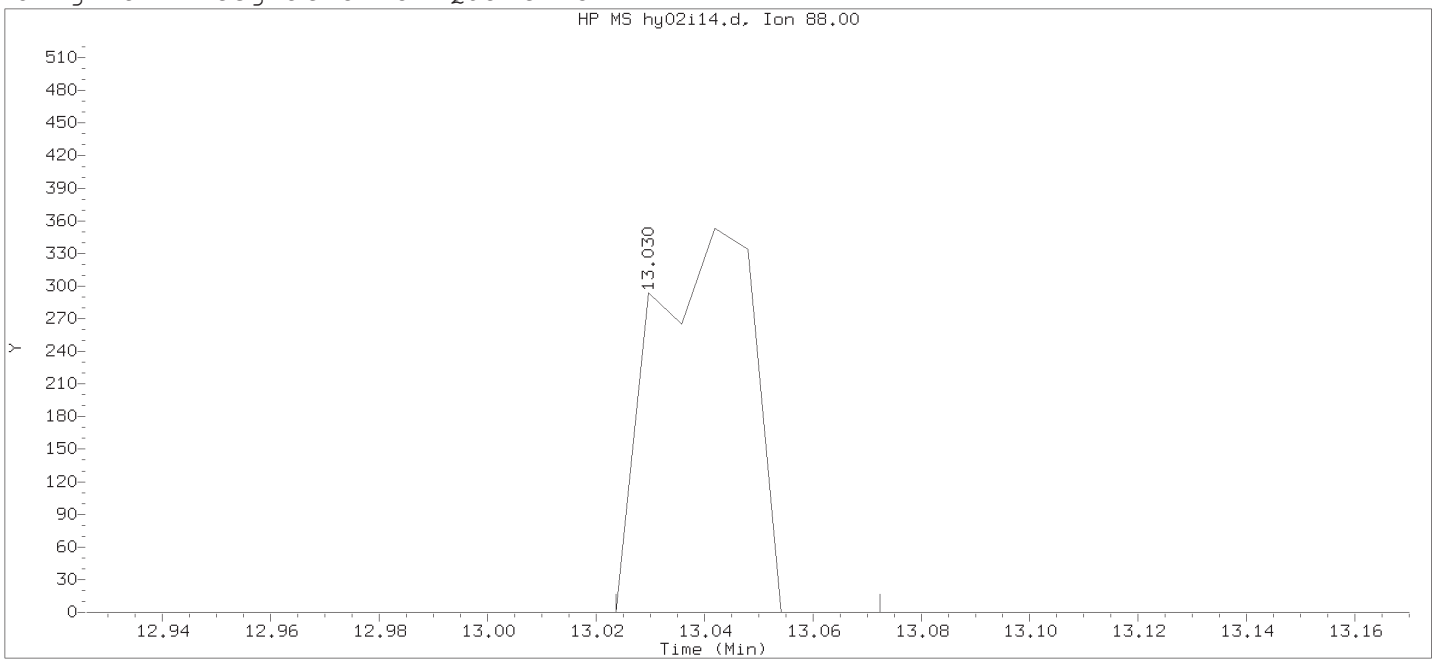
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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

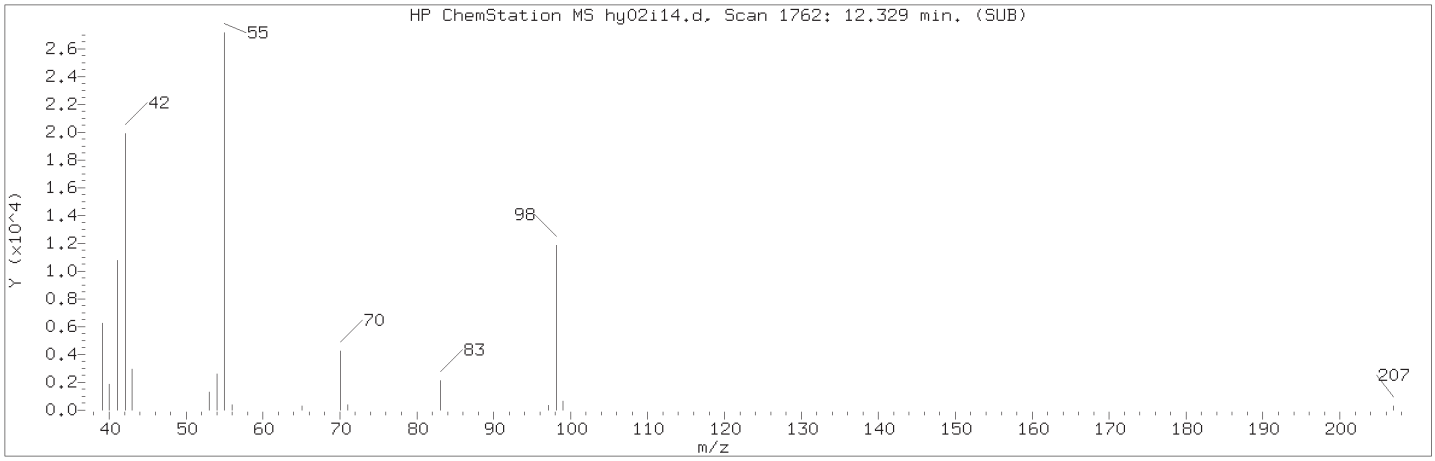
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

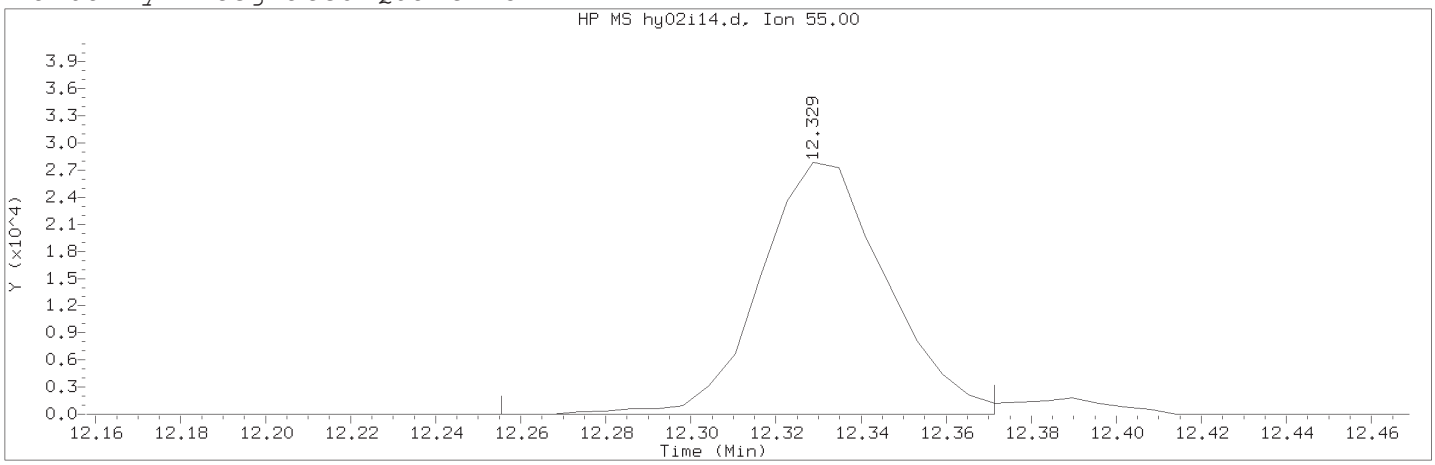
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1877
Retention Time (minutes): 13.030
Quant Ion : 88.00
Area : 455
On-column Amount (ng) : 0.0756
Integration start scan : 1875 Integration stop scan: 1883
Y at integration start : 0 Y at integration end: 0

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

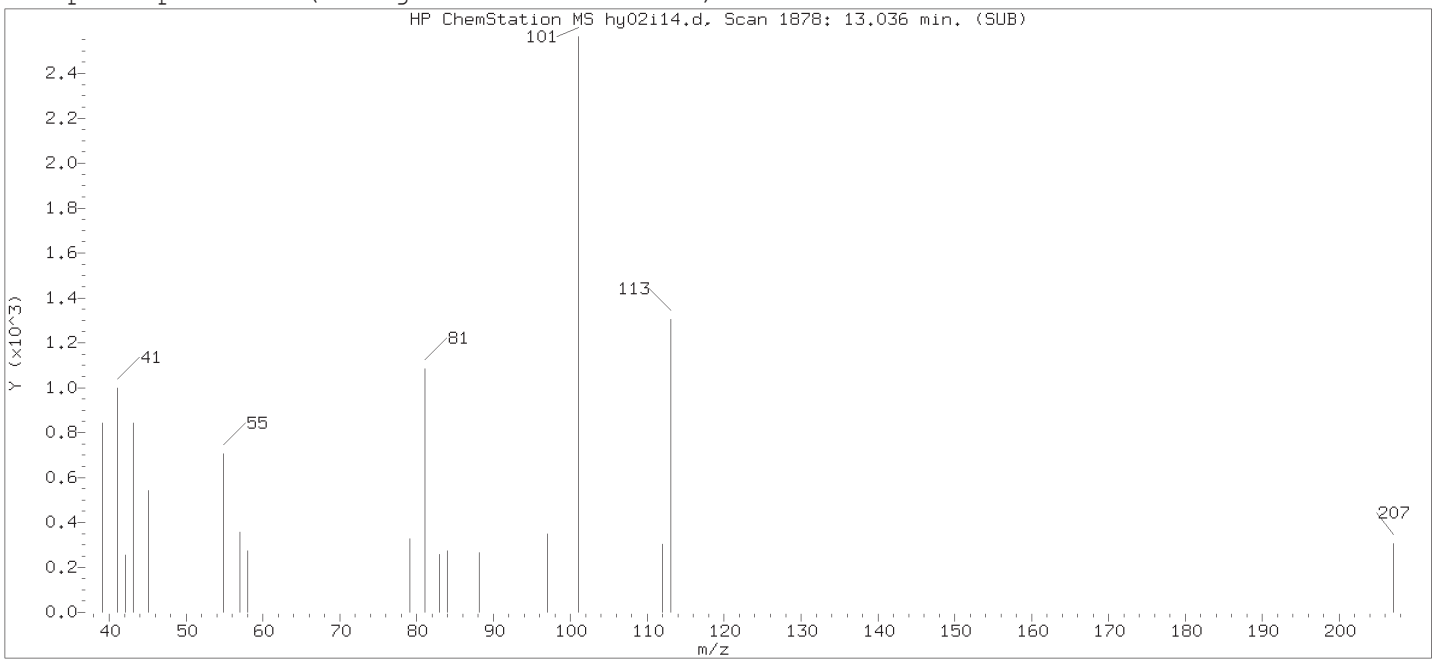
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 57098M
On-Column Amount (ng) : 93.9316
Integration start scan : 1749 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

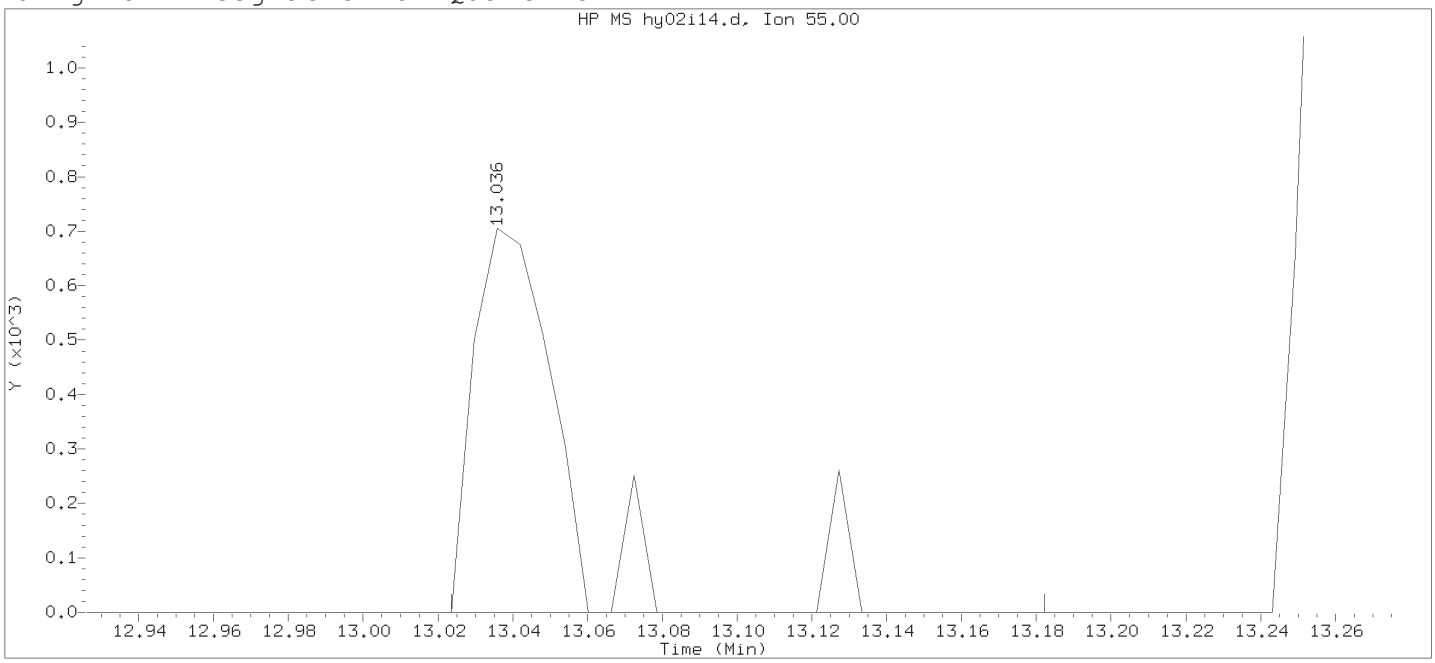
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

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



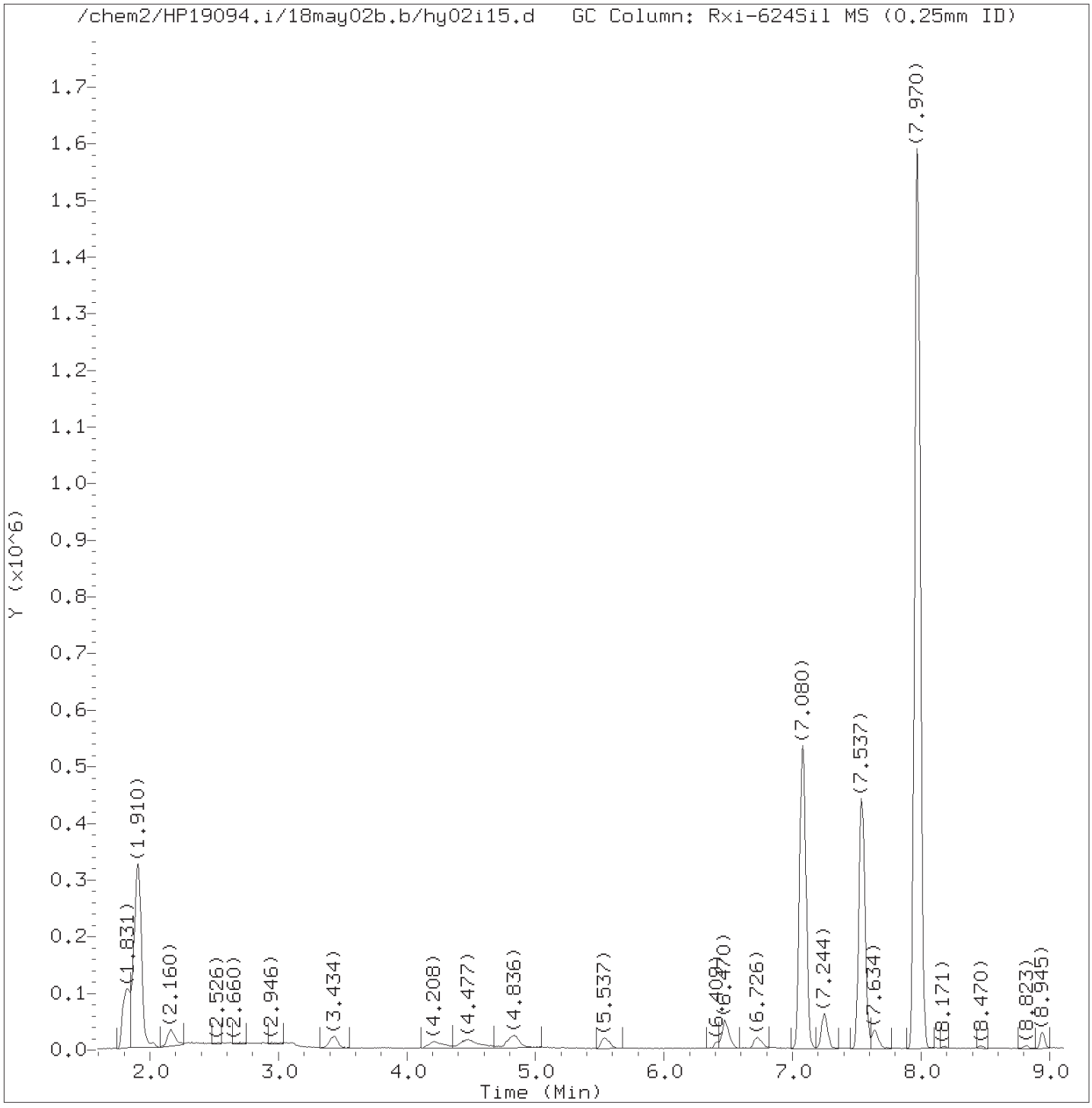
Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

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)

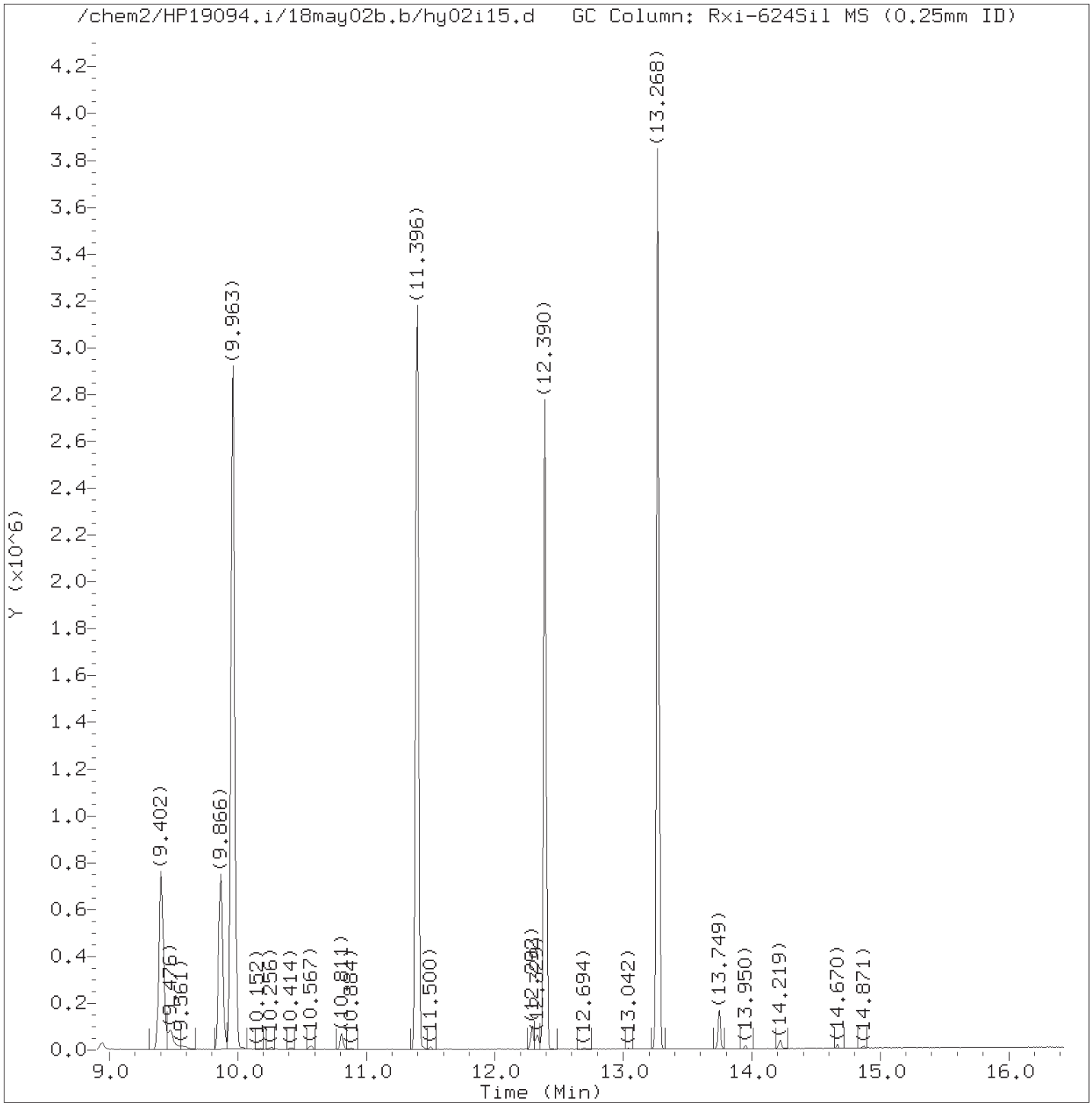
Target Revision 3.5

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

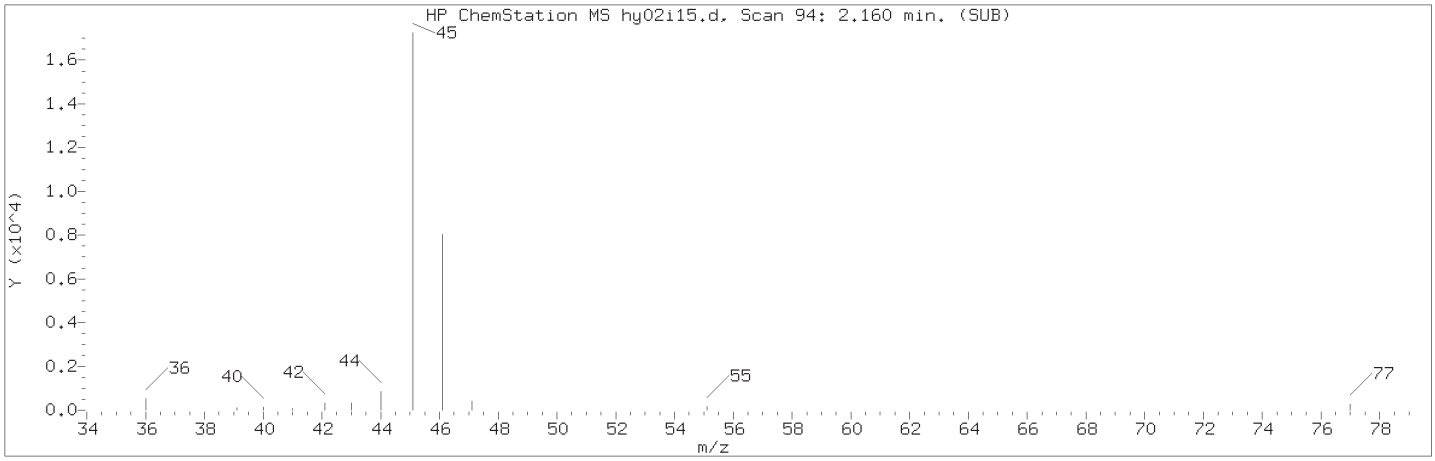
Sample Name: VSTD001 Lab Sample ID: VSTD001

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

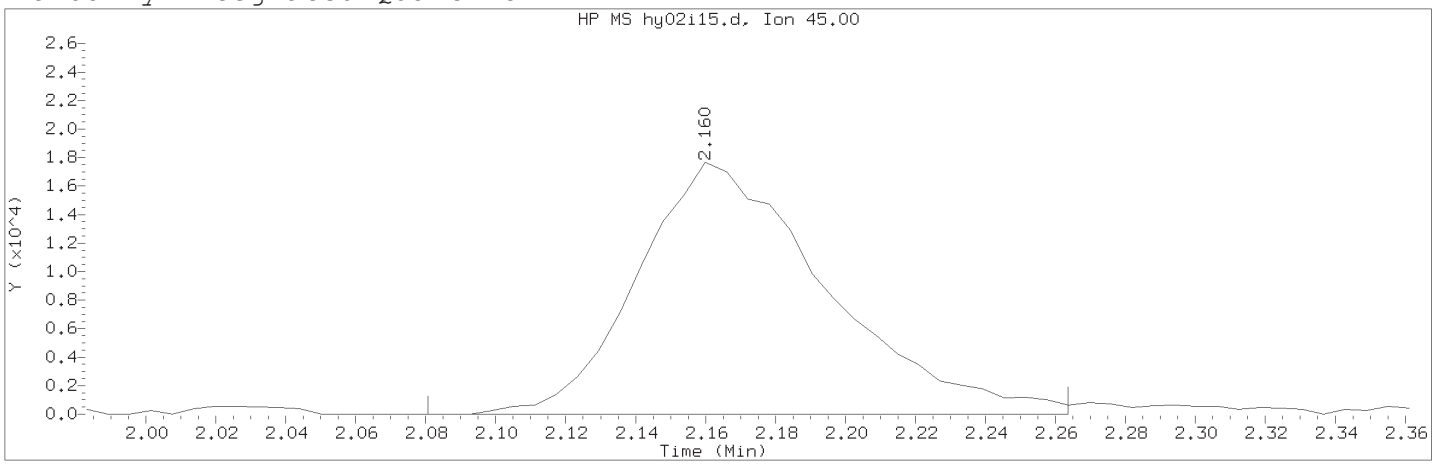
M = Compound was manually integrated.
* = Compound is an internal standard.

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

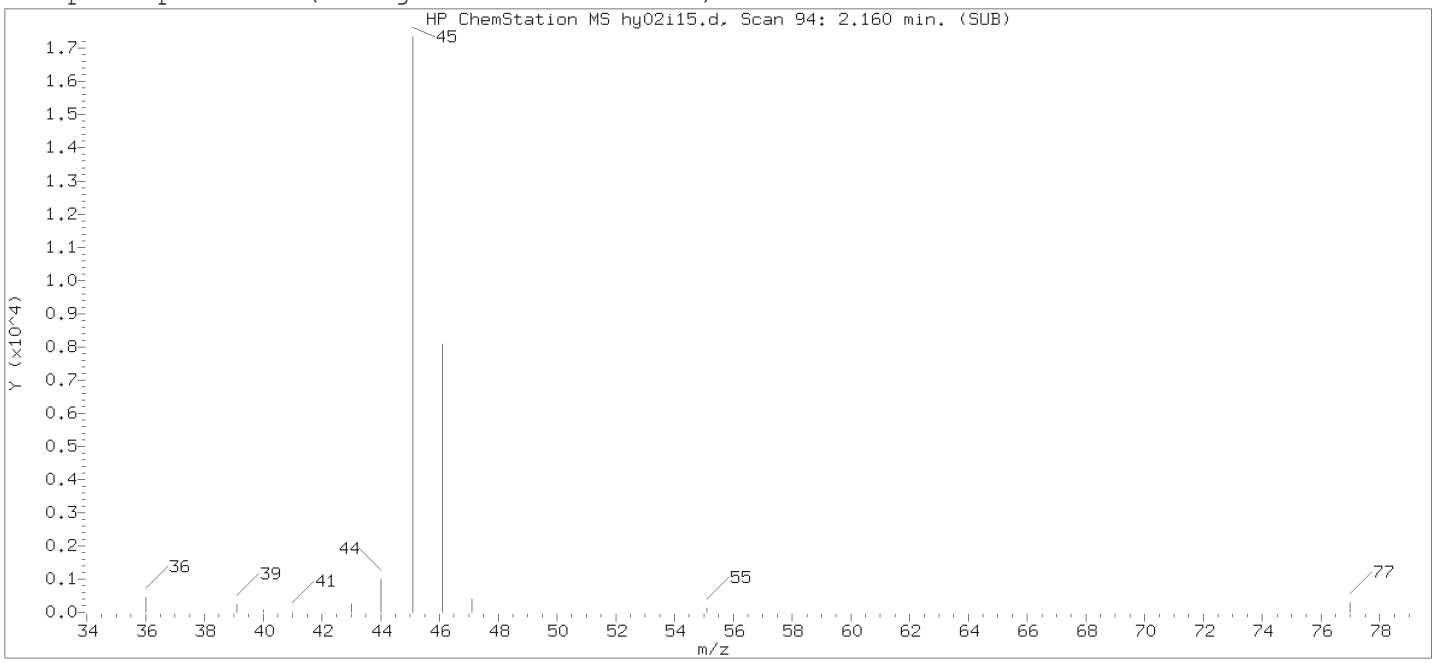
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 66497M
On-Column Amount (ng) : 0.9137
Integration start scan : 80 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

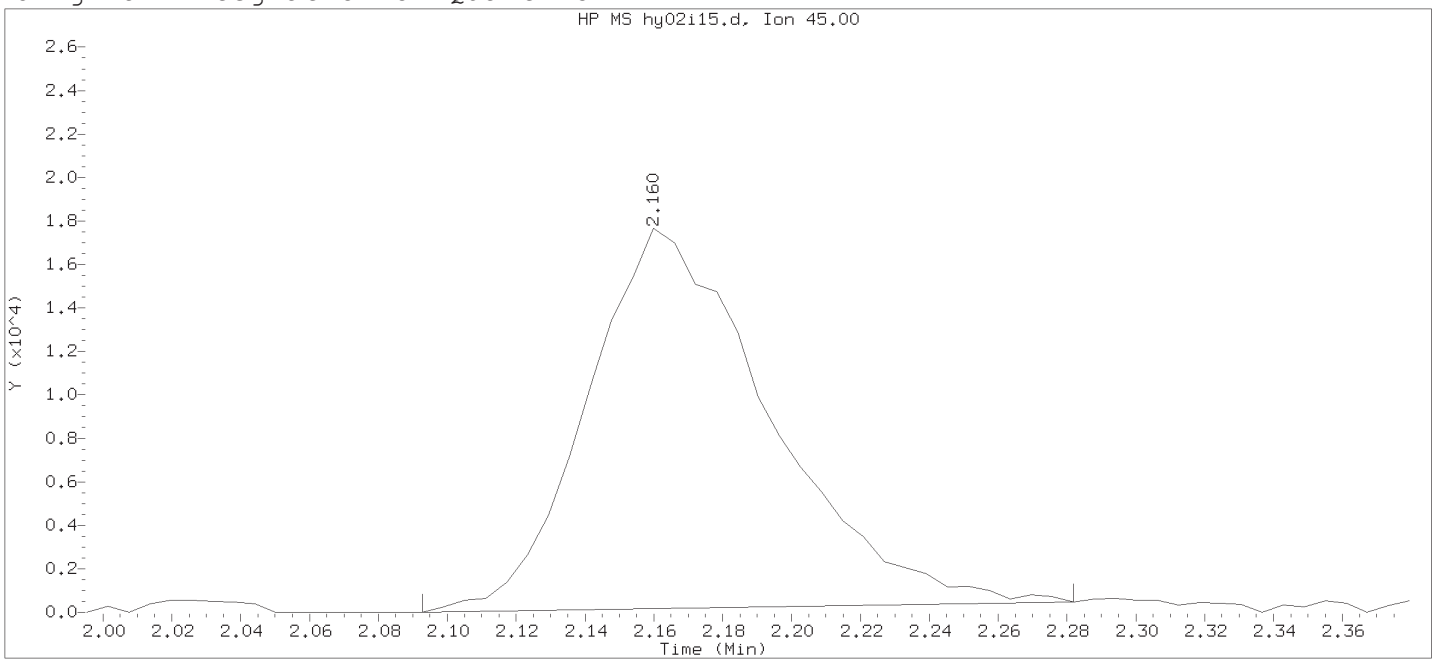
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

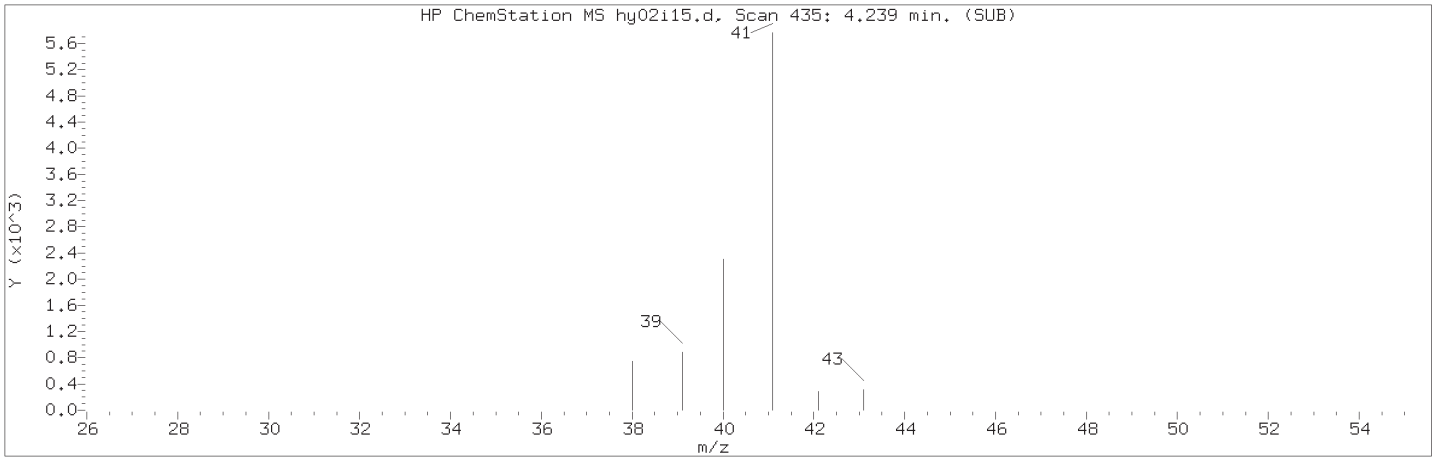
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

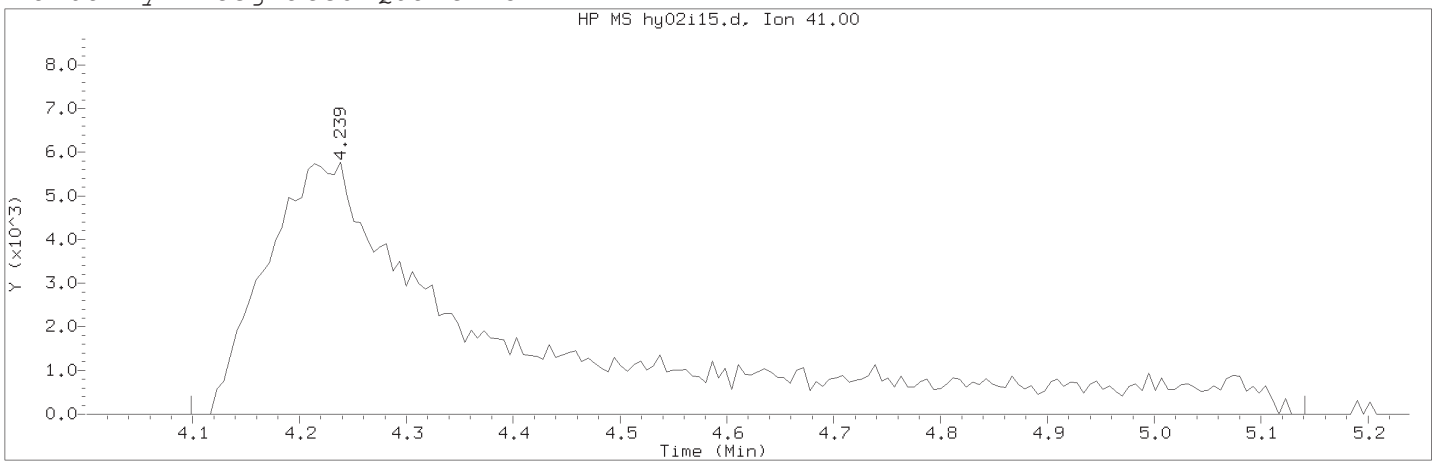
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 94		
Retention Time (minutes)	: 2.160		
Quant Ion	: 45.00		
Area	: 64528		
On-column Amount (ng)	: 0.8809		
Integration start scan	: 82	Integration stop scan:	113
Y at integration start	: 0	Y at integration end:	461

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

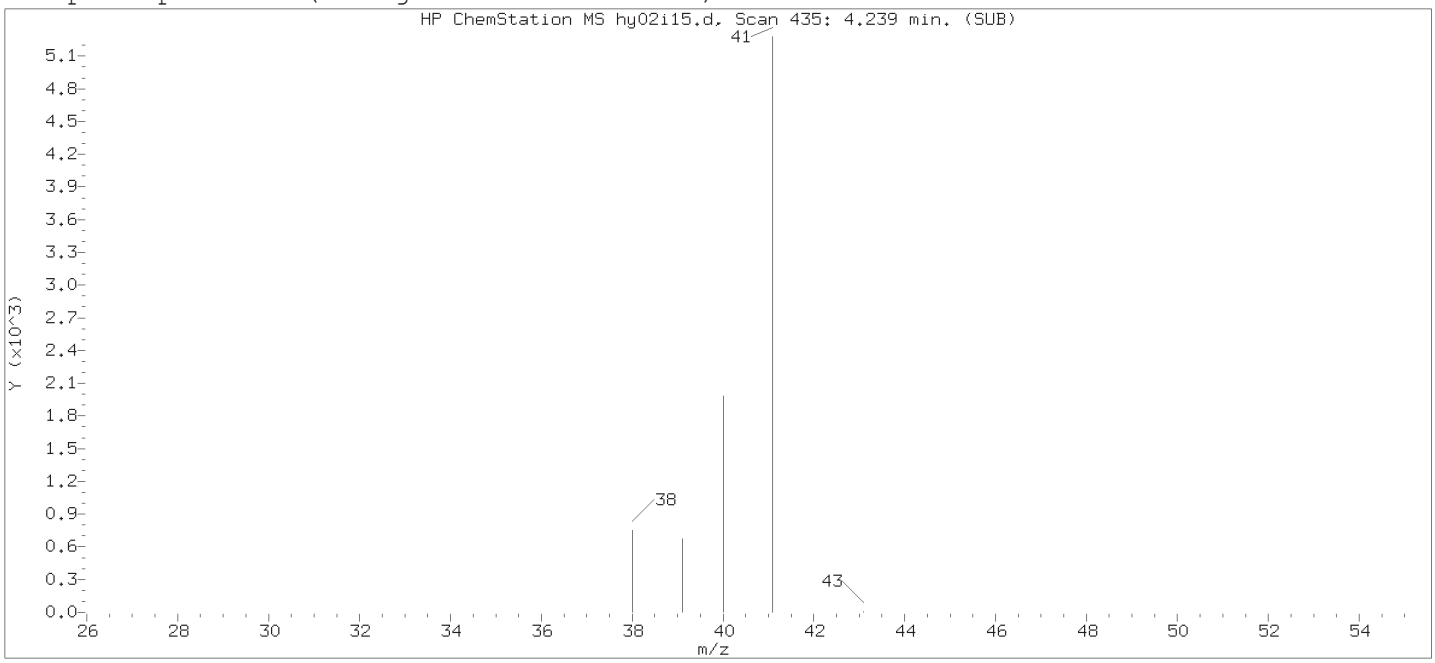
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 41.00
Area (flag) : 91043M
On-Column Amount (ng) : 41.6038
Integration start scan : 411 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

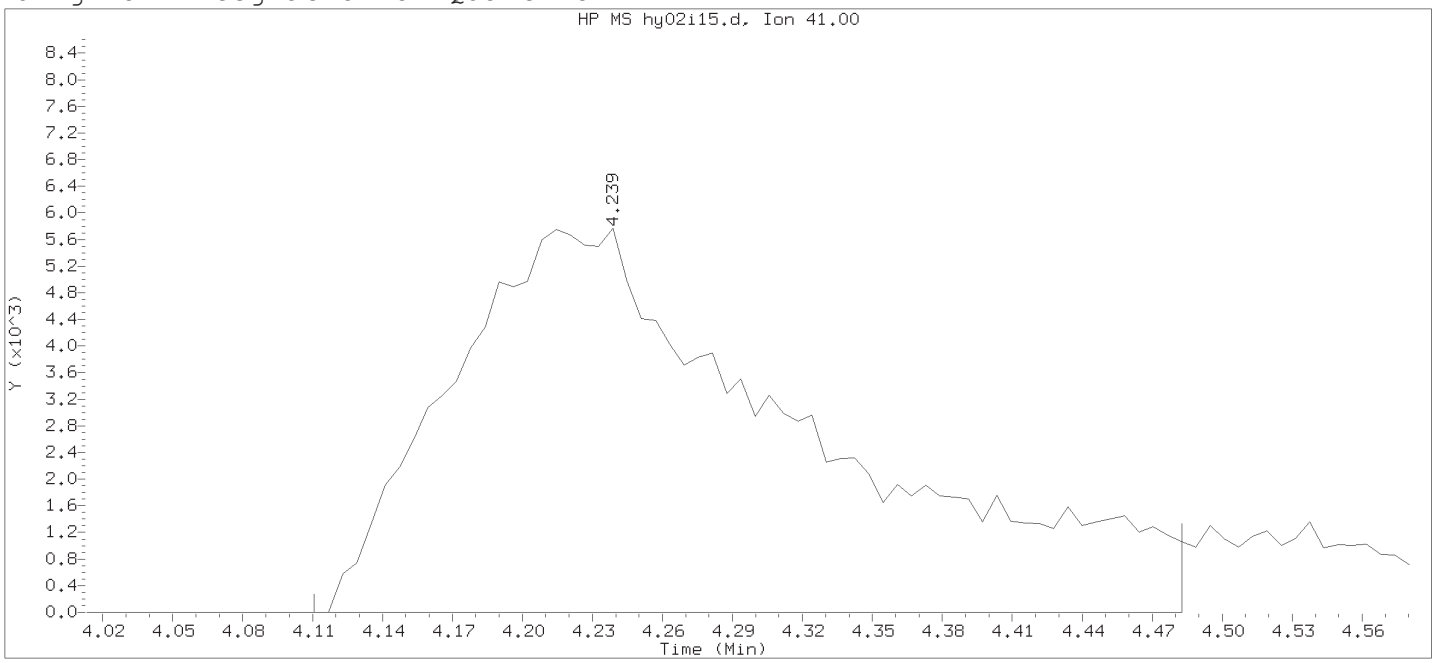
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

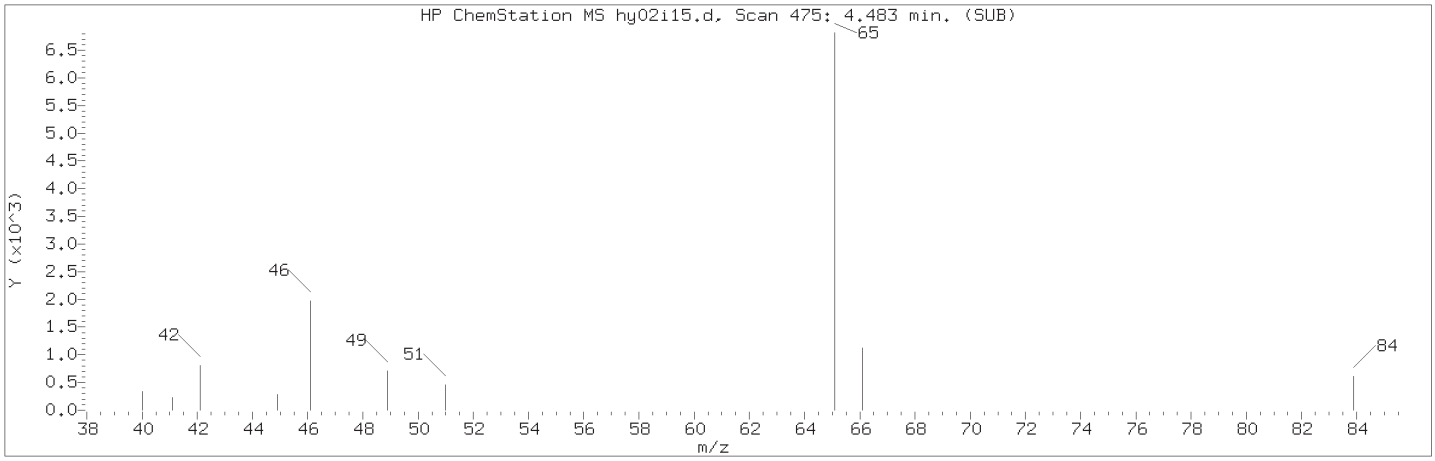
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

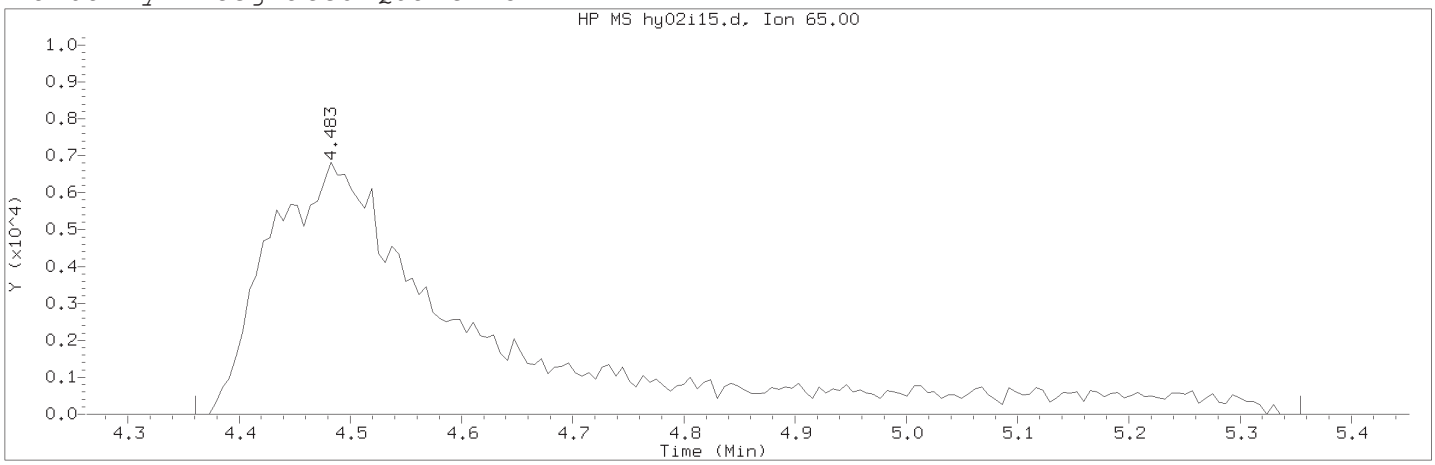
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 41.00
Area : 61510
On-column Amount (ng) : 30.2073
Integration start scan : 413 Integration stop scan: 474
Y at integration start : 0 Y at integration end: 0

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

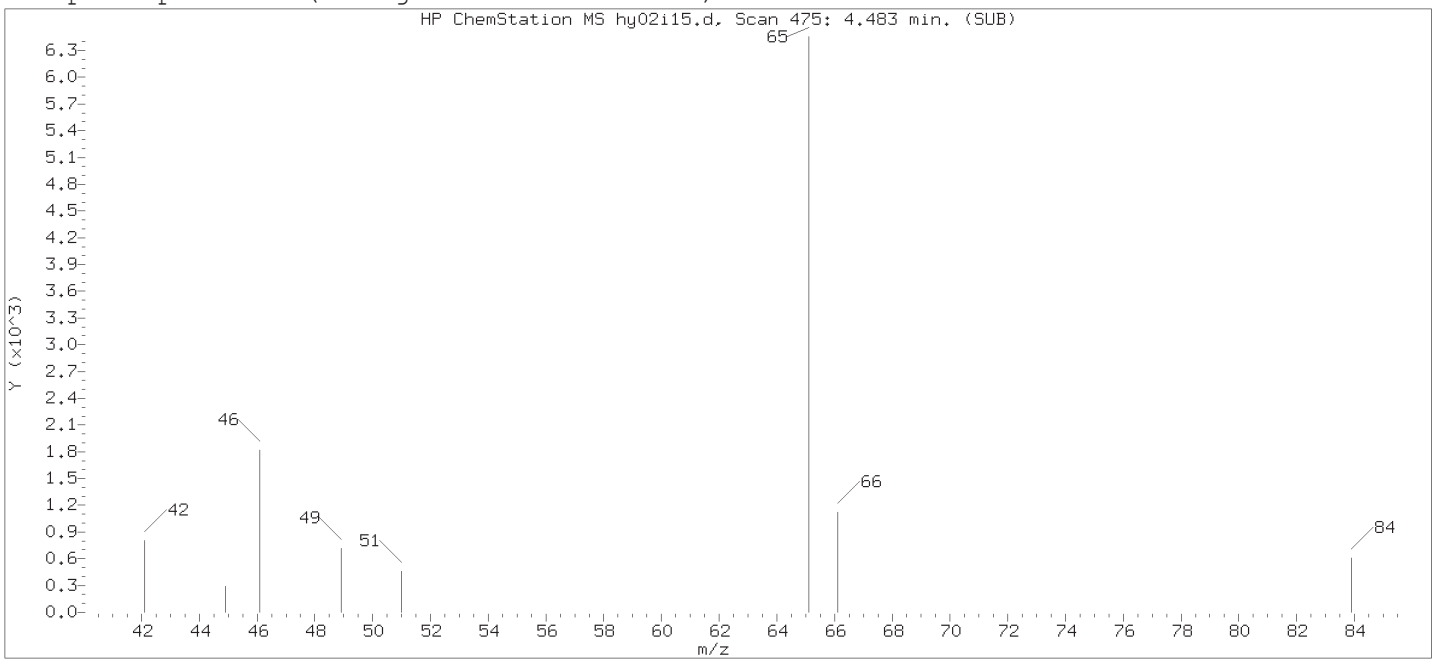
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 90627M
On-Column Amount (ng) : 50.0000
Integration start scan : 454 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

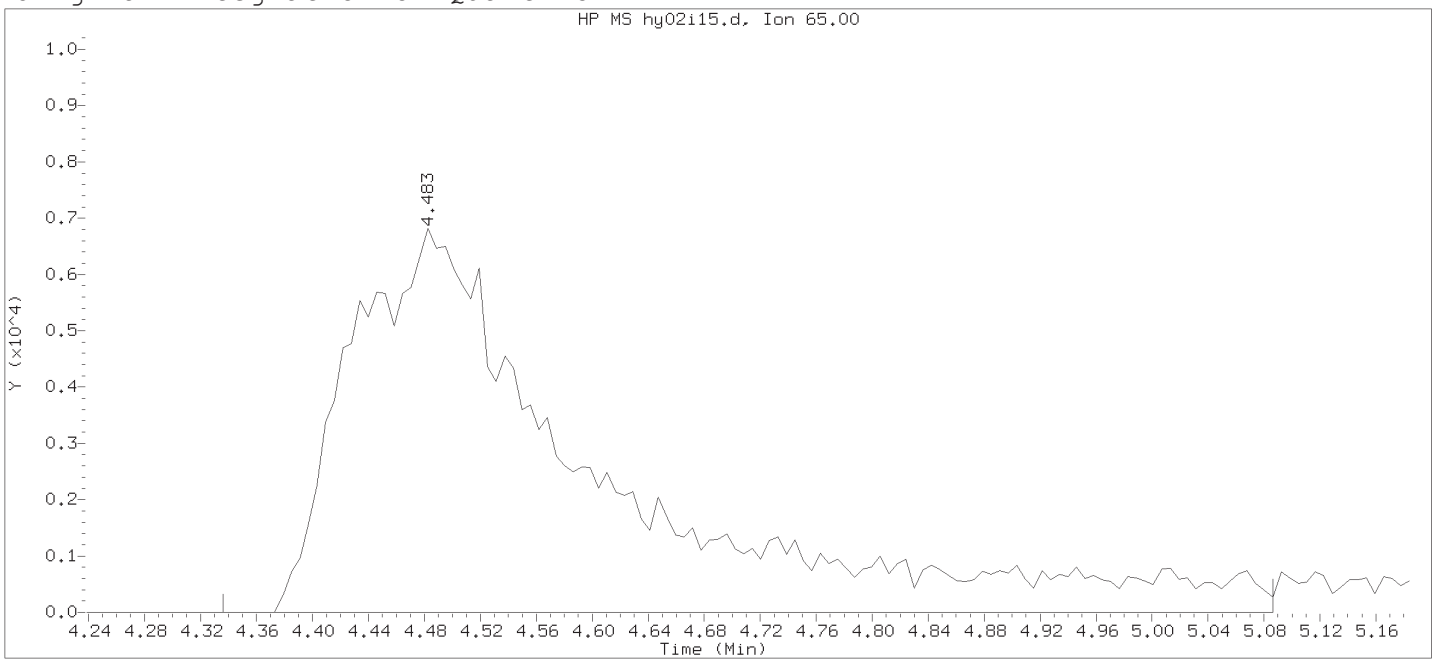
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

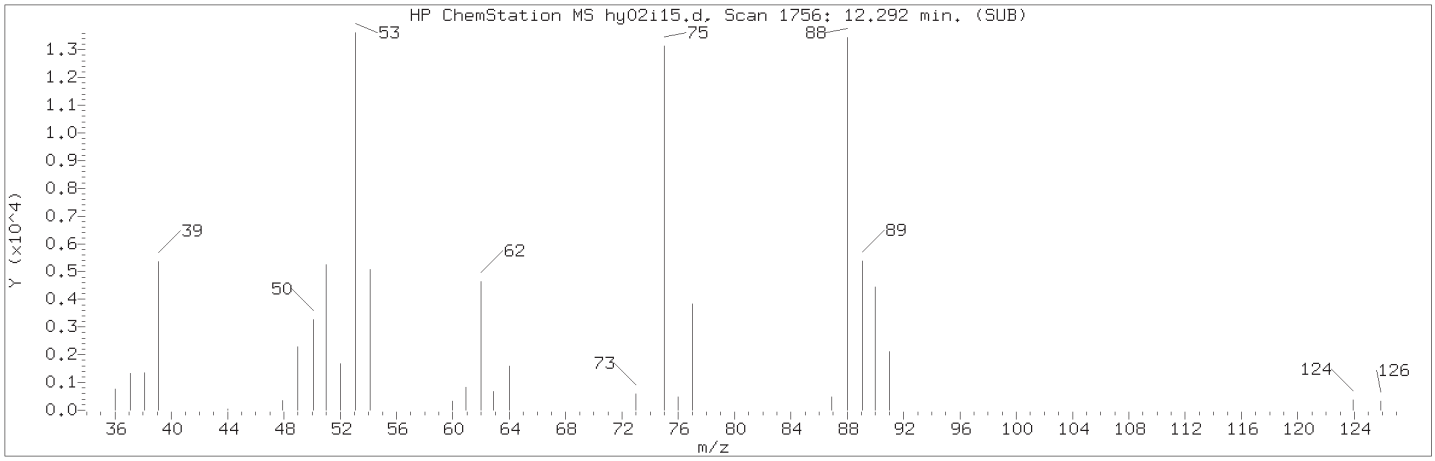
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

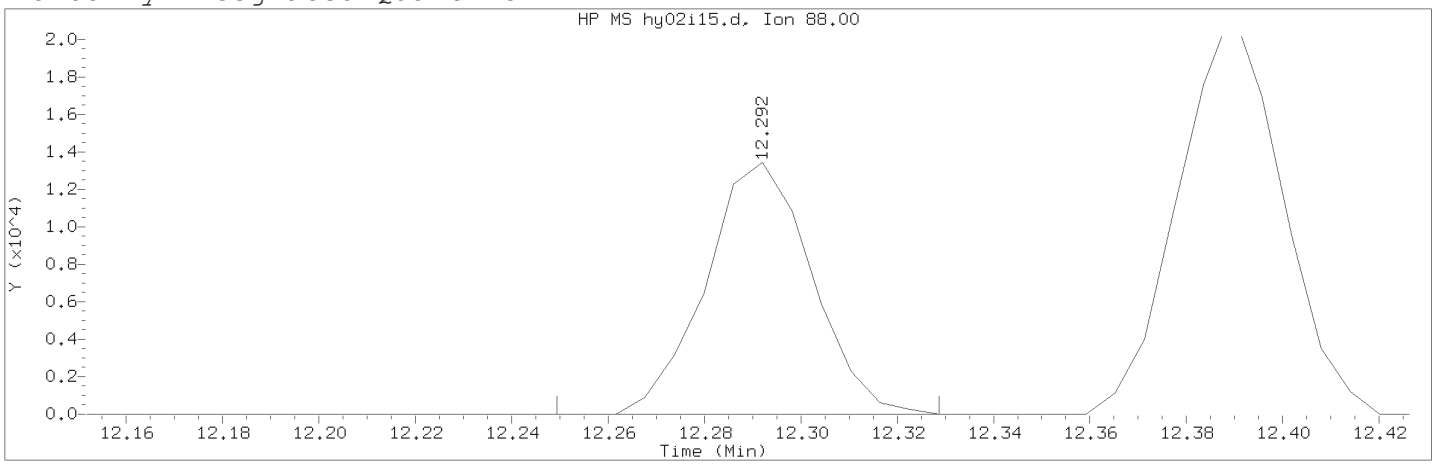
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area : 83546
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

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

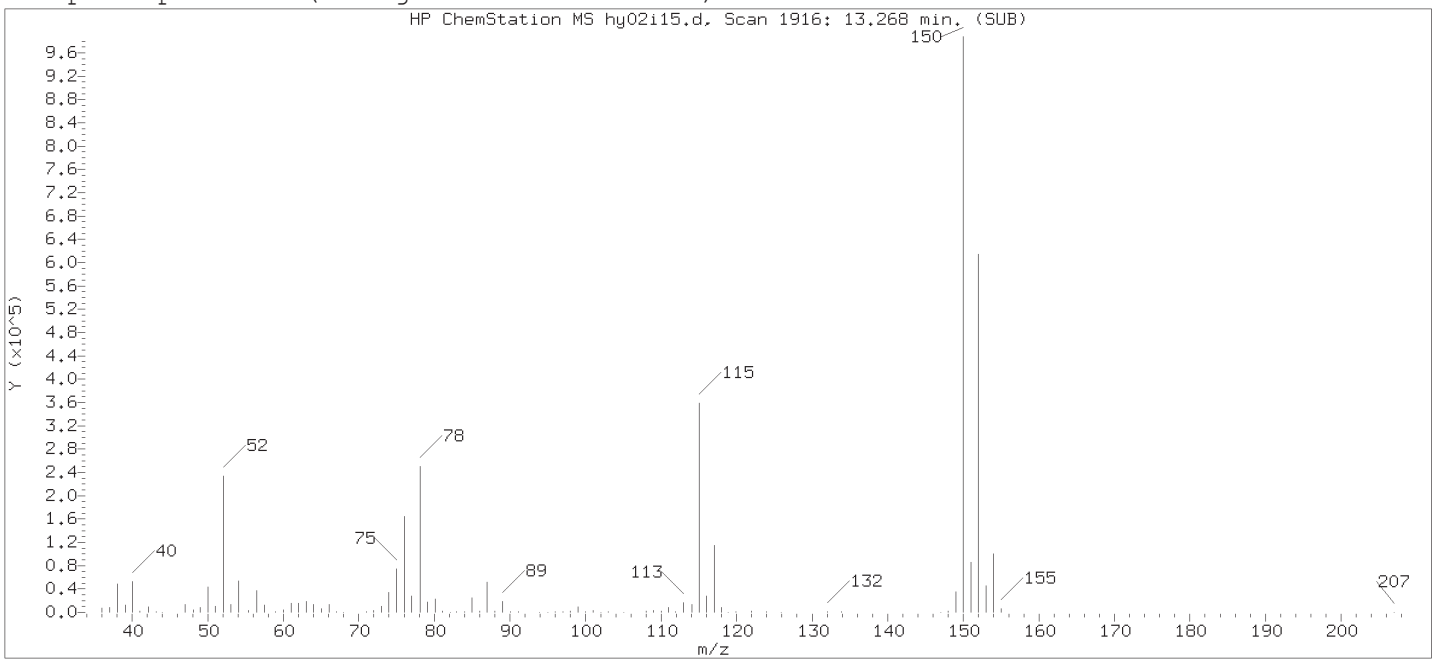
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 20531M
On-Column Amount (ng) : 1.7493
Integration start scan : 1748 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

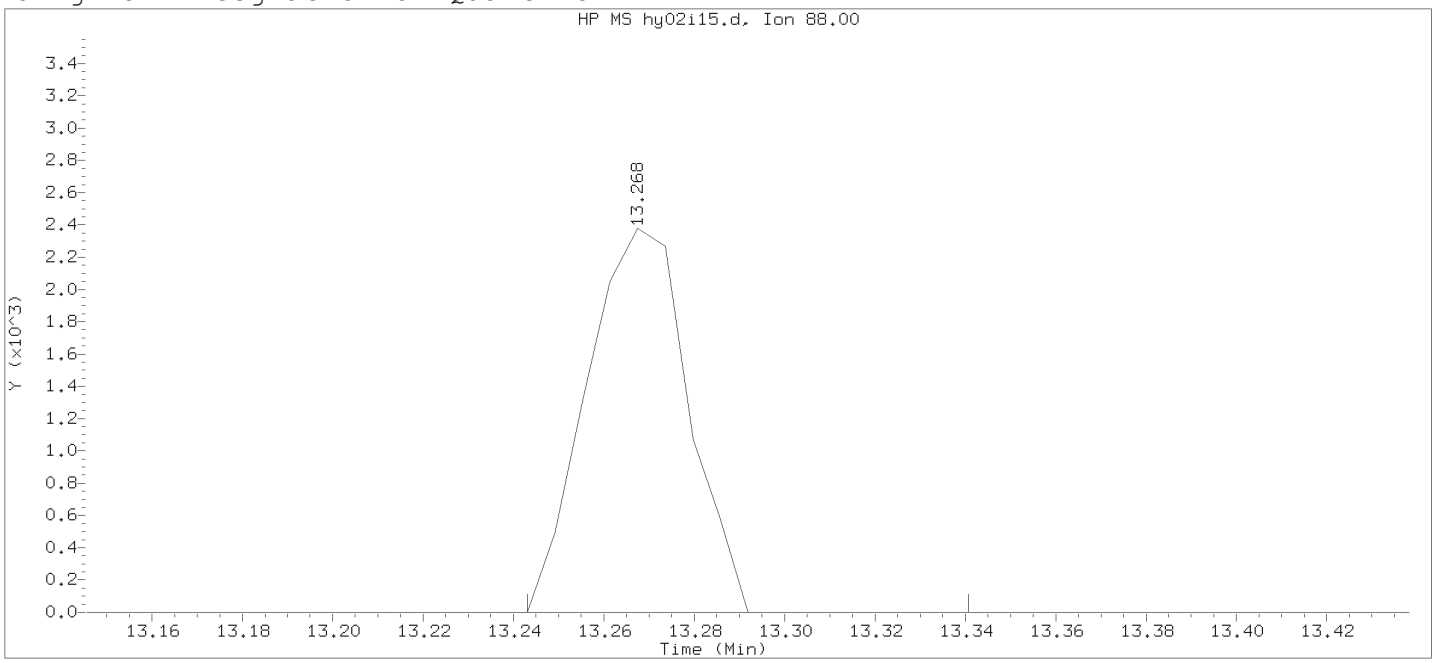
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

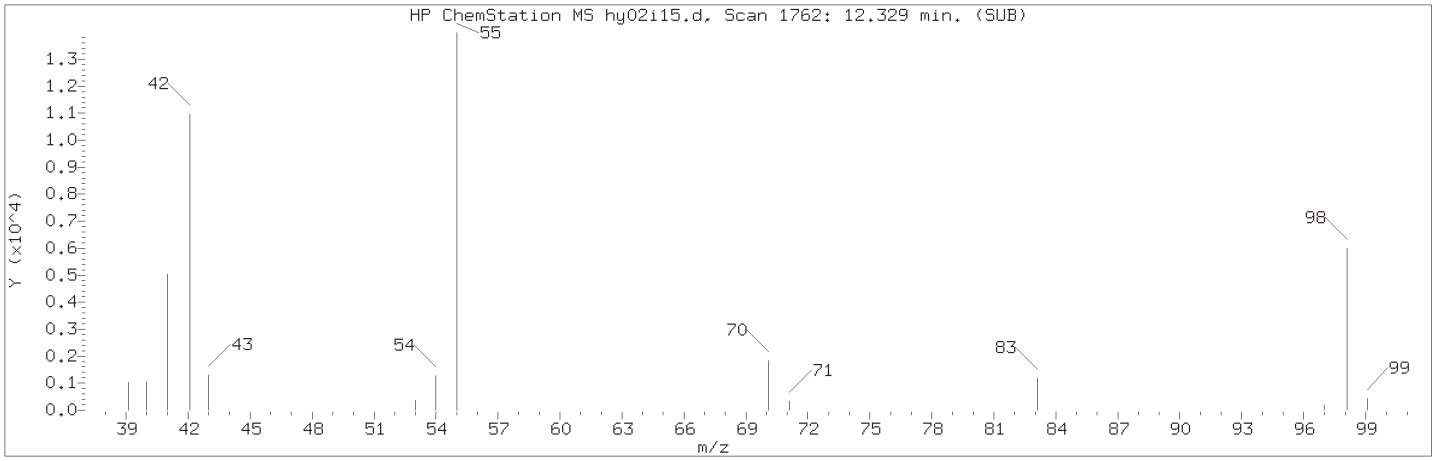
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

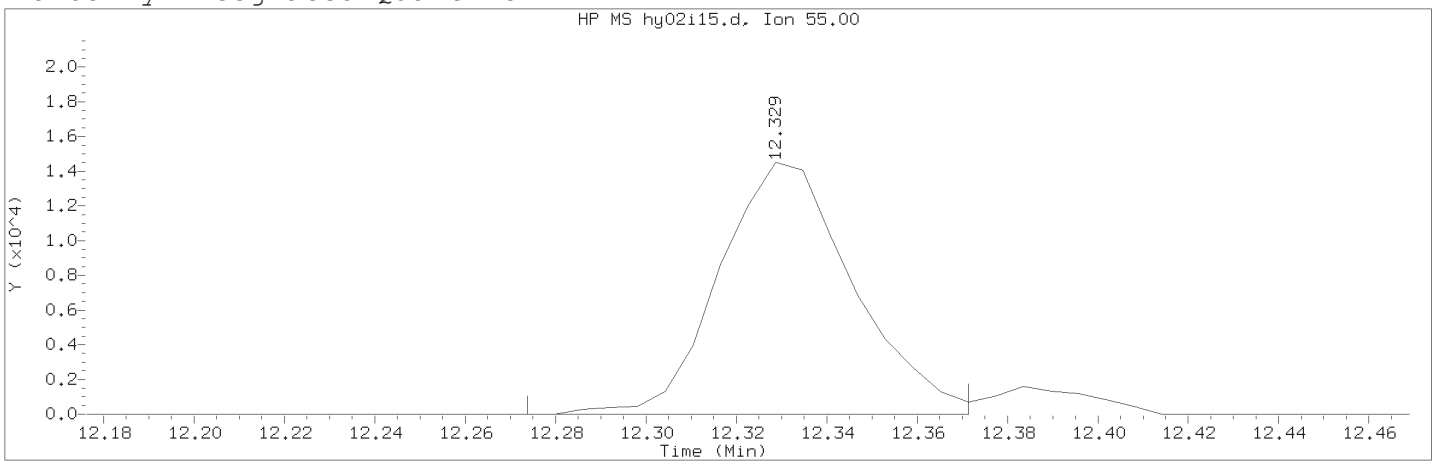
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.268
Quant Ion : 88.00
Area : 3717
On-column Amount (ng) : 0.8719
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

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

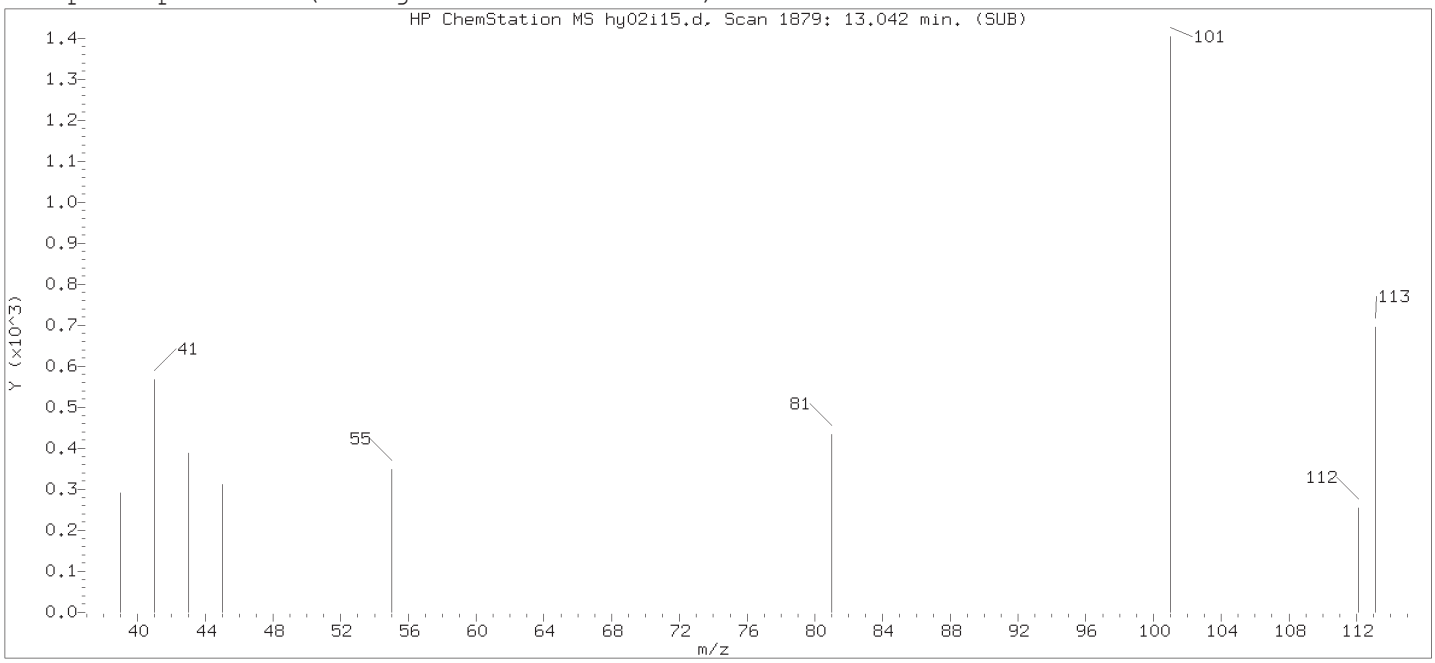
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 29836M
On-Column Amount (ng) : 49.9853
Integration start scan : 1752 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

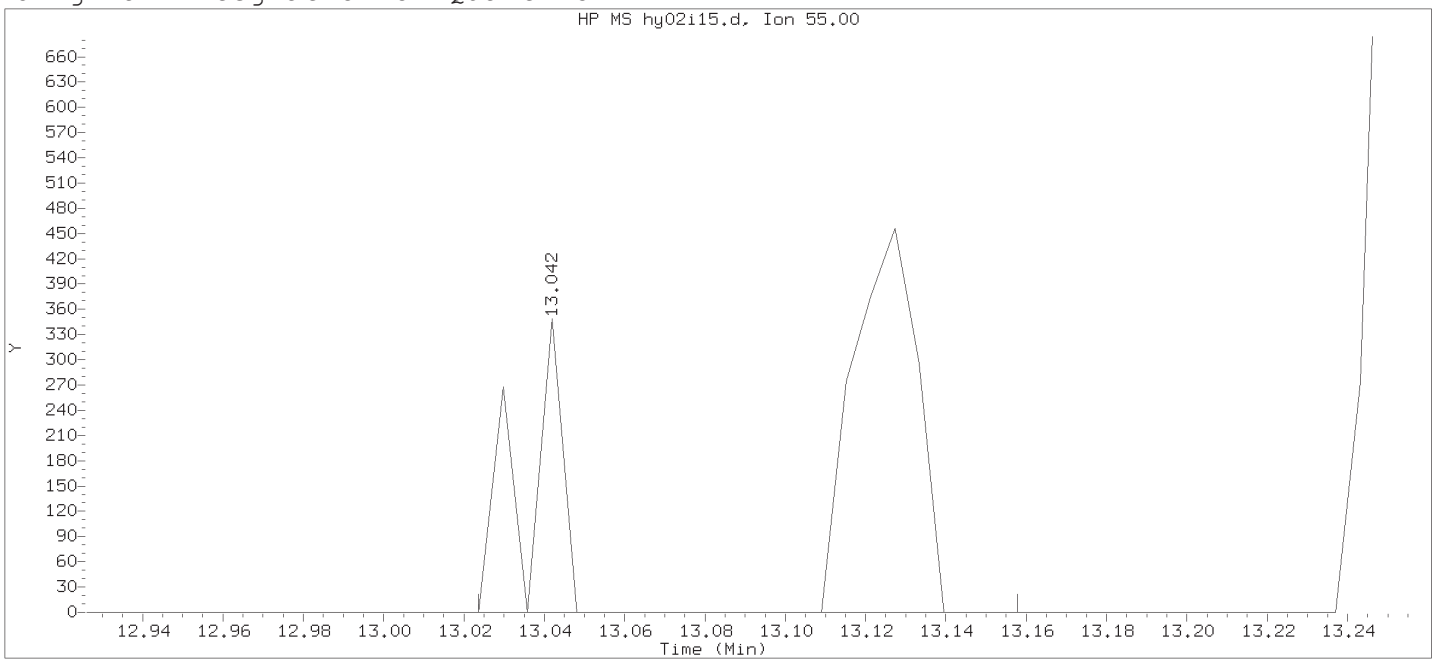
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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



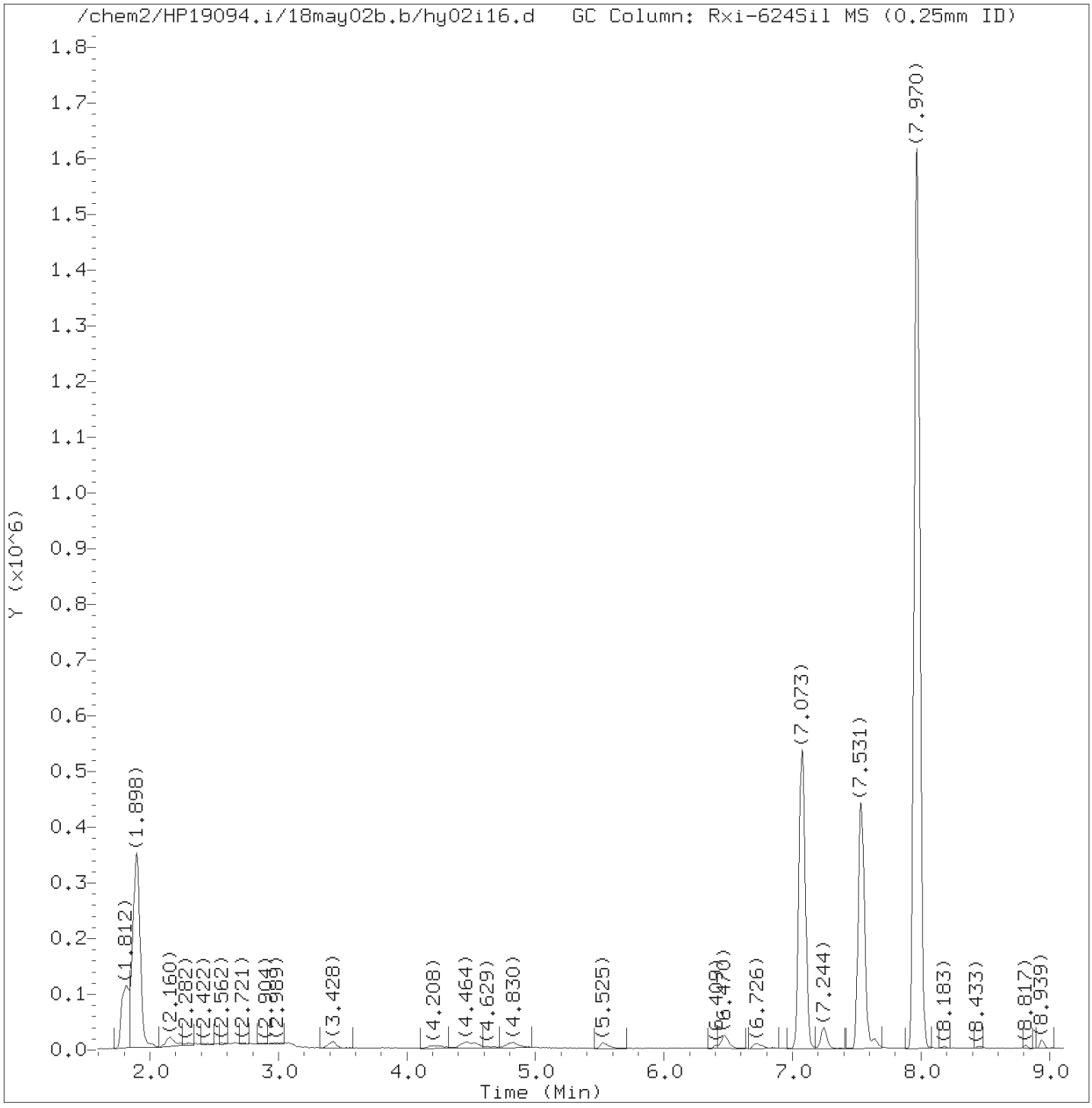
Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

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)

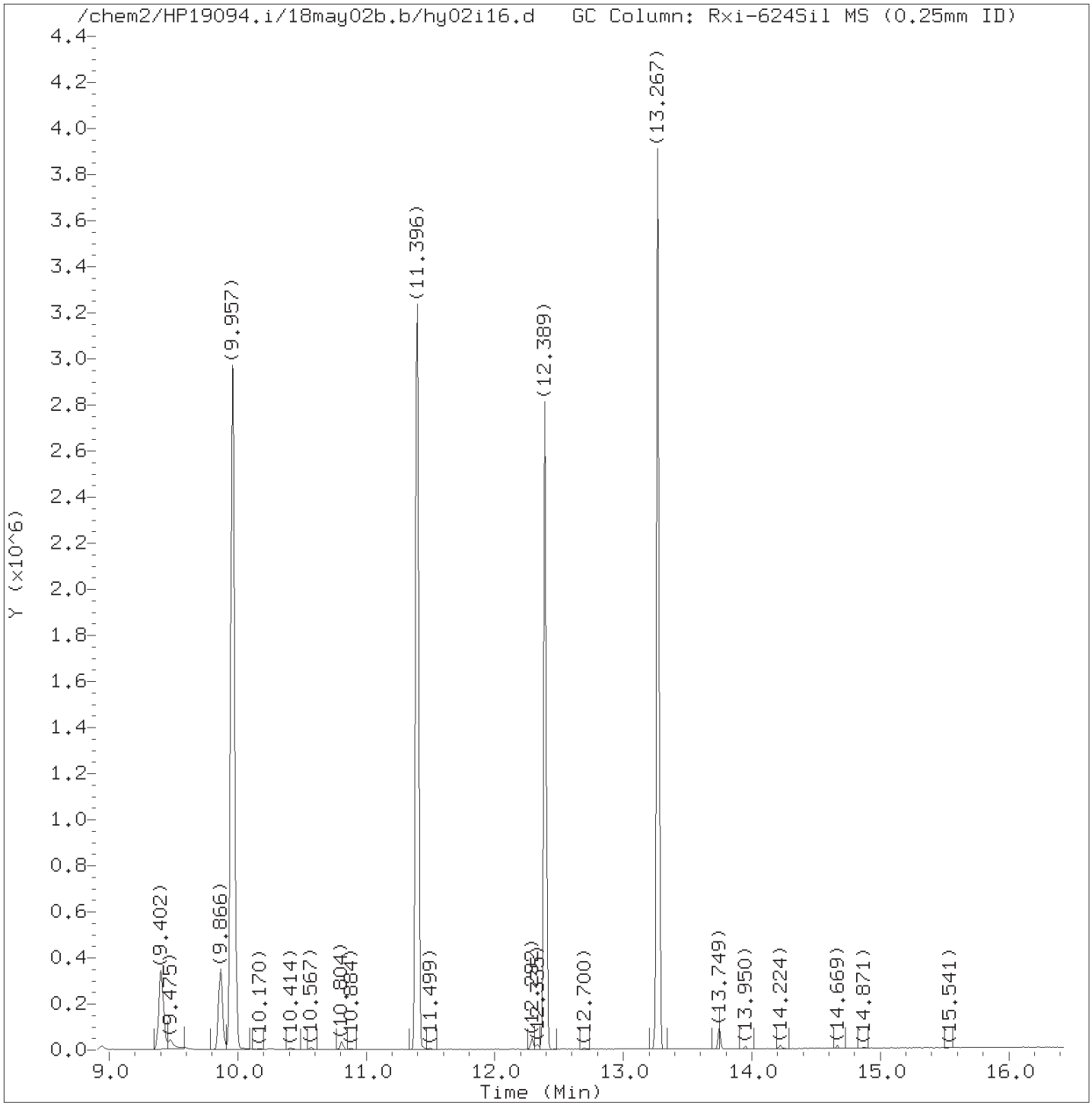
Target Revision 3.5

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

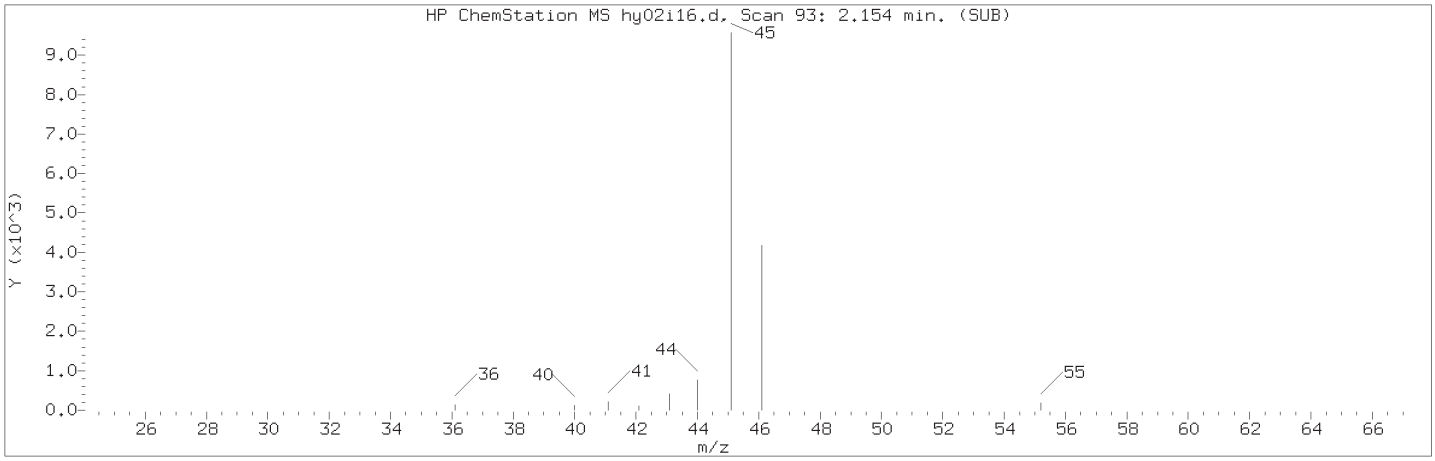
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

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

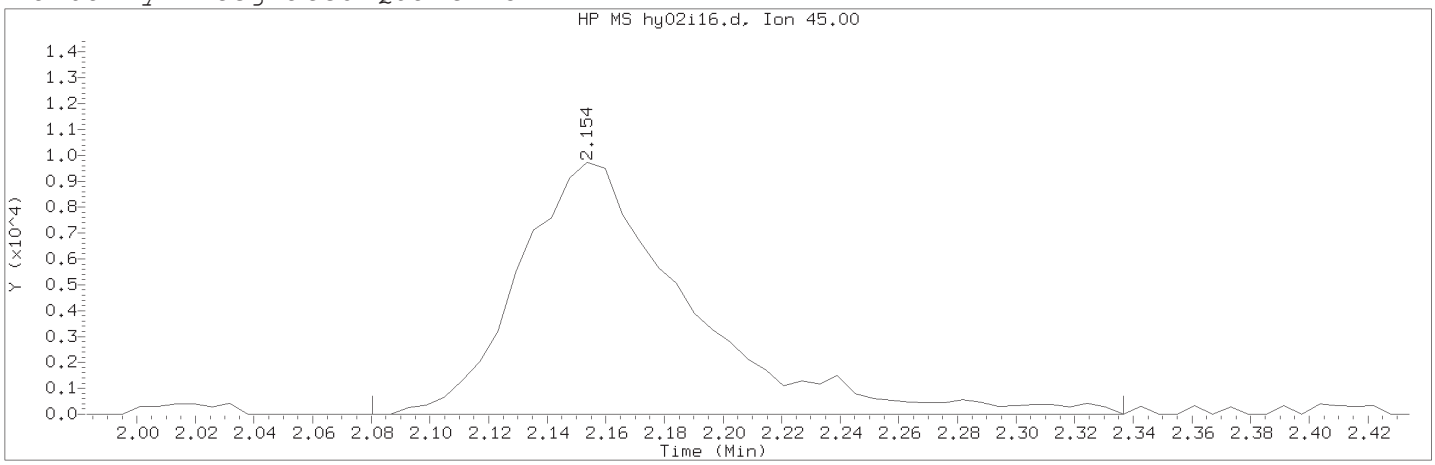
M = Compound was manually integrated.
* = Compound is an internal standard.

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

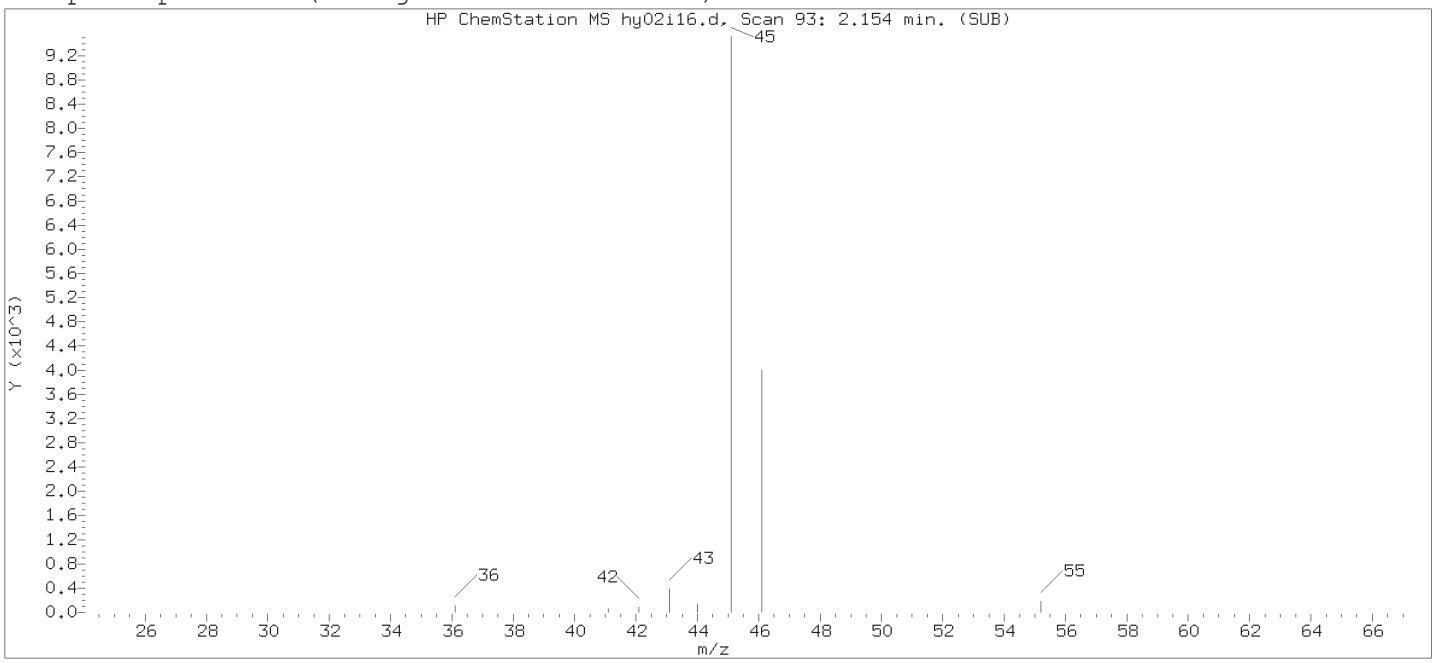
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 39145M
On-Column Amount (ng) : 0.5222
Integration start scan : 80 Integration stop scan: 122
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

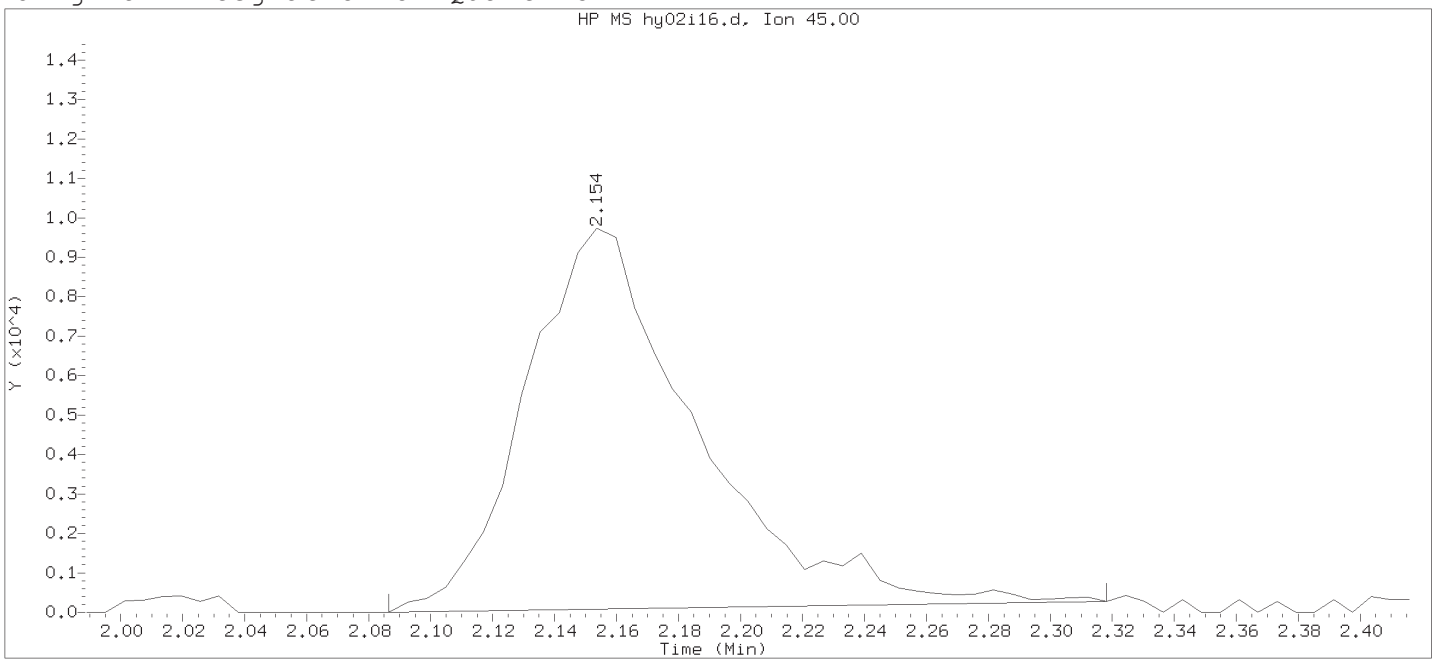
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

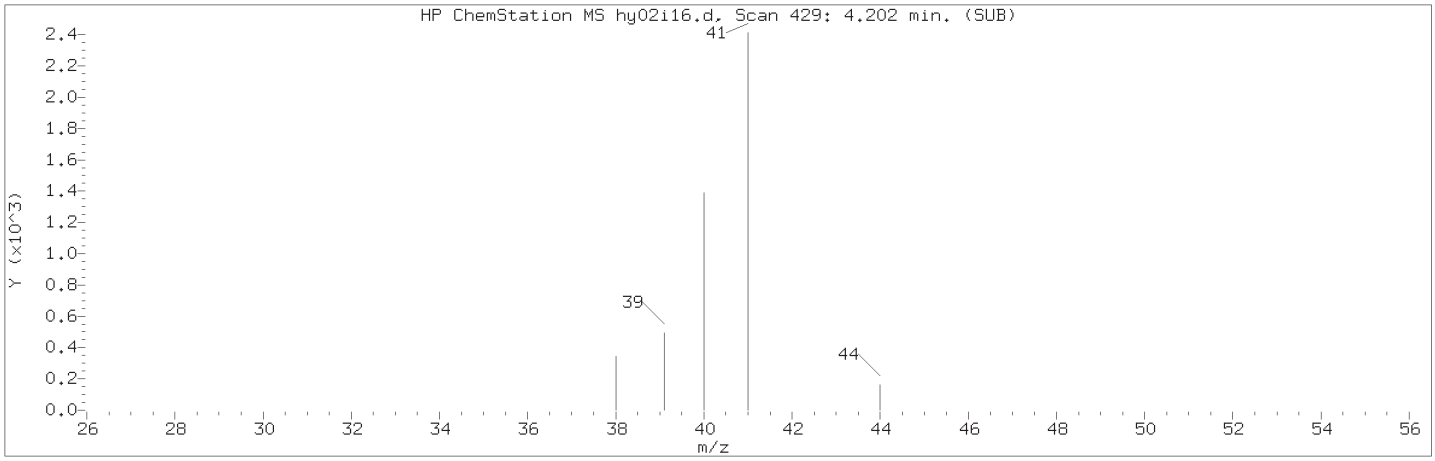
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

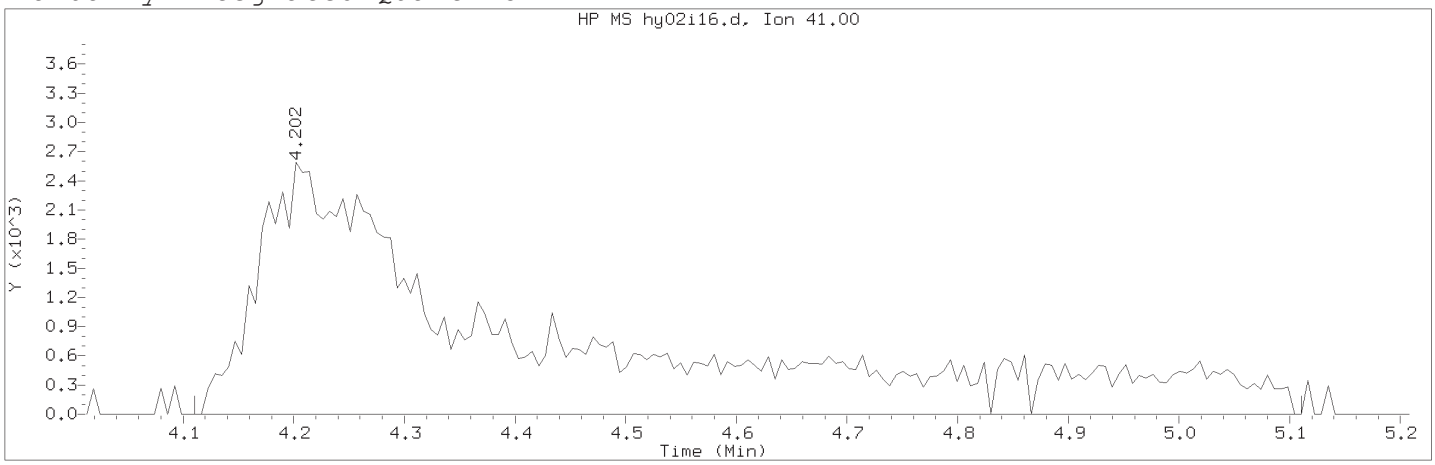
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 93		
Retention Time (minutes)	: 2.154		
Quant Ion	: 45.00		
Area	: 36886		
On-column Amount (ng)	: 0.4905		
Integration start scan	: 81	Integration stop scan:	119
Y at integration start	: 0	Y at integration end:	281

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

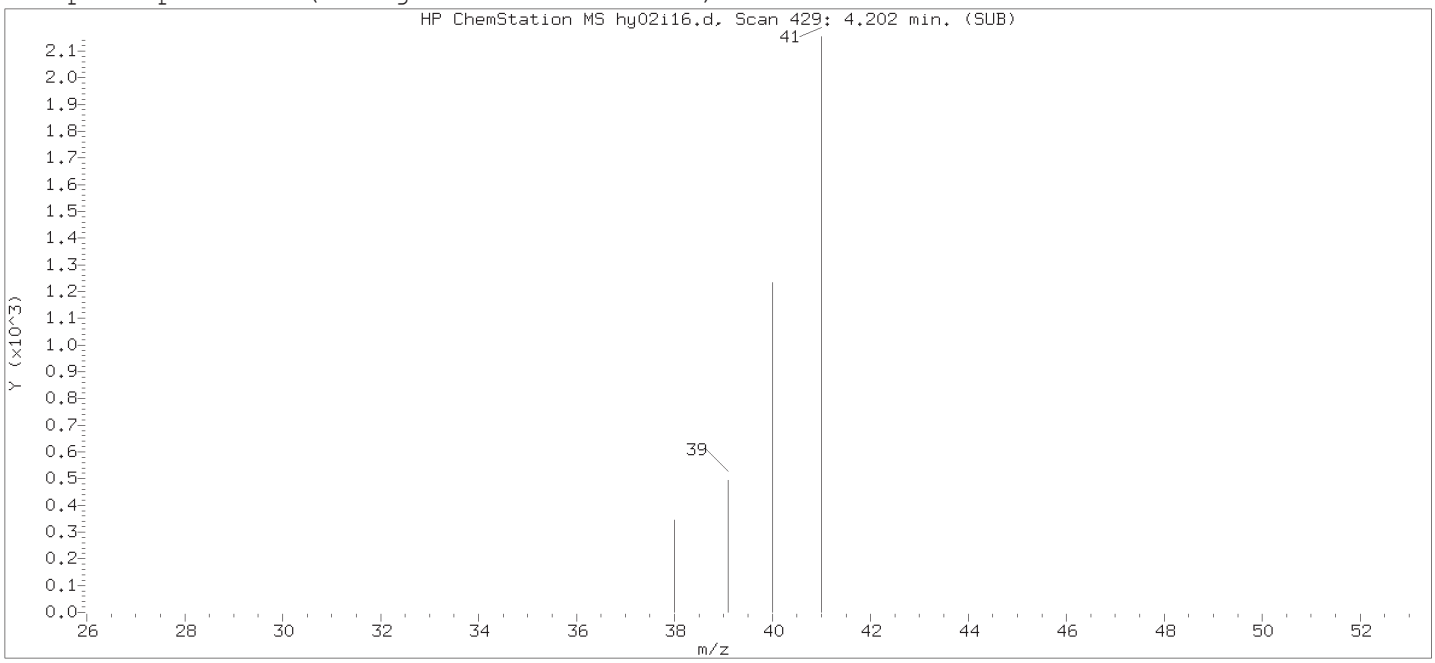
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area (flag) : 43595M
On-Column Amount (ng) : 22.8735
Integration start scan : 413 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

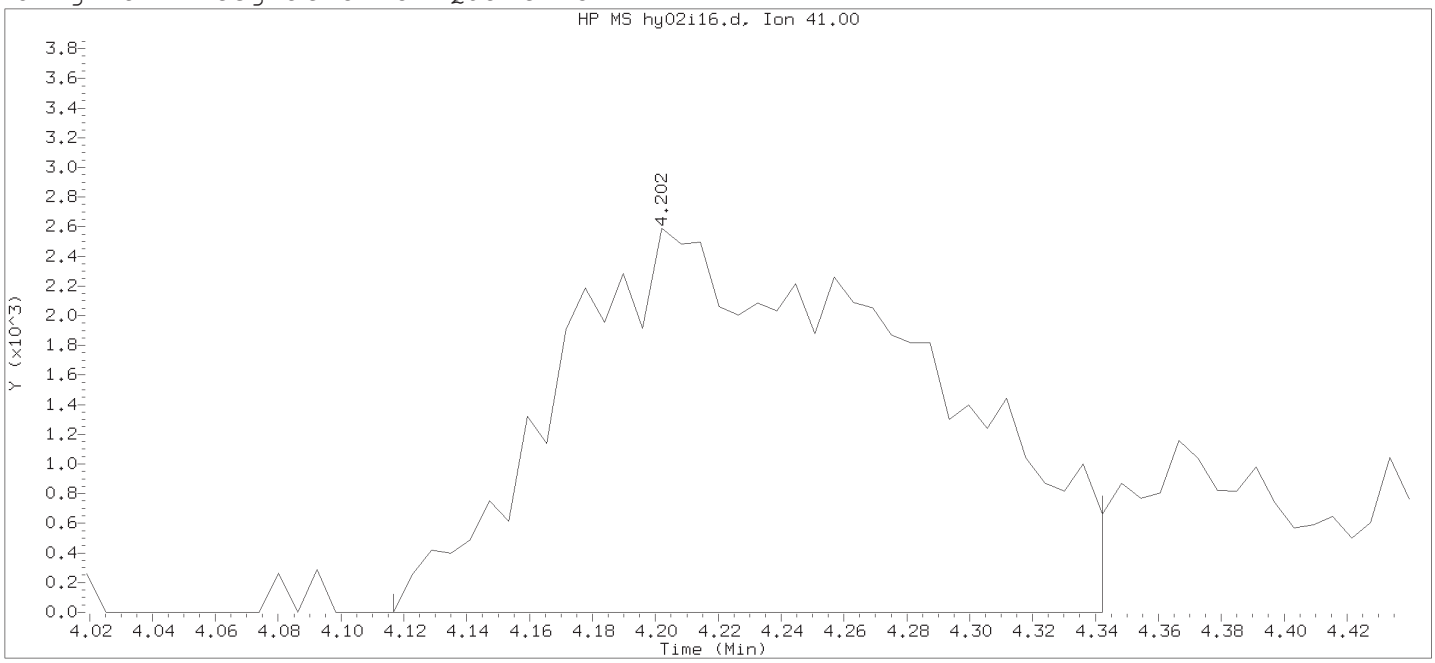
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

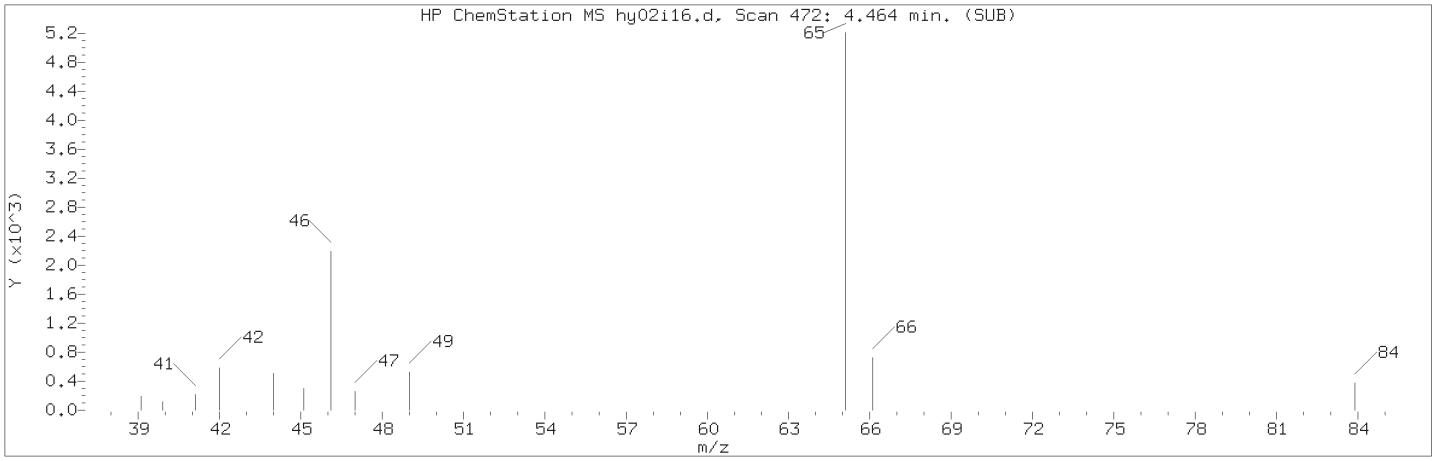
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

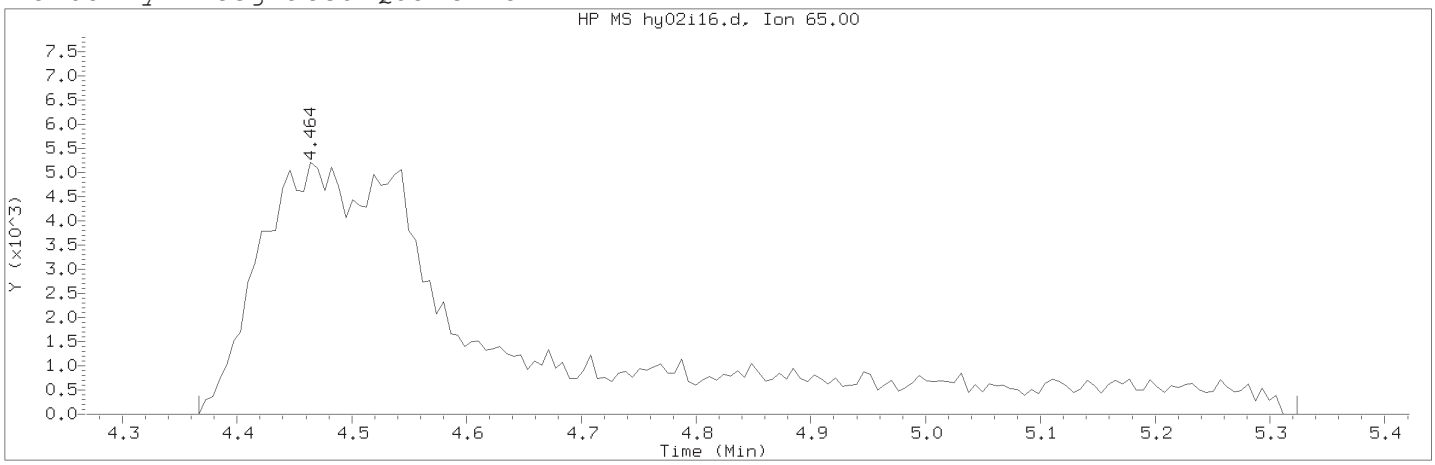
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area : 20787
On-column Amount (ng) : 11.9110
Integration start scan : 414 Integration stop scan: 451
Y at integration start : 0 Y at integration end: 0

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

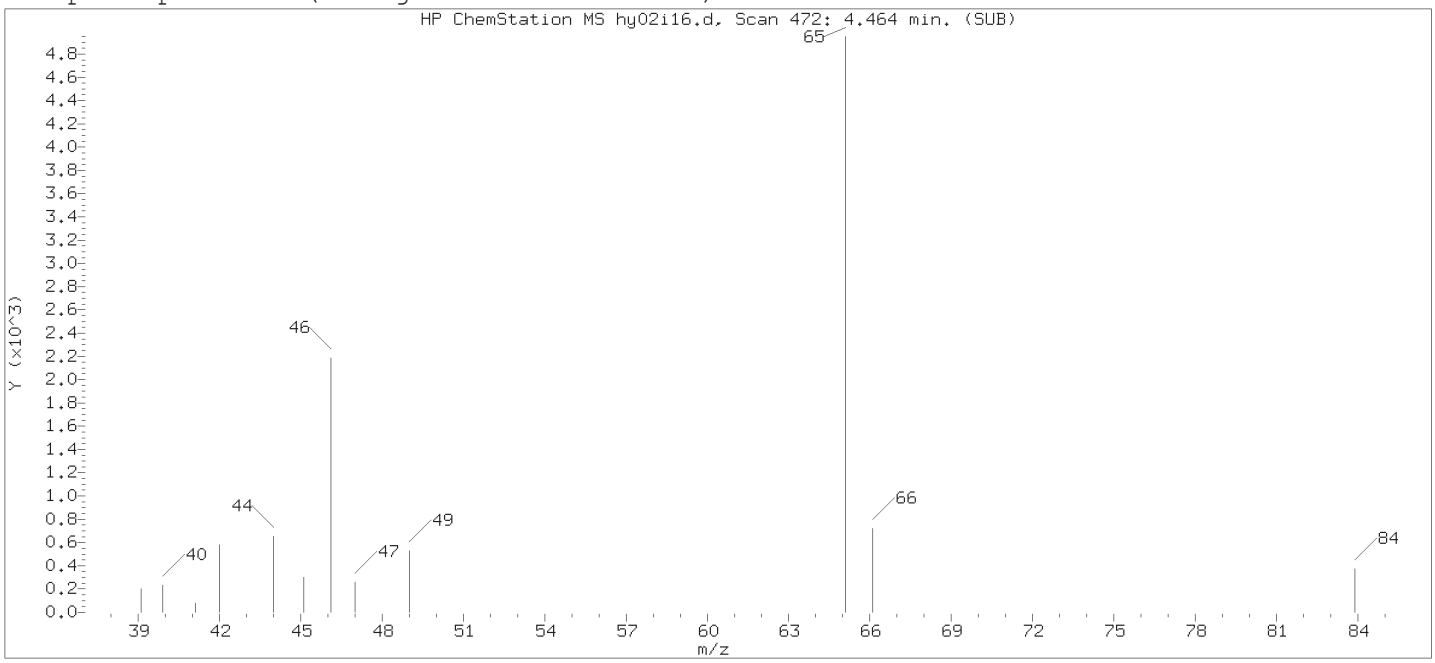
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area (flag) : 78931M
On-Column Amount (ng) : 50.0000
Integration start scan : 455 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

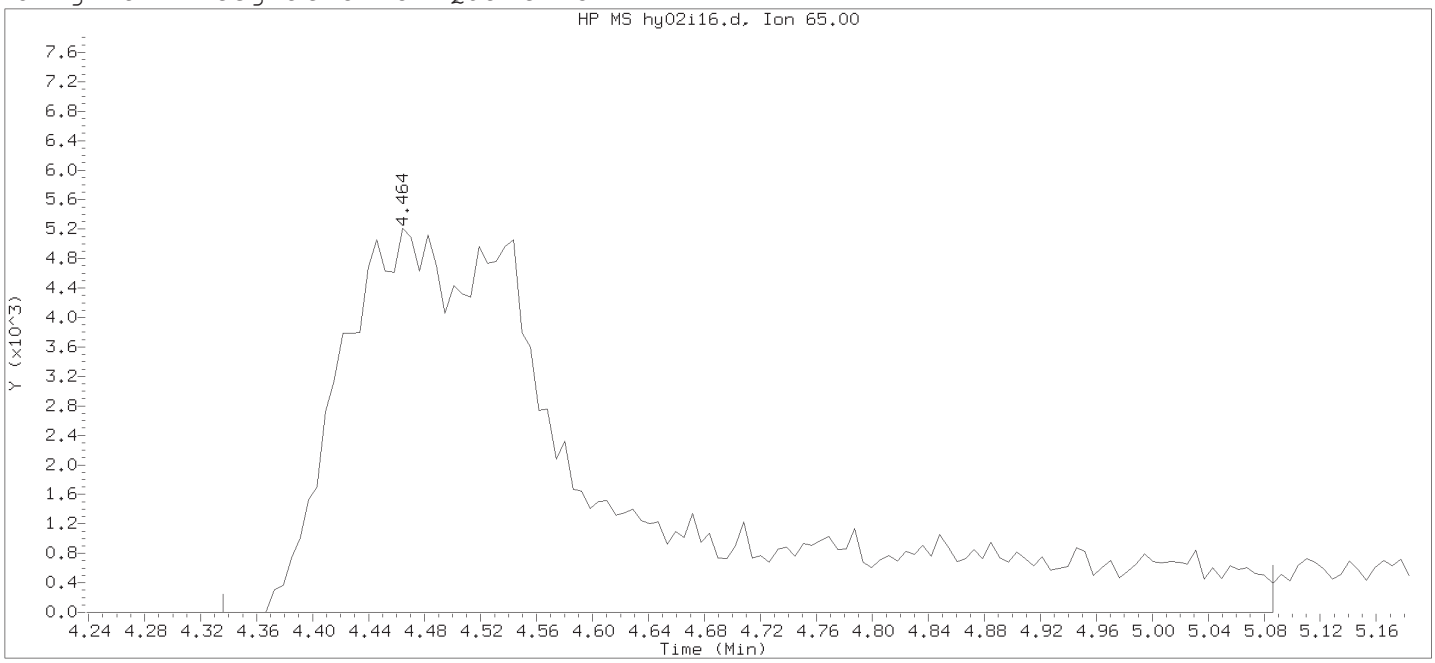
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

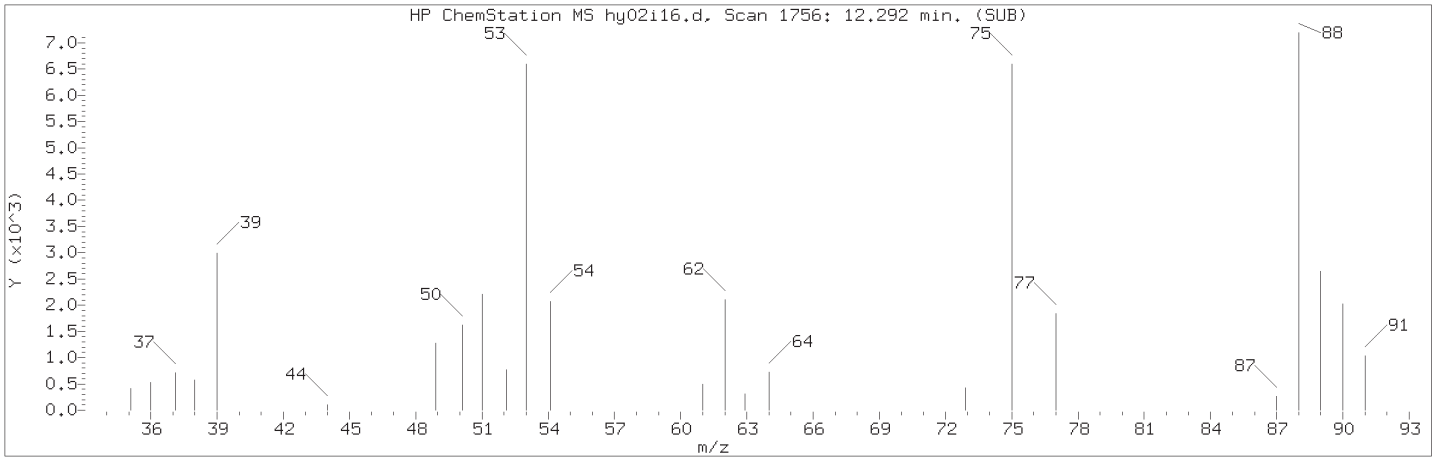
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

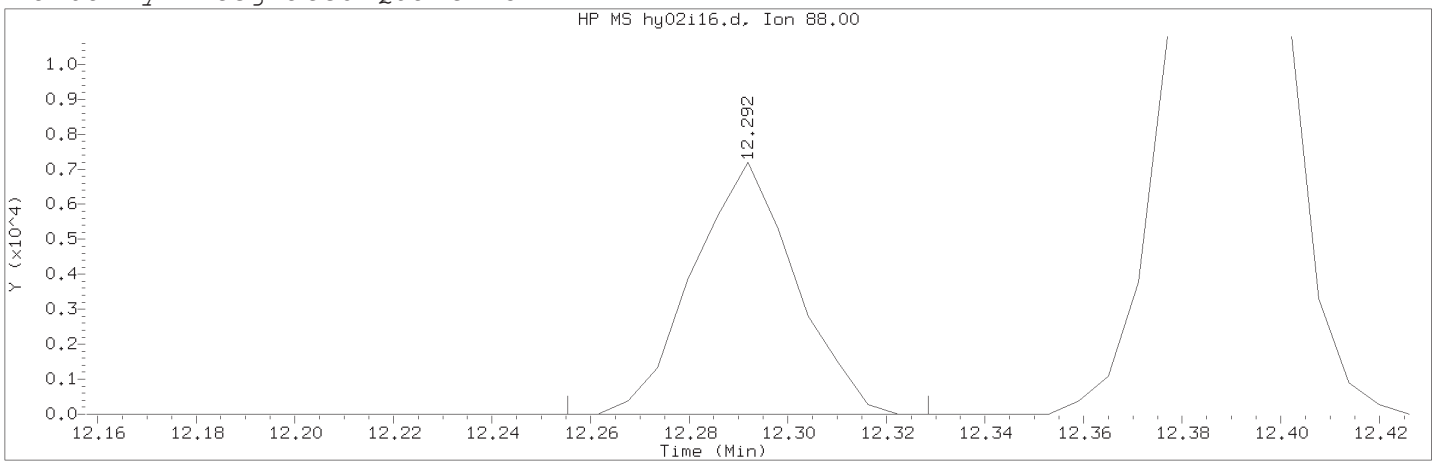
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area : 71620
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

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

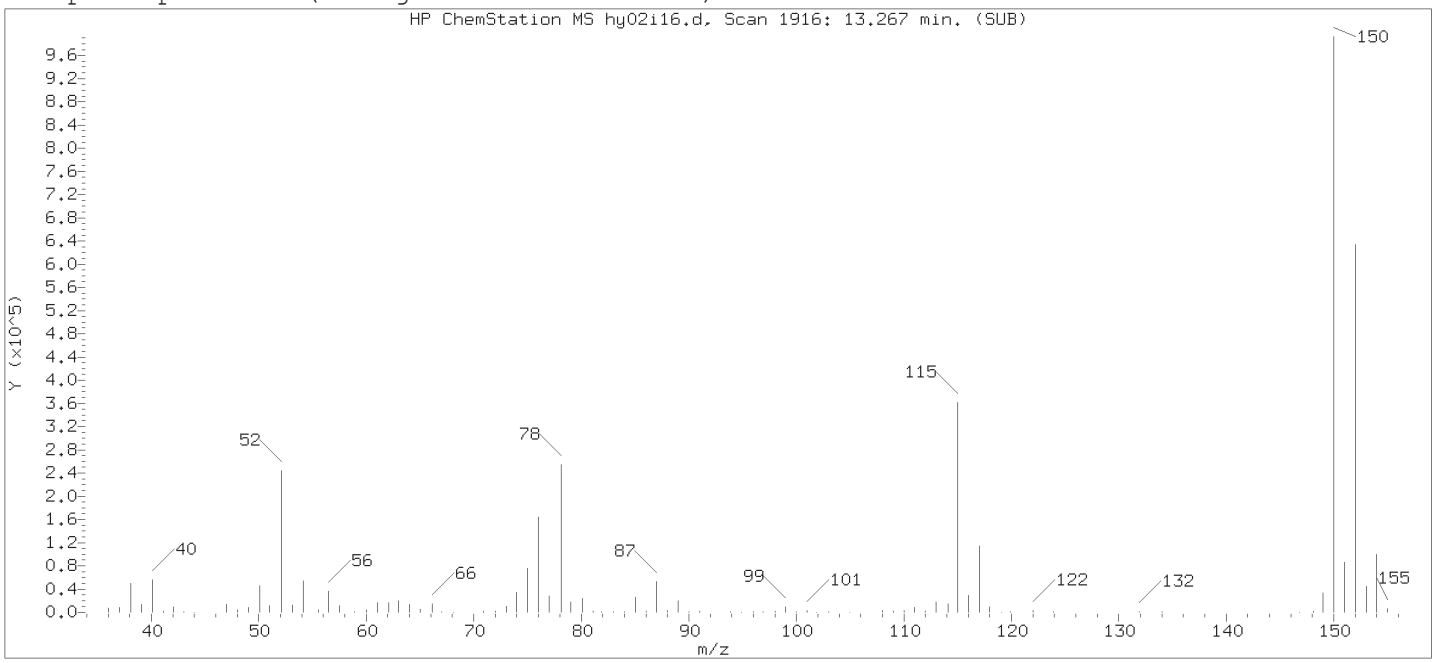
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 10342M
On-Column Amount (ng) : 1.0117
Integration start scan : 1749 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

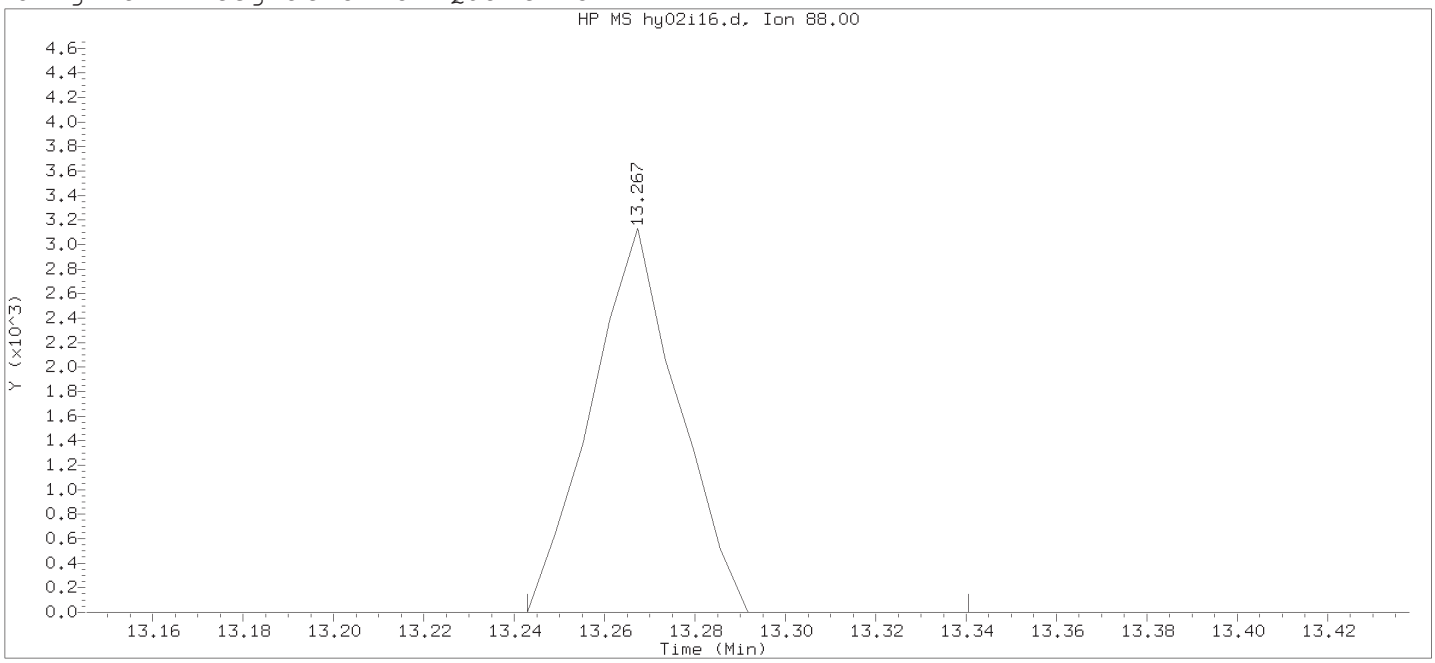
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

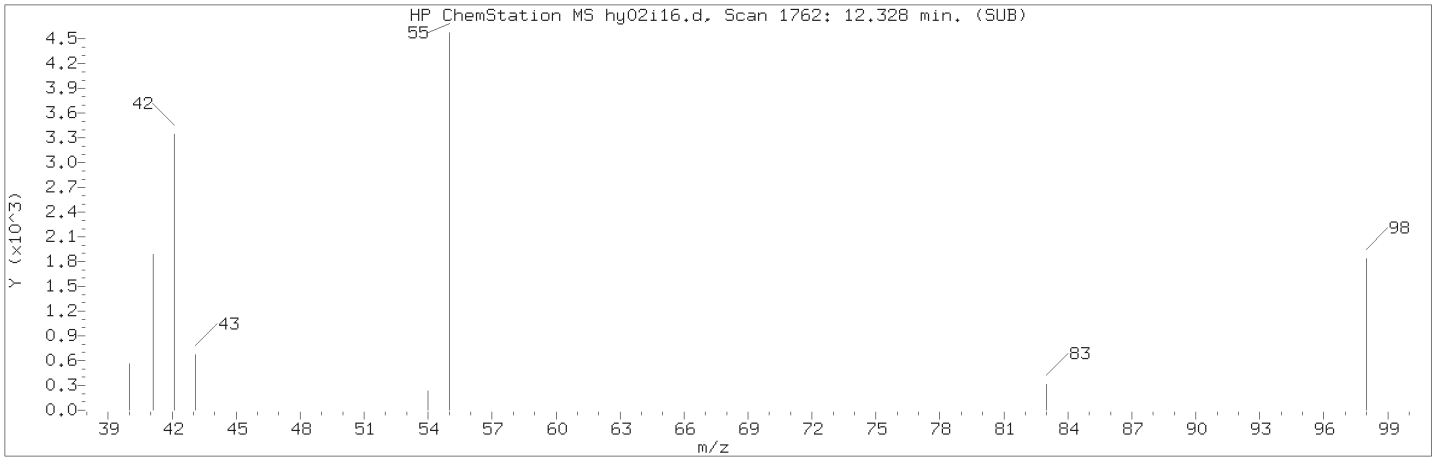
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

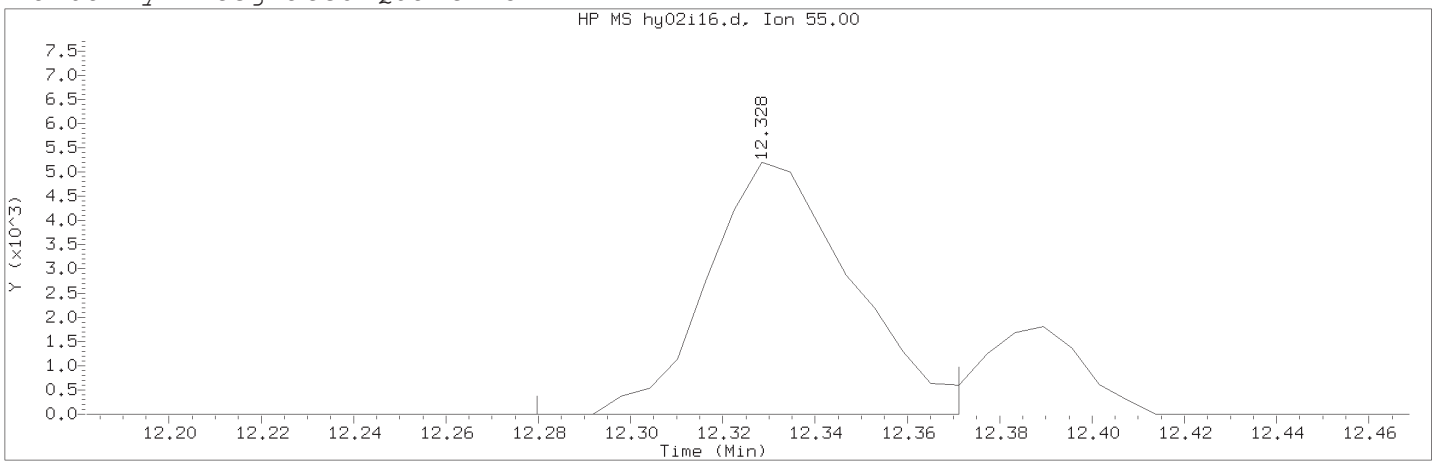
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 4184
On-column Amount (ng) : 0.4845
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

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

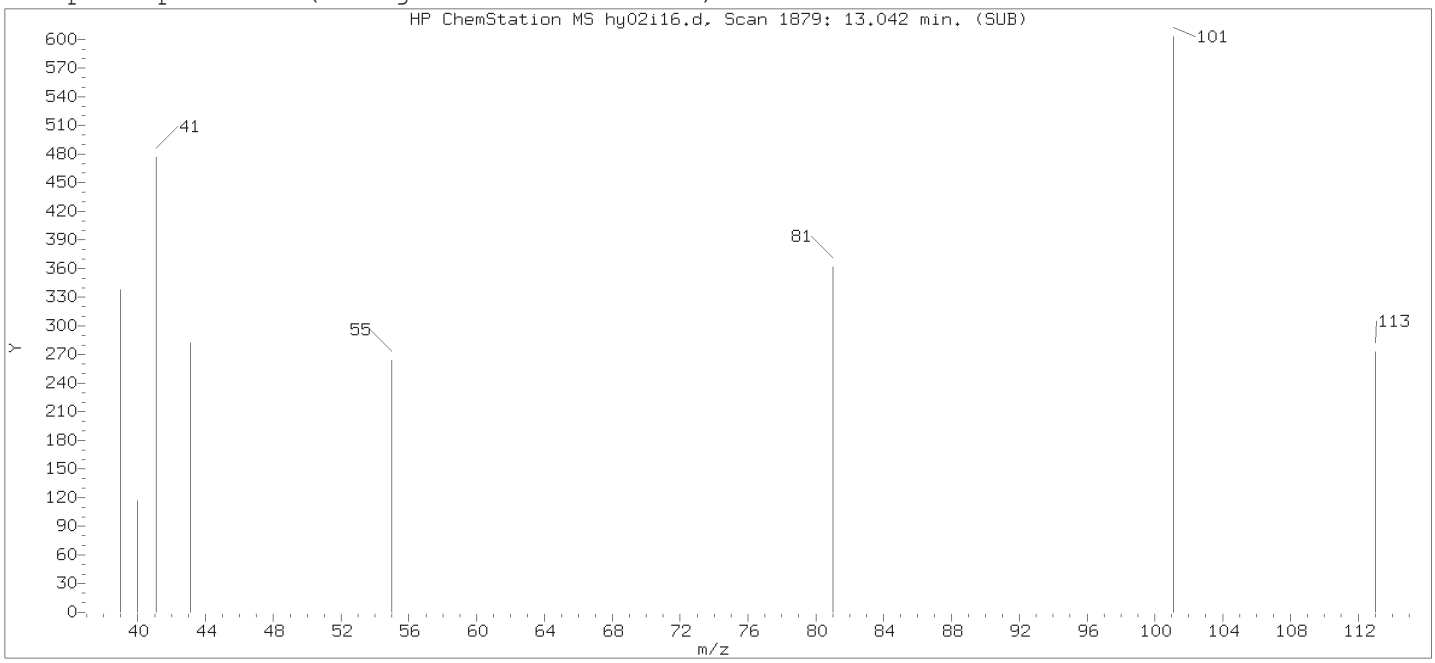
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.328
Quant Ion : 55.00
Area (flag) : 11242M
On-Column Amount (ng) : 21.6250
Integration start scan : 1753 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

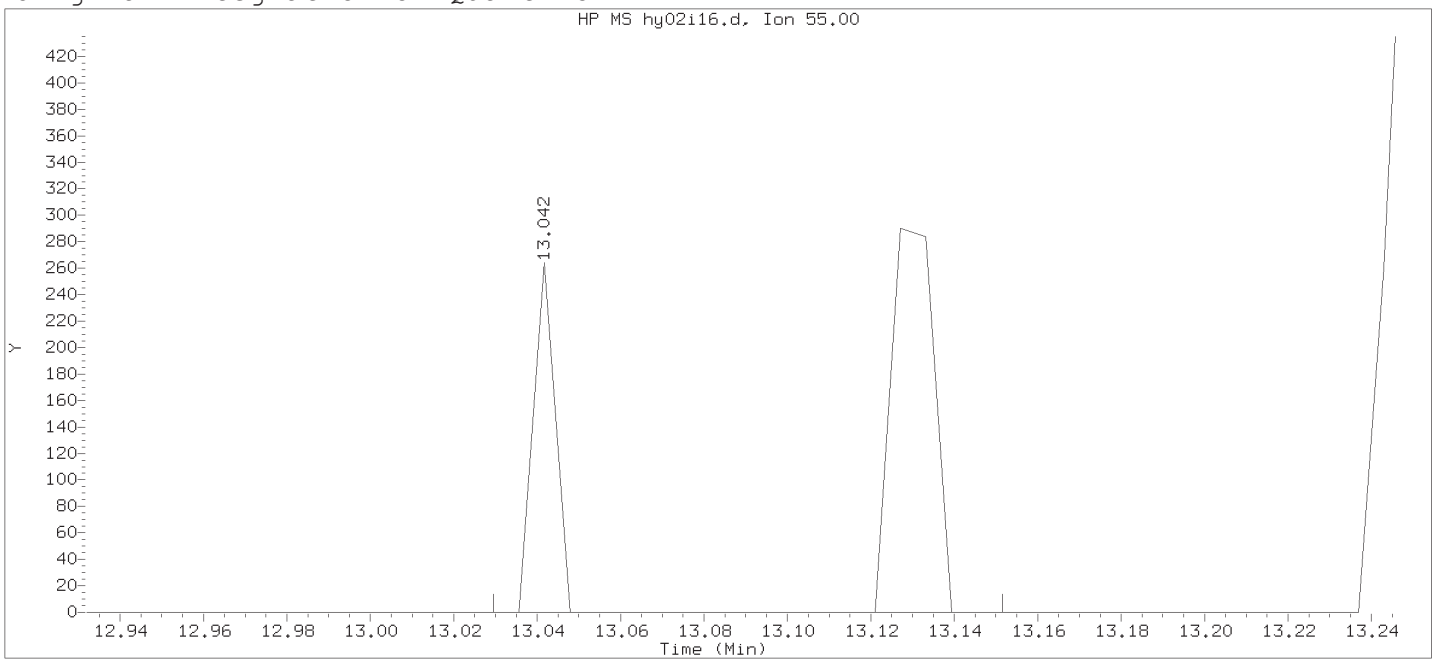
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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



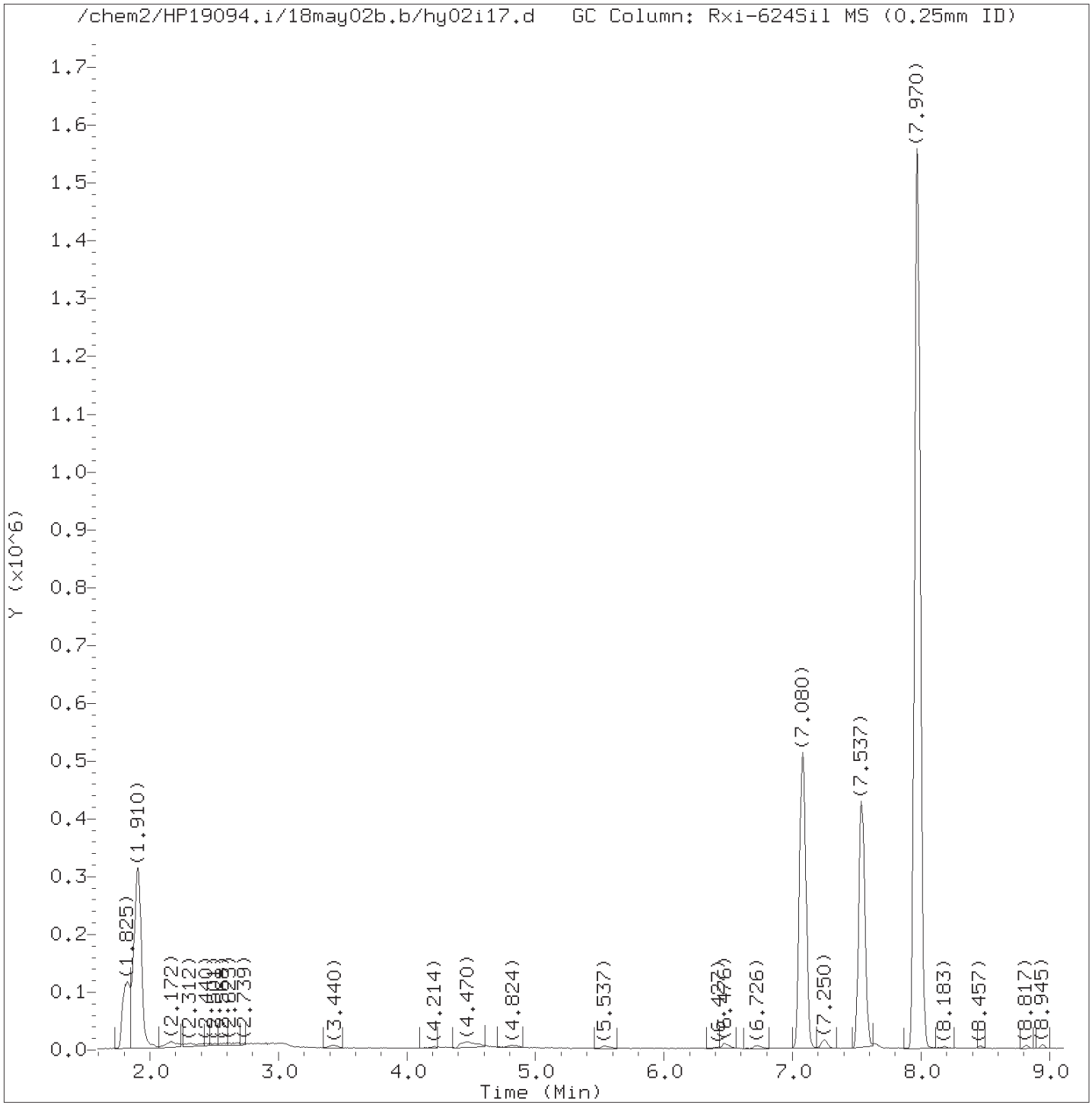
Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

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)

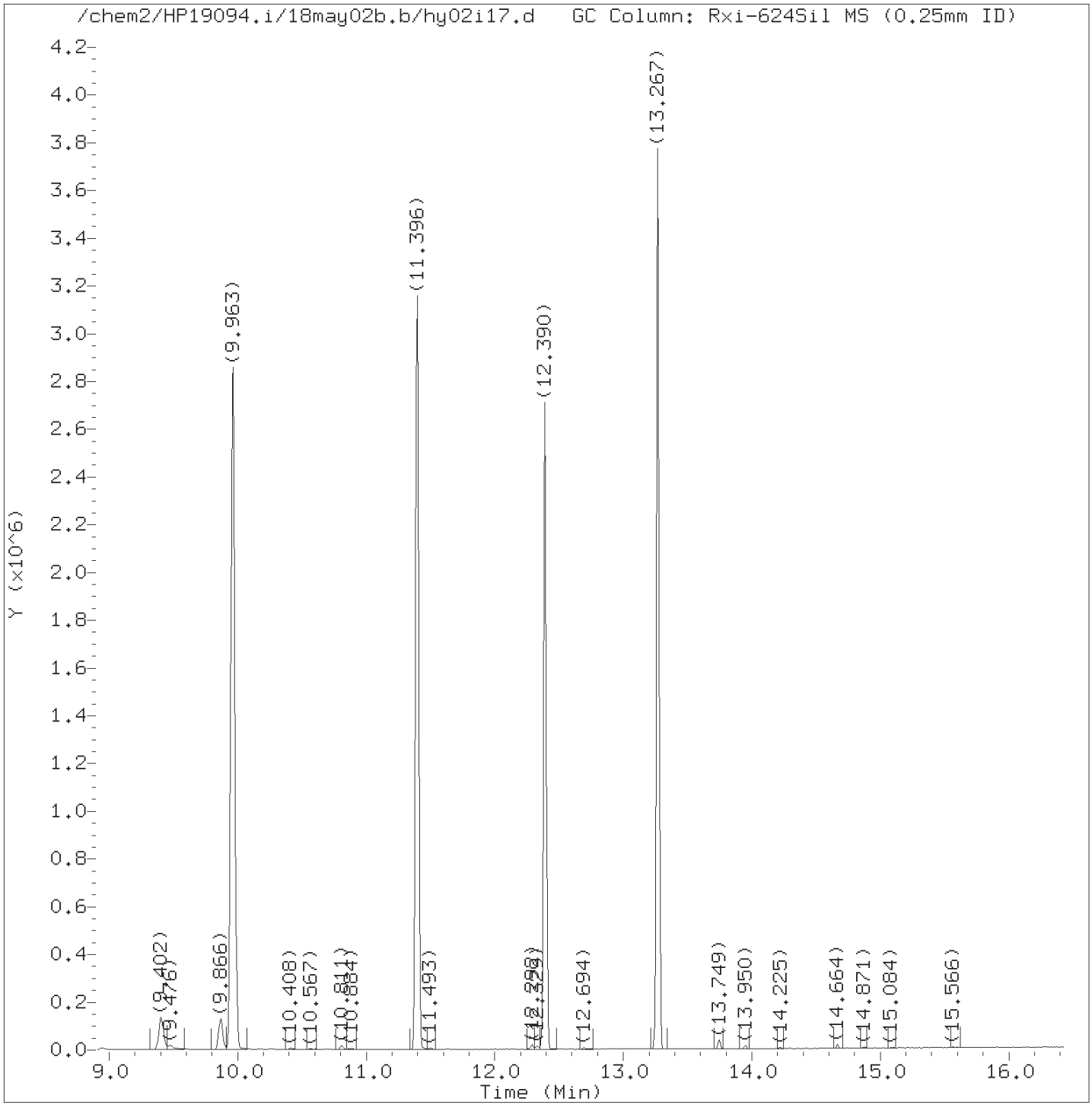
Target Revision 3.5

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

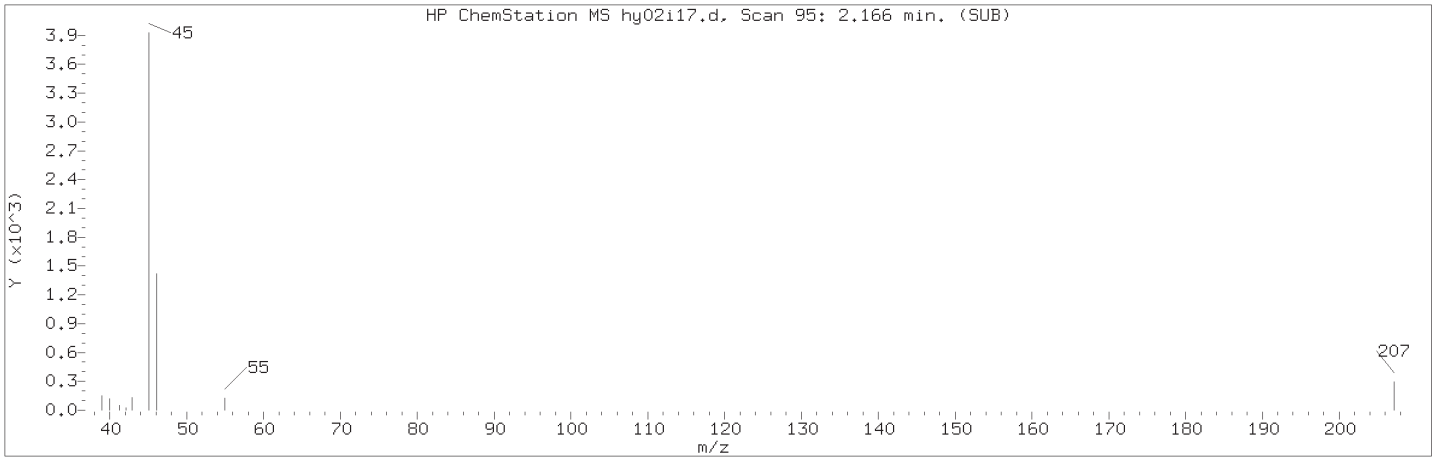
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

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

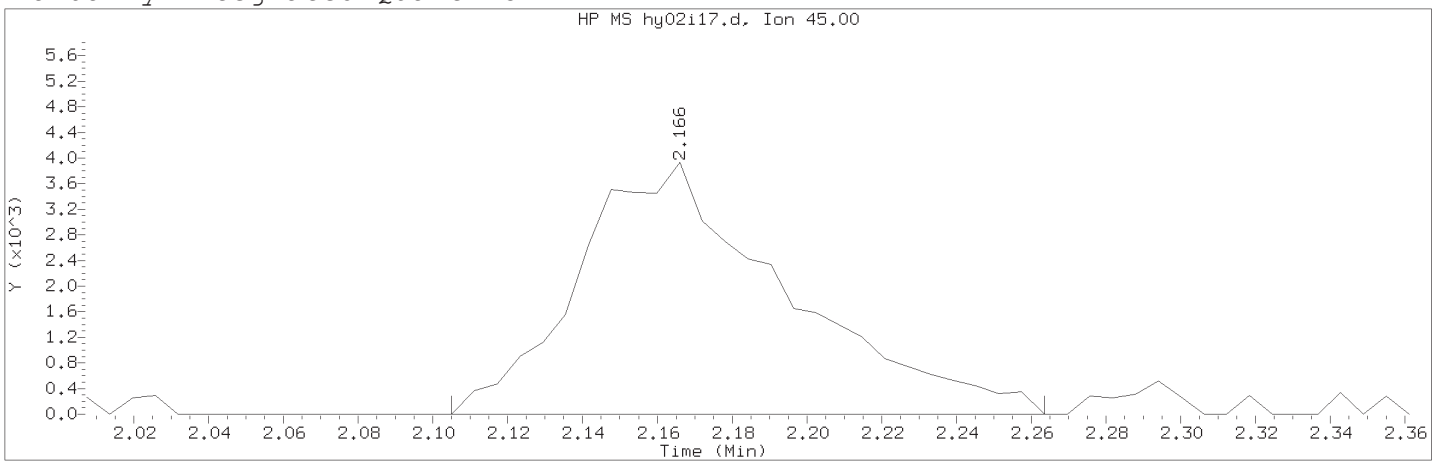
M = Compound was manually integrated.
* = Compound is an internal standard.

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

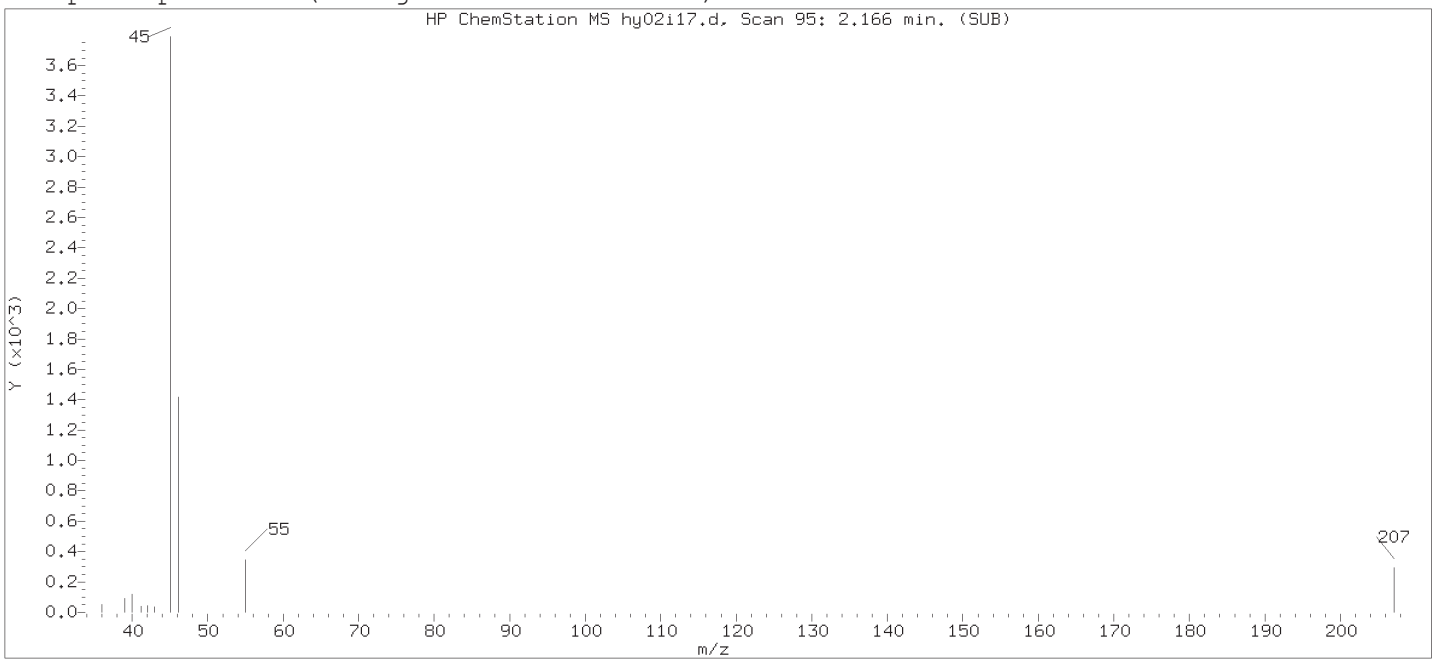
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area (flag) : 15219M
On-Column Amount (ng) : 0.2109
Integration start scan : 84 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

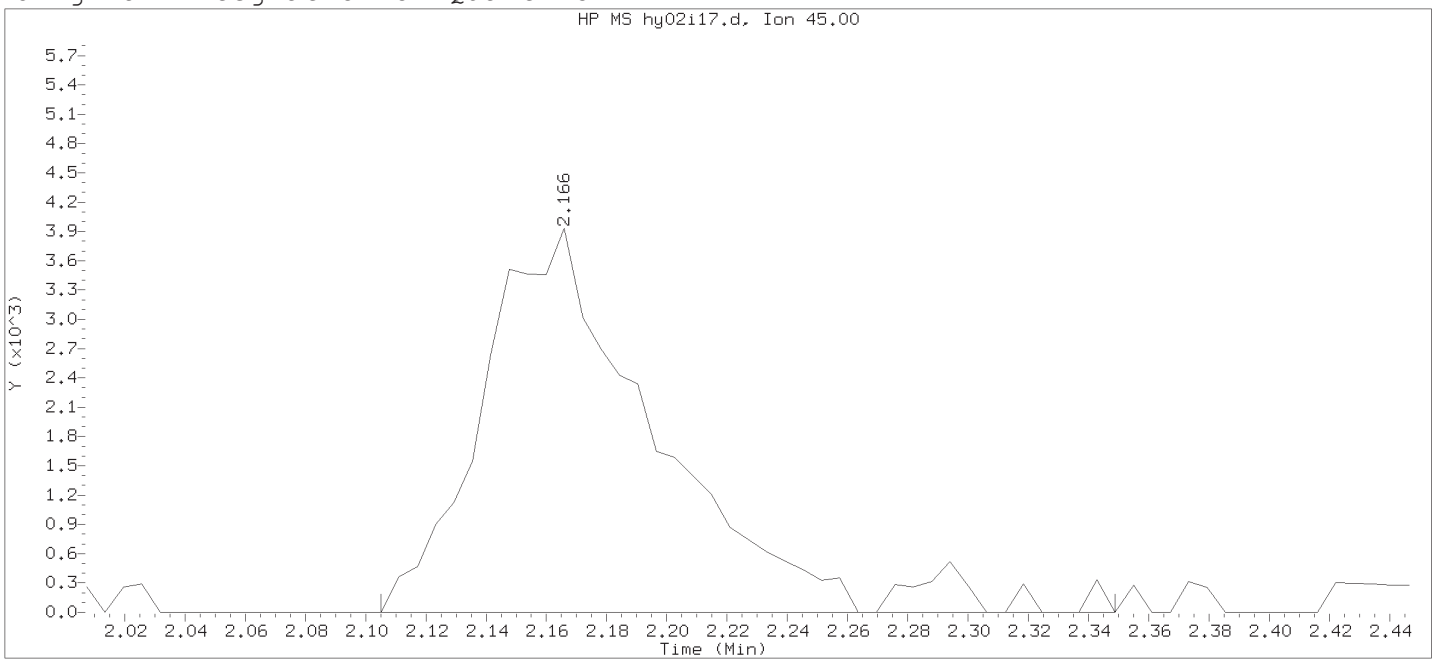
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

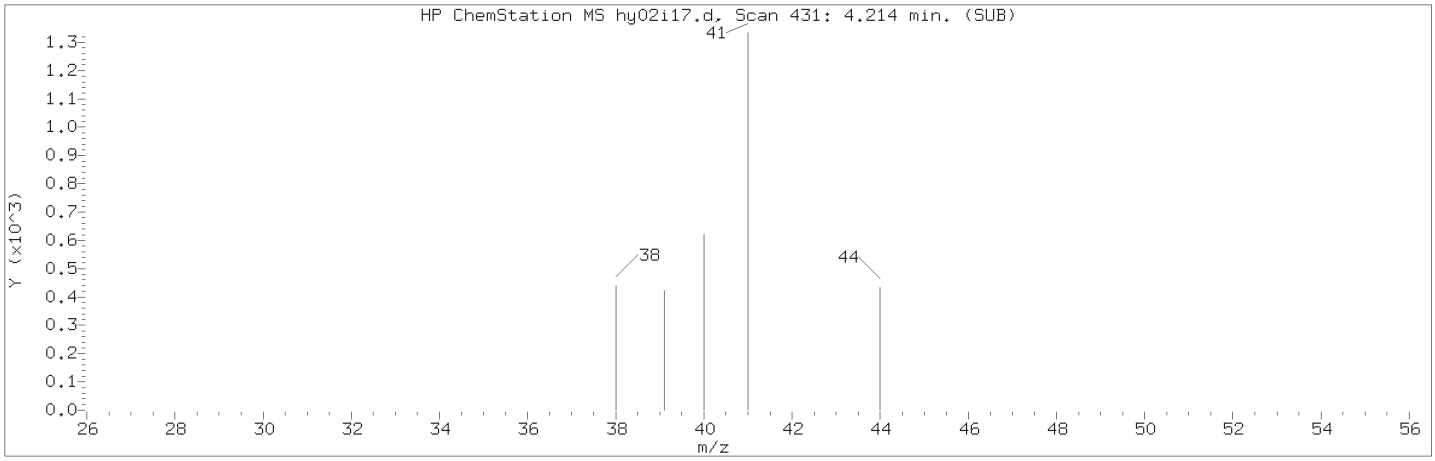
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

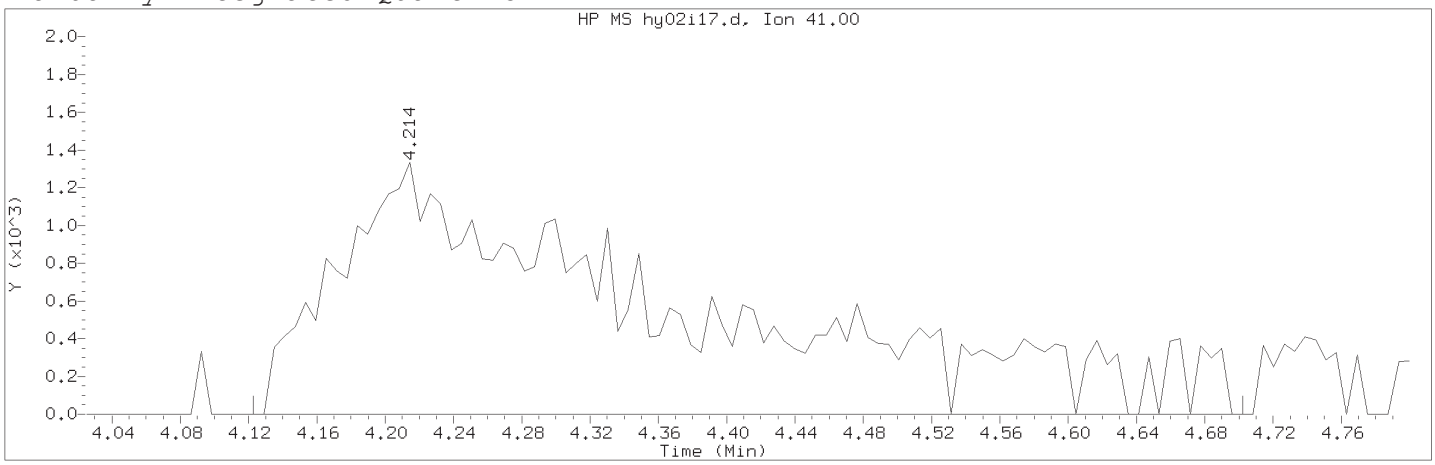
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area : 16050
On-column Amount (ng) : 0.2226
Integration start scan : 84 Integration stop scan: 124
Y at integration start : 0 Y at integration end: 0

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

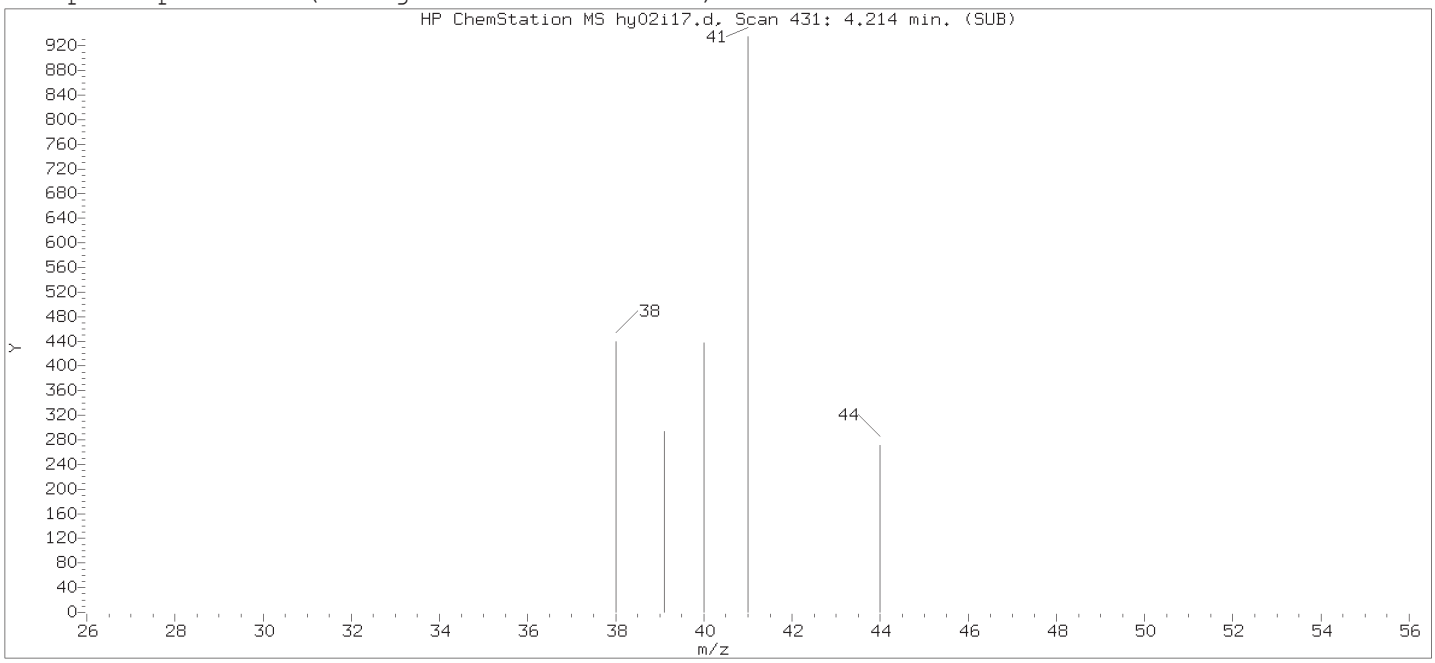
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 18284M
On-Column Amount (ng) : 8.6435
Integration start scan : 415 Integration stop scan: 510
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

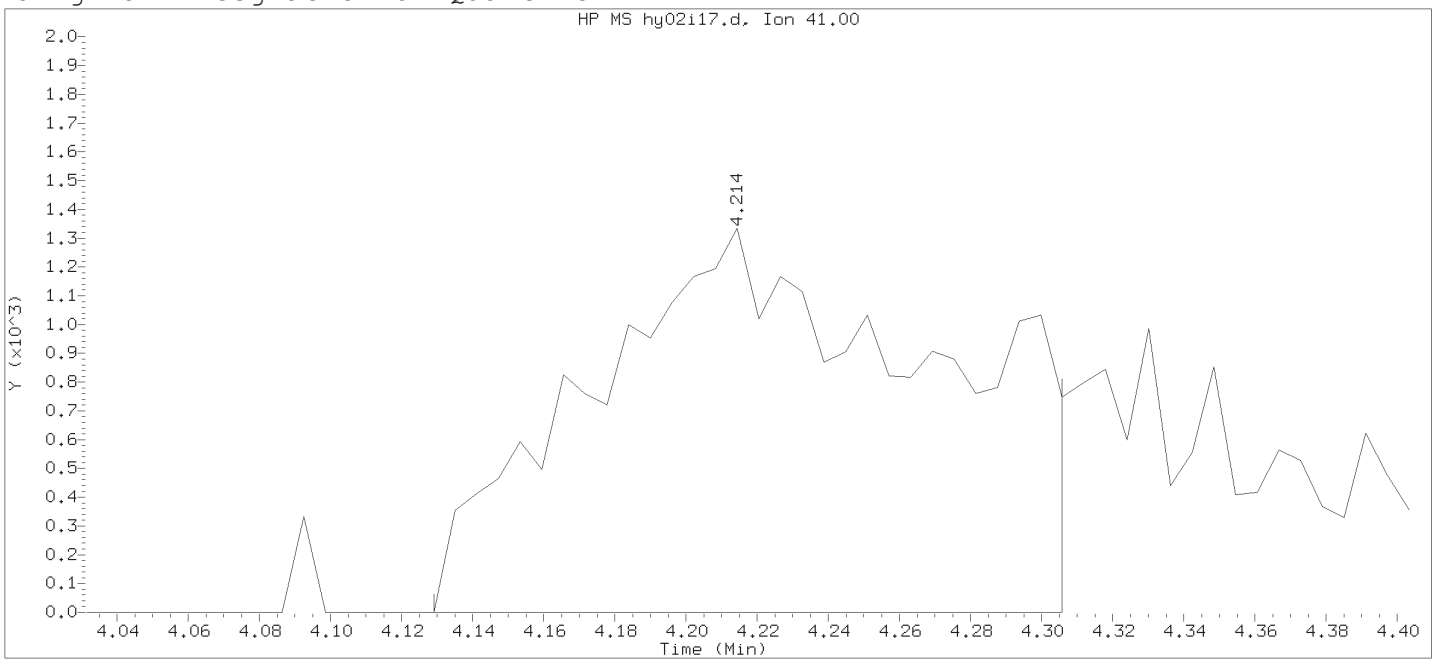
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

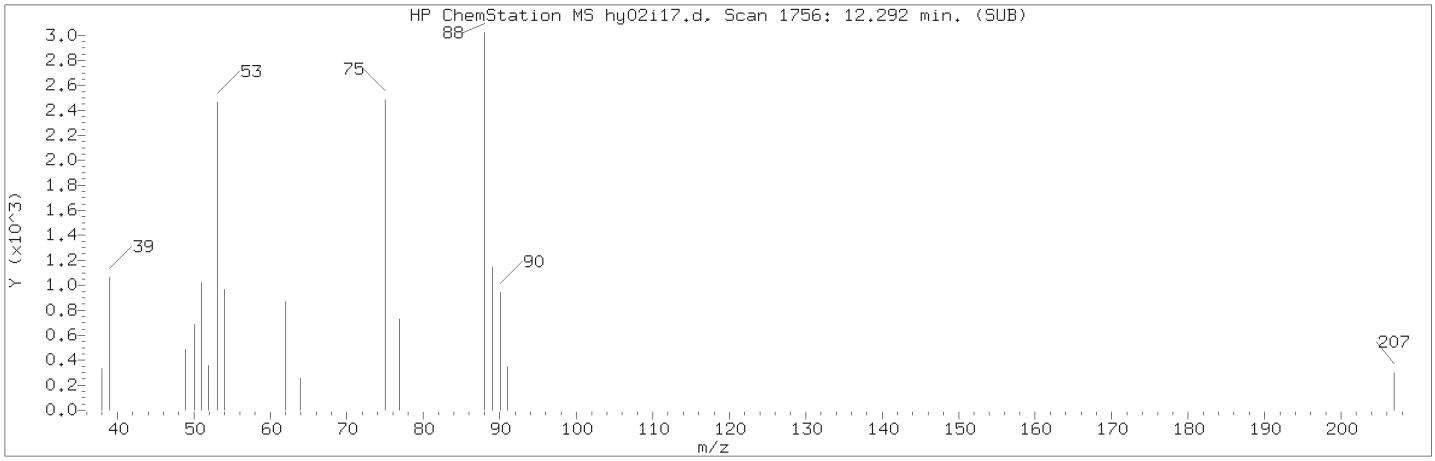
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

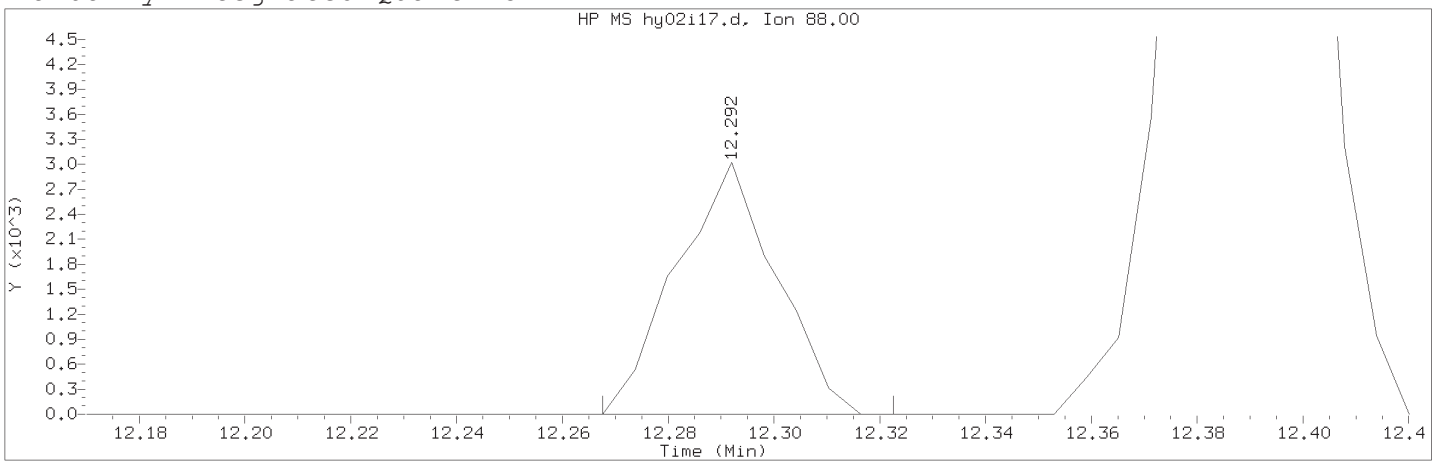
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 9088
On-column Amount (ng) : 5.0856
Integration start scan : 416 Integration stop scan: 445
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: DVV

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

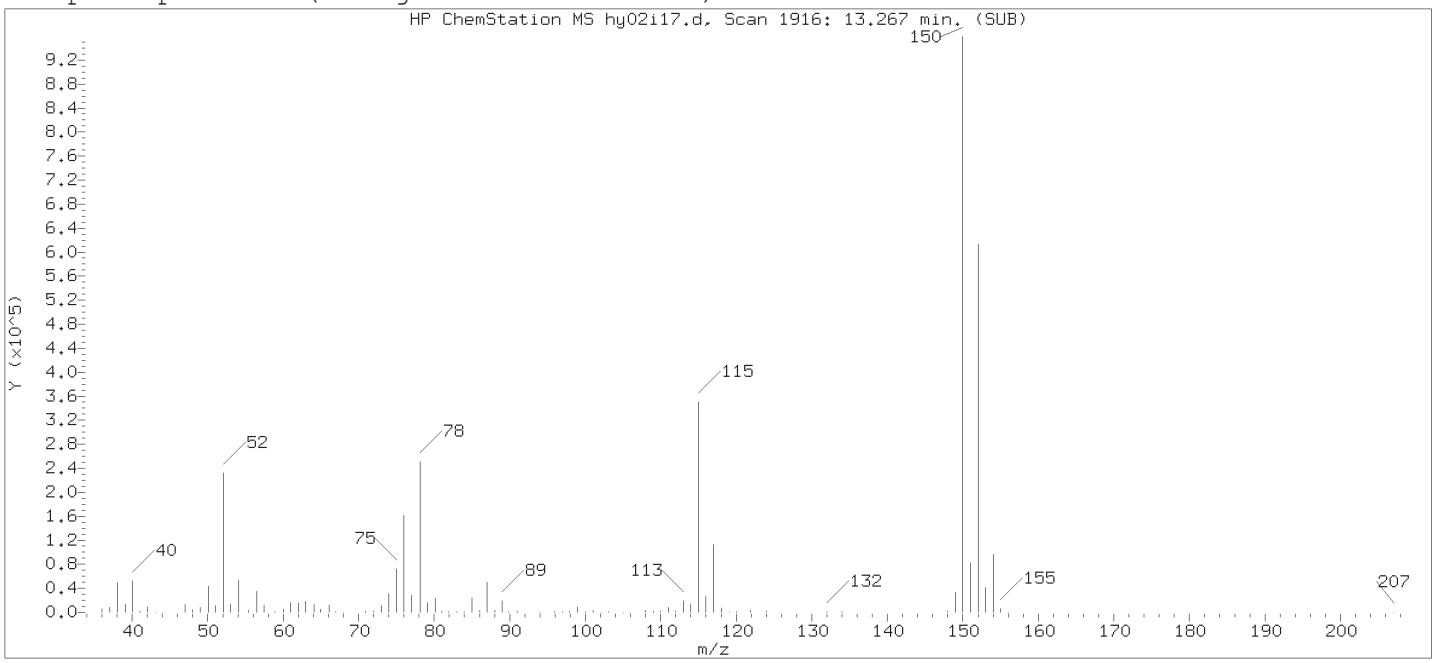
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 3969M
On-Column Amount (ng) : 0.3498
Integration start scan : 1751 Integration stop scan: 1760
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

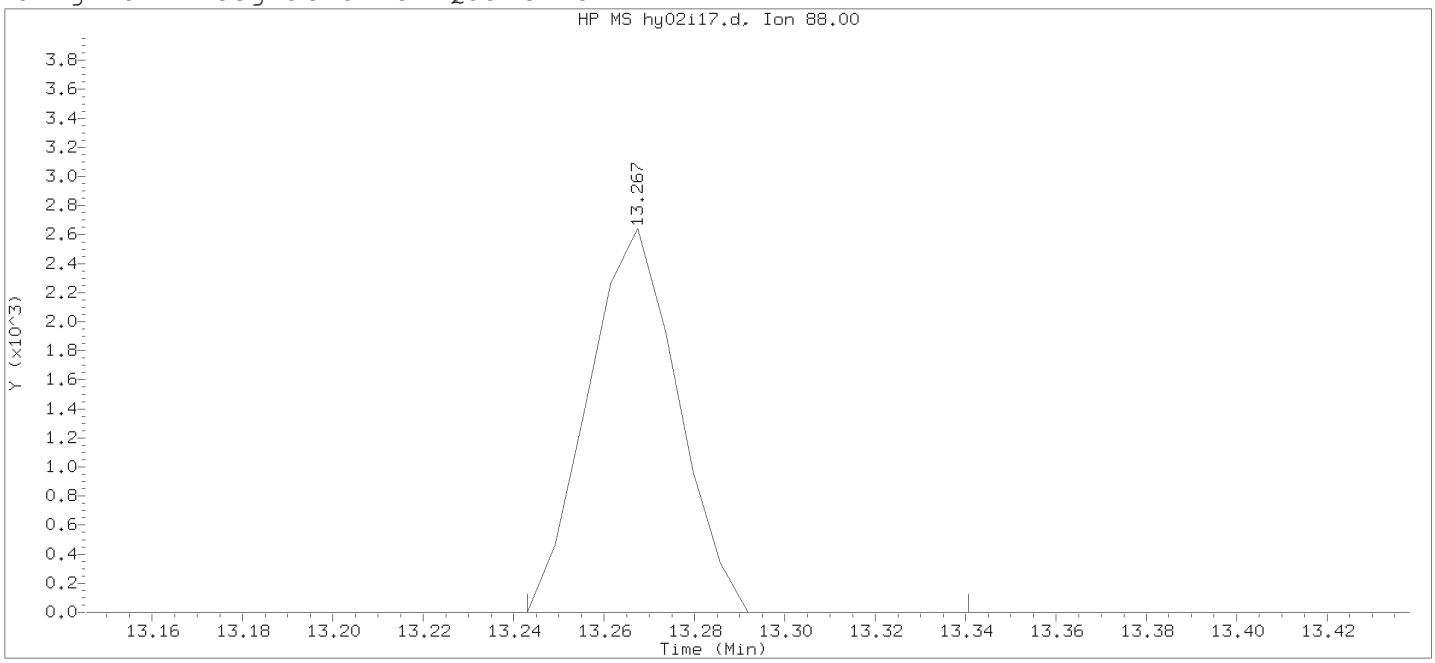
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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

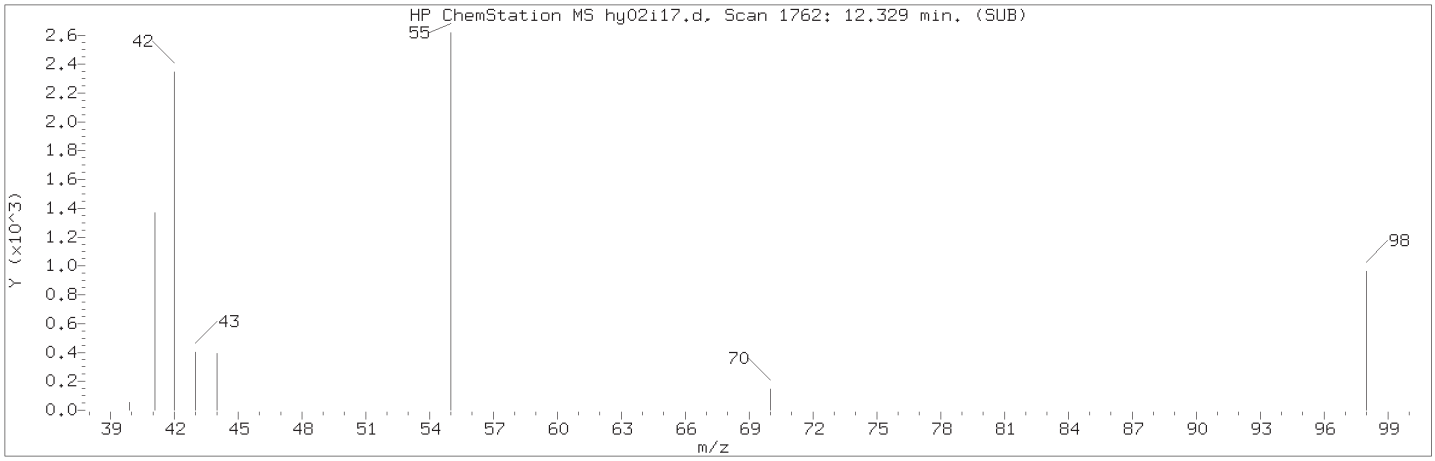
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

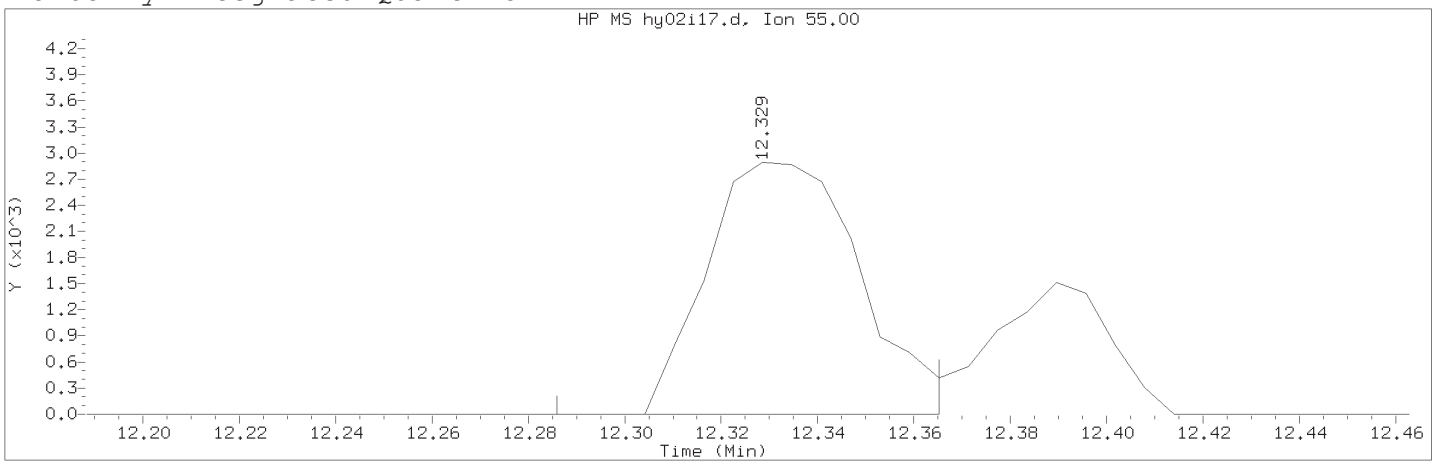
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 3639
On-column Amount (ng) : 0.3604
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

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

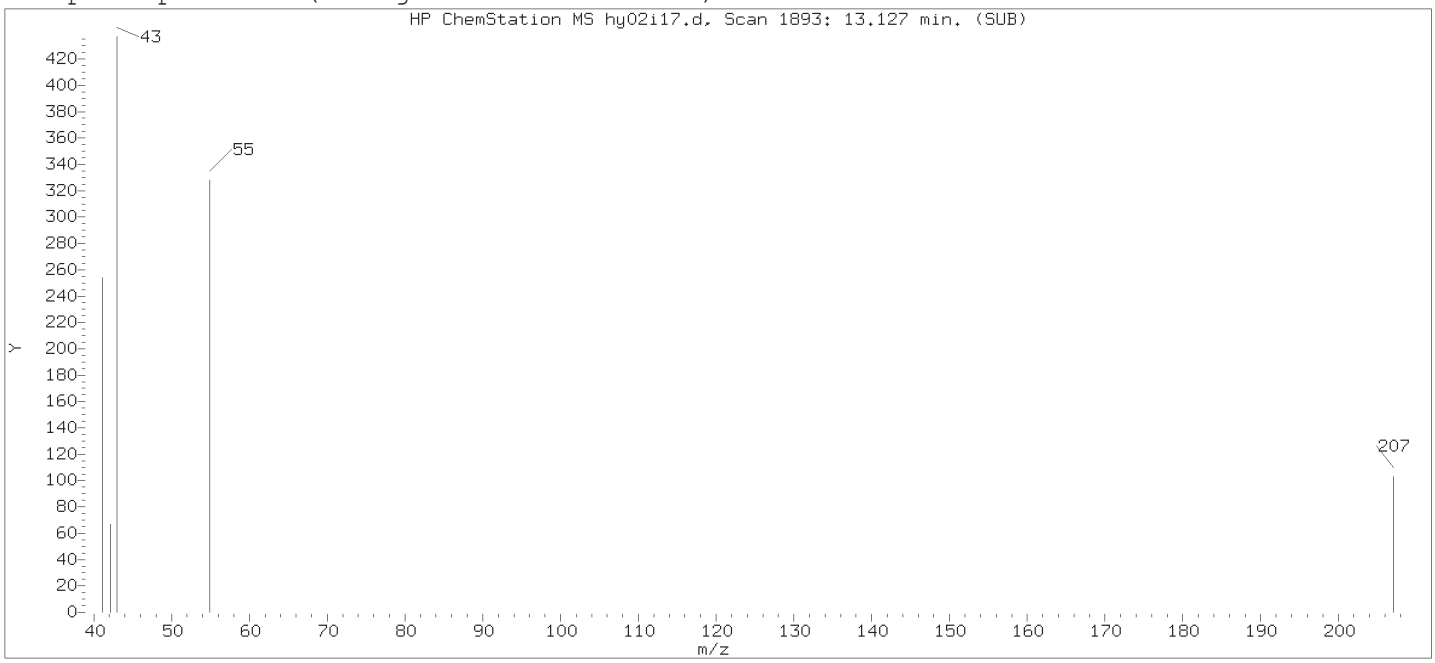
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 6386M
On-Column Amount (ng) : 11.0679
Integration start scan : 1754 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

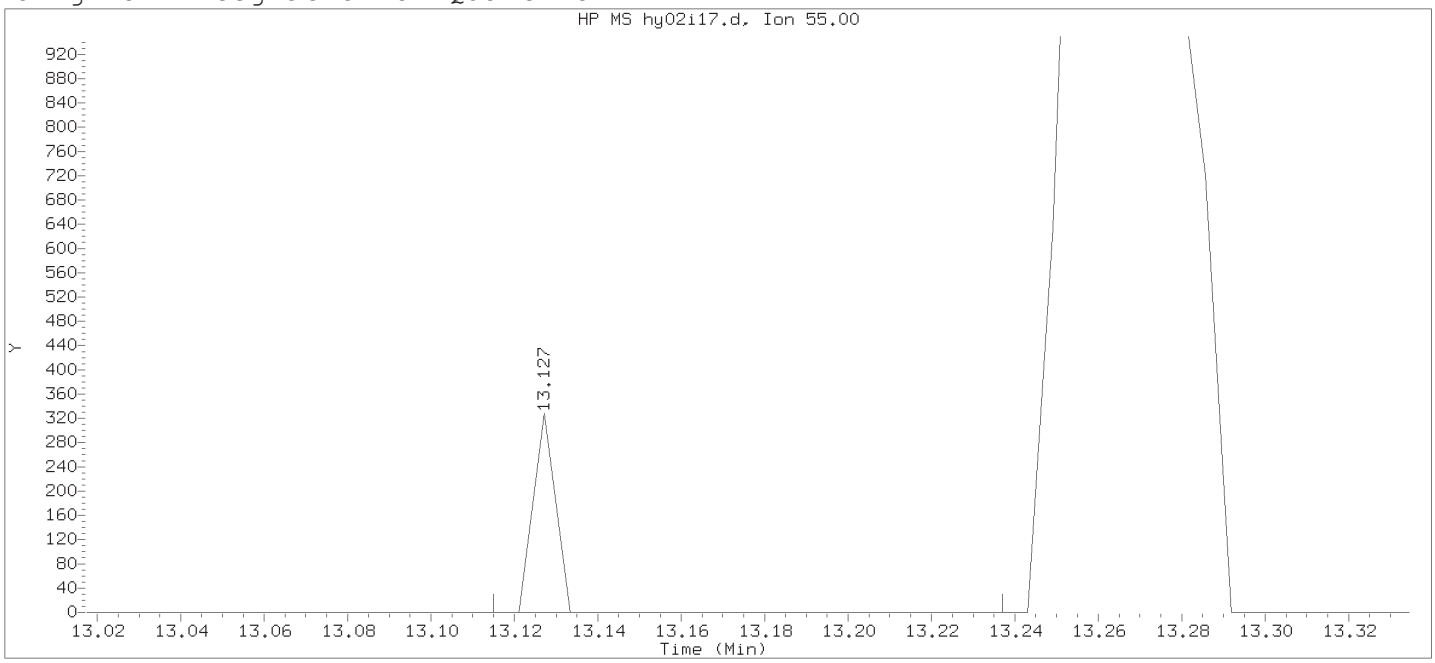
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

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



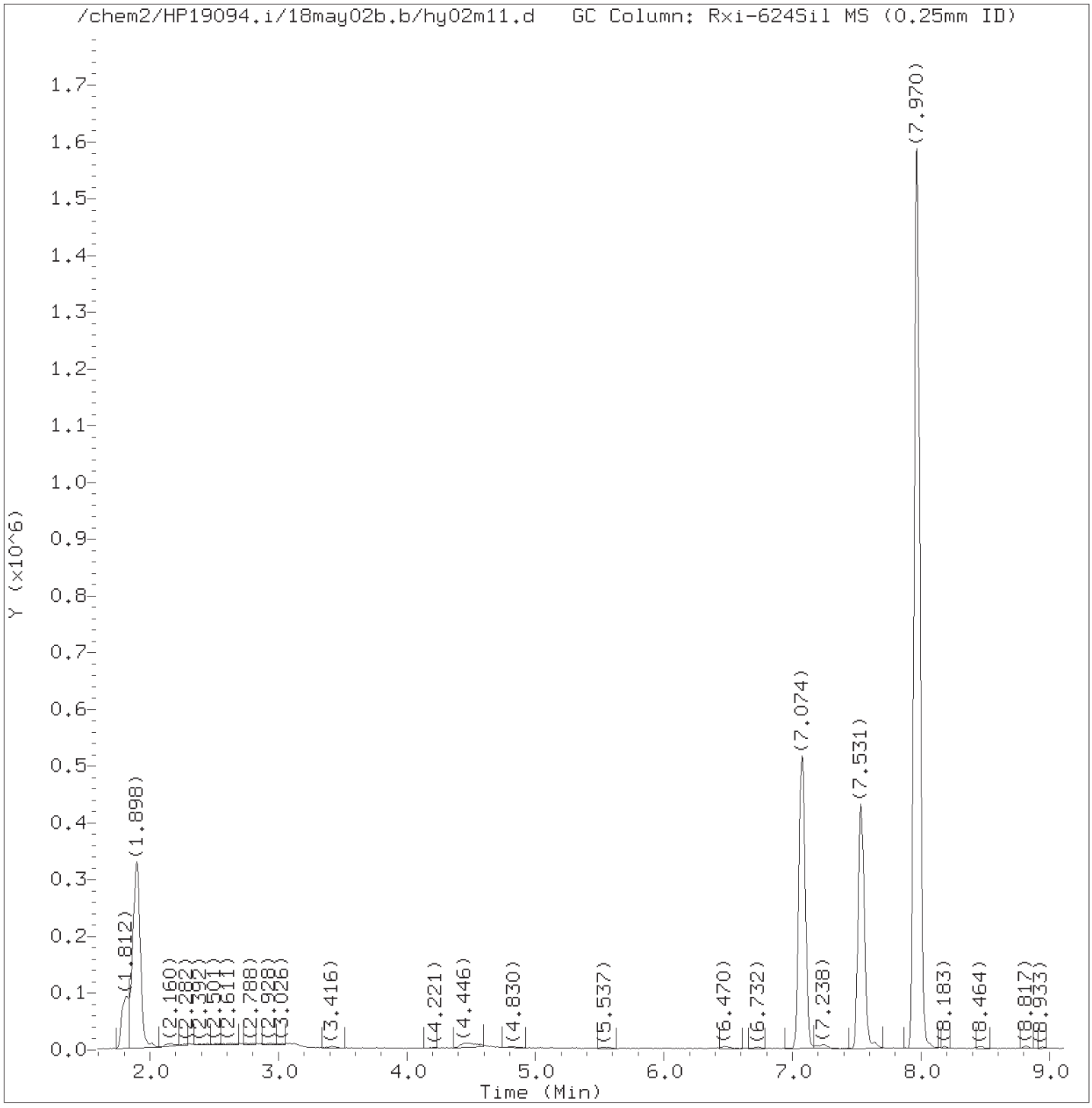
Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

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)

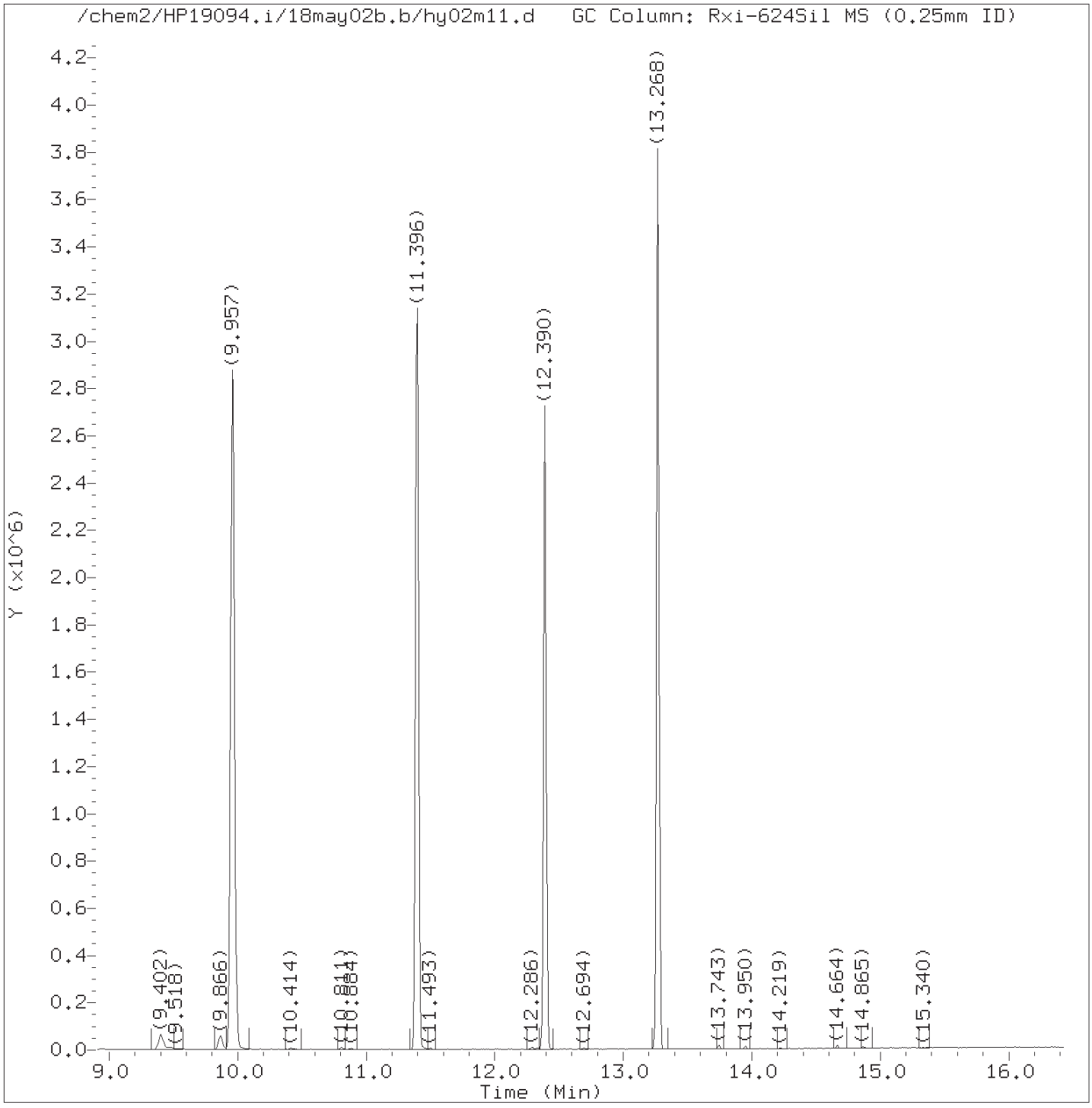
Target Revision 3.5

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

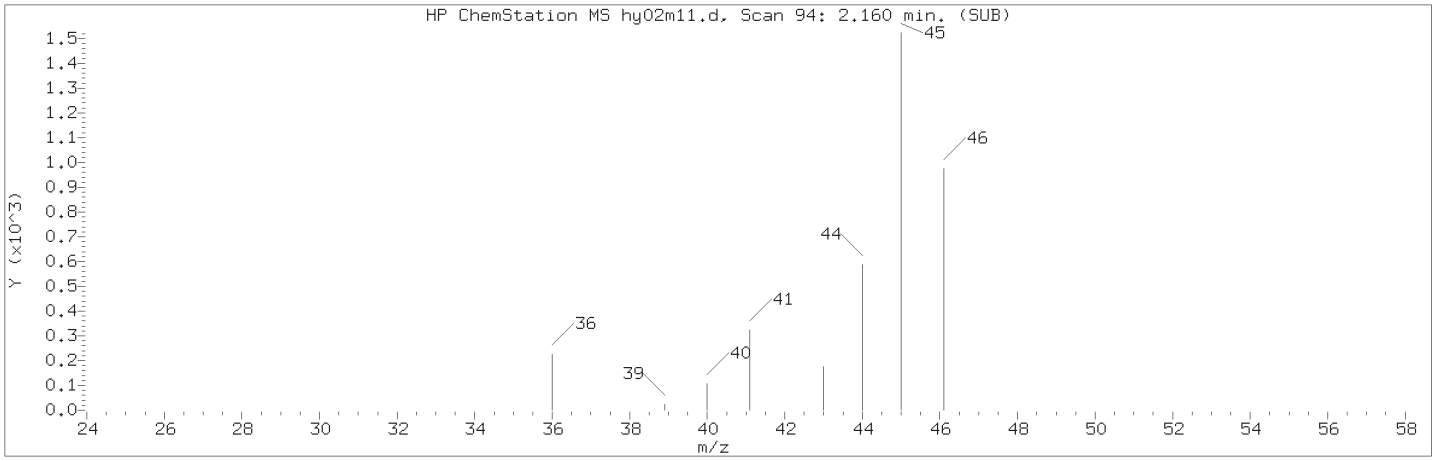
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

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

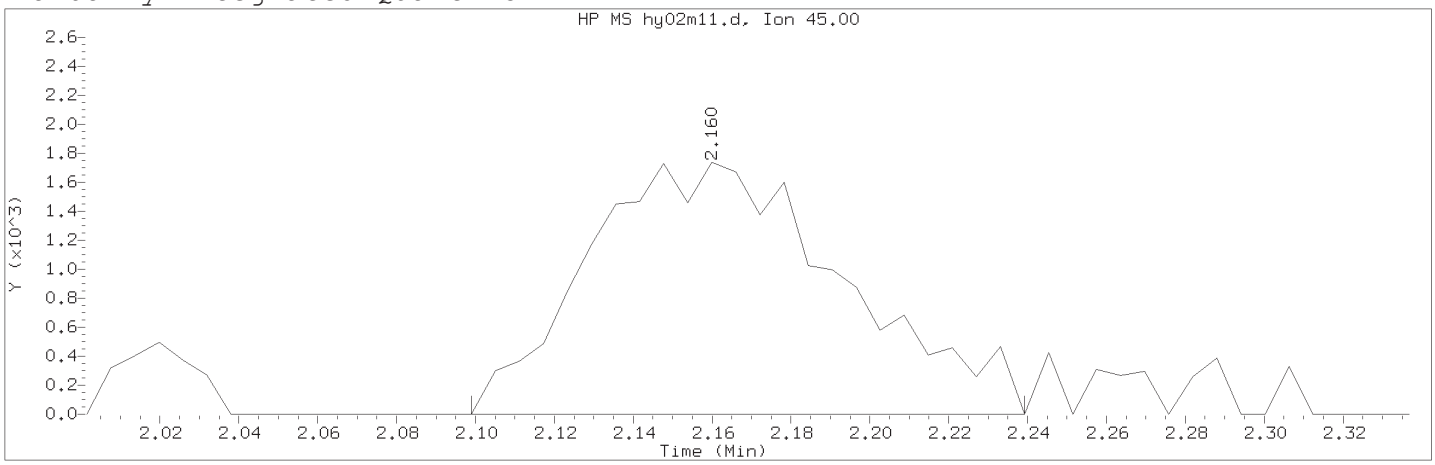
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

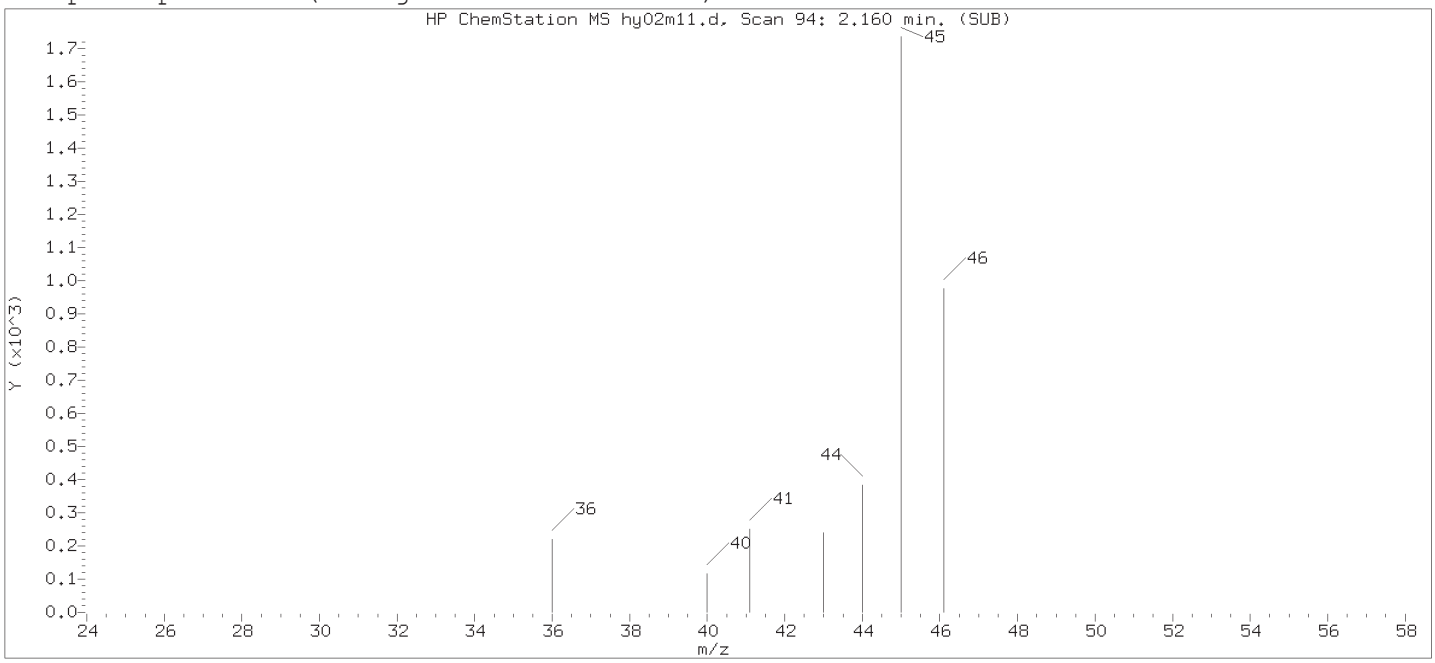
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 7839M
On-Column Amount (ng) : 0.1069
Integration start scan : 83 Integration stop scan: 106
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

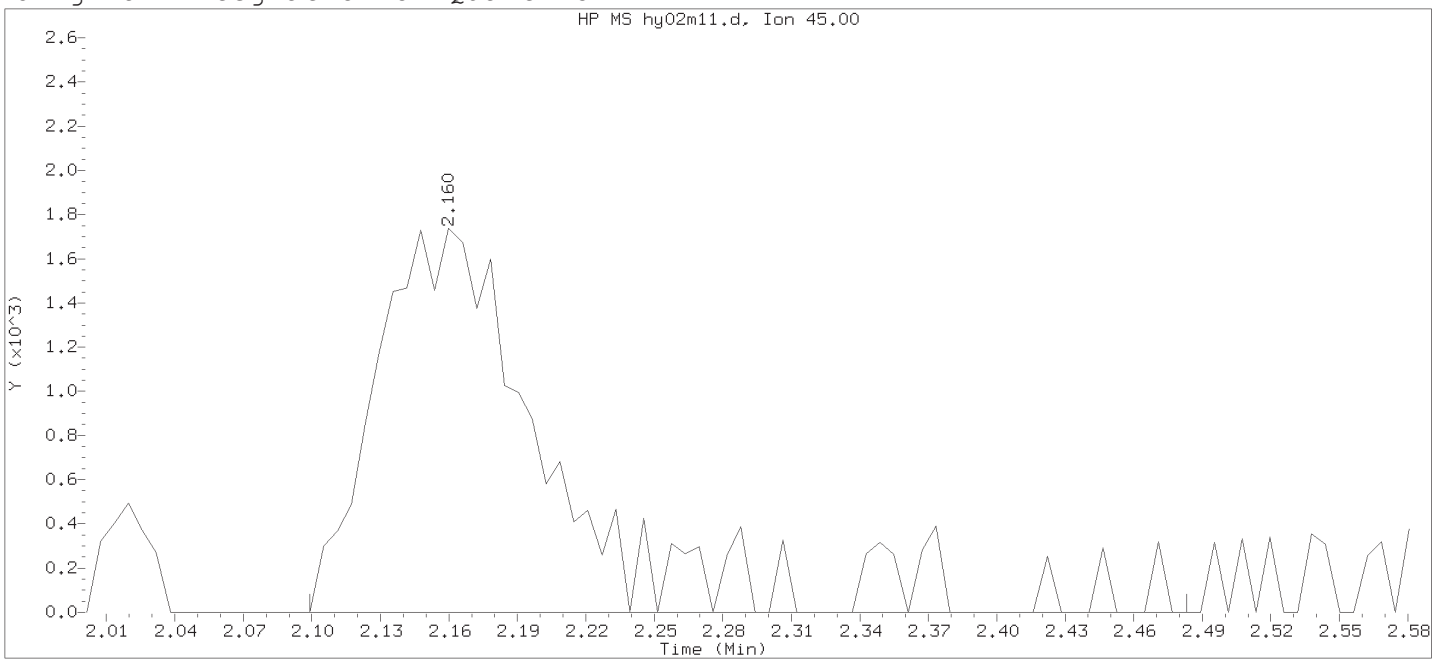
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

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

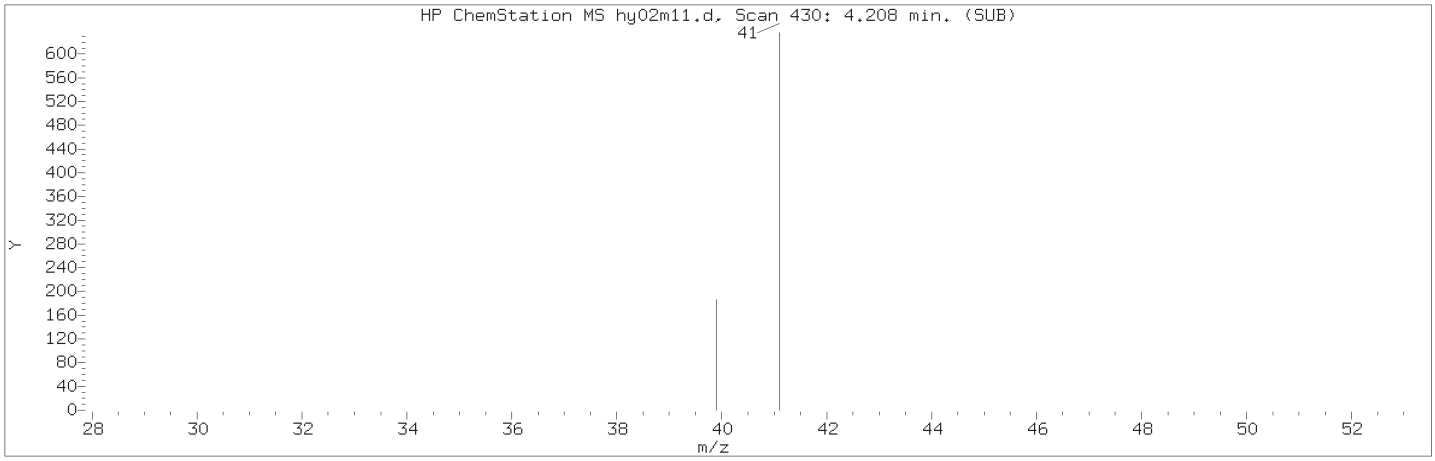
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

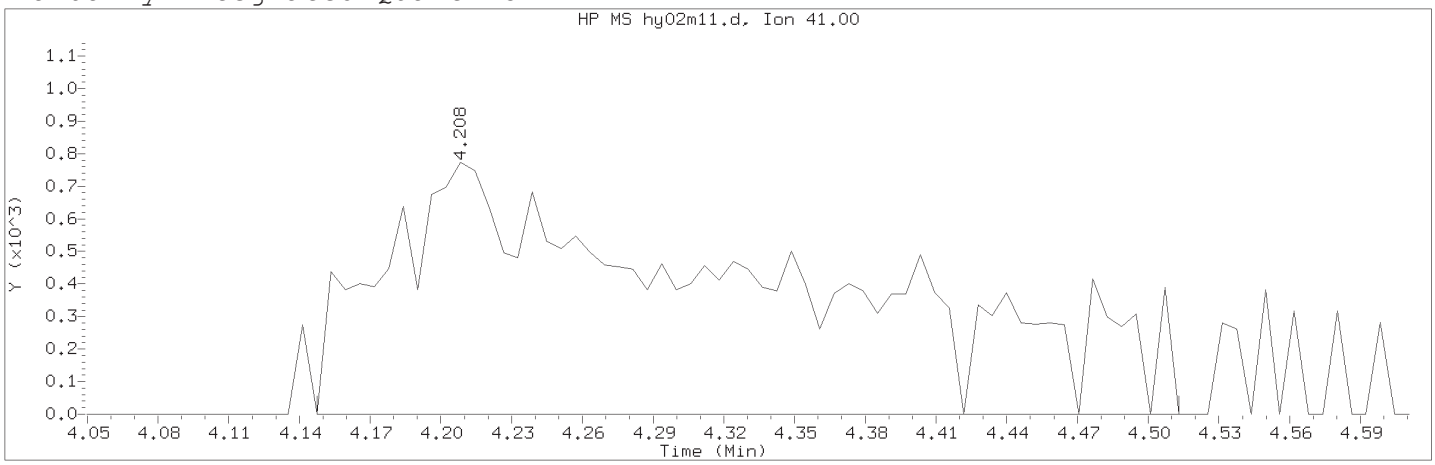
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area : 9539
On-column Amount (ng) : 0.1302
Integration start scan : 83 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

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

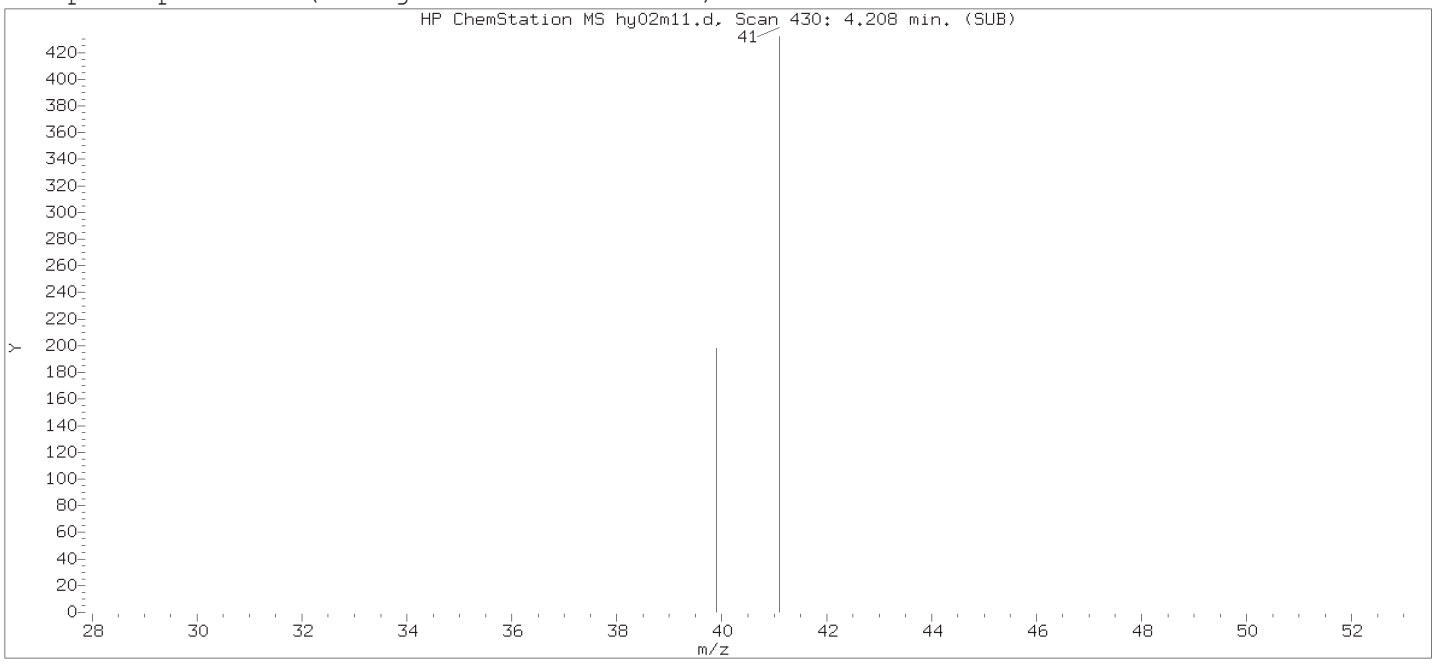
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 8867M
On-Column Amount (ng) : 4.2995
Integration start scan : 419 Integration stop scan: 479
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

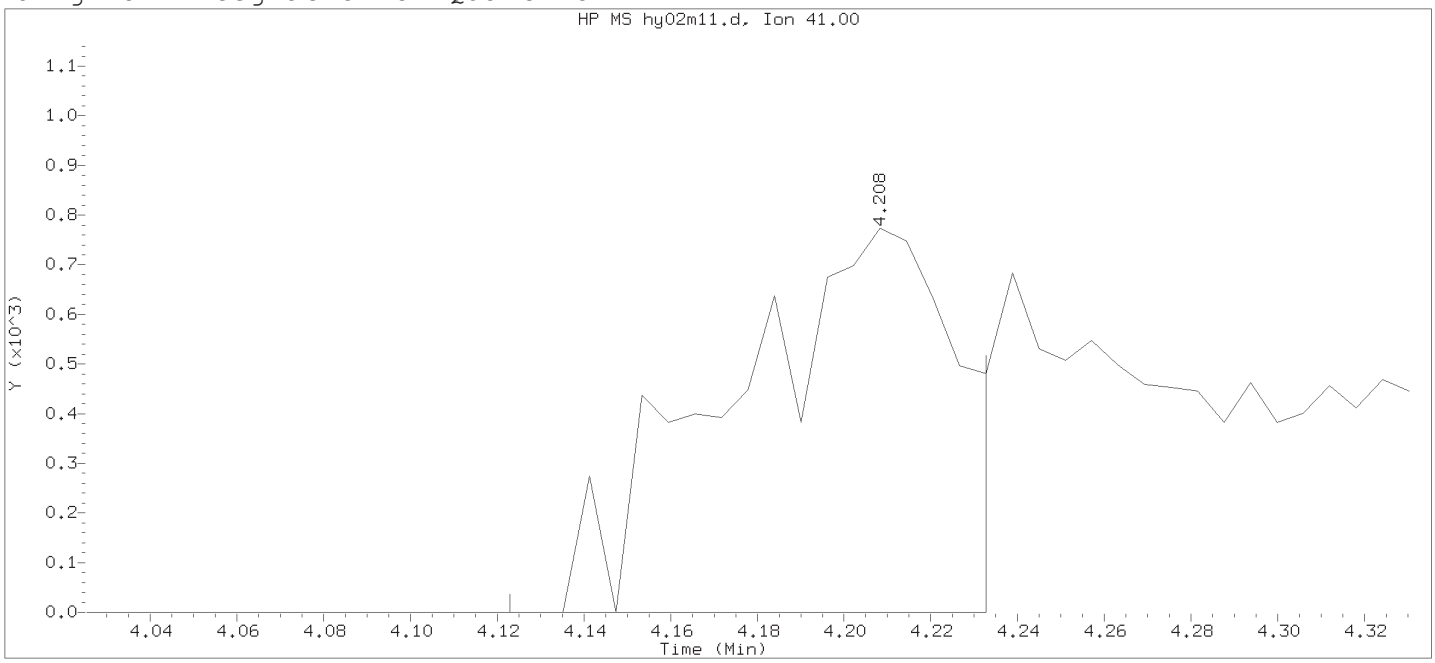
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

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

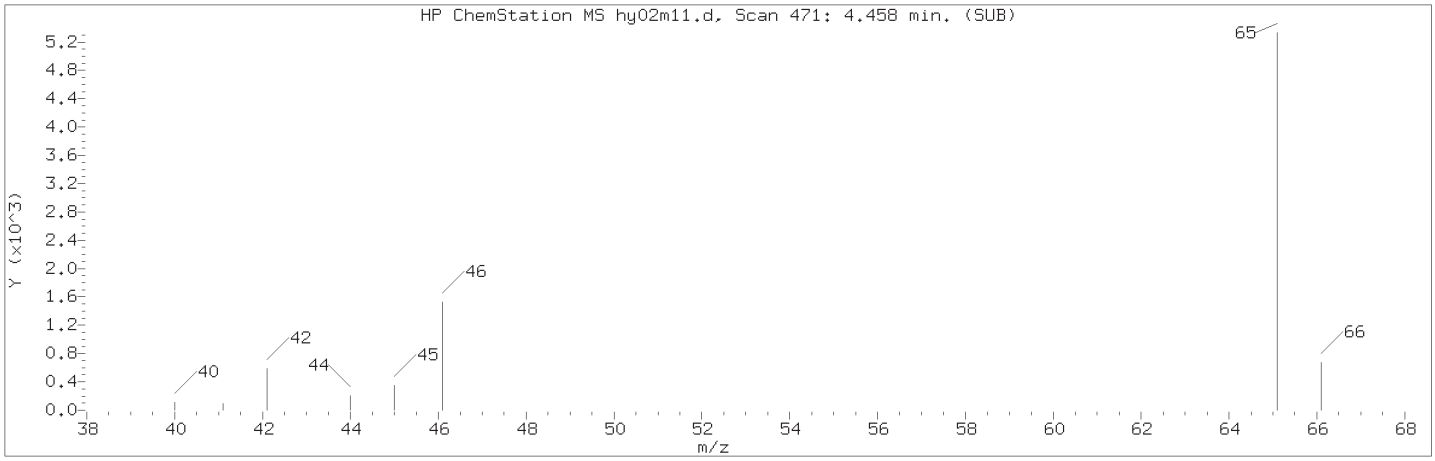
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

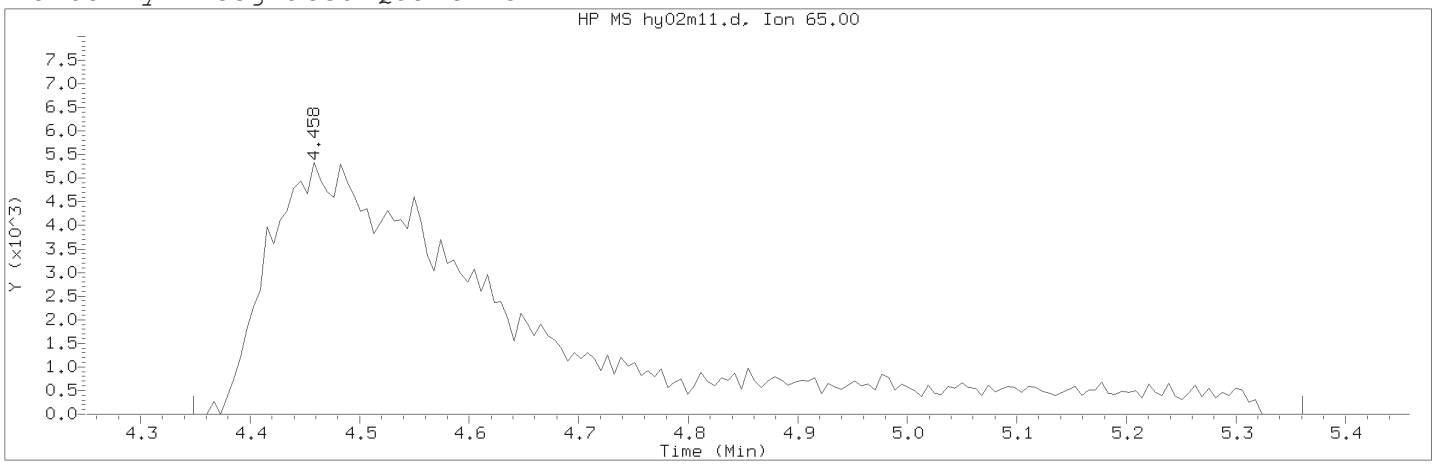
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 2786
On-column Amount (ng) : 1.5113
Integration start scan : 415 Integration stop scan: 433
Y at integration start : 0 Y at integration end: 0

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

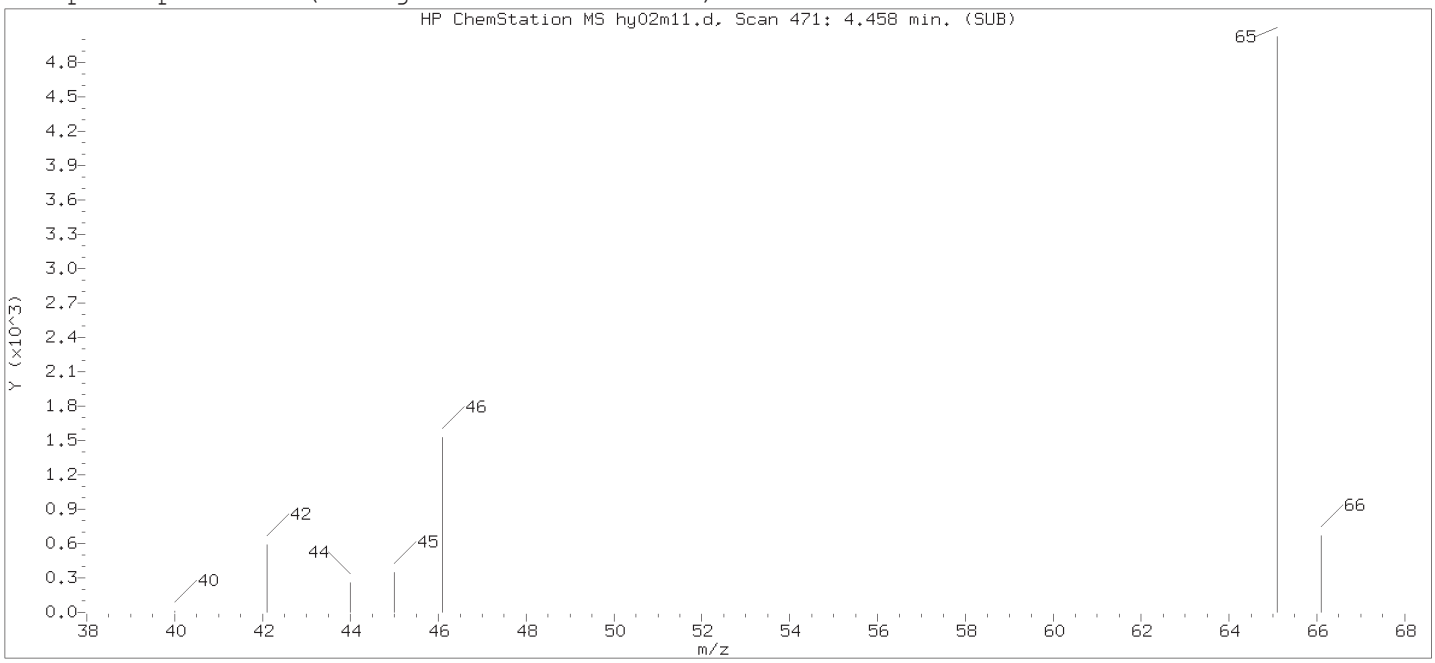
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 85408M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

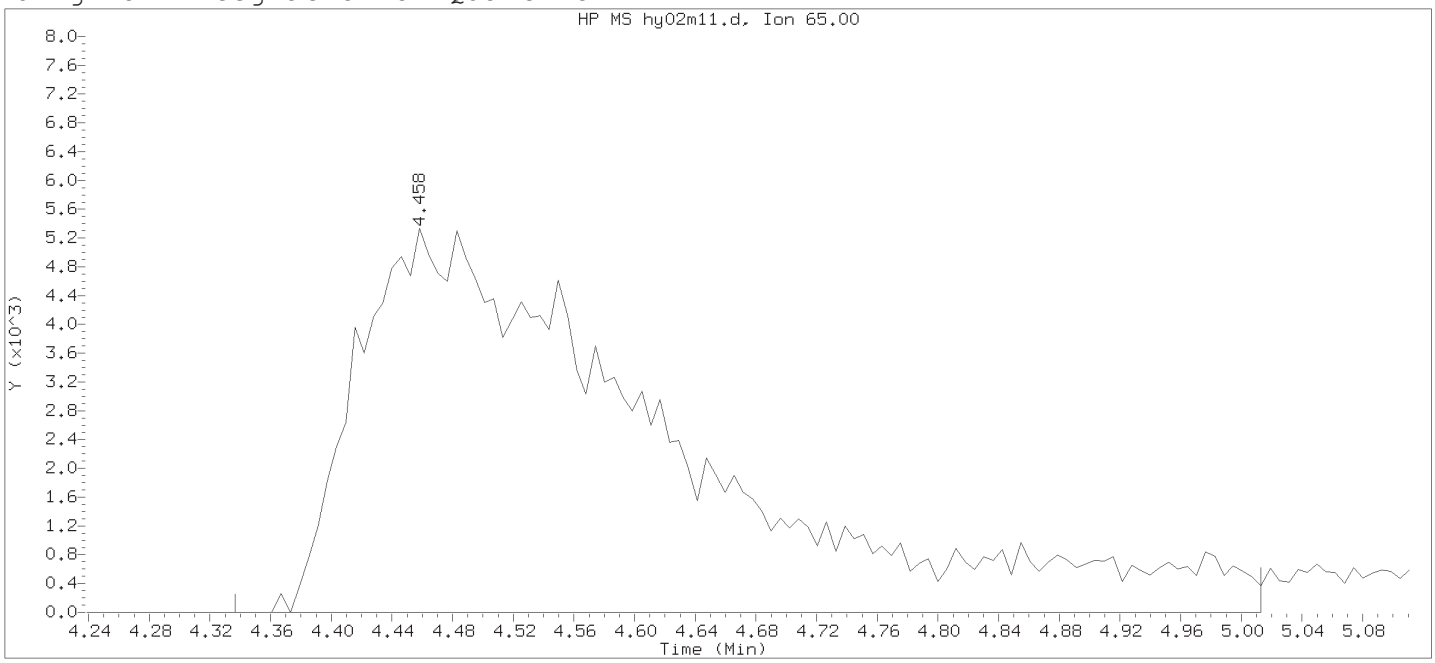
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

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

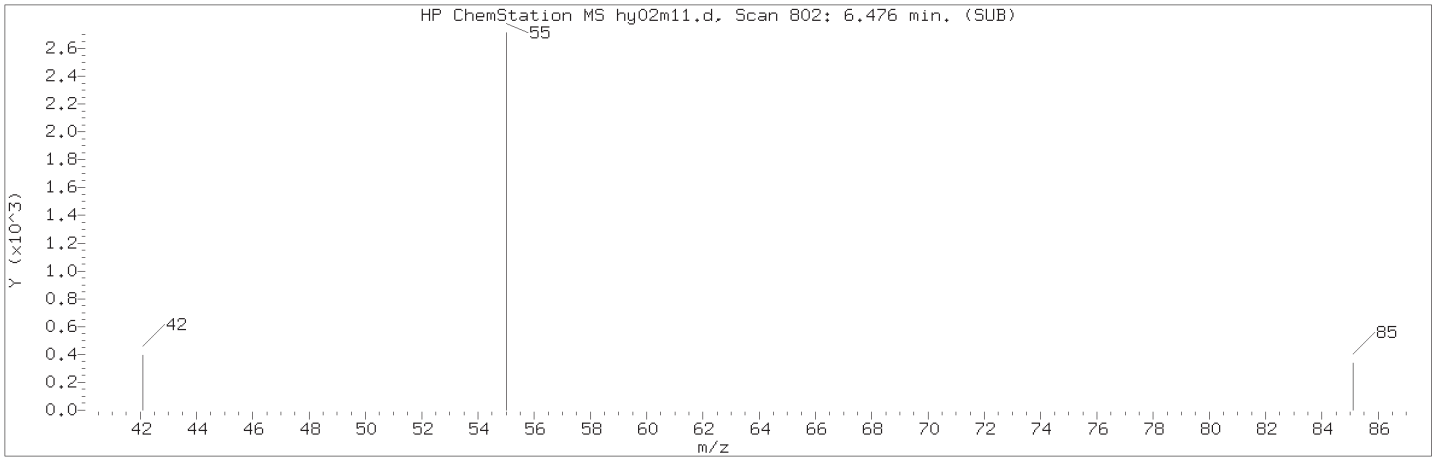
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

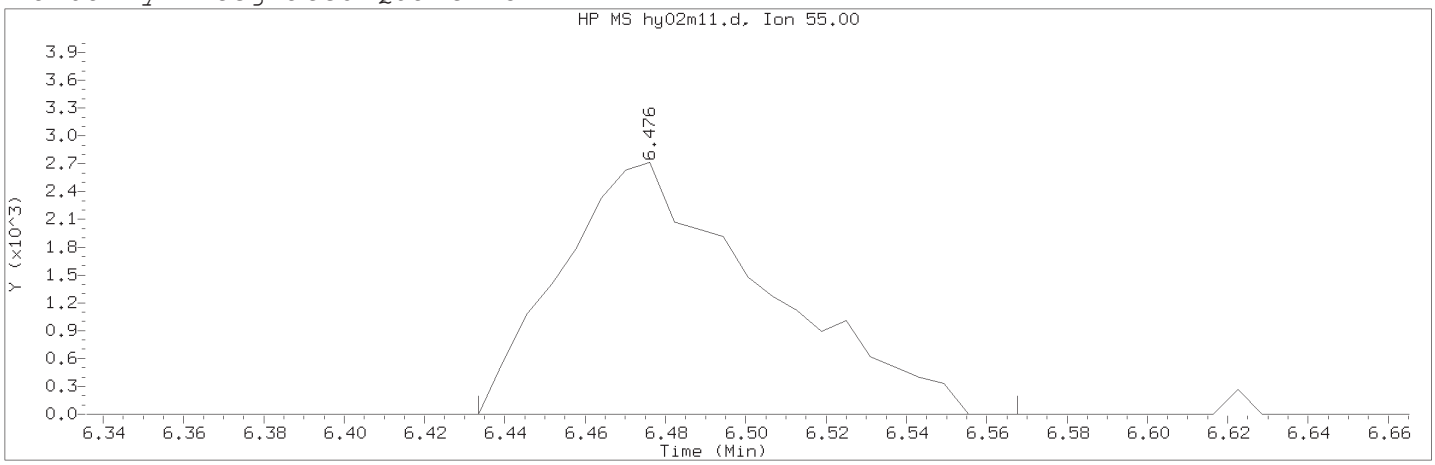
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area : 76364
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 561
Y at integration start : 0 Y at integration end: 0

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

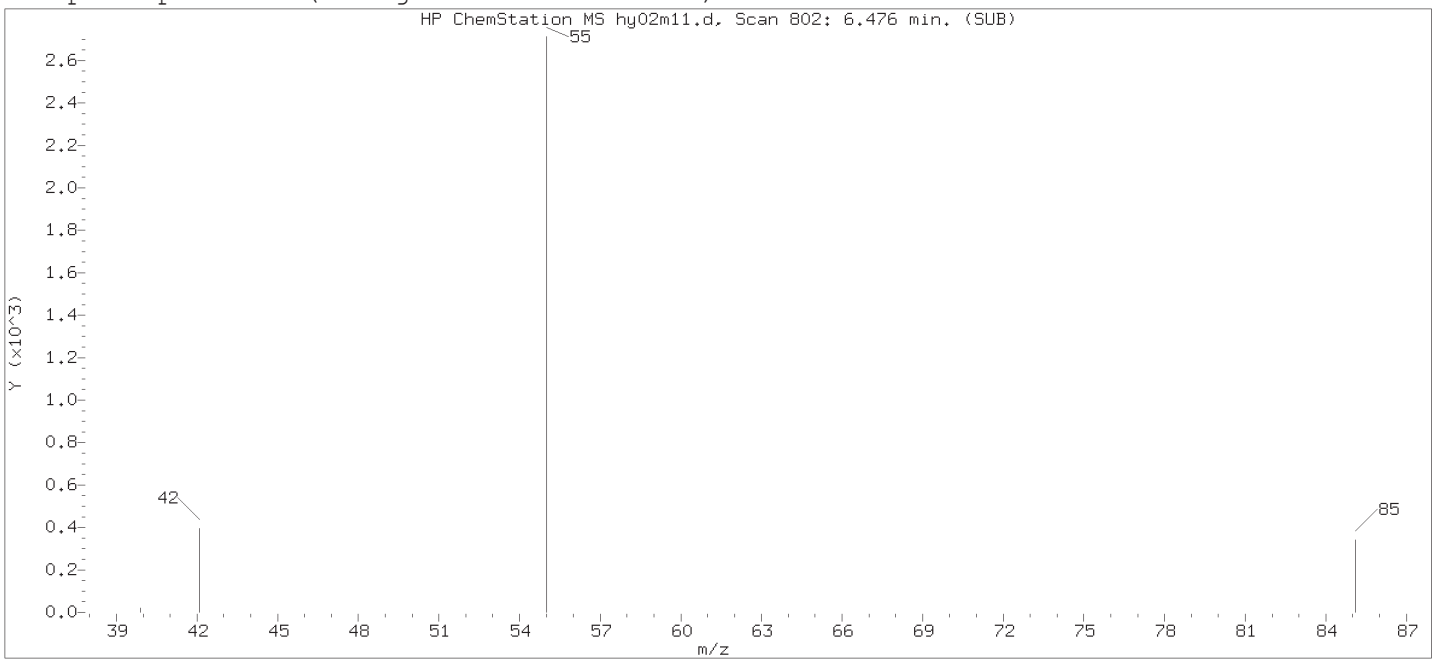
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 802
Retention Time (minutes): 6.476
Quant Ion : 55.00
Area (flag) : 9556M
On-Column Amount (ng) : 0.4435
Integration start scan : 794 Integration stop scan: 816
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

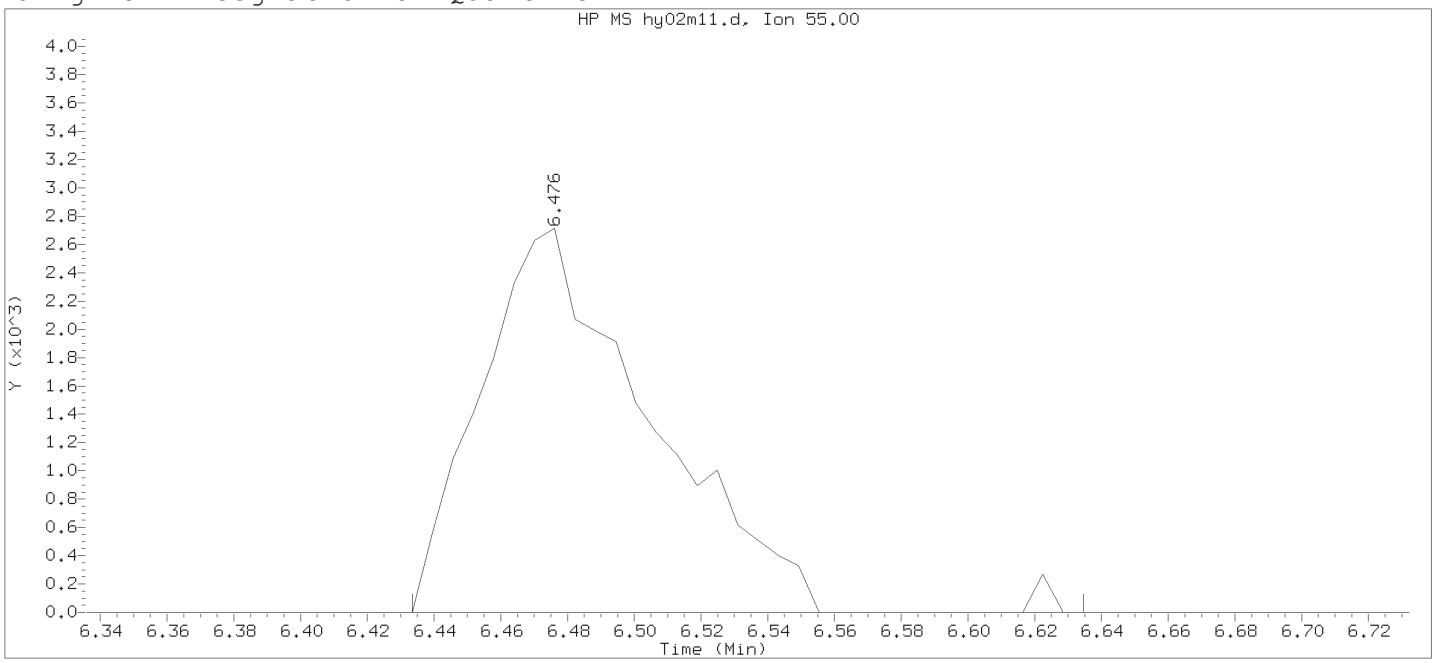
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

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

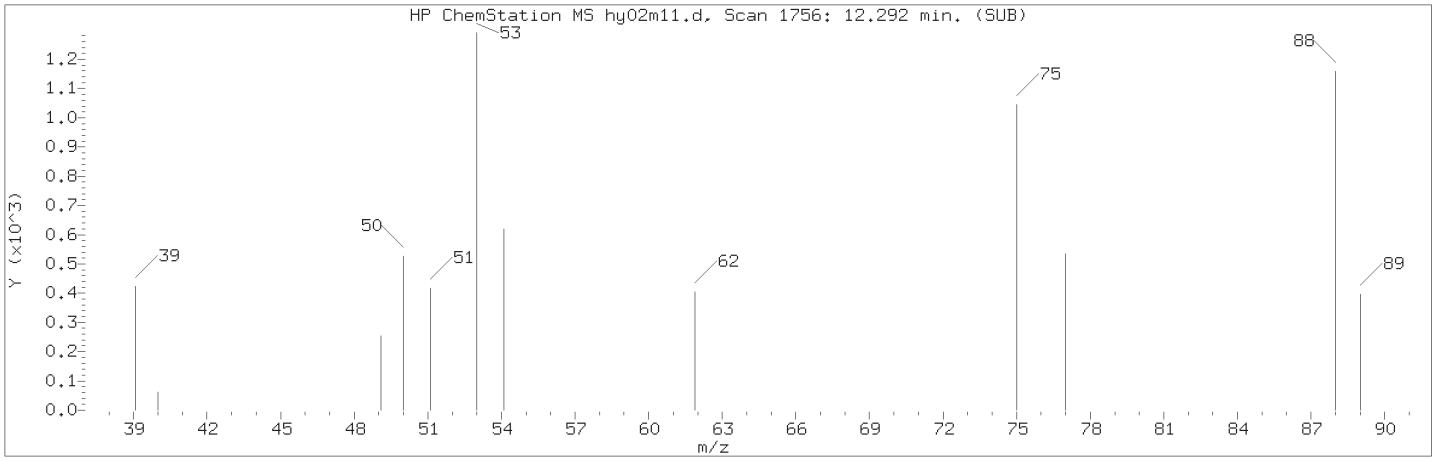
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

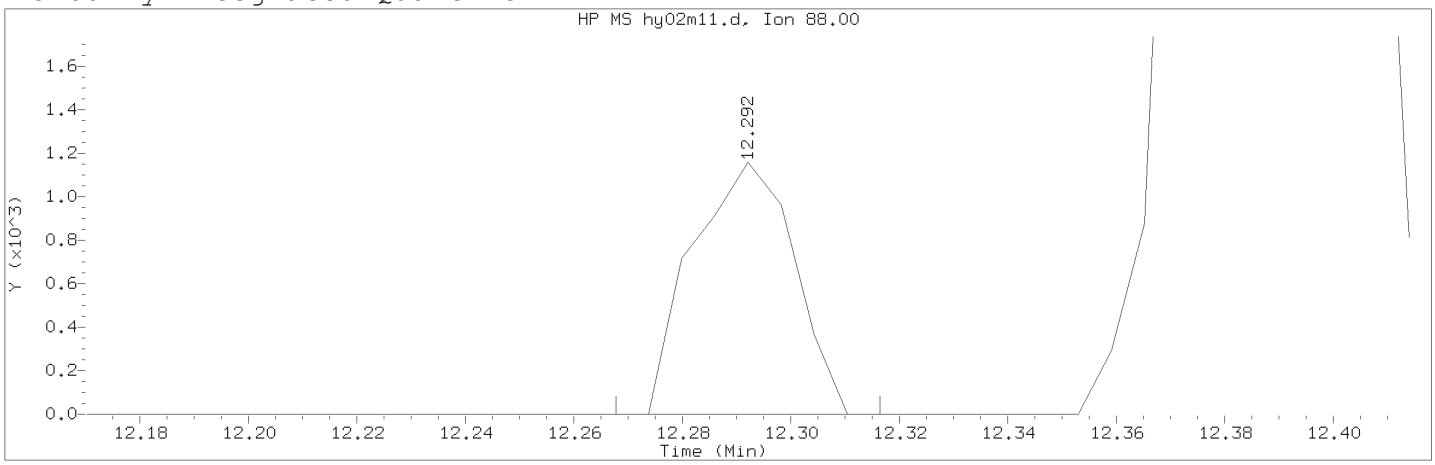
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 802
Retention Time (minutes): 6.476
Quant Ion : 55.00
Area : 9654
On-column Amount (ng) : 0.4481
Integration start scan : 794 Integration stop scan: 827
Y at integration start : 0 Y at integration end: 0

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

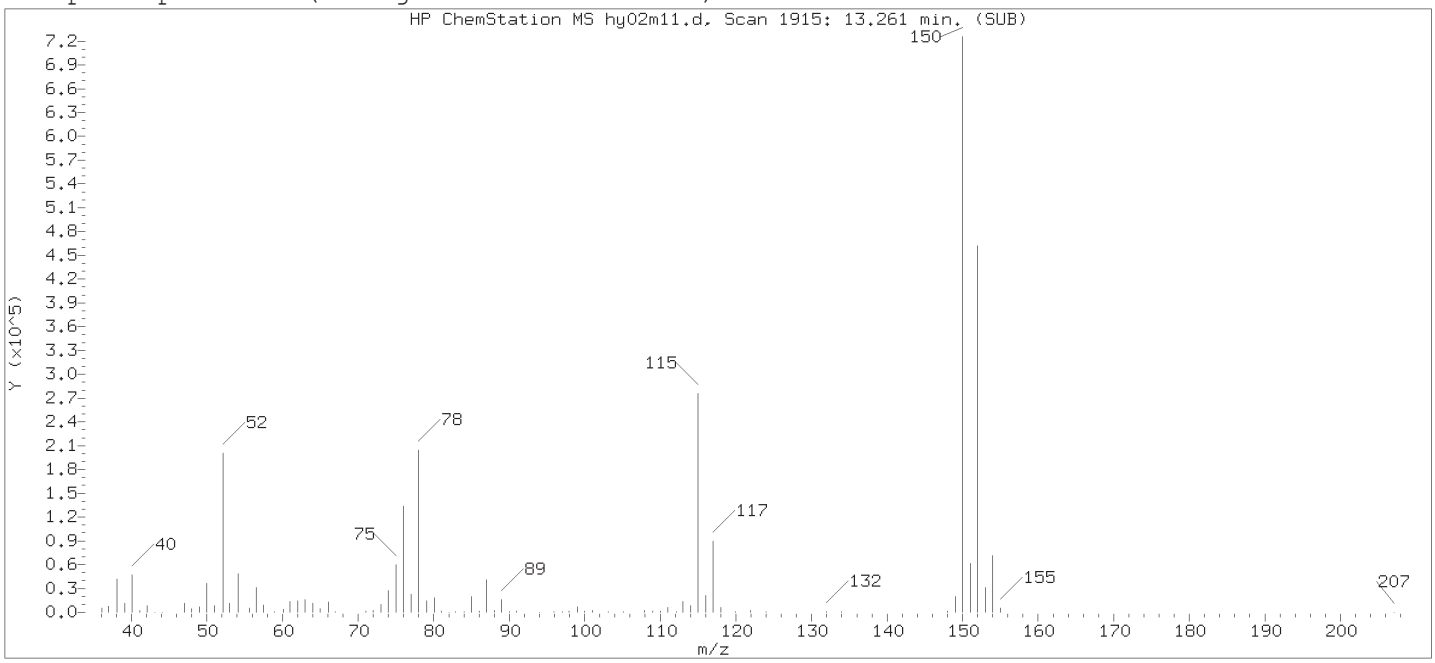
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 1506M
On-Column Amount (ng) : 0.1362
Integration start scan : 1751 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

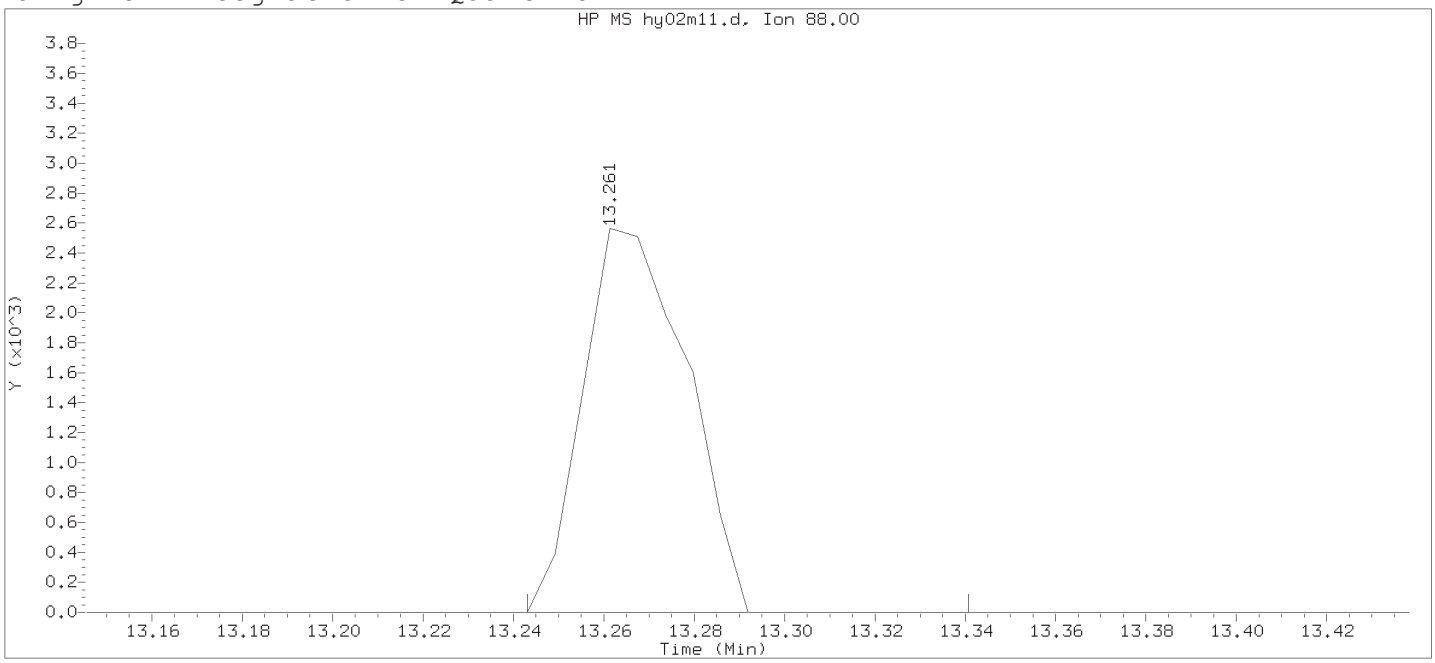
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

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

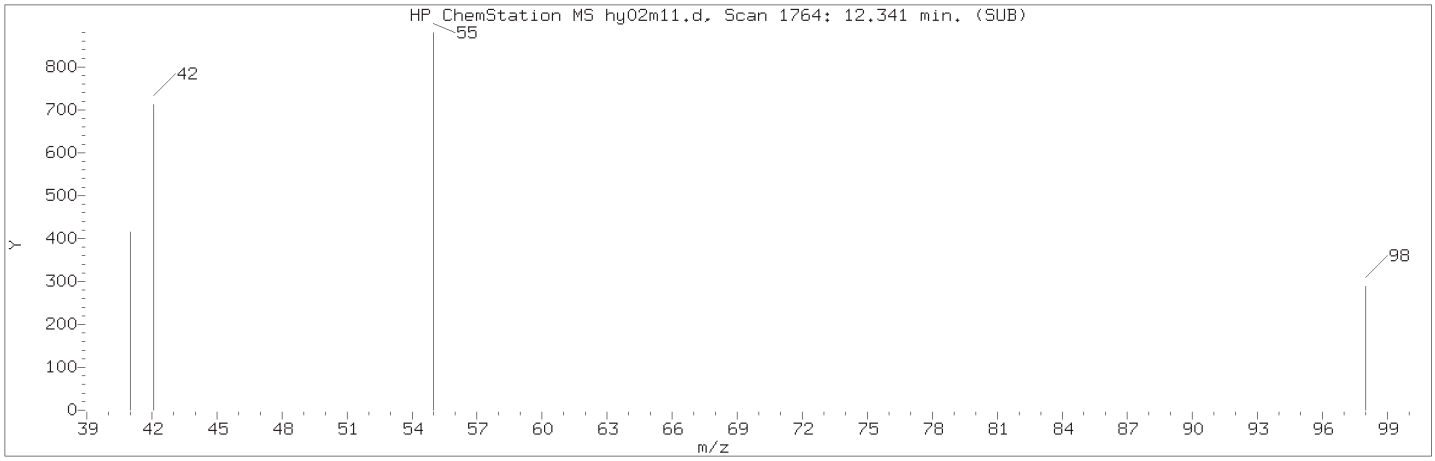
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

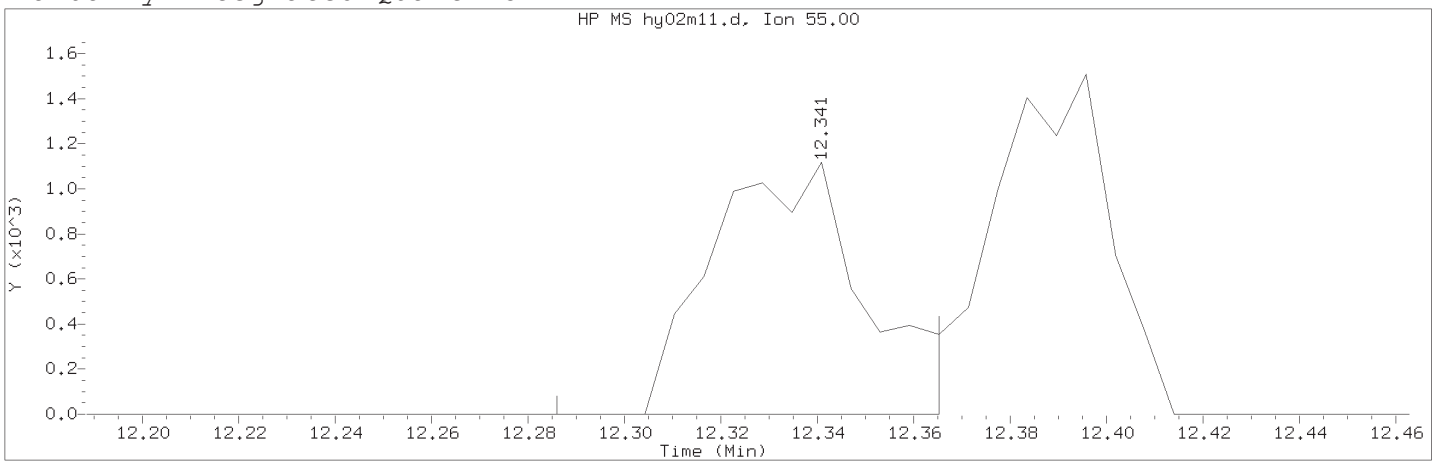
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1915
Retention Time (minutes): 13.261
Quant Ion : 88.00
Area : 4090
On-column Amount (ng) : 0.4136
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

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

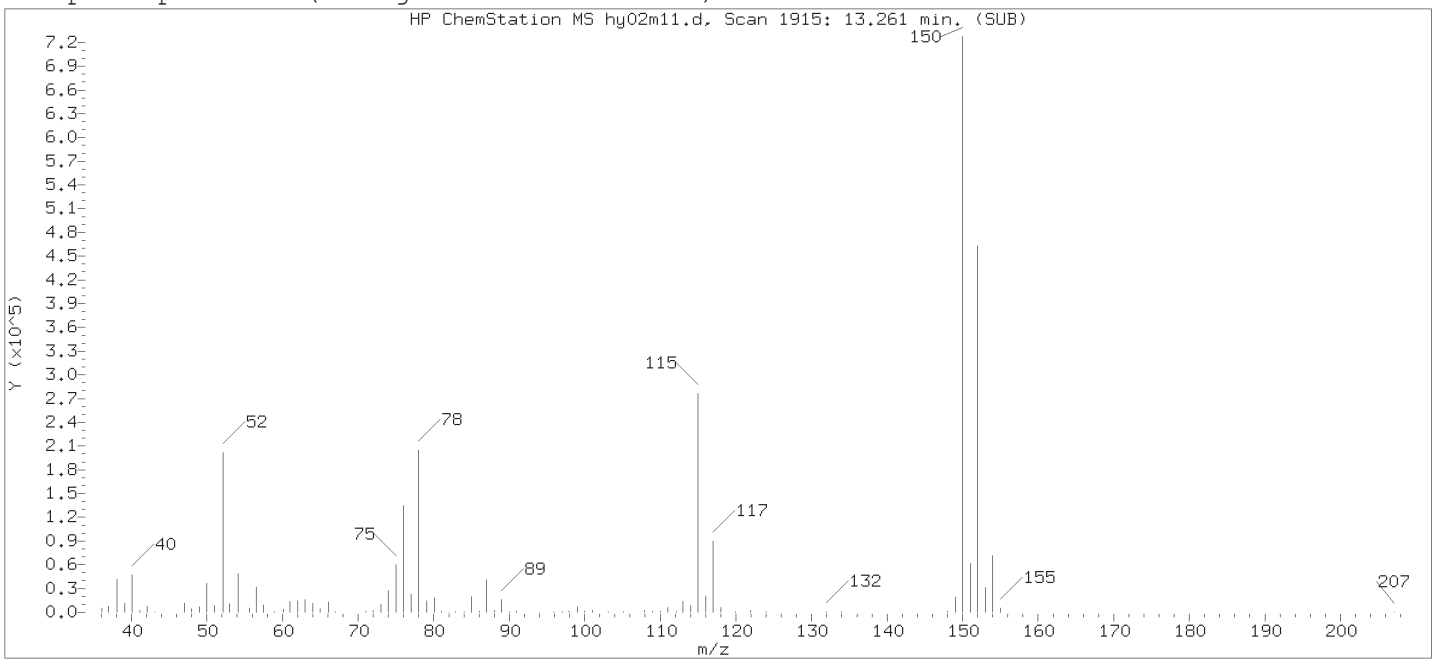
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 55.00
Area (flag) : 2470M
On-Column Amount (ng) : 4.3909
Integration start scan : 1754 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

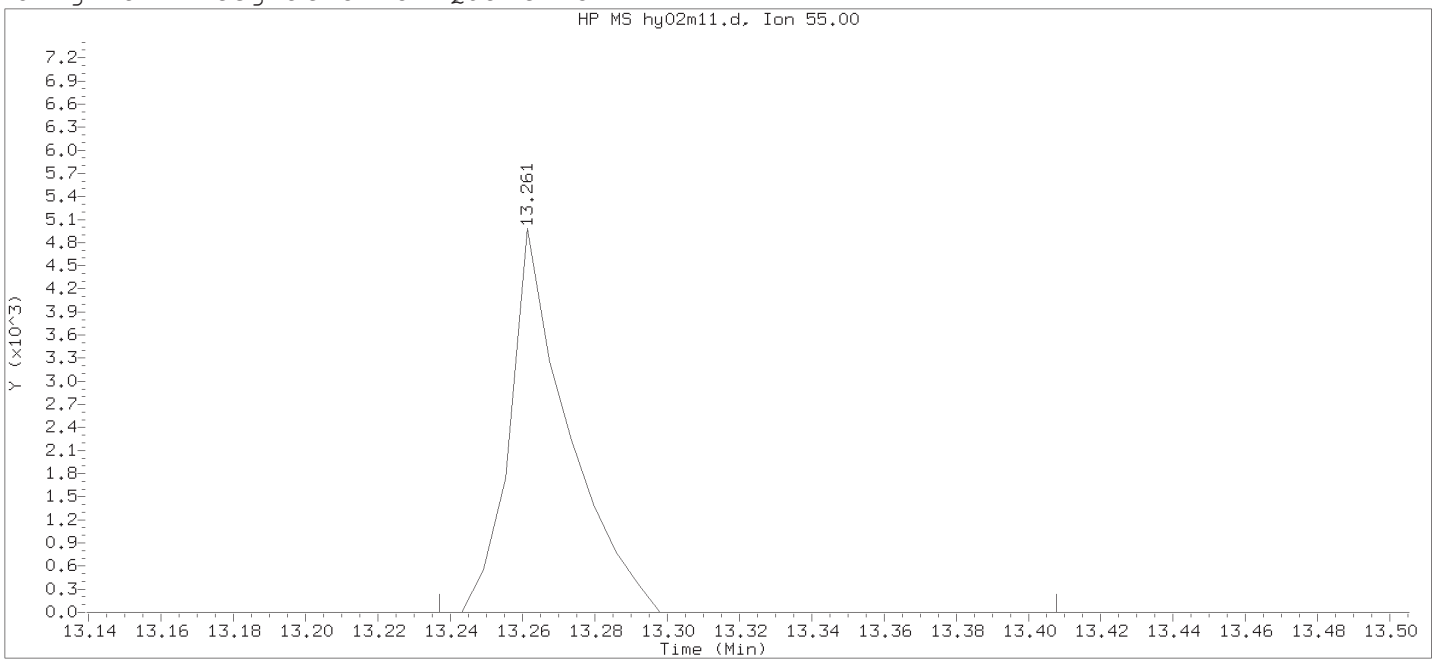
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

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



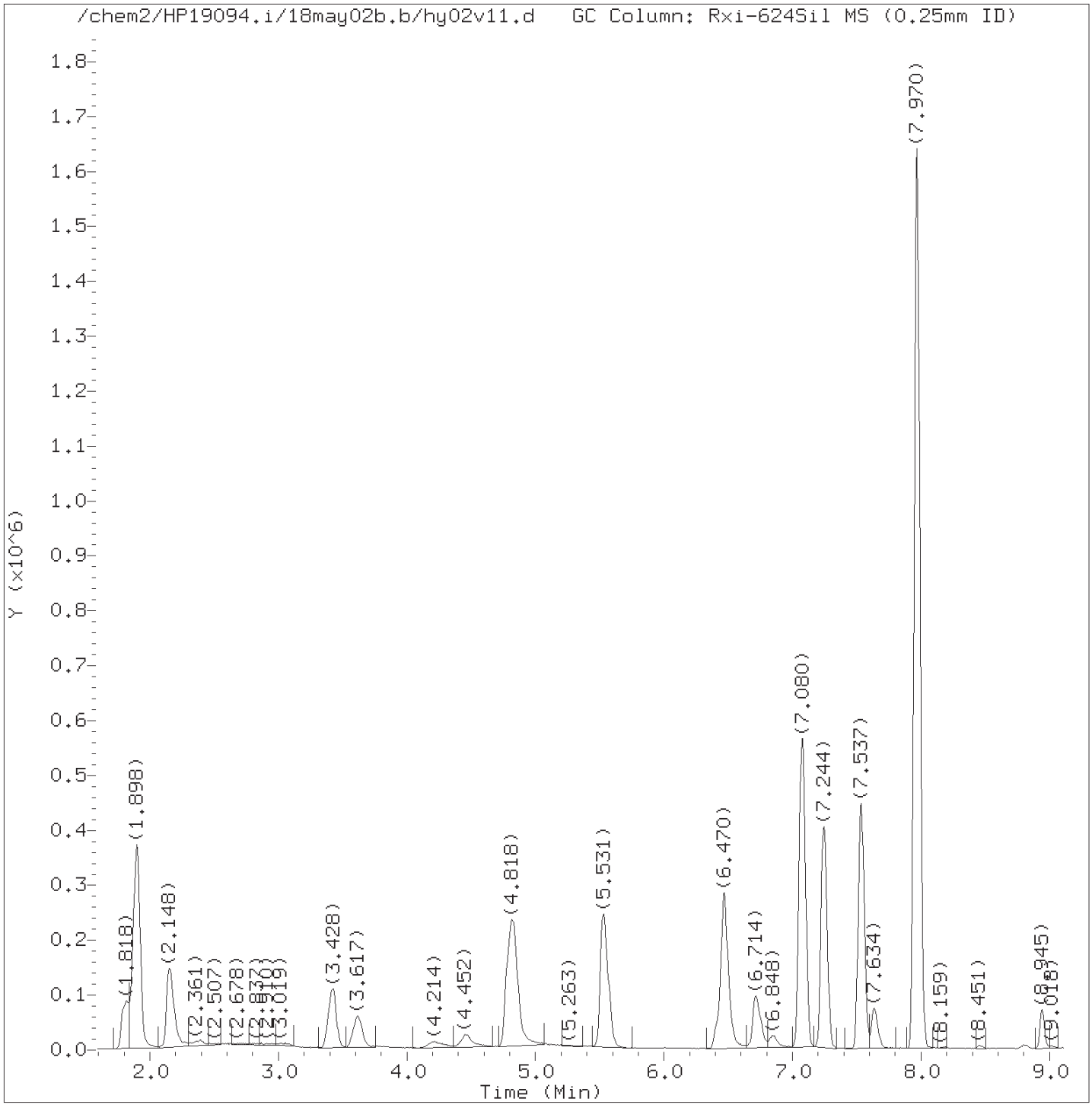
Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

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)

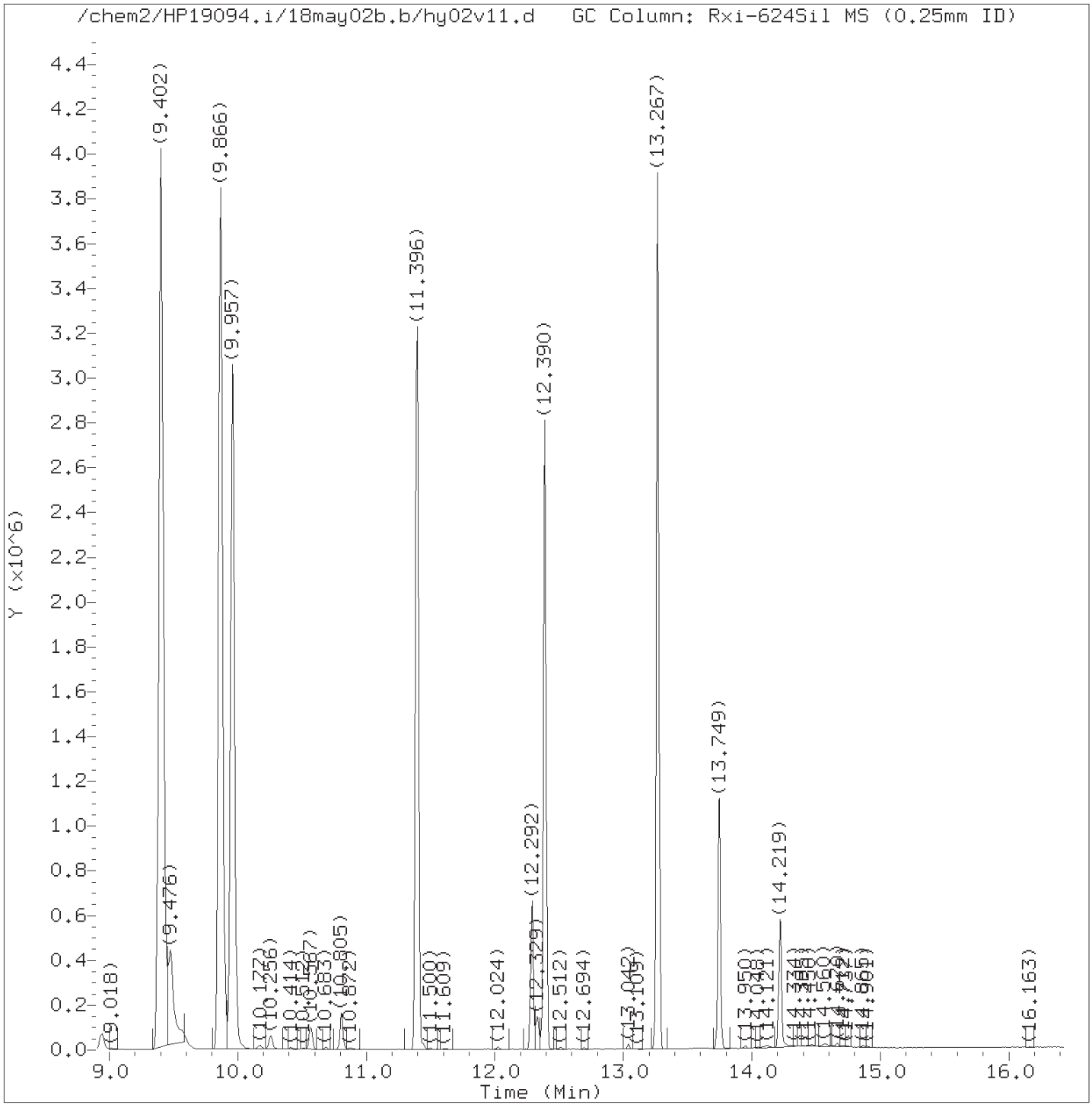
Target Revision 3.5

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

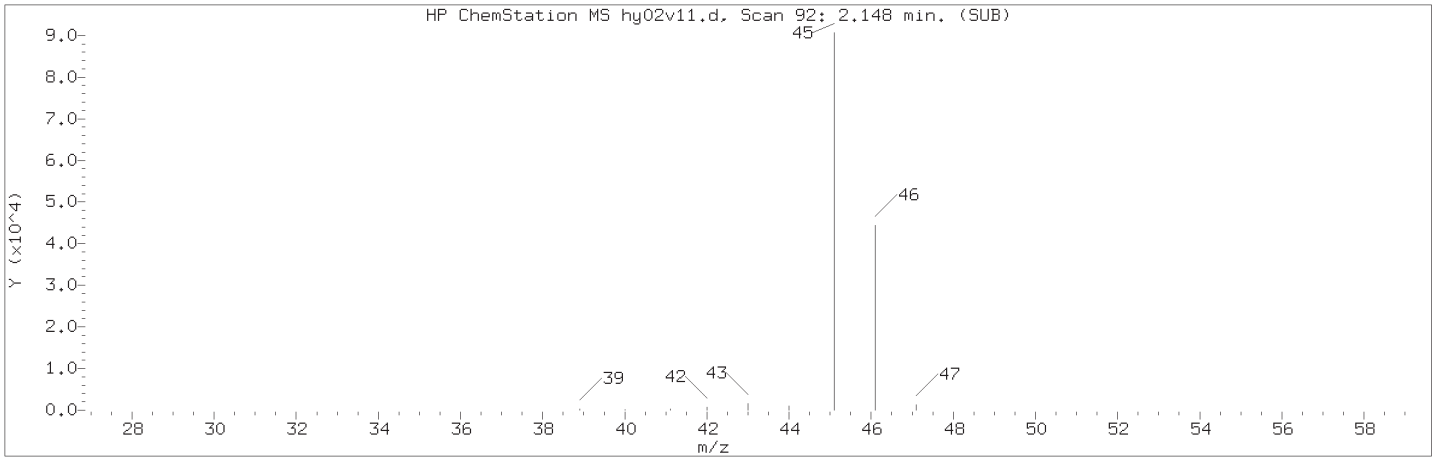
Sample Name: LCSH88 Lab Sample ID: LCSH88

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

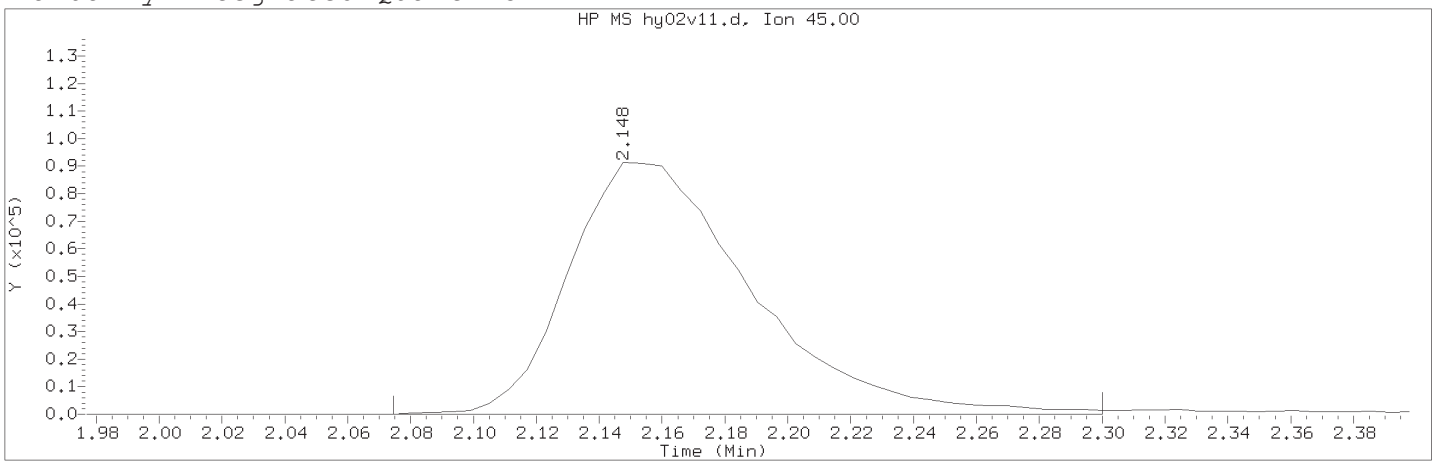
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

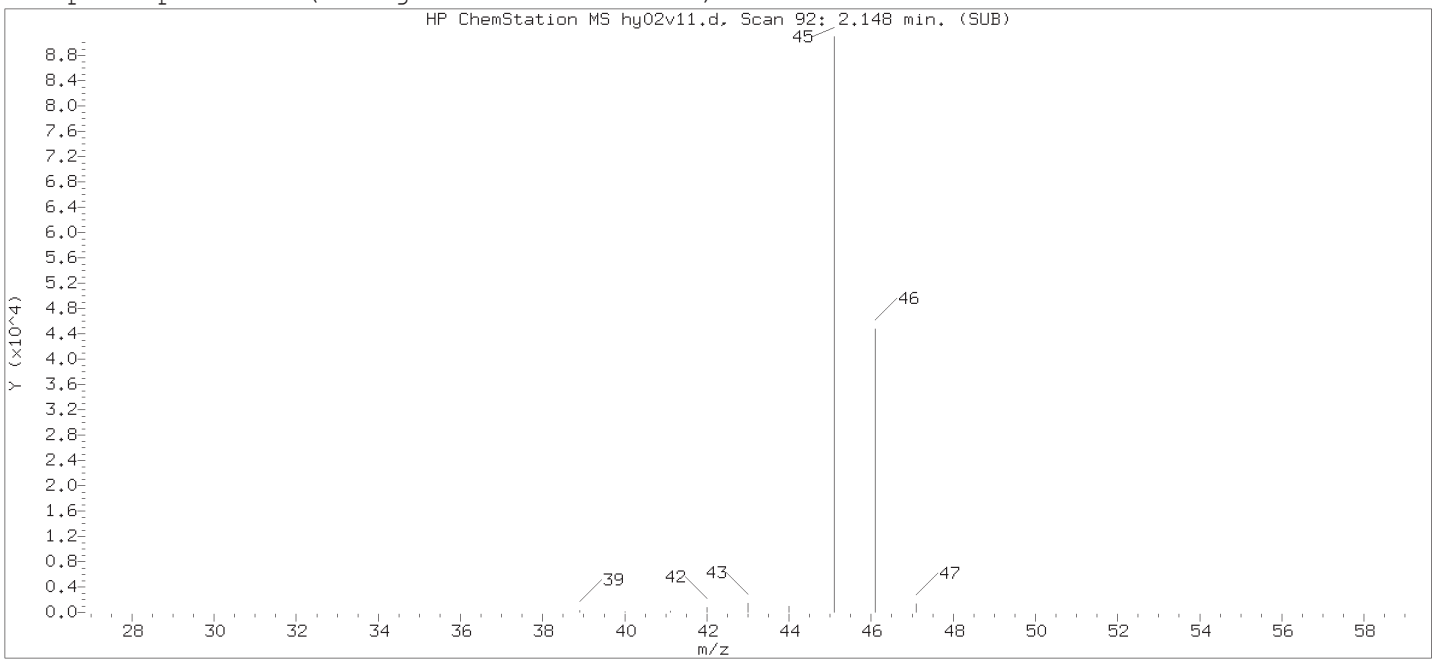
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 368555M
On-Column Amount (ng) : 4.9074
Integration start scan : 79 Integration stop scan: 116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

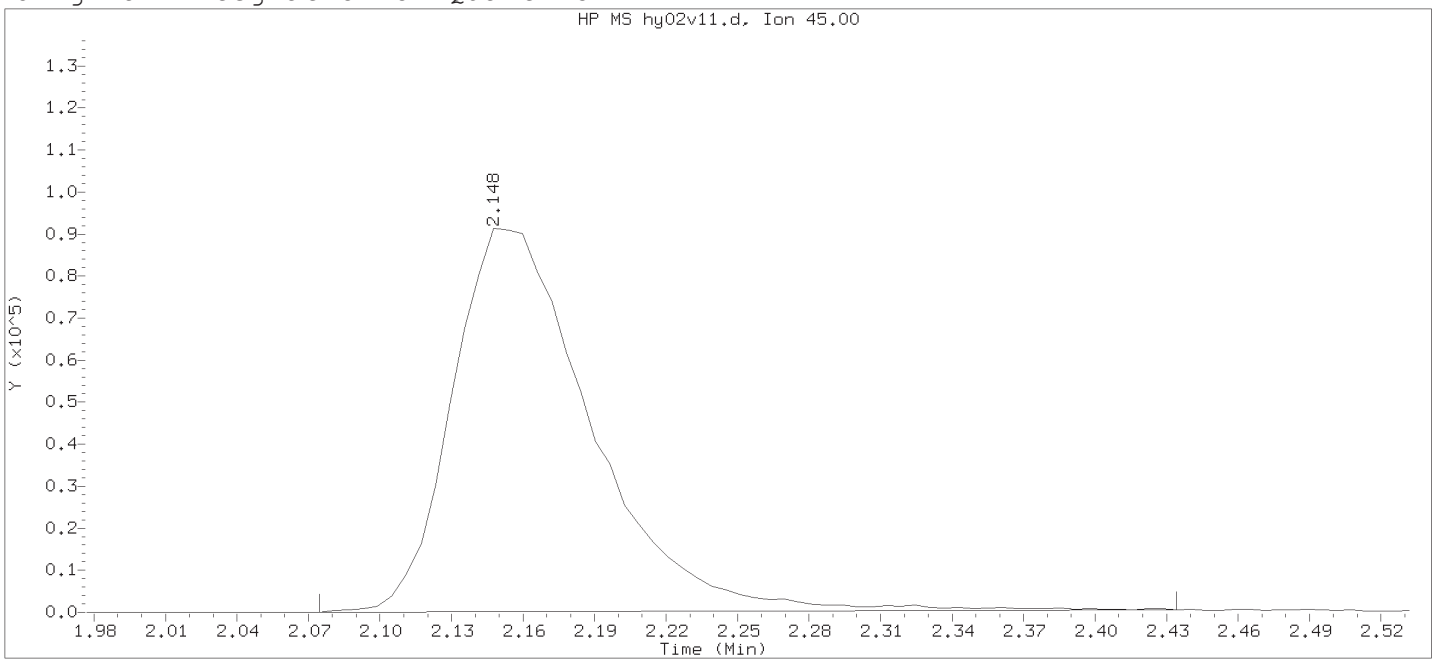
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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

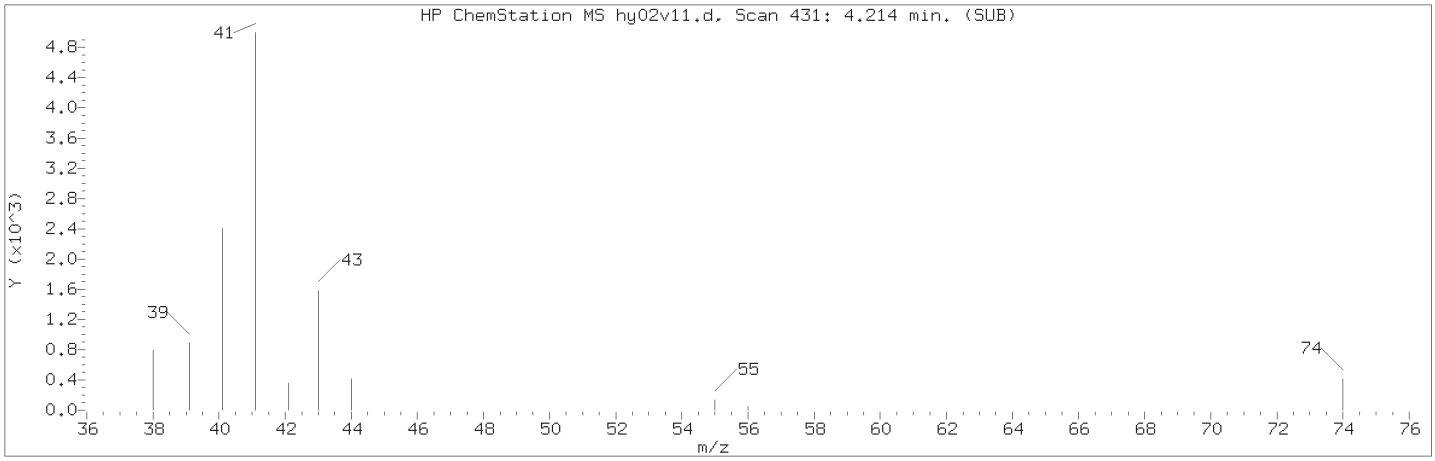
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

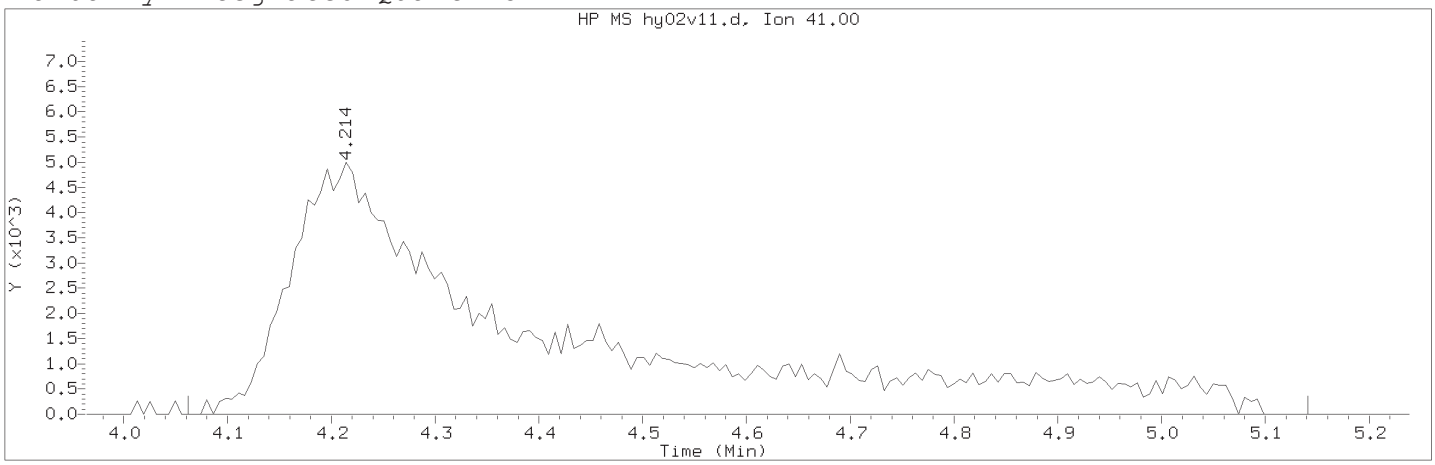
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 92		
Retention Time (minutes)	: 2.148		
Quant Ion	: 45.00		
Area	: 369928		
On-column Amount (ng)	: 4.9257		
Integration start scan	: 79	Integration stop scan:	138
Y at integration start	: 0	Y at integration end:	605

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

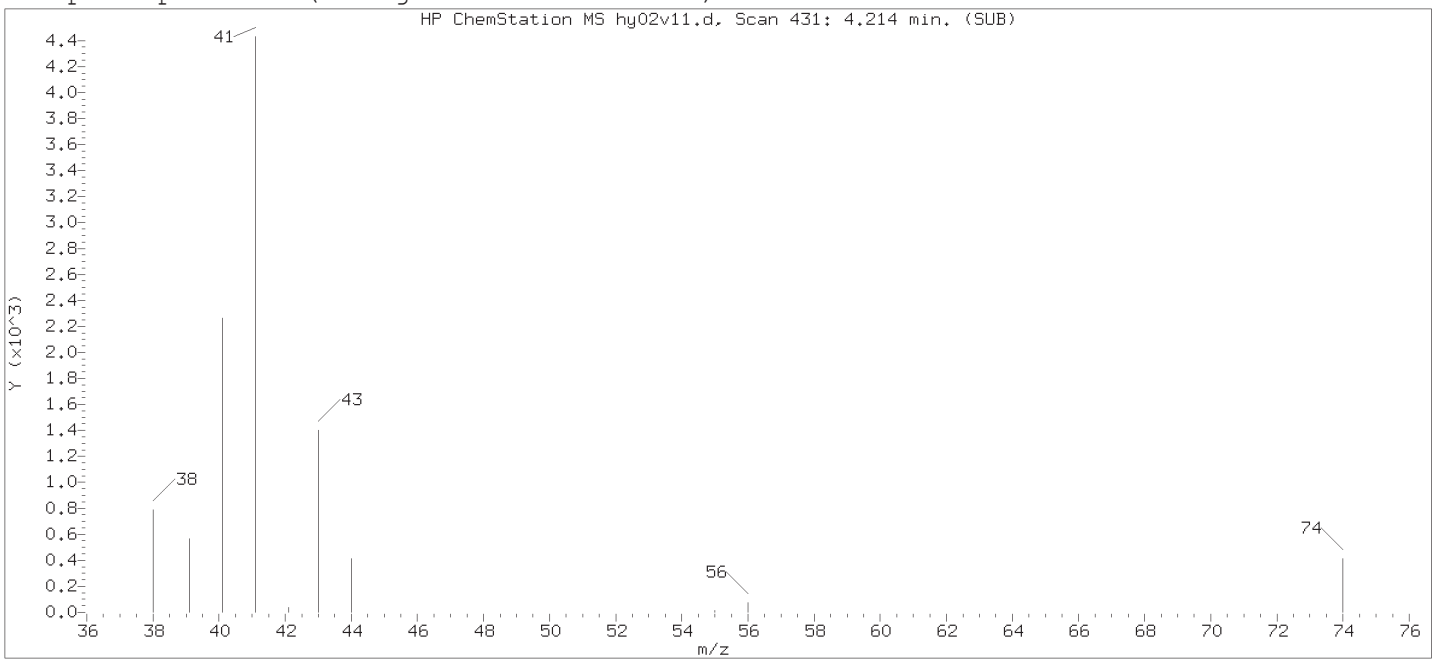
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 82341M
On-Column Amount (ng) : 40.7988
Integration start scan : 405 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

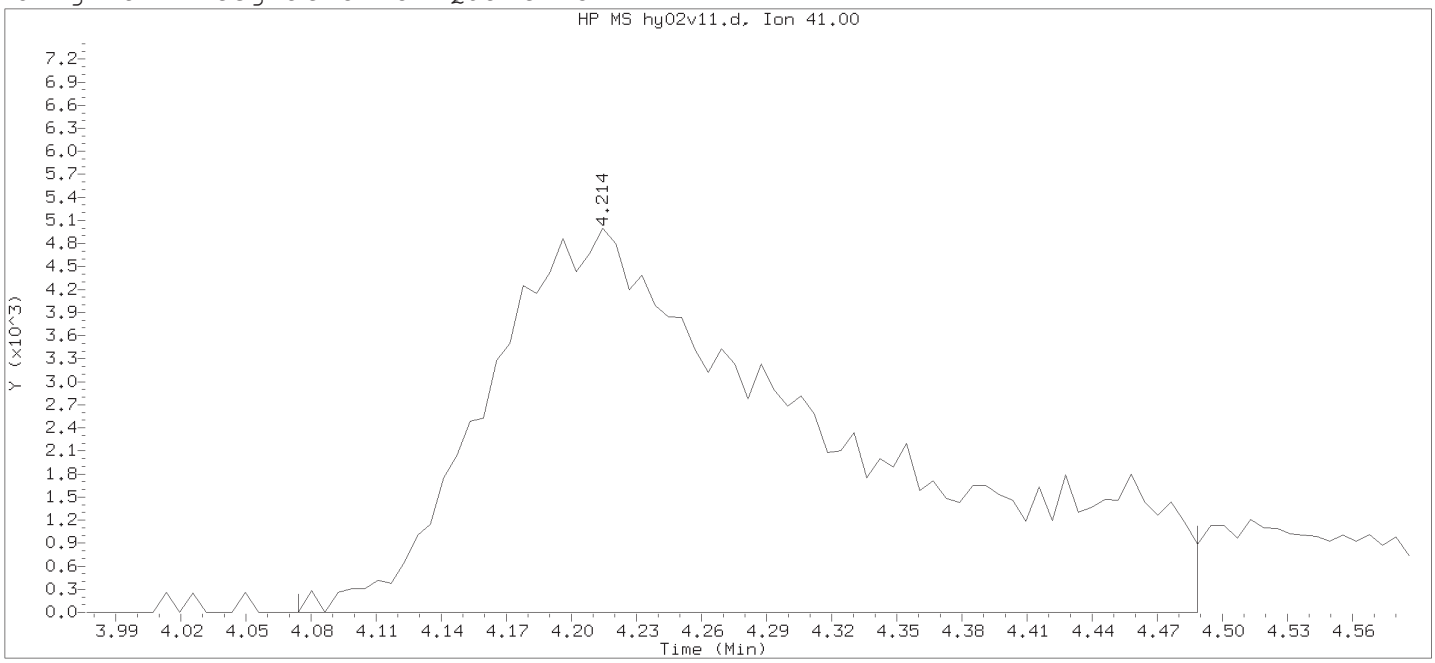
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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

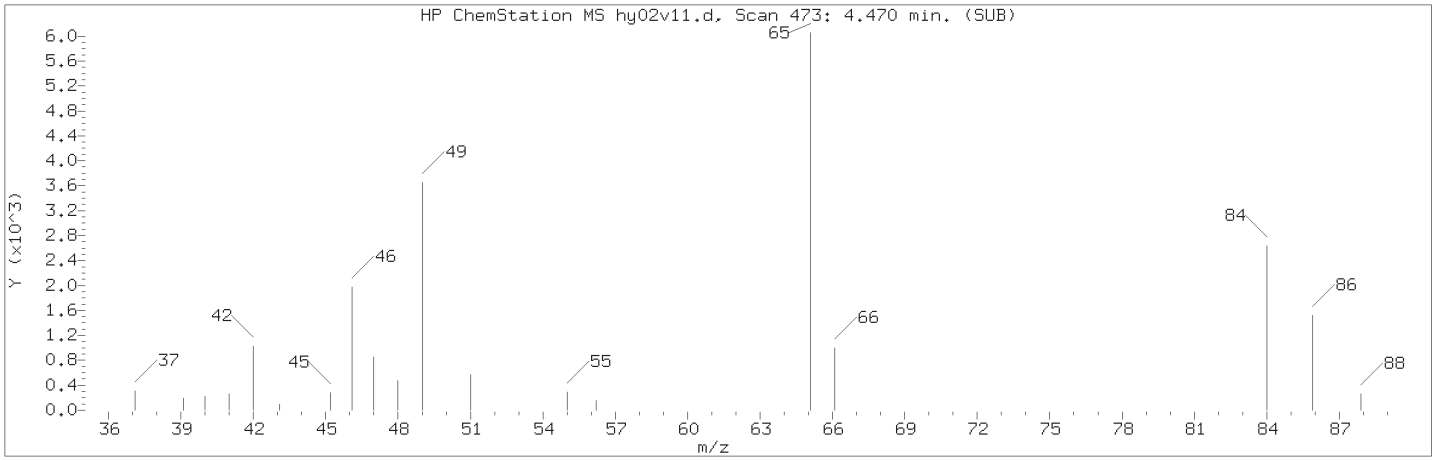
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

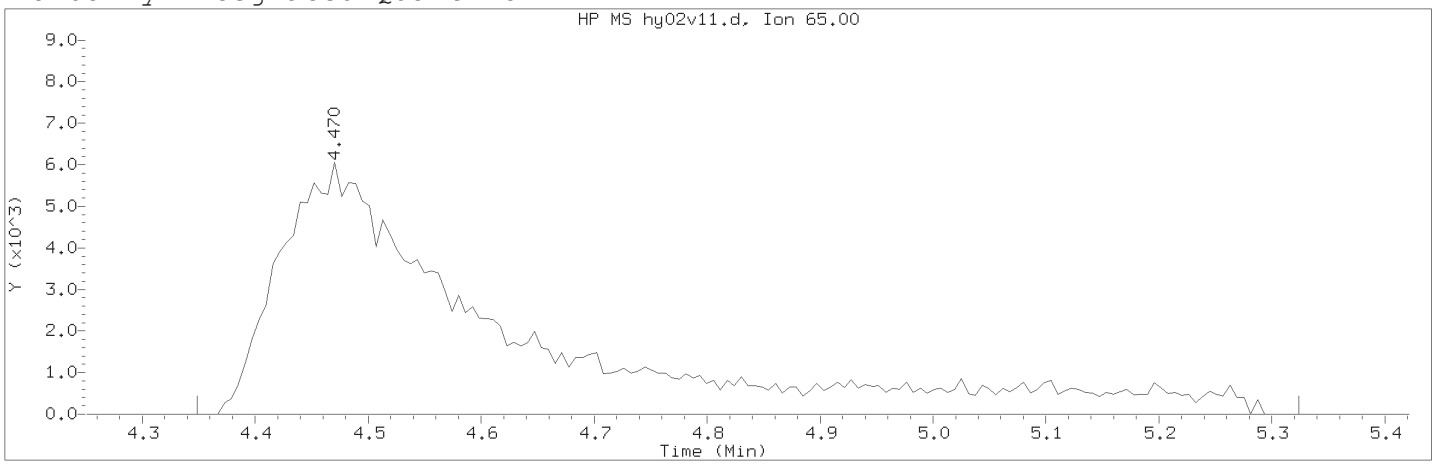
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 56012
On-column Amount (ng) : 28.2326
Integration start scan : 407 Integration stop scan: 475
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV

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

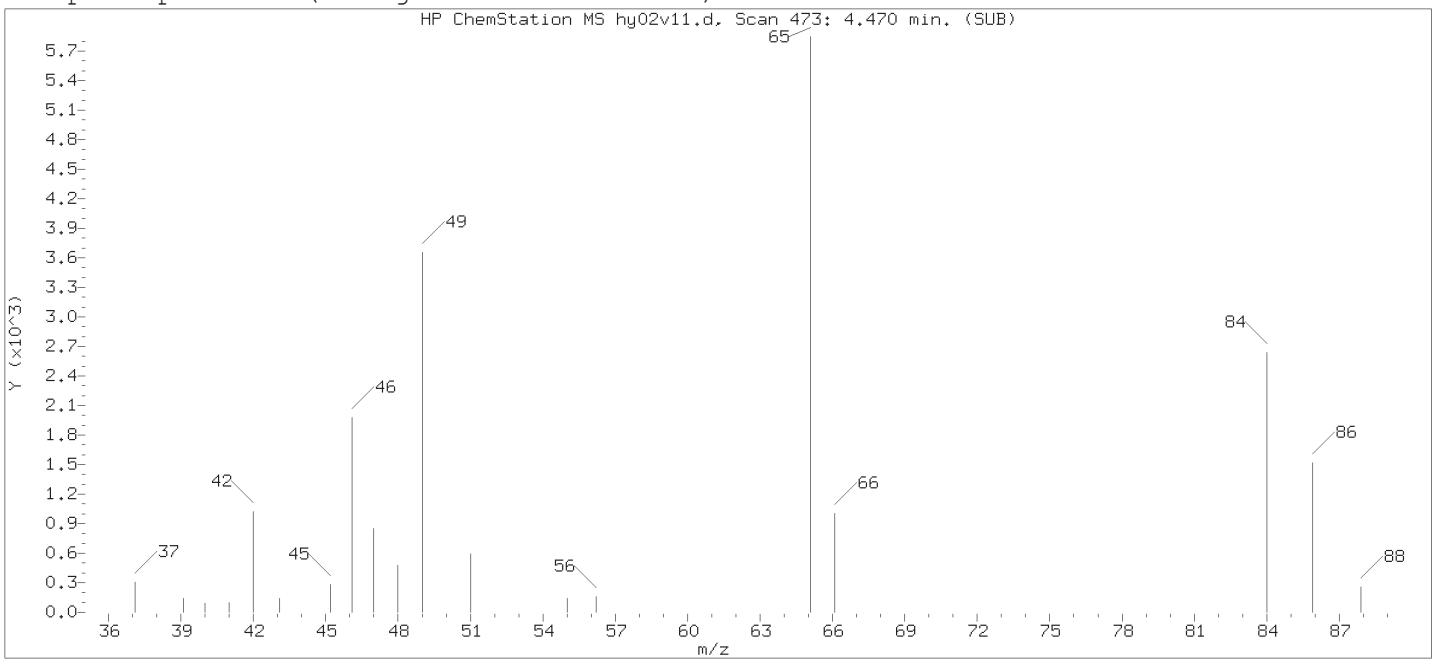
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 83582M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

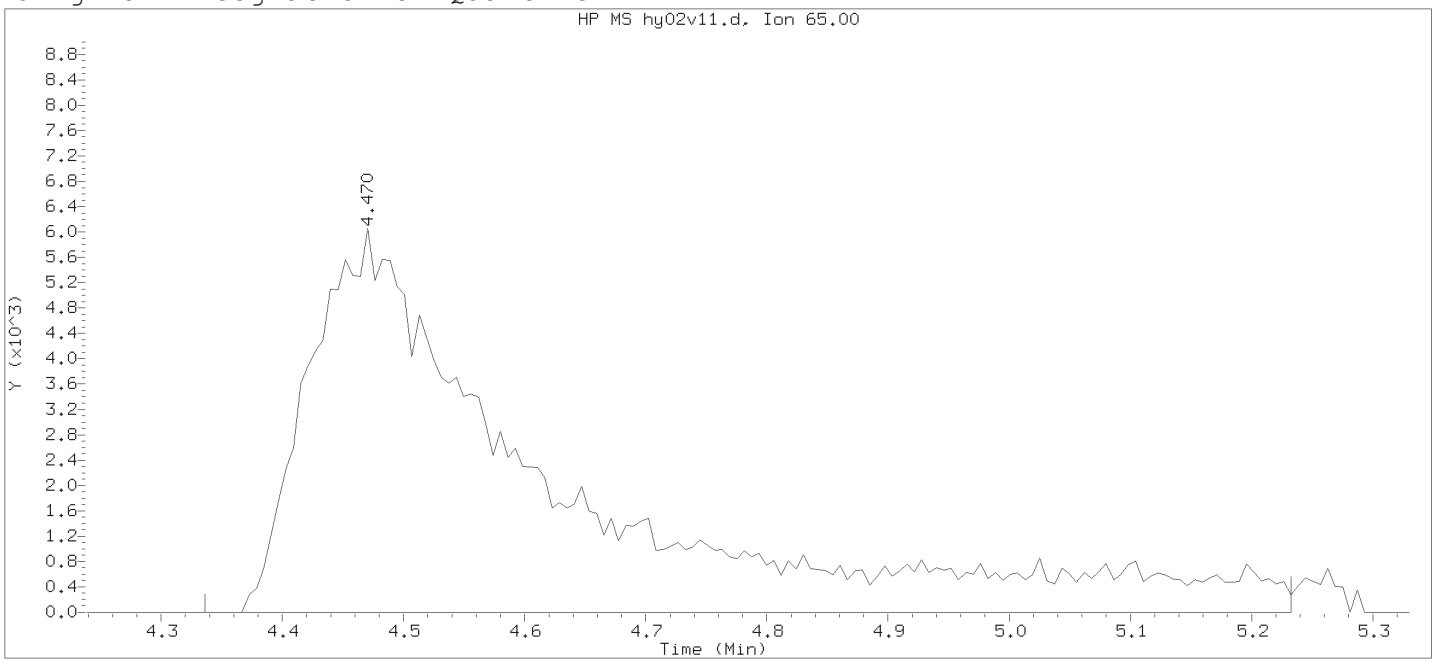
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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

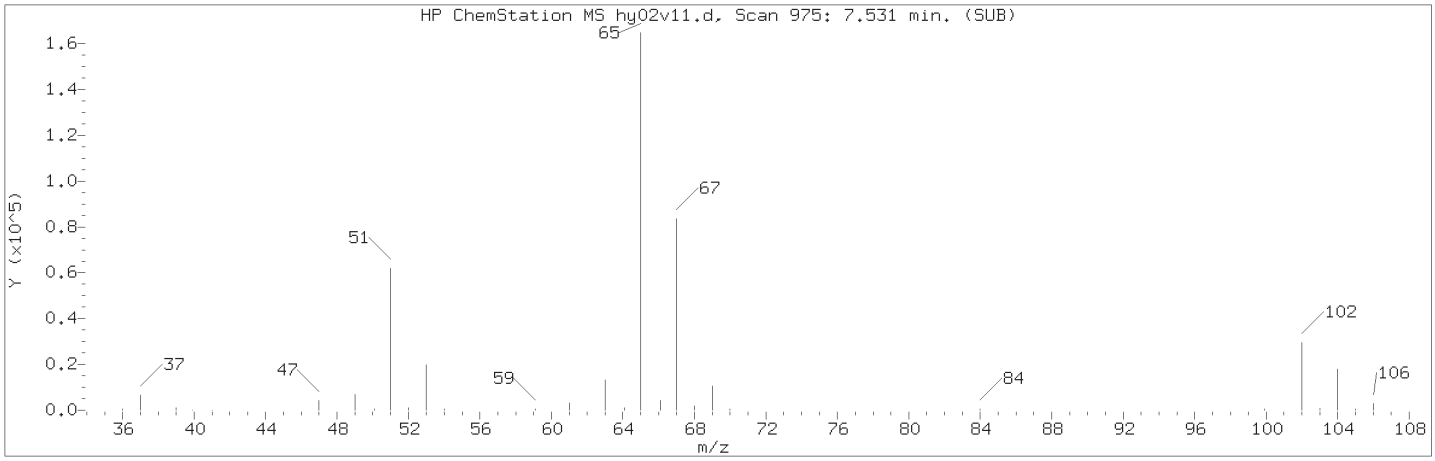
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

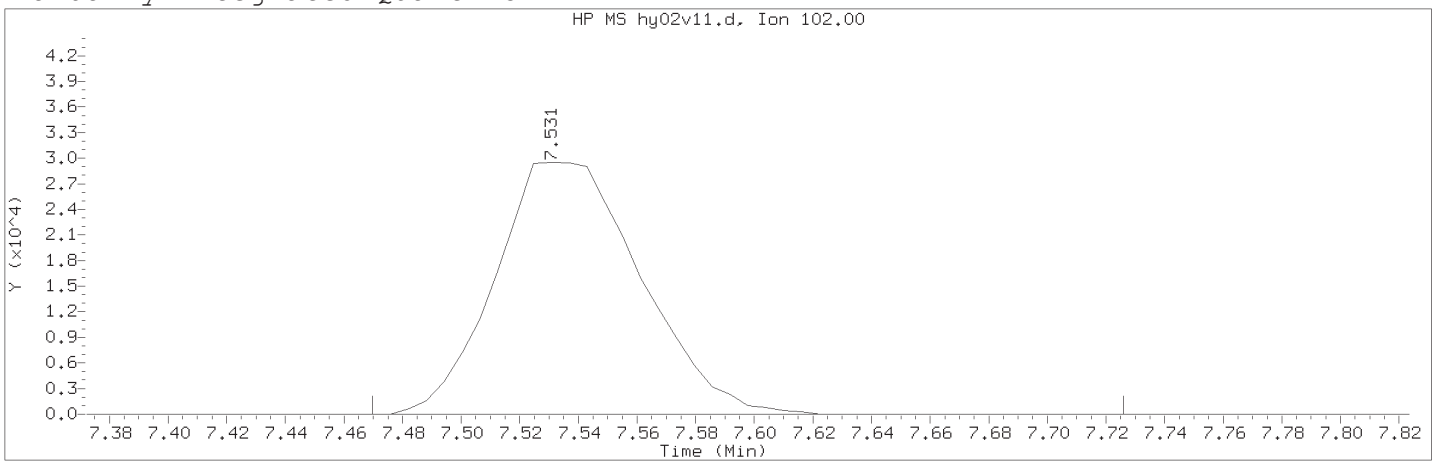
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 82163
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

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

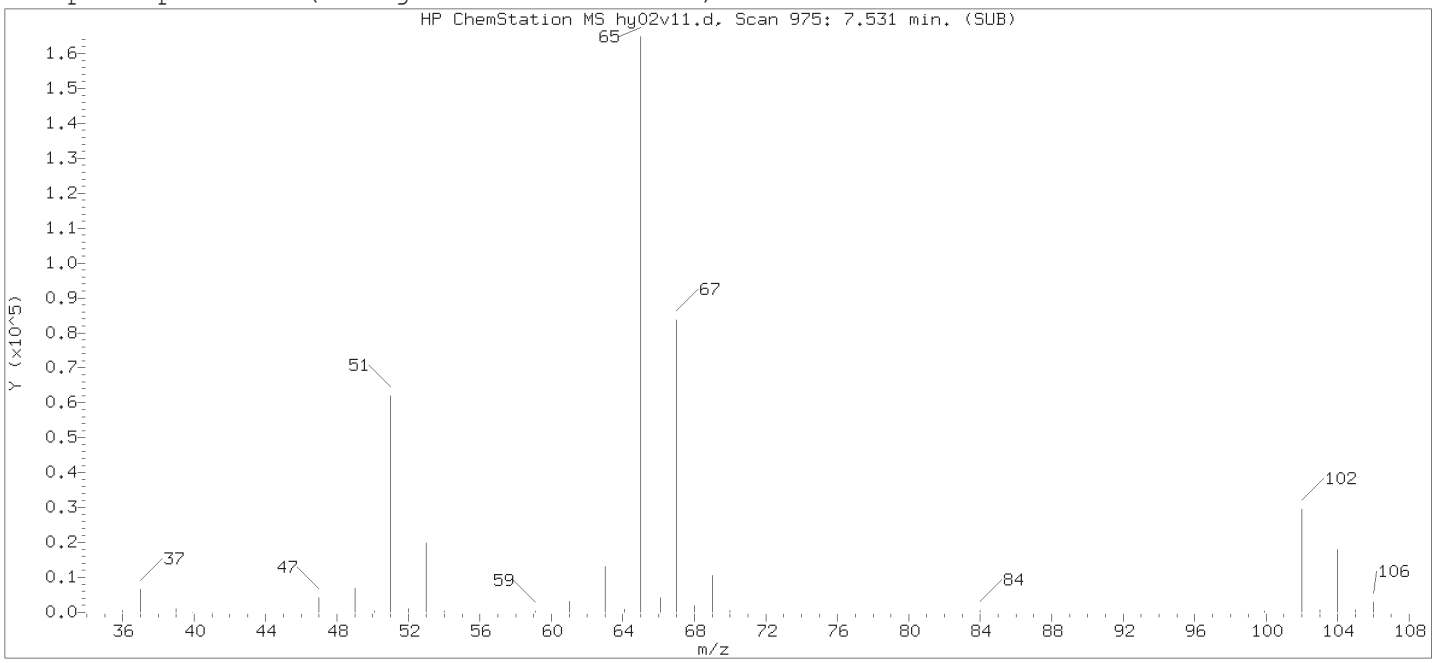
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area (flag) : 101751M
On-Column Amount (ng) : 9.9826
Integration start scan : 964 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

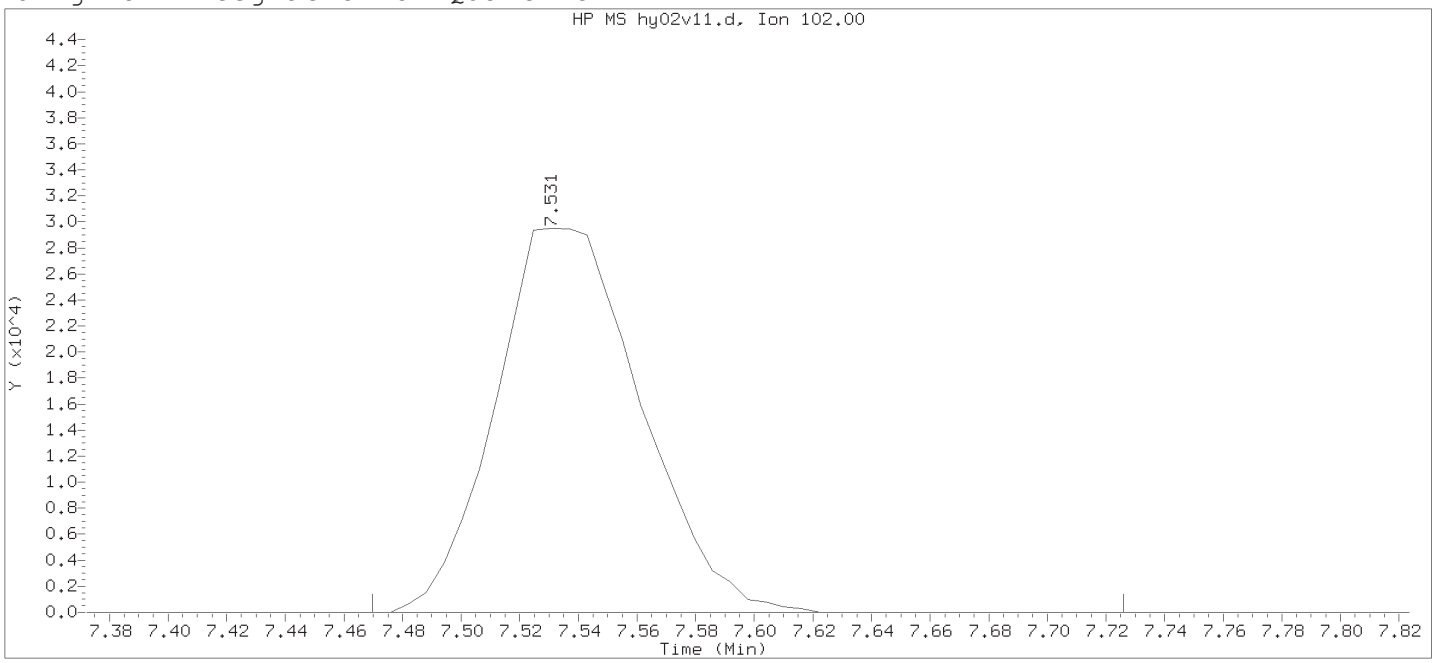
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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

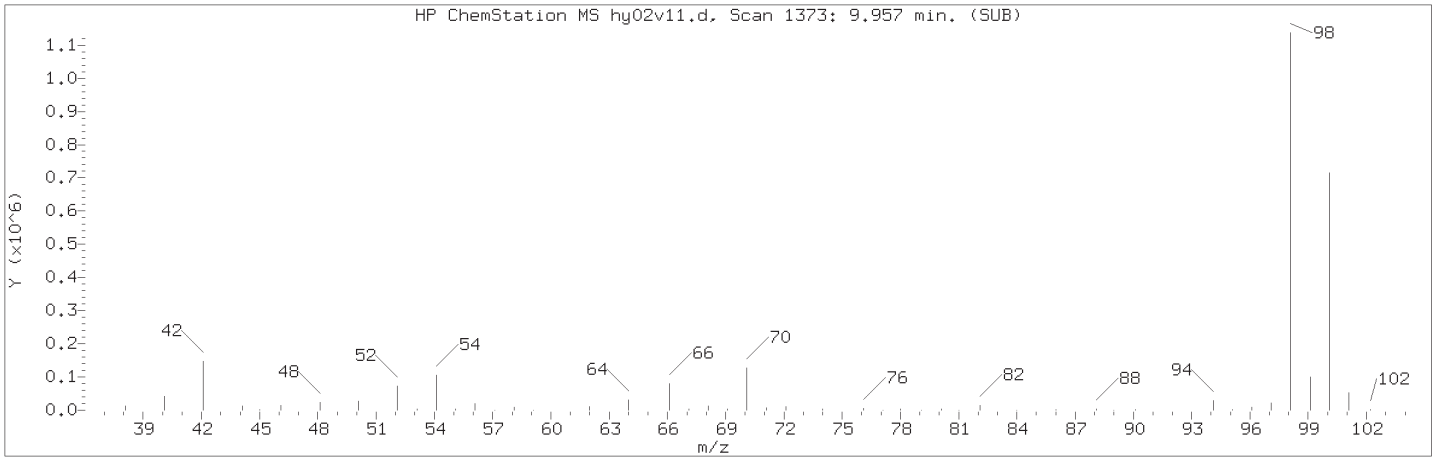
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

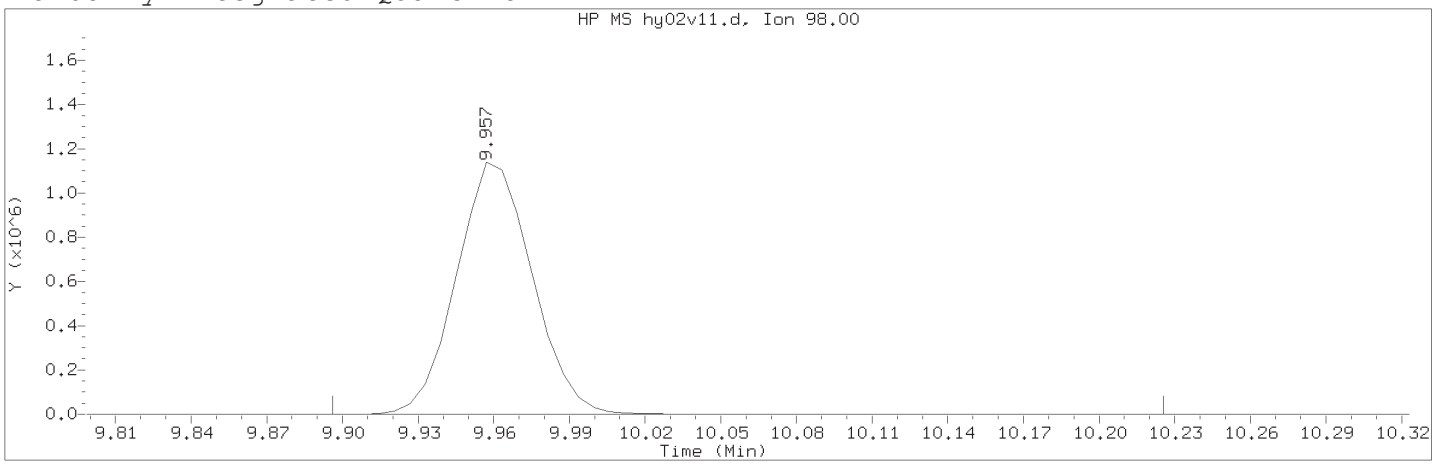
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area : 101751
On-column Amount (ng) : 0.0000
Integration start scan : 964 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: DVV

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

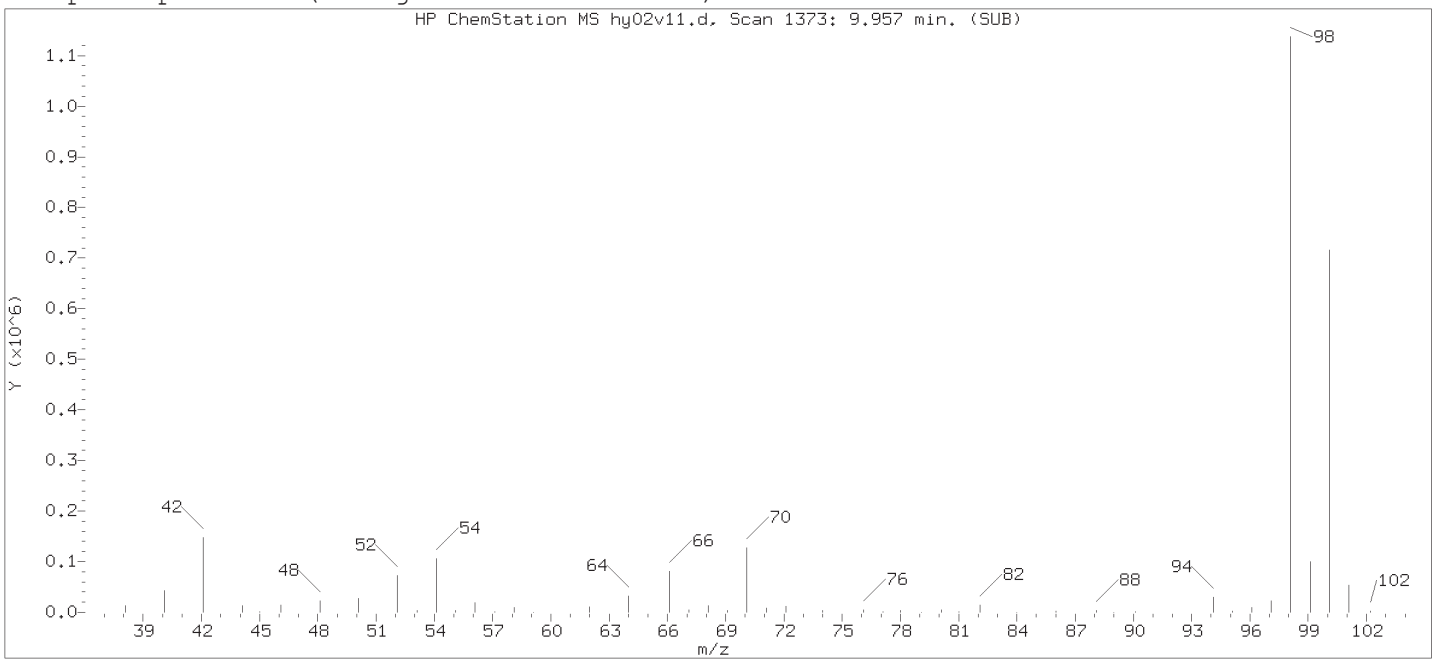
Compound Number : 82
Compound Name : Toluene-d8
Scan Number : 1373
Retention Time (minutes): 9.957
Quant Ion : 98.00
Area (flag) : 2378040M
On-Column Amount (ng) : 10.1199
Integration start scan : 1362 Integration stop scan: 1416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

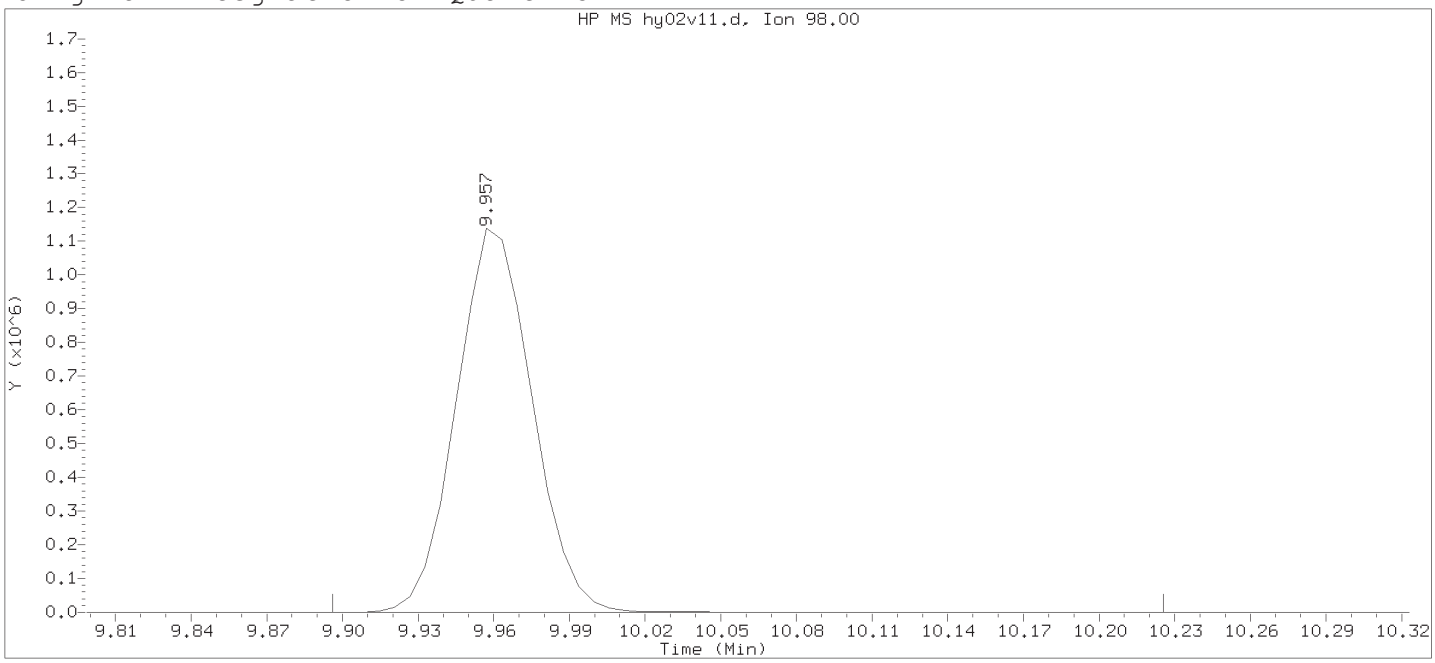
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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

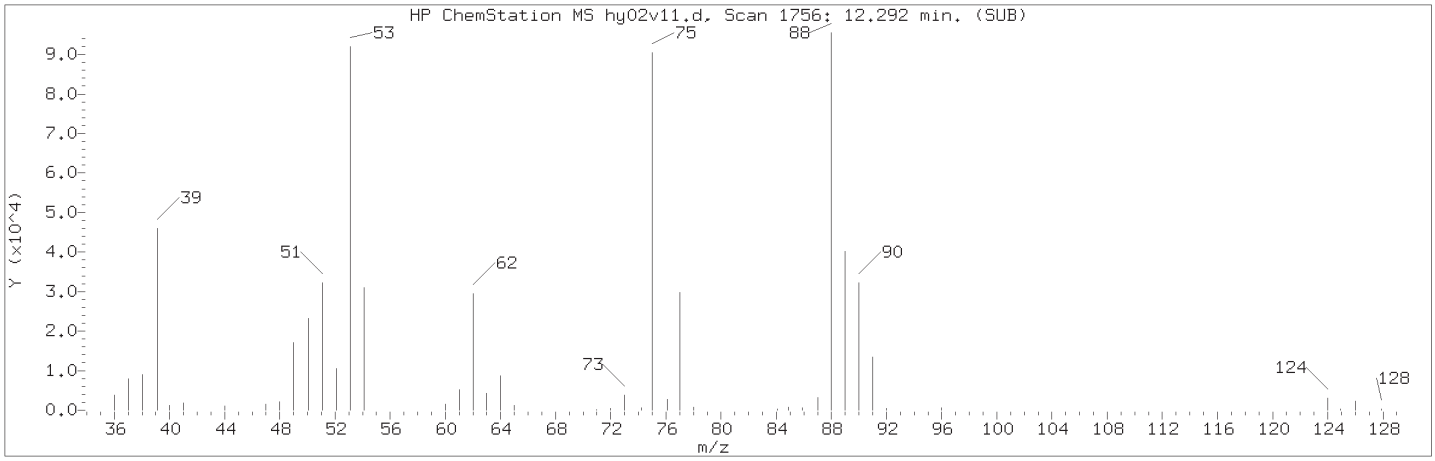
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

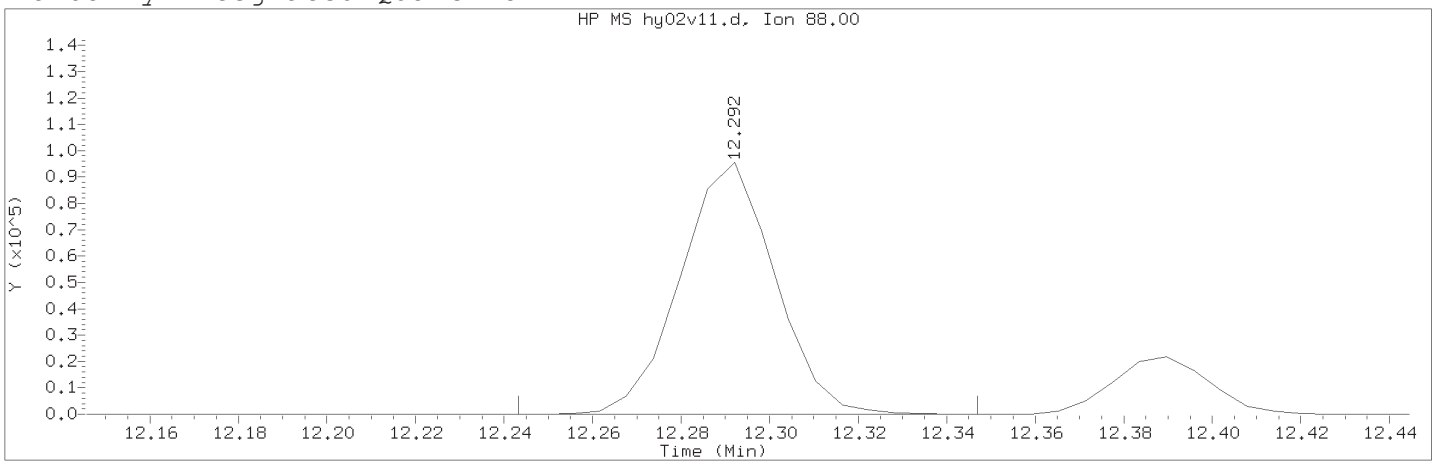
Compound Number : 82
Compound Name : Toluene-d8
Scan Number : 1373
Retention Time (minutes): 9.957
Quant Ion : 98.00
Area : 2378040
On-column Amount (ng) : 0.0000
Integration start scan : 1362 Integration stop scan: 1416
Y at integration start : 0 Y at integration end: 0

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

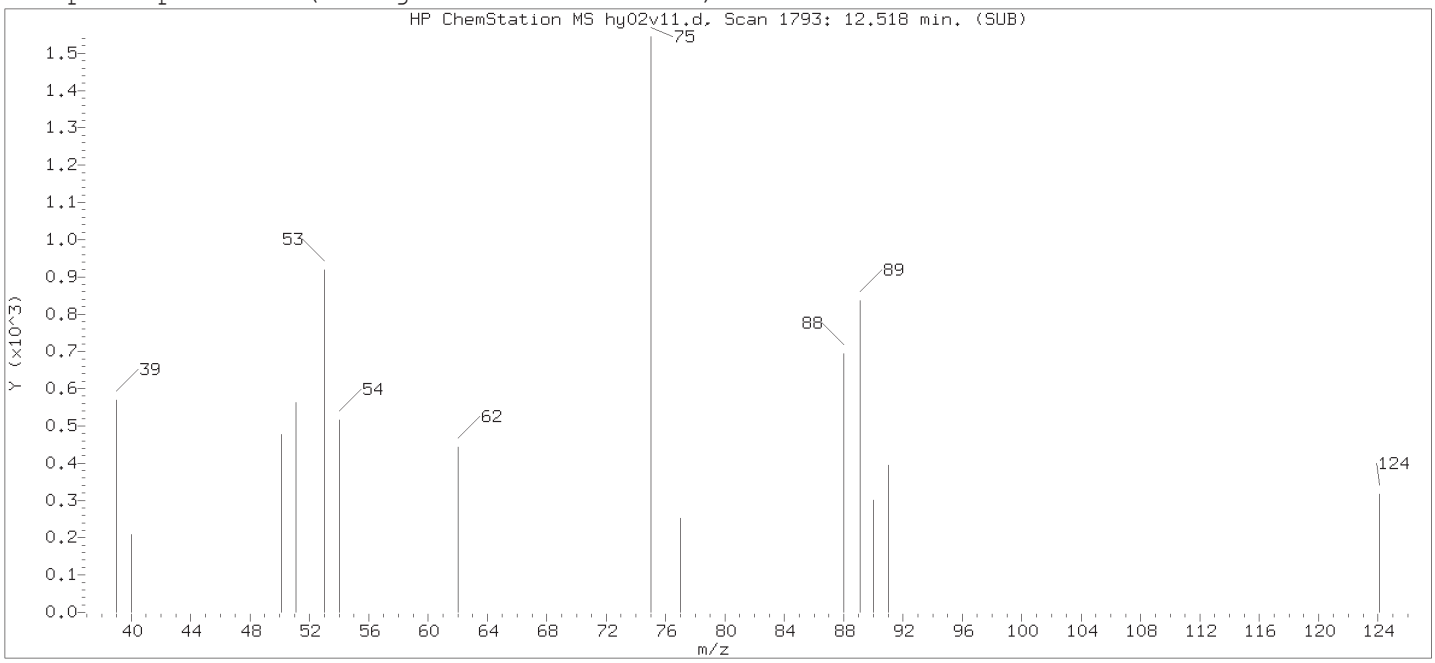
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 141422M
On-Column Amount (ng) : 13.0650
Integration start scan : 1747 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

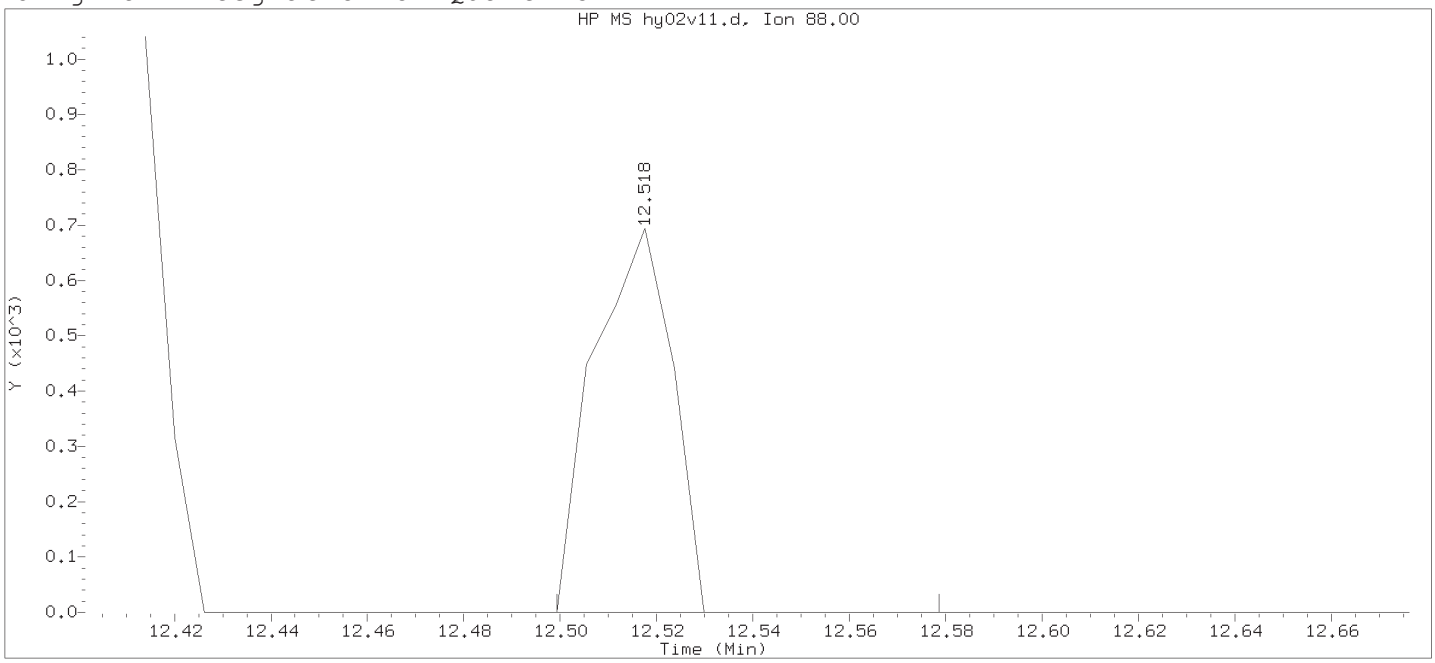
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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

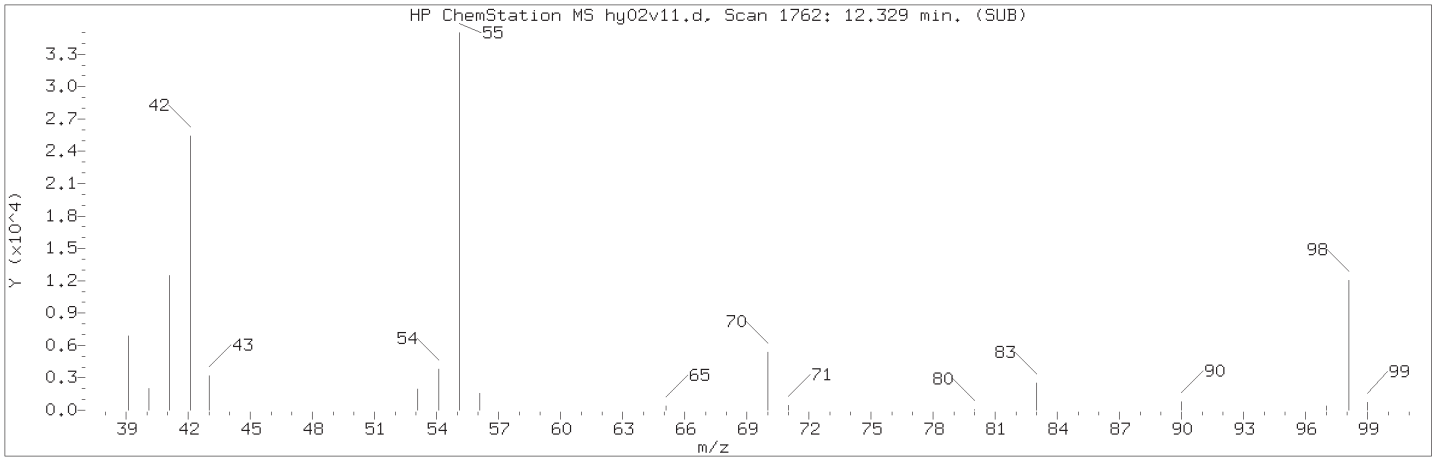
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

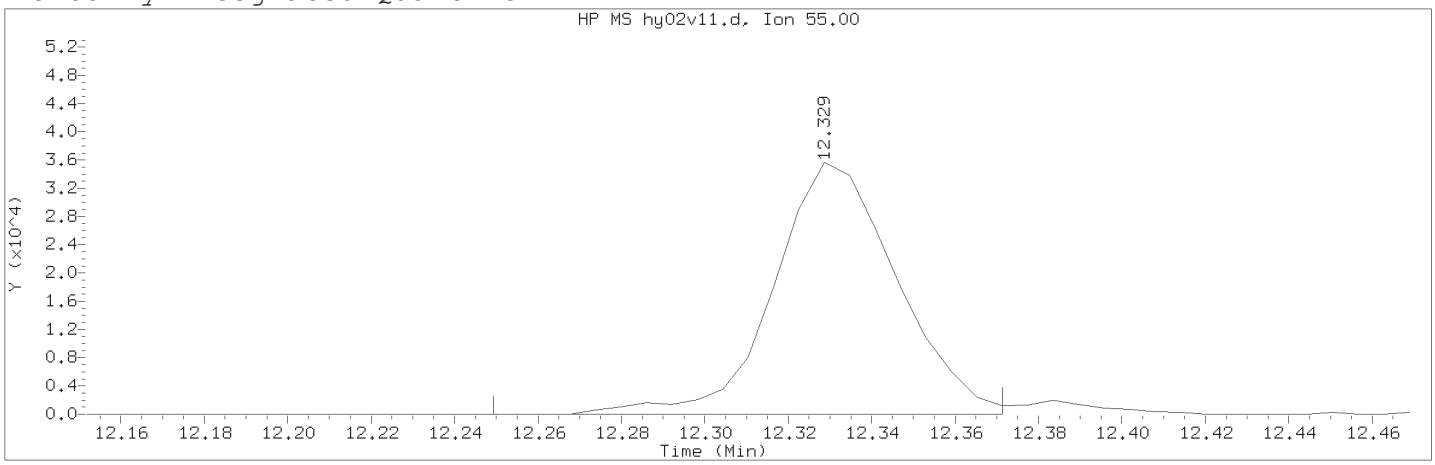
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 88.00
Area : 782
On-column Amount (ng) : 0.0735
Integration start scan : 1789 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

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

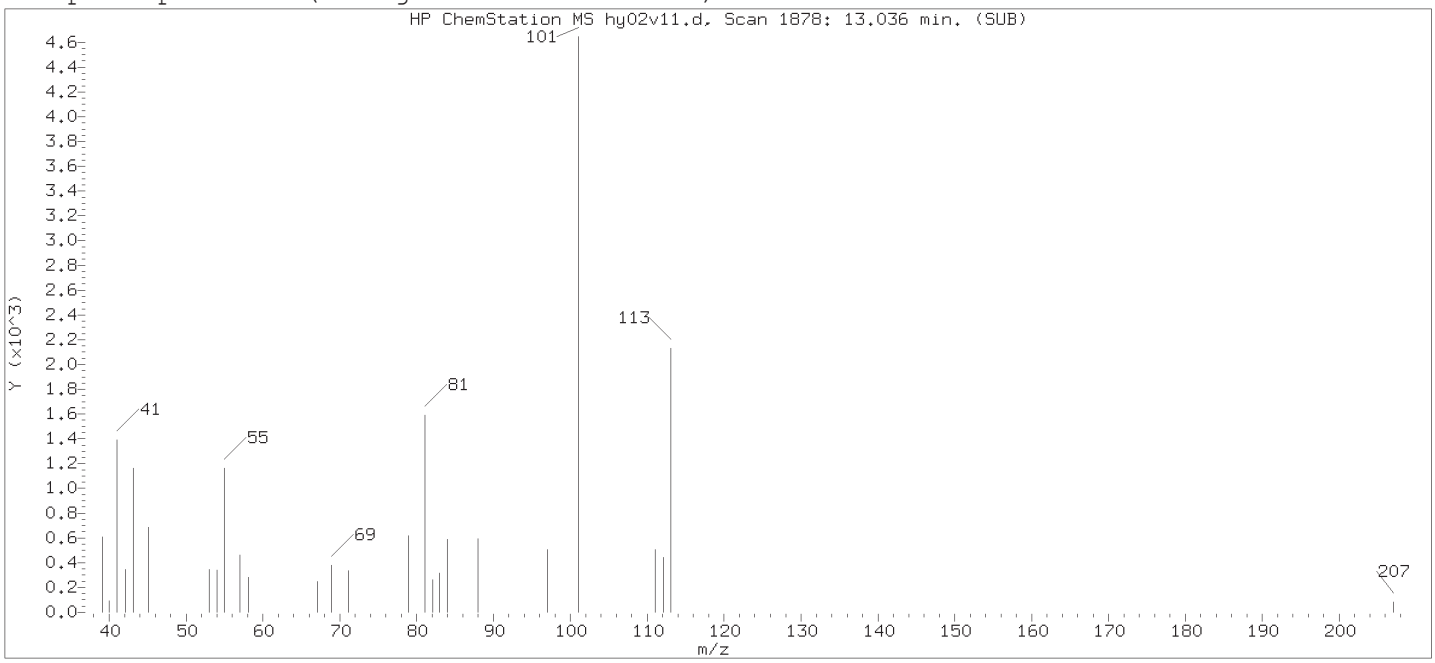
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 72992M
On-Column Amount (ng) : 132.5935
Integration start scan : 1748 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

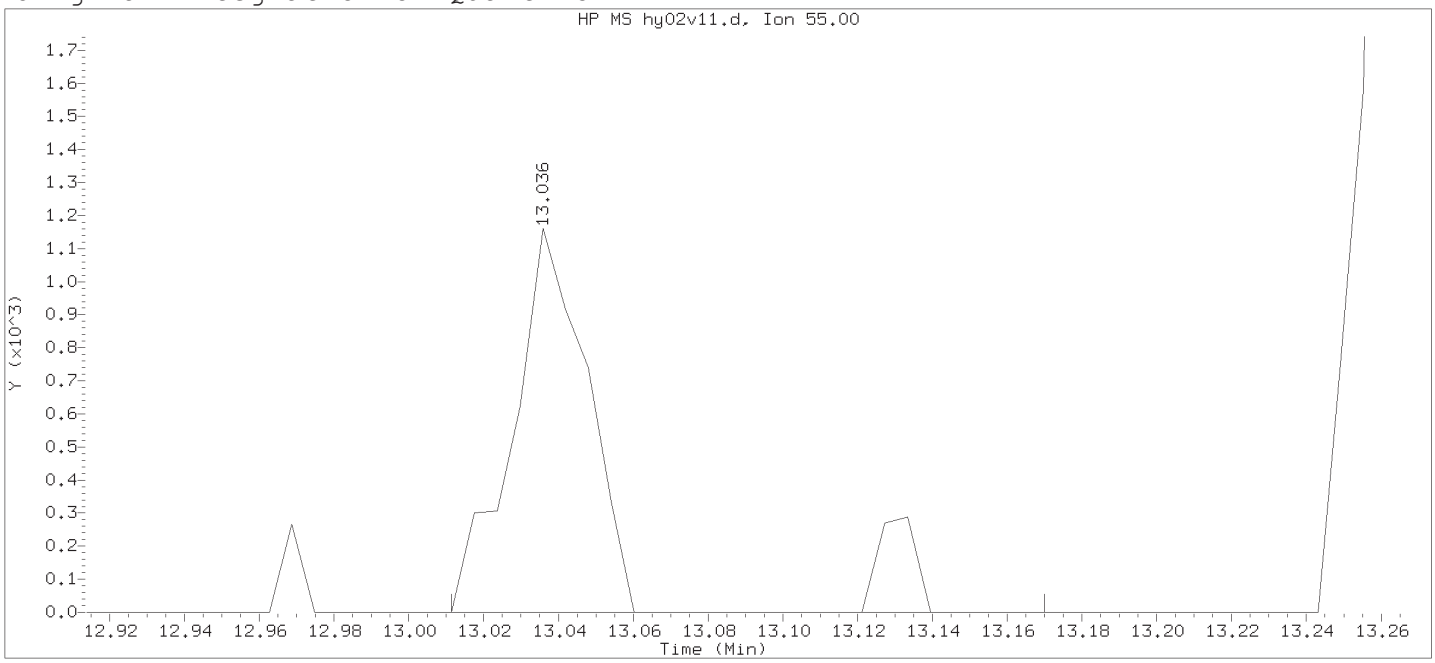
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

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



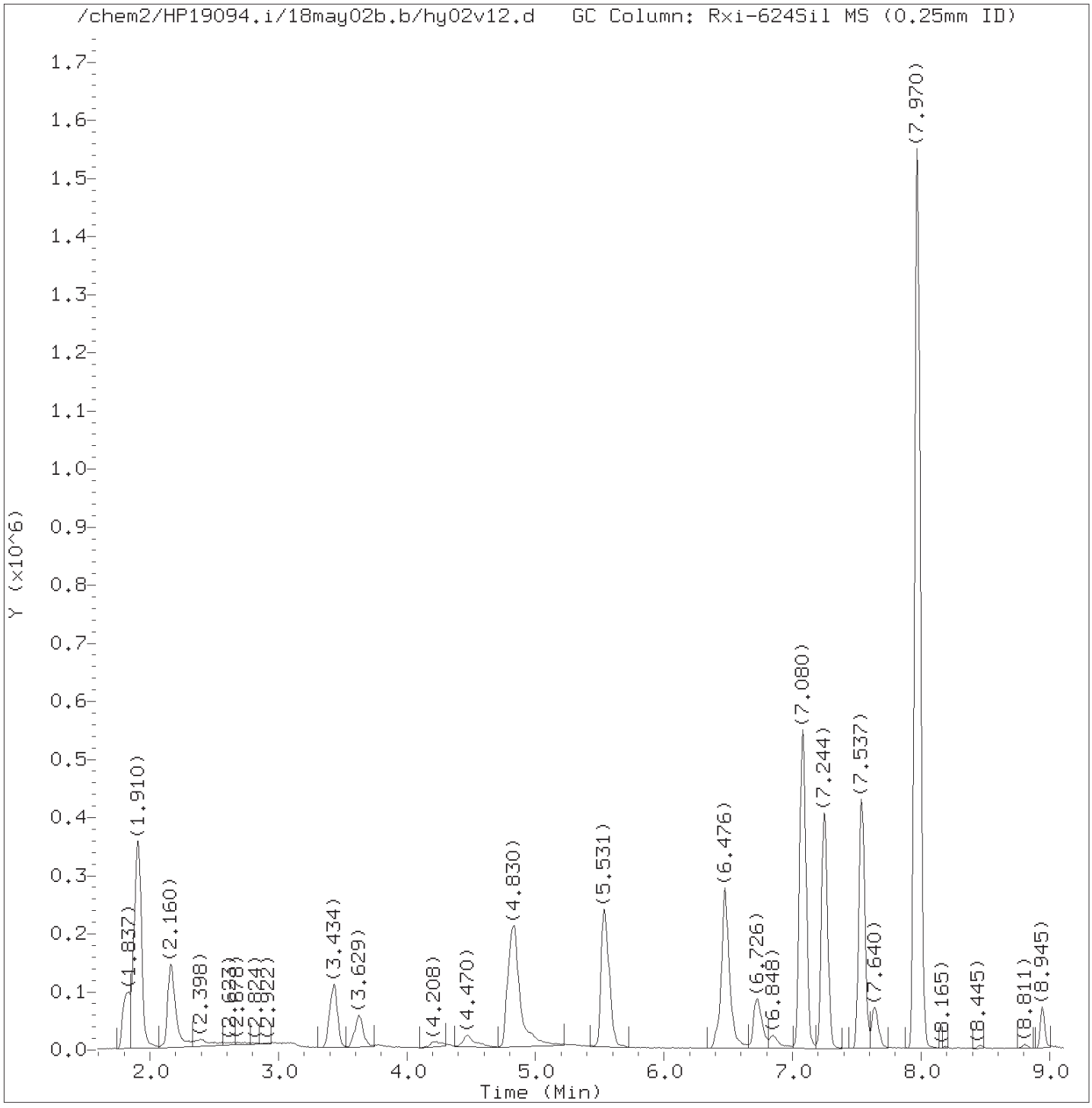
Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

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)

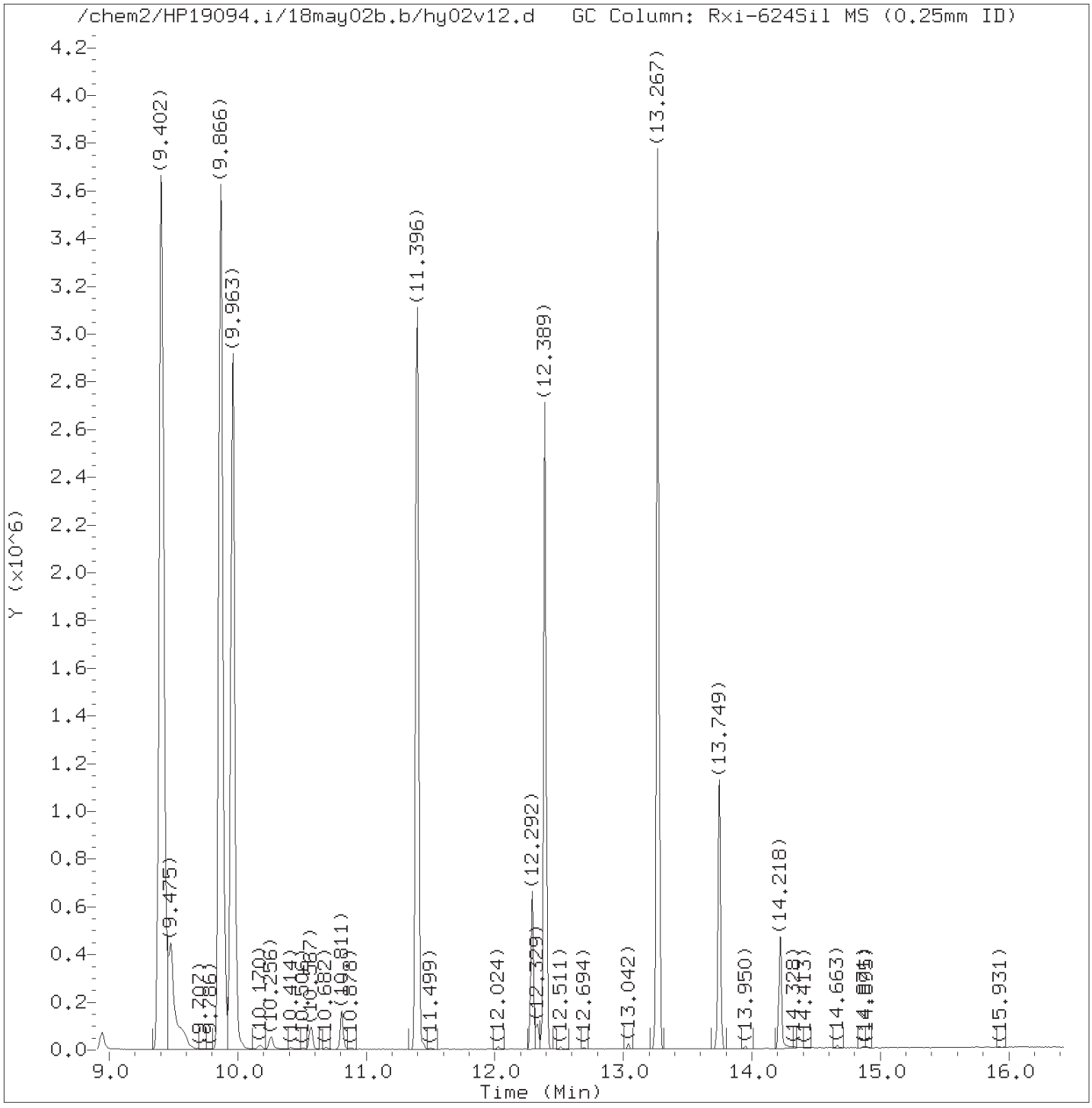
Target Revision 3.5

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

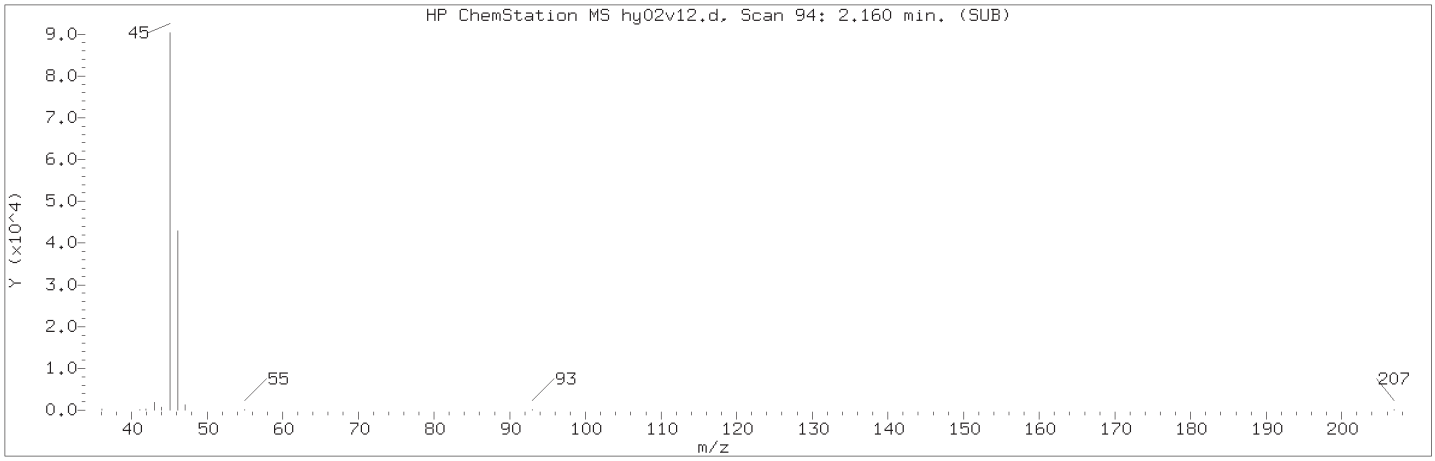
Sample Name: LCDH88 Lab Sample ID: LCDH88

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

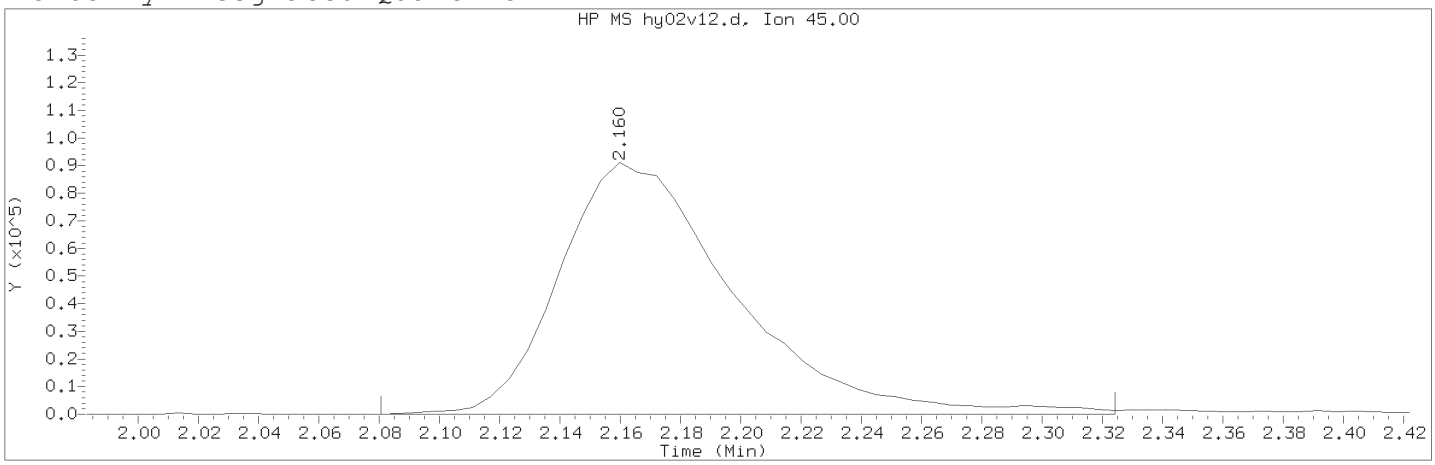
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

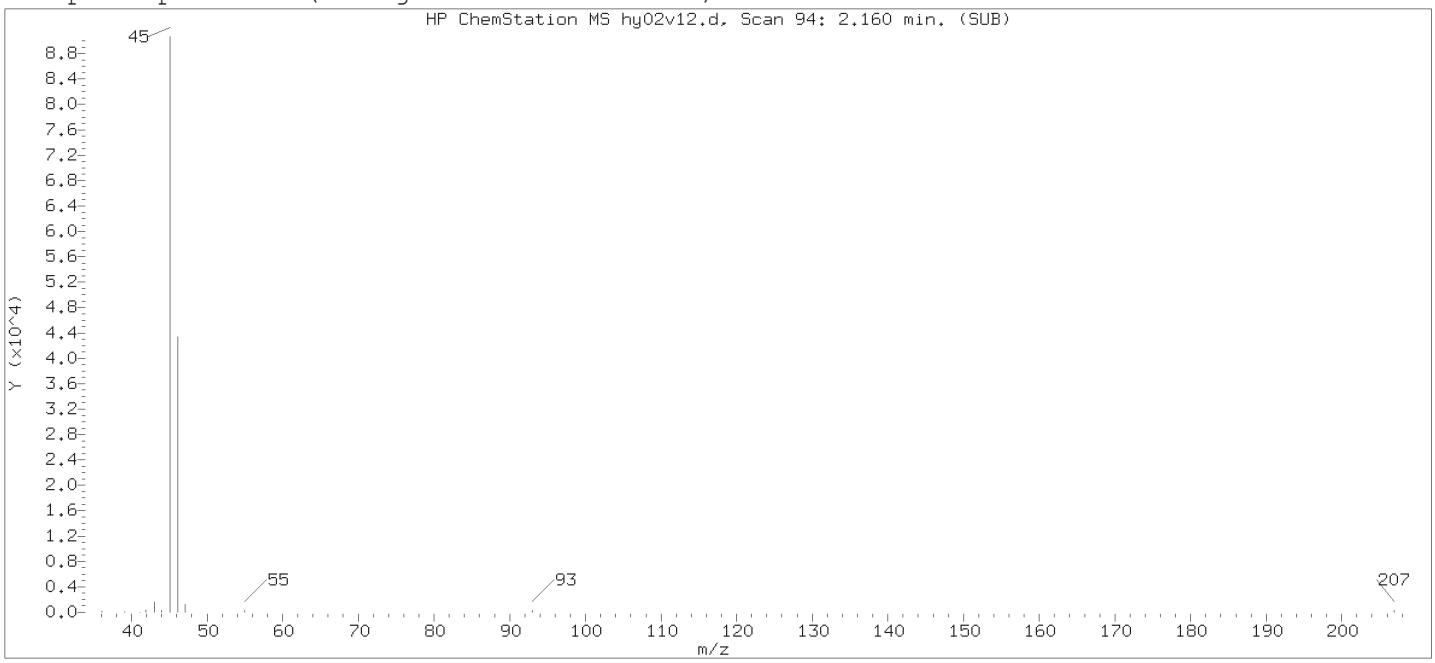
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 367108M
On-Column Amount (ng) : 5.1147
Integration start scan : 80 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

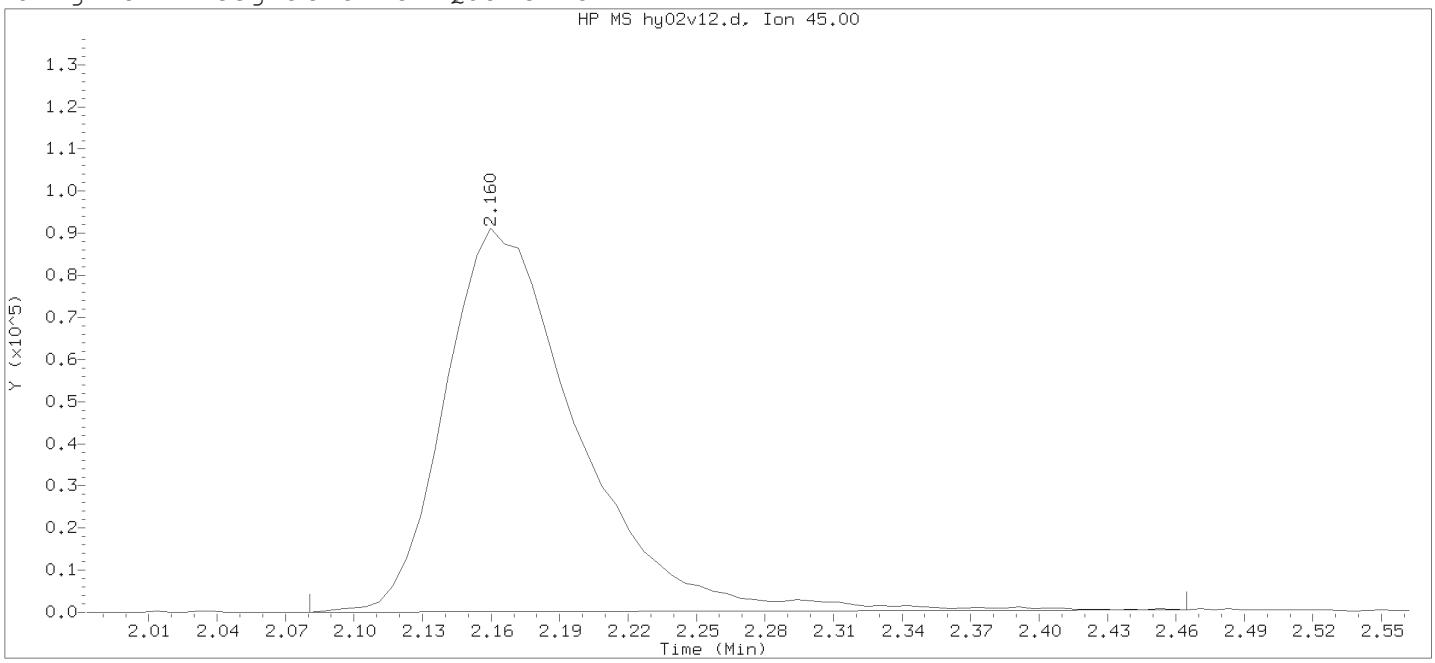
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

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

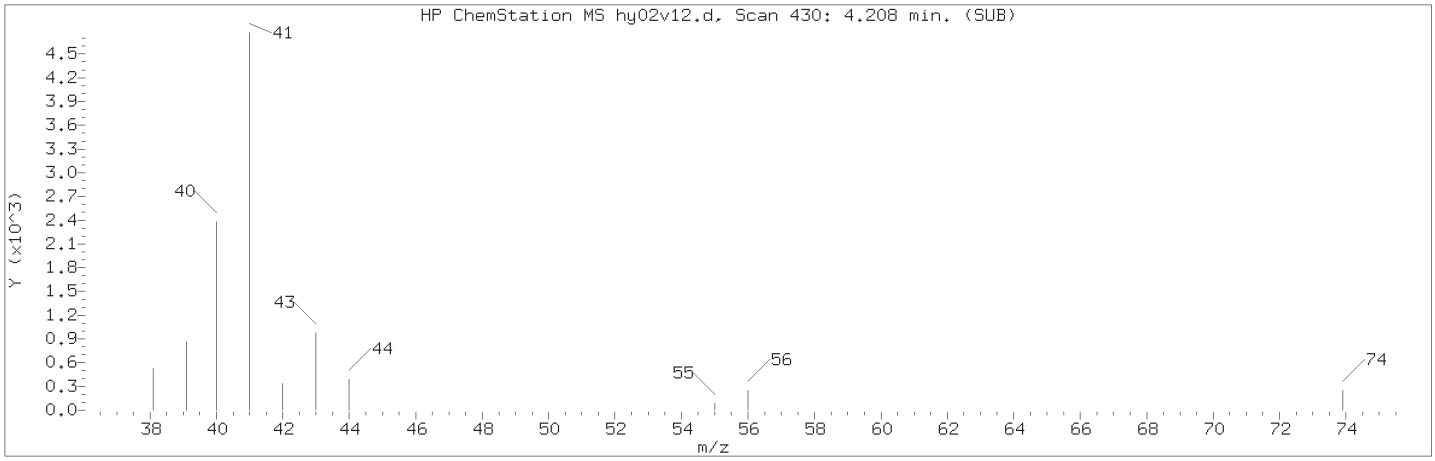
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

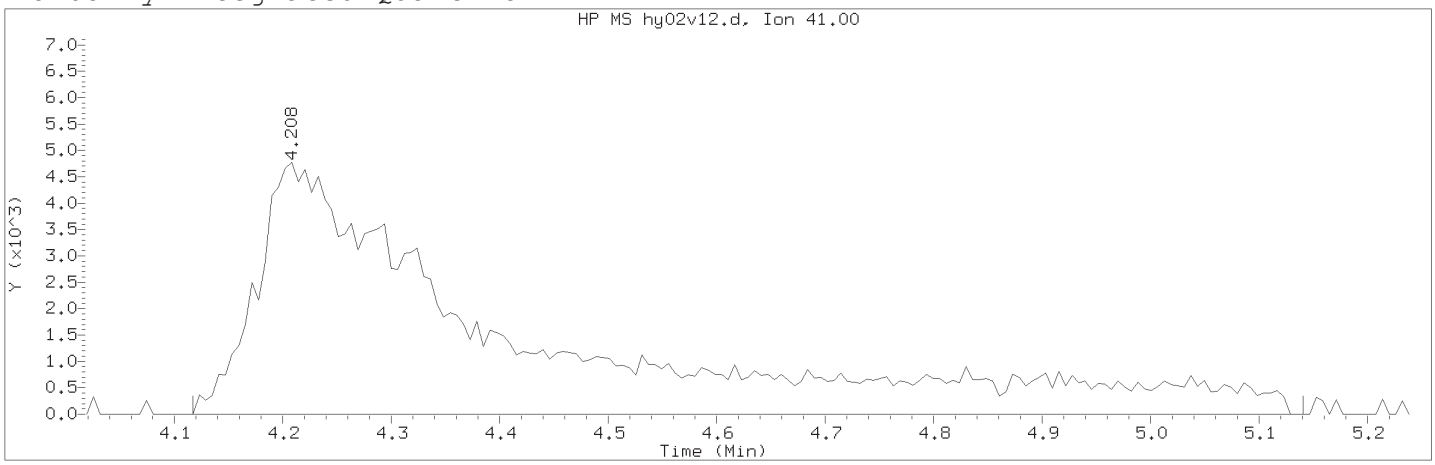
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area : 368442
On-column Amount (ng) : 5.1333
Integration start scan : 80 Integration stop scan: 143
Y at integration start : 0 Y at integration end: 584

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

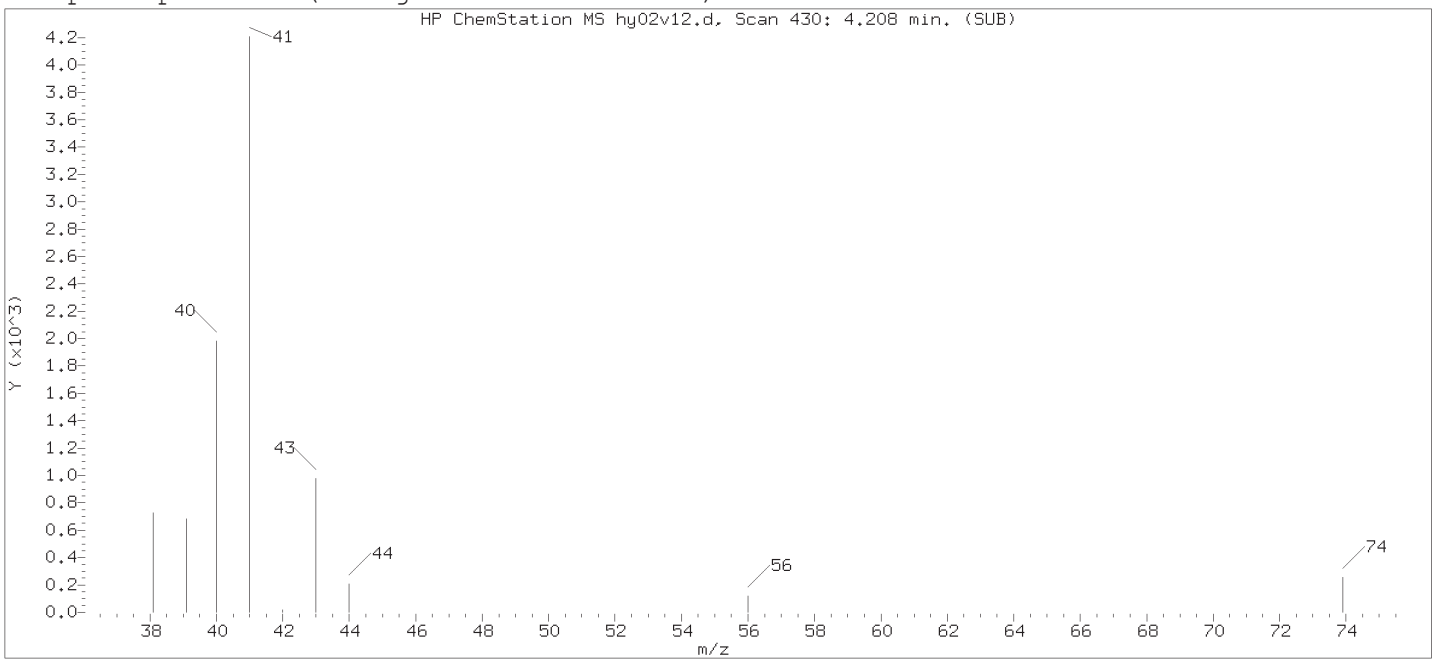
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 76036M
On-Column Amount (ng) : 44.7419
Integration start scan : 414 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

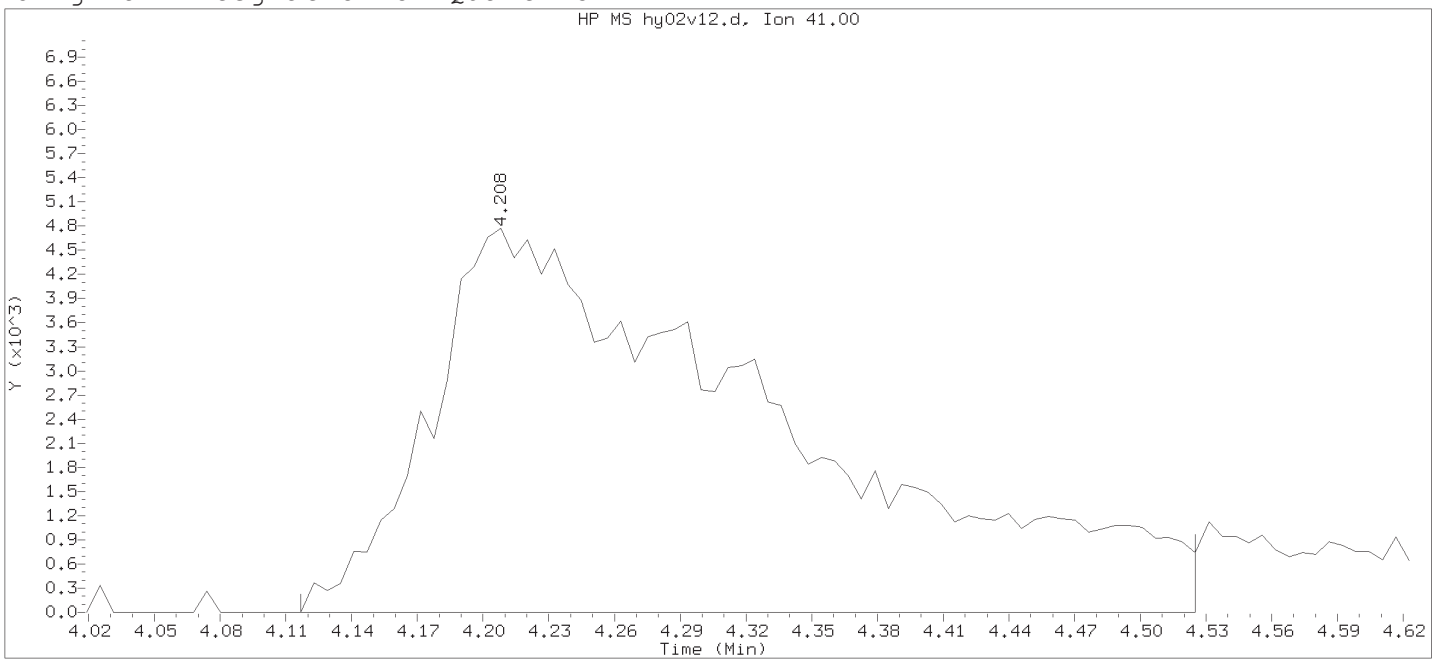
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

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

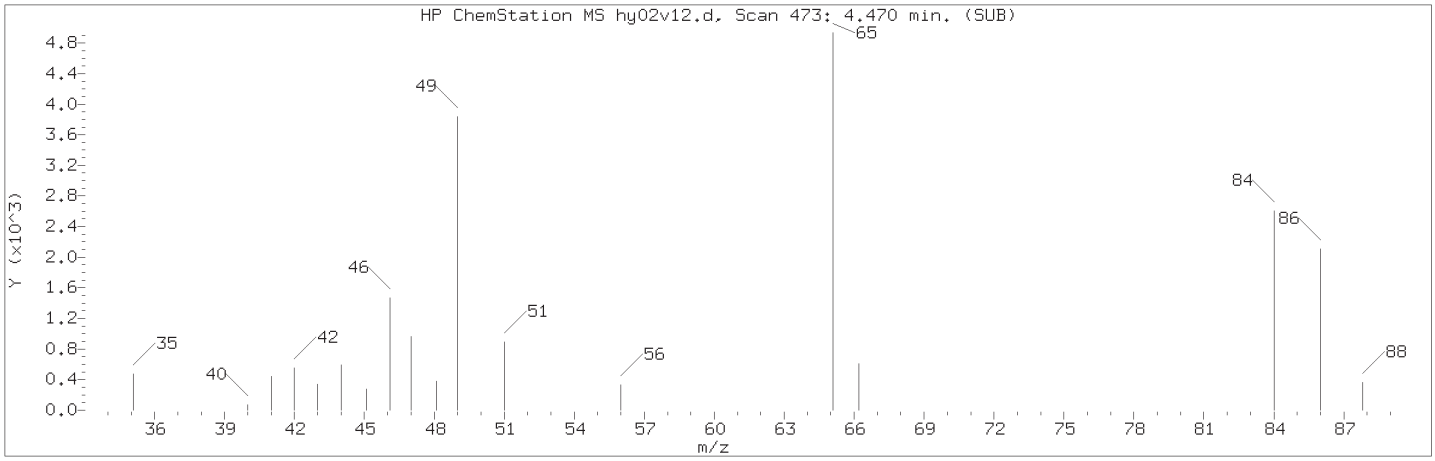
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

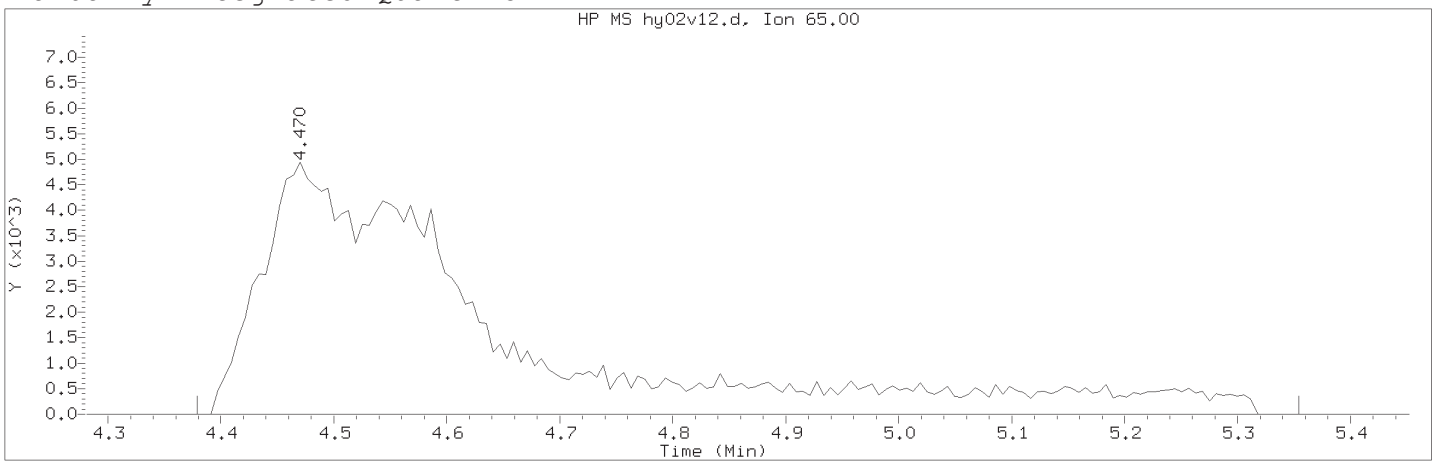
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 53034
On-column Amount (ng) : 31.5863
Integration start scan : 414 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

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

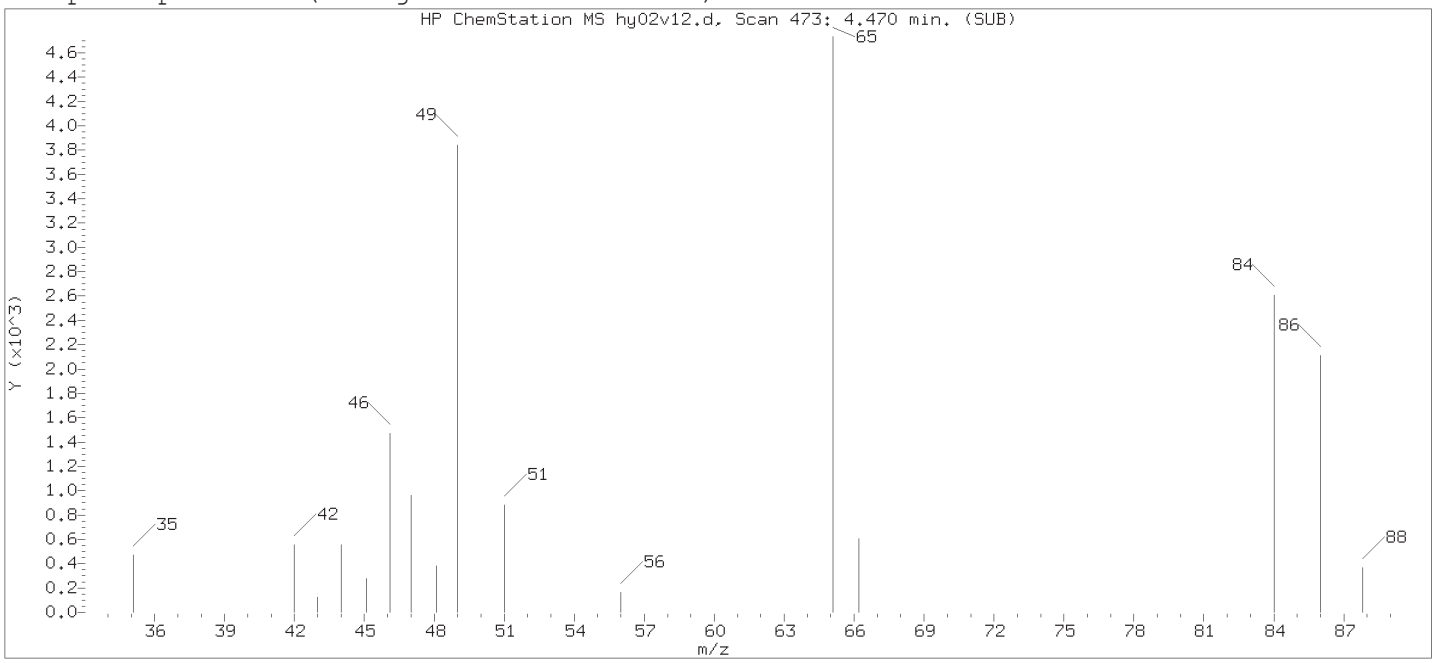
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 70380M
On-Column Amount (ng) : 50.0000
Integration start scan : 457 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

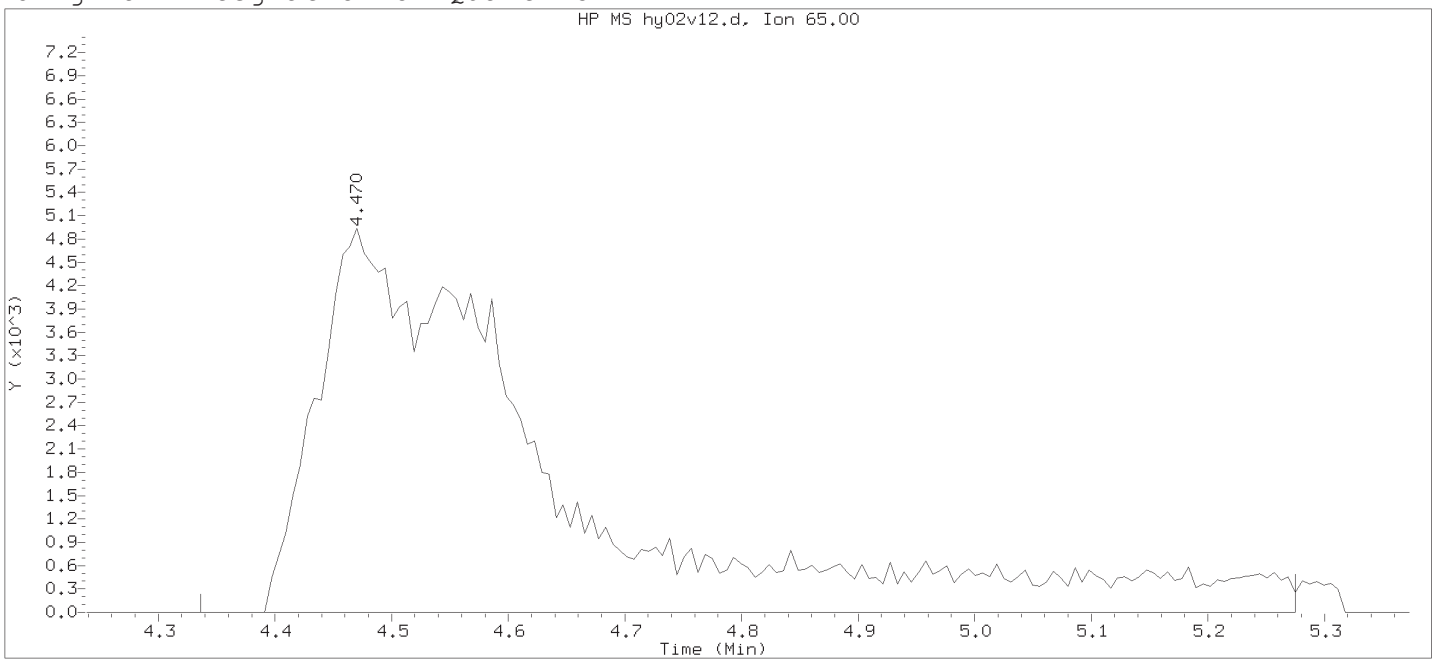
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

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

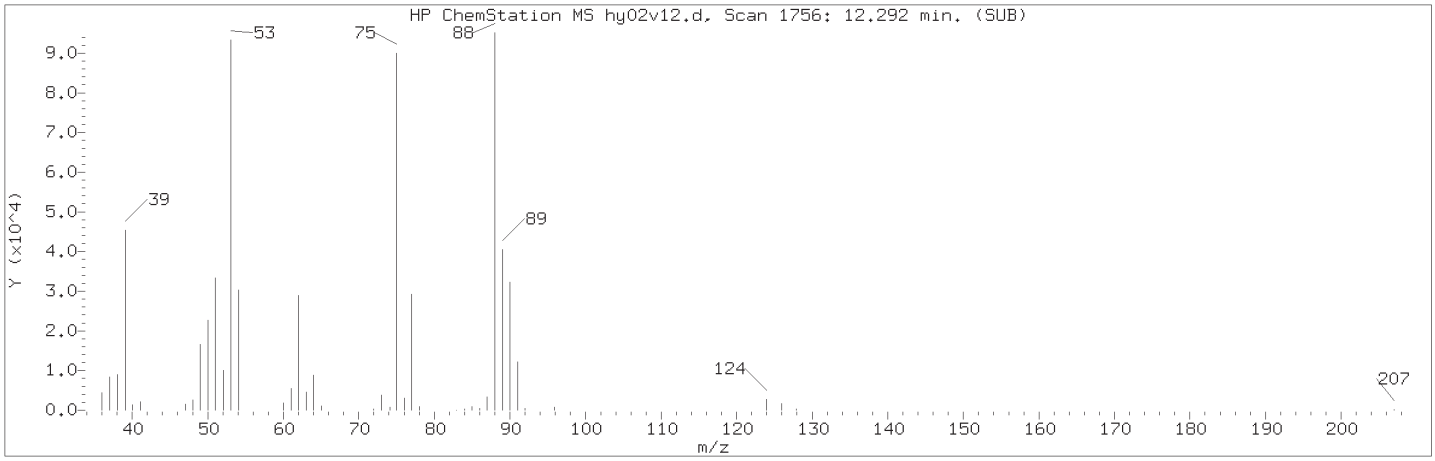
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

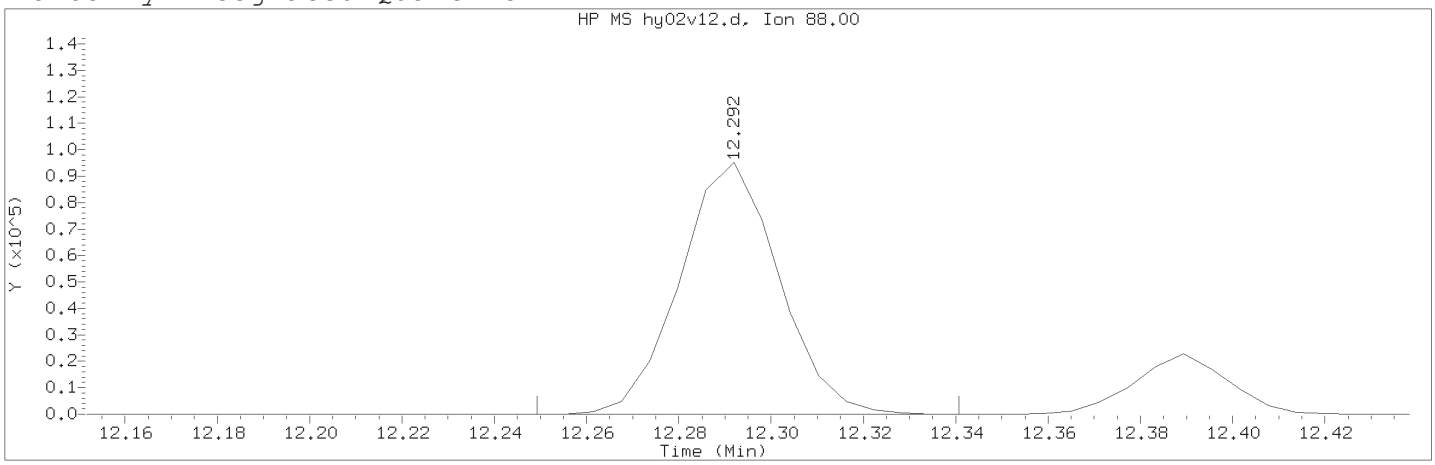
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 69535
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 604
Y at integration start : 0 Y at integration end: 0

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

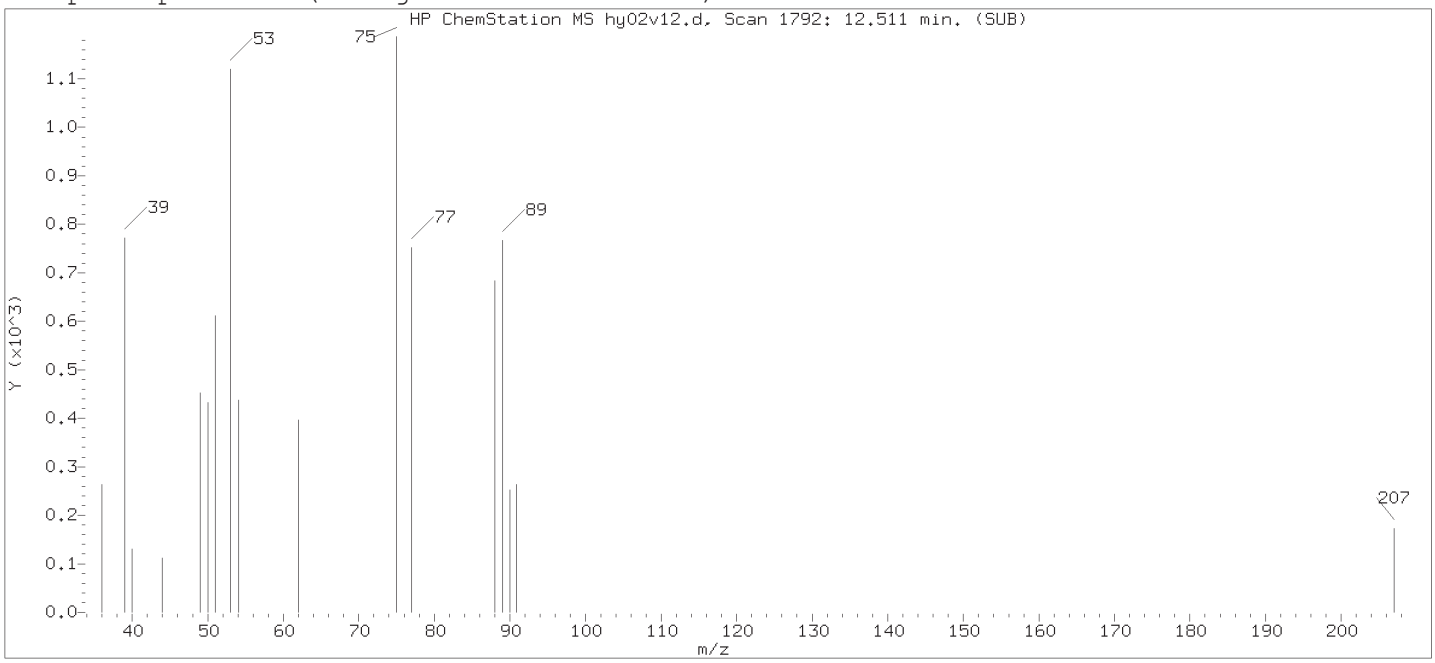
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 141379M
On-Column Amount (ng) : 15.5110
Integration start scan : 1748 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

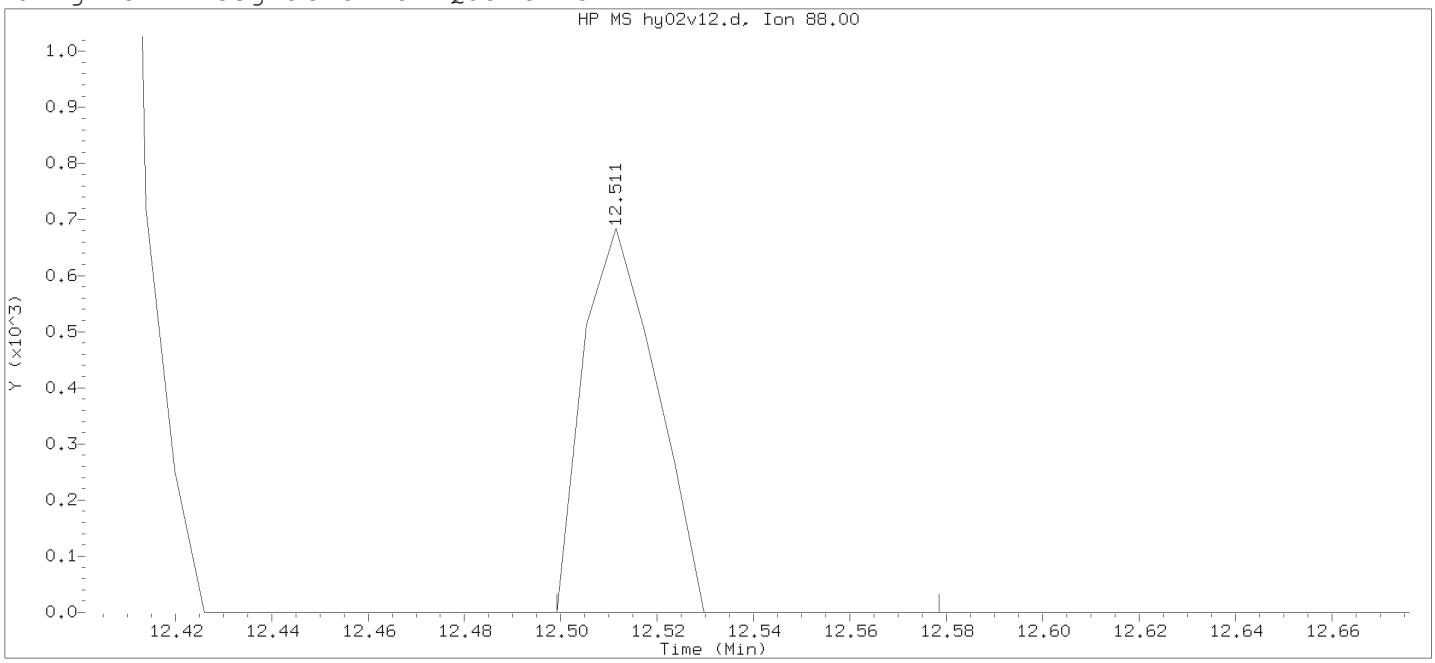
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

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

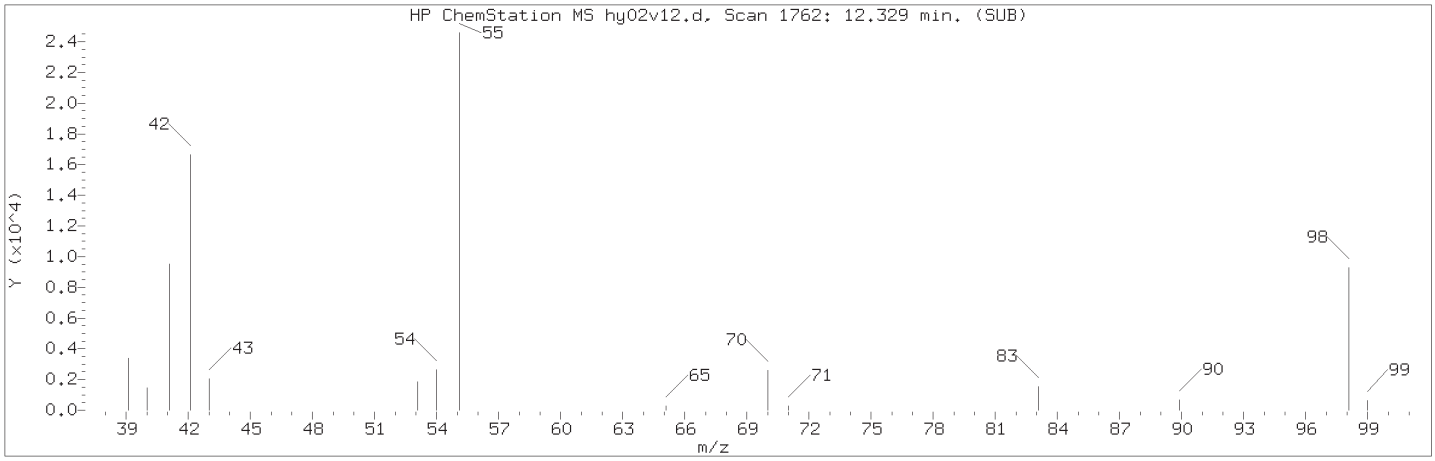
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

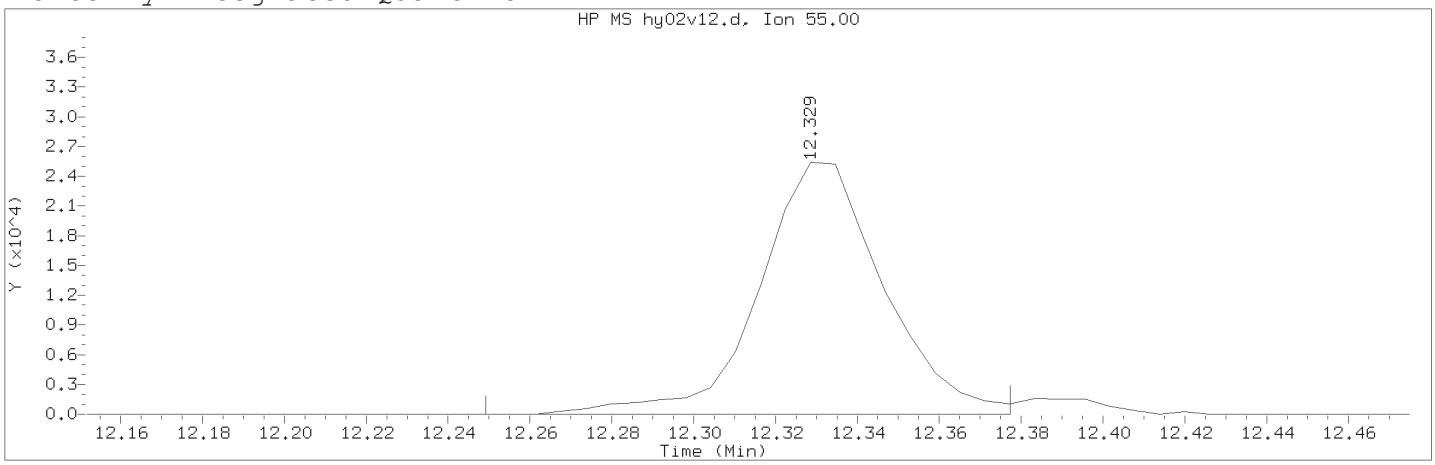
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1792
Retention Time (minutes): 12.511
Quant Ion : 88.00
Area : 718
On-column Amount (ng) : 0.0798
Integration start scan : 1789 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: DVV

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

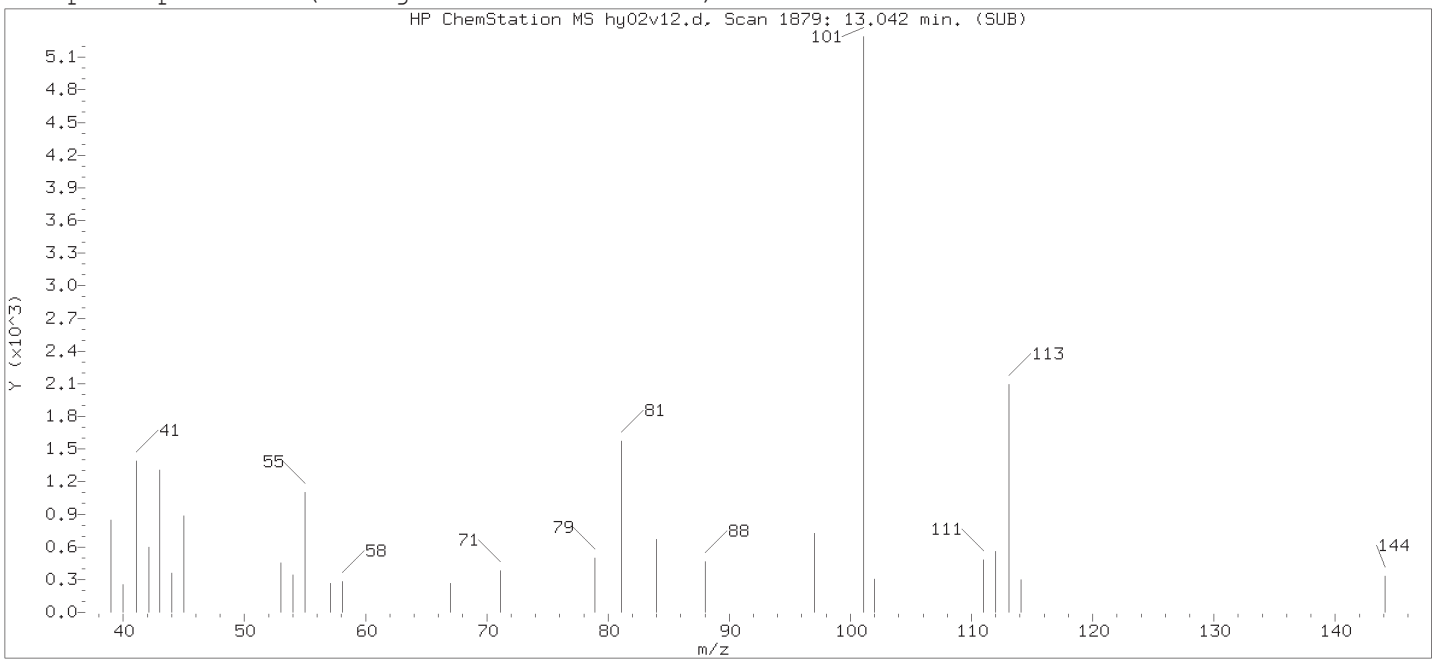
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 53752M
On-Column Amount (ng) : 115.9591
Integration start scan : 1748 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

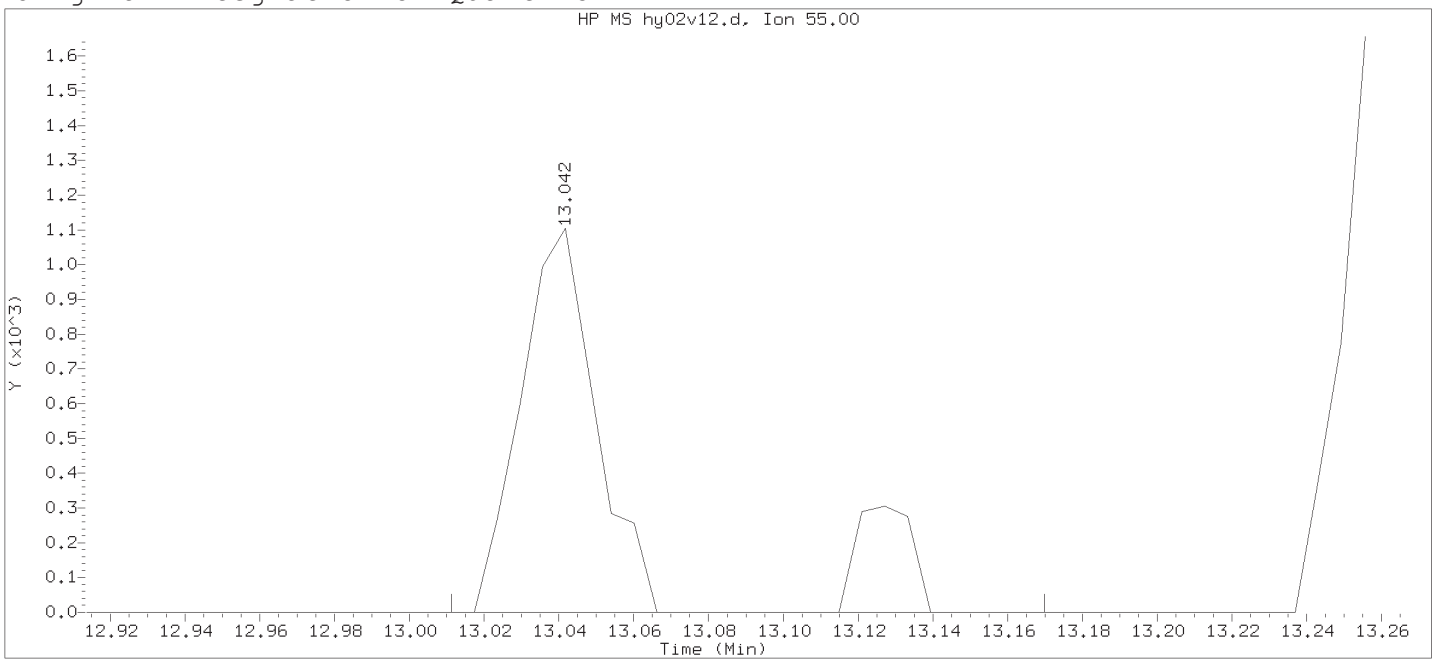
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

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



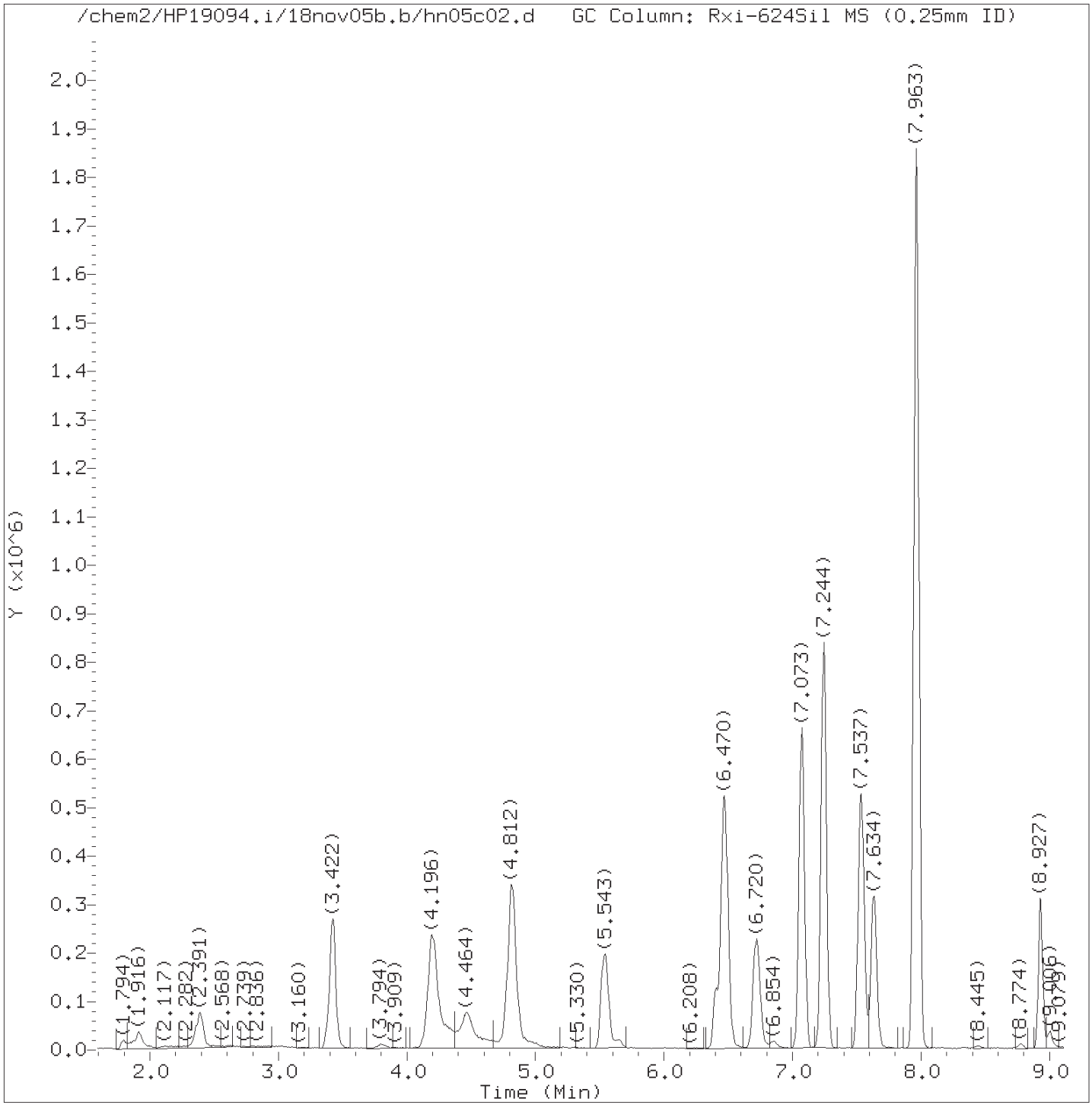
Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

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)

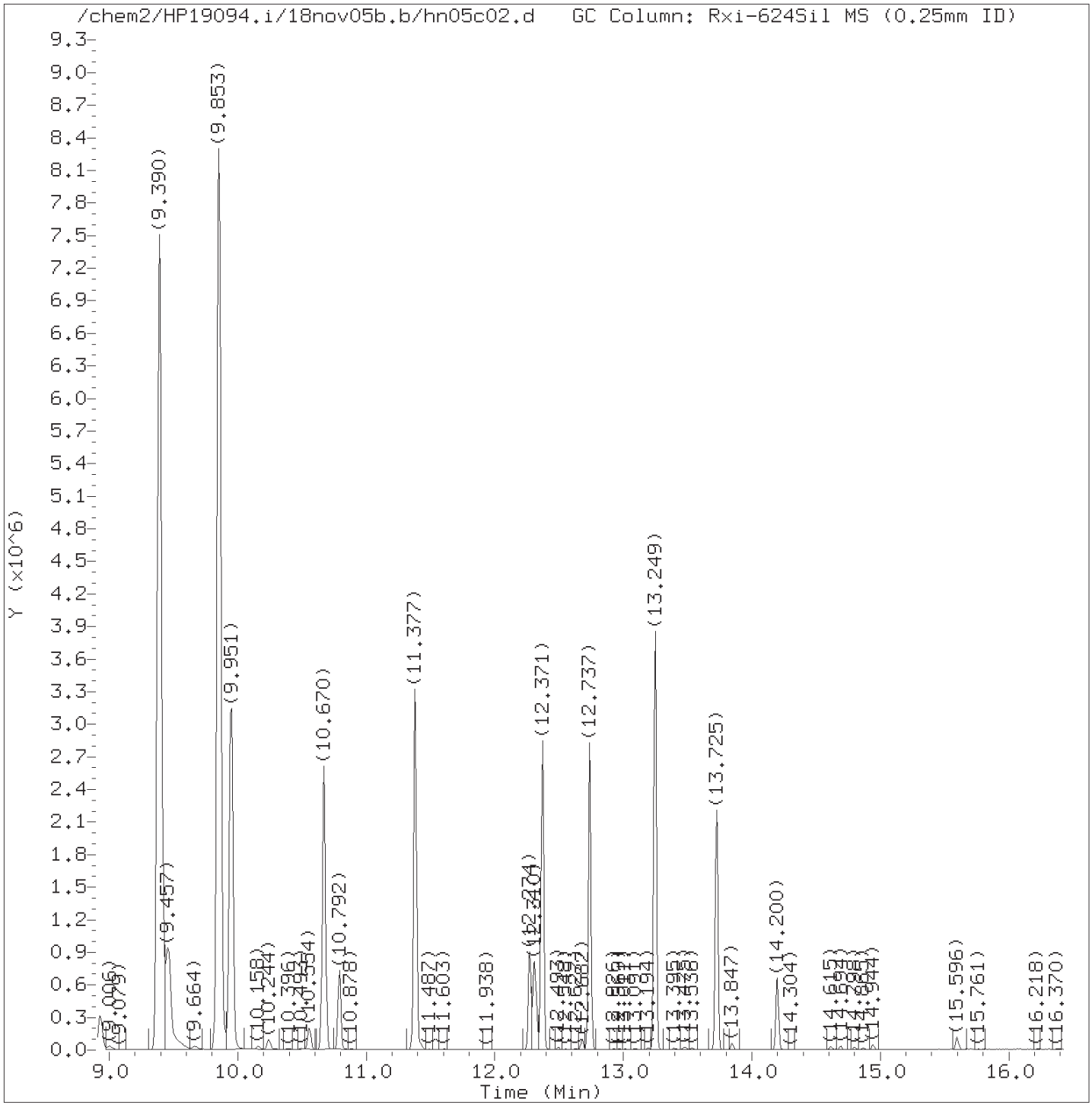
Target Revision 3.5

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

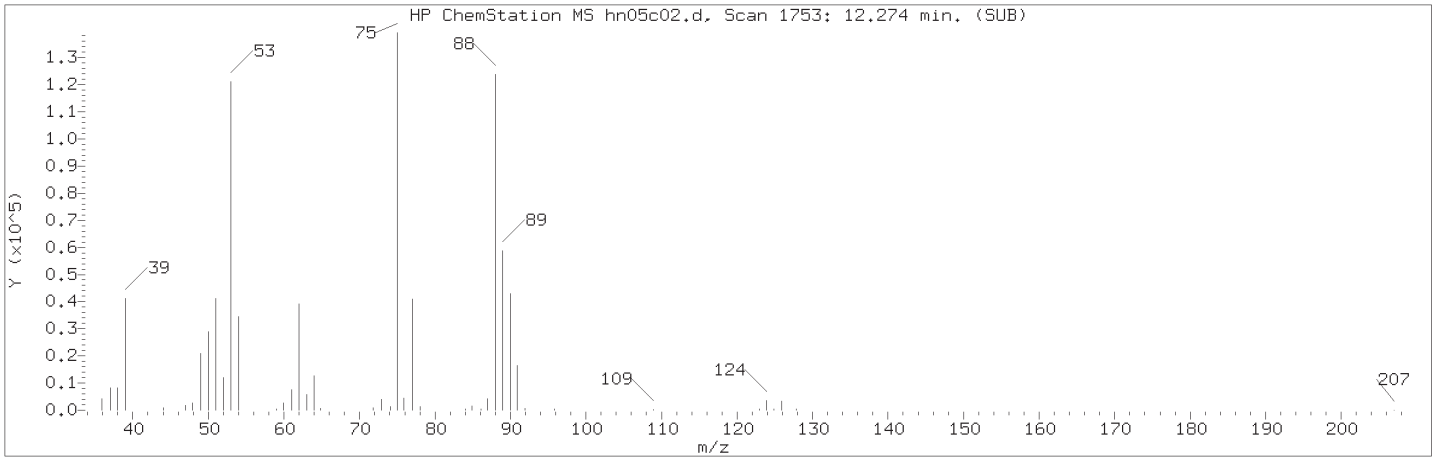
Sample Name: VSTD010 Lab Sample ID: VSTD010

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

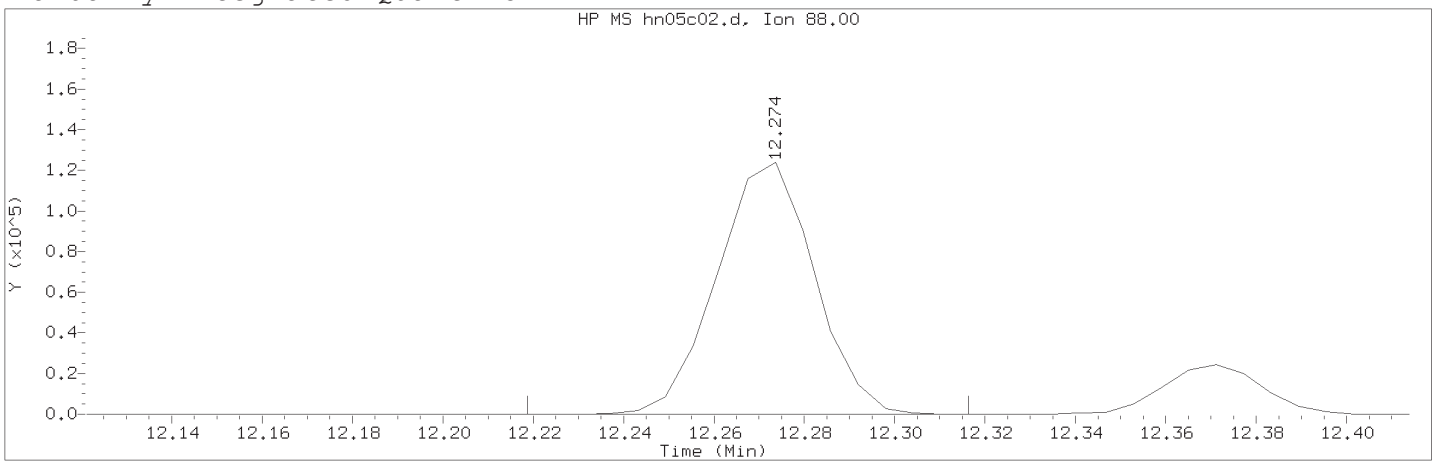
M = Compound was manually integrated.
* = Compound is an internal standard.

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

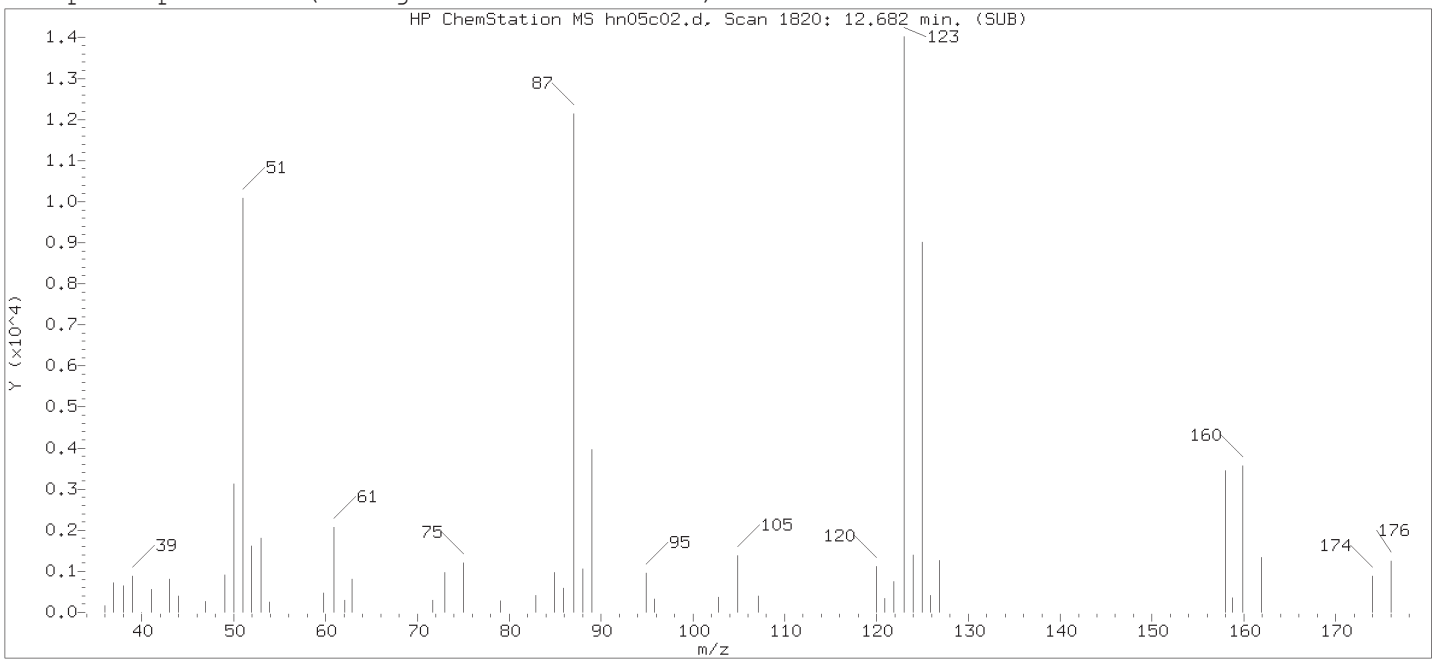
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1753
Retention Time (minutes): 12.274
Quant Ion : 88.00
Area (flag) : 185388M
On-Column Amount (ng) : 11.9380
Integration start scan : 1743 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

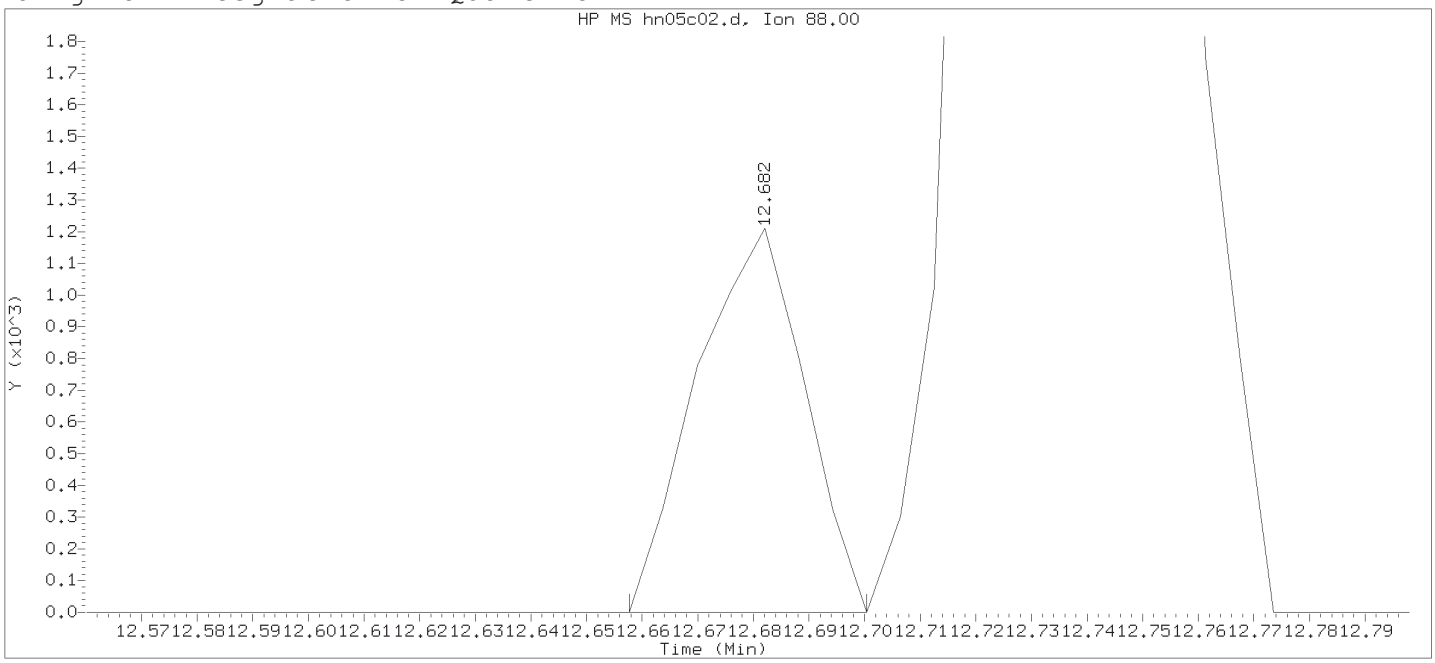
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

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

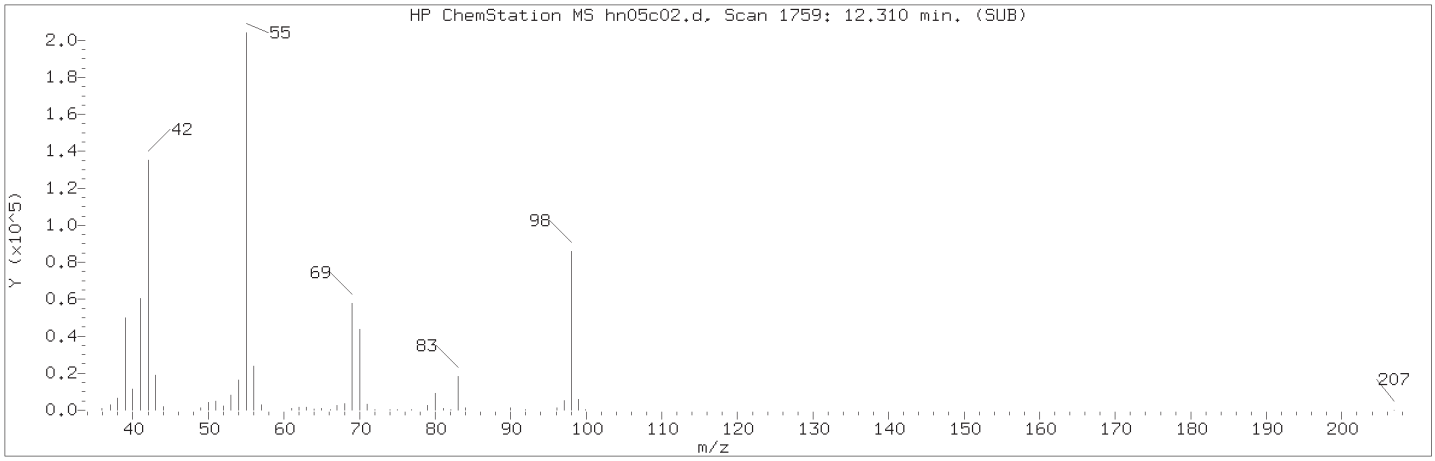
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 05-NOV-2018 20:57
Date, time and analyst ID of latest file update: 05-Nov-2018 20:57 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

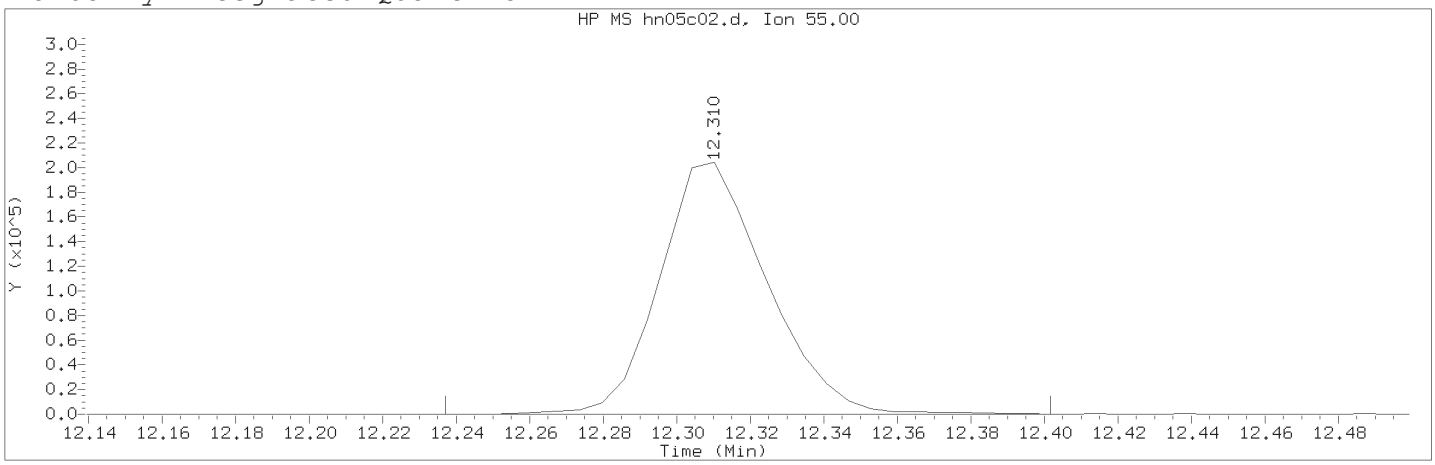
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1820
Retention Time (minutes): 12.682
Quant Ion : 88.00
Area : 1630
On-column Amount (ng) : 0.1050
Integration start scan : 1815 Integration stop scan: 1822
Y at integration start : 0 Y at integration end: 0

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

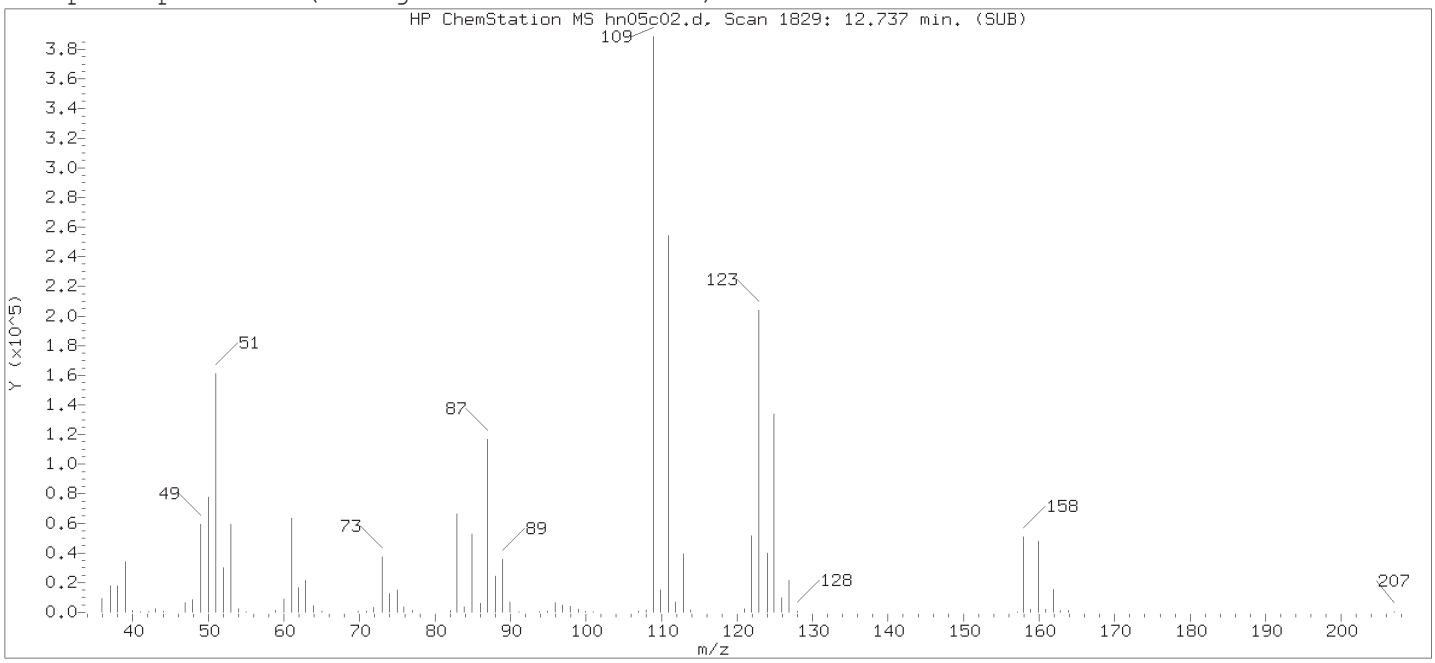
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 414036M
On-Column Amount (ng) : 524.2546
Integration start scan : 1746 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

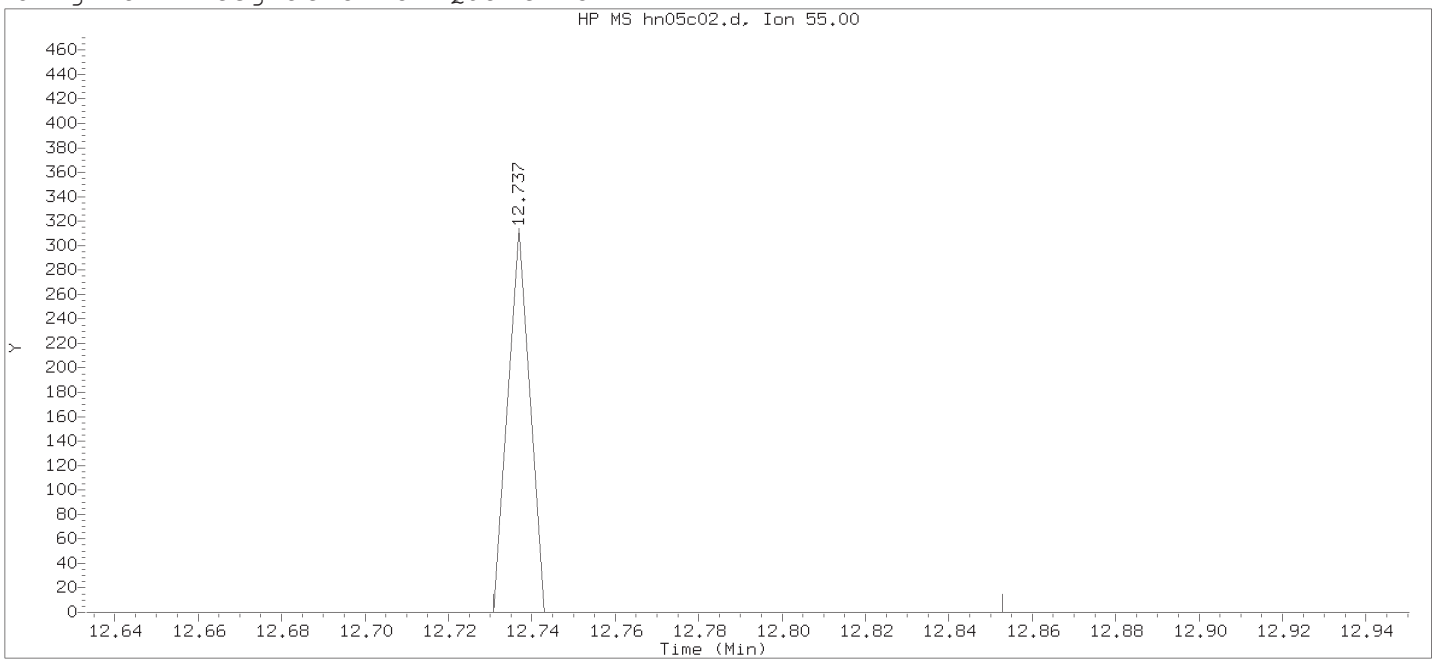
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/05/2018 at 21:51.
Target 3.5 esignature user ID: jgc14951

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	

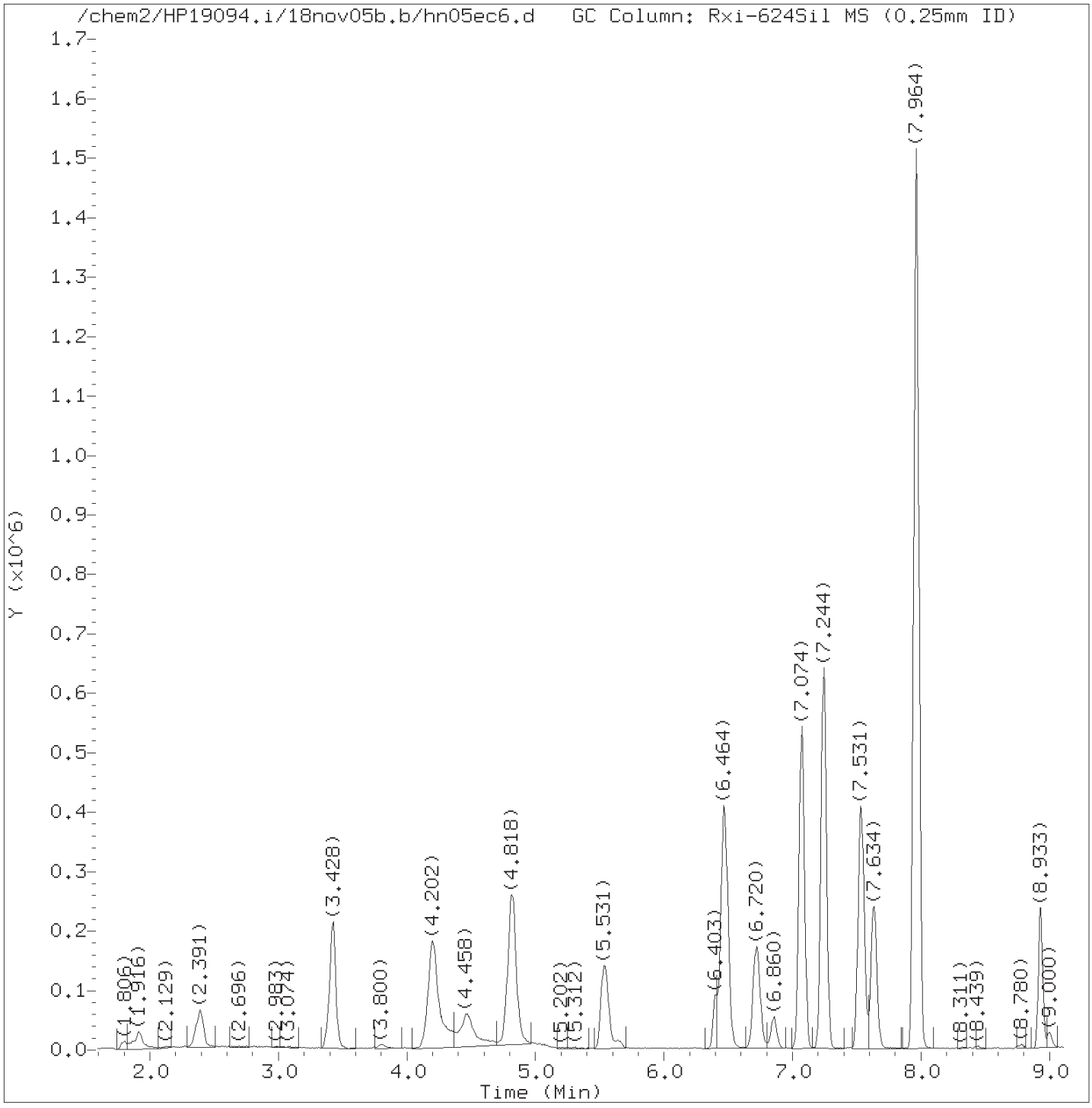
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	512034	9.561	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531	(-0.001)	102	95518	10.231	102%		81 - 118
82) Toluene-d8	(3)	9.951	(0.000)	98	2070221	10.279	103%		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)

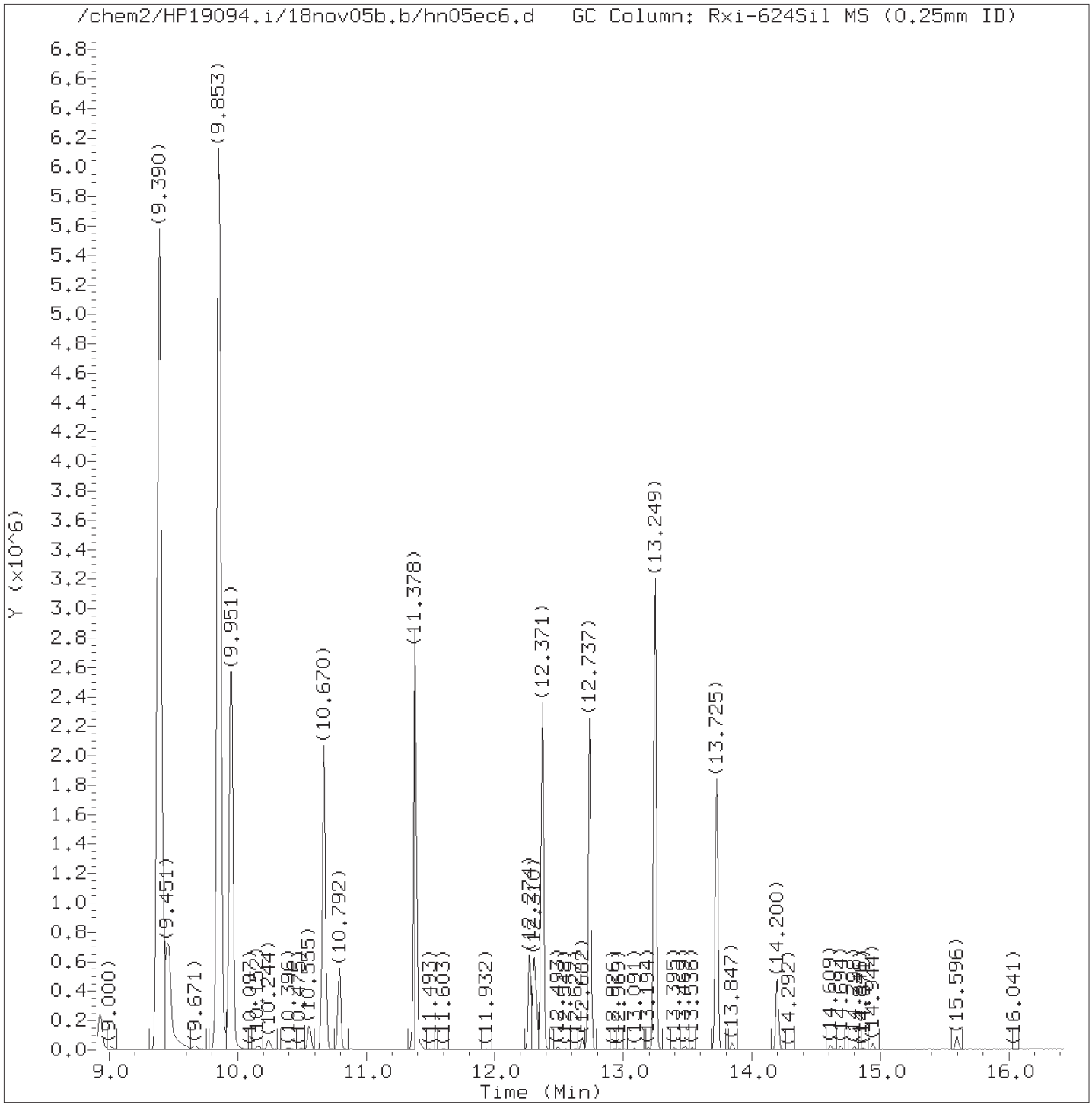
Target Revision 3.5

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

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
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**

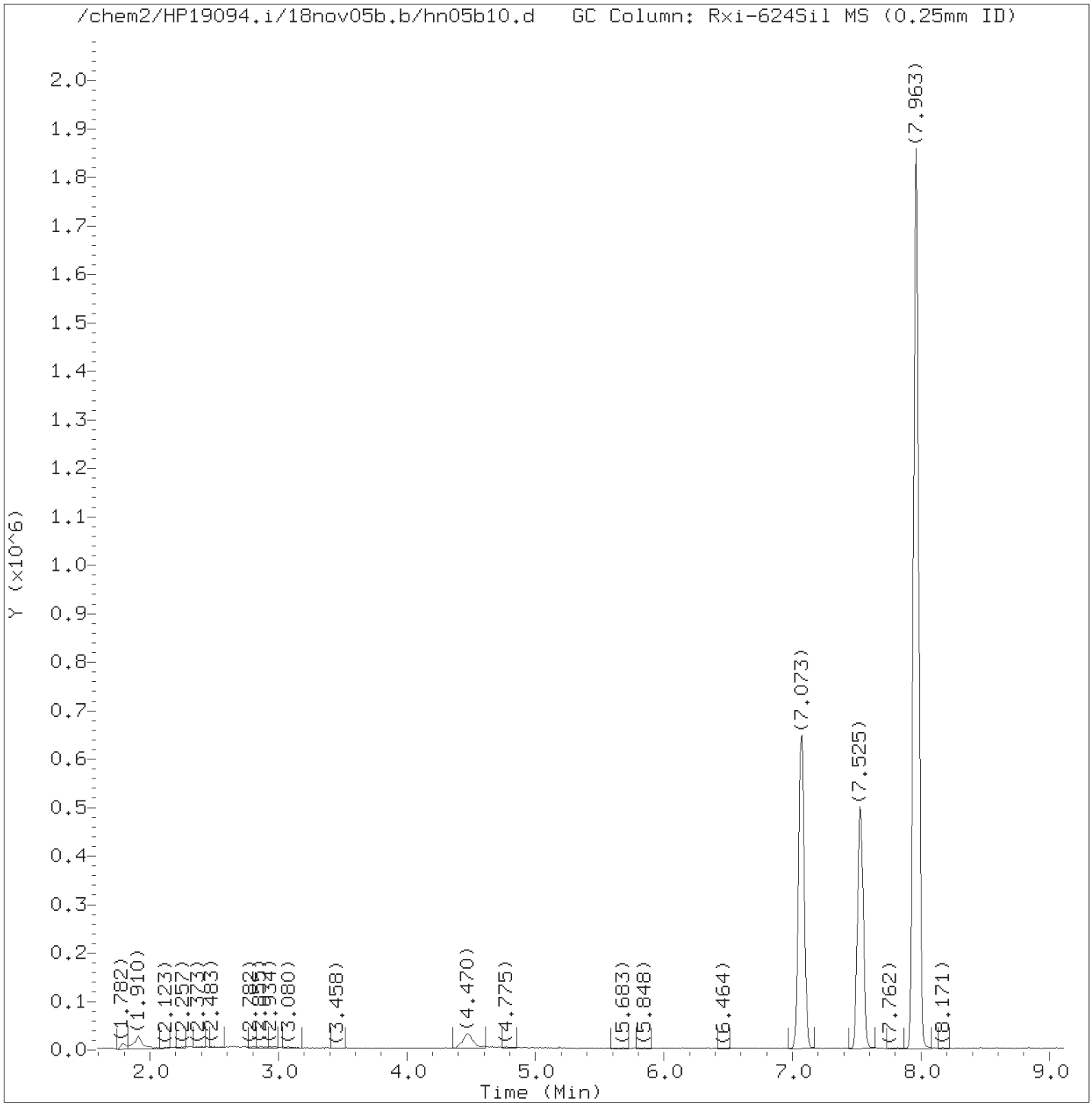
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
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)

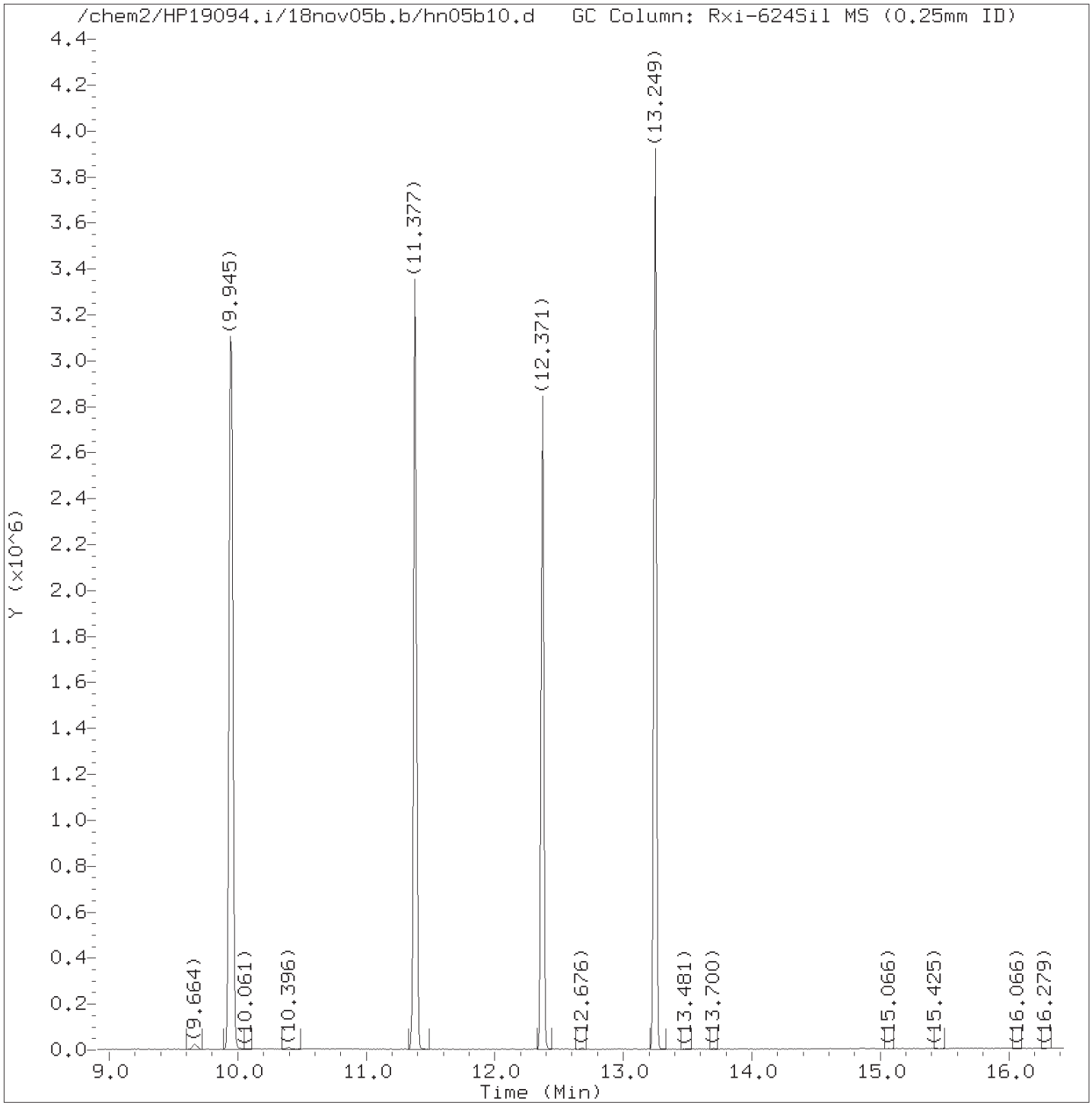
Target Revision 3.5

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

Data file: /chem2/HP19094.i/18nov05b.b/hn05s79.d Injection date and time: **06-NOV-2018 03:48**
Data file Sample Info. Line: 14T04MS1;9876335MS;1;3;MS;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 11:07 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 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: **038B** 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	4.483(0.000)	475	65	116899	(-5)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2507483	(-2)	10.00	
97) Chlorobenzene-d5	11.378(0.006)	1606	117	1839540	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	932013	(1)	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	609181	9.639	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531(-0.001)	102	112952	10.252	103%		81 - 118
82) Toluene-d8	(3)	9.951(0.000)	98	2418087	10.213	102%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	848604	9.845	98%		85 - 114

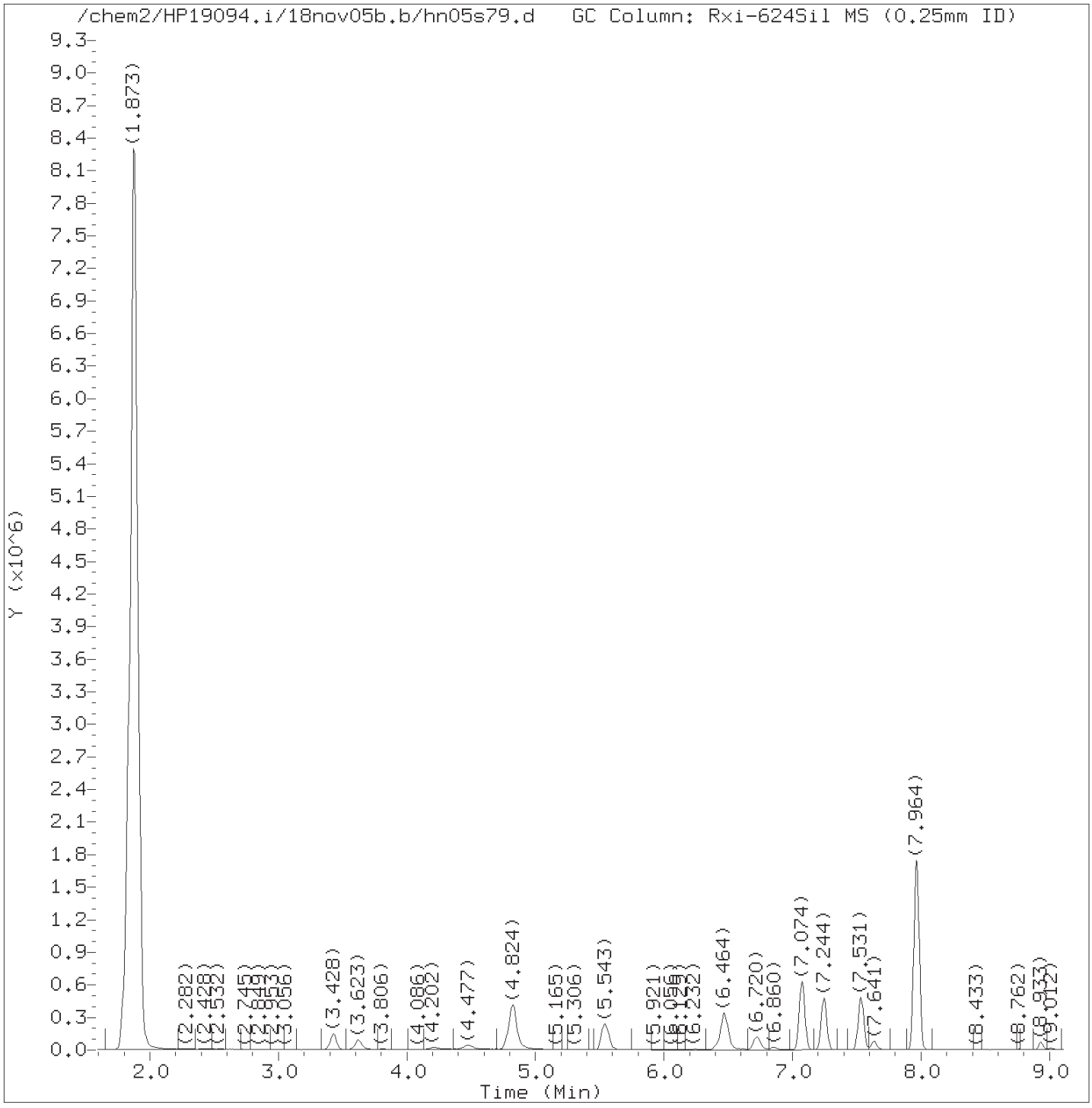
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
112) Cyclohexanone	(1)	12.310(-0.000)	55	77106M	100.147	100.15			2	25

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08. 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)

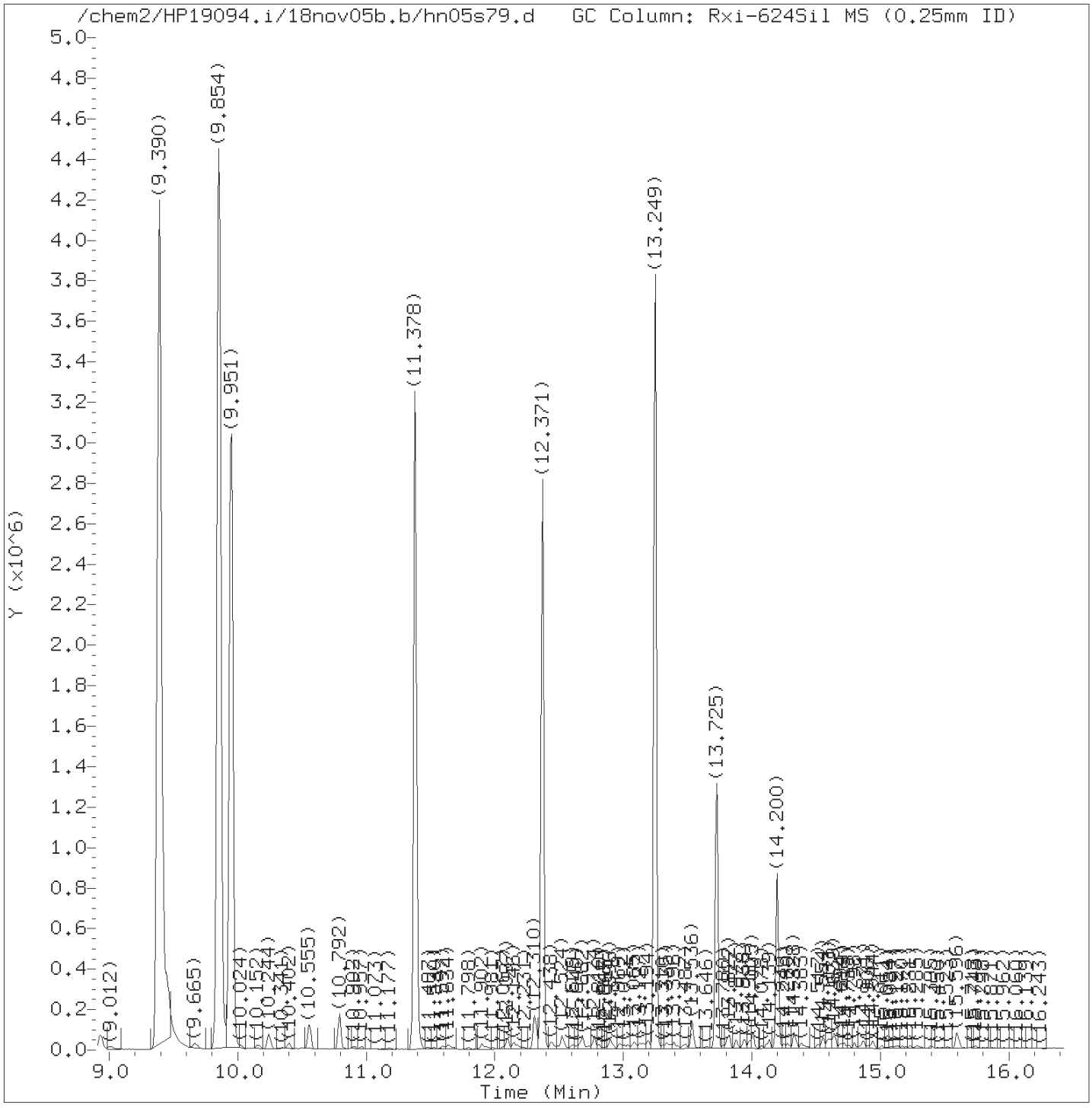
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s79.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:48 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS1 Lab Sample ID: 9876335MS

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s79.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:48 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS1 Lab Sample ID: 9876335MS

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s79.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:48 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: 06-Nov-2018 11:07 jkh09052

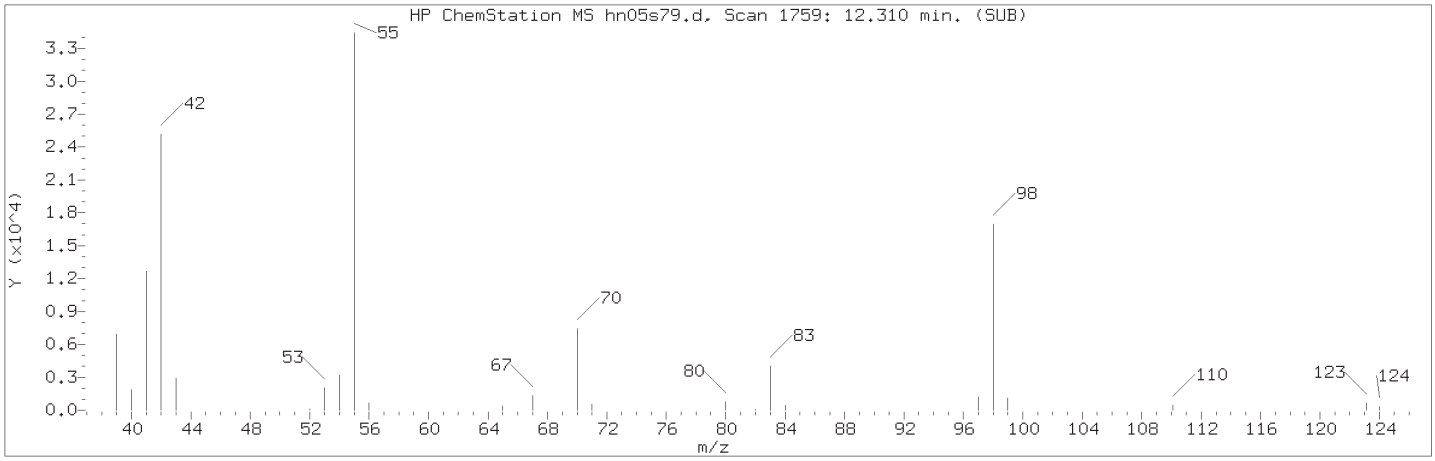
Sample Name: 14T04MS1 Lab Sample ID: 9876335MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.483	65	116899	50.000
50)$Dibromofluoromethane	(2)	7.074	113	609181	9.639
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112952	10.252
63)*Fluorobenzene	(2)	7.964	96	2507483	10.000
82)$Toluene-d8	(3)	9.951	98	2418087	10.213
97)*Chlorobenzene-d5	(3)	11.378	117	1839540	10.000
112) Cyclohexanone	(1)	12.310	55	77106M	100.147
111)$4-Bromofluorobenzene	(3)	12.371	95	848604	9.845
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	932013	10.000

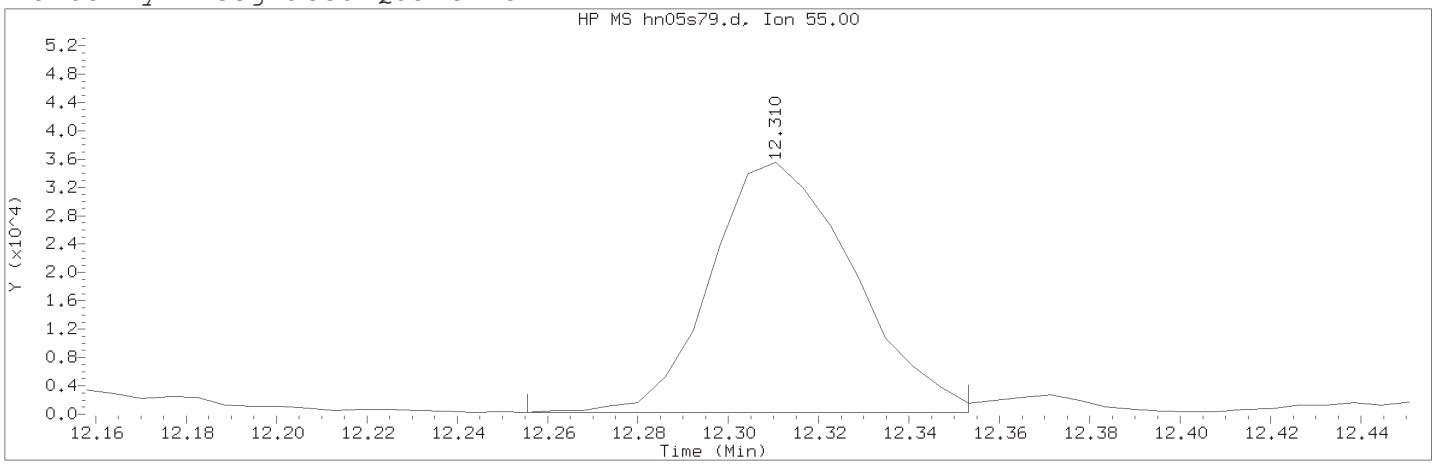
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s79.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:48 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS1 Lab Sample ID: 9876335MS

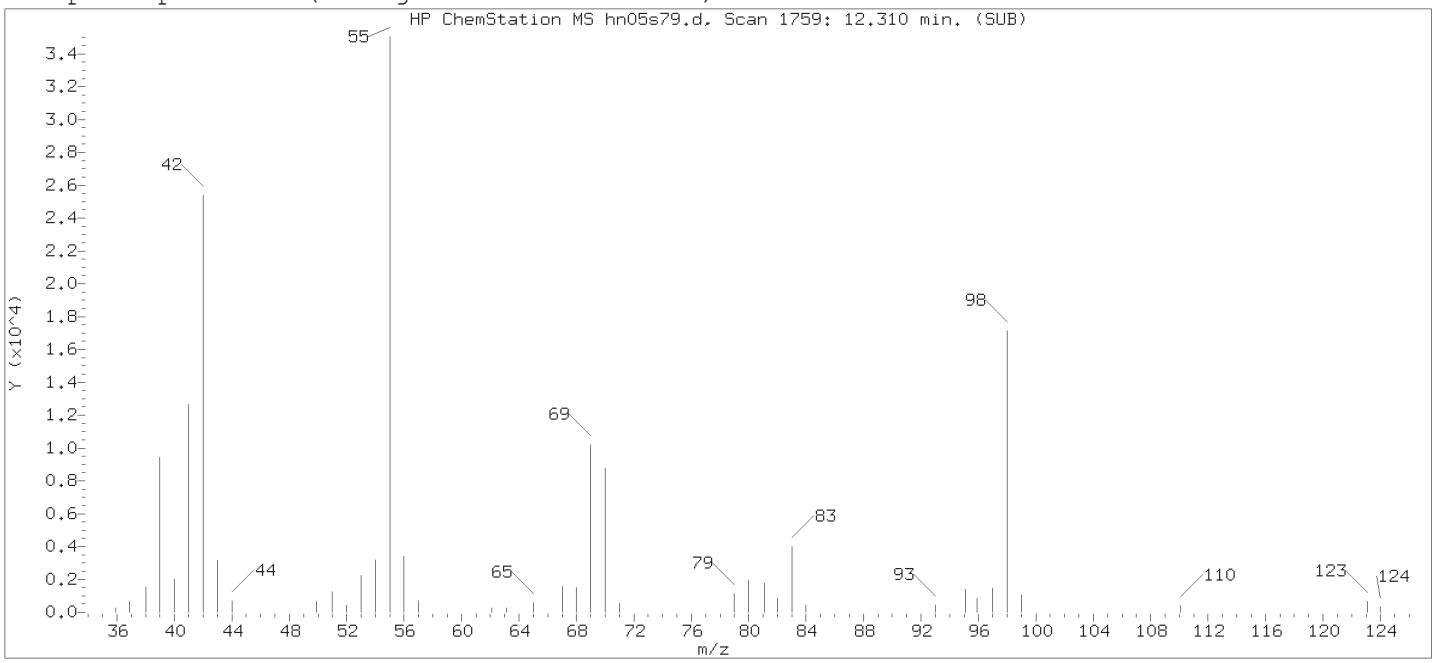
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 77106M
On-Column Amount (ng) : 100.1468
Integration start scan : 1749 Integration stop scan: 1765
Y at integration start : 277 Y at integration end: 277

Reason for manual integration: improper integration

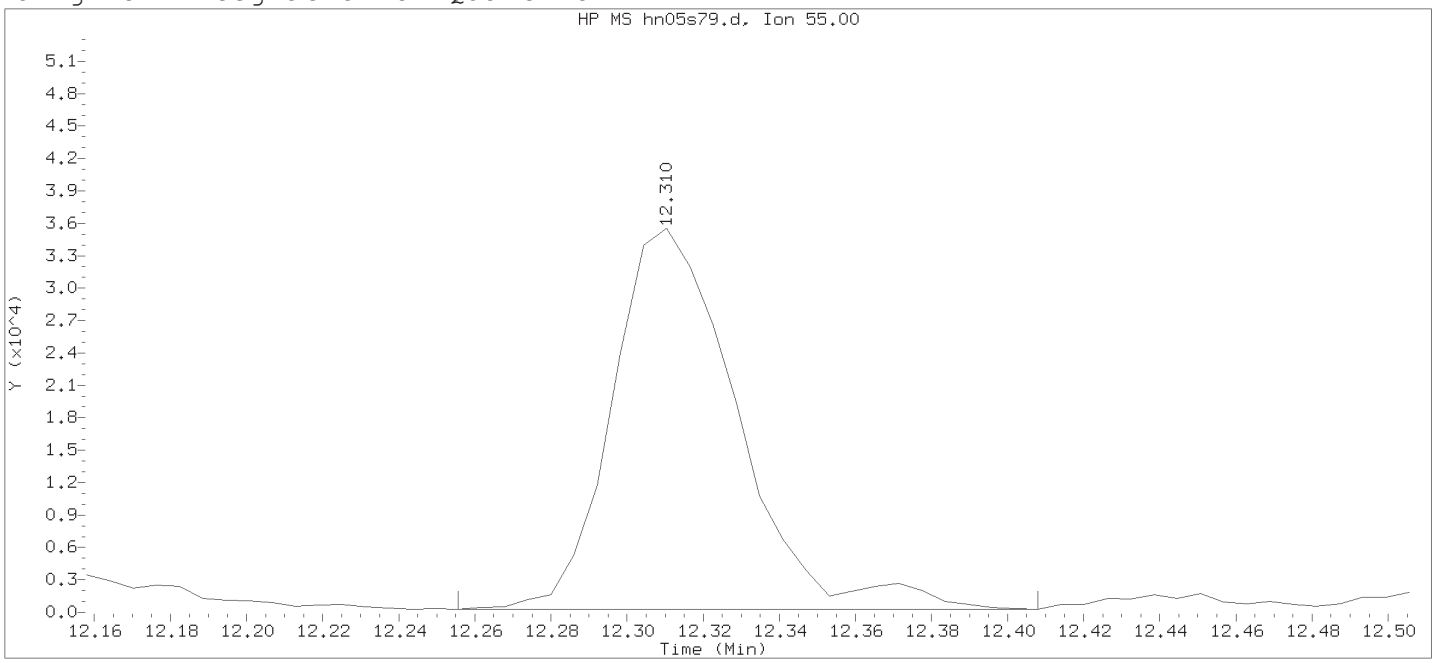
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

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/hn05s79.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:48 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: 06-Nov-2018 10:42 jkh09052

Sample Name: 14T04MS1 Lab Sample ID: 9876335MS

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area : 80507
On-column Amount (ng) : 104.5646
Integration start scan : 1749 Integration stop scan: 1774
Y at integration start : 277 Y at integration end: 277

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s80.d Injection date and time: **06-NOV-2018 04:09**
Data file Sample Info. Line: 14T04MSD1;9876336MSD;1;3;MSD;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094**
Date, time and analyst ID of latest file update: 06-Nov-2018 11:07 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 09:05
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18nov05b.b/hn05c01.d**

Bottle Code: **038B** 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	4.452(0.031)	470	65	86414	(-30)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2420278	(-5)	10.00	
97) Chlorobenzene-d5	11.378(0.006)	1606	117	1774386	(-5)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	919226	(0)	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	603000	9.885	99%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531(-0.001)	102	109332	10.281	103%		81 - 118
82) Toluene-d8	(3)	9.945(0.000)	98	2165442	9.482	95%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	840936	10.114	101%		85 - 114

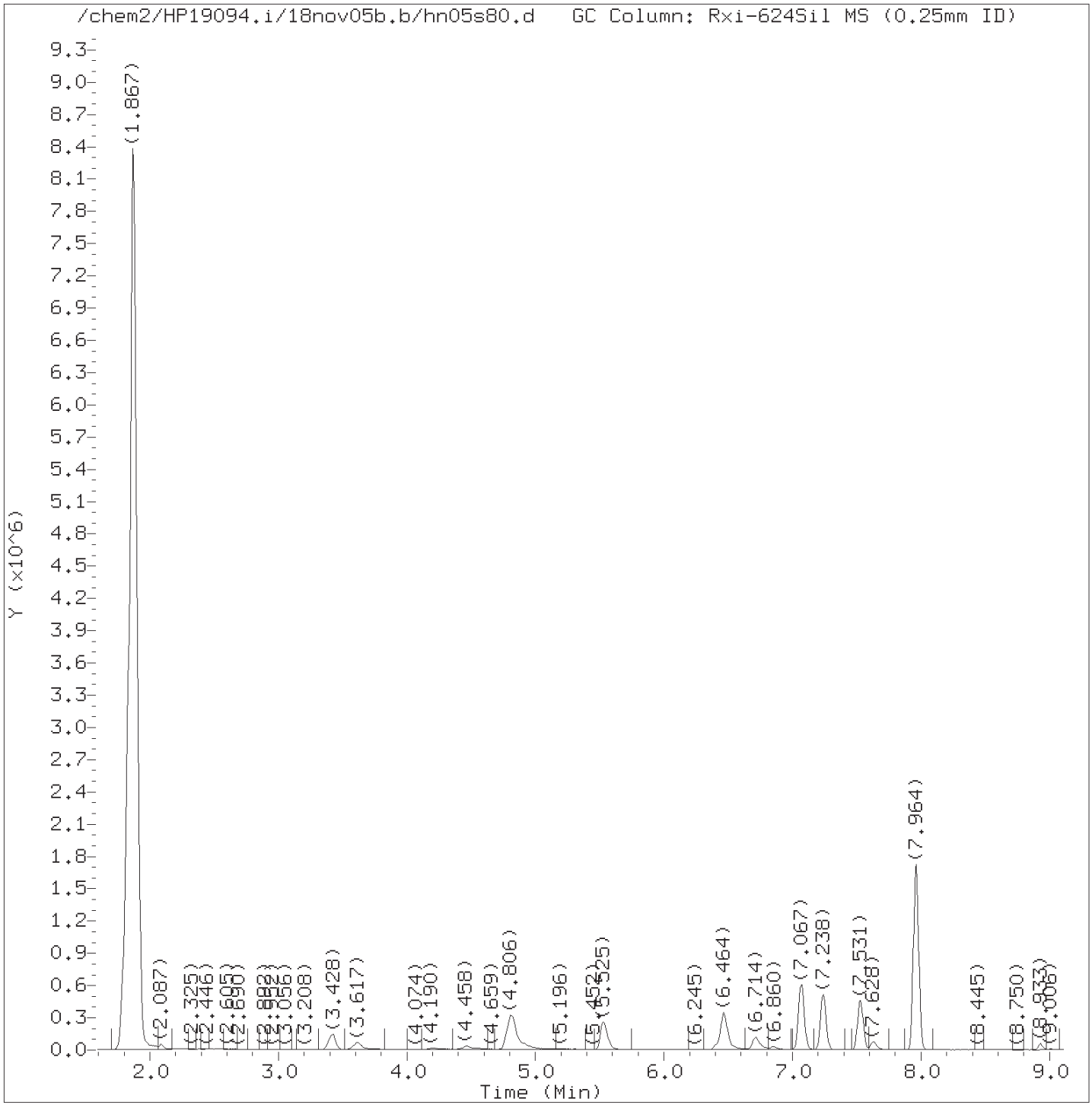
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
112) Cyclohexanone	(1)	12.316(-0.020)	55	50968M	89.552	89.55			2	25

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08. 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)

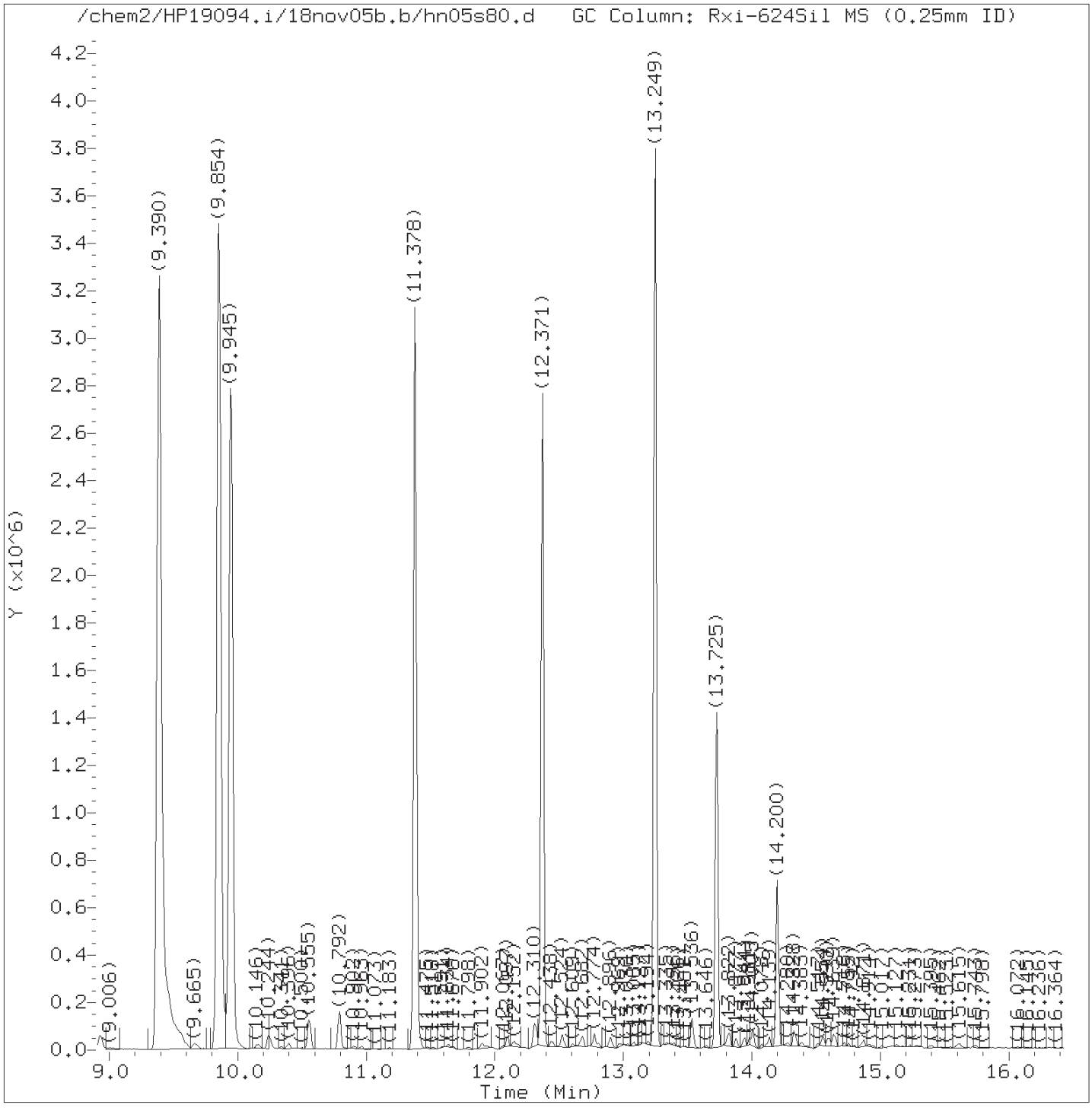
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s80.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:09 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD1 Lab Sample ID: 9876336MSD

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s80.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:09 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD1 Lab Sample ID: 9876336MSD

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s80.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:09 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: 06-Nov-2018 11:07 jkh09052

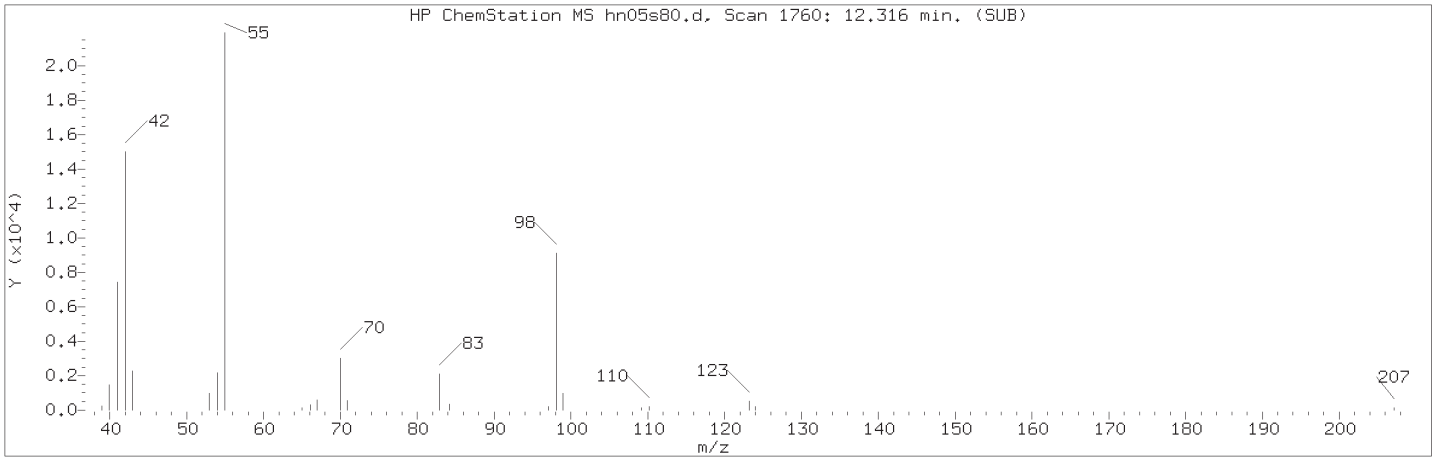
Sample Name: 14T04MSD1 Lab Sample ID: 9876336MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.452	65	86414	50.000
50)$Dibromofluoromethane	(2)	7.074	113	603000	9.885
57)$1,2-Dichloroethane-d4	(2)	7.531	102	109332	10.281
63)*Fluorobenzene	(2)	7.964	96	2420278	10.000
82)$Toluene-d8	(3)	9.945	98	2165442	9.482
97)*Chlorobenzene-d5	(3)	11.378	117	1774386	10.000
112) Cyclohexanone	(1)	12.316	55	50968M	89.552
111)$4-Bromofluorobenzene	(3)	12.371	95	840936	10.114
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	919226	10.000

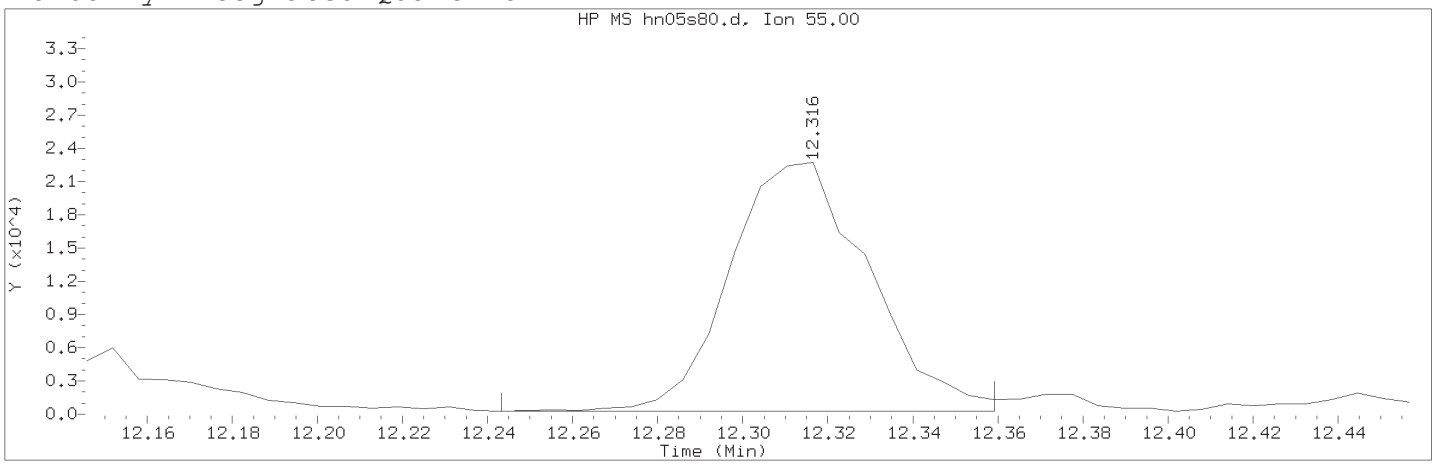
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s80.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:09 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD1 Lab Sample ID: 9876336MSD

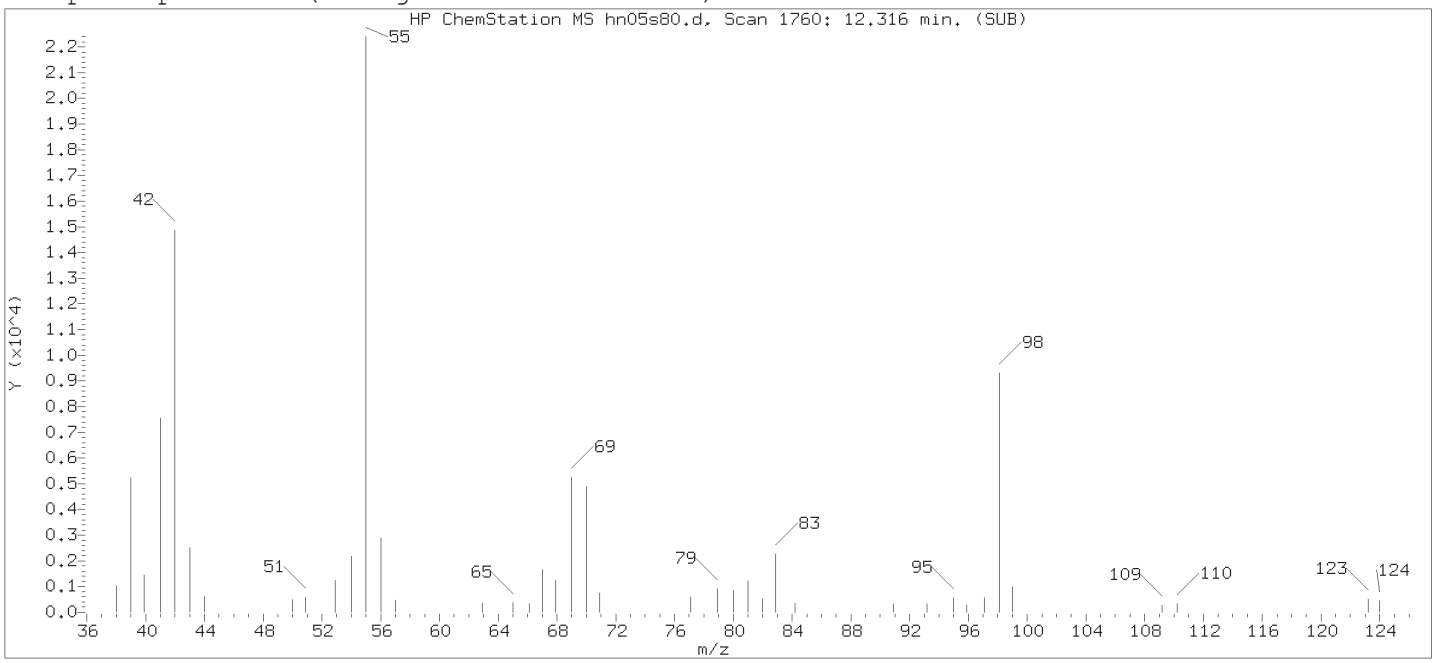
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1760
Retention Time (minutes): 12.316
Quant Ion : 55.00
Area (flag) : 50968M
On-Column Amount (ng) : 89.5515
Integration start scan : 1747 Integration stop scan: 1766
Y at integration start : 260 Y at integration end: 260

Reason for manual integration: improper integration

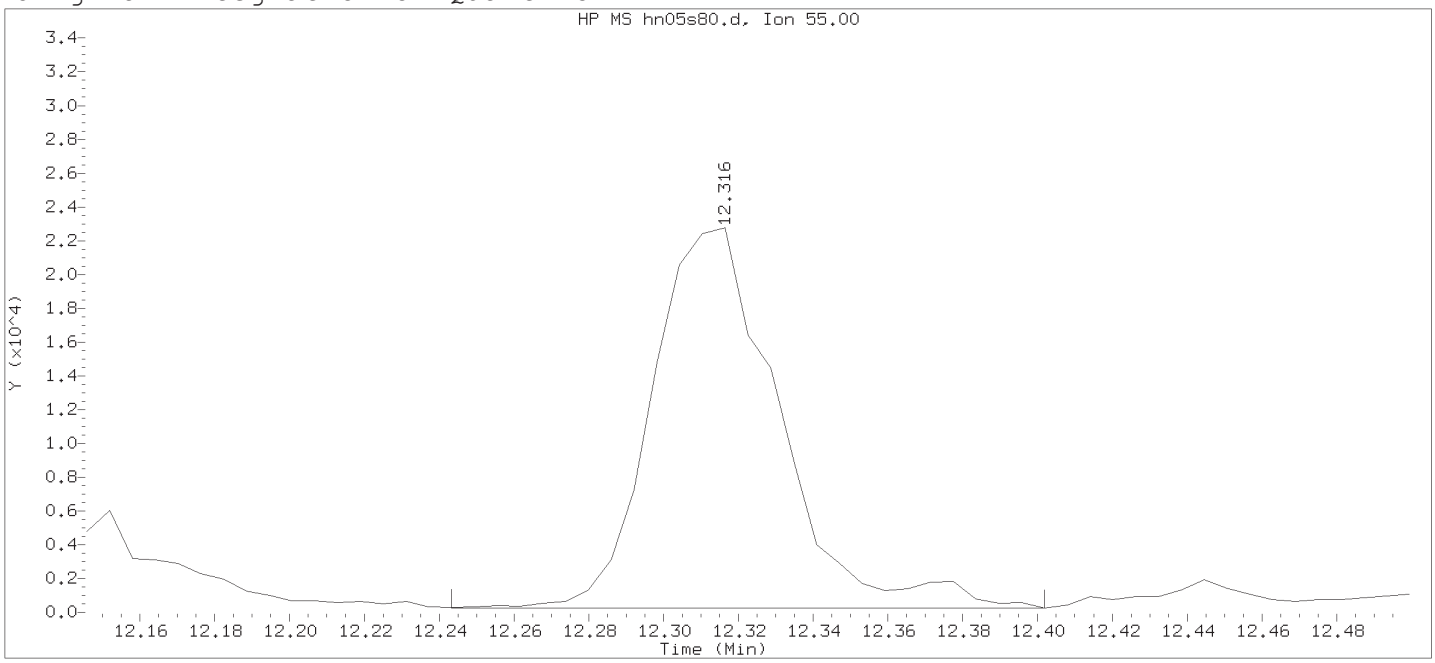
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

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/hn05s80.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 04:09 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: 06-Nov-2018 10:42 jkh09052

Sample Name: 14T04MSD1 Lab Sample ID: 9876336MSD

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1760
Retention Time (minutes): 12.316
Quant Ion : 55.00
Area : 52897
On-column Amount (ng) : 92.9408
Integration start scan : 1747 Integration stop scan: 1773
Y at integration start : 260 Y at integration end: 260

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18nov05b.b/hn05s77.d Injection date and time: **06-NOV-2018 03:05**
Data file Sample Info. Line: 14T04MS;9876335MS;1;3;MS;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 11:07 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 09:05
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	4.470(0.012)	473	65	99126	(-19)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2488944	(-3)	10.00	
97) Chlorobenzene-d5	11.378(0.006)	1606	117	1818323	(-3)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	926876	(0)	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	606886	9.674	97%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.531(-0.001)	102	111225M	10.171	102%		81 - 118
82) Toluene-d8	(3)	9.945(0.000)	98	2427621	10.373	104%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(-0.001)	95	843701	9.902	99%		85 - 114

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	LOQ (in sample)
1) Dichlorodifluoromethane	(2)	2.074(-0.000)	85	345002	3.547	3.55			0.05	0.5
2) Chloromethane	(2)	2.276(-0.000)	50	376721	3.955	3.95			0.06	0.5
5) Vinyl Chloride	(2)	2.398(0.000)	62	375597	4.210	4.21			0.1	0.5
7) Bromomethane	(2)	2.739(-0.000)	94	263515	3.800	3.80			0.07	0.5
8) Chloroethane	(2)	2.843(-0.000)	64	221147	4.087	4.09			0.07	0.5
10) Trichlorofluoromethane	(2)	3.148(-0.000)	101	463776	4.115	4.12			0.05	0.5
15) 1,1-Dichloroethene	(2)	3.751(0.000)	96	255546	5.236	5.24			0.06	0.5
16) Freon 113	(2)	3.782(0.001)	101	271130	4.714	4.71			0.06	0.5
14) Acetone	(1)	3.800(-0.002)	43	217427	36.801	36.80			0.9	5
18) Carbon Disulfide	(2)	4.074(0.000)	76	697737	4.493	4.49			0.06	1
21) Methyl Acetate	(1)	4.239(-0.002)	43	83730	5.048	5.05			0.1	1
23) Methylene Chloride	(2)	4.464(-0.000)	84	260894	4.739	4.74			0.07	0.5
31) trans-1,2-Dichloroethene	(2)	4.885(0.000)	96	287382	5.218	5.22			0.06	0.5
30) Methyl Tertiary Butyl Ether	(2)	4.879(-0.001)	73	462305	4.606	4.61			0.05	0.5
33) 1,1-Dichloroethane	(2)	5.550(0.000)	63	526482	5.020	5.02			0.07	0.5
39) cis-1,2-Dichloroethene	(2)	6.372(0.000)	96	308222	5.065	5.06			0.05	0.5
38) 2-Butanone	(1)	6.342(-0.002)	43	408483	42.237	42.24			0.6	5
49) Chloroform	(2)	6.854(0.000)	83	513410	5.266	5.27			0.09	0.5
51) 1,1,1-Trichloroethane	(2)	7.092(-0.000)	97	428642	5.140	5.14			0.06	0.5
52) Cyclohexane	(2)	7.189(-0.000)	56	519360	4.771	4.77			0.05	0.5
54) Carbon Tetrachloride	(2)	7.299(-0.000)	117	378616	5.286	5.29			0.07	0.5
58) Benzene	(2)	7.561(0.000)	78	1157476	4.955	4.95			0.05	0.5
59) 1,2-Dichloroethane	(2)	7.634(0.000)	62	254981	4.743	4.74			0.05	0.5
67) Trichloroethene	(2)	8.439(-0.000)	95	299933	5.014	5.01			0.06	0.5
69) Methylcyclohexane	(2)	8.750(-0.000)	83	531484	4.705	4.70			0.05	0.5
70) 1,2-Dichloropropane	(2)	8.780(-0.000)	63	286013	5.046	5.05			0.06	0.5
74) Bromodichloromethane	(2)	9.122(-0.000)	83	319089	5.008	5.01			0.05	0.5
80) cis-1,3-Dichloropropene	(2)	9.646(-0.000)	75	365610	4.928	4.93			0.05	0.5
81) 4-Methyl-2-Pentanone	(1)	9.811(-0.005)	43	683644M	28.418	28.42			0.7	5

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:07. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s77.d Injection date and time: **06-NOV-2018 03:05**
Data file Sample Info. Line: 14T04MS;9876335MS;1;3;MS;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094AA**
Date, time and analyst ID of latest file update: 06-Nov-2018 11:07 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 09:05
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**

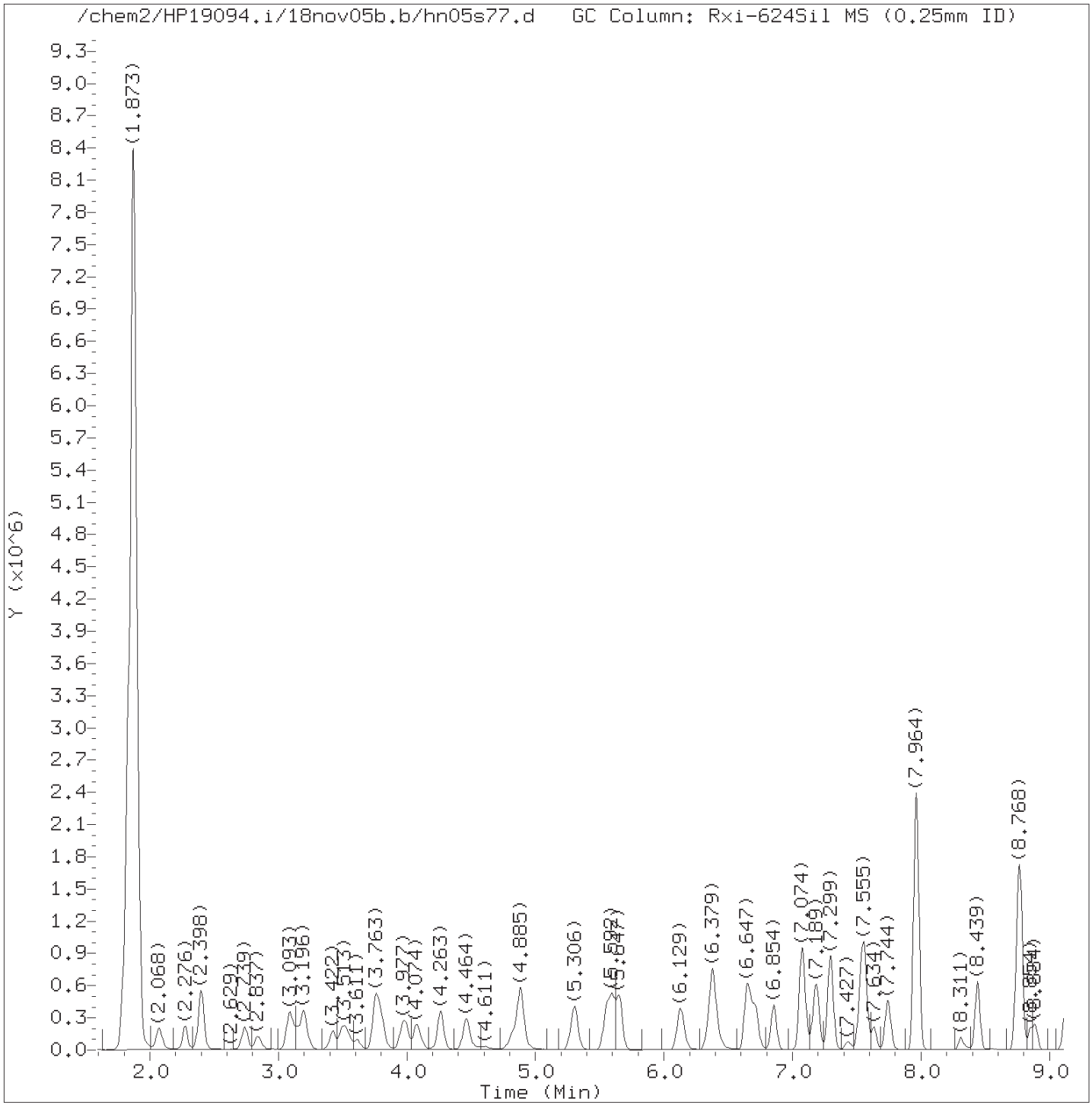
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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)
83) Toluene	(3)	10.024(-0.000)	92	729438	5.406	5.41			0.07	0.5
84) trans-1,3-Dichloropropene	(3)	10.268(0.000)	75	274380	5.277	5.28			0.06	0.5
88) 1,1,2-Trichloroethane	(3)	10.475(-0.000)	97	165550	5.332	5.33			0.06	0.5
89) Tetrachloroethene	(3)	10.561(-0.000)	166	332518	5.454	5.45			0.06	0.5
91) 2-Hexanone	(1)	10.676(-0.006)	43	468113	28.587	28.59			0.6	5
93) Dibromochloromethane	(3)	10.847(-0.000)	129	195299	5.248	5.25			0.07	0.5
95) 1,2-Dibromoethane	(3)	10.957(-0.000)	107	153343	5.269	5.27			0.06	0.5
98) Chlorobenzene	(3)	11.408(-0.000)	112	778110	5.435	5.44			0.06	0.5
100) Ethylbenzene	(3)	11.487(-0.000)	91	1413464	5.360	5.36			0.06	0.5
101) m+p-Xylene	(3)	11.603(-0.000)	106	1052838	10.763	10.76			0.1	0.5
104) o-Xylene	(3)	11.926(-0.000)	106	503656	5.386	5.39			0.05	0.5
105) Xylene (Total)	(3)		106	1556494	16.149	16.15			0.1	0.5
106) Styrene	(3)	11.945(-0.000)	104	798144	5.334	5.33			0.05	0.5
107) Bromoform	(3)	12.103(-0.000)	173	102495	5.011	5.01			0.3	1
108) Isopropylbenzene	(3)	12.225(-0.000)	105	1382426	5.415	5.41			0.05	0.5
113) 1,1,2,2-Tetrachloroethane	(4)	12.469(0.000)	83	190255	5.175	5.17			0.07	0.5
131) 1,3-Dichlorobenzene	(4)	13.194(0.000)	146	578743	5.211	5.21			0.06	0.5
134) 1,4-Dichlorobenzene	(4)	13.268(0.000)	146	573006	5.256	5.26			0.07	0.5
139) 1,2-Dichlorobenzene	(4)	13.524(0.000)	146	497793	5.080	5.08			0.06	0.5
143) 1,2-Dibromo-3-chloropropane	(1)	14.066(-0.008)	155	24359	5.974	5.97			0.1	0.5
145) 1,2,4-Trichlorobenzene	(4)	14.615(0.000)	180	311349	4.627	4.63			0.06	0.5

Total number of targets = 50

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:07. 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)

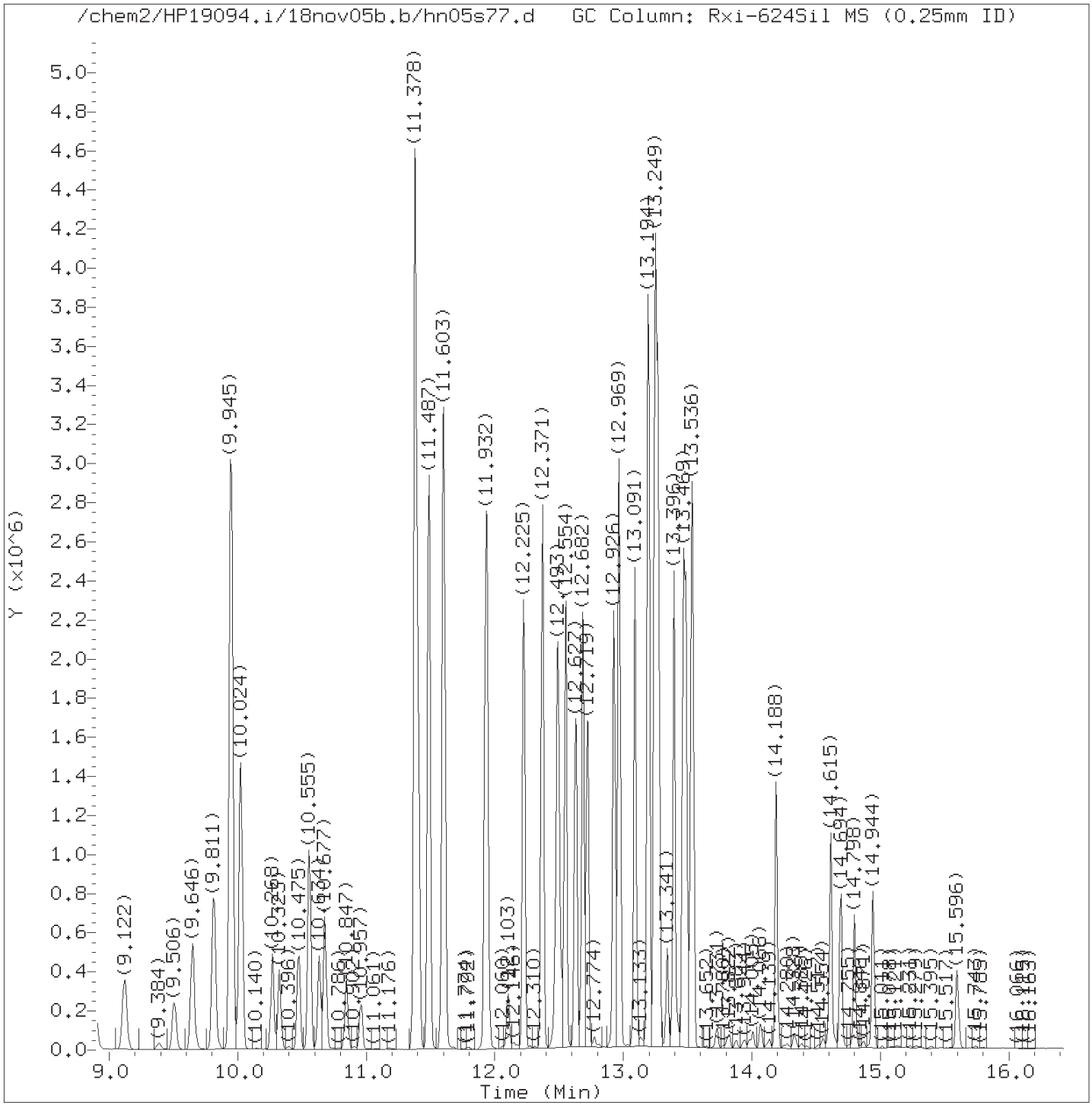
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	345002	3.547
2) Chloromethane	(2)	2.276	50	376721	3.955
5) Vinyl Chloride	(2)	2.398	62	375597	4.210
7) Bromomethane	(2)	2.739	94	263515	3.800
8) Chloroethane	(2)	2.843	64	221147	4.087
10) Trichlorofluoromethane	(2)	3.148	101	463776	4.115
15) 1,1-Dichloroethene	(2)	3.751	96	255546	5.236
16) Freon 113	(2)	3.782	101	271130	4.714
14) Acetone	(1)	3.800	43	217427	36.801
18) Carbon Disulfide	(2)	4.074	76	697737	4.493
21) Methyl Acetate	(1)	4.239	43	83730	5.048
23) Methylene Chloride	(2)	4.464	84	260894	4.739
26)*t-Butyl Alcohol-d10	(1)	4.470	65	99126	50.000
30) Methyl Tertiary Butyl Ether	(2)	4.879	73	462305	4.606
31) trans-1,2-Dichloroethene	(2)	4.885	96	287382	5.218
33) 1,1-Dichloroethane	(2)	5.550	63	526482	5.020
38) 2-Butanone	(1)	6.342	43	408483	42.237
39) cis-1,2-Dichloroethene	(2)	6.373	96	308222	5.065
49) Chloroform	(2)	6.854	83	513410	5.266
50)$Dibromofluoromethane	(2)	7.074	113	606886	9.674
51) 1,1,1-Trichloroethane	(2)	7.092	97	428642	5.140
52) Cyclohexane	(2)	7.189	56	519360	4.771
54) Carbon Tetrachloride	(2)	7.299	117	378616	5.286
57)$1,2-Dichloroethane-d4	(2)	7.531	102	111225M	10.171
58) Benzene	(2)	7.561	78	1157476	4.955
59) 1,2-Dichloroethane	(2)	7.634	62	254981	4.743
63)*Fluorobenzene	(2)	7.964	96	2488944	10.000
67) Trichloroethene	(2)	8.439	95	299933	5.014
69) Methylcyclohexane	(2)	8.750	83	531484	4.705
70) 1,2-Dichloropropane	(2)	8.781	63	286013	5.046
74) Bromodichloromethane	(2)	9.122	83	319089	5.008
80) cis-1,3-Dichloropropene	(2)	9.646	75	365610	4.928
81) 4-Methyl-2-Pentanone	(1)	9.811	43	683644M	28.418
82)$Toluene-d8	(3)	9.945	98	2427621	10.373
83) Toluene	(3)	10.024	92	729438	5.406
84) trans-1,3-Dichloropropene	(3)	10.268	75	274380	5.277
88) 1,1,2-Trichloroethane	(3)	10.475	97	165550	5.332
89) Tetrachloroethene	(3)	10.561	166	332518	5.454

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 11:07.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 11:07 jkh09052

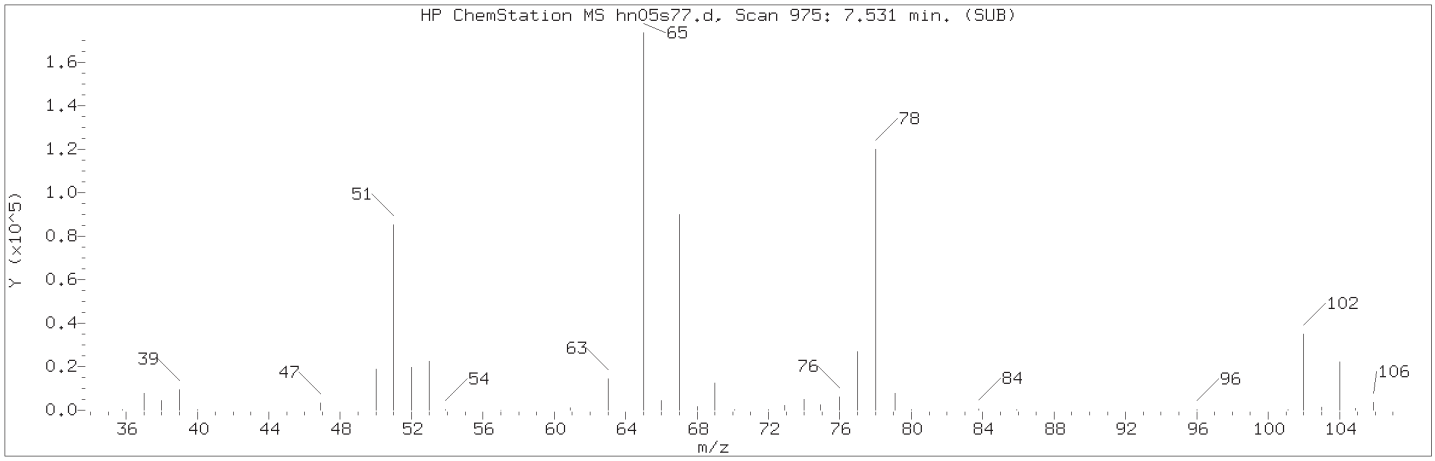
Sample Name: 14T04MS Lab Sample ID: 9876335MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 2-Hexanone	(1)	10.677	43	468113	28.587
93) Dibromochloromethane	(3)	10.847	129	195299	5.248
95) 1,2-Dibromoethane	(3)	10.957	107	153343	5.269
97)*Chlorobenzene-d5	(3)	11.378	117	1818323	10.000
98) Chlorobenzene	(3)	11.408	112	778110	5.435
100) Ethylbenzene	(3)	11.487	91	1413464	5.360
101) m+p-Xylene	(3)	11.603	106	1052838	10.763
105) Xylene (Total)	(3)		106	1556494	16.149
104) o-Xylene	(3)	11.926	106	503656	5.386
106) Styrene	(3)	11.945	104	798144	5.334
107) Bromoform	(3)	12.103	173	102495	5.011
108) Isopropylbenzene	(3)	12.225	105	1382426	5.415
111)$4-Bromofluorobenzene	(3)	12.371	95	843701	9.902
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	190255	5.175
131) 1,3-Dichlorobenzene	(4)	13.194	146	578743	5.211
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	926876	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	573006	5.256
139) 1,2-Dichlorobenzene	(4)	13.524	146	497793	5.080
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	24359	5.974
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	311349	4.627

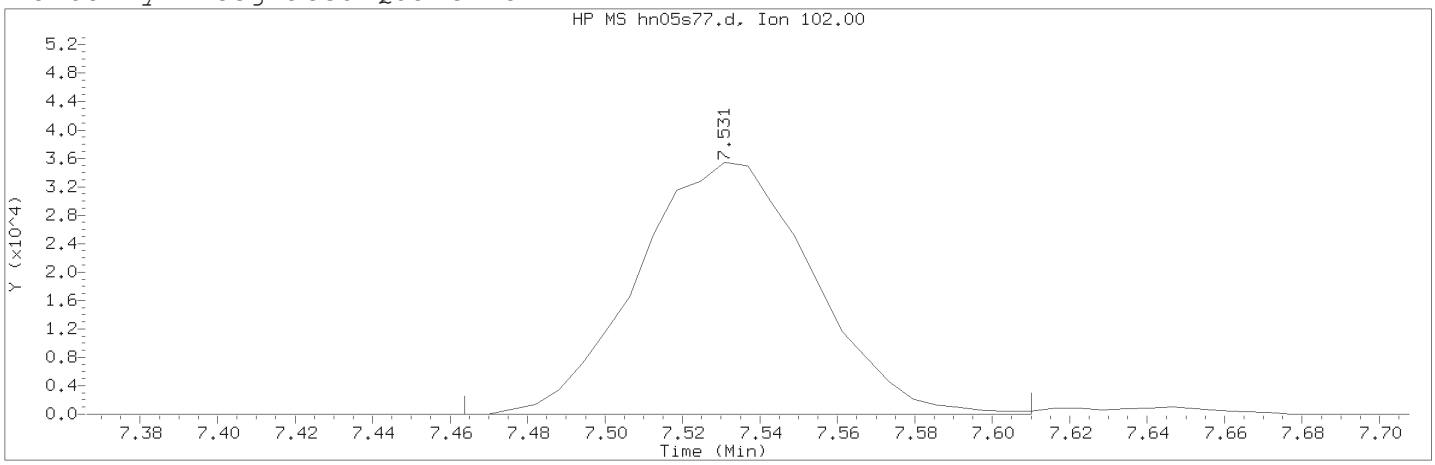
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

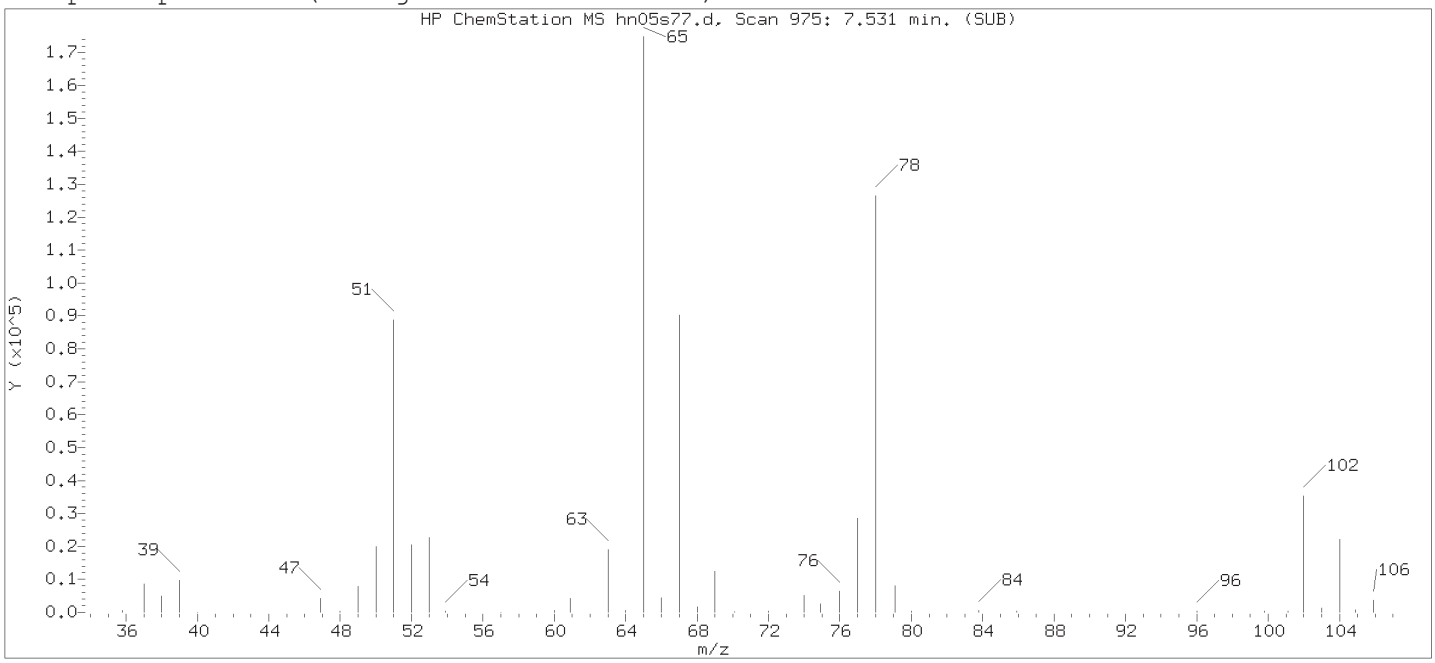
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area (flag) : 111225M
On-Column Amount (ng) : 10.1705
Integration start scan : 963 Integration stop scan: 987
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

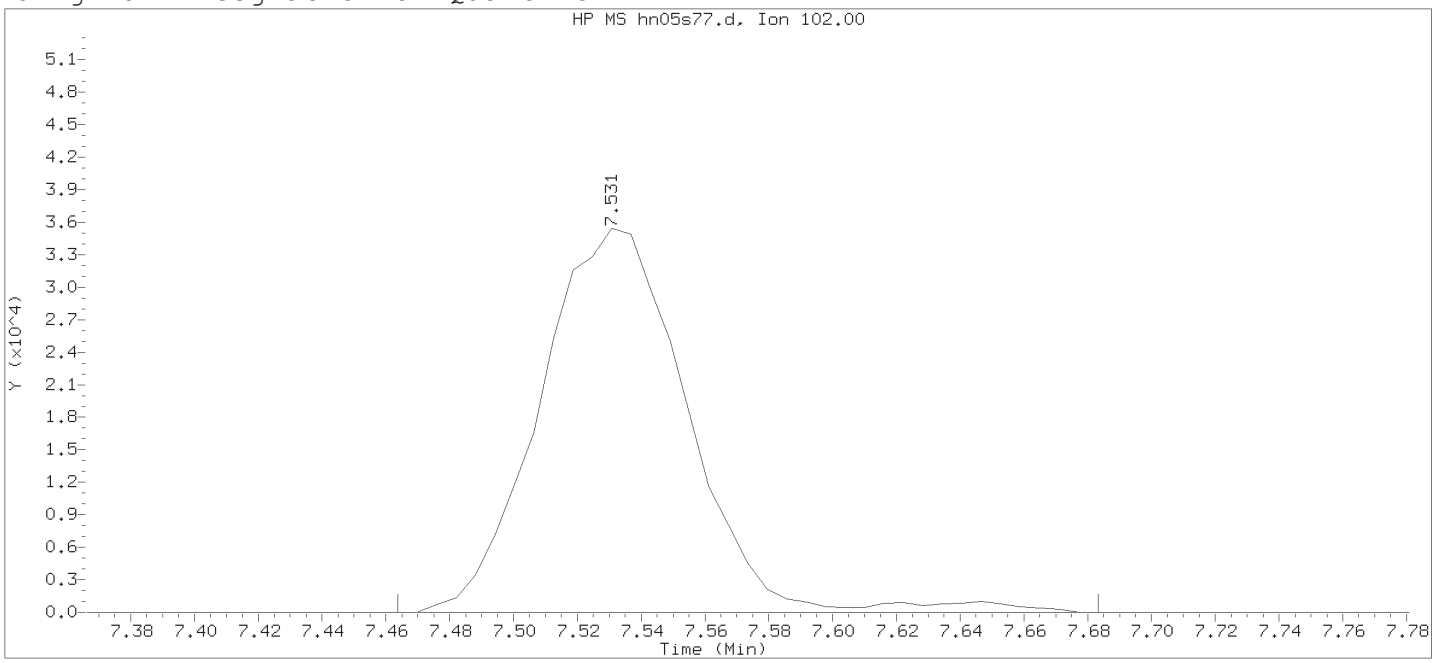
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052

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/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 Analyst ID: JGC14951

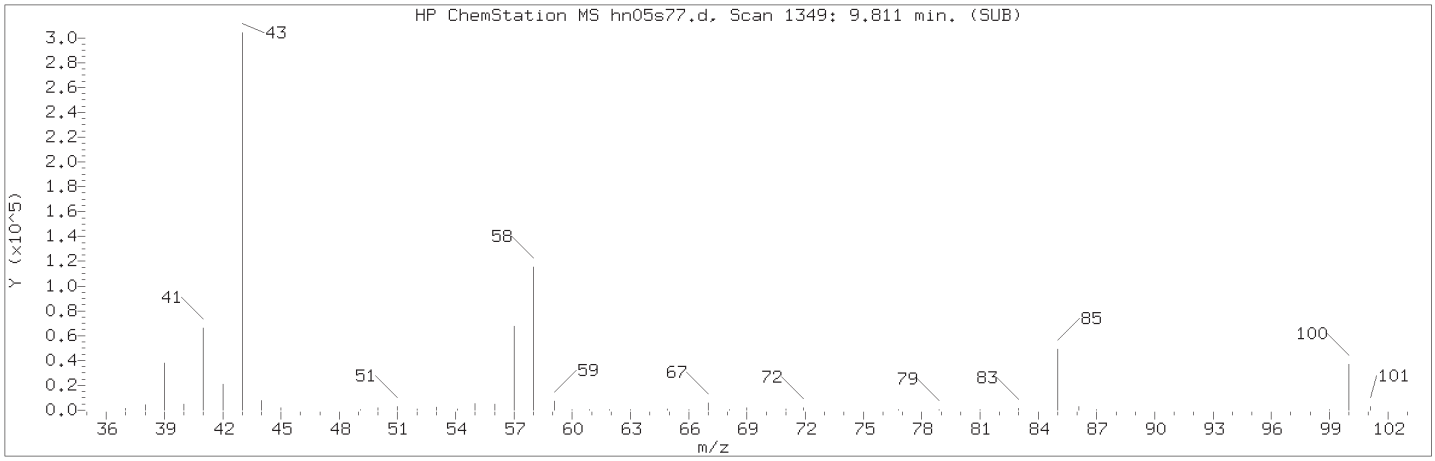
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 06-Nov-2018 10:41 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

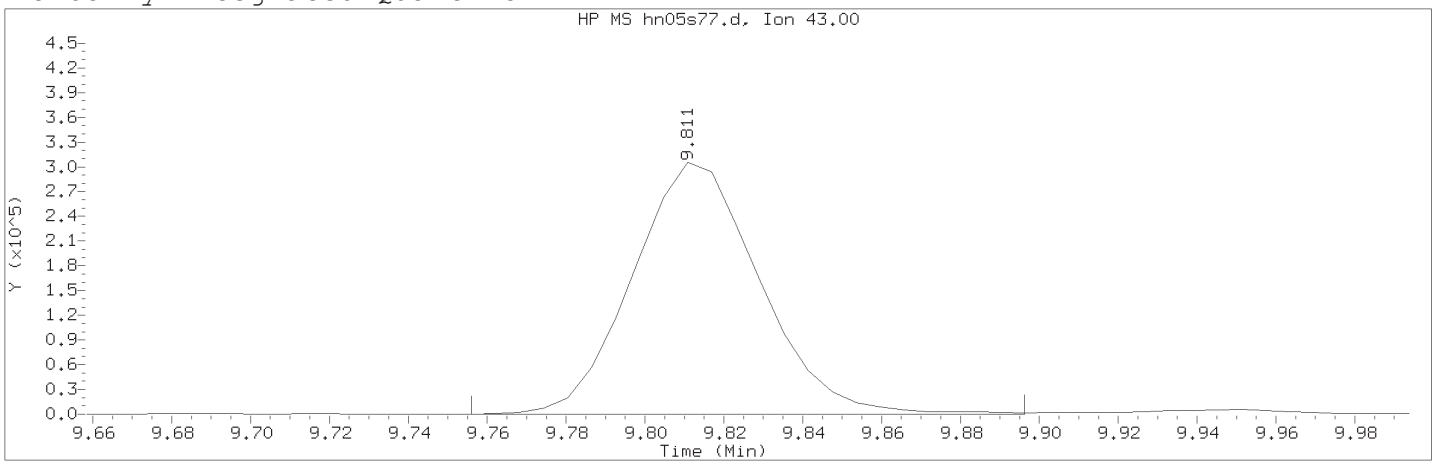
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area : 113746
On-column Amount (ng) : 10.4011
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

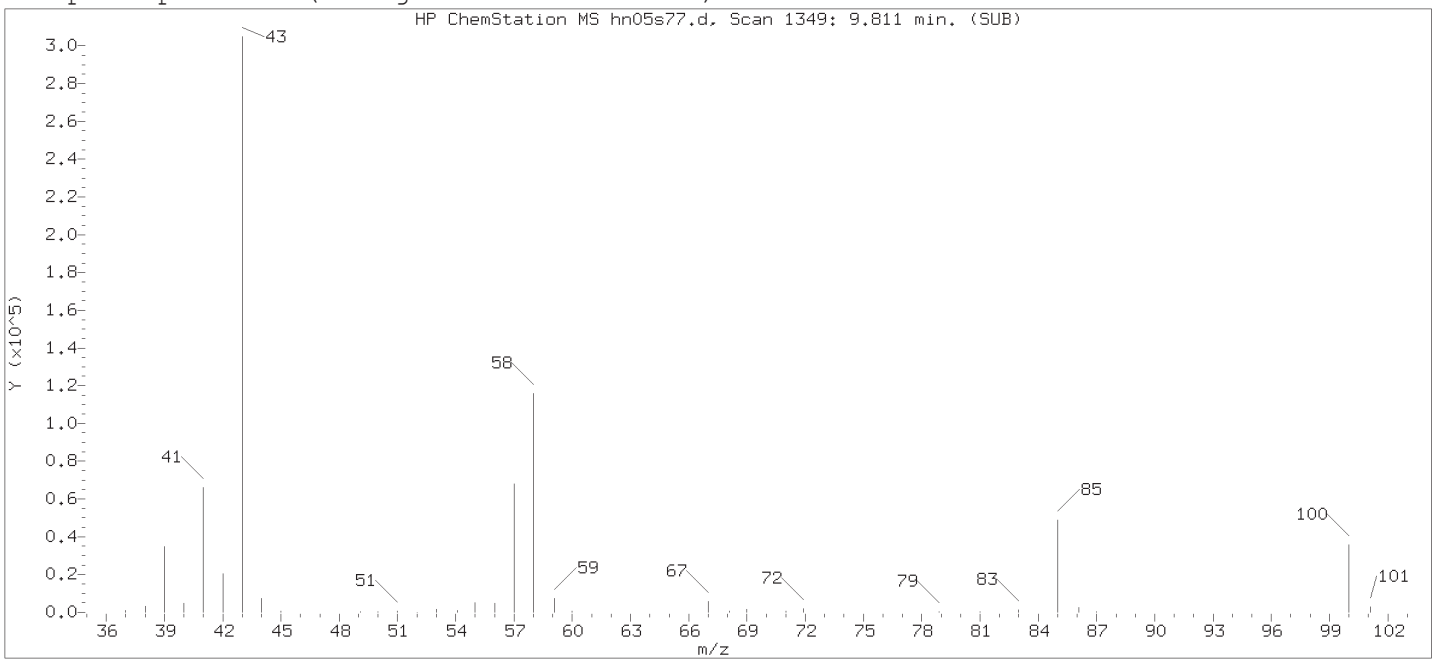
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 683644M
On-Column Amount (ng) : 28.4182
Integration start scan : 1339 Integration stop scan: 1362
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

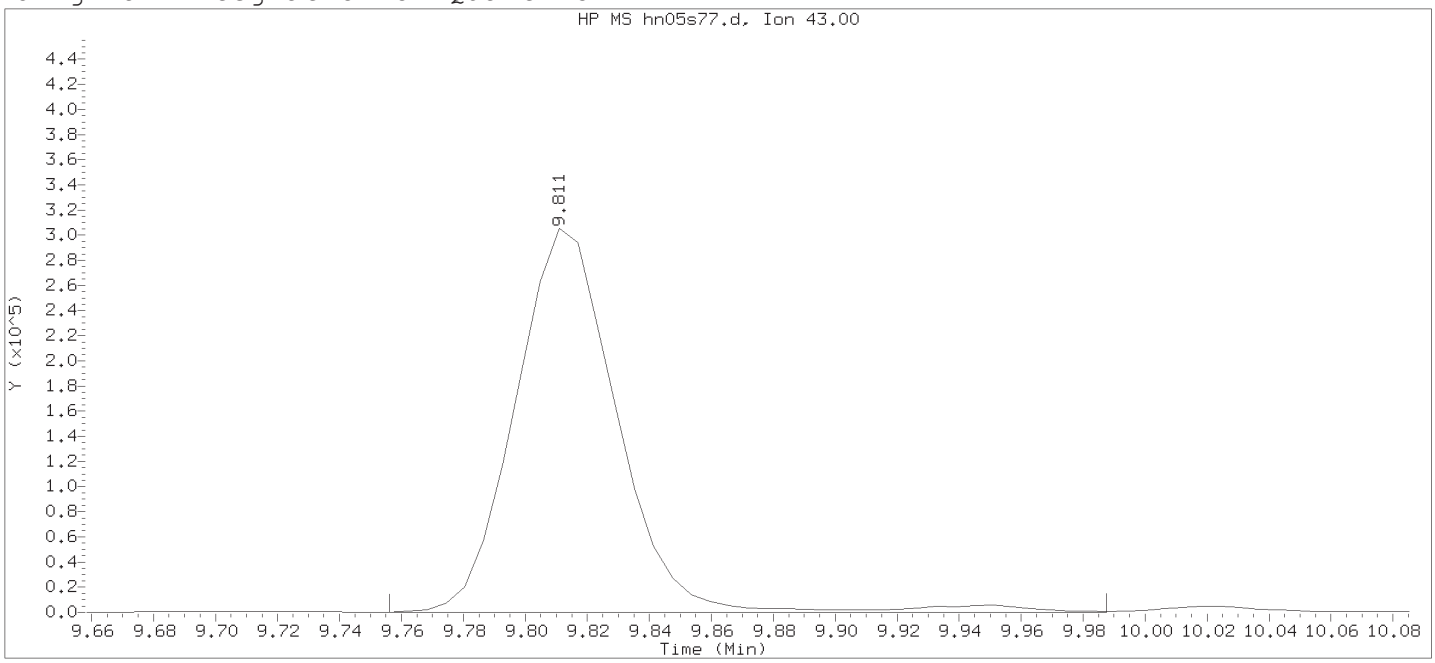
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052

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/hn05s77.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:05 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: 06-Nov-2018 10:41 jkh09052

Sample Name: 14T04MS Lab Sample ID: 9876335MS

Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area : 699465
On-column Amount (ng) : 29.0756
Integration start scan : 1339 Integration stop scan: 1377
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:07.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18nov05b.b/hn05s78.d Injection date and time: **06-NOV-2018 03:26**
Data file Sample Info. Line: 14T04MSD;9876336MSD;1;3;MSD;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094**
Date, time and analyst ID of latest file update: 06-Nov-2018 11:07 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 09:05
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	4.483(0.000)	475	65	102631M (-16)	50.00	
63) Fluorobenzene	7.970(0.000)	1047	96	2492076 (-3)	10.00	
97) Chlorobenzene-d5	11.384(0.000)	1607	117	1702614 (-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	915365 (-1)	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)	7.080(-0.001)	113	596249	9.493	95%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.537(-0.001)	102	109204M	9.973	100%		81 - 118
82) Toluene-d8	(3)	9.951(0.000)	98	2418642	11.037	110%		89 - 112
111) 4-Bromofluorobenzene	(3)	12.371(0.000)	95	837044	10.491	105%		85 - 114

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 (in sample)
1) Dichlorodifluoromethane	(2)	2.074(0.000)	85	366113	3.759	3.76			0.05	0.5
2) Chloromethane	(2)	2.282(-0.000)	50	394734	4.139	4.14			0.06	0.5
5) Vinyl Chloride	(2)	2.404(0.000)	62	401076	4.490	4.49			0.1	0.5
7) Bromomethane	(2)	2.745(-0.000)	94	275034	3.961	3.96			0.07	0.5
8) Chloroethane	(2)	2.843(0.000)	64	233262	4.306	4.31			0.07	0.5
10) Trichlorofluoromethane	(2)	3.154(-0.000)	101	499843	4.430	4.43			0.05	0.5
15) 1,1-Dichloroethene	(2)	3.763(-0.000)	96	267844	5.482	5.48			0.06	0.5
16) Freon 113	(2)	3.794(0.000)	101	288830	5.015	5.02			0.06	0.5
14) Acetone	(1)	3.806(-0.001)	43	222037M	36.298	36.30			0.9	5
18) Carbon Disulfide	(2)	4.080(0.000)	76	747113	4.805	4.81			0.06	1
21) Methyl Acetate	(1)	4.245(-0.001)	43	91359	5.320	5.32			0.1	1
23) Methylene Chloride	(2)	4.470(-0.000)	84	273144	4.955	4.96			0.07	0.5
31) trans-1,2-Dichloroethene	(2)	4.891(0.000)	96	300431	5.448	5.45			0.06	0.5
30) Methyl Tertiary Butyl Ether	(2)	4.885(-0.001)	73	492179	4.898	4.90			0.05	0.5
33) 1,1-Dichloroethane	(2)	5.556(0.000)	63	550313	5.241	5.24			0.07	0.5
39) cis-1,2-Dichloroethene	(2)	6.379(0.000)	96	331072	5.433	5.43			0.05	0.5
38) 2-Butanone	(1)	6.348(-0.000)	43	434324	43.375	43.38			0.6	5
49) Chloroform	(2)	6.860(-0.000)	83	538895	5.520	5.52			0.09	0.5
51) 1,1,1-Trichloroethane	(2)	7.092(-0.000)	97	457083	5.474	5.47			0.06	0.5
52) Cyclohexane	(2)	7.189(0.000)	56	549097	5.037	5.04			0.05	0.5
54) Carbon Tetrachloride	(2)	7.299(0.000)	117	395493	5.515	5.51			0.07	0.5
58) Benzene	(2)	7.561(0.000)	78	1221511	5.222	5.22			0.05	0.5
59) 1,2-Dichloroethane	(2)	7.640(0.000)	62	271187	5.038	5.04			0.05	0.5
67) Trichloroethene	(2)	8.445(-0.000)	95	327027	5.460	5.46			0.06	0.5
69) Methylcyclohexane	(2)	8.750(-0.000)	83	554830	4.905	4.91			0.05	0.5
70) 1,2-Dichloropropane	(2)	8.780(-0.000)	63	299830	5.283	5.28			0.06	0.5
74) Bromodichloromethane	(2)	9.122(-0.000)	83	338327	5.303	5.30			0.05	0.5
80) cis-1,3-Dichloropropene	(2)	9.652(-0.000)	75	392109	5.279	5.28			0.05	0.5

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18nov05b.b/hn05s78.d Injection date and time: **06-NOV-2018 03:26**
Data file Sample Info. Line: 14T04MSD;9876336MSD;1;3;MSD;TID14;DOD25;;hn05b10; Instrument ID: **HP19094.i** Batch: **H183094**
Date, time and analyst ID of latest file update: 06-Nov-2018 11:07 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 09:05
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**

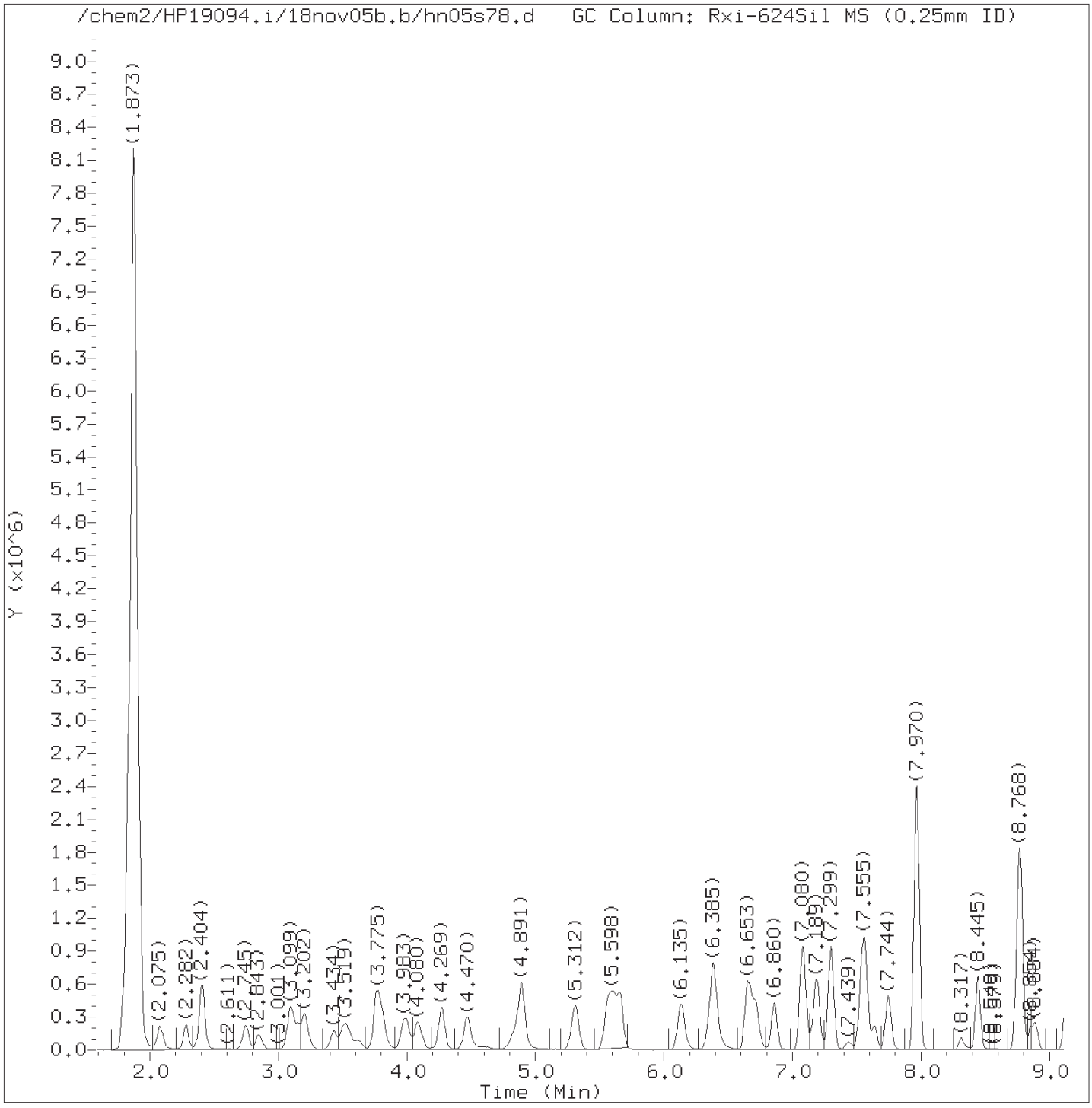
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
81) 4-Methyl-2-Pentanone	(1)	9.811(-0.000)	43	709165	28.472	28.47			0.7	5
83) Toluene	(3)	10.024(-0.000)	92	765391	6.058	6.06			0.07	0.5
84) trans-1,3-Dichloropropene	(3)	10.274(0.000)	75	292738	6.013	6.01			0.06	0.5
88) 1,1,2-Trichloroethane	(3)	10.475(-0.000)	97	177507	6.105	6.11			0.06	0.5
89) Tetrachloroethene	(3)	10.555(0.000)	166	353742	6.197	6.20			0.06	0.5
91) 2-Hexanone	(1)	10.676(-0.000)	43	506737	29.889	29.89			0.6	5
93) Dibromochloromethane	(3)	10.847(0.000)	129	208297	5.978	5.98			0.07	0.5
95) 1,2-Dibromoethane	(3)	10.957(-0.000)	107	162012	5.945	5.95			0.06	0.5
98) Chlorobenzene	(3)	11.408(-0.000)	112	806672	6.018	6.02			0.06	0.5
100) Ethylbenzene	(3)	11.487(-0.000)	91	1471406	5.959	5.96			0.06	0.5
101) m+p-Xylene	(3)	11.603(-0.000)	106	1109600	12.114	12.11			0.1	0.5
104) o-Xylene	(3)	11.926(-0.000)	106	524207	5.986	5.99			0.05	0.5
105) Xylene (Total)	(3)		106	1633807	18.101	18.10			0.1	0.5
106) Styrene	(3)	11.945(-0.000)	104	845160	6.032	6.03			0.05	0.5
107) Bromoform	(3)	12.103(-0.000)	173	108964	5.690	5.69			0.3	1
108) Isopropylbenzene	(3)	12.225(-0.000)	105	1460795	6.111	6.11			0.05	0.5
113) 1,1,2,2-Tetrachloroethane	(4)	12.469(0.000)	83	201637	5.553	5.55			0.07	0.5
131) 1,3-Dichlorobenzene	(4)	13.194(0.000)	146	604846	5.515	5.51			0.06	0.5
134) 1,4-Dichlorobenzene	(4)	13.268(0.000)	146	599316	5.567	5.57			0.07	0.5
139) 1,2-Dichlorobenzene	(4)	13.524(0.000)	146	532377	5.502	5.50			0.06	0.5
143) 1,2-Dibromo-3-chloropropane	(1)	14.072(-0.001)	155	25861	6.125	6.13			0.1	0.5
145) 1,2,4-Trichlorobenzene	(4)	14.615(0.000)	180	321283	4.834	4.83			0.06	0.5

Total number of targets = 50

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08. 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)

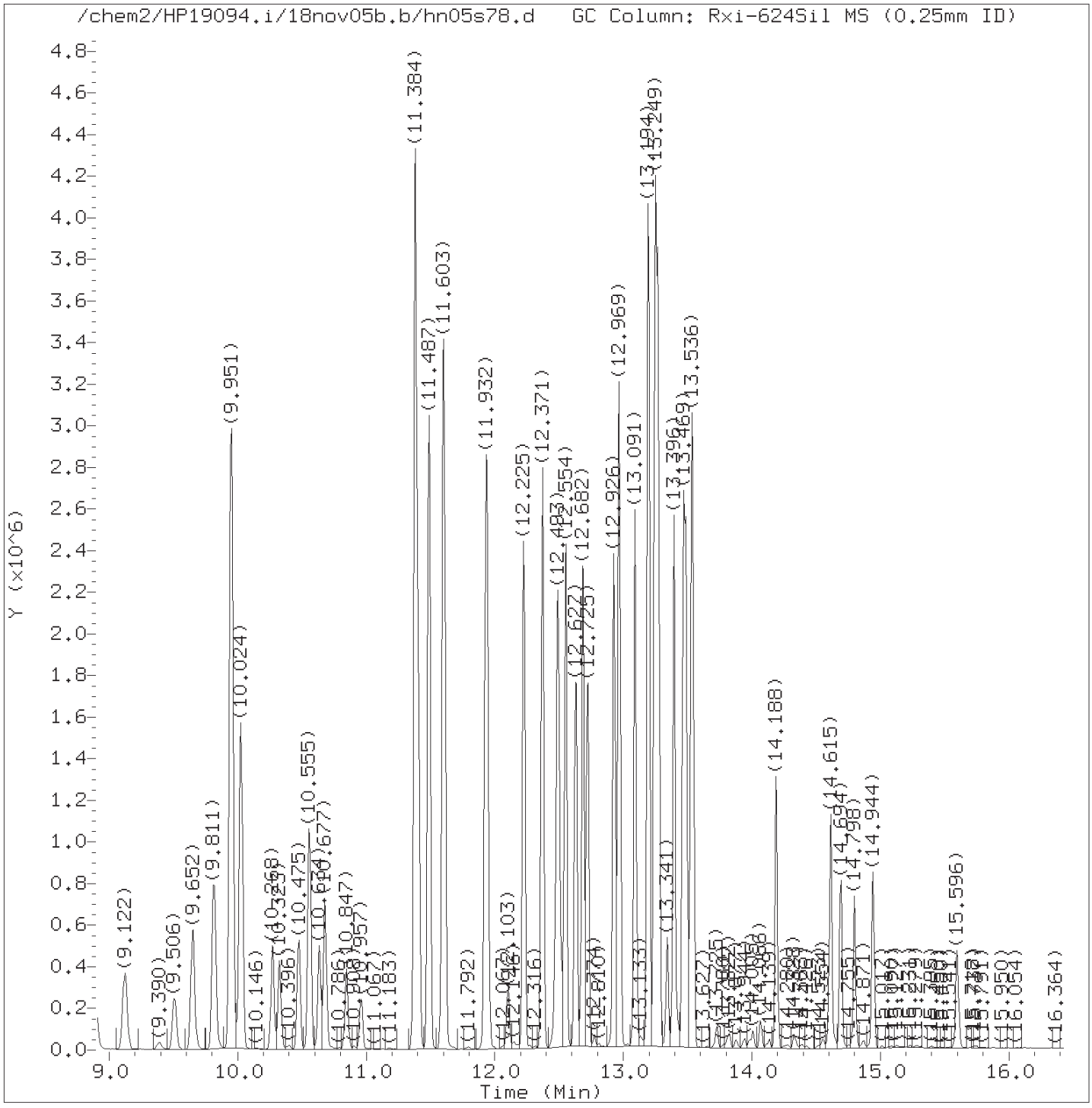
Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	366113	3.759
2) Chloromethane	(2)	2.282	50	394734	4.139
5) Vinyl Chloride	(2)	2.404	62	401076	4.490
7) Bromomethane	(2)	2.745	94	275034	3.961
8) Chloroethane	(2)	2.843	64	233262	4.306
10) Trichlorofluoromethane	(2)	3.154	101	499843	4.430
15) 1,1-Dichloroethene	(2)	3.763	96	267844	5.482
16) Freon 113	(2)	3.794	101	288830	5.015
14) Acetone	(1)	3.806	43	222037M	36.298
18) Carbon Disulfide	(2)	4.080	76	747113	4.805
21) Methyl Acetate	(1)	4.245	43	91359	5.320
23) Methylene Chloride	(2)	4.470	84	273144	4.955
26)*t-Butyl Alcohol-d10	(1)	4.483	65	102631M	50.000
30) Methyl Tertiary Butyl Ether	(2)	4.885	73	492179	4.898
31) trans-1,2-Dichloroethene	(2)	4.891	96	300431	5.448
33) 1,1-Dichloroethane	(2)	5.556	63	550313	5.241
38) 2-Butanone	(1)	6.348	43	434324	43.375
39) cis-1,2-Dichloroethene	(2)	6.379	96	331072	5.433
49) Chloroform	(2)	6.860	83	538895	5.520
50)$Dibromofluoromethane	(2)	7.080	113	596249	9.493
51) 1,1,1-Trichloroethane	(2)	7.092	97	457083	5.474
52) Cyclohexane	(2)	7.189	56	549097	5.037
54) Carbon Tetrachloride	(2)	7.299	117	395493	5.515
57)$1,2-Dichloroethane-d4	(2)	7.537	102	109204M	9.973
58) Benzene	(2)	7.561	78	1221511	5.222
59) 1,2-Dichloroethane	(2)	7.641	62	271187	5.038
63)*Fluorobenzene	(2)	7.970	96	2492076	10.000
67) Trichloroethene	(2)	8.445	95	327027	5.460
69) Methylcyclohexane	(2)	8.750	83	554830	4.905
70) 1,2-Dichloropropane	(2)	8.781	63	299830	5.283
74) Bromodichloromethane	(2)	9.122	83	338327	5.303
80) cis-1,3-Dichloropropene	(2)	9.652	75	392109	5.279
81) 4-Methyl-2-Pentanone	(1)	9.811	43	709165	28.472
82)$Toluene-d8	(3)	9.951	98	2418642	11.037
83) Toluene	(3)	10.024	92	765391	6.058
84) trans-1,3-Dichloropropene	(3)	10.274	75	292738	6.013
88) 1,1,2-Trichloroethane	(3)	10.475	97	177507	6.105
89) Tetrachloroethene	(3)	10.555	166	353742	6.197

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 11:08.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

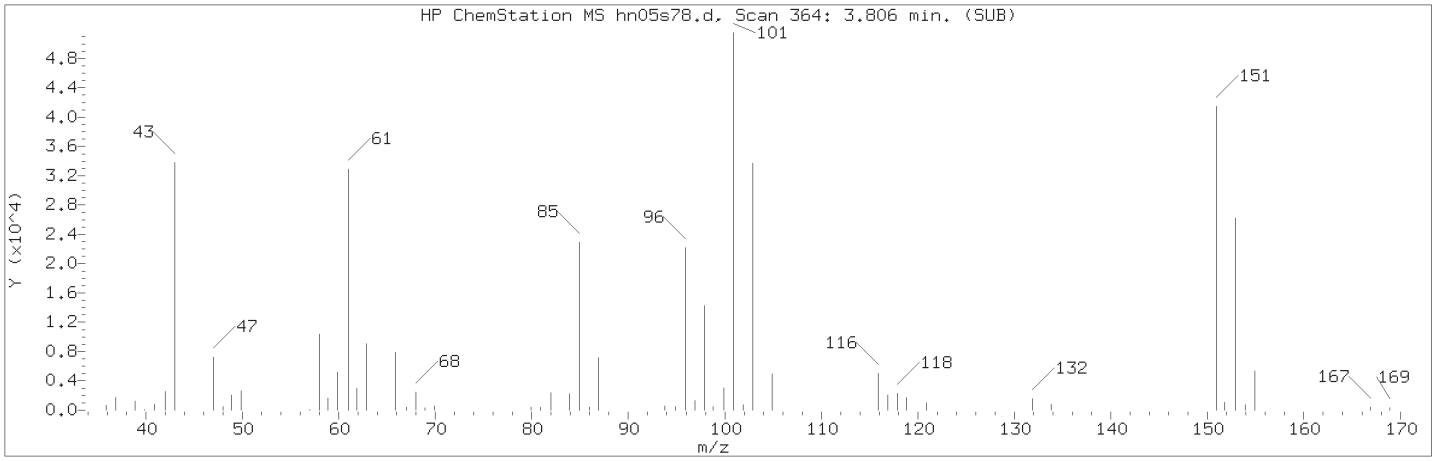
Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) 2-Hexanone	(1)	10.677	43	506737	29.889
93) Dibromochloromethane	(3)	10.847	129	208297	5.978
95) 1,2-Dibromoethane	(3)	10.957	107	162012	5.945
97)*Chlorobenzene-d5	(3)	11.384	117	1702614	10.000
98) Chlorobenzene	(3)	11.408	112	806672	6.018
100) Ethylbenzene	(3)	11.487	91	1471406	5.959
101) m+p-Xylene	(3)	11.603	106	1109600	12.114
105) Xylene (Total)	(3)		106	1633807	18.101
104) o-Xylene	(3)	11.926	106	524207	5.986
106) Styrene	(3)	11.945	104	845160	6.032
107) Bromoform	(3)	12.103	173	108964	5.690
108) Isopropylbenzene	(3)	12.225	105	1460795	6.111
111)$4-Bromofluorobenzene	(3)	12.371	95	837044	10.491
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	201637	5.553
131) 1,3-Dichlorobenzene	(4)	13.194	146	604846	5.515
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	915365	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	599316	5.567
139) 1,2-Dichlorobenzene	(4)	13.524	146	532377	5.502
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	25861	6.125
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	321283	4.834

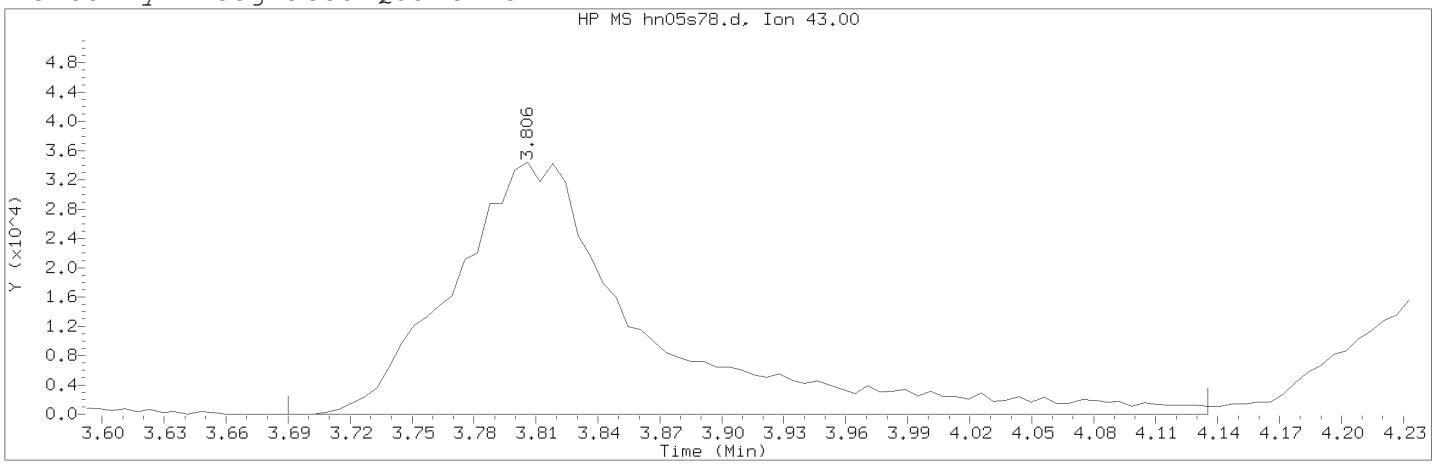
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

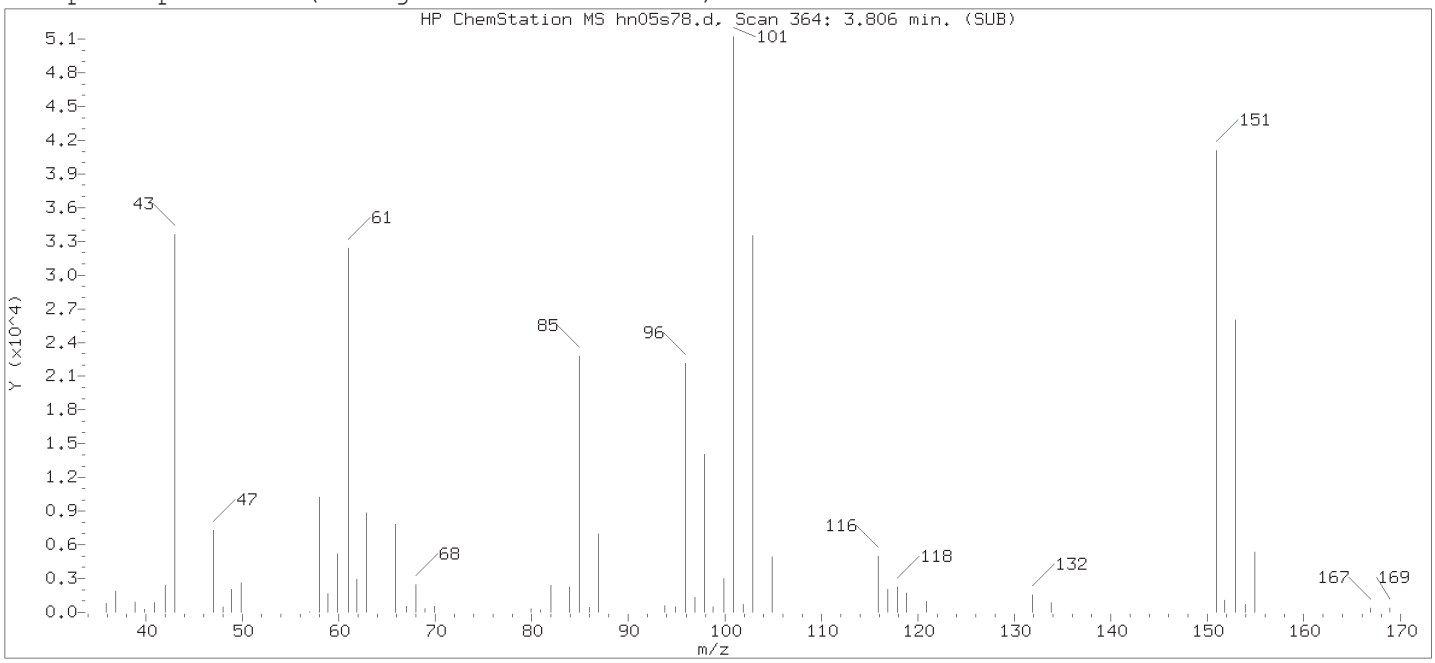
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area (flag) : 222037M
On-Column Amount (ng) : 36.2977
Integration start scan : 344 Integration stop scan: 417
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

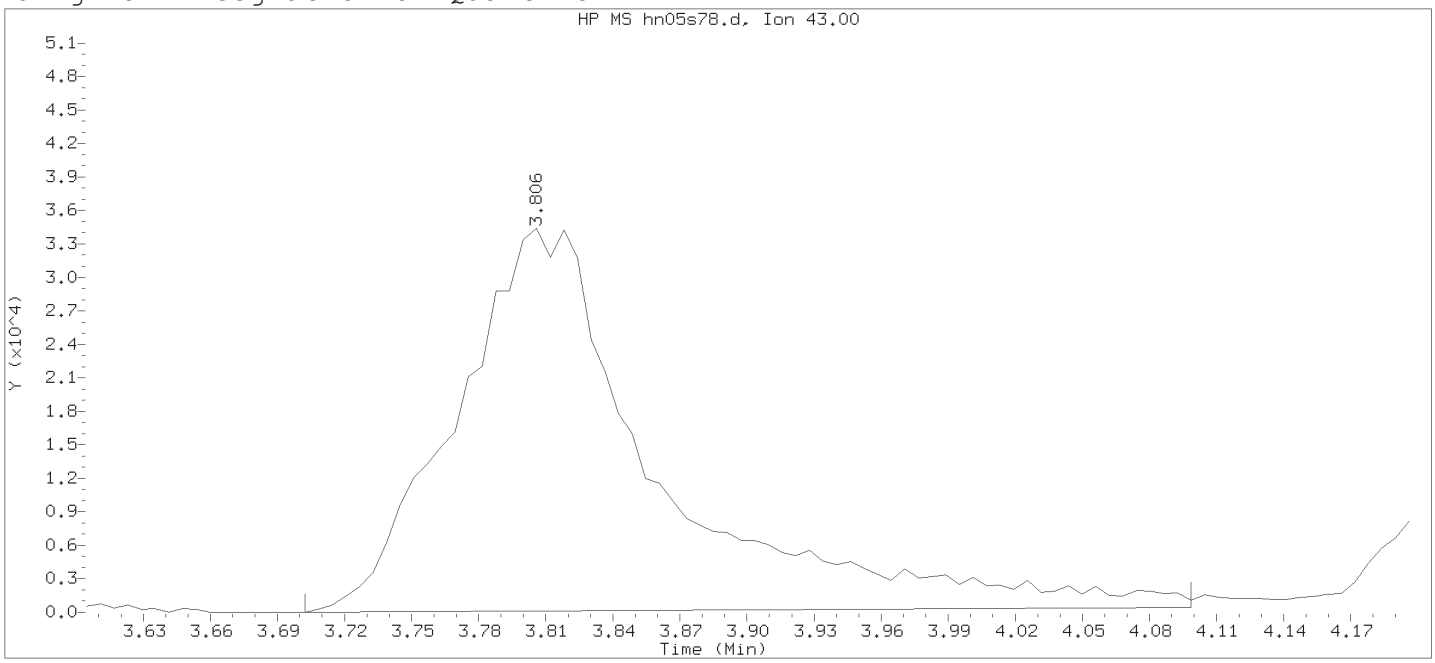
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

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/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 Analyst ID: JGC14951

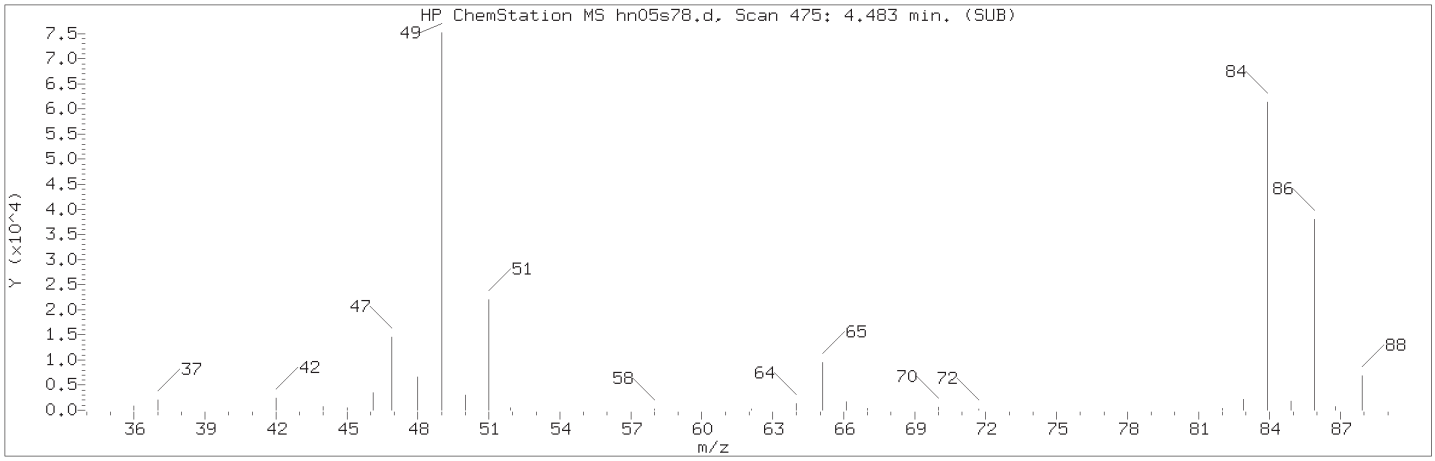
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 06-Nov-2018 10:42 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

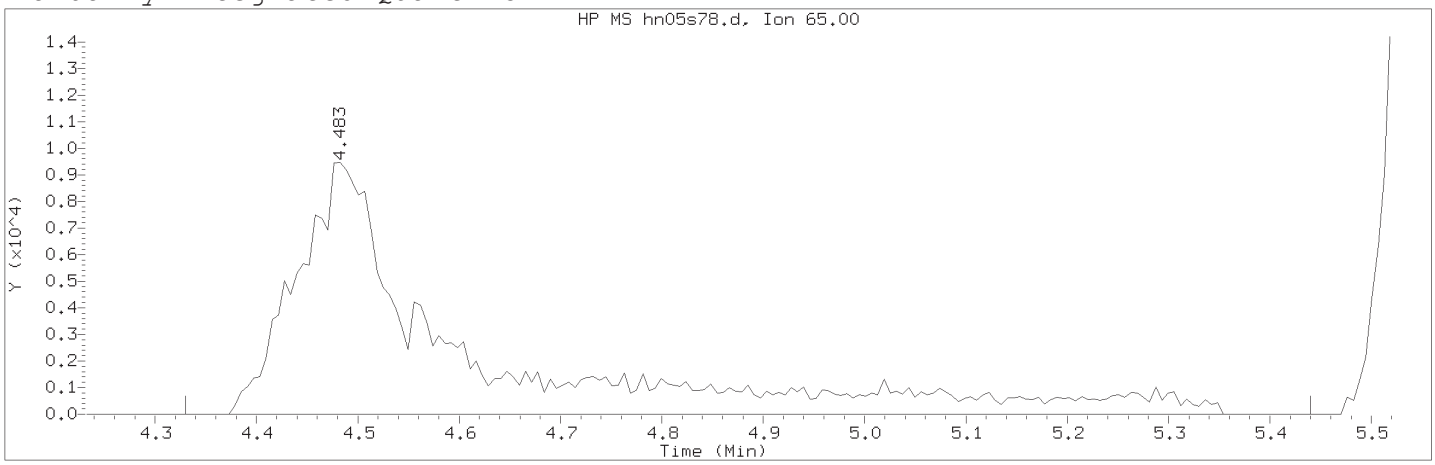
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 364		
Retention Time (minutes)	: 3.806		
Quant Ion	: 43.00		
Area	: 213671		
On-column Amount (ng)	: 41.4181		
Integration start scan	: 346	Integration stop scan:	411
Y at integration start	: 0	Y at integration end:	449

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

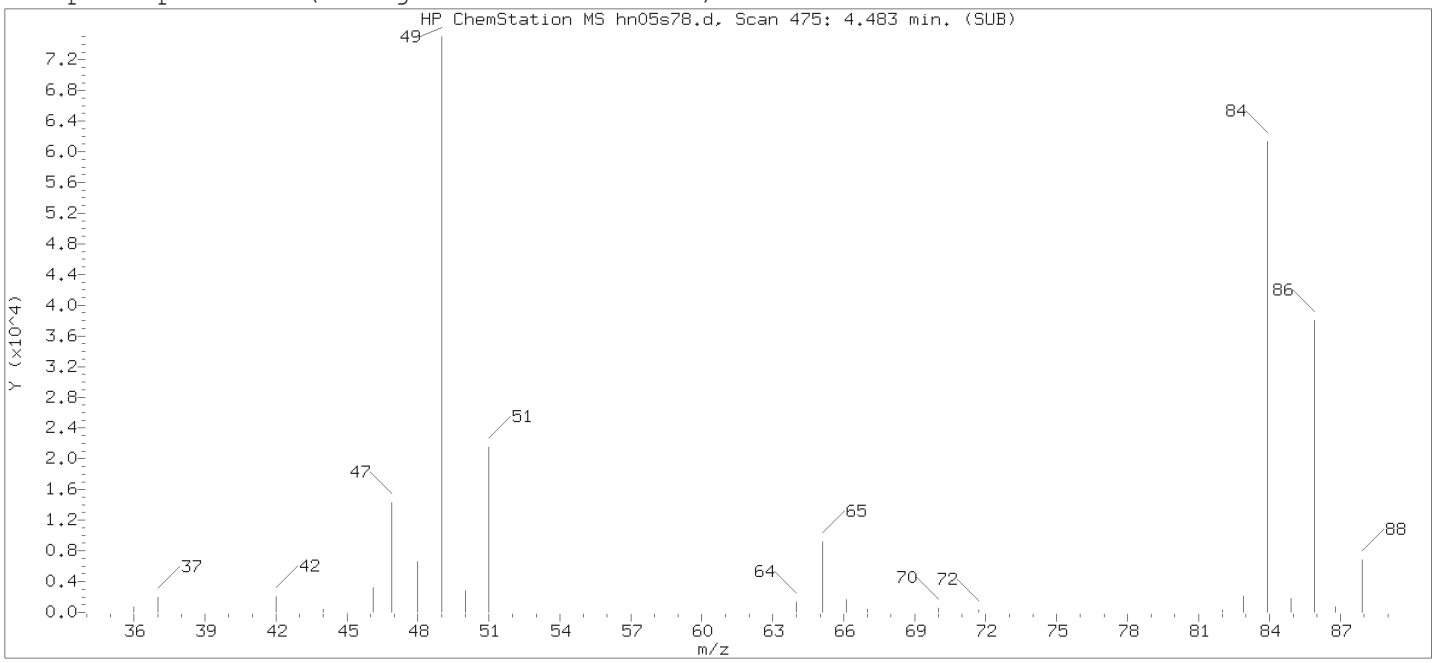
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 102631M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 631
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

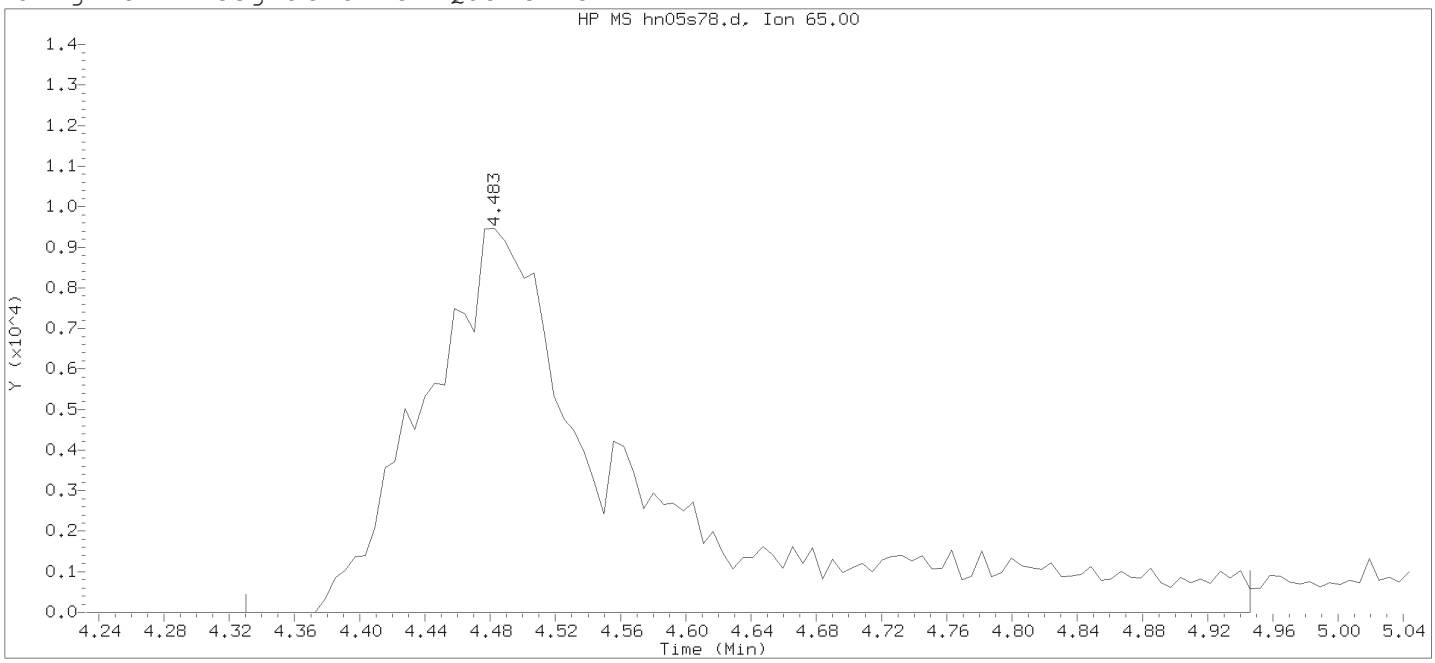
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

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/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 Analyst ID: JGC14951

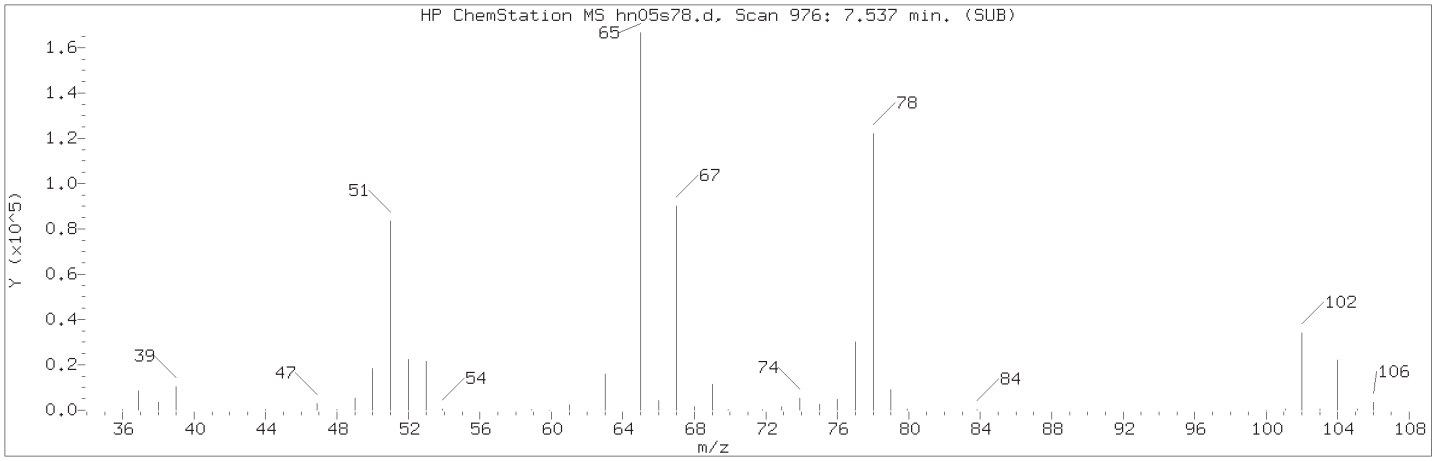
Method used: /chem2/HP19094.i/18nov05b.b/m8260c25.m Sublist used: 25789-SM
Calibration date and time: 06-NOV-2018 09:05
Date, time and analyst ID of latest file update: 06-Nov-2018 10:42 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

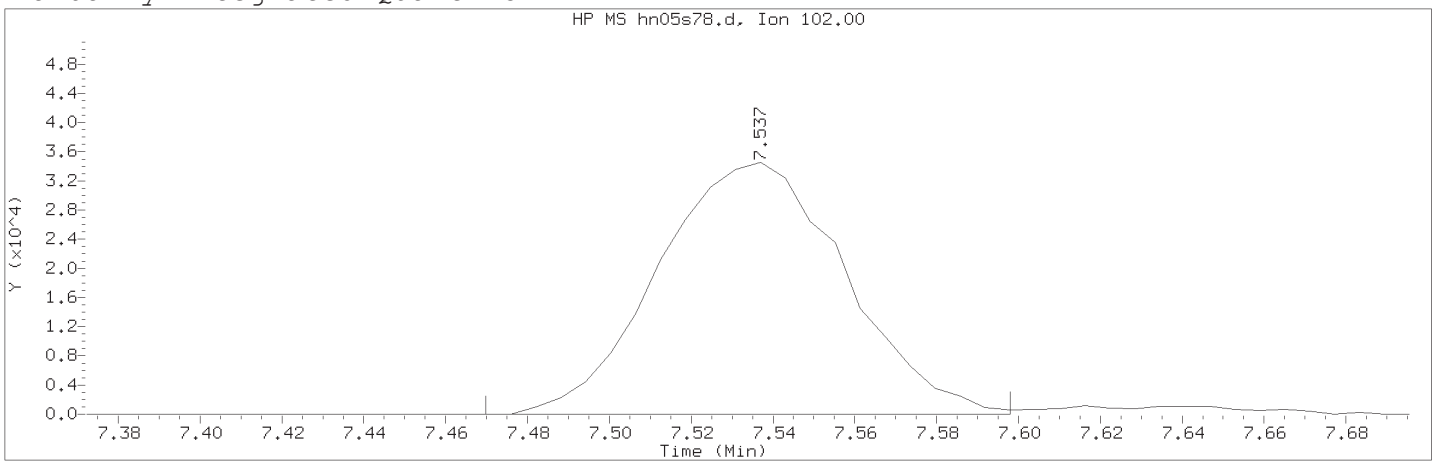
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area : 86554
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 550
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18nov05b.b/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 11:07 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

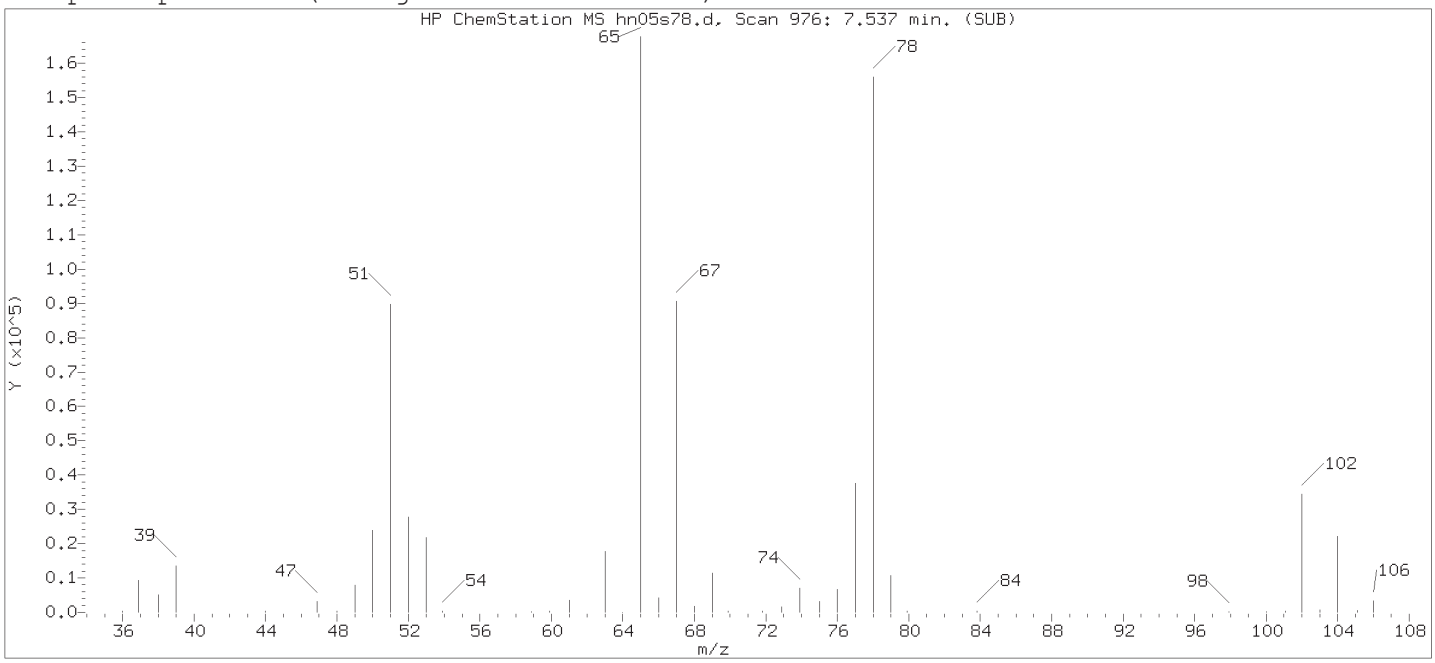
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 109204M
On-Column Amount (ng) : 9.9732
Integration start scan : 964 Integration stop scan: 985
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

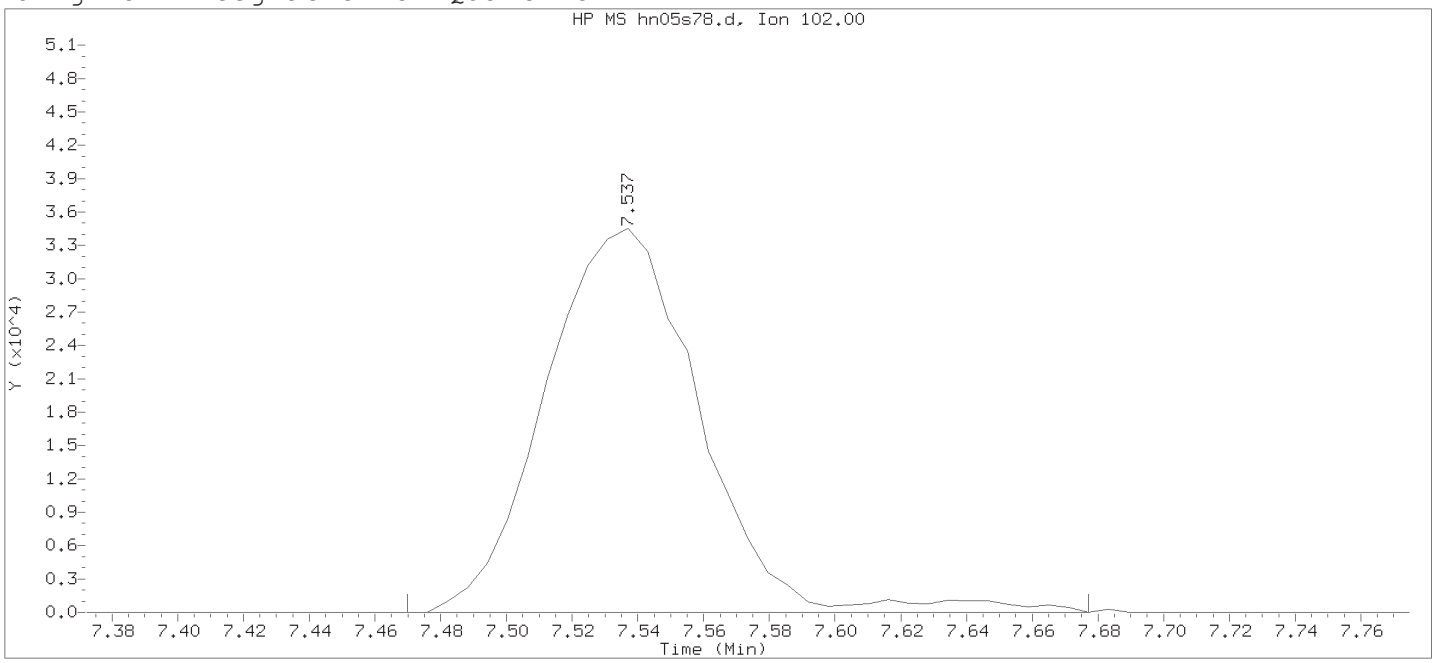
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

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/hn05s78.d Instrument ID: HP19094.i
Injection date and time: 06-NOV-2018 03:26 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: 06-Nov-2018 10:42 jkh09052

Sample Name: 14T04MSD Lab Sample ID: 9876336MSD

Compound Number	: 57		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 976		
Retention Time (minutes)	: 7.537		
Quant Ion	: 102.00		
Area	: 112685		
On-column Amount (ng)	: 10.2911		
Integration start scan	: 964	Integration stop scan:	998
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 11/06/2018 at 11:08.
Target 3.5 esignature user ID: jkh09052

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	

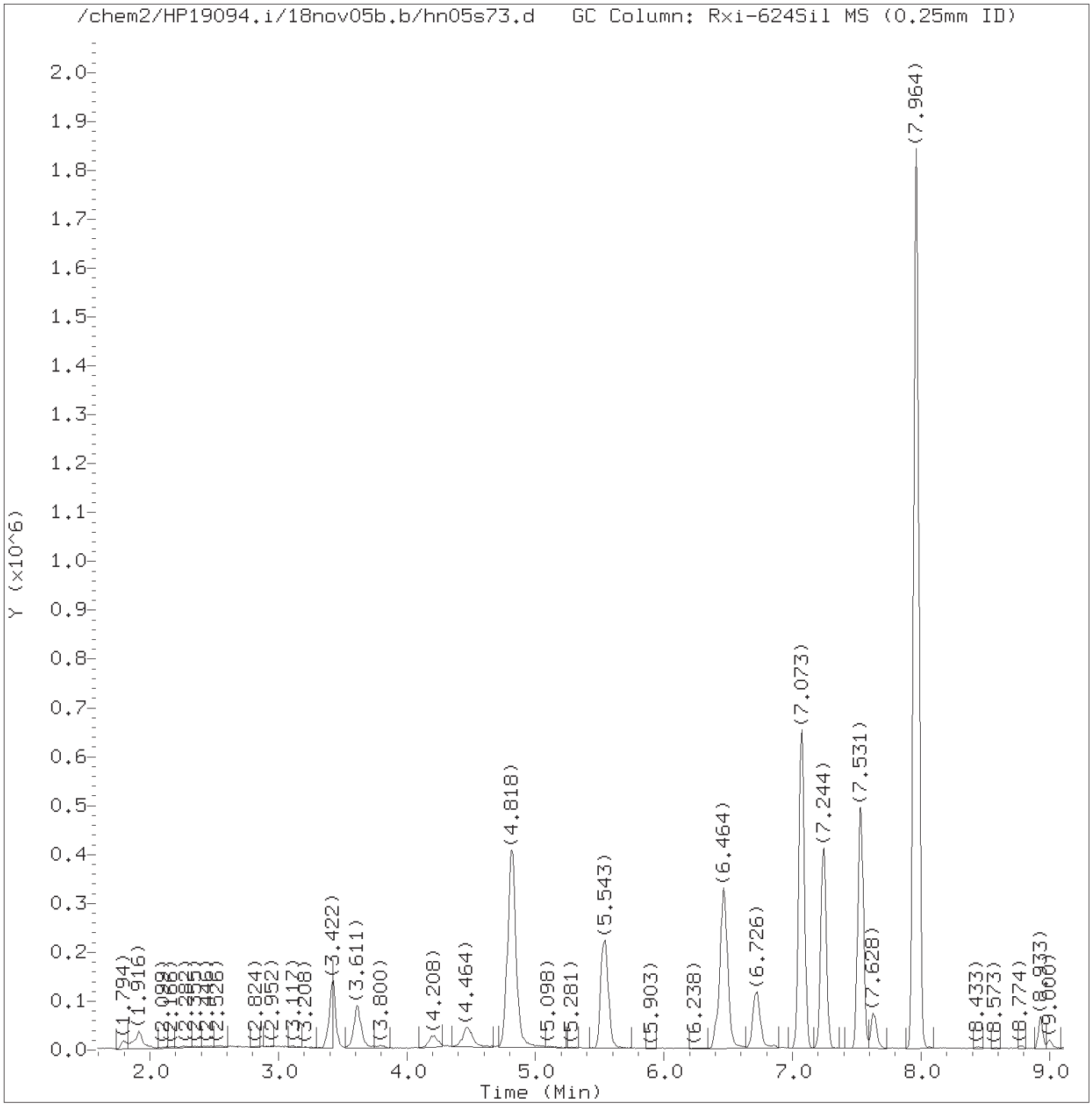
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.067	(0.000)	113	618684	9.550	95%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.000)	102	111320	9.856	99%		81 - 118
82) Toluene-d8	(3)	9.951	(0.000)	98	2485166	10.497	105%		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)

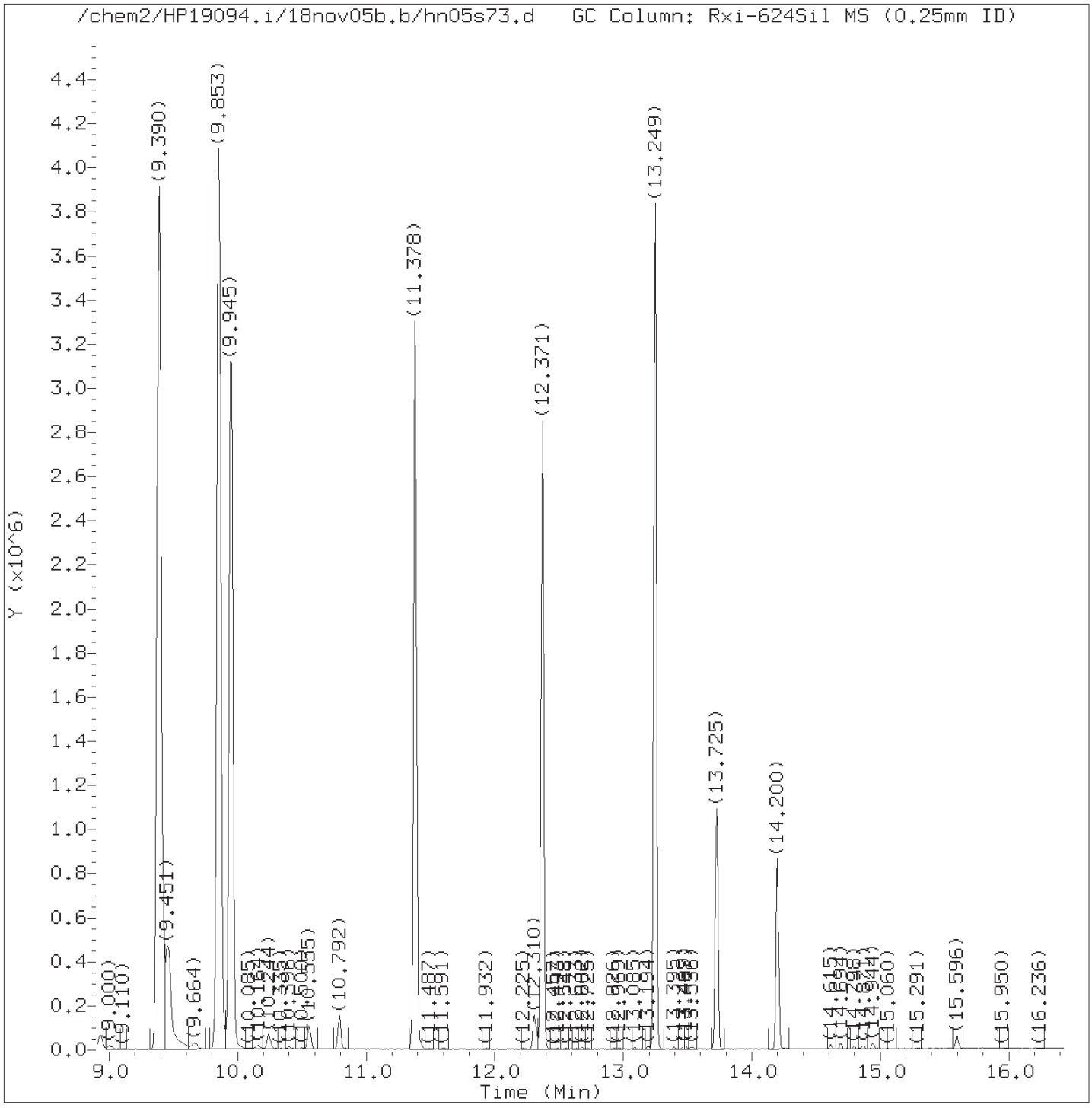
Target Revision 3.5

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

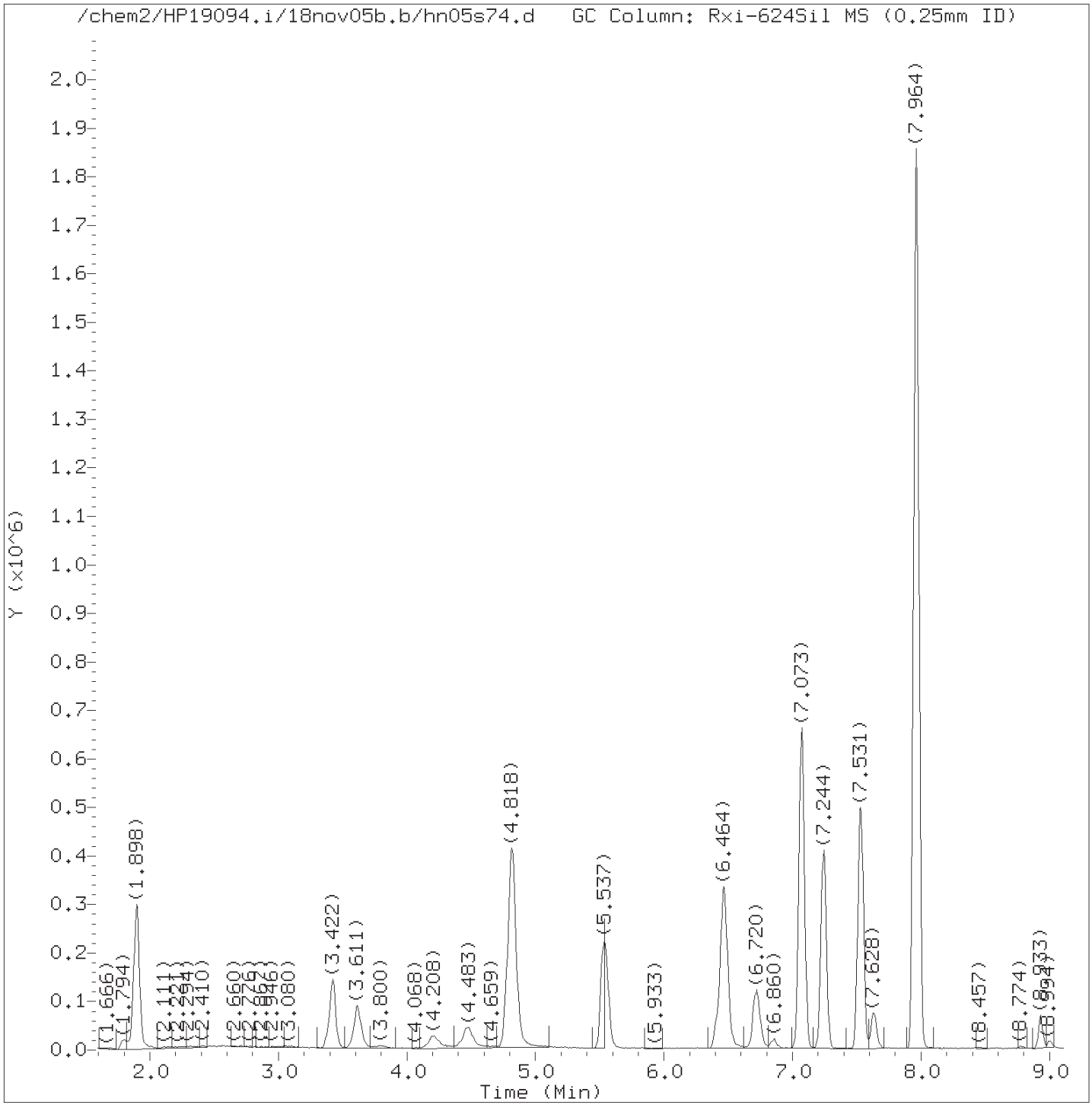
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(-0.001)	113	626823	9.617	96%		80 - 119
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	118698	10.447	104%		81 - 118
82) Toluene-d8	(3)	9.945	(0.000)	98	2509422	10.436	104%		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)

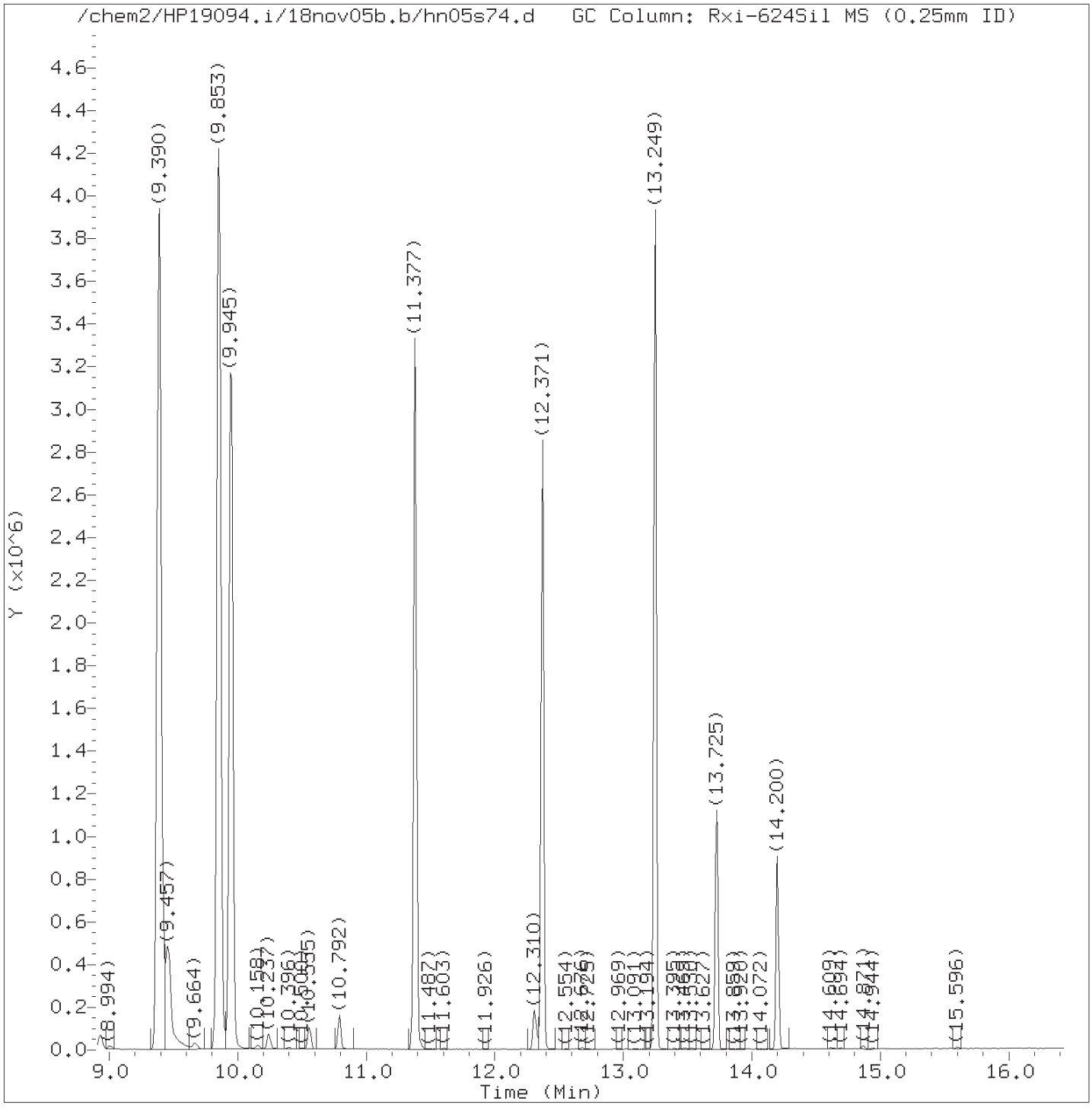
Target Revision 3.5

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

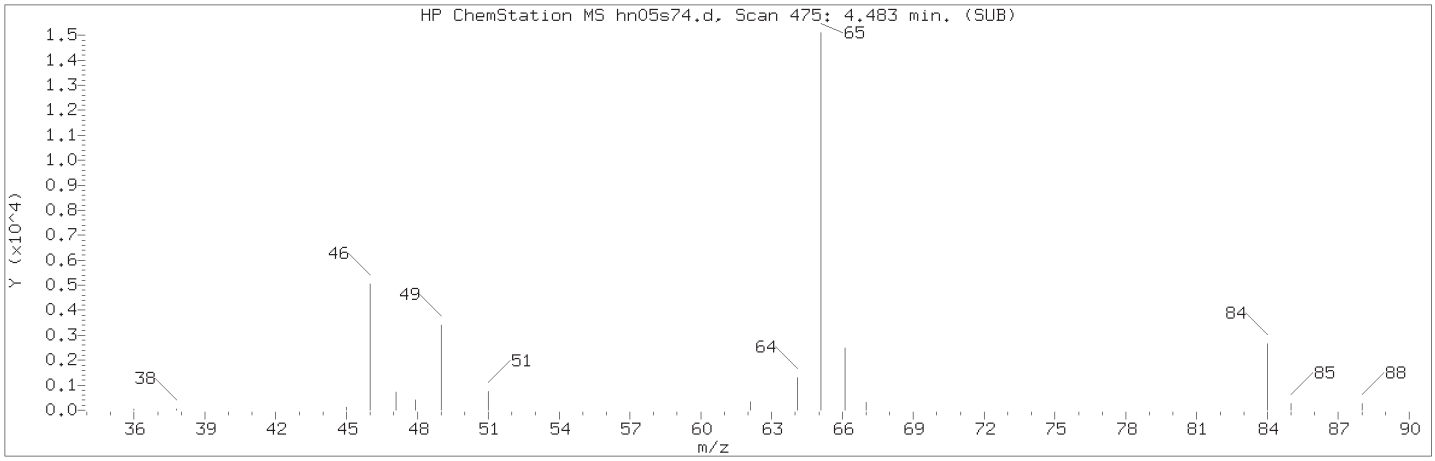
Sample Name: LCDH97 Lab Sample ID: LCDH97

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

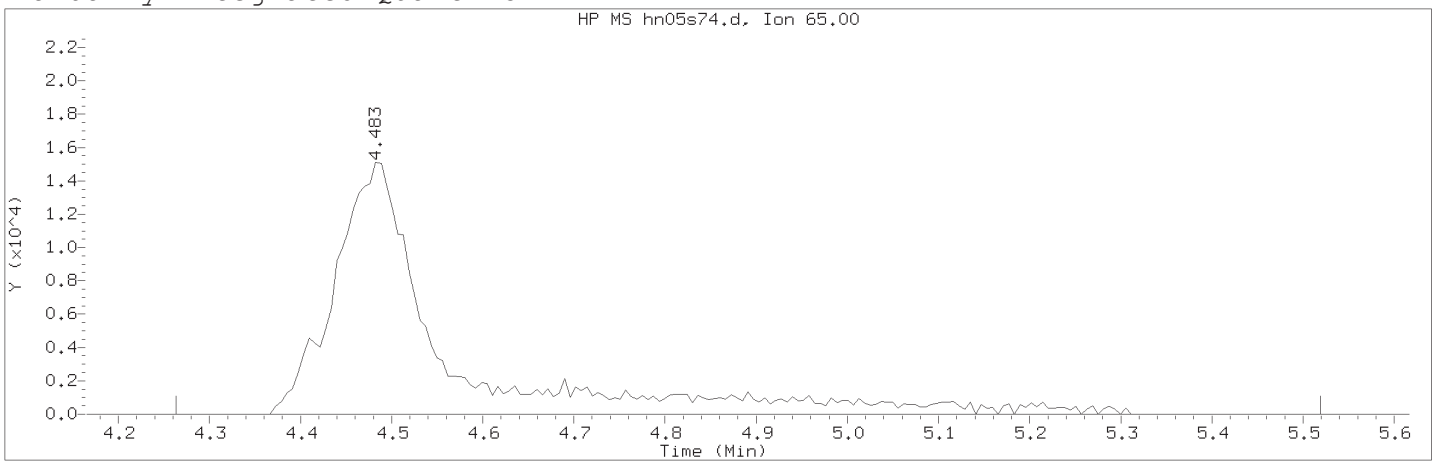
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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

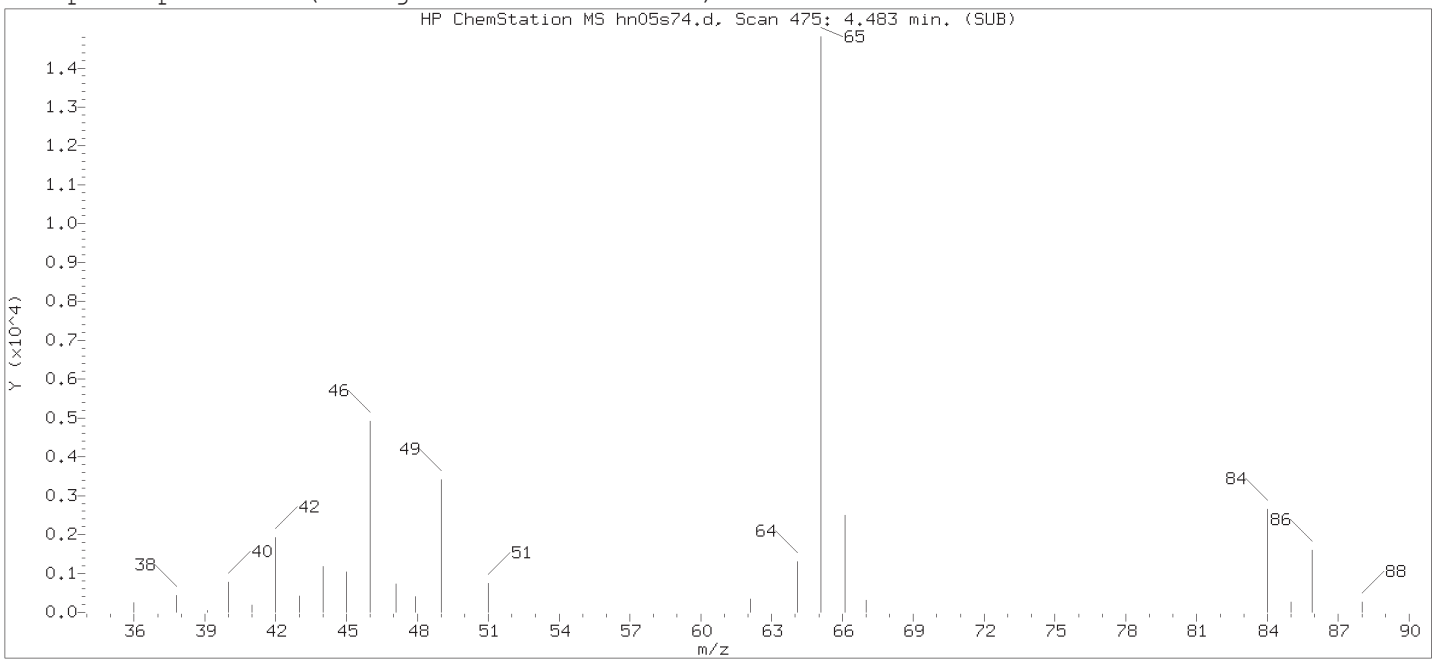
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 125004M
On-Column Amount (ng) : 50.0000
Integration start scan : 438 Integration stop scan: 644
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

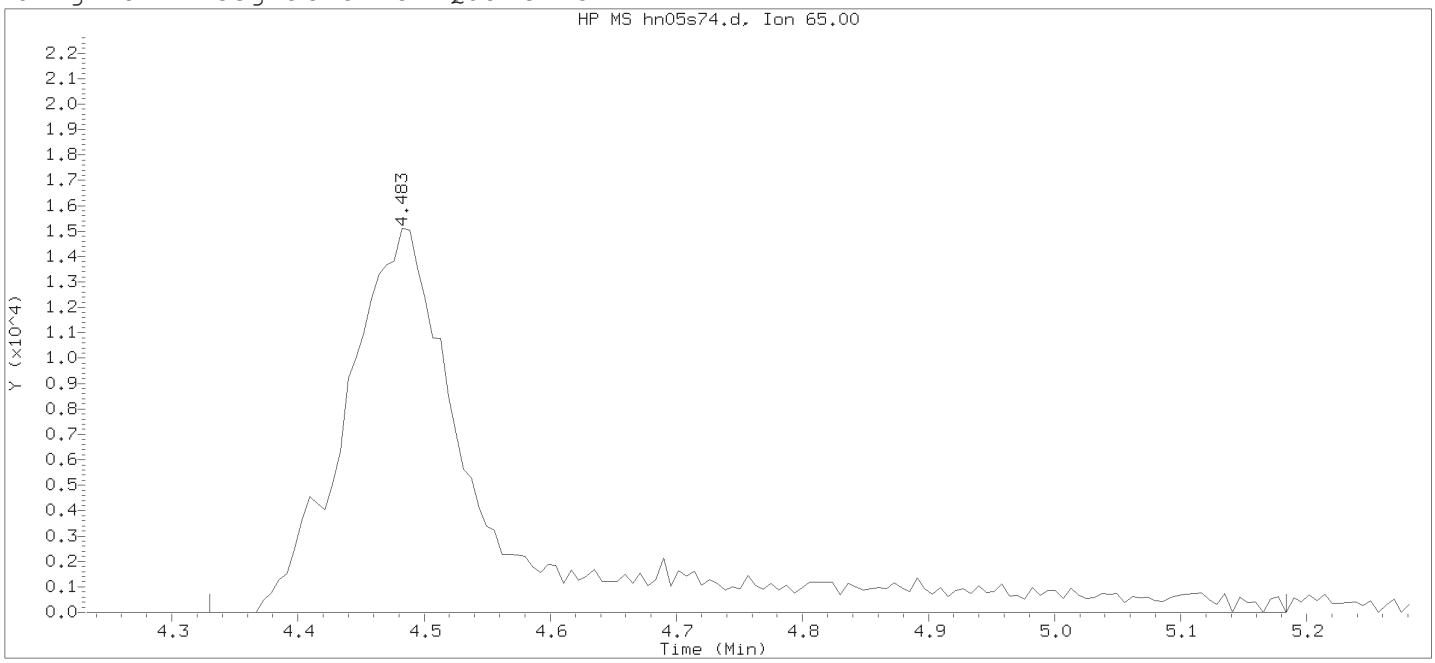
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951

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 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

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

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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

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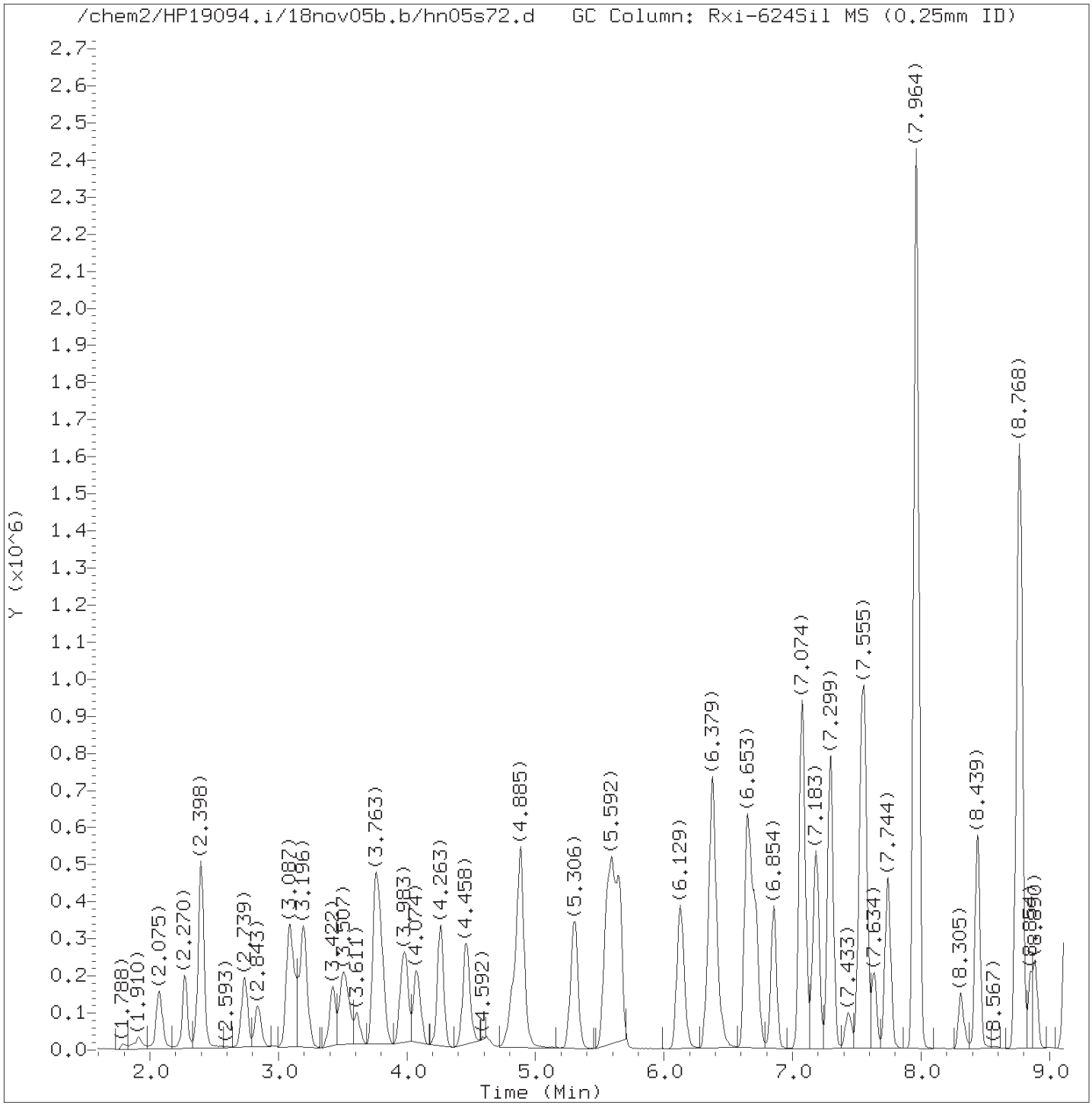
Secondary review performed and digitally signed by Chad A. Moline on 11/09/2018 at 14:16. PARALLAX ID: cam01237



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

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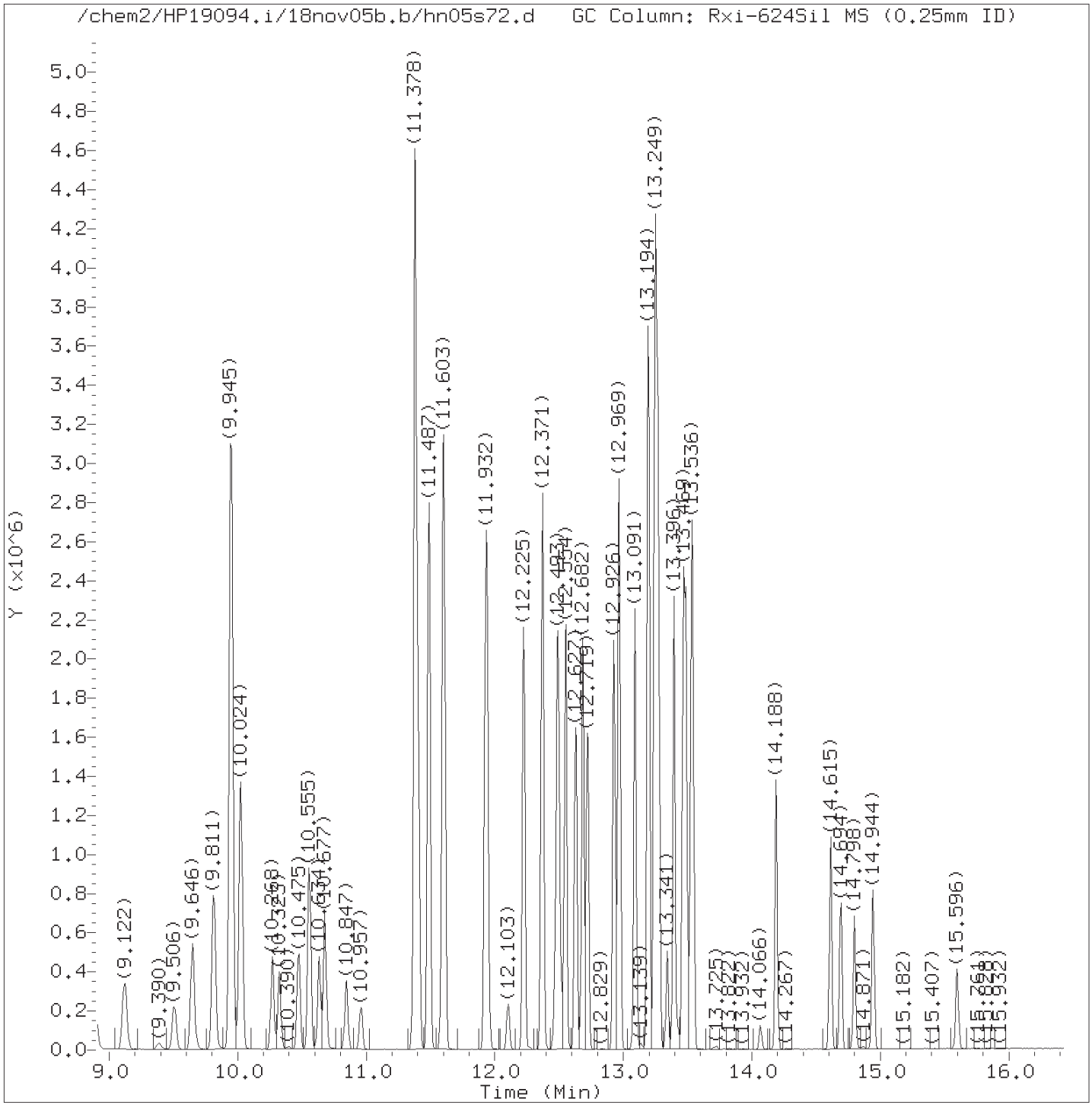
on 11/07/2018 at 15:13.
Target 3.5 esignature user ID: jgc14951



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.

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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

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9876332	OU2-1-MW010	X		1	
9876334	OU2-1-MW008I	X		1	Unspiked
9876335	OU2-1-MW008I MS	X		1	Matrix Spike
9876336	OU2-1-MW008I MSD	X		1	Matrix Spike Duplicate
9876342	OU2EB103018-001	X		1	Equipment Blank

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:

MS/MSD

Batch#: 18305WAM026 (Sample number(s): 9876332, 9876334-9876336, 9876342, UNSPK: 9876334)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: 2,4-Dichlorophenol, 2-Chlorophenol, 2-Methylphenol, 4-Chloro-3-methylphenol, 4-Methylphenol, Phenol

The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: 2,4-Dichlorophenol, Phenol

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 18305WAM026 (Sample number(s): 9876332, 9876334-9876336, 9876342, UNSPK: 9876334) The recovery(ies) for the following surrogate(s) were below the acceptance window: 2,4,6-Tribromophenol (9876334 UNSPK), 2-Fluorophenol (9876334 UNSPK, 9876336), Phenol-d6 (9876334 UNSPK)

(Sample number(s): 9876334-9876336: Analysis: 14241)
The surrogate recoveries were outside of QC limits.
The matrix spike sample was analyzed and surrogate recoveries were within QC limits but were low. Also, the matrix spike duplicate sample was analyzed and surrogate recoveries were outside of QC limits or within QC limits but low, all indicating a matrix effect.

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

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Tidewater, Inc.
SDG: TID14

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
SVOAs 8270D MINI	18305WAM026	SBLKWM305	11/07/2018 23:25
		305WMLCS	11/07/2018 23:53
		9876332	11/08/2018 01:46
		9876334 UNSPK	11/08/2018 02:14
		9876335 MS	11/08/2018 02:42
		9876336 MSD	11/08/2018 03:10
		9876342	11/08/2018 03:38

Fraction: Semivolatiles by GC/MS

18305WAM026 / SBLKWM305 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Pyridine	11/07/18	N.D.	ug/l	2	4	5
Phenol	11/07/18	N.D.	ug/l	0.5	1	2
Aniline	11/07/18	N.D.	ug/l	3	9	10
2-Chlorophenol	11/07/18	N.D.	ug/l	0.5	1	2
1,3-Dichlorobenzene	11/07/18	N.D.	ug/l	0.5	1	2
1,4-Dichlorobenzene	11/07/18	N.D.	ug/l	0.5	1	2
Benzyl alcohol	11/07/18	N.D.	ug/l	10	20	30
1,2-Dichlorobenzene	11/07/18	N.D.	ug/l	0.5	1	2
2-Methylphenol	11/07/18	N.D.	ug/l	0.5	1	2
2,2'-oxybis(1-Chloropropane)	11/07/18	N.D.	ug/l	0.5	1	2
2,4-Dichlorophenol	11/07/18	N.D.	ug/l	0.5	1	2
4-Methylphenol	11/07/18	N.D.	ug/l	0.5	1	2
N-Nitroso-di-n-propylamine	11/07/18	N.D.	ug/l	0.7	2	3
Hexachloroethane	11/07/18	N.D.	ug/l	1	2	5
Nitrobenzene	11/07/18	N.D.	ug/l	0.5	1	2
Isophorone	11/07/18	N.D.	ug/l	0.5	1	2
2-Nitrophenol	11/07/18	N.D.	ug/l	3	9	10
2,4-Dimethylphenol	11/07/18	N.D.	ug/l	3	9	10
bis(2-Chloroethoxy)methane	11/07/18	N.D.	ug/l	0.5	1	2
1,2,4-Trichlorobenzene	11/07/18	N.D.	ug/l	0.5	1	2
4-Chloroaniline	11/07/18	N.D.	ug/l	4	9	10
Hexachlorobutadiene	11/07/18	N.D.	ug/l	0.5	1	2
4-Chloro-3-methylphenol	11/07/18	N.D.	ug/l	0.5	1	2
2-Methylnaphthalene	11/07/18	N.D.	ug/l	0.1	0.2	0.5
Hexachlorocyclopentadiene	11/07/18	N.D.	ug/l	5	10	11
2,4,6-Trichlorophenol	11/07/18	N.D.	ug/l	0.5	1	2
2,4,5-Trichlorophenol	11/07/18	N.D.	ug/l	0.5	1	2
2-Chloronaphthalene	11/07/18	N.D.	ug/l	0.4	0.8	1
2-Nitroaniline	11/07/18	N.D.	ug/l	2	6	7
Dimethylphthalate	11/07/18	N.D.	ug/l	2	4	5
2,6-Dinitrotoluene	11/07/18	N.D.	ug/l	0.5	1	2
3-Nitroaniline	11/07/18	N.D.	ug/l	3	6	7
2,4-Dinitrophenol	11/07/18	N.D.	ug/l	14	28	30
4-Nitrophenol	11/07/18	N.D.	ug/l	10	20	30
2,4-Dinitrotoluene	11/07/18	N.D.	ug/l	1	2	5
Dibenzofuran	11/07/18	N.D.	ug/l	0.5	1	2
Diethylphthalate	11/07/18	N.D.	ug/l	2	4	5
4-Chlorophenyl-phenylether	11/07/18	N.D.	ug/l	0.5	1	2
4-Nitroaniline	11/07/18	N.D.	ug/l	0.9	2	3
4,6-Dinitro-2-methylphenol	11/07/18	N.D.	ug/l	8	20	21
N-Nitrosodiphenylamine	11/07/18	N.D.	ug/l	0.7	2	3
4-Bromophenyl-phenylether	11/07/18	N.D.	ug/l	0.5	1	2
Pentachlorophenol	11/07/18	N.D.	ug/l	1	4	5
Carbazole	11/07/18	N.D.	ug/l	0.5	1	2
3,3'-Dichlorobenzidine	11/07/18	N.D.	ug/l	3	9	10

Fraction: Semivolatiles by GC/MS

18305WAM026 / SBLKWM305 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Di-n-octylphthalate	11/07/18	N.D.	ug/l	5	10	11

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: TID14
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18305WAM026	2,4,6-Tribromophenol		2-Fluorobiphenyl		2-Fluorophenol		Nitrobenzene-d5		Phenol-d6		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWM305	64	43 - 140	74	44 - 119	47	19 - 119	70	44 - 120	35	10 - 72	83	50 - 134
305WMLCS	80	43 - 140	84	44 - 119	58	19 - 119	82	44 - 120	41	10 - 72	89	50 - 134
9876332	63	43 - 140	54	44 - 119	32	19 - 119	49	44 - 120	29	10 - 72	61	50 - 134
9876334 UNSPK	32 *	43 - 140	47	44 - 119	4 *	19 - 119	44	44 - 120	5 *	10 - 72	57	50 - 134
9876335 MS	66	43 - 140	83	44 - 119	25	19 - 119	80	44 - 120	26	10 - 72	78	50 - 134
9876336 MSD	61	43 - 140	81	44 - 119	16 *	19 - 119	80	44 - 120	16	10 - 72	80	50 - 134
9876342	78	43 - 140	76	44 - 119	47	19 - 119	75	44 - 120	34	10 - 72	93	50 - 134

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9876334 MS: 9876335 MSD: 9876336 **Analyte**	Batch: **18305WAM026** (Sample number(s): 9876332, 9876334-9876336, 9876342)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pyridine	50.61 / 50.2	N.D.	19.77	19.04	39	38	13-83	4	20
Phenol	50.61 / 50.2	N.D.	15.27	9.70	30	19 *	23-82	45 *	20
Aniline	50.61 / 50.2	N.D.	23.36	21.14	46	42	29-101	10	20
2-Chlorophenol	50.61 / 50.2	N.D.	25.38	18.95	50	38	38-117	29 *	20
1,3-Dichlorobenzene	50.61 / 50.2	N.D.	38.57	36.48	76	73	28-110	6	20
1,4-Dichlorobenzene	50.61 / 50.2	N.D.	40.16	37.33	79	74	29-112	7	20
Benzyl alcohol	50.61 / 50.2	N.D.	41.94	41.31	83	82	31-112	2	20
1,2-Dichlorobenzene	50.61 / 50.2	N.D.	40.07	37.79	79	75	32-111	6	20
2-Methylphenol	50.61 / 50.2	N.D.	33.94	26.21	67	52	30-117	26 *	20
2,2'-oxybis(1-Chloropropane)	50.61 / 50.2	N.D.	40.85	39.28	81	78	48-118	4	30
2,4-Dichlorophenol	50.61 / 50.2	N.D.	27.7	20.9	55	42 *	47-121	28 *	20
4-Methylphenol	50.61 / 50.2	N.D.	30.05	21.73	59	43	25-120	32 *	20
N-Nitroso-di-n-propylamine	50.61 / 50.2	N.D.	45.01	43.13	89	86	49-119	4	20
Hexachloroethane	50.61 / 50.2	N.D.	38.21	35.9	76	72	21-115	6	20
Nitrobenzene	50.61 / 50.2	N.D.	41.59	40.73	82	81	45-121	2	20
Isophorone	50.61 / 50.2	N.D.	44.4	43.61	88	87	42-124	2	20
2-Nitrophenol	50.61 / 50.2	N.D.	41.04	38.03	81	76	47-123	8	20
2,4-Dimethylphenol	50.61 / 50.2	N.D.	32.9	30.15	65	60	31-124	9	20
bis(2-Chloroethoxy)methane	50.61 / 50.2	N.D.	42.83	41.59	85	83	48-120	3	20
1,2,4-Trichlorobenzene	50.61 / 50.2	N.D.	40.17	38.42	79	77	29-116	4	20
4-Chloroaniline	50.61 / 50.2	N.D.	31.98	29.88	63	60	33-117	7	20
Hexachlorobutadiene	50.61 / 50.2	N.D.	38.75	38.21	77	76	22-124	1	20
4-Chloro-3-methylphenol	50.61 / 50.2	N.D.	37.72	28.98	75	58	52-119	26 *	20
2-Methylnaphthalene	50.61 / 50.2	N.D.	42.17	41.29	83	82	40-121	2	20
Hexachlorocyclopentadiene	101.21 / 100.4	N.D.	66.17	65.7	65	65	10-117	1	20
2,4,6-Trichlorophenol	50.61 / 50.2	N.D.	34.5	29.68	68	59	50-125	15	20
2,4,5-Trichlorophenol	50.61 / 50.2	N.D.	35.14	29.75	69	59	53-123	17	20
2-Chloronaphthalene	50.61 / 50.2	N.D.	43.66	42.83	86	85	40-116	2	20
2-Nitroaniline	50.61 / 50.2	N.D.	48.11	47.11	95	94	55-127	2	20
Dimethylphthalate	50.61 / 50.2	N.D.	44.52	43.55	88	87	45-127	2	20
2,6-Dinitrotoluene	50.61 / 50.2	N.D.	45.7	45.27	90	90	57-124	1	20
3-Nitroaniline	50.61 / 50.2	N.D.	38.7	38.08	76	76	41-128	2	20
2,4-Dinitrophenol	101.21 / 100.4	N.D.	84.16	77.06	83	77	23-143	9	20
4-Nitrophenol	50.61 / 50.2	N.D.	21.32 J	19.52 J	42	39	28-88	9	20
2,4-Dinitrotoluene	50.61 / 50.2	N.D.	40.7	39.74	80	79	57-128	2	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: 9876334 MS: 9876335 MSD: 9876336 **Analyte**	Batch: **18305WAM026** (Sample number(s): 9876332, 9876334-9876336, 9876342)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dibenzofuran	50.61 / 50.2	N.D.	45.42	43.46	90	87	53-118	4	20
Diethylphthalate	50.61 / 50.2	N.D.	40.25	39.37	80	78	56-125	2	20
4-Chlorophenyl-phenylether	50.61 / 50.2	N.D.	44.04	43.22	87	86	53-121	2	20
4-Nitroaniline	50.61 / 50.2	N.D.	37.54	38.32	74	76	53-111	2	20
4,6-Dinitro-2-methylphenol	50.61 / 50.2	N.D.	45.37	42.71	90	85	44-137	6	20
N-Nitrosodiphenylamine	50.61 / 50.2	N.D.	45.4	42.25	90	84	51-123	7	20
4-Bromophenyl-phenylether	50.61 / 50.2	N.D.	48.03	45.3	95	90	55-124	6	20
Pentachlorophenol	50.61 / 50.2	N.D.	50.16	45.9	99	91	35-138	9	20
Carbazole	50.61 / 50.2	N.D.	48.42	46.1	96	92	60-122	5	20
3,3'-Dichlorobenzidine	50.61 / 50.2	N.D.	27.78	24.03	55	48	27-129	15	20
Di-n-octylphthalate	50.61 / 50.2	N.D.	43.98	45.05	87	90	51-140	2	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

LCS: 305WMLCS	Batch: **18305WAM026** (Sample number(s): 9876332, 9876334-9876336, 9876342)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pyridine	50	22.44	NA	45	NA	13-83	NA	NA
Phenol	50	23.14	NA	46	NA	23-82	NA	NA
Aniline	50	26.75	NA	54	NA	29-101	NA	NA
2-Chlorophenol	50	40.58	NA	81	NA	38-117	NA	NA
1,3-Dichlorobenzene	50	37.05	NA	74	NA	28-110	NA	NA
1,4-Dichlorobenzene	50	38.15	NA	76	NA	29-112	NA	NA
Benzyl alcohol	50	42.42	NA	85	NA	31-112	NA	NA
1,2-Dichlorobenzene	50	38.94	NA	78	NA	32-111	NA	NA
2-Methylphenol	50	39.3	NA	79	NA	30-117	NA	NA
2,2'-oxybis(1-Chloropropane)	50	40.36	NA	81	NA	48-118	NA	NA
2,4-Dichlorophenol	50	42.47	NA	85	NA	47-121	NA	NA
4-Methylphenol	50	37.71	NA	75	NA	25-120	NA	NA
N-Nitroso-di-n-propylamine	50	43.3	NA	87	NA	49-119	NA	NA
Hexachloroethane	50	34.77	NA	70	NA	21-115	NA	NA
Nitrobenzene	50	42.17	NA	84	NA	45-121	NA	NA
Isophorone	50	44.63	NA	89	NA	42-124	NA	NA
2-Nitrophenol	50	42.01	NA	84	NA	47-123	NA	NA
2,4-Dimethylphenol	50	34.64	NA	69	NA	31-124	NA	NA
bis(2-Chloroethoxy)methane	50	43.37	NA	87	NA	48-120	NA	NA
1,2,4-Trichlorobenzene	50	38.87	NA	78	NA	29-116	NA	NA
4-Chloroaniline	50	33.98	NA	68	NA	33-117	NA	NA
Hexachlorobutadiene	50	36.91	NA	74	NA	22-124	NA	NA
4-Chloro-3-methylphenol	50	43.99	NA	88	NA	52-119	NA	NA
2-Methylnaphthalene	50	41.73	NA	83	NA	40-121	NA	NA
Hexachlorocyclopentadiene	100	45.04	NA	45	NA	10-117	NA	NA
2,4,6-Trichlorophenol	50	45.55	NA	91	NA	50-125	NA	NA
2,4,5-Trichlorophenol	50	45.71	NA	91	NA	53-123	NA	NA
2-Chloronaphthalene	50	43.21	NA	86	NA	40-116	NA	NA
2-Nitroaniline	50	46.15	NA	92	NA	55-127	NA	NA
Dimethylphthalate	50	38.76	NA	78	NA	45-127	NA	NA
2,6-Dinitrotoluene	50	44.2	NA	88	NA	57-124	NA	NA
3-Nitroaniline	50	36.39	NA	73	NA	41-128	NA	NA
2,4-Dinitrophenol	100	78.11	NA	78	NA	23-143	NA	NA
4-Nitrophenol	50	19.98 J	NA	40	NA	28-88	NA	NA
2,4-Dinitrotoluene	50	40.74	NA	81	NA	57-128	NA	NA
Dibenzofuran	50	42.84	NA	86	NA	53-118	NA	NA
Diethylphthalate	50	37.13	NA	74	NA	56-125	NA	NA
4-Chlorophenyl-phenylether	50	41.38	NA	83	NA	53-121	NA	NA
4-Nitroaniline	50	33.47	NA	67	NA	53-111	NA	NA
4,6-Dinitro-2-methylphenol	50	41.5	NA	83	NA	44-137	NA	NA
N-Nitrosodiphenylamine	50	49.34	NA	99	NA	51-123	NA	NA
4-Bromophenyl-phenylether	50	45.75	NA	92	NA	55-124	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 305WMLCS	Batch: **18305WAM026** (Sample number(s): 9876332, 9876334-9876336, 9876342)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Pentachlorophenol	50	40.49	NA	81	NA	35-138	NA	NA
Carbazole	50	46.2	NA	92	NA	60-122	NA	NA
3,3'-Dichlorobenzidine	50	38.04	NA	76	NA	27-129	NA	NA
Di-n-octylphthalate	50	37.7	NA	75	NA	51-140	NA	NA

Fraction: Semivolatiles by GC/MS

14241: SVOAs 8270D MINI Analyte Name	Default DL	Default LOD	Default LOQ	Units
Pyridine	2	4	5	ug/l
Phenol	.5	1	2	ug/l
Aniline	3	9	10	ug/l
2-Chlorophenol	.5	1	2	ug/l
1,3-Dichlorobenzene	.5	1	2	ug/l
1,4-Dichlorobenzene	.5	1	2	ug/l
Benzyl alcohol	10	20	30	ug/l
1,2-Dichlorobenzene	.5	1	2	ug/l
2-Methylphenol	.5	1	2	ug/l
2,2'-oxybis(1-Chloropropane)	.5	1	2	ug/l
2,4-Dichlorophenol	.5	1	2	ug/l
4-Methylphenol	.5	1	2	ug/l
N-Nitroso-di-n-propylamine	.7	2	3	ug/l
Hexachloroethane	1	2	5	ug/l
Nitrobenzene	.5	1	2	ug/l
Isophorone	.5	1	2	ug/l
2-Nitrophenol	3	9	10	ug/l
2,4-Dimethylphenol	3	9	10	ug/l
bis(2-Chloroethoxy)methane	.5	1	2	ug/l
1,2,4-Trichlorobenzene	.5	1	2	ug/l
4-Chloroaniline	4	9	10	ug/l
Hexachlorobutadiene	.5	1	2	ug/l
4-Chloro-3-methylphenol	.5	1	2	ug/l
2-Methylnaphthalene	.1	.2	0.5	ug/l
Hexachlorocyclopentadiene	5	10	11	ug/l
2,4,6-Trichlorophenol	.5	1	2	ug/l
2,4,5-Trichlorophenol	.5	1	2	ug/l
2-Chloronaphthalene	.4	.8	1	ug/l
2-Nitroaniline	2	6	7	ug/l
Dimethylphthalate	2	4	5	ug/l
2,6-Dinitrotoluene	.5	1	2	ug/l
3-Nitroaniline	3	6	7	ug/l
2,4-Dinitrophenol	14	28	30	ug/l
4-Nitrophenol	10	20	30	ug/l
2,4-Dinitrotoluene	1	2	5	ug/l
Dibenzofuran	.5	1	2	ug/l
Diethylphthalate	2	4	5	ug/l
4-Chlorophenyl-phenylether	.5	1	2	ug/l
4-Nitroaniline	.9	2	3	ug/l
4,6-Dinitro-2-methylphenol	8	20	21	ug/l
N-Nitrosodiphenylamine	.7	2	3	ug/l
4-Bromophenyl-phenylether	.5	1	2	ug/l
Pentachlorophenol	1	4	5	ug/l
Carbazole	.5	1	2	ug/l
3,3'-Dichlorobenzidine	3	9	10	ug/l
Di-n-octylphthalate	5	10	11	ug/l

Fraction: Semivolatiles by GC/MS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dk0210.d DFTPP Injection Date: 11/04/18

Instrument ID: HP19760 DFTPP Injection Time: 11:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	51.0
68	Less than 2.0% of mass 69	0.82 (1.43)1
69	Mass 69 relative abundance	57.5
70	Less than 2.0% of mass 69	0.29 (0.5)1
127	10.0 - 80.00% of mass 198	52.5
197	Less than 2.0% of mass 198	1.19
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.29
275	10.0 - 60.0% of mass 198	21.0
365	Greater than 1.00% of mass 198	2.38
441	Present, and less than mass 443	8.47
442	Greater than 50.00% of mass 198	58.6
443	15.00 - 24.00% of mass 442	11.3 (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	rvSTD2648 - SSTD7.5	dk0211.d	11/04/18	11:51
02	rvSTD2648 - SSTD.125	dk0212.d	11/04/18	12:44
03	rvSTD2648 - SSTD30	dk0213.d	11/04/18	13:12
04	rvSTD2648 - SSTD20	dk0214.d	11/04/18	13:40
05	rvSTD2648 - SSTD12.5	dk0215.d	11/04/18	14:09
06	rvSTD2648 - SSTD3.75	dk0216.d	11/04/18	14:37
07	rvSTD2648 - SSTD1.25	dk0217.d	11/04/18	15:06
08	rvSTD2648 - SSTD.25	dk0218.d	11/04/18	15:35
09	rvMDL2648 - SSTD0.125	dk0219.d	11/04/18	16:03
10	PAHMDL2648 - SSTD0.025	dk0220.d	11/04/18	16:31
11	rvICV2628 - SSTD12.5	dk0221.d	11/04/18	17:00
12	rvBASICV3028 - SSTD12.5	dk0222.d	11/04/18	17:29

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: dk0300.d DFTPP Injection Date: 11/04/18

Instrument ID: HP19760 DFTPP Injection Time: 20:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	55.4
68	Less than 2.0% of mass 69	1.08 (1.75)1
69	Mass 69 relative abundance	61.5
70	Less than 2.0% of mass 69	0.34 (0.56)1
127	10.0 - 80.00% of mass 198	56.2
197	Less than 2.0% of mass 198	0.87
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.67
275	10.0 - 60.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.35
441	Present, and less than mass 443	7.27
442	Greater than 50.00% of mass 198	52.8
443	15.00 - 24.00% of mass 442	9.94 (18.8)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	rvSTD2648 - SSTD7.5	dk0301.d	11/04/18	21:12
02	rvICV2628 - SSTD12.5	dk0302.d	11/04/18	22:13
03	SBLKWR302	dk0303.d	11/05/18	00:08
04	302WRLCS	dk0304.d	11/05/18	00:36
05	302WRLCSD	dk0305.d	11/05/18	01:04
06	9869228	dk0306.d	11/05/18	01:32
07	9869230	dk0307.d	11/05/18	02:00
08	9869232	dk0308.d	11/05/18	02:29
09	9869234	dk0309.d	11/05/18	02:57
10	9867287	dk0310.d	11/05/18	03:25
11	9868253	dk0311.d	11/05/18	03:53
12	9868527	dk0312.d	11/05/18	04:22
13	9868532	dk0313.d	11/05/18	04:50
14	9868540	dk0314.d	11/05/18	05:18
15	9868554	dk0315.d	11/05/18	05:47
16	9869112	dk0316.d	11/05/18	06:15
17	9870353	dk0317.d	11/05/18	06:43
18	9870354	dk0318.d	11/05/18	07:12

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dk0300.d DFTPP Injection Date: 11/04/18

Instrument ID: HP19760 DFTPP Injection Time: 20:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	55.4
68	Less than 2.0% of mass 69	1.08 (1.75)1
69	Mass 69 relative abundance	61.5
70	Less than 2.0% of mass 69	0.34 (0.56)1
127	10.0 - 80.00% of mass 198	56.2
197	Less than 2.0% of mass 198	0.87
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.67
275	10.0 - 60.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.35
441	Present, and less than mass 443	7.27
442	Greater than 50.00% of mass 198	52.8
443	15.00 - 24.00% of mass 442	9.94 (18.8)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

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: dk0600.d DFTPP Injection Date: 11/07/18

Instrument ID: HP19760 DFTPP Injection Time: 19:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	55.5
68	Less than 2.0% of mass 69	1.07 (1.8)1
69	Mass 69 relative abundance	59.3
70	Less than 2.0% of mass 69	0.4 (0.67)1
127	10.0 - 80.00% of mass 198	55.1
197	Less than 2.0% of mass 198	1.09
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.06
275	10.0 - 60.0% of mass 198	20.5
365	Greater than 1.00% of mass 198	2.31
441	Present, and less than mass 443	8.14
442	Greater than 50.00% of mass 198	56.0
443	15.00 - 24.00% of mass 442	10.4 (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	RVSTD2648 - SSTD7.5	dk0601.d	11/07/18	19:40
02	SBLKWG311	dk0602.d	11/07/18	20:36
03	311WGLCS	dk0603.d	11/07/18	21:04
04	311WGLCSD	dk0604.d	11/07/18	21:32
05	SBLKWK306	dk0605.d	11/07/18	22:01
06	306WKLCS	dk0606.d	11/07/18	22:29
07	306WKLCSD	dk0607.d	11/07/18	22:57
08	SBLKWM305	dk0608.d	11/07/18	23:25
09	305WMLCS	dk0609.d	11/07/18	23:53
10	9879198RE	dk0612.d	11/08/18	01:17
11	9876332	dk0613.d	11/08/18	01:46
12	9876334	dk0614.d	11/08/18	02:14
13	9876335MS	dk0615.d	11/08/18	02:42
14	9876336MSD	dk0616.d	11/08/18	03:10
15	9876342	dk0617.d	11/08/18	03:38
16	RV2648	dk0628.d	11/08/18	04:06
17	9879467	dk0620.d	11/08/18	05:31
18	9882159	dk0621.d	11/08/18	05:59

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dk0600.d DFTPP Injection Date: 11/07/18

Instrument ID: HP19760 DFTPP Injection Time: 19:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	55.5
68	Less than 2.0% of mass 69	1.07 (1.8)1
69	Mass 69 relative abundance	59.3
70	Less than 2.0% of mass 69	0.4 (0.67)1
127	10.0 - 80.00% of mass 198	55.1
197	Less than 2.0% of mass 198	1.09
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.06
275	10.0 - 60.0% of mass 198	20.5
365	Greater than 1.00% of mass 198	2.31
441	Present, and less than mass 443	8.14
442	Greater than 50.00% of mass 198	56.0
443	15.00 - 24.00% of mass 442	10.4 (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
19	9879471	dk0622.d	11/08/18	06:27
20	9879472	dk0623.d	11/08/18	06:55
21	9879473	dk0624.d	11/08/18	07:23

FORM V SV

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 11/04/18 11/04/18

Calibration Times: 11:51 15:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dk0212.d RRF0.25 = dk0218.d RRF1.25 = dk0217.d RRF3.75 = dk0216.d
RRF7.5 = dk0211.d RRF12.5 = dk0215.d RRF20 = dk0214.d RRF30 = dk0213.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.827	0.813	0.860	0.868	0.859	0.839	0.844	3	AVG
N-Nitrosodimethylamine			1.203	1.280	1.292	1.327	1.331	1.299	1.289	4	AVG
Pyridine			1.999	2.186	2.190	2.202	2.216	2.166	2.160	4	AVG
2-Picoline			2.049	2.144	2.192	2.211	2.195	2.147	2.156	3	AVG
N-Nitrosomethylethylamine			0.915	0.904	0.945	0.969	0.957	0.941	0.939	3	AVG
Methyl methanesulfonate			0.992	1.039	1.063	1.036	1.045	1.022	1.033	2	AVG
N-Nitrosodiethylamine		0.692	0.762	0.832	0.879	0.902	0.898	0.882	0.835	10	AVG
Ethyl methanesulfonate		0.651	0.802	0.811	0.849	0.840	0.847	0.834	0.805	9	AVG
Benzaldehyde			1.408	1.537	1.454	1.393	1.238	1.051	1.347	13	AVG
Phenol		2.425	2.457	2.602	2.654	2.675	2.662	2.590	2.581	4	AVG
Aniline		2.919	2.933	3.052	3.096	3.125	3.105	3.022	3.036	3	AVG
a-methylstyrene			0.154	0.140	0.161	0.163	0.160	0.157	0.156	6	AVG
bis(2-Chloroethyl)ether		1.861	1.829	1.926	1.972	1.968	1.927	1.906	1.913	3	AVG
2-Chlorophenol		1.312	1.464	1.525	1.578	1.598	1.585	1.549	1.516	7	AVG
1,3-Dichlorobenzene		1.527	1.581	1.616	1.648	1.660	1.645	1.596	1.610	3	AVG
1,4-Dichlorobenzene		1.550	1.536	1.608	1.663	1.663	1.635	1.609	1.609	3	AVG
Benzyl alcohol			0.985	1.009	1.091	1.137	1.099	1.083	1.067	5	AVG
1,2-Dichlorobenzene		1.468	1.502	1.536	1.570	1.571	1.547	1.523	1.531	2	AVG
Indene			1.615	1.609	1.787	1.821	1.780	1.764	1.729	5	AVG
2-Methylphenol		1.316	1.447	1.592	1.633	1.652	1.628	1.584	1.550	8	AVG
2,2'-oxybis(1-Chloropropane)		2.072	2.130	2.248	2.267	2.288	2.247	2.208	2.209	4	AVG
bis(2-Chloroisopropyl)ether		2.072	2.130	2.248	2.267	2.288	2.247	2.208	2.209	4	AVG
N-Nitrosopyrrolidine		0.695	0.806	0.883	0.905	0.953	0.945	0.884	0.867	10	AVG
Acetophenone		1.983	2.061	2.254	2.229	2.278	2.231	2.216	2.179	5	AVG
4-Methylphenol		1.520	1.681	1.806	1.848	1.861	1.816	1.788	1.760	7	AVG
Total Cresols		1.418	1.564	1.699	1.740	1.757	1.722	1.686	1.655	7	AVG
N-Nitroso-di-n-propylamine		1.268	1.309	1.373	1.419	1.436	1.405	1.334	1.363	5	AVG
N-Nitrosomorpholine			0.993	1.007	1.072	1.031	1.010	1.000	1.019	3	AVG
o-Toluidine		2.565	2.582	2.746	2.782	2.796	2.776	2.684	2.704	4	AVG
Hexachloroethane			0.692	0.761	0.781	0.771	0.763	0.748	0.753	4	AVG
Nitrobenzene		0.498	0.526	0.550	0.563	0.560	0.565	0.553	0.545	5	AVG
N-Nitrosopiperidine		0.187	0.186	0.215	0.219	0.221	0.226	0.221	0.211	8	AVG
Isophorone		0.763	0.842	0.923	0.956	0.974	0.997	0.978	0.919	9	AVG
2-Nitrophenol			0.180	0.198	0.205	0.215	0.222	0.216	0.206	8	AVG
2,4-Dimethylphenol		0.374	0.421	0.449	0.459	0.464	0.472	0.466	0.444	8	AVG
O,O,O-Triethylphosphorothioat			0.155	0.167	0.168	0.170	0.175	0.172	0.168	4	AVG
bis(2-Chloroethoxy)methane		0.544	0.550	0.586	0.602	0.595	0.605	0.572	0.579	4	AVG
Benzoic acid			0.235	0.280	0.288	0.325	0.338	0.330	0.299	13	AVG
2,4-Dichlorophenol		0.244	0.282	0.300	0.312	0.317	0.323	0.314	0.299	9	AVG
1,2,4-Trichlorobenzene		0.319	0.317	0.325	0.329	0.331	0.339	0.329	0.327	2	AVG
Naphthalene	1.208	1.143	1.138	1.177	1.194	1.192	1.216	1.191	1.182	2	AVG
4-Chloroaniline		0.392	0.435	0.458	0.467	0.465	0.477	0.465	0.451	7	AVG
2,6-Dichlorophenol		0.262	0.270	0.293	0.300	0.303	0.308	0.303	0.291	6	AVG
Hexachloropropene			0.195	0.203	0.206	0.208	0.213	0.211	0.206	3	AVG
Hexachlorobutadiene		0.178	0.169	0.176	0.181	0.175	0.179	0.175	0.176	2	AVG
Quinoline			0.609	0.654	0.678	0.679	0.702	0.684	0.668	5	AVG
Caprolactam			0.092	0.120	0.122	0.132	0.132	0.131	0.122	13	AVG
N-Nitrosodi-n-butylamine			0.286	0.313	0.324	0.330	0.425	0.413	0.348	16	AVG
4-Chloro-3-methylphenol		0.266	0.328	0.359	0.368	0.377	0.392	0.387	0.354	13	AVG
Safrole			0.244	0.260	0.278	0.281	0.285	0.283	0.272	6	AVG
2-Methylnaphthalene	0.698	0.662	0.664	0.723	0.746	0.746	0.756	0.745	0.718	5	AVG
1-Methylnaphthalene	0.614	0.635	0.648	0.691	0.705	0.709	0.726	0.712	0.680	6	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: HP19760 Calibration Date(s): 11/04/18 11/04/18

Calibration Times: 11:51 15:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dk0212.d RRF0.25 = dk0218.d RRF1.25 = dk0217.d RRF3.75 = dk0216.d
RRF7.5 = dk0211.d RRF12.5 = dk0215.d RRF20 = dk0214.d RRF30 = dk0213.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Hexachlorocyclopentadiene			0.358	0.397	0.415	0.413	0.400	0.397	0.397	5	AVG
1,2,4,5-Tetrachlorobenzene		0.684	0.620	0.664	0.679	0.675	0.664	0.660	0.664	3	AVG
cis-Isosafrole			0.557	0.573	0.612	0.625	0.623	0.641	0.605	5	AVG
2,4,6-Trichlorophenol		0.327	0.382	0.417	0.451	0.451	0.450	0.460	0.420	12	AVG
2,4,5-Trichlorophenol		0.352	0.412	0.451	0.463	0.479	0.467	0.461	0.441	10	AVG
trans-Isosafrole			0.583	0.650	0.674	0.675	0.675	0.704	0.660	6	AVG
Isosafrole			0.579	0.637	0.663	0.666	0.666	0.693	0.651	6	AVG
1,1'-Biphenyl		1.698	1.732	1.844	1.864	1.877	1.817	1.739	1.796	4	AVG
2-Chloronaphthalene		1.402	1.426	1.476	1.477	1.446	1.458	1.536	1.460	3	AVG
1-Chloronaphthalene		1.258	1.253	1.313	1.377	1.397	1.285	1.194	1.297	6	AVG
Diphenyl ether		0.739	0.718	0.757	0.780	0.768	0.750	0.749	0.752	3	AVG
2-Nitroaniline		0.343	0.418	0.473	0.498	0.521	0.506	0.509	0.467	14	AVG
1,4-Naphthoquinone			0.438	0.512	0.562	0.587	0.580	0.561	0.540	10	AVG
1,4-Dinitrobenzene			0.220	0.246	0.262	0.266	0.265	0.263	0.254	7	AVG
Dimethylphthalate			1.402	1.524	1.570	1.537	1.509	1.500	1.507	4	AVG
1,3-Dinitrobenzene			0.245	0.275	0.287	0.296	0.292	0.291	0.281	7	AVG
2,6-Dinitrotoluene		0.283	0.320	0.360	0.374	0.370	0.370	0.363	0.349	10	AVG
Acenaphthylene	1.730	1.745	1.864	2.048	2.128	2.127	2.113	2.121	1.985	9	AVG
3-Nitroaniline		0.291	0.372	0.421	0.423	0.437	0.432	0.437	0.402	13	AVG
Acenaphthene	1.467	1.423	1.374	1.466	1.498	1.492	1.482	1.458	1.457	3	AVG
2,4-Dinitrophenol				0.212	0.220	0.248	0.263	0.267	0.242	10	AVG
4-Nitrophenol				0.284	0.309	0.314	0.310	0.316	0.307	4	AVG
Pentachlorobenzene		0.509	0.516	0.531	0.544	0.522	0.526	0.519	0.524	2	AVG
2,4-Dinitrotoluene			0.413	0.470	0.480	0.500	0.487	0.496	0.474	7	AVG
2,4_2,6-Dinitrotoluenes		0.317	0.367	0.415	0.427	0.435	0.428	0.429	0.403	11	AVG
Dibenzofuran		2.032	1.966	2.017	2.066	2.063	2.030	1.981	2.022	2	AVG
1-Naphthylamine				1.501	1.543	1.537	1.527	1.548	1.531	1	AVG
2,3,4,6-Tetrachlorophenol			0.291	0.327	0.347	0.354	0.353	0.357	0.338	8	AVG
2-Naphthylamine				1.535	1.537	1.562	1.558	1.545	1.548	1	AVG
Diethylphthalate			1.369	1.497	1.529	1.598	1.565	1.595	1.526	6	AVG
Thionazin			0.295	0.329	0.333	0.350	0.341	0.342	0.332	6	AVG
Fluorene	1.394	1.354	1.501	1.578	1.638	1.614	1.587	1.589	1.532	7	AVG
4-Chlorophenyl-phenylether		0.668	0.725	0.757	0.767	0.769	0.740	0.727	0.736	5	AVG
5-Nitro-o-toluidine		0.356	0.434	0.487	0.485	0.507	0.497	0.501	0.467	12	AVG
4-Nitroaniline		0.329	0.408	0.461	0.461	0.482	0.471	0.478	0.441	13	AVG
4,6-Dinitro-2-methylphenol				0.137	0.146	0.165	0.167	0.169	0.157	9	AVG
N-Nitrosodiphenylamine (1)		0.595	0.661	0.701	0.722	0.717	0.720	0.708	0.689	7	AVG
NDPA as diphenylamine		0.595	0.661	0.701	0.722	0.717	0.720	0.708	0.689	7	AVG
1,2-Diphenylhydrazine		0.965	1.086	1.157	1.192	1.176	1.164	1.148	1.127	7	AVG
Tetraethyldithiopyrophosphate			0.143	0.166	0.171	0.171	0.174	0.171	0.166	7	AVG
1,3,5-Trinitrobenzene				0.085	0.095	0.103	0.109	0.113	0.101	11	AVG
Diallate (peak 1)			0.473	0.522	0.538	0.547	0.548	0.544	0.529	5	AVG
Phorate		0.513	0.597	0.662	0.686	0.703	0.702	0.688	0.650	11	AVG
Phenacetin			0.412	0.495	0.507	0.536	0.540	0.544	0.506	10	AVG
4-Bromophenyl-phenylether		0.160	0.207	0.208	0.207	0.206	0.209	0.207	0.200	9	AVG
Diallate (peak 2)			0.364	0.412	0.415	0.431	0.426	0.429	0.413	6	AVG
Diallate trans/cis			0.454	0.503	0.517	0.527	0.527	0.525	0.509	6	AVG
Hexachlorobenzene	0.210	0.205	0.199	0.206	0.212	0.208	0.214	0.209	0.208	2	AVG
Dimethoate			0.353	0.415	0.442	0.459	0.456	0.454	0.430	10	AVG
Atrazine			0.184	0.219	0.215	0.216	0.203	0.186	0.204	8	AVG
Pentachlorophenol			0.099	0.130	0.142	0.151	0.157	0.157	0.139	16	AVG
4-Aminobiphenyl		0.476	0.541	0.609	0.628	0.642	0.632	0.610	0.591	10	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: HP19760 Calibration Date(s): 11/04/18 11/04/18

Calibration Times: 11:51 15:35

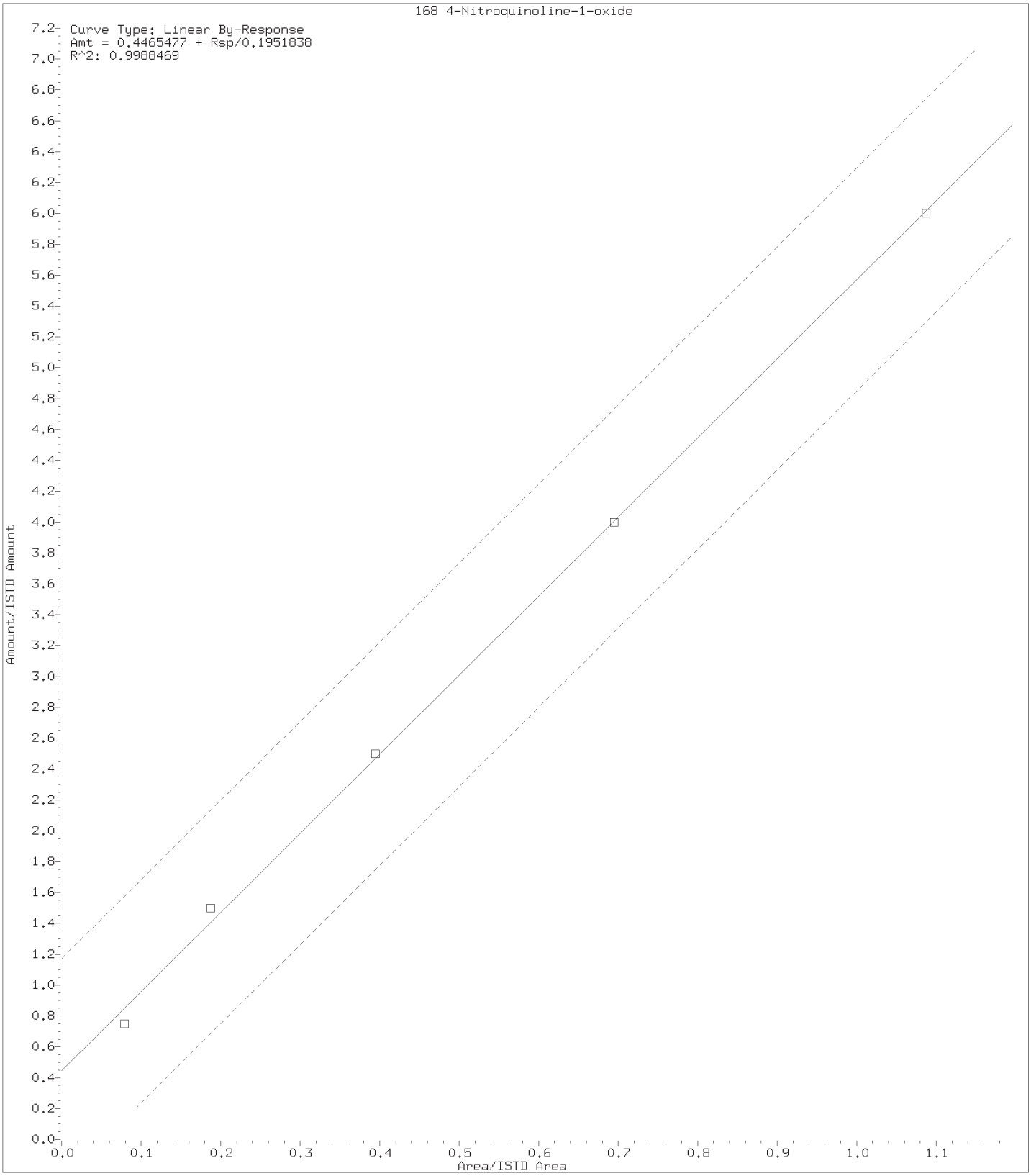
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dk0212.d RRF0.25 = dk0218.d RRF1.25 = dk0217.d RRF3.75 = dk0216.d
RRF7.5 = dk0211.d RRF12.5 = dk0215.d RRF20 = dk0214.d RRF30 = dk0213.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Pentachloronitrobenzene			0.086	0.096	0.097	0.099	0.101	0.101	0.097	6	AVG
Pronamide			0.296	0.349	0.366	0.383	0.386	0.384	0.361	10	AVG
Dinoseb				0.192	0.209	0.235	0.245	0.249	0.226	11	AVG
Phenanthrene	1.237	1.166	1.161	1.184	1.215	1.217	1.230	1.213	1.203	2	AVG
Anthracene	1.061	1.020	1.103	1.200	1.225	1.252	1.254	1.252	1.171	8	AVG
Carbazole		0.982	1.046	1.140	1.183	1.213	1.222	1.234	1.146	8	AVG
Methyl parathion			0.244	0.306	0.327	0.354	0.365	0.359	0.326	14	AVG
Di-n-butylphthalate			1.166	1.372	1.428	1.520	1.560	1.514	1.427	10	AVG
Parathion			0.138	0.196	0.210	0.227	0.232	0.238	0.207	18	AVG
4-Nitroquinoline-1-oxide				0.106	0.125	0.158	0.174	0.181	0.149	22	1STDEG
Octachlorostyrene			0.070	0.077	0.081	0.086	0.086	0.086	0.081	8	AVG
Isodrin		0.112	0.123	0.135	0.141	0.144	0.146	0.147	0.136	10	AVG
Fluoranthene	1.003	1.048	1.158	1.290	1.335	1.390	1.406	1.442	1.259	13	AVG
Benzidine				0.996	1.047	1.044	1.026	0.891	1.001	6	AVG
Pyrene	1.495	1.435	1.384	1.420	1.444	1.453	1.440	1.418	1.436	2	AVG
p-Dimethylaminoazobenzene			0.162	0.211	0.228	0.251	0.255	0.258	0.228	16	AVG
Chlorobenzilate			0.379	0.438	0.450	0.478	0.480	0.475	0.450	9	AVG
3,3'-Dimethylbenzidine			0.652	0.818	0.889	0.927	0.942	0.924	0.859	13	AVG
Butylbenzylphthalate			0.582	0.702	0.729	0.769	0.775	0.769	0.721	10	AVG
2-Acetylaminofluorene				0.490	0.523	0.609	0.644	0.642	0.582	12	AVG
3,3'-Dichlorobenzidine			0.403	0.472	0.493	0.529	0.533	0.523	0.492	10	AVG
4,4'-Methylenebis(2-chloroani				0.260	0.270	0.293	0.296	0.285	0.281	6	AVG
Benzo(a)anthracene	0.868	0.860	1.086	1.215	1.278	1.364	1.342	1.329	1.168	18	AVG
Chrysene	1.109	1.060	1.155	1.266	1.294	1.324	1.323	1.291	1.228	8	AVG
bis(2-Ethylhexyl)phthalate			0.756	0.969	1.034	1.093	1.114	1.098	1.011	13	AVG
6-Methylchrysene			0.702	0.812	0.858	0.918	0.934	0.921	0.858	10	AVG
Di-n-octylphthalate			1.184	1.579	1.725	1.835	1.941	1.925	1.698	17	AVG
Benzo(b)fluoranthene	0.900	0.954	1.139	1.221	1.296	1.323	1.339	1.395	1.196	15	AVG
7,12-Dimethylbenz[a]anthracen			0.460	0.559	0.611	0.618	0.640	0.631	0.586	12	AVG
Benzo(k)fluoranthene	1.063	0.999	1.220	1.307	1.350	1.343	1.386	1.279	1.243	11	AVG
Benzo(a)pyrene	0.773	0.826	1.024	1.133	1.196	1.252	1.290	1.273	1.096	18	AVG
3-Methylcholanthrene		0.351	0.458	0.538	0.562	0.587	0.614	0.613	0.532	18	AVG
Dibenz(a,h)acridine			0.760	0.848	0.915	0.920	0.963	0.930	0.890	8	AVG
Dibenz(a,j)acridine			0.876	0.949	0.990	1.024	1.029	0.963	0.972	6	AVG
Indeno(1,2,3-cd)pyrene	0.773	0.735	0.956	1.012	1.070	1.113	1.129	1.045	0.979	15	AVG
Dibenz(a,h)anthracene	0.895	0.892	1.104	1.104	1.189	1.190	1.195	1.122	1.086	12	AVG
Benzo(g,h,i)perylene	1.043	0.965	1.085	1.110	1.166	1.157	1.151	1.026	1.088	7	AVG
Total PAHs	1.097	1.062	1.130	1.142	1.177	1.164	1.176	1.139	1.136	4	AVG
2-Fluorophenol			1.431	1.498	1.618	1.659	1.677	1.685	1.655	1.603	6	AVG
Phenol-d6			1.916	2.093	2.252	2.310	2.340	2.322	2.281	2.216	7	AVG
Nitrobenzene-d5			0.481	0.509	0.545	0.559	0.561	0.565	0.556	0.539	6	AVG
2-Fluorobiphenyl			1.576	1.622	1.696	1.726	1.699	1.660	1.656	1.662	3	AVG
2,4,6-Tribromophenol			0.132	0.145	0.166	0.169	0.178	0.179	0.183	0.165	12	AVG
Terphenyl-d14			0.755	0.760	0.823	0.835	0.855	0.854	0.836	0.817	5	AVG

Average %RSD 8

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 Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/18nov04.b/dk0211.d SSTD7.5
/chem/HP19760.i/18nov04.b/dk0212.d SSTD0.125
/chem/HP19760.i/18nov04.b/dk0213.d SSTD30
/chem/HP19760.i/18nov04.b/dk0214.d SSTD20
/chem/HP19760.i/18nov04.b/dk0215.d SSTD12.5
/chem/HP19760.i/18nov04.b/dk0216.d SSTD3.75
/chem/HP19760.i/18nov04.b/dk0217.d SSTD1.25
/chem/HP19760.i/18nov04.b/dk0218.d SSTD0.25

Area Summary

	File ID:									
Internal Standard Name	dk0211.d	dk0212.d	dk0213.d	dk0214.d	dk0215.d	dk0216.d	dk0217.d	dk0218.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	261444	343195	297977	288736	285497	266319	282310	262568	286006	9	Yes
Naphthalene-d8	972956	1266142	1086871	1049909	1063802	987946	1049459	974943	1056504	9	Yes
Acenaphthene-d10	434824	556706	494386	490246	481163	443565	468772	425772	474429	9	Yes
Phenanthrene-d10	809458	976796	930619	907307	903320	826051	855772	764307	871704	8	Yes
Pyrene-d10	787242	907950	973269	912844	895336	807478	812866	719433	852052	10	Yes
Perylene-d12	796000	848103	972401	925359	922764	804596	772686	668655	838820	12	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:								
Internal Standard Name	dk0211.d	dk0212.d	dk0213.d	dk0214.d	dk0215.d	dk0216.d	dk0217.d	dk0218.d	Avg. RT
1,4-Dichlorobenzene-d4	6.755	6.755	6.760	6.761	6.761	6.760	6.760	6.760	6.759
Naphthalene-d8	8.690	8.690	8.696	8.696	8.690	8.690	8.690	8.690	8.691
Acenaphthene-d10	11.482	11.482	11.488	11.488	11.482	11.482	11.482	11.482	11.483
Phenanthrene-d10	13.382	13.382	13.388	13.388	13.388	13.382	13.382	13.382	13.384
Pyrene-d10	15.340	15.340	15.346	15.340	15.340	15.340	15.340	15.340	15.341
Perylene-d12	19.811	19.811	19.822	19.817	19.817	19.817	19.817	19.817	19.816

Comments:_____

_____

Report generated on 11/04/2018 at 19:23

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dk0221.d

ICV SAMPLE ID: rvICV2628 BATCH: 18NOV04026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Diphenyl ether	12.50	15.14	21	30	YES
2-Nitroaniline	12.50	11.87	-5	30	YES
Acenaphthylene	12.50	12.81	3	30	YES
1,2-Diphenylhydrazine	12.50	12.71	2	30	YES
Pentachlorophenol	12.50	12.55	0	30	YES
Benzo(b)fluoranthene	12.50	12.16	-3	30	YES
Benzo(k)fluoranthene	12.50	11.91	-5	30	YES
Benzo(a)pyrene	12.50	12.62	1	30	YES
Dibenz(a,h)anthracene	12.50	12.44	-1	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dk0222.d

ICV SAMPLE ID: rvBASICV3028 BATCH: 18NOV04026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	15.02	20	30	YES
Caprolactam	12.50	11.59	-7	30	YES
Atrazine	12.50	12.13	-3	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dk0302.d

ICV SAMPLE ID: rvICV2628 BATCH: 18NOV04A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.04	-4	30	YES
N-Nitrosodimethylamine	12.50	14.10	13	30	YES
Pyridine	12.50	13.33	7	30	YES
2-Picoline	12.50	13.50	8	30	YES
N-Nitrosomethylethylamine	12.50	12.00	-4	30	YES
Methyl methanesulfonate	12.50	12.59	1	30	YES
N-Nitrosodiethylamine	12.50	12.59	1	30	YES
Ethyl methanesulfonate	12.50	12.24	-2	30	YES
Phenol	12.50	13.42	7	30	YES
Aniline	12.50	12.63	1	30	YES
bis(2-Chloroethyl)ether	12.50	13.46	8	30	YES
2-Chlorophenol	12.50	13.84	11	30	YES
1,3-Dichlorobenzene	12.50	13.57	9	30	YES
1,4-Dichlorobenzene	12.50	13.86	11	30	YES
Benzyl alcohol	12.50	14.52	16	30	YES
1,2-Dichlorobenzene	12.50	13.61	9	30	YES
Indene	12.50	19.93	59	30	NO*
2-Methylphenol	12.50	13.81	10	30	YES
2,2'-oxybis(1-Chloropropane	12.50	13.07	5	30	YES
bis(2-Chloroisopropyl)ether	12.50	13.07	5	30	YES
N-Nitrosopyrrolidine	12.50	12.50	0	30	YES
Acetophenone	12.50	14.31	14	30	YES
4-Methylphenol	12.50	13.92	11	30	YES
N-Nitroso-di-n-propylamine	12.50	14.12	13	30	YES
N-Nitrosomorpholine	12.50	12.28	-2	30	YES
o-Toluidine	12.50	13.41	7	30	YES
Total Cresols	25.00	27.74	11	30	YES
Hexachloroethane	12.50	13.20	6	30	YES
Nitrobenzene	12.50	13.70	10	30	YES
N-Nitrosopiperidine	12.50	12.02	-4	30	YES
Isophorone	12.50	14.46	16	30	YES
2-Nitrophenol	12.50	13.90	11	30	YES
2,4-Dimethylphenol	12.50	11.54	-8	30	YES
bis(2-Chloroethoxy)methane	12.50	14.17	13	30	YES
Benzoic acid	25.00	25.84	3	30	YES
O,O,O-Triethylphosphorothio	12.50	12.73	2	30	YES
2,4-Dichlorophenol	12.50	14.04	12	30	YES

NC = Could not calculate

Comments: _____*Compound fails high, run any hits under valid ICV_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dk0302.d

ICV SAMPLE ID: rvICV2628 BATCH: 18NOV04A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	13.61	9	30	YES
Naphthalene	12.50	13.45	8	30	YES
4-Chloroaniline	12.50	14.35	15	30	YES
2,6-Dichlorophenol	12.50	12.24	-2	30	YES
Hexachloropropene	12.50	13.22	6	30	YES
Hexachlorobutadiene	12.50	13.45	8	30	YES
Quinoline	12.50	12.98	4	30	YES
N-Nitrosodi-n-butylamine	12.50	10.88	-13	30	YES
4-Chloro-3-methylphenol	12.50	14.53	16	30	YES
Safrole	12.50	12.08	-3	30	YES
2-Methylnaphthalene	12.50	13.87	11	30	YES
1-Methylnaphthalene	12.50	13.47	8	30	YES
Hexachlorocyclopentadiene	25.00	26.78	7	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	13.49	8	30	YES
cis-Isosafrole	1.50	1.54	3	30	YES
2,4,6-Trichlorophenol	12.50	14.57	17	30	YES
2,4,5-Trichlorophenol	12.50	14.85	19	30	YES
trans-Isosafrole	11.00	11.47	4	30	YES
1,1'-Biphenyl	12.50	14.51	16	30	YES
2-Chloronaphthalene	12.50	13.51	8	30	YES
Isosafrole	12.50	13.07	5	30	YES
1-Chloronaphthalene	12.50	12.79	2	30	YES
1,4-Naphthoquinone	15.63	16.56	6	30	YES
1,4-Dinitrobenzene	12.50	14.05	12	30	YES
Dimethylphthalate	12.50	13.45	8	30	YES
1,3-Dinitrobenzene	12.50	13.81	11	30	YES
2,6-Dinitrotoluene	12.50	14.14	13	30	YES
3-Nitroaniline	12.50	14.60	17	30	YES
Acenaphthene	12.50	14.19	14	30	YES
2,4-Dinitrophenol	25.00	28.73	15	30	YES
4-Nitrophenol	12.50	13.61	9	30	YES
Pentachlorobenzene	12.50	12.03	-4	30	YES
2,4-Dinitrotoluene	12.50	13.77	10	30	YES
Dibenzofuran	12.50	13.87	11	30	YES
2,4_2,6-Dinitrotoluenes	25.00	28.47	14	30	YES
1-Naphthylamine	25.00	25.51	2	30	YES
2,3,4,6-Tetrachlorophenol	12.50	12.72	2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dk0302.d

ICV SAMPLE ID: rvICV2628 BATCH: 18NOV04A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Naphthylamine	25.00	24.94	0	30	YES
Diethylphthalate	12.50	13.66	9	30	YES
Thionazin	12.50	13.30	6	30	YES
Fluorene	12.50	14.33	15	30	YES
4-Chlorophenyl-phenylether	12.50	13.54	8	30	YES
5-Nitro-o-toluidine	12.50	12.69	2	30	YES
4-Nitroaniline	12.50	14.28	14	30	YES
4,6-Dinitro-2-methylphenol	12.50	14.17	13	30	YES
N-Nitrosodiphenylamine	12.50	14.72	18	30	YES
NDPA as diphenylamine	12.50	14.72	18	30	YES
Tetraethyldithiopyrophospha	12.50	13.10	5	30	YES
1,3,5-Trinitrobenzene	12.50	12.19	-2	30	YES
Diallate (peak 1)	9.38	9.09	-3	30	YES
Phorate	12.50	13.91	11	30	YES
Phenacetin	12.50	12.47	0	30	YES
4-Bromophenyl-phenylether	12.50	13.77	10	30	YES
Diallate (peak 2)	3.13	3.56	14	30	YES
Hexachlorobenzene	12.50	13.81	11	30	YES
Diallate trans/cis	12.50	12.33	-1	30	YES
Dimethoate	12.50	13.50	8	30	YES
4-Aminobiphenyl	12.50	19.44	56	30	NO*
Pentachloronitrobenzene	12.50	12.46	0	30	YES
Pronamide	12.50	13.04	4	30	YES
Dinoseb	12.50	11.73	-6	30	YES
Phenanthrene	12.50	13.96	12	30	YES
Anthracene	12.50	14.48	16	30	YES
Carbazole	12.50	14.66	17	30	YES
Methyl parathion	12.50	14.00	12	30	YES
Di-n-butylphthalate	12.50	14.39	15	30	YES
Parathion	12.50	14.61	17	30	YES
4-Nitroquinoline-1-oxide	150.00	147.12	-2	30	YES
Isodrin	12.50	13.33	7	30	YES
Fluoranthene	12.50	14.53	16	30	YES
Benzidine	62.50	55.60	-11	30	YES
Pyrene	12.50	13.52	8	30	YES
p-Dimethylaminoazobenzene	12.50	14.42	15	30	YES
Chlorobenzilate	12.50	13.14	5	30	YES

NC = Could not calculate

Comments: _____*Compound fails high, run any hits under valid ICV_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: dk0302.d

ICV SAMPLE ID: rvICV2628 BATCH: 18NOV04A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
3,3'-Dimethylbenzidine	25.00	25.78	3	30	YES
Butylbenzylphthalate	12.50	14.09	13	30	YES
2-Acetylaminofluorene	12.50	11.81	-6	30	YES
3,3'-Dichlorobenzidine	12.50	12.51	0	30	YES
Benzo(a)anthracene	12.50	14.80	18	30	YES
Chrysene	12.50	14.05	12	30	YES
4,4'-Methylenebis(2-chloroa	12.50	12.09	-3	30	YES
bis(2-Ethylhexyl)phthalate	12.50	14.24	14	30	YES
6-Methylchrysene	12.50	12.42	-1	30	YES
Di-n-octylphthalate	12.50	14.65	17	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	14.73	18	30	YES
3-Methylcholanthrene	12.50	14.99	20	30	YES
Dibenz(a,h)acridine	12.50	12.74	2	30	YES
Dibenz(a,j)acridine	12.50	13.20	6	30	YES
Indeno(1,2,3-cd)pyrene	12.50	14.89	19	30	YES
Benzo(g,h,i)perylene	12.50	14.38	15	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: HP19760 Calibration Date: 11/07/18 Time: 19:40

Lab File ID: dk0601.d Init. Calib. Date(s): 11/04/18 11/04/18

Init. Calib. Times(s): 11:51 15:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.844	0.669	5.940	7.5	-21
N-Nitrosodimethylamine	1.289	1.185	6.900	7.5	-8
Pyridine	2.160	1.950	6.770	7.5	-10
2-Picoline	2.156	2.062	7.170	7.5	-4
N-Nitrosomethylethylamine	0.939	0.889	7.100	7.5	-5
Methyl methanesulfonate	1.033	1.032	7.490	7.5	0
N-Nitrosodiethylamine	0.835	0.845	7.590	7.5	1
Ethyl methanesulfonate	0.805	0.816	7.600	7.5	1
Benzaldehyde	1.347	1.437	8.000	7.5	7
Phenol	2.581	2.542	7.390	7.5	-2
Aniline	3.036	2.971	7.340	7.5	-2
a-methylstyrene	0.156	0.147	7.060	7.5	-6
bis(2-Chloroethyl)ether	1.913	1.903	7.460	7.5	0
2-Chlorophenol	1.516	1.557	7.710	7.5	3
1,3-Dichlorobenzene	1.610	1.605	7.480	7.5	0
1,4-Dichlorobenzene	1.609	1.623	7.560	7.5	1
Benzyl alcohol	1.067	0.996	7.000	7.5	-7
1,2-Dichlorobenzene	1.531	1.549	7.590	7.5	1
Indene	1.729	1.679	7.280	7.5	-3
2-Methylphenol	1.550	1.573	7.610	7.5	2
2,2'-oxybis(1-Chloropropane)	2.209	2.271	7.710	7.5	3
bis(2-Chloroisopropyl)ether	2.209	2.271	7.710	7.5	3
N-Nitrosopyrrolidine	0.867	0.879	7.600	7.5	1
Acetophenone	2.179	2.185	7.520	7.5	0
4-Methylphenol	1.760	1.784	7.600	7.5	1
Total Cresols	1.655	1.679	15.220	15.0	1
N-Nitroso-di-n-propylamine	1.363	1.377	7.580	7.5	1
N-Nitrosomorpholine	1.019	1.047	7.710	7.5	3
o-Toluidine	2.704	2.687	7.450	7.5	-1
Hexachloroethane	0.753	0.755	7.520	7.5	0
Nitrobenzene	0.545	0.547	7.530	7.5	0
N-Nitrosopiperidine	0.211	0.215	7.640	7.5	2
Isophorone	0.919	0.923	7.530	7.5	0
2-Nitrophenol	0.206	0.202	7.350	7.5	-2
2,4-Dimethylphenol	0.444	0.448	7.570	7.5	1
O,O,O-Triethylphosphorothioate	0.168	0.165	7.360	7.5	-2

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/07/18 Time: 19:40

Lab File ID: dk0601.d Init. Calib. Date(s): 11/04/18 11/04/18

Init. Calib. Times(s): 11:51 15:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.579	0.576	7.460	7.5	0
Benzoic acid	0.299	0.264	8.830	10.0	-12
2,4-Dichlorophenol	0.299	0.305	7.660	7.5	2
1,2,4-Trichlorobenzene	0.327	0.330	7.570	7.5	1
Naphthalene	1.182	1.180	7.480	7.5	0
4-Chloroaniline	0.451	0.455	7.560	7.5	1
2,6-Dichlorophenol	0.291	0.300	7.720	7.5	3
Hexachloropropene	0.206	0.200	7.290	7.5	-3
Hexachlorobutadiene	0.176	0.172	7.330	7.5	-2
Quinoline	0.668	0.652	7.330	7.5	-2
Caprolactam	0.122	0.117	7.230	7.5	-4
N-Nitrosodi-n-butylamine	0.348	0.310	6.680	7.5	-11
4-Chloro-3-methylphenol	0.354	0.356	7.540	7.5	1
Safrole	0.272	0.270	7.440	7.5	-1
2-Methylnaphthalene	0.718	0.732	7.650	7.5	2
1-Methylnaphthalene	0.680	0.697	7.690	7.5	2
Hexachlorocyclopentadiene	0.397	0.377	7.130	7.5	-5
1,2,4,5-Tetrachlorobenzene	0.664	0.650	7.350	7.5	-2
cis-Isosafrole	0.605	0.625	1.320	1.3	3
2,4,6-Trichlorophenol	0.420	0.420	7.500	7.5	0
2,4,5-Trichlorophenol	0.441	0.448	7.620	7.5	2
trans-Isosafrole	0.660	0.654	6.170	6.2	-1
Isosafrole	0.651	0.649	7.480	7.5	0
1,1'-Biphenyl	1.796	1.833	7.650	7.5	2
2-Chloronaphthalene	1.460	1.475	7.580	7.5	1
1-Chloronaphthalene	1.297	1.306	7.550	7.5	1
Diphenyl ether	0.752	0.759	7.570	7.5	1
2-Nitroaniline	0.467	0.473	7.600	7.5	1
1,4-Naphthoquinone	0.540	0.533	7.400	7.5	-1
1,4-Dinitrobenzene	0.254	0.246	7.270	7.5	-3
Dimethylphthalate	1.507	1.507	7.500	7.5	0
1,3-Dinitrobenzene	0.281	0.281	7.510	7.5	0
2,6-Dinitrotoluene	0.349	0.357	7.680	7.5	2
Acenaphthylene	1.985	2.064	7.800	7.5	4
3-Nitroaniline	0.402	0.409	7.630	7.5	2
Acenaphthene	1.457	1.471	7.570	7.5	1

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/07/18 Time: 19:40

Lab File ID: dk0601.d Init. Calib. Date(s): 11/04/18 11/04/18

Init. Calib. Times(s): 11:51 15:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.242	0.210	8.690	10.0	-13
4-Nitrophenol	0.307	0.293	7.160	7.5	-5
Pentachlorobenzene	0.524	0.514	7.360	7.5	-2
2,4-Dinitrotoluene	0.474	0.472	7.460	7.5	-1
2,4_2,6-Dinitrotoluenes	0.403	0.414	15.440	15.0	3
Dibenzofuran	2.022	2.025	7.510	7.5	0
1-Naphthylamine	1.531	1.459	7.150	7.5	-5
2,3,4,6-Tetrachlorophenol	0.338	0.329	7.290	7.5	-3
2-Naphthylamine	1.548	1.450	7.030	7.5	-6
Diethylphthalate	1.526	1.436	7.060	7.5	-6
Thionazin	0.332	0.316	7.150	7.5	-5
Fluorene	1.532	1.583	7.750	7.5	3
4-Chlorophenyl-phenylether	0.736	0.734	7.480	7.5	0
5-Nitro-o-toluidine	0.467	0.468	7.510	7.5	0
4-Nitroaniline	0.441	0.458	7.790	7.5	4
4,6-Dinitro-2-methylphenol	0.157	0.147	7.040	7.5	-6
N-Nitrosodiphenylamine (1)	0.689	0.705	7.680	7.5	2
NDPA as diphenylamine	0.689	0.705	7.680	7.5	2
1,2-Diphenylhydrazine	1.127	1.177	7.830	7.5	4
Tetraethyldithiopyrophosphate	0.166	0.159	7.200	7.5	-4
1,3,5-Trinitrobenzene	0.101	0.093	6.890	7.5	-8
Diallate (peak 1)	0.529	0.515	6.060	6.2	-3
Phorate	0.650	0.654	7.540	7.5	1
Phenacetin	0.506	0.487	7.220	7.5	-4
4-Bromophenyl-phenylether	0.200	0.202	7.550	7.5	1
Diallate (peak 2)	0.413	0.407	1.260	1.3	-1
Diallate trans/cis	0.509	0.497	7.320	7.5	-2
Hexachlorobenzene	0.208	0.203	7.330	7.5	-2
Dimethoate	0.430	0.422	7.370	7.5	-2
Atrazine	0.204	0.199	7.340	7.5	-2
Pentachlorophenol	0.139	0.137	7.360	7.5	-2
4-Aminobiphenyl	0.591	0.609	7.730	7.5	3
Pentachloronitrobenzene	0.097	0.095	7.330	7.5	-2
Pronamide	0.361	0.352	7.300	7.5	-3
Dinoseb	0.226	0.199	6.620	7.5	-12
Phenanthrene	1.203	1.195	7.450	7.5	-1

(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: HP19760 Calibration Date: 11/07/18 Time: 19:40

Lab File ID: dk0601.d Init. Calib. Date(s): 11/04/18 11/04/18

Init. Calib. Times(s): 11:51 15:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.171	1.214	7.780	7.5	4
Carbazole	1.146	1.181	7.730	7.5	3
Methyl parathion	0.326	0.316	7.280	7.5	-3
Di-n-butylphthalate	1.427	1.374	7.220	7.5	-4
Parathion	0.207	0.200	7.260	7.5	-3
4-Nitroquinoline-1-oxide	0.149	0.112	6.530	7.5	-13
Octachlorostyrene	0.081	0.075	6.950	7.5	-7
Isodrin	0.136	0.137	7.550	7.5	1
Fluoranthene	1.259	1.328	7.910	7.5	5
Benzidine	1.001	0.971	21.820	22.5	-3
Pyrene	1.436	1.443	7.530	7.5	0
p-Dimethylaminoazobenzene	0.228	0.216	7.120	7.5	-5
Chlorobenzilate	0.450	0.435	7.240	7.5	-3
3,3'-Dimethylbenzidine	0.859	0.828	7.230	7.5	-4
Butylbenzylphthalate	0.721	0.679	7.070	7.5	-6
2-Acetylaminofluorene	0.582	0.473	6.100	7.5	-19
3,3'-Dichlorobenzidine	0.492	0.465	7.090	7.5	-5
4,4'-Methylenebis(2-chloroanil	0.281	0.253	6.760	7.5	-10
Benzo(a)anthracene	1.168	1.203	7.730	7.5	3
Chrysene	1.228	1.273	7.780	7.5	4
bis(2-Ethylhexyl)phthalate	1.010	0.881	6.540	7.5	-13
6-Methylchrysene	0.858	0.797	6.970	7.5	-7
Di-n-octylphthalate	1.698	1.598	7.060	7.5	-6
Benzo(b)fluoranthene	1.196	1.281	8.030	7.5	7
7,12-Dimethylbenz[a]anthracene	0.586	0.583	7.450	7.5	-1
Benzo(k)fluoranthene	1.243	1.346	8.120	7.5	8
Benzo(a)pyrene	1.096	1.175	8.040	7.5	7
3-Methylcholanthrene	0.532	0.537	7.570	7.5	1
Dibenz(a,h)acridine	0.890	0.847	7.140	7.5	-5
Dibenz(a,j)acridine	0.972	0.989	7.640	7.5	2
Indeno(1,2,3-cd)pyrene	0.979	1.011	7.740	7.5	3
Dibenz(a,h)anthracene	1.086	1.154	7.970	7.5	6
Benzo(g,h,i)perylene	1.088	1.151	7.940	7.5	6
Total PAHs	1.136	1.231	146.340	135.0	8
2-Fluorophenol	1.603	1.586	14.830	15.0	-1

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: HP19760 Calibration Date: 11/07/18 Time: 19:40

Lab File ID: dk0601.d Init. Calib. Date(s): 11/04/18 11/04/18

Init. Calib. Times(s): 11:51 15:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.216	2.233	15.110	15.0	1
Nitrobenzene-d5	0.539	0.540	15.010	15.0	0
2-Fluorobiphenyl	1.662	1.675	15.120	15.0	1
2,4,6-Tribromophenol	0.165	0.161	14.690	15.0	-2
Terphenyl-d14	0.817	0.811	14.890	15.0	-1
			Average %Drift:		3

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/18nov04.b/dk0211.d **
/chem/HP19760.i/18nov04.b/dk0212.d
/chem/HP19760.i/18nov04.b/dk0213.d
/chem/HP19760.i/18nov04.b/dk0214.d
/chem/HP19760.i/18nov04.b/dk0215.d
/chem/HP19760.i/18nov04.b/dk0216.d
/chem/HP19760.i/18nov04.b/dk0217.d
/chem/HP19760.i/18nov04.b/dk0218.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/18nov07a.b/dk0601.d

Area Summary

File ID:

Internal Standard Name	dk0601.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	257002	261444	130722	522888	Yes
Naphthalene-d8	949149	972956	486478	1945912	Yes
Acenaphthene-d10	428449	434824	217412	869648	Yes
Phenanthrene-d10	781417	809458	404729	1618916	Yes
Pyrene-d10	770980	787242	393621	1574484	Yes
Perylene-d12	705290	796000	398000	1592000	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dk0601.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.696	6.755	Yes
Naphthalene-d8	8.631	8.690	Yes
Acenaphthene-d10	11.423	11.482	Yes
Phenanthrene-d10	13.329	13.382	Yes
Pyrene-d10	15.276	15.340	Yes
Perylene-d12	19.741	19.811	Yes

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: _____

Report generated on 11/07/2018 at 20:21

Data File: /chem/HP19760.i/18nov07a.b/dk0628.d
Report Date: 11/08/2018 08:43

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP19760.i
Client ID: SECC12.5
Lab Sample ID: RV2648
Sublist used: 25788M.sub
Injection Date and Time: 08-NOV-2018 04:06
Initial Calibration Date(s): 04-NOV-2018 04-NOV-2018
Initial Calibration Time(s): 11:51 15:35
Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
Pyridine	2.15978	2.09417	0.010	3.0	20.0
Phenol	2.58072	2.55949	0.010	0.8	20.0
Aniline	3.03599	2.99822	0.010	1.2	20.0
2-Chlorophenol	1.51574	1.53721	0.010	-1.4	20.0
1,3-Dichlorobenzene	1.61030	1.61964	0.010	-0.6	20.0
1,4-Dichlorobenzene	1.60919	1.63794	0.010	-1.8	20.0
Benzyl alcohol	1.06729	1.03646	0.010	2.9	20.0
1,2-Dichlorobenzene	1.53114	1.52614	0.010	0.3	20.0
2-Methylphenol	1.55014	1.57791	0.010	-1.8	20.0
2,2'-oxybis(1-Chloropropane)	2.20858	2.20683	0.010	0.1	20.0
4-Methylphenol	1.75983	1.75641	0.010	0.2	20.0
N-Nitroso-di-n-propylamine	1.36341	1.36356	0.010	0.0	20.0
Hexachloroethane	0.75265	0.73981	0.010	1.7	20.0
Nitrobenzene	0.54508	0.54754	0.010	-0.5	20.0
Isophorone	0.91891	0.93662	0.010	-1.9	20.0
2-Nitrophenol	0.20588	0.20993	0.010	-2.0	20.0
2,4-Dimethylphenol	0.44366	0.45459	0.010	-2.5	20.0
bis(2-Chloroethoxy)methane	0.57904	0.57893	0.010	0.0	20.0
2,4-Dichlorophenol	0.29878	0.30751	0.010	-2.9	20.0
1,2,4-Trichlorobenzene	0.32703	0.32739	0.010	-0.1	20.0
4-Chloroaniline	0.45133	0.45205	0.010	-0.2	20.0
Hexachlorobutadiene	0.17625	0.17653	0.010	-0.2	20.0
4-Chloro-3-methylphenol	0.35382	0.35931	0.010	-1.6	20.0
2-Methylnaphthalene	0.71763	0.72666	0.010	-1.3	20.0
Hexachlorocyclopentadiene	0.39662	0.40718	0.010	-2.7	20.0
2,4,6-Trichlorophenol	0.41986	0.43878	0.010	-4.5	20.0
2,4,5-Trichlorophenol	0.44067	0.45673	0.010	-3.6	20.0
2-Chloronaphthalene	1.46003	1.55597	0.010	-6.6	20.0
2-Nitroaniline	0.46683	0.50231	0.010	-7.6	20.0
Dimethylphthalate	1.50713	1.43461	0.010	4.8	20.0
2,6-Dinitrotoluene	0.34862	0.35173	0.010	-0.9	20.0
3-Nitroaniline	0.40193	0.41734	0.010	-3.8	20.0
2,4-Dinitrophenol	0.24199	0.22781	0.010	5.9	20.0
4-Nitrophenol	0.30673	0.30315	0.010	1.2	20.0
2,4-Dinitrotoluene	0.47417	0.45484	0.010	4.1	20.0
Dibenzofuran	2.02209	2.01879	0.010	0.2	20.0
Diethylphthalate	1.52551	1.45686	0.010	4.5	20.0
4-Chlorophenyl-phenylether	0.73623	0.73240	0.010	0.5	20.0
4-Nitroaniline	0.44120	0.44153	0.010	-0.1	20.0
4,6-Dinitro-2-methylphenol	0.15679	0.15285	0.010	2.5	20.0
N-Nitrosodiphenylamine	0.68875	0.72446	0.010	-5.2	20.0
4-Bromophenyl-phenylether	0.20047	0.20949	0.010	-4.5	20.0
Pentachlorophenol	0.13925	0.15096	0.010	-8.4	20.0
Carbazole	1.14585	1.18376	0.010	-3.3	20.0
3,3'-Dichlorobenzidine	0.49230	0.50425	0.010	-2.4	20.0
Di-n-octylphthalate	1.69804	1.67065	0.010	1.6	20.0
Surrogate Standards	**ICAL Avg. RRF**	**SECC RRF**	**Min. RRF**	**% Diff.**	**Max. %Diff.**
2-Fluorophenol	1.60328	1.62751	0.010	-1.5	20.0

Phenol-d6	2.21621	2.24378	0.010	-1.2	20.0
Nitrobenzene-d5	0.53946	0.54828	0.010	-1.6	20.0
2-Fluorobiphenyl	1.66209	1.67763	0.010	-0.9	20.0
2,4,6-Tribromophenol	0.16465	0.16291	0.010	1.1	20.0
Terphenyl-d14	0.81692	0.80319	0.010	1.7	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): dk0601.d Date Analyzed: 11/07/18

Instrument ID: HP19760 Time Analyzed: 19:40

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	257002	6.696	949149	8.631	428449	11.423
UPPER LIMIT	514004	7.196	1898298	9.131	856898	11.923
LOWER LIMIT	128501	6.196	474575	8.131	214225	10.923
LLI SAMPLE NO.						
01 SBLKWG311	221312	6.696	807989	8.631	363497	11.423
02 311WGLCS	219615	6.696	809490	8.631	355097	11.423
03 311WGLCSD	219804	6.696	796514	8.632	351398	11.429
04 SBLKWK306	231796	6.696	843179	8.632	357059	11.423
05 306WKLCS	232833	6.697	853107	8.632	381404	11.429
06 306WKLCSD	222913	6.696	824628	8.631	359850	11.429
07 SBLKWM305	228682	6.696	849802	8.631	381575	11.423
08 305WMLCS	232022	6.696	855405	8.632	382951	11.429
09 9879198RE	221668	6.696	847977	8.632	381358	11.423
10 9876332	238902	6.696	863320	8.631	397041	11.423
11 9876334	236651	6.697	888855	8.632	399339	11.424
12 9876335MS	221820	6.696	841730	8.632	372495	11.429
13 9876336MSD	226739	6.696	851239	8.632	379423	11.429
14 9876342	229244	6.696	852049	8.631	387258	11.423
15 RV2648	273394	6.696	992637	8.637	439237	11.429
16 9879467	260794	6.696	958523	8.632	413434	11.423
17 9882159	244123	6.696	886349	8.632	381730	11.423

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): dk0601.d Date Analyzed: 11/07/18

Instrument ID: HP19760 Time Analyzed: 19:40

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	781417	13.329	770980	15.276	705290	19.741
UPPER LIMIT	1562834	13.829	1541960	15.776	1410580	20.241
LOWER LIMIT	390709	12.829	385490	14.776	352645	19.241
LLI SAMPLE NO.						
01 SBLKWG311	608315	13.329	537462	15.276	467048	19.741
02 311WGLCS	541490	13.329	546436	15.276	584638	19.741
03 311WGLCSD	617919	13.329	636882	15.276	597485	19.741
04 SBLKWK306	638716	13.329	568775	15.276	512913	19.741
05 306WKLCS	639512	13.335	587778	15.276	574404	19.741
06 306WKLCSD	597243	13.335	539779	15.276	571814	19.747
07 SBLKWM305	664497	13.329	592874	15.282	534350	19.741
08 305WMLCS	623135	13.335	555454	15.276	593087	19.741
09 9879198RE	644473	13.335	566845	15.276	523756	19.741
10 9876332	716843	13.329	705911	15.276	652901	19.747
11 9876334	699074	13.330	651846	15.276	593829	19.741
12 9876335MS	628769	13.335	607181	15.276	613744	19.747
13 9876336MSD	664319	13.335	651025	15.282	635790	19.747
14 9876342	661864	13.335	608214	15.276	543234	19.741
15 RV2648	779368	13.335	773053	15.282	772494	19.747
16 9879467	735610	13.329	689152	15.276	597147	19.741
17 9882159	673625	13.329	612664	15.276	506418	19.741

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): dk0601.d Date Analyzed: 11/07/18

Instrument ID: HP19760 Time Analyzed: 19:40

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	257002	6.696	949149	8.631	428449	11.423
UPPER LIMIT	514004	7.196	1898298	9.131	856898	11.923
LOWER LIMIT	128501	6.196	474575	8.131	214225	10.923
LLI SAMPLE NO.						
18 9879471	233310	6.696	862642	8.632	385632	11.423
19 9879472	220003	6.696	797752	8.632	334617	11.423
20 9879473	233780	6.696	869309	8.632	372861	11.423

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): dk0601.d Date Analyzed: 11/07/18

Instrument ID: HP19760 Time Analyzed: 19:40

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	781417	13.329	770980	15.276	705290	19.741
UPPER LIMIT	1562834	13.829	1541960	15.776	1410580	20.241
LOWER LIMIT	390709	12.829	385490	14.776	352645	19.241
LLI SAMPLE NO.						
18 9879471	646416	13.329	581437	15.276	511610	19.741
19 9879472	591445	13.329	544038	15.276	507935	19.741
20 9879473	662625	13.329	586264	15.276	529810	19.741

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

Data file: /chem/HP19760.i/18nov07a.b/dk0613.d Injection date and time: **08-NOV-2018 01:46**
Data file Sample Info. Line: 14T02;9876332;1;0;SAMPLE;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:39 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 238 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.696(0.000)	808	152	238902 (-7)	5.00	
65) Naphthalene-d8	8.631(0.000)	1140	136	863320 (-9)	5.00	
113) Acenaphthene-d10	11.423(0.000)	1619	164	397041 (-7)	5.00	
153) Phenanthrene-d10	13.329(0.000)	1946	188	716843 (-8)	5.00	
175) Pyrene-d10	15.276(0.000)	2280	212	705911 (-8)	5.00	
213) Perylene-d12	19.747(-0.006)	3047	264	652901 (-7)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.796(0.000)	112	1223906	15.977	32%		19 - 119
17) Phenol-d6	(1)	6.178(0.000)	99	1551904	14.656	29%		10 - 72
44) Nitrobenzene-d5	(2)	7.530(0.000)	82	1146405	12.308	49%		44 - 120
93) 2-Fluorobiphenyl	(3)	10.380(0.000)	172	1778082	13.472	54%		44 - 119
135) 2,4,6-Tribromophenol	(3)	12.490(0.000)	330	414319	31.689	63%		43 - 140
179) Terphenyl-d14	(5)	15.597(0.000)	244	1755400	15.220	61%		50 - 134

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					0.5
18) Phenol	(1)			Not Detected					0.1
19) Aniline	(1)			Not Detected					0.8
23) 2-Chlorophenol	(1)			Not Detected					0.1
24) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
26) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
27) Benzyl alcohol	(1)			Not Detected					3
28) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
31) 2-Methylphenol	(1)			Not Detected					0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
37) 4-Methylphenol	(1)			Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
43) Hexachloroethane	(1)			Not Detected					0.3
45) Nitrobenzene	(2)			Not Detected					0.1
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.8
53) 2,4-Dimethylphenol	(2)			Not Detected					0.8
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
62) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
67) 4-Chloroaniline	(2)			Not Detected					1
71) Hexachlorobutadiene	(2)			Not Detected					0.1
80) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
83) 2-Methylnaphthalene	(2)			Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)			Not Detected					1
90) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1

Digitally signed by Edward Monborne on 11/08/2018 at 08:46. Target 3.5 esignature user ID: em10340

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0613.d Injection date and time: **08-NOV-2018 01:46**
Data file Sample Info. Line: 14T02;9876332;1;0;SAMPLE;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:39 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

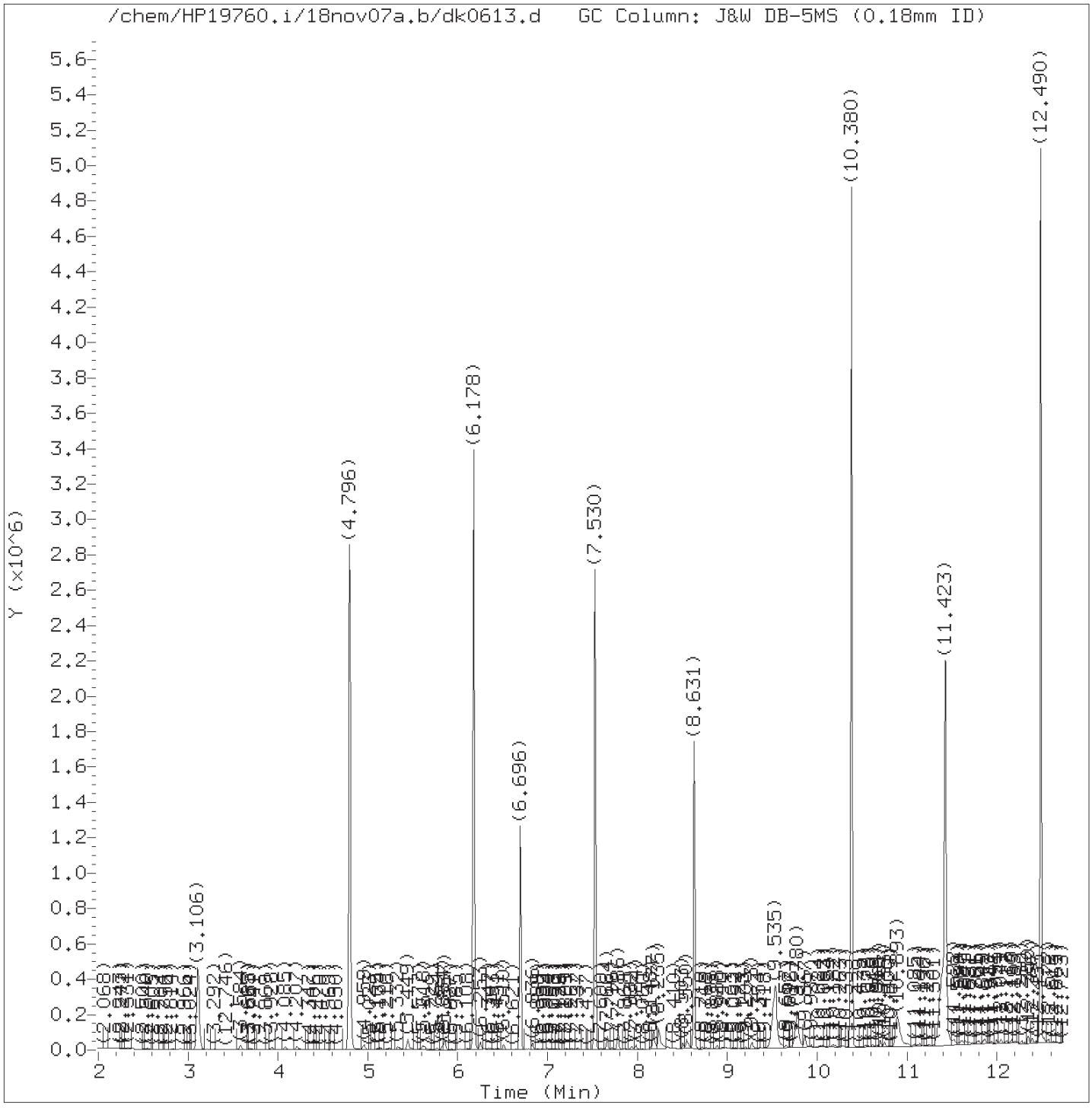
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 238 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.5
106) Dimethylphthalate	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
112) 3-Nitroaniline	(3)				Not Detected					0.8
115) 2,4-Dinitrophenol	(3)				Not Detected					4
116) 4-Nitrophenol	(3)				Not Detected					3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
124) Diethylphthalate	(3)				Not Detected					0.5
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					2
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.2
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					0.3
163) Carbazole	(4)				Not Detected					0.1
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.8
205) Di-n-octylphthalate	(6)				Not Detected					1

Total number of targets = 46

Digitally signed by Edward Monborne on 11/08/2018 at 08:46. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

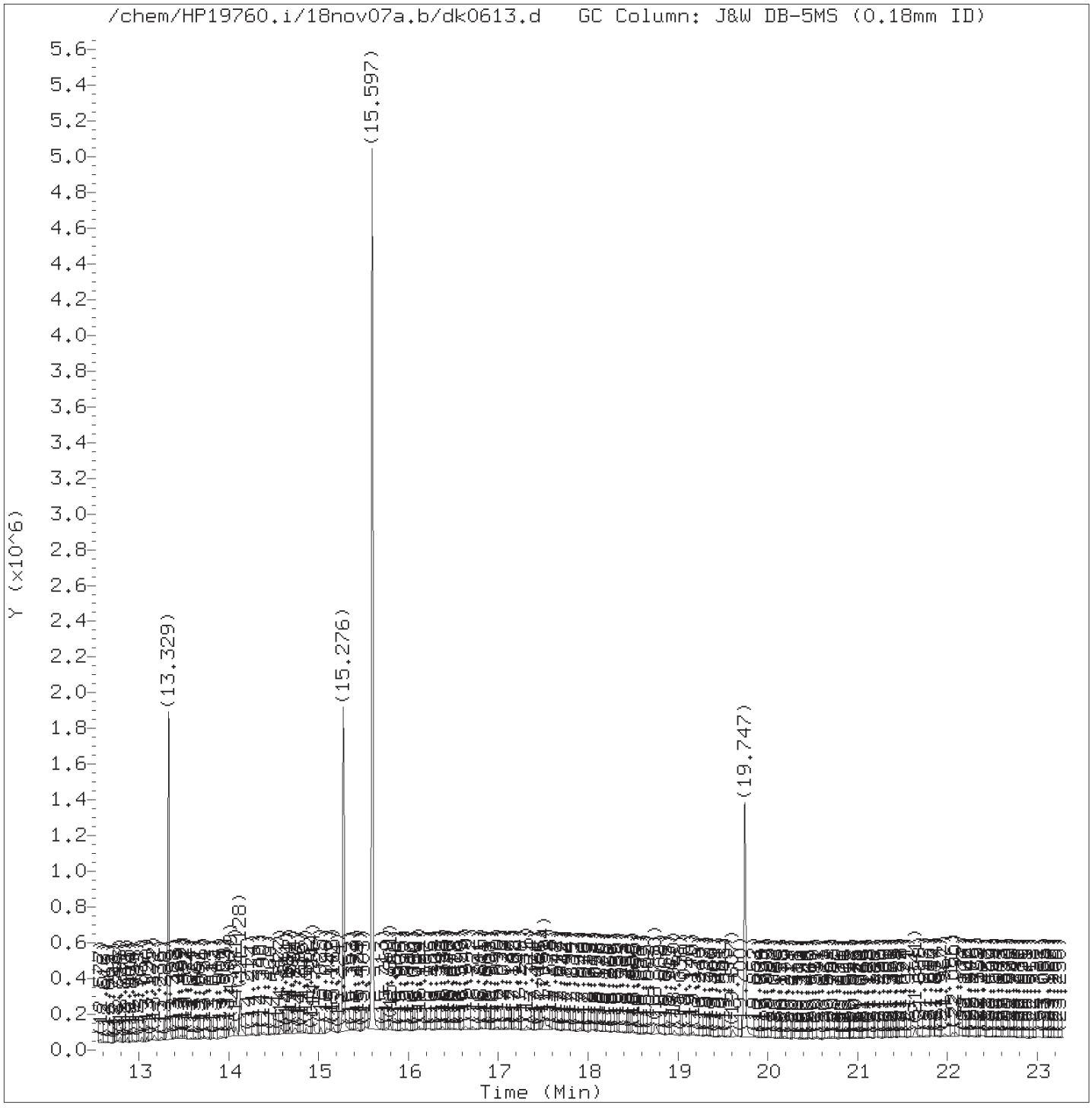
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0613.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 01:46 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:39 em10340

Sample Name: 14T02 Lab Sample ID: 9876332

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0613.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 01:46 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:39 em10340

Sample Name: 14T02 Lab Sample ID: 9876332

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0613.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 01:46 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:39 em10340

Sample Name: 14T02 Lab Sample ID: 9876332

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.796	112	1223906	15.977
17)$Phenol-d6	(1)	6.178	99	1551904	14.656
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	238902	5.000
44)$Nitrobenzene-d5	(2)	7.530	82	1146405	12.308
65)*Naphthalene-d8	(2)	8.631	136	863320	5.000
93)$2-Fluorobiphenyl	(3)	10.380	172	1778082	13.472
113)*Acenaphthene-d10	(3)	11.423	164	397041	5.000
135)$2,4,6-Tribromophenol	(3)	12.490	330	414319	31.689
153)*Phenanthrene-d10	(4)	13.329	188	716843	5.000
175)*Pyrene-d10	(5)	15.276	212	705911	5.000
179)$Terphenyl-d14	(5)	15.597	244	1755400	15.220
213)*Perylene-d12	(6)	19.747	264	652901	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0614.d Injection date and time: **08-NOV-2018 02:14**
Data file Sample Info. Line: 14T04;9876334;1;0;SAMPLE;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.697(0.000)	808	152	236651	(-8)	5.00	
65) Naphthalene-d8	8.632(0.000)	1140	136	888855	(-6)	5.00	
113) Acenaphthene-d10	11.424(0.000)	1619	164	399339	(-7)	5.00	
153) Phenanthrene-d10	13.330(0.000)	1946	188	699074	(-11)	5.00	
175) Pyrene-d10	15.276(0.000)	2280	212	651846	(-15)	5.00	
213) Perylene-d12	19.741(0.000)	3046	264	593829	(-16)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.796(0.000)	112	155862	2.054	4%	*	19 - 119
17) Phenol-d6	(1)	6.178(0.000)	99	273300	2.606	5%	*	10 - 72
44) Nitrobenzene-d5	(2)	7.530(0.000)	82	1058173	11.034	44%		44 - 120
93) 2-Fluorobiphenyl	(3)	10.380(0.000)	172	1562542	11.771	47%		44 - 119
135) 2,4,6-Tribromophenol	(3)	12.490(0.000)	330	210910	16.039	32%	*	43 - 140
179) Terphenyl-d14	(5)	15.597(0.000)	244	1525163	14.321	57%		50 - 134

*** = 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 (on-column)
5) Pyridine	(1)			Not Detected					0.5
18) Phenol	(1)			Not Detected					0.1
19) Aniline	(1)			Not Detected					0.8
23) 2-Chlorophenol	(1)			Not Detected					0.1
24) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
26) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
27) Benzyl alcohol	(1)			Not Detected					3
28) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
31) 2-Methylphenol	(1)			Not Detected					0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
37) 4-Methylphenol	(1)			Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
43) Hexachloroethane	(1)			Not Detected					0.3
45) Nitrobenzene	(2)			Not Detected					0.1
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.8
53) 2,4-Dimethylphenol	(2)			Not Detected					0.8
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
62) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
67) 4-Chloroaniline	(2)			Not Detected					1
71) Hexachlorobutadiene	(2)			Not Detected					0.1
80) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
83) 2-Methylnaphthalene	(2)			Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)			Not Detected					1
90) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1

Digitally signed by Edward Monborne on 11/08/2018 at 08:46. Target 3.5 esignature user ID: em10340

Data file: /chem/HP19760.i/18nov07a.b/dk0614.d Injection date and time: **08-NOV-2018 02:14**
Data file Sample Info. Line: 14T04;9876334;1;0;SAMPLE;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

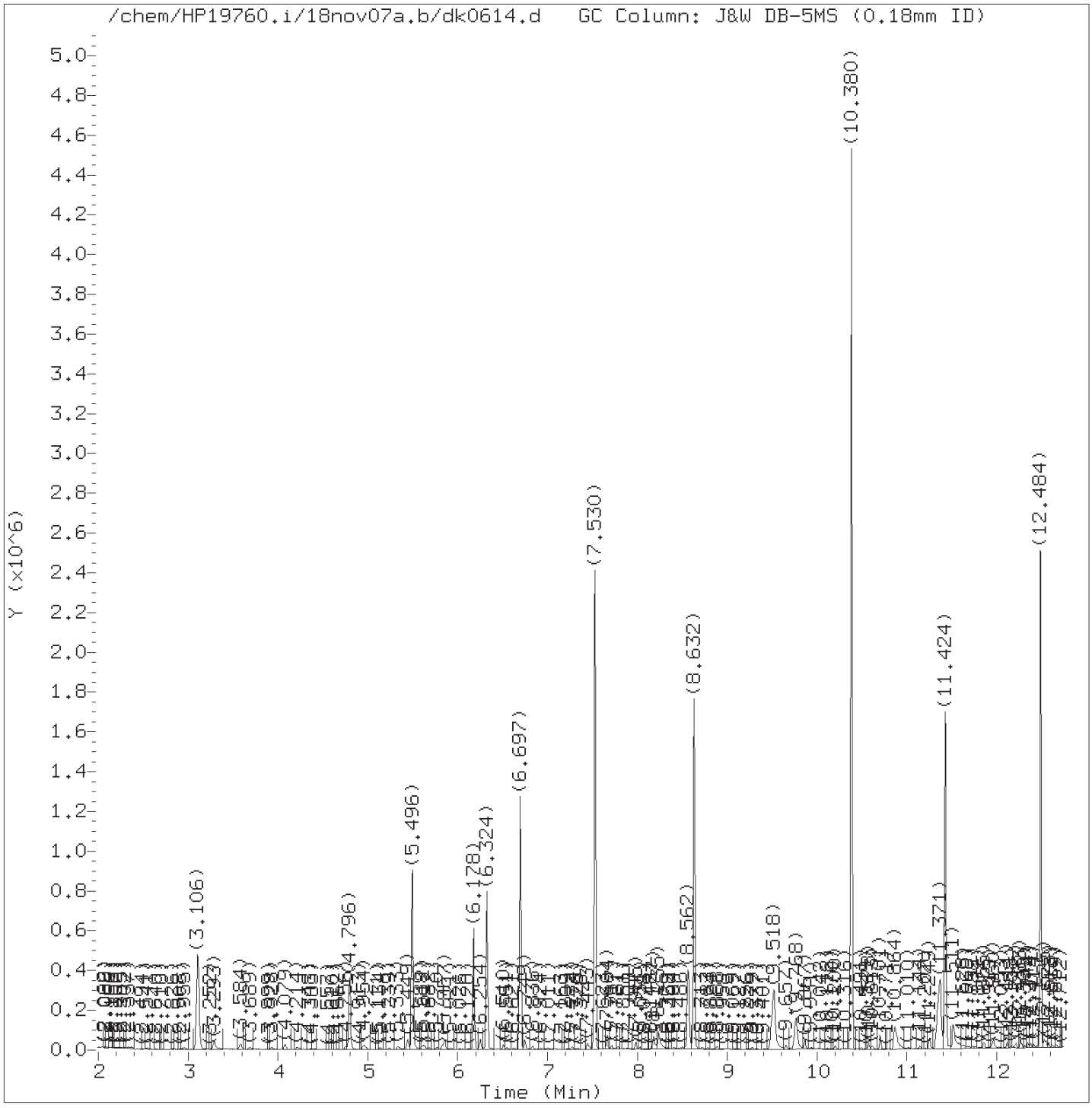
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

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					0.1
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.5
106) Dimethylphthalate	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
112) 3-Nitroaniline	(3)				Not Detected					0.8
115) 2,4-Dinitrophenol	(3)				Not Detected					4
116) 4-Nitrophenol	(3)				Not Detected					3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
124) Diethylphthalate	(3)				Not Detected					0.5
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					2
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.2
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					0.3
163) Carbazole	(4)				Not Detected					0.1
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.8
205) Di-n-octylphthalate	(6)				Not Detected					1

Total number of targets = 46

Digitally signed by Edward Monborne on 11/08/2018 at 08:46. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

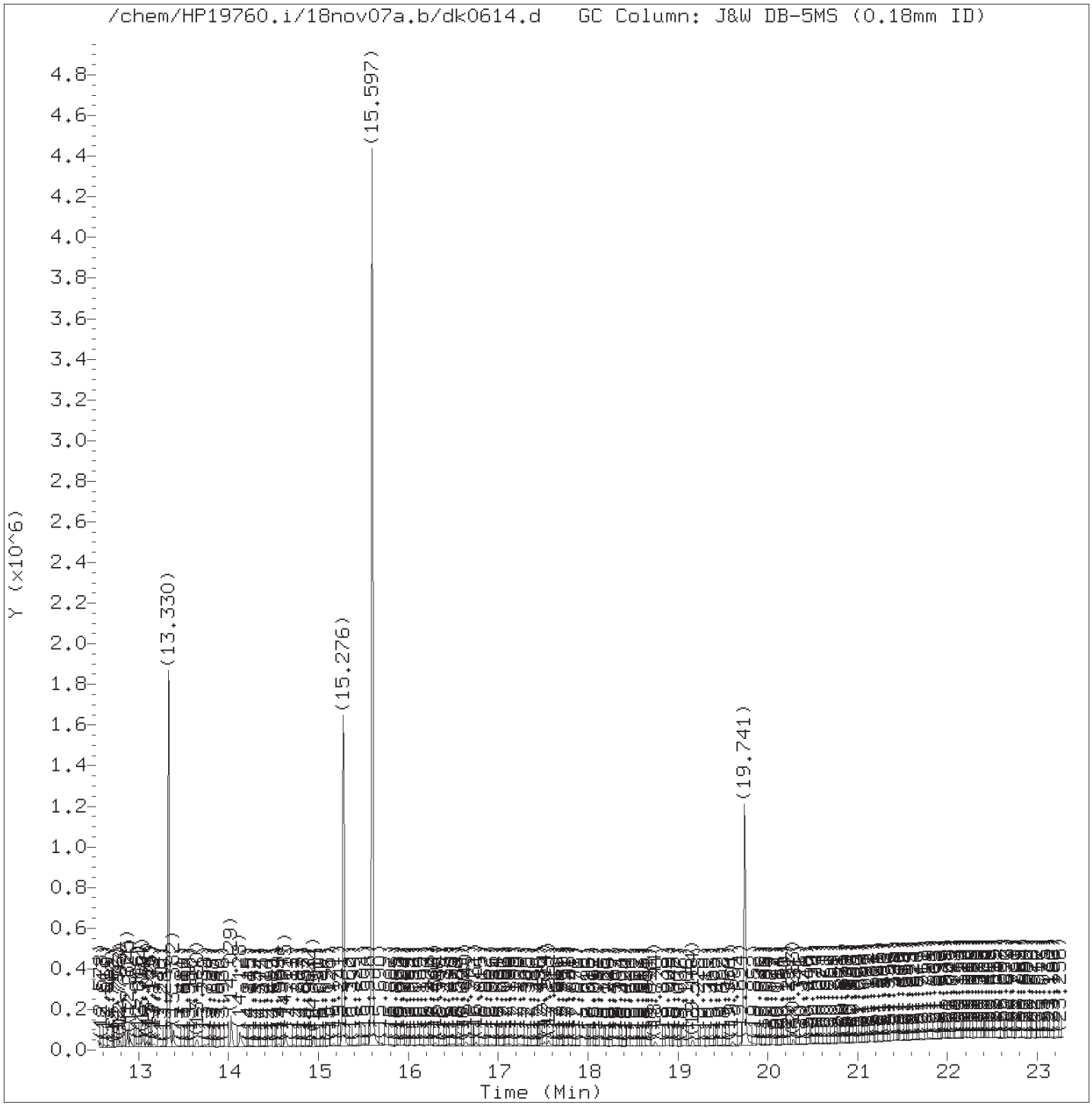
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0614.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:14 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 14T04 Lab Sample ID: 9876334

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0614.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:14 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 14T04 Lab Sample ID: 9876334

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0614.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:14 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 14T04 Lab Sample ID: 9876334

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.796	112	155862	2.054
17)$Phenol-d6	(1)	6.178	99	273300	2.606
25)*1,4-Dichlorobenzene-d4	(1)	6.697	152	236651	5.000
44)$Nitrobenzene-d5	(2)	7.530	82	1058173	11.034
65)*Naphthalene-d8	(2)	8.632	136	888855	5.000
93)$2-Fluorobiphenyl	(3)	10.380	172	1562542	11.771
113)*Acenaphthene-d10	(3)	11.424	164	399339	5.000
135)$2,4,6-Tribromophenol	(3)	12.490	330	210910	16.039
153)*Phenanthrene-d10	(4)	13.330	188	699074	5.000
175)*Pyrene-d10	(5)	15.276	212	651846	5.000
179)$Terphenyl-d14	(5)	15.597	244	1525163	14.321
213)*Perylene-d12	(6)	19.741	264	593829	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0617.d Injection date and time: **08-NOV-2018 03:38**
Data file Sample Info. Line: 14T06;9876342;1;0;SAMPLE;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.696	(0.000)	808	152	229244	(-11)	5.00	
65) Naphthalene-d8	8.631	(0.000)	1140	136	852049	(-10)	5.00	
113) Acenaphthene-d10	11.423	(0.000)	1619	164	387258	(-10)	5.00	
153) Phenanthrene-d10	13.335	(-0.006)	1947	188	661864	(-15)	5.00	
175) Pyrene-d10	15.276	(0.000)	2280	212	608214	(-21)	5.00	
213) Perylene-d12	19.741	(0.000)	3046	264	543234	(-23)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.796	(0.000)	112	1732089	23.563	47%		19 - 119
17) Phenol-d6	(1)	6.178	(0.000)	99	1729811	17.024	34%		10 - 72
44) Nitrobenzene-d5	(2)	7.530	(0.000)	82	1714491	18.650	75%		44 - 120
93) 2-Fluorobiphenyl	(3)	10.380	(0.000)	172	2451098	19.040	76%		44 - 119
135) 2,4,6-Tribromophenol	(3)	12.490	(0.000)	330	497457	39.009	78%		43 - 140
179) Terphenyl-d14	(5)	15.597	(0.000)	244	2302680	23.172	93%		50 - 134

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					0.5
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.8
23) 2-Chlorophenol	(1)				Not Detected					0.1
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.1
26) 1,4-Dichlorobenzene	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.1
31) 2-Methylphenol	(1)				Not Detected					0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.2
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
50) Isophorone	(2)				Not Detected					0.1
51) 2-Nitrophenol	(2)				Not Detected					0.8
53) 2,4-Dimethylphenol	(2)				Not Detected					0.8
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
60) 2,4-Dichlorophenol	(2)				Not Detected					0.1
62) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.1
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.1
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1

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Data file: /chem/HP19760.i/18nov07a.b/dk0617.d Injection date and time: **08-NOV-2018 03:38**
Data file Sample Info. Line: 14T06;9876342;1;0;SAMPLE;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.5
106) Dimethylphthalate	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
112) 3-Nitroaniline	(3)				Not Detected					0.8
115) 2,4-Dinitrophenol	(3)				Not Detected					4
116) 4-Nitrophenol	(3)				Not Detected					3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
124) Diethylphthalate	(3)				Not Detected					0.5
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					2
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.2
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					0.3
163) Carbazole	(4)				Not Detected					0.1
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.8
205) Di-n-octylphthalate	(6)				Not Detected					1

Total number of targets = 46

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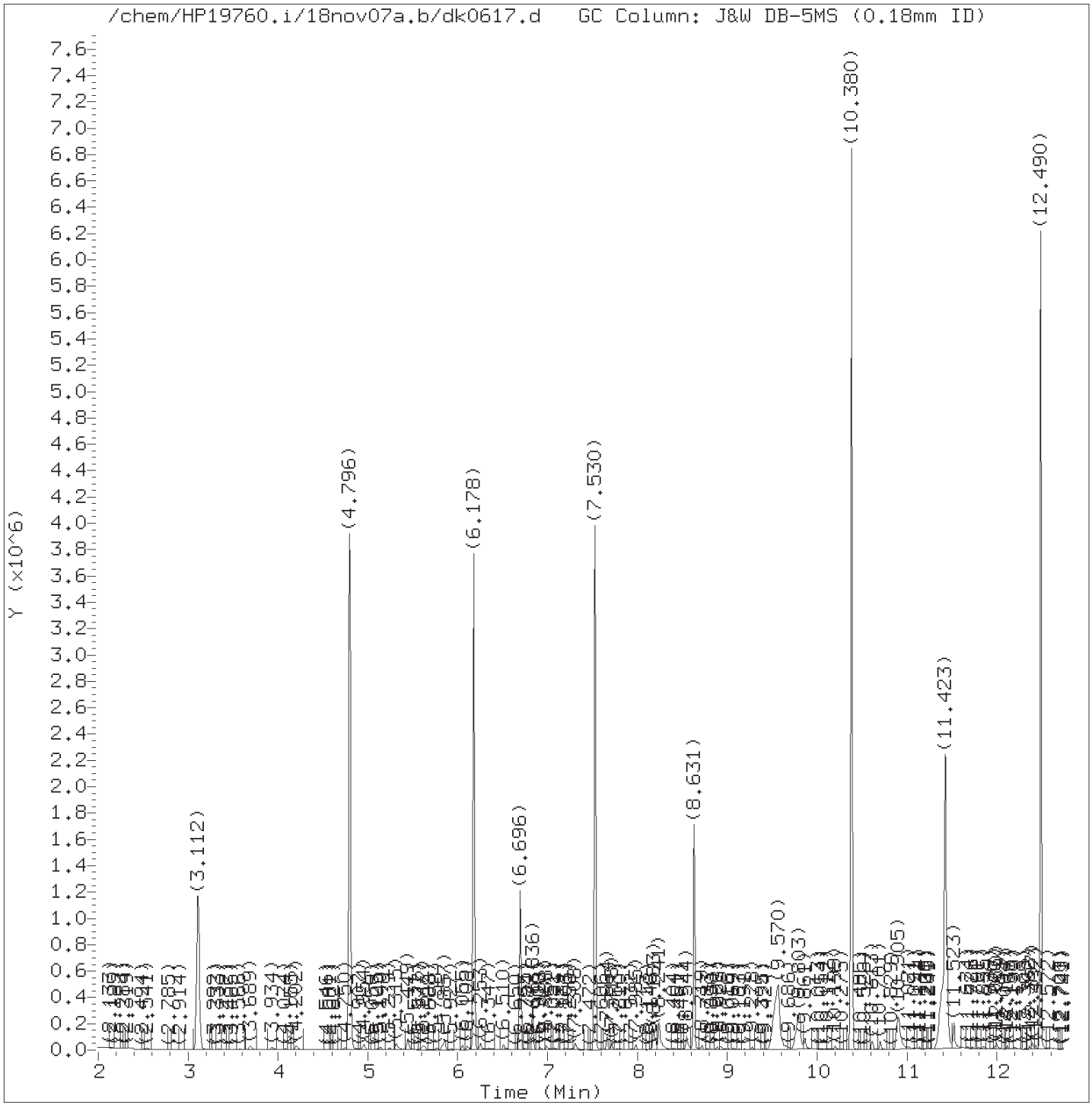
Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

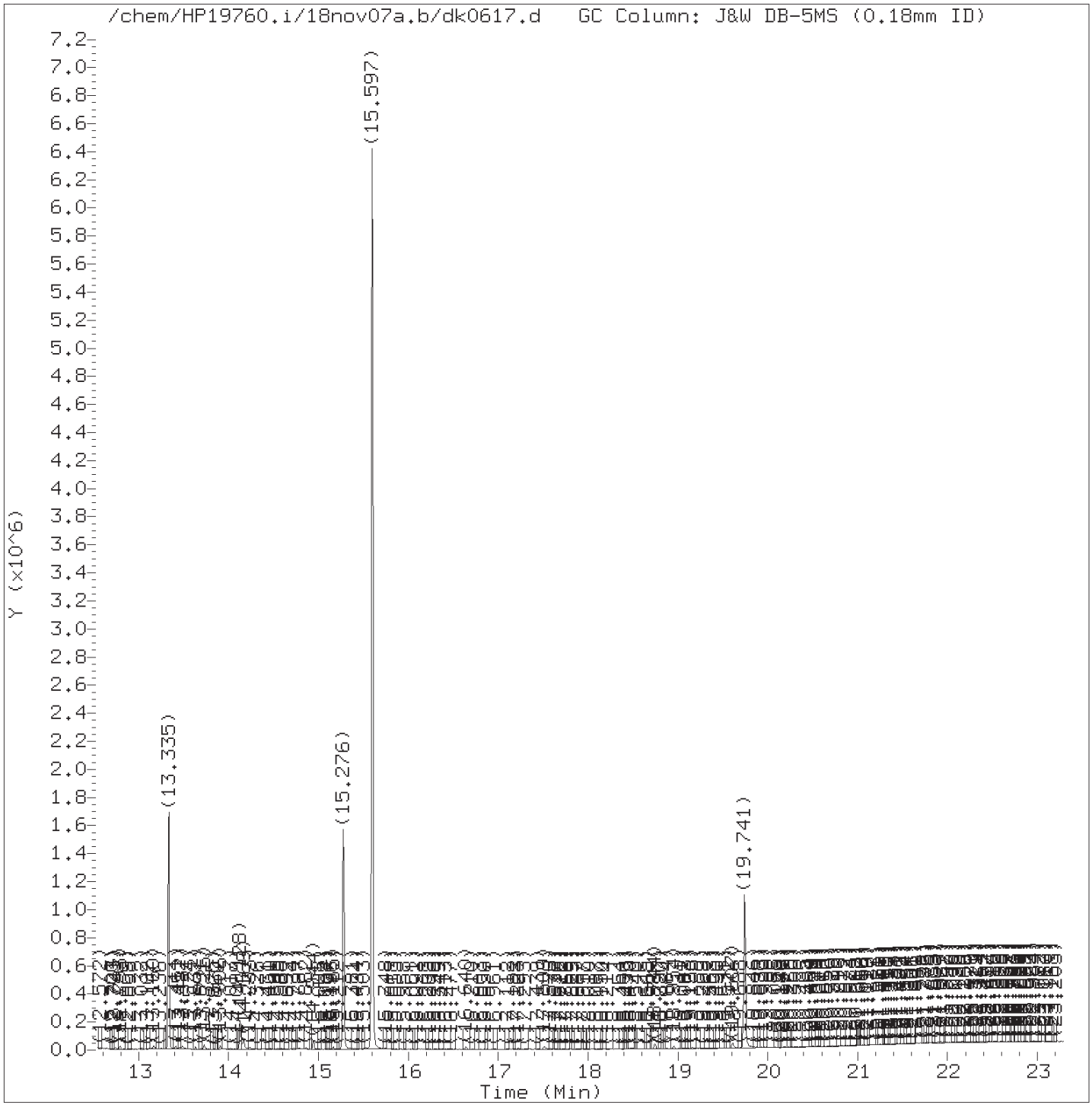
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0617.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:38 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T06 Lab Sample ID: 9876342

Digitally signed by Edward Monborne
on 11/08/2018 at 08:45.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0617.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:38 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T06 Lab Sample ID: 9876342

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on 11/08/2018 at 08:45.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0617.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:38 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T06 Lab Sample ID: 9876342

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.796	112	1732089	23.563
17)$Phenol-d6	(1)	6.178	99	1729811	17.024
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	229244	5.000
44)$Nitrobenzene-d5	(2)	7.530	82	1714491	18.650
65)*Naphthalene-d8	(2)	8.631	136	852049	5.000
93)$2-Fluorobiphenyl	(3)	10.380	172	2451098	19.040
113)*Acenaphthene-d10	(3)	11.423	164	387258	5.000
135)$2,4,6-Tribromophenol	(3)	12.490	330	497457	39.009
153)*Phenanthrene-d10	(4)	13.335	188	661864	5.000
175)*Pyrene-d10	(5)	15.276	212	608214	5.000
179)$Terphenyl-d14	(5)	15.597	244	2302680	23.172
213)*Perylene-d12	(6)	19.741	264	543234	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/08/2018 at 08:45.
Target 3.5 esignature user ID: em10340

Standards Data

Semivolatiles by GC/MS

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP19760.i/18nov04.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
dk0200.d	04-NOV-2018 09:30	DFTPP	1.00	HP19760	rvdftpp8270d.m	18nov04.b
dk0200a.d	04-NOV-2018 10:02	DFTPP	1.00	HP19760	rvdftpp8270d.m	18nov04.b
dk0201.d	04-NOV-2018 10:16	Continuing Cal	1.00	HP19760	rv8270d.m	18nov04.b
dk0210.d	04-NOV-2018 11:11	DFTPP	1.00	HP19760	rvdftpp8270d.m	18nov04.b
dk0211.d	04-NOV-2018 11:51	Cal Level 5	1.00	HP19760	rv8270d.m	18nov04.b
dk0212.d	04-NOV-2018 12:44	Cal Level 1	1.00	HP19760	rv8270d.m	18nov04.b
dk0213.d	04-NOV-2018 13:12	Cal Level 8	1.00	HP19760	rv8270d.m	18nov04.b
dk0214.d	04-NOV-2018 13:40	Cal Level 7	1.00	HP19760	rv8270d.m	18nov04.b
dk0215.d	04-NOV-2018 14:09	Cal Level 6	1.00	HP19760	rv8270d.m	18nov04.b
dk0216.d	04-NOV-2018 14:37	Cal Level 4	1.00	HP19760	rv8270d.m	18nov04.b
dk0217.d	04-NOV-2018 15:06	Cal Level 3	1.00	HP19760	rv8270d.m	18nov04.b
dk0218.d	04-NOV-2018 15:35	Cal Level 2	1.00	HP19760	rv8270d.m	18nov04.b
dk0219.d	04-NOV-2018 16:03	MDL/LOQ	1.00	HP19760	rv8270d.m	18nov04.b
dk0220.d	04-NOV-2018 16:31	MDL/LOQ	1.00	HP19760	rv8270d.m	18nov04.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
dk0200.d	LIQUID	SV	rvDFTPP2878	18nov04	DFTPP12.5	18nov04
dk0200a.d	LIQUID	SV	rvDFTPP2878	18nov04	DFTPP12.5	18nov04
dk0201.d	LIQUID	SV	rvSTD2648	18nov04	SSTD7.5	18nov04
dk0210.d	LIQUID	SV	rvDFTPP2878	18nov04	DFTPP12.5	18nov04
dk0211.d	LIQUID	SV	rvSTD2648	18nov04	SSTD7.5	18nov04
dk0212.d	LIQUID	SV	rvSTD2648	18nov04	SSTD0.125	18nov04
dk0213.d	LIQUID	SV	rvSTD2648	18nov04	SSTD30	18nov04
dk0214.d	LIQUID	SV	rvSTD2648	18nov04	SSTD20	18nov04
dk0215.d	LIQUID	SV	rvSTD2648	18nov04	SSTD12.5	18nov04
dk0216.d	LIQUID	SV	rvSTD2648	18nov04	SSTD3.75	18nov04
dk0217.d	LIQUID	SV	rvSTD2648	18nov04	SSTD1.25	18nov04
dk0218.d	LIQUID	SV	rvSTD2648	18nov04	SSTD0.25	18nov04
dk0219.d	LIQUID	SV	rvMDL2648	18nov04	SSTD0.125	18nov04
dk0220.d	LIQUID	SV	PAHMDL2648	18nov04	SSTD0.025	18nov04

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
dk0200.d	all.sub		202546469	202546470	200002637	202546468
dk0200a.d	all.sub		202546482	202546483	200002637	202546468
dk0201.d	all1.sub		202546497	202546483	202546444	202546499
dk0210.d	all.sub		202546501	202546502	200002637	202546468
dk0211.d	all1.sub		202546521	202546502	202546652	202546499
dk0212.d	all1.sub		202546529	202546502	202546652	202546499
dk0213.d	all1.sub		202546531	202546502	202546652	202546499
dk0214.d	all1.sub		202546533	202546502	202546652	202546499
dk0215.d	all1.sub		202546535	202546502	202546652	202546499
dk0216.d	all1.sub		202546537	202546502	202546652	202546499
dk0217.d	all1.sub		202546539	202546502	202546652	202546499
dk0218.d	all1.sub		202546541	202546502	202546652	202546499
dk0219.d	mdlall1.sub		202546543	202546502	202546652	202546499
dk0220.d	pahmdlall1.sub		202546545	202546502	202546652	202546499

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP19760.i/18nov04.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
dk0221.d	04-NOV-2018 17:00	ICV	1.00	HP19760	rv8270d.m	18nov04.b
dk0222.d	04-NOV-2018 17:29	ICV	1.00	HP19760	rv8270d.m	18nov04.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
dk0221.d	LIQUID	SV	rvICV2628	18nov04	SSTD12.5	18nov04
dk0222.d	LIQUID	SV	rvBASICV3028	18nov04	SSTD12.5	18nov04

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
dk0221.d	icv2.sub	ICV4X.spk	202546585	202546502	202546652	202546499
dk0222.d	basicval11.sub	ICV4X.spk	202546595	202546502	202546652	202546499

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP19760.i/18nov04a.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
dk0300.d	04-NOV-2018 20:00	DFTPP	1.00	HP19760	rvdftpp8270d.m	18nov04a.b
dk0301.d	04-NOV-2018 21:12	Continuing Cal	1.00	HP19760	rv8270d.m	18nov04a.b
dk0302.d	04-NOV-2018 22:13	ICV	1.00	HP19760	rv8270d.m	18nov04a.b
dk0303.d	05-NOV-2018 00:08	BLANK	1.00	HP19760	rv8270d.m	18nov04a.b
dk0304.d	05-NOV-2018 00:36	LCS	1.00	HP19760	rv8270d.m	18nov04a.b
dk0305.d	05-NOV-2018 01:04	LCSD	1.00	HP19760	rv8270d.m	18nov04a.b
dk0306.d	05-NOV-2018 01:32	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0307.d	05-NOV-2018 02:00	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0308.d	05-NOV-2018 02:29	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0309.d	05-NOV-2018 02:57	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0310.d	05-NOV-2018 03:25	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0311.d	05-NOV-2018 03:53	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0312.d	05-NOV-2018 04:22	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0313.d	05-NOV-2018 04:50	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
dk0300.d	LIQUID	SV	rvDFTPP2878	18nov04a	DFTPP12.5	18nov04a
dk0301.d	LIQUID	SV	rvSTD2648	18nov04a	SSTD7.5	18nov04a
dk0302.d	LIQUID	SV	rvICV2628	18nov04a	SSTD12.5	18nov04a
dk0303.d	LIQUID	SV	SBLKWR302	18302WAR	SBLKWR302	18nov04a
dk0304.d	LIQUID	SV	302WRLCS	18302WAR	302WRLCS	18nov04a
dk0305.d	LIQUID	SV	302WRLCSD	18302WAR	302WRLCSD	18nov04a
dk0306.d	LIQUID	SV	9869228	18299WAL	79E01	18nov04a
dk0307.d	LIQUID	SV	9869230	18299WAL	79E03	18nov04a
dk0308.d	LIQUID	SV	9869232	18299WAL	79E05	18nov04a
dk0309.d	LIQUID	SV	9869234	18299WAL	79E07	18nov04a
dk0310.d	LIQUID	SV	9867287	18302WAR	2977B	18nov04a
dk0311.d	LIQUID	SV	9868253	18302WAR	1--50	18nov04a
dk0312.d	LIQUID	SV	9868527	18302WAR	11822	18nov04a
dk0313.d	LIQUID	SV	9868532	18302WAR	-1832	18nov04a

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
dk0300.d	all.sub		202546672	202546673	200002637	202546671
dk0301.d	all1.sub		202546742	202546673	202546652	202546760
dk0302.d	icvall1.sub	ICV4X.spk	202546777	202546673	202546652	202546760
dk0303.d	21365M.sub		202546841	202546673	202546652	202546760
dk0304.d	21365M.sub		202546860	202546673	202546652	202546760
dk0305.d	21365M.sub		202546874	202546673	202546652	202546760
dk0306.d	25271M.sub		202546887	202546673	202546652	202546760
dk0307.d	25271M.sub		202546903	202546673	202546652	202546760
dk0308.d	25271M.sub		202546920	202546673	202546652	202546760
dk0309.d	25271M.sub		202546935	202546673	202546652	202546760
dk0310.d	21365M.sub		202546950	202546673	202546652	202546760
dk0311.d	28126M.sub		202546978	202546673	202546652	202546760
dk0312.d	21365M.sub		202546997	202546673	202546652	202546760
dk0313.d	21365M.sub		202547013	202546673	202546652	202546760

SAMPLE INFORMATION SUMMARY

BATCH: /chem/HP19760.i/18nov04a.b

Data File	Injection Date	Sample Type	Dil Factor	Inst ID	Method	Method Batch
dk0314.d	05-NOV-2018 05:18	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0315.d	05-NOV-2018 05:47	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0316.d	05-NOV-2018 06:15	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0317.d	05-NOV-2018 06:43	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b
dk0318.d	05-NOV-2018 07:12	Unknown	1.00	HP19760	rv8270d.m	18nov04a.b

Data File	Matrix	Fraction	Lab Sample ID	Lab Prep Batch	Client Sample ID	Client Sample Group
dk0314.d	LIQUID	SV	9868540	18302WAR	706-2	18nov04a
dk0315.d	LIQUID	SV	9868554	18302WAR	70611	18nov04a
dk0316.d	LIQUID	SV	9869112	18302WAR	E7802	18nov04a
dk0317.d	LIQUID	SV	9870353	18302WAR	VB-55	18nov04a
dk0318.d	LIQUID	SV	9870354	18302WAR	VB-28	18nov04a

Data File	Compound Sublist	Spike List File	Sample Ref #	QC Group Ref #	Init Cal Ref #	Batch Ref #
dk0314.d	21365M.sub		202547039	202546673	202546652	202546760
dk0315.d	21365M.sub		202547051	202546673	202546652	202546760
dk0316.d	21365M.sub		202547065	202546673	202546652	202546760
dk0317.d	21365M.sub		202547102	202546673	202546652	202546760
dk0318.d	21365M.sub		202547114	202546673	202546652	202546760

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\data\18nov07a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	DK0600.D	rvDFTPP2878	11/07/2018	19:23		
art12405	DK0601.D	RVSTD2648	11/07/2018	19:40		
art12405	DK0602.D	SBLKWG311	11/07/2018	20:36	18311WAG	
art12405	DK0603.D	311WGLCS	11/07/2018	21:04	18311WAG	
art12405	DK0604.D	311WGLCSD	11/07/2018	21:32	18311WAG	
art12405	DK0605.D	SBLKWK306	11/07/2018	22:01	18306WAK	
art12405	DK0606.D	306WKLCS	11/07/2018	22:29	18306WAK	
art12405	DK0607.D	306WKLCSD	11/07/2018	22:57	18306WAK	
art12405	DK0608.D	SBLKWM305	11/07/2018	23:25	18305WAM	
art12405	DK0609.D	305WMLCS	11/07/2018	23:53	18305WAM	
art12405	DK0610.D	305WMLCS1	11/08/2018	00:21	18305WAM	
art12405	DK0611.D	305WMLCSD1	11/08/2018	00:49	18305WAM	
art12405	DK0612.D	9879198RE	11/08/2018	01:17	18311WAG	
art12405	DK0613.D	9876332	11/08/2018	01:46	18305WAM	
art12405	DK0614.D	9876334	11/08/2018	02:14	18305WAM	
art12405	DK0615.D	9876335	11/08/2018	02:42	18305WAM	
art12405	DK0616.D	9876336	11/08/2018	03:10	18305WAM	
art12405	DK0617.D	9876342	11/08/2018	03:38	18305WAM	
art12405	DK0628.D	RV2648	11/08/2018	04:06		
art12405	DK0618.D	9883743	11/08/2018	04:35	18310WAF	
art12405	DK0619.D	9883745	11/08/2018	05:03	18310WAF	
art12405	DK0620.D	9879467	11/08/2018	05:31	18310WAE	
art12405	DK0621.D	9882159	11/08/2018	05:59	18310WAE	
art12405	DK0622.D	9879471	11/08/2018	06:27	18306WAK	
art12405	DK0623.D	9879472	11/08/2018	06:55	18306WAK	
art12405	DK0624.D	9879473	11/08/2018	07:23	18306WAK	

Data File: /chem/HP19760.i/18nov04.b/dk0210.d

Date : 04-NOV-2018 11:11

Client ID: DFTPP12.5

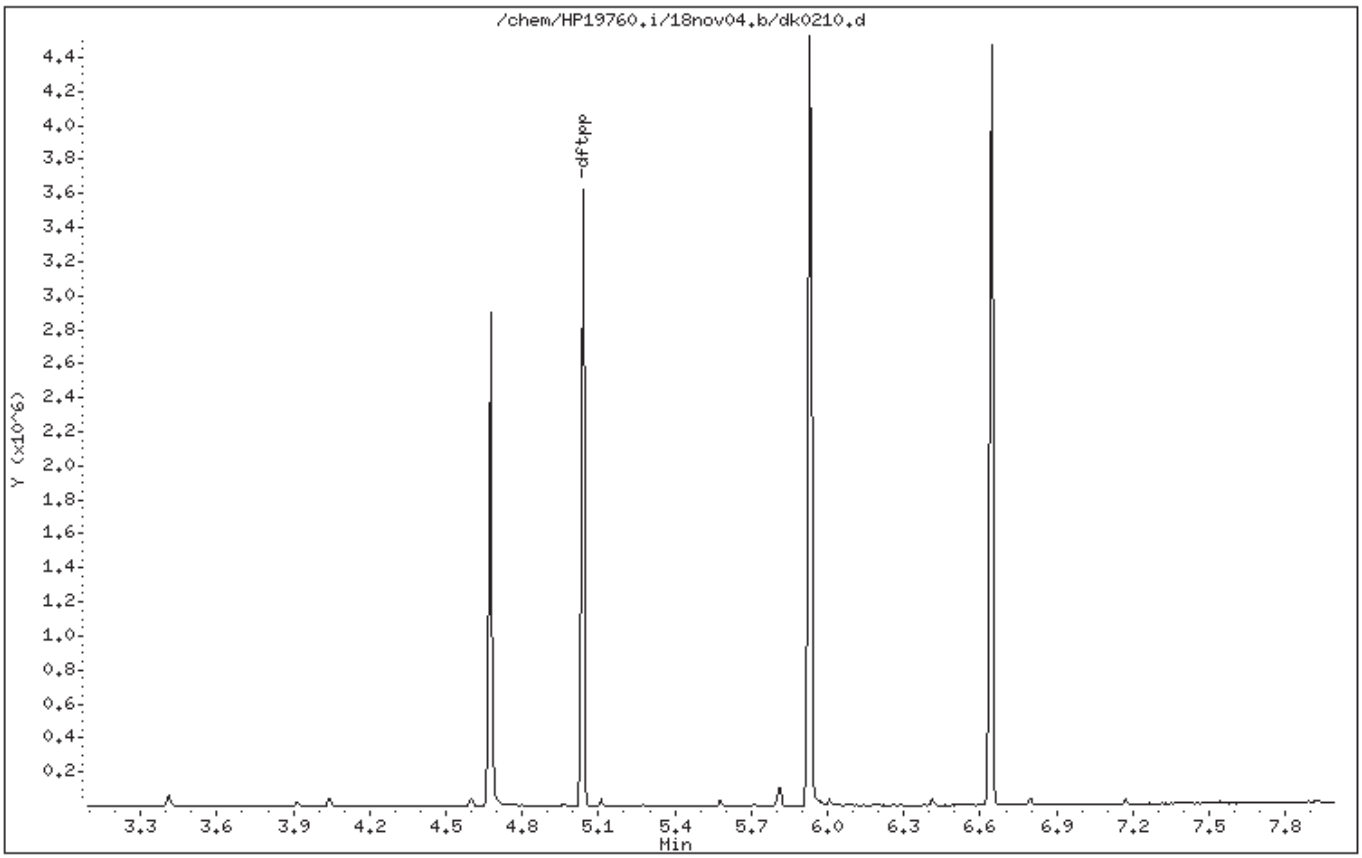
Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP19760.i/18nov04.b/dk0210.d

Date : 04-NOV-2018 11:11

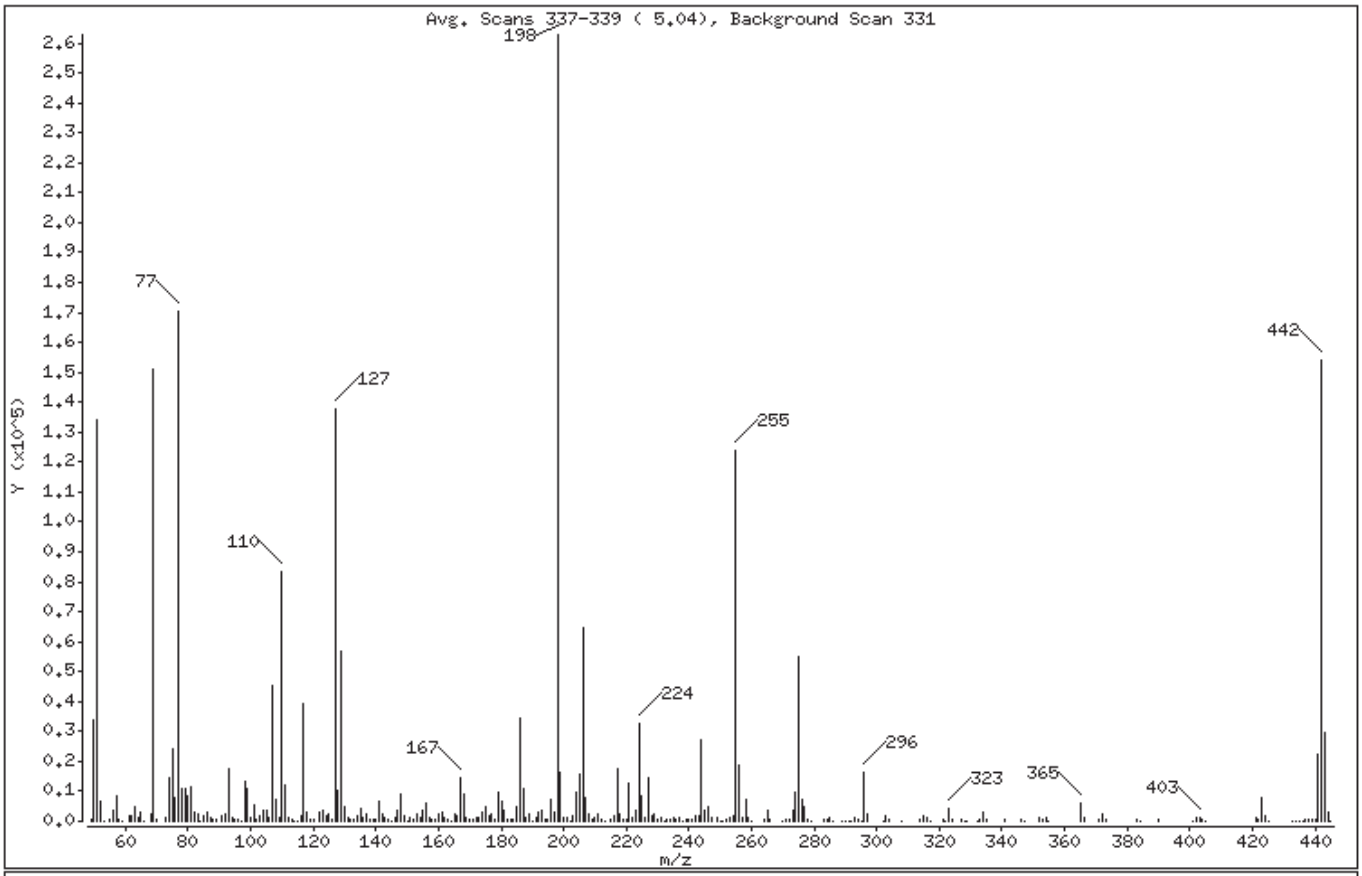
Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;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	51.03
68	Less than 2.00% of mass 69	0.82 (1.43)
69	Mass 69 relative abundance	57.48
70	Less than 2.00% of mass 69	0.29 (0.50)
127	10.00 - 80.00% of mass 198	52.53
197	Less than 2.00% of mass 198	1.19
199	5.00 - 9.00% of mass 198	6.29
275	10.00 - 60.00% of mass 198	20.99
365	Greater than 1.00% of mass 198	2.38
441	0.01 - 24.00% of mass 442	8.47 (14.45)
442	50.00 - 99.99% of mass 198	58.57
443	15.00 - 24.00% of mass 442	11.25 (19.21)

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Date : 04-NOV-2018 11:11

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0210.d
Spectrum: Avg. Scans 337-339 (5.04), Background Scan 331
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	495	128.00	10112	200.00	1426	283.00	692
50.00	34072	129.00	56584	201.00	1458	284.00	373
51.00	134080	130.00	4762	202.00	143	285.00	932
52.00	6890	131.00	983	203.00	2064	286.00	158
53.00	176	132.00	484	204.00	9720	289.00	105
55.00	815	133.00	352	205.00	15583	290.00	223
56.00	3883	134.00	1759	206.00	64480	291.00	135
57.00	8416	135.00	4378	207.00	8132	292.00	103
58.00	525	136.00	1410	208.00	2261	293.00	1243
59.00	98	137.00	2219	209.00	682	294.00	349
61.00	1650	138.00	504	210.00	1072	295.00	242
62.00	1696	139.00	342	211.00	2584	296.00	16049
63.00	5128	140.00	611	212.00	398	297.00	2263
64.00	927	141.00	6617	213.00	95	302.00	293
65.00	2897	142.00	2193	215.00	821	303.00	2058
66.00	85	143.00	1372	216.00	1590	304.00	411
68.00	2166	144.00	413	217.00	17408	308.00	260
69.00	150976	145.00	221	218.00	2473	314.00	688
70.00	749	146.00	1197	219.00	462	315.00	1987
73.00	1146	147.00	3663	220.00	361	316.00	943
74.00	14539	148.00	9222	221.00	12916	317.00	198
75.00	24216	149.00	2071	222.00	1233	321.00	405
76.00	7713	150.00	289	223.00	3693	322.00	251
77.00	170176	151.00	950	224.00	32416	323.00	4318
78.00	11081	152.00	432	225.00	8585	324.00	680
79.00	10614	153.00	2404	226.00	998	327.00	805
80.00	8239	154.00	1508	227.00	14285	328.00	253
81.00	11539	155.00	3828	228.00	1994	329.00	88
82.00	2761	156.00	5946	229.00	2667	332.00	156
83.00	2487	157.00	956	230.00	311	333.00	382
84.00	149	158.00	791	231.00	1145	334.00	2923
85.00	1803	159.00	851	232.00	104	335.00	792
86.00	3283	160.00	2154	233.00	350	341.00	472
87.00	1296	161.00	3122	234.00	903	346.00	786
88.00	571	162.00	1089	235.00	1182	347.00	104

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Date : 04-NOV-2018 11:11

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0210.d
Spectrum: Avg. Scans 337-339 (5.04), Background Scan 331
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	460	163.00	385	236.00	529	352.00	1038
91.00	1945	164.00	208	237.00	1184	353.00	883
92.00	2646	165.00	2260	238.00	138	354.00	1447
93.00	17560	166.00	1922	239.00	783	355.00	208
94.00	1261	167.00	14234	240.00	599	365.00	6254
95.00	460	168.00	9259	241.00	806	366.00	942
96.00	823	169.00	1173	242.00	1819	371.00	419
97.00	119	170.00	544	243.00	1896	372.00	2350
98.00	13475	171.00	404	244.00	26896	373.00	564
99.00	11107	172.00	1333	245.00	3561	383.00	658
100.00	985	173.00	1351	246.00	5089	384.00	90
101.00	5537	174.00	2739	247.00	1089	390.00	350
102.00	367	175.00	4916	249.00	926	401.00	150
103.00	1715	176.00	1673	250.00	90	402.00	956
104.00	3689	177.00	2286	251.00	227	403.00	1104
105.00	3494	178.00	882	252.00	540	404.00	325
106.00	1304	179.00	9534	253.00	914	405.00	117
107.00	45304	180.00	6755	254.00	1706	421.00	1162
108.00	7136	181.00	3471	255.00	123616	422.00	777
109.00	1472	182.00	480	256.00	18488	423.00	7888
110.00	83064	183.00	504	257.00	1449	424.00	1699
111.00	12277	184.00	842	258.00	7326	425.00	126
112.00	1244	185.00	4532	259.00	1251	433.00	84
113.00	623	186.00	34656	260.00	95	434.00	243
114.00	87	187.00	10720	264.00	404	435.00	211
115.00	92	188.00	1104	265.00	3379	436.00	99
116.00	1900	189.00	2132	266.00	489	437.00	398
117.00	39256	190.00	281	270.00	205	438.00	499
118.00	2883	191.00	1147	271.00	373	439.00	445
119.00	373	192.00	3286	272.00	484	440.00	456
120.00	597	193.00	3387	273.00	3751	441.00	22240
122.00	3033	194.00	696	274.00	9882	442.00	153856
123.00	3850	195.00	518	275.00	55152	443.00	29560
124.00	1931	196.00	7186	276.00	7418	444.00	3122
125.00	2177	197.00	3140	277.00	4894	445.00	200

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Date : 04-NOV-2018 11:11

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: em10340

Column phase: DB-5MS Column diameter: 0.18

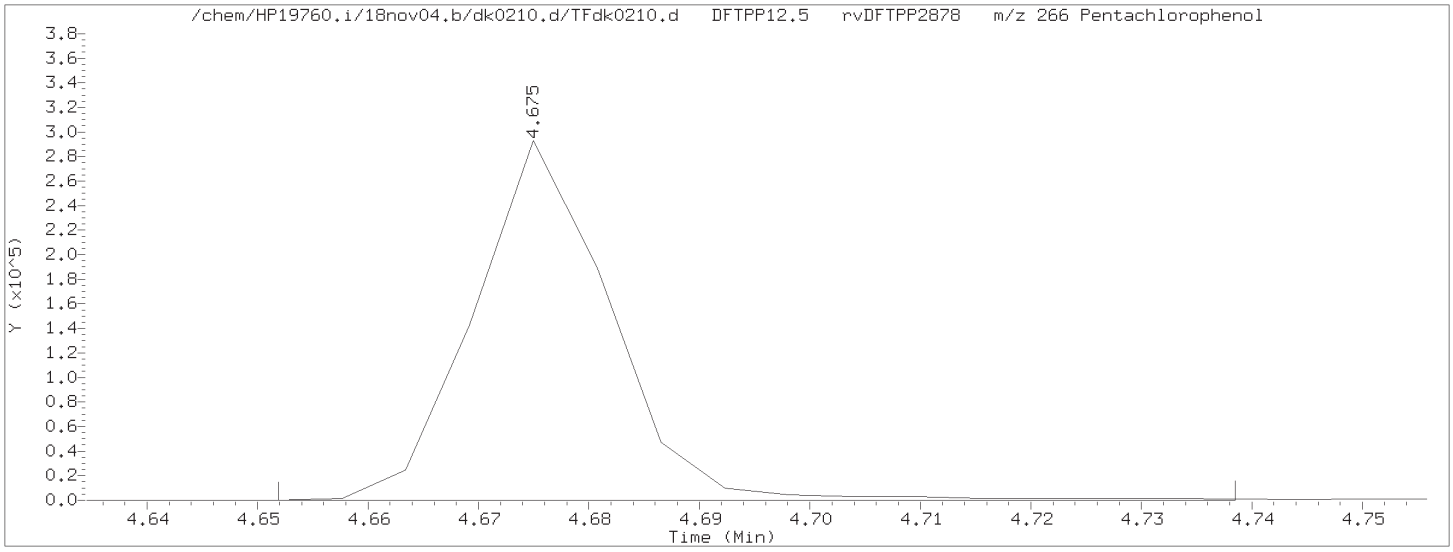
Data File: dk0210.d
Spectrum: Avg. Scans 337-339 (5.04), Background Scan 331
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
126.00	825	198.00	262720	278.00	752		
127.00	137984	199.00	16520	279.00	139		

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Assessment of GC Column Performance and Injection Port Inertness for

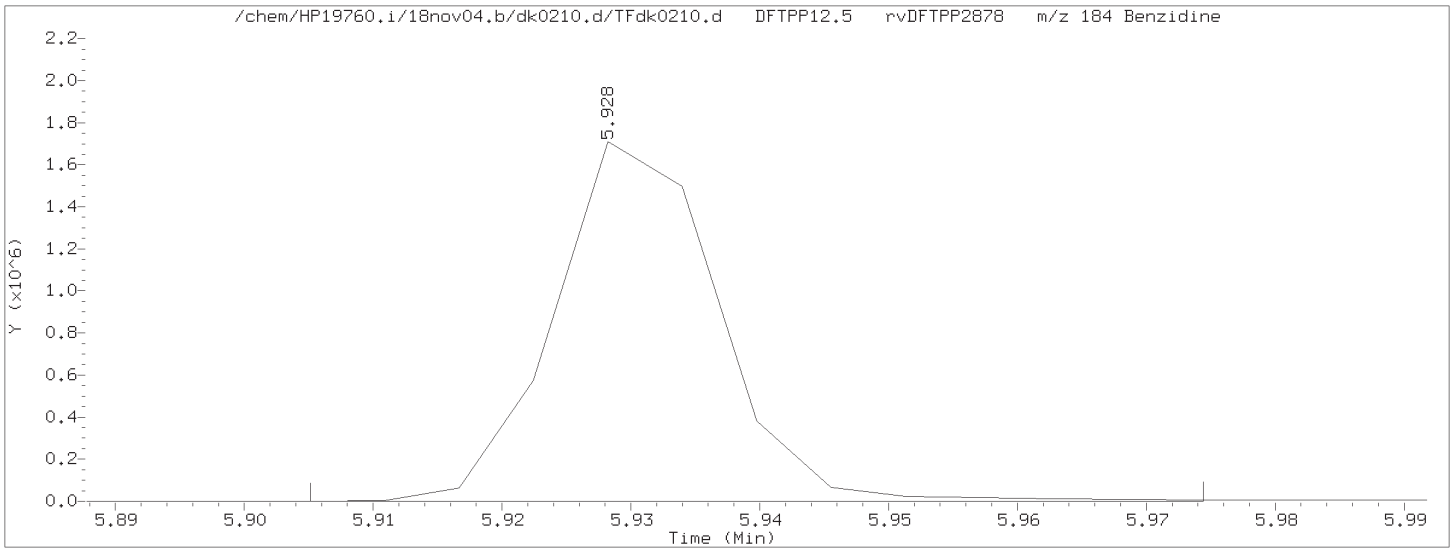
Instrument ID: HP19760.i Injection Date: 04-NOV-2018 11:11 Operator: em10340



Pentachlorophenol EICP peak height = 292992 EICP peak height at 10% = 29299 Pentachlorophenol EICP area = 251221

Pentachlorophenol EICP peak apex (min.) = 4.675
RT at 10% of front half of EICP (min.) = 4.664 'Front' peak width (min.) = 0.0112833333
RT at 10% of back half of EICP (min.) = 4.689 'Tailing' peak width (min.) = 0.0142833333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0142833333}{0.0112833333} = 1.266$



Benzidine EICP peak height = 1710515 EICP peak height at 10% = 171052 Benzidine EICP area = 1509829

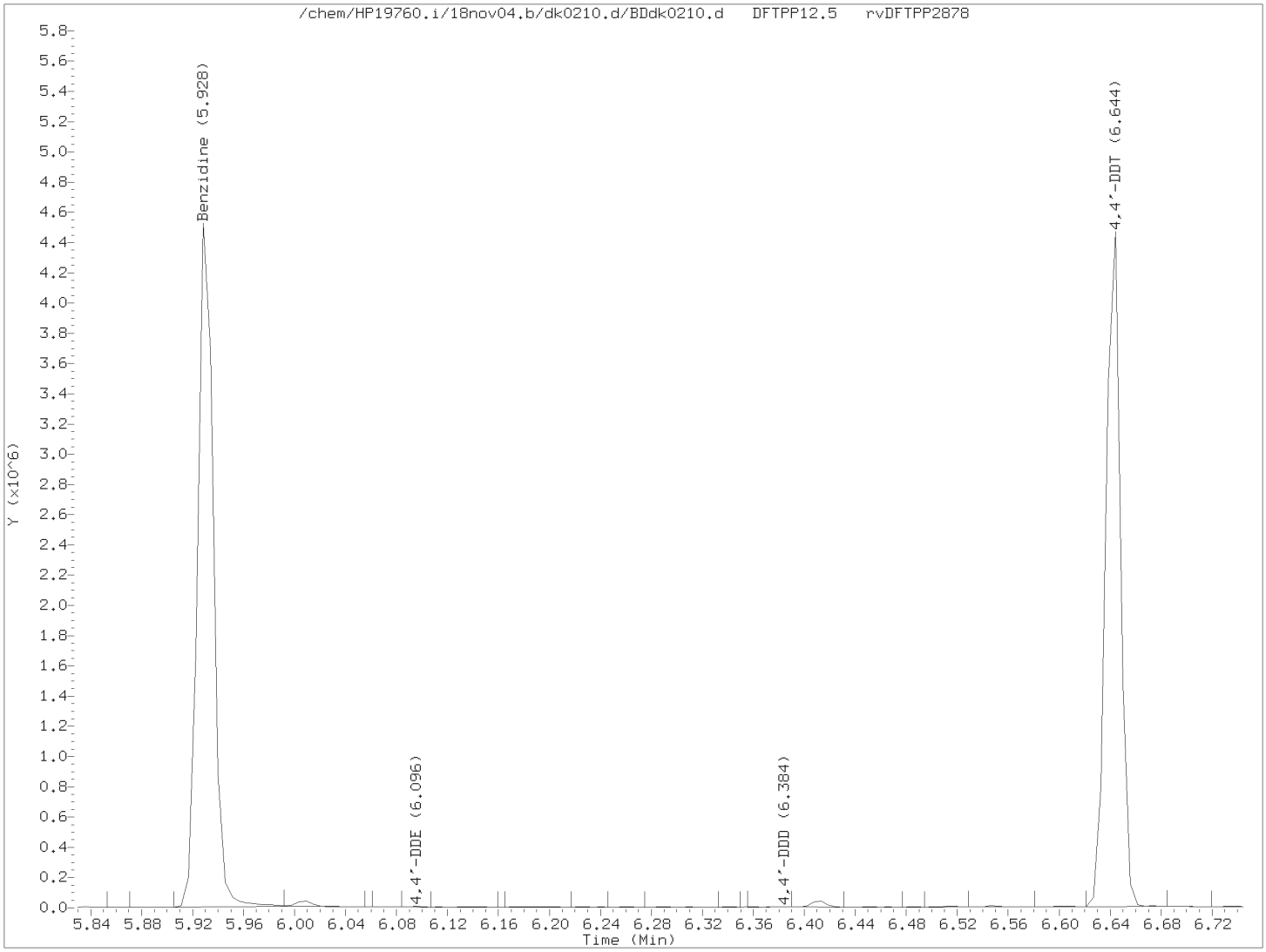
Benzidine EICP peak apex (min.) = 5.928
RT at 10% of front half of EICP (min.) = 5.918 'Front' peak width (min.) = 0.0102833333
RT at 10% of back half of EICP (min.) = 5.944 'Tailing' peak width (min.) = 0.0153333333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0153333333}{0.0102833333} = 1.491$

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

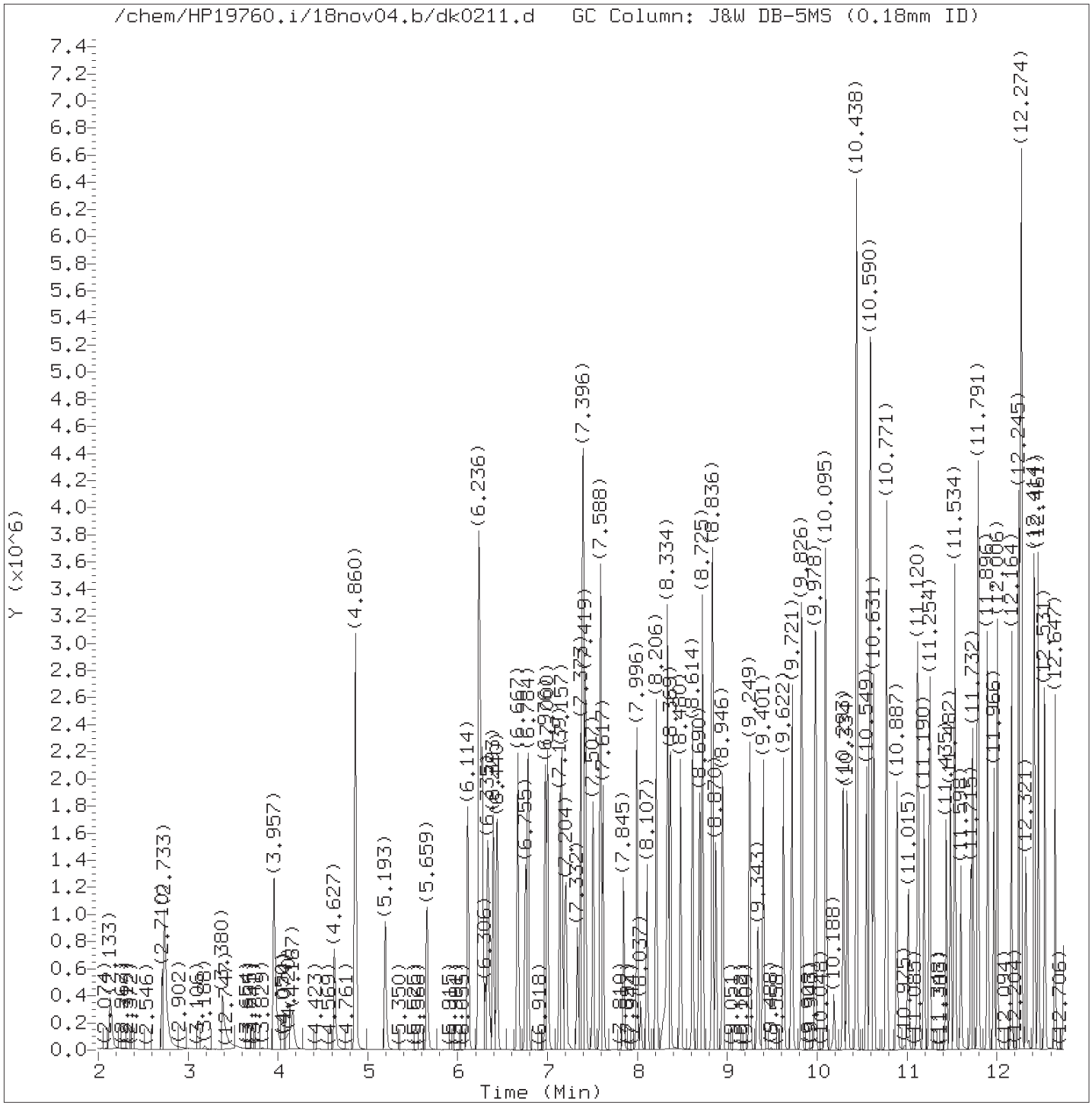
Instrument ID: HP19760.i Injection Date: 04-NOV-2018 11:11 Operator: em10340



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{3958 + 2747}{3958 + 2747 + 3611345} \times 100 = 0.2$$

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

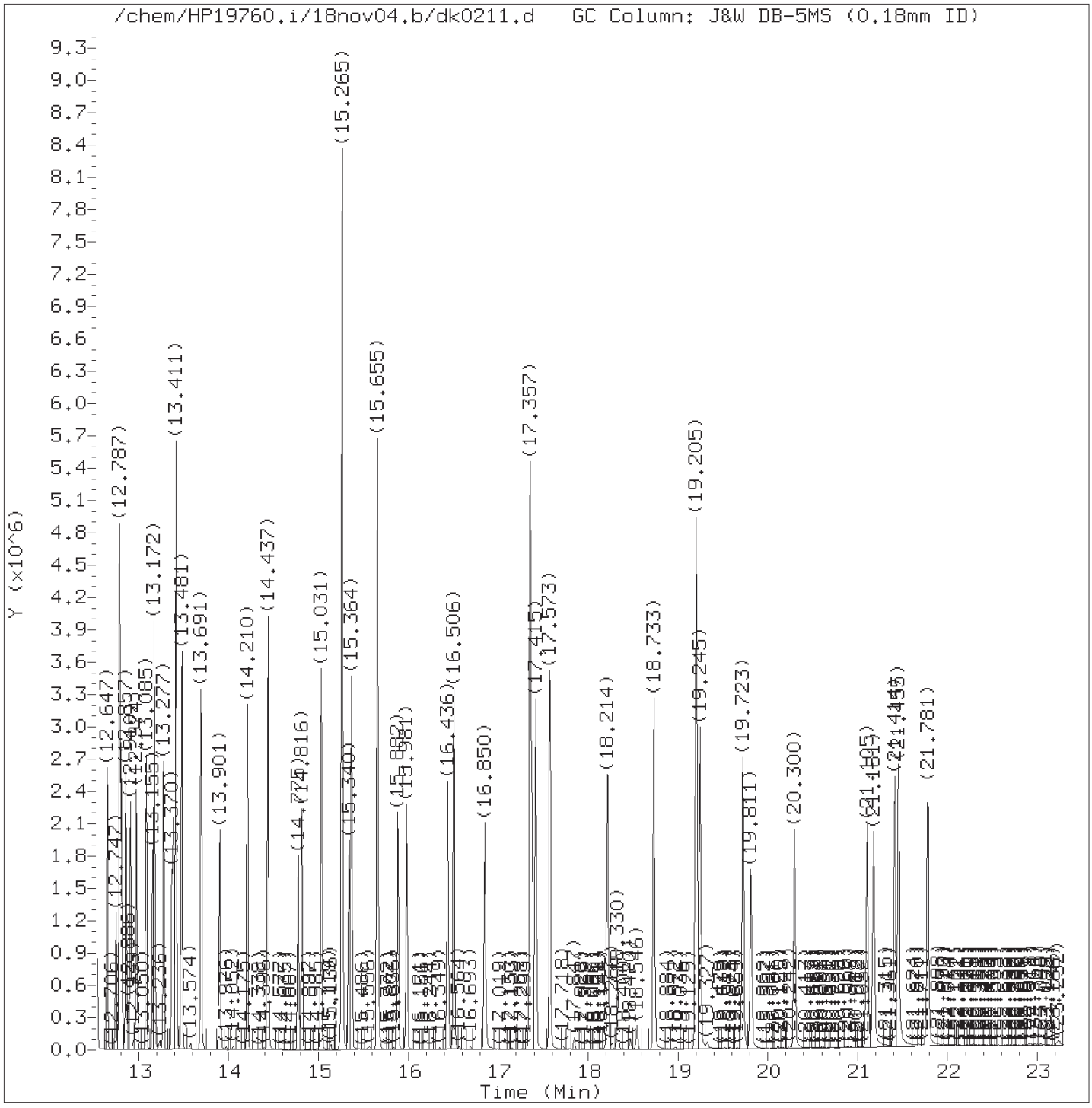
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.133	88	337383	7.500
4) N-Nitrosodimethylamine	(1)	2.710	74	506608	7.500
5) Pyridine	(1)	2.739	79	858820	7.500
7) 2-Picoline	(1)	3.957	93	859537	7.500
8) N-Nitrosomethylethylamine	(1)	4.167	88	370780	7.500
9) Methyl methanesulfonate	(1)	4.627	80	416769	7.500
11)$2-Fluorophenol	(1)	4.860	112	1301248	15.000
13) N-Nitrosodiethylamine	(1)	5.193	102	344598	7.500
15) Ethyl methanesulfonate	(1)	5.659	109	332764	7.500
42) Total Cresols	(1)			1364836	15.000
16) Benzaldehyde	(1)	6.114	77	570078	7.500
17)$Phenol-d6	(1)	6.236	99	1811991	15.000
18) Phenol	(1)	6.253	94	1040667	7.500
19) Aniline	(1)	6.277	93	1213966	7.500
20) a-methylstyrene	(1)	6.358	118	63196	7.500
22) bis(2-Chloroethyl)ether	(1)	6.393	93	773512	7.500
23) 2-Chlorophenol	(1)	6.440	128	618661	7.500
24) 1,3-Dichlorobenzene	(1)	6.667	146	646116	7.500
25)*1,4-Dichlorobenzene-d4	(1)	6.755	152	261444	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	652333	7.500
27) Benzyl alcohol	(1)	6.976	108	427952	7.500
28) 1,2-Dichlorobenzene	(1)	7.000	146	615800	7.500
30) Indene	(1)	7.134	115	700793	7.500
31) 2-Methylphenol	(1)	7.157	108	640300	7.500
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.204	45	889221	7.500
34) bis(2-Chloroisopropyl)ether	(1)	7.204	45	889221	7.500
35) N-Nitrosopyrrolidine	(1)	7.332	100	354843	7.500
36) Acetophenone	(1)	7.373	105	874034	7.500
97) Isosafrole	(3)			432570	7.500
38) N-Nitroso-di-n-propylamine	(1)	7.390	70	556580	7.500
37) 4-Methylphenol	(1)	7.396	108	724536	7.500
39) N-Nitrosomorpholine	(1)	7.402	56	420517	7.500
40) o-Toluidine	(1)	7.419	106	1091018	7.500
43) Hexachloroethane	(1)	7.507	117	306404	7.500
44)$Nitrobenzene-d5	(2)	7.588	82	1631294	15.000
45) Nitrobenzene	(2)	7.617	77	821656	7.500
48) N-Nitrosopiperidine	(2)	7.845	114	320154	7.500
50) Isophorone	(2)	7.996	82	1394514	7.500
120) 2,4_2,6-Dinitrotoluenes	(3)			557309	15.000
51) 2-Nitrophenol	(2)	8.107	139	299119	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.212	107	670573	7.500
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	245788	7.500
56) Benzoic acid	(2)	8.340	105	561216	10.000
55) bis(2-Chloroethoxy)methane	(2)	8.369	93	877886	7.500
60) 2,4-Dichlorophenol	(2)	8.480	162	454683	7.500
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	479930	7.500
65)*Naphthalene-d8	(2)	8.690	136	972956	5.000
66) Naphthalene	(2)	8.725	128	1742990	7.500
146) Diallate trans/cis	(4)			628086	7.500
67) 4-Chloroaniline	(2)	8.830	127	681940	7.500
68) 2,6-Dichlorophenol	(2)	8.836	162	438352	7.500
69) Hexachloropropene	(2)	8.870	213	300119	7.500
71) Hexachlorobutadiene	(2)	8.946	225	264632	7.500
75) Quinoline	(2)	9.249	129	989952	7.500
76) Caprolactam	(2)	9.343	113	177798	7.500
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	472909	7.500
80) 4-Chloro-3-methylphenol	(2)	9.622	107	537248	7.500
82) Safrole	(2)	9.721	162	406325	7.500
83) 2-Methylnaphthalene	(2)	9.826	142	1089161	7.500
84) 1-Methylnaphthalene	(2)	9.984	142	1029475	7.500
85) Hexachlorocyclopentadiene	(3)	10.095	237	270669	7.500
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.100	216	442558	7.500
88) cis-Isosafrole	(3)	10.188	162	67816	1.275
90) 2,4,6-Trichlorophenol	(3)	10.293	196	294214	7.500
92) 2,4,5-Trichlorophenol	(3)	10.334	196	302047	7.500
93)$2-Fluorobiphenyl	(3)	10.438	172	2251520	15.000
99) Diphenyl ether	(3)	10.438	170	508851	7.500
94) trans-Isosafrole	(3)	10.549	162	364754	6.225
95) 1,1'-Biphenyl	(3)	10.590	154	1215464	7.500
96) 2-Chloronaphthalene	(3)	10.596	162	963624	7.500
98) 1-Chloronaphthalene	(3)	10.631	162	898193	7.500
100) 2-Nitroaniline	(3)	10.776	138	324836	7.500
104) 1,4-Naphthoquinone	(3)	10.887	158	366579	7.500
105) 1,4-Dinitrobenzene	(3)	11.015	168	170911	7.500
106) Dimethylphthalate	(3)	11.120	163	1023801	7.500
107) 1,3-Dinitrobenzene	(3)	11.126	168	187253	7.500
108) 2,6-Dinitrotoluene	(3)	11.190	165	244048	7.500
109) Acenaphthylene	(3)	11.254	152	1388100	7.500
112) 3-Nitroaniline	(3)	11.435	138	275756	7.500
113)*Acenaphthene-d10	(3)	11.482	164	434824	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.534	153	976728	7.500
115) 2,4-Dinitrophenol	(3)	11.604	184	191226	10.000
116) 4-Nitrophenol	(3)	11.715	109	201659	7.500
117) Pentachlorobenzene	(3)	11.732	250	354919	7.500
119) Dibenzofuran	(3)	11.791	168	1347798	7.500
118) 2,4-Dinitrotoluene	(3)	11.796	165	313261	7.500
121) 1-Naphthylamine	(3)	11.896	143	1006616	7.500
122) 2,3,4,6-Tetrachlorophenol	(3)	11.966	232	226160	7.500
123) 2-Naphthylamine	(3)	12.006	143	1002388	7.500
124) Diethylphthalate	(3)	12.164	149	997118	7.500
126) Fluorene	(3)	12.245	166	1068099	7.500
125) Thionazin	(3)	12.257	107	217233	7.500
128) 5-Nitro-o-toluidine	(3)	12.269	152	316356	7.500
127) 4-Chlorophenyl-phenylether	(3)	12.274	204	500502	7.500
129) 4-Nitroaniline	(3)	12.280	138	300588	7.500
130) 4,6-Dinitro-2-methylphenol	(4)	12.321	198	177719	7.500
131) N-Nitrosodiphenylamine	(4)	12.414	169	876175	7.500
132) NDPA as diphenylamine	(4)	12.414	169	876175	7.500
134) 1,2-Diphenylhydrazine	(4)	12.461	77	1447087	7.500
135)$2,4,6-Tribromophenol	(3)	12.537	330	220126	15.000
137) Tetraethyldithiopyrophosphate	(4)	12.647	97	207774	7.500
139) 1,3,5-Trinitrobenzene	(4)	12.747	213	114767	7.500
140) Diallate (peak 1)	(4)	12.782	86	542483	6.225
141) Phorate	(4)	12.787	75	832631	7.500
142) Phenacetin	(4)	12.805	108	615931	7.500
143) 4-Bromophenyl-phenylether	(4)	12.857	248	251100	7.500
144) Diallate (peak 2)	(4)	12.886	86	85603	1.275
145) Hexachlorobenzene	(4)	12.910	284	257723	7.500
147) Dimethoate	(4)	12.974	87	536322	7.500
148) Atrazine	(4)	13.085	200	260939	7.500
149) Pentachlorophenol	(4)	13.155	266	172617	7.500
150) 4-Aminobiphenyl	(4)	13.172	169	762401	7.500
151) Pentachloronitrobenzene	(4)	13.178	237	118076	7.500
152) Pronamide	(4)	13.277	173	444903	7.500
153)*Phenanthrene-d10	(4)	13.382	188	809458	5.000
154) Dinoseb	(4)	13.411	211	253453	7.500
155) Phenanthrene	(4)	13.411	178	1475371	7.500
157) Anthracene	(4)	13.481	178	1486900	7.500
163) Carbazole	(4)	13.691	167	1436515	7.500
164) Methyl parathion	(4)	13.901	109	397570	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

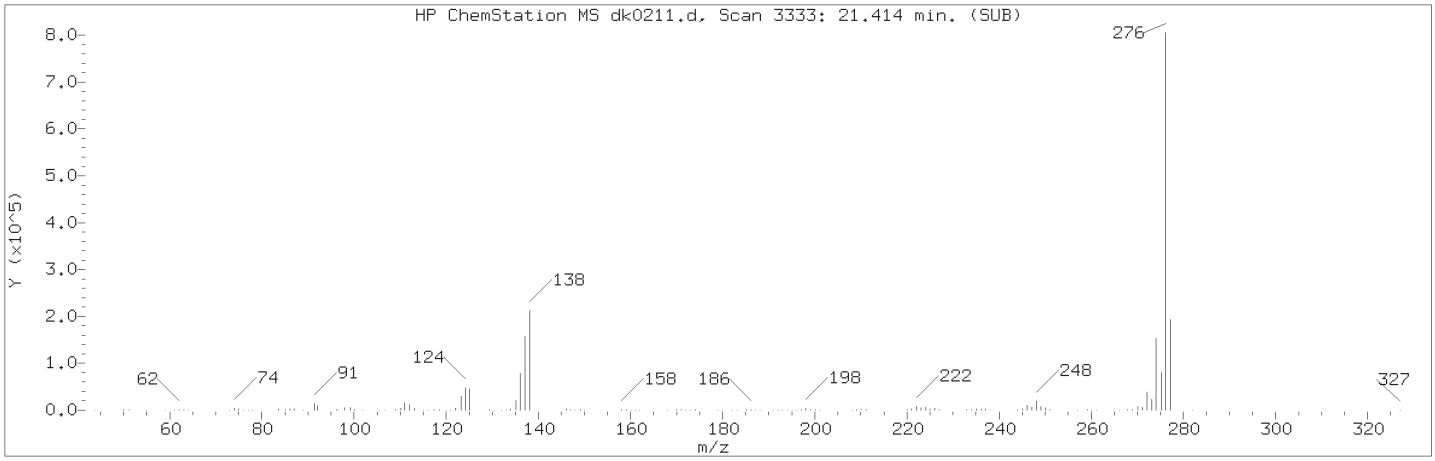
Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.210	149	1734224	7.500
168) 4-Nitroquinoline-1-oxide	(4)	14.437	190	151939	7.500
167) Parathion	(4)	14.437	109	255292	7.500
169) Octachlorostyrene	(4)	14.775	308	98843	7.500
171) Isodrin	(4)	14.816	193	171326	7.500
222) Total PAHs	(6)			25295488	135.000
173) Fluoranthene	(4)	15.031	202	1620829	7.500
174) Benzidine	(5)	15.265	184	3708968	22.500
175)*Pyrene-d10	(5)	15.340	212	787242	5.000
177) Pyrene	(5)	15.369	202	1705241	7.500
179)$Terphenyl-d14	(5)	15.655	244	1972257	15.000
182) p-Dimethylaminoazobenzene	(5)	15.882	225	269648	7.500
185) Chlorobenzilate	(5)	15.981	139	531728	7.500
187) 3,3'-Dimethylbenzidine	(5)	16.436	212	1049308	7.500
188) Butylbenzylphthalate	(5)	16.506	149	860840	7.500
191) 2-Acetylaminofluorene	(5)	16.850	181	617439	7.500
193) 3,3'-Dichlorobenzidine	(5)	17.357	252	581908	7.500
195) Benzo(a)anthracene	(5)	17.357	228	1508713	7.500
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.374	231	318578	7.500
196) Chrysene	(5)	17.415	228	1527801	7.500
199) bis(2-Ethylhexyl)phthalate	(5)	17.578	149	1220957	7.500
203) 6-Methylchrysene	(5)	18.220	242	1013313	7.500
205) Di-n-octylphthalate	(6)	18.733	149	2059368	7.500
206) Benzo(b)fluoranthene	(6)	19.199	252	1547025	7.500
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.205	256	730096	7.500
208) Benzo(k)fluoranthene	(6)	19.245	252	1611447	7.500
211) Benzo(a)pyrene	(6)	19.723	252	1428454	7.500
213)*Perylene-d12	(6)	19.811	264	796000	5.000
215) 3-Methylcholanthrene	(6)	20.300	268	671411	7.500
217) Dibenz(a,h)acridine	(6)	21.105	279	1092591	7.500
218) Dibenz(a,j)acridine	(6)	21.181	279	1182111	7.500
219) Indeno(1,2,3-cd)pyrene	(6)	21.414	276	1277792M	7.500
220) Dibenz(a,h)anthracene	(6)	21.455	278	1419693	7.500
221) Benzo(g,h,i)perylene	(6)	21.781	276	1391669	7.500

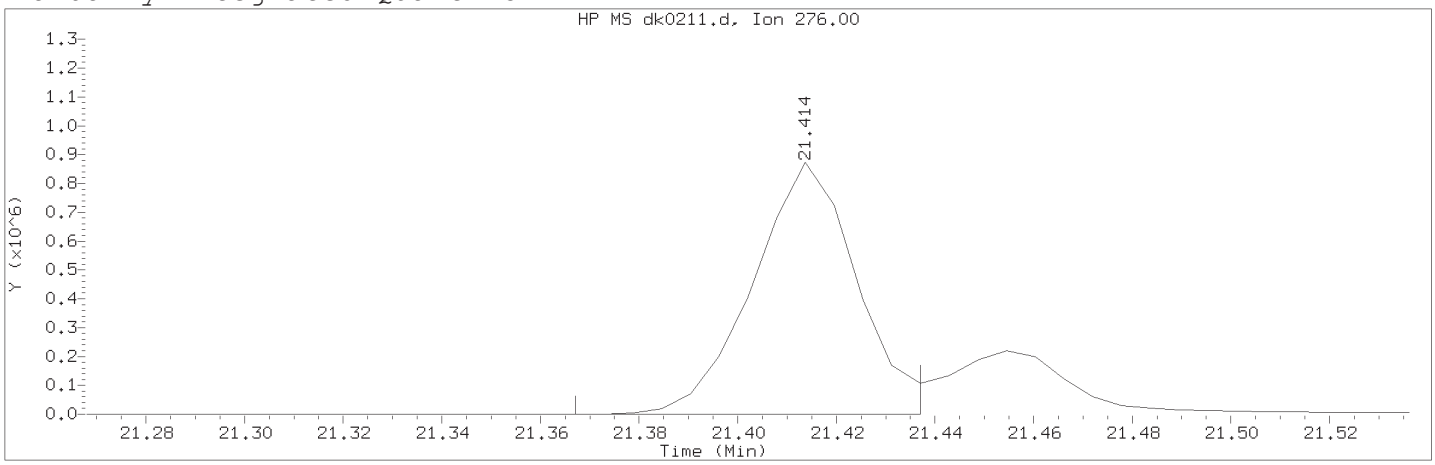
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

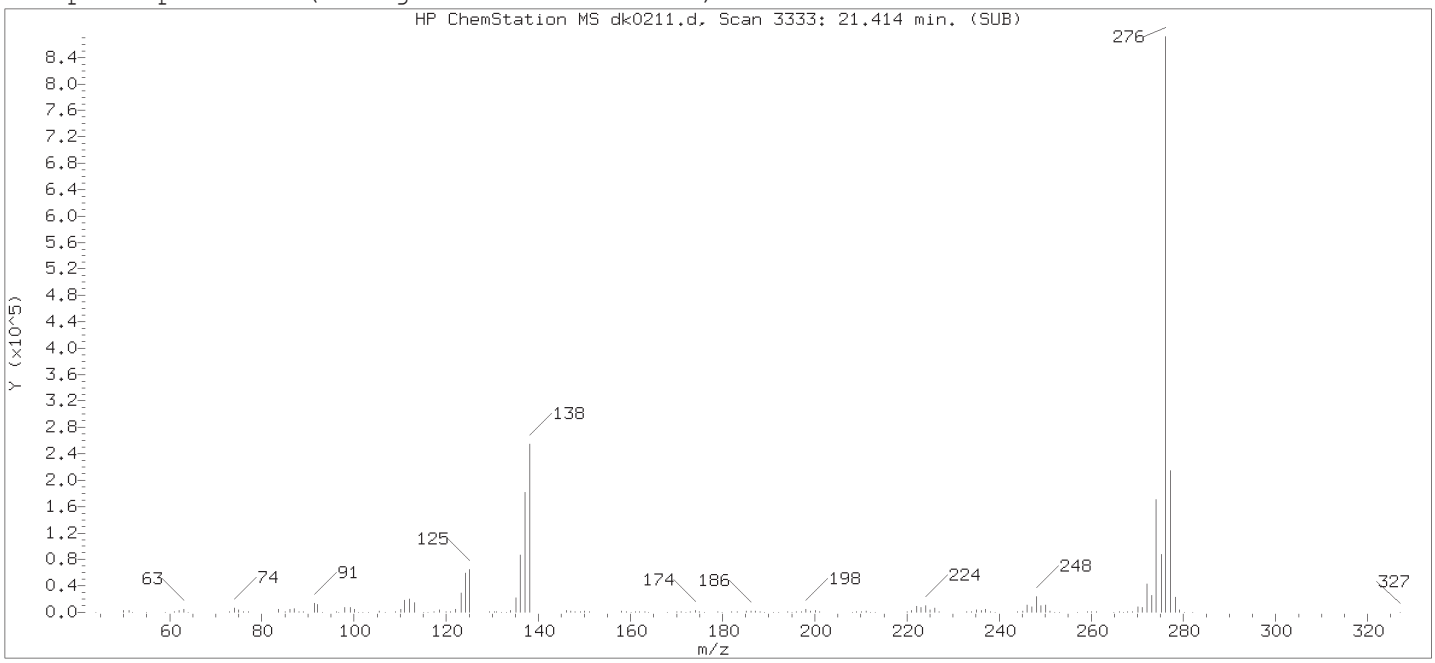
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3333		
Retention Time (minutes)	: 21.414		
Quant Ion	: 276.00		
Area (flag)	: 1277792M		
On-Column Amount (ng/ul)	: 7.5000		
Integration start scan	: 3324	Integration stop scan:	3336
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

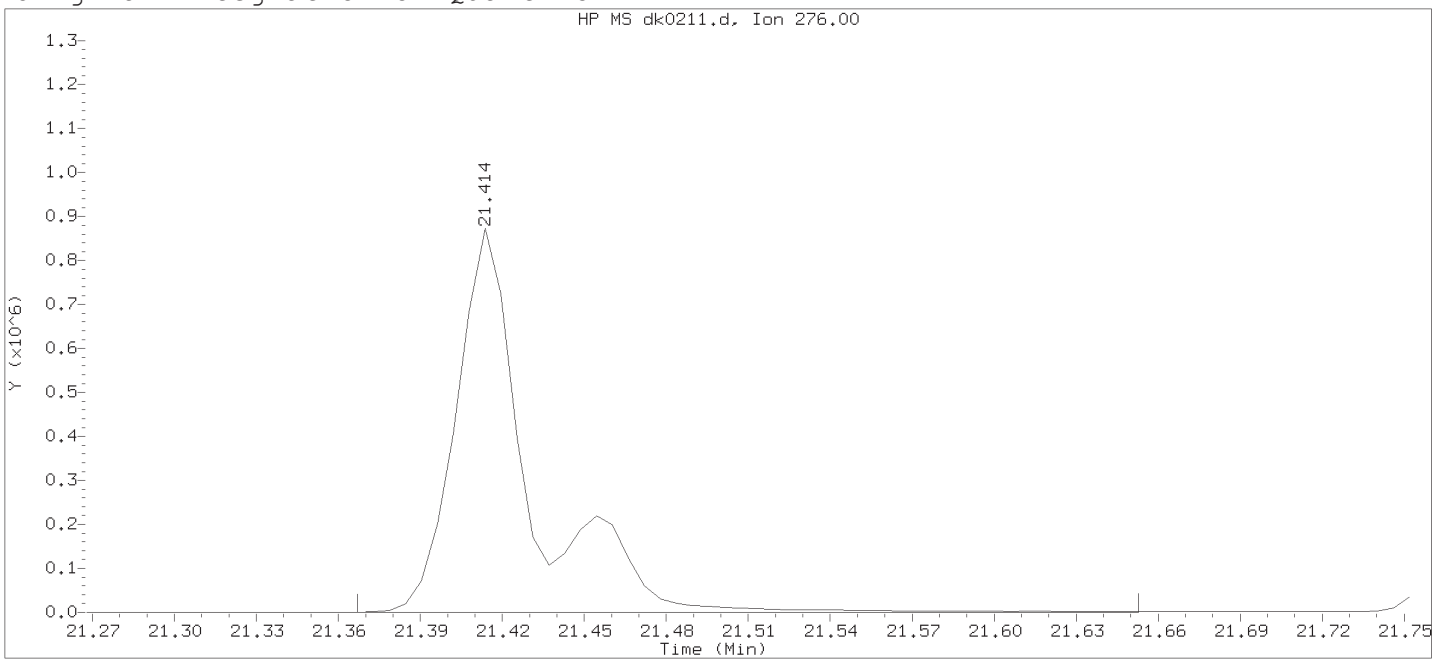
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



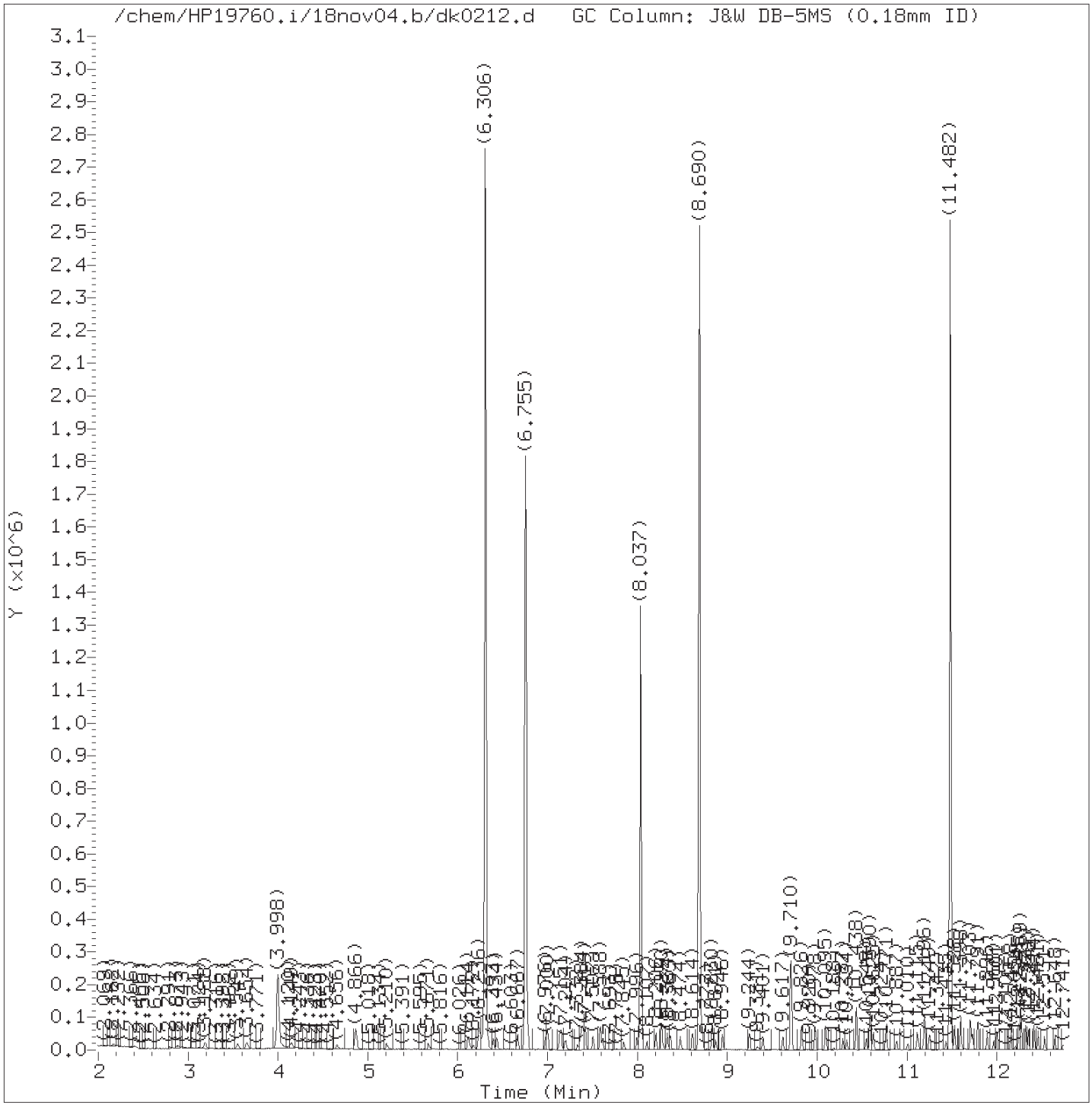
Data File: /chem/HP19760.i/18nov04.b/dk0211.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 11:51 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 12:20
Date, time and analyst ID of latest file update: 04-Nov-2018 12:20 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3333
Retention Time (minutes) : 21.414
Quant Ion : 276.00
Area : 1663892
On-column Amount (ng/ul) : 16.3484
Integration start scan : 3324 Integration stop scan: 3373
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12475



Total Ion Chromatogram (TIC)

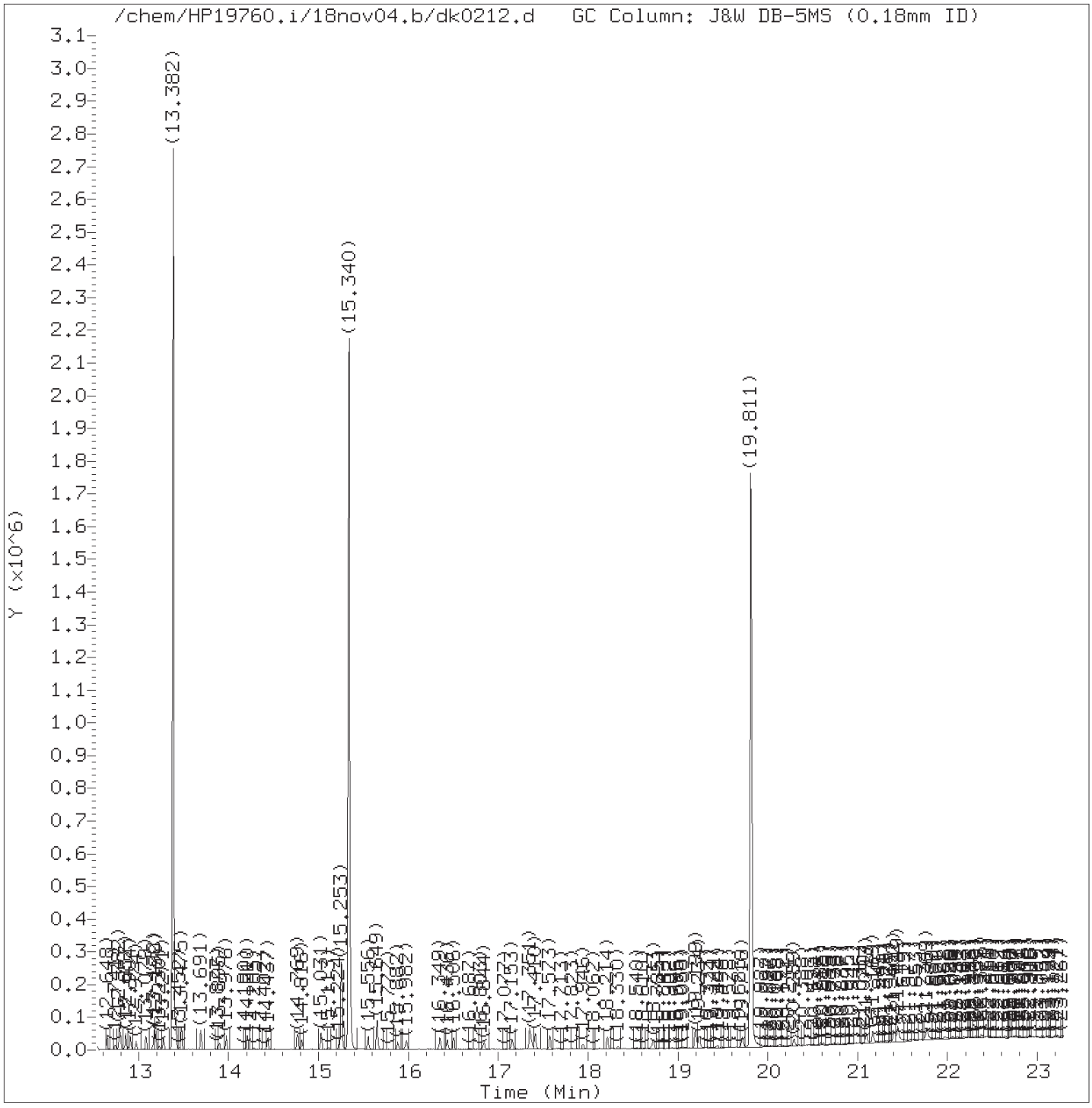
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.162	88	10005M	0.169
4) N-Nitrosodimethylamine	(1)	2.791	74	9534M	0.108
5) Pyridine	(1)	2.879	79	21919M	0.146
7) 2-Picoline	(1)	4.027	93	20678M	0.137
8) N-Nitrosomethylethylamine	(1)	4.208	88	8172M	0.126
9) Methyl methanesulfonate	(1)	4.662	80	8244M	0.113
11)$2-Fluorophenol	(1)	4.860	112	26437	0.232
13) N-Nitrosodiethylamine	(1)	5.210	102	6104	0.101
42) Total Cresols	(1)			26606	0.223
15) Ethyl methanesulfonate	(1)	5.671	109	6255	0.107
16) Benzaldehyde	(1)	6.114	77	12885	0.129
17)$Phenol-d6	(1)	6.236	99	37301	0.235
18) Phenol	(1)	6.253	94	21893	0.120
19) Aniline	(1)	6.277	93	24975	0.118
20) a-methylstyrene	(1)	6.358	118	1521A	0.138
22) bis(2-Chloroethyl)ether	(1)	6.393	93	16745	0.124
23) 2-Chlorophenol	(1)	6.434	128	11682	0.108
24) 1,3-Dichlorobenzene	(1)	6.667	146	13015	0.115
25)*1,4-Dichlorobenzene-d4	(1)	6.755	152	343195	5.000
26) 1,4-Dichlorobenzene	(1)	6.778	146	14526	0.127
27) Benzyl alcohol	(1)	6.982	108	7778	0.104
28) 1,2-Dichlorobenzene	(1)	7.000	146	13212	0.123
30) Indene	(1)	7.134	115	14311	0.117
31) 2-Methylphenol	(1)	7.151	108	12154	0.108
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.204	45	18345	0.118
34) bis(2-Chloroisopropyl)ether	(1)	7.204	45	18345	0.118
35) N-Nitrosopyrrolidine	(1)	7.332	100	6254	0.101
36) Acetophenone	(1)	7.367	105	18170	0.119
97) Isosafrole	(3)			7196	0.097
38) N-Nitroso-di-n-propylamine	(1)	7.384	70	9880	0.101
37) 4-Methylphenol	(1)	7.390	108	14452	0.114
39) N-Nitrosomorpholine	(1)	7.402	56	8393	0.114
40) o-Toluidine	(1)	7.419	106	23800	0.125
43) Hexachloroethane	(1)	7.507	117	6504	0.121
44)$Nitrobenzene-d5	(2)	7.588	82	30548	0.216
45) Nitrobenzene	(2)	7.612	77	16577	0.116
48) N-Nitrosopiperidine	(2)	7.845	114	5739	0.103
50) Isophorone	(2)	7.996	82	24712	0.102
120) 2,4_2,6-Dinitrotoluenes	(3)			8366	0.176
51) 2-Nitrophenol	(2)	8.107	139	4935	0.095

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.206	107	12225	0.105
56) Benzoic acid	(2)	8.270	105	32341M	0.443
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	4530	0.106
55) bis(2-Chloroethoxy)methane	(2)	8.363	93	17631	0.116
60) 2,4-Dichlorophenol	(2)	8.480	162	9000	0.114
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	10211	0.123
65)*Naphthalene-d8	(2)	8.690	136	1266142	5.000
66) Naphthalene	(2)	8.725	128	38223	0.126
146) Diallate trans/cis	(4)			10312	0.102
67) 4-Chloroaniline	(2)	8.830	127	13084	0.111
68) 2,6-Dichlorophenol	(2)	8.836	162	7927	0.104
69) Hexachloropropene	(2)	8.871	213	5572	0.107
71) Hexachlorobutadiene	(2)	8.946	225	5846	0.127
75) Quinoline	(2)	9.249	129	21162	0.123
76) Caprolactam	(2)	9.325	113	2451M	0.079
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	8513	0.104
80) 4-Chloro-3-methylphenol	(2)	9.617	107	9791	0.105
82) Safrole	(2)	9.716	162	7171	0.102
83) 2-Methylnaphthalene	(2)	9.826	142	22095	0.121
84) 1-Methylnaphthalene	(2)	9.978	142	19450	0.116
85) Hexachlorocyclopentadiene	(3)	10.089	237	5016	0.109
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.095	216	9808	0.130
88) cis-Isosafrole	(3)	10.194	162	1273	0.019
90) 2,4,6-Trichlorophenol	(3)	10.287	196	4976	0.099
92) 2,4,5-Trichlorophenol	(3)	10.334	196	5510	0.107
93)$2-Fluorobiphenyl	(3)	10.438	172	44603	0.232
99) Diphenyl ether	(3)	10.438	170	9602	0.111
94) trans-Isosafrole	(3)	10.549	162	5923	0.079
95) 1,1'-Biphenyl	(3)	10.590	154	24693	0.119
96) 2-Chloronaphthalene	(3)	10.596	162	19219	0.117
98) 1-Chloronaphthalene	(3)	10.625	162	18769	0.122
100) 2-Nitroaniline	(3)	10.771	138	5360	0.097
104) 1,4-Naphthoquinone	(3)	10.887	158	4599	0.073
105) 1,4-Dinitrobenzene	(3)	11.010	168	2448	0.084
106) Dimethylphthalate	(3)	11.115	163	18384	0.105
107) 1,3-Dinitrobenzene	(3)	11.126	168	2702	0.085
108) 2,6-Dinitrotoluene	(3)	11.185	165	3890	0.093
109) Acenaphthylene	(3)	11.249	152	24080	0.112
112) 3-Nitroaniline	(3)	11.435	138	4569	0.097
113)*Acenaphthene-d10	(3)	11.482	164	556706	5.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.528	153	20413	0.124
115) 2,4-Dinitrophenol	(3)	11.598	184	12258	0.501
116) 4-Nitrophenol	(3)	11.703	109	12918	0.375
117) Pentachlorobenzene	(3)	11.732	250	6883	0.114
119) Dibenzofuran	(3)	11.785	168	27099	0.118
118) 2,4-Dinitrotoluene	(3)	11.791	165	4476	0.084
121) 1-Naphthylamine	(3)	11.896	143	17196	0.100
122) 2,3,4,6-Tetrachlorophenol	(3)	11.966	232	3948	0.102
123) 2-Naphthylamine	(3)	12.001	143	17915	0.105
124) Diethylphthalate	(3)	12.158	149	17421	0.102
126) Fluorene	(3)	12.240	166	19403	0.115
125) Thionazin	(3)	12.251	107	3365	0.091
128) 5-Nitro-o-toluidine	(3)	12.263	152	3878M	0.072
127) 4-Chlorophenyl-phenylether	(3)	12.269	204	9446	0.111
129) 4-Nitroaniline	(3)	12.274	138	3963	0.077
130) 4,6-Dinitro-2-methylphenol	(4)	12.321	198	8188	0.286
131) N-Nitrosodiphenylamine	(4)	12.414	169	15571	0.110
132) NDPA as diphenylamine	(4)	12.414	169	15571	0.110
134) 1,2-Diphenylhydrazine	(4)	12.461	77	24794	0.106
135)$2,4,6-Tribromophenol	(3)	12.537	330	3587	0.191
137) Tetraethyldithiopyrophosphate	(4)	12.648	97	3453	0.103
139) 1,3,5-Trinitrobenzene	(4)	12.735	213	958M	0.052
140) Diallate (peak 1)	(4)	12.782	86	8628	0.082
141) Phorate	(4)	12.787	75	11054	0.083
142) Phenacetin	(4)	12.799	108	8752	0.088
143) 4-Bromophenyl-phenylether	(4)	12.857	248	4284	0.106
144) Diallate (peak 2)	(4)	12.886	86	1684	0.021
145) Hexachlorobenzene	(4)	12.904	284	5134	0.124
147) Dimethoate	(4)	12.968	87	6493	0.075
148) Atrazine	(4)	13.079	200	4219	0.100
149) Pentachlorophenol	(4)	13.160	266	1989	0.072
150) 4-Aminobiphenyl	(4)	13.172	169	12256	0.100
151) Pentachloronitrobenzene	(4)	13.172	237	1821	0.096
152) Pronamide	(4)	13.271	173	6111	0.085
153)*Phenanthrene-d10	(4)	13.382	188	976796	5.000
155) Phenanthrene	(4)	13.411	178	30211	0.126
154) Dinoseb	(4)	13.411	211	1992	0.049
157) Anthracene	(4)	13.475	178	25898	0.116
163) Carbazole	(4)	13.691	167	23074	0.100
164) Methyl parathion	(4)	13.895	109	4139	0.065

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on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.210	149	24479	0.088
168) 4-Nitroquinoline-1-oxide	(4)	14.431	190	1479	0.060
167) Parathion	(4)	14.437	109	2536	0.062
169) Octachlorostyrene	(4)	14.775	308	1839	0.116
171) Isodrin	(4)	14.816	193	2898	0.105
222) Total PAHs	(6)			418552	2.171
173) Fluoranthene	(4)	15.031	202	24493	0.107
174) Benzidine	(5)	15.259	184	122422	0.644
175)*Pyrene-d10	(5)	15.340	212	907950	5.000
177) Pyrene	(5)	15.364	202	33944	0.127
179)$Terphenyl-d14	(5)	15.655	244	34381	0.227
182) p-Dimethylaminoazobenzene	(5)	15.877	225	2229	0.054
185) Chlorobenzilate	(5)	15.982	139	6558	0.080
187) 3,3'-Dimethylbenzidine	(5)	16.436	212	14764	0.091
188) Butylbenzylphthalate	(5)	16.506	149	8969	0.068
191) 2-Acetylaminofluorene	(5)	16.844	181	6170	0.065
193) 3,3'-Dichlorobenzidine	(5)	17.351	252	7247	0.081
195) Benzo(a)anthracene	(5)	17.351	228	19696	0.101
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.375	231	3683	0.075
196) Chrysene	(5)	17.415	228	25164	0.115
199) bis(2-Ethylhexyl)phthalate	(5)	17.573	149	12042	0.064
203) 6-Methylchrysene	(5)	18.220	242	14174	0.091
205) Di-n-octylphthalate	(6)	18.733	149	17253	0.059
206) Benzo(b)fluoranthene	(6)	19.193	252	19089	0.102
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.199	256	7081	0.068
208) Benzo(k)fluoranthene	(6)	19.246	252	22536	0.110
211) Benzo(a)pyrene	(6)	19.718	252	16380M	0.098
213)*Perylene-d12	(6)	19.811	264	848103	5.000
215) 3-Methylcholanthrene	(6)	20.289	268	7633	0.080
217) Dibenz(a,h)acridine	(6)	21.099	279	13772	0.089
218) Dibenz(a,j)acridine	(6)	21.169	279	16133	0.096
219) Indeno(1,2,3-cd)pyrene	(6)	21.402	276	16389M	0.105
220) Dibenz(a,h)anthracene	(6)	21.449	278	18972	0.107
221) Benzo(g,h,i)perylene	(6)	21.775	276	22116	0.118

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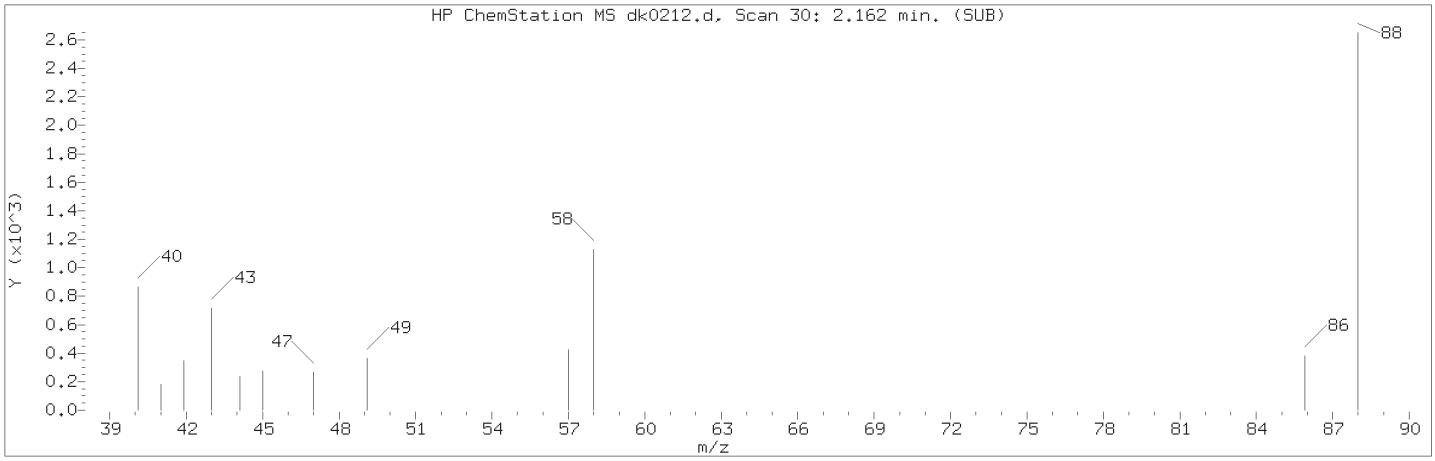
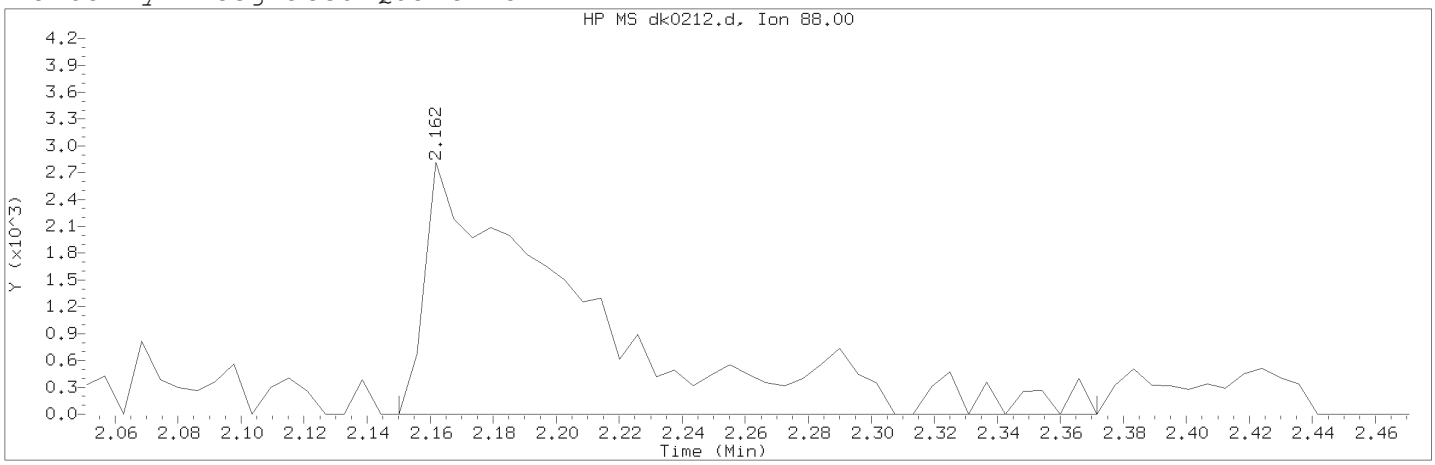
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

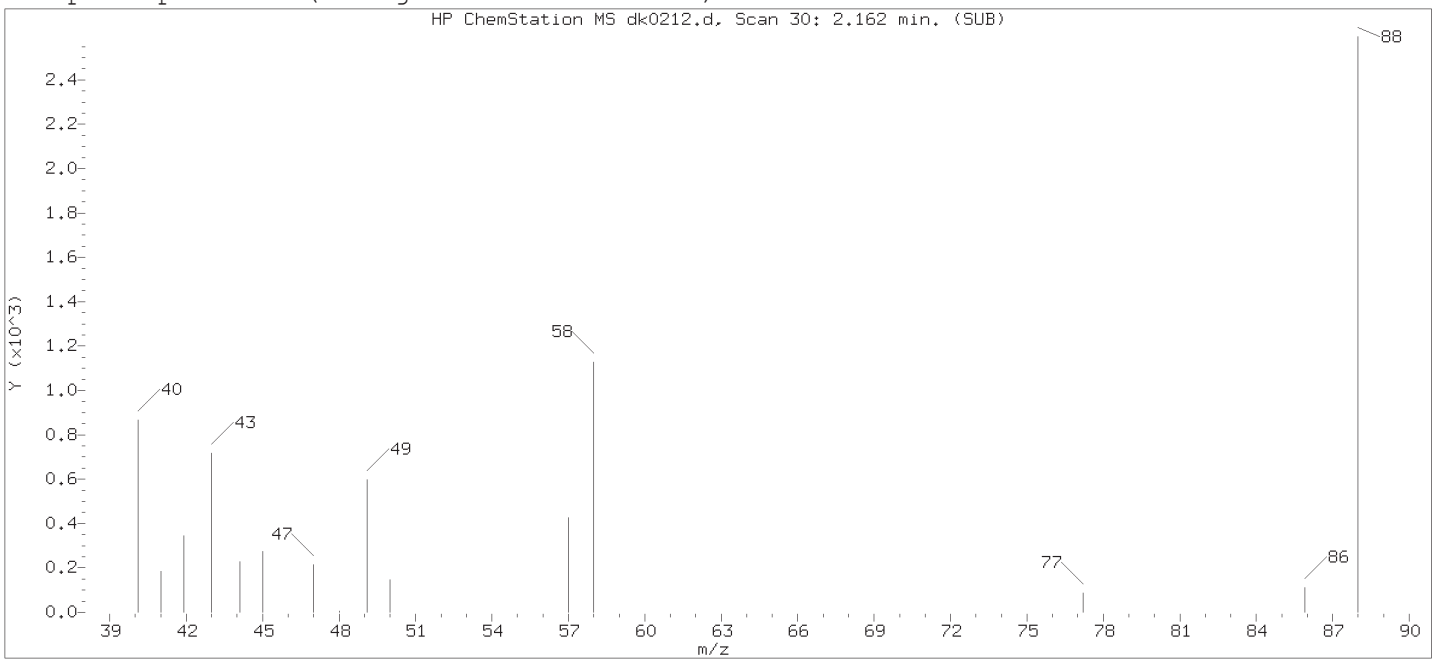
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 30		
Retention Time (minutes)	: 2.162		
Quant Ion	: 88.00		
Area (flag)	: 10005M		
On-Column Amount (ng/ul)	: 0.1694		
Integration start scan	: 27	Integration stop scan:	65
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

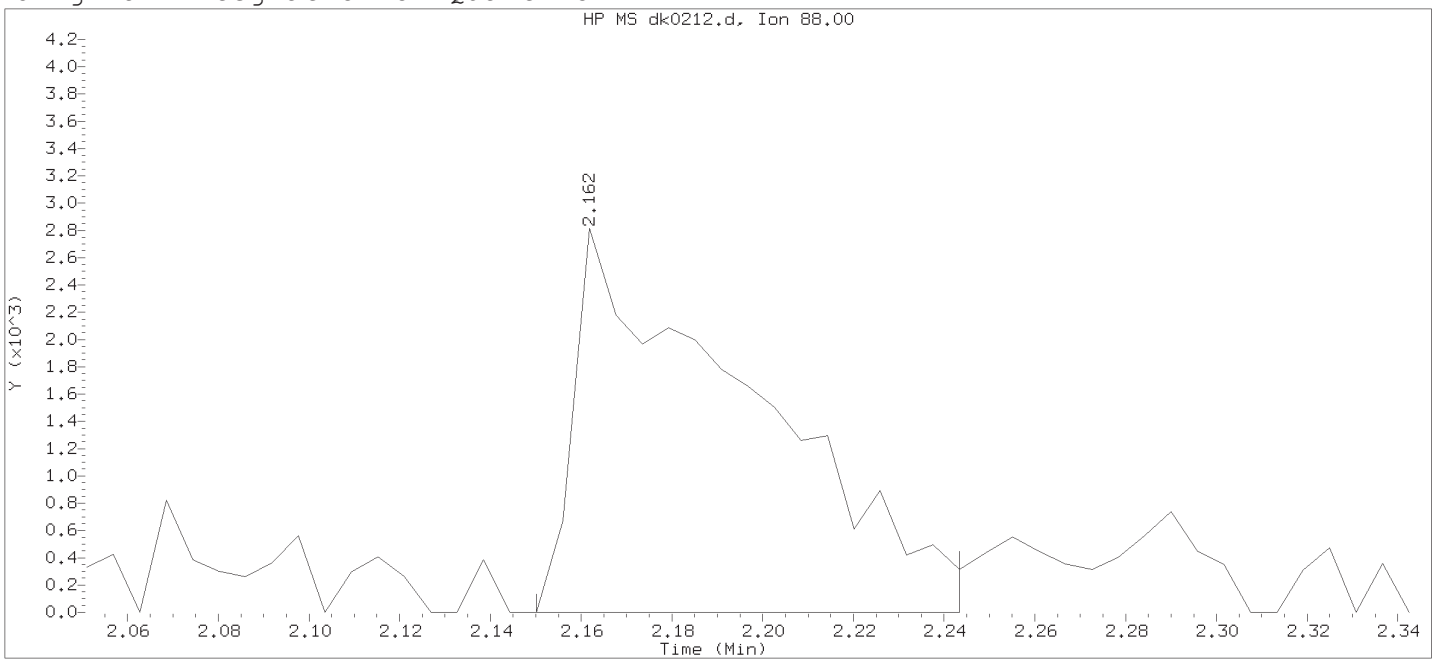
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

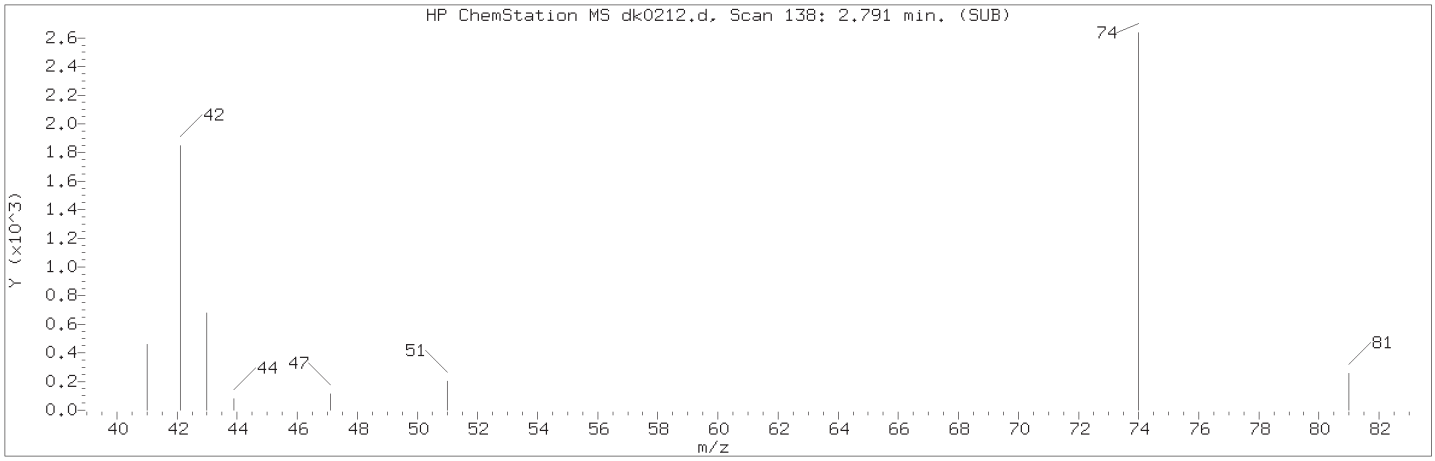
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

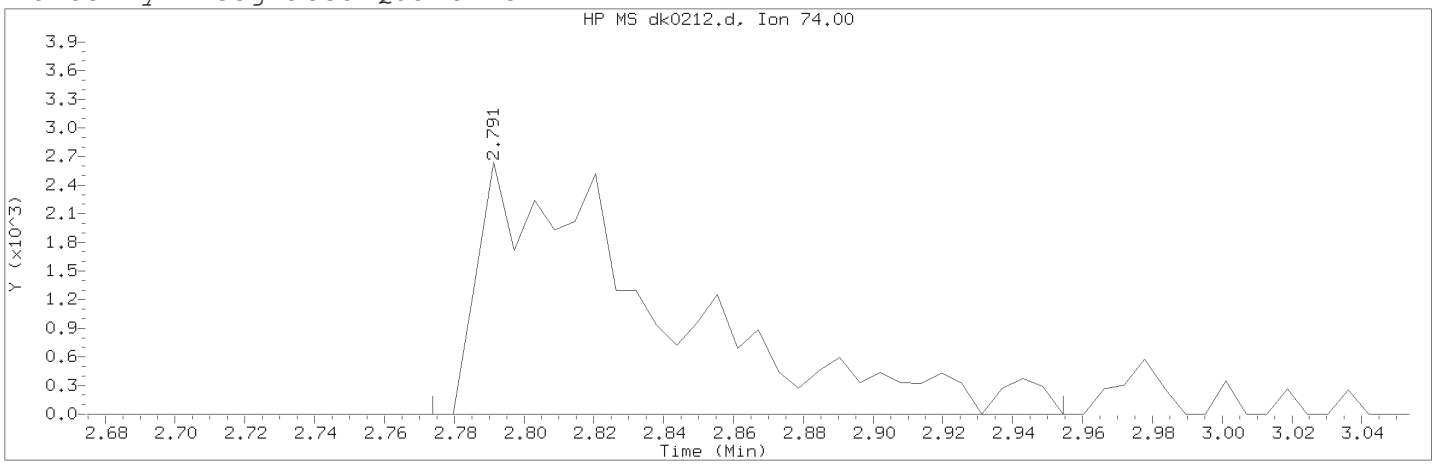
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 30		
Retention Time (minutes)	: 2.162		
Quant Ion	: 88.00		
Area	: 7621		
On-column Amount (ng/ul)	: 0.1424		
Integration start scan	: 27	Integration stop scan:	43
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

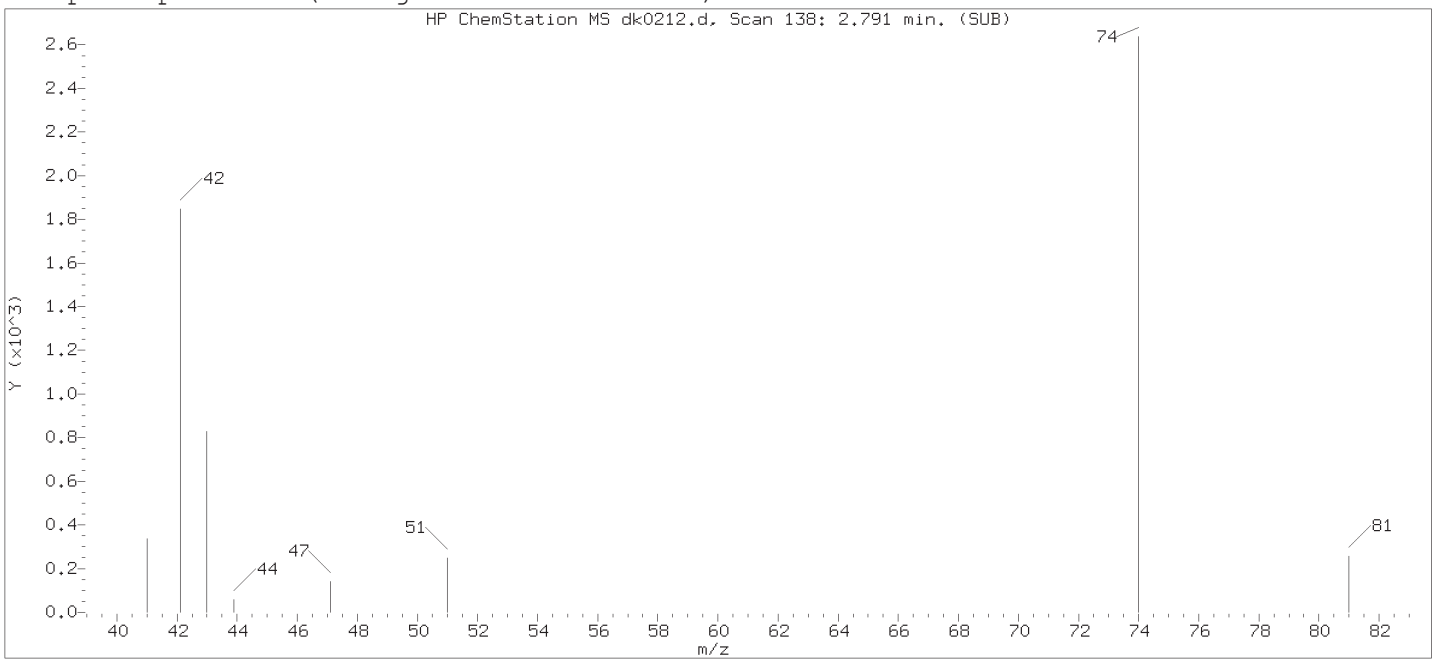
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 138		
Retention Time (minutes)	: 2.791		
Quant Ion	: 74.00		
Area (flag)	: 9534M		
On-Column Amount (ng/ul)	: 0.1075		
Integration start scan	: 134	Integration stop scan:	165
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

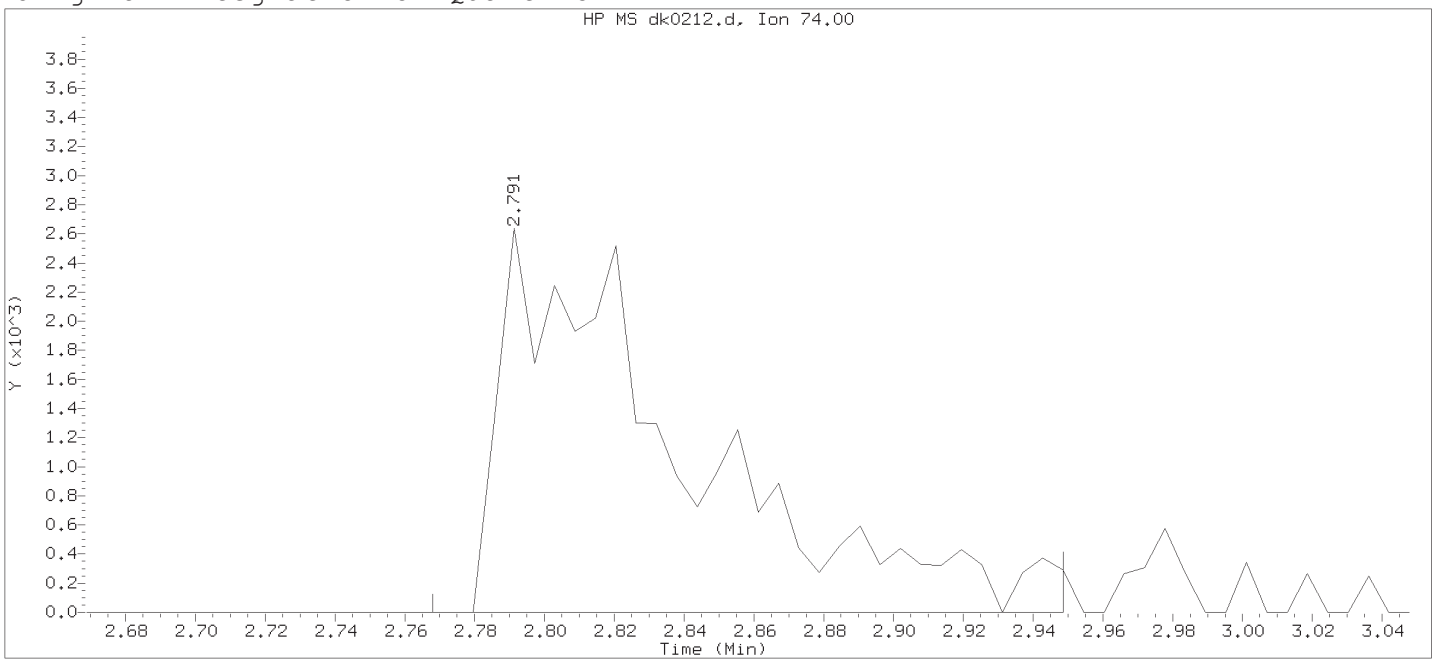
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

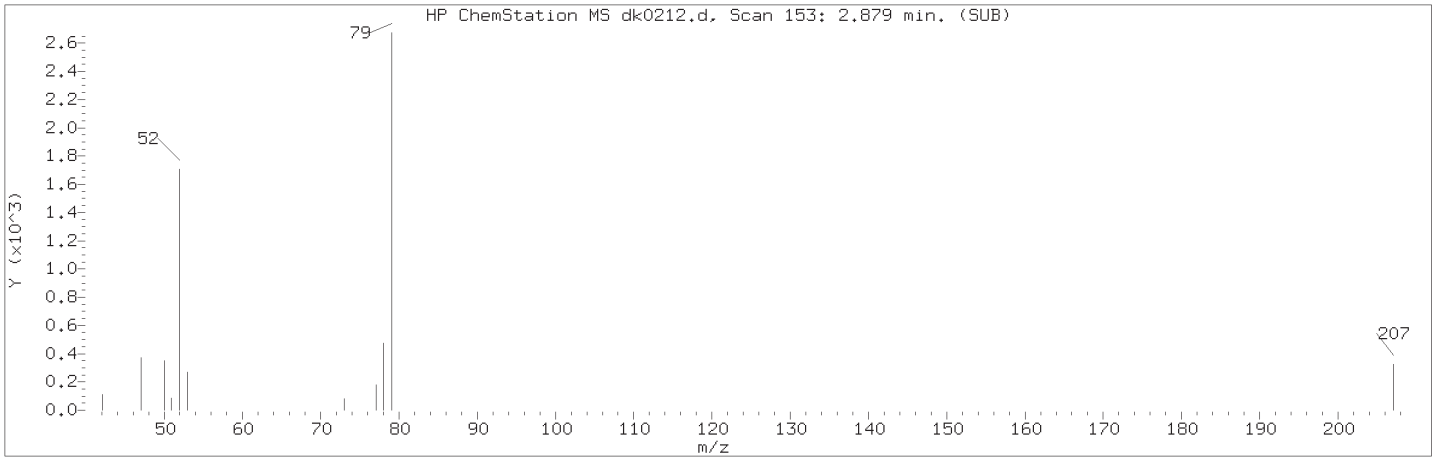
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

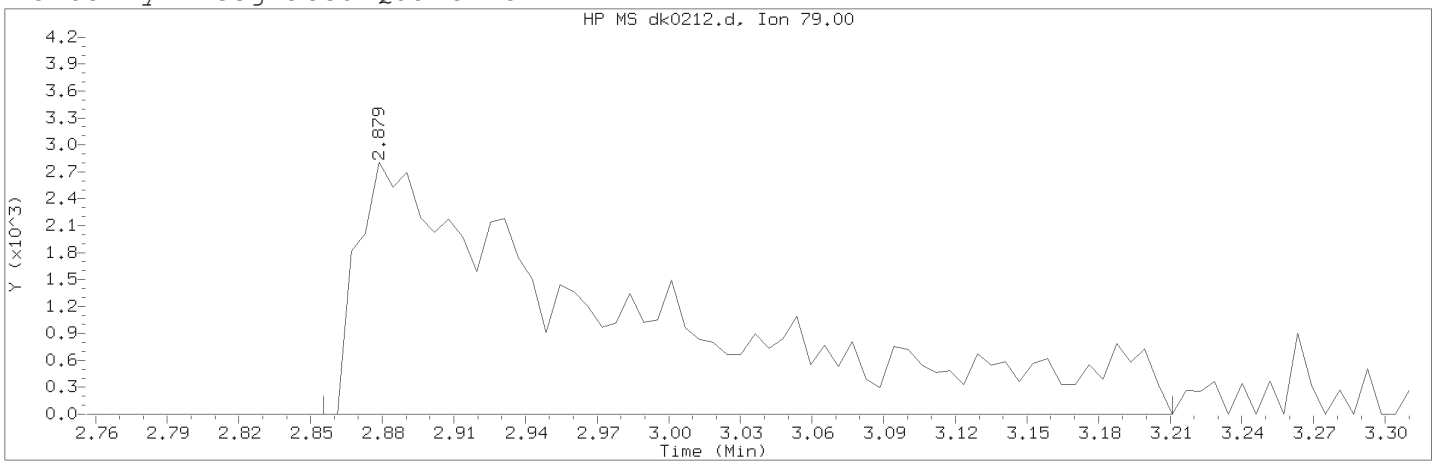
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 138		
Retention Time (minutes)	: 2.791		
Quant Ion	: 74.00		
Area	: 9483		
On-column Amount (ng/ul)	: 0.1297		
Integration start scan	: 133	Integration stop scan:	164
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

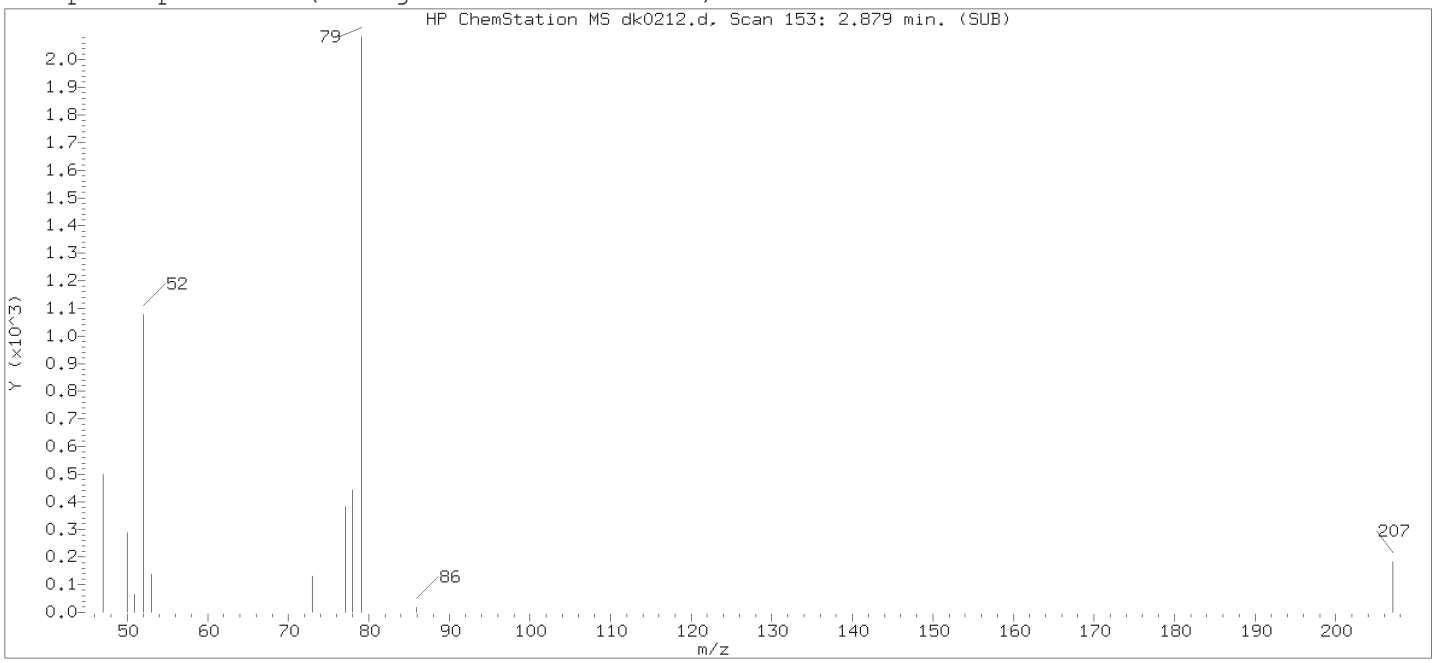
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 153		
Retention Time (minutes)	: 2.879		
Quant Ion	: 79.00		
Area (flag)	: 21919M		
On-Column Amount (ng/ul)	: 0.1458		
Integration start scan	: 148	Integration stop scan:	209
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

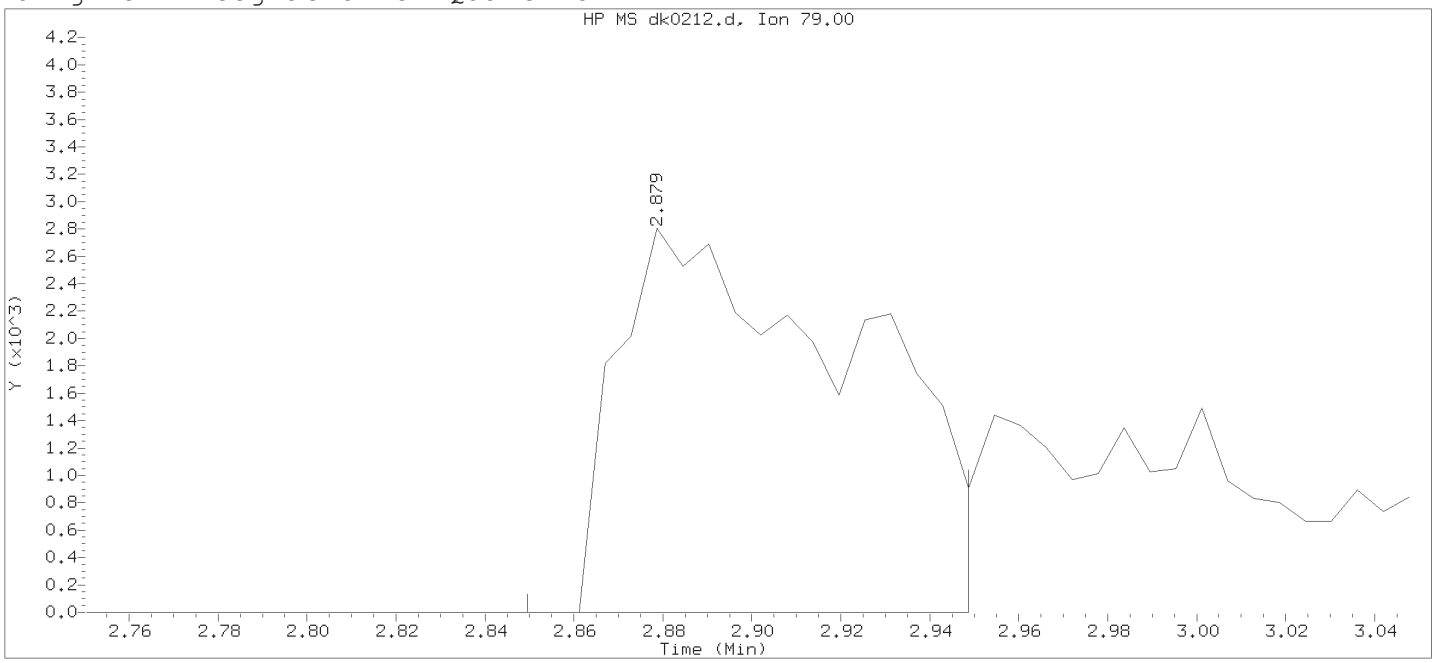
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

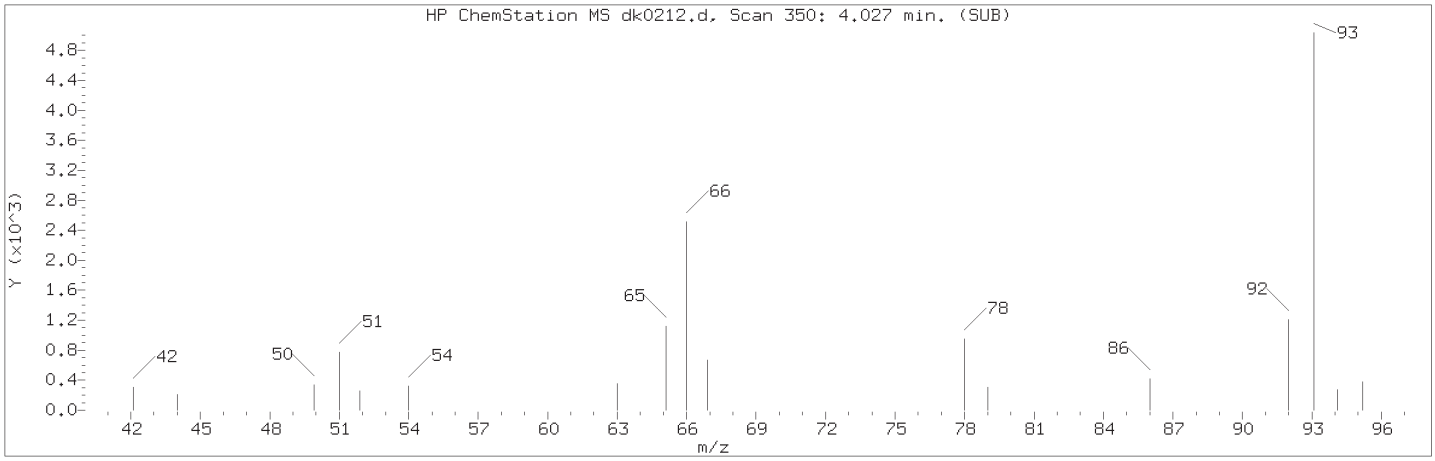
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

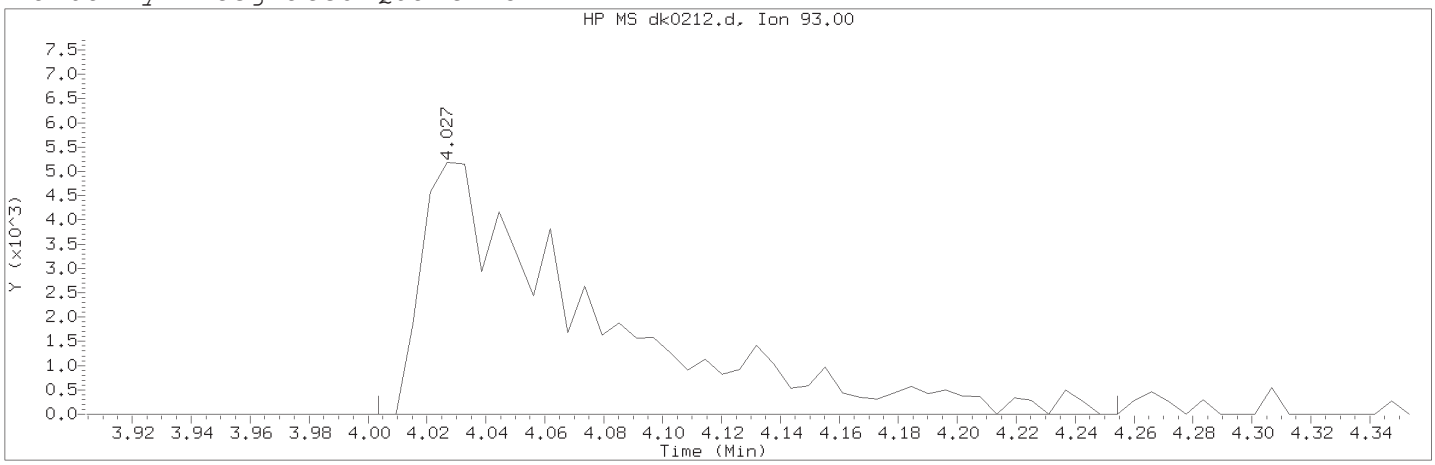
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 153		
Retention Time (minutes)	: 2.879		
Quant Ion	: 79.00		
Area	: 10429		
On-column Amount (ng/ul)	: 0.0856		
Integration start scan	: 147	Integration stop scan:	164
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user id: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

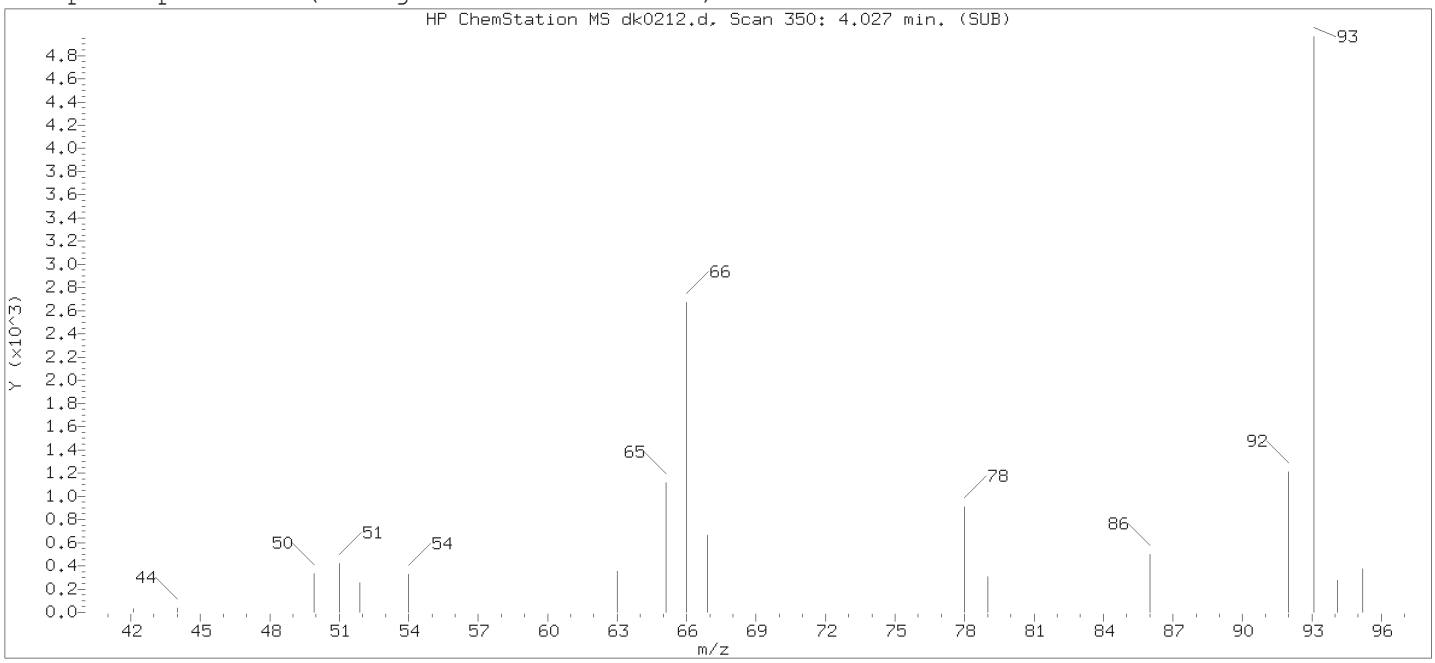
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 350		
Retention Time (minutes)	: 4.027		
Quant Ion	: 93.00		
Area (flag)	: 20678M		
On-Column Amount (ng/ul)	: 0.1374		
Integration start scan	: 345	Integration stop scan:	388
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

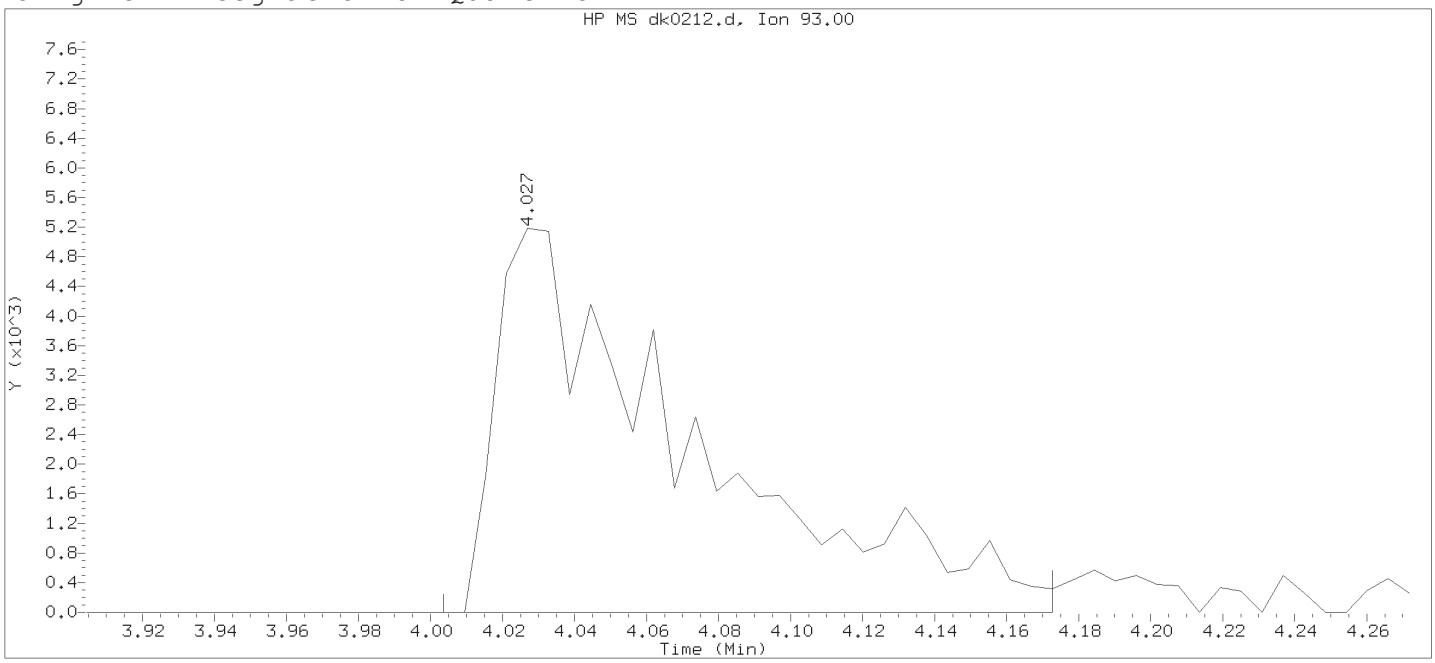
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

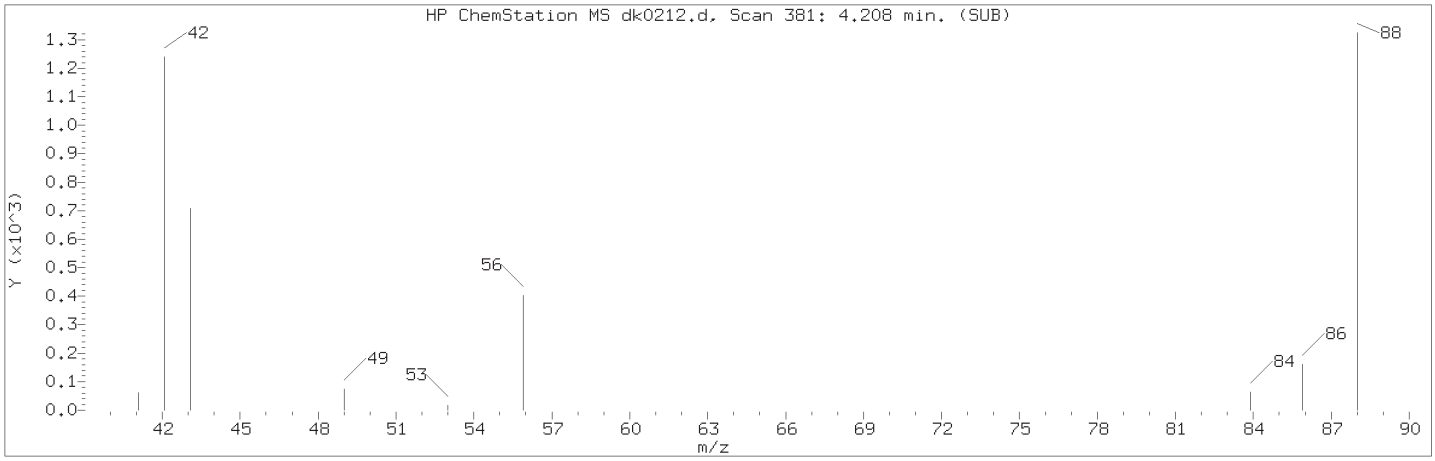
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

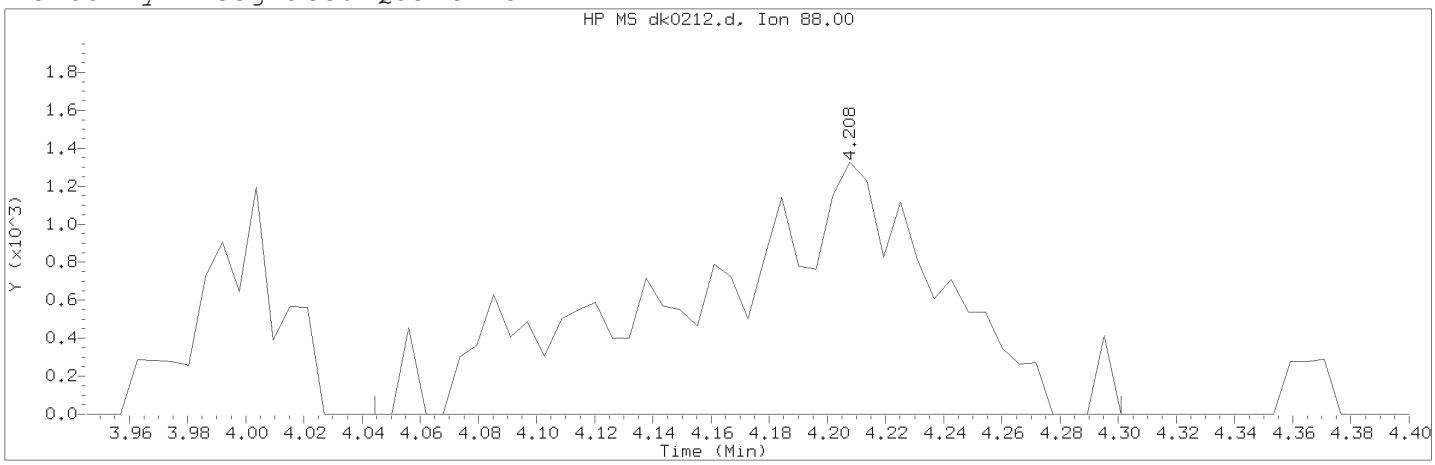
Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 350		
Retention Time (minutes)	: 4.027		
Quant Ion	: 93.00		
Area	: 19215		
On-column Amount (ng/ul)	: 0.1495		
Integration start scan	: 345	Integration stop scan:	374
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: 2615

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

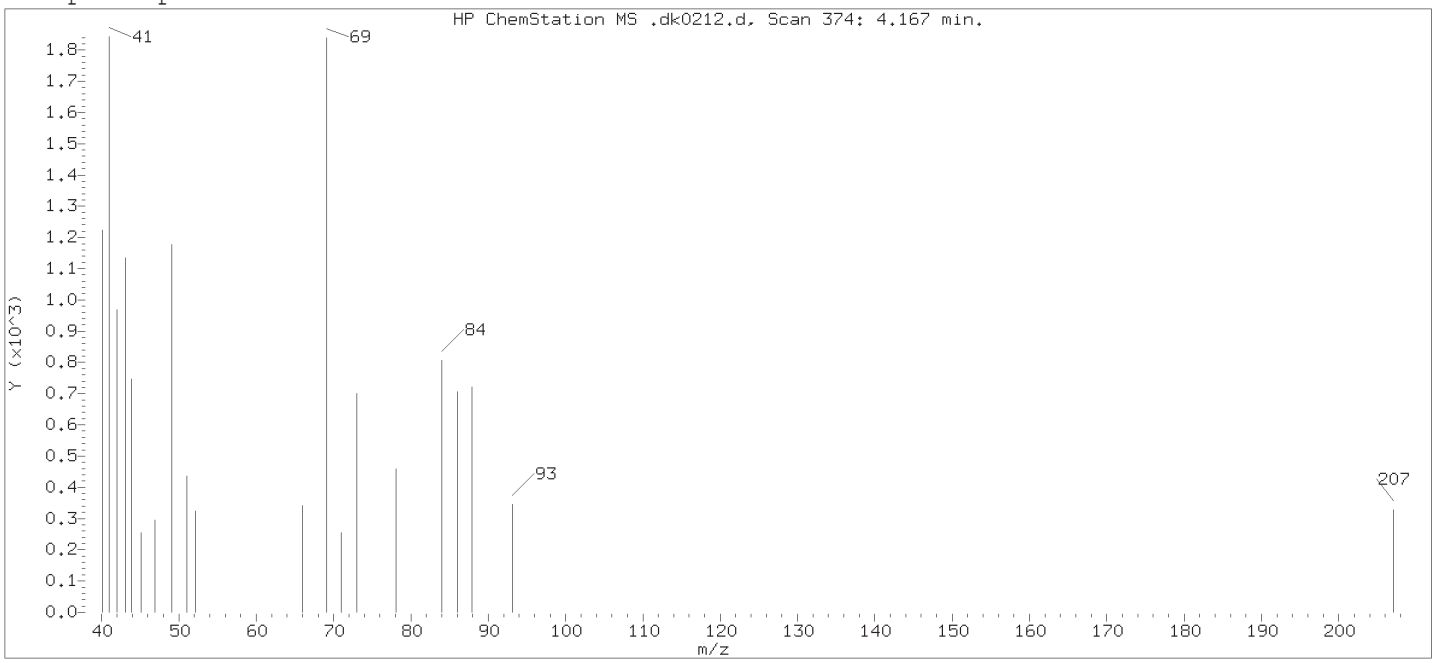
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 381		
Retention Time (minutes)	: 4.208		
Quant Ion	: 88.00		
Area (flag)	: 8172M		
On-Column Amount (ng/ul)	: 0.1259		
Integration start scan	: 352	Integration stop scan:	396
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

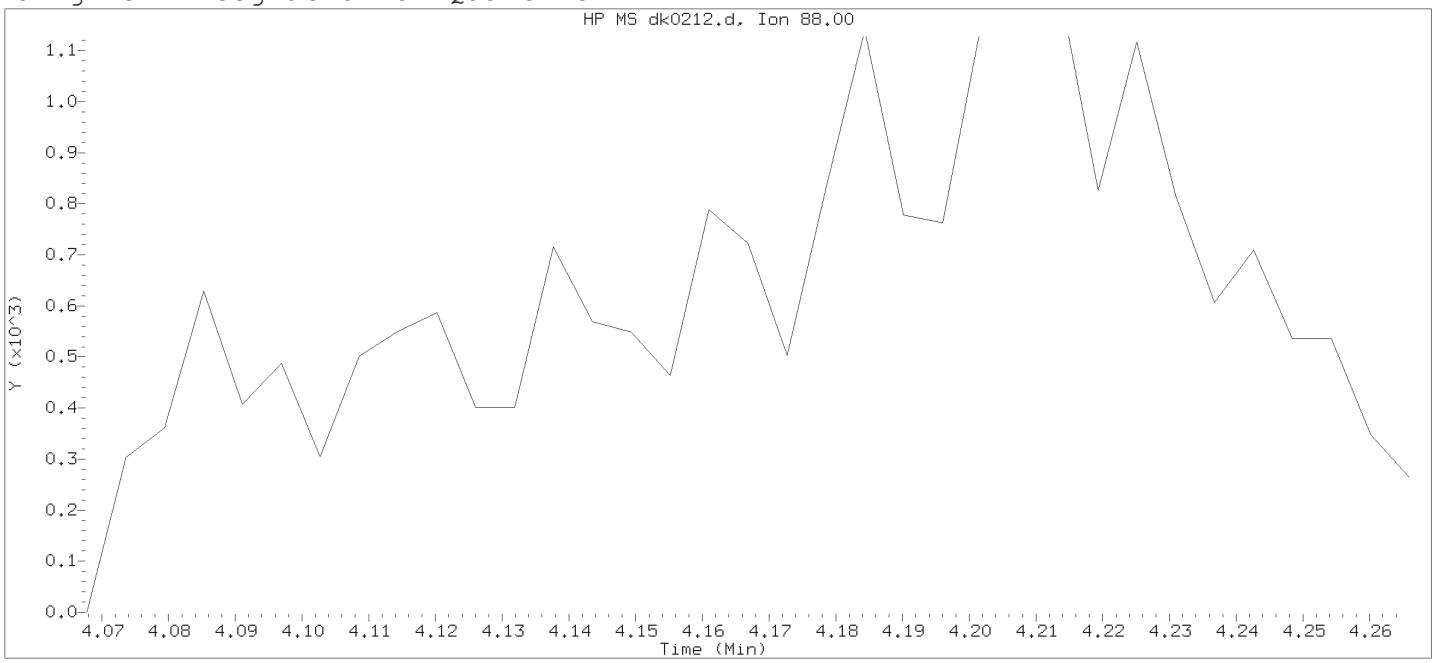
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

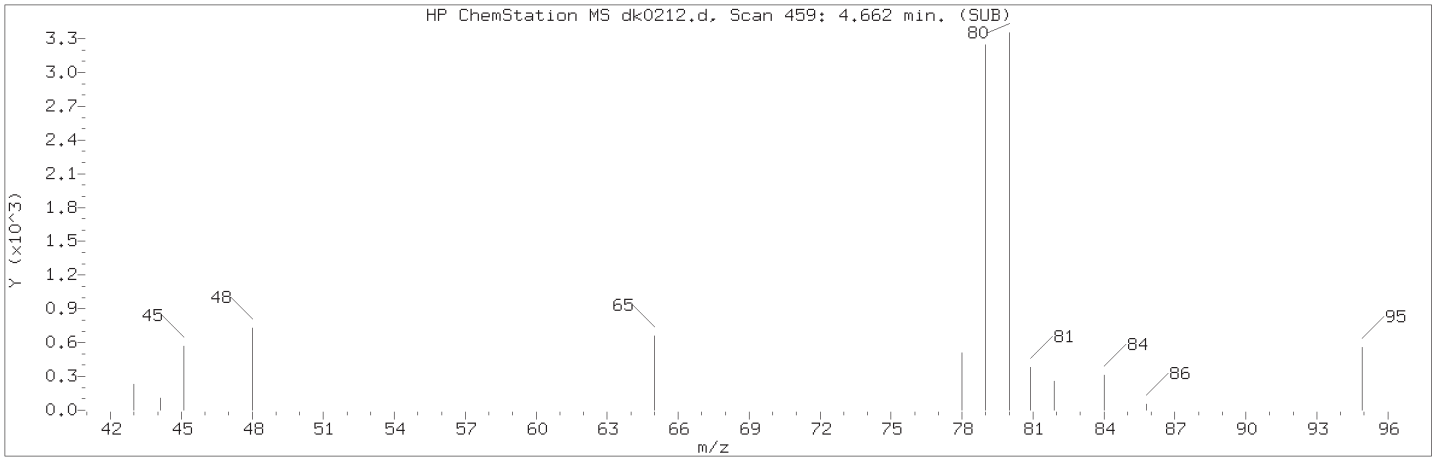
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

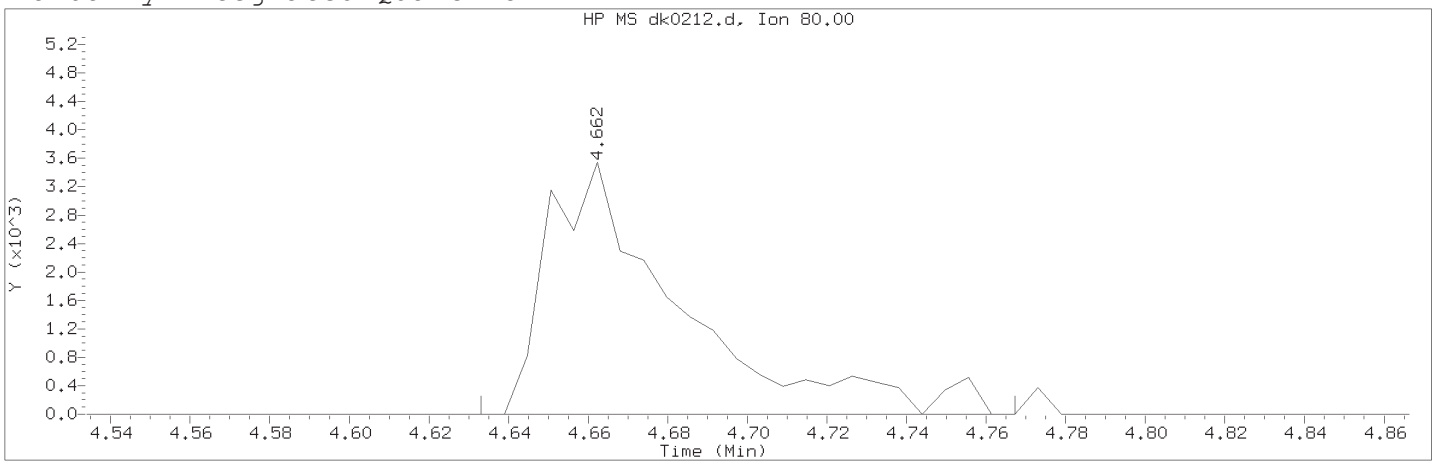
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.167
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: ARTRANSUE

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

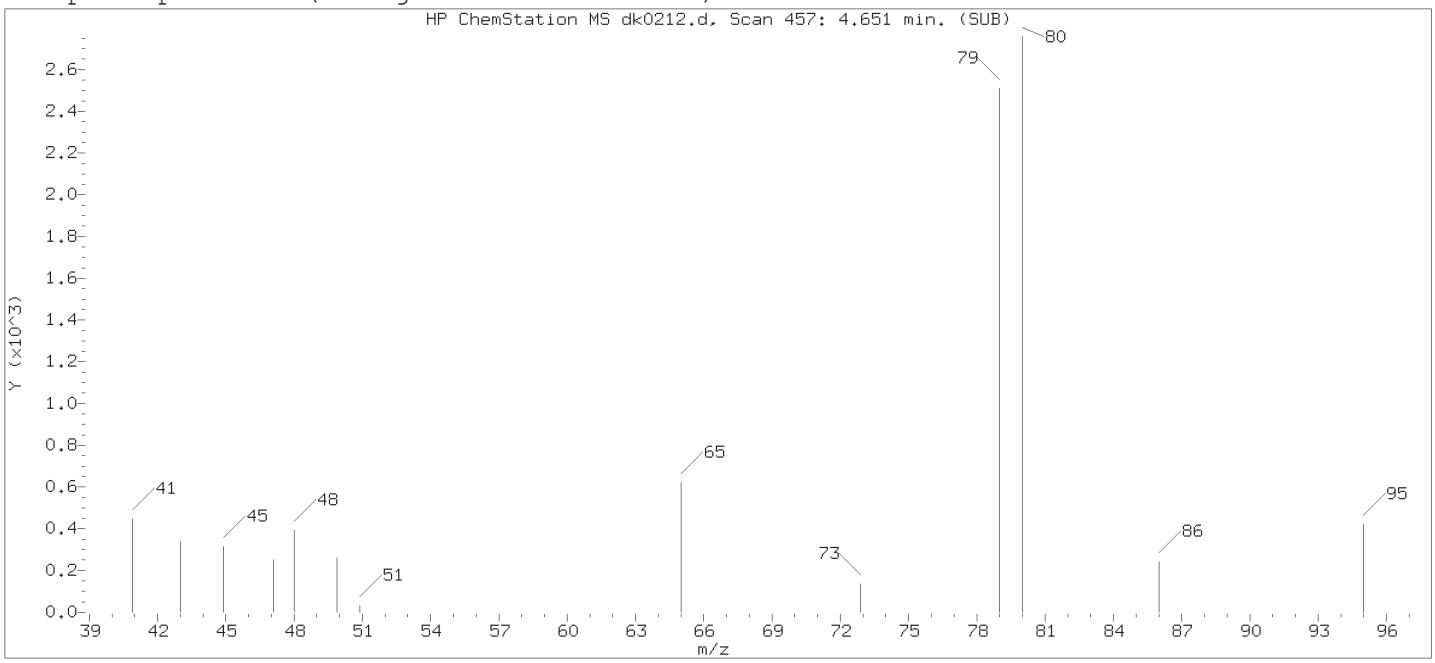
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 459
Retention Time (minutes) : 4.662
Quant Ion : 80.00
Area (flag) : 8244M
On-Column Amount (ng/ul) : 0.1130
Integration start scan : 453 Integration stop scan: 476
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

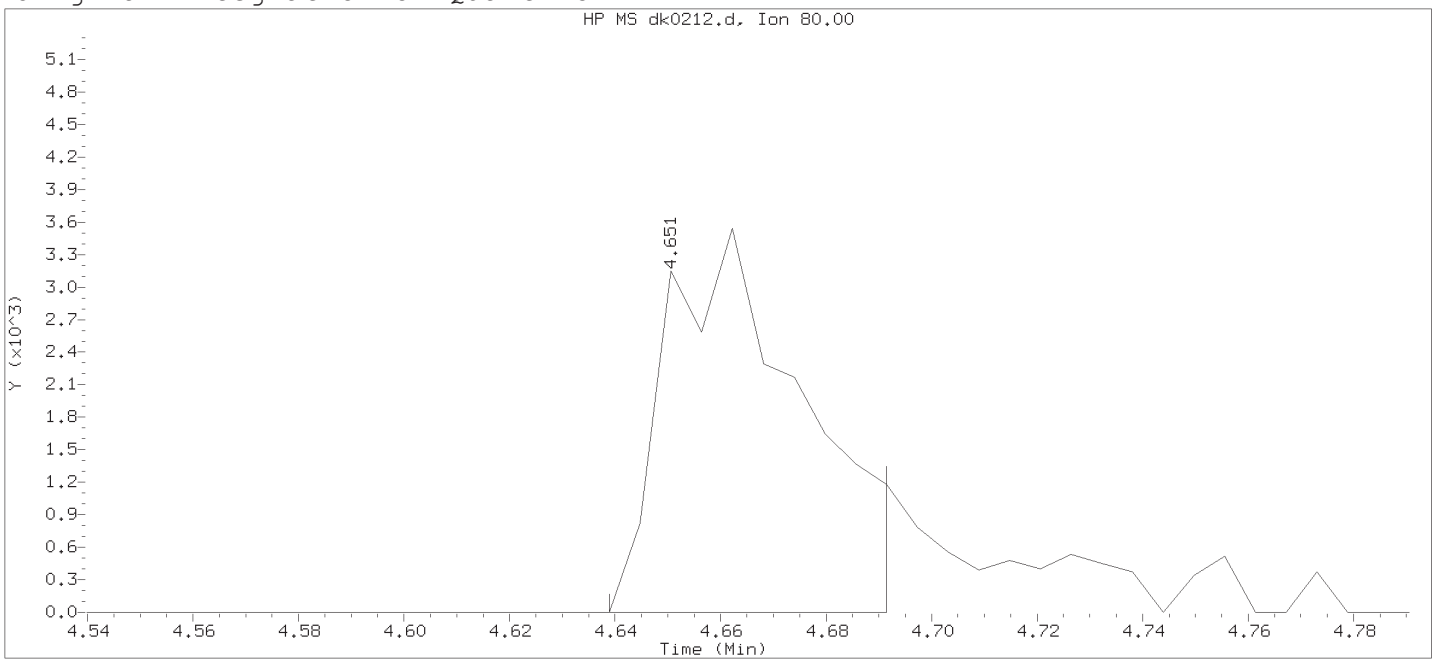
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

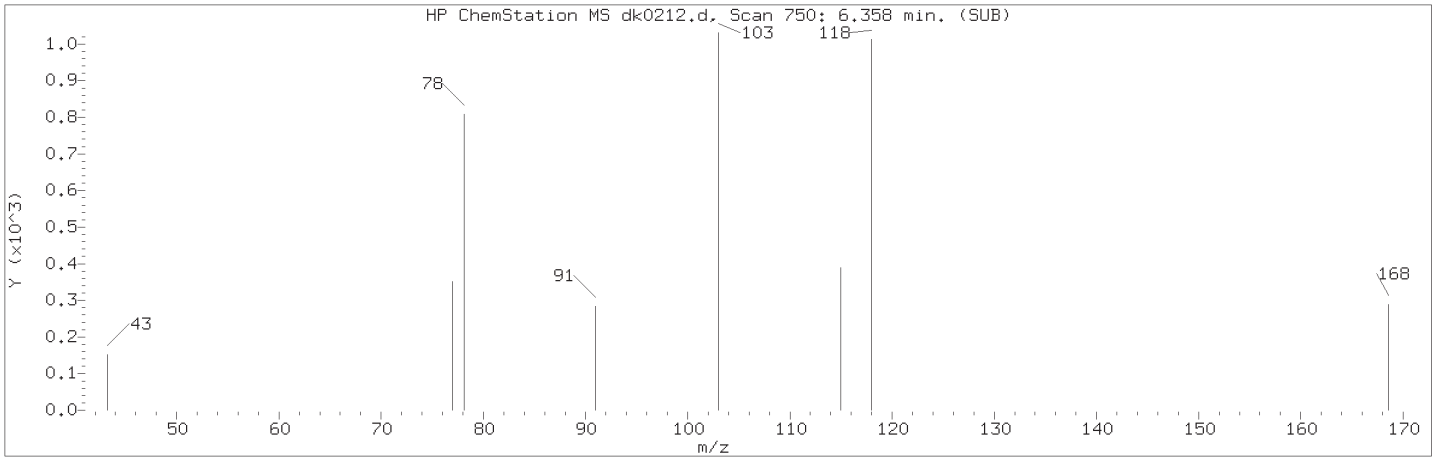
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

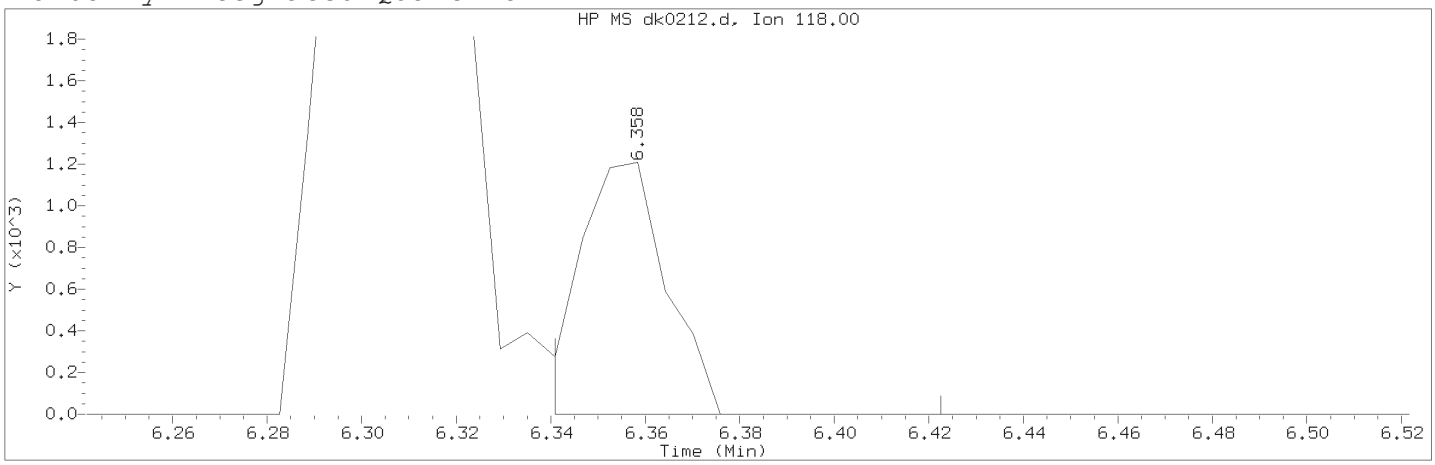
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 457		
Retention Time (minutes)	: 4.651		
Quant Ion	: 80.00		
Area	: 6351		
On-column Amount (ng/ul)	: 0.1088		
Integration start scan	: 454	Integration stop scan:	463
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user id: atransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

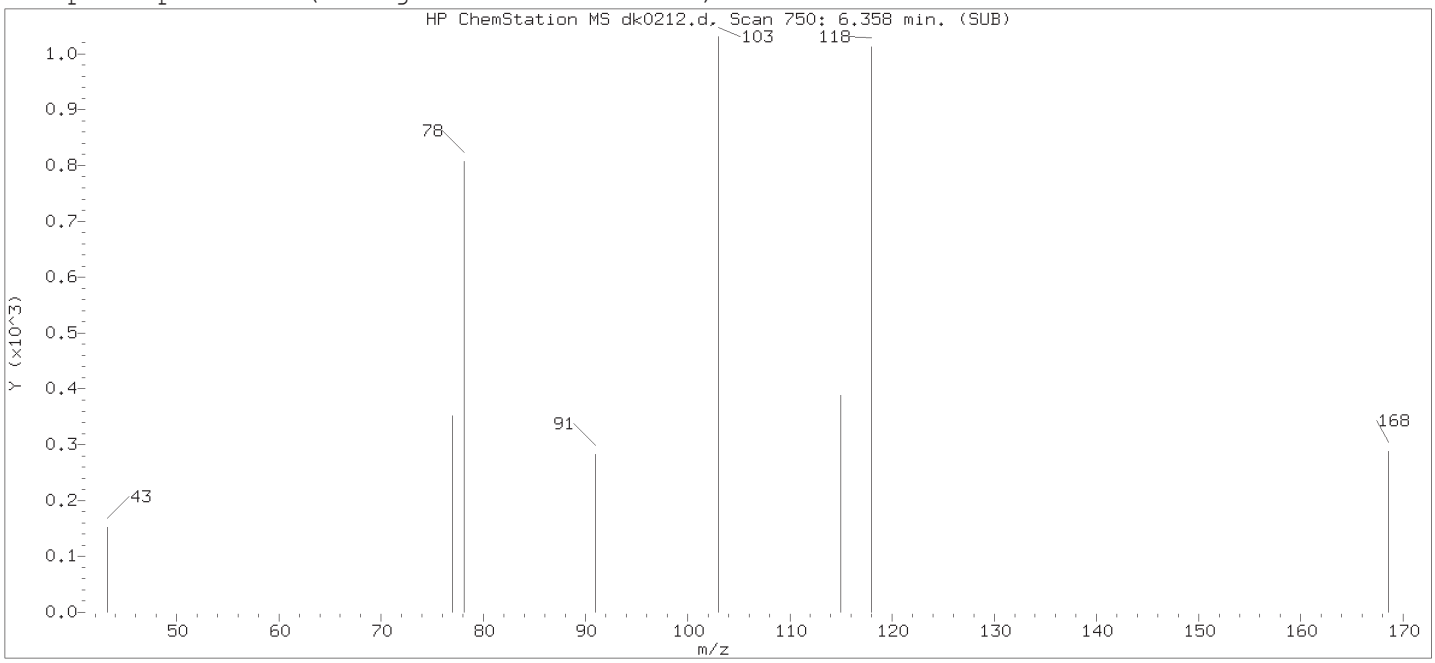
Compound Number	: 20		
Compound Name	: a-methylstyrene		
Scan Number	: 750		
Retention Time (minutes)	: 6.358		
Quant Ion	: 118.00		
Area (flag)	: 1521A		
On-Column Amount (ng/ul)	: 0.1375		
Integration start scan	: 746	Integration stop scan:	760
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

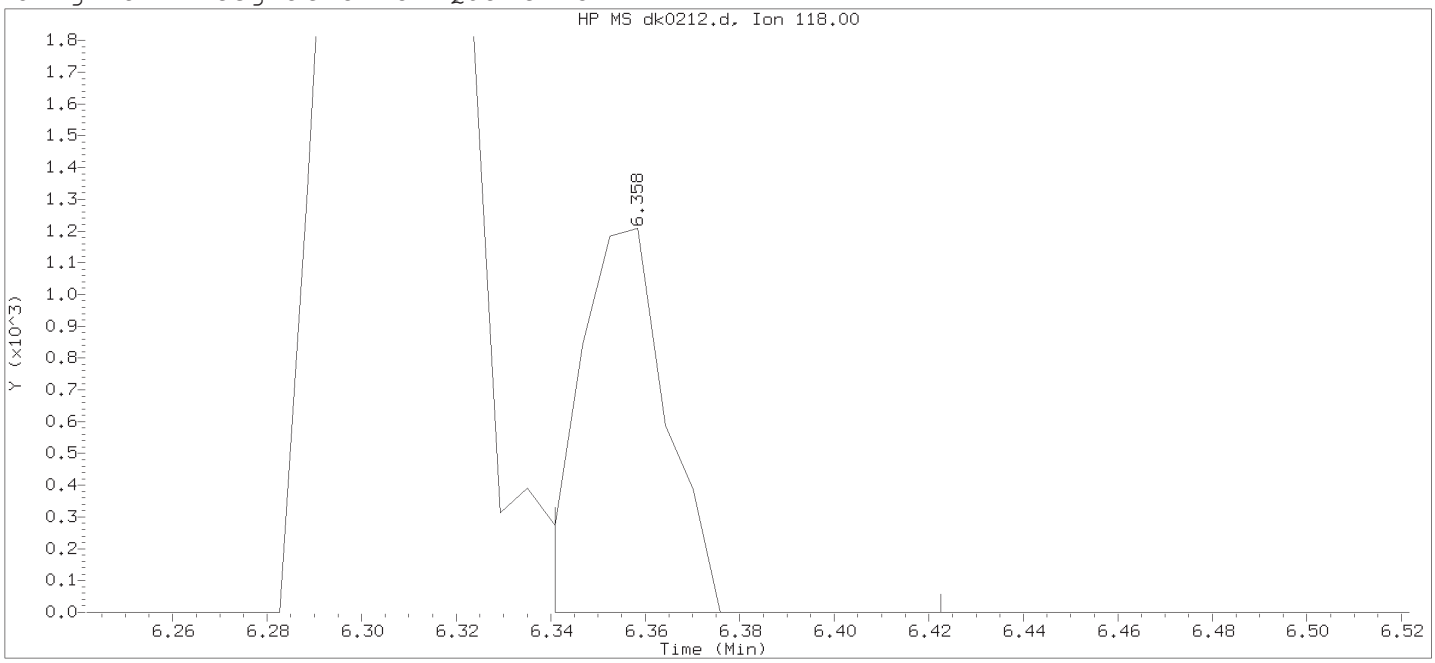
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

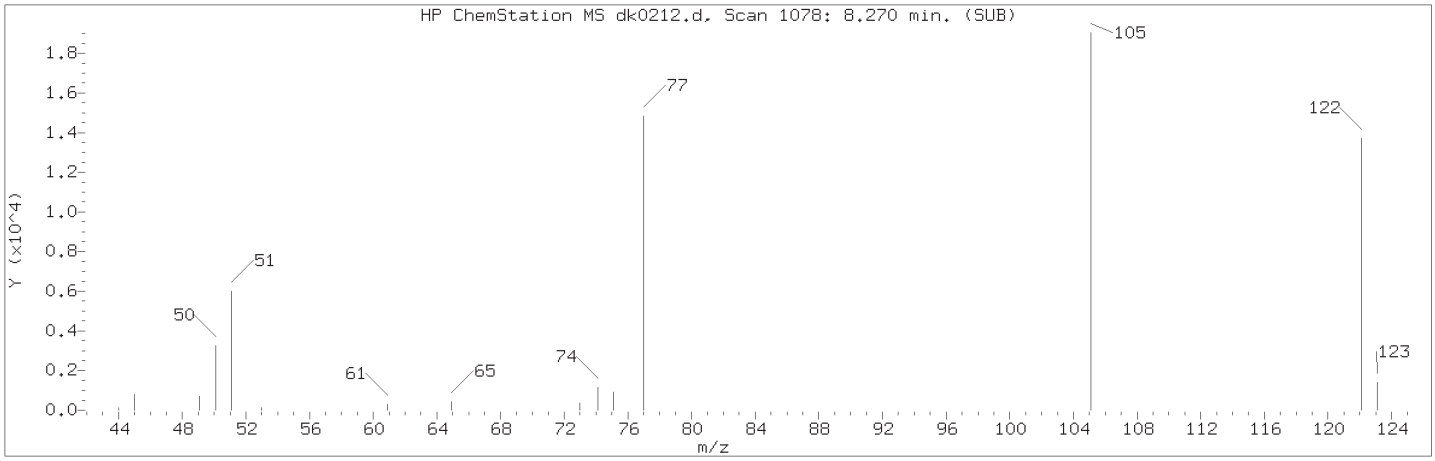
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

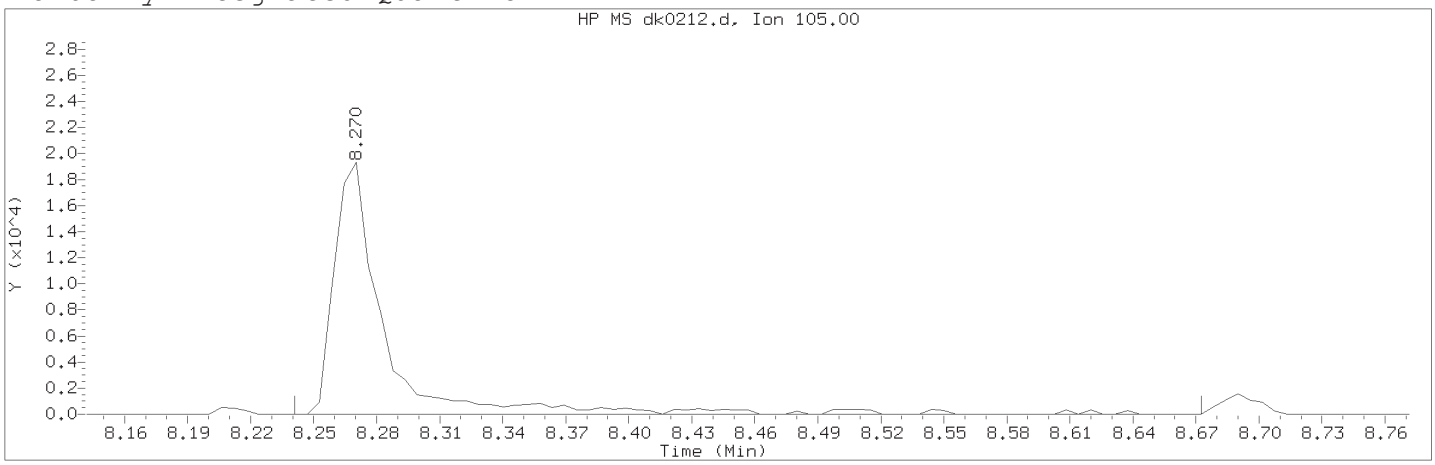
Compound Number	: 20		
Compound Name	: a-methylstyrene		
Scan Number	: 750		
Retention Time (minutes)	: 6.358		
Quant Ion	: 118.00		
Area	: 1521		
On-column Amount (ng/ul)	: 0.1450		
Integration start scan	: 746	Integration stop scan:	760
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

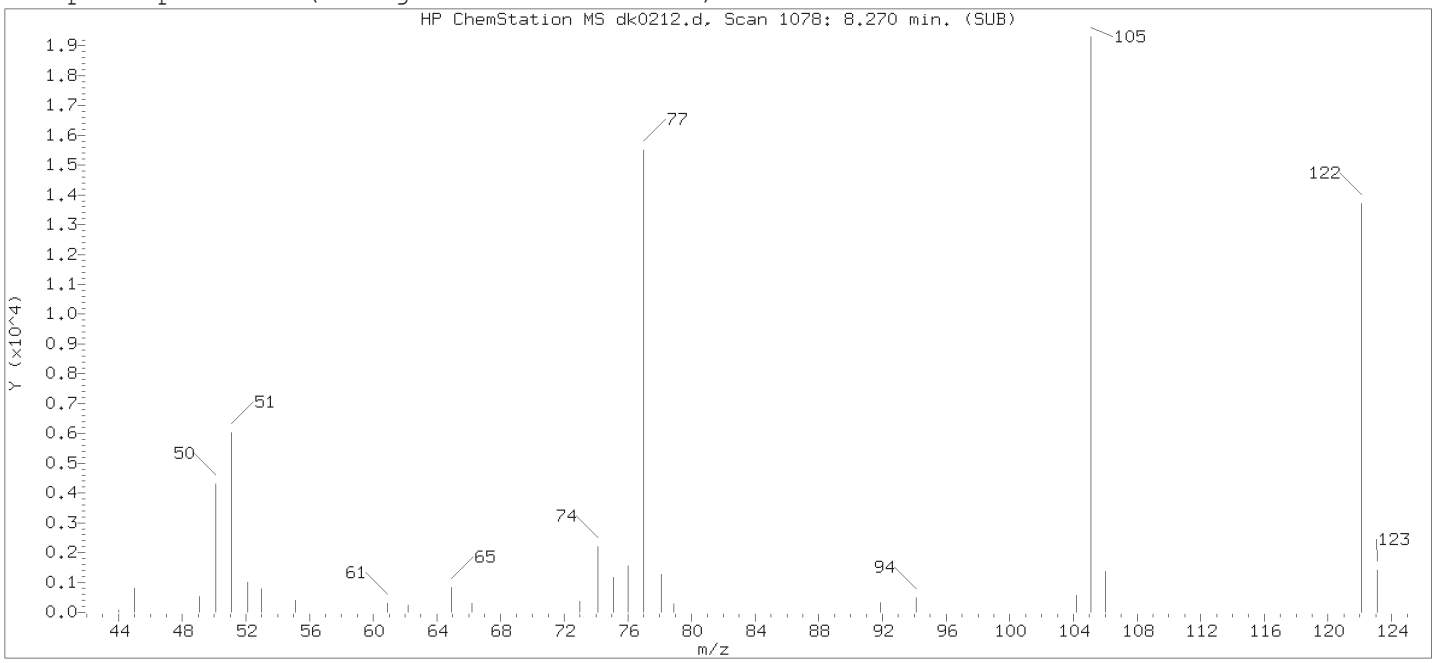
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1078		
Retention Time (minutes)	: 8.270		
Quant Ion	: 105.00		
Area (flag)	: 32341M		
On-Column Amount (ng/ul)	: 0.4428		
Integration start scan	: 1072	Integration stop scan:	1146
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

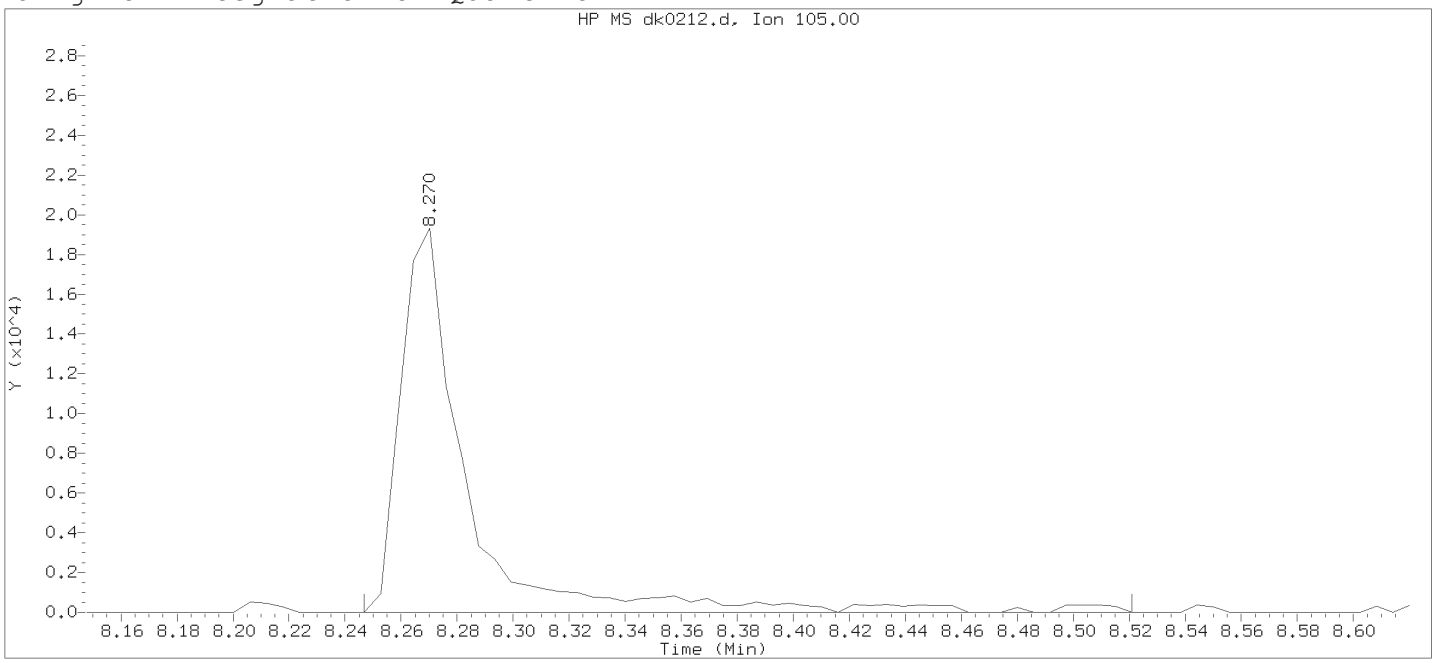
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

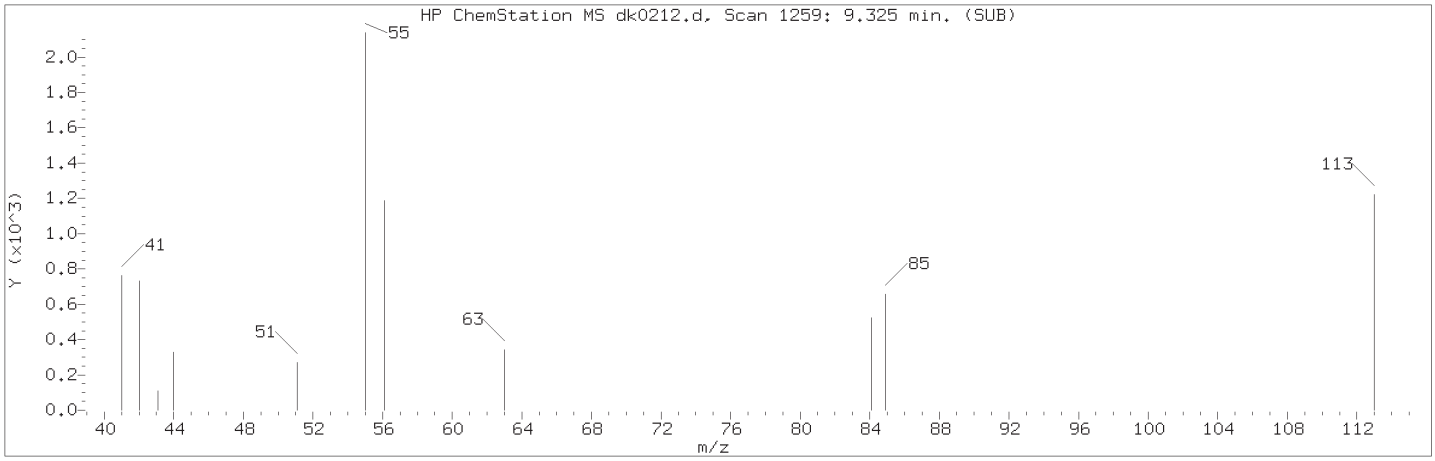
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

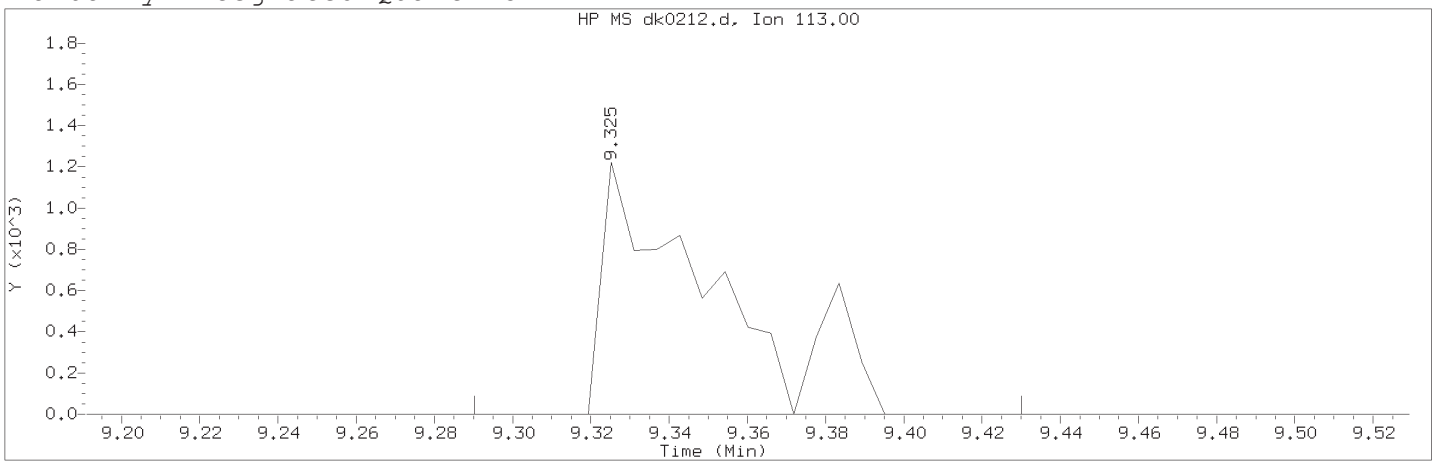
Compound Number	:	56
Compound Name	:	Benzoic acid
Scan Number	:	1078
Retention Time (minutes)	:	8.270
Quant Ion	:	105.00
Area	:	31801
On-column Amount (ng/ul)	:	0.4596
Integration start scan	:	1073 Integration stop scan: 1120
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: 2405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

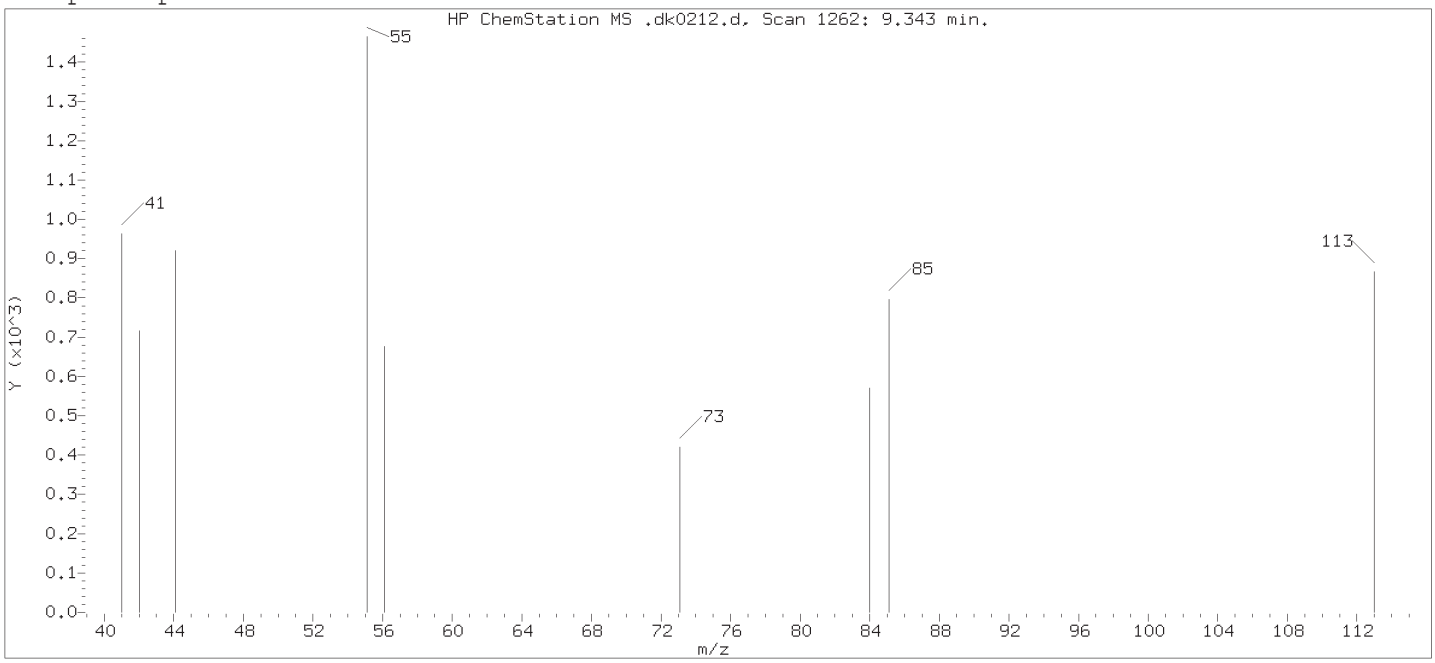
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1259		
Retention Time (minutes)	: 9.325		
Quant Ion	: 113.00		
Area (flag)	: 2451M		
On-Column Amount (ng/ul)	: 0.0794		
Integration start scan	: 1252	Integration stop scan:	1276
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

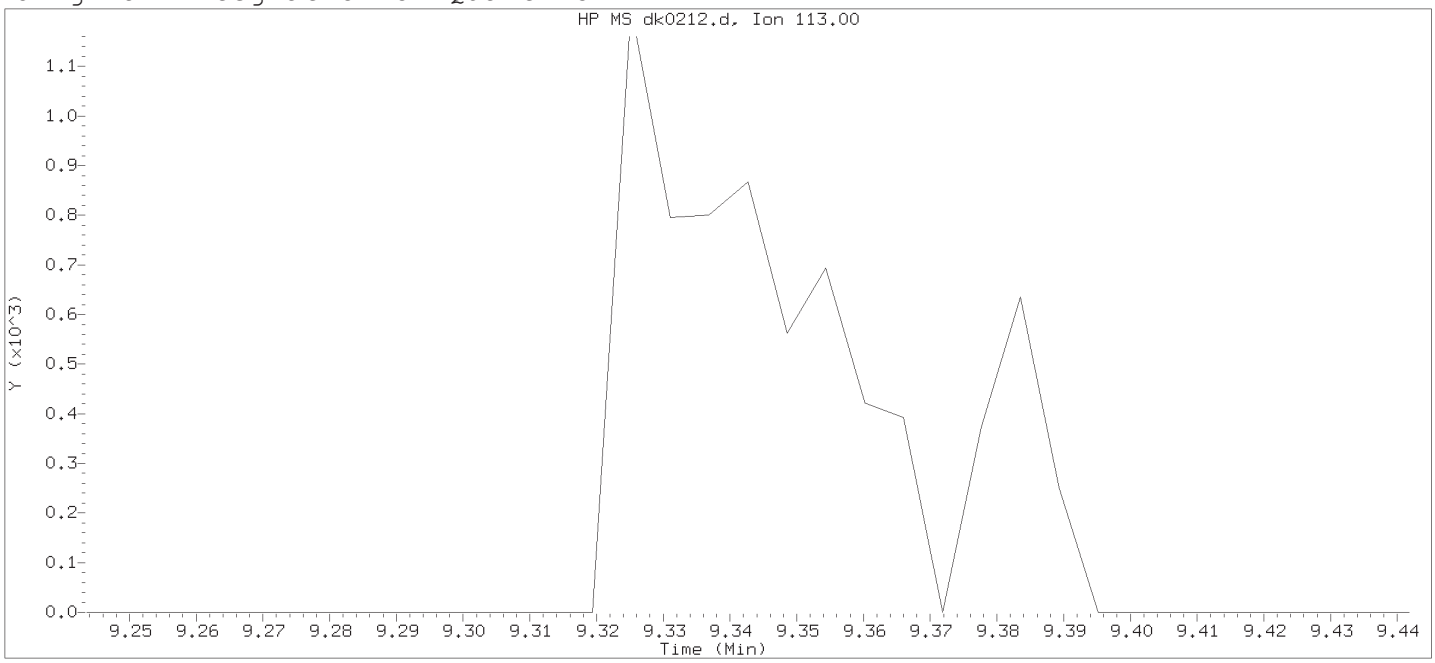
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

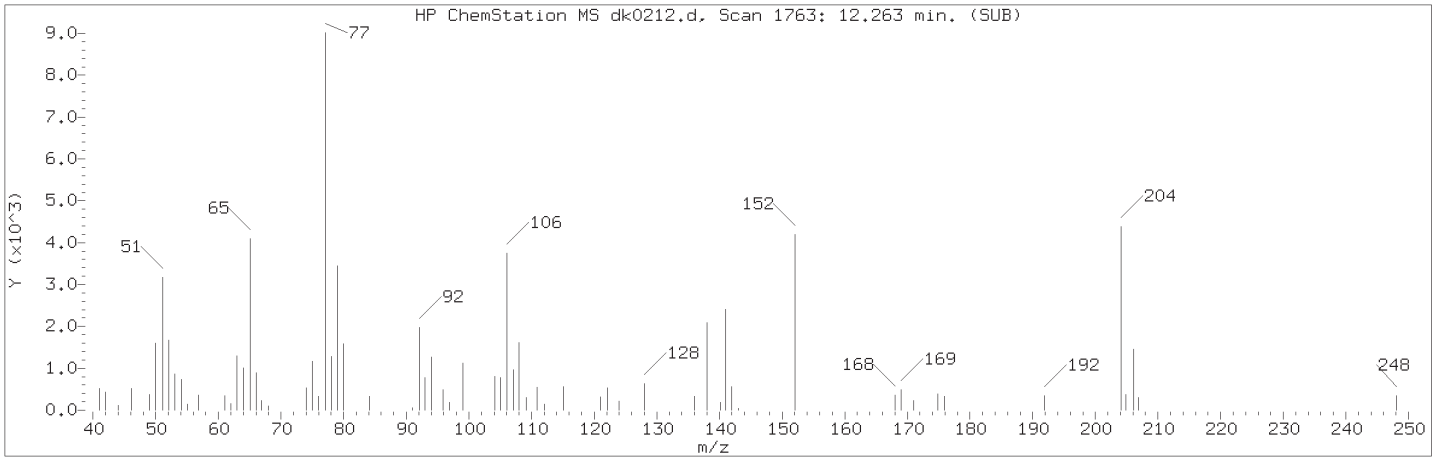
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

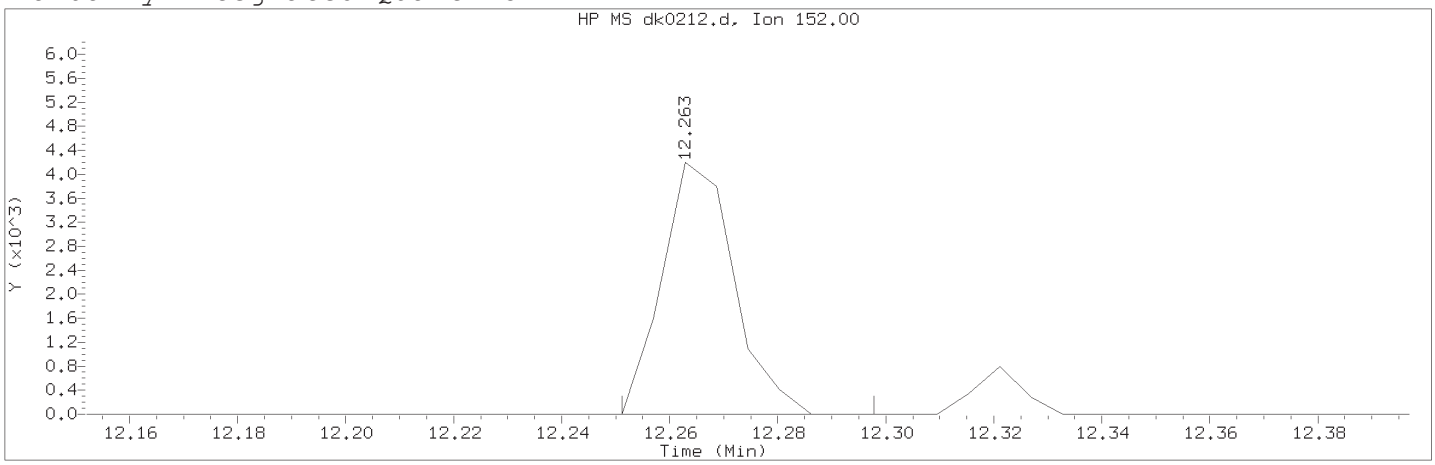
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.343
Quant Ion : 113.00

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: 2715

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

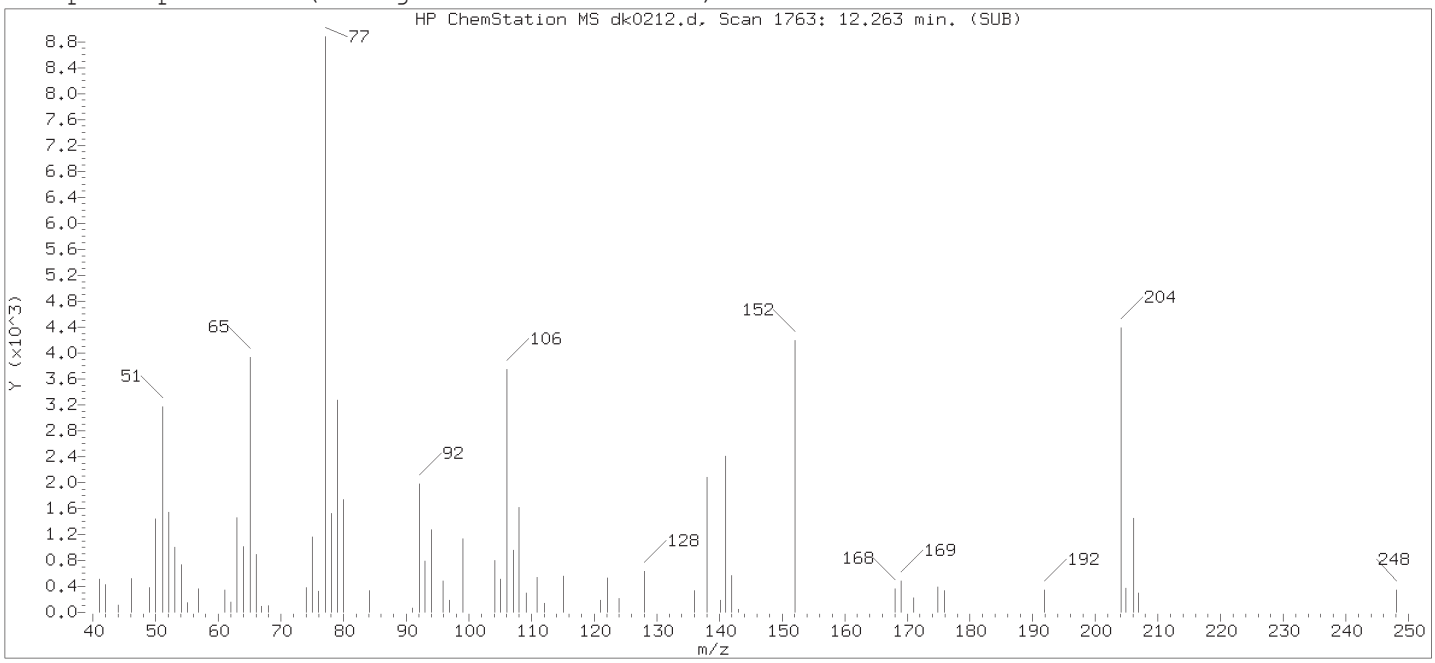
Compound Number	: 128		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1763		
Retention Time (minutes)	: 12.263		
Quant Ion	: 152.00		
Area (flag)	: 3878M		
On-Column Amount (ng/ul)	: 0.0718		
Integration start scan	: 1760	Integration stop scan:	1768
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

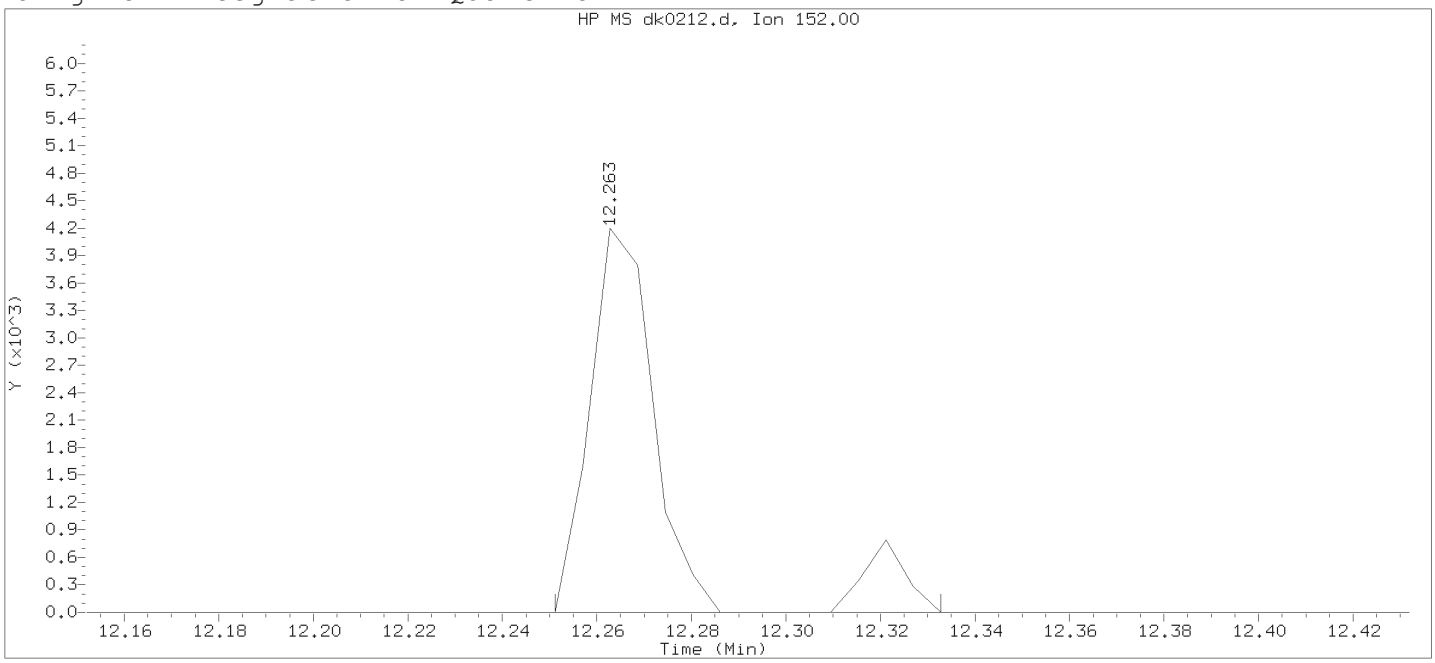
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

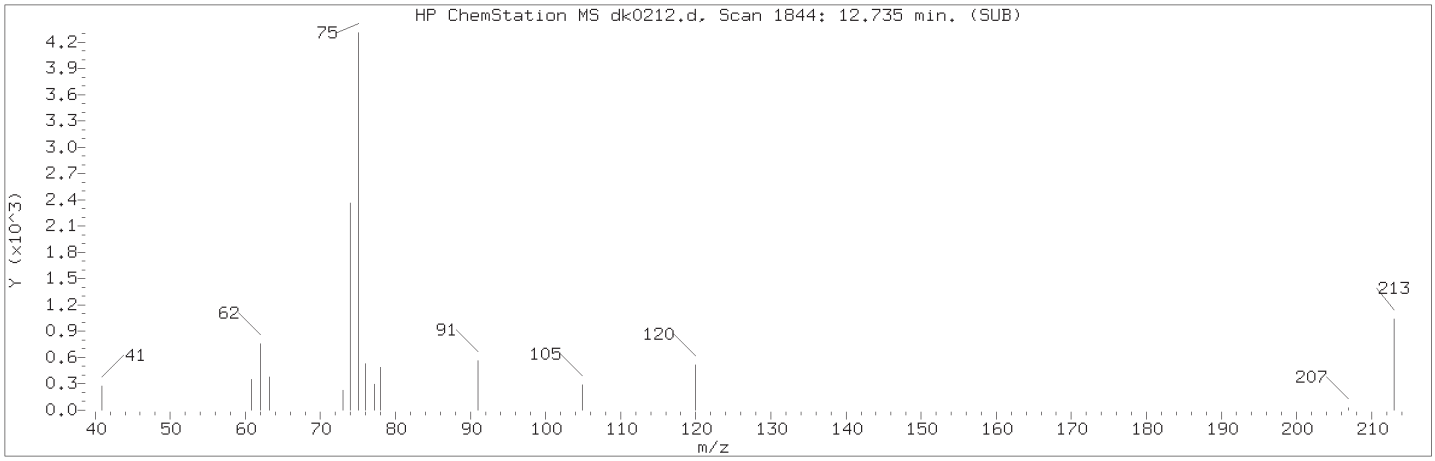
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

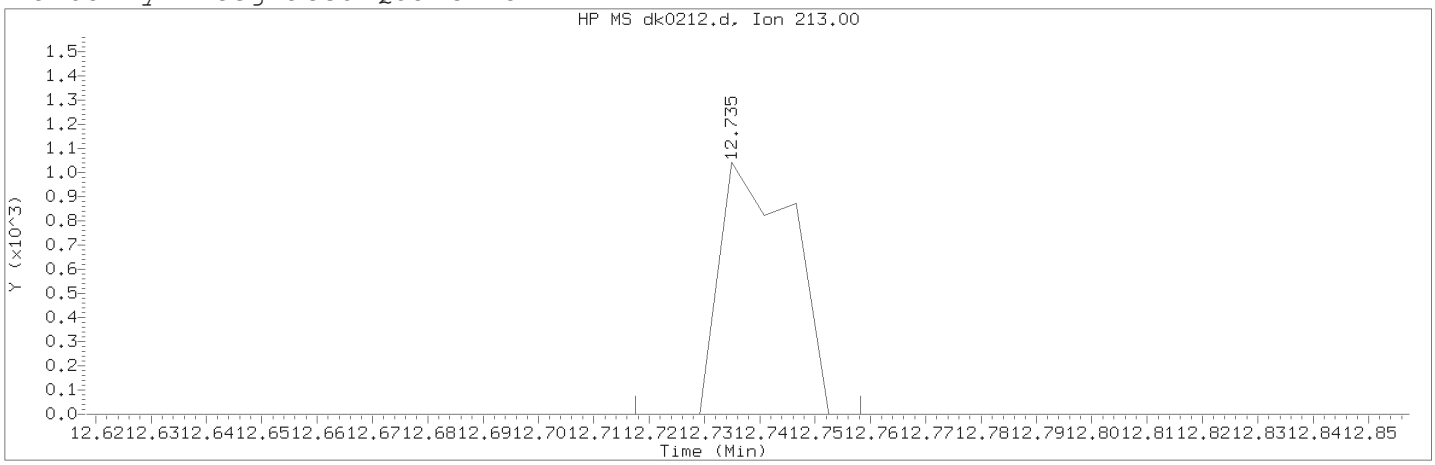
Compound Number	: 128		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1763		
Retention Time (minutes)	: 12.263		
Quant Ion	: 152.00		
Area	: 4375		
On-column Amount (ng/ul)	: 0.0860		
Integration start scan	: 1760	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: 2735

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

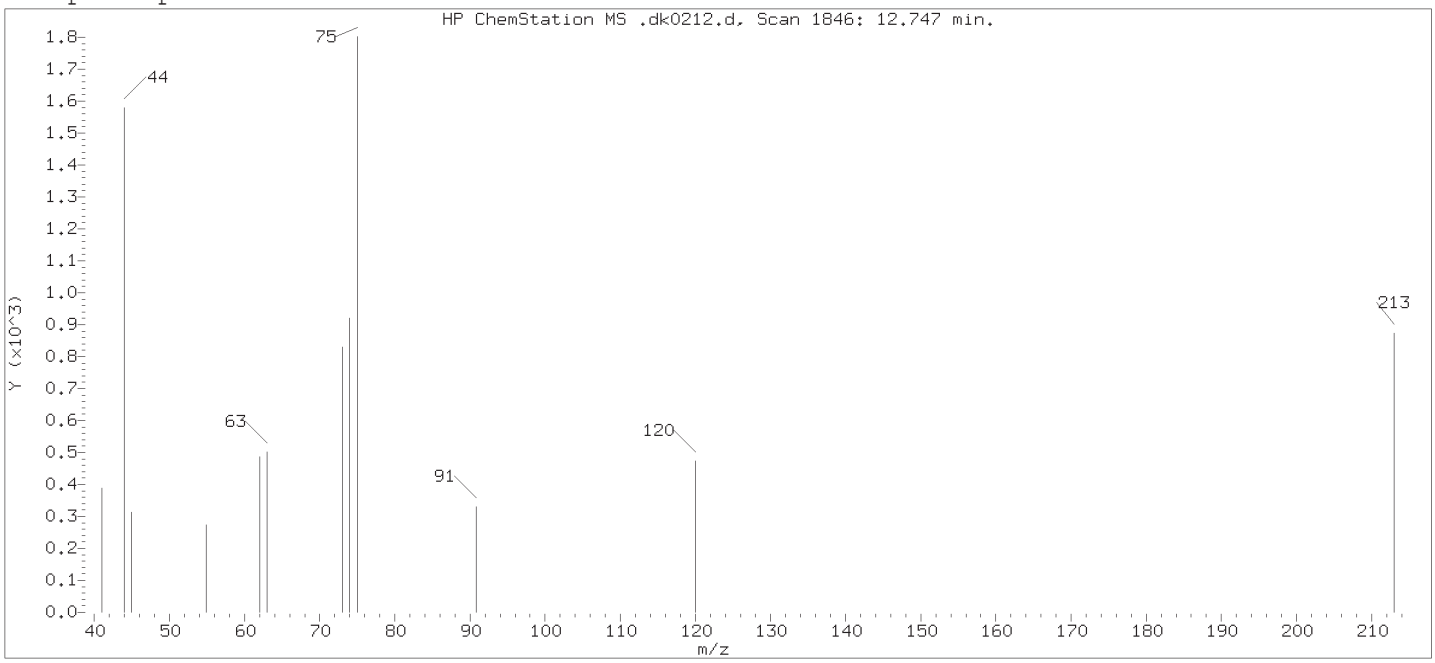
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1844
Retention Time (minutes) : 12.735
Quant Ion : 213.00
Area (flag) : 958M
On-Column Amount (ng/ul) : 0.0519
Integration start scan : 1840 Integration stop scan: 1847
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

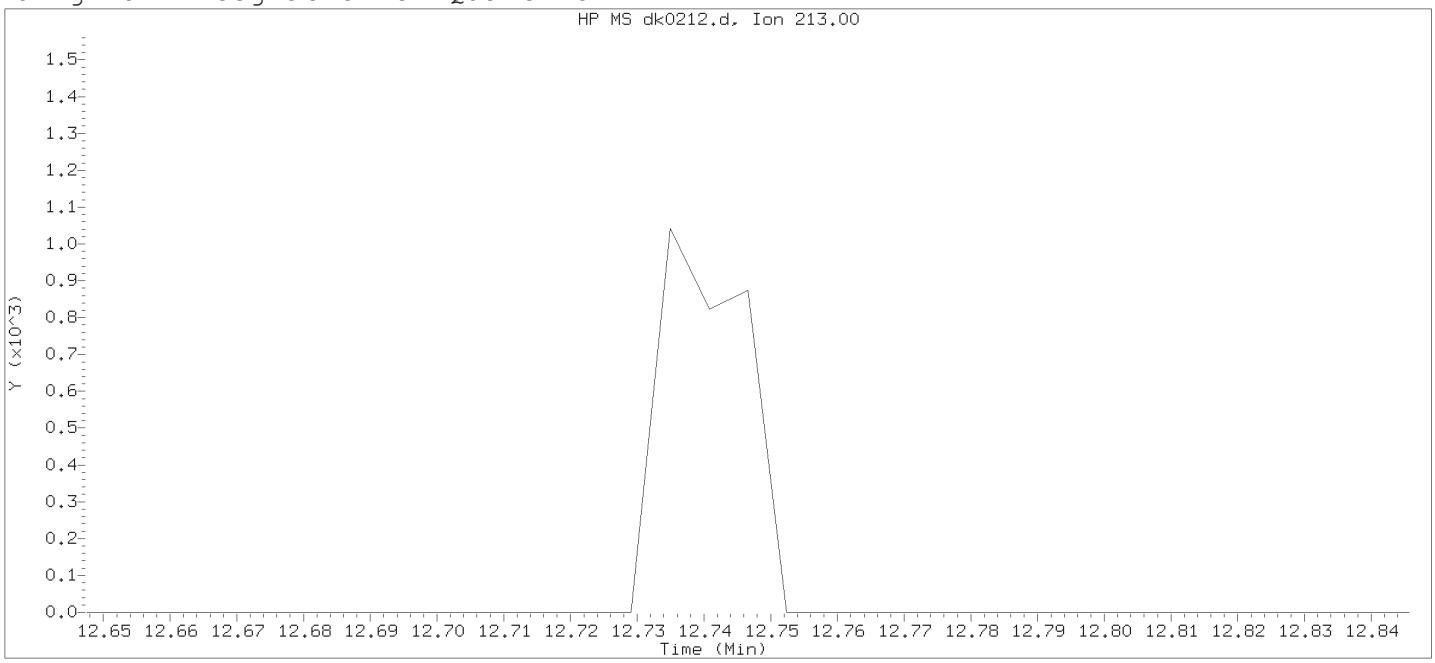
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

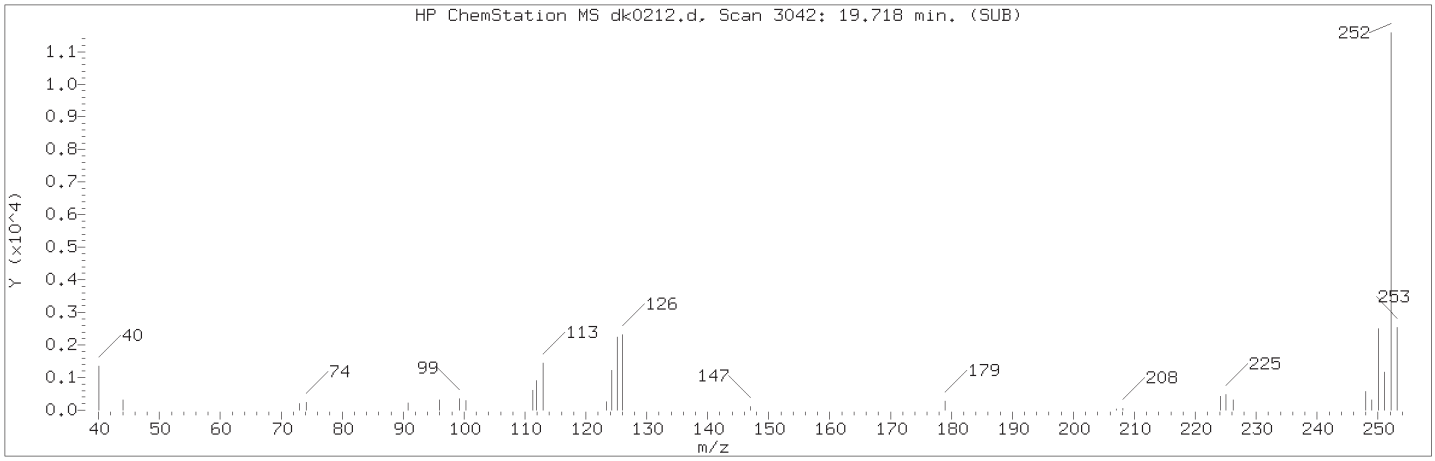
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

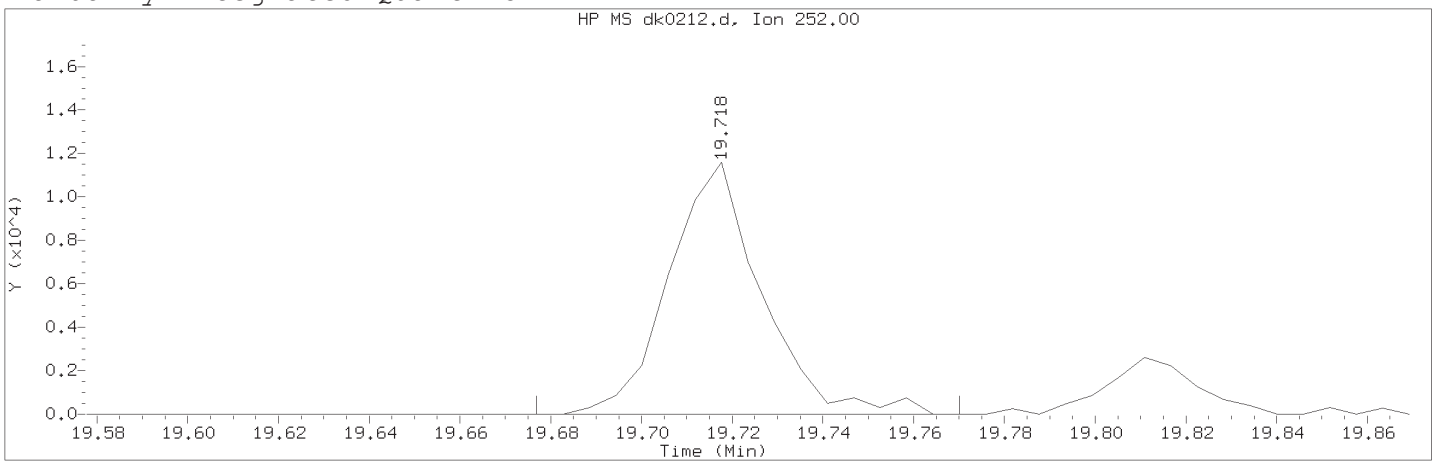
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.747
Quant Ion : 213.00

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: ashley.transue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

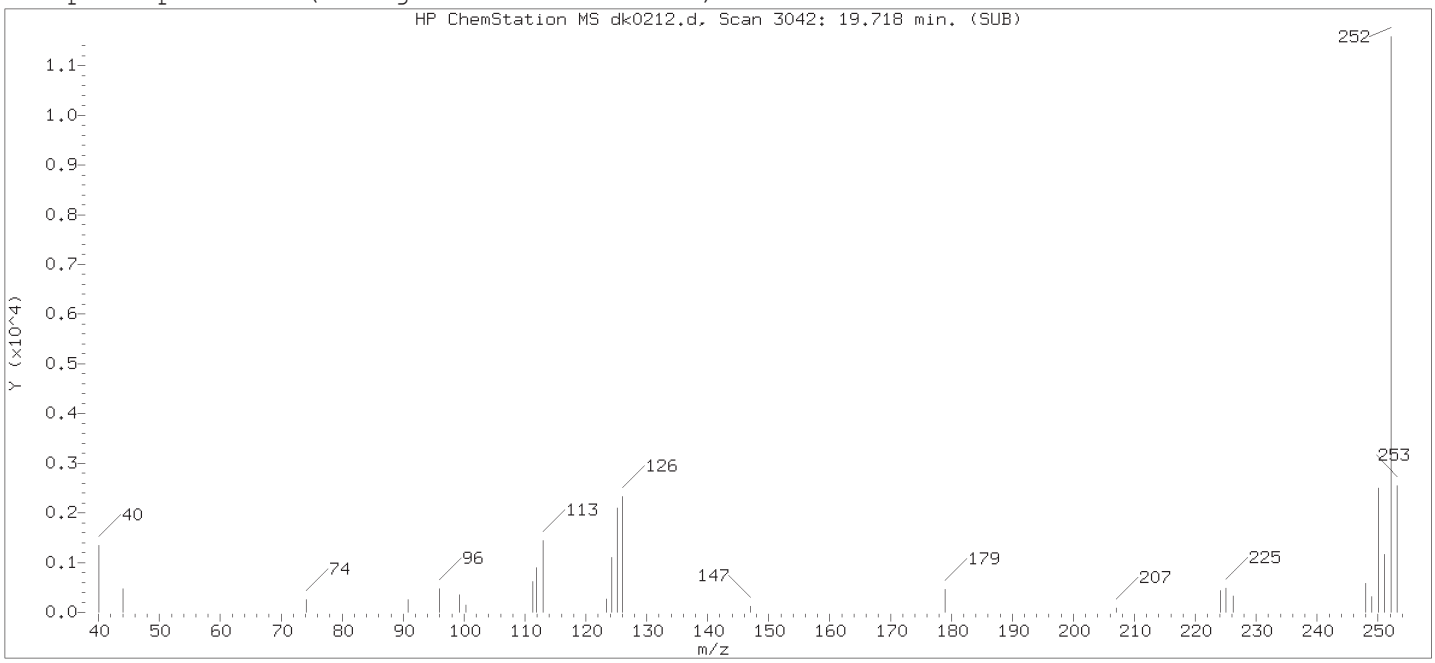
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3042		
Retention Time (minutes)	: 19.718		
Quant Ion	: 252.00		
Area (flag)	: 16380M		
On-Column Amount (ng/ul)	: 0.0981		
Integration start scan	: 3034	Integration stop scan:	3050
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

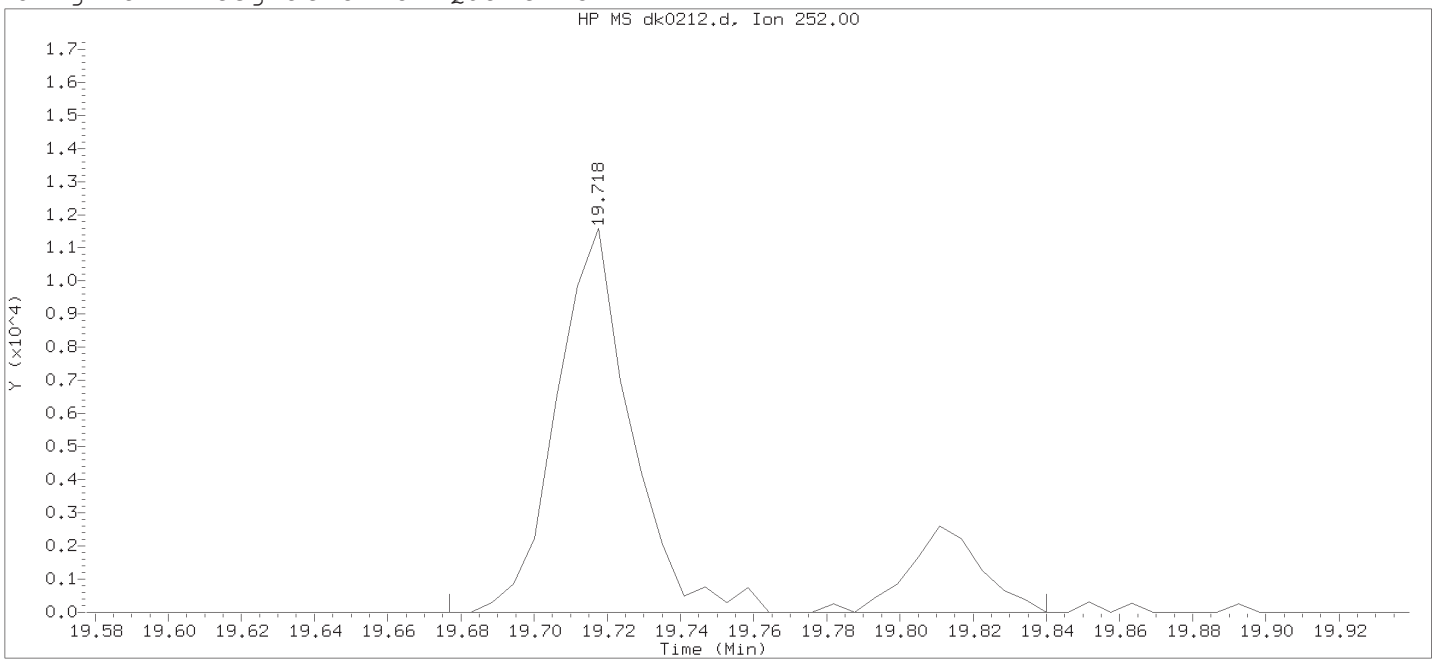
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

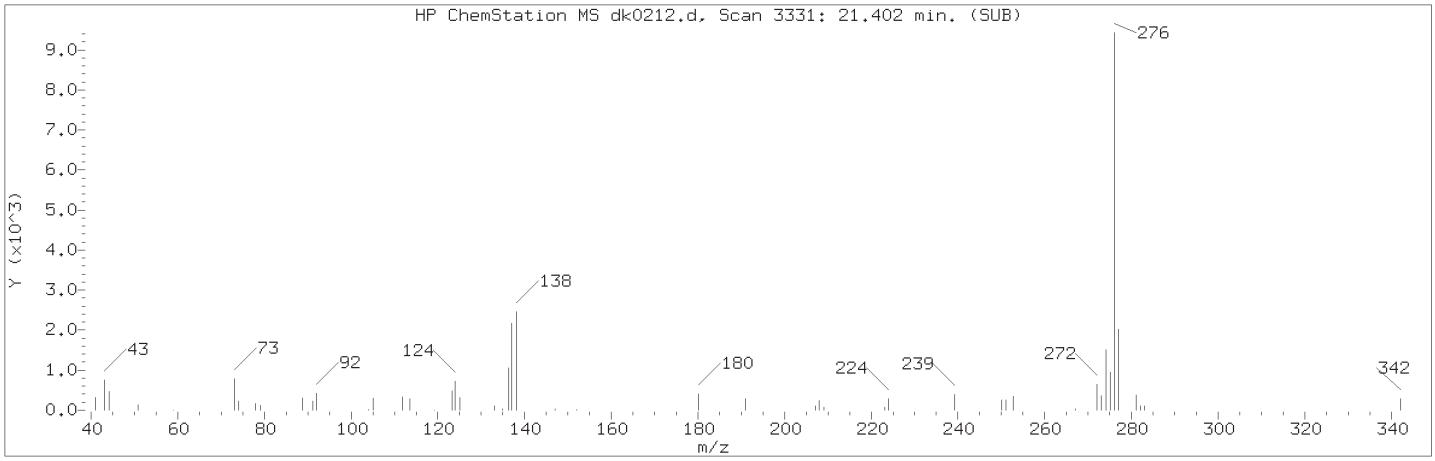
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

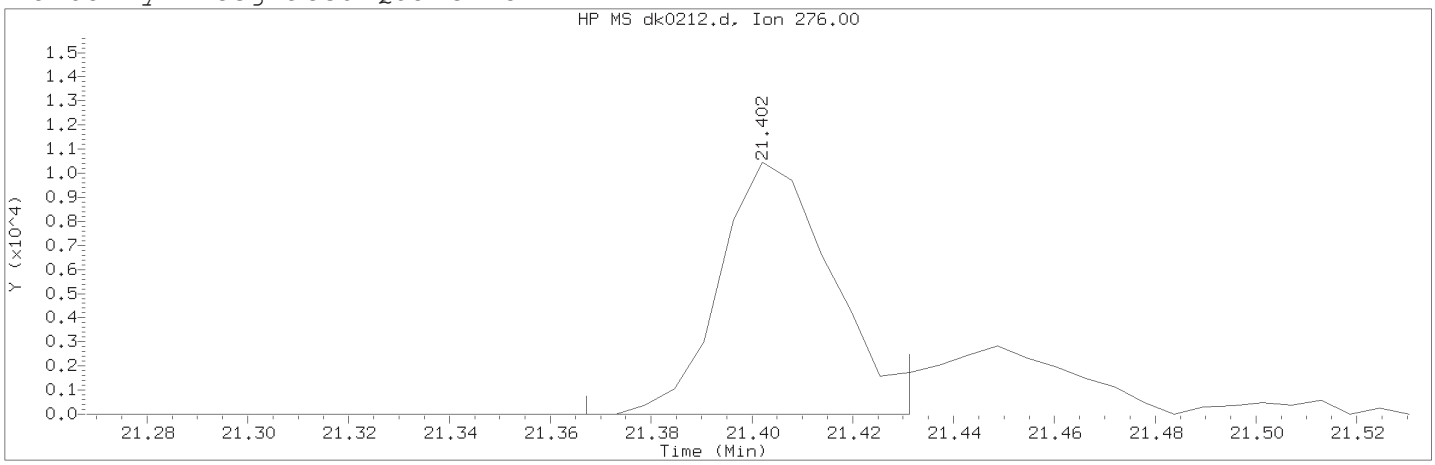
Compound Number	:	211
Compound Name	:	Benzo(a)pyrene
Scan Number	:	3042
Retention Time (minutes)	:	19.718
Quant Ion	:	252.00
Area	:	20008
On-column Amount (ng/ul)	:	0.1043
Integration start scan	:	3034 Integration stop scan: 3062
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

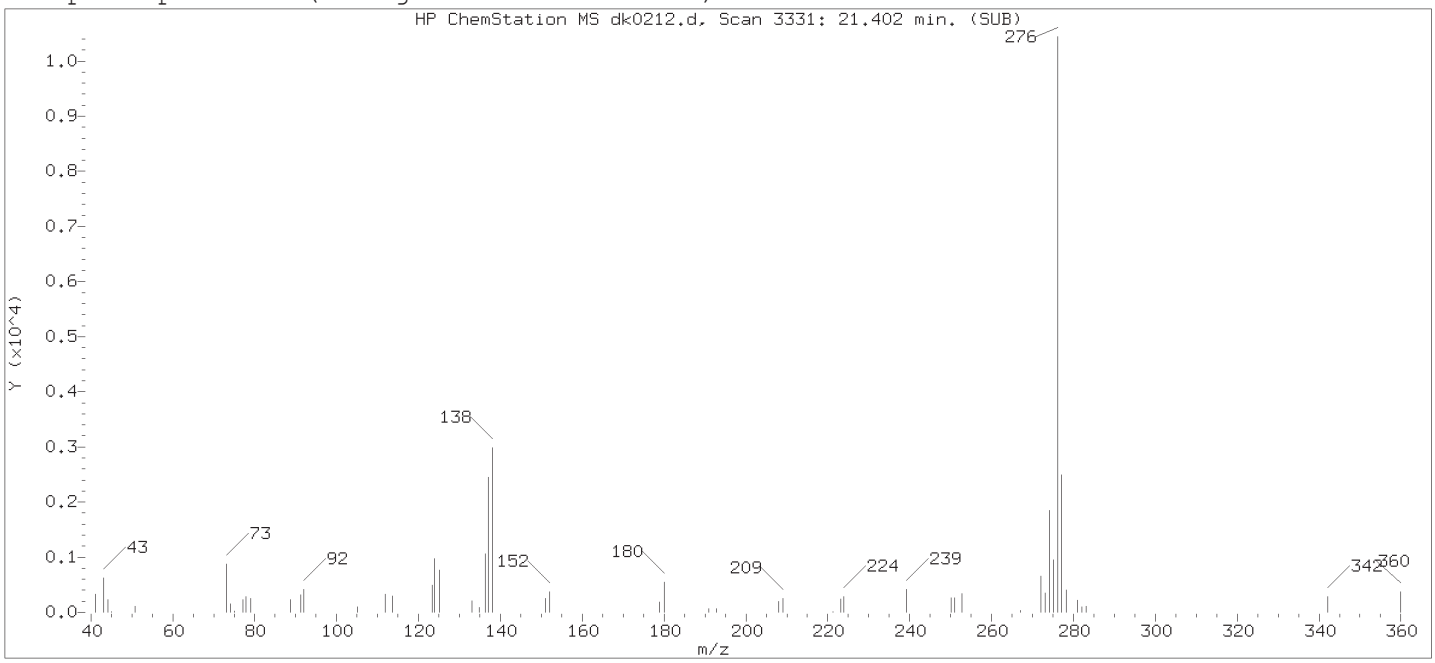
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3331		
Retention Time (minutes)	: 21.402		
Quant Ion	: 276.00		
Area (flag)	: 16389M		
On-Column Amount (ng/ul)	: 0.1048		
Integration start scan	: 3324	Integration stop scan:	3335
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

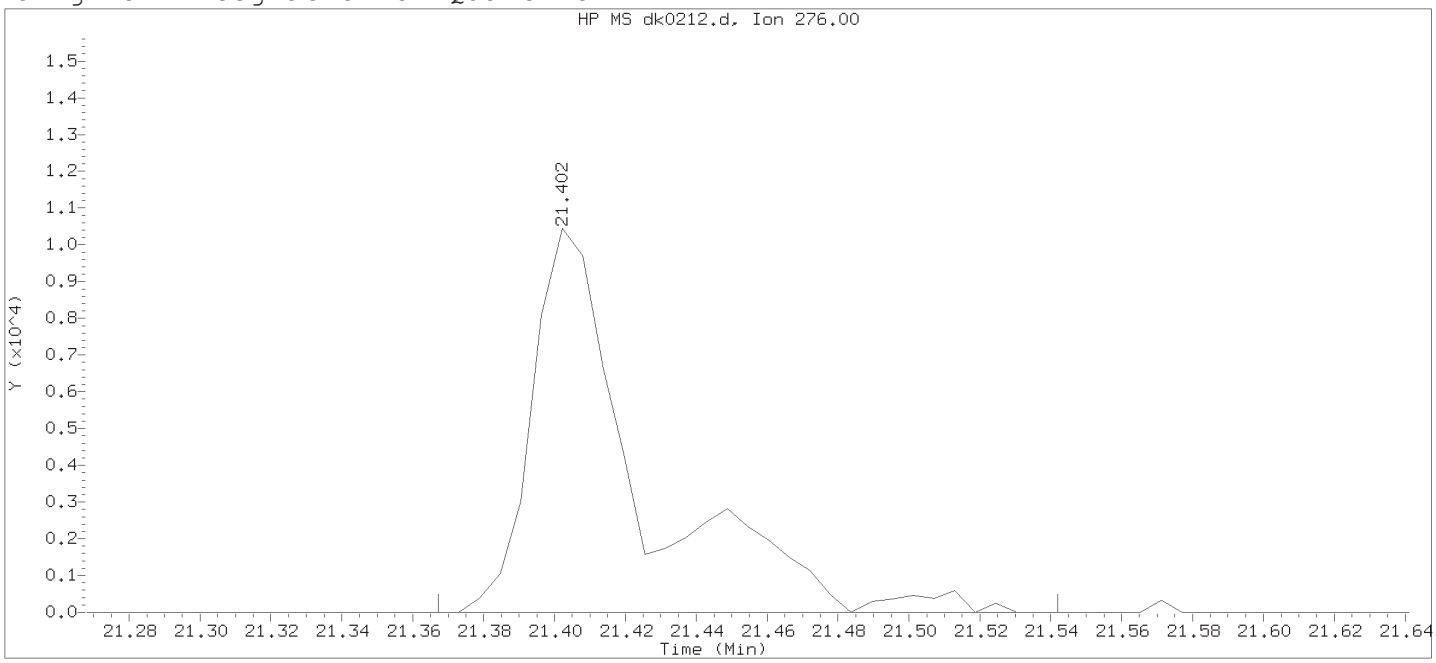
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



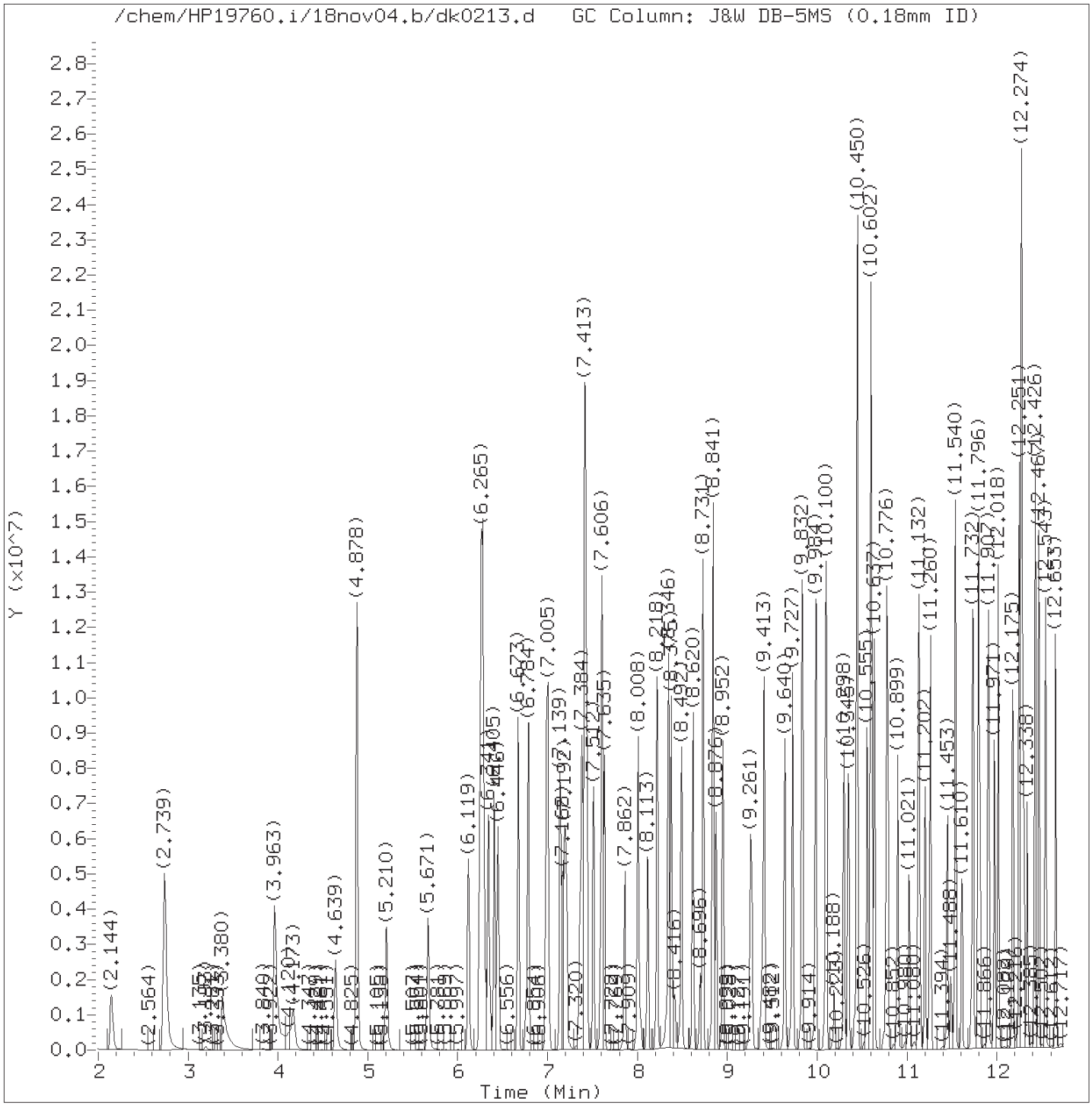
Data File: /chem/HP19760.i/18nov04.b/dk0212.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 12:44 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:12
Date, time and analyst ID of latest file update: 04-Nov-2018 13:12 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3331
Retention Time (minutes) : 21.402
Quant Ion : 276.00
Area : 22352
On-column Amount (ng/ul) : 0.1822
Integration start scan : 3324 Integration stop scan: 3354
Y at integration start : 0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: 1214 at 12:05



Total Ion Chromatogram (TIC)

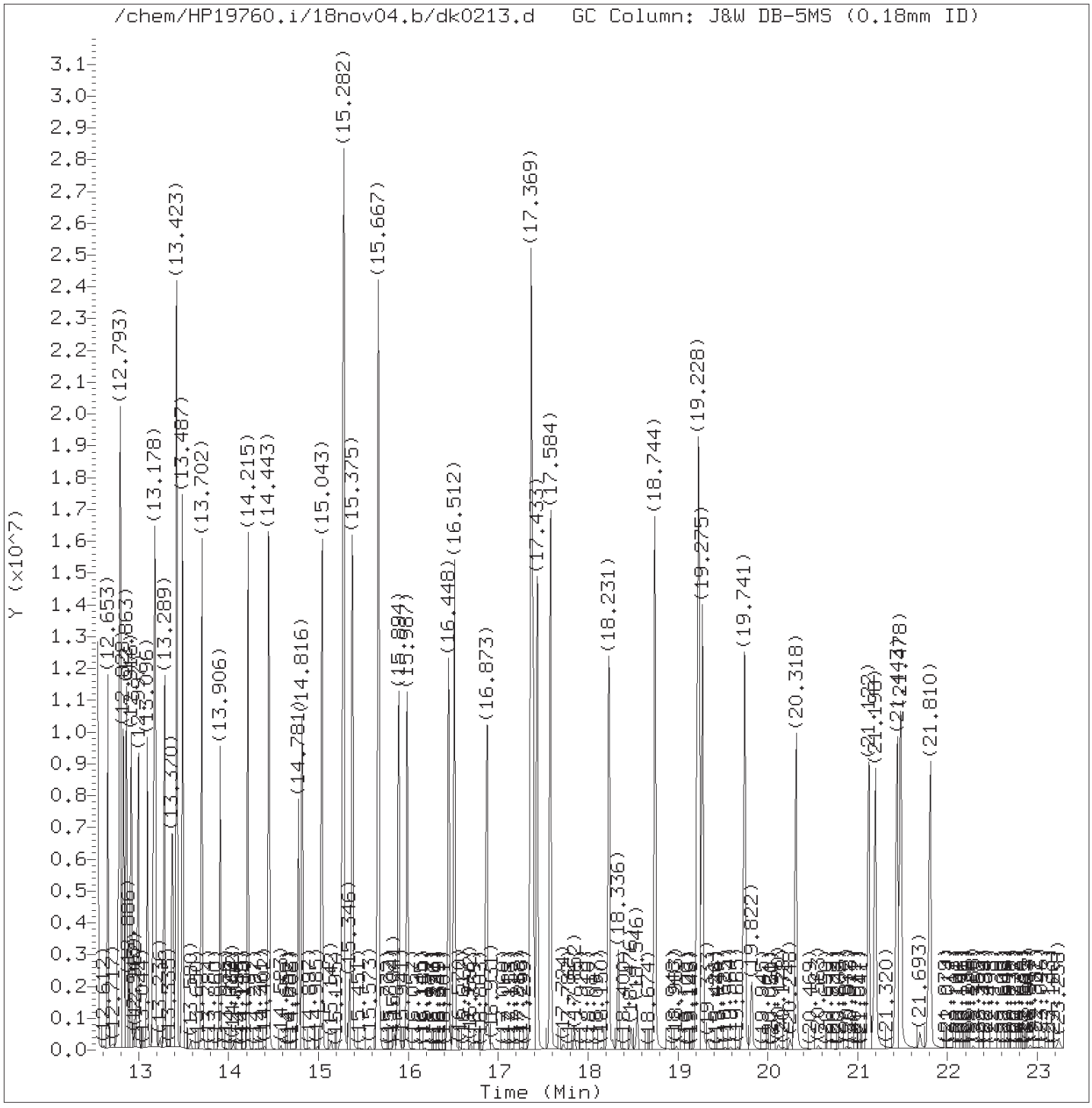
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.144	88	1500246	29.626
4) N-Nitrosodimethylamine	(1)	2.727	74	2322106	30.081
5) Pyridine	(1)	2.745	79	3872563	29.835
7) 2-Picoline	(1)	3.963	93	3838802	29.691
8) N-Nitrosomethylethylamine	(1)	4.173	88	1682821	29.933
9) Methyl methanesulfonate	(1)	4.645	80	1827981	29.420
11)$2-Fluorophenol	(1)	4.878	112	5917767	59.926
13) N-Nitrosodiethylamine	(1)	5.210	102	1576865	30.056
42) Total Cresols	(1)			6028125	59.049
15) Ethyl methanesulfonate	(1)	5.671	109	1491215	29.742
16) Benzaldehyde	(1)	6.119	77	1879456	25.180
17)$Phenol-d6	(1)	6.259	99	8157402	59.622
18) Phenol	(1)	6.277	94	4630664	29.636
19) Aniline	(1)	6.288	93	5403216	29.640
20) a-methylstyrene	(1)	6.364	118	280641	29.606
22) bis(2-Chloroethyl)ether	(1)	6.405	93	3408172	29.489
23) 2-Chlorophenol	(1)	6.452	128	2769358	29.726
24) 1,3-Dichlorobenzene	(1)	6.673	146	2854109	29.527
25)*1,4-Dichlorobenzene-d4	(1)	6.760	152	297977	5.000
26) 1,4-Dichlorobenzene	(1)	6.790	146	2877044	29.503
27) Benzyl alcohol	(1)	6.988	108	1936198	29.886
28) 1,2-Dichlorobenzene	(1)	7.005	146	2722582	29.540
30) Indene	(1)	7.139	115	3154164	29.808
31) 2-Methylphenol	(1)	7.168	108	2831934	29.545
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.209	45	3947775	29.602
34) bis(2-Chloroisopropyl)ether	(1)	7.209	45	3947775	29.602
35) N-Nitrosopyrrolidine	(1)	7.361	100	1581061A	29.656
97) Isosafrole	(3)			2056648	30.666
36) Acetophenone	(1)	7.384	105	3961763	29.914
37) 4-Methylphenol	(1)	7.413	108	3196191	29.506
38) N-Nitroso-di-n-propylamine	(1)	7.419	70	2385266A	29.073
39) N-Nitrosomorpholine	(1)	7.425	56	1788171	28.956
40) o-Toluidine	(1)	7.437	106	4799105	29.463
43) Hexachloroethane	(1)	7.512	117	1337706	29.351
44)$Nitrobenzene-d5	(2)	7.606	82	7253701	59.854
45) Nitrobenzene	(2)	7.635	77	3608903	29.742
48) N-Nitrosopiperidine	(2)	7.862	114	1438813	30.086
50) Isophorone	(2)	8.008	82	6377624	30.349
120) 2,4_2,6-Dinitrotoluenes	(3)			2546856	60.145
51) 2-Nitrophenol	(2)	8.119	139	1410272	30.805

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.218	107	3040481	30.219
57) O,O,O-Triethylphosphorothioate	(2)	8.346	198	1118952	30.280
55) bis(2-Chloroethoxy)methane	(2)	8.375	93	3728580	29.239
56) Benzoic acid	(2)	8.416	105	2154489M	32.035
60) 2,4-Dichlorophenol	(2)	8.492	162	2045423	30.101
62) 1,2,4-Trichlorobenzene	(2)	8.620	180	2146317	30.013
65)*Naphthalene-d8	(2)	8.696	136	1086871	5.000
66) Naphthalene	(2)	8.731	128	7769721	29.842
146) Diallate trans/cis	(4)			2929352	30.211
67) 4-Chloroaniline	(2)	8.841	127	3032561	29.928
68) 2,6-Dichlorophenol	(2)	8.847	162	1978238	30.149
69) Hexachloropropene	(2)	8.876	213	1377634	30.404
71) Hexachlorobutadiene	(2)	8.952	225	1143893	29.503
75) Quinoline	(2)	9.261	129	4461439	30.128
76) Caprolactam	(2)	9.407	113	856443A	31.126
77) N-Nitrosodi-n-butylamine	(2)	9.413	84	2693068	33.620
80) 4-Chloro-3-methylphenol	(2)	9.640	107	2520451	30.731
82) Safrole	(2)	9.727	162	1844161	30.234
83) 2-Methylnaphthalene	(2)	9.832	142	4860909	30.637
84) 1-Methylnaphthalene	(2)	9.984	142	4640169	31.525
85) Hexachlorocyclopentadiene	(3)	10.094	237	1177088	29.329
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.106	216	1958817	29.593
88) cis-Isosafrole	(3)	10.188	162	323462	5.221
90) 2,4,6-Trichlorophenol	(3)	10.298	196	1364433	30.293
92) 2,4,5-Trichlorophenol	(3)	10.351	196	1368414	29.942
93)$2-Fluorobiphenyl	(3)	10.450	172	9826209	58.764
99) Diphenyl ether	(3)	10.450	170	2223017	29.397
94) trans-Isosafrole	(3)	10.555	162	1733186	25.446
95) 1,1'-Biphenyl	(3)	10.596	154	5157032	28.959
96) 2-Chloronaphthalene	(3)	10.607	162	4555940	30.582
98) 1-Chloronaphthalene	(3)	10.637	162	3542306	27.866
100) 2-Nitroaniline	(3)	10.788	138	1508659	30.315
104) 1,4-Naphthoquinone	(3)	10.899	158	1663108	29.963
105) 1,4-Dinitrobenzene	(3)	11.027	168	780365	30.059
106) Dimethylphthalate	(3)	11.132	163	4450254	29.322
107) 1,3-Dinitrobenzene	(3)	11.144	168	862551	30.191
108) 2,6-Dinitrotoluene	(3)	11.202	165	1076591	29.543
109) Acenaphthylene	(3)	11.260	152	6292155	31.927
112) 3-Nitroaniline	(3)	11.453	138	1297441	30.509
113)*Acenaphthene-d10	(3)	11.488	164	494386	5.000

M = Compound was manually integrated.
A = User selected an alternate hit.
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Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.540	153	4325689	29.677
115) 2,4-Dinitrophenol	(3)	11.616	184	792461	32.911
116) 4-Nitrophenol	(3)	11.732	109	937690	30.333
117) Pentachlorobenzene	(3)	11.738	250	1538852	29.284
119) Dibenzofuran	(3)	11.796	168	5876039	29.366
118) 2,4-Dinitrotoluene	(3)	11.814	165	1470265	30.472
121) 1-Naphthylamine	(3)	11.907	143	4591173	30.043
122) 2,3,4,6-Tetrachlorophenol	(3)	11.971	232	1060010	30.452
123) 2-Naphthylamine	(3)	12.018	143	4581897	30.076
124) Diethylphthalate	(3)	12.175	149	4732433	30.640
126) Fluorene	(3)	12.251	166	4712305	30.945
125) Thionazin	(3)	12.269	107	1014830	30.403
127) 4-Chlorophenyl-phenylether	(3)	12.280	204	2156099	29.187
128) 5-Nitro-o-toluidine	(3)	12.286	152	1486201	30.487
129) 4-Nitroaniline	(3)	12.298	138	1416825	30.536
130) 4,6-Dinitro-2-methylphenol	(4)	12.338	198	940895	32.109
131) N-Nitrosodiphenylamine	(4)	12.426	169	3951403	29.707
132) NDPA as diphenylamine	(4)	12.426	169	3951403	29.707
134) 1,2-Diphenylhydrazine	(4)	12.467	77	6408891	29.435
135)$2,4,6-Tribromophenol	(3)	12.543	330	1084364	62.395
137) Tetraethyldithiopyrophosphate	(4)	12.653	97	955095	29.994
139) 1,3,5-Trinitrobenzene	(4)	12.770	213	632371	32.705
140) Diallate (peak 1)	(4)	12.787	86	2521975	25.035
141) Phorate	(4)	12.799	75	3843218	30.055
142) Phenacetin	(4)	12.828	108	3037751	31.049
143) 4-Bromophenyl-phenylether	(4)	12.863	248	1155078	30.004
144) Diallate (peak 2)	(4)	12.886	86	407377	5.187
145) Hexachlorobenzene	(4)	12.916	284	1165429	29.760
147) Dimethoate	(4)	12.997	87	2535035	30.412
148) Atrazine	(4)	13.096	200	1036556	27.808
149) Pentachlorophenol	(4)	13.166	266	878110	31.512
150) 4-Aminobiphenyl	(4)	13.178	169	3404904	29.561
151) Pentachloronitrobenzene	(4)	13.184	237	564203	30.575
152) Pronamide	(4)	13.289	173	2146488	30.719
153)*Phenanthrene-d10	(4)	13.388	188	930619	5.000
154) Dinoseb	(4)	13.417	211	1388594	32.620
155) Phenanthrene	(4)	13.423	178	6772442	29.783
157) Anthracene	(4)	13.487	178	6988883	31.851
163) Carbazole	(4)	13.702	167	6888463	30.628
164) Methyl parathion	(4)	13.906	109	2003329	31.370

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

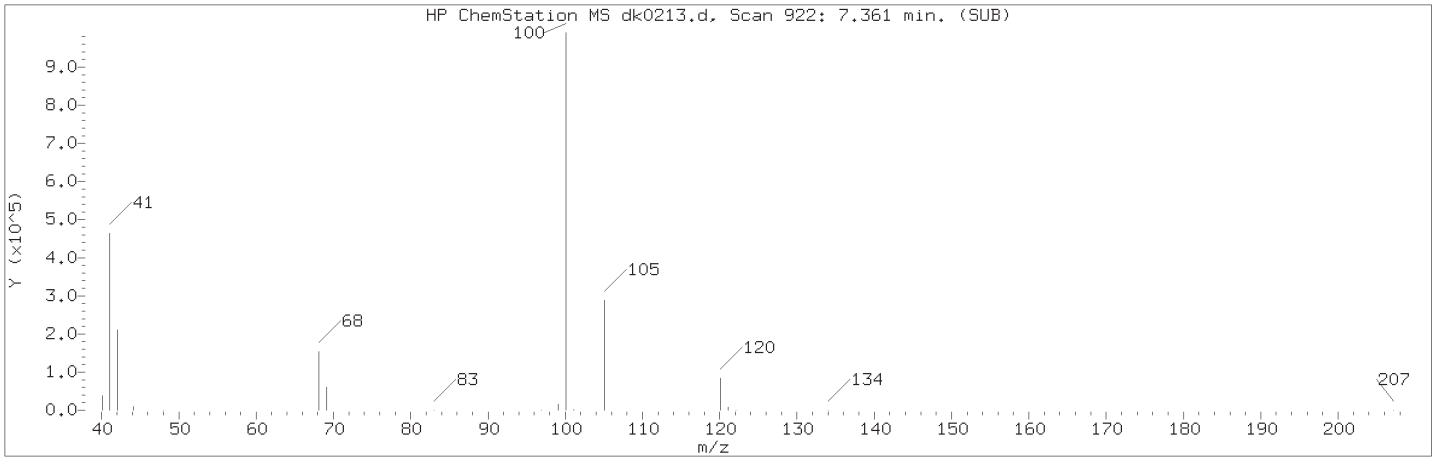
Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.215	149	8455338	30.877
167) Parathion	(4)	14.443	109	1329952	31.868
168) 4-Nitroquinoline-1-oxide	(4)	14.448	190	1011726	35.490
169) Octachlorostyrene	(4)	14.781	308	479336	30.796
171) Isodrin	(4)	14.816	193	821070	30.619
222) Total PAHs	(6)			119657689	540.807
173) Fluoranthene	(4)	15.043	202	8053053	34.338
174) Benzidine	(5)	15.288	184	15606625	82.749
175)*Pyrene-d10	(5)	15.346	212	973269	5.000
177) Pyrene	(5)	15.375	202	8282158	29.291
179)$Terphenyl-d14	(5)	15.667	244	9758259	60.015
182) p-Dimethylaminoazobenzene	(5)	15.894	225	1508636	31.849
185) Chlorobenzilate	(5)	15.987	139	2776405	30.815
187) 3,3'-Dimethylbenzidine	(5)	16.448	212	5395960	30.586
188) Butylbenzylphthalate	(5)	16.512	149	4487937	30.792
191) 2-Acetylaminofluorene	(5)	16.879	181	3747705	33.063
193) 3,3'-Dichlorobenzidine	(5)	17.369	252	3053328	30.889
195) Benzo(a)anthracene	(5)	17.369	228	7760678	34.426
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.392	231	1663934	30.820
196) Chrysene	(5)	17.439	228	7541705	31.466
199) bis(2-Ethylhexyl)phthalate	(5)	17.584	149	6410805	30.899
203) 6-Methylchrysene	(5)	18.231	242	5376837	31.056
205) Di-n-octylphthalate	(6)	18.744	149	11230424	31.645
206) Benzo(b)fluoranthene	(6)	19.228	252	8138974	34.963
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.234	256	3681355	30.471
208) Benzo(k)fluoranthene	(6)	19.275	252	7460406	31.177
211) Benzo(a)pyrene	(6)	19.747	252	7425842	35.336
213)*Perylene-d12	(6)	19.822	264	972401	5.000
215) 3-Methylcholanthrene	(6)	20.318	268	3578625	31.303
217) Dibenz(a,h)acridine	(6)	21.128	279	5426236	30.243
218) Dibenz(a,j)acridine	(6)	21.198	279	5617143	29.581
219) Indeno(1,2,3-cd)pyrene	(6)	21.443	276	6098266M	32.569
220) Dibenz(a,h)anthracene	(6)	21.484	278	6548945	31.508
221) Benzo(g,h,i)perylene	(6)	21.810	276	5985389	28.545

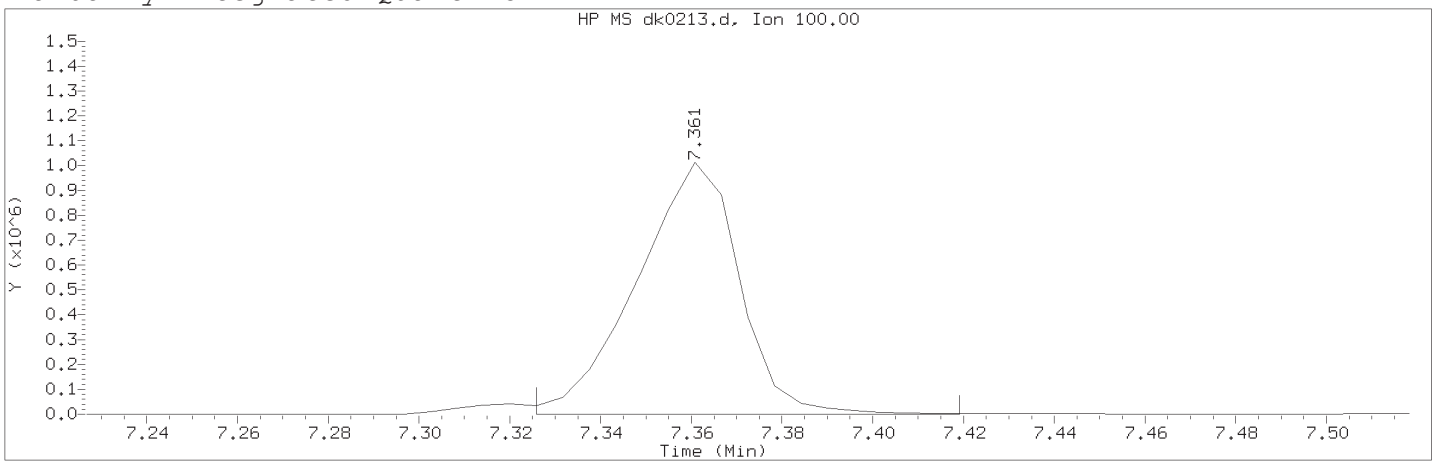
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

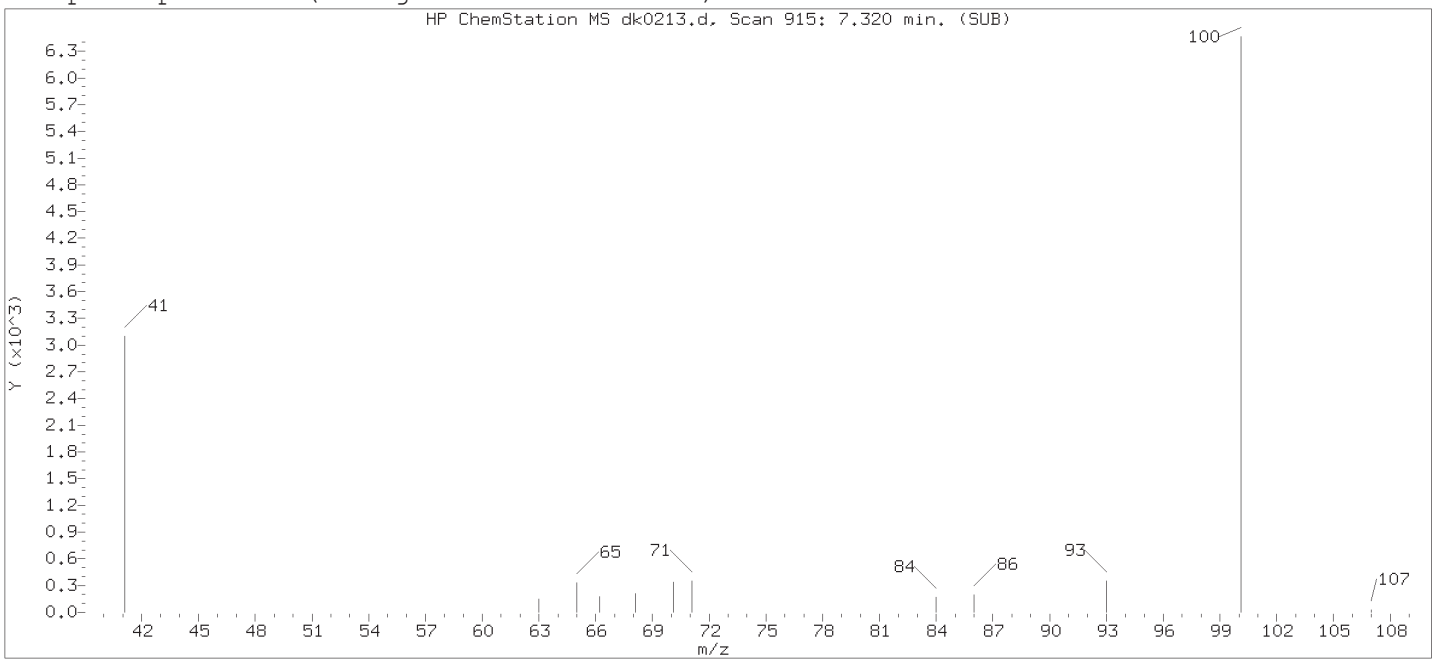
Compound Number	: 35		
Compound Name	: N-Nitrosopyrrolidine		
Scan Number	: 922		
Retention Time (minutes)	: 7.361		
Quant Ion	: 100.00		
Area (flag)	: 1581061A		
On-Column Amount (ng/ul)	: 29.6563		
Integration start scan	: 915	Integration stop scan:	931
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

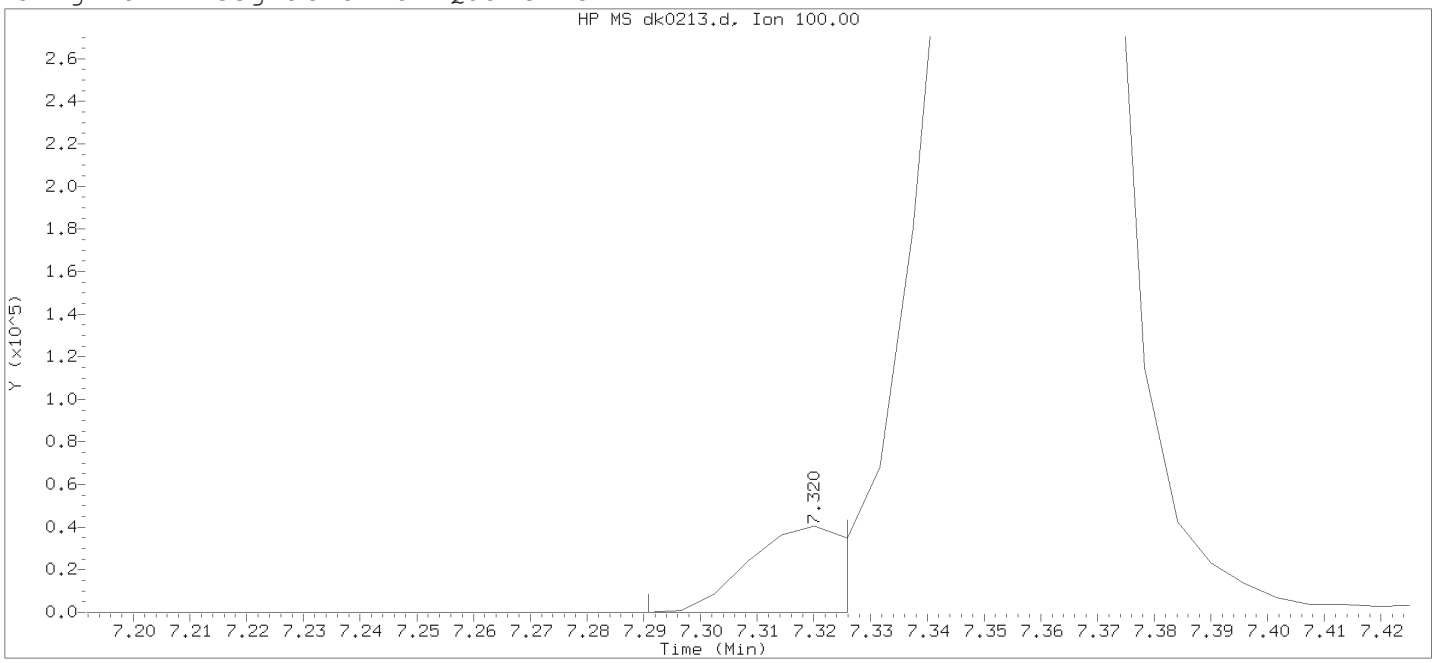
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:40
Date, time and analyst ID of latest file update: 04-Nov-2018 13:40 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number	:	35
Compound Name	:	N-Nitrosopyrrolidine
Scan Number	:	915
Retention Time (minutes)	:	7.320
Quant Ion	:	100.00
Area	:	44851
On-column Amount (ng/ul)	:	1.1128
Integration start scan	:	909 Integration stop scan: 915
Y at integration start	:	0 Y at integration end: 0

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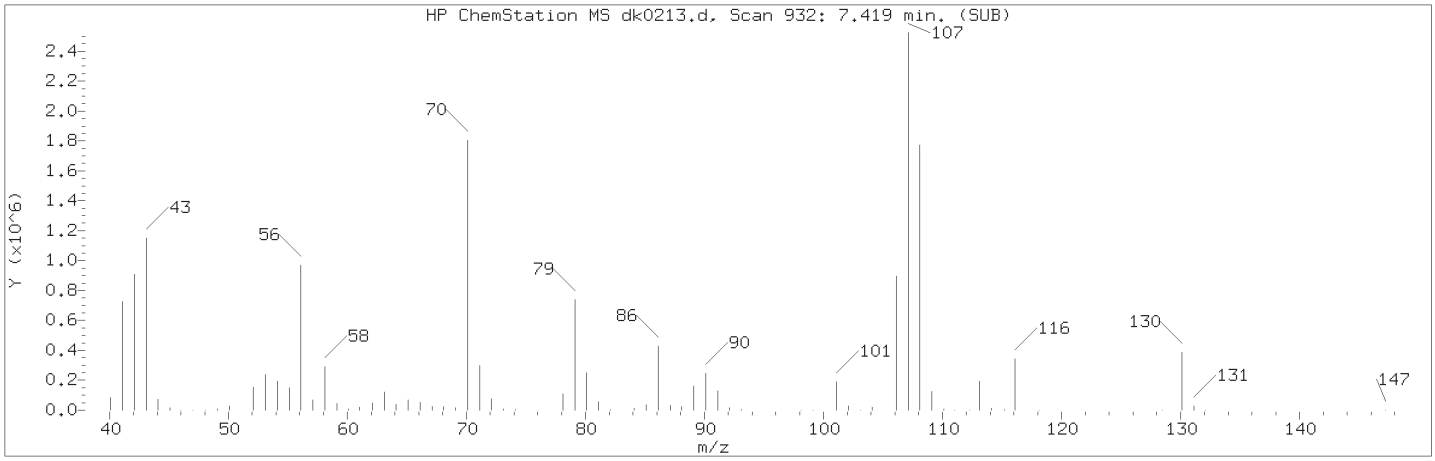
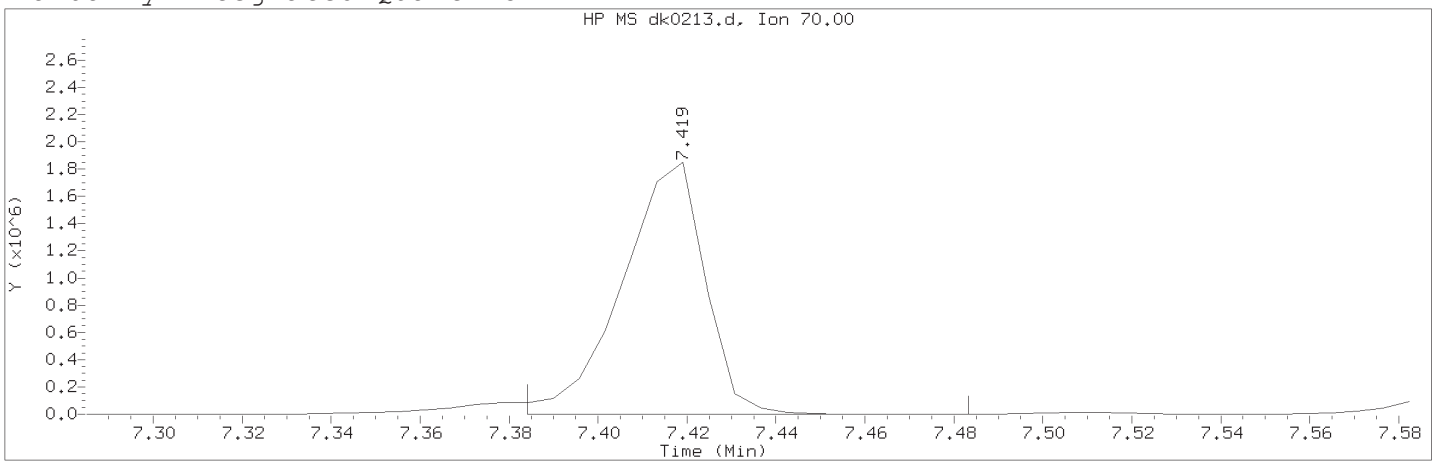
Target 3.5 esignature user ID: 1214 Page 787 of 4047

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

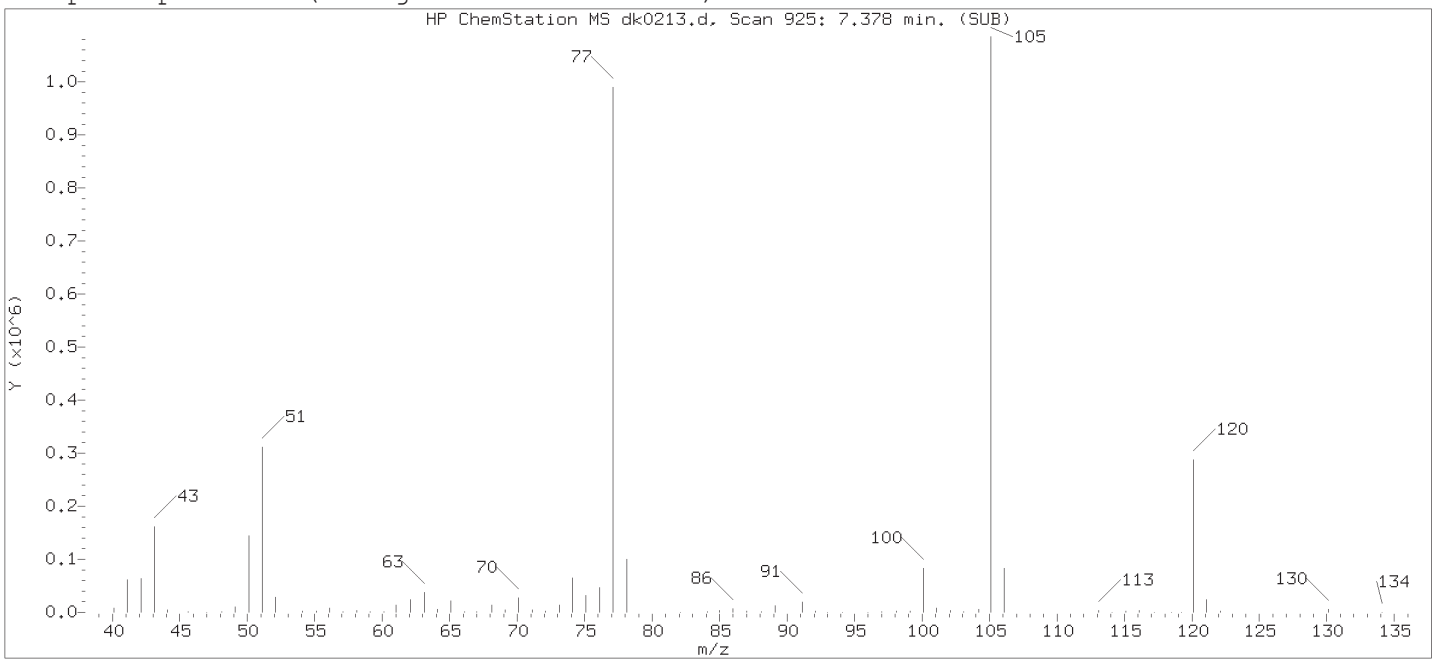
Compound Number	: 38		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 932		
Retention Time (minutes)	: 7.419		
Quant Ion	: 70.00		
Area (flag)	: 2385266A		
On-Column Amount (ng/ul)	: 29.0728		
Integration start scan	: 925	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

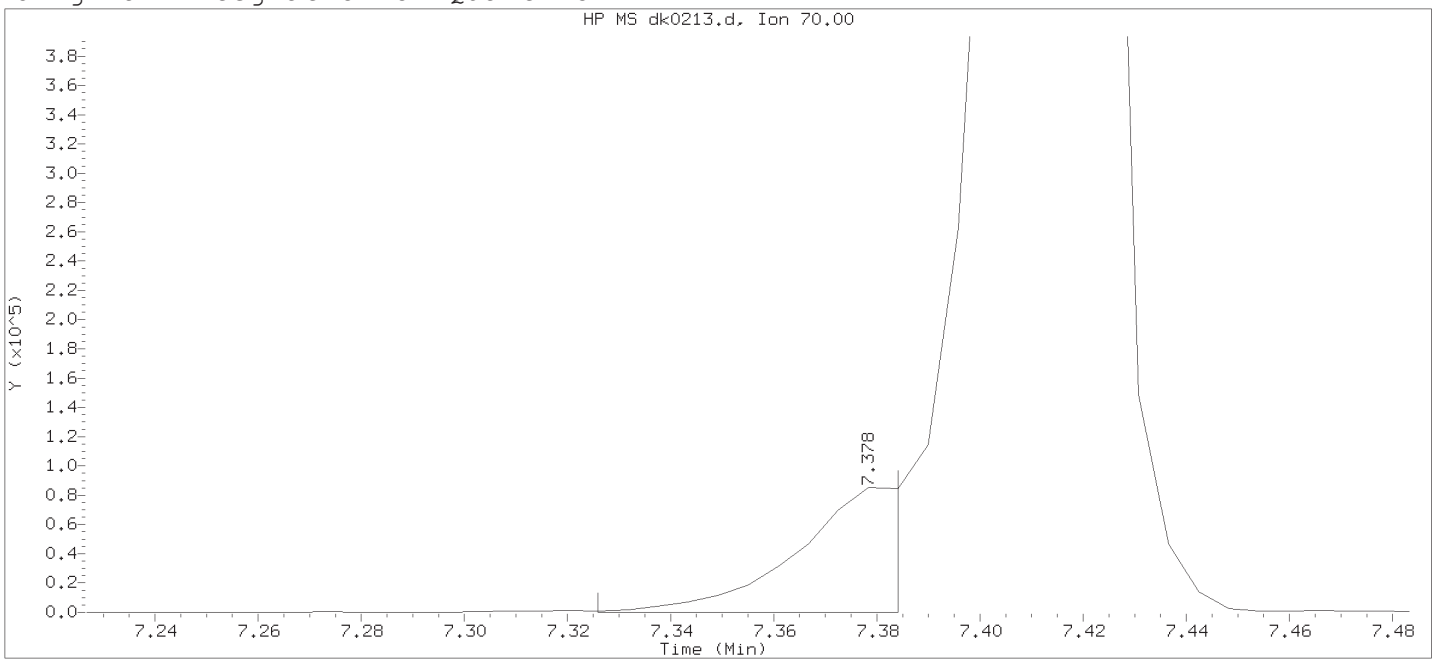
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:40
Date, time and analyst ID of latest file update: 04-Nov-2018 13:40 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number : 38
Compound Name : N-Nitroso-di-n-propylamine
Scan Number : 925
Retention Time (minutes) : 7.378
Quant Ion : 70.00
Area : 111317
On-column Amount (ng/ul) : 1.9680
Integration start scan : 915 Integration stop scan: 925
Y at integration start : 0 Y at integration end: 0

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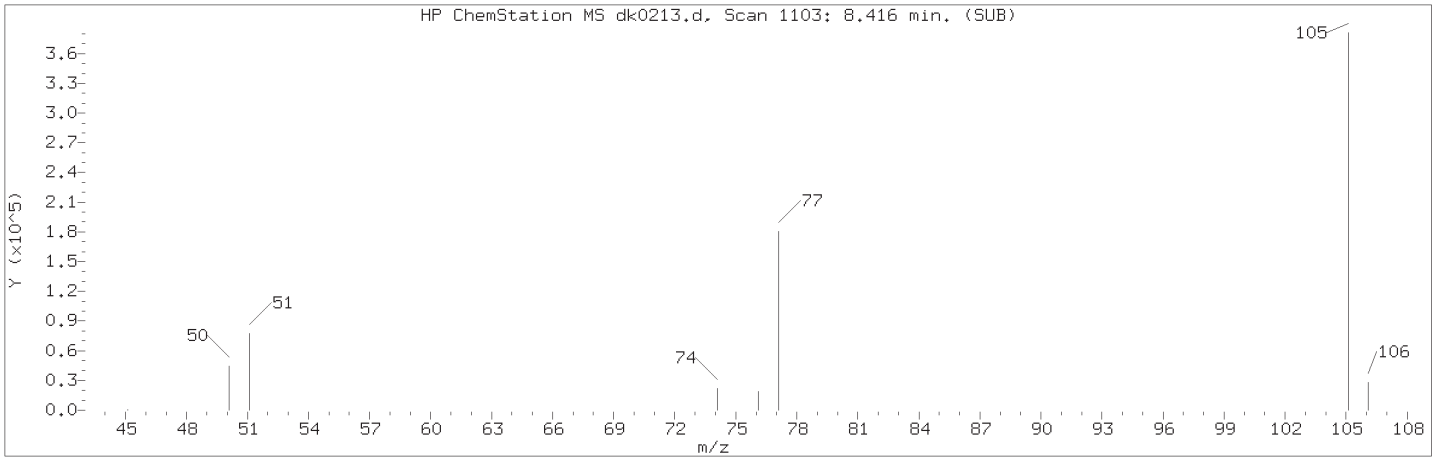
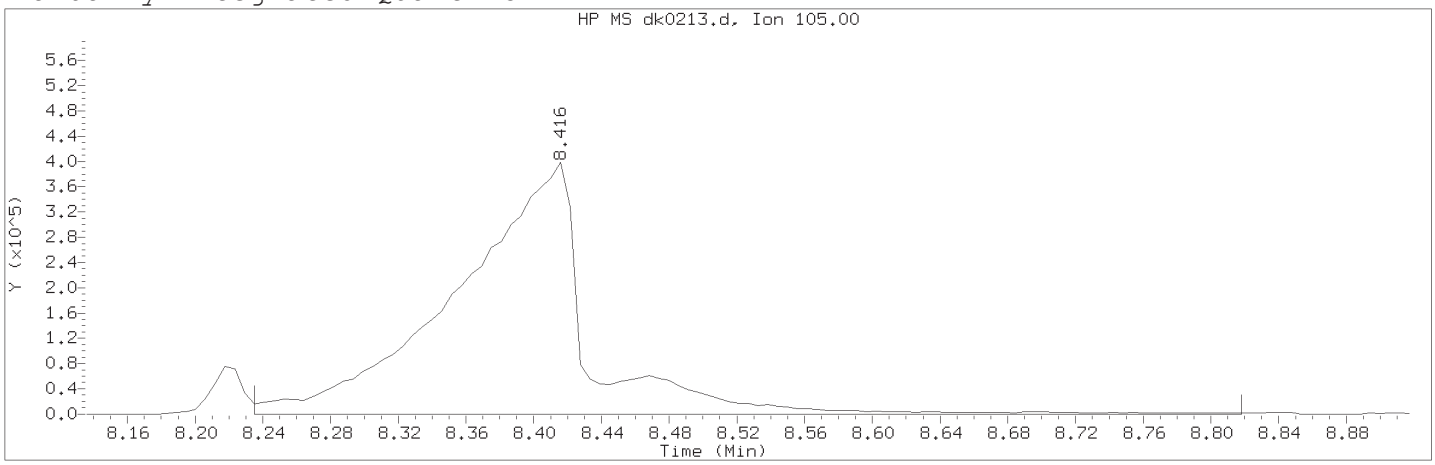
Target 3.5 esignature user ID: 12495

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

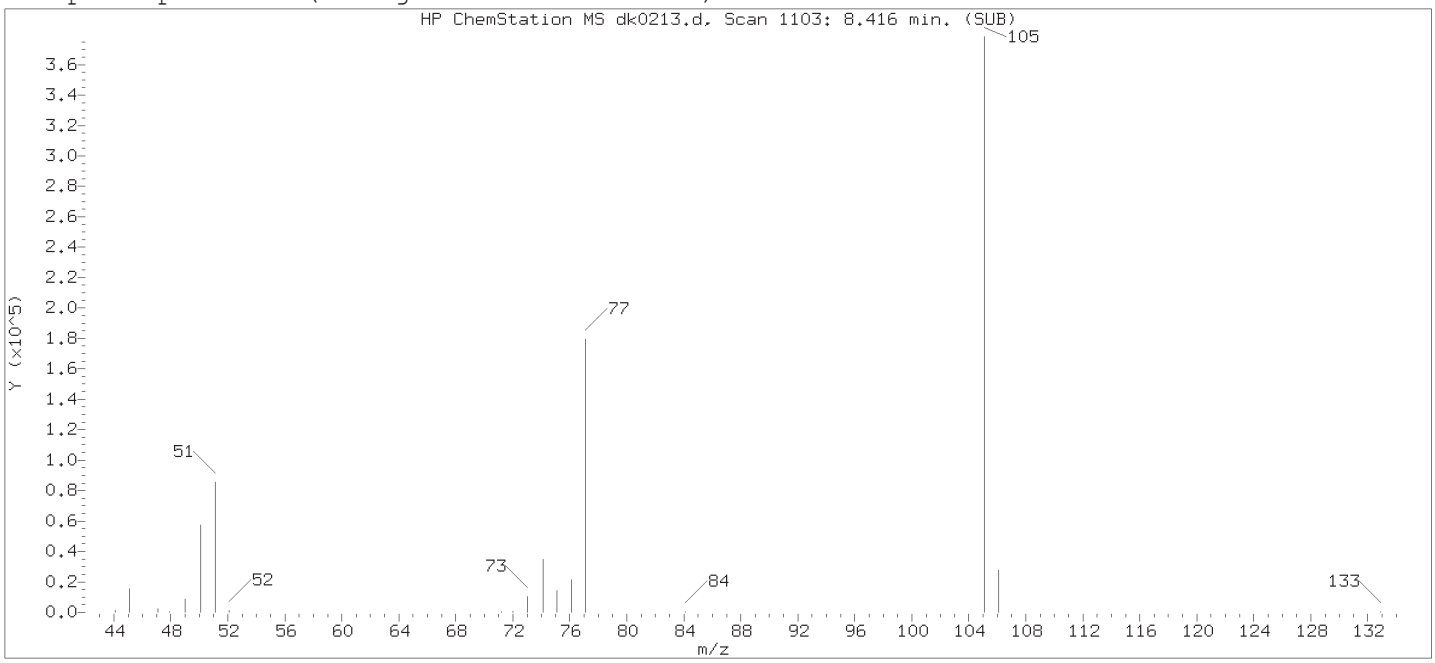
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1103		
Retention Time (minutes)	: 8.416		
Quant Ion	: 105.00		
Area (flag)	: 2154489M		
On-Column Amount (ng/ul)	: 32.0349		
Integration start scan	: 1071	Integration stop scan:	1171
Y at integration start	: -270	Y at integration end:	-270

Reason for manual integration: improper integration

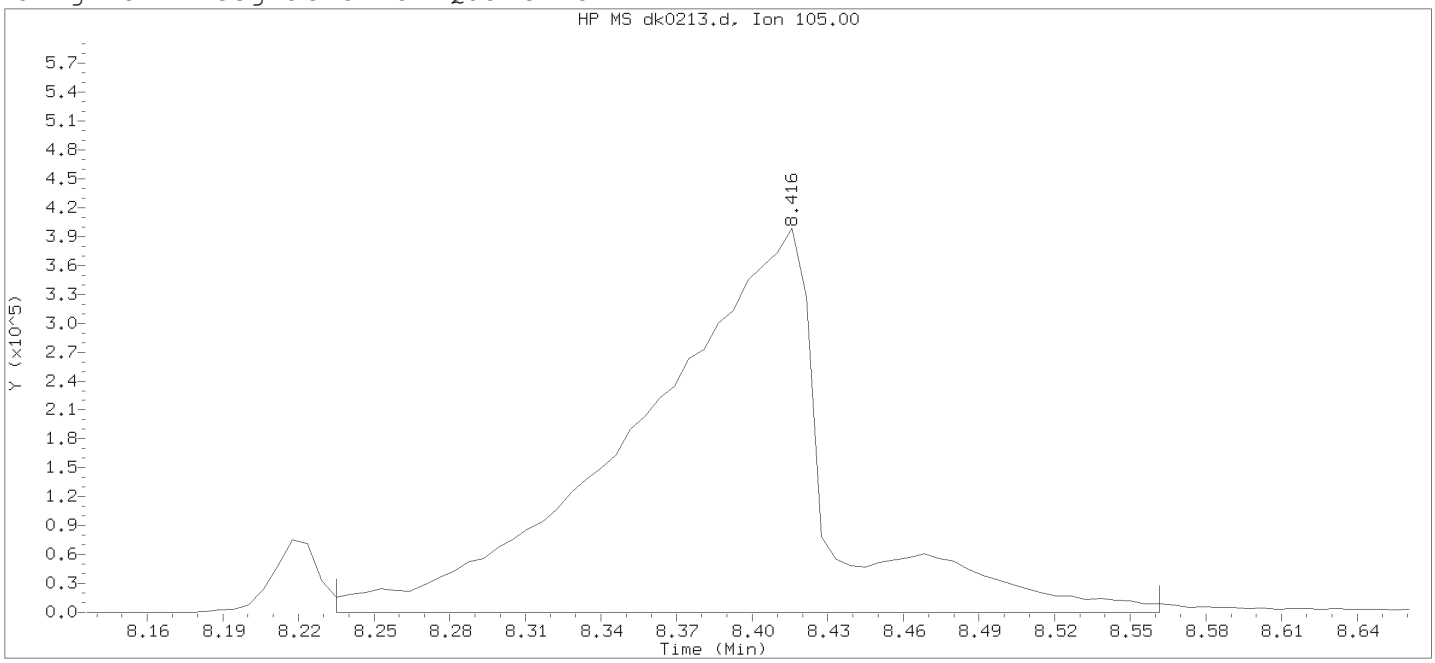
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:40
Date, time and analyst ID of latest file update: 04-Nov-2018 13:40 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1103
Retention Time (minutes) : 8.416
Quant Ion : 105.00
Area : 2096087
On-column Amount (ng/ul) : 34.1707
Integration start scan : 1071 Integration stop scan: 1127
Y at integration start : 0 Y at integration end: 0

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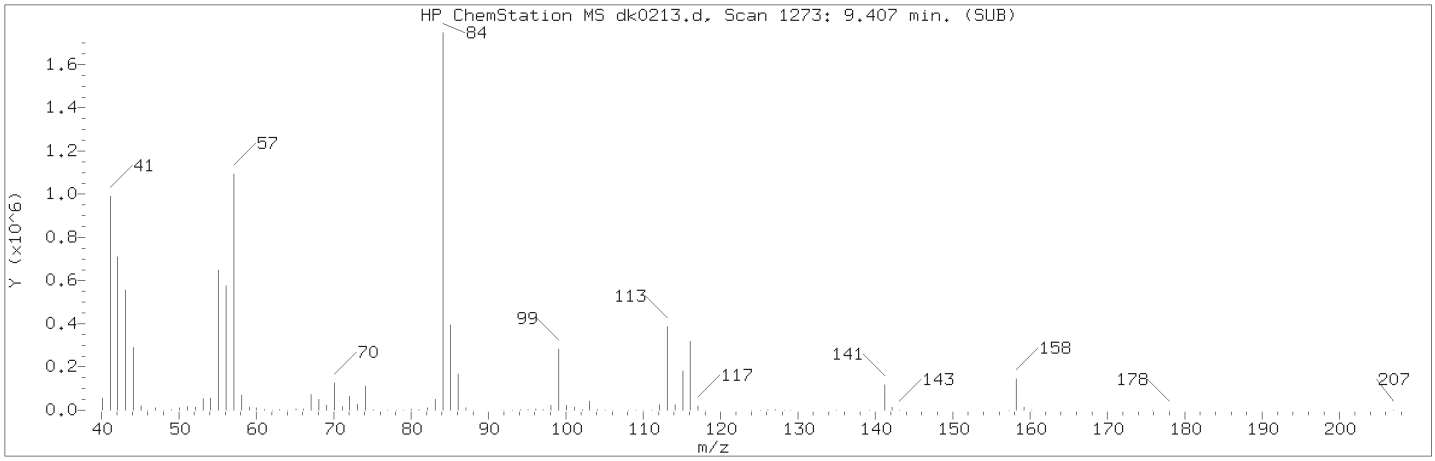
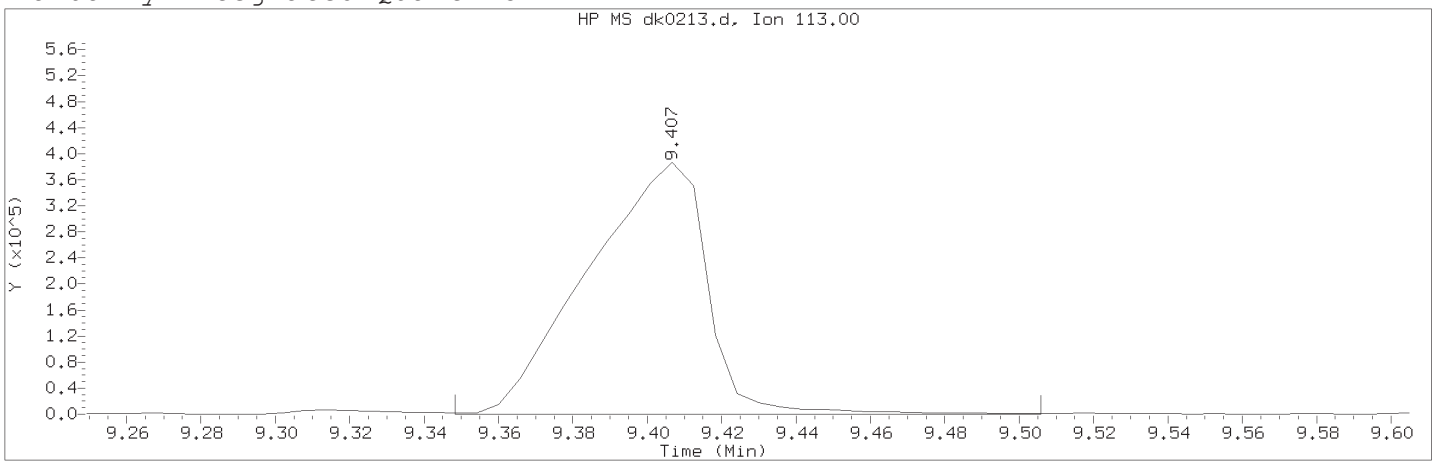
Target 3.5 esignature user ID: 2405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

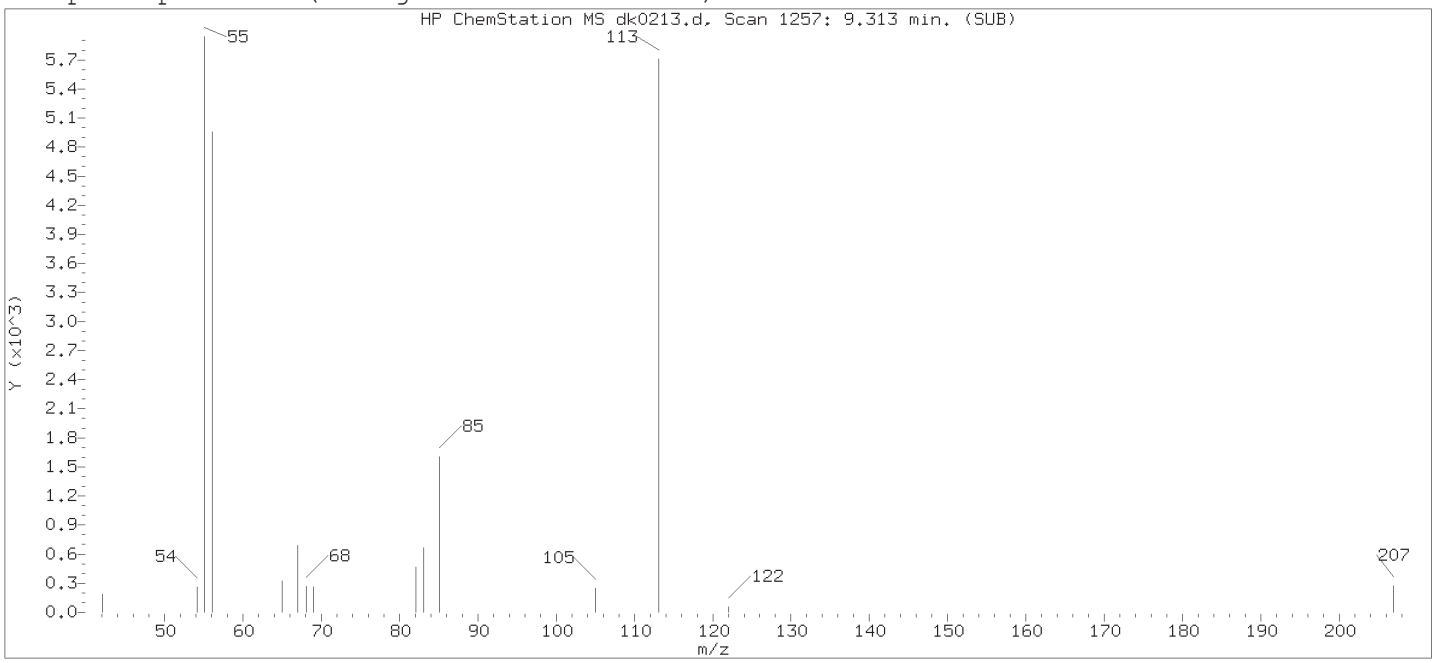
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1273
Retention Time (minutes) : 9.407
Quant Ion : 113.00
Area (flag) : 856443A
On-Column Amount (ng/ul) : 31.1264
Integration start scan : 1262 Integration stop scan: 1289
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

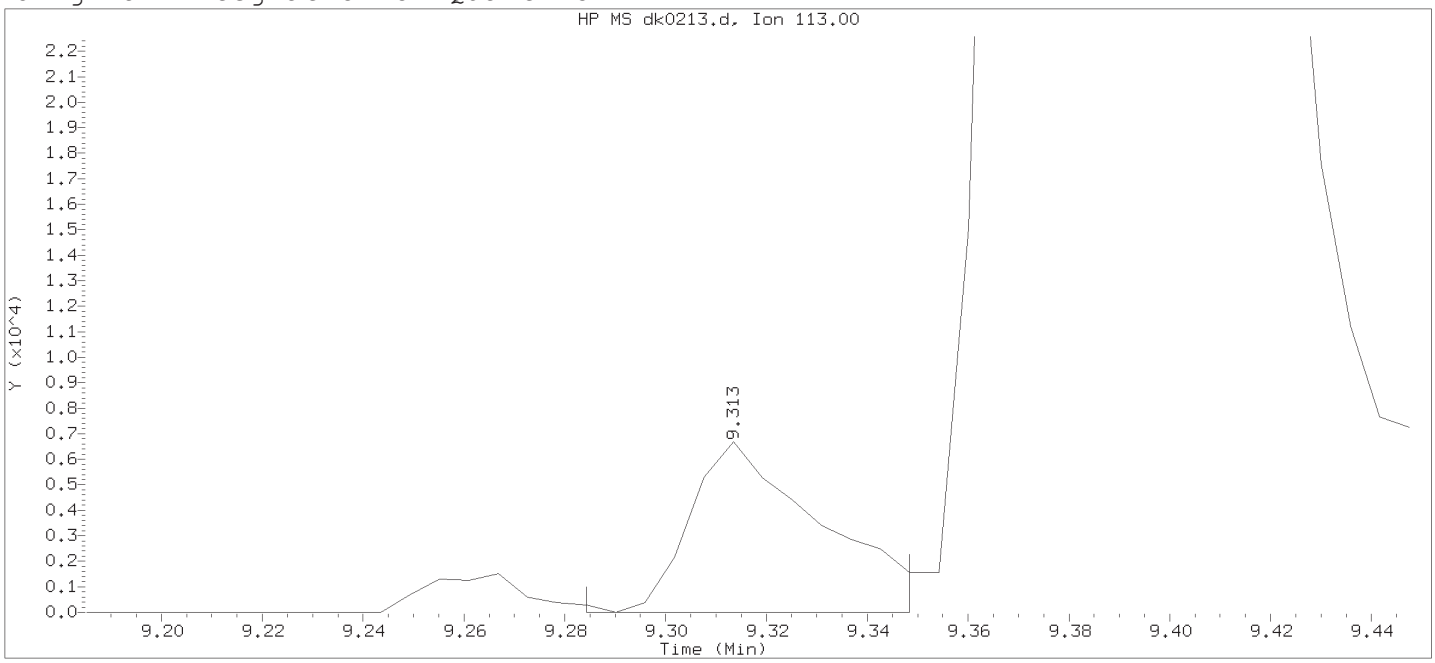
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

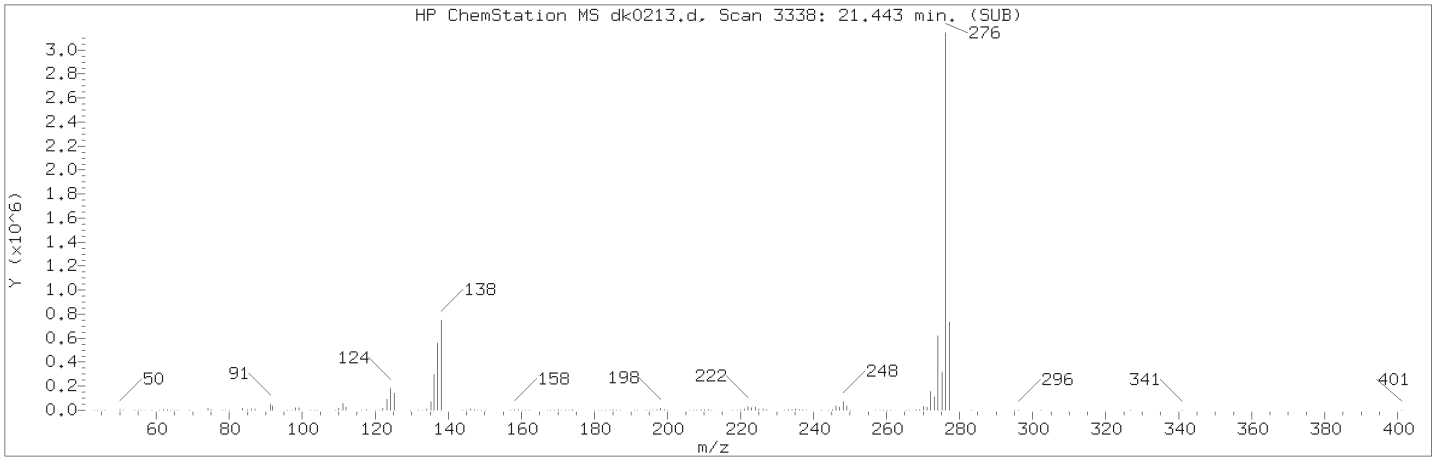
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:40
Date, time and analyst ID of latest file update: 04-Nov-2018 13:40 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

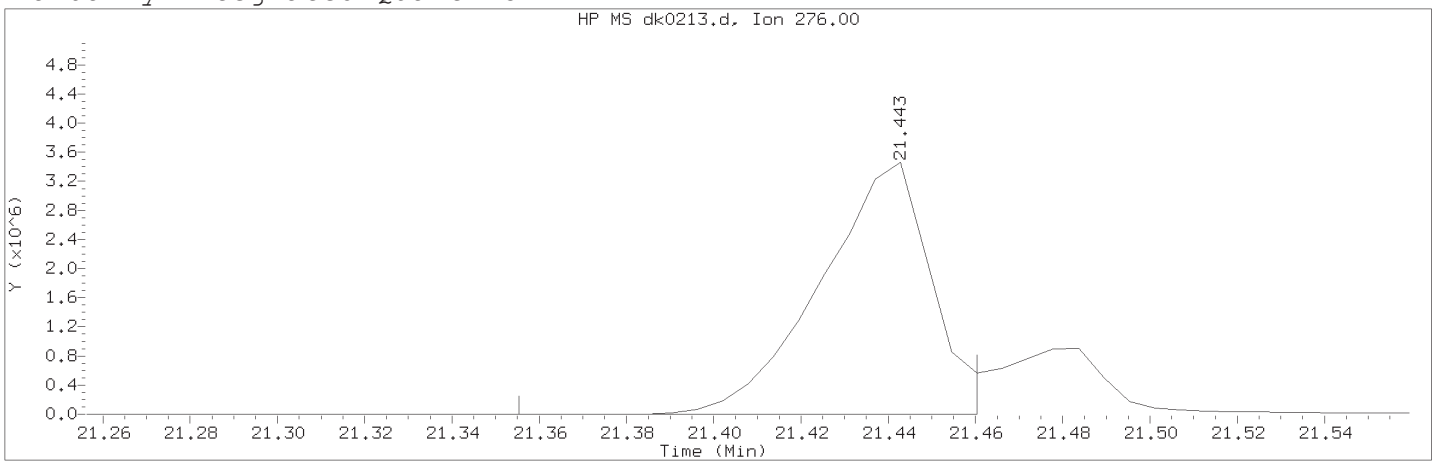
Compound Number	:	76
Compound Name	:	Caprolactam
Scan Number	:	1257
Retention Time (minutes)	:	9.313
Quant Ion	:	113.00
Area	:	11847
On-column Amount (ng/ul)	:	0.5482
Integration start scan	:	1251 Integration stop scan: 1262
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

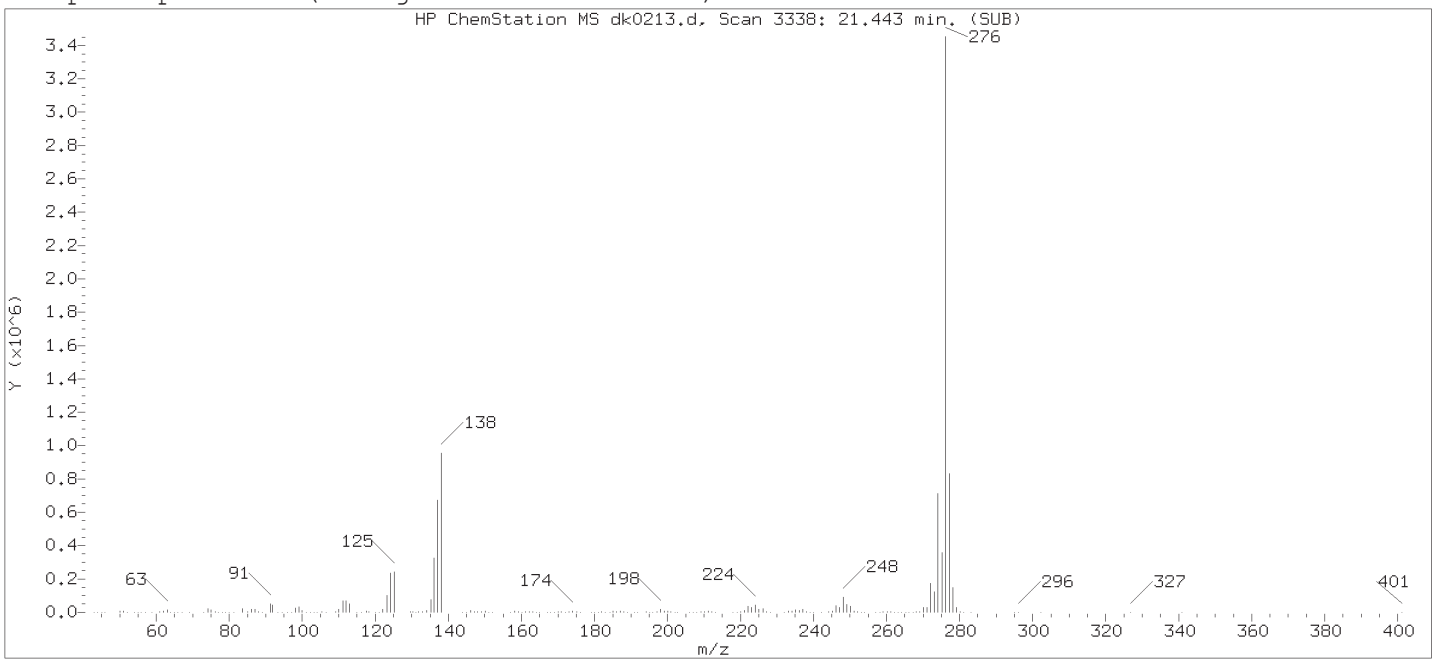
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3338
Retention Time (minutes) : 21.443
Quant Ion : 276.00
Area (flag) : 6098266M
On-Column Amount (ng/ul) : 32.5686
Integration start scan : 3322 Integration stop scan: 3340
Y at integration start : 366 Y at integration end: 366

Reason for manual integration: improper integration

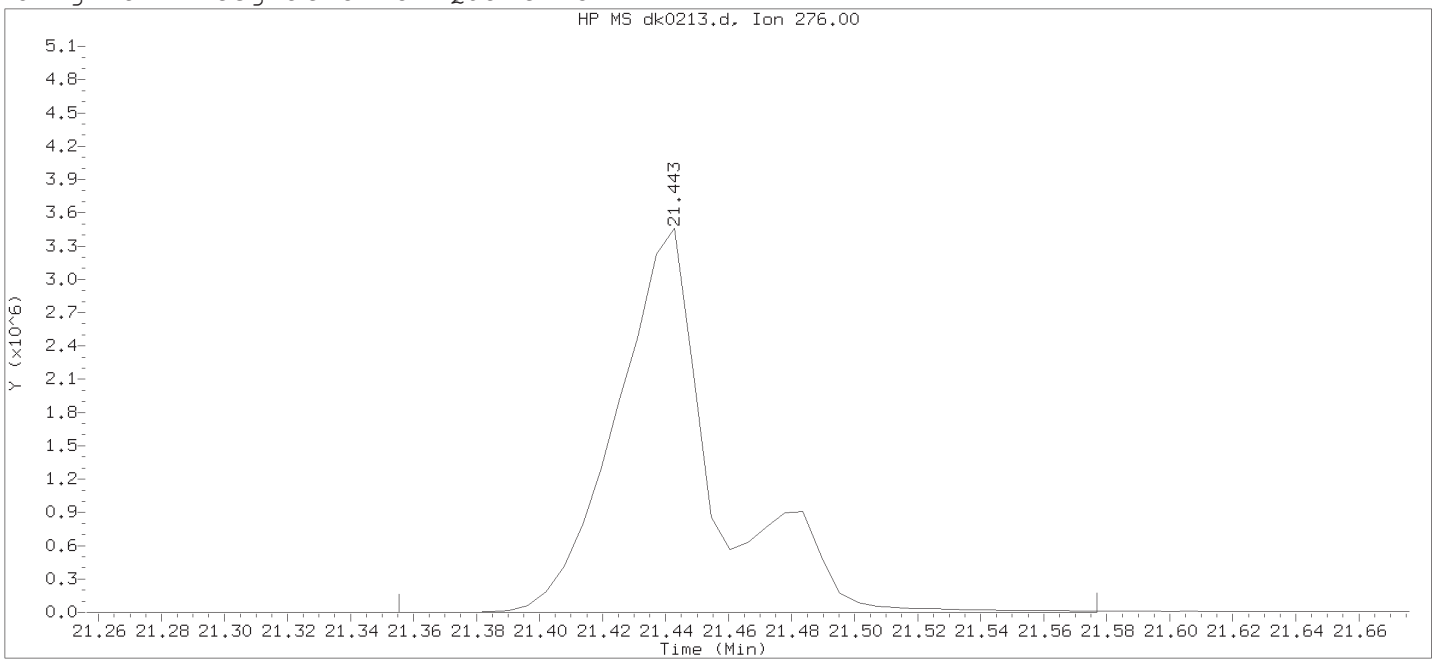
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



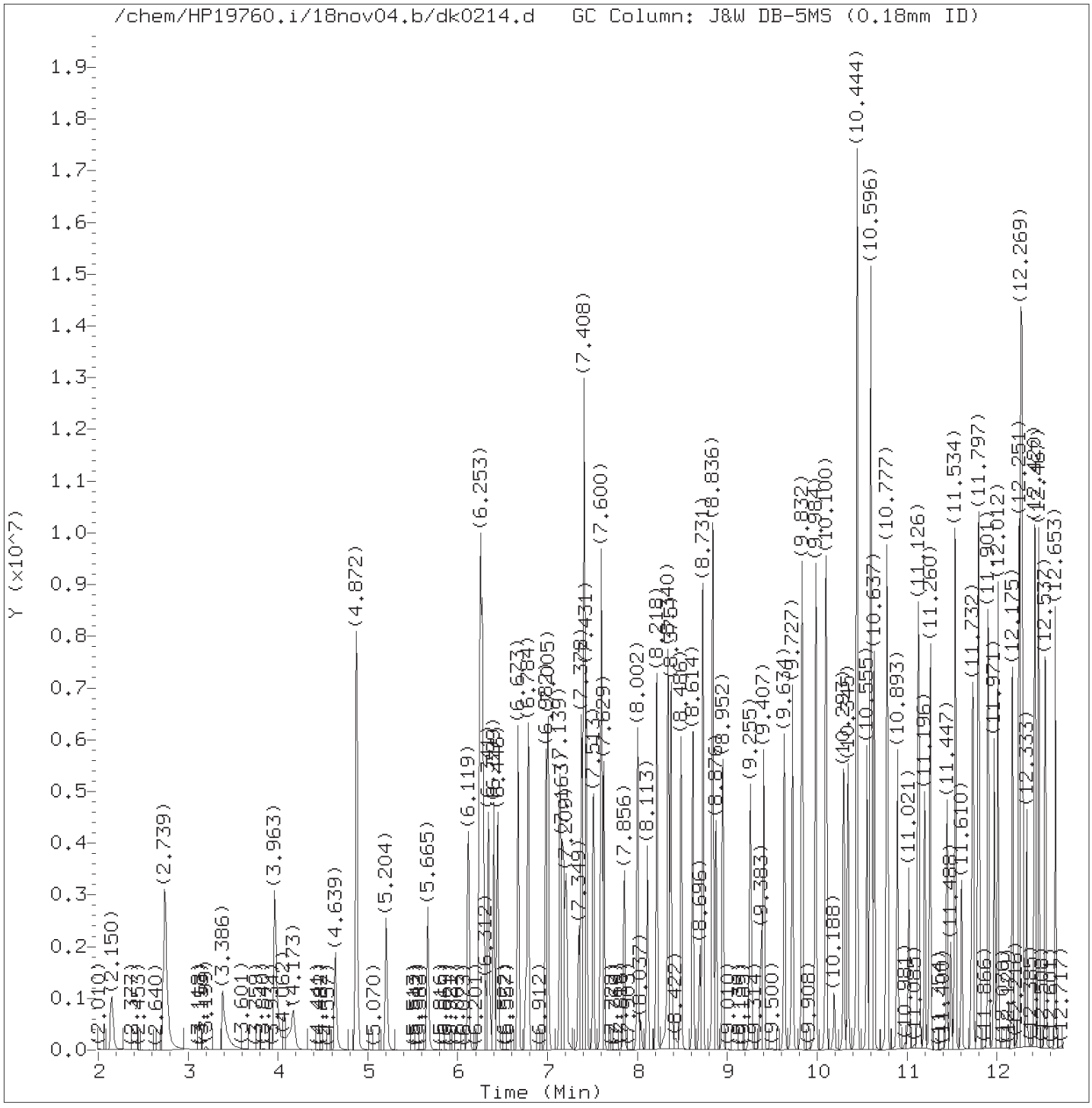
Data File: /chem/HP19760.i/18nov04.b/dk0213.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:12 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 13:40
Date, time and analyst ID of latest file update: 04-Nov-2018 13:40 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3338
Retention Time (minutes) : 21.443
Quant Ion : 276.00
Area : 7586985
On-column Amount (ng/ul) : 49.7146
Integration start scan : 3322 Integration stop scan: 3360
Y at integration start : 366 Y at integration end: 366

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:24.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

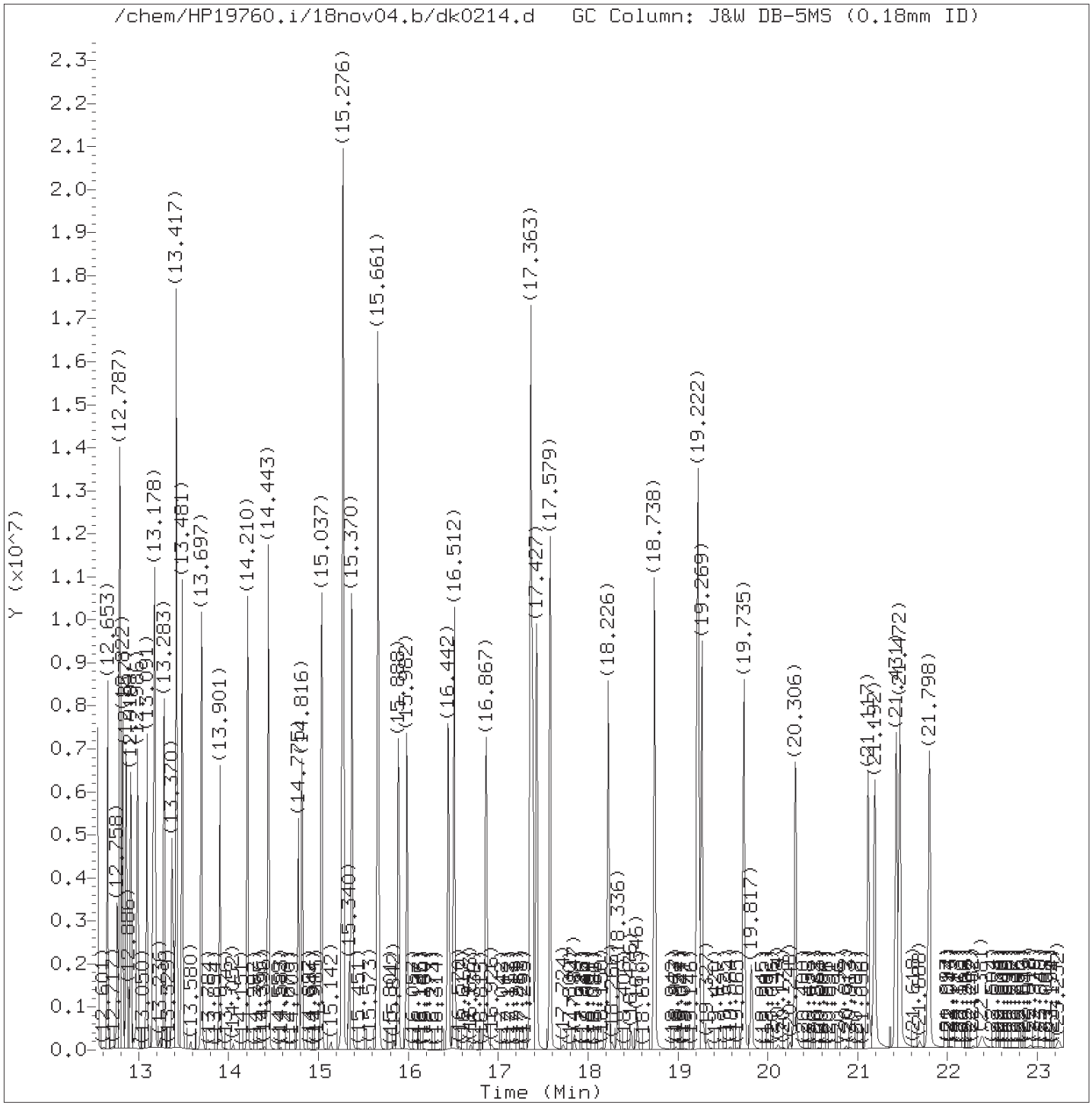
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.150	88	992206	20.147
4) N-Nitrosodimethylamine	(1)	2.727	74	1536656	20.359
5) Pyridine	(1)	2.745	79	2559662	20.233
7) 2-Picoline	(1)	3.963	93	2534853	20.155
8) N-Nitrosomethylethylamine	(1)	4.173	88	1104802	20.186
9) Methyl methanesulfonate	(1)	4.639	80	1206979	20.032
11)$2-Fluorophenol	(1)	4.872	112	3893131	40.454
13) N-Nitrosodiethylamine	(1)	5.204	102	1037513	20.270
42) Total Cresols	(1)			3977305	40.138
15) Ethyl methanesulfonate	(1)	5.665	109	977782	20.084
16) Benzaldehyde	(1)	6.119	77	1429956	19.847
17)$Phenol-d6	(1)	6.253	99	5362888	40.300
18) Phenol	(1)	6.271	94	3074778	20.205
19) Aniline	(1)	6.283	93	3585648	20.198
20) a-methylstyrene	(1)	6.358	118	184792	20.079
22) bis(2-Chloroethyl)ether	(1)	6.405	93	2225145	19.912
23) 2-Chlorophenol	(1)	6.446	128	1830309	20.183
24) 1,3-Dichlorobenzene	(1)	6.673	146	1899653	20.187
25)*1,4-Dichlorobenzene-d4	(1)	6.761	152	288736	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	1887808	19.986
27) Benzyl alcohol	(1)	6.982	108	1268770	20.140
28) 1,2-Dichlorobenzene	(1)	7.005	146	1787015	20.006
30) Indene	(1)	7.139	115	2055744	20.033
31) 2-Methylphenol	(1)	7.163	108	1880165	20.162
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.209	45	2594601	20.052
34) bis(2-Chloroisopropyl)ether	(1)	7.209	45	2594601	20.052
35) N-Nitrosopyrrolidine	(1)	7.349	100	1091620	20.740
36) Acetophenone	(1)	7.378	105	2576219	20.050
97) Isosafrole	(3)			1306208	19.759
38) N-Nitroso-di-n-propylamine	(1)	7.408	70	1622737	20.273
37) 4-Methylphenol	(1)	7.408	108	2097140	19.987
39) N-Nitrosomorpholine	(1)	7.413	56	1166336	19.658
40) o-Toluidine	(1)	7.431	106	3206490	20.209
43) Hexachloroethane	(1)	7.507	117	881050	19.967
44)$Nitrobenzene-d5	(2)	7.600	82	4744838	40.352
45) Nitrobenzene	(2)	7.629	77	2374006	20.169
48) N-Nitrosopiperidine	(2)	7.856	114	949051	20.359
50) Isophorone	(2)	8.002	82	4185124	20.407
120) 2,4_2,6-Dinitrotoluenes	(3)			1678815	39.987
51) 2-Nitrophenol	(2)	8.113	139	932375	20.709

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53)	2,4-Dimethylphenol	(2)	8.218	107	1982828	20.266
57)	O,O,O-Triethylphosphorothioate	(2)	8.340	198	733991	20.371
55)	bis(2-Chloroethoxy)methane	(2)	8.375	93	2541060	20.414
56)	Benzoic acid	(2)	8.387	105	1417558M	21.177
60)	2,4-Dichlorophenol	(2)	8.486	162	1357374	20.448
62)	1,2,4-Trichlorobenzene	(2)	8.620	180	1423612	20.401
65)	*Naphthalene-d8	(2)	8.696	136	1049909	5.000
66)	Naphthalene	(2)	8.731	128	5107993	20.231
146)	Diallate trans/cis	(4)			1913334	20.159
67)	4-Chloroaniline	(2)	8.836	127	2005124	20.321
68)	2,6-Dichlorophenol	(2)	8.841	162	1291871	20.253
69)	Hexachloropropene	(2)	8.876	213	894762	20.293
71)	Hexachlorobutadiene	(2)	8.952	225	753832	20.084
75)	Quinoline	(2)	9.255	129	2946389	20.394
76)	Caprolactam	(2)	9.383	113	555217A	20.584
77)	N-Nitrosodi-n-butylamine	(2)	9.407	84	1783132	21.931
80)	4-Chloro-3-methylphenol	(2)	9.634	107	1648319	20.529
82)	Safrole	(2)	9.727	162	1198436	20.225
83)	2-Methylnaphthalene	(2)	9.832	142	3173937	20.527
84)	1-Methylnaphthalene	(2)	9.984	142	3049506	21.066
85)	Hexachlorocyclopentadiene	(3)	10.095	237	784999	19.815
86)	1,2,4,5-Tetrachlorobenzene	(3)	10.100	216	1301340	19.884
88)	cis-Isosafrole	(3)	10.188	162	207692	3.387
90)	2,4,6-Trichlorophenol	(3)	10.299	196	883399	19.852
92)	2,4,5-Trichlorophenol	(3)	10.345	196	915519	20.134
93)	$2-Fluorobiphenyl	(3)	10.444	172	6511063	39.508
99)	Diphenyl ether	(3)	10.444	170	1469922	19.733
94)	trans-Isosafrole	(3)	10.555	162	1098516	16.374
95)	1,1'-Biphenyl	(3)	10.596	154	3563348	20.119
96)	2-Chloronaphthalene	(3)	10.602	162	2859530	19.567
98)	1-Chloronaphthalene	(3)	10.637	162	2519792	19.993
100)	2-Nitroaniline	(3)	10.788	138	992629	20.076
104)	1,4-Naphthoquinone	(3)	10.893	158	1136936	20.433
105)	1,4-Dinitrobenzene	(3)	11.021	168	518934	20.105
106)	Dimethylphthalate	(3)	11.126	163	2959557	19.775
107)	1,3-Dinitrobenzene	(3)	11.138	168	571970	20.126
108)	2,6-Dinitrotoluene	(3)	11.196	165	724683	20.036
109)	Acenaphthylene	(3)	11.260	152	4143798	20.889
112)	3-Nitroaniline	(3)	11.447	138	847952	20.072
113)	*Acenaphthene-d10	(3)	11.488	164	490246	5.000

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.534	153	2905445	20.076
115) 2,4-Dinitrophenol	(3)	11.610	184	515504	21.033
116) 4-Nitrophenol	(3)	11.727	109	608572	19.901
117) Pentachlorobenzene	(3)	11.738	250	1031475	19.862
119) Dibenzofuran	(3)	11.791	168	3980792	20.042
118) 2,4-Dinitrotoluene	(3)	11.808	165	954132	19.961
121) 1-Naphthylamine	(3)	11.901	143	2994675	19.840
122) 2,3,4,6-Tetrachlorophenol	(3)	11.971	232	692354	20.038
123) 2-Naphthylamine	(3)	12.012	143	3056191	20.153
124) Diethylphthalate	(3)	12.175	149	3069393	20.027
126) Fluorene	(3)	12.251	166	3111988	20.453
125) Thionazin	(3)	12.269	107	668913	20.139
127) 4-Chlorophenyl-phenylether	(3)	12.274	204	1450894	19.871
128) 5-Nitro-o-toluidine	(3)	12.280	152	974182	20.101
129) 4-Nitroaniline	(3)	12.292	138	922764	20.037
130) 4,6-Dinitro-2-methylphenol	(4)	12.333	198	607551	20.827
131) N-Nitrosodiphenylamine	(4)	12.426	169	2611322	20.091
132) NDPA as diphenylamine	(4)	12.426	169	2611322	20.091
134) 1,2-Diphenylhydrazine	(4)	12.467	77	4226057	19.939
135)$2,4,6-Tribromophenol	(3)	12.543	330	702104	40.491
137) Tetraethyldithiopyrophosphate	(4)	12.653	97	629895	20.192
139) 1,3,5-Trinitrobenzene	(4)	12.764	213	394200	20.598
140) Diallate (peak 1)	(4)	12.787	86	1650755	16.738
141) Phorate	(4)	12.793	75	2546775	20.284
142) Phenacetin	(4)	12.822	108	1959952	20.362
143) 4-Bromophenyl-phenylether	(4)	12.863	248	757125	20.115
144) Diallate (peak 2)	(4)	12.886	86	262579	3.420
145) Hexachlorobenzene	(4)	12.910	284	775373	20.230
147) Dimethoate	(4)	12.986	87	1655180	20.243
148) Atrazine	(4)	13.091	200	736794	20.182
149) Pentachlorophenol	(4)	13.160	266	568569	20.609
151) Pentachloronitrobenzene	(4)	13.178	237	366225	20.236
150) 4-Aminobiphenyl	(4)	13.178	169	2295037	20.289
152) Pronamide	(4)	13.283	173	1402297	20.386
153)*Phenanthrene-d10	(4)	13.388	188	907307	5.000
154) Dinoseb	(4)	13.417	211	890811	20.953
155) Phenanthrene	(4)	13.417	178	4465372	20.106
157) Anthracene	(4)	13.481	178	4550720	20.939
163) Carbazole	(4)	13.697	167	4433714	20.146
164) Methyl parathion	(4)	13.901	109	1323199	20.818

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on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.210	149	5661555	20.788
168) 4-Nitroquinoline-1-oxide	(4)	14.443	190	630365	21.711
167) Parathion	(4)	14.443	109	841269	20.446
169) Octachlorostyrene	(4)	14.775	308	310753	20.316
171) Isodrin	(4)	14.816	193	531272	20.213
222) Total PAHs	(6)			78321633	368.910
173) Fluoranthene	(4)	15.037	202	5102257	21.687
174) Benzidine	(5)	15.276	184	11241799	62.322
175)*Pyrene-d10	(5)	15.340	212	912844	5.000
177) Pyrene	(5)	15.370	202	5257718	19.869
179)$Terphenyl-d14	(5)	15.661	244	6239546	40.605
182) p-Dimethylaminoazobenzene	(5)	15.888	225	929932	20.611
185) Chlorobenzilate	(5)	15.982	139	1753142	20.491
187) 3,3'-Dimethylbenzidine	(5)	16.448	212	3440855	20.523
188) Butylbenzylphthalate	(5)	16.512	149	2830370	20.464
191) 2-Acetylaminofluorene	(5)	16.867	181	2352835	21.372
193) 3,3'-Dichlorobenzidine	(5)	17.363	252	1947806	20.662
195) Benzo(a)anthracene	(5)	17.363	228	4899873	22.290
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.386	231	1081023	20.879
196) Chrysene	(5)	17.427	228	4831001	21.098
199) bis(2-Ethylhexyl)phthalate	(5)	17.579	149	4067536	20.593
203) 6-Methylchrysene	(5)	18.226	242	3411432	20.661
205) Di-n-octylphthalate	(6)	18.738	149	7184253	20.831
206) Benzo(b)fluoranthene	(6)	19.216	252	4956435	21.729
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.228	256	2369031	20.400
208) Benzo(k)fluoranthene	(6)	19.269	252	5129463	21.837
211) Benzo(a)pyrene	(6)	19.735	252	4775047	22.774
213)*Perylene-d12	(6)	19.817	264	925359	5.000
215) 3-Methylcholanthrene	(6)	20.312	268	2271169	20.576
217) Dibenz(a,h)acridine	(6)	21.117	279	3565350	20.579
218) Dibenz(a,j)acridine	(6)	21.192	279	3808171	20.703
219) Indeno(1,2,3-cd)pyrene	(6)	21.431	276	4179809M	22.486
220) Dibenz(a,h)anthracene	(6)	21.472	278	4422337	21.718
221) Benzo(g,h,i)perylene	(6)	21.798	276	4258934	20.991

M = Compound was manually integrated.
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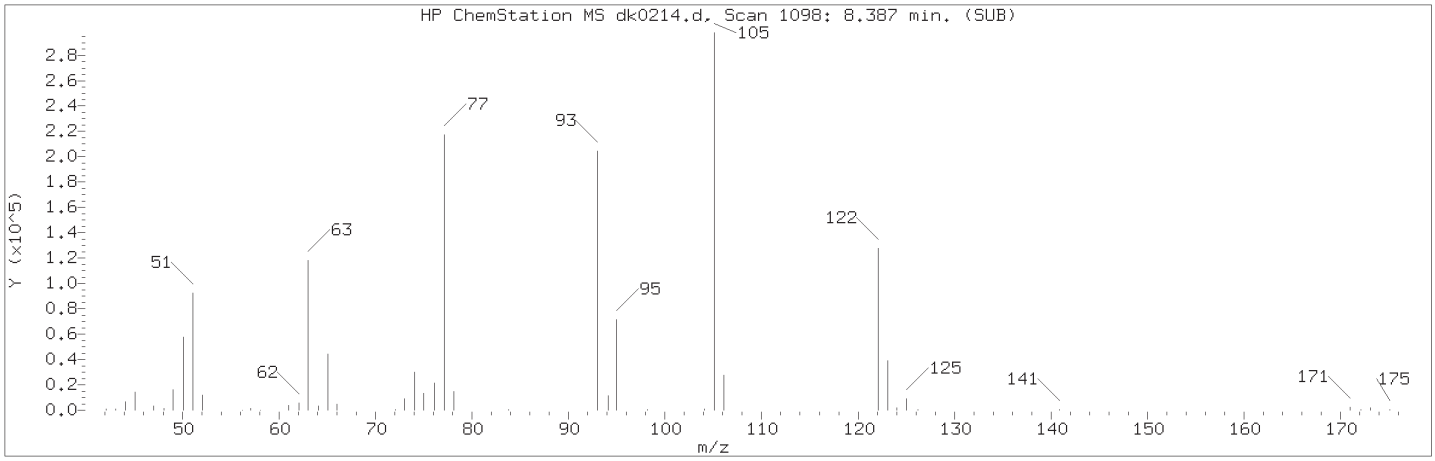
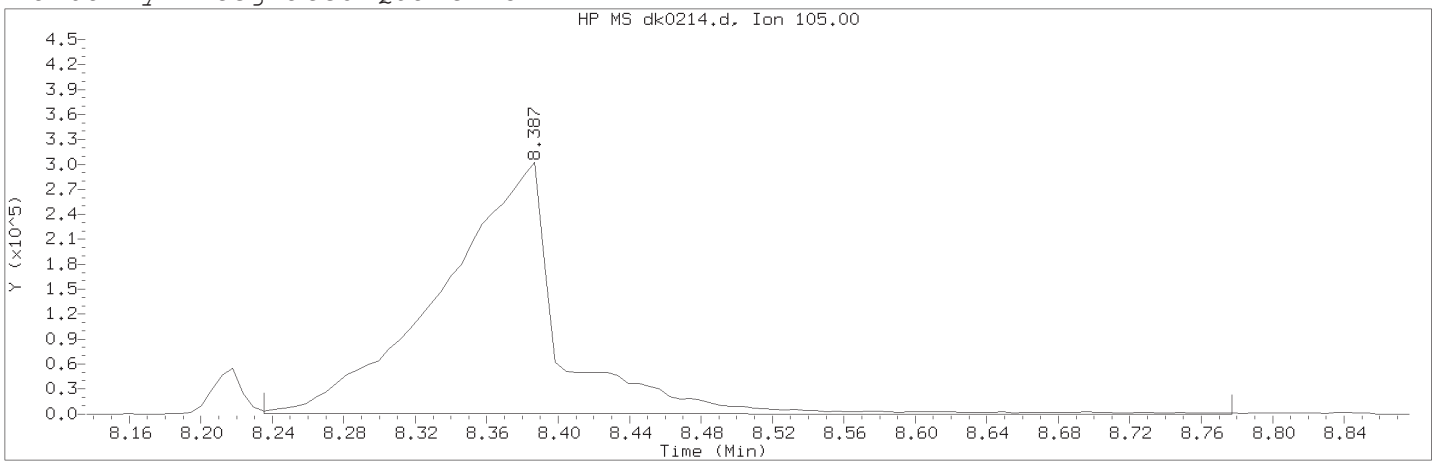
Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

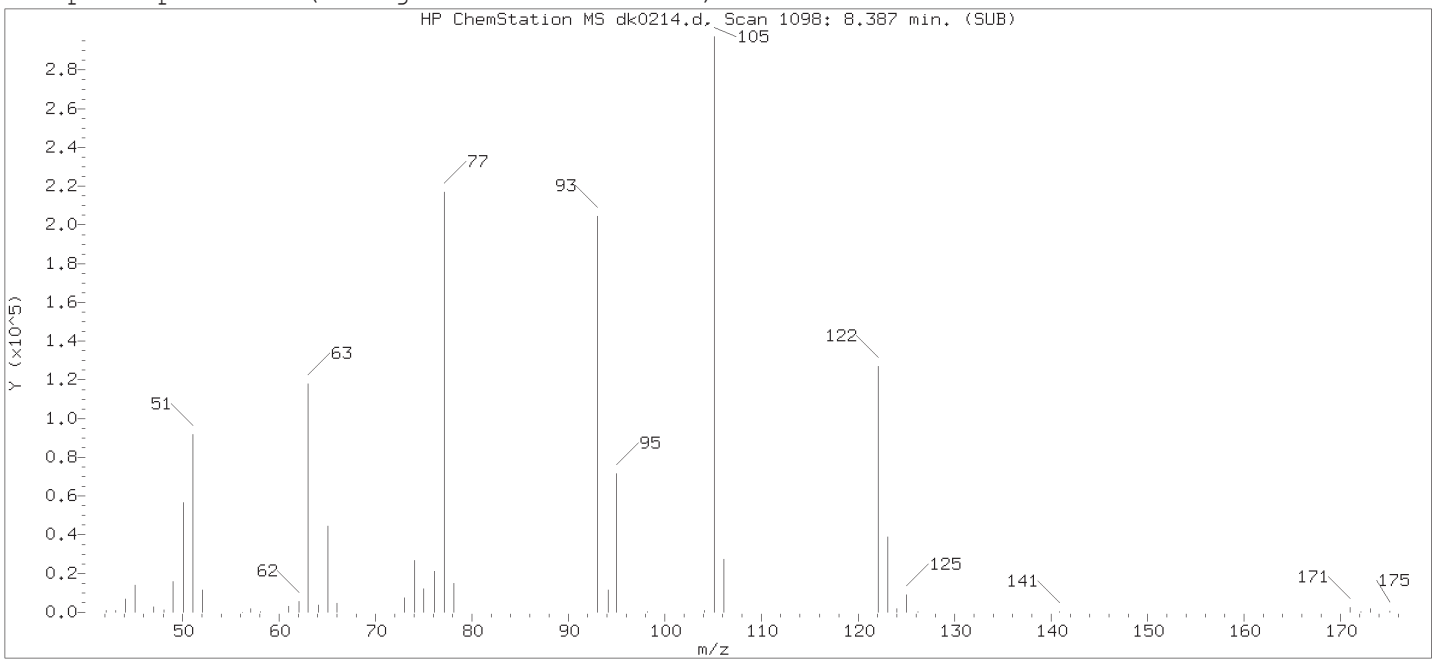
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1098		
Retention Time (minutes)	: 8.387		
Quant Ion	: 105.00		
Area (flag)	: 1417558M		
On-Column Amount (ng/ul)	: 21.1774		
Integration start scan	: 1071	Integration stop scan:	1164
Y at integration start	: 118	Y at integration end:	-334

Reason for manual integration: improper integration

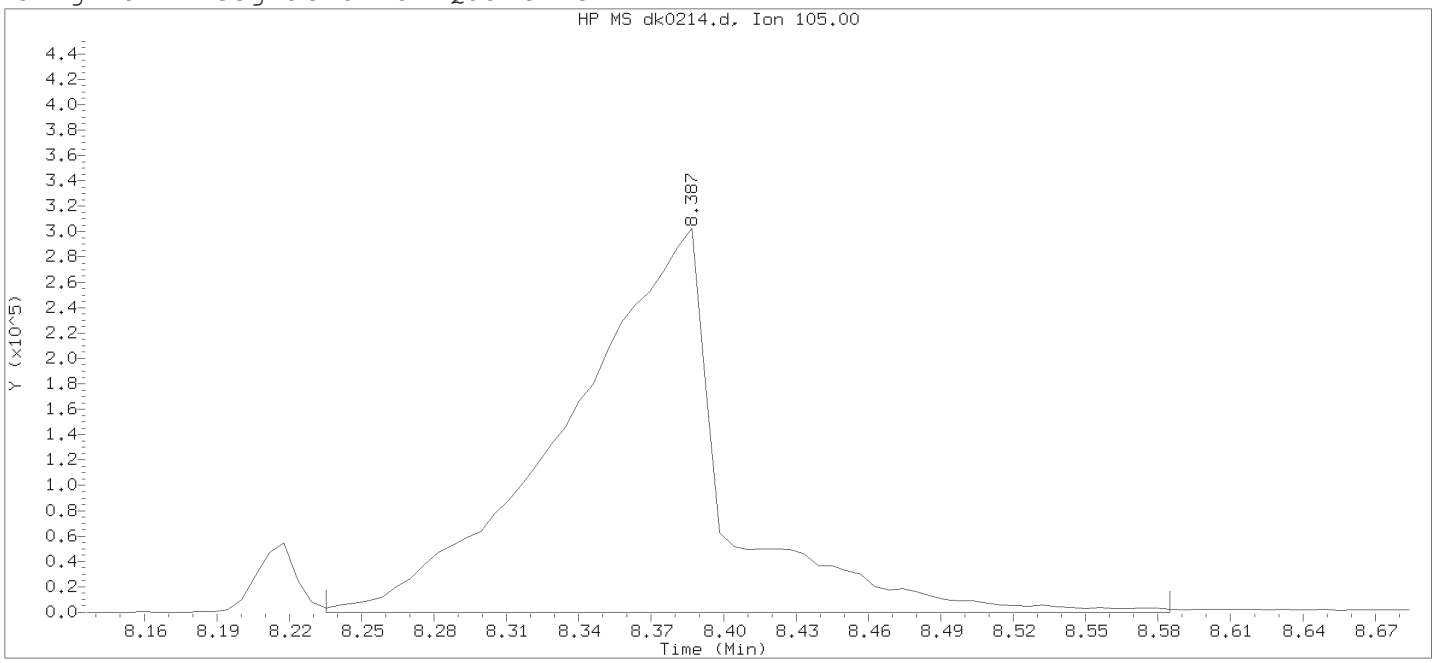
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

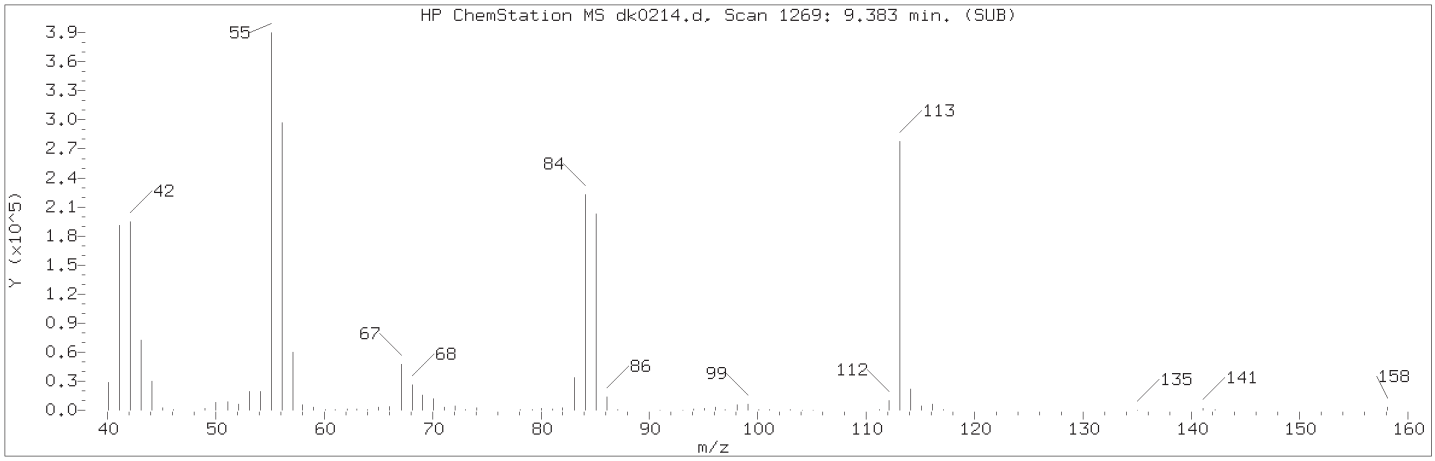
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 14:09
Date, time and analyst ID of latest file update: 04-Nov-2018 14:09 Automation

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

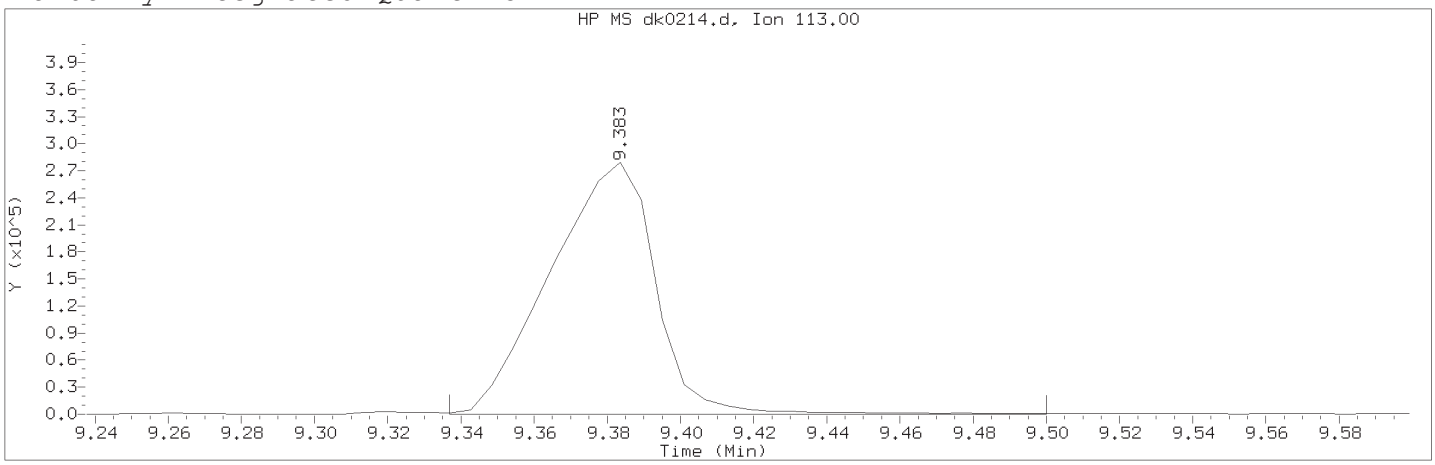
Compound Number	:	56
Compound Name	:	Benzoic acid
Scan Number	:	1098
Retention Time (minutes)	:	8.387
Quant Ion	:	105.00
Area	:	1392294
On-column Amount (ng/ul)	:	23.1518
Integration start scan	:	1071 Integration stop scan: 1131
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

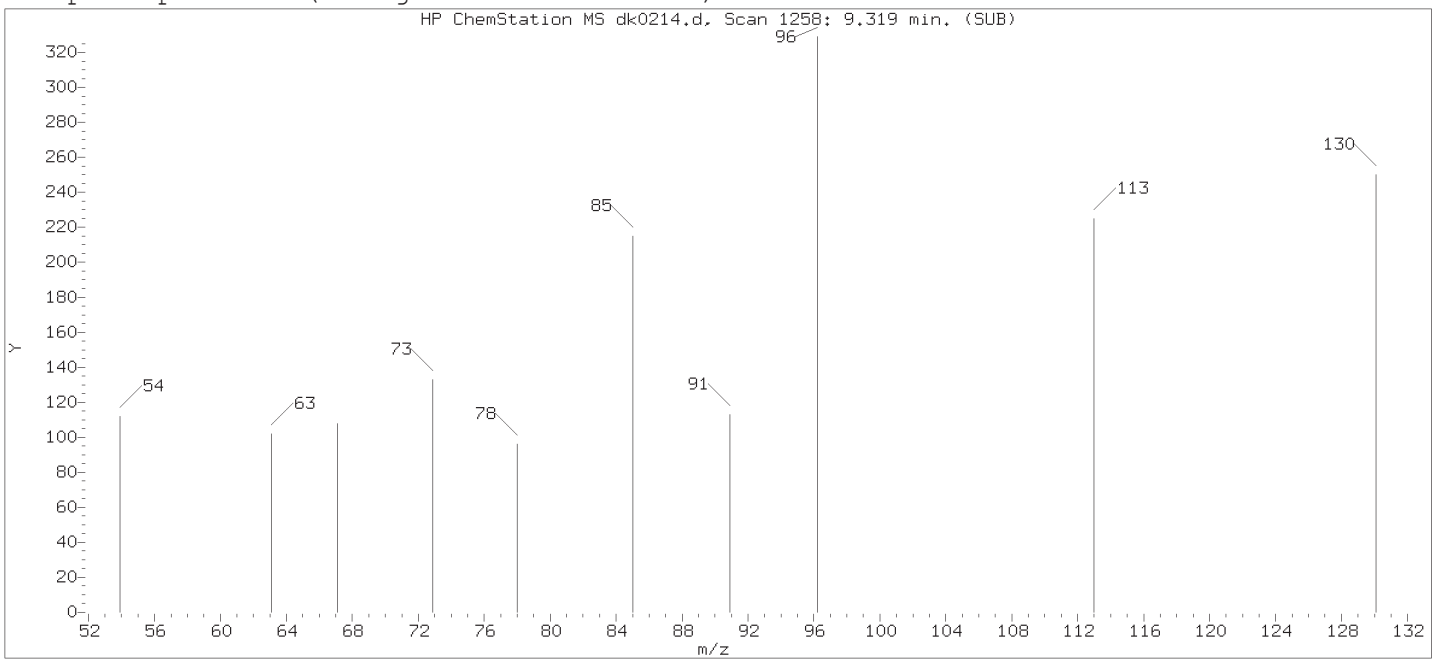
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1269		
Retention Time (minutes)	: 9.383		
Quant Ion	: 113.00		
Area (flag)	: 555217A		
On-Column Amount (ng/ul)	: 20.5841		
Integration start scan	: 1260	Integration stop scan:	1288
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

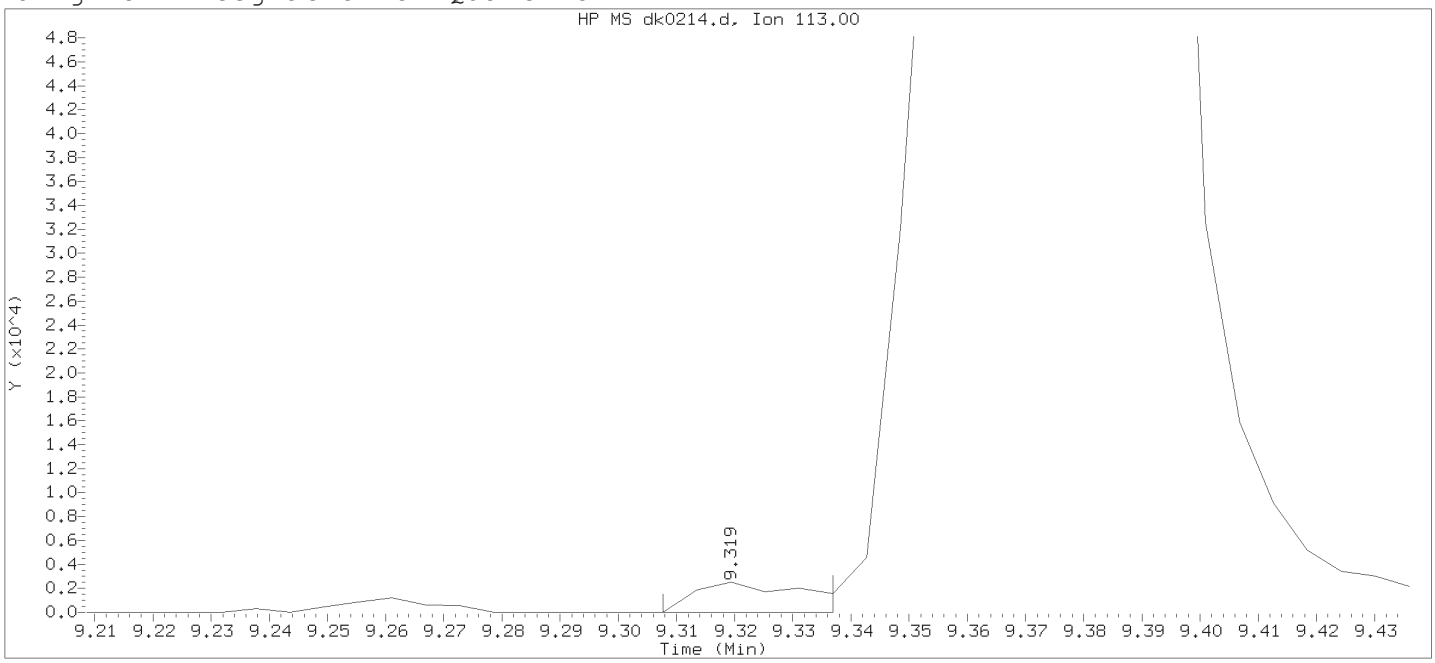
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

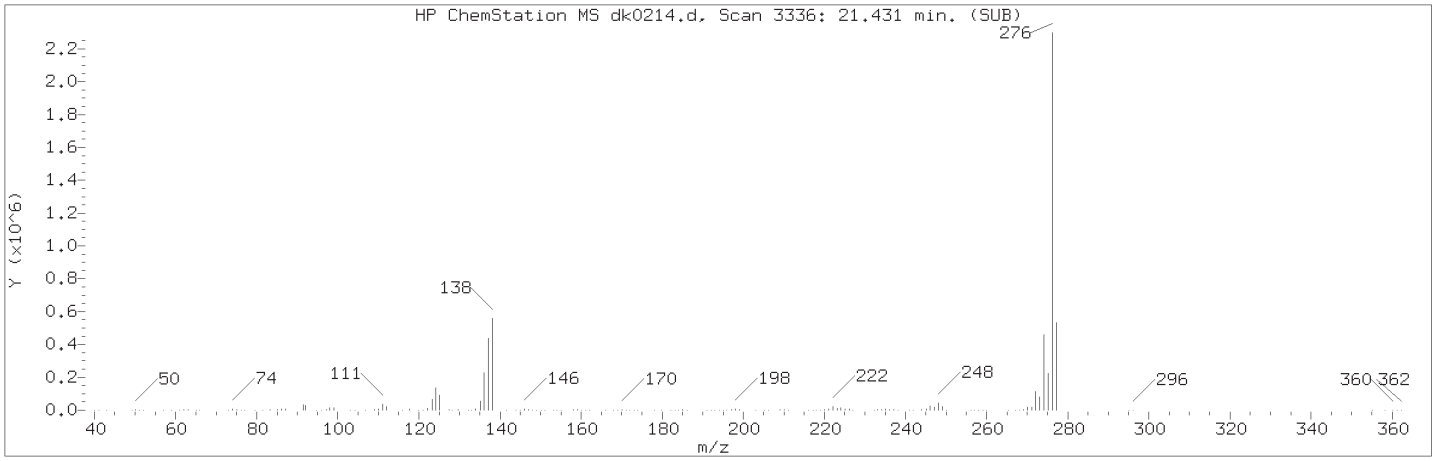
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 14:09
Date, time and analyst ID of latest file update: 04-Nov-2018 14:09 Automation

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

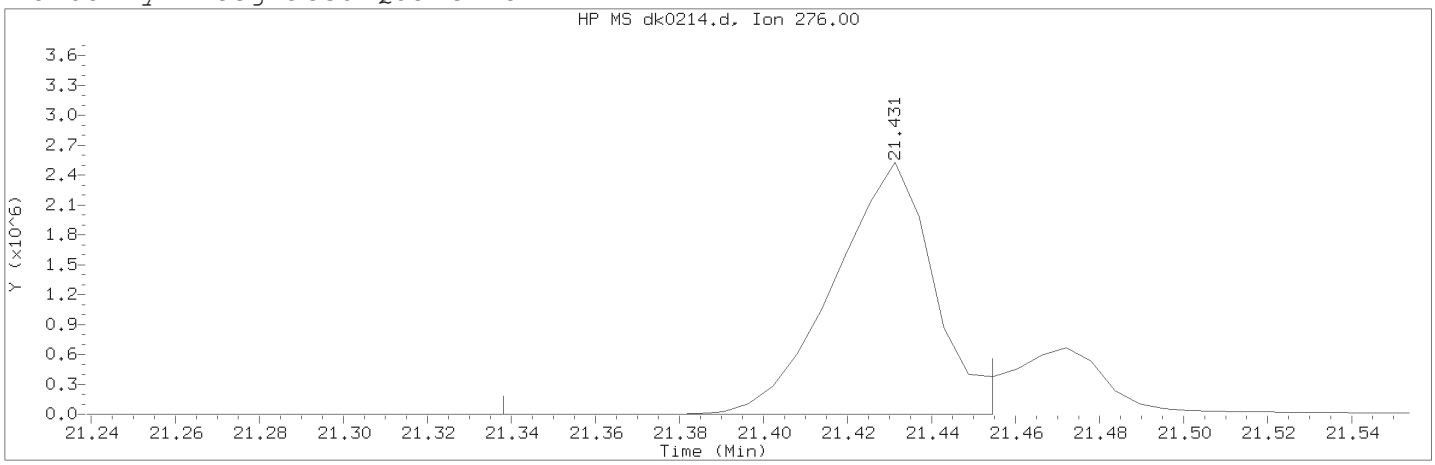
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1258		
Retention Time (minutes)	: 9.319		
Quant Ion	: 113.00		
Area	: 3089		
On-column Amount (ng/ul)	: 0.1879		
Integration start scan	: 1255	Integration stop scan:	1260
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: ARTransue

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

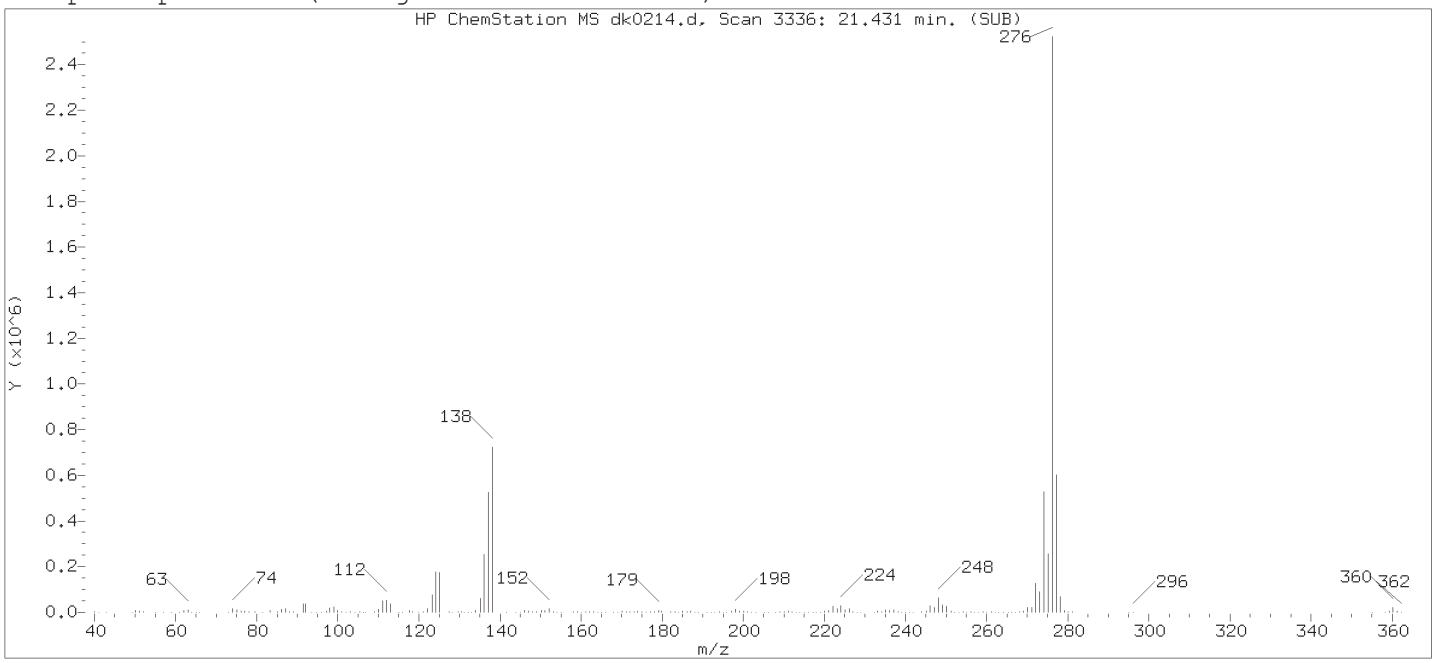
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3336
Retention Time (minutes) : 21.431
Quant Ion : 276.00
Area (flag) : 4179809M
On-Column Amount (ng/ul) : 22.4858
Integration start scan : 3319 Integration stop scan: 3339
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

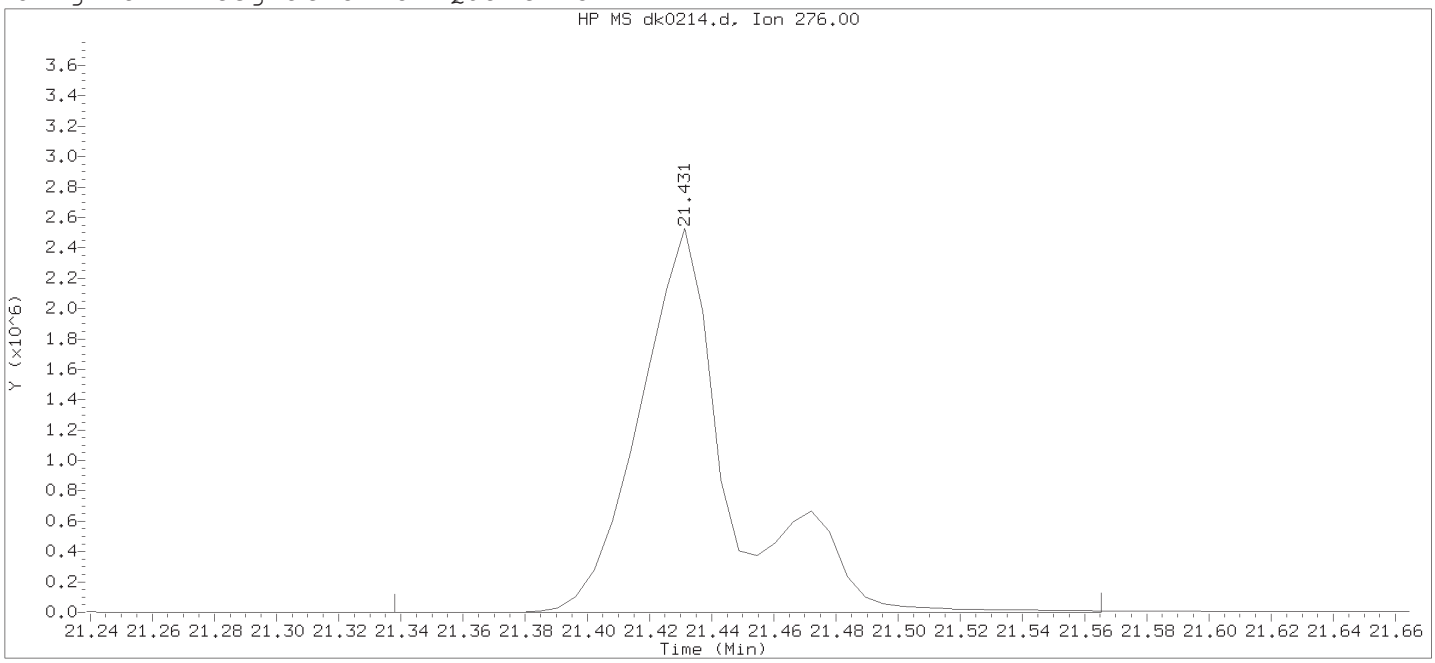
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:18.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



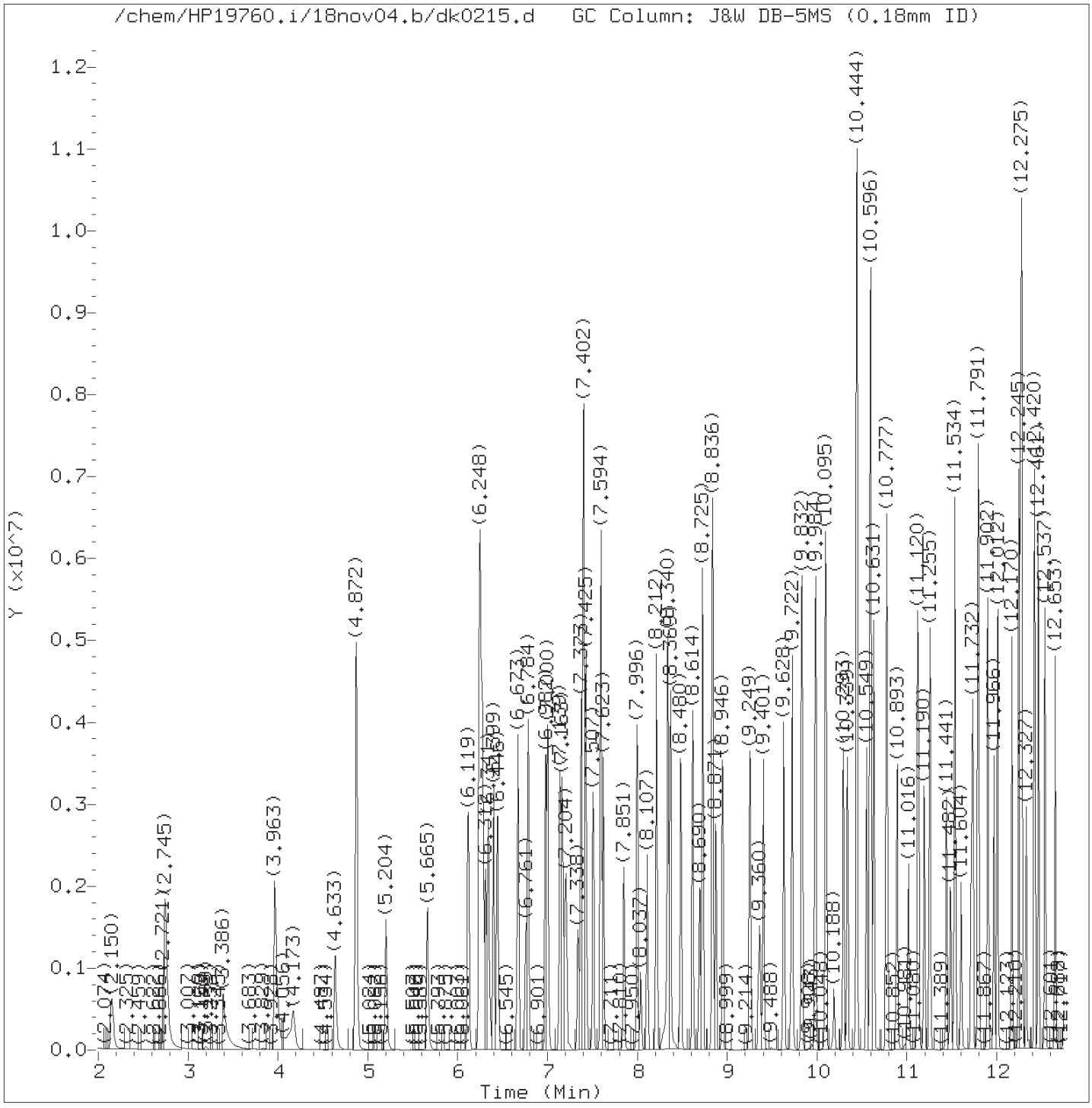
Data File: /chem/HP19760.i/18nov04.b/dk0214.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 13:40 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 14:09
Date, time and analyst ID of latest file update: 04-Nov-2018 14:09 Automation

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compound Number	:	219
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	3336
Retention Time (minutes)	:	21.431
Quant Ion	:	276.00
Area	:	5181161
On-column Amount (ng/ul)	:	32.5444
Integration start scan	:	3319 Integration stop scan: 3358
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: 12405



Total Ion Chromatogram (TIC)

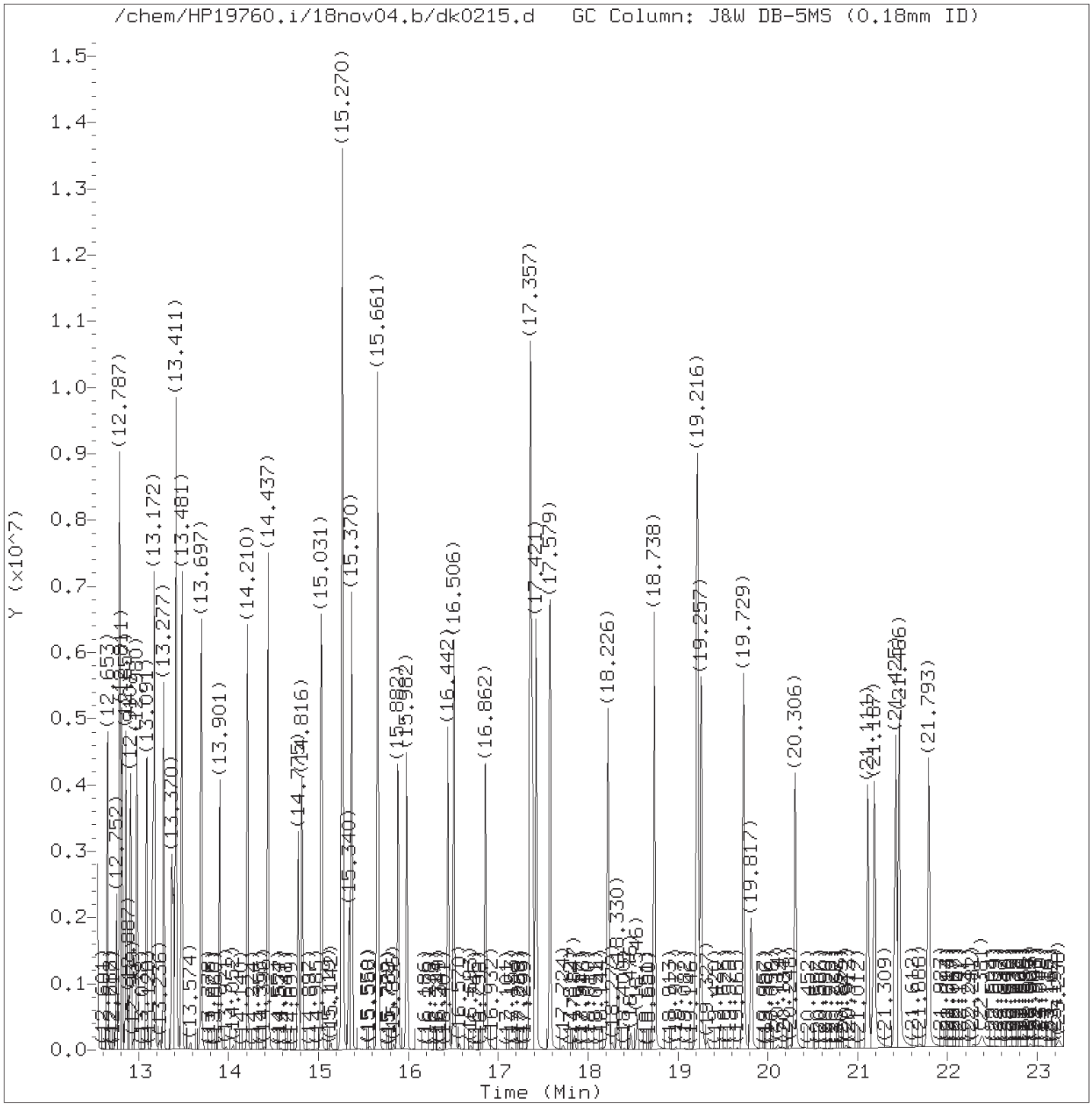
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.150	88	619438	12.664
4) N-Nitrosodimethylamine	(1)	2.721	74	947413	12.645
5) Pyridine	(1)	2.751	79	1571322	12.546
7) 2-Picoline	(1)	3.963	93	1577765	12.640
8) N-Nitrosomethylethylamine	(1)	4.173	88	691280	12.704
9) Methyl methanesulfonate	(1)	4.639	80	739349	12.432
11)$2-Fluorophenol	(1)	4.872	112	2393412	25.114
13) N-Nitrosodiethylamine	(1)	5.204	102	643941	12.667
42) Total Cresols	(1)			2507502	25.441
15) Ethyl methanesulfonate	(1)	5.665	109	599472	12.465
16) Benzaldehyde	(1)	6.119	77	994103	13.560
17)$Phenol-d6	(1)	6.242	99	3340550	25.290
18) Phenol	(1)	6.265	94	1908980	12.639
19) Aniline	(1)	6.283	93	2230443	12.655
20) a-methylstyrene	(1)	6.358	118	116649	12.737
22) bis(2-Chloroethyl)ether	(1)	6.399	93	1404680	12.659
23) 2-Chlorophenol	(1)	6.446	128	1140619	12.664
24) 1,3-Dichlorobenzene	(1)	6.673	146	1184471	12.671
25)*1,4-Dichlorobenzene-d4	(1)	6.761	152	285497	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	1187008	12.656
27) Benzyl alcohol	(1)	6.976	108	811853	12.896
28) 1,2-Dichlorobenzene	(1)	7.005	146	1121596	12.649
30) Indene	(1)	7.139	115	1299584	12.729
31) 2-Methylphenol	(1)	7.163	108	1179077	12.714
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.204	45	1633082	12.697
34) bis(2-Chloroisopropyl)ether	(1)	7.204	45	1633082	12.697
35) N-Nitrosopyrrolidine	(1)	7.338	100	679858	12.918
36) Acetophenone	(1)	7.373	105	1626130	12.723
97) Isosafrole	(3)			801400	12.388
38) N-Nitroso-di-n-propylamine	(1)	7.396	70	1024583	12.831
37) 4-Methylphenol	(1)	7.402	108	1328425	12.727
39) N-Nitrosomorpholine	(1)	7.408	56	736172	12.536
40) o-Toluidine	(1)	7.425	106	1995888	12.666
43) Hexachloroethane	(1)	7.507	117	550084	12.581
44)$Nitrobenzene-d5	(2)	7.594	82	2981318	25.017
45) Nitrobenzene	(2)	7.623	77	1490200	12.496
48) N-Nitrosopiperidine	(2)	7.851	114	588884	12.476
50) Isophorone	(2)	7.996	82	2589533	12.471
120) 2,4_2,6-Dinitrotoluenes	(3)			1046730	25.300
51) 2-Nitrophenol	(2)	8.113	139	571136	12.515

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.212	107	1232729	12.451
57) O,O,O-Triethylphosphorothioate	(2)	8.340	198	453125	12.434
56) Benzoic acid	(2)	8.358	105	864102M	12.680
55) bis(2-Chloroethoxy)methane	(2)	8.369	93	1583642	12.542
60) 2,4-Dichlorophenol	(2)	8.486	162	843828	12.534
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	880297	12.463
65)*Naphthalene-d8	(2)	8.690	136	1063802	5.000
66) Naphthalene	(2)	8.725	128	3169457	12.411
146) Diallate trans/cis	(4)			1190952	12.577
67) 4-Chloroaniline	(2)	8.836	127	1236637	12.401
68) 2,6-Dichlorophenol	(2)	8.841	162	806746	12.487
69) Hexachloropropene	(2)	8.876	213	552732	12.404
71) Hexachlorobutadiene	(2)	8.952	225	466266	12.320
75) Quinoline	(2)	9.249	129	1807089	12.383
76) Caprolactam	(2)	9.360	113	352320	12.791
77) N-Nitrosodi-n-butylamine	(2)	9.407	84	876797	11.054
80) 4-Chloro-3-methylphenol	(2)	9.628	107	1003636	12.377
82) Safrole	(2)	9.722	162	747729	12.465
83) 2-Methylnaphthalene	(2)	9.832	142	1984143	12.631
84) 1-Methylnaphthalene	(2)	9.984	142	1884881	12.779
85) Hexachlorocyclopentadiene	(3)	10.095	237	496784	12.706
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.100	216	812368	12.610
88) cis-Isosafrole	(3)	10.188	162	127881	2.125
90) 2,4,6-Trichlorophenol	(3)	10.293	196	542790	12.446
92) 2,4,5-Trichlorophenol	(3)	10.339	196	575761	12.798
93)$2-Fluorobiphenyl	(3)	10.444	172	4086975	25.200
99) Diphenyl ether	(3)	10.444	170	923729	12.601
94) trans-Isosafrole	(3)	10.549	162	673519	10.265
95) 1,1'-Biphenyl	(3)	10.590	154	2257813	12.863
96) 2-Chloronaphthalene	(3)	10.602	162	1738975	12.216
98) 1-Chloronaphthalene	(3)	10.631	162	1679909	13.293
100) 2-Nitroaniline	(3)	10.782	138	626629	12.807
104) 1,4-Naphthoquinone	(3)	10.893	158	705628	12.813
105) 1,4-Dinitrobenzene	(3)	11.016	168	319562	12.586
106) Dimethylphthalate	(3)	11.120	163	1849427	12.568
107) 1,3-Dinitrobenzene	(3)	11.132	168	355979	12.696
108) 2,6-Dinitrotoluene	(3)	11.196	165	445575	12.539
109) Acenaphthylene	(3)	11.255	152	2558620	13.008
112) 3-Nitroaniline	(3)	11.441	138	525922	12.638
113)*Acenaphthene-d10	(3)	11.482	164	481163	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.534	153	1794468	12.606
115) 2,4-Dinitrophenol	(3)	11.604	184	297775	12.409
116) 4-Nitrophenol	(3)	11.715	109	377665	12.562
117) Pentachlorobenzene	(3)	11.732	250	627642	12.360
119) Dibenzofuran	(3)	11.791	168	2481719	12.672
118) 2,4-Dinitrotoluene	(3)	11.802	165	601155	12.734
121) 1-Naphthylamine	(3)	11.902	143	1848343	12.483
122) 2,3,4,6-Tetrachlorophenol	(3)	11.971	232	426158	12.550
123) 2-Naphthylamine	(3)	12.012	143	1879190	12.594
124) Diethylphthalate	(3)	12.170	149	1922005	12.707
126) Fluorene	(3)	12.245	166	1941635	12.898
125) Thionazin	(3)	12.263	107	421134	12.811
128) 5-Nitro-o-toluidine	(3)	12.275	152	609954	12.741
127) 4-Chlorophenyl-phenylether	(3)	12.275	204	924803	12.801
129) 4-Nitroaniline	(3)	12.286	138	579656	12.742
130) 4,6-Dinitro-2-methylphenol	(4)	12.327	198	371929	12.728
131) N-Nitrosodiphenylamine	(4)	12.420	169	1618263	12.504
132) NDPA as diphenylamine	(4)	12.420	169	1618263	12.504
134) 1,2-Diphenylhydrazine	(4)	12.461	77	2655176	12.562
135)$2,4,6-Tribromophenol	(3)	12.537	330	429385	25.172
137) Tetraethyldithiopyrophosphate	(4)	12.648	97	385319	12.430
139) 1,3,5-Trinitrobenzene	(4)	12.752	213	232420	12.272
140) Diallate (peak 1)	(4)	12.782	86	1025438	10.426
141) Phorate	(4)	12.787	75	1588629	12.656
142) Phenacetin	(4)	12.811	108	1211349	12.605
143) 4-Bromophenyl-phenylether	(4)	12.857	248	465259	12.436
144) Diallate (peak 2)	(4)	12.887	86	165514	2.155
145) Hexachlorobenzene	(4)	12.910	284	470478	12.363
147) Dimethoate	(4)	12.980	87	1036684	12.675
148) Atrazine	(4)	13.091	200	488169	13.185
149) Pentachlorophenol	(4)	13.155	266	340691	12.428
150) 4-Aminobiphenyl	(4)	13.172	169	1449756	12.778
151) Pentachloronitrobenzene	(4)	13.178	237	223678	12.435
152) Pronamide	(4)	13.277	173	864918	12.597
153)*Phenanthrene-d10	(4)	13.388	188	903320	5.000
154) Dinoseb	(4)	13.411	211	531058	12.535
155) Phenanthrene	(4)	13.417	178	2748827	12.445
157) Anthracene	(4)	13.481	178	2828379	12.953
163) Carbazole	(4)	13.697	167	2740234	12.505
164) Methyl parathion	(4)	13.901	109	799319	12.598

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.210	149	3431782	12.617
167) Parathion	(4)	14.437	109	511664	12.493
168) 4-Nitroquinoline-1-oxide	(4)	14.443	190	356255	12.368
169) Octachlorostyrene	(4)	14.775	308	194438	12.700
171) Isodrin	(4)	14.816	193	325917	12.466
222) Total PAHs	(6)			48341528	227.663
173) Fluoranthene	(4)	15.031	202	3139264	13.212
174) Benzidine	(5)	15.270	184	7010773	39.072
175)*Pyrene-d10	(5)	15.340	212	895336	5.000
177) Pyrene	(5)	15.370	202	3252227	12.524
179)$Terphenyl-d14	(5)	15.661	244	3829508	25.305
182) p-Dimethylaminoazobenzene	(5)	15.888	225	562377	12.656
185) Chlorobenzilate	(5)	15.982	139	1069455	12.683
187) 3,3'-Dimethylbenzidine	(5)	16.442	212	2074045	12.584
188) Butylbenzylphthalate	(5)	16.506	149	1721466	12.642
191) 2-Acetylaminofluorene	(5)	16.862	181	1363775	12.597
193) 3,3'-Dichlorobenzidine	(5)	17.357	252	1184524	12.732
195) Benzo(a)anthracene	(5)	17.357	228	3054173	13.798
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.380	231	656543	12.819
196) Chrysene	(5)	17.421	228	2963817	13.051
199) bis(2-Ethylhexyl)phthalate	(5)	17.579	149	2446511	12.596
203) 6-Methylchrysene	(5)	18.226	242	2055007	12.642
205) Di-n-octylphthalate	(6)	18.738	149	4232953	12.355
206) Benzo(b)fluoranthene	(6)	19.211	252	3051054	13.220
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.216	256	1425066	12.354
208) Benzo(k)fluoranthene	(6)	19.257	252	3098928	13.077
211) Benzo(a)pyrene	(6)	19.729	252	2889399	13.534
213)*Perylene-d12	(6)	19.817	264	922764	5.000
215) 3-Methylcholanthrene	(6)	20.306	268	1354186	12.351
217) Dibenz(a,h)acridine	(6)	21.111	279	2123381	12.342
218) Dibenz(a,j)acridine	(6)	21.187	279	2361914	12.781
219) Indeno(1,2,3-cd)pyrene	(6)	21.425	276	2567603M	13.558
220) Dibenz(a,h)anthracene	(6)	21.466	278	2745348	13.303
221) Benzo(g,h,i)perylene	(6)	21.793	276	2669305	13.049

M = Compound was manually integrated.
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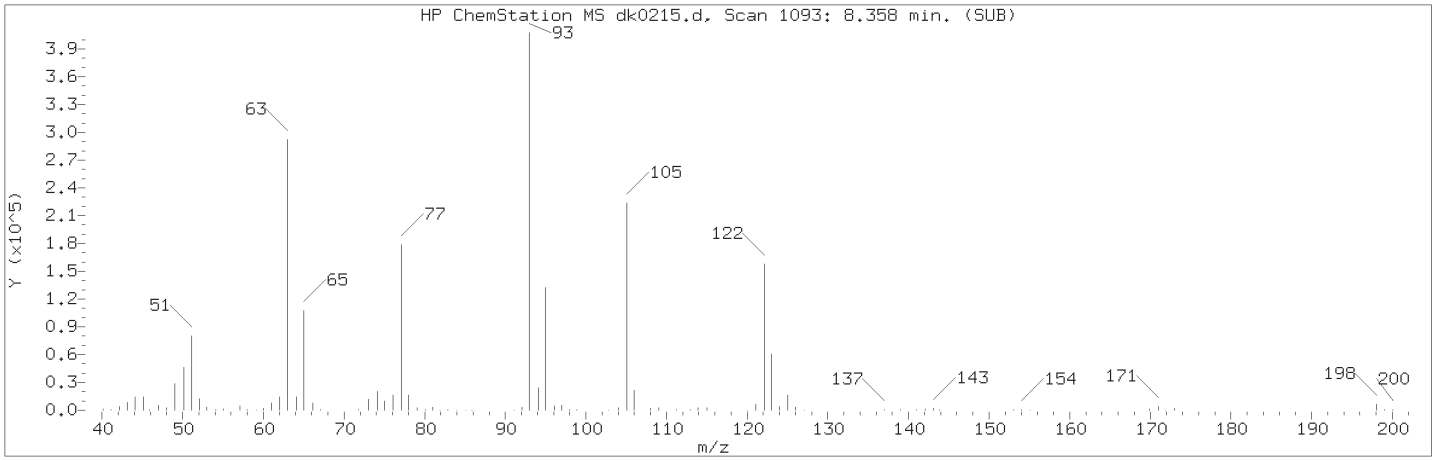
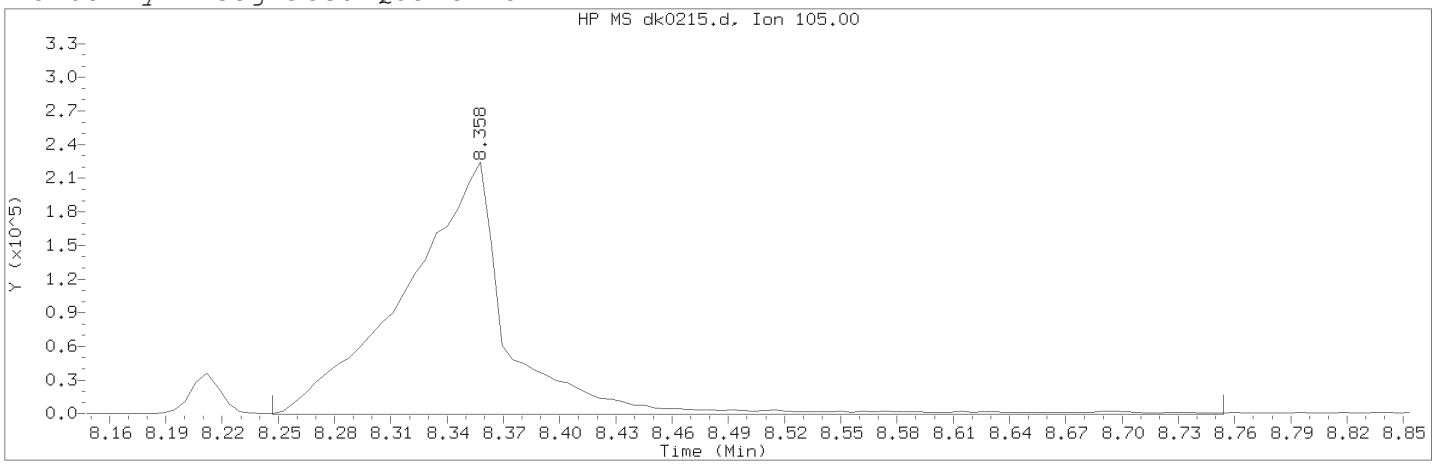
Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1093		
Retention Time (minutes)	: 8.358		
Quant Ion	: 105.00		
Area (flag)	: 864102M		
On-Column Amount (ng/ul)	: 12.6795		
Integration start scan	: 1073	Integration stop scan:	1160
Y at integration start	: -378	Y at integration end:	-378

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

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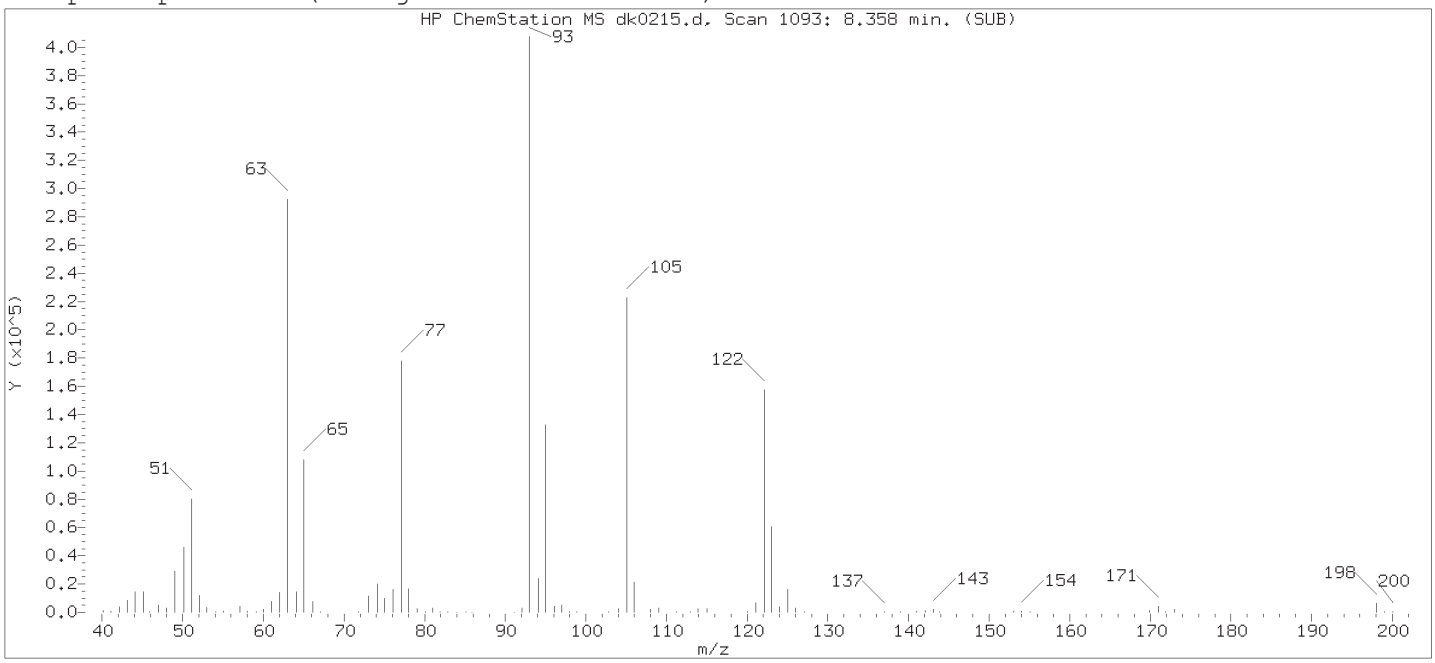
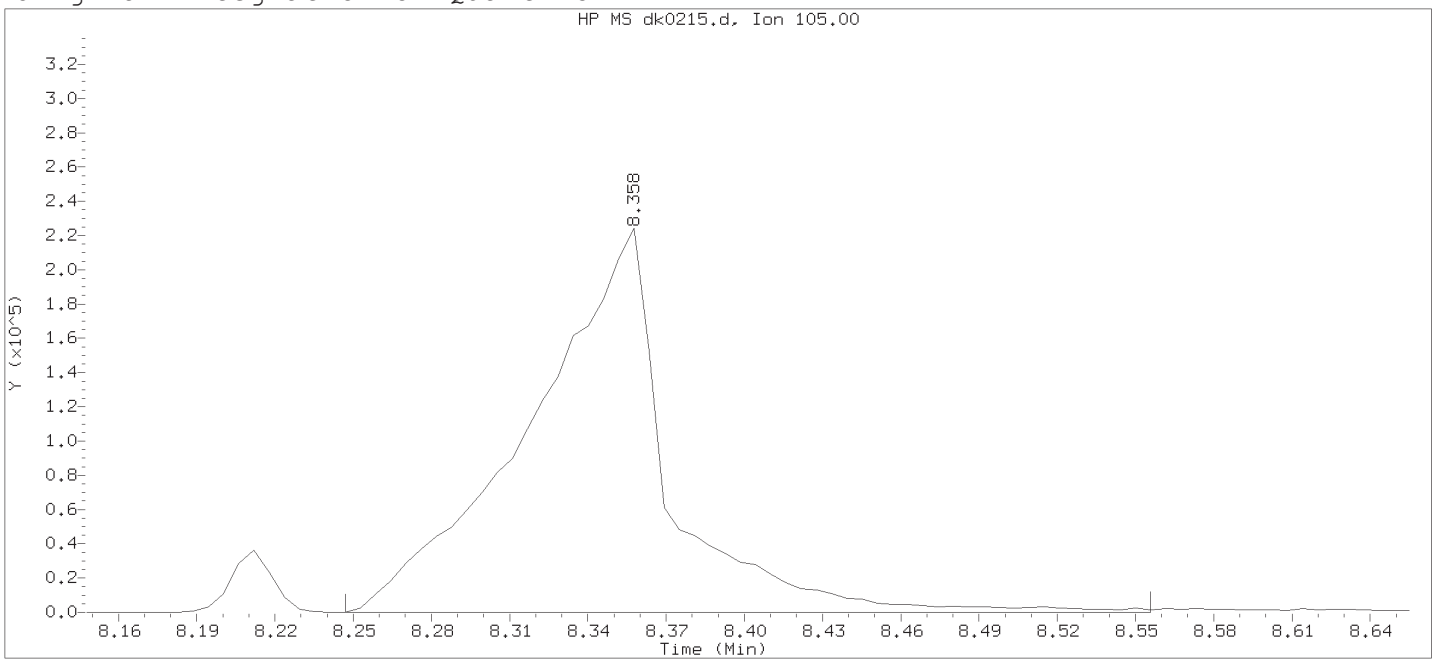
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 14:37
Date, time and analyst ID of latest file update: 04-Nov-2018 14:37 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1093		
Retention Time (minutes)	: 8.358		
Quant Ion	: 105.00		
Area	: 835592		
On-column Amount (ng/ul)	: 13.6130		
Integration start scan	: 1073	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

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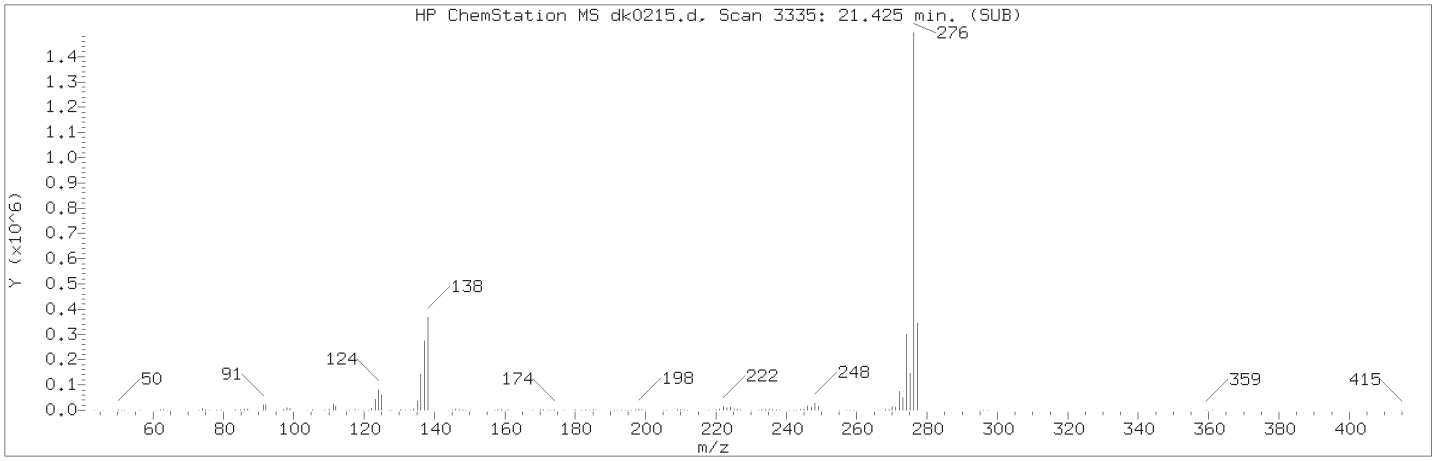
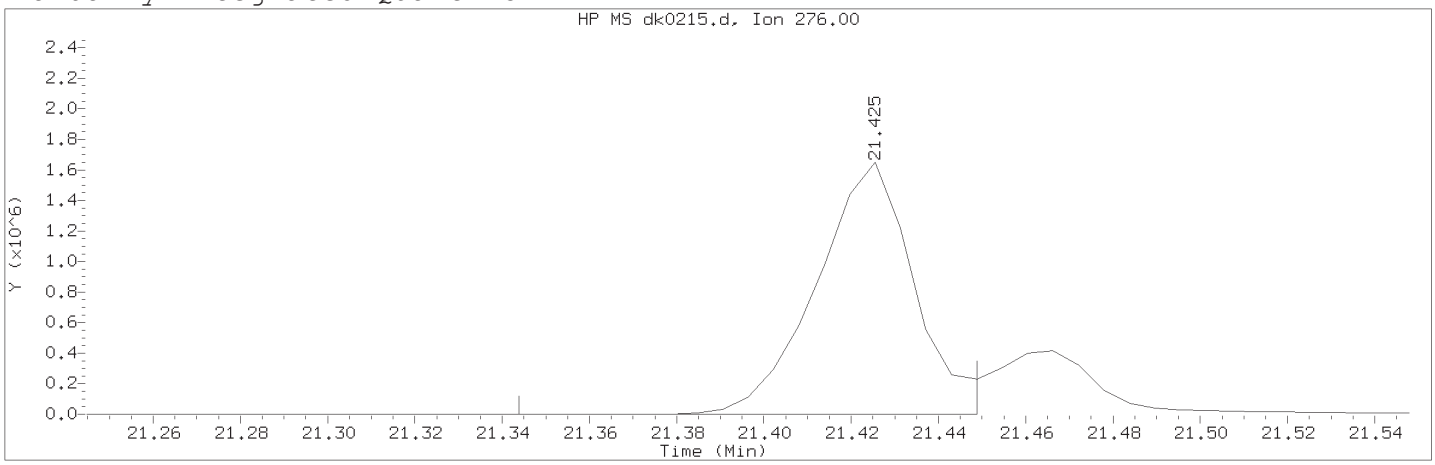
Target 3.5 esignature user id: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3335		
Retention Time (minutes)	: 21.425		
Quant Ion	: 276.00		
Area (flag)	: 2567603M		
On-Column Amount (ng/ul)	: 13.5584		
Integration start scan	: 3320	Integration stop scan:	3338
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

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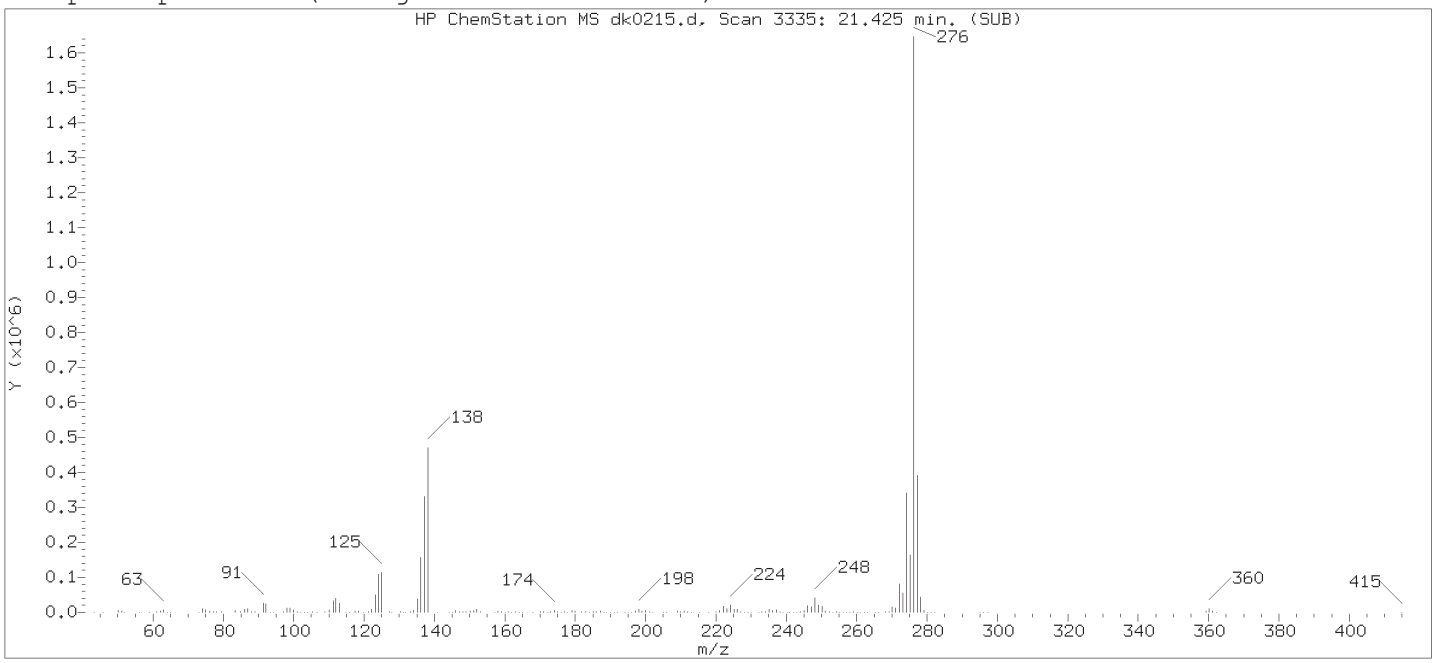
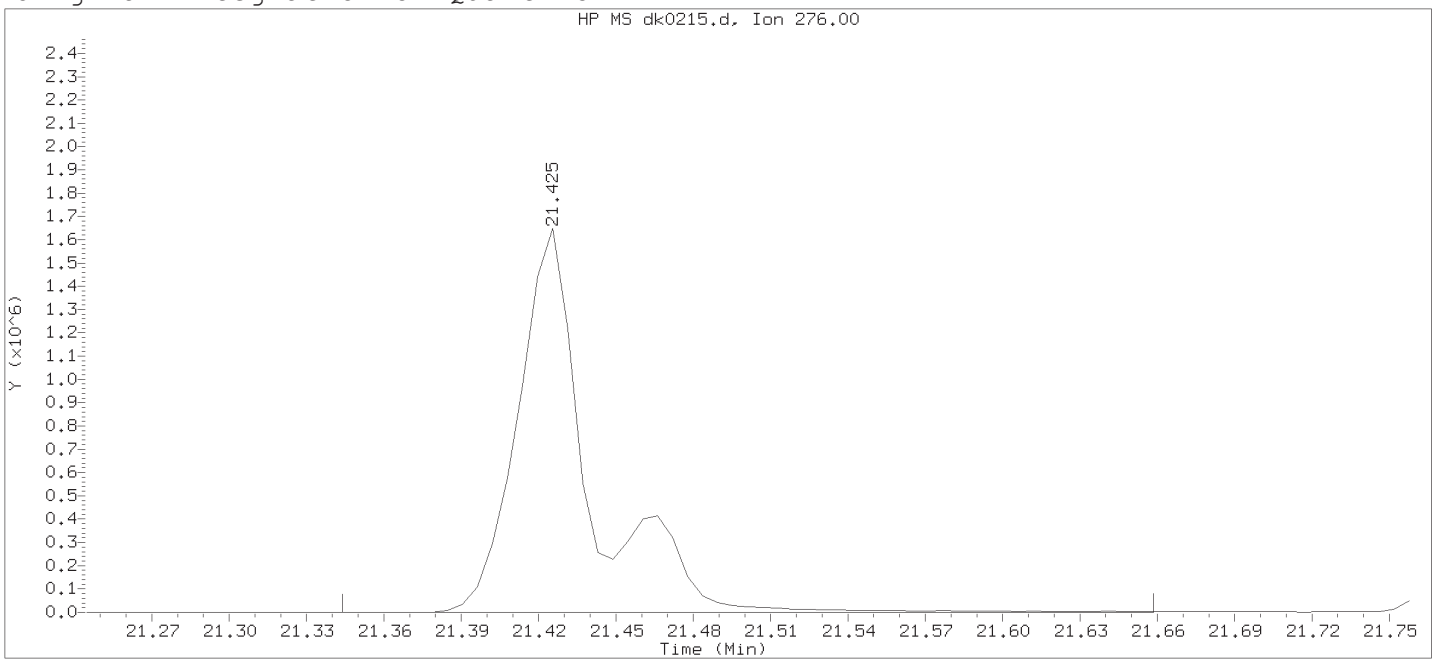
Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0215.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:09 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 14:37
Date, time and analyst ID of latest file update: 04-Nov-2018 14:37 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3335		
Retention Time (minutes)	: 21.425		
Quant Ion	: 276.00		
Area	: 3246543		
On-column Amount (ng/ul)	: 18.6965		
Integration start scan	: 3320	Integration stop scan:	3374
Y at integration start	: 0	Y at integration end:	0

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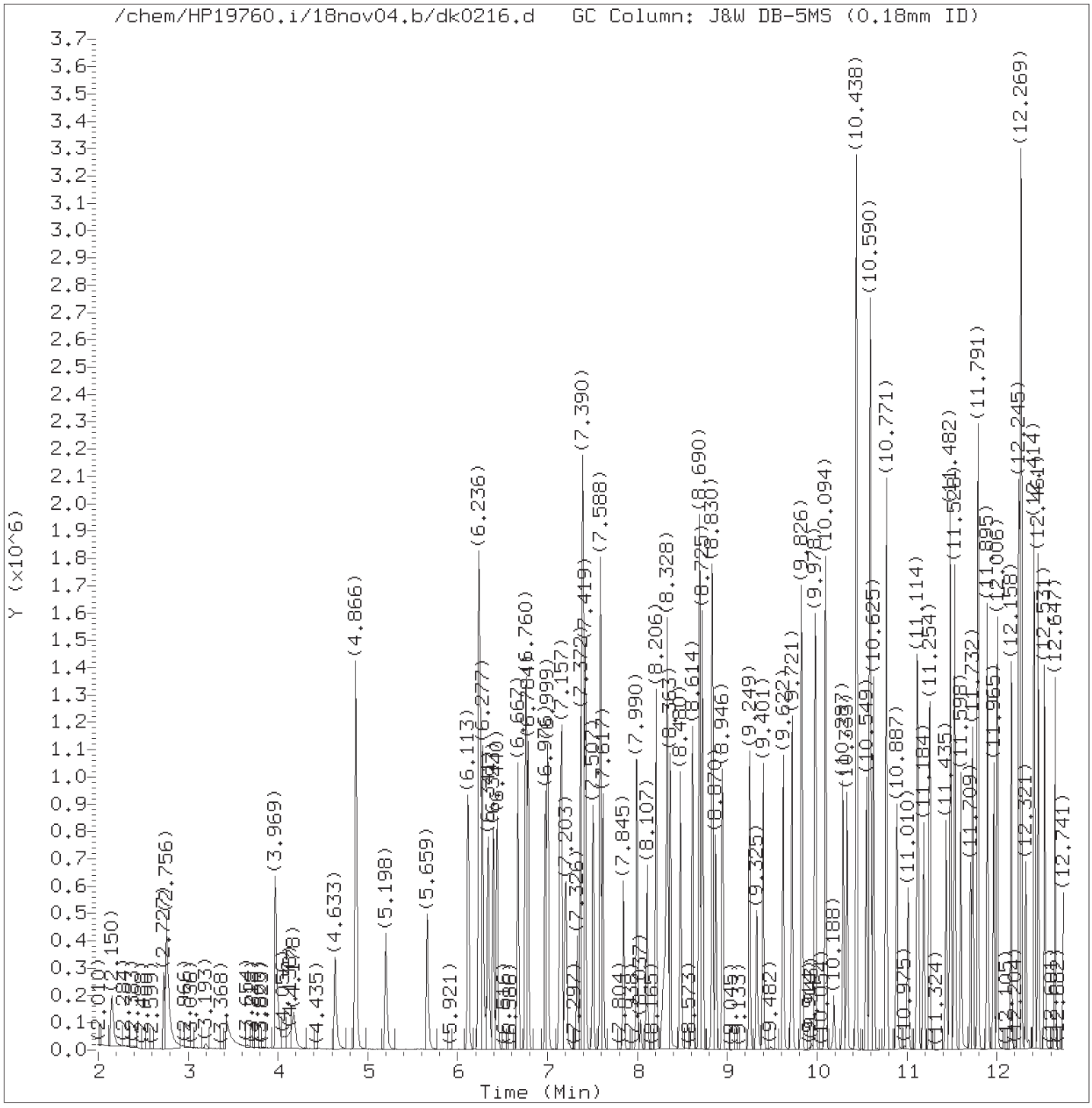
Target 3.5 esignature user ID: ARTransue



Total Ion Chromatogram (TIC)

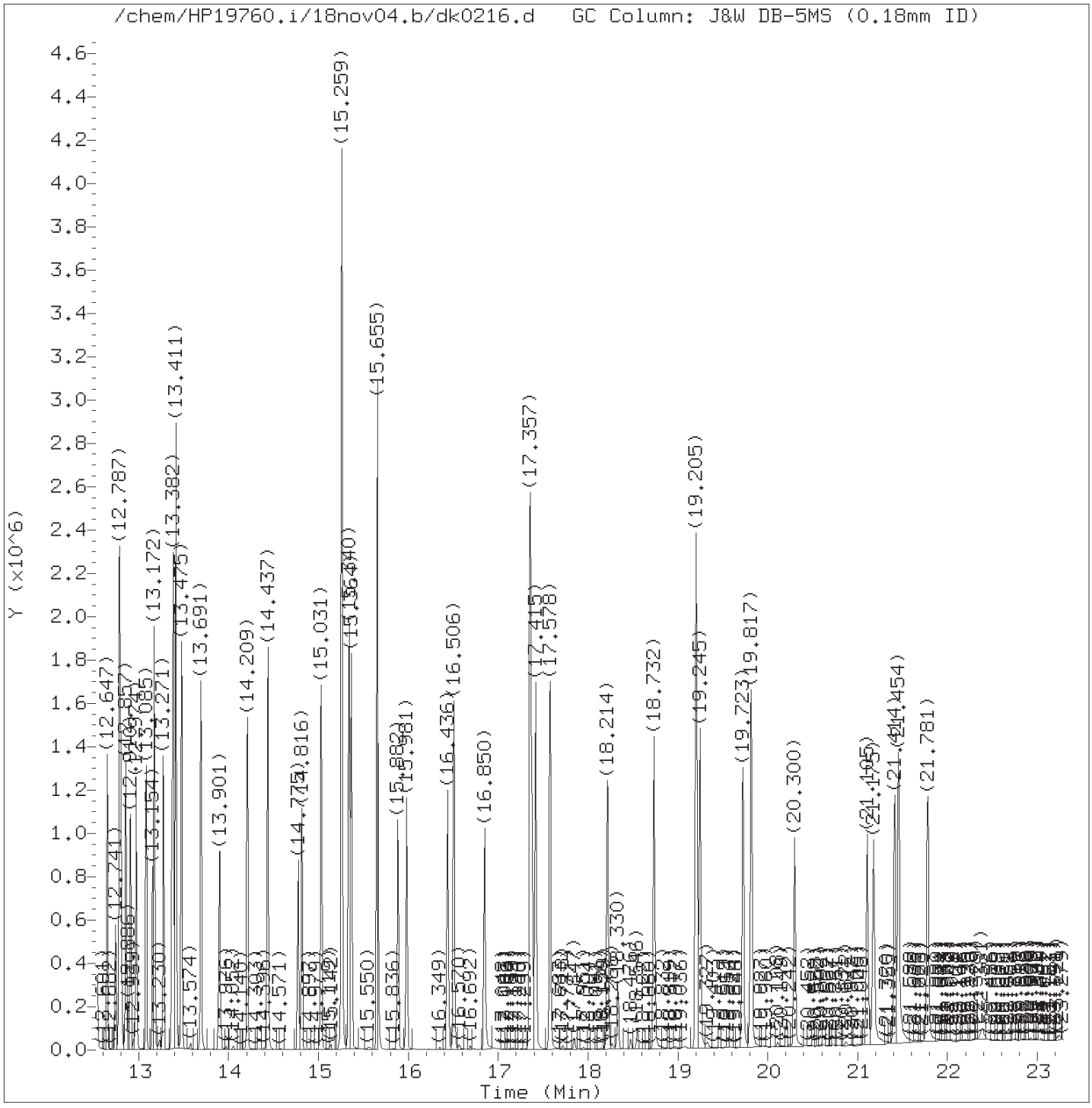
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.150	88	162380	3.596
4) N-Nitrosodimethylamine	(1)	2.727	74	255665	3.676
5) Pyridine	(1)	2.756	79	436698	3.740
7) 2-Picoline	(1)	3.969	93	428332	3.693
8) N-Nitrosomethylethylamine	(1)	4.178	88	180642	3.596
9) Methyl methanesulfonate	(1)	4.633	80	207580	3.743
11)$2-Fluorophenol	(1)	4.866	112	646360	7.315
13) N-Nitrosodiethylamine	(1)	5.198	102	166117	3.550
15) Ethyl methanesulfonate	(1)	5.659	109	161940	3.637
42) Total Cresols	(1)			678780	7.406
16) Benzaldehyde	(1)	6.113	77	307081	4.320
17)$Phenol-d6	(1)	6.236	99	899507	7.339
18) Phenol	(1)	6.253	94	519692	3.701
19) Aniline	(1)	6.277	93	609646	3.716
20) a-methylstyrene	(1)	6.358	118	27885	3.351
22) bis(2-Chloroethyl)ether	(1)	6.393	93	384677	3.723
23) 2-Chlorophenol	(1)	6.440	128	304578	3.650
24) 1,3-Dichlorobenzene	(1)	6.667	146	322745	3.711
25)*1,4-Dichlorobenzene-d4	(1)	6.760	152	266319	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	321270	3.687
27) Benzyl alcohol	(1)	6.976	108	201530	3.491
28) 1,2-Dichlorobenzene	(1)	6.999	146	306791	3.717
30) Indene	(1)	7.139	115	321396	3.444
31) 2-Methylphenol	(1)	7.157	108	317956	3.690
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.203	45	448945	3.744
34) bis(2-Chloroisopropyl)ether	(1)	7.203	45	448945	3.744
35) N-Nitrosopyrrolidine	(1)	7.326	100	176315	3.622
36) Acetophenone	(1)	7.367	105	450200	3.771
97) Isosafrole	(3)			211925	3.591
38) N-Nitroso-di-n-propylamine	(1)	7.390	70	274249	3.695
37) 4-Methylphenol	(1)	7.390	108	360824	3.714
39) N-Nitrosomorpholine	(1)	7.396	56	201232	3.689
40) o-Toluidine	(1)	7.419	106	548422	3.735
43) Hexachloroethane	(1)	7.507	117	152003	3.731
44)$Nitrobenzene-d5	(2)	7.588	82	807731	7.338
45) Nitrobenzene	(2)	7.617	77	407240	3.691
48) N-Nitrosopiperidine	(2)	7.845	114	159521	3.661
50) Isophorone	(2)	7.996	82	684105	3.586
120) 2,4_2,6-Dinitrotoluenes	(3)			275923	7.286
51) 2-Nitrophenol	(2)	8.107	139	146405	3.510

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.206	107	333034	3.647
56) Benzoic acid	(2)	8.328	105	414806M	6.724
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	123803	3.676
55) bis(2-Chloroethoxy)methane	(2)	8.363	93	433841	3.710
60) 2,4-Dichlorophenol	(2)	8.480	162	222393	3.594
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	240912	3.688
65)*Naphthalene-d8	(2)	8.690	136	987946	5.000
66) Naphthalene	(2)	8.725	128	872274	3.690
146) Diallate trans/cis	(4)			311778	3.630
67) 4-Chloroaniline	(2)	8.830	127	339227	3.680
68) 2,6-Dichlorophenol	(2)	8.835	162	217114	3.644
69) Hexachloropropene	(2)	8.870	213	150771	3.664
71) Hexachlorobutadiene	(2)	8.946	225	130230	3.714
75) Quinoline	(2)	9.249	129	484404	3.608
76) Caprolactam	(2)	9.325	113	88828	3.525
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	231630	3.249
80) 4-Chloro-3-methylphenol	(2)	9.622	107	265686	3.570
82) Safrole	(2)	9.721	162	193017	3.518
83) 2-Methylnaphthalene	(2)	9.826	142	535899	3.686
84) 1-Methylnaphthalene	(2)	9.978	142	511732	3.738
85) Hexachlorocyclopentadiene	(3)	10.094	237	131936	3.678
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.094	216	220830	3.725
88) cis-Isosafrole	(3)	10.188	162	32394	0.594
90) 2,4,6-Trichlorophenol	(3)	10.287	196	138599	3.504
92) 2,4,5-Trichlorophenol	(3)	10.333	196	150157	3.646
93)$2-Fluorobiphenyl	(3)	10.438	172	1128176	7.537
99) Diphenyl ether	(3)	10.438	170	251875	3.732
94) trans-Isosafrole	(3)	10.549	162	179531	2.996
95) 1,1'-Biphenyl	(3)	10.590	154	613599	3.783
96) 2-Chloronaphthalene	(3)	10.596	162	490891	3.742
98) 1-Chloronaphthalene	(3)	10.625	162	436807	3.750
100) 2-Nitroaniline	(3)	10.776	138	157210	3.535
104) 1,4-Naphthoquinone	(3)	10.887	158	170278	3.426
105) 1,4-Dinitrobenzene	(3)	11.010	168	81690	3.539
106) Dimethylphthalate	(3)	11.114	163	507089	3.740
107) 1,3-Dinitrobenzene	(3)	11.126	168	91516	3.581
108) 2,6-Dinitrotoluene	(3)	11.190	165	119656	3.672
109) Acenaphthylene	(3)	11.254	152	681395	3.757
112) 3-Nitroaniline	(3)	11.435	138	139914	3.667
113)*Acenaphthene-d10	(3)	11.482	164	443565	5.000

M = Compound was manually integrated.
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Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.528	153	487758	3.722
115) 2,4-Dinitrophenol	(3)	11.598	184	141364	6.585
116) 4-Nitrophenol	(3)	11.709	109	94494	3.473
117) Pentachlorobenzene	(3)	11.732	250	176644	3.769
119) Dibenzofuran	(3)	11.791	168	670937	3.723
118) 2,4-Dinitrotoluene	(3)	11.796	165	156267	3.622
121) 1-Naphthylamine	(3)	11.895	143	499277	3.676
122) 2,3,4,6-Tetrachlorophenol	(3)	11.965	232	108820	3.528
123) 2-Naphthylamine	(3)	12.006	143	510772	3.721
124) Diethylphthalate	(3)	12.158	149	498008	3.606
126) Fluorene	(3)	12.245	166	525033	3.778
125) Thionazin	(3)	12.257	107	109402	3.637
128) 5-Nitro-o-toluidine	(3)	12.269	152	161902	3.685
129) 4-Nitroaniline	(3)	12.274	138	153212	3.672
127) 4-Chlorophenyl-phenylether	(3)	12.274	204	251877	3.776
130) 4,6-Dinitro-2-methylphenol	(4)	12.321	198	84859	3.276
131) N-Nitrosodiphenylamine	(4)	12.414	169	434044	3.684
132) NDPA as diphenylamine	(4)	12.414	169	434044	3.684
134) 1,2-Diphenylhydrazine	(4)	12.461	77	716504	3.715
135)$2,4,6-Tribromophenol	(3)	12.537	330	110632	7.124
137) Tetraethyldithiopyrophosphate	(4)	12.647	97	102884	3.653
139) 1,3,5-Trinitrobenzene	(4)	12.741	213	52362	3.145
140) Diallate (peak 1)	(4)	12.781	86	268419	3.009
141) Phorate	(4)	12.787	75	410240	3.608
142) Phenacetin	(4)	12.805	108	306648	3.539
143) 4-Bromophenyl-phenylether	(4)	12.857	248	129028	3.767
144) Diallate (peak 2)	(4)	12.886	86	43359	0.621
145) Hexachlorobenzene	(4)	12.910	284	127338	3.674
147) Dimethoate	(4)	12.974	87	256978	3.494
148) Atrazine	(4)	13.085	200	135485	3.949
149) Pentachlorophenol	(4)	13.154	266	80466	3.305
151) Pentachloronitrobenzene	(4)	13.172	237	59589	3.647
150) 4-Aminobiphenyl	(4)	13.172	169	377155	3.658
152) Pronamide	(4)	13.271	173	216404	3.503
153)*Phenanthrene-d10	(4)	13.382	188	826051	5.000
154) Dinoseb	(4)	13.411	211	118925	3.185
155) Phenanthrene	(4)	13.411	178	733428	3.651
157) Anthracene	(4)	13.475	178	743192	3.727
163) Carbazole	(4)	13.691	167	706561	3.569
164) Methyl parathion	(4)	13.895	109	189430	3.352

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on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.209	149	849816	3.478
168) 4-Nitroquinoline-1-oxide	(4)	14.437	190	65390	2.662
167) Parathion	(4)	14.437	109	121523	3.334
169) Octachlorostyrene	(4)	14.775	308	47592	3.464
171) Isodrin	(4)	14.816	193	83937	3.556
222) Total PAHs	(6)			12408213	67.098
173) Fluoranthene	(4)	15.031	202	799243	3.690
174) Benzidine	(5)	15.259	184	1809950	11.198
175)*Pyrene-d10	(5)	15.340	212	807478	5.000
177) Pyrene	(5)	15.364	202	859968	3.685
179)$Terphenyl-d14	(5)	15.655	244	996571	7.341
182) p-Dimethylaminoazobenzene	(5)	15.882	225	127828	3.288
185) Chlorobenzilate	(5)	15.981	139	265422	3.539
187) 3,3'-Dimethylbenzidine	(5)	16.436	212	495453	3.409
188) Butylbenzylphthalate	(5)	16.506	149	425152	3.516
191) 2-Acetylaminofluorene	(5)	16.850	181	296745	3.159
193) 3,3'-Dichlorobenzidine	(5)	17.351	252	285991	3.472
195) Benzo(a)anthracene	(5)	17.357	228	735989	3.697
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.374	231	157350	3.470
196) Chrysene	(5)	17.415	228	766698	3.745
199) bis(2-Ethylhexyl)phthalate	(5)	17.578	149	586569	3.422
203) 6-Methylchrysene	(5)	18.214	242	491979	3.428
205) Di-n-octylphthalate	(6)	18.732	149	952614	3.287
206) Benzo(b)fluoranthene	(6)	19.199	252	736870	3.676
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.205	256	337353	3.426
208) Benzo(k)fluoranthene	(6)	19.245	252	788587	3.805
211) Benzo(a)pyrene	(6)	19.723	252	683606	3.685
213)*Perylene-d12	(6)	19.817	264	804596	5.000
215) 3-Methylcholanthrene	(6)	20.300	268	324873	3.463
217) Dibenz(a,h)acridine	(6)	21.105	279	511826	3.475
218) Dibenz(a,j)acridine	(6)	21.181	279	572666	3.591
219) Indeno(1,2,3-cd)pyrene	(6)	21.414	276	610774M	3.707
220) Dibenz(a,h)anthracene	(6)	21.454	278	666034	3.709
221) Benzo(g,h,i)perylene	(6)	21.781	276	669733	3.754

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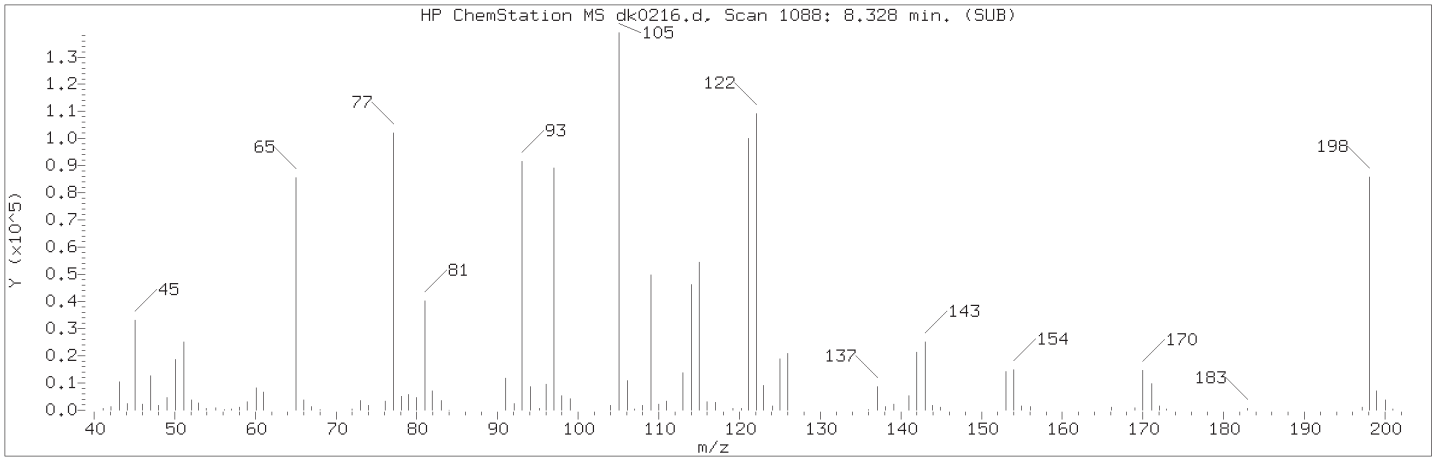
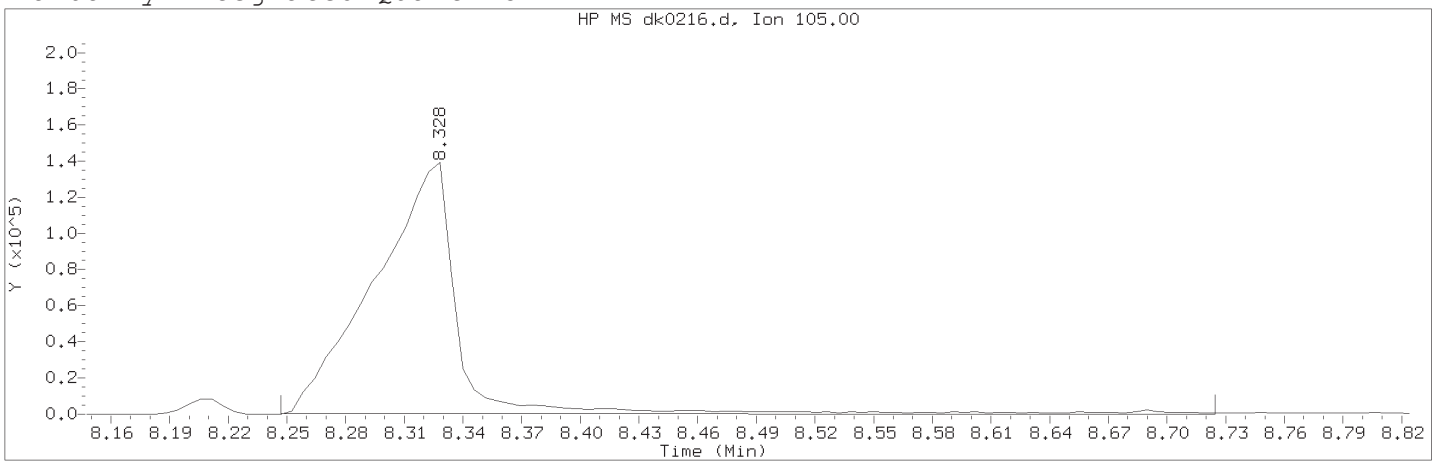
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

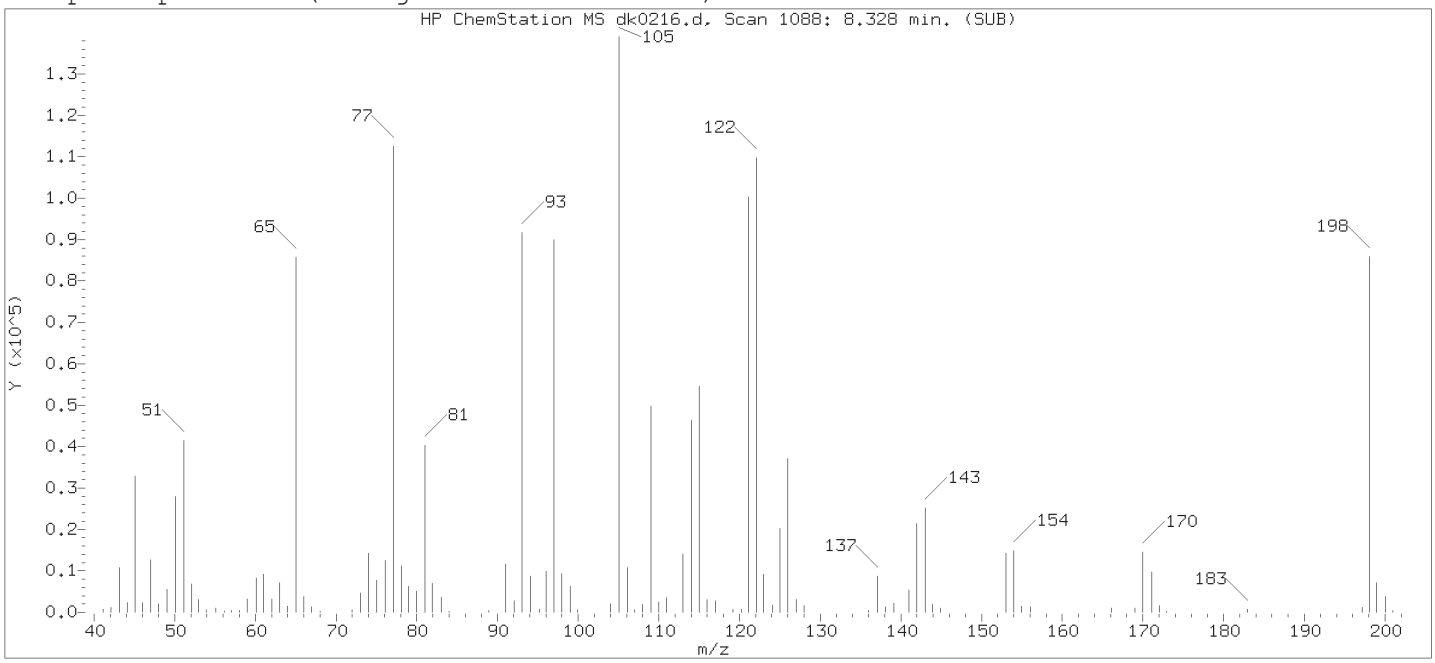
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1088
Retention Time (minutes) : 8.328
Quant Ion : 105.00
Area (flag) : 414806M
On-Column Amount (ng/ul) : 6.7237
Integration start scan : 1073 Integration stop scan: 1155
Y at integration start : 90 Y at integration end: -144

Reason for manual integration: improper integration

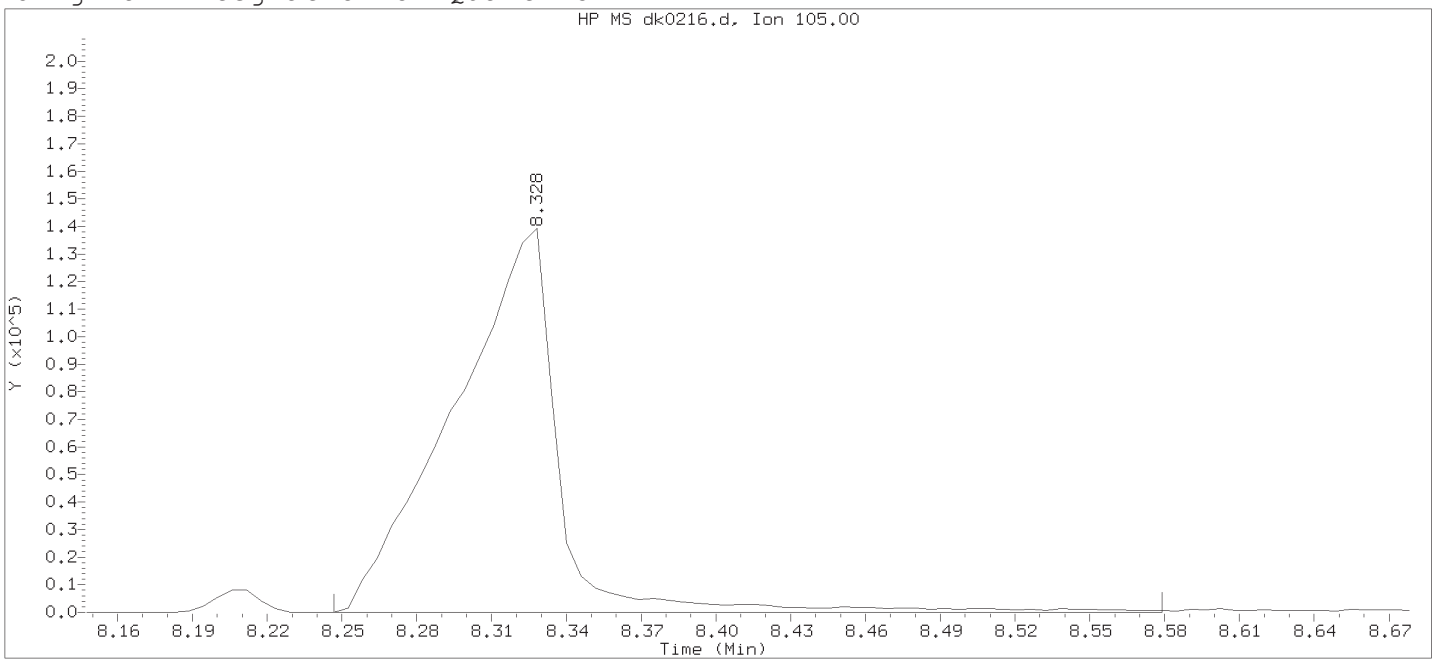
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

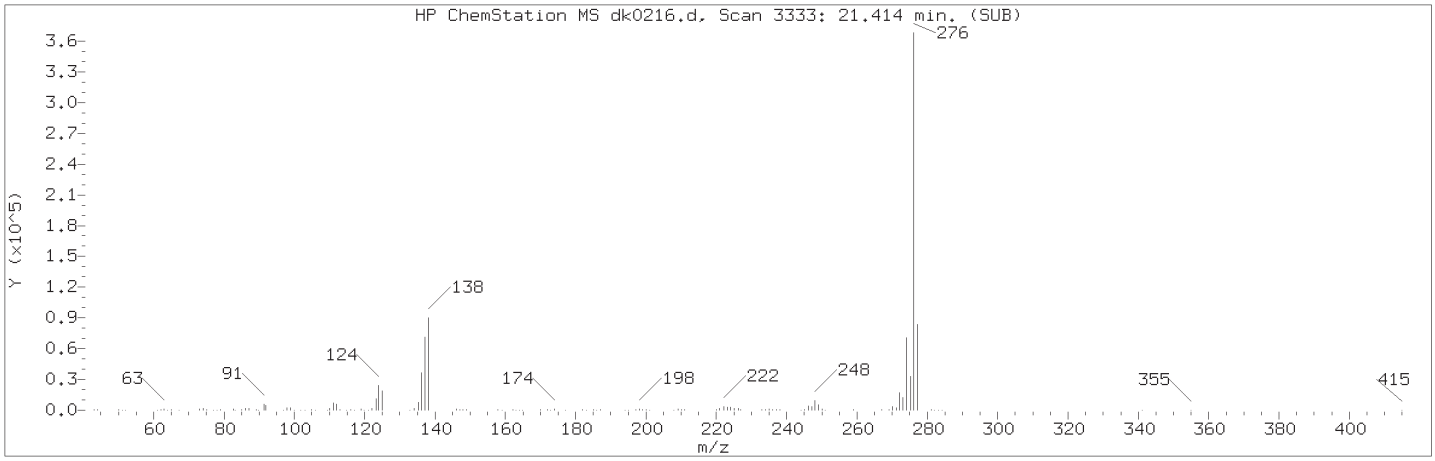
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 15:06
Date, time and analyst ID of latest file update: 04-Nov-2018 15:06 Automation

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

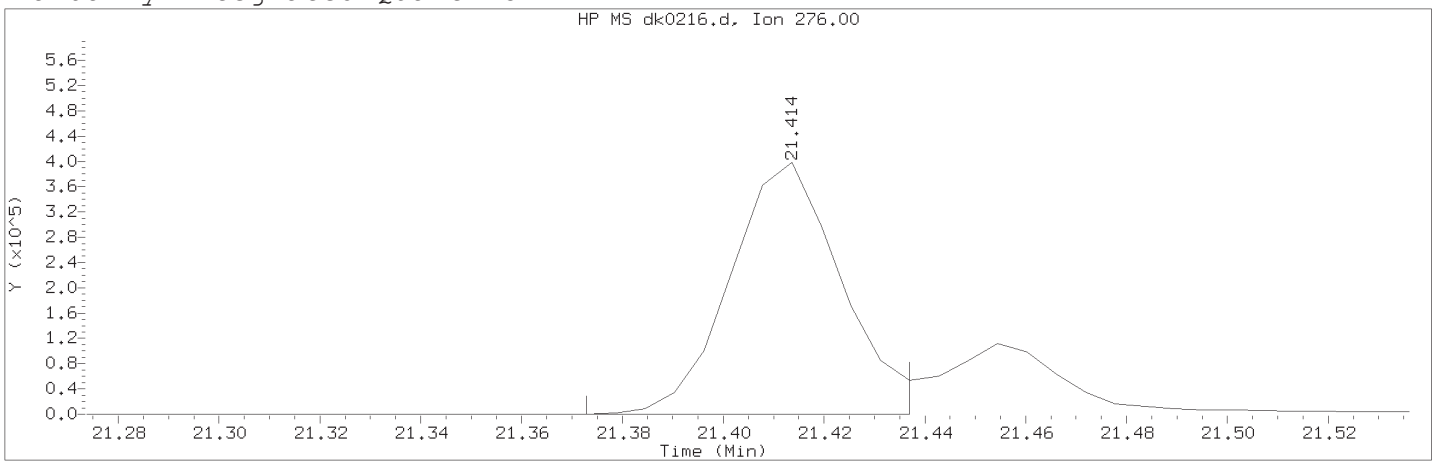
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1088		
Retention Time (minutes)	: 8.328		
Quant Ion	: 105.00		
Area	: 406493		
On-column Amount (ng/ul)	: 7.0817		
Integration start scan	: 1073	Integration stop scan:	1130
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user id: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

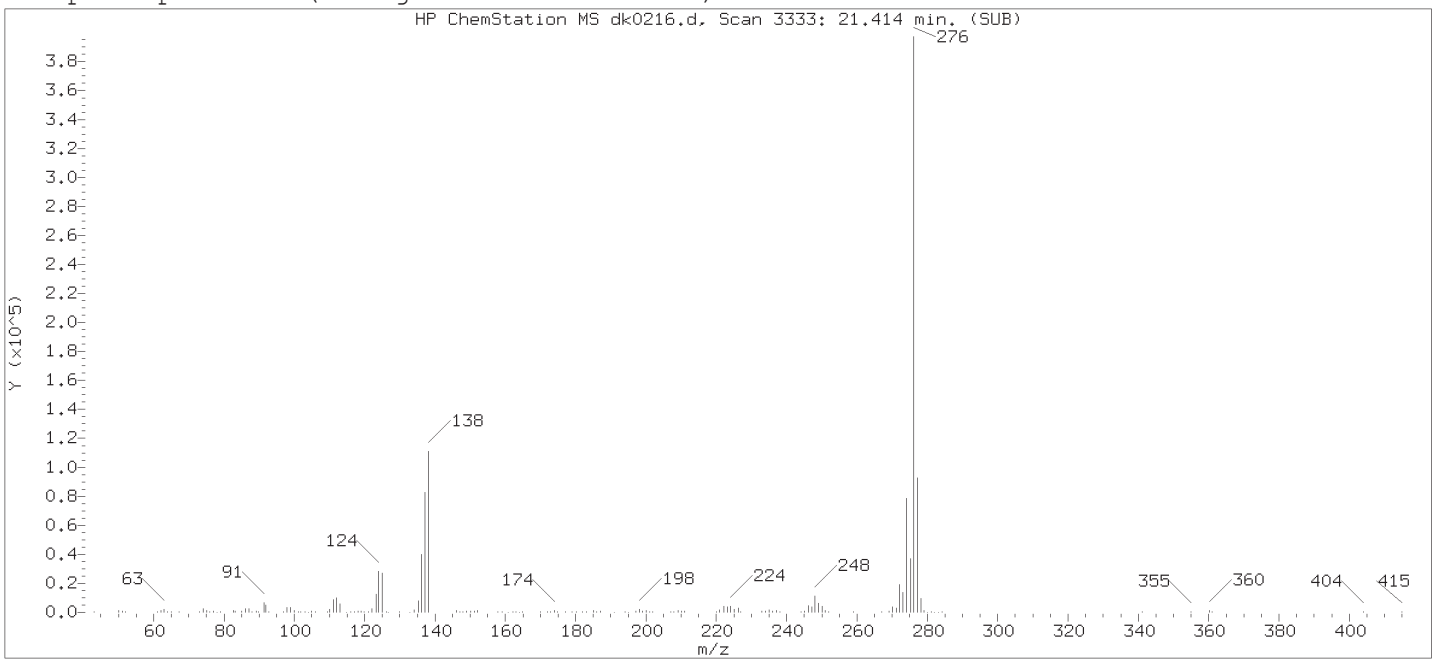
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3333		
Retention Time (minutes)	: 21.414		
Quant Ion	: 276.00		
Area (flag)	: 610774M		
On-Column Amount (ng/ul)	: 3.7073		
Integration start scan	: 3325	Integration stop scan:	3336
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

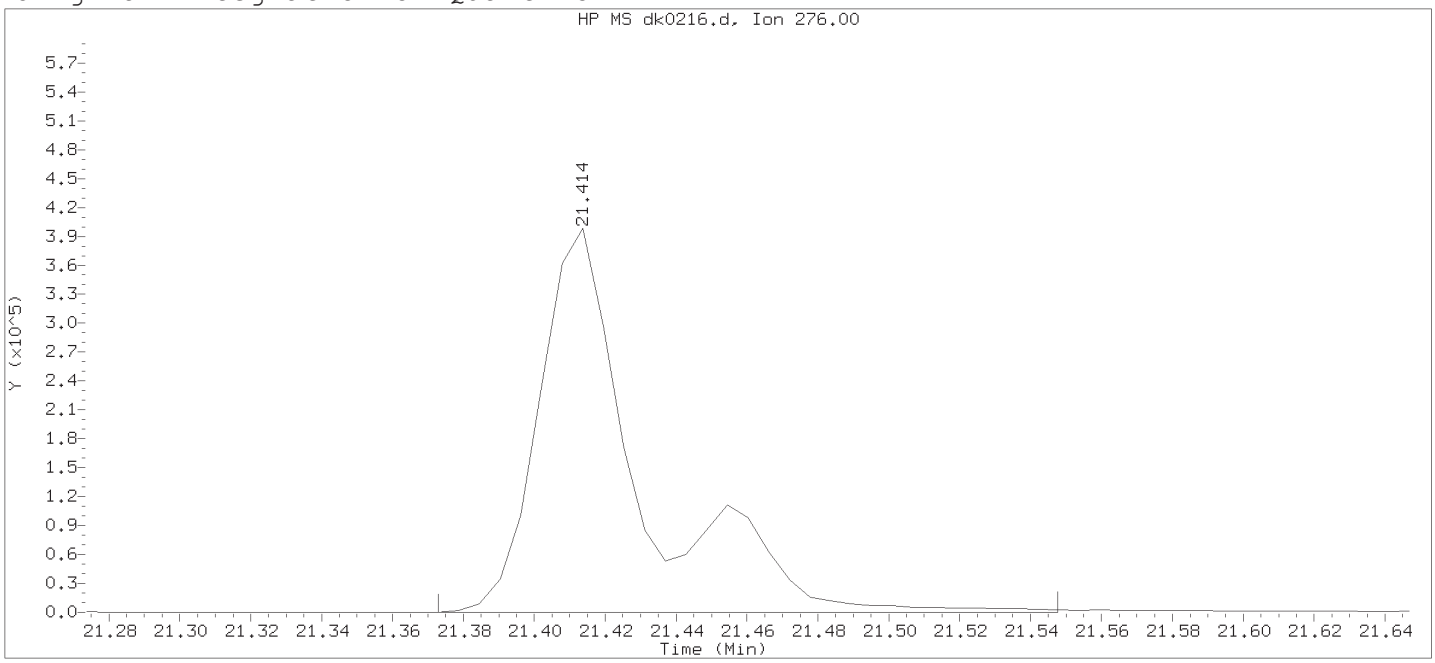
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0216.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 14:37 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 15:06
Date, time and analyst ID of latest file update: 04-Nov-2018 15:06 Automation

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compound Number	:	219
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	3333
Retention Time (minutes)	:	21.414
Quant Ion	:	276.00
Area	:	797475
On-column Amount (ng/ul)	:	4.8380
Integration start scan	:	3325 Integration stop scan: 3355
Y at integration start	:	0 Y at integration end: 0

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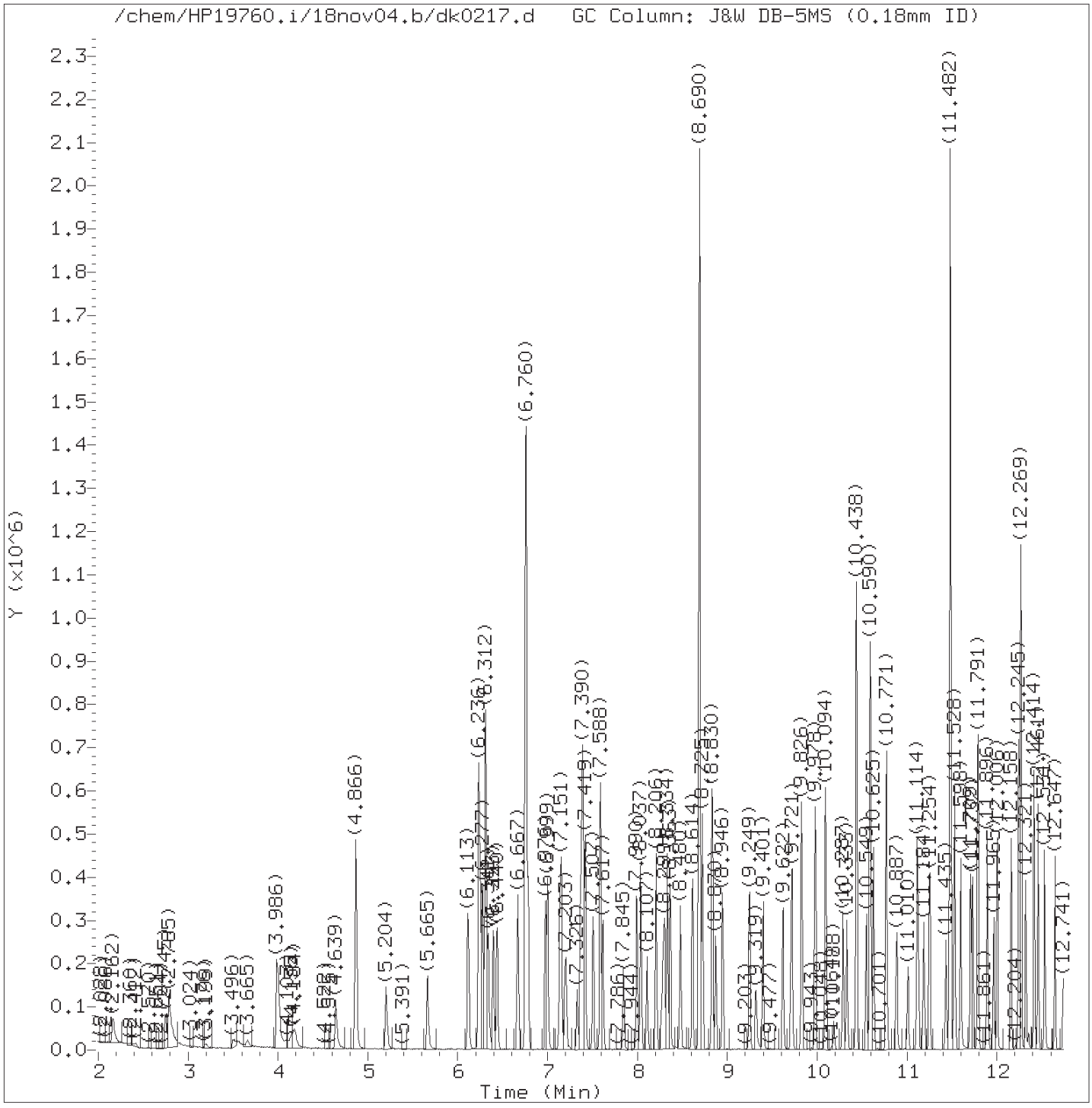
Target 3.5 esignature user ID: 1214 at 12:25



Total Ion Chromatogram (TIC)

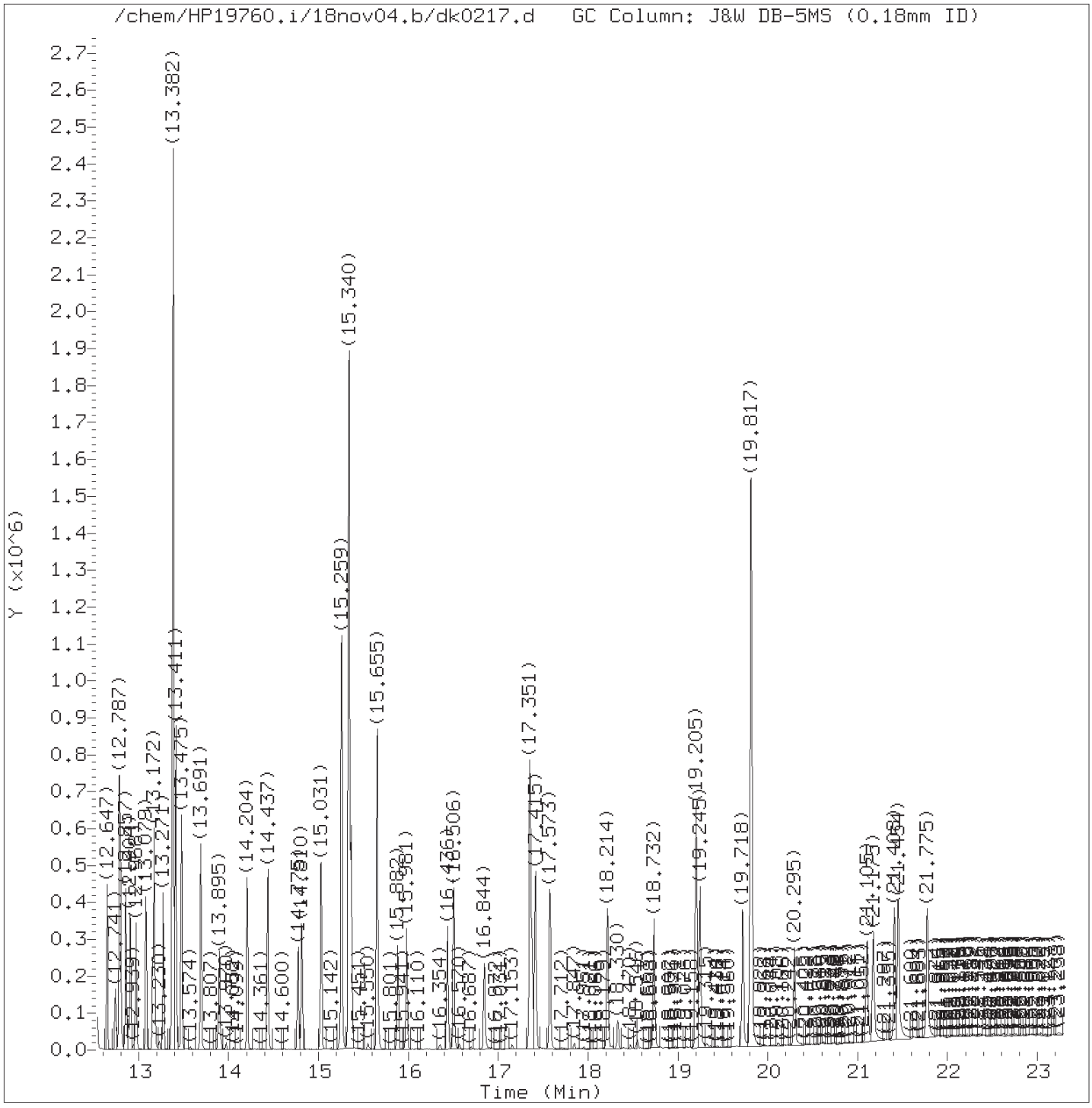
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.167	88	58357M	1.224
4) N-Nitrosodimethylamine	(1)	2.745	74	84913	1.167
5) Pyridine	(1)	2.785	79	141054	1.157
7) 2-Picoline	(1)	3.980	93	144629	1.188
8) N-Nitrosomethylethylamine	(1)	4.178	88	64595	1.219
9) Methyl methanesulfonate	(1)	4.639	80	70039	1.201
11)$2-Fluorophenol	(1)	4.866	112	211425	2.294
13) N-Nitrosodiethylamine	(1)	5.204	102	53770	1.108
42) Total Cresols	(1)			220717	2.307
15) Ethyl methanesulfonate	(1)	5.665	109	56620	1.208
16) Benzaldehyde	(1)	6.113	77	99400	1.307
17)$Phenol-d6	(1)	6.236	99	295376	2.308
18) Phenol	(1)	6.253	94	173422	1.178
19) Aniline	(1)	6.277	93	207001	1.200
20) a-methylstyrene	(1)	6.358	118	10845	1.233
22) bis(2-Chloroethyl)ether	(1)	6.393	93	129052	1.190
23) 2-Chlorophenol	(1)	6.440	128	103314	1.181
24) 1,3-Dichlorobenzene	(1)	6.667	146	111573	1.217
25)*1,4-Dichlorobenzene-d4	(1)	6.760	152	282310	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	108389	1.186
27) Benzyl alcohol	(1)	6.976	108	69486	1.153
28) 1,2-Dichlorobenzene	(1)	6.999	146	106000	1.218
30) Indene	(1)	7.133	115	113992	1.167
31) 2-Methylphenol	(1)	7.151	108	102108	1.138
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.203	45	150365	1.193
34) bis(2-Chloroisopropyl)ether	(1)	7.203	45	150365	1.193
35) N-Nitrosopyrrolidine	(1)	7.326	100	56885	1.125
36) Acetophenone	(1)	7.367	105	145436	1.165
97) Isosafrole	(3)			67844	1.112
38) N-Nitroso-di-n-propylamine	(1)	7.384	70	92367	1.186
37) 4-Methylphenol	(1)	7.390	108	118609	1.167
39) N-Nitrosomorpholine	(1)	7.396	56	70106	1.218
40) o-Toluidine	(1)	7.419	106	182204	1.183
43) Hexachloroethane	(1)	7.507	117	48828	1.149
44)$Nitrobenzene-d5	(2)	7.588	82	267283	2.319
45) Nitrobenzene	(2)	7.617	77	138057	1.189
48) N-Nitrosopiperidine	(2)	7.845	114	48841	1.083
50) Isophorone	(2)	7.990	82	220989	1.114
120) 2,4_2,6-Dinitrotoluenes	(3)			85925	2.199
51) 2-Nitrophenol	(2)	8.107	139	47157	1.091

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.206	107	110335	1.155
56) Benzoic acid	(2)	8.299	105	185081M	2.945
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	40603	1.153
55) bis(2-Chloroethoxy)methane	(2)	8.363	93	144337	1.176
60) 2,4-Dichlorophenol	(2)	8.480	162	73928	1.144
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	83158	1.207
65)*Naphthalene-d8	(2)	8.690	136	1049459	5.000
66) Naphthalene	(2)	8.725	128	298454	1.197
146) Diallate trans/cis	(4)			97234	1.116
67) 4-Chloroaniline	(2)	8.830	127	114197	1.179
68) 2,6-Dichlorophenol	(2)	8.835	162	70903	1.140
69) Hexachloropropene	(2)	8.870	213	51041	1.181
71) Hexachlorobutadiene	(2)	8.946	225	44290	1.199
75) Quinoline	(2)	9.249	129	159810	1.140
76) Caprolactam	(2)	9.313	113	24014	0.941
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	74944	1.025
80) 4-Chloro-3-methylphenol	(2)	9.622	107	86014	1.112
82) Safrole	(2)	9.721	162	63956	1.120
83) 2-Methylnaphthalene	(2)	9.826	142	174232	1.144
84) 1-Methylnaphthalene	(2)	9.978	142	169958	1.180
85) Hexachlorocyclopentadiene	(3)	10.094	237	41956	1.128
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.094	216	72627	1.173
88) cis-Isosafrole	(3)	10.188	162	11092	0.196
90) 2,4,6-Trichlorophenol	(3)	10.287	196	44788	1.098
92) 2,4,5-Trichlorophenol	(3)	10.333	196	48235	1.130
93)$2-Fluorobiphenyl	(3)	10.438	172	380081	2.418
99) Diphenyl ether	(3)	10.438	170	84193	1.191
94) trans-Isosafrole	(3)	10.549	162	56752	0.917
95) 1,1'-Biphenyl	(3)	10.590	154	202940	1.195
96) 2-Chloronaphthalene	(3)	10.596	162	167064	1.212
98) 1-Chloronaphthalene	(3)	10.625	162	146818	1.202
100) 2-Nitroaniline	(3)	10.776	138	49014	1.073
104) 1,4-Naphthoquinone	(3)	10.887	158	51354	1.015
105) 1,4-Dinitrobenzene	(3)	11.010	168	25768	1.084
106) Dimethylphthalate	(3)	11.114	163	164292	1.163
107) 1,3-Dinitrobenzene	(3)	11.126	168	28679	1.089
108) 2,6-Dinitrotoluene	(3)	11.184	165	37522	1.113
109) Acenaphthylene	(3)	11.254	152	218445	1.154
112) 3-Nitroaniline	(3)	11.435	138	43582	1.106
113)*Acenaphthene-d10	(3)	11.482	164	468772	5.000

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on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.528	153	161076	1.175
115) 2,4-Dinitrophenol	(3)	11.598	184	59691	2.631
116) 4-Nitrophenol	(3)	11.709	109	58018	2.018
117) Pentachlorobenzene	(3)	11.732	250	60494	1.226
119) Dibenzofuran	(3)	11.785	168	230361	1.216
118) 2,4-Dinitrotoluene	(3)	11.791	165	48403	1.089
121) 1-Naphthylamine	(3)	11.896	143	156346	1.089
122) 2,3,4,6-Tetrachlorophenol	(3)	11.965	232	34116	1.076
123) 2-Naphthylamine	(3)	12.006	143	163266	1.125
124) Diethylphthalate	(3)	12.158	149	160427	1.122
126) Fluorene	(3)	12.245	166	175947	1.205
125) Thionazin	(3)	12.257	107	34575	1.112
128) 5-Nitro-o-toluidine	(3)	12.269	152	50917	1.119
129) 4-Nitroaniline	(3)	12.274	138	47779	1.108
127) 4-Chlorophenyl-phenylether	(3)	12.274	204	84990	1.213
130) 4,6-Dinitro-2-methylphenol	(4)	12.321	198	44518	1.659
131) N-Nitrosodiphenylamine	(4)	12.414	169	141345	1.172
132) NDPA as diphenylamine	(4)	12.414	169	141345	1.172
134) 1,2-Diphenylhydrazine	(4)	12.461	77	232276	1.176
135)$2,4,6-Tribromophenol	(3)	12.531	330	34067	2.136
137) Tetraethyldithiopyrophosphate	(4)	12.647	97	30689	1.080
139) 1,3,5-Trinitrobenzene	(4)	12.741	213	14208	0.824
140) Diallate (peak 1)	(4)	12.781	86	83980	0.928
141) Phorate	(4)	12.787	75	127723	1.109
142) Phenacetin	(4)	12.799	108	88157	1.018
143) 4-Bromophenyl-phenylether	(4)	12.857	248	44201	1.246
144) Diallate (peak 2)	(4)	12.886	86	13254	0.188
145) Hexachlorobenzene	(4)	12.910	284	42502	1.193
147) Dimethoate	(4)	12.968	87	75501	1.026
148) Atrazine	(4)	13.085	200	39429	1.130
149) Pentachlorophenol	(4)	13.154	266	21106	0.886
150) 4-Aminobiphenyl	(4)	13.166	169	115795	1.108
151) Pentachloronitrobenzene	(4)	13.172	237	18423	1.112
152) Pronamide	(4)	13.271	173	63342	1.025
153)*Phenanthrene-d10	(4)	13.382	188	855772	5.000
154) Dinoseb	(4)	13.411	211	27774	0.718
155) Phenanthrene	(4)	13.411	178	248306	1.201
157) Anthracene	(4)	13.475	178	235989	1.156
163) Carbazole	(4)	13.691	167	223819	1.115
164) Methyl parathion	(4)	13.895	109	52171	0.936

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Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.204	149	249513	1.022
168) 4-Nitroquinoline-1-oxide	(4)	14.437	190	14042	0.552
167) Parathion	(4)	14.437	109	29482	0.833
169) Octachlorostyrene	(4)	14.775	308	15035	1.084
171) Isodrin	(4)	14.816	193	26363	1.103
222) Total PAHs	(6)			3928058	22.172
173) Fluoranthene	(4)	15.031	202	247790	1.123
174) Benzidine	(5)	15.259	184	505107	3.104
175)*Pyrene-d10	(5)	15.340	212	812866	5.000
177) Pyrene	(5)	15.364	202	281240	1.204
179)$Terphenyl-d14	(5)	15.655	244	308777	2.296
182) p-Dimethylaminoazobenzene	(5)	15.882	225	32843	0.888
185) Chlorobenzilate	(5)	15.981	139	77112	1.054
187) 3,3'-Dimethylbenzidine	(5)	16.436	212	132566	0.950
188) Butylbenzylphthalate	(5)	16.506	149	118317	1.009
191) 2-Acetylaminofluorene	(5)	16.844	181	69397	0.734
193) 3,3'-Dichlorobenzidine	(5)	17.351	252	81958	1.024
195) Benzo(a)anthracene	(5)	17.351	228	220792	1.121
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.374	231	43677	0.957
196) Chrysene	(5)	17.415	228	234771	1.154
199) bis(2-Ethylhexyl)phthalate	(5)	17.578	149	153580	0.935
203) 6-Methylchrysene	(5)	18.214	242	142566	1.023
205) Di-n-octylphthalate	(6)	18.732	149	228748	0.872
206) Benzo(b)fluoranthene	(6)	19.199	252	220017	1.157
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.205	256	88801	0.980
208) Benzo(k)fluoranthene	(6)	19.245	252	235674	1.193
211) Benzo(a)pyrene	(6)	19.723	252	197885	1.129
213)*Perylene-d12	(6)	19.817	264	772686	5.000
215) 3-Methylcholanthrene	(6)	20.300	268	88550	1.019
217) Dibenz(a,h)acridine	(6)	21.105	279	146864	1.068
218) Dibenz(a,j)acridine	(6)	21.175	279	169167	1.127
219) Indeno(1,2,3-cd)pyrene	(6)	21.408	276	184761M	1.179
220) Dibenz(a,h)anthracene	(6)	21.454	278	213177	1.238
221) Benzo(g,h,i)perylene	(6)	21.775	276	209544	1.227

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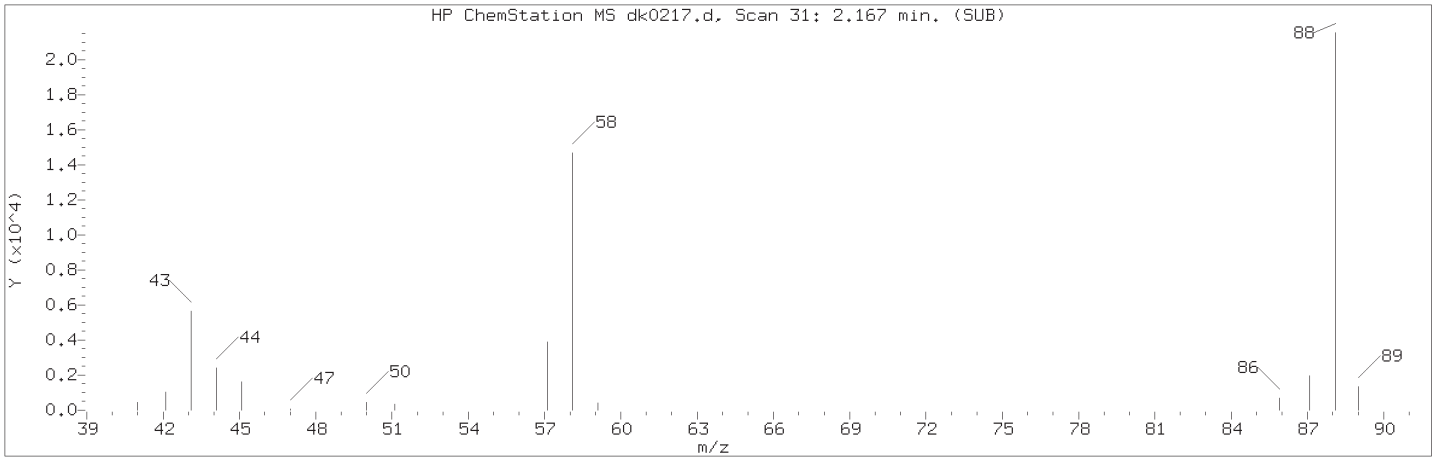
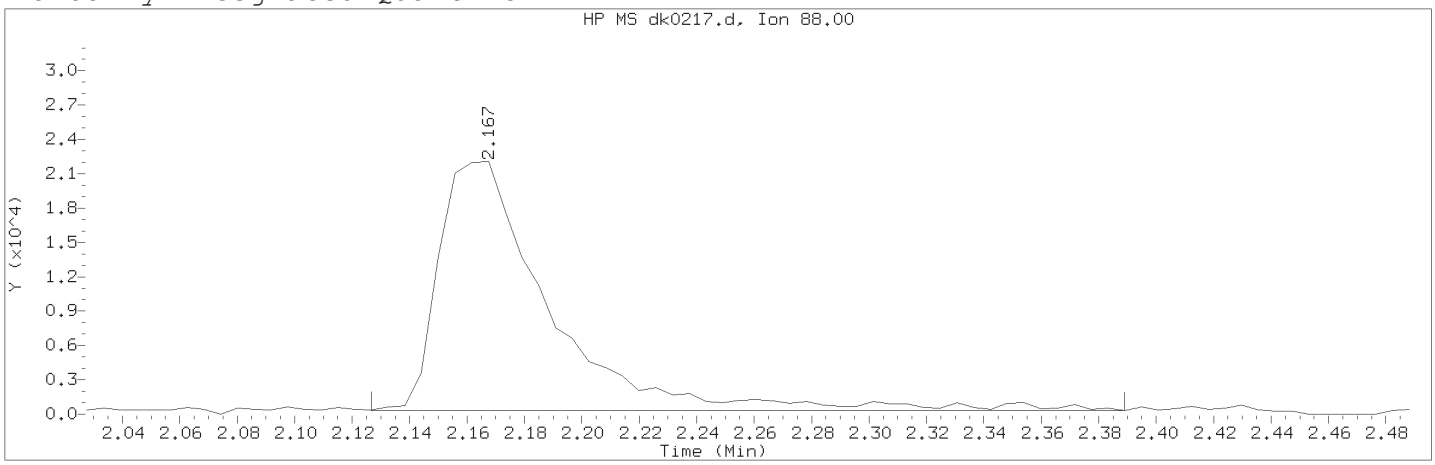
Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

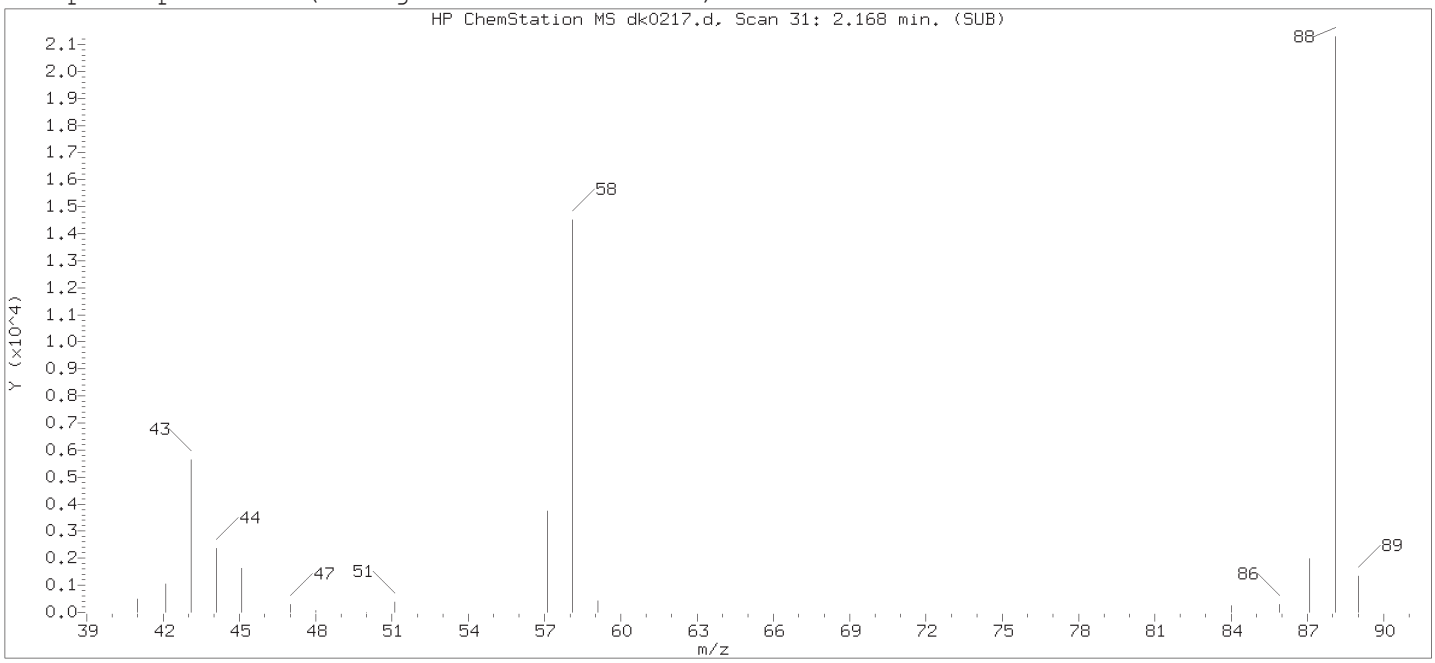
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 31		
Retention Time (minutes)	: 2.167		
Quant Ion	: 88.00		
Area (flag)	: 58357M		
On-Column Amount (ng/ul)	: 1.2241		
Integration start scan	: 23	Integration stop scan:	68
Y at integration start	: 328	Y at integration end:	328

Reason for manual integration: improper integration

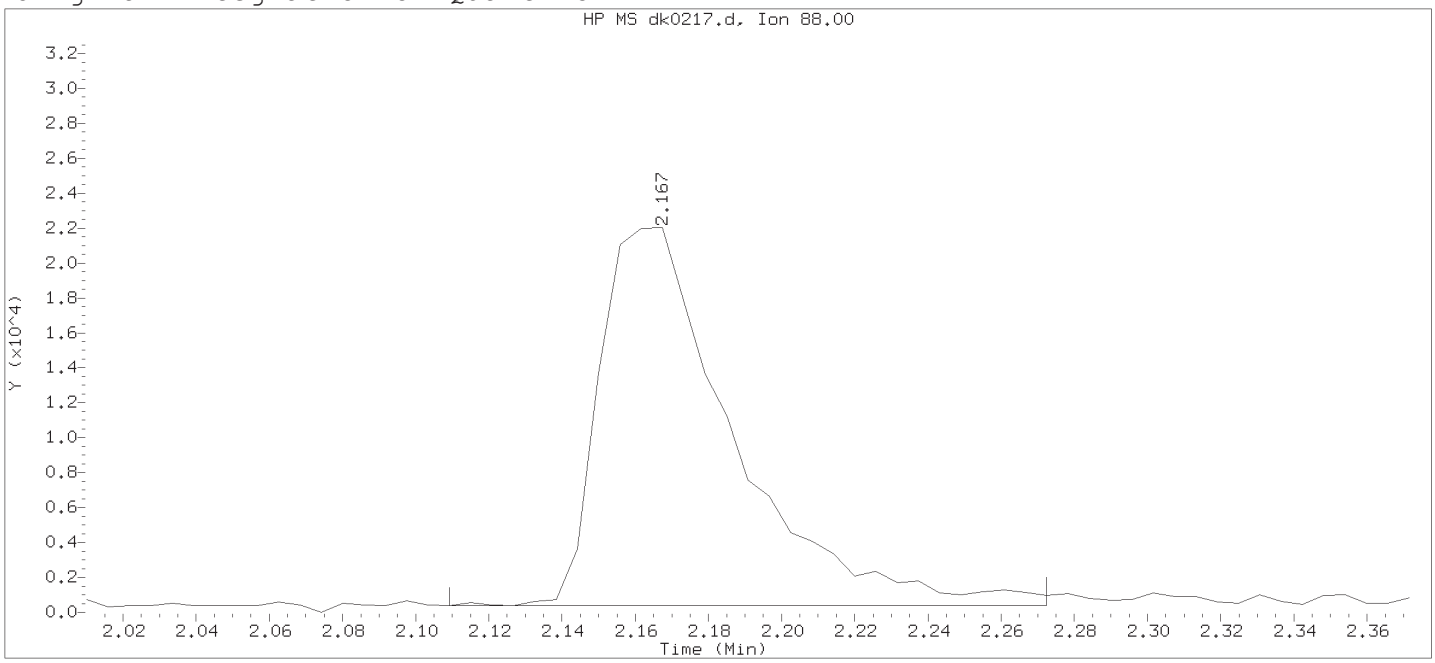
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

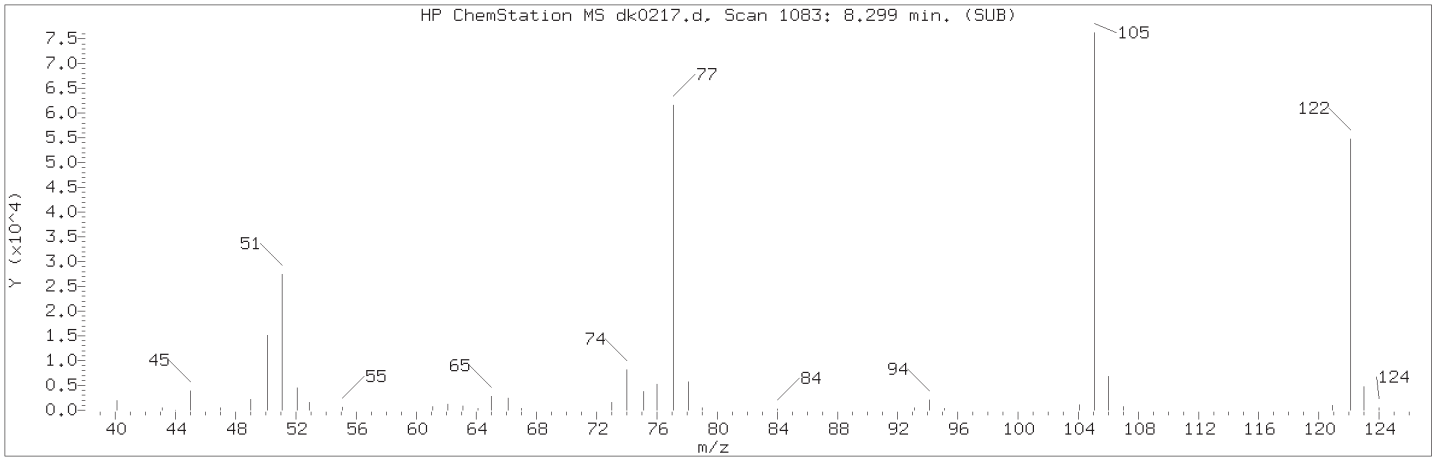
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 15:34
Date, time and analyst ID of latest file update: 04-Nov-2018 15:34 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

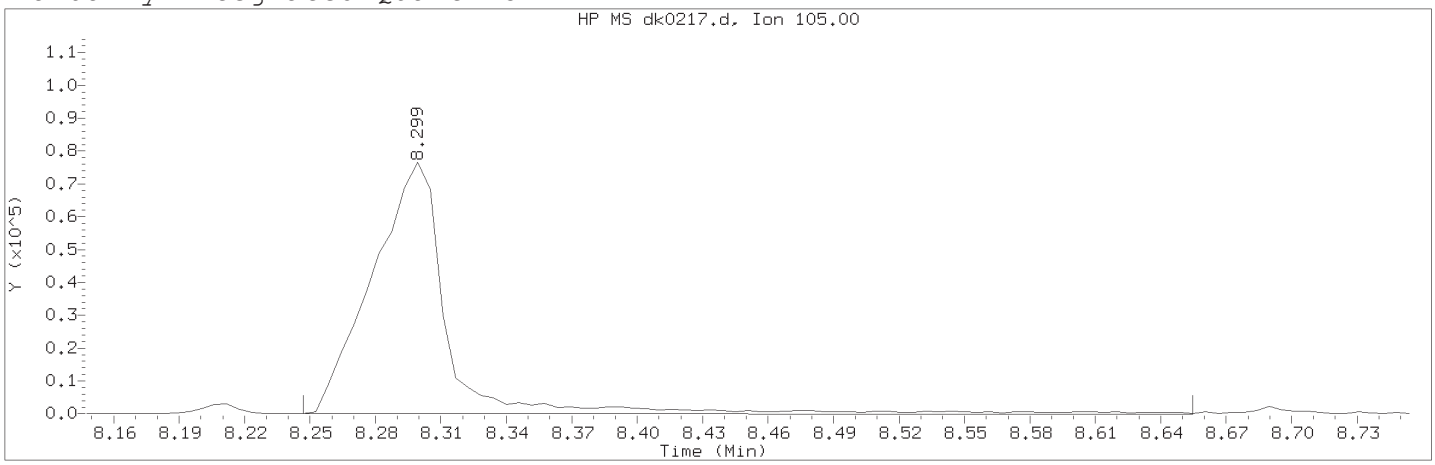
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 31		
Retention Time (minutes)	: 2.167		
Quant Ion	: 88.00		
Area	: 55210		
On-column Amount (ng/ul)	: 1.1813		
Integration start scan	: 20	Integration stop scan:	48
Y at integration start	: 370	Y at integration end:	370

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: ARTRANSUE

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

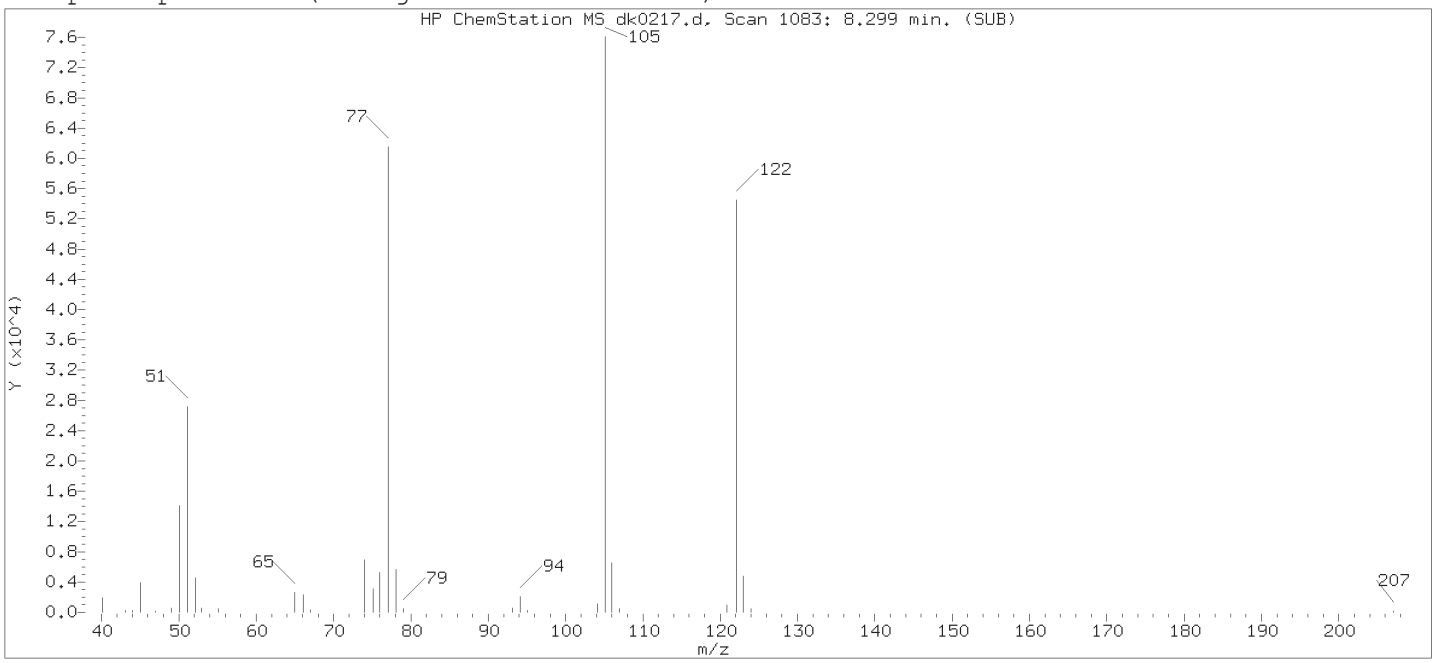
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1083
Retention Time (minutes) : 8.299
Quant Ion : 105.00
Area (flag) : 185081M
On-Column Amount (ng/ul) : 2.9454
Integration start scan : 1073 Integration stop scan: 1143
Y at integration start : 9 Y at integration end: -114

Reason for manual integration: improper integration

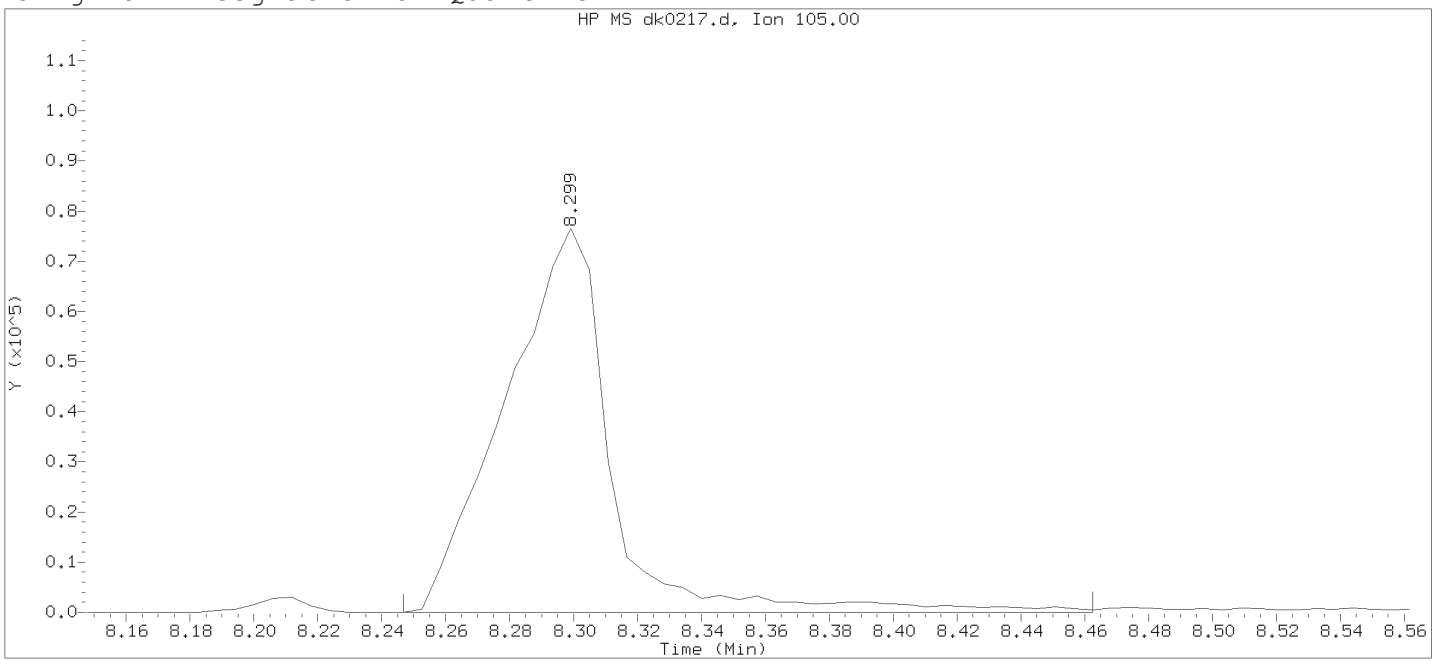
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

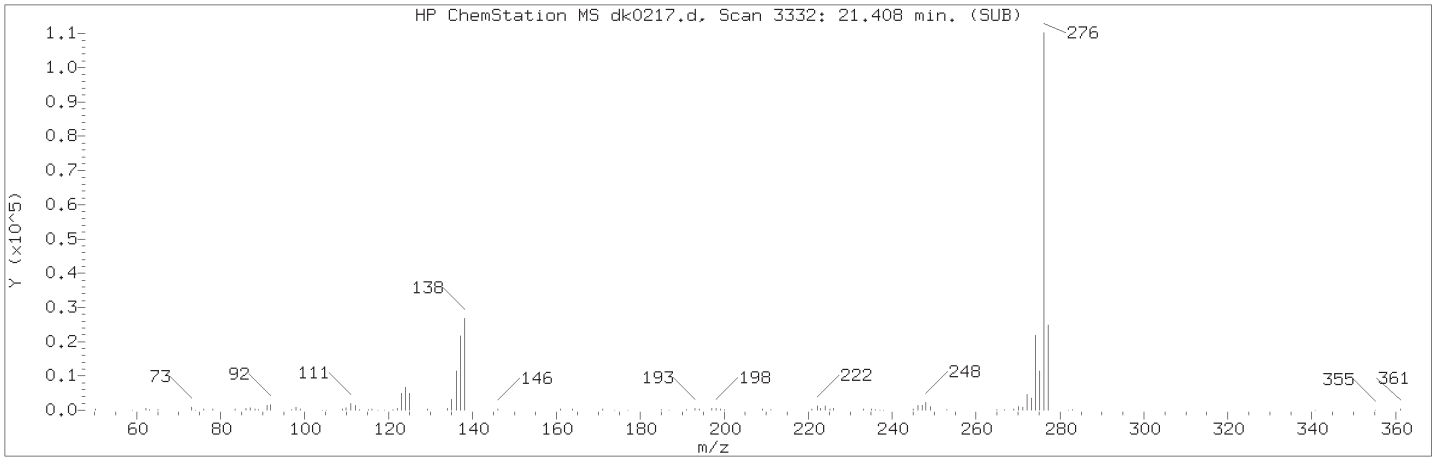
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 15:34
Date, time and analyst ID of latest file update: 04-Nov-2018 15:34 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

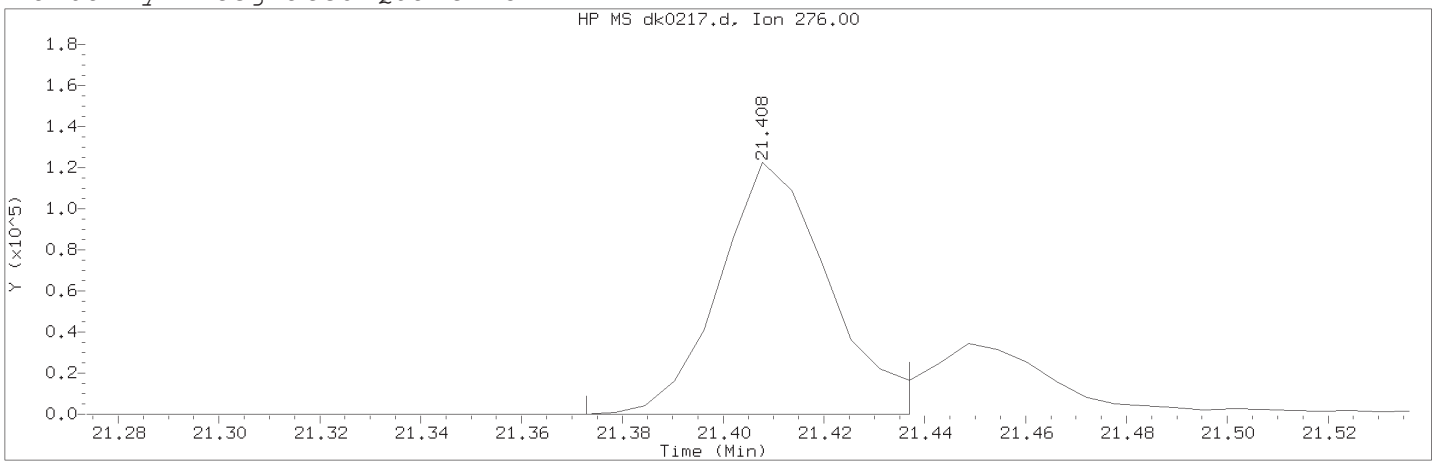
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1083		
Retention Time (minutes)	: 8.299		
Quant Ion	: 105.00		
Area	: 177150		
On-column Amount (ng/ul)	: 2.8855		
Integration start scan	: 1073	Integration stop scan:	1110
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: 2375

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

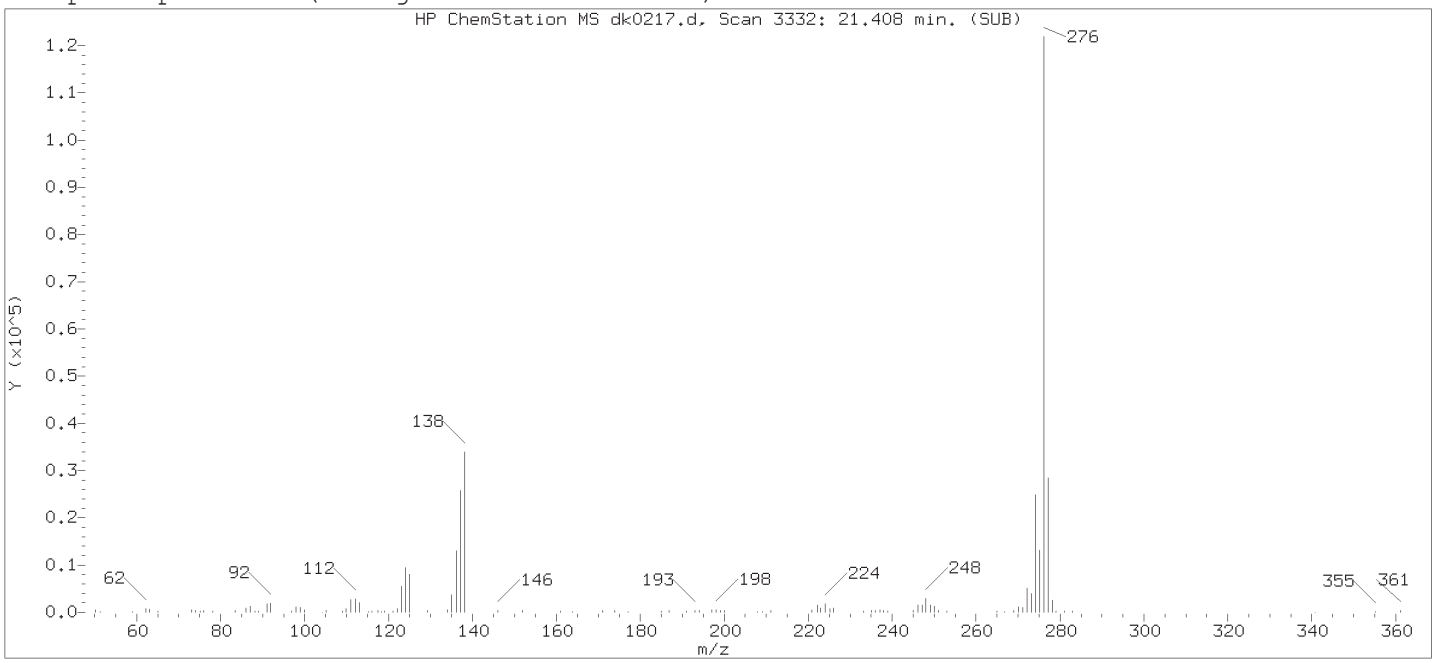
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3332
Retention Time (minutes) : 21.408
Quant Ion : 276.00
Area (flag) : 184761M
On-Column Amount (ng/ul) : 1.1789
Integration start scan : 3325 Integration stop scan: 3336
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

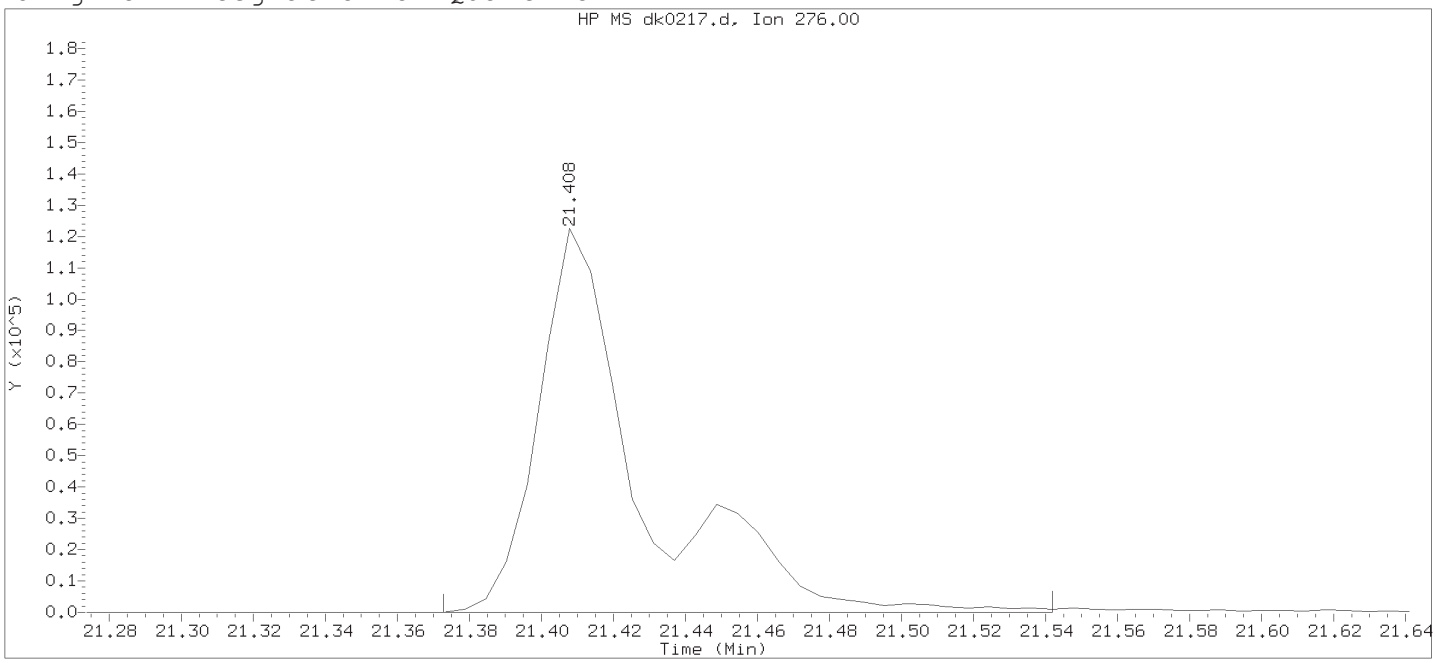
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



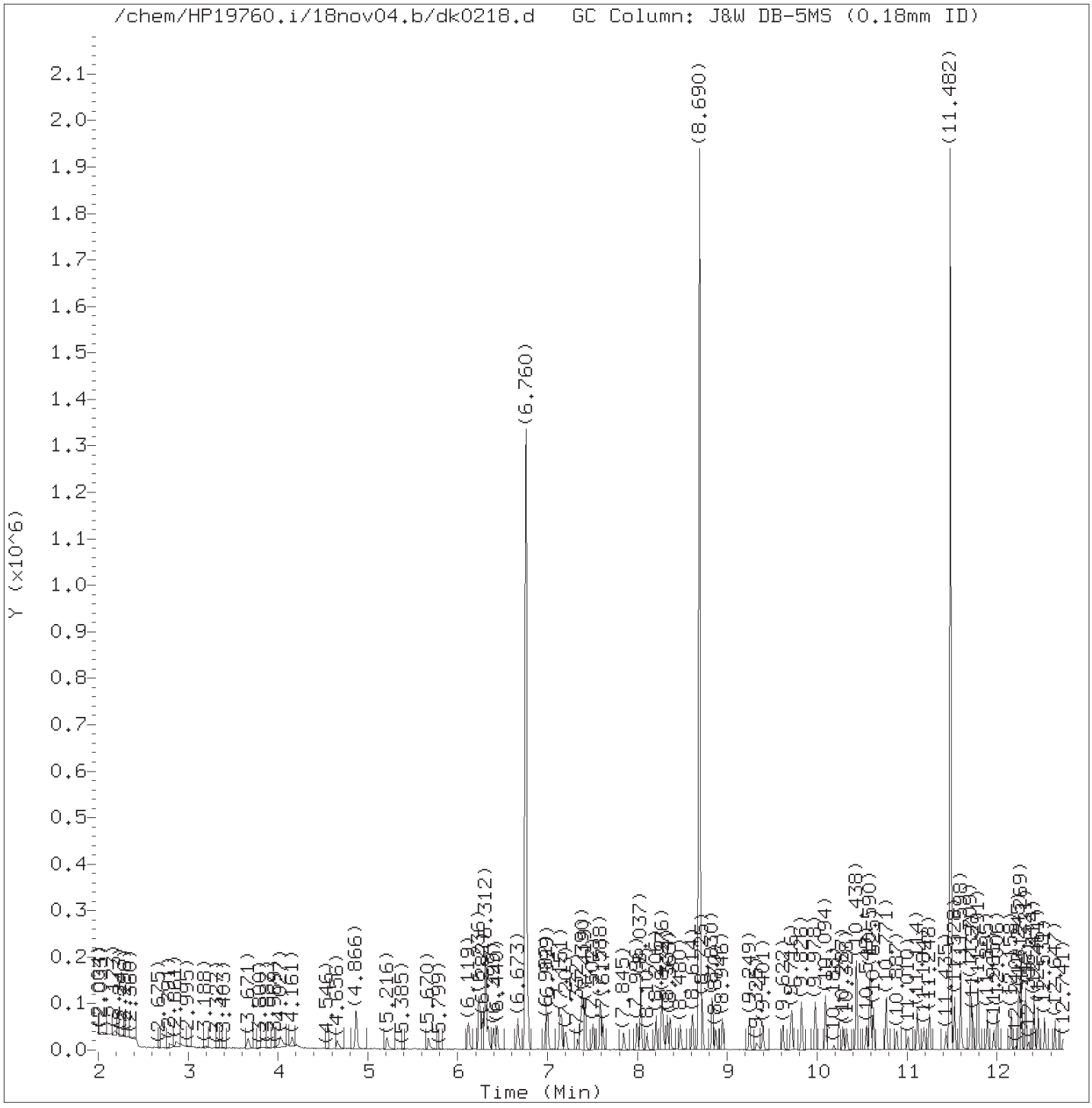
Data File: /chem/HP19760.i/18nov04.b/dk0217.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:06 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 15:34
Date, time and analyst ID of latest file update: 04-Nov-2018 15:34 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3332		
Retention Time (minutes)	: 21.408		
Quant Ion	: 276.00		
Area	: 243311		
On-column Amount (ng/ul)	: 1.4143		
Integration start scan	: 3325	Integration stop scan:	3354
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: ARTransue



Total Ion Chromatogram (TIC)

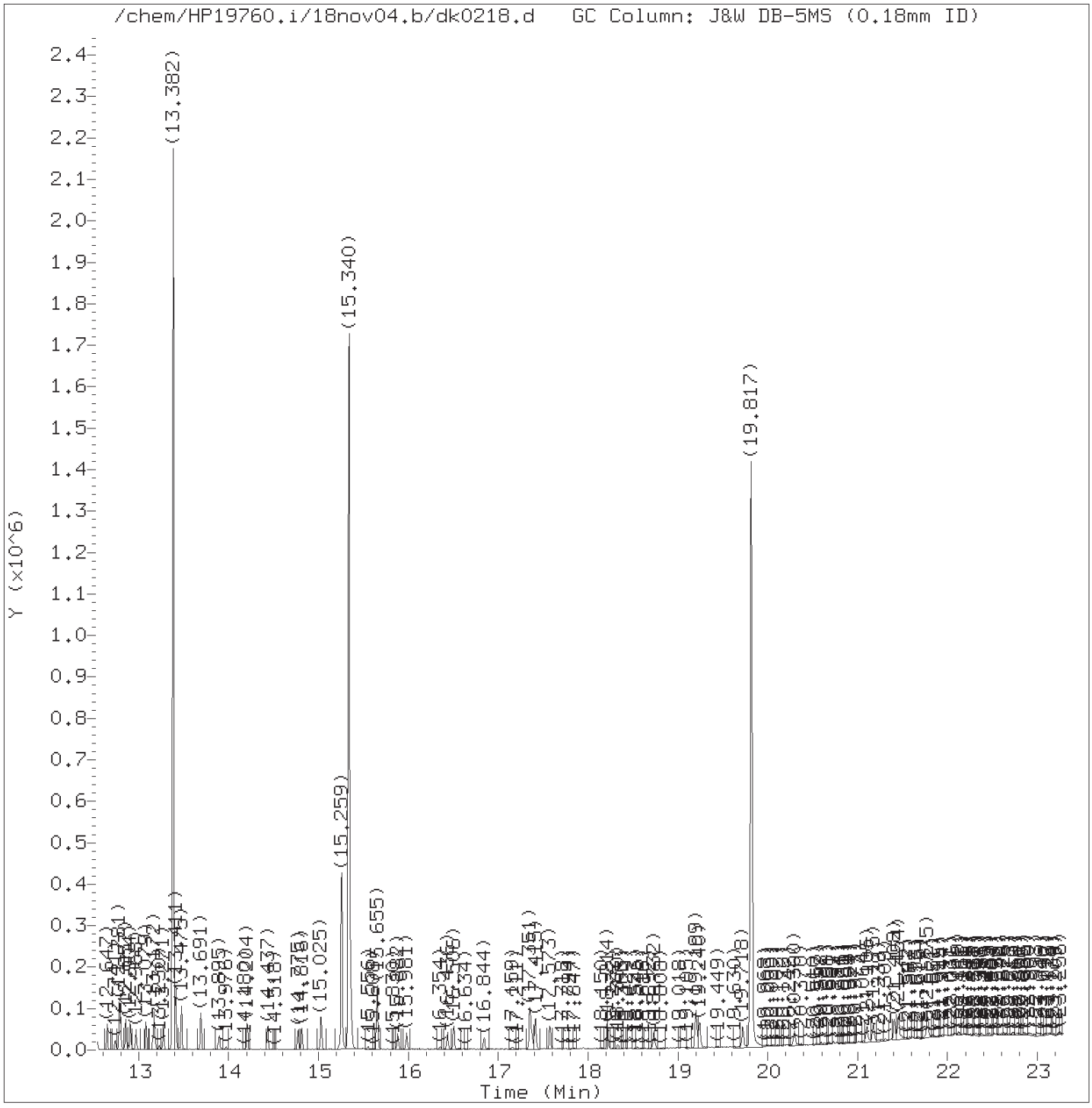
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.185	88	23550M	0.531
4) N-Nitrosodimethylamine	(1)	2.797	74	14301M	0.211
5) Pyridine	(1)	2.873	79	29403M	0.259
7) 2-Picoline	(1)	4.027	93	25733	0.227
8) N-Nitrosomethylethylamine	(1)	4.219	88	11475M	0.233
9) Methyl methanesulfonate	(1)	4.656	80	11762	0.217
11)$2-Fluorophenol	(1)	4.872	112	37574	0.446
13) N-Nitrosodiethylamine	(1)	5.210	102	9091	0.207
42) Total Cresols	(1)			37223	0.428
15) Ethyl methanesulfonate	(1)	5.670	109	8541	0.202
16) Benzaldehyde	(1)	6.119	77	19593	0.277
17)$Phenol-d6	(1)	6.236	99	50301	0.432
18) Phenol	(1)	6.253	94	31842	0.235
19) Aniline	(1)	6.282	93	38328	0.240
20) a-methylstyrene	(1)	6.352	118	2115	0.259
22) bis(2-Chloroethyl)ether	(1)	6.399	93	24427	0.243
23) 2-Chlorophenol	(1)	6.440	128	17226	0.216
24) 1,3-Dichlorobenzene	(1)	6.667	146	20049	0.237
25)*1,4-Dichlorobenzene-d4	(1)	6.760	152	262568	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	20348	0.241
27) Benzyl alcohol	(1)	6.982	108	12943	0.231
28) 1,2-Dichlorobenzene	(1)	7.005	146	19277	0.240
30) Indene	(1)	7.133	115	21353	0.235
31) 2-Methylphenol	(1)	7.151	108	17274	0.212
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.203	45	27199	0.235
34) bis(2-Chloroisopropyl)ether	(1)	7.203	45	27199	0.235
35) N-Nitrosopyrrolidine	(1)	7.332	100	9121	0.200
36) Acetophenone	(1)	7.372	105	26037	0.228
97) Isosafrole	(3)			11262	0.203
38) N-Nitroso-di-n-propylamine	(1)	7.390	70	16649	0.233
37) 4-Methylphenol	(1)	7.390	108	19949	0.216
39) N-Nitrosomorpholine	(1)	7.402	56	12426	0.232
40) o-Toluidine	(1)	7.419	106	33673	0.237
43) Hexachloroethane	(1)	7.507	117	9611	0.243
44)$Nitrobenzene-d5	(2)	7.588	82	46931	0.446
45) Nitrobenzene	(2)	7.617	77	24263	0.228
48) N-Nitrosopiperidine	(2)	7.850	114	9099	0.221
50) Isophorone	(2)	7.990	82	37198	0.208
120) 2,4_2,6-Dinitrotoluenes	(3)			13477	0.393
51) 2-Nitrophenol	(2)	8.107	139	7771	0.194

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.206	107	18242	0.211
56) Benzoic acid	(2)	8.276	105	54833M	0.939
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	7165	0.219
55) bis(2-Chloroethoxy)methane	(2)	8.363	93	26510	0.235
60) 2,4-Dichlorophenol	(2)	8.480	162	11885	0.204
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	15557	0.244
65)*Naphthalene-d8	(2)	8.690	136	974943	5.000
66) Naphthalene	(2)	8.725	128	55704	0.242
146) Diallate trans/cis	(4)			15288	0.196
67) 4-Chloroaniline	(2)	8.830	127	19086	0.217
68) 2,6-Dichlorophenol	(2)	8.835	162	12765	0.225
69) Hexachloropropene	(2)	8.870	213	8904	0.222
71) Hexachlorobutadiene	(2)	8.946	225	8658	0.252
75) Quinoline	(2)	9.249	129	30109	0.231
76) Caprolactam	(2)	9.325	113	3268	0.138
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	12749	0.188
80) 4-Chloro-3-methylphenol	(2)	9.622	107	12958	0.188
82) Safrole	(2)	9.721	162	10473	0.197
83) 2-Methylnaphthalene	(2)	9.826	142	32279	0.231
84) 1-Methylnaphthalene	(2)	9.978	142	30960	0.234
85) Hexachlorocyclopentadiene	(3)	10.094	237	7360	0.218
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.094	216	14551	0.258
88) cis-Isosafrole	(3)	10.188	162	1447	0.028
90) 2,4,6-Trichlorophenol	(3)	10.287	196	6971	0.195
92) 2,4,5-Trichlorophenol	(3)	10.328	196	7489	0.200
93)$2-Fluorobiphenyl	(3)	10.438	172	67109	0.474
99) Diphenyl ether	(3)	10.438	170	15738	0.246
94) trans-Isosafrole	(3)	10.549	162	9815	0.175
95) 1,1'-Biphenyl	(3)	10.584	154	36147	0.236
96) 2-Chloronaphthalene	(3)	10.596	162	29845	0.240
98) 1-Chloronaphthalene	(3)	10.625	162	26777	0.243
100) 2-Nitroaniline	(3)	10.771	138	7308	0.184
104) 1,4-Naphthoquinone	(3)	10.887	158	7886	0.172
105) 1,4-Dinitrobenzene	(3)	11.010	168	3470	0.161
106) Dimethylphthalate	(3)	11.114	163	29093	0.227
107) 1,3-Dinitrobenzene	(3)	11.126	168	4100	0.171
108) 2,6-Dinitrotoluene	(3)	11.184	165	6033	0.203
109) Acenaphthylene	(3)	11.248	152	37148	0.220
112) 3-Nitroaniline	(3)	11.435	138	6201	0.181
113)*Acenaphthene-d10	(3)	11.482	164	425772	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.528	153	30286	0.244
115) 2,4-Dinitrophenol	(3)	11.598	184	23093	1.121
116) 4-Nitrophenol	(3)	11.709	109	21350	0.817
117) Pentachlorobenzene	(3)	11.732	250	10845	0.243
119) Dibenzofuran	(3)	11.785	168	43253	0.251
118) 2,4-Dinitrotoluene	(3)	11.791	165	7444	0.184
121) 1-Naphthylamine	(3)	11.895	143	27064	0.208
122) 2,3,4,6-Tetrachlorophenol	(3)	11.965	232	5144	0.179
123) 2-Naphthylamine	(3)	12.006	143	26396	0.200
124) Diethylphthalate	(3)	12.158	149	26525	0.204
126) Fluorene	(3)	12.245	166	28834	0.221
125) Thionazin	(3)	12.257	107	5326	0.189
128) 5-Nitro-o-toluidine	(3)	12.269	152	7579	0.191
127) 4-Chlorophenyl-phenylether	(3)	12.269	204	14228	0.227
129) 4-Nitroaniline	(3)	12.274	138	7009	0.187
130) 4,6-Dinitro-2-methylphenol	(4)	12.321	198	14493	0.605
131) N-Nitrosodiphenylamine	(4)	12.414	169	22722	0.216
132) NDPA as diphenylamine	(4)	12.414	169	22722	0.216
134) 1,2-Diphenylhydrazine	(4)	12.461	77	36889	0.214
135)$2,4,6-Tribromophenol	(3)	12.537	330	5616	0.401
137) Tetraethyldithiopyrophosphate	(4)	12.647	97	4883	0.192
139) 1,3,5-Trinitrobenzene	(4)	12.741	213	1737	0.113
140) Diallate (peak 1)	(4)	12.781	86	12949	0.160
141) Phorate	(4)	12.787	75	19612	0.197
142) Phenacetin	(4)	12.799	108	12273	0.159
143) 4-Bromophenyl-phenylether	(4)	12.857	248	6118	0.200
144) Diallate (peak 2)	(4)	12.881	86	2339	0.037
145) Hexachlorobenzene	(4)	12.910	284	7827	0.246
147) Dimethoate	(4)	12.968	87	11116	0.169
148) Atrazine	(4)	13.079	200	5835	0.187
149) Pentachlorophenol	(4)	13.154	266	2852	0.134
150) 4-Aminobiphenyl	(4)	13.172	169	18190	0.201
151) Pentachloronitrobenzene	(4)	13.172	237	2799	0.189
152) Pronamide	(4)	13.271	173	8953	0.162
153)*Phenanthrene-d10	(4)	13.382	188	764307	5.000
155) Phenanthrene	(4)	13.411	178	44575	0.242
154) Dinoseb	(4)	13.411	211	3579	0.104
157) Anthracene	(4)	13.475	178	38989	0.218
163) Carbazole	(4)	13.691	167	37545	0.214
164) Methyl parathion	(4)	13.895	109	7842	0.157

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

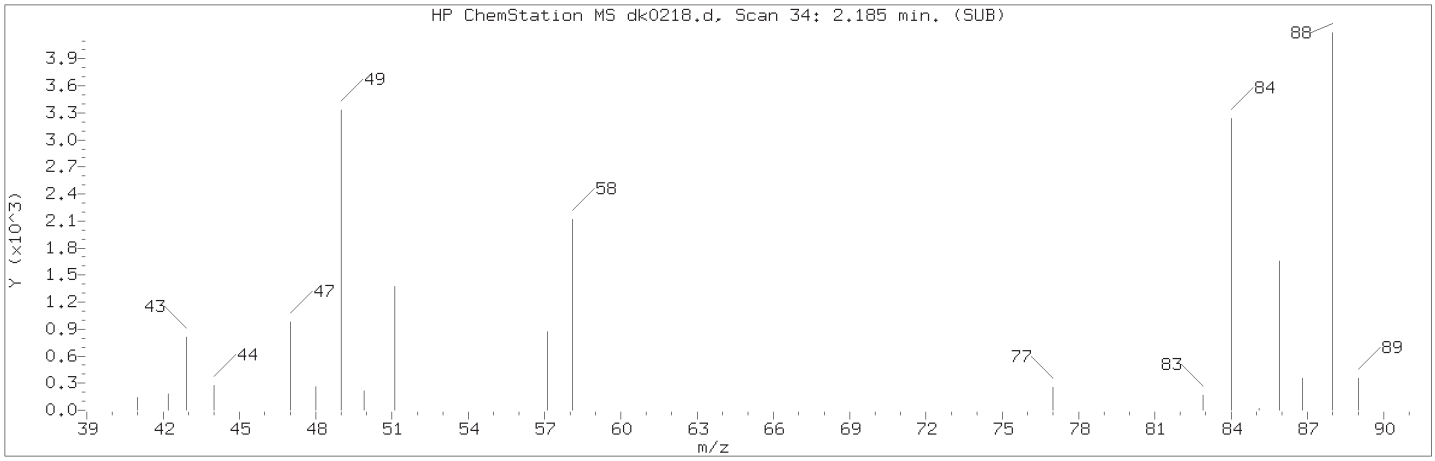
Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.204	149	37314	0.171
168) 4-Nitroquinoline-1-oxide	(4)	14.431	190	2301	0.101
167) Parathion	(4)	14.437	109	3212	0.102
169) Octachlorostyrene	(4)	14.775	308	2776	0.224
171) Isodrin	(4)	14.816	193	4275	0.206
222) Total PAHs	(6)			639100	4.207
173) Fluoranthene	(4)	15.031	202	40041	0.208
174) Benzidine	(5)	15.259	184	195495	1.357
175)*Pyrene-d10	(5)	15.340	212	719433	5.000
177) Pyrene	(5)	15.364	202	51616	0.250
179)$Terphenyl-d14	(5)	15.655	244	54353	0.462
182) p-Dimethylaminoazobenzene	(5)	15.882	225	4561	0.139
185) Chlorobenzilate	(5)	15.981	139	10341	0.160
187) 3,3'-Dimethylbenzidine	(5)	16.436	212	18391	0.149
188) Butylbenzylphthalate	(5)	16.506	149	15785	0.152
191) 2-Acetylaminofluorene	(5)	16.844	181	8232	0.098
193) 3,3'-Dichlorobenzidine	(5)	17.351	252	10863	0.153
195) Benzo(a)anthracene	(5)	17.357	228	30952	0.184
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.374	231	5916	0.146
196) Chrysene	(5)	17.415	228	38122	0.216
199) bis(2-Ethylhexyl)phthalate	(5)	17.573	149	17265	0.119
203) 6-Methylchrysene	(5)	18.214	242	20988	0.170
205) Di-n-octylphthalate	(6)	18.732	149	27135	0.119
206) Benzo(b)fluoranthene	(6)	19.193	252	31891	0.199
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.205	256	11505	0.147
208) Benzo(k)fluoranthene	(6)	19.240	252	33412	0.201
211) Benzo(a)pyrene	(6)	19.723	252	27618	0.188
213)*Perylene-d12	(6)	19.817	264	668655	5.000
215) 3-Methylcholanthrene	(6)	20.300	268	11723	0.165
217) Dibenz(a,h)acridine	(6)	21.105	279	20404	0.172
218) Dibenz(a,j)acridine	(6)	21.175	279	22971	0.177
219) Indeno(1,2,3-cd)pyrene	(6)	21.408	276	24572M	0.188
220) Dibenz(a,h)anthracene	(6)	21.454	278	29826	0.205
221) Benzo(g,h,i)perylene	(6)	21.775	276	32275	0.222

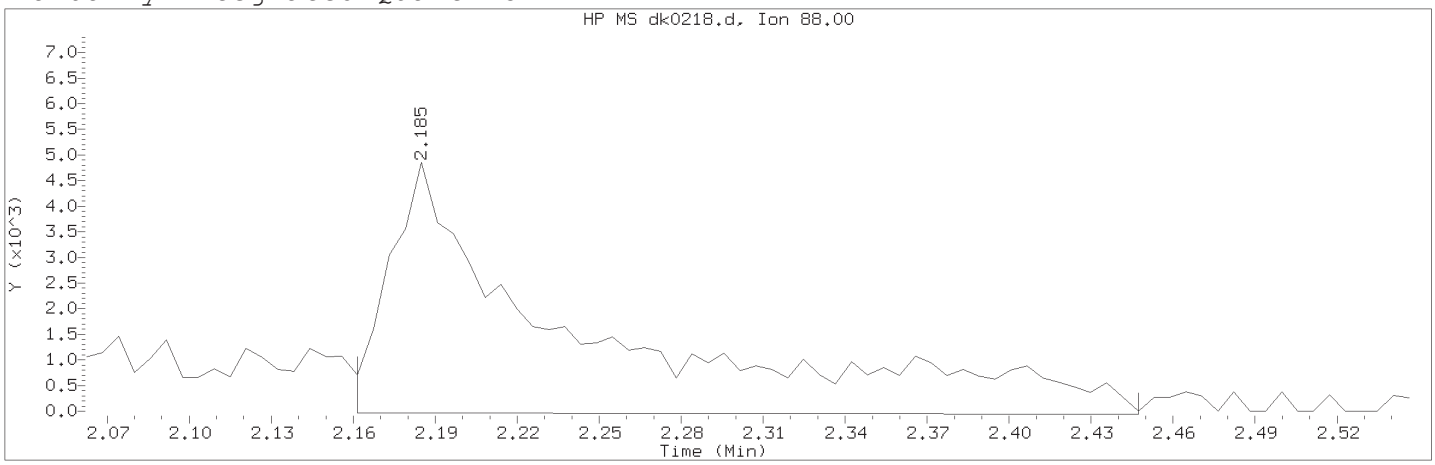
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

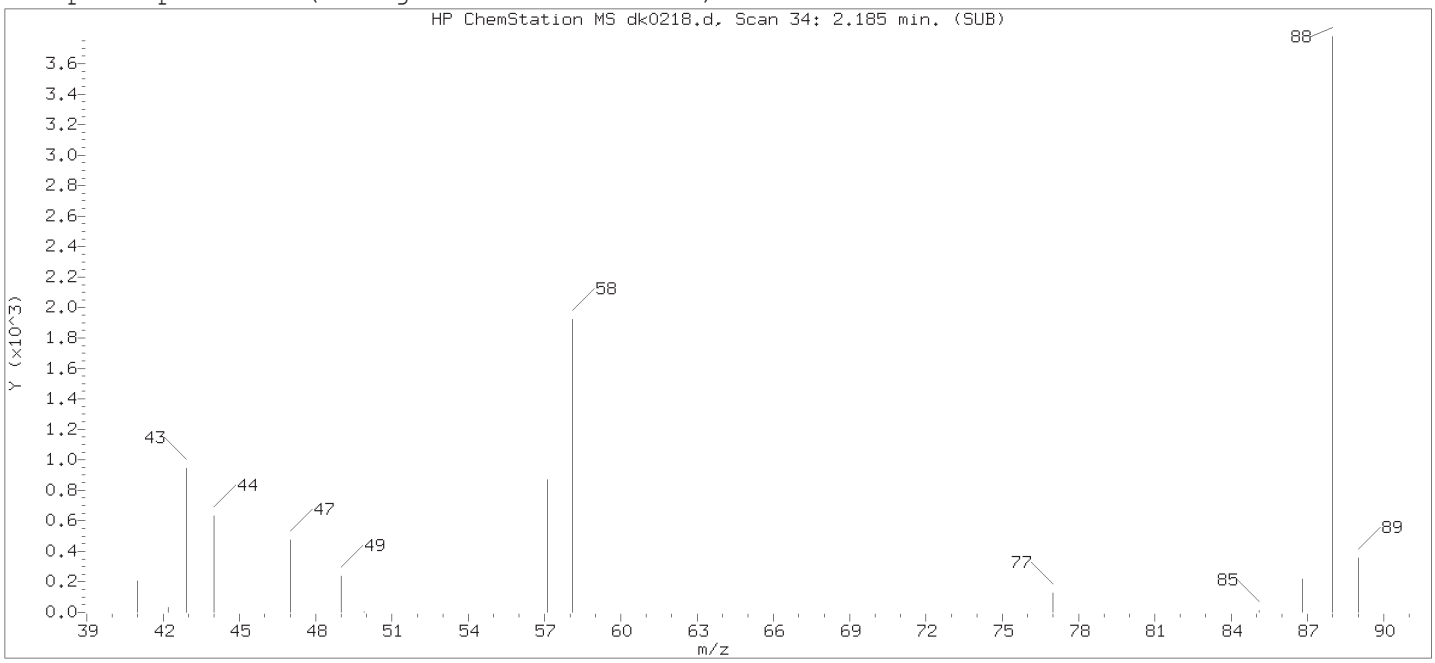
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 34		
Retention Time (minutes)	: 2.185		
Quant Ion	: 88.00		
Area (flag)	: 23550M		
On-Column Amount (ng/ul)	: 0.5311		
Integration start scan	: 29	Integration stop scan:	78
Y at integration start	: -37	Y at integration end:	-58

Reason for manual integration: improper integration

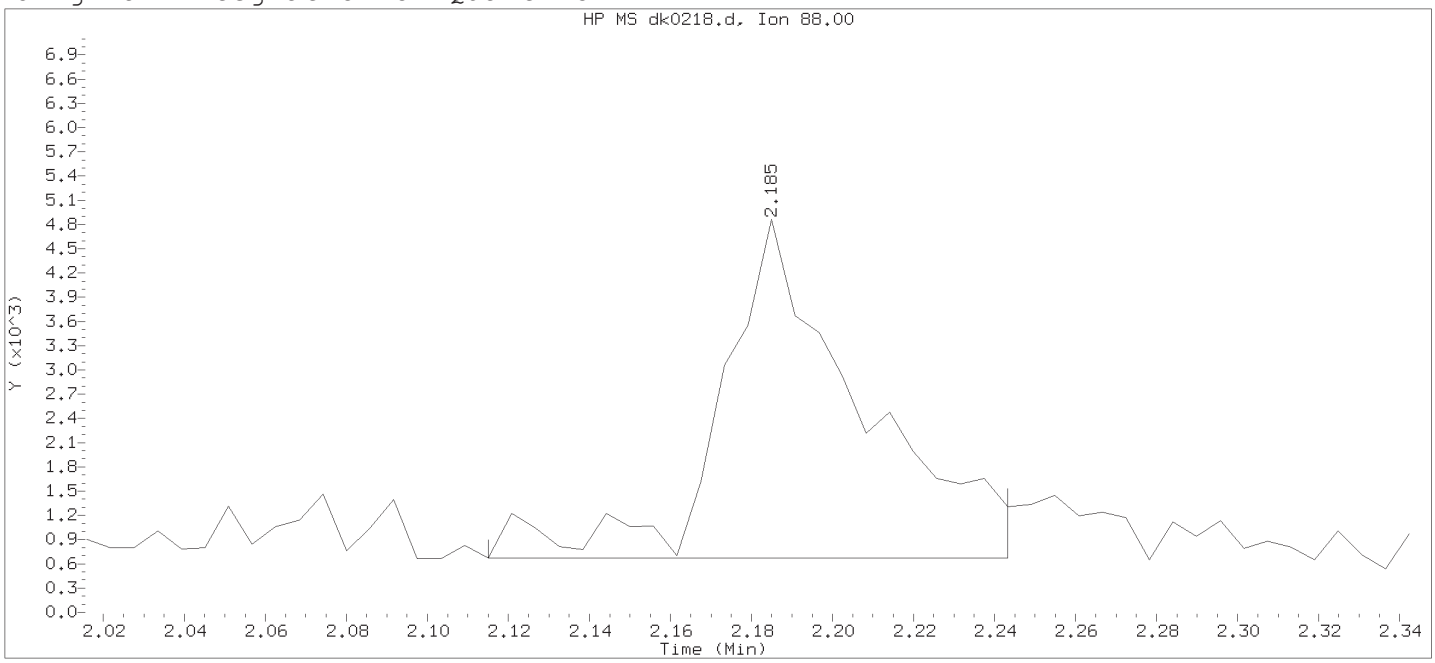
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

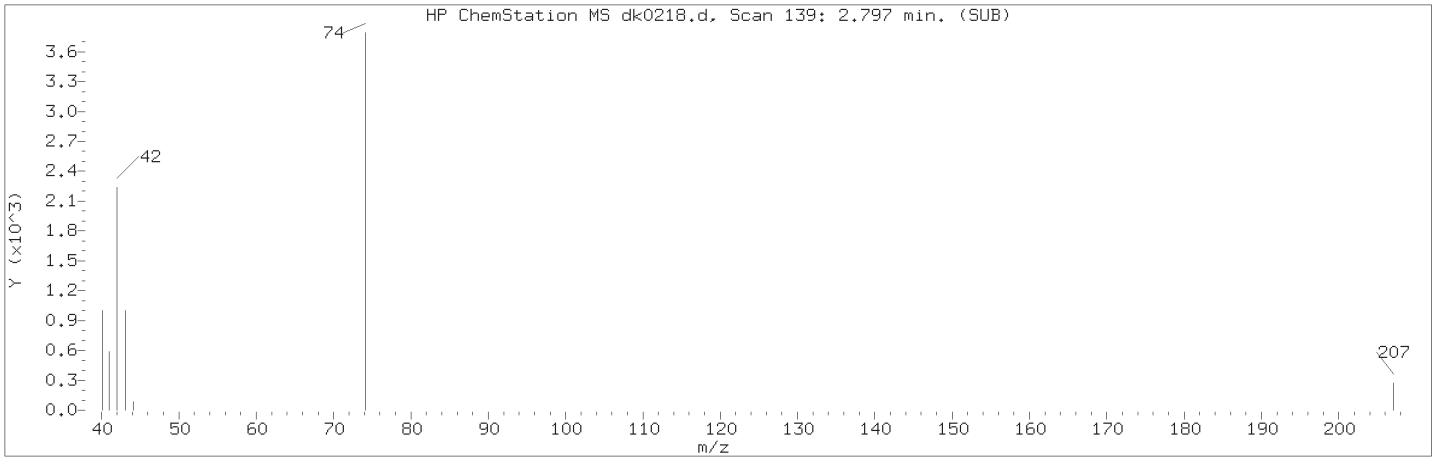
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:03 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

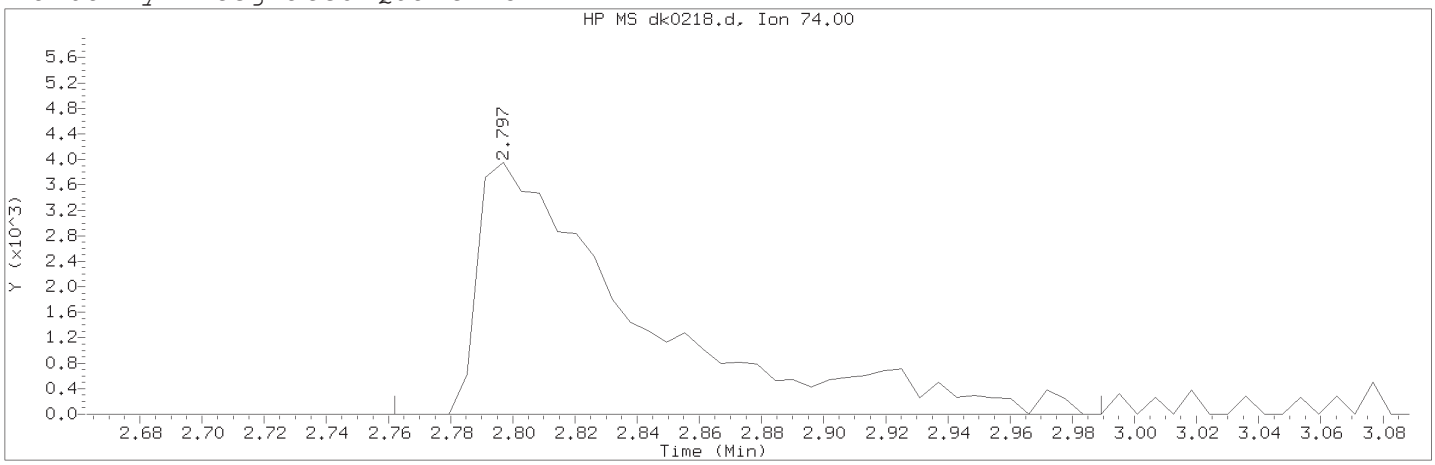
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 34		
Retention Time (minutes)	: 2.185		
Quant Ion	: 88.00		
Area	: 10070		
On-column Amount (ng/ul)	: 0.2317		
Integration start scan	: 21	Integration stop scan:	43
Y at integration start	: 675	Y at integration end:	675

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: 1214 Page 2475

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

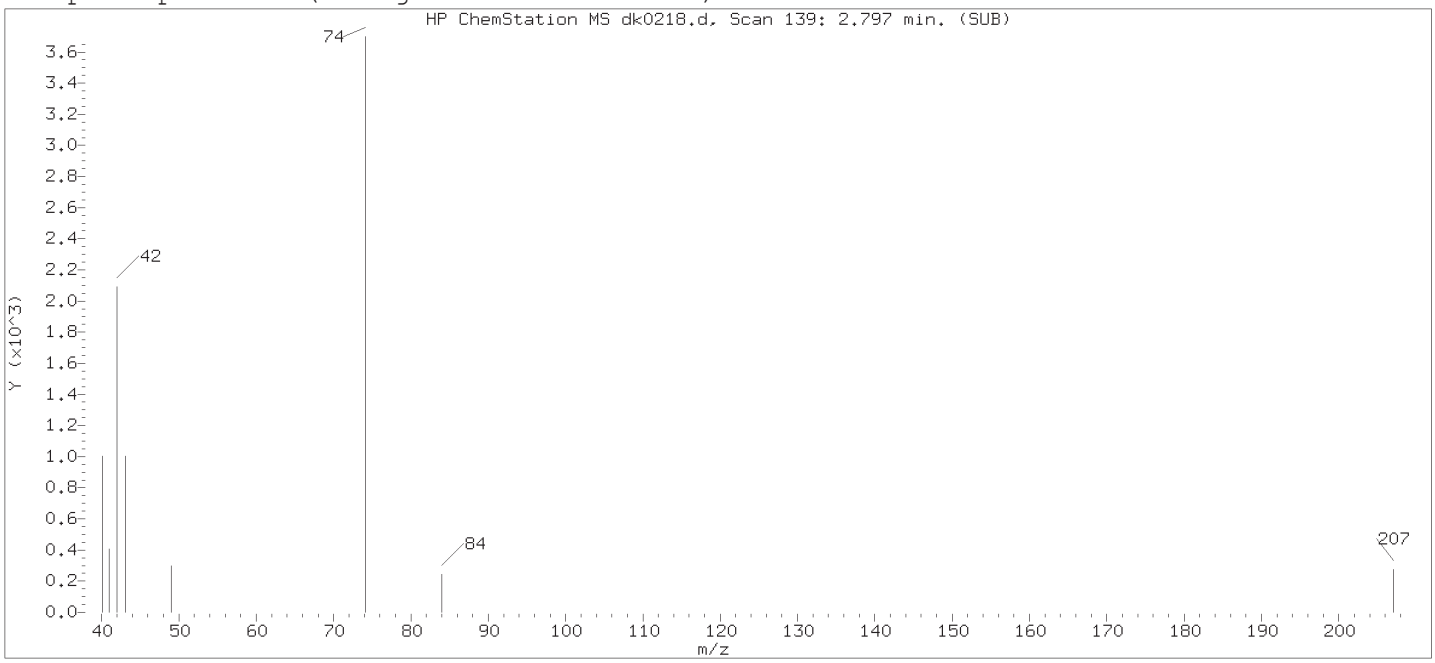
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 139		
Retention Time (minutes)	: 2.797		
Quant Ion	: 74.00		
Area (flag)	: 14301M		
On-Column Amount (ng/ul)	: 0.2113		
Integration start scan	: 132	Integration stop scan:	171
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

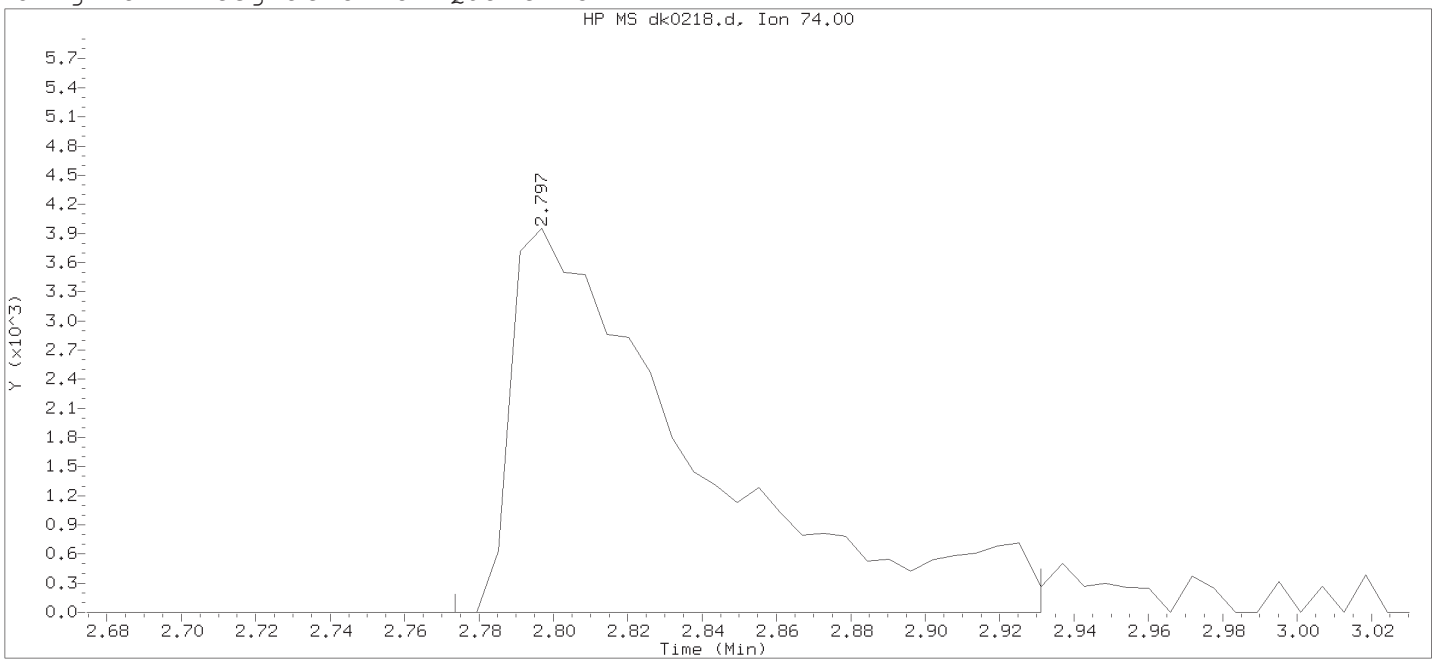
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

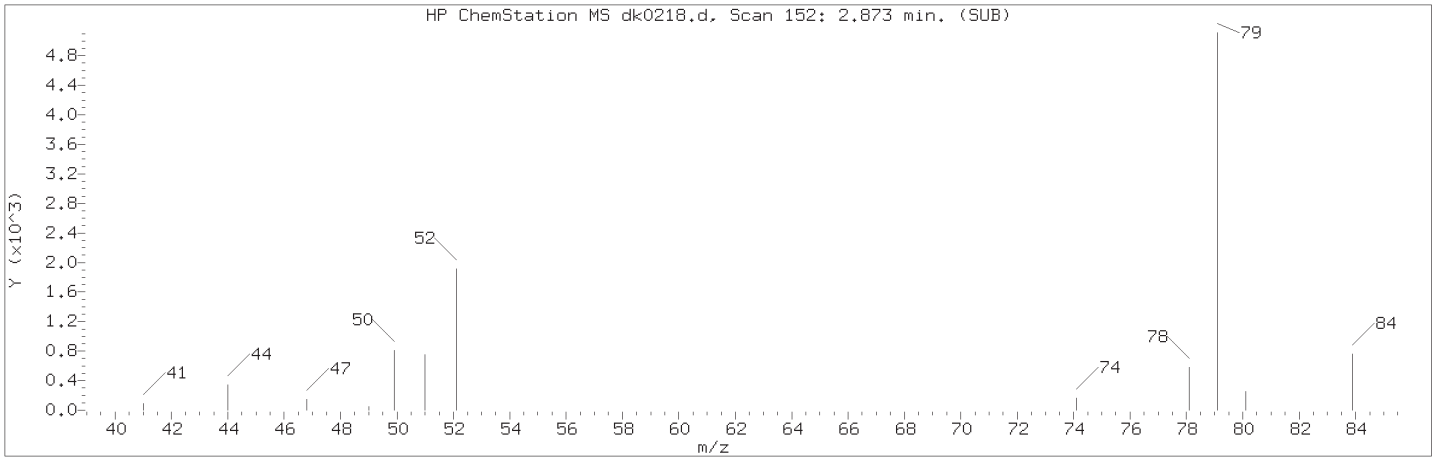
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:03 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

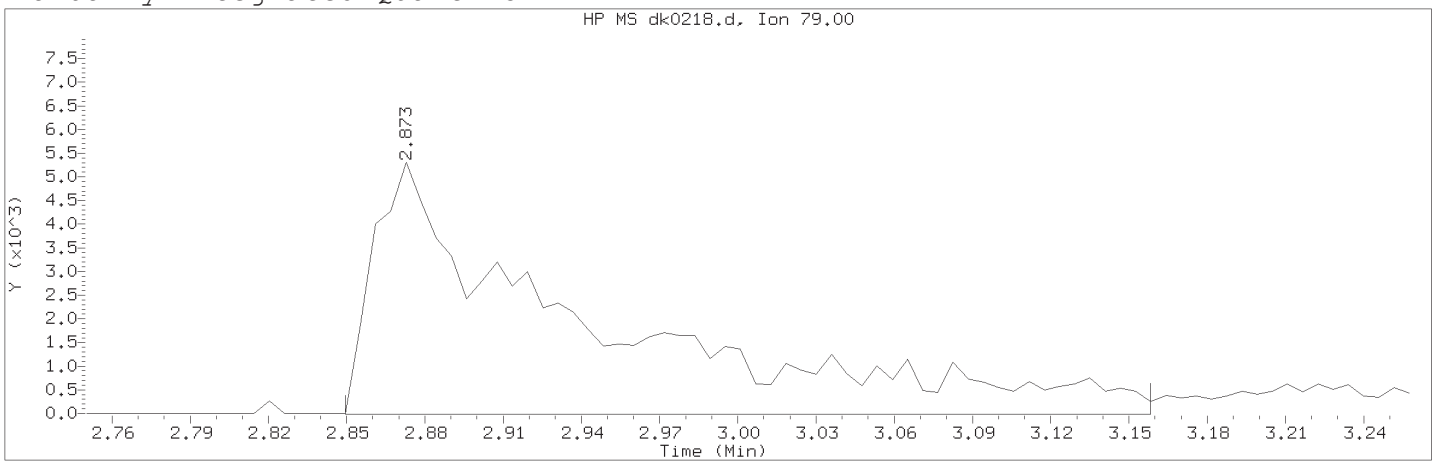
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 139		
Retention Time (minutes)	: 2.797		
Quant Ion	: 74.00		
Area	: 13487		
On-column Amount (ng/ul)	: 0.2045		
Integration start scan	: 134	Integration stop scan:	161
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: 1214 at 12:45

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

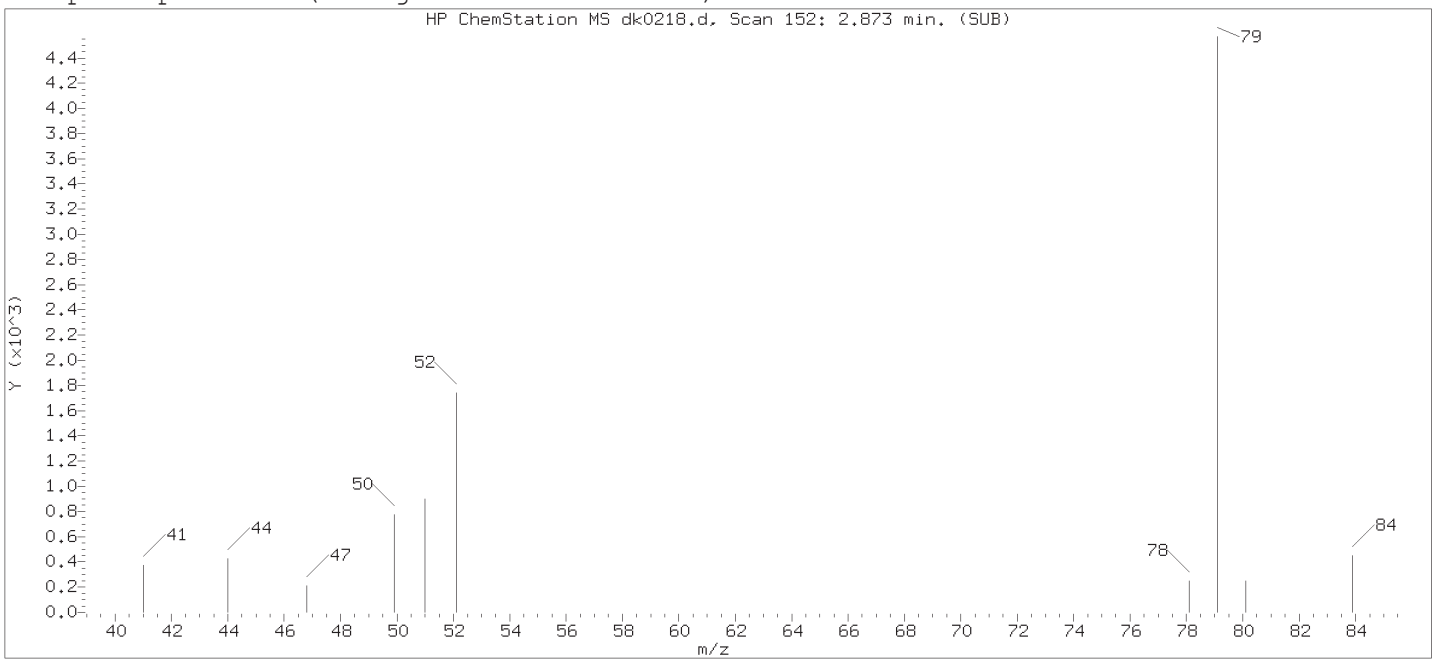
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 152		
Retention Time (minutes)	: 2.873		
Quant Ion	: 79.00		
Area (flag)	: 29403M		
On-Column Amount (ng/ul)	: 0.2592		
Integration start scan	: 147	Integration stop scan:	200
Y at integration start	: -14	Y at integration end:	-14

Reason for manual integration: improper integration

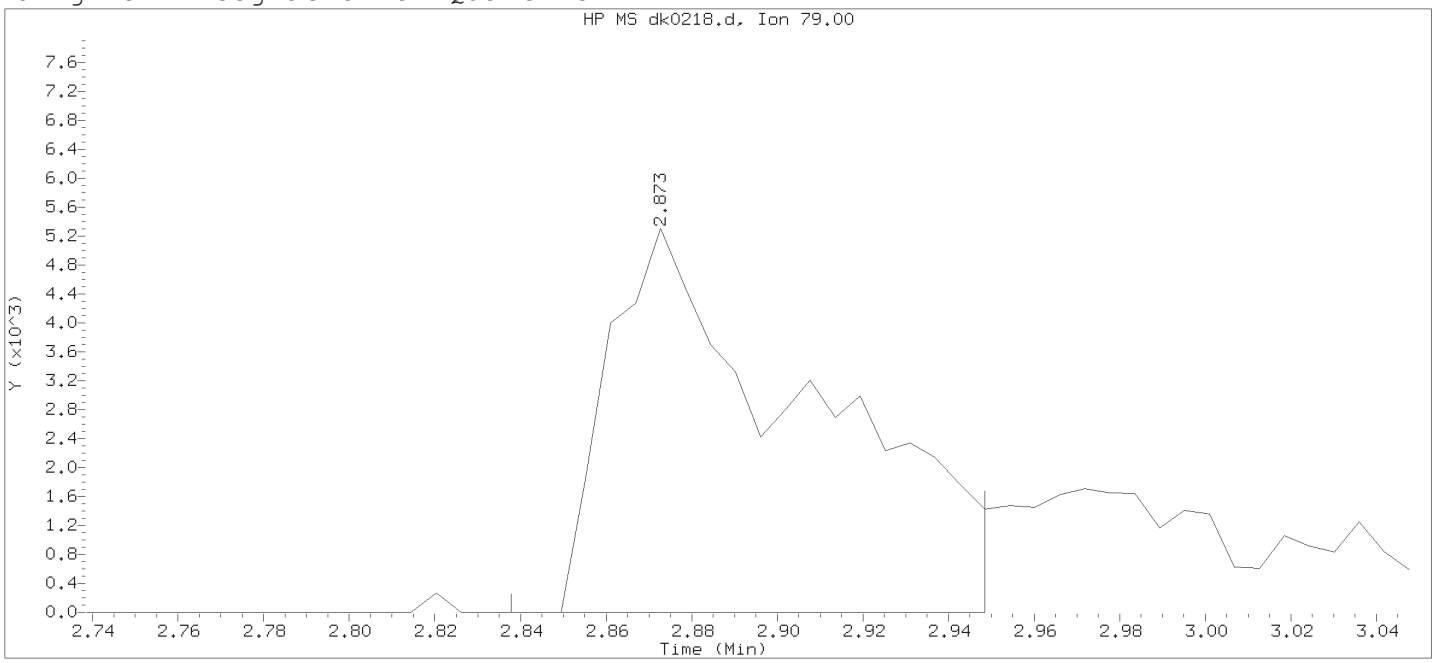
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

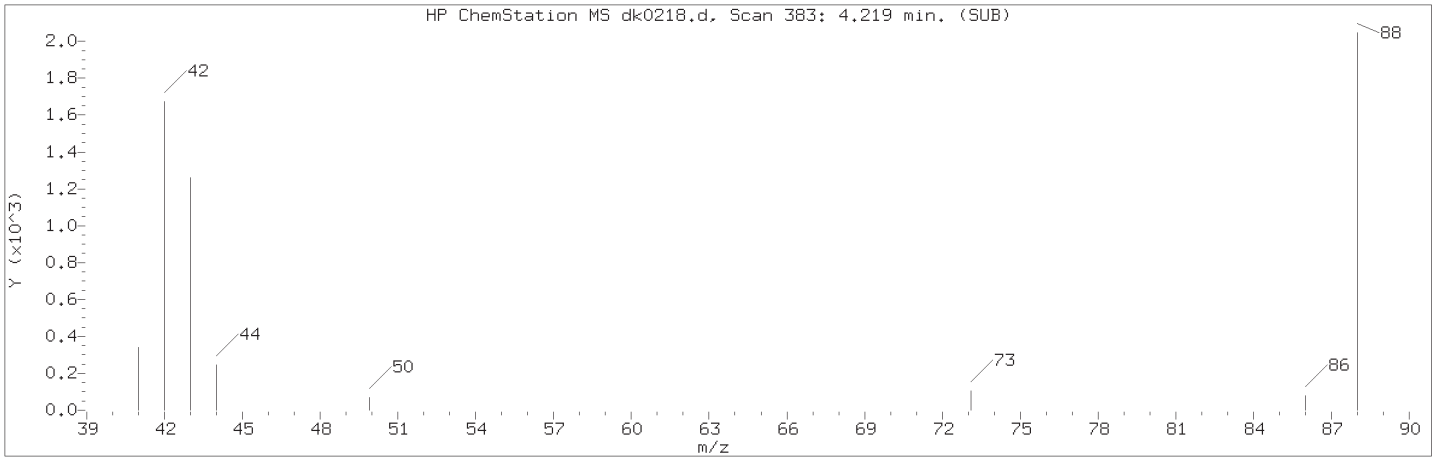
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:03 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

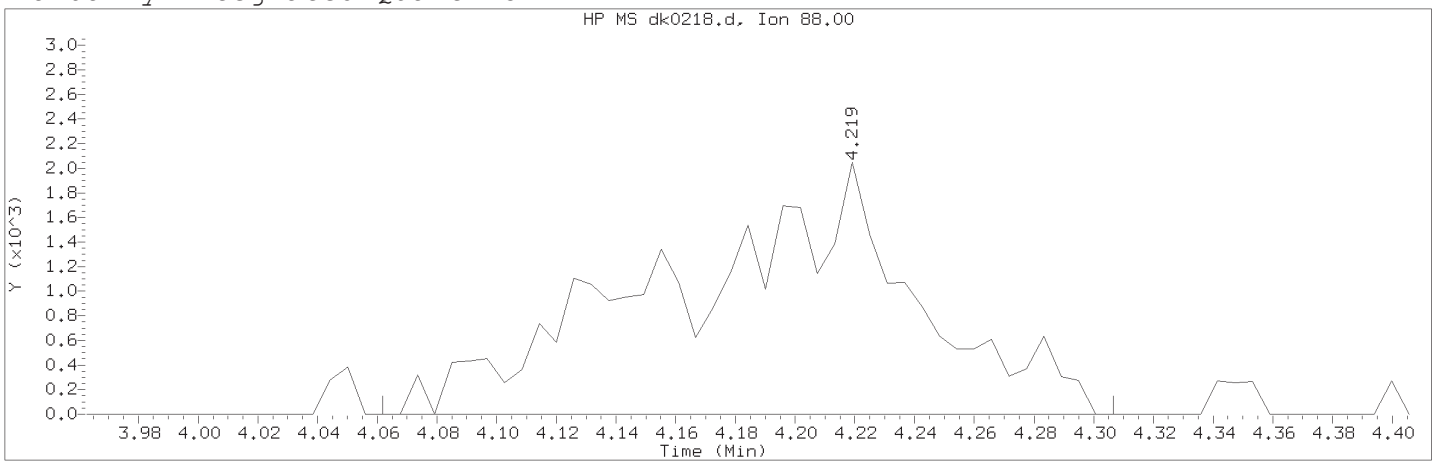
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 152		
Retention Time (minutes)	: 2.873		
Quant Ion	: 79.00		
Area	: 17581		
On-column Amount (ng/ul)	: 0.1598		
Integration start scan	: 145	Integration stop scan:	164
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

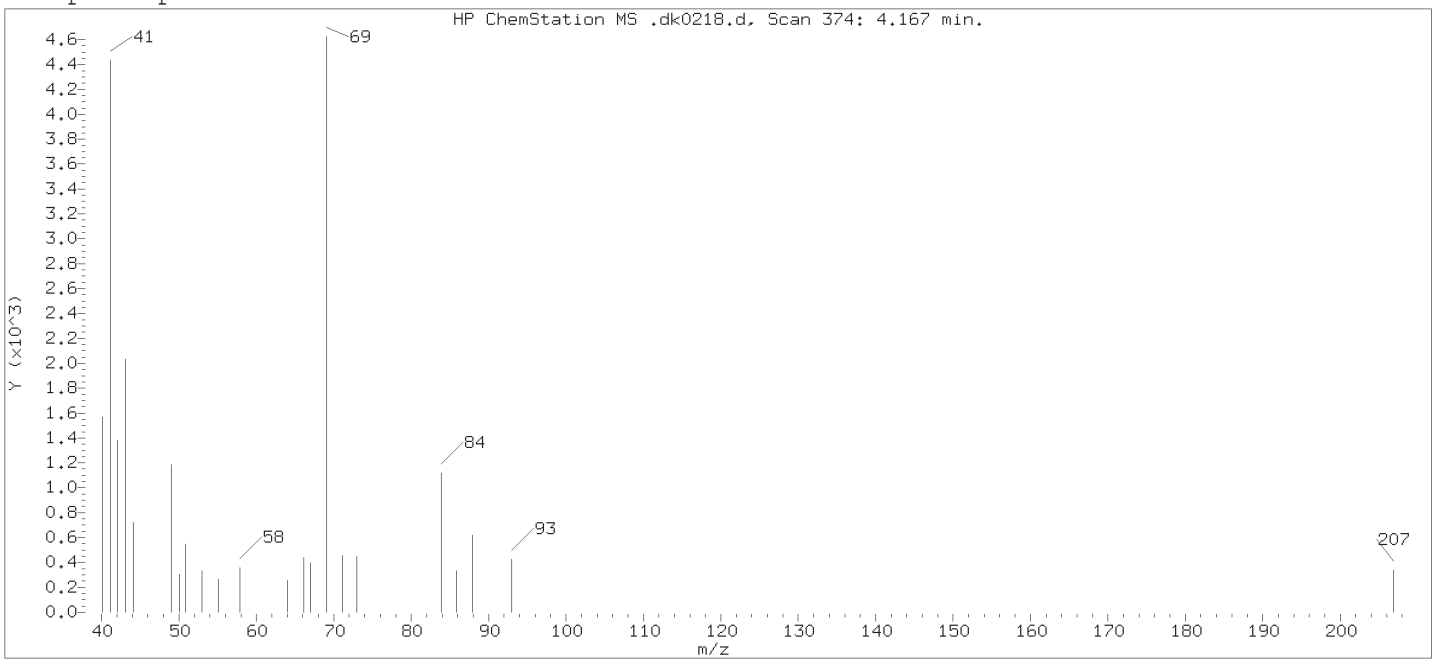
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 383		
Retention Time (minutes)	: 4.219		
Quant Ion	: 88.00		
Area (flag)	: 11475M		
On-Column Amount (ng/ul)	: 0.2328		
Integration start scan	: 355	Integration stop scan:	397
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

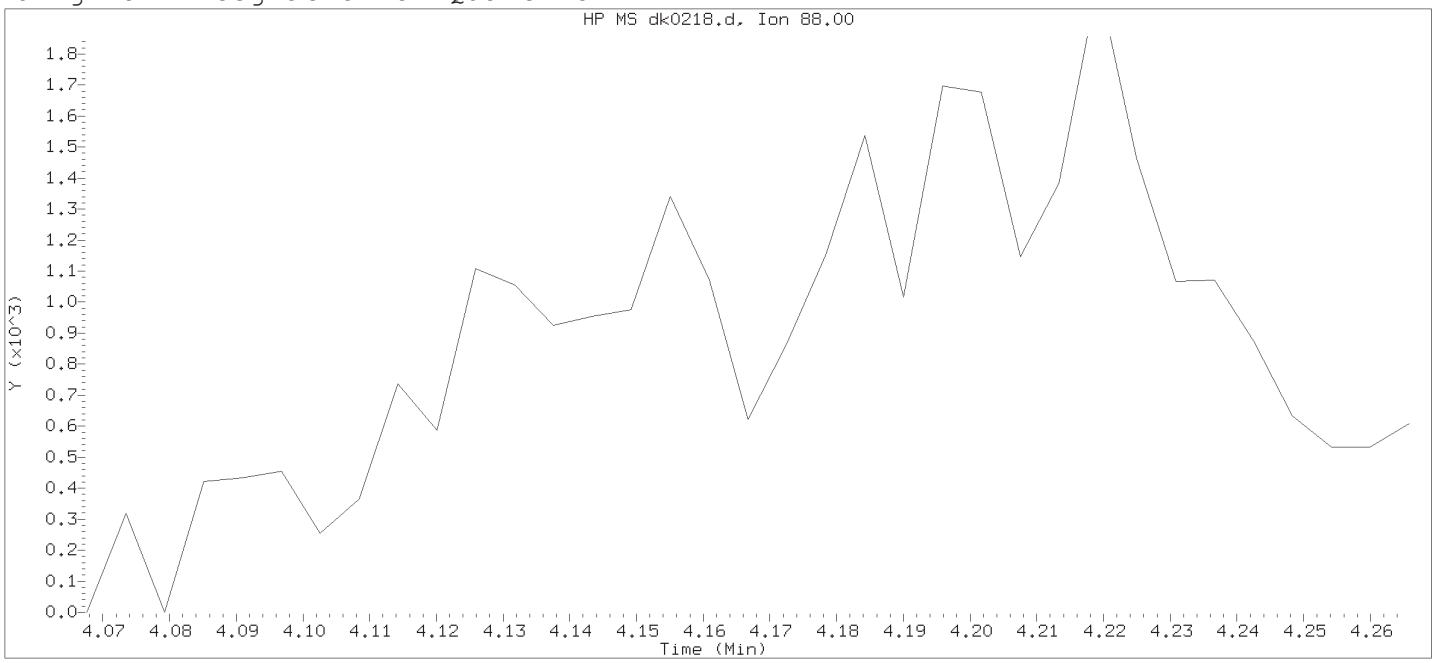
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

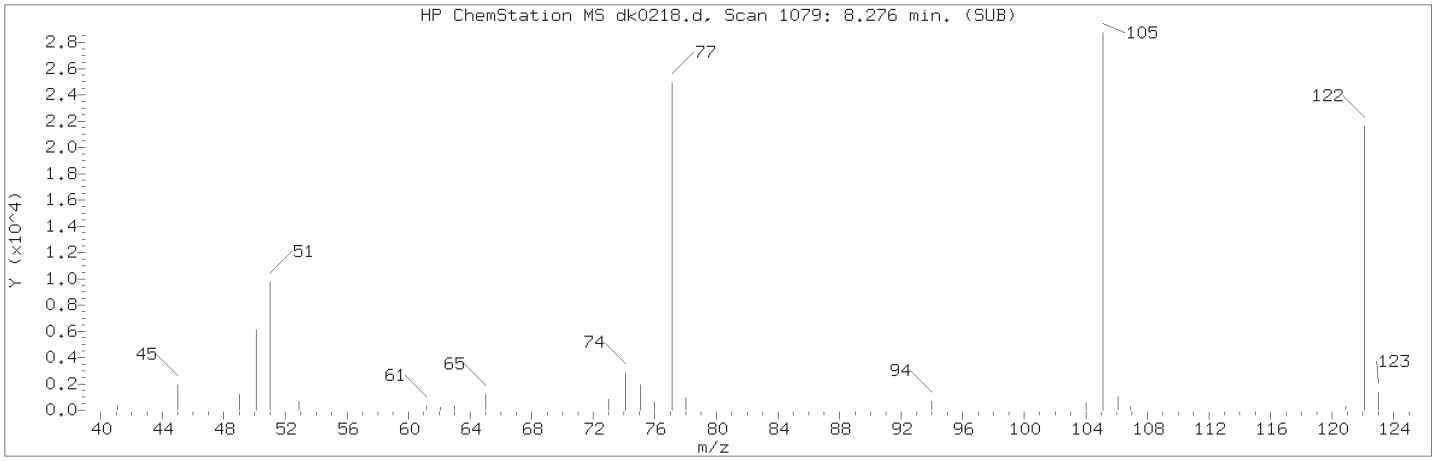
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:03 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

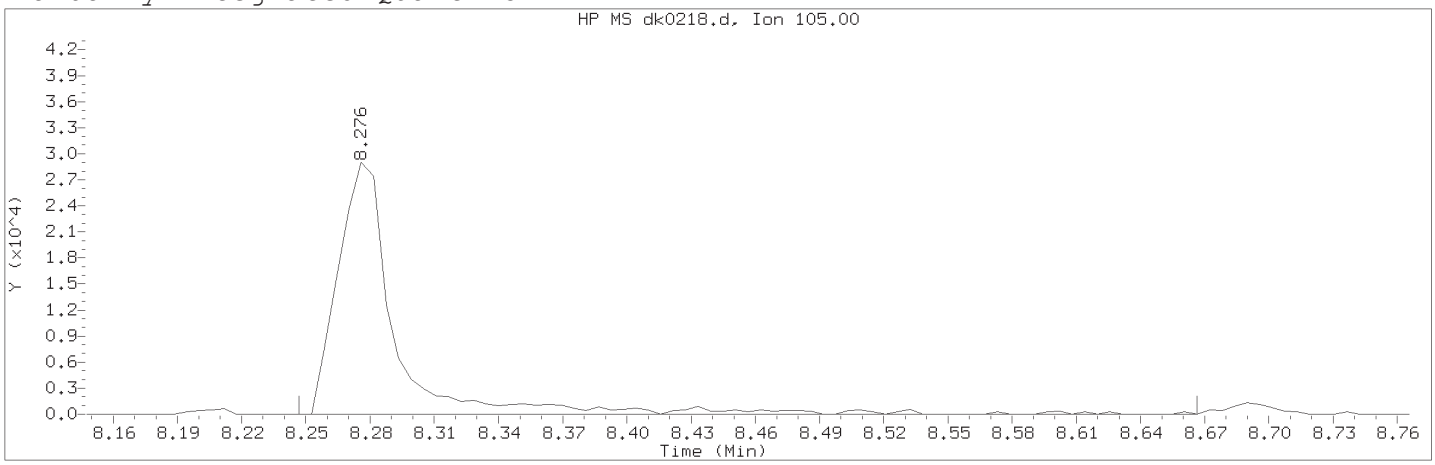
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.167
Quant Ion : 88.00

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: ARTRANSUE

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

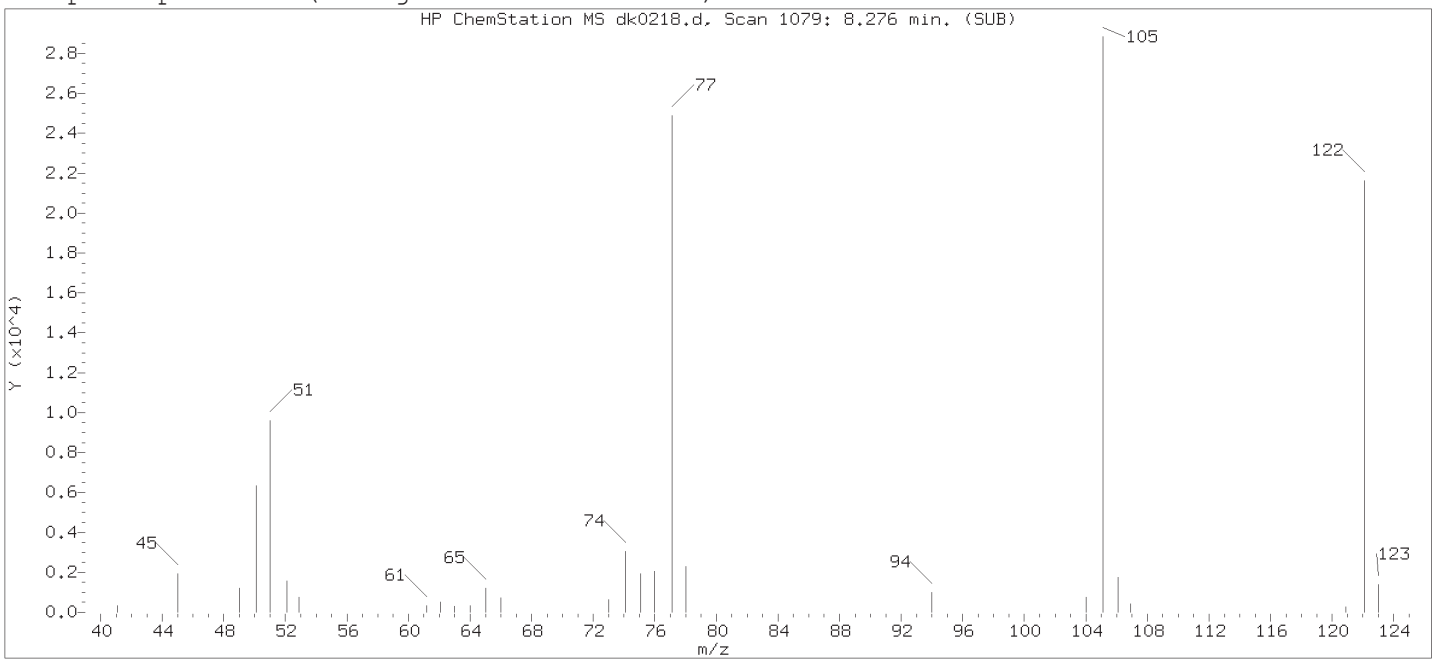
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 8.276		
Quant Ion	: 105.00		
Area (flag)	: 54833M		
On-Column Amount (ng/ul)	: 0.9393		
Integration start scan	: 1073	Integration stop scan:	1145
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

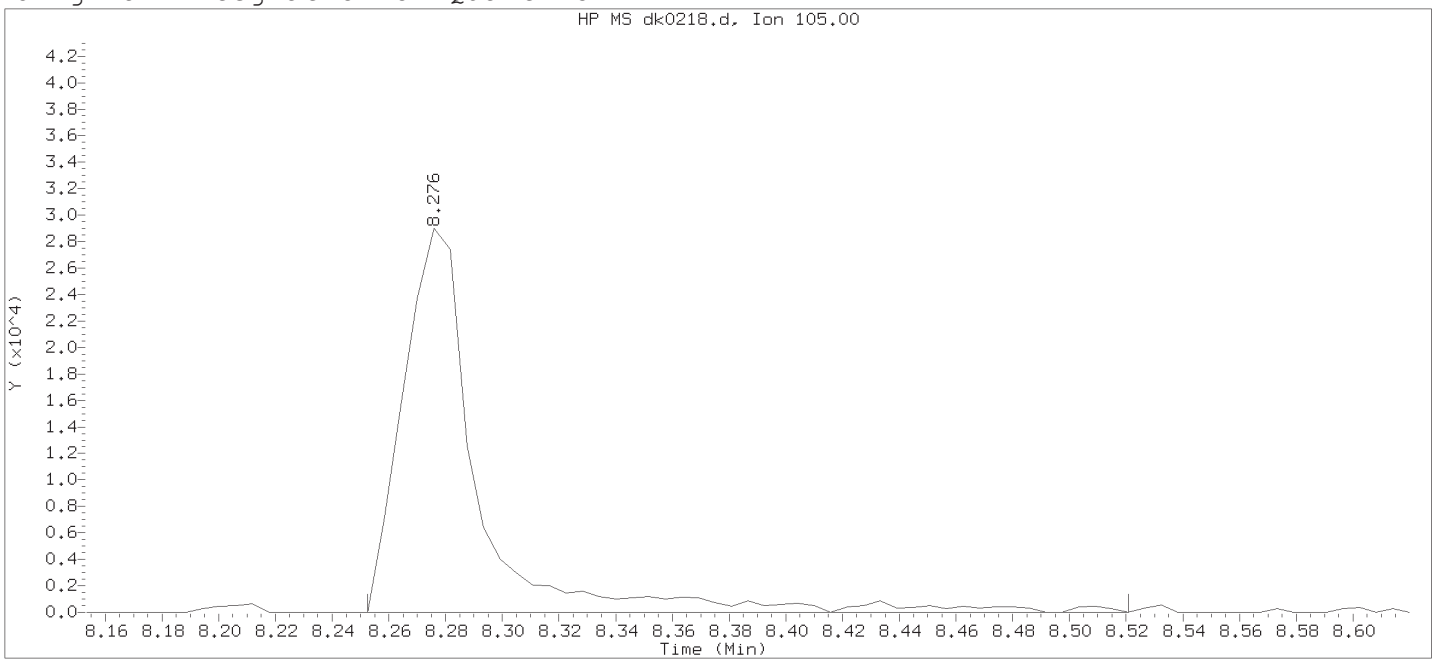
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

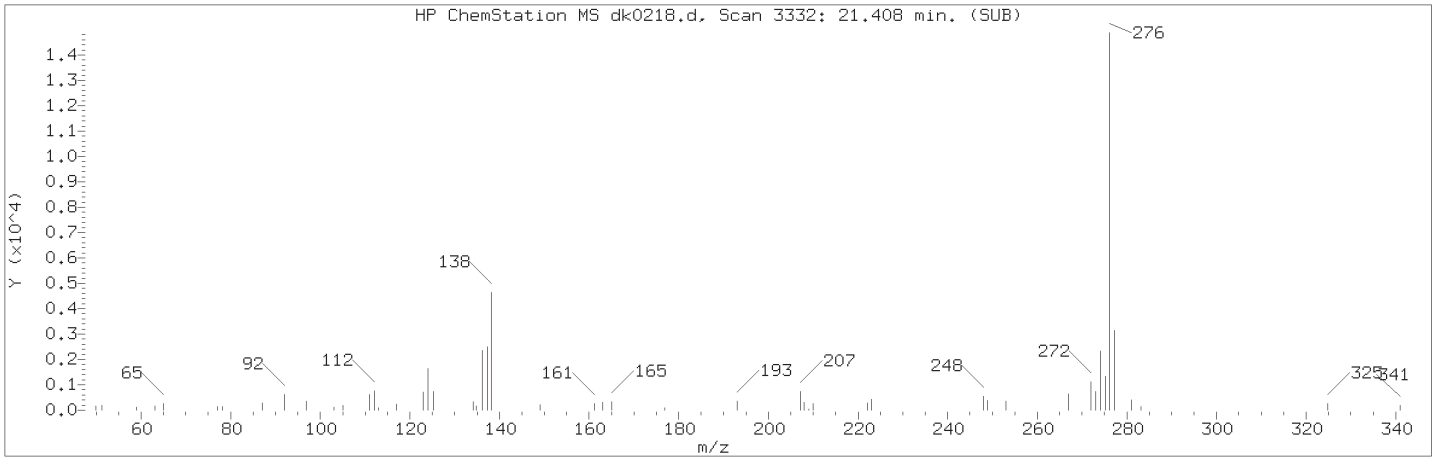
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:03 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

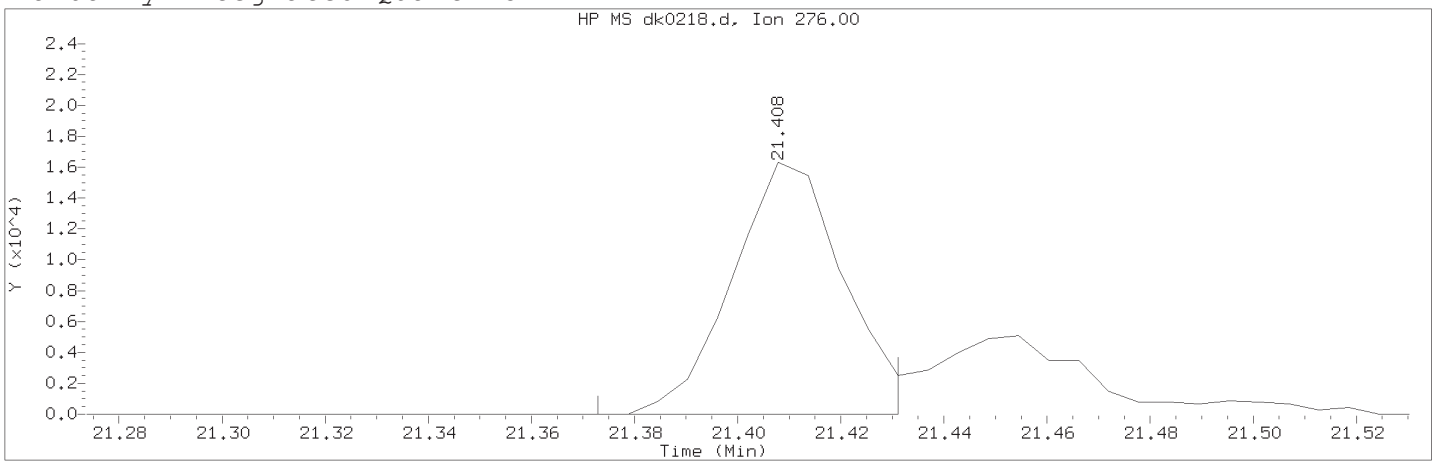
Compound Number	:	56
Compound Name	:	Benzoic acid
Scan Number	:	1079
Retention Time (minutes)	:	8.276
Quant Ion	:	105.00
Area	:	53923
On-column Amount (ng/ul)	:	0.9455
Integration start scan	:	1074 Integration stop scan: 1120
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12455

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 19:12
Date, time and analyst ID of latest file update: 04-Nov-2018 19:12 art12405

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

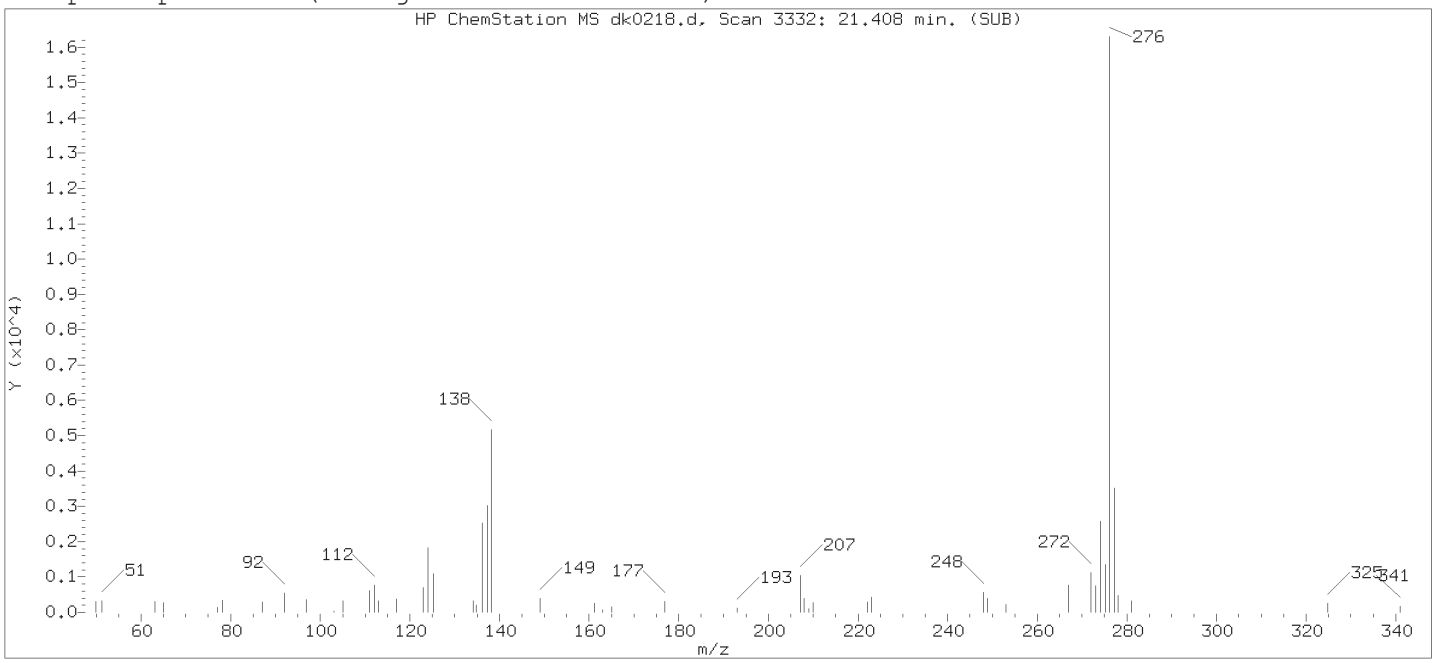
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3332		
Retention Time (minutes)	: 21.408		
Quant Ion	: 276.00		
Area (flag)	: 24572M		
On-Column Amount (ng/ul)	: 0.1876		
Integration start scan	: 3325	Integration stop scan:	3335
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

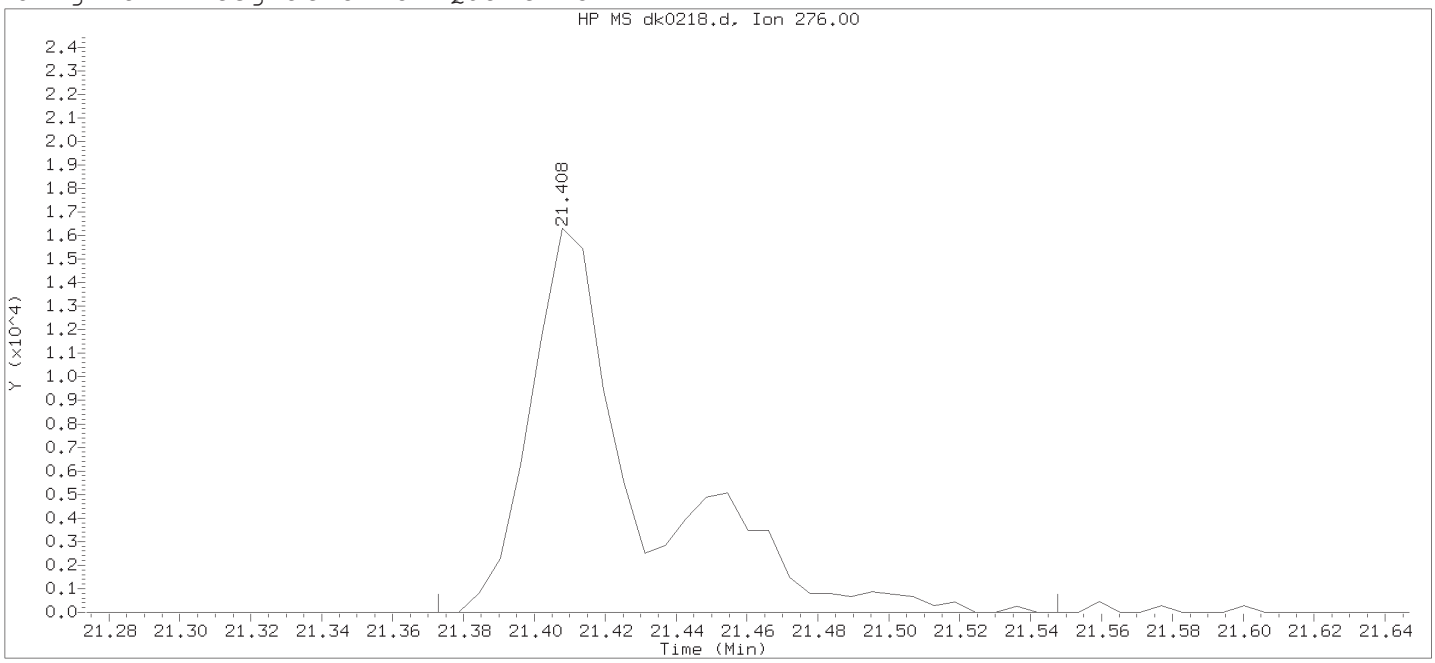
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



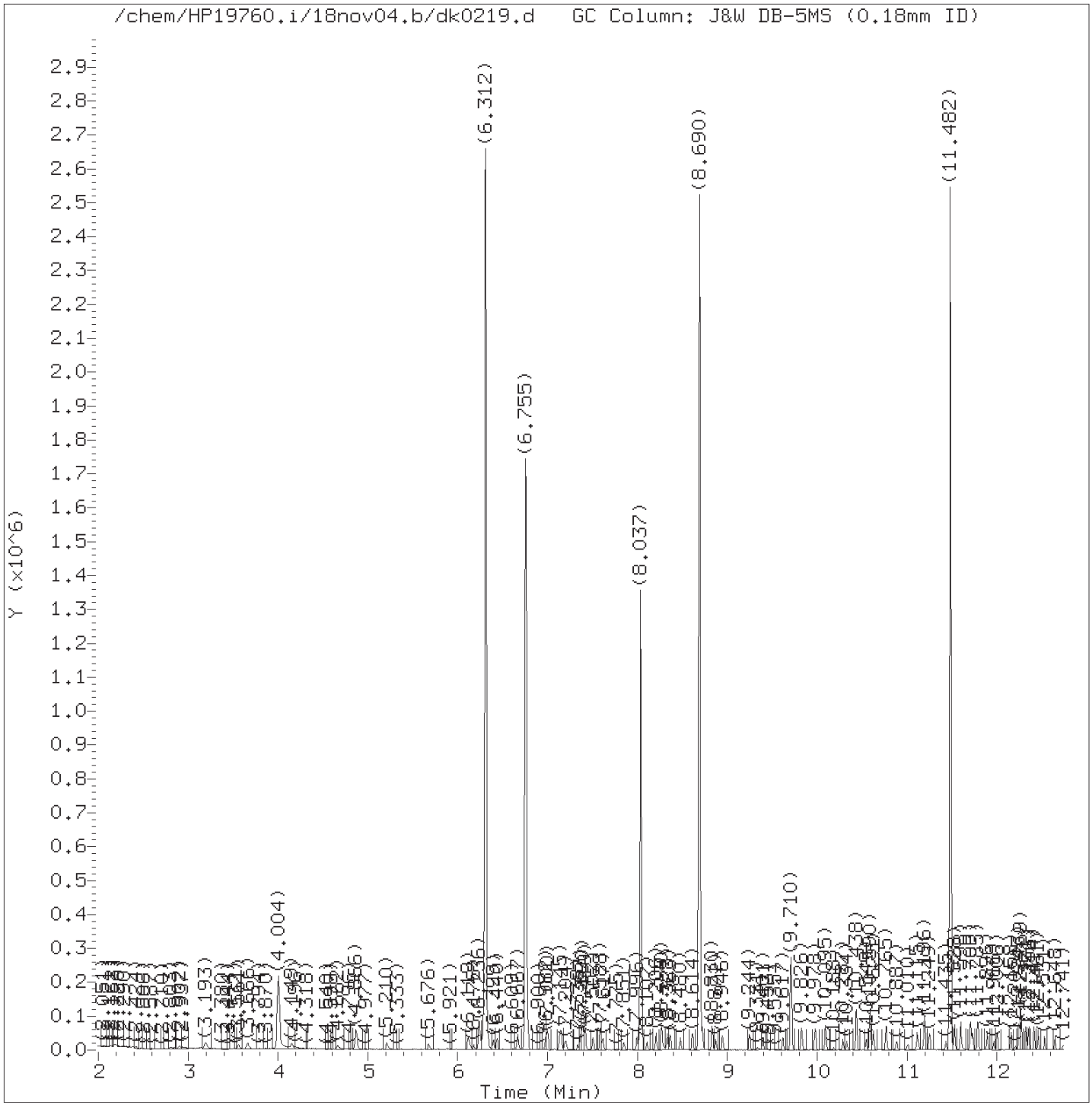
Data File: /chem/HP19760.i/18nov04.b/dk0218.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 15:35 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: all1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:03 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compound Number	:	219
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	3332
Retention Time (minutes)	:	21.408
Quant Ion	:	276.00
Area	:	35332
On-column Amount (ng/ul)	:	0.2213
Integration start scan	:	3325 Integration stop scan: 3355
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:25.
Target 3.5 esignature user ID: 1214 at 12:55



Total Ion Chromatogram (TIC)

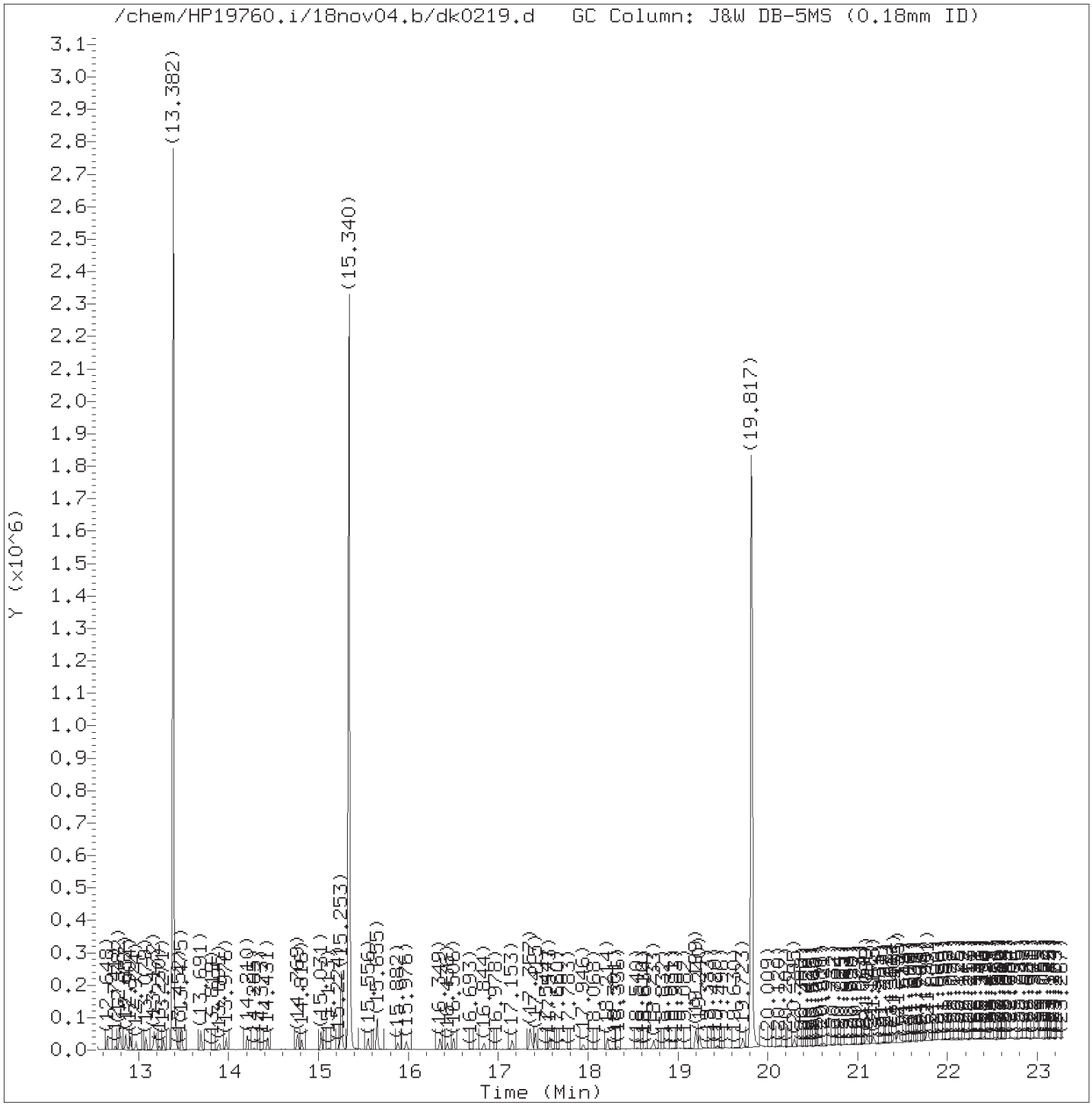
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.191	88	7530	0.131
4) N-Nitrosodimethylamine	(1)	2.803	74	8699	0.099
5) Pyridine	(1)	2.902	79	9019	0.061
7) 2-Picoline	(1)	4.039	93	11788	0.080
8) N-Nitrosomethylethylamine	(1)	4.213	88	8409M	0.131
9) Methyl methanesulfonate	(1)	4.668	80	8419	0.119
11)$2-Fluorophenol	(1)	4.866	112	22670	0.207
13) N-Nitrosodiethylamine	(1)	5.210	102	5962	0.104
42) Total Cresols	(1)			24631	0.217
15) Ethyl methanesulfonate	(1)	5.676	109	6371	0.116
16) Benzaldehyde	(1)	6.119	77	12409	0.135
17)$Phenol-d6	(1)	6.236	99	32600	0.215
18) Phenol	(1)	6.254	94	19783	0.112
19) Aniline	(1)	6.277	93	23875	0.115
20) a-methylstyrene	(1)	6.358	118	946M	0.089
22) bis(2-Chloroethyl)ether	(1)	6.393	93	14416	0.110
23) 2-Chlorophenol	(1)	6.440	128	10719	0.104
24) 1,3-Dichlorobenzene	(1)	6.667	146	13635	0.124
25)*1,4-Dichlorobenzene-d4	(1)	6.755	152	341575	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	13294	0.121
27) Benzyl alcohol	(1)	6.982	108	8293	0.114
28) 1,2-Dichlorobenzene	(1)	7.000	146	12713	0.122
30) Indene	(1)	7.134	115	13426	0.114
31) 2-Methylphenol	(1)	7.151	108	10915	0.103
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.198	45	17305	0.115
34) bis(2-Chloroisopropyl)ether	(1)	7.198	45	17305	0.115
35) N-Nitrosopyrrolidine	(1)	7.332	100	6172	0.104
36) Acetophenone	(1)	7.373	105	17300	0.116
97) Isosafrole	(3)			7725	0.108
38) N-Nitroso-di-n-propylamine	(1)	7.384	70	9971	0.107
37) 4-Methylphenol	(1)	7.390	108	13716	0.114
39) N-Nitrosomorpholine	(1)	7.402	56	7879	0.113
40) o-Toluidine	(1)	7.419	106	20742	0.112
43) Hexachloroethane	(1)	7.507	117	6218	0.121
44)$Nitrobenzene-d5	(2)	7.582	82	29022	0.214
45) Nitrobenzene	(2)	7.617	77	15484	0.113
48) N-Nitrosopiperidine	(2)	7.851	114	5644	0.107
50) Isophorone	(2)	7.996	82	23402	0.101
120) 2,4_2,6-Dinitrotoluenes	(3)			8087	0.179
51) 2-Nitrophenol	(2)	8.107	139	5082	0.098

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.206	107	10696	0.096
56) Benzoic acid	(2)	8.270	105	27675	0.368
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	4747	0.113
55) bis(2-Chloroethoxy)methane	(2)	8.363	93	16561	0.114
60) 2,4-Dichlorophenol	(2)	8.480	162	7448	0.099
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	9842	0.120
65)*Naphthalene-d8	(2)	8.690	136	1256378	5.000
146) Diallate trans/cis	(4)			9308	0.093
67) 4-Chloroaniline	(2)	8.830	127	12559	0.111
68) 2,6-Dichlorophenol	(2)	8.836	162	7081	0.097
69) Hexachloropropene	(2)	8.871	213	5772	0.112
71) Hexachlorobutadiene	(2)	8.946	225	5422	0.122
75) Quinoline	(2)	9.244	129	18649	0.111
76) Caprolactam	(2)	9.337	113	1557M	0.051
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	8191	0.094
80) 4-Chloro-3-methylphenol	(2)	9.622	107	9143	0.103
82) Safrole	(2)	9.722	162	6125	0.090
85) Hexachlorocyclopentadiene	(3)	10.089	237	4061	0.093
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.095	216	8655	0.118
88) cis-Isosafrole	(3)	10.188	162	1689	0.025
90) 2,4,6-Trichlorophenol	(3)	10.287	196	4110	0.089
92) 2,4,5-Trichlorophenol	(3)	10.334	196	4969	0.102
99) Diphenyl ether	(3)	10.433	170	9598	0.116
93)$2-Fluorobiphenyl	(3)	10.438	172	42085	0.229
94) trans-Isosafrole	(3)	10.549	162	6036	0.083
95) 1,1'-Biphenyl	(3)	10.590	154	22832	0.115
98) 1-Chloronaphthalene	(3)	10.625	162	19042	0.133
100) 2-Nitroaniline	(3)	10.777	138	4253	0.083
104) 1,4-Naphthoquinone	(3)	10.887	158	4916	0.082
105) 1,4-Dinitrobenzene	(3)	11.010	168	2371	0.085
106) Dimethylphthalate	(3)	11.115	163	18611	0.112
107) 1,3-Dinitrobenzene	(3)	11.126	168	2177	0.070
108) 2,6-Dinitrotoluene	(3)	11.185	165	3619	0.094
112) 3-Nitroaniline	(3)	11.435	138	3929	0.089
113)*Acenaphthene-d10	(3)	11.482	164	551905	5.000
115) 2,4-Dinitrophenol	(3)	11.598	184	10882	0.407
116) 4-Nitrophenol	(3)	11.709	109	11885	0.351
117) Pentachlorobenzene	(3)	11.732	250	6824	0.118
119) Dibenzofuran	(3)	11.785	168	26694	0.120
118) 2,4-Dinitrotoluene	(3)	11.791	165	4468	0.085

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
121) 1-Naphthylamine	(3)	11.896	143	17200	0.102
122) 2,3,4,6-Tetrachlorophenol	(3)	11.966	232	2966	0.079
123) 2-Naphthylamine	(3)	12.006	143	16581	0.097
124) Diethylphthalate	(3)	12.158	149	16365	0.097
125) Thionazin	(3)	12.257	107	3276	0.089
128) 5-Nitro-o-toluidine	(3)	12.263	152	4150	0.081
127) 4-Chlorophenyl-phenylether	(3)	12.269	204	9561	0.118
129) 4-Nitroaniline	(3)	12.269	138	3894	0.080
130) 4,6-Dinitro-2-methylphenol	(4)	12.321	198	7868	0.252
131) N-Nitrosodiphenylamine	(4)	12.414	169	14871	0.109
132) NDPA as diphenylamine	(4)	12.414	169	14871	0.109
134) 1,2-Diphenylhydrazine	(4)	12.461	77	23932	0.107
135)$2,4,6-Tribromophenol	(3)	12.531	330	3537	0.195
137) Tetraethyldithiopyrophosphate	(4)	12.648	97	3298	0.100
139) 1,3,5-Trinitrobenzene	(4)	12.735	213	1202	0.060
140) Diallate (peak 1)	(4)	12.782	86	7782	0.074
141) Phorate	(4)	12.787	75	12027	0.093
142) Phenacetin	(4)	12.799	108	7724	0.077
143) 4-Bromophenyl-phenylether	(4)	12.857	248	4965	0.125
144) Diallate (peak 2)	(4)	12.886	86	1526	0.019
147) Dimethoate	(4)	12.968	87	6529	0.076
148) Atrazine	(4)	13.079	200	3719	0.092
149) Pentachlorophenol	(4)	13.155	266	937	0.034
151) Pentachloronitrobenzene	(4)	13.172	237	1675	0.087
150) 4-Aminobiphenyl	(4)	13.172	169	10630	0.090
152) Pronamide	(4)	13.271	173	5494	0.077
153)*Phenanthrene-d10	(4)	13.382	188	994197	5.000
154) Dinoseb	(4)	13.411	211	1424	0.032
163) Carbazole	(4)	13.691	167	23758	0.104
164) Methyl parathion	(4)	13.895	109	3962	0.061
165) Di-n-butylphthalate	(4)	14.210	149	22942	0.081
167) Parathion	(4)	14.431	109	2338	0.057
168) 4-Nitroquinoline-1-oxide	(4)	14.431	190	1350	2.268
169) Octachlorostyrene	(4)	14.775	308	1605	0.100
171) Isodrin	(4)	14.816	193	3381	0.125
174) Benzidine	(5)	15.253	184	113716	0.602
175)*Pyrene-d10	(5)	15.340	212	943367	5.000
179)$Terphenyl-d14	(5)	15.655	244	36095	0.234
182) p-Dimethylaminoazobenzene	(5)	15.877	225	2666	0.062
185) Chlorobenzilate	(5)	15.976	139	6487	0.076

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

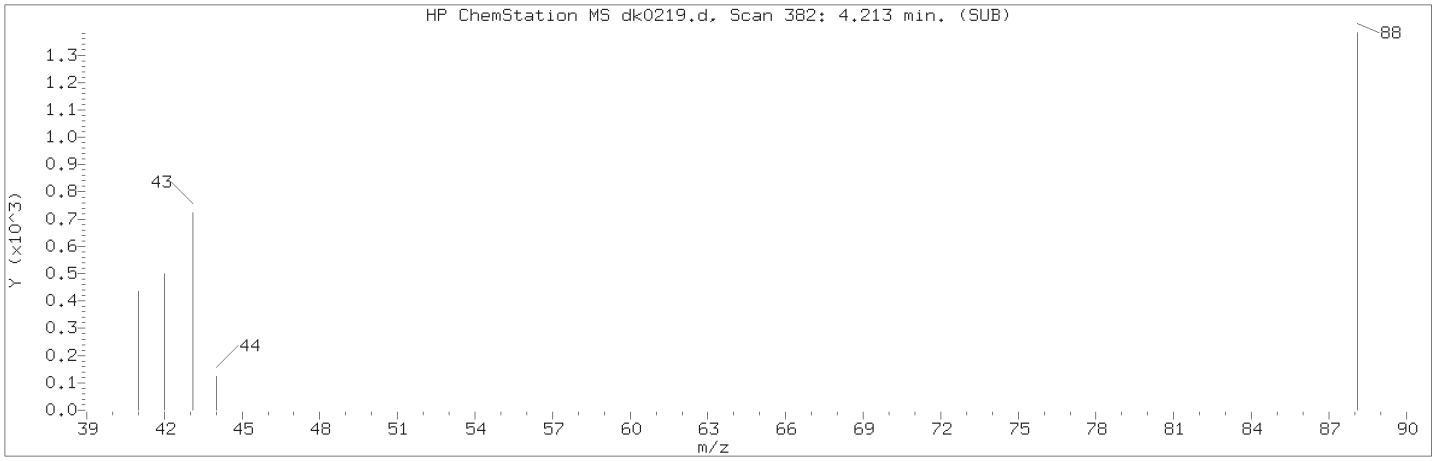
Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
187) 3,3'-Dimethylbenzidine	(5)	16.436	212	11362	0.070
188) Butylbenzylphthalate	(5)	16.506	149	9452	0.069
191) 2-Acetylaminofluorene	(5)	16.844	181	5304	0.048
193) 3,3'-Dichlorobenzidine	(5)	17.351	252	6989	0.075
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.375	231	3581	0.068
199) bis(2-Ethylhexyl)phthalate	(5)	17.573	149	11382	0.060
203) 6-Methylchrysene	(5)	18.220	242	13967	0.086
205) Di-n-octylphthalate	(6)	18.733	149	16283	0.054
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.205	256	6476	0.062
213)*Perylene-d12	(6)	19.817	264	884422	5.000
215) 3-Methylcholanthrene	(6)	20.301	268	6960	0.074
217) Dibenz(a,h)acridine	(6)	21.105	279	12650	0.080
218) Dibenz(a,j)acridine	(6)	21.181	279	13189	0.077

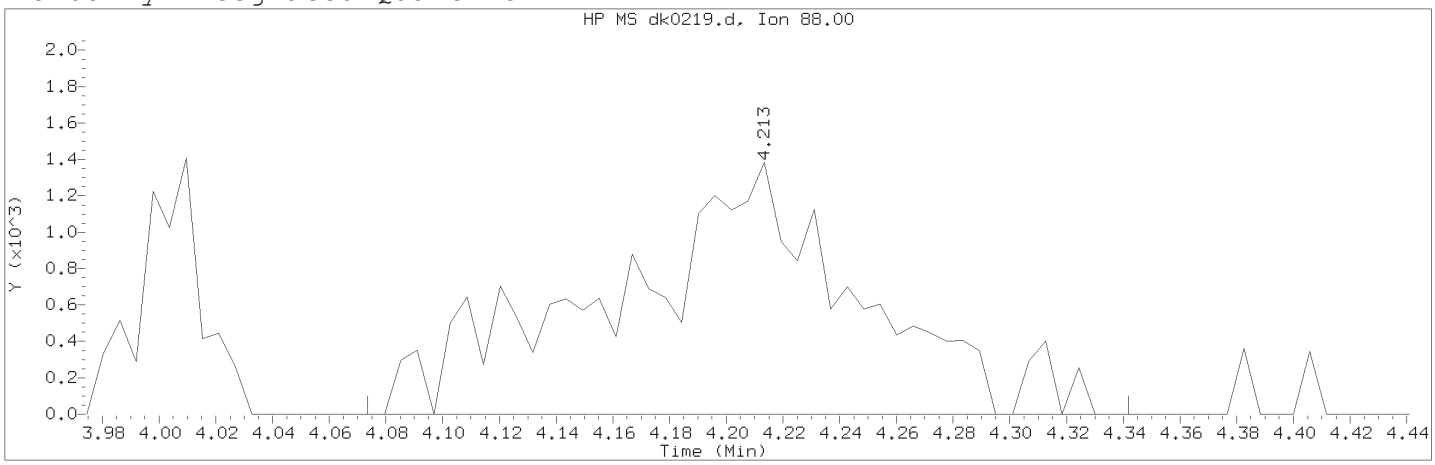
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

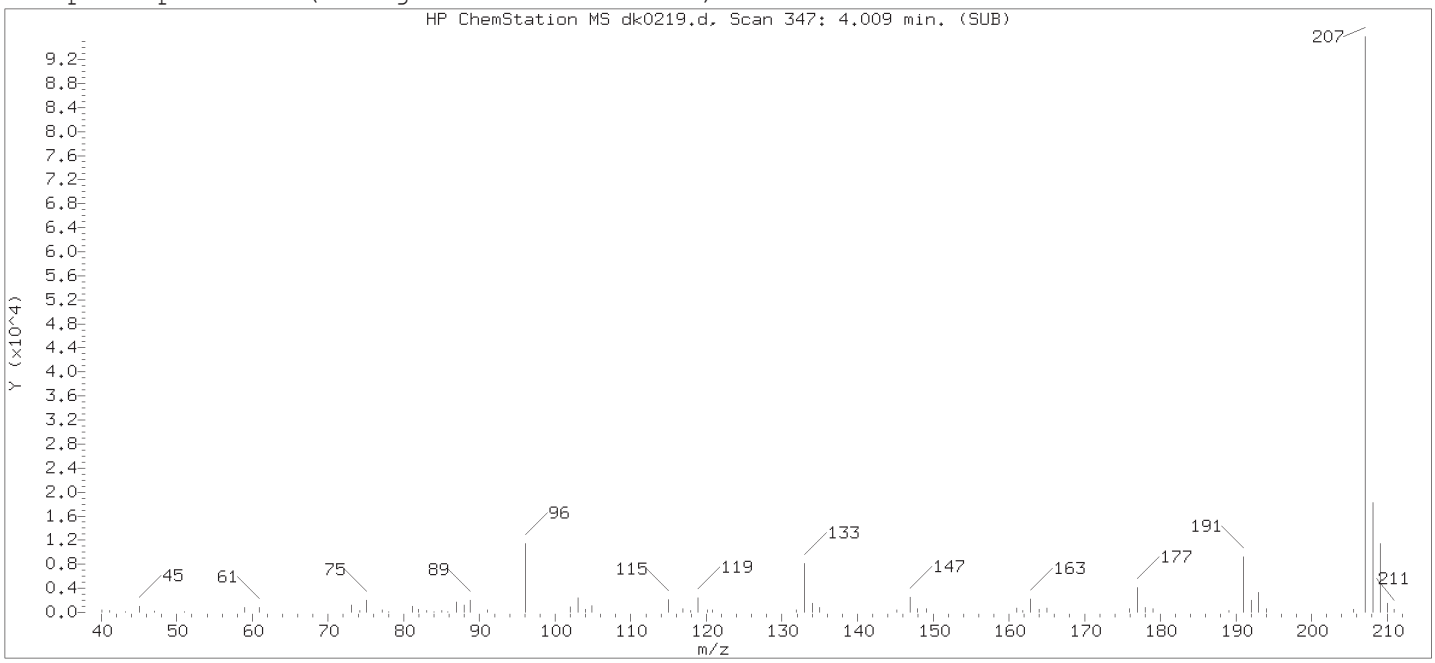
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 382		
Retention Time (minutes)	: 4.213		
Quant Ion	: 88.00		
Area (flag)	: 8409M		
On-Column Amount (ng/ul)	: 0.1312		
Integration start scan	: 357	Integration stop scan:	403
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

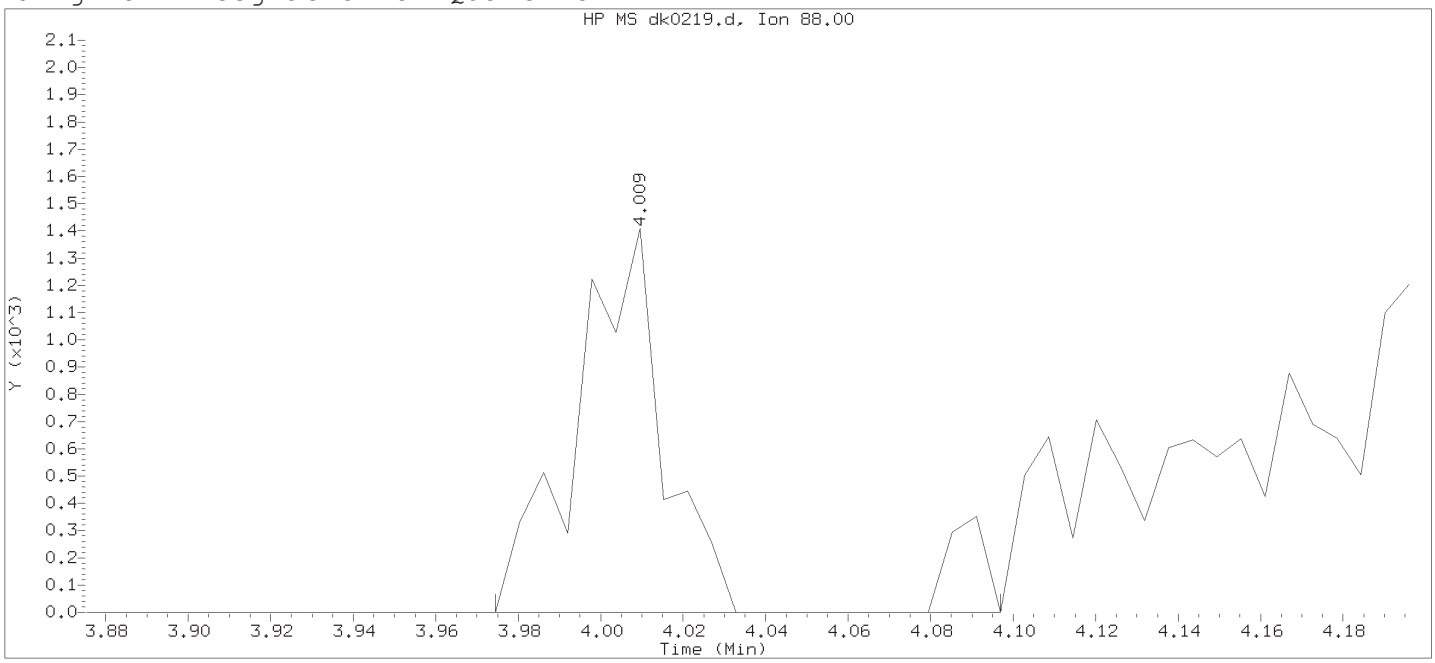
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

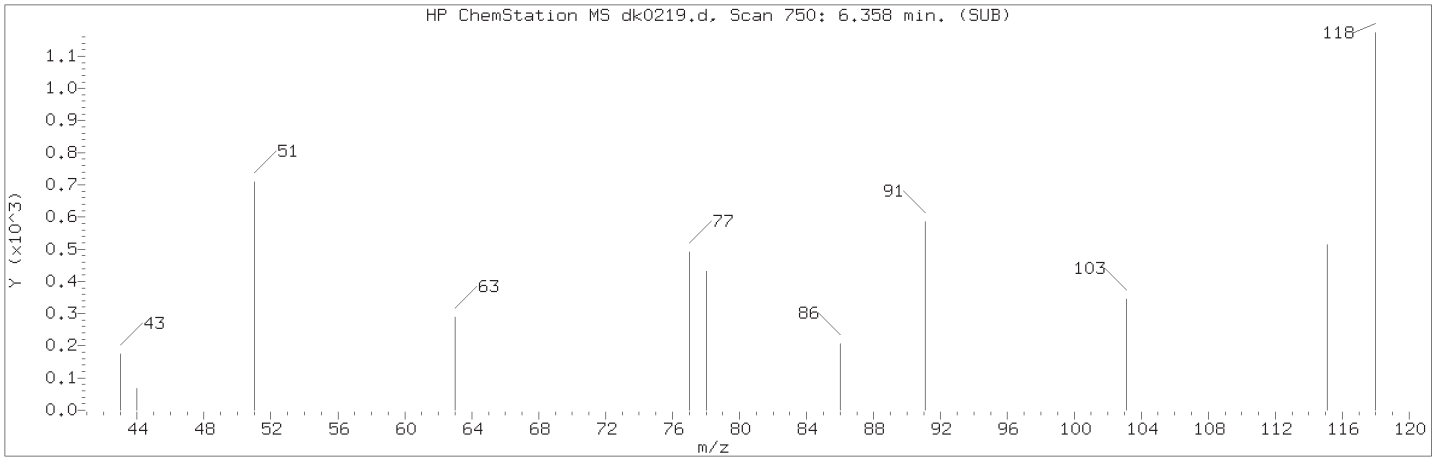
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:31 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

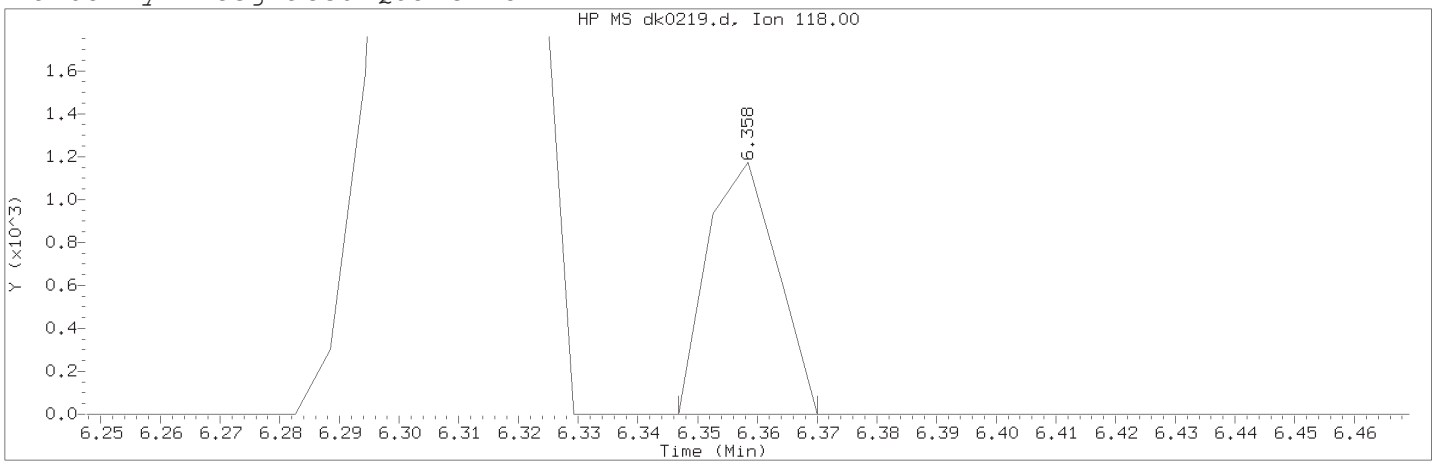
Compound Number	: 8		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 347		
Retention Time (minutes)	: 4.009		
Quant Ion	: 88.00		
Area	: 2290		
On-column Amount (ng/ul)	: 0.0366		
Integration start scan	: 340	Integration stop scan:	361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: 1214 Page 865 of 4047

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

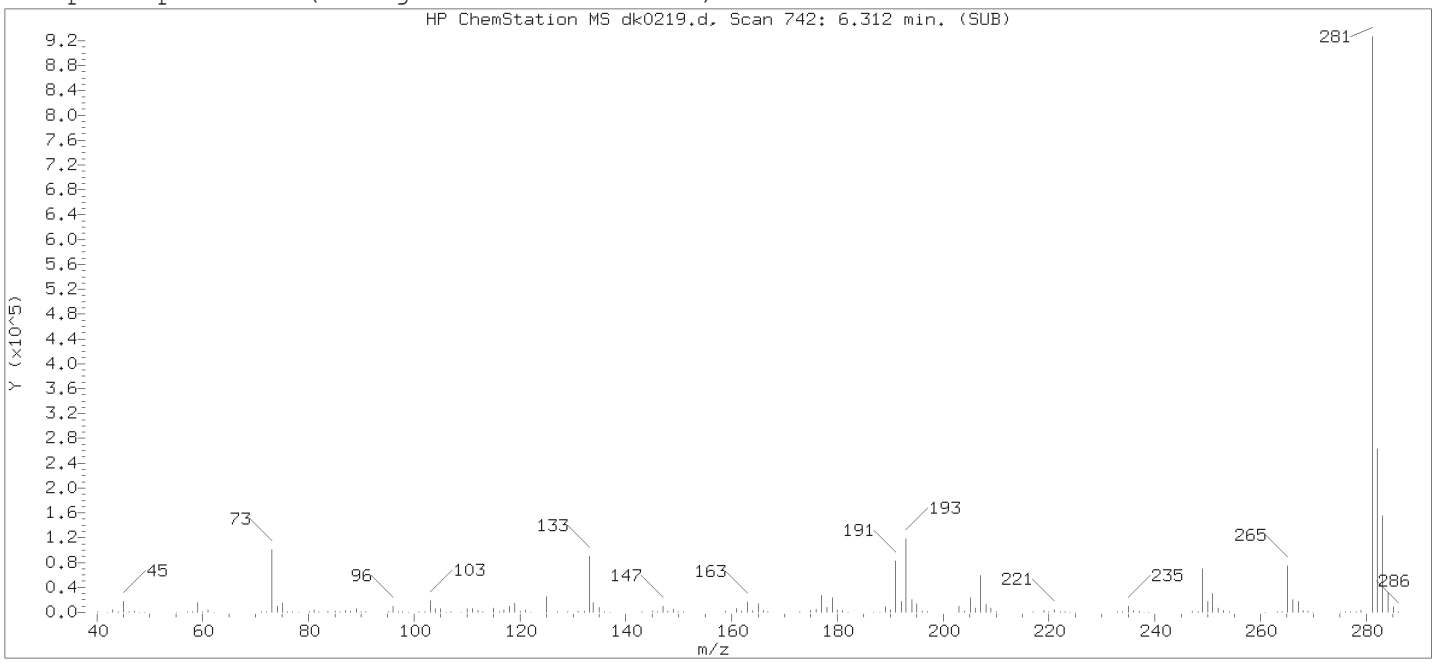
Compound Number	: 20		
Compound Name	: a-methylstyrene		
Scan Number	: 750		
Retention Time (minutes)	: 6.358		
Quant Ion	: 118.00		
Area (flag)	: 946M		
On-Column Amount (ng/ul)	: 0.0889		
Integration start scan	: 747	Integration stop scan:	751
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

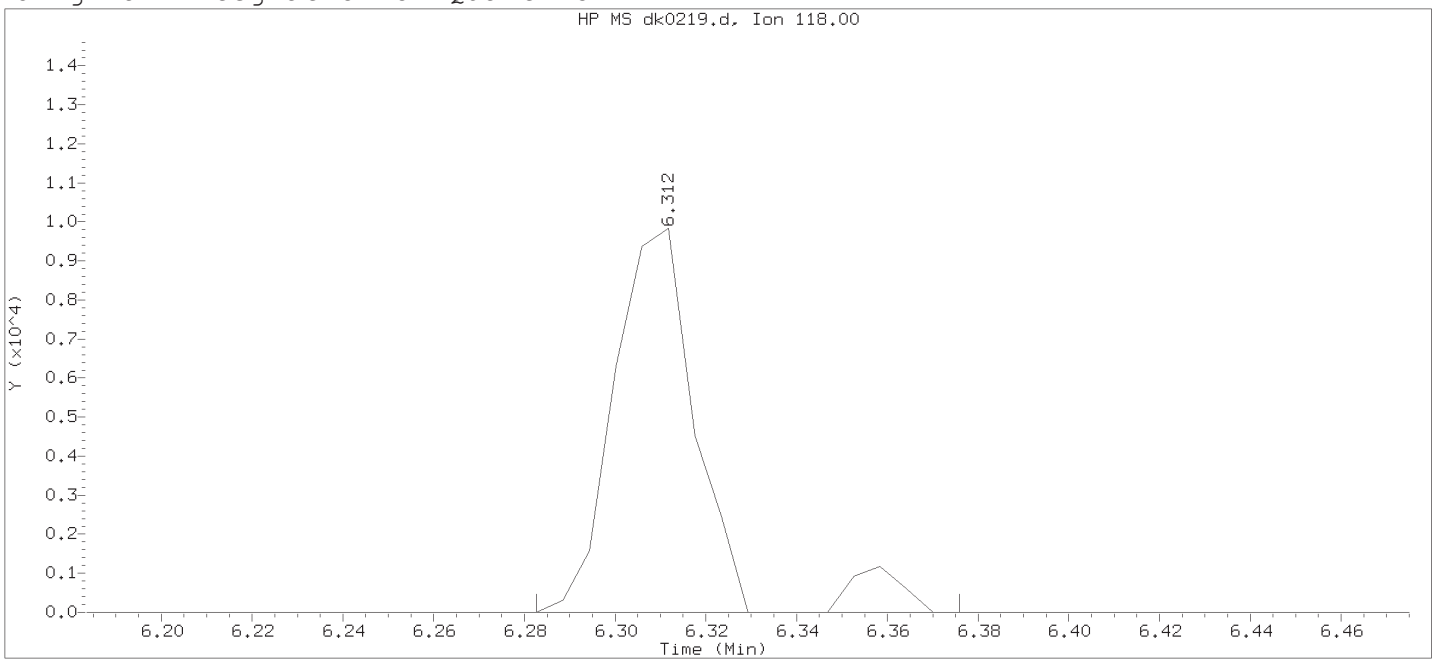
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

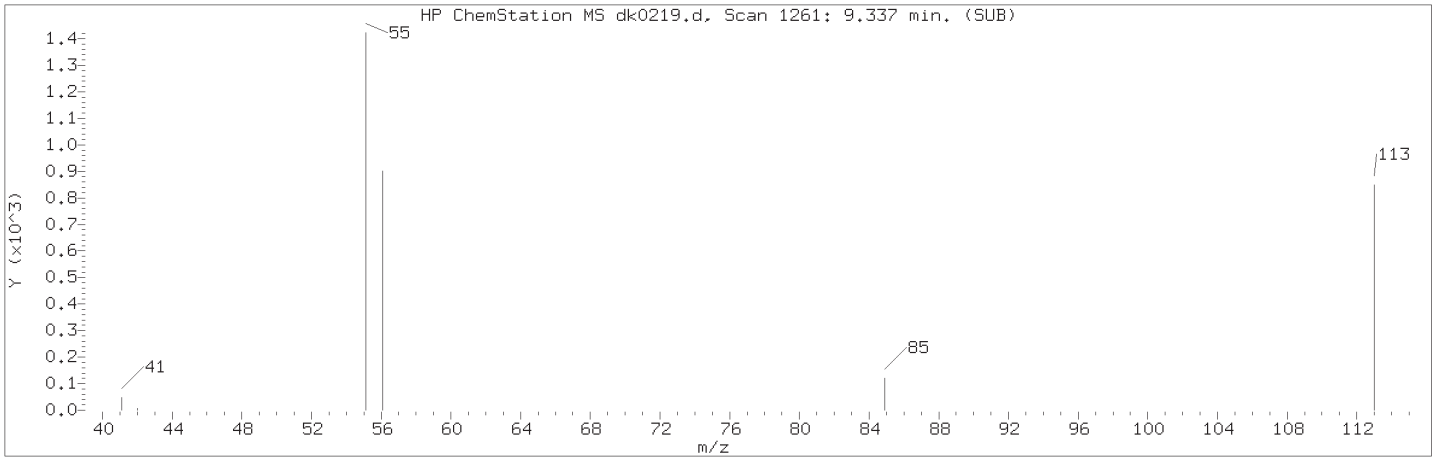
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:31 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

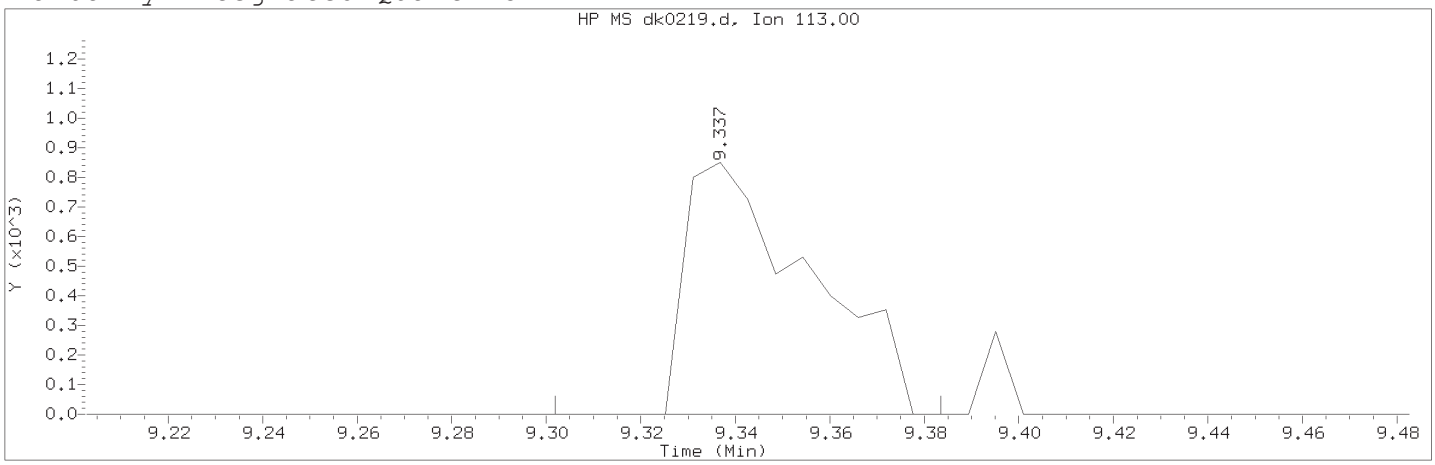
Compound Number	:	20
Compound Name	:	a-methylstyrene
Scan Number	:	742
Retention Time (minutes)	:	6.312
Quant Ion	:	118.00
Area	:	12962
On-column Amount (ng/ul)	:	1.2272
Integration start scan	:	736 Integration stop scan: 752
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: 1214 Page 2675

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:38 art12405

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

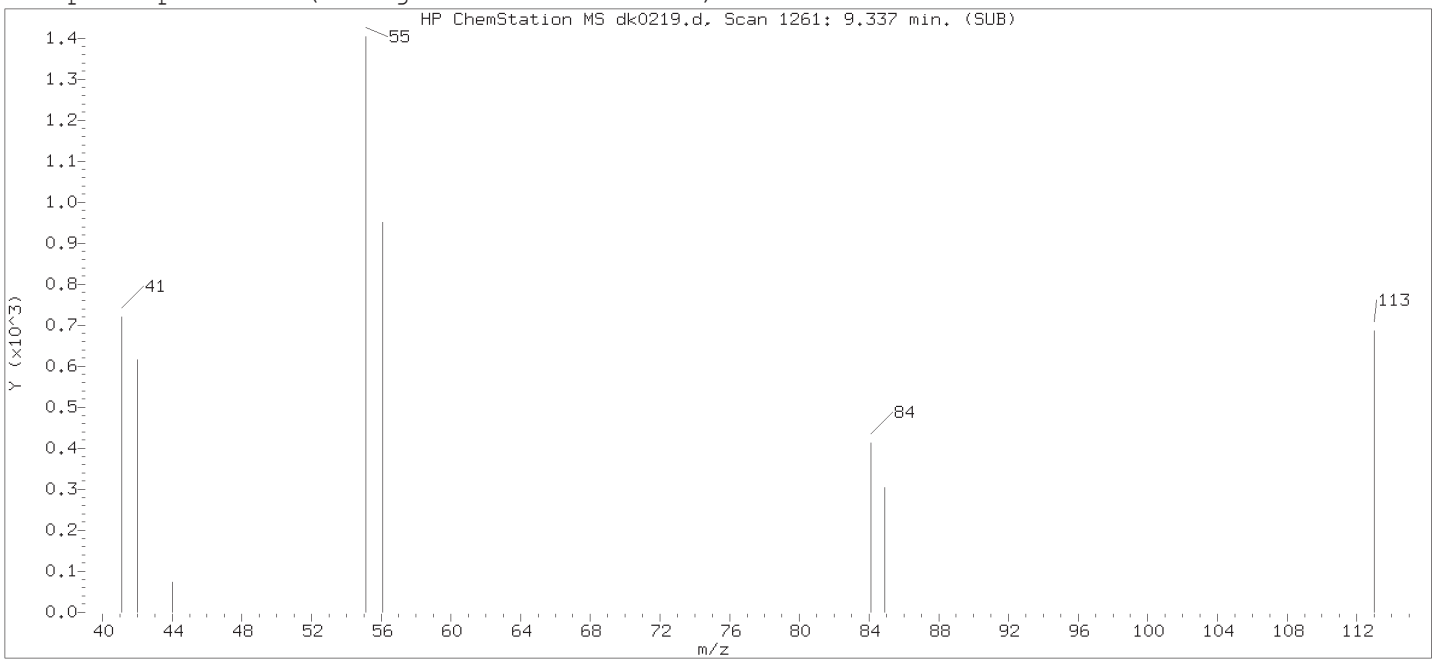
Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1261		
Retention Time (minutes)	: 9.337		
Quant Ion	: 113.00		
Area (flag)	: 1557M		
On-Column Amount (ng/ul)	: 0.0510		
Integration start scan	: 1254	Integration stop scan:	1268
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

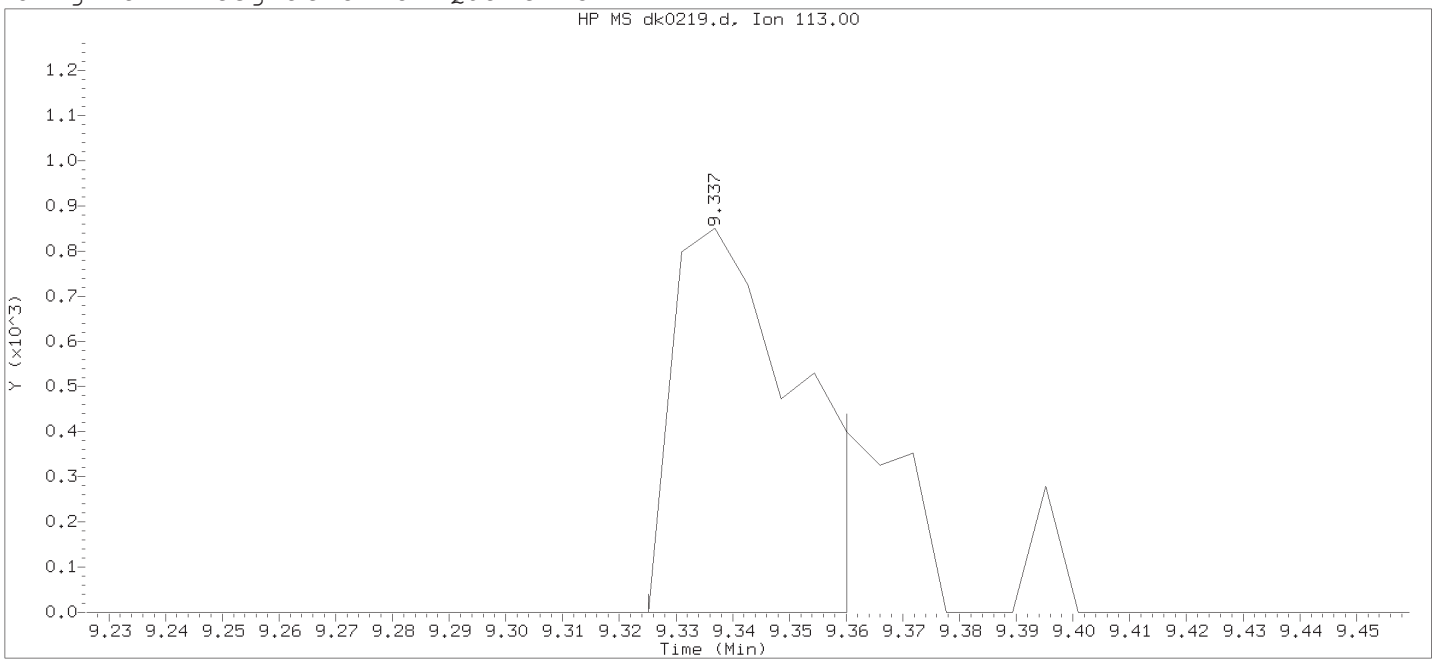
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



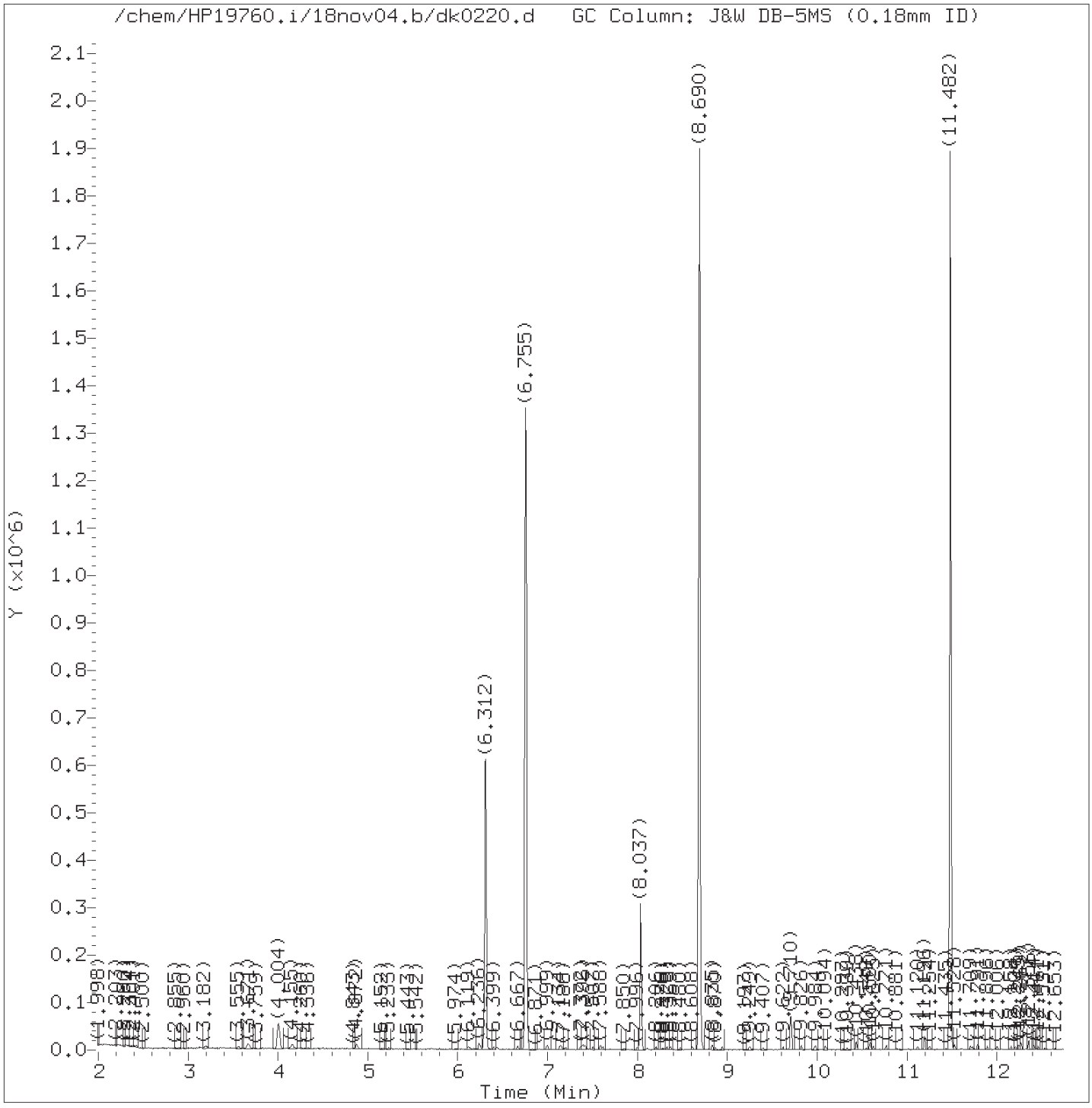
Data File: /chem/HP19760.i/18nov04.b/dk0219.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:03 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 16:31 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1261		
Retention Time (minutes)	: 9.337		
Quant Ion	: 113.00		
Area	: 1250		
On-column Amount (ng/ul)	: 0.0637		
Integration start scan	: 1258	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: ashley.transue



Total Ion Chromatogram (TIC)

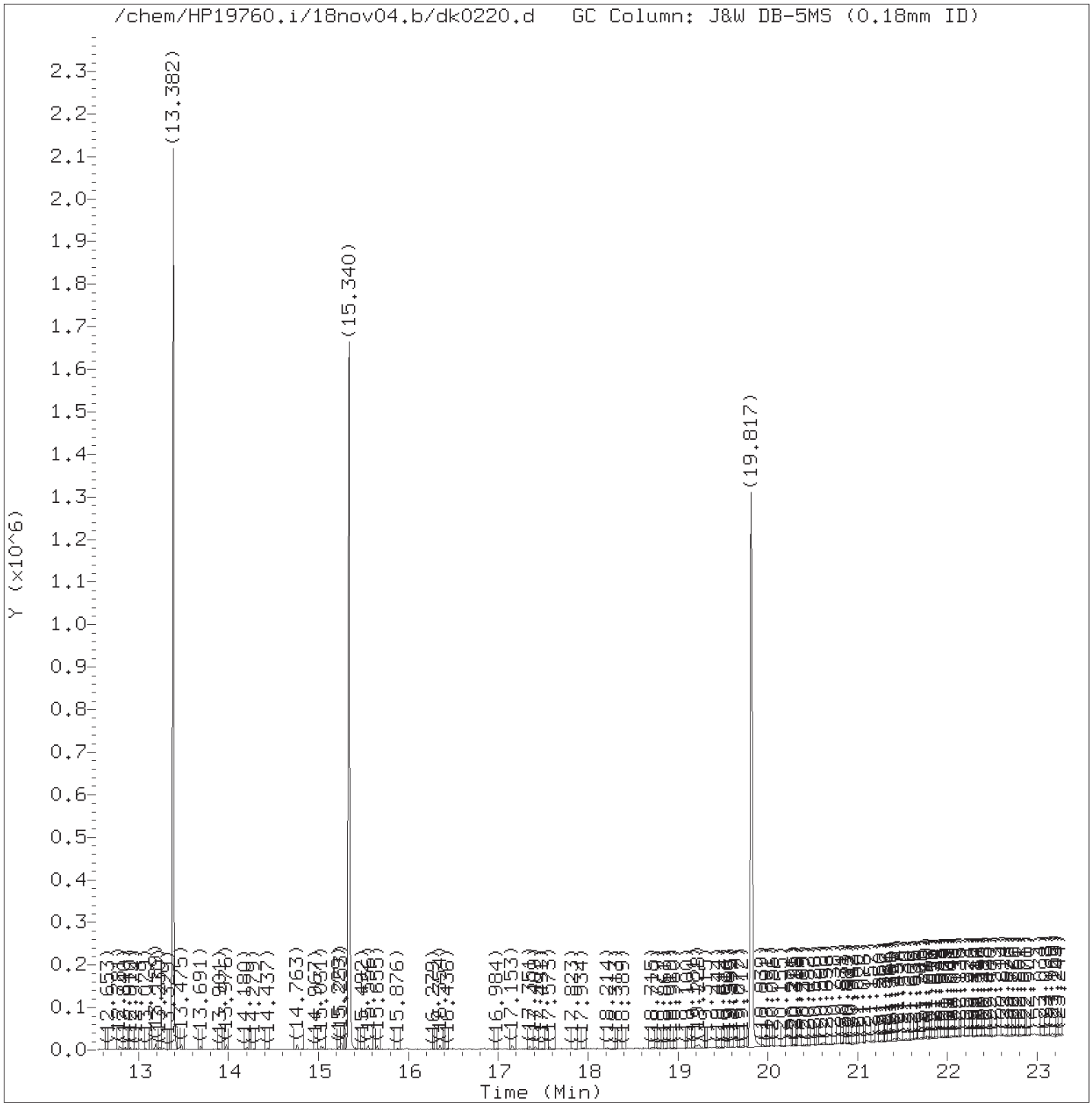
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

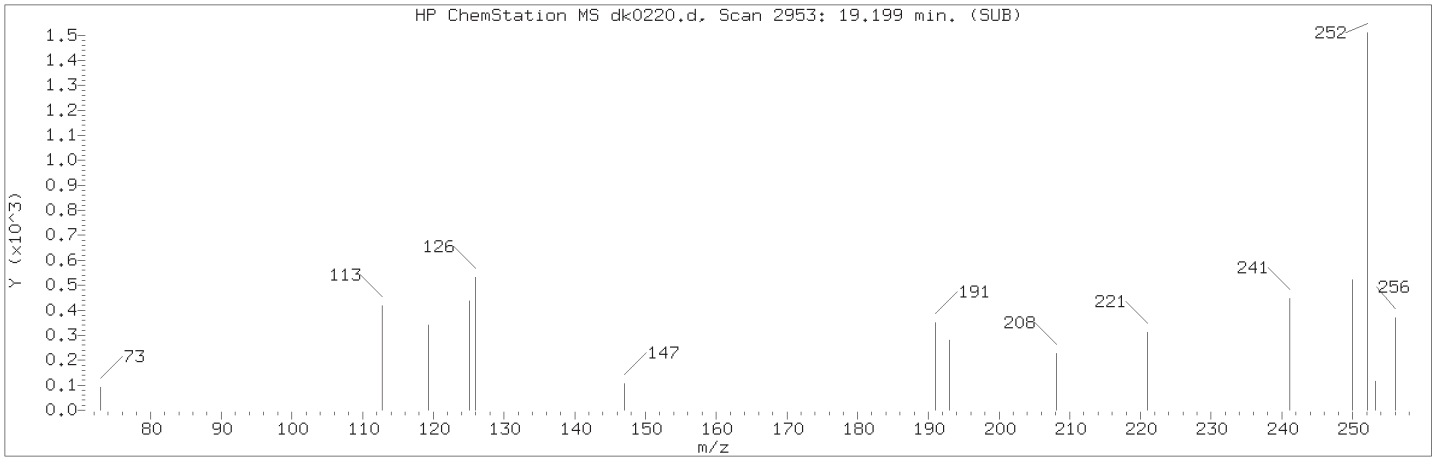
Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.755	152	265816	5.000
44)$Nitrobenzene-d5	(2)	7.588	82	4828	0.046
65)*Naphthalene-d8	(2)	8.690	136	964016	5.000
66) Naphthalene	(2)	8.725	128	6053	0.027
83) 2-Methylnaphthalene	(2)	9.826	142	2912	0.021
84) 1-Methylnaphthalene	(2)	9.978	142	2983	0.023
93)$2-Fluorobiphenyl	(3)	10.438	172	6643	0.048
96) 2-Chloronaphthalene	(3)	10.596	162	3031	0.025
109) Acenaphthylene	(3)	11.249	152	3547	0.022
113)*Acenaphthene-d10	(3)	11.482	164	415152	5.000
114) Acenaphthene	(3)	11.528	153	2811	0.023
126) Fluorene	(3)	12.239	166	2465	0.019
145) Hexachlorobenzene	(4)	12.910	284	799	0.026
153)*Phenanthrene-d10	(4)	13.382	188	742490	5.000
155) Phenanthrene	(4)	13.411	178	4647	0.026
157) Anthracene	(4)	13.475	178	3482	0.020
222) Total PAHs	(6)			58269	0.366
173) Fluoranthene	(4)	15.031	202	3959	0.021
175)*Pyrene-d10	(5)	15.340	212	680798	5.000
177) Pyrene	(5)	15.364	202	5049	0.026
179)$Terphenyl-d14	(5)	15.649	244	5199	0.047
195) Benzo(a)anthracene	(5)	17.351	228	2635	0.017
196) Chrysene	(5)	17.409	228	3345	0.020
206) Benzo(b)fluoranthene	(6)	19.199	252	2590M	0.017
208) Benzo(k)fluoranthene	(6)	19.245	252	2548M	0.016
211) Benzo(a)pyrene	(6)	19.723	252	2139M	0.015
213)*Perylene-d12	(6)	19.817	264	630337	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	21.408	276	1729M	0.014
220) Dibenz(a,h)anthracene	(6)	21.460	278	2462	0.018
221) Benzo(g,h,i)perylene	(6)	21.775	276	2913	0.021

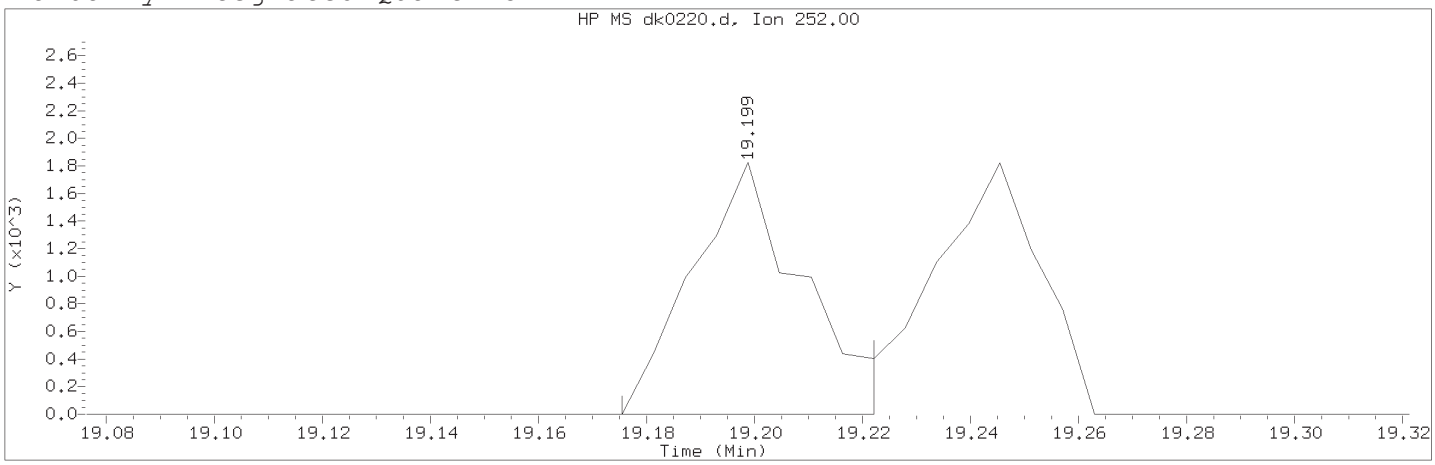
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

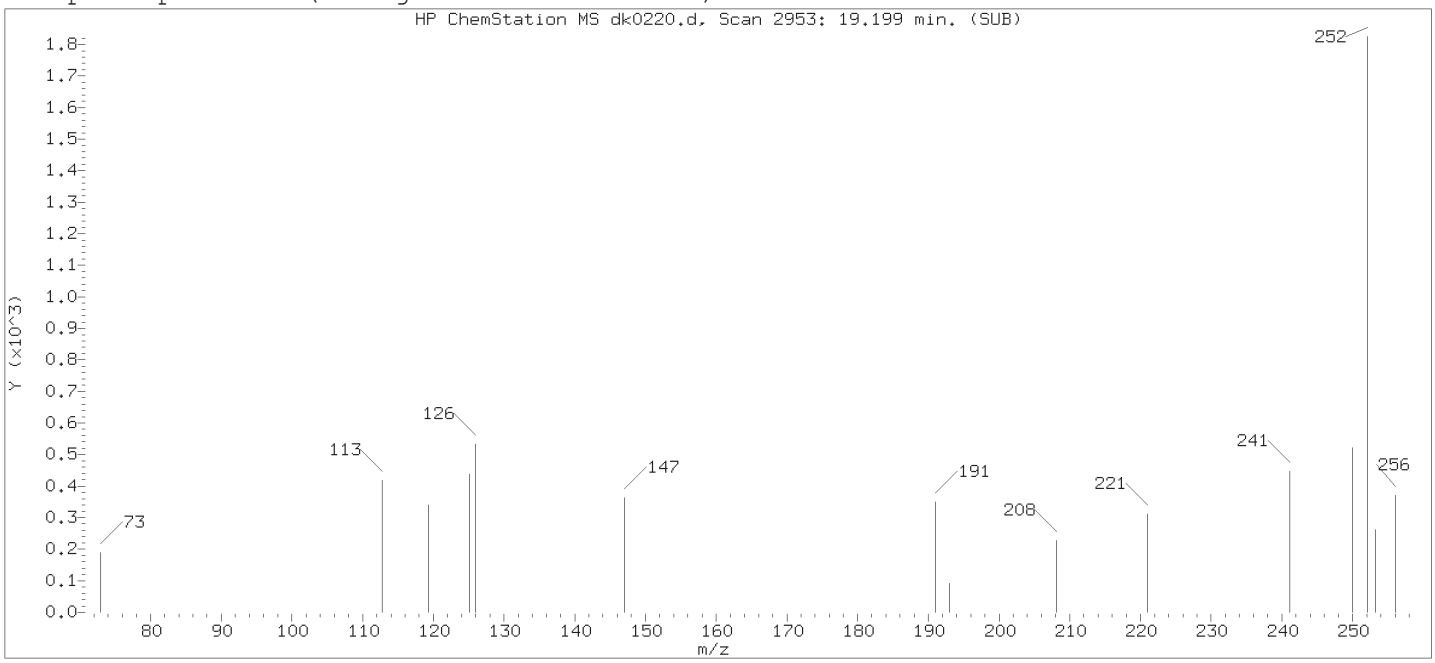
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 2953
Retention Time (minutes) : 19.199
Quant Ion : 252.00
Area (flag) : 2590M
On-Column Amount (ng/ul) : 0.0172
Integration start scan : 2948 Integration stop scan: 2956
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

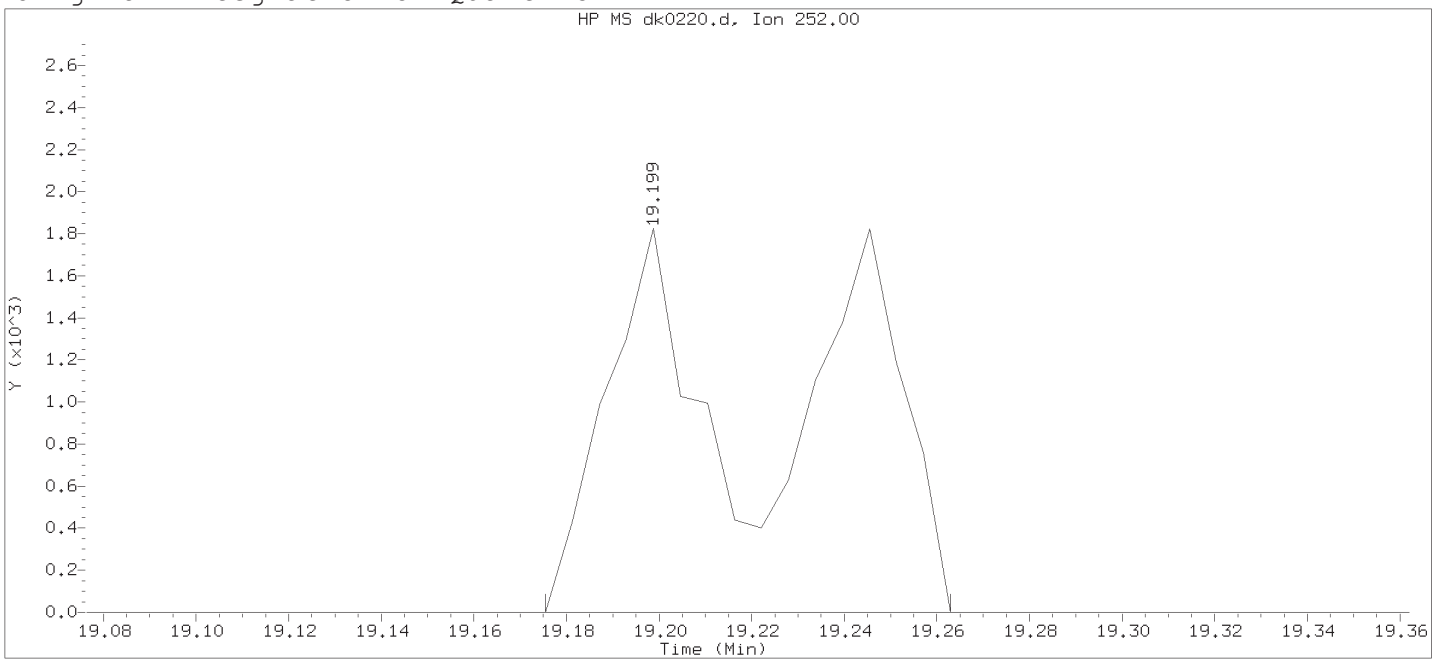
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 17:00 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Compound Number	:	206
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	2953
Retention Time (minutes)	:	19.199
Quant Ion	:	252.00
Area	:	4999
On-column Amount (ng/ul)	:	0.0327
Integration start scan	:	2948 Integration stop scan: 2963
Y at integration start	:	0 Y at integration end: 0

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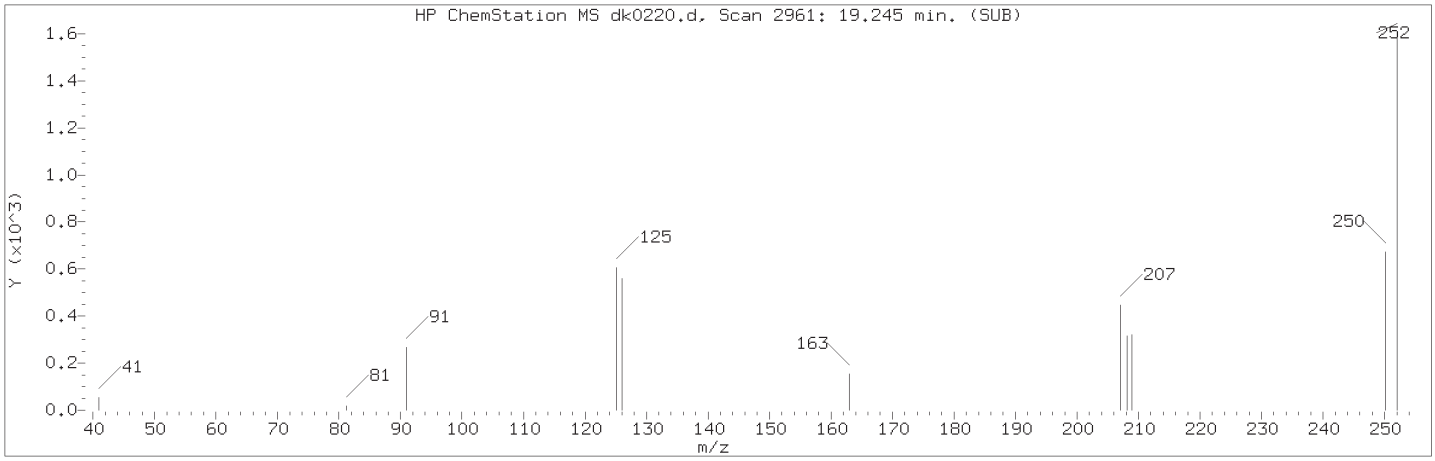
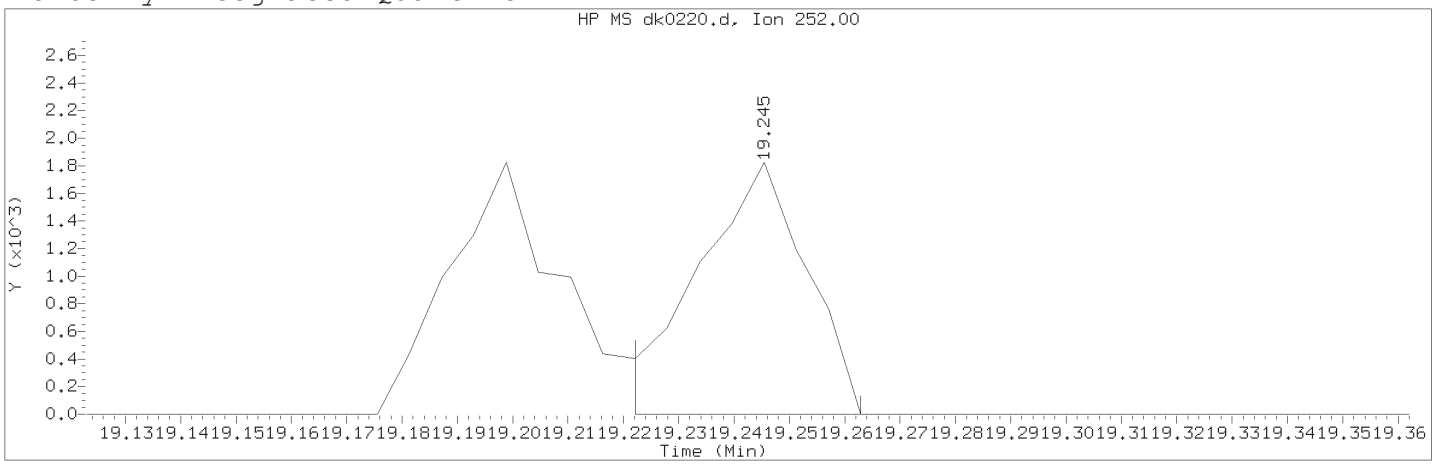
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

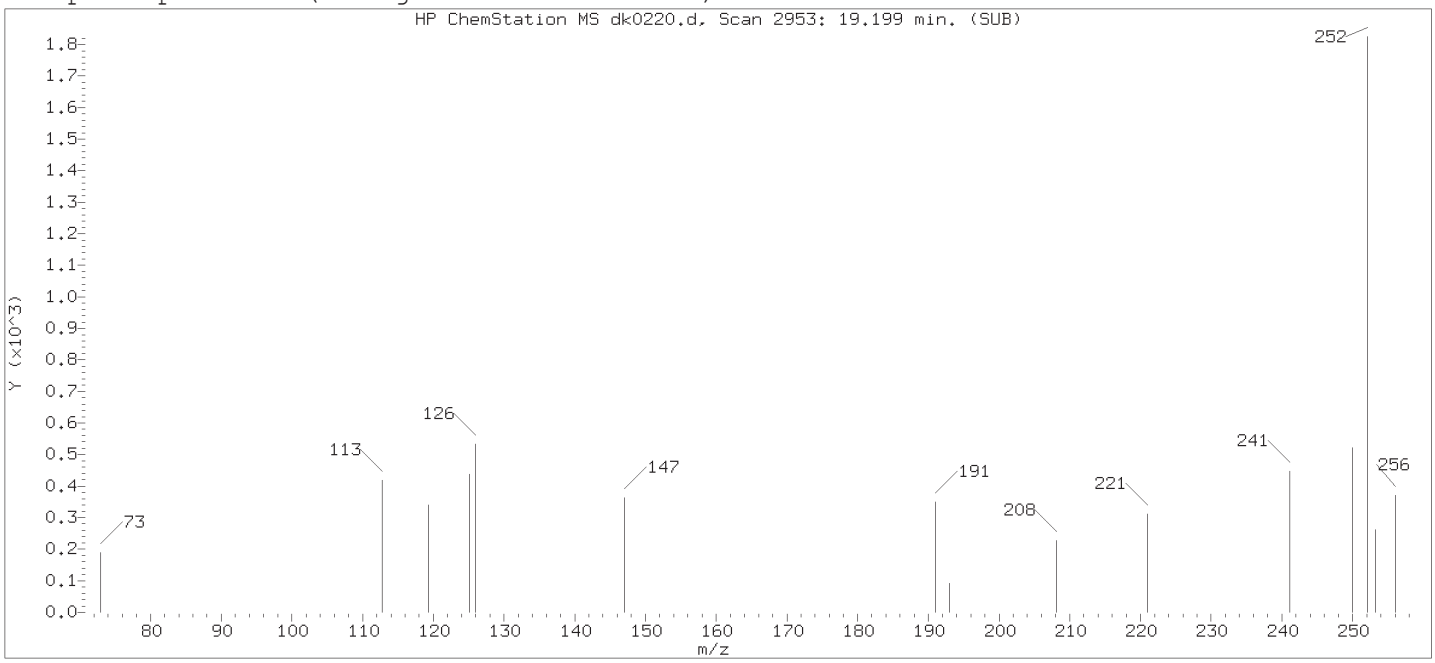
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 2961
Retention Time (minutes) : 19.245
Quant Ion : 252.00
Area (flag) : 2548M
On-Column Amount (ng/ul) : 0.0163
Integration start scan : 2956 Integration stop scan: 2963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

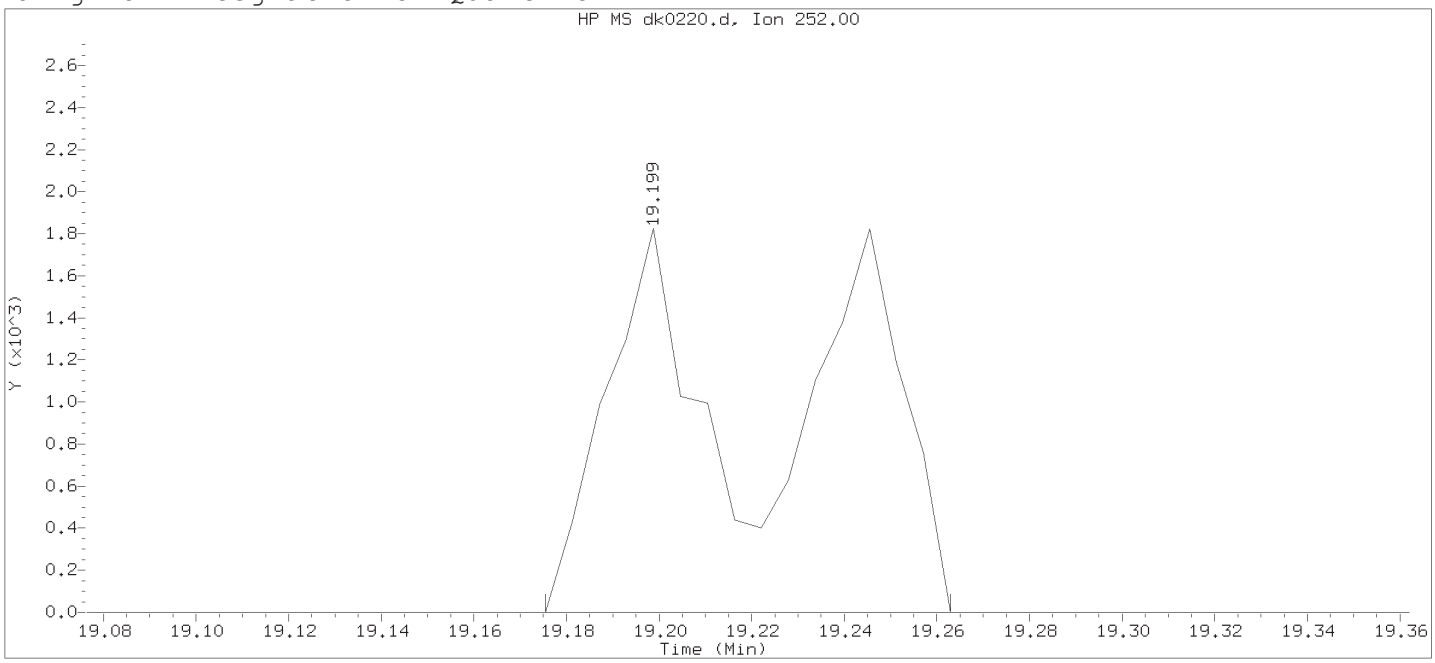
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

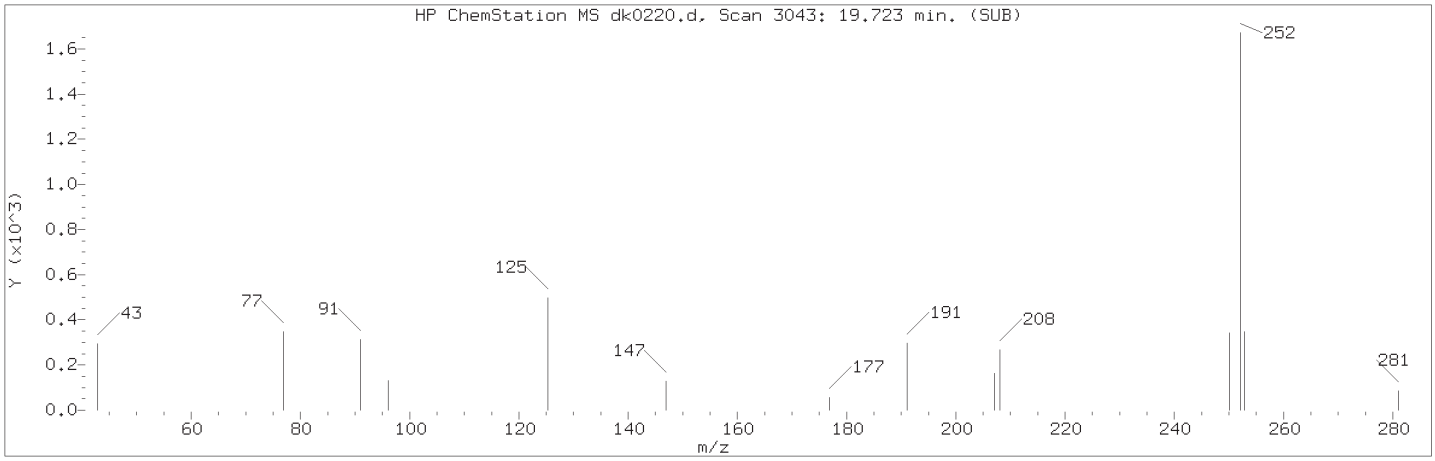
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 17:00 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

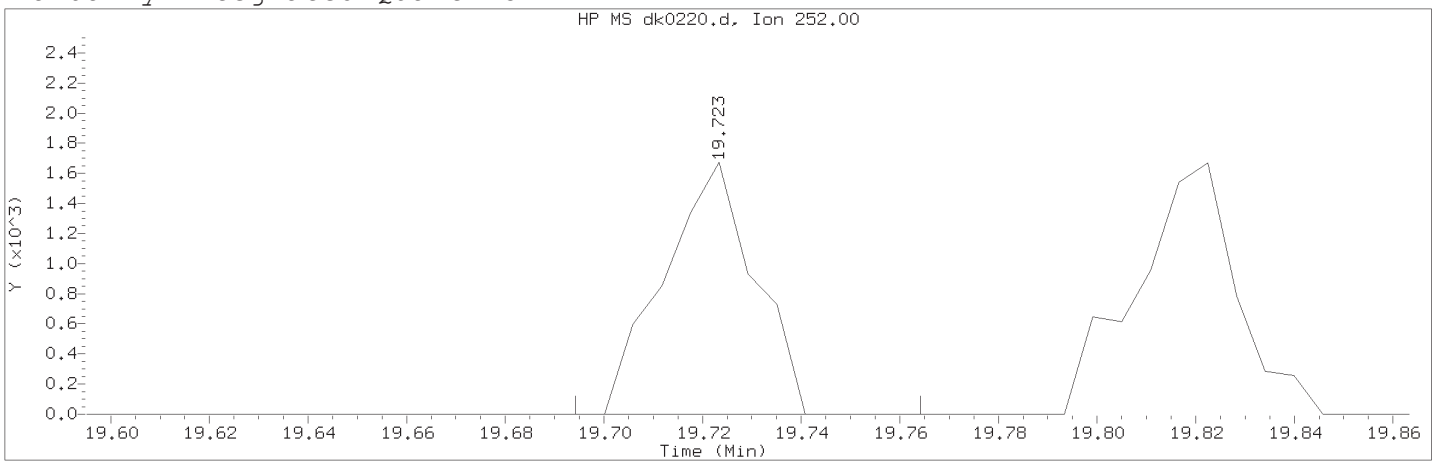
Compound Number	:	208
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	2953
Retention Time (minutes)	:	19.199
Quant Ion	:	252.00
Area	:	4999
On-column Amount (ng/ul)	:	0.0318
Integration start scan	:	2948 Integration stop scan: 2963
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12475

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

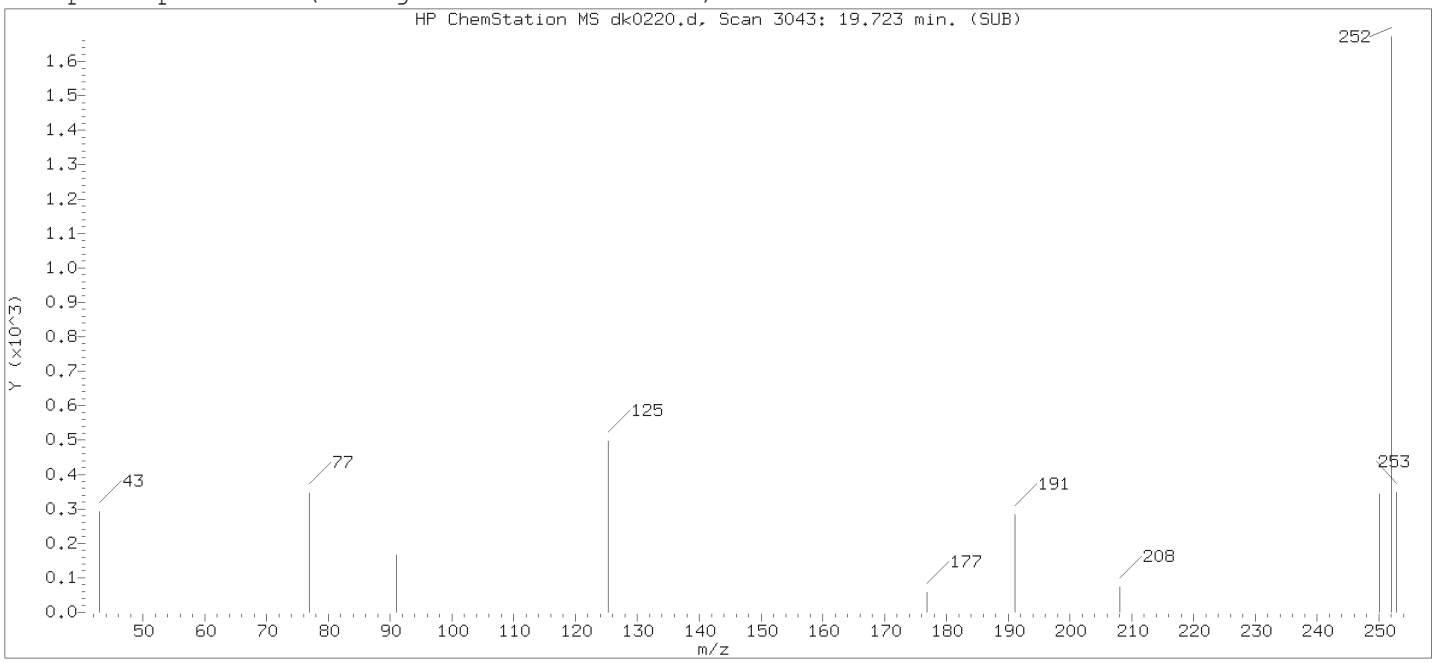
Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3043		
Retention Time (minutes)	: 19.723		
Quant Ion	: 252.00		
Area (flag)	: 2139M		
On-Column Amount (ng/ul)	: 0.0155		
Integration start scan	: 3037	Integration stop scan:	3049
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

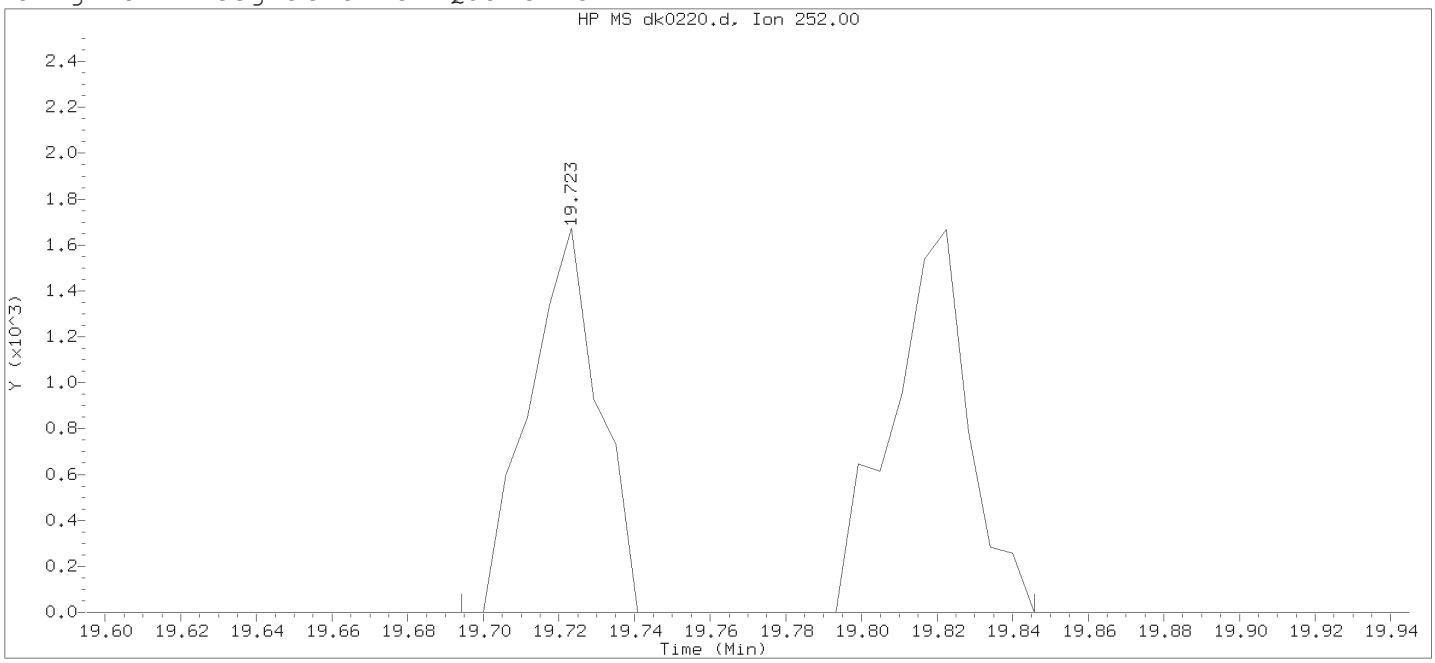
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

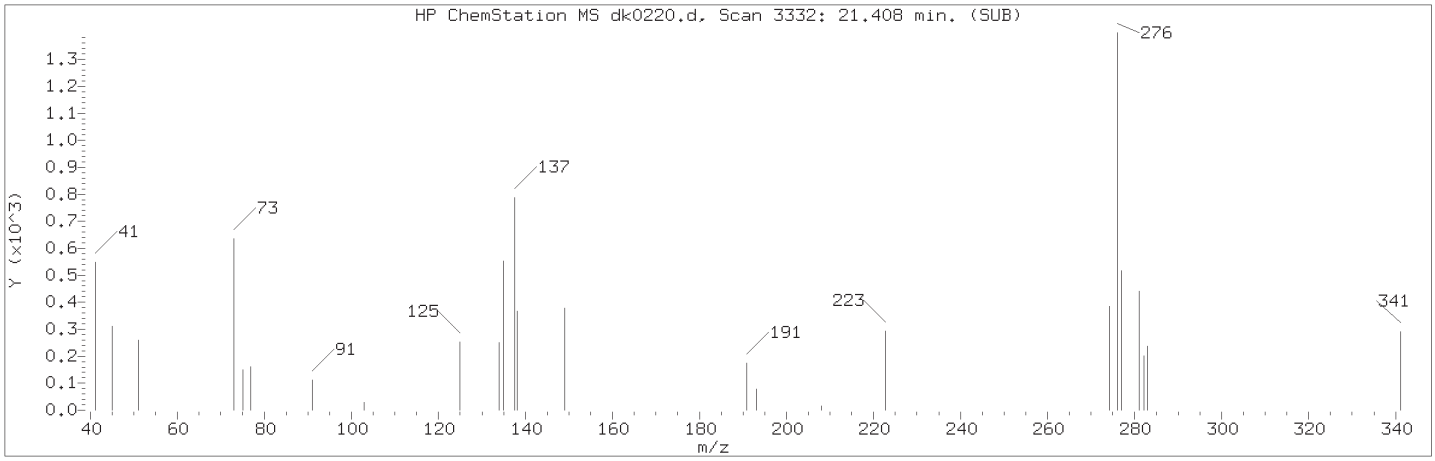
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 17:00 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

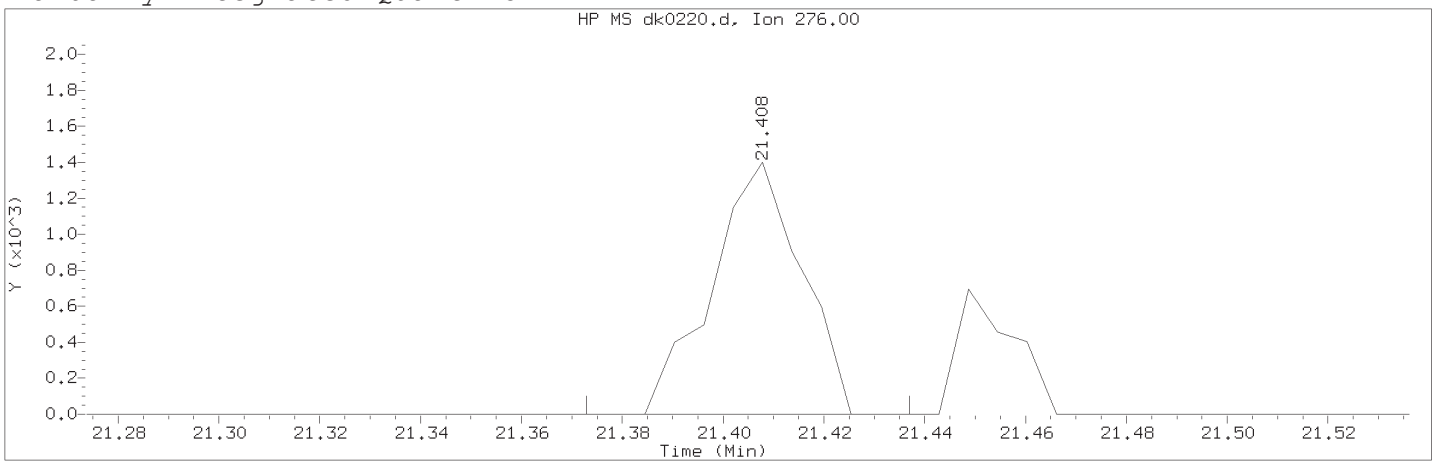
Compound Number	:	211
Compound Name	:	Benzo(a)pyrene
Scan Number	:	3043
Retention Time (minutes)	:	19.723
Quant Ion	:	252.00
Area	:	4500
On-column Amount (ng/ul)	:	0.0318
Integration start scan	:	3037 Integration stop scan: 3063
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:40 art12405

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

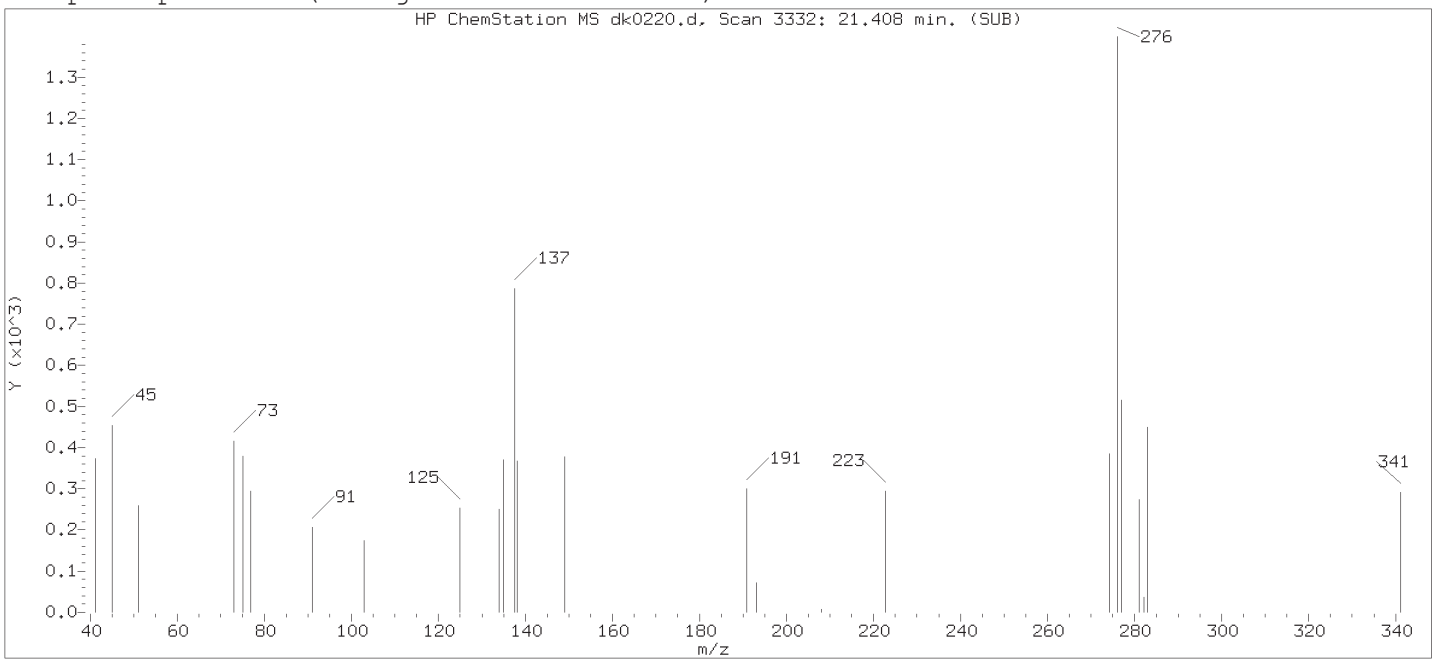
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3332
Retention Time (minutes) : 21.408
Quant Ion : 276.00
Area (flag) : 1729M
On-Column Amount (ng/ul) : 0.0140
Integration start scan : 3325 Integration stop scan: 3336
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

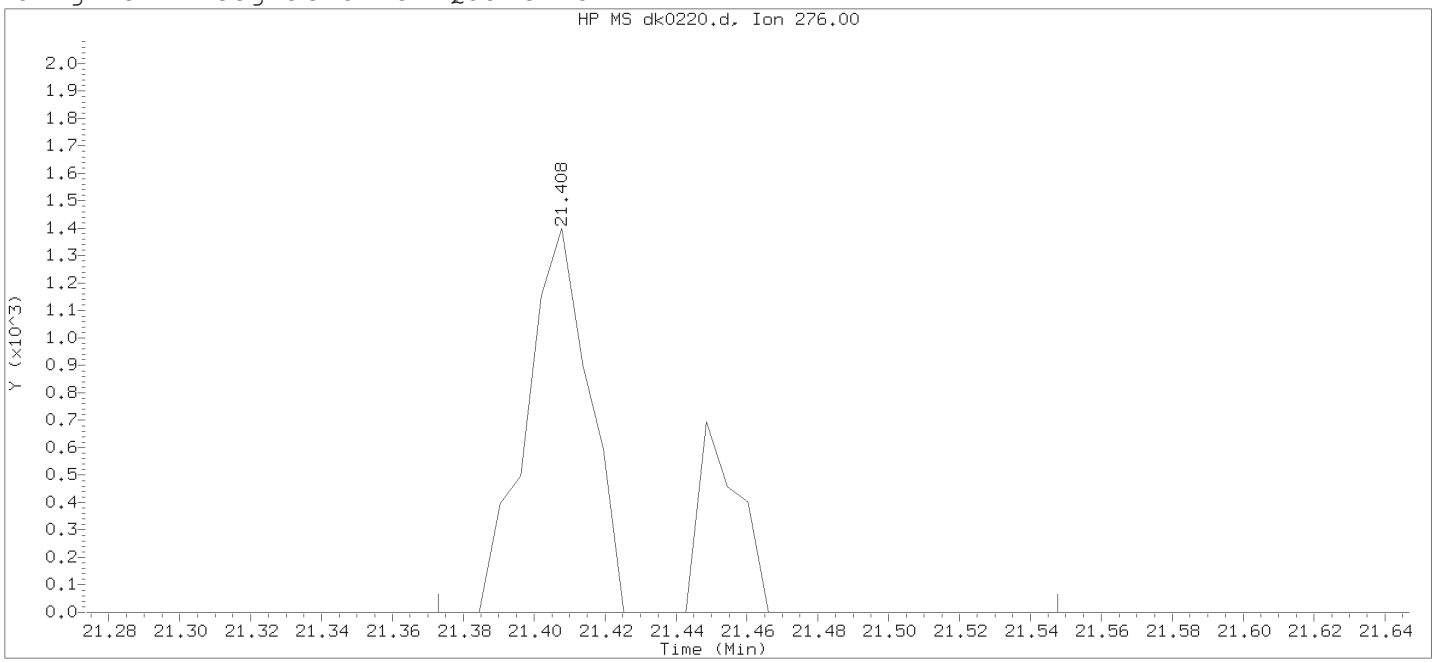
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/06/2018 at 11:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



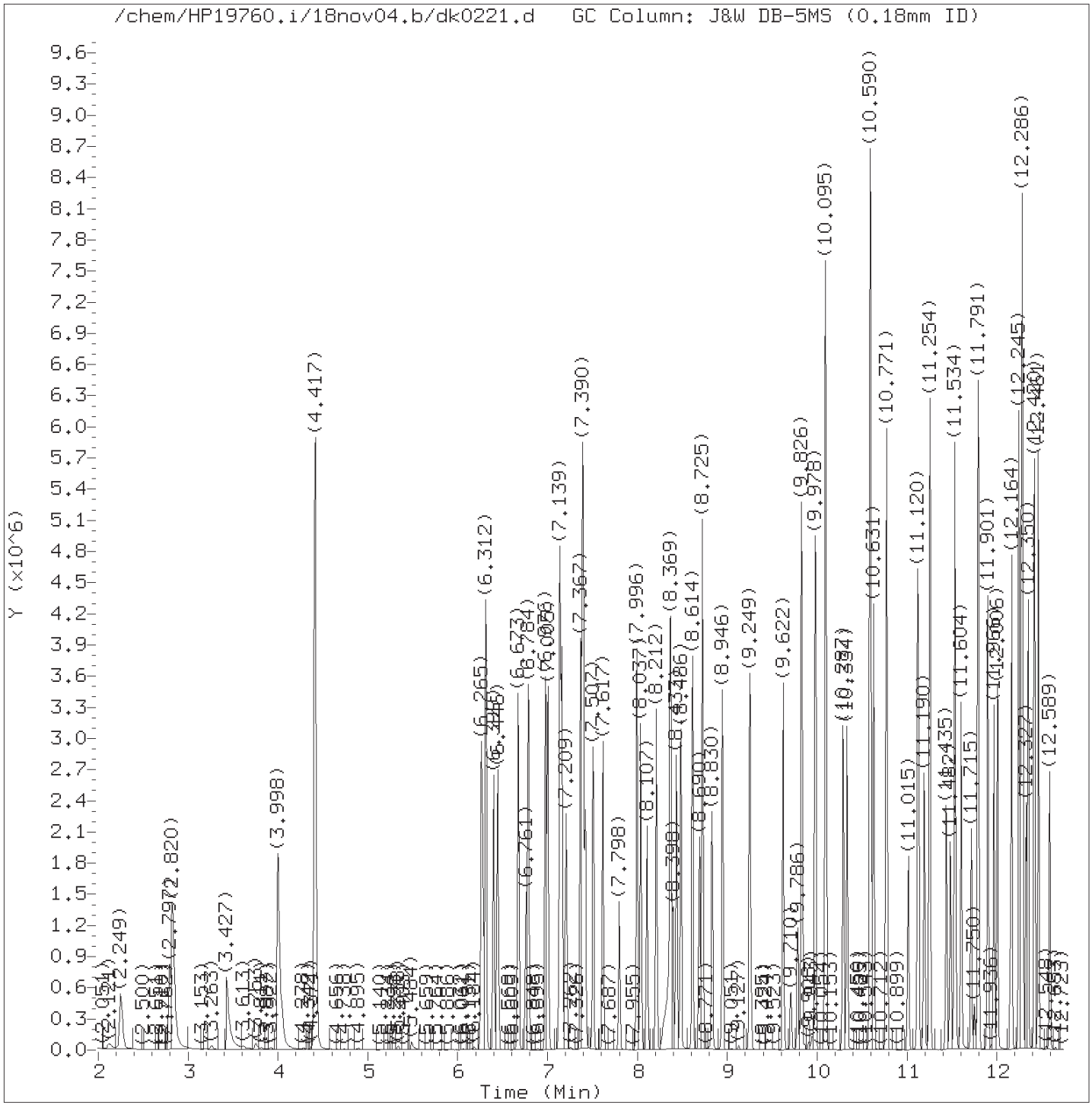
Data File: /chem/HP19760.i/18nov04.b/dk0220.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 16:31 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 17:00 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Compound Number	: 219	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 3332	
Retention Time (minutes)	: 21.408	
Quant Ion	: 276.00	
Area	: 2272	
On-column Amount (ng/ul)	: 0.0151	
Integration start scan	: 3325	Integration stop scan: 3355
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/04/2018 at 19:40.
Target 3.5 esignature user ID: ashley.transue



Total Ion Chromatogram (TIC)

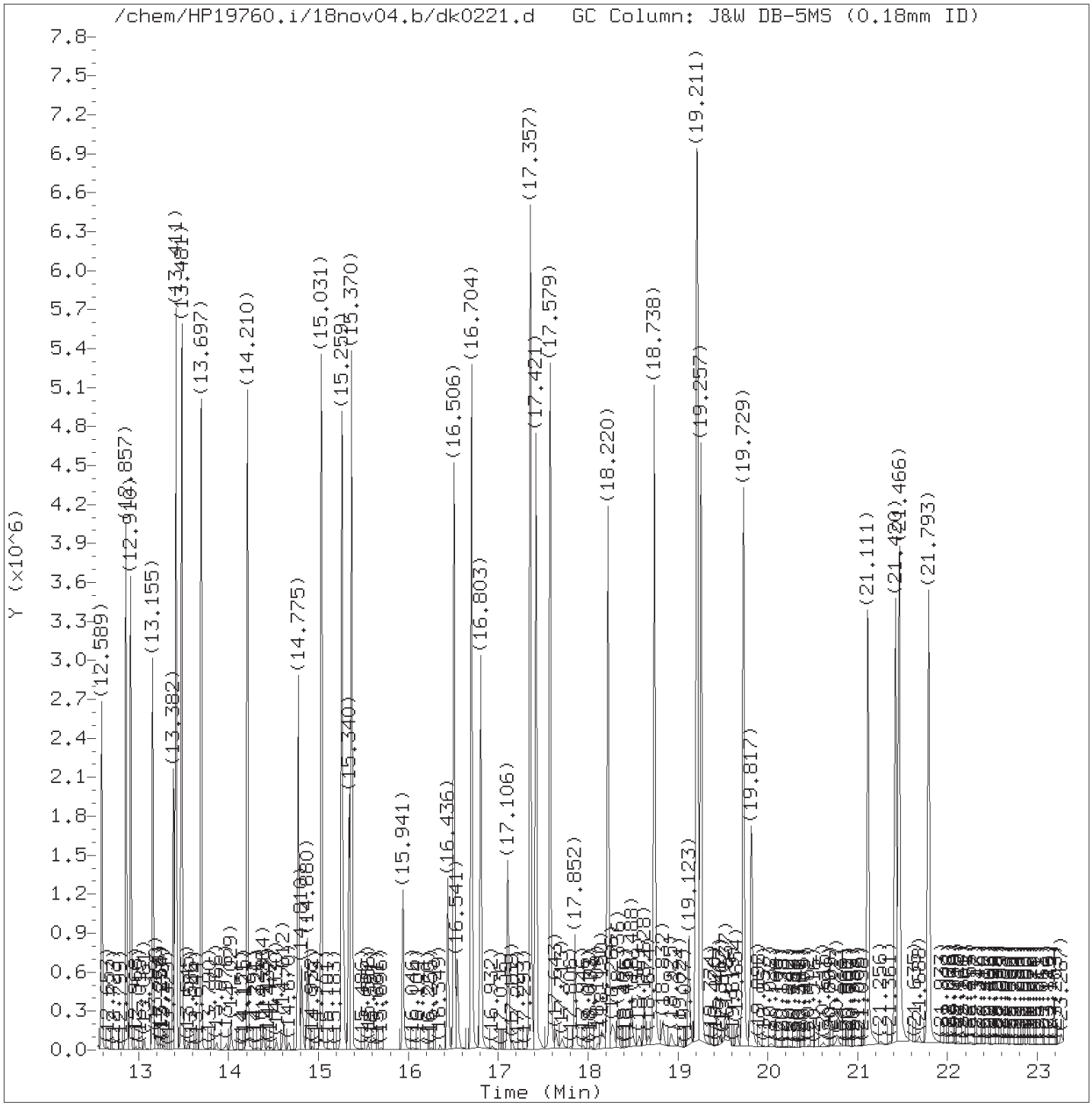
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0221.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:00 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: icv2
Calibration date and time: 05-NOV-2018 17:05
Date, time and analyst ID of latest file update: 05-Nov-2018 17:10 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:17.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0221.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:00 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: icv2
Calibration date and time: 05-NOV-2018 17:05
Date, time and analyst ID of latest file update: 05-Nov-2018 17:10 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:17.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0221.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:00 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: icv2
Calibration date and time: 05-NOV-2018 17:05
Date, time and analyst ID of latest file update: 05-Nov-2018 17:10 art12405

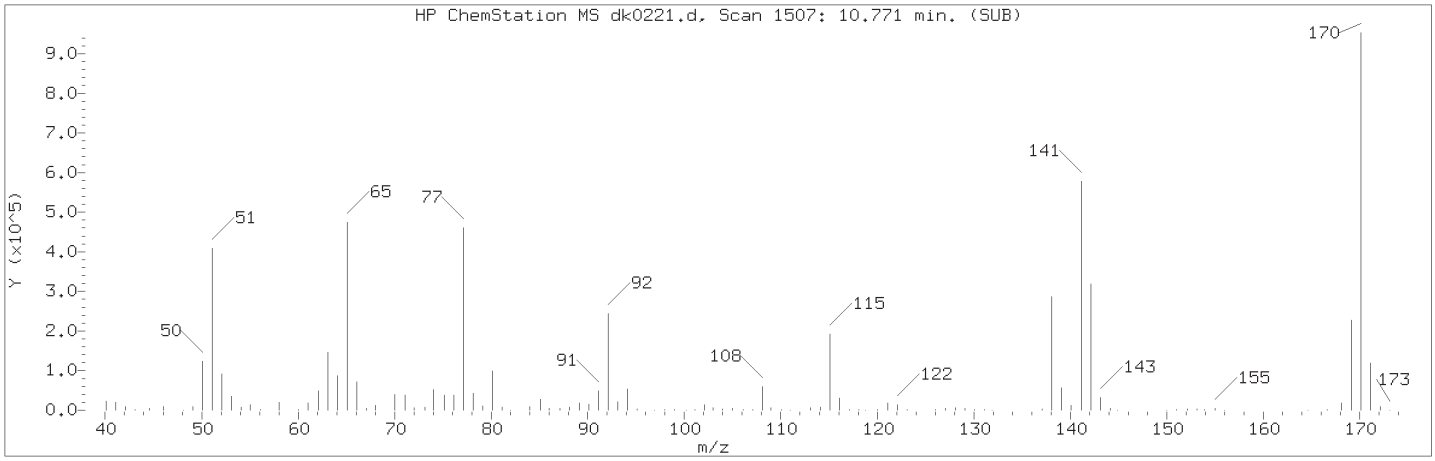
Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.761	152	270998	5.000
65)*Naphthalene-d8	(2)	8.690	136	1033320	5.000
99) Diphenyl ether	(3)	10.771	170	1079352M	15.137
100) 2-Nitroaniline	(3)	10.777	138	525570	11.868
109) Acenaphthylene	(3)	11.254	152	2412428	12.814
113)*Acenaphthene-d10	(3)	11.482	164	474293	5.000
134) 1,2-Diphenylhydrazine	(4)	12.461	77	2339867	12.713
149) Pentachlorophenol	(4)	13.155	266	285399	12.547
153)*Phenanthrene-d10	(4)	13.382	188	816740	5.000
175)*Pyrene-d10	(5)	15.340	212	811240	5.000
206) Benzo(b)fluoranthene	(6)	19.211	252	2388277	12.158
208) Benzo(k)fluoranthene	(6)	19.257	252	2432383	11.910
211) Benzo(a)pyrene	(6)	19.729	252	2272014	12.620
213)*Perylene-d12	(6)	19.817	264	821344	5.000
220) Dibenz(a,h)anthracene	(6)	21.466	278	2219072	12.435

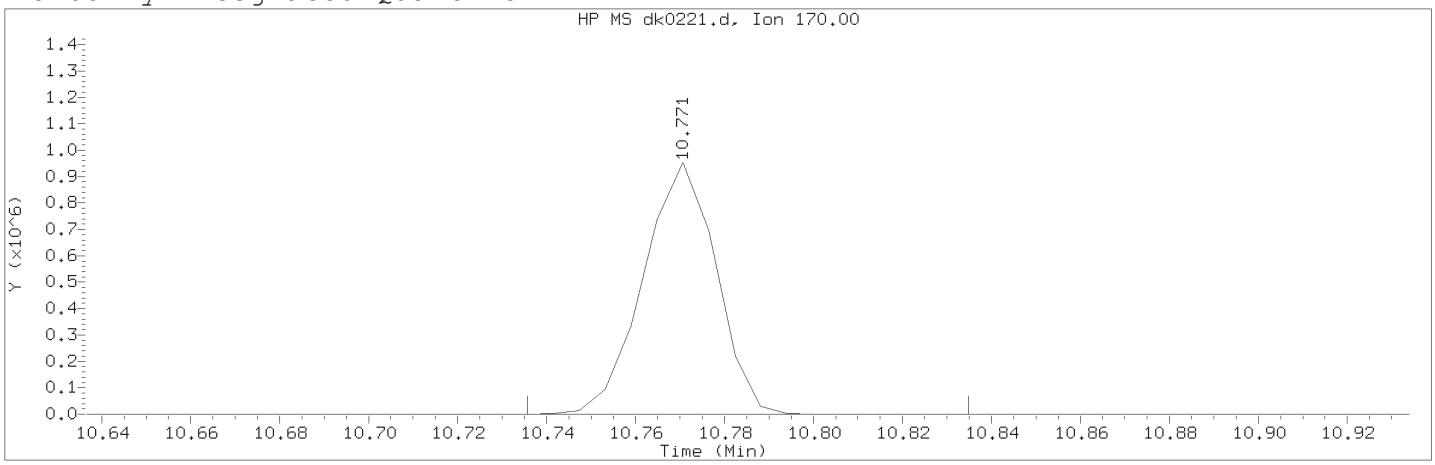
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:17.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04.b/dk0221.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:00 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: icv2
Calibration date and time: 05-NOV-2018 17:05
Date, time and analyst ID of latest file update: 05-Nov-2018 17:10 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

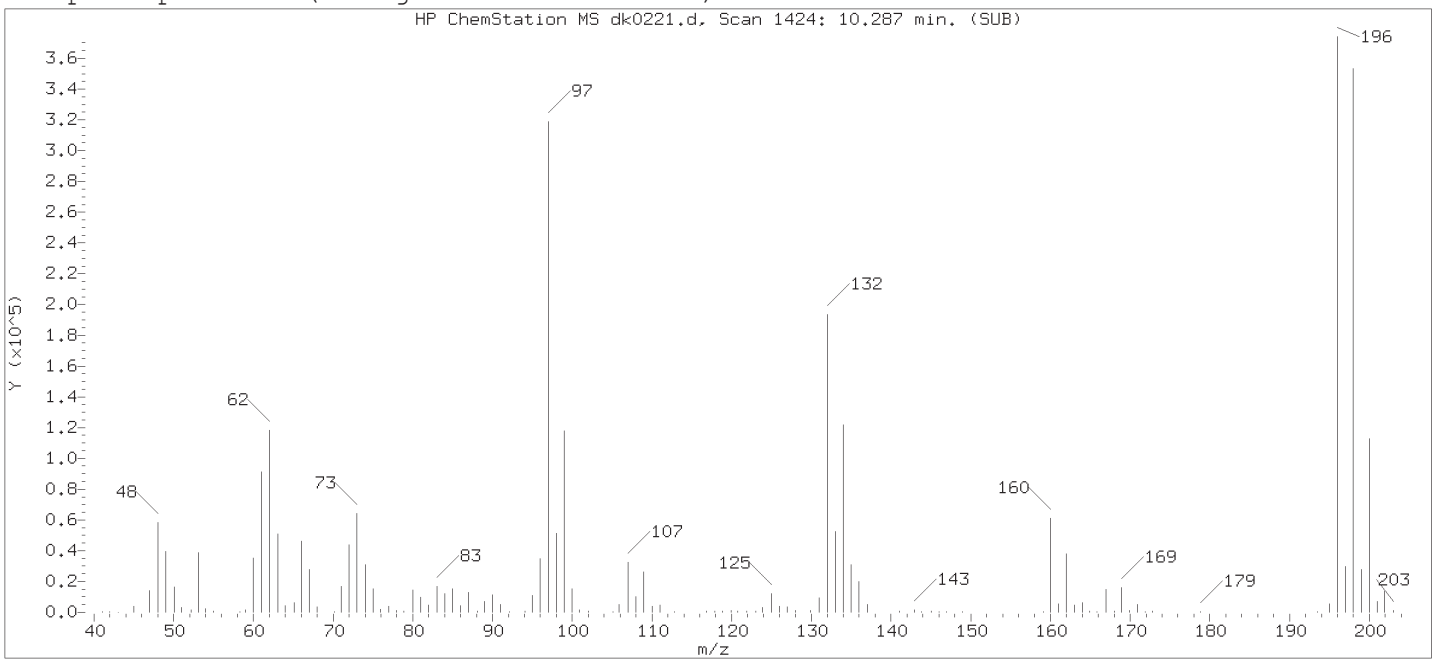
Compound Number	: 99		
Compound Name	: Diphenyl ether		
Scan Number	: 1507		
Retention Time (minutes)	: 10.771		
Quant Ion	: 170.00		
Area (flag)	: 1079352M		
On-Column Amount (ng/ul)	: 15.1371		
Integration start scan	: 1500	Integration stop scan:	1517
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

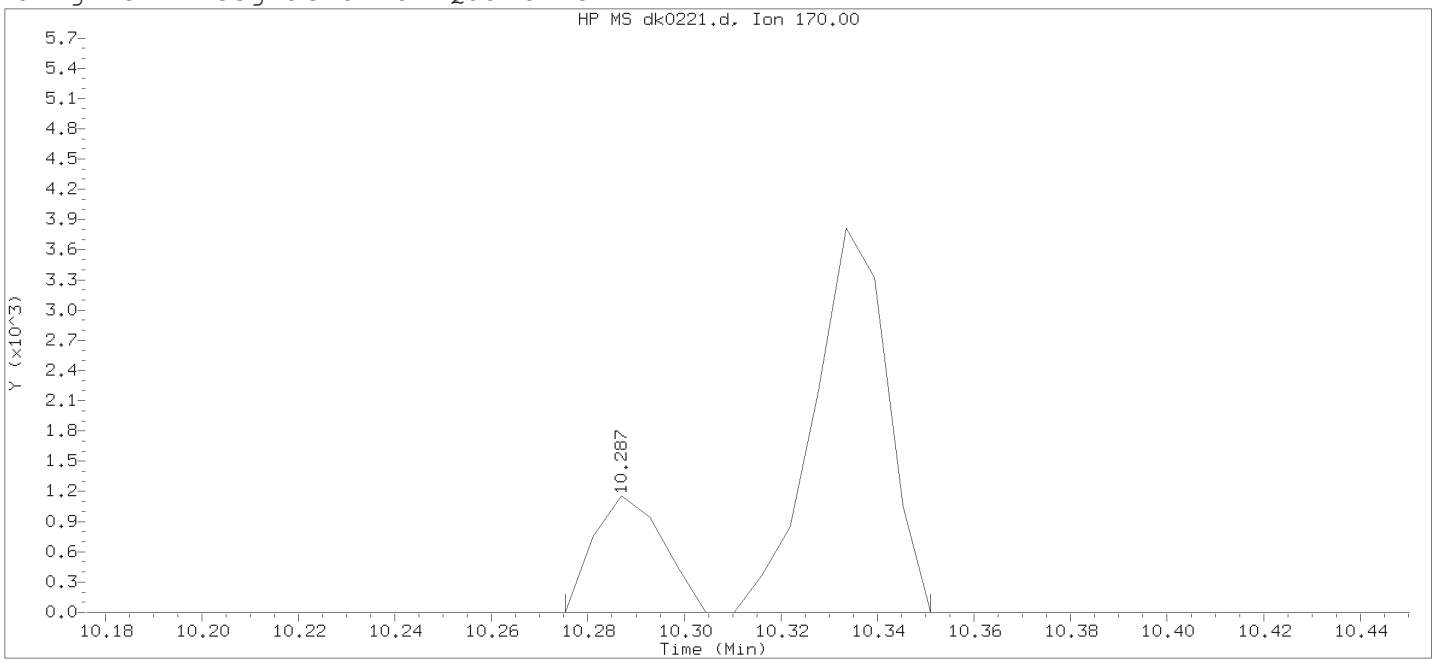
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:17.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 07:20.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



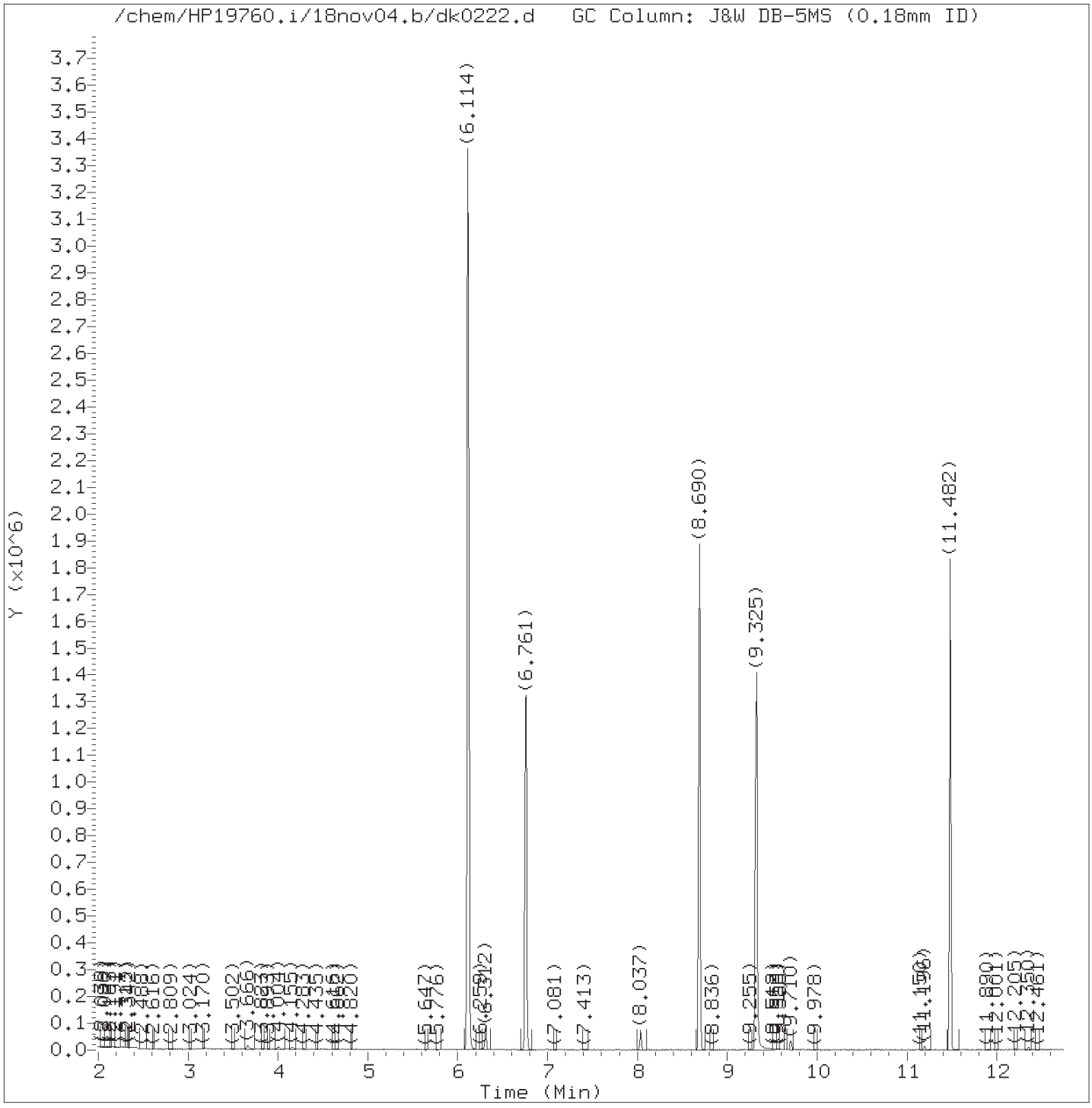
Data File: /chem/HP19760.i/18nov04.b/dk0221.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:00 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 04-NOV-2018 16:03
Date, time and analyst ID of latest file update: 04-Nov-2018 17:29 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compound Number	:	99
Compound Name	:	Diphenyl ether
Scan Number	:	1424
Retention Time (minutes)	:	10.287
Quant Ion	:	170.00
Area	:	5213
On-column Amount (ng/ul)	:	0.0739
Integration start scan	:	1421 Integration stop scan: 1434
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Ashley R. Transue on 11/05/2018 at 17:17.
Target 3.5 esignature user ID: art1285



Total Ion Chromatogram (TIC)

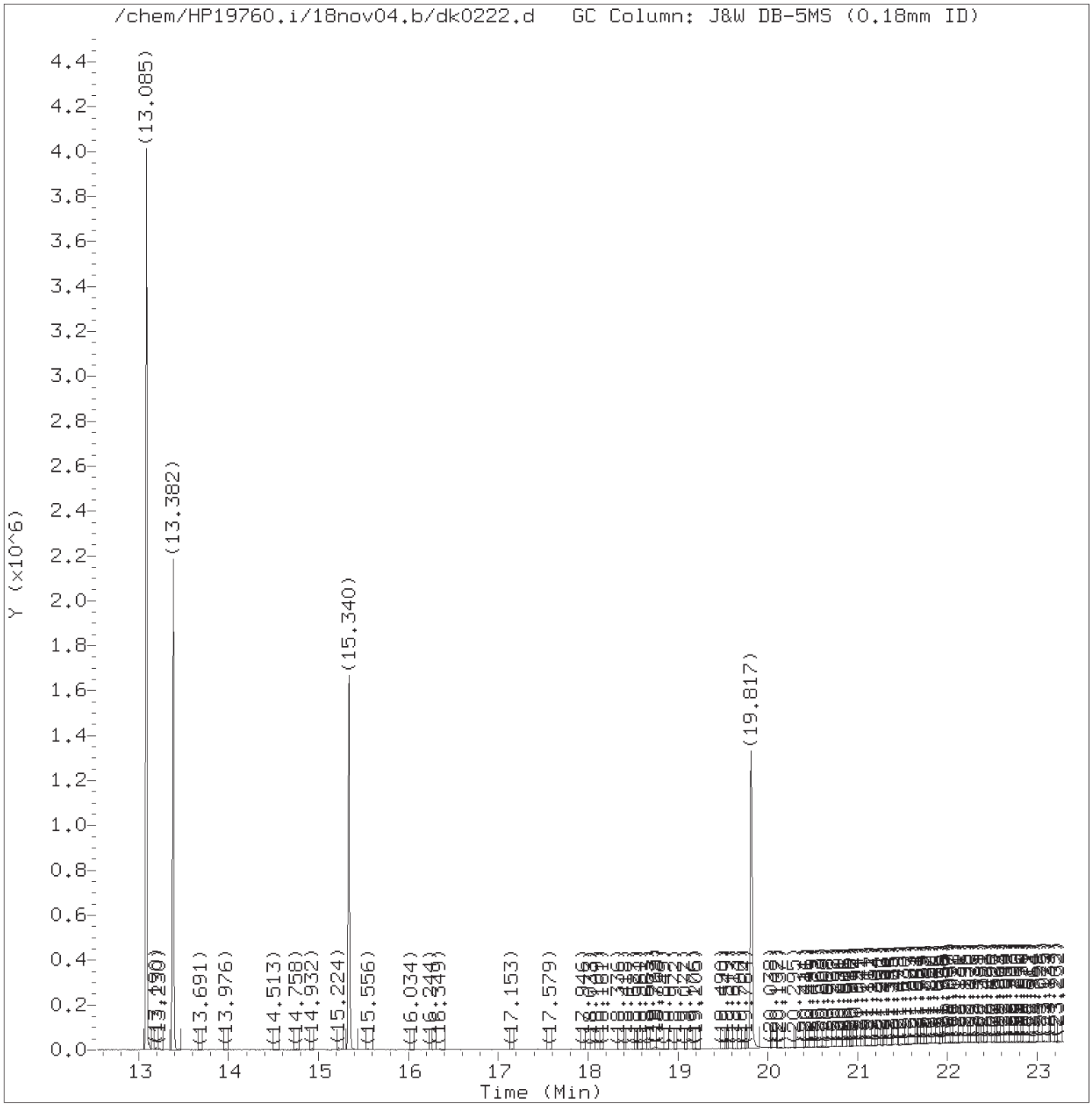
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0222.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:29 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:52 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV3028

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:56.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0222.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:29 Analyst ID: em10340

Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:52 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV3028

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:56.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04.b/dk0222.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 17:29 Analyst ID: em10340

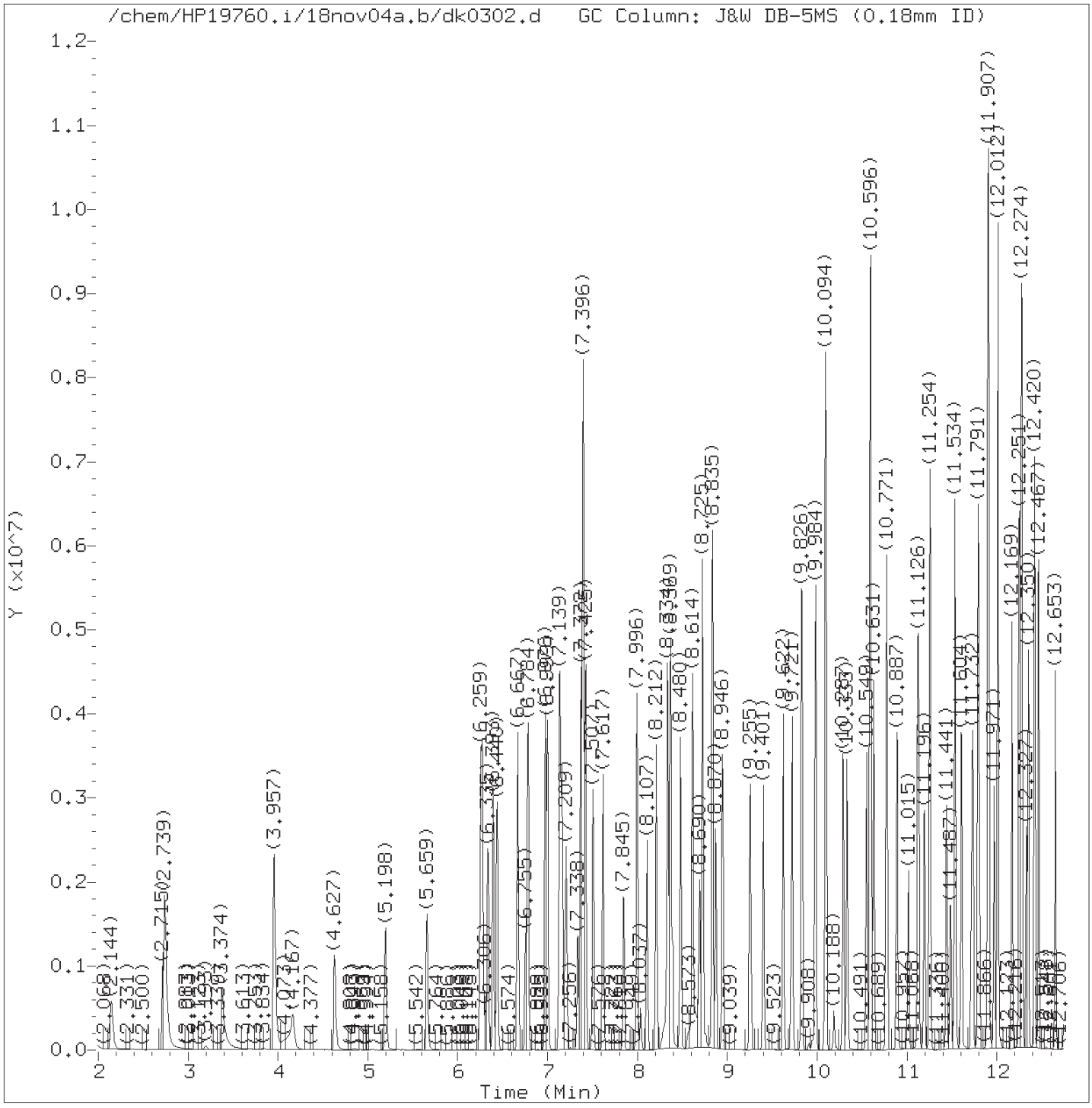
Method used: /chem/HP19760.i/18nov04.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 04-NOV-2018 19:17
Date, time and analyst ID of latest file update: 04-Nov-2018 19:52 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV3028

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.114	77	1058206	15.025
25)*1,4-Dichlorobenzene-d4	(1)	6.761	152	261447	5.000
65)*Naphthalene-d8	(2)	8.690	136	954697	5.000
76) Caprolactam	(2)	9.325	113	268969	11.590
113)*Acenaphthene-d10	(3)	11.482	164	408703	5.000
148) Atrazine	(4)	13.085	200	385498	12.129
153)*Phenanthrene-d10	(4)	13.382	188	779786	5.000
175)*Pyrene-d10	(5)	15.340	212	685403	5.000
213)*Perylene-d12	(6)	19.817	264	625219	5.000

* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/04/2018 at 19:56.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

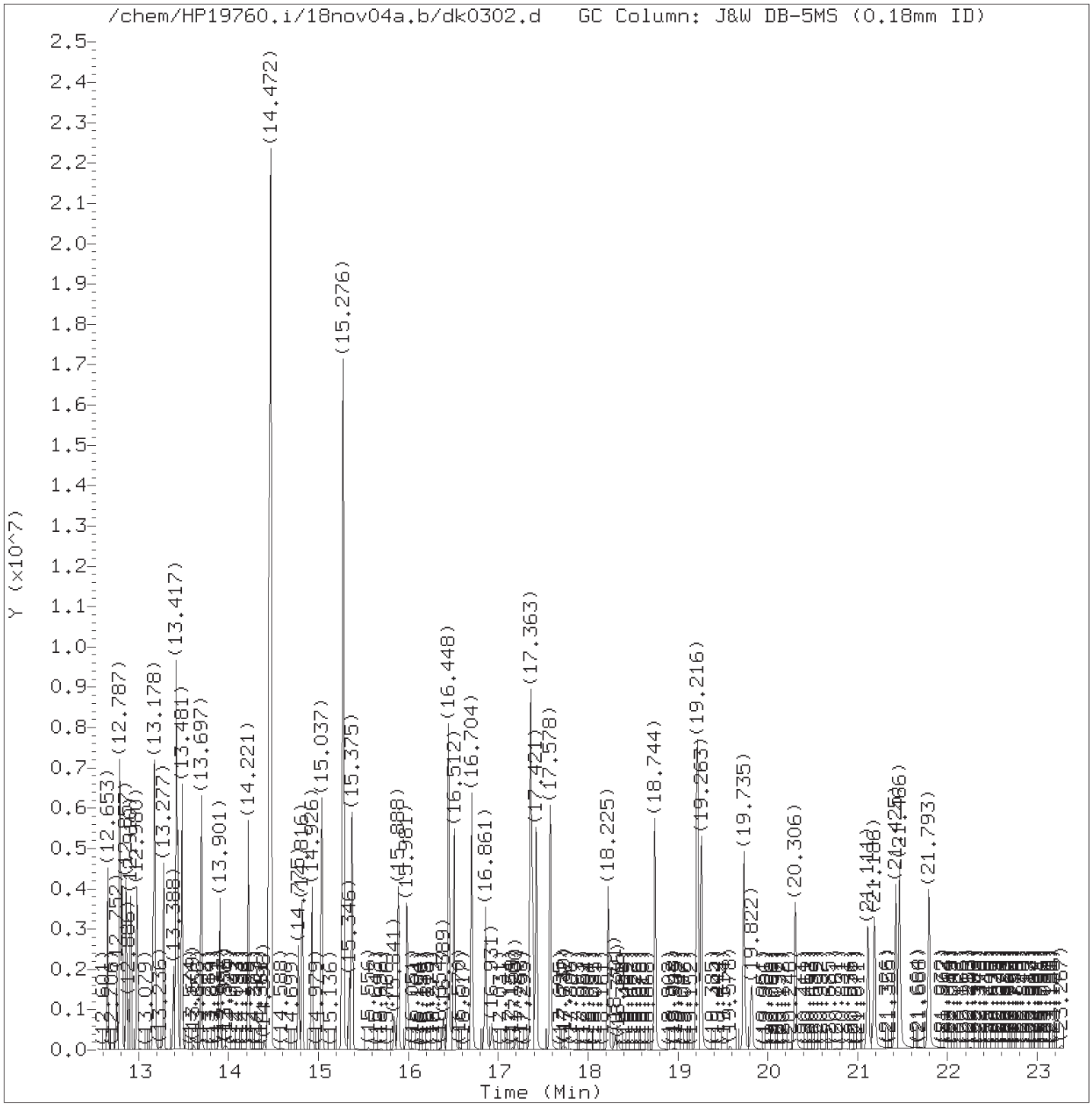
Target Revision 3.5

Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.144	88	527989	12.043
4) N-Nitrosodimethylamine	(1)	2.715	74	943325	14.098
5) Pyridine	(1)	2.745	79	1495400	13.334
7) 2-Picoline	(1)	3.957	93	1511333	13.498
8) N-Nitrosomethylethylamine	(1)	4.167	88	584957	12.003
9) Methyl methanesulfonate	(1)	4.627	80	675443	12.593
13) N-Nitrosodiethylamine	(1)	5.198	102	545947	12.587
15) Ethyl methanesulfonate	(1)	5.659	109	511454	12.241
42) Total Cresols	(1)	5.660	100	2383412	27.735
18) Phenol	(1)	6.253	94	1798520	13.422
19) Aniline	(1)	6.277	93	1991372	12.632
22) bis(2-Chloroethyl)ether	(1)	6.393	93	1336376	13.456
23) 2-Chlorophenol	(1)	6.440	128	1089524	13.843
24) 1,3-Dichlorobenzene	(1)	6.667	146	1134539	13.569
25)*1,4-Dichlorobenzene-d4	(1)	6.755	152	259622	5.000
26) 1,4-Dichlorobenzene	(1)	6.784	146	1157704	13.855
27) Benzyl alcohol	(1)	6.976	108	804469	14.516
28) 1,2-Dichlorobenzene	(1)	6.999	146	1081763	13.606
30) Indene	(1)	7.133	115	1789925	19.933
31) 2-Methylphenol	(1)	7.157	108	1111405	13.808
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.209	45	1499076	13.072
34) bis(2-Chloroisopropyl)ether	(1)	7.209	45	1499076	13.072
35) N-Nitrosopyrrolidine	(1)	7.338	100	562983	12.503
36) Acetophenone	(1)	7.372	105	1618557	14.307
97) Isosafrole	(3)	7.383	162	715560	13.065
38) N-Nitroso-di-n-propylamine	(1)	7.396	70	999556	14.119
37) 4-Methylphenol	(1)	7.396	108	1272007	13.920
39) N-Nitrosomorpholine	(1)	7.402	56	649619	12.276
40) o-Toluidine	(1)	7.425	106	1883775	13.415
43) Hexachloroethane	(1)	7.507	117	515924	13.201
45) Nitrobenzene	(2)	7.617	77	1408380	13.698
48) N-Nitrosopiperidine	(2)	7.850	114	477955	12.021
50) Isophorone	(2)	7.996	82	2505613	14.456
120) 2,4_2,6-Dinitrotoluenes	(3)	8.050	165	964191	28.465
51) 2-Nitrophenol	(2)	8.107	139	539756	13.899
53) 2,4-Dimethylphenol	(2)	8.212	107	966026	11.544
57) O,O,O-Triethylphosphorothioate	(2)	8.334	198	402894	12.727
55) bis(2-Chloroethoxy)methane	(2)	8.369	93	1547131	14.165
56) Benzoic acid	(2)	8.392	105	1459044	25.837
60) 2,4-Dichlorophenol	(2)	8.480	162	791155	14.039

* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
62) 1,2,4-Trichlorobenzene	(2)	8.614	180	839551	13.610
65)*Naphthalene-d8	(2)	8.690	136	943114	5.000
66) Naphthalene	(2)	8.725	128	3000522	13.454
146) Diallate trans/cis	(4)	8.775	86	956223	12.333
67) 4-Chloroaniline	(2)	8.830	127	1221532	14.349
68) 2,6-Dichlorophenol	(2)	8.835	162	672750	12.240
69) Hexachloropropene	(2)	8.870	213	513734	13.223
71) Hexachlorobutadiene	(2)	8.946	225	447202	13.452
75) Quinoline	(2)	9.255	129	1634321	12.976
77) N-Nitrosodi-n-butylamine	(2)	9.401	84	714745	10.881
80) 4-Chloro-3-methylphenol	(2)	9.622	107	969525	14.527
82) Safrole	(2)	9.721	162	619823	12.081
83) 2-Methylnaphthalene	(2)	9.832	142	1878139	13.875
84) 1-Methylnaphthalene	(2)	9.984	142	1727810	13.471
85) Hexachlorocyclopentadiene	(3)	10.094	237	894015	26.785
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.100	216	753205	13.488
88) cis-Isosafrole	(3)	10.188	162	78315	1.538
90) 2,4,6-Trichlorophenol	(3)	10.293	196	514708	14.567
92) 2,4,5-Trichlorophenol	(3)	10.333	196	550668	14.849
94) trans-Isosafrole	(3)	10.549	162	637245	11.470
95) 1,1'-Biphenyl	(3)	10.590	154	2192938	14.511
96) 2-Chloronaphthalene	(3)	10.596	162	1659530	13.506
98) 1-Chloronaphthalene	(3)	10.631	162	1396029	12.794
104) 1,4-Naphthoquinone	(3)	10.893	158	752160	16.556
105) 1,4-Dinitrobenzene	(3)	11.015	168	299659	14.048
106) Dimethylphthalate	(3)	11.120	163	1706395	13.454
107) 1,3-Dinitrobenzene	(3)	11.132	168	326538	13.814
108) 2,6-Dinitrotoluene	(3)	11.196	165	414829	14.140
112) 3-Nitroaniline	(3)	11.441	138	493836	14.600
113)*Acenaphthene-d10	(3)	11.482	164	420779	5.000
114) Acenaphthene	(3)	11.534	153	1740352	14.190
115) 2,4-Dinitrophenol	(3)	11.610	184	585003	28.726
116) 4-Nitrophenol	(3)	11.721	109	351372	13.612
117) Pentachlorobenzene	(3)	11.732	250	530322	12.028
119) Dibenzofuran	(3)	11.791	168	2360051	13.869
118) 2,4-Dinitrotoluene	(3)	11.802	165	549362	13.767
121) 1-Naphthylamine	(3)	11.901	143	3286665	25.507
122) 2,3,4,6-Tetrachlorophenol	(3)	11.971	232	362163	12.722
123) 2-Naphthylamine	(3)	12.012	143	3248205	24.942
124) Diethylphthalate	(3)	12.169	149	1753254	13.657

* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
126) Fluorene	(3)	12.245	166	1847394	14.330
125) Thionazin	(3)	12.263	107	371211	13.298
128) 5-Nitro-o-toluidine	(3)	12.274	152	498613	12.695
127) 4-Chlorophenyl-phenylether	(3)	12.274	204	838775	13.538
129) 4-Nitroaniline	(3)	12.286	138	530145	14.278
130) 4,6-Dinitro-2-methylphenol	(4)	12.333	198	338442	14.172
131) N-Nitrosodiphenylamine	(4)	12.420	169	1544446	14.722
132) NDPA as diphenylamine	(4)	12.420	169	1544446	14.722
137) Tetraethyldithiopyrophosphate	(4)	12.653	97	331080	13.096
139) 1,3,5-Trinitrobenzene	(4)	12.752	213	187162	12.195
140) Diallate (peak 1)	(4)	12.787	86	732330	9.093
141) Phorate	(4)	12.793	75	1377579	13.910
142) Phenacetin	(4)	12.811	108	960332	12.465
143) 4-Bromophenyl-phenylether	(4)	12.863	248	420356	13.767
144) Diallate (peak 2)	(4)	12.886	86	223893	3.561
145) Hexachlorobenzene	(4)	12.910	284	437189	13.815
147) Dimethoate	(4)	12.980	87	883495	13.497
150) 4-Aminobiphenyl	(4)	13.172	169	1750281	19.439
151) Pentachloronitrobenzene	(4)	13.178	237	183696	12.465
152) Pronamide	(4)	13.277	173	717127	13.045
153)*Phenanthrene-d10	(4)	13.388	188	761566	5.000
154) Dinoseb	(4)	13.417	211	403945	11.735
155) Phenanthrene	(4)	13.417	178	2556979	13.955
157) Anthracene	(4)	13.481	178	2582918	14.485
163) Carbazole	(4)	13.697	167	2557967	14.657
164) Methyl parathion	(4)	13.901	109	694727	14.003
165) Di-n-butylphthalate	(4)	14.221	149	3126258	14.387
167) Parathion	(4)	14.443	109	460306	14.614
168) 4-Nitroquinoline-1-oxide	(4)	14.472	190	4307314	147.118
171) Isodrin	(4)	14.816	193	275434	13.333
222) Total PAHs	(6)	15.000	100	30886615	179.813
173) Fluoranthene	(4)	15.037	202	2785780	14.527
174) Benzidine	(5)	15.276	184	8452700	55.602
175)*Pyrene-d10	(5)	15.346	212	759450	5.000
177) Pyrene	(5)	15.375	202	2948743	13.518
182) p-Dimethylaminoazobenzene	(5)	15.888	225	498312	14.418
185) Chlorobenzilate	(5)	15.981	139	898435	13.138
187) 3,3'-Dimethylbenzidine	(5)	16.448	212	3362721	25.783
188) Butylbenzylphthalate	(5)	16.512	149	1542560	14.086
191) 2-Acetylaminofluorene	(5)	16.861	181	1043580	11.812

* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

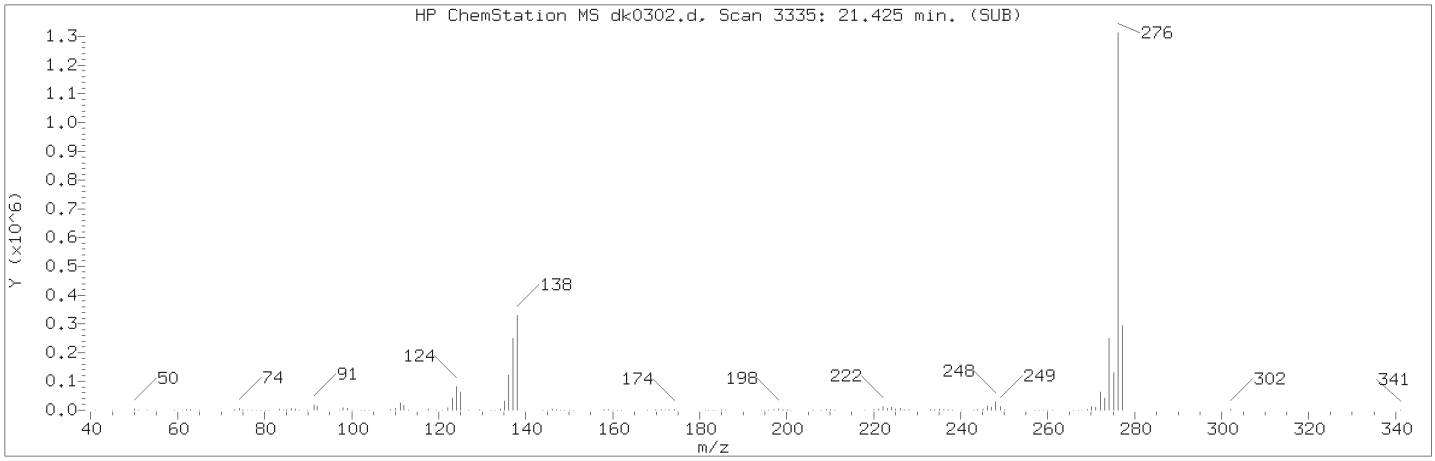
Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
193) 3,3'-Dichlorobenzidine	(5)	17.357	252	935447	12.510
195) Benzo(a)anthracene	(5)	17.363	228	2625612	14.802
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.380	231	515768	12.094
196) Chrysene	(5)	17.421	228	2620751	14.053
199) bis(2-Ethylhexyl)phthalate	(5)	17.578	149	2185908	14.242
203) 6-Methylchrysene	(5)	18.225	242	1618129	12.423
205) Di-n-octylphthalate	(6)	18.744	149	3761358	14.648
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.222	256	1306329	14.729
213)*Perylene-d12	(6)	19.822	264	756130	5.000
215) 3-Methylcholanthrene	(6)	20.306	268	1205540	14.986
217) Dibenz(a,h)acridine	(6)	21.116	279	1713468	12.738
218) Dibenz(a,j)acridine	(6)	21.186	279	1939984	13.202
219) Indeno(1,2,3-cd)pyrene	(6)	21.425	276	2205669M	14.894
221) Benzo(g,h,i)perylene	(6)	21.793	276	2365946	14.383

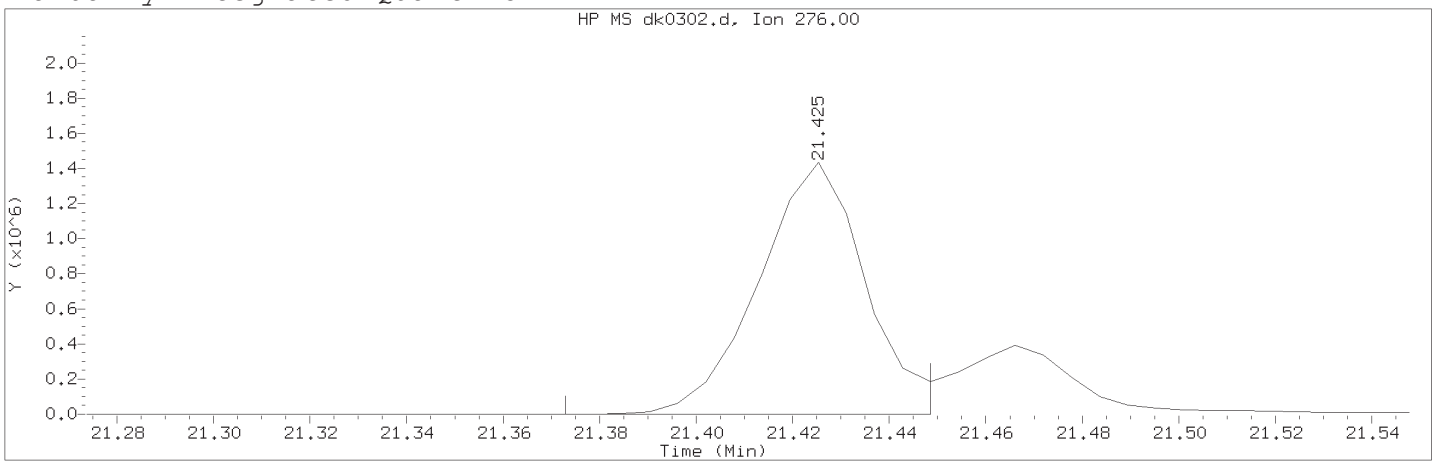
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 05-NOV-2018 17:24
Date, time and analyst ID of latest file update: 05-Nov-2018 17:25 art12405

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

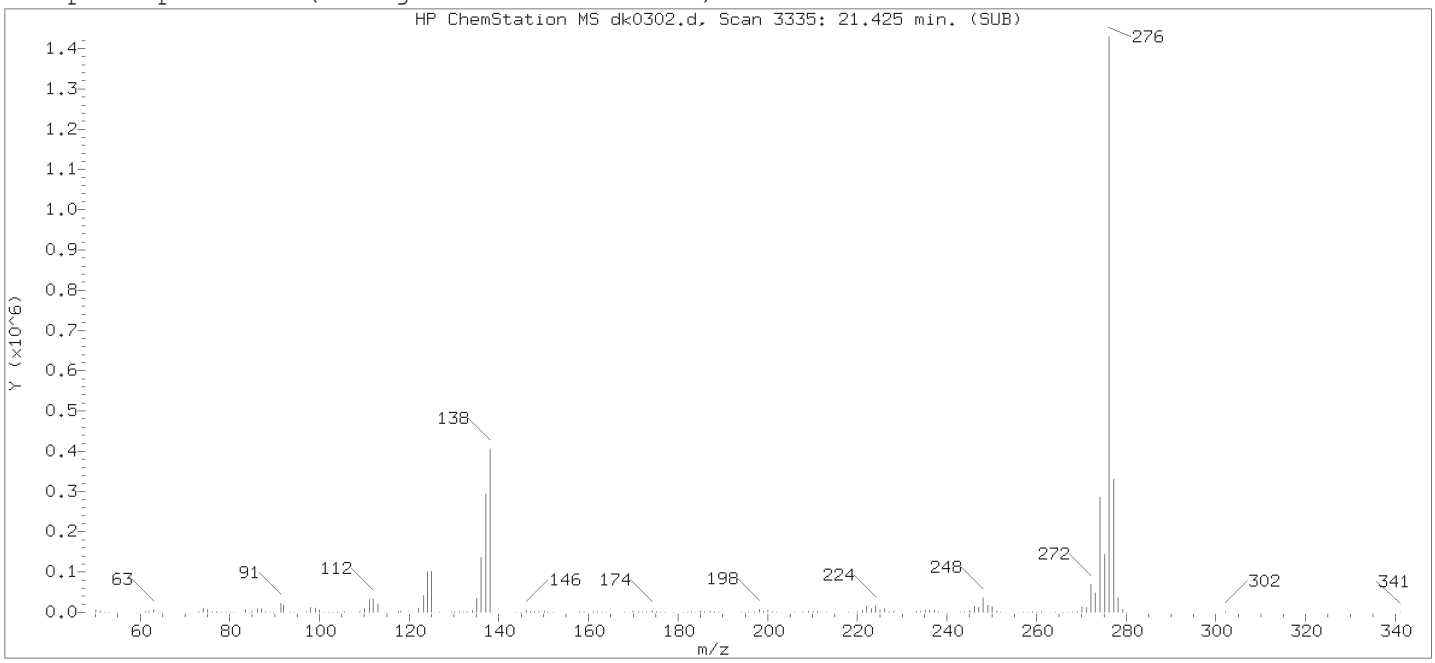
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3335		
Retention Time (minutes)	: 21.425		
Quant Ion	: 276.00		
Area (flag)	: 2205669M		
On-Column Amount (ng/ul)	: 14.8939		
Integration start scan	: 3325	Integration stop scan:	3338
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

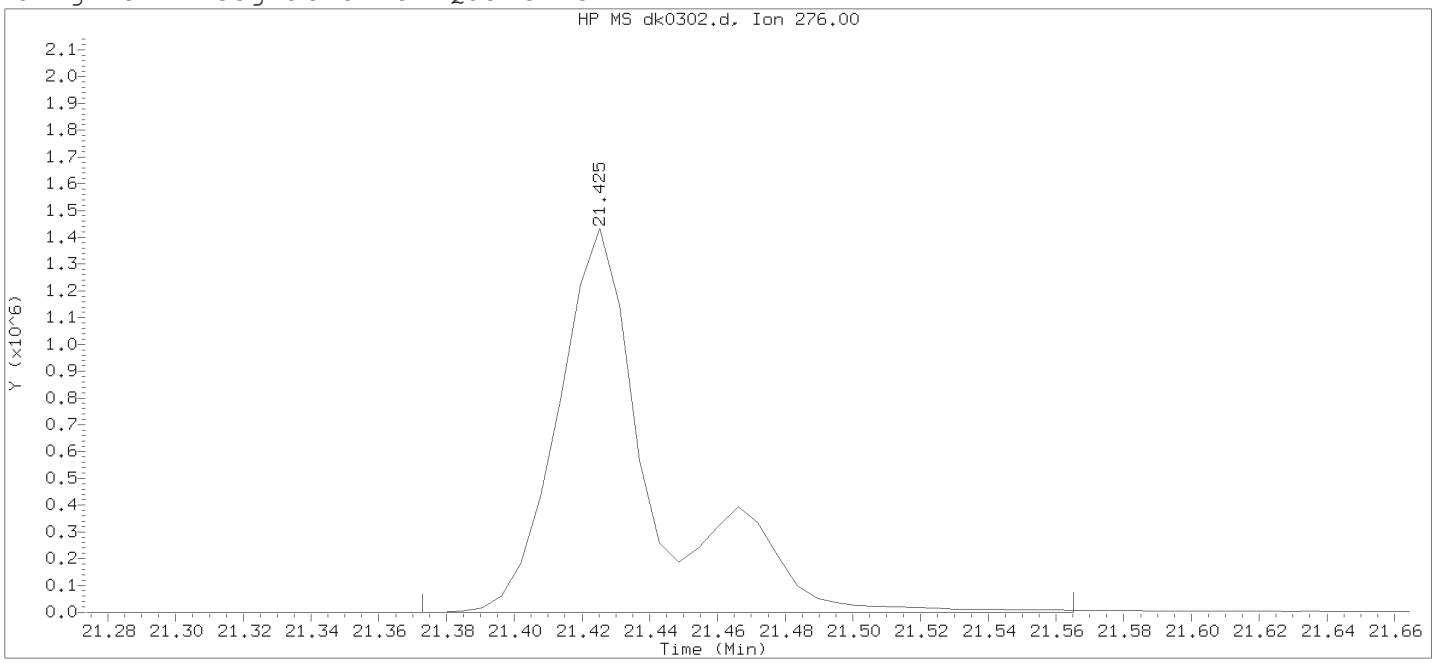
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/05/2018 at 17:26.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 07:22.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18nov04a.b/dk0302.d Instrument ID: HP19760.i
Injection date and time: 04-NOV-2018 22:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov04a.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 04-NOV-2018 22:12
Date, time and analyst ID of latest file update: 04-Nov-2018 22:42 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3335		
Retention Time (minutes)	: 21.425		
Quant Ion	: 276.00		
Area	: 2853020		
On-column Amount (ng/ul)	: 19.2652		
Integration start scan	: 3325	Integration stop scan:	3358
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/05/2018 at 17:26.
Target 3.5 esignature user id: art12405

Data File: /chem/HP19760.i/18nov07a.b/dk0600.d

Date : 07-NOV-2018 19:23

Client ID: DFTPP12.5

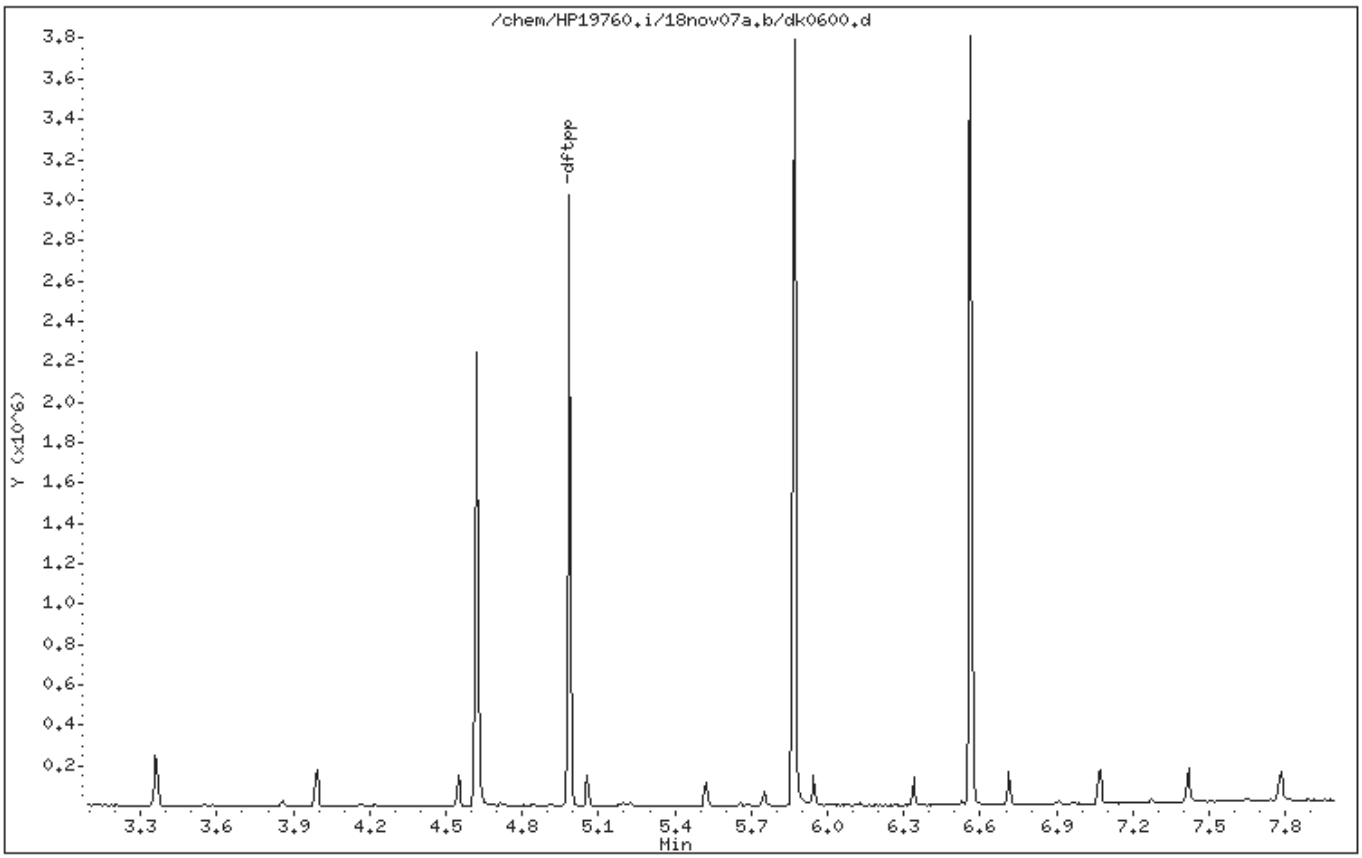
Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Ashley R. Transue on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP19760.i/18nov07a.b/dk0600.d

Date : 07-NOV-2018 19:23

Client ID: DFTPP12.5

Instrument: HP19760.i

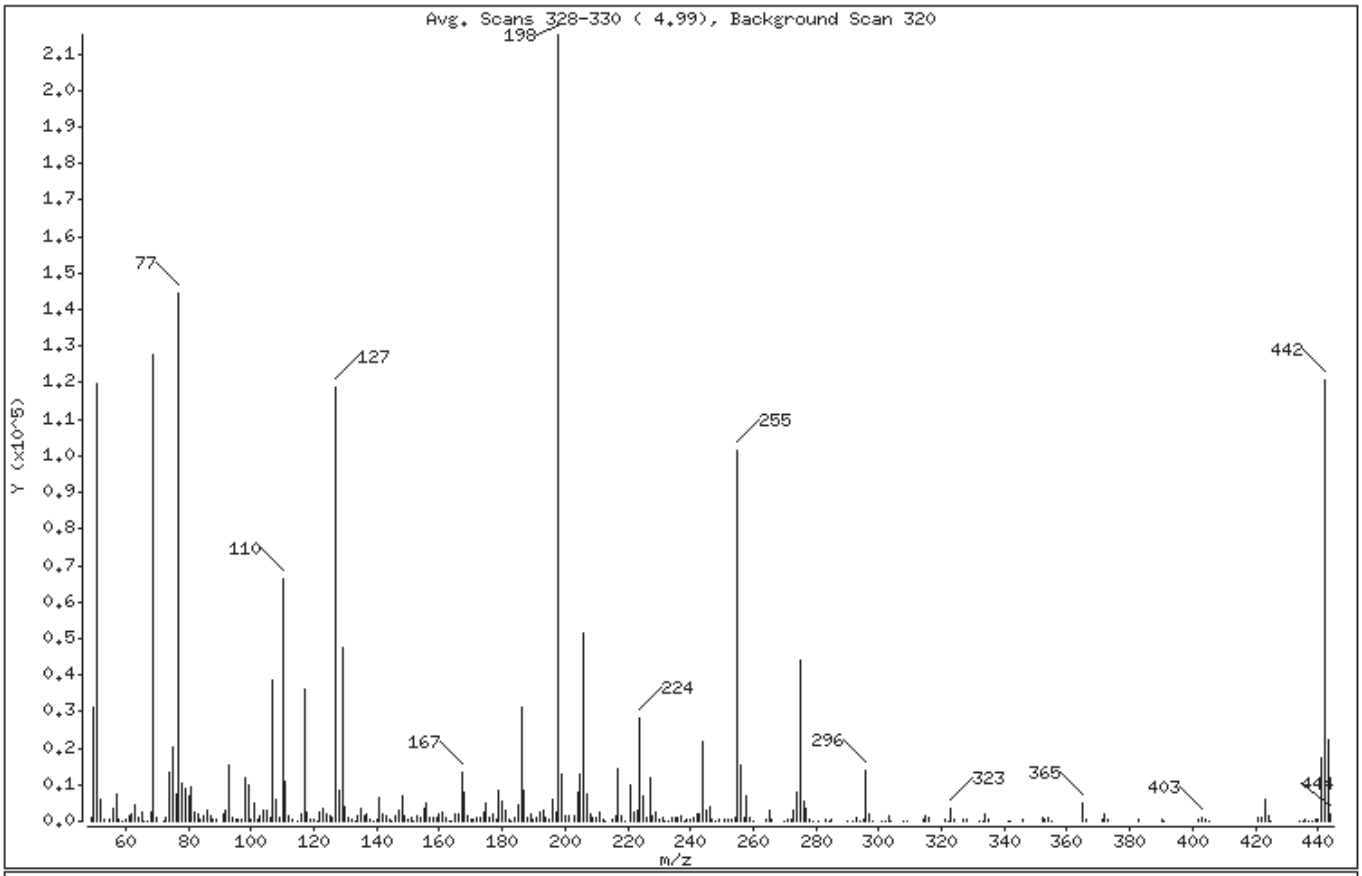
Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: art12405

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	55.54
68	Less than 2.00% of mass 69	1.07 (1.80)
69	Mass 69 relative abundance	59.26
70	Less than 2.00% of mass 69	0.40 (0.67)
127	10.00 - 80.00% of mass 198	55.14
197	Less than 2.00% of mass 198	1.09
199	5.00 - 9.00% of mass 198	6.06
275	10.00 - 60.00% of mass 198	20.51
365	Greater than 1.00% of mass 198	2.31
441	0.01 - 24.00% of mass 442	8.14 (14.52)
442	50.00 - 99.99% of mass 198	56.04
443	15.00 - 24.00% of mass 442	10.41 (18.57)

Digitally signed by Ashley R. Transue on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Date : 07-NOV-2018 19:23

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0600.d
Spectrum: Avg. Scans 328-330 (4.99), Background Scan 320
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	857	124.00	1743	195.00	520	276.00	5482
50.00	30992	125.00	1510	196.00	6104	277.00	3599
51.00	119544	126.00	1132	197.00	2352	278.00	492
52.00	6089	127.00	118688	198.00	215232	279.00	91
53.00	411	128.00	8559	199.00	13053	281.00	88
55.00	709	129.00	47632	200.00	1530	283.00	296
56.00	3430	130.00	4039	201.00	1250	284.00	111
57.00	7522	131.00	928	203.00	1533	285.00	700
58.00	414	132.00	495	204.00	7764	290.00	96
59.00	110	133.00	198	205.00	13029	292.00	125
60.00	262	134.00	1447	206.00	51664	293.00	879
61.00	1407	135.00	3462	207.00	7271	294.00	129
62.00	1943	136.00	1638	208.00	1897	295.00	380
63.00	4368	137.00	1948	209.00	833	296.00	13650
64.00	833	138.00	424	210.00	841	297.00	2064
65.00	2557	139.00	98	211.00	2271	298.00	107
66.00	112	140.00	519	212.00	647	301.00	136
67.00	247	141.00	6223	213.00	200	302.00	124
68.00	2296	142.00	2085	215.00	474	303.00	1272
69.00	127544	143.00	1244	216.00	1352	304.00	206
70.00	852	144.00	253	217.00	14396	308.00	241
72.00	88	145.00	206	218.00	1707	309.00	85
73.00	1234	146.00	1301	219.00	136	314.00	557
74.00	13208	147.00	3076	221.00	9882	315.00	1501
75.00	20456	148.00	7075	222.00	2284	316.00	787
76.00	7337	149.00	1544	223.00	2876	321.00	354
77.00	144256	150.00	450	224.00	28184	322.00	94
78.00	10368	151.00	773	225.00	6946	323.00	3369
79.00	8962	152.00	235	226.00	847	324.00	637
80.00	7069	153.00	1535	227.00	12019	327.00	629
81.00	9638	154.00	1196	228.00	1427	328.00	438
82.00	2665	155.00	3307	229.00	2598	332.00	192
83.00	2025	156.00	4735	230.00	487	333.00	212
84.00	410	157.00	901	231.00	1016	334.00	2199
85.00	1348	158.00	1001	232.00	149	335.00	605

Digitally signed by Ashley R. Transue on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Date : 07-NOV-2018 19:23

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0600.d
Spectrum: Avg. Scans 328-330 (4.99), Background Scan 320
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	2784	159.00	936	233.00	96	341.00	220
87.00	1497	160.00	1795	234.00	852	342.00	113
88.00	331	161.00	2599	235.00	1062	346.00	513
89.00	271	162.00	798	236.00	861	352.00	936
91.00	2144	163.00	137	237.00	1295	353.00	721
92.00	2733	164.00	242	238.00	184	354.00	1088
93.00	15518	165.00	1977	239.00	408	355.00	129
94.00	1099	166.00	1792	240.00	341	365.00	4965
95.00	340	167.00	13330	241.00	813	366.00	644
96.00	667	168.00	8101	242.00	1765	371.00	263
97.00	372	169.00	1283	243.00	1829	372.00	2015
98.00	11732	170.00	333	244.00	21984	373.00	587
99.00	9997	171.00	404	245.00	3093	383.00	446
100.00	627	172.00	995	246.00	4143	390.00	418
101.00	4839	173.00	1174	247.00	726	391.00	90
102.00	309	174.00	2246	248.00	92	402.00	655
103.00	1640	175.00	4938	249.00	729	403.00	829
104.00	3148	176.00	1076	251.00	337	404.00	317
105.00	2773	177.00	1883	252.00	456	405.00	84
106.00	988	178.00	728	253.00	720	421.00	883
107.00	38576	179.00	8227	254.00	1152	422.00	880
108.00	5904	180.00	5280	255.00	101656	423.00	5920
109.00	1175	181.00	2985	256.00	15258	424.00	1533
110.00	66544	182.00	511	257.00	1186	425.00	115
111.00	10712	183.00	127	258.00	6761	434.00	121
112.00	1276	184.00	852	259.00	953	435.00	104
113.00	353	185.00	4418	260.00	91	436.00	569
115.00	184	186.00	31296	264.00	300	437.00	86
116.00	2075	187.00	8441	265.00	2843	438.00	136
117.00	35944	188.00	817	266.00	414	439.00	290
118.00	2479	189.00	2025	270.00	132	440.00	319
119.00	266	190.00	319	271.00	280	441.00	17512
120.00	375	191.00	1017	272.00	393	442.00	120624
121.00	108	192.00	2455	273.00	3025	443.00	22400
122.00	2464	193.00	2819	274.00	7981	444.00	2206

Digitally signed by Ashley R. Transue on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Date : 07-NOV-2018 19:23

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2878;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

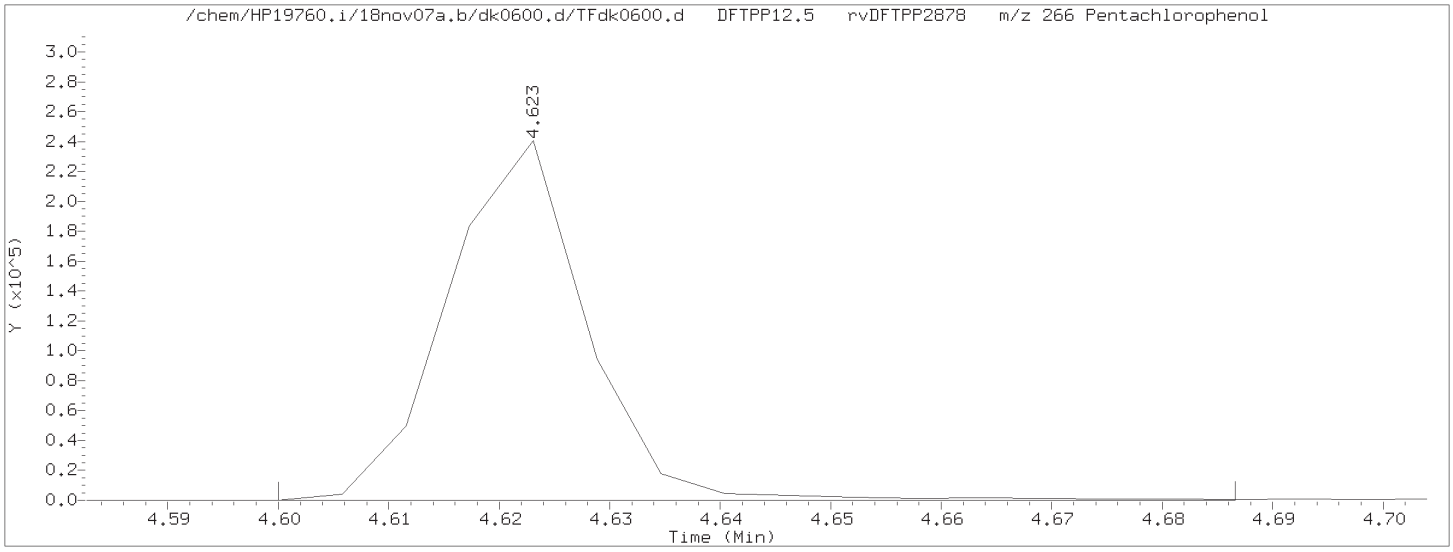
Data File: dk0600.d
Spectrum: Avg. Scans 328-330 (4.99), Background Scan 320
Location of Maximum: 198.00
Number of points: 283

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	3455	194.00	896	275.00	44144		

Digitally signed by Ashley R. Transue on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Assessment of GC Column Performance and Injection Port Inertness for

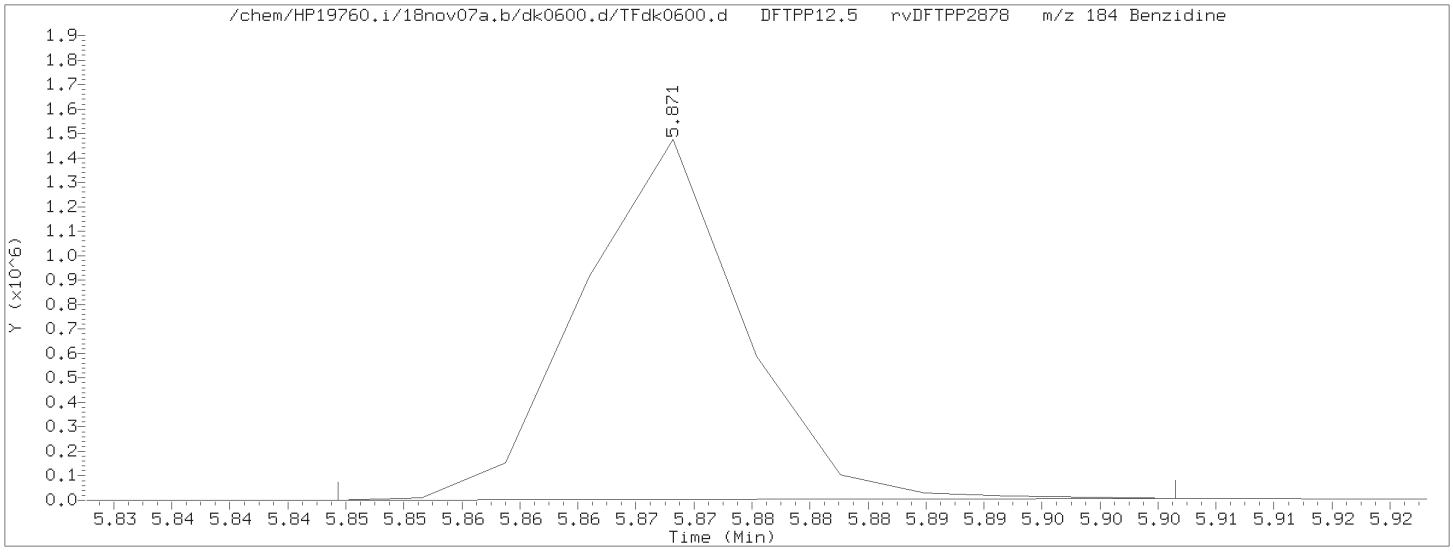
Instrument ID: HP19760.i Injection Date: 07-NOV-2018 19:23 Operator: art12405



Pentachlorophenol EICP peak height = 240704 EICP peak height at 10% = 24070 Pentachlorophenol EICP area = 209668

Pentachlorophenol EICP peak apex (min.) = 4.623
RT at 10% of front half of EICP (min.) = 4.608 'Front' peak width (min.) = 0.0147666667
RT at 10% of back half of EICP (min.) = 4.634 'Tailing' peak width (min.) = 0.0110500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0110500000}{0.0147666667} = 0.748$



Benzidine EICP peak height = 1471150 EICP peak height at 10% = 147115 Benzidine EICP area = 1131899

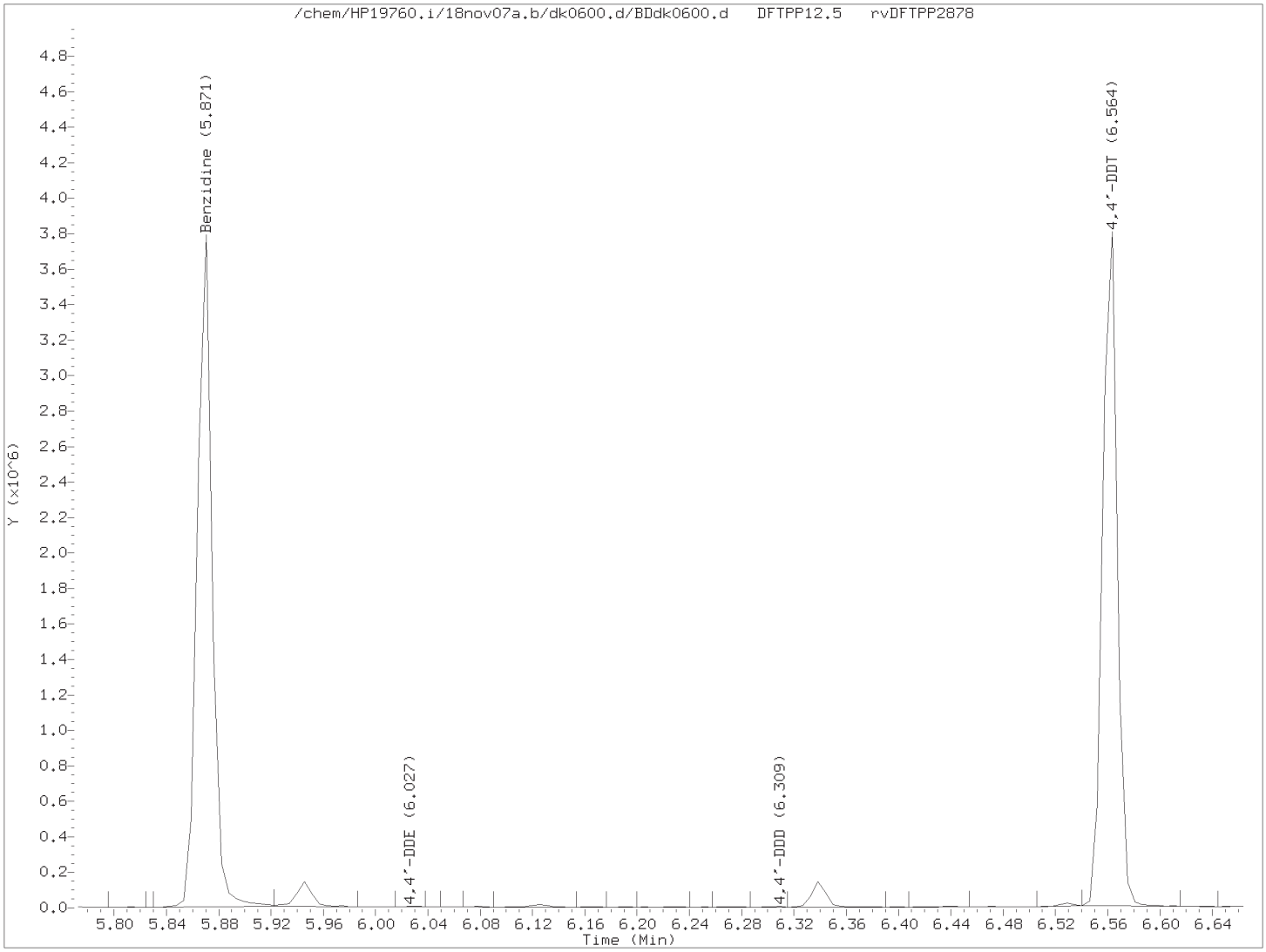
Benzidine EICP peak apex (min.) = 5.871
RT at 10% of front half of EICP (min.) = 5.859 'Front' peak width (min.) = 0.0116666667
RT at 10% of back half of EICP (min.) = 5.882 'Tailing' peak width (min.) = 0.0109833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0109833333}{0.0116666667} = 0.941$

Secondary review performed and digitally signed by Chad A. Moline on 11/08/2018 at 09:49. PARALLAX ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

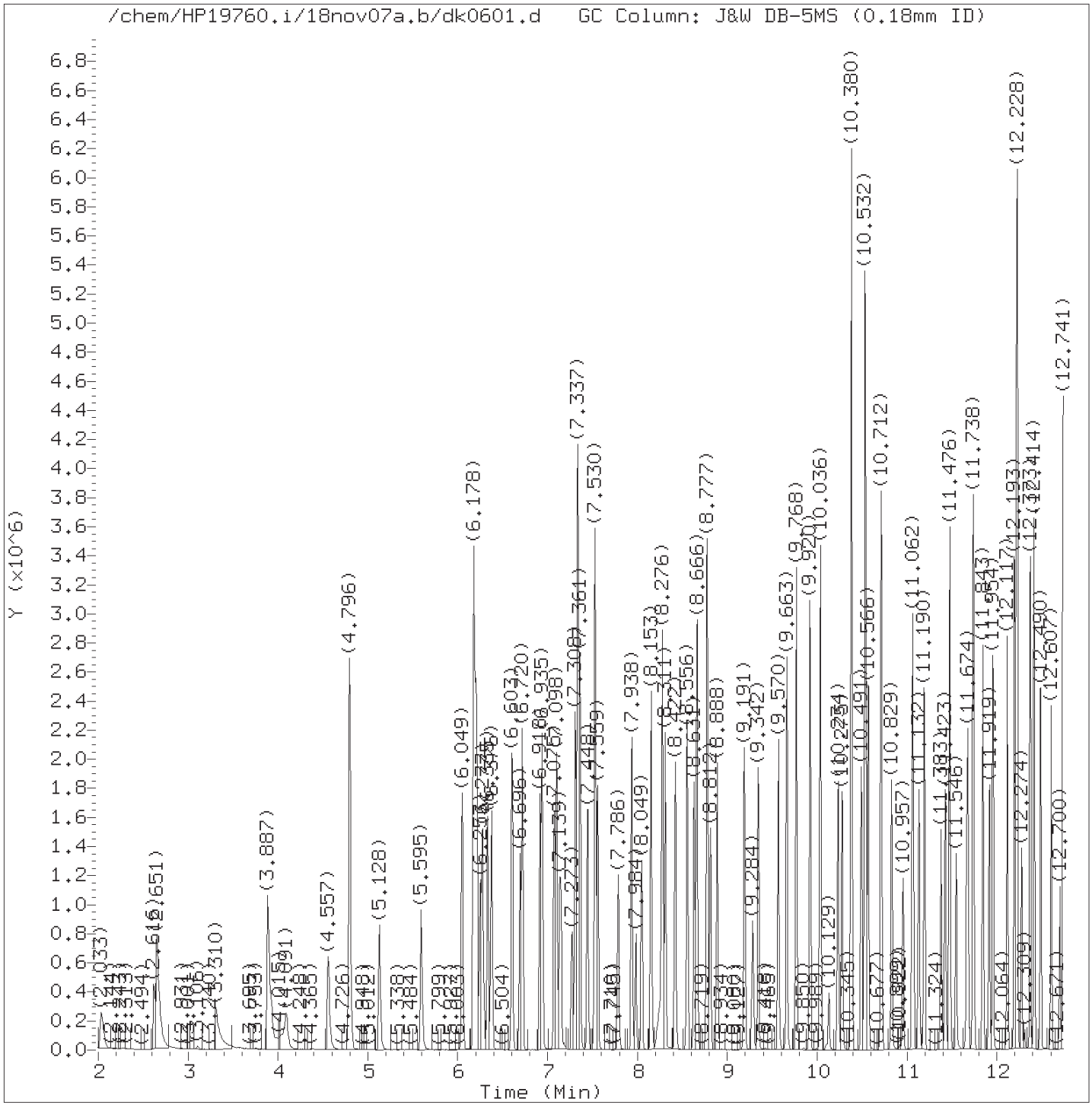
Instrument ID: HP19760.i Injection Date: 07-NOV-2018 19:23 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{3268 + 3014}{3268 + 3014 + 3021439} \times 100 = 0.2$$

Secondary review performed and digitally signed by Chad A. Moline on 11/08/2018 at 09:49. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

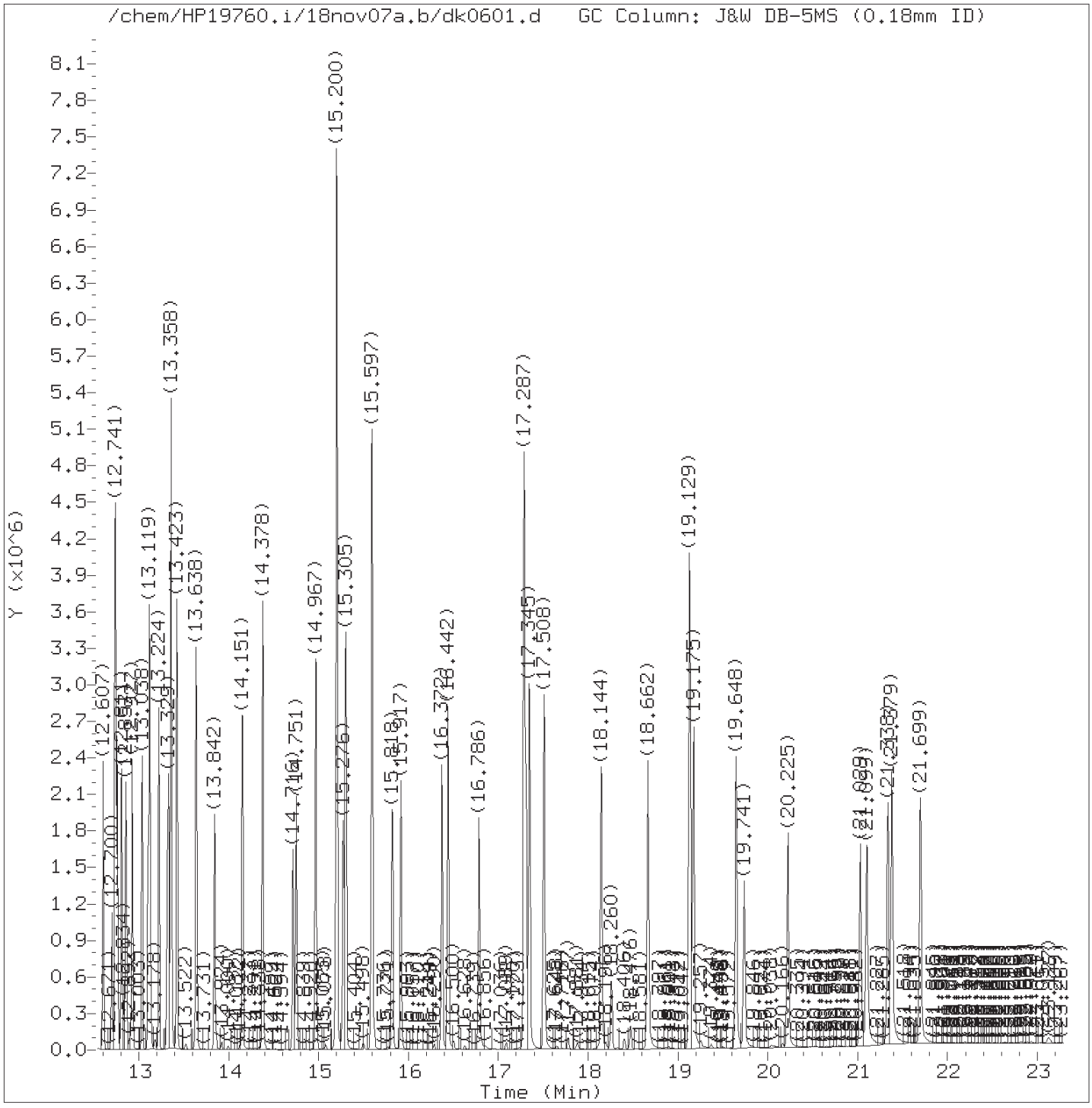
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Digitally signed by Ashley R. Transue
on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Digitally signed by Ashley R. Transue
on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.033	88	257750	5.939
4) N-Nitrosodimethylamine	(1)	2.616	74	456755	6.896
5) Pyridine	(1)	2.651	79	751616	6.770
7) 2-Picoline	(1)	3.887	93	795067	7.173
8) N-Nitrosomethylethylamine	(1)	4.091	88	342575	7.101
9) Methyl methanesulfonate	(1)	4.557	80	397755	7.491
11)$2-Fluorophenol	(1)	4.796	112	1222473	14.834
13) N-Nitrosodiethylamine	(1)	5.128	102	325919	7.591
15) Ethyl methanesulfonate	(1)	5.595	109	314386	7.601
42) Total Cresols	(1)			1294459	15.217
16) Benzaldehyde	(1)	6.049	77	554104	8.003
17)$Phenol-d6	(1)	6.178	99	1721383	15.111
18) Phenol	(1)	6.195	94	979899	7.387
19) Aniline	(1)	6.213	93	1145329	7.339
20) a-methylstyrene	(1)	6.294	118	56520	7.058
22) bis(2-Chloroethyl)ether	(1)	6.335	93	733705	7.463
23) 2-Chlorophenol	(1)	6.376	128	600343	7.706
24) 1,3-Dichlorobenzene	(1)	6.603	146	618844	7.477
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	257002	5.000
26) 1,4-Dichlorobenzene	(1)	6.720	146	625570	7.563
27) Benzyl alcohol	(1)	6.918	108	384082	7.001
28) 1,2-Dichlorobenzene	(1)	6.941	146	596957	7.585
30) Indene	(1)	7.075	115	647103	7.280
31) 2-Methylphenol	(1)	7.098	108	606587	7.613
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.145	45	875287	7.710
34) bis(2-Chloroisopropyl)ether	(1)	7.145	45	875287	7.710
35) N-Nitrosopyrrolidine	(1)	7.273	100	338744	7.600
36) Acetophenone	(1)	7.308	105	842317	7.521
38) N-Nitroso-di-n-propylamine	(1)	7.332	70	530894	7.576
39) N-Nitrosomorpholine	(1)	7.337	56	403712	7.707
37) 4-Methylphenol	(1)	7.337	108	687872	7.605
40) o-Toluidine	(1)	7.361	106	1035798	7.451
97) Isosafrole	(3)			417092	7.479
43) Hexachloroethane	(1)	7.442	117	291094	7.524
44)$Nitrobenzene-d5	(2)	7.530	82	1537380	15.013
45) Nitrobenzene	(2)	7.559	77	779054	7.529
48) N-Nitrosopiperidine	(2)	7.786	114	305547	7.636
50) Isophorone	(2)	7.938	82	1314365	7.535
51) 2-Nitrophenol	(2)	8.049	139	287366	7.353
120) 2,4_2,6-Dinitrotoluenes	(3)			532406	15.436

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.153	107	637608	7.571
56) Benzoic acid	(2)	8.282	105	501979	8.833
57) O,O,O-Triethylphosphorothioate	(2)	8.282	198	234567	7.363
55) bis(2-Chloroethoxy)methane	(2)	8.311	93	820486	7.464
60) 2,4-Dichlorophenol	(2)	8.422	162	434482	7.661
62) 1,2,4-Trichlorobenzene	(2)	8.556	180	469901	7.569
65)*Naphthalene-d8	(2)	8.631	136	949149	5.000
66) Naphthalene	(2)	8.666	128	1679763	7.484
67) 4-Chloroaniline	(2)	8.771	127	647726	7.560
146) Diallate trans/cis	(4)			582173	7.318
68) 2,6-Dichlorophenol	(2)	8.777	162	427012	7.719
69) Hexachloropropene	(2)	8.812	213	285035	7.290
71) Hexachlorobutadiene	(2)	8.888	225	245166	7.328
75) Quinoline	(2)	9.191	129	928812	7.328
76) Caprolactam	(2)	9.284	113	166925	7.235
77) N-Nitrosodi-n-butylamine	(2)	9.342	84	441535	6.679
80) 4-Chloro-3-methylphenol	(2)	9.570	107	506645	7.543
82) Safrole	(2)	9.663	162	384175	7.440
83) 2-Methylnaphthalene	(2)	9.768	142	1042651	7.654
84) 1-Methylnaphthalene	(2)	9.920	142	992024	7.685
85) Hexachlorocyclopentadiene	(3)	10.036	237	242406	7.133
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.042	216	418052	7.352
88) cis-Isosafrole	(3)	10.129	162	68260	1.316
90) 2,4,6-Trichlorophenol	(3)	10.234	196	269990	7.504
92) 2,4,5-Trichlorophenol	(3)	10.281	196	287597	7.616
93)$2-Fluorobiphenyl	(3)	10.380	172	2153236	15.118
99) Diphenyl ether	(3)	10.380	170	487645	7.571
94) trans-Isosafrole	(3)	10.491	162	348832	6.167
95) 1,1'-Biphenyl	(3)	10.532	154	1177816	7.654
96) 2-Chloronaphthalene	(3)	10.537	162	948243	7.579
98) 1-Chloronaphthalene	(3)	10.572	162	839016	7.551
100) 2-Nitroaniline	(3)	10.718	138	304041	7.600
104) 1,4-Naphthoquinone	(3)	10.829	158	342481	7.403
105) 1,4-Dinitrobenzene	(3)	10.957	168	158010	7.275
106) Dimethylphthalate	(3)	11.062	163	968498	7.499
107) 1,3-Dinitrobenzene	(3)	11.074	168	180681	7.507
108) 2,6-Dinitrotoluene	(3)	11.132	165	229278	7.675
109) Acenaphthylene	(3)	11.190	152	1326597	7.801
112) 3-Nitroaniline	(3)	11.383	138	262632	7.625
113)*Acenaphthene-d10	(3)	11.423	164	428449	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.476	153	945534	7.571
115) 2,4-Dinitrophenol	(3)	11.546	184	180123	8.687
116) 4-Nitrophenol	(3)	11.662	109	188113	7.157
117) Pentachlorobenzene	(3)	11.680	250	330410	7.360
119) Dibenzofuran	(3)	11.732	168	1301322	7.510
118) 2,4-Dinitrotoluene	(3)	11.744	165	303128	7.460
121) 1-Naphthylamine	(3)	11.843	143	937458	7.145
122) 2,3,4,6-Tetrachlorophenol	(3)	11.919	232	211238	7.287
123) 2-Naphthylamine	(3)	11.954	143	931911	7.028
124) Diethylphthalate	(3)	12.117	149	922950	7.060
126) Fluorene	(3)	12.193	166	1017526	7.751
125) Thionazin	(3)	12.210	107	203223	7.150
128) 5-Nitro-o-toluidine	(3)	12.222	152	300463	7.513
127) 4-Chlorophenyl-phenylether	(3)	12.228	204	471809	7.479
129) 4-Nitroaniline	(3)	12.233	138	294431	7.788
130) 4,6-Dinitro-2-methylphenol	(4)	12.274	198	172580	7.043
131) N-Nitrosodiphenylamine	(4)	12.373	169	826270	7.676
132) NDPA as diphenylamine	(4)	12.373	169	826270	7.676
134) 1,2-Diphenylhydrazine	(4)	12.414	77	1379479	7.834
135)$2,4,6-Tribromophenol	(3)	12.490	330	207271	14.691
137) Tetraethyldithiopyrophosphate	(4)	12.601	97	186726	7.198
139) 1,3,5-Trinitrobenzene	(4)	12.700	213	108494	6.889
140) Diallate (peak 1)	(4)	12.735	86	501066	6.064
141) Phorate	(4)	12.741	75	766655	7.544
142) Phenacetin	(4)	12.758	108	571058	7.224
143) 4-Bromophenyl-phenylether	(4)	12.811	248	236677	7.554
144) Diallate (peak 2)	(4)	12.834	86	81107	1.257
145) Hexachlorobenzene	(4)	12.857	284	238106	7.333
147) Dimethoate	(4)	12.927	87	494668	7.365
148) Atrazine	(4)	13.038	200	233837	7.342
149) Pentachlorophenol	(4)	13.102	266	160234	7.363
150) 4-Aminobiphenyl	(4)	13.119	169	714293	7.732
151) Pentachloronitrobenzene	(4)	13.125	237	110878	7.332
152) Pronamide	(4)	13.224	173	412050	7.305
153)*Phenanthrene-d10	(4)	13.329	188	781417	5.000
154) Dinoseb	(4)	13.358	211	233758	6.618
155) Phenanthrene	(4)	13.358	178	1400253	7.448
157) Anthracene	(4)	13.423	178	1423082	7.778
163) Carbazole	(4)	13.638	167	1383758	7.727
164) Methyl parathion	(4)	13.842	109	370584	7.280

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.157	149	1610900	7.225
168) 4-Nitroquinoline-1-oxide	(4)	14.378	190	130984	6.527
167) Parathion	(4)	14.378	109	234704	7.262
169) Octachlorostyrene	(4)	14.716	308	88036	6.953
171) Isodrin	(4)	14.751	193	160024	7.549
173) Fluoranthene	(4)	14.973	202	1556490	7.910
222) Total PAHs	(6)			23446672	146.339
174) Benzidine	(5)	15.200	184	3367820	21.822
175)*Pyrene-d10	(5)	15.276	212	770980	5.000
177) Pyrene	(5)	15.305	202	1668527	7.534
179)$Terphenyl-d14	(5)	15.597	244	1875162	14.886
182) p-Dimethylaminoazobenzene	(5)	15.824	225	249904	7.122
185) Chlorobenzilate	(5)	15.917	139	502941	7.245
187) 3,3'-Dimethylbenzidine	(5)	16.372	212	957084	7.229
188) Butylbenzylphthalate	(5)	16.442	149	785570	7.066
191) 2-Acetylaminofluorene	(5)	16.786	181	547483	6.104
193) 3,3'-Dichlorobenzidine	(5)	17.287	252	538327	7.092
195) Benzo(a)anthracene	(5)	17.287	228	1391485	7.727
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.310	231	292494	6.756
196) Chrysene	(5)	17.351	228	1472115	7.776
199) bis(2-Ethylhexyl)phthalate	(5)	17.508	149	1018471	6.536
203) 6-Methylchrysene	(5)	18.150	242	921787	6.971
205) Di-n-octylphthalate	(6)	18.668	149	1691008	7.060
206) Benzo(b)fluoranthene	(6)	19.129	252	1355093	8.034
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.135	256	616296	7.450
208) Benzo(k)fluoranthene	(6)	19.175	252	1424432	8.122
211) Benzo(a)pyrene	(6)	19.648	252	1243260	8.042
213)*Perylene-d12	(6)	19.741	264	705290	5.000
215) 3-Methylcholanthrene	(6)	20.225	268	567763	7.566
217) Dibenz(a,h)acridine	(6)	21.029	279	896043	7.141
218) Dibenz(a,j)acridine	(6)	21.105	279	1046559	7.635
219) Indeno(1,2,3-cd)pyrene	(6)	21.338	276	1069593M	7.743
220) Dibenz(a,h)anthracene	(6)	21.379	278	1220689	7.966
221) Benzo(g,h,i)perylene	(6)	21.699	276	1217558	7.935

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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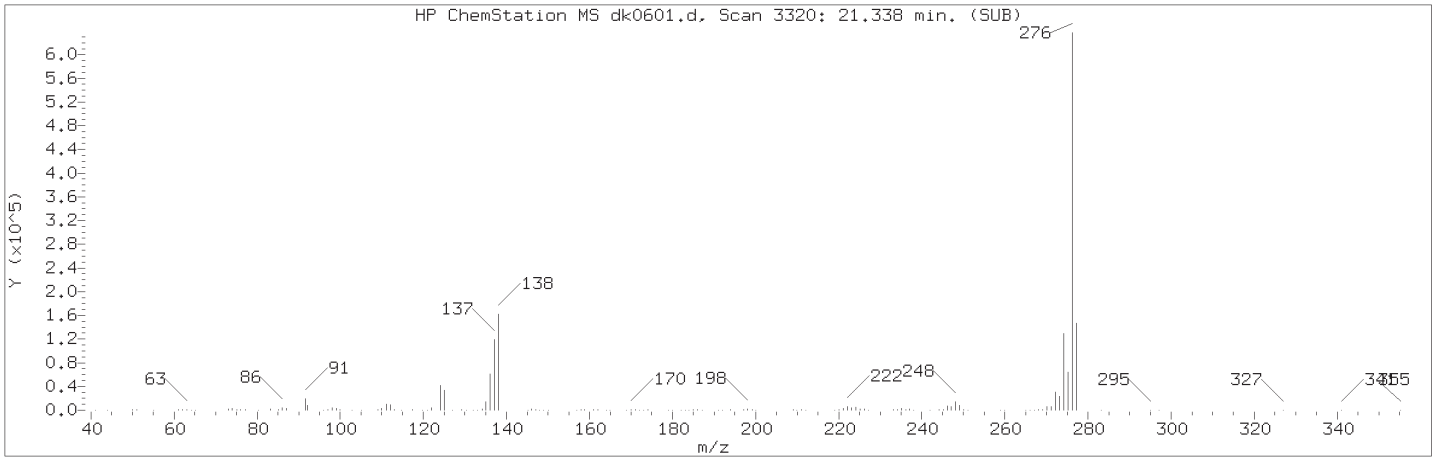
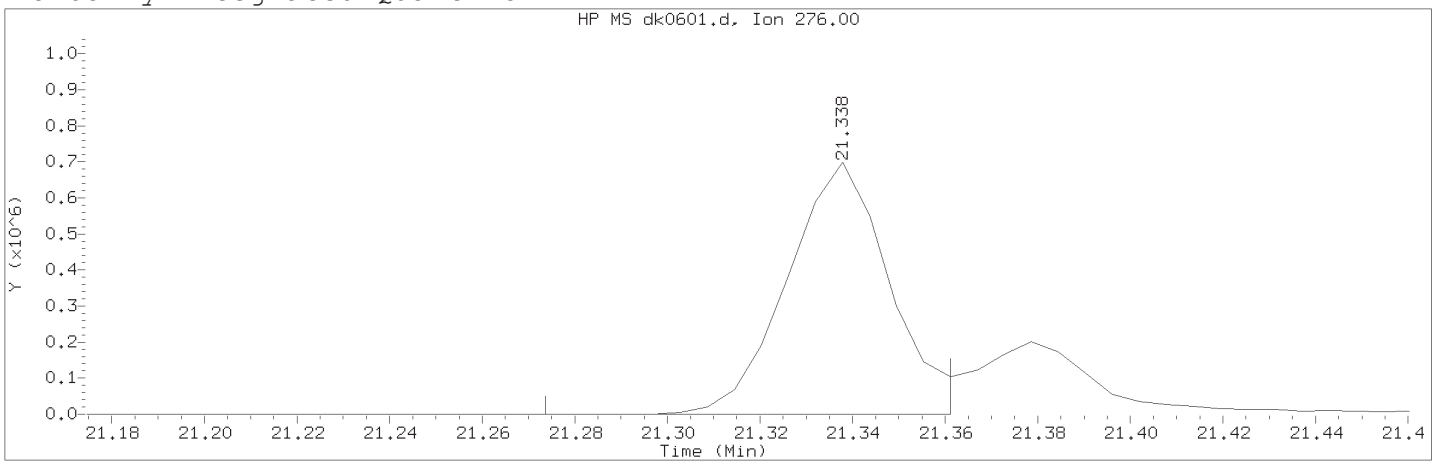
on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:20
Date, time and analyst ID of latest file update: 07-Nov-2018 20:20 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

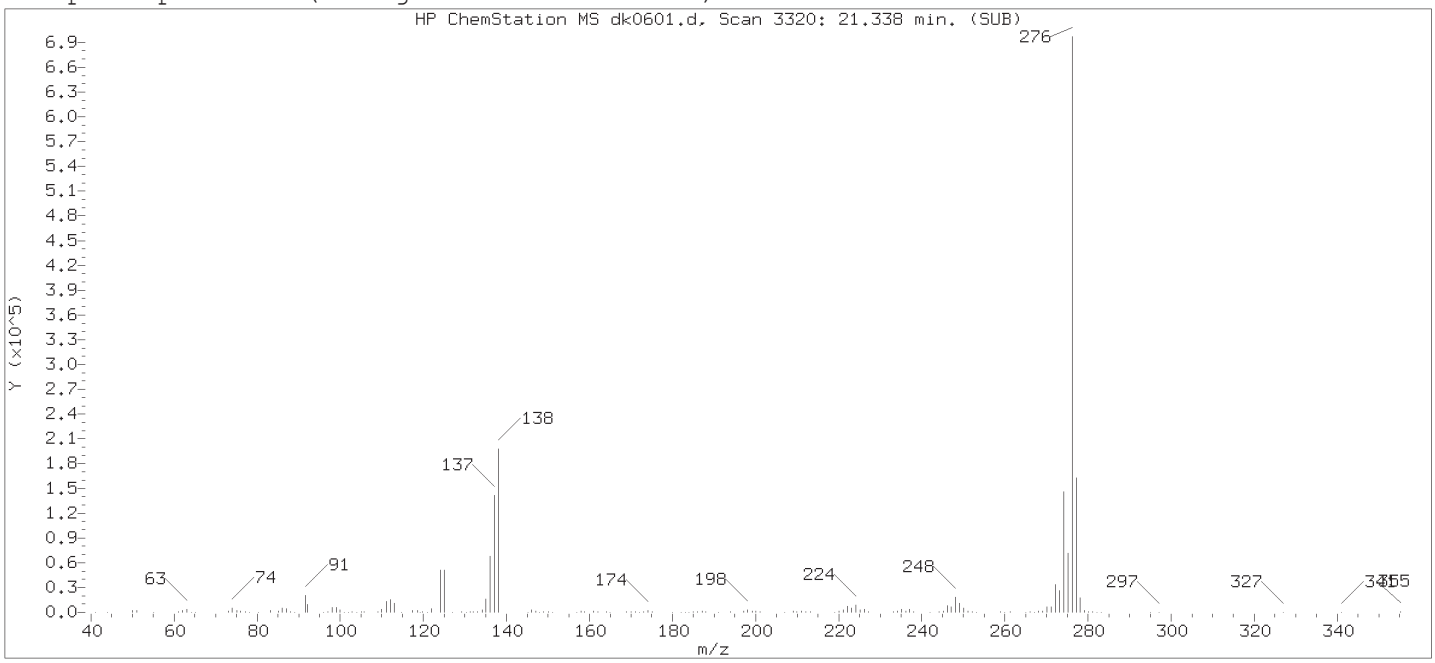
Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3320		
Retention Time (minutes)	: 21.338		
Quant Ion	: 276.00		
Area (flag)	: 1069593M		
On-Column Amount (ng/ul)	: 7.7431		
Integration start scan	: 3308	Integration stop scan:	3323
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

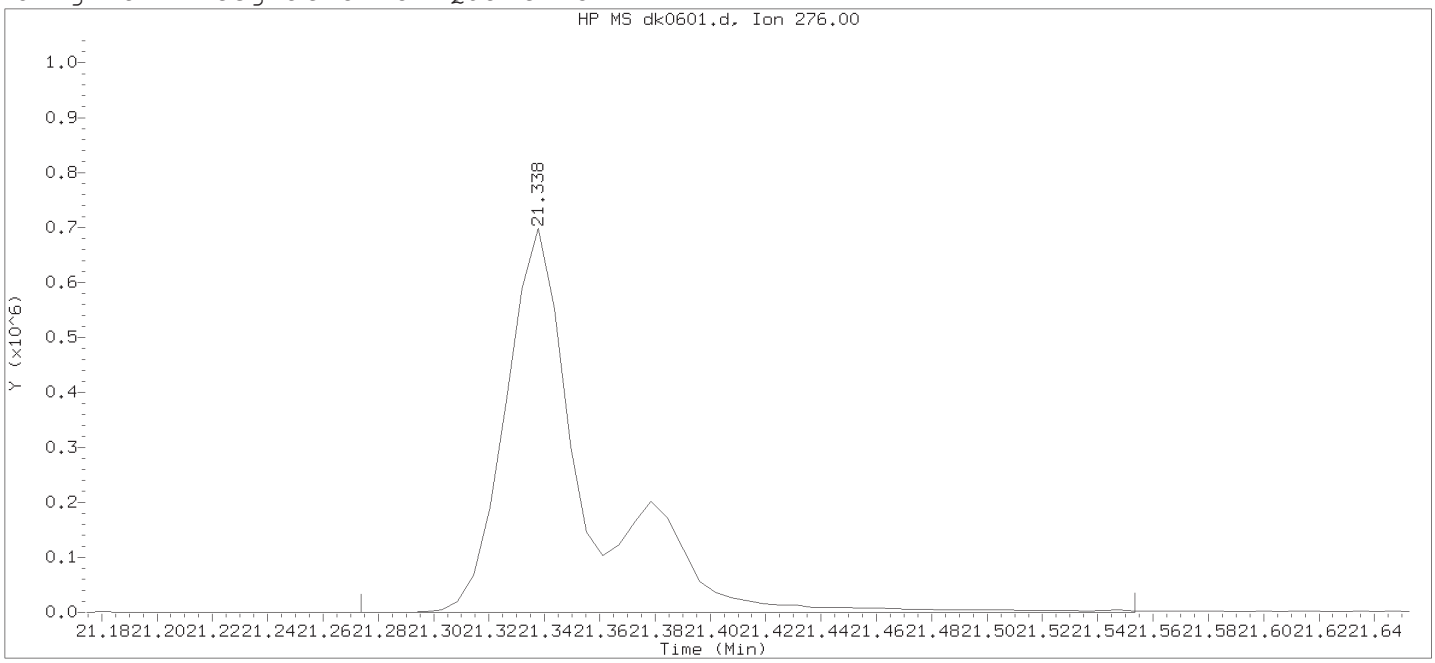
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 20:21.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Chad A. Moline on 11/08/2018 at 09:49.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



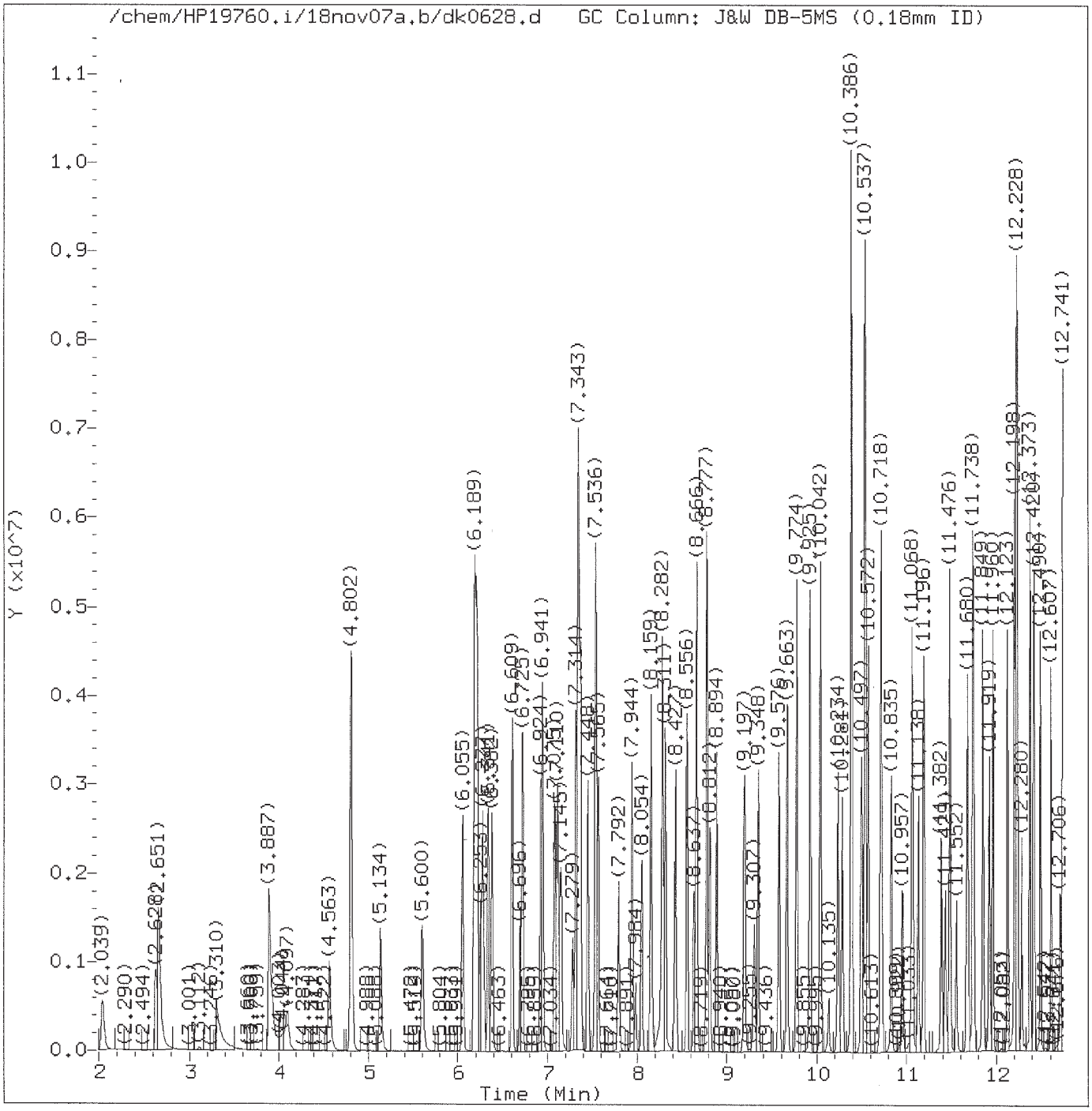
Data File: /chem/HP19760.i/18nov07a.b/dk0601.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 19:40 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: all1
Calibration date and time: 07-NOV-2018 20:19
Date, time and analyst ID of latest file update: 07-Nov-2018 20:19 art12405

Sample Name: SSTD7.5 Lab Sample ID: RVSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3320		
Retention Time (minutes)	: 21.338		
Quant Ion	: 276.00		
Area	: 1439963		
On-column Amount (ng/ul)	: 10.4244		
Integration start scan	: 3308	Integration stop scan:	3356
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 11/07/2018 at 20:21.
Target 3.5 esignature user id: art12405



Total Ion Chromatogram (TIC)

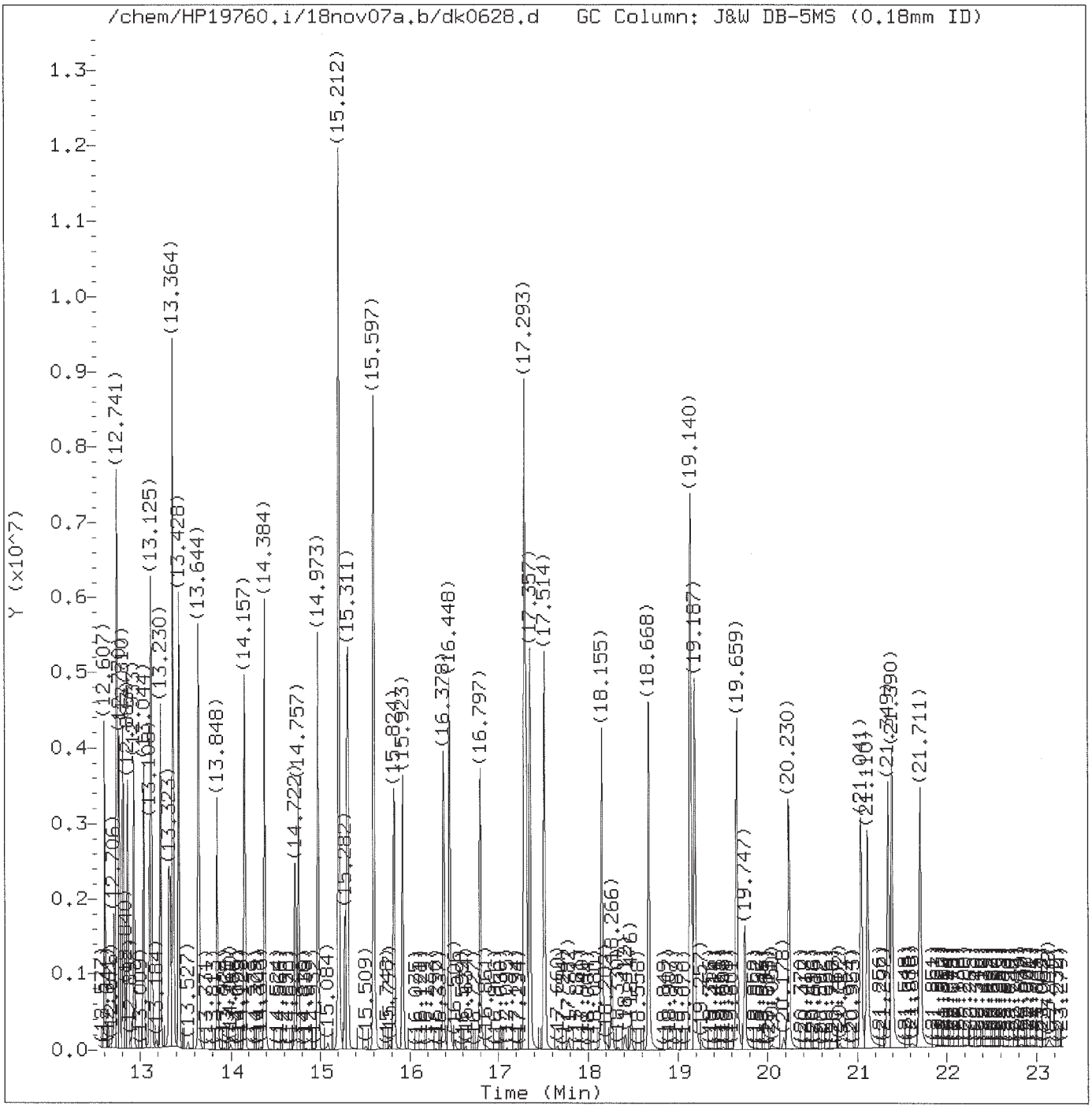
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0628.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 04:06 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:43 em10340

Sample Name: SECC12.5 Lab Sample ID: RV2648

Digitally signed by Edward Monborne
on 11/08/2018 at 08:43.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0628.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 04:06 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:43 em10340

Sample Name: SECC12.5 Lab Sample ID: RV2648

Digitally signed by Edward Monborne
on 11/08/2018 at 08:43.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0628.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 04:06 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:43 em10340

Sample Name: SECC12.5 Lab Sample ID: RV2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.657	79	1431332	12.120
11)$2-Fluorophenol	(1)	4.802	112	2224764	25.378
17)$Phenol-d6	(1)	6.189	99	3067183	25.311
18) Phenol	(1)	6.207	94	1749375	12.397
19) Aniline	(1)	6.218	93	2049236	12.344
23) 2-Chlorophenol	(1)	6.382	128	1050660	12.677
24) 1,3-Dichlorobenzene	(1)	6.609	146	1107001	12.573
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	273394	5.000
26) 1,4-Dichlorobenzene	(1)	6.725	146	1119508	12.723
27) Benzyl alcohol	(1)	6.918	108	708407	12.139
28) 1,2-Dichlorobenzene	(1)	6.941	146	1043092	12.459
31) 2-Methylphenol	(1)	7.110	108	1078481	12.724
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.145	45	1508335	12.490
38) N-Nitroso-di-n-propylamine	(1)	7.337	70	931974	12.501
37) 4-Methylphenol	(1)	7.343	108	1200482	12.476
43) Hexachloroethane	(1)	7.448	117	505651	12.287
44)$Nitrobenzene-d5	(2)	7.536	82	2721219	25.409
45) Nitrobenzene	(2)	7.565	77	1358765	12.556
50) Isophorone	(2)	7.944	82	2324321	12.741
51) 2-Nitrophenol	(2)	8.054	139	520969	12.746
53) 2,4-Dimethylphenol	(2)	8.159	107	1128115	12.808
55) bis(2-Chloroethoxy)methane	(2)	8.311	93	1436661	12.498
60) 2,4-Dichlorophenol	(2)	8.427	162	763122	12.866
62) 1,2,4-Trichlorobenzene	(2)	8.556	180	812450	12.514
65)*Naphthalene-d8	(2)	8.637	136	992637	5.000
67) 4-Chloroaniline	(2)	8.777	127	1121796	12.520
71) Hexachlorobutadiene	(2)	8.894	225	438065	12.520
80) 4-Chloro-3-methylphenol	(2)	9.576	107	891665	12.694
83) 2-Methylnaphthalene	(2)	9.774	142	1803273	12.657
85) Hexachlorocyclopentadiene	(3)	10.036	237	447119	12.833
90) 2,4,6-Trichlorophenol	(3)	10.234	196	481824	13.063
92) 2,4,5-Trichlorophenol	(3)	10.281	196	501528	12.956
93)$2-Fluorobiphenyl	(3)	10.386	172	3684382	25.234
96) 2-Chloronaphthalene	(3)	10.543	162	1708602	13.321
100) 2-Nitroaniline	(3)	10.724	138	551583	13.450
106) Dimethylphthalate	(3)	11.068	163	1575339	11.899
108) 2,6-Dinitrotoluene	(3)	11.138	165	386237	12.612
112) 3-Nitroaniline	(3)	11.388	138	458283	12.979
113)*Acenaphthene-d10	(3)	11.429	164	439237	5.000
115) 2,4-Dinitrophenol	(3)	11.552	184	250160	11.768

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:43.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0628.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 04:06 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:43 em10340

Sample Name: SECC12.5 Lab Sample ID: RV2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	11.674	109	332887	12.354
119) Dibenzofuran	(3)	11.738	168	2216822	12.480
118) 2,4-Dinitrotoluene	(3)	11.750	165	499452	11.990
124) Diethylphthalate	(3)	12.123	149	1599762	11.937
127) 4-Chlorophenyl-phenylether	(3)	12.228	204	804238	12.435
129) 4-Nitroaniline	(3)	12.239	138	484837	12.509
130) 4,6-Dinitro-2-methylphenol	(4)	12.280	198	297820	12.186
131) N-Nitrosodiphenylamine	(4)	12.373	169	1411554	13.148
135)$2,4,6-Tribromophenol	(3)	12.490	330	357780	24.736
143) 4-Bromophenyl-phenylether	(4)	12.810	248	408180	13.063
149) Pentachlorophenol	(4)	13.108	266	294127	13.551
153)*Phenanthrene-d10	(4)	13.335	188	779368	5.000
163) Carbazole	(4)	13.644	167	2306463	12.914
175)*Pyrene-d10	(5)	15.282	212	773053	5.000
179)$Terphenyl-d14	(5)	15.597	244	3104540	24.580
193) 3,3'-Dichlorobenzidine	(5)	17.293	252	974530	12.803
205) Di-n-octylphthalate	(6)	18.674	149	3226427	12.298
213)*Perylene-d12	(6)	19.747	264	772494	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:43.
Target 3.5 esignature user ID: em10340

Raw QC Data

Semivolatiles by GC/MS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0608.d Injection date and time: **07-NOV-2018 23:25**
Data file Sample Info. Line: SBLKWM305;SBLKWM305;1;3;BLANK;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.696(0.000)	808	152	228682 (-11)	5.00	
65) Naphthalene-d8	8.631(0.000)	1140	136	849802 (-10)	5.00	
113) Acenaphthene-d10	11.423(0.000)	1619	164	381575 (-11)	5.00	
153) Phenanthrene-d10	13.329(0.000)	1946	188	664497 (-15)	5.00	
175) Pyrene-d10	15.282(-0.006)	2281	212	592874 (-23)	5.00	
213) Perylene-d12	19.741(0.000)	3046	264	534350 (-24)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.796(0.000)	112	1715004	23.388	47%
17) Phenol-d6	(1)	6.178(0.000)	99	1790386	17.663	35%
44) Nitrobenzene-d5	(2)	7.530(0.000)	82	1613043	17.593	70%
93) 2-Fluorobiphenyl	(3)	10.380(0.000)	172	2335776	18.415	74%
135) 2,4,6-Tribromophenol	(3)	12.490(0.000)	330	403043	32.076	64%
179) Terphenyl-d14	(5)	15.597(0.000)	244	2006727	20.716	83%

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					0.5
18) Phenol	(1)			Not Detected					0.1
19) Aniline	(1)			Not Detected					0.8
23) 2-Chlorophenol	(1)			Not Detected					0.1
24) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
26) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
27) Benzyl alcohol	(1)			Not Detected					3
28) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
31) 2-Methylphenol	(1)			Not Detected					0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
37) 4-Methylphenol	(1)			Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
43) Hexachloroethane	(1)			Not Detected					0.3
45) Nitrobenzene	(2)			Not Detected					0.1
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.8
53) 2,4-Dimethylphenol	(2)			Not Detected					0.8
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
62) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
67) 4-Chloroaniline	(2)			Not Detected					1
71) Hexachlorobutadiene	(2)			Not Detected					0.1
80) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
83) 2-Methylnaphthalene	(2)			Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)			Not Detected					1
90) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1

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Data file: /chem/HP19760.i/18nov07a.b/dk0608.d Injection date and time: **07-NOV-2018 23:25**
Data file Sample Info. Line: SBLKWM305;SBLKWM305;1;3;BLANK;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.5
106) Dimethylphthalate	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
112) 3-Nitroaniline	(3)				Not Detected					0.8
115) 2,4-Dinitrophenol	(3)				Not Detected					4
116) 4-Nitrophenol	(3)				Not Detected					3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
124) Diethylphthalate	(3)				Not Detected					0.5
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					2
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.2
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
149) Pentachlorophenol	(4)				Not Detected					0.3
163) Carbazole	(4)				Not Detected					0.1
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.8
205) Di-n-octylphthalate	(6)				Not Detected					1

Total number of targets = 46

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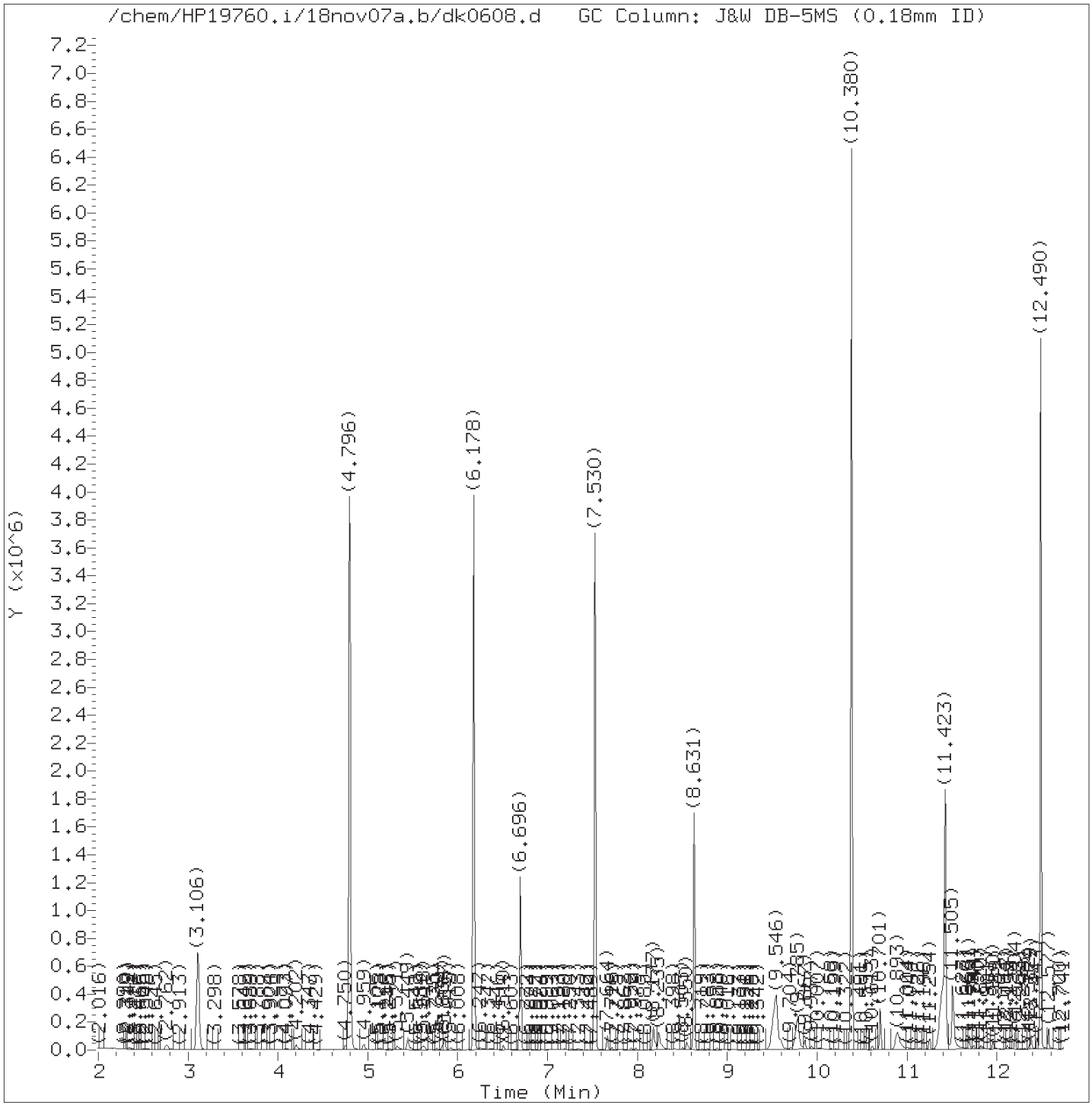
Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0608.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:25 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: SBLKWM305 Lab Sample ID: SBLKWM305

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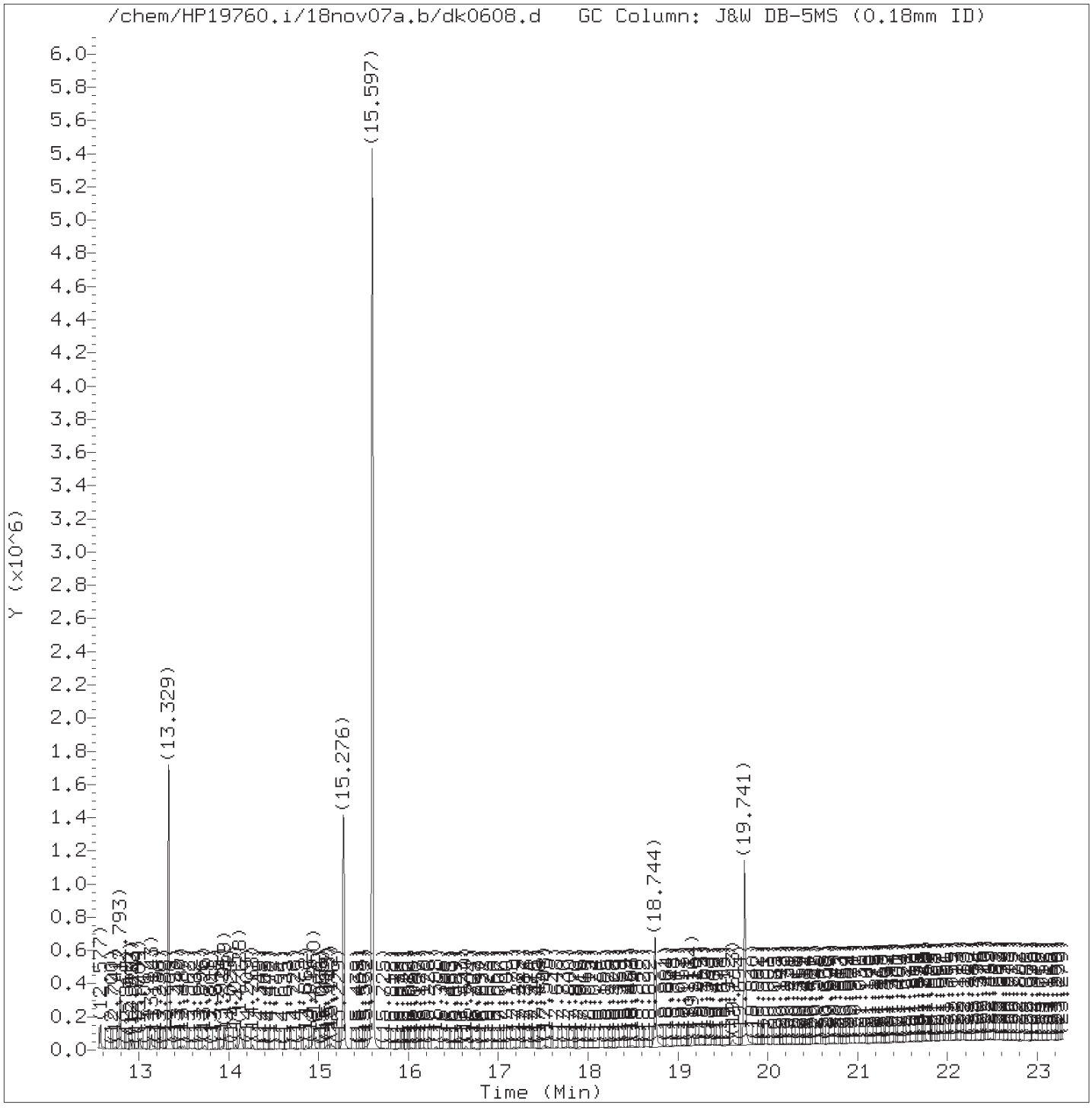
on 11/08/2018 at 08:32.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0608.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:25 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: SBLKWM305 Lab Sample ID: SBLKWM305

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on 11/08/2018 at 08:32.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0608.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:25 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: SBLKWM305 Lab Sample ID: SBLKWM305

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.796	112	1715004	23.388
17)$Phenol-d6	(1)	6.178	99	1790386	17.663
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	228682	5.000
44)$Nitrobenzene-d5	(2)	7.530	82	1613043	17.593
65)*Naphthalene-d8	(2)	8.631	136	849802	5.000
93)$2-Fluorobiphenyl	(3)	10.380	172	2335776	18.415
113)*Acenaphthene-d10	(3)	11.423	164	381575	5.000
135)$2,4,6-Tribromophenol	(3)	12.490	330	403043	32.076
153)*Phenanthrene-d10	(4)	13.329	188	664497	5.000
175)*Pyrene-d10	(5)	15.282	212	592874	5.000
179)$Terphenyl-d14	(5)	15.597	244	2006727	20.716
213)*Perylene-d12	(6)	19.741	264	534350	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:32.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0615.d
Data file Sample Info. Line: 14T04MS;9876335;1;3;MS;;DOD26;
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Injection date and time: **08-NOV-2018 02:42**
Instrument ID: **HP19760.i** Batch: **18305WAM**

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.696	(0.000)	808	152	221820	(-14)	5.00	
65) Naphthalene-d8	8.632	(0.000)	1140	136	841730	(-11)	5.00	
113) Acenaphthene-d10	11.429	(-0.006)	1620	164	372495	(-13)	5.00	
153) Phenanthrene-d10	13.335	(-0.006)	1947	188	628769	(-20)	5.00	
175) Pyrene-d10	15.276	(0.000)	2280	212	607181	(-21)	5.00	
213) Perylene-d12	19.747	(-0.006)	3047	264	613744	(-13)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.808	(-0.002)	112	898059	12.626	25%		19 - 119
17) Phenol-d6	(1)	6.184	(-0.001)	99	1279265	13.011	26%		10 - 72
44) Nitrobenzene-d5	(2)	7.530	(0.000)	82	1825608	20.102	80%		44 - 120
93) 2-Fluorobiphenyl	(3)	10.386	(0.000)	172	2584756	20.874	83%		44 - 119
135) 2,4,6-Tribromophenol	(3)	12.490	(0.001)	330	403746	32.915	66%		43 - 140
179) Terphenyl-d14	(5)	15.597	(0.000)	244	1942128	19.577	78%		50 - 134

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)	2.686	(-0.005)	79	467830	4.883	19.77			0.5
18) Phenol	(1)	6.201	(-0.000)	94	431927	3.773	15.27			0.1
19) Aniline	(1)	6.218	(-0.000)	93	777266	5.771	23.36			0.8
23) 2-Chlorophenol	(1)	6.382	(-0.000)	128	421618	6.270	25.38			0.1
24) 1,3-Dichlorobenzene	(1)	6.609	(-0.000)	146	680568	9.527	38.57			0.1
26) 1,4-Dichlorobenzene	(1)	6.726	(-0.000)	146	708073	9.918	40.16			0.1
27) Benzyl alcohol	(1)	6.918	(0.000)	108	490460	10.358	41.94			3
28) 1,2-Dichlorobenzene	(1)	6.941	(0.000)	146	672259	9.897	40.07			0.1
31) 2-Methylphenol	(1)	7.099	(0.000)	108	576441	8.382	33.94			0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.151	(-0.000)	45	988659	10.090	40.85			0.1
37) 4-Methylphenol	(1)	7.338	(0.000)	108	579421	7.422	30.05			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.332	(0.000)	70	672410	11.117	45.01			0.2
43) Hexachloroethane	(1)	7.448	(-0.000)	117	315177	9.439	38.21			0.3
45) Nitrobenzene	(2)	7.559	(-0.000)	77	942677	10.273	41.59			0.1
50) Isophorone	(2)	7.938	(-0.000)	82	1696627	10.968	44.40			0.1
51) 2-Nitrophenol	(2)	8.049	(-0.000)	139	351342	10.137	41.04			0.8
53) 2,4-Dimethylphenol	(2)	8.154	(-0.000)	107	607021	8.127	32.90			0.8
55) bis(2-Chloroethoxy)methane	(2)	8.311	(-0.000)	93	1031243	10.579	42.83			0.1
60) 2,4-Dichlorophenol	(2)	8.422	(-0.000)	162	344187	6.843	27.70			0.1
62) 1,2,4-Trichlorobenzene	(2)	8.556	(-0.000)	180	546275	9.923	40.17			0.1
67) 4-Chloroaniline	(2)	8.771	(0.000)	127	600196	7.899	31.98			1
71) Hexachlorobutadiene	(2)	8.894	(-0.000)	225	283958	9.570	38.75			0.1
80) 4-Chloro-3-methylphenol	(2)	9.570	(0.000)	107	554913	9.316	37.72			0.1
83) 2-Methylnaphthalene	(2)	9.768	(0.000)	142	1258409	10.416	42.17			0.03
85) Hexachlorocyclopentadiene	(3)	10.036	(0.000)	237	482905	16.343	66.17			1
90) 2,4,6-Trichlorophenol	(3)	10.234	(0.000)	196	266524	8.521	34.50			0.1
92) 2,4,5-Trichlorophenol	(3)	10.275	(0.000)	196	284906	8.678	35.14			0.1

Digitally signed by Edward Monborne on 11/08/2018 at 08:46. Target 3.5 esignature user ID: em10340

Data file: /chem/HP19760.i/18nov07a.b/dk0615.d Injection date and time: **08-NOV-2018 02:42**
Data file Sample Info. Line: 14T04MS;9876335;1;3;MS;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

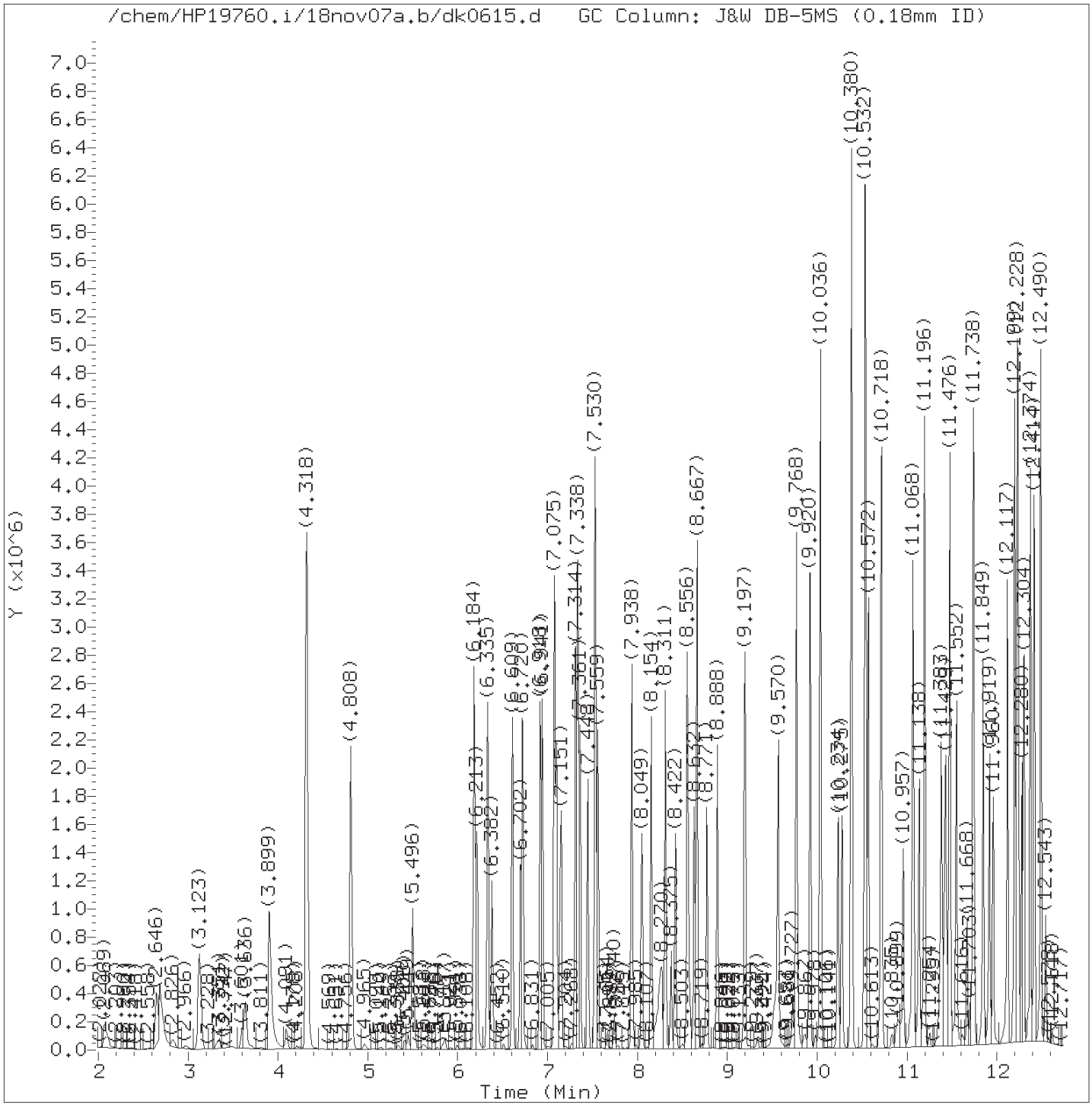
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
96) 2-Chloronaphthalene	(3)	10.538(0.000)	162	1172981	10.784	43.66			0.1
100) 2-Nitroaniline	(3)	10.724(-0.000)	138	413319	11.884	48.11			0.5
106) Dimethylphthalate	(3)	11.062(0.000)	163	1234564	10.995	44.52			0.5
108) 2,6-Dinitrotoluene	(3)	11.138(-0.000)	165	293174	11.288	45.70			0.1
112) 3-Nitroaniline	(3)	11.383(0.000)	138	286199	9.558	38.70			0.8
115) 2,4-Dinitrophenol	(3)	11.552(0.000)	184	374742	20.787	84.16			4
116) 4-Nitrophenol	(3)	11.668(0.000)	109	120362	5.267	21.33		J	3
118) 2,4-Dinitrotoluene	(3)	11.750(0.000)	165	355137	10.053	40.70			0.3
119) Dibenzofuran	(3)	11.738(0.000)	168	1689920	11.218	45.42			0.1
124) Diethylphthalate	(3)	12.117(0.000)	149	1129966	9.943	40.25			0.5
127) 4-Chlorophenyl-phenylether	(3)	12.228(0.000)	204	596582	10.877	44.04			0.1
129) 4-Nitroaniline	(3)	12.234(0.000)	138	304763	9.272	37.54			0.2
130) 4,6-Dinitro-2-methylphenol	(4)	12.280(-0.000)	198	220979	11.208	45.37			2
131) N-Nitrosodiphenylamine	(4)	12.374(0.000)	169	971350	11.215	45.40			0.2
143) 4-Bromophenyl-phenylether	(4)	12.811(0.000)	248	299043	11.862	48.03			0.1
149) Pentachlorophenol	(4)	13.108(-0.000)	266	216956	12.390	50.16			0.3
163) Carbazole	(4)	13.644(0.000)	167	1723302	11.960	48.42			0.1
193) 3,3'-Dichlorobenzidine	(5)	17.293(-0.000)	252	410265	6.862	27.78			0.8
205) Di-n-octylphthalate	(6)	18.668(0.000)	149	2264285	10.863	43.98			1

Total number of targets = 46

Digitally signed by Edward Monborne on 11/08/2018 at 08:46. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

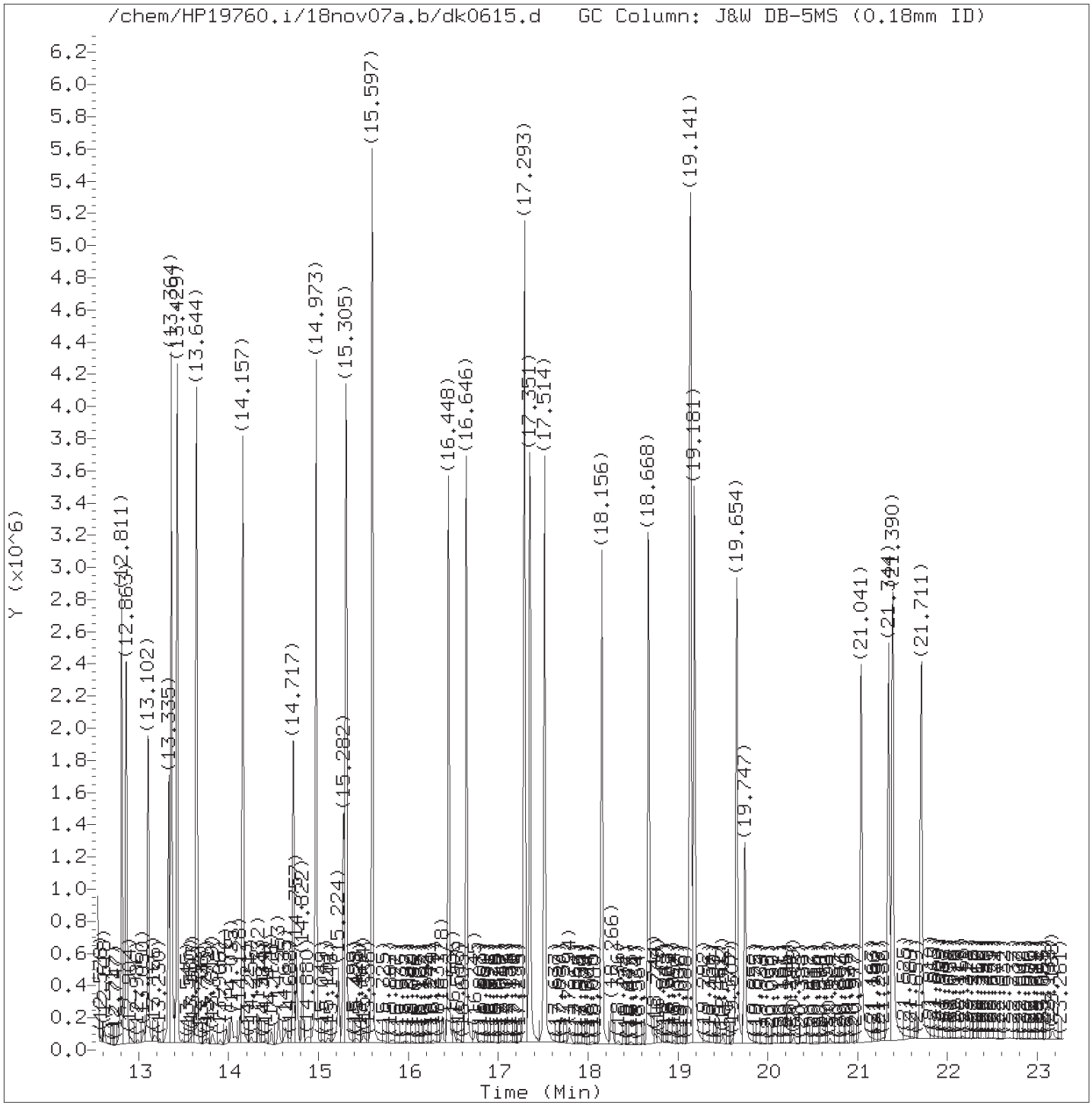
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0615.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MS Lab Sample ID: 9876335

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0615.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MS Lab Sample ID: 9876335

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0615.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MS Lab Sample ID: 9876335

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.686	79	467830	4.883
11)$2-Fluorophenol	(1)	4.808	112	898059	12.626
17)$Phenol-d6	(1)	6.184	99	1279265	13.011
18) Phenol	(1)	6.201	94	431927	3.773
19) Aniline	(1)	6.219	93	777266	5.771
23) 2-Chlorophenol	(1)	6.382	128	421618	6.270
24) 1,3-Dichlorobenzene	(1)	6.609	146	680568	9.527
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	221820	5.000
26) 1,4-Dichlorobenzene	(1)	6.726	146	708073	9.918
27) Benzyl alcohol	(1)	6.918	108	490460	10.358
28) 1,2-Dichlorobenzene	(1)	6.941	146	672259	9.897
31) 2-Methylphenol	(1)	7.099	108	576441	8.382
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.151	45	988659	10.090
38) N-Nitroso-di-n-propylamine	(1)	7.332	70	672410	11.117
37) 4-Methylphenol	(1)	7.338	108	579421	7.422
43) Hexachloroethane	(1)	7.448	117	315177	9.439
44)$Nitrobenzene-d5	(2)	7.530	82	1825608	20.102
45) Nitrobenzene	(2)	7.559	77	942677	10.273
50) Isophorone	(2)	7.938	82	1696627	10.968
51) 2-Nitrophenol	(2)	8.049	139	351342	10.137
53) 2,4-Dimethylphenol	(2)	8.154	107	607021	8.127
55) bis(2-Chloroethoxy)methane	(2)	8.311	93	1031243	10.579
60) 2,4-Dichlorophenol	(2)	8.422	162	344187	6.843
62) 1,2,4-Trichlorobenzene	(2)	8.556	180	546275	9.923
65)*Naphthalene-d8	(2)	8.632	136	841730	5.000
67) 4-Chloroaniline	(2)	8.771	127	600196	7.899
71) Hexachlorobutadiene	(2)	8.894	225	283958	9.570
80) 4-Chloro-3-methylphenol	(2)	9.570	107	554913	9.316
83) 2-Methylnaphthalene	(2)	9.768	142	1258409	10.416
85) Hexachlorocyclopentadiene	(3)	10.036	237	482905	16.343
90) 2,4,6-Trichlorophenol	(3)	10.234	196	266524	8.521
92) 2,4,5-Trichlorophenol	(3)	10.275	196	284906	8.678
93)$2-Fluorobiphenyl	(3)	10.386	172	2584756	20.874
96) 2-Chloronaphthalene	(3)	10.538	162	1172981	10.784
100) 2-Nitroaniline	(3)	10.724	138	413319	11.884
106) Dimethylphthalate	(3)	11.062	163	1234564	10.995
108) 2,6-Dinitrotoluene	(3)	11.138	165	293174	11.288
112) 3-Nitroaniline	(3)	11.383	138	286199	9.558
113)*Acenaphthene-d10	(3)	11.429	164	372495	5.000
115) 2,4-Dinitrophenol	(3)	11.552	184	374742	20.787

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0615.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 02:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MS Lab Sample ID: 9876335

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	11.668	109	120362	5.267
119) Dibenzofuran	(3)	11.738	168	1689920	11.218
118) 2,4-Dinitrotoluene	(3)	11.750	165	355137	10.053
124) Diethylphthalate	(3)	12.117	149	1129966	9.943
127) 4-Chlorophenyl-phenylether	(3)	12.228	204	596582	10.877
129) 4-Nitroaniline	(3)	12.234	138	304763	9.272
130) 4,6-Dinitro-2-methylphenol	(4)	12.280	198	220979	11.208
131) N-Nitrosodiphenylamine	(4)	12.374	169	971350	11.215
135)$2,4,6-Tribromophenol	(3)	12.490	330	403746	32.915
143) 4-Bromophenyl-phenylether	(4)	12.811	248	299043	11.862
149) Pentachlorophenol	(4)	13.108	266	216956	12.390
153)*Phenanthrene-d10	(4)	13.335	188	628769	5.000
163) Carbazole	(4)	13.644	167	1723302	11.960
175)*Pyrene-d10	(5)	15.276	212	607181	5.000
179)$Terphenyl-d14	(5)	15.597	244	1942128	19.577
193) 3,3'-Dichlorobenzidine	(5)	17.293	252	410265	6.862
205) Di-n-octylphthalate	(6)	18.668	149	2264285	10.863
213)*Perylene-d12	(6)	19.747	264	613744	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/08/2018 at 08:46.
Target 3.5 esignature user ID: em10340

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0616.d
Data file Sample Info. Line: 14T04MSD;9876336;1;3;MSD;;DOD26;
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Injection date and time: **08-NOV-2018 03:10**
Instrument ID: **HP19760.i** Batch: **18305WAM**

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.696(0.000)	808	152	226739 (-12)	5.00	
65) Naphthalene-d8	8.632(0.000)	1140	136	851239 (-10)	5.00	
113) Acenaphthene-d10	11.429(-0.006)	1620	164	379423 (-11)	5.00	
153) Phenanthrene-d10	13.335(-0.006)	1947	188	664319 (-15)	5.00	
175) Pyrene-d10	15.282(-0.006)	2281	212	651025 (-16)	5.00	
213) Perylene-d12	19.747(-0.006)	3047	264	635790 (-10)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
11) 2-Fluorophenol	(1)	4.808(-0.002)	112	566608	7.793	16%	*	19 - 119
17) Phenol-d6	(1)	6.184(-0.001)	99	790350	7.864	16%		10 - 72
44) Nitrobenzene-d5	(2)	7.530(0.000)	82	1825947	19.881	80%		44 - 120
93) 2-Fluorobiphenyl	(3)	10.386(0.000)	172	2563714	20.326	81%		44 - 119
135) 2,4,6-Tribromophenol	(3)	12.490(0.001)	330	380213	30.431	61%		43 - 140
179) Terphenyl-d14	(5)	15.597(0.000)	244	2136965	20.090	80%		50 - 134

*** = 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 (on-column)
5) Pyridine	(1)	2.686(-0.005)	79	464361	4.741	19.04			0.5
18) Phenol	(1)	6.201(-0.000)	94	282544	2.414	9.70			0.1
19) Aniline	(1)	6.213(-0.000)	93	724689	5.264	21.14			0.8
23) 2-Chlorophenol	(1)	6.382(-0.000)	128	324370	4.719	18.95			0.1
24) 1,3-Dichlorobenzene	(1)	6.609(-0.000)	146	663345	9.084	36.48			0.1
26) 1,4-Dichlorobenzene	(1)	6.726(-0.000)	146	678335	9.296	37.33			0.1
27) Benzyl alcohol	(1)	6.918(-0.000)	108	497833	10.286	41.31			3
28) 1,2-Dichlorobenzene	(1)	6.941(-0.000)	146	653400	9.410	37.79			0.1
31) 2-Methylphenol	(1)	7.099(-0.000)	108	458796	6.527	26.21			0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.151(-0.000)	45	979495	9.780	39.28			0.1
37) 4-Methylphenol	(1)	7.338(0.000)	108	431781	5.410	21.73			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.332(0.000)	70	664066	10.741	43.13			0.2
43) Hexachloroethane	(1)	7.448(-0.000)	117	305098	8.939	35.90			0.3
45) Nitrobenzene	(2)	7.559(-0.000)	77	941193	10.142	40.73			0.1
50) Isophorone	(2)	7.938(0.000)	82	1698683	10.858	43.61			0.1
51) 2-Nitrophenol	(2)	8.049(-0.000)	139	331901	9.469	38.03			0.8
53) 2,4-Dimethylphenol	(2)	8.154(-0.000)	107	566961	7.506	30.15			0.8
55) bis(2-Chloroethoxy)methane	(2)	8.311(0.000)	93	1020935	10.356	41.59			0.1
60) 2,4-Dichlorophenol	(2)	8.422(-0.000)	162	264656	5.203	20.90			0.1
62) 1,2,4-Trichlorobenzene	(2)	8.556(-0.000)	180	532613	9.566	38.42			0.1
67) 4-Chloroaniline	(2)	8.771(0.000)	127	571690	7.440	29.88			1
71) Hexachlorobutadiene	(2)	8.888(0.000)	225	285486	9.514	38.21			0.1
80) 4-Chloro-3-methylphenol	(2)	9.570(0.000)	107	434708	7.217	28.98			0.1
83) 2-Methylnaphthalene	(2)	9.768(0.000)	142	1255958	10.280	41.29			0.03
85) Hexachlorocyclopentadiene	(3)	10.036(0.000)	237	492394	16.360	65.70			1
90) 2,4,6-Trichlorophenol	(3)	10.234(0.000)	196	235482	7.391	29.68			0.1

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Data file: /chem/HP19760.i/18nov07a.b/dk0616.d Injection date and time: **08-NOV-2018 03:10**
Data file Sample Info. Line: 14T04MSD;9876336;1;3;MSD;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

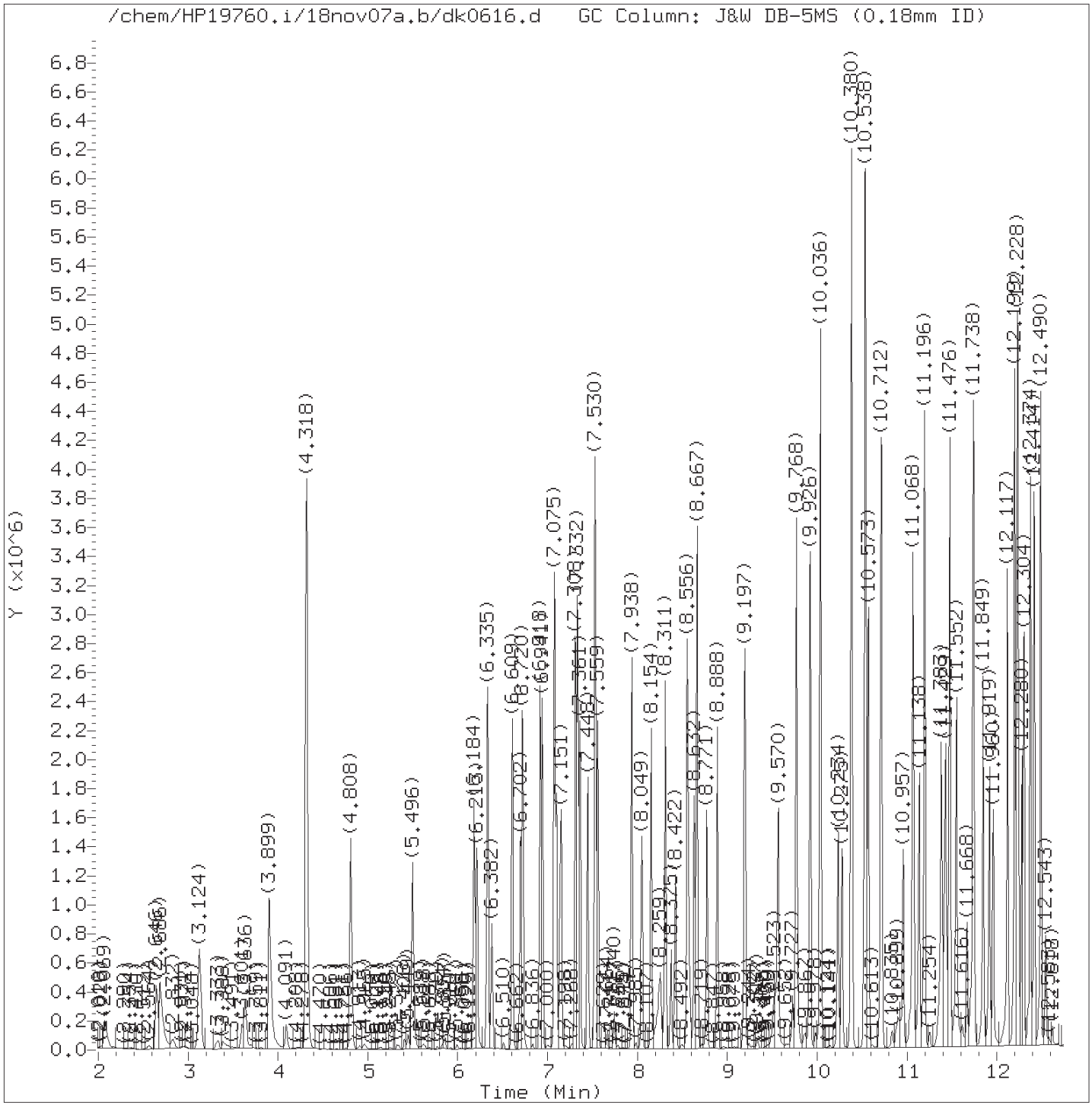
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 0.5 ul

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)	10.275(0.000)	196	247711	7.408	29.75			0.1
96) 2-Chloronaphthalene	(3)	10.538(0.000)	162	1181680	10.666	42.83			0.1
100) 2-Nitroaniline	(3)	10.724(-0.000)	138	415543	11.730	47.11			0.5
106) Dimethylphthalate	(3)	11.062(0.000)	163	1240284	10.845	43.55			0.5
108) 2,6-Dinitrotoluene	(3)	11.138(-0.000)	165	298182	11.271	45.27			0.1
112) 3-Nitroaniline	(3)	11.383(0.000)	138	289194	9.482	38.08			0.8
115) 2,4-Dinitrophenol	(3)	11.552(0.000)	184	352353	19.188	77.06			4
116) 4-Nitrophenol	(3)	11.668(0.000)	109	113109	4.859	19.52		J	3
118) 2,4-Dinitrotoluene	(3)	11.750(0.000)	165	356040	9.895	39.74			0.3
119) Dibenzofuran	(3)	11.738(0.000)	168	1660593	10.822	43.46			0.1
124) Diethylphthalate	(3)	12.117(0.000)	149	1134845	9.803	39.37			0.5
127) 4-Chlorophenyl-phenylether	(3)	12.228(0.000)	204	601191	10.761	43.22			0.1
129) 4-Nitroaniline	(3)	12.234(0.000)	138	319452	9.541	38.32			0.2
130) 4,6-Dinitro-2-methylphenol	(4)	12.280(-0.000)	198	221531	10.634	42.71			2
131) N-Nitrosodiphenylamine	(4)	12.374(0.000)	169	962661	10.520	42.25			0.2
143) 4-Bromophenyl-phenylether	(4)	12.811(0.000)	248	300466	11.281	45.30			0.1
149) Pentachlorophenol	(4)	13.108(-0.000)	266	211441	11.429	45.90			0.3
163) Carbazole	(4)	13.644(0.000)	167	1747616	11.479	46.10			0.1
193) 3,3'-Dichlorobenzidine	(5)	17.293(0.000)	252	383467	5.982	24.03			0.8
205) Di-n-octylphthalate	(6)	18.674(-0.000)	149	2421933	11.217	45.05			1

Total number of targets = 46

Digitally signed by Edward Monborne on 11/08/2018 at 08:45. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

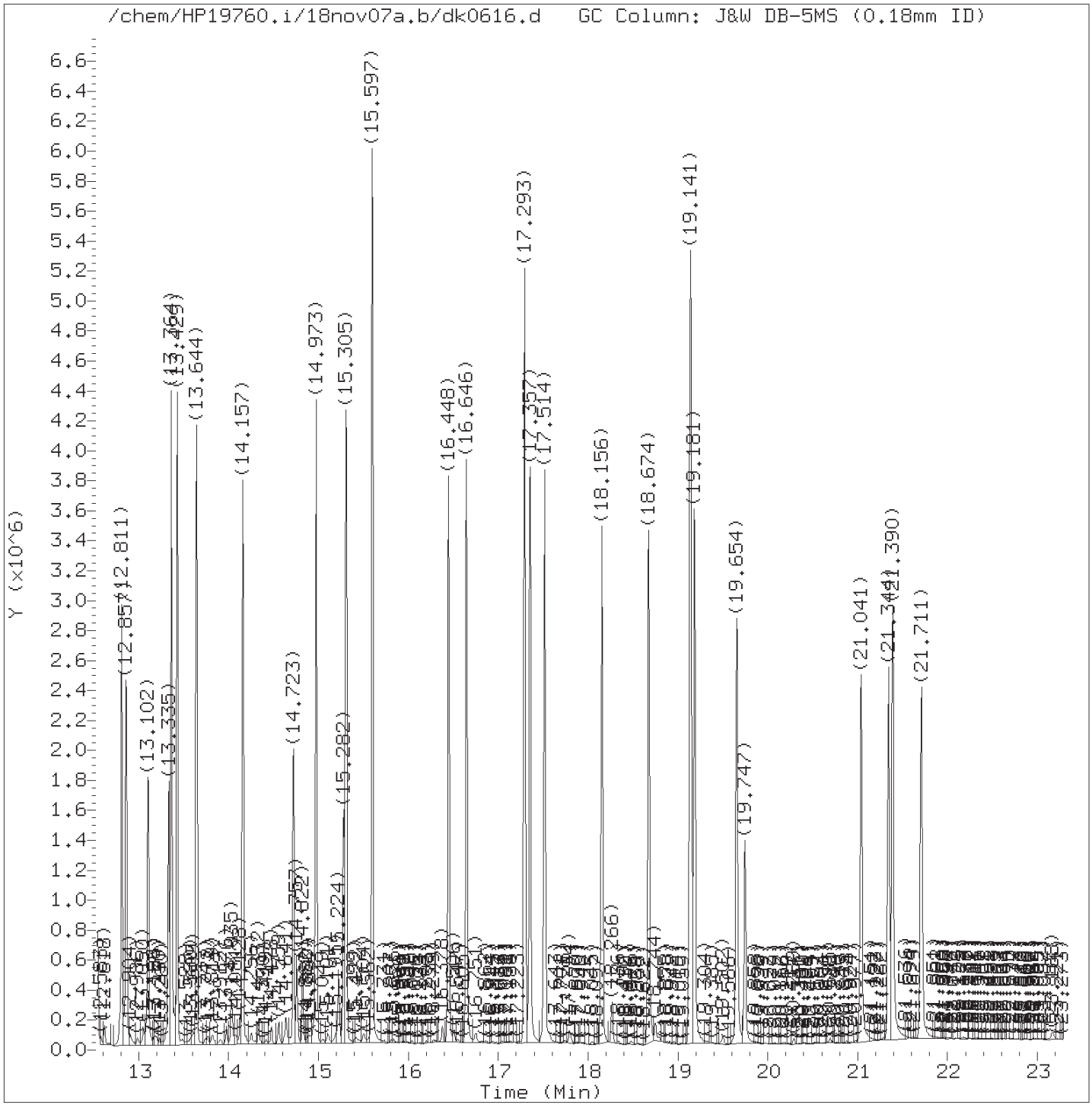
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0616.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:10 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MSD Lab Sample ID: 9876336

Digitally signed by Edward Monborne
on 11/08/2018 at 08:45.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0616.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:10 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MSD Lab Sample ID: 9876336

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on 11/08/2018 at 08:45.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0616.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:10 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MSD Lab Sample ID: 9876336

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.686	79	464361	4.741
11)$2-Fluorophenol	(1)	4.808	112	566608	7.793
17)$Phenol-d6	(1)	6.184	99	790350	7.864
18) Phenol	(1)	6.201	94	282544	2.414
19) Aniline	(1)	6.213	93	724689	5.264
23) 2-Chlorophenol	(1)	6.382	128	324370	4.719
24) 1,3-Dichlorobenzene	(1)	6.609	146	663345	9.084
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	226739	5.000
26) 1,4-Dichlorobenzene	(1)	6.726	146	678335	9.296
27) Benzyl alcohol	(1)	6.918	108	497833	10.286
28) 1,2-Dichlorobenzene	(1)	6.941	146	653400	9.410
31) 2-Methylphenol	(1)	7.099	108	458796	6.527
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.151	45	979495	9.780
38) N-Nitroso-di-n-propylamine	(1)	7.332	70	664066	10.741
37) 4-Methylphenol	(1)	7.338	108	431781	5.410
43) Hexachloroethane	(1)	7.448	117	305098	8.939
44)$Nitrobenzene-d5	(2)	7.530	82	1825947	19.881
45) Nitrobenzene	(2)	7.559	77	941193	10.142
50) Isophorone	(2)	7.938	82	1698683	10.858
51) 2-Nitrophenol	(2)	8.049	139	331901	9.469
53) 2,4-Dimethylphenol	(2)	8.154	107	566961	7.506
55) bis(2-Chloroethoxy)methane	(2)	8.311	93	1020935	10.356
60) 2,4-Dichlorophenol	(2)	8.422	162	264656	5.203
62) 1,2,4-Trichlorobenzene	(2)	8.556	180	532613	9.566
65)*Naphthalene-d8	(2)	8.632	136	851239	5.000
67) 4-Chloroaniline	(2)	8.771	127	571690	7.440
71) Hexachlorobutadiene	(2)	8.888	225	285486	9.514
80) 4-Chloro-3-methylphenol	(2)	9.570	107	434708	7.217
83) 2-Methylnaphthalene	(2)	9.768	142	1255958	10.280
85) Hexachlorocyclopentadiene	(3)	10.036	237	492394	16.360
90) 2,4,6-Trichlorophenol	(3)	10.234	196	235482	7.391
92) 2,4,5-Trichlorophenol	(3)	10.275	196	247711	7.408
93)$2-Fluorobiphenyl	(3)	10.386	172	2563714	20.326
96) 2-Chloronaphthalene	(3)	10.538	162	1181680	10.666
100) 2-Nitroaniline	(3)	10.724	138	415543	11.730
106) Dimethylphthalate	(3)	11.062	163	1240284	10.845
108) 2,6-Dinitrotoluene	(3)	11.138	165	298182	11.271
112) 3-Nitroaniline	(3)	11.383	138	289194	9.482
113)*Acenaphthene-d10	(3)	11.429	164	379423	5.000
115) 2,4-Dinitrophenol	(3)	11.552	184	352353	19.188

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0616.d Instrument ID: HP19760.i
Injection date and time: 08-NOV-2018 03:10 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:31 em10340

Sample Name: 14T04MSD Lab Sample ID: 9876336

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	11.668	109	113109	4.859
119) Dibenzofuran	(3)	11.738	168	1660593	10.822
118) 2,4-Dinitrotoluene	(3)	11.750	165	356040	9.895
124) Diethylphthalate	(3)	12.117	149	1134845	9.803
127) 4-Chlorophenyl-phenylether	(3)	12.228	204	601191	10.761
129) 4-Nitroaniline	(3)	12.234	138	319452	9.541
130) 4,6-Dinitro-2-methylphenol	(4)	12.280	198	221531	10.634
131) N-Nitrosodiphenylamine	(4)	12.374	169	962661	10.520
135)$2,4,6-Tribromophenol	(3)	12.490	330	380213	30.431
143) 4-Bromophenyl-phenylether	(4)	12.811	248	300466	11.281
149) Pentachlorophenol	(4)	13.108	266	211441	11.429
153)*Phenanthrene-d10	(4)	13.335	188	664319	5.000
163) Carbazole	(4)	13.644	167	1747616	11.479
175)*Pyrene-d10	(5)	15.282	212	651025	5.000
179)$Terphenyl-d14	(5)	15.597	244	2136965	20.090
193) 3,3'-Dichlorobenzidine	(5)	17.293	252	383467	5.982
205) Di-n-octylphthalate	(6)	18.674	149	2421933	11.217
213)*Perylene-d12	(6)	19.747	264	635790	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:45.
Target 3.5 esignature user ID: em10340

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18nov07a.b/dk0609.d Injection date and time: **07-NOV-2018 23:53**
Data file Sample Info. Line: 305WMLCS;305WMLCS;1;3;LCS;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.696	(0.000)	808	152	232022	(-10)	5.00	
65) Naphthalene-d8	8.632	(0.000)	1140	136	855405	(-10)	5.00	
113) Acenaphthene-d10	11.429	(-0.006)	1620	164	382951	(-11)	5.00	
153) Phenanthrene-d10	13.335	(-0.006)	1947	188	623135	(-20)	5.00	
175) Pyrene-d10	15.276	(0.000)	2280	212	555454	(-28)	5.00	
213) Perylene-d12	19.741	(0.000)	3046	264	593087	(-16)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.808	(-0.002)	112	2149391	28.890	58%
17) Phenol-d6	(1)	6.184	(-0.001)	99	2100897	20.428	41%
44) Nitrobenzene-d5	(2)	7.530	(0.000)	82	1899745	20.584	82%
93) 2-Fluorobiphenyl	(3)	10.386	(0.000)	172	2675179	21.015	84%
135) 2,4,6-Tribromophenol	(3)	12.490	(0.001)	330	503658	39.939	80%
179) Terphenyl-d14	(5)	15.597	(0.000)	244	2012692	22.178	89%

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)	2.686	(-0.005)	79	562295	5.610	22.44			0.5
18) Phenol	(1)	6.201	(-0.000)	94	692689	5.784	23.14			0.1
19) Aniline	(1)	6.218	(-0.000)	93	942294	6.688	26.75			0.8
23) 2-Chlorophenol	(1)	6.382	(-0.000)	128	713574	10.145	40.58			0.1
24) 1,3-Dichlorobenzene	(1)	6.609	(-0.000)	146	692223	9.264	37.05			0.1
26) 1,4-Dichlorobenzene	(1)	6.726	(-0.000)	146	712270	9.538	38.15			0.1
27) Benzyl alcohol	(1)	6.918	(-0.000)	108	525242	10.605	42.42			3
28) 1,2-Dichlorobenzene	(1)	6.941	(0.000)	146	691690	9.735	38.94			0.1
31) 2-Methylphenol	(1)	7.099	(-0.000)	108	706728	9.825	39.30			0.1
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.151	(-0.000)	45	1034089	10.090	40.36			0.1
37) 4-Methylphenol	(1)	7.338	(0.000)	108	769890	9.428	37.71			0.1
38) N-Nitroso-di-n-propylamine	(1)	7.332	(0.000)	70	684888	10.825	43.30			0.2
43) Hexachloroethane	(1)	7.448	(-0.000)	117	303603	8.693	34.77			0.3
45) Nitrobenzene	(2)	7.559	(-0.000)	77	983041	10.542	42.17			0.1
50) Isophorone	(2)	7.938	(-0.000)	82	1753912	11.157	44.63			0.1
51) 2-Nitrophenol	(2)	8.049	(-0.000)	139	369897	10.502	42.01			0.8
53) 2,4-Dimethylphenol	(2)	8.154	(-0.000)	107	657236	8.659	34.64			0.8
55) bis(2-Chloroethoxy)methane	(2)	8.311	(0.000)	93	1074064	10.842	43.37			0.1
60) 2,4-Dichlorophenol	(2)	8.422	(-0.000)	162	542681	10.617	42.47			0.1
62) 1,2,4-Trichlorobenzene	(2)	8.556	(0.000)	180	543728	9.718	38.87			0.1
67) 4-Chloroaniline	(2)	8.771	(0.000)	127	655981	8.496	33.98			1
71) Hexachlorobutadiene	(2)	8.888	(0.000)	225	278218	9.227	36.91			0.1
80) 4-Chloro-3-methylphenol	(2)	9.570	(0.000)	107	665642	10.997	43.99			0.1
83) 2-Methylnaphthalene	(2)	9.768	(0.000)	142	1280866	10.433	41.73			0.03
85) Hexachlorocyclopentadiene	(3)	10.036	(0.000)	237	342064	11.261	45.04			1
90) 2,4,6-Trichlorophenol	(3)	10.234	(0.000)	196	366190	11.387	45.55			0.1
92) 2,4,5-Trichlorophenol	(3)	10.275	(0.000)	196	385709	11.428	45.71			0.1

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Data file: /chem/HP19760.i/18nov07a.b/dk0609.d Injection date and time: **07-NOV-2018 23:53**
Data file Sample Info. Line: 305WMLCS;305WMLCS;1;3;LCS;;DOD26; Instrument ID: **HP19760.i** Batch: **18305WAM**
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Blank Data file reference: **/chem/HP19760.i/18nov07a.b/dk0608.d**

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: **25788M**
Calibration date and time (Last Method Edit): 08-NOV-2018 07:52
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18nov07a.b/dk0601.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
96) 2-Chloronaphthalene	(3)	10.538(0.000)	162	1208115	10.804	43.21			0.1
100) 2-Nitroaniline	(3)	10.718(0.000)	138	412533	11.538	46.15			0.5
106) Dimethylphthalate	(3)	11.062(0.000)	163	1118477	9.690	38.76			0.5
108) 2,6-Dinitrotoluene	(3)	11.138(-0.000)	165	295070	11.051	44.20			0.1
112) 3-Nitroaniline	(3)	11.383(0.000)	138	280031	9.097	36.39			0.8
115) 2,4-Dinitrophenol	(3)	11.552(0.000)	184	361934	19.528	78.11			4
116) 4-Nitrophenol	(3)	11.668(0.000)	109	117336	4.995	19.98		J	3
118) 2,4-Dinitrotoluene	(3)	11.750(0.000)	165	369879	10.185	40.74			0.3
119) Dibenzofuran	(3)	11.738(0.000)	168	1658704	10.710	42.84			0.1
124) Diethylphthalate	(3)	12.117(0.000)	149	1084446	9.282	37.13			0.5
127) 4-Chlorophenyl-phenylether	(3)	12.228(0.000)	204	583277	10.344	41.38			0.1
129) 4-Nitroaniline	(3)	12.234(0.000)	138	282713	8.366	33.47			0.2
130) 4,6-Dinitro-2-methylphenol	(4)	12.280(-0.000)	198	202719	10.374	41.50			2
131) N-Nitrosodiphenylamine	(4)	12.374(0.000)	169	1058870	12.336	49.34			0.2
143) 4-Bromophenyl-phenylether	(4)	12.811(0.000)	248	285764	11.438	45.75			0.1
149) Pentachlorophenol	(4)	13.102(0.000)	266	175680	10.123	40.49			0.3
163) Carbazole	(4)	13.644(0.000)	167	1649380	11.550	46.20			0.1
193) 3,3'-Dichlorobenzidine	(5)	17.293(-0.000)	252	520166	9.511	38.04			0.8
205) Di-n-octylphthalate	(6)	18.668(-0.000)	149	1898299	9.425	37.70			1

Total number of targets = 46

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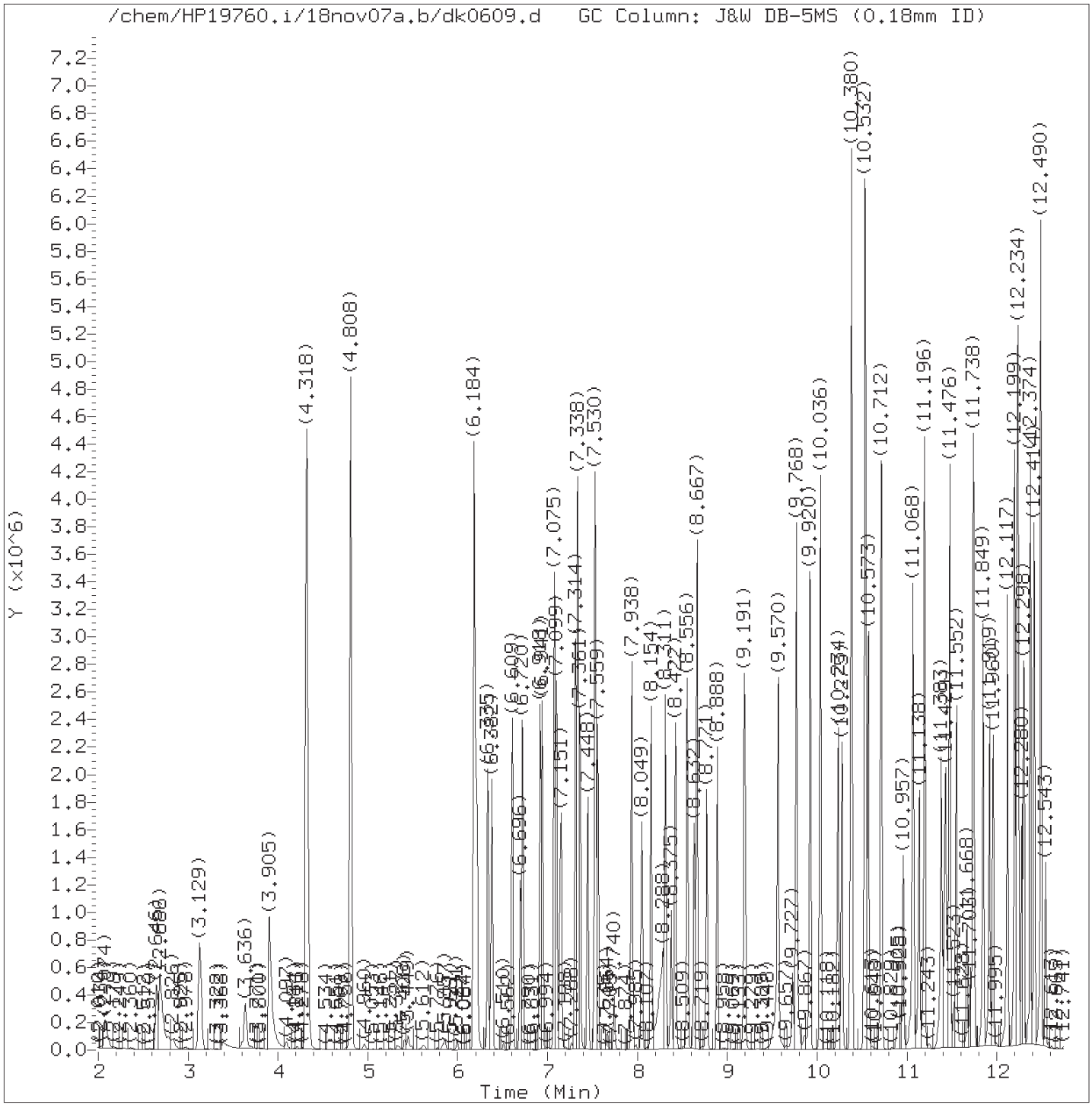
Secondary review performed and digitally signed by Holly B. Ziegler on 11/08/2018 at 12:41. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

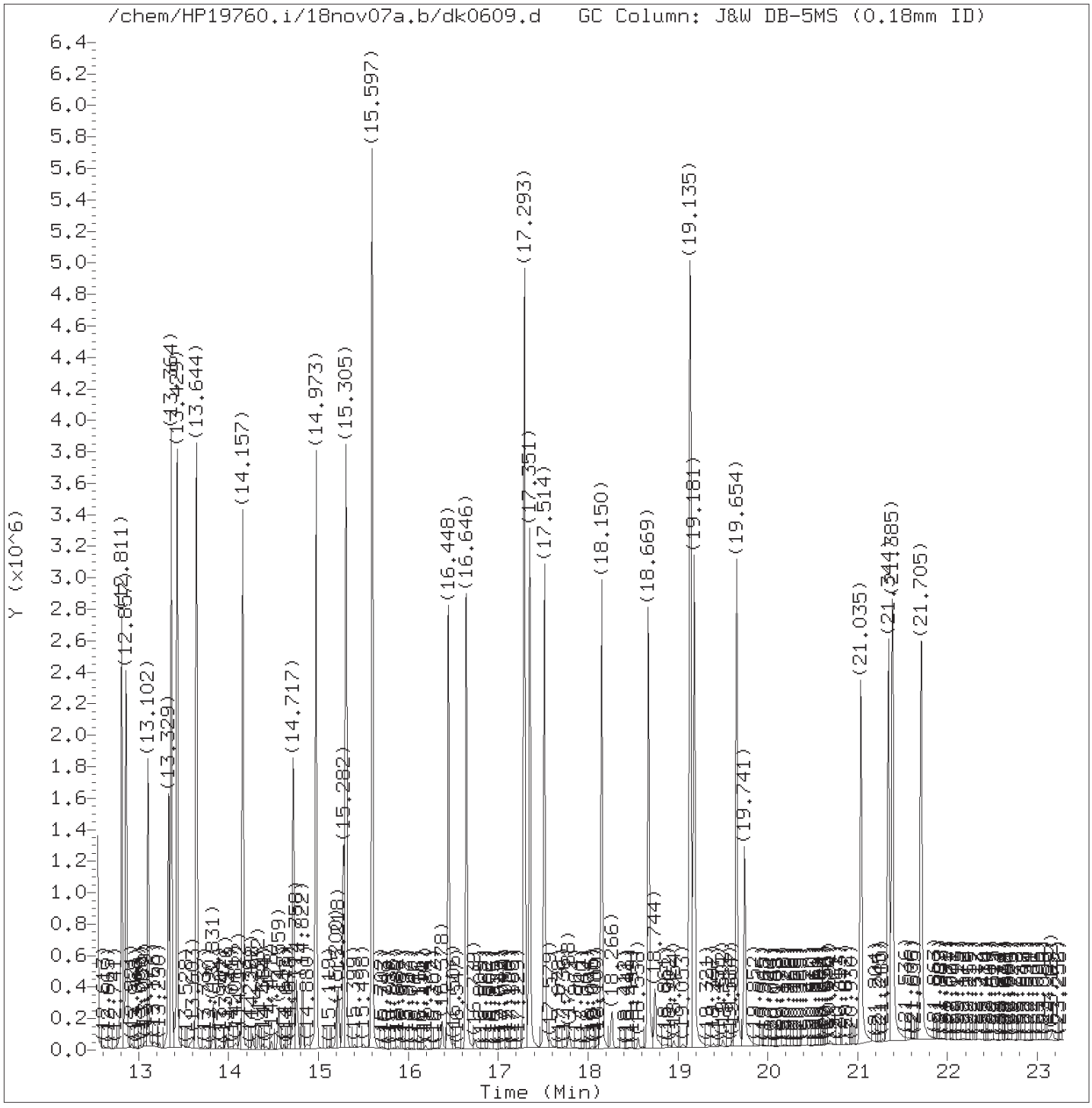
Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0609.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:53 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 305WMLCS Lab Sample ID: 305WMLCS

Digitally signed by Edward Monborne
on 11/08/2018 at 08:31.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0609.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:53 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 305WMLCS Lab Sample ID: 305WMLCS

Digitally signed by Edward Monborne
on 11/08/2018 at 08:31.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0609.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:53 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 305WMLCS Lab Sample ID: 305WMLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5) Pyridine	(1)	2.686	79	562295	5.610
11)$2-Fluorophenol	(1)	4.808	112	2149391	28.890
17)$Phenol-d6	(1)	6.184	99	2100897	20.428
18) Phenol	(1)	6.201	94	692689	5.784
19) Aniline	(1)	6.219	93	942294	6.688
23) 2-Chlorophenol	(1)	6.382	128	713574	10.145
24) 1,3-Dichlorobenzene	(1)	6.609	146	692223	9.264
25)*1,4-Dichlorobenzene-d4	(1)	6.696	152	232022	5.000
26) 1,4-Dichlorobenzene	(1)	6.726	146	712270	9.538
27) Benzyl alcohol	(1)	6.918	108	525242	10.605
28) 1,2-Dichlorobenzene	(1)	6.941	146	691690	9.735
31) 2-Methylphenol	(1)	7.099	108	706728	9.825
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.151	45	1034089	10.090
38) N-Nitroso-di-n-propylamine	(1)	7.332	70	684888	10.825
37) 4-Methylphenol	(1)	7.338	108	769890	9.428
43) Hexachloroethane	(1)	7.448	117	303603	8.693
44)$Nitrobenzene-d5	(2)	7.530	82	1899745	20.584
45) Nitrobenzene	(2)	7.559	77	983041	10.542
50) Isophorone	(2)	7.938	82	1753912	11.157
51) 2-Nitrophenol	(2)	8.049	139	369897	10.502
53) 2,4-Dimethylphenol	(2)	8.154	107	657236	8.659
55) bis(2-Chloroethoxy)methane	(2)	8.311	93	1074064	10.842
60) 2,4-Dichlorophenol	(2)	8.422	162	542681	10.617
62) 1,2,4-Trichlorobenzene	(2)	8.556	180	543728	9.718
65)*Naphthalene-d8	(2)	8.632	136	855405	5.000
67) 4-Chloroaniline	(2)	8.771	127	655981	8.496
71) Hexachlorobutadiene	(2)	8.888	225	278218	9.227
80) 4-Chloro-3-methylphenol	(2)	9.570	107	665642	10.997
83) 2-Methylnaphthalene	(2)	9.768	142	1280866	10.433
85) Hexachlorocyclopentadiene	(3)	10.036	237	342064	11.261
90) 2,4,6-Trichlorophenol	(3)	10.234	196	366190	11.387
92) 2,4,5-Trichlorophenol	(3)	10.275	196	385709	11.428
93)$2-Fluorobiphenyl	(3)	10.386	172	2675179	21.015
96) 2-Chloronaphthalene	(3)	10.538	162	1208115	10.804
100) 2-Nitroaniline	(3)	10.718	138	412533	11.538
106) Dimethylphthalate	(3)	11.062	163	1118477	9.690
108) 2,6-Dinitrotoluene	(3)	11.138	165	295070	11.051
112) 3-Nitroaniline	(3)	11.383	138	280031	9.097
113)*Acenaphthene-d10	(3)	11.429	164	382951	5.000
115) 2,4-Dinitrophenol	(3)	11.552	184	361934	19.528

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2018 at 08:31.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18nov07a.b/dk0609.d Instrument ID: HP19760.i
Injection date and time: 07-NOV-2018 23:53 Analyst ID: art12405

Method used: /chem/HP19760.i/18nov07a.b/rv8270d.m Sublist used: 25788M
Calibration date and time: 08-NOV-2018 07:52
Date, time and analyst ID of latest file update: 08-Nov-2018 08:30 em10340

Sample Name: 305WMLCS Lab Sample ID: 305WMLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
116) 4-Nitrophenol	(3)	11.668	109	117336	4.995
119) Dibenzofuran	(3)	11.738	168	1658704	10.710
118) 2,4-Dinitrotoluene	(3)	11.750	165	369879	10.185
124) Diethylphthalate	(3)	12.117	149	1084446	9.282
127) 4-Chlorophenyl-phenylether	(3)	12.228	204	583277	10.344
129) 4-Nitroaniline	(3)	12.234	138	282713	8.366
130) 4,6-Dinitro-2-methylphenol	(4)	12.280	198	202719	10.374
131) N-Nitrosodiphenylamine	(4)	12.374	169	1058870	12.336
135)$2,4,6-Tribromophenol	(3)	12.490	330	503658	39.939
143) 4-Bromophenyl-phenylether	(4)	12.811	248	285764	11.438
149) Pentachlorophenol	(4)	13.102	266	175680	10.123
153)*Phenanthrene-d10	(4)	13.335	188	623135	5.000
163) Carbazole	(4)	13.644	167	1649380	11.550
175)*Pyrene-d10	(5)	15.276	212	555454	5.000
179)$Terphenyl-d14	(5)	15.597	244	2012692	22.178
193) 3,3'-Dichlorobenzidine	(5)	17.293	252	520166	9.511
205) Di-n-octylphthalate	(6)	18.669	149	1898299	9.425
213)*Perylene-d12	(6)	19.741	264	593087	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 11/08/2018 at 08:31.
Target 3.5 esignature user ID: em10340

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 26557 Logan Brosemer Reviewed by: ATL2405 11/7/18 Start Date: 11/2/18 Start time: 8:30

18305WAM026

Tech 1: LMB 26557 Tech 2: —

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9876335MS	14T04	247	~~SS1828826~~A	1.0	~~MS1829826~~A	1.0	1	✓	✓	153C	Tan cloudy
9876336MSD	14T04	249	SS1828826A	(8)	~~MS1829826~~A	1.0	1	✓	✓	153C	Tan cloudy
BLANKA ★	SBLKWM305	250	SS1828826A		—	—	1	✓	✓		TAP H2O
LCSA	305WMLCS	250	SS1828826A	(8)	~~MS1829826~~A	1.0	1	✓	✓		
LCSAPI	305WMLCS	250	SS1828826A		MS1829826B	1.0	1	✓	✓		
LCSDAPI	305WMLCSD	250	~~SS1828826~~A		MS1829826B	1.0	1	✓	✓		

(8A)

Solvent Used	Lot No.
10N NaOH	4711F51
Methylene Chloride	186618
Sodium Sulfate	183044
Sulfuric Acid	184517
—	—

LMB 26557 11-2-18

Spike Solutions: Witness: —

~~MS1829826B~~ APPIX #1 MINI SPIKE

~~MS1829826A~~ MINI SEP. LCS SPIKE #1

~~SS1828826~~A MINI SEP. BNA SURROGATE

LMB 26557 11-2-18 MS18298 26B

LMB 26557 11/4/18 (8) MS18304 26A

(8A) SS18298 26B

★Split with 18305WAM026

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
1 9876332 ★	14T02	238	SS1828826A	1.0	1	✓	✓	153B	Tan TinT	14241	25788	11/09/2018	N
2 9876334BKG ★	14T04	244	SS1828826A		1	✓	✓	153B	Green TinT	14241	25788	11/09/2018	N
3 9876342 ★	14T06	247	~~SS1828826~~A		1	✓	✓	153B	Clear	14241	25788	11/09/2018	N

(8A)

TID14 Page 941 of 4047

11/2/18 NH LMB 26557

Bench# —	~~Bench#~~	~~Bench#~~		
Rack ID:	—	Work Station	Tumble	Micro Temp 100? ✓
Internal Standard	RVLSTD2998	Balance #	25996	

R-VAP ID 6	90 C	R-VAP ID 1	90 C	R-VAP ID —	C
S-bath ID —	C	~~S-bath ID~~	~~C~~	N-Evap	C
~~M-vap~~ —	C	18305WAM026			

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Semivolatiles by GC/MS-SIM Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS-SIM

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Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9876332	OU2-1-MW010	X		1	
9876334	OU2-1-MW008I	X		1	Unspiked
9876335	OU2-1-MW008I MS	X		1	Matrix Spike
9876336	OU2-1-MW008I MSD	X		1	Matrix Spike Duplicate
9876342	OU2EB103018-001	X		1	Equipment Blank

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): 9876332: Analysis: 14244)
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 the first trial.

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

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#: 18305WAN026 (Sample number(s): 9876332, 9876334-9876336, 9876342, UNSPK: 9876334)
The recovery(ies) for the following analyte(s) in the LCS exceeded the acceptance window indicating a positive bias: bis(2-Chloroethyl)ether

Batch#: 18311WAD026
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: bis(2-Chloroethyl)ether

(Sample number(s): 9876334, 9876342: Analysis: 14244)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MS/MSD

Batch#: 18305WAN026 (Sample number(s): 9876332, 9876334-9876336, 9876342, UNSPK: 9876334)
The relative percent difference(s) for the following analyte(s) in the MS/MSD is outside the acceptance window: bis(2-Ethylhexyl)phthalate

The recovery(ies) for the following analyte(s) in the MS were below the acceptance window: bis(2-Ethylhexyl)phthalate

The recovery(ies) for the following analyte(s) in the MS exceeded the acceptance window indicating a positive bias: bis(2-Chloroethyl)ether

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

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

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Tidewater, Inc.
SDG: TID14

Fraction: Semivolatiles by GC/MS-SIM

Analysis	Batch Number	Sample Number	Analysis Date
SIM SVOAs 8270D MINI	18305WAN026	SBLKWN305	11/05/2018 19:48
		305WNLCS	11/05/2018 20:17
		9876332	11/05/2018 21:46
		9876334 UNSPK	11/05/2018 22:15
		9876335 MS	11/05/2018 22:51
		9876336 MSD	11/05/2018 23:21
		9876342	11/05/2018 23:50
SIM SVOAs 8270D MINI	18311WAD026	SBLKWD311	11/08/2018 06:27
		311WDLCS	11/08/2018 06:56
		311WDLCSD	11/08/2018 07:25
		9876332RE	11/08/2018 07:55

Fraction: Semivolatiles by GC/MS-SIM

18305WAN026 / SBLKWN305 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,4-Dioxane	11/05/18	N.D.	ug/l	0.1	0.2	0.3
bis(2-Chloroethyl)ether	11/05/18	N.D.	ug/l	0.02	0.06	0.07
Naphthalene	11/05/18	N.D.	ug/l	0.03	0.06	0.07
Acenaphthylene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Acenaphthene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Fluorene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Phenanthrene	11/05/18	N.D.	ug/l	0.03	0.06	0.07
Anthracene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Di-n-butylphthalate	11/05/18	0.08 J	ug/l	0.05	0.1	1
Fluoranthene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Pyrene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
bis(2-Ethylhexyl)phthalate	11/05/18	0.3 J	ug/l	0.08	0.2	1
Benzo(a)anthracene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Chrysene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Benzo(b)fluoranthene	11/05/18	0.01 J	ug/l	0.01	0.03	0.05
Benzo(k)fluoranthene	11/05/18	0.01 J	ug/l	0.01	0.03	0.05
Benzo(a)pyrene	11/05/18	N.D.	ug/l	0.01	0.03	0.05
Indeno(1,2,3-cd)pyrene	11/05/18	0.01 J	ug/l	0.01	0.03	0.05
Dibenz(a,h)anthracene	11/05/18	N.D.	ug/l	0.02	0.06	0.07
Benzo(g,h,i)perylene	11/05/18	0.01 J	ug/l	0.01	0.03	0.05
Hexachlorobenzene	11/05/18	N.D.	ug/l	0.01	0.03	0.05

18311WAD026 / SBLKWD311 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
1,4-Dioxane	11/08/18	N.D.	ug/l	0.1	0.2	0.3
bis(2-Chloroethyl)ether	11/08/18	N.D.	ug/l	0.02	0.06	0.07
Naphthalene	11/08/18	N.D.	ug/l	0.03	0.06	0.07
Acenaphthylene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Acenaphthene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Fluorene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Phenanthrene	11/08/18	N.D.	ug/l	0.03	0.06	0.07
Anthracene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Di-n-butylphthalate	11/08/18	0.09 J	ug/l	0.05	0.1	1
Fluoranthene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Pyrene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
bis(2-Ethylhexyl)phthalate	11/08/18	0.2 J	ug/l	0.08	0.2	1
Benzo(a)anthracene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Chrysene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Benzo(b)fluoranthene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Benzo(k)fluoranthene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Benzo(a)pyrene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Indeno(1,2,3-cd)pyrene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Dibenz(a,h)anthracene	11/08/18	N.D.	ug/l	0.02	0.06	0.07
Benzo(g,h,i)perylene	11/08/18	N.D.	ug/l	0.01	0.03	0.05
Hexachlorobenzene	11/08/18	N.D.	ug/l	0.01	0.03	0.05

Fraction: Semivolatiles by GC/MS-SIM

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: TID14
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS-SIM

18305WAN026	1-Methylnaphthalene-d10		Benzo(a)pyrene-d12		Fluoranthene-d10	
	Spike Added	1 ug/l	Spike Added	1 ug/l	Spike Added	1 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWN305	65	29 - 112	62	18 - 129	59	38 - 119
305WNLCS	100	29 - 112	91	18 - 129	88	38 - 119
9876332	79	29 - 112	75	18 - 129	91	38 - 119
9876334 UNSPK	69	29 - 112	54	18 - 129	64	38 - 119
9876335 MS	84	29 - 112	76	18 - 129	98	38 - 119
9876336 MSD	90	29 - 112	80	18 - 129	100	38 - 119
9876342	73	29 - 112	71	18 - 129	83	38 - 119

18311WAD026	1-Methylnaphthalene-d10		Benzo(a)pyrene-d12		Fluoranthene-d10	
	Spike Added	1 ug/l	Spike Added	1 ug/l	Spike Added	1 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWD311	62	29 - 112	68	18 - 129	72	38 - 119
311WDLCS	86	29 - 112	84	18 - 129	87	38 - 119
311WDLCSD	82	29 - 112	81	18 - 129	83	38 - 119
9876332RE	79	29 - 112	68	18 - 129	74	38 - 119

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

UNSPK: 9876334 MS: 9876335 MSD: 9876336 **Analyte**	Batch: **18305WAN026** (Sample number(s): 9876332, 9876334-9876336, 9876342)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	1.02 / 1.02	0.140 J	0.784	0.789	63	63	10-113	1	20
bis(2-Chloroethyl)ether	1.02 / 1.02	0.0293 J	1.25	1.10	120 *	105	40-116	12	20
Naphthalene	1.02 / 1.02	0.0577 J	1.05	1.03	97	95	43-114	2	20
Acenaphthylene	1.02 / 1.02	N.D.	0.737	0.806	73	79	35-121	9	20
Acenaphthene	1.02 / 1.02	0.0448 J	0.812	0.922	75	86	48-114	13	20
Fluorene	1.02 / 1.02	0.0281 J	0.752	0.804	71	76	50-118	7	20
Phenanthrene	1.02 / 1.02	0.0530 J	1.15	1.22	108	114	53-115	6	20
Anthracene	1.02 / 1.02	0.0124 J	0.926	0.951	90	92	53-119	3	20
Di-n-butylphthalate	1.02 / 1.02	0.180 J	1.31	1.33	111	112	60-145	2	20
Fluoranthene	1.02 / 1.02	0.0143 J	1.02	1.02	99	98	58-120	1	20
Pyrene	1.02 / 1.02	0.0103 J	0.806	0.837	78	81	53-121	4	20
bis(2-Ethylhexyl)phthalate	1.02 / 1.02	0.306 J	0.777 J	1.48	46 *	114	55-173	62 *	20
Benzo(a)anthracene	1.02 / 1.02	N.D.	0.915	0.980	90	96	59-120	7	20
Chrysene	1.02 / 1.02	N.D.	0.886	0.920	87	90	57-120	4	20
Benzo(b)fluoranthene	1.02 / 1.02	N.D.	0.878	0.956	86	93	53-126	8	20
Benzo(k)fluoranthene	1.02 / 1.02	N.D.	0.883	0.943	87	92	54-125	7	20
Benzo(a)pyrene	1.02 / 1.02	N.D.	0.855	0.918	84	90	53-120	7	20
Indeno(1,2,3-cd)pyrene	1.02 / 1.02	N.D.	0.780	0.881	77	86	48-130	12	20
Dibenz(a,h)anthracene	1.02 / 1.02	N.D.	0.689	0.803	68	78	44-131	15	20
Benzo(g,h,i)perylene	1.02 / 1.02	N.D.	0.714	0.797	70	78	44-128	11	20
Hexachlorobenzene	1.02 / 1.02	N.D.	0.895	0.916	88	89	46-124	2	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: TID14
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

LCS: 305WNLCS	Batch: **18305WAN026** (Sample number(s): 9876332, 9876334-9876336, 9876342)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	1.00	0.713	NA	71	NA	10-113	NA	NA
bis(2-Chloroethyl)ether	1.00	1.23	NA	123 *	NA	40-116	NA	NA
Naphthalene	1.00	0.927	NA	93	NA	43-114	NA	NA
Acenaphthylene	1.00	0.894	NA	89	NA	35-121	NA	NA
Acenaphthene	1.00	0.934	NA	93	NA	48-114	NA	NA
Fluorene	1.00	0.875	NA	88	NA	50-118	NA	NA
Phenanthrene	1.00	0.985	NA	99	NA	53-115	NA	NA
Anthracene	1.00	0.833	NA	83	NA	53-119	NA	NA
Di-n-butylphthalate	1.00	1.07	NA	107	NA	60-145	NA	NA
Fluoranthene	1.00	0.861	NA	86	NA	58-120	NA	NA
Pyrene	1.00	0.851	NA	85	NA	53-121	NA	NA
bis(2-Ethylhexyl)phthalate	1.00	1.06	NA	106	NA	55-173	NA	NA
Benzo(a)anthracene	1.00	0.991	NA	99	NA	59-120	NA	NA
Chrysene	1.00	0.968	NA	97	NA	57-120	NA	NA
Benzo(b)fluoranthene	1.00	1.03	NA	103	NA	53-126	NA	NA
Benzo(k)fluoranthene	1.00	1.02	NA	102	NA	54-125	NA	NA
Benzo(a)pyrene	1.00	1.02	NA	102	NA	53-120	NA	NA
Indeno(1,2,3-cd)pyrene	1.00	1.05	NA	105	NA	48-130	NA	NA
Dibenz(a,h)anthracene	1.00	0.974	NA	97	NA	44-131	NA	NA
Benzo(g,h,i)perylene	1.00	0.949	NA	95	NA	44-128	NA	NA
Hexachlorobenzene	1.00	0.826	NA	83	NA	46-124	NA	NA

LCS: 311WDLCS LCSD: 311WDLCSD	Batch: **18311WAD026** (Sample number(s): 9876332)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,4-Dioxane	1.00	0.622	0.619	62	62	10-113	0	30
bis(2-Chloroethyl)ether	1.00	1.35	0.977	135	98	56-137	32 *	30
Naphthalene	1.00	0.826	0.779	83	78	44-107	6	30
Acenaphthylene	1.00	0.779	0.764	78	76	55-106	2	30
Acenaphthene	1.00	0.807	0.794	81	79	58-128	2	30
Fluorene	1.00	0.845	0.814	85	81	59-106	4	30
Phenanthrene	1.00	0.913	0.865	91	87	69-108	5	30
Anthracene	1.00	0.853	0.830	85	83	65-110	3	30
Di-n-butylphthalate	1.00	1.03	0.925 J	103	92	70-130	11	30
Fluoranthene	1.00	0.891	0.846	89	85	63-108	5	30
Pyrene	1.00	0.842	0.794	84	79	57-113	6	30
bis(2-Ethylhexyl)phthalate	1.00	0.947 J	0.884 J	95	88	70-130	7	30
Benzo(a)anthracene	1.00	0.928	0.878	93	88	67-111	5	30
Chrysene	1.00	0.903	0.874	90	87	66-109	3	30
Benzo(b)fluoranthene	1.00	0.959	0.915	96	91	70-123	5	30
Benzo(k)fluoranthene	1.00	0.942	0.915	94	91	66-120	3	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS-SIM

LCS: 311WDLCS LCSD: 311WDLCSD	Batch: **18311WAD026** (Sample number(s): 9876332)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzo(a)pyrene	1.00	0.952	0.909	95	91	69-121	5	30
Indeno(1,2,3-cd)pyrene	1.00	0.936	0.889	94	89	52-124	5	30
Dibenz(a,h)anthracene	1.00	0.887	0.851	89	85	55-123	4	30
Benzo(g,h,i)perylene	1.00	0.823	0.782	82	78	52-120	5	30
Hexachlorobenzene	1.00	0.818	0.767	82	77	49-110	7	30

Fraction: Semivolatiles by GC/MS-SIM

14244: SIM SVOAs 8270D MINI Analyte Name	Default DL	Default LOD	Default LOQ	Units
1,4-Dioxane	.1	.2	0.3	ug/l
bis(2-Chloroethyl)ether	.02	.06	0.07	ug/l
Naphthalene	.03	.06	0.07	ug/l
Acenaphthylene	.01	.03	0.05	ug/l
Acenaphthene	.01	.03	0.05	ug/l
Fluorene	.01	.03	0.05	ug/l
Phenanthrene	.03	.06	0.07	ug/l
Anthracene	.01	.03	0.05	ug/l
Di-n-butylphthalate	.05	.1	1	ug/l
Fluoranthene	.01	.03	0.05	ug/l
Pyrene	.01	.03	0.05	ug/l
bis(2-Ethylhexyl)phthalate	.08	.16	1	ug/l
Benzo(a)anthracene	.01	.03	0.05	ug/l
Chrysene	.01	.03	0.05	ug/l
Benzo(b)fluoranthene	.01	.03	0.05	ug/l
Benzo(k)fluoranthene	.01	.03	0.05	ug/l
Benzo(a)pyrene	.01	.03	0.05	ug/l
Indeno(1,2,3-cd)pyrene	.01	.03	0.05	ug/l
Dibenz(a,h)anthracene	.02	.06	0.07	ug/l
Benzo(g,h,i)perylene	.01	.03	0.05	ug/l
Hexachlorobenzene	.01	.03	0.05	ug/l

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: mj2000.d DFTPP Injection Date: 10/26/18

Instrument ID: HP21585 DFTPP Injection Time: 05:46

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	41.9
68	Less than 2.0% of mass 69	0.74 (1.56)1
69	Mass 69 relative abundance	47.6
70	Less than 2.0% of mass 69	0.27 (0.56)1
127	10.0 - 80.00% of mass 198	48.3
197	Less than 2.0% of mass 198	0.83
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.72
275	10.0 - 60.0% of mass 198	24.6
365	Greater than 1.00% of mass 198	2.62
441	Present, and less than mass 443	11.6
442	Greater than 50.00% of mass 198	75.4
443	15.00 - 24.00% of mass 442	14.7 (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	RVSIM2768 - SSTD.5	mj2001b.d	10/26/18	07:31
02	RVSIM2768 - SSTD2.5	mj2002.d	10/26/18	08:05
03	RVSIM2768 - SSTD1	mj2003.d	10/26/18	08:35
04	RVSIM2768 - SSTD.1	mj2004.d	10/26/18	09:04
05	RVSIM2768 - SSTD.05	mj2005.d	10/26/18	09:33
06	RVSIM2768 - SSTD.01	mj2006.d	10/26/18	10:02
07	RVSIM2768 - SSTD0.0025	mj2007.d	10/26/18	10:32
08	RVSICV2788 - SSTD0.50	mj2008.d	10/26/18	11:01

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: mk0200.d DFTPP Injection Date: 11/05/18

Instrument ID: HP21585 DFTPP Injection Time: 17:52

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.2
68	Less than 2.0% of mass 69	0.74 (1.5)1
69	Mass 69 relative abundance	49.5
70	Less than 2.0% of mass 69	0.26 (0.52)1
127	10.0 - 80.00% of mass 198	49.6
197	Less than 2.0% of mass 198	0.76
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	24.0
365	Greater than 1.00% of mass 198	2.41
441	Present, and less than mass 443	10.5
442	Greater than 50.00% of mass 198	67.1
443	15.00 - 24.00% of mass 442	13.6 (20.3)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	RVSIM2768 - SSTD.5	mk0201.d	11/05/18	18:37
02	SBLKWN305	mk0202.d	11/05/18	19:48
03	305WNLCS	mk0203.d	11/05/18	20:17
04	SBLKWB306	mk0204.d	11/05/18	20:47
05	306WBLCS	mk0205.d	11/05/18	21:16
06	9876332	mk0206.d	11/05/18	21:46
07	9876334	mk0207.d	11/05/18	22:15
08	9876335MS	mk0208.d	11/05/18	22:51
09	9876336MSD	mk0209.d	11/05/18	23:21
10	9876342	mk0210.d	11/05/18	23:50
11	RVSIM2768	mk0229.d	11/06/18	00:20
12	9879132	mk0213.d	11/06/18	01:49
13	9879133	mk0214.d	11/06/18	02:19
14	9879134MS	mk0215.d	11/06/18	02:49
15	9879135MSD	mk0216.d	11/06/18	03:18
16	9879136	mk0217.d	11/06/18	03:48
17	9879137	mk0218.d	11/06/18	04:18
18	9879138	mk0219.d	11/06/18	04:48

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: mk0200.d DFTPP Injection Date: 11/05/18

Instrument ID: HP21585 DFTPP Injection Time: 17:52

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.2
68	Less than 2.0% of mass 69	0.74 (1.5)1
69	Mass 69 relative abundance	49.5
70	Less than 2.0% of mass 69	0.26 (0.52)1
127	10.0 - 80.00% of mass 198	49.6
197	Less than 2.0% of mass 198	0.76
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	24.0
365	Greater than 1.00% of mass 198	2.41
441	Present, and less than mass 443	10.5
442	Greater than 50.00% of mass 198	67.1
443	15.00 - 24.00% of mass 442	13.6 (20.3)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	9879139	mk0220.d	11/06/18	05:17

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: mk0450.d DFTPP Injection Date: 11/08/18

Instrument ID: HP21585 DFTPP Injection Time: 05:12

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	43.4
68	Less than 2.0% of mass 69	0.81 (1.63)1
69	Mass 69 relative abundance	49.6
70	Less than 2.0% of mass 69	0.29 (0.59)1
127	10.0 - 80.00% of mass 198	49.7
197	Less than 2.0% of mass 198	0.81
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	24.3
365	Greater than 1.00% of mass 198	2.66
441	Present, and less than mass 443	11.0
442	Greater than 50.00% of mass 198	70.3
443	15.00 - 24.00% of mass 442	13.9 (19.7)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	RVSIM2768 - SSTD.5	mk0451.d	11/08/18	05:27
02	SBLKWD311	mk0452.d	11/08/18	06:27
03	311WDLCS	mk0453.d	11/08/18	06:56
04	311WDLCSD	mk0454.d	11/08/18	07:25
05	9876332RE	mk0455.d	11/08/18	07:55
06	RVSIM2768	mk0456.d	11/08/18	08:24
07	9881395DL	mk0457b.d	11/08/18	11:34
08	9881396DL	mk0458a.d	11/08/18	12:03
09	9881397DL	mk0459.d	11/08/18	12:32
10	9881856DL	mk0460.d	11/08/18	13:02
11	9881857	mk0461.d	11/08/18	13:31
12	9881858MS	mk0462.d	11/08/18	14:01
13	9881859MSD	mk0463.d	11/08/18	14:30
14	9881861	mk0464.d	11/08/18	14:59
15	9881863	mk0465.d	11/08/18	15:29
16	9882056	mk0466.d	11/08/18	15:58
17	9882057	mk0467.d	11/08/18	16:27

FORM V SV

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP21585 Calibration Date(s): 10/26/18 10/26/18

Calibration Times: 07:31 10:02

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF0.01 = mj2006.d RRF0.05 = mj2005.d RRF0.1 = mj2004.d
RRF0.5 = mj2001b.d RRF1 = mj2003.d RRF2.5 = mj2002.d

COMPOUND	RRF0.01	RRF0.05	RRF0.1	RRF0.5	RRF1	RRF2.5	RRF	___ RRF	% RSD	CAL. METHOD
1,4-Dioxane		0.697	0.678	0.699	0.687	0.706		0.694	2	AVG
N-Nitrosodimethylamine	0.930	0.943	0.956	1.053	1.048	1.099		1.005	7	AVG
bis(2-Chloroethyl)ether	0.322	0.388	0.400	0.408	0.401	0.376		0.382	8	AVG
Quinoline	0.658	0.683	0.701	0.703	0.694	0.701		0.690	3	AVG
Naphthalene	1.178	1.151	1.152	1.181	1.141	1.095		1.149	3	AVG
2-Methylnaphthalene	0.693	0.699	0.705	0.727	0.721	0.700		0.707	2	AVG
1-Methylnaphthalene	0.678	0.687	0.696	0.723	0.712	0.703		0.700	2	AVG
Acenaphthylene	2.507	2.534	2.521	2.705	2.706	2.818		2.632	5	AVG
Dimethylphthalate	1.944	2.016	1.922	2.025	2.023	1.913		1.974	3	AVG
Acenaphthene	1.660	1.581	1.525	1.609	1.577	1.641		1.599	3	AVG
Dibenzofuran	2.114	1.979	2.101	2.228	2.171	2.229		2.137	4	AVG
Diethylphthalate	1.919	1.975	1.905	2.008	2.008	1.970		1.964	2	AVG
Fluorene	1.772	1.826	1.792	1.923	1.915	1.958		1.864	4	AVG
Hexachlorobenzene	0.279	0.279	0.281	0.283	0.278	0.285		0.281	1	AVG
Phenanthrene	1.307	1.330	1.333	1.343	1.335	1.400		1.341	2	AVG
Anthracene	1.263	1.285	1.298	1.351	1.347	1.357		1.317	3	AVG
Di-n-butylphthalate	1.383	1.445	1.441	1.526	1.542	1.483		1.470	4	AVG
Fluoranthene	1.437	1.448	1.480	1.541	1.533	1.542		1.497	3	AVG
Pyrene	2.260	2.227	2.220	2.304	2.310	2.319		2.273	2	AVG
Butylbenzylphthalate	0.891	0.934	0.919	0.973	1.010	0.959		0.948	4	AVG
bis(2-Ethylhexyl)phthalate	1.305	1.378	1.377	1.456	1.500	1.462		1.413	5	AVG
Benzo(a)anthracene	2.172	1.894	1.886	1.921	1.922	1.963		1.960	5	AVG
Chrysene	2.115	1.964	1.948	1.956	1.956	1.965		1.984	3	AVG
Di-n-octylphthalate	2.406	2.536	2.555	2.685	2.743	2.584		2.585	5	AVG
Benzo(b)fluoranthene	2.063	1.929	1.948	1.966	1.978	1.995		1.980	2	AVG
Benzo(k)fluoranthene	2.012	1.890	1.914	2.031	2.010	2.000		1.976	3	AVG
Benzo(e)pyrene	1.798	1.825	1.856	1.895	1.890	1.896		1.860	2	AVG
Benzo(a)pyrene	1.988	1.840	1.836	1.907	1.900	1.913		1.897	3	AVG
Perylene	2.010	1.891	1.881	1.931	1.922	1.937		1.929	2	AVG
Indeno(1,2,3-cd)pyrene	1.805	1.647	1.654	1.746	1.728	1.767		1.724	4	AVG
Dibenz(a,h)anthracene	1.813	1.719	1.718	1.784	1.747	1.783		1.761	2	AVG
Benzo(g,h,i)perylene	2.131	1.943	1.938	1.995	1.966	1.994		1.995	4	AVG
1-Methylnaphthalene-d10	0.456	0.454	0.457	0.462	0.455	0.446		0.455	1	AVG
Fluoranthene-d10	0.932	0.958	0.971	1.015	1.003	1.004		0.981	3	AVG
Benzo(a)pyrene-d12	0.857	0.882	0.909	0.950	0.954	0.962		0.919	5	AVG
							Average %RSD		3	

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/HP21585.i/18oct26.b/mj2001b.d SSTD0.5
/chem/HP21585.i/18oct26.b/mj2002.d SSTD2.5
/chem/HP21585.i/18oct26.b/mj2003.d SSTD001
/chem/HP21585.i/18oct26.b/mj2004.d SSTD0.1
/chem/HP21585.i/18oct26.b/mj2005.d SSTD0.05
/chem/HP21585.i/18oct26.b/mj2006.d SSTD0.01

Area Summary

	File ID:								
Internal Standard Name	mj2001b.d	mj2002.d	mj2003.d	mj2004.d	mj2005.d	mj2006.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	53139	53598	53854	53454	53330	52565	53323	1	Yes
Naphthalene-d8	152458	162269	153430	147772	150740	149221	152648	3	Yes
Acenaphthene-d10	66371	66824	66884	64924	64400	64827	65705	2	Yes
Phenanthrene-d10	136980	138135	137822	130356	132129	131827	134542	3	Yes
Chrysene-d12	94742	95935	95148	89008	88556	87761	91858	4	Yes
Perylene-d12	90716	95191	91421	85375	84922	84530	88692	5	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:						
Internal Standard Name	mj2001b.d	mj2002.d	mj2003.d	mj2004.d	mj2005.d	mj2006.d	Avg. RT
1,4-Dichlorobenzene-d4	6.619	6.619	6.619	6.619	6.619	6.618	6.619
Naphthalene-d8	8.539	8.539	8.539	8.519	8.539	8.539	8.535
Acenaphthene-d10	11.316	11.316	11.316	11.316	11.316	11.316	11.316
Phenanthrene-d10	13.214	13.214	13.214	13.207	13.206	13.206	13.210
Chrysene-d12	17.223	17.230	17.223	17.223	17.223	17.223	17.224
Perylene-d12	19.669	19.677	19.669	19.670	19.669	19.669	19.671

Comments:_____

_____

Report generated on 10/27/2018 at 18:21

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP21585

Method: SW-846 8270D (SIM) MINI File ID: mj2008.d

ICV SAMPLE ID: RVSICV2788 BATCH: 18OCT26026 Sample Name: SSTD0.50

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	20.00	.50	0	30	YES
N-Nitrosodimethylamine	20.00	.55	11	30	YES
bis(2-Chloroethyl)ether	20.00	.57	14	30	YES
Naphthalene	20.00	.55	10	30	YES
Quinoline	20.00	.48	-3	30	YES
2-Methylnaphthalene	20.00	.56	11	30	YES
1-Methylnaphthalene	20.00	.52	5	30	YES
Dimethylphthalate	20.00	.53	7	30	YES
Acenaphthylene	20.00	.48	-5	30	YES
Acenaphthene	20.00	.48	-3	30	YES
Dibenzofuran	20.00	.54	8	30	YES
Diethylphthalate	20.00	.53	5	30	YES
Fluorene	20.00	.53	6	30	YES
Hexachlorobenzene	20.00	.53	6	30	YES
Phenanthrene	20.00	.53	6	30	YES
Anthracene	20.00	.55	9	30	YES
Di-n-butylphthalate	20.00	.51	2	30	YES
Fluoranthene	20.00	.54	8	30	YES
Pyrene	20.00	.52	4	30	YES
Butylbenzylphthalate	20.00	.51	2	30	YES
Benzo(a)anthracene	20.00	.53	6	30	YES
Chrysene	20.00	.52	5	30	YES
bis(2-Ethylhexyl)phthalate	20.00	.50	-1	30	YES
Di-n-octylphthalate	20.00	.51	3	30	YES
Benzo(b)fluoranthene	20.00	.57	13	30	YES
Benzo(k)fluoranthene	20.00	.54	8	30	YES
Benzo(a)pyrene	20.00	.54	8	30	YES
Indeno(1,2,3-cd)pyrene	20.00	.57	14	30	YES
Dibenz(a,h)anthracene	20.00	.53	6	30	YES
Benzo(g,h,i)perylene	20.00	.53	7	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: HP21585 Calibration Date: 11/05/18 Time: 18:37

Lab File ID: mk0201.d Init. Calib. Date(s): 10/26/18 10/26/18

Init. Calib. Times(s): 07:31 10:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.694	0.722	0.520	.5	4
N-Nitrosodimethylamine	1.005	1.075	0.530	.5	7
bis(2-Chloroethyl)ether	0.382	0.350	0.460	.5	-8
Quinoline	0.690	0.599	0.430	.5	-13
Naphthalene	1.150	1.104	0.480	.5	-4
2-Methylnaphthalene	0.707	0.697	0.490	.5	-1
1-Methylnaphthalene	0.700	0.707	0.500	.5	1
Acenaphthylene	2.632	2.574	0.490	.5	-2
Dimethylphthalate	1.974	1.955	2.480	2.5	-1
Acenaphthene	1.599	1.568	0.490	.5	-2
Dibenzofuran	2.137	2.168	0.510	.5	1
Diethylphthalate	1.964	1.961	2.500	2.5	0
Fluorene	1.864	1.871	0.500	.5	0
Hexachlorobenzene	0.281	0.275	0.490	.5	-2
Phenanthrene	1.341	1.321	0.490	.5	-1
Anthracene	1.317	1.319	0.500	.5	0
Di-n-butylphthalate	1.470	1.516	2.580	2.5	3
Fluoranthene	1.497	1.553	0.520	.5	4
Pyrene	2.273	2.198	0.480	.5	-3
Butylbenzylphthalate	0.948	0.926	2.440	2.5	-2
bis(2-Ethylhexyl)phthalate	1.413	1.387	2.450	2.5	-2
Benzo(a)anthracene	1.960	1.890	0.480	.5	-4
Chrysene	1.984	1.945	0.490	.5	-2
Di-n-octylphthalate	2.585	2.413	2.330	2.5	-7
Benzo(b)fluoranthene	1.980	1.894	0.480	.5	-4
Benzo(k)fluoranthene	1.976	2.059	0.520	.5	4
Benzo(e)pyrene	1.860	1.881	0.510	.5	1
Benzo(a)pyrene	1.897	1.878	0.490	.5	-1
Perylene	1.929	1.892	0.490	.5	-2
Indeno(1,2,3-cd)pyrene	1.724	1.620	0.470	.5	-6
Dibenz(a,h)anthracene	1.761	1.660	0.470	.5	-6
Benzo(g,h,i)perylene	1.995	1.841	0.460	.5	-8
1-Methylnaphthalene-d10	0.455	0.458	0.500	.5	1
Fluoranthene-d10	0.981	1.035	0.530	.5	6
Benzo(a)pyrene-d12	0.919	0.948	0.520	.5	3

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page 1 of 1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP21585.i/18oct26.b/mj2001b.d **
/chem/HP21585.i/18oct26.b/mj2002.d
/chem/HP21585.i/18oct26.b/mj2003.d
/chem/HP21585.i/18oct26.b/mj2004.d
/chem/HP21585.i/18oct26.b/mj2005.d
/chem/HP21585.i/18oct26.b/mj2006.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP21585.i/18nov05a.b/mk0201.d

Area Summary

File ID:

Internal Standard Name	mk0201.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	77036	53139	26570	106278	Yes
Naphthalene-d8	234353	152458	76229	304916	Yes
Acenaphthene-d10	103593	66371	33186	132742	Yes
Phenanthrene-d10	214526	136980	68490	273960	Yes
Chrysene-d12	156950	94742	47371	189484	Yes
Perylene-d12	156396	90716	45358	181432	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	mk0201.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.599	6.619	Yes
Naphthalene-d8	8.519	8.539	Yes
Acenaphthene-d10	11.303	11.316	Yes
Phenanthrene-d10	13.199	13.214	Yes
Chrysene-d12	17.184	17.223	Yes
Perylene-d12	19.631	19.669	Yes

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: _____

_____

Report generated on 11/05/2018 at 19:16

Data File: /chem/HP21585.i/18nov05a.b/mk0229.d
Report Date: 11/07/2018 16:33

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP21585.i
Client ID: SECC0.5
Lab Sample ID: RVSIM2768
Sublist used: 25784.sub

Injection Date and Time: 06-NOV-2018 00:20
Initial Calibration Date(s): 26-OCT-2018 26-OCT-2018
Initial Calibration Time(s): 07:31 10:02
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,4-Dioxane	0.69359	0.71170	0.010	-2.6	20.0
bis(2-Chloroethyl)ether	0.38248	0.35252	0.010	7.8	20.0
Naphthalene	1.14946	1.11466	0.010	3.0	20.0
Acenaphthylene	2.63173	2.49962	0.010	5.0	20.0
Acenaphthene	1.59900	1.50909	0.010	5.6	20.0
Fluorene	1.86421	1.81116	0.010	2.8	20.0
Hexachlorobenzene	0.28072	0.26792	0.010	4.6	20.0
Phenanthrene	1.34136	1.28732	0.010	4.0	20.0
Anthracene	1.31684	1.32240	0.010	-0.4	20.0
Di-n-butylphthalate	1.47014	1.50079	0.010	-2.1	20.0
Fluoranthene	1.49686	1.53441	0.010	-2.5	20.0
Pyrene	2.27340	2.12190	0.010	6.7	20.0
bis(2-Ethylhexyl)phthalate	1.41312	1.33906	0.010	5.2	20.0
Benzo(a)anthracene	1.95976	1.83709	0.010	6.3	20.0
Chrysene	1.98419	1.90228	0.010	4.1	20.0
Benzo(b)fluoranthene	1.97970	1.86623	0.010	5.7	20.0
Benzo(k)fluoranthene	1.97625	1.96968	0.010	0.3	20.0
Benzo(a)pyrene	1.89716	1.84455	0.010	2.8	20.0
Indeno(1,2,3-cd)pyrene	1.72430	1.48230	0.010	14.0	20.0
Dibenz(a,h)anthracene	1.76065	1.60385	0.010	8.9	20.0
Benzo(g,h,i)perylene	1.99454	1.67230	0.010	16.2	20.0

Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1-Methylnaphthalene-d10	0.45479	0.47430	0.010	-4.3	20.0
Fluoranthene-d10	0.98056	1.05140	0.010	-7.2	20.0
Benzo(a)pyrene-d12	0.91911	0.94823	0.010	-3.2	20.0

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP21585 Calibration Date: 11/08/18 Time: 05:27

Lab File ID: mk0451.d Init. Calib. Date(s): 10/26/18 10/26/18

Init. Calib. Times(s): 07:31 10:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.694	0.743	0.540	.5	7
N-Nitrosodimethylamine	1.005	1.089	0.540	.5	8
bis(2-Chloroethyl)ether	0.382	0.368	0.480	.5	-4
Quinoline	0.690	0.618	0.450	.5	-10
Naphthalene	1.150	1.014	0.440	.5	-12
2-Methylnaphthalene	0.707	0.660	0.470	.5	-7
1-Methylnaphthalene	0.700	0.656	0.470	.5	-6
Acenaphthylene	2.632	2.521	0.480	.5	-4
Dimethylphthalate	1.974	1.895	2.400	2.5	-4
Acenaphthene	1.599	1.508	0.470	.5	-6
Dibenzofuran	2.137	2.158	0.500	.5	1
Diethylphthalate	1.964	1.946	2.480	2.5	-1
Fluorene	1.864	1.808	0.480	.5	-3
Hexachlorobenzene	0.281	0.277	0.490	.5	-1
Phenanthrene	1.341	1.320	0.490	.5	-2
Anthracene	1.317	1.339	0.510	.5	2
Di-n-butylphthalate	1.470	1.568	2.670	2.5	7
Fluoranthene	1.497	1.550	0.520	.5	4
Pyrene	2.273	2.144	0.470	.5	-6
Butylbenzylphthalate	0.948	0.923	2.440	2.5	-3
bis(2-Ethylhexyl)phthalate	1.413	1.386	2.450	2.5	-2
Benzo(a)anthracene	1.960	1.943	0.500	.5	-1
Chrysene	1.984	1.985	0.500	.5	0
Di-n-octylphthalate	2.585	2.338	2.260	2.5	-10
Benzo(b)fluoranthene	1.980	1.903	0.480	.5	-4
Benzo(k)fluoranthene	1.976	2.023	0.510	.5	2
Benzo(e)pyrene	1.860	1.876	0.500	.5	1
Benzo(a)pyrene	1.897	1.875	0.490	.5	-1
Perylene	1.929	1.900	0.490	.5	-1
Indeno(1,2,3-cd)pyrene	1.724	1.587	0.460	.5	-8
Dibenz(a,h)anthracene	1.761	1.649	0.470	.5	-6
Benzo(g,h,i)perylene	1.995	1.776	0.450	.5	-11
1-Methylnaphthalene-d10	0.455	0.427	0.470	.5	-6
Fluoranthene-d10	0.981	1.039	0.530	.5	6
Benzo(a)pyrene-d12	0.919	0.936	0.510	.5	2

FORM VII SV-1

page 1 of 1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP21585.i/18oct26.b/mj2001b.d **
/chem/HP21585.i/18oct26.b/mj2002.d
/chem/HP21585.i/18oct26.b/mj2003.d
/chem/HP21585.i/18oct26.b/mj2004.d
/chem/HP21585.i/18oct26.b/mj2005.d
/chem/HP21585.i/18oct26.b/mj2006.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP21585.i/18nov08.b/mk0451.d

Area Summary

Internal Standard Name	File ID: mk0451.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	64386	53139	26570	106278	Yes
Naphthalene-d8	211113	152458	76229	304916	Yes
Acenaphthene-d10	88775	66371	33186	132742	Yes
Phenanthrene-d10	174149	136980	68490	273960	Yes
Chrysene-d12	131394	94742	47371	189484	Yes
Perylene-d12	139270	90716	45358	181432	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

Internal Standard Name	File ID: mk0451.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.560	6.619	Yes
Naphthalene-d8	8.480	8.539	Yes
Acenaphthene-d10	11.264	11.316	Yes
Phenanthrene-d10	13.175	13.214	Yes
Chrysene-d12	17.146	17.223	Yes
Perylene-d12	19.593	19.669	Yes

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: _____

Report generated on 11/08/2018 at 05:57

Data File: /chem/HP21585.i/18nov08.b/mk0456.d
Report Date: 11/08/2018 18:50

Lancaster Laboratories, Inc.
Shift Ending Continuing Calibration Check Report

Instrument ID: HP21585.i
Client ID: SECC0.50
Lab Sample ID: RVSIM2768
Sublist used: 25784.sub

Injection Date and Time: 08-NOV-2018 08:24
Initial Calibration Date(s): 26-OCT-2018 26-OCT-2018
Initial Calibration Time(s): 07:31 10:02
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m

Target Compounds	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1,4-Dioxane	0.69359	0.73881	0.010	-6.5	20.0
bis(2-Chloroethyl)ether	0.38248	0.35489	0.010	7.2	20.0
Naphthalene	1.14946	1.02977	0.010	10.4	20.0
Acenaphthylene	2.63173	2.48031	0.010	5.8	20.0
Acenaphthene	1.59900	1.49316	0.010	6.6	20.0
Fluorene	1.86421	1.79827	0.010	3.5	20.0
Hexachlorobenzene	0.28072	0.27363	0.010	2.5	20.0
Phenanthrene	1.34136	1.31243	0.010	2.2	20.0
Anthracene	1.31684	1.31786	0.010	-0.1	20.0
Di-n-butylphthalate	1.47014	1.54156	0.010	-4.9	20.0
Fluoranthene	1.49686	1.53915	0.010	-2.8	20.0
Pyrene	2.27340	2.09339	0.010	7.9	20.0
bis(2-Ethylhexyl)phthalate	1.41312	1.32143	0.010	6.5	20.0
Benzo(a)anthracene	1.95976	1.87819	0.010	4.2	20.0
Chrysene	1.98419	1.92998	0.010	2.7	20.0
Benzo(b)fluoranthene	1.97970	1.91395	0.010	3.3	20.0
Benzo(k)fluoranthene	1.97625	1.99316	0.010	-0.9	20.0
Benzo(a)pyrene	1.89716	1.86487	0.010	1.7	20.0
Indeno(1,2,3-cd)pyrene	1.72430	1.53641	0.010	10.9	20.0
Dibenz(a,h)anthracene	1.76065	1.60311	0.010	8.9	20.0
Benzo(g,h,i)perylene	1.99454	1.70651	0.010	14.4	20.0

Surrogate Standards	ICAL Avg. RRF	SECC RRF	Min. RRF	% Diff.	Max. %Diff.
1-Methylnaphthalene-d10	0.45479	0.43297	0.010	4.8	20.0
Fluoranthene-d10	0.98056	1.03723	0.010	-5.8	20.0
Benzo(a)pyrene-d12	0.91911	0.94677	0.010	-3.0	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): mk0201.d Date Analyzed: 11/05/18

Instrument ID: HP21585 Time Analyzed: 18:37

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	77036	6.599	234353	8.519	103593	11.303
UPPER LIMIT	154072	7.099	468706	9.019	207186	11.803
LOWER LIMIT	38518	6.099	117177	8.019	51797	10.803
LLI SAMPLE NO.						
01 SBLKWN305	164882*	6.599	502154*	8.519	228197*	11.303
02 305WNLCS	58113	6.599	203726	8.519	91863	11.303
03 SBLKWB306	58747	6.599	181775	8.519	80929	11.303
04 306WBLCS	58021	6.599	198004	8.519	85940	11.303
05 9876332	55335	6.599	164875	8.519	77264	11.303
06 9876334	77173	6.599	235865	8.519	110490	11.303
07 9876335MS	56186	6.599	189202	8.519	88450	11.303
08 9876336MSD	57610	6.599	193778	8.500	88942	11.303
09 9876342	77459	6.599	234465	8.519	106810	11.303
10 RVSIM2768	76195	6.599	230132	8.519	105103	11.303
11 9879132	56268	6.599	169926	8.519	78757	11.303
12 9879133	53985	6.599	163833	8.519	77374	11.303
13 9879134MS	55186	6.599	182853	8.519	79465	11.303
14 9879135MSD	53772	6.599	179278	8.519	77354	11.303
15 9879136	55944	6.599	166154	8.519	73942	11.303
16 9879137	51114	6.599	147700	8.519	66451	11.303
17 9879138	54156	6.599	159689	8.519	71317	11.303

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): mk0201.d Date Analyzed: 11/05/18

Instrument ID: HP21585 Time Analyzed: 18:37

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	214526	13.199	156950	17.184	156396	19.631
UPPER LIMIT	429052	13.699	313900	17.684	312792	20.131
LOWER LIMIT	107263	12.699	78475	16.684	78198	19.131
LLI SAMPLE NO.						
01 SBLKWN305	469348*	13.199	312418	17.185	332226*	19.631
02 305WNLCS	188266	13.199	130930	17.184	130766	19.631
03 SBLKWB306	166588	13.199	120270	17.185	118298	19.631
04 306WBLCS	144593	13.206	129007	17.200	132057	19.631
05 9876332	121680	13.199	113932	17.185	116070	19.631
06 9876334	220893	13.183	154870	17.184	158127	19.631
07 9876335MS	140146	13.199	122743	17.185	127106	19.631
08 9876336MSD	146600	13.199	125235	17.185	129561	19.631
09 9876342	184525	13.199	152316	17.185	154794	19.624
10 RVSIM2768	215747	13.198	162440	17.184	161922	19.623
11 9879132	162008	13.198	122401	17.184	126071	19.631
12 9879133	156950	13.199	116468	17.184	119243	19.631
13 9879134MS	123261	13.206	124335	17.200	125880	19.639
14 9879135MSD	119545	13.206	123108	17.200	123447	19.639
15 9879136	125610	13.198	110384	17.184	115999	19.623
16 9879137	141302	13.199	105044	17.185	108787	19.631
17 9879138	144270	13.199	107302	17.185	105621	19.631

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.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): mk0201.d Date Analyzed: 11/05/18

Instrument ID: HP21585 Time Analyzed: 18:37

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	77036	6.599	234353	8.519	103593	11.303
UPPER LIMIT	154072	7.099	468706	9.019	207186	11.803
LOWER LIMIT	38518	6.099	117177	8.019	51797	10.803
LLI SAMPLE NO.						
18 9879139	54758	6.599	156287	8.519	71124	11.303

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): mk0201.d Date Analyzed: 11/05/18

Instrument ID: HP21585 Time Analyzed: 18:37

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	214526	13.199	156950	17.184	156396	19.631
UPPER LIMIT	429052	13.699	313900	17.684	312792	20.131
LOWER LIMIT	107263	12.699	78475	16.684	78198	19.131
LLI SAMPLE NO.						
18 9879139	147287	13.199	107293	17.185	108104	19.631

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): mk0451.d Date Analyzed: 11/08/18

Instrument ID: HP21585 Time Analyzed: 05:27

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	64386	6.560	211113	8.480	88775	11.264
UPPER LIMIT	128772	7.060	422226	8.980	177550	11.764
LOWER LIMIT	32193	6.060	105557	7.980	44388	10.764
LLI SAMPLE NO.						
01 SBLKWD311	63644	6.560	215412	8.480	89663	11.264
02 311WDLCS	56680	6.580	189421	8.480	86168	11.264
03 311WDLCSD	58610	6.580	198529	8.480	86776	11.264
04 9876332RE	54914	6.560	183480	8.480	78912	11.264
05 RVSIM2768	64385	6.560	210111	8.480	89711	11.264
06 9881395DL	54203	6.560	177679	8.480	74449	11.264
07 9881396DL	55119	6.560	172326	8.480	74152	11.264
08 9881397DL	55386	6.560	175841	8.480	74435	11.264
09 9881856DL	53460	6.560	171592	8.480	81541	11.264
10 9881857	66345	6.560	219779	8.480	93666	11.264
11 9881858MS	53473	6.580	177333	8.480	77877	11.264
12 9881859MSD	49262	6.579	172045	8.480	80881	11.264
13 9881861	49019	6.560	153260	8.480	66196	11.265
14 9881863	58271	6.560	181185	8.480	78082	11.264
15 9882056	54297	6.560	173190	8.480	92913	11.264
16 9882057	54814	6.560	174663	8.480	123123	11.264

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): mk0451.d Date Analyzed: 11/08/18

Instrument ID: HP21585 Time Analyzed: 05:27

	IS4(PHN)		IS5(CRY)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	174149	13.175	131394	17.146	139270	19.593
UPPER LIMIT	348298	13.675	262788	17.646	278540	20.093
LOWER LIMIT	87075	12.675	65697	16.646	69635	19.093
LLI SAMPLE NO.						
01 SBLKWD311	175342	13.175	122581	17.146	128197	19.593
02 311WDLCS	162174	13.167	115380	17.146	120636	19.585
03 311WDLCSD	167789	13.167	120214	17.146	124961	19.585
04 9876332RE	153923	13.128	110385	17.146	116739	19.593
05 RVSIM2768	175472	13.175	133665	17.146	138070	19.585
06 9881395DL	149258	13.168	105149	17.146	105481	19.585
07 9881396DL	146368	13.175	103335	17.146	104350	19.585
08 9881397DL	145467	13.167	102961	17.146	102389	19.585
09 9881856DL	152090	13.152	100346	17.146	104250	19.585
10 9881857	187869	13.128	128735	17.146	130987	19.585
11 9881858MS	155046	13.167	105175	17.146	109615	19.585
12 9881859MSD	149159	13.152	102559	17.146	105759	19.585
13 9881861	130396	13.152	89252	17.147	92902	19.585
14 9881863	152375	13.152	106118	17.146	109067	19.585
15 9882056	125725	13.175	124148	17.146	133217	19.593
16 9882057	151647	13.167	114103	17.146	121718	19.585

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

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP21585.i/18nov05a.b/mk0206.d
Data file Sample Info. Line: 14T02;9876332;1;0;SAMPLE;;DOD26;
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Injection date and time: **05-NOV-2018 21:46**
Instrument ID: **HP21585.i** Batch: **18305WAN**

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 238 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599(0.000)	476	152	55335 (-28)	0.25	
6) Naphthalene-d8	8.519(0.000)	574	136	164875 (-30)	0.25	
14) Acenaphthene-d10	11.303(0.000)	770	164	77264 (-25)	0.25	
20) Phenanthrene-d10	13.199(0.000)	990	188	121680 (-43)	0.25	
29) Chrysene-d12	17.185(0.000)	1554	240	113932 (-27)	0.25	
38) Perylene-d12	19.631(0.000)	1873	264	116070 (-26)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 1-Methylnaphthalene-d10	(2)	9.741(0.000)	152	59173	0.197	79%		29 - 112
24) Fluoranthene-d10	(4)	14.820(0.000)	212	108666	0.228	91%		38 - 119
36) Benzo(a)pyrene-d12	(6)	19.501(0.000)	264	79802	0.187	75%		18 - 129

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					0.03
4) bis(2-Chloroethyl)ether	(2)			Not Detected					0.02
7) Naphthalene	(2)	8.539(0.000)	128	16782	0.022	0.09			0.008
13) Acenaphthylene	(3)			Not Detected					0.003
15) Acenaphthene	(3)			Not Detected					0.003
18) Fluorene	(3)	12.067(0.000)	166	2938	0.005	0.02			0.003
19) Hexachlorobenzene	(4)			Not Detected					0.01
21) Phenanthrene	(4)	13.230(0.000)	178	11673	0.018	0.08			0.008
22) Anthracene	(4)	13.292(0.000)	178	4695	0.007	0.03			0.003
23) Di-n-butylphthalate	(4)			Not Detected					0.05
25) Fluoranthene	(4)	14.845(0.000)	202	8513	0.012	0.05			0.003
26) Pyrene	(5)	15.177(0.000)	202	8565	0.008	0.03			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.384(0.000)	149	209334	0.325	1.37			0.08
28) Benzo(a)anthracene	(5)	17.169(0.000)	228	5160	0.006	0.02			0.003
30) Chrysene	(5)	17.231(0.000)	228	7123	0.008	0.03			0.003
33) Benzo(b)fluoranthene	(6)	19.018(-0.000)	252	6501	0.007	0.03	0.012	B	0.003
34) Benzo(k)fluoranthene	(6)	19.056(-0.000)	252	2530	0.003	0.01	0.011	B	0.003
37) Benzo(a)pyrene	(6)	19.532(0.000)	252	4147	0.005	0.02			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.234(0.000)	276	3254M	0.004	0.02	0.013	B	0.003
40) Dibenz(a,h)anthracene	(6)			Not Detected					0.005
41) Benzo(g,h,i)perylene	(6)	21.630(0.000)	276	3796	0.004	0.02	0.011	B	0.003

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33. Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0206.d Injection date and time: **05-NOV-2018 21:46**
Data file Sample Info. Line: 14T02;9876332;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 238 ml Volume Injected (Vi): 2 ul

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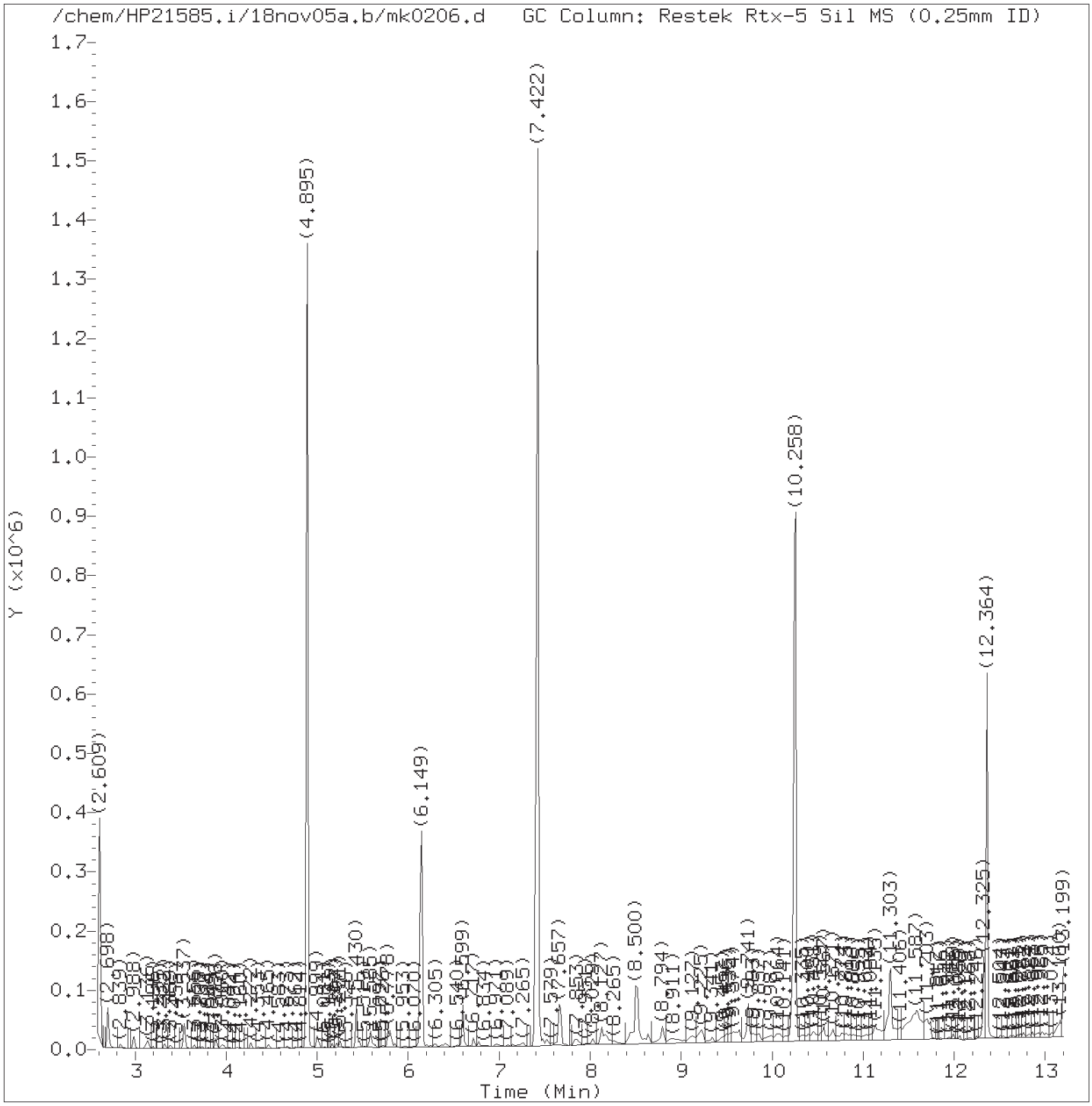
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

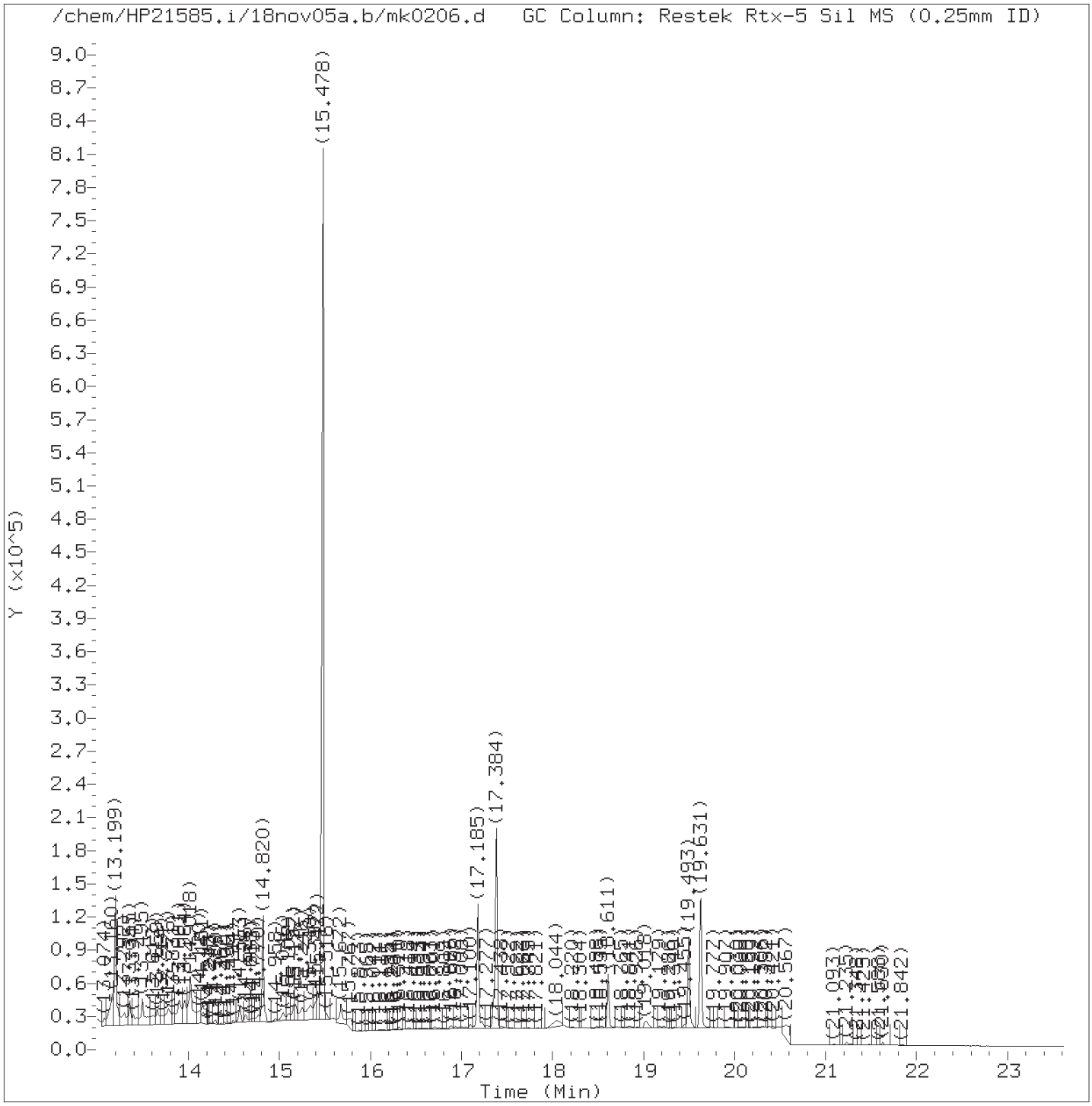
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

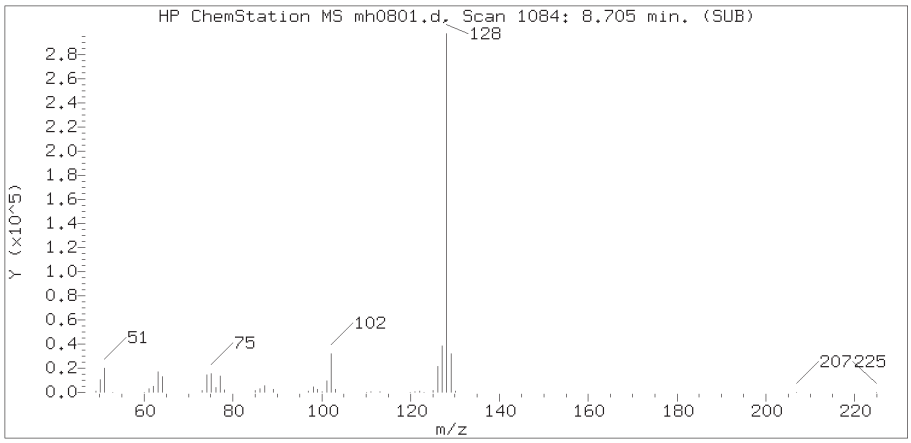
Sample Name: 14T02 Lab Sample ID: 9876332

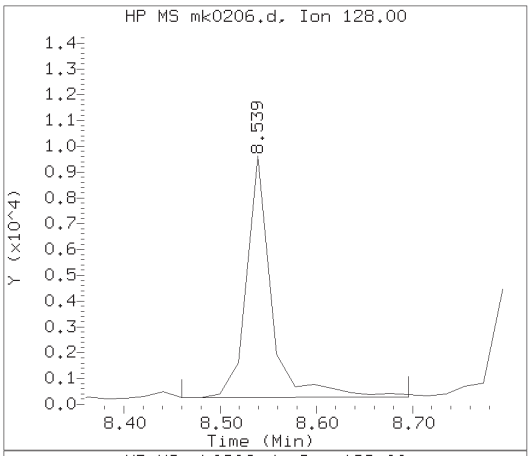
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	55335	0.250
6)*Naphthalene-d8	(2)	8.519	136	164875	0.250
7) Naphthalene	(2)	8.539	128	16782	0.022
10)$1-Methylnaphthalene-d10	(2)	9.741	152	59173	0.197
14)*Acenaphthene-d10	(3)	11.303	164	77264	0.250
18) Fluorene	(3)	12.067	166	2938	0.005
20)*Phenanthrene-d10	(4)	13.199	188	121680	0.250
21) Phenanthrene	(4)	13.230	178	11673	0.018
22) Anthracene	(4)	13.292	178	4695	0.007
24)$Fluoranthene-d10	(4)	14.820	212	108666	0.228
25) Fluoranthene	(4)	14.845	202	8513	0.012
26) Pyrene	(5)	15.177	202	8565	0.008
28) Benzo(a)anthracene	(5)	17.169	228	5160	0.006
29)*Chrysene-d12	(5)	17.185	240	113932	0.250
30) Chrysene	(5)	17.231	228	7123	0.008
31) bis(2-Ethylhexyl)phthalate	(5)	17.384	149	209334	0.325
33) Benzo(b)fluoranthene	(6)	19.018	252	6501	0.007
34) Benzo(k)fluoranthene	(6)	19.056	252	2530	0.003
36)$Benzo(a)pyrene-d12	(6)	19.501	264	79802	0.187
37) Benzo(a)pyrene	(6)	19.532	252	4147	0.005
38)*Perylene-d12	(6)	19.631	264	116070	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.235	276	3254M	0.004
41) Benzo(g,h,i)perylene	(6)	21.630	276	3796	0.004

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

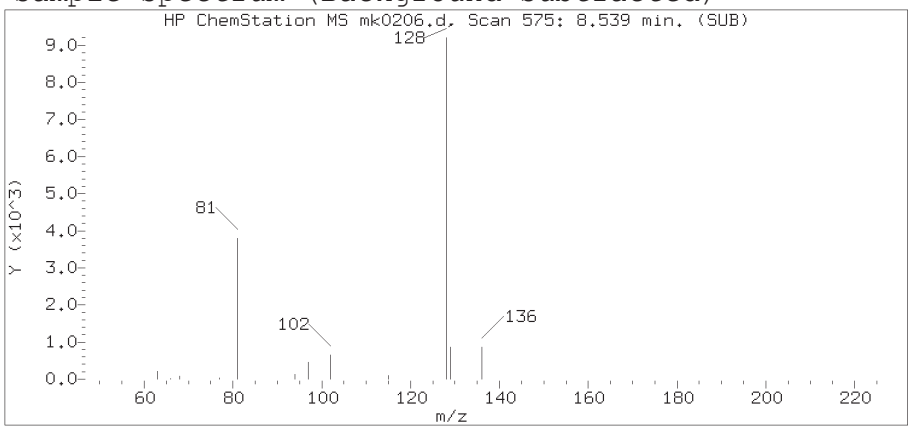
Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

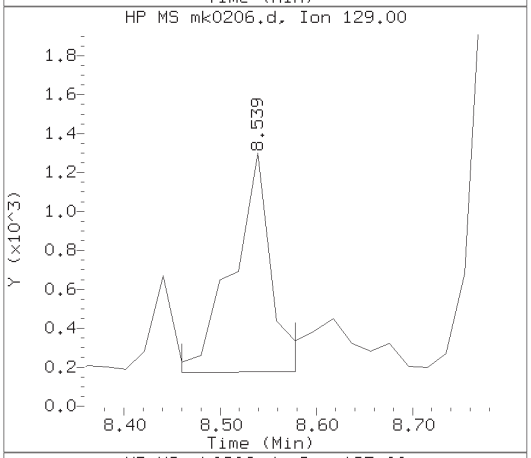
Reference Standard Spectrum for Naphthalene



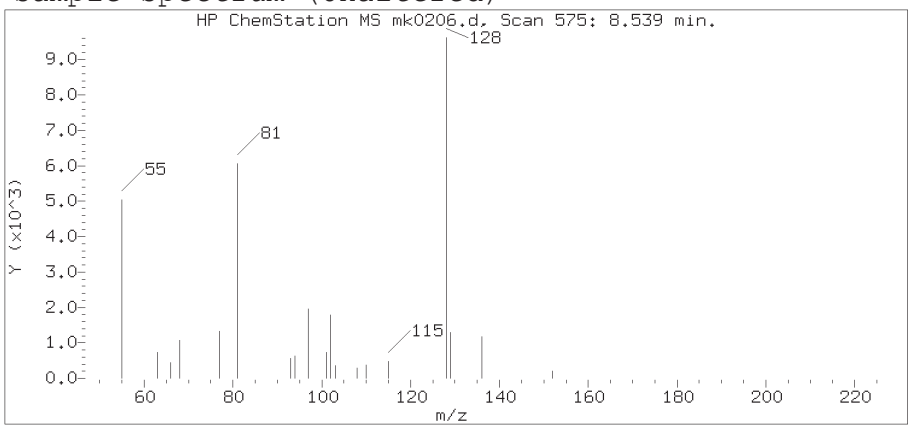


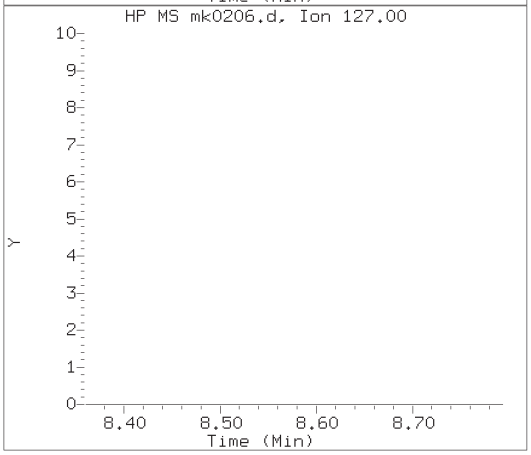
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

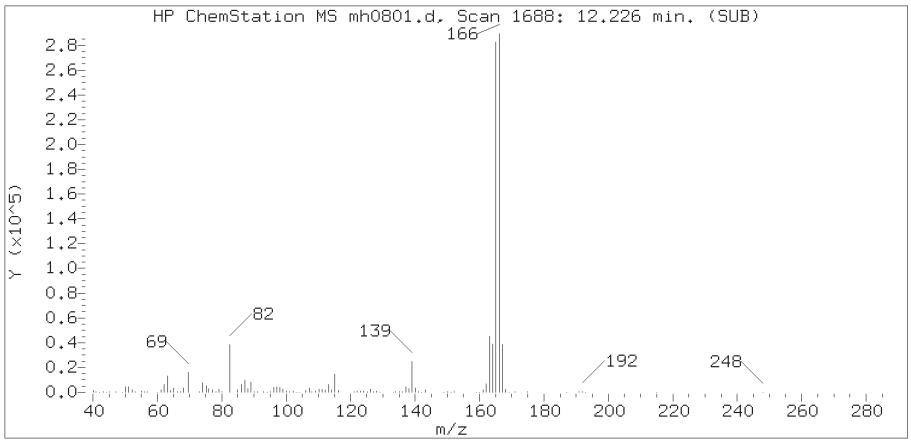
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

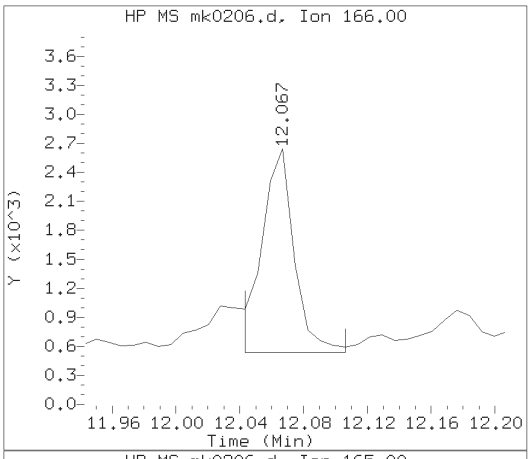
Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 7
Compound Name	: Naphthalene
Scan Number	: 575
Retention Time (minutes)	: 8.539
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 16782
On-column Amount (ng/ul)	: 0.0221

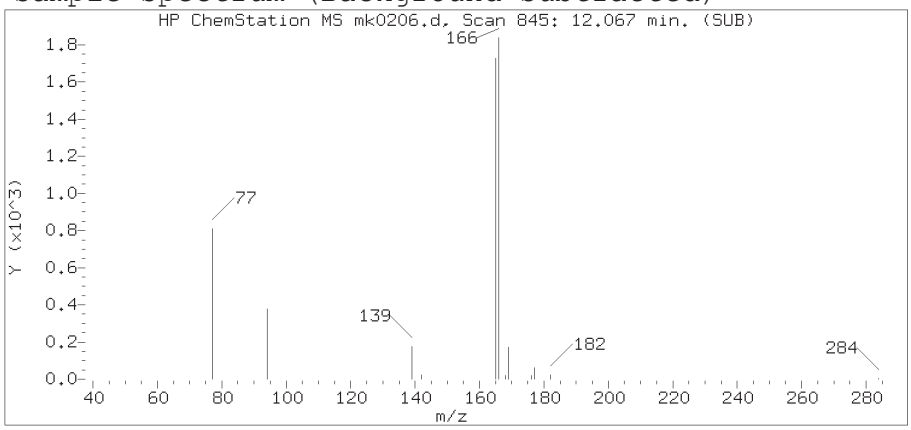
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

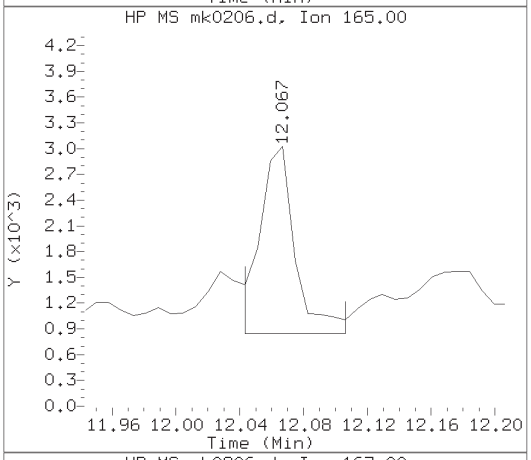
Reference Standard Spectrum for Fluorene



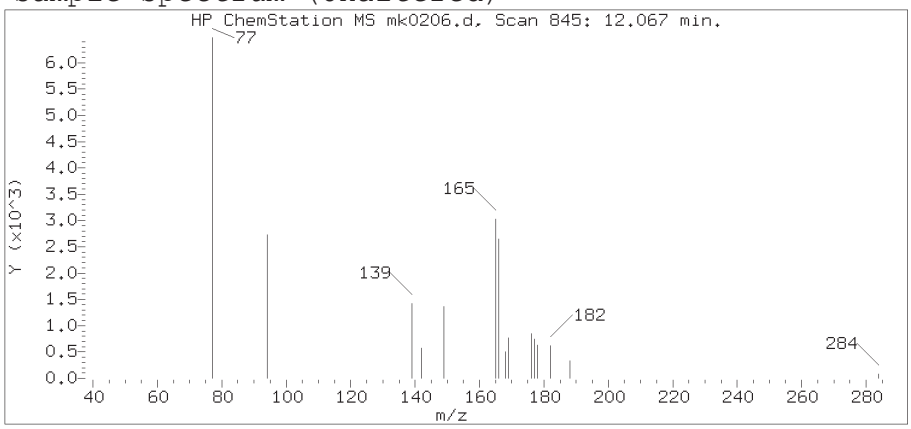


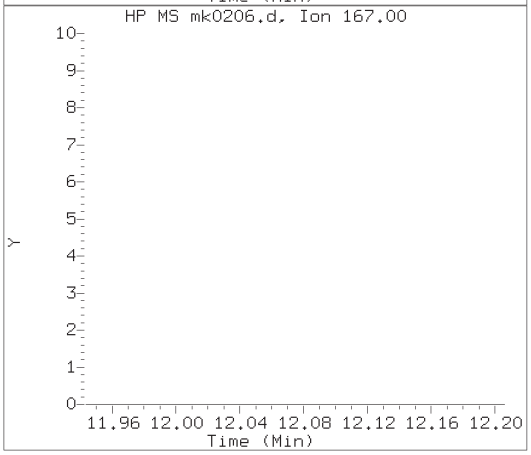
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 18
Compound Name	: Fluorene
Scan Number	: 845
Retention Time (minutes)	: 12.067
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 2938
On-column Amount (ng/ul)	: 0.0051

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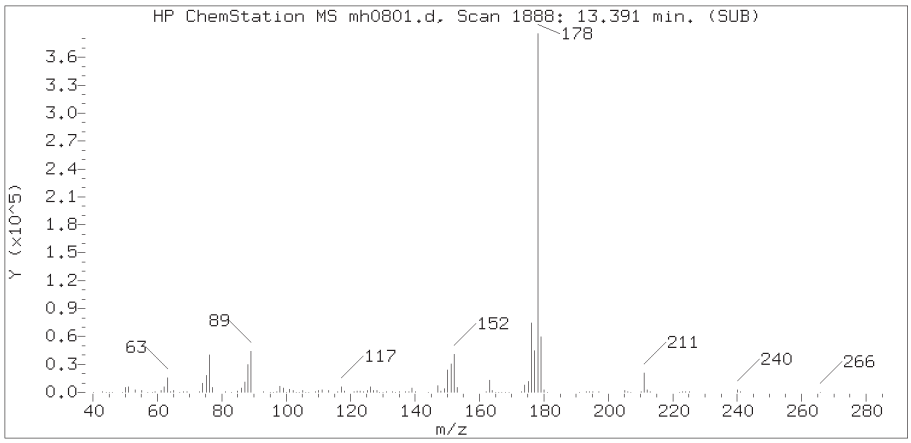
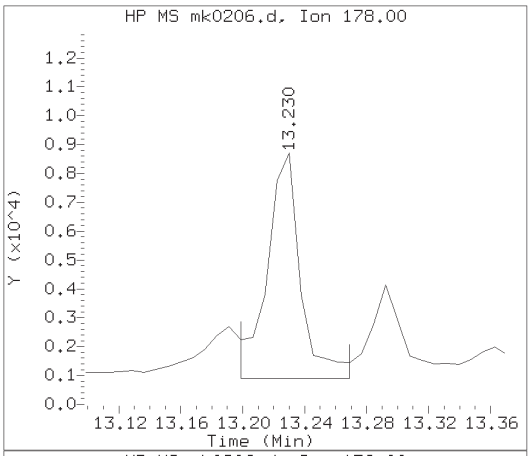
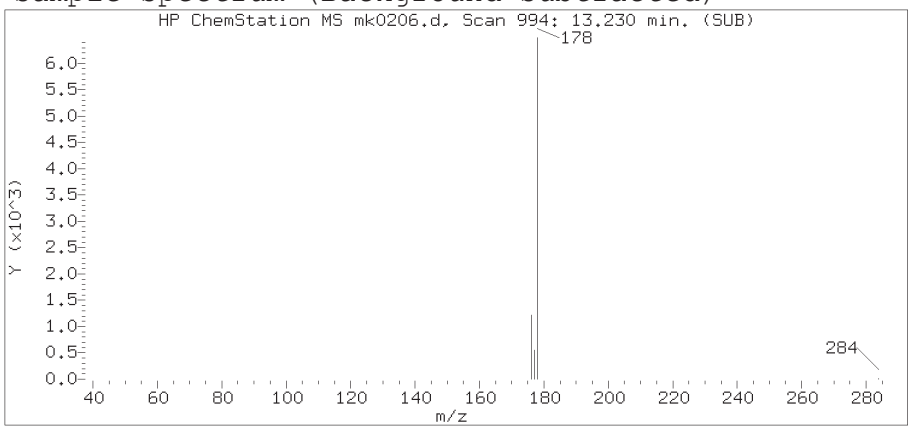
Target 3.5 esignature user ID: art12405

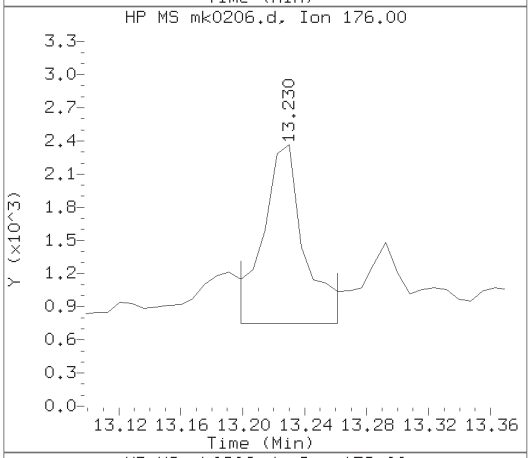
Reference Standard Spectrum for Phenanthrene



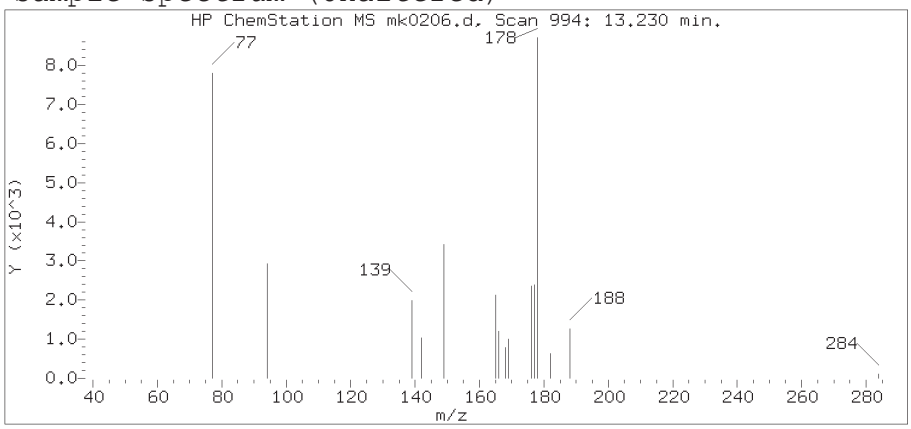


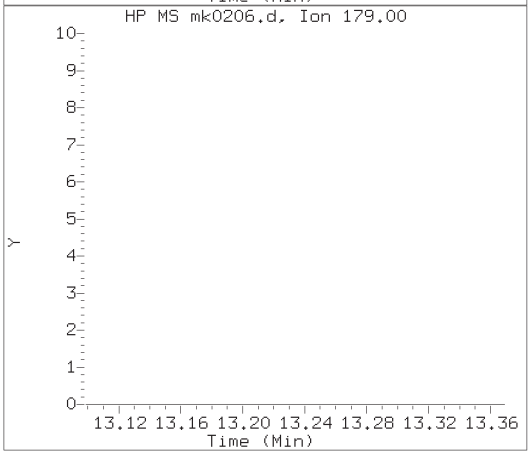
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

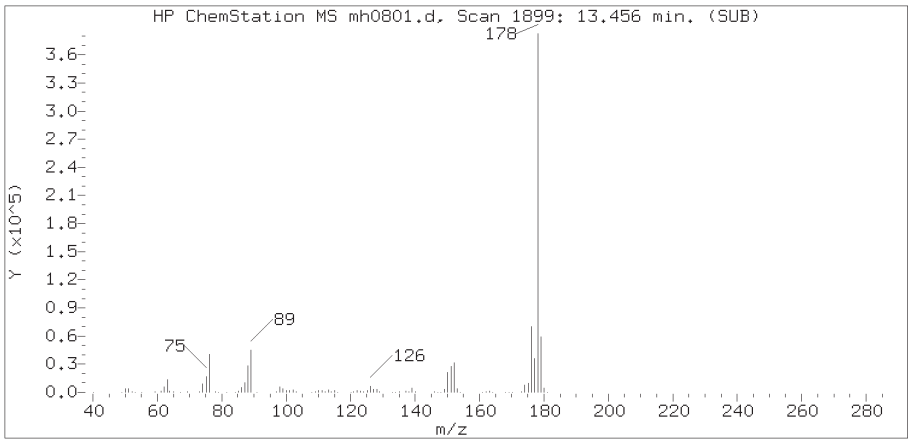
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

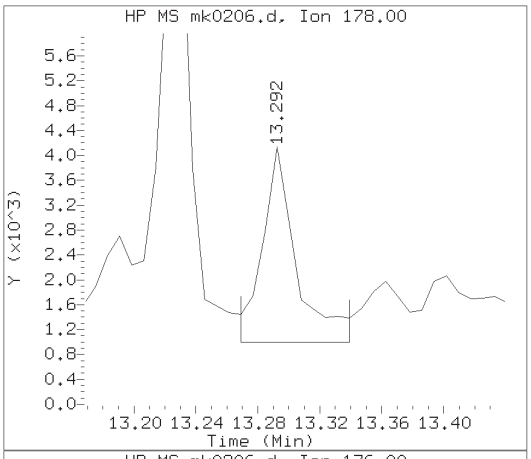
Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 21
Compound Name	: Phenanthrene
Scan Number	: 994
Retention Time (minutes)	: 13.230
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 11673
On-column Amount (ng/ul)	: 0.0179

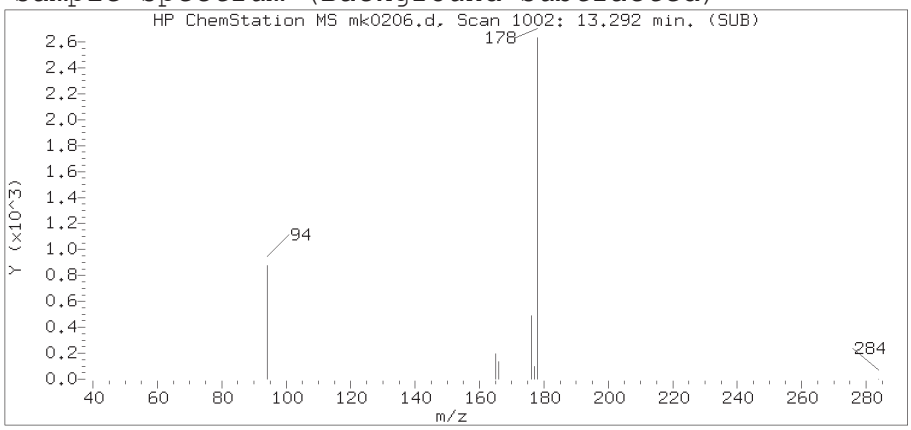
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

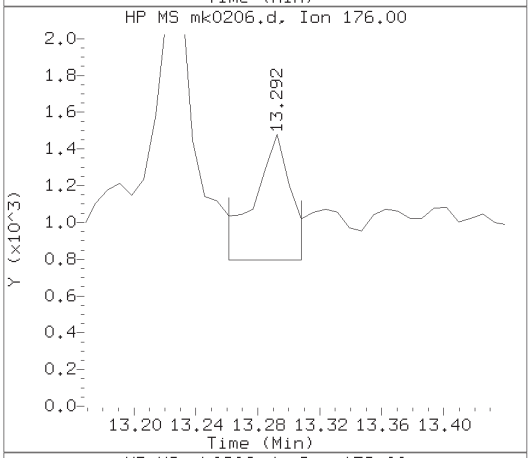
Reference Standard Spectrum for Anthracene



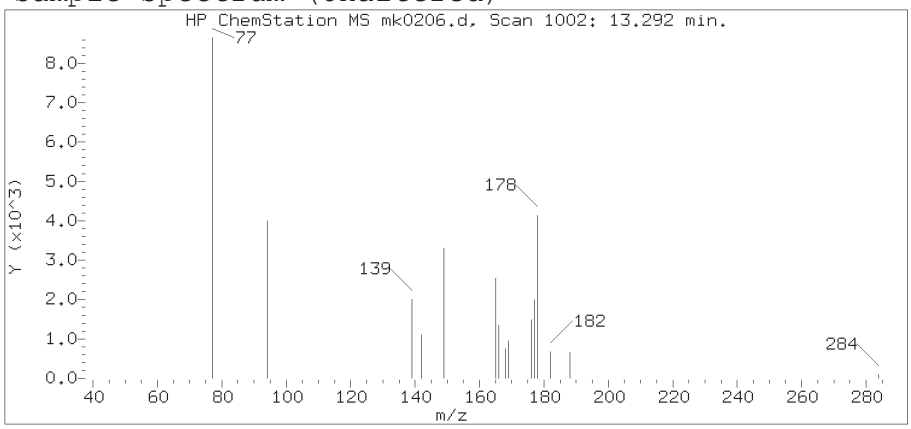


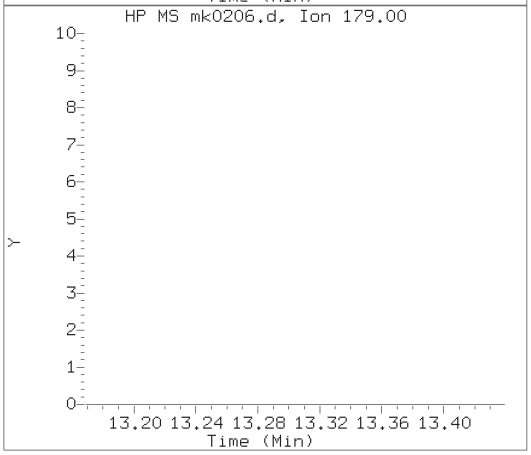
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 22
Compound Name	: Anthracene
Scan Number	: 1002
Retention Time (minutes)	: 13.292
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 4695
On-column Amount (ng/ul)	: 0.0073

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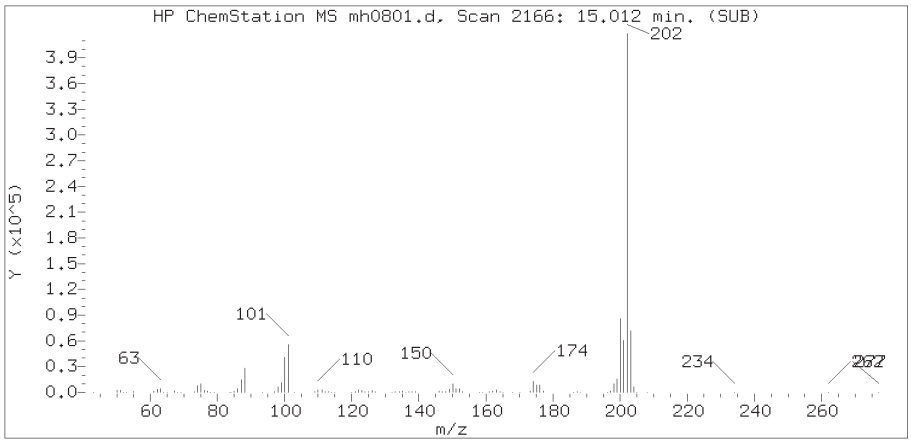
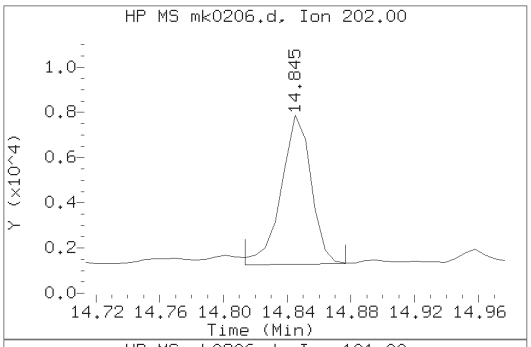
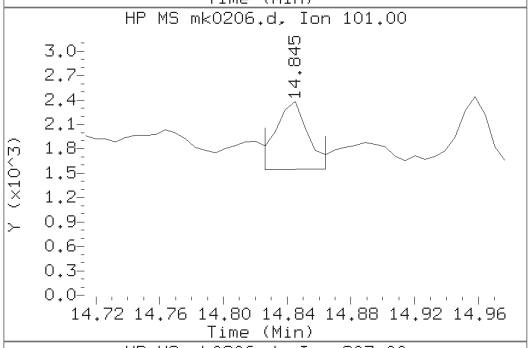
Target 3.5 esignature user ID: art12405

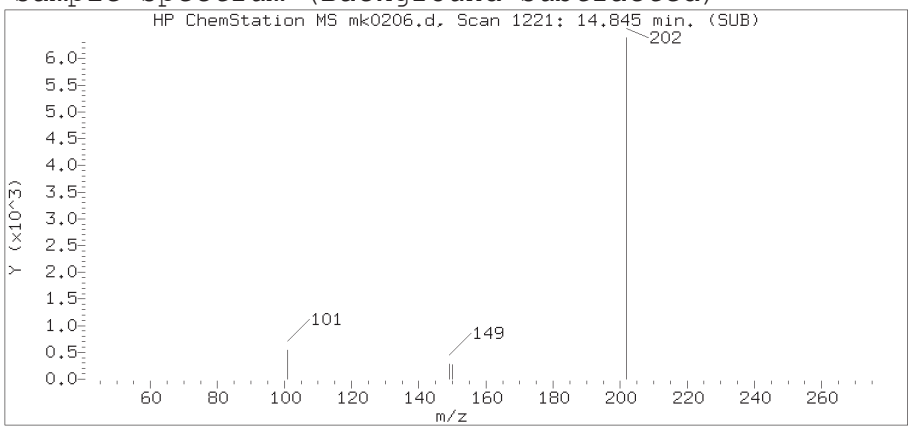
Reference Standard Spectrum for Fluoranthene

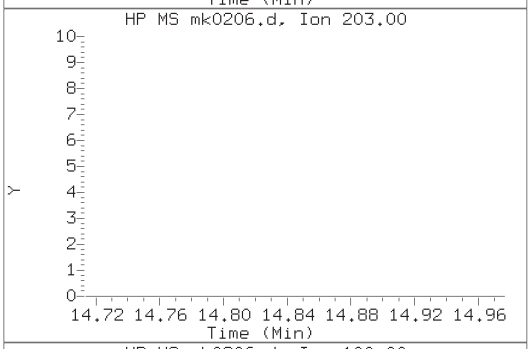




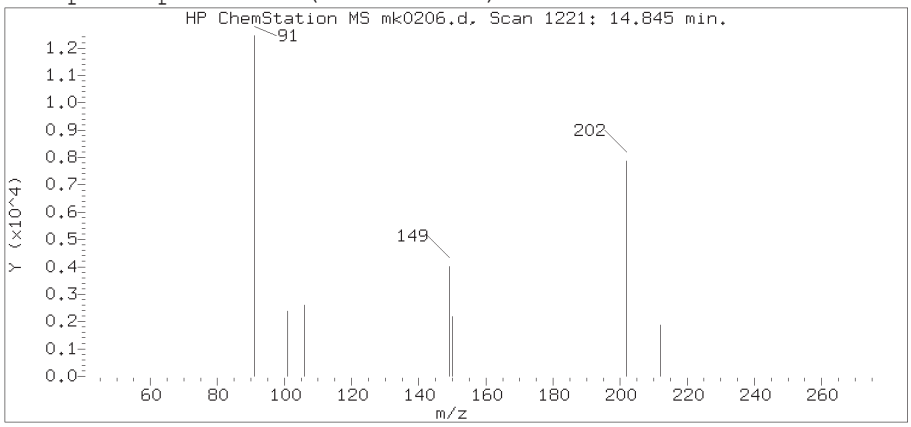


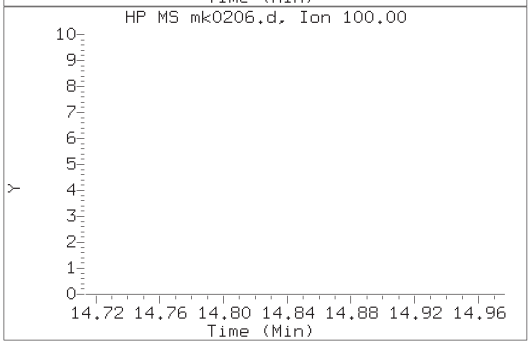
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 25
Compound Name	: Fluoranthene
Scan Number	: 1221
Retention Time (minutes)	: 14.845
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 8513
On-column Amount (ng/ul)	: 0.0117

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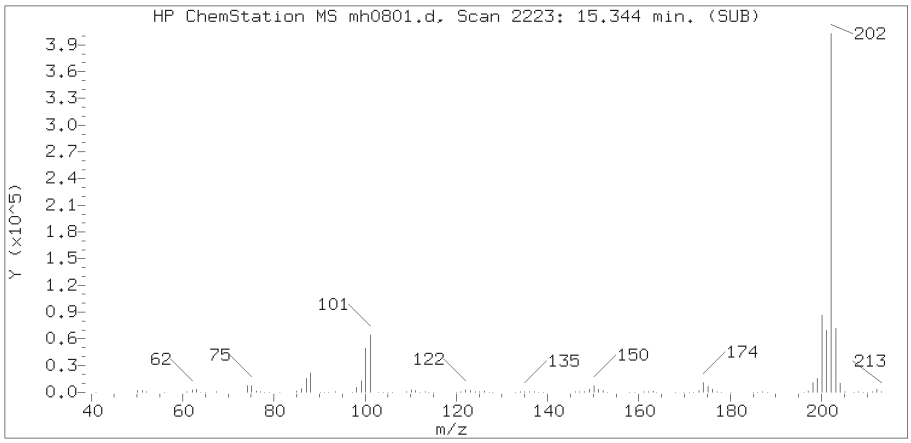
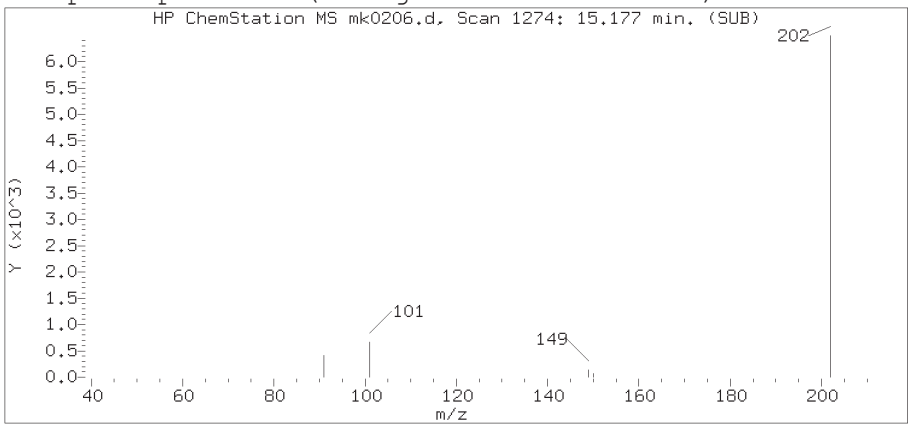
Target 3.5 esignature user ID: art12405

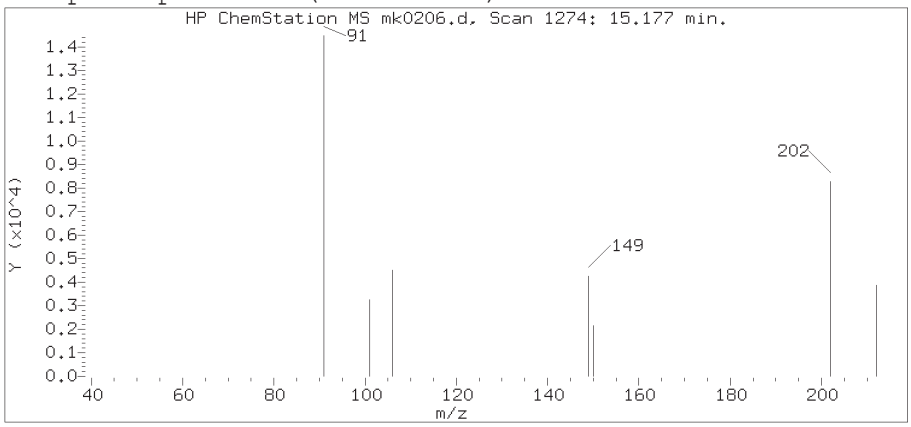
Reference Standard Spectrum for Pyrene

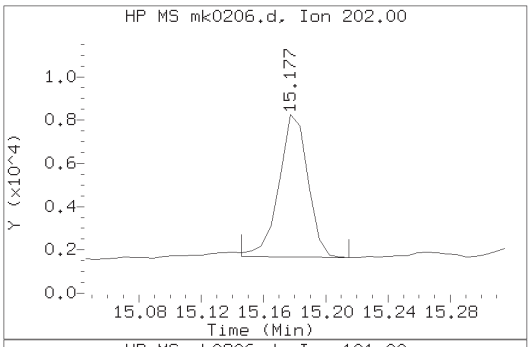


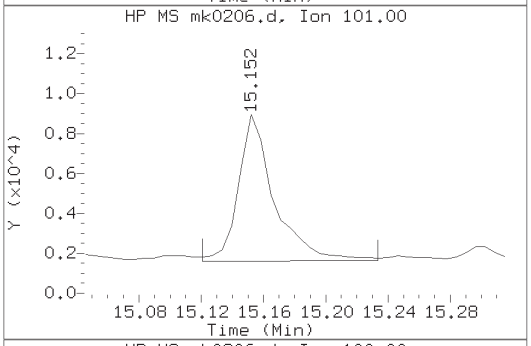
Sample Spectrum (Background Subtracted)

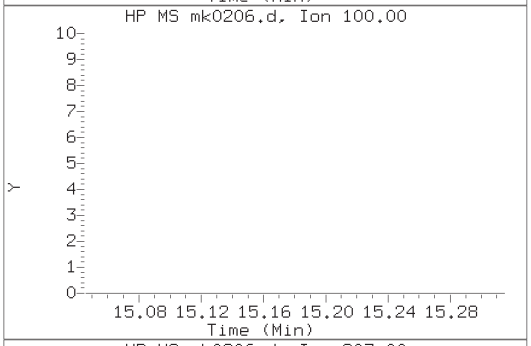


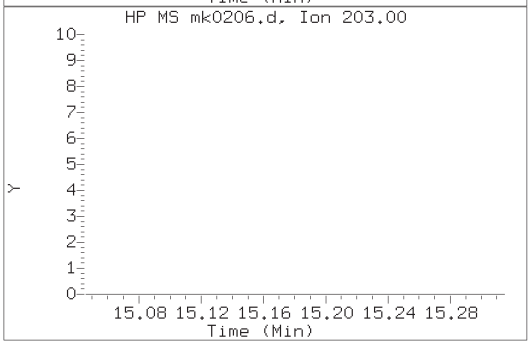
Sample Spectrum (Unaltered)











Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 26
Compound Name	: Pyrene
Scan Number	: 1274
Retention Time (minutes)	: 15.177
Relative Retention Time	: 0.00036
Quant Ion	: 202.00
Area (flag)	: 8565
On-column Amount (ng/ul)	: 0.0083

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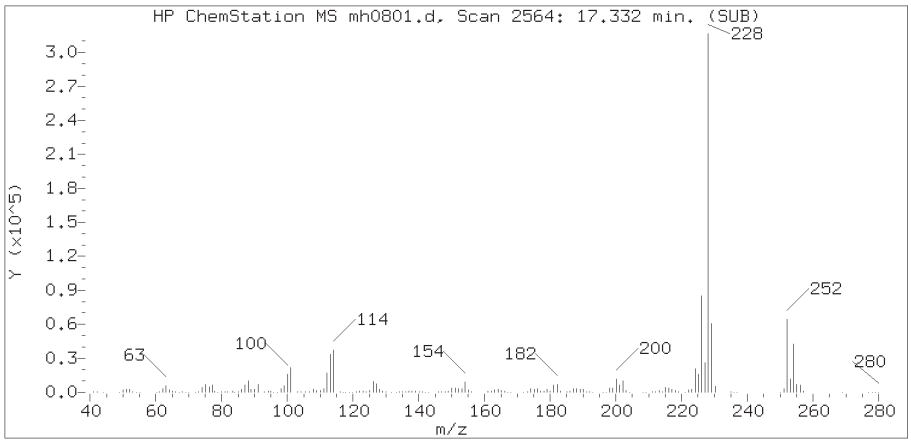
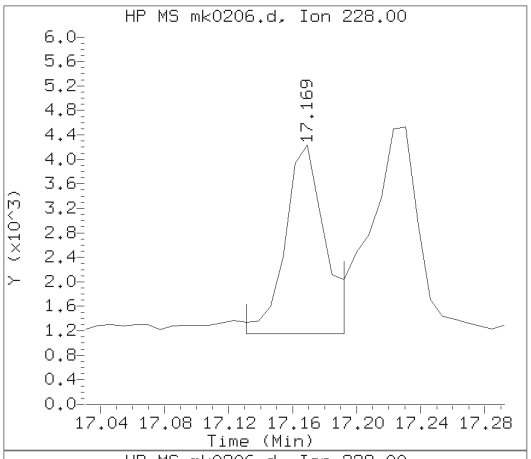
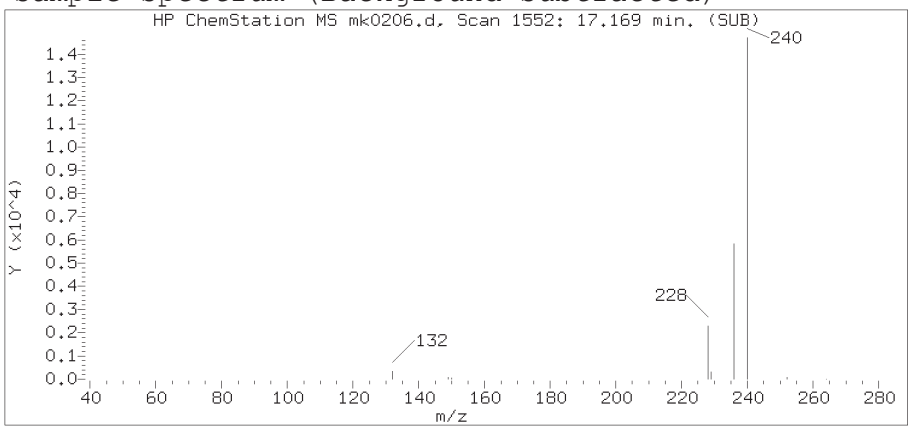
Target 3.5 esignature user ID: art12405

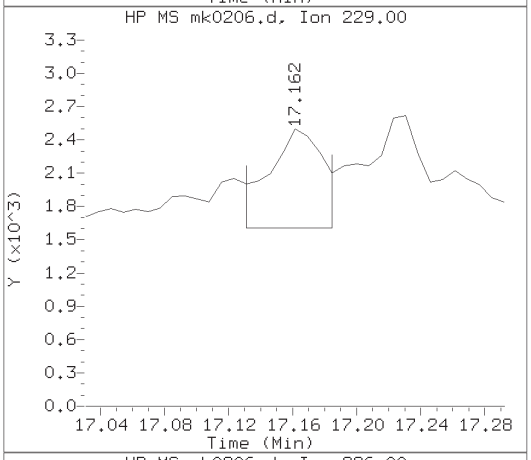
Reference Standard Spectrum for Benzo(a)anthracene



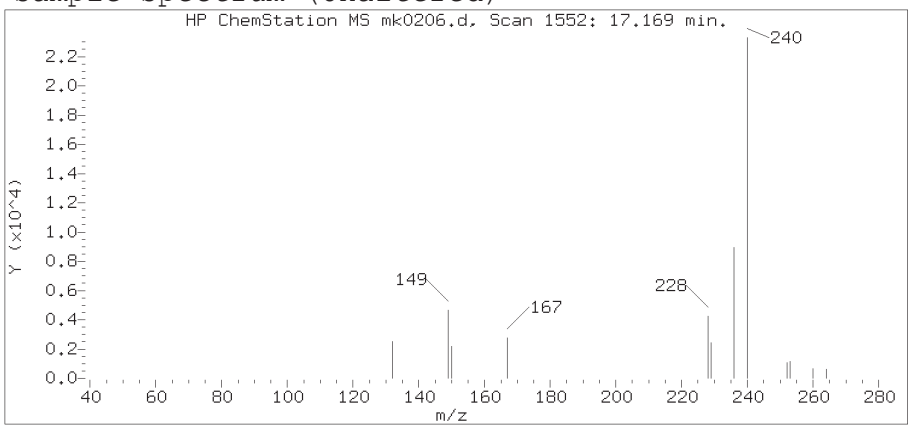


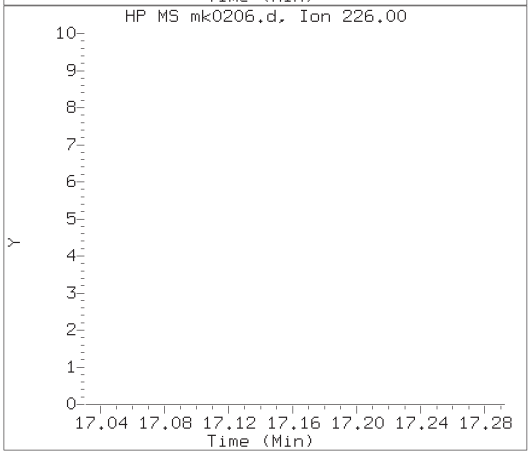
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 28
Compound Name	: Benzo(a)anthracene
Scan Number	: 1552
Retention Time (minutes)	: 17.169
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 5160
On-column Amount (ng/ul)	: 0.0058

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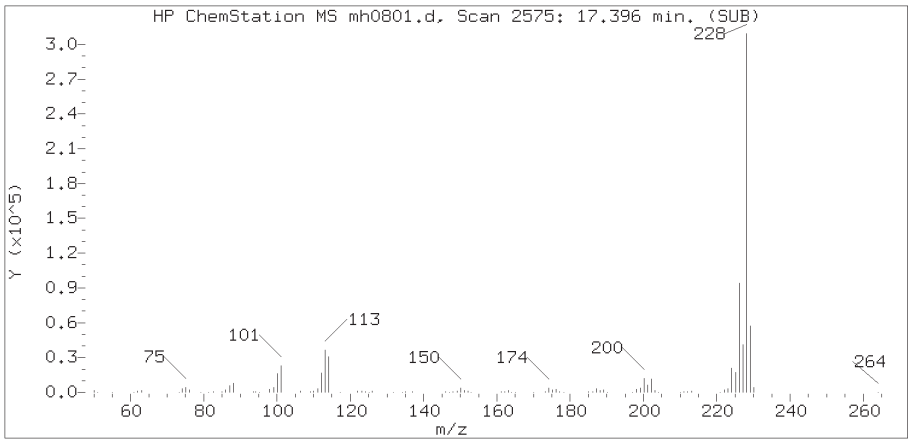
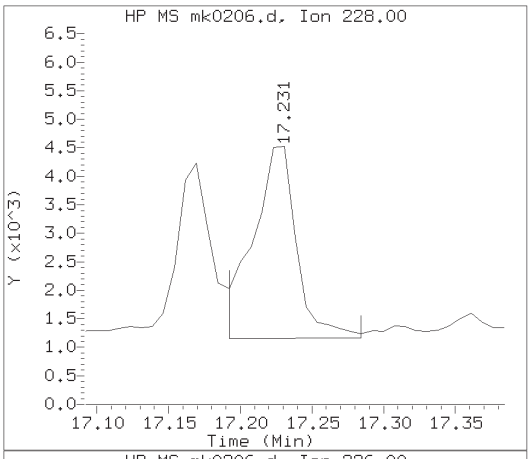
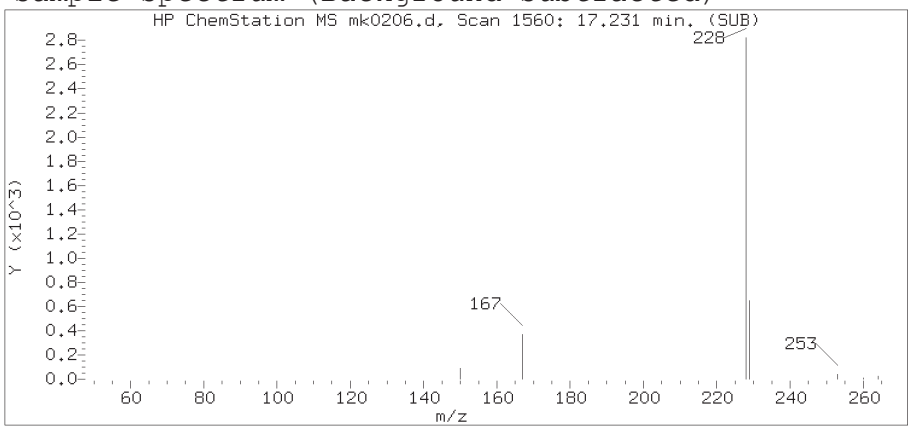
Target 3.5 esignature user ID: art12405

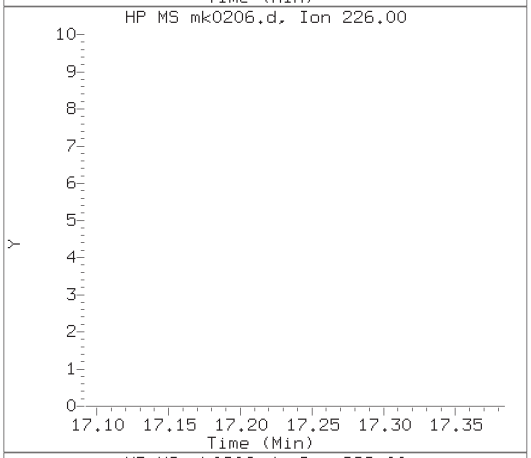
Reference Standard Spectrum for Chrysene



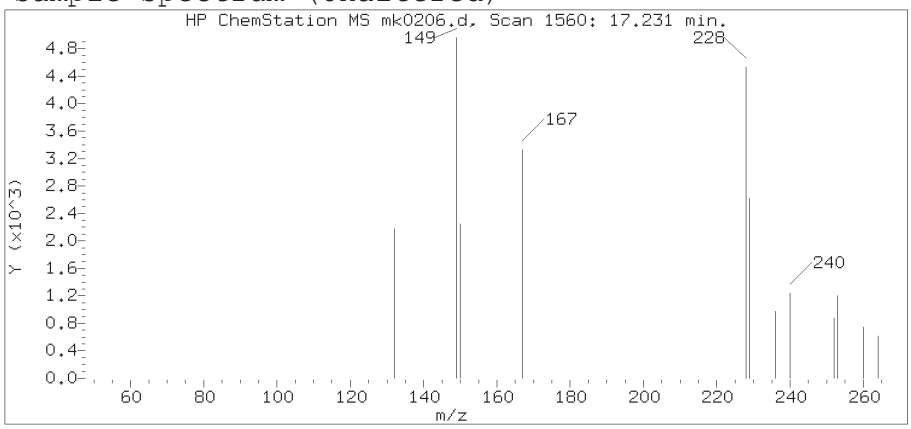


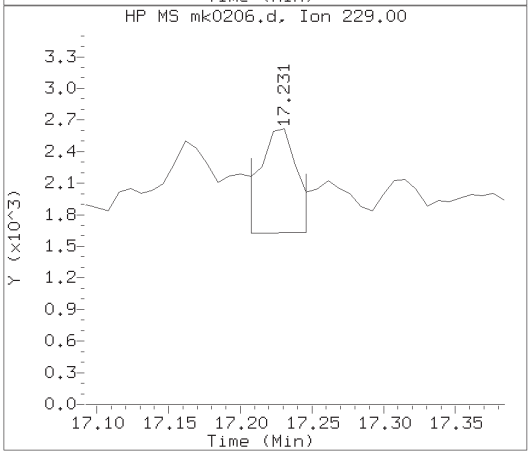
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 30
Compound Name	: Chrysene
Scan Number	: 1560
Retention Time (minutes)	: 17.231
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 7123
On-column Amount (ng/ul)	: 0.0079

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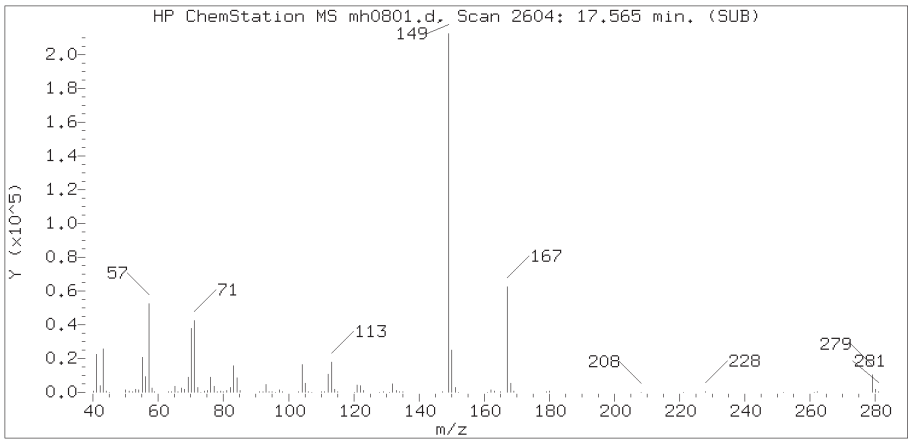
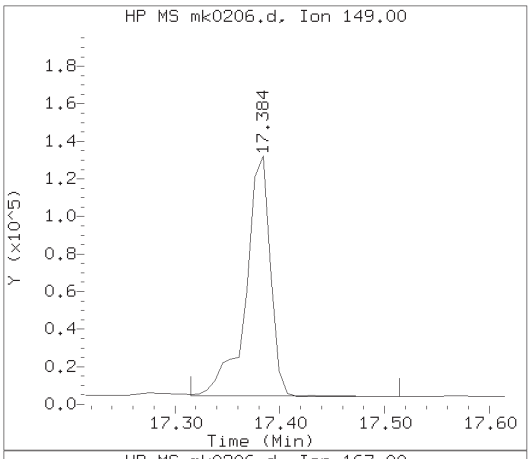
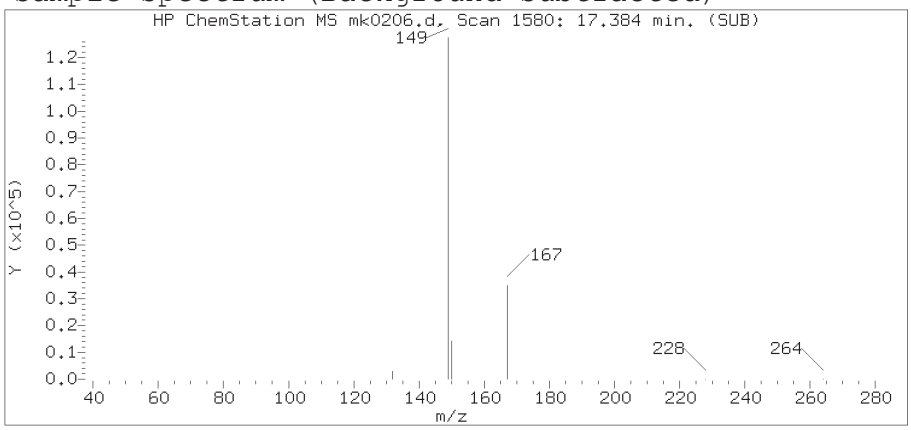
Target 3.5 esignature user ID: art12405

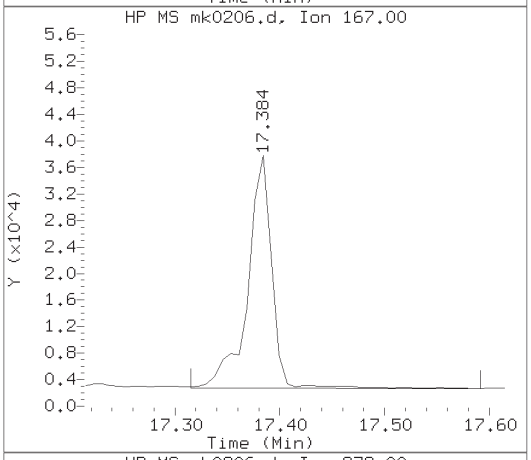
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



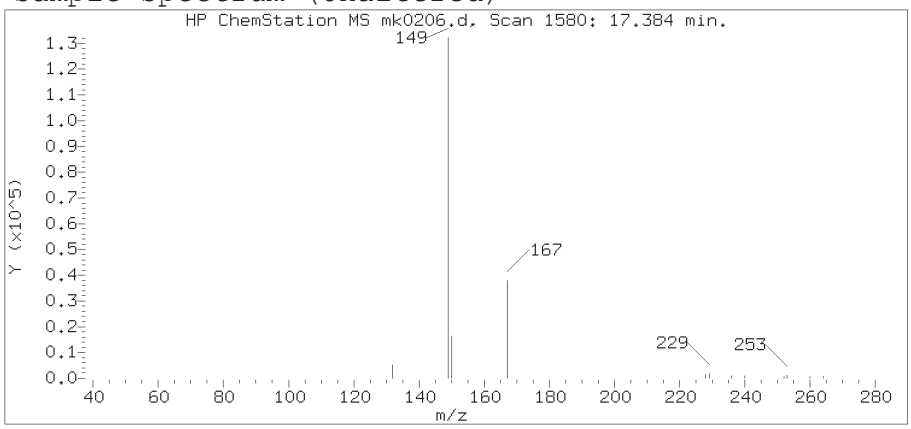


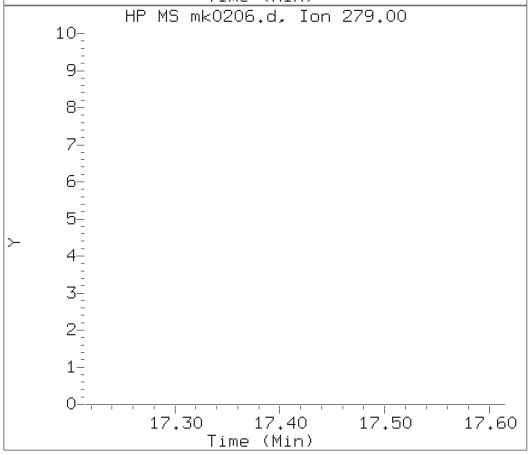
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 31
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1580
Retention Time (minutes)	: 17.384
Relative Retention Time	: 0.00000
Quant Ion	: 149.00
Area (flag)	: 209334
On-column Amount (ng/ul)	: 0.3251

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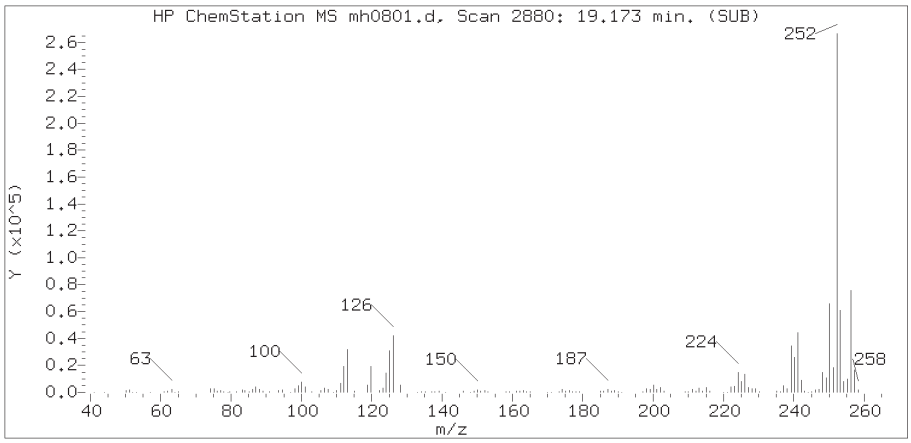
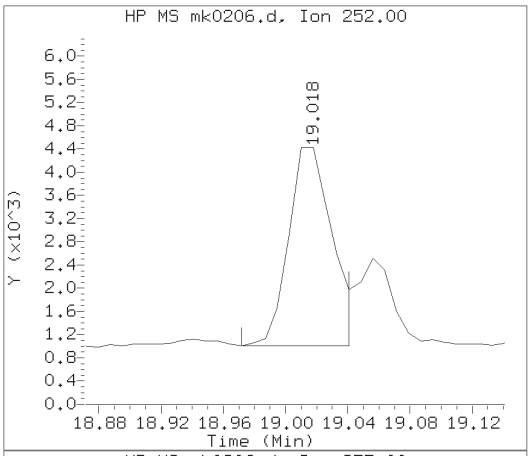
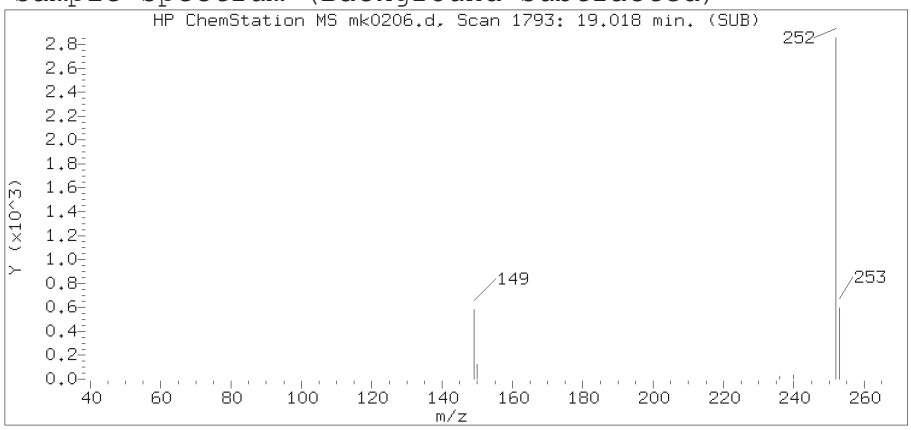
Target 3.5 esignature user ID: art12405

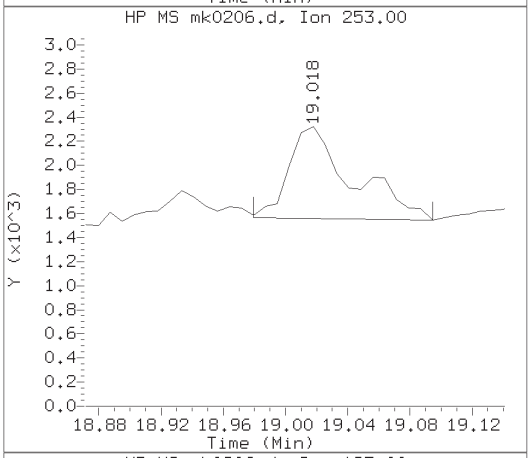
Reference Standard Spectrum for Benzo(b)fluoranthene



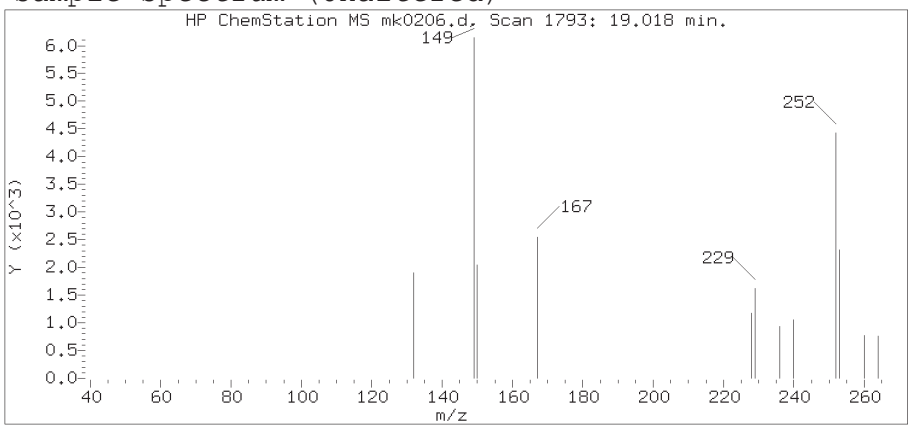


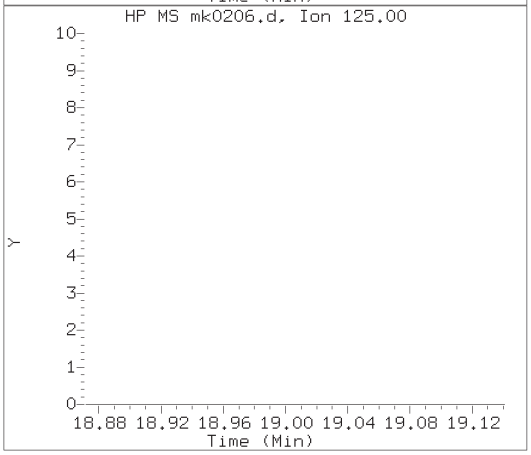
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 33
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1793
Retention Time (minutes)	: 19.018
Relative Retention Time	:-0.00000
Quant Ion	: 252.00
Area (flag)	: 6501
On-column Amount (ng/ul)	: 0.0071

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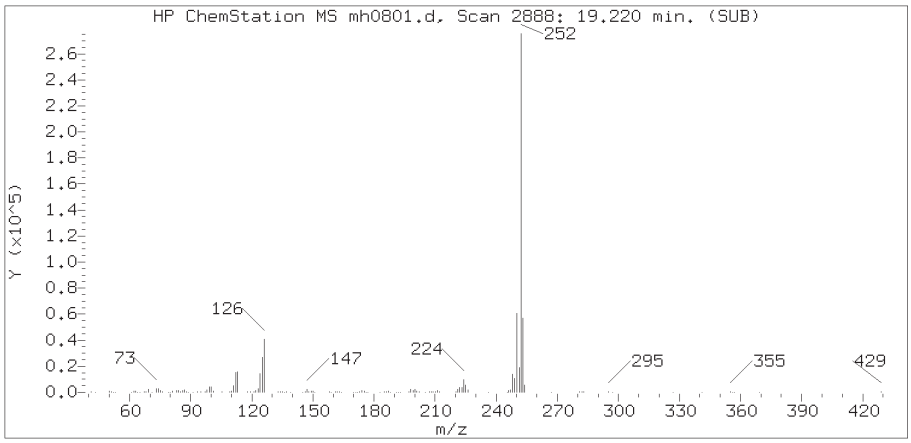
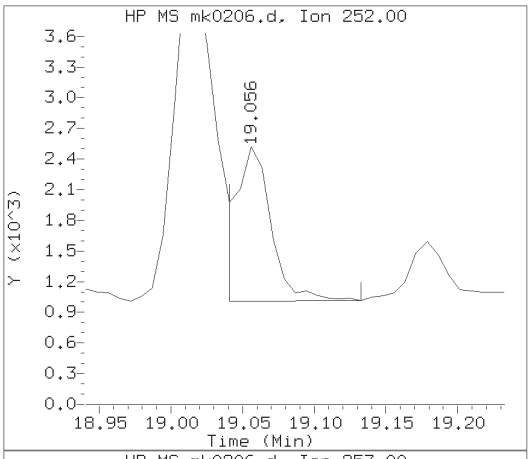
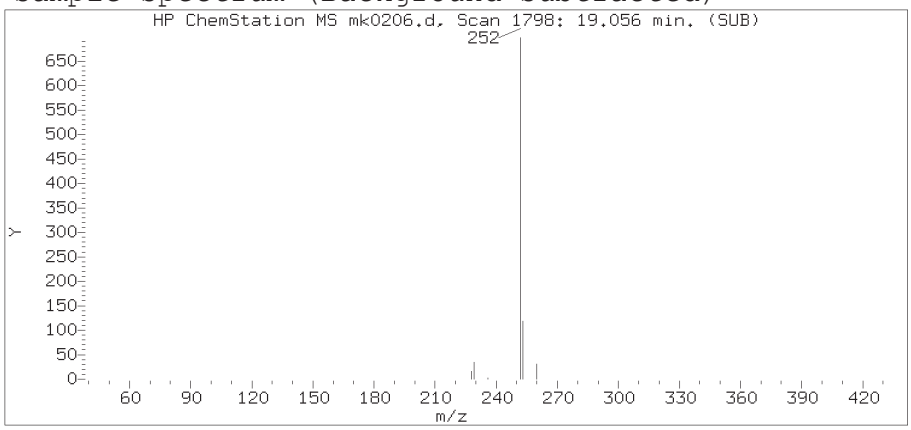
Target 3.5 esignature user ID: art12405

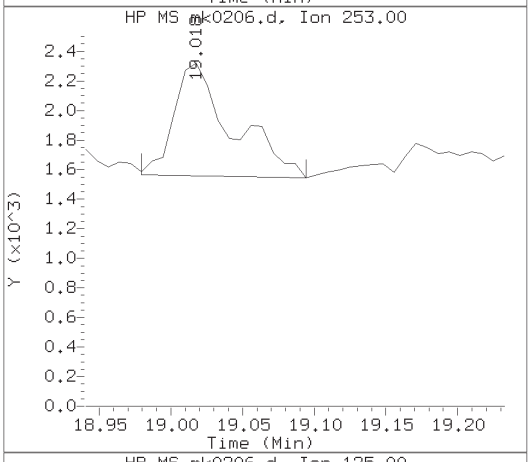
Reference Standard Spectrum for Benzo(k)fluoranthene



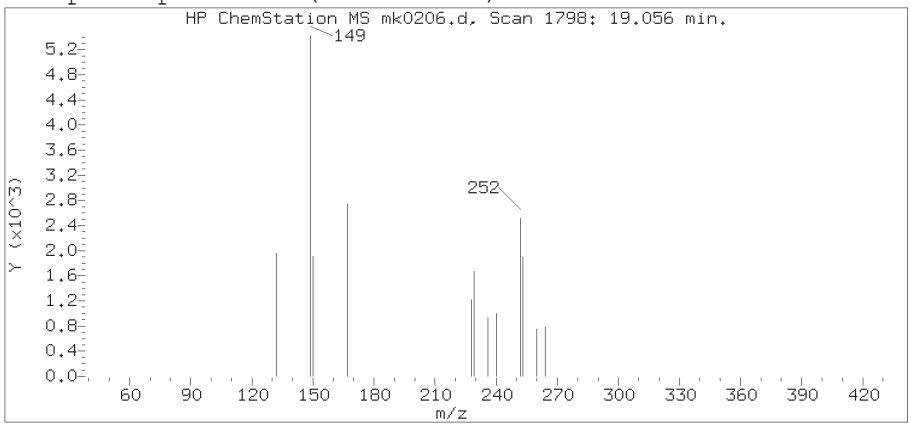


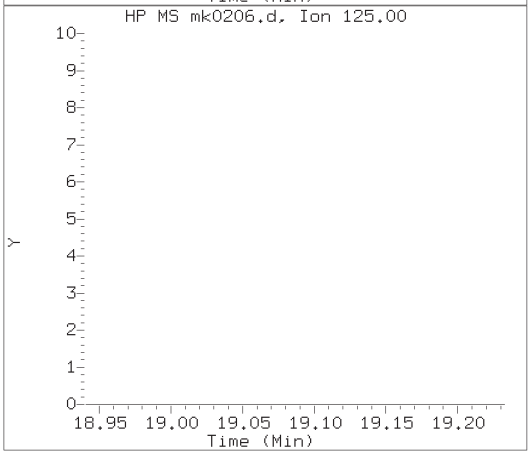
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

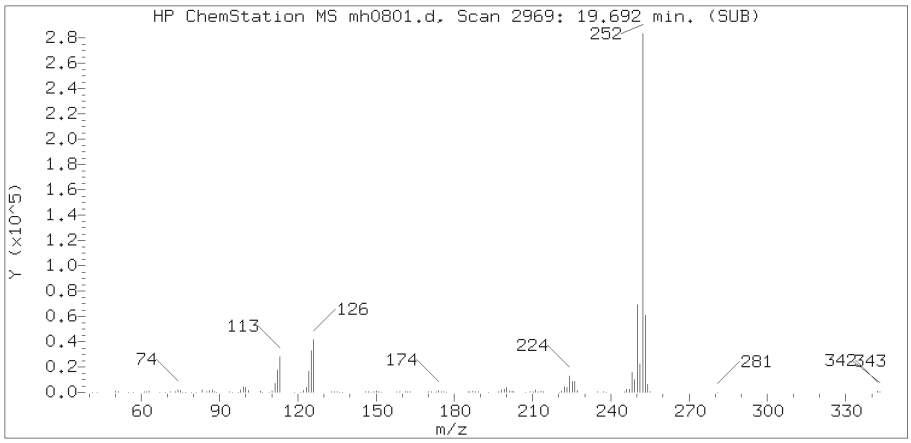
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

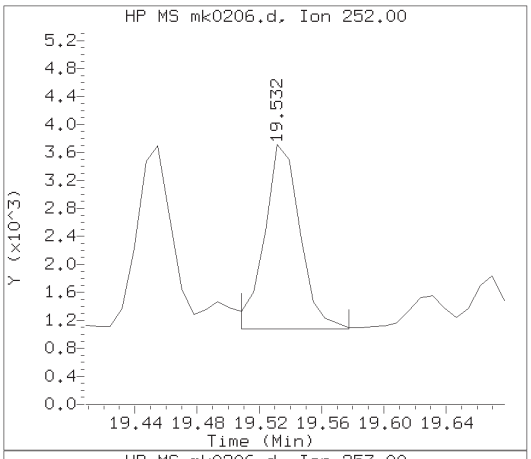
Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 34
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1798
Retention Time (minutes)	: 19.056
Relative Retention Time	:-0.00000
Quant Ion	: 252.00
Area (flag)	: 2530
On-column Amount (ng/ul)	: 0.0028

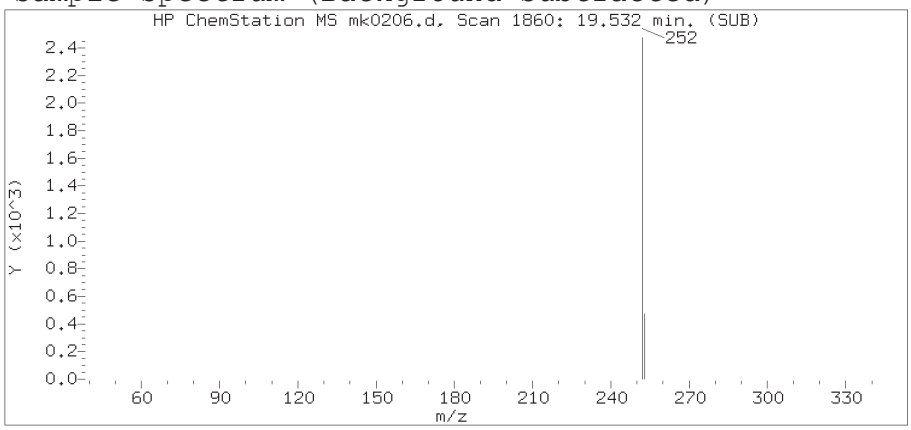
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

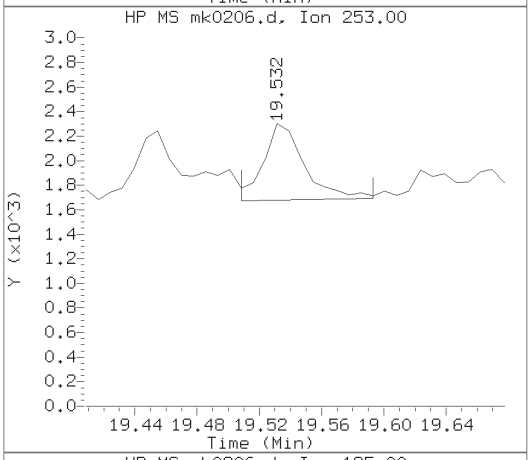
Reference Standard Spectrum for Benzo(a)pyrene



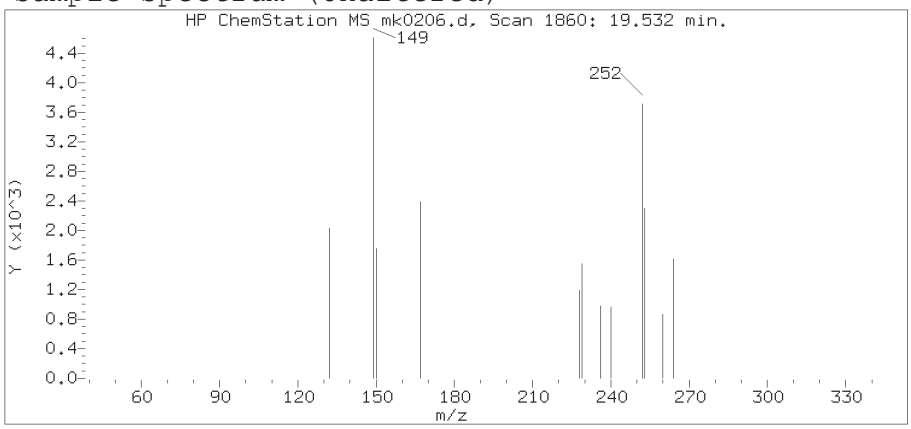


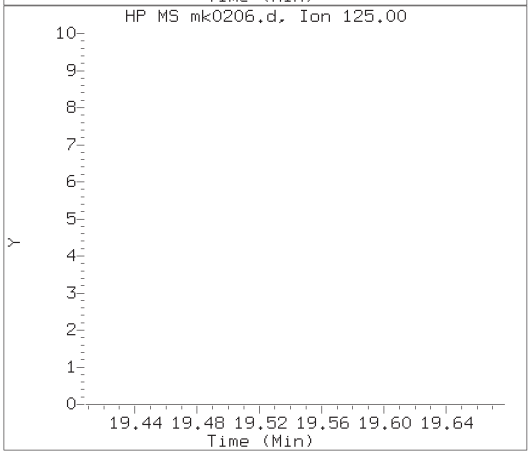
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

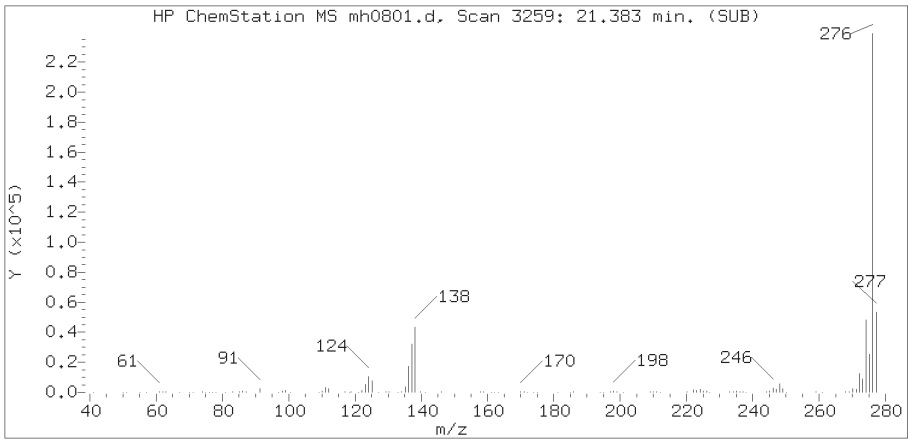
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

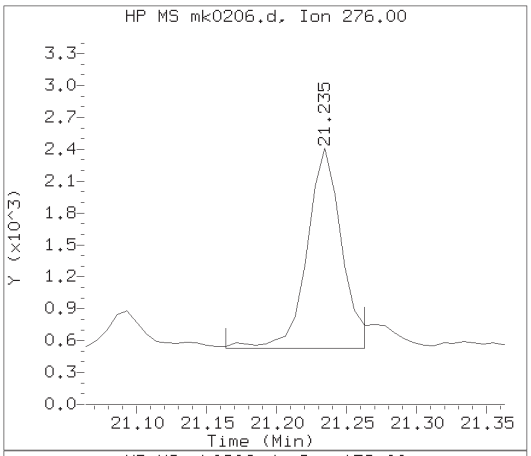
Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 37
Compound Name	: Benzo(a)pyrene
Scan Number	: 1860
Retention Time (minutes)	: 19.532
Relative Retention Time	: 0.00039
Quant Ion	: 252.00
Area (flag)	: 4147
On-column Amount (ng/ul)	: 0.0047

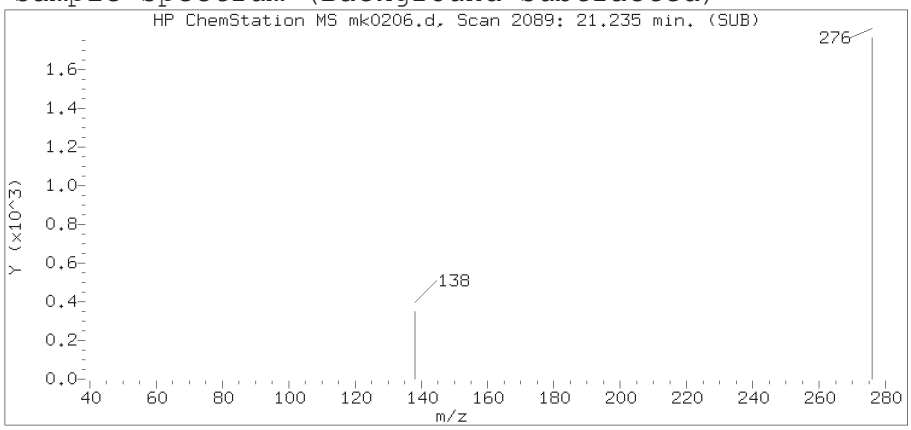
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

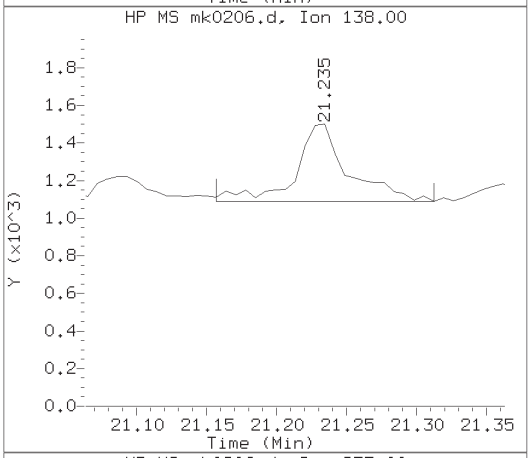
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



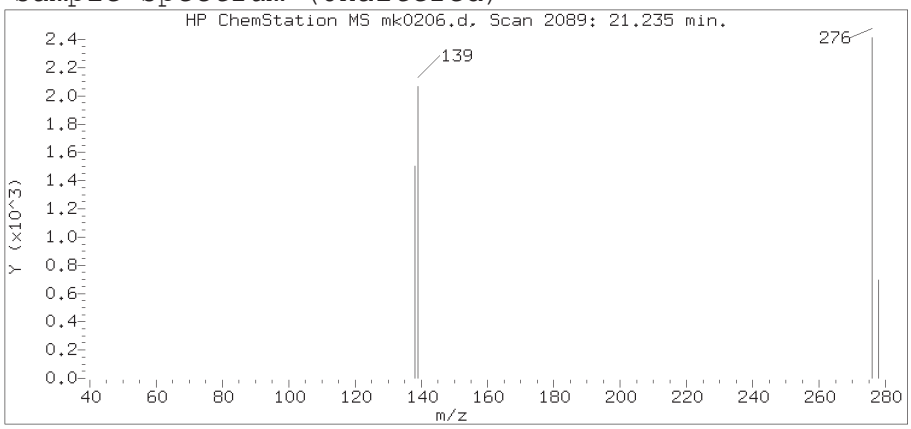


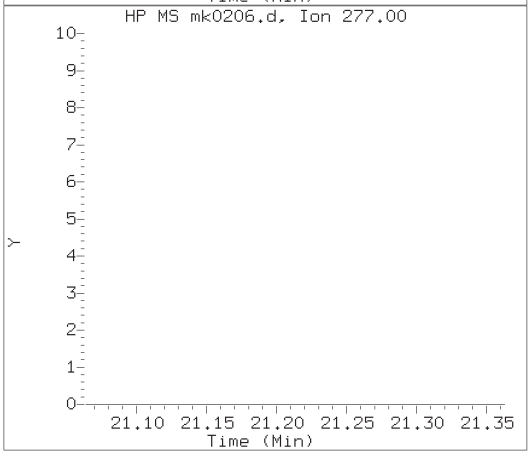
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

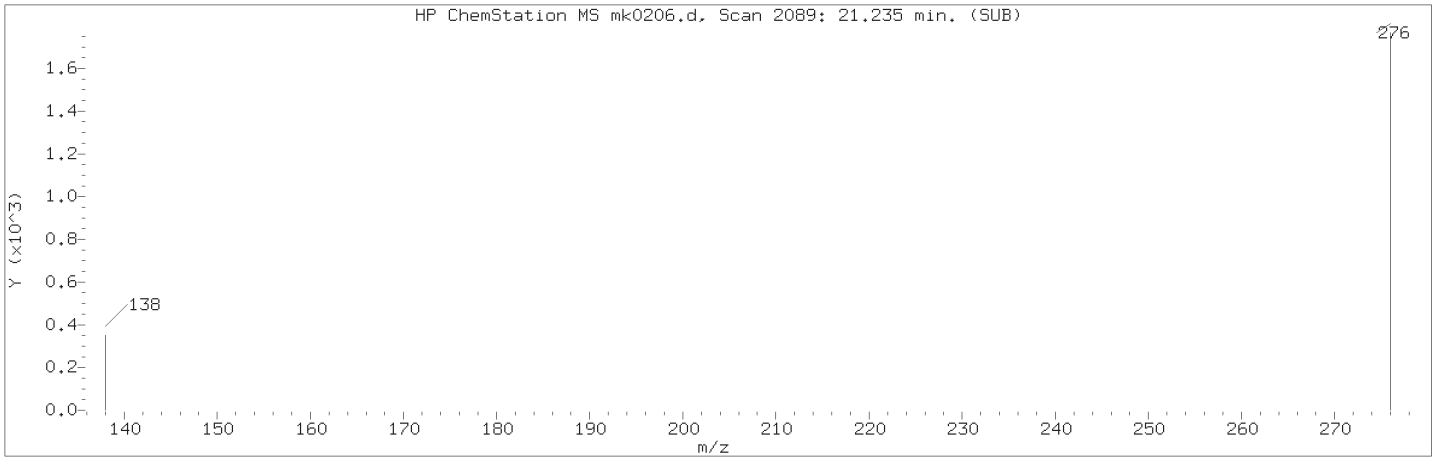
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

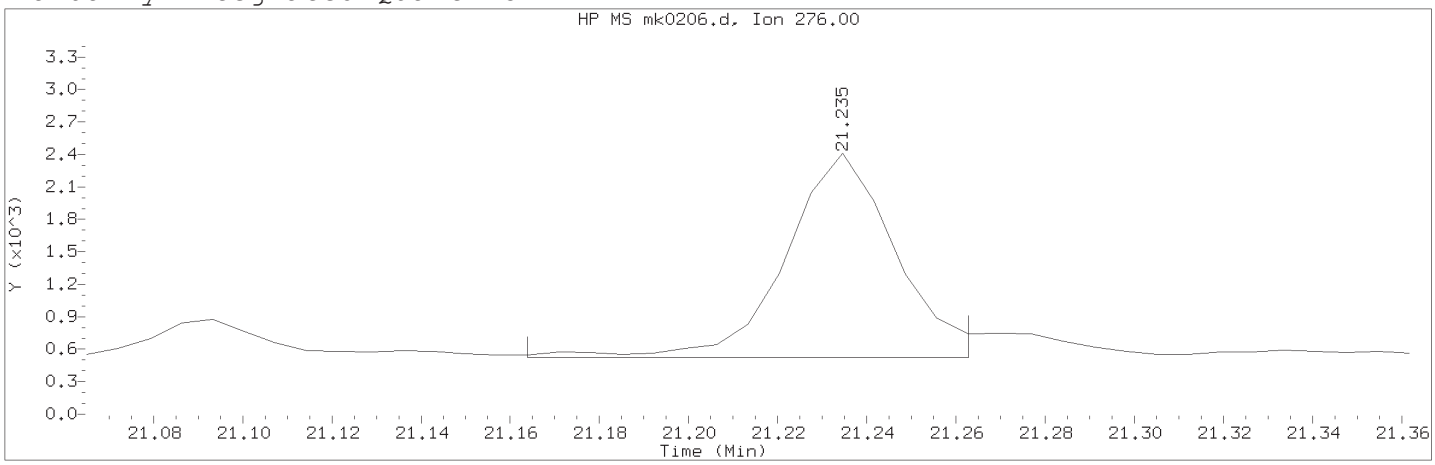
Compound Number	: 39
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2089
Retention Time (minutes)	: 21.235
Relative Retention Time	: 0.00000
Quant Ion	: 276.00
Area (flag)	: 3254M
On-column Amount (ng/ul)	: 0.0041

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

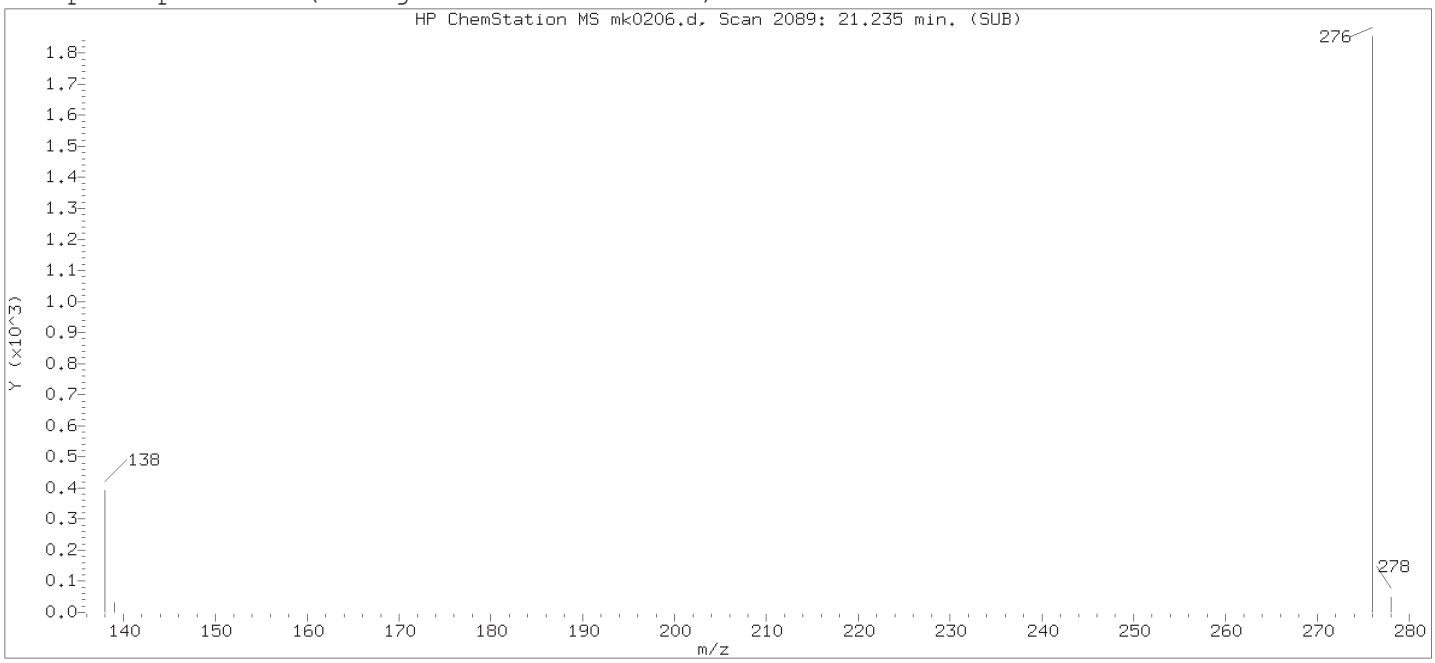
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2089
Retention Time (minutes) : 21.235
Quant Ion : 276.00
Area (flag) : 3254M
On-column Amount (ng/ul) : 0.0041
Integration start scan : 2078 Integration stop scan: 2092
Y at integration start : 525 Y at integration end: 525

Reason for manual integration: improper integration

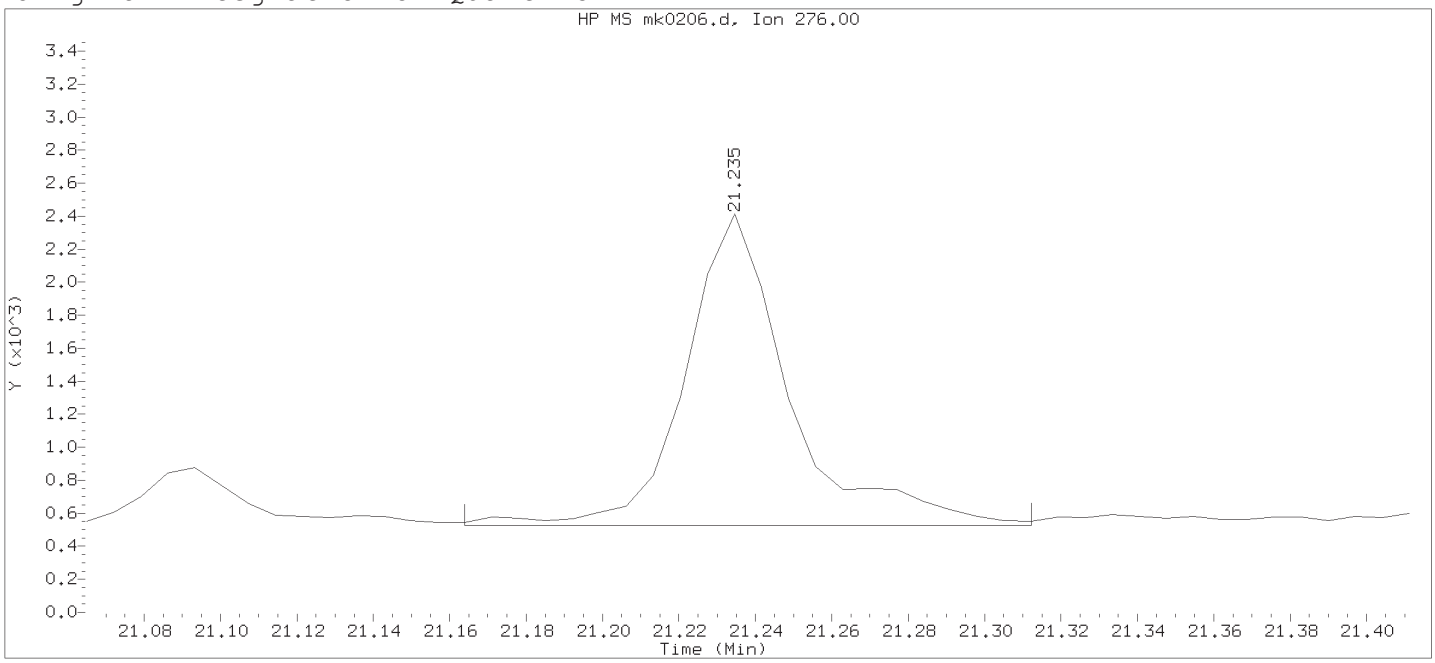
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

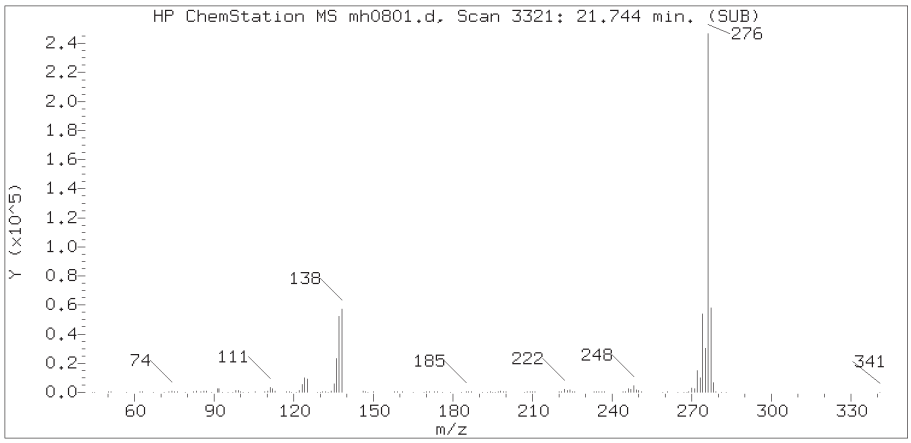
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

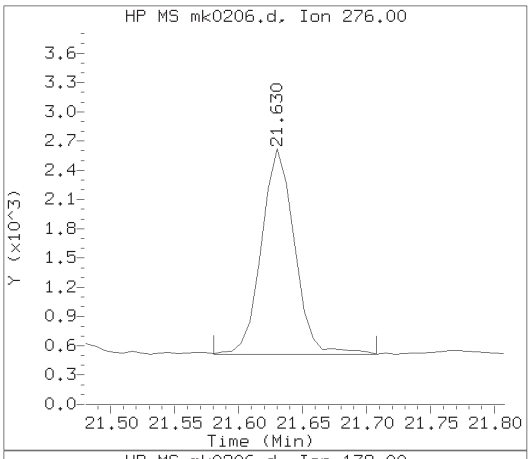
Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2089
Retention Time (minutes)	:	21.235
Quant Ion	:	276.00
Area	:	3581
On-column Amount (ng/ul)	:	0.0045
Integration start scan	:	2078 Integration stop scan: 2099
Y at integration start	:	525 Y at integration end: 525

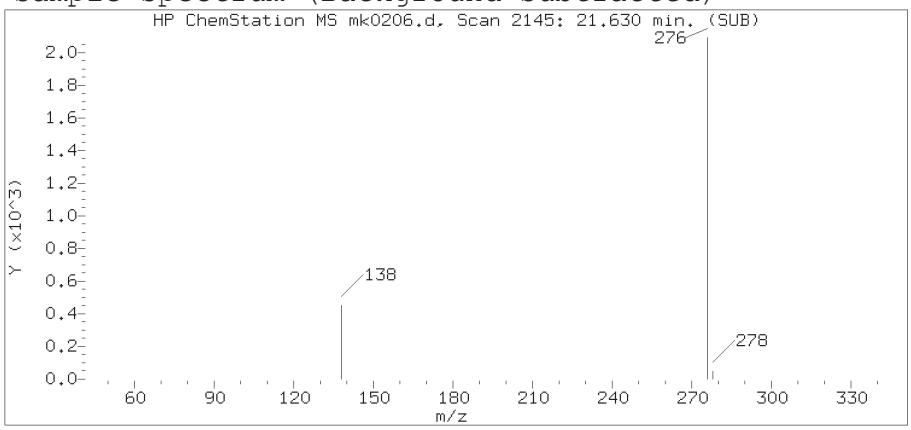
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user id: art12405

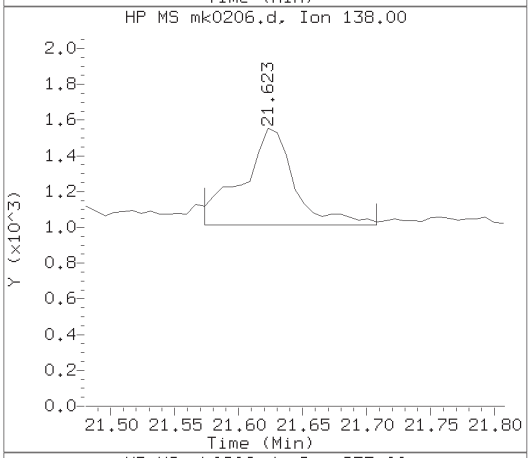
Reference Standard Spectrum for Benzo(g,h,i)perylene



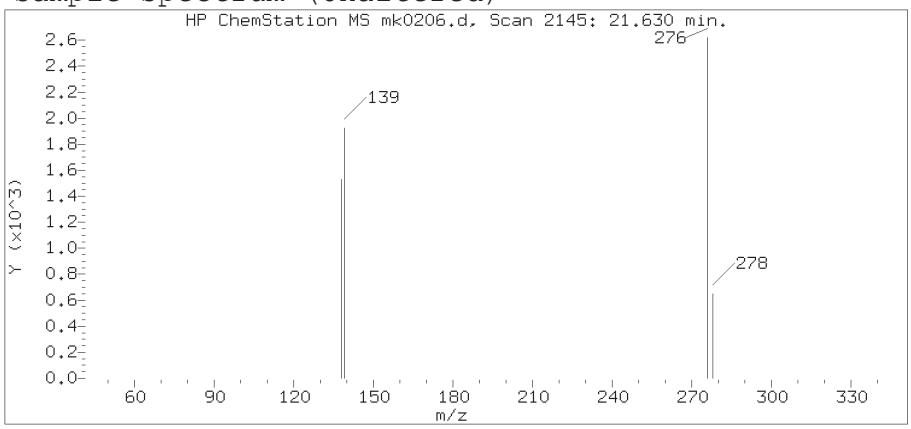


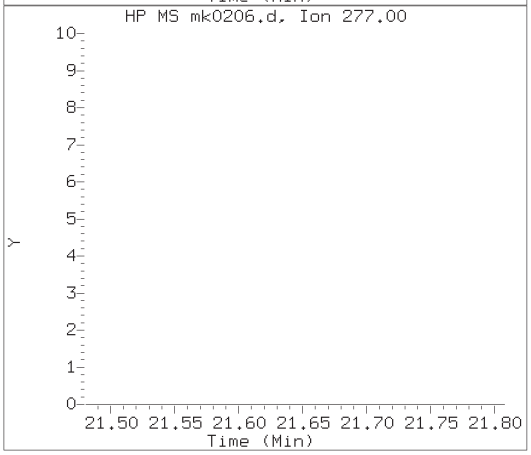
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0206.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 21:46 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T02 Lab Sample ID: 9876332

Compound Number	: 41
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2145
Retention Time (minutes)	: 21.630
Relative Retention Time	: 0.00000
Quant Ion	: 276.00
Area (flag)	: 3796
On-column Amount (ng/ul)	: 0.0041

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov08.b/mk0455.d Injection date and time: **08-NOV-2018 07:55**
Data file Sample Info. Line: 14T02RE;9876332RE;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.560(0.000)	474	152	54914	(-15)	0.25	
6) Naphthalene-d8	8.480(0.000)	572	136	183480	(-13)	0.25	
14) Acenaphthene-d10	11.264(0.000)	767	164	78912	(-11)	0.25	
20) Phenanthrene-d10	13.128(0.047)	981	188	153923	(-12)	0.25	
29) Chrysene-d12	17.146(0.000)	1549	240	110385	(-16)	0.25	
38) Perylene-d12	19.593(0.000)	1868	264	116739	(-16)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 1-Methylnaphthalene-d10	(2)	9.702(0.000)	152	65868	0.197	79%		29 - 112
24) Fluoranthene-d10	(4)	14.788(-0.004)	212	112434A	0.186	74%		38 - 119
36) Benzo(a)pyrene-d12	(6)	19.455(0.000)	264	73107	0.170	68%		18 - 129

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					0.03
4) bis(2-Chloroethyl)ether	(2)	6.129(0.009)	93	3319	0.012	0.05			0.005
7) Naphthalene	(2)	8.499(-0.000)	128	21353	0.025	0.10			0.008
13) Acenaphthylene	(3)			Not Detected					0.003
15) Acenaphthene	(3)	11.316(-0.000)	154	2347	0.005	0.02			0.003
18) Fluorene	(3)	12.035(0.000)	166	4028	0.007	0.03			0.003
19) Hexachlorobenzene	(4)			Not Detected					0.003
21) Phenanthrene	(4)			Not Detected					0.008
22) Anthracene	(4)	13.198(0.001)	178	13224	0.016	0.07			0.003
23) Di-n-butylphthalate	(4)	13.971(-0.002)	149	36425	0.040	0.16	0.095	B	0.01
25) Fluoranthene	(4)			Not Detected					0.003
26) Pyrene	(5)	15.146(0.000)	202	9699	0.010	0.04			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.345(-0.000)	149	196542	0.315	1.26	0.168	B	0.02
28) Benzo(a)anthracene	(5)	17.131(0.000)	228	5225	0.006	0.02			0.003
30) Chrysene	(5)	17.192(-0.000)	228	7300	0.008	0.03			0.003
33) Benzo(b)fluoranthene	(6)	18.971(0.000)	252	6627	0.007	0.03			0.003
34) Benzo(k)fluoranthene	(6)	19.017(0.000)	252	2396	0.003	0.01			0.003
37) Benzo(a)pyrene	(6)	19.493(0.000)	252	4695	0.005	0.02			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.192(-0.000)	276	3625	0.005	0.02			0.003
40) Dibenz(a,h)anthracene	(6)			Not Detected					0.005
41) Benzo(g,h,i)perylene	(6)	21.587(-0.000)	276	3832	0.004	0.02			0.003

B = Compound detected in referenced method blank.

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP21585.i/18nov08.b/mk0455.d Injection date and time: **08-NOV-2018 07:55**
Data file Sample Info. Line: 14T02RE;9876332RE;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

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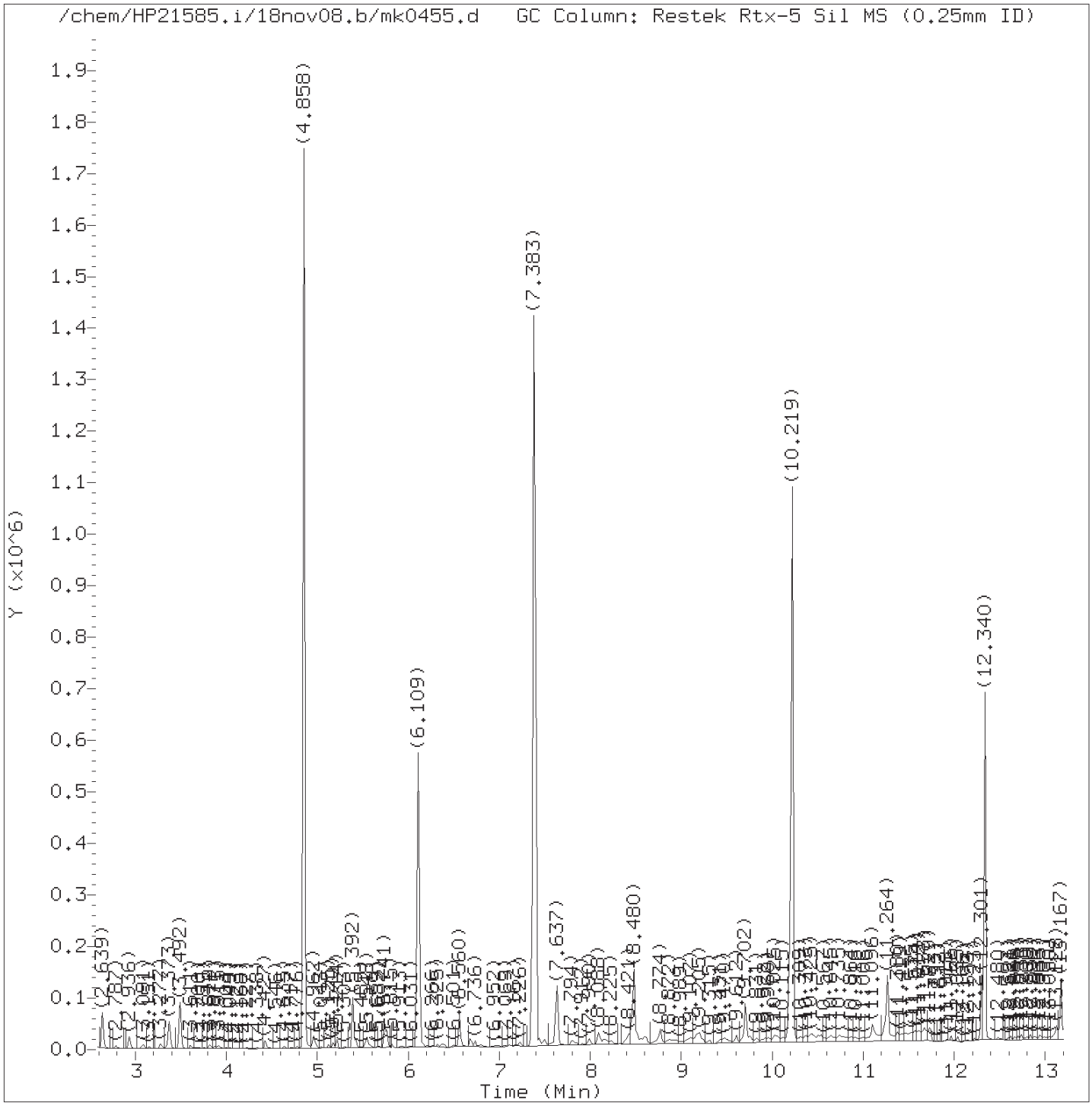
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

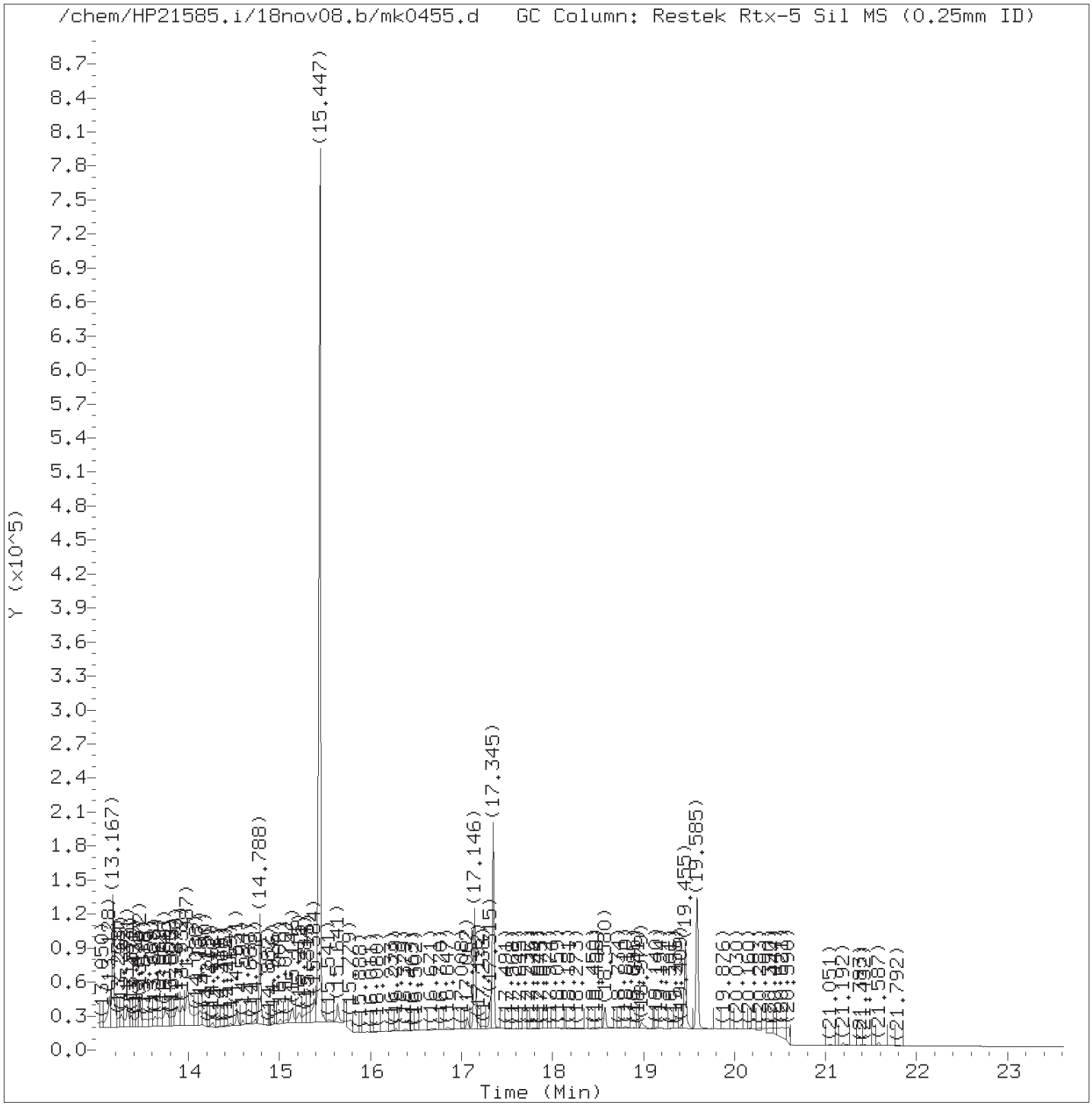
Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
4) bis(2-Chloroethyl)ether	(2)	6.129	93	3319	0.012
5)*1,4-Dichlorobenzene-d4	(1)	6.560	152	54914	0.250
6)*Naphthalene-d8	(2)	8.480	136	183480	0.250
7) Naphthalene	(2)	8.499	128	21353	0.025
10)$1-Methylnaphthalene-d10	(2)	9.702	152	65868	0.197
14)*Acenaphthene-d10	(3)	11.264	164	78912	0.250
15) Acenaphthene	(3)	11.316	154	2347	0.005
18) Fluorene	(3)	12.035	166	4028	0.007
20)*Phenanthrene-d10	(4)	13.128	188	153923	0.250
22) Anthracene	(4)	13.198	178	13224	0.016
23) Di-n-butylphthalate	(4)	13.971	149	36425	0.040
24)$Fluoranthene-d10	(4)	14.788	212	112434	0.186
26) Pyrene	(5)	15.146	202	9699	0.010
28) Benzo(a)anthracene	(5)	17.131	228	5225	0.006
29)*Chrysene-d12	(5)	17.146	240	110385	0.250
30) Chrysene	(5)	17.192	228	7300	0.008
31) bis(2-Ethylhexyl)phthalate	(5)	17.345	149	196542	0.315
33) Benzo(b)fluoranthene	(6)	18.971	252	6627	0.007
34) Benzo(k)fluoranthene	(6)	19.017	252	2396	0.003
36)$Benzo(a)pyrene-d12	(6)	19.455	264	73107	0.170
37) Benzo(a)pyrene	(6)	19.493	252	4695	0.005
38)*Perylene-d12	(6)	19.593	264	116739	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.192	276	3625	0.005
41) Benzo(g,h,i)perylene	(6)	21.587	276	3832	0.004

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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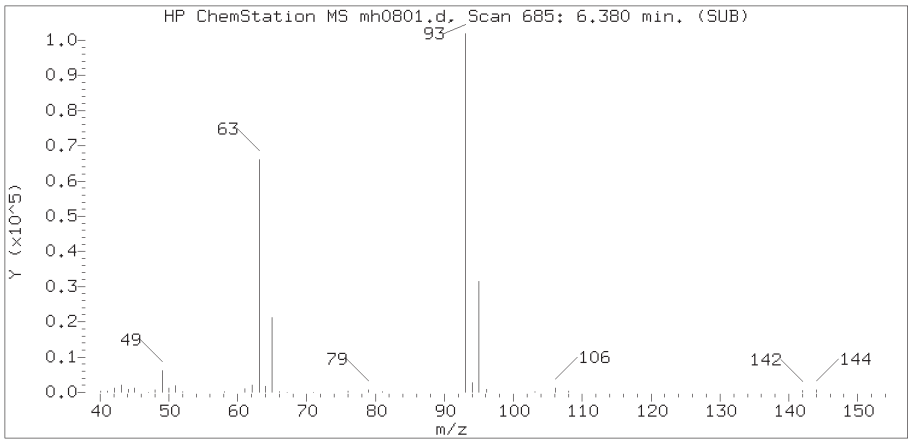
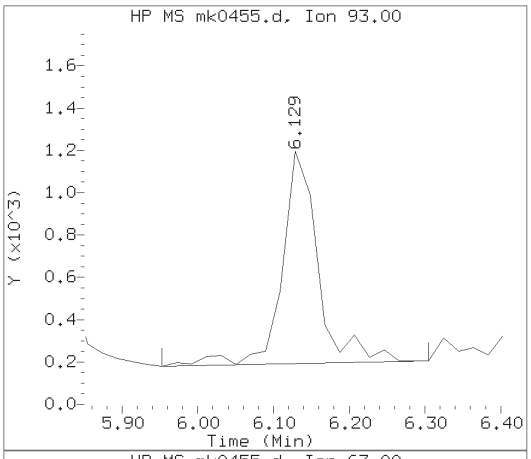
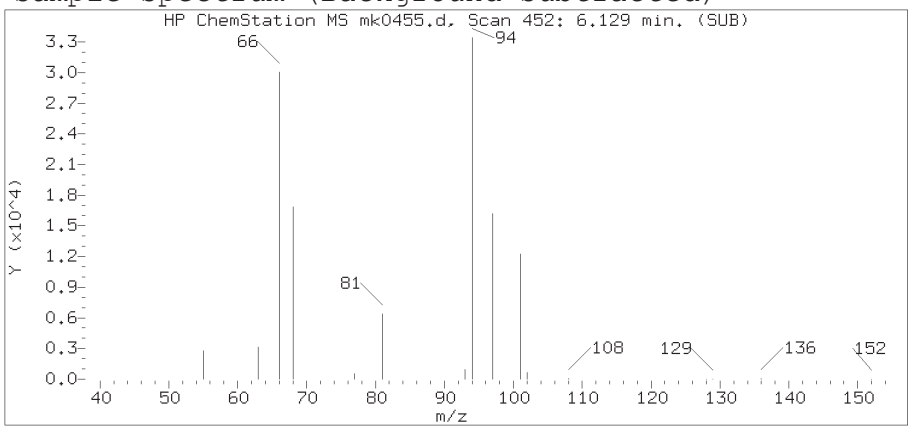
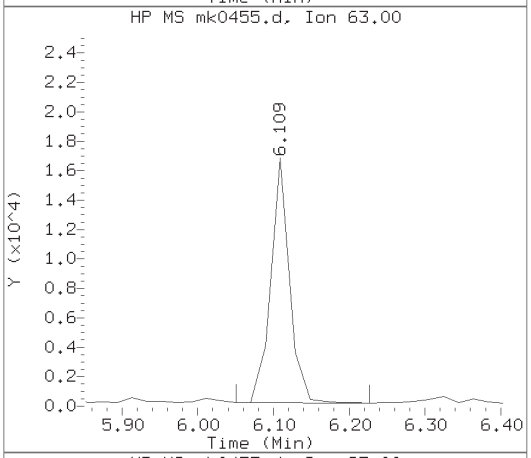
Reference Standard Spectrum for bis(2-Chloroethyl)ether



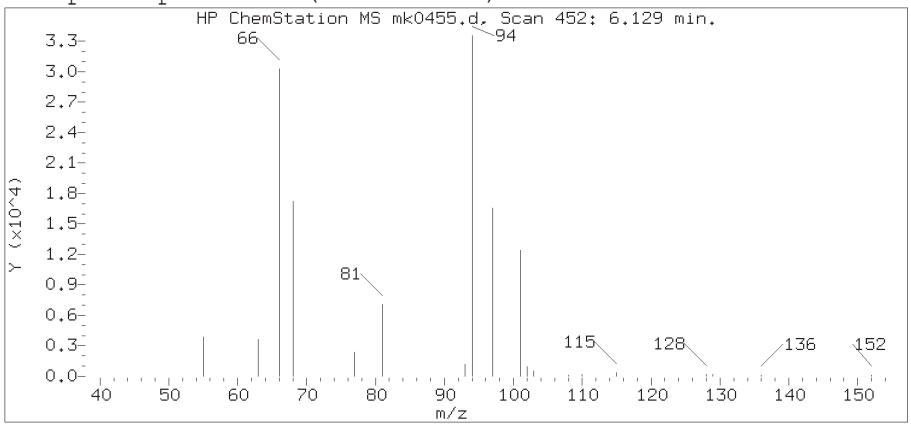


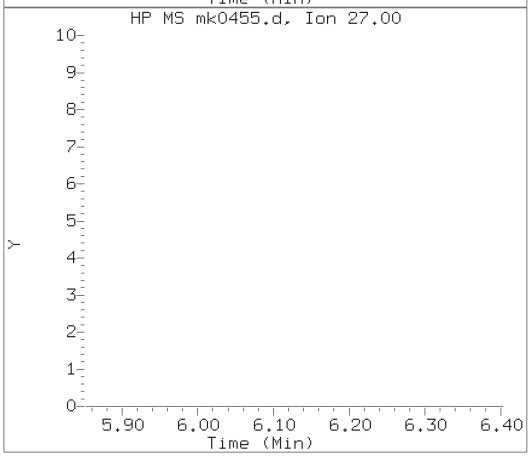
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 4
Compound Name	: bis(2-Chloroethyl)ether
Scan Number	: 452
Retention Time (minutes)	: 6.129
Relative Retention Time	: 0.00925
Quant Ion	: 93.00
Area (flag)	: 3319
On-column Amount (ng/ul)	: 0.0118

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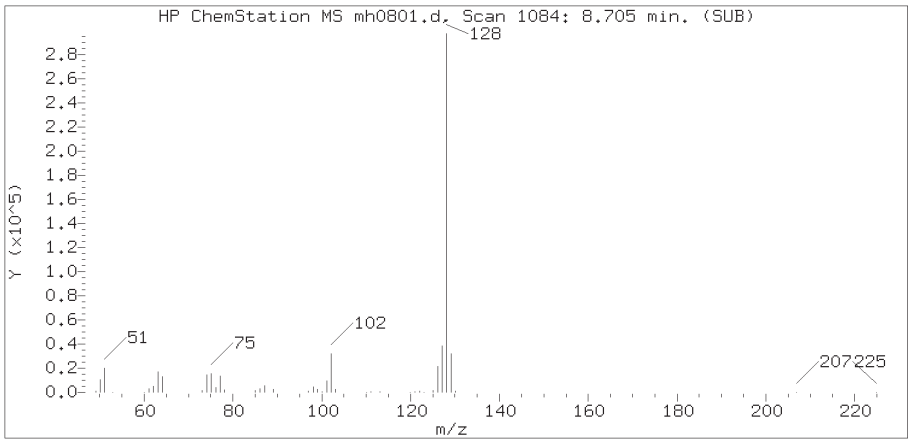
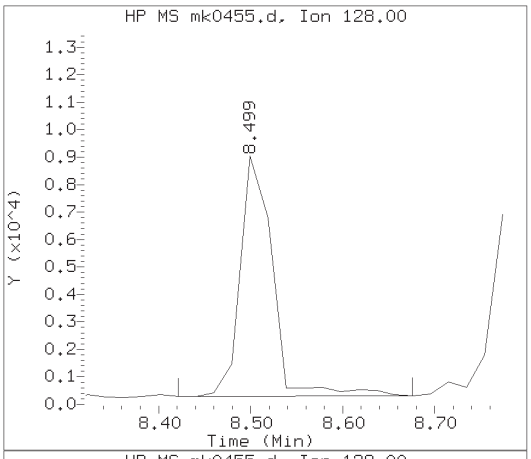
Target 3.5 esignature user ID: jmg00346

Reference Standard Spectrum for Naphthalene





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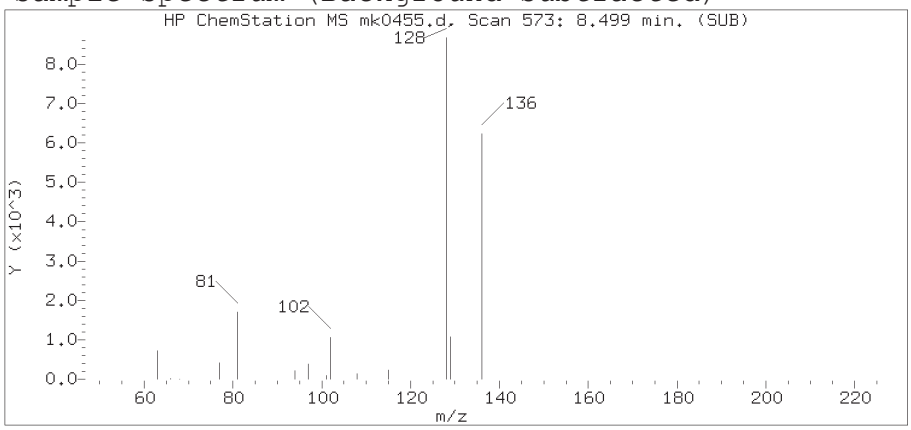
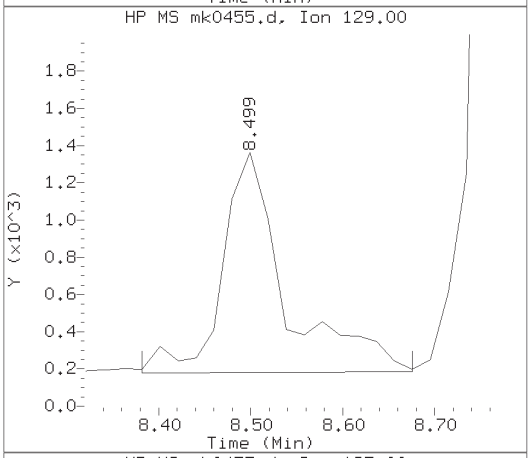
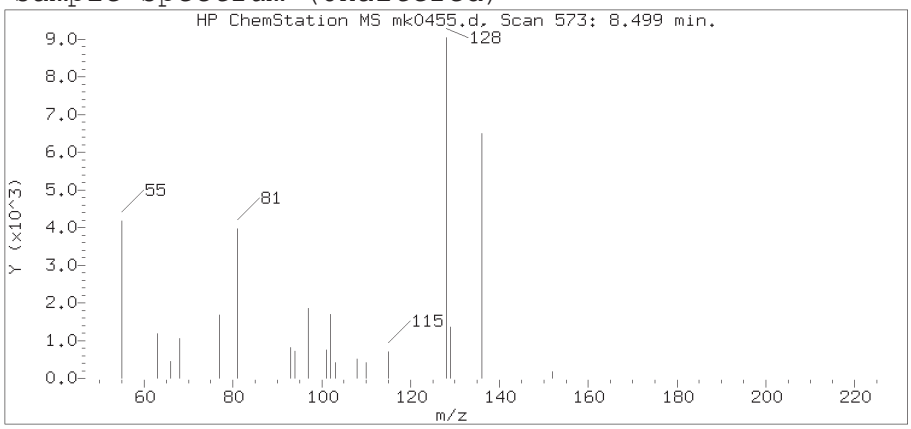
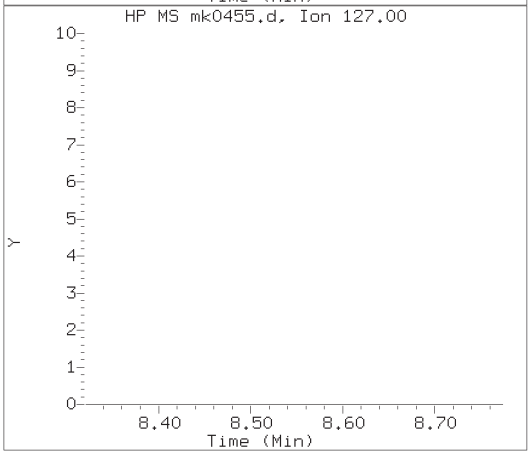




Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 7
Compound Name	: Naphthalene
Scan Number	: 573
Retention Time (minutes)	: 8.499
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 21353
On-column Amount (ng/ul)	: 0.0253

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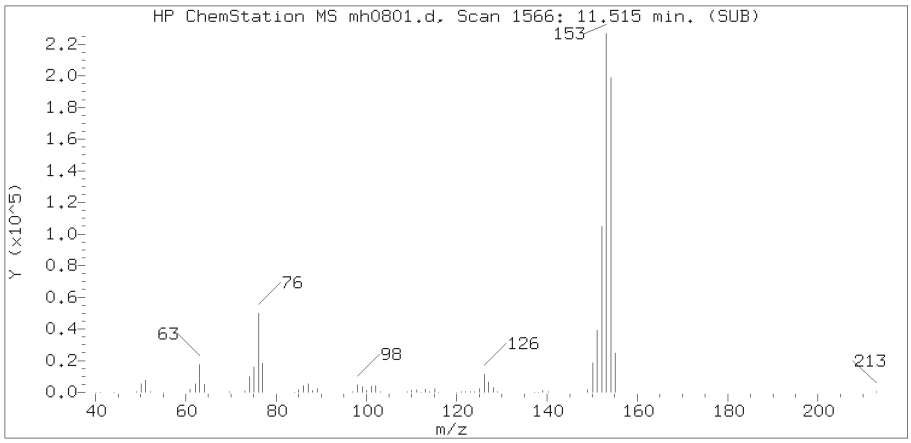
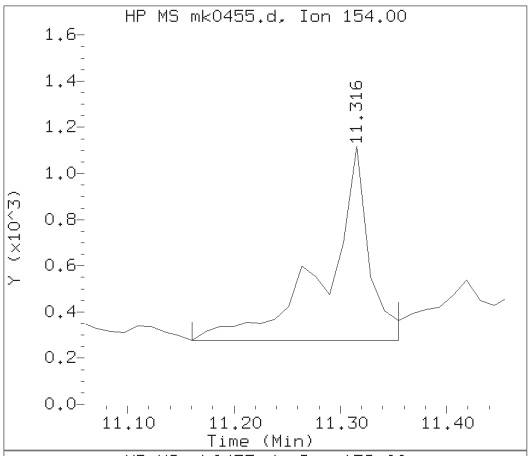
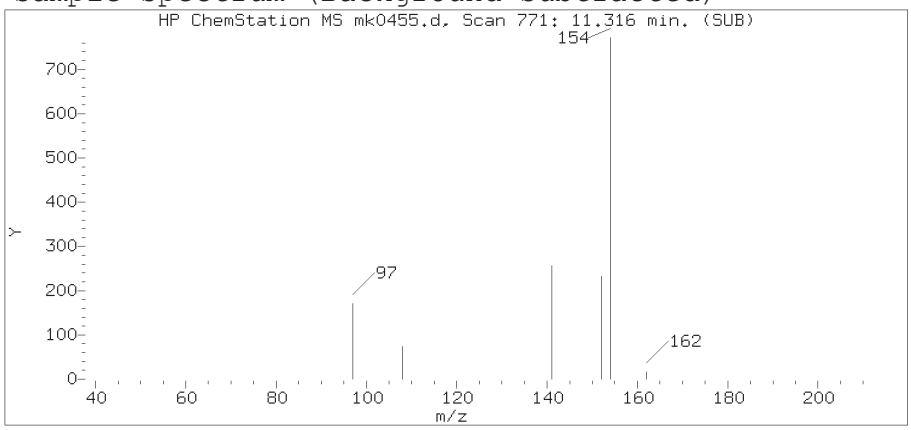
Target 3.5 esignature user ID: jmg00346

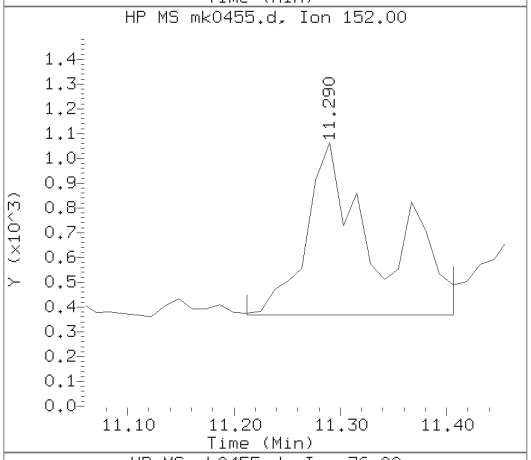
Reference Standard Spectrum for Acenaphthene



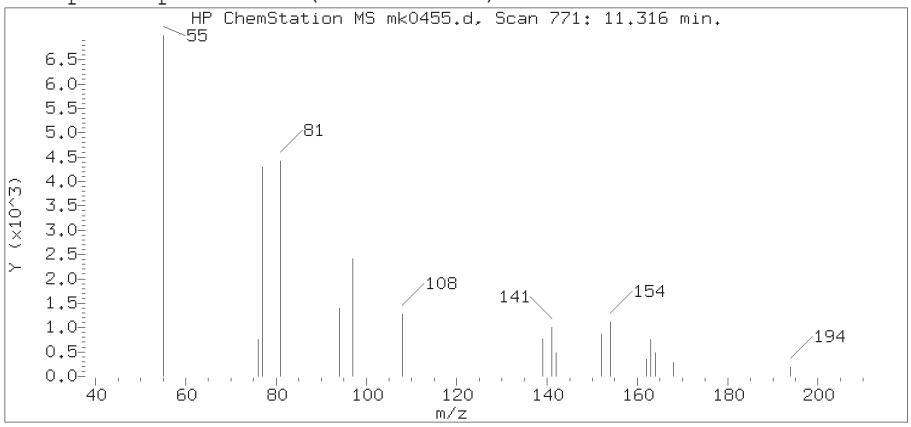


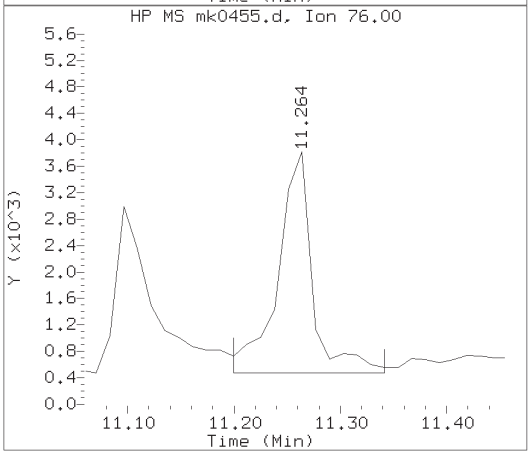
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 15
Compound Name	: Acenaphthene
Scan Number	: 771
Retention Time (minutes)	: 11.316
Relative Retention Time	:-0.00000
Quant Ion	: 154.00
Area (flag)	: 2347
On-column Amount (ng/ul)	: 0.0047

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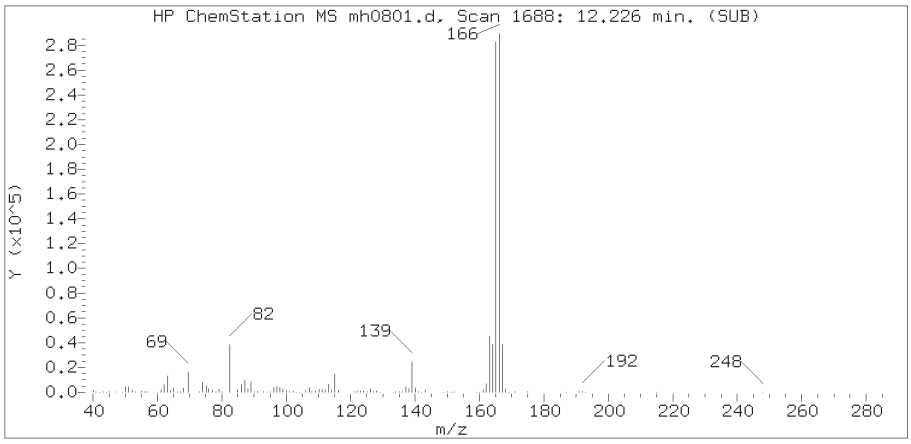
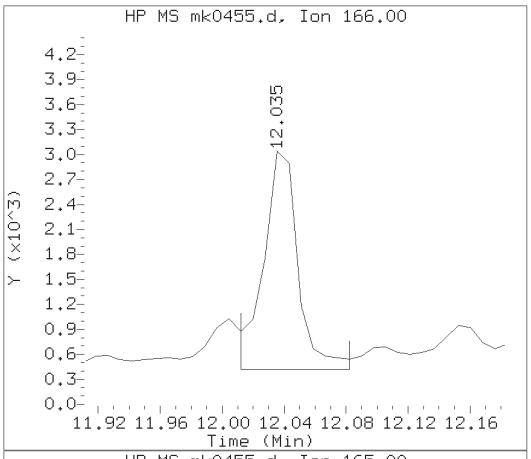
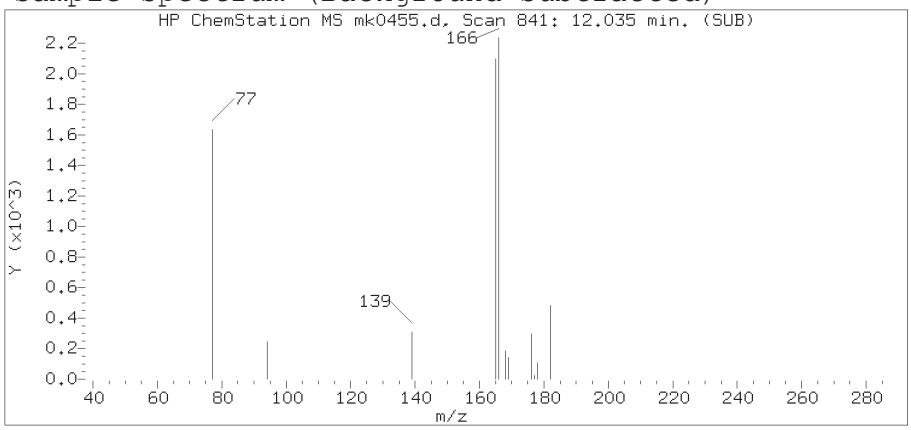
Target 3.5 esignature user ID: jmg00346

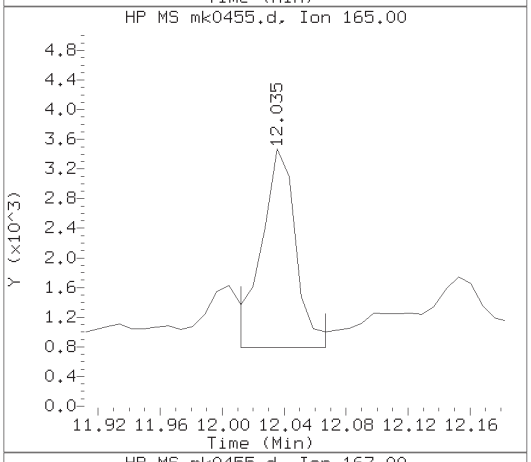
Reference Standard Spectrum for Fluorene



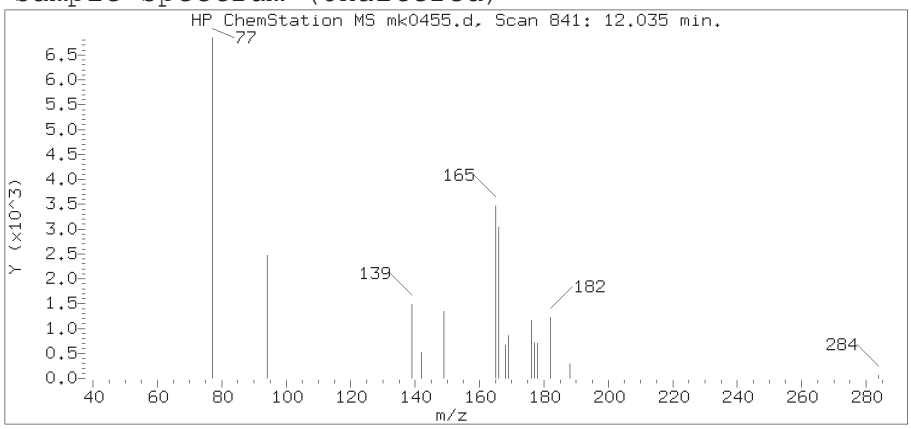


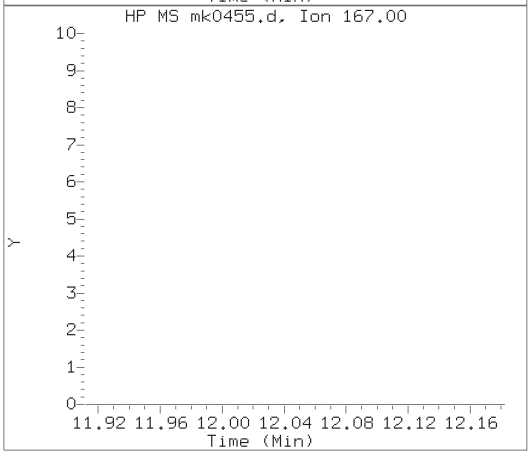
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 18
Compound Name	: Fluorene
Scan Number	: 841
Retention Time (minutes)	: 12.035
Relative Retention Time	: 0.00069
Quant Ion	: 166.00
Area (flag)	: 4028
On-column Amount (ng/ul)	: 0.0068

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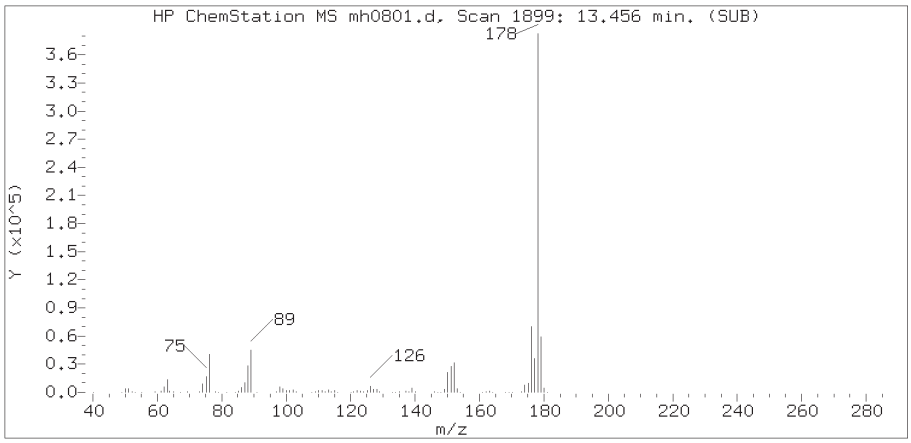
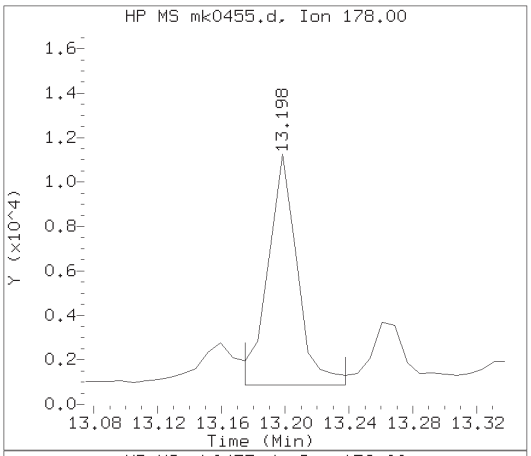
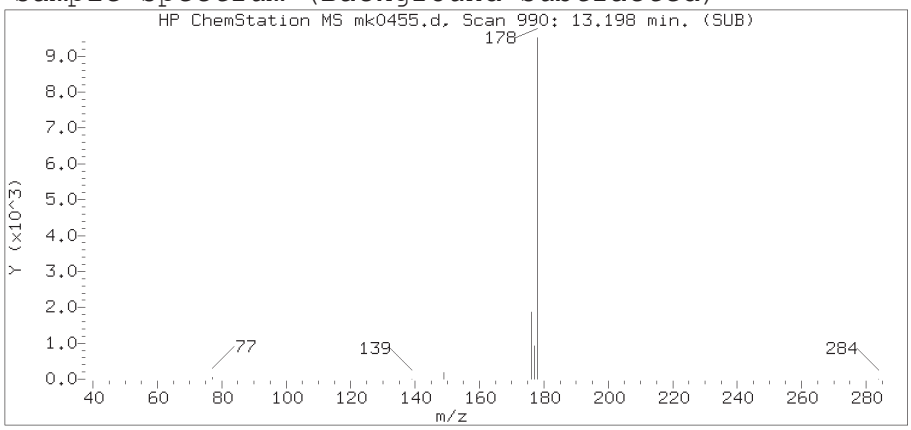
Target 3.5 esignature user ID: jmg00346

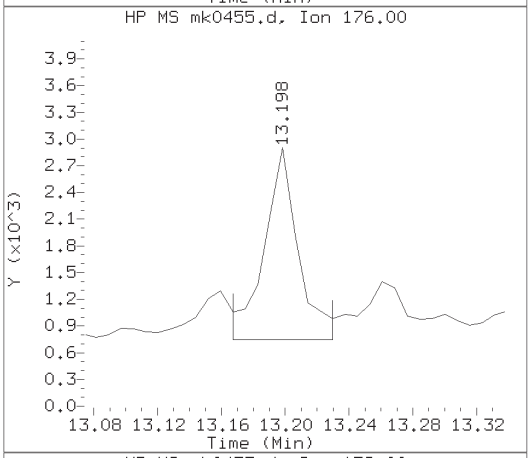
Reference Standard Spectrum for Anthracene



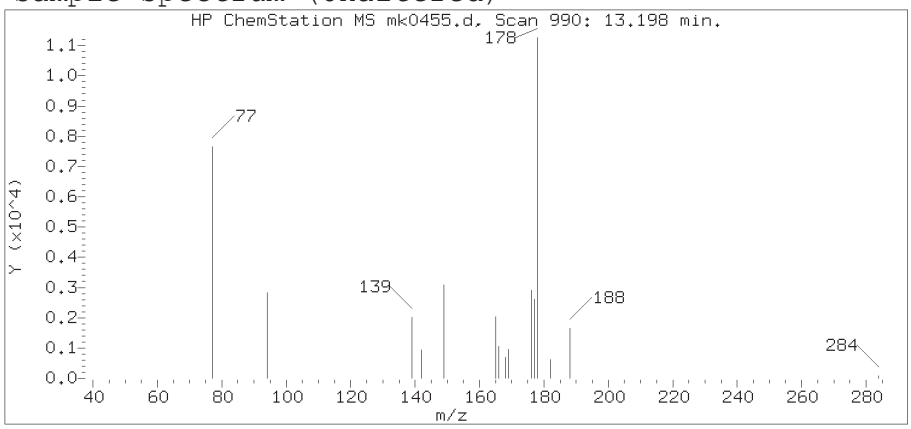


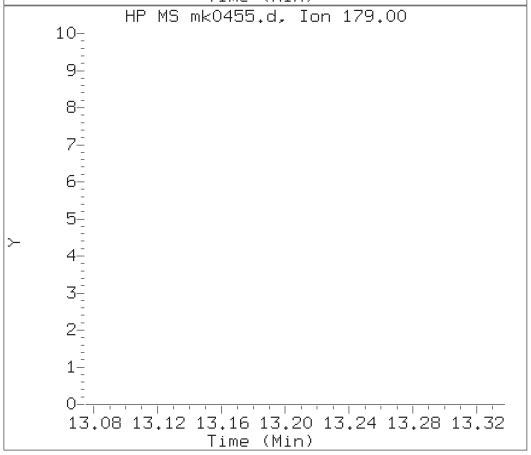
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 22
Compound Name	: Anthracene
Scan Number	: 990
Retention Time (minutes)	: 13.198
Relative Retention Time	: 0.00176
Quant Ion	: 178.00
Area (flag)	: 13224
On-column Amount (ng/ul)	: 0.0163

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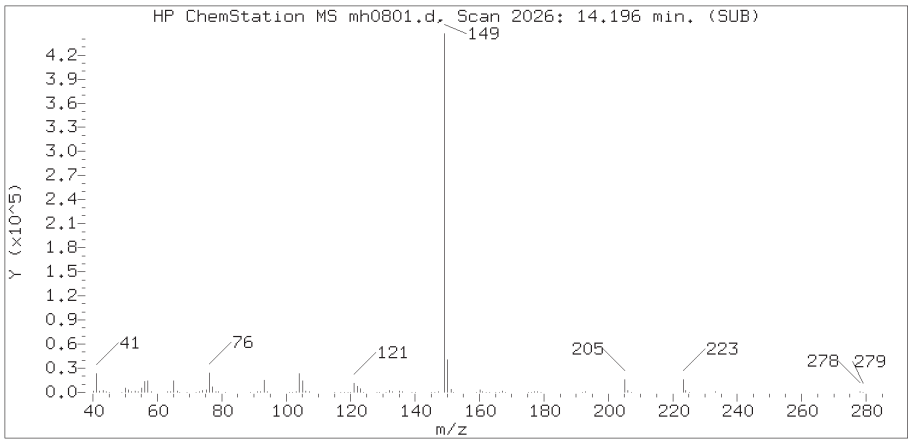
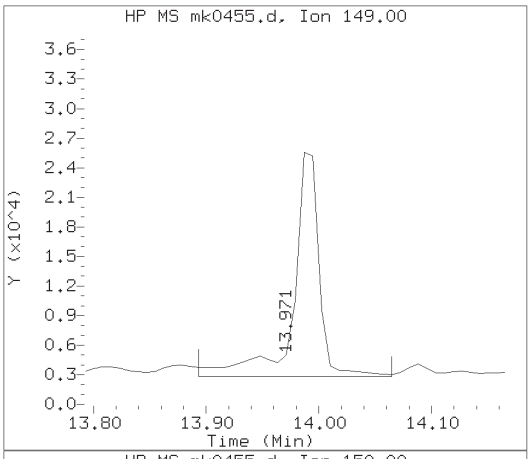
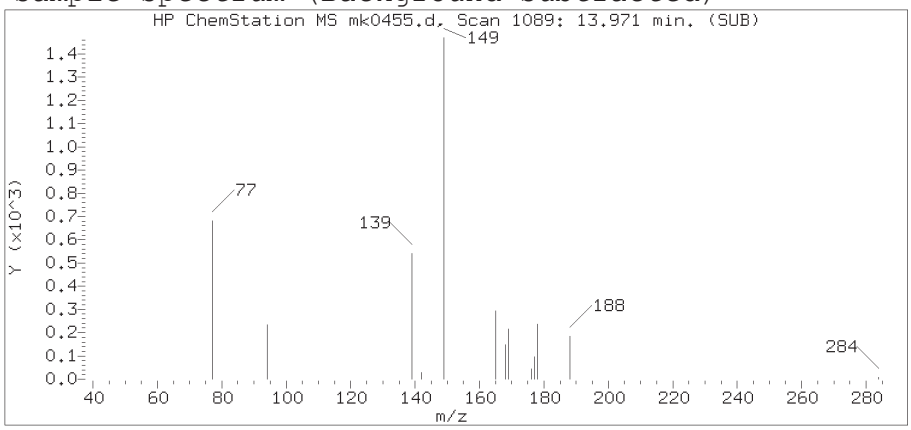
Target 3.5 esignature user ID: jmg00346

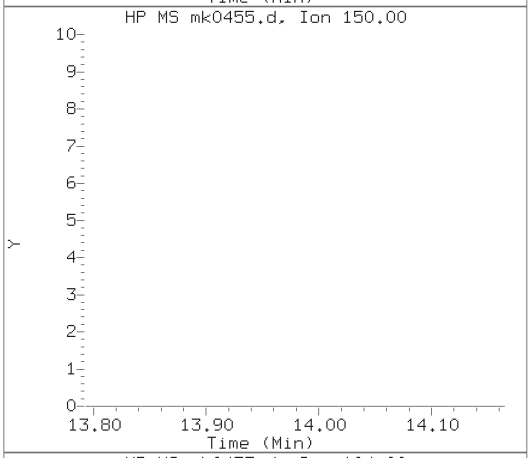
Reference Standard Spectrum for Di-n-butylphthalate



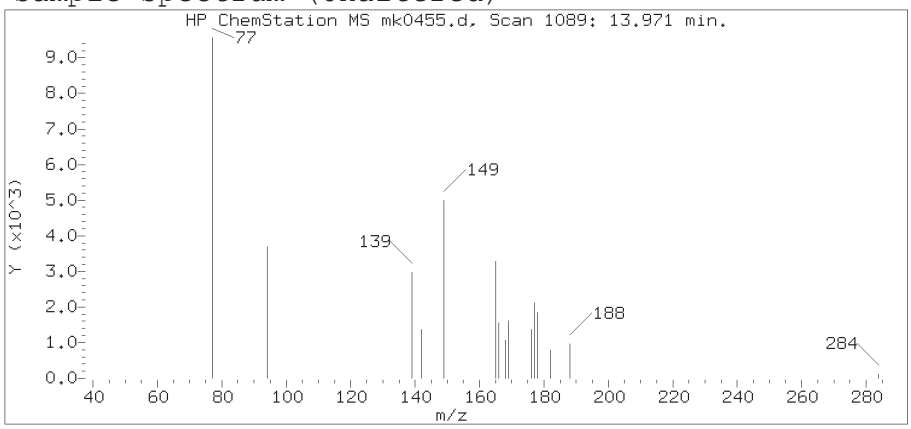


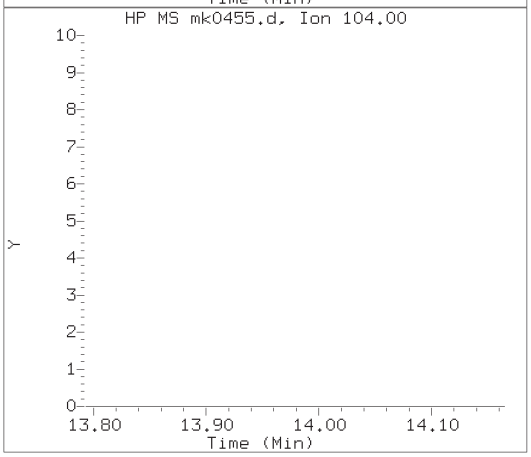
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 23
Compound Name	: Di-n-butylphthalate
Scan Number	: 1089
Retention Time (minutes)	: 13.971
Relative Retention Time	:-0.00201
Quant Ion	: 149.00
Area (flag)	: 36425
On-column Amount (ng/ul)	: 0.0402

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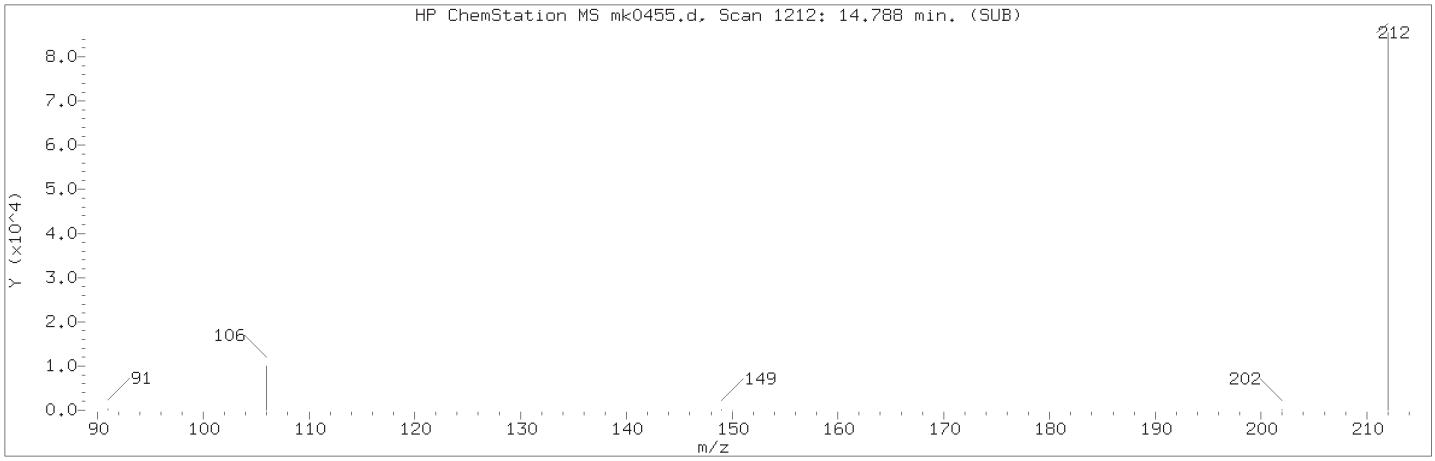
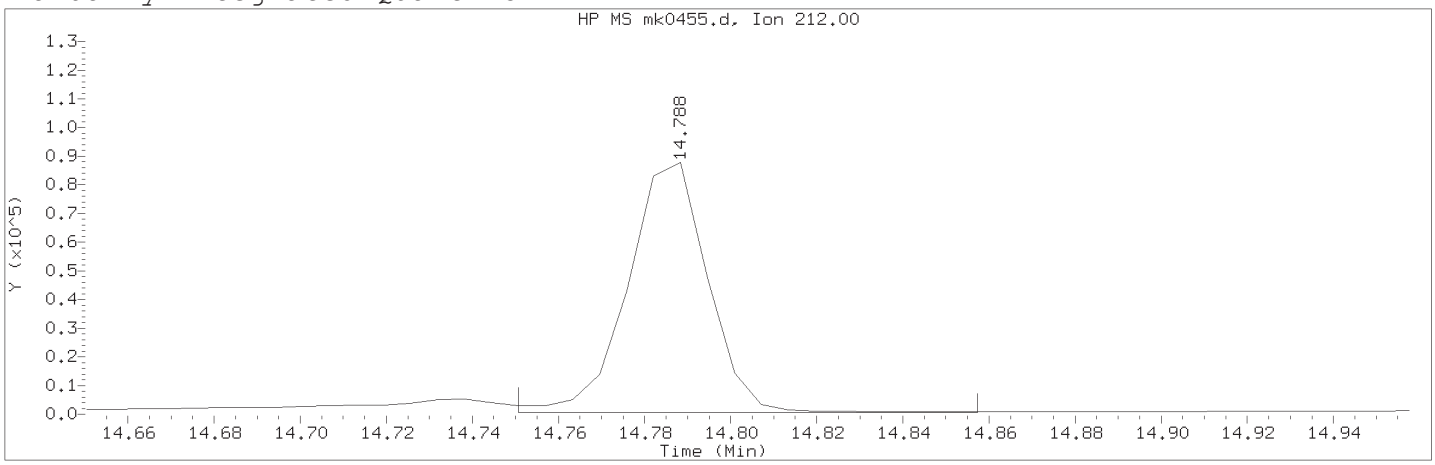
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

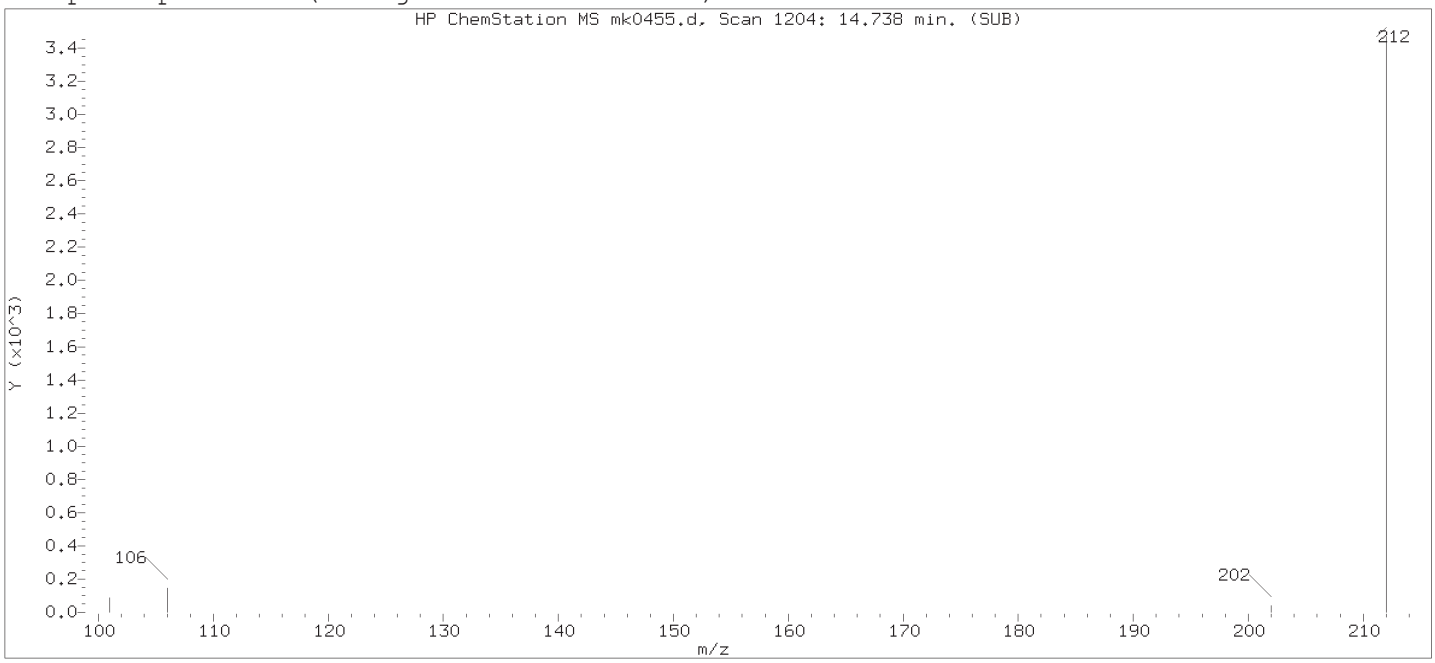
Compound Number : 24
Compound Name : Fluoranthene-d10
Scan Number : 1212
Retention Time (minutes) : 14.788
Quant Ion : 212.00
Area (flag) : 112434A
On-column Amount (ng/ul) : 0.1862
Integration start scan : 1205 Integration stop scan: 1222
Y at integration start : 671 Y at integration end: 671

Reason for manual integration: improper integration

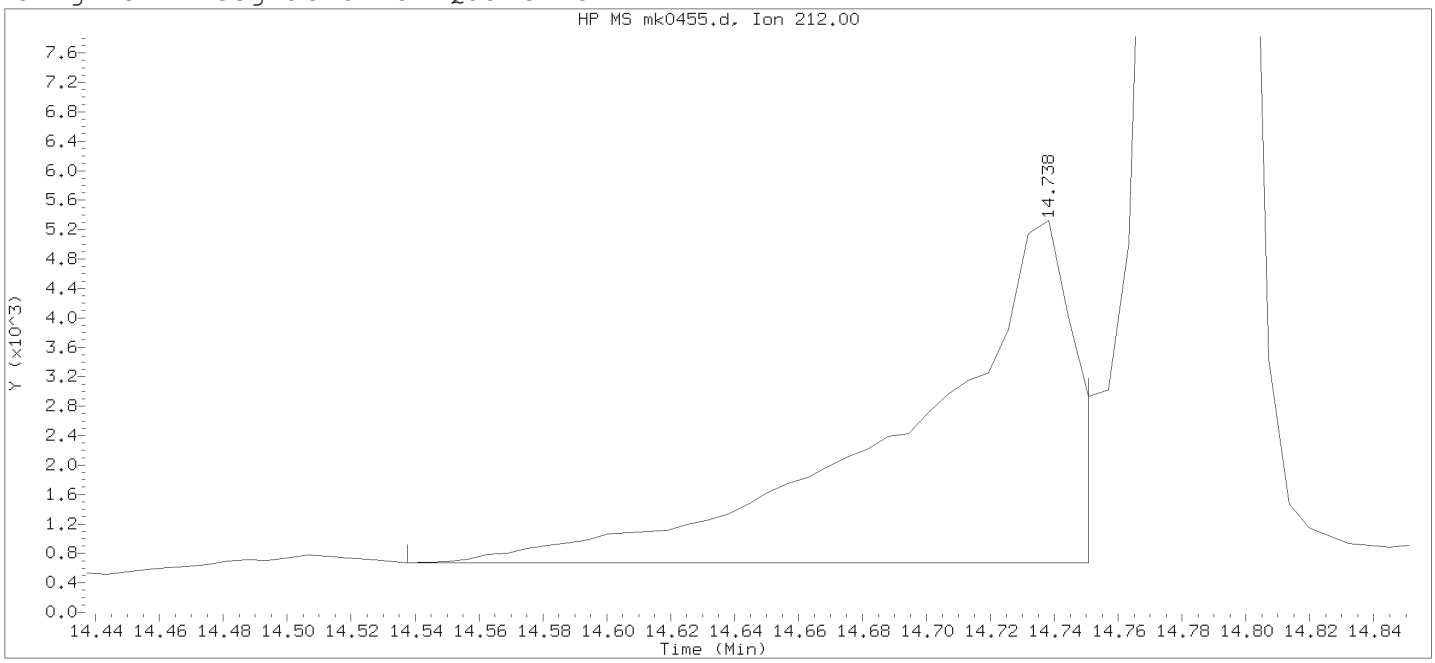
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

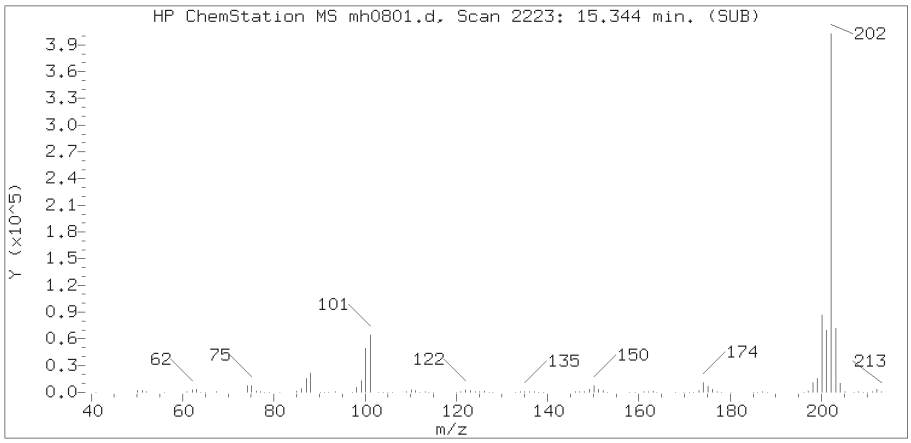
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 06:50
Date, time and analyst ID of latest file update: 08-Nov-2018 08:24 Unknown

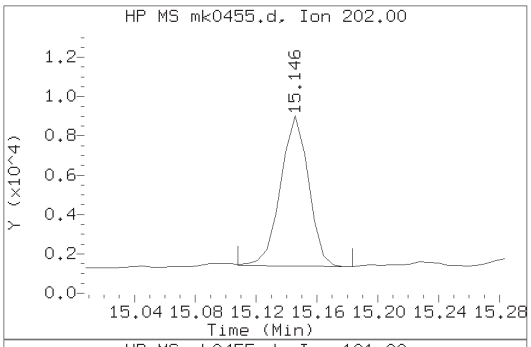
Sample Name: 14T02RE Lab Sample ID: 9876332RE

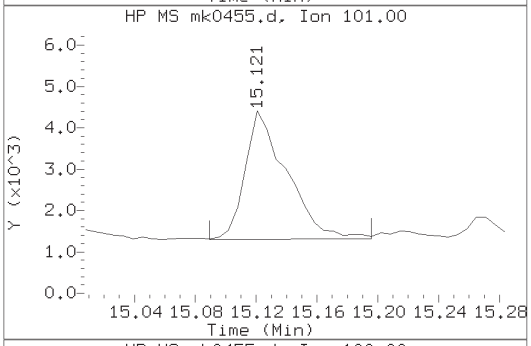
Compound Number	: 24		
Compound Name	: Fluoranthene-d10		
Scan Number	: 1204		
Retention Time (minutes)	: 14.738		
Quant Ion	: 212.00		
Area	: 16063		
On-column Amount (ng/ul)	: 0.0266		
Integration start scan	: 1171	Integration stop scan:	1205
Y at integration start	: 671	Y at integration end:	671

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature used 11/14/2018

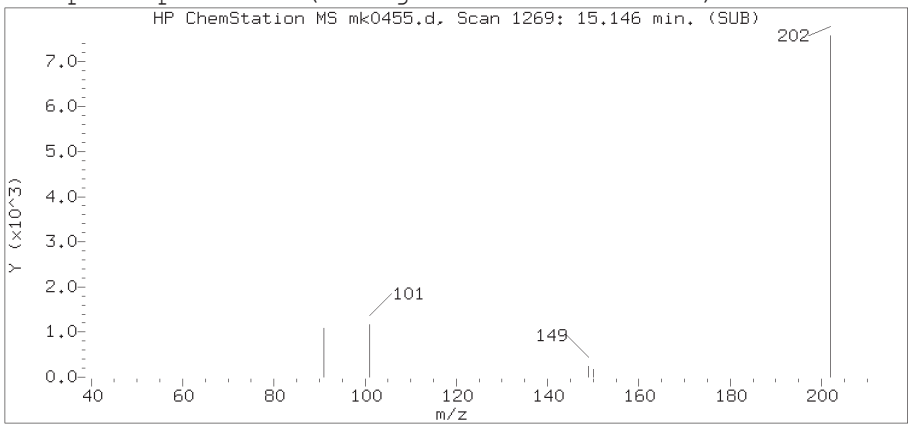
Reference Standard Spectrum for Pyrene

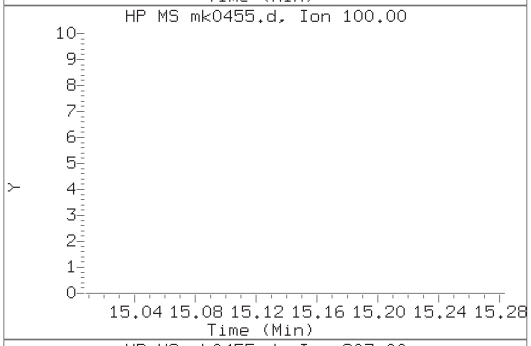




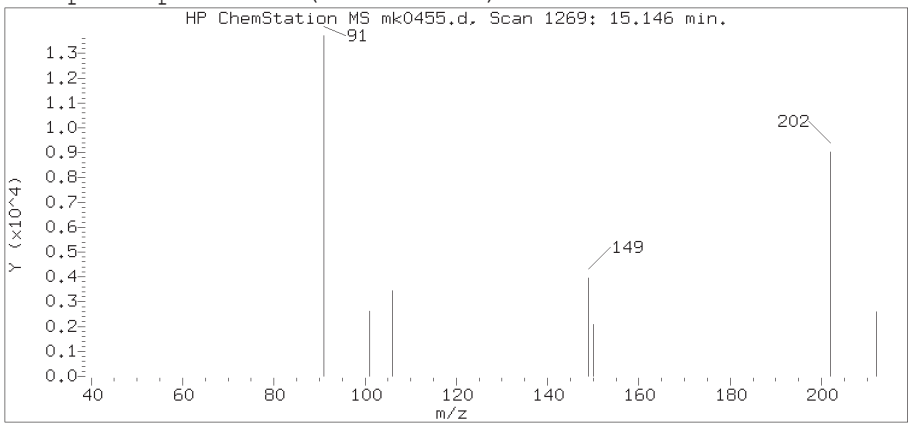


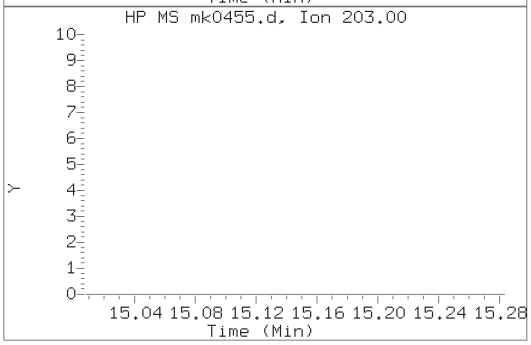
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

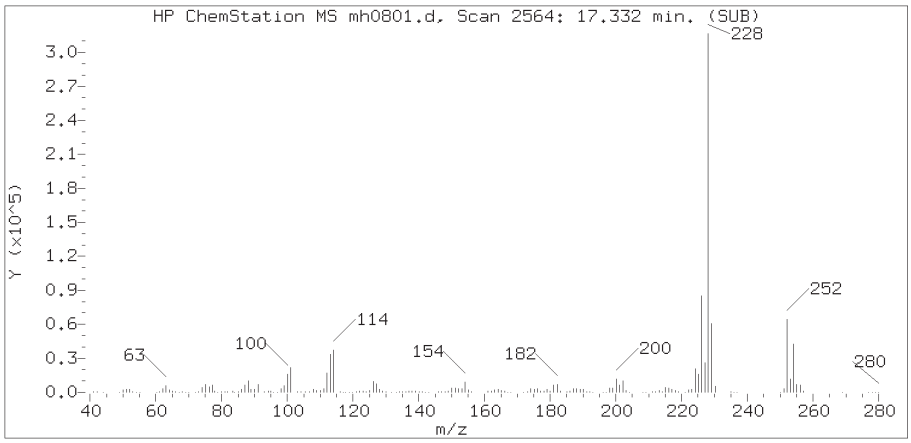
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

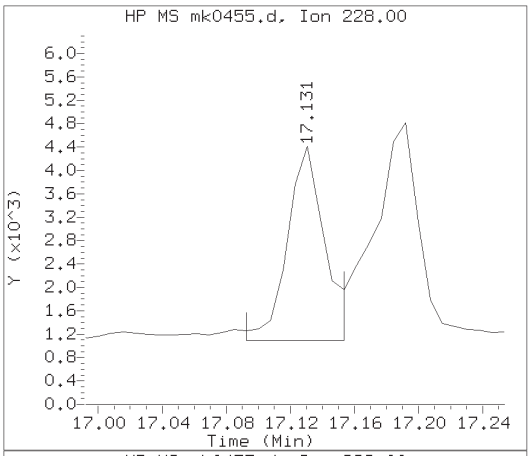
Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 26
Compound Name	: Pyrene
Scan Number	: 1269
Retention Time (minutes)	: 15.146
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 9699
On-column Amount (ng/ul)	: 0.0097

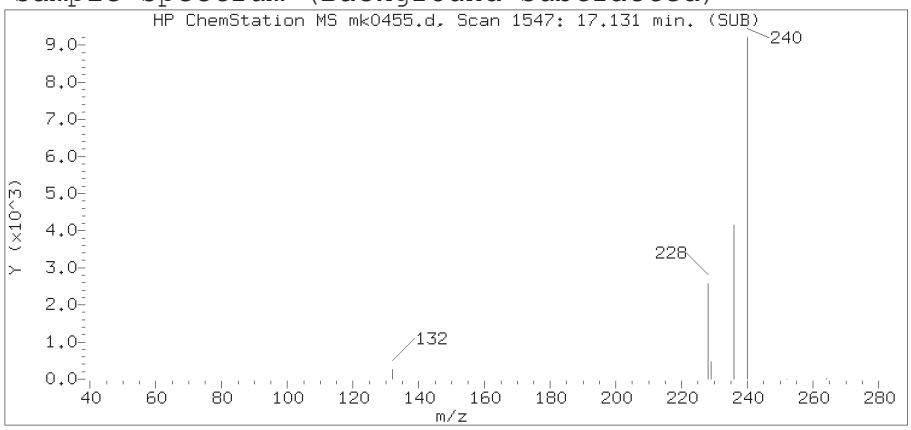
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

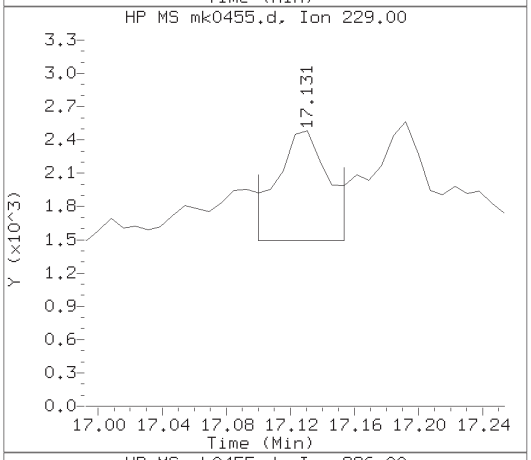
Reference Standard Spectrum for Benzo(a)anthracene



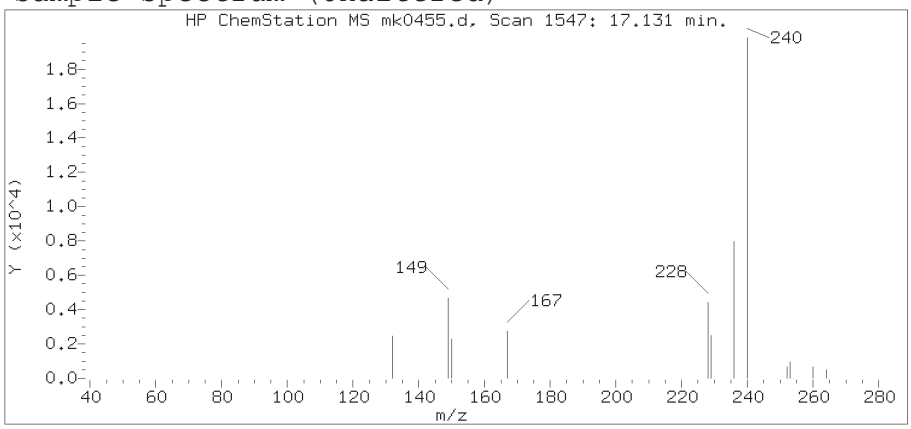


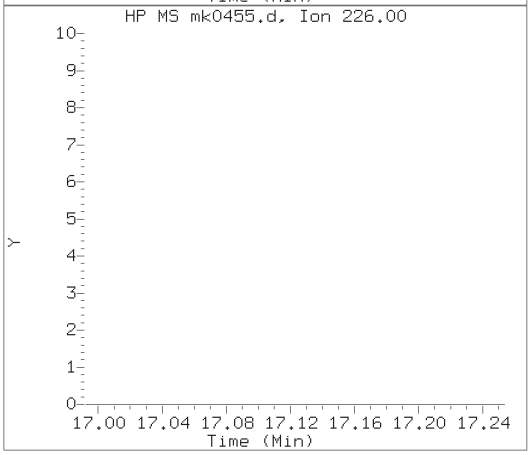
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

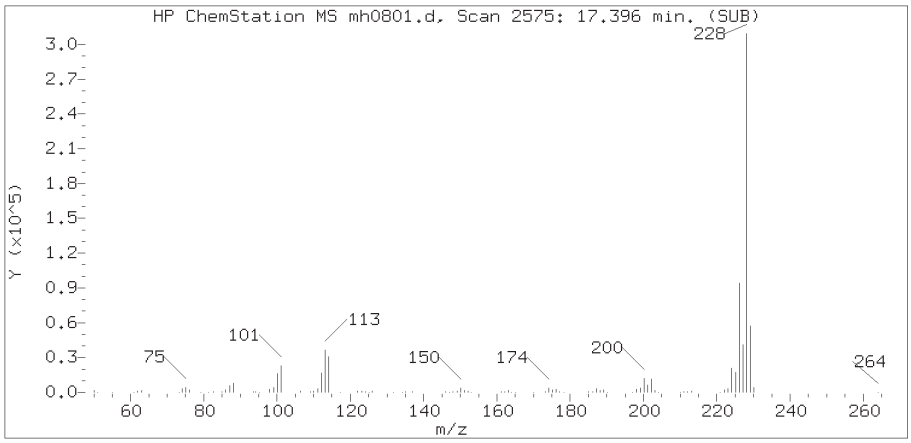
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

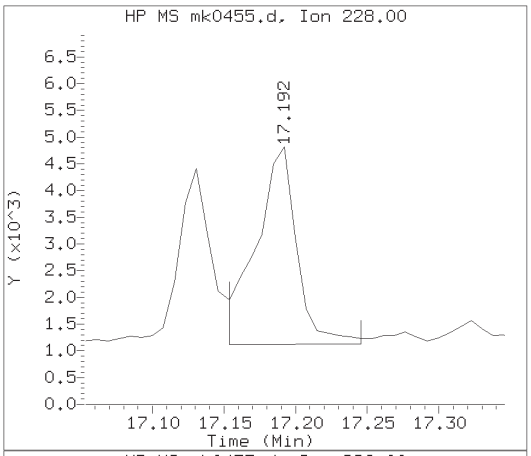
Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 28
Compound Name	: Benzo(a)anthracene
Scan Number	: 1547
Retention Time (minutes)	: 17.131
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 5225
On-column Amount (ng/ul)	: 0.0060

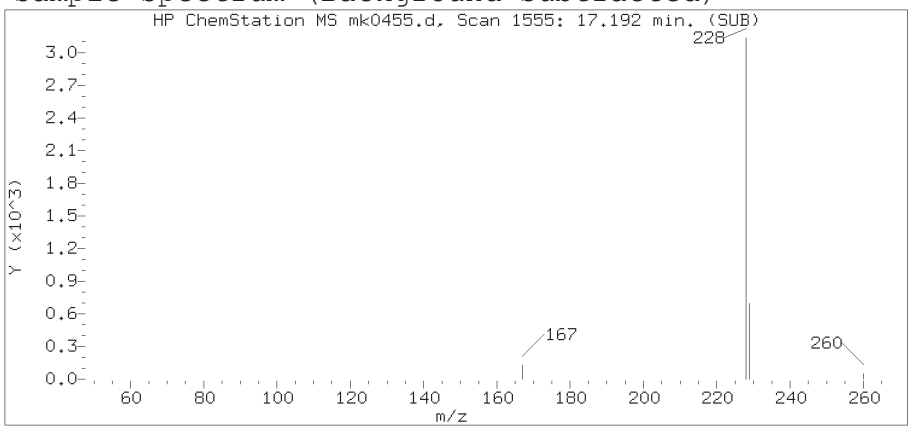
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

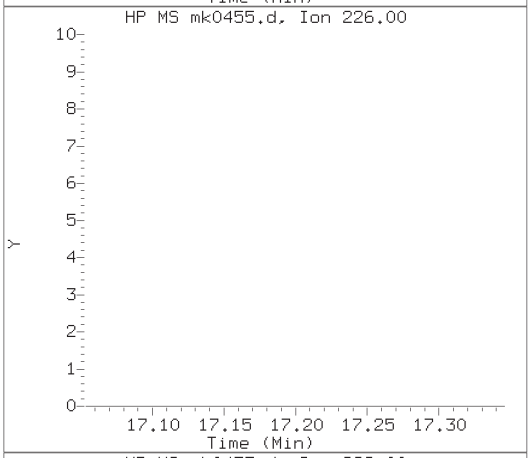
Reference Standard Spectrum for Chrysene



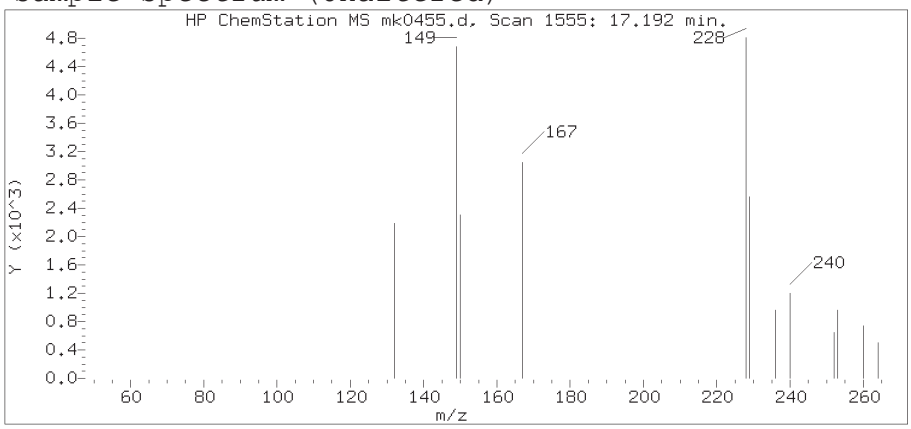


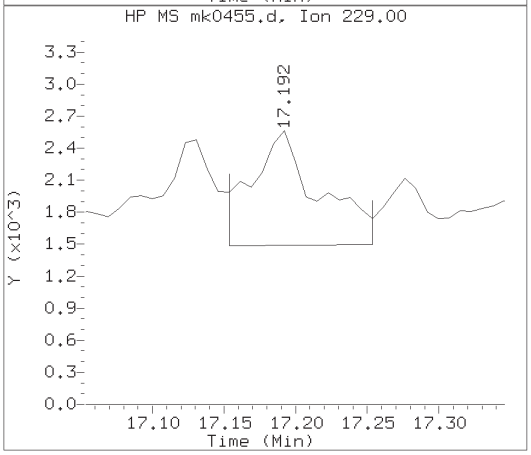
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

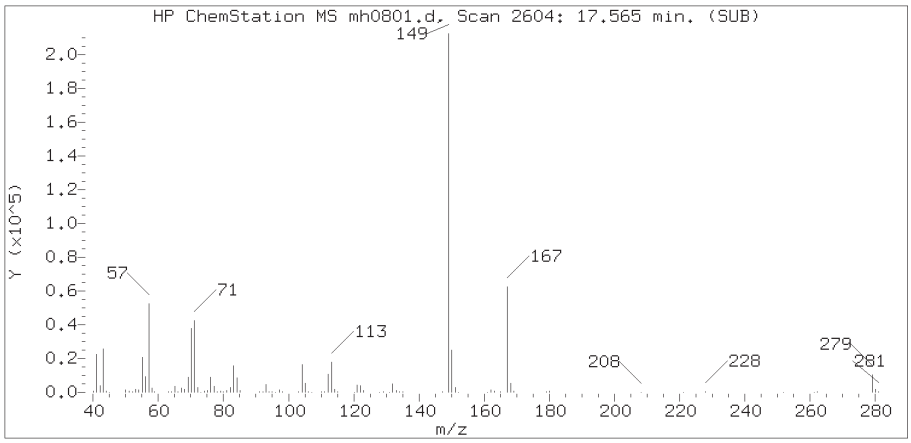
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

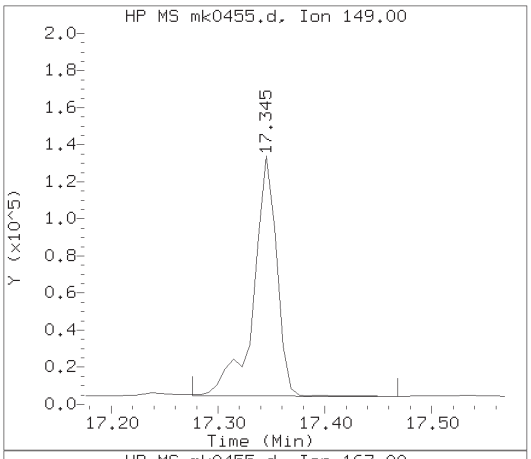
Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 30
Compound Name	: Chrysene
Scan Number	: 1555
Retention Time (minutes)	: 17.192
Relative Retention Time	:-0.00000
Quant Ion	: 228.00
Area (flag)	: 7300
On-column Amount (ng/ul)	: 0.0083

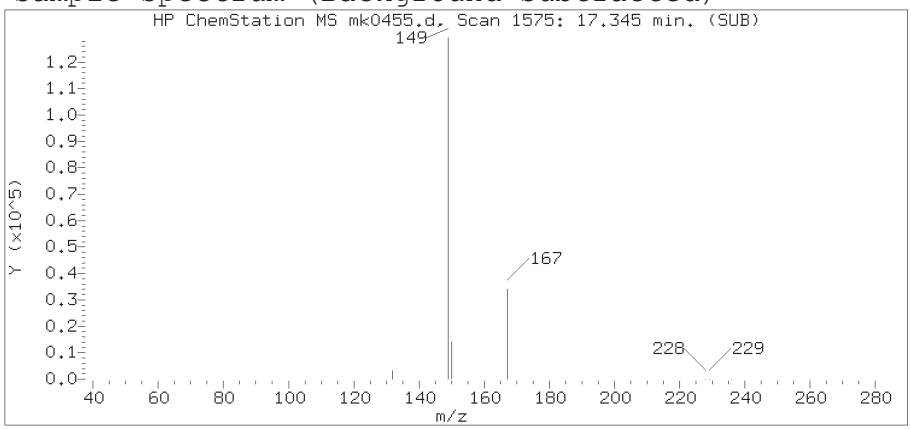
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

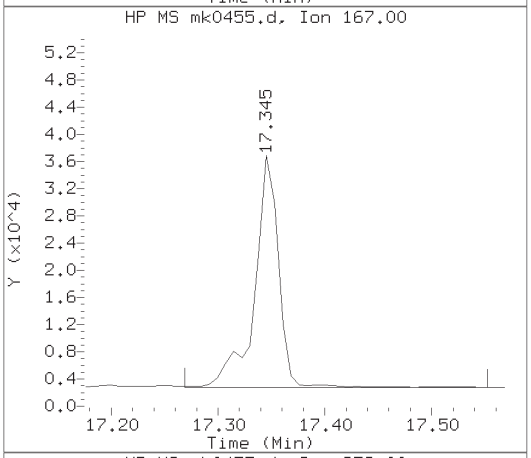
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



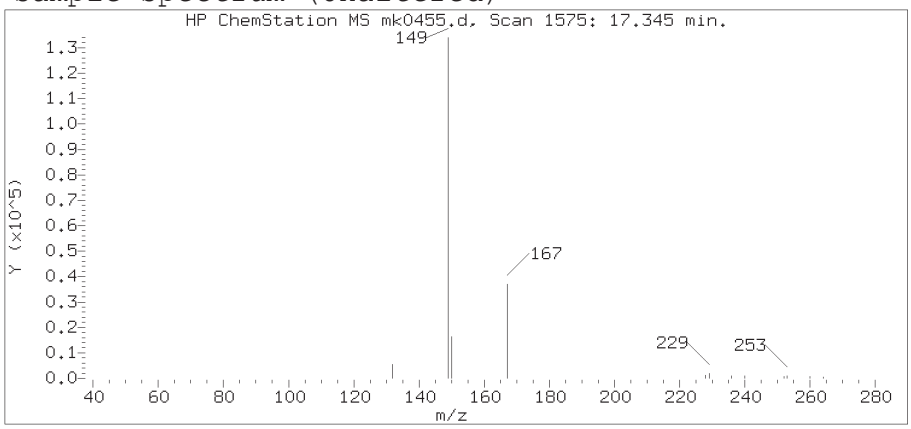


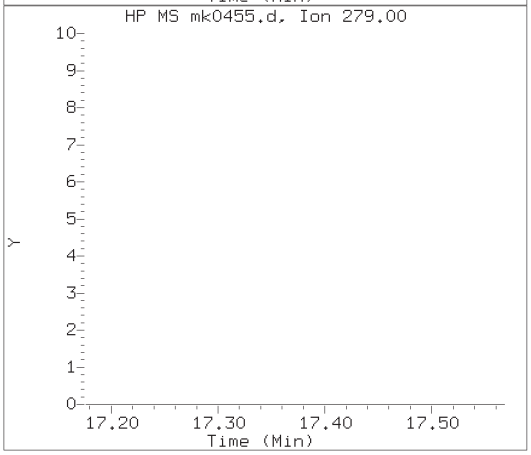
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

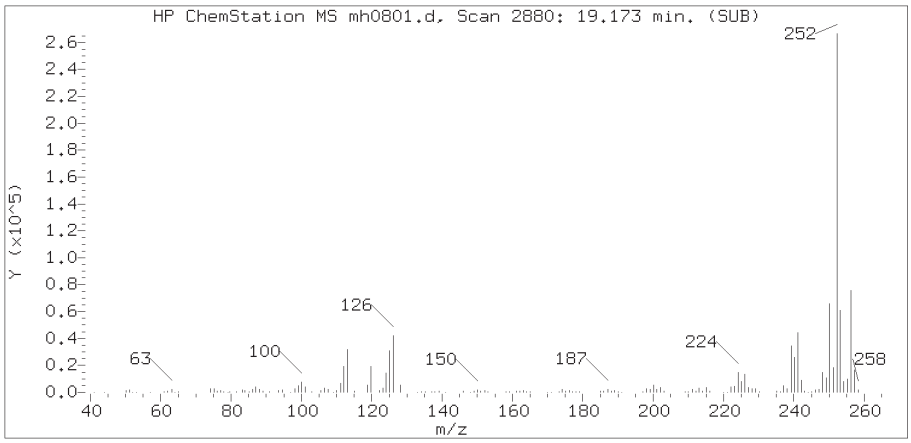
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

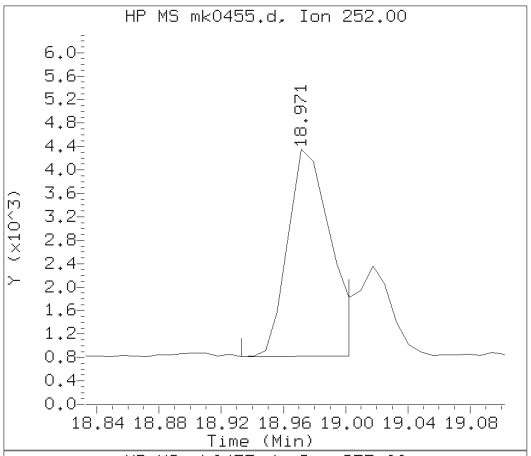
Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 31
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1575
Retention Time (minutes)	: 17.345
Relative Retention Time	:-0.00000
Quant Ion	: 149.00
Area (flag)	: 196542
On-column Amount (ng/ul)	: 0.3150

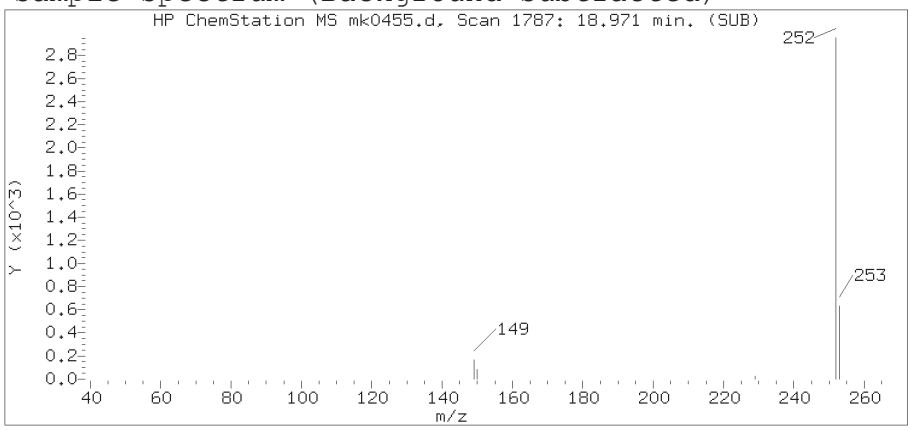
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

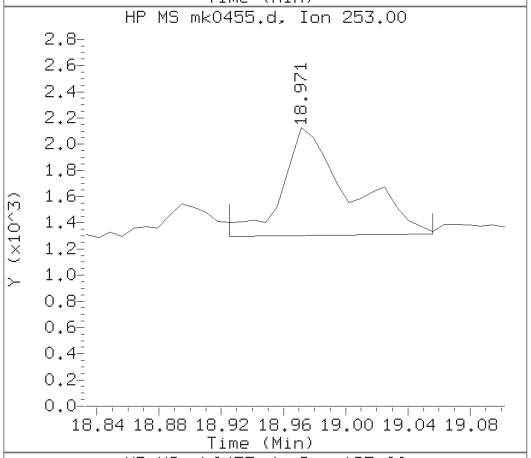
Reference Standard Spectrum for Benzo(b)fluoranthene



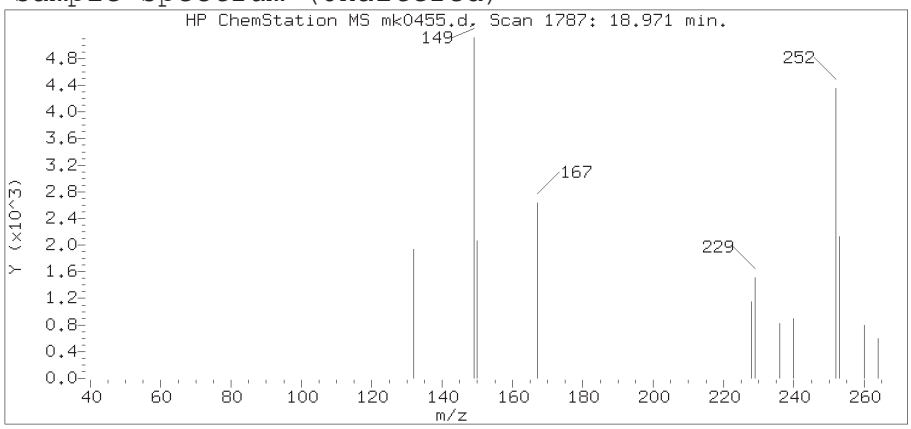


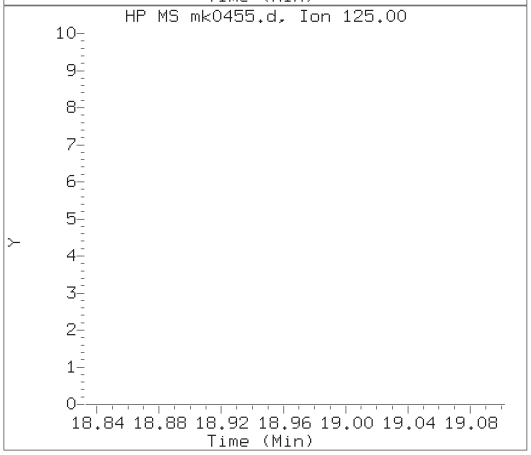
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

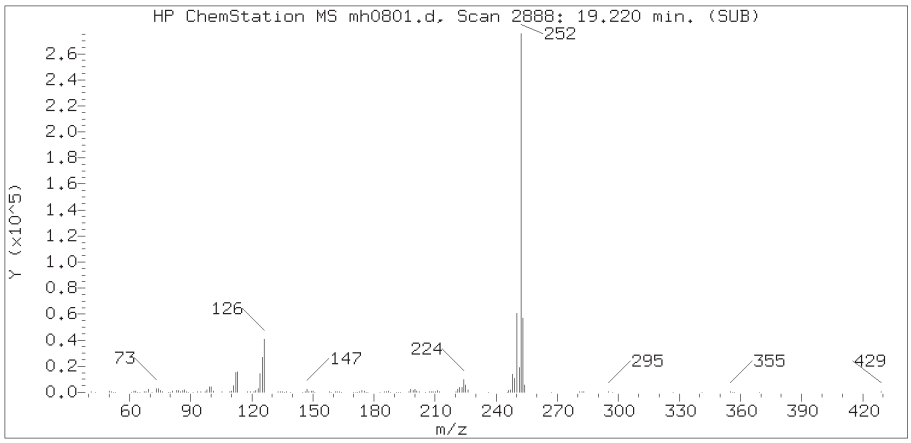
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

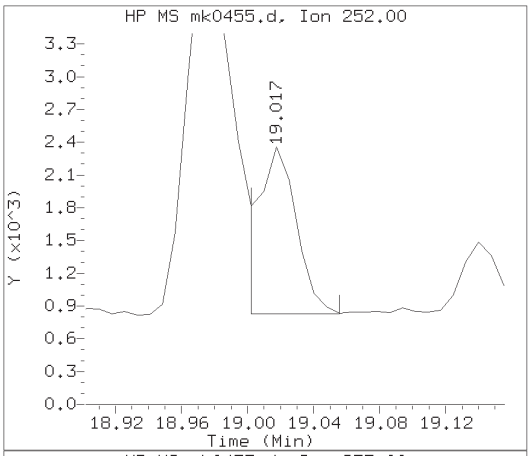
Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 33
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1787
Retention Time (minutes)	: 18.971
Relative Retention Time	: 0.00000
Quant Ion	: 252.00
Area (flag)	: 6627
On-column Amount (ng/ul)	: 0.0072

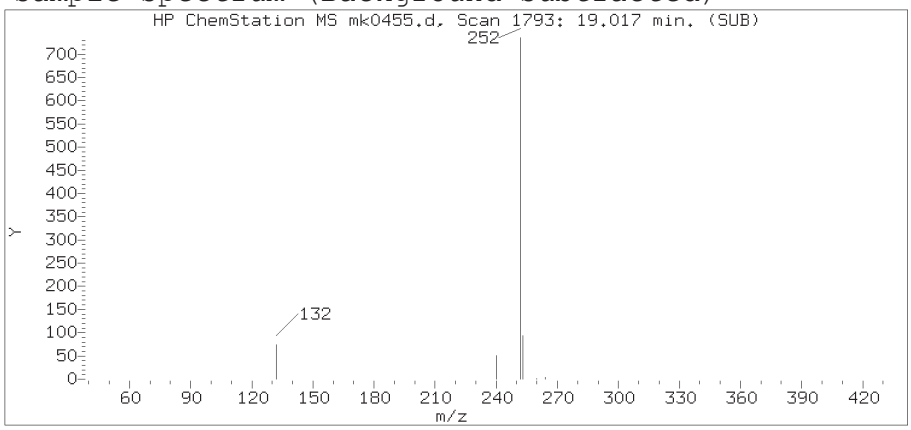
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

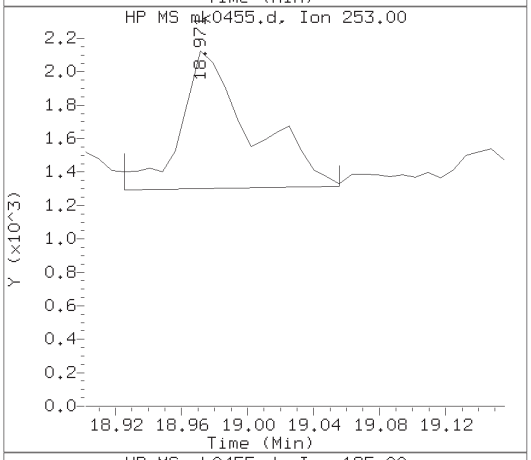
Reference Standard Spectrum for Benzo(k)fluoranthene



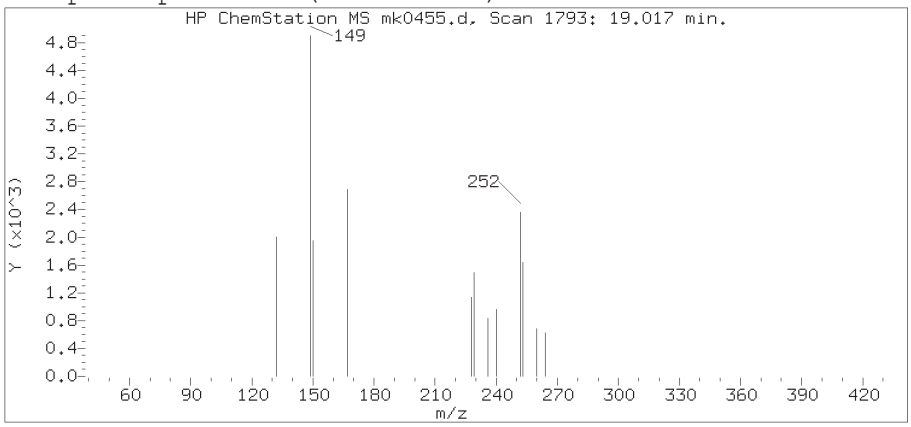


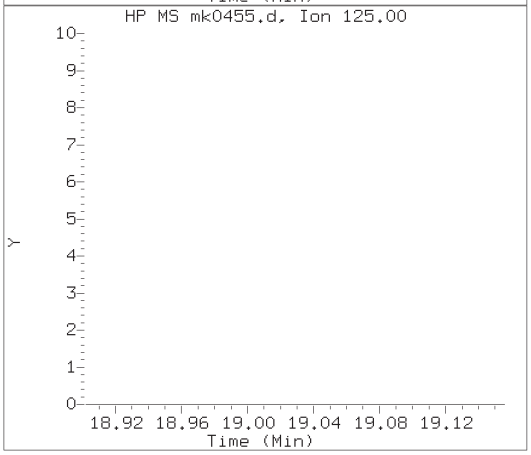
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

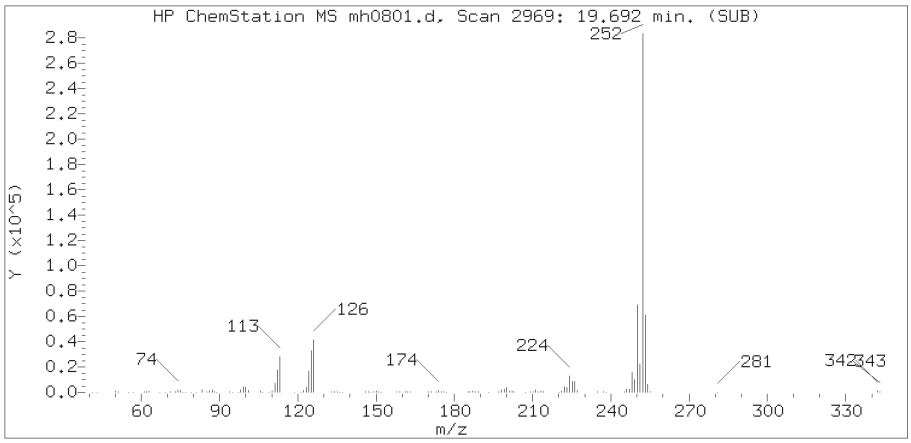
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

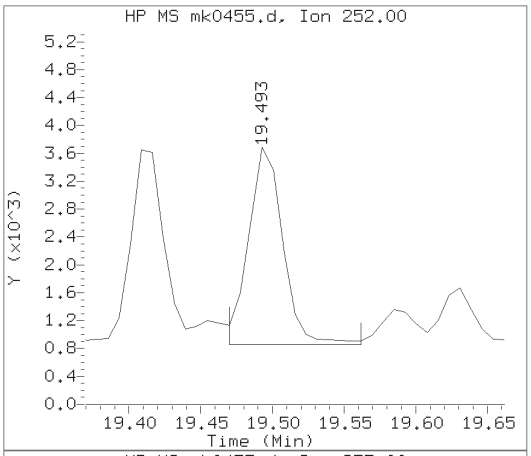
Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 34
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1793
Retention Time (minutes)	: 19.017
Relative Retention Time	: 0.00000
Quant Ion	: 252.00
Area (flag)	: 2396
On-column Amount (ng/ul)	: 0.0026

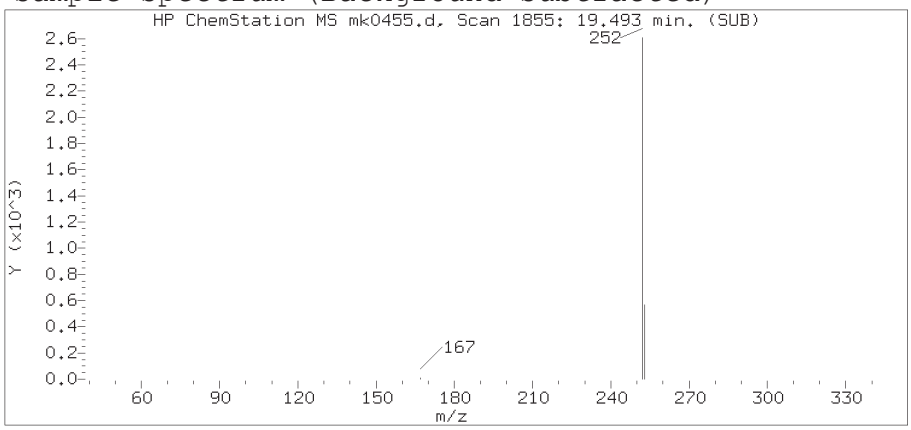
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

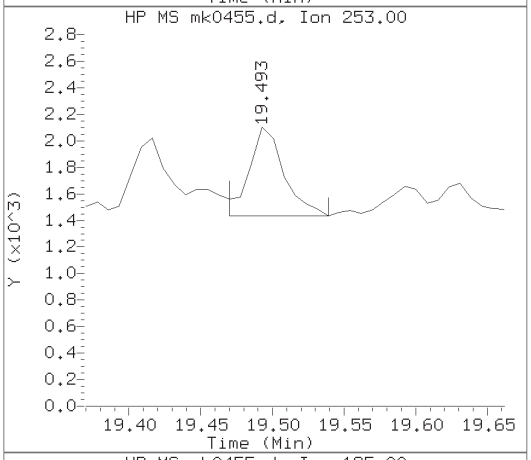
Reference Standard Spectrum for Benzo(a)pyrene



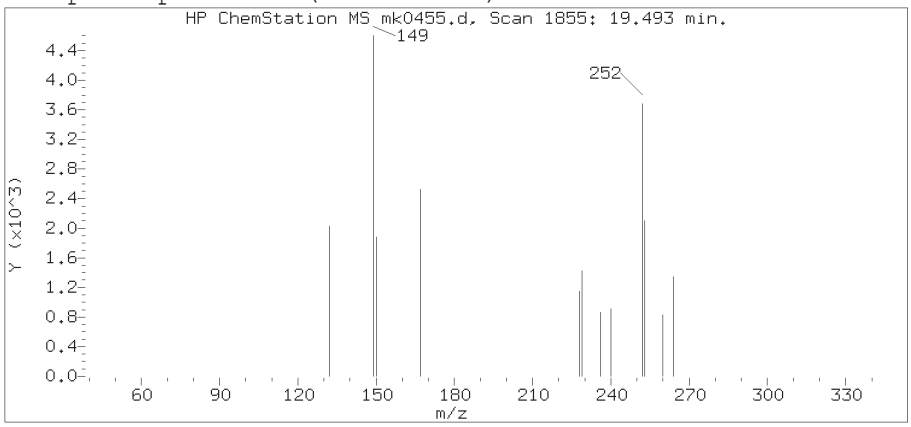


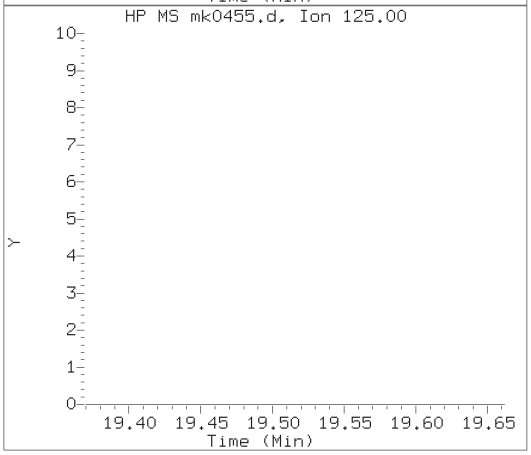
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 37
Compound Name	: Benzo(a)pyrene
Scan Number	: 1855
Retention Time (minutes)	: 19.493
Relative Retention Time	: 0.00039
Quant Ion	: 252.00
Area (flag)	: 4695
On-column Amount (ng/ul)	: 0.0053

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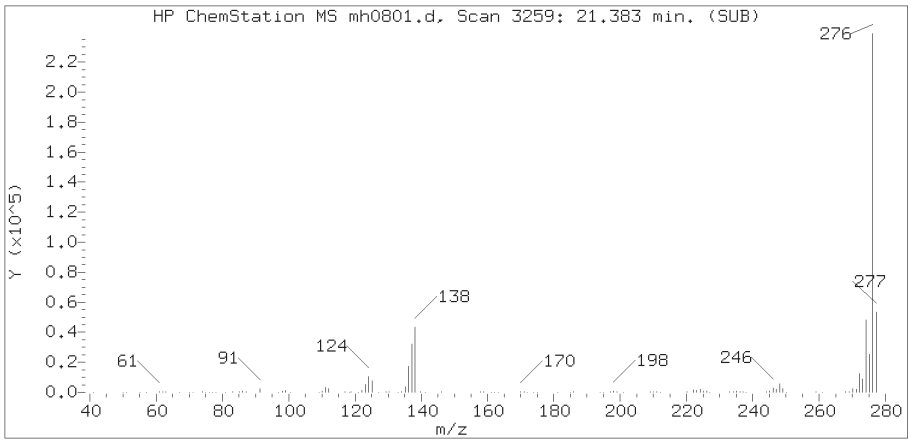
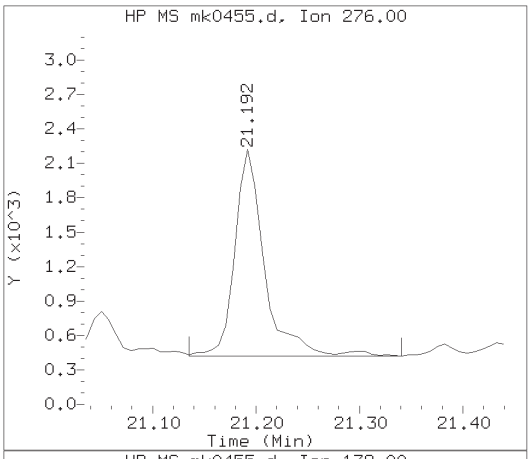
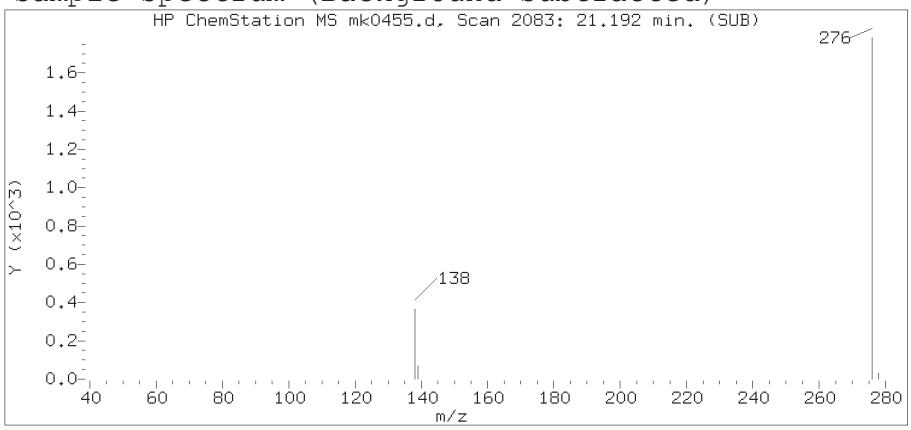
Target 3.5 esignature user ID: jmg00346

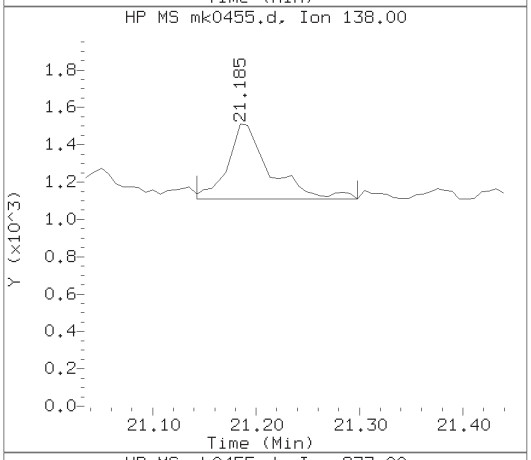
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



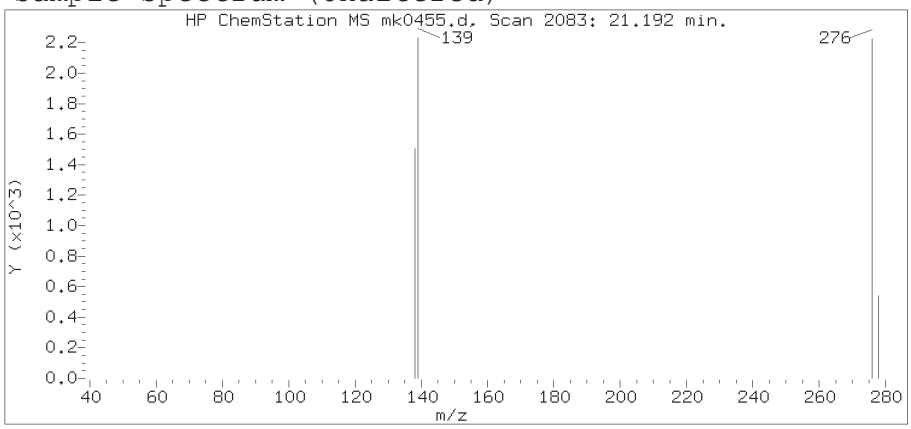


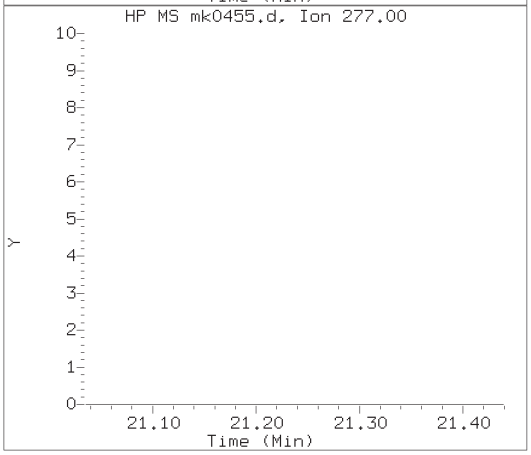
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 39
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2083
Retention Time (minutes)	: 21.192
Relative Retention Time	:-0.00000
Quant Ion	: 276.00
Area (flag)	: 3625
On-column Amount (ng/ul)	: 0.0045

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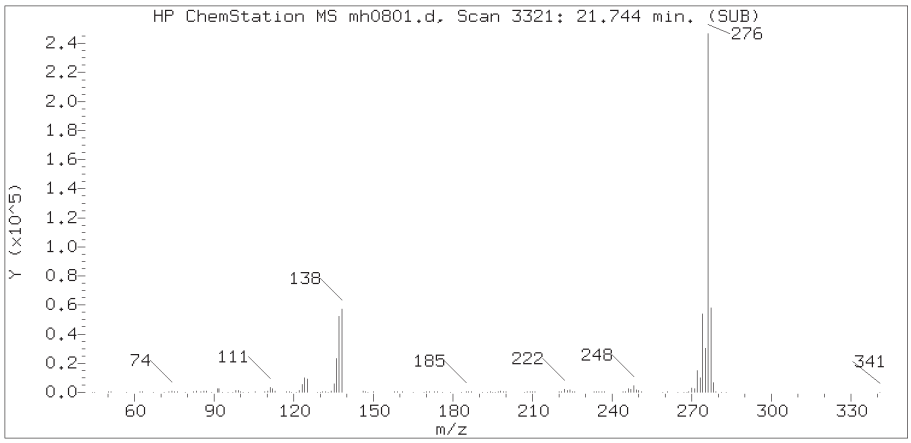
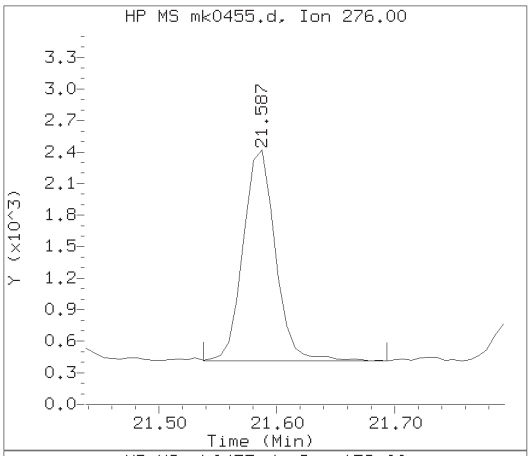
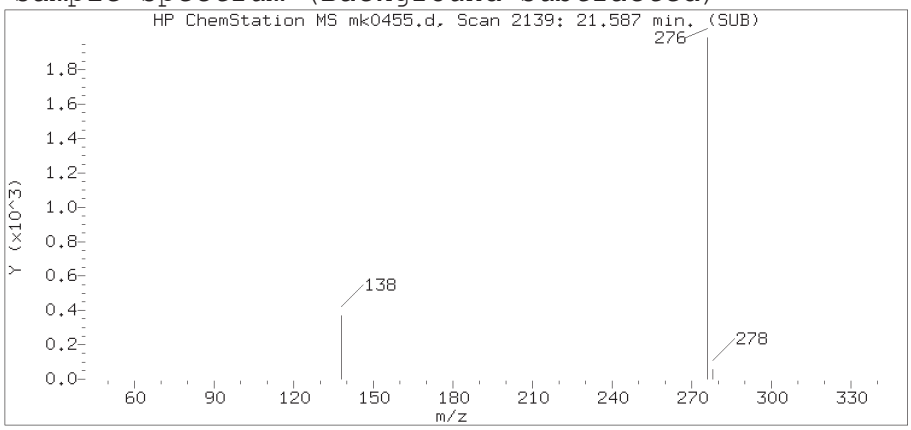
Target 3.5 esignature user ID: jmg00346

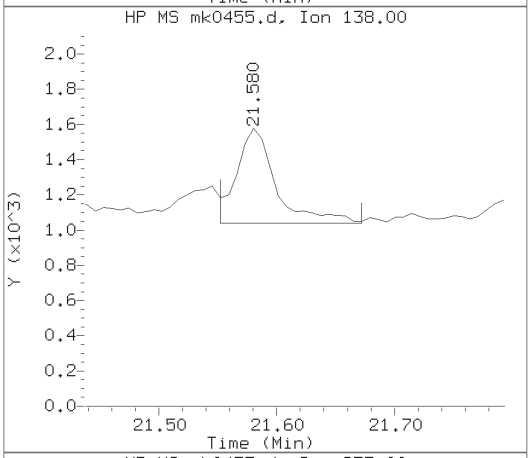
Reference Standard Spectrum for Benzo(g,h,i)perylene



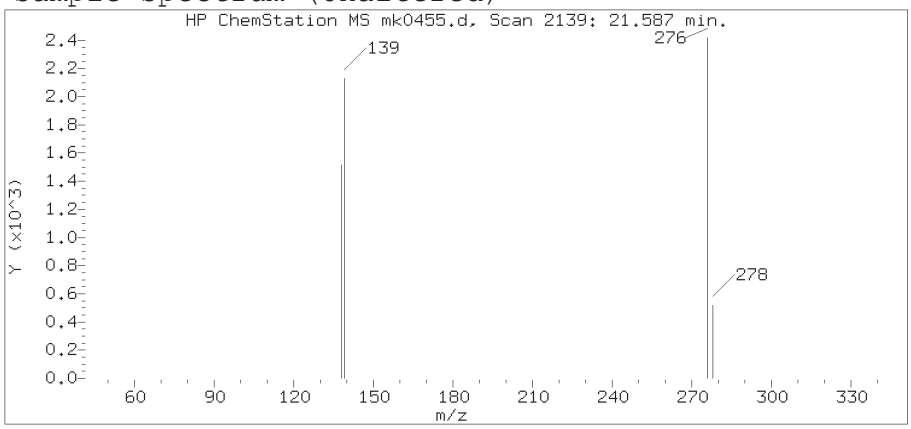


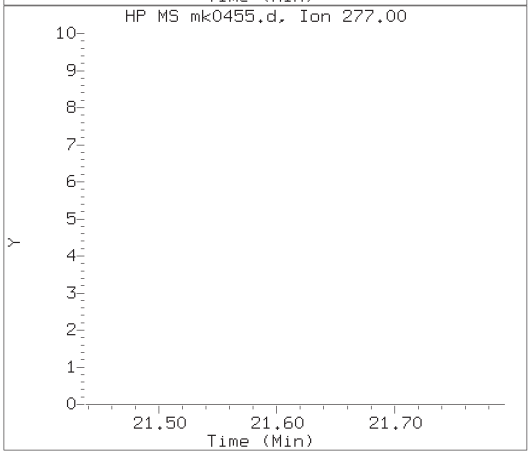
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0455.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:55 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 14T02RE Lab Sample ID: 9876332RE

Compound Number	: 41
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2139
Retention Time (minutes)	: 21.587
Relative Retention Time	:-0.00000
Quant Ion	: 276.00
Area (flag)	: 3832
On-column Amount (ng/ul)	: 0.0041

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP21585.i/18nov05a.b/mk0207.d Injection date and time: **05-NOV-2018 22:15**
Data file Sample Info. Line: 14T04;9876334;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599(0.000)	476	152	77173 (0)	0.25	
6) Naphthalene-d8	8.519(0.000)	574	136	235865 (1)	0.25	
14) Acenaphthene-d10	11.303(0.000)	770	164	110490 (7)	0.25	
20) Phenanthrene-d10	13.183(0.016)	988	188	220893 (3)	0.25	
29) Chrysene-d12	17.184(0.000)	1554	240	154870 (-1)	0.25	
38) Perylene-d12	19.631(0.000)	1873	264	158127 (1)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 1-Methylnaphthalene-d10	(2)	9.741(0.000)	152	73763	0.172	69%		29 - 112
24) Fluoranthene-d10	(4)	14.820(-0.001)	212	138194	0.160	64%		38 - 119
36) Benzo(a)pyrene-d12	(6)	19.493(0.000)	264	78764	0.135	54%		18 - 129

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)	2.839(-0.001)	88	7325	0.034	0.14			0.03
4) bis(2-Chloroethyl)ether	(2)			Not Detected					0.02
7) Naphthalene	(2)	8.539(0.000)	128	15272	0.014	0.06			0.008
13) Acenaphthylene	(3)			Not Detected					0.003
15) Acenaphthene	(3)	11.341(-0.000)	154	7733M	0.011	0.04			0.003
18) Fluorene	(3)	12.067(-0.000)	166	5648	0.007	0.03			0.003
19) Hexachlorobenzene	(4)			Not Detected					0.01
21) Phenanthrene	(4)	13.230(-0.001)	178	15329	0.013	0.05			0.008
22) Anthracene	(4)	13.292(-0.001)	178	3537	0.003	0.01			0.003
23) Di-n-butylphthalate	(4)			Not Detected					0.05
25) Fluoranthene	(4)	14.845(-0.001)	202	4607	0.003	0.01			0.003
26) Pyrene	(5)	15.177(0.000)	202	3549	0.003	0.01			0.003
31) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.08
28) Benzo(a)anthracene	(5)			Not Detected					0.003
30) Chrysene	(5)			Not Detected					0.003
33) Benzo(b)fluoranthene	(6)			Not Detected					0.003
34) Benzo(k)fluoranthene	(6)			Not Detected					0.003
37) Benzo(a)pyrene	(6)			Not Detected					0.003
39) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.003
40) Dibenz(a,h)anthracene	(6)			Not Detected					0.005
41) Benzo(g,h,i)perylene	(6)			Not Detected					0.003

M = Compound was manually integrated.

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0207.d Injection date and time: **05-NOV-2018 22:15**
Data file Sample Info. Line: 14T04;9876334;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 2 ul

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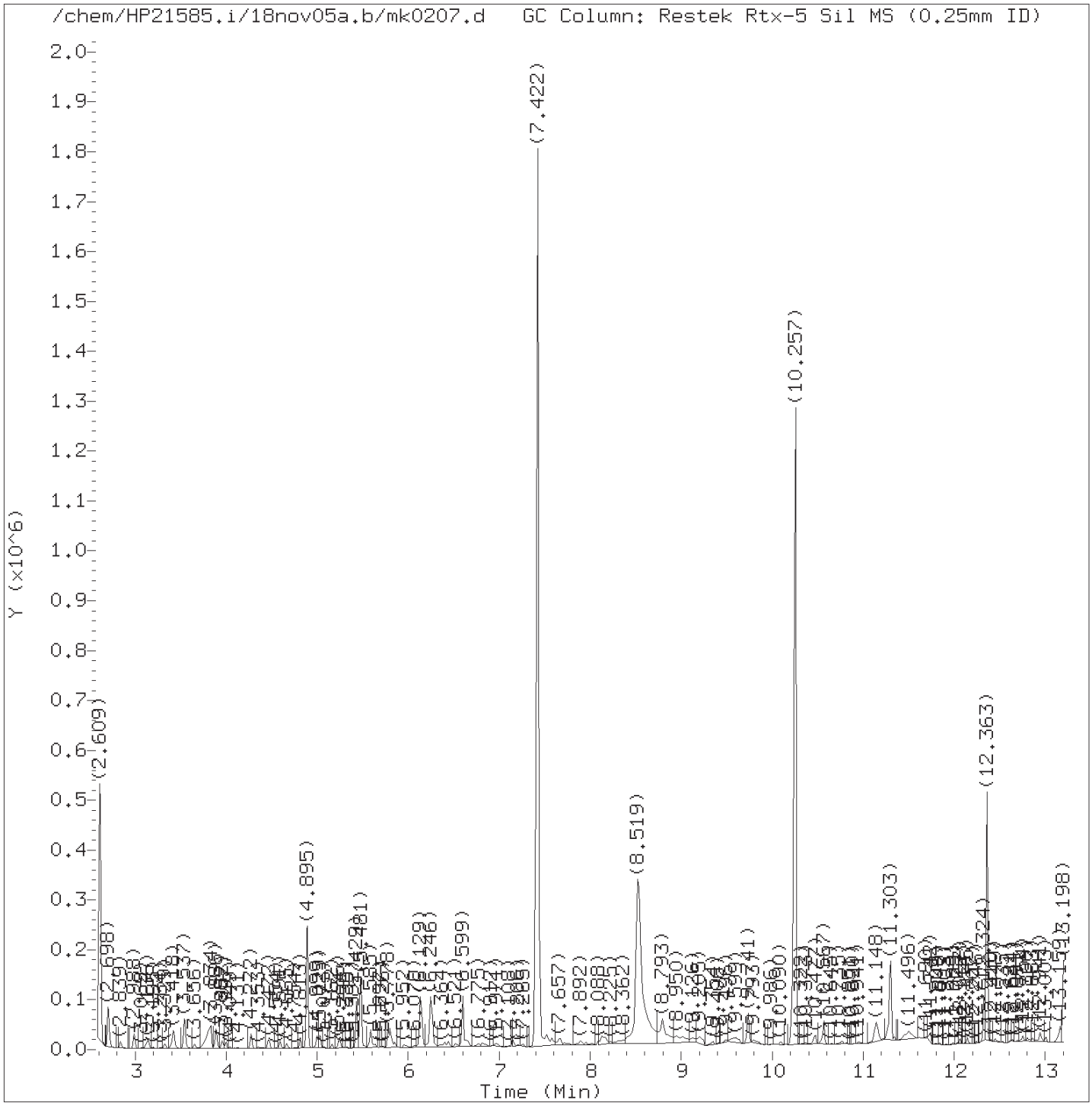
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

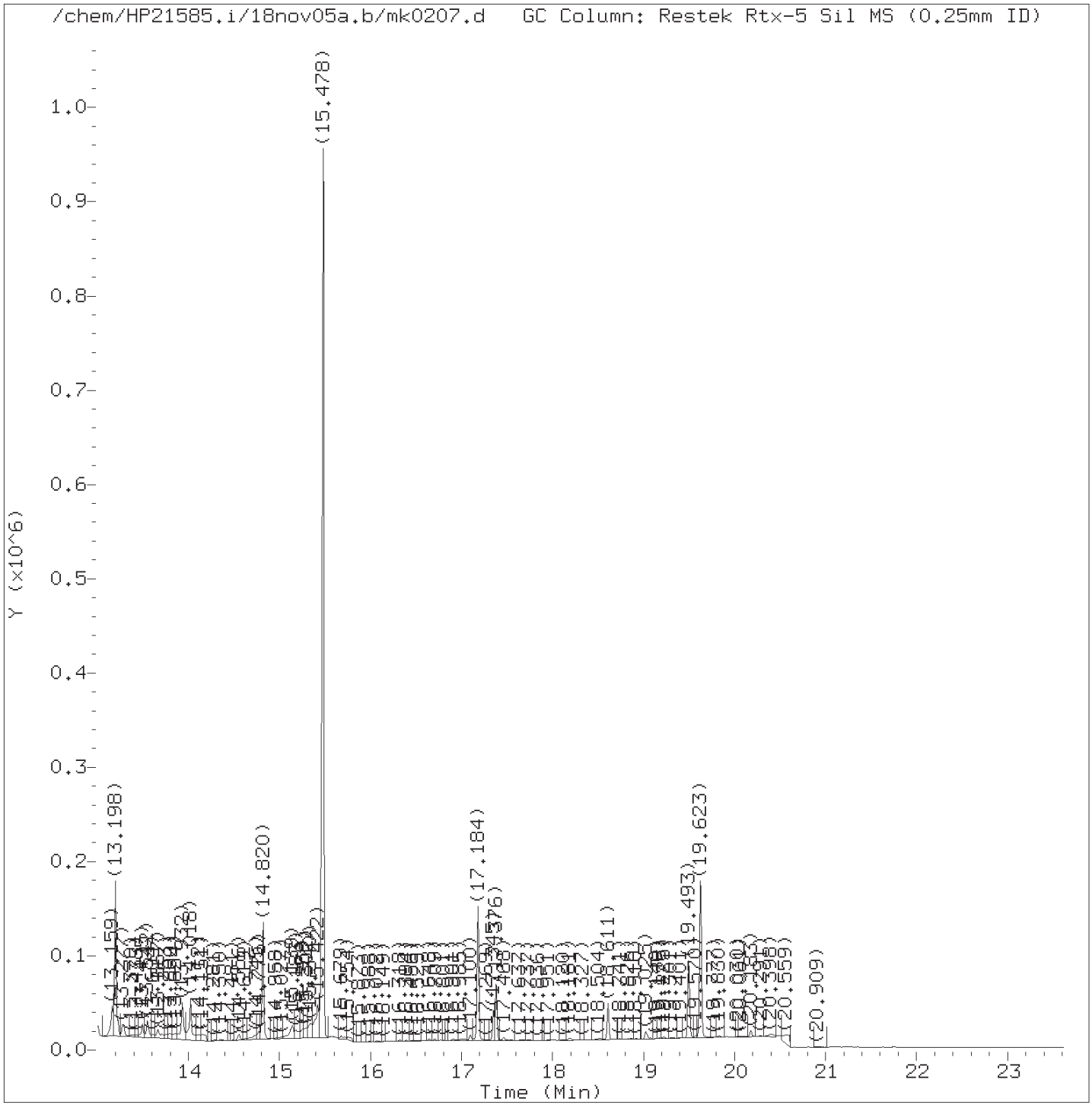
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

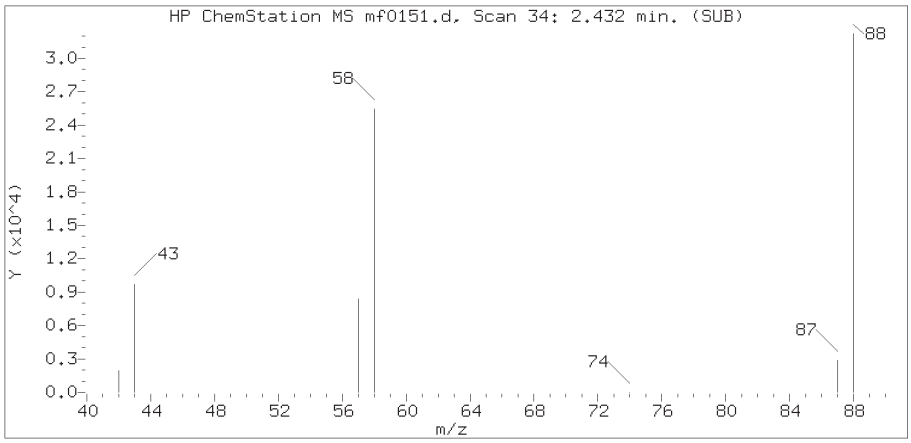
Sample Name: 14T04 Lab Sample ID: 9876334

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.839	88	7325	0.034
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	77173	0.250
6)*Naphthalene-d8	(2)	8.519	136	235865	0.250
7) Naphthalene	(2)	8.539	128	15272	0.014
10)$1-Methylnaphthalene-d10	(2)	9.741	152	73763	0.172
14)*Acenaphthene-d10	(3)	11.303	164	110490	0.250
15) Acenaphthene	(3)	11.341	154	7733M	0.011
18) Fluorene	(3)	12.067	166	5648	0.007
20)*Phenanthrene-d10	(4)	13.183	188	220893	0.250
21) Phenanthrene	(4)	13.230	178	15329	0.013
22) Anthracene	(4)	13.292	178	3537	0.003
24)$Fluoranthene-d10	(4)	14.820	212	138194	0.160
25) Fluoranthene	(4)	14.845	202	4607	0.003
26) Pyrene	(5)	15.177	202	3549	0.003
29)*Chrysene-d12	(5)	17.184	240	154870	0.250
36)$Benzo(a)pyrene-d12	(6)	19.493	264	78764	0.135
38)*Perylene-d12	(6)	19.631	264	158127	0.250

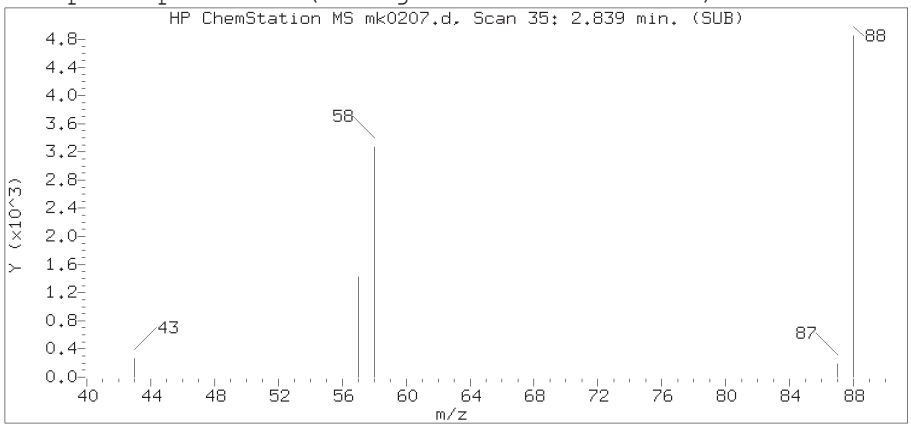
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

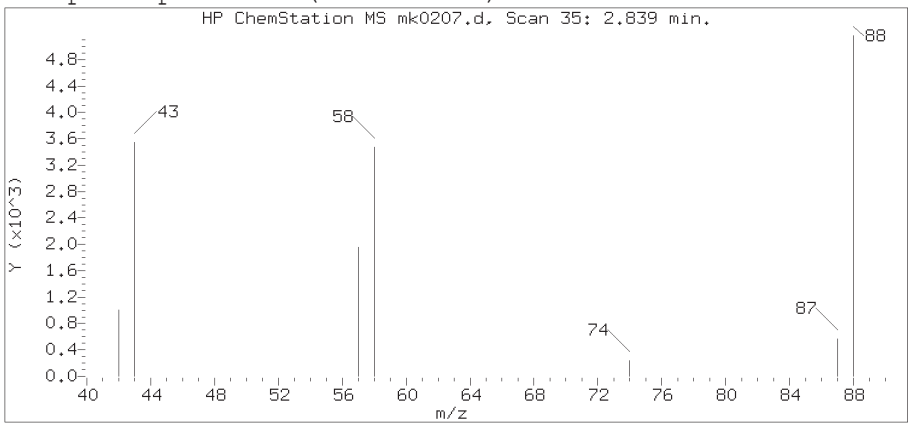
Reference Standard Spectrum for 1,4-Dioxane

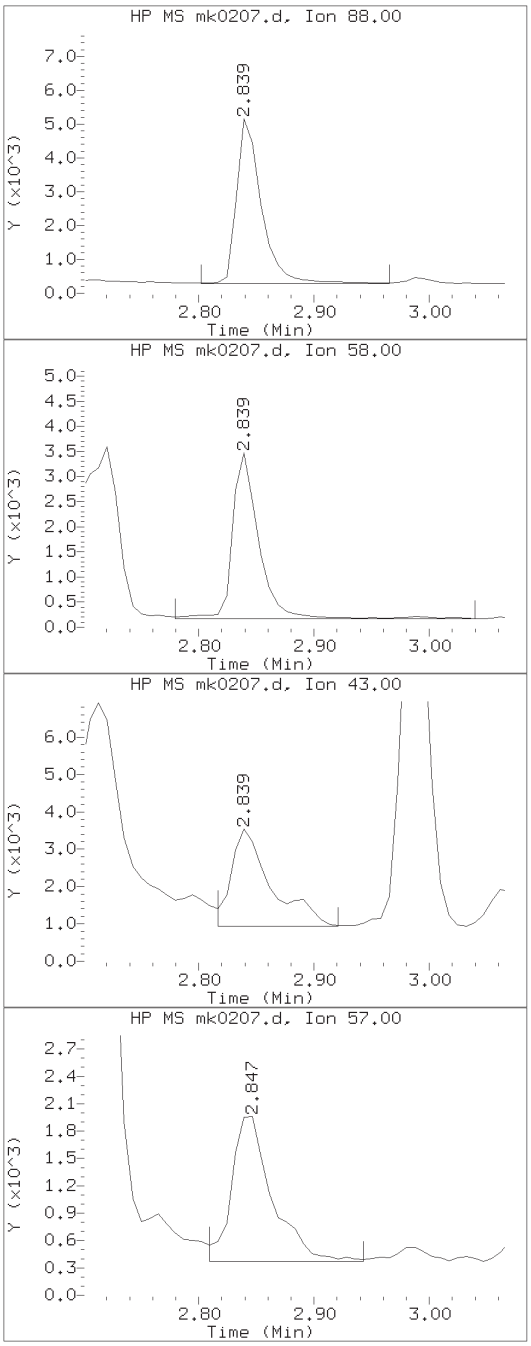


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

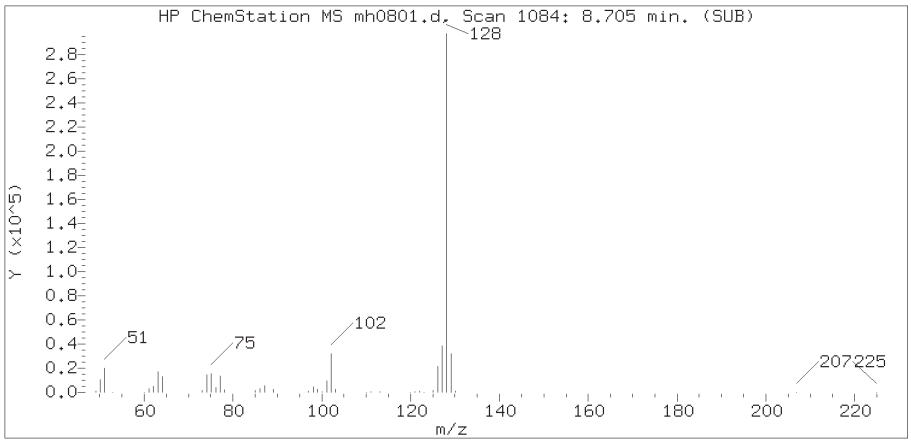
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

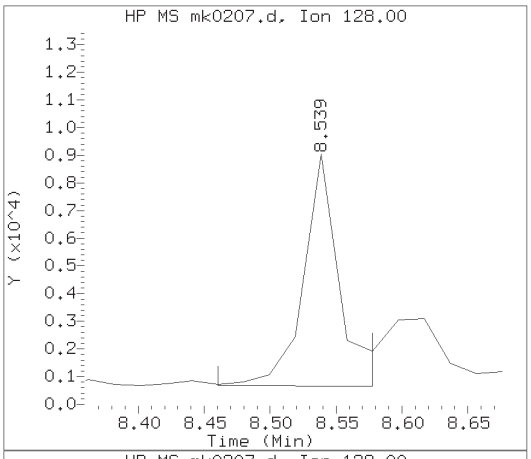
Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 35
Retention Time (minutes)	: 2.839
Relative Retention Time	:-0.00112
Quant Ion	: 88.00
Area (flag)	: 7325
On-column Amount (ng/ul)	: 0.0342

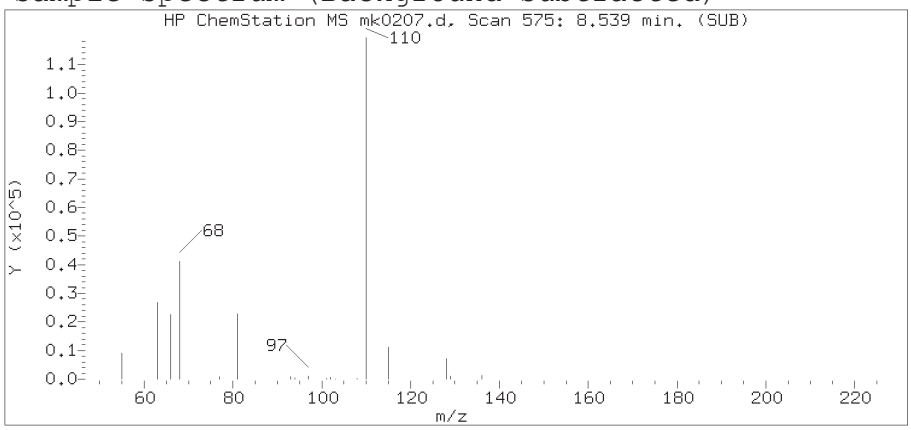
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

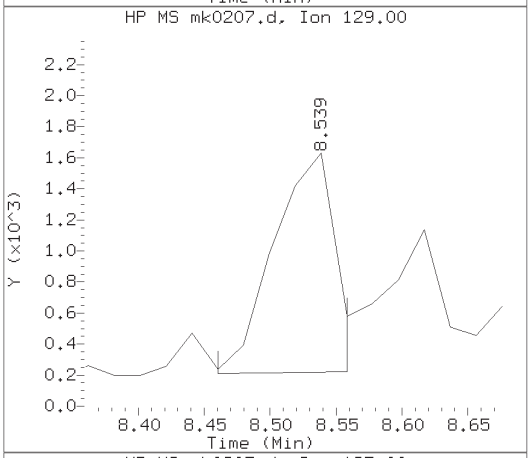
Reference Standard Spectrum for Naphthalene



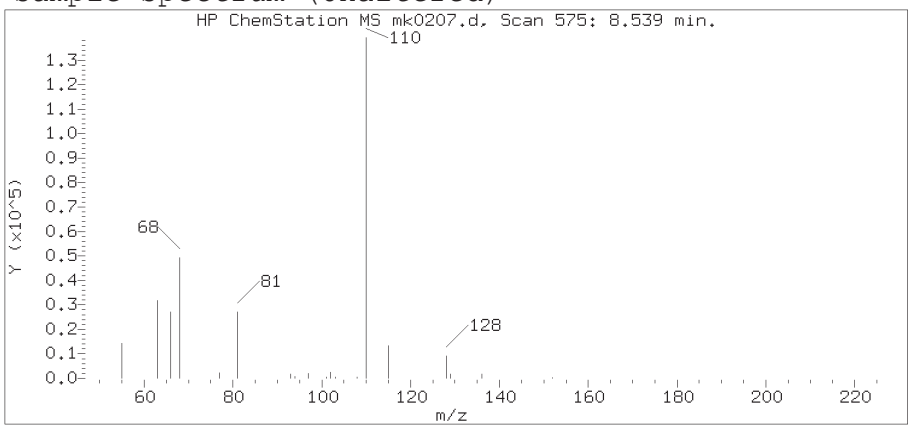


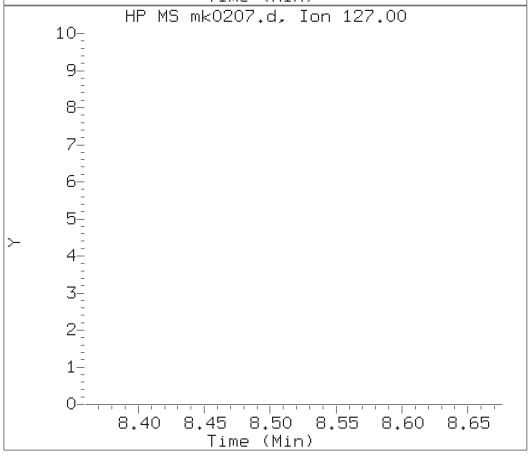
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

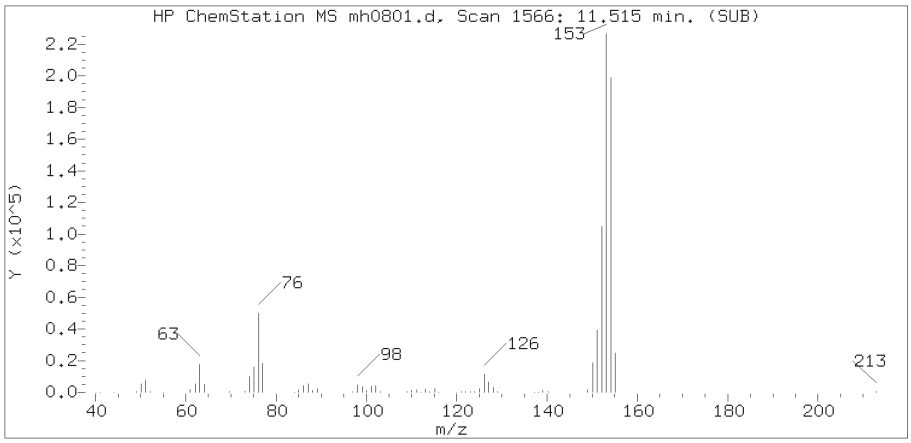
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

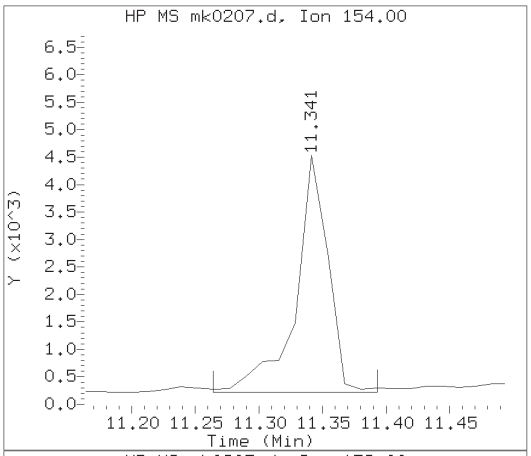
Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 7
Compound Name	: Naphthalene
Scan Number	: 575
Retention Time (minutes)	: 8.539
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 15272
On-column Amount (ng/ul)	: 0.0141

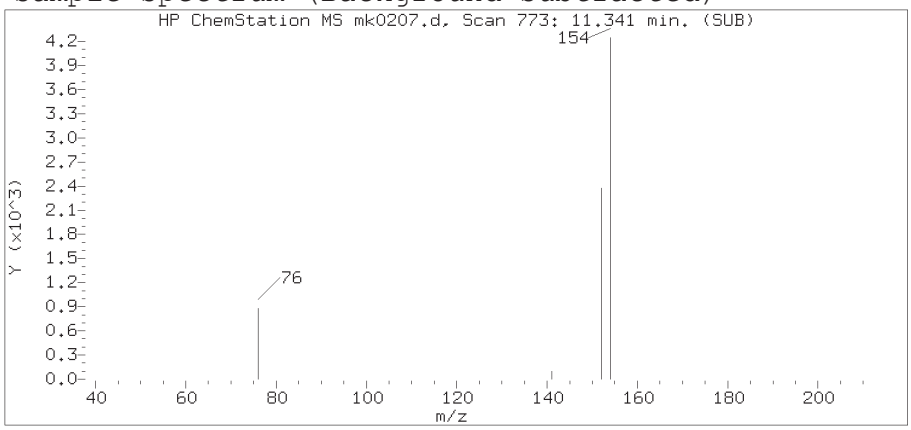
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

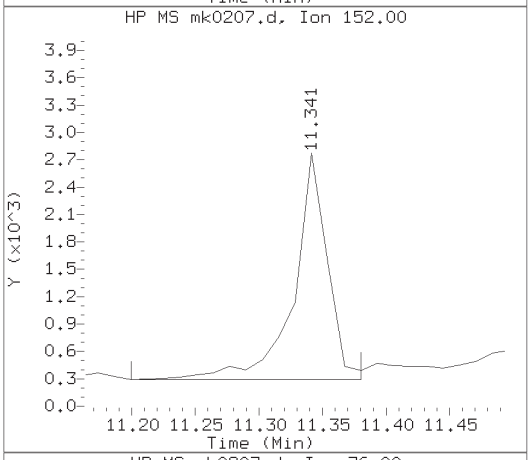
Reference Standard Spectrum for Acenaphthene



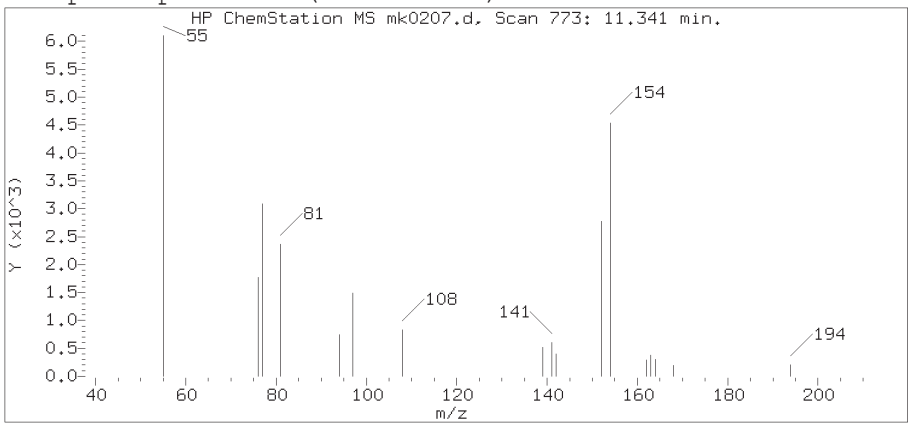


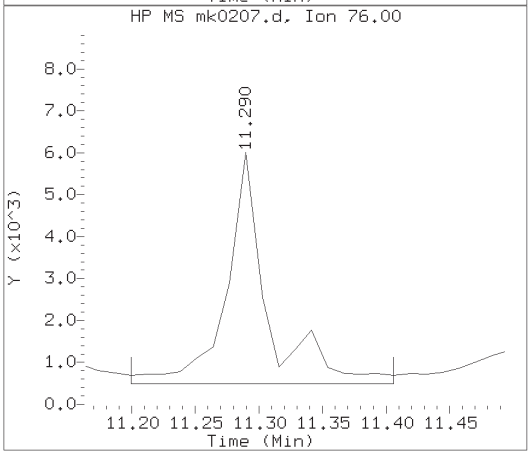
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

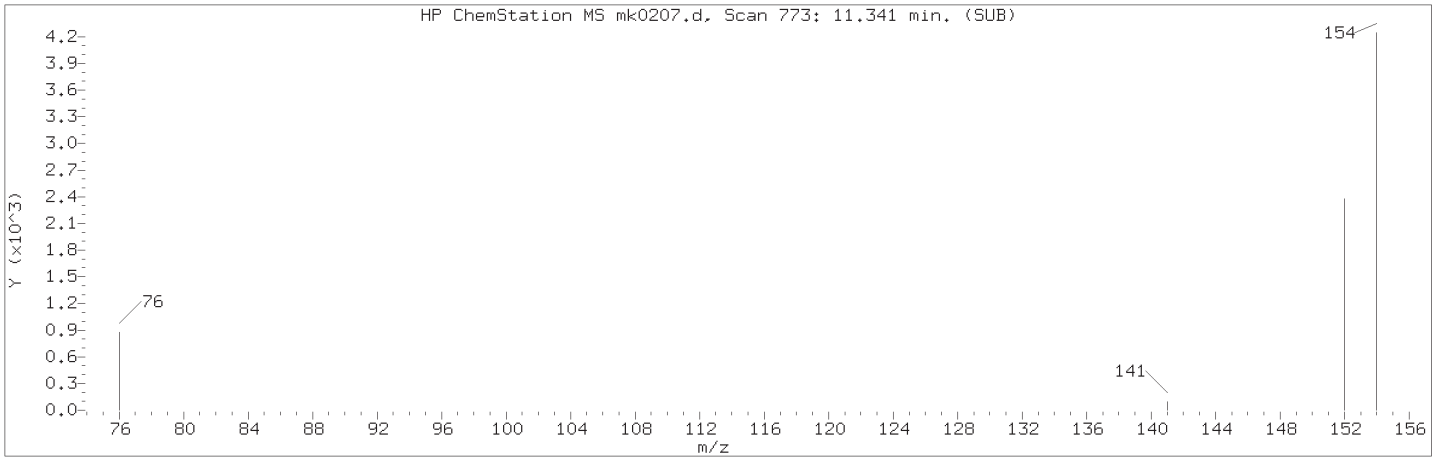
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

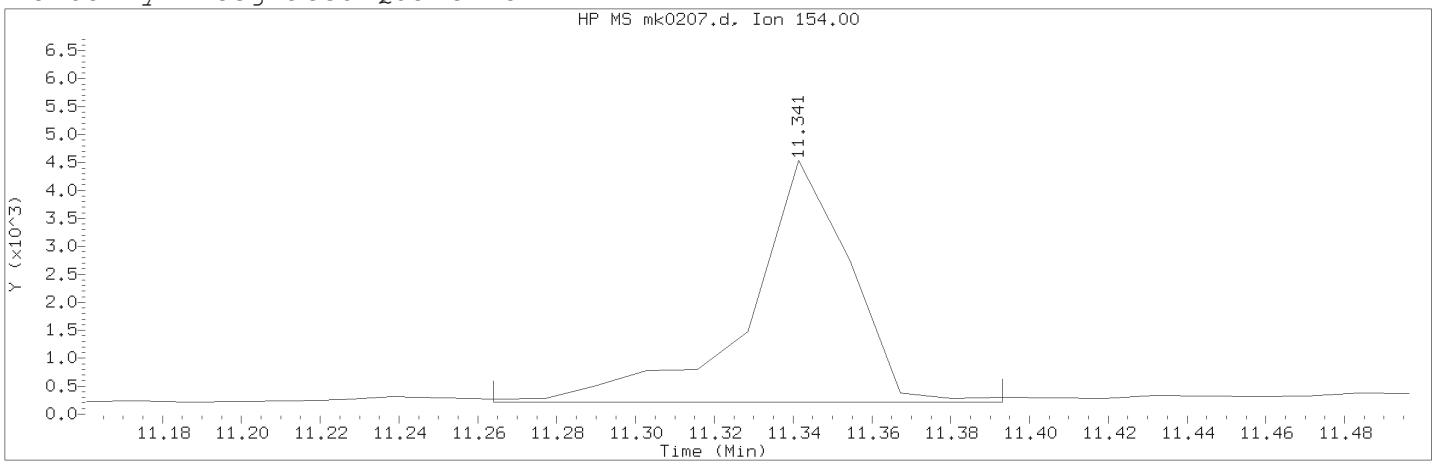
Compound Number	: 15
Compound Name	: Acenaphthene
Scan Number	: 773
Retention Time (minutes)	: 11.341
Relative Retention Time	:-0.00000
Quant Ion	: 154.00
Area (flag)	: 7733M
On-column Amount (ng/ul)	: 0.0109

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

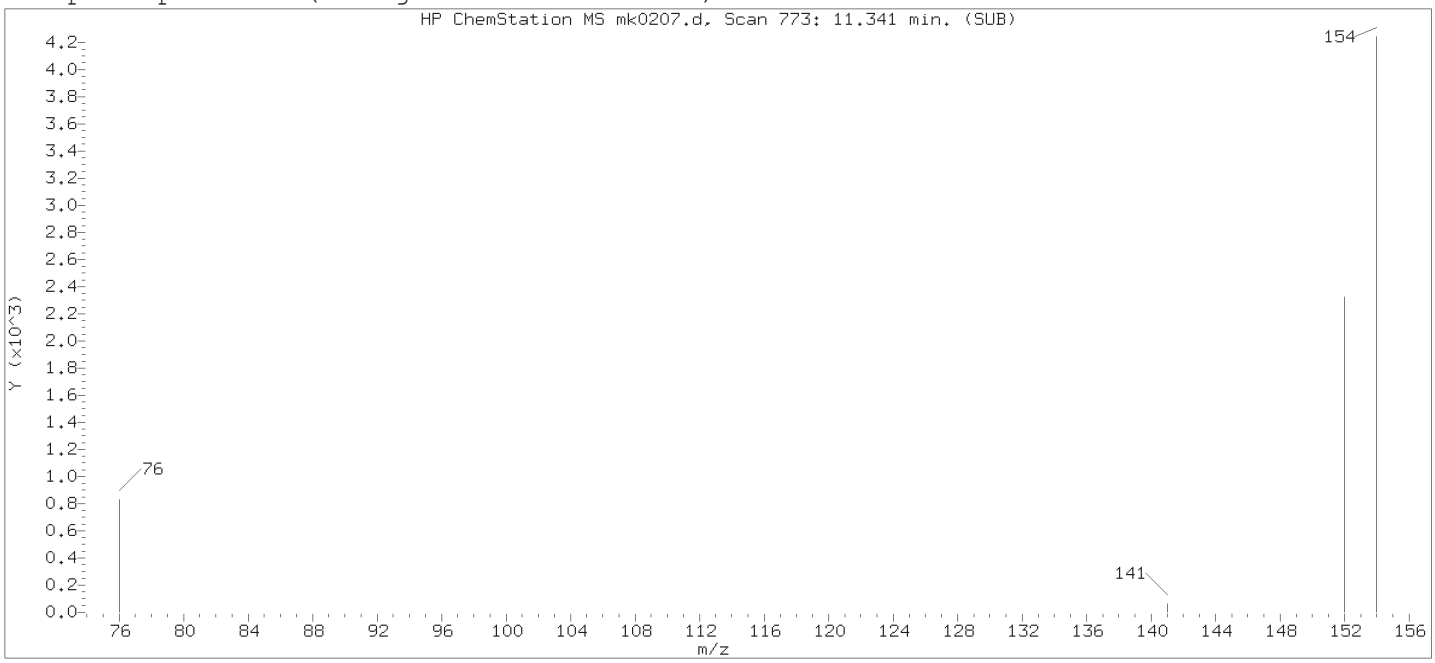
Compound Number	: 15		
Compound Name	: Acenaphthene		
Scan Number	: 773		
Retention Time (minutes)	: 11.341		
Quant Ion	: 154.00		
Area (flag)	: 7733M		
On-column Amount (ng/ul)	: 0.0109		
Integration start scan	: 766	Integration stop scan:	776
Y at integration start	: 216	Y at integration end:	216

Reason for manual integration: improper integration

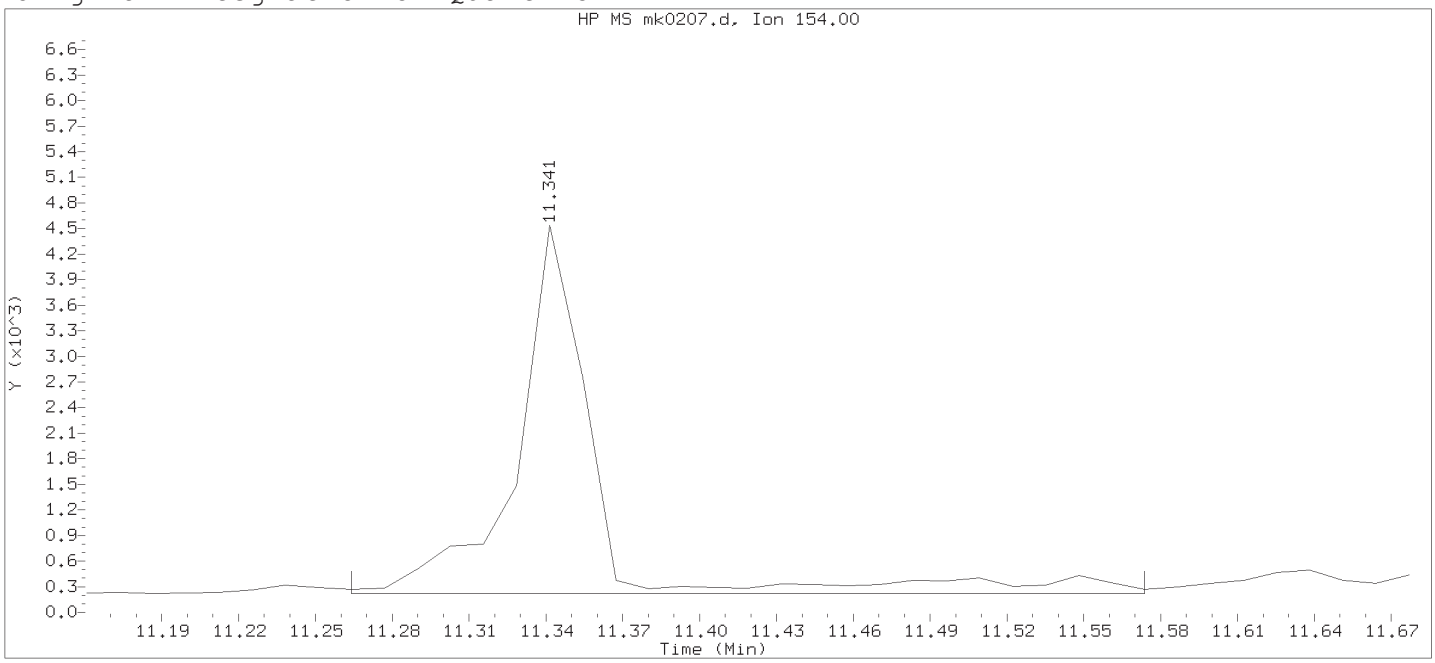
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

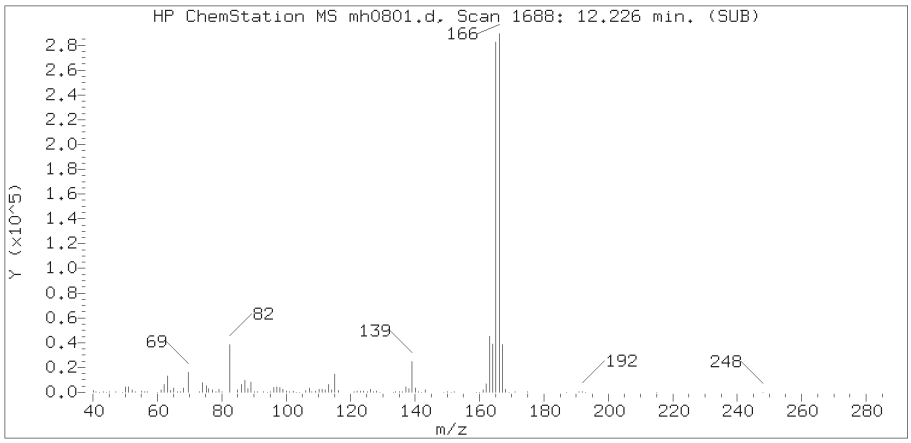
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

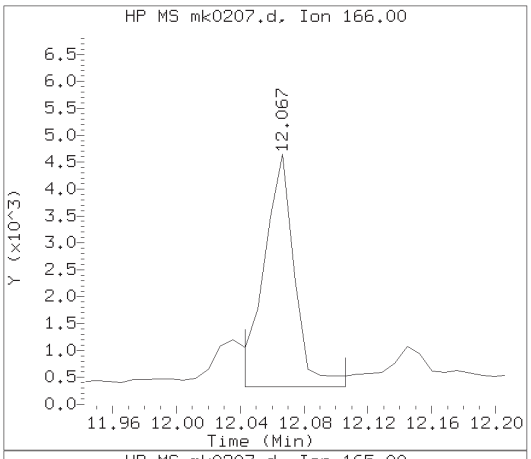
Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 15		
Compound Name	: Acenaphthene		
Scan Number	: 773		
Retention Time (minutes)	: 11.341		
Quant Ion	: 154.00		
Area	: 8972		
On-column Amount (ng/ul)	: 0.0127		
Integration start scan	: 766	Integration stop scan:	790
Y at integration start	: 216	Y at integration end:	216

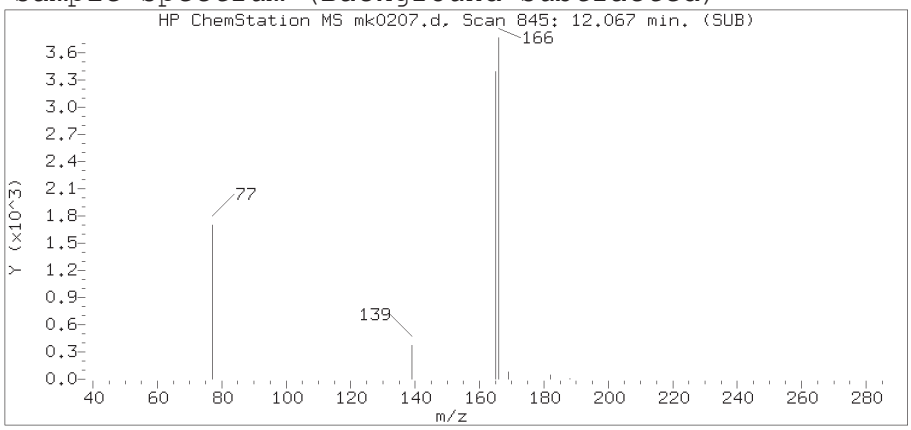
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature used: D14

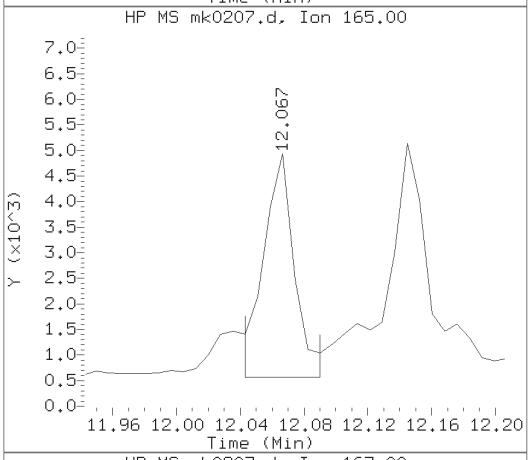
Reference Standard Spectrum for Fluorene



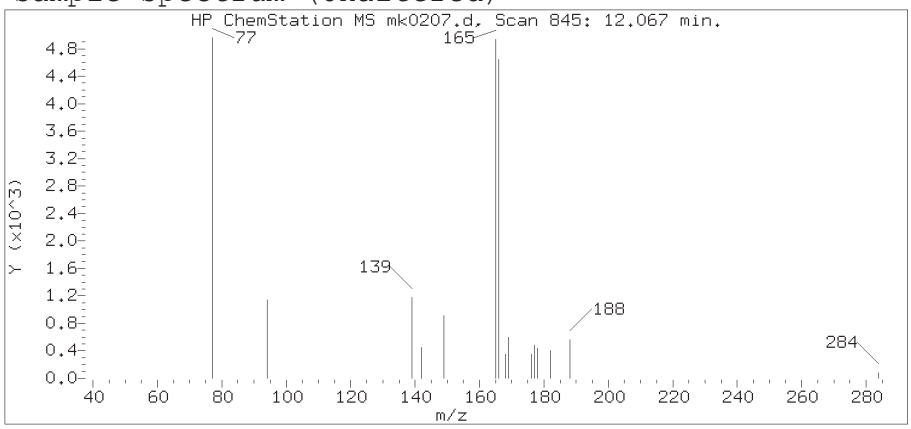


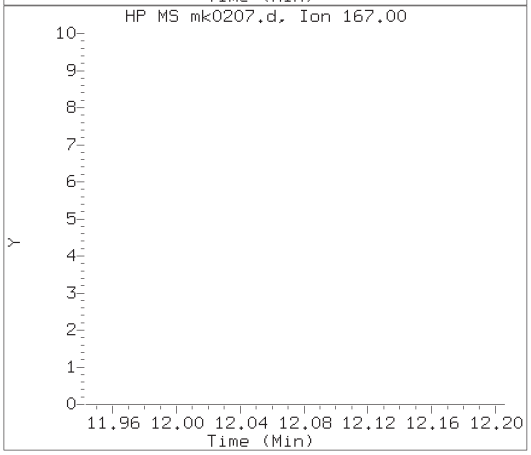
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 18
Compound Name	: Fluorene
Scan Number	: 845
Retention Time (minutes)	: 12.067
Relative Retention Time	:-0.00000
Quant Ion	: 166.00
Area (flag)	: 5648
On-column Amount (ng/ul)	: 0.0069

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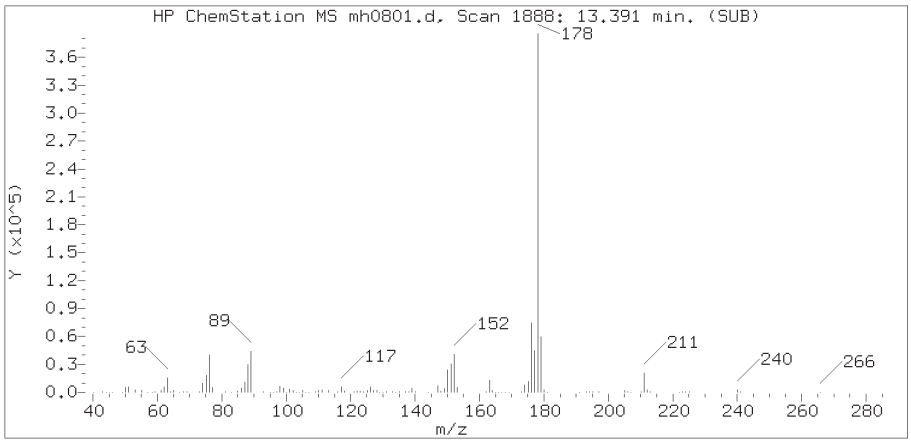
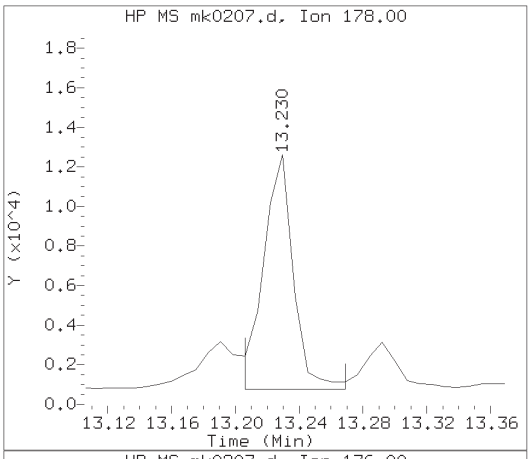
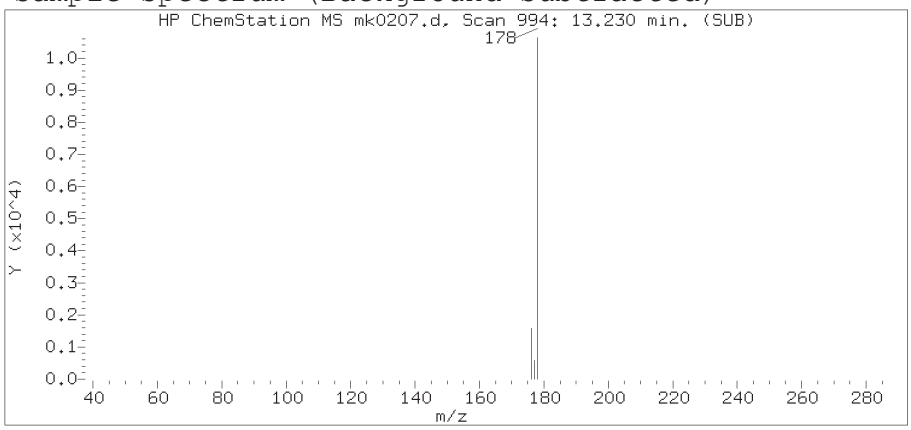
Target 3.5 esignature user ID: art12405

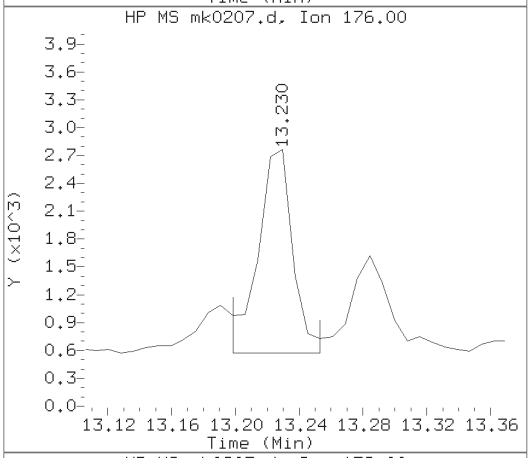
Reference Standard Spectrum for Phenanthrene



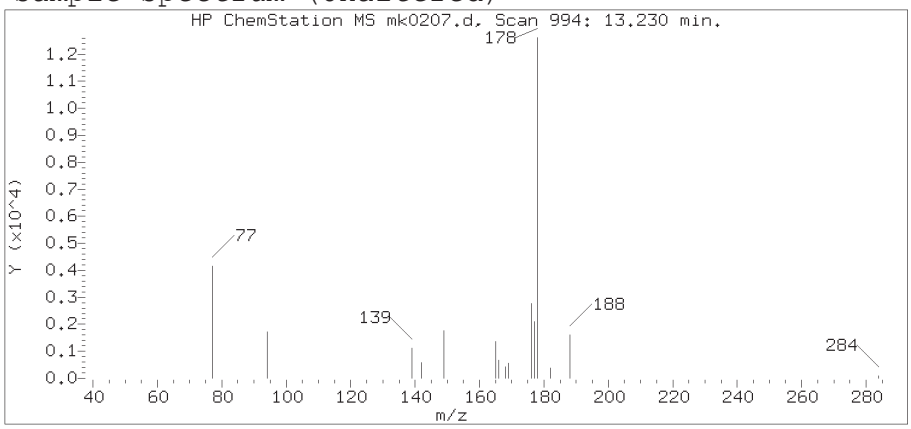


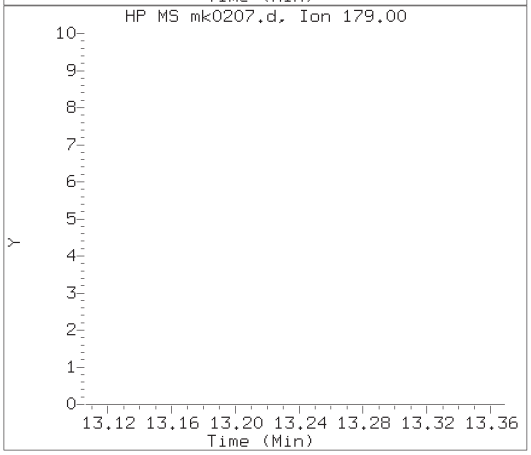
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 21
Compound Name	: Phenanthrene
Scan Number	: 994
Retention Time (minutes)	: 13.230
Relative Retention Time	:-0.00119
Quant Ion	: 178.00
Area (flag)	: 15329
On-column Amount (ng/ul)	: 0.0129

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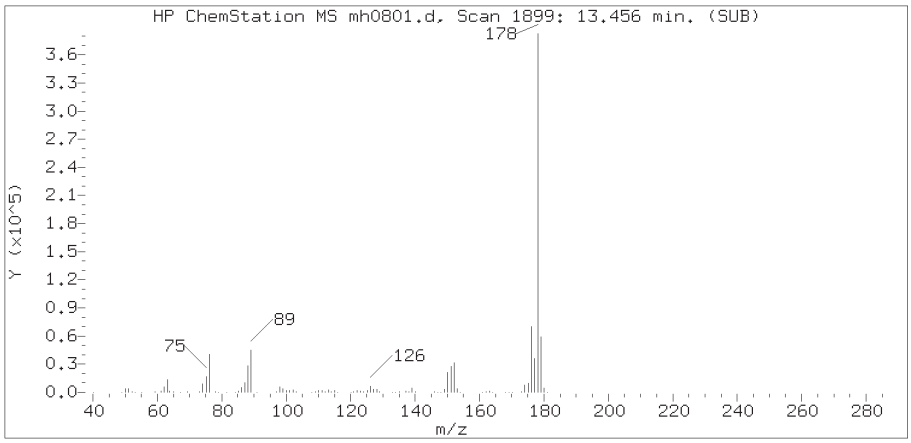
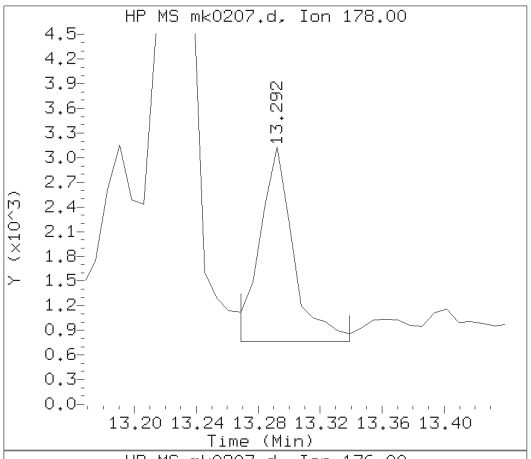
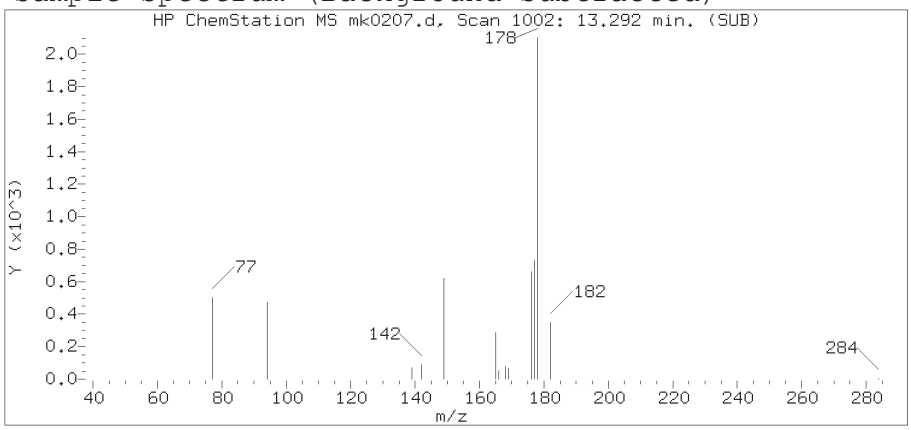
Target 3.5 esignature user ID: art12405

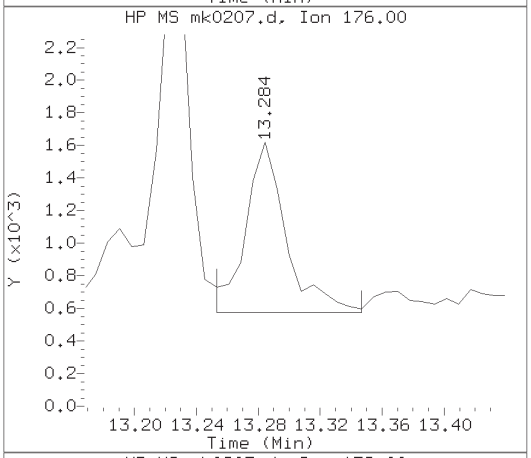
Reference Standard Spectrum for Anthracene



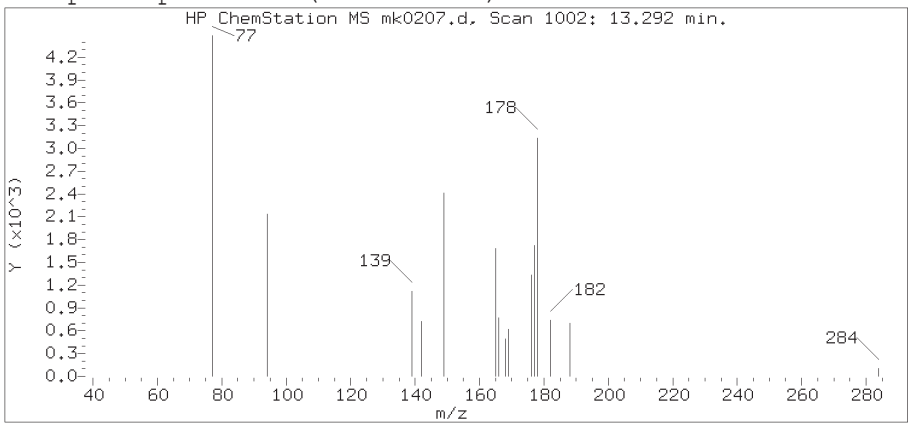


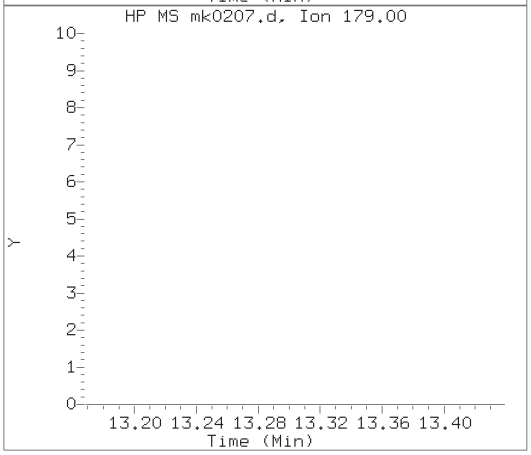
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 22
Compound Name	: Anthracene
Scan Number	: 1002
Retention Time (minutes)	: 13.292
Relative Retention Time	:-0.00119
Quant Ion	: 178.00
Area (flag)	: 3537
On-column Amount (ng/ul)	: 0.0030

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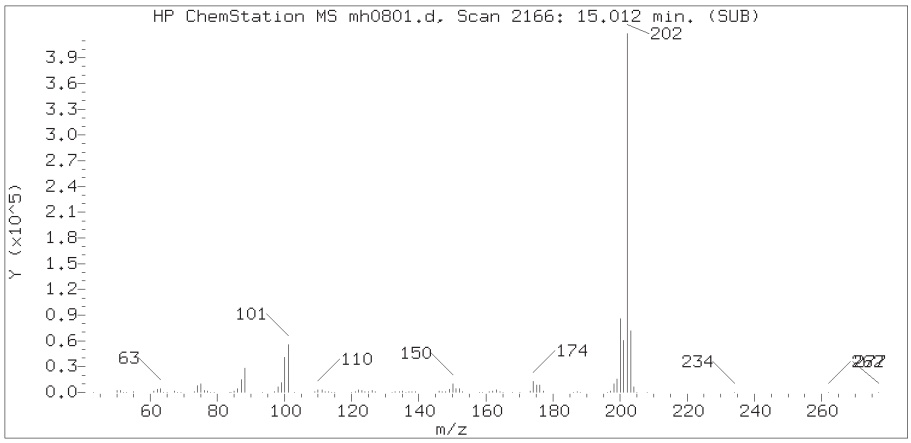
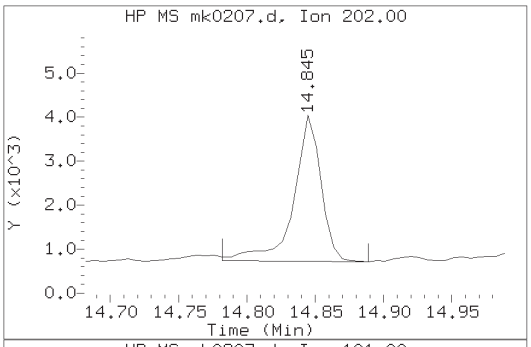
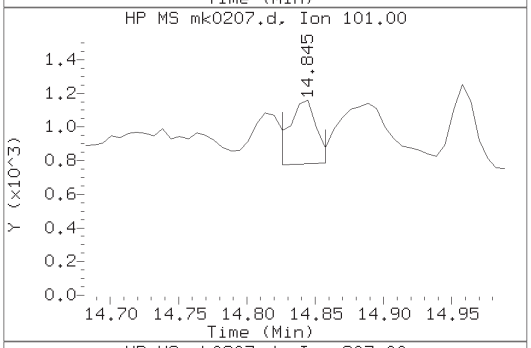
Target 3.5 esignature user ID: art12405

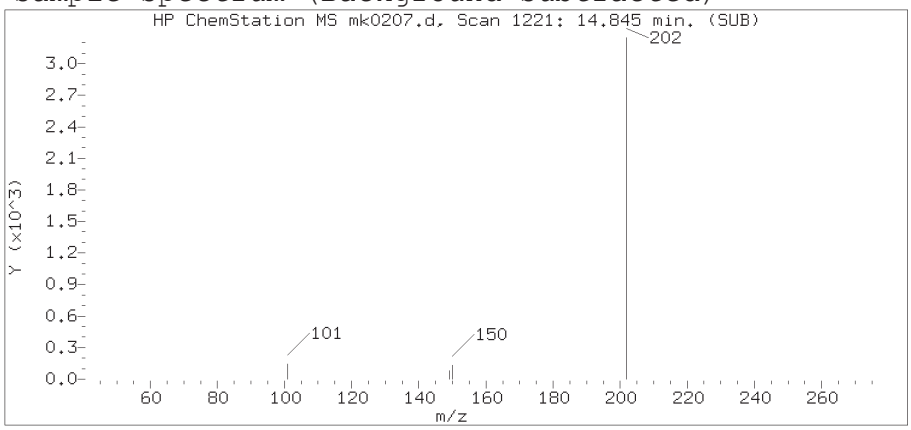
Reference Standard Spectrum for Fluoranthene

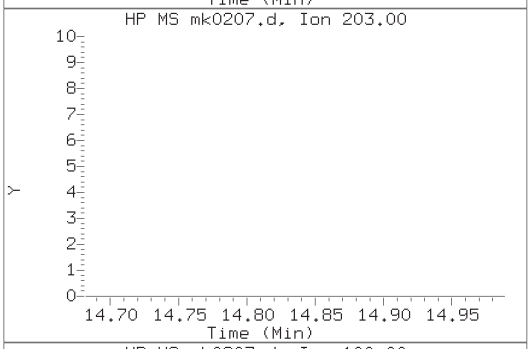




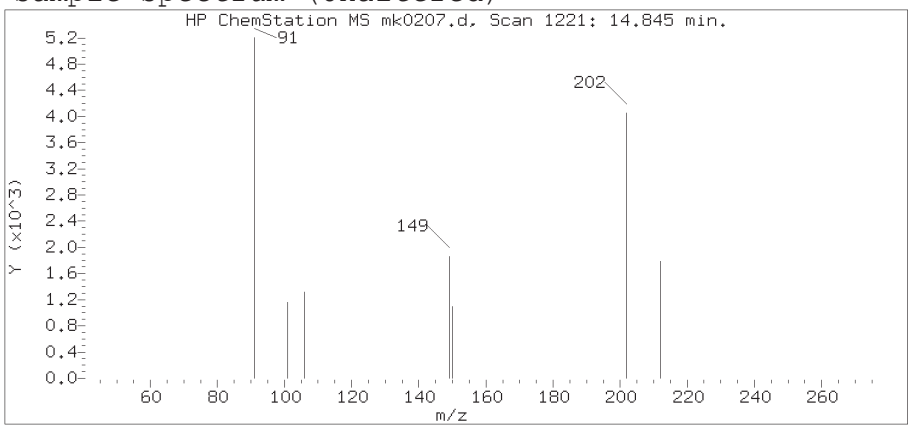


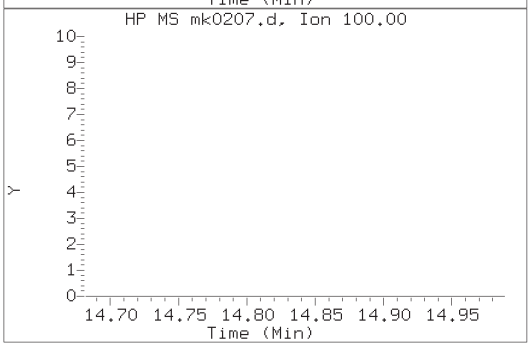
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

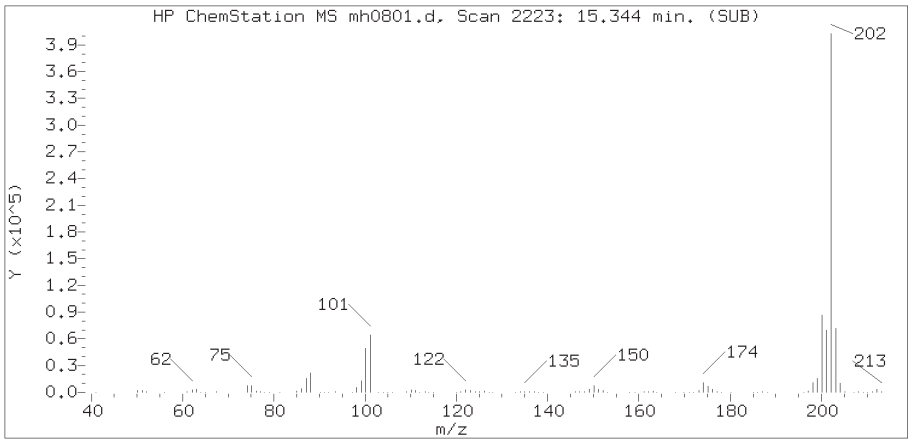
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

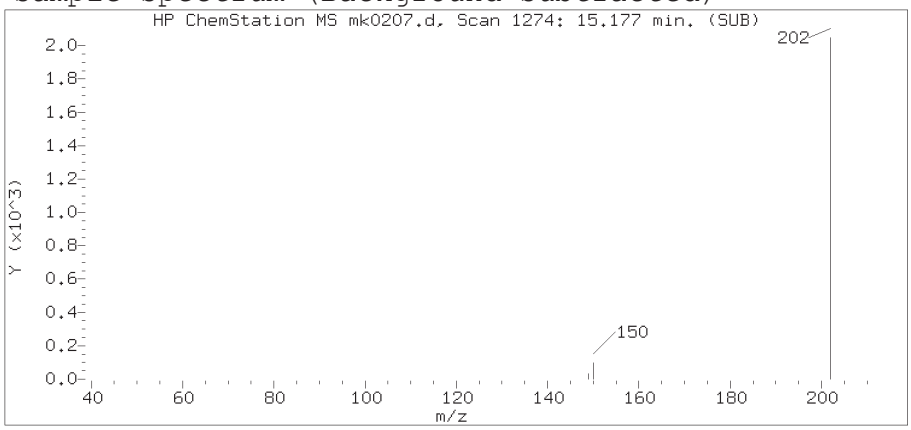
Compound Number	: 25
Compound Name	: Fluoranthene
Scan Number	: 1221
Retention Time (minutes)	: 14.845
Relative Retention Time	:-0.00133
Quant Ion	: 202.00
Area (flag)	: 4607
On-column Amount (ng/ul)	: 0.0035

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

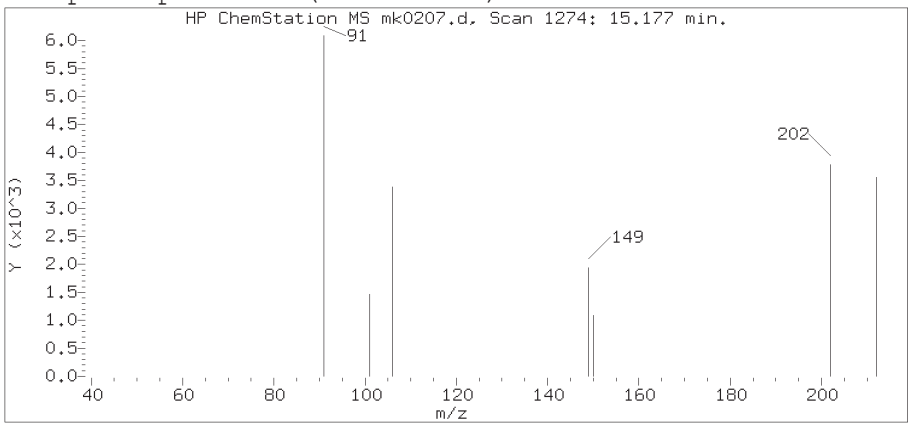
Reference Standard Spectrum for Pyrene

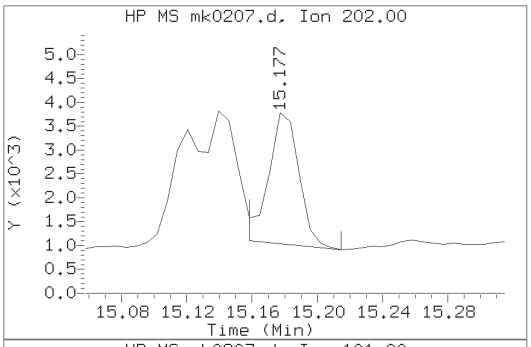


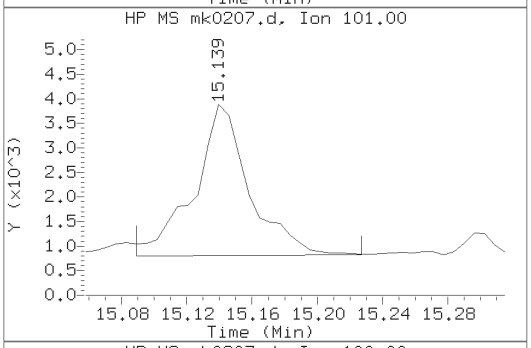
Sample Spectrum (Background Subtracted)

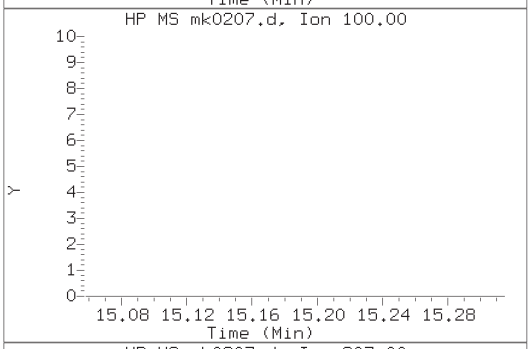


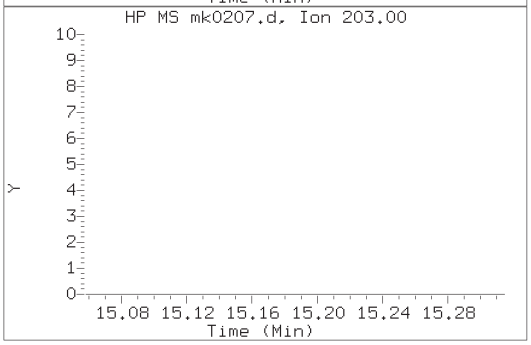
Sample Spectrum (Unaltered)











Data File: /chem/HP21585.i/18nov05a.b/mk0207.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:15 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 14T04 Lab Sample ID: 9876334

Compound Number	: 26
Compound Name	: Pyrene
Scan Number	: 1274
Retention Time (minutes)	: 15.177
Relative Retention Time	: 0.00037
Quant Ion	: 202.00
Area (flag)	: 3549
On-column Amount (ng/ul)	: 0.0025

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0210.d Injection date and time: **05-NOV-2018 23:50**
Data file Sample Info. Line: 14T06;9876342;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599(0.000)	476	152	77459 (1)	0.25	
6) Naphthalene-d8	8.519(0.000)	574	136	234465 (0)	0.25	
14) Acenaphthene-d10	11.303(0.000)	770	164	106810 (3)	0.25	
20) Phenanthrene-d10	13.199(0.000)	990	188	184525 (-14)	0.25	
29) Chrysene-d12	17.185(0.000)	1554	240	152316 (-3)	0.25	
38) Perylene-d12	19.624(0.007)	1872	264	154794 (-1)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 1-Methylnaphthalene-d10	(2)	9.741(0.000)	152	77385	0.181	73%		29 - 112
24) Fluoranthene-d10	(4)	14.820(0.000)	212	150319	0.208	83%		38 - 119
36) Benzo(a)pyrene-d12	(6)	19.493(0.000)	264	100718	0.177	71%		18 - 129

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					0.03
4) bis(2-Chloroethyl)ether	(2)			Not Detected					0.02
7) Naphthalene	(2)	8.539(0.000)	128	10651M	0.010	0.04			0.008
13) Acenaphthylene	(3)			Not Detected					0.003
15) Acenaphthene	(3)			Not Detected					0.003
18) Fluorene	(3)			Not Detected					0.003
19) Hexachlorobenzene	(4)			Not Detected					0.01
21) Phenanthrene	(4)			Not Detected					0.008
22) Anthracene	(4)			Not Detected					0.003
23) Di-n-butylphthalate	(4)	14.018(0.000)	149	77543M	0.071	0.29			0.05
25) Fluoranthene	(4)			Not Detected					0.003
26) Pyrene	(5)			Not Detected					0.003
31) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.08
28) Benzo(a)anthracene	(5)			Not Detected					0.003
30) Chrysene	(5)			Not Detected					0.003
33) Benzo(b)fluoranthene	(6)			Not Detected					0.003
34) Benzo(k)fluoranthene	(6)			Not Detected					0.003
37) Benzo(a)pyrene	(6)			Not Detected					0.003
39) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.003
40) Dibenz(a,h)anthracene	(6)			Not Detected					0.005
41) Benzo(g,h,i)perylene	(6)			Not Detected					0.003

M = Compound was manually integrated.

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP21585.i/18nov05a.b/mk0210.d Injection date and time: **05-NOV-2018 23:50**
Data file Sample Info. Line: 14T06;9876342;1;0;SAMPLE;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 2 ul

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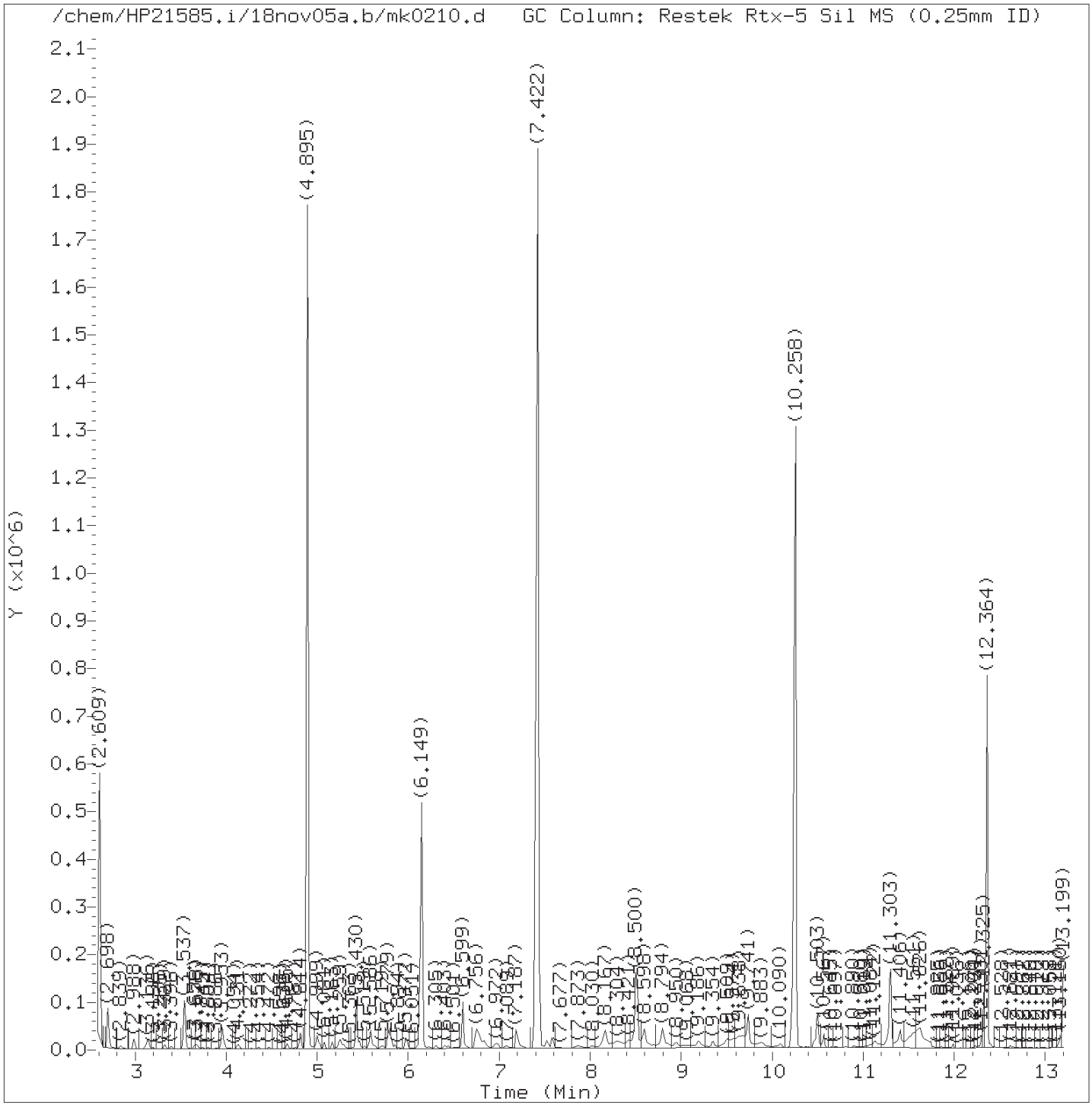
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

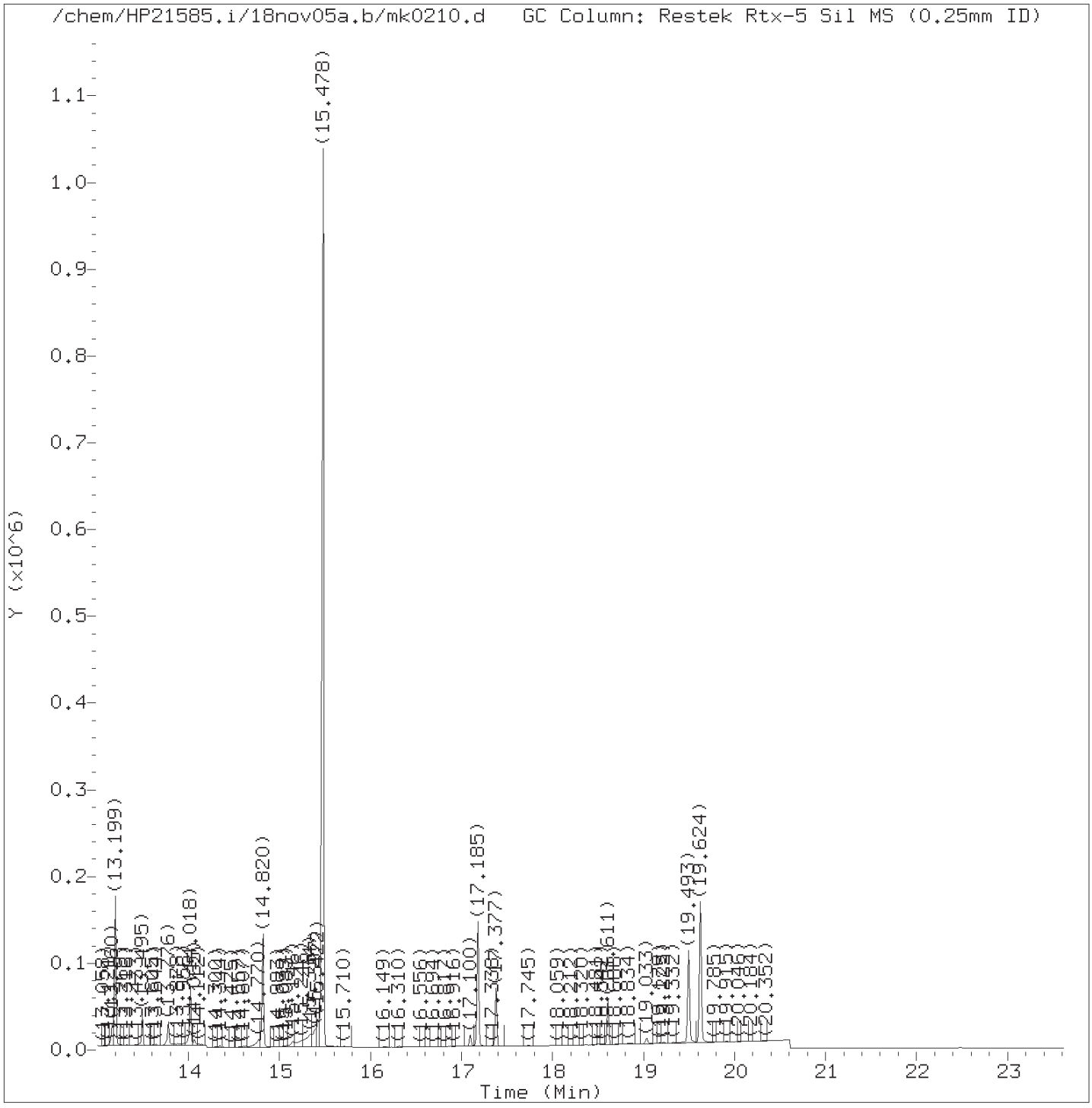
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

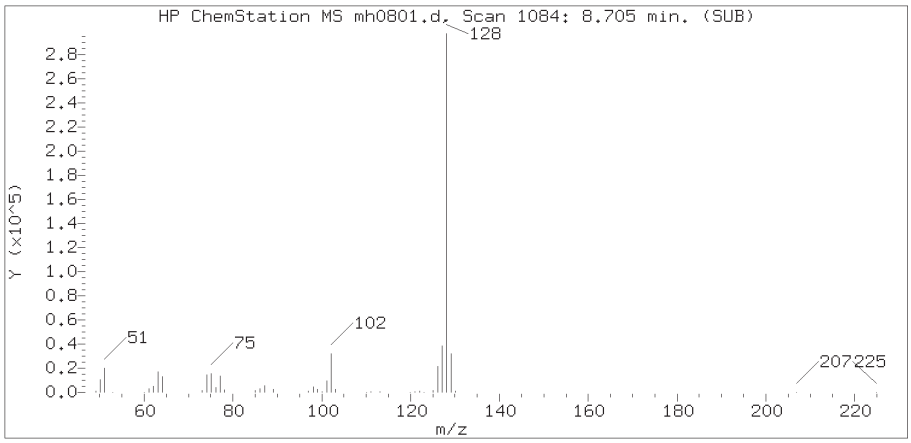
Sample Name: 14T06 Lab Sample ID: 9876342

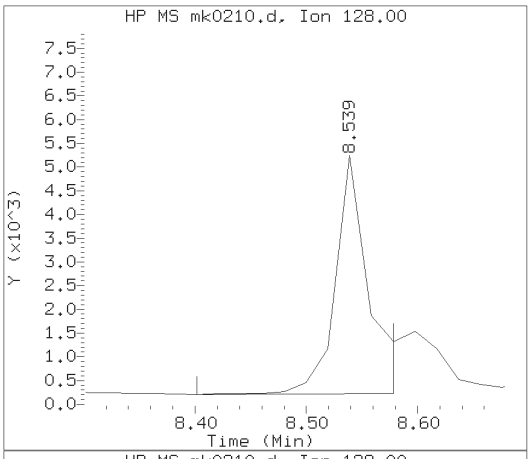
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	77459	0.250
6)*Naphthalene-d8	(2)	8.519	136	234465	0.250
7) Naphthalene	(2)	8.539	128	10651M	0.010
10)$1-Methylnaphthalene-d10	(2)	9.741	152	77385	0.181
14)*Acenaphthene-d10	(3)	11.303	164	106810	0.250
20)*Phenanthrene-d10	(4)	13.199	188	184525	0.250
23) Di-n-butylphthalate	(4)	14.018	149	77543M	0.071
24)$Fluoranthene-d10	(4)	14.820	212	150319	0.208
29)*Chrysene-d12	(5)	17.185	240	152316	0.250
36)$Benzo(a)pyrene-d12	(6)	19.493	264	100718	0.177
38)*Perylene-d12	(6)	19.624	264	154794	0.250

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

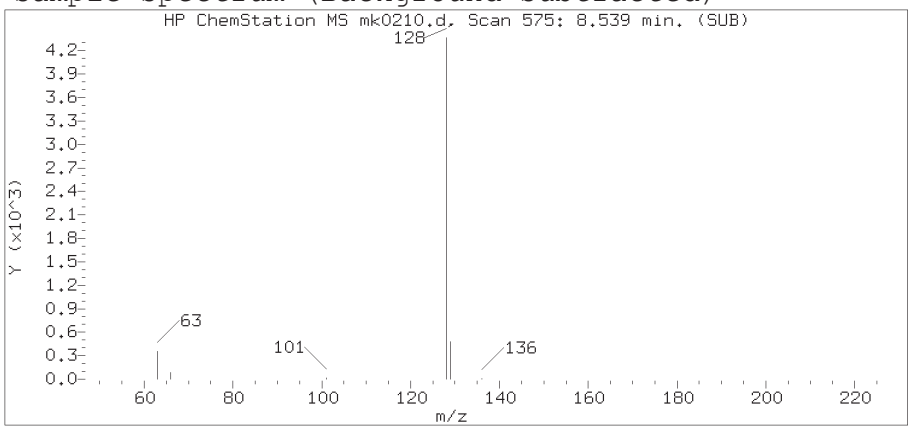
Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

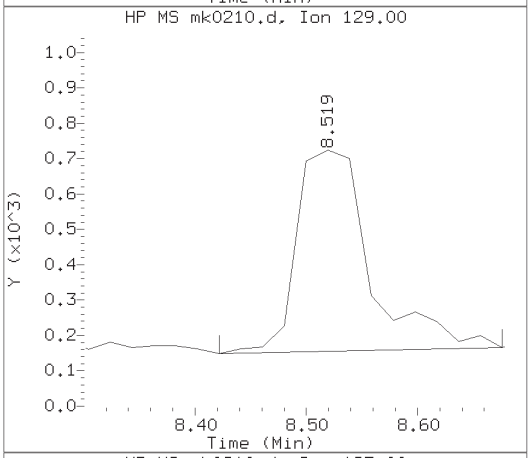
Reference Standard Spectrum for Naphthalene



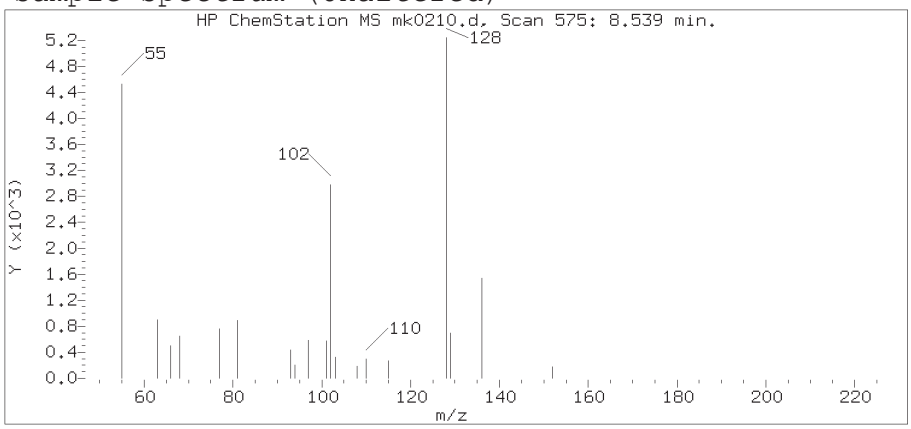


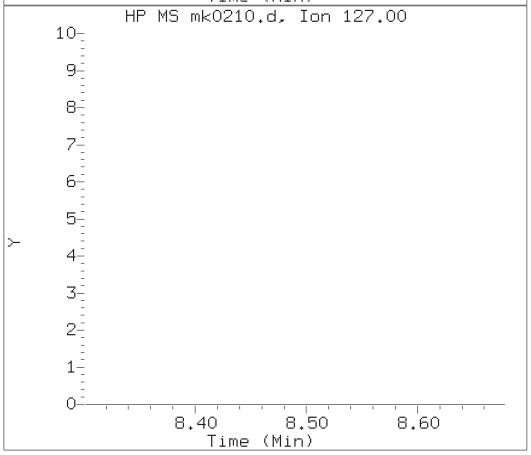
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

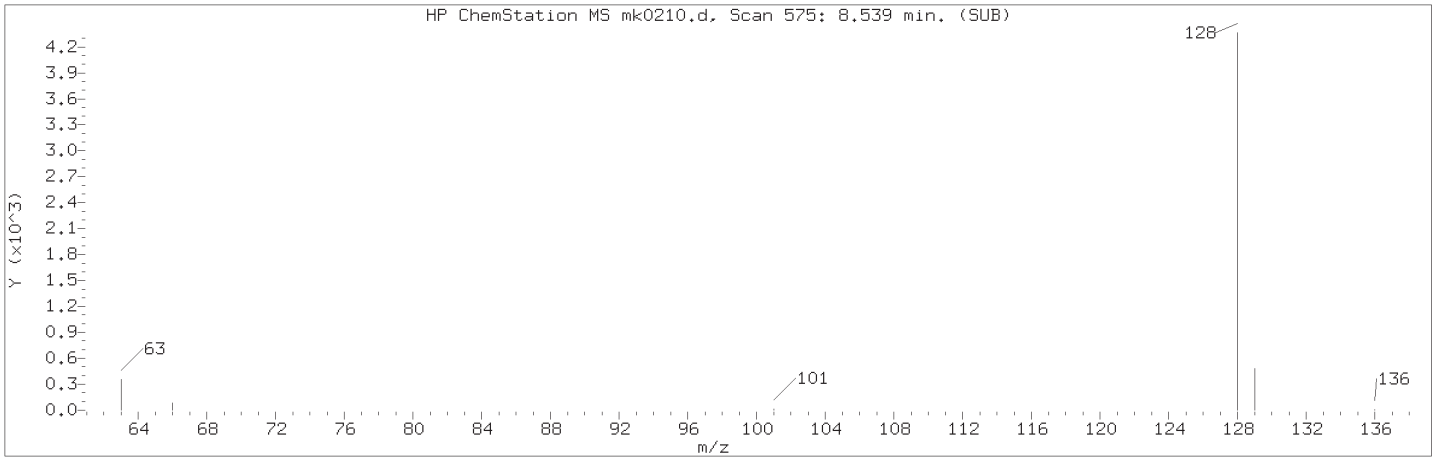
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

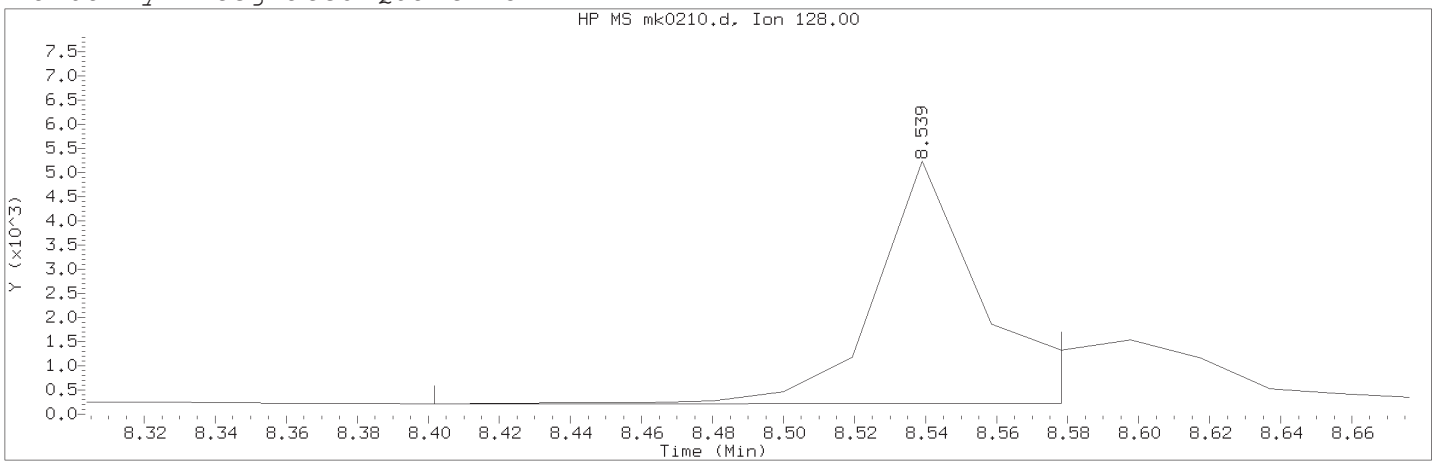
Compound Number	: 7
Compound Name	: Naphthalene
Scan Number	: 575
Retention Time (minutes)	: 8.539
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 10651M
On-column Amount (ng/ul)	: 0.0099

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

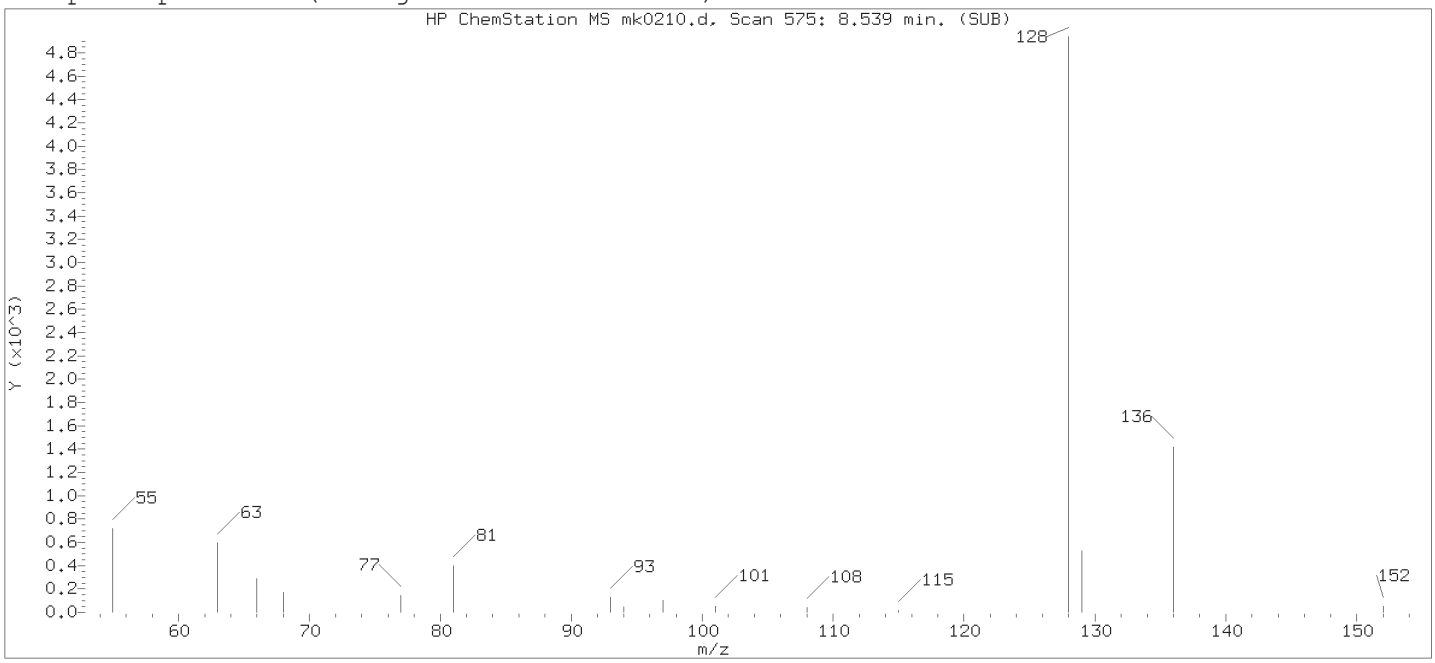
Compound Number	: 7		
Compound Name	: Naphthalene		
Scan Number	: 575		
Retention Time (minutes)	: 8.539		
Quant Ion	: 128.00		
Area (flag)	: 10651M		
On-column Amount (ng/ul)	: 0.0099		
Integration start scan	: 567	Integration stop scan:	576
Y at integration start	: 209	Y at integration end:	225

Reason for manual integration: improper integration

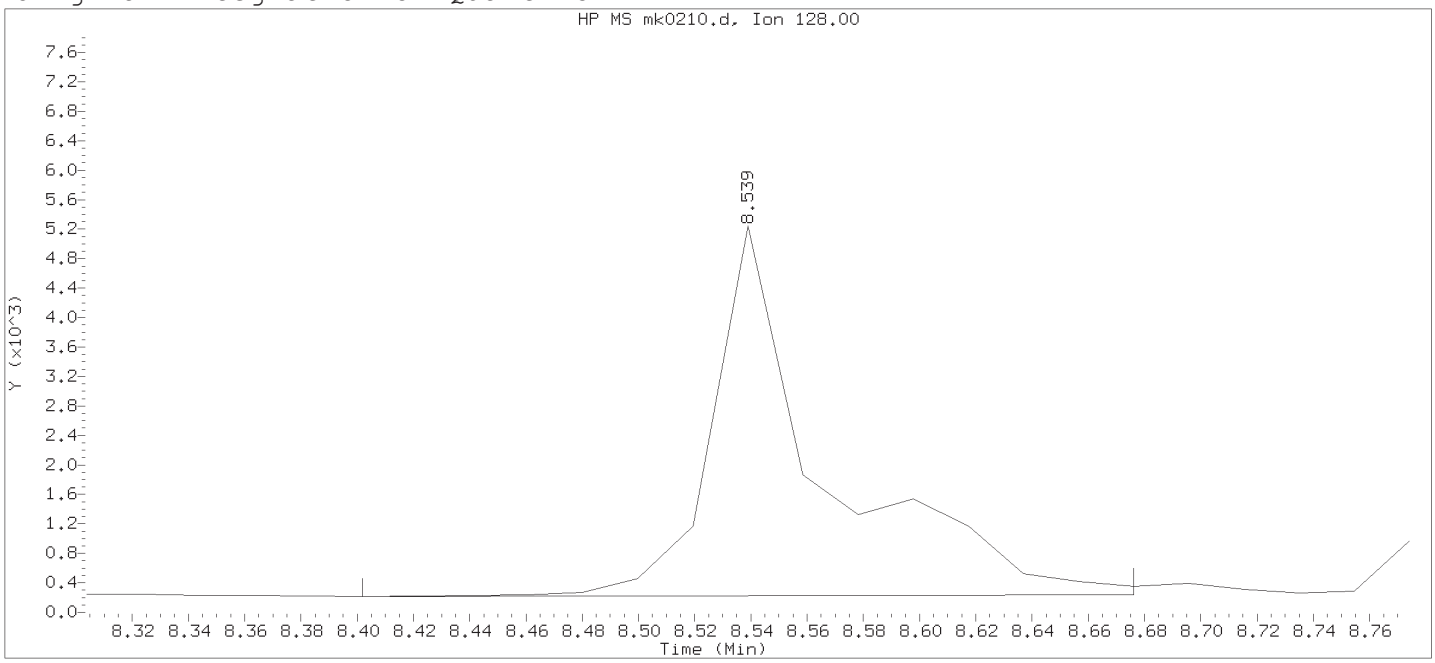
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

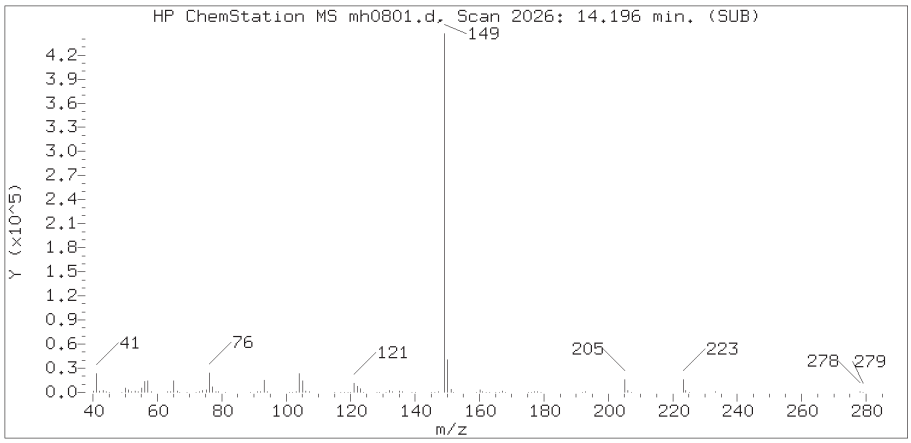
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

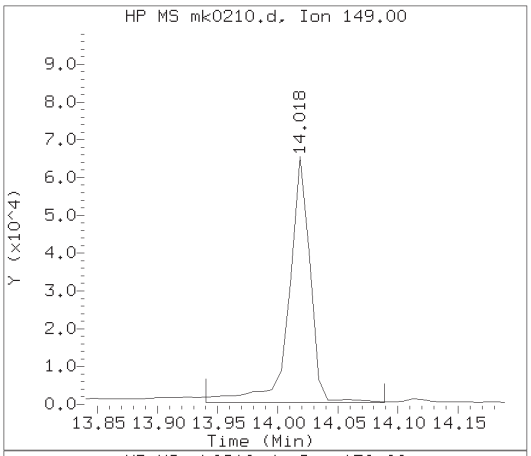
Sample Name: 14T06 Lab Sample ID: 9876342

Compound Number	: 7		
Compound Name	: Naphthalene		
Scan Number	: 575		
Retention Time (minutes)	: 8.539		
Quant Ion	: 128.00		
Area	: 13926		
On-column Amount (ng/ul)	: 0.0129		
Integration start scan	: 567	Integration stop scan:	581
Y at integration start	: 209	Y at integration end:	235

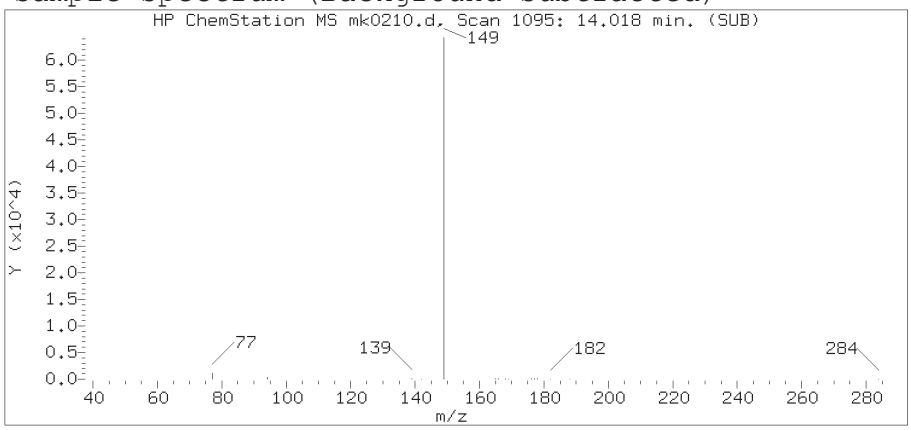
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature used: D14 Page 1041

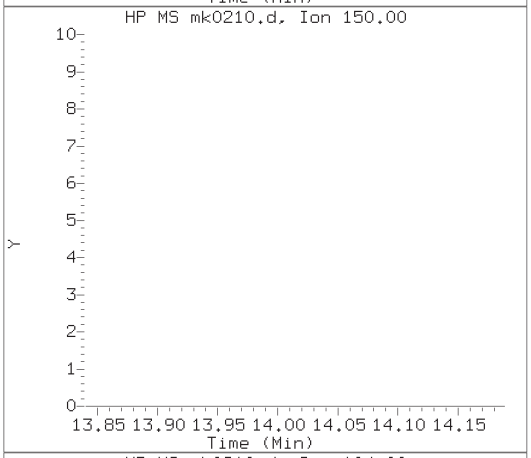
Reference Standard Spectrum for Di-n-butylphthalate



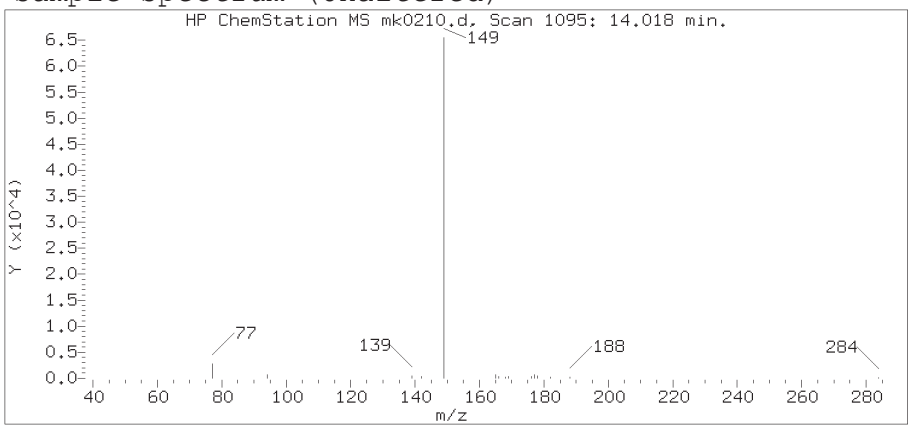


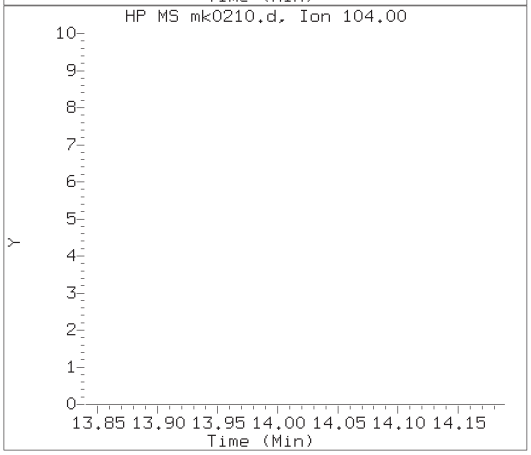
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

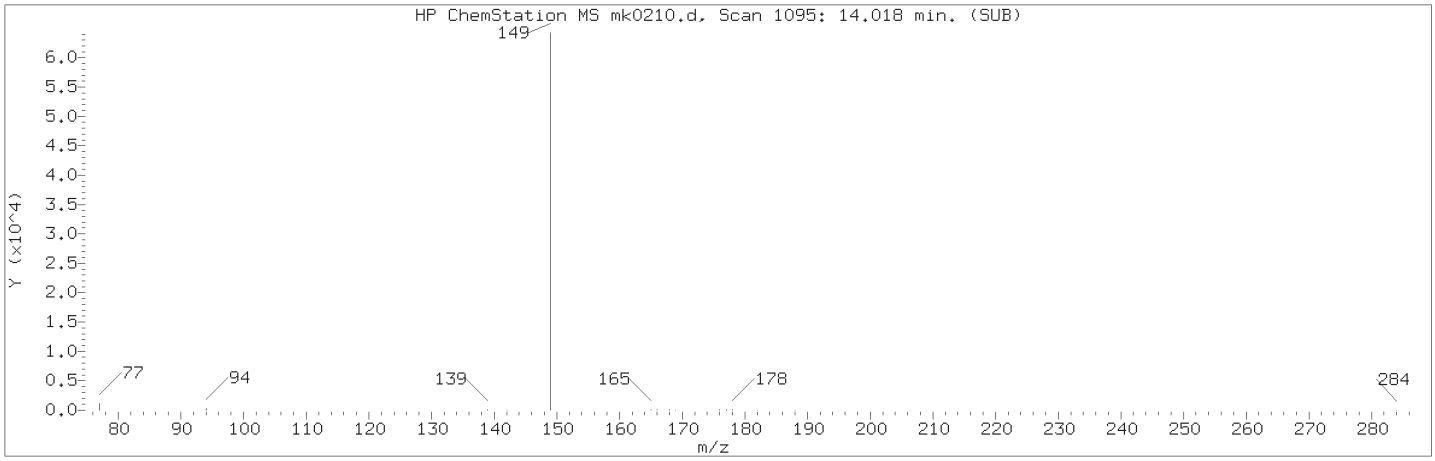
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

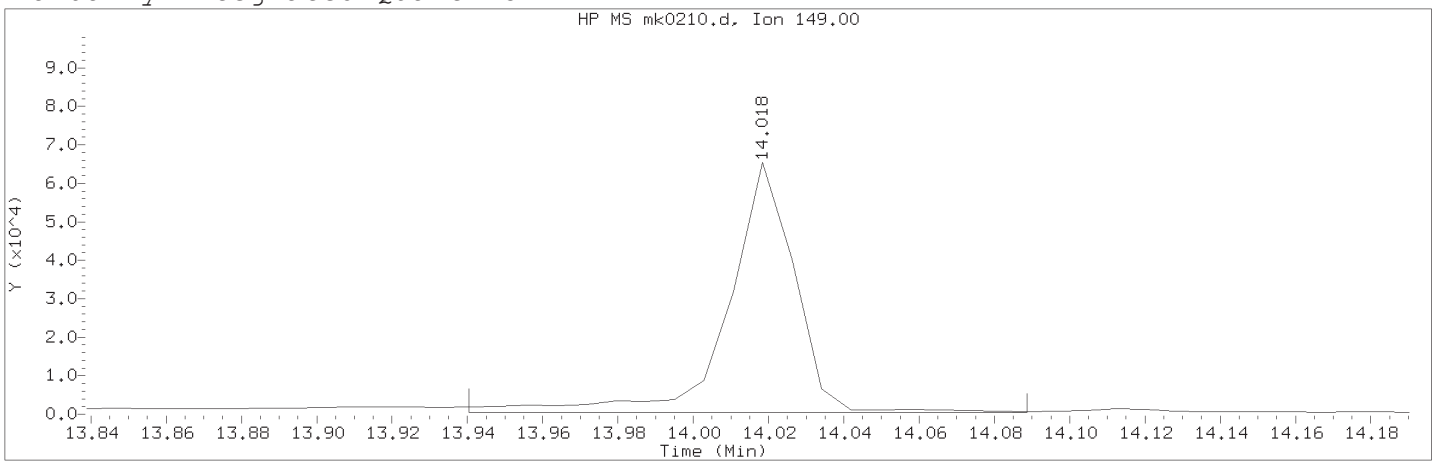
Compound Number	: 23
Compound Name	: Di-n-butylphthalate
Scan Number	: 1095
Retention Time (minutes)	: 14.018
Relative Retention Time	: 0.00059
Quant Ion	: 149.00
Area (flag)	: 77543M
On-column Amount (ng/ul)	: 0.0715

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

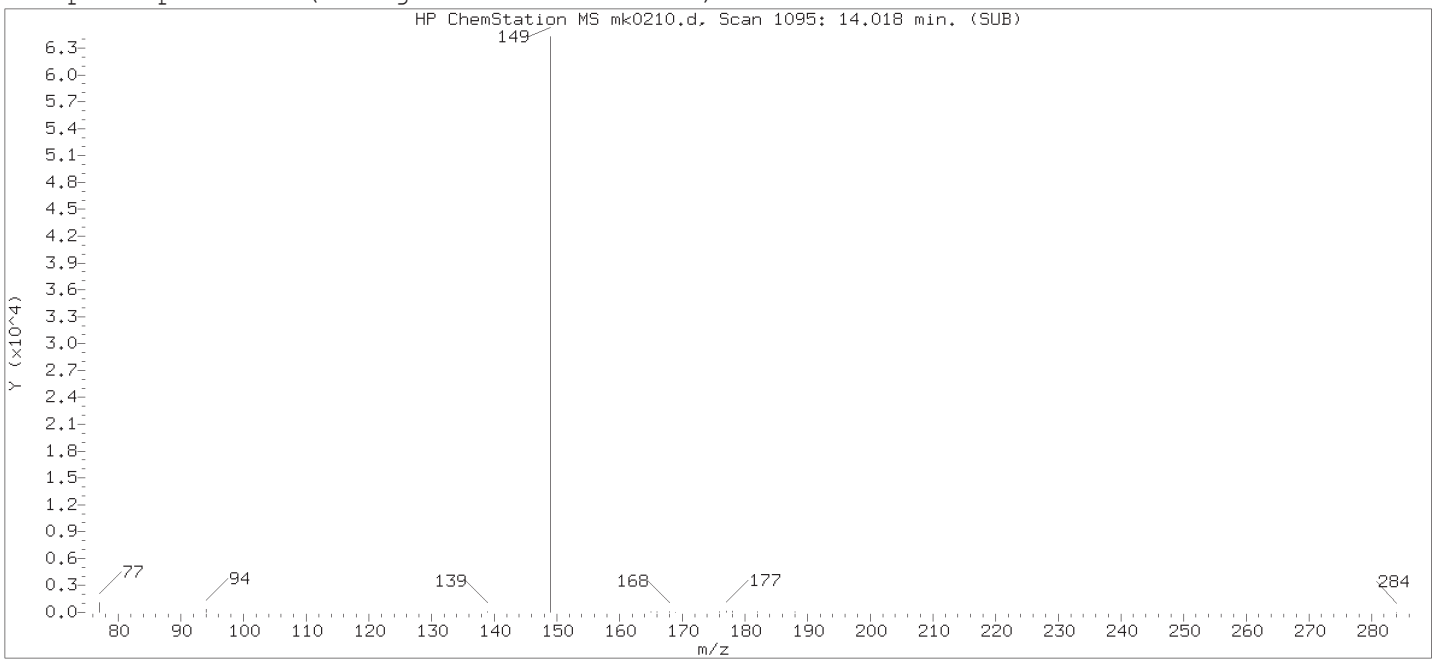
Compound Number : 23
Compound Name : Di-n-butylphthalate
Scan Number : 1095
Retention Time (minutes) : 14.018
Quant Ion : 149.00
Area (flag) : 77543M
On-column Amount (ng/ul) : 0.0715
Integration start scan : 1084 Integration stop scan: 1103
Y at integration start : 539 Y at integration end: 539

Reason for manual integration: improper integration

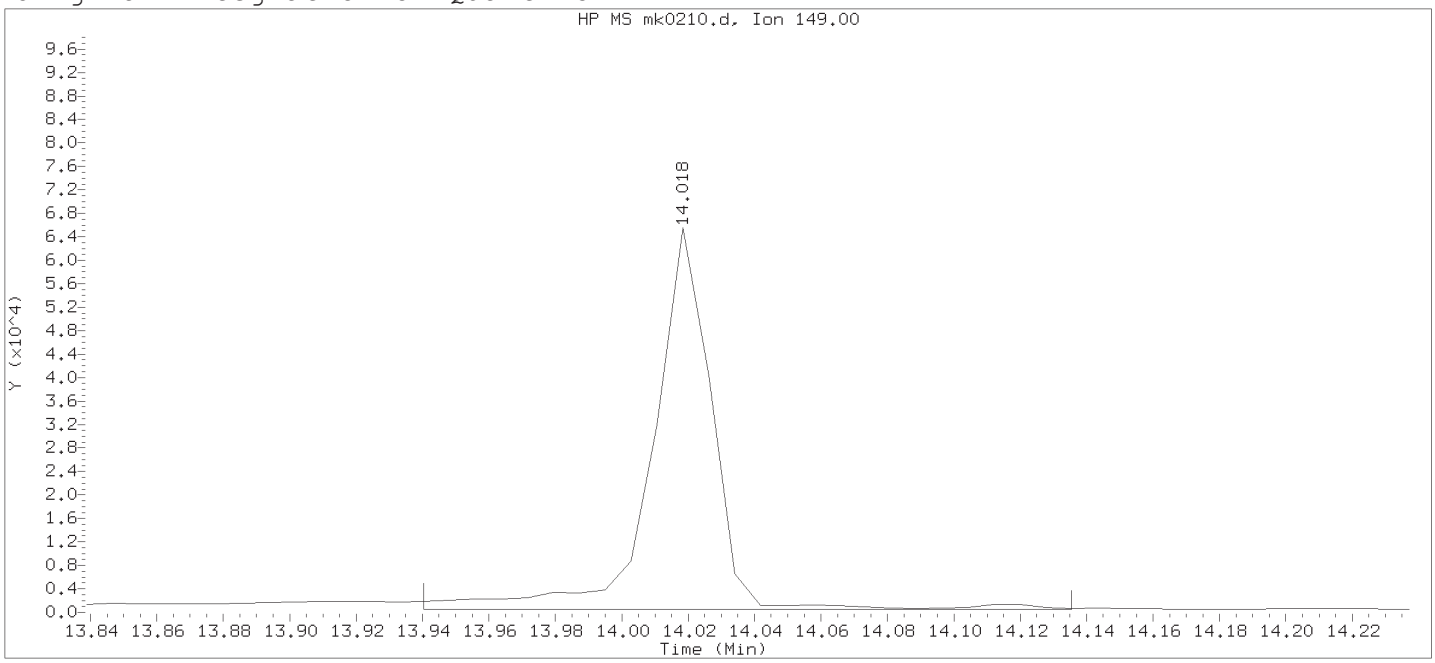
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0210.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:50 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 14T06 Lab Sample ID: 9876342

Compound Number	: 23		
Compound Name	: Di-n-butylphthalate		
Scan Number	: 1095		
Retention Time (minutes)	: 14.018		
Quant Ion	: 149.00		
Area	: 78141		
On-column Amount (ng/ul)	: 0.0720		
Integration start scan	: 1084	Integration stop scan:	1109
Y at integration start	: 539	Y at integration end:	539

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature used [illegible]

Standards Data

Semivolatiles by GC/MS-SIM

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP21585 **HP #13**

Data Directory Path is - D:\data\18oct26\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	MJ2000.D	RVDFTPP2878	10/26/2018	05:46		
ceb05247	MJ2001.D	RVSIM2768	10/26/2018	06:01		
ceb05247	MJ2001a.D	RVSIM2768	10/26/2018	06:59		
ceb05247	MJ2001b.D	RVSIM2768	10/26/2018	07:31		
ceb05247	MJ2002.D	RVSIM2768	10/26/2018	08:05		
ceb05247	MJ2003.D	RVSIM2768	10/26/2018	08:35		
ceb05247	MJ2004.D	RVSIM2768	10/26/2018	09:04		
ceb05247	MJ2005.D	RVSIM2768	10/26/2018	09:33		
ceb05247	MJ2006.D	RVSIM2768	10/26/2018	10:02		
ceb05247	MJ2007.D	RVSIM2768	10/26/2018	10:32		
ceb05247	MJ2008.D	RVSICV2788	10/26/2018	11:01		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP21585 **HP #13**

Data Directory Path is - D:\data\18nov05a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	MK0200.D	RVDFTPP2878	11/05/2018	17:52		
ceb05247	MK0201.D	RVSIM2768	11/05/2018	18:37		
ceb05247	MK0202.D	SBLKWN305	11/05/2018	19:48	18305WAN	
ceb05247	MK0203.D	305WNLCS	11/05/2018	20:17	18305WAN	
ceb05247	MK0204.D	SBLKWB306	11/05/2018	20:47	18306WAB	
ceb05247	MK0205.D	306WBLCS	11/05/2018	21:16	18306WAB	
ceb05247	MK0206.D	9876332	11/05/2018	21:46	18305WAN	
ceb05247	MK0207.D	9876334	11/05/2018	22:15	18305WAN	
ceb05247	MK0208.D	9876335	11/05/2018	22:51	18305WAN	
ceb05247	MK0209.D	9876336	11/05/2018	23:21	18305WAN	
ceb05247	MK0210.D	9876342	11/05/2018	23:50	18305WAN	
ceb05247	MK0229.D	RVSIM2768	11/06/2018	00:20		
ceb05247	MK0211.D	9879130	11/06/2018	00:50	18306WAB	
ceb05247	MK0212.D	9879131	11/06/2018	01:20	18306WAB	
ceb05247	MK0213.D	9879132	11/06/2018	01:49	18306WAB	
ceb05247	MK0214.D	9879133	11/06/2018	02:19	18306WAB	
ceb05247	MK0215.D	9879134	11/06/2018	02:49	18306WAB	
ceb05247	MK0219.D	9879138	11/06/2018	04:48	18306WAB	
ceb05247	MK0220.D	9879139	11/06/2018	05:17	18306WAB	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP21585 **HP #13**

Data Directory Path is - D:\data\18nov08\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ceb05247	MK0450.D	RVDFTPP2878	11/08/2018	05:12		
ceb05247	MK0451.D	RVSIM2768	11/08/2018	05:27		
ceb05247	MK0452.D	SBLKWD311	11/08/2018	06:27	18311WAD	
ceb05247	MK0453.D	311WDLCS	11/08/2018	06:56	18311WAD	
ceb05247	MK0454.D	311WDLCSD	11/08/2018	07:25	18311WAD	
ceb05247	MK0455.D	9876332RE	11/08/2018	07:55	18311WAD	
ceb05247	MK0456.D	RVSIM2768	11/08/2018	08:24		
ceb05247	MK0457a.D	9881395DL	11/08/2018	10:35	18309WAQ	10
ceb05247	MK0458.D	9881396DL	11/08/2018	11:04	18309WAQ	20
ceb05247	MK0457b.D	9881395DL	11/08/2018	11:34	18309WAQ	10
ceb05247	MK0458a.D	9881396DL	11/08/2018	12:03	18309WAQ	20
ceb05247	MK0459.D	9881397DL	11/08/2018	12:32	18309WAQ	10
ceb05247	MK0460.D	9881856DL	11/08/2018	13:02	18309WAQ	10
ceb05247	MK0461.D	9881857	11/08/2018	13:31	18309WAQ	
ceb05247	MK0462.D	9881858	11/08/2018	14:01	18309WAQ	
ceb05247	MK0463.D	9881859	11/08/2018	14:30	18309WAQ	
ceb05247	MK0464.D	9881861	11/08/2018	14:59	18309WAQ	
ceb05247	MK0465.D	9881863	11/08/2018	15:29	18309WAQ	
ceb05247	MK0466.D	9882056	11/08/2018	15:58	18311WAD	10
ceb05247	MK0467.D	9882057	11/08/2018	16:27	18311WAD	10

Data File: /chem/HP21585.i/18oct26.b/mj2000.d

Date : 26-OCT-2018 05:46

Client ID: DFTPP12.5

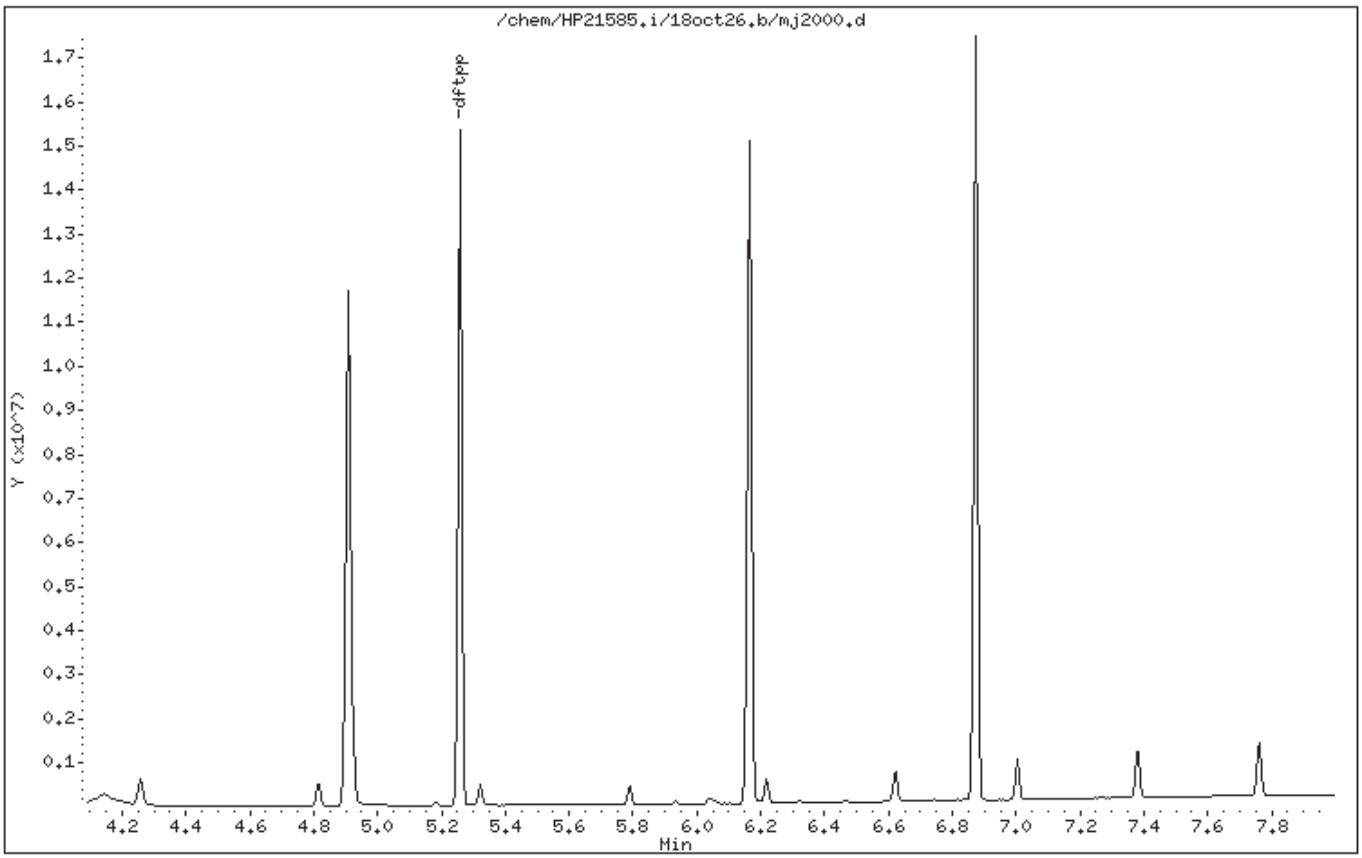
Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Data File: /chem/HP21585.i/18oct26.b/mj2000.d

Date : 26-OCT-2018 05:46

Client ID: DFTPP12.5

Instrument: HP21585.i

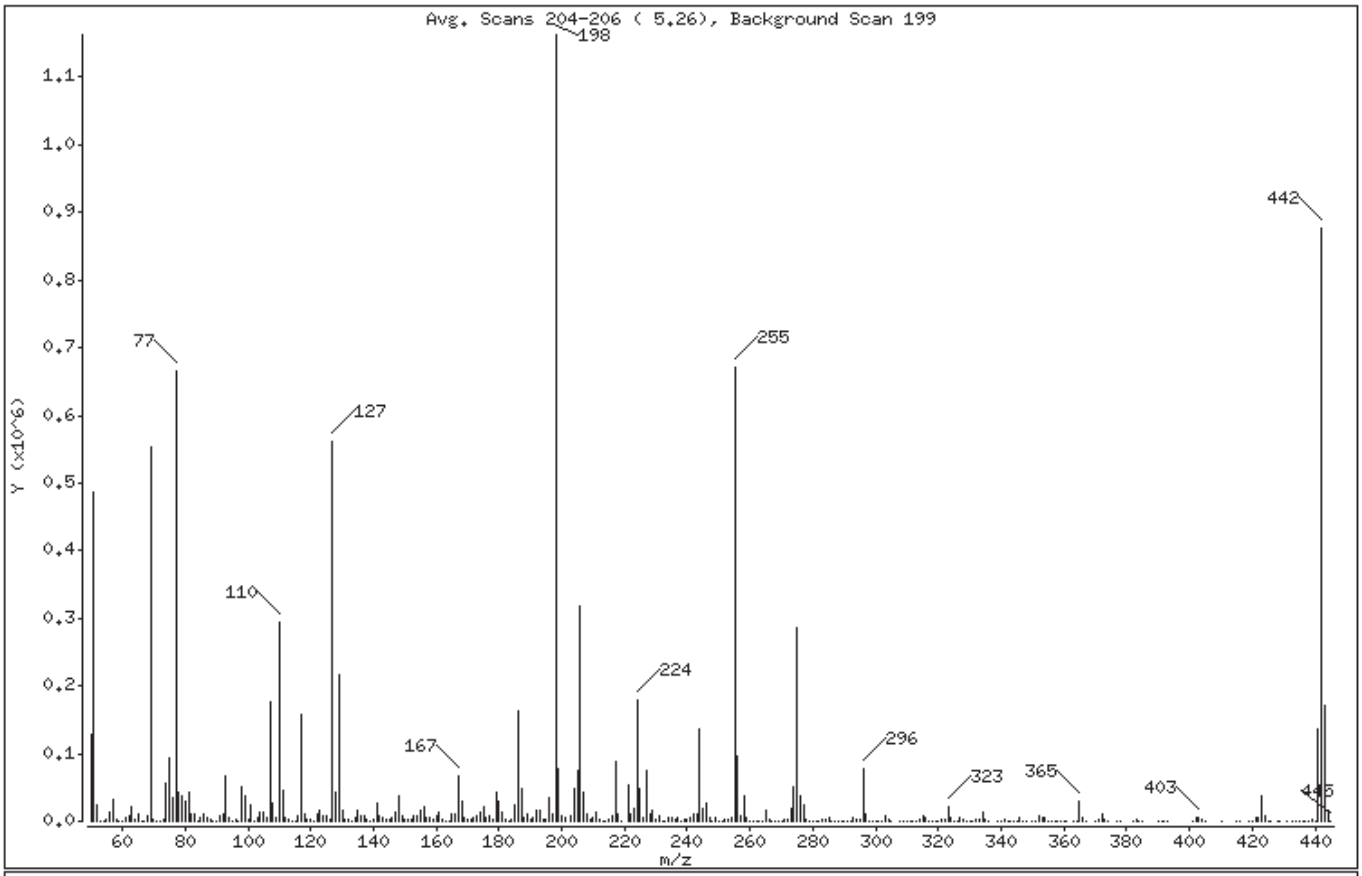
Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

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	41.88
68	Less than 2.00% of mass 69	0.74 (1.56)
69	Mass 69 relative abundance	47.61
70	Less than 2.00% of mass 69	0.27 (0.56)
127	10.00 - 80.00% of mass 198	48.34
197	Less than 2.00% of mass 198	0.83
199	5.00 - 9.00% of mass 198	6.72
275	10.00 - 60.00% of mass 198	24.60
365	Greater than 1.00% of mass 198	2.62
441	0.01 - 24.00% of mass 442	11.61 (15.40)
442	50.00 - 99.99% of mass 198	75.41
443	15.00 - 24.00% of mass 442	14.74 (19.54)

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Date : 26-OCT-2018 05:46

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: mj2000.d
Spectrum: Avg. Scans 204-206 (5.26), Background Scan 199
Location of Maximum: 198.00
Number of points: 357

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	127272	140.00	2583	232.00	958	324.00	4027
51.00	487104	141.00	26640	233.00	1333	325.00	547
52.00	24136	142.00	8858	234.00	4861	326.00	525
53.00	790	143.00	5764	235.00	5132	327.00	4408
54.00	88	144.00	1985	236.00	3893	328.00	2378
55.00	2446	145.00	1460	237.00	5868	329.00	552
56.00	13575	146.00	5245	238.00	963	330.00	232
57.00	32368	147.00	14072	239.00	2743	331.00	158
58.00	1676	148.00	38568	240.00	2015	332.00	1934
59.00	349	149.00	7129	241.00	4287	333.00	2478
60.00	359	150.00	1844	242.00	10535	334.00	13603
61.00	5863	151.00	3613	243.00	10225	335.00	3415
62.00	6725	152.00	1738	244.00	135104	336.00	525
63.00	20800	153.00	8606	245.00	18400	339.00	465
64.00	3009	154.00	6771	246.00	26192	340.00	379
65.00	10153	155.00	15731	247.00	5195	341.00	2411
66.00	914	156.00	22528	248.00	1281	342.00	613
67.00	513	157.00	4348	249.00	4624	343.00	51
68.00	8656	158.00	4883	250.00	1002	344.00	53
69.00	553728	159.00	3970	251.00	1280	345.00	57
70.00	3105	160.00	9154	252.00	1401	346.00	4727
71.00	207	161.00	13350	253.00	3675	347.00	899
72.00	331	162.00	3796	254.00	5804	348.00	136
73.00	3411	163.00	1061	255.00	669888	350.00	337
74.00	57392	164.00	1267	256.00	97416	351.00	619
75.00	92312	165.00	10182	257.00	7531	352.00	6719
76.00	33696	166.00	9370	258.00	37584	353.00	4374
77.00	664768	167.00	65624	259.00	6097	354.00	6404
78.00	42056	168.00	30504	260.00	1115	355.00	945
79.00	37440	169.00	4849	261.00	1110	356.00	232
80.00	30120	170.00	1487	262.00	146	357.00	173
81.00	43000	171.00	2796	263.00	459	358.00	145
82.00	10795	172.00	5048	264.00	995	359.00	374
83.00	9603	173.00	6902	265.00	15456	360.00	56
84.00	815	174.00	12571	266.00	1844	361.00	231

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Date : 26-OCT-2018 05:46

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: mj2000.d
Spectrum: Avg. Scans 204-206 (5.26), Background Scan 199
Location of Maximum: 198.00
Number of points: 357

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	6678	175.00	22312	267.00	364	363.00	159
86.00	11256	176.00	6267	268.00	110	364.00	227
87.00	5069	177.00	9109	269.00	288	365.00	30416
88.00	2017	178.00	3810	270.00	758	366.00	4533
89.00	882	179.00	43256	271.00	1624	367.00	364
90.00	221	180.00	30048	272.00	1767	370.00	765
91.00	8217	181.00	14501	273.00	20040	371.00	1521
92.00	9391	182.00	2605	274.00	51336	372.00	10863
93.00	65496	183.00	1284	275.00	286080	373.00	2556
94.00	4895	184.00	3593	276.00	37296	374.00	296
95.00	1043	185.00	22880	277.00	22944	377.00	256
96.00	2838	186.00	162944	278.00	3958	378.00	63
97.00	1222	187.00	48352	279.00	842	382.00	69
98.00	50456	188.00	4698	280.00	93	383.00	2687
99.00	37472	189.00	9474	281.00	81	384.00	1044
100.00	3297	190.00	1608	282.00	370	385.00	229
101.00	23424	191.00	4726	283.00	2353	390.00	1181
102.00	1264	192.00	15237	284.00	2000	391.00	1017
103.00	6202	193.00	16279	285.00	4079	392.00	699
104.00	12814	194.00	3846	286.00	781	393.00	100
105.00	12206	195.00	1990	287.00	123	401.00	824
106.00	4142	196.00	34056	288.00	374	402.00	4117
107.00	176128	197.00	9611	289.00	1144	403.00	5847
108.00	26504	198.00	1162752	290.00	778	404.00	2162
109.00	4537	199.00	78192	291.00	545	405.00	344
110.00	293568	200.00	6688	292.00	1229	410.00	203
111.00	45592	201.00	4671	293.00	5651	415.00	315
112.00	6020	203.00	8642	294.00	1594	416.00	66
113.00	1948	204.00	47072	295.00	1936	419.00	53
114.00	396	205.00	75968	296.00	77600	420.00	88
115.00	356	206.00	318016	297.00	10046	421.00	4800
116.00	8951	207.00	41528	298.00	791	422.00	5144
117.00	158784	208.00	10105	299.00	255	423.00	36488
118.00	11318	209.00	3306	300.00	55	424.00	7277
119.00	1577	210.00	4982	301.00	1039	425.00	1015

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Date : 26-OCT-2018 05:46

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

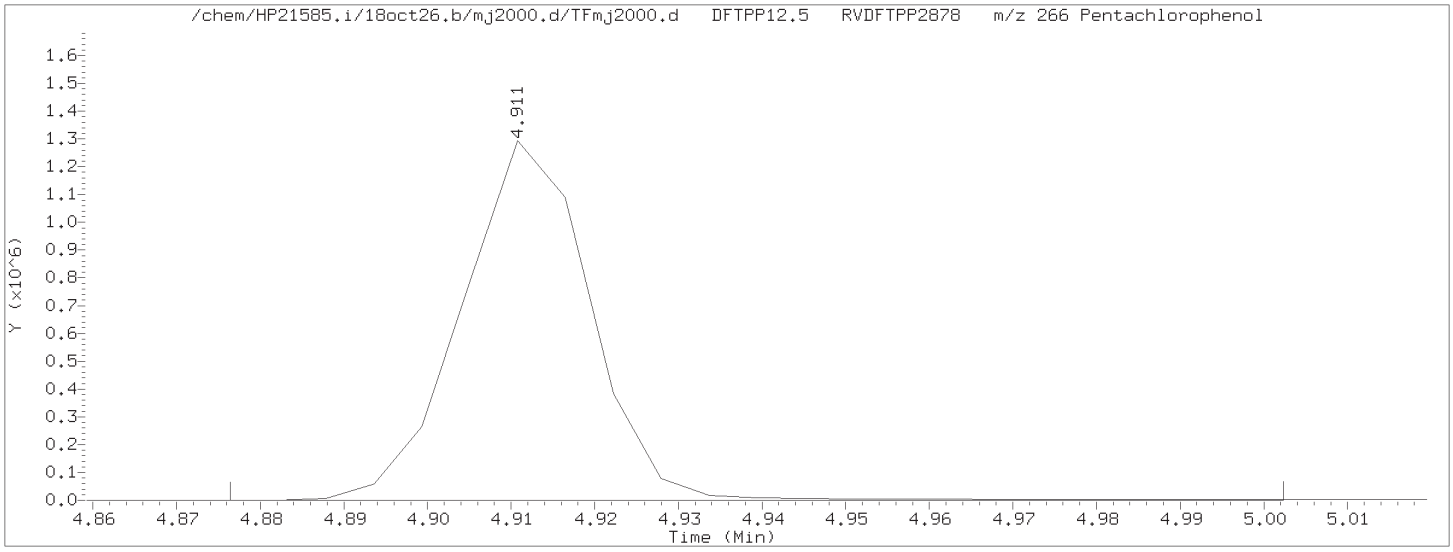
Data File: mj2000.d
Spectrum: Avg. Scans 204-206 (5.26), Background Scan 199
Location of Maximum: 198.00
Number of points: 357

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	1922	211.00	12608	302.00	1291	426.00	50
121.00	697	212.00	1944	303.00	8515	428.00	50
122.00	9493	213.00	947	304.00	2043	429.00	88
123.00	16456	214.00	470	305.00	152	431.00	190
124.00	7452	215.00	3914	308.00	1127	433.00	132
125.00	7386	216.00	6763	309.00	722	434.00	532
126.00	3246	217.00	88152	310.00	1048	435.00	470
127.00	562304	218.00	10494	311.00	172	436.00	795
128.00	42672	219.00	1069	312.00	353	437.00	453
129.00	215296	221.00	52992	313.00	682	438.00	1230
130.00	17328	222.00	11255	314.00	3795	439.00	1542
131.00	3388	223.00	19656	315.00	8389	440.00	506
132.00	1957	224.00	179328	316.00	4882	441.00	135040
133.00	639	225.00	46800	317.00	688	442.00	877056
134.00	5421	226.00	4990	318.00	71	443.00	171392
135.00	16928	227.00	76024	319.00	227	444.00	15440
136.00	6930	228.00	10318	320.00	246	445.00	855
137.00	9061	229.00	15565	321.00	2472		
138.00	2071	230.00	2246	322.00	1340		
139.00	1101	231.00	6801	323.00	22424		

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Assessment of GC Column Performance and Injection Port Inertness for

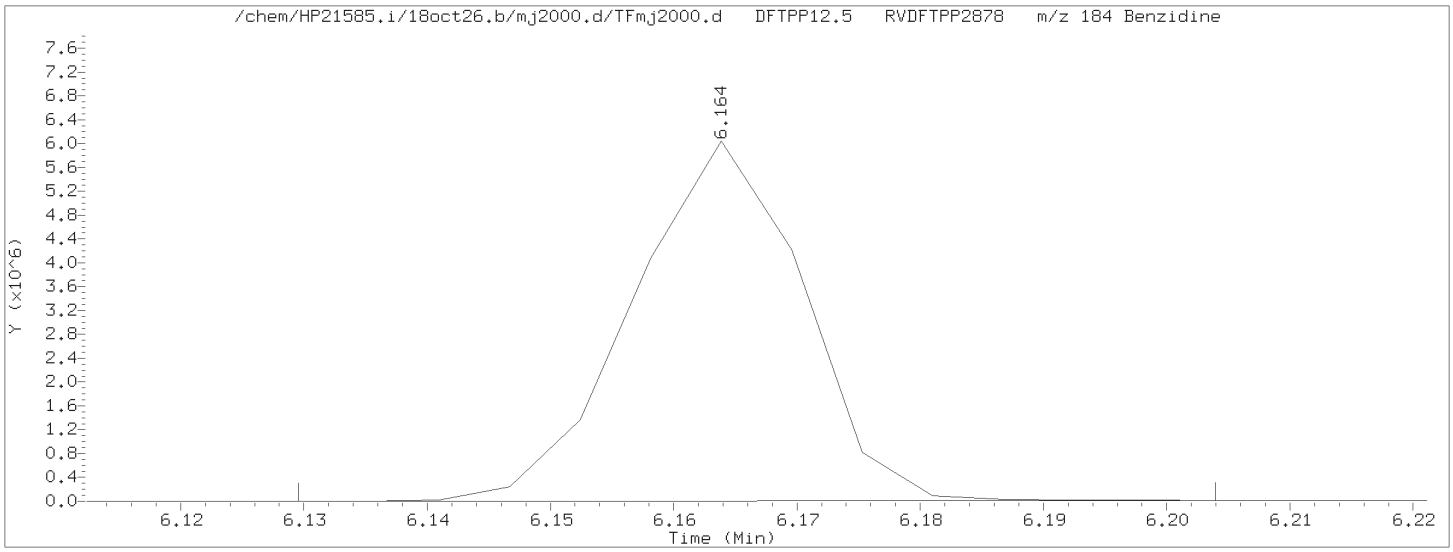
Instrument ID: HP21585.i Injection Date: 26-OCT-2018 05:46 Operator: ceb05247



Pentachlorophenol EICP peak height = 1294173 EICP peak height at 10% = 129417 Pentachlorophenol EICP area = 1377464

Pentachlorophenol EICP peak apex (min.) = 4.911
RT at 10% of front half of EICP (min.) = 4.896 'Front' peak width (min.) = 0.0151666667
RT at 10% of back half of EICP (min.) = 4.927 'Tailing' peak width (min.) = 0.0162000000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0162000000}{0.0151666667} = 1.068$



Benzidine EICP peak height = 6034458 EICP peak height at 10% = 603446 Benzidine EICP area = 5795344

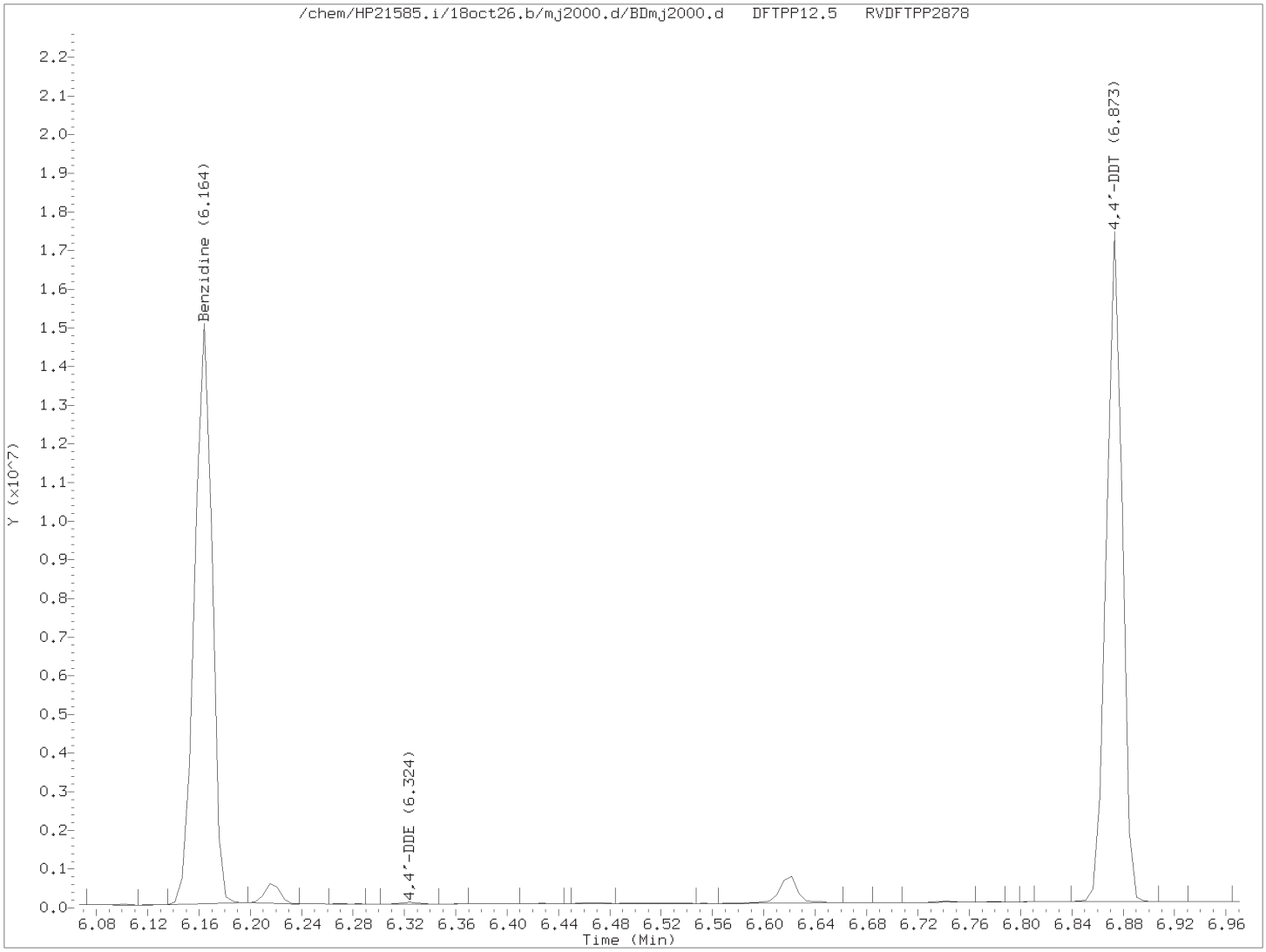
Benzidine EICP peak apex (min.) = 6.164
RT at 10% of front half of EICP (min.) = 6.149 'Front' peak width (min.) = 0.0153000000
RT at 10% of back half of EICP (min.) = 6.177 'Tailing' peak width (min.) = 0.0130833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0130833333}{0.0153000000} = 0.855$

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42. PARALLAX ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

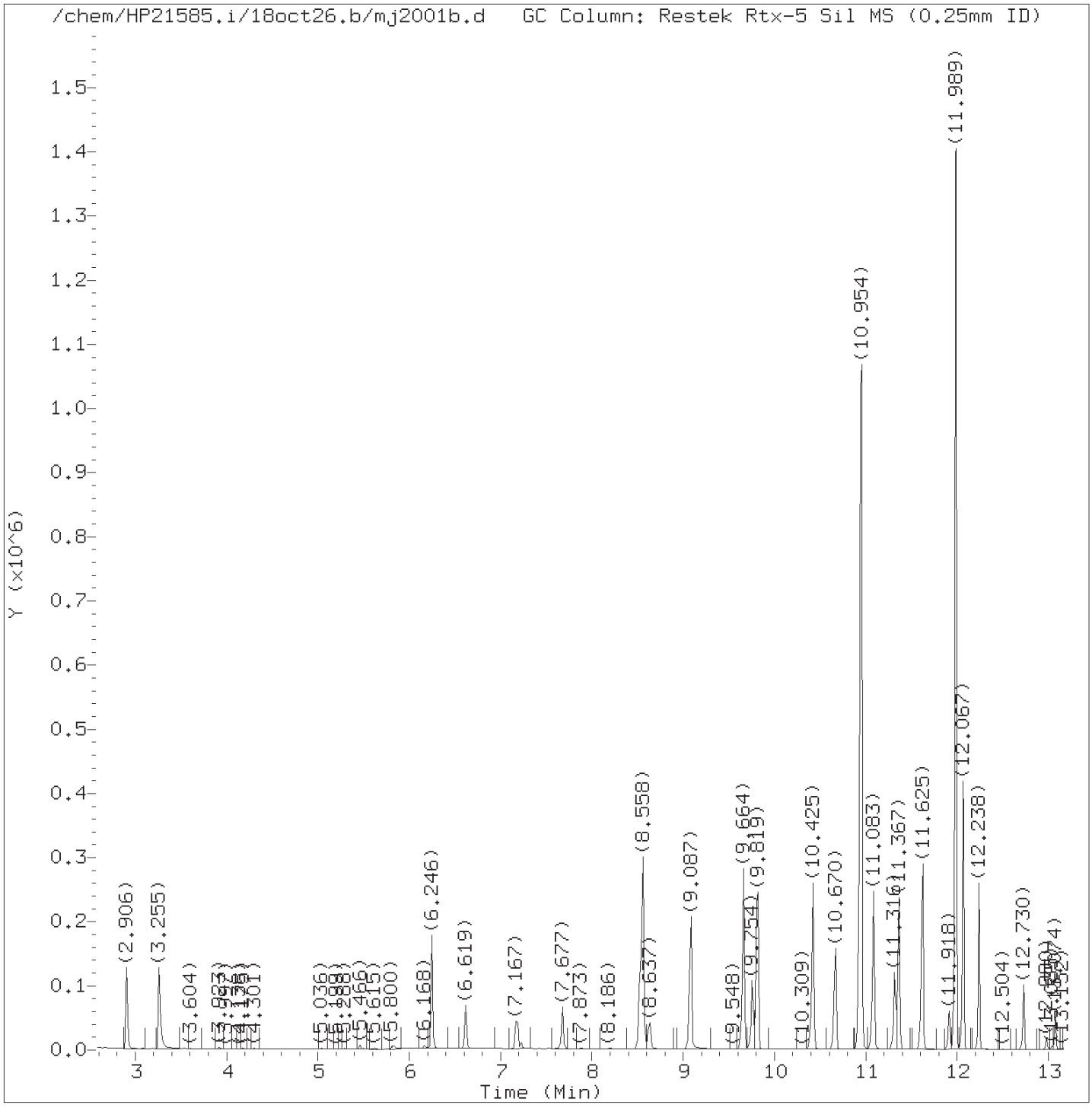
Instrument ID: HP21585.i Injection Date: 26-OCT-2018 05:46 Operator: ceb05247



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{39863 + 7205}{39863 + 7205 + 14989508} \times 100 = 0.3$$

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42. PARALLAX ID: hb01996



Total Ion Chromatogram (TIC)

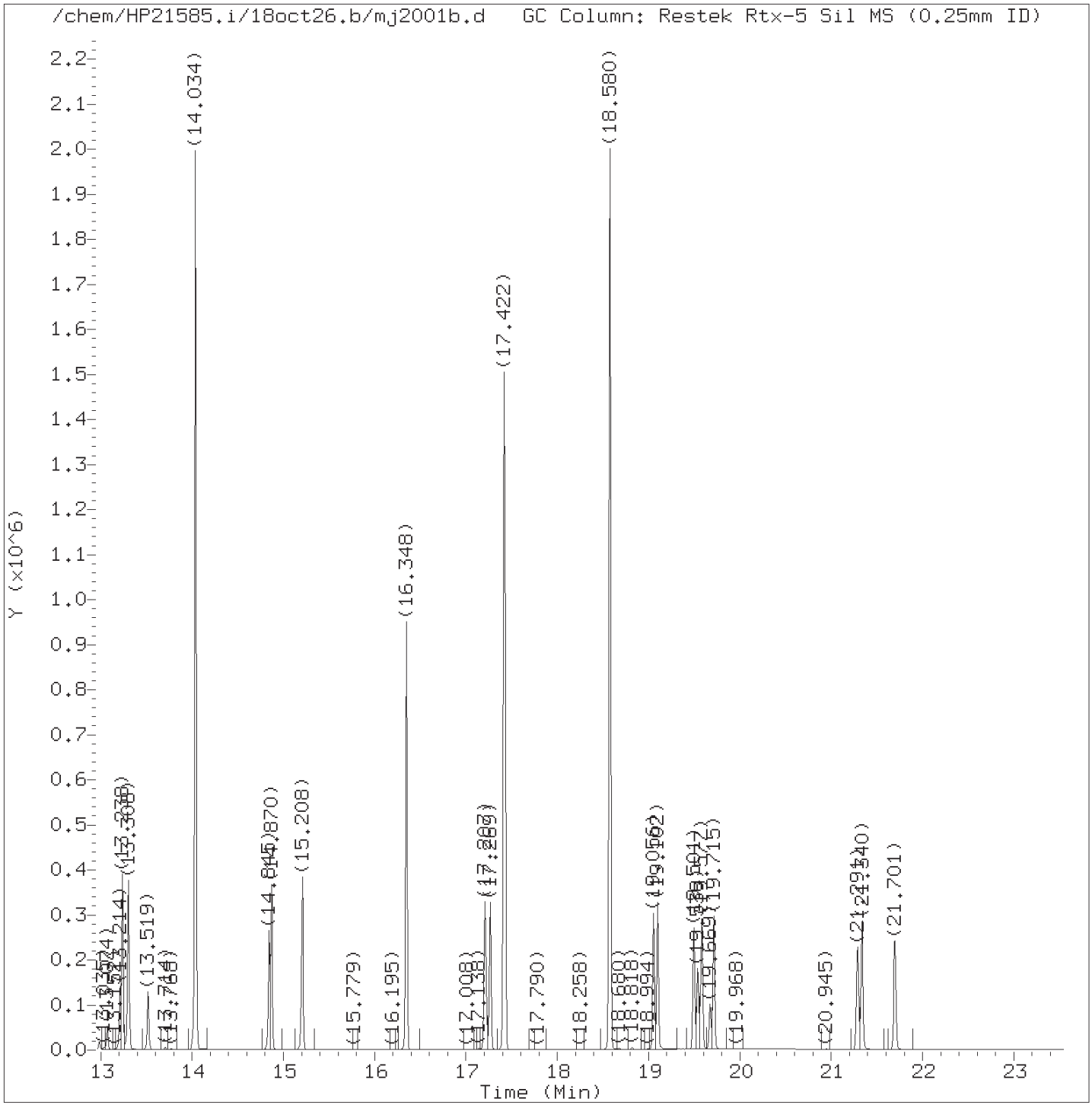
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2001b.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 07:31 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2001b.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 07:31 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2001b.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 07:31 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.906	88	74340	0.500
2) N-Nitrosodimethylamine	(1)	3.255	74	111937	0.500
4) bis(2-Chloroethyl)ether	(2)	6.246	93	124417	0.500
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	53139	0.250
6)*Naphthalene-d8	(2)	8.539	136	152458	0.250
7) Naphthalene	(2)	8.558	128	360131	0.500
8) Quinoline	(2)	9.087	129	214443	0.500
9) 2-Methylnaphthalene	(2)	9.664	142	221759	0.500
10)$1-Methylnaphthalene-d10	(2)	9.754	152	140720	0.500
11) 1-Methylnaphthalene	(2)	9.819	142	220512	0.500
12) Dimethylphthalate	(3)	10.954	163	1344002	2.500
13) Acenaphthylene	(3)	11.083	152	359012	0.500
14)*Acenaphthene-d10	(3)	11.316	164	66371	0.250
15) Acenaphthene	(3)	11.367	154	213637	0.500
16) Dibenzofuran	(3)	11.625	168	295701	0.500
17) Diethylphthalate	(3)	11.981	149	1333007	2.500
18) Fluorene	(3)	12.067	166	255239	0.500
19) Hexachlorobenzene	(4)	12.738	284	77448	0.500
20)*Phenanthrene-d10	(4)	13.214	188	136980	0.250
21) Phenanthrene	(4)	13.238	178	367993	0.500
22) Anthracene	(4)	13.308	178	370045	0.500
23) Di-n-butylphthalate	(4)	14.034	149	2090672	2.500
24)$Fluoranthene-d10	(4)	14.845	212	278193	0.500
25) Fluoranthene	(4)	14.870	202	422256	0.500
26) Pyrene	(5)	15.208	202	436497	0.500
27) Butylbenzylphthalate	(5)	16.348	149	921828	2.500
28) Benzo(a)anthracene	(5)	17.207	228	364031	0.500
29)*Chrysene-d12	(5)	17.223	240	94742	0.250
30) Chrysene	(5)	17.269	228	370719	0.500
31) bis(2-Ethylhexyl)phthalate	(5)	17.422	149	1379040	2.500
32) Di-n-octylphthalate	(6)	18.580	149	2436022	2.500
33) Benzo(b)fluoranthene	(6)	19.056	252	356662	0.500
34) Benzo(k)fluoranthene	(6)	19.102	252	368461	0.500
35) Benzo(e)pyrene	(6)	19.501	252	343767	0.500
36)$Benzo(a)pyrene-d12	(6)	19.547	264	172445	0.500
37) Benzo(a)pyrene	(6)	19.577	252	345906	0.500
38)*Perylene-d12	(6)	19.669	264	90716	0.250
45) Perylene	(6)	19.715	252	350335	0.500
39) Indeno(1,2,3-cd)pyrene	(6)	21.291	276	316754M	0.500
40) Dibenz(a,h)anthracene	(6)	21.340	278	323670	0.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2001b.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 07:31 Analyst ID: ceb05247

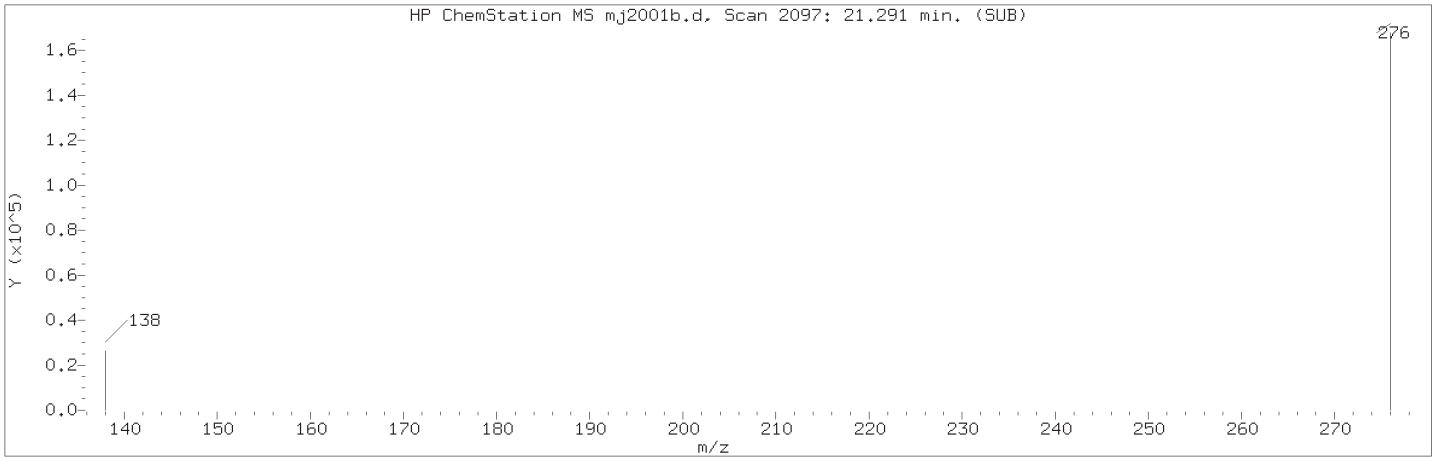
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

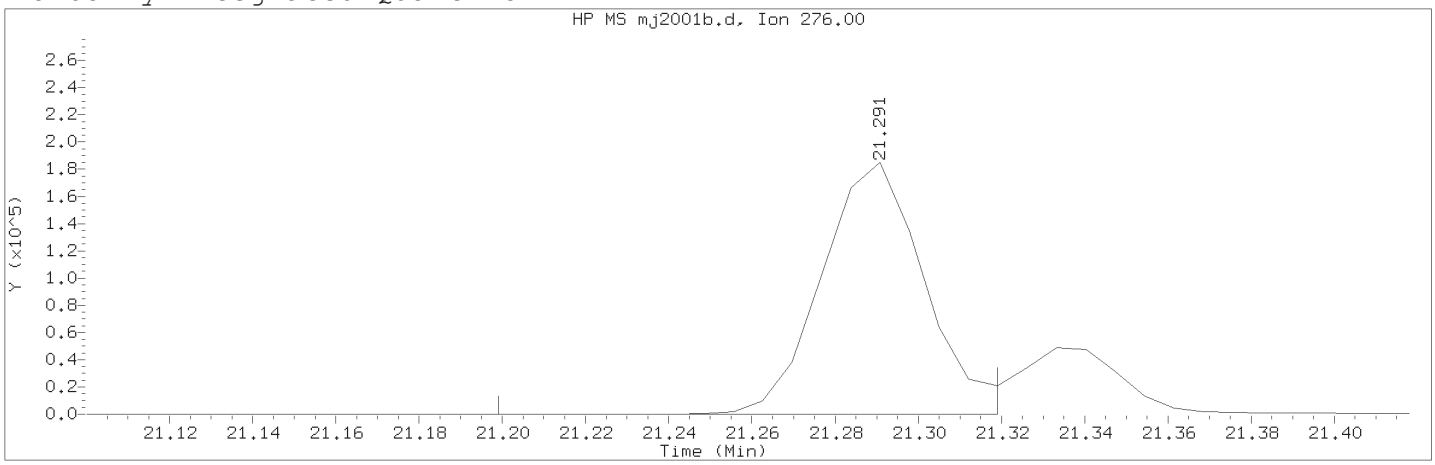
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.701	276	362005	0.500

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2001b.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 07:31 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

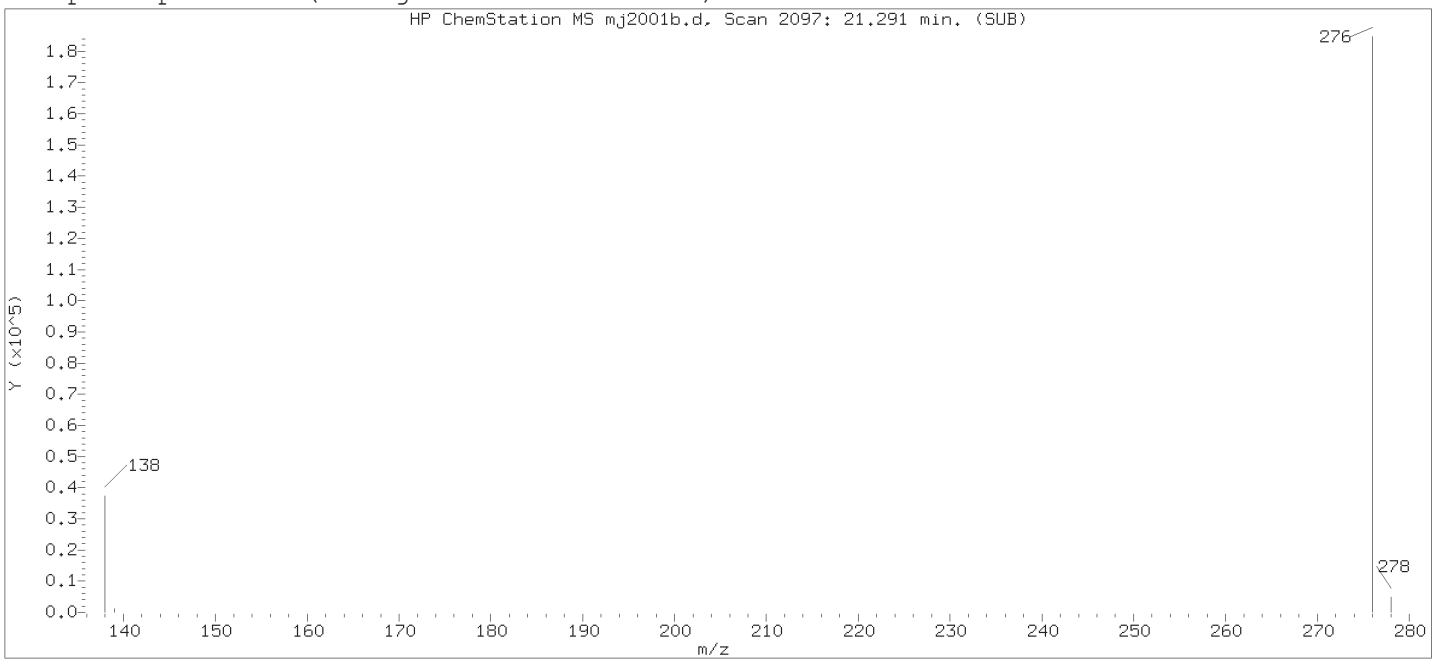
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2097
Retention Time (minutes) : 21.291
Quant Ion : 276.00
Area (flag) : 316754M
On-Column Amount (ng/ul) : 0.5000
Integration start scan : 2083 Integration stop scan: 2100
Y at integration start : 94 Y at integration end: 94

Reason for manual integration: improper integration

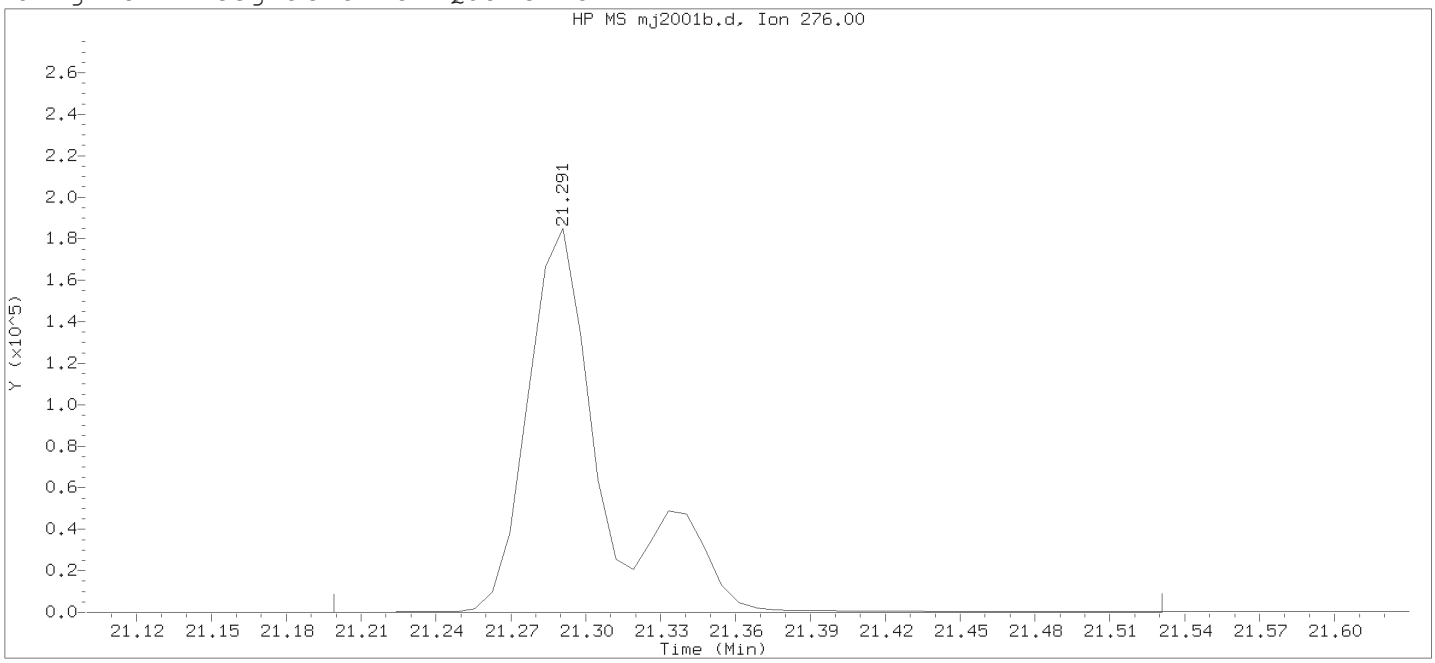
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



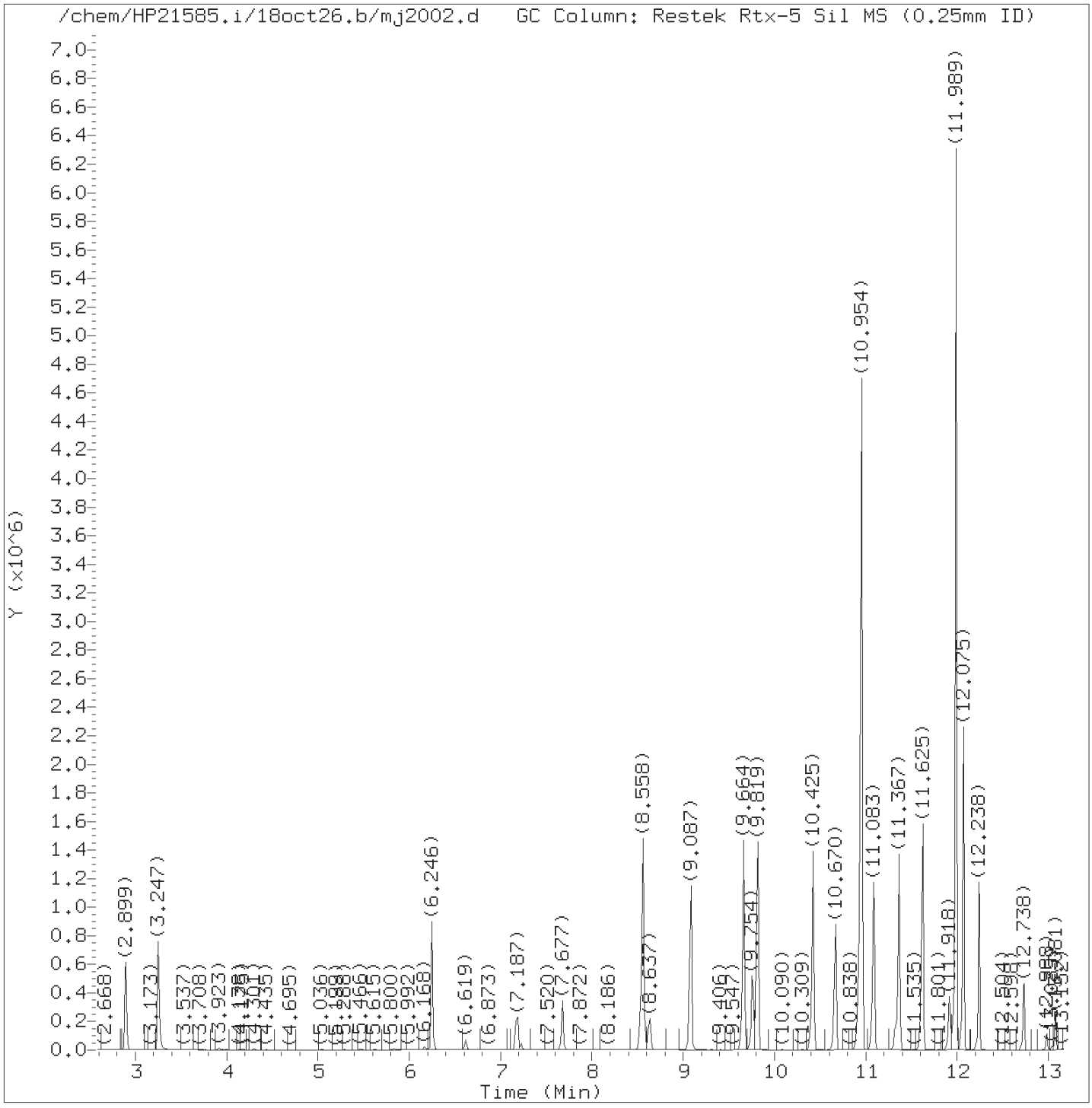
Data File: /chem/HP21585.i/18oct26.b/mj2001b.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 07:31 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 08:06
Date, time and analyst ID of latest file update: 26-Oct-2018 08:06 jmg00346

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2097
Retention Time (minutes)	:	21.291
Quant Ion	:	276.00
Area	:	397234
On-column Amount (ng/ul)	:	0.5000
Integration start scan	:	2083 Integration stop scan: 2130
Y at integration start	:	94 Y at integration end: 94

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira25061



Total Ion Chromatogram (TIC)

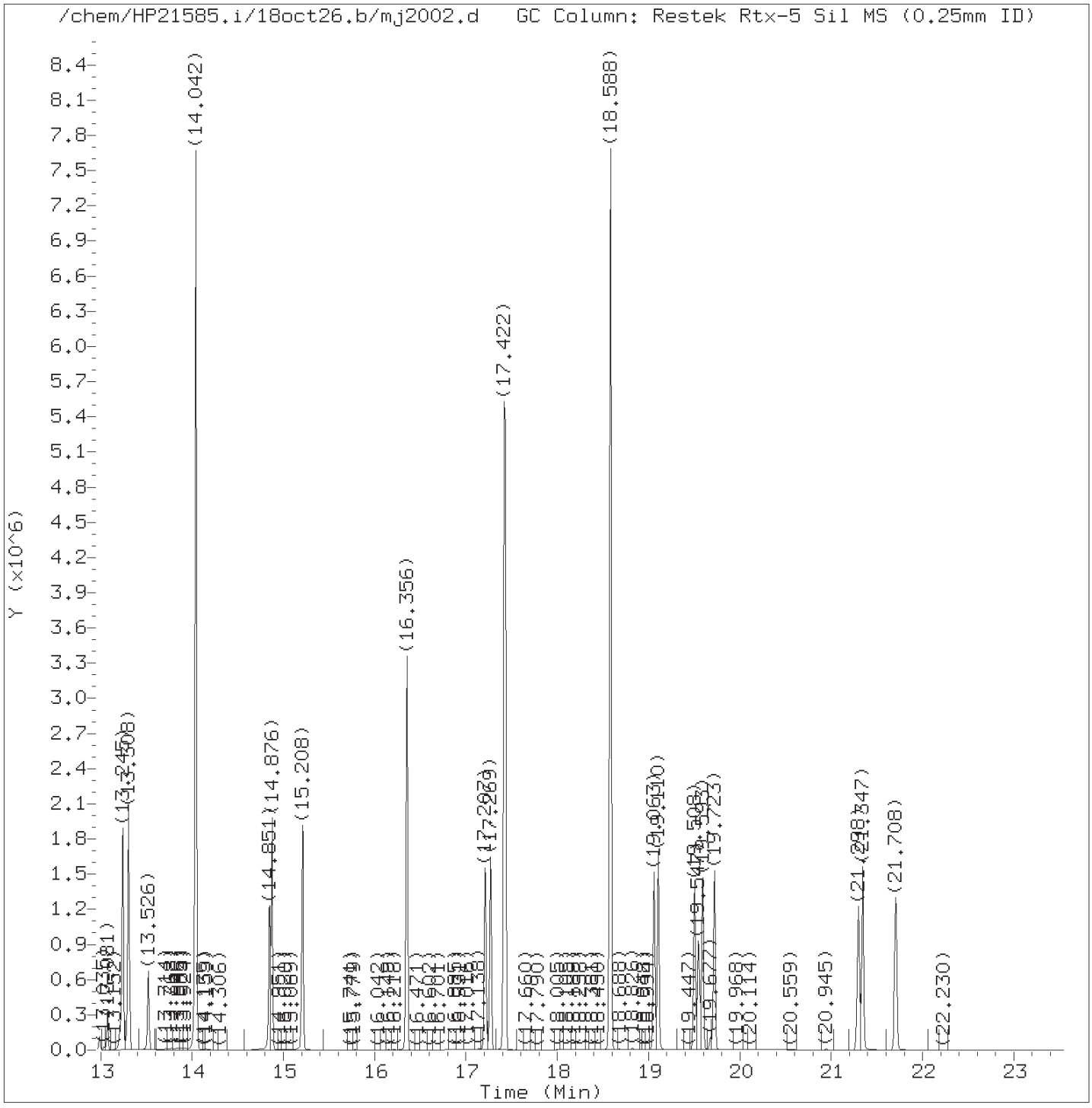
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2002.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:05 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD2.5 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2002.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:05 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD2.5 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2002.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:05 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD2.5 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.899	88	378484	2.512
2) N-Nitrosodimethylamine	(1)	3.247	74	589133	2.553
4) bis(2-Chloroethyl)ether	(2)	6.246	93	610102	2.398
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	53598	0.250
6)*Naphthalene-d8	(2)	8.539	136	162269	0.250
7) Naphthalene	(2)	8.558	128	1776668	2.405
8) Quinoline	(2)	9.087	129	1137228	2.496
9) 2-Methylnaphthalene	(2)	9.664	142	1136260	2.453
10)$1-Methylnaphthalene-d10	(2)	9.754	152	722984	2.456
11) 1-Methylnaphthalene	(2)	9.819	142	1140299	2.464
12) Dimethylphthalate	(3)	10.954	163	5114582	9.717
13) Acenaphthylene	(3)	11.083	152	1883391	2.552
14)*Acenaphthene-d10	(3)	11.316	164	66824	0.250
15) Acenaphthene	(3)	11.367	154	1096252	2.524
16) Dibenzofuran	(3)	11.625	168	1489563	2.501
17) Diethylphthalate	(3)	11.989	149	5265373	9.903
18) Fluorene	(3)	12.075	166	1308498	2.523
19) Hexachlorobenzene	(4)	12.738	284	394190	2.512
20)*Phenanthrene-d10	(4)	13.214	188	138135	0.250
21) Phenanthrene	(4)	13.245	178	1934462	2.552
22) Anthracene	(4)	13.308	178	1874512	2.506
23) Di-n-butylphthalate	(4)	14.042	149	8194704	9.857
24)$Fluoranthene-d10	(4)	14.851	212	1387323	2.486
25) Fluoranthene	(4)	14.876	202	2130641	2.501
26) Pyrene	(5)	15.208	202	2225130	2.509
27) Butylbenzylphthalate	(5)	16.356	149	3680842	9.929
28) Benzo(a)anthracene	(5)	17.207	228	1883505	2.527
29)*Chrysene-d12	(5)	17.230	240	95935	0.250
30) Chrysene	(5)	17.269	228	1885157	2.505
31) bis(2-Ethylhexyl)phthalate	(5)	17.422	149	5610662	10.022
32) Di-n-octylphthalate	(6)	18.588	149	9837635	9.807
33) Benzo(b)fluoranthene	(6)	19.063	252	1899228	2.519
34) Benzo(k)fluoranthene	(6)	19.110	252	1904244	2.481
35) Benzo(e)pyrene	(6)	19.508	252	1805256	2.501
36)$Benzo(a)pyrene-d12	(6)	19.554	264	915786	2.515
37) Benzo(a)pyrene	(6)	19.593	252	1820653	2.504
38)*Perylene-d12	(6)	19.677	264	95191	0.250
45) Perylene	(6)	19.723	252	1843802	2.504
39) Indeno(1,2,3-cd)pyrene	(6)	21.298	276	1681739M	2.515
40) Dibenz(a,h)anthracene	(6)	21.347	278	1697466	2.499

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2002.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:05 Analyst ID: ceb05247

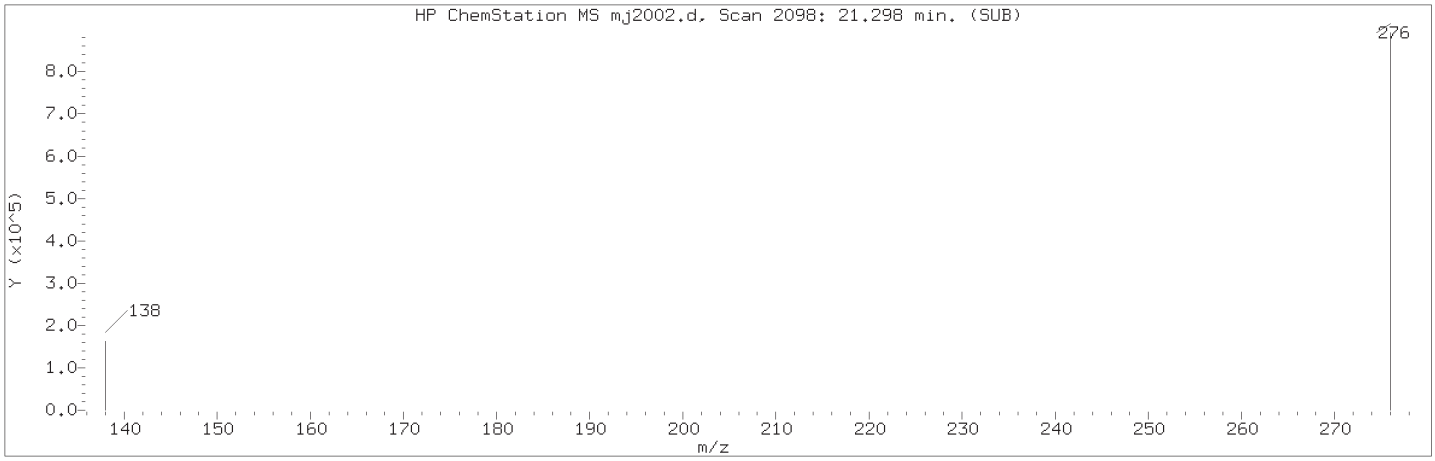
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD2.5 Lab Sample ID: RVSIM2768

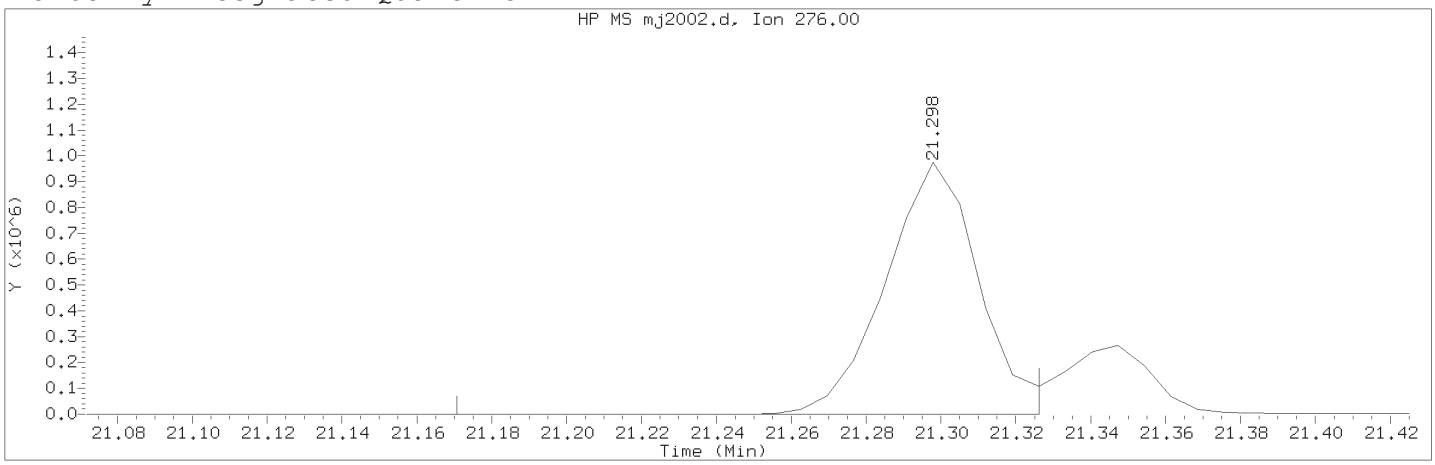
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.708	276	1898487	2.499

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2002.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:05 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD2.5 Lab Sample ID: RVSIM2768

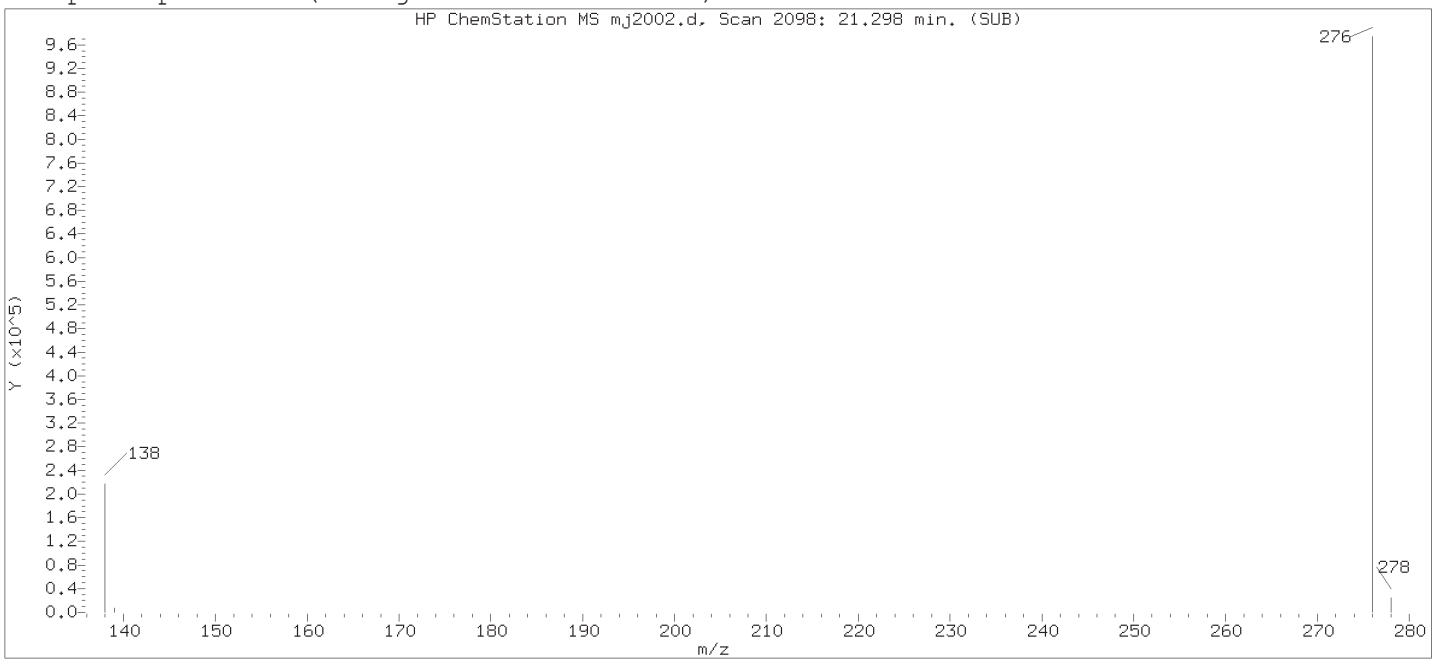
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2098
Retention Time (minutes) : 21.298
Quant Ion : 276.00
Area (flag) : 1681739M
On-Column Amount (ng/ul) : 2.5148
Integration start scan : 2079 Integration stop scan: 2101
Y at integration start : 159 Y at integration end: 159

Reason for manual integration: improper integration

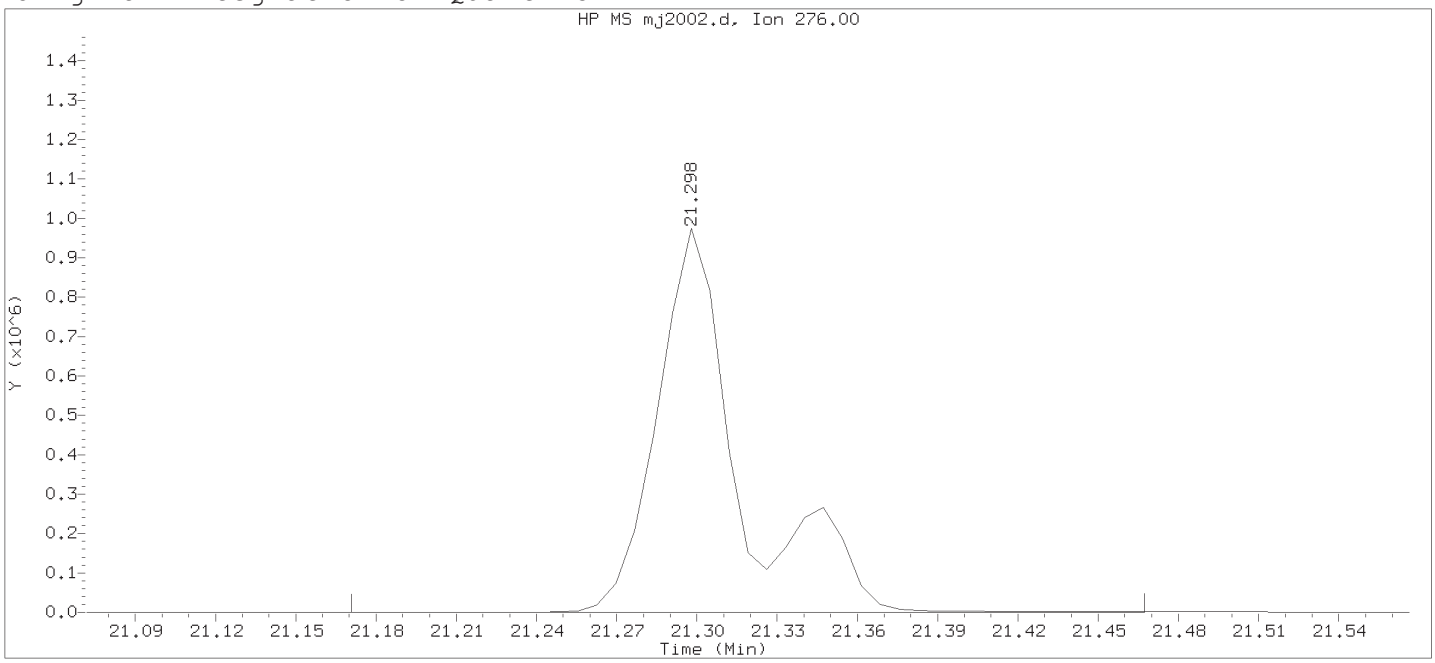
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



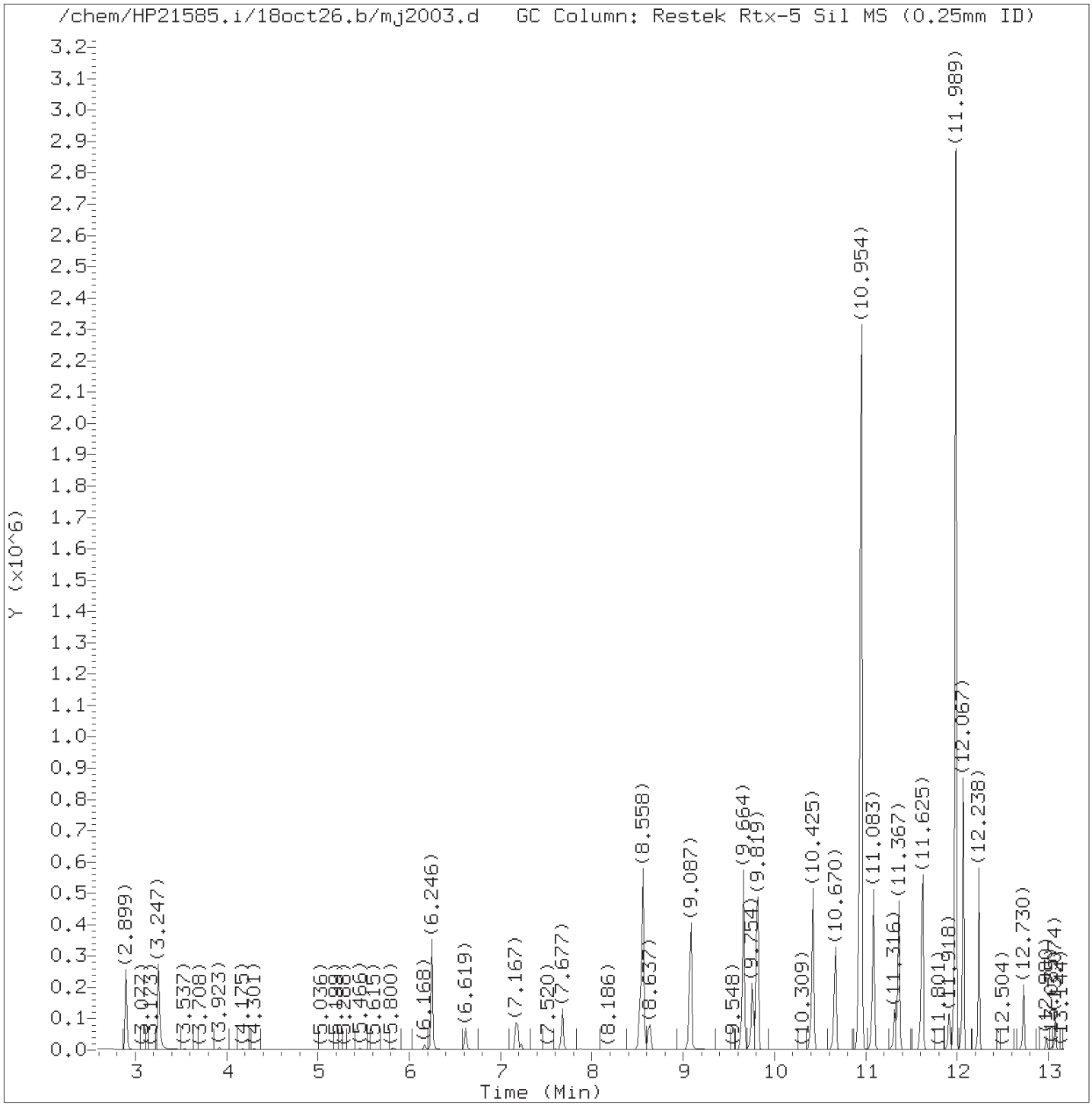
Data File: /chem/HP21585.i/18oct26.b/mj2002.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:05 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 08:34
Date, time and analyst ID of latest file update: 26-Oct-2018 08:34 Unknown

Sample Name: SSTD2.5 Lab Sample ID: RVSIM2768

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2098
Retention Time (minutes)	:	21.298
Quant Ion	:	276.00
Area	:	2095911
On-column Amount (ng/ul)	:	3.1529
Integration start scan	:	2079 Integration stop scan: 2121
Y at integration start	:	159 Y at integration end: 159

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira25067



Total Ion Chromatogram (TIC)

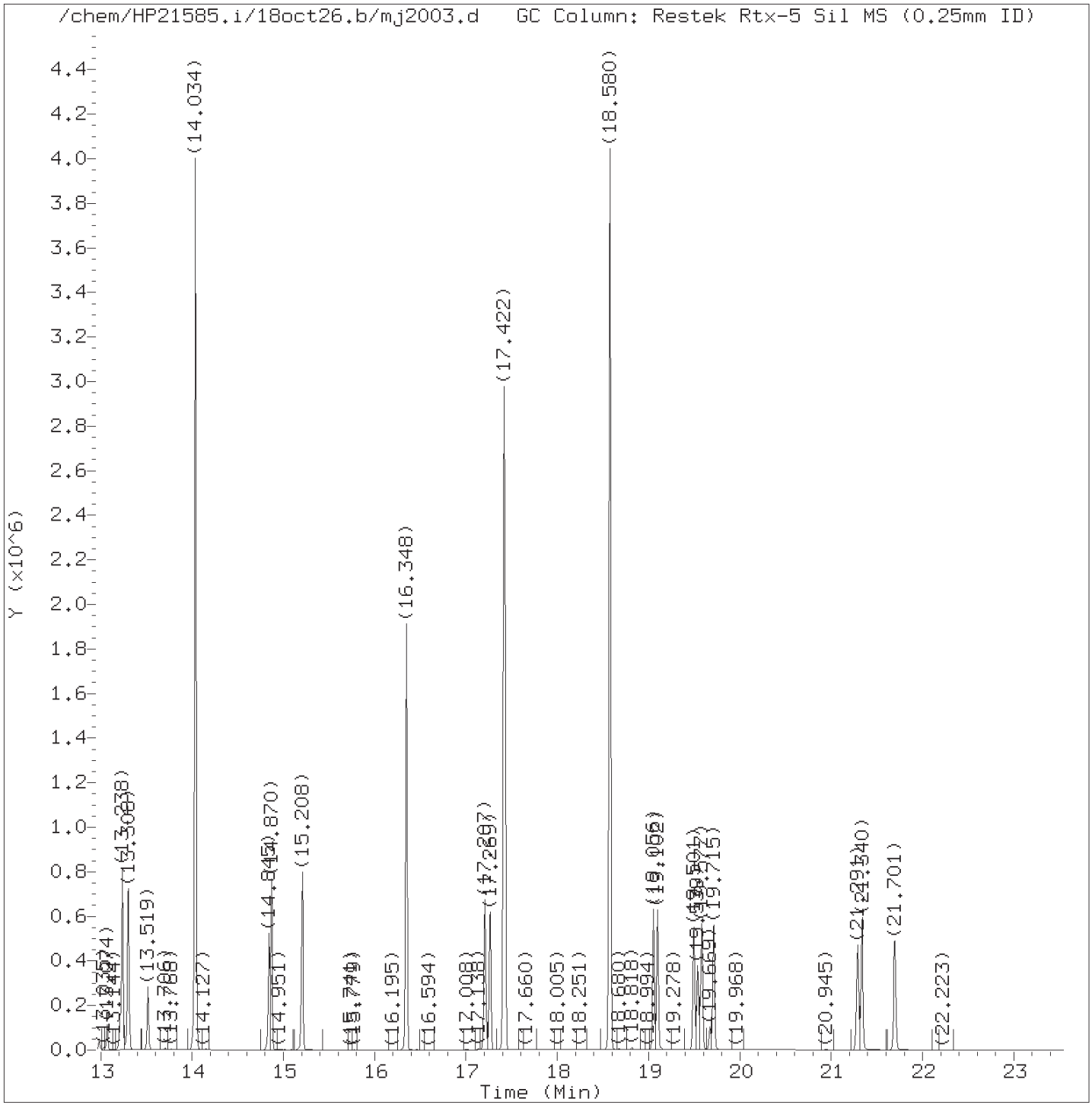
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2003.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:35 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD001 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2003.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:35 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD001 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2003.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:35 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD001 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.899	88	148040	0.985
2) N-Nitrosodimethylamine	(1)	3.247	74	225666	0.982
4) bis(2-Chloroethyl)ether	(2)	6.246	93	246158	1.015
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	53854	0.250
6)*Naphthalene-d8	(2)	8.539	136	153430	0.250
7) Naphthalene	(2)	8.558	128	699975	1.001
8) Quinoline	(2)	9.087	129	425622	0.992
9) 2-Methylnaphthalene	(2)	9.664	142	442255	1.006
10)$1-Methylnaphthalene-d10	(2)	9.754	152	279029	1.002
11) 1-Methylnaphthalene	(2)	9.819	142	437166	0.999
12) Dimethylphthalate	(3)	10.954	163	2706064	5.090
13) Acenaphthylene	(3)	11.083	152	723868	0.986
14)*Acenaphthene-d10	(3)	11.316	164	66884	0.250
15) Acenaphthene	(3)	11.367	154	421991	0.980
16) Dibenzofuran	(3)	11.625	168	580805	0.983
17) Diethylphthalate	(3)	11.981	149	2685757	5.031
18) Fluorene	(3)	12.067	166	512354	0.991
19) Hexachlorobenzene	(4)	12.730	284	153147	0.985
20)*Phenanthrene-d10	(4)	13.214	188	137822	0.250
21) Phenanthrene	(4)	13.238	178	735982	0.982
22) Anthracene	(4)	13.308	178	742802	0.997
23) Di-n-butylphthalate	(4)	14.034	149	4251276	5.083
24)$Fluoranthene-d10	(4)	14.845	212	553093	0.996
25) Fluoranthene	(4)	14.870	202	844919	0.996
26) Pyrene	(5)	15.208	202	879325	1.000
27) Butylbenzylphthalate	(5)	16.348	149	1922759	5.151
28) Benzo(a)anthracene	(5)	17.207	228	731408	0.993
29)*Chrysene-d12	(5)	17.223	240	95148	0.250
30) Chrysene	(5)	17.269	228	744436	0.998
31) bis(2-Ethylhexyl)phthalate	(5)	17.422	149	2855246	5.094
32) Di-n-octylphthalate	(6)	18.580	149	5015050	5.135
33) Benzo(b)fluoranthene	(6)	19.056	252	723442	0.999
34) Benzo(k)fluoranthene	(6)	19.102	252	735105	0.998
35) Benzo(e)pyrene	(6)	19.501	252	691241	0.998
36)$Benzo(a)pyrene-d12	(6)	19.539	264	348725	0.998
37) Benzo(a)pyrene	(6)	19.577	252	694875	0.997
38)*Perylene-d12	(6)	19.669	264	91421	0.250
45) Perylene	(6)	19.715	252	702707	0.996
39) Indeno(1,2,3-cd)pyrene	(6)	21.291	276	631955M	0.989
40) Dibenz(a,h)anthracene	(6)	21.340	278	638857	0.986

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2003.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:35 Analyst ID: ceb05247

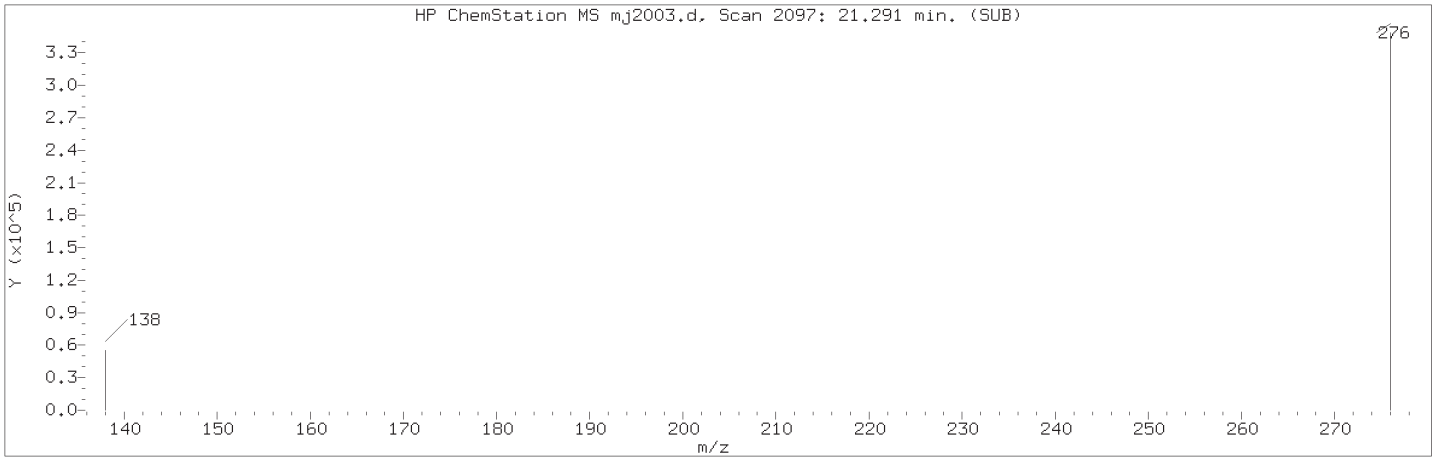
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD001 Lab Sample ID: RVSIM2768

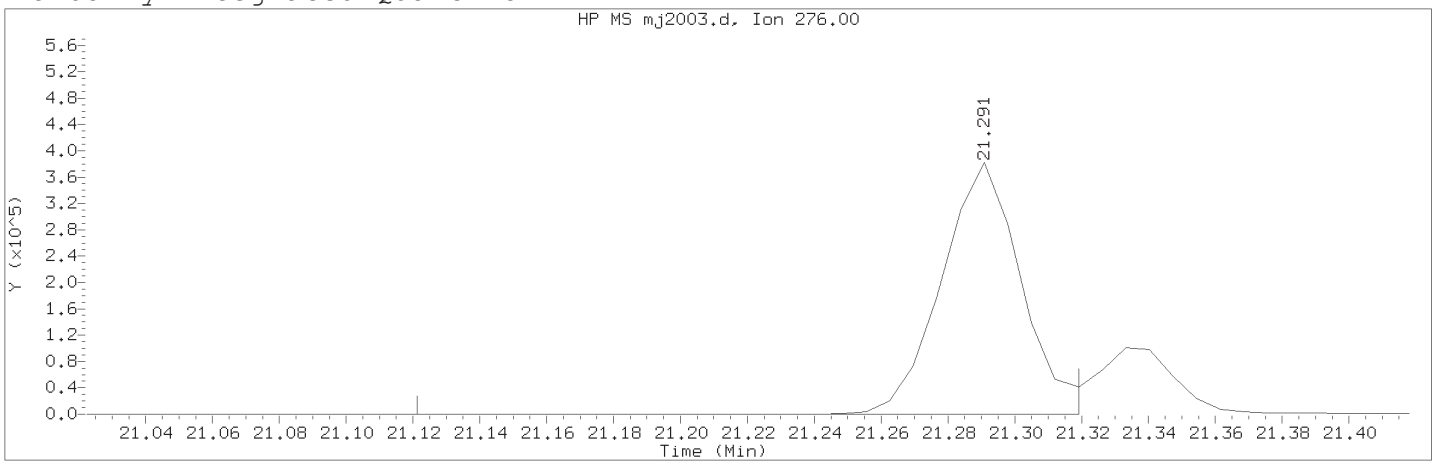
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.701	276	719086	0.990

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2003.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:35 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD001 Lab Sample ID: RVSIM2768

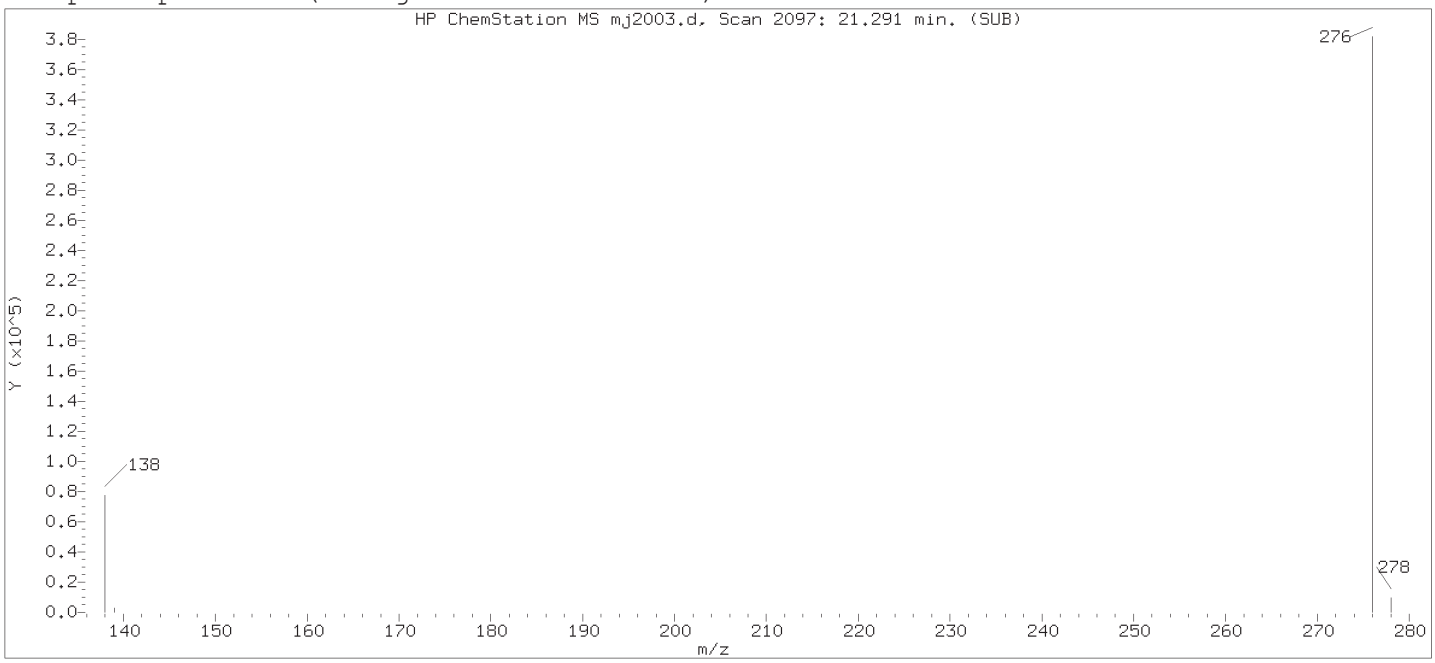
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2097
Retention Time (minutes) : 21.291
Quant Ion : 276.00
Area (flag) : 631955M
On-Column Amount (ng/ul) : 0.9893
Integration start scan : 2072 Integration stop scan: 2100
Y at integration start : 95 Y at integration end: 95

Reason for manual integration: improper integration

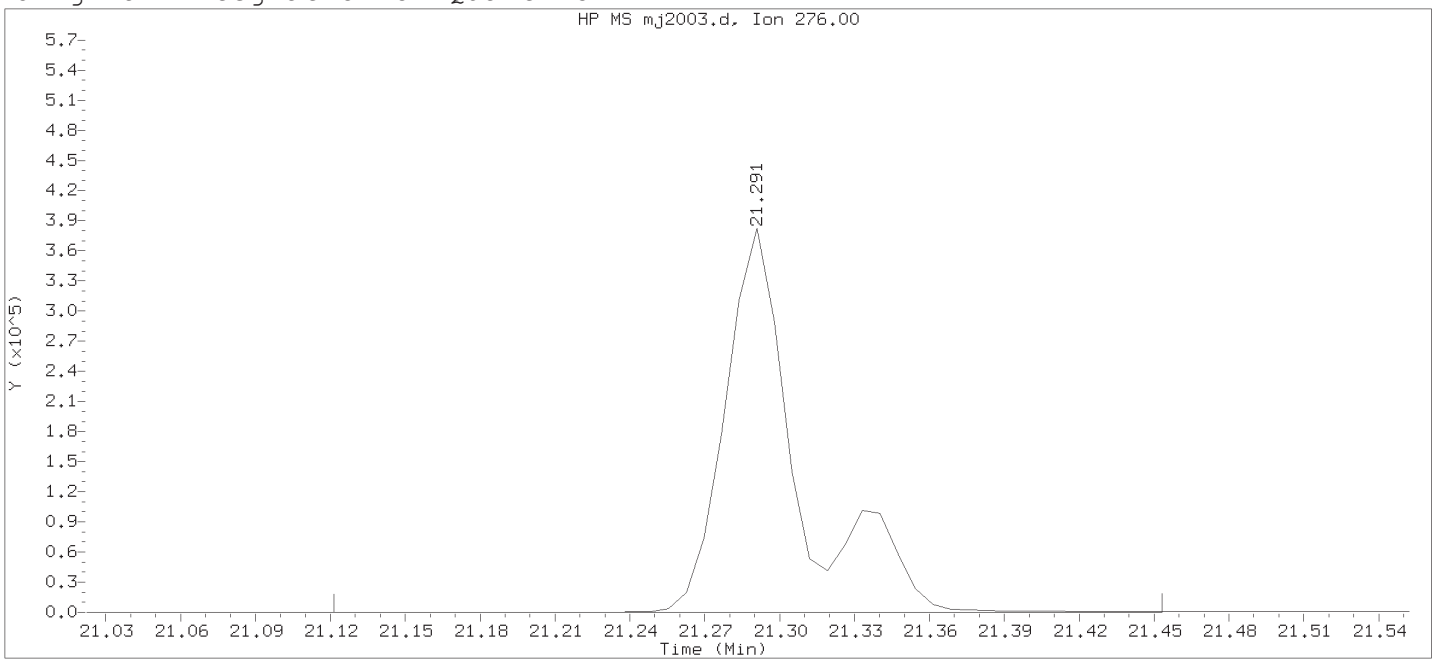
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



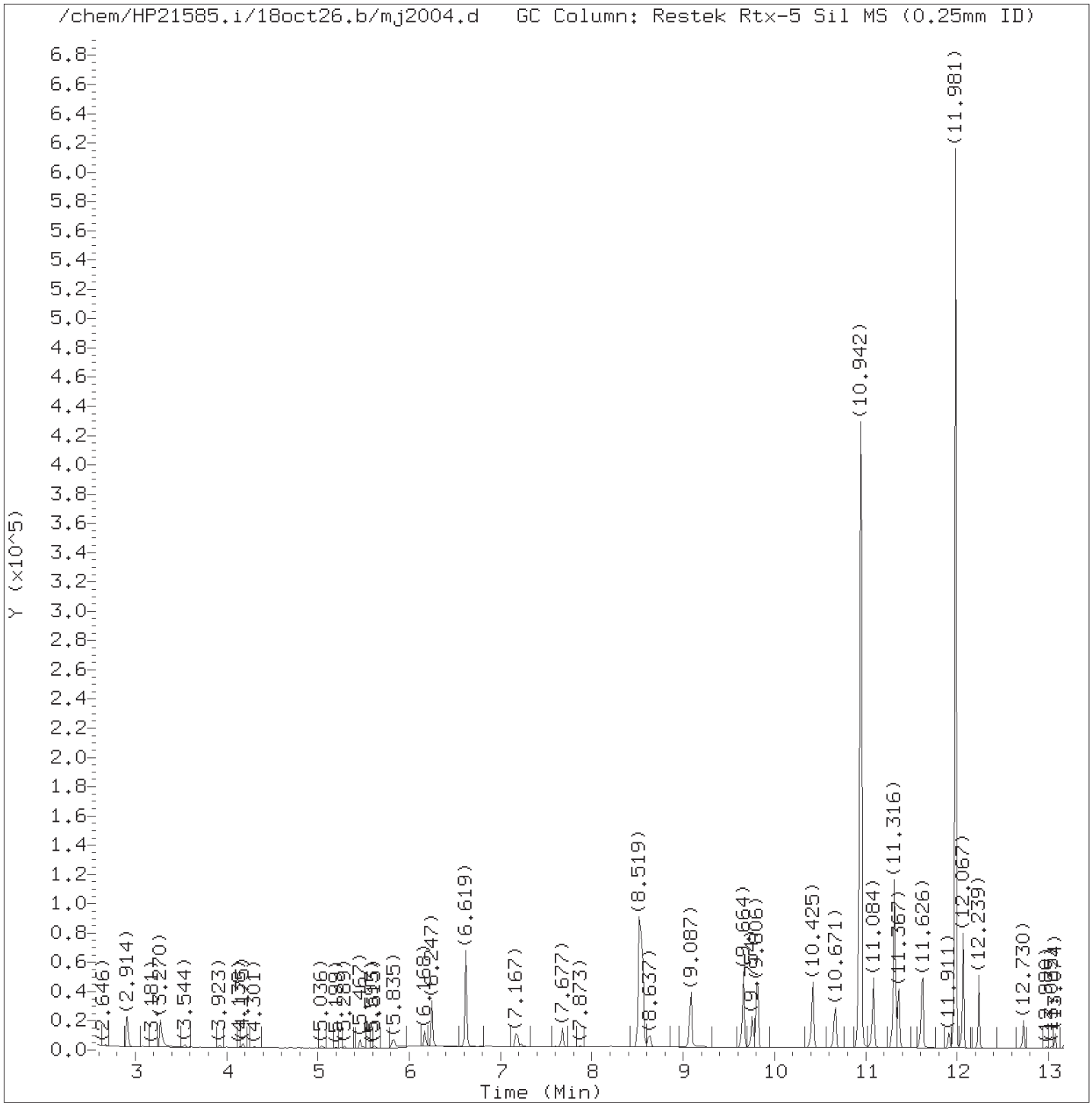
Data File: /chem/HP21585.i/18oct26.b/mj2003.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 08:35 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 09:03
Date, time and analyst ID of latest file update: 26-Oct-2018 09:03 Unknown

Sample Name: SSTD001 Lab Sample ID: RVSIM2768

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2097
Retention Time (minutes)	:	21.291
Quant Ion	:	276.00
Area	:	788664
On-column Amount (ng/ul)	:	1.2353
Integration start scan	:	2072 Integration stop scan: 2119
Y at integration start	:	95 Y at integration end: 95

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira25016



Total Ion Chromatogram (TIC)

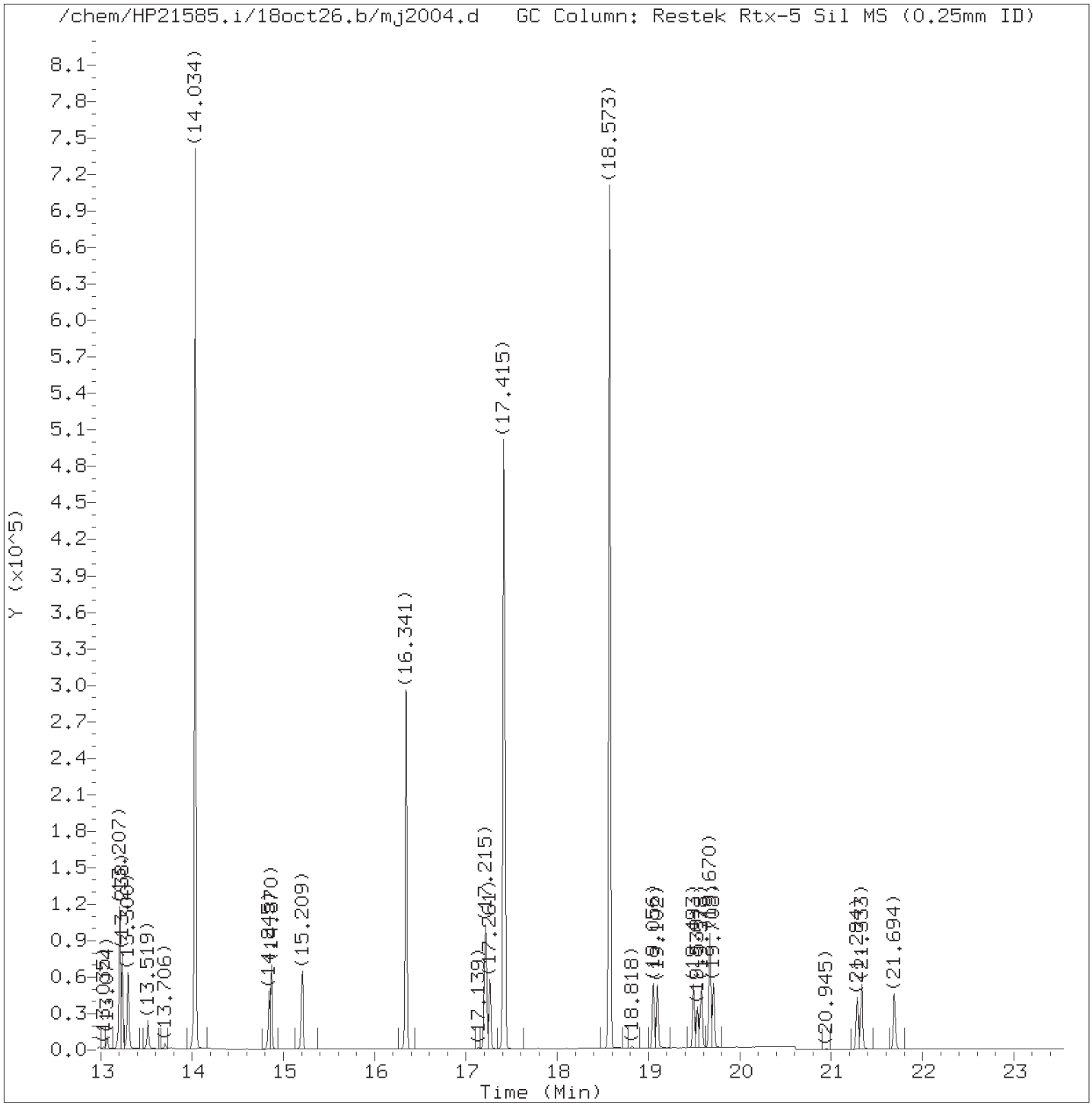
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2004.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:04 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.1 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2004.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:04 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.1 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2004.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:04 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.1 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.914	88	14503	0.098
2) N-Nitrosodimethylamine	(1)	3.270	74	20432	0.092
4) bis(2-Chloroethyl)ether	(2)	6.247	93	23641	0.101
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	53454	0.250
6)*Naphthalene-d8	(2)	8.519	136	147772	0.250
7) Naphthalene	(2)	8.558	128	68077	0.101
8) Quinoline	(2)	9.087	129	41437	0.100
9) 2-Methylnaphthalene	(2)	9.664	142	41649	0.099
10)$1-Methylnaphthalene-d10	(2)	9.754	152	27008	0.100
11) 1-Methylnaphthalene	(2)	9.819	142	41161	0.098
12) Dimethylphthalate	(3)	10.954	163	499068	0.975
13) Acenaphthylene	(3)	11.084	152	65459	0.094
14)*Acenaphthene-d10	(3)	11.316	164	64924	0.250
15) Acenaphthene	(3)	11.367	154	39615	0.096
16) Dibenzofuran	(3)	11.626	168	54556	0.096
17) Diethylphthalate	(3)	11.981	149	494695	0.966
18) Fluorene	(3)	12.067	166	46528	0.094
19) Hexachlorobenzene	(4)	12.730	284	14629	0.100
20)*Phenanthrene-d10	(4)	13.207	188	130356	0.250
21) Phenanthrene	(4)	13.238	178	69484	0.099
22) Anthracene	(4)	13.300	178	67677	0.097
23) Di-n-butylphthalate	(4)	14.034	149	751276	0.962
24)$Fluoranthene-d10	(4)	14.845	212	50610	0.097
25) Fluoranthene	(4)	14.870	202	77148	0.097
26) Pyrene	(5)	15.209	202	79052	0.097
27) Butylbenzylphthalate	(5)	16.341	149	327172	0.952
28) Benzo(a)anthracene	(5)	17.208	228	67151	0.098
29)*Chrysene-d12	(5)	17.223	240	89008	0.250
30) Chrysene	(5)	17.261	228	69359	0.100
31) bis(2-Ethylhexyl)phthalate	(5)	17.415	149	490345	0.951
32) Di-n-octylphthalate	(6)	18.573	149	872363	0.967
33) Benzo(b)fluoranthene	(6)	19.056	252	66515	0.099
34) Benzo(k)fluoranthene	(6)	19.102	252	65364	0.096
35) Benzo(e)pyrene	(6)	19.493	252	63380	0.098
36)$Benzo(a)pyrene-d12	(6)	19.539	264	31046	0.096
37) Benzo(a)pyrene	(6)	19.578	252	62689	0.097
38)*Perylene-d12	(6)	19.670	264	85375	0.250
45) Perylene	(6)	19.708	252	64253	0.098
39) Indeno(1,2,3-cd)pyrene	(6)	21.284	276	56469M	0.096
40) Dibenz(a,h)anthracene	(6)	21.333	278	58674	0.098

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2004.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:04 Analyst ID: ceb05247

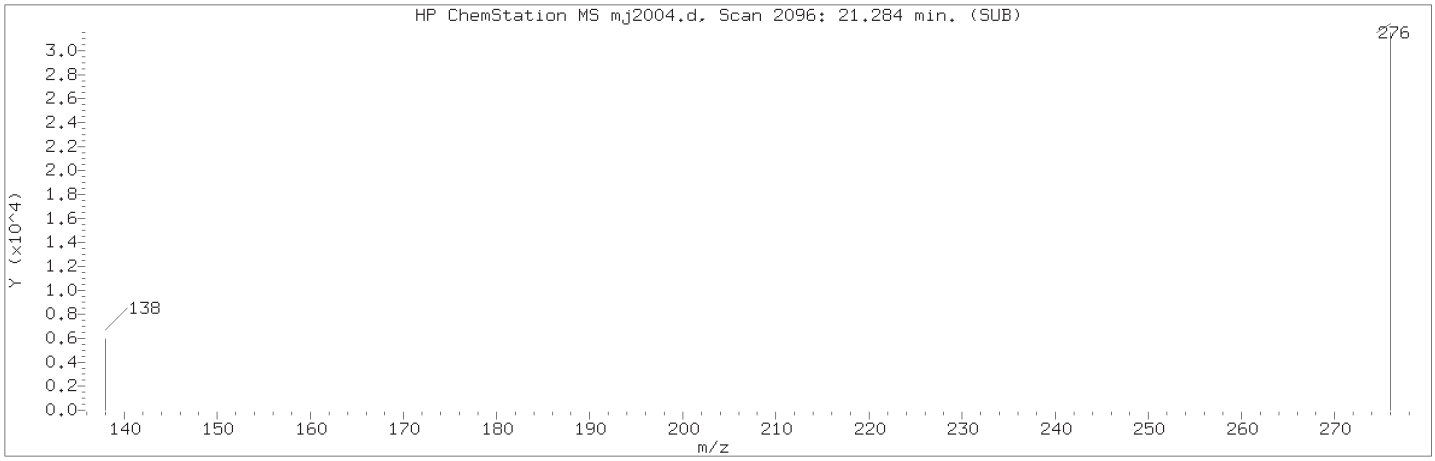
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.1 Lab Sample ID: RVSIM2768

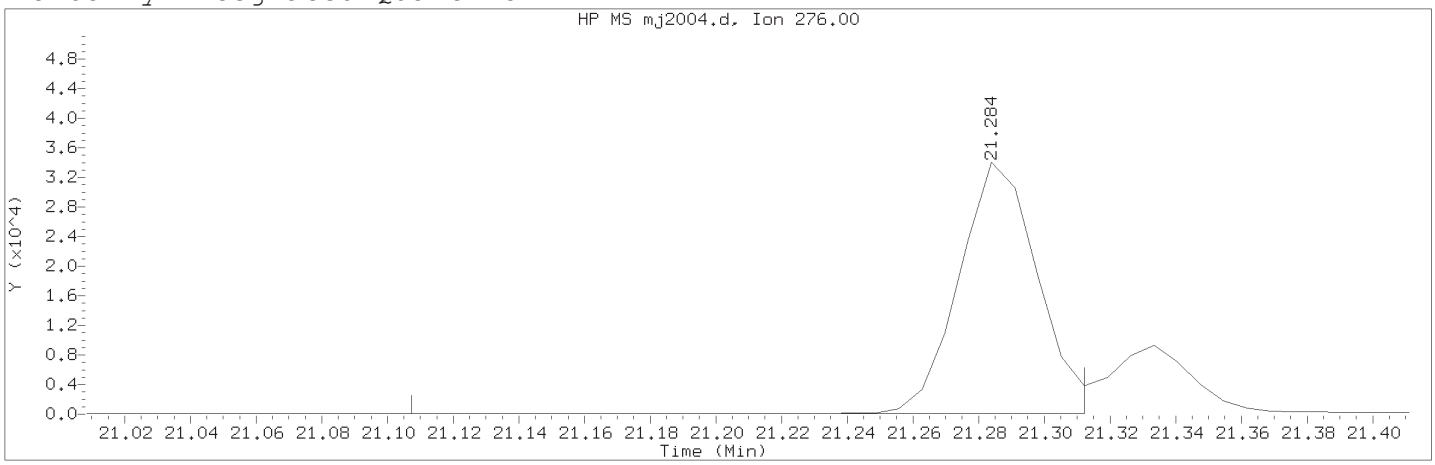
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.694	276	66179	0.098

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2004.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:04 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.1 Lab Sample ID: RVSIM2768

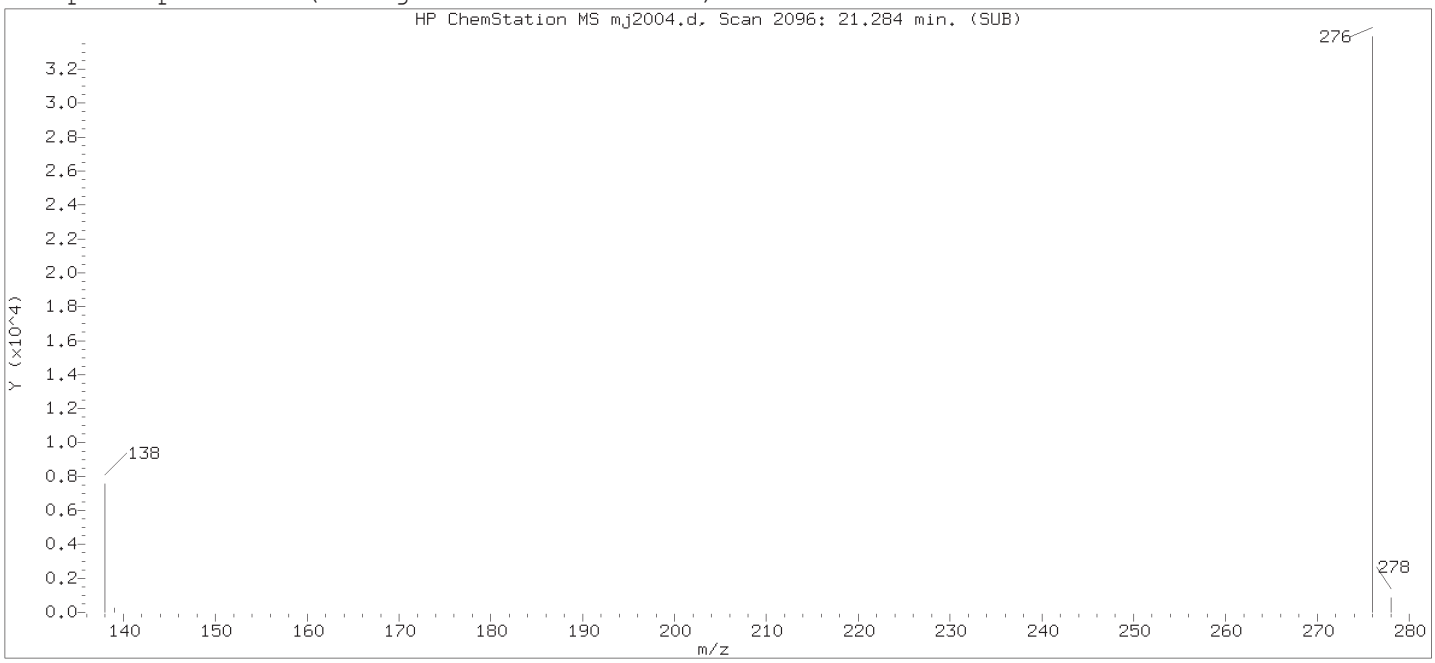
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2096
Retention Time (minutes) : 21.284
Quant Ion : 276.00
Area (flag) : 56469M
On-Column Amount (ng/ul) : 0.0959
Integration start scan : 2070 Integration stop scan: 2099
Y at integration start : 88 Y at integration end: 88

Reason for manual integration: improper integration

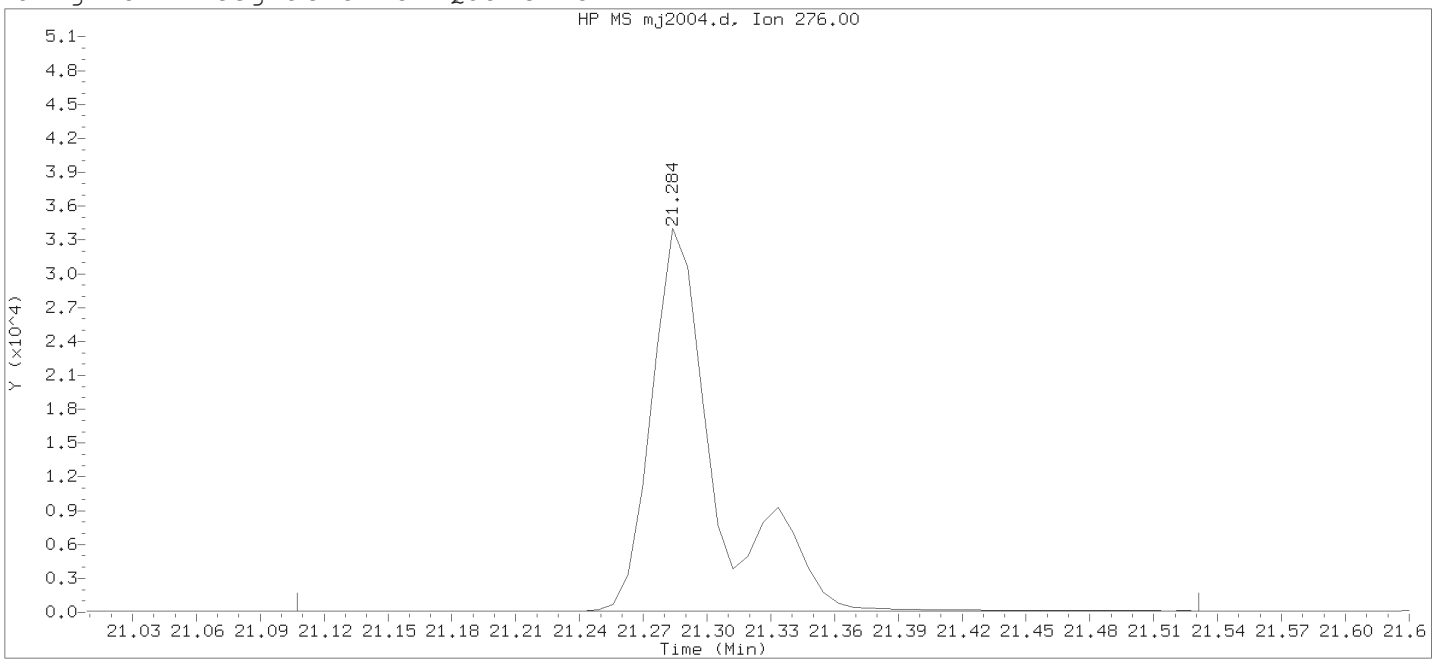
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



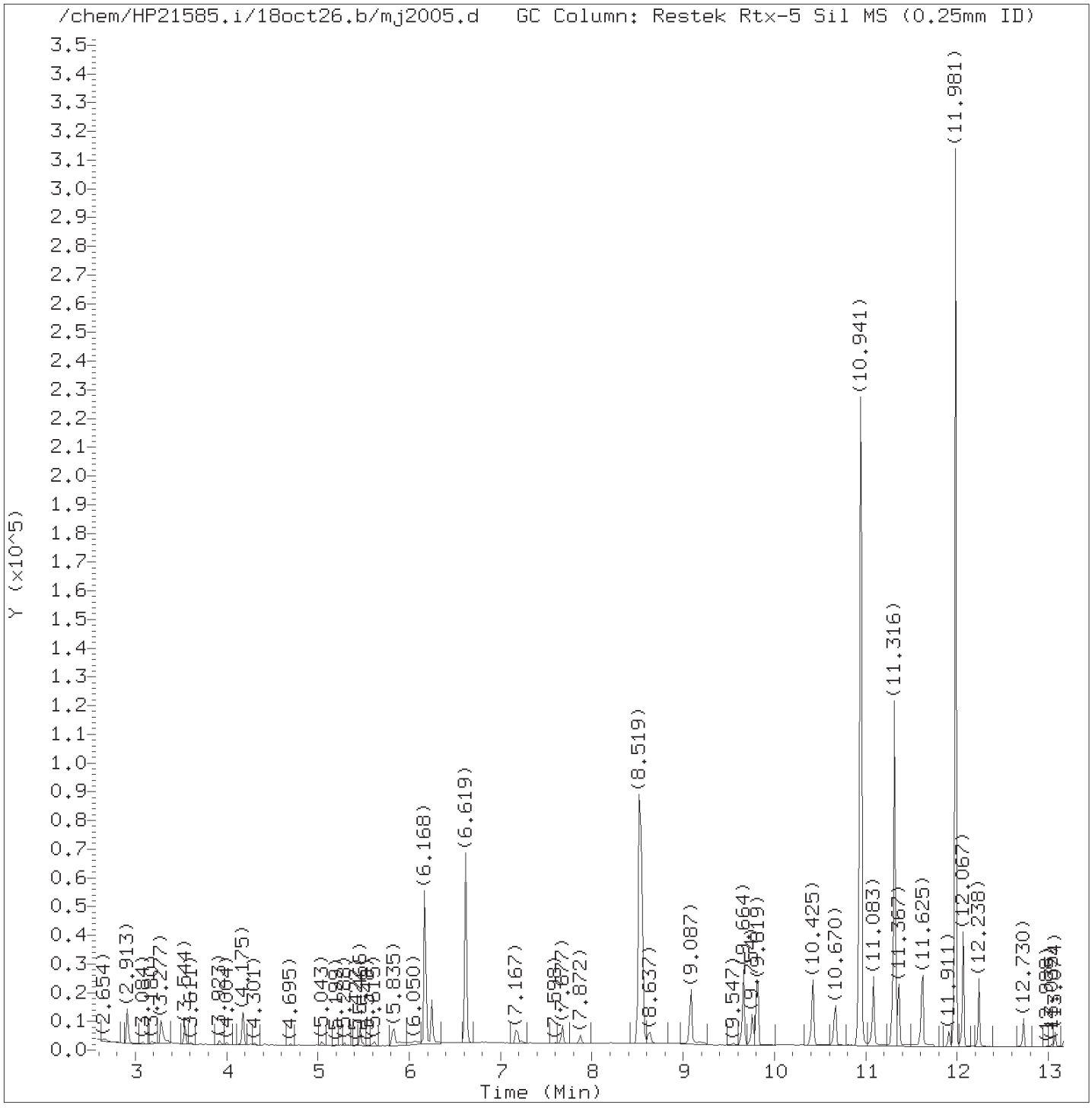
Data File: /chem/HP21585.i/18oct26.b/mj2004.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:04 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 09:32
Date, time and analyst ID of latest file update: 26-Oct-2018 09:32 Unknown

Sample Name: SSTD0.1 Lab Sample ID: RVSIM2768

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2096		
Retention Time (minutes)	: 21.284		
Quant Ion	: 276.00		
Area	: 72488		
On-column Amount (ng/ul)	: 0.1216		
Integration start scan	: 2070	Integration stop scan:	2130
Y at integration start	: 88	Y at integration end:	88

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used 21 CFR 11



Total Ion Chromatogram (TIC)

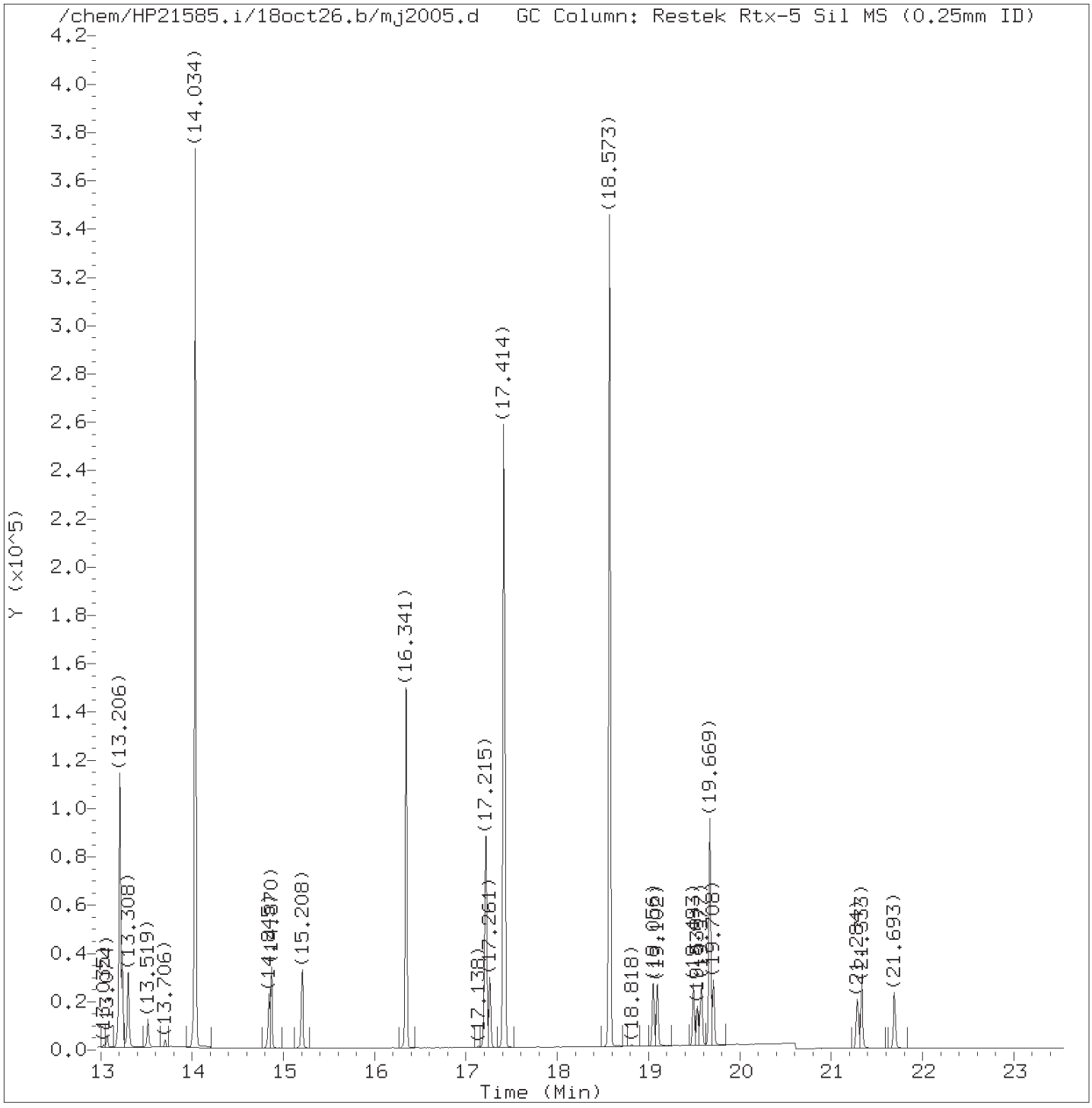
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.913	88	7432	0.050
2) N-Nitrosodimethylamine	(1)	3.277	74	10055	0.046
4) bis(2-Chloroethyl)ether	(2)	6.246	93	11706	0.049
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	53330	0.250
6)*Naphthalene-d8	(2)	8.539	136	150740	0.250
7) Naphthalene	(2)	8.558	128	34693	0.050
8) Quinoline	(2)	9.087	129	20580	0.049
9) 2-Methylnaphthalene	(2)	9.664	142	21076	0.049
10)$1-Methylnaphthalene-d10	(2)	9.754	152	13680	0.050
11) 1-Methylnaphthalene	(2)	9.819	142	20716	0.049
12) Dimethylphthalate	(3)	10.941	163	259683	0.509
13) Acenaphthylene	(3)	11.083	152	32643	0.048
14)*Acenaphthene-d10	(3)	11.316	164	64400	0.250
15) Acenaphthene	(3)	11.367	154	20365	0.050
16) Dibenzofuran	(3)	11.625	168	25493M	0.046
17) Diethylphthalate	(3)	11.981	149	254425	0.501
18) Fluorene	(3)	12.067	166	23513	0.048
19) Hexachlorobenzene	(4)	12.730	284	7361	0.050
20)*Phenanthrene-d10	(4)	13.206	188	132129	0.250
21) Phenanthrene	(4)	13.238	178	35134	0.049
22) Anthracene	(4)	13.308	178	33946	0.048
23) Di-n-butylphthalate	(4)	14.034	149	381949	0.486
24)$Fluoranthene-d10	(4)	14.845	212	25316	0.048
25) Fluoranthene	(4)	14.870	202	38262	0.048
26) Pyrene	(5)	15.208	202	39434	0.049
27) Butylbenzylphthalate	(5)	16.341	149	165480	0.487
28) Benzo(a)anthracene	(5)	17.200	228	33547	0.049
29)*Chrysene-d12	(5)	17.223	240	88556	0.250
30) Chrysene	(5)	17.261	228	34787	0.050
31) bis(2-Ethylhexyl)phthalate	(5)	17.414	149	244051	0.480
32) Di-n-octylphthalate	(6)	18.573	149	430773	0.484
33) Benzo(b)fluoranthene	(6)	19.056	252	32756	0.049
34) Benzo(k)fluoranthene	(6)	19.102	252	32095	0.048
35) Benzo(e)pyrene	(6)	19.493	252	30989	0.049
36)$Benzo(a)pyrene-d12	(6)	19.539	264	14981	0.047
37) Benzo(a)pyrene	(6)	19.577	252	31254	0.049
38)*Perylene-d12	(6)	19.669	264	84922	0.250
45) Perylene	(6)	19.708	252	32115	0.049
39) Indeno(1,2,3-cd)pyrene	(6)	21.284	276	27971M	0.048
40) Dibenz(a,h)anthracene	(6)	21.333	278	29189	0.049

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.693	276	32995	0.049

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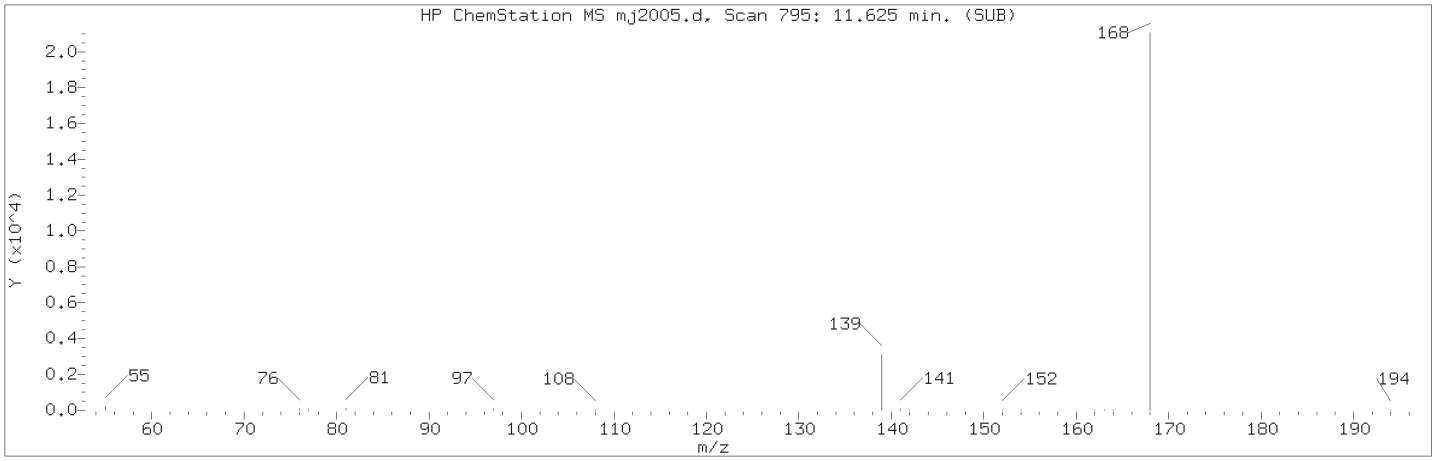
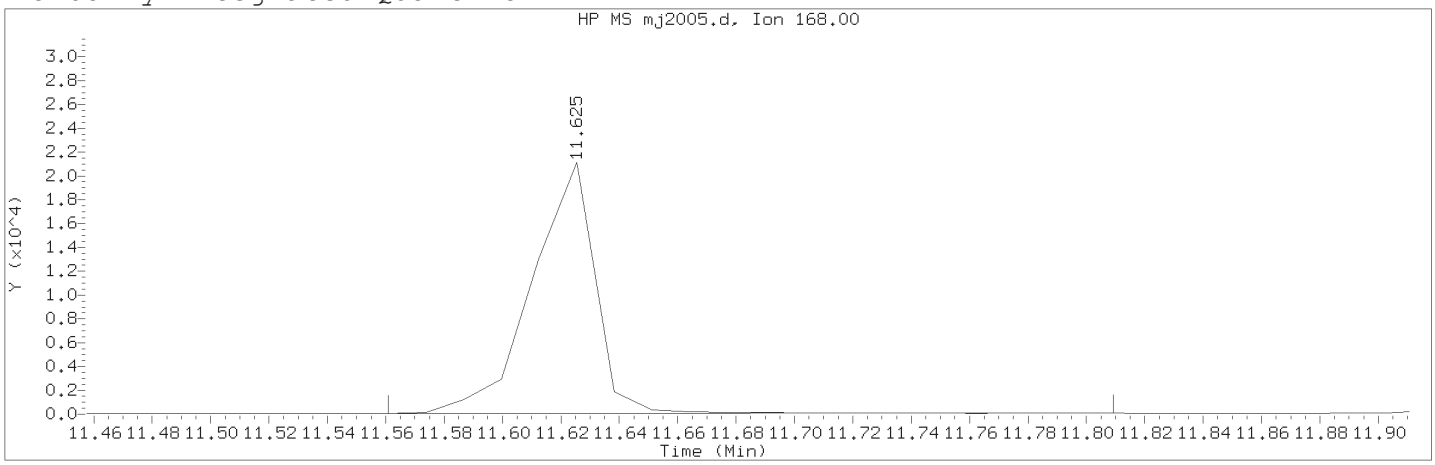
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

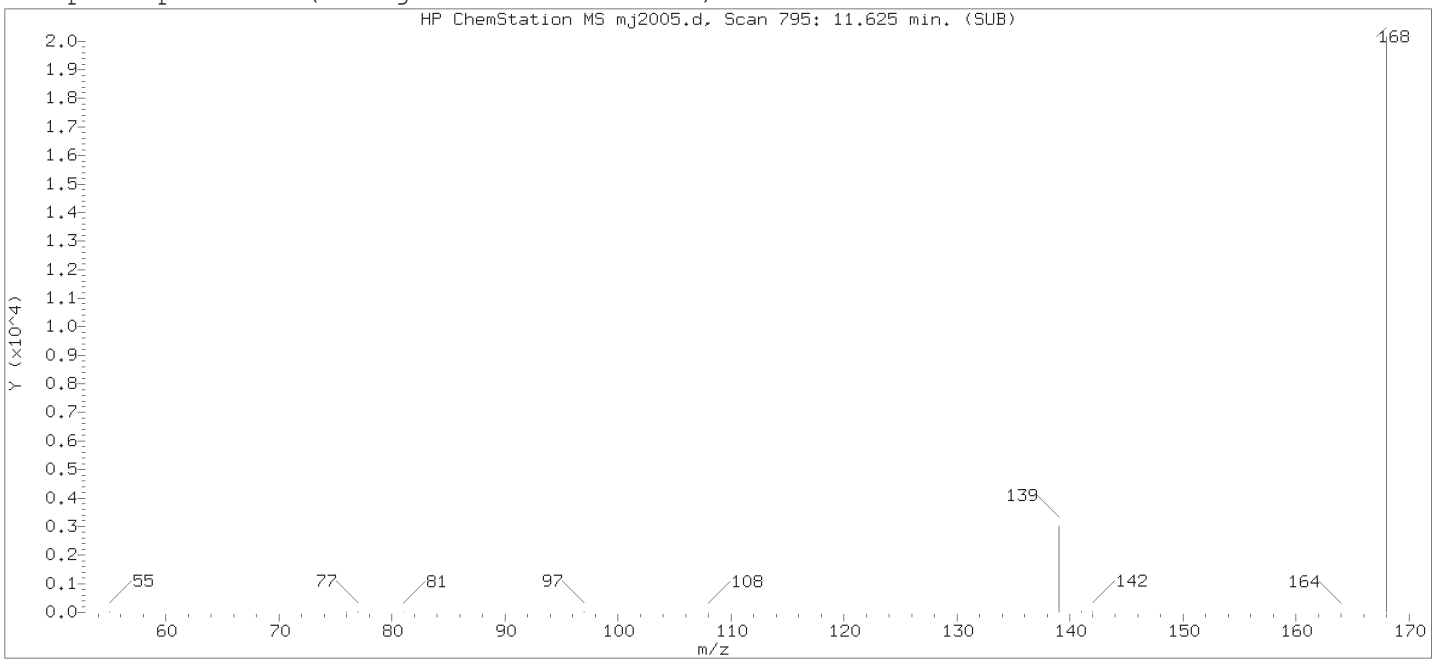
Compound Number : 16
Compound Name : Dibenzofuran
Scan Number : 795
Retention Time (minutes) : 11.625
Quant Ion : 168.00
Area (flag) : 25493M
On-Column Amount (ng/ul) : 0.0462
Integration start scan : 789 Integration stop scan: 811
Y at integration start : 53 Y at integration end: 83

Reason for manual integration: improper integration

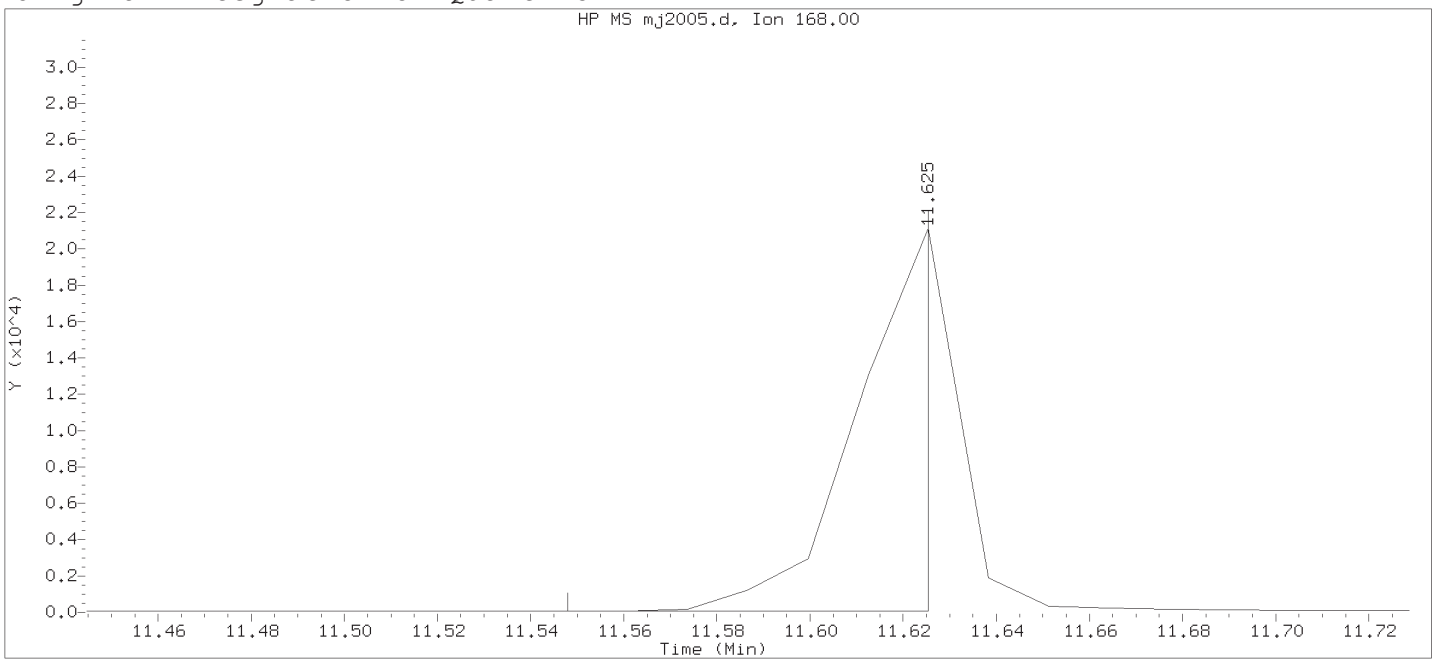
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

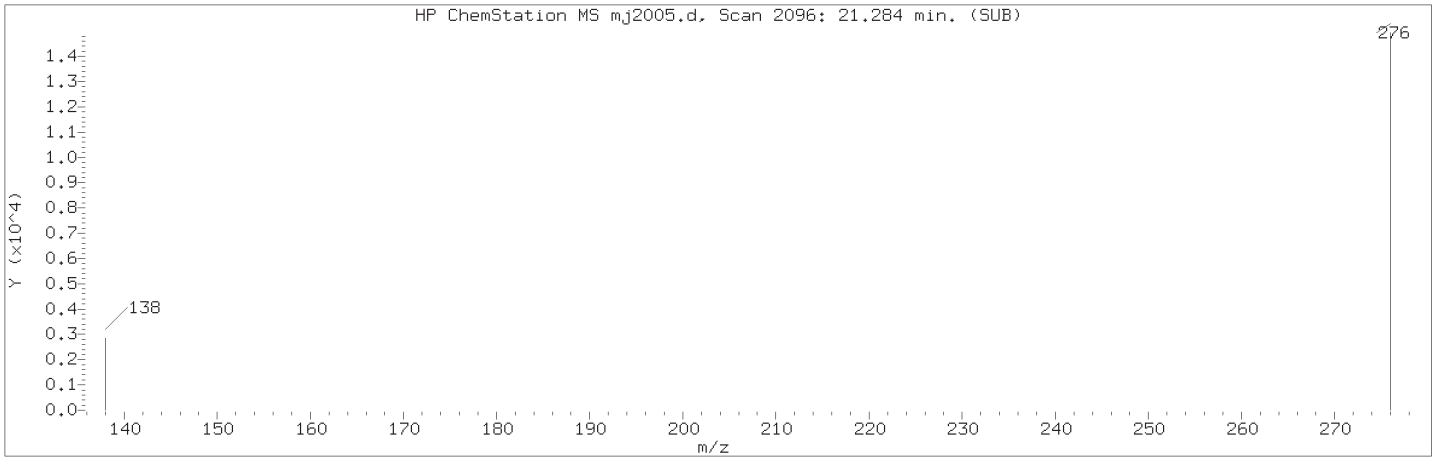
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:02
Date, time and analyst ID of latest file update: 26-Oct-2018 10:02 Unknown

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

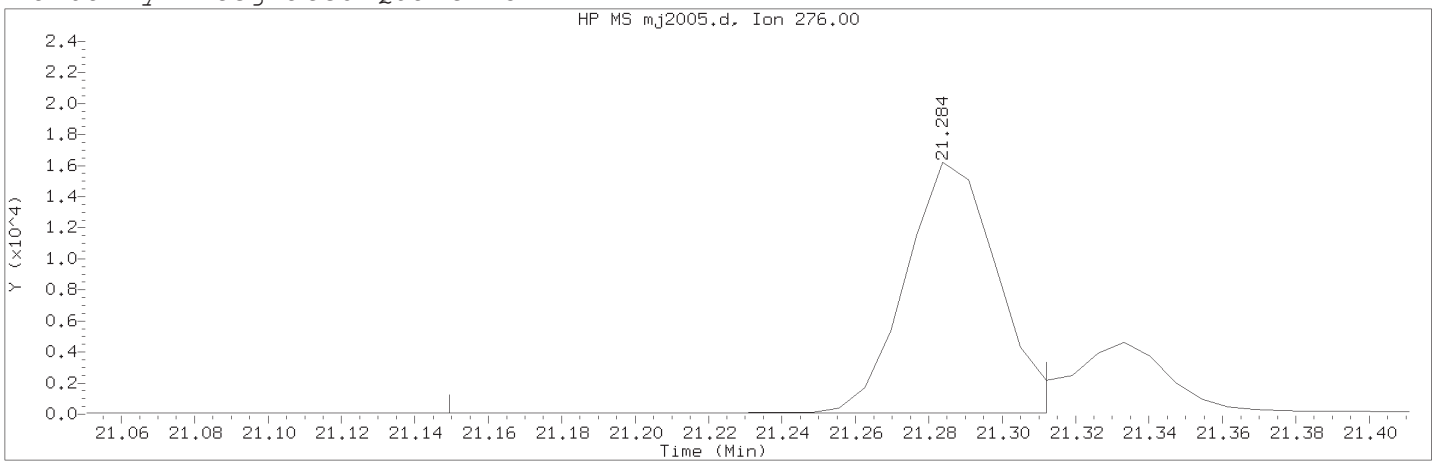
Compound Number	: 16		
Compound Name	: Dibenzofuran		
Scan Number	: 795		
Retention Time (minutes)	: 11.625		
Quant Ion	: 168.00		
Area	: 18566		
On-column Amount (ng/ul)	: 0.0324		
Integration start scan	: 788	Integration stop scan:	794
Y at integration start	: 55	Y at integration end:	55

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira25085

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

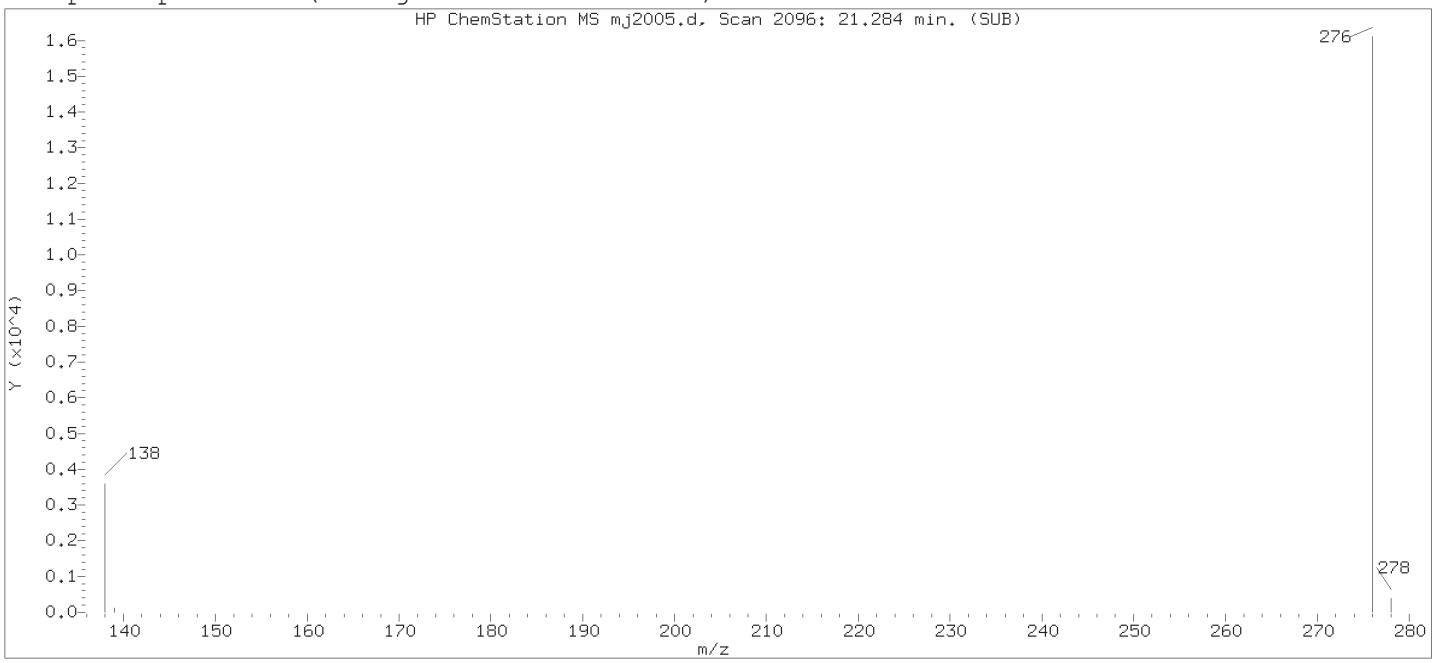
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2096
Retention Time (minutes) : 21.284
Quant Ion : 276.00
Area (flag) : 27971M
On-Column Amount (ng/ul) : 0.0482
Integration start scan : 2076 Integration stop scan: 2099
Y at integration start : 85 Y at integration end: 85

Reason for manual integration: improper integration

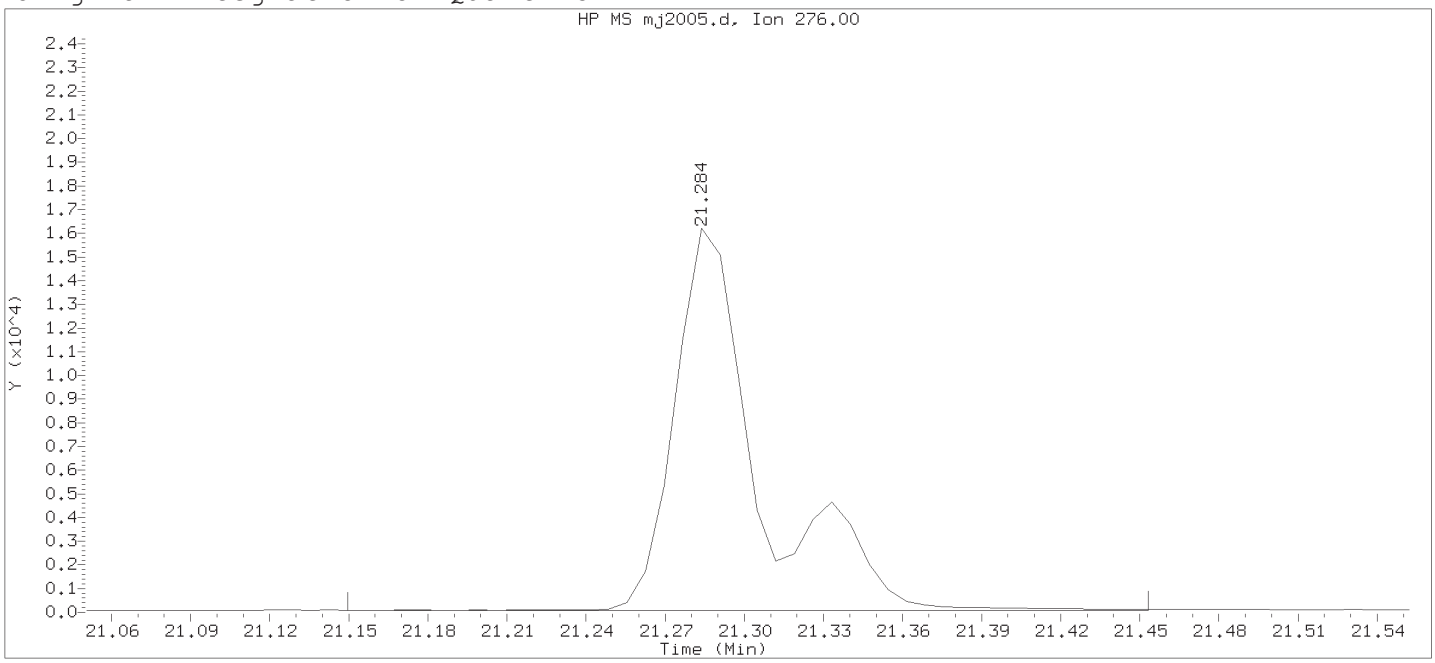
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



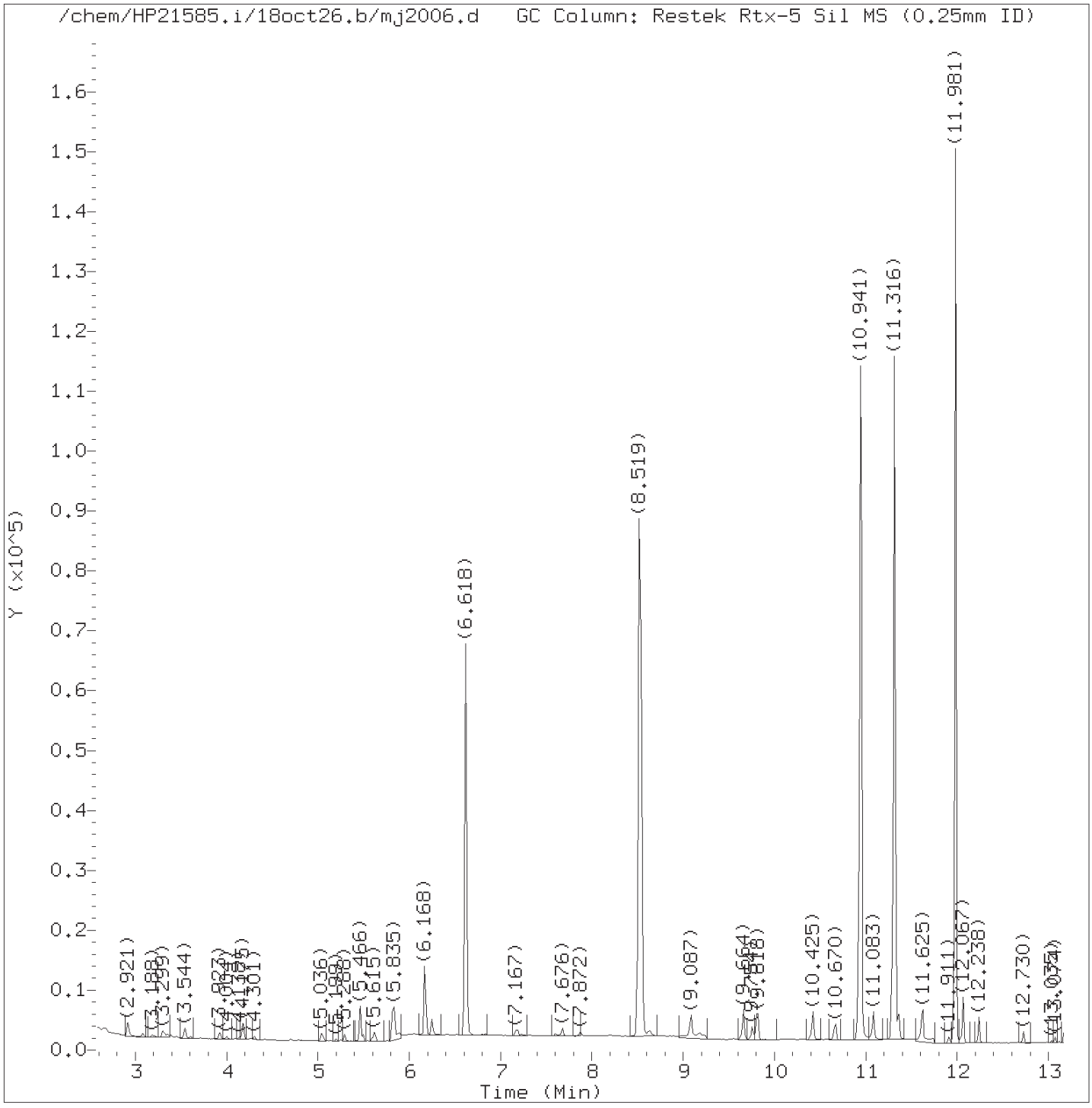
Data File: /chem/HP21585.i/18oct26.b/mj2005.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 09:33 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:02
Date, time and analyst ID of latest file update: 26-Oct-2018 10:02 Unknown

Sample Name: SSTD0.05 Lab Sample ID: RVSIM2768

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2096
Retention Time (minutes)	:	21.284
Quant Ion	:	276.00
Area	:	35920
On-column Amount (ng/ul)	:	0.0606
Integration start scan	:	2076 Integration stop scan: 2119
Y at integration start	:	85 Y at integration end: 85

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira25016



Total Ion Chromatogram (TIC)

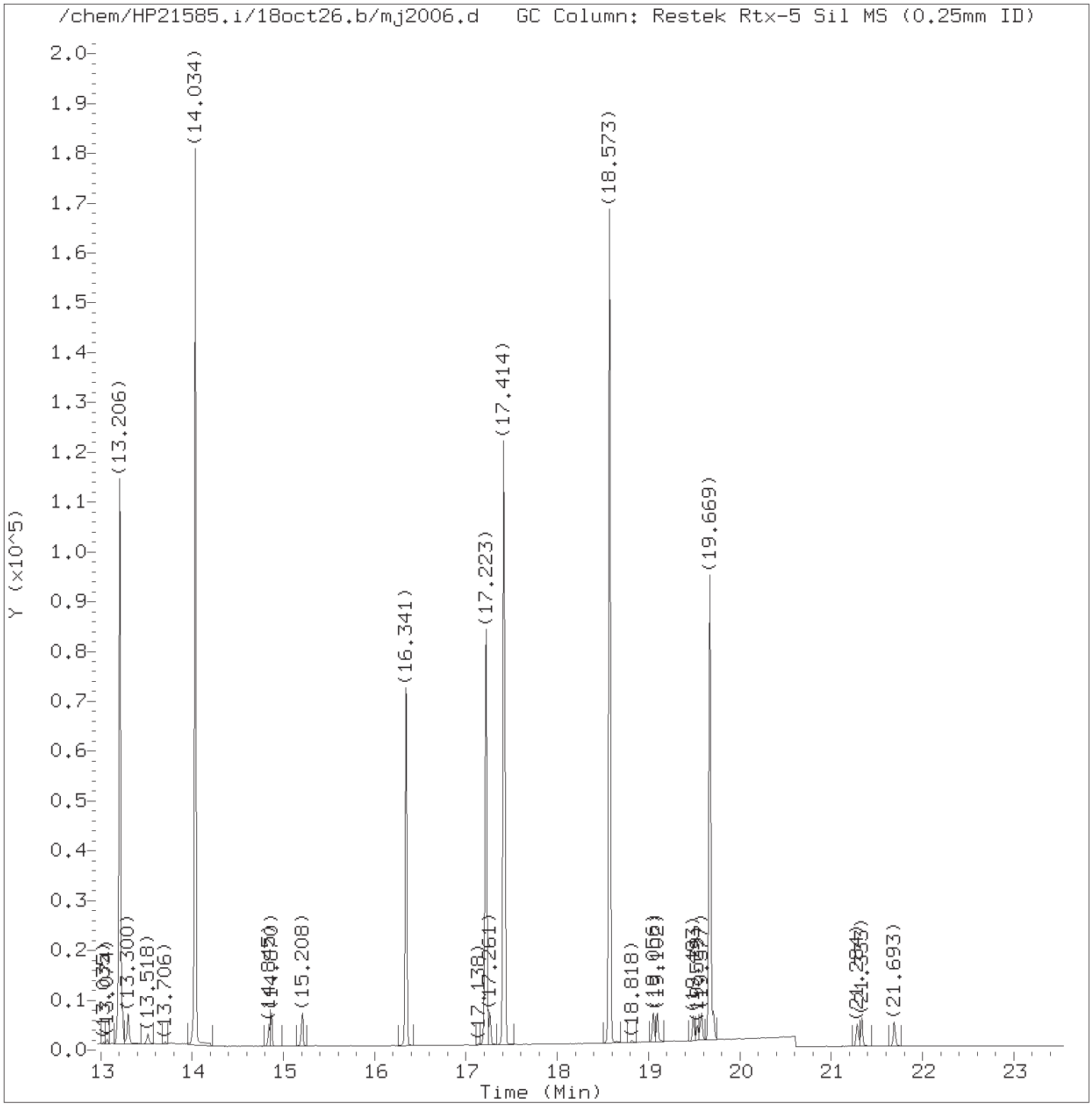
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.921	88	1562M	0.011
2) N-Nitrosodimethylamine	(1)	3.299	74	1956	0.009
4) bis(2-Chloroethyl)ether	(2)	6.246	93	1919M	0.008
5)*1,4-Dichlorobenzene-d4	(1)	6.618	152	52565	0.250
6)*Naphthalene-d8	(2)	8.539	136	149221	0.250
7) Naphthalene	(2)	8.558	128	7030	0.010
8) Quinoline	(2)	9.087	129	3926M	0.010
9) 2-Methylnaphthalene	(2)	9.664	142	4136	0.010
10)$1-Methylnaphthalene-d10	(2)	9.754	152	2724	0.010
11) 1-Methylnaphthalene	(2)	9.818	142	4046	0.010
12) Dimethylphthalate	(3)	10.941	163	126023	0.246
13) Acenaphthylene	(3)	11.083	152	6500	0.010
14)*Acenaphthene-d10	(3)	11.316	164	64827	0.250
15) Acenaphthene	(3)	11.367	154	4305	0.010
16) Dibenzofuran	(3)	11.625	168	5482	0.010
17) Diethylphthalate	(3)	11.981	149	124407	0.244
18) Fluorene	(3)	12.067	166	4595	0.010
19) Hexachlorobenzene	(4)	12.730	284	1473	0.010
20)*Phenanthrene-d10	(4)	13.206	188	131827	0.250
21) Phenanthrene	(4)	13.237	178	6894	0.010
22) Anthracene	(4)	13.300	178	6662	0.010
23) Di-n-butylphthalate	(4)	14.034	149	182316	0.235
24)$Fluoranthene-d10	(4)	14.845	212	4913	0.010
25) Fluoranthene	(4)	14.870	202	7579	0.010
26) Pyrene	(5)	15.208	202	7934	0.010
27) Butylbenzylphthalate	(5)	16.341	149	78162	0.235
28) Benzo(a)anthracene	(5)	17.200	228	7625	0.011
29)*Chrysene-d12	(5)	17.223	240	87761	0.250
30) Chrysene	(5)	17.261	228	7426	0.011
31) bis(2-Ethylhexyl)phthalate	(5)	17.414	149	114568	0.231
32) Di-n-octylphthalate	(6)	18.573	149	203368	0.233
33) Benzo(b)fluoranthene	(6)	19.056	252	6974	0.010
34) Benzo(k)fluoranthene	(6)	19.102	252	6804	0.010
35) Benzo(e)pyrene	(6)	19.493	252	6081	0.010
36)$Benzo(a)pyrene-d12	(6)	19.539	264	2899	0.009
37) Benzo(a)pyrene	(6)	19.577	252	6721	0.010
38)*Perylene-d12	(6)	19.669	264	84530	0.250
45) Perylene	(6)	19.708	252	6796	0.010
39) Indeno(1,2,3-cd)pyrene	(6)	21.284	276	6102M	0.010
40) Dibenz(a,h)anthracene	(6)	21.333	278	6130	0.010

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

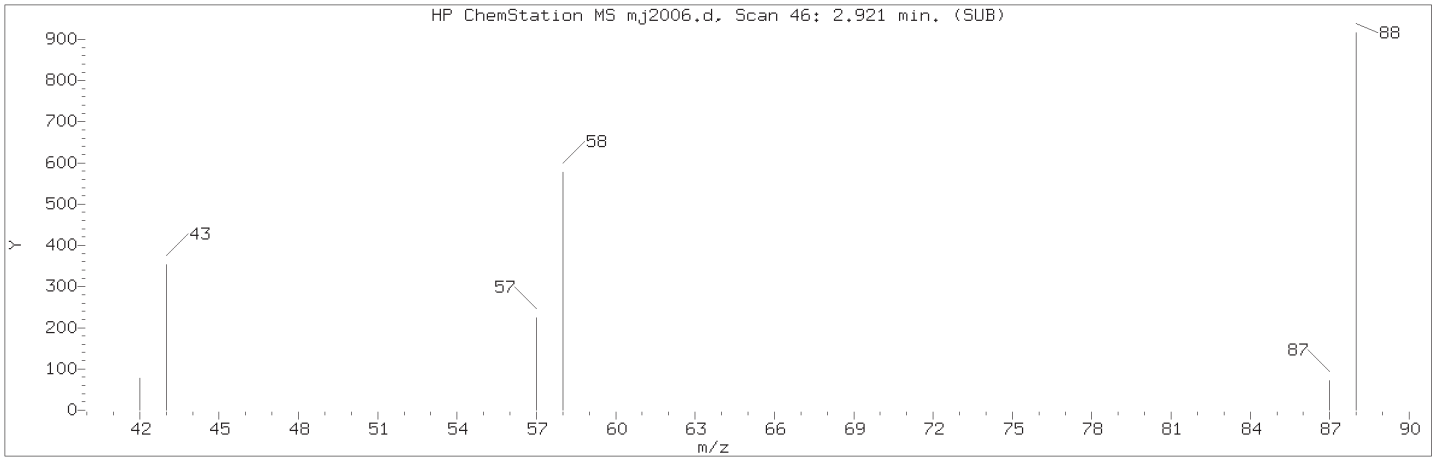
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

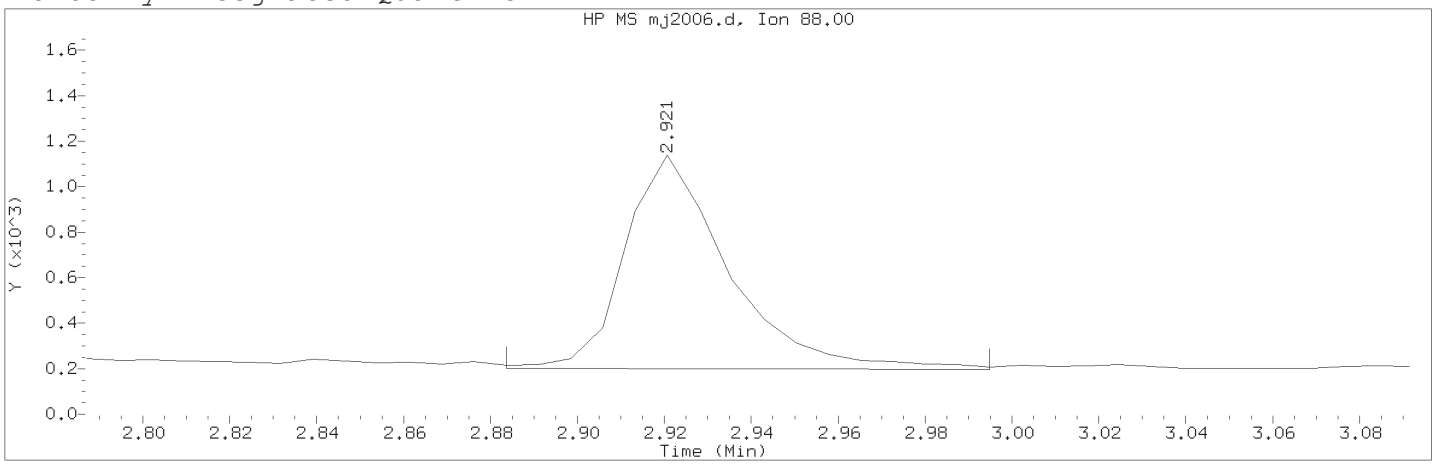
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.693	276	7204	0.011

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

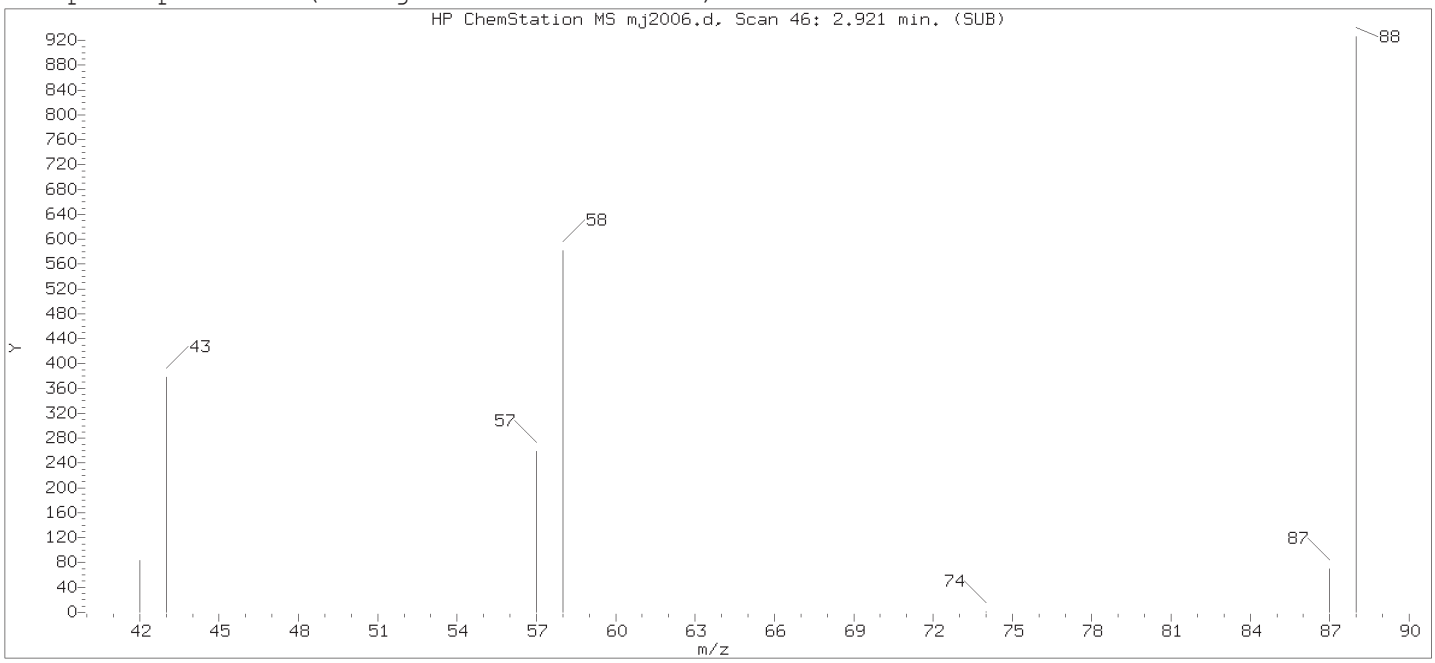
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 46
Retention Time (minutes) : 2.921
Quant Ion : 88.00
Area (flag) : 1562M
On-Column Amount (ng/ul) : 0.0107
Integration start scan : 40 Integration stop scan: 55
Y at integration start : 201 Y at integration end: 196

Reason for manual integration: improper integration

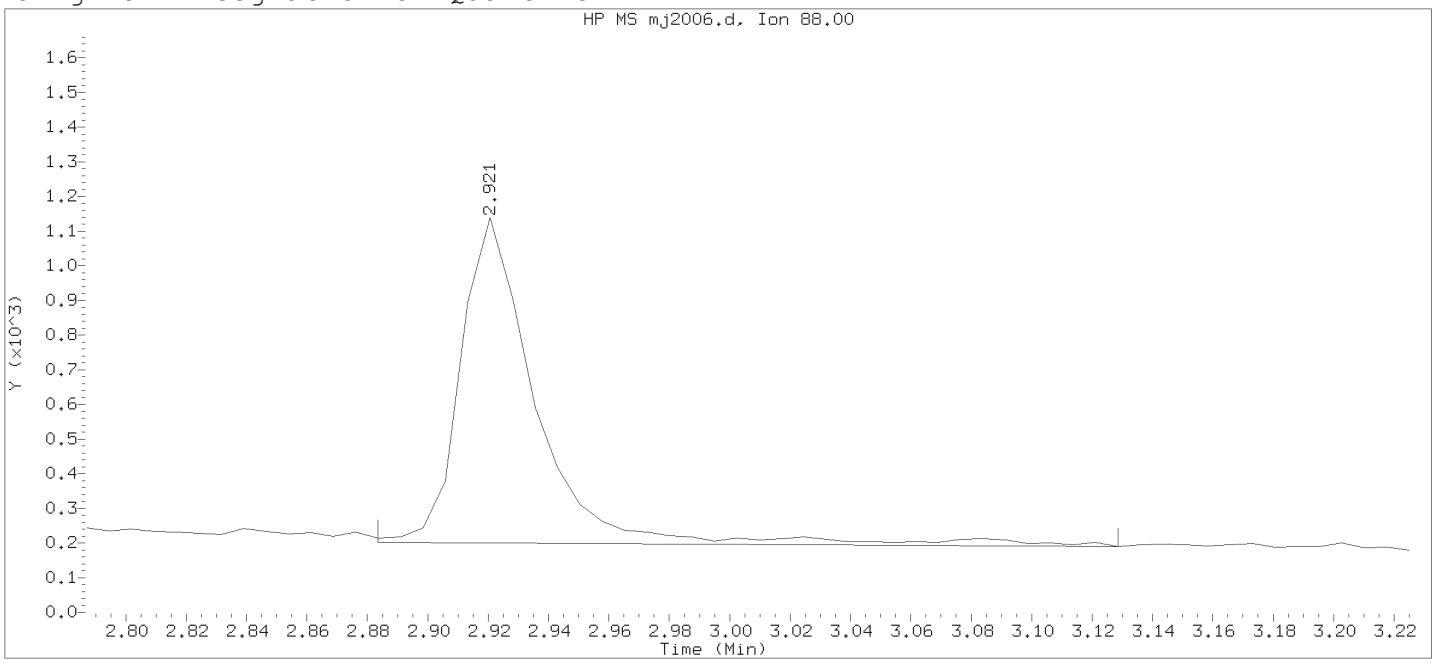
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

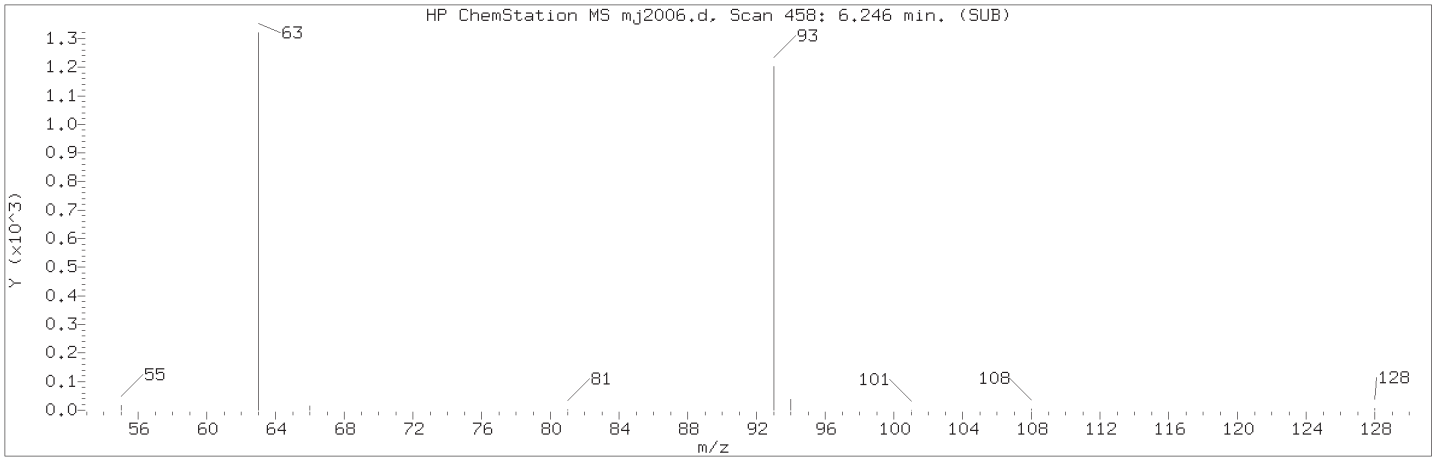
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 10:31 Unknown

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

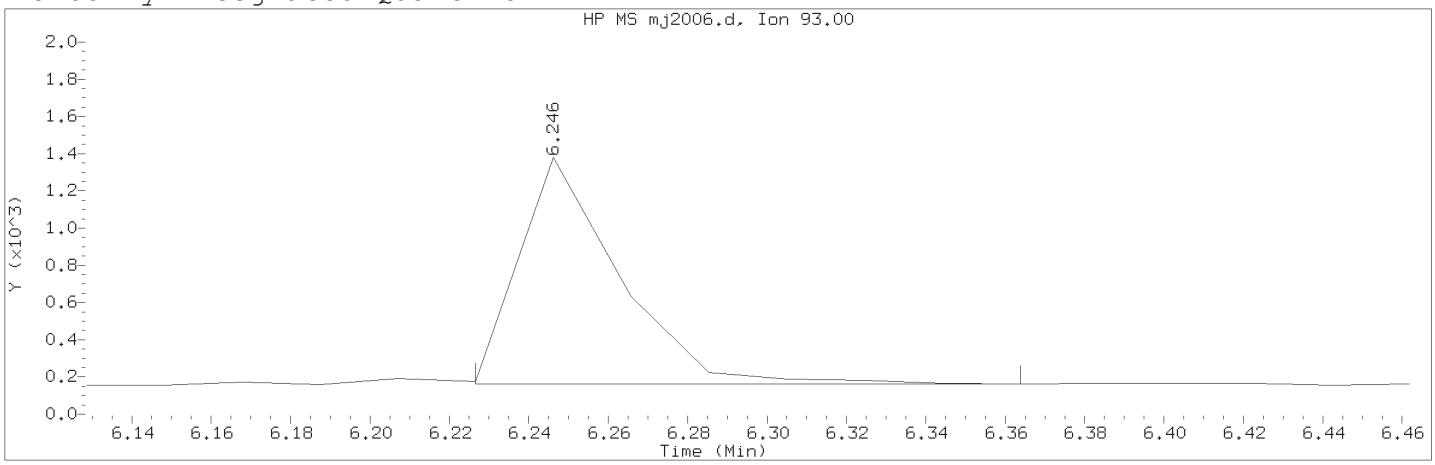
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 46
Retention Time (minutes) : 2.921
Quant Ion : 88.00
Area : 1665
On-column Amount (ng/ul) : 0.0113
Integration start scan : 40 Integration stop scan: 73
Y at integration start : 201 Y at integration end: 189

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira2516

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

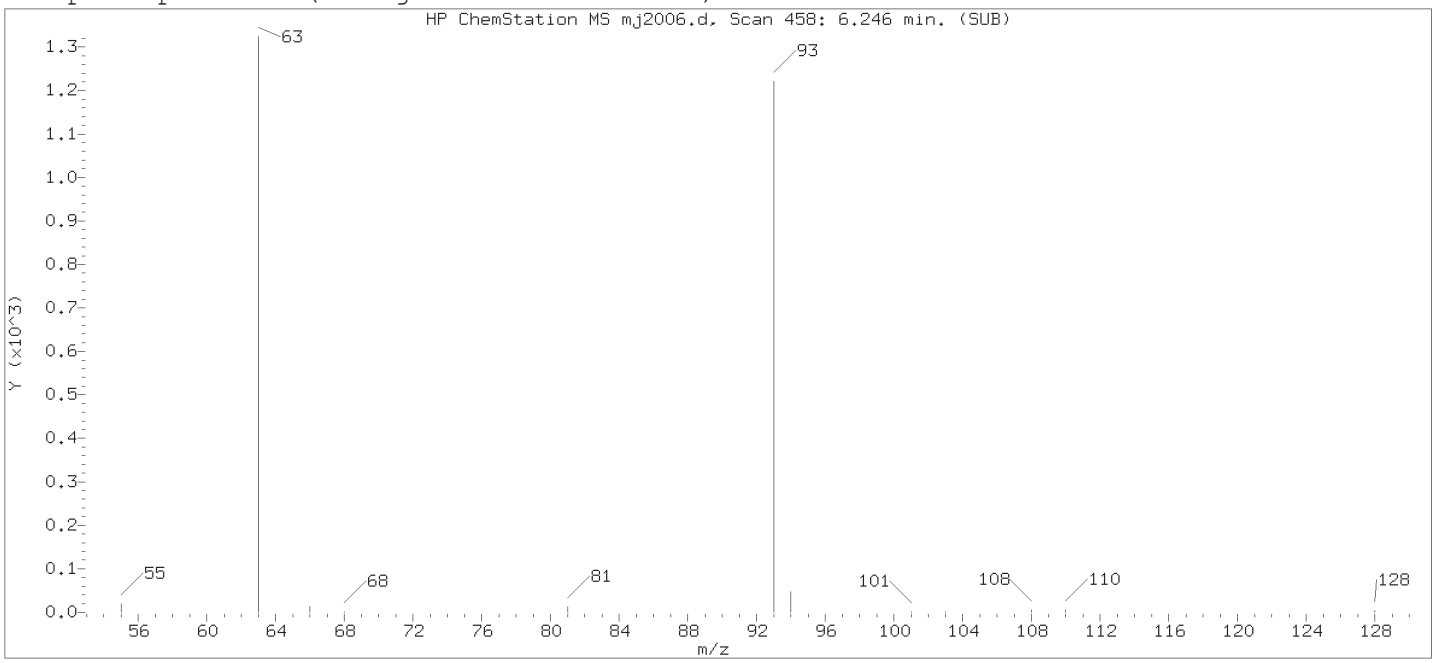
Compound Number	: 4		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 458		
Retention Time (minutes)	: 6.246		
Quant Ion	: 93.00		
Area (flag)	: 1919M		
On-Column Amount (ng/ul)	: 0.0084		
Integration start scan	: 456	Integration stop scan:	463
Y at integration start	: 162	Y at integration end:	162

Reason for manual integration: improper integration

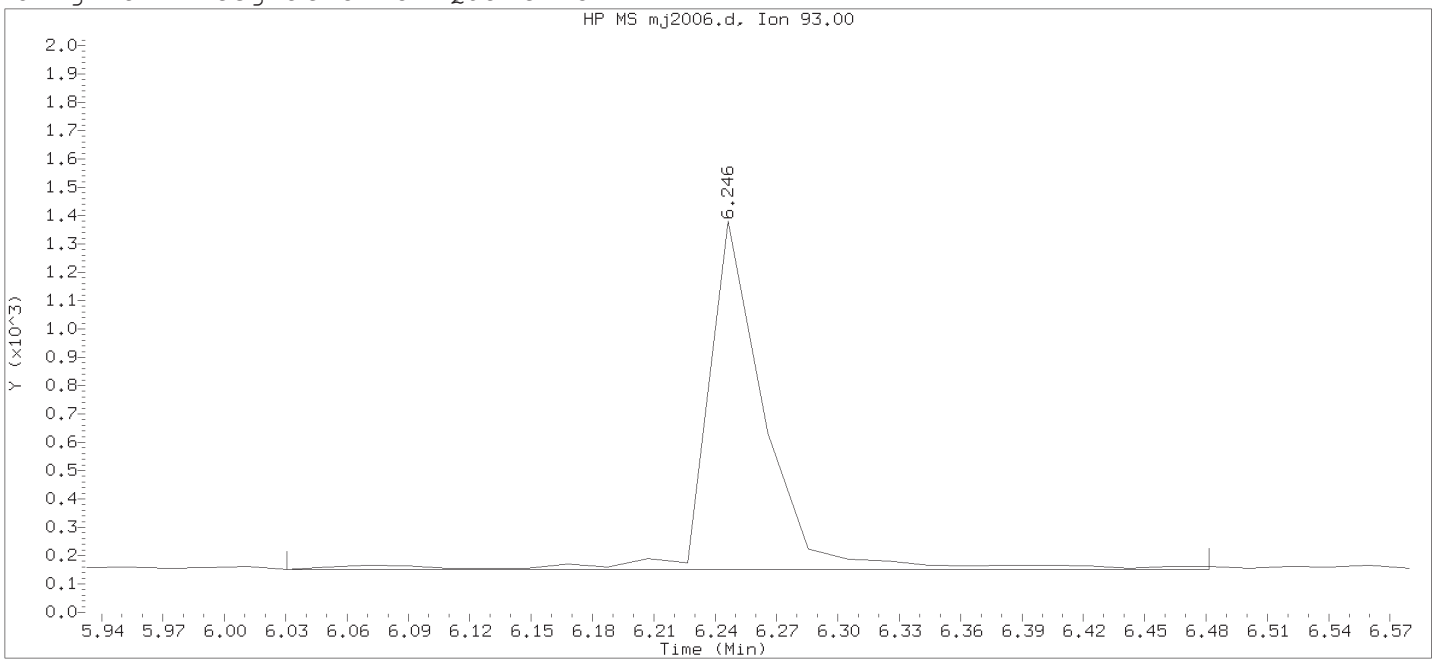
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

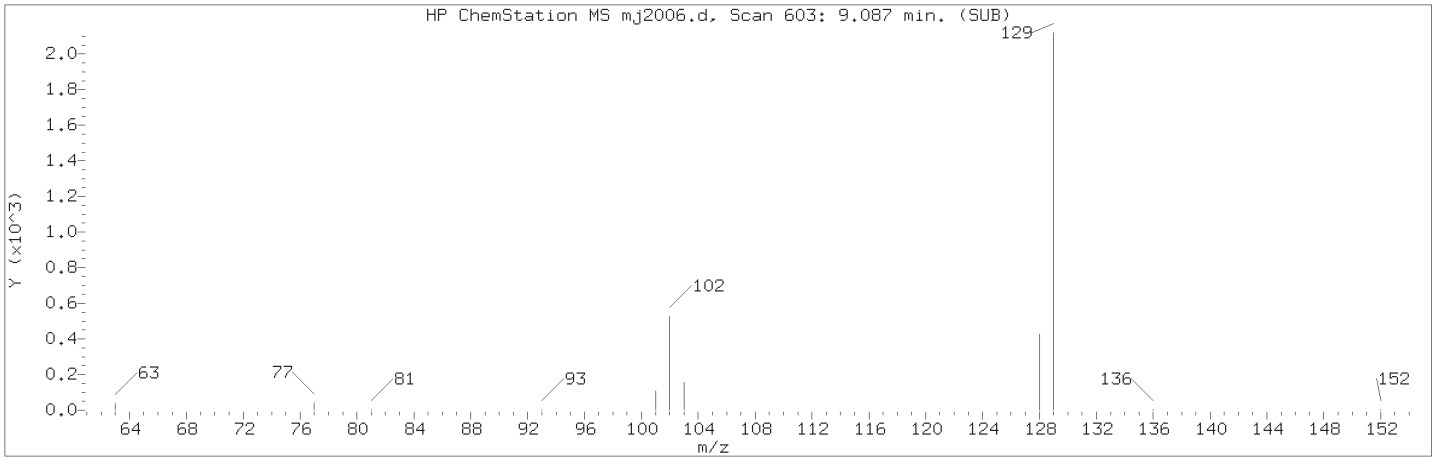
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 10:31 Unknown

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

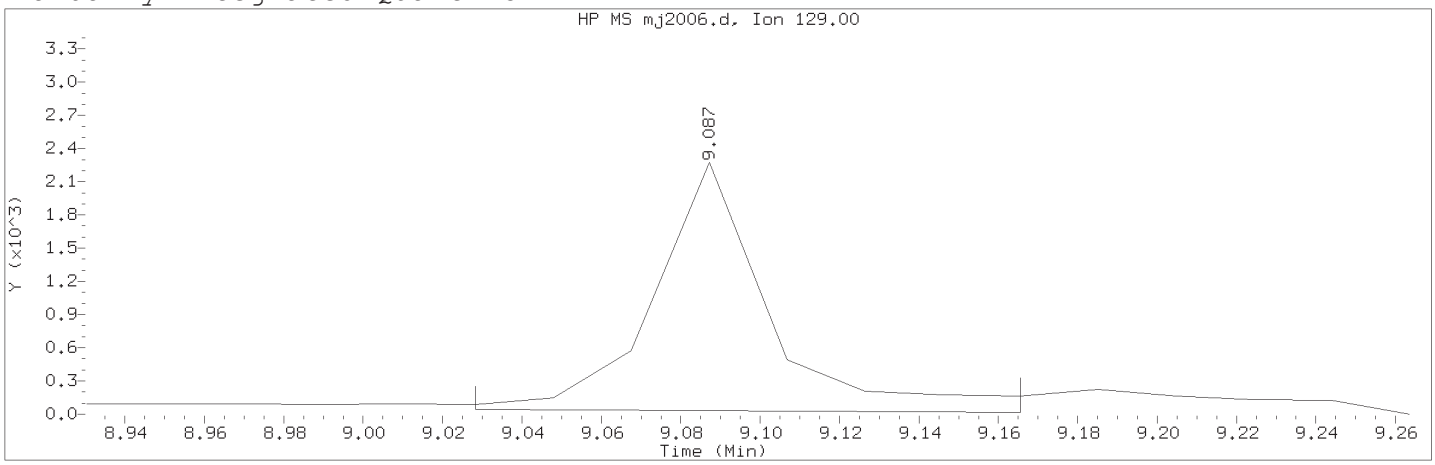
Compound Number	: 4		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 458		
Retention Time (minutes)	: 6.246		
Quant Ion	: 93.00		
Area	: 2423		
On-column Amount (ng/ul)	: 0.0099		
Integration start scan	: 446	Integration stop scan:	469
Y at integration start	: 152	Y at integration end:	152

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14 Page 2155

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

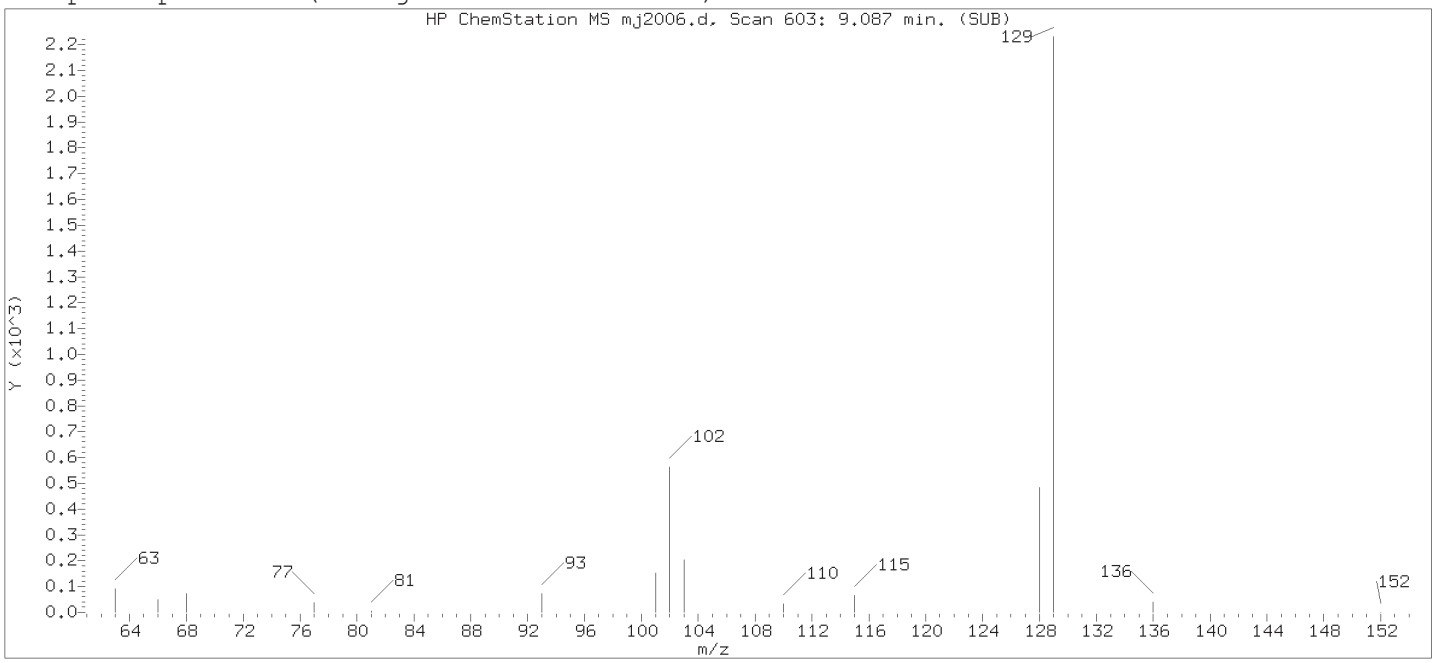
Compound Number	: 8		
Compound Name	: Quinoline		
Scan Number	: 603		
Retention Time (minutes)	: 9.087		
Quant Ion	: 129.00		
Area (flag)	: 3926M		
On-Column Amount (ng/ul)	: 0.0095		
Integration start scan	: 599	Integration stop scan:	606
Y at integration start	: 44	Y at integration end:	19

Reason for manual integration: improper integration

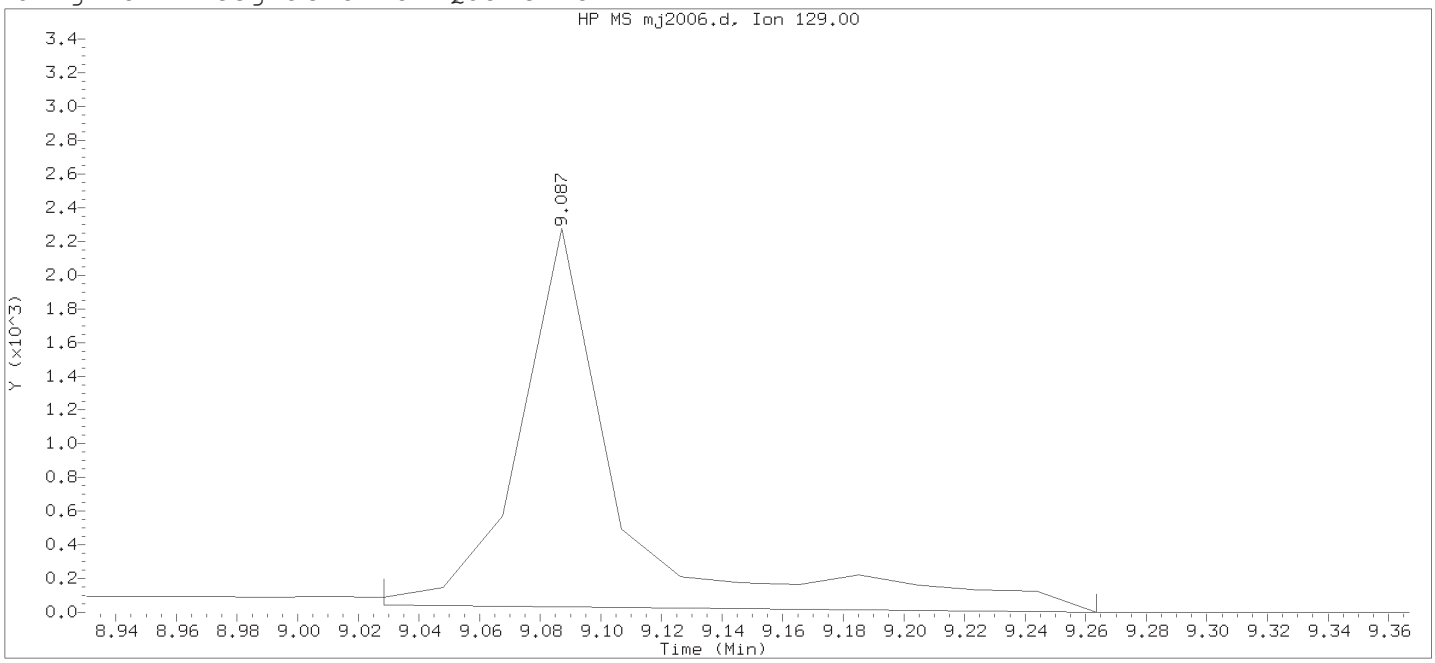
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

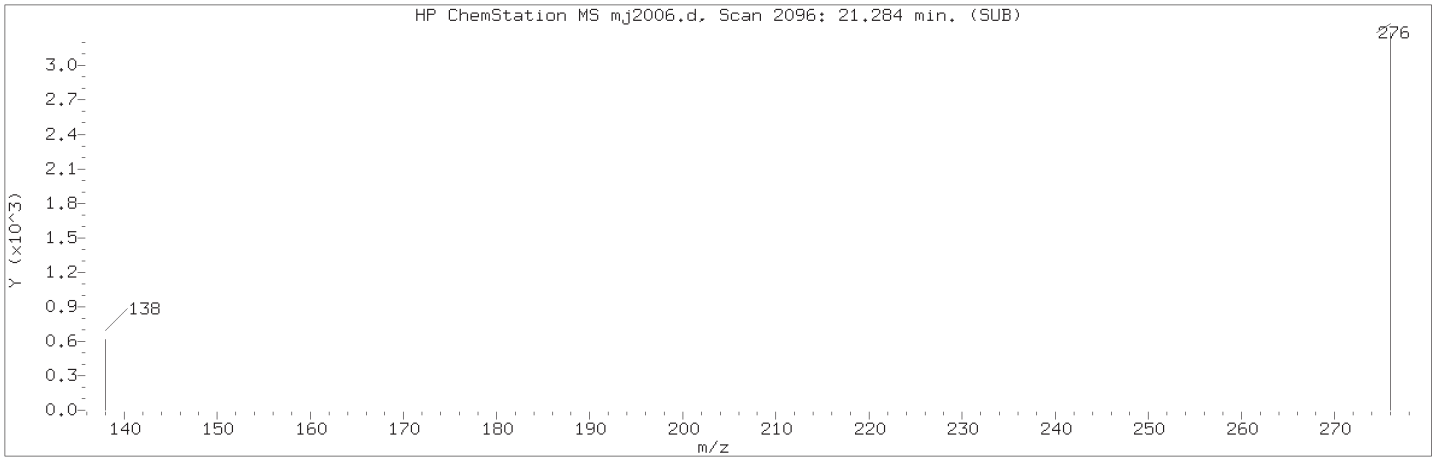
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 10:31 Unknown

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

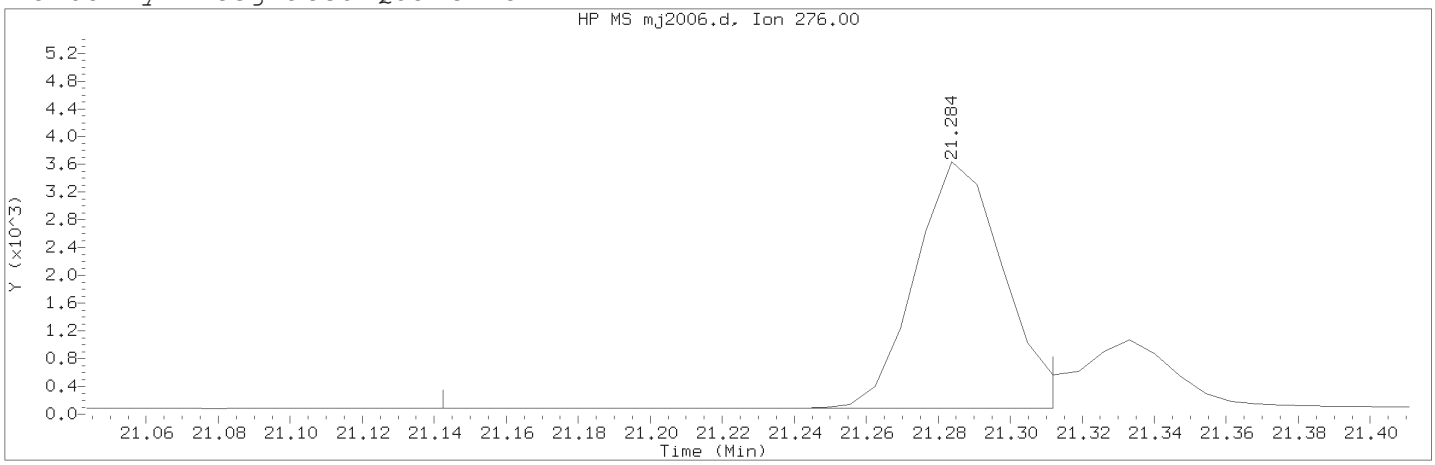
Compound Number	: 8		
Compound Name	: Quinoline		
Scan Number	: 603		
Retention Time (minutes)	: 9.087		
Quant Ion	: 129.00		
Area	: 4863		
On-column Amount (ng/ul)	: 0.0116		
Integration start scan	: 599	Integration stop scan:	611
Y at integration start	: 44	Y at integration end:	0

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira25016

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

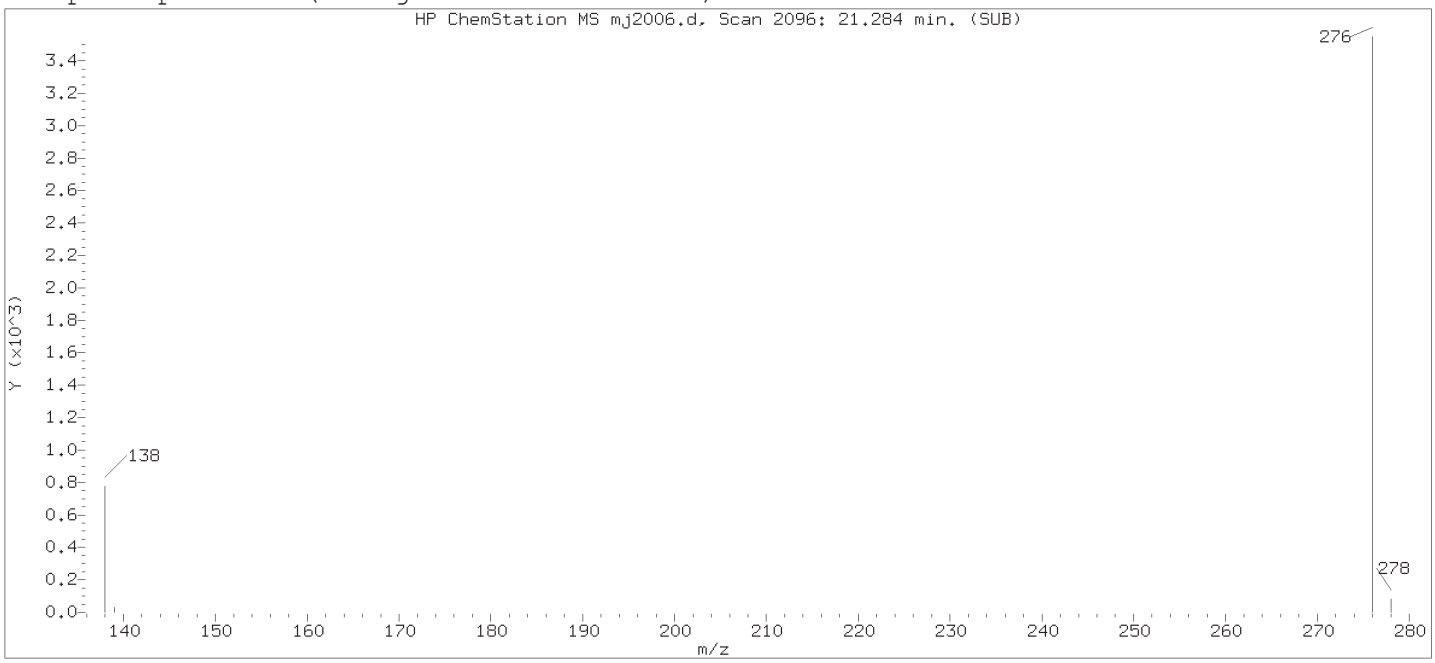
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2096
Retention Time (minutes) : 21.284
Quant Ion : 276.00
Area (flag) : 6102M
On-Column Amount (ng/ul) : 0.0105
Integration start scan : 2075 Integration stop scan: 2099
Y at integration start : 84 Y at integration end: 84

Reason for manual integration: improper integration

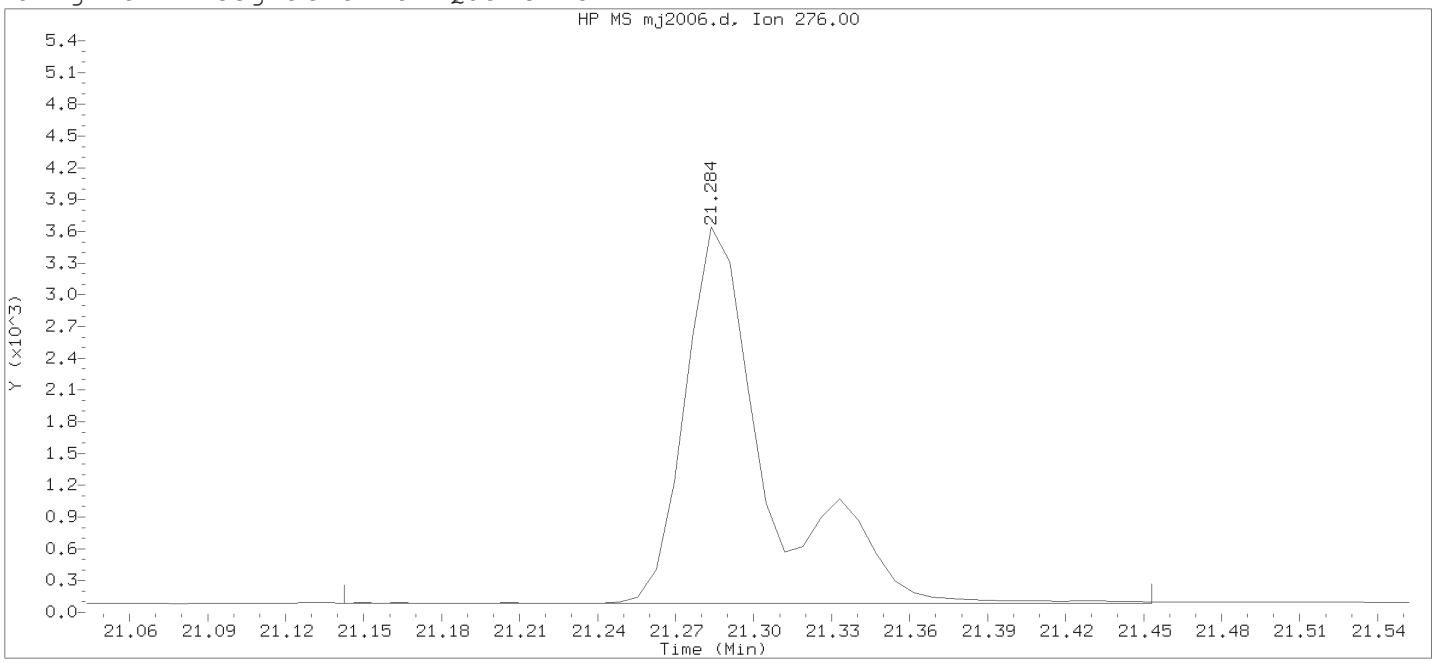
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



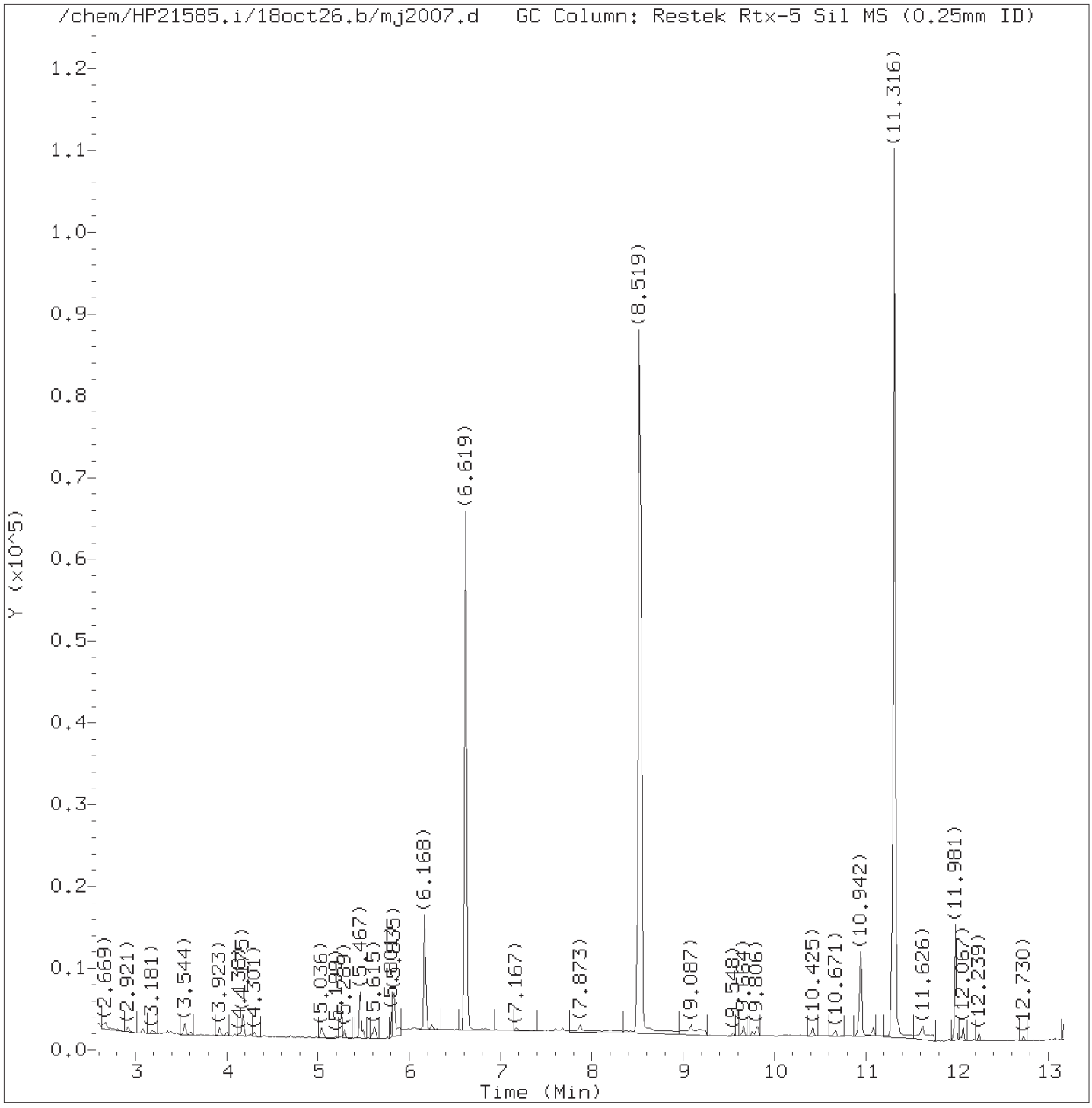
Data File: /chem/HP21585.i/18oct26.b/mj2006.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:02 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 10:31 Unknown

Sample Name: SSTD0.01 Lab Sample ID: RVSIM2768

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2096		
Retention Time (minutes)	: 21.284		
Quant Ion	: 276.00		
Area	: 7907		
On-column Amount (ng/ul)	: 0.0134		
Integration start scan	: 2075	Integration stop scan:	2119
Y at integration start	: 84	Y at integration end:	84

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used 21 CFR 11



Total Ion Chromatogram (TIC)

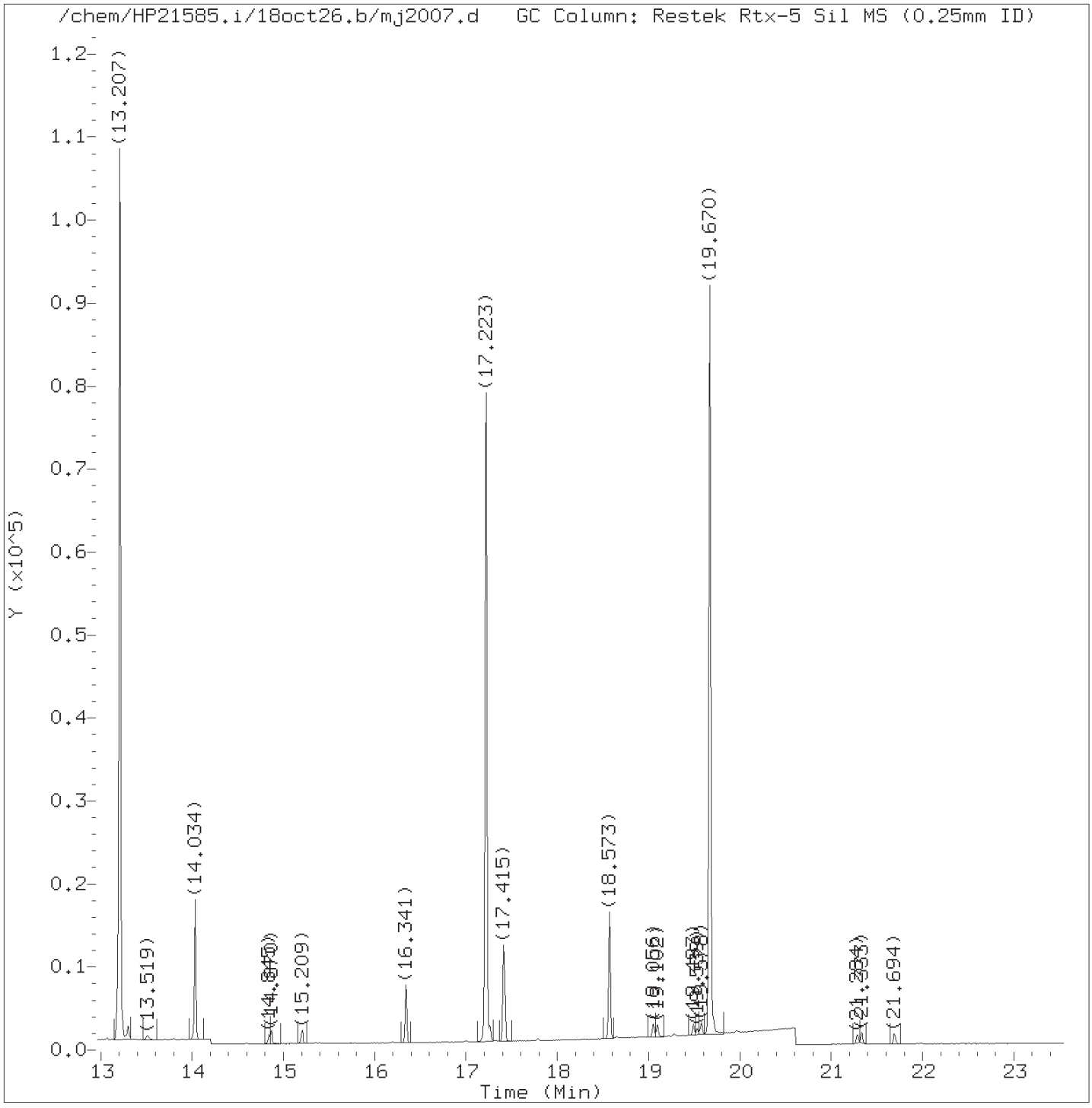
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.921	88	398M	0.003
2) N-Nitrosodimethylamine	(1)	3.314	74	479	0.002
4) bis(2-Chloroethyl)ether	(2)	6.247	93	704	0.003
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	51250	0.250
6)*Naphthalene-d8	(2)	8.519	136	145342	0.250
7) Naphthalene	(2)	8.558	128	1842	0.003
8) Quinoline	(2)	9.087	129	806M	0.002
9) 2-Methylnaphthalene	(2)	9.664	142	1062	0.003
10)$1-Methylnaphthalene-d10	(2)	9.754	152	707M	0.003
11) 1-Methylnaphthalene	(2)	9.819	142	1067	0.003
12) Dimethylphthalate	(3)	10.942	163	12567	0.026
13) Acenaphthylene	(3)	11.084	152	1642M	0.003
14)*Acenaphthene-d10	(3)	11.316	164	62310	0.250
15) Acenaphthene	(3)	11.367	154	966M	0.002
16) Dibenzofuran	(3)	11.626	168	1299M	0.002
17) Diethylphthalate	(3)	11.981	149	12965	0.026
18) Fluorene	(3)	12.067	166	1250M	0.003
19) Hexachlorobenzene	(4)	12.730	284	405M	0.003
20)*Phenanthrene-d10	(4)	13.207	188	128259	0.250
21) Phenanthrene	(4)	13.238	178	1859	0.003
22) Anthracene	(4)	13.308	178	1804	0.003
23) Di-n-butylphthalate	(4)	14.034	149	18137	0.024
24)$Fluoranthene-d10	(4)	14.845	212	1228	0.002
25) Fluoranthene	(4)	14.870	202	1970	0.003
26) Pyrene	(5)	15.209	202	2070	0.003
27) Butylbenzylphthalate	(5)	16.341	149	7680	0.024
28) Benzo(a)anthracene	(5)	17.200	228	2268	0.003
29)*Chrysene-d12	(5)	17.223	240	84757	0.250
30) Chrysene	(5)	17.261	228	1992M	0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.415	149	11869M	0.025
32) Di-n-octylphthalate	(6)	18.573	149	18941	0.022
33) Benzo(b)fluoranthene	(6)	19.056	252	1838	0.003
34) Benzo(k)fluoranthene	(6)	19.102	252	1779	0.003
35) Benzo(e)pyrene	(6)	19.493	252	1605	0.003
36)$Benzo(a)pyrene-d12	(6)	19.539	264	732	0.002
37) Benzo(a)pyrene	(6)	19.578	252	1783	0.003
38)*Perylene-d12	(6)	19.670	264	81434	0.250
45) Perylene	(6)	19.708	252	1598M	0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.284	276	1565M	0.003
40) Dibenz(a,h)anthracene	(6)	21.333	278	1543M	0.003

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

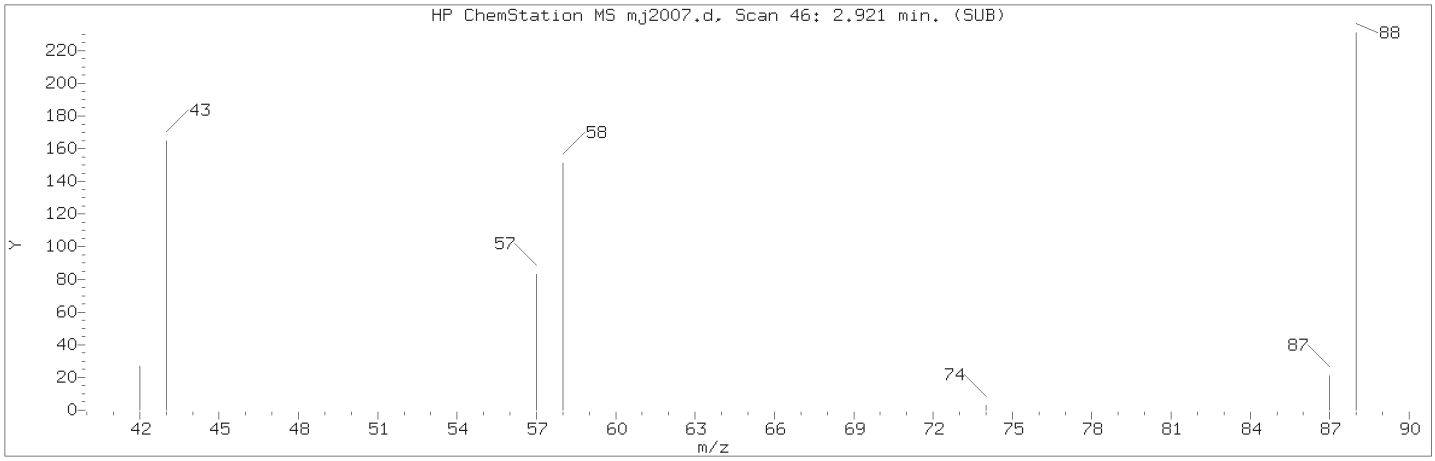
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

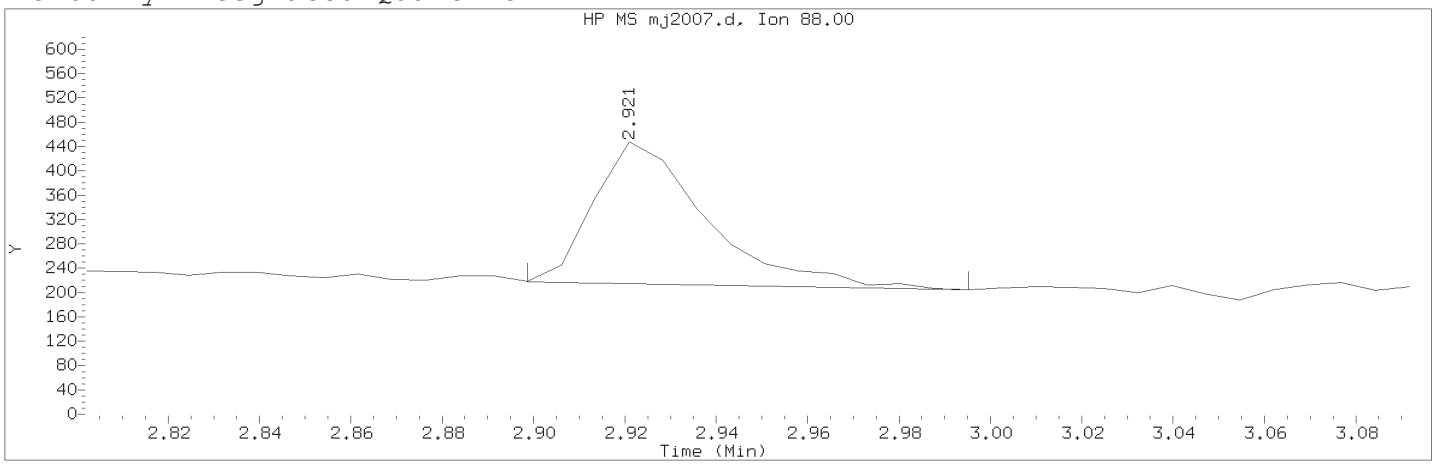
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.694	276	1858	0.003

Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

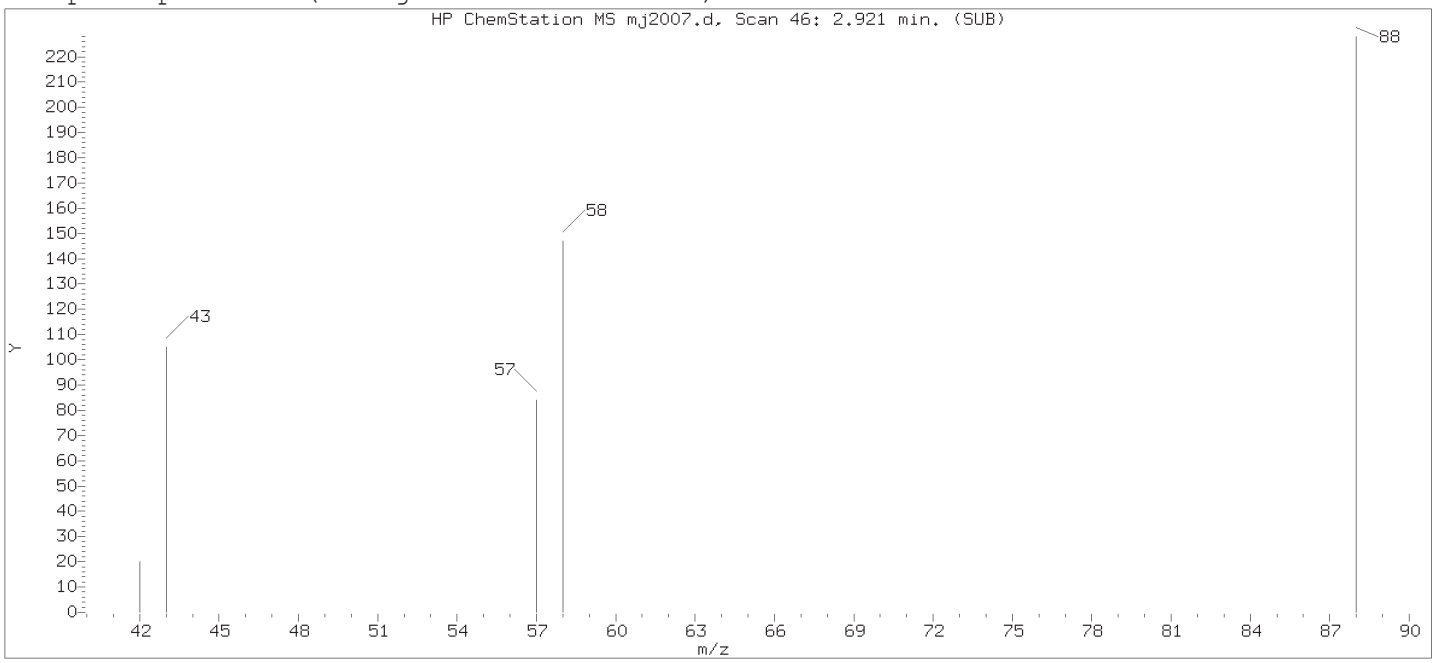
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 2.921		
Quant Ion	: 88.00		
Area (flag)	: 398M		
On-Column Amount (ng/ul)	: 0.0028		
Integration start scan	: 42	Integration stop scan:	55
Y at integration start	: 218	Y at integration end:	205

Reason for manual integration: improper integration

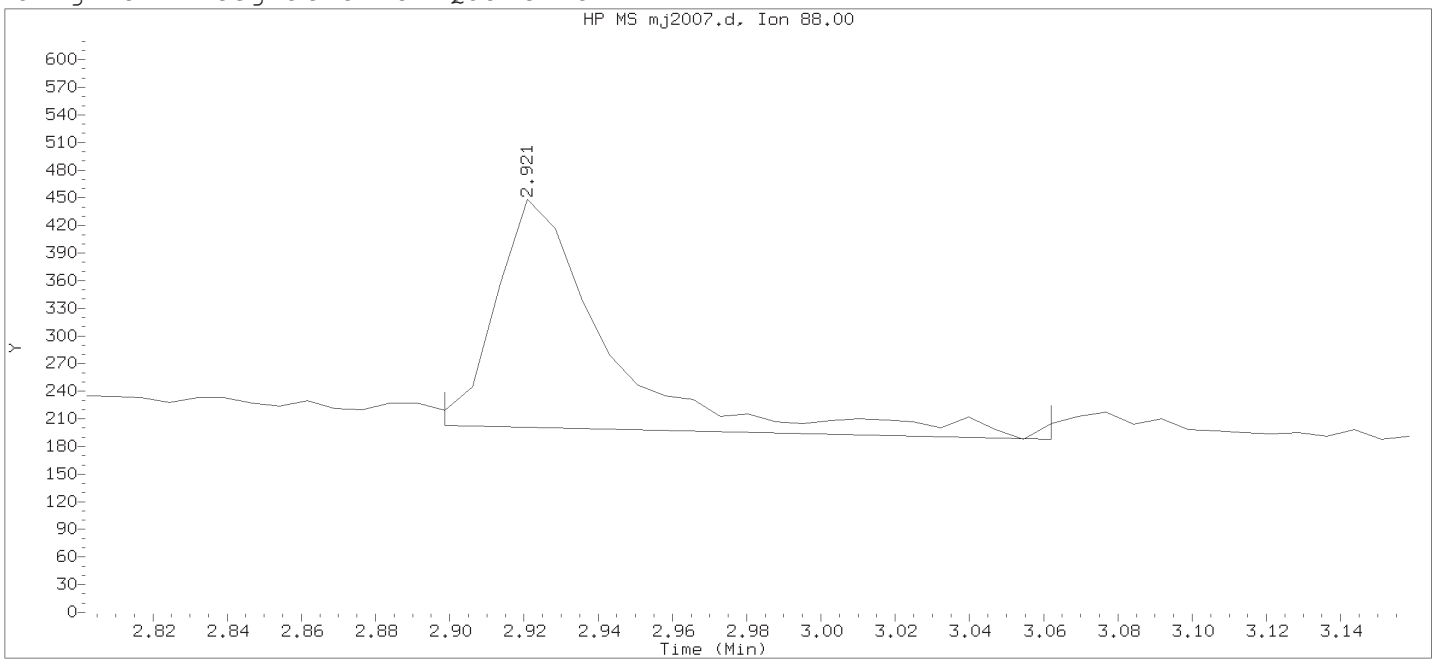
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

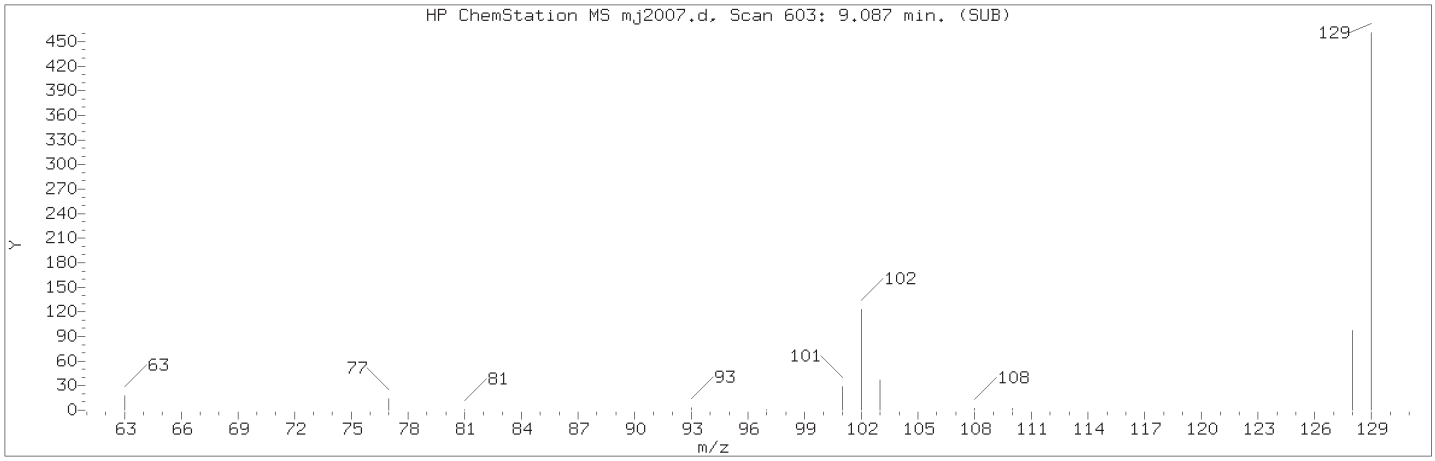
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

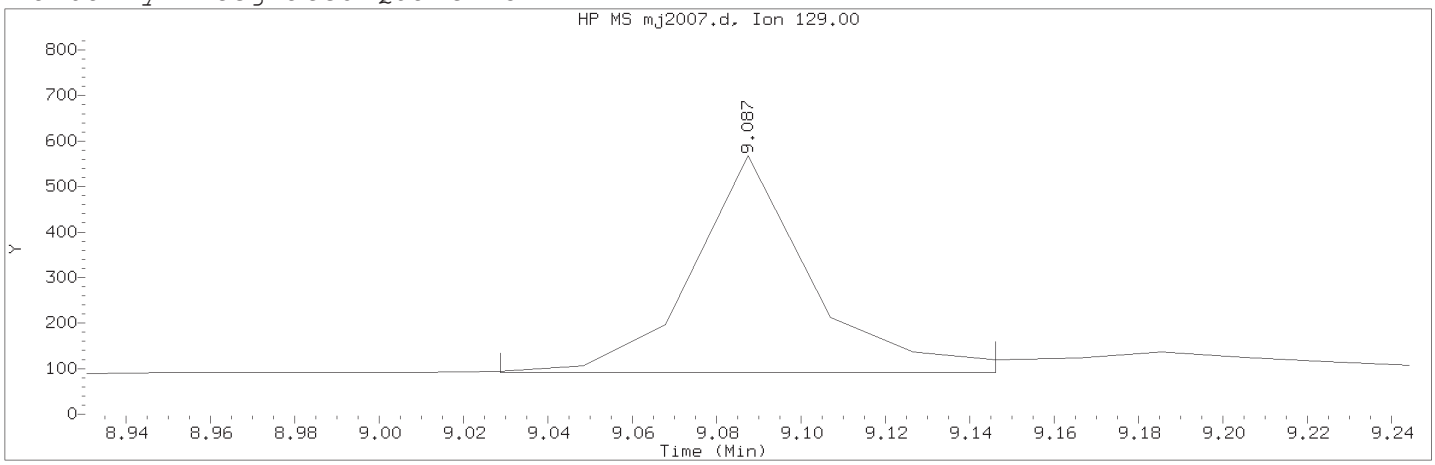
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 46		
Retention Time (minutes)	: 2.921		
Quant Ion	: 88.00		
Area	: 525		
On-column Amount (ng/ul)	: 0.0037		
Integration start scan	: 42	Integration stop scan:	64
Y at integration start	: 203	Y at integration end:	188

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

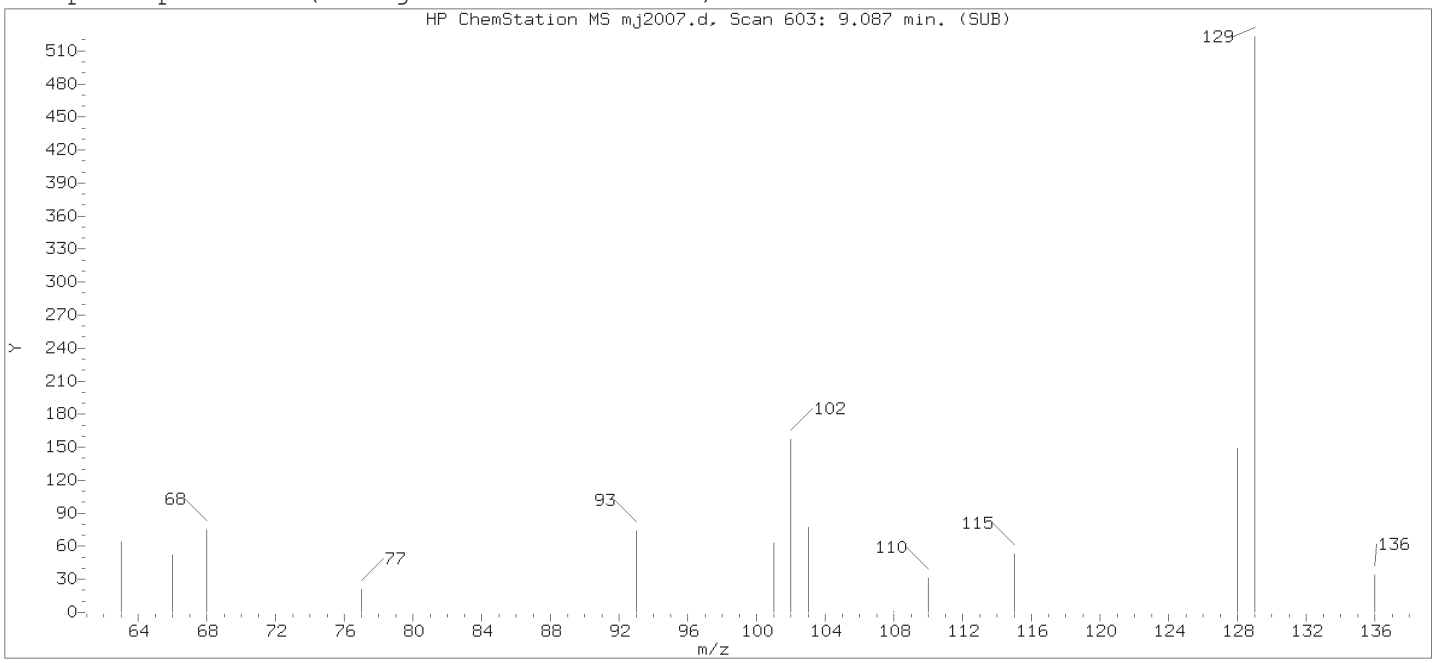
Compound Number : 8
Compound Name : Quinoline
Scan Number : 603
Retention Time (minutes) : 9.087
Quant Ion : 129.00
Area (flag) : 806M
On-Column Amount (ng/ul) : 0.0020
Integration start scan : 599 Integration stop scan: 605
Y at integration start : 91 Y at integration end: 91

Reason for manual integration: improper integration

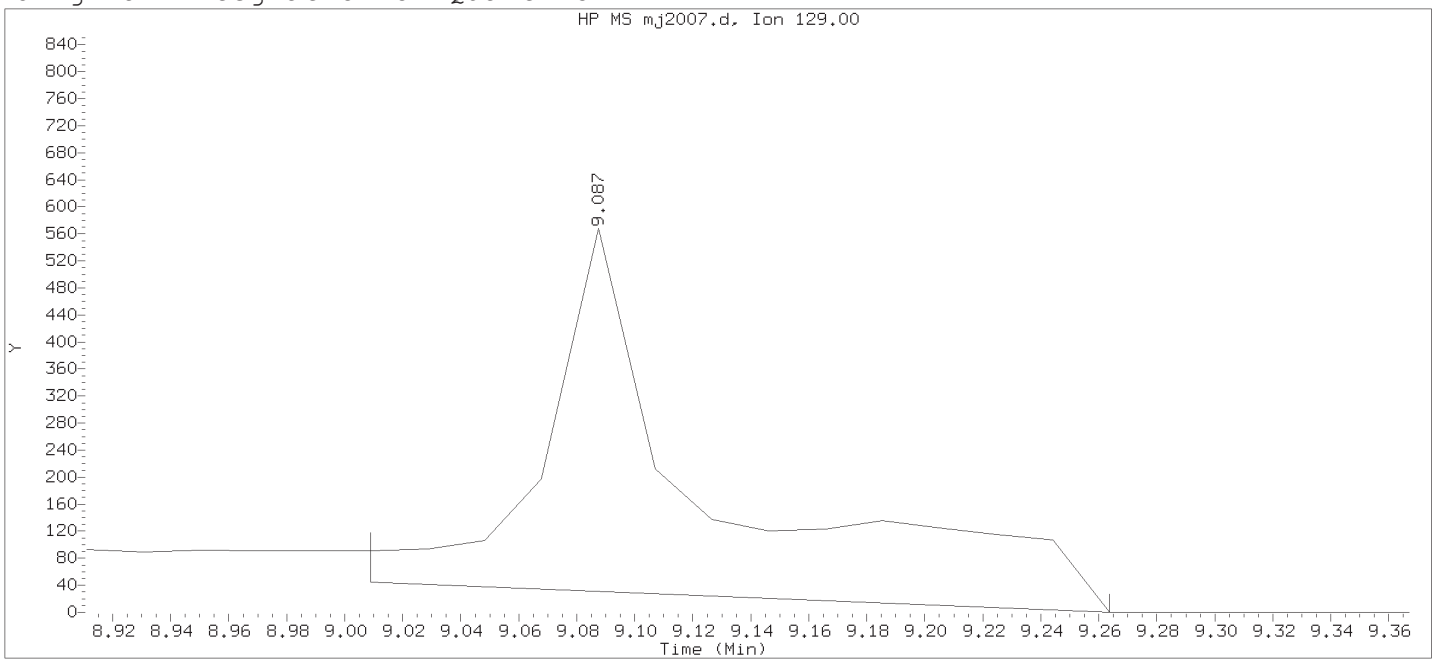
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

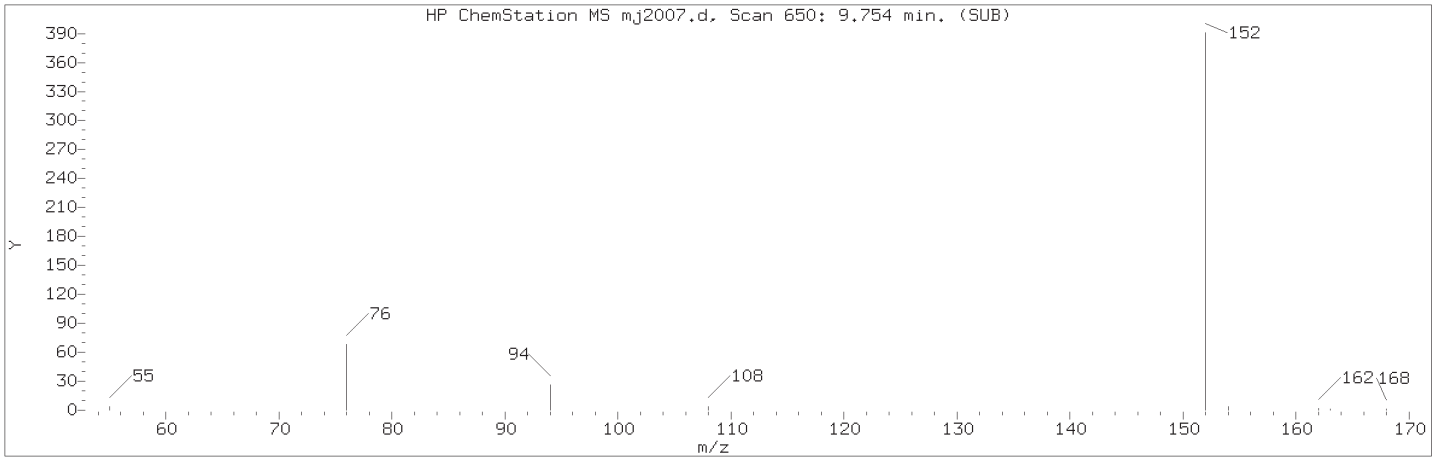
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

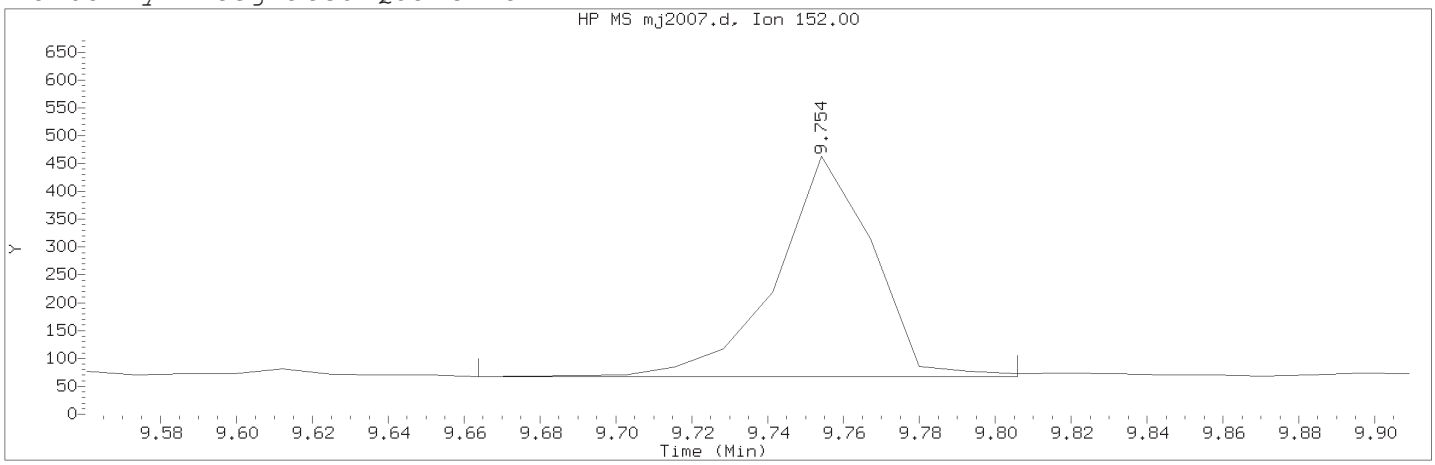
Compound Number	: 8		
Compound Name	: Quinoline		
Scan Number	: 603		
Retention Time (minutes)	: 9.087		
Quant Ion	: 129.00		
Area	: 2001		
On-column Amount (ng/ul)	: 0.0049		
Integration start scan	: 598	Integration stop scan:	611
Y at integration start	: 45	Y at integration end:	0

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira.Beck

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

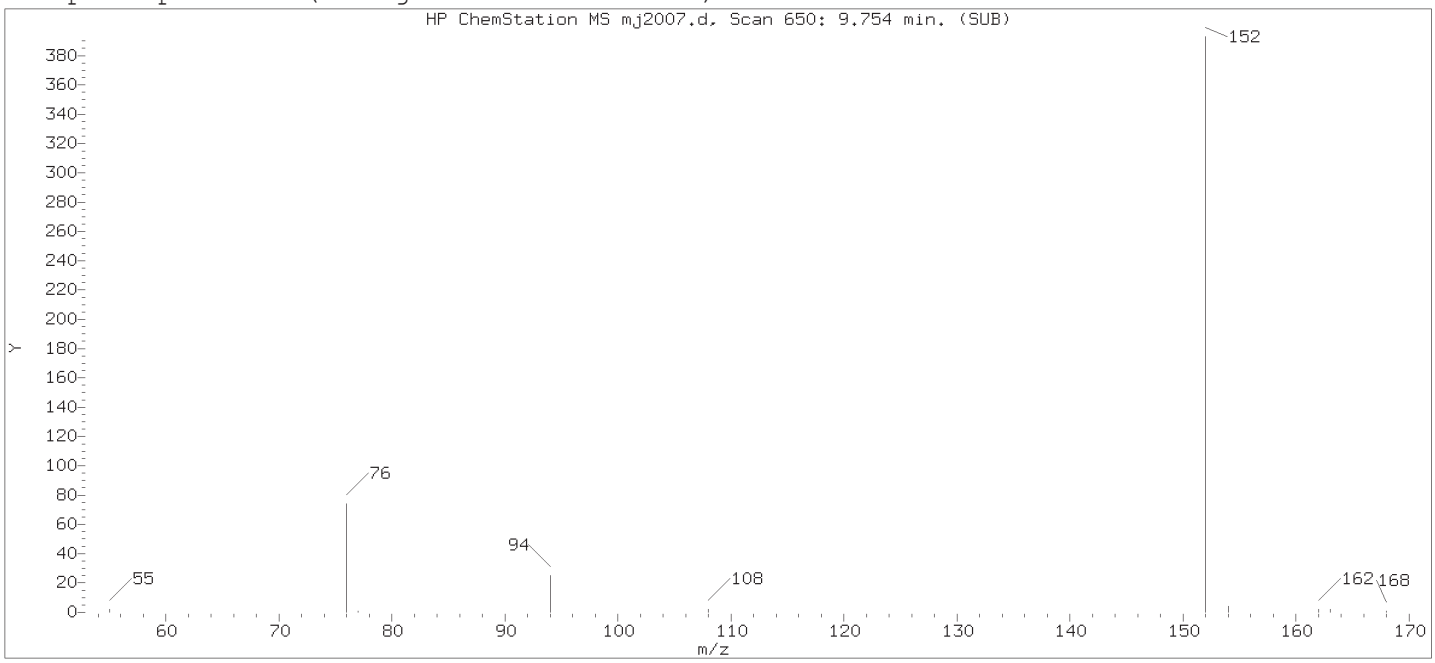
Compound Number : 10
Compound Name : 1-Methylnaphthalene-d10
Scan Number : 650
Retention Time (minutes) : 9.754
Quant Ion : 152.00
Area (flag) : 707M
On-Column Amount (ng/ul) : 0.0027
Integration start scan : 642 Integration stop scan: 653
Y at integration start : 67 Y at integration end: 67

Reason for manual integration: improper integration

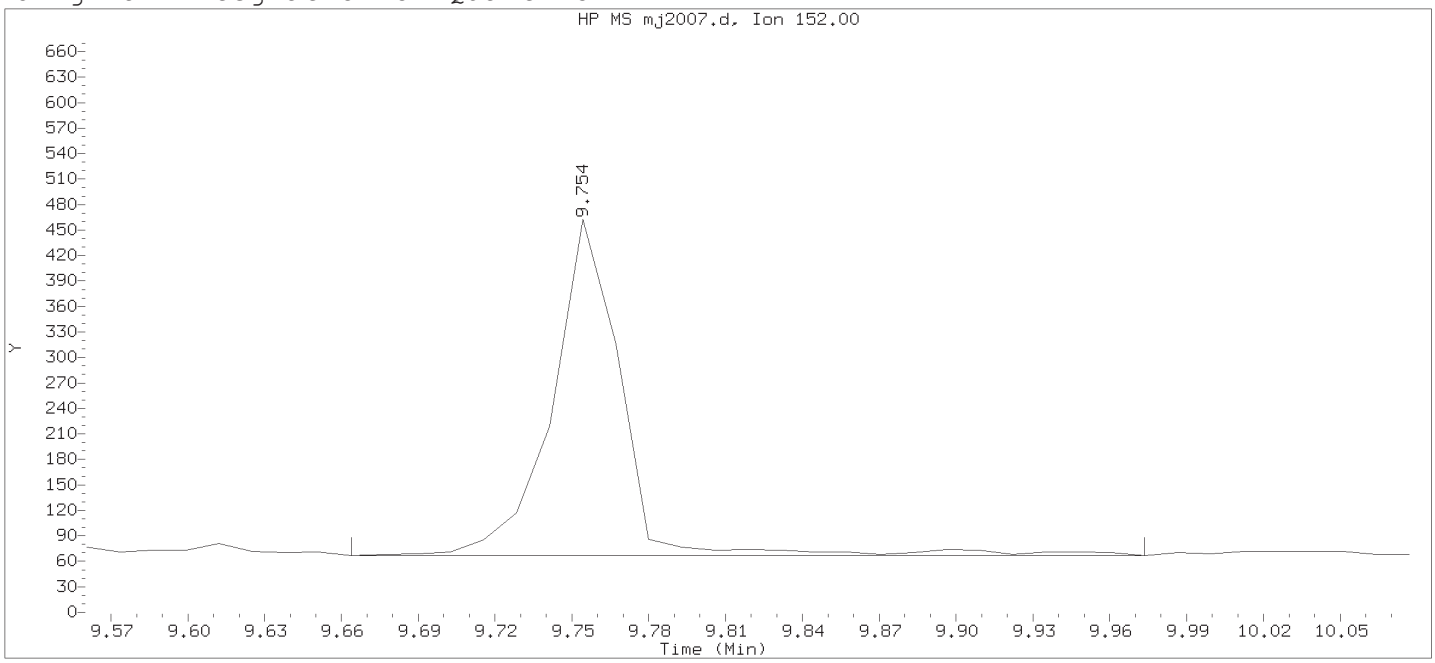
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

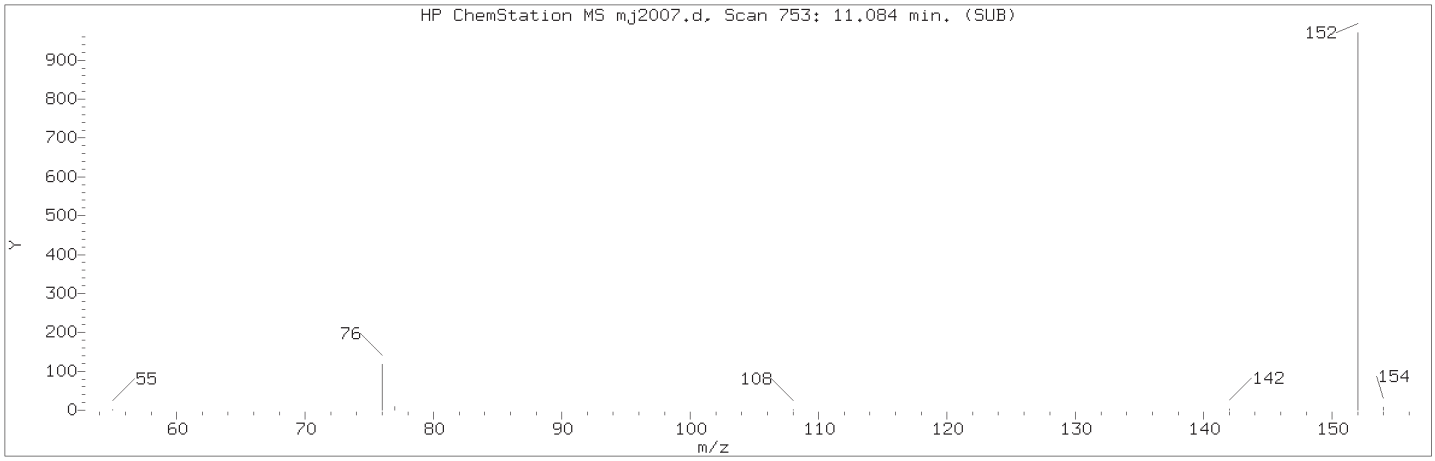
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

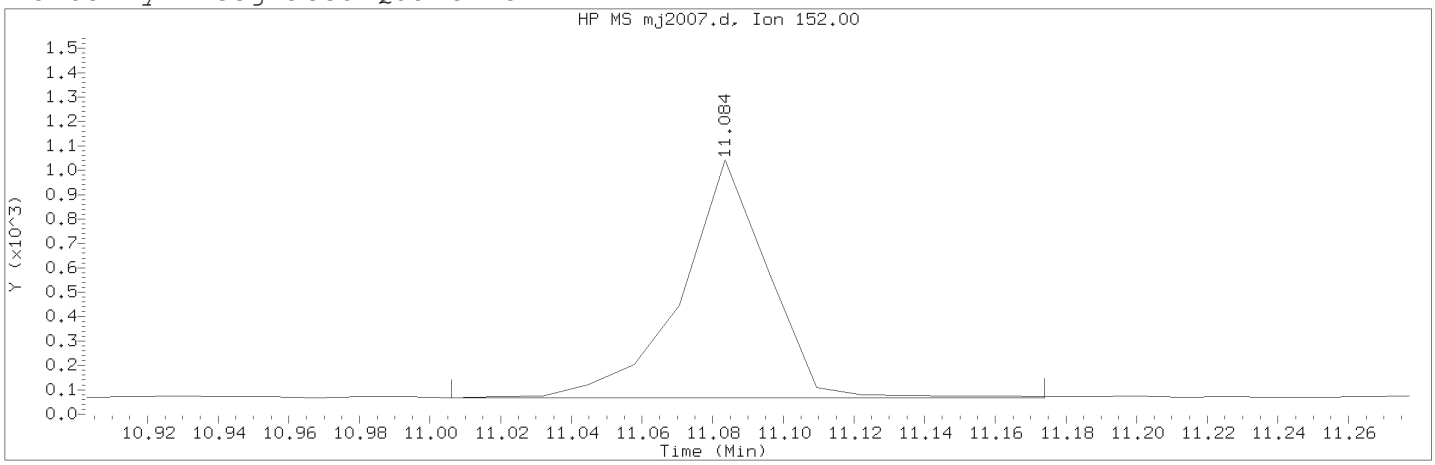
Compound Number	: 10		
Compound Name	: 1-Methylnaphthalene-d10		
Scan Number	: 650		
Retention Time (minutes)	: 9.754		
Quant Ion	: 152.00		
Area	: 741		
On-column Amount (ng/ul)	: 0.0028		
Integration start scan	: 642	Integration stop scan:	666
Y at integration start	: 67	Y at integration end:	67

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

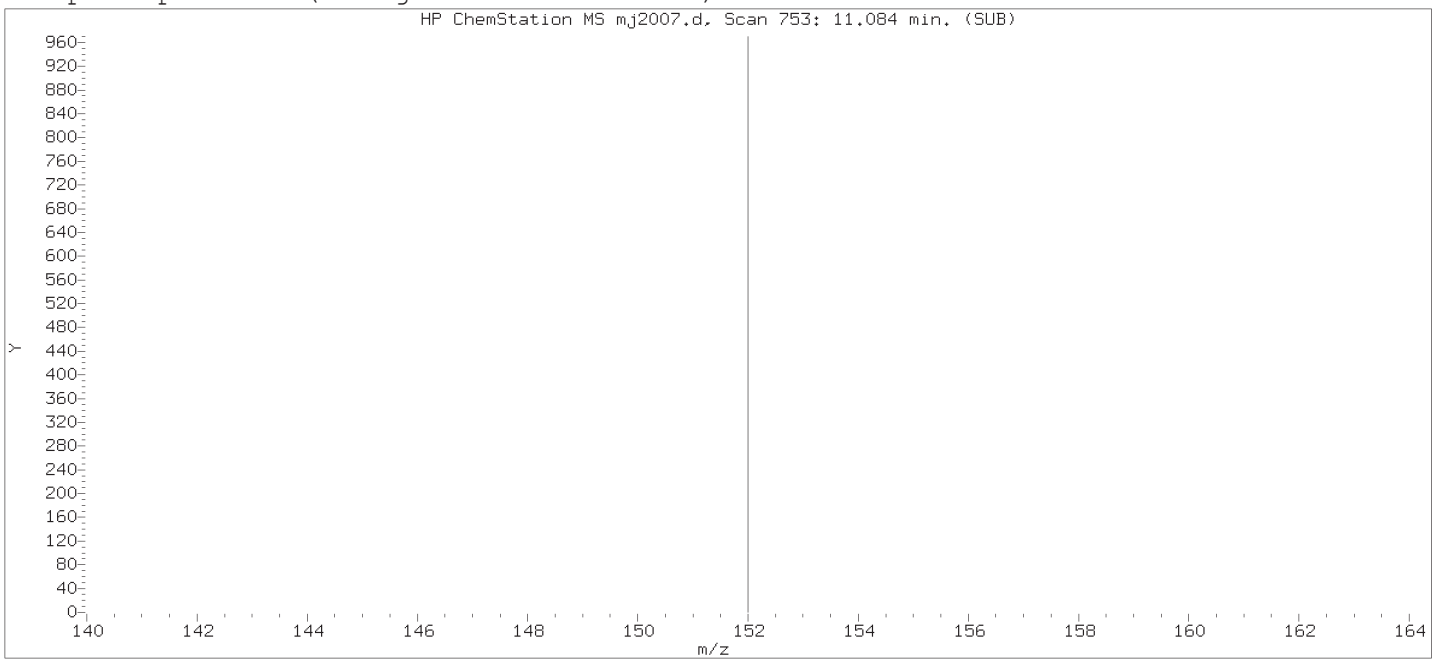
Compound Number : 13
Compound Name : Acenaphthylene
Scan Number : 753
Retention Time (minutes) : 11.084
Quant Ion : 152.00
Area (flag) : 1642M
On-Column Amount (ng/ul) : 0.0025
Integration start scan : 746 Integration stop scan: 759
Y at integration start : 68 Y at integration end: 68

Reason for manual integration: improper integration

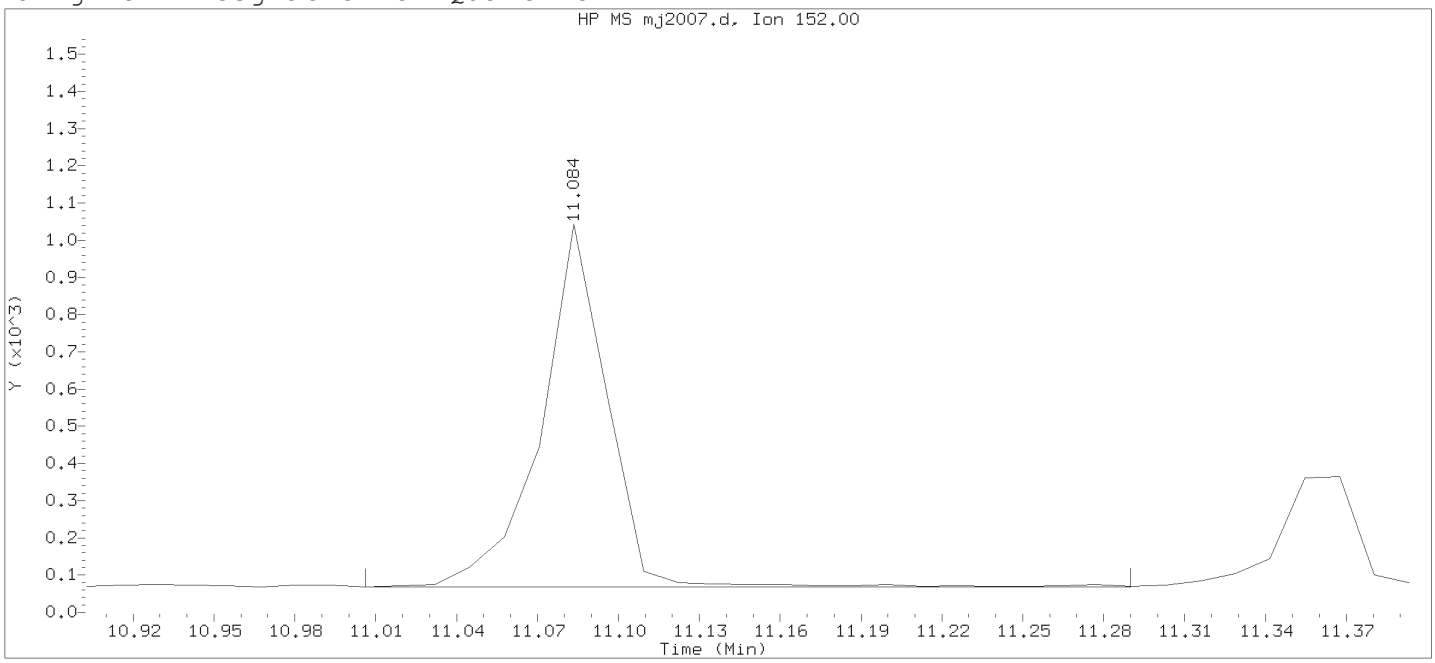
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

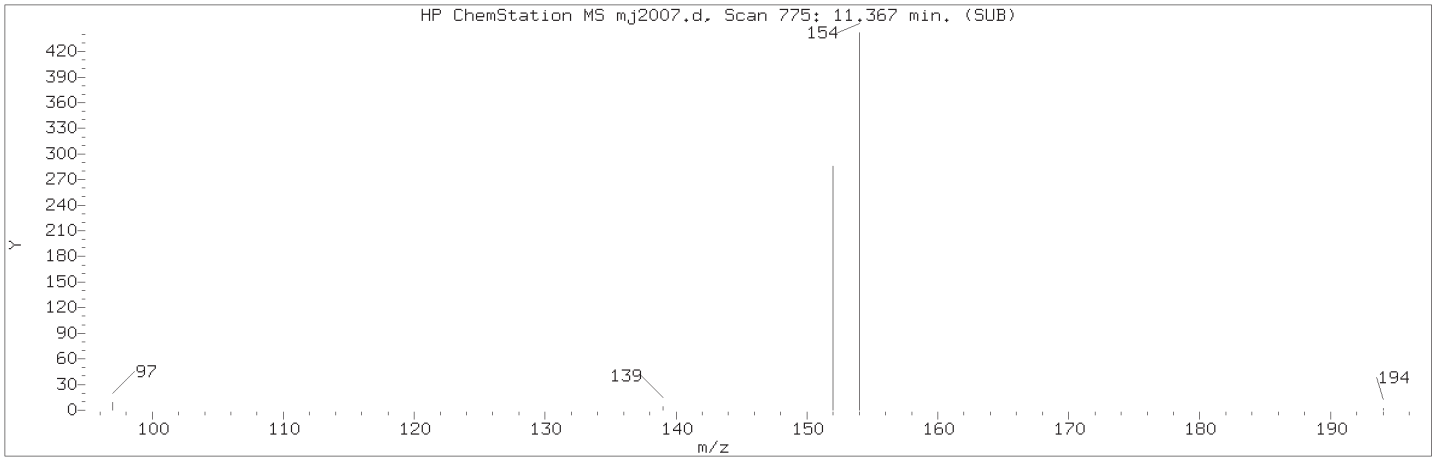
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

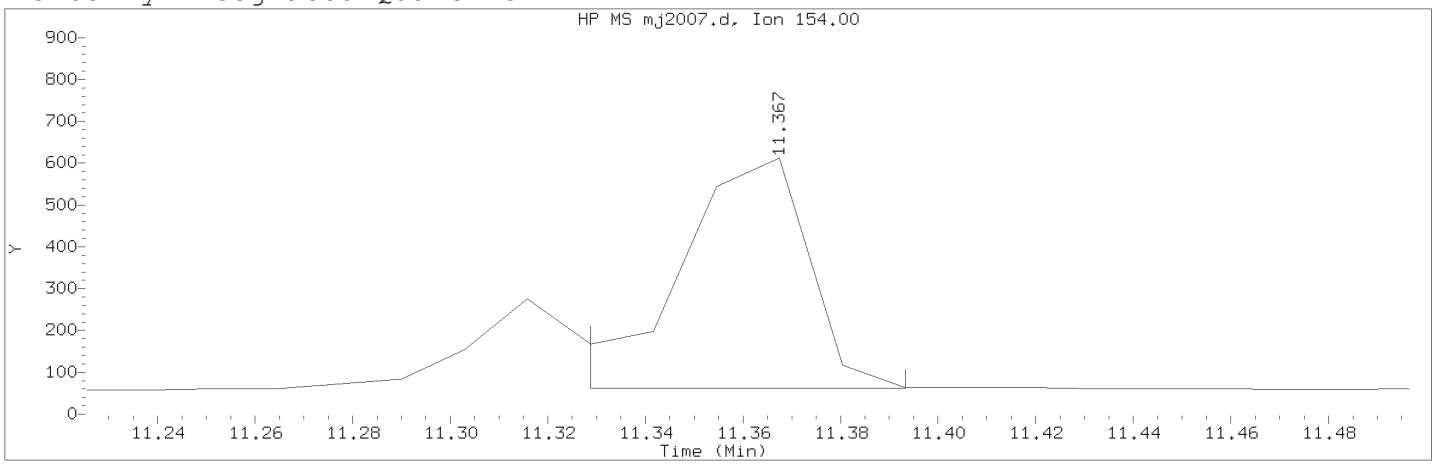
Compound Number	: 13		
Compound Name	: Acenaphthylene		
Scan Number	: 753		
Retention Time (minutes)	: 11.084		
Quant Ion	: 152.00		
Area	: 1663		
On-column Amount (ng/ul)	: 0.0025		
Integration start scan	: 746	Integration stop scan:	768
Y at integration start	: 68	Y at integration end:	68

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14 Page 111 of 4047

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

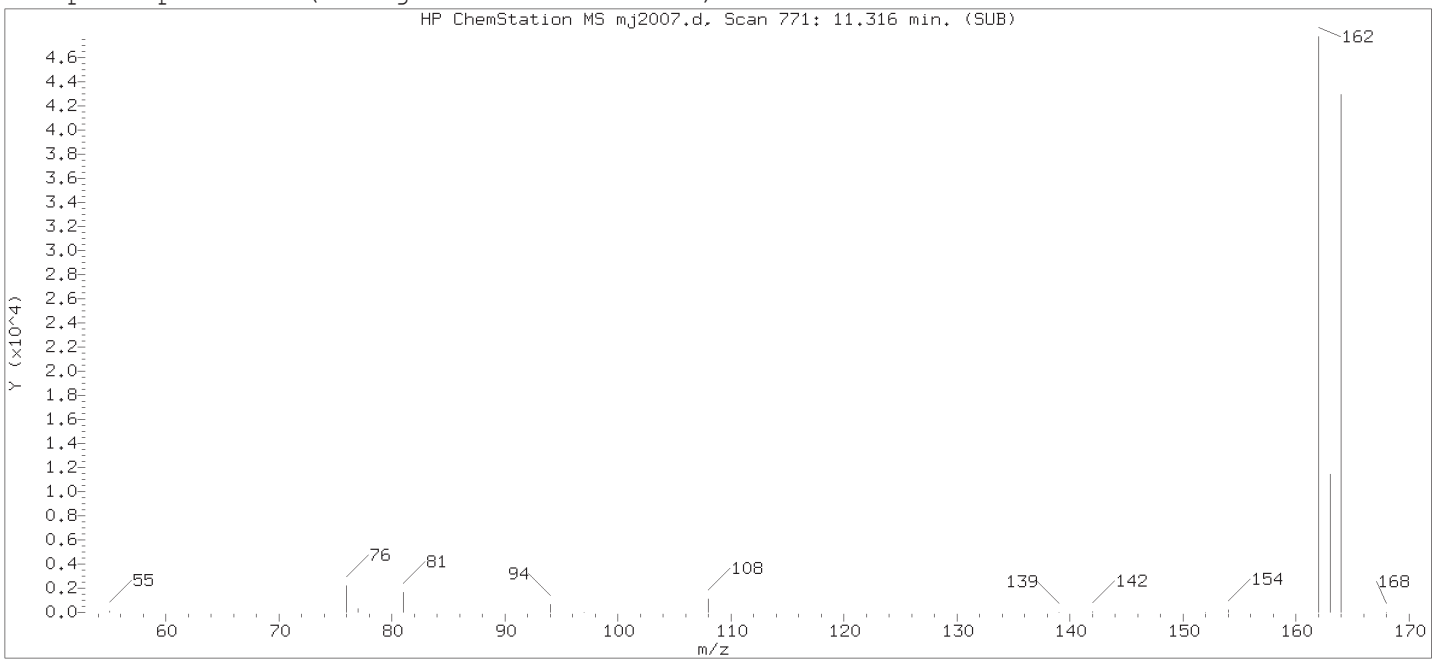
Compound Number : 15
Compound Name : Acenaphthene
Scan Number : 775
Retention Time (minutes) : 11.367
Quant Ion : 154.00
Area (flag) : 966M
On-Column Amount (ng/ul) : 0.0024
Integration start scan : 771 Integration stop scan: 776
Y at integration start : 62 Y at integration end: 62

Reason for manual integration: improper integration

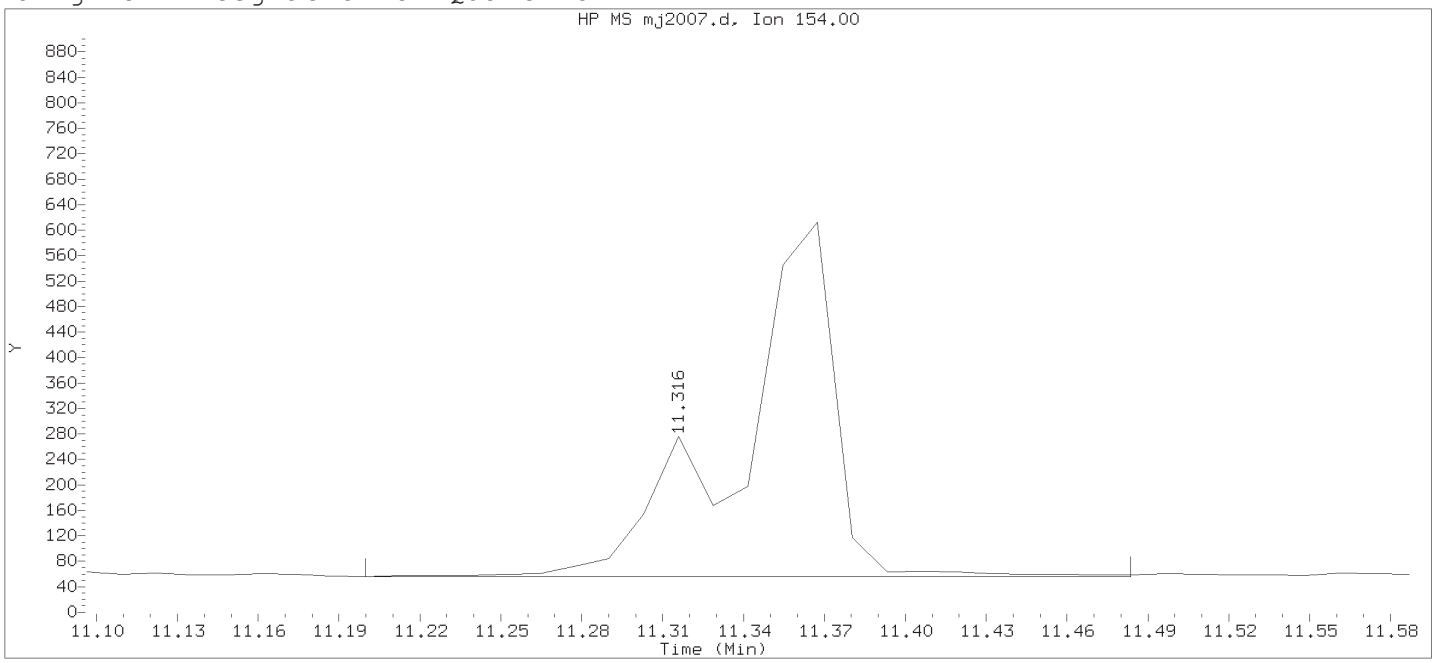
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

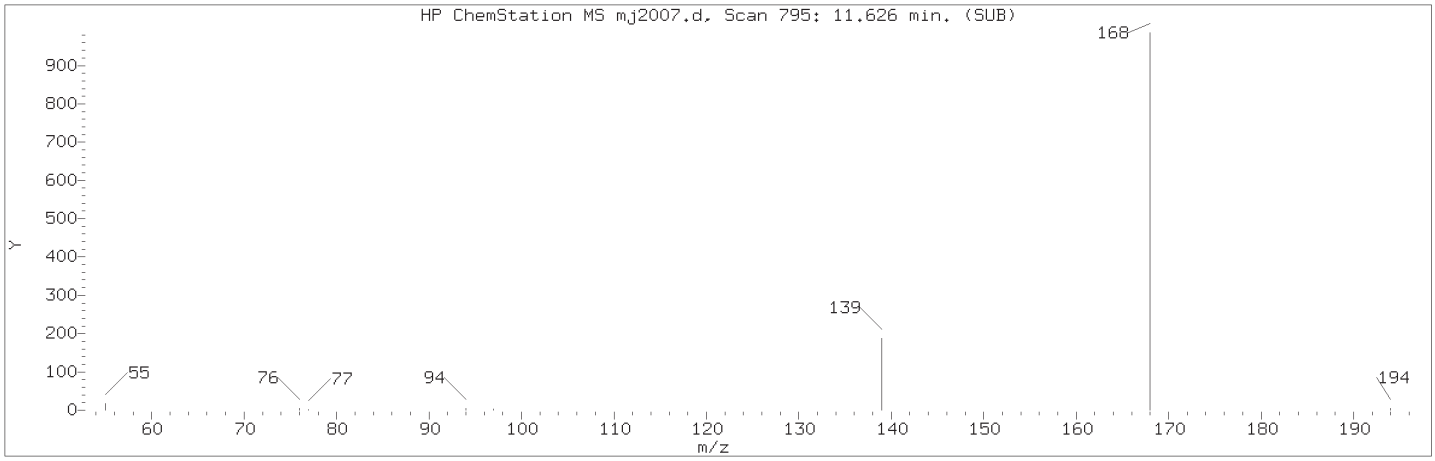
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

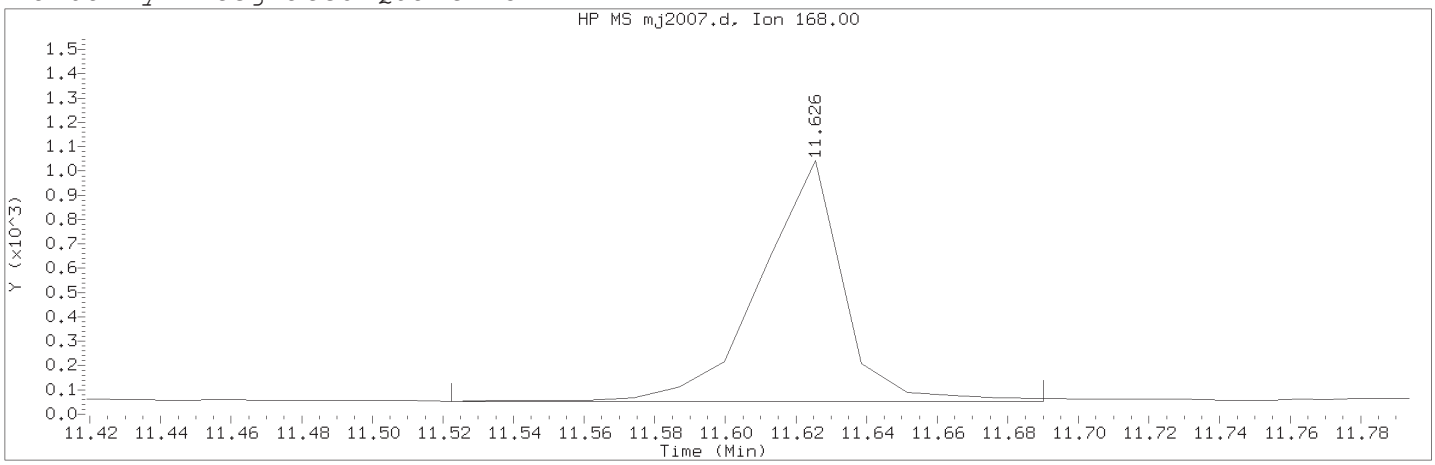
Compound Number	: 15		
Compound Name	: Acenaphthene		
Scan Number	: 771		
Retention Time (minutes)	: 11.316		
Quant Ion	: 154.00		
Area	: 1375		
On-column Amount (ng/ul)	: 0.0034		
Integration start scan	: 761	Integration stop scan:	783
Y at integration start	: 56	Y at integration end:	56

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

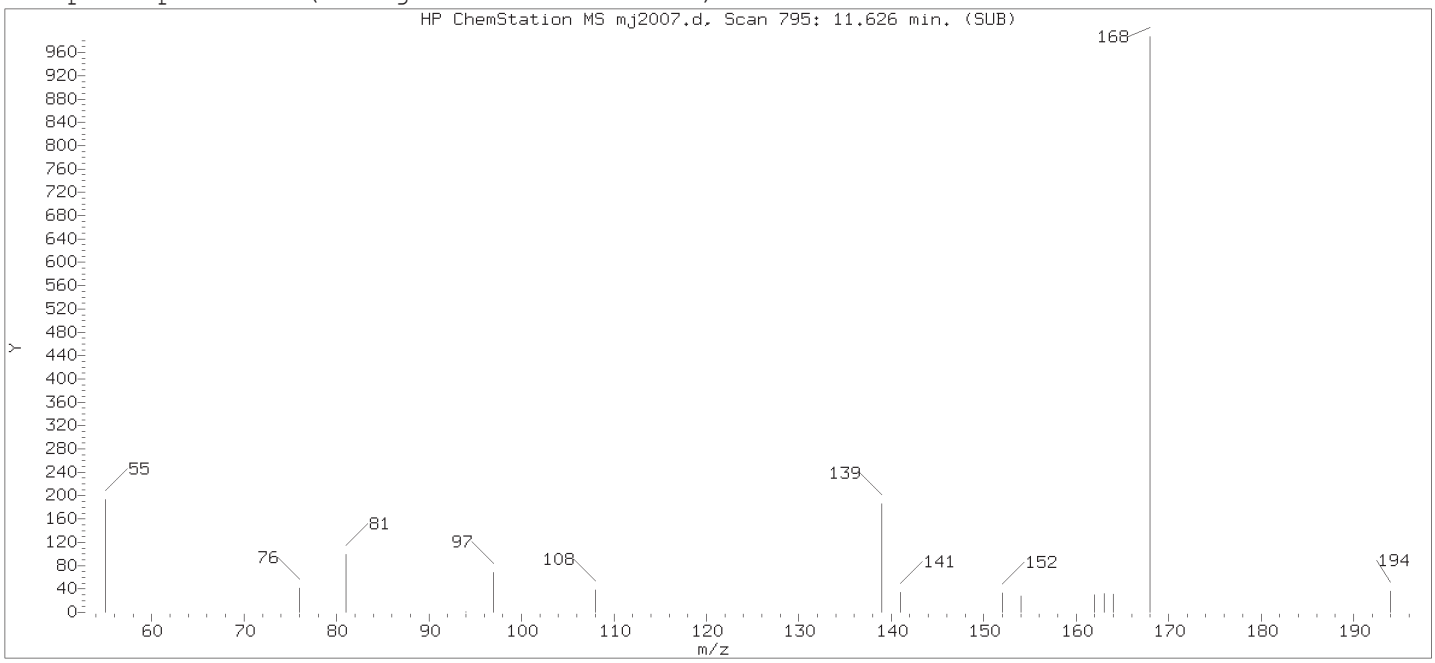
Compound Number : 16
Compound Name : Dibenzofuran
Scan Number : 795
Retention Time (minutes) : 11.626
Quant Ion : 168.00
Area (flag) : 1299M
On-Column Amount (ng/ul) : 0.0024
Integration start scan : 786 Integration stop scan: 799
Y at integration start : 53 Y at integration end: 53

Reason for manual integration: improper integration

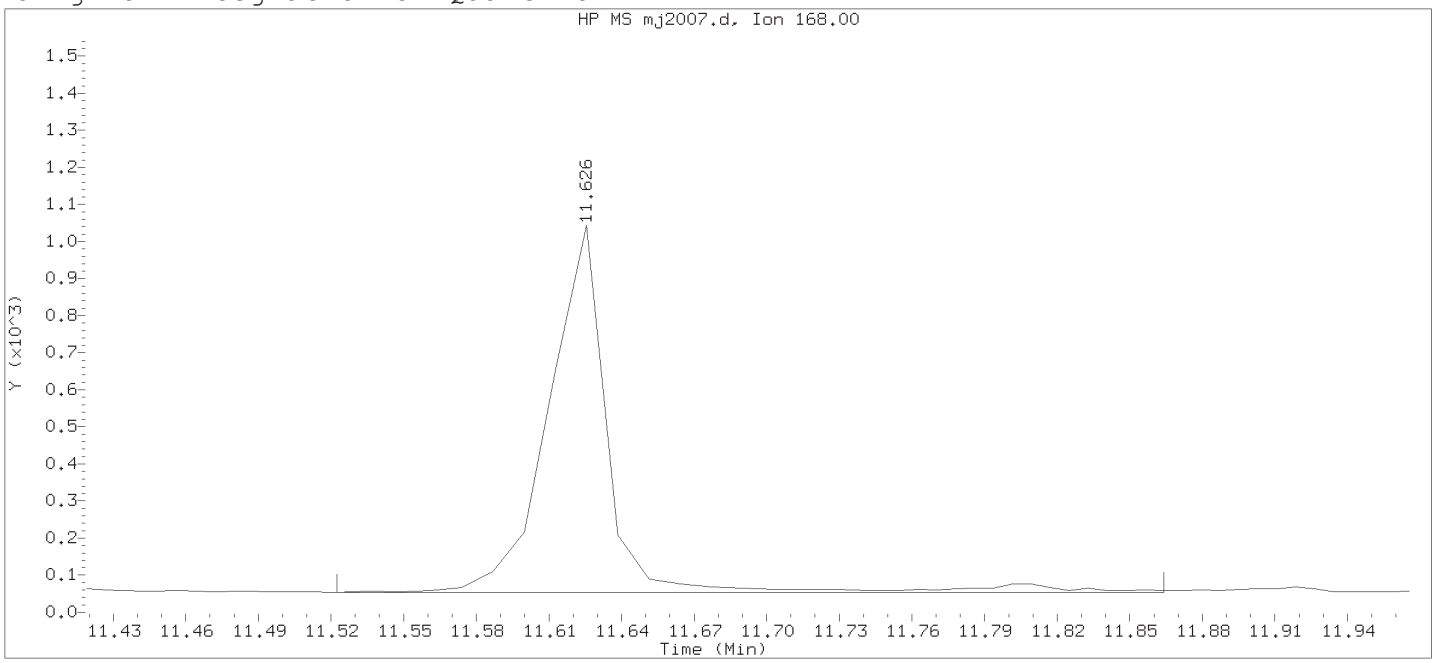
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

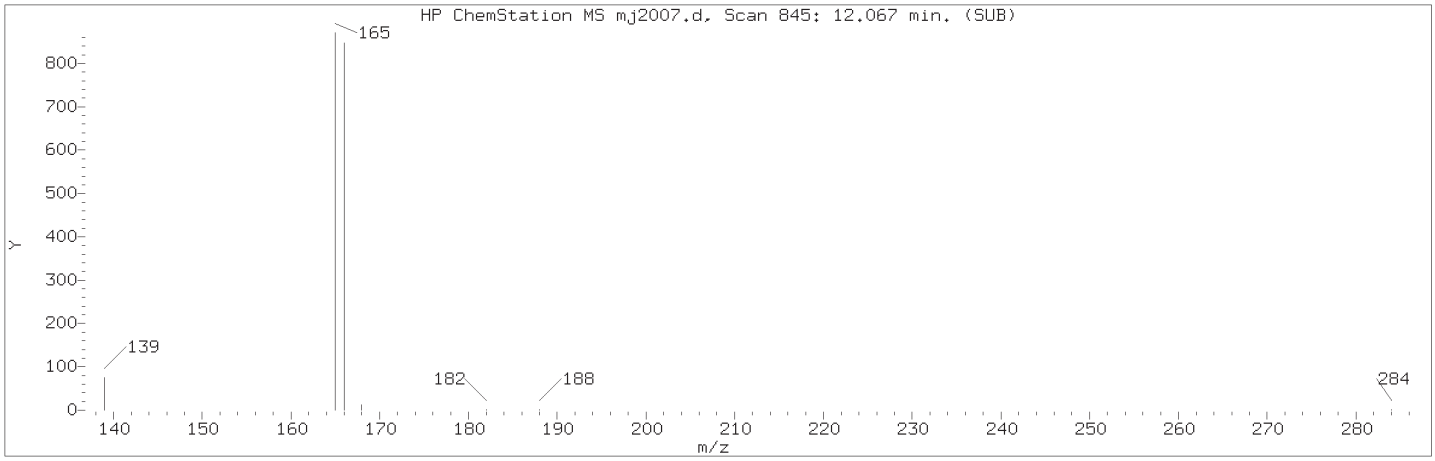
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

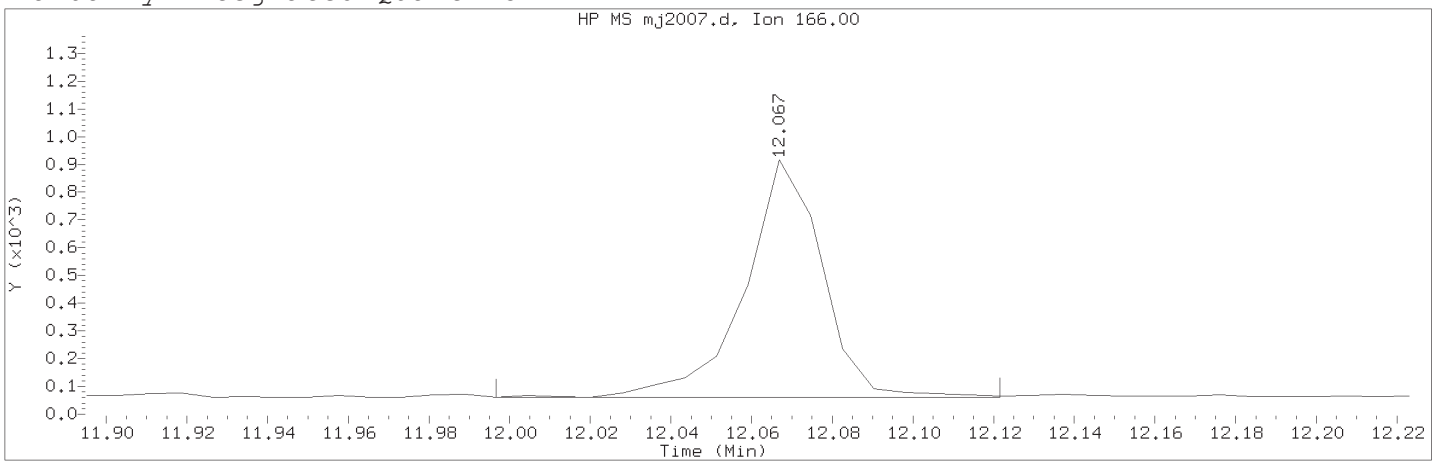
Compound Number	: 16		
Compound Name	: Dibenzofuran		
Scan Number	: 795		
Retention Time (minutes)	: 11.626		
Quant Ion	: 168.00		
Area	: 1512		
On-column Amount (ng/ul)	: 0.0027		
Integration start scan	: 786	Integration stop scan:	818
Y at integration start	: 53	Y at integration end:	53

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

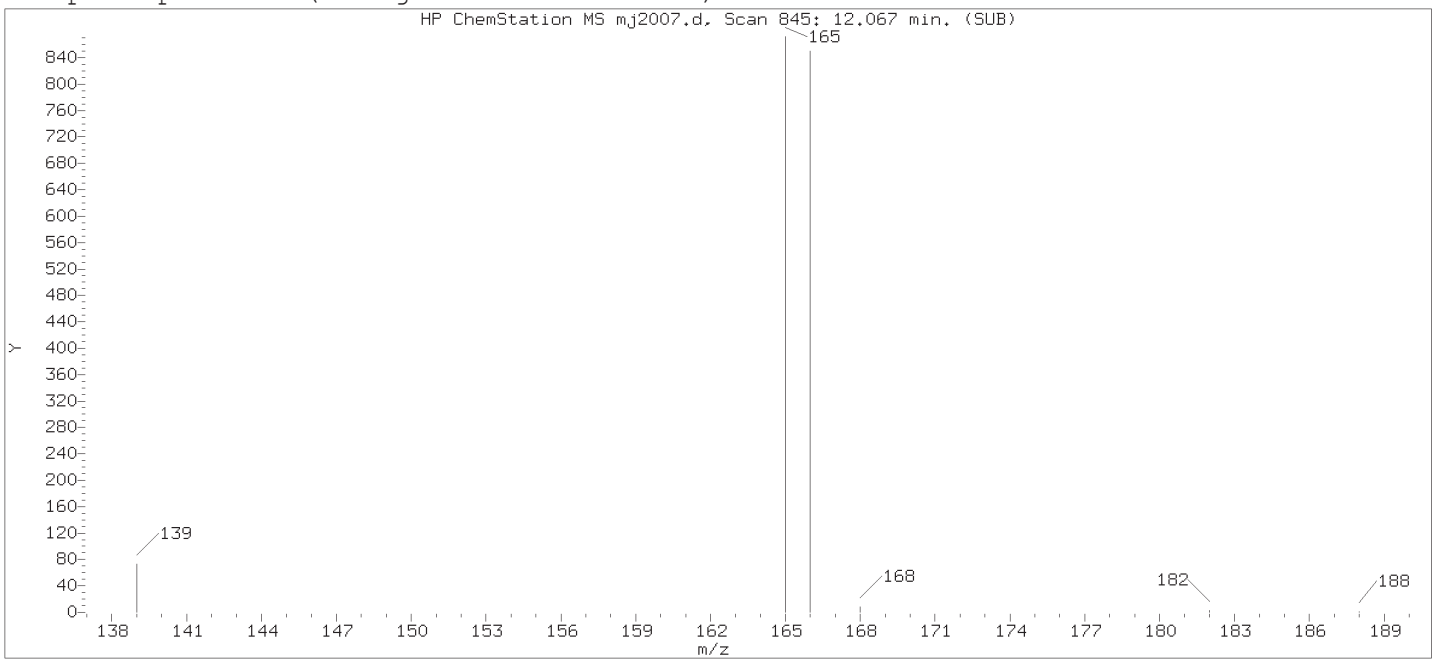
Compound Number : 18
Compound Name : Fluorene
Scan Number : 845
Retention Time (minutes) : 12.067
Quant Ion : 166.00
Area (flag) : 1250M
On-Column Amount (ng/ul) : 0.0027
Integration start scan : 835 Integration stop scan: 851
Y at integration start : 60 Y at integration end: 60

Reason for manual integration: improper integration

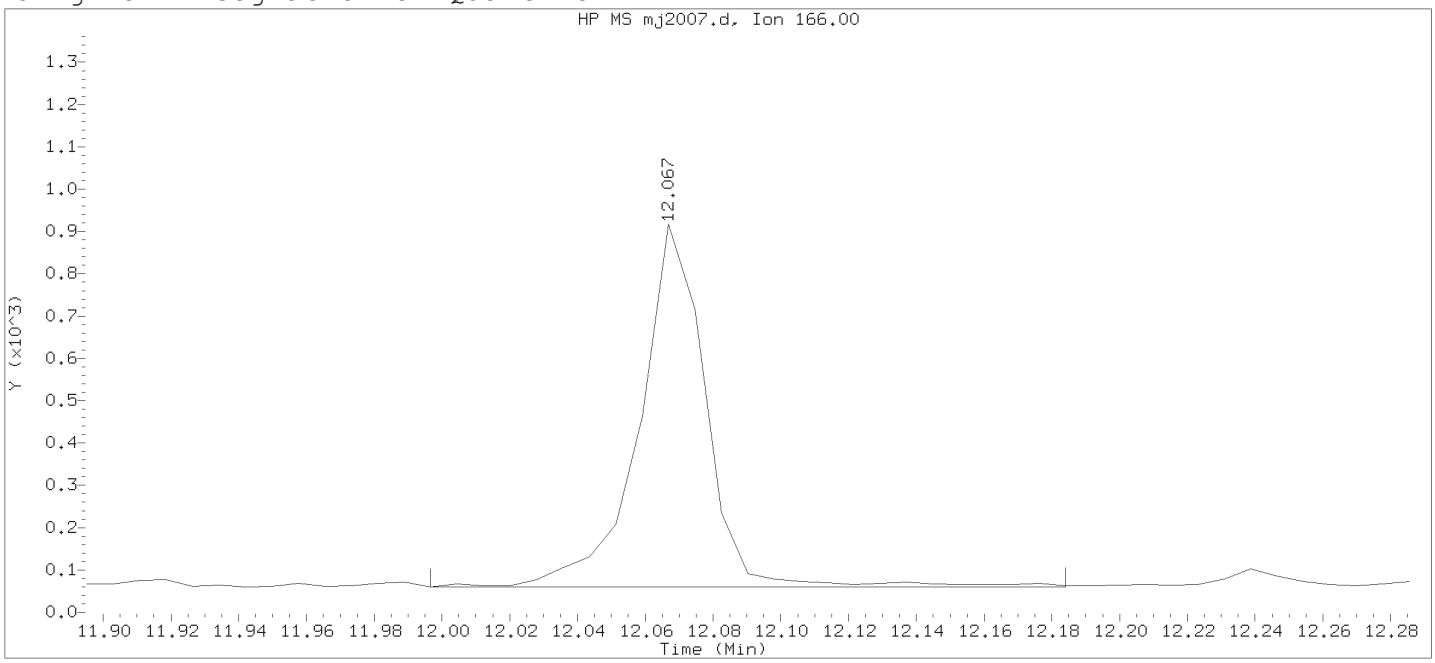
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

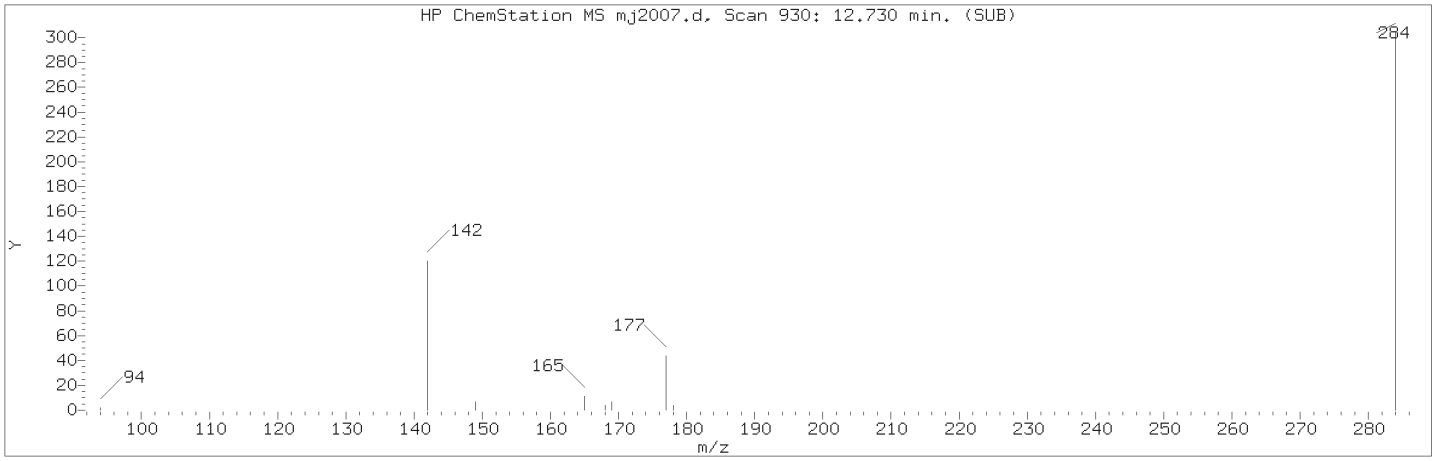
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

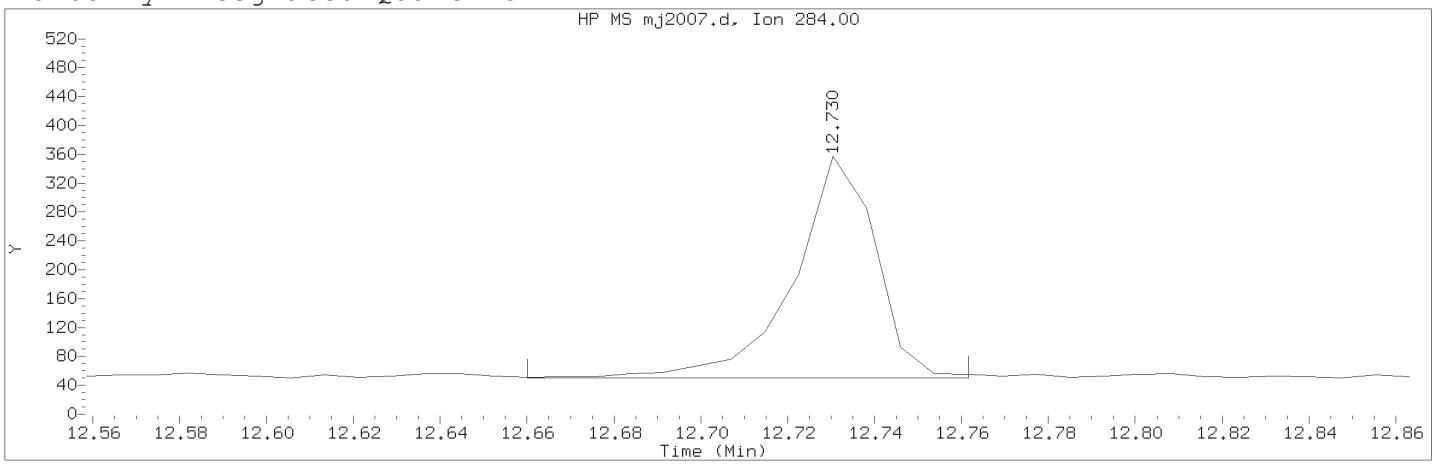
Compound Number	: 18		
Compound Name	: Fluorene		
Scan Number	: 845		
Retention Time (minutes)	: 12.067		
Quant Ion	: 166.00		
Area	: 1179		
On-column Amount (ng/ul)	: 0.0025		
Integration start scan	: 835	Integration stop scan:	859
Y at integration start	: 60	Y at integration end:	60

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira2517

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

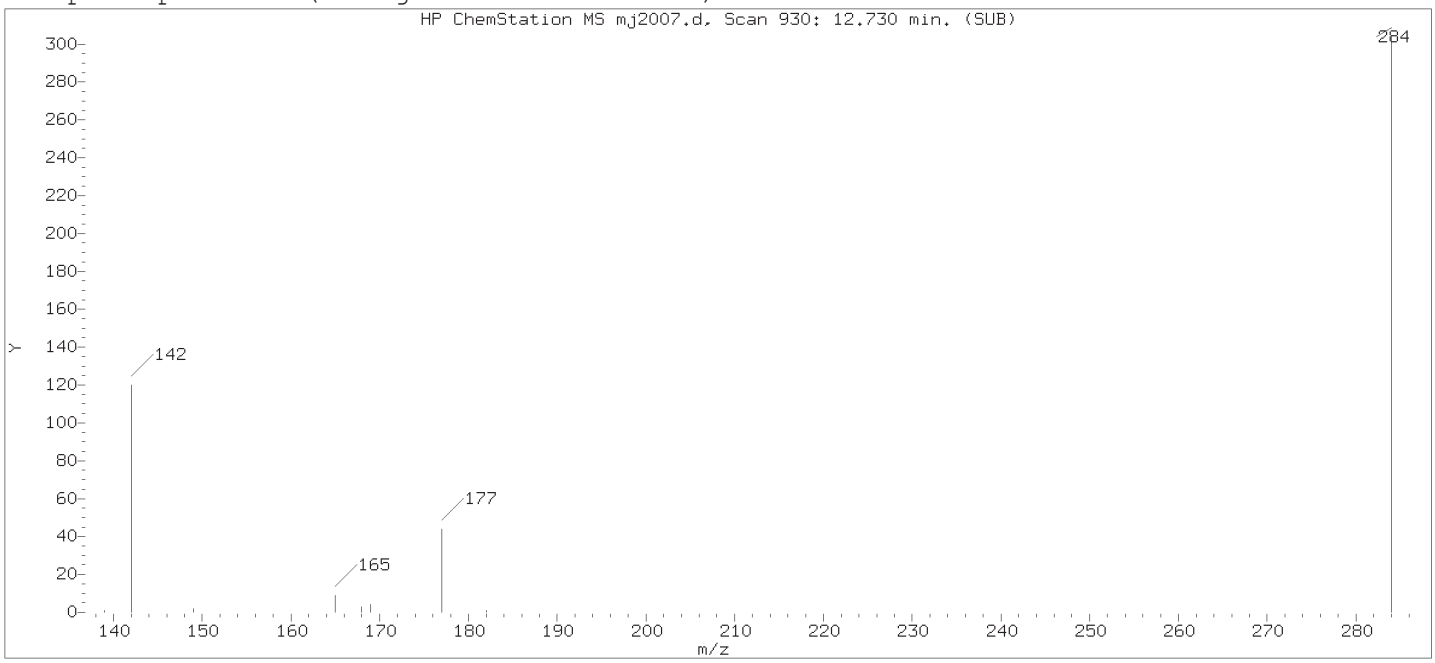
Compound Number : 19
Compound Name : Hexachlorobenzene
Scan Number : 930
Retention Time (minutes) : 12.730
Quant Ion : 284.00
Area (flag) : 405M
On-Column Amount (ng/ul) : 0.0028
Integration start scan : 920 Integration stop scan: 933
Y at integration start : 50 Y at integration end: 50

Reason for manual integration: improper integration

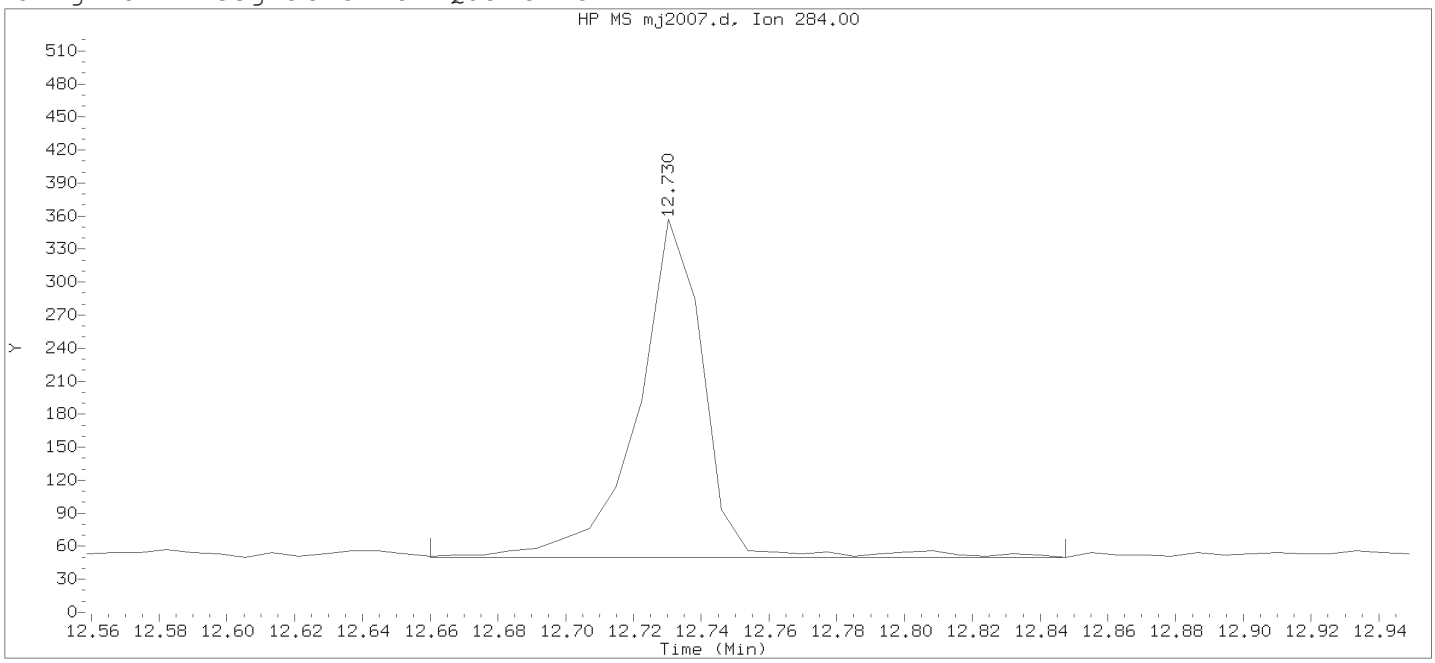
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

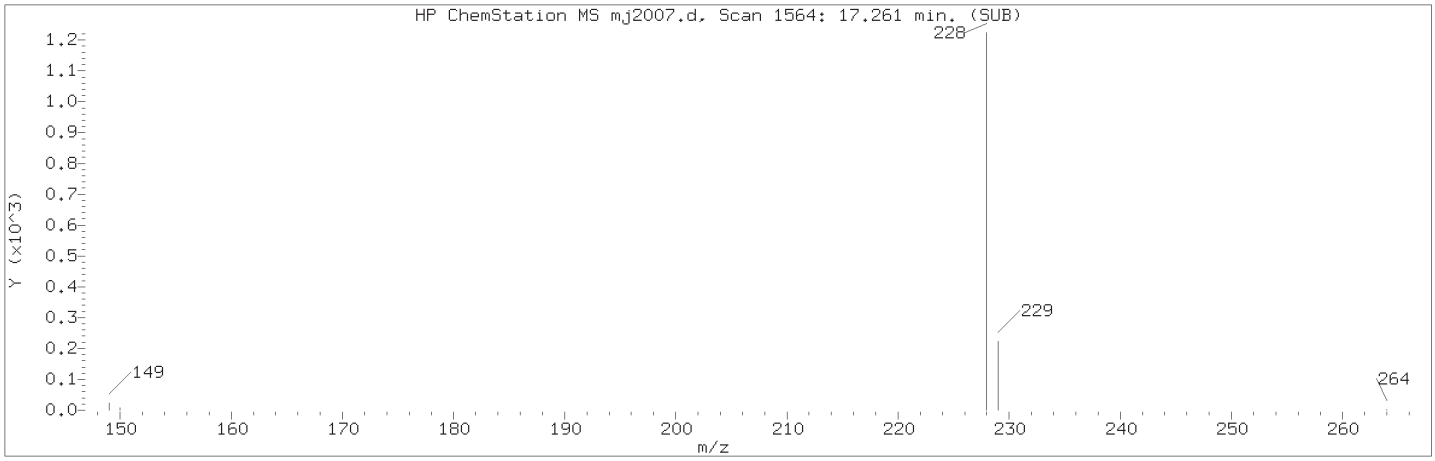
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

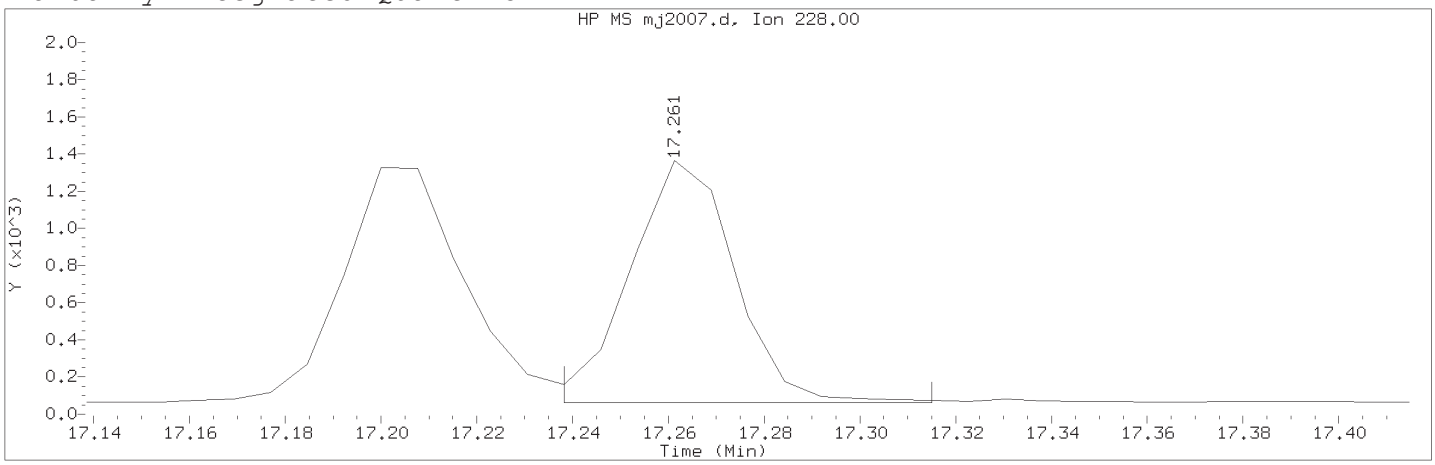
Compound Number	: 19		
Compound Name	: Hexachlorobenzene		
Scan Number	: 930		
Retention Time (minutes)	: 12.730		
Quant Ion	: 284.00		
Area	: 419		
On-column Amount (ng/ul)	: 0.0029		
Integration start scan	: 920	Integration stop scan:	944
Y at integration start	: 50	Y at integration end:	50

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

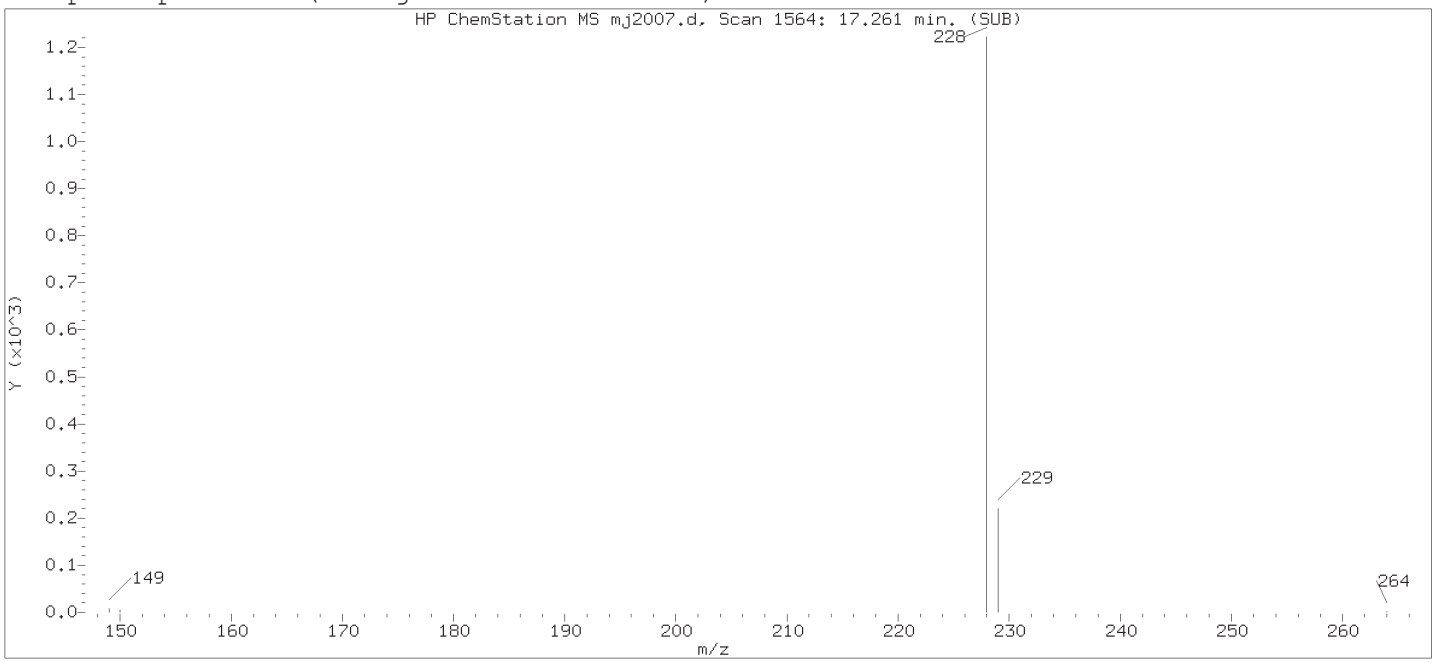
Compound Number : 30
Compound Name : Chrysene
Scan Number : 1564
Retention Time (minutes) : 17.261
Quant Ion : 228.00
Area (flag) : 1992M
On-Column Amount (ng/ul) : 0.0030
Integration start scan : 1560 Integration stop scan: 1570
Y at integration start : 61 Y at integration end: 61

Reason for manual integration: improper integration

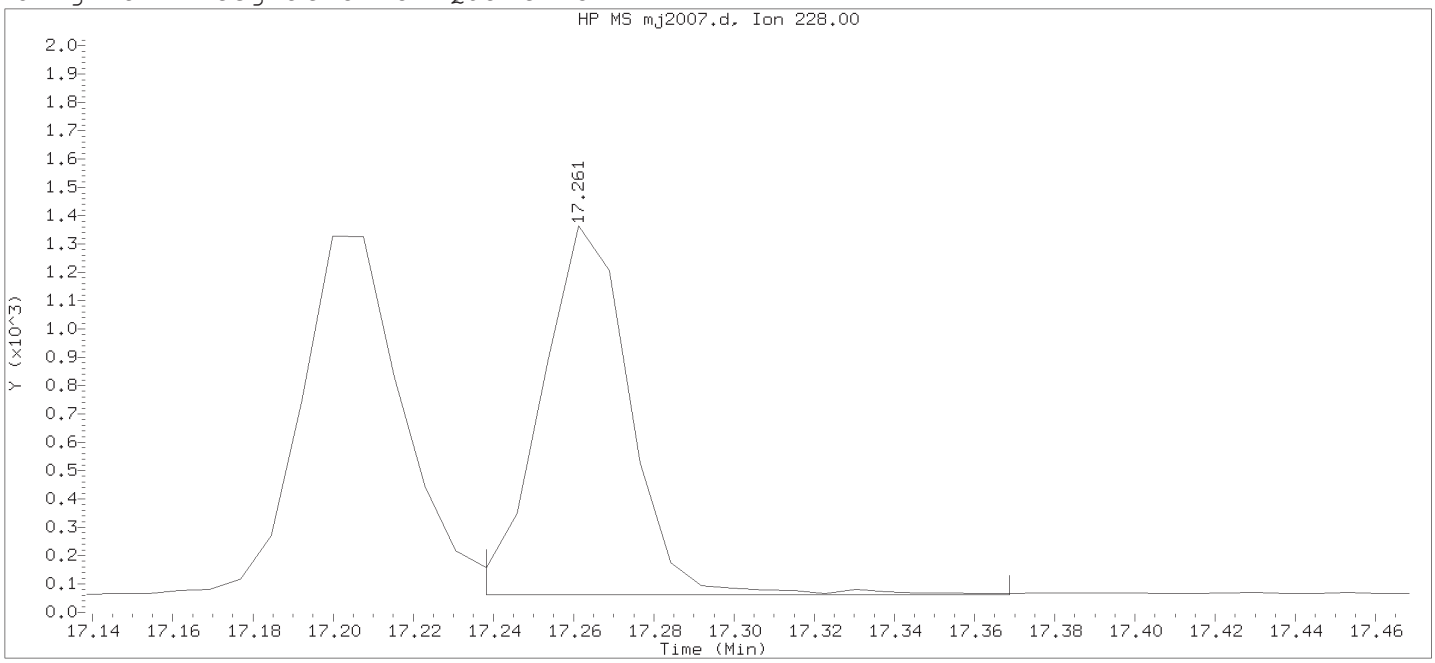
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

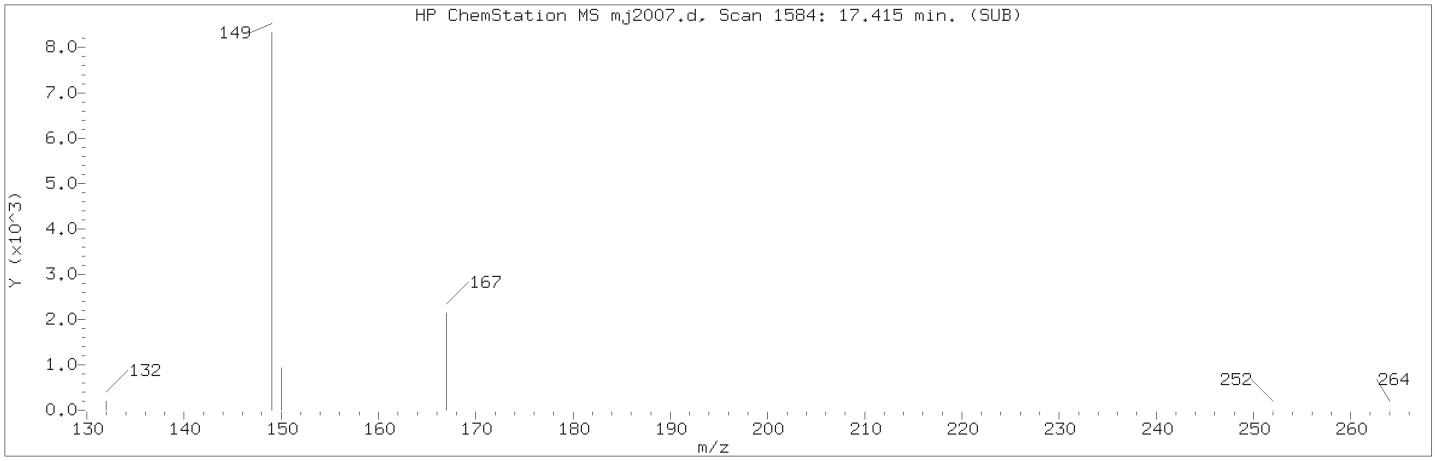
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

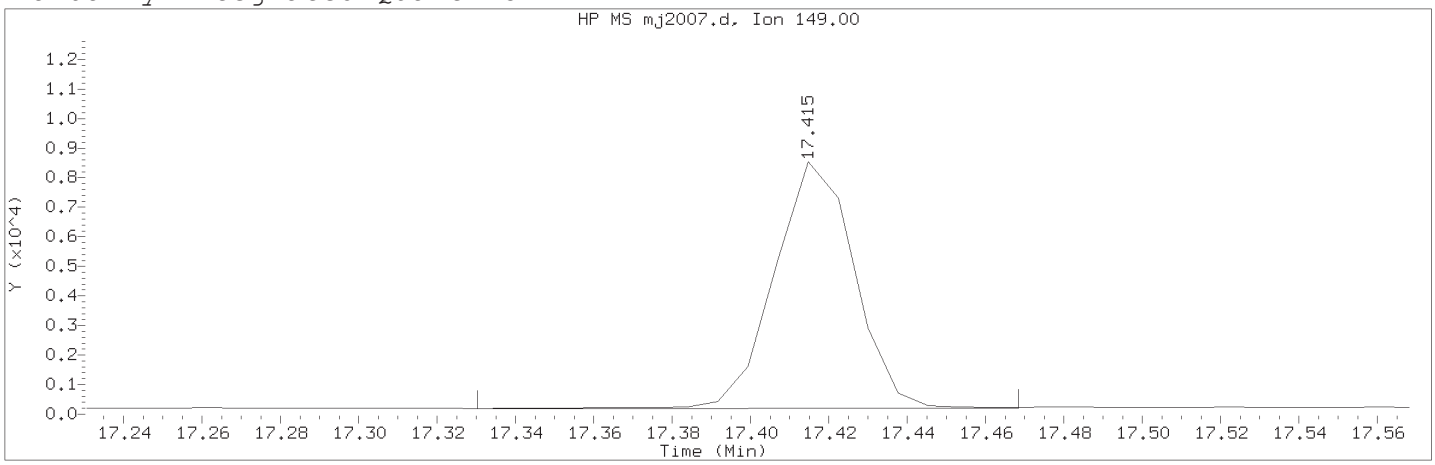
Compound Number	:	30
Compound Name	:	Chrysene
Scan Number	:	1564
Retention Time (minutes)	:	17.261
Quant Ion	:	228.00
Area	:	1998
On-column Amount (ng/ul)	:	0.0030
Integration start scan	:	1560 Integration stop scan: 1577
Y at integration start	:	61 Y at integration end: 61

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira2531

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

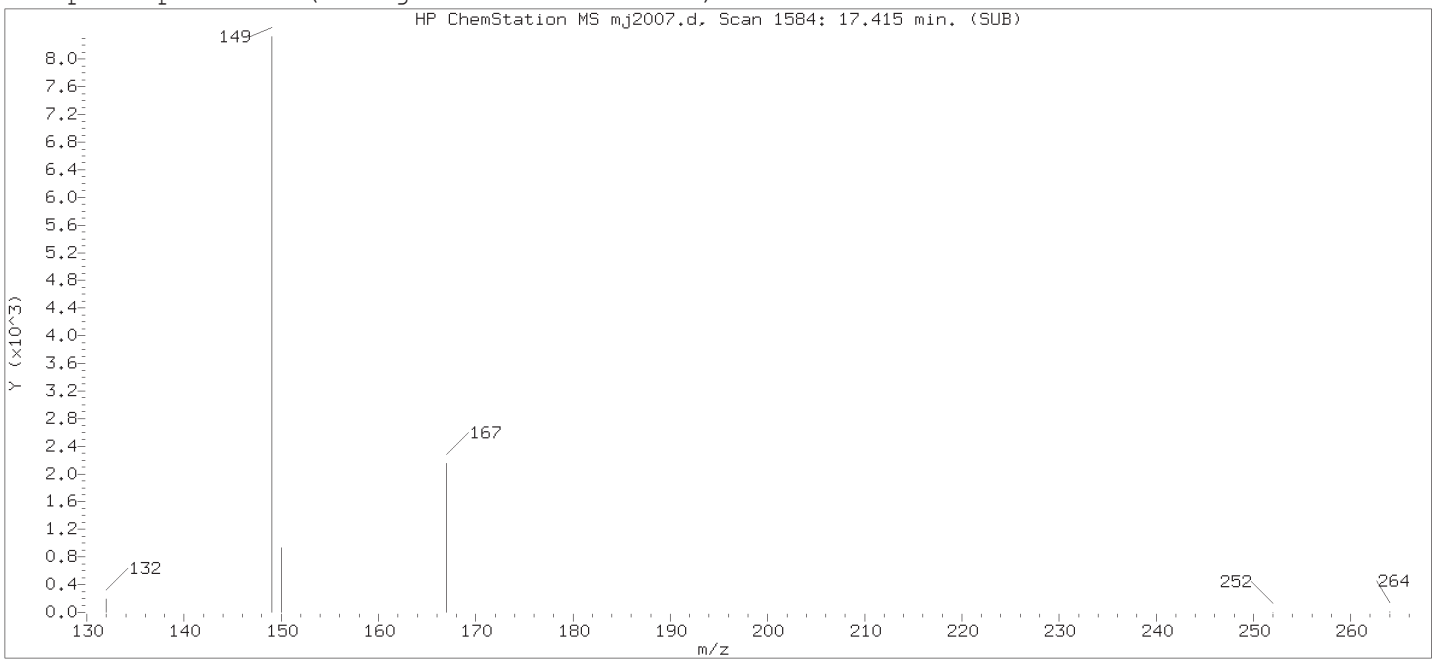
Compound Number : 31
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1584
Retention Time (minutes) : 17.415
Quant Ion : 149.00
Area (flag) : 11869M
On-Column Amount (ng/ul) : 0.0248
Integration start scan : 1572 Integration stop scan: 1590
Y at integration start : 193 Y at integration end: 201

Reason for manual integration: improper integration

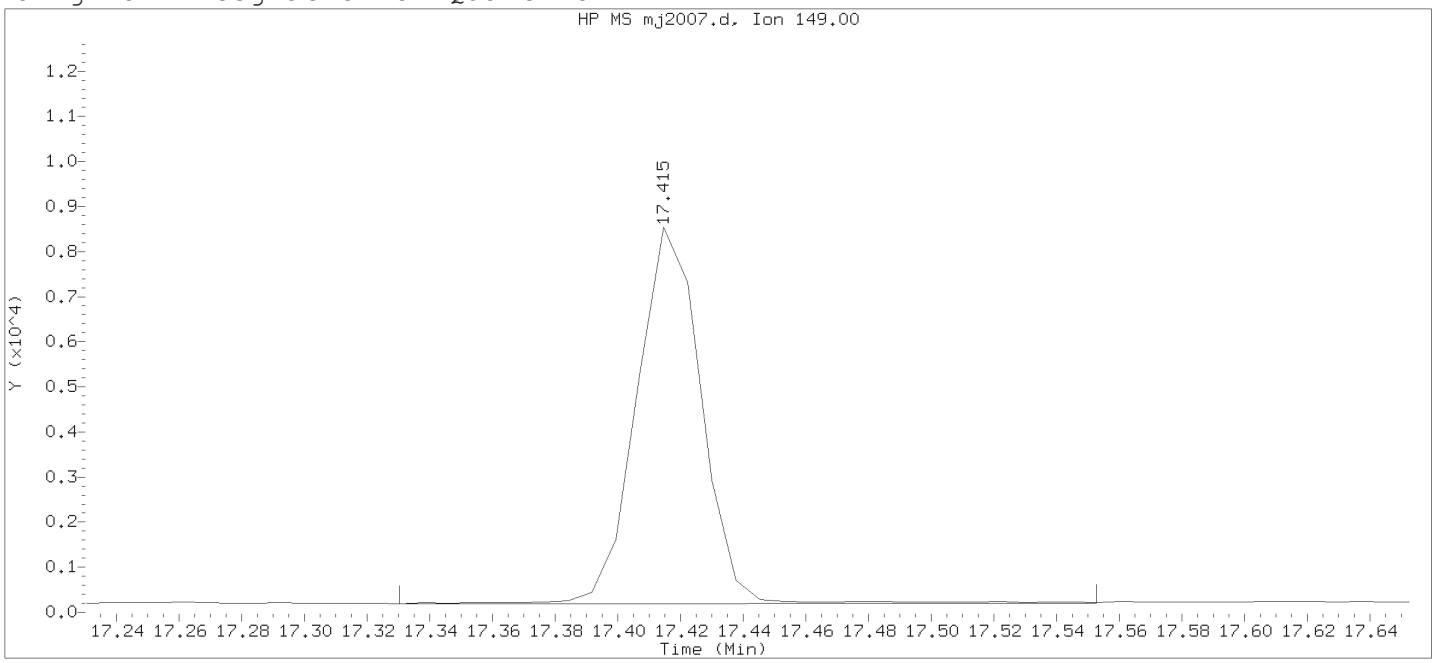
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

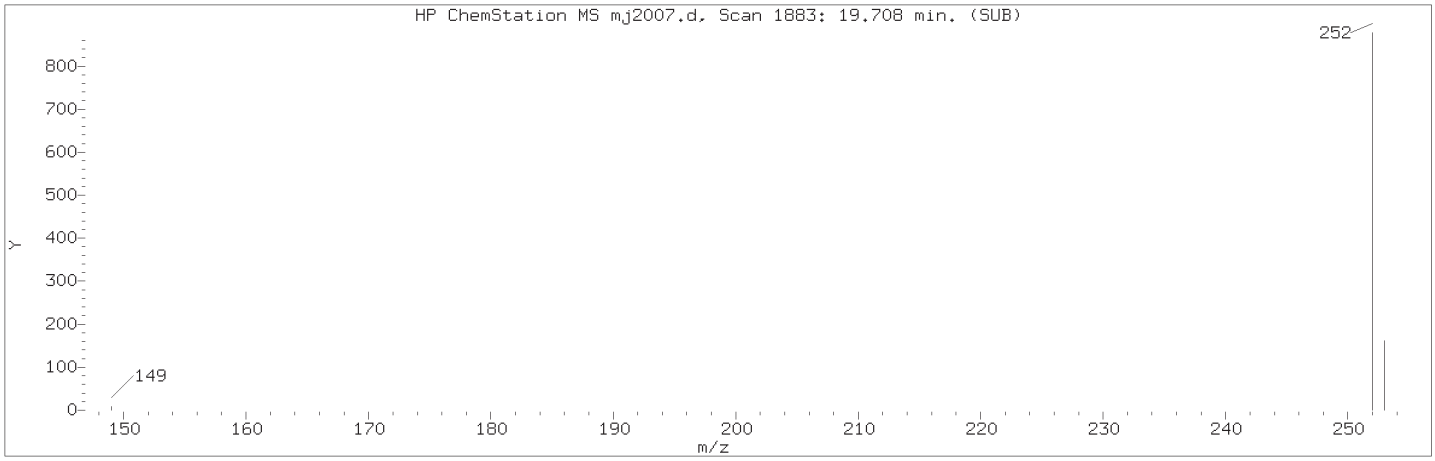
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

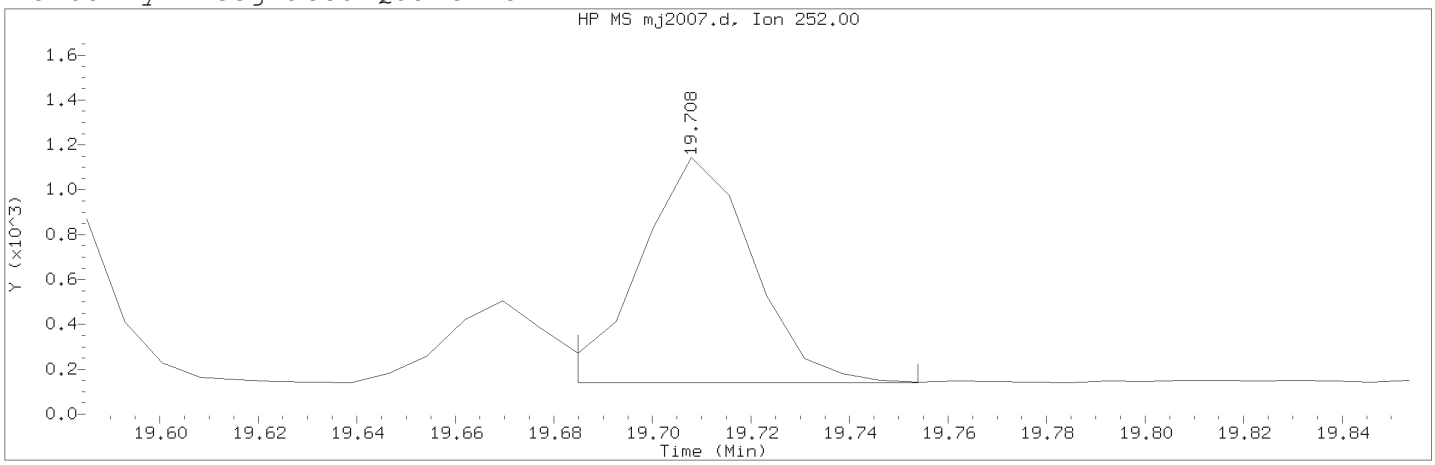
Compound Number	: 31	
Compound Name	: bis(2-Ethylhexyl)phthalate	
Scan Number	: 1584	
Retention Time (minutes)	: 17.415	
Quant Ion	: 149.00	
Area	: 11980	
On-column Amount (ng/ul)	: 0.0243	
Integration start scan	: 1572	Integration stop scan: 1601
Y at integration start	: 193	Y at integration end: 206

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

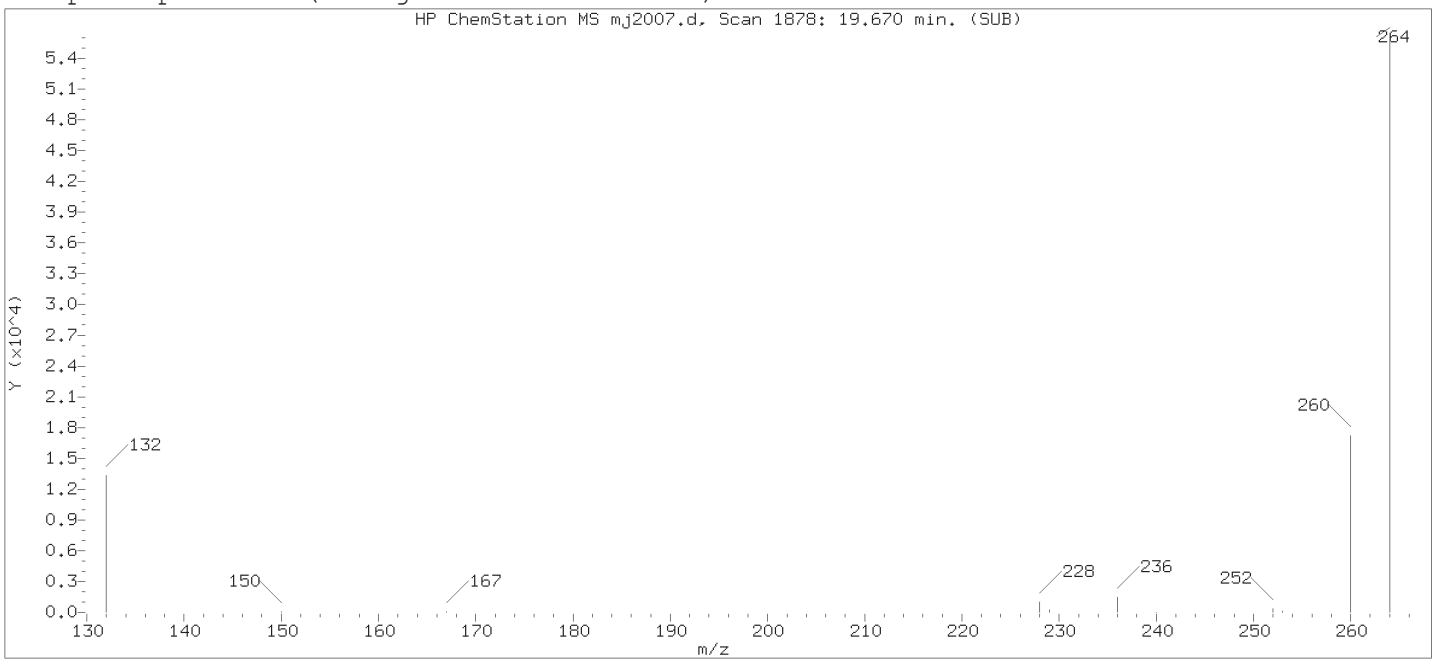
Compound Number : 45
Compound Name : Perylene
Scan Number : 1883
Retention Time (minutes) : 19.708
Quant Ion : 252.00
Area (flag) : 1598M
On-Column Amount (ng/ul) : 0.0025
Integration start scan : 1879 Integration stop scan: 1888
Y at integration start : 141 Y at integration end: 141

Reason for manual integration: improper integration

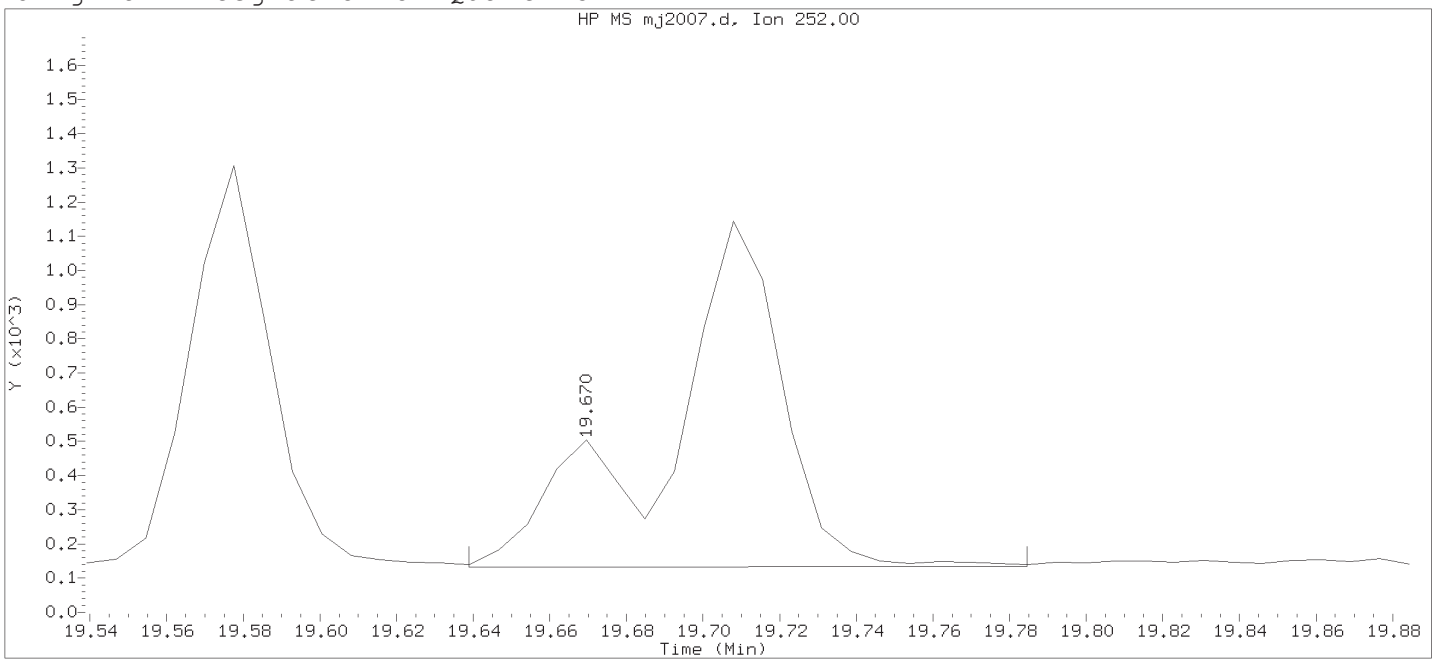
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

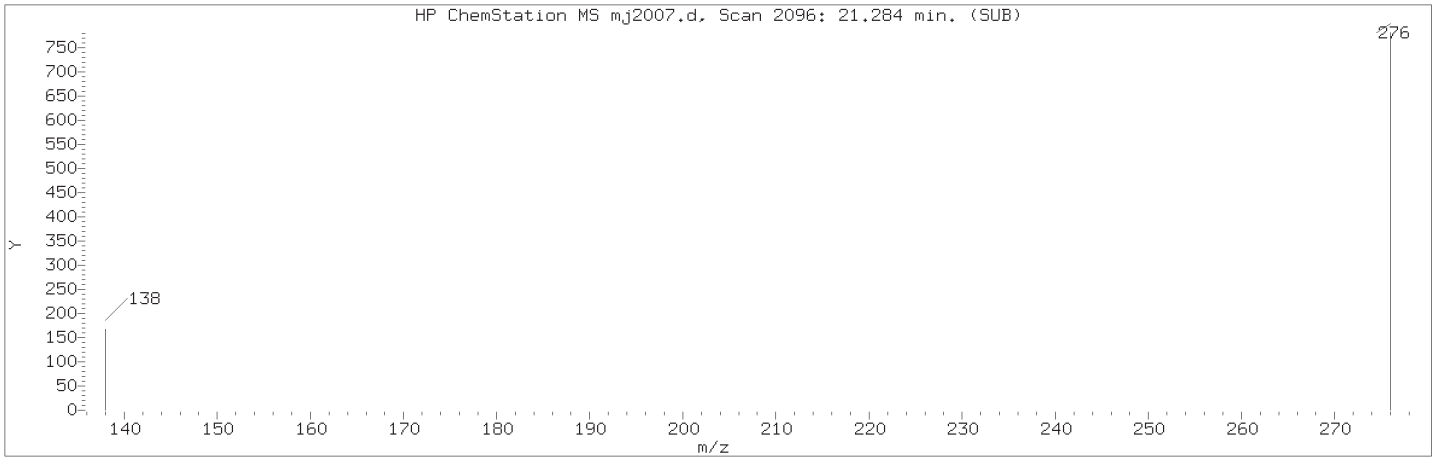
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

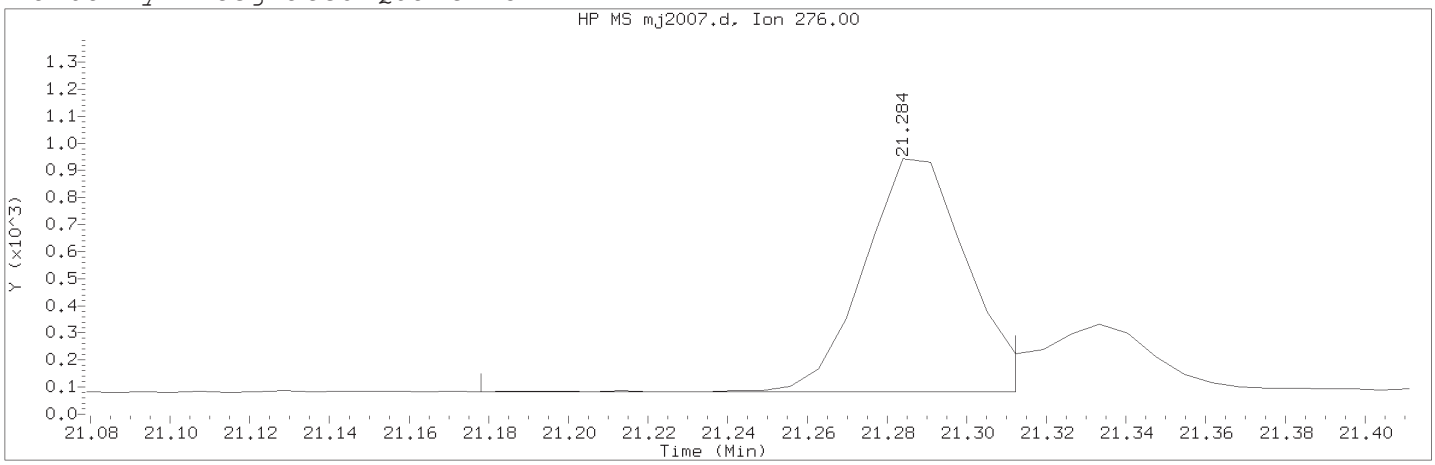
Compound Number	:	45
Compound Name	:	Perylene
Scan Number	:	1878
Retention Time (minutes)	:	19.670
Quant Ion	:	252.00
Area	:	2150
On-column Amount (ng/ul)	:	0.0034
Integration start scan	:	1873 Integration stop scan: 1892
Y at integration start	:	133 Y at integration end: 134

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira2135

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

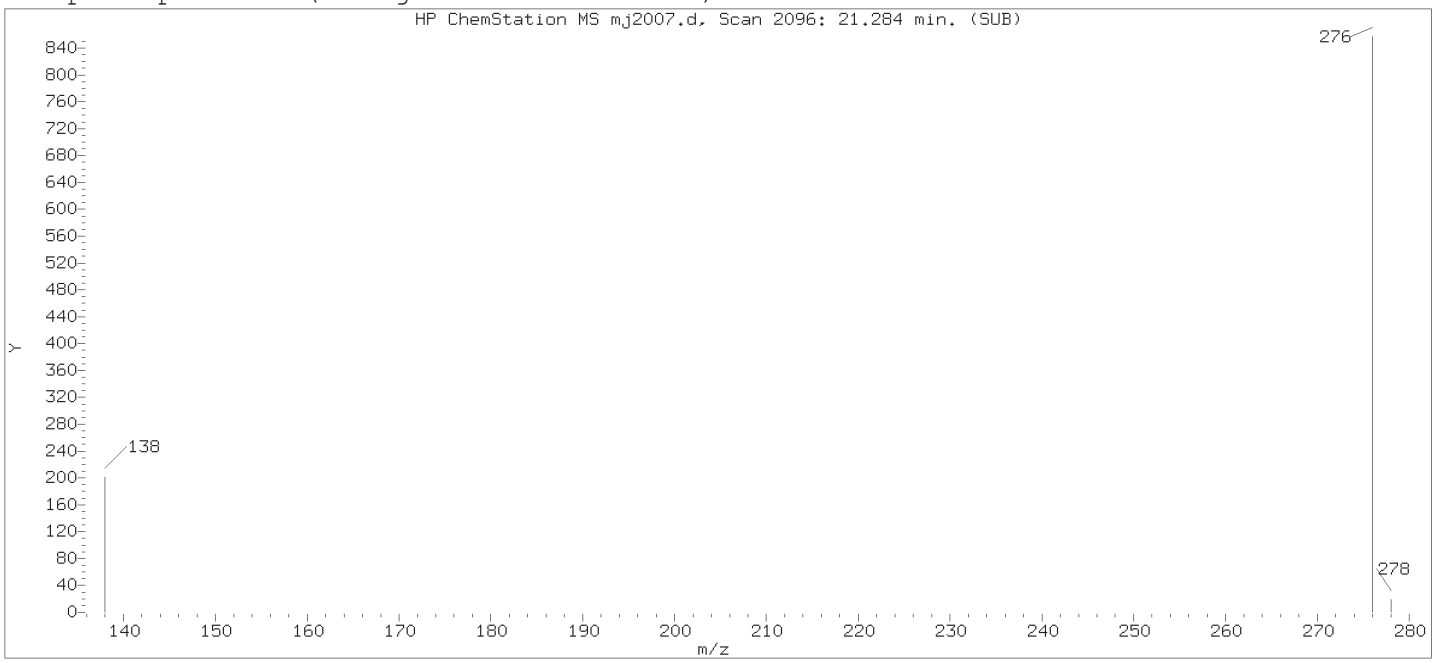
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2096
Retention Time (minutes) : 21.284
Quant Ion : 276.00
Area (flag) : 1565M
On-Column Amount (ng/ul) : 0.0028
Integration start scan : 2080 Integration stop scan: 2099
Y at integration start : 82 Y at integration end: 82

Reason for manual integration: improper integration

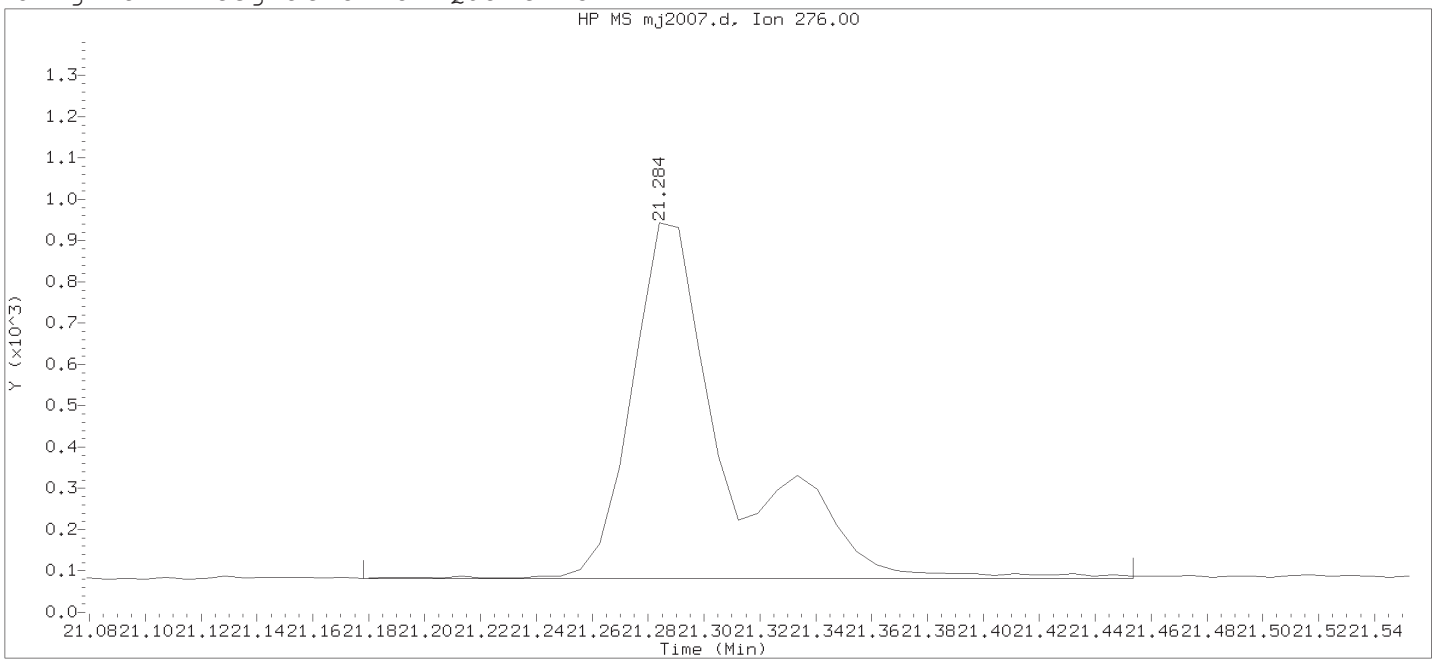
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

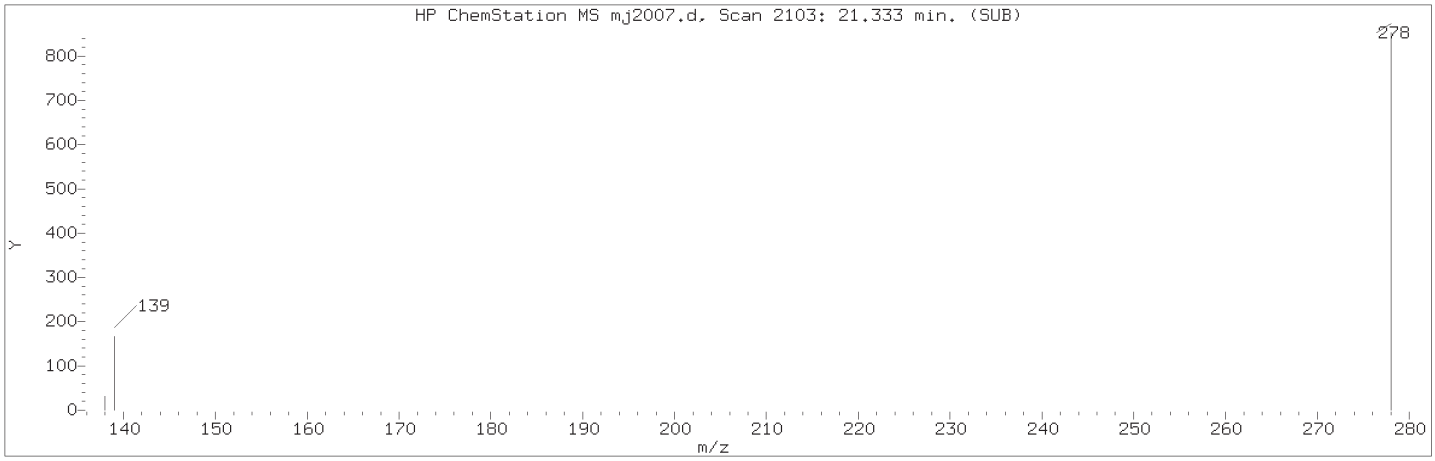
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

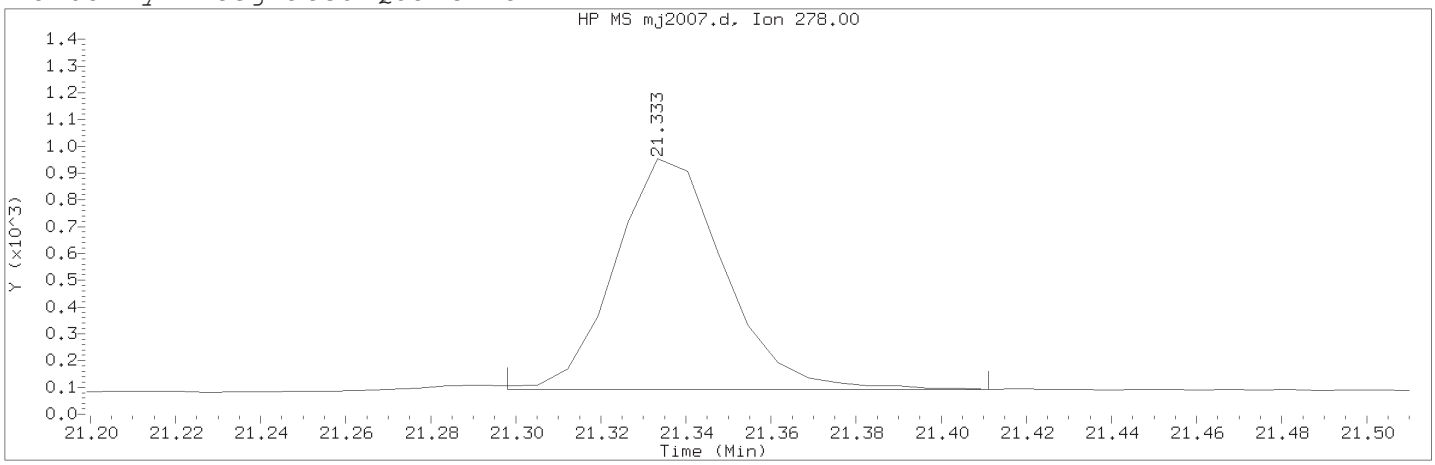
Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2096
Retention Time (minutes)	:	21.284
Quant Ion	:	276.00
Area	:	2073
On-column Amount (ng/ul)	:	0.0036
Integration start scan	:	2080 Integration stop scan: 2119
Y at integration start	:	82 Y at integration end: 82

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira.Beck

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 27-OCT-2018 17:17
Date, time and analyst ID of latest file update: 27-Oct-2018 17:17 knb25316

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

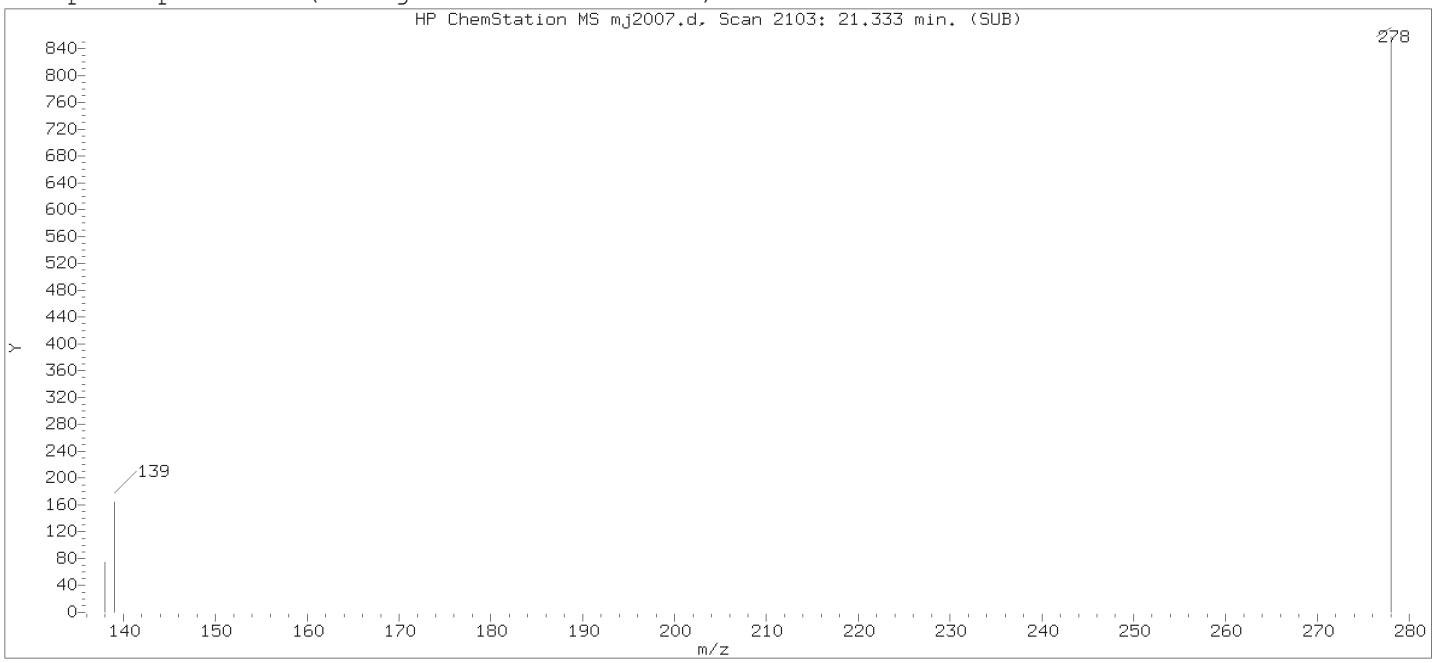
Compound Number : 40
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2103
Retention Time (minutes) : 21.333
Quant Ion : 278.00
Area (flag) : 1543M
On-Column Amount (ng/ul) : 0.0027
Integration start scan : 2097 Integration stop scan: 2113
Y at integration start : 92 Y at integration end: 92

Reason for manual integration: improper integration

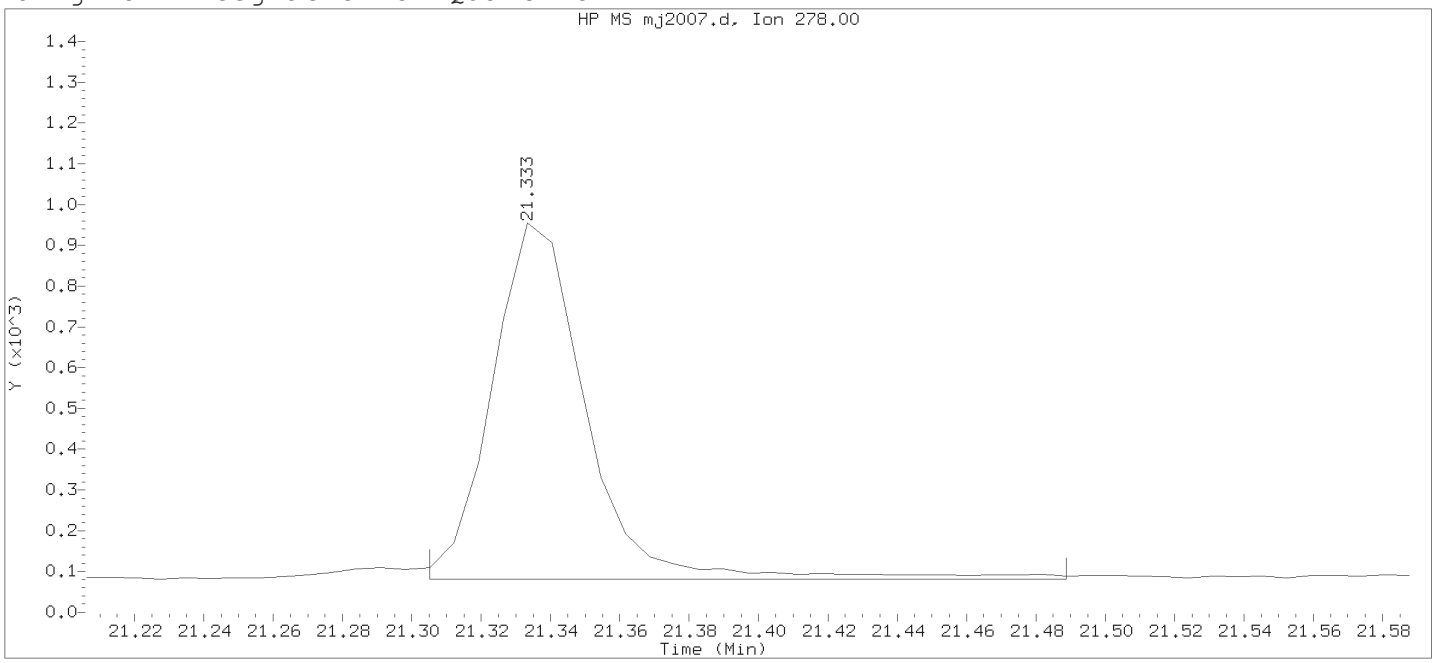
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/30/2018 at 08:42.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



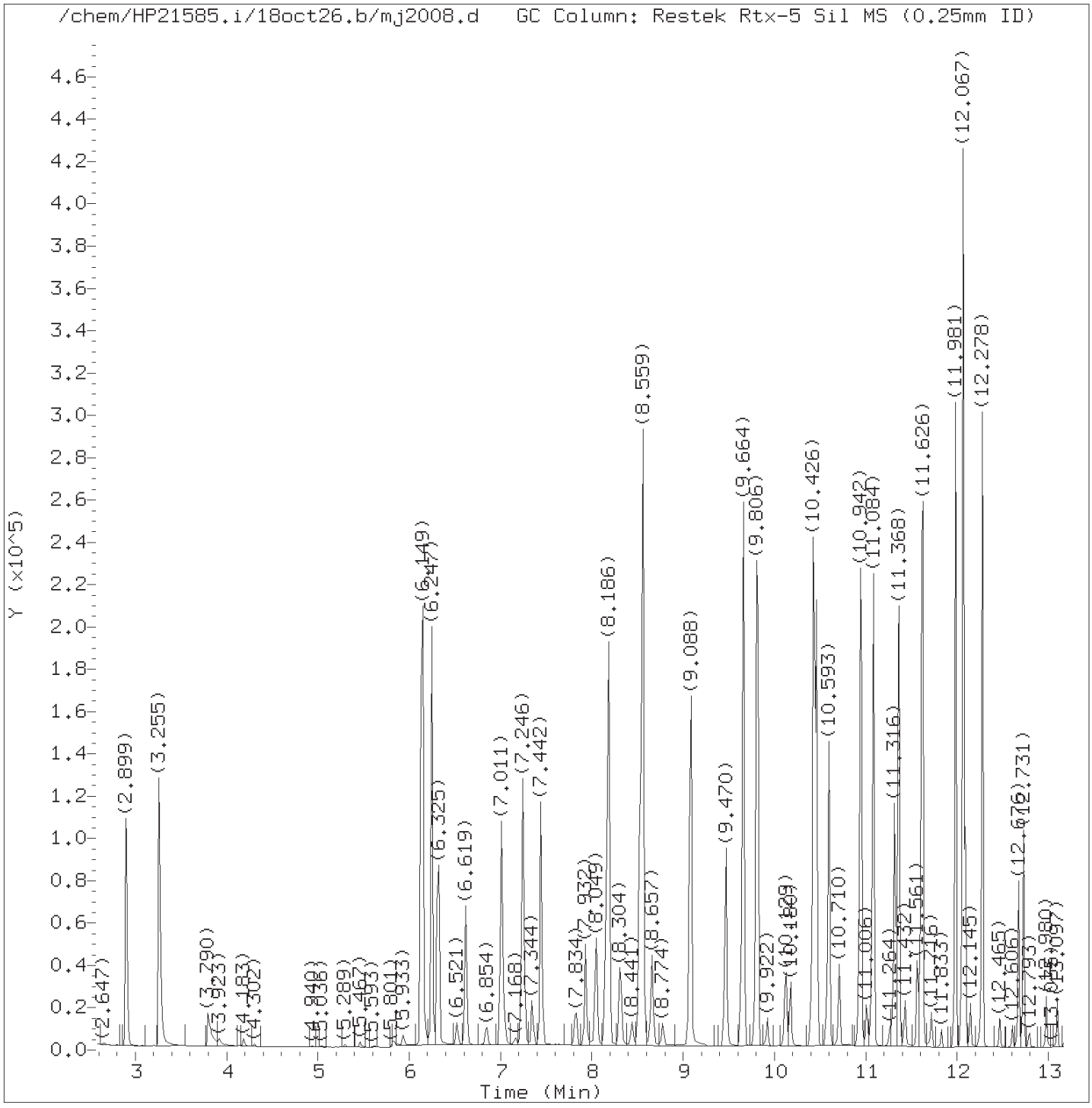
Data File: /chem/HP21585.i/18oct26.b/mj2007.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 10:32 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:00 Unknown

Sample Name: SSTD0.0025 Lab Sample ID: RVSIM2768

Compound Number	:	40
Compound Name	:	Dibenz(a,h)anthracene
Scan Number	:	2103
Retention Time (minutes)	:	21.333
Quant Ion	:	278.00
Area	:	1644
On-column Amount (ng/ul)	:	0.0028
Integration start scan	:	2098 Integration stop scan: 2124
Y at integration start	:	82 Y at integration end: 82

Digitally signed by Kira N. Beck on 10/27/2018 at 18:22.
Target 3.5 esignature user ID: Kira2139



Total Ion Chromatogram (TIC)

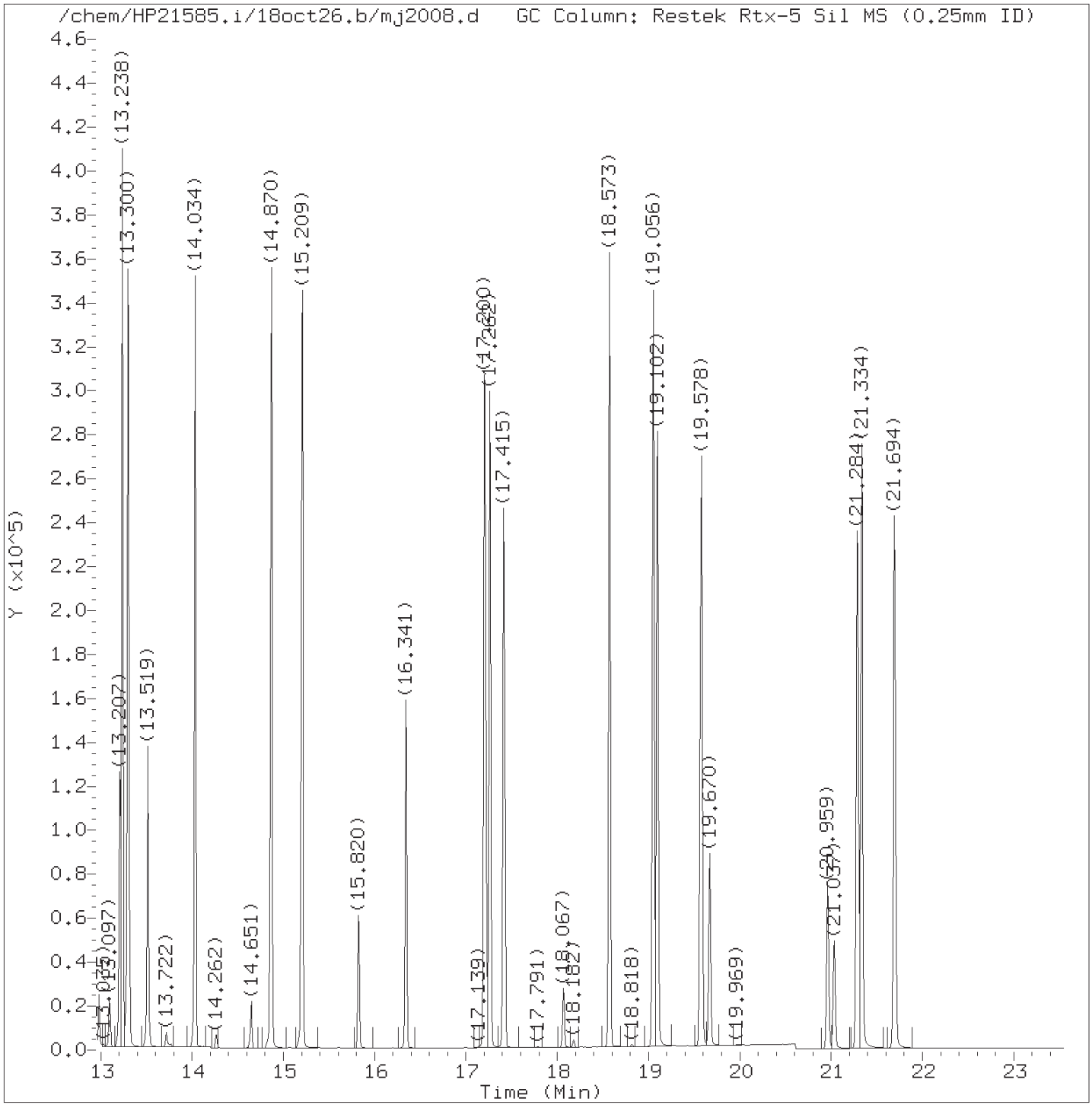
Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1icv
Calibration date and time: 30-OCT-2018 14:23
Date, time and analyst ID of latest file update: 30-Oct-2018 14:23 knb25316

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

Digitally signed by Kira N. Beck
on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1icv
Calibration date and time: 30-OCT-2018 14:23
Date, time and analyst ID of latest file update: 30-Oct-2018 14:23 knb25316

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

Digitally signed by Kira N. Beck
on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1icv
Calibration date and time: 30-OCT-2018 14:23
Date, time and analyst ID of latest file update: 30-Oct-2018 14:23 knb25316

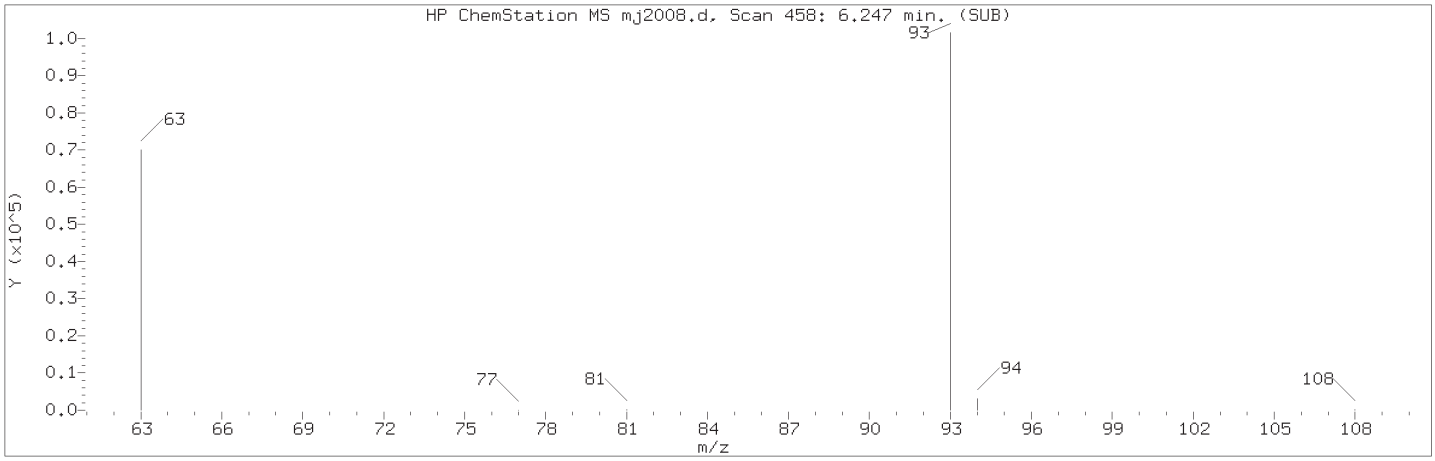
Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.906	88	68458	0.500
2) N-Nitrosodimethylamine	(1)	3.255	74	109638	0.553
4) bis(2-Chloroethyl)ether	(2)	6.247	93	120926M	0.572
5)*1,4-Dichlorobenzene-d4	(1)	6.619	152	49313	0.250
6)*Naphthalene-d8	(2)	8.519	136	138248	0.250
7) Naphthalene	(2)	8.559	128	348054	0.548
8) Quinoline	(2)	9.088	129	184773	0.484
9) 2-Methylnaphthalene	(2)	9.664	142	217951	0.557
11) 1-Methylnaphthalene	(2)	9.806	142	203104	0.525
12) Dimethylphthalate	(3)	10.942	163	255933	0.534
13) Acenaphthylene	(3)	11.084	152	304239	0.476
14)*Acenaphthene-d10	(3)	11.316	164	60667	0.250
15) Acenaphthene	(3)	11.368	154	187273M	0.483
16) Dibenzofuran	(3)	11.626	168	279562	0.539
17) Diethylphthalate	(3)	11.981	149	250896	0.526
18) Fluorene	(3)	12.067	166	238813	0.528
19) Hexachlorobenzene	(4)	12.731	284	73975	0.531
20)*Phenanthrene-d10	(4)	13.207	188	124161	0.250
21) Phenanthrene	(4)	13.238	178	354234	0.532
22) Anthracene	(4)	13.300	178	357404	0.546
23) Di-n-butylphthalate	(4)	14.034	149	373857	0.512
25) Fluoranthene	(4)	14.870	202	400620	0.539
26) Pyrene	(5)	15.209	202	403014	0.522
27) Butylbenzylphthalate	(5)	16.341	149	164652	0.512
28) Benzo(a)anthracene	(5)	17.200	228	351729	0.528
29)*Chrysene-d12	(5)	17.223	240	84907	0.250
30) Chrysene	(5)	17.262	228	352892	0.524
31) bis(2-Ethylhexyl)phthalate	(5)	17.415	149	238604	0.497
32) Di-n-octylphthalate	(6)	18.573	149	426077	0.513
33) Benzo(b)fluoranthene	(6)	19.056	252	360747	0.567
34) Benzo(k)fluoranthene	(6)	19.102	252	342222	0.539
37) Benzo(a)pyrene	(6)	19.578	252	329543	0.540
38)*Perylene-d12	(6)	19.670	264	80375	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.284	276	315036M	0.568
40) Dibenz(a,h)anthracene	(6)	21.334	278	300019	0.530
41) Benzo(g,h,i)perylene	(6)	21.694	276	341494	0.533

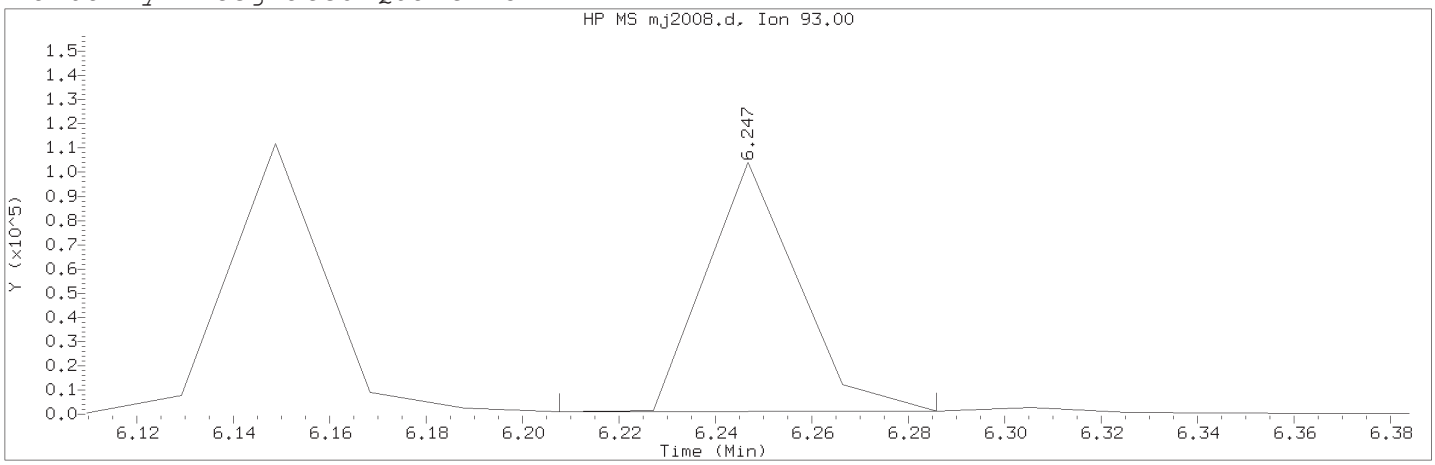
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kira N. Beck
on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1icv
Calibration date and time: 30-OCT-2018 14:23
Date, time and analyst ID of latest file update: 30-Oct-2018 14:23 knb25316

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

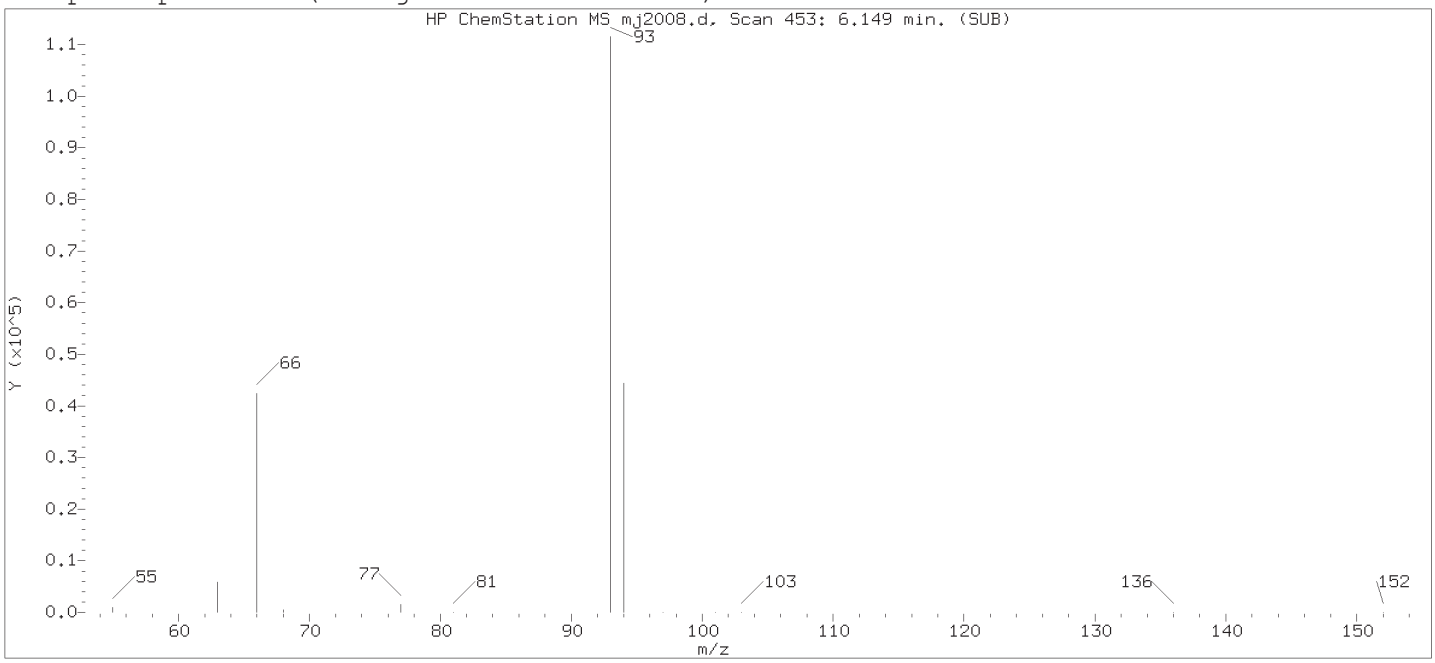
Compound Number : 4
Compound Name : bis(2-Chloroethyl)ether
Scan Number : 458
Retention Time (minutes) : 6.247
Quant Ion : 93.00
Area (flag) : 120926M
On-Column Amount (ng/ul) : 0.5717
Integration start scan : 455 Integration stop scan: 459
Y at integration start : 1064 Y at integration end: 1247

Reason for manual integration: improper integration

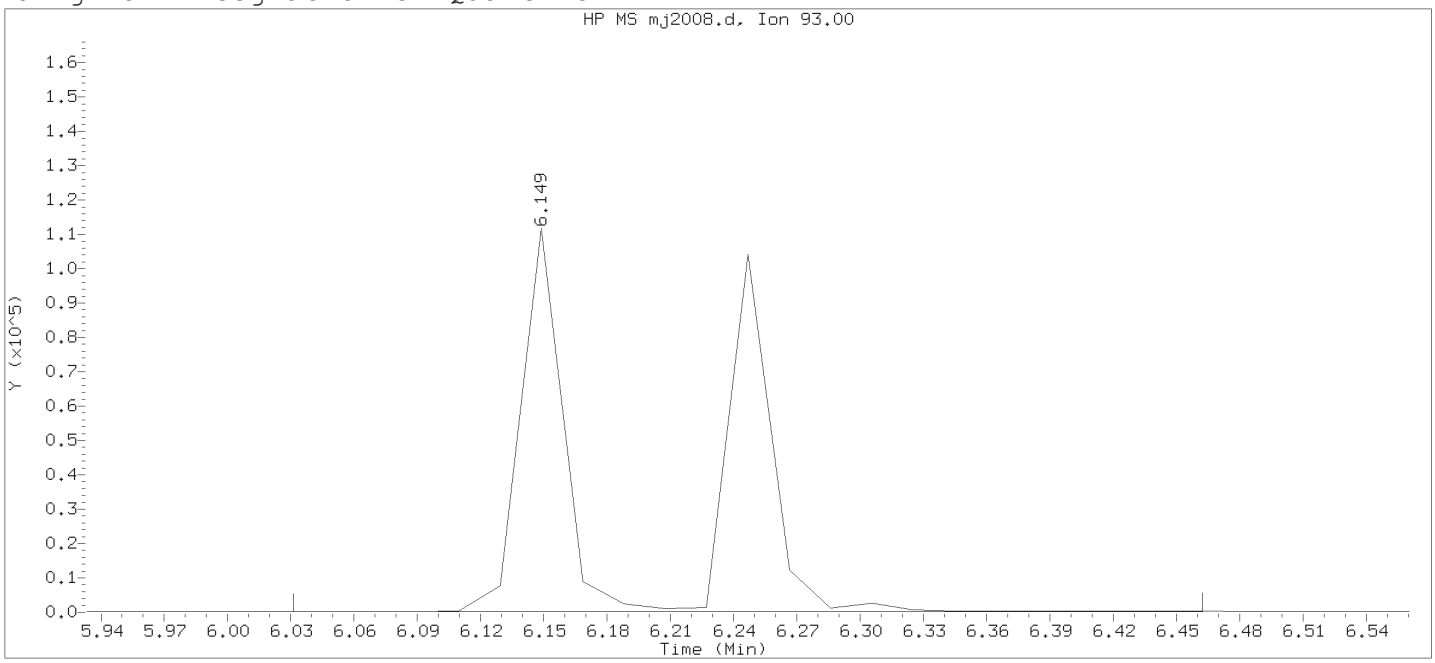
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/31/2018 at 07:37.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

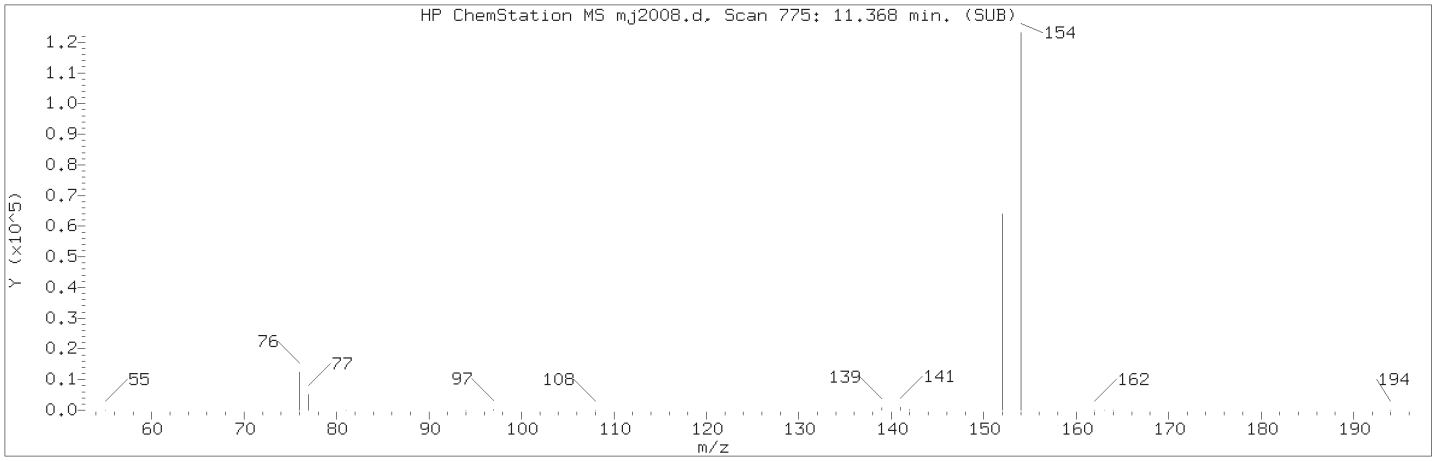
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:29 Unknown

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

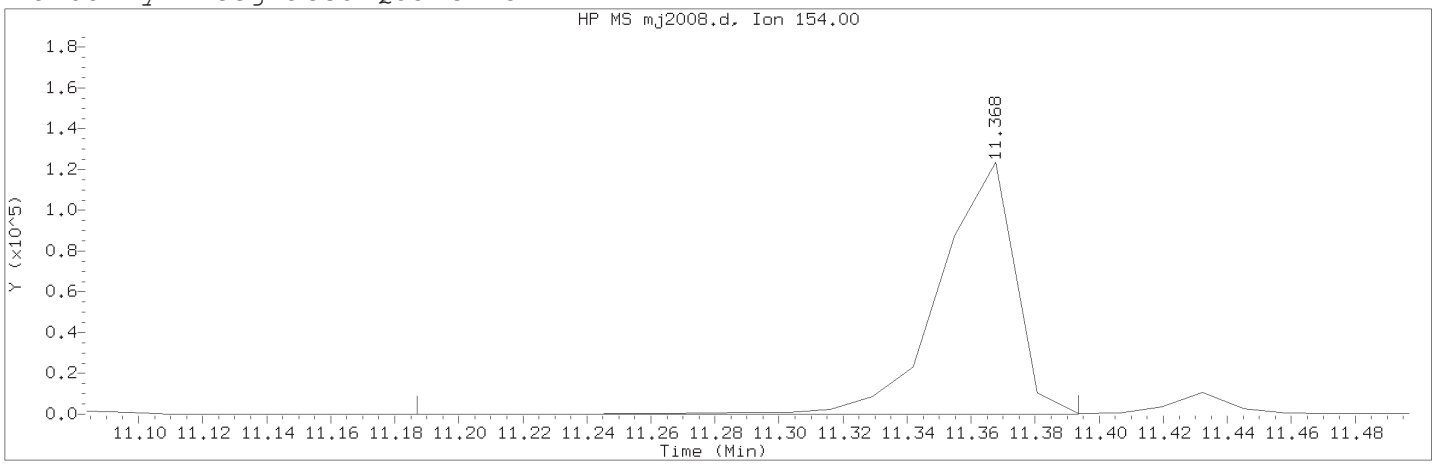
Compound Number	: 4		
Compound Name	: bis(2-Chloroethyl)ether		
Scan Number	: 453		
Retention Time (minutes)	: 6.149		
Quant Ion	: 93.00		
Area	: 298499		
On-column Amount (ng/ul)	: 1.3229		
Integration start scan	: 446	Integration stop scan:	468
Y at integration start	: 156	Y at integration end:	210

Digitally signed by Kira N. Beck on 10/30/2018 at 14:24.
Target 3.5 esignature used: D14 Page 2134

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1icv
Calibration date and time: 30-OCT-2018 14:23
Date, time and analyst ID of latest file update: 30-Oct-2018 14:23 knb25316

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

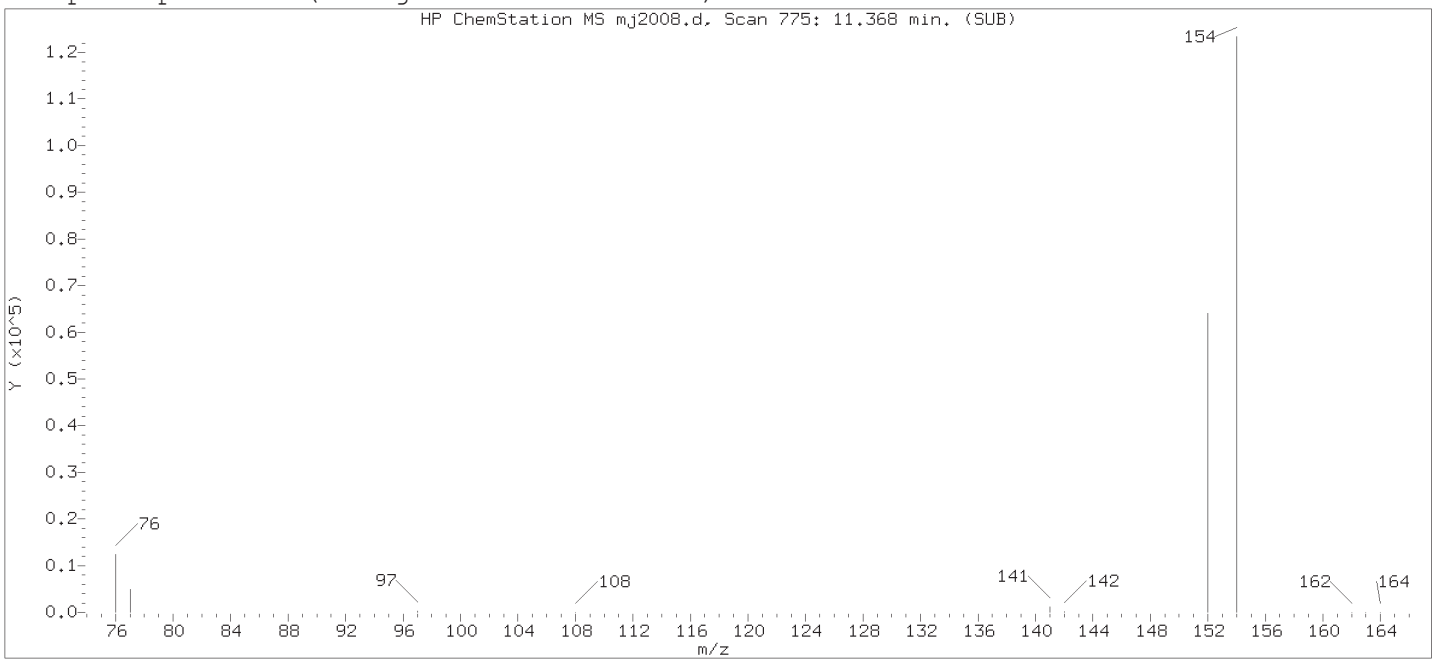
Compound Number : 15
Compound Name : Acenaphthene
Scan Number : 775
Retention Time (minutes) : 11.368
Quant Ion : 154.00
Area (flag) : 187273M
On-Column Amount (ng/ul) : 0.4826
Integration start scan : 760 Integration stop scan: 776
Y at integration start : 58 Y at integration end: 58

Reason for manual integration: improper integration

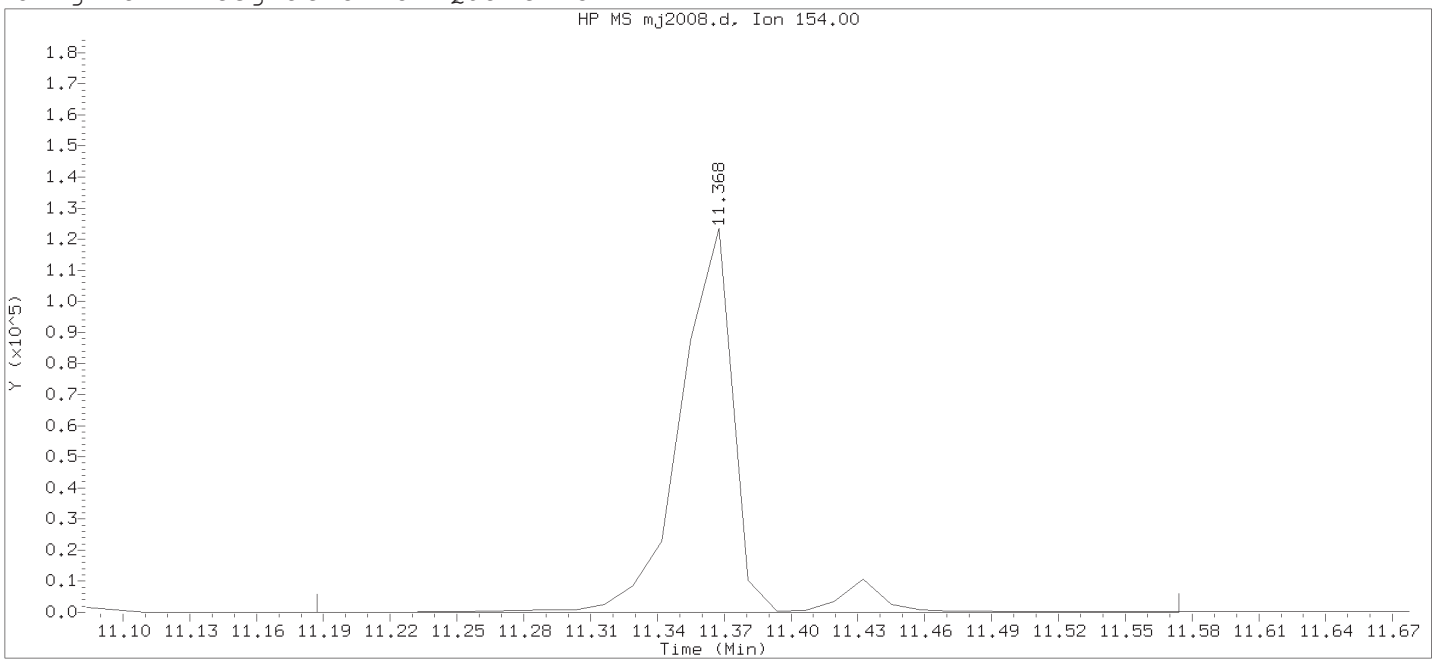
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/31/2018 at 07:37.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

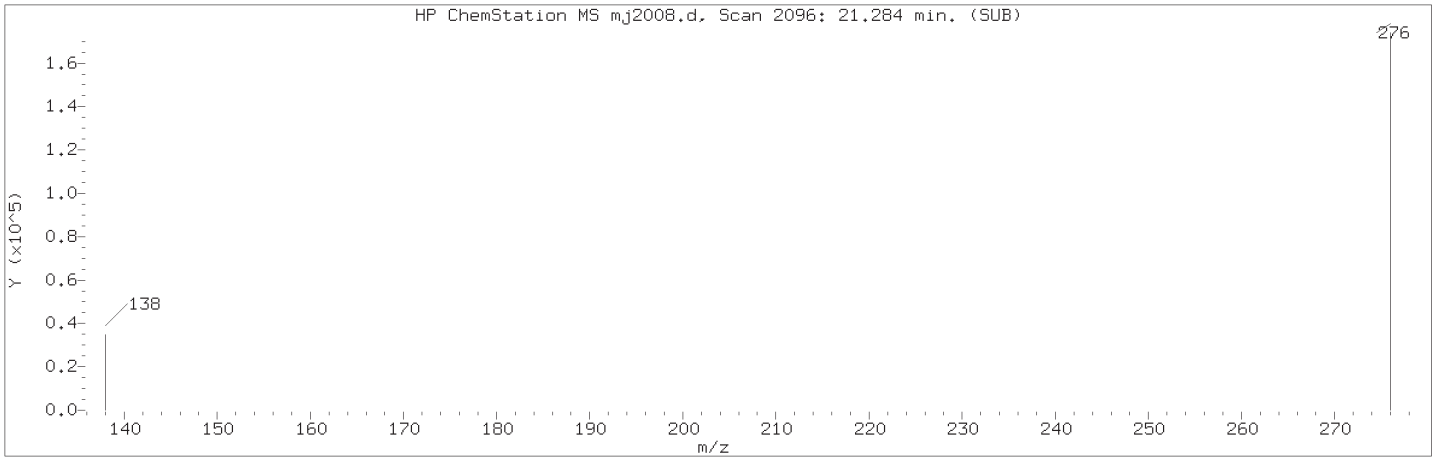
Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:29 Unknown

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

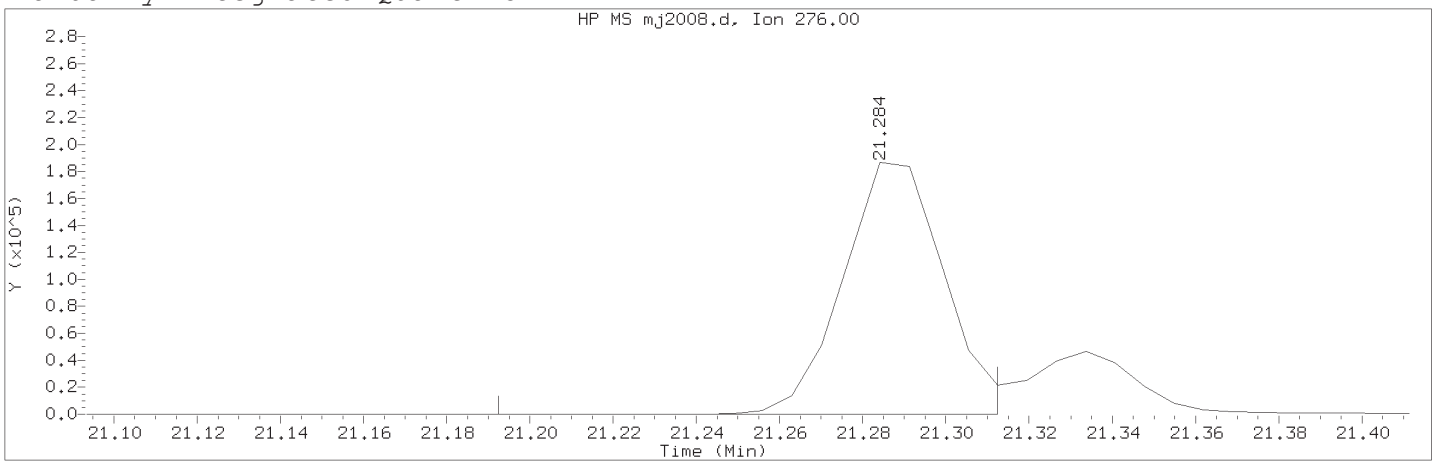
Compound Number	: 15		
Compound Name	: Acenaphthene		
Scan Number	: 775		
Retention Time (minutes)	: 11.368		
Quant Ion	: 154.00		
Area	: 214789		
On-column Amount (ng/ul)	: 0.5500		
Integration start scan	: 760	Integration stop scan:	790
Y at integration start	: 58	Y at integration end:	58

Digitally signed by Kira N. Beck on 10/30/2018 at 14:24.
Target 3.5 esignature used: D14

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1icv
Calibration date and time: 30-OCT-2018 14:23
Date, time and analyst ID of latest file update: 30-Oct-2018 14:23 knb25316

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

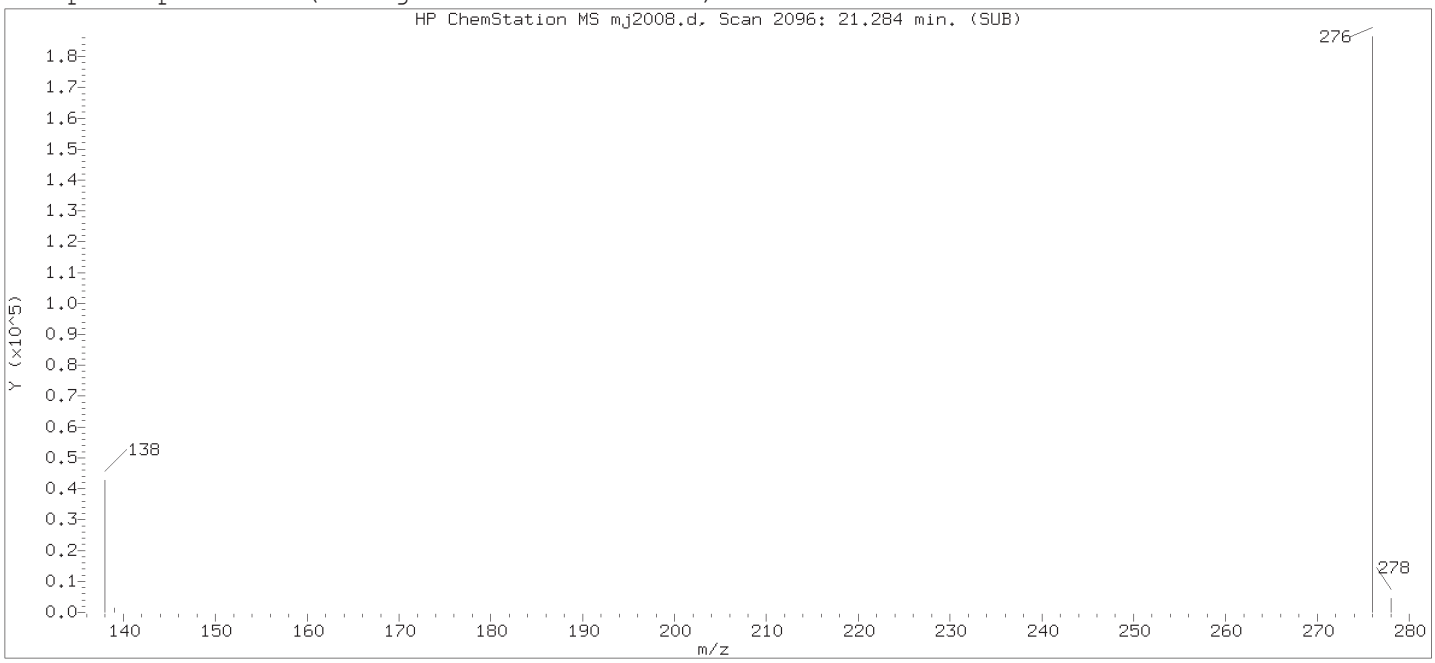
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2096
Retention Time (minutes) : 21.284
Quant Ion : 276.00
Area (flag) : 315036M
On-Column Amount (ng/ul) : 0.5683
Integration start scan : 2082 Integration stop scan: 2099
Y at integration start : 101 Y at integration end: 101

Reason for manual integration: improper integration

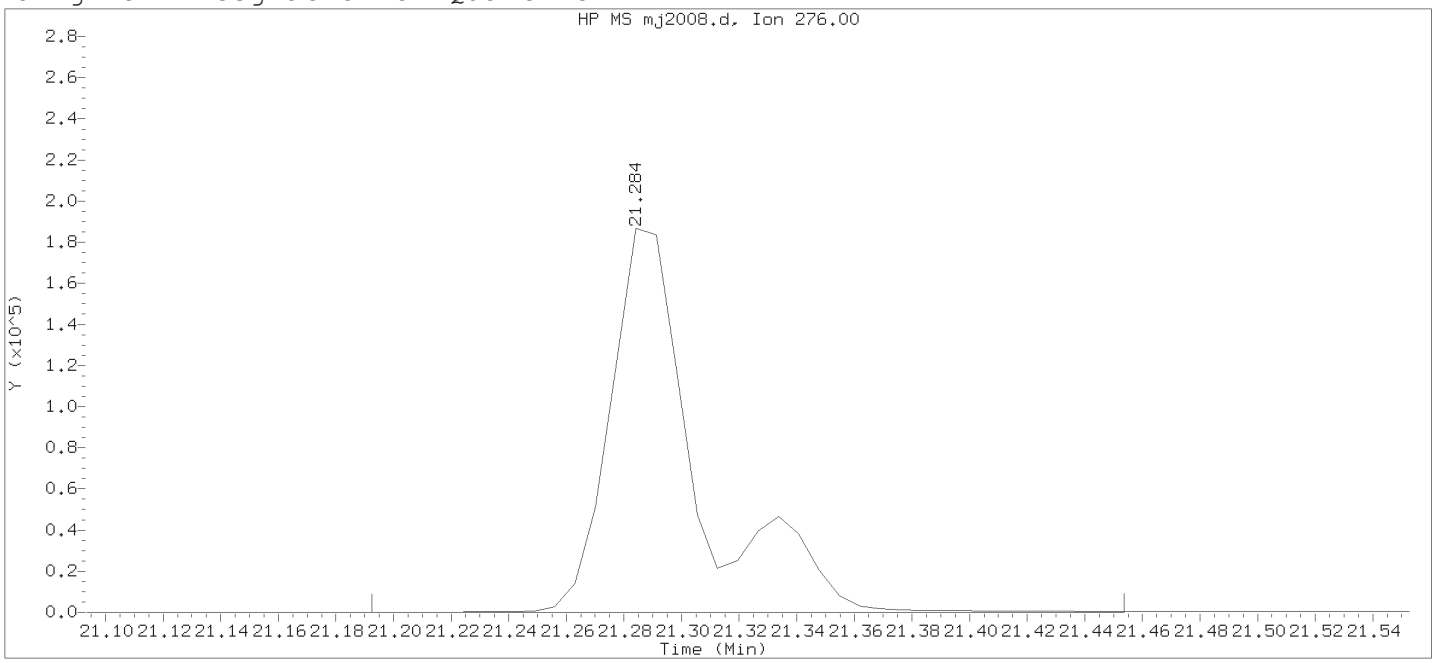
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Holly B. Ziegler on 10/31/2018 at 07:37.
PARALLAX ID: hb01996

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18oct26.b/mj2008.d Instrument ID: HP21585.i
Injection date and time: 26-OCT-2018 11:01 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18oct26.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 26-OCT-2018 10:31
Date, time and analyst ID of latest file update: 26-Oct-2018 11:29 Unknown

Sample Name: SSTD0.50 Lab Sample ID: RVSICV2788

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2096
Retention Time (minutes)	:	21.284
Quant Ion	:	276.00
Area	:	394789
On-column Amount (ng/ul)	:	0.7034
Integration start scan	:	2082 Integration stop scan: 2119
Y at integration start	:	101 Y at integration end: 101

Digitally signed by Kira N. Beck on 10/30/2018 at 14:24.
Target 3.5 esignature user ID: Kira2138

Data File: /chem/HP21585.i/18nov05a.b/mk0200.d

Date : 05-NOV-2018 17:52

Client ID: DFTPP12.5

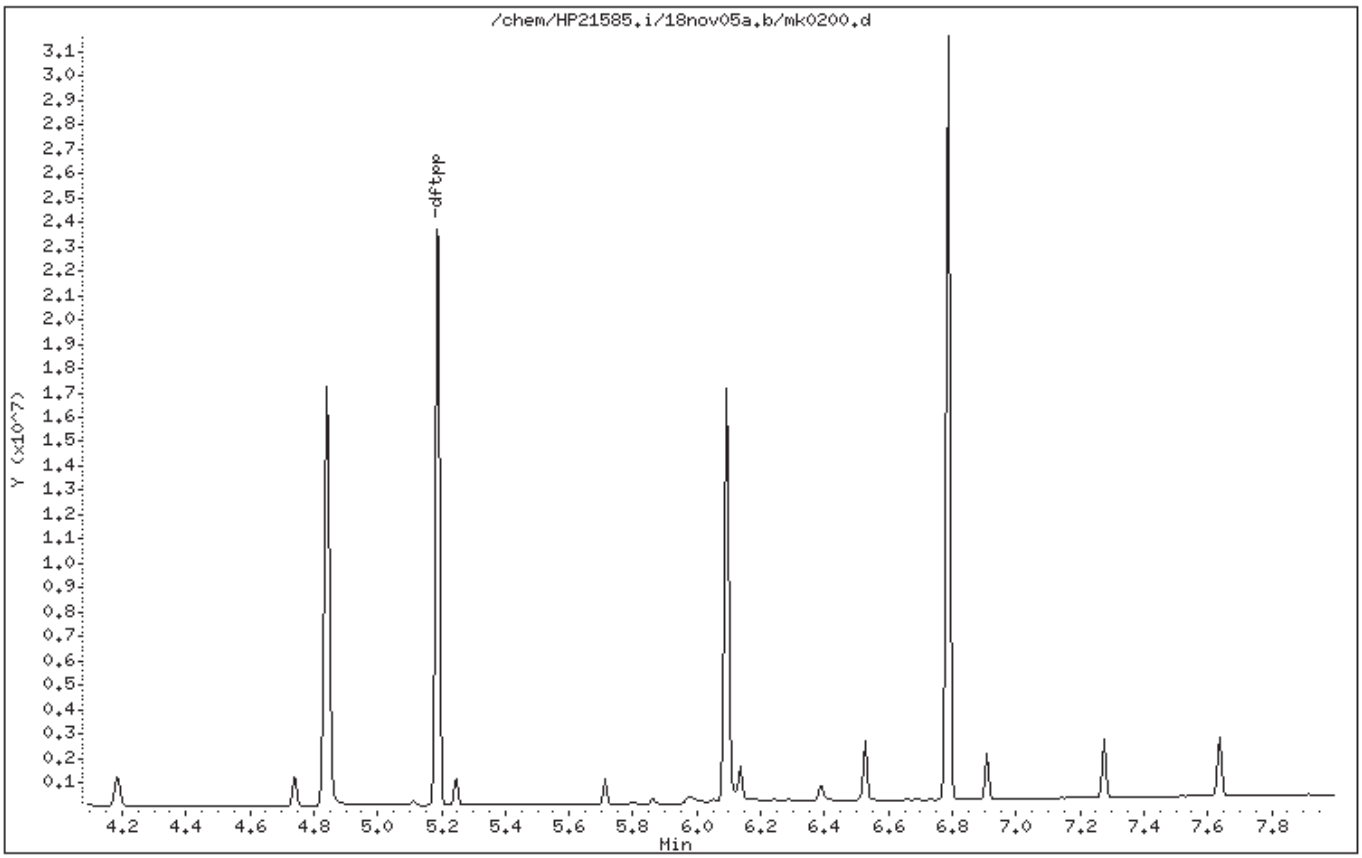
Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Ashley R. Transue on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP21585.i/18nov05a.b/mk0200.d

Date : 05-NOV-2018 17:52

Client ID: DFTPP12.5

Instrument: HP21585.i

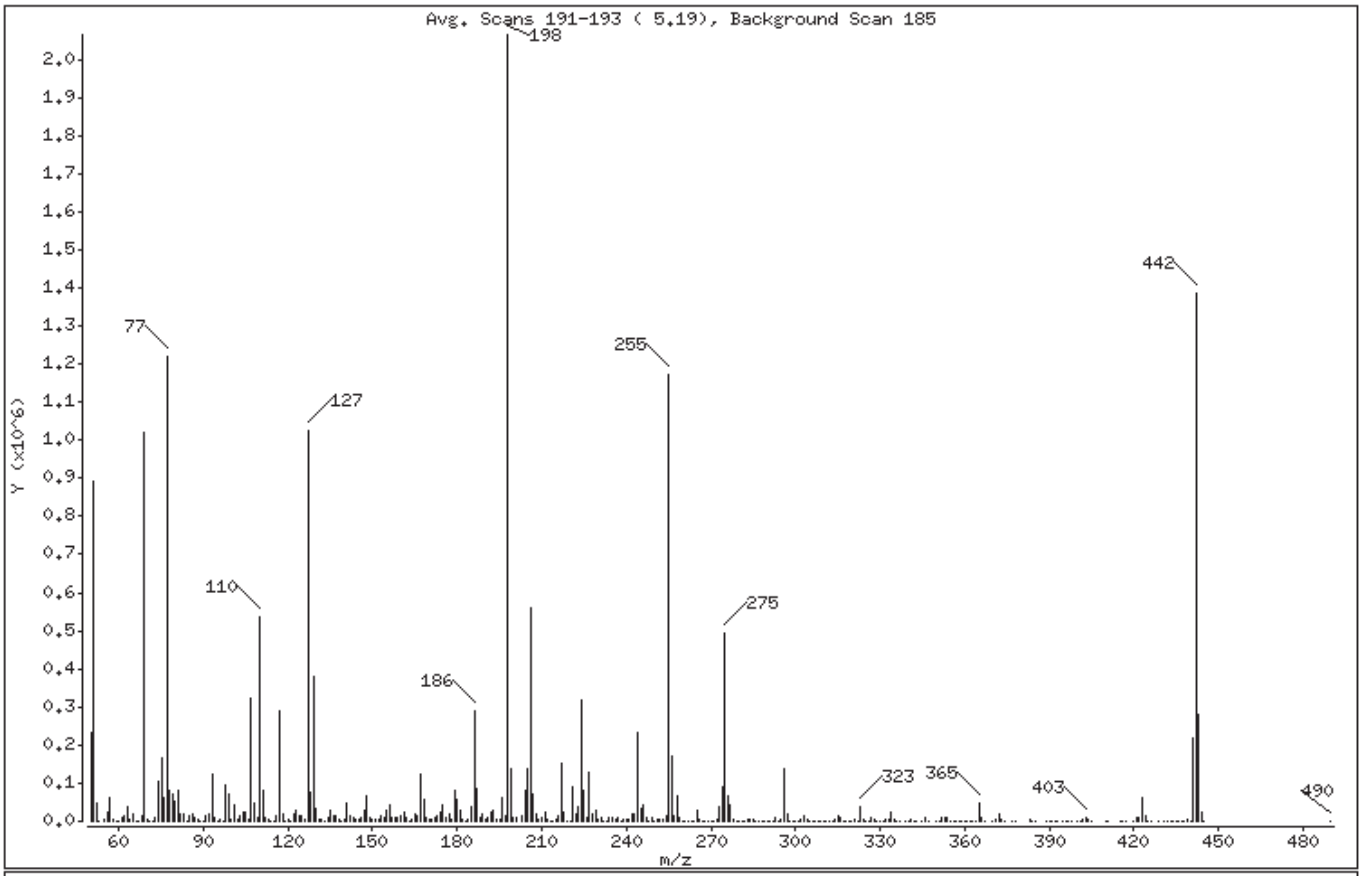
Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

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	43.16
68	Less than 2.00% of mass 69	0.74 (1.50)
69	Mass 69 relative abundance	49.49
70	Less than 2.00% of mass 69	0.26 (0.52)
127	10.00 - 80.00% of mass 198	49.62
197	Less than 2.00% of mass 198	0.76
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	24.01
365	Greater than 1.00% of mass 198	2.41
441	0.01 - 24.00% of mass 442	10.47 (15.62)
442	50.00 - 99.99% of mass 198	67.07
443	15.00 - 24.00% of mass 442	13.63 (20.32)

Digitally signed by Ashley R. Transue on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Date : 05-NOV-2018 17:52

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: mk0200.d
Spectrum: Avg. Scans 191-193 (5.19), Background Scan 185
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	233024	143.00	11345	236.00	6740	328.00	3760
51.00	891072	144.00	2731	237.00	9762	329.00	754
52.00	46080	145.00	2995	238.00	1760	330.00	223
53.00	1874	146.00	8498	239.00	5254	331.00	189
55.00	3773	147.00	26712	240.00	4162	332.00	2780
56.00	25040	148.00	66400	241.00	6590	333.00	3555
57.00	60536	149.00	11531	242.00	18448	334.00	24808
58.00	2672	150.00	3452	243.00	18512	335.00	6227
59.00	974	151.00	6490	244.00	234240	336.00	911
60.00	607	152.00	3420	245.00	32592	337.00	117
61.00	10403	153.00	16560	246.00	44624	339.00	573
62.00	13965	154.00	11698	247.00	9594	340.00	430
63.00	36968	155.00	29304	248.00	2225	341.00	4300
64.00	5477	156.00	43536	249.00	8807	342.00	1306
65.00	18792	157.00	7428	250.00	1655	343.00	438
66.00	1133	158.00	8504	251.00	2550	345.00	203
67.00	761	159.00	7243	252.00	2427	346.00	8651
68.00	15277	160.00	16408	253.00	5805	347.00	1298
69.00	1021760	161.00	22584	254.00	12955	350.00	438
70.00	5271	162.00	7210	255.00	1173504	351.00	911
71.00	724	163.00	1883	256.00	171328	352.00	11783
72.00	937	164.00	2993	257.00	13405	353.00	7413
73.00	7601	165.00	17920	258.00	66320	354.00	11763
74.00	105032	166.00	16312	259.00	10625	355.00	2301
75.00	165248	167.00	122400	260.00	1910	356.00	393
76.00	62552	168.00	56288	261.00	2149	357.00	212
77.00	1218048	169.00	8738	262.00	479	358.00	249
78.00	81824	170.00	3256	263.00	688	359.00	998
79.00	70384	171.00	4454	264.00	1577	360.00	162
80.00	53928	172.00	8867	265.00	27736	361.00	446
81.00	78952	173.00	12584	266.00	3343	362.00	180
82.00	20008	174.00	21696	267.00	255	363.00	332
83.00	17056	175.00	42256	268.00	489	364.00	91
84.00	1637	176.00	10707	269.00	419	365.00	49808
85.00	12131	177.00	17392	270.00	1139	366.00	7316

Digitally signed by Ashley R. Transue on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Date : 05-NOV-2018 17:52

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: mk0200.d
Spectrum: Avg. Scans 191-193 (5.19), Background Scan 185
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	20704	178.00	7116	271.00	2204	367.00	606
87.00	9553	179.00	80624	272.00	3516	370.00	1246
88.00	3564	180.00	55680	273.00	36816	371.00	2563
89.00	2065	181.00	26272	274.00	88248	372.00	18192
90.00	429	182.00	3689	275.00	495744	373.00	4328
91.00	15099	183.00	1864	276.00	65848	374.00	570
92.00	17424	184.00	5839	277.00	41072	377.00	423
93.00	122296	185.00	39568	278.00	6696	378.00	54
94.00	8161	186.00	288512	279.00	1486	383.00	4855
95.00	1989	187.00	84368	280.00	295	384.00	1396
96.00	5184	188.00	8699	281.00	457	385.00	430
97.00	1271	189.00	17968	282.00	947	389.00	174
98.00	95328	190.00	2867	283.00	4130	390.00	2101
99.00	72208	191.00	8561	284.00	2935	391.00	1865
100.00	5774	192.00	25784	285.00	6742	392.00	1282
101.00	42112	193.00	29792	286.00	1551	393.00	324
102.00	2628	194.00	6836	287.00	285	395.00	209
103.00	12423	195.00	4119	288.00	671	396.00	80
104.00	25256	196.00	59648	289.00	1995	397.00	204
105.00	24824	197.00	15649	290.00	1438	398.00	200
106.00	6848	198.00	2064384	291.00	1039	400.00	60
107.00	322496	199.00	139200	292.00	1859	401.00	1216
108.00	48568	200.00	11680	293.00	9019	402.00	6545
109.00	8317	201.00	8363	294.00	2347	403.00	10077
110.00	536000	203.00	15702	295.00	2813	404.00	4083
111.00	82496	204.00	80744	296.00	136704	405.00	683
112.00	9740	205.00	136640	297.00	18816	410.00	339
113.00	3646	206.00	562304	298.00	1194	411.00	50
114.00	856	207.00	73304	299.00	364	415.00	615
115.00	1088	208.00	18928	300.00	174	416.00	70
116.00	16512	209.00	5129	301.00	1547	417.00	178
117.00	290496	210.00	8702	302.00	2454	420.00	277
118.00	20152	211.00	22448	303.00	15168	421.00	8719
119.00	1980	212.00	3830	304.00	3988	422.00	8244
120.00	3413	213.00	1680	305.00	632	423.00	59720

Digitally signed by Ashley R. Transue on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Date : 05-NOV-2018 17:52

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

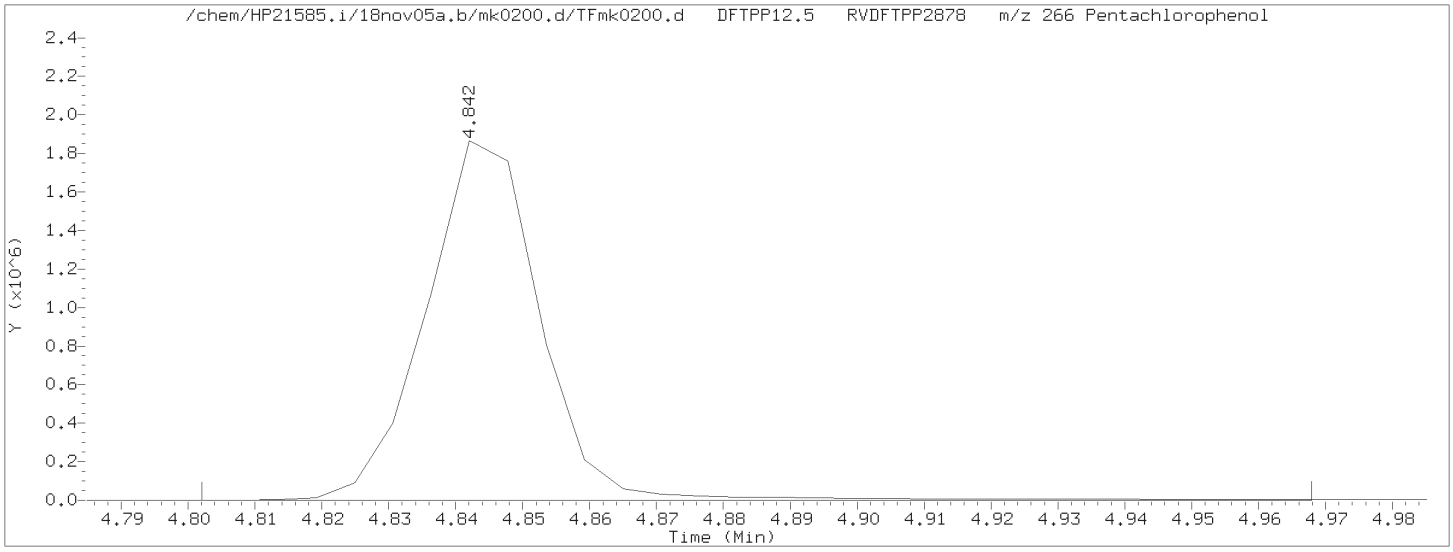
Data File: mk0200.d
Spectrum: Avg. Scans 191-193 (5.19), Background Scan 185
Location of Maximum: 198.00
Number of points: 366

m/z	Y	m/z	Y	m/z	Y	m/z	Y
121.00	1046	214.00	925	306.00	96	424.00	12954
122.00	17288	215.00	6364	307.00	180	425.00	1300
123.00	29296	216.00	14151	308.00	1576	426.00	124
124.00	12976	217.00	153152	309.00	1290	429.00	143
125.00	13130	218.00	21400	310.00	1855	431.00	246
126.00	5515	219.00	1834	311.00	316	432.00	224
127.00	1024384	220.00	270	312.00	500	433.00	463
128.00	76856	221.00	91168	313.00	1366	434.00	538
129.00	380608	222.00	19712	314.00	6170	435.00	621
130.00	32688	223.00	35728	315.00	13410	436.00	725
131.00	6040	224.00	319744	316.00	7749	437.00	1146
132.00	3270	225.00	81136	317.00	1232	438.00	1342
133.00	1120	226.00	8745	318.00	204	439.00	2758
134.00	9532	227.00	129584	319.00	150	440.00	1054
135.00	30688	228.00	18792	320.00	507	441.00	216256
136.00	12818	229.00	28808	321.00	3684	442.00	1384448
137.00	15262	230.00	4257	322.00	2035	443.00	281344
138.00	3640	231.00	10702	323.00	37624	444.00	24832
139.00	2239	232.00	2051	324.00	6958	445.00	1307
140.00	5398	233.00	2131	325.00	697	490.00	52
141.00	49160	234.00	8165	326.00	779		
142.00	15937	235.00	10032	327.00	7213		

Digitally signed by Ashley R. Transue on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Assessment of GC Column Performance and Injection Port Inertness for

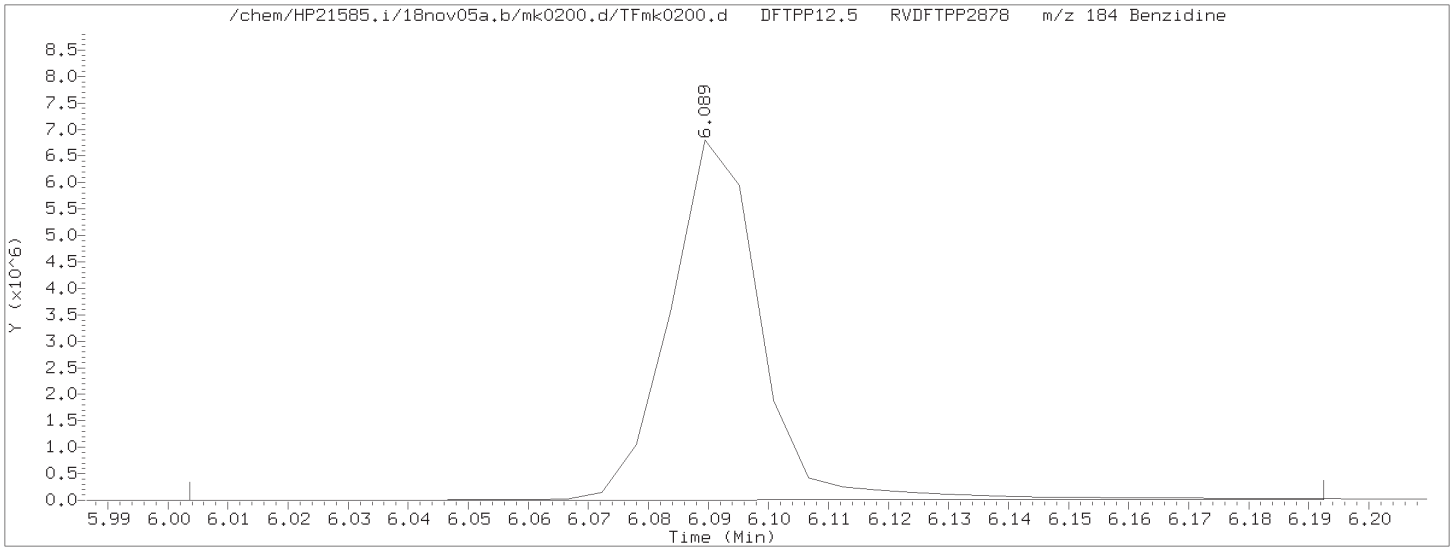
Instrument ID: HP21585.i Injection Date: 05-NOV-2018 17:52 Operator: ceb05247



Pentachlorophenol EICP peak height = 1866752 EICP peak height at 10% = 186675 Pentachlorophenol EICP area = 2213959

Pentachlorophenol EICP peak apex (min.) = 4.842
RT at 10% of front half of EICP (min.) = 4.827 'Front' peak width (min.) = 0.0153666667
RT at 10% of back half of EICP (min.) = 4.860 'Tailing' peak width (min.) = 0.0180333333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0180333333}{0.0153666667} = 1.174$



Benzidine EICP peak height = 6791532 EICP peak height at 10% = 679153 Benzidine EICP area = 7169589

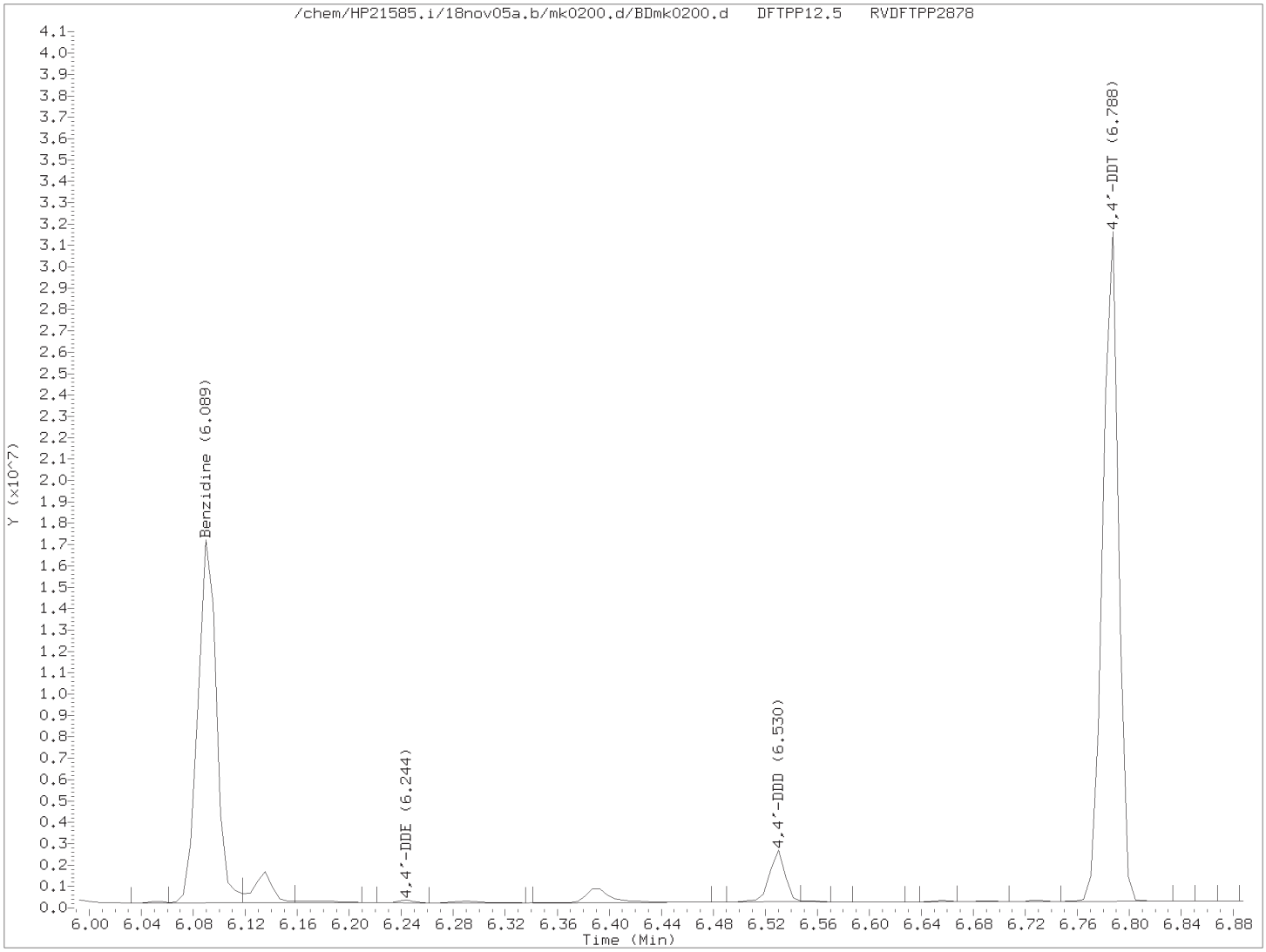
Benzidine EICP peak apex (min.) = 6.089
RT at 10% of front half of EICP (min.) = 6.076 'Front' peak width (min.) = 0.0136833333
RT at 10% of back half of EICP (min.) = 6.106 'Tailing' peak width (min.) = 0.0160833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0160833333}{0.0136833333} = 1.175$

Secondary review performed and digitally signed by Irene L. Dodd on 11/07/2018 at 13:02. PARALLAX ID: ild00415

Assessment of GC Column Performance and Injection Port Inertness for

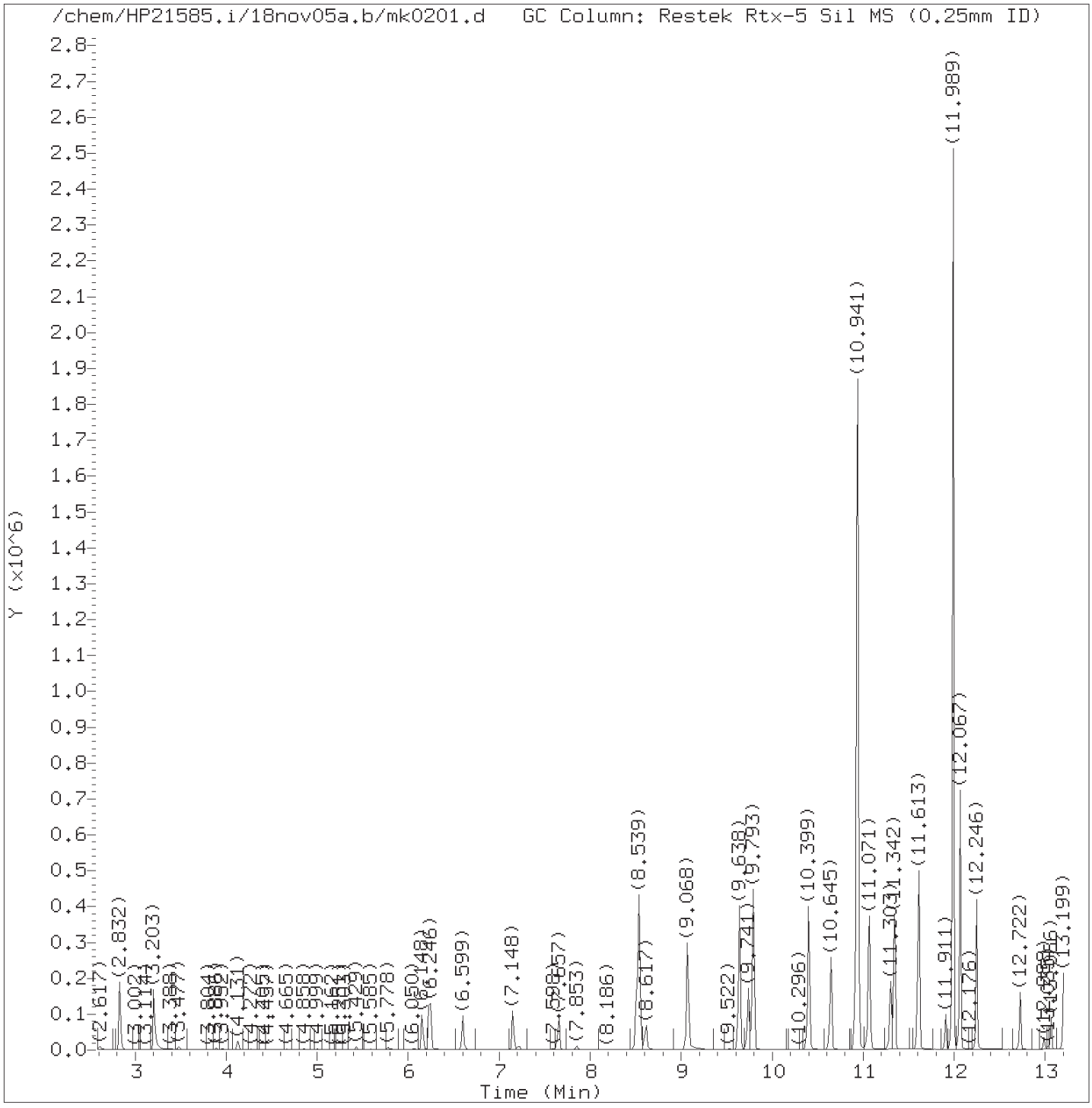
Instrument ID: HP21585.i Injection Date: 05-NOV-2018 17:52 Operator: ceb05247



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{98604 + 2003634}{98604 + 2003634 + 26636638} \times 100 = 7.3$$

Secondary review performed and digitally signed by Irene L. Dodd on 11/07/2018 at 13:02. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

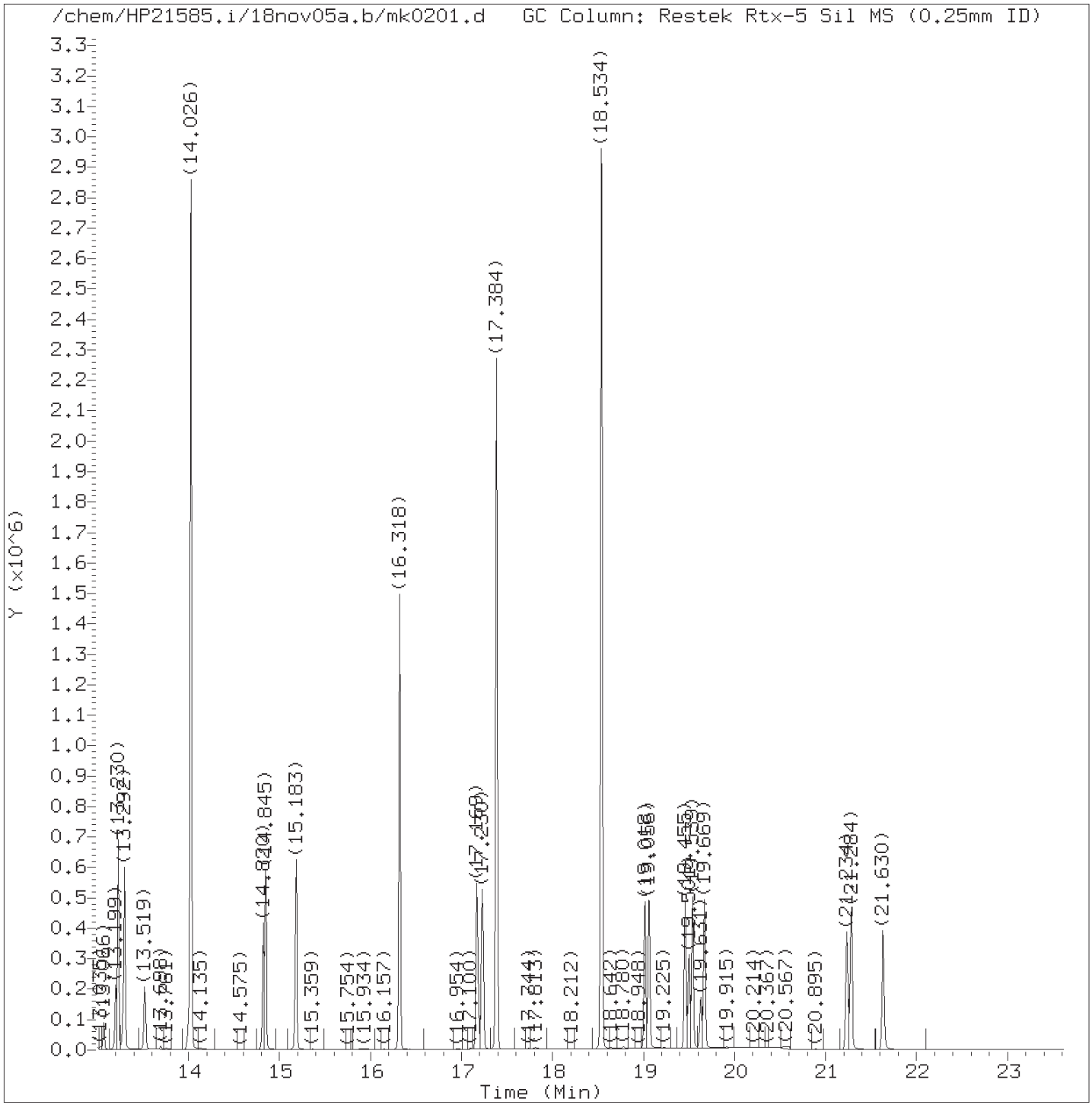
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0201.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 18:37 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 05-NOV-2018 19:15
Date, time and analyst ID of latest file update: 05-Nov-2018 19:15 art12405

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Digitally signed by Ashley R. Transue
on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0201.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 18:37 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 05-NOV-2018 19:15
Date, time and analyst ID of latest file update: 05-Nov-2018 19:15 art12405

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Digitally signed by Ashley R. Transue
on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0201.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 18:37 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 05-NOV-2018 19:15
Date, time and analyst ID of latest file update: 05-Nov-2018 19:15 art12405

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.832	88	111213	0.520
2) N-Nitrosodimethylamine	(1)	3.203	74	165610	0.535
4) bis(2-Chloroethyl)ether	(2)	6.246	93	164274	0.458
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	77036	0.250
6)*Naphthalene-d8	(2)	8.519	136	234353	0.250
7) Naphthalene	(2)	8.539	128	517567	0.480
8) Quinoline	(2)	9.068	129	280528	0.434
9) 2-Methylnaphthalene	(2)	9.638	142	326830	0.493
10)$1-Methylnaphthalene-d10	(2)	9.741	152	214728	0.504
11) 1-Methylnaphthalene	(2)	9.793	142	331163	0.505
12) Dimethylphthalate	(3)	10.941	163	2025396	2.476
13) Acenaphthylene	(3)	11.071	152	533235	0.489
14)*Acenaphthene-d10	(3)	11.303	164	103593	0.250
15) Acenaphthene	(3)	11.342	154	324901	0.490
16) Dibenzofuran	(3)	11.613	168	449200	0.507
17) Diethylphthalate	(3)	11.989	149	2031425	2.496
18) Fluorene	(3)	12.067	166	387746	0.502
19) Hexachlorobenzene	(4)	12.722	284	118180	0.491
20)*Phenanthrene-d10	(4)	13.199	188	214526	0.250
21) Phenanthrene	(4)	13.230	178	566966	0.493
22) Anthracene	(4)	13.292	178	566112	0.501
23) Di-n-butylphthalate	(4)	14.026	149	3253058	2.579
24)$Fluoranthene-d10	(4)	14.820	212	443976	0.528
25) Fluoranthene	(4)	14.845	202	666136	0.519
26) Pyrene	(5)	15.183	202	689938	0.483
27) Butylbenzylphthalate	(5)	16.318	149	1453607	2.443
28) Benzo(a)anthracene	(5)	17.169	228	593229	0.482
29)*Chrysene-d12	(5)	17.184	240	156950	0.250
30) Chrysene	(5)	17.230	228	610494	0.490
31) bis(2-Ethylhexyl)phthalate	(5)	17.384	149	2176492	2.453
32) Di-n-octylphthalate	(6)	18.534	149	3774022	2.334
33) Benzo(b)fluoranthene	(6)	19.018	252	592274	0.478
34) Benzo(k)fluoranthene	(6)	19.056	252	644189	0.521
35) Benzo(e)pyrene	(6)	19.455	252	588397	0.506
36)$Benzo(a)pyrene-d12	(6)	19.501	264	296428	0.516
37) Benzo(a)pyrene	(6)	19.539	252	587294	0.495
38)*Perylene-d12	(6)	19.631	264	156396	0.250
45) Perylene	(6)	19.669	252	591688	0.490
39) Indeno(1,2,3-cd)pyrene	(6)	21.234	276	506598M	0.470
40) Dibenz(a,h)anthracene	(6)	21.284	278	519222	0.471

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0201.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 18:37 Analyst ID: ceb05247

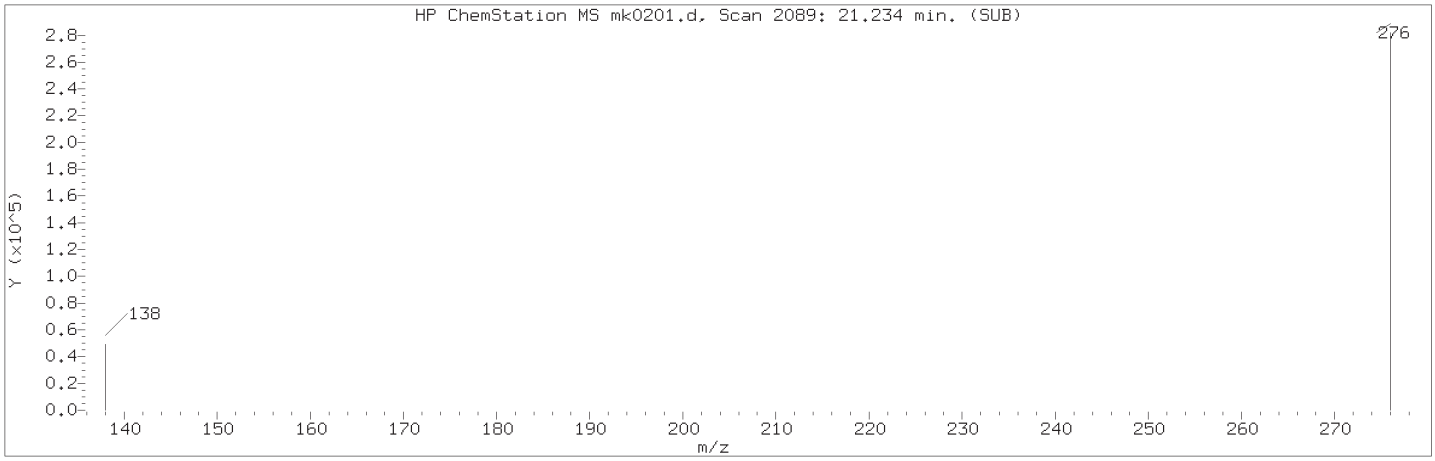
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 05-NOV-2018 19:15
Date, time and analyst ID of latest file update: 05-Nov-2018 19:15 art12405

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

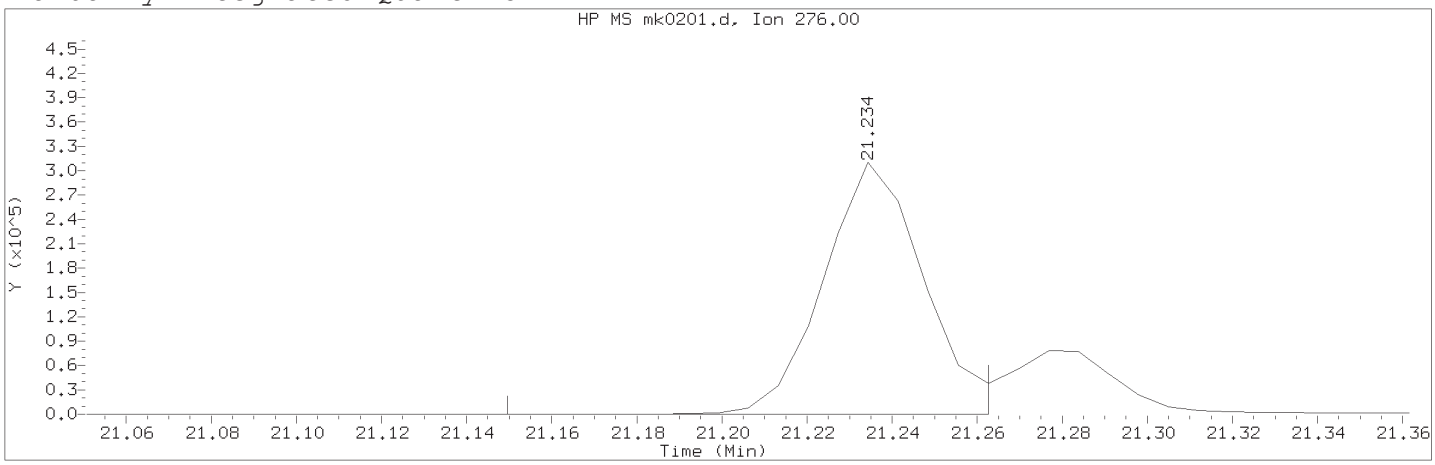
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.630	276	575928	0.462

Digitally signed by Ashley R. Transue
on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0201.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 18:37 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 05-NOV-2018 19:15
Date, time and analyst ID of latest file update: 05-Nov-2018 19:15 art12405

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

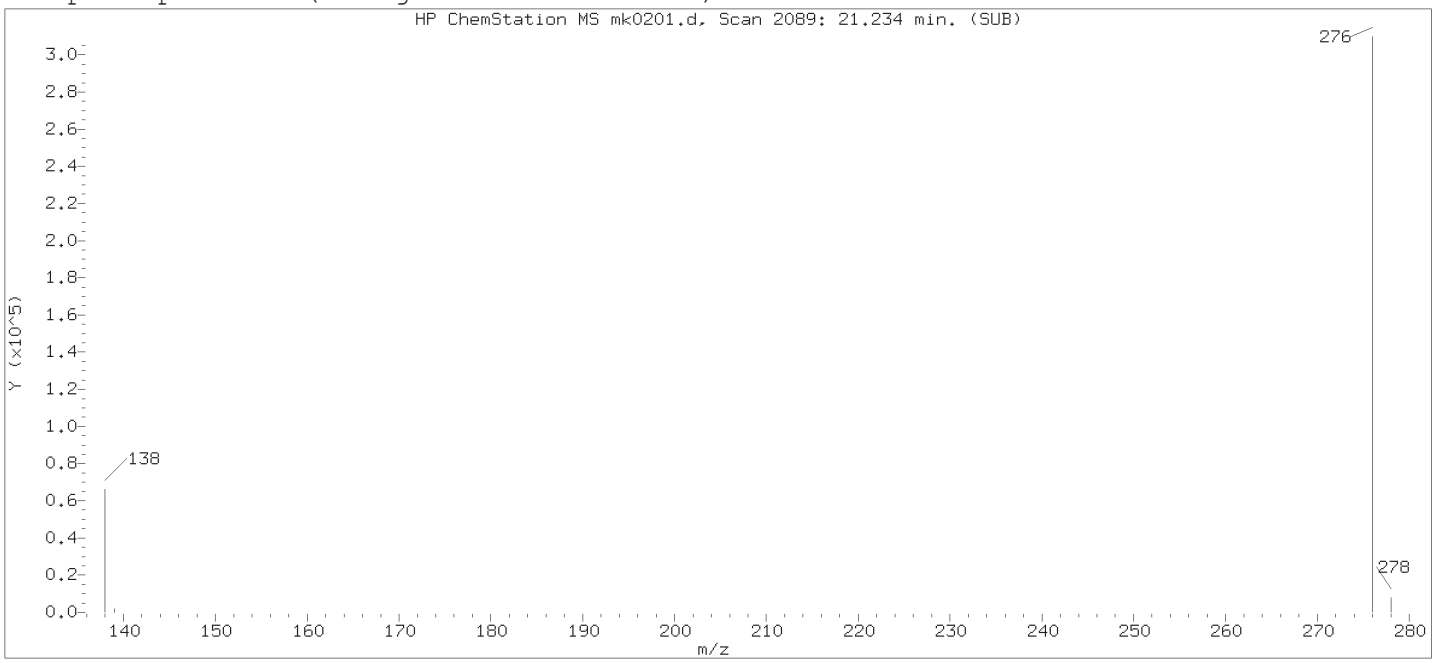
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2089
Retention Time (minutes) : 21.234
Quant Ion : 276.00
Area (flag) : 506598M
On-Column Amount (ng/ul) : 0.4696
Integration start scan : 2076 Integration stop scan: 2092
Y at integration start : 252 Y at integration end: 252

Reason for manual integration: improper integration

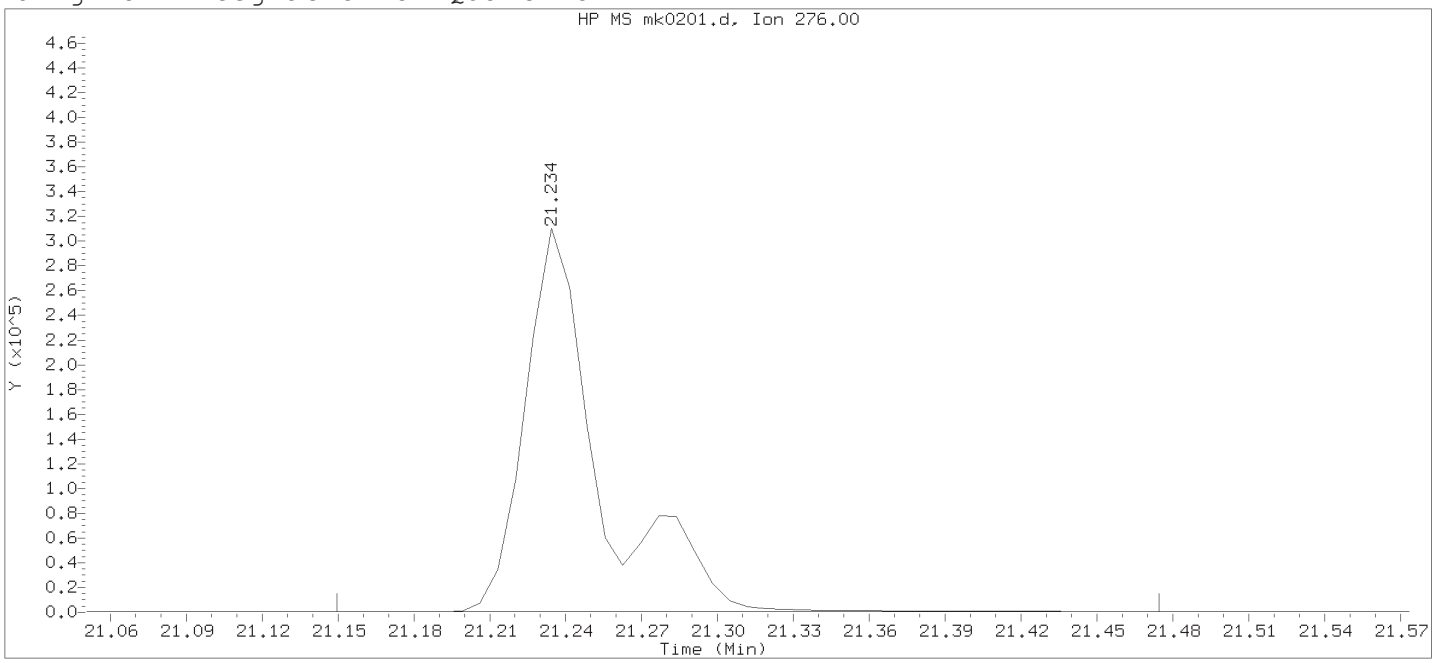
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/07/2018 at 13:02.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



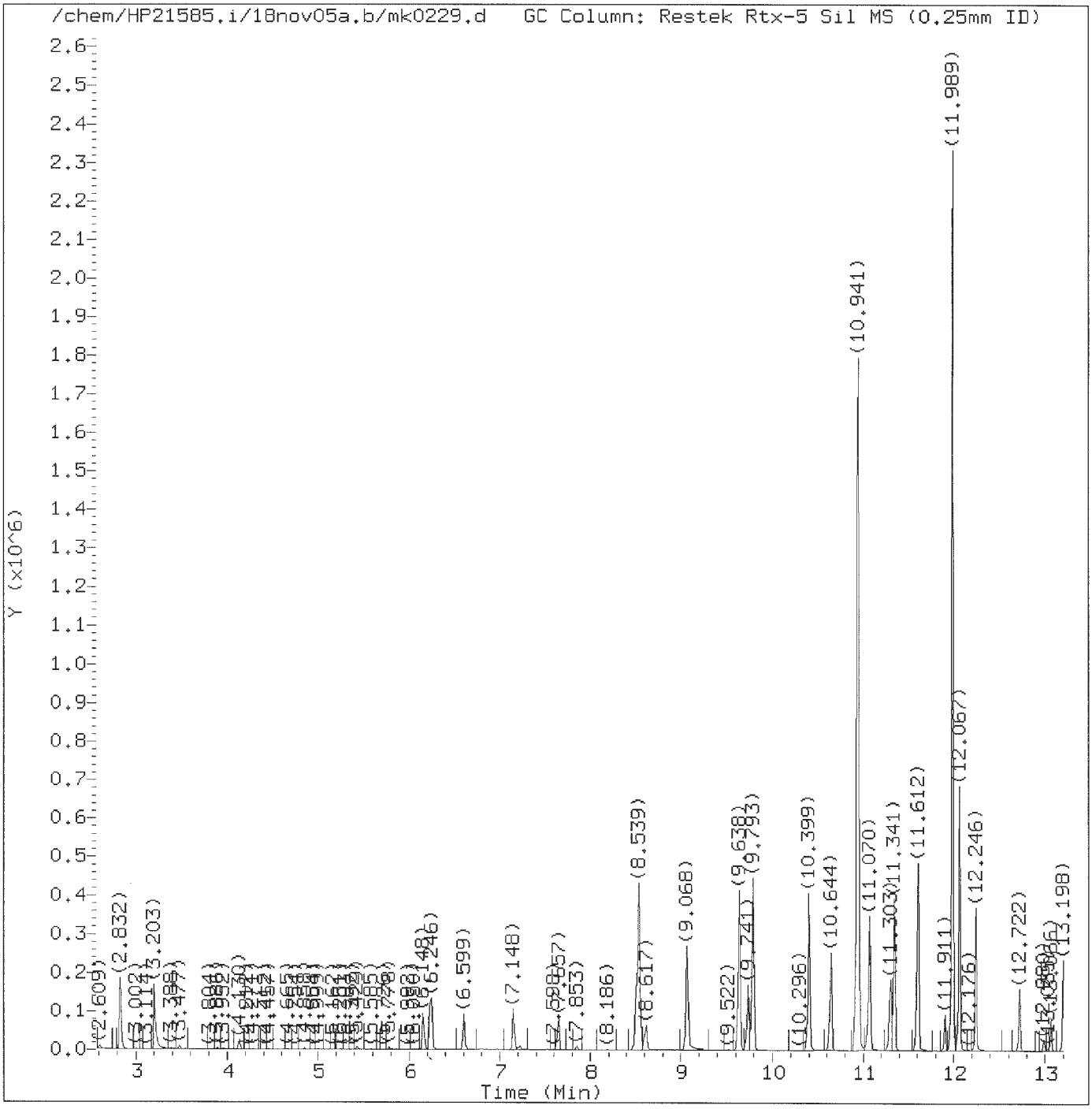
Data File: /chem/HP21585.i/18nov05a.b/mk0201.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 18:37 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 05-NOV-2018 19:06
Date, time and analyst ID of latest file update: 05-Nov-2018 19:06 Unknown

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2089
Retention Time (minutes)	:	21.234
Quant Ion	:	276.00
Area	:	640960
On-column Amount (ng/ul)	:	0.5942
Integration start scan	:	2076 Integration stop scan: 2122
Y at integration start	:	252 Y at integration end: 252

Digitally signed by Ashley R. Transue on 11/05/2018 at 19:17.
Target 3.5 esignature user ID: [illegible]



Total Ion Chromatogram (TIC)

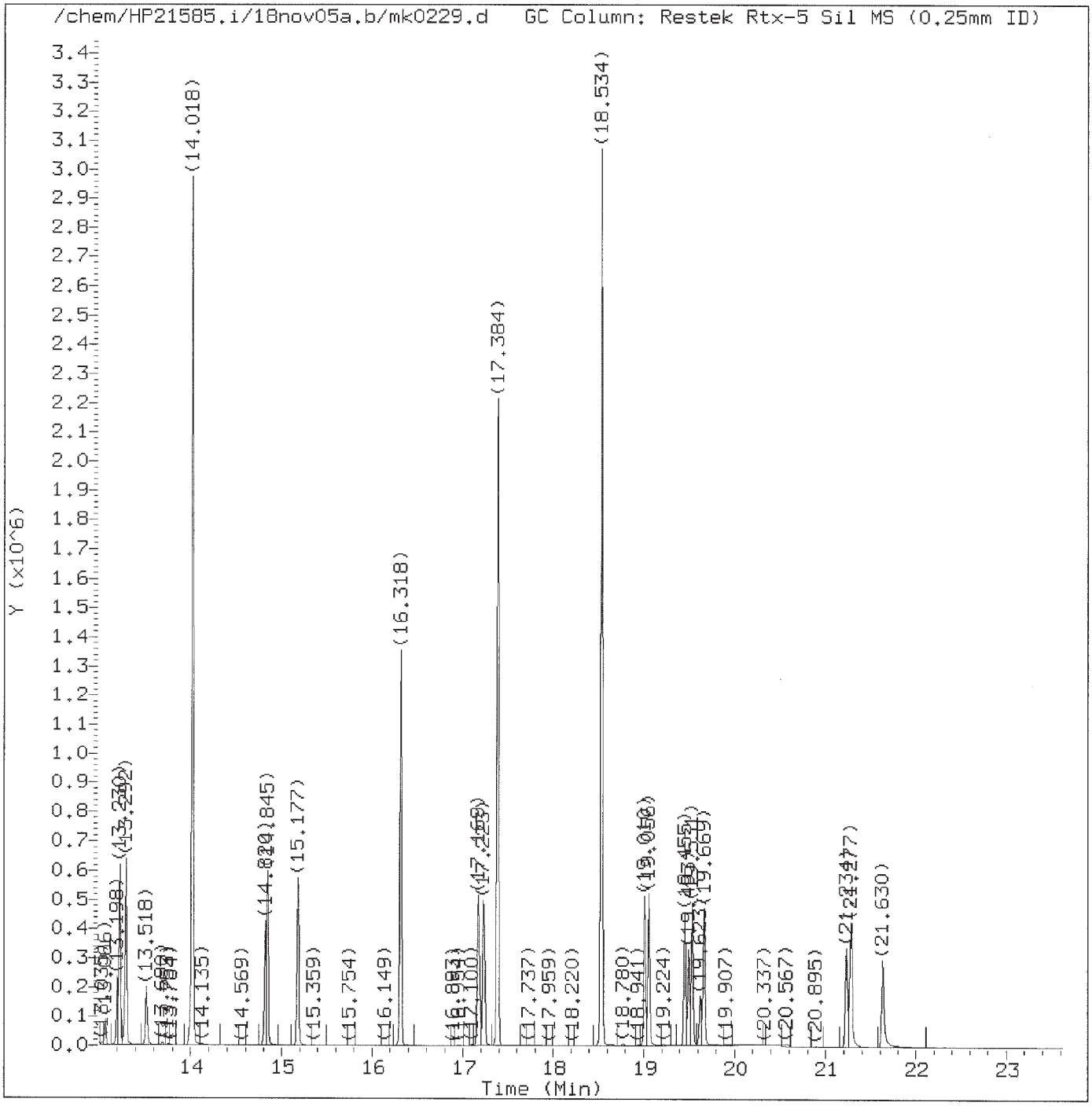
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0229.d Instrument ID: HP21585.i
Injection date and time: 06-NOV-2018 00:20 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: SECC0.5 Lab Sample ID: RVSIM2768

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0229.d Instrument ID: HP21585.i
Injection date and time: 06-NOV-2018 00:20 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: SECC0.5 Lab Sample ID: RVSIM2768

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0229.d Instrument ID: HP21585.i
Injection date and time: 06-NOV-2018 00:20 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

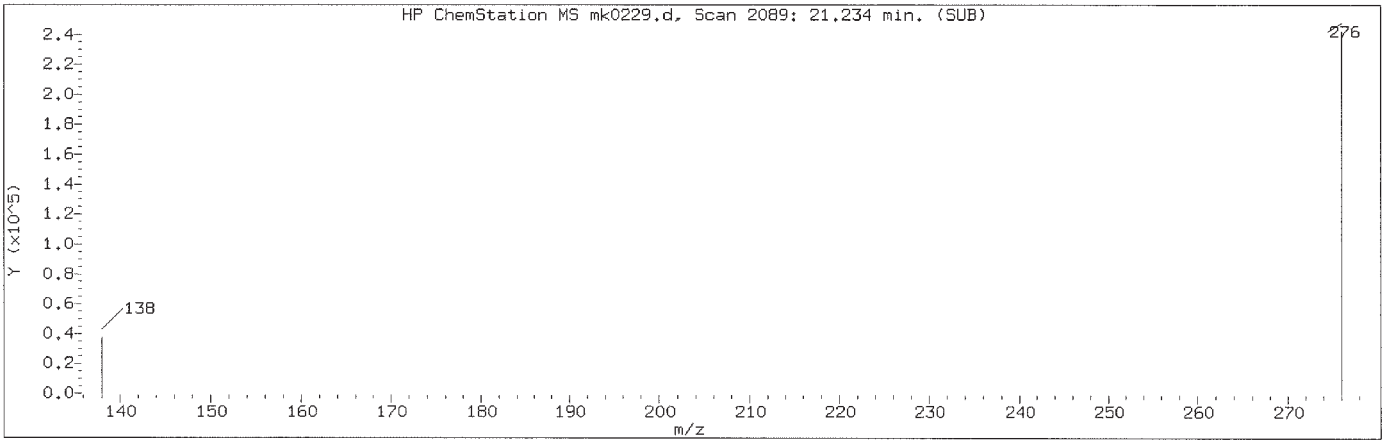
Sample Name: SECC0.5 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.832	88	108456	0.513
4) bis(2-Chloroethyl)ether	(2)	6.246	93	162254	0.461
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	76195	0.250
6)*Naphthalene-d8	(2)	8.519	136	230132	0.250
7) Naphthalene	(2)	8.539	128	513039	0.485
10)$1-Methylnaphthalene-d10	(2)	9.741	152	218303	0.521
13) Acenaphthylene	(3)	11.070	152	525435	0.475
14)*Acenaphthene-d10	(3)	11.303	164	105103	0.250
15) Acenaphthene	(3)	11.341	154	317219	0.472
18) Fluorene	(3)	12.067	166	380717	0.486
19) Hexachlorobenzene	(4)	12.722	284	115608	0.477
20)*Phenanthrene-d10	(4)	13.198	188	215747	0.250
21) Phenanthrene	(4)	13.230	178	555473	0.480
22) Anthracene	(4)	13.292	178	570609	0.502
23) Di-n-butylphthalate	(4)	14.018	149	3237904	2.552
24)$Fluoranthene-d10	(4)	14.820	212	453673	0.536
25) Fluoranthene	(4)	14.845	202	662090	0.513
26) Pyrene	(5)	15.177	202	689363	0.467
28) Benzo(a)anthracene	(5)	17.169	228	596834	0.469
29)*Chrysene-d12	(5)	17.184	240	162440	0.250
30) Chrysene	(5)	17.223	228	618012	0.479
31) bis(2-Ethylhexyl)phthalate	(5)	17.384	149	2175172	2.369
33) Benzo(b)fluoranthene	(6)	19.010	252	604368	0.471
34) Benzo(k)fluoranthene	(6)	19.056	252	637869	0.498
36)$Benzo(a)pyrene-d12	(6)	19.493	264	307079	0.516
37) Benzo(a)pyrene	(6)	19.531	252	597346	0.486
38)*Perylene-d12	(6)	19.623	264	161922	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.234	276	480034M	0.430
40) Dibenz(a,h)anthracene	(6)	21.284	278	519397	0.455
41) Benzo(g,h,i)perylene	(6)	21.630	276	541564	0.419

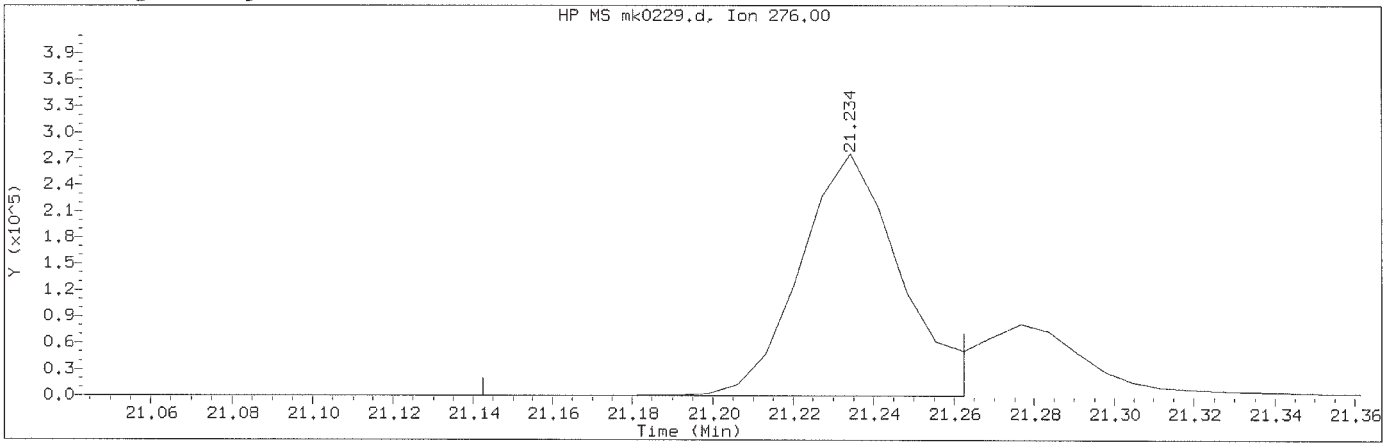
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0229.d Instrument ID: HP21585.i
Injection date and time: 06-NOV-2018 00:20 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: SECC0.5 Lab Sample ID: RVSIM2768

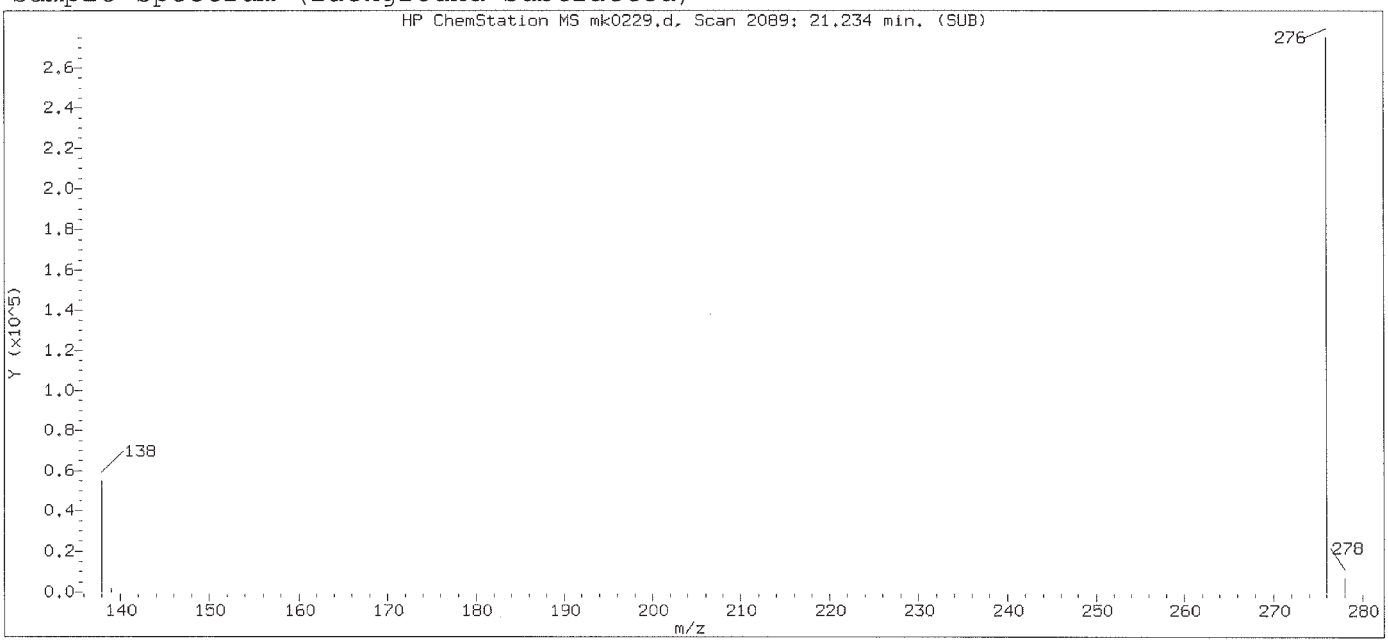
Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2089		
Retention Time (minutes)	: 21.234		
Quant Ion	: 276.00		
Area (flag)	: 480034M		
On-Column Amount (ng/ul)	: 0.4298		
Integration start scan	: 2075	Integration stop scan:	2092
Y at integration start	: 247	Y at integration end:	247

Reason for manual integration: improper integration

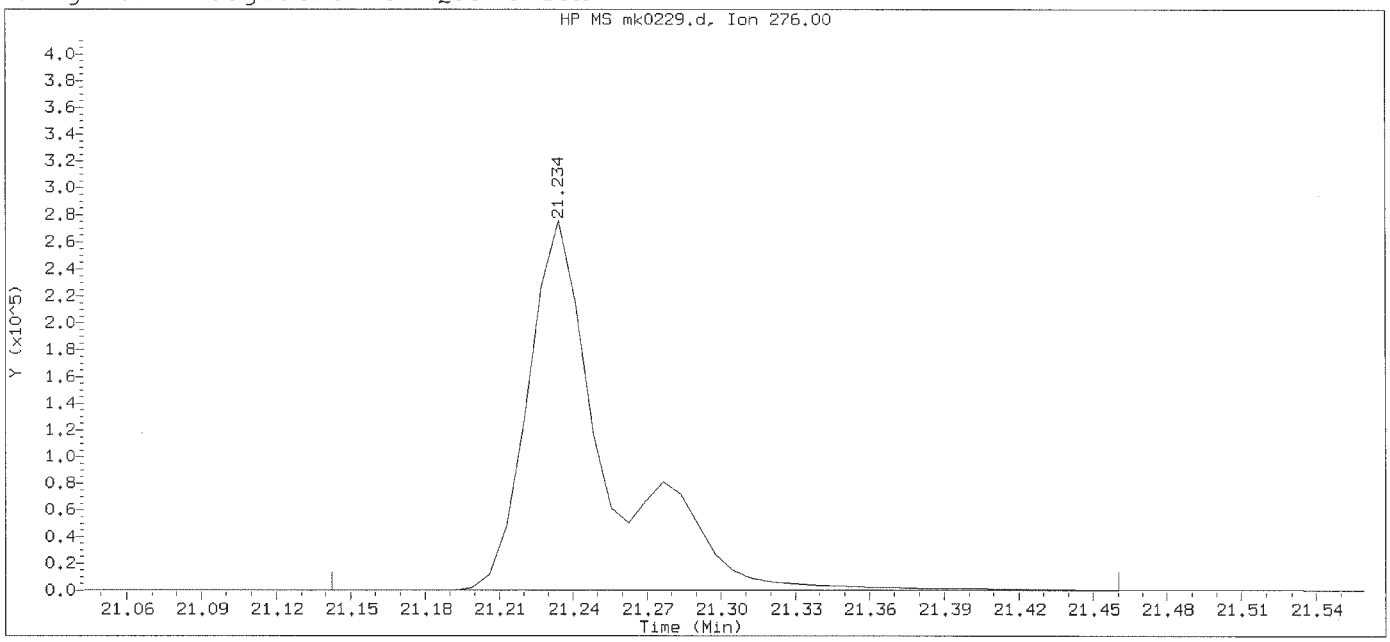
Analyst responsible for change: Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

GC/MS audit/management approval: 11/8/18

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0229.d Instrument ID: HP21585.i
Injection date and time: 06-NOV-2018 00:20 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: SECC0.5 Lab Sample ID: RVSIM2768

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2089		
Retention Time (minutes)	: 21.234		
Quant Ion	: 276.00		
Area	: 634974		
On-column Amount (ng/ul)	: 0.5686		
Integration start scan	: 2075	Integration stop scan:	2120
Y at integration start	: 247	Y at integration end:	247

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP21585.i/18nov08.b/mk0450.d

Date : 08-NOV-2018 05:12

Client ID: DFTPP12.5

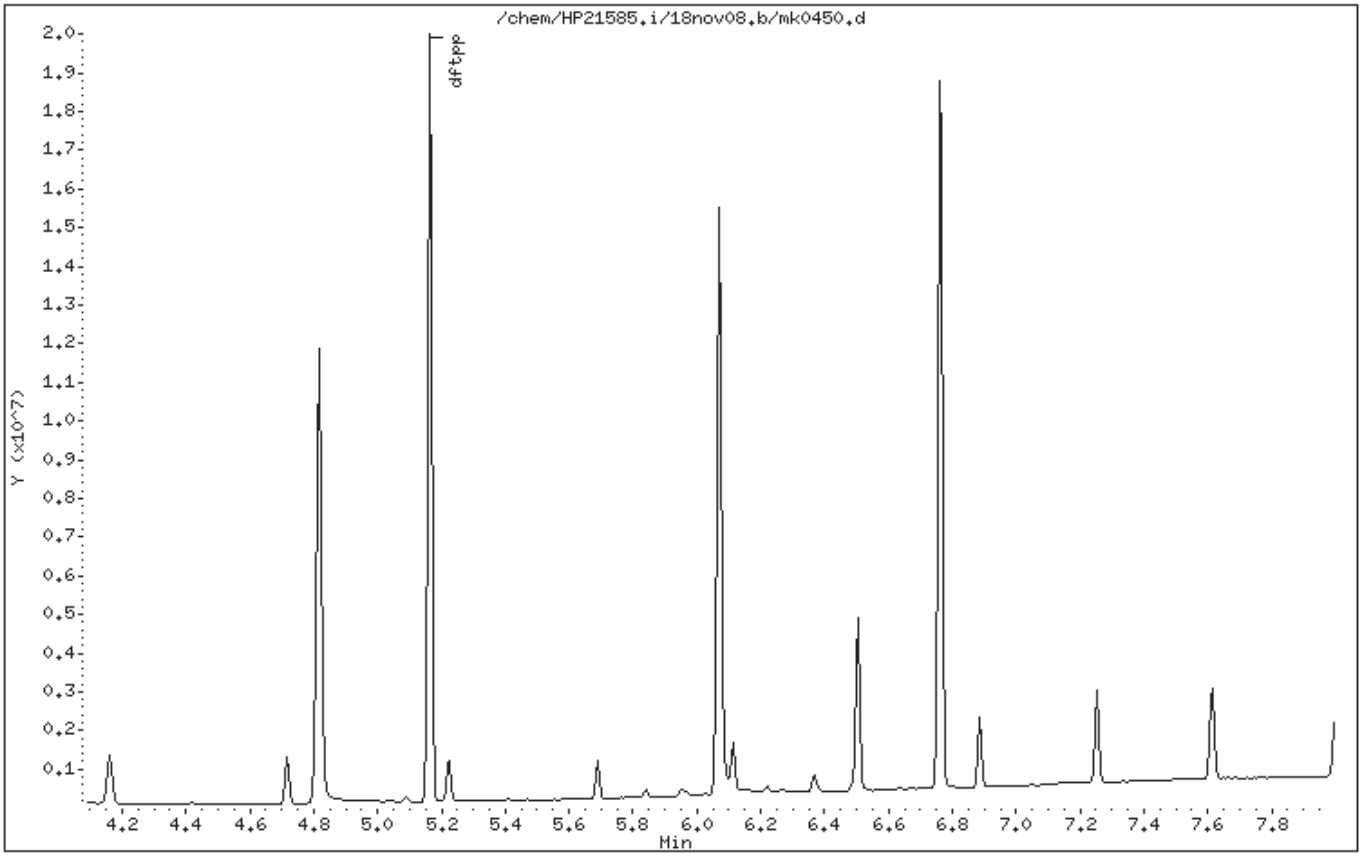
Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP21585.i/18nov08.b/mk0450.d

Date : 08-NOV-2018 05:12

Client ID: DFTPP12.5

Instrument: HP21585.i

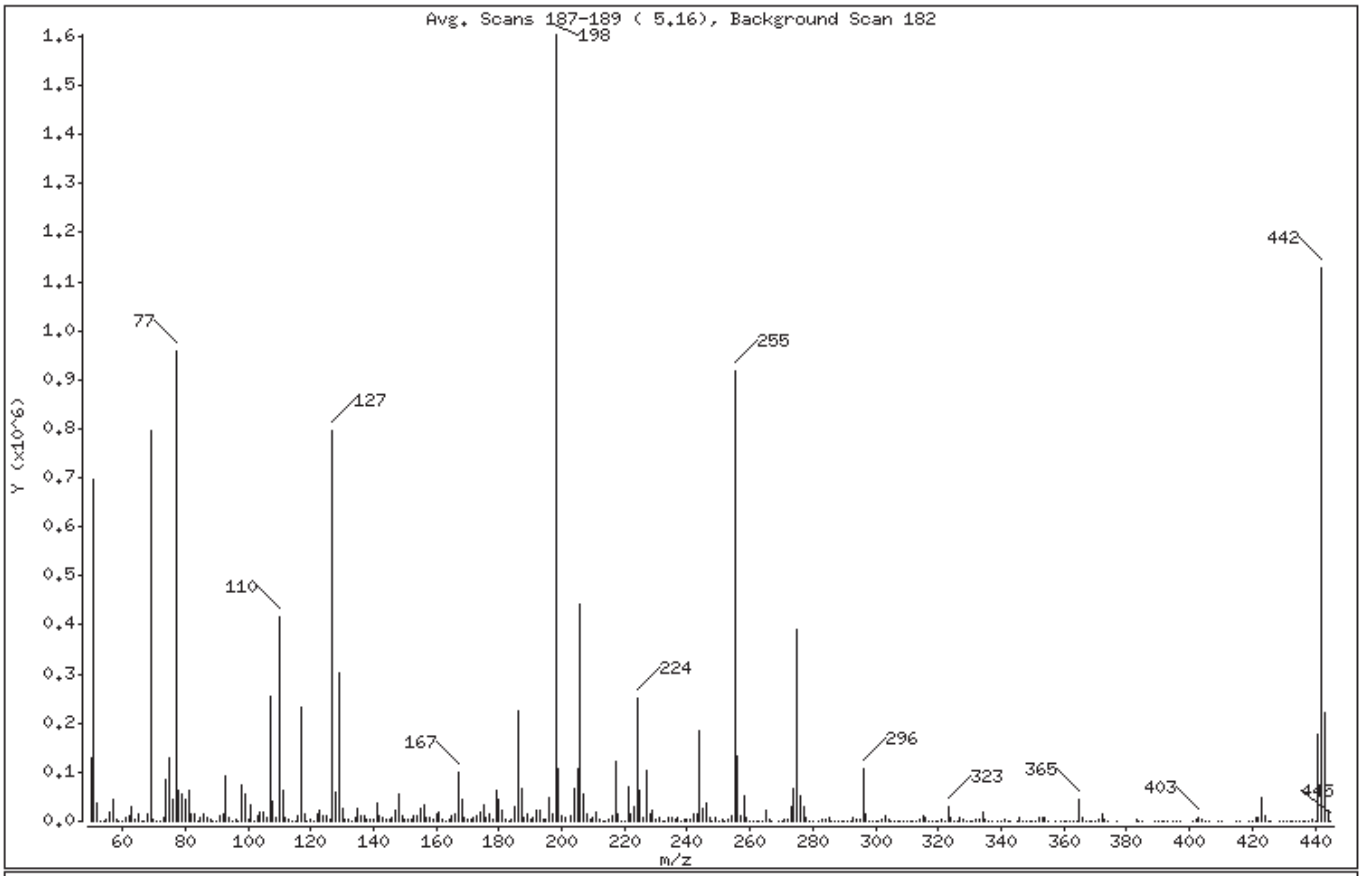
Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

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	43.41
68	Less than 2.00% of mass 69	0.81 (1.63)
69	Mass 69 relative abundance	49.58
70	Less than 2.00% of mass 69	0.29 (0.59)
127	10.00 - 80.00% of mass 198	49.68
197	Less than 2.00% of mass 198	0.81
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 60.00% of mass 198	24.27
365	Greater than 1.00% of mass 198	2.66
441	0.01 - 24.00% of mass 442	11.01 (15.66)
442	50.00 - 99.99% of mass 198	70.29
443	15.00 - 24.00% of mass 442	13.87 (19.73)

Digitally signed by Joseph M. Gambler on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2018 05:12

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: mk0450.d
Spectrum: Avg. Scans 187-189 (5.16), Background Scan 182
Location of Maximum: 198.00
Number of points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
50.00	129536	142.00	11882	235.00	7103	329.00	632
51.00	696192	143.00	9062	236.00	5219	330.00	141
52.00	36008	144.00	2537	237.00	8323	331.00	181
53.00	1597	145.00	1884	238.00	1371	332.00	2180
54.00	23	146.00	6984	239.00	3653	333.00	2659
55.00	3046	147.00	21024	240.00	2960	334.00	18824
56.00	18840	148.00	54208	241.00	5514	335.00	4600
57.00	46072	149.00	9688	242.00	12982	336.00	773
58.00	2071	150.00	3020	243.00	14587	337.00	74
59.00	558	151.00	4499	244.00	184832	339.00	515
60.00	466	152.00	2131	245.00	24024	340.00	519
61.00	7658	153.00	12504	246.00	36440	341.00	3566
62.00	11019	154.00	9513	247.00	7860	342.00	1102
63.00	29432	155.00	23992	248.00	1468	343.00	293
64.00	4232	156.00	33616	249.00	6756	345.00	177
65.00	13384	157.00	6267	250.00	1457	346.00	6515
66.00	1163	158.00	6792	251.00	1949	347.00	1239
67.00	1209	159.00	5376	252.00	1711	348.00	56
68.00	12977	160.00	12943	253.00	4672	349.00	50
69.00	795200	161.00	19120	254.00	10228	350.00	278
70.00	4668	162.00	5404	255.00	919680	351.00	745
71.00	474	163.00	1258	256.00	134336	352.00	8910
72.00	350	164.00	1991	257.00	9542	353.00	5871
73.00	5741	165.00	12825	258.00	52064	354.00	8964
74.00	83064	166.00	13853	259.00	7458	355.00	1475
75.00	130864	167.00	98552	260.00	1554	357.00	314
76.00	45832	168.00	44344	261.00	1716	359.00	796
77.00	957120	169.00	6731	262.00	437	360.00	282
78.00	64096	170.00	2430	263.00	898	361.00	298
79.00	54336	171.00	3465	264.00	1052	362.00	107
80.00	43656	172.00	6448	265.00	21872	363.00	301
81.00	63632	173.00	9286	266.00	3282	364.00	438
82.00	15894	174.00	17256	267.00	710	365.00	42656
83.00	14402	175.00	33736	269.00	219	366.00	5725
84.00	1440	176.00	8429	270.00	1150	367.00	397

Digitally signed by Joseph M. Gambler on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2018 05:12

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: mk0450.d
Spectrum: Avg. Scans 187-189 (5.16), Background Scan 182
Location of Maximum: 198.00
Number of points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	9180	177.00	13494	271.00	2264	368.00	59
86.00	16376	178.00	5304	272.00	2786	369.00	63
87.00	7998	179.00	62072	273.00	27912	370.00	745
88.00	2674	180.00	43416	274.00	68120	371.00	2351
89.00	1103	181.00	20496	275.00	389248	372.00	14287
90.00	296	182.00	3409	276.00	50320	373.00	3485
91.00	12300	183.00	1831	277.00	30728	374.00	533
92.00	14542	184.00	5133	278.00	5602	377.00	420
93.00	93592	185.00	30424	279.00	1278	383.00	3933
94.00	6428	186.00	226240	280.00	232	384.00	896
95.00	962	187.00	66808	282.00	918	385.00	347
96.00	4336	188.00	6637	283.00	2920	389.00	208
97.00	1104	189.00	14684	284.00	2537	390.00	1705
98.00	75448	190.00	2757	285.00	5872	391.00	1337
99.00	55304	191.00	7192	286.00	1264	392.00	874
100.00	4857	192.00	20560	287.00	219	393.00	59
101.00	31944	193.00	23472	288.00	590	395.00	168
102.00	1448	194.00	5147	289.00	1357	396.00	127
103.00	9376	195.00	3007	290.00	1095	397.00	69
104.00	19472	196.00	47360	291.00	762	401.00	798
105.00	18448	197.00	12986	292.00	1560	402.00	4990
106.00	5570	198.00	1603584	293.00	7968	403.00	7183
107.00	255680	199.00	108072	294.00	2050	404.00	2642
108.00	38944	200.00	9576	295.00	2174	405.00	296
109.00	6103	201.00	7456	296.00	106360	406.00	58
110.00	416000	203.00	11735	297.00	14847	409.00	50
111.00	64120	204.00	65704	298.00	1022	410.00	286
112.00	7656	205.00	107864	299.00	360	415.00	585
113.00	2601	206.00	442304	300.00	188	416.00	78
114.00	823	207.00	57048	301.00	1425	419.00	169
115.00	689	208.00	14248	302.00	1994	420.00	185
116.00	12465	209.00	5009	303.00	11133	421.00	6468
117.00	230720	210.00	5970	304.00	2967	422.00	6531
118.00	16061	211.00	17272	305.00	429	423.00	49264
119.00	1601	212.00	2940	306.00	201	424.00	9784

Digitally signed by Joseph M. Gambler on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2018 05:12

Client ID: DFTPP12.5 Instrument: HP21585.i

Sample Info: DFTPP12.5;RVDFTPP2878;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

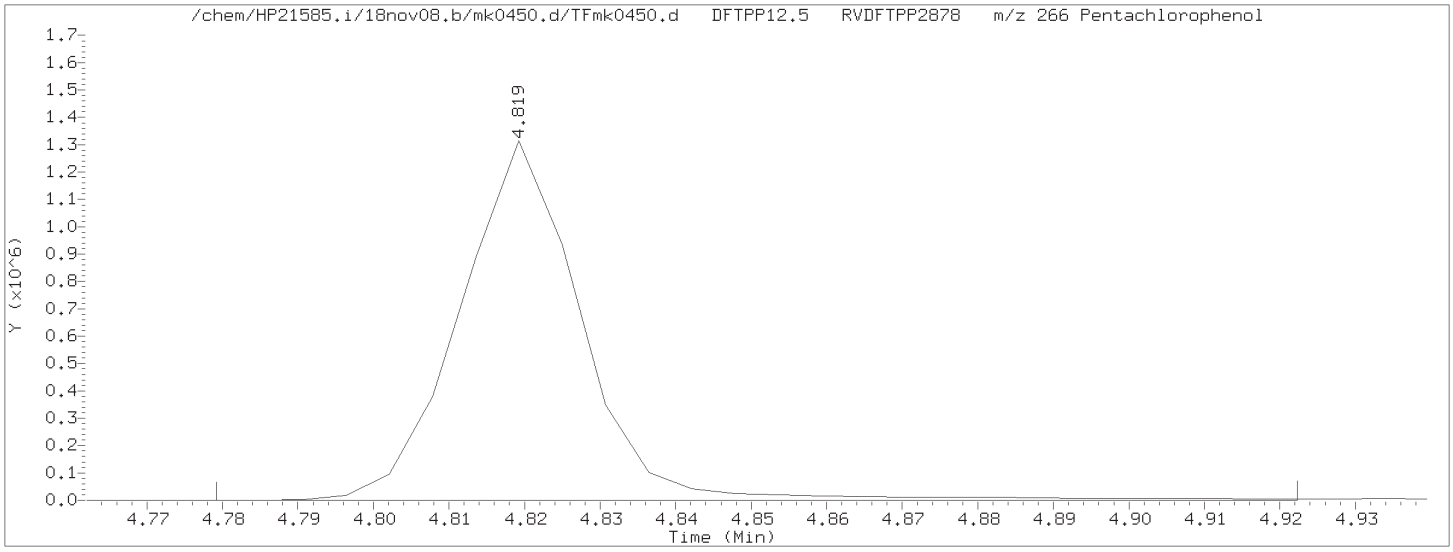
Data File: mk0450.d
Spectrum: Avg. Scans 187-189 (5.16), Background Scan 182
Location of Maximum: 198.00
Number of points: 365

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	2633	213.00	1493	307.00	224	425.00	1107
121.00	417	214.00	325	308.00	1664	426.00	53
122.00	14342	215.00	5236	309.00	992	429.00	337
123.00	22976	216.00	10031	310.00	1177	430.00	156
124.00	10875	217.00	122424	311.00	412	431.00	240
125.00	9817	218.00	16297	312.00	473	432.00	171
126.00	4365	219.00	1430	313.00	1011	433.00	477
127.00	796736	220.00	339	314.00	4863	434.00	512
128.00	60104	221.00	70048	315.00	11468	435.00	559
129.00	302016	222.00	14256	316.00	6060	436.00	1269
130.00	25400	223.00	28976	317.00	1035	437.00	1363
131.00	3995	224.00	250496	318.00	56	438.00	1611
132.00	2559	225.00	62272	319.00	174	439.00	2716
133.00	1402	226.00	6915	320.00	568	440.00	1025
134.00	8076	227.00	103704	321.00	3396	441.00	176576
135.00	23976	228.00	14541	322.00	1511	442.00	1126912
136.00	9895	229.00	22000	323.00	30320	443.00	222400
137.00	12178	230.00	2683	324.00	5532	444.00	21104
138.00	2387	231.00	8844	325.00	680	445.00	1028
139.00	2243	232.00	1346	326.00	624		
140.00	4063	233.00	1832	327.00	5555		
141.00	38144	234.00	6057	328.00	3376		

Digitally signed by Joseph M. Gambler on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

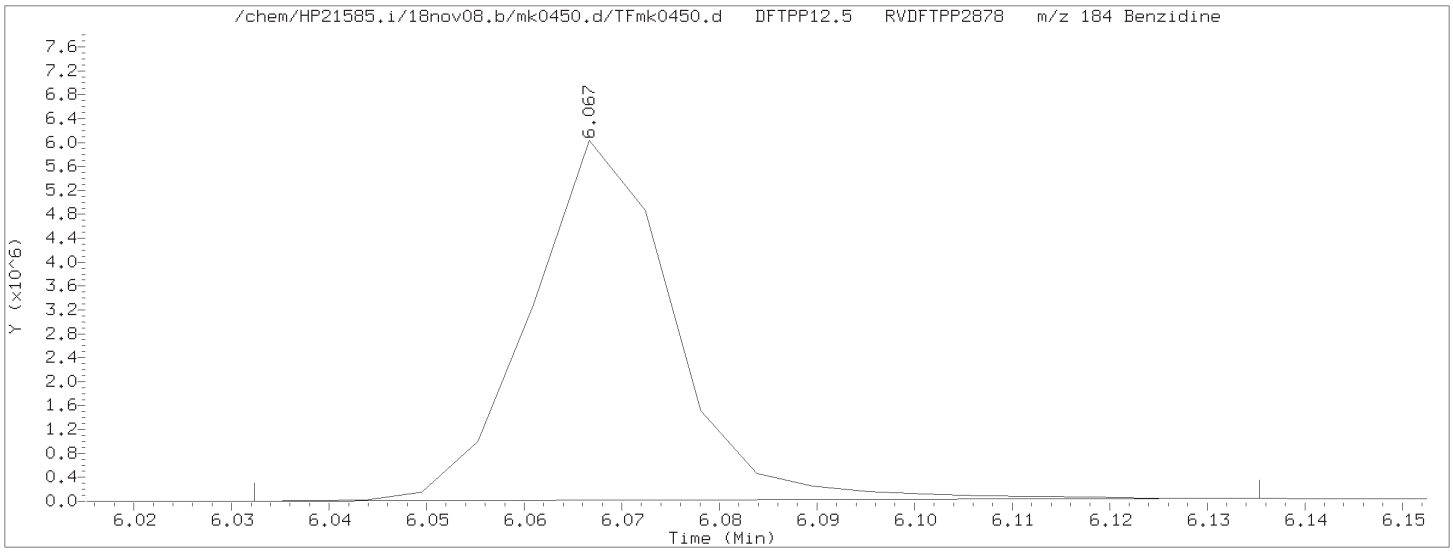
Instrument ID: HP21585.i Injection Date: 08-NOV-2018 05:12 Operator: ceb05247



Pentachlorophenol EICP peak height = 1315317 EICP peak height at 10% = 131532 Pentachlorophenol EICP area = 1468384

Pentachlorophenol EICP peak apex (min.) = 4.819
RT at 10% of front half of EICP (min.) = 4.803 'Front' peak width (min.) = 0.0164000000
RT at 10% of back half of EICP (min.) = 4.836 'Tailing' peak width (min.) = 0.0164500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0164500000}{0.0164000000} = 1.003$



Benzidine EICP peak height = 6017196 EICP peak height at 10% = 601720 Benzidine EICP area = 6105335

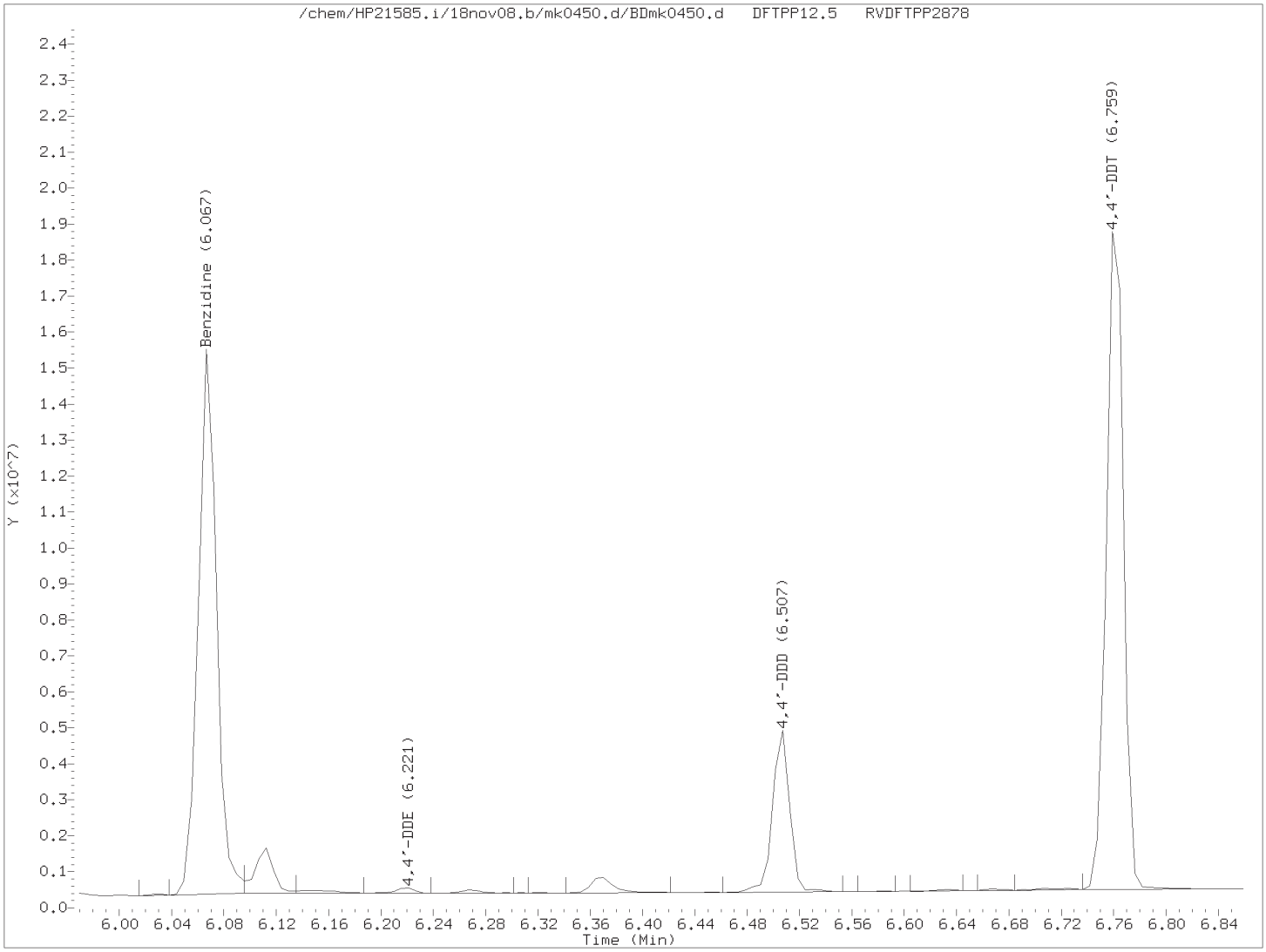
Benzidine EICP peak apex (min.) = 6.067
RT at 10% of front half of EICP (min.) = 6.053 'Front' peak width (min.) = 0.0140000000
RT at 10% of back half of EICP (min.) = 6.083 'Tailing' peak width (min.) = 0.0162833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0162833333}{0.0140000000} = 1.163$

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:59. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

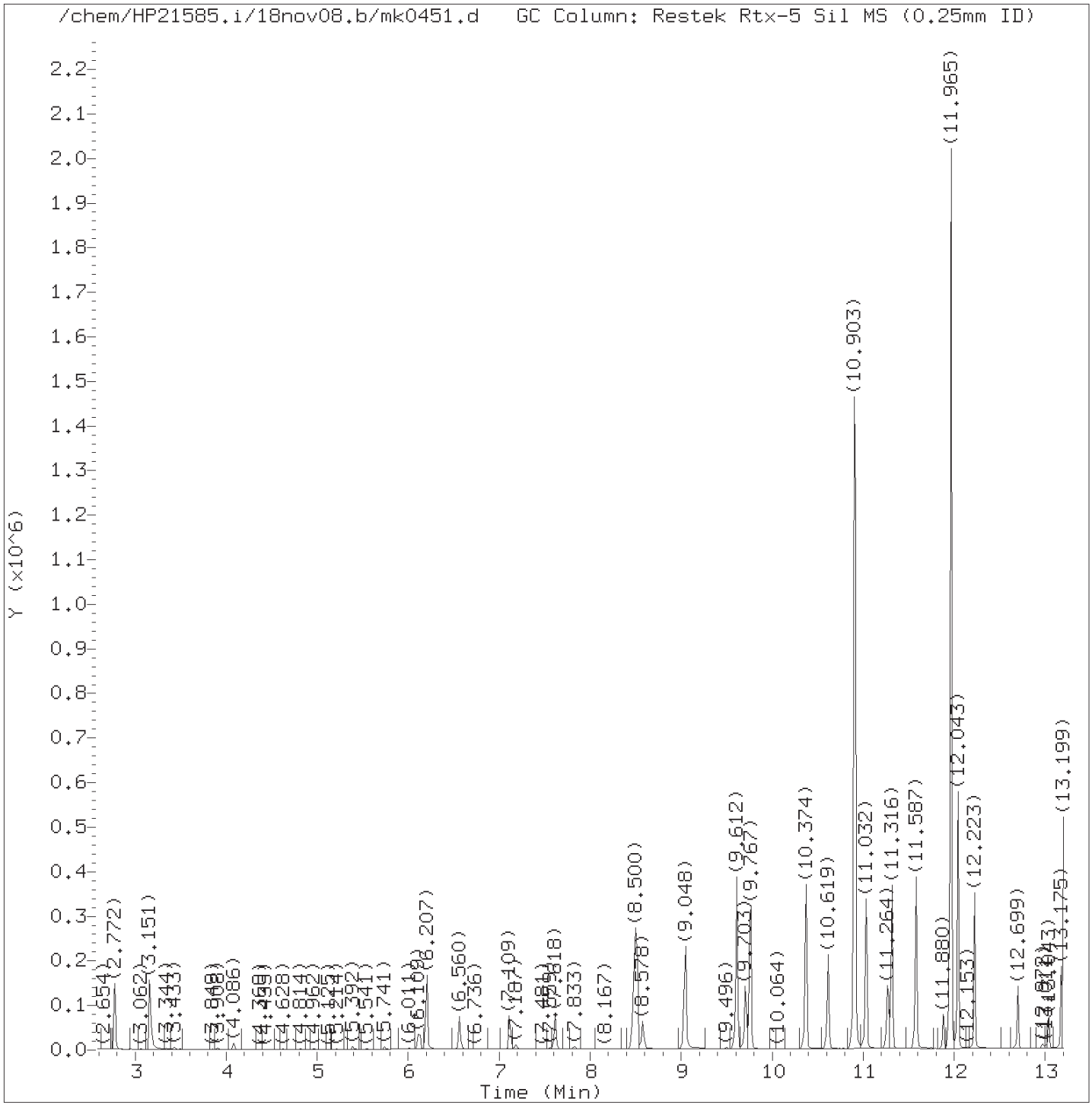
Instrument ID: HP21585.i Injection Date: 08-NOV-2018 05:12 Operator: ceb05247



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{140812 + 4110533}{140812 + 4110533 + 17035421} \times 100 = 20.0$$

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:59. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

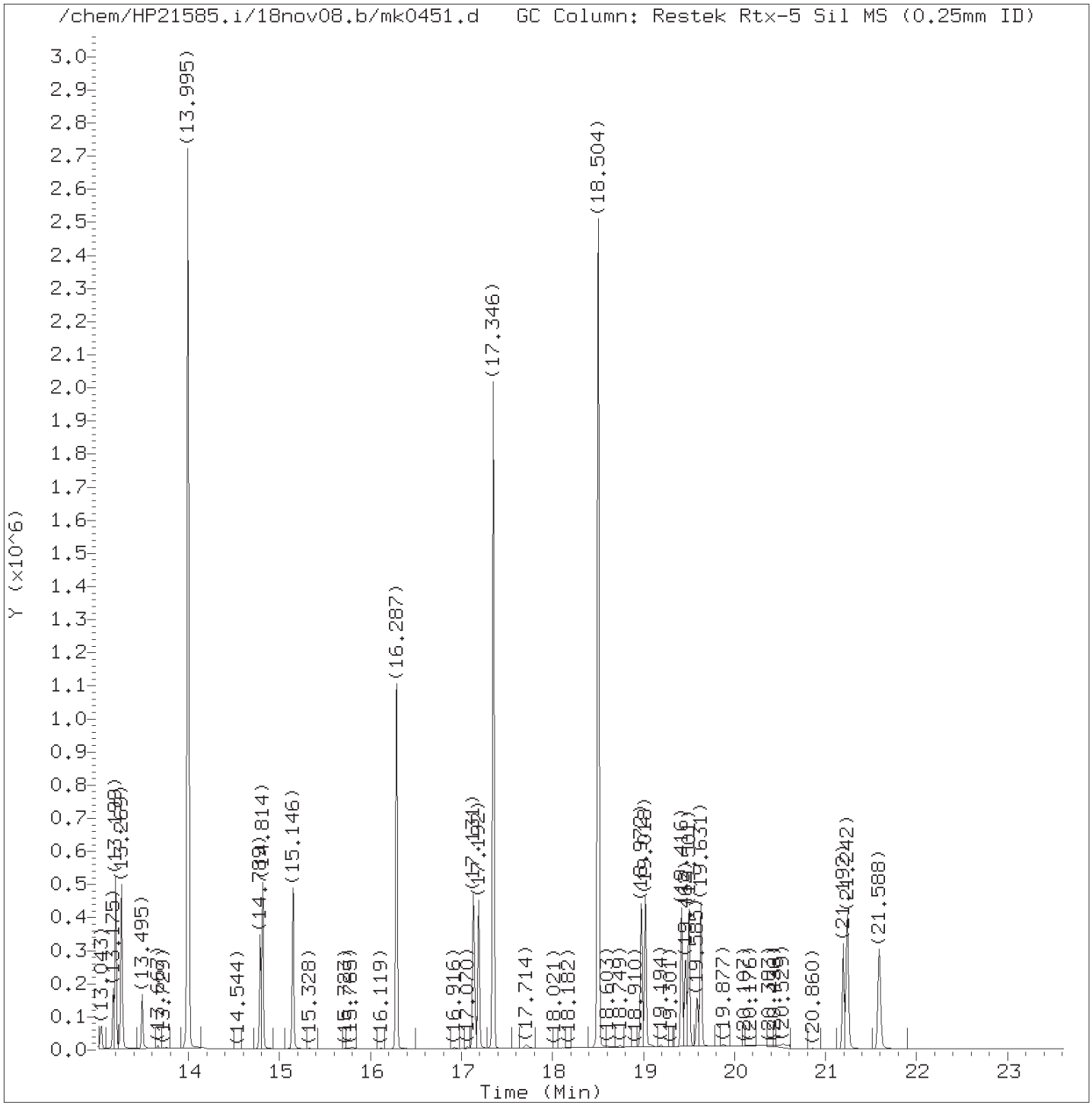
Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0451.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 05:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 06:34
Date, time and analyst ID of latest file update: 08-Nov-2018 06:34 jmg00346

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0451.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 05:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 06:34
Date, time and analyst ID of latest file update: 08-Nov-2018 06:34 jmg00346

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0451.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 05:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 06:34
Date, time and analyst ID of latest file update: 08-Nov-2018 06:34 jmg00346

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.772	88	95615	0.535
2) N-Nitrosodimethylamine	(1)	3.151	74	140184	0.542
4) bis(2-Chloroethyl)ether	(2)	6.207	93	155223	0.481
5)*1,4-Dichlorobenzene-d4	(1)	6.560	152	64386	0.250
6)*Naphthalene-d8	(2)	8.480	136	211113	0.250
7) Naphthalene	(2)	8.500	128	427980	0.441
8) Quinoline	(2)	9.048	129	260883	0.448
9) 2-Methylnaphthalene	(2)	9.612	142	278531	0.466
10)$1-Methylnaphthalene-d10	(2)	9.703	152	180272	0.469
11) 1-Methylnaphthalene	(2)	9.767	142	276967	0.469
12) Dimethylphthalate	(3)	10.916	163	1682206	2.400
13) Acenaphthylene	(3)	11.032	152	447647	0.479
14)*Acenaphthene-d10	(3)	11.264	164	88775	0.250
15) Acenaphthene	(3)	11.316	154	267791	0.472
16) Dibenzofuran	(3)	11.587	168	383165	0.505
17) Diethylphthalate	(3)	11.965	149	1727407	2.477
18) Fluorene	(3)	12.043	166	321004	0.485
19) Hexachlorobenzene	(4)	12.699	284	96479	0.493
20)*Phenanthrene-d10	(4)	13.175	188	174149	0.250
21) Phenanthrene	(4)	13.199	178	459625	0.492
22) Anthracene	(4)	13.269	178	466399	0.508
23) Di-n-butylphthalate	(4)	13.995	149	2731012	2.667
24)$Fluoranthene-d10	(4)	14.789	212	361887	0.530
25) Fluoranthene	(4)	14.814	202	539845	0.518
26) Pyrene	(5)	15.146	202	563456	0.472
27) Butylbenzylphthalate	(5)	16.287	149	1213071	2.435
28) Benzo(a)anthracene	(5)	17.131	228	510548	0.496
29)*Chrysene-d12	(5)	17.146	240	131394	0.250
30) Chrysene	(5)	17.192	228	521749	0.500
31) bis(2-Ethylhexyl)phthalate	(5)	17.346	149	1821224	2.452
32) Di-n-octylphthalate	(6)	18.504	149	3256612	2.262
33) Benzo(b)fluoranthene	(6)	18.972	252	530057	0.481
34) Benzo(k)fluoranthene	(6)	19.018	252	563587	0.512
35) Benzo(e)pyrene	(6)	19.416	252	522528	0.504
36)$Benzo(a)pyrene-d12	(6)	19.462	264	260647	0.509
37) Benzo(a)pyrene	(6)	19.501	252	522253	0.494
38)*Perylene-d12	(6)	19.593	264	139270	0.250
45) Perylene	(6)	19.631	252	529292	0.493
39) Indeno(1,2,3-cd)pyrene	(6)	21.192	276	442003M	0.460
40) Dibenz(a,h)anthracene	(6)	21.242	278	459241	0.468

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 06:34.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0451.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 05:27 Analyst ID: ceb05247

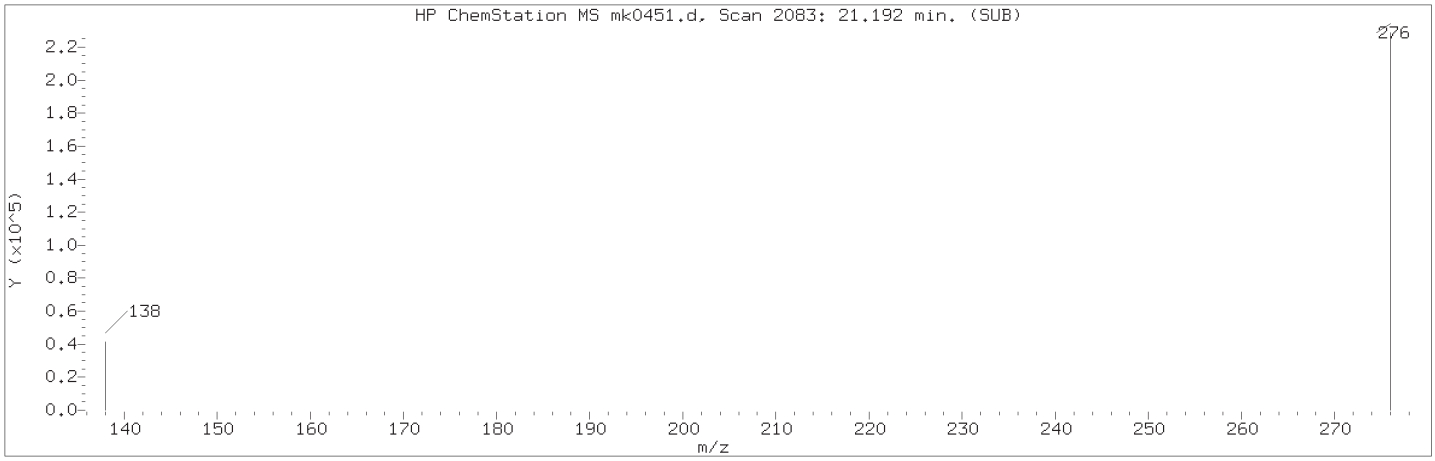
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 06:34
Date, time and analyst ID of latest file update: 08-Nov-2018 06:34 jmg00346

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

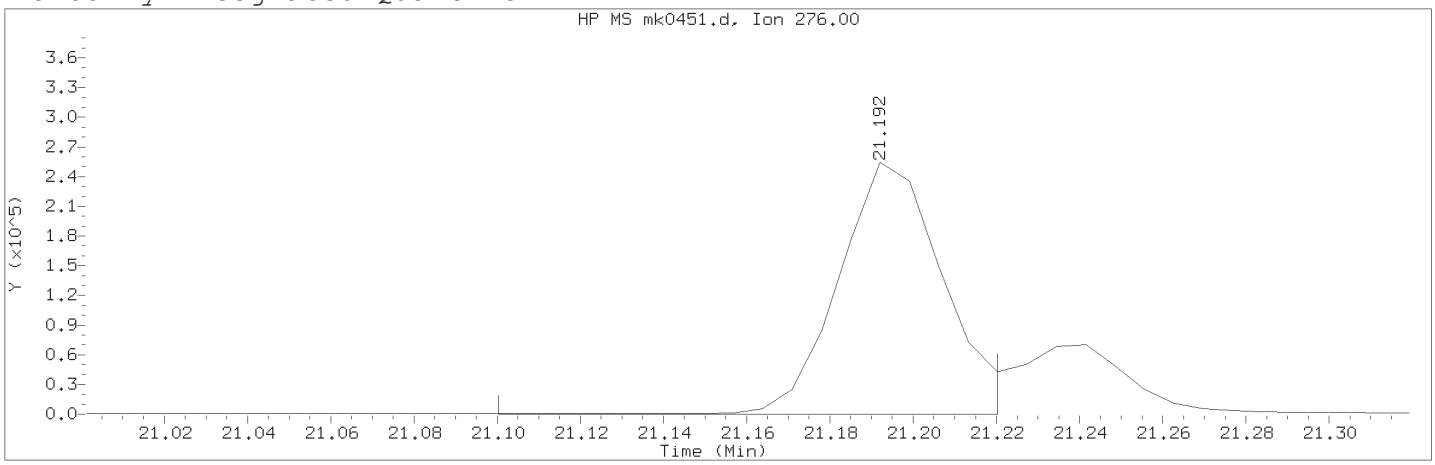
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
41) Benzo(g,h,i)perylene	(6)	21.588	276	494568	0.445

Digitally signed by Joseph M. Gambler
on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0451.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 05:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 06:34
Date, time and analyst ID of latest file update: 08-Nov-2018 06:34 jmg00346

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

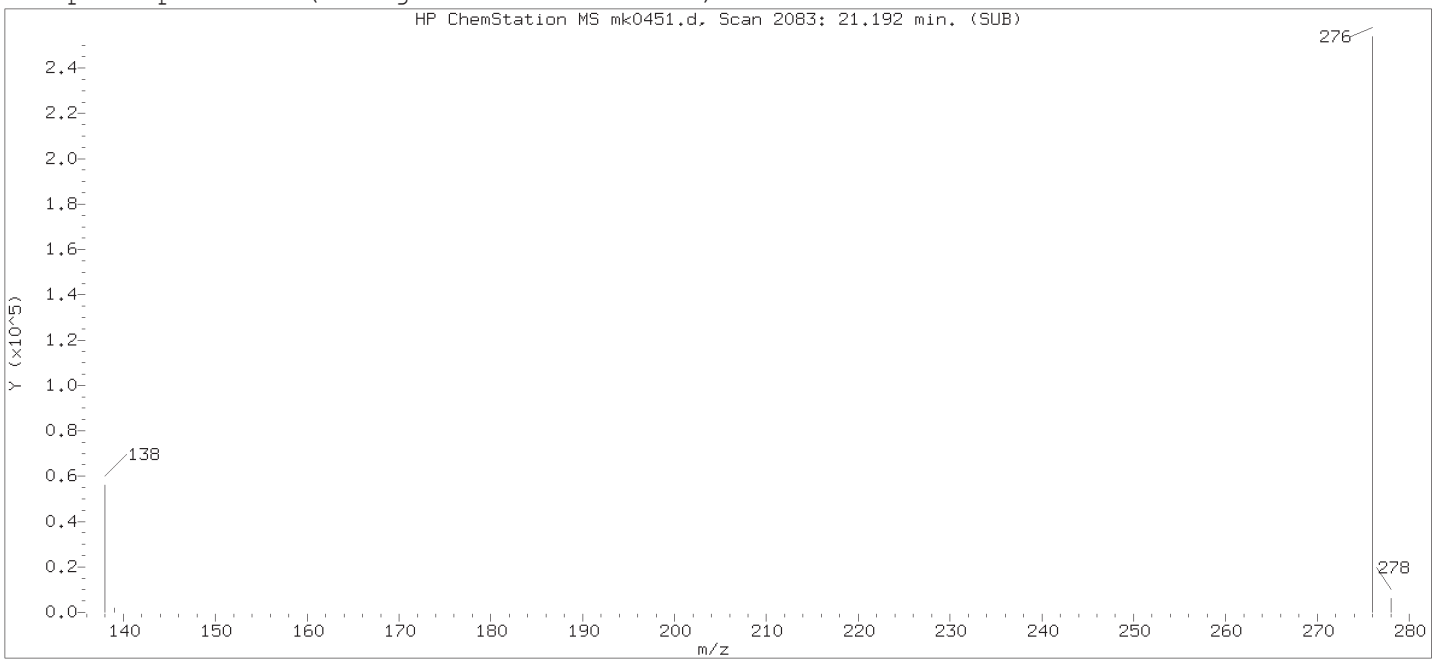
Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2083		
Retention Time (minutes)	: 21.192		
Quant Ion	: 276.00		
Area (flag)	: 442003M		
On-Column Amount (ng/ul)	: 0.4601		
Integration start scan	: 2069	Integration stop scan:	2086
Y at integration start	: 305	Y at integration end:	305

Reason for manual integration: improper integration

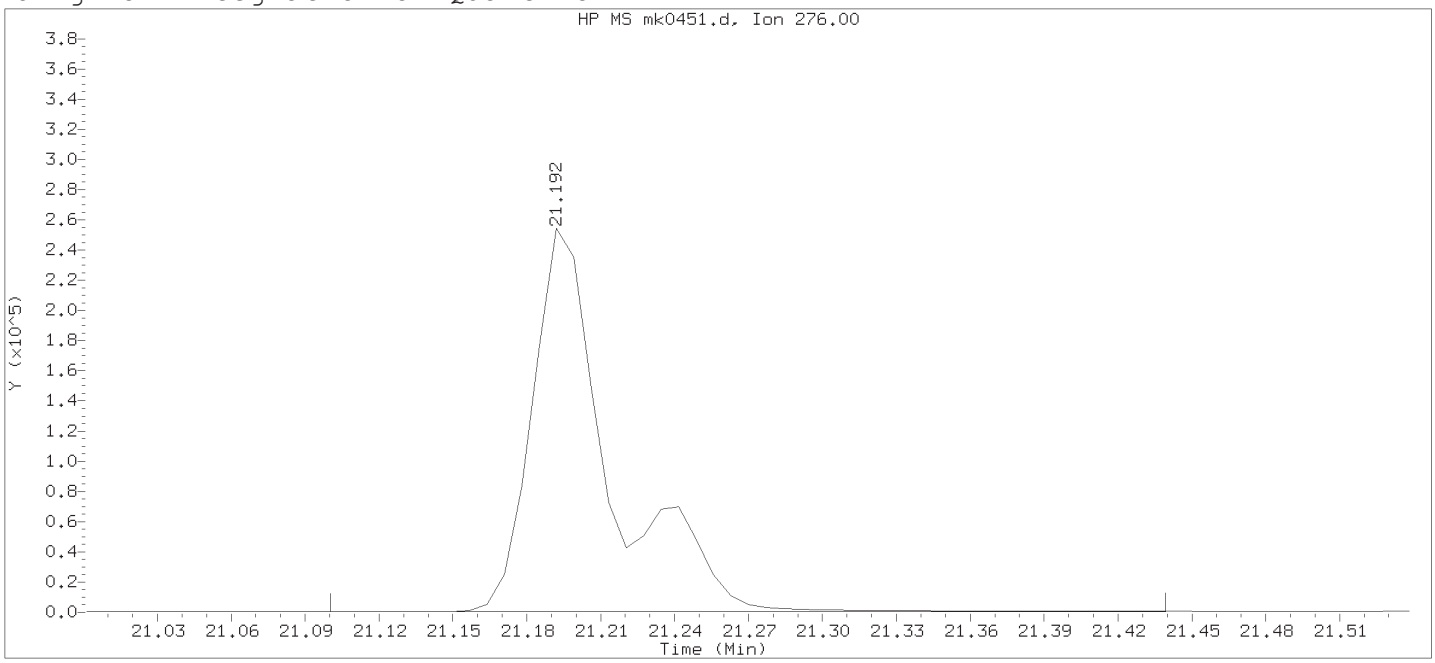
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2018 at 06:34.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2018 at 10:59.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



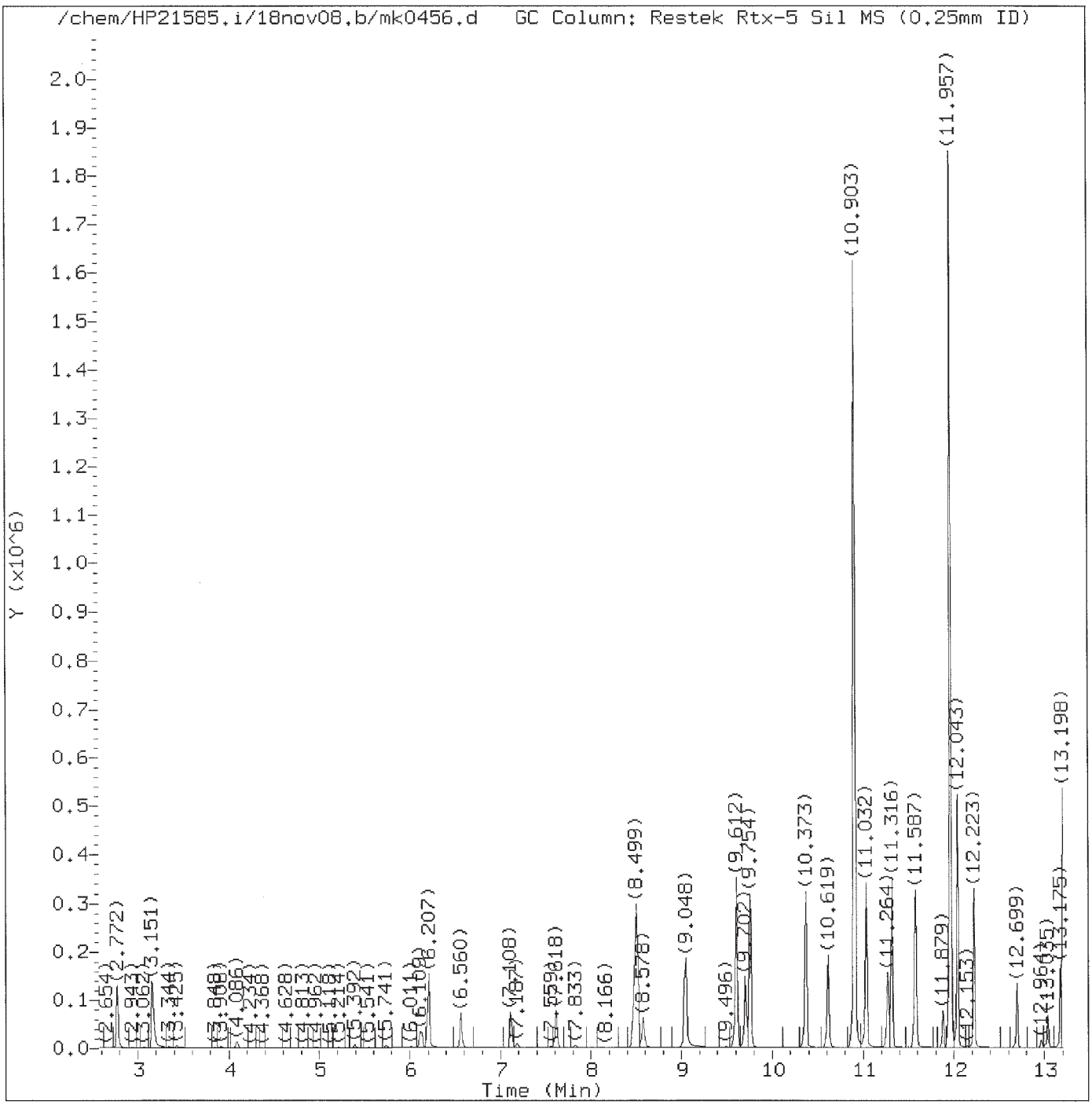
Data File: /chem/HP21585.i/18nov08.b/mk0451.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 05:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: all1
Calibration date and time: 08-NOV-2018 05:56
Date, time and analyst ID of latest file update: 08-Nov-2018 05:56 Unknown

Sample Name: SSTD0.5 Lab Sample ID: RVSIM2768

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2083		
Retention Time (minutes)	: 21.192		
Quant Ion	: 276.00		
Area	: 568294		
On-column Amount (ng/ul)	: 0.5916		
Integration start scan	: 2069	Integration stop scan:	2117
Y at integration start	: 305	Y at integration end:	305

Digitally signed by Joseph M. Gambler on 11/08/2018 at 06:34.
Target 3.5 esignature used.



Total Ion Chromatogram (TIC)

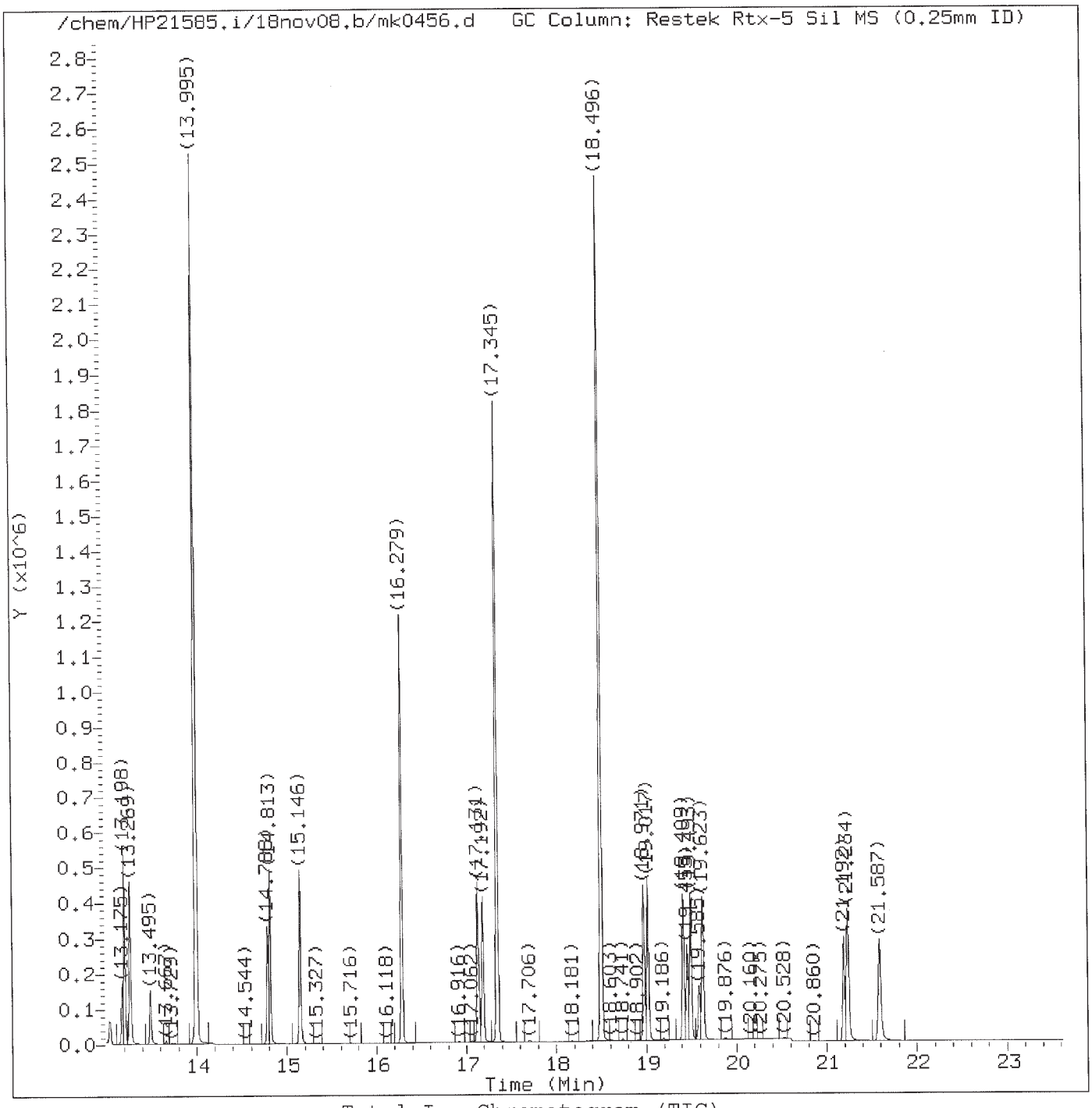
Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0456.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 08:24 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 18:04
Date, time and analyst ID of latest file update: 08-Nov-2018 18:49 art12405

Sample Name: SECC0.50 Lab Sample ID: RVSIM2768

Digitally signed by Ashley R. Transue
on 11/08/2018 at 18:50.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0456.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 08:24 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 18:04
Date, time and analyst ID of latest file update: 08-Nov-2018 18:49 art12405

Sample Name: SECC0.50 Lab Sample ID: RVSIM2768

Digitally signed by Ashley R. Transue
on 11/08/2018 at 18:50.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0456.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 08:24 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 18:04
Date, time and analyst ID of latest file update: 08-Nov-2018 18:49 art12405

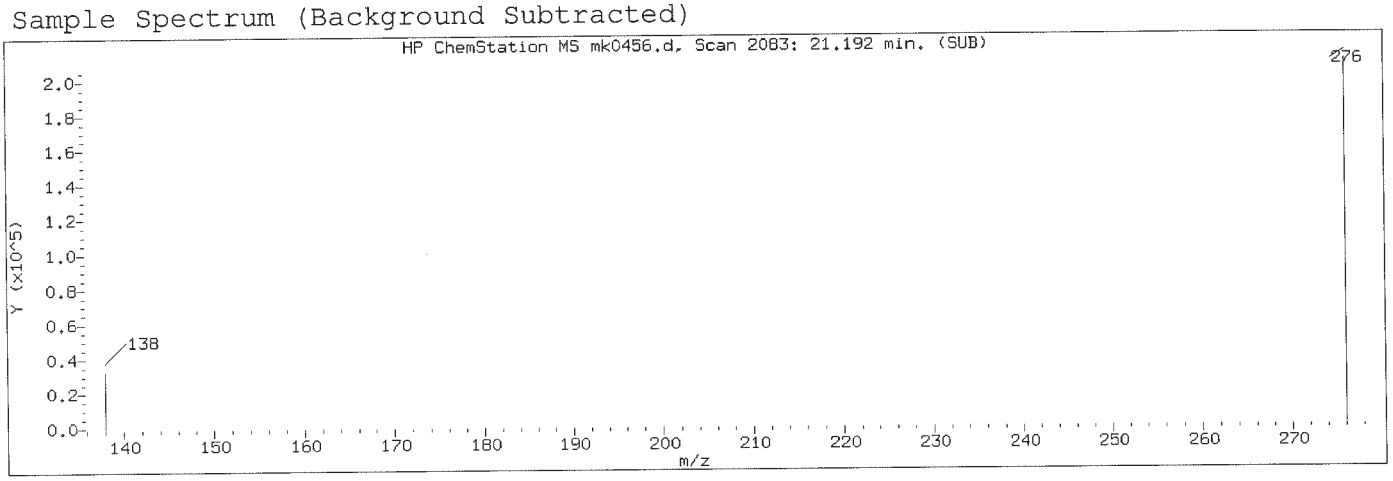
Sample Name: SECC0.50 Lab Sample ID: RVSIM2768

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.772	88	95136	0.533
4) bis(2-Chloroethyl)ether	(2)	6.207	93	149131	0.464
5)*1,4-Dichlorobenzene-d4	(1)	6.560	152	64385	0.250
6)*Naphthalene-d8	(2)	8.480	136	210111	0.250
7) Naphthalene	(2)	8.499	128	432732	0.448
10)$1-Methylnaphthalene-d10	(2)	9.702	152	181943	0.476
13) Acenaphthylene	(3)	11.032	152	445022	0.471
14)*Acenaphthene-d10	(3)	11.264	164	89711	0.250
15) Acenaphthene	(3)	11.316	154	267905	0.467
18) Fluorene	(3)	12.043	166	322650	0.482
19) Hexachlorobenzene	(4)	12.699	284	96030	0.487
20)*Phenanthrene-d10	(4)	13.175	188	175472	0.250
21) Phenanthrene	(4)	13.198	178	460589	0.489
22) Anthracene	(4)	13.269	178	462496	0.500
23) Di-n-butylphthalate	(4)	13.995	149	2705010	2.621
24)$Fluoranthene-d10	(4)	14.788	212	364008	0.529
25) Fluoranthene	(4)	14.813	202	540154	0.514
26) Pyrene	(5)	15.146	202	559626	0.460
28) Benzo(a)anthracene	(5)	17.131	228	502096	0.479
29)*Chrysene-d12	(5)	17.146	240	133665	0.250
30) Chrysene	(5)	17.192	228	515941	0.486
31) bis(2-Ethylhexyl)phthalate	(5)	17.345	149	1766288	2.338
33) Benzo(b)fluoranthene	(6)	18.971	252	528519	0.483
34) Benzo(k)fluoranthene	(6)	19.017	252	550390	0.504
36)$Benzo(a)pyrene-d12	(6)	19.455	264	261441	0.515
37) Benzo(a)pyrene	(6)	19.493	252	514964	0.491
38)*Perylene-d12	(6)	19.585	264	138070	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.192	276	424264M	0.446
40) Dibenz(a,h)anthracene	(6)	21.241	278	442684	0.455
41) Benzo(g,h,i)perylene	(6)	21.587	276	471237	0.428

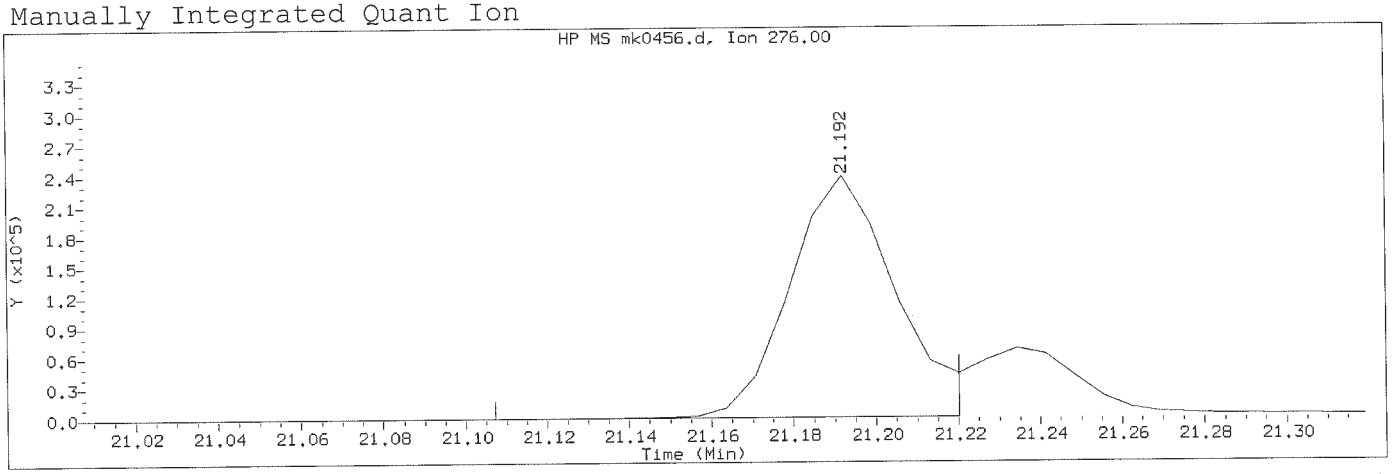
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/08/2018 at 18:50.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0456.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 08:24 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 18:04
Date, time and analyst ID of latest file update: 08-Nov-2018 18:49 art12405

Sample Name: SECC0.50 Lab Sample ID: RVSIM2768

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2083		
Retention Time (minutes)	: 21.192		
Quant Ion	: 276.00		
Area (flag)	: 424264M		
On-Column Amount (ng/ul)	: 0.4455		
Integration start scan	: 2070	Integration stop scan:	2086
Y at integration start	: 215	Y at integration end:	215

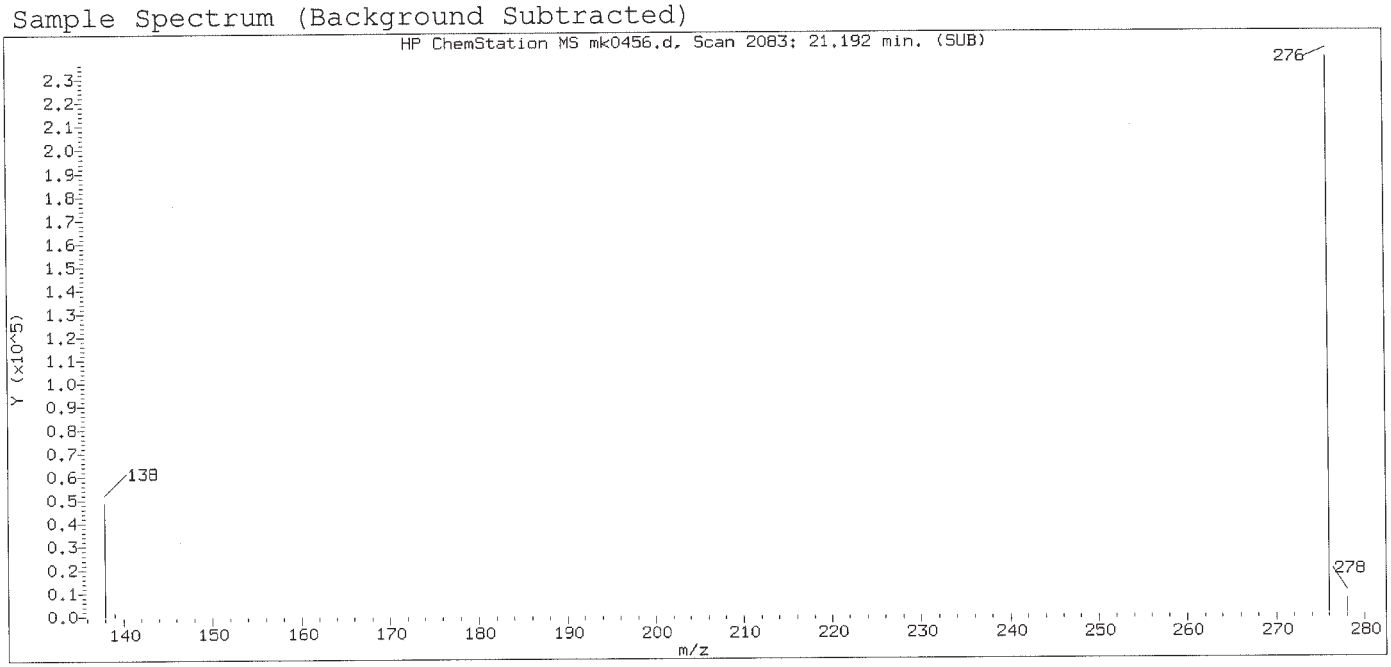
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/08/2018 at 18:50.
Target 3.5 esignature user ID: art12405

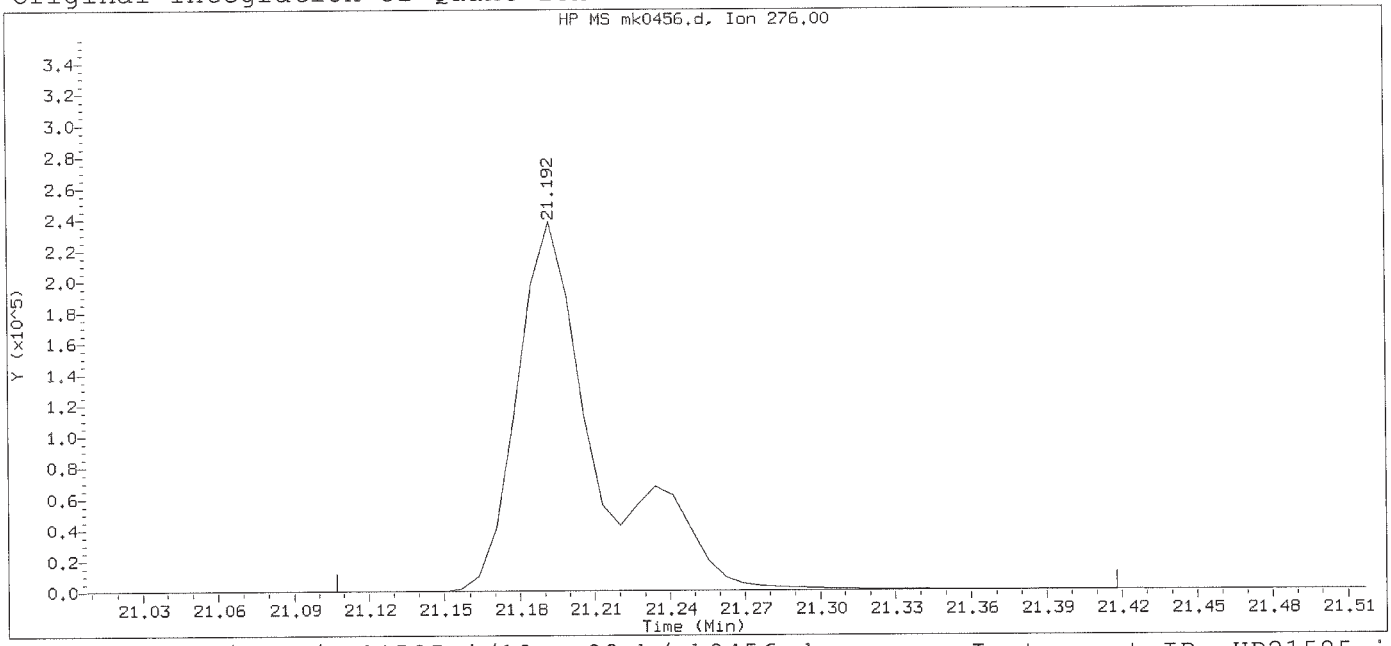
Matthew E. Burton
Principal Specialist

GC/MS audit/management approval: NOV 12 2018

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0456.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 08:24 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 08-NOV-2018 06:50
Date, time and analyst ID of latest file update: 08-Nov-2018 08:53 Unknown

Sample Name: SECC0.50 Lab Sample ID: RVSIM2768

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2083		
Retention Time (minutes)	: 21.192		
Quant Ion	: 276.00		
Area	: 542175		
On-column Amount (ng/ul)	: 0.5693		
Integration start scan	: 2070	Integration stop scan:	2114
Y at integration start	: 215	Y at integration end:	215

Digitally signed by Ashley R. Transue on 11/08/2018 at 18:50.
Target 3.5 esignature user ID: atransue

Raw QC Data

Semivolatiles by GC/MS-SIM

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP21585.i/18nov05a.b/mk0202.d Injection date and time: **05-NOV-2018 19:48**
Data file Sample Info. Line: SBLKWN305;SBLKWN305;1;3;BLANK;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:28
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599(0.000)	476	152	164882 (114)	0.50	*
6) Naphthalene-d8	8.519(0.000)	574	136	502154 (114)	0.50	*
14) Acenaphthene-d10	11.303(0.000)	770	164	228197 (120)	0.50	*
20) Phenanthrene-d10	13.199(0.000)	990	188	469348 (119)	0.50	*
29) Chrysene-d12	17.185(0.000)	1554	240	312418 (99)	0.50	
38) Perylene-d12	19.631(0.000)	1873	264	332226 (112)	0.50	*

*** = Internal Standard area outside QC limits**

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
10) 1-Methylnaphthalene-d10	(2)	9.741(0.000)	152	74291	0.163	65%
24) Fluoranthene-d10	(4)	14.820(0.000)	212	136900	0.149	59%
36) Benzo(a)pyrene-d12	(6)	19.501(0.000)	264	94181	0.154	62%

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					0.03
4) bis(2-Chloroethyl)ether	(2)			Not Detected					0.02
7) Naphthalene	(2)			Not Detected					0.008
13) Acenaphthylene	(3)			Not Detected					0.003
15) Acenaphthene	(3)			Not Detected					0.003
18) Fluorene	(3)			Not Detected					0.003
19) Hexachlorobenzene	(4)			Not Detected					0.01
21) Phenanthrene	(4)			Not Detected					0.008
22) Anthracene	(4)			Not Detected					0.003
23) Di-n-butylphthalate	(4)			Not Detected					0.05
25) Fluoranthene	(4)			Not Detected					0.003
26) Pyrene	(5)			Not Detected					0.003
31) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.08
28) Benzo(a)anthracene	(5)			Not Detected					0.003
30) Chrysene	(5)			Not Detected					0.003
33) Benzo(b)fluoranthene	(6)	19.018(-0.000)	252	3810	0.003	0.01			0.003
34) Benzo(k)fluoranthene	(6)	19.056(-0.000)	252	3582	0.003	0.01			0.003
37) Benzo(a)pyrene	(6)			Not Detected					0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.234(0.000)	276	3720M	0.003	0.01			0.003
40) Dibenz(a,h)anthracene	(6)			Not Detected					0.005
41) Benzo(g,h,i)perylene	(6)	21.637(-0.000)	276	3804	0.003	0.01			0.003

M = Compound was manually integrated.

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30. Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0202.d Injection date and time: **05-NOV-2018 19:48**
Data file Sample Info. Line: SBLKWN305;SBLKWN305;1;3;BLANK;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:28
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

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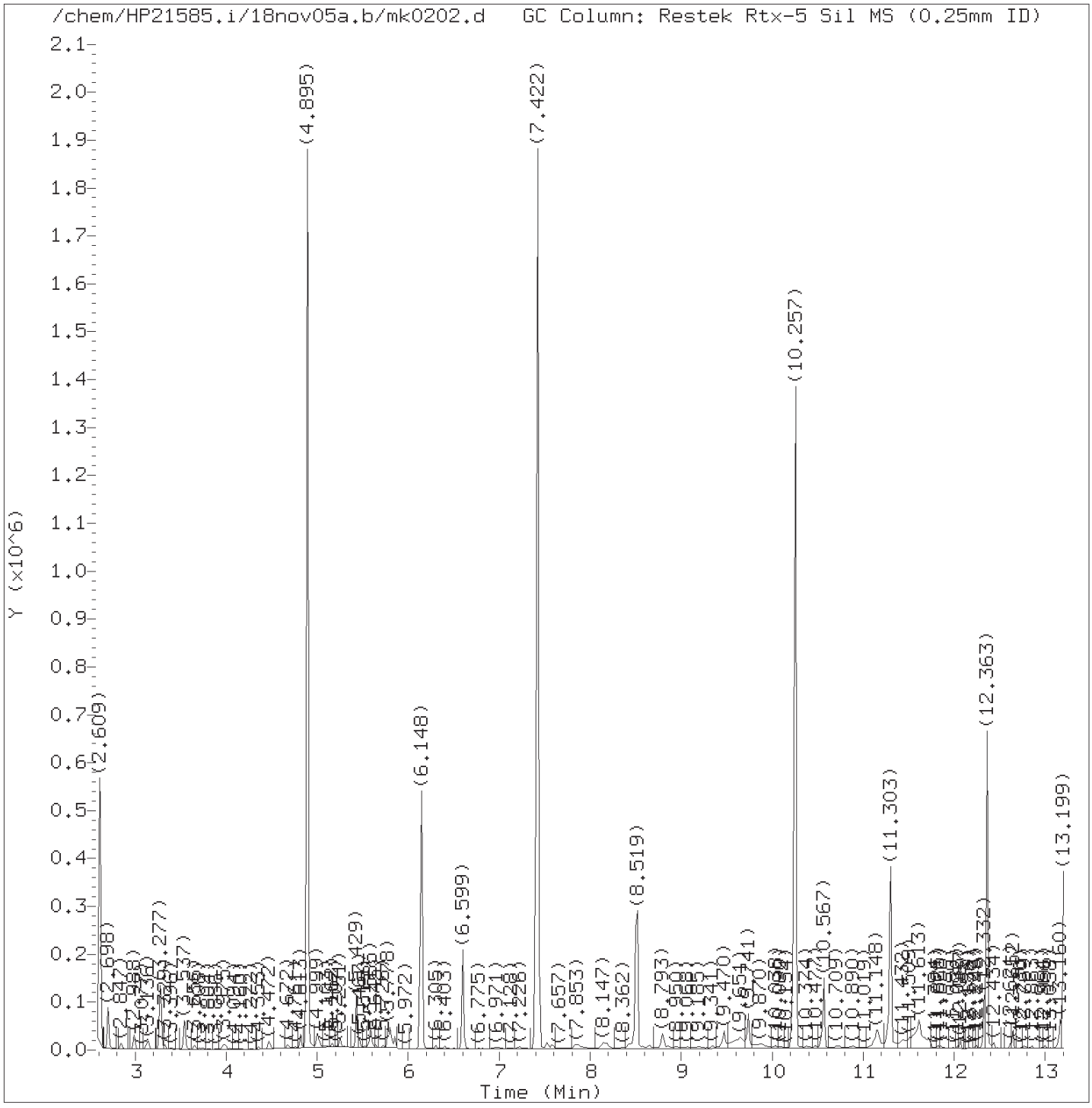
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

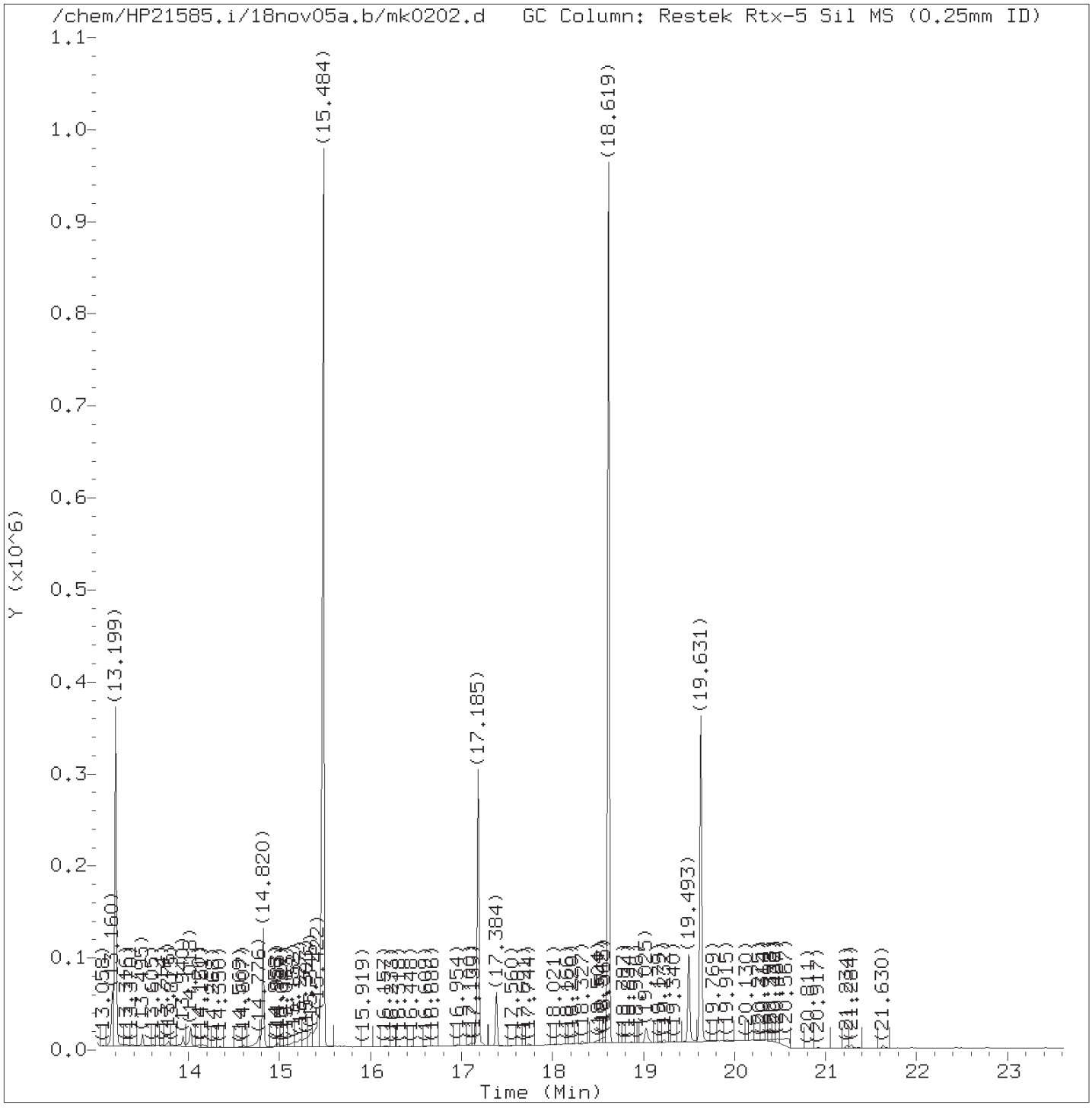
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

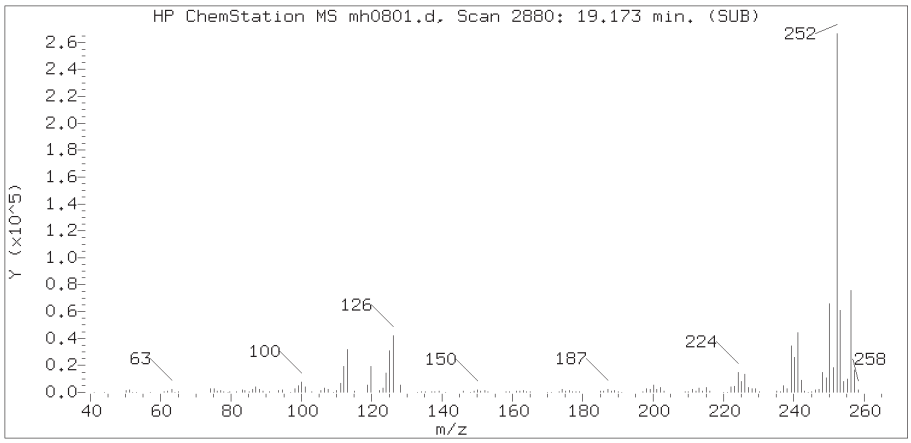
Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

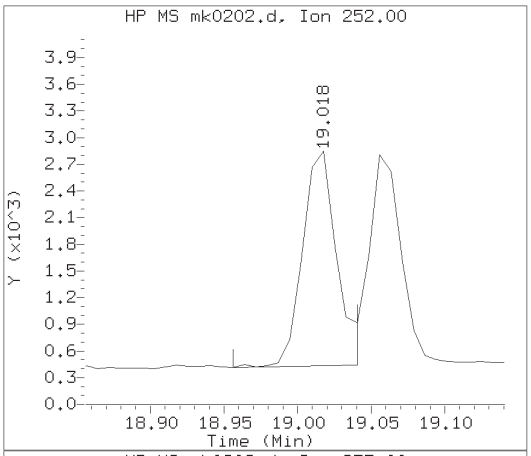
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	164882	0.500
6)*Naphthalene-d8	(2)	8.519	136	502154	0.500
10)$1-Methylnaphthalene-d10	(2)	9.741	152	74291	0.163
14)*Acenaphthene-d10	(3)	11.303	164	228197	0.500
20)*Phenanthrene-d10	(4)	13.199	188	469348	0.500
24)$Fluoranthene-d10	(4)	14.820	212	136900	0.149
29)*Chrysene-d12	(5)	17.185	240	312418	0.500
33) Benzo(b)fluoranthene	(6)	19.018	252	3810	0.003
34) Benzo(k)fluoranthene	(6)	19.056	252	3582	0.003
36)$Benzo(a)pyrene-d12	(6)	19.501	264	94181	0.154
38)*Perylene-d12	(6)	19.631	264	332226	0.500
39) Indeno(1,2,3-cd)pyrene	(6)	21.234	276	3720M	0.003
41) Benzo(g,h,i)perylene	(6)	21.637	276	3804	0.003

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

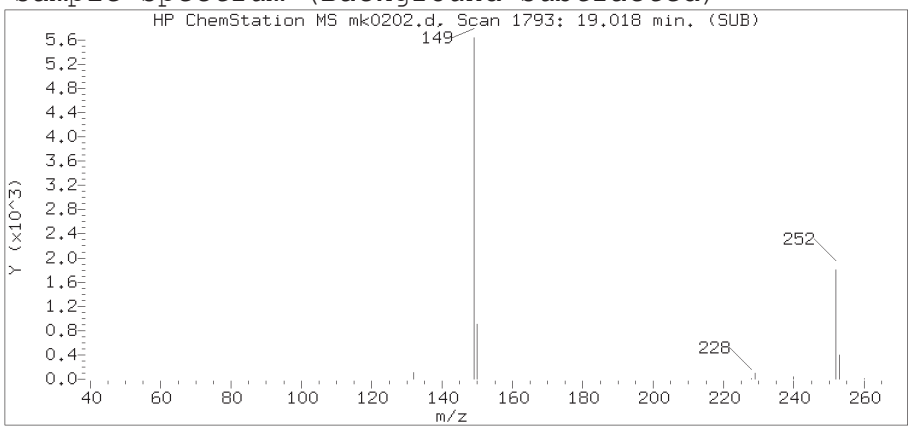
Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

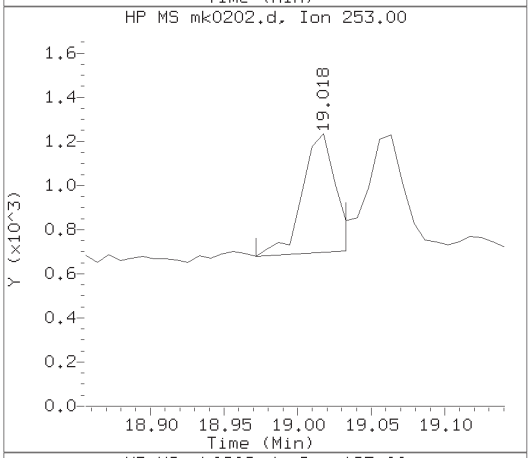
Reference Standard Spectrum for Benzo(b)fluoranthene



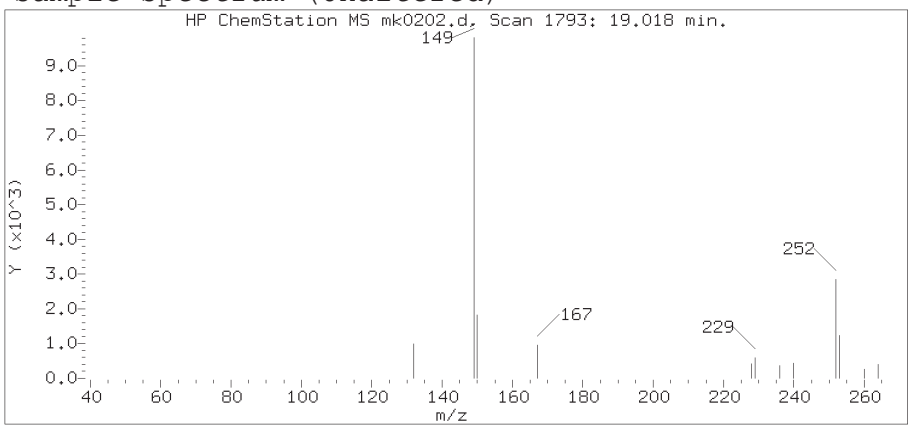


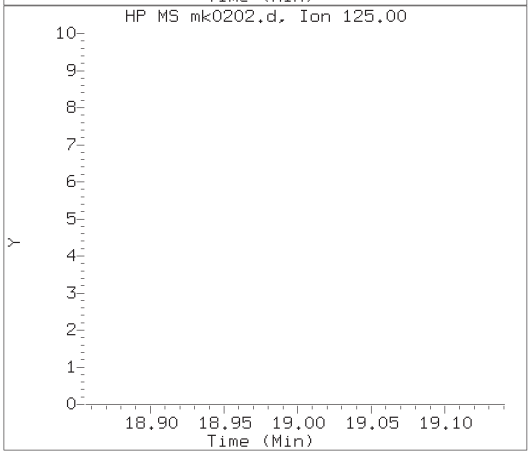
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

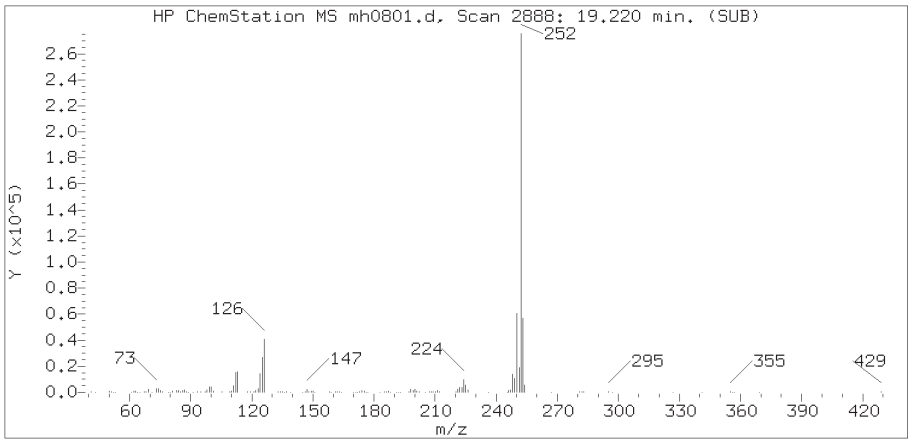
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

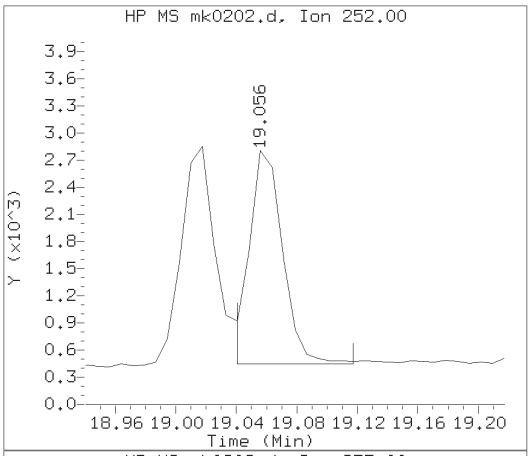
Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

Compound Number	: 33
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1793
Retention Time (minutes)	: 19.018
Relative Retention Time	:-0.00000
Quant Ion	: 252.00
Area (flag)	: 3810
On-column Amount (ng/ul)	: 0.0029

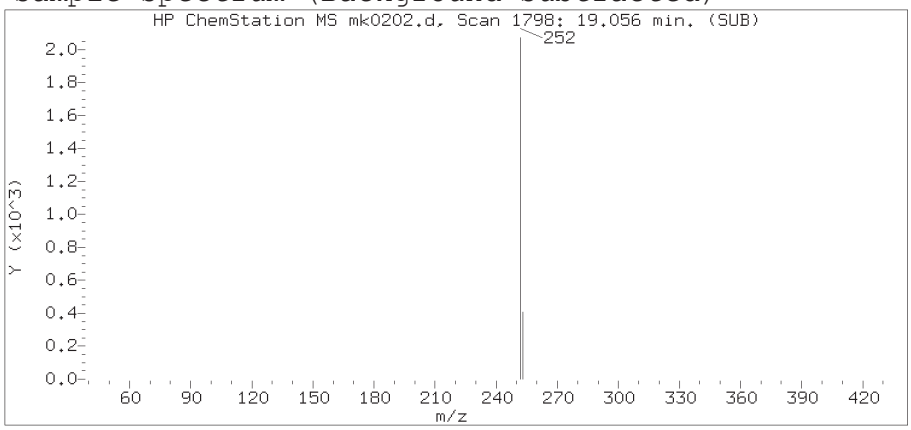
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

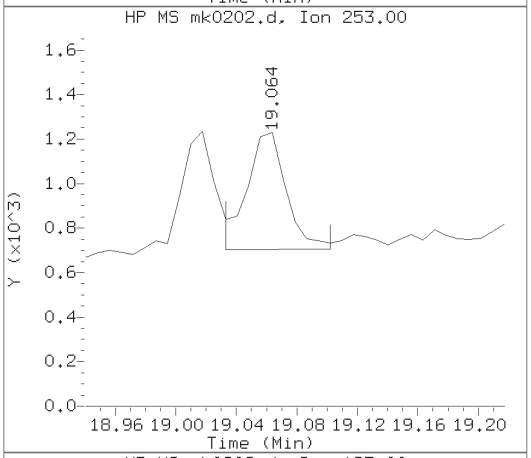
Reference Standard Spectrum for Benzo(k)fluoranthene



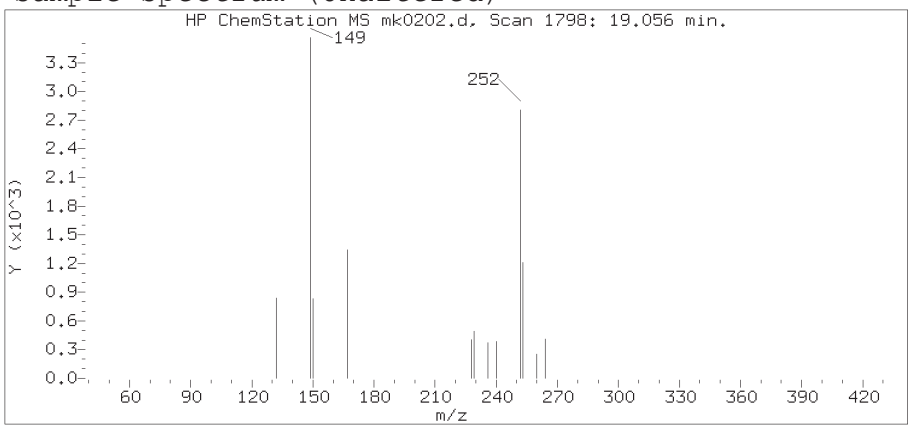


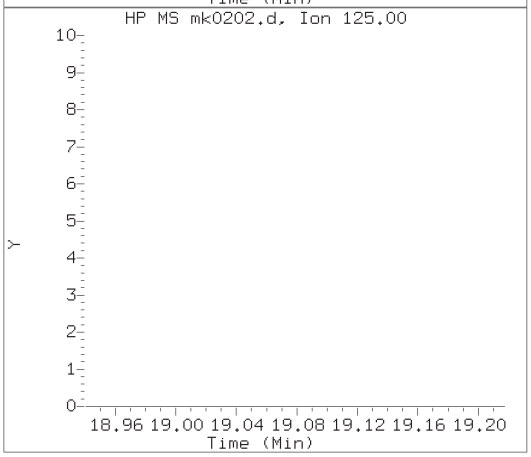
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

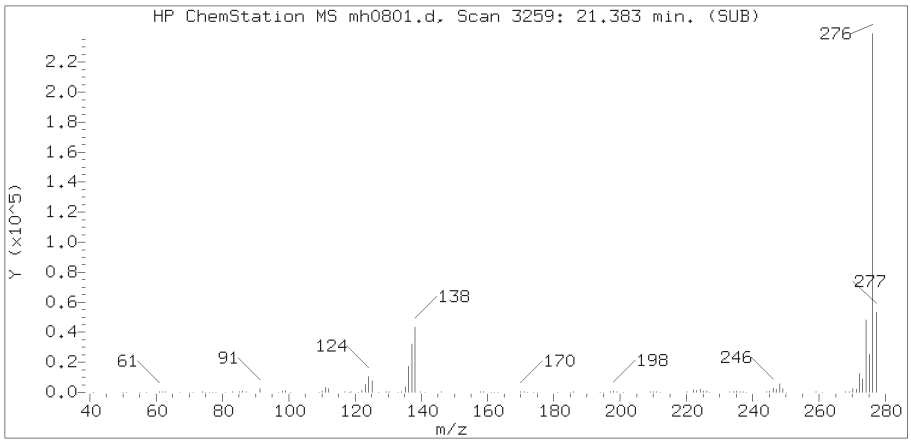
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

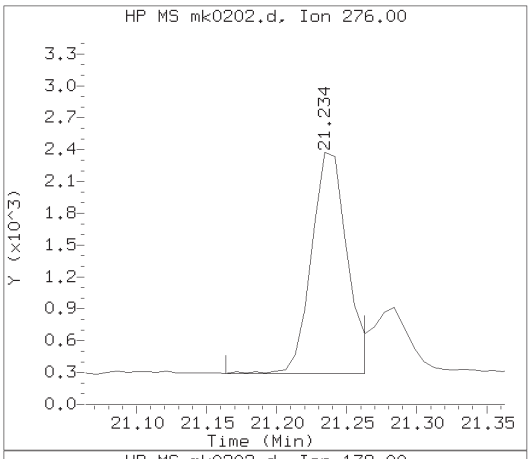
Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

Compound Number	: 34
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1798
Retention Time (minutes)	: 19.056
Relative Retention Time	:-0.00000
Quant Ion	: 252.00
Area (flag)	: 3582
On-column Amount (ng/ul)	: 0.0027

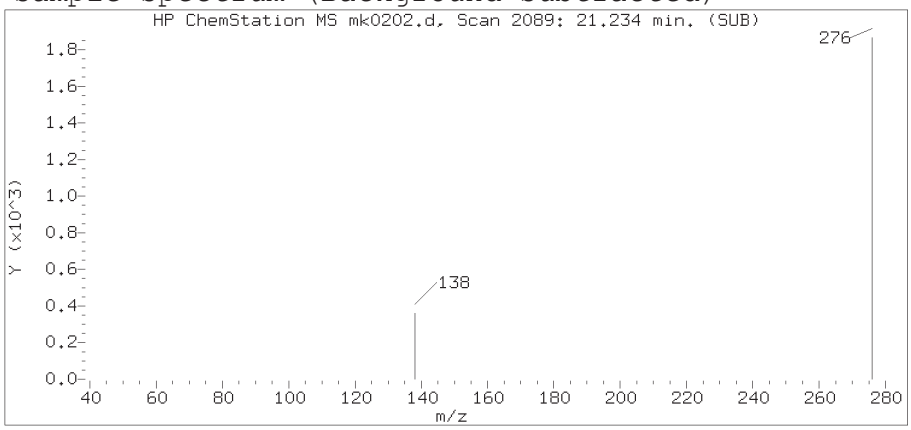
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

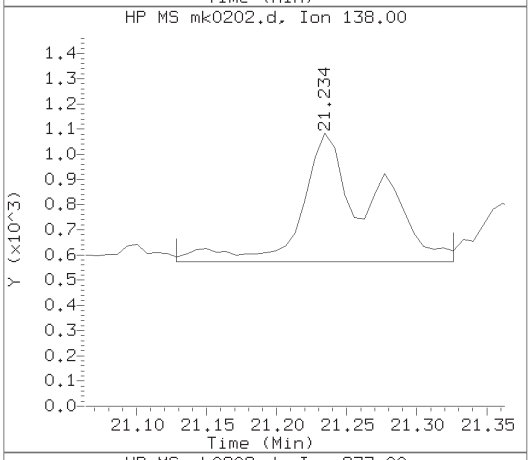
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



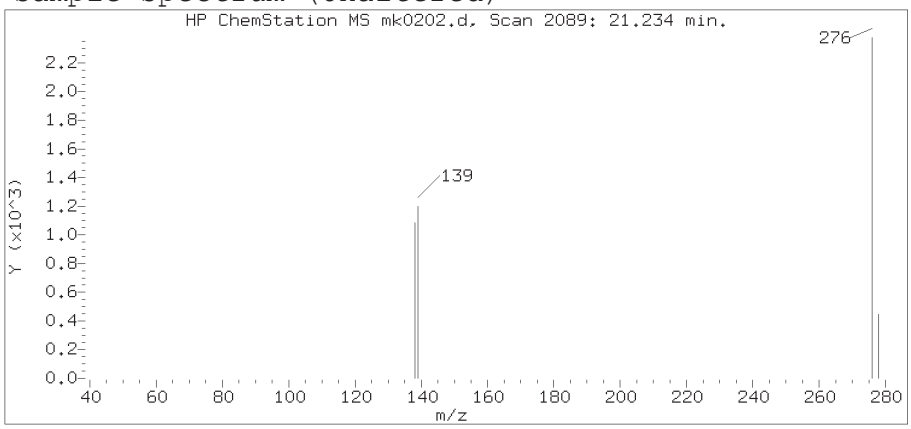


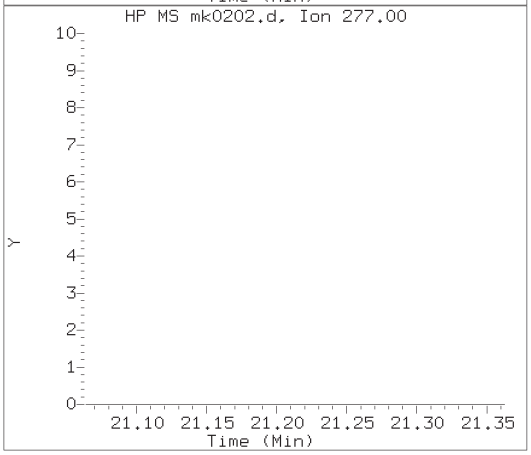
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

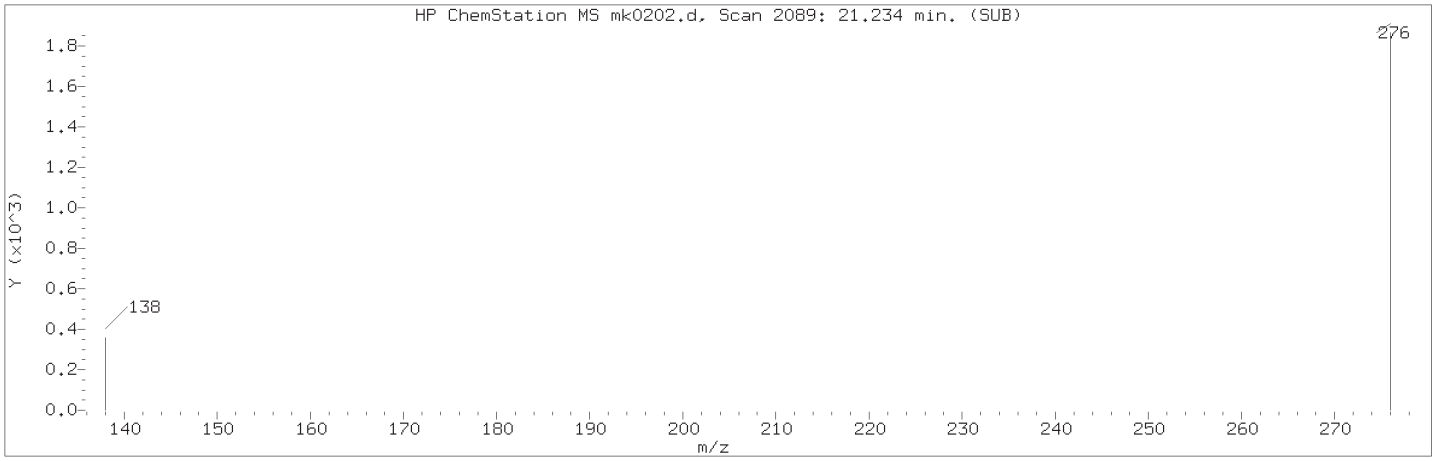
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

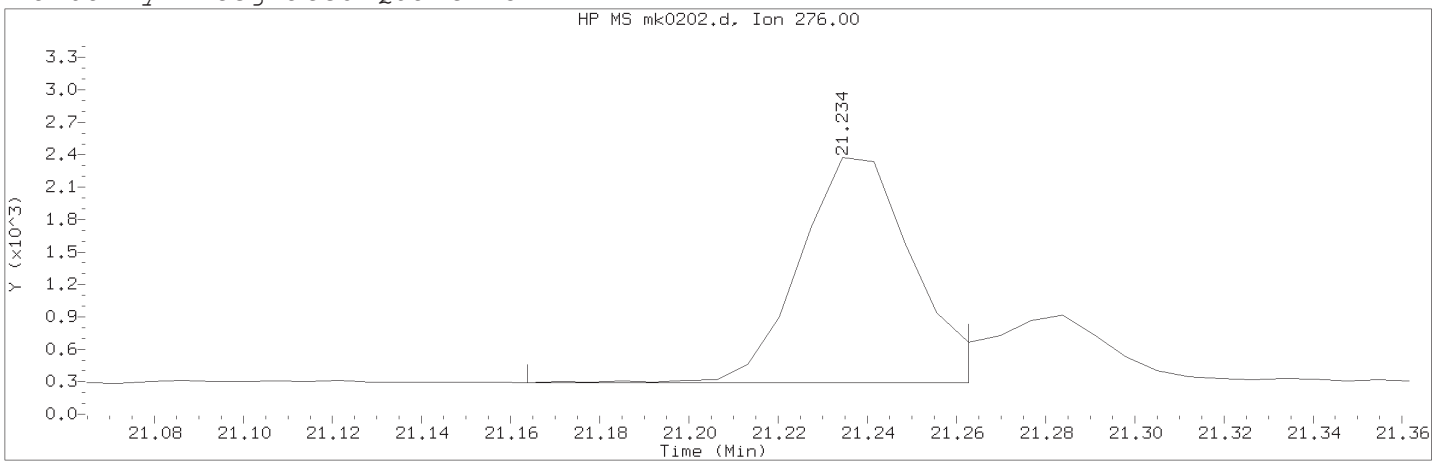
Compound Number	: 39
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2089
Retention Time (minutes)	: 21.234
Relative Retention Time	: 0.00000
Quant Ion	: 276.00
Area (flag)	: 3720M
On-column Amount (ng/ul)	: 0.0032

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

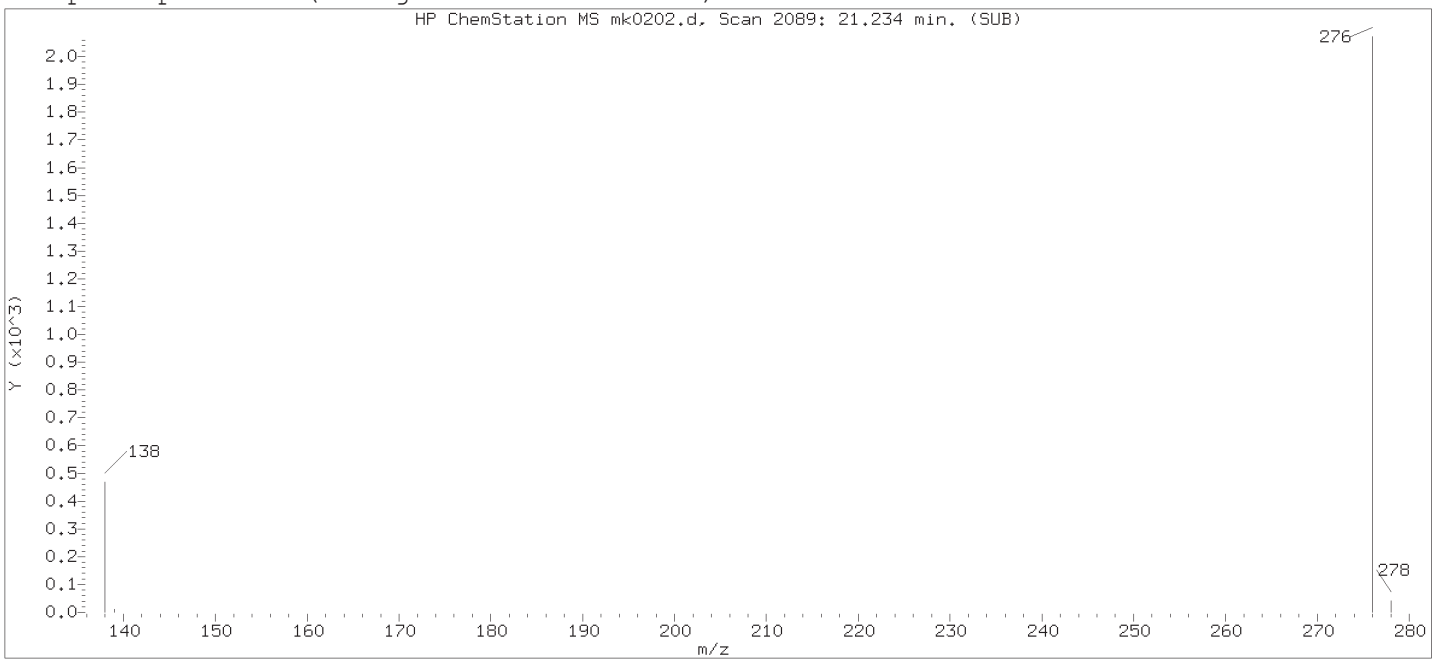
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2089
Retention Time (minutes) : 21.234
Quant Ion : 276.00
Area (flag) : 3720M
On-column Amount (ng/ul) : 0.0032
Integration start scan : 2078 Integration stop scan: 2092
Y at integration start : 289 Y at integration end: 289

Reason for manual integration: improper integration

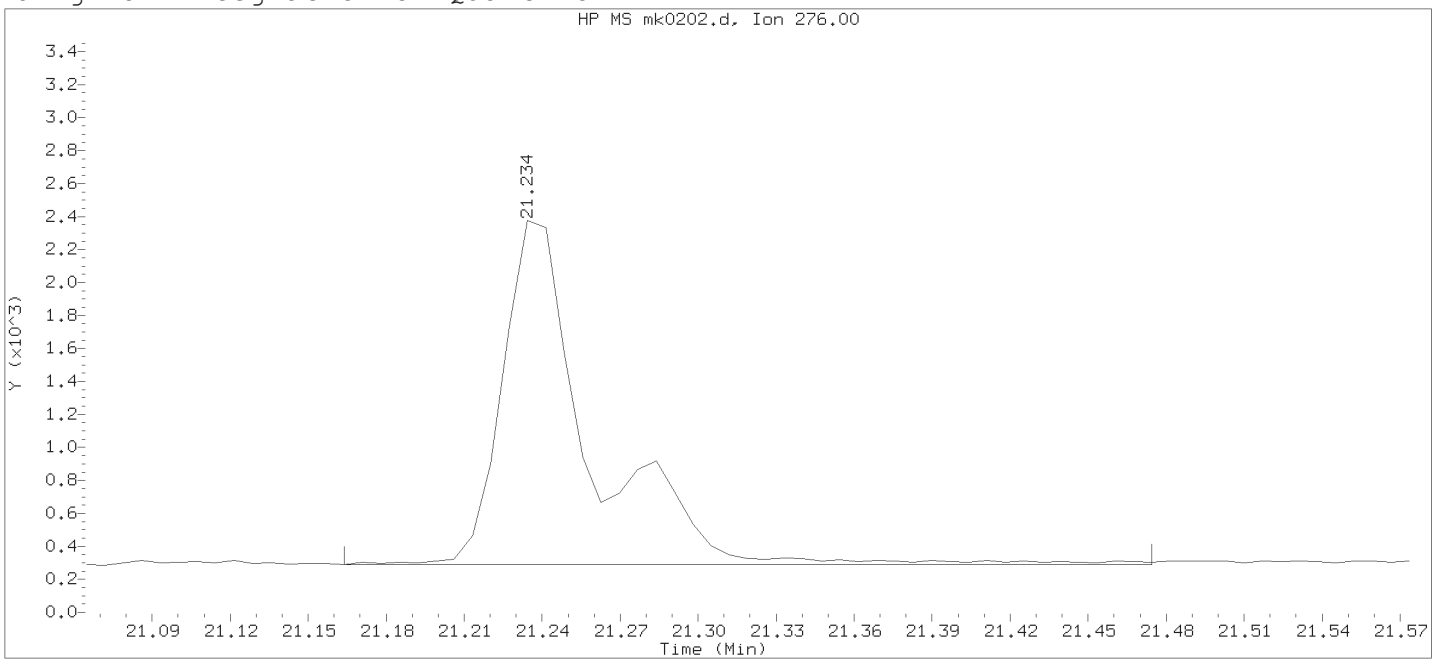
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

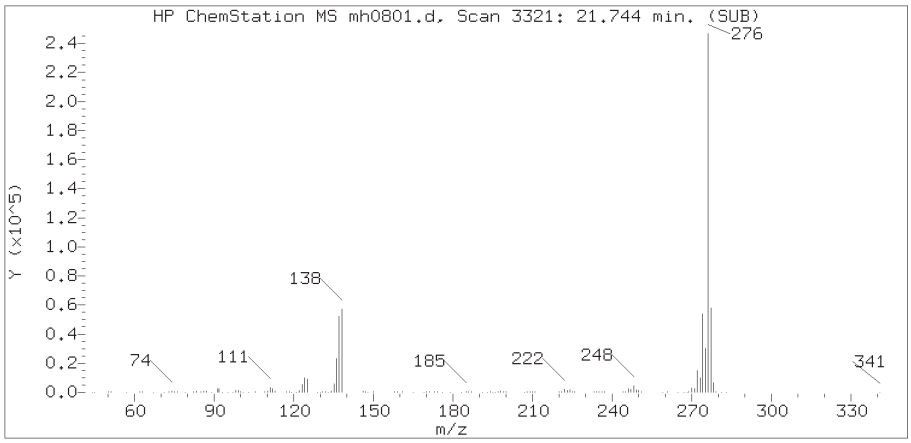
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

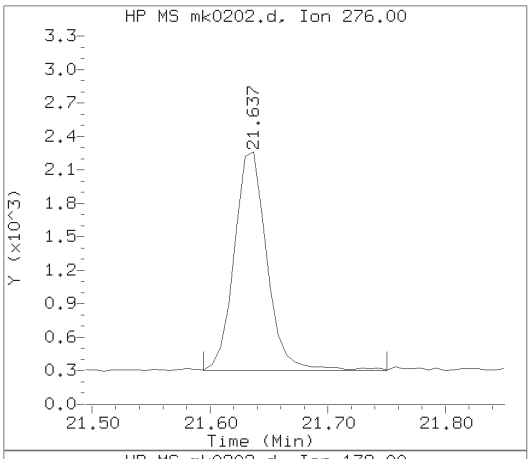
Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

Compound Number	:	39
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2089
Retention Time (minutes)	:	21.234
Quant Ion	:	276.00
Area	:	4991
On-column Amount (ng/ul)	:	0.0022
Integration start scan	:	2078 Integration stop scan: 2122
Y at integration start	:	289 Y at integration end: 289

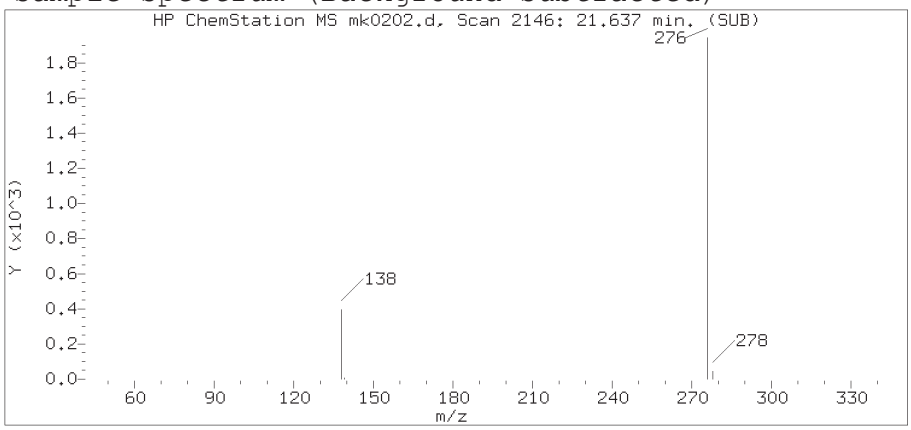
Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

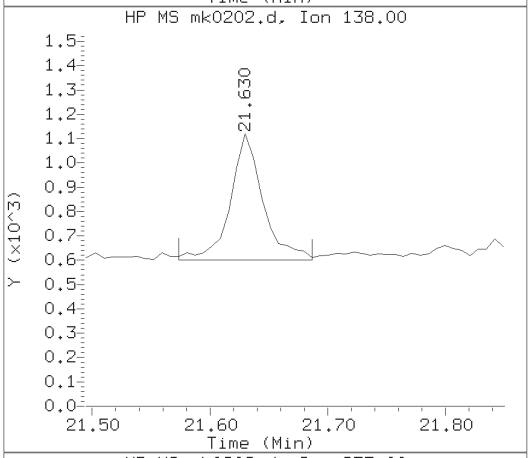
Reference Standard Spectrum for Benzo(g,h,i)perylene



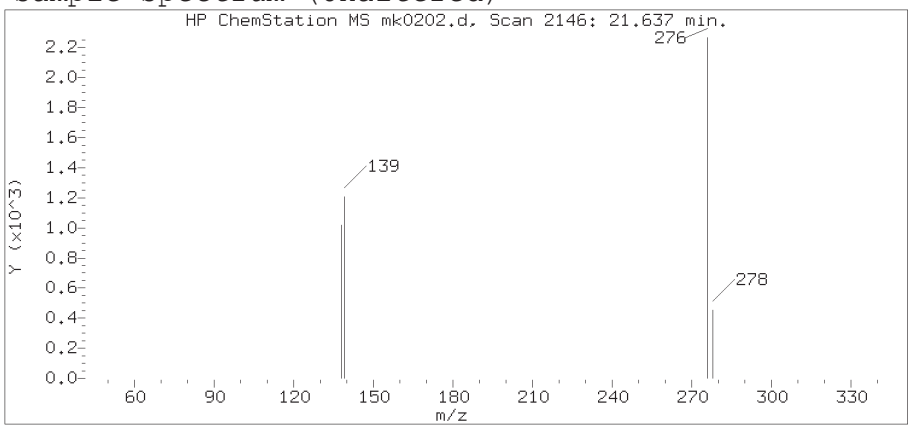


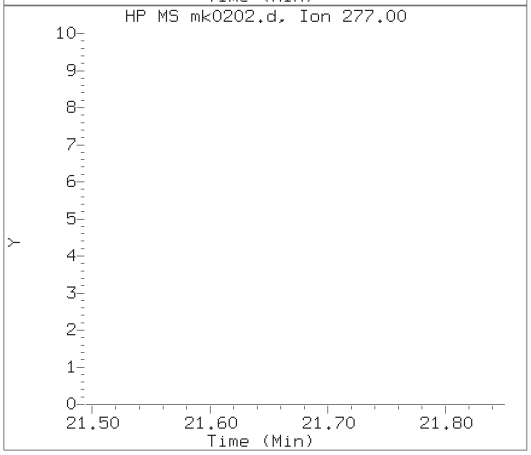
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov05a.b/mk0202.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 19:48 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:28
Date, time and analyst ID of latest file update: 07-Nov-2018 16:29 art12405

Sample Name: SBLKWN305 Lab Sample ID: SBLKWN305

Compound Number	: 41
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2146
Retention Time (minutes)	: 21.637
Relative Retention Time	:-0.00036
Quant Ion	: 276.00
Area (flag)	: 3804
On-column Amount (ng/ul)	: 0.0029

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:30.
Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov08.b/mk0452.d Injection date and time: **08-NOV-2018 06:27**
Data file Sample Info. Line: SBLKWD311;SBLKWD311;1;3;BLANK;;; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **311WAD**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.560	(0.000)	474	152	63644	(-1)	0.25	
6) Naphthalene-d8	8.480	(0.000)	572	136	215412	(2)	0.25	
14) Acenaphthene-d10	11.264	(0.000)	767	164	89663	(1)	0.25	
20) Phenanthrene-d10	13.175	(0.000)	987	188	175342	(1)	0.25	
29) Chrysene-d12	17.146	(0.000)	1549	240	122581	(-7)	0.25	
38) Perylene-d12	19.593	(0.000)	1868	264	128197	(-8)	0.25	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
10) 1-Methylnaphthalene-d10	(2)	9.702	(0.000)	152	61145	0.156	62%
24) Fluoranthene-d10	(4)	14.788	(0.000)	212	123511	0.180	72%
36) Benzo(a)pyrene-d12	(6)	19.462	(0.000)	264	79873	0.169	68%

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					0.03
4) bis(2-Chloroethyl)ether	(2)				Not Detected					0.005
7) Naphthalene	(2)				Not Detected					0.008
9) 2-Methylnaphthalene	(2)				Not Detected					0.005
11) 1-Methylnaphthalene	(2)				Not Detected					0.003
13) Acenaphthylene	(3)				Not Detected					0.003
15) Acenaphthene	(3)				Not Detected					0.003
18) Fluorene	(3)				Not Detected					0.003
19) Hexachlorobenzene	(4)				Not Detected					0.01
21) Phenanthrene	(4)				Not Detected					0.008
22) Anthracene	(4)				Not Detected					0.003
23) Di-n-butylphthalate	(4)	13.909	(0.006)	149	24418	0.024	0.09			0.01
25) Fluoranthene	(4)				Not Detected					0.003
26) Pyrene	(5)				Not Detected					0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.345	(-0.000)	149	29058	0.042	0.17			0.02
28) Benzo(a)anthracene	(5)				Not Detected					0.003
30) Chrysene	(5)				Not Detected					0.003
33) Benzo(b)fluoranthene	(6)				Not Detected					0.003
34) Benzo(k)fluoranthene	(6)				Not Detected					0.003
37) Benzo(a)pyrene	(6)				Not Detected					0.003
39) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.003
40) Dibenz(a,h)anthracene	(6)				Not Detected					0.005
41) Benzo(g,h,i)perylene	(6)				Not Detected					0.003

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP21585.i/18nov08.b/mk0452.d Injection date and time: **08-NOV-2018 06:27**
Data file Sample Info. Line: SBLKWD311;SBLKWD311;1;3;BLANK;;; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **311WAD**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

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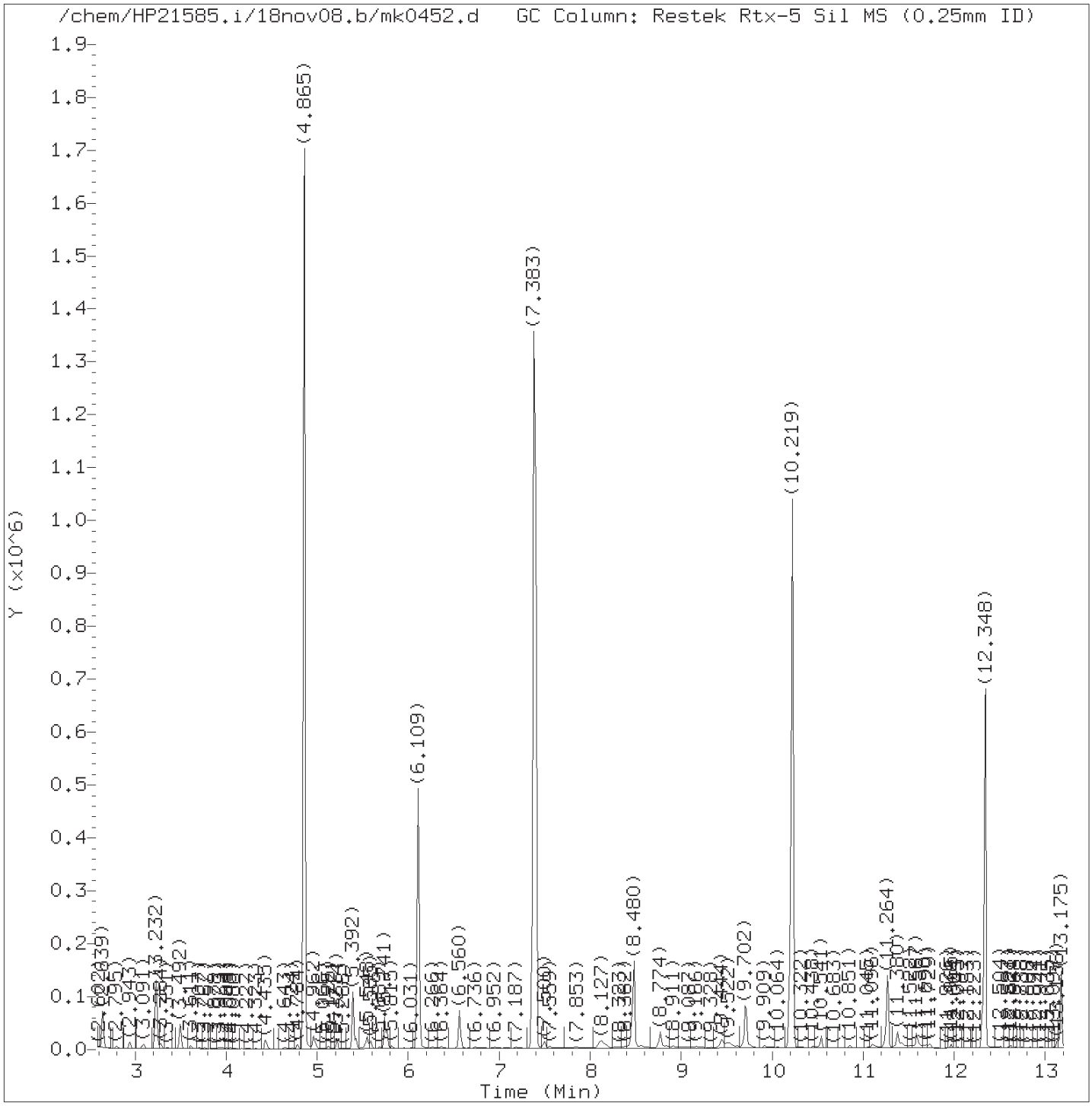
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 23

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

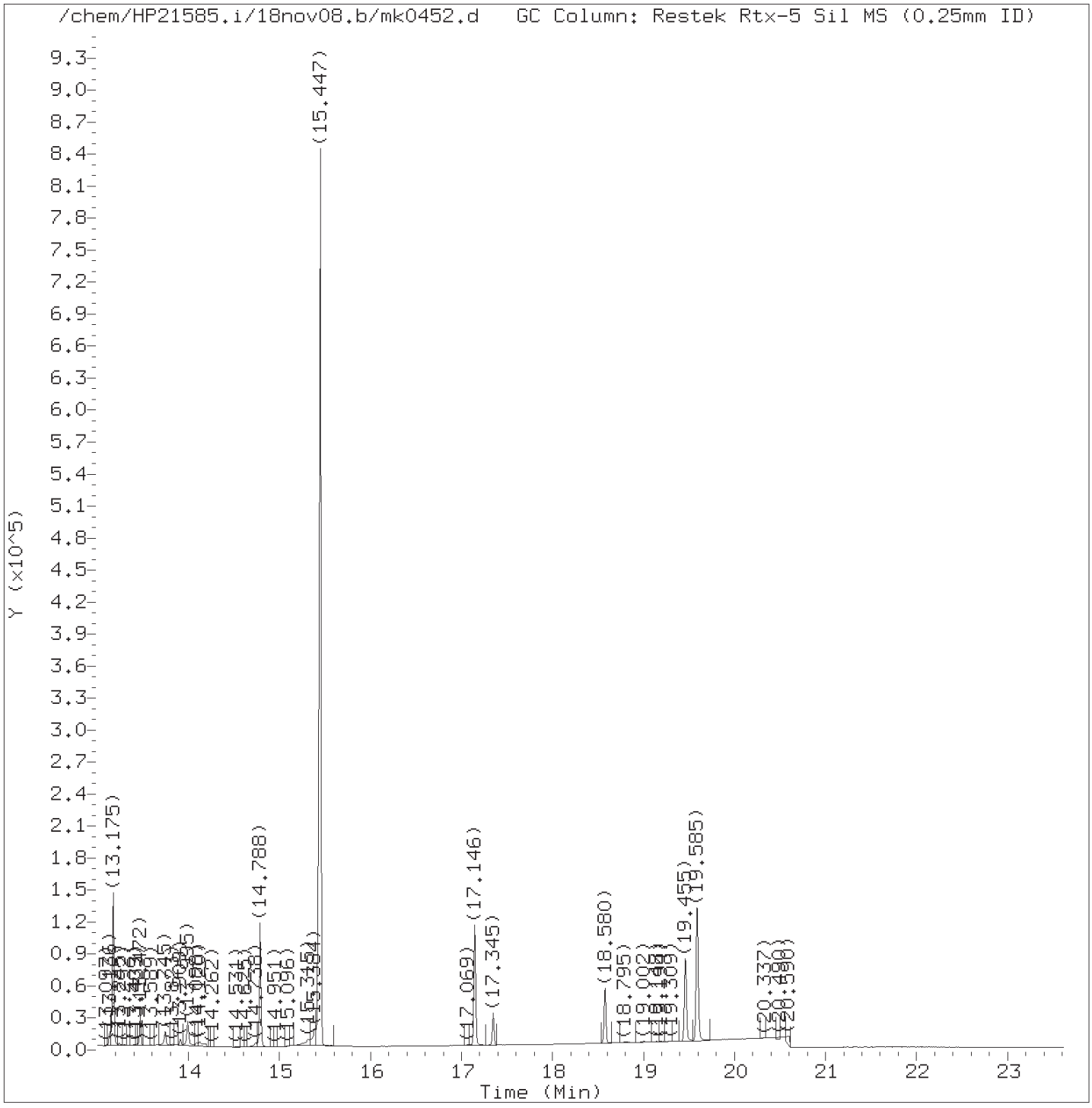
Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0452.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: SBLKWD311 Lab Sample ID: SBLKWD311

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0452.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: SBLKWD311 Lab Sample ID: SBLKWD311

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0452.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

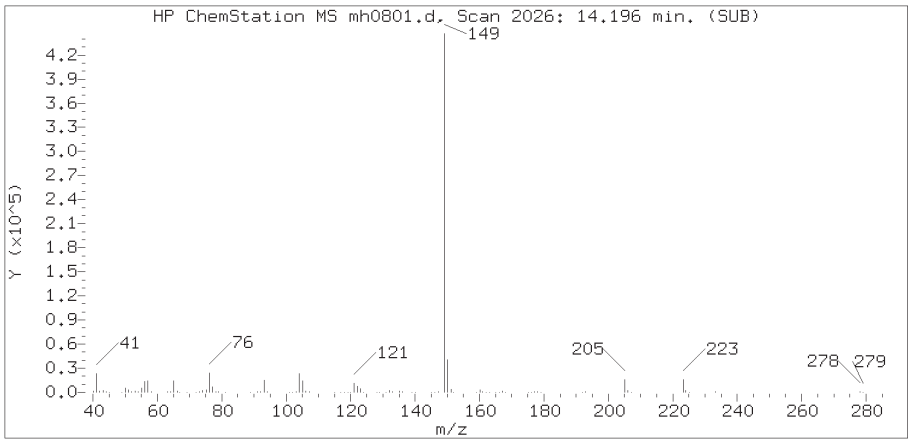
Sample Name: SBLKWD311 Lab Sample ID: SBLKWD311

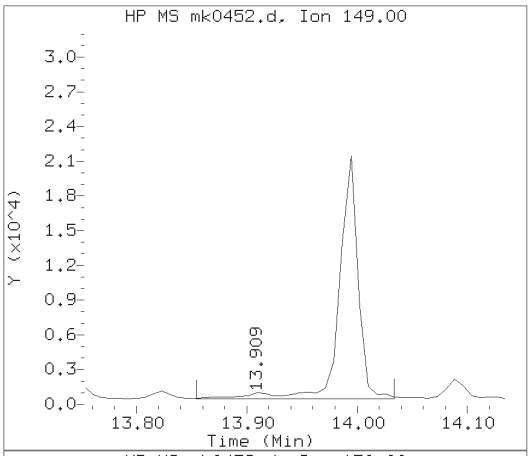
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
5)*1,4-Dichlorobenzene-d4	(1)	6.560	152	63644	0.250
6)*Naphthalene-d8	(2)	8.480	136	215412	0.250
10)$1-Methylnaphthalene-d10	(2)	9.702	152	61145	0.156
14)*Acenaphthene-d10	(3)	11.264	164	89663	0.250
20)*Phenanthrene-d10	(4)	13.175	188	175342	0.250
23) Di-n-butylphthalate	(4)	13.909	149	24418	0.024
24)$Fluoranthene-d10	(4)	14.788	212	123511	0.180
29)*Chrysene-d12	(5)	17.146	240	122581	0.250
31) bis(2-Ethylhexyl)phthalate	(5)	17.345	149	29058	0.042
36)$Benzo(a)pyrene-d12	(6)	19.462	264	79873	0.169
38)*Perylene-d12	(6)	19.593	264	128197	0.250

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

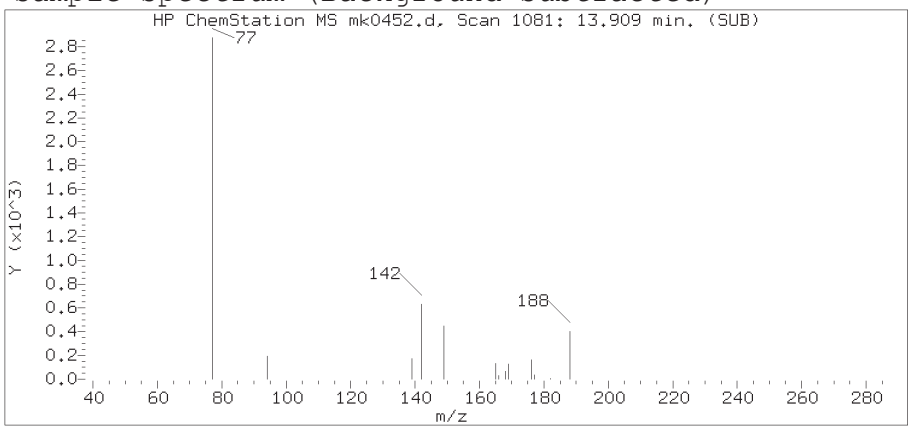
Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

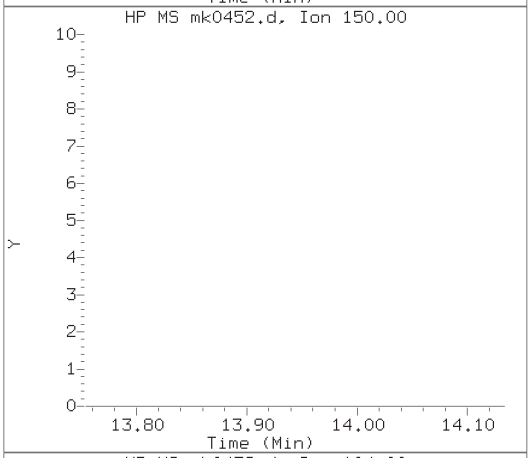
Reference Standard Spectrum for Di-n-butylphthalate



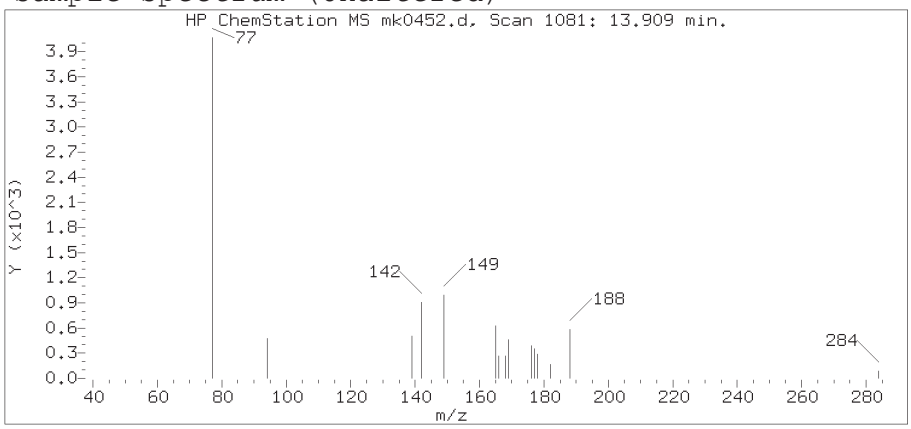


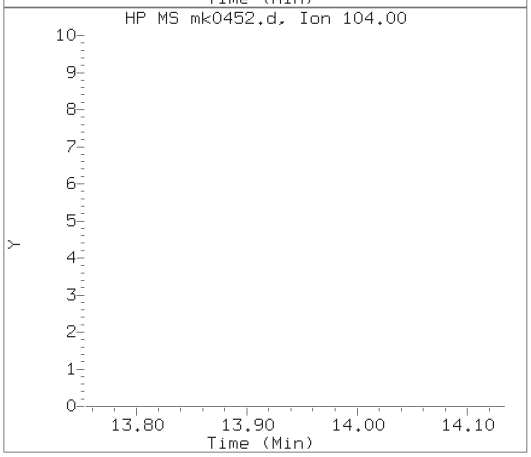
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0452.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:27 Analyst ID: ceb05247

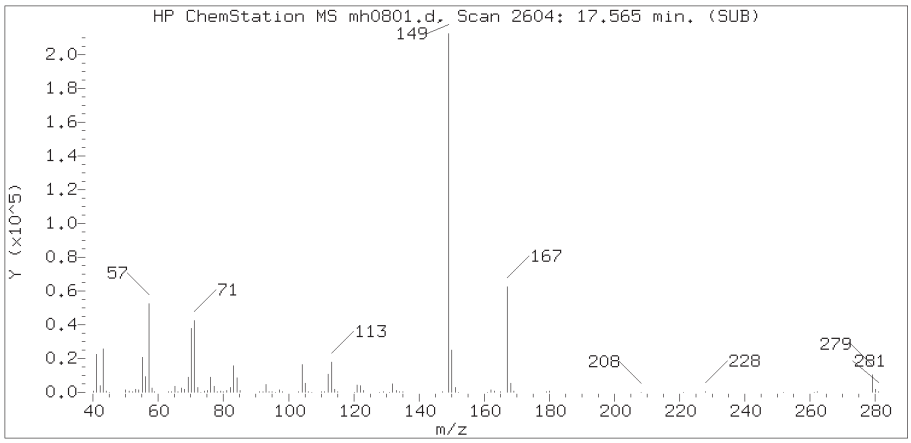
Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

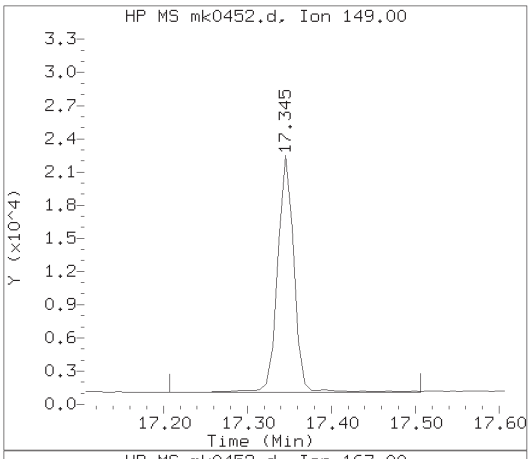
Sample Name: SBLKWD311 Lab Sample ID: SBLKWD311

Compound Number	: 23
Compound Name	: Di-n-butylphthalate
Scan Number	: 1081
Retention Time (minutes)	: 13.909
Relative Retention Time	: 0.00652
Quant Ion	: 149.00
Area (flag)	: 24418
On-column Amount (ng/ul)	: 0.0237

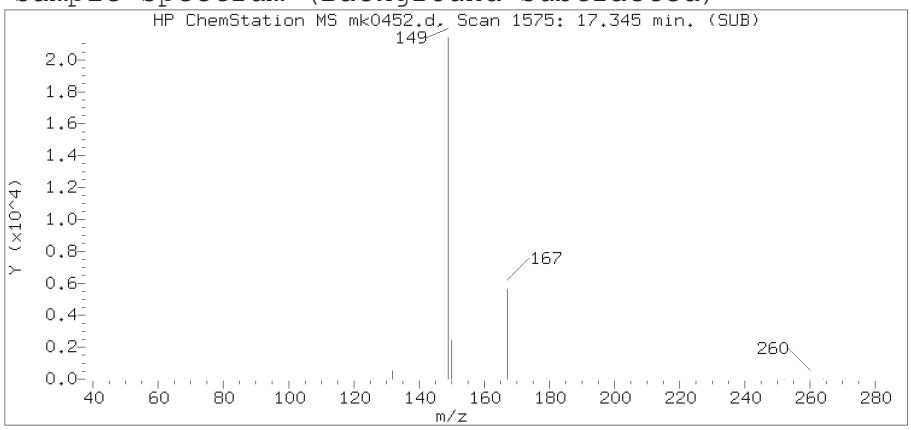
Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

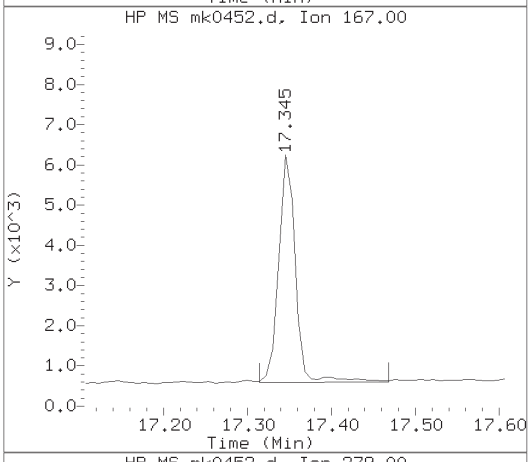
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



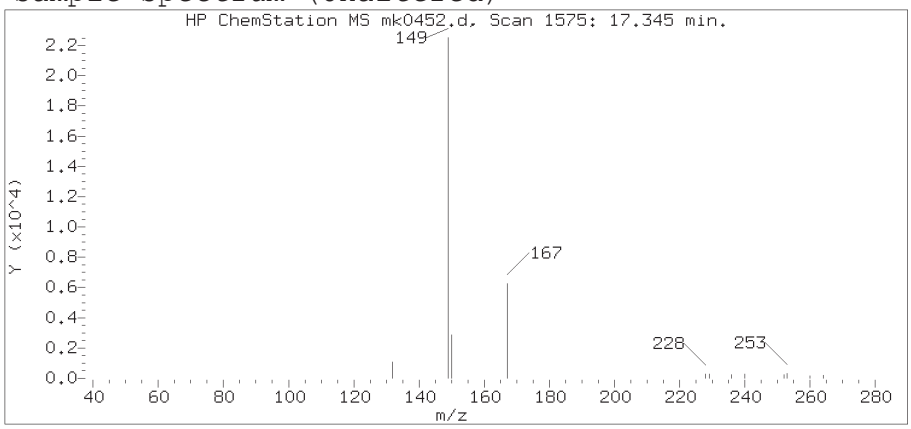


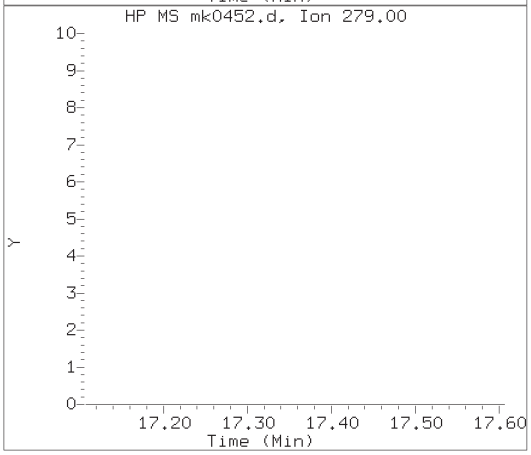
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP21585.i/18nov08.b/mk0452.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:27 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: SBLKWD311 Lab Sample ID: SBLKWD311

Compound Number	: 31
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 1575
Retention Time (minutes)	: 17.345
Relative Retention Time	:-0.00000
Quant Ion	: 149.00
Area (flag)	: 29058
On-column Amount (ng/ul)	: 0.0419

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP21585.i/18nov05a.b/mk0208.d
Data file Sample Info. Line: 14T04MS;9876335;1;3;MS;;DOD26;
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Injection date and time: **05-NOV-2018 22:51**
Instrument ID: **HP21585.i** Batch: **18305WAN**

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599(0.000)	476	152	56186 (-27)	0.25	
6) Naphthalene-d8	8.519(0.000)	574	136	189202 (-19)	0.25	
14) Acenaphthene-d10	11.303(0.000)	770	164	88450 (-15)	0.25	
20) Phenanthrene-d10	13.199(0.000)	990	188	140146 (-35)	0.25	
29) Chrysene-d12	17.185(0.000)	1554	240	122743 (-22)	0.25	
38) Perylene-d12	19.631(0.000)	1873	264	127106 (-19)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 1-Methylnaphthalene-d10	(2)	9.741(0.000)	152	72018	0.209	84%		29 - 112
24) Fluoranthene-d10	(4)	14.820(0.000)	212	134131	0.244	98%		38 - 119
36) Benzo(a)pyrene-d12	(6)	19.501(0.000)	264	88638	0.190	76%		18 - 129

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)	2.921(-0.013)	88	30068	0.193	0.78			0.03
4) bis(2-Chloroethyl)ether	(2)	6.148(0.011)	93	88839	0.307	1.25			0.02
7) Naphthalene	(2)	8.539(0.000)	128	224160	0.258	1.05			0.008
13) Acenaphthylene	(3)	11.071(-0.000)	152	168828	0.181	0.74			0.003
15) Acenaphthene	(3)	11.342(0.000)	154	112936M	0.200	0.81			0.003
18) Fluorene	(3)	12.067(0.000)	166	121954	0.185	0.75			0.003
19) Hexachlorobenzene	(4)	12.722(-0.000)	284	34644	0.220	0.89			0.01
21) Phenanthrene	(4)	13.230(-0.000)	178	213051	0.283	1.15			0.008
22) Anthracene	(4)	13.292(0.000)	178	168245	0.228	0.93			0.003
23) Di-n-butylphthalate	(4)	14.018(0.000)	149	265016	0.322	1.31			0.05
25) Fluoranthene	(4)	14.845(0.000)	202	209716	0.250	1.02			0.003
26) Pyrene	(5)	15.183(0.000)	202	221304	0.198	0.81			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.384(0.000)	149	132553M	0.191	0.78			0.08
28) Benzo(a)anthracene	(5)	17.169(0.000)	228	216538	0.225	0.91			0.003
30) Chrysene	(5)	17.231(0.000)	228	212288	0.218	0.89			0.003
33) Benzo(b)fluoranthene	(6)	19.010(0.000)	252	217514	0.216	0.88	0.012	B	0.003
34) Benzo(k)fluoranthene	(6)	19.056(0.000)	252	218232	0.217	0.88	0.011	B	0.003
37) Benzo(a)pyrene	(6)	19.539(0.000)	252	202923	0.210	0.86			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.234(0.000)	276	168246M	0.192	0.78	0.013	B	0.003
40) Dibenz(a,h)anthracene	(6)	21.277(0.000)	278	151655	0.169	0.69			0.005
41) Benzo(g,h,i)perylene	(6)	21.630(0.000)	276	178042	0.176	0.71	0.011	B	0.003

M = Compound was manually integrated. B = Compound detected in referenced method blank.

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0208.d Injection date and time: **05-NOV-2018 22:51**
Data file Sample Info. Line: 14T04MS;9876335;1;3;MS;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 2 ul

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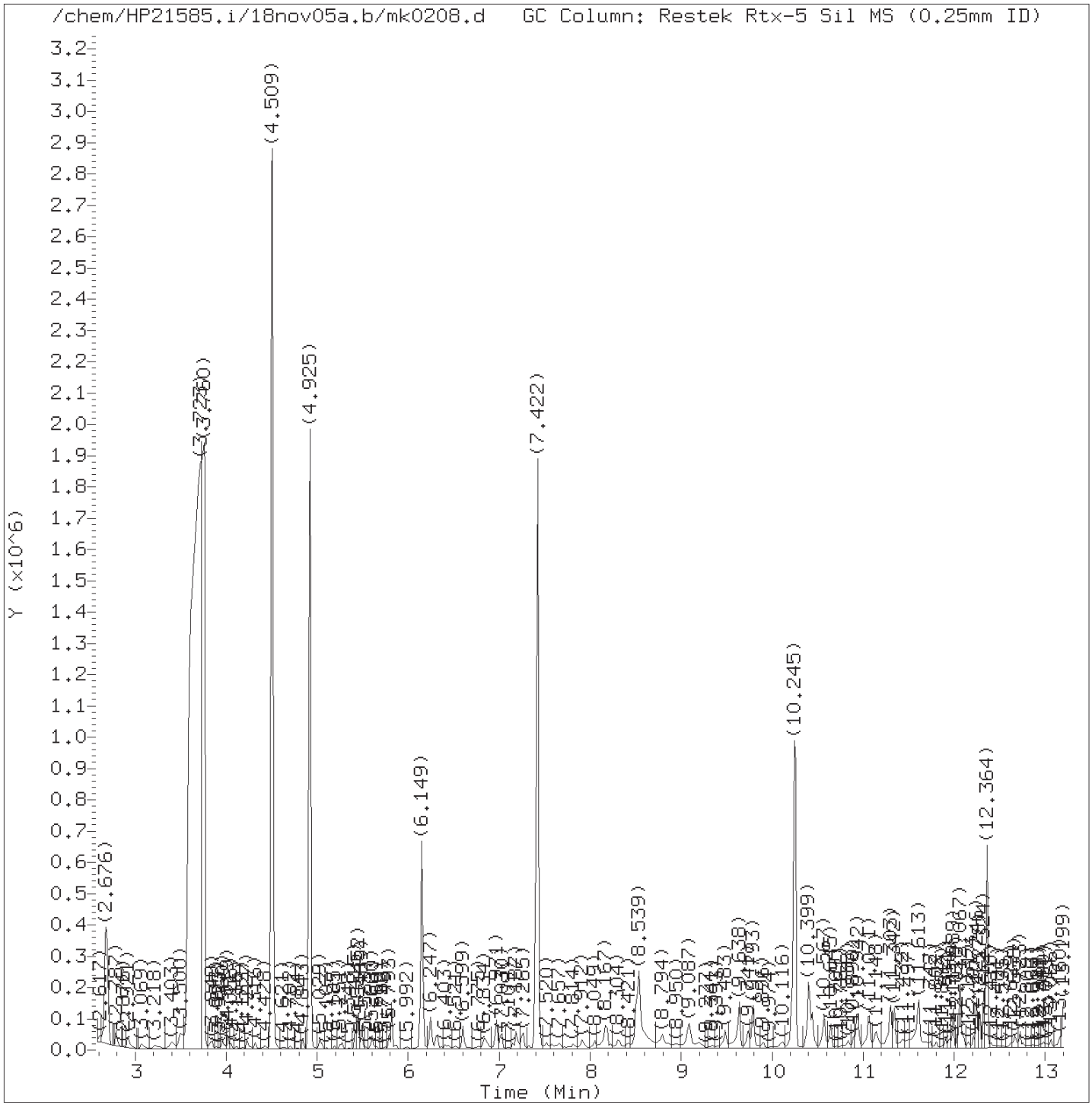
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

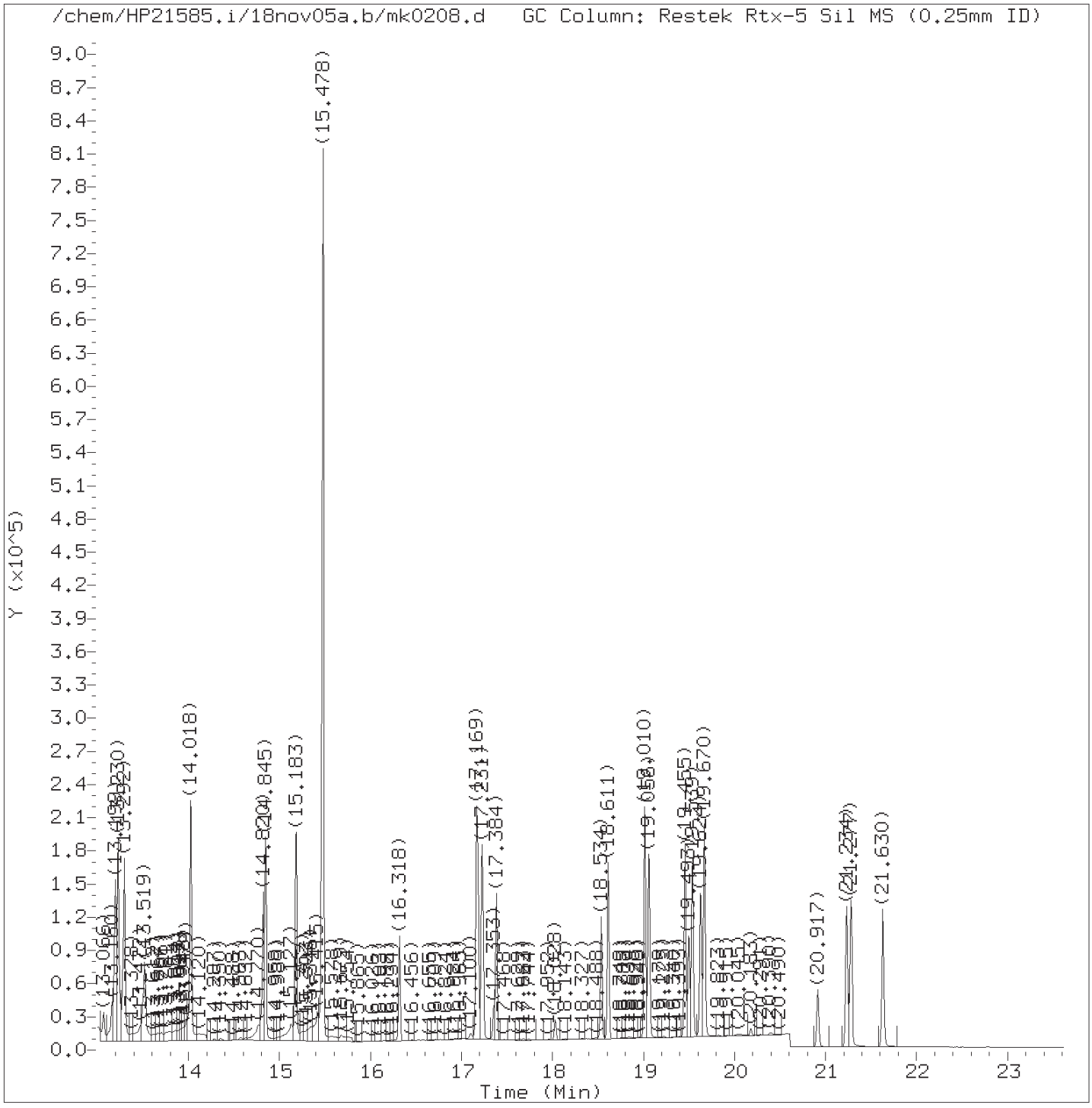
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

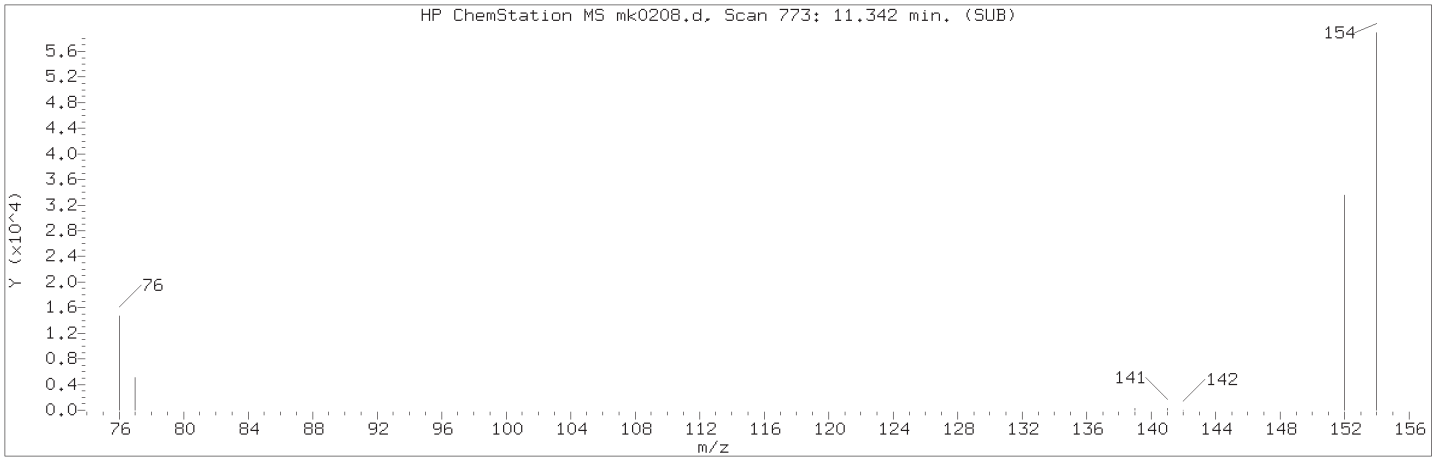
Sample Name: 14T04MS Lab Sample ID: 9876335

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.921	88	30068	0.193
4) bis(2-Chloroethyl)ether	(2)	6.149	93	88839	0.307
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	56186	0.250
6)*Naphthalene-d8	(2)	8.519	136	189202	0.250
7) Naphthalene	(2)	8.539	128	224160	0.258
10)$1-Methylnaphthalene-d10	(2)	9.741	152	72018	0.209
13) Acenaphthylene	(3)	11.071	152	168828	0.181
14)*Acenaphthene-d10	(3)	11.303	164	88450	0.250
15) Acenaphthene	(3)	11.342	154	112936M	0.200
18) Fluorene	(3)	12.067	166	121954	0.185
19) Hexachlorobenzene	(4)	12.723	284	34644	0.220
20)*Phenanthrene-d10	(4)	13.199	188	140146	0.250
21) Phenanthrene	(4)	13.230	178	213051	0.283
22) Anthracene	(4)	13.292	178	168245	0.228
23) Di-n-butylphthalate	(4)	14.018	149	265016	0.322
24)$Fluoranthene-d10	(4)	14.820	212	134131	0.244
25) Fluoranthene	(4)	14.845	202	209716	0.250
26) Pyrene	(5)	15.183	202	221304	0.198
28) Benzo(a)anthracene	(5)	17.169	228	216538	0.225
29)*Chrysene-d12	(5)	17.185	240	122743	0.250
30) Chrysene	(5)	17.231	228	212288	0.218
31) bis(2-Ethylhexyl)phthalate	(5)	17.384	149	132553M	0.191
33) Benzo(b)fluoranthene	(6)	19.010	252	217514	0.216
34) Benzo(k)fluoranthene	(6)	19.056	252	218232	0.217
36)$Benzo(a)pyrene-d12	(6)	19.501	264	88638	0.190
37) Benzo(a)pyrene	(6)	19.539	252	202923	0.210
38)*Perylene-d12	(6)	19.631	264	127106	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.234	276	168246M	0.192
40) Dibenz(a,h)anthracene	(6)	21.277	278	151655	0.169
41) Benzo(g,h,i)perylene	(6)	21.630	276	178042	0.176

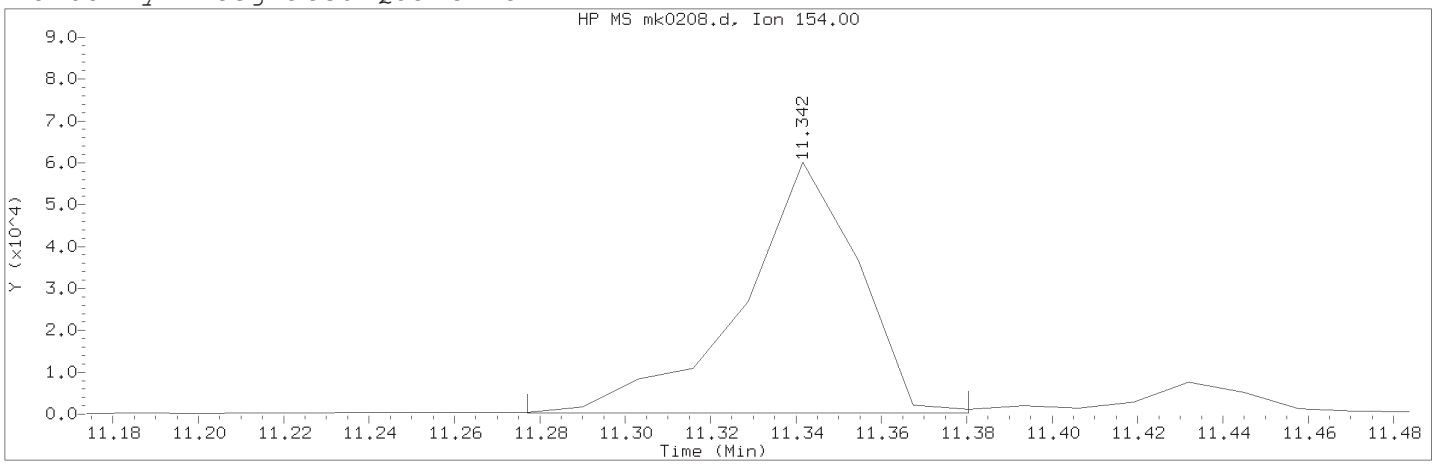
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

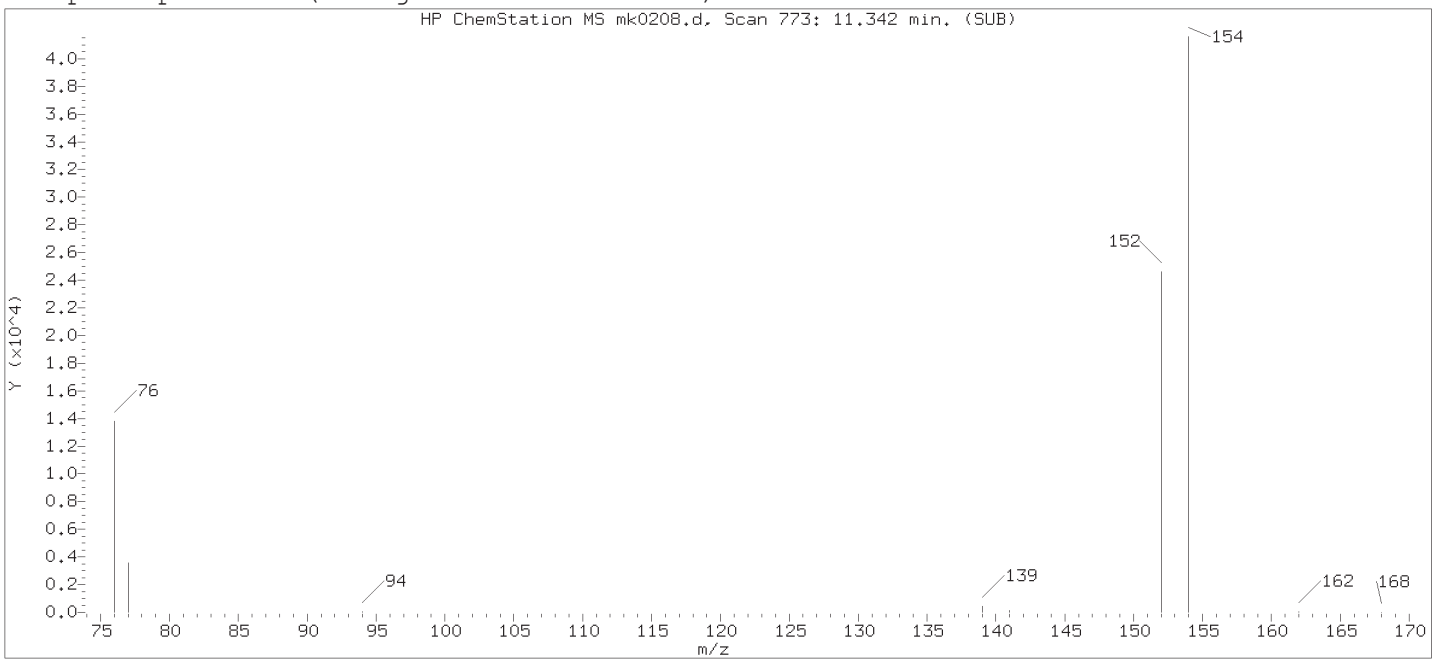
Compound Number	: 15		
Compound Name	: Acenaphthene		
Scan Number	: 773		
Retention Time (minutes)	: 11.342		
Quant Ion	: 154.00		
Area (flag)	: 112936M		
On-Column Amount (ng/ul)	: 0.1996		
Integration start scan	: 767	Integration stop scan:	775
Y at integration start	: 303	Y at integration end:	303

Reason for manual integration: improper integration

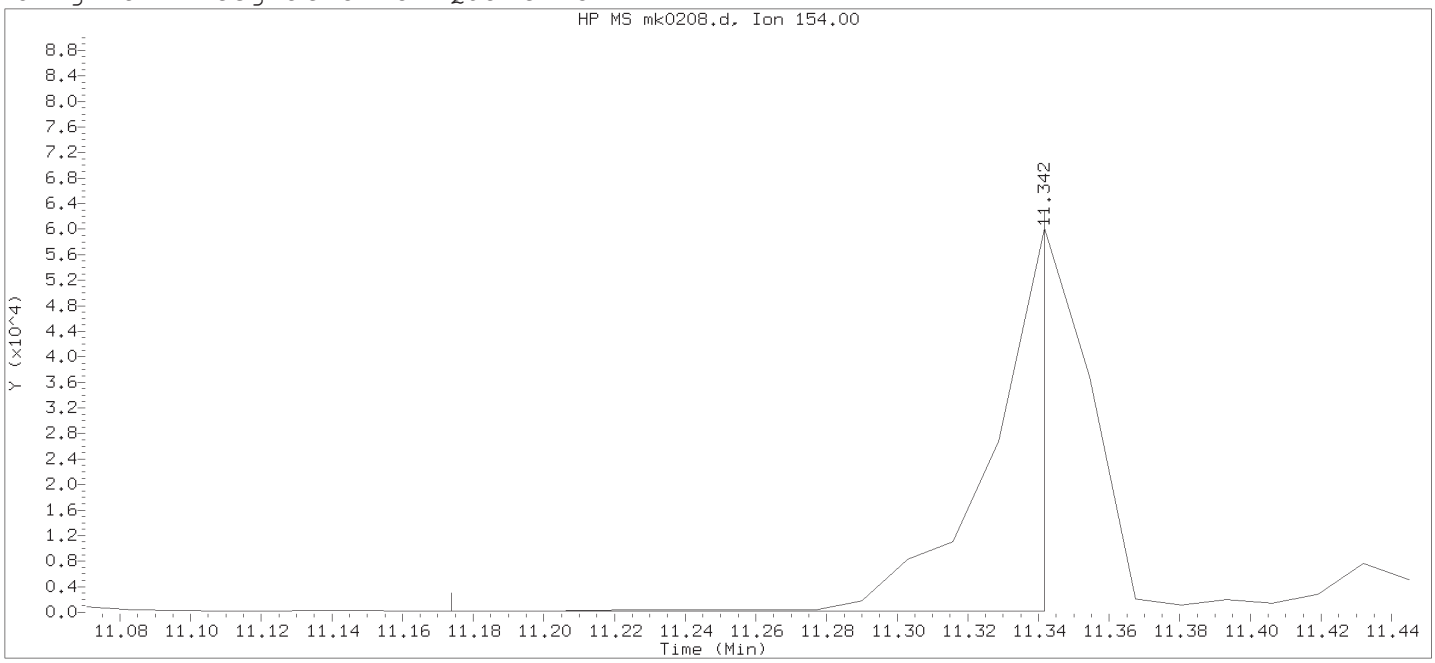
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

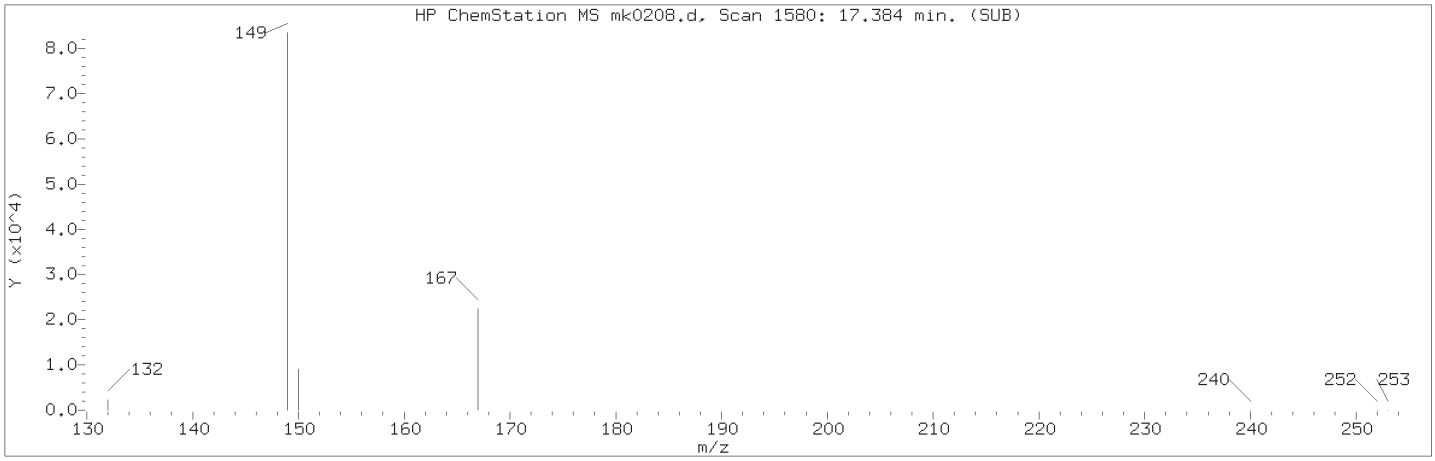
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

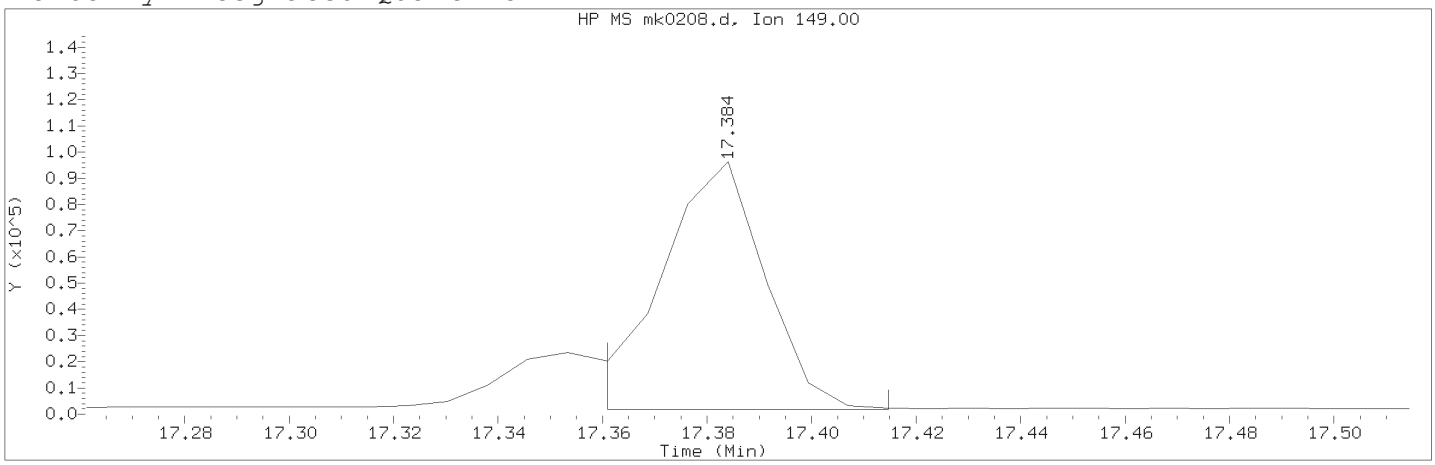
Compound Number	: 15		
Compound Name	: Acenaphthene		
Scan Number	: 773		
Retention Time (minutes)	: 11.342		
Quant Ion	: 154.00		
Area	: 60373		
On-column Amount (ng/ul)	: 0.1067		
Integration start scan	: 759	Integration stop scan:	772
Y at integration start	: 211	Y at integration end:	211

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

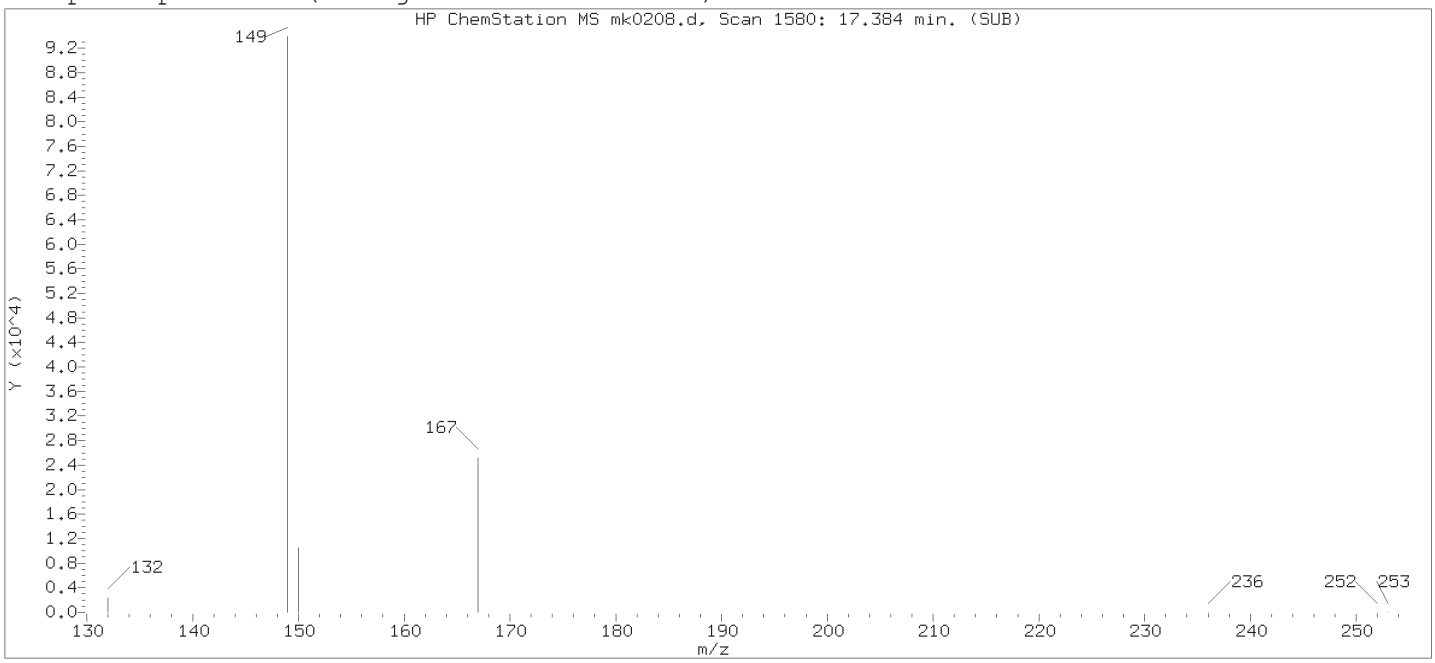
Compound Number : 31
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 1580
Retention Time (minutes) : 17.384
Quant Ion : 149.00
Area (flag) : 132553M
On-Column Amount (ng/ul) : 0.1911
Integration start scan : 1576 Integration stop scan: 1583
Y at integration start : 1767 Y at integration end: 1767

Reason for manual integration: improper integration

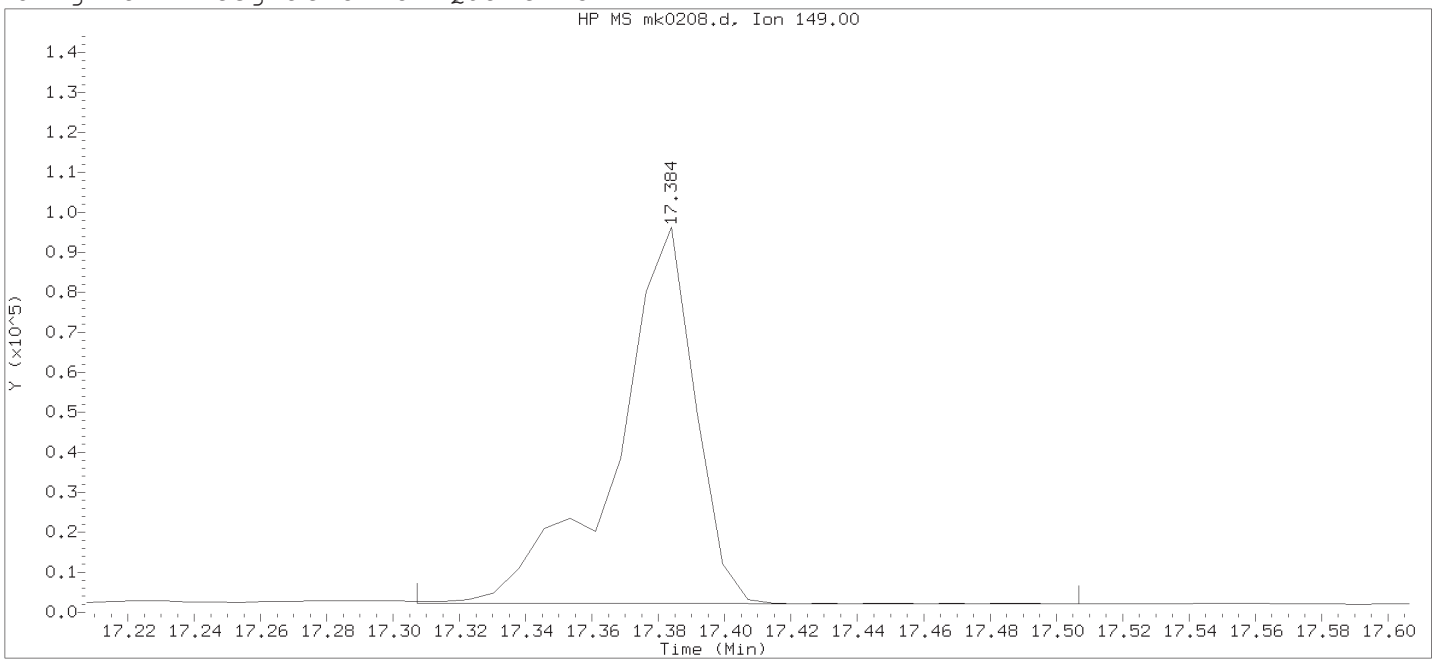
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

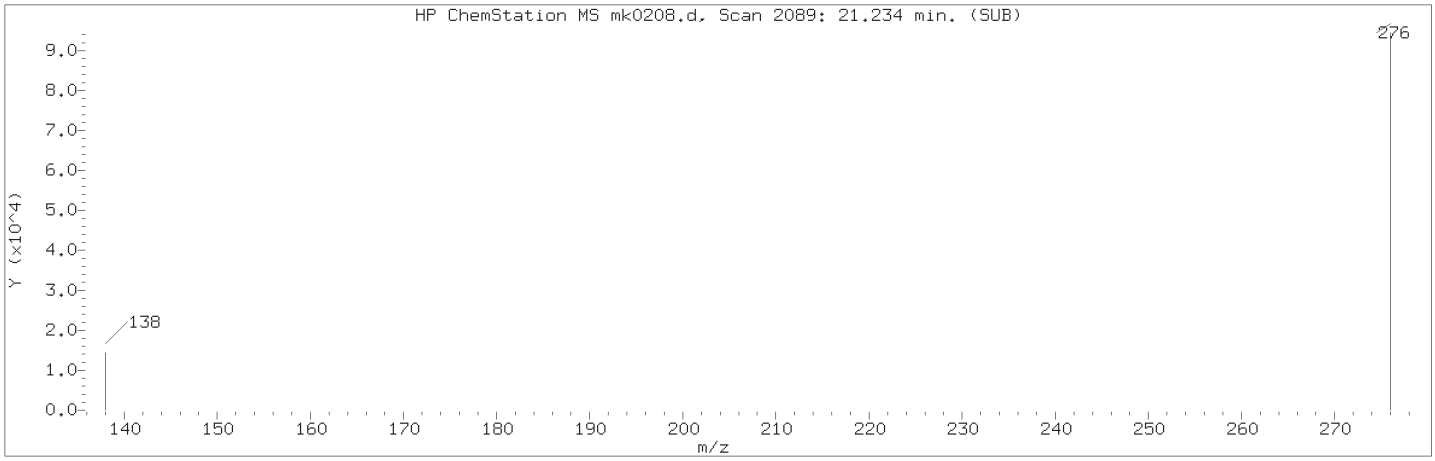
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

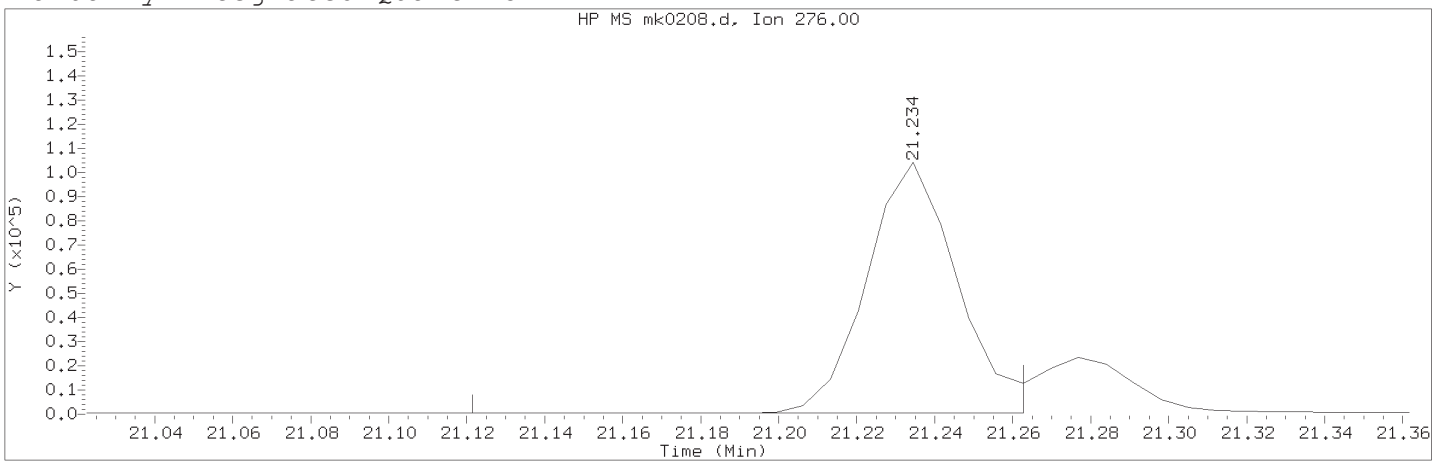
Compound Number	:	31
Compound Name	:	bis(2-Ethylhexyl)phthalate
Scan Number	:	1580
Retention Time (minutes)	:	17.384
Quant Ion	:	149.00
Area	:	156064
On-column Amount (ng/ul)	:	0.2249
Integration start scan	:	1569 Integration stop scan: 1595
Y at integration start	:	2223 Y at integration end: 2065

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

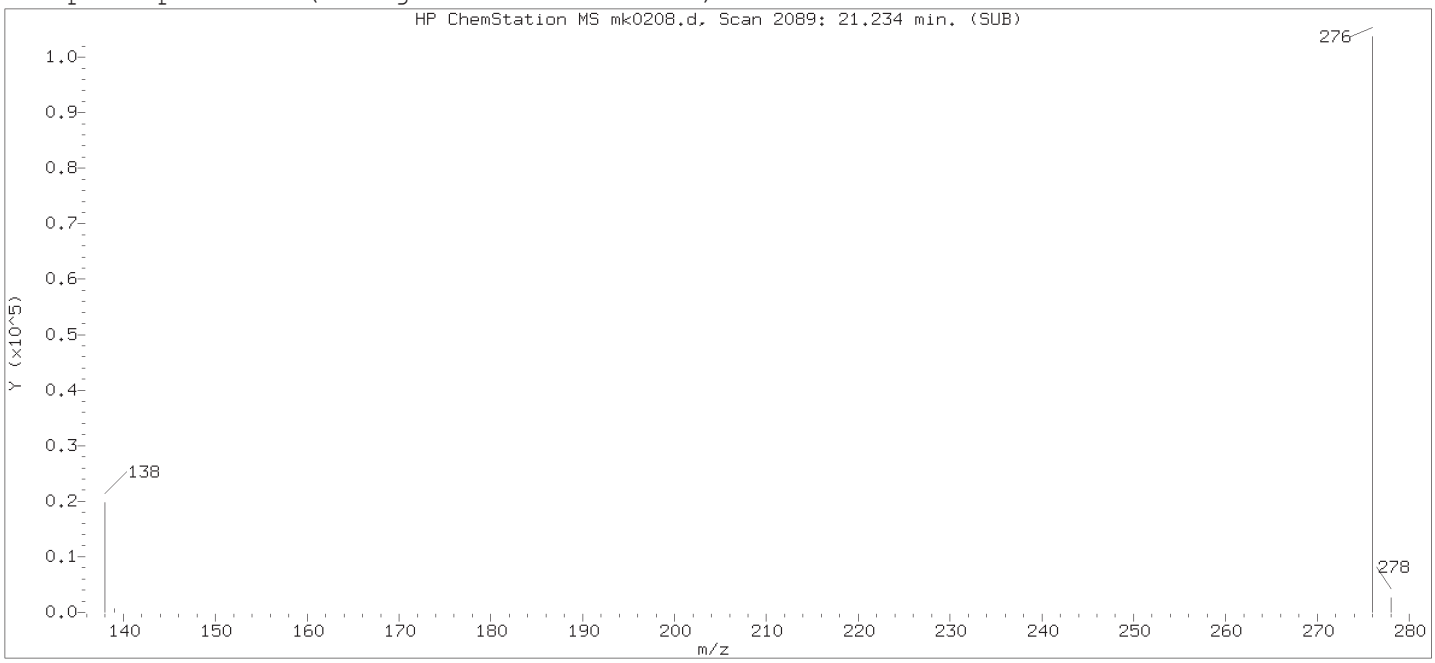
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2089
Retention Time (minutes) : 21.234
Quant Ion : 276.00
Area (flag) : 168246M
On-Column Amount (ng/ul) : 0.1919
Integration start scan : 2072 Integration stop scan: 2092
Y at integration start : 393 Y at integration end: 393

Reason for manual integration: improper integration

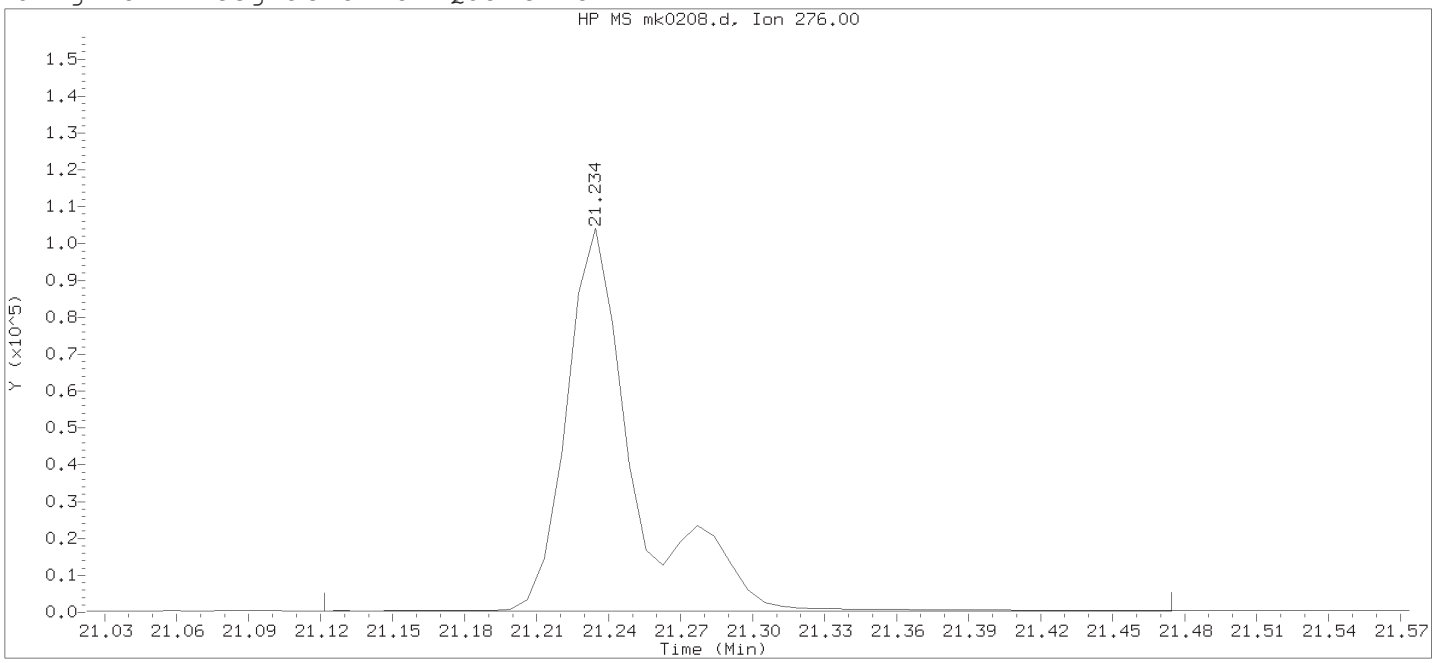
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0208.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 22:51 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 14T04MS Lab Sample ID: 9876335

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2089		
Retention Time (minutes)	: 21.234		
Quant Ion	: 276.00		
Area	: 206421		
On-column Amount (ng/ul)	: 0.2355		
Integration start scan	: 2072	Integration stop scan:	2122
Y at integration start	: 393	Y at integration end:	393

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature used. Page 1204

Data file: /chem/HP21585.i/18nov05a.b/mk0209.d Injection date and time: **05-NOV-2018 23:21**
Data file Sample Info. Line: 14T04MSD;9876336;1;3;MSD;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599	(0.000)	476	152	57610	(-25)	0.25	
6) Naphthalene-d8	8.500	(0.019)	573	136	193778	(-17)	0.25	
14) Acenaphthene-d10	11.303	(0.000)	770	164	88942	(-14)	0.25	
20) Phenanthrene-d10	13.199	(0.000)	990	188	146600	(-32)	0.25	
29) Chrysene-d12	17.185	(0.000)	1554	240	125235	(-20)	0.25	
38) Perylene-d12	19.631	(0.000)	1873	264	129561	(-17)	0.25	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 1-Methylnaphthalene-d10	(2)	9.741	(-0.003)	152	79245	0.225	90%		29 - 112
24) Fluoranthene-d10	(4)	14.820	(0.000)	212	143482	0.250	100%		38 - 119
36) Benzo(a)pyrene-d12	(6)	19.493	(0.000)	264	95416	0.200	80%		18 - 129

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)	2.921	(-0.013)	88	30757	0.192	0.79			0.03
4) bis(2-Chloroethyl)ether	(2)	6.168	(0.007)	93	79797	0.269	1.10			0.02
7) Naphthalene	(2)	8.539	(-0.002)	128	224038	0.251	1.03			0.008
13) Acenaphthylene	(3)	11.058	(0.001)	152	184209	0.197	0.81			0.003
15) Acenaphthene	(3)	11.342	(0.000)	154	128042	0.225	0.92			0.003
18) Fluorene	(3)	12.067	(0.000)	166	130156	0.196	0.80			0.003
19) Hexachlorobenzene	(4)	12.722	(-0.000)	284	36792	0.224	0.92			0.01
21) Phenanthrene	(4)	13.230	(-0.000)	178	235081	0.299	1.22			0.008
22) Anthracene	(4)	13.292	(0.000)	178	179121	0.232	0.95			0.003
23) Di-n-butylphthalate	(4)	14.018	(0.000)	149	279414	0.324	1.33			0.05
25) Fluoranthene	(4)	14.845	(0.000)	202	219170	0.250	1.02			0.003
26) Pyrene	(5)	15.177	(0.000)	202	232602	0.204	0.84			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.376	(0.000)	149	255359	0.361	1.48			0.08
28) Benzo(a)anthracene	(5)	17.169	(-0.000)	228	234711	0.239	0.98			0.003
30) Chrysene	(5)	17.231	(-0.000)	228	223144	0.225	0.92			0.003
33) Benzo(b)fluoranthene	(6)	19.010	(0.000)	252	239270	0.233	0.96	0.012	B	0.003
34) Benzo(k)fluoranthene	(6)	19.056	(0.000)	252	235760	0.230	0.94	0.011	B	0.003
37) Benzo(a)pyrene	(6)	19.532	(0.000)	252	220164	0.224	0.92			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.234	(0.000)	276	192073M	0.215	0.88	0.013	B	0.003
40) Dibenz(a,h)anthracene	(6)	21.277	(0.000)	278	178758	0.196	0.80			0.005
41) Benzo(g,h,i)perylene	(6)	21.630	(0.000)	276	201042	0.194	0.80	0.011	B	0.003

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0209.d Injection date and time: **05-NOV-2018 23:21**
Data file Sample Info. Line: 14T04MSD;9876336;1;3;MSD;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 2 ul

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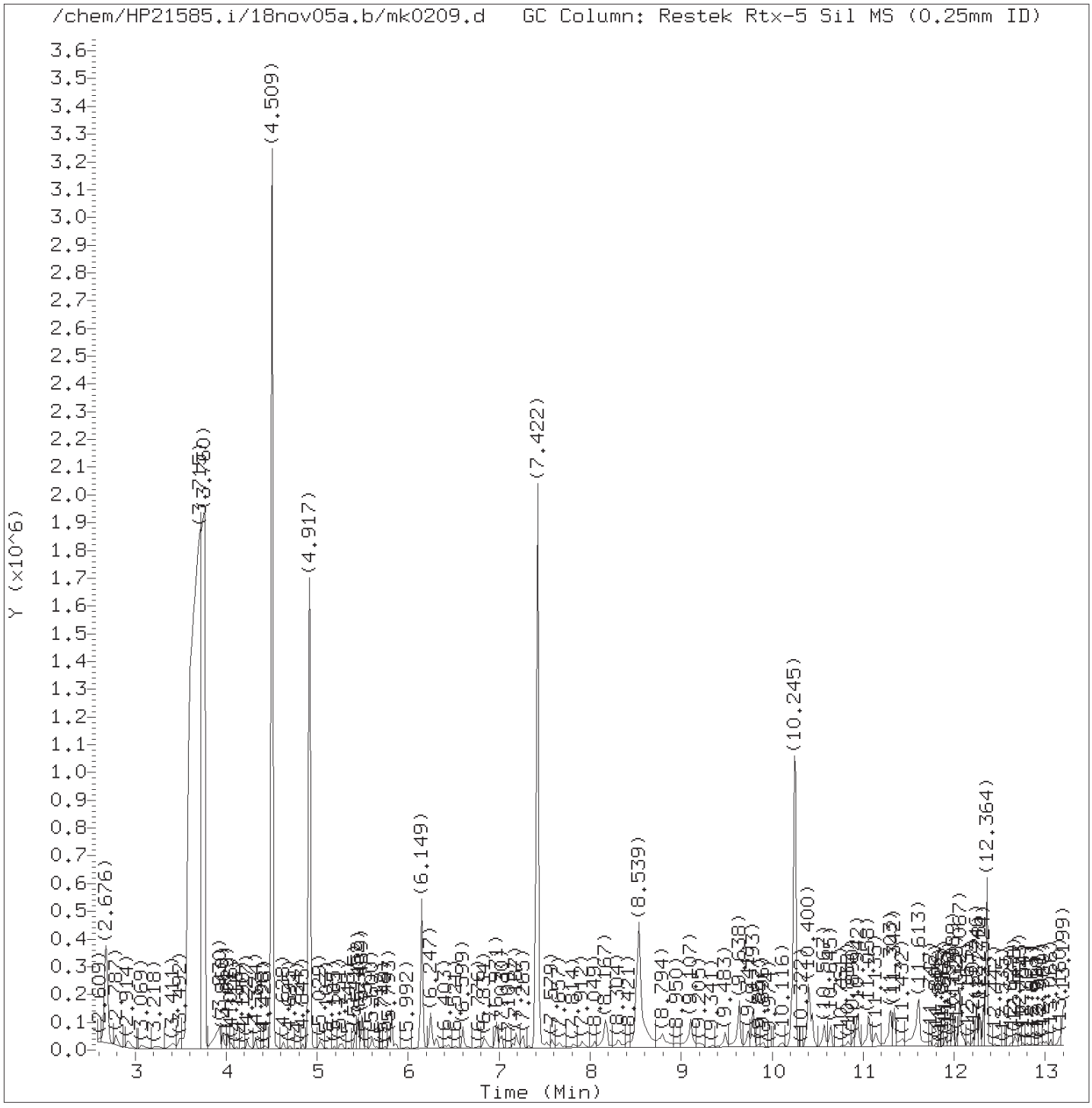
Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

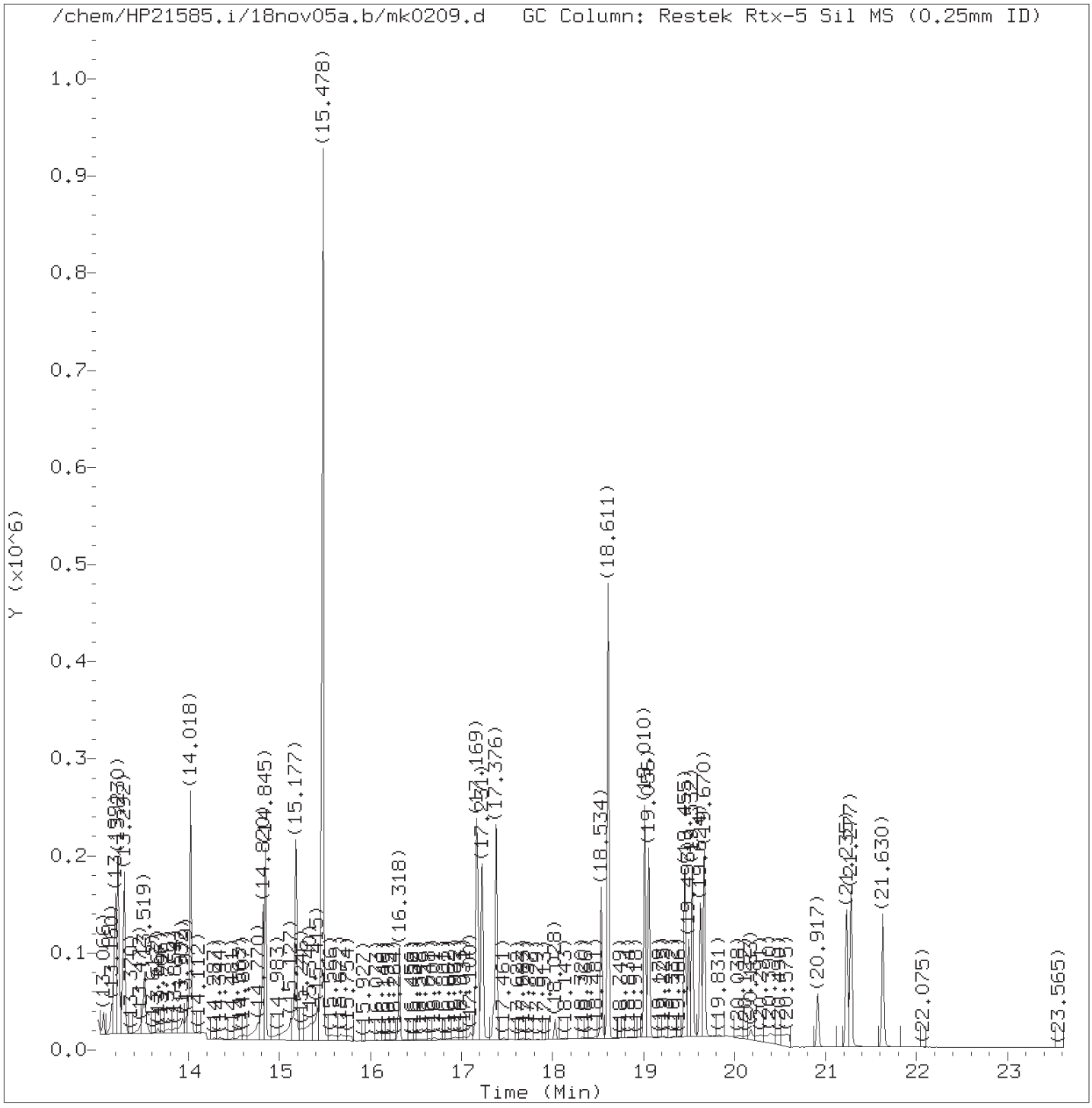
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0209.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:21 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MSD Lab Sample ID: 9876336

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0209.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:21 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MSD Lab Sample ID: 9876336

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0209.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:21 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

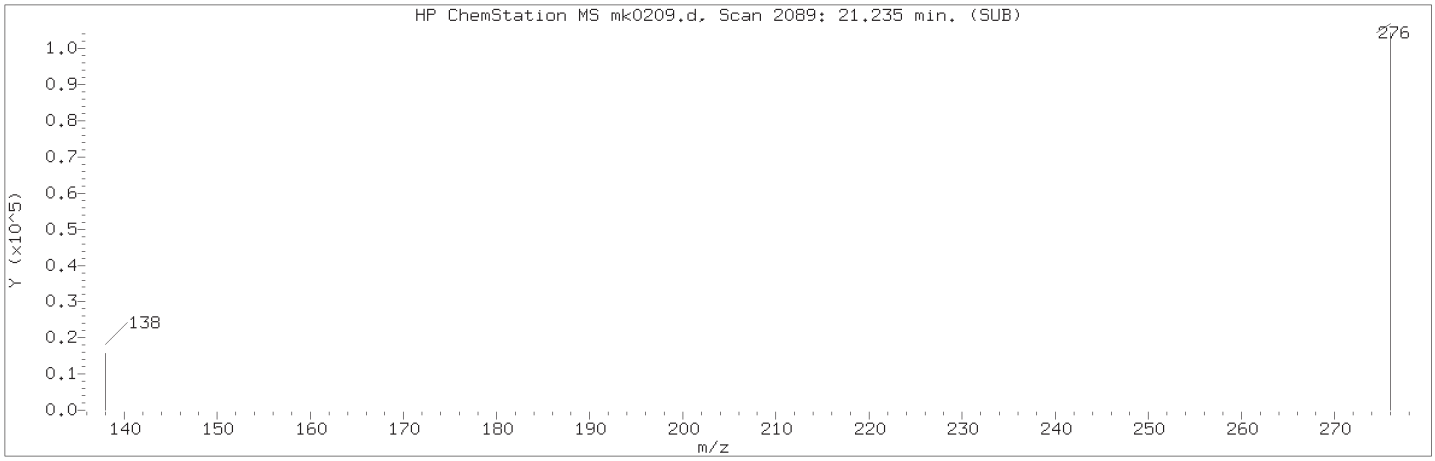
Sample Name: 14T04MSD Lab Sample ID: 9876336

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.921	88	30757	0.192
4) bis(2-Chloroethyl)ether	(2)	6.168	93	79797	0.269
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	57610	0.250
6)*Naphthalene-d8	(2)	8.500	136	193778	0.250
7) Naphthalene	(2)	8.539	128	224038	0.251
10)$1-Methylnaphthalene-d10	(2)	9.741	152	79245	0.225
13) Acenaphthylene	(3)	11.058	152	184209	0.197
14)*Acenaphthene-d10	(3)	11.303	164	88942	0.250
15) Acenaphthene	(3)	11.342	154	128042	0.225
18) Fluorene	(3)	12.067	166	130156	0.196
19) Hexachlorobenzene	(4)	12.723	284	36792	0.224
20)*Phenanthrene-d10	(4)	13.199	188	146600	0.250
21) Phenanthrene	(4)	13.230	178	235081	0.299
22) Anthracene	(4)	13.292	178	179121	0.232
23) Di-n-butylphthalate	(4)	14.018	149	279414	0.324
24)$Fluoranthene-d10	(4)	14.820	212	143482	0.250
25) Fluoranthene	(4)	14.845	202	219170	0.250
26) Pyrene	(5)	15.177	202	232602	0.204
28) Benzo(a)anthracene	(5)	17.169	228	234711	0.239
29)*Chrysene-d12	(5)	17.185	240	125235	0.250
30) Chrysene	(5)	17.231	228	223144	0.225
31) bis(2-Ethylhexyl)phthalate	(5)	17.376	149	255359	0.361
33) Benzo(b)fluoranthene	(6)	19.010	252	239270	0.233
34) Benzo(k)fluoranthene	(6)	19.056	252	235760	0.230
36)$Benzo(a)pyrene-d12	(6)	19.493	264	95416	0.200
37) Benzo(a)pyrene	(6)	19.532	252	220164	0.224
38)*Perylene-d12	(6)	19.631	264	129561	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.235	276	192073M	0.215
40) Dibenz(a,h)anthracene	(6)	21.277	278	178758	0.196
41) Benzo(g,h,i)perylene	(6)	21.630	276	201042	0.194

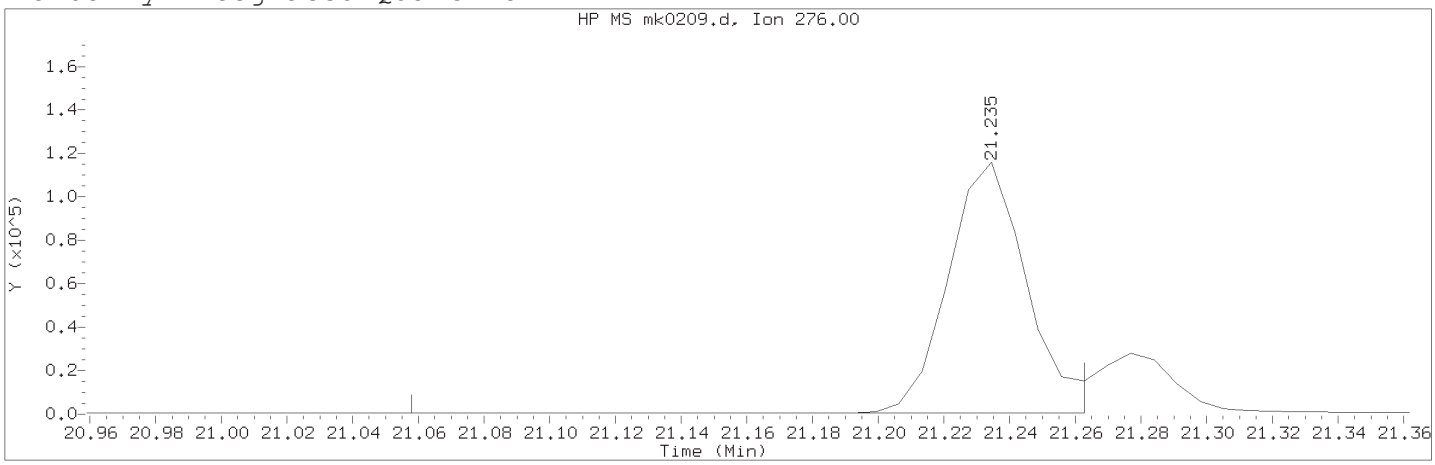
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0209.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:21 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:32 art12405

Sample Name: 14T04MSD Lab Sample ID: 9876336

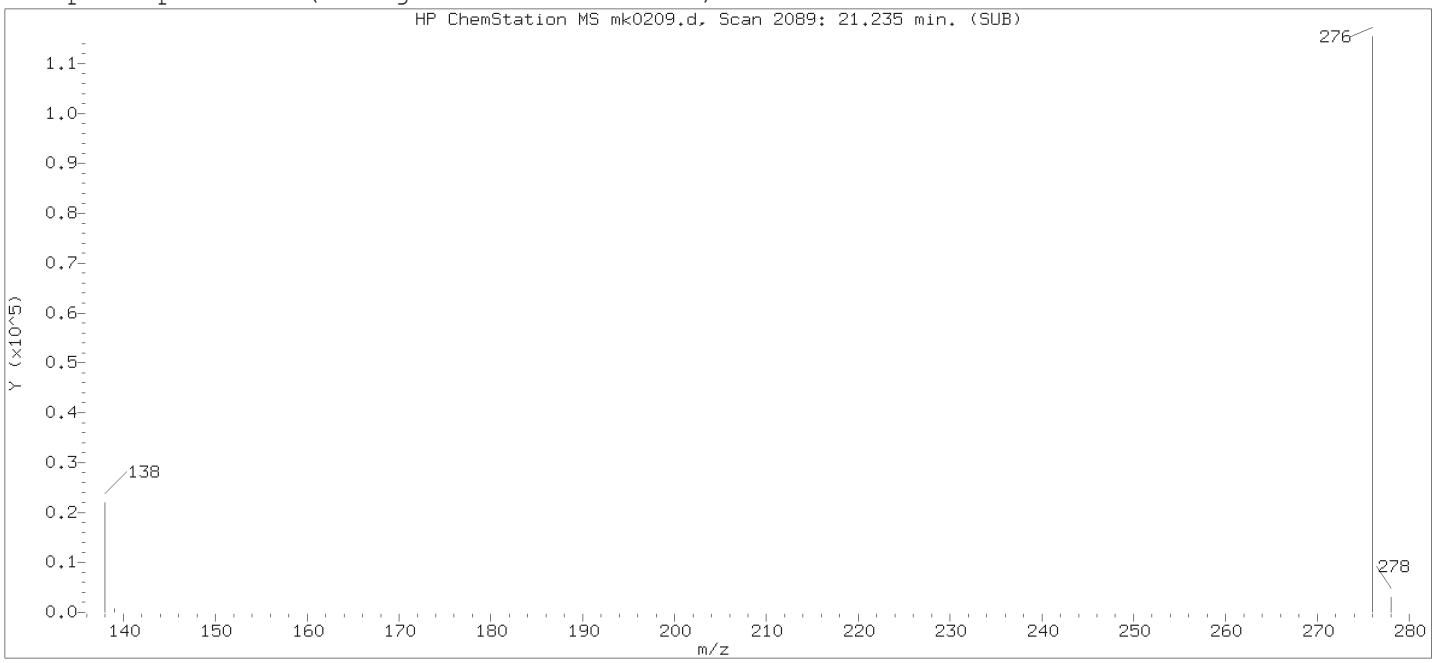
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2089
Retention Time (minutes) : 21.235
Quant Ion : 276.00
Area (flag) : 192073M
On-Column Amount (ng/ul) : 0.2149
Integration start scan : 2063 Integration stop scan: 2092
Y at integration start : 443 Y at integration end: 443

Reason for manual integration: improper integration

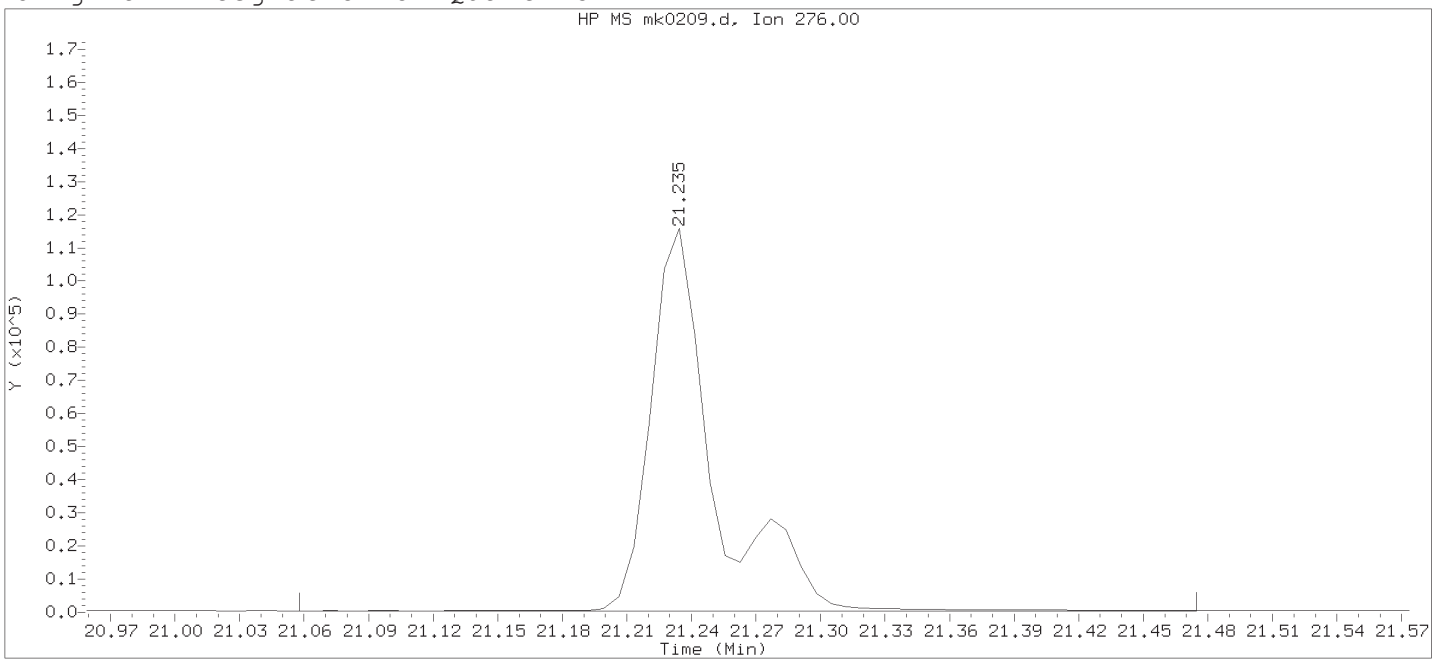
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:34.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0209.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 23:21 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 14T04MSD Lab Sample ID: 9876336

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2089		
Retention Time (minutes)	: 21.235		
Quant Ion	: 276.00		
Area	: 235779		
On-column Amount (ng/ul)	: 0.2639		
Integration start scan	: 2063	Integration stop scan:	2122
Y at integration start	: 443	Y at integration end:	443

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:34.
Target 3.5 esignature used: D14 Page 1201

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

305WNLCS

Data file: /chem/HP21585.i/18nov05a.b/mk0203.d Injection date and time: **05-NOV-2018 20:17**
Data file Sample Info. Line: 305WNLCS;305WNLCS;1;3;LCS;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.599(0.000)	476	152	58113 (-25)	0.25	
6) Naphthalene-d8	8.519(0.000)	574	136	203726 (-13)	0.25	
14) Acenaphthene-d10	11.303(0.000)	770	164	91863 (-11)	0.25	
20) Phenanthrene-d10	13.199(0.000)	990	188	188266 (-12)	0.25	
29) Chrysene-d12	17.184(0.000)	1554	240	130930 (-17)	0.25	
38) Perylene-d12	19.631(0.000)	1873	264	130766 (-16)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
10) 1-Methylnaphthalene-d10	(2)	9.741(0.000)	152	92310	0.249	100%
24) Fluoranthene-d10	(4)	14.820(0.000)	212	161621	0.219	88%
36) Benzo(a)pyrene-d12	(6)	19.493(0.000)	264	109908	0.229	91%

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)	2.913(-0.012)	88	28740A	0.178	0.71			0.03
4) bis(2-Chloroethyl)ether	(2)	6.246(0.000)	93	95955	0.308	1.23			0.02
7) Naphthalene	(2)	8.539(0.000)	128	217040	0.232	0.93			0.008
13) Acenaphthylene	(3)	11.058(0.001)	152	216218	0.224	0.89			0.003
15) Acenaphthene	(3)	11.342(0.000)	154	137178	0.233	0.93			0.003
18) Fluorene	(3)	12.067(0.000)	166	149909	0.219	0.88			0.003
19) Hexachlorobenzene	(4)	12.722(0.000)	284	43648	0.206	0.83			0.01
21) Phenanthrene	(4)	13.230(-0.000)	178	248779	0.246	0.99			0.008
22) Anthracene	(4)	13.292(-0.000)	178	206416	0.208	0.83			0.003
23) Di-n-butylphthalate	(4)	14.018(0.000)	149	295298	0.267	1.07			0.05
25) Fluoranthene	(4)	14.845(-0.000)	202	242717	0.215	0.86			0.003
26) Pyrene	(5)	15.177(0.000)	202	253309	0.213	0.85			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.376(0.000)	149	196346	0.265	1.06			0.08
28) Benzo(a)anthracene	(5)	17.161(0.000)	228	254324	0.248	0.99			0.003
30) Chrysene	(5)	17.223(0.000)	228	251361	0.242	0.97			0.003
33) Benzo(b)fluoranthene	(6)	19.010(0.000)	252	266808	0.258	1.03	0.012	B	0.003
34) Benzo(k)fluoranthene	(6)	19.056(0.000)	252	263816	0.255	1.02	0.011	B	0.003
37) Benzo(a)pyrene	(6)	19.531(0.000)	252	254140	0.256	1.02			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.234(0.000)	276	236681M	0.262	1.05	0.013	B	0.003
40) Dibenz(a,h)anthracene	(6)	21.277(0.000)	278	224292	0.244	0.97			0.005
41) Benzo(g,h,i)perylene	(6)	21.630(0.000)	276	247634	0.237	0.95	0.011	B	0.003

A = User selected an alternate peak. B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33. Target 3.5 esignature user ID: art12405

Data file: /chem/HP21585.i/18nov05a.b/mk0203.d Injection date and time: **05-NOV-2018 20:17**
Data file Sample Info. Line: 305WNLCS;305WNLCS;1;3;LCS;;DOD26; Instrument ID: **HP21585.i** Batch: **18305WAN**
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Blank Data file reference: **/chem/HP21585.i/18nov05a.b/mk0202.d**

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: **25784**
Calibration date and time (Last Method Edit): 07-NOV-2018 16:30
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov05a.b/mk0201.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

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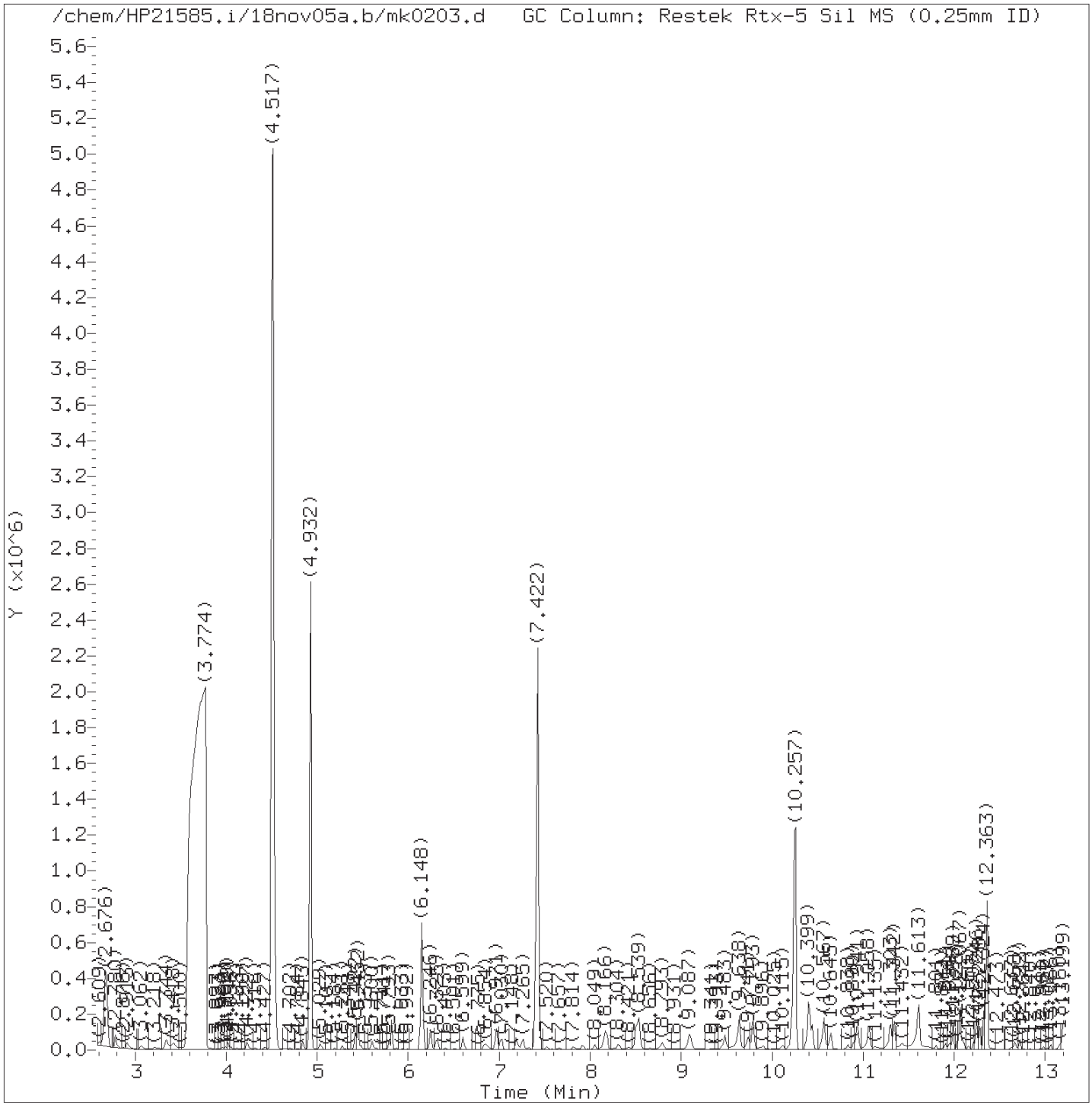
Total number of targets = 21

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33. Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10. PARALLAX ID: ild00415



Total Ion Chromatogram (TIC)

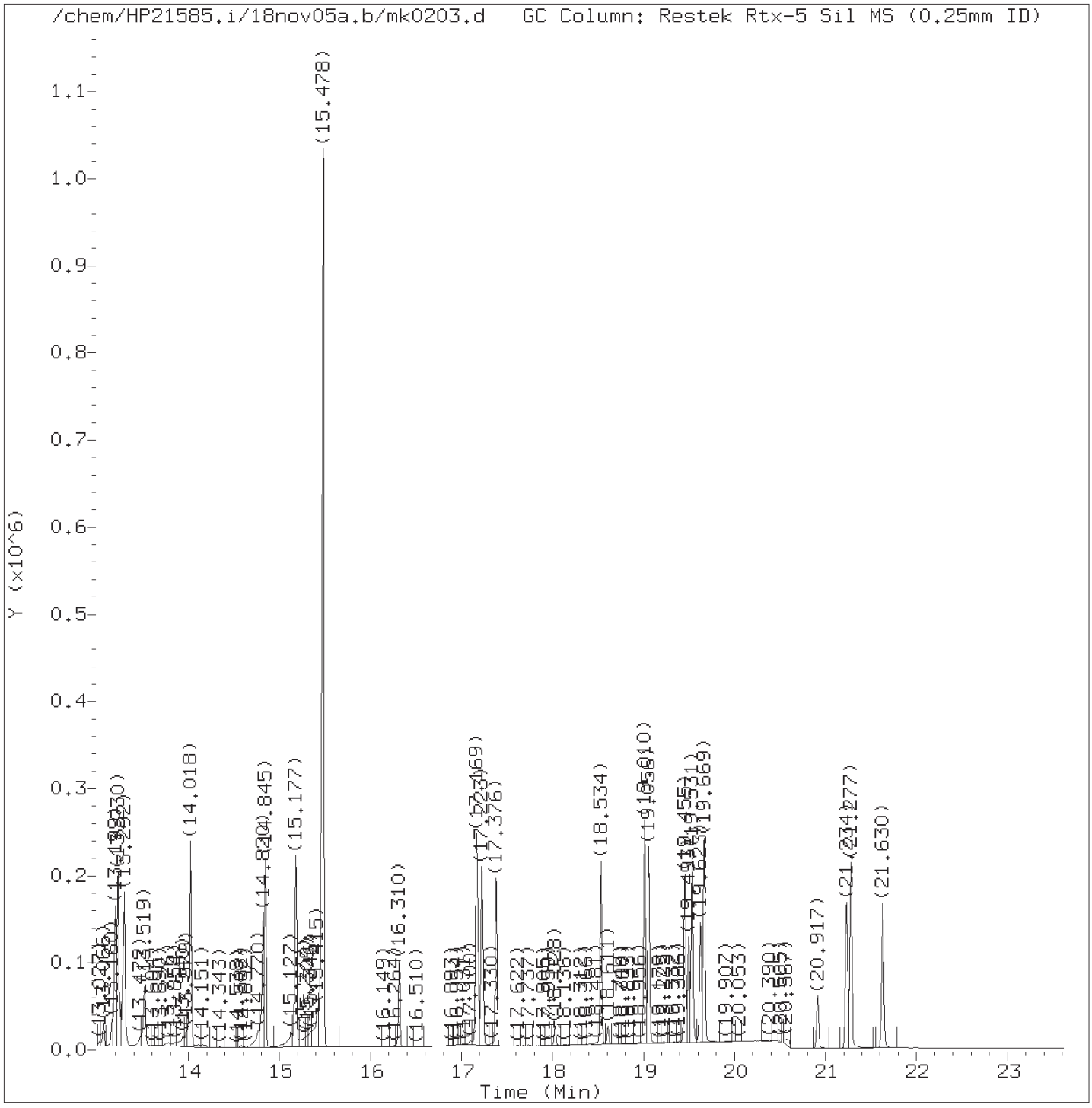
Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

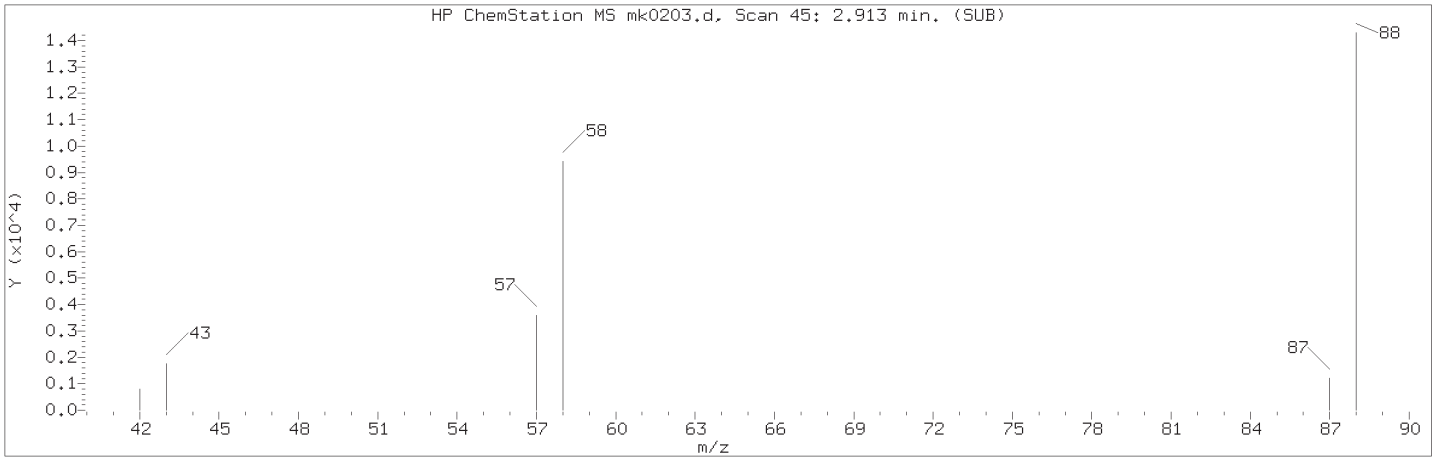
Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.913	88	28740A	0.178
4) bis(2-Chloroethyl)ether	(2)	6.246	93	95955	0.308
5)*1,4-Dichlorobenzene-d4	(1)	6.599	152	58113	0.250
6)*Naphthalene-d8	(2)	8.519	136	203726	0.250
7) Naphthalene	(2)	8.539	128	217040	0.232
10)$1-Methylnaphthalene-d10	(2)	9.741	152	92310	0.249
13) Acenaphthylene	(3)	11.058	152	216218	0.224
14)*Acenaphthene-d10	(3)	11.303	164	91863	0.250
15) Acenaphthene	(3)	11.342	154	137178	0.233
18) Fluorene	(3)	12.067	166	149909	0.219
19) Hexachlorobenzene	(4)	12.722	284	43648	0.206
20)*Phenanthrene-d10	(4)	13.199	188	188266	0.250
21) Phenanthrene	(4)	13.230	178	248779	0.246
22) Anthracene	(4)	13.292	178	206416	0.208
23) Di-n-butylphthalate	(4)	14.018	149	295298	0.267
24)$Fluoranthene-d10	(4)	14.820	212	161621	0.219
25) Fluoranthene	(4)	14.845	202	242717	0.215
26) Pyrene	(5)	15.177	202	253309	0.213
28) Benzo(a)anthracene	(5)	17.161	228	254324	0.248
29)*Chrysene-d12	(5)	17.184	240	130930	0.250
30) Chrysene	(5)	17.223	228	251361	0.242
31) bis(2-Ethylhexyl)phthalate	(5)	17.376	149	196346	0.265
33) Benzo(b)fluoranthene	(6)	19.010	252	266808	0.258
34) Benzo(k)fluoranthene	(6)	19.056	252	263816	0.255
36)$Benzo(a)pyrene-d12	(6)	19.493	264	109908	0.229
37) Benzo(a)pyrene	(6)	19.531	252	254140	0.256
38)*Perylene-d12	(6)	19.631	264	130766	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.234	276	236681M	0.262
40) Dibenz(a,h)anthracene	(6)	21.277	278	224292	0.244
41) Benzo(g,h,i)perylene	(6)	21.630	276	247634	0.237

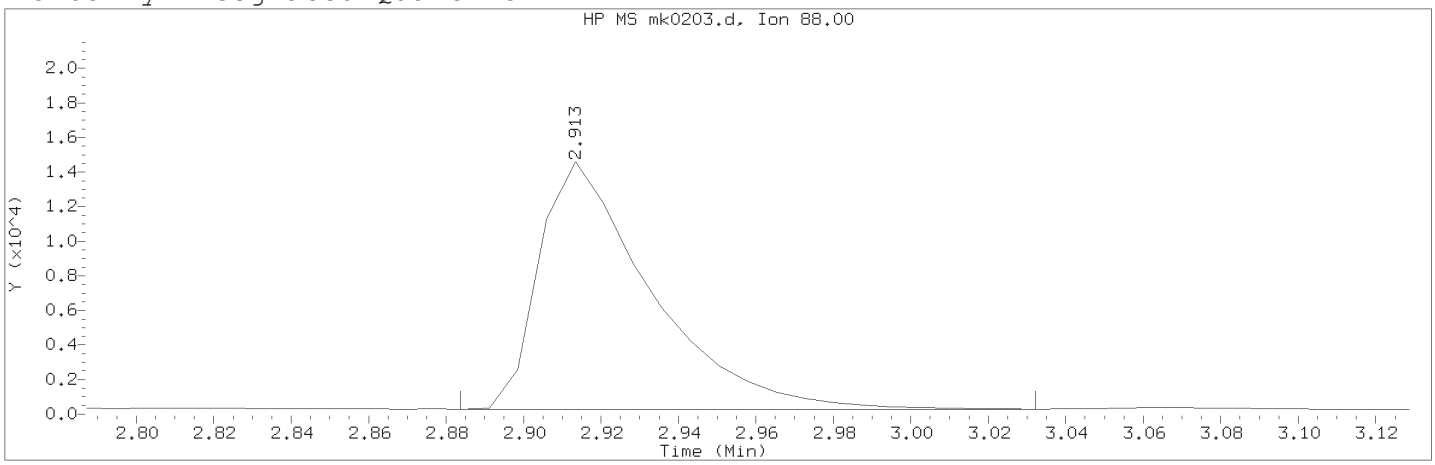
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

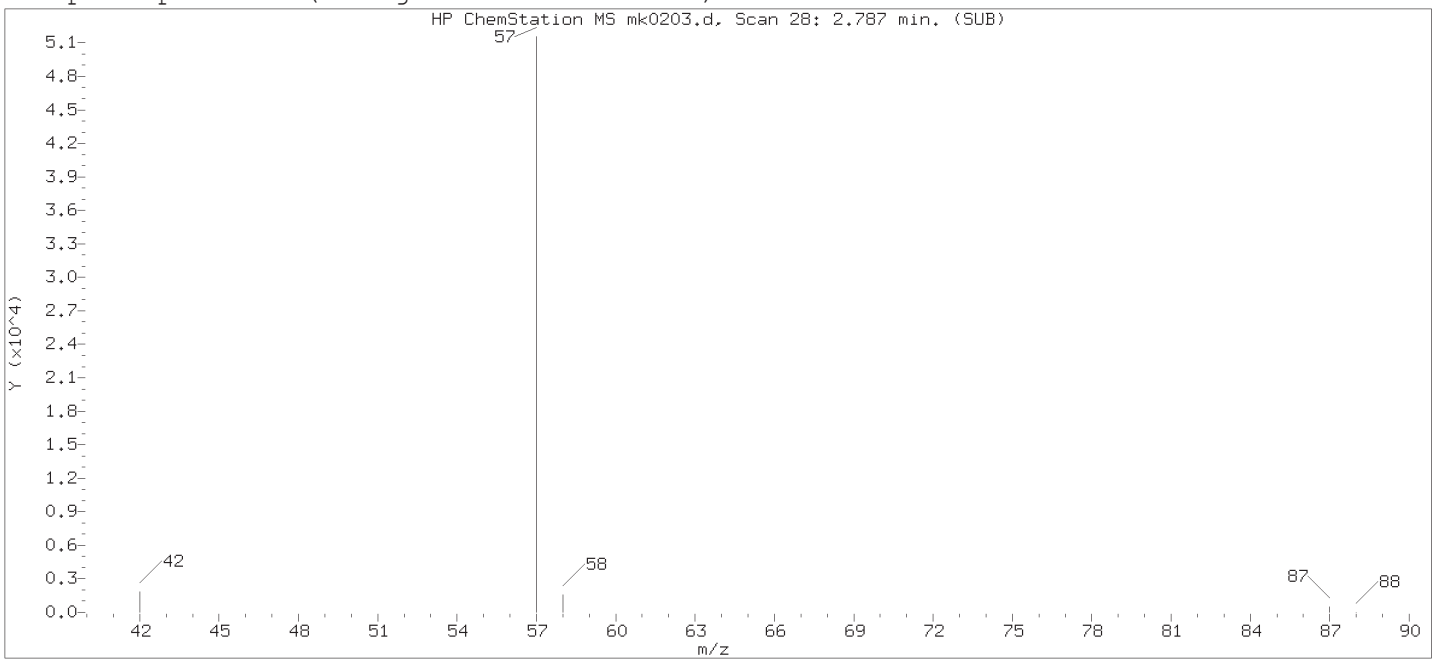
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 45		
Retention Time (minutes)	: 2.913		
Quant Ion	: 88.00		
Area (flag)	: 28740A		
On-Column Amount (ng/ul)	: 0.1783		
Integration start scan	: 40	Integration stop scan:	60
Y at integration start	: 286	Y at integration end:	286

Reason for manual integration: improper integration

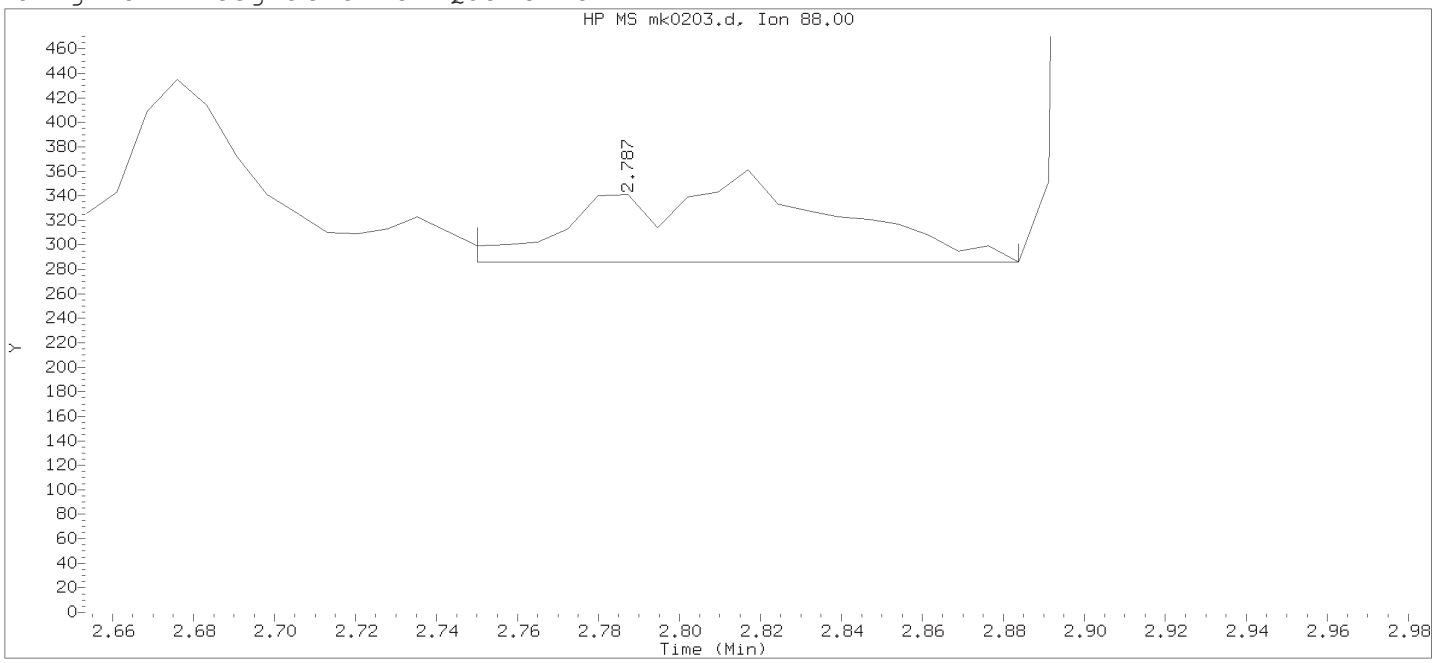
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

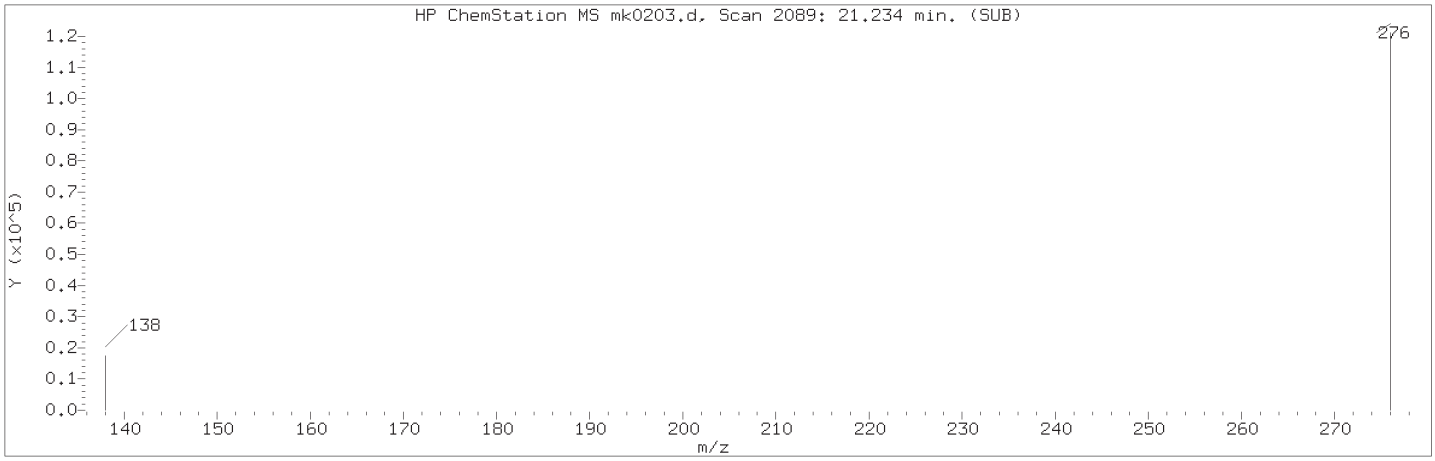
Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

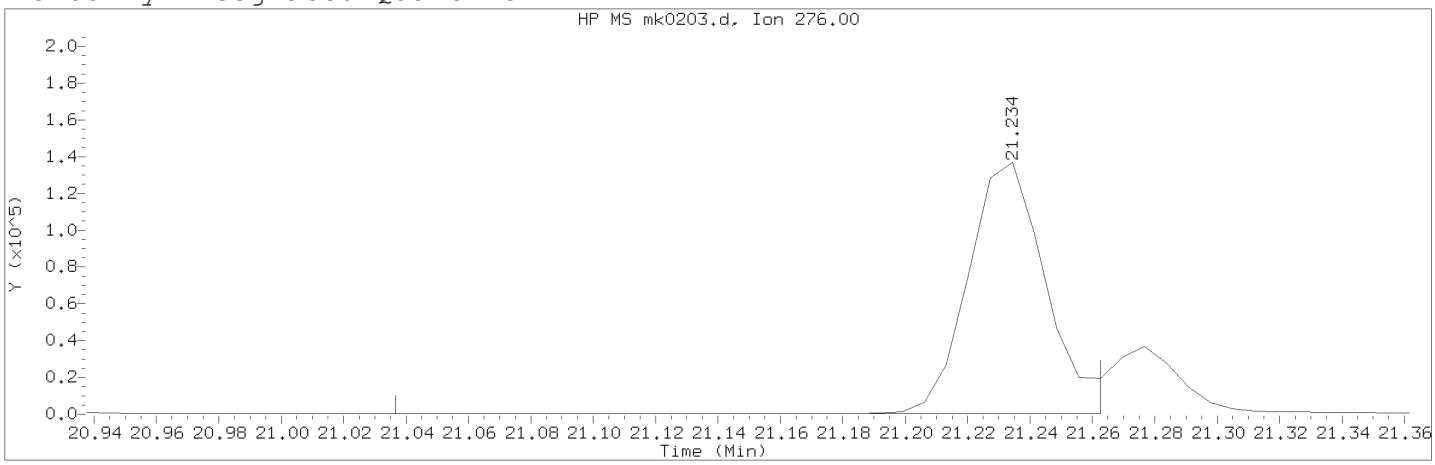
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 28		
Retention Time (minutes)	: 2.787		
Quant Ion	: 88.00		
Area	: 276		
On-column Amount (ng/ul)	: 0.0017		
Integration start scan	: 22	Integration stop scan:	40
Y at integration start	: 286	Y at integration end:	286

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 07-NOV-2018 16:30
Date, time and analyst ID of latest file update: 07-Nov-2018 16:31 art12405

Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

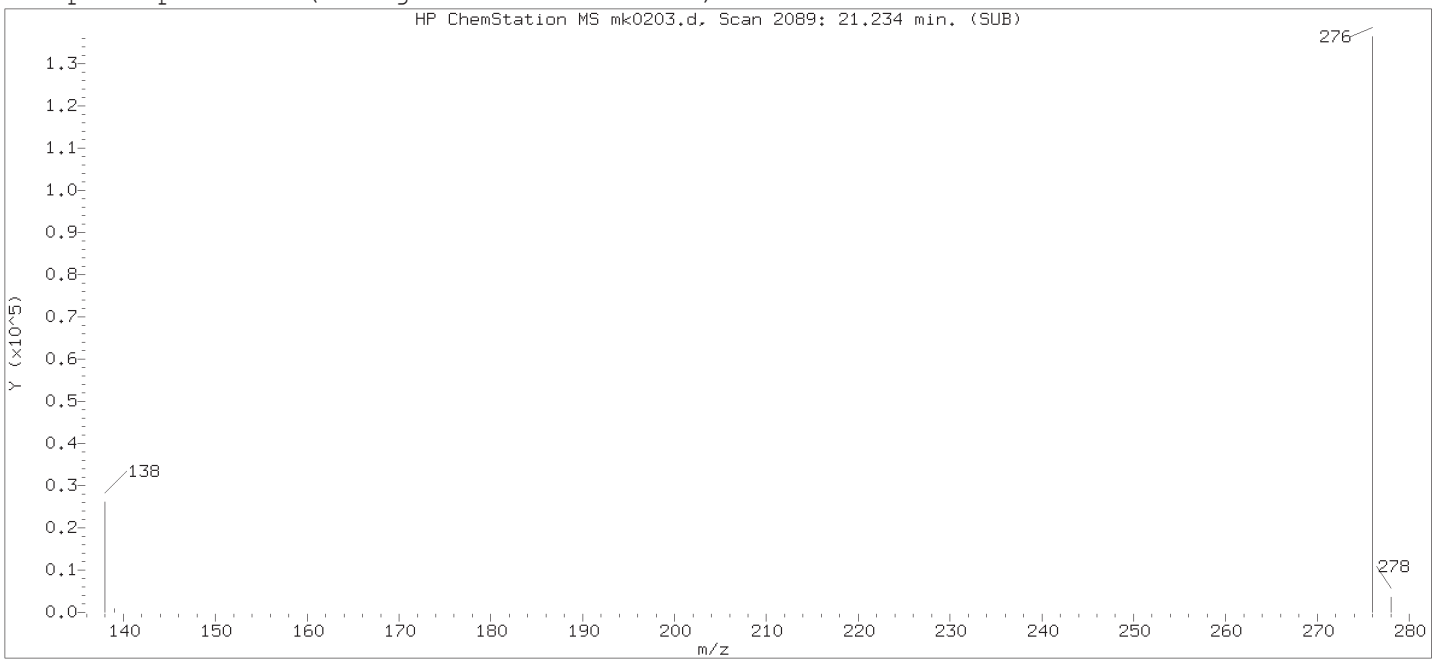
Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2089		
Retention Time (minutes)	: 21.234		
Quant Ion	: 276.00		
Area (flag)	: 236681M		
On-Column Amount (ng/ul)	: 0.2624		
Integration start scan	: 2060	Integration stop scan:	2092
Y at integration start	: 348	Y at integration end:	348

Reason for manual integration: improper integration

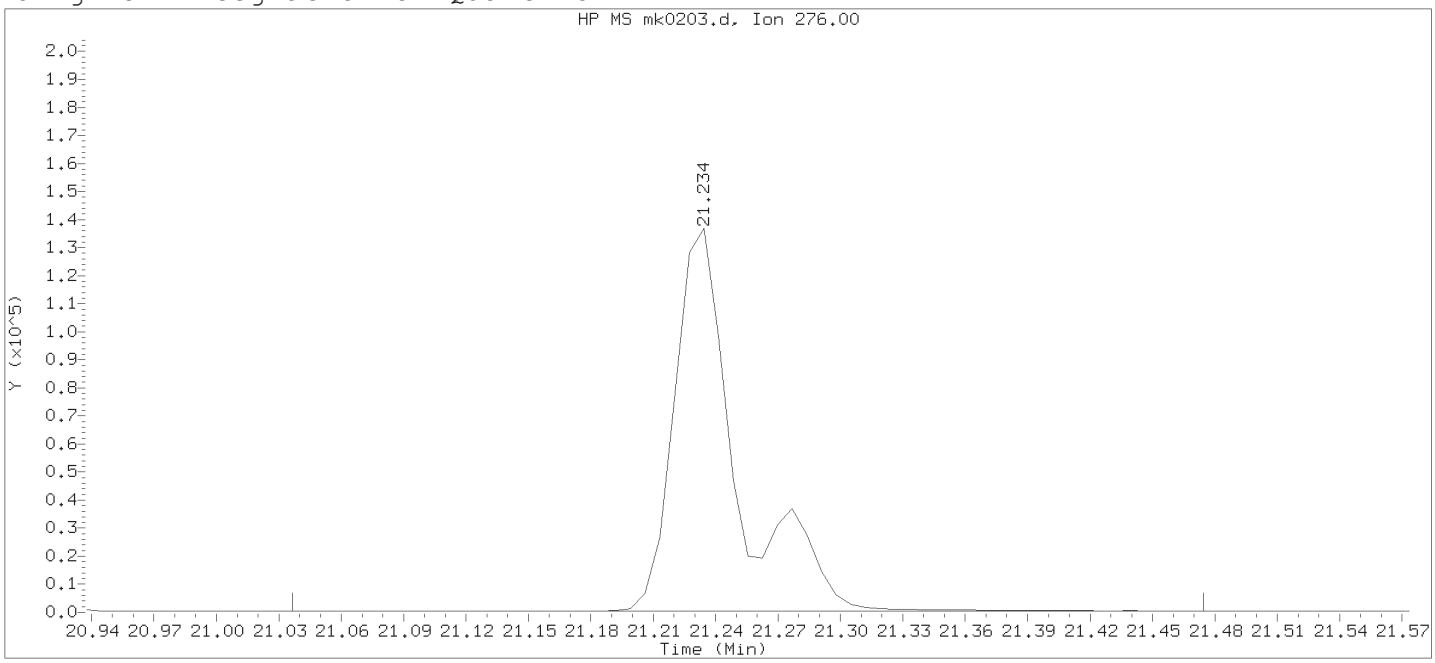
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 11/07/2018 at 16:33.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Irene L. Dodd on 11/08/2018 at 12:10.
PARALLAX ID: ild00415

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov05a.b/mk0203.d Instrument ID: HP21585.i
Injection date and time: 05-NOV-2018 20:17 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov05a.b/rvsim8270d.m Sublist used: 25784
Calibration date and time: 06-NOV-2018 18:44
Date, time and analyst ID of latest file update: 06-Nov-2018 18:48 art12405

Sample Name: 305WNLCS Lab Sample ID: 305WNLCS

Compound Number	: 39	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 2089	
Retention Time (minutes)	: 21.234	
Quant Ion	: 276.00	
Area	: 290386	
On-column Amount (ng/ul)	: 0.3220	
Integration start scan	: 2060	Integration stop scan: 2122
Y at integration start	: 348	Y at integration end: 348

Digitally signed by Ashley R. Transue on 11/07/2018 at 16:33.
Target 3.5 esignature used: D14

Data file: /chem/HP21585.i/18nov08.b/mk0453.d Injection date and time: **08-NOV-2018 06:56**
Data file Sample Info. Line: 311WDLCS;311WDLCS;1;3;LCS;;; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **311WAD**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.580 (-0.020)	475	152	56680 (-12)	0.25	
6) Naphthalene-d8	8.480 (0.000)	572	136	189421 (-10)	0.25	
14) Acenaphthene-d10	11.264 (0.000)	767	164	86168 (-3)	0.25	
20) Phenanthrene-d10	13.167 (0.008)	986	188	162174 (-7)	0.25	
29) Chrysene-d12	17.146 (0.000)	1549	240	115380 (-12)	0.25	
38) Perylene-d12	19.585 (0.008)	1867	264	120636 (-13)	0.25	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
10) 1-Methylnaphthalene-d10	(2)	9.702 (0.000)	152	73774	0.214	86%
24) Fluoranthene-d10	(4)	14.789 (-0.001)	212	138664	0.218	87%
36) Benzo(a)pyrene-d12	(6)	19.455 (0.000)	264	93154	0.210	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)	2.899 (-0.017)	88	24438	0.155	0.62			0.03
4) bis(2-Chloroethyl)ether	(2)	6.109 (0.011)	93	97558	0.337	1.35			0.005
7) Naphthalene	(2)	8.500 (-0.000)	128	179943	0.207	0.83			0.008
9) 2-Methylnaphthalene	(2)	9.612 (-0.000)	142	118417	0.221	0.88			0.005
11) 1-Methylnaphthalene	(2)	9.754 (0.001)	142	113787	0.215	0.86			0.003
13) Acenaphthylene	(3)	11.032 (0.000)	152	176724	0.195	0.78			0.003
15) Acenaphthene	(3)	11.316 (-0.000)	154	111225	0.202	0.81			0.003
18) Fluorene	(3)	12.036 (0.000)	166	135808	0.211	0.85			0.003
19) Hexachlorobenzene	(4)	12.699 (-0.000)	284	37262	0.205	0.82			0.01
21) Phenanthrene	(4)	13.199 (-0.000)	178	198645	0.228	0.91			0.008
22) Anthracene	(4)	13.261 (-0.000)	178	182074	0.213	0.85			0.003
23) Di-n-butylphthalate	(4)	13.995 (-0.000)	149	245574	0.258	1.03	0.095	B	0.01
25) Fluoranthene	(4)	14.814 (-0.000)	202	216337	0.223	0.89			0.003
26) Pyrene	(5)	15.146 (-0.000)	202	220755	0.210	0.84			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.346 (-0.000)	149	154340	0.237	0.95	0.168	B	0.02
28) Benzo(a)anthracene	(5)	17.131 (-0.000)	228	209828	0.232	0.93			0.003
30) Chrysene	(5)	17.192 (-0.000)	228	206794	0.226	0.90			0.003
33) Benzo(b)fluoranthene	(6)	18.972 (-0.000)	252	228955	0.240	0.96			0.003
34) Benzo(k)fluoranthene	(6)	19.018 (-0.000)	252	224486	0.235	0.94			0.003
37) Benzo(a)pyrene	(6)	19.493 (0.000)	252	217871	0.238	0.95			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.192 (-0.000)	276	194668M	0.234	0.94			0.003
40) Dibenz(a,h)anthracene	(6)	21.234 (-0.000)	278	188322	0.222	0.89			0.005
41) Benzo(g,h,i)perylene	(6)	21.580 (-0.000)	276	198086	0.206	0.82			0.003

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP21585.i/18nov08.b/mk0453.d Injection date and time: **08-NOV-2018 06:56**
Data file Sample Info. Line: 311WDLCS;311WDLCS;1;3;LCS;;; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **311WAD**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

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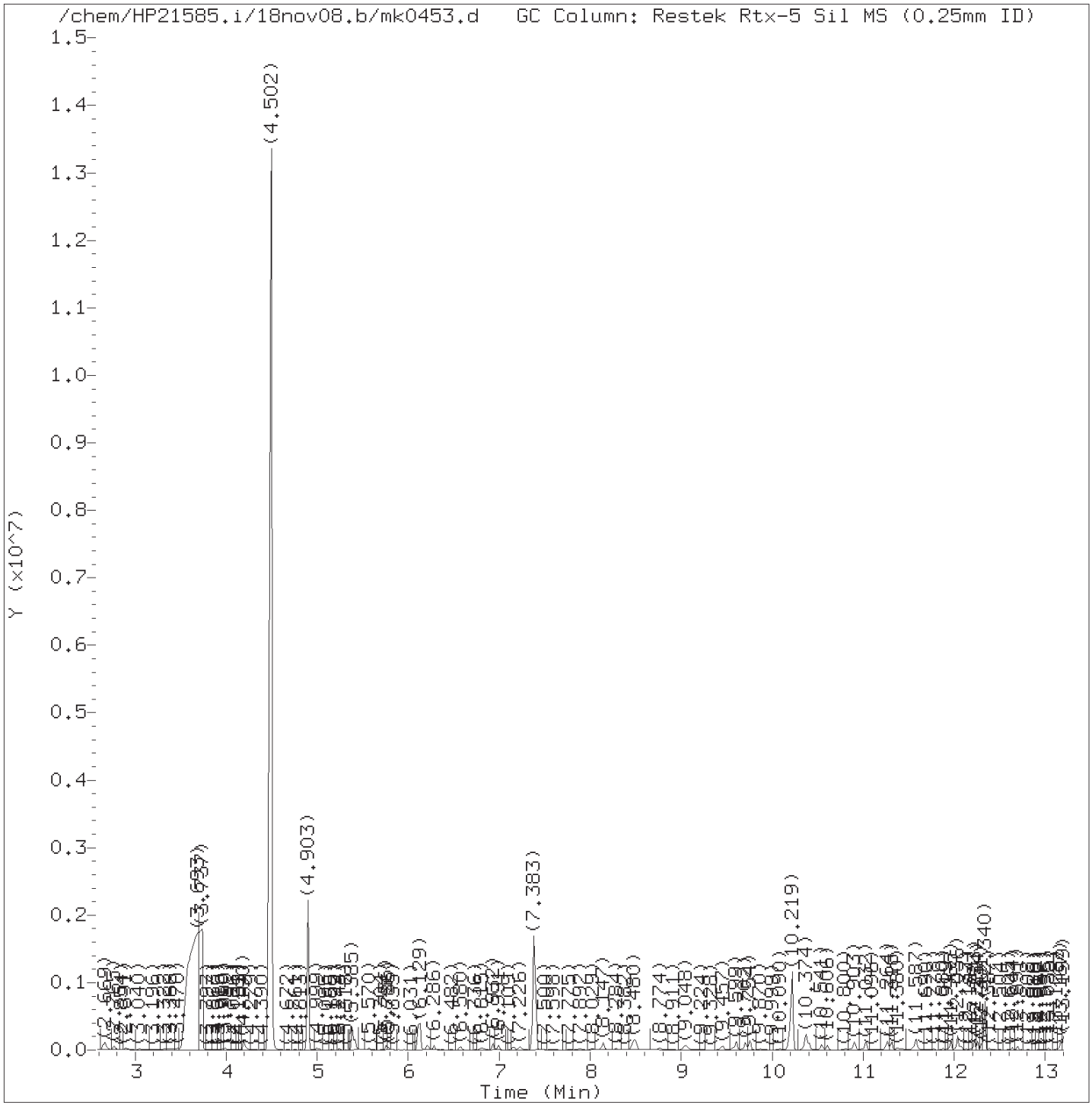
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 23

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

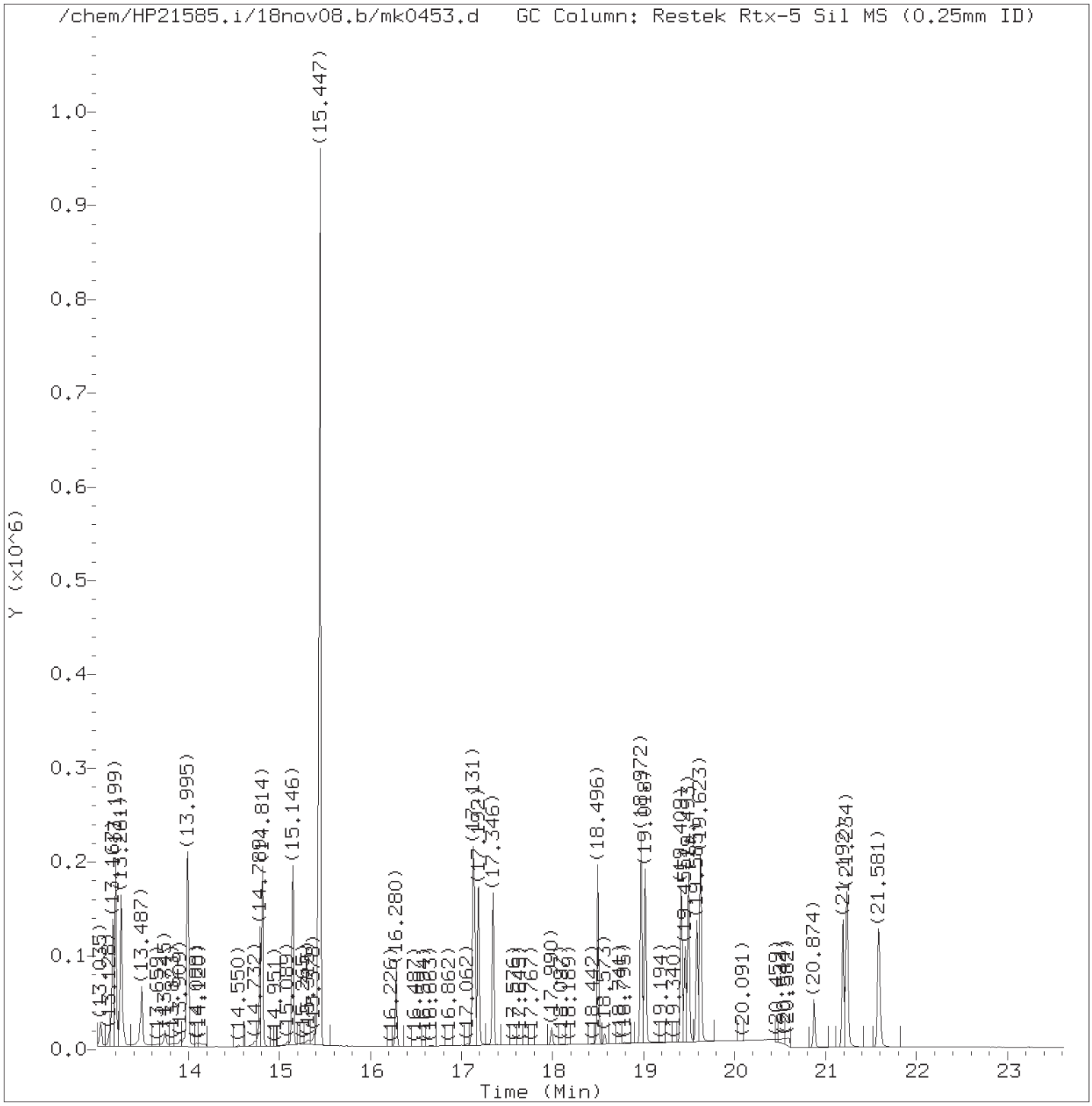
Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0453.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:56 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 311WDLCS Lab Sample ID: 311WDLCS

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0453.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:56 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 311WDLCS Lab Sample ID: 311WDLCS

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0453.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:56 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

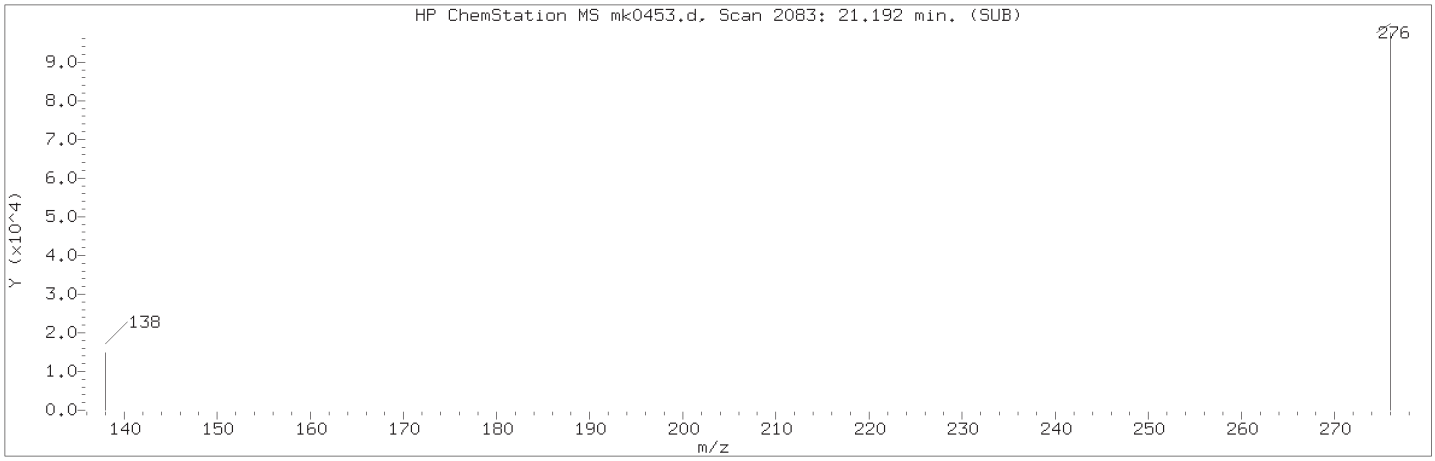
Sample Name: 311WDLCS Lab Sample ID: 311WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.899	88	24438	0.155
4) bis(2-Chloroethyl)ether	(2)	6.109	93	97558	0.337
5)*1,4-Dichlorobenzene-d4	(1)	6.580	152	56680	0.250
6)*Naphthalene-d8	(2)	8.480	136	189421	0.250
7) Naphthalene	(2)	8.500	128	179943	0.207
9) 2-Methylnaphthalene	(2)	9.612	142	118417	0.221
10)$1-Methylnaphthalene-d10	(2)	9.702	152	73774	0.214
11) 1-Methylnaphthalene	(2)	9.754	142	113787	0.215
13) Acenaphthylene	(3)	11.032	152	176724	0.195
14)*Acenaphthene-d10	(3)	11.264	164	86168	0.250
15) Acenaphthene	(3)	11.316	154	111225	0.202
18) Fluorene	(3)	12.036	166	135808	0.211
19) Hexachlorobenzene	(4)	12.699	284	37262	0.205
20)*Phenanthrene-d10	(4)	13.167	188	162174	0.250
21) Phenanthrene	(4)	13.199	178	198645	0.228
22) Anthracene	(4)	13.261	178	182074	0.213
23) Di-n-butylphthalate	(4)	13.995	149	245574	0.258
24)$Fluoranthene-d10	(4)	14.789	212	138664	0.218
25) Fluoranthene	(4)	14.814	202	216337	0.223
26) Pyrene	(5)	15.146	202	220755	0.210
28) Benzo(a)anthracene	(5)	17.131	228	209828	0.232
29)*Chrysene-d12	(5)	17.146	240	115380	0.250
30) Chrysene	(5)	17.192	228	206794	0.226
31) bis(2-Ethylhexyl)phthalate	(5)	17.346	149	154340	0.237
33) Benzo(b)fluoranthene	(6)	18.972	252	228955	0.240
34) Benzo(k)fluoranthene	(6)	19.018	252	224486	0.235
36)$Benzo(a)pyrene-d12	(6)	19.455	264	93154	0.210
37) Benzo(a)pyrene	(6)	19.493	252	217871	0.238
38)*Perylene-d12	(6)	19.585	264	120636	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.192	276	194668M	0.234
40) Dibenz(a,h)anthracene	(6)	21.234	278	188322	0.222
41) Benzo(g,h,i)perylene	(6)	21.581	276	198086	0.206

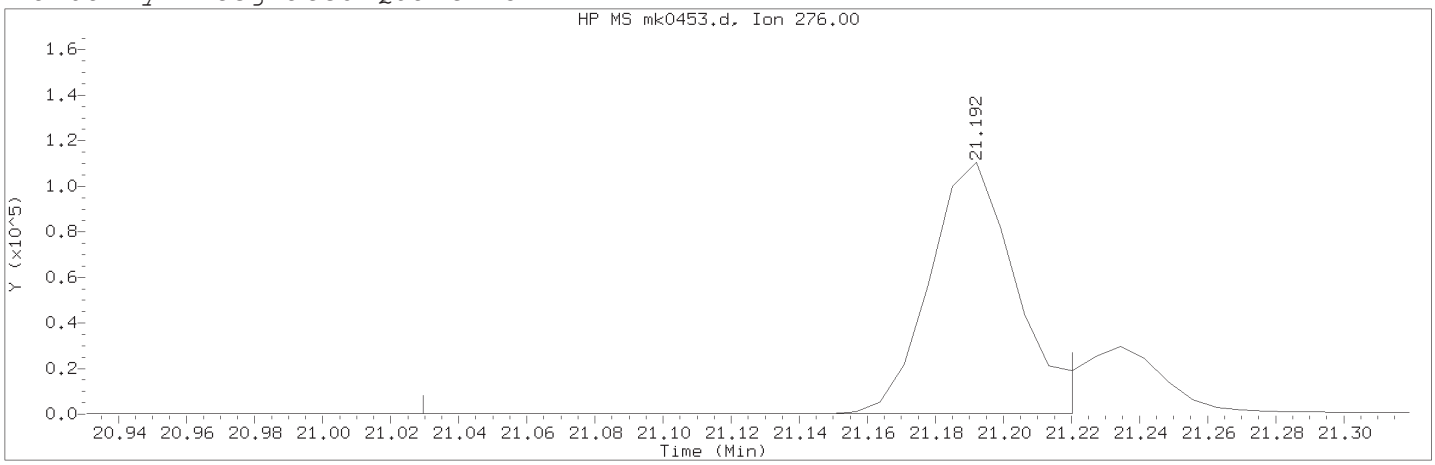
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0453.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:56 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 311WDLCS Lab Sample ID: 311WDLCS

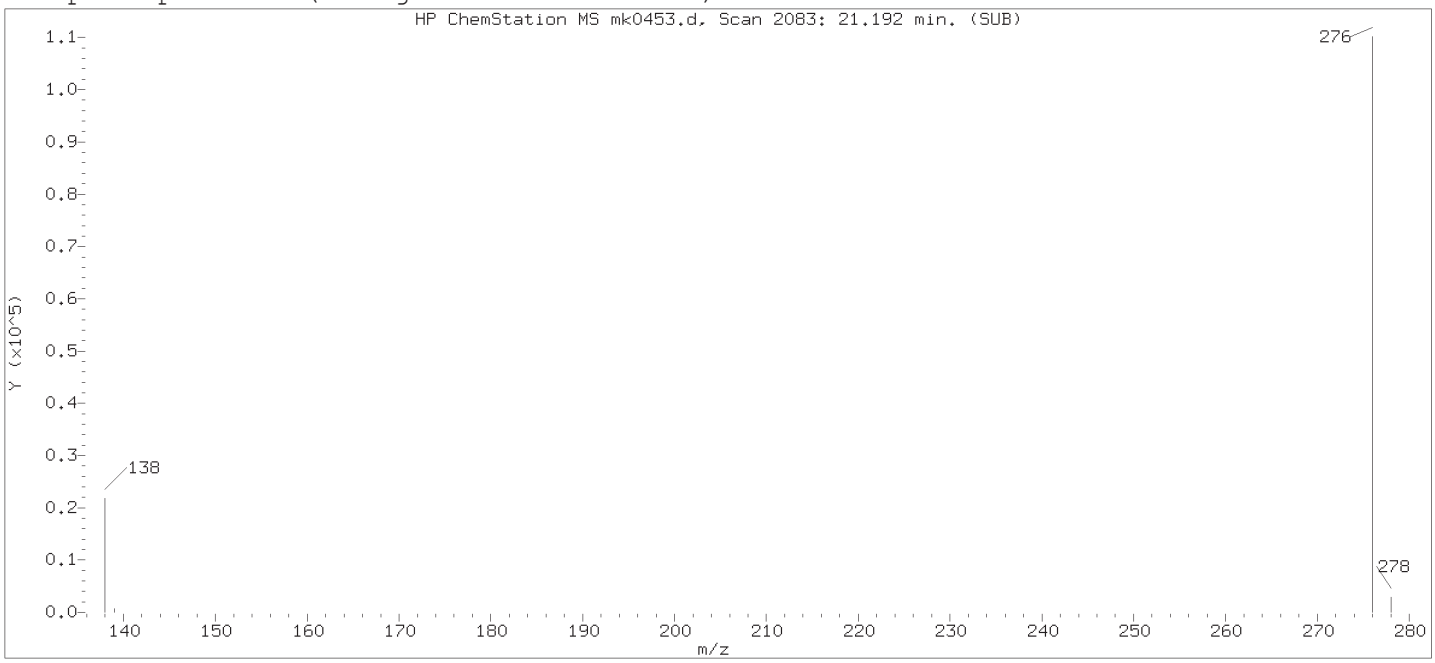
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2083
Retention Time (minutes) : 21.192
Quant Ion : 276.00
Area (flag) : 194668M
On-Column Amount (ng/ul) : 0.2340
Integration start scan : 2059 Integration stop scan: 2086
Y at integration start : 248 Y at integration end: 248

Reason for manual integration: improper integration

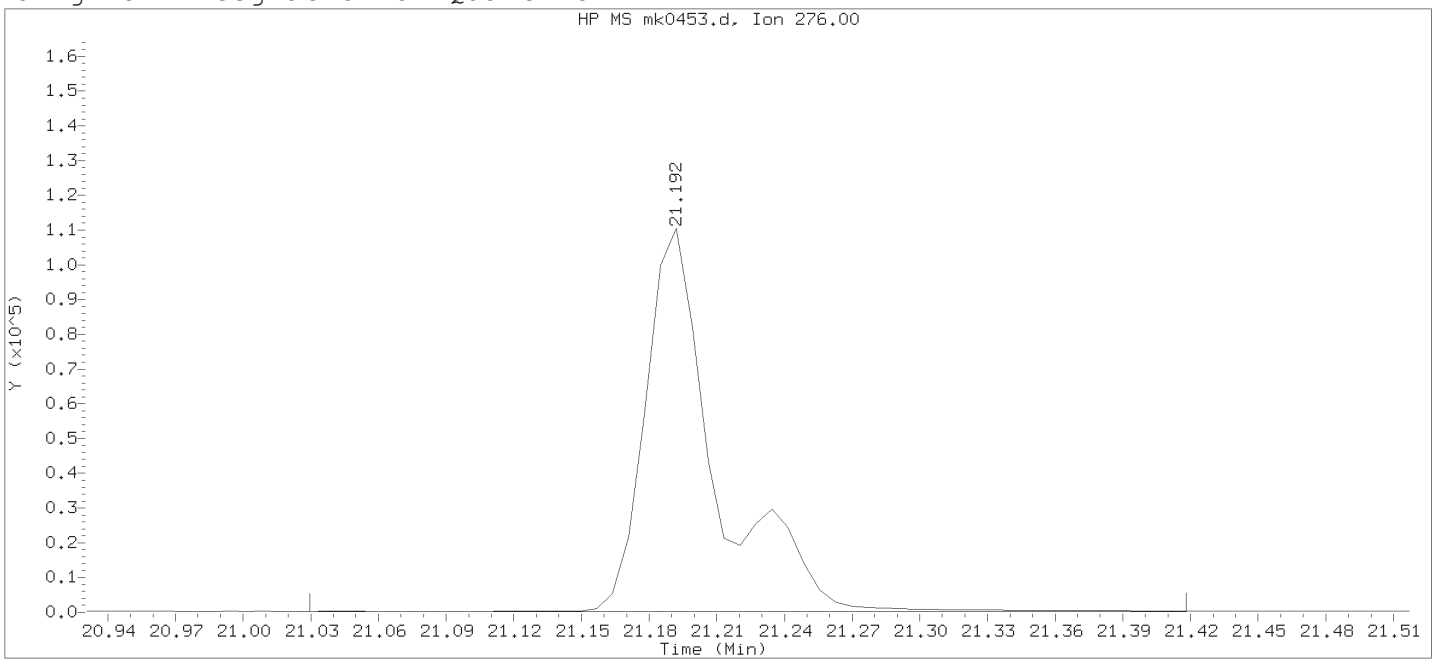
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0453.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 06:56 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 06:50
Date, time and analyst ID of latest file update: 08-Nov-2018 07:26 Unknown

Sample Name: 311WDLCS Lab Sample ID: 311WDLCS

Compound Number	: 39		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2083		
Retention Time (minutes)	: 21.192		
Quant Ion	: 276.00		
Area	: 241939		
On-column Amount (ng/ul)	: 0.2908		
Integration start scan	: 2059	Integration stop scan:	2114
Y at integration start	: 248	Y at integration end:	248

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature used.

Data file: /chem/HP21585.i/18nov08.b/mk0454.d Injection date and time: **08-NOV-2018 07:25**
Data file Sample Info. Line: 311WDLCSD;311WDLCSD;1;3;LCSD;;; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **311WAD**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
5) 1,4-Dichlorobenzene-d4	6.580	(-0.020)	475	152	58610	(-9)	0.25	
6) Naphthalene-d8	8.480	(0.000)	572	136	198529	(-6)	0.25	
14) Acenaphthene-d10	11.264	(0.000)	767	164	86776	(-2)	0.25	
20) Phenanthrene-d10	13.167	(0.008)	986	188	167789	(-4)	0.25	
29) Chrysene-d12	17.146	(0.000)	1549	240	120214	(-9)	0.25	
38) Perylene-d12	19.585	(0.008)	1867	264	124961	(-10)	0.25	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
10) 1-Methylnaphthalene-d10	(2)	9.703	(0.000)	152	73866	0.205	82%
24) Fluoranthene-d10	(4)	14.782	(0.000)	212	137281	0.209	83%
36) Benzo(a)pyrene-d12	(6)	19.455	(0.000)	264	93382	0.203	81%

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)	2.906	(-0.019)	88	25174	0.155	0.62			0.03
4) bis(2-Chloroethyl)ether	(2)	6.227	(-0.002)	93	74157	0.244	0.98			0.005
7) Naphthalene	(2)	8.500	(0.000)	128	177763	0.195	0.78			0.008
9) 2-Methylnaphthalene	(2)	9.599	(0.001)	142	116294	0.207	0.83			0.005
11) 1-Methylnaphthalene	(2)	9.754	(0.001)	142	110349	0.199	0.79			0.003
13) Acenaphthylene	(3)	11.032	(0.000)	152	174592	0.191	0.76			0.003
15) Acenaphthene	(3)	11.316	(0.000)	154	110177	0.199	0.79			0.003
18) Fluorene	(3)	12.036	(0.000)	166	131639	0.203	0.81			0.003
19) Hexachlorobenzene	(4)	12.699	(-0.000)	284	36106	0.192	0.77			0.01
21) Phenanthrene	(4)	13.199	(-0.000)	178	194768	0.216	0.87			0.008
22) Anthracene	(4)	13.261	(-0.000)	178	183340	0.207	0.83			0.003
23) Di-n-butylphthalate	(4)	13.987	(-0.000)	149	228116	0.231	0.92	0.095	B	0.01
25) Fluoranthene	(4)	14.814	(-0.000)	202	212423	0.211	0.85			0.003
26) Pyrene	(5)	15.146	(0.000)	202	217058	0.199	0.79			0.003
31) bis(2-Ethylhexyl)phthalate	(5)	17.346	(0.000)	149	150102	0.221	0.88	0.168	B	0.02
28) Benzo(a)anthracene	(5)	17.131	(0.000)	228	206946	0.220	0.88			0.003
30) Chrysene	(5)	17.184	(0.000)	228	208411	0.218	0.87			0.003
33) Benzo(b)fluoranthene	(6)	18.972	(-0.000)	252	226293	0.229	0.91			0.003
34) Benzo(k)fluoranthene	(6)	19.018	(-0.000)	252	225920	0.229	0.91			0.003
37) Benzo(a)pyrene	(6)	19.493	(0.000)	252	215457	0.227	0.91			0.003
39) Indeno(1,2,3-cd)pyrene	(6)	21.192	(-0.000)	276	191621M	0.222	0.89			0.003
40) Dibenz(a,h)anthracene	(6)	21.234	(-0.000)	278	187344	0.213	0.85			0.005
41) Benzo(g,h,i)perylene	(6)	21.580	(-0.000)	276	195026	0.196	0.78			0.003

B = Compound detected in referenced method blank. M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP21585.i/18nov08.b/mk0454.d Injection date and time: **08-NOV-2018 07:25**
Data file Sample Info. Line: 311WDLCSD;311WDLCSD;1;3;LCSD;;; Instrument ID: **HP21585.i** Batch: **18311WAD**
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Blank Data file reference: **/chem/HP21585.i/18nov08.b/mk0452.d**

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: **311WAD**
Calibration date and time (Last Method Edit): 08-NOV-2018 11:10
Mid Level Daily Calibration Standard Reference: **/chem/HP21585.i/18nov08.b/mk0451.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * GPCf * Uf * Vt/(Vo)

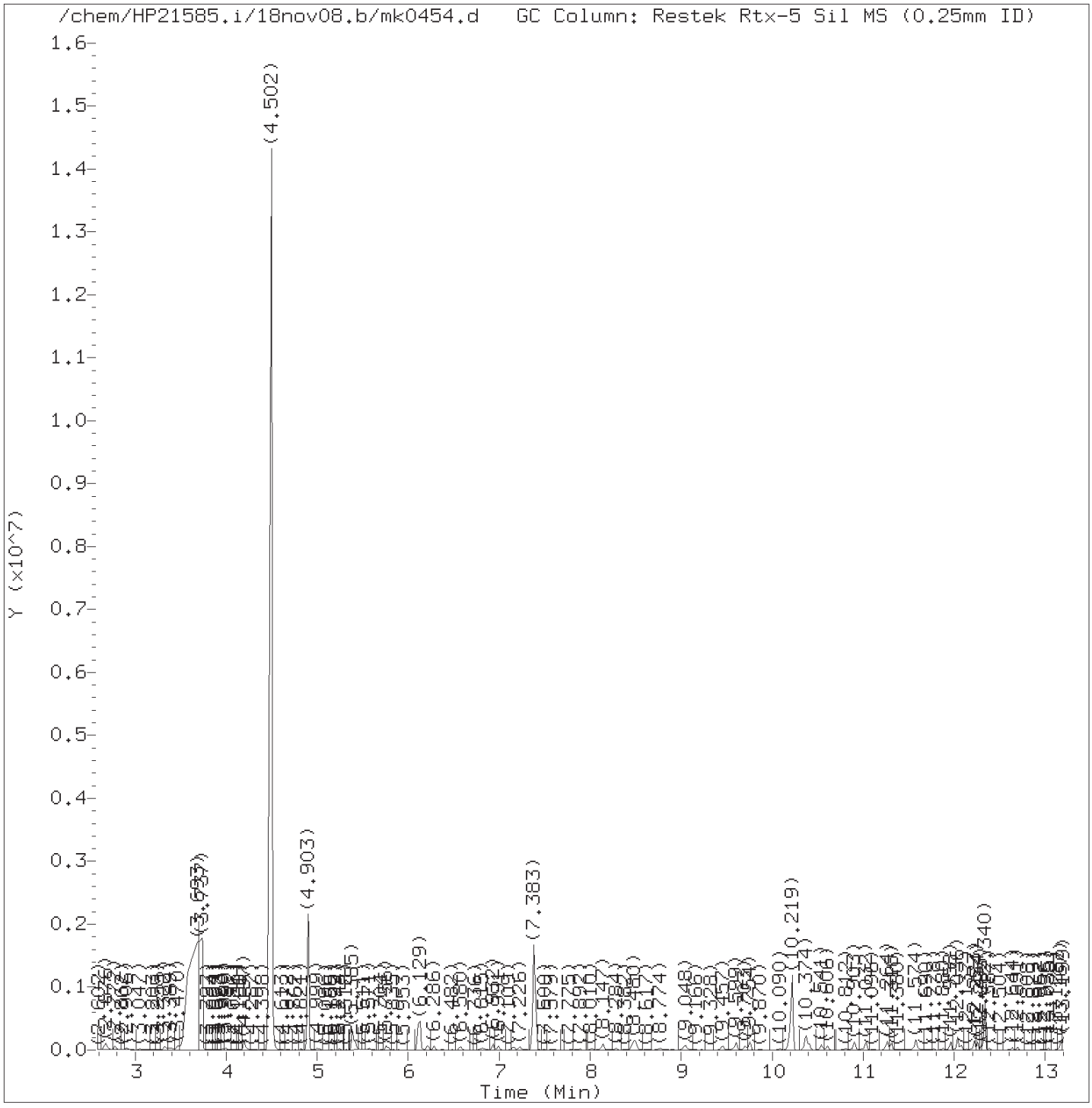
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 2 ul

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 23

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

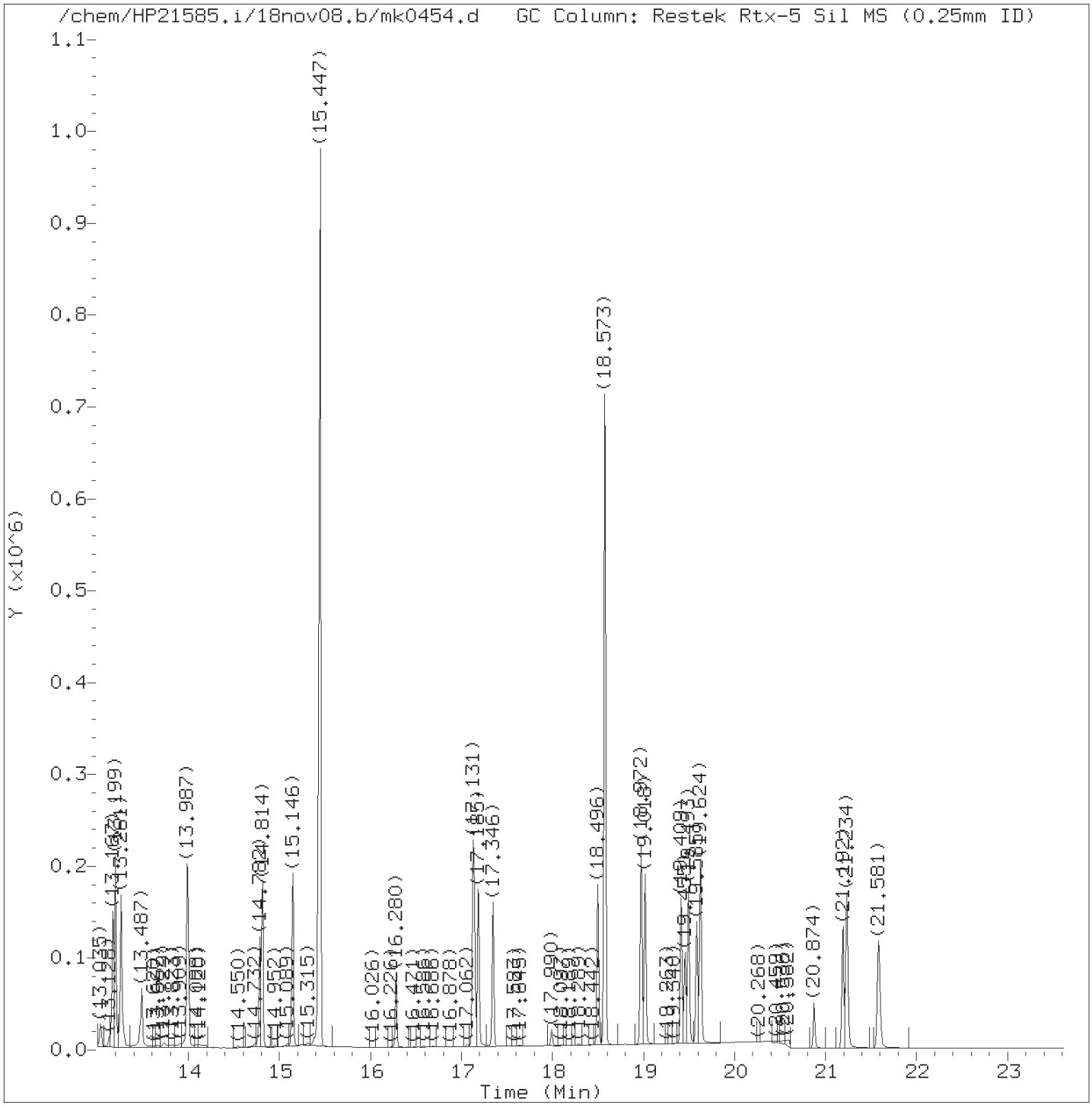
Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0454.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:25 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 311WDLCSD Lab Sample ID: 311WDLCSD

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0454.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:25 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 311WDLCSD Lab Sample ID: 311WDLCSD

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP21585.i/18nov08.b/mk0454.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:25 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

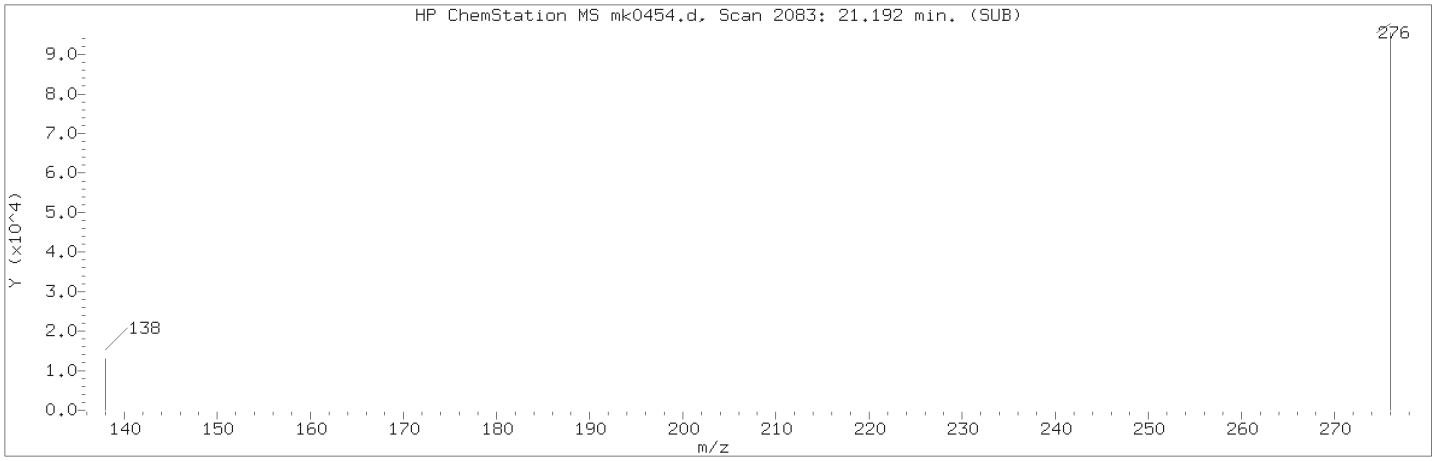
Sample Name: 311WDLCSD Lab Sample ID: 311WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.906	88	25174	0.155
4) bis(2-Chloroethyl)ether	(2)	6.227	93	74157	0.244
5)*1,4-Dichlorobenzene-d4	(1)	6.580	152	58610	0.250
6)*Naphthalene-d8	(2)	8.480	136	198529	0.250
7) Naphthalene	(2)	8.500	128	177763	0.195
9) 2-Methylnaphthalene	(2)	9.599	142	116294	0.207
10)$1-Methylnaphthalene-d10	(2)	9.703	152	73866	0.205
11) 1-Methylnaphthalene	(2)	9.754	142	110349	0.199
13) Acenaphthylene	(3)	11.032	152	174592	0.191
14)*Acenaphthene-d10	(3)	11.264	164	86776	0.250
15) Acenaphthene	(3)	11.316	154	110177	0.199
18) Fluorene	(3)	12.036	166	131639	0.203
19) Hexachlorobenzene	(4)	12.699	284	36106	0.192
20)*Phenanthrene-d10	(4)	13.167	188	167789	0.250
21) Phenanthrene	(4)	13.199	178	194768	0.216
22) Anthracene	(4)	13.261	178	183340	0.207
23) Di-n-butylphthalate	(4)	13.987	149	228116	0.231
24)$Fluoranthene-d10	(4)	14.782	212	137281	0.209
25) Fluoranthene	(4)	14.814	202	212423	0.211
26) Pyrene	(5)	15.146	202	217058	0.199
28) Benzo(a)anthracene	(5)	17.131	228	206946	0.220
29)*Chrysene-d12	(5)	17.146	240	120214	0.250
30) Chrysene	(5)	17.185	228	208411	0.218
31) bis(2-Ethylhexyl)phthalate	(5)	17.346	149	150102	0.221
33) Benzo(b)fluoranthene	(6)	18.972	252	226293	0.229
34) Benzo(k)fluoranthene	(6)	19.018	252	225920	0.229
36)$Benzo(a)pyrene-d12	(6)	19.455	264	93382	0.203
37) Benzo(a)pyrene	(6)	19.493	252	215457	0.227
38)*Perylene-d12	(6)	19.585	264	124961	0.250
39) Indeno(1,2,3-cd)pyrene	(6)	21.192	276	191621M	0.222
40) Dibenz(a,h)anthracene	(6)	21.234	278	187344	0.213
41) Benzo(g,h,i)perylene	(6)	21.581	276	195026	0.196

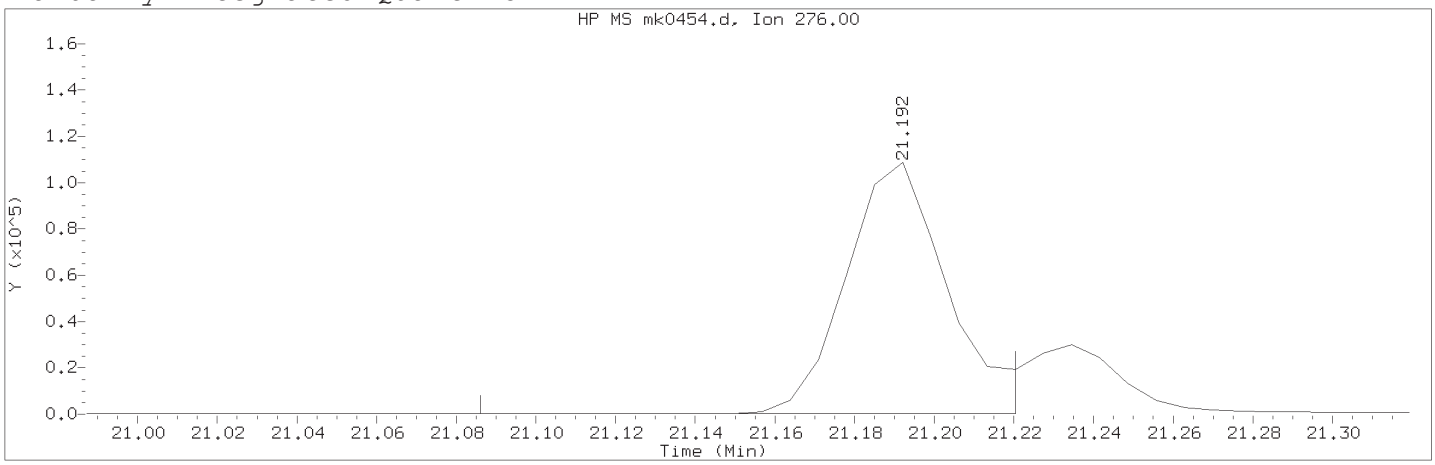
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0454.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:25 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 11:10
Date, time and analyst ID of latest file update: 14-Nov-2018 04:01 jmg00346

Sample Name: 311WDLCSD Lab Sample ID: 311WDLCSD

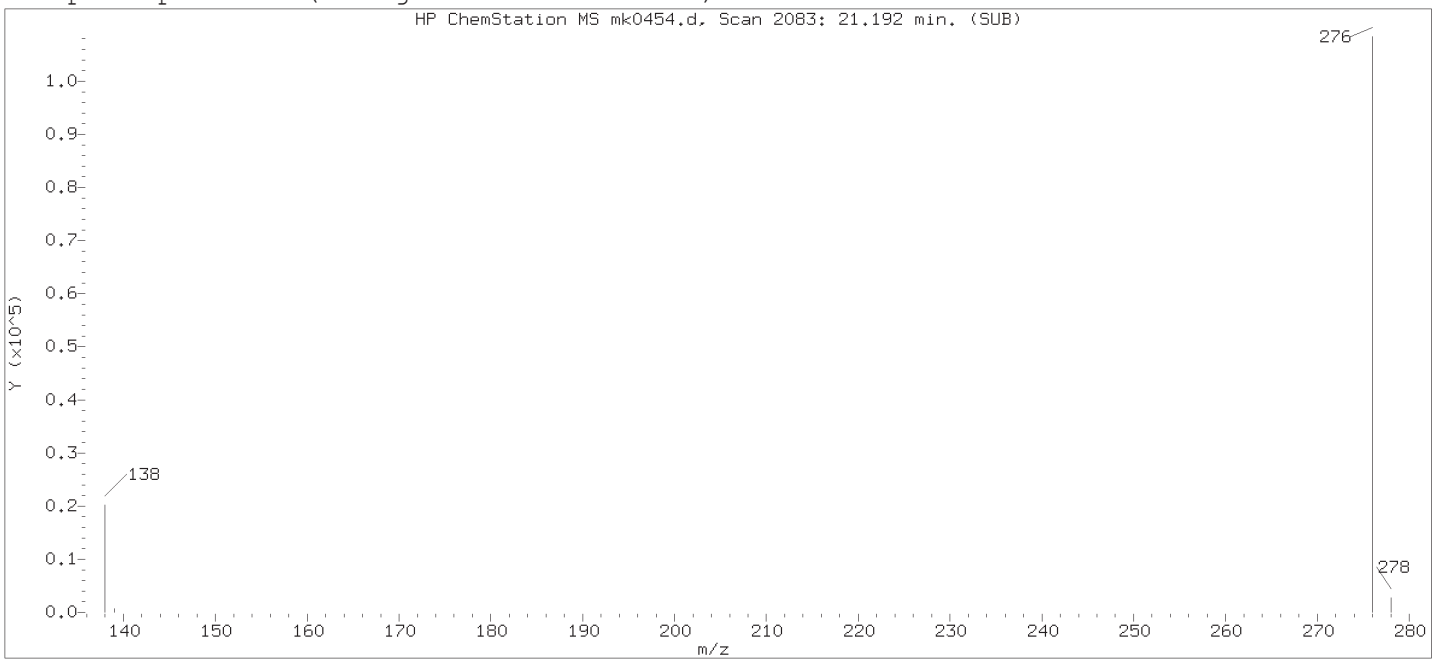
Compound Number : 39
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2083
Retention Time (minutes) : 21.192
Quant Ion : 276.00
Area (flag) : 191621M
On-Column Amount (ng/ul) : 0.2223
Integration start scan : 2067 Integration stop scan: 2086
Y at integration start : 220 Y at integration end: 220

Reason for manual integration: improper integration

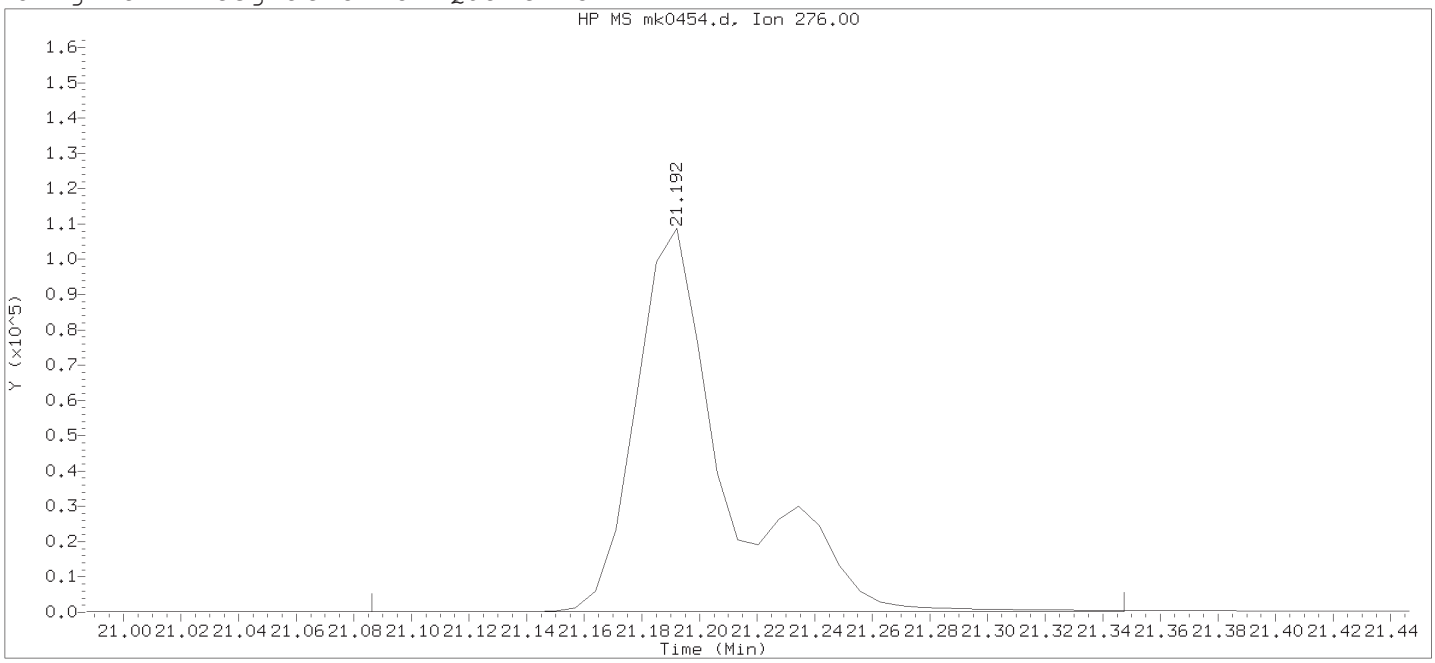
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/14/2018 at 04:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2018 at 13:19.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP21585.i/18nov08.b/mk0454.d Instrument ID: HP21585.i
Injection date and time: 08-NOV-2018 07:25 Analyst ID: ceb05247

Method used: /chem/HP21585.i/18nov08.b/rvsim8270d.m Sublist used: 311WAD
Calibration date and time: 08-NOV-2018 06:50
Date, time and analyst ID of latest file update: 08-Nov-2018 07:55 Unknown

Sample Name: 311WDLCSD Lab Sample ID: 311WDLCSD

Compound Number	: 39	
Compound Name	: Indeno(1,2,3-cd)pyrene	
Scan Number	: 2083	
Retention Time (minutes)	: 21.192	
Quant Ion	: 276.00	
Area	: 238047	
On-column Amount (ng/ul)	: 0.2762	
Integration start scan	: 2067	Integration stop scan: 2104
Y at integration start	: 220	Y at integration end: 220

Digitally signed by Joseph M. Gambler on 11/14/2018 at 04:04.
Target 3.5 esignature used.

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS-SIM

Organic Extraction Batchlog Assigned to: 26557 Logan Brosemer Reviewed by: ATI2405 11/5/18 Start Date: 11/2/18 Start time: 8:30

18305WAN026

Tech 1: LMB 26557 Tech 2: —

Dept: 26 Prep Analysis: 10466 BNA Water Extraction SIM SIM SVOAs 8270D MINI

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9876335MS	14T04	246	SS1829826B	1.0	MS1829826C	1.0	1	✓	✓	153D	Tan cloudy
9876336MSD	14T04	244	SS1829826B	↓	MS1829826C	1.0	1	✓	✓	153D	Tan cloudy
BLANKA *	SBLKWN305	250	SS1829826B	↓	—	—	1	✓	✓	Z	TAP H2O
LCSA	305WNLCS	250	SS1829826B	✓	MS1829826C	1.0	1	✓	✓	Z	↓

Solvent Used	Lot No.
10N NaOH 47HFS1	~~HC~~ LMB 26557 11/2/18
Methylene Chloride	186618
Sodium Sulfate	18304A
Sulfuric Acid	184517
—	—

11/2/18 NA LMB 26557

Spike Solutions: Witness: —
MS1829826C MINI SIM SPIKE
SS1829826B MINI SEP BNA SURROGATE

*Split with 18305WAM026

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
1 9876332 *	14T02	238	SS1829826B	1.0	1	✓	✓	153B	Tan THT	14244	25784	11/09/2018	N
2 9876334BKG *	14T04	244	SS1829826B	↓	1	✓	✓	153B	Green THT	14244	25784	11/09/2018	N
3 9876342 *	14T06	247	SS1829826B	↓	1	✓	✓	153B	Clear	14244	25784	11/09/2018	N

NA LMB 26557 11/2/18

TID14 Page 1236 of 4047

Bench# ~~Bench#~~	~~Bench#~~	Bench#			
Rack ID:	—	Work Station	Tumble	Micro Temp 100?	✓
Internal Standard	RVSISTD2848	Balance #	259916		

R-VAP ID 2	90 C	R-VAP ID 6	90 C	R-VAP ID ~~—~~	C
S-bath ID	C	S-bath ID	C	N-Evap	C
M-vap	C				

18305WAN026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 12385 Christine Gleim Reviewed by: KB253160 11.9.18 Start Date: 11-7-18 Start time: 1637

18311WAC026

Tech 1: CG12385 Tech 2: NA

Dept: 26 Prep Analysis: 07807 BNA Water Extraction PAHs 8270C MINI

QC	Sample Code	Amt (ml)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH <2	BC	Comments
BLANKA	SBLKWC311	250	SS1830626A	1.0			1	7	✓	7	tapwater
LCSA	311WCLCS	250	SS1830626A	↓	MS1830526B MS1831026A	1.0 1.0	1	/	✓	/	tapwater
LCSDA	311WCLCSD	250	SS1830626A	↓	MS1830526B MS1831026A	1.0 1.0	1	L	✓	L	tapwater

Solvent Used	Lot No.
Methylene Chloride	187001
Sodium Sulfate	183091
Sulfuric Acid	184517

Spike Solutions: Witness: NA

MS1831026A MINI SEP. LCS SPIKE #1
MS1830526B MINI SEP. LCS SPIKE #2
SS1830626A MINI SEP. BNA SURROGATE

(8) Not needed KMB2125 11/7/18

Sample #	Sample Code	Amt (ml)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH <2	BC	Comments	Analyses	List	Due Date	Prio
~~1 9872422 R~~	~~C5305~~		~~SS1830626A~~							~~14249~~	~~21978~~	~~11/07/2018~~	~~N~~
2 9872449 R	SC553	251	SS1830626A	1.0	1		✓	153B	orange	14249	21978	11/07/2018	N
3 9885344	22771	250	SS1830626A	↓	1		✓	153A	clear	14249	21971	11/15/2018	N
4 9885345	22772	241	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
5 9885346	22773	248	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
6 9885347	22774	241	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
7 9885348	22775	239	SS1830626A		1		✓	153A	orange	14249	21971	11/15/2018	N
8 9885349	22776	237	SS1830626A		1		✓	153A	lightorange	14249	21971	11/15/2018	N
9 9885350	22777	250	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
10 9885351	22778	242	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
11 9885352	22779	244	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
12 9885354	22781	237	SS1830626A		1		✓	153A	clear	14249	21971	11/15/2018	N
13 9885355	22782	242	SS1830626A	↓	1			153A	clear	14249	21971	11/15/2018	N

TID14 Page 1237 of 4047

NA CG12385 11-7-18

Bench# 3	Bench# 2	~~Bench#~~	
Rack ID:		Work Station	tumble
Internal Standard	v1stdmix2018	Balance #	25996

Micro Temp 100? /

R-VAP ID 6	90° C	R-VAP ID 2	90° C	~~R-VAP ID~~	~~C~~		
~~S-bath ID~~	~~C~~	~~S-bath ID~~	~~C~~	~~N-Evap~~	~~C~~	~~M-vap~~	~~C~~

18311WAC026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Herbicides Data

Case Narrative/Conformance Summary

Herbicides

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

Pesticide Residue Analysis

Fraction: Herbicides

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9876332	OU2-1-MW010	X		1	
9876334	OU2-1-MW008I	X		1	Unspiked
9876335	OU2-1-MW008I MS	X		1	Matrix Spike
9876336	OU2-1-MW008I MSD	X		1	Matrix Spike Duplicate
9876342	OU2EB103018-001	X		1	Equipment Blank

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): 9876332, 9876334-9876336, 9876342: Analysis: 10407)
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

(Sample number(s): 9876332, 9876334-9876336, 9876342: Analysis: 10407)
The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.

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Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID14

Pesticide Residue Analysis

Fraction: Herbicides

MS/MSD

Batch#: 183050043A (Sample number(s): 9876332, 9876334-9876336, 9876342, UNSPK: 9876334)
The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: 2,4,5-T, 2,4,5-TP, Dicamba, MCPA, MCPP

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

Herbicides

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Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Tidewater, Inc.
SDG: TID14

Fraction: Herbicides

Analysis	Batch Number	Sample Number	Analysis Date
Herb water 8151A Master	183050043A	PBLK43305	11/07/2018 18:58
		LCS43305	11/07/2018 19:31
		9876332	11/07/2018 21:43
		9876334 UNSPK	11/07/2018 20:04
		9876335 MS	11/07/2018 20:37
		9876336 MSD	11/07/2018 21:10
		9876342	11/07/2018 22:16

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: TID14
Matrix: LIQUID

Fraction: Herbicides

183050043A / PBLK43305 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Dalapon	11/07/18	N.D.	ug/l	1.8	3.6	4.0
Dicamba	11/07/18	N.D.	ug/l	0.080	0.16	0.30
MCPP	11/07/18	N.D.	ug/l	50	100	200
MCPA	11/07/18	N.D.	ug/l	50	100	200
2,4-DP (Dichloroprop)	11/07/18	N.D.	ug/l	0.16	0.32	0.50
2,4-D	11/07/18	N.D.	ug/l	0.25	0.50	0.60
2,4,5-TP	11/07/18	N.D.	ug/l	0.010	0.030	0.050
2,4,5-T	11/07/18	N.D.	ug/l	0.065	0.13	0.15
2,4-DB	11/07/18	N.D.	ug/l	0.63	1.3	1.5
Dinoseb	11/07/18	N.D.	ug/l	0.18	0.40	0.50

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: TID14
Matrix: LIQUID

Fraction: Herbicides

183050043A	2,4-DCAA-D1		2,4-DCAA-D2	
	Spike Added	2 ug/l	Spike Added	2 ug/l
Sample	% Recovery	Limits	% Recovery	Limits
PBLK43305	65	32 - 138	56	32 - 138
LCS43305	92	32 - 138	84	32 - 138
9876332	80	32 - 138	71	32 - 138
9876334 UNSPK	71	32 - 138	61	32 - 138
9876335 MS	85	32 - 138	72	32 - 138
9876336 MSD	90	32 - 138	75	32 - 138
9876342	78	32 - 138	65	32 - 138

Pesticide Residue Analysis

Fraction: Herbicides

UNSPK: 9876334 MS: 9876335 MSD: 9876336 **Analyte**	Batch: **183050043A** (Sample number(s): 9876332, 9876334-9876336, 9876342)								
	Spike Added ug/l MS/MSD	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dalapon	5.89 / 5.90	N.D.	4.41	3.63 J	75	62	19-139	19	30
Dicamba	0.235 / 0.236	N.D.	N.D.	N.D.	0 *	0 *	50-141	0	30
MCPP	235.72 / 236.39	N.D.	N.D.	N.D.	0 *	0 *	33-157	0	30
MCPA	474.06 / 475.4	N.D.	129.94 J	98.79 J	27 *	21 *	35-144	27	30
2,4-DP (Dichloroprop)	2.35 / 2.36	N.D.	2.25	2.44	95	103	46-159	8	30
2,4-D	2.35 / 2.36	N.D.	2.51	2.82	107	120	45-152	11	30
2,4,5-TP	0.235 / 0.236	N.D.	N.D.	N.D.	0 *	0 *	51-134	0	30
2,4,5-T	0.235 / 0.236	N.D.	N.D.	N.D.	0 *	0 *	42-147	0	30
2,4-DB	2.36 / 2.37	N.D.	2.35	2.80	100	118	35-153	17	30
Dinoseb	1.18 / 1.18	N.D.	1.33	1.38	113	117	16-163	3	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: TID14
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Herbicides

LCS: LCS43305	Batch: **183050043A** (Sample number(s): 9876332, 9876334-9876336, 9876342)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dalapon	6.26	3.18 J	NA	51	NA	19-139	NA	NA
Dicamba	0.250	0.230 J	NA	92	NA	50-141	NA	NA
MCPP	250.58	278.59	NA	111	NA	33-157	NA	NA
MCPA	503.93	482.03	NA	96	NA	35-144	NA	NA
2,4-DP (Dichloroprop)	2.50	2.47	NA	99	NA	46-159	NA	NA
2,4-D	2.50	2.47	NA	99	NA	45-152	NA	NA
2,4,5-TP	0.250	0.272	NA	109	NA	51-134	NA	NA
2,4,5-T	0.250	0.282	NA	113	NA	42-147	NA	NA
2,4-DB	2.51	2.36	NA	94	NA	35-153	NA	NA
Dinoseb	1.25	1.22	NA	98	NA	19-133	NA	NA

Fraction: Herbicides

10407: Herb water 8151A Master Analyte Name	Default DL	Default LOD	Default LOQ	Units
Dalapon	1.8	3.6	4.0	ug/l
Dicamba	.08	.16	0.30	ug/l
MCPP	50	100	200	ug/l
MCPA	50	100	200	ug/l
2,4-DP (Dichloroprop)	.16	.32	0.50	ug/l
2,4-D	.25	.5	0.60	ug/l
2,4,5-TP	.01	.03	0.050	ug/l
2,4,5-T	.065	.13	0.15	ug/l
2,4-DB	.63	1.3	1.5	ug/l
Dinoseb	.18	.4	0.50	ug/l

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

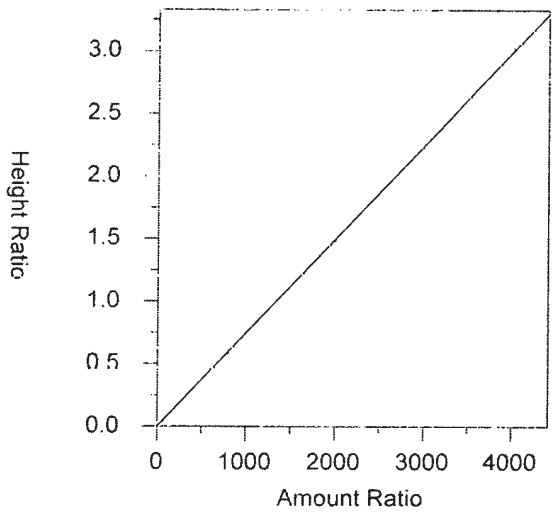
Creator:
Description:
Reason for change:

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

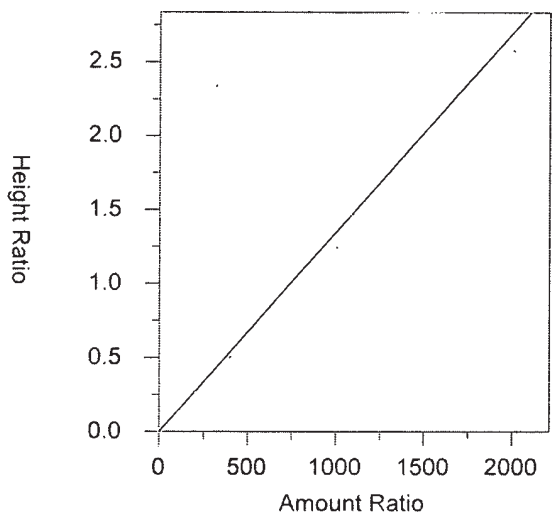
Single peak quantification by height

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

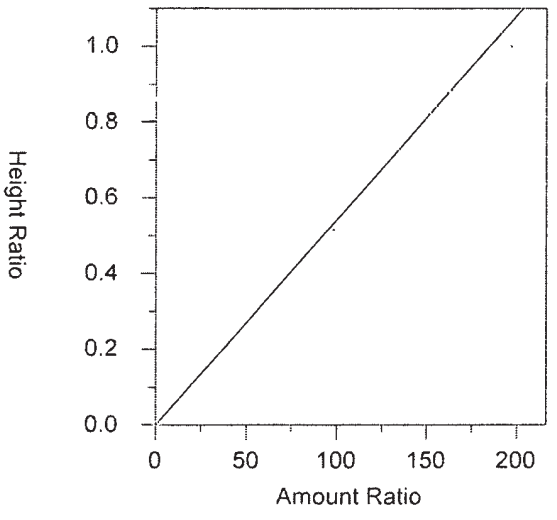
Single peak quantification by height

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

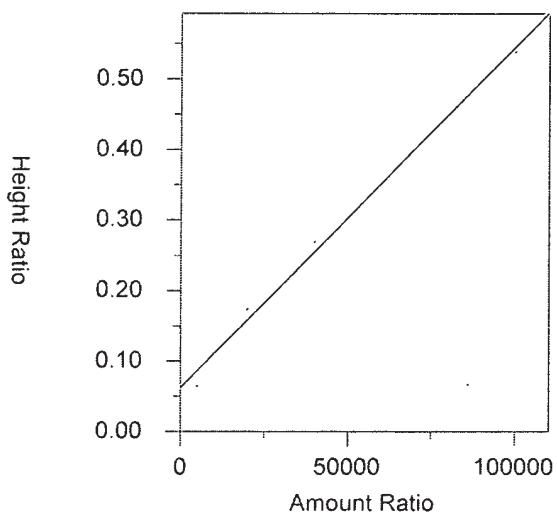
Single peak quantification by height

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

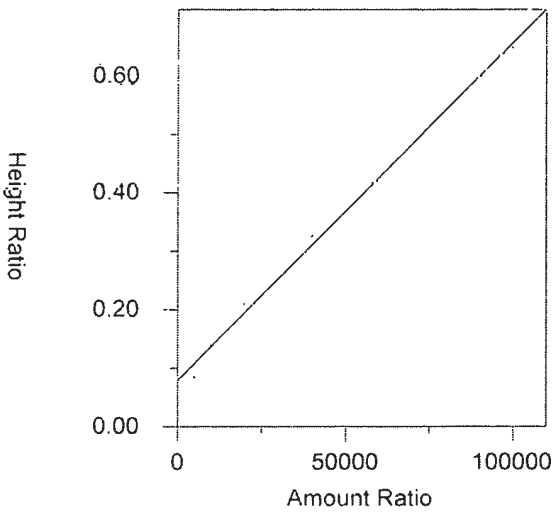
Y = 4.835912E-06 X + 0.06207189

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

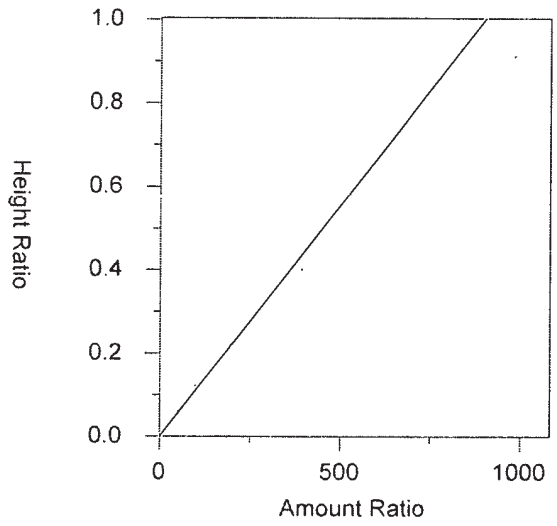
Y = 5.798257E-06 X + 0.07889777

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

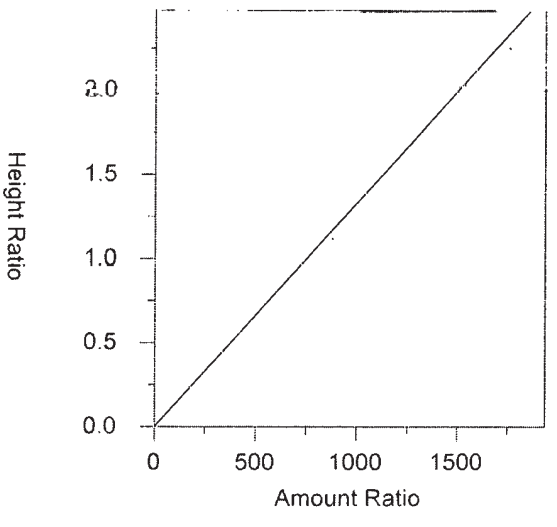
Single peak quantification by height

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

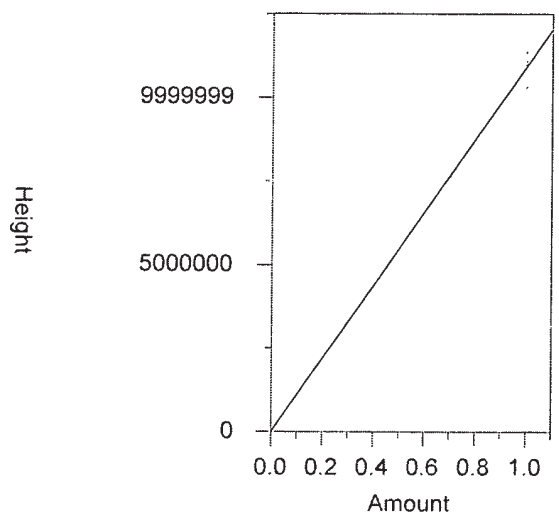
Single peak quantification by height

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

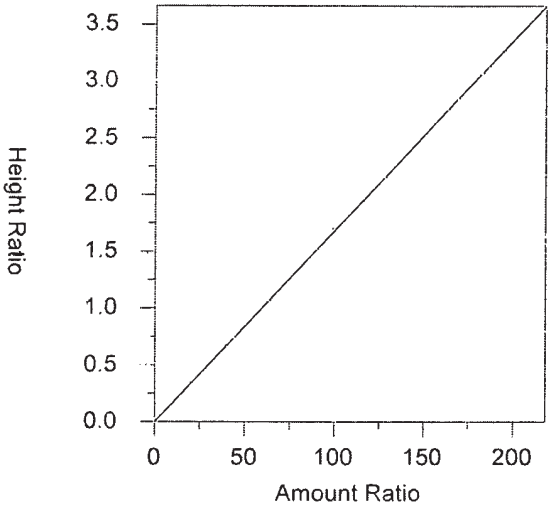
Single peak quantification by height

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

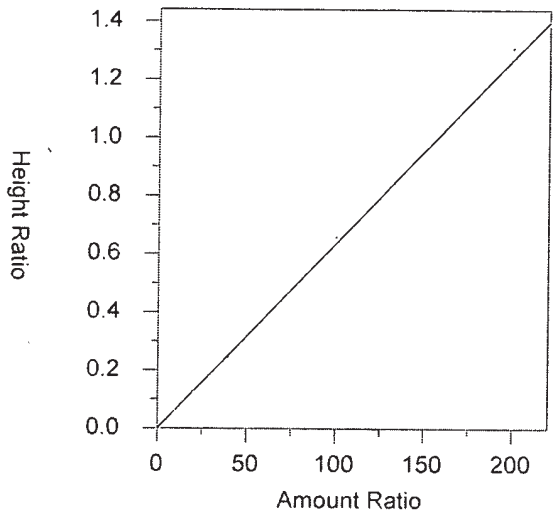
Single peak quantification by height

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

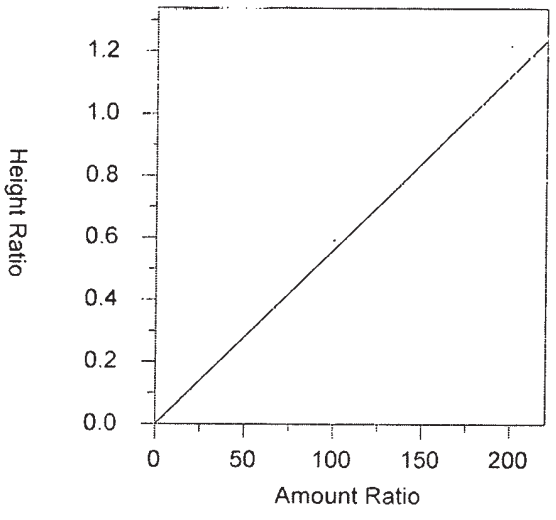
Single peak quantification by height

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

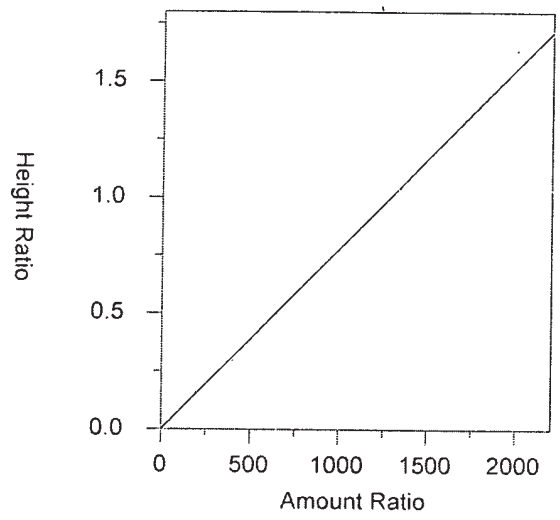
Single peak quantification by height

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

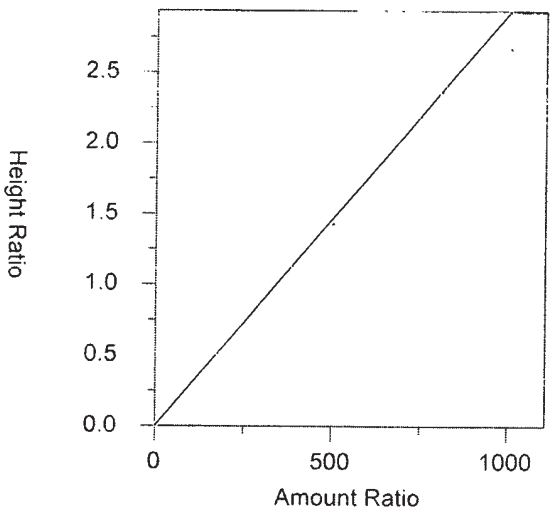
Single peak quantification by height

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

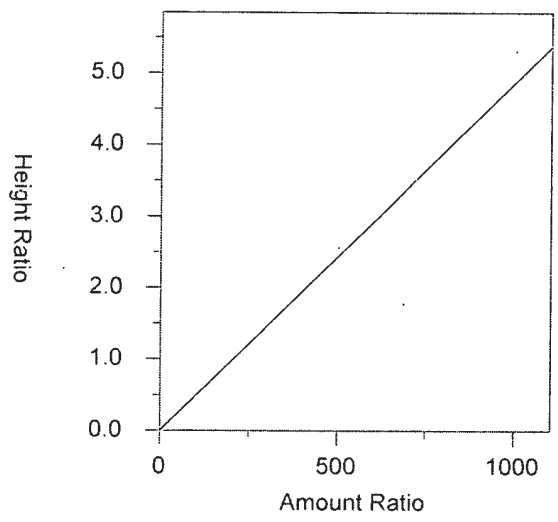
Single peak quantification by height

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

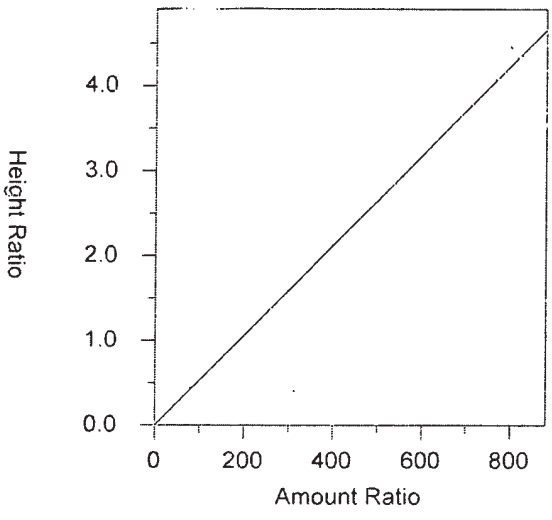
Y = 0.004867646 X + 0

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

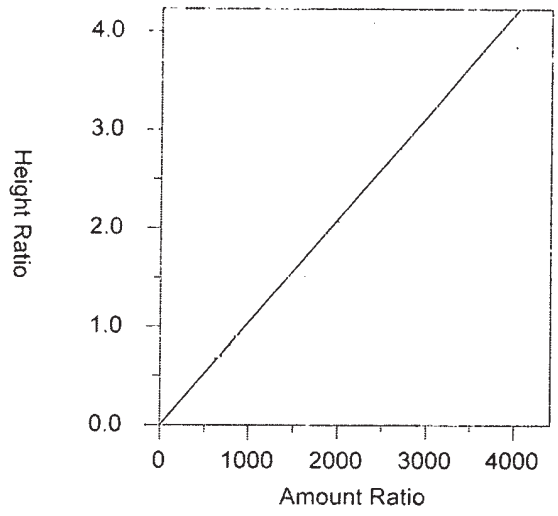
Creator:
Description:
Reason for change:

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

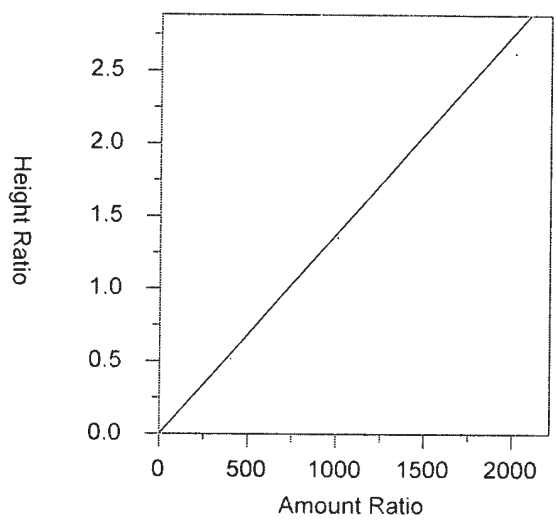
Single peak quantification by height

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

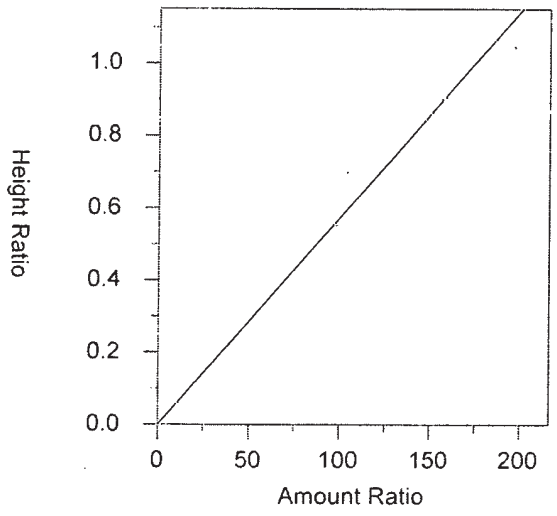
Single peak quantification by height

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

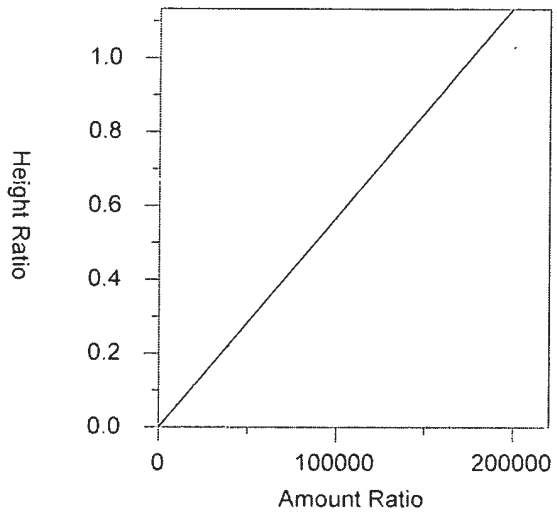
Single peak quantification by height

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

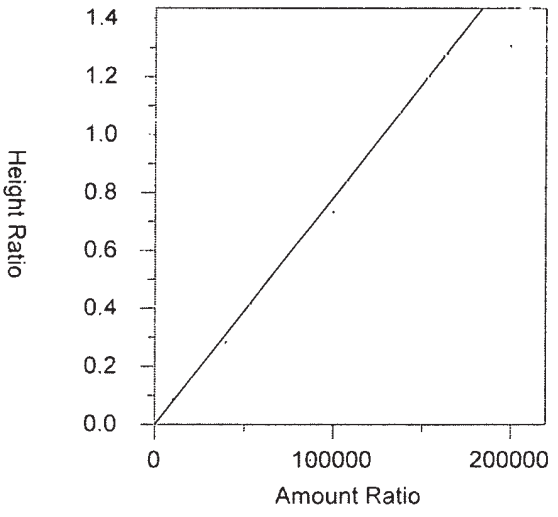
Single peak quantification by height

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

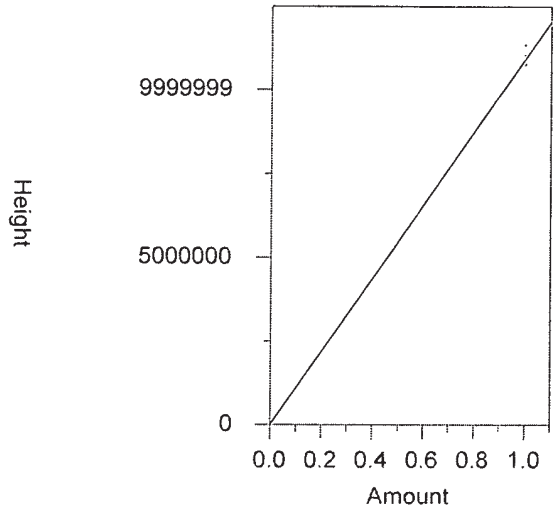
Single peak quantification by height

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

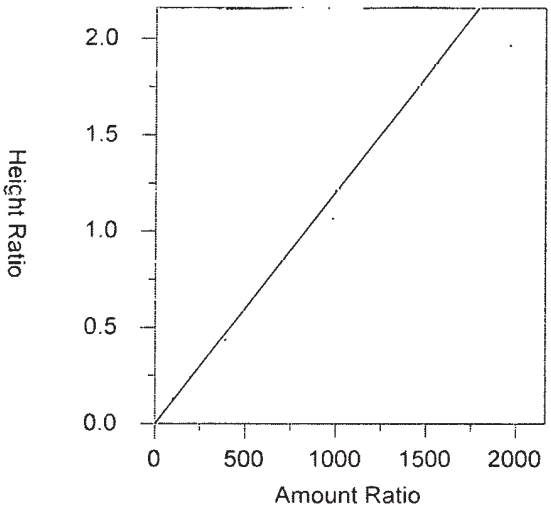
Single peak quantification by height

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

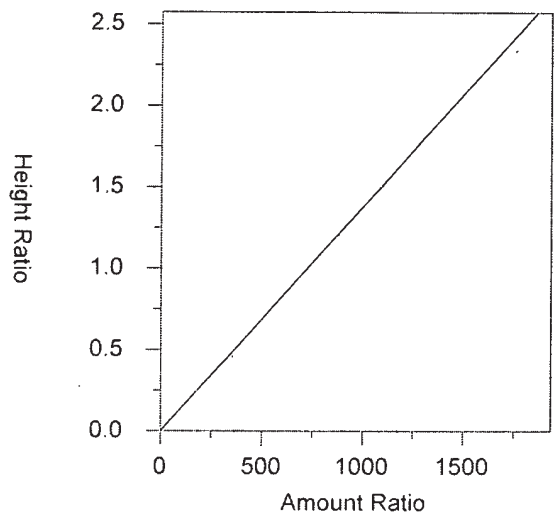
Single peak quantification by height

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

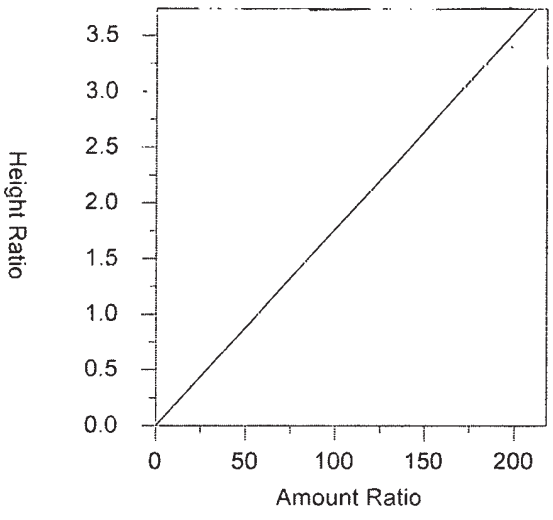
Single peak quantification by height

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

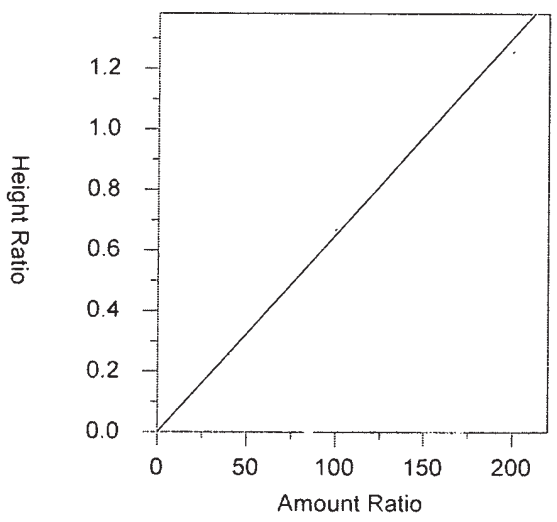
Single peak quantification by height

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

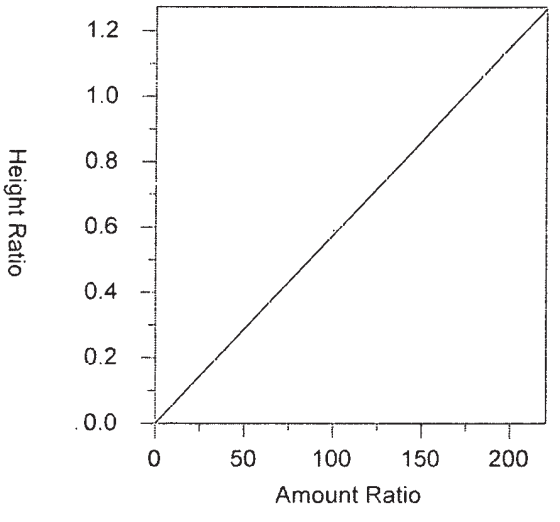
Single peak quantification by height

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

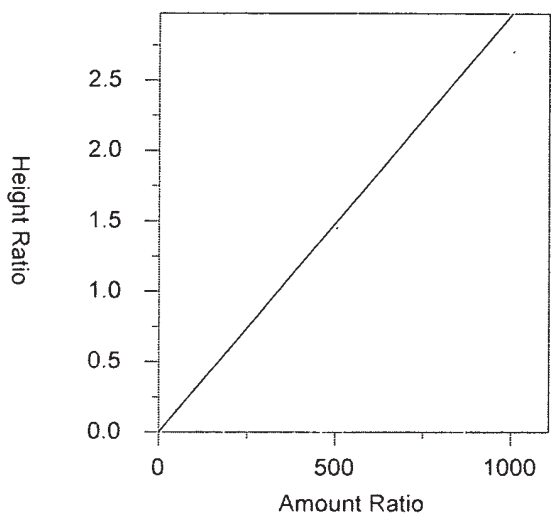
Single peak quantification by height

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

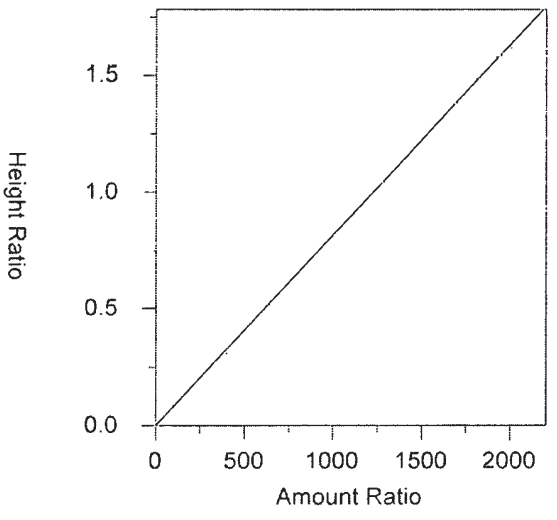
Single peak quantification by height

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

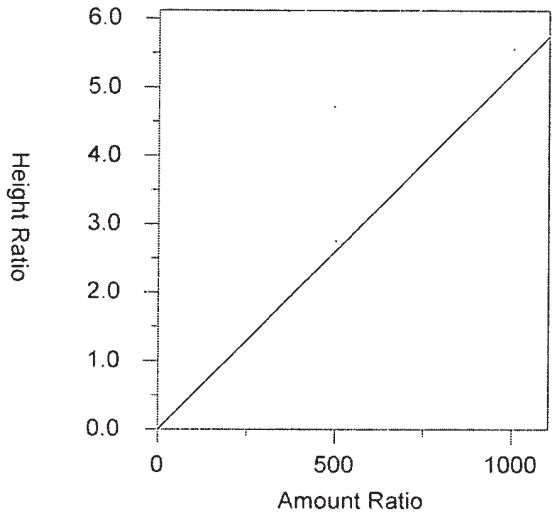
Single peak quantification by height

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

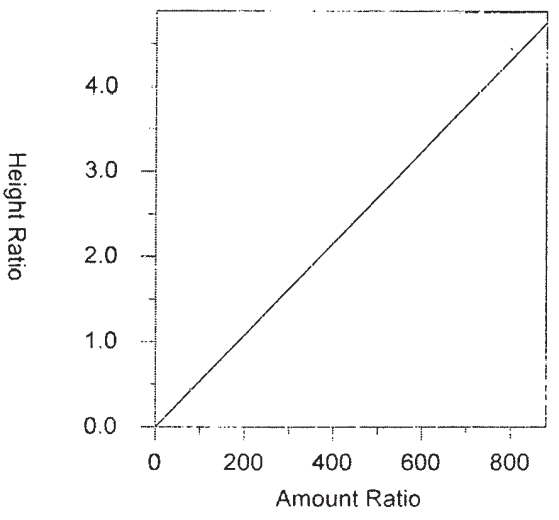
Single peak quantification by height

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: 11/07/18

GC Column (1) : ZB XLB ID: .32 (mm) Time Analyzed: 17:19

Lab File ID: 15HERB18304004.056.RAW Initial Calibration: 15HERB1830401

Lab Standard ID: HERB3VA 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	396.99	401.00	-1
2,4-DCAA	11.94	11.91	11.97	197.80	201.00	-2
Dicamba	12.07	12.04	12.10	19.96	19.66	2
Mcpp	12.48	12.45	12.51	22992.06	20016.00	15
Mcpa	12.86	12.83	12.89	22094.09	19958.00	11
2,4-DP	13.45	13.43	13.49	199.32	196.60	1
2,4-D	13.89	13.87	13.93	174.51	176.00	-1
PCP	15.09	15.06	15.12	19.99	19.82	1
2,4,5-TP	15.38	15.36	15.42	20.00	20.00	0
2,4,5-T	15.91	15.88	15.94	19.27	20.02	-4
2,4-DB	16.74	16.71	16.77	192.33	200.20	-4
Dinoseb	16.93	16.90	16.96	106.87	100.70	6
Picloram	17.89	17.86	17.92	97.65	99.96	-2
Hexachlorophene	26.13	26.10	26.16	78.79	80.00	-2

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Date Analyzed: 11/07/18

GC Column (2) : ZB 35 ID: .32 (mm) Time Analyzed: 17:19

Lab File ID: 15HERB18304004B.056.RAW Initial Calibration: 15HERB1830401B

Lab Standard ID: HERB3VA 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	393.08	401.00	-2
2,4-DCAA	12.51	12.49	12.55	190.55	201.00	-5
Dicamba	12.88	12.85	12.91	19.47	19.66	-1
Mcpp	12.93	12.90	12.96	19990.70	20016.00	0
Mcpa	13.46	13.43	13.49	20035.93	19958.00	0
2,4-DP	13.98	13.96	14.02	192.75	196.60	-2
2,4-D	14.61	14.58	14.64	164.75	176.00	-6
PCP	15.30	15.28	15.34	19.39	19.82	-2
2,4,5-TP	15.80	15.77	15.83	19.54	20.00	-2
2,4,5-T	16.50	16.47	16.53	19.20	20.02	-4
Dinoseb	16.93	16.91	16.97	103.85	100.70	3
2,4-DB	17.21	17.18	17.24	192.26	200.20	-4
Picloram	19.50	19.48	19.54	96.15	99.96	-4
Hexachlorophene	26.56	26.52	26.58	78.11	80.00	-2

Compounds 14

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: HIBLKX1824B HIBLKSJ ID: SJ **Batchnumber: 1830999999**
Sample Amount: 1000 Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 17:52:33
Instrument : CP15--19850A
Result file : 15HERB18304004.057.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 63% (34-142) Conc.: 2.538222

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.74	3.76	3240	0.003953
DCAA	11.91	11.96	11.97	3747086	2.538222
DBOFB	14.21	14.23	14.26	10959980	0.001000
2,4,5-T	15.88	15.92	15.94	7569	0.001230
DINOSEB	16.90	16.95	16.96	5390	0.001683
Picloram	17.86	17.90	17.92	20788	0.003897
Hexachlorophene	26.10	26.13	26.16	34476	0.005930

Analysis Report (B)

Injected on : Nov 07, 2018 17:52:33
Instrument : CP15--19850B
Result file : 15HERB18304004B.057.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 61% (34-142) Conc.: 2.440341

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.53	12.55	3658450	2.440341
MCPA	13.43	13.47	13.49	801	0.094103
DBOFB	13.69	13.72	13.75	10880620	0.001000
2,4-D	14.58	14.60	14.64	564	0.000376
PCP	15.28	15.32	15.34	2282	0.000119
DINOSEB	16.91	16.94	16.97	2872	0.000890
2,4-DB	17.18	17.23	17.24	4495	0.005060
Picloram	19.48	19.51	19.54	29284	0.005171
Hexachlorophene	26.52	26.56	26.58	30191	0.005145

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☐ DCAA	A	2.538222				3.93	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP			<0.5	<0.16			
☑ 2,4-D			<0.6	<0.25			
☐ DBOFB	A	0.001000				0.00	
☑ PCP			<0.07	<0.027			
☑ 2,4,5-TP			<0.05	<0.01			
☑ 2,4,5-T			<0.15	<0.065			
☑ 2,4-DB			<1.5	<0.63			
☑ DINOSEB	B	0.000890	<0.5	<0.18	<MDL	61.61 **	RU 13378 11/8/18
☑ Picloram	B	0.005171	<1	<0.36	<MDL	28.11	RU 13378 11/8/18
☑ Hexachlorophene	A	0.005930	<0.2	<0.18	<MDL	14.17	RU 13378 11/8/18

Units: ug/l

Reviewed by: [signature] Date: 11/12/18

Verified by: Valerie L. Tomaydo, Principal Specialist Date: NOV 13 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

GC Column (1) : ZB XLB ID: .32 (mm)

Lab File ID: 15HERB18304004.066.RAW

Lab Standard ID: HERB3VB

Calibration: 15HERB1830401

Date Analyzed: 11/07/18

Time Analyzed: 22:49

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	382.45	401.00	-5
2,4-DCAA	11.94	11.91	11.97	189.98	201.00	-5
Dicamba	12.07	12.04	12.10	19.48	19.66	-1
Mcpp	12.48	12.45	12.51	21804.20	20016.00	9
Mcpa	12.86	12.83	12.89	20920.92	19958.00	5
2,4-DP	13.45	13.43	13.49	194.82	196.60	-1
2,4-D	13.89	13.87	13.93	172.39	176.00	-2
PCP	15.09	15.06	15.12	20.09	19.82	1
2,4,5-TP	15.38	15.36	15.42	19.54	20.00	-2
2,4,5-T	15.91	15.88	15.94	19.47	20.02	-3
2,4-DB	16.74	16.71	16.77	192.79	200.20	-4
Dinoseb	16.93	16.90	16.96	105.09	100.70	4
Picloram	17.89	17.86	17.92	95.89	99.96	-4
Hexachlorophene	26.13	26.10	26.16	72.57	80.00	-9

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: 19850B Date Analyzed: 11/07/18

GC Column (2) : ZB 35 ID: .32 (mm) Time Analyzed: 22:49

Lab File ID: 15HERB18304004B.066.RAW Initial Calibration: 15HERB1830401B

Lab Standard ID: HERB3VB 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	378.41	401.00	-6
2,4-DCAA	12.52	12.49	12.55	189.41	201.00	-6
Dicamba	12.88	12.85	12.91	18.70	19.66	-5
Mcpp	12.93	12.90	12.96	19546.63	20016.00	-2
Mcpa	13.46	13.43	13.49	19159.50	19958.00	-4
2,4-DP	13.98	13.96	14.02	191.36	196.60	-3
2,4-D	14.61	14.58	14.64	162.19	176.00	-8
PCP	15.31	15.28	15.34	19.64	19.82	-1
2,4,5-TP	15.80	15.77	15.83	19.15	20.00	-4
2,4,5-T	16.50	16.47	16.53	18.14	20.02	-9
Dinoseb	16.94	16.91	16.97	99.96	100.70	-1
2,4-DB	17.21	17.18	17.24	185.98	200.20	-7
Picloram	19.51	19.48	19.54	91.73	99.96	-8
Hexachlorophene	26.56	26.52	26.58	80.09	80.00	0

Compounds 14

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: HIBLKX1824B HIBLKSK ID: SK **Batchnumber: 1830999999**
Sample Amount: 1000 Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 23:22:28
Instrument : CP15--19850A
Result file : 15HERB18304004.067.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET

%SSR(DCAA) : 65% (34-142) Conc.: 2.593354

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.75	3.76	3236	0.004011
DCAA	11.91	11.97	11.97	3769097	2.593354
DBOFB	14.21	14.23	14.26	10789990	0.001000
2,4,5-T	15.88	15.92	15.94	9475	0.001564
DINOSEB	16.90	16.94	16.96	4671	0.001482
Picloram	17.86	17.91	17.92	20108	0.003828
Hexachlorophene	26.10	26.13	26.16	14591	0.002549

Analysis Report (B)

Injected on : Nov 07, 2018 23:22:28
Instrument : CP15--19850B
Result file : 15HERB18304004B.067.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET

%SSR(DCAA) : 62% (34-142) Conc.: 2.479717

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.54	12.55	3692068	2.479717
MCPA	13.43	13.46	13.49	1269	0.150016
DBOFB	13.69	13.72	13.75	10806240	0.001000
2,4-DP	13.96	13.99	14.01	99443	0.076381
2,4-D	14.58	14.61	14.64	1328	0.000891
PCP	15.28	15.31	15.34	2061	0.000108
DINOSEB	16.91	16.94	16.97	3734	0.001165
2,4-DB	17.18	17.22	17.24	2580	0.002925
Picloram	19.48	19.52	19.54	24752	0.004401
Hexachlorophene	26.52	26.56	26.58	18725	0.003213

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☐ DCAA	A	2.593354				4.48	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP			<0.5	<0.16			
☑ 2,4-D			<0.6	<0.25			
☐ DBOFB	A	0.001000				0.00	
☑ PCP			<0.07	<0.027			
☑ 2,4,5-TP			<0.05	<0.01			
☑ 2,4,5-T			<0.15	<0.065			
☑ 2,4-DB			<1.5	<0.63			
☑ DINOSEB	A	0.001482	<0.5	<0.18	LMDL	23.91	RU 13378 11/8/18
☑ Picloram	B	0.004401	<1	<0.36	LMDL	13.91	RU 13378 11/8/18
☑ Hexachlorophene	B	0.003213	<0.2	<0.18	LMDL	23.04	RU 13378 11/8/18

Units: ug/l

Reviewed by: [signature] Verified by: Valerie L. Tomayko Principal Specialist

Date: 11/8/18 Date: NOV 13 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 15HERB18304004
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	15HERB18304004.001	CONDITIONER		11/6/18 8:10	1830999999	1.00
13378	15HERB18304004.002	CONDITIONER		11/6/18 8:43	1830999999	1.00
13378	15HERB18304004.003	CONDITIONER		11/6/18 9:16	1830999999	1.00
13378	15HERB18304004.004	CONDITIONER		11/6/18 9:49	1830999999	1.00
13378	15HERB18304004.005	HERB31824F	HERB3UV	11/6/18 10:22	1830999999	1.00
13378	15HERB18304004.006	HIBLKX1824B	HIBLKSE	11/6/18 10:55	1830999999	10.00
13378	15HERB18304004.007	BLANKA 10/29/18 RI	PBLK09302	11/6/18 14:36	183020009A	10.00
13378	15HERB18304004.008	9870992 RI F	02W03	11/6/18 15:09	183020009A	10.00
13378	15HERB18304004.009	LCSA 10/28/18 RI F	LCS34299	11/6/18 15:42	182990034A	10.00
13378	15HERB18304004.010	HERB31824F	HERB3UW	11/6/18 16:15	1830999999	1.00
13378	15HERB18304004.011	HIBLKX1824B	AA	11/6/18 16:48	1830999999	10.00
13378	15HERB18304004.012	BLANKA 11/5/18 F	PBLK33309	11/6/18 17:21	183090033A	10.00
13378	15HERB18304004.013	LCSA 11/5/18 F	LCS33309	11/6/18 17:54	183090033A	10.00
13378	15HERB18304004.014	9863853R F	GKP-4	11/6/18 18:27	183090033A	10.00
13378	15HERB18304004.015	9863854RMS F	GKP-4	11/6/18 19:01	183090033A	10.00
13378	15HERB18304004.016	9863855RMSD F	GKP-4	11/6/18 19:34	183090033A	10.00
13378	15HERB18304004.017	9863851R F	GKP-1	11/6/18 20:07	183090033A	10.00
13378	15HERB18304004.018	9863852R F	GKP-2	11/6/18 20:40	183090033A	10.00
13378	15HERB18304004.019	9863857R F	GKP-D	11/6/18 21:13	183090033A	10.00
13378	15HERB18304004.020	9863858R F	GKP-3	11/6/18 21:46	183090033A	10.00
13378	15HERB18304004.021	9881801 F	92E01	11/6/18 22:19	183090033A	10.00
13378	15HERB18304004.022	HERB31824F	HERB3UX	11/6/18 22:52	1830999999	1.00
13378	15HERB18304004.023	HIBLKX1824B	AA	11/6/18 23:25	1830999999	10.00
13378	15HERB18304004.024	9881804 F	92E04	11/6/18 23:58	183090033A	10.00
13378	15HERB18304004.025	9881807 F	92E07	11/7/18 0:31	183090033A	10.00
13378	15HERB18304004.026	BLANKA 11/1/18 RI F	PBLK15305	11/7/18 1:04	183050015A	10.00
13378	15HERB18304004.027	LCSA 11/1/18 RI F	LCS15305	11/7/18 1:37	183050015A	10.00
13378	15HERB18304004.028	9874412 F DF20	T1303	11/7/18 2:10	183050015A	200.00
13378	15HERB18304004.029	CONDITIONER		11/7/18 2:43	183050015A	200.00
13378	15HERB18304004.030	9874412MS F DF20	T1303MS	11/7/18 3:16	183050015A	200.00
13378	15HERB18304004.031	CONDITIONER		11/7/18 3:49	183050015A	200.00
13378	15HERB18304004.032	9874412MSD F DF2(	T1303MSD	11/7/18 4:22	183050015A	200.00
13378	15HERB18304004.033	CONDITIONER		11/7/18 4:55	183050015A	200.00
13378	15HERB18304004.034	HERB31824F	HERB3UY	11/7/18 5:28	1830999999	1.00
13378	15HERB18304004.035	HIBLKX1824B	HIBLKSH	11/7/18 6:01	1830999999	10.00
13378	15HERB18304004.036	9868565 RI F	3E671	11/7/18 6:34	183050015A	10.00
13378	15HERB18304004.037	9868566 RI F	3E531	11/7/18 7:07	183050015A	10.00
13378	15HERB18304004.038	9868567 RI F	3F422	11/7/18 7:40	183050015A	10.00
13378	15HERB18304004.039	9868568 F DF10	3E441	11/7/18 8:13	183050015A	100.00
13378	15HERB18304004.040	CONDITIONER		11/7/18 8:46	183050015A	100.00
13378	15HERB18304004.041	9868571 RI F DF10	E482-	11/7/18 9:19	183050015A	100.00
13378	15HERB18304004.042	CONDITIONER		11/7/18 9:52	183050015A	100.00
13378	15HERB18304004.043	9868571 F DF20	E482-	11/7/18 10:25	183050015A	200.00
13378	15HERB18304004.044	CONDITIONER		11/7/18 10:58	183050015A	200.00
13378	15HERB18304004.045	HERB31824F	HERB3UZ	11/7/18 11:31	1830999999	1.00
13378	15HERB18304004.046	HIBLKX1824B	HIBLKSI	11/7/18 12:04	1830999999	10.00
13378	15HERB18304004.047	9870637 RI F	E538-	11/7/18 12:37	183050015A	10.00
13378	15HERB18304004.048	9870639 F DF5	E575-	11/7/18 13:10	183050015A	50.00
13378	15HERB18304004.049	CONDITIONER		11/7/18 13:43	183050015A	50.00
13378	15HERB18304004.050	9870639 F DF10	E575-	11/7/18 14:16	183050015A	100.00
13378	15HERB18304004.051	9874411 F DF10	T1302	11/7/18 14:49	183050015A	100.00
13378	15HERB18304004.052	CONDITIONER		11/7/18 15:22	183050015A	100.00
13378	15HERB18304004.054	9874413 RI F DF5	T1304	11/7/18 16:13	183050015A	50.00
13378	15HERB18304004.055	CONDITIONER		11/7/18 16:46	183050015A	50.00
13378	15HERB18304004.056	HERB31824F	HERB3VA	11/7/18 17:19	1830999999	1.00
13378	15HERB18304004.057	HIBLKX1824B	HIBLKSJ	11/7/18 17:52	1830999999	10.00

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	15HERB18304004.058	9875251 RI F	36831	11/7/18 18:25	183050015A	10.00
13378	15HERB18304004.059	BLANKA 11/2/18 F	PBLK43305	11/7/18 18:58	183050043A	10.00
13378	15HERB18304004.060	LCSA 11/2/18 F	LCS43305	11/7/18 19:31	183050043A	10.00
13378	15HERB18304004.061	9876334 F	14T04	11/7/18 20:04	183050043A	10.00
13378	15HERB18304004.062	9876335MS F	14T04	11/7/18 20:37	183050043A	10.00
13378	15HERB18304004.063	9876336MSD F	14T04	11/7/18 21:10	183050043A	10.00
13378	15HERB18304004.064	9876332 F	14T02	11/7/18 21:43	183050043A	10.00
13378	15HERB18304004.065	9876342 F	14T06	11/7/18 22:16	183050043A	10.00
13378	15HERB18304004.066	HERB31824F	HERB3VB	11/7/18 22:49	1830999999	1.00
13378	15HERB18304004.067	HIBLKX1824B	HIBLKSK	11/7/18 23:22	1830999999	10.00
13378	15HERB18304004.068	BLANKA 10/28/18 RI	PBLK34299	11/7/18 23:55	182990034A	10.00
13378	15HERB18304004.069	9860859 F DF5	02375	11/8/18 0:28	182990034A	50.00
13378	15HERB18304004.070	CONDITIONER		11/8/18 1:01	182990034A	50.00
13378	15HERB18304004.071	HERB31824F	HERB3VG	11/8/18 1:34	1831099999	1.00
13378	15HERB18304004.072	HIBLKX1824B	HIBLKSP	11/8/18 2:07	1831099999	10.00
13378	15HERB18304004.073	9866461 F DF5	T0902	11/8/18 2:40	183020009A	50.00
13378	15HERB18304004.074	9866462 F DF5	T0903	11/8/18 3:13	183020009A	50.00
13378	15HERB18304004.075	9863858R F DF200	GKP-3	11/8/18 3:46	183090033A	2,000.00
13378	15HERB18304004.076	BLANKA 11/4/18 F	PBLK17306	11/8/18 4:19	183060017A	10.00
13378	15HERB18304004.077	LCSA 11/4/18 F	LCS17306	11/8/18 4:52	183060017A	10.00
13378	15HERB18304004.078	9879191 F DF100	LS754	11/8/18 5:25	183060017A	1,000.00
13378	15HERB18304004.079	CONDITIONER		11/8/18 5:58	183060017A	1,000.00
13378	15HERB18304004.080	9879191 F DF1000	LS754	11/8/18 6:31	183060017A	10,000.00
13378	15HERB18304004.081	CONDITIONER		11/8/18 7:04	183060017A	10,000.00
13378	15HERB18304004.082	HERB31824F	HERB3VH	11/8/18 7:37	1831099999	1.00
13378	15HERB18304004.083	HIBLKX1824B	HIBLKSQ	11/8/18 8:10	1831099999	10.00
13378	15HERB18304004.084	9879191 F DF2000	LS754	11/8/18 8:43	183060017A	20,000.00
13378	15HERB18304004.085	CONDITIONER		11/8/18 9:16	183060017A	20,000.00
13378	15HERB18304004.086	9879191 F DF5000	LS754	11/8/18 9:49	183060017A	50,000.00
13378	15HERB18304004.087	CONDITIONER		11/8/18 10:22	183060017A	50,000.00
13378	15HERB18304004.088	BLANKA 11/4/18 F	PBLK13306	11/8/18 10:55	183060013A	10.00
13378	15HERB18304004.089	LCSA 11/4/18 F	LCS13306	11/8/18 11:28	183060013A	10.00
13378	15HERB18304004.090	9879191 F DF100	LS754	11/8/18 12:01	183060013A	1,000.00
13378	15HERB18304004.091	CONDITIONER		11/8/18 12:34	183060013A	1,000.00
13378	15HERB18304004.092	9879191 F DF1000	LS754	11/8/18 13:07	183060013A	10,000.00
13378	15HERB18304004.093	CONDITIONER		11/8/18 13:40	183060013A	10,000.00
13378	15HERB18304004.094	HERB31824F	HERB3VI	11/8/18 14:13	1831099999	1.00
13378	15HERB18304004.095	HIBLKX1824B	HIBLKSR	11/8/18 14:46	1831099999	10.00
13378	15HERB18304004.096	9879191 F DF2000	LS754	11/8/18 15:24	183060013A	20,000.00
13378	15HERB18304004.097	CONDITIONER		11/8/18 15:57	183060013A	20,000.00
13378	15HERB18304004.098	9879191 F DF5000	LS754	11/8/18 16:30	183060013A	50,000.00
13378	15HERB18304004.099	CONDITIONER		11/8/18 17:03	183060013A	50,000.00
13378	15HERB18304004.100	BLANKA 11/4/18 F	PBLK12306	11/8/18 17:36	183060012A	10.00
13378	15HERB18304004.101	LCSA 11/4/18 F	LCS12306	11/8/18 18:09	183060012A	10.00
13378	15HERB18304004.102	9879192 F	L7551	11/8/18 18:42	183060012A	10.00
13378	15HERB18304004.103	9879193MS F	L7551	11/8/18 19:15	183060012A	10.00
13378	15HERB18304004.104	9879194MSD F	L7551	11/8/18 19:48	183060012A	10.00
13378	15HERB18304004.105	9879196 F	L7552	11/8/18 20:21	183060012A	10.00
13378	15HERB18304004.106	HERB31824F	HERB3VJ	11/8/18 20:54	1831099999	1.00
13378	15HERB18304004.107	HIBLKX1824B	HIBLKSS	11/8/18 21:27	1831099999	10.00
13378	15HERB18304004.108	BLANKA 11/4/18	PBLK18306	11/8/18 22:00	183060018A	10.00
13378	15HERB18304004.109	LCSA 11/4/18	LCS18306	11/8/18 22:33	183060018A	10.00
13378	15HERB18304004.110	9879192	L7551	11/8/18 23:06	183060018A	10.00
13378	15HERB18304004.111	9879193MS	L7551	11/8/18 23:39	183060018A	10.00
13378	15HERB18304004.112	9879194MSD	L7551	11/9/18 0:12	183060018A	10.00
13378	15HERB18304004.113	9879196	L7552	11/9/18 0:45	183060018A	10.00
13378	15HERB18304004.114	HERB31824F	HERB3VK	11/9/18 1:18	1831099999	1.00
13378	15HERB18304004.115	HIBLKX1824B	HIBLKST	11/9/18 1:51	1831099999	10.00
13378	15HERB18304004.116	9870252 F DF50	T1103	11/9/18 2:24	183030010A	500.00
13378	15HERB18304004.117	9870253 F DF50	T1104	11/9/18 2:57	183030010A	500.00
13378	15HERB18304004.118	9870254 F DF50	T1105	11/9/18 3:30	183030010A	500.00
13378	15HERB18304004.119	9872060 F DF100	12T02	11/9/18 4:03	183030010A	1,000.00

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
13378	15HERB18304004.120	9872061 F DF100	12T03	11/9/18 4:36	183030010A	1,000.00
13378	15HERB18304004.121	9872062 F DF100	12T04	11/9/18 5:09	183030010A	1,000.00
13378	15HERB18304004.122	9872064 F DF100	12T06	11/9/18 5:42	183030010A	1,000.00
13378	15HERB18304004.123	HERB31824F	HERB3VT	11/9/18 6:16	1831199999	1.00
13378	15HERB18304004.124	HIBLKX1824B	HIBLKTC	11/9/18 6:49	1831199999	10.00
13378	15HERB18304004.125	BLANKA 11/6/18 F	PBLK05310	11/9/18 7:22	183100005A	10.00
13378	15HERB18304004.126	LCSA 11/6/18 F	LCS05310	11/9/18 7:55	183100005A	10.00
13378	15HERB18304004.127	LCSDA 11/6/18 F	LCSD05310	11/9/18 8:28	183100005A	10.00
13378	15HERB18304004.128	9881309 F	15T-2	11/9/18 9:01	183100005A	10.00
13378	15HERB18304004.129	9881310 F	15T-3	11/9/18 9:34	183100005A	10.00
13378	15HERB18304004.130	9881313 F	15T-6	11/9/18 10:07	183100005A	10.00
13378	15HERB18304004.131	9882870 F	PR-22	11/9/18 10:40	183100005A	10.00
13378	15HERB18304004.132	9882871 F	PR-24	11/9/18 11:13	183100005A	10.00
13378	15HERB18304004.133	9882872 F	PR-25	11/9/18 11:46	183100005A	10.00
13378	15HERB18304004.134	9882873 F	PR-26	11/9/18 12:19	183100005A	10.00
13378	15HERB18304004.135	HERB31824F	HERB3VU	11/9/18 12:52	1831199999	1.00
13378	15HERB18304004.136	HIBLKX1824B	HIBLKTD	11/9/18 13:25	1831199999	10.00
13378	15HERB18304004.137	9882874 F	PR-13	11/9/18 13:58	183100005A	10.00
13378	15HERB18304004.138	9882875 F	PR-04	11/9/18 14:31	183100005A	10.00
13378	15HERB18304004.139	9882876 F	PRFB4	11/9/18 15:04	183100005A	10.00
13378	15HERB18304004.140	HERB31824F	HERB3VV	11/9/18 15:37	1831199999	1.00
13378	15HERB18304004.141	HIBLKX1824B	HIBLKTE	11/9/18 16:11	1831199999	10.00

Sample Data

Herbicides

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: 9876332 F 14T02 Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1060 mL Total Volume: 10 ml Analyst: 120 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 21:43:28
Instrument 19850A
Result file 15HERB18304004.064.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 80% (32 - 138) Conc: 1.508147

Analysis Report (B)

Injected on Nov 07, 2018 21:43:28
Instrument 19850B
Result file 15HERB18304004B.064.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 71% (32 - 138) Conc: 1.341727

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	728211	1.086657
2,4-DCAA	11.91	11.95	11.97	1820580	1.508147
MCPP	12.45	12.46	12.51	32562	0
MCPA	12.83	12.88	12.89	30183	0
2,4-DP (Dichloroprop)	13.43	13.43	13.49	16445	0.016509
2,4-D	13.87	13.88	13.93	51567	0.043303
Pentachlorophenol	15.06	15.09	15.12	158426	0.010521
2,4,5-TP	15.36	15.39	15.42	71570	0.012555
2,4-DB	16.71	16.75	16.77	111421	0.159613
Dinoseb	16.90	16.92	16.96	136020	0.051951
Picloram	17.86	17.91	17.92	39324	0.009014

Compound	Min	RT	Max	Height	Amount
Dalapon	3.83	3.87	3.89	61943	0.059092
2,4-DCAA	12.49	12.52	12.55	1852944	1.341727
Dicamba	12.85	12.86	12.91	19115	0.003331
MCPP	12.90	12.91	12.96	30170	5.288969
MCPA	13.43	13.48	13.49	36224	4.6174
2,4-DP (Dichloroprop)	13.96	13.96	14.01	47947	0.039705
2,4-D	14.58	14.61	14.64	10382	0.007505
Pentachlorophenol	15.28	15.30	15.34	189236	0.010689
2,4,5-TP	15.77	15.81	15.83	63080	0.009655
2,4,5-T	16.47	16.47	16.53	104949	0.018182
2,4-DB	17.18	17.22	17.24	141525	0.172953

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<1.6981	<3.3962	<3.7736	D2		
☐	2,4-DCAA	A	1.508147	0.0943	0.1887	0.1887		11.68	
☑	2,4-DCAA-D1	A	1.508147	0.0943	0.1887	0.1887			
☑	2,4-DCAA-D2	B	1.341727	0.0943	0.1887	0.1887			
☑	Dicamba			<0.0755	<0.1509	<0.283	D1		
☑	MCPP			<47.1698	<94.3396	<188.6792	D1		
☑	MCPA			<47.1698	<94.3396	<188.6792	D1		
☑	2,4-DP (Dichloroprop)			<0.1509	<0.3019	<0.4717	D1		
☑	2,4-D			<0.2358	<0.4717	<0.566	D2		
☐	Pentachlorophenol			<0.0255	<0.0566	<0.066			
☑	2,4,5-TP	A	0.012555	0.0094	<0.0283	<0.0472	JD1	26.11	
☑	2,4,5-T			<0.0613	<0.1226	<0.1415	D1		
☑	2,4-DB			<0.5943	<1.2264	<1.4151	D1		
☑	Dinoseb			<0.1698	<0.3774	<0.4717	D2		
☐	Picloram			<0.3396	<0.7547	<0.9434			
☐	Hexachlorophene					<0.1887			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:33

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9876332** F 14T02 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1060 mL Total Volume: 10 ml Analyst: 13378 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 21:43:28
Instrument : CP15--19850A
Result file : 15HERB18304004.064.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 80% (32-138) Conc.: 1.508147

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	728211	1.086657
DCAA	11.91	11.95	11.97	1820580	1.508147
MCPP	12.45	12.46	12.51	32562	-113.577500
MCPA	12.83	12.88	12.89	30183	-122.561100
2,4-DP	13.43	13.43	13.49	16445	0.016509
2,4-D	13.87	13.88	13.93	51567	0.043303
DBOFB	14.21	14.22	14.26	8454852	0.000943
PCP	15.06	15.09	15.12	158426	0.010521
2,4,5-TP	15.36	15.39	15.42	71570	0.012555
2,4-DB	16.71	16.75	16.77	111421	0.159613
DINOSEB	16.90	16.92	16.96	136020	0.051951
Picloram	17.86	17.91	17.92	39324	0.009014

Analysis Report (B)

Injected on : Nov 07, 2018 21:43:28
Instrument : CP15--19850B
Result file : 15HERB18304004B.064.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 71% (32-138) Conc.: 1.341727

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.87	3.89	61943	0.059092
DCAA	12.49	12.52	12.55	1852944	1.341727
DICAMBA	12.85	12.86	12.91	19115	0.003331
MCPP	12.90	12.91	12.96	30170	5.288969
MCPA	13.43	13.48	13.49	36224	4.617400
DBOFB	13.69	13.70	13.75	9455822	0.000943
2,4-DP	13.96	13.96	14.01	47947	0.039705
2,4-D	14.58	14.61	14.64	10382	0.007505
PCP	15.28	15.30	15.34	189236	0.010689
2,4,5-TP	15.77	15.81	15.83	63080	0.009655
2,4,5-T	16.47	16.47	16.53	104949	0.018182
2,4-DB	17.18	17.22	17.24	141525	0.172953

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon			<3.7736	<1.6981			
☐ DCAA	A	1.508147	0.1887	0.0943		11.68	
☑ DICAMBA			<0.283	<0.0755			
☑ MCPP			<188.6792	<47.1698			
☑ MCPA			<188.6792	<47.1698			
☑ 2,4-DP			<0.4717	<0.1509			
☑ 2,4-D			<0.566	<0.2358			
☐ DBOFB	A	0.000943				0.00	
☐ PCP			<0.066	<0.0255			
☑ 2,4,5-TP	A	0.012555	<0.0472	0.0094	J	26.11	
☑ 2,4,5-T			<0.1415	<0.0613			
☑ 2,4-DB			<1.4151	<0.5943			
☑ DINOSEB			<0.4717	<0.1698			
☐ Picloram			<0.9434	<0.3396			
☐ Hexachlorophene			<0.1887				

Units: ug/l

Reviewed by: [signature] Verified by: Valerie L. Tomayko Principal Specialist

Date: 11/16/ Date: NOV 16 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

Printed on: 11/8/2018 08:11:29

9876332 F AB14T02 T 183050043A 10407 SW-846 8015A

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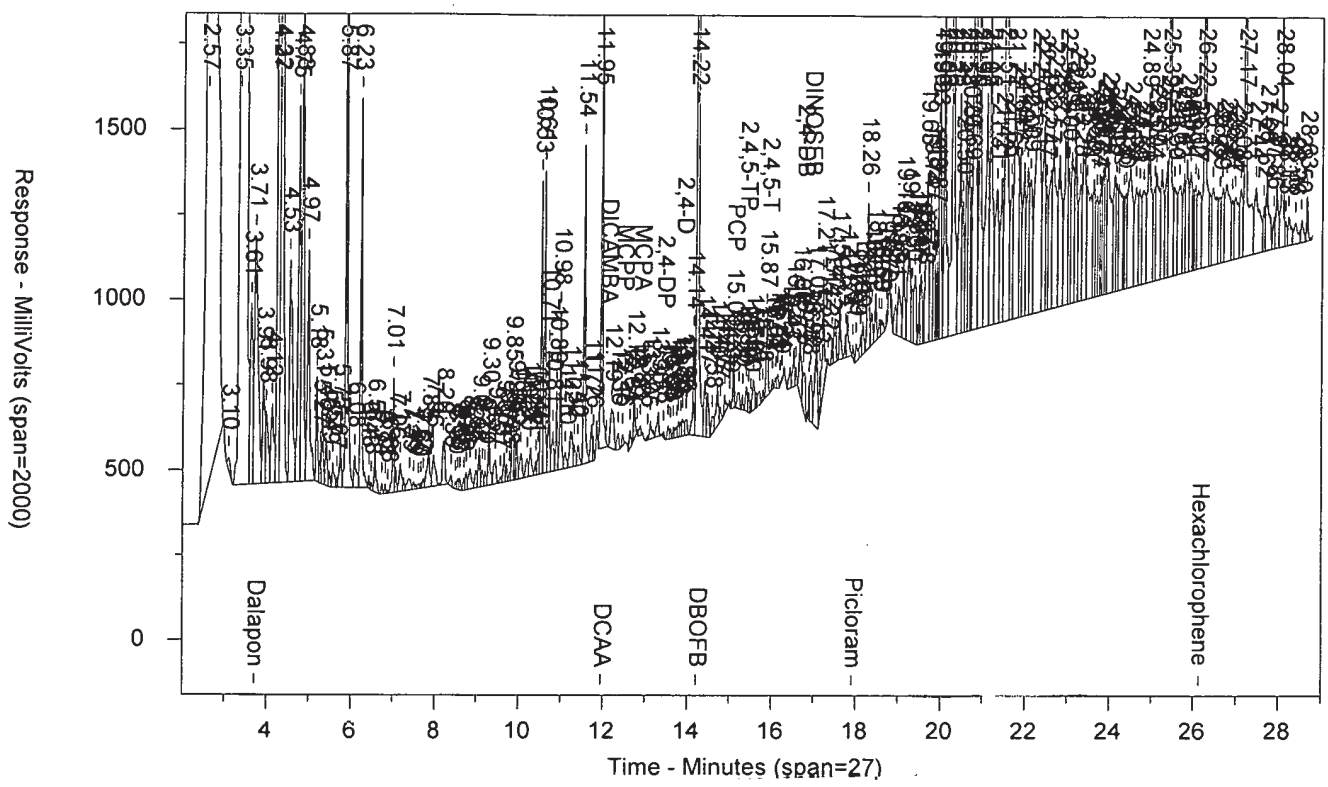

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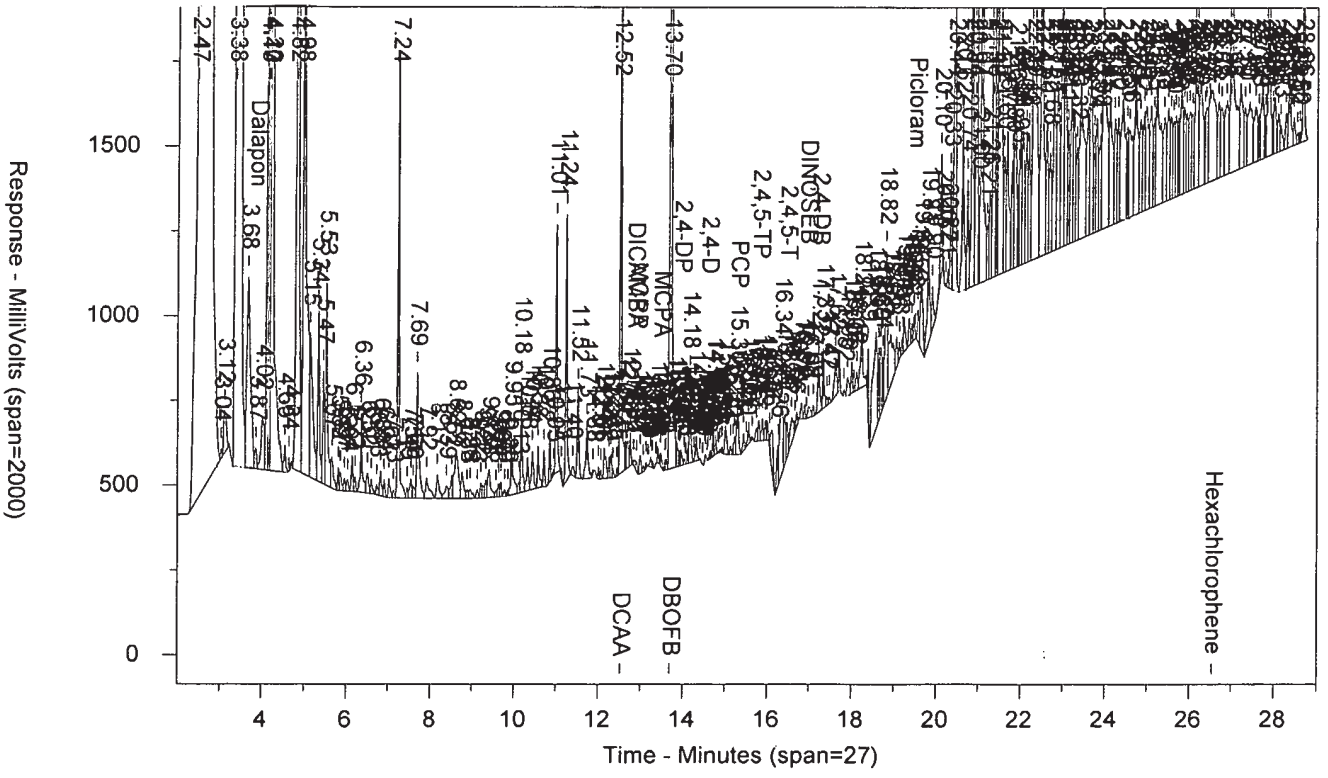

LANCASTER LABORATORIES

Sample Number: 9876332 F AB14T02 T 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 9:43:28 PM Sample Weight: 1060
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
3.713	728211	1.087	Dalapon	3.866	61943	.059	Dalapon
11.949	1820580	1.508	DCAA	12.522	1852944	1.342	DCAA
12.464	32562	-113.578	MCPP	12.909	30170	5.289	MCPP
	0		DICAMBA	12.856	19115	.003	DICAMBA
12.876	30183	-122.561	MCPA	13.476	36224	4.617	MCPA
13.429	16445	.017	2,4-DP	13.959	47947	.04	2,4-DP
14.219	8454852	.001	DBOFB	13.7	9455822	.001	DBOFB
13.881	51567	.043	2,4-D	14.607	10382	.008	2,4-D
15.085	158426	.011	PCP	15.298	189236	.011	PCP
15.392	71570	.013	2,4,5-TP	15.808	63080	.01	2,4,5-TP
	0		2,4,5-T	16.474	104949	.018	2,4,5-T
16.748	111421	.16	2,4-DB	17.225	141525	.173	2,4-DB
16.915	136020	.052	DINOSEB		0		DINOSEB
17.91	39324	.009	Picloram		0		Picloram

Files:
Area File: 15herb18304004.064.RAW
Area File: 15herb18304004B.064.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: 11/7/2018 10:12:15 PM
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9876332 F AB14T02 T 183050043A 10407 SW-846 8015A

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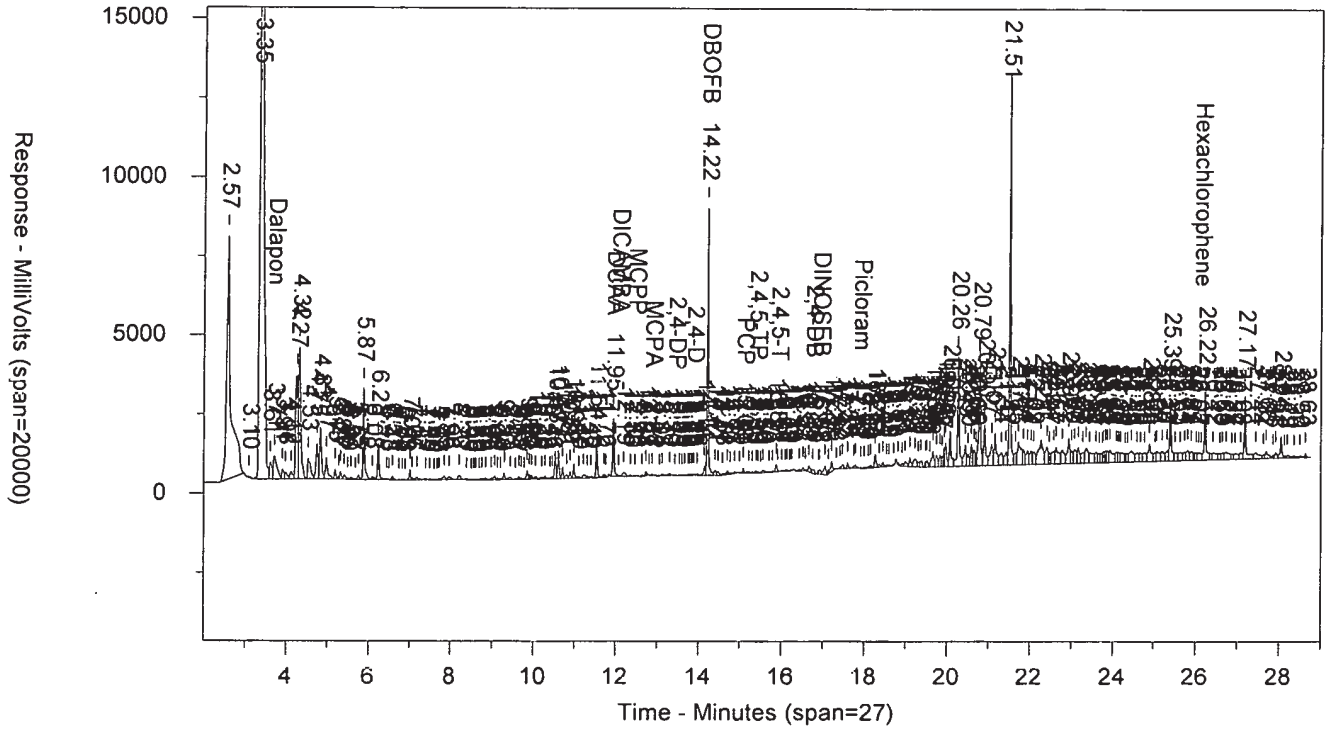

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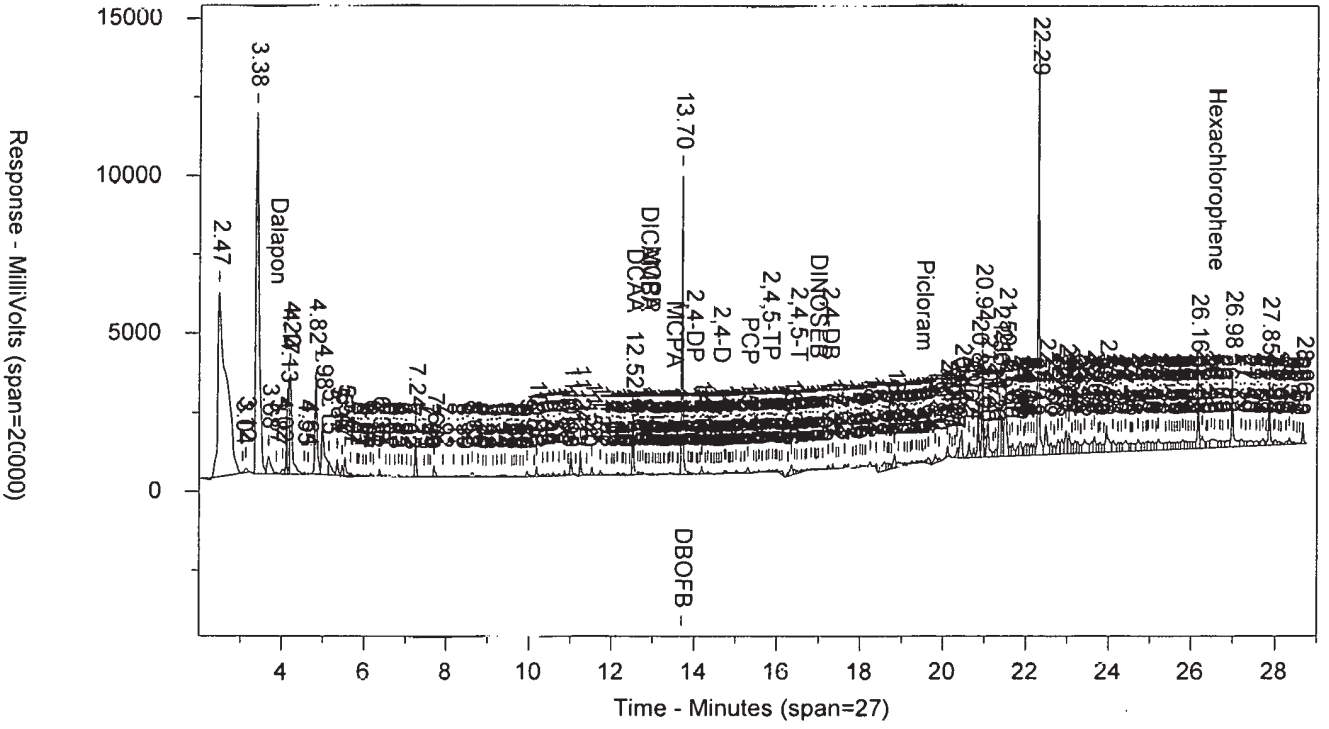

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Data Summary

Sample Name: 9876334 F 14T04 Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1056 mL Total Volume: 10 ml Analyst: 120 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 20:04:35
Instrument 19850A
Result file 15HERB18304004.061.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 71% (32 - 138) Conc: 1.344579

Analysis Report (B)

Injected on Nov 07, 2018 20:04:35
Instrument 19850B
Result file 15HERB18304004B.061.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 61% (32 - 138) Conc: 1.146206

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	738560	0.947167
2,4-DCAA	11.91	11.95	11.97	1888631	1.344579
MCPP	12.45	12.46	12.51	100410	0
MCPA	12.83	12.85	12.89	23668	0
Pentachlorophenol	15.06	15.10	15.12	21847	0.001247
2,4,5-TP	15.36	15.40	15.42	35030	0.005281
2,4-DB	16.71	16.76	16.77	55694	0.068567

Compound	Min	RT	Max	Height	Amount
2,4-DCAA	12.49	12.52	12.55	1815406	1.146206
Dicamba	12.85	12.86	12.91	26582	0.004039
2,4-DP (Dichloroprop)	13.96	13.97	14.01	92291	0.066639
2,4-D	14.58	14.60	14.64	1575	0.000993
Pentachlorophenol	15.28	15.29	15.34	192240	0.009468
2,4,5-TP	15.77	15.81	15.83	108439	0.014472
2,4-DB	17.18	17.23	17.24	138132	0.147189
Picloram	19.48	19.50	19.54	40681	0.006799

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑	Dalapon			<1.7045	<3.4091	<3.7879	D2		
☐	2,4-DCAA	A	1.344579	0.0947	0.1894	0.1894		15.93	
☑	2,4-DCAA-D1	A	1.344579	0.0947	0.1894	0.1894			
☑	2,4-DCAA-D2	B	1.146206	0.0947	0.1894	0.1894			
☑	Dicamba			<0.0758	<0.1515	<0.2841	D1		
☑	MCPP			<47.3485	<94.697	<189.3939	D1		
☑	MCPA			<47.3485	<94.697	<189.3939	D1		
☑	2,4-DP (Dichloroprop)			<0.1515	<0.303	<0.4735	D1		
☑	2,4-D			<0.2367	<0.4735	<0.5682	D1		
☐	Pentachlorophenol			<0.0256	<0.0568	<0.0663			
☑	2,4,5-TP			<0.0095	<0.0284	<0.0473	D1		
☑	2,4,5-T			<0.0616	<0.1231	<0.142	D1		
☑	2,4-DB			<0.5966	<1.2311	<1.4205	D1		
☑	Dinoseb			<0.1705	<0.3788	<0.4735	D1		
☐	Picloram			<0.3409	<0.7576	<0.947			
☐	Hexachlorophene					<0.1894			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:39

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9876334** F 14T04 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1056 mL Total Volume: 10 ml Analyst: 13378 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 20:04:35
Instrument : CP15--19850A
Result file : 15HERB18304004.061.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 71% (32-138) Conc.: 1.344579

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	738560	0.947167
DCAA	11.91	11.95	11.97	1888631	1.344579
MCPP	12.45	12.46	12.51	100410	-101.638500
MCPA	12.83	12.85	12.89	23668	-124.941300
DBOFB	14.21	14.22	14.26	9875125	0.000947
PCP	15.06	15.10	15.12	21847	0.001247
2,4,5-TP	15.36	15.40	15.42	35030	0.005281
2,4-DB	16.71	16.76	16.77	55694	0.068567

Analysis Report (B)

Injected on : Nov 07, 2018 20:04:35
Instrument : CP15--19850B
Result file : 15HERB18304004B.061.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 61% (32-138) Conc.: 1.146206

Peak name	Min	R.T.	Max	Height	Amount
DCAA	12.49	12.52	12.55	1815406	1.146206
DICAMBA	12.85	12.86	12.91	26582	0.004039
DBOFB	13.69	13.70	13.75	10885640	0.000947
2,4-DP	13.96	13.97	14.01	92291	0.066639
2,4-D	14.58	14.60	14.64	1575	0.000993
PCP	15.28	15.29	15.34	192240	0.009468
2,4,5-TP	15.77	15.81	15.83	108439	0.014472
2,4-DB	17.18	17.23	17.24	138132	0.147189
Picloram	19.48	19.50	19.54	40681	0.006799

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon			<3.7879	<1.7045			
☐ DCAA	A	1.344579	0.1894	0.0947		15.93	
☑ DICAMBA			<0.2841	<0.0758			
☑ MCPP			<189.3939	<47.3485			
☑ MCPA			<189.3939	<47.3485			
☑ 2,4-DP			<0.4735	<0.1515			
☑ 2,4-D			<0.5682	<0.2367			
☐ DBOFB	A	0.000947				0.00	
☐ PCP			<0.0663	<0.0256			
☑ 2,4,5-TP			<0.0473	<0.0095			
☑ 2,4,5-T			<0.142	<0.0616			
☑ 2,4-DB			<1.4205	<0.5966			
☑ DINOSEB			<0.4735	<0.1705			
☐ Picloram			<0.947	<0.3409			
☐ Hexachlorophene			<0.1894				

Units: ug/l

Reviewed by: _____ Verified by: Valerie L. Tomayko, Principal Specialist
Date: 11/16/18 Date: NOV 16 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

9876334 F AB14T04 T 183050043A 10407 SW-846 8015A

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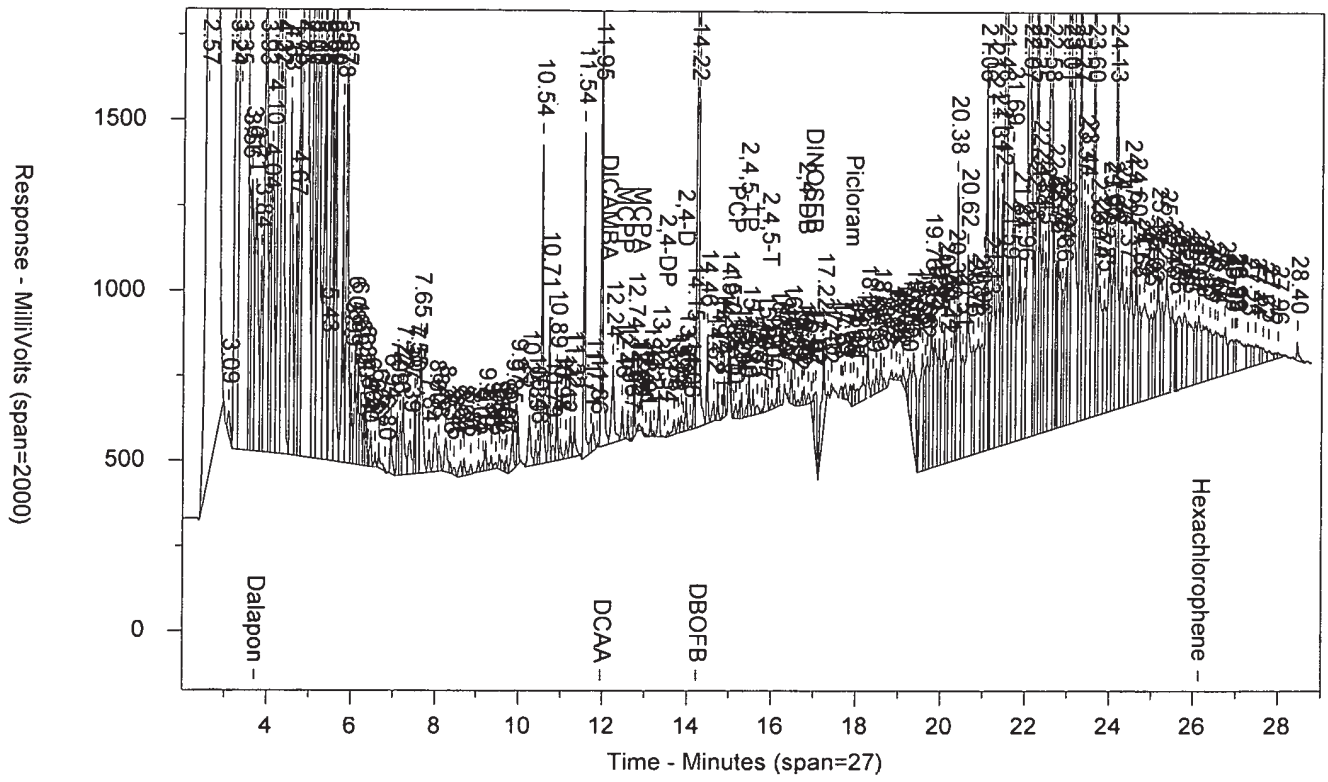

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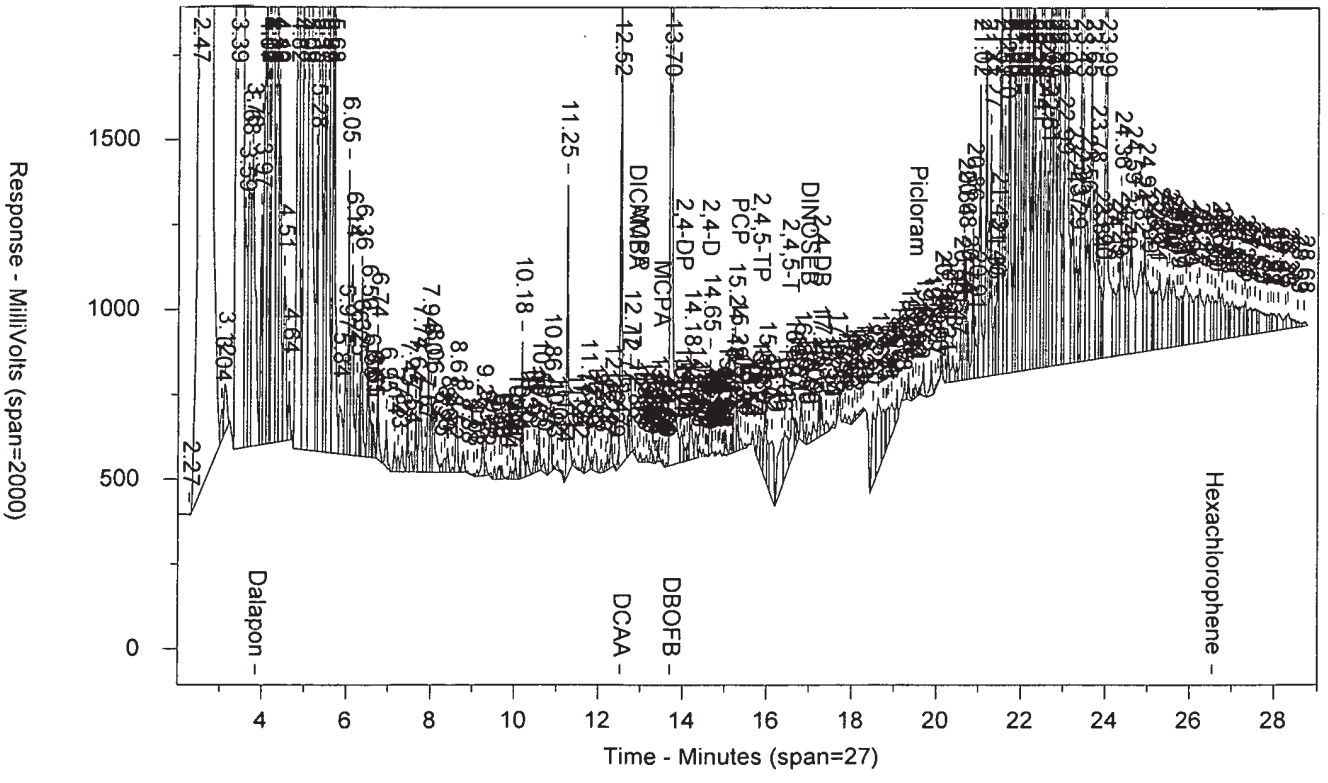

LANCASTER LABORATORIES

Sample Number: 9876334 F AB14T04 T 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 8:04:35 PM Sample Weight: 1056
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
3.71	738560	.947	Dalapon		0		Dalapon
11.954	1888631	1.345	DCAA	12.525	1815406	1.146	DCAA
12.457	100410	-101.639	MCPP		0		MCPP
12.855	23668	-124.941	MCPA		0		MCPA
	0		DICAMBA	12.863	26582	.004	DICAMBA
14.223	9875125	.001	DBOFB	13.705	10885640	.001	DBOFB
	0		2,4-DP	13.97	92291	.067	2,4-DP
	0		2,4-D	14.603	1575	.001	2,4-D
15.099	21847	.001	PCP	15.294	192240	.009	PCP
15.403	35030	.005	2,4,5-TP	15.81	108439	.014	2,4,5-TP
16.757	55694	.069	2,4-DB	17.233	138132	.147	2,4-DB
	0		Picloram	19.501	40681	.007	Picloram

Files:
Area File: 15herb18304004.061.RAW
Area File: 15herb18304004B.061.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: 11/7/2018 8:33:22 PM
File Reported On: 11/8/2018 at 8:00:35 AM

9876334 F AB14T04 T 183050043A 10407 SW-846 8015A

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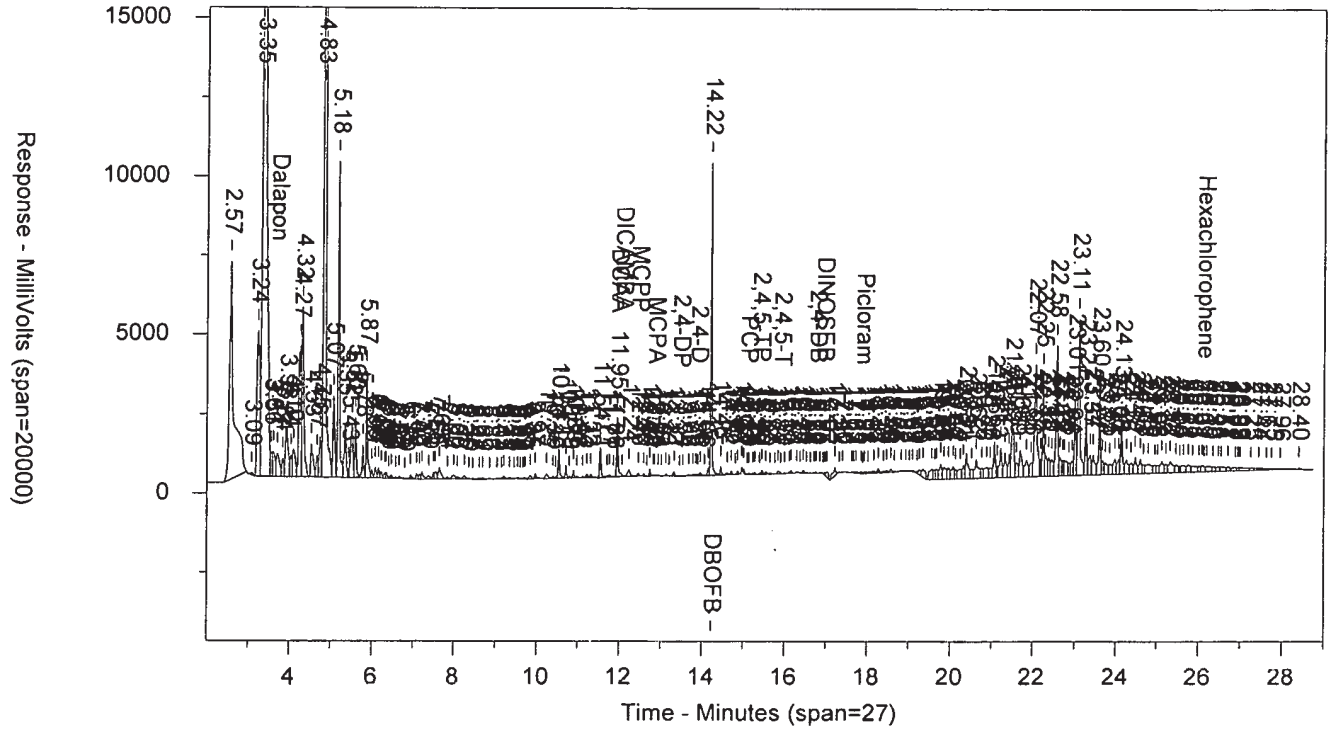

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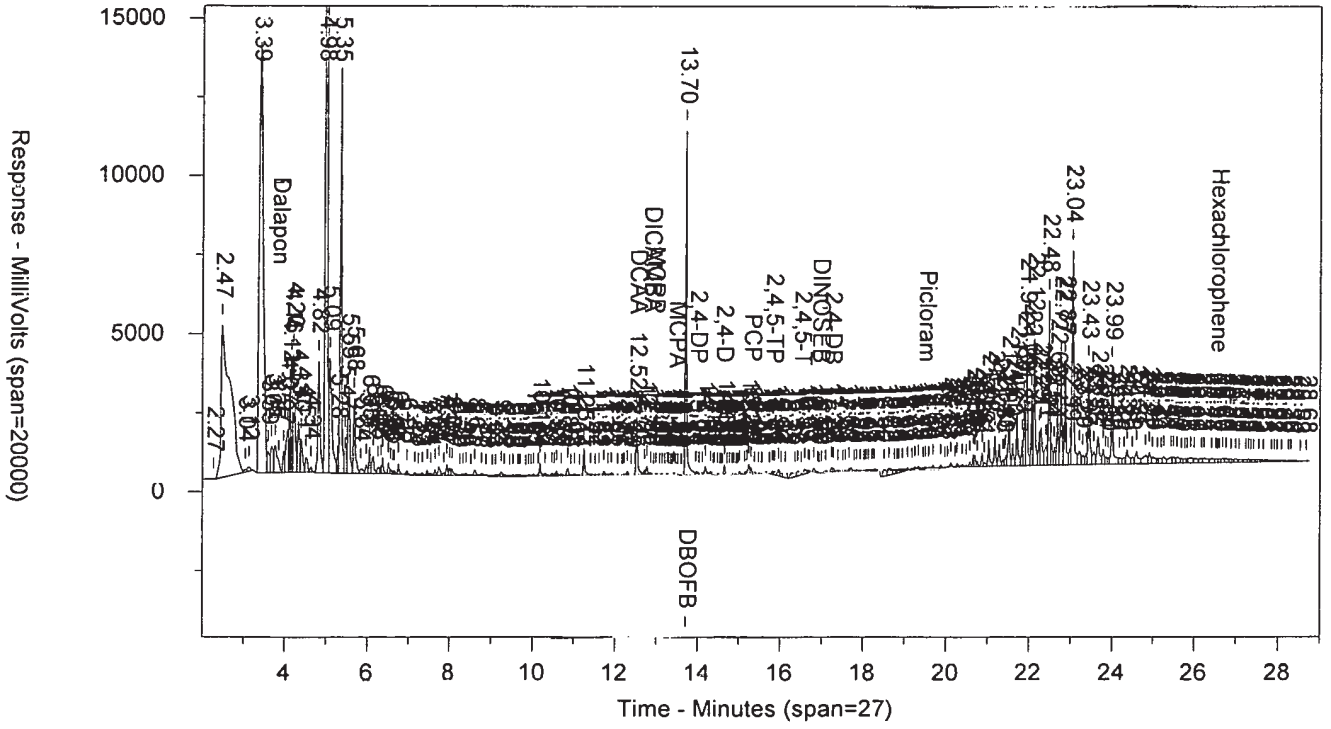

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Data Summary

Sample Name: 9876342 F 14T06 Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1062 mL Total Volume: 10 ml Analyst: 120 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 22:16:23
Instrument 19850A
Result file 15HERB18304004.065.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 78% (32 - 138) Conc: 1.46035

Analysis Report (B)

Injected on Nov 07, 2018 22:16:23
Instrument 19850B
Result file 15HERB18304004B.065.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 65% (32 - 138) Conc: 1.22662

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	1495035	1.893123
2,4-DCAA	11.91	11.95	11.97	2077450	1.46035
MCPA	12.83	12.88	12.89	30602	0
Pentachlorophenol	15.06	15.10	15.12	21108	0.001189
2,4,5-TP	15.36	15.41	15.42	80172	0.011935
2,4,5-T	15.88	15.89	15.94	139827	0.023582
2,4-DB	16.71	16.76	16.77	16110	0.019583

Compound	Min	RT	Max	Height	Amount
Dalapon	3.83	3.87	3.89	99270	0.080969
2,4-DCAA	12.49	12.53	12.55	1981283	1.22662
Dicamba	12.85	12.85	12.91	16462	0.002453
MCPP	12.90	12.93	12.96	5032	0.754276
MCPA	13.43	13.49	13.49	1944	0.211891
2,4-DP (Dichloroprop)	13.96	13.99	14.01	51603	0.036535
2,4-D	14.58	14.61	14.64	12334	0.007623
Pentachlorophenol	15.28	15.30	15.34	16457	0.000795
2,4,5-TP	15.77	15.81	15.83	43144	0.005646
2,4-DB	17.18	17.23	17.24	56135	0.058653
Picloram	19.48	19.50	19.54	5539	0.000908

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑ Dalapon			<1.6949	<3.3898	<3.7665	D2		
☐ 2,4-DCAA	A	1.46035	0.0942	0.1883	0.1883		17.40	
☑ 2,4-DCAA-D1	A	1.46035	0.0942	0.1883	0.1883			
☑ 2,4-DCAA-D2	B	1.22662	0.0942	0.1883	0.1883			
☑ Dicamba			<0.0753	<0.1507	<0.2825	D1		
☑ MCPP			<47.081	<94.162	<188.3239	D1		
☑ MCPA			<47.081	<94.162	<188.3239	D1		
☑ 2,4-DP (Dichloroprop)			<0.1507	<0.3013	<0.4708	D1		
☑ 2,4-D			<0.2354	<0.4708	<0.565	D1		
☐ Pentachlorophenol			<0.0254	<0.0565	<0.0659			
☑ 2,4,5-TP			<0.0094	<0.0282	<0.0471	D2		
☑ 2,4,5-T			<0.0612	<0.1224	<0.1412	D2		
☑ 2,4-DB			<0.5932	<1.2241	<1.4124	D1		
☑ Dinoseb			<0.1695	<0.3766	<0.4708	D1		
☐ Picloram			<0.339	<0.7533	<0.9416			
☐ Hexachlorophene					<0.1883			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:59

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9876342** F 14T06 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1062 mL Total Volume: 10 ml Analyst: 13378 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 22:16:23
Instrument : CP15--19850A
Result file : 15HERB18304004.065.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 78% (32-138) Conc.: 1.46035

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	1495035	1.893123
DCAA	11.91	11.95	11.97	2077450	1.460350
MCPA	12.83	12.88	12.89	30602	-123.130400
DBOFB	14.21	14.23	14.26	9944774	0.000942
PCP	15.06	15.10	15.12	21108	0.001189
2,4,5-TP	15.36	15.41	15.42	80172	0.011935
2,4,5-T	15.88	15.89	15.94	139827	0.023582
2,4-DB	16.71	16.76	16.77	16110	0.019583

Analysis Report (B)

Injected on : Nov 07, 2018 22:16:23
Instrument : CP15--19850B
Result file : 15HERB18304004B.065.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 65% (32-138) Conc.: 1.22662

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.87	3.89	99270	0.080969
DCAA	12.49	12.53	12.55	1981283	1.226620
DICAMBA	12.85	12.85	12.91	16462	0.002453
MCPP	12.90	12.93	12.96	5032	0.754276
MCPA	13.43	13.49	13.49	1944	0.211891
DBOFB	13.69	13.71	13.75	11038720	0.000942
2,4-DP	13.96	13.99	14.01	51603	0.036535
2,4-D	14.58	14.61	14.64	12334	0.007623
PCP	15.28	15.30	15.34	16457	0.000795
2,4,5-TP	15.77	15.81	15.83	43144	0.005646
2,4-DB	17.18	17.23	17.24	56135	0.058653
Picloram	19.48	19.50	19.54	5539	0.000908

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon			<3.7665	<1.6949			
☐ DCAA	A	1.460350	0.1883	0.0942		17.40	
☑ DICAMBA			<0.2825	<0.0753			
☑ MCPP			<188.3239	<47.081			
☑ MCPA			<188.3239	<47.081			
☑ 2,4-DP			<0.4708	<0.1507			
☑ 2,4-D			<0.565	<0.2354			
☐ DBOFB	A	0.000942				0.00	
☐ PCP			<0.0659	<0.0254			
☑ 2,4,5-TP			<0.0471	<0.0094			
☑ 2,4,5-T			<0.1412	<0.0612			
☑ 2,4-DB			<1.4124	<0.5932			
☑ DINOSEB			<0.4708	<0.1695			
☐ Picloram			<0.9416	<0.339			
☐ Hexachlorophene			<0.1883				

Units: ug/l

Valerie L. Tomayko
Principal Specialist

Reviewed by: _____ Verified by: _____

Date: 11/16/18 Date: NOV 16 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

Printed on: 11/8/2018 08:11:51

9876342 F AB14T06 T 183050043A 10407 SW-846 8015A

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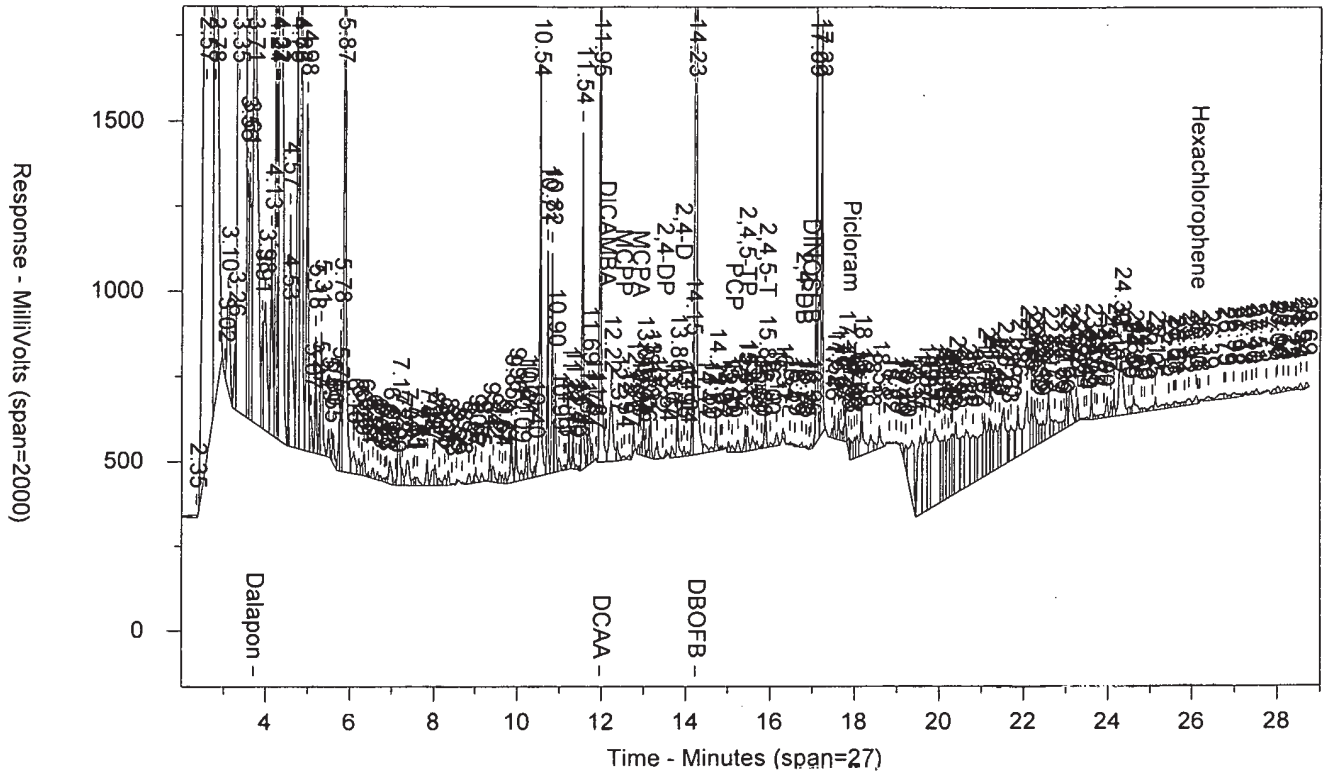

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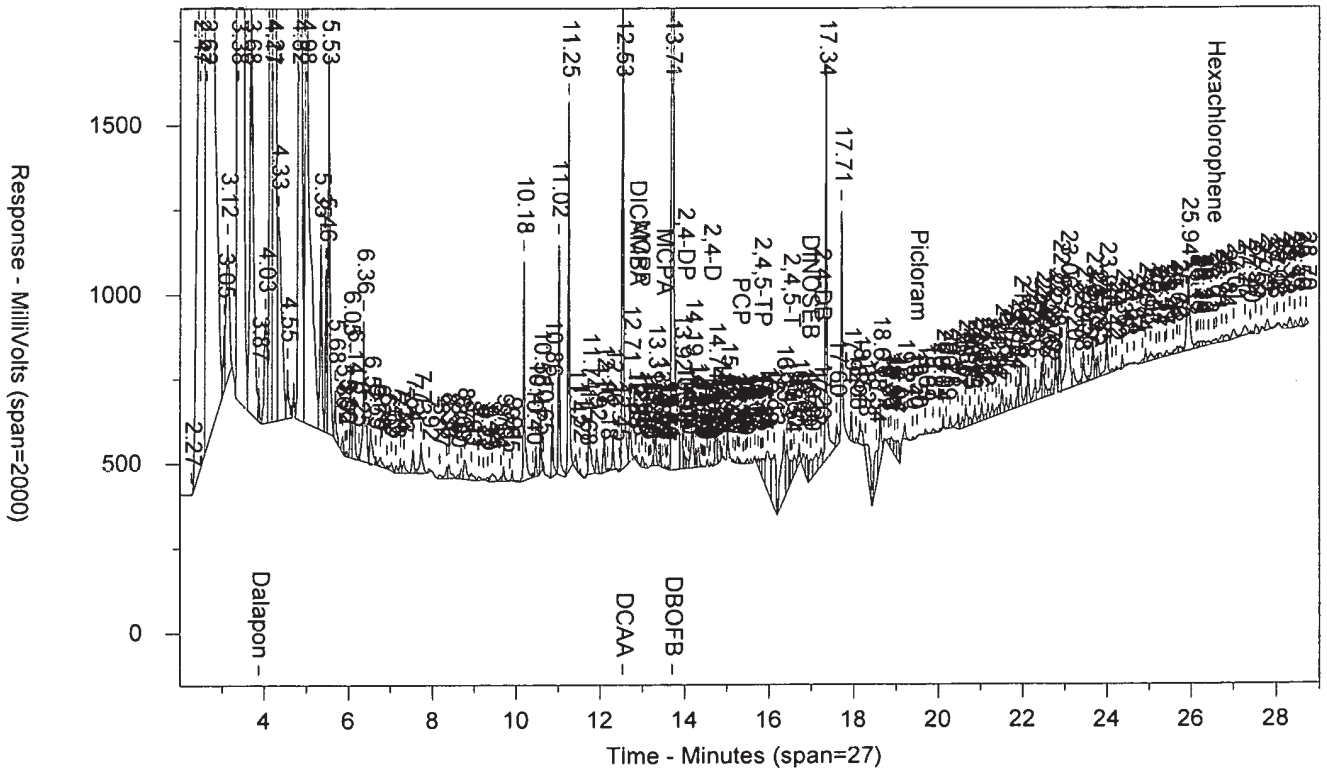

LANCASTER LABORATORIES

Sample Number: 9876342 F AB14T06 T 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 10:16:23 PM Sample Weight: 1062
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
3.711	1495035	1.893	Dalapon	3.872	99270	.081	Dalapon
11.955	2077450	1.46	DCAA	12.526	1981283	1.227	DCAA
	0		DICAMBA	12.855	16462	.002	DICAMBA
12.882	30602	-123.13	MCPA	13.486	1944	.212	MCPA
	0		MCPP	12.927	5032	.754	MCPP
14.225	9944774	.001	DBOFB	13.707	11038720	.001	DBOFB
	0		2,4-DP	13.989	51603	.037	2,4-DP
	0		2,4-D	14.611	12334	.008	2,4-D
15.101	21108	.001	PCP	15.301	16457	.001	PCP
15.414	80172	.012	2,4,5-TP	15.813	43144	.006	2,4,5-TP
15.886	139827	.024	2,4,5-T		0		2,4,5-T
16.755	16110	.02	2,4-DB	17.233	56135	.059	2,4-DB
	0		Picloram	19.504	5539	.001	Picloram

Files:
Area File: 15herb18304004.065.RAW
Area File: 15herb18304004B.065.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: 11/7/2018 10:45:11 PM
File Reported On: 11/8/2018 at 8:01:52 AM

9876342 F AB14T06 T 183050043A 10407 SW-846 8015A

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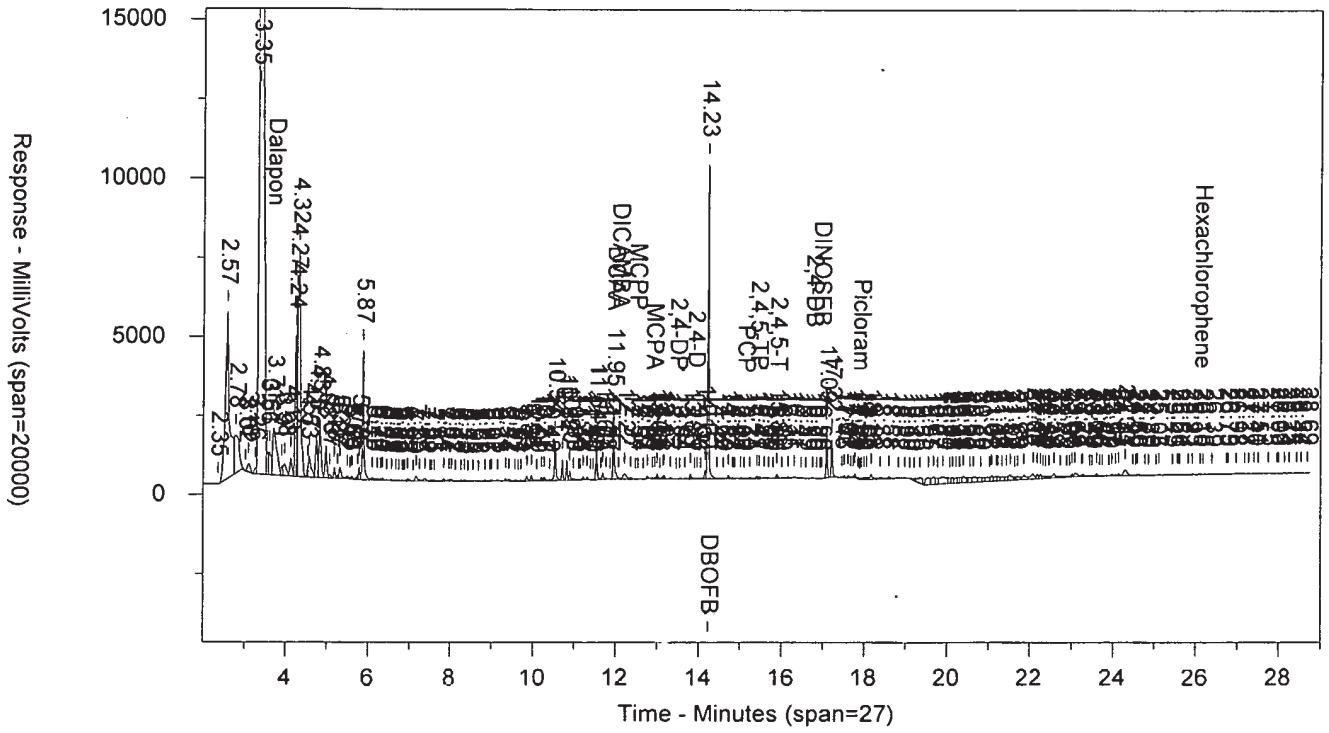

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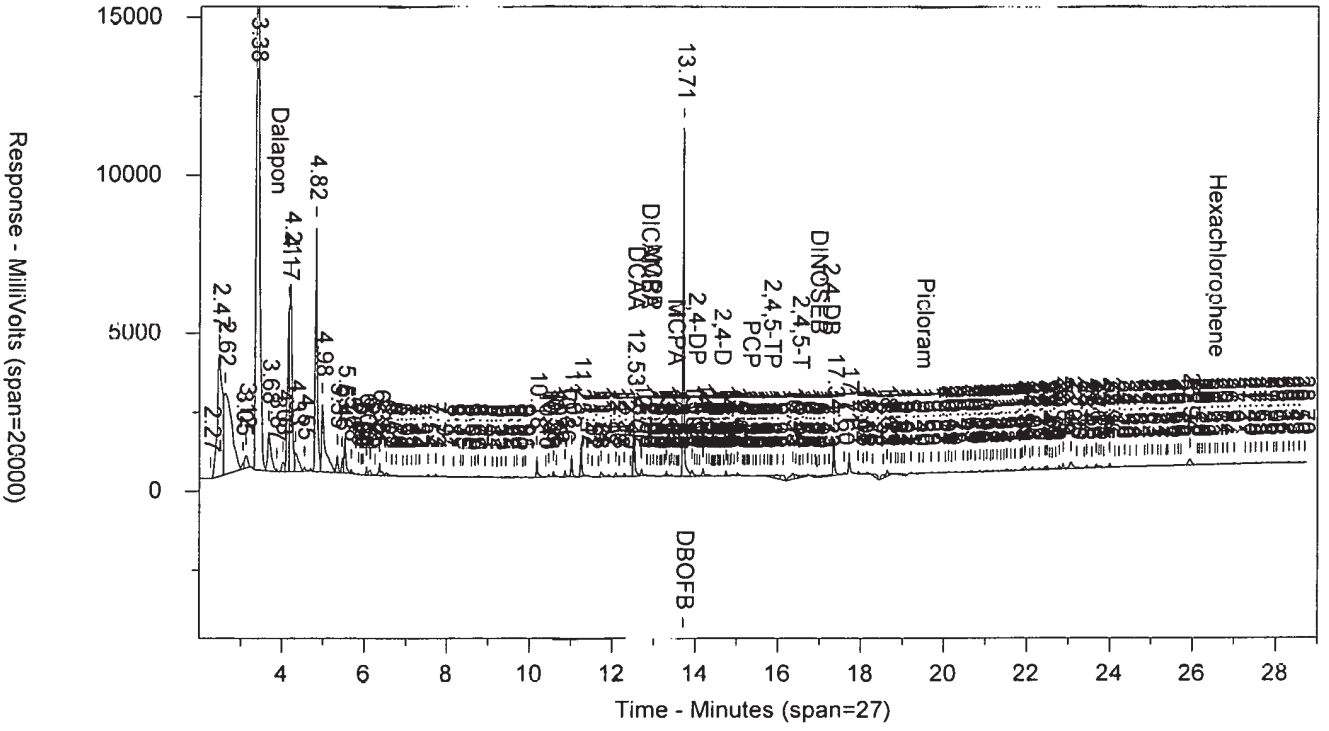

Standards Data

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\15herb18304004.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Number of Entries: 141

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	1830999999	
2 CONDITIONER	2	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	
3 CONDITIONER	3	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	
4 CONDITIONER	4	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	
5 HERB31824F	5	CCAL	UV	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
6 HIBLKX1824B	6	MISC	SE	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
7 BLANKA 10/29/18 RI F	7	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183020009A	10401
8 9870992 RI F	8	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.41	10	1	0	183020009A	10401
9 LCSA 10/28/18 RI F	9	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	182990034A	10401
10 HERB31824F	10	CCAL	UW	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
11 HIBLKX1824B	11	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
12 BLANKA 11/5/18 F	12	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183090033A	10401
13 LCSA 11/5/18 F	13	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183090033A	10401
14 9863853R F	14	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.1	10	1	0	183090033A	10401
15 9863854RMS F	15	MS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183090033A	10401
16 9863855RMSD F	16	MSD	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.4	10	1	0	183090033A	10401
17 9863851R F	17	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.1	10	1	0	183090033A	10401
18 9863852R F	18	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.3	10	1	0	183090033A	10401
19 9863857R F	19	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.1	10	1	0	183090033A	10401
20 9863858R F	20	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.1	10	1	0	183090033A	10401
21 9881801 F	21	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	10	1	0	183090033A	10401
22 HERB31824F	22	CCAL	UX	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
23 HIBLKX1824B	23	MISC	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
24 9881804 F	24	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.13	10	1	0	183090033A	10401
25 9881807 F	25	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.2	10	1	0	183090033A	10401
26 BLANKA 11/1/18 RI F	26	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183050015A	10401
27 LCSA 11/1/18 RI F	27	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	183050015A	10401
28 9874412 F DF20	28	T	AD	EPT-24\ACTIVE\CP15\15HERB.MET	30.09	200	1	0	183050015A	10401
29 CONDITIONER	29	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.09	200	1	0	183050015A	10401
30 9874412MS F DF20	30	MS	AE	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	200	1	0	183050015A	10401
31 CONDITIONER	31	MS	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	200	1	0	183050015A	10401
32 9874412MSD F DF20	32	MSD	AE	EPT-24\ACTIVE\CP15\15HERB.MET	30.5	200	1	0	183050015A	10401
33 CONDITIONER	33	MSD	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.5	200	1	0	183050015A	10401
34 HERB31824F	34	CCAL	UY	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
35 HIBLKX1824B	35	MISC	SH	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
36 9868565 RI F	36	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.14	10	1	0	183050015A	10401
37 9868566 RI F	37	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.16	10	1	0	183050015A	10401
38 9868567 RI F	38	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.22	10	1	0	183050015A	10401
39 9868568 F DF10	39	T	AD	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	100	1	0	183050015A	10401
40 CONDITIONER	40	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.39	100	1	0	183050015A	10401
41 9868571 RI F DF10	41	T	AD	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	100	1	0	183050015A	10401
42 CONDITIONER	42	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	100	1	0	183050015A	10401
43 9868571 F DF20	43	T	AH	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	200	1	0	183050015A	10401
44 CONDITIONER	44	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.29	200	1	0	183050015A	10401
45 HERB31824F	45	CCAL	UZ	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
46 HIBLKX1824B	46	MISC	SI	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
47 9870637 RI F	47	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.15	10	1	0	183050015A	10401
48 9870639 F DF5	48	T	AE	EPT-24\ACTIVE\CP15\15HERB.MET	30.12	50	1	0	183050015A	10401
49 CONDITIONER	49	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.12	50	1	0	183050015A	10401
50 9870639 F DF10	50	T	AF	EPT-24\ACTIVE\CP15\15HERB.MET	30.12	100	1	0	183050015A	10401

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP15\15herb18304004.seq

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Number of Entries: 141

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 9874411 F DF10	51	T	AE	EPT-24\ACTIVE\CP15\15HERB.MET	30.04	100	1	0	183050015A	10401
52 CONDITIONER	52	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.04	100	1	0	183050015A	10401
53 9874411 F DF20	53	T	AF	EPT-24\ACTIVE\CP15\15HERB.MET	30.04	200	1	0	183050015A	10401
54 9874413 RI F DF5	54	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.17	50	1	0	183050015A	10401
55 CONDITIONER	55	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.17	50	1	0	183050015A	10401
56 HERB31824F	56	CCAL	VA	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
57 HIBLKX1824B	57	MISC	SJ	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
58 9875251 RI F	58	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30.42	10	1	0	183050015A	10401
59 BLANKA 11/2/18 F	59	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183050043A	10407
60 LCSA 11/2/18 F	60	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183050043A	10407
61 9876334 F	61	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1056	10	1	0	183050043A	10407
62 9876335MS F	62	MS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1063	10	1	0	183050043A	10407
63 9876336MSD F	63	MSD	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1060	10	1	0	183050043A	10407
64 9876332 F	64	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1060	10	1	0	183050043A	10407
65 9876342 F	65	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1062	10	1	0	183050043A	10407
66 HERB31824F	66	CCAL	VB	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1830999999	10407
67 HIBLKX1824B	67	MISC	SK	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1830999999	10407
68 BLANKA 10/28/18 RI F	68	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	30	10	1	0	182990034A	10401
69 9860859 F DF5	69	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.33	50	1	0	182990034A	10401
70 CONDITIONER	70	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	30.33	50	1	0	182990034A	10401
71 HERB31824F	71	CCAL	VG	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1831099999	10407
72 HIBLKX1824B	72	MISC	SP	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1831099999	10407
73 9866461 F DF5	73	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.06	50	1	0	183020009A	10401
74 9866462 F DF5	74	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	30.18	50	1	0	183020009A	10401
75 9863858R F DF200	75	T	AD	EPT-24\ACTIVE\CP15\15HERB.MET	30.1	2000	1	0	183090033A	10401
76 BLANKA 11/4/18 F	76	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060017A	10407
77 LCSA 11/4/18 F	77	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060017A	10407
78 9879191 F DF100	78	T	AC	EPT-24\ACTIVE\CP15\15HERB.MET	994	1000	1	0	183060017A	10407
79 CONDITIONER	79	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	994	1000	1	0	183060017A	10407
80 9879191 F DF1000	80	T	AD	EPT-24\ACTIVE\CP15\15HERB.MET	994	10000	1	0	183060017A	10407
81 CONDITIONER	81	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	994	10000	1	0	183060017A	10407
82 HERB31824F	82	CCAL	VH	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1831099999	10407
83 HIBLKX1824B	83	MISC	SQ	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1831099999	10407
84 9879191 F DF2000	84	T	AE	EPT-24\ACTIVE\CP15\15HERB.MET	994	20000	1	0	183060017A	10407
85 CONDITIONER	85	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	994	20000	1	0	183060017A	10407
86 9879191 F DF5000	86	T	AF	EPT-24\ACTIVE\CP15\15HERB.MET	994	50000	1	0	183060017A	10407
87 CONDITIONER	87	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	994	50000	1	0	183060017A	10407
88 BLANKA 11/4/18 F	88	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060013A	10407
89 LCSA 11/4/18 F	89	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060013A	10407
90 9879191 F DF100	90	T	AD	EPT-24\ACTIVE\CP15\15HERB.MET	1036	1000	1	0	183060013A	10407
91 CONDITIONER	91	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1036	1000	1	0	183060013A	10407
92 9879191 F DF1000	92	T	AE	EPT-24\ACTIVE\CP15\15HERB.MET	1036	10000	1	0	183060013A	10407
93 CONDITIONER	93	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1036	10000	1	0	183060013A	10407
94 HERB31824F	94	CCAL	VI	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1831099999	10407
95 HIBLKX1824B	95	MISC	SR	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1831099999	10407
96 9879191 F DF2000	96	T	AF	EPT-24\ACTIVE\CP15\15HERB.MET	1036	20000	1	0	183060013A	10407
97 CONDITIONER	97	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1036	20000	1	0	183060013A	10407
98 9879191 F DF5000	98	T	AG	EPT-24\ACTIVE\CP15\15HERB.MET	1036	50000	1	0	183060013A	10407
99 CONDITIONER	99	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1036	50000	1	0	183060013A	10407
100 BLANKA 11/4/18 F	100	BLK	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060012A	10407

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CHROM PERFECT SEQUENCE FILE

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP15

Number of Entries: 141

Samplename	VP	Code	ID	Method	Samp Amt	DF	Int Std	C	Batch Number	Analysis
101 LCSA 11/4/18 F	101	LCS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060012A	10407
102 9879192 F	102	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1049	10	1	0	183060012A	10407
103 9879193MS F	103	MS	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1071	10	1	0	183060012A	10407
104 9879194MSD F	104	MSD	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1057	10	1	0	183060012A	10407
105 9879196 F	105	T	AB	EPT-24\ACTIVE\CP15\15HERB.MET	1058	10	1	0	183060012A	10407
106 HERB31824F	106	CCAL	VJ	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1831099999	10407
107 HIBLKX1824B	107	MISC	SS	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1831099999	10407
108 BLANKA 11/4/18	108	BLK	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060018A	10407
109 LCSA 11/4/18	109	LCS	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	183060018A	10407
110 9879192	110	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1062	10	1	0	183060018A	10407
111 9879193MS	111	MS	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1064	10	1	0	183060018A	10407
112 9879194MSD	112	MSD	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1061	10	1	0	183060018A	10407
113 9879196	113	T	AA	EPT-24\ACTIVE\CP15\15HERB.MET	1055	10	1	0	183060018A	10407
114 HERB31824F	114	CCAL	VK	EPT-24\ACTIVE\CP15\15HERB.MET	1	1	1	0	1831099999	10407
115 HIBLKX1824B	115	MISC	ST	EPT-24\ACTIVE\CP15\15HERB.MET	1000	10	1	0	1831099999	10407
116 9870252 F DF50	116	T	AD	15HERB.MET	30.14	500	1	0	183030010A	10401
117 9870253 F DF50	117	T	AD	15HERB.MET	30.18	500	1	0	183030010A	10401
118 9870254 F DF50	118	T	AD	15HERB.MET	30.15	500	1	0	183030010A	10401
119 9872060 F DF100	119	T	AD	15HERB.MET	30	1000	1	0	183030010A	10401
120 9872061 F DF100	120	T	AD	15HERB.MET	30.02	1000	1	0	183030010A	10401
121 9872062 F DF100	121	T	AD	15HERB.MET	30.41	1000	1	0	183030010A	10401
122 9872064 F DF100	122	T	AD	15HERB.MET	30.22	1000	1	0	183030010A	10401
123 HERB31824F	123	CCAL	VT	15HERB.MET	1	1	1	0	1831199999	10407
124 HIBLKX1824B	124	MISC	TC	15HERB.MET	1000	10	1	0	1831199999	10407
125 BLANKA 11/6/18 F	125	BLK	AB	15HERB.MET	1000	10	1	0	183100005A	10407
126 LCSA 11/6/18 F	126	LCS	AB	15HERB.MET	1000	10	1	0	183100005A	10407
127 LCSDA 11/6/18 F	127	LCSD	AB	15HERB.MET	1000	10	1	0	183100005A	10407
128 9881309 F	128	T	AB	15HERB.MET	1042	10	1	0	183100005A	10407
129 9881310 F	129	T	AB	15HERB.MET	1039	10	1	0	183100005A	10407
130 9881313 F	130	T	AB	15HERB.MET	1044	10	1	0	183100005A	10407
131 9882870 F	131	T	AB	15HERB.MET	1055	10	1	0	183100005A	10407
132 9882871 F	132	T	AB	15HERB.MET	1061	10	1	0	183100005A	10407
133 9882872 F	133	T	AB	15HERB.MET	1057	10	1	0	183100005A	10407
134 9882873 F	134	T	AB	15HERB.MET	1064	10	1	0	183100005A	10407
135 HERB31824F	135	CCAL	VU	15HERB.MET	1	1	1	0	1831199999	10407
136 HIBLKX1824B	136	MISC	TD	15HERB.MET	1000	10	1	0	1831199999	10407
137 9882874 F	137	T	AB	15HERB.MET	1054	10	1	0	183100005A	10407
138 9882875 F	138	T	AB	15HERB.MET	1058	10	1	0	183100005A	10407
139 9882876 F	139	T	AB	15HERB.MET	1032	10	1	0	183100005A	10407
140 HERB31824F	140	CCAL	VV	15HERB.MET	1	1	1	0	1831199999	10407
141 HIBLKX1824B	141	MISC	TE	15HERB.MET	1000	10	1	0	1831199999	10407

MW15249
11/9/18

Set-up by: _____ Date: 11/8/18

11/8/2018

HIBLKX1824B AAHIBLKAA ICAL 1830299999 10407 SW-846 8015A

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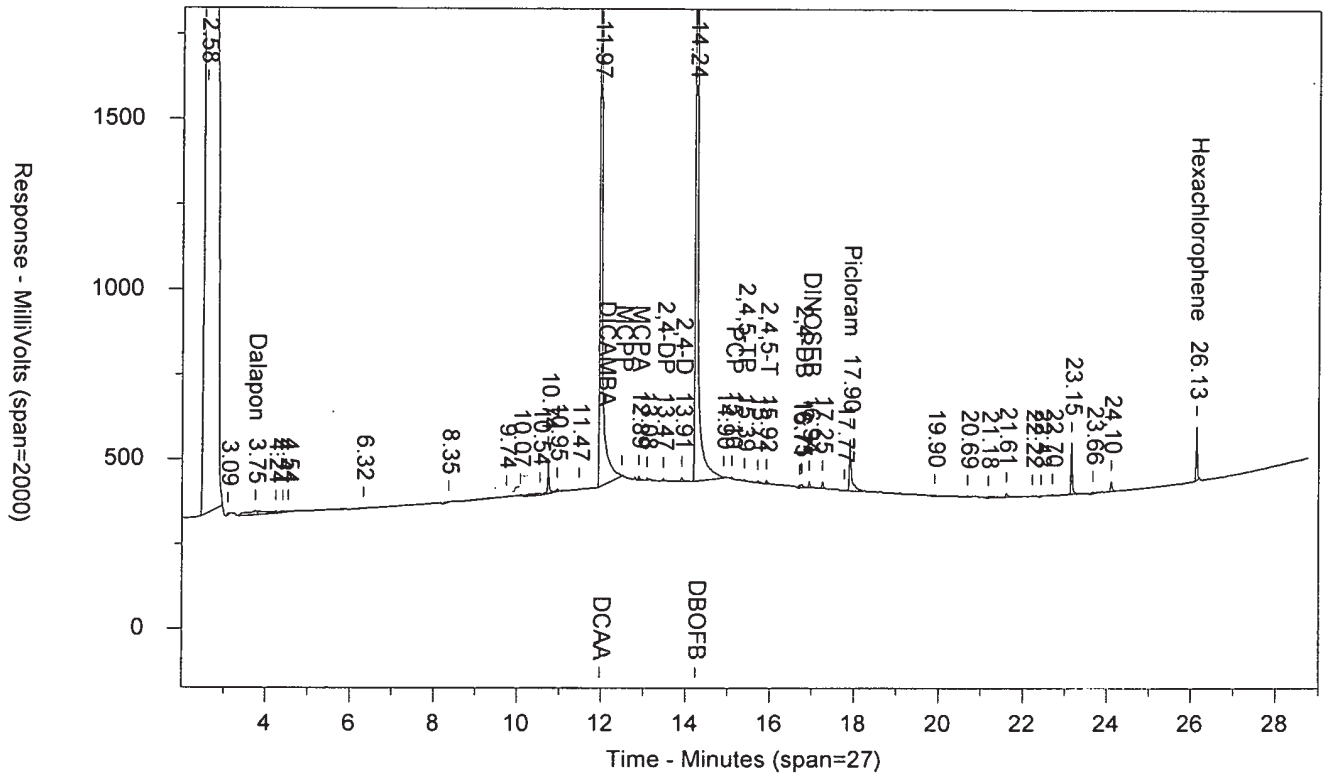

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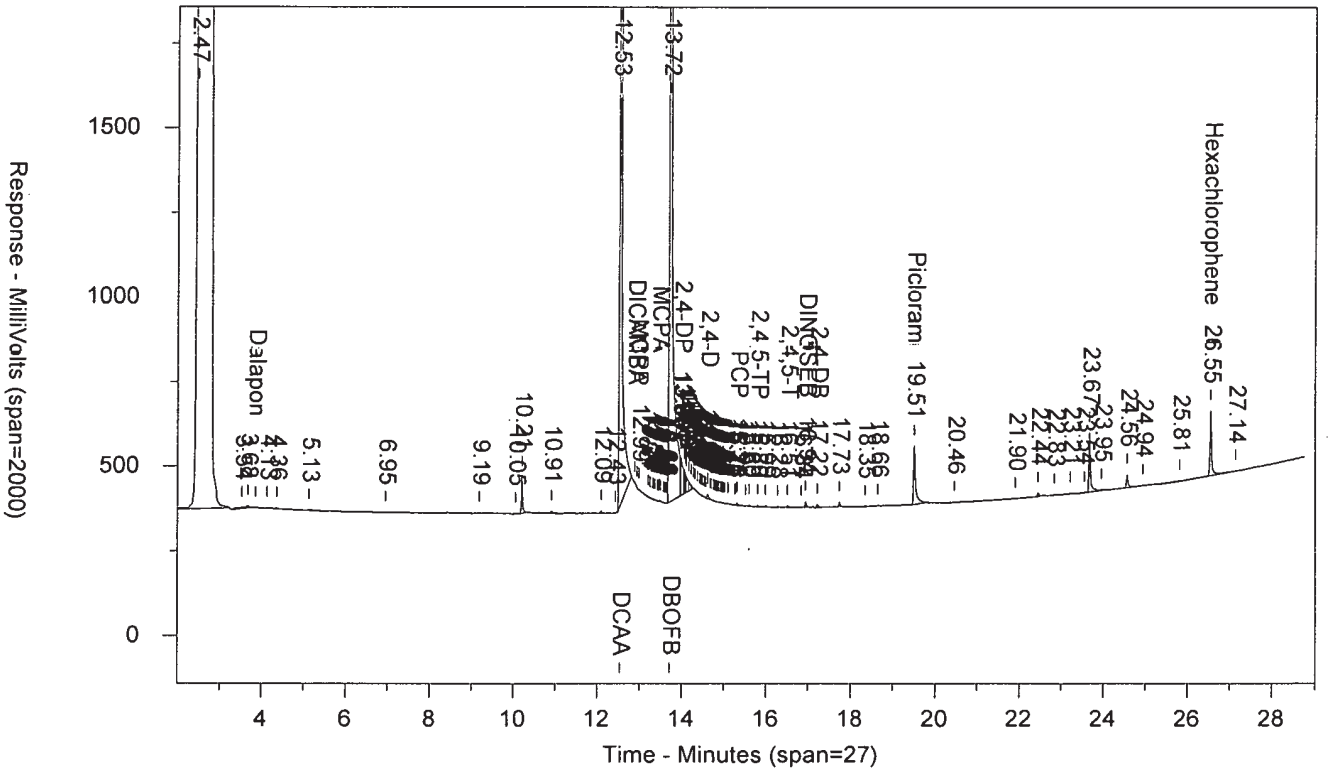

LANCASTER LABORATORIES

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
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HIBLKX1824B AAHIBLKAA ICAL 1830299999 10407 SW-846 801

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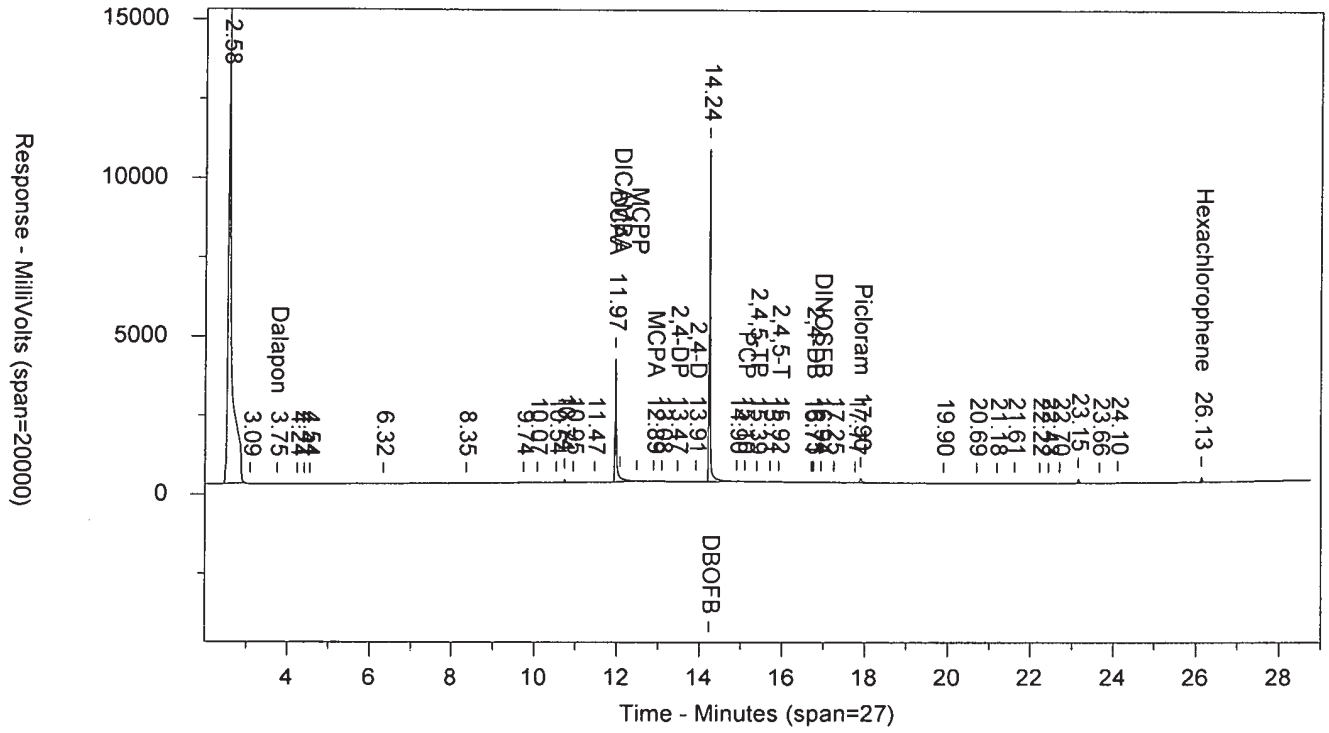

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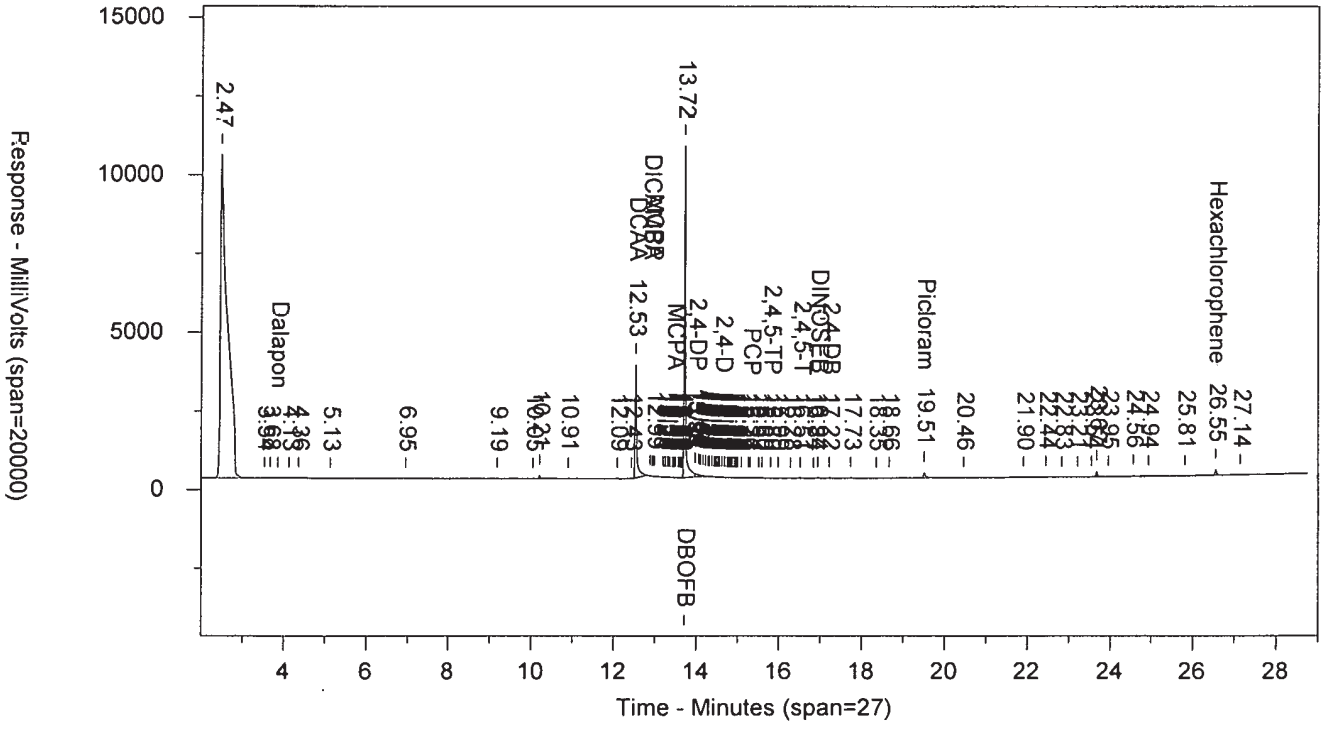

HERB11824E AAHERB1AA ICAL 1830299999 10407 SW-846 8015A

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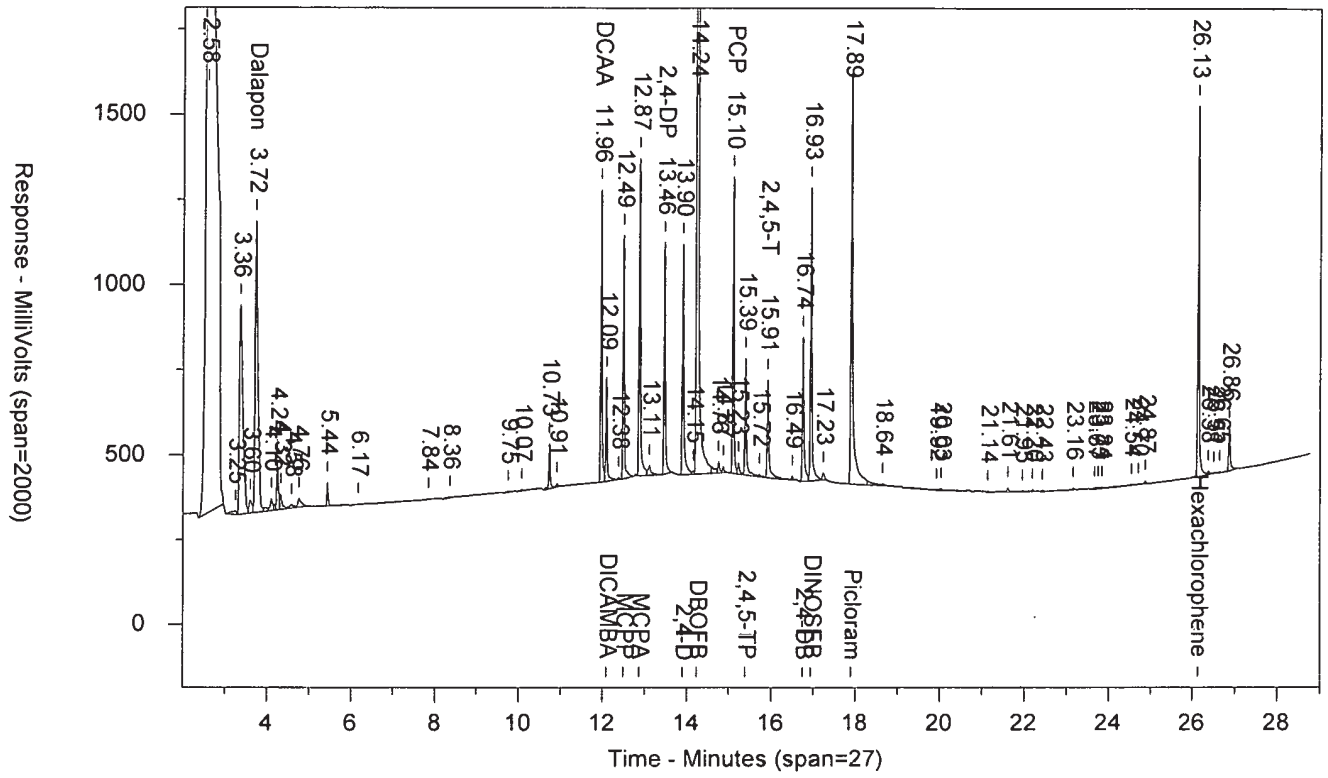

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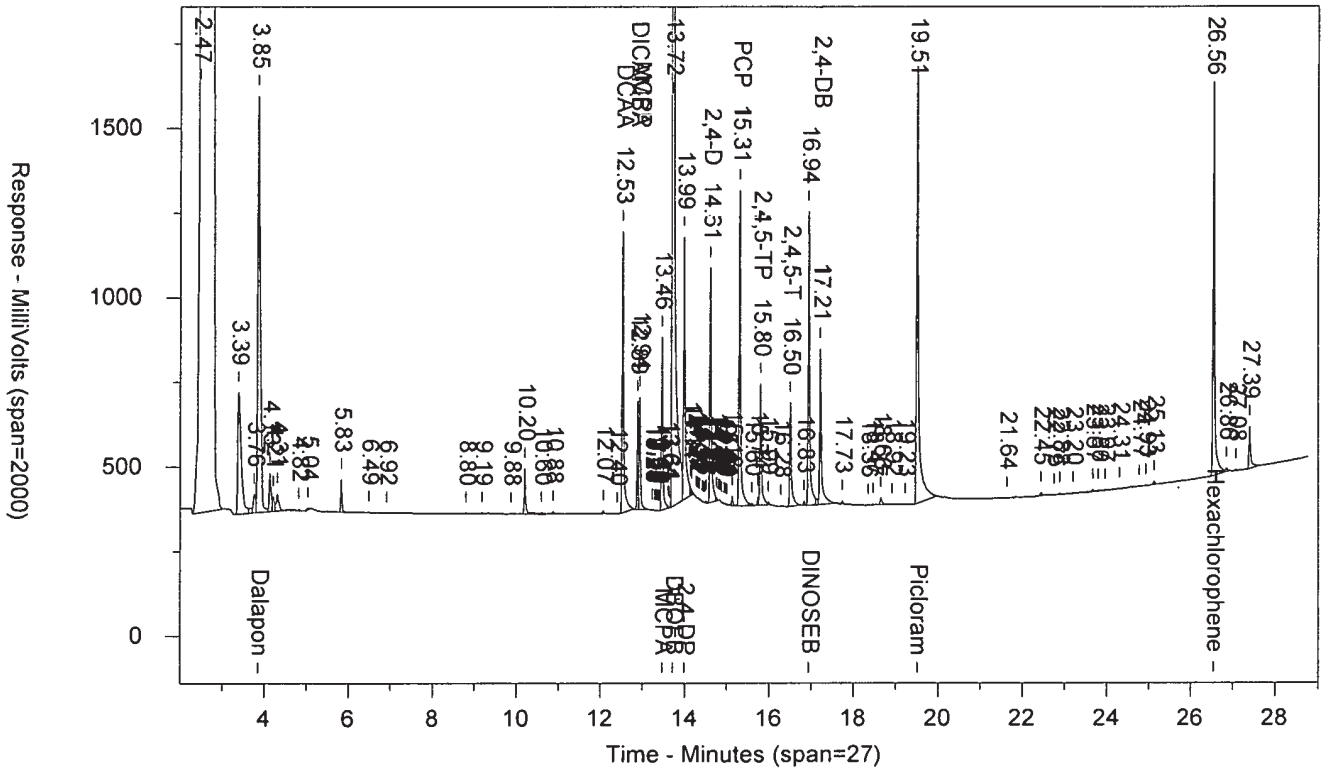

LANCASTER LABORATORIES

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

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Area File: 15herb18304001B.006.RAW
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Method B: 15HERBB.MET
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Format B: herw15.FMTA
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HERB11824E AAHERB1AA ICAL 1830299999 10407 SW-846 801

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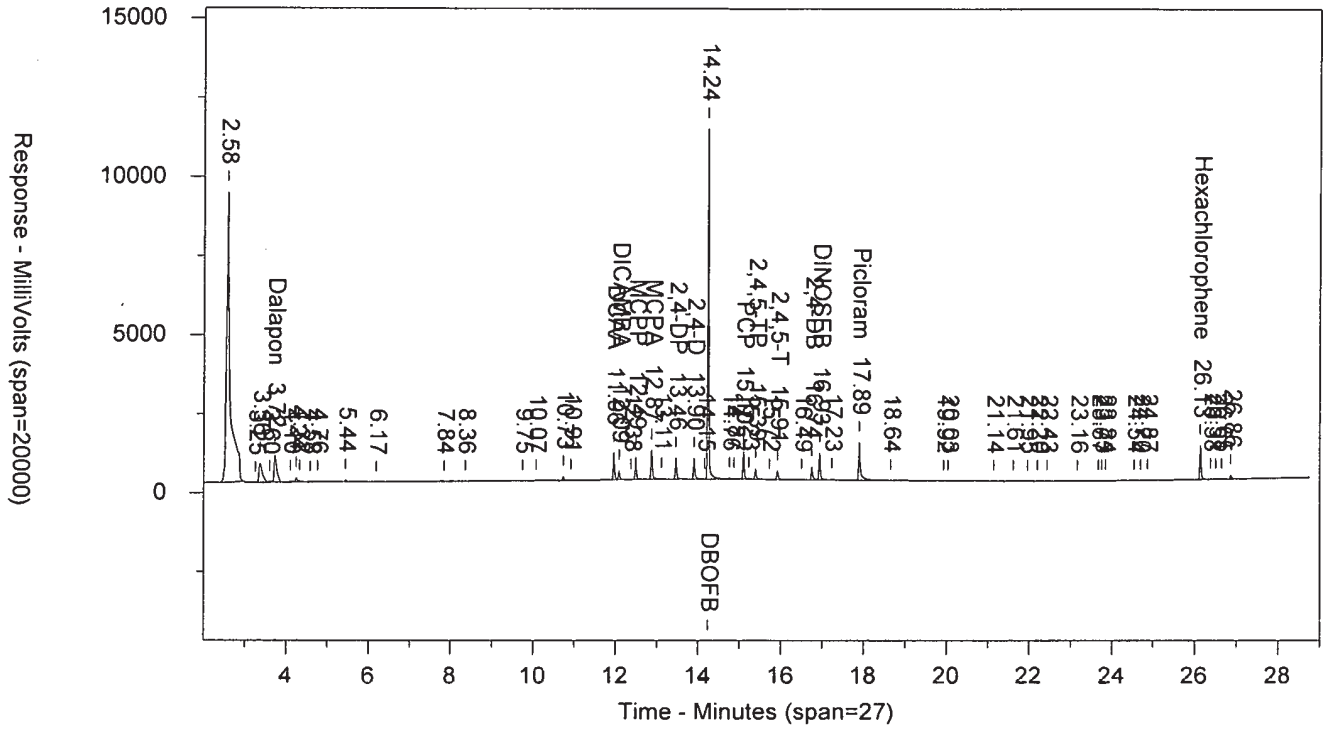

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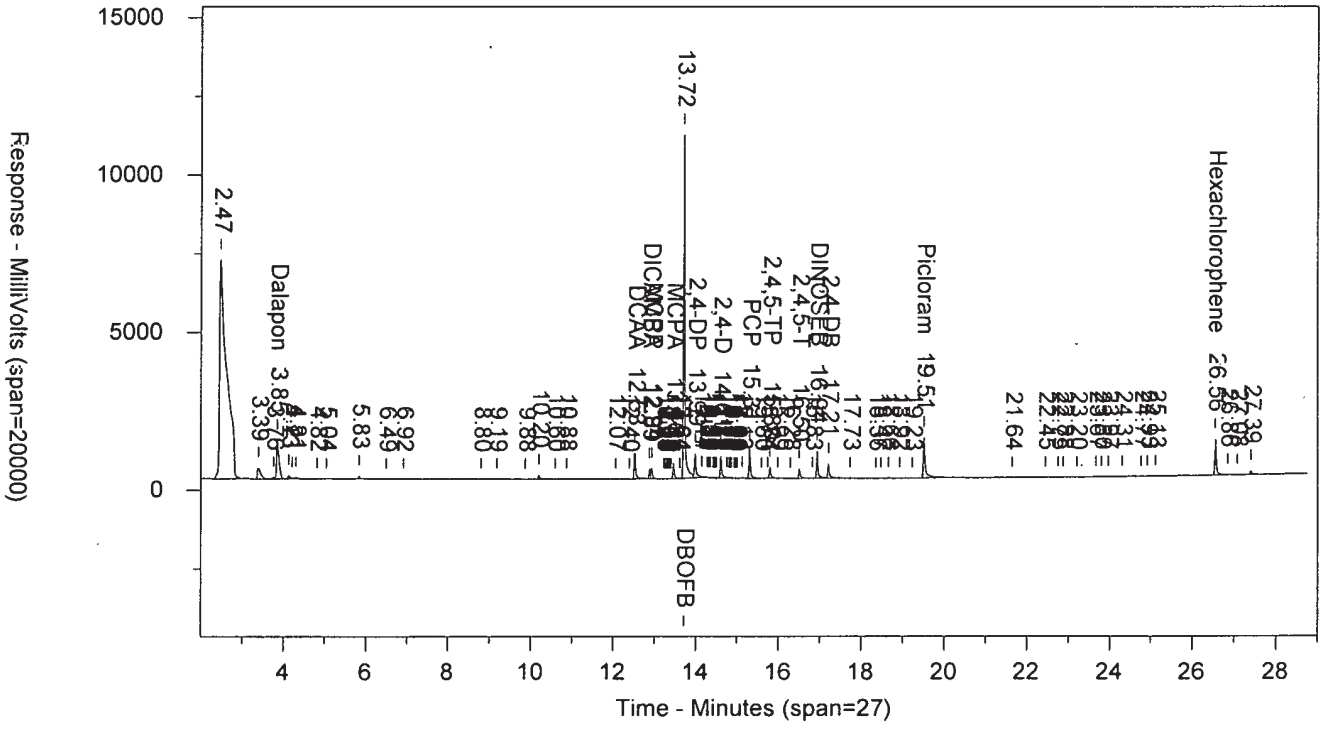

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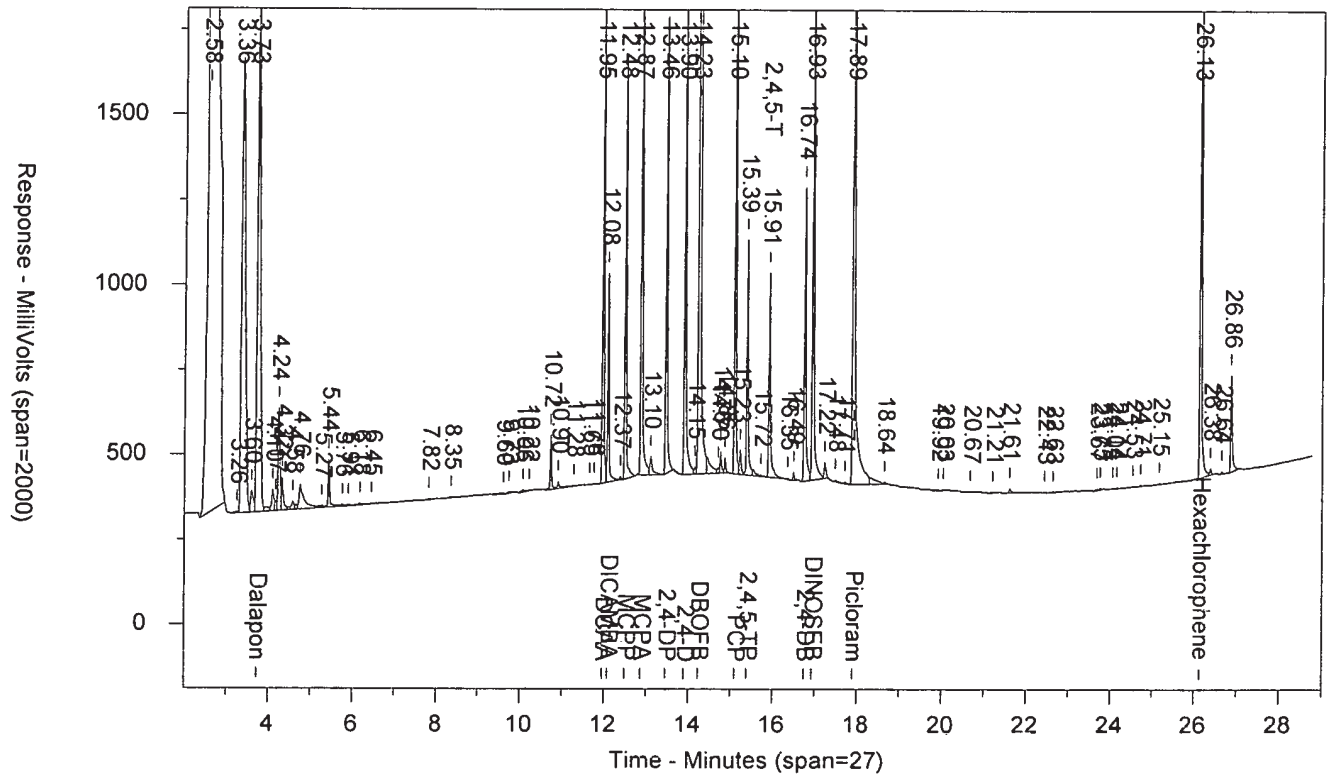

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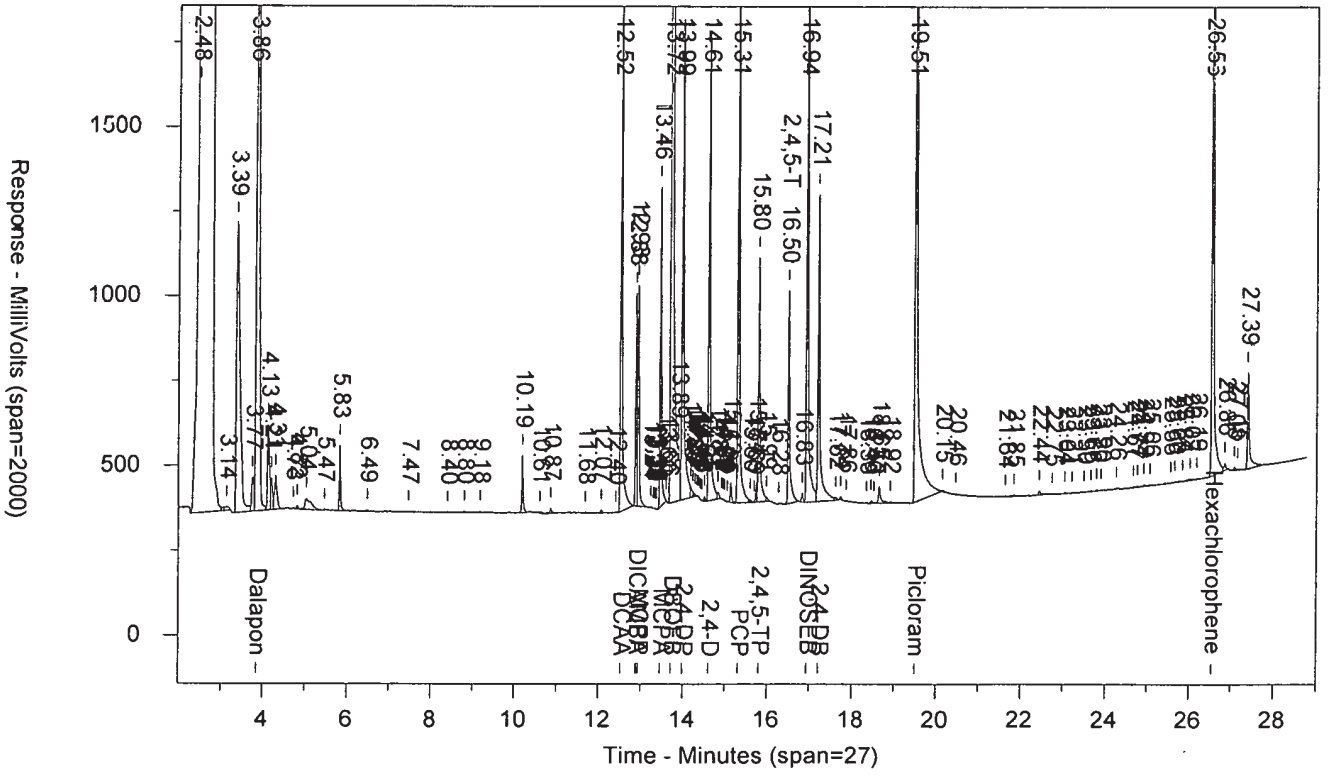

LANCASTER LABORATORIES

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

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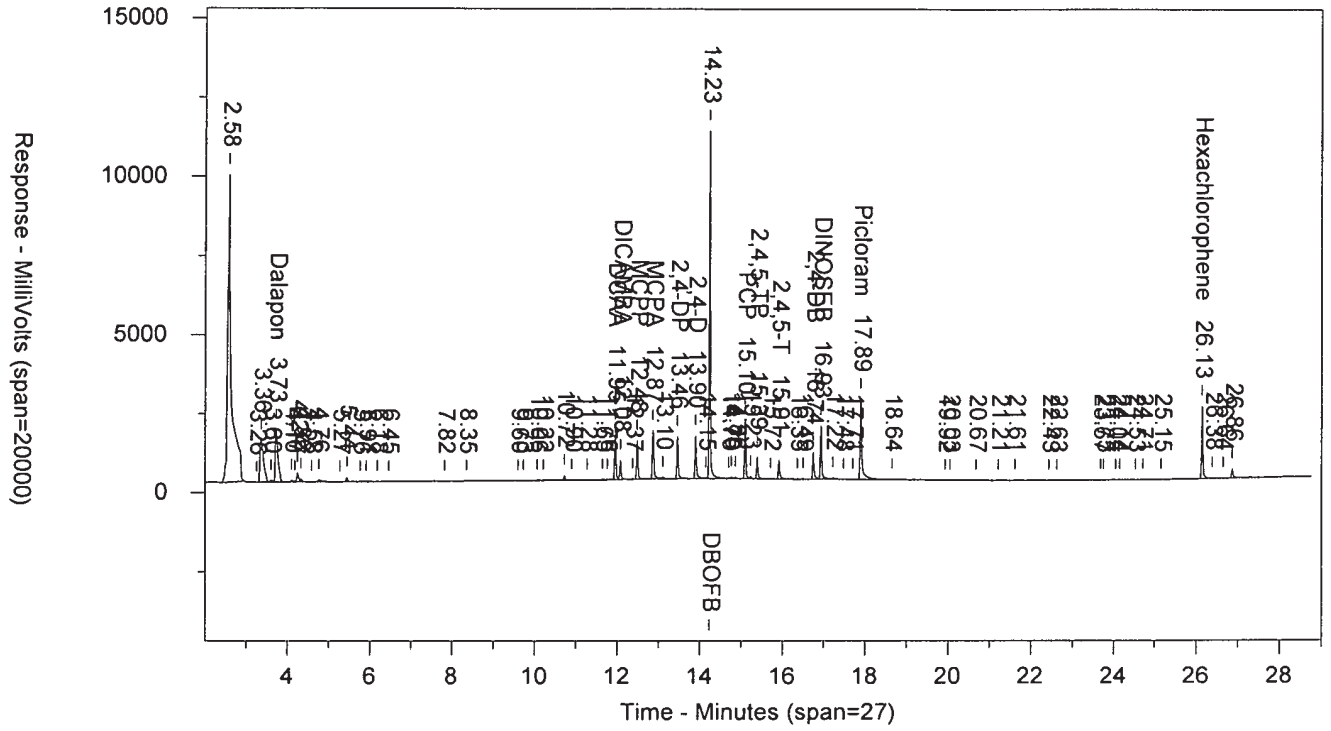

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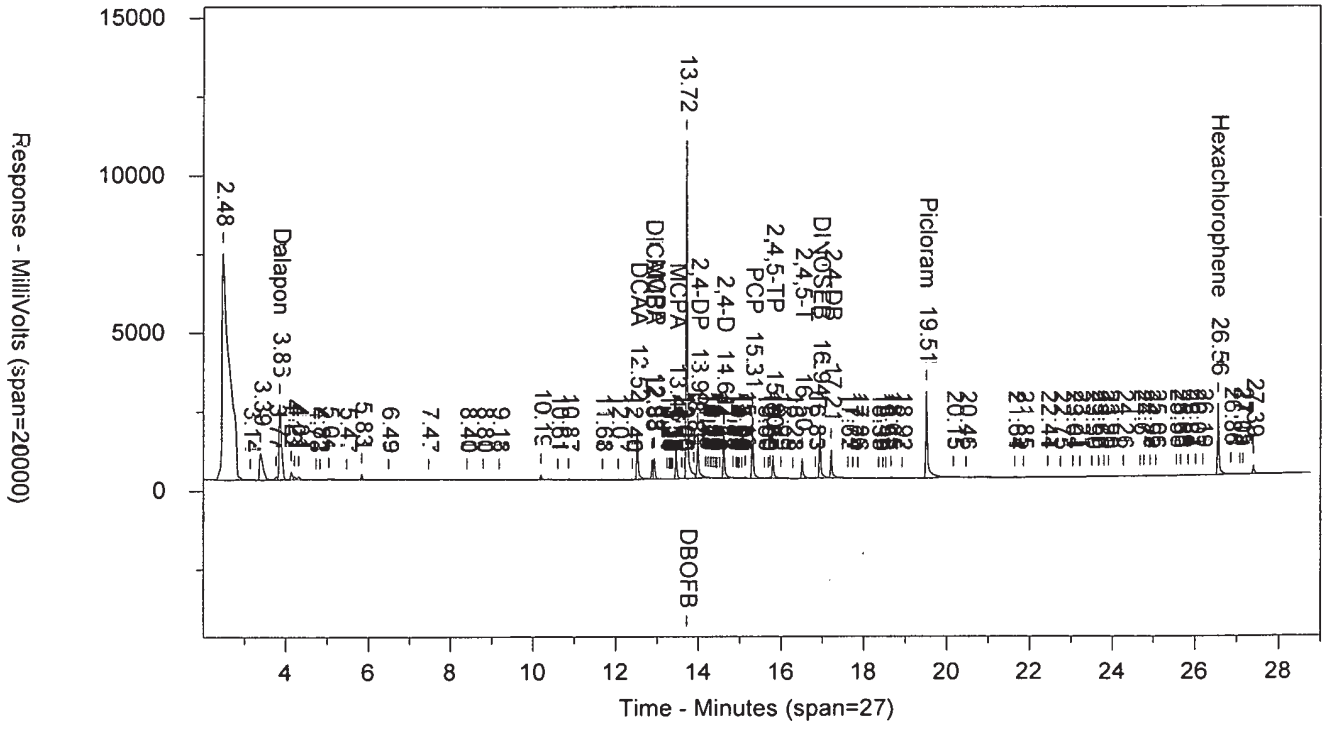

HERB31824F AAHERB3AA ICAL 1830299999 10407 SW-846 8015A

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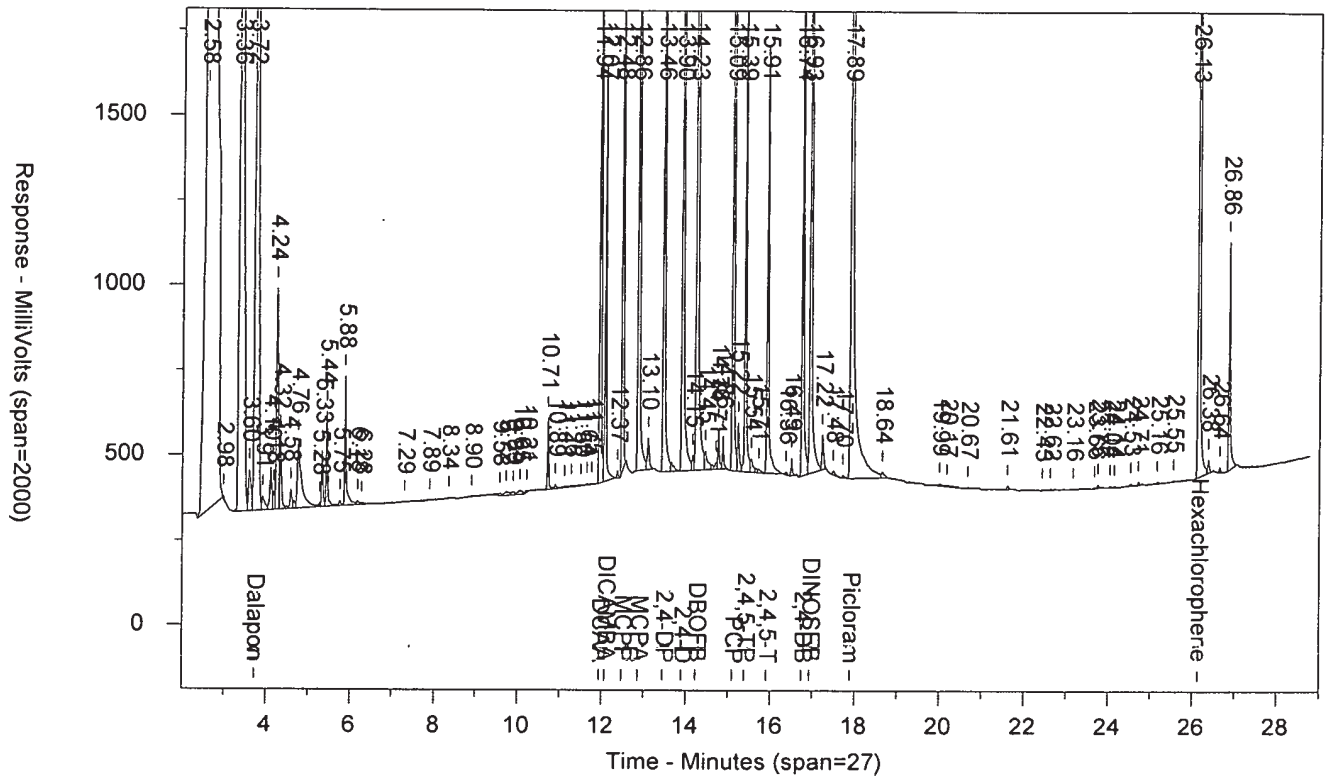

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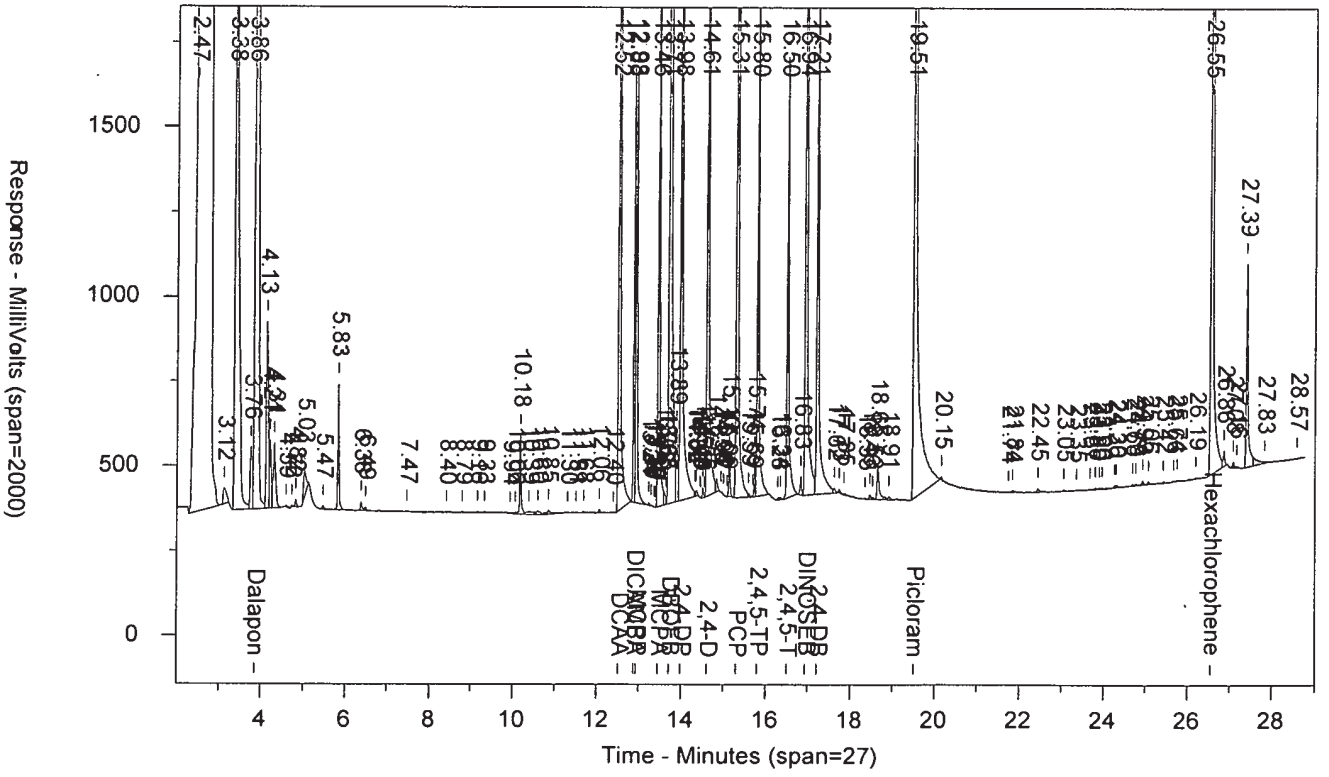

LANCASTER LABORATORIES

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

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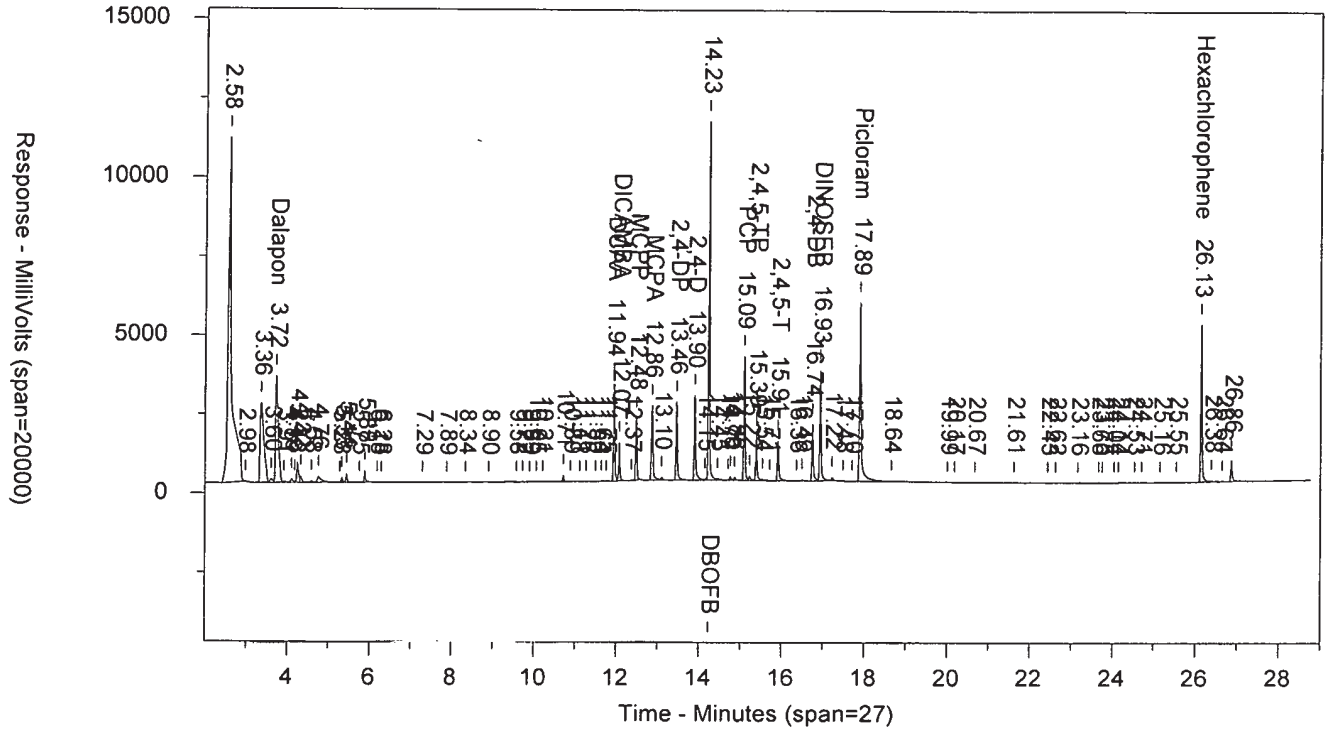

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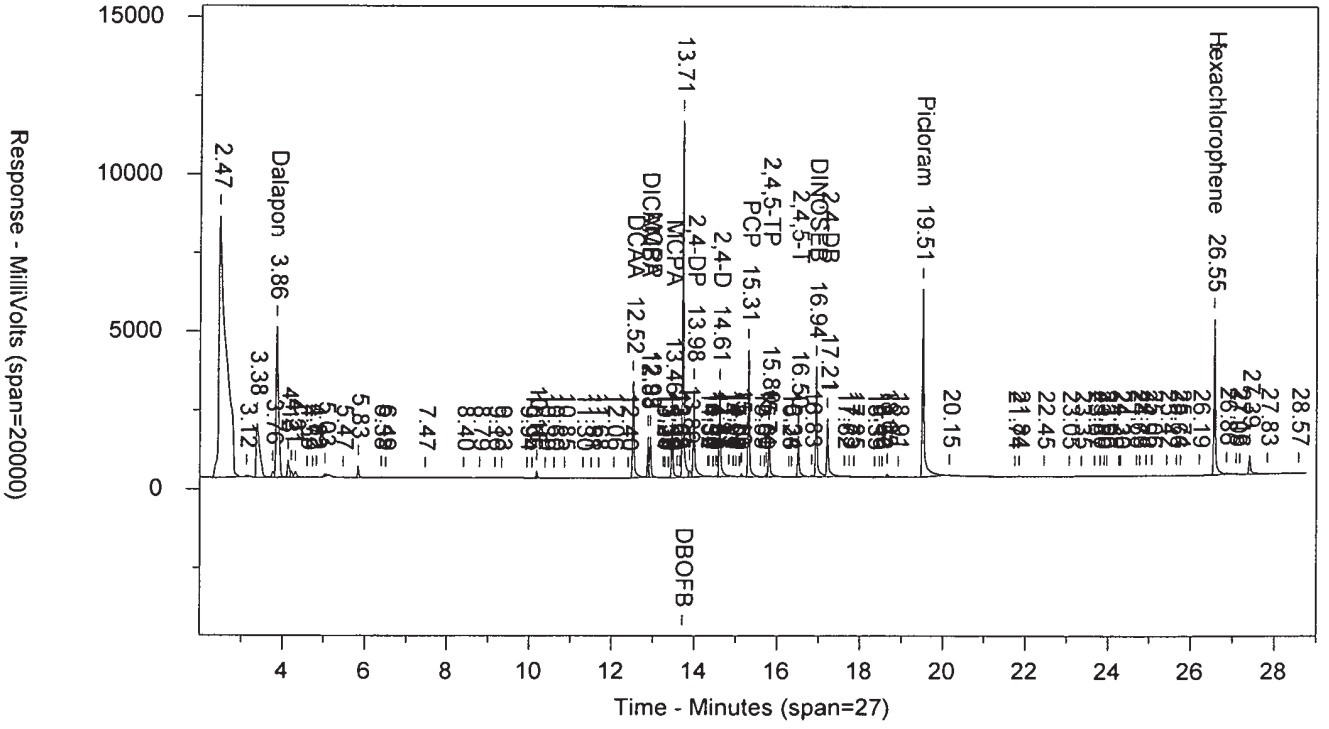

HERB41824E AAHERB4AA ICAL 1830299999 10407 SW-846 8015A

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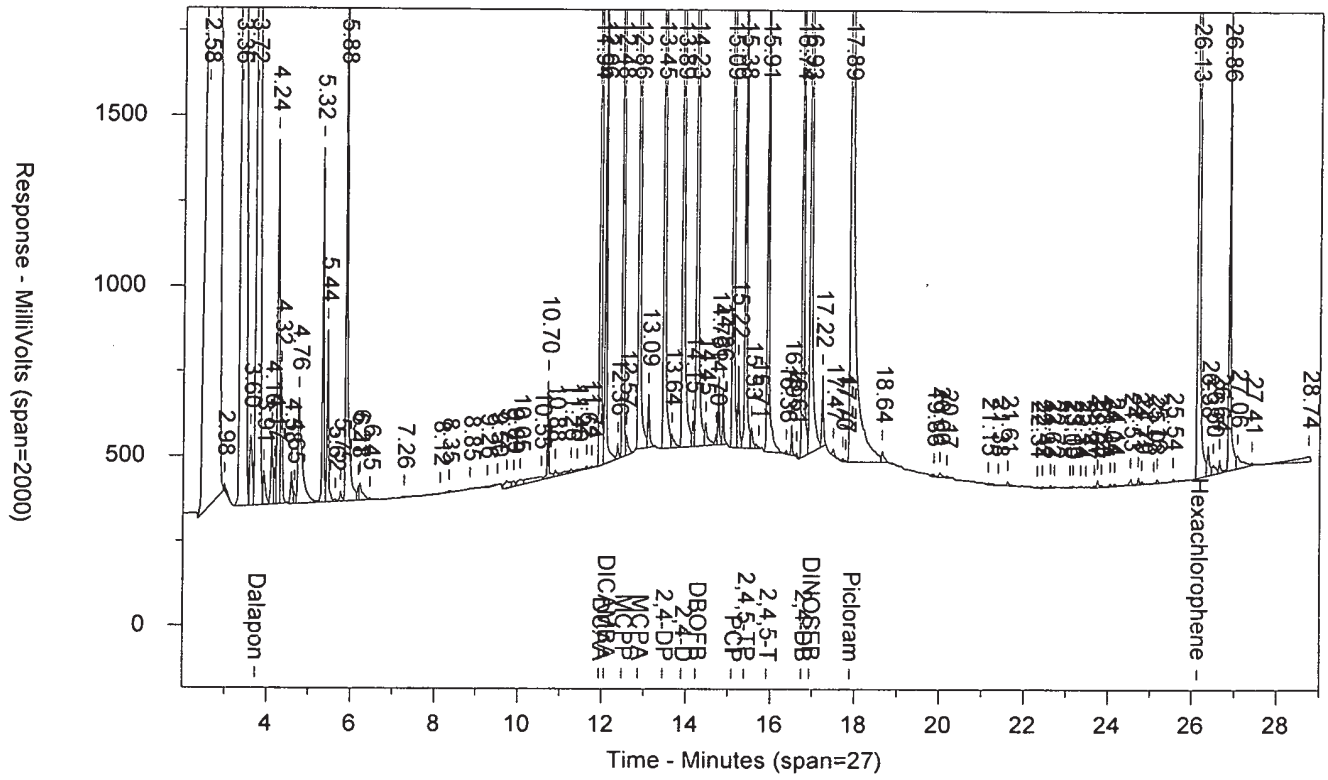

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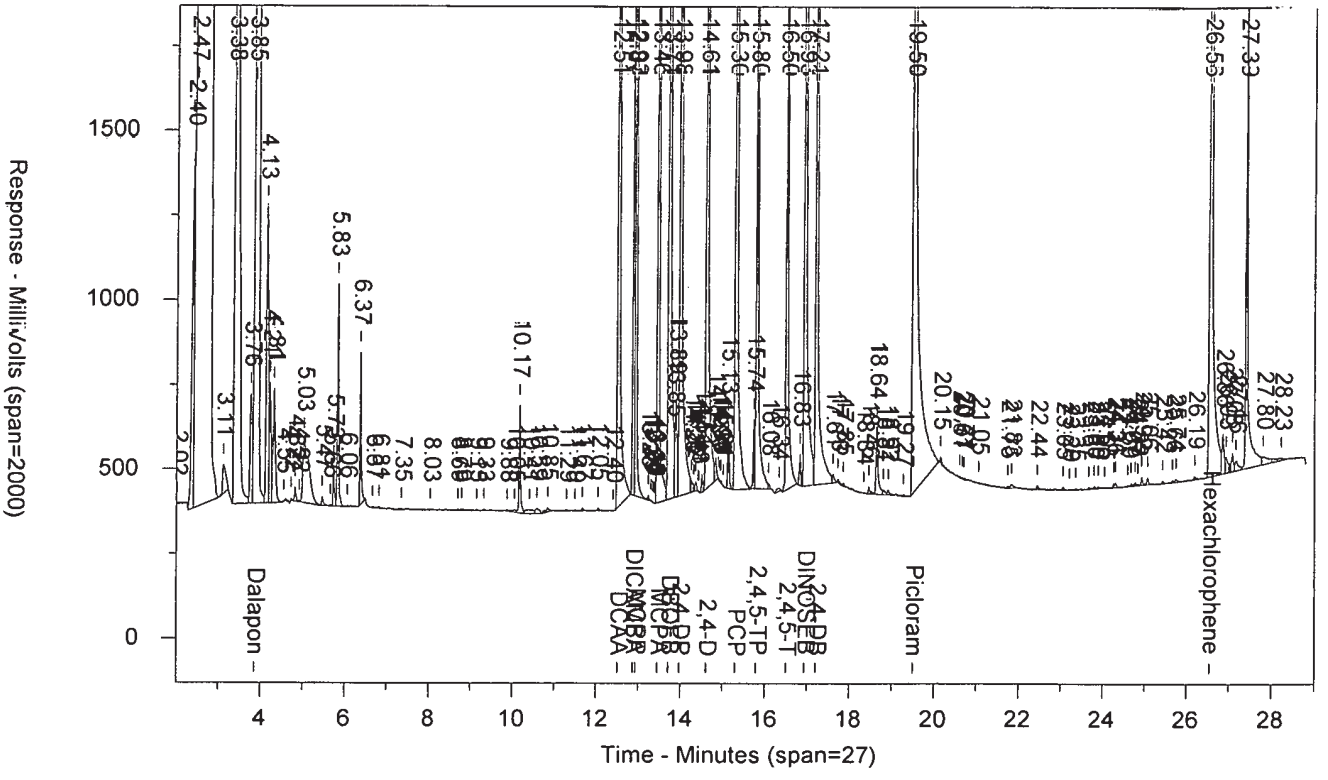

LANCASTER LABORATORIES

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

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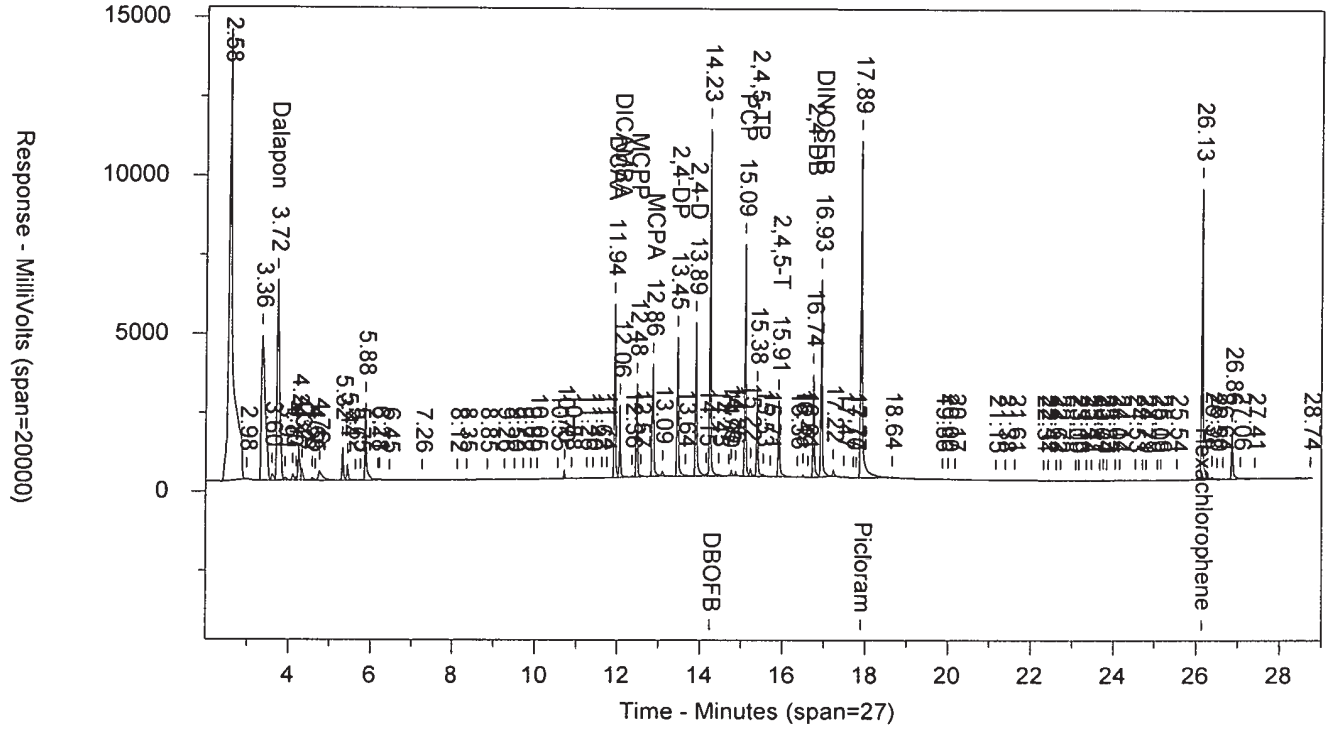

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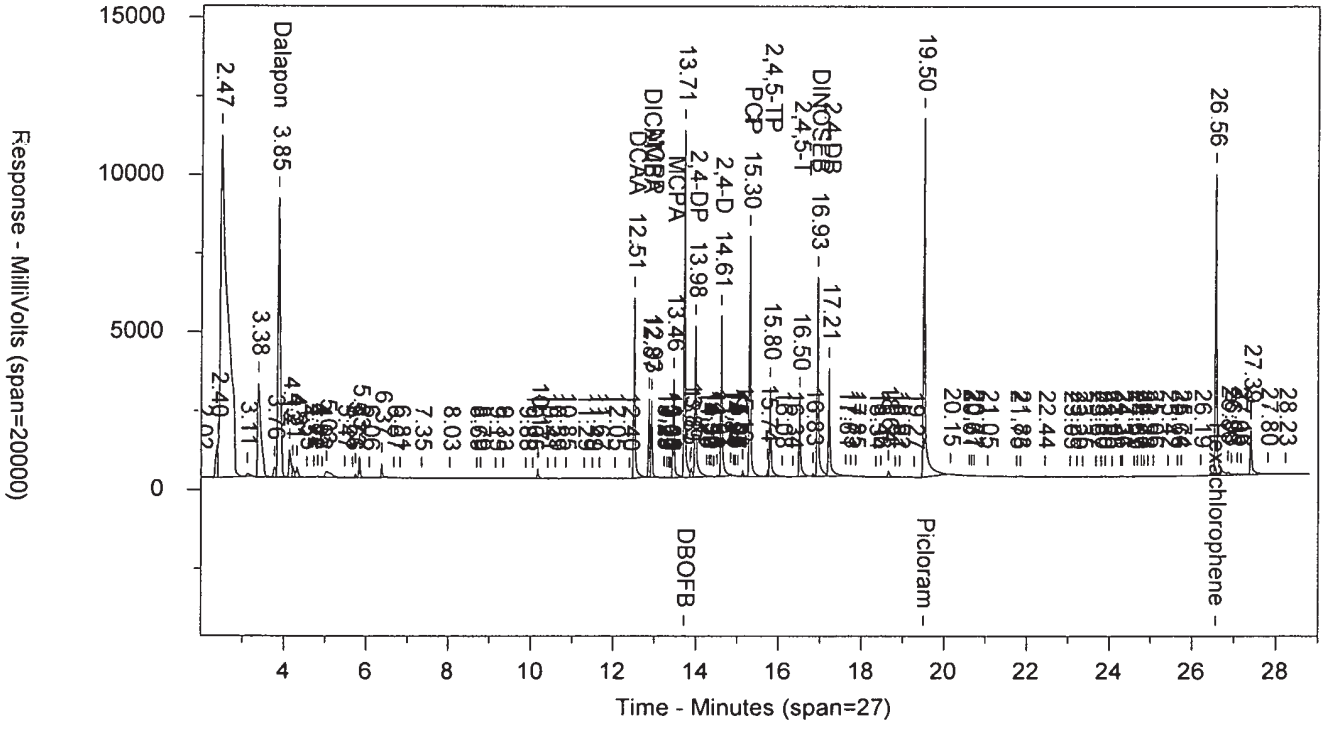

HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 8015A

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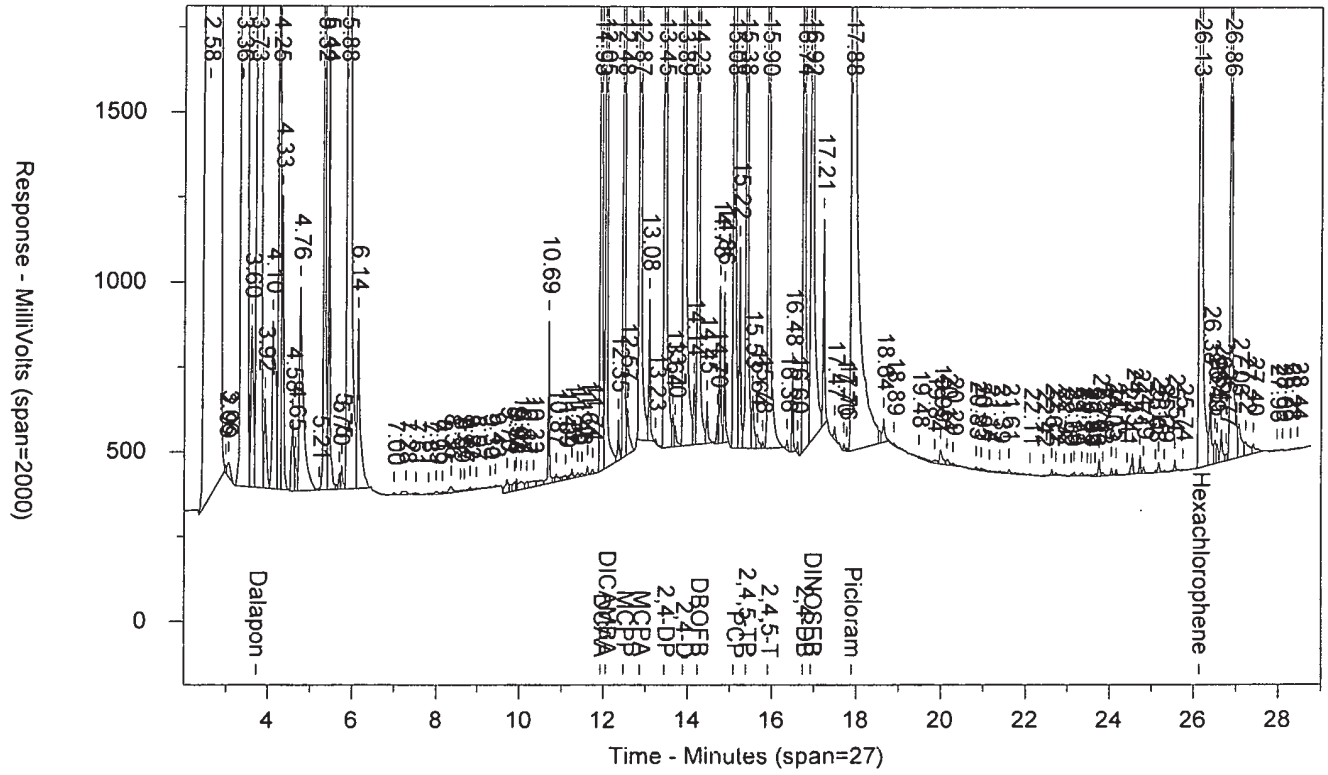

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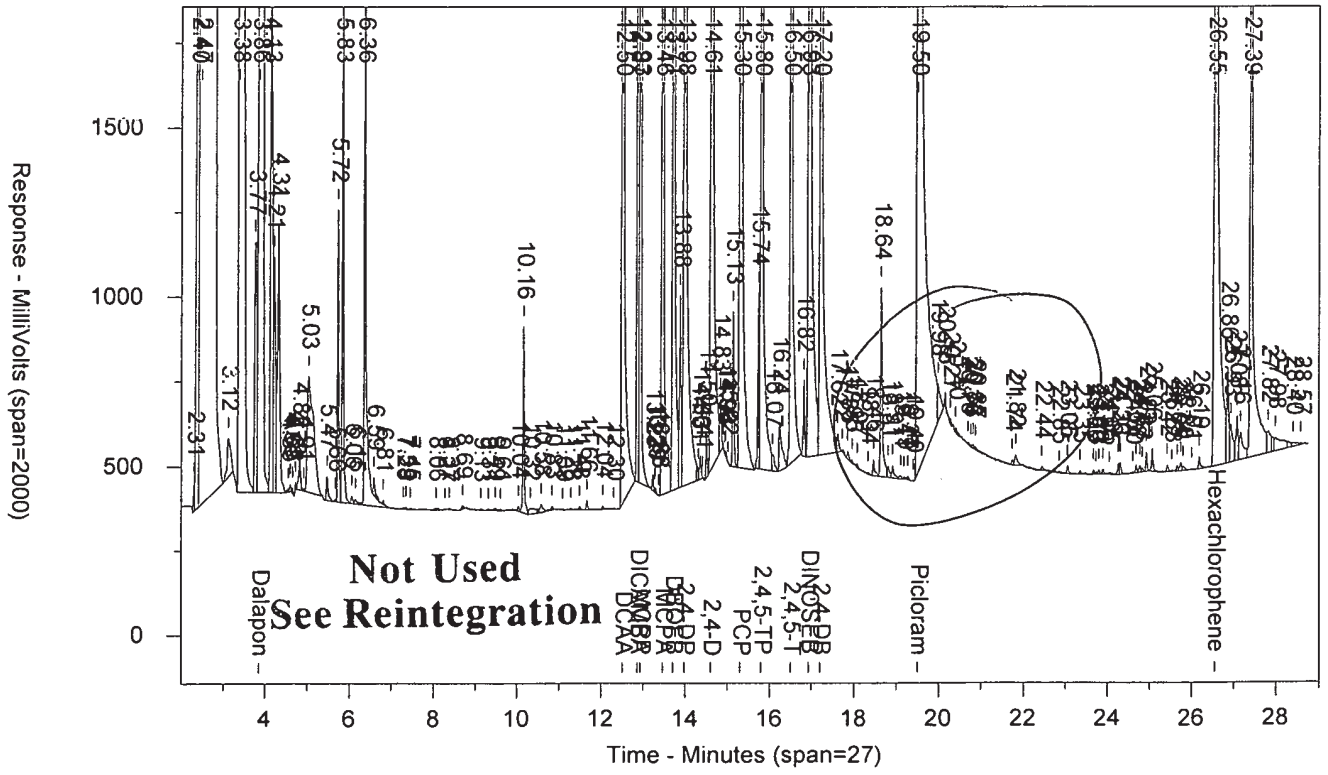

LANCASTER LABORATORIES

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	Hexachlorophen

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

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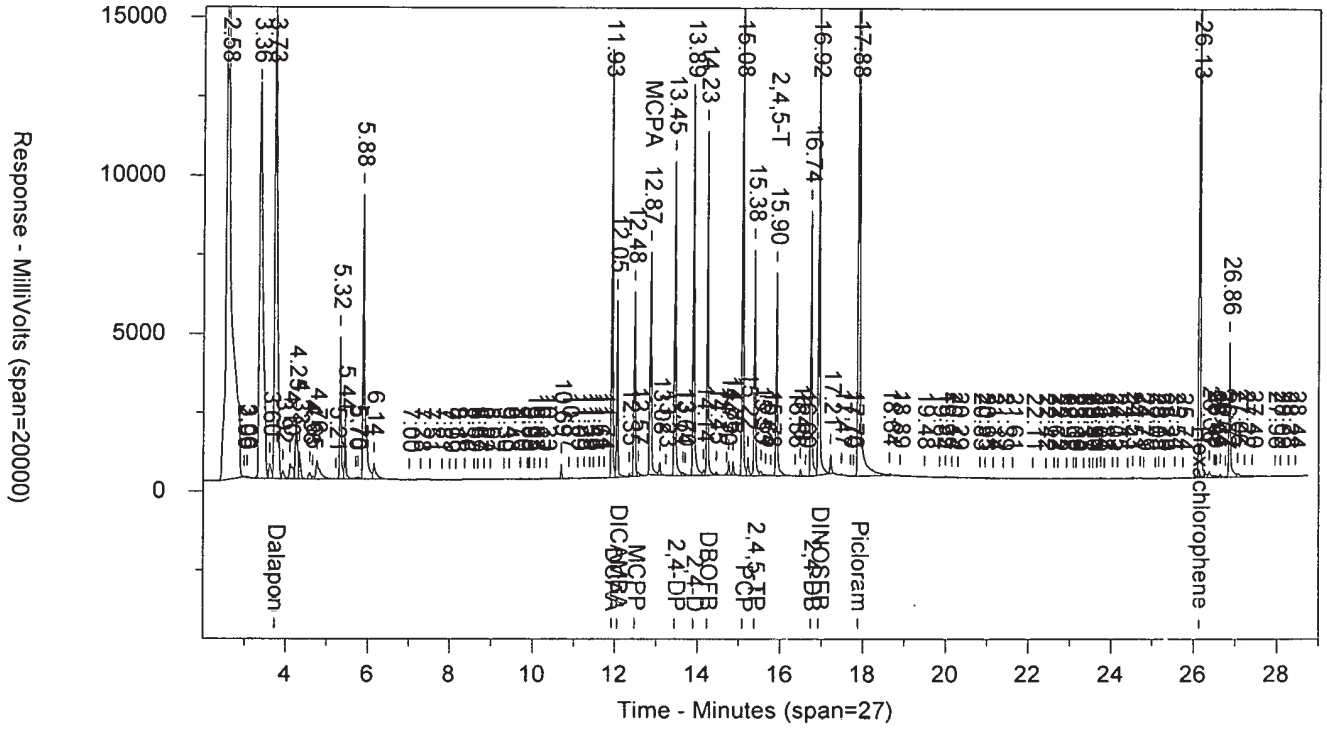

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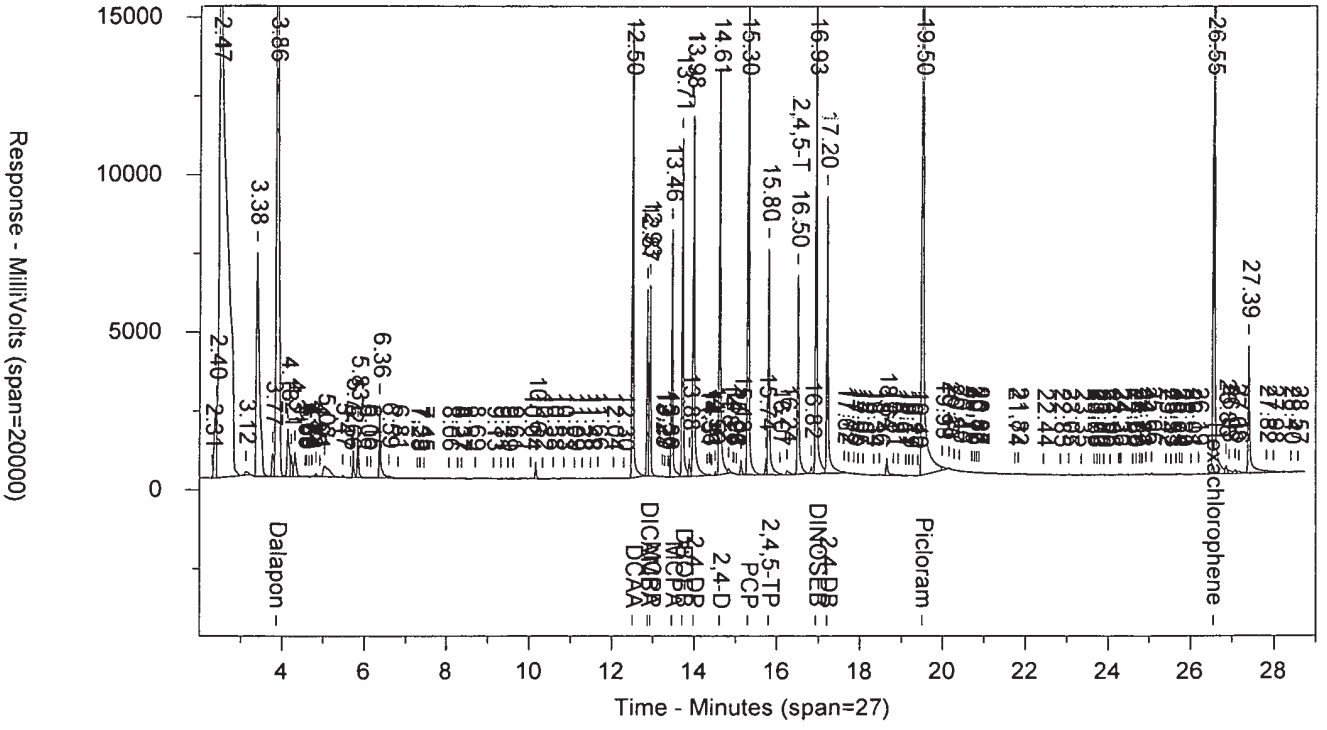

HERB51824E AAHERB5AA ICAL 1830299999 10407 SW-846 8015A

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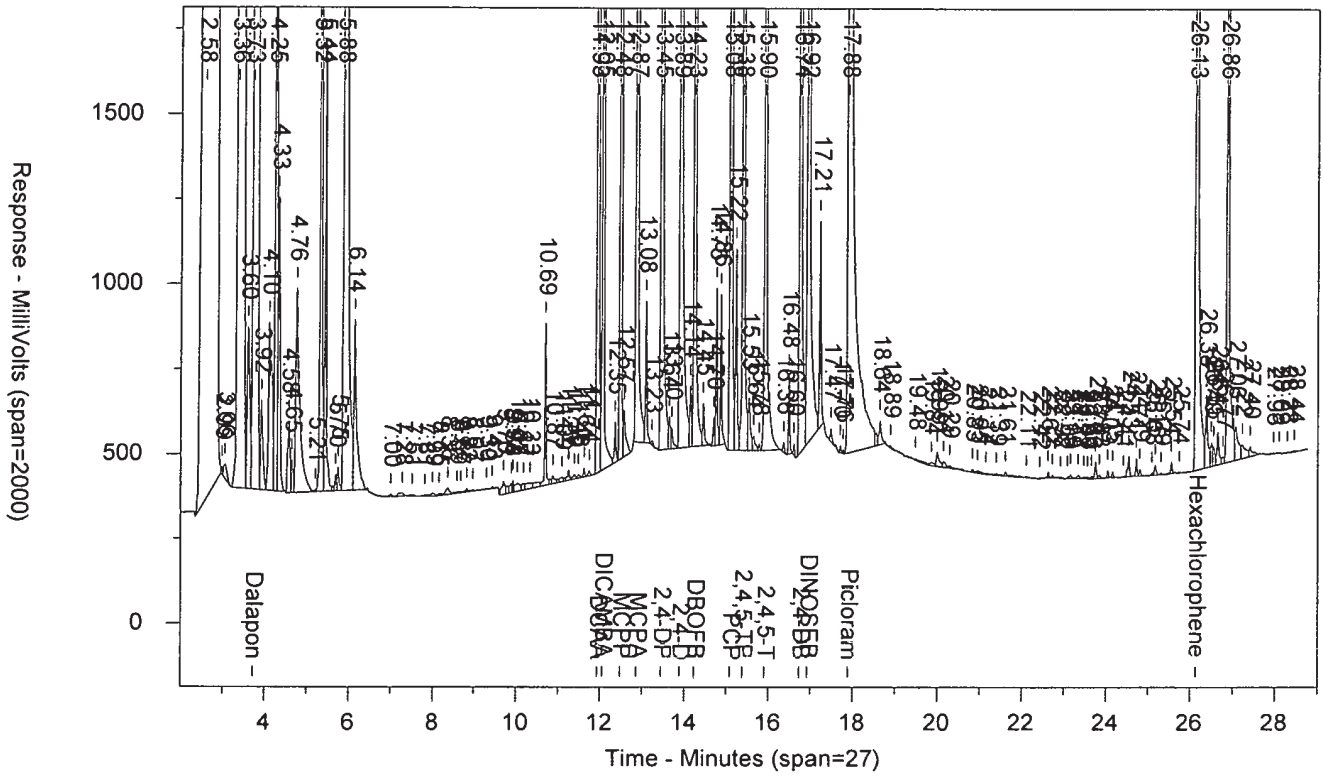

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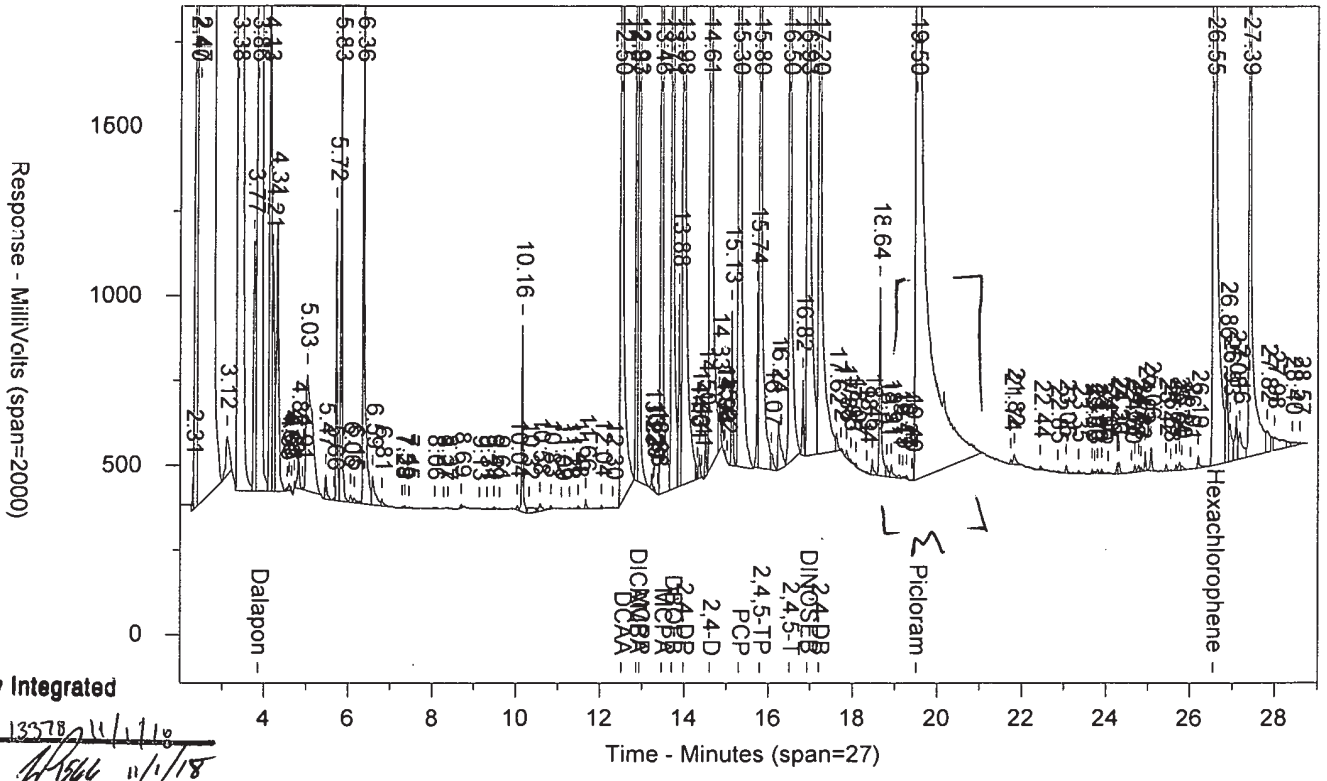

M = Manually Integrated

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 _____

Printed 1/1/2018 10:16:47 AM

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	Hexachlorophen

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

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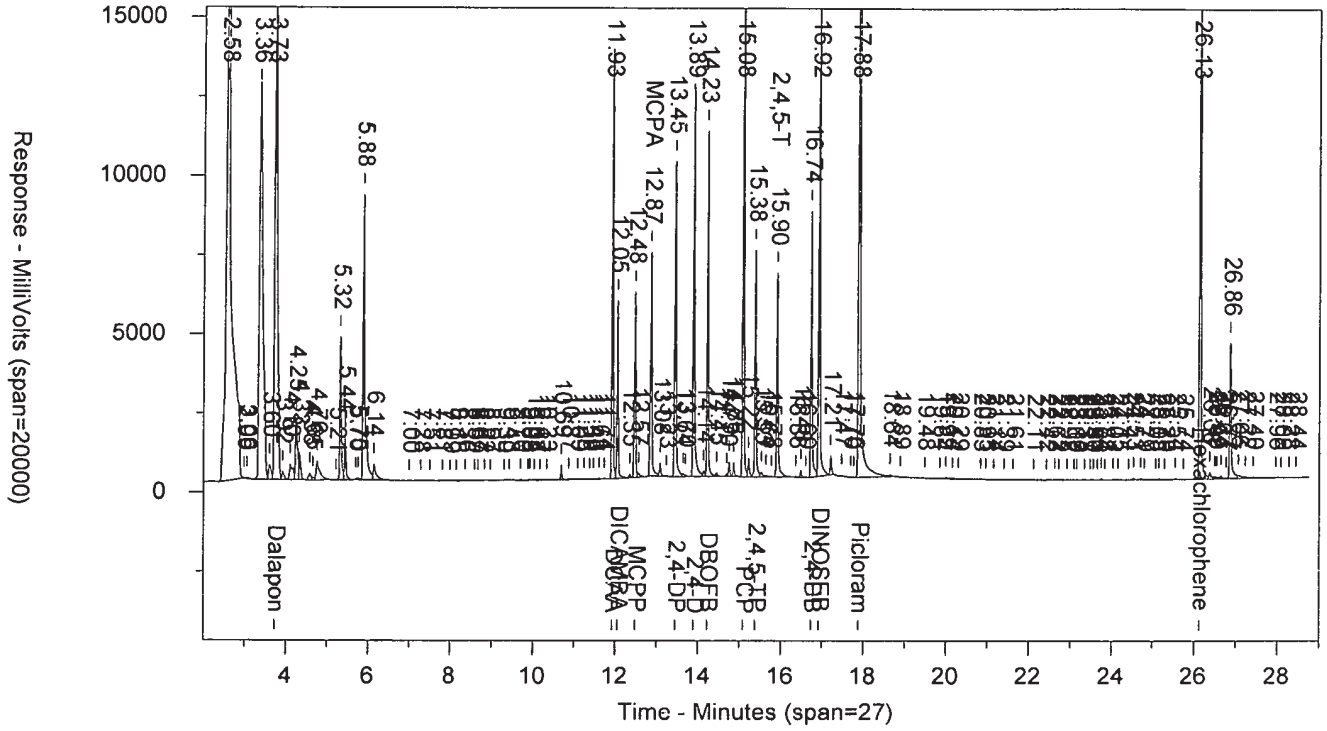

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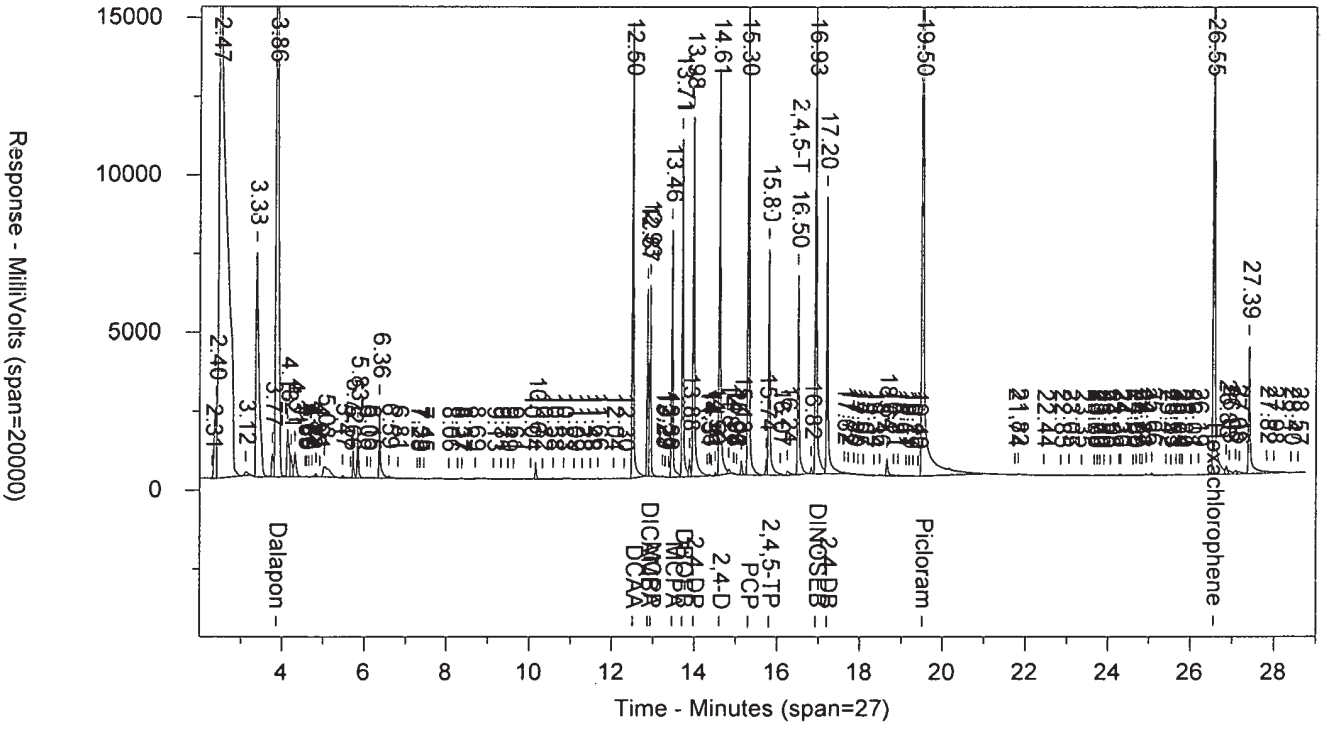

HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 8015A

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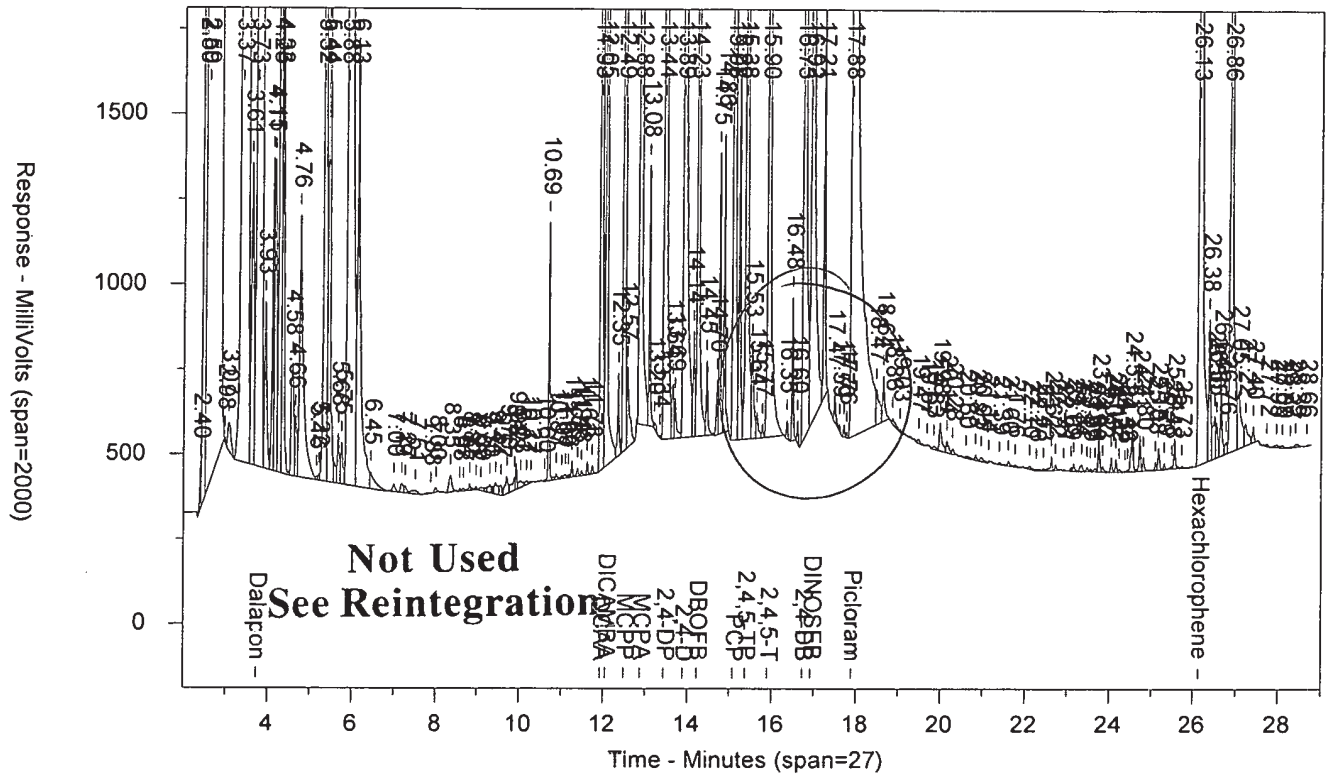

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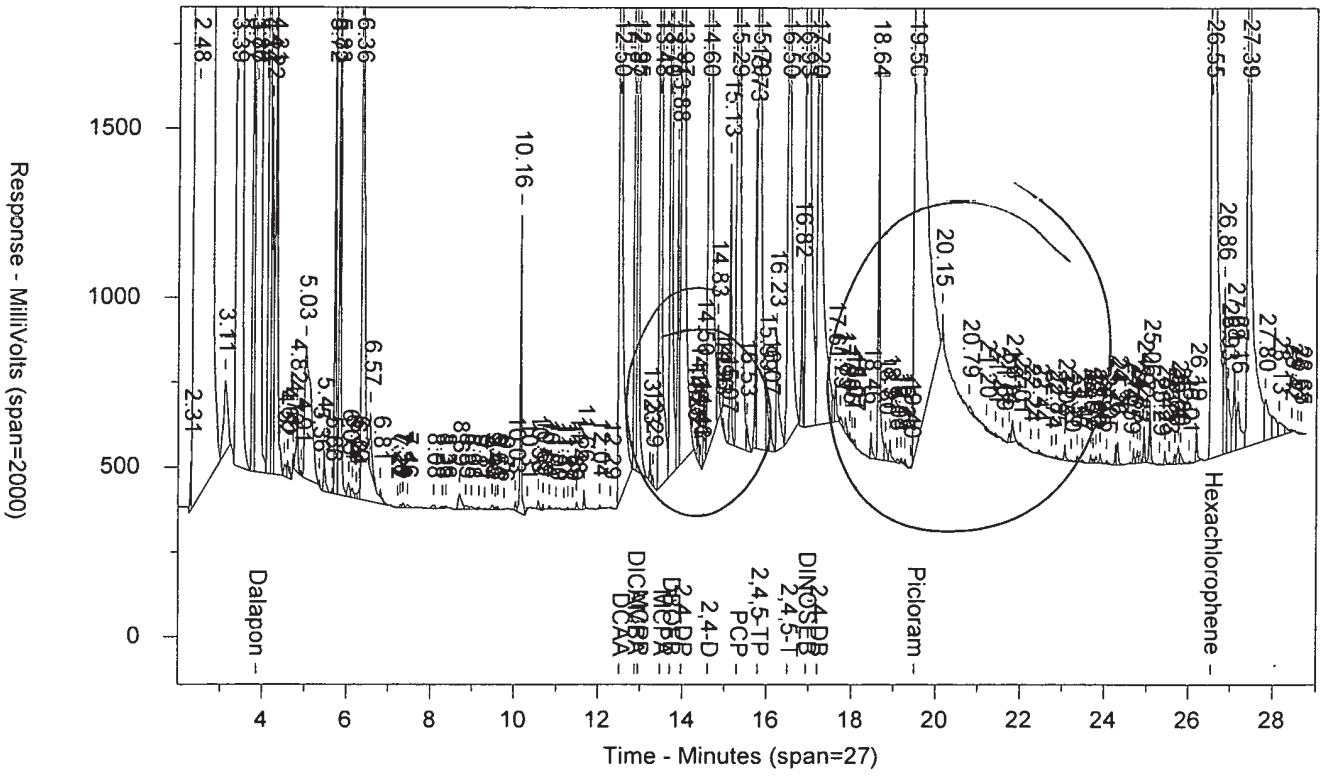

LANCASTER LABORATORIES

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

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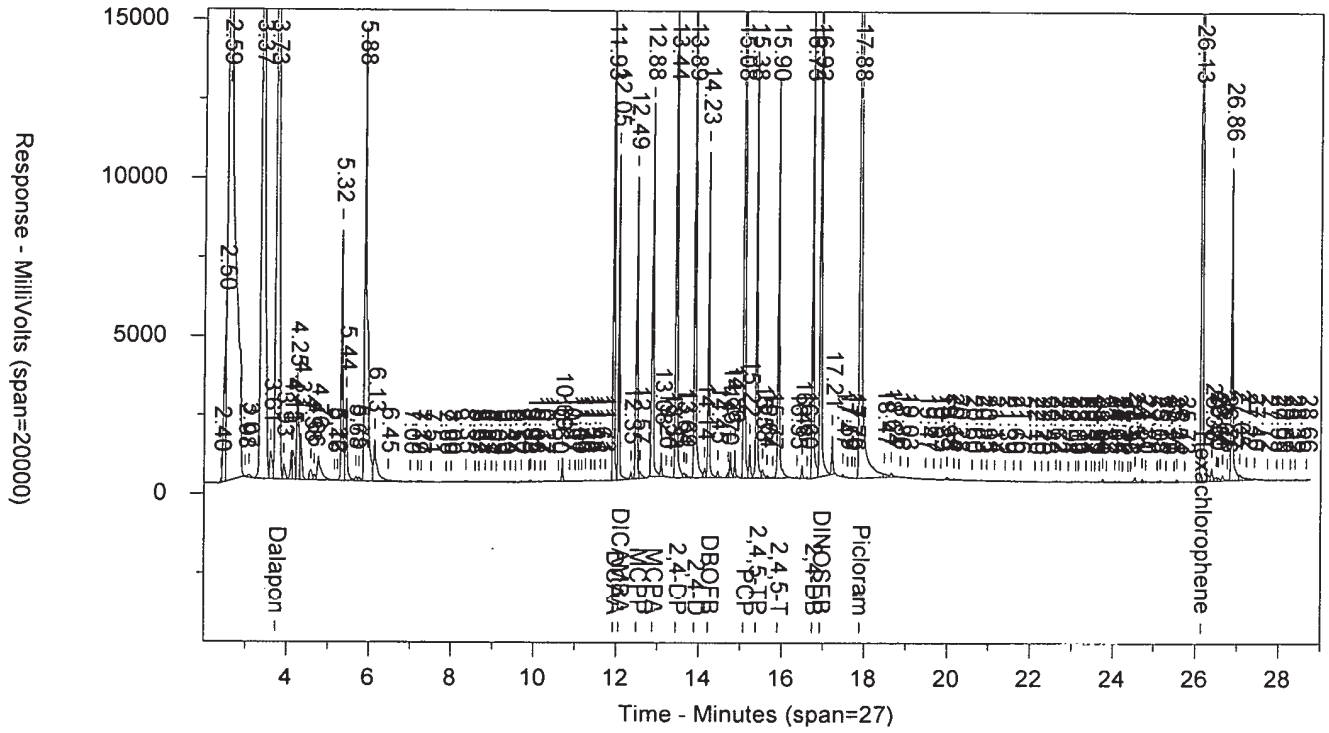

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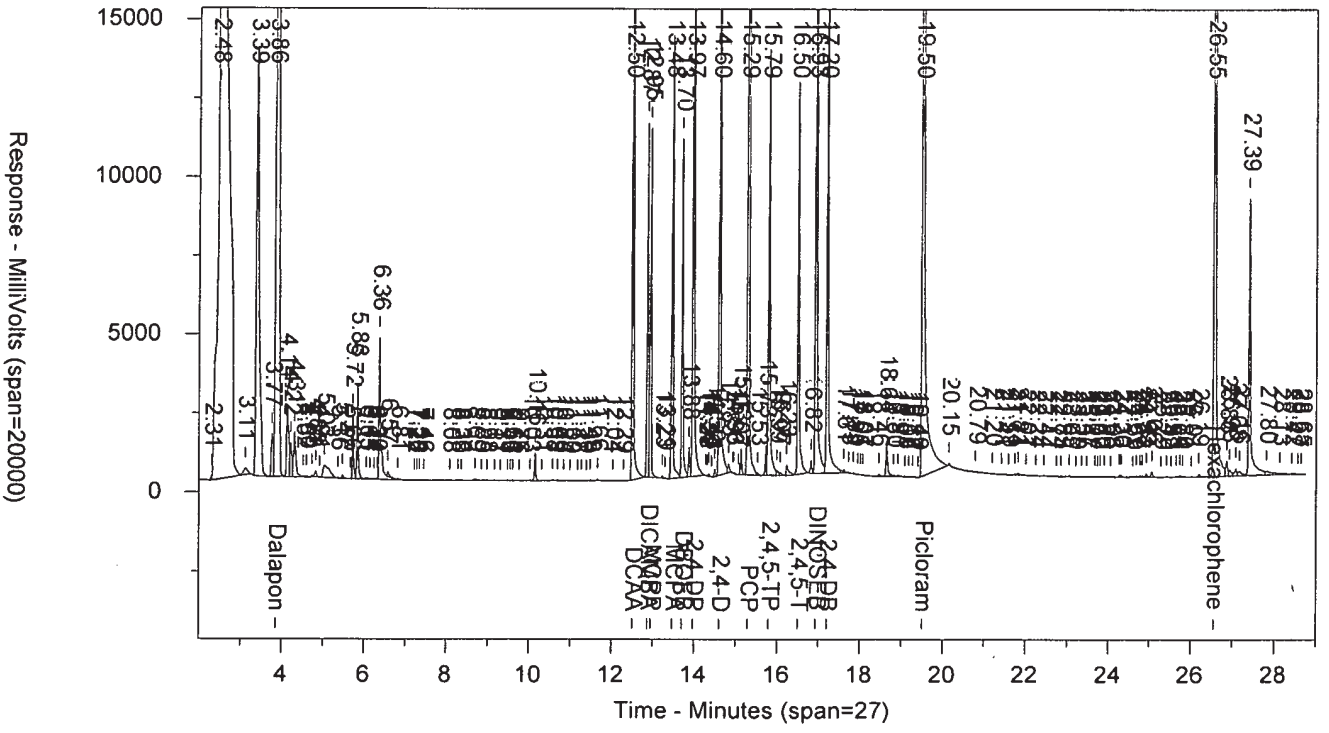

HERB61824E AAHERB6AA ICAL 1830299999 10407 SW-846 8015A

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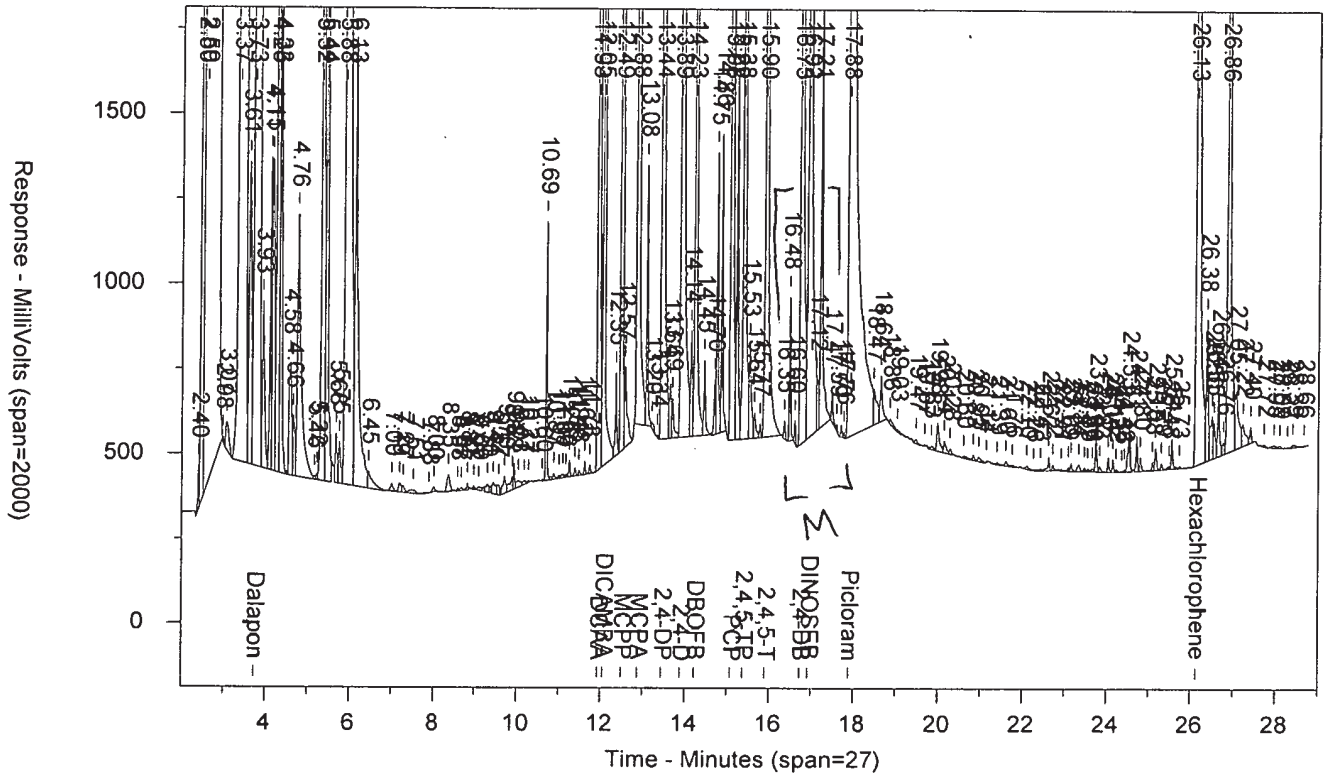

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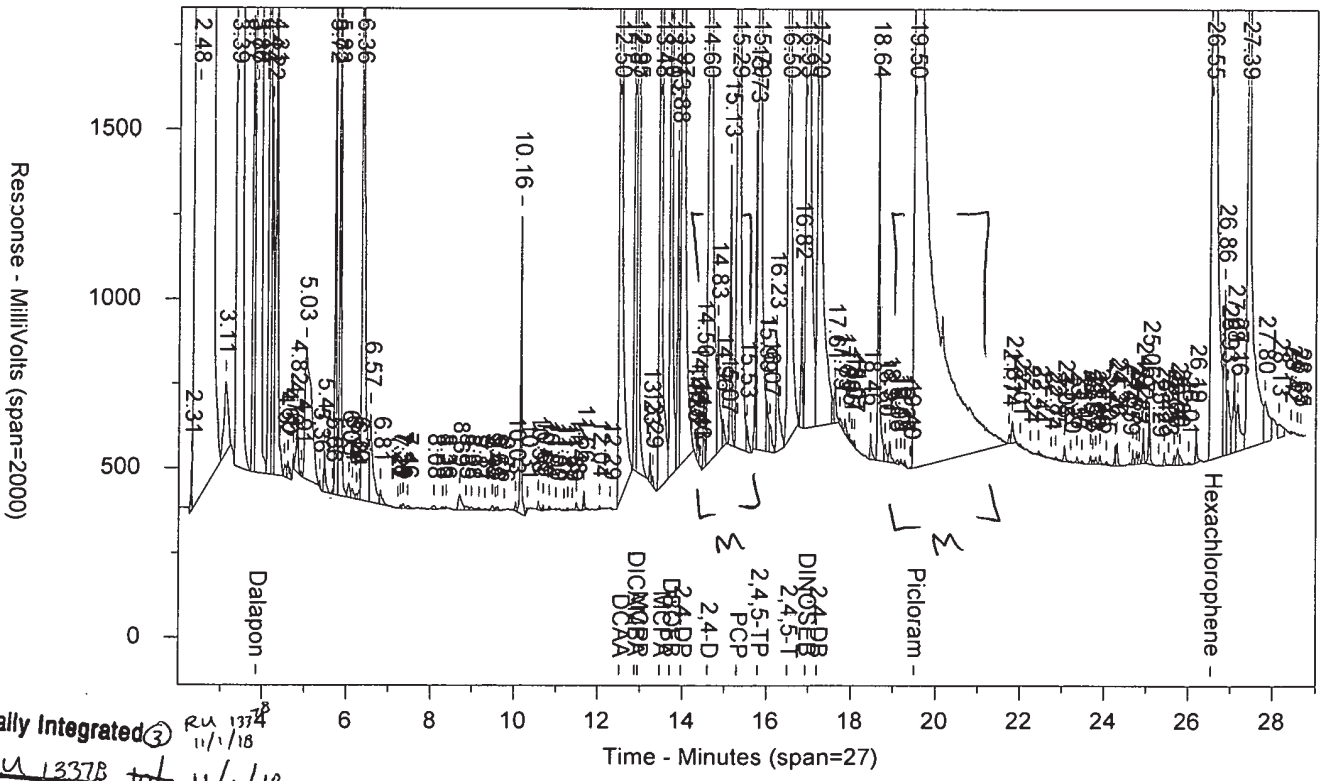

M = Manually Integrated (3) RU 13378 11/1/18

Analyst RU 13378 tod 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

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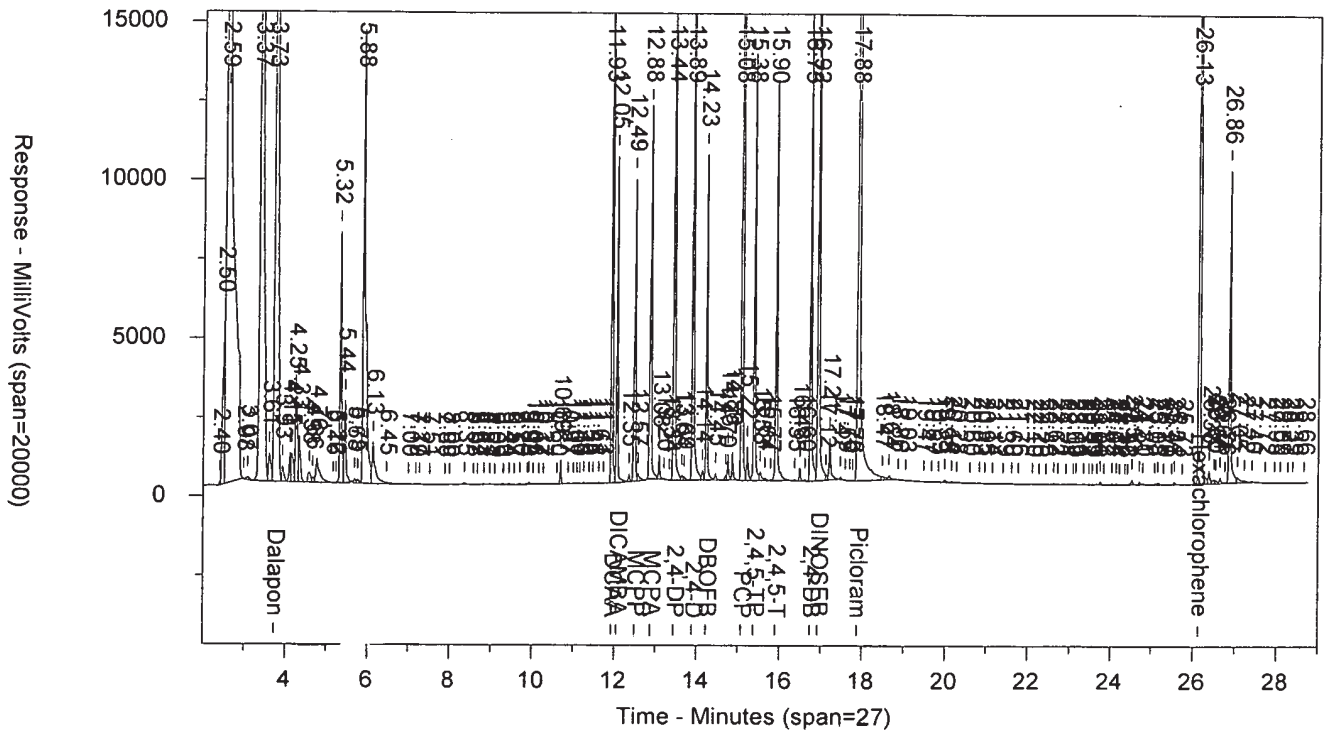

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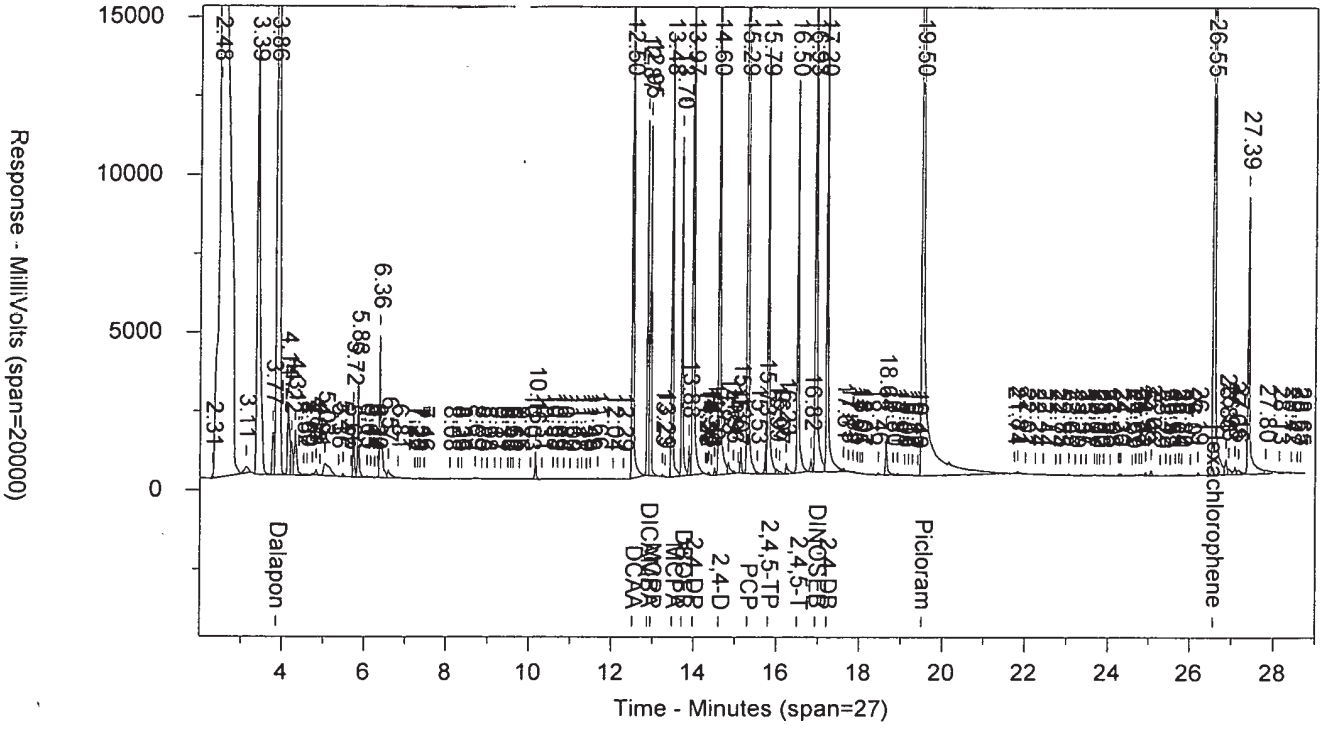

MDHEX1824E AAMDHEXAA ICAL 1830299999 10407 SW-846 8015/

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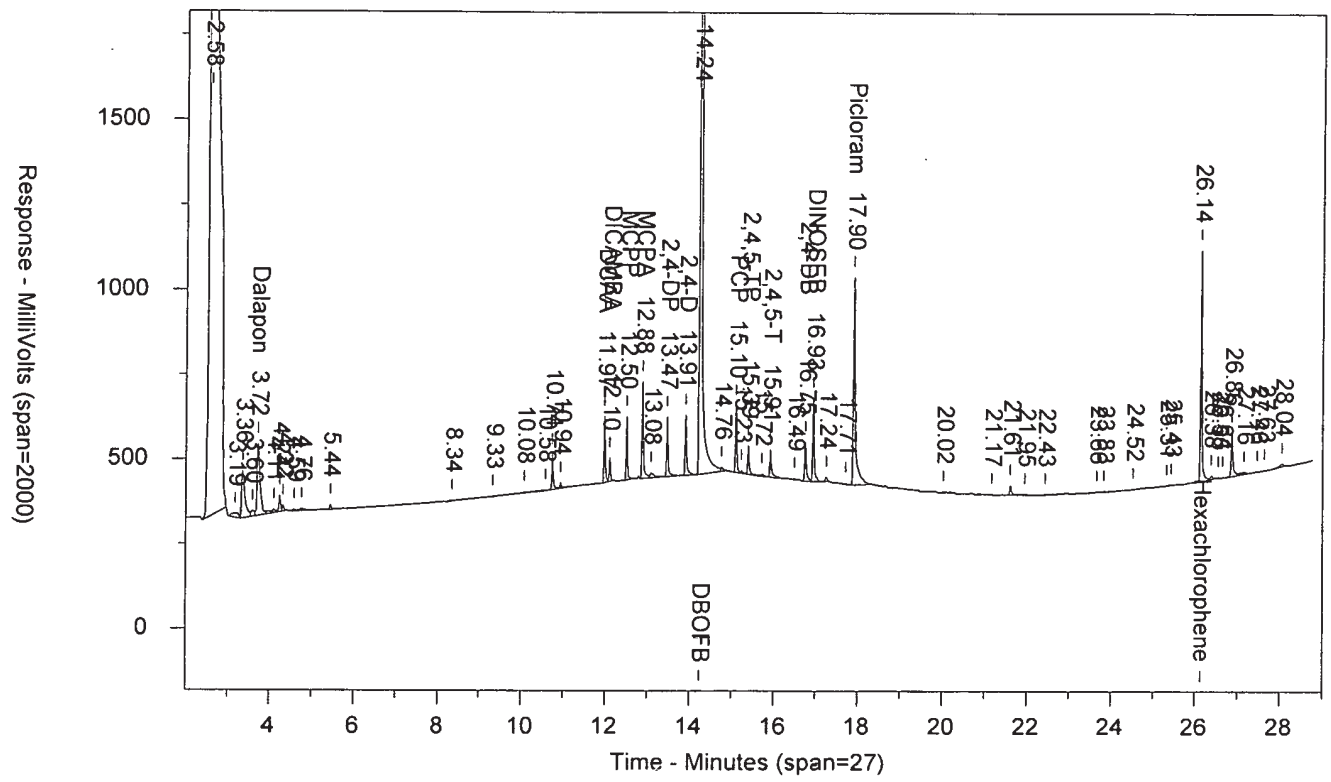

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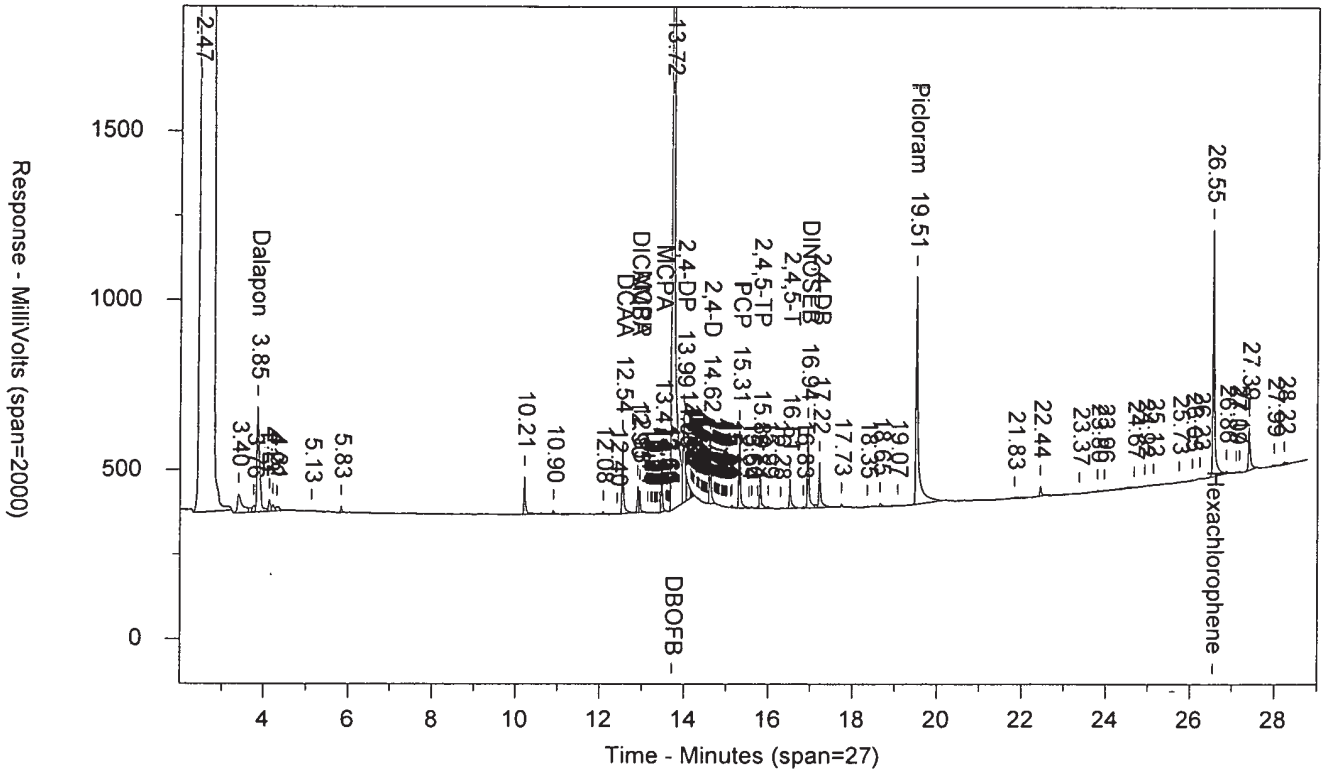

LANCASTER LABORATORIES

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
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File Reported On: 11/1/2018 at 10:35:13 AM

MDHEX1824E AAMDHEXAA ICAL 1830299999 10407 SW-846 8(

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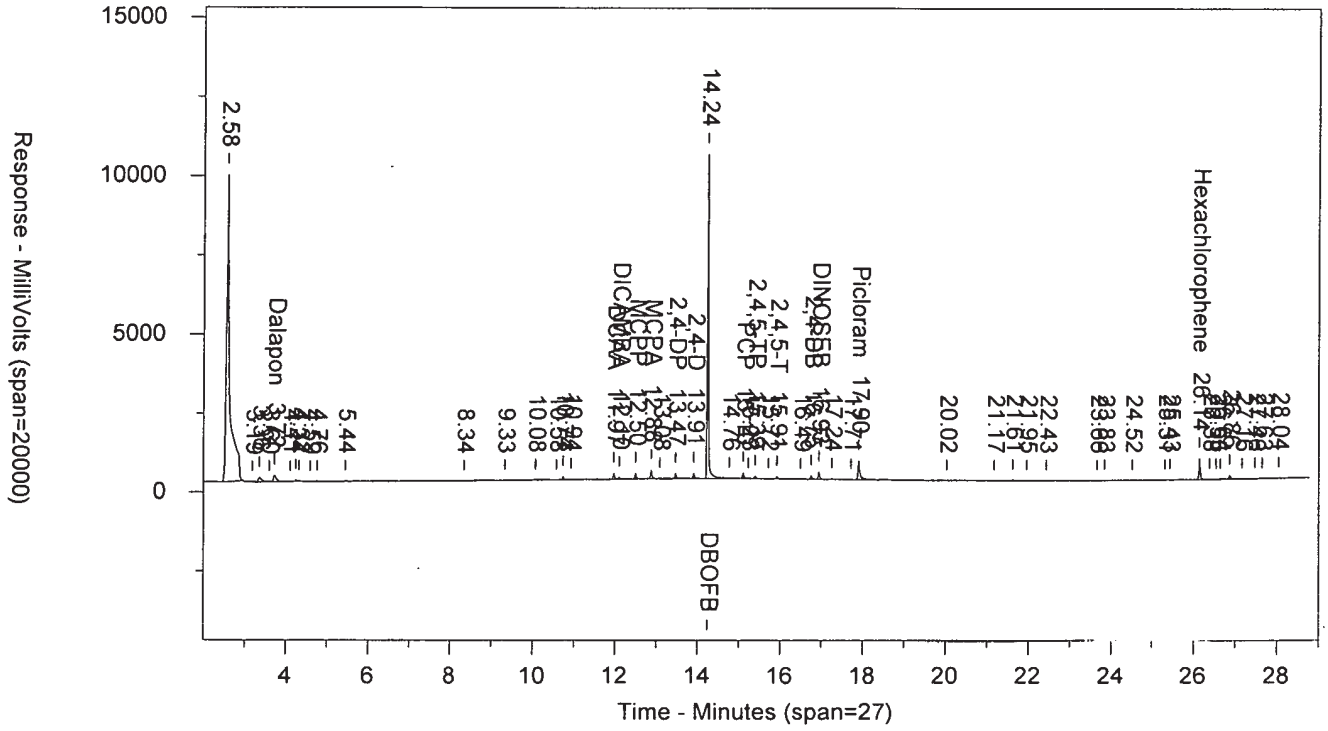

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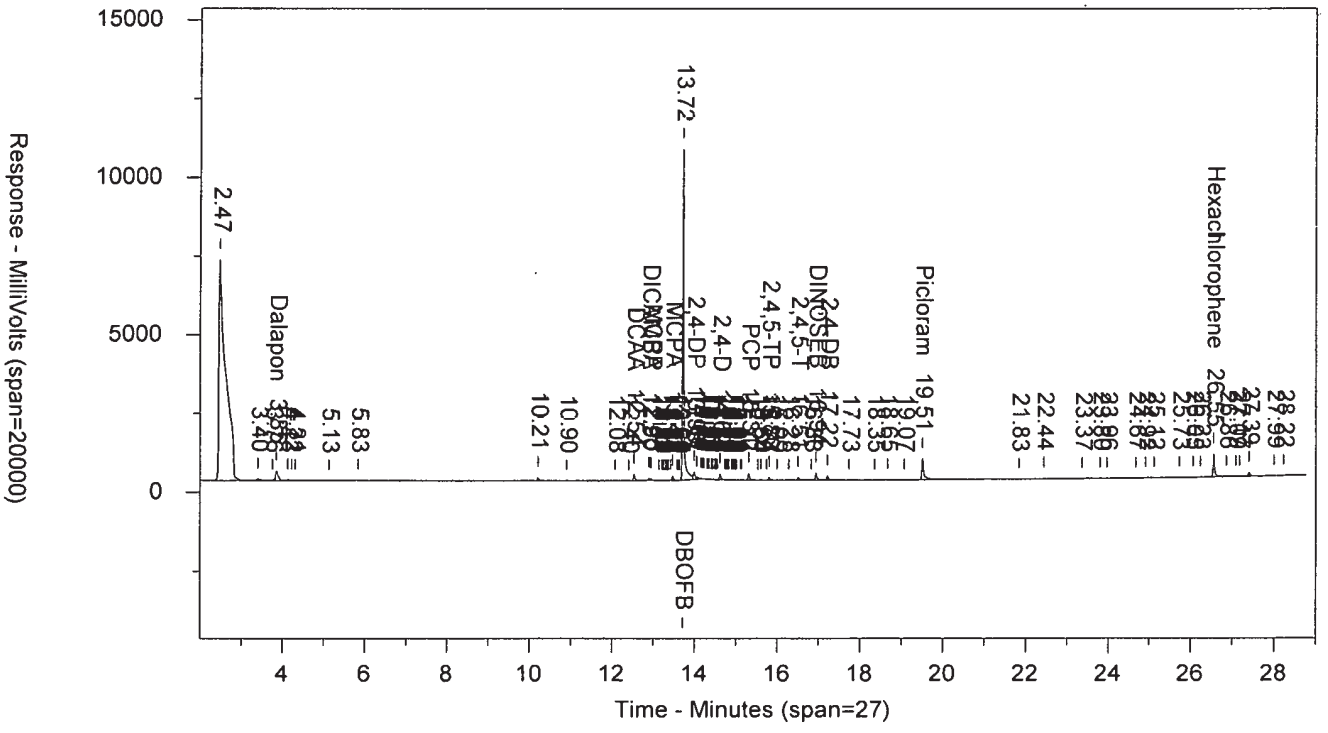

ICHBX1824G AAICHBXAA CCAL 1830299999 10407 SW-846 8015A

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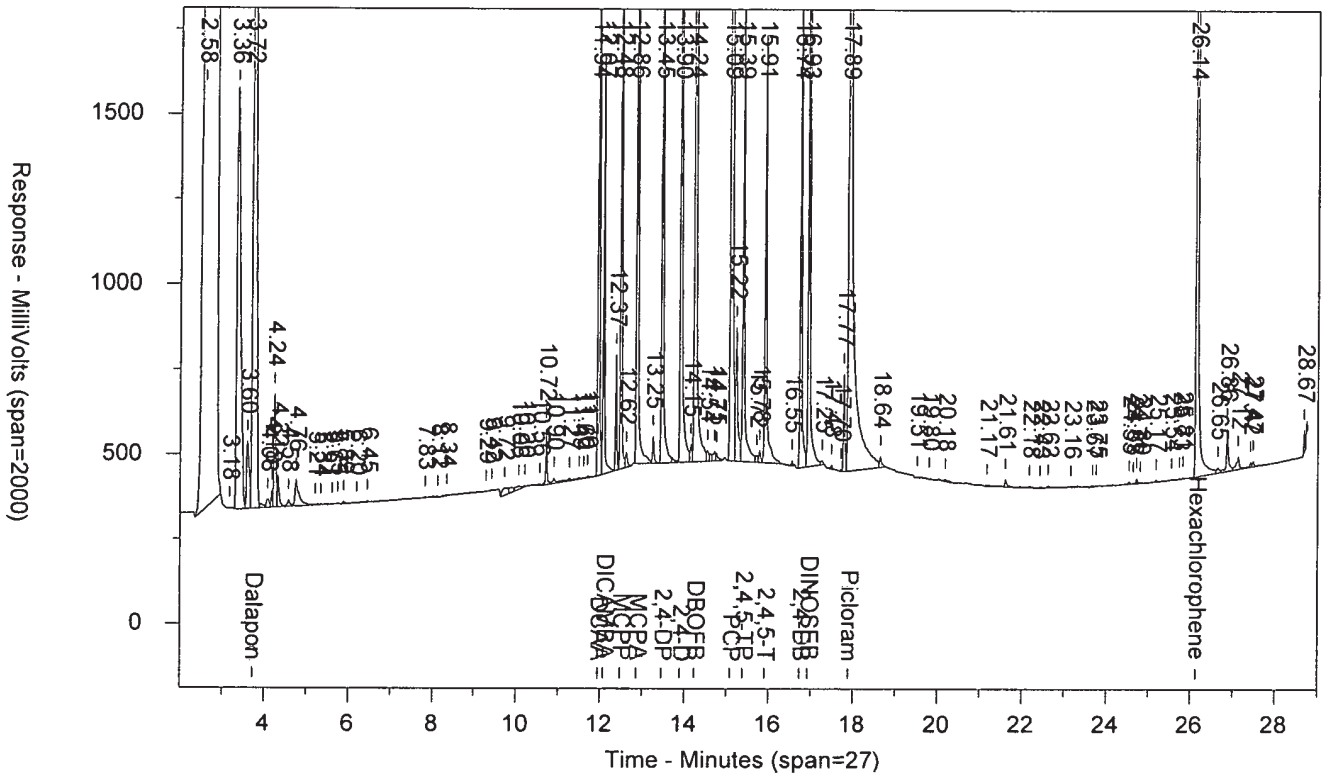

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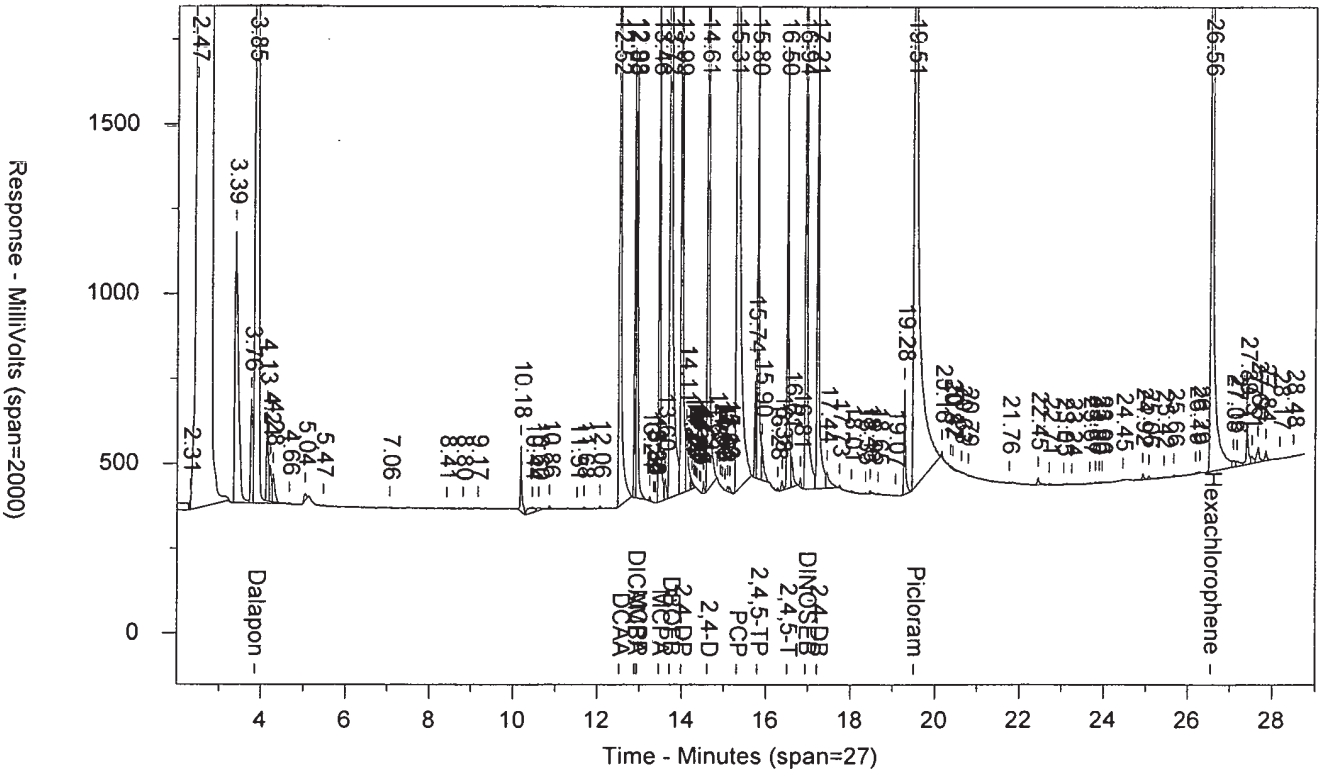

LANCASTER LABORATORIES

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
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ICHBX1824G AAICHBXAA CCAL 1830299999 10407 SW-846 801

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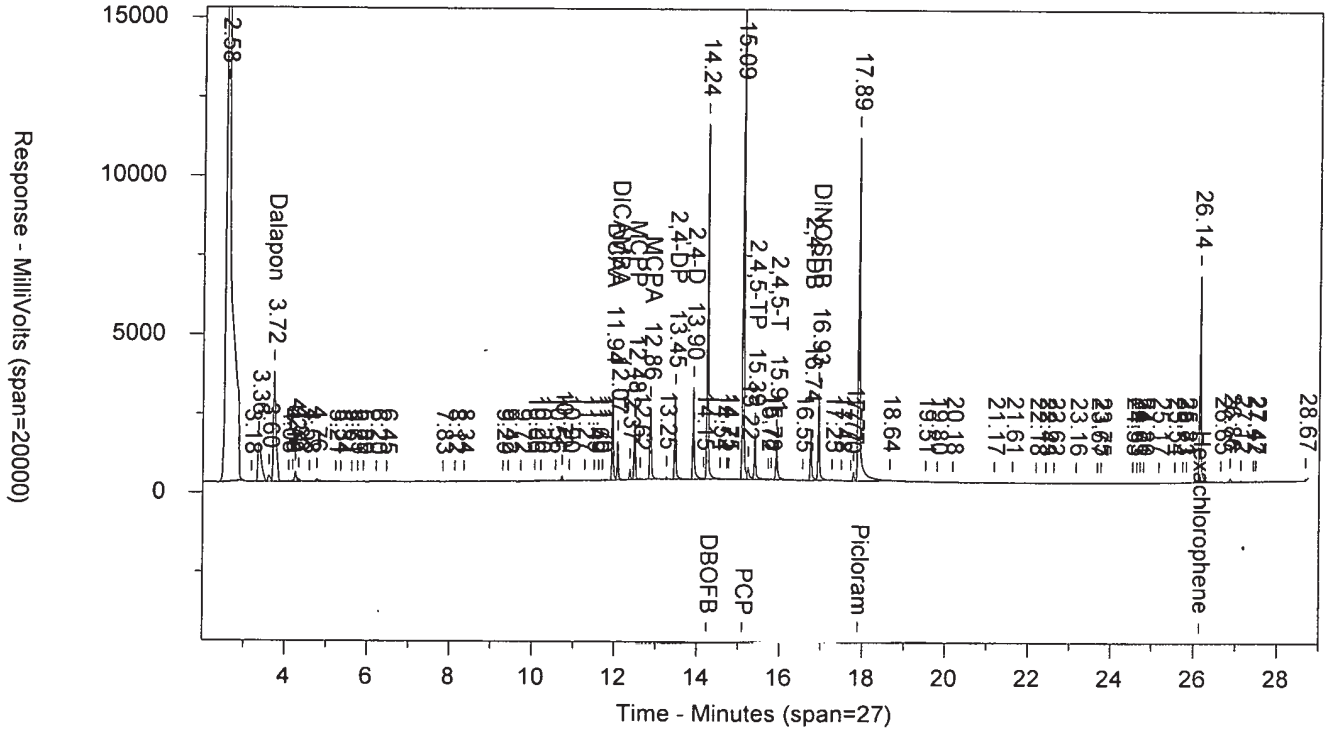

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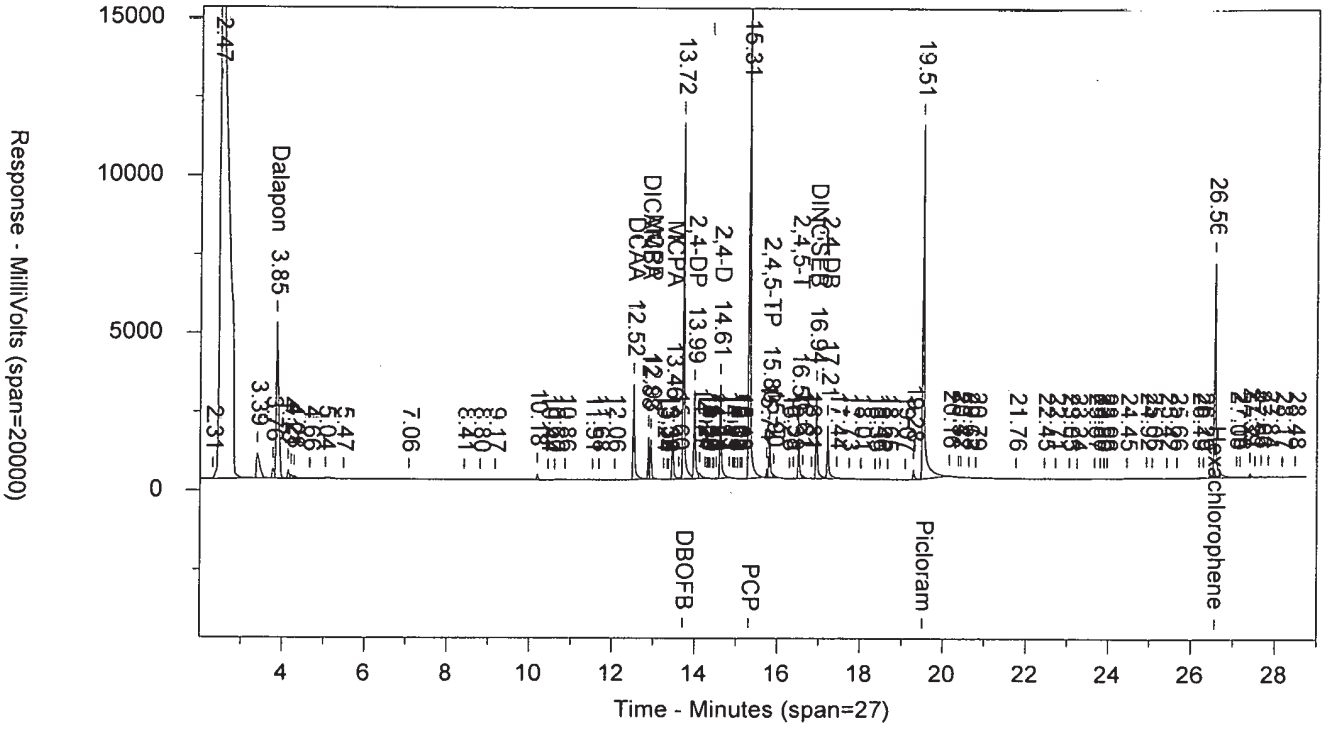

HERB31824F VAHERB3VA CCAL 1830999999 10407 SW-846 8015A

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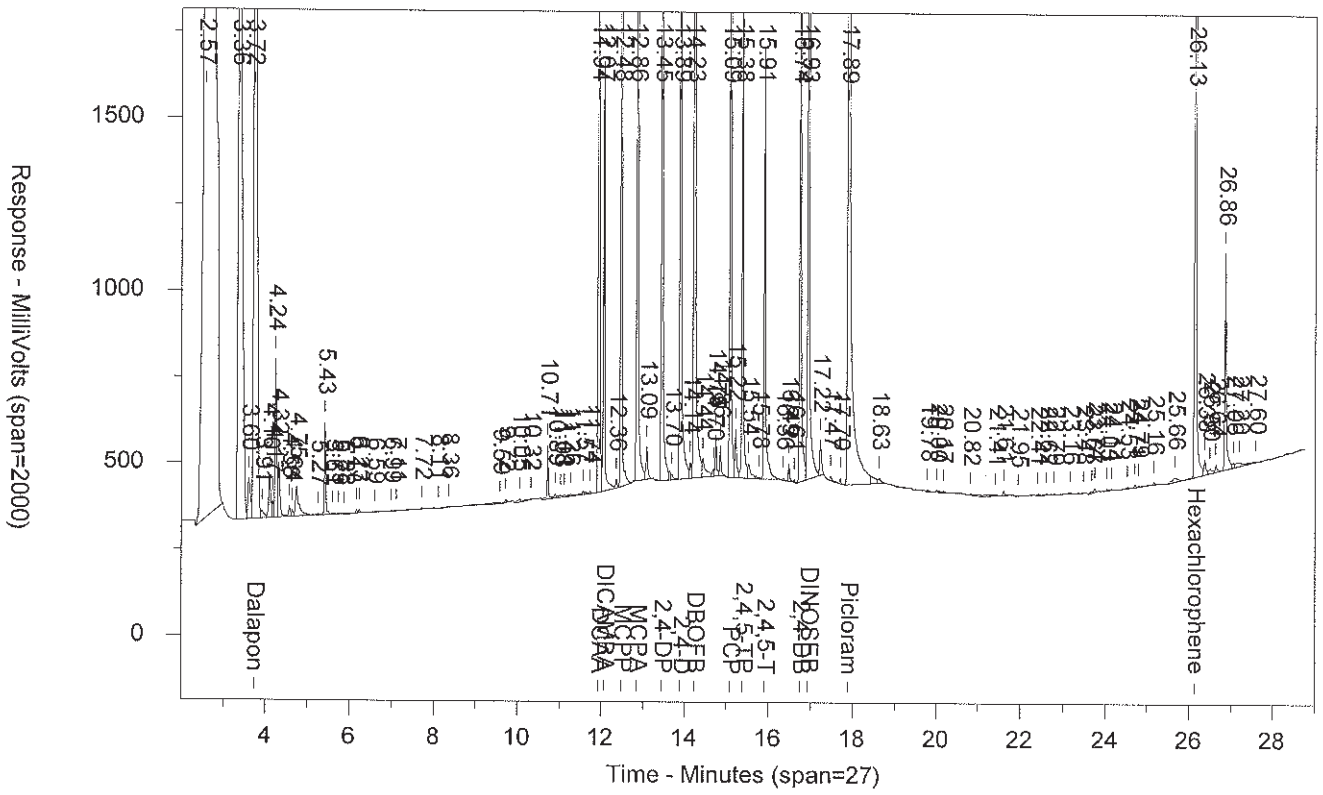

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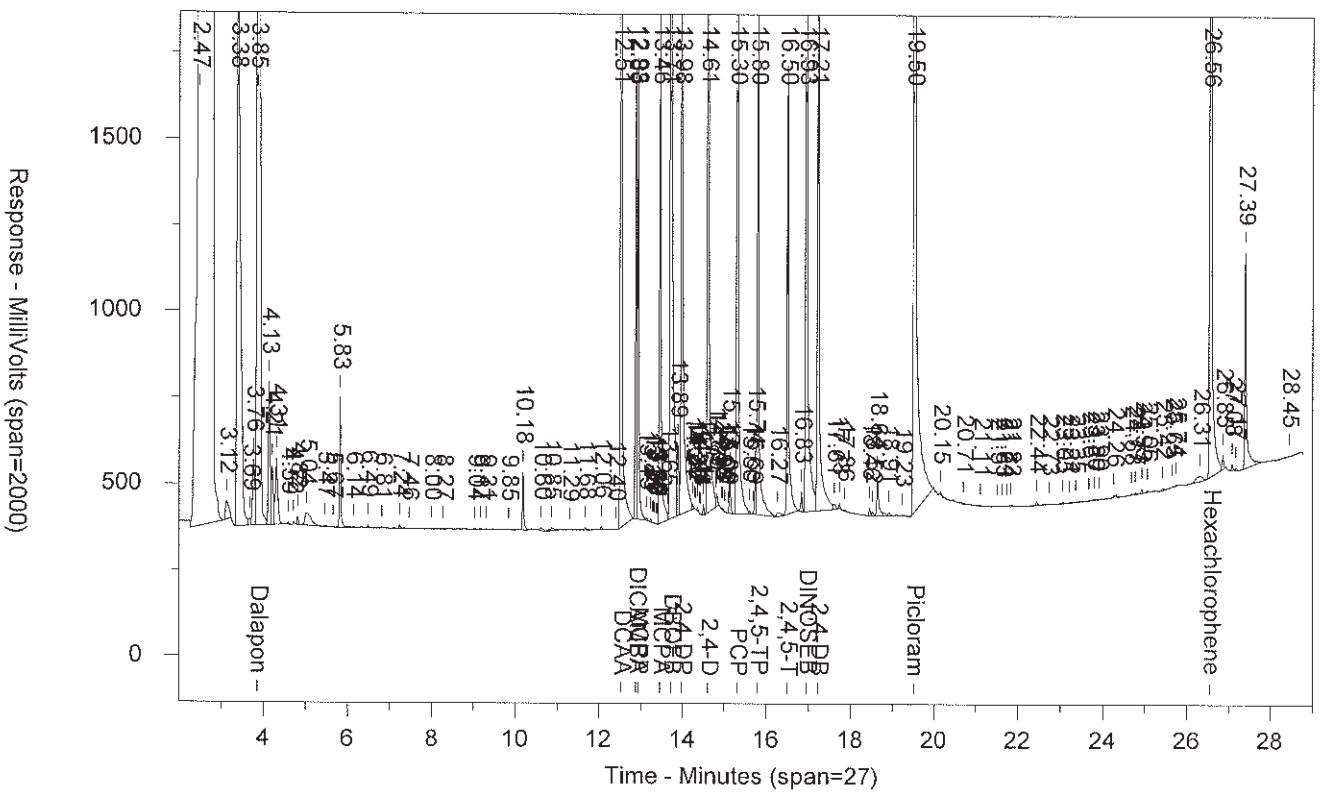

LANCASTER LABORATORIES

Sample Number: HERB31824F VAHERB3VA CCAL 1830999999 10407 SW-846 8015A
Injected On: 11/7/2018 5:19:41 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
3.721	3426128	396.985	Dalapon	3.855	4827485	393.08	Dalapon
11.94	3075093	197.801	DCAA	12.515	3083123	190.552	DCAA
12.066	1246784	19.964	DICAMBA	12.876	1308894	19.47	DICAMBA
12.475	1999740	22992.06	MCPP	12.929	1335996	19990.7	MCPP
12.858	2389226	22094.09	MCPA	13.456	1841567	20035.93	MCPA
13.452	2557054	199.321	2,4-DP	13.983	2727113	192.754	2,4-DP
14.23	11541880	1	DBOFB	13.714	11743130	1	DBOFB
13.894	2676300	174.507	2,4-D	14.609	2670045	164.747	2,4-D
15.091	3877038	19.992	PCP	15.303	4021972	19.391	PCP
15.382	1468399	20.002	2,4,5-TP	15.798	1495541	19.538	2,4,5-TP
15.908	1248910	19.273	2,4,5-T	16.501	1298714	19.204	2,4,5-T
16.739	1729014	192.326	2,4-DB	17.208	1843244	192.264	2,4-DB
16.927	3603402	106.866	DINOSEB	16.934	3615768	103.85	DINOSEB
17.887	5486390	97.654	Picloram	19.505	5877021	96.153	Picloram
26.131	4823765	78.787	Hexachlorophene	26.555	4946663	78.108	Hexachlorophen

Files:
Area File: 15herb18304004.056.RAW
Area File: 15herb18304004B.056.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: 11/7/2018 5:48:28 PM
File Reported On: 11/8/2018 at 7:59:17 AM

HERB31824F VAHERB3VA CCAL 1830999999 10407 SW-846 80

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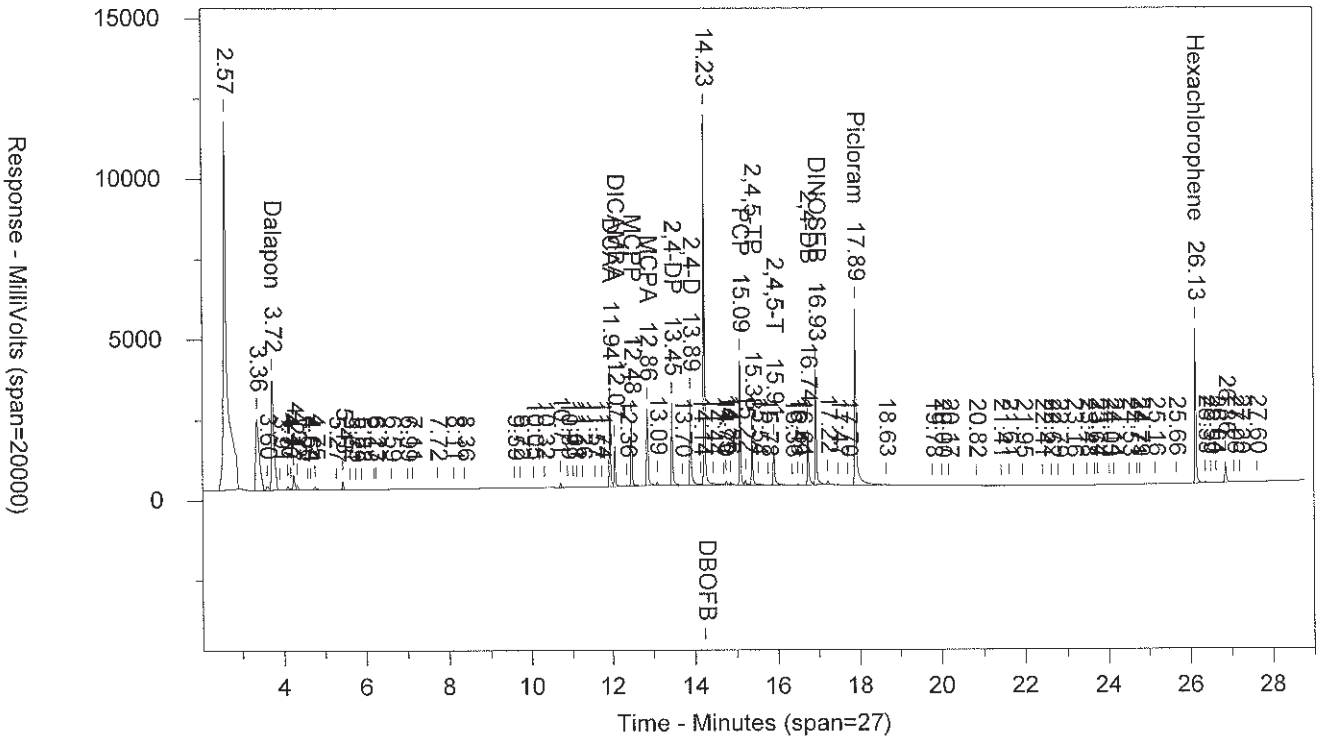

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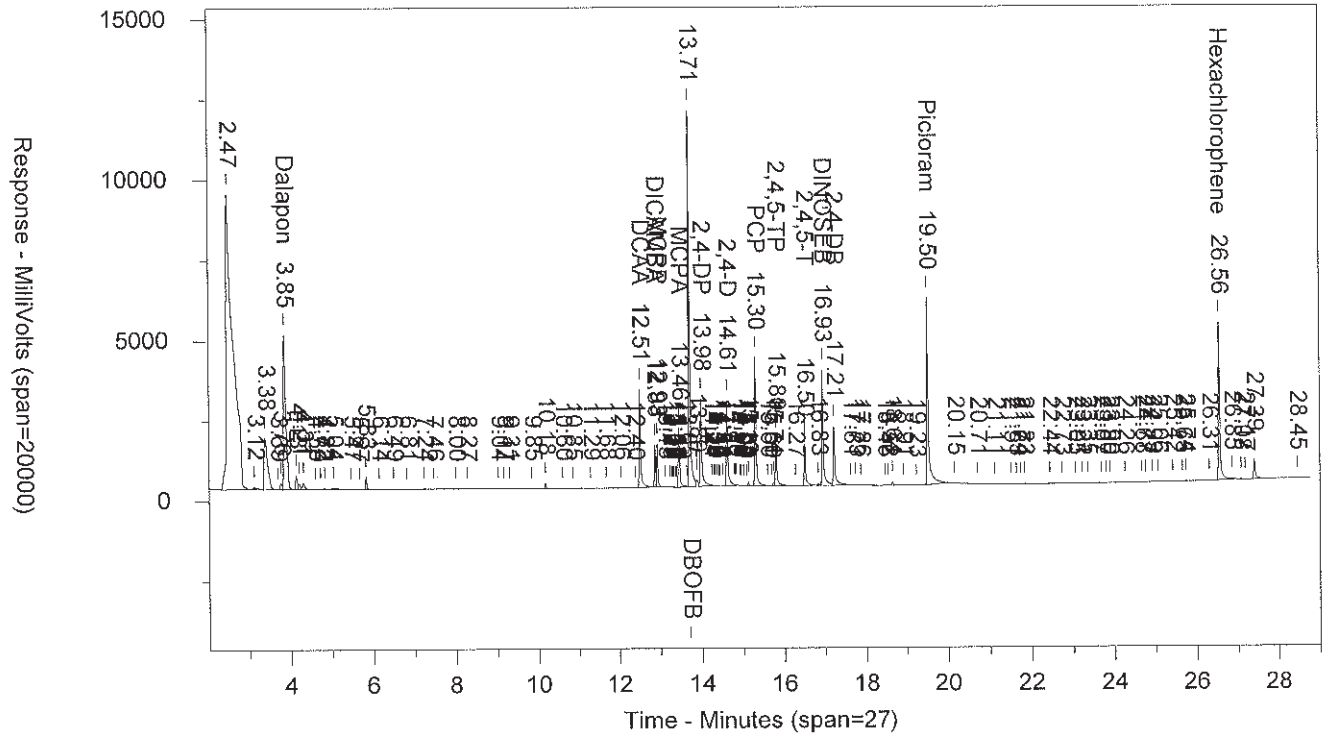

HIBLKX1824B SJHIBLKSJ MISC 1830999999 10407 SW-846 8015A

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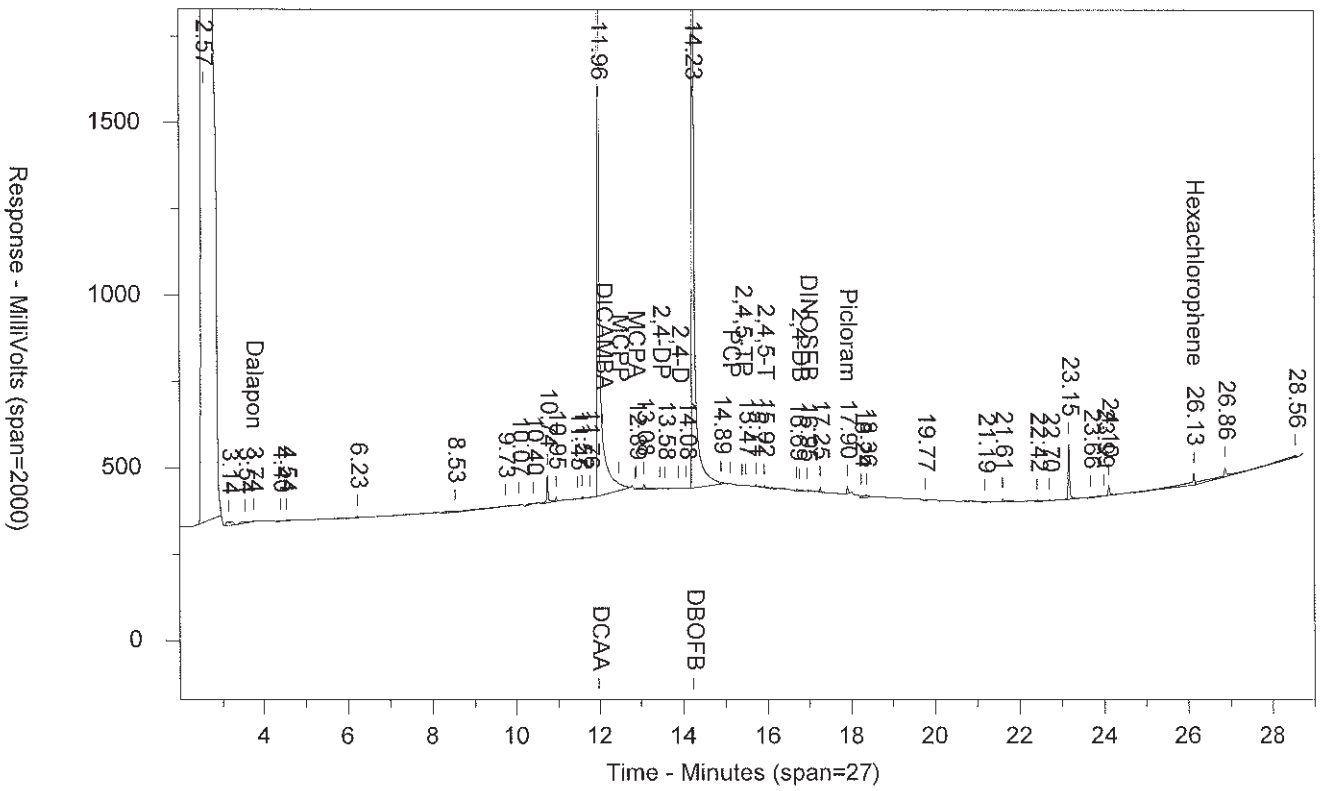

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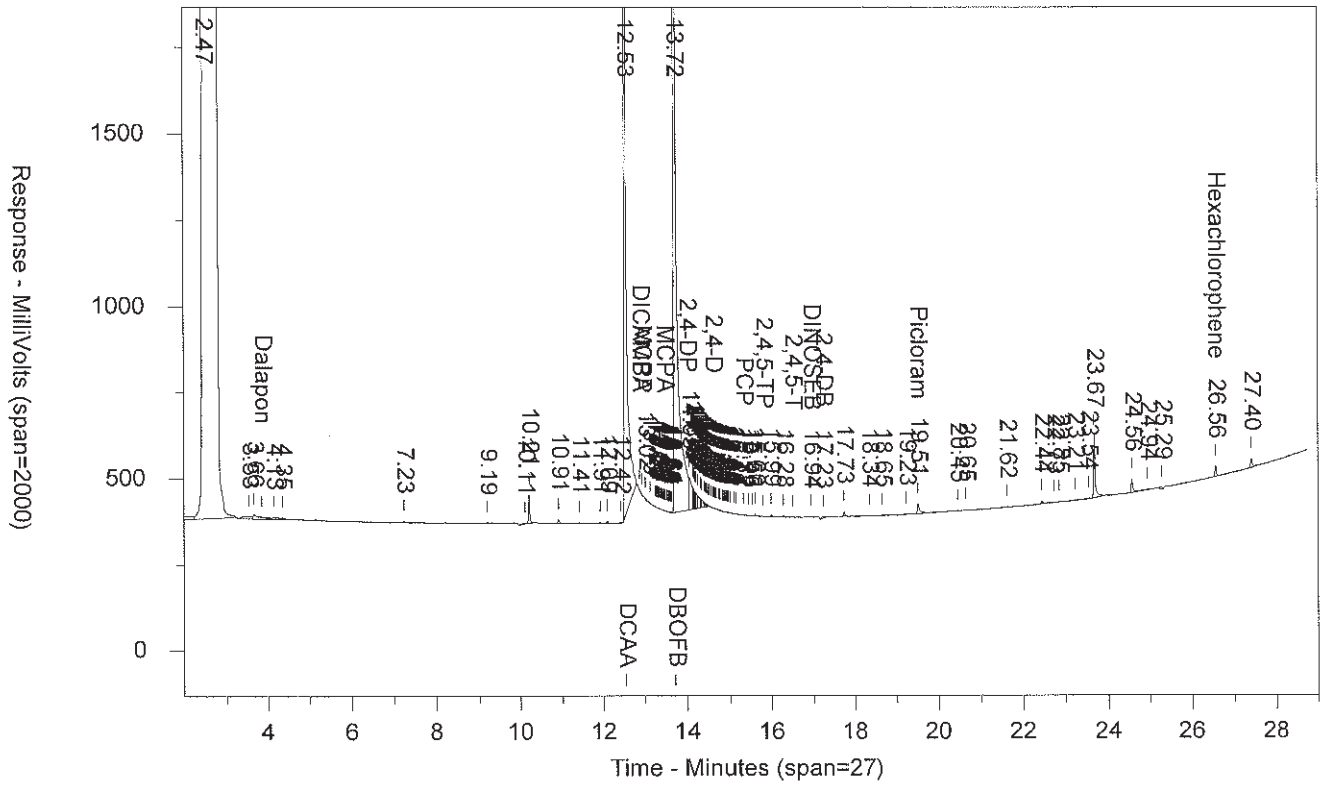

LANCASTER LABORATORIES

Sample Number: HIBLKX1824B SJHIBLKSJ MISC 1830999999 10407 SW-846 8015A
Injected On: 11/7/2018 5:52:33 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
3.742	3240	.004	Dalapon		0		Dalapon
11.965	3747086	2.538	DCAA	12.533	3658451	2.44	DCAA
	0		MCPA	13.466	801	.094	MCPA
14.232	10959980	.001	DBOFB	13.716	10880620	.001	DBOFB
	0		2,4-D	14.603	564		2,4-D
	0		PCP	15.318	2282		PCP
15.92	7569	.001	2,4,5-T		0		2,4,5-T
16.947	5390	.002	DINOSEB	16.944	2872	.001	DINOSEB
	0		2,4-DB	17.232	4495	.005	2,4-DB
17.904	20788	.004	Picloram	19.514	29284	.005	Picloram
26.134	34476	.006	Hexachlorophene	26.557	30191	.005	Hexachlorophen

Files:
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Area File: 15herb18304004B.057.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: 11/7/2018 6:21:22 PM
File Reported On: 11/8/2018 at 7:59:31 AM

HIBLKX1824B SJHIBLKSJ MISC 1830999999 10407 SW-846 8015

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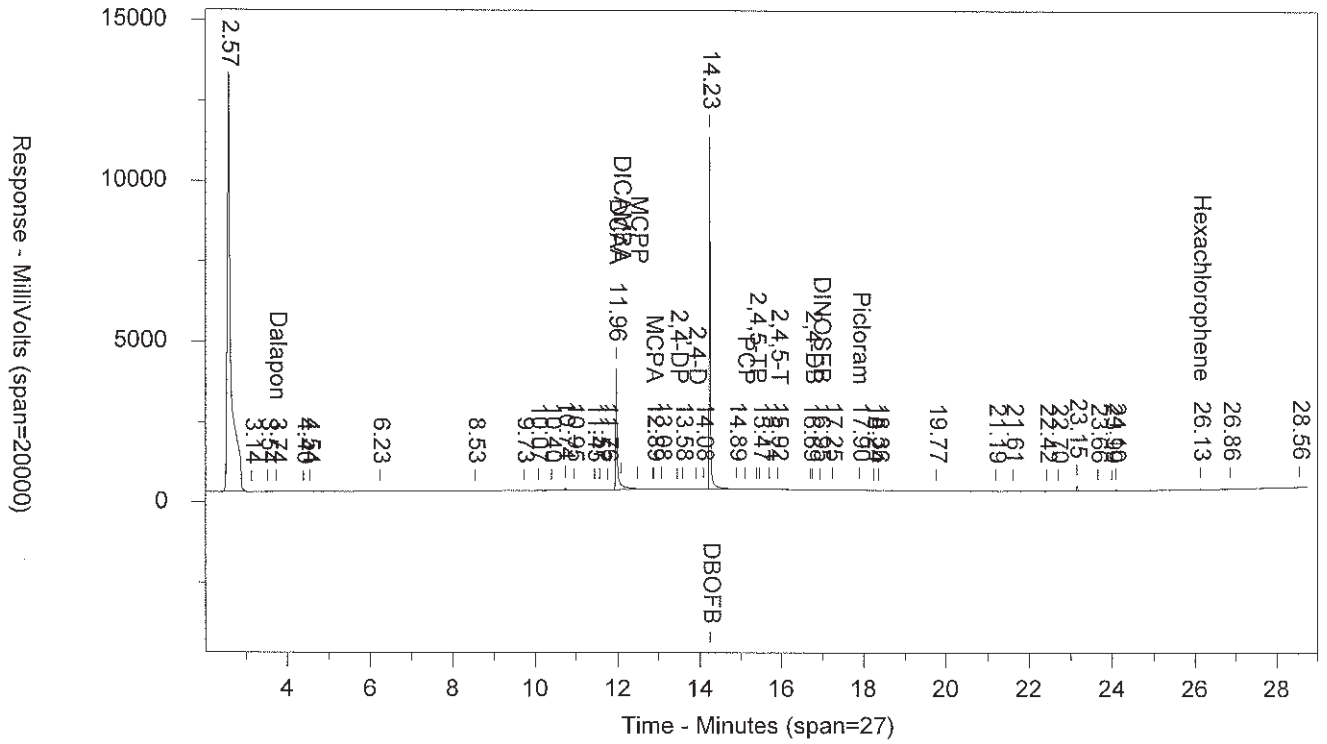

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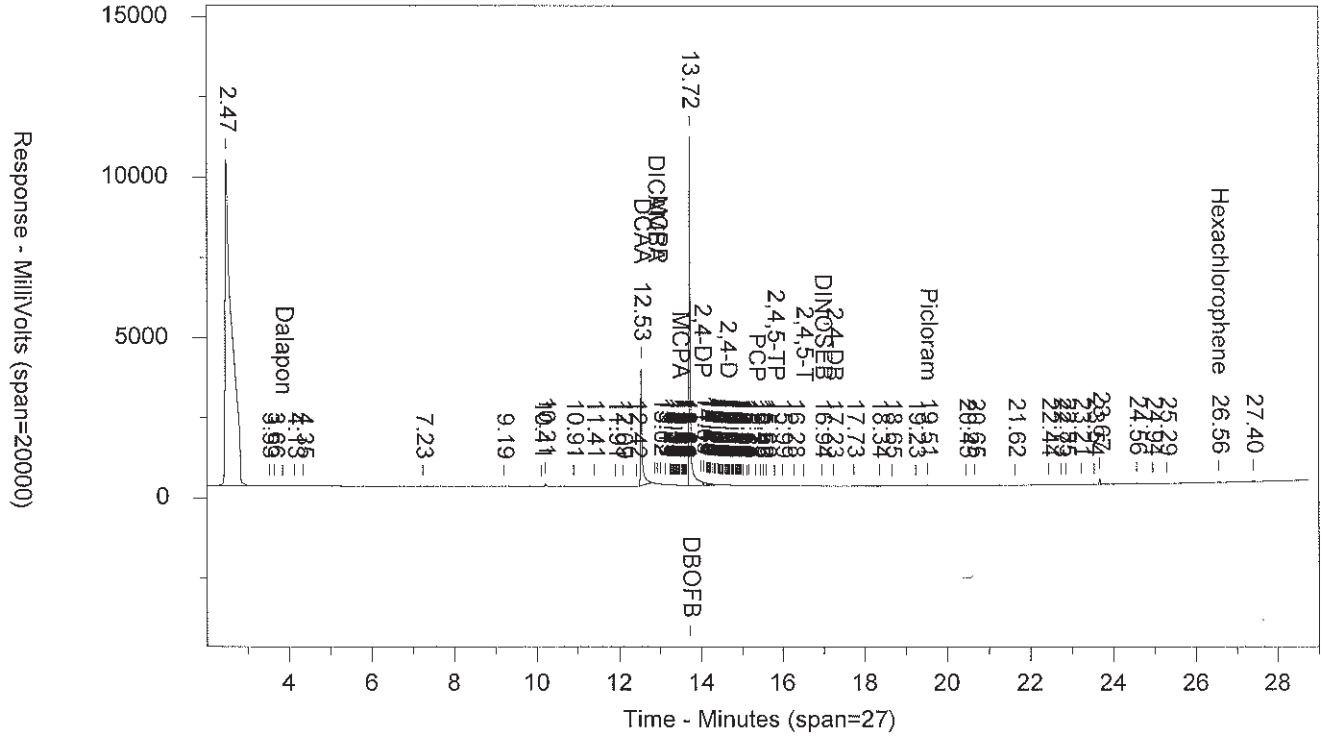

HERB31824F VBHERB3VB CCAL 1830999999 10407 SW-846 8015A

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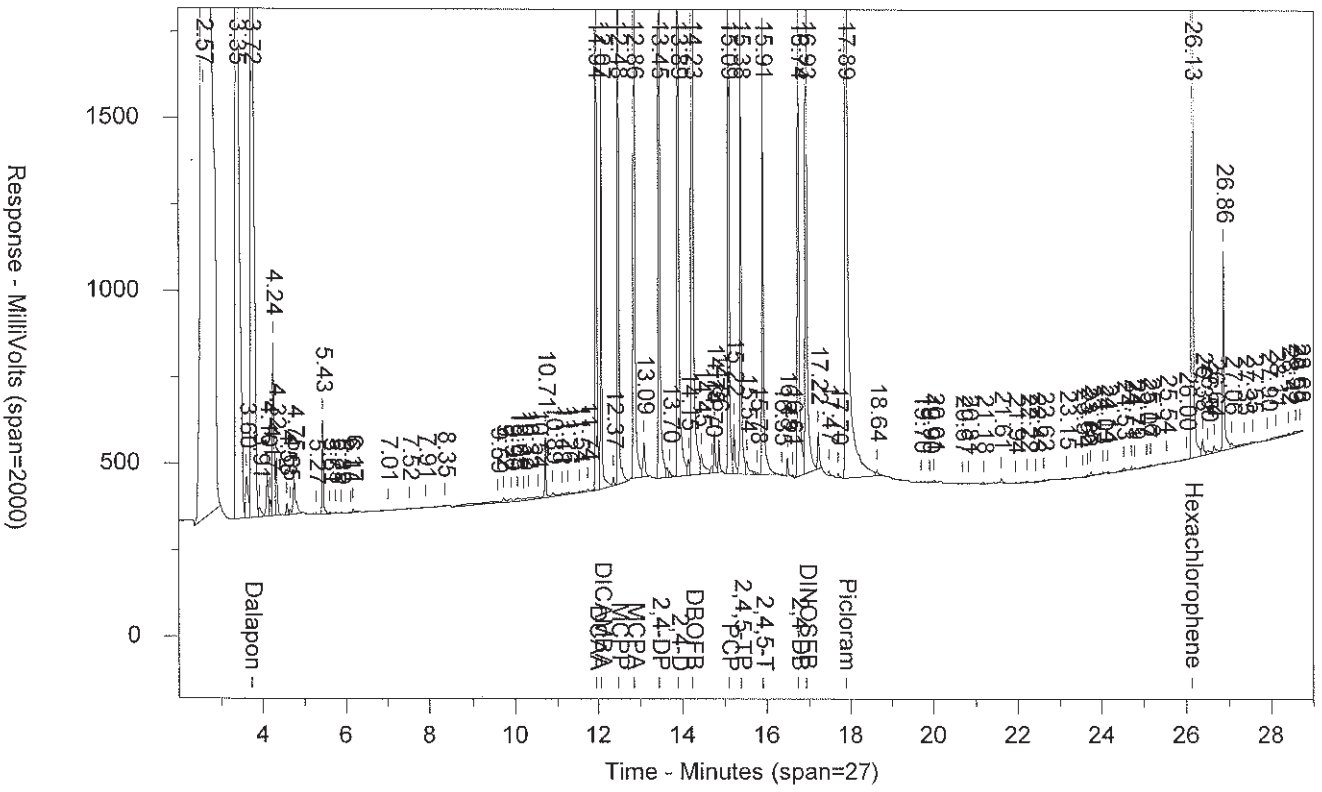

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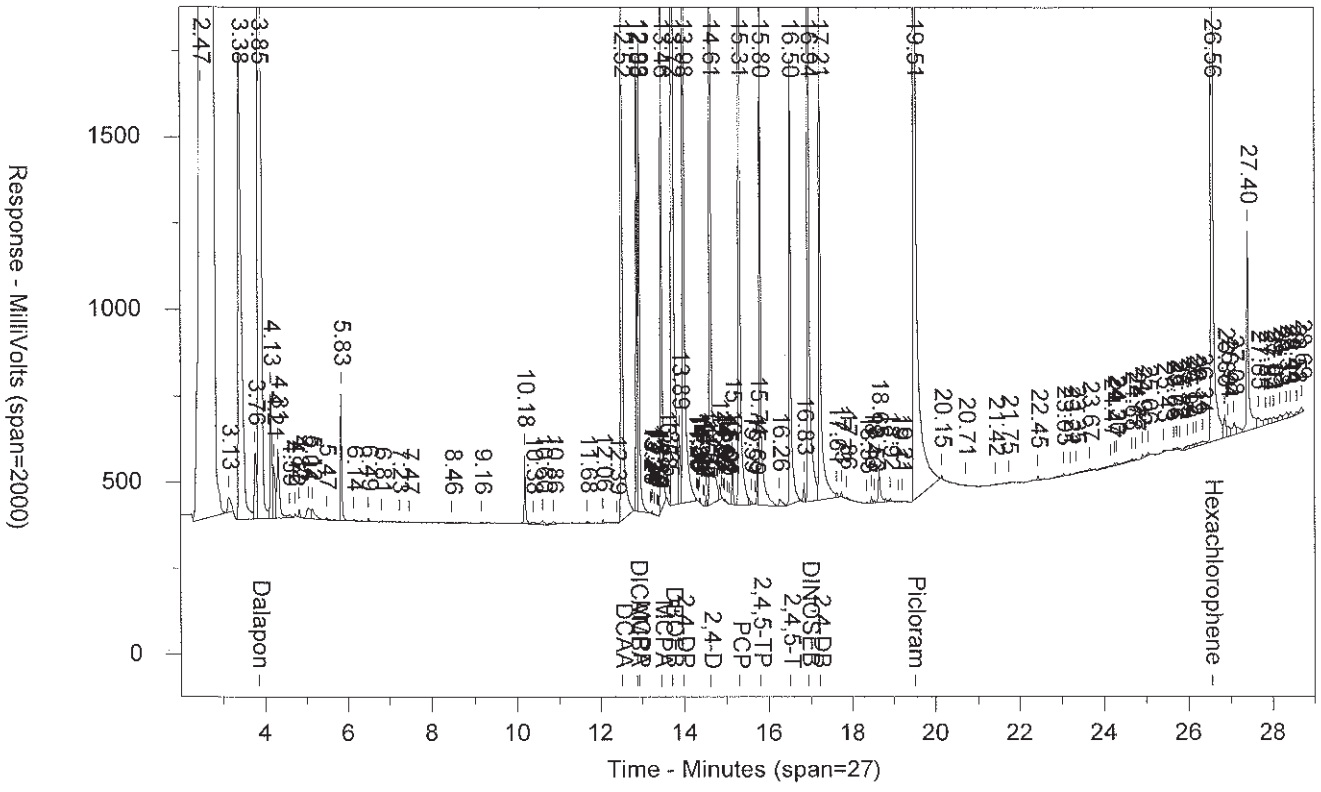

LANCASTER LABORATORIES

Sample Number: HERB31824F VBHERB3VB CCAL 1830999999 10407 SW-846 8015A
Injected On: 11/7/2018 10:49:33 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	3463539	382.452	Dalapon	3.855	4885997	378.414	Dalapon
11.941	3099189	189.978	DCAA	12.517	3222014	189.411	DCAA
12.067	1276630	19.48	DICAMBA	12.878	1321841	18.702	DICAMBA
12.477	2028825	21804.2	MCPP	12.932	1373393	19546.63	MCPP
12.859	2424713	20920.92	MCPA	13.458	1851432	19159.5	MCPA
13.452	2622585	194.818	2,4-DP	13.984	2846469	191.364	2,4-DP
14.231	12111290	1	DBOFB	13.716	12346090	1	DBOFB
13.895	2774235	172.388	2,4-D	14.609	2763507	162.186	2,4-D
15.091	4088083	20.089	PCP	15.306	4283869	19.645	PCP
15.384	1505064	19.538	2,4,5-TP	15.801	1541299	19.153	2,4,5-TP
15.907	1323819	19.469	2,4,5-T	16.504	1289631	18.138	2,4,5-T
16.739	1818679	192.788	2,4-DB	17.21	1874551	185.98	2,4-DB
16.928	3718372	105.091	DINOSEB	16.936	3659072	99.961	DINOSEB
17.888	5652872	95.887	Picloram	19.507	5894471	91.729	Picloram
26.131	4662497	72.572	Hexachlorophene	26.555	5332305	80.085	Hexachlorophen

Files:
Area File: 15herb18304004.066.RAW
Area File: 15herb18304004B.066.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: 11/7/2018 11:18:20 PM
File Reported On: 11/8/2018 at 8:02:10 AM

HERB31824F VBHERB3VB CCAL 1830999999 10407 SW-846 80

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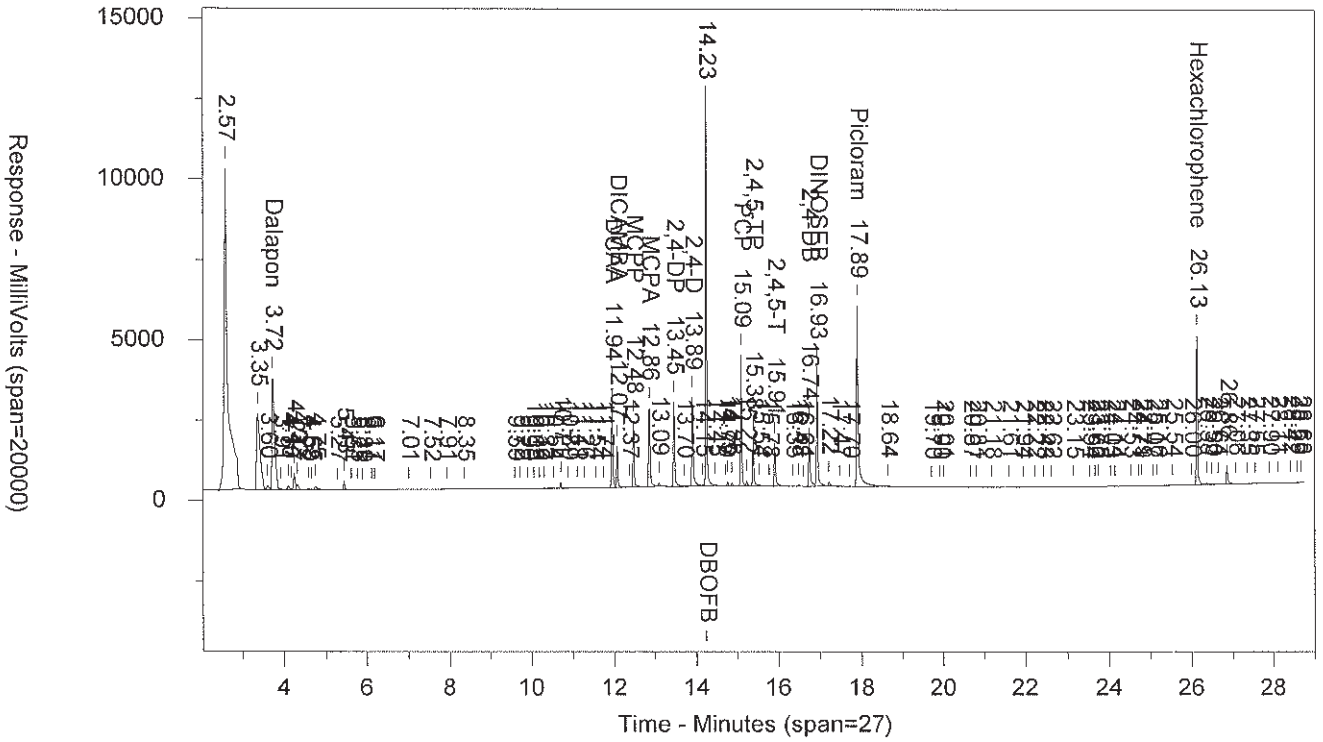

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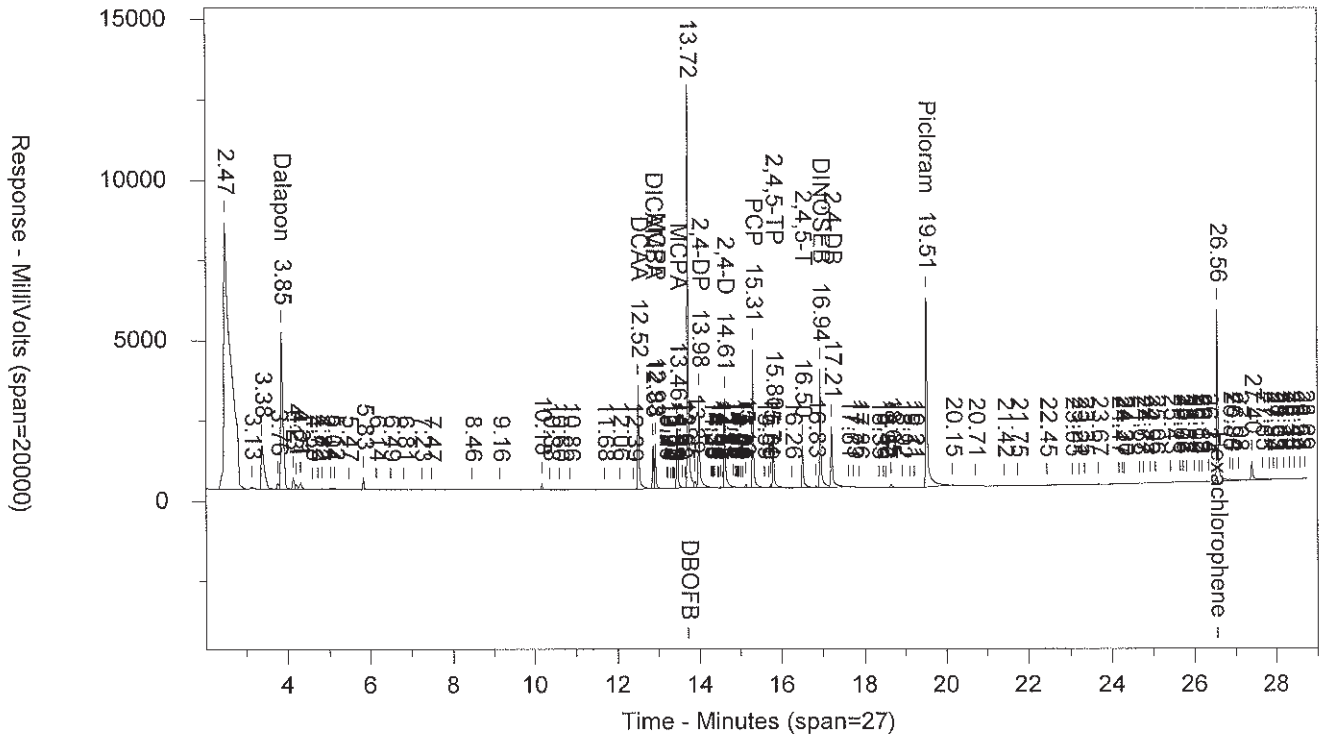

HIBLKX1824B SKHIBLKSK MISC 1830999999 10407 SW-846 8015A

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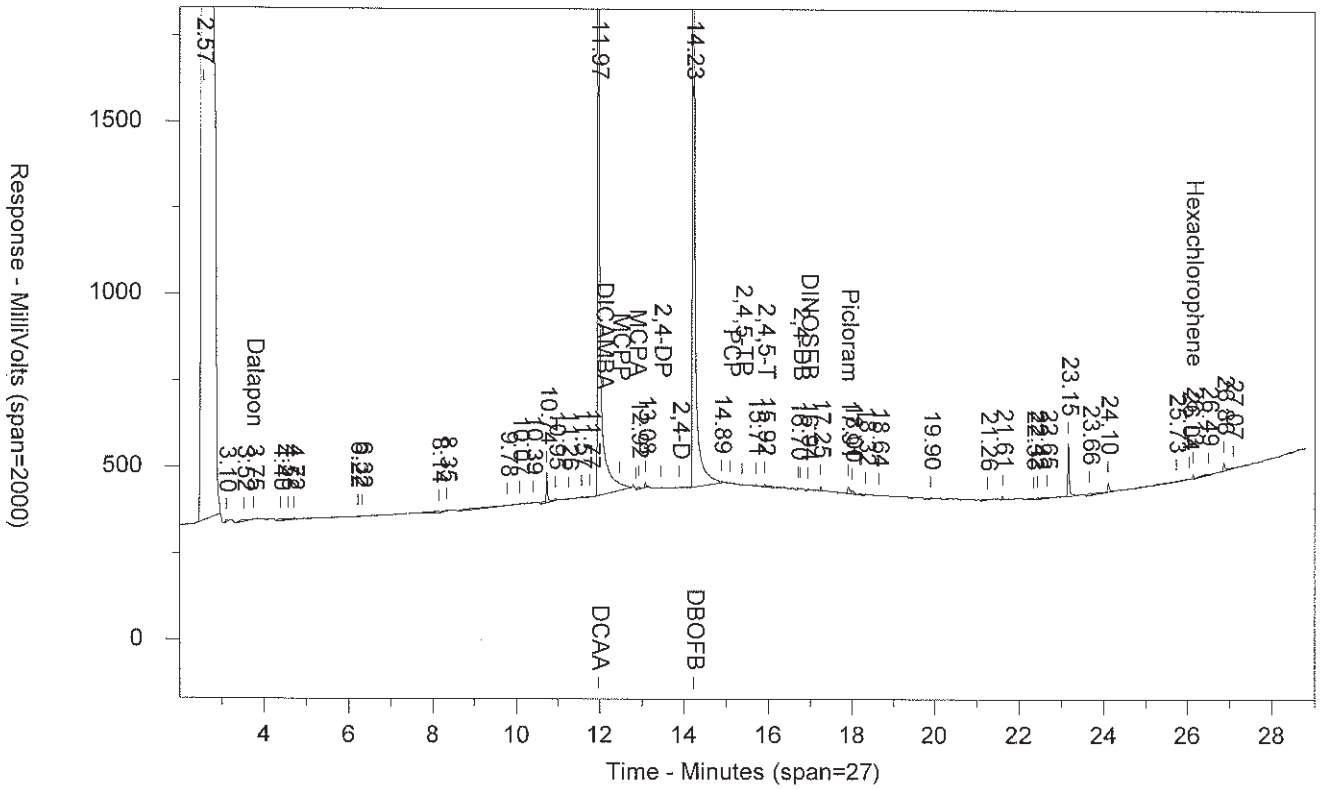

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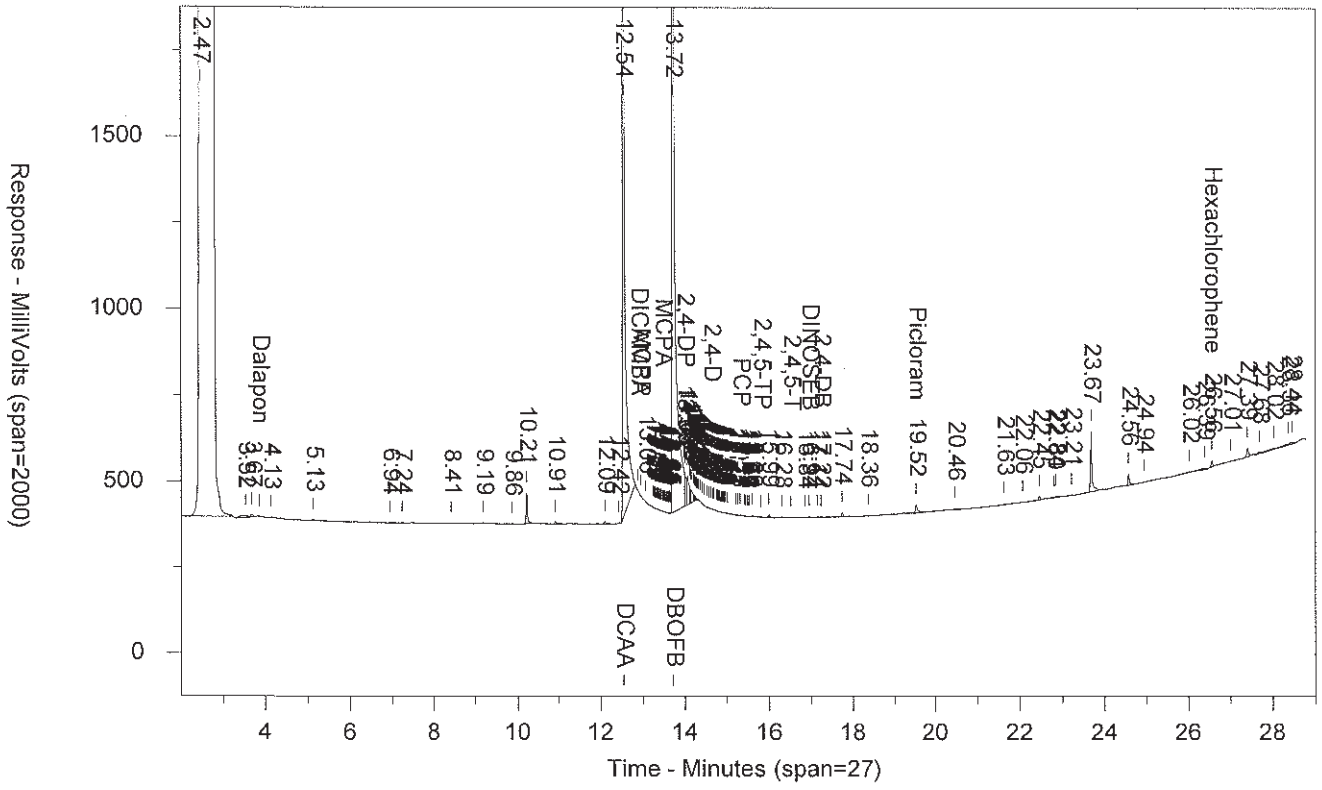

LANCASTER LABORATORIES

Sample Number: HIBLKX1824B SKHIBLKSK MISC 1830999999 10407 SW-846 8015A
Injected On: 11/7/2018 11:22:28 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
3.747	3236	.004	Dalapon		0		Dalapon
11.965	3769097	2.593	DCAA	12.537	3692068	2.48	DCAA
	0		MCPA	13.456	1269	.15	MCPA
14.232	10789990	.001	DBOFB	13.716	10806240	.001	DBOFB
	0		2,4-DP	13.99	99443	.076	2,4-DP
	0		2,4-D	14.611	1328	.001	2,4-D
	0		PCP	15.313	2061		PCP
15.917	9475	.002	2,4,5-T		0		2,4,5-T
16.942	4671	.001	DINOSEB	16.943	3734	.001	DINOSEB
	0		2,4-DB	17.222	2580	.003	2,4-DB
17.908	20108	.004	Picloram	19.52	24752	.004	Picloram
26.131	14591	.003	Hexachlorophene	26.558	18725	.003	Hexachloropher

Files:
Area File: 15herb18304004.067.RAW
Area File: 15herb18304004B.067.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: 11/7/2018 11:51:15 PM
File Reported On: 11/8/2018 at 8:02:28 AM

HIBLKX1824B SKHIBLKSK MISC 1830999999 10407 SW-846 801

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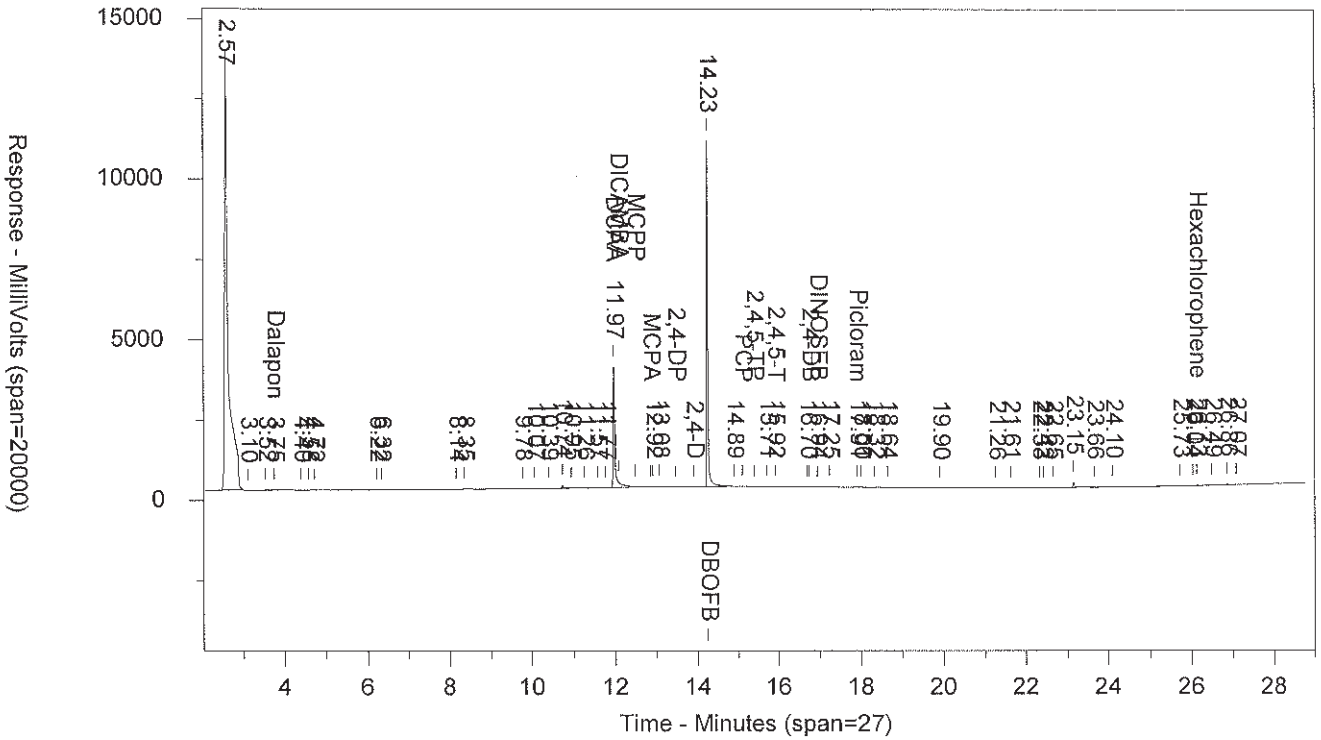

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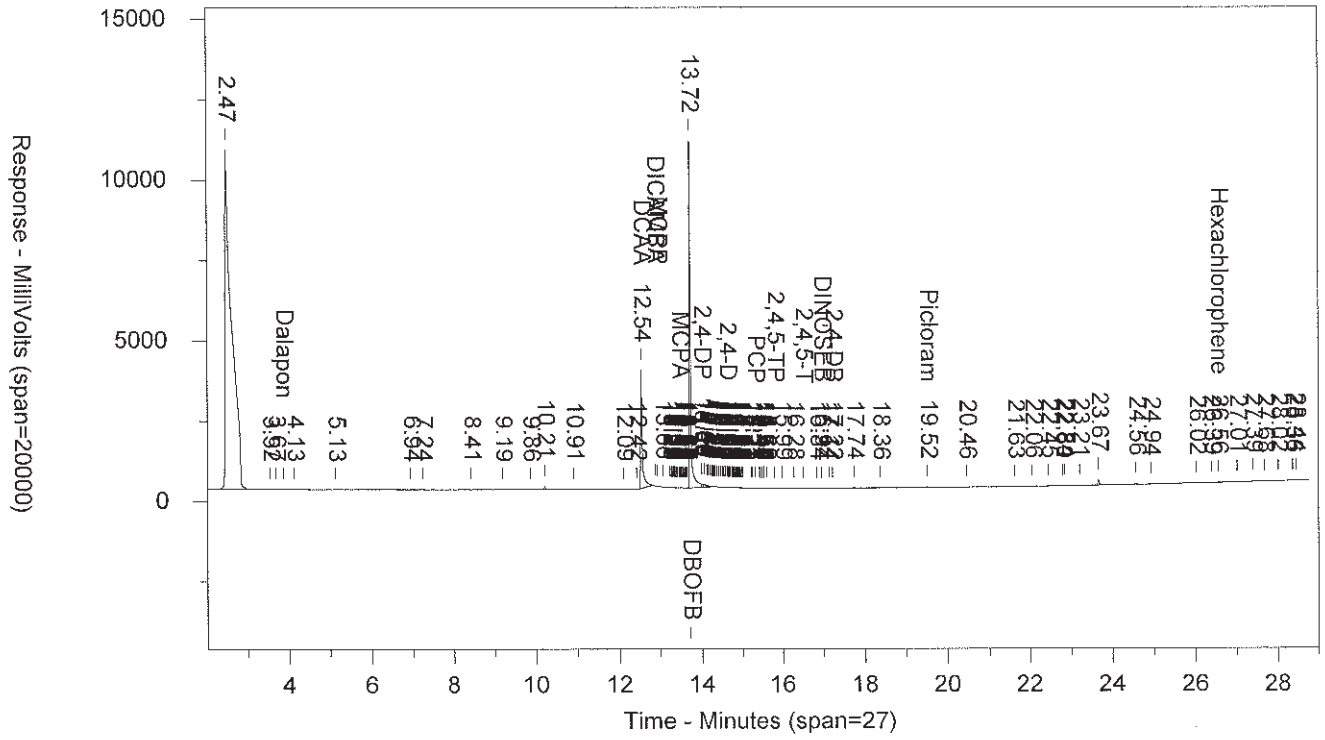

Raw QC Data

Herbicides

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Data Summary

Sample Name: BLANKA 11/2/18 F PBLK43305 BLK Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1000 mL Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 18:58:38
Instrument 19850A
Result file 15HERB18304004.059.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 65% (34 - 142) Conc: 1.292628

Analysis Report (B)

Injected on Nov 07, 2018 18:58:38
Instrument 19850B
Result file 15HERB18304004B.059.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 56% (34 - 142) Conc: 1.127549

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	492679	0.667481
2,4-DCAA	11.91	11.96	11.97	1718702	1.292628
MCPP	12.45	12.46	12.51	23109	0
Pentachlorophenol	15.06	15.12	15.12	9300	0.000561
2,4,5-T	15.88	15.89	15.94	234412	0.042297
Picloram	17.86	17.87	17.92	26734	0.005564
Hexachlorophene	26.10	26.12	26.16	12086	0.002308

Compound	Min	RT	Max	Height	Amount
Dalapon	3.83	3.86	3.89	54513	0.048256
2,4-DCAA	12.49	12.53	12.55	1678114	1.127549
Dicamba	12.85	12.86	12.91	15911	0.002573
MCPA	13.43	13.47	13.49	902	0.106638
2,4-D	14.58	14.61	14.64	8420	0.005648
Pentachlorophenol	15.28	15.30	15.34	11254	0.00059
2,4,5-T	16.47	16.49	16.53	74318	0.011947
2,4-DB	17.18	17.22	17.24	36734	0.041656
Hexachlorophene	26.52	26.54	26.58	5712	0.00098

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<1.8	<3.6	<4			
2,4-DCAA	A	1.292628	0.1	0.2	0.2		13.64	
2,4-DCAA-D1	A	1.292628	0.1	0.2	0.2			
2,4-DCAA-D2	B	1.127549	0.1	0.2	0.2			
Dicamba			<0.08	<0.16	<0.3			
MCPP			<50	<100	<200			
MCPA			<50	<100	<200			
2,4-DP (Dichloroprop)			<0.16	<0.32	<0.5			
2,4-D			<0.25	<0.5	<0.6			
Pentachlorophenol			<0.027	<0.06	<0.07			
2,4,5-TP			<0.01	<0.03	<0.05			
2,4,5-T			<0.065	<0.13	<0.15			
2,4-DB			<0.63	<1.3	<1.5			
Dinoseb			<0.18	<0.4	<0.5			
Picloram			<0.36	<0.8	<1			
Hexachlorophene					<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:26

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Data Summary

Sample Name: BLANKA 11/2/18 F PBLK43305 BLK Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1000 mL Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on	Nov 07, 2018 18:58:38
Instrument	19850A
Result file	15HERB18304004.059.RAW
Calibration file	15HERB1830401
Method file	15HERB

%SSR(DCAA) 65% (32 - 138) Conc: 1.292628

Analysis Report (B)

Injected on	Nov 07, 2018 18:58:38
Instrument	19850B
Result file	15HERB18304004B.059.RAW
Calibration file	15HERB1830401B
Method file	15HERBB

%SSR(DCAA) 56% (32 - 138) Conc: 1.127549

Single Component Data

Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.71	3.76	492679	0.667481
2,4-DCAA	11.91	11.96	11.97	1718702	1.292628
MCPP	12.45	12.46	12.51	23109	0
Pentachlorophenol	15.06	15.12	15.12	9300	0.000561
2,4,5-T	15.88	15.89	15.94	234412	0.042297
Picloram	17.86	17.87	17.92	26734	0.005564
Hexachlorophene	26.10	26.12	26.16	12086	0.002308

Compound	Min	RT	Max	Height	Amount
Dalapon	3.83	3.86	3.89	54513	0.048256
2,4-DCAA	12.49	12.53	12.55	1678114	1.127549
Dicamba	12.85	12.86	12.91	15911	0.002573
MCPA	13.43	13.47	13.49	902	0.106638
2,4-D	14.58	14.61	14.64	8420	0.005648
Pentachlorophenol	15.28	15.30	15.34	11254	0.00059
2,4,5-T	16.47	16.49	16.53	74318	0.011947
2,4-DB	17.18	17.22	17.24	36734	0.041656
Hexachlorophene	26.52	26.54	26.58	5712	0.00098

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon			<1.8	<3.6	<4			
2,4-DCAA	A	1.292628	0.1	0.2	0.2		13.64	
2,4-DCAA-D1	A	1.292628	0.1	0.2	0.2			
2,4-DCAA-D2	B	1.127549	0.1	0.2	0.2			
Dicamba			<0.08	<0.16	<0.3			
MCPP			<50	<100	<200			
MCPA			<50	<100	<200			
2,4-DP (Dichloroprop)			<0.16	<0.32	<0.5			
2,4-D			<0.25	<0.5	<0.6			
Pentachlorophenol			<0.027	<0.06	<0.07			
2,4,5-TP			<0.01	<0.03	<0.05			
2,4,5-T			<0.065	<0.13	<0.15			
2,4-DB			<0.63	<1.3	<1.5			
Dinoseb			<0.18	<0.4	<0.5			
Picloram			<0.36	<0.8	<1			
Hexachlorophene					<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:28

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **BLANKA** 11/2/18 F PBLK43305 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1000 mL Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 18:58:38
Instrument : CP15--19850A
Result file : 15HERB18304004.059.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 65% (34-142) Conc.: 1.292628

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.71	3.76	492679	0.667481
DCAA	11.91	11.96	11.97	1718702	1.292628
MCPP	12.45	12.46	12.51	23109	-123.515200
DBOFB	14.21	14.23	14.26	9871260	0.001000
PCP	15.06	15.12	15.12	9300	0.000561
2,4,5-T	15.88	15.89	15.94	234412	0.042297
Picloram	17.86	17.87	17.92	26734	0.005564
Hexachlorophene	26.10	26.12	26.16	12086	0.002308

Analysis Report (B)

Injected on : Nov 07, 2018 18:58:38
Instrument : CP15--19850B
Result file : 15HERB18304004B.059.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 56% (34-142) Conc.: 1.127549

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.86	3.89	54513	0.048256
DCAA	12.49	12.53	12.55	1678114	1.127549
DICAMBA	12.85	12.86	12.91	15911	0.002573
MCPA	13.43	13.47	13.49	902	0.106638
DBOFB	13.69	13.71	13.75	10801720	0.001000
2,4-D	14.58	14.61	14.64	8420	0.005648
PCP	15.28	15.30	15.34	11254	0.000590
2,4,5-T	16.47	16.49	16.53	74318	0.011947
2,4-DB	17.18	17.22	17.24	36734	0.041656
Hexachlorophene	26.52	26.54	26.58	5712	0.000980

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon			<4	<1.8			
☑ DCAA	A	1.292628	0.2	0.1		13.64	
☑ DICAMBA			<0.3	<0.08			
☑ MCPP			<200	<50			
☑ MCPA			<200	<50			
☑ 2,4-DP			<0.5	<0.16			
☑ 2,4-D			<0.6	<0.25			
☐ DBOFB	A	0.001000				0.00	
☑ PCP			<0.07	<0.027			
☑ 2,4,5-TP			<0.05	<0.01			
☑ 2,4,5-T			<0.15	<0.065			
☑ 2,4-DB			<1.5	<0.63			
☑ DINOSEB			<0.5	<0.18			
☑ Picloram			<1	<0.36			
☐ Hexachlorophene	B	0.000980	<0.2			80/74 **	

Units: ug/l

Valerie L. Tomayko
Principal Specialist

Reviewed by: _____ Verified by: _____ NOV 16 2018
Date: 11/16/18 Date: _____

%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

Printed on: 11/8/2018 08:09:22

BLANKA 11/2/18 F ABPBLK43305 BLK 183050043A 10407 SW-846 8015/

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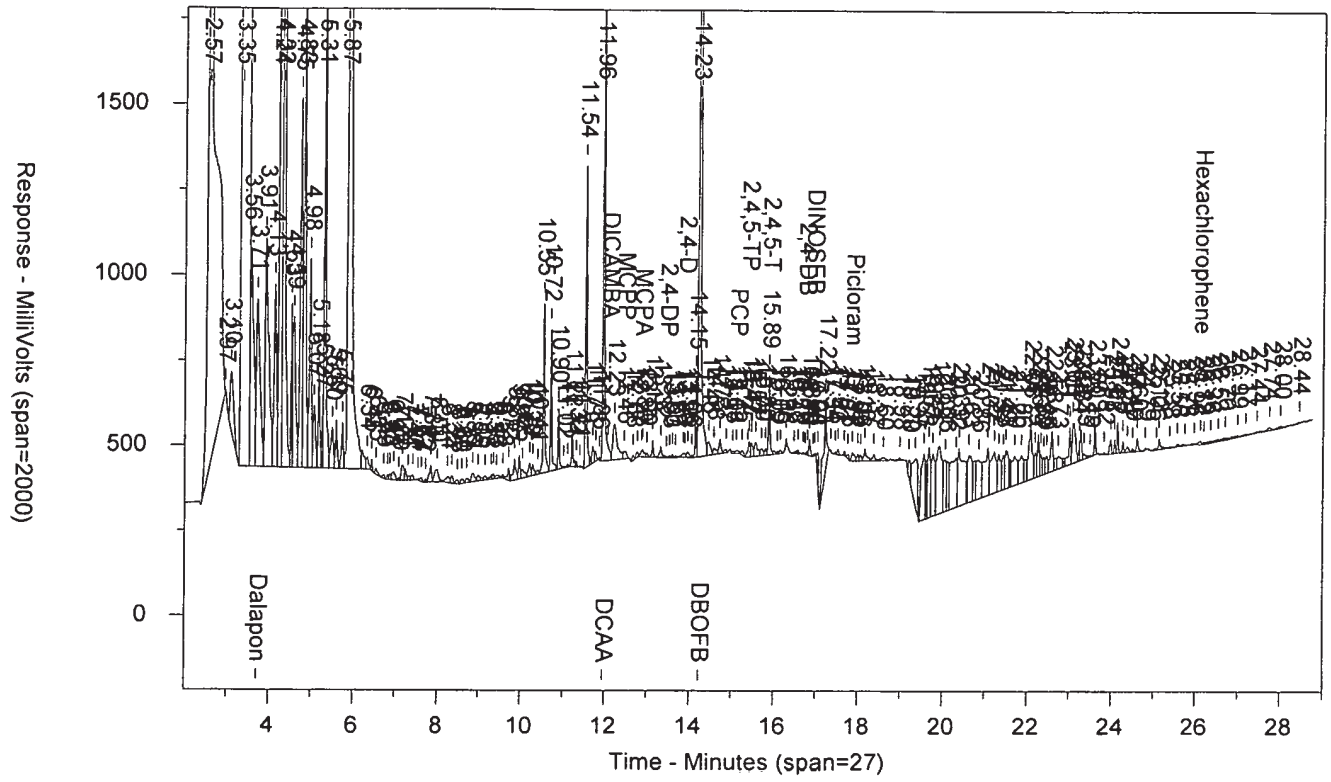

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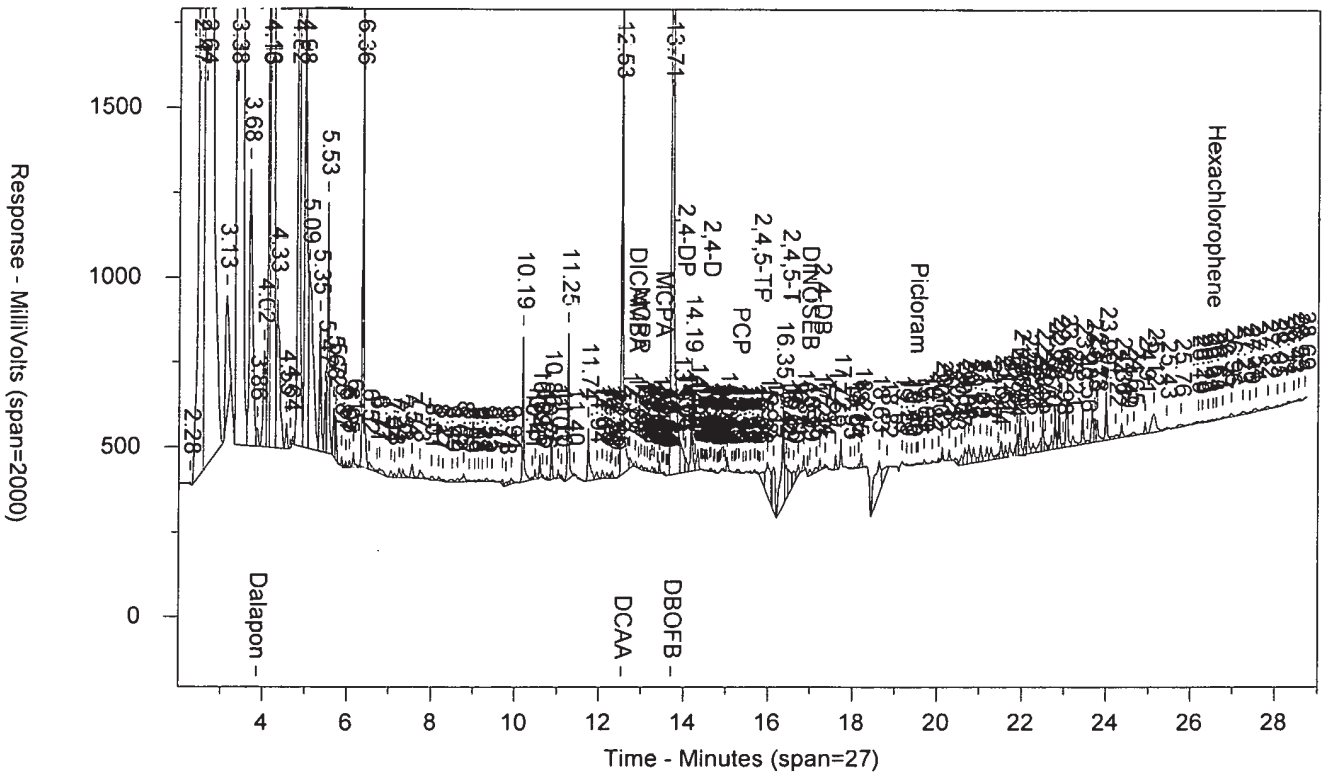

LANCASTER LABORATORIES

Sample Number: BLANKA 11/2/18 F ABPBLK43305 BLK 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 6:58:38 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
3.713	492679	.667	Dalapon	3.861	54513	.048	Dalapon
11.956	1718702	1.293	DCAA	12.526	1678114	1.128	DCAA
12.459	23109	-123.515	MCPP		0		MCPP
	0		DICAMBA	12.857	15911	.003	DICAMBA
	0		MCPA	13.469	902	.107	MCPA
14.225	9871260	.001	DBOFB	13.707	10801720	.001	DBOFB
	0		2,4-D	14.607	8420	.006	2,4-D
15.116	9300	.001	PCP	15.303	11254	.001	PCP
15.886	234412	.042	2,4,5-T	16.488	74318	.012	2,4,5-T
	0		2,4-DB	17.224	36734	.042	2,4-DB
17.866	26734	.006	Picloram		0		Picloram
26.115	12086	.002	Hexachlorophene	26.536	5712	.001	Hexachlorophene

Files:
Area File: 15herb18304004.059.RAW
Area File: 15herb18304004B.059.RAW
Method A: 15HERB.MET
Method B: 15HERBB.MET
Calibration File A: 15HERB1830401.CAL
Calibration File B: 15HERB183040 1b.CAL
Format A: herw15.FMTA
Format B: herw15.FMTA
Area File Created On: 11/7/2018 7:27:25 PM
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BLANKA 11/2/18 F ABPBLK43305 BLK 183050043A 10407 SW-846 8(

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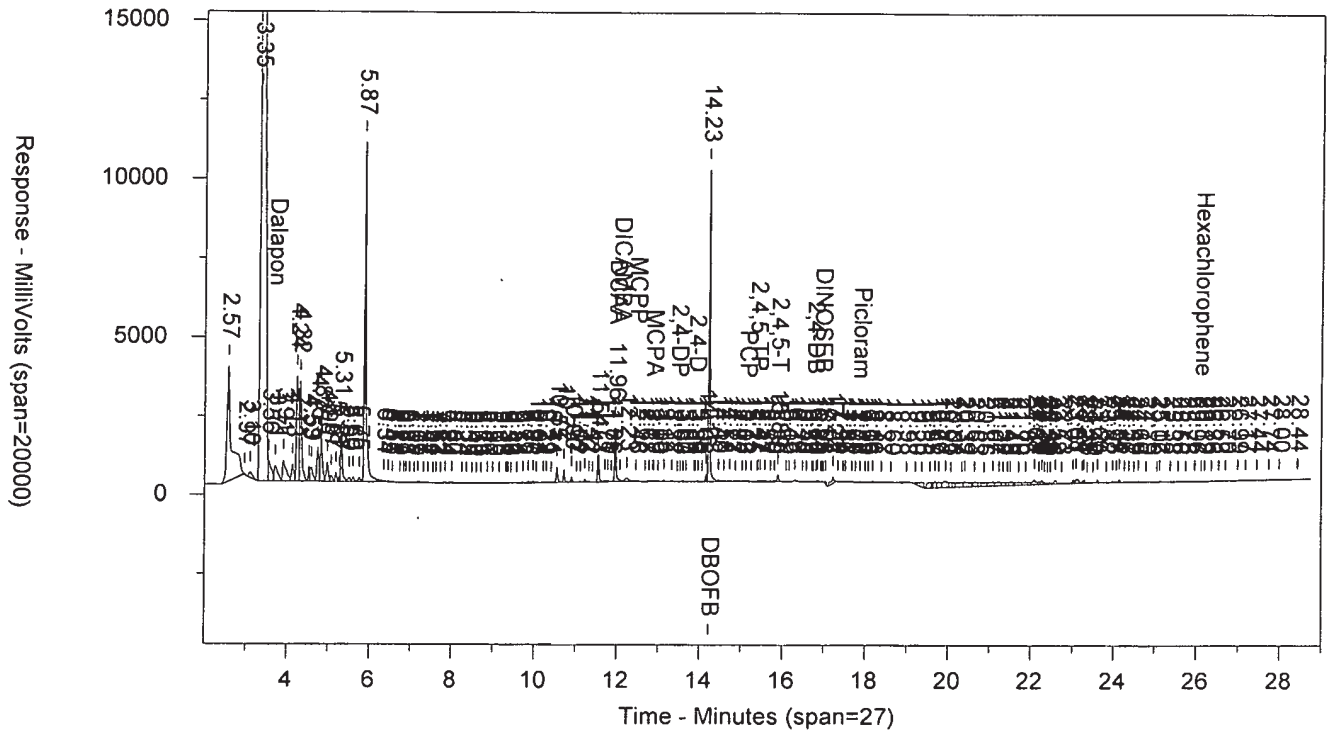

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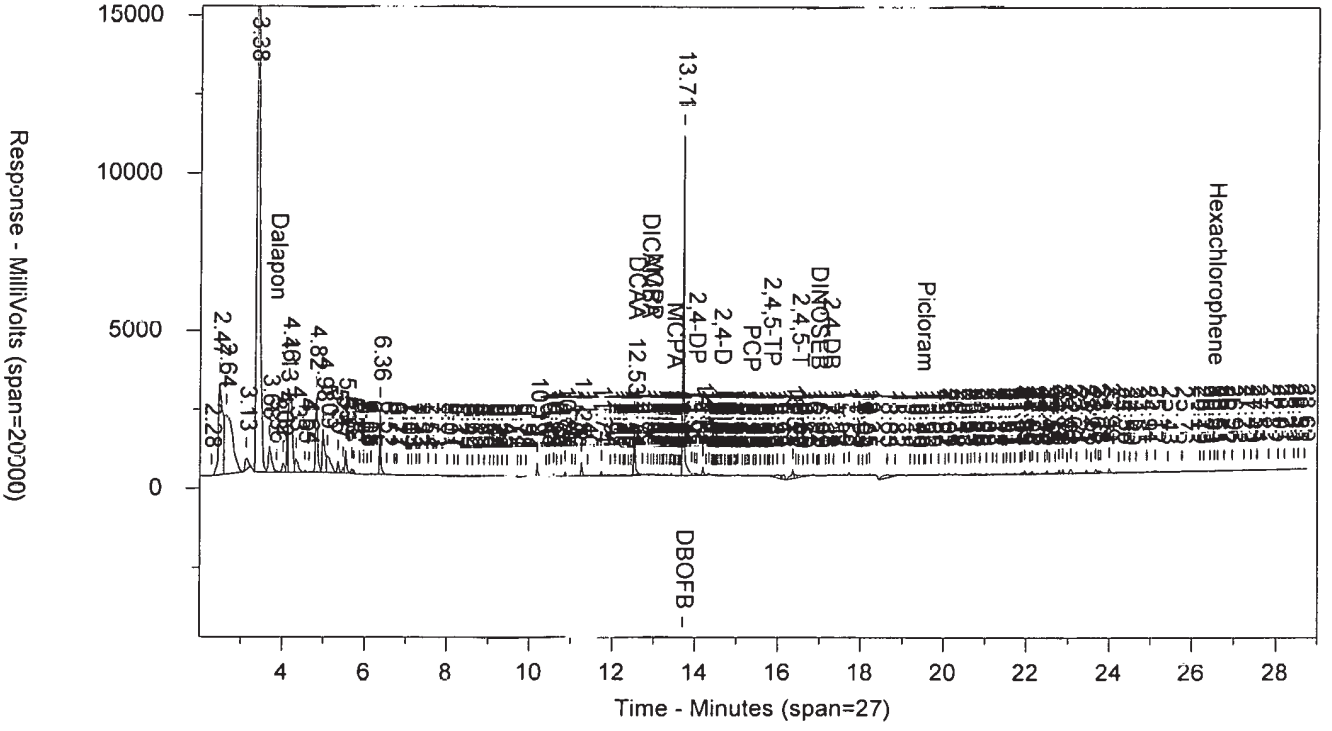

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Data Summary

Sample Name: 9876335 MS F 14T04 MS Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1063 mL Total Volume: 10 ml Analyst: 120 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 20:37:34
Instrument 19850A
Result file 15HERB18304004.062.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 85% (32 - 138) Conc: 1.596926

Analysis Report (B)

Injected on Nov 07, 2018 20:37:34
Instrument 19850B
Result file 15HERB18304004B.062.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 71% (32 - 138) Conc: 1.345197

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	3305138	4.411452	Dalapon	3.83	3.85	3.89	4291274	3.304065
2,4-DCAA	11.91	11.94	11.97	2155233	1.596926	2,4-DCAA	12.49	12.51	12.55	2301760	1.345197
MCPP	12.45	12.48	12.51	865604	57.8939	MCPP	12.90	12.92	12.96	10035980	1419.991
MCPA	12.83	12.86	12.89	1498600	129.9416	MCPA	13.43	13.47	13.49	2707157	278.5084
2,4-DP (Dichloroprop)	13.43	13.45	13.49	2500860	2.245558	2,4-DP (Dichloroprop)	13.96	13.98	14.01	2867542	1.916513
2,4-D	13.87	13.88	13.93	3347537	2.514349	2,4-D	14.58	14.60	14.64	2958811	1.726307
Pentachlorophenol	15.06	15.11	15.12	4567552	0.271303	2,4,5-TP	15.77	15.82	15.83	534593	0.066041
2,4,5-T	15.88	15.89	15.94	3526061	0.626815	2,4,5-T	16.47	16.50	16.53	1501789	0.209985
2,4-DB	16.71	16.73	16.77	1836814	2.35356	Dinoseb	16.91	16.92	16.97	3818548	1.037069
Dinoseb	16.90	16.91	16.96	3899510	1.332161	2,4-DB	17.18	17.20	17.24	1849890	1.824582
Picloram	17.86	17.87	17.92	9855101	2.020631	Picloram	19.48	19.50	19.54	10707550	1.656526
Hexachlorophene	26.10	26.13	26.16	549299	0.103347	Hexachlorophene	26.52	26.55	26.58	523538	0.078169

Single Component Summary

	Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
✓	Dalapon	A	4.411452	1.6933	3.3866	3.7629	D1	28.71	
	2,4-DCAA	A	1.596926	0.0941	0.1881	0.1881		17.11	
✓	2,4-DCAA-D1	A	1.596926	0.0941	0.1881	0.1881			
✓	2,4-DCAA-D2	B	1.345197	0.0941	0.1881	0.1881			
✓	Dicamba			<0.0753	<0.1505	<0.2822	D1		
✓	MCPP			<60	<120	<188.1468	VD1		2706
✓	MCPA	A	129.9416	47.0387	94.0734	<188.1468	JPD1	72.75	
✓	2,4-DP (Dichloroprop)	A	2.245558	0.1505	0.301	0.4704	D1	15.81	
✓	2,4-D	A	2.514349	0.2352	0.4704	0.5644	D1	37.17	
	Pentachlorophenol			<0.0254	<0.0564	<0.0659			
✓	2,4,5-TP			<0.0094	<0.0282	<0.047	D1		
✓	2,4,5-T			<0.22	<0.44	<0.45	✓ D2		2706
✓	2,4-DB	A	2.35356	0.5927	1.223	1.4111	D1	25.32	
✓	Dinoseb	A	1.332161	0.1693	0.3763	0.4704	D1	24.91	
	Picloram	A	2.020631	0.3387	0.7526	0.9407		19.80	
	Hexachlorophene					<0.1881			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:44

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9876335** MS F 14T04 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1063 mL Total Volume: 10 ml Analyst: 13378 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 20:37:34
Instrument : CP15--19850A
Result file : 15HERB18304004.062.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 85% (32-138) Conc.: 1.596926

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.72	3.76	3305138	4.411452
DCAA	11.91	11.94	11.97	2155233	1.596926
MCPP	12.45	12.48	12.51	865604	57.893900
MCPA	12.83	12.86	12.89	1498600	129.941600
2,4-DP	13.43	13.45	13.49	2500860	2.245558
2,4-D	13.87	13.88	13.93	3347537	2.514349
DBOFB	14.21	14.22	14.26	9425876	0.000941
PCP	15.06	15.11	15.12	4567552	0.271303
2,4,5-T	15.88	15.89	15.94	3526061	0.626815
2,4-DB	16.71	16.73	16.77	1836814	2.353560
DINOSEB	16.90	16.91	16.96	3899510	1.332161
Picloram	17.86	17.87	17.92	9855101	2.020631
Hexachlorophene	26.10	26.13	26.16	549299	0.103347

Analysis Report (B)

Injected on : Nov 07, 2018 20:37:34
Instrument : CP15--19850B
Result file : 15HERB18304004B.062.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 71% (32-138) Conc.: 1.345197

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.85	3.89	4291274	3.304065
DCAA	12.49	12.51	12.55	2301760	1.345197
MCPP	12.90	12.92	12.96	10035980	1419.991000
MCPA	13.43	13.47	13.49	2707157	278.508400
DBOFB	13.69	13.71	13.75	11682820	0.000941
2,4-DP	13.96	13.98	14.01	2867542	1.916513
2,4-D	14.58	14.60	14.64	2958811	1.726307
2,4,5-TP	15.77	15.82	15.83	534593	0.066041
2,4,5-T	16.47	16.50	16.53	1501789	0.209985
DINOSEB	16.91	16.92	16.97	3818548	1.037069
2,4-DB	17.18	17.20	17.24	1849890	1.824582
Picloram	19.48	19.50	19.54	10707550	1.656526
Hexachlorophene	26.52	26.55	26.58	523538	0.078169

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon	A	4.411452	3.7629	1.6933		28.71	
☐ DCAA	A	1.596926	0.1881	0.0941		17.11	
☑ DICAMBA			<0.2822	<0.0753			
☑ MCPP	A	57.893900	<188.1468	47.0367	J <60	184.33	** WC
☑ MCPA	A	129.941600	<188.1468	47.0367	J	72.75	**
☑ 2,4-DP	A	2.245558	0.4704	0.1505		15.81	
☑ 2,4-D	A	2.514349	0.5644	0.2352		37.17	
☐ DBOFB	A	0.000941				0.00	
☐ PCP			<0.0659	<0.0254			
☑ 2,4,5-TP			<0.047	<0.0094			
☑ 2,4,5-T	B	0.209985	<0.45 0.1411	0.0611	<027	99.62	** WC
☑ 2,4-DB	A	2.353560	1.4111	0.5927		25.32	
☑ DINOSEB	A	1.332161	0.4704	0.1693		24.91	
☐ Picloram	A	2.020631	0.9407	0.3387		19.80	
☐ Hexachlorophene	A	0.103347	<0.1881			27.74	

Units: ug/l

Reviewed by: [signature] Verified by: Valerie L. Tomayko Principal Specialist

Date: 11/16/ Date: NOV 16 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

Printed on: 11/8/2018 08:10:38

9876335MS F AB14T04 MS 183050043A 10407 SW-846 8015A

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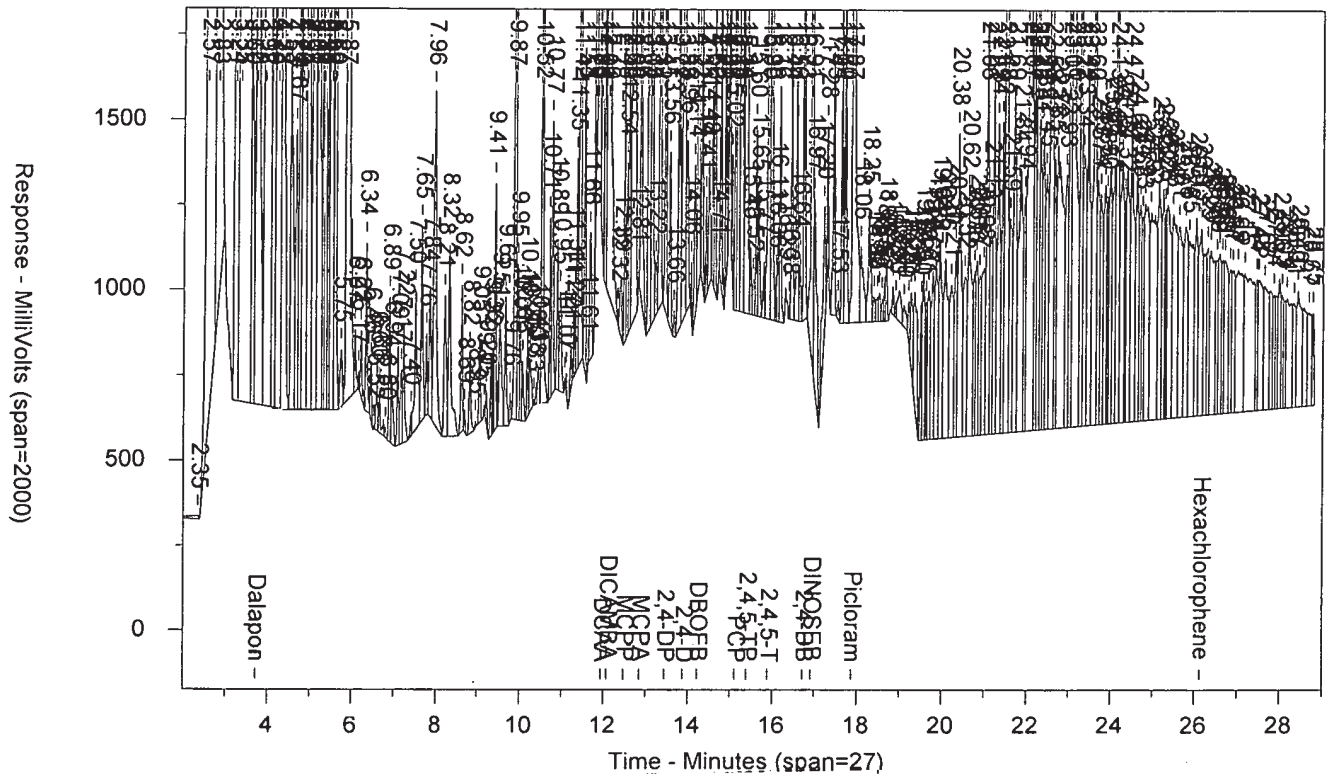

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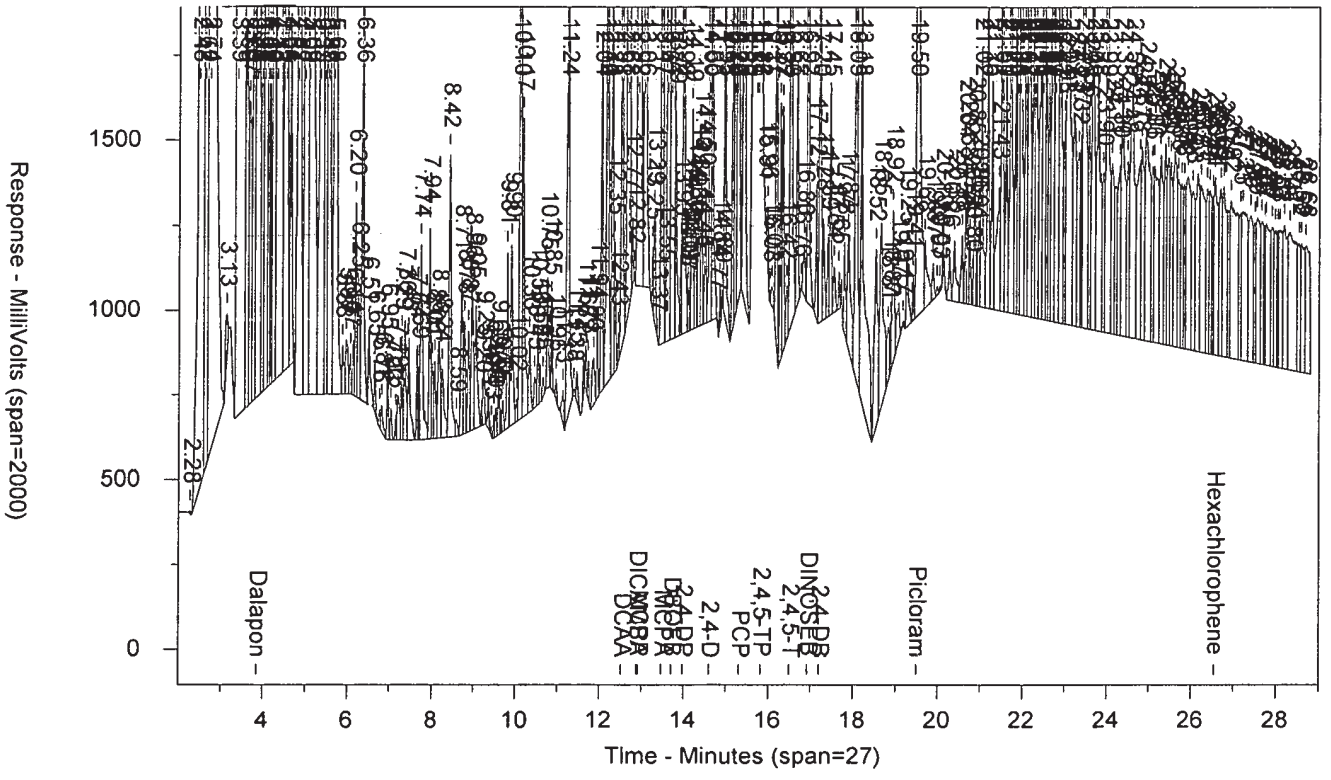

LANCASTER LABORATORIES

Sample Number: 9876335MS F AB14T04 MS 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 8:37:34 PM Sample Weight: 1063
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
3.721	3305138	4.411	Dalapon	3.851	4291274	3.304	Dalapon
11.941	2155233	1.597	DCAA	12.514	2301760	1.345	DCAA
12.477	865604	57.894	MCPP	12.919	10035980	1419.991	MCPP
12.859	1498600	129.942	MCPA	13.468	2707157	278.508	MCPA
13.446	2500860	2.246	2,4-DP	13.978	2867542	1.917	2,4-DP
14.221	9425876	.001	DBOFB	13.705	11682820	.001	DBOFB
13.883	3347537	2.514	2,4-D	14.601	2958811	1.726	2,4-D
15.109	4567552	.271	PCP		0		PCP
	0		2,4,5-TP	15.816	534593	.066	2,4,5-TP
15.885	3526061	.627	2,4,5-T	16.496	1501789	.21	2,4,5-T
16.726	1836814	2.354	2,4-DB	17.199	1849890	1.825	2,4-DB
16.912	3899510	1.332	DINOSEB	16.919	3818548	1.037	DINOSEB
17.874	9855101	2.021	Picloram	19.498	10707550	1.657	Picloram
26.126	549299	.103	Hexachlorophene	26.553	523538	.078	Hexachlorophene

Files:
Area File: 15herb18304004.062.RAW
Area File: 15herb18304004B.062.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: 11/7/2018 9:06:26 PM
File Reported On: 11/8/2018 at 8:00:55 AM

9876335MS F AB14T04 MS 183050043A 10407 SW-846 8015A

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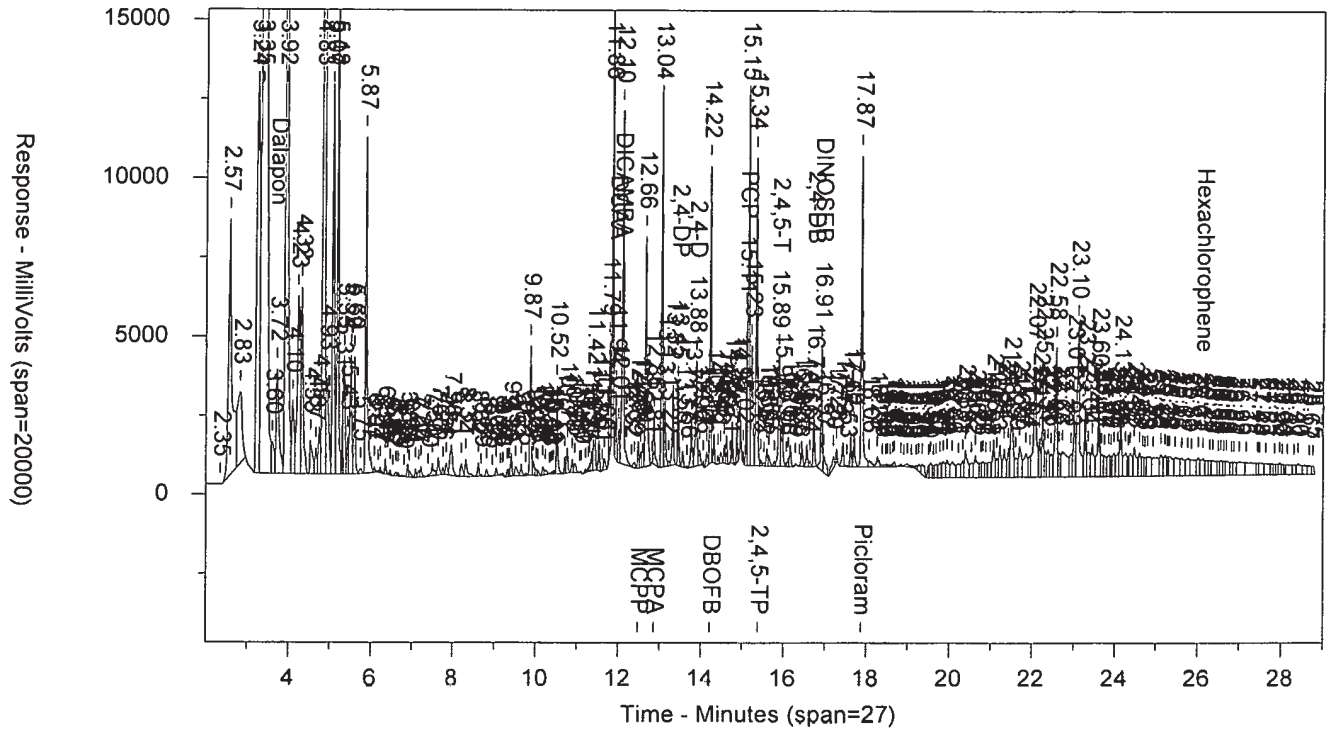

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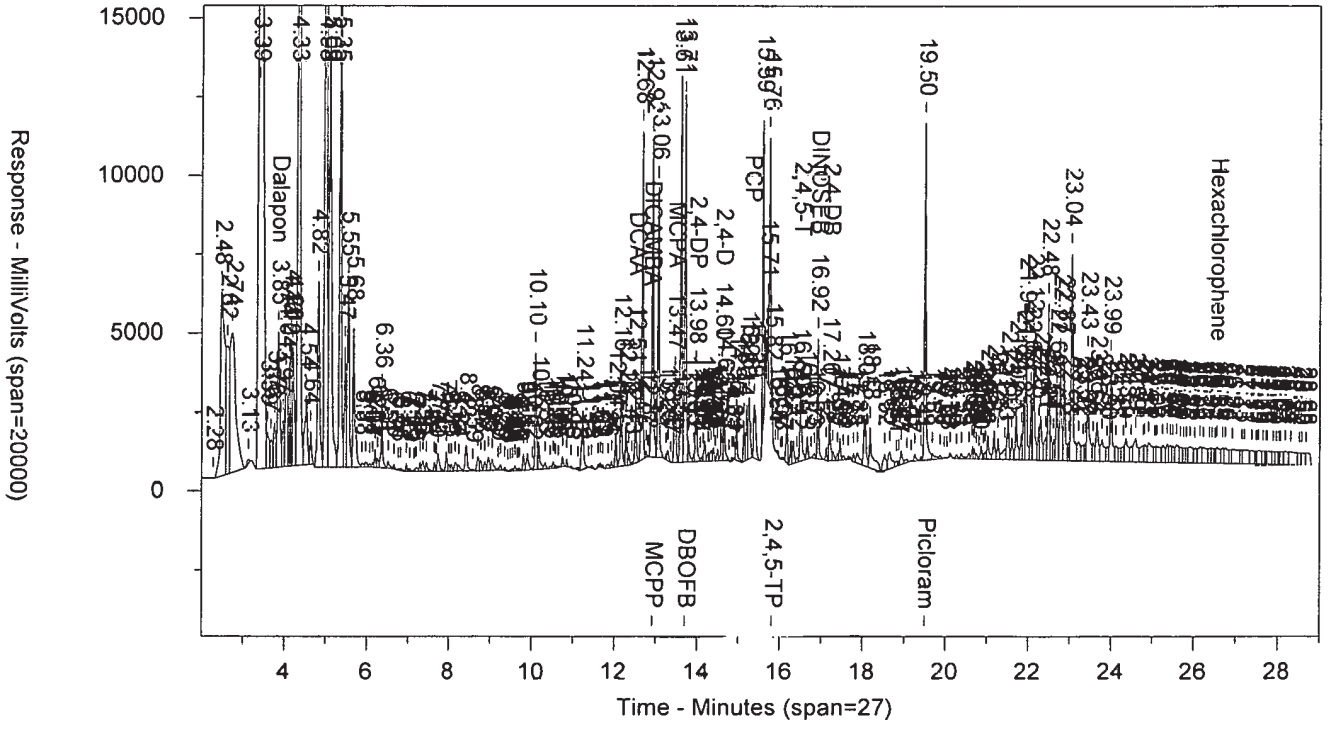

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Data Summary

Sample Name: 9876336 MSD F 14T04 MSD Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1060 mL Total Volume: 10 ml Analyst: 120 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 21:10:30
Instrument 19850A
Result file 15HERB18304004.063.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 90% (32 - 138) Conc: 1.693685

Analysis Report (B)

Injected on Nov 07, 2018 21:10:30
Instrument 19850B
Result file 15HERB18304004B.063.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 75% (32 - 138) Conc: 1.414606

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	2684366	3.632764	Dalapon	3.83	3.85	3.89	4456170	3.463294
2,4-DCAA	11.91	11.94	11.97	2254439	1.693685	2,4-DCAA	12.49	12.51	12.55	2397974	1.414606
MCPP	12.45	12.48	12.51	726175	30.86293	MCPP	12.90	12.92	12.96	10948220	1563.632
MCPA	12.83	12.86	12.89	1301631	98.79422	MCPA	13.43	13.47	13.49	2751706	285.7539
2,4-DP (Dichloroprop)	13.43	13.44	13.49	2676517	2.436735	2,4-DP (Dichloroprop)	13.96	13.98	14.01	3201474	2.159818
2,4-D	13.87	13.88	13.93	3704060	2.820859	2,4-D	14.58	14.60	14.64	3246554	1.912003
Pentachlorophenol	15.06	15.11	15.12	6163846	0.371215	2,4,5-TP	15.77	15.82	15.83	1143098	0.14254
2,4,5-T	15.88	15.89	15.94	5028714	0.906379	2,4,5-T	16.47	16.49	16.53	1556245	0.219645
2,4-DB	16.71	16.73	16.77	2156670	2.801864	Dinoseb	16.91	16.92	16.97	3861526	1.058605
Dinoseb	16.90	16.91	16.96	3982324	1.379389	2,4-DB	17.18	17.20	17.24	1981899	1.973169
Picloram	17.86	17.87	17.92	8402180	1.746712	Picloram	19.48	19.50	19.54	9160765	1.430556
Hexachlorophene	26.10	26.11	26.16	270989	0.051694						

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
☑ Dalapon	A	3.632764	1.6981	3.3962	<3.7736	JD1	4.78	
☐ 2,4-DCAA	A	1.693685	0.0943	0.1887	0.1887		17.96	
☑ 2,4-DCAA-D1	A	1.693685	0.0943	0.1887	0.1887			
☑ 2,4-DCAA-D2	B	1.414606	0.0943	0.1887	0.1887			
☑ Dicamba			<0.0755	<0.1509	<0.283	D1		
☑ MCPP			<47.1698	<94.3396	<188.6792	D1		
☑ MCPA	A	90.79422	47.1698	94.3396	<188.6792	JPD1	97.24	
☑ 2,4-DP (Dichloroprop)	A	2.436735	0.1509	0.3019	0.4717	D1	12.05	
☑ 2,4-D	A	2.820859	0.2358	0.4717	0.566	D1	38.41	
☐ Pentachlorophenol			<0.0255	<0.0566	<0.066			
☑ 2,4,5-TP			<0.0094	<0.0283	<0.0472	D1		
☑ 2,4,5-T			<0.23	<0.46	<0.47	VD2		2706
☑ 2,4-DB	A	2.801864	0.5943	1.2264	1.4151	D1	34.71	
☑ Dinoseb	A	1.379389	0.1698	0.3774	0.4717	D1	26.32	
☐ Picloram	A	1.746712	0.3396	0.7547	0.9434		19.90	
☐ Hexachlorophene					<0.1887			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:47

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **9876336** MSD F 14T04 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1060 mL Total Volume: 10 ml Analyst: 13378 SDG: TID14 State: NY
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 21:10:30
Instrument : CP15--19850A
Result file : 15HERB18304004.063.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 90% (32-138) Conc.: 1.693685

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.72	3.76	2684366	3.632764
DCAA	11.91	11.94	11.97	2254439	1.693685
MCPP	12.45	12.48	12.51	726175	30.862930
MCPA	12.83	12.86	12.89	1301631	98.794220
2,4-DP	13.43	13.44	13.49	2676517	2.436735
2,4-D	13.87	13.88	13.93	3704060	2.820859
DBOFB	14.21	14.22	14.26	9322787	0.000943
PCP	15.06	15.11	15.12	6163846	0.371215
2,4,5-T	15.88	15.89	15.94	5028714	0.906379
2,4-DB	16.71	16.73	16.77	2156670	2.801864
DINOSEB	16.90	16.91	16.96	3982324	1.379389
Picloram	17.86	17.87	17.92	8402180	1.746712
Hexachlorophene	26.10	26.11	26.16	270989	0.051694

Analysis Report (B)

Injected on : Nov 07, 2018 21:10:30
Instrument : CP15--19850B
Result file : 15HERB18304004B.063.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 75% (32-138) Conc.: 1.414606

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.85	3.89	4456170	3.463294
DCAA	12.49	12.51	12.55	2397974	1.414606
MCPP	12.90	12.92	12.96	10948220	1563.632000
MCPA	13.43	13.47	13.49	2751706	285.753900
DBOFB	13.69	13.70	13.75	11606730	0.000943
2,4-DP	13.96	13.98	14.01	3201474	2.159818
2,4-D	14.58	14.60	14.64	3246554	1.912003
2,4,5-TP	15.77	15.82	15.83	1143098	0.142541
2,4,5-T	16.47	16.49	16.53	1556245	0.219646
DINOSEB	16.91	16.92	16.97	3861526	1.058605
2,4-DB	17.18	17.20	17.24	1981899	1.973169
Picloram	19.48	19.50	19.54	9160765	1.430556

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon	A	3.632764	<3.7736	1.6981	J	4.78	
☐ DCAA	A	1.693685	0.1887	0.0943		17.96	
☑ DICAMBA			<0.283	<0.0755			
☑ MCPP			<188.6792	<47.1698			
☑ MCPA	A	98.794220	<188.6792	47.1698	J	97.24	**
☑ 2,4-DP	A	2.436735	0.4717	0.1509		12.05	
☑ 2,4-D	A	2.820859	0.566	0.2358		38.41	
☐ DBOFB	A	0.000943				0.00	
☐ PCP			<0.066	<0.0255			
☑ 2,4,5-TP			<0.0472	<0.0094			
☑ 2,4,5-T	B	0.219646 <0.47	0.1415	0.0613	<6.2>	121.97	** wc
☑ 2,4-DB	A	2.801864	1.4151	0.5943		34.71	
☑ DINOSEB	A	1.379389	0.4717	0.1698		26.32	
☐ Picloram	A	1.746712	0.9434	0.3396		19.90	
☐ Hexachlorophene			<0.1887				

Units: ug/l

Reviewed by: _____
Date: 11/16/

Verified by: Valerie L. Tomayko
Valerie L. Tomayko
Principal Specialist
Date: NOV 16 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

Printed on: 11/8/2018 08:11:00

9876336MSD F AB14T04 MSD 183050043A 10407 SW-846 8015A

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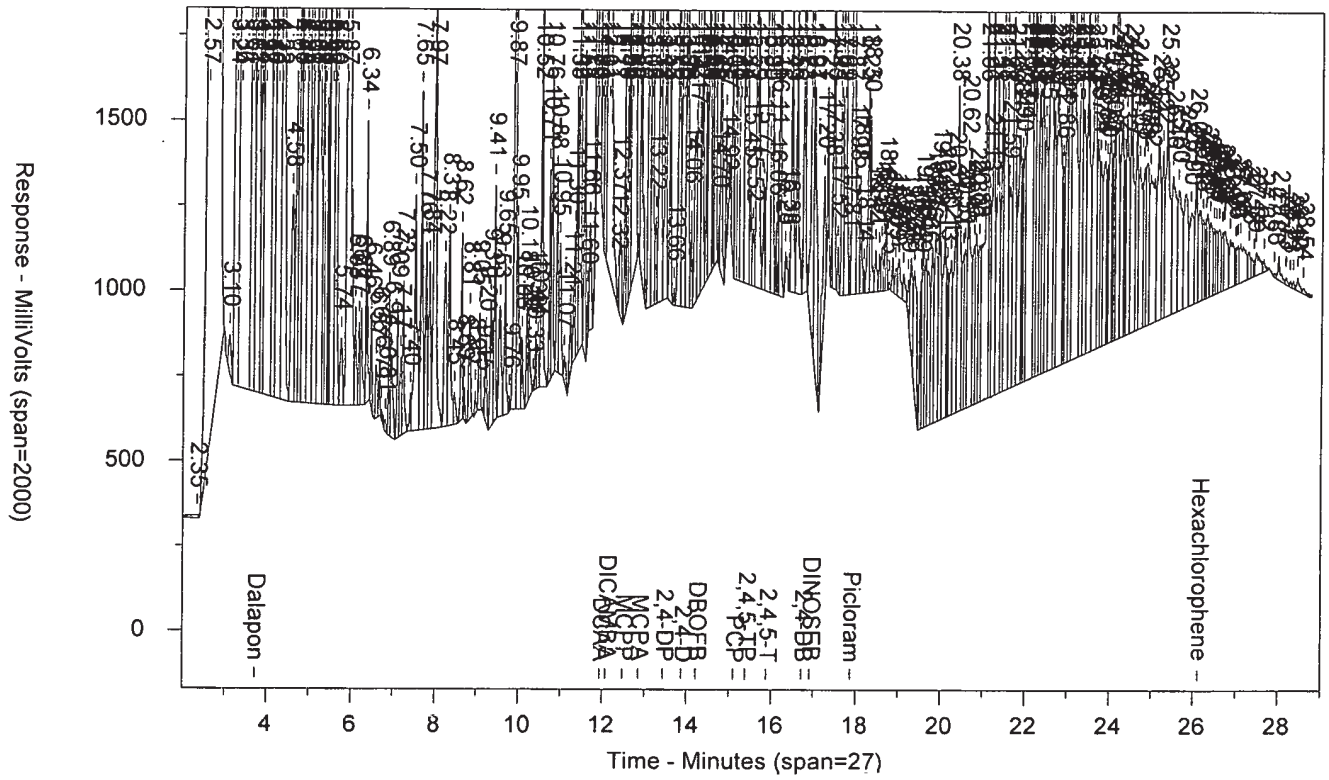

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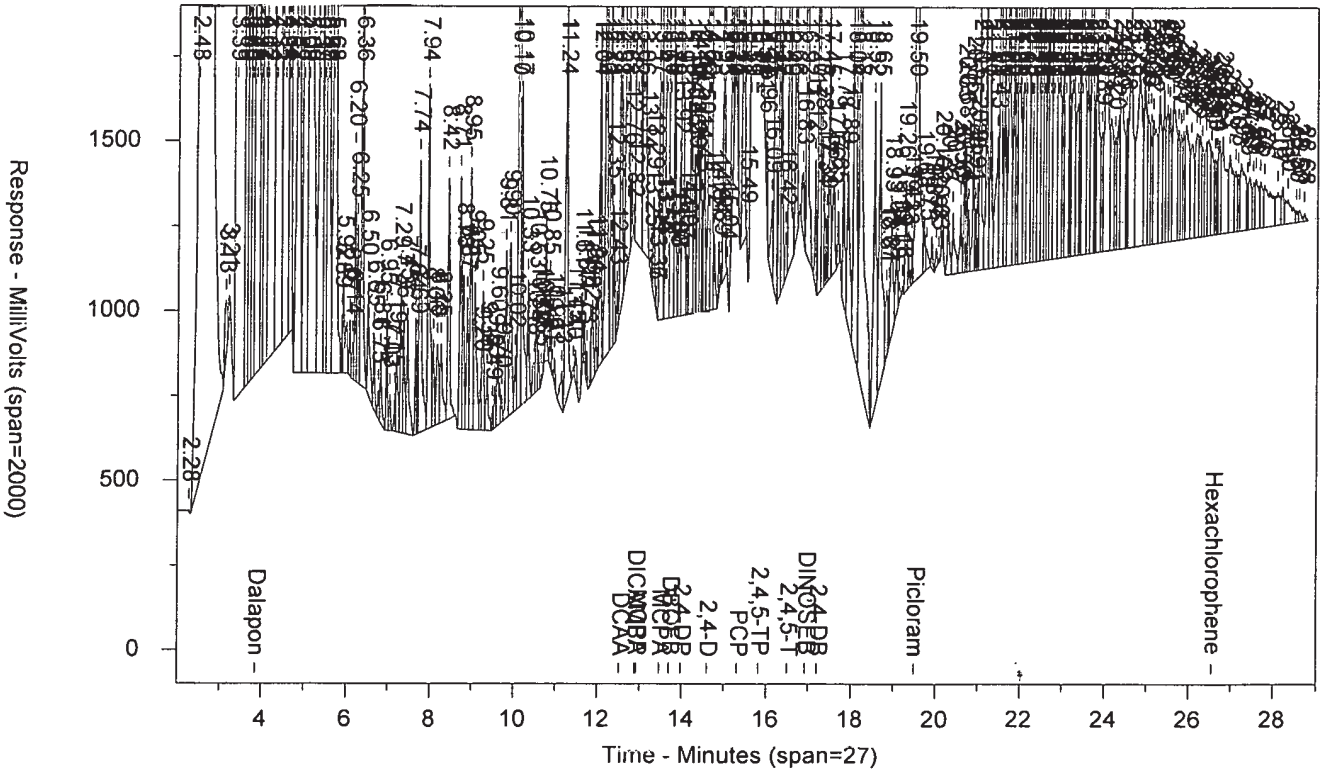

LANCASTER LABORATORIES

Sample Number: 9876336MSD F AB14T04 MSD 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 9:10:30 PM Sample Weight: 1060
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	2684367	3.633	Dalapon	3.851	4456171	3.463	Dalapon
11.94	2254439	1.694	DCAA	12.515	2397974	1.415	DCAA
12.477	726175	30.863	MCPP	12.919	10948230	1563.632	MCPP
12.857	1301631	98.794	MCPA	13.466	2751706	285.754	MCPA
13.445	2676517	2.437	2,4-DP	13.977	3201475	2.16	2,4-DP
14.221	9322787	.001	DBOFB	13.703	11606730	.001	DBOFB
13.882	3704060	2.821	2,4-D	14.6	3246555	1.912	2,4-D
15.109	6163846	.371	PCP		0		PCP
	0		2,4,5-TP	15.816	1143098	.143	2,4,5-TP
15.886	5028714	.906	2,4,5-T	16.495	1556245	.22	2,4,5-T
16.726	2156670	2.802	2,4-DB	17.199	1981899	1.973	2,4-DB
16.911	3982324	1.379	DINOSEB	16.919	3861527	1.059	DINOSEB
17.873	8402180	1.747	Picloram	19.497	9160765	1.431	Picloram
26.114	270989	.052	Hexachlorophene		0		Hexachlorophene

Files:
Area File: 15herb18304004.063.RAW
Area File: 15herb18304004B.063.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: 11/7/2018 9:39:20 PM
File Reported On: 11/8/2018 at 8:01:15 AM

9876336MSD F AB14T04 MSD 183050043A 10407 SW-846 8015

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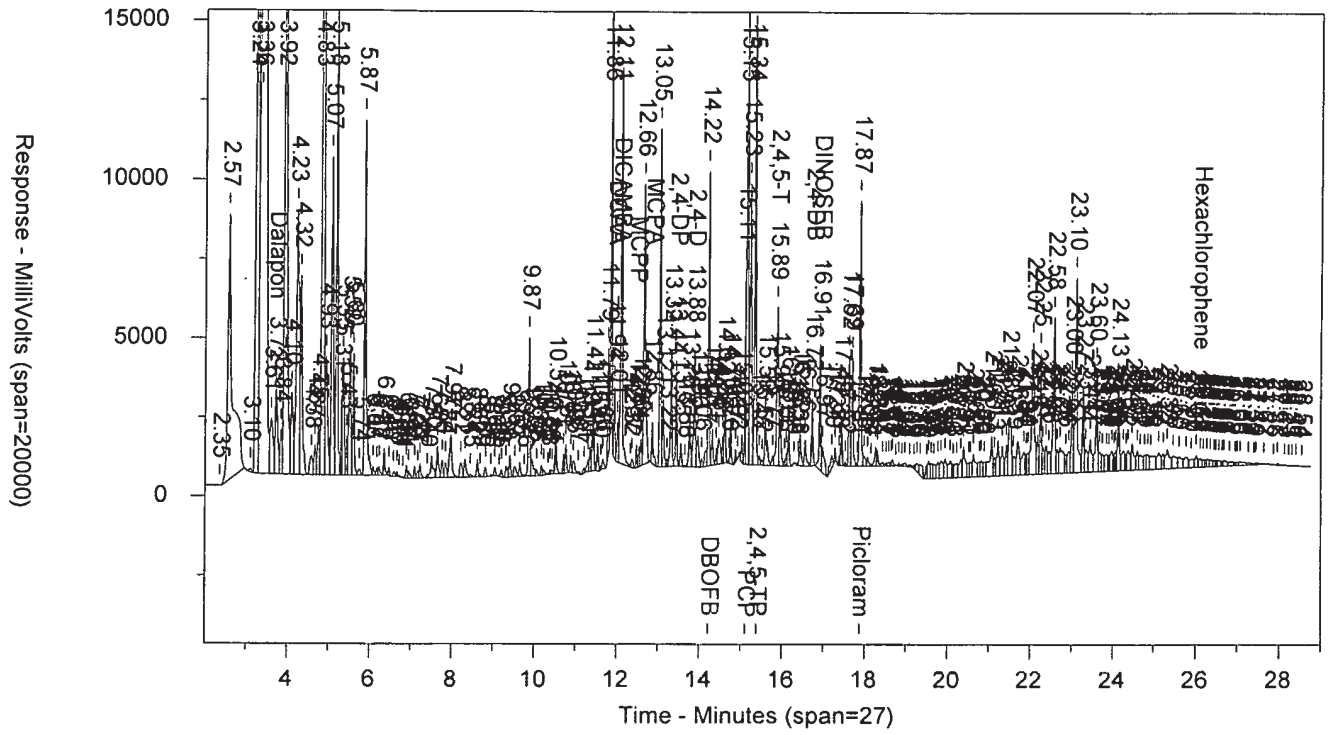

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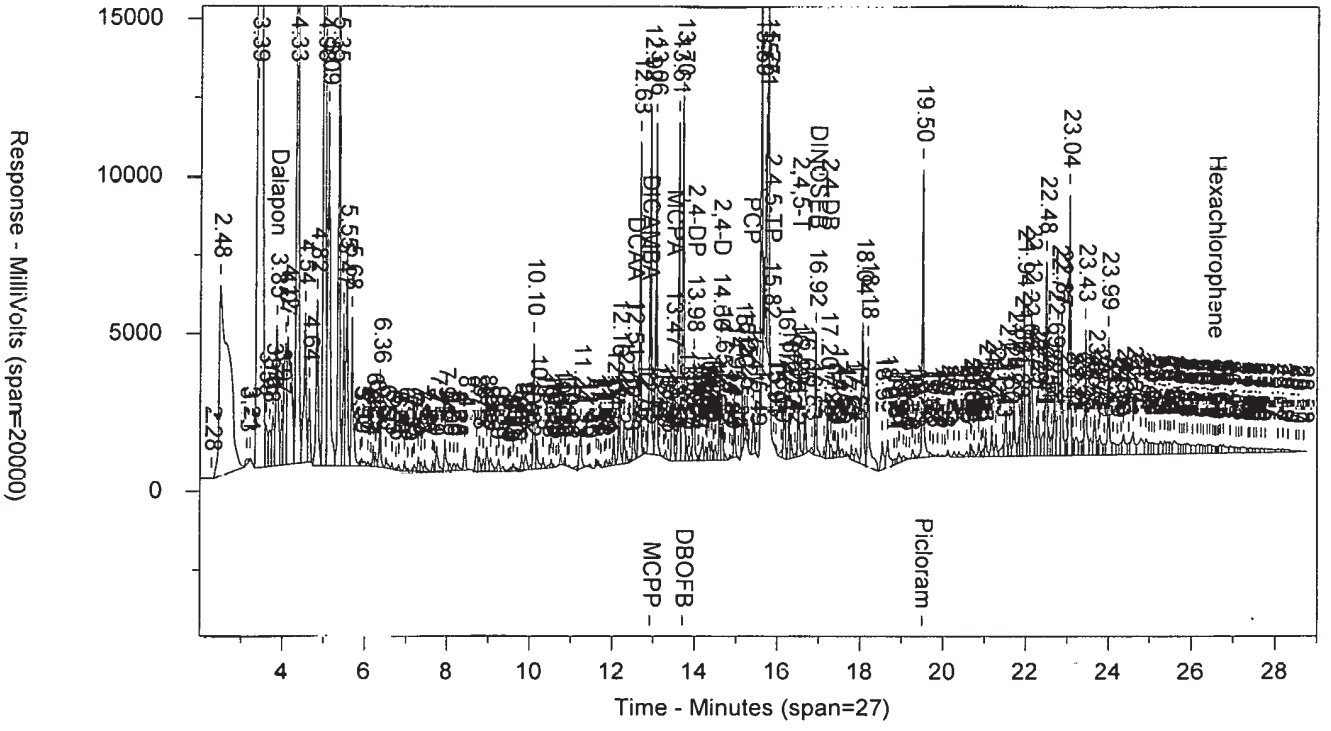

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Data Summary

Sample Name: LCSA 11/2/18 F LCS43305 LCS Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1000 mL Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 19:31:37
Instrument 19850A
Result file 15HERB18304004.060.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 92% (34 - 142) Conc: 1.839698

Analysis Report (B)

Injected on Nov 07, 2018 19:31:37
Instrument 19850B
Result file 15HERB18304004B.060.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 84% (34 - 142) Conc: 1.689363

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	2554708	3.183928	Dalapon	3.83	3.85	3.89	2947649	2.423125
2,4-DCAA	11.91	11.93	11.97	2659046	1.839698	2,4-DCAA	12.49	12.51	12.55	2707442	1.689363
Dicamba	12.04	12.06	12.10	1335020	0.229925	Dicamba	12.85	12.87	12.91	1431580	0.214986
MCPP	12.45	12.47	12.51	2111715	278.5853	MCPP	12.90	12.93	12.96	1438550	217.3142
MCPA	12.83	12.86	12.89	3845776	482.0325	MCPA	13.43	13.46	13.49	3445694	378.4768
2,4-DP (Dichloroprop)	13.43	13.45	13.49	2949430	2.47288	2,4-DP (Dichloroprop)	13.96	13.98	14.01	3225654	2.301747
2,4-D	13.87	13.89	13.93	3524902	2.472163	2,4-D	14.58	14.60	14.64	3589201	2.235817
Pentachlorophenol	15.06	15.09	15.12	15811140	0.876927	Pentachlorophenol	15.28	15.30	15.34	16248700	0.790889
2,4,5-TP	15.36	15.37	15.42	1856316	0.271977	2,4,5-TP	15.77	15.79	15.83	1848348	0.243787
2,4,5-T	15.88	15.90	15.94	1698086	0.281864	2,4,5-T	16.47	16.50	16.53	1617390	0.241452
2,4-DB	16.71	16.73	16.77	1972636	2.360136	Dinoseb	16.91	16.92	16.97	3685404	1.068642
Dinoseb	16.90	16.91	16.96	3836006	1.223646	2,4-DB	17.18	17.20	17.24	2100637	2.212108
Picloram	17.86	17.88	17.92	9459967	1.811113	Picloram	19.48	19.50	19.54	10335350	1.707146
Hexachlorophene	26.10	26.13	26.16	4833452	0.849131	Hexachlorophene	26.52	26.55	26.58	5070220	0.808257

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon	A	3.183928	1.8	<3.6	<4	J	27.14	
2,4-DCAA	A	1.839698	0.1	0.2	0.2		8.52	
2,4-DCAA-D1	A	1.839698	0.1	0.2	0.2			
2,4-DCAA-D2	B	1.689363	0.1	0.2	0.2			
Dicamba	A	0.229925	0.08	0.16	<0.3	J	6.72	
MCPP	A	278.5853	50	100	200		24.71	
MCPA	A	482.0325	50	100	200		24.07	
2,4-DP (Dichloroprop)	A	2.47288	0.16	0.32	0.5		7.17	
2,4-D	A	2.472163	0.25	0.5	0.6		10.04	
Pentachlorophenol	A	0.876927	0.027	0.06	0.07		10.32	
2,4,5-TP	A	0.271977	0.01	0.03	0.05		10.93	
2,4,5-T	A	0.281864	0.065	0.13	0.15		15.44	
2,4-DB	A	2.360136	0.63	1.3	1.5		6.48	
Dinoseb	A	1.223646	0.18	0.4	0.5		13.52	
Picloram	A	1.811113	0.36	0.8	1		5.91	
Hexachlorophene	A	0.849131			0.2		4.93	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:30

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Data Summary

Sample Name: LCSA 11/2/18 F LCS43305 LCS Sample ID: AB **Batchnumber: 183050043A**
Sample Amount: 1000 mL Total Volume: 10 ml Analyst: 120 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on Nov 07, 2018 19:31:37
Instrument 19850A
Result file 15HERB18304004.060.RAW
Calibration file 15HERB1830401
Method file 15HERB

%SSR(DCAA) 92% (32 - 138) Conc: 1.839698

Analysis Report (B)

Injected on Nov 07, 2018 19:31:37
Instrument 19850B
Result file 15HERB18304004B.060.RAW
Calibration file 15HERB1830401B
Method file 15HERBB

%SSR(DCAA) 84% (32 - 138) Conc: 1.689363

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Dalapon	3.70	3.72	3.76	2554708	3.183928	Dalapon	3.83	3.85	3.89	2947649	2.423125
2,4-DCAA	11.91	11.93	11.97	2659046	1.839698	2,4-DCAA	12.49	12.51	12.55	2707442	1.689363
Dicamba	12.04	12.06	12.10	1335020	0.229925	Dicamba	12.85	12.87	12.91	1431580	0.214986
MCPP	12.45	12.47	12.51	2111715	278.5853	MCPP	12.90	12.93	12.96	1438550	217.3142
MCPA	12.83	12.86	12.89	3845776	482.0325	MCPA	13.43	13.46	13.49	3445694	378.4768
2,4-DP (Dichloroprop)	13.43	13.45	13.49	2949430	2.47288	2,4-DP (Dichloroprop)	13.96	13.98	14.01	3225654	2.301747
2,4-D	13.87	13.89	13.93	3524902	2.472163	2,4-D	14.58	14.60	14.64	3589201	2.235817
Pentachlorophenol	15.06	15.09	15.12	15811140	0.876927	Pentachlorophenol	15.28	15.30	15.34	16248700	0.790889
2,4,5-TP	15.36	15.37	15.42	1856316	0.271977	2,4,5-TP	15.77	15.79	15.83	1848348	0.243787
2,4,5-T	15.88	15.90	15.94	1698086	0.281864	2,4,5-T	16.47	16.50	16.53	1617390	0.241452
2,4-DB	16.71	16.73	16.77	1972636	2.360136	Dinoseb	16.91	16.92	16.97	3685404	1.068642
Dinoseb	16.90	16.91	16.96	3836006	1.223646	2,4-DB	17.18	17.20	17.24	2100637	2.212108
Picloram	17.86	17.88	17.92	9459967	1.811113	Picloram	19.48	19.50	19.54	10335350	1.707146
Hexachlorophene	26.10	26.13	26.16	4833452	0.849131	Hexachlorophene	26.52	26.55	26.58	5070220	0.808257

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
Dalapon	A	3.183928	1.8	<3.6	<4	J	27.14	
2,4-DCAA	A	1.839698	0.1	0.2	0.2		8.52	
2,4-DCAA-D1	A	1.839698	0.1	0.2	0.2			
2,4-DCAA-D2	B	1.689363	0.1	0.2	0.2			
Dicamba	A	0.229925	0.08	0.16	<0.3	J	6.72	
MCPP	A	278.5853	50	100	200		24.71	
MCPA	A	482.0325	50	100	200		24.07	
2,4-DP (Dichloroprop)	A	2.47288	0.16	0.32	0.5		7.17	
2,4-D	A	2.472163	0.25	0.5	0.6		10.04	
Pentachlorophenol	A	0.876927	0.027	0.06	0.07		10.32	
2,4,5-TP	A	0.271977	0.01	0.03	0.05		10.93	
2,4,5-T	A	0.281864	0.065	0.13	0.15		15.44	
2,4-DB	A	2.360136	0.63	1.3	1.5		6.48	
Dinoseb	A	1.223646	0.18	0.4	0.5		13.52	
Picloram	A	1.811113	0.36	0.8	1		5.91	
Hexachlorophene	A	0.849131			0.2		4.93	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
Principal Specialist

NOV 16 2018

Reviewed and digitally signed by Richard A Shober on 11/16/2018 07:33:32

Eurofins Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/2/18 F LCS43305 ID: AB **Batchnumber: 183050043A**
Sample Amount: 1000 mL Total Volume: 10 ml Analyst: 13378 SDG: State:
Analyses: 10407

Analysis Report (A)

Injected on : Nov 07, 2018 19:31:37
Instrument : CP15--19850A
Result file : 15HERB18304004.060.RAW
Calibration file : 15HERB1830401.CAL
Method file : 15HERB.MET
%SSR(DCAA) : 92% (34-142) Conc.: 1.839698

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.70	3.72	3.76	2554708	3.183928
DCAA	11.91	11.93	11.97	2659046	1.839698
DICAMBA	12.04	12.06	12.10	1335020	0.229925
MCPP	12.45	12.47	12.51	2111715	278.585300
MCPA	12.83	12.86	12.89	3845776	482.032500
2,4-DP	13.43	13.45	13.49	2949430	2.472880
2,4-D	13.87	13.89	13.93	3524902	2.472163
DBOFB	14.21	14.22	14.26	10730620	0.001000
PCP	15.06	15.09	15.12	15811140	0.876927
2,4,5-TP	15.36	15.37	15.42	1856316	0.271977
2,4,5-T	15.88	15.90	15.94	1698086	0.281864
2,4-DB	16.71	16.73	16.77	1972636	2.360136
DINOSEB	16.90	16.91	16.96	3836006	1.223646
Picloram	17.86	17.88	17.92	9459967	1.811113
Hexachlorophene	26.10	26.13	26.16	4833452	0.849131

Analysis Report (B)

Injected on : Nov 07, 2018 19:31:37
Instrument : CP15--19850B
Result file : 15HERB18304004B.060.RAW
Calibration file : 15HERB1830401B.CAL
Method file : 15HERBB.MET
%SSR(DCAA) : 84% (34-142) Conc.: 1.689363

Peak name	Min	R.T.	Max	Height	Amount
Dalapon	3.83	3.85	3.89	2947649	2.423125
DCAA	12.49	12.51	12.55	2707442	1.689363
DICAMBA	12.85	12.87	12.91	1431580	0.214986
MCPP	12.90	12.93	12.96	1438550	217.314200
MCPA	13.43	13.46	13.49	3445694	378.476800
DBOFB	13.69	13.71	13.75	11631700	0.001000
2,4-DP	13.96	13.98	14.01	3225654	2.301747
2,4-D	14.58	14.60	14.64	3589201	2.235817
PCP	15.28	15.30	15.34	16248700	0.790889
2,4,5-TP	15.77	15.79	15.83	1848348	0.243787
2,4,5-T	16.47	16.50	16.53	1617390	0.241452
DINOSEB	16.91	16.92	16.97	3685404	1.068642
2,4-DB	17.18	17.20	17.24	2100637	2.212108
Picloram	19.48	19.50	19.54	10335350	1.707146
Hexachlorophene	26.52	26.55	26.58	5070220	0.808257

Summary Report

Compound Name	Column	Amount Found	LOQ	DL	Qualifiers	%RPD	Comments
☑ Dalapon	A	3.183928	<4	1.8	J	27.14	
☑ DCAA	A	1.839698	0.2	0.1		8.52	
☑ DICAMBA	A	0.229925	<0.3	0.08	J	6.72	
☑ MCPP	A	278.585300	200	50		24.71	
☑ MCPA	A	482.032500	200	50		24.07	
☑ 2,4-DP	A	2.472880	0.5	0.16		7.17	
☑ 2,4-D	A	2.472163	0.6	0.25		10.04	
☐ DBOFB	A	0.001000				0.00	
☑ PCP	A	0.876927	0.07	0.027		10.32	
☑ 2,4,5-TP	A	0.271977	0.05	0.01		10.93	
☑ 2,4,5-T	A	0.281864	0.15	0.065		15.44	
☑ 2,4-DB	A	2.360136	1.5	0.63		6.48	
☑ DINOSEB	A	1.223646	0.5	0.18		13.52	
☑ Picloram	A	1.811113	1	0.36		5.91	
☐ Hexachlorophene	A	0.849131	0.2			4.93	

Units: ug/l

Reviewed by: _____ Verified by: Valerie L Tomayko, Principal Specialist

Date: 11/16 Date: NOV 16 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

Printed on: 11/8/2018 08:09:42

LCSA 11/2/18 F ABLCS43305 LCS 183050043A 10407 SW-846 8015A

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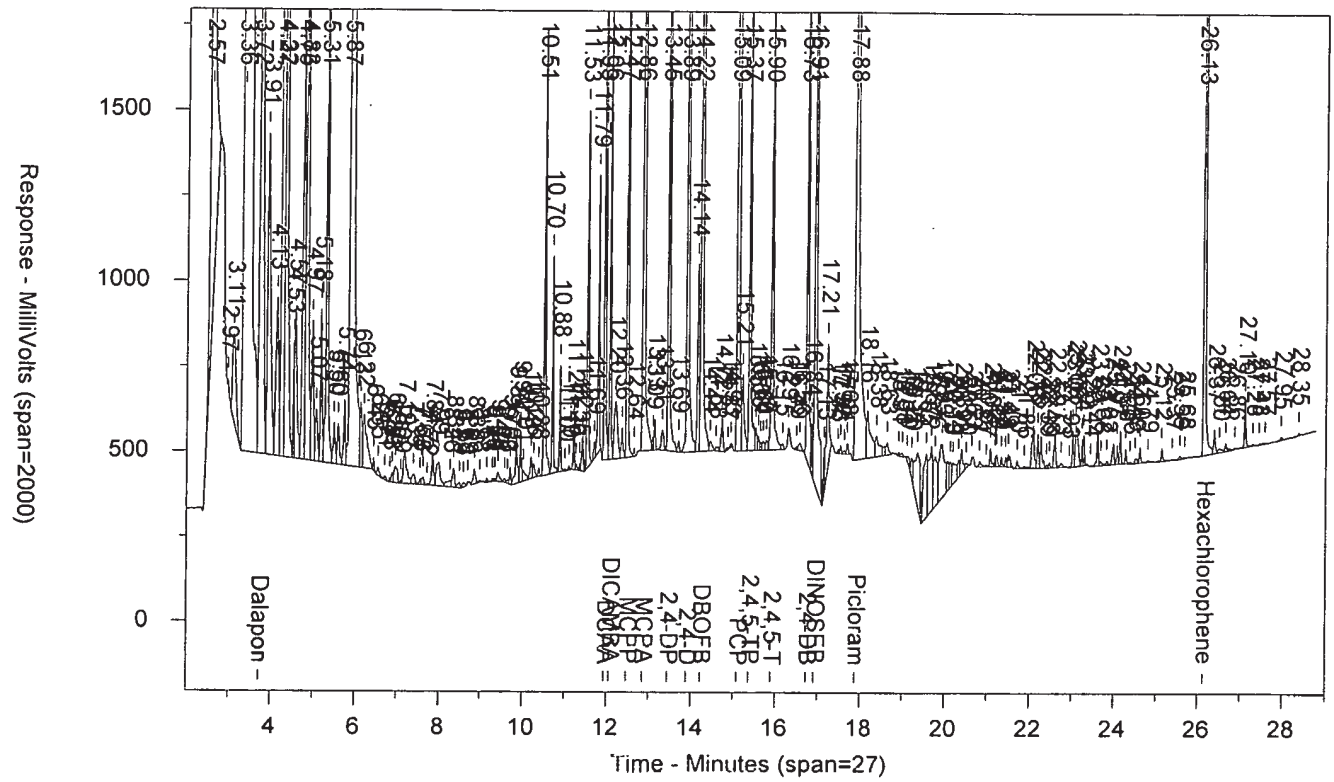

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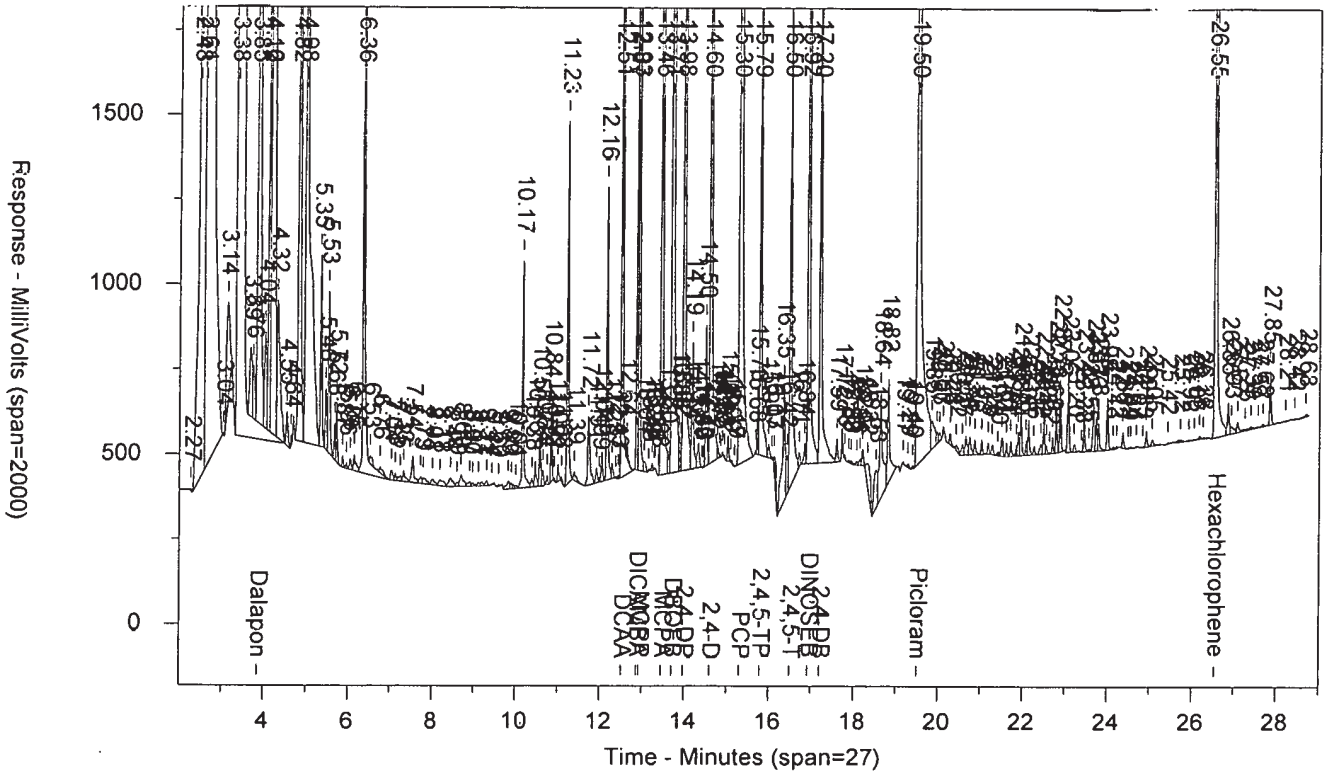

LANCASTER LABORATORIES

Sample Number: LCSA 11/2/18 F ABLCS43305 LCS 183050043A 10407 SW-846 8015A
Injected On: 11/7/2018 7:31:37 PM
Instrument ID: CP15-19850
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
Sample Weight: 1000
Dilution Factor: 10

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	2554708	3.184	Dalapon	3.853	2947649	2.423	Dalapon
11.934	2659047	1.84	DCAA	12.511	2707442	1.689	DCAA
12.06	1335020	.23	DICAMBA	12.872	1431580	.215	DICAMBA
12.47	2111715	278.585	MCPP	12.926	1438550	217.314	MCPP
12.856	3845776	482.033	MCPA	13.455	3445694	378.477	MCPA
13.446	2949430	2.473	2,4-DP	13.978	3225655	2.302	2,4-DP
14.223	10730620	.001	DBOFB	13.705	11631700	.001	DBOFB
13.887	3524903	2.472	2,4-D	14.603	3589201	2.236	2,4-D
15.087	15811140	.877	PCP	15.301	16248700	.791	PCP
15.37	1856317	.272	2,4,5-TP	15.79	1848348	.244	2,4,5-TP
15.897	1698086	.282	2,4,5-T	16.496	1617390	.241	2,4,5-T
16.73	1972636	2.36	2,4-DB	17.201	2100637	2.212	2,4-DB
16.914	3836006	1.224	DINOSEB	16.922	3685404	1.069	DINOSEB
17.878	9459967	1.811	Picloram	19.5	10335350	1.707	Picloram
26.129	4833452	.849	Hexachlorophene	26.552	5070221	.808	Hexachlorophen

Files:
Area File: 15herb18304004.060.RAW
Area File: 15herb18304004B.060.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: 11/7/2018 8:00:24 PM
File Reported On: 11/8/2018 at 8:00:21 AM

LCSA 11/2/18 F ABLCS43305 LCS 183050043A 10407 SW-846 801!

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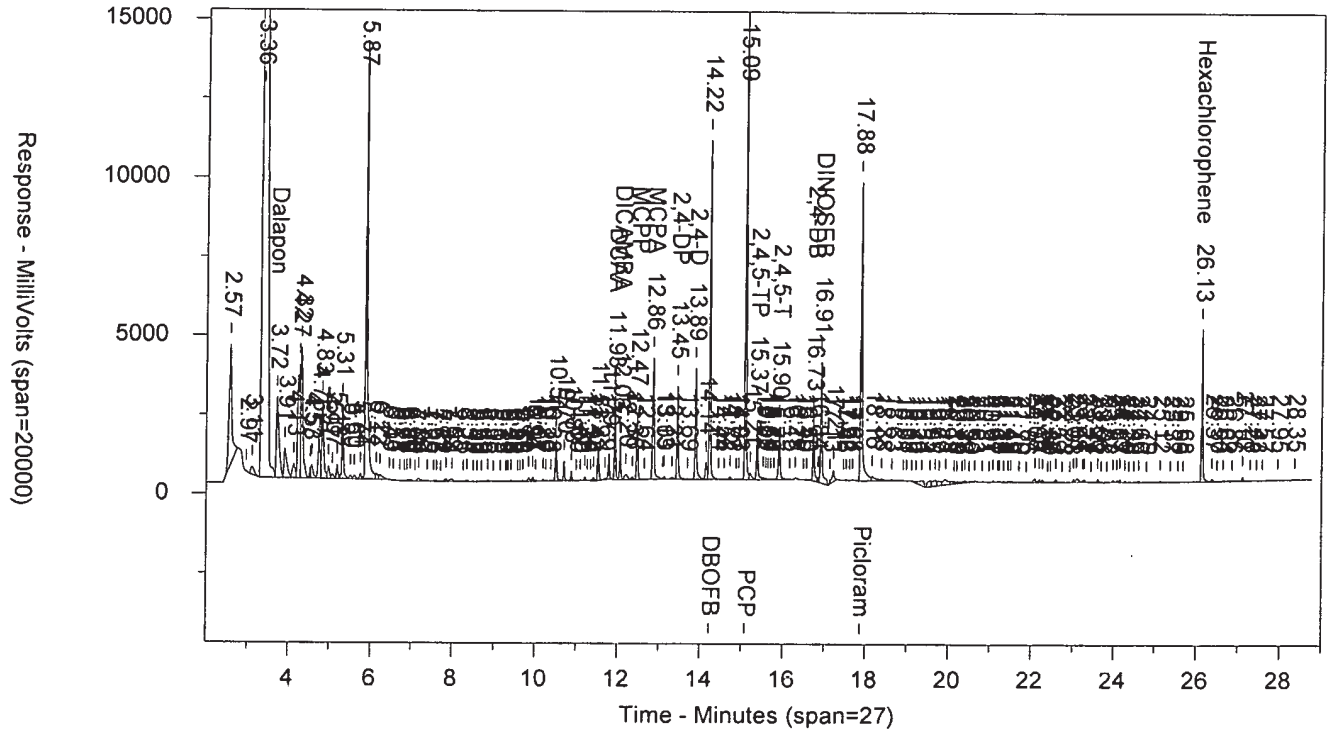

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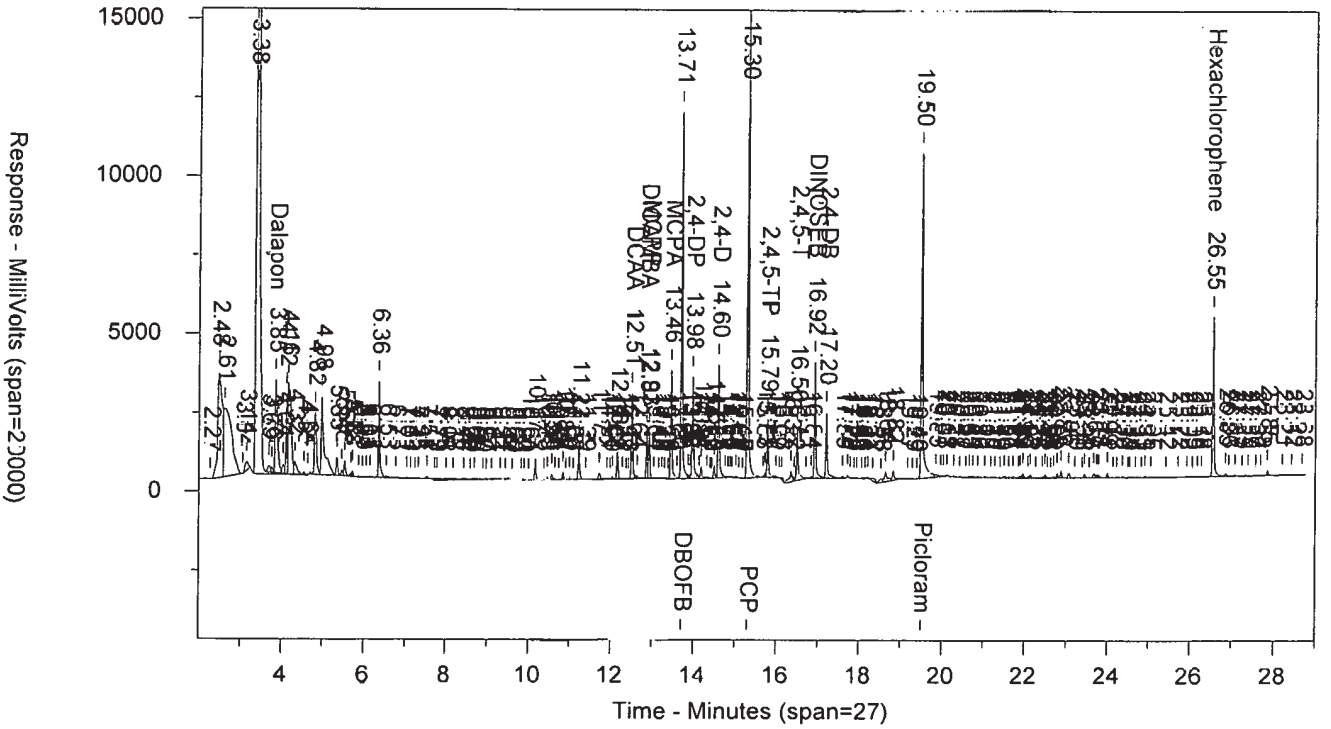

Extraction/Distillation/Digestion Logs

Herbicides

Organic Extraction Batchlog Assigned to: 24470 Elizabeth Donovan Reviewed by: RU 13378 Start Date: November 2, 2018 Start time: 15:25

183050043A

Tech 1: E024470 Tech 2:

Dept: 24 Prep Analysis: 00816 Water Sample Herbicide Extract Herb water 8151A Master

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 12	BC	Comments
9876335MS	14T04	1063	IS1828824A SS1828124A	0.1 1.0	MS1824924C MS1828224A	1.0 1.0	10	✓	✓	436	Yellow
9876336MSD	14T04	1060	IS1828824A SS1828124A	0.1 1.0	MS1824924C MS1828224A	1.0 1.0	10	✓	✓	436	Yellow
BLANKA	PBLK43305	1000	IS1828824A SS1828124A	0.1 1.0	—	—	10	✓	✓		DI H_2O
LCSA	LCS43305	1000	IS1828824A SS1828124A	0.1 1.0	MS1824924C MS1828224A	1.0 1.0	10	✓	✓		DI H_2O

Solvent Used	Lot No.
12 N Sulfuric Acid	H200-16
6 N NaOH	2808937
Diazald Solution	9121110218A
Ethyl Ether	183339
Hexane	186229
Methanol	181172
Methylene Chloride	186618
NaCl	180803
Sodium Sulfate(acid)	2894103118C

8A 12N Sulfuric Acid was added to all samples at the time 6N NaOH was supposed to be added. 6N NaOH was then added to the samples until they reached a pH of 12 E024470 11/2/18

NA E024470 11/2/18

Spike Solutions: Witness: NA

IS1828824A HERB INTERNAL STANDARD
MS1828224A HERB SPIKE
MS1824924C MCPA FORTIFICATION MIX
SS1828124A HERB SURROGATE STANDARD

	Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 12	BC	Comments	Analyses	List	Due Date	Prio
1	9876332	14T02	1060	IS1828824A SS1828124A	0.1 1.0	10	✓	✓	436	Brown	10407	25781	11/09/2018	N
2	9876334BKG	14T04	1056	IS1828824A SS1828124A	0.1 1.0	10	✓	✓	436	Yellow	10407	25781	11/09/2018	N
3	9876342	14T06	1062	IS1828824A SS1828124A	0.1 1.0	10	✓	✓	436	Clear	10407	25781	11/09/2018	N

NA E024470 11/2/18

Bench# —	Bench# —	Bench# —		
Rack ID:		Work Station	Herb Hood 2	Micro Temp 100? —
Internal Standard		Balance #	25996	

R-VAP ID	C	R-VAP ID	C	R-VAP ID	C		
S-bath ID 10481	85 C	S-bath ID	C	N-Evap 3	40 C	M-vap	C

183050043A

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Prep-Process Worksheet

Florisil
Prep: 00816 Water Sample Herbicide Extract
Batch: 183050043A

Verified: MT 047
Start Date: 11/2/18
Start Time: 21:50
Tech 1: ED24470
Tech 2:

Sample #	Aliquot (mL)	Final Volume (mL)	D.F. Aliq	D.F. F.V.	Comments
9876335MS	2	2			
9876336MSD	2	2			
BLANKA	2	2			
LCSA	2	2			

	Sample #	QC	Aliquot (mL)	Final Volume (mL)	D.F. Aliq	D.F. F.V.	Comments	Analyses
1	9876332		2	2				10407
2	9876334		2	2				10407
3	9876342		2	2				10407

NA ED24470
11/2/18

Additional Comment: NA

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
		Florisil Cartridges	6362355-17
		50% Ether/Hexane	21701021888

S-Evap/bath — C | S-Evap/bath — C | N-Evap 40 C

The documented temperatures are NIST corrected.