

Polychlorinated Biphenyls (PCBs) Data

Case Narrative/Conformance Summary

Polychlorinated Biphenyls (PCBs)

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID15

Pesticide Residue Analysis

Fraction: Polychlorinated Biphenyls (PCBs)

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
9881309	OU2-1-MW008WT	X		1	
9881310	OU2-1-MW008WT-DUP	X		1	Field Duplicate Sample
9881313	OU2-1-MW009WT	X		1	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 9881309-9881310, 9881313: Analysis: 10591)
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

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#: 183100010A (Sample number(s): 9881309-9881310, 9881313)

The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: PCB-1016

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID15

Pesticide Residue Analysis

Fraction: Polychlorinated Biphenyls (PCBs)

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

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

Polychlorinated Biphenyls (PCBs)

**Quality Control Reference List
Pesticide Residue Analysis**

**CLIENT: Tidewater, Inc.
SDG: TID15**

Fraction: Polychlorinated Biphenyls (PCBs)

Analysis	Batch Number	Sample Number	Analysis Date
PCBs in Water by 8082A	183100010A	PBLK10310	11/08/2018 12:16
		LCS10310	11/08/2018 12:27
		LCSD10310	11/08/2018 12:38
		9881309	11/08/2018 18:37
		9881310	11/08/2018 18:48
		9881313	11/08/2018 18:58

Fraction: Polychlorinated Biphenyls (PCBs)

183100010A / PBLK10310						
Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
PCB-1016	11/08/18	N.D.	ug/l	0.080	0.24	0.40
PCB-1221	11/08/18	N.D.	ug/l	0.080	0.24	0.40
PCB-1232	11/08/18	N.D.	ug/l	0.16	0.32	0.40
PCB-1242	11/08/18	N.D.	ug/l	0.080	0.24	0.40
PCB-1248	11/08/18	N.D.	ug/l	0.080	0.24	0.40
PCB-1254	11/08/18	N.D.	ug/l	0.080	0.24	0.40
PCB-1260	11/08/18	N.D.	ug/l	0.12	0.24	0.40
PCB-1262	11/08/18	N.D.	ug/l	0.16	0.32	0.40
PCB-1268	11/08/18	N.D.	ug/l	0.13	0.26	0.40

Fraction: Polychlorinated Biphenyls (PCBs)

183100010A	Decachlorobiphenyl-D1		Decachlorobiphenyl-D2		Tetrachloro-m-xylene-D1		Tetrachloro-m-xylene-D2	
	Spike Added	0.2976 ug/l	Spike Added	0.2976 ug/l	Spike Added	0.301049 ug/l	Spike Added	0.301049 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
PBLK10310	60	10 - 148	62	10 - 148	64	33 - 137	60	33 - 137
LCS10310	57	10 - 148	58	10 - 148	71	33 - 137	70	33 - 137
LCSD10310	67	10 - 148	68	10 - 148	97	33 - 137	95	33 - 137
9881309	33	10 - 148	32	10 - 148	114	33 - 137	108	33 - 137
9881310	28	10 - 148	28	10 - 148	73	33 - 137	71	33 - 137
9881313	83	10 - 148	86	10 - 148	114	33 - 137	108	33 - 137

SDG: TID15
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Polychlorinated Biphenyls (PCBs)

LCS: LCS10310 LCSD: LCSD10310 Analyte	Batch: 183100010A (Sample number(s): 9881309-9881310, 9881313)							
	Spike Added ug/l	LCS Conc ug/l	LCSD Conc ug/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
PCB-1016	5.01	3.45	4.72	69	94	46-129	31 *	30
PCB-1260	5.00	3.95	5.36	79	107	45-134	30	30

Fraction: Polychlorinated Biphenyls (PCBs)

10591: PCBs in Water by 8082A Analyte Name	Default DL	Default LOD	Default LOQ	Units
PCB-1016	.08	.24	0.40	ug/l
PCB-1221	.08	.24	0.40	ug/l
PCB-1232	.16	.32	0.40	ug/l
PCB-1242	.08	.24	0.40	ug/l
PCB-1248	.08	.24	0.40	ug/l
PCB-1254	.08	.24	0.40	ug/l
PCB-1260	.12	.24	0.40	ug/l
PCB-1262	.16	.32	0.40	ug/l
PCB-1268	.128	.256	0.40	ug/l

Multiple Component Initial Calibration Report: 25PCBS1830301

Area Files Used For Calibration

Sequence _____ Injections _____

Component: **Aroclor-1016**

AR16

Calibration Levels: 6

Avg Concentration (ng/ml): 100.200000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1016

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	3.182	3.397	3.512	3.728	3.787	3.979	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Average Height:	752713	729715	958851	1140878	949999	699898	5232054
RF (Height/Conc):	2643	2557	3283	3779	3112	2377	
%RSD For RF	11.878	11.457	9.484	7.301	5.369	9.316	

Slope

Y-Intercept

Level	Height	Conc	1	2	3	4	5	6	SUM
Level 1	75503	25.050	73203	25.050	90270	105438	82112	67454	493980
Level 2	146818	50.100	142607	50.100	178049	198098	160190	126874	952636
Level 3	267602	100.200	257848	100.200	339375	372287	313654	234676	1785442
Level 4	533317	200.400	505255	200.400	658792	737500	635686	477901	3548451
Level 5	1095296	501.000	1088673	501.000	1388826	1700359	1400081	1027346	7700581
Level 6	2397742	1002.000	2310704	1002.000	3097795	3731587	3108270	2265134	16911232

Component: **Aroclor-1221**

AR21

Calibration Levels: 1

Concentration (ng/ml): 201.700000

Min # of Peaks Required: 3

Max %RSD: 5

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1221

	<u>1</u>	<u>2</u>	<u>3</u>	<u>SUM</u>
Retention Time:	3.077	3.133	3.181	
RT Window (Mins):	0.02000	0.02000	0.02000	
Height:	283431	224638	734217	1242286
RF (Height/Conc):	1405	1114	3640	
%RSD For RF	0.000	0.000	0.000	

Slope

Y-Intercept

Component: **Aroclor-1232**

AR32

Calibration Levels: 1

Concentration (ng/ml): 201.600000

Min # of Peaks Required: 4

Max %RSD: 10

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1232

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	3.182	3.396	3.512	3.729	3.787	3.978	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	599681	232902	298723	359052	265743	187474	1943575
RF (Height/Conc):	2975	1155	1482	1781	1318	930	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	

Slope

Y-Intercept

Multiple Component Initial Calibration Report: 25PCBS1830301

Component: **Aroclor-1242**

AR42

Calibration Levels: 1

Concentration (ng/ml): 198.660000

Min # of Peaks Required: 4

Max %RSD: 30

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1242

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	3.182	3.397	3.513	3.729	3.788	3.980	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	454082	422803	538774	642603	479208	359250	2896720
RF (Height/Conc):	2286	2128	2712	3235	2412	1808	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

Component: **Aroclor-1248**

AR48

Calibration Levels: 6

Avg Concentration (ng/ml): 100.950000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1248

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	3.854	3.979	4.068	4.248	4.377	4.634		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	891859	1035712	879897	921566	955375	685082	5369492	
RF (Height/Conc):	3111	3511	2977	2971	3166	2356		
%RSD For RF	15.444	13.308	13.398	8.529	12.824	15.323		
Slope								
Y-Intercept								
Level 1	Height Conc	101346 25.240	111588 25.240	94220 25.240	87034 25.240	100213 25.240	77489 25.240	571890
Level 2	Height Conc	162501 50.470	176516 50.470	149906 50.470	145718 50.470	157882 50.470	117274 50.470	909797
Level 3	Height Conc	306732 100.950	349640 100.950	302107 100.950	297585 100.950	304387 100.950	231663 100.950	1792114
Level 4	Height Conc	586135 201.900	655082 201.900	547615 201.900	556716 201.900	574697 201.900	445117 201.900	3365362
Level 5	Height Conc	1349984 504.750	1576176 504.750	1317265 504.750	1400666 504.750	1495085 504.750	1046054 504.750	8185230
Level 6	Height Conc	2844456 1009.500	3345268 1009.500	2868271 1009.500	3041679 1009.500	3099987 1009.500	2192896 1009.500	17392557

Multiple Component Initial Calibration Report: **25PCBS1830301**

Component: **Aroclor-1254**

AR54

Calibration Levels: 6

Avg Concentration (ng/ml): 100.560000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1254

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	4.573	4.634	4.757	4.848	5.048	5.164		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	1081188	2172570	650252	1477260	1232058	1559983	8173311	
RF (Height/Conc):	3491	6989	2204	4822	3869	4945		
%RSD For RF	9.017	7.204	11.161	9.078	5.401	5.721		
Slope								
Y-Intercept								
Level 1	Height	101777	199750	64495	141946	106743	134726	749437
	Conc	25.140	25.140	25.140	25.140	25.140	25.140	
Level 2	Height	184557	360152	119328	248121	196751	259820	1368729
	Conc	50.280	50.280	50.280	50.280	50.280	50.280	
Level 3	Height	333041	676949	229605	470862	377654	491007	2579118
	Conc	100.560	100.560	100.560	100.560	100.560	100.560	
Level 4	Height	827982	1684452	523914	1175536	933268	1183647	6328799
	Conc	251.400	251.400	251.400	251.400	251.400	251.400	
Level 5	Height	1619001	3353396	972978	2218199	1850595	2312743	12326912
	Conc	502.800	502.800	502.800	502.800	502.800	502.800	
Level 6	Height	3420771	6760720	1991192	4608894	3927339	4977952	25686868
	Conc	1005.600	1005.600	1005.600	1005.600	1005.600	1005.600	

Component: **Aroclor-1260**

AR16

Calibration Levels: 6

Avg Concentration (ng/ml): 100.220000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1260

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	4.756	4.956	5.164	5.228	5.631	5.837		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	1615040	1946233	2450183	1134449	3644032	1952307	12742243	
RF (Height/Conc):	5412	6519	7862	3815	11391	6344		
%RSD For RF	9.159	8.364	4.413	8.666	4.361	6.116		
Slope								
Y-Intercept								
Level 1	Height	152363	183327	198524	108702	288500	169233	1100649
	Conc	25.060	25.060	25.060	25.060	25.060	25.060	
Level 2	Height	290340	341145	409465	201452	566675	327228	2136305
	Conc	50.110	50.110	50.110	50.110	50.110	50.110	
Level 3	Height	541151	659767	776581	372998	1119487	646075	4116050
	Conc	100.220	100.220	100.220	100.220	100.220	100.220	
Level 4	Height	1050530	1278580	1612398	755072	2295582	1244407	8236569
	Conc	200.440	200.440	200.440	200.440	200.440	200.440	
Level 5	Height	2324202	2841732	3617329	1687649	5357405	2824350	18652667
	Conc	501.100	501.100	501.100	501.100	501.100	501.100	
Level 6	Height	5331655	6372845	8086801	3680820	12236540	6502546	42211207
	Conc	1002.200	1002.200	1002.200	1002.200	1002.200	1002.200	

Multiple Component Initial Calibration Report: 25PCBS1830301

Component: **Aroclor-1262**

AR62

Calibration Levels: 1

Concentration (ng/ml): 200.200000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1262

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	5.230	5.395	5.633	5.837	5.892	6.269	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	1164675	938190	2718715	1573352	853867	1051633	8300432
RF (Height/Conc):	5818	4686	13580	7859	4265	5253	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

Component: **Aroclor-1268**

AR68

Calibration Levels: 1

Concentration (ng/ml): 200.200000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1268

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	5.831	5.890	6.020	6.086	6.264	6.464	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	3533167	3199968	2938374	737580	1261203	10177340	21847632
RF (Height/Conc):	17648	15984	14677	3684	6300	50836	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

Multiple Component Initial Calibration Report: **25PCBS1830301B**

Area Files Used For Calibration

Sequence _____ Injections _____

Component: Aroclor-1016

AR16

Calibration Levels: 6

Avg Concentration (ng/ml): 100.200000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1016

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	2.962	3.294	3.487	3.562	3.621	3.725		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	1246524	1500646	1461509	1544662	1186906	1283060	8223305	
RF (Height/Conc):	4354	5098	4944	5124	4020	4335		
%RSD For RF	10.764	9.293	8.904	7.081	8.815	9.301		
Slope								
Y-Intercept								
Level 1	Height	124339	143547	135493	139771	111475	121312	775937
	Conc	25.050	25.050	25.050	25.050	25.050	25.050	
Level 2	Height	236641	276807	271866	272442	215826	234636	1508218
	Conc	50.100	50.100	50.100	50.100	50.100	50.100	
Level 3	Height	444019	513766	489337	508535	405735	430757	2792149
	Conc	100.200	100.200	100.200	100.200	100.200	100.200	
Level 4	Height	872891	985969	992112	1014869	805902	862187	5533930
	Conc	200.400	200.400	200.400	200.400	200.400	200.400	
Level 5	Height	1862517	2218634	2131913	2274882	1726302	1850855	12065103
	Conc	501.000	501.000	501.000	501.000	501.000	501.000	
Level 6	Height	3938734	4865150	4748335	5057472	3856195	4198610	26664496
	Conc	1002.000	1002.000	1002.000	1002.000	1002.000	1002.000	

Component: Aroclor-1221

AR21

Calibration Levels: 1

Concentration (ng/ml): 201.700000

Min # of Peaks Required: 3

Max %RSD: 5

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1221

	<u>1</u>	<u>2</u>	<u>3</u>	<u>SUM</u>
Retention Time:	2.849	2.910	2.962	
RT Window (Mins):	0.02000	0.02000	0.02000	
Height:	512425	365366	1241151	2118942
RF (Height/Conc):	2541	1811	6153	
%RSD For RF	0.000	0.000	0.000	
Slope				
Y-Intercept				

Component: Aroclor-1232

AR32

Calibration Levels: 1

Concentration (ng/ml): 201.600000

Min # of Peaks Required: 4

Max %RSD: 10

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1232

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	2.962	3.294	3.487	3.562	3.621	3.726	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	1004896	462523	469887	449578	292905	342291	3022080
RF (Height/Conc):	4985	2294	2331	2230	1453	1698	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

Multiple Component Initial Calibration Report: **25PCBS1830301B**

Component: **Aroclor-1242**

AR42

Calibration Levels: 1

Concentration (ng/ml): 198.660000

Min # of Peaks Required: 4

Max %RSD: 30

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1242

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	2.962	3.294	3.487	3.562	3.621	3.726	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	746286	822899	836933	816912	600229	671054	4494313
RF (Height/Conc):	3757	4142	4213	4112	3021	3378	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

Component: **Aroclor-1248**

AR48

Calibration Levels: 6

Avg Concentration (ng/ml): 100.950000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1248

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	3.597	3.725	3.818	3.954	4.091	4.324		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	1477833	1855387	1224545	2477278	1155937	1066139	9257119	
RF (Height/Conc):	5078	6235	4121	8026	3692	3490		
%RSD For RF	13.969	11.862	12.995	8.591	5.808	9.480		
Slope								
Y-Intercept								
Level 1	Height Conc	161334 25.240	193718 25.240	130637 25.240	234630 25.240	99069 25.240	103005 25.240	922393
Level 2	Height Conc	260788 50.470	317587 50.470	208220 50.470	402446 50.470	192587 50.470	175733 50.470	1557361
Level 3	Height Conc	518707 100.950	607642 100.950	401143 100.950	802517 100.950	377295 100.950	353479 100.950	3060783
Level 4	Height Conc	939975 201.900	1186033 201.900	769223 201.900	1498938 201.900	698043 201.900	659057 201.900	5751269
Level 5	Height Conc	2215002 504.750	2829950 504.750	1875280 504.750	3737282 504.750	1714444 504.750	1568281 504.750	13940239
Level 6	Height Conc	4771194 1009.500	5997394 1009.500	3962764 1009.500	8187852 1009.500	3854186 1009.500	3537277 1009.500	30310667

Multiple Component Initial Calibration Report: **25PCBS1830301B**

Component: **Aroclor-1254**

AR54

Calibration Levels:6

Avg Concentration (ng/ml): 100.560000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1254

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	4.323	4.417	4.488	4.557	4.712	4.793		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	3243920	1473331	2079202	1212095	1459922	2358855	11827324	
RF (Height/Conc):	10204	4793	6436	3881	4426	7273		
%RSD For RF	6.025	7.915	3.928	6.146	4.858	4.749		
Slope								
Y-Intercept								
Level 1	Height	286327	136710	171463	106750	116641	196142	1014033
	Conc	25.140	25.140	25.140	25.140	25.140	25.140	
Level 2	Height	512856	252879	322258	204251	214837	365768	1872849
	Conc	50.280	50.280	50.280	50.280	50.280	50.280	
Level 3	Height	968365	477966	638169	386897	437757	709287	3618441
	Conc	100.560	100.560	100.560	100.560	100.560	100.560	
Level 4	Height	2483457	1134046	1572065	938245	1082411	1731512	8941736
	Conc	251.400	251.400	251.400	251.400	251.400	251.400	
Level 5	Height	5025122	2236031	3088708	1800090	2129697	3554720	17834368
	Conc	502.800	502.800	502.800	502.800	502.800	502.800	
Level 6	Height	10187390	4602355	6682550	3836338	4778186	7595699	37682518
	Conc	1005.600	1005.600	1005.600	1005.600	1005.600	1005.600	

Component: **Aroclor-1260**

AR16

Calibration Levels:6

Avg Concentration (ng/ml): 100.220000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1260

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>	
Retention Time:	4.557	4.662	4.792	5.019	5.214	5.474		
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000		
Average Height:	2983403	2412770	3055246	1850497	4604799	3006933	17913648	
RF (Height/Conc):	9482	7613	9473	5864	13916	9474		
%RSD For RF	5.827	6.408	5.841	4.892	6.503	2.997		
Slope								
Y-Intercept								
Level 1	Height	248288	201226	245410	154875	338668	238977	1427444
	Conc	25.060	25.060	25.060	25.060	25.060	25.060	
Level 2	Height	494277	387672	462462	290152	677397	483176	2795136
	Conc	50.110	50.110	50.110	50.110	50.110	50.110	
Level 3	Height	937030	731484	919693	578540	1332020	902059	5430826
	Conc	100.220	100.220	100.220	100.220	100.220	100.220	
Level 4	Height	1818781	1517422	1898718	1170345	2811238	1864258	11080762
	Conc	200.440	200.440	200.440	200.440	200.440	200.440	
Level 5	Height	4333224	3435597	4405541	2715796	6741592	4580504	26212254
	Conc	501.100	501.100	501.100	501.100	501.100	501.100	
Level 6	Height	10068820	8203220	10399650	6193271	15727880	9942624	60535465
	Conc	1002.200	1002.200	1002.200	1002.200	1002.200	1002.200	

Multiple Component Initial Calibration Report: **25PCBS1830301B**

Component: **Aroclor-1262**

AR62

Calibration Levels: 1

Concentration (ng/ml): 200.200000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1262

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	4.828	5.021	5.216	5.429	5.478	5.854	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	1556104	1611131	3273690	1325530	2216939	1310334	11293728
RF (Height/Conc):	7773	8048	16352	6621	11074	6545	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

Component: **Aroclor-1268**

AR68

Calibration Levels: 1

Concentration (ng/ml): 200.200000

Min # of Peaks Required: 4

Max %RSD: 40

Report Base:

Slope:

Y-Intercept:

E-Flag Basis: Aroclor-1268

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>SUM</u>
Retention Time:	5.426	5.476	5.627	5.695	5.851	6.051	
RT Window (Mins):	0.02000	0.02000	0.02000	0.02000	0.02000	0.02000	
Height:	4736334	4788130	4160612	1035941	1670071	15195680	31586768
RF (Height/Conc):	23658	23917	20782	5175	8342	75902	
%RSD For RF	0.000	0.000	0.000	0.000	0.000	0.000	
Slope							
Y-Intercept							

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Calibration File: 25PCBS1830301

GC Column (1): MR-1

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	RT OF STANDARDS						MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
Tetrachloro-m-xylene	2.93	2.93	2.92	2.93	2.93	2.93	2.92	2.89	2.95
Decachlorobiphenyl	6.62	6.61	6.61	6.61	6.61	6.61	6.61	6.58	6.64

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Calibration File: 25PCBS1830301

GC Column (1): MR-1

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
Tetrachloro-m-xylene	1.54E+05	1.49E+05	1.52E+05	1.59E+05	1.63E+05	1.55E+05	1.55E+05	3
Decachlorobiphenyl	1.42E+05	1.31E+05	1.22E+05	1.21E+05	1.29E+05	1.27E+05	1.28E+05	6

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274ACalibration File: 25PCBS1830301GC Column (1): MR-1ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE CF	LEVEL	AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO						
Aroclor-1016	1	3.18	3.16	3.20	3014	2643	1	25.05	75503	11.88
					2930		2	50.1	146818	
					2671		3	100.2	267602	
					2661		4	200.4	533317	
					2186		5	501	1095296	
					2393		6	1002	2397742	
	2	3.40	3.38	3.42	2922	2557	1	25.05	73203	11.46
					2846		2	50.1	142607	
					2573		3	100.2	257848	
					2521		4	200.4	505255	
					2173		5	501	1088673	
					2306		6	1002	2310704	
	3	3.51	3.49	3.53	3604	3283	1	25.05	90270	9.48
					3554		2	50.1	178049	
					3387		3	100.2	339375	
					3287		4	200.4	658792	
					2772		5	501	1388826	
					3092		6	1002	3097795	
	4	3.73	3.71	3.75	4709	3779	1	25.05	105430	7.30
					3954		2	50.1	198098	
					3715		3	100.2	372287	
					3680		4	200.4	737500	
					3394		5	501	1700359	
					3724		6	1002	3731587	
5	3.79	3.77	3.81	3278	3112	1	25.05	82112	5.37	
				3197		2	50.1	160190		
				3130		3	100.2	313654		
				3172		4	200.4	635686		
				2795		5	501	1400081		
				3102		6	1002	3108270		
6	3.98	3.96	4.00	2693	2377	1	25.05	67454	9.32	
				2532		2	50.1	126874		
				2342		3	100.2	234676		
				2385		4	200.4	477901		
				2051		5	501	1027346		
				2261		6	1002	2265134		
Aroclor-1221	1	3.08	3.06	3.10	1405	1405	1	201.7	283431	.00
	2	3.13	3.11	3.15	1114	1114	1	201.7	224638	.00
	3	3.18	3.16	3.20	3640	3640	1	201.7	734217	.00

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Calibration File: 25PCBS1830301

GC Column (1): MR-1

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE		AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO		CF	LEVEL			
Aroclor-1232	1	3.18	3.16	3.20	2975	2975	1	201.6	599681	.00
	2	3.40	3.38	3.42	1155	1155	1	201.6	232902	.00
	3	3.51	3.49	3.53	1482	1482	1	201.6	298723	.00
	4	3.73	3.71	3.75	1781	1781	1	201.6	359052	.00
	5	3.79	3.77	3.81	1318	1318	1	201.6	265743	.00
	6	3.98	3.96	4.00	930	930	1	201.6	187474	.00
Aroclor-1242	1	3.18	3.16	3.20	2286	2286	1	198.66	454082	.00
	2	3.40	3.38	3.42	2128	2128	1	198.66	422803	.00
	3	3.51	3.49	3.53	2712	2712	1	198.66	538774	.00
	4	3.73	3.71	3.75	3235	3235	1	198.66	642603	.00
	5	3.79	3.77	3.81	2412	2412	1	198.66	479208	.00
	6	3.98	3.96	4.00	1808	1808	1	198.66	359250	.00

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Calibration File: 25PCBS1830301

GC Column (1): MR-1

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE		AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO		CF	LEVEL			
Aroclor-1248	1	3.85	3.83	3.87	4015	3111	1	25.24	101346	15.44
							2	50.47	162501	
							3	100.95	306732	
							4	201.9	586135	
							5	504.75	1349984	
							6	1009.5	2844456	
	2	3.98	3.96	4.00	4421	3511	1	25.24	111588	13.31
							2	50.47	176516	
							3	100.95	349640	
							4	201.9	655082	
							5	504.75	1576176	
							6	1009.5	3345268	
	3	4.07	4.05	4.09	3733	2977	1	25.24	94220	13.40
							2	50.47	149906	
							3	100.95	302107	
							4	201.9	547615	
							5	504.75	1317265	
							6	1009.5	2868271	
	4	4.25	4.23	4.27	3448	2971	1	25.24	87034	8.53
							2	50.47	145718	
							3	100.95	297585	
							4	201.9	556716	
							5	504.75	1400666	
							6	1009.5	3041679	
5	4.38	4.36	4.40	3970	3166	1	25.24	100213	12.82	
						2	50.47	157882		
						3	100.95	304387		
						4	201.9	574697		
						5	504.75	1495085		
						6	1009.5	3099987		
6	4.63	4.61	4.65	3070	2356	1	25.24	77489	15.32	
						2	50.47	117274		
						3	100.95	231663		
						4	201.9	445117		
						5	504.75	1046054		
						6	1009.5	2192896		

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274ACalibration File: 25PCBS1830301GC Column (1): MR-1ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE		AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO		CF	LEVEL			
Aroclor-1254	1	4.57	4.55	4.59	4048	3491	1	25.14	101777	9.02
							2	50.28	184557	
							3	100.56	333041	
							4	251.4	827982	
							5	502.8	1619001	
							6	1005.6	3420771	
	2	4.63	4.61	4.65	7946	6989	1	25.14	199750	7.20
							2	50.28	360152	
							3	100.56	676949	
							4	251.4	1684452	
							5	502.8	3353396	
							6	1005.6	6760720	
	3	4.76	4.74	4.78	2565	2204	1	25.14	64495	11.16
							2	50.28	119328	
							3	100.56	229605	
							4	251.4	523914	
							5	502.8	972978	
							6	1005.6	1991192	
	4	4.85	4.83	4.87	5646	4822	1	25.14	141946	9.08
							2	50.28	248121	
							3	100.56	470862	
							4	251.4	1175536	
							5	502.8	2218199	
							6	1005.6	4608894	
5	5.05	5.03	5.07	4246	3869	1	25.14	106743	5.40	
						2	50.28	196751		
						3	100.56	377654		
						4	251.4	933268		
						5	502.8	1050505		
						6	1005.6	3927339		
6	5.16	5.14	5.18	5359	4945	1	25.14	134726	5.72	
						2	50.28	259820		
						3	100.56	491007		
						4	251.4	1183647		
						5	502.8	2312743		
						6	1005.6	4977952		

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Calibration File: 25PCBS1830301

GC Column (1): MR-1

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE		AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO		CF	LEVEL			
Aroclor-1260	1	4.76	4.74	4.78	6080	5412	1	25.06	152363	9.16
							2	50.11	290340	
							3	100.22	541151	
							4	200.44	1050530	
							5	501.1	2324202	
							6	1002.2	5331655	
	2	4.96	4.94	4.98	7316	6519	1	25.06	183327	8.36
							2	50.11	341145	
							3	100.22	659767	
							4	200.44	1278580	
							5	501.1	2841732	
							6	1002.2	6372845	
	3	5.16	5.14	5.18	7922	7862	1	25.06	198524	4.41
							2	50.11	409465	
							3	100.22	776581	
							4	200.44	1612398	
							5	501.1	3617329	
							6	1002.2	8086801	
	4	5.23	5.21	5.25	4338	3815	1	25.06	108702	8.67
							2	50.11	201452	
							3	100.22	372998	
							4	200.44	755072	
							5	501.1	1687649	
							6	1002.2	3680820	
5	5.63	5.61	5.65	11512	11391	1	25.06	288500	4.36	
						2	50.11	566675		
						3	100.22	1119487		
						4	200.44	2295582		
						5	501.1	5357405		
						6	1002.2	12236540		
6	5.84	5.82	5.86	6753	6344	1	25.06	169233	6.12	
						2	50.11	327228		
						3	100.22	646075		
						4	200.44	1244407		
						5	501.1	2824350		
						6	1002.2	6502546		

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274ACalibration File: 25PCBS1830301GC Column (1): MR-1ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE		AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO		CF	LEVEL			
Aroclor-1262	1	5.23	5.21	5.25	5818	5818	1	200.2	1164675	.00
	2	5.40	5.38	5.42	4686	4686	1	200.2	938190	.00
	3	5.63	5.61	5.65	13580	13580	1	200.2	2718715	.00
	4	5.84	5.82	5.86	7859	7859	1	200.2	1573352	.00
	5	5.89	5.87	5.91	4265	4265	1	200.2	853867	.00
	6	6.27	6.25	6.29	5253	5253	1	200.2	1051633	.00
Aroclor-1268	1	5.83	5.81	5.85	17648	17648	6	200.2	3533167	.00
	2	5.89	5.87	5.91	15984	15984	6	200.2	3199968	.00
	3	6.02	6.00	6.04	14677	14677	6	200.2	2938374	.00
	4	6.09	6.07	6.11	3684	3684	6	200.2	737580	.00
	5	6.26	6.24	6.28	6300	6300	6	200.2	1261203	.00
	6	6.46	6.44	6.48	50836	50836	6	200.2	10177340	.00

File Name: V:\CP25\25PCBS1830301.CAL
 Version: 8

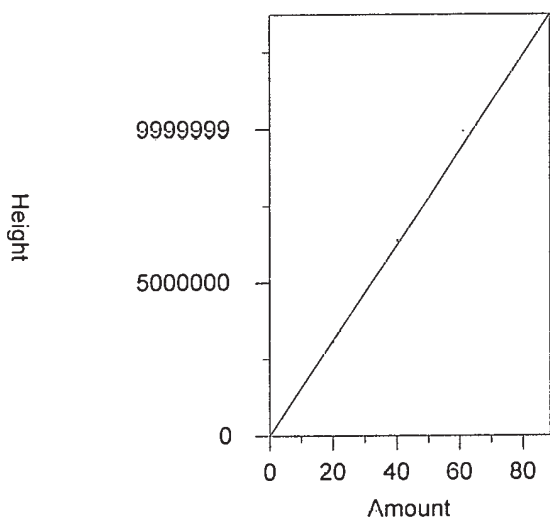
Creator:
 Description:
 Reason for change:

External standard calibration
 Standard injection volume: 1
 No sample weight correction
 Area reject threshold: 0
 Reference peak area reject threshold: 0
 Amount units: ug/l
 No default component

Method of calculating data point averages: Current update equal to cal data
 Print calibration update report

All levels are normal data points.

1 TCX



Expected retention time: 2.925 minutes
 Search window: 0.03 minutes
 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

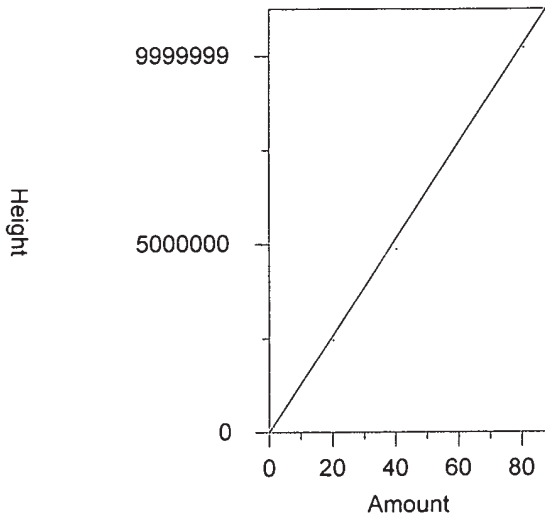
$$Y = 155137.6 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9981739
 Average error: 2.371%
 Average CF: 155137.6
 RSD: 3.136%

Level	Amount	Response	Cal Factor	Error, %	Source
1	2.01	308788.9	153626.3	-0.974	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001.007.
2	4.02	598913.4	148983.4	-3.967	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001.008.
3	20.12	3056704	151923.7	-2.072	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001.009.
4	40.24	6390003	158797.3	2.359	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001.010.
5	61.16	9939359	162514	4.755	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001.011.
6	80.48	1.247286E+07	154980.9	-0.101	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001.012.

2 DCB

Chrom Perfect Calibration File



Expected retention time: 6.614 minutes
 Search window: 0.03 minutes
 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

$$Y = 128339 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.998426
 Average error: 4.146%
 Average CF: 128339
 RSD: 5.949%

Level	Amount	Response	Cal Factor	Error, %	Source
1	2.02	286269.3	141717.5	10.424	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
2	4.03	526710.1	130697.3	1.838	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
3	20.15	2448309	121504.2	-5.326	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
4	40.3	4865646	120735.6	-5.924	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
5	61.26	7875793	128563.4	0.175	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
6	80.6	1.022137E+07	126816	-1.187	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Calibration File: 25PCBS1830301B

GC Column (2): MR-2

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	RT OF STANDARDS						MIDPOINT RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
Tetrachloro-m-xylene	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.65	2.71
Decachlorobiphenyl	6.21	6.21	6.21	6.21	6.21	6.21	6.21	6.18	6.24

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Calibration File: 25PCBS1830301B

GC Column (2): MR-2

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	CALIBRATION FACTORS						MEAN	%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		
Tetrachloro-m-xylene	2.49E+05	2.35E+05	2.53E+05	2.56E+05	2.66E+05	2.72E+05	2.55E+05	5
Decachlorobiphenyl	2.00E+05	1.89E+05	1.78E+05	1.85E+05	1.88E+05	1.87E+05	1.88E+05	4

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274BCalibration File: 25PCBS1830301BGC Column (2): MR-2ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE CF	LEVEL	AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO						
Aroclor-1016	1	2.96	2.94	2.98	4964	4354	1	25.05	124339	10.76
					4723		2	50.1	236641	
					4431		3	100.2	444019	
					4356		4	200.4	872891	
					3718		5	501	1862517	
					3931		6	1002	3938734	
	2	3.29	3.27	3.31	5730	5098	1	25.05	143547	9.29
					5525		2	50.1	276807	
					5127		3	100.2	513766	
					4920		4	200.4	985969	
					4428		5	501	2218634	
					4855		6	1002	4865150	
	3	3.49	3.47	3.51	5409	4944	1	25.05	135493	8.90
					5426		2	50.1	271866	
					4884		3	100.2	489337	
					4951		4	200.4	992112	
					4255		5	501	2131913	
					4739		6	1002	4748335	
	4	3.56	3.54	3.58	5580	5124	1	25.05	139771	7.08
					5438		2	50.1	272442	
					5075		3	100.2	508535	
					5064		4	200.4	1014869	
					4541		5	501	2274882	
					5047		6	1002	5057472	
5	3.62	3.60	3.64	4450	4020	1	25.05	111475	8.81	
				4308		2	50.1	215826		
				4049		3	100.2	405735		
				4021		4	200.4	805902		
				3446		5	501	1726302		
				3848		6	1002	3856195		
6	3.73	3.71	3.75	4843	4335	1	25.05	121312	9.30	
				4683		2	50.1	234636		
				4299		3	100.2	430757		
				4302		4	200.4	862187		
				3694		5	501	1850855		
				4190		6	1002	4198610		
Aroclor-1221	1	2.85	2.83	2.87	2541	2541	1	201.7	512425	.00
	2	2.91	2.89	2.93	1811	1811	1	201.7	365366	.00
	3	2.96	2.94	2.98	6153	6153	1	201.7	1241151	.00

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Calibration File: 25PCBS1830301B

GC Column (2): MR-2

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE CF	LEVEL	AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO						
Aroclor-1232	1	2.96	2.94	2.98	4985	4985	1	201.6	1004896	.00
	2	3.29	3.27	3.31	2294	2294	1	201.6	462523	.00
	3	3.49	3.47	3.51	2331	2331	1	201.6	469887	.00
	4	3.56	3.54	3.58	2230	2230	1	201.6	449578	.00
	5	3.62	3.60	3.64	1453	1453	1	201.6	292905	.00
	6	3.73	3.71	3.75	1698	1698	1	201.6	342291	.00
Aroclor-1242	1	2.96	2.94	2.98	3757	3757	1	198.66	746286	.00
	2	3.29	3.27	3.31	4142	4142	1	198.66	822899	.00
	3	3.49	3.47	3.51	4213	4213	1	198.66	836933	.00
	4	3.56	3.54	3.58	4112	4112	1	198.66	816912	.00
	5	3.62	3.60	3.64	3021	3021	1	198.66	600229	.00
	6	3.73	3.71	3.75	3378	3378	1	198.66	671054	.00

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274BCalibration File: 25PCBS1830301BGC Column (2): MR-2ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE CF	LEVEL	AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO						
Aroclor-1248	1	3.60	3.58	3.62	6392	5078	1	25.24	161334	13.97
							2	50.47	260788	
							3	100.95	518707	
							4	201.9	939975	
							5	504.75	2215002	
							6	1009.5	4771194	
	2	3.73	3.71	3.75	7675	6235	1	25.24	193718	11.86
							2	50.47	317587	
							3	100.95	607642	
							4	201.9	1186033	
							5	504.75	2829950	
							6	1009.5	5997394	
	3	3.82	3.80	3.84	5176	4121	1	25.24	130637	13.00
							2	50.47	208220	
							3	100.95	401143	
							4	201.9	769223	
							5	504.75	1875280	
							6	1009.5	3962764	
	4	3.95	3.93	3.97	9296	8026	1	25.24	234630	8.59
							2	50.47	402446	
							3	100.95	802517	
							4	201.9	1498938	
							5	504.75	3737282	
							6	1009.5	8187852	
5	4.09	4.07	4.11	3925	3692	1	25.24	99069	5.81	
						2	50.47	192587		
						3	100.95	377295		
						4	201.9	098043		
						5	504.75	1714444		
						6	1009.5	3854186		
6	4.32	4.30	4.34	4081	3490	1	25.24	103005	9.48	
						2	50.47	175733		
						3	100.95	353479		
						4	201.9	659057		
						5	504.75	1568281		
						6	1009.5	3537277		

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274BCalibration File: 25PCBS1830301BGC Column (2): MR-2ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE CF	LEVEL	AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO						
Aroclor-1254	1	4.32	4.30	4.34	11389	10204	1	25.14	286327	6.03
					10200		2	50.28	512856	
					9630		3	100.56	968365	
					9879		4	251.4	2483457	
					9994		5	502.8	5025122	
					10131		6	1005.6	10187390	
	2	4.42	4.40	4.44	5438	4793	1	25.14	136710	7.91
					5029		2	50.28	252879	
					4753		3	100.56	477966	
					4511		4	251.4	1134046	
					4447		5	502.8	2236031	
					4577		6	1005.6	4602355	
	3	4.49	4.47	4.51	6820	6436	1	25.14	171463	3.93
					6409		2	50.28	322258	
					6346		3	100.56	638169	
					6253		4	251.4	1572065	
					6143		5	502.8	3088708	
					6645		6	1005.6	6682550	
	4	4.56	4.54	4.58	4246	3881	1	25.14	106750	6.15
					4062		2	50.28	204251	
					3847		3	100.56	386897	
					3732		4	251.4	938245	
					3580		5	502.8	1800090	
					3815		6	1005.6	3836338	
5	4.71	4.69	4.73	4640	4426	1	25.14	116641	4.86	
				4273		2	50.28	214837		
				4353		3	100.56	437757		
				4306		4	251.4	1082411		
				4236		5	502.8	2129697		
				4752		6	1005.6	4778186		
6	4.79	4.77	4.81	7802	7273	1	25.14	196142	4.75	
				7275		2	50.28	365768		
				7053		3	100.56	709287		
				6887		4	251.4	1731512		
				7070		5	502.8	3554720		
				7553		6	1005.6	7595699		

6F

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Calibration File: 25PCBS1830301B

GC Column (2) : MR-2

ID: 0.32 (mm)

ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE CF	LEVEL	AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO						
Aroclor-1260	1	4.56	4.54	4.58	9908	9482	1	25.06	248288	5.83
					9864		2	50.11	494277	
					9350		3	100.22	937030	
					9074		4	200.44	1818781	
					8647		5	501.1	4333224	
					10047		6	1002.2	10068820	
	2	4.66	4.64	4.68	8030	7613	1	25.06	201226	6.41
					7736		2	50.11	387672	
					7299		3	100.22	731484	
					7570		4	200.44	1517422	
					6856		5	501.1	3435597	
					8185		6	1002.2	8203220	
	3	4.79	4.77	4.81	9793	9473	1	25.06	245410	5.84
					9229		2	50.11	462462	
					9177		3	100.22	919693	
					9473		4	200.44	1898718	
					8792		5	501.1	4405541	
					10377		6	1002.2	10399650	
	4	5.02	5.00	5.04	6180	5864	1	25.06	154875	4.89
					5790		2	50.11	290152	
					5773		3	100.22	578540	
					5839		4	200.44	1170345	
					5420		5	501.1	2715796	
					6180		6	1002.2	6193271	
5	5.21	5.19	5.23	13514	13916	1	25.06	338668	6.50	
				13518		2	50.11	677397		
				13291		3	100.22	1332020		
				14025		4	200.44	2811230		
				13454		5	501.1	6741592		
				15693		6	1002.2	15727880		
6	5.47	5.45	5.49	9536	9474	1	25.06	238977	3.00	
				9642		2	50.11	483176		
				9300		3	100.22	932059		
				9301		4	200.44	1864258		
				9141		5	501.1	4580504		
				9921		6	1002.2	9942624		

INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274BCalibration File: 25PCBS1830301BGC Column (2): MR-2ID: 0.32 (mm)ICAL Date(s) Analyzed: 10/30/2018 10/30/2018

COMPOUND	PEAK	RT	RT WINDOW		CALIBRATION FACTOR	AVERAGE		AMOUNT	PEAK HEIGHT	%RSD
			FROM	TO		CF	LEVEL			
Aroclor-1262	1	4.83	4.81	4.85	7773	7773	1	200.2	1556104	.00
	2	5.02	5.00	5.04	8048	8048	1	200.2	1611131	.00
	3	5.22	5.20	5.24	16352	16352	1	200.2	3273690	.00
	4	5.43	5.41	5.45	6621	6621	1	200.2	1325530	.00
	5	5.48	5.46	5.50	11074	11074	1	200.2	2216939	.00
	6	5.85	5.83	5.87	6545	6545	1	200.2	1310334	.00
Aroclor-1268	1	5.43	5.41	5.45	23658	23658	1	200.2	4736334	.00
	2	5.48	5.46	5.50	23917	23917	1	200.2	4788130	.00
	3	5.63	5.61	5.65	20782	20782	1	200.2	4160612	.00
	4	5.70	5.68	5.72	5175	5175	1	200.2	1035941	.00
	5	5.85	5.83	5.87	8342	8342	1	200.2	1670071	.00
	6	6.05	6.03	6.07	75902	75902	1	200.2	15195680	.00

File Name: V:\CP25\25PCBS1830301b.CAL
 Version: 8

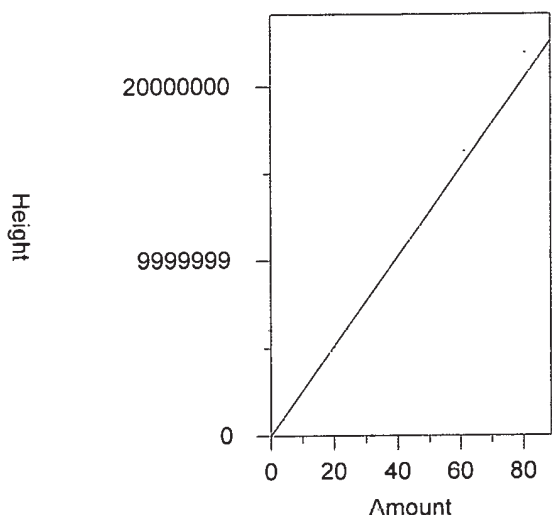
Creator:
 Description:
 Reason for change:

External standard calibration
 Standard injection volume: 1
 No sample weight correction
 Area reject threshold: 0
 Reference peak area reject threshold: 0
 Amount units: ug/l
 No default component

Method of calculating data point averages: Current update equal to cal data
 Print calibration update report

All levels are normal data points.

1 TCX



Expected retention time: 2.678 minutes
 Search window: 0.03 minutes
 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

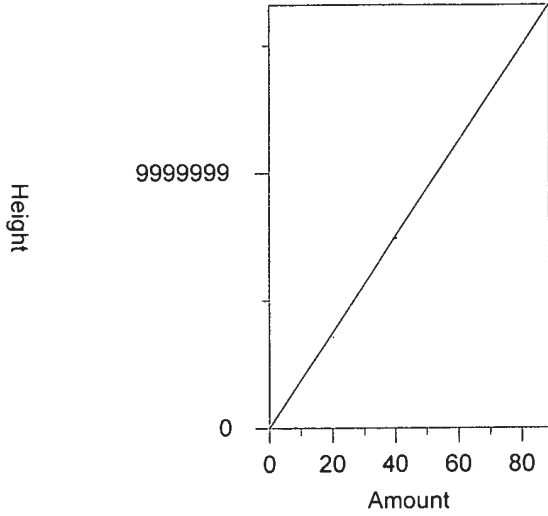
$$Y = 255215.7 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9937048
 Average error: 3.769%
 Average CF: 255215.7
 RSD: 5.165%

Level	Amount	Response	Cal Factor	Error, %	Source
1	2.01	500538.6	249024.2	-2.426	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.00
2	4.02	944578.4	234969.8	-7.933	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.00
3	20.12	5086297	252798	-0.947	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.00
4	40.24	1.029699E+07	255889.4	0.264	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.01
5	61.16	1.629122E+07	266370.5	4.371	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.01
6	80.48	2.191007E+07	272242.4	6.671	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.01

2 DCB

Chrom Perfect Calibration File



Expected retention time: 6.211 minutes
 Search window: 0.03 minutes
 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

$$Y = 187766.9 X + 0$$

Average CF fit with equal weighting, forced to origin
 Coefficient of determination: 0.9996763
 Average error: 2.392%
 Average CF: 187766.9
 RSD: 3.762%

Level	Amount	Response	Cal Factor	Error, %	Source
1	2.02	403092.3	199550.7	6.276	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
2	4.03	762165.5	189122.9	0.722	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
3	20.15	3582853	177809.1	-5.303	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
4	40.3	7443800	184709.7	-1.628	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
5	61.26	1.152307E+07	188101	0.178	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300
6	80.6	1.509704E+07	187308.2	-0.244	\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs1830300

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 10/30/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 22:45

Lab File ID: 25PCBS18303001.032.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: IC16XAA

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Aroclor-1016	3.18	3.16	3.20	197.83	201.00	-2
	3.40	3.38	3.42	199.59	201.00	-1
	3.51	3.49	3.53	201.43	201.00	0
	3.73	3.71	3.75	202.07	201.00	1
	3.79	3.77	3.81	195.94	201.00	-3
	3.98	3.96	4.00	183.06	201.00	-9
Aroclor-1260	4.76	4.74	4.78	198.12	200.60	-1
	4.96	4.94	4.98	199.80	200.60	0
	5.16	5.14	5.18	201.71	200.60	1
	5.23	5.21	5.25	211.77	200.60	6
	5.63	5.61	5.65	213.21	200.60	6
	5.84	5.82	5.86	214.40	200.60	7

Compounds 12

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 10/30/18

GC Column (2) : MR-2

ID: .32 (mm)

Time Analyzed: 22:45

Lab File ID: 25PCBS18303001B.032.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: IC16XAA

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Aroclor-1016	2.96	2.94	2.98	198.51	201.00	-1
	3.29	3.27	3.31	199.52	201.00	-1
	3.49	3.47	3.51	196.16	201.00	-2
	3.56	3.54	3.58	197.67	201.00	-2
	3.62	3.60	3.64	213.88	201.00	6
	3.72	3.71	3.75	189.71	201.00	-6
Aroclor-1260	4.56	4.54	4.58	200.63	200.60	0
	4.66	4.64	4.68	196.39	200.60	-2
	4.79	4.77	4.81	191.49	200.60	-5
	5.02	5.00	5.04	207.97	200.60	4
	5.21	5.19	5.23	220.23	200.60	10
	5.47	5.45	5.49	221.76	200.60	11

Compounds 12

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC16X1824D **IC16XAA ID:** AA **Batchnumber:** 1830299999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 22:45:45
 Instrument : CP25--18274A
 Result file : 25PCBS18303001.032.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Analysis Report (B)

Injected on : Oct 30, 2018 22:45:45
 Instrument : CP25--18274B
 Result file : 25PCBS18303001B.032.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	522789.9	197.830301	6	3.58	1
3.38	3.40	3.42	510369	199.591846			2
+ 3.38	3.41	3.42	213874.6	83.640712			2
3.49	3.51	3.53	661226.2	201.434234			3
3.71	3.73	3.75	763712.6	202.068869			4
3.77	3.79	3.81	609852.2	195.943445			5
3.96	3.98	4.00	435164.3	183.057446			6

Height Summation: 3503114.2
Amount Avg CF: 196.654357 Linear:

Aroclor-1221							
3.06	3.08	3.10	140143.4	99.731235	3	22.19	1
3.11	3.13	3.15	110941.9	99.613517			2
3.16	3.18	3.20	522789.9	143.617926			3

Height Summation: 773875.2
Amount Avg CF: 114.320893 Linear:

Aroclor-1232							
3.16	3.18	3.20	522789.9	175.750847	6	27.89	1
E 3.38	3.40	3.42	510369	441.77547			2
+ 3.38	3.41	3.42	213874.6	185.12988			2
E 3.49	3.51	3.53	661226.2	446.243516			3
E 3.71	3.73	3.75	763712.6	428.808251			4
E 3.77	3.79	3.81	609852.2	462.65077			5
E 3.96	3.98	4.00	435164.3	467.953545			6

Height Summation: 3503114.2
Amount Avg CF: 403.863733 Linear:

Aroclor-1242							
E 3.16	3.18	3.20	522789.9	228.719574	6	3.34	1
E 3.38	3.40	3.42	510369	239.80413			2
+ 3.38	3.41	3.42	213874.6	100.492021			2
E 3.49	3.51	3.53	661226.2	243.811314			3
E 3.71	3.73	3.75	763712.6	236.100898			4
E 3.77	3.79	3.81	609852.2	252.819732			5
E 3.96	3.98	4.00	435164.3	240.639499			6

Height Summation: 3503114.2
Amount Avg CF: 240.315858 Linear:

Aroclor-1248							
3.83	3.85	3.87	405437.2	130.303891	6	44.83	1
3.96	3.98	4.00	435164.3	123.960313			2
4.05	4.07	4.09	379460.2	127.484455			3
4.23	4.25	4.27	38330.04	12.899417			4
4.36	4.38	4.40	486172	153.583348			5
4.61	4.63	4.65	269762.2	114.484903			6

Height Summation: 2014325.94
Amount Avg CF: 110.452721 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	864285.9	198.514916	6	4.00	1
3.27	3.29	3.31	1017116	199.520777			2
+ 3.47	3.47	3.51	45993.72	9.302999			3
3.47	3.49	3.51	969790.9	196.156417			3
3.54	3.56	3.58	1012916	197.673512			4
3.60	3.62	3.64	859890.4	213.877076			5
+ 3.60	3.64	3.64	197964.1	49.238813			5
3.71	3.72	3.75	822452.3	189.709119			6

Height Summation: 5546451.5
Amount Avg CF: 199.24197 Linear:

Aroclor-1221							
2.83	2.85	2.87	252177.5	99.261749	3	20.69	1
2.89	2.91	2.93	181872.5	100.402564			2
2.94	2.96	2.98	864285.9	140.455485			3

Height Summation: 1298335.9
Amount Avg CF: 113.373266 Linear:

Aroclor-1232							
2.94	2.96	2.98	864285.9	173.391115	6	32.42	1
E 3.27	3.29	3.31	1017116	443.330571			2
+ 3.47	3.47	3.51	45993.72	19.733114			3
E 3.47	3.49	3.51	969790.9	416.07843			3
E 3.54	3.56	3.58	1012916	454.212318			4
E 3.60	3.62	3.64	859890.4	591.843446			5
+ 3.60	3.64	3.64	197964.1	136.254289			5
E 3.71	3.72	3.75	822452.3	484.401821			6

Height Summation: 5546451.5
Amount Avg CF: 427.209617 Linear:

Aroclor-1242							
E 2.94	2.96	2.98	864285.9	230.071363	6	8.10	1
3.27	3.29	3.31	1017116	245.548859			2
+ 3.47	3.47	3.51	45993.72	10.917376			3
E 3.47	3.49	3.51	969790.9	230.196037			3
E 3.54	3.56	3.58	1012916	246.325054			4
E 3.60	3.62	3.64	859890.4	284.601089			5
+ 3.60	3.64	3.64	197964.1	65.520906			5
E 3.71	3.72	3.75	822452.3	243.480218			6

Height Summation: 5546451.5
Amount Avg CF: 246.703437 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC16X1824D **IC16XAA ID:** AA **Batchnumber:** 1830299999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 22:45:45
 Instrument : CP25-18274A
 Result file : 25PCBS18303001.032.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
+ 4.55	4.57	4.59	18634.97	5.337995	6	105.01	1
4.55	4.59	4.59	127102	36.408421			1
4.61	4.63	4.65	269762.2	38.599009			2
4.74	4.76	4.78	1072242	486.602121			3
4.83	4.85	4.87	149500.4	31.001368			4
5.03	5.05	5.07	625042.2	161.55909			5
5.14	5.16	5.18	1585895	320.734896			6

Height Summation: 3829543.8
Amount Avg CF: 179.150818 Linear:

Aroclor-1260							
4.74	4.76	4.78	1072242	198.117675	6	3.58	1
4.94	4.96	4.98	1302570	199.804465			2
5.14	5.16	5.18	1585895	201.707285			3
5.21	5.23	5.25	807798.5	211.767166			4
5.61	5.63	5.65	2428648	213.210838			5
5.82	5.84	5.86	1360107	214.399289			6

Height Summation: 8557260.5
Amount Avg CF: 206.501119 Linear:

Aroclor-1262							
5.21	5.23	5.25	807798.5	138.855268	6	36.40	1
5.38	5.39	5.41	815590.6	174.038562			2
5.61	5.63	5.65	2428648	178.840125			3
5.82	5.84	5.86	1360107	173.065799			4
+ 5.87	5.87	5.91	88012.84	20.635732			5
5.87	5.89	5.91	187649.9	43.996911			5
6.25	6.27	6.29	697246.1	132.735155			6

Height Summation: 6297040.1
Amount Avg CF: 140.255303 Linear:

Aroclor-1268							
5.81	5.84	5.85	1360107	77.067804	6	124.78	1
+ 5.87	5.87	5.91	88012.84	5.506358			2
5.87	5.89	5.91	187649.9	11.739964			2
6.00	6.02	6.04	55161.66	3.758325			3
6.07	6.08	6.11	43021.25	11.67718			4
6.24	6.27	6.28	697246.1	110.678986			5
6.44	6.47	6.48	248487.7	4.888039			6

Height Summation: 2591673.61
Amount Avg CF: 36.63505 Linear:

Analysis Report (B)

Injected on : Oct 30, 2018 22:45:45
 Instrument : CP25-18274B
 Result file : 25PCBS18303001B.032.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	652570.7	128.51067	6	44.46	1
3.71	3.72	3.75	822452.3	131.913121			2
+ 3.80	3.80	3.84	229868.5	55.780352			3
3.80	3.82	3.84	478556.6	116.127506			3
3.93	3.95	3.97	709709.2	88.421205			4
+ 4.07	4.09	4.11	29788.54	8.069021			5
4.07	4.11	4.11	73073.45	19.793894			5
+ 4.30	4.31	4.34	207829.5	59.550608			6
+ 4.30	4.32	4.34	108363.6	31.050059			6
4.30	4.34	4.34	530156	151.908715			6

Height Summation: 3266518.25
Amount Avg CF: 106.112518 Linear:

Aroclor-1254							
+ 4.30	4.31	4.34	207829.5	20.367964	6	97.18	1
+ 4.30	4.32	4.34	108363.6	10.619984			1
4.30	4.34	4.34	530156	51.957005			1
4.40	4.42	4.44	1690249	352.683683			2
4.47	4.49	4.51	112443.8	17.470463			3
4.54	4.56	4.58	1902249	490.205029			4
4.69	4.72	4.73	186625.3	42.161796			5
4.77	4.79	4.81	1814083	249.411576			6

Height Summation: 6235806.1
Amount Avg CF: 200.648259 Linear:

Aroclor-1260							
4.54	4.56	4.58	1902249	200.62604	6	6.07	1
4.64	4.66	4.68	1495106	196.393924			2
4.77	4.79	4.81	1814083	191.494016			3
5.00	5.02	5.04	1219417	207.965103			4
5.19	5.21	5.23	3064727	220.231191			5
5.45	5.47	5.49	2100850	221.760099			6

Height Summation: 1159643.2
Amount Avg CF: 208.411729 Linear:

Aroclor-1262							
4.81	4.83	4.85	983008.8	126.468643	6	24.85	1
5.00	5.02	5.04	1219417	151.525409			2
5.20	5.21	5.24	3064727	187.421028			3
5.41	5.43	5.45	643736.9	97.226111			4
5.46	5.47	5.50	2100850	189.716618			5
5.83	5.85	5.87	849517.8	129.793979			6

Height Summation: 8861257.5
Amount Avg CF: 147.025298 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC16X1824D **IC16XAA ID: AA** **Batchnumber: 1830299999**
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 22:45:45
 Instrument : CP25--18274A
 Result file : 25PCBS18303001.032.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Analysis Report (B)

Injected on : Oct 30, 2018 22:45:45
 Instrument : CP25--18274B
 Result file : 25PCBS18303001B.032.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.41	5.43	5.45	643736.9	0.135915	6	141.31	1
5.46	5.47	5.50	2100850	438.762105			2
5.61	5.63	5.65	70341.34	16.906489			3
5.68	5.70	5.72	24643.6	23.788613			4
5.83	5.85	5.87	849517.8	508.671667			5
6.03	6.05	6.07	323788.7	21.307944			6
Height Summation:			4012878.34				
Amount Avg CF:			168.262122	Linear:			

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		1.31	4	40	
Aroclor-1221			0.5	0.1		0.83	3	5	
Aroclor-1232			0.5	0.2	E	5.62	4	10	
Aroclor-1242			0.5	0.1	E	2.62	4	30	
Aroclor-1248			0.5	0.1		4.01	4	40	
Aroclor-1254			0.5	0.1		11.32	4	40	
Aroclor-1260			0.5	0.15		0.04	4	40	
Aroclor-1262			0.5	0.2		4.71	4	40	
Aroclor-1268			0.5	0.16		** 128.48	4	40	

Units: ug/l

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 10/30/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 22:56

Lab File ID: 25PCBS18303001.033.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: IC48XAA

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Aroclor-1248	3.85	3.83	3.87	179.04	200.00	-10
	3.98	3.96	4.00	181.47	200.00	-9
	4.07	4.05	4.09	186.05	200.00	-7
	4.25	4.23	4.27	186.37	200.00	-7
	4.38	4.36	4.40	181.61	200.00	-9
	4.63	4.61	4.65	184.86	200.00	-8

Compounds 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 10/30/18

GC Column (2) : MR-2

ID: .32 (mm)

Time Analyzed: 22:56

Lab File ID: 25PCBS18303001B.033.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: IC48XAA

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Aroclor-1248	3.60	4.30	4.34	186.12	200.00	-7
	3.72	4.07	4.11	182.19	200.00	-9
	3.82	3.58	3.62	181.56	200.00	-9
	3.95	3.71	3.75	185.55	200.00	-7
	4.09	3.80	3.84	198.03	200.00	-1
	4.32	3.93	3.97	188.46	200.00	-6

Compounds 6

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC48X1824C **IC48XAA ID:** AA **Batchnumber:** 1830299999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 22:56:40
 Instrument : CP25-18274A
 Result file : 25PCBS18303001.033.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Analysis Report (B)

Injected on : Oct 30, 2018 22:56:40
 Instrument : CP25-18274B
 Result file : 25PCBS18303001B.033.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	106031.3	40.123583	6	67.17	1
3.38	3.40	3.42	255116.6	99.769369			2
+ 3.38	3.41	3.42	64431.24	25.197358			2
3.49	3.51	3.53	275120.7	83.812056			3
3.71	3.73	3.75	383485.5	101.4655			4
3.77	3.79	3.81	325200.2	104.485722			5
3.96	3.98	4.00	637049.2	267.982919			6

Height Summation: 1982003.5
Amount Avg CF: 116.273192 Linear:

Aroclor-1221							
3.06	3.08	3.10	52375.76	37.272531	3	40.55	1
3.11	3.14	3.15	17147.97	15.396974			2
3.16	3.18	3.20	106031.3	29.128327			3

Height Summation: 175555.03
Amount Avg CF: 27.265944 Linear:

Aroclor-1232							
3.16	3.18	3.20	106031.3	35.645468	6	82.73	1
E 3.38	3.40	3.42	255116.6	220.828961			2
+ 3.38	3.41	3.42	64431.24	55.771689			2
3.49	3.51	3.53	275120.7	185.671452			3
E 3.71	3.73	3.75	383485.5	215.318886			4
E 3.77	3.79	3.81	325200.2	246.705879			5
E 3.96	3.98	4.00	637049.2	685.050293			6

Height Summation: 1982003.5
Amount Avg CF: 264.870157 Linear:

Aroclor-1242							
3.16	3.18	3.20	106031.3	46.388489	6	72.72	1
3.38	3.40	3.42	255116.6	119.870161			2
+ 3.38	3.41	3.42	64431.24	30.273934			2
3.49	3.51	3.53	275120.7	101.444164			3
3.71	3.73	3.75	383485.5	118.554114			4
3.77	3.79	3.81	325200.2	134.814677			5
E 3.96	3.98	4.00	637049.2	352.278898			6

Height Summation: 1982003.5
Amount Avg CF: 145.558417 Linear:

Aroclor-1248							
3.83	3.85	3.87	557066.4	179.03616	6	1.61	1
3.96	3.98	4.00	637049.2	181.468973			2
4.05	4.07	4.09	553775.1	186.047751			3
4.23	4.25	4.27	553795.1	186.371673			4
4.36	4.38	4.40	574904.8	181.614334			5
4.61	4.63	4.65	435580.5	184.856853			6

Height Summation: 3312171.1
Amount Avg CF: 183.232624 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	170243.8	39.102725	6	65.22	1
3.27	3.29	3.31	418366.7	82.06817			2
+ 3.47	3.47	3.51	77786.06	15.733531			3
3.47	3.49	3.51	447777.8	90.570544			3
3.54	3.56	3.58	546259.4	106.604115			4
3.60	3.62	3.64	869763	216.332648			5
+ 3.60	3.64	3.64	267707.8	66.585883			5
3.71	3.72	3.75	1135933	262.017443			6

Height Summation: 3588343.7
Amount Avg CF: 132.782608 Linear:

Aroclor-1221							
2.83	2.85	2.87	92267.65	36.318261	3	37.08	1
2.89	2.91	2.93	29853.29	16.480484			2
2.94	2.96	2.98	170243.8	27.666396			3

Height Summation: 292384.74
Amount Avg CF: 26.821714 Linear:

Aroclor-1232							
2.94	2.96	2.98	170243.8	34.153932	6	79.26	1
3.27	3.29	3.31	418366.7	182.353584			2
+ 3.47	3.47	3.51	77786.06	33.373278			3
3.47	3.49	3.51	447777.8	192.114284			3
E 3.54	3.56	3.58	546259.4	244.953924			4
E 3.60	3.62	3.64	869763	598.638537			5
+ 3.60	3.64	3.64	267707.8	184.257327			5
E 3.71	3.72	3.75	1135933	669.033345			6

Height Summation: 3588343.7
Amount Avg CF: 320.207934 Linear:

Aroclor-1242							
2.94	2.96	2.98	170243.8	45.318595	6	68.93	1
3.27	3.29	3.31	418366.7	100.999914			2
+ 3.47	3.47	3.51	77786.06	18.463818			3
3.47	3.49	3.51	447777.8	106.287526			3
3.54	3.56	3.58	546259.4	132.841594			4
E 3.60	3.62	3.64	869763	287.868659			5
+ 3.60	3.64	3.64	267707.8	88.604235			5
E 3.71	3.72	3.75	1135933	336.283592			6

Height Summation: 3588343.7
Amount Avg CF: 168.266647 Linear:

Aroclor-1248							
3.58	3.60	3.62	945120.9	186.122546	6	3.20	1
3.71	3.72	3.75	1135933	182.192289			2
+ 3.80	3.80	3.84	175911	42.686917			3
3.80	3.82	3.84	748187.1	181.556584			3
3.93	3.95	3.97	1489308	185.549811			4
4.07	4.09	4.11	731062.9	198.027898			5
4.30	4.32	4.34	657715.4	188.45906			6

Height Summation: 5707327.3
Amount Avg CF: 186.984698 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC48X1824C **IC48XAA ID:** AA **Batchnumber:** 1830299999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 22:56:40
 Instrument : CP25--18274A
 Result file : 25PCBS18303001.033.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.57	4.59	242846.7	69.563539	6	54.59	1
4.61	4.63	4.65	435580.5	62.325172			2
4.74	4.76	4.78	37144.83	16.856972			3
4.83	4.85	4.87	311288.1	64.550711			4
5.03	5.05	5.07	327178.2	84.56807			5
5.14	5.16	5.18	83463.61	16.879864			6

Height Summation: 1437501.94
Amount Avg CF: 52.457388 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.74	4.76	4.78	37144.83	6.863234	6	81.17	1
4.94	4.96	4.98	25546.09	3.918579			2
+ 4.94	4.97	4.98	16931.2	2.597119			2
5.14	5.16	5.18	83463.61	10.615594			3
5.21	5.23	5.25	4631.566	1.214181			4
5.61	5.63	5.65	19987.45	1.754697			5
5.82	5.84	5.86	15577.71	2.455579			6

Height Summation: 186351.256
Amount Avg CF: 4.470311 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.21	5.23	5.25	4631.566	0.796136	5	39.38	1
5.61	5.63	5.65	19987.45	1.47183			3
5.82	5.84	5.86	15577.71	1.982174			4
5.87	5.89	5.91	3987.986	0.935034			5
6.25	6.26	6.29	5272.021	1.003638			6

Height Summation: 49456.733
Amount Avg CF: 1.237762 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	15577.71	0.88268	6	95.68	1
5.87	5.89	5.91	3987.986	0.249501			2
6.00	6.02	6.04	1123.161	0.076524			3
6.07	6.09	6.11	764.7879	0.207585			4
6.24	6.26	6.28	5272.021	0.836867			5
6.44	6.47	6.48	3967.612	0.078047			6

Height Summation: 30693.2779
Amount Avg CF: 0.388534 Linear:

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		13.26	4	40	
Aroclor-1221			0.5	0.1		1.64	3	5	
Aroclor-1232			0.5	0.2	E	18.92	4	10	
Aroclor-1242			0.5	0.1	E	14.47	4	30	
Aroclor-1248			0.5	0.1		2.03	4	40	
Aroclor-1254			0.5	0.1		1.93	4	40	
Aroclor-1260			0.5	0.15		12.97	4	40	
Aroclor-1262			0.5	0.2		3.03	4	40	

Analysis Report (B)

Injected on : Oct 30, 2018 22:56:40
 Instrument : CP25--18274B
 Result file : 25PCBS18303001B.033.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.30	4.32	4.34	657715.4	64.45824	6	61.53	1
4.40	4.42	4.44	268719.5	56.070427			2
4.47	4.49	4.51	425923	66.175922			3
4.54	4.56	4.58	47954.12	12.357662			4
4.69	4.71	4.73	415614.2	93.894241			5
4.77	4.79	4.81	114609.3	15.75721			6

Height Summation: 1930535.52
Amount Avg CF: 51.452284 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.54	4.56	4.58	47954.12	5.057616	6	85.78	1
4.64	4.66	4.68	63797.91	8.380357			2
4.77	4.79	4.81	114609.3	12.098121			3
5.00	5.02	5.04	8271.973	1.410741			4
5.19	5.21	5.23	20849.66	1.498256			5
5.45	5.47	5.49	19861.91	2.09657			6

Height Summation: 275344.873
Amount Avg CF: 5.090277 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.00	5.02	5.04	8271.973	1.02788	5	24.00	2
5.20	5.21	5.24	20849.66	1.275045			3
5.41	5.43	5.45	7110.343	1.073903			4
5.46	5.47	5.50	19861.91	1.793624			5
5.83	5.85	5.87	7910.783	1.208653			6

Height Summation: 64004.669
Amount Avg CF: 1.275821 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.41	5.43	5.45	7110.343	0.001501	4	106.62	1
5.46	5.47	5.50	19861.91	4.148156			2
5.83	5.85	5.87	7910.783	4.736794			5
6.03	6.05	6.07	5811.18	0.382423			6

Height Summation: 40694.216
Amount Avg CF: 2.317219 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC48X1824C IC48XAA ID: AA **Batchnumber:** 1830299999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 22:56:40
 Instrument : CP25--18274A
 Result file : 25PCBS18303001.033.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Analysis Report (B)

Injected on : Oct 30, 2018 22:56:40
 Instrument : CP25--18274B
 Result file : 25PCBS18303001B.033.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1268			0.5	0.16		** 142.56	4	40	

Units: ug/l

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 10/30/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 23:07

Lab File ID: 25PCBS18303001.034.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: IC54XAA

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Aroclor-1254	4.57	4.55	4.59	232.44	250.00	-7
	4.63	4.61	4.65	239.19	250.00	-4
	4.76	4.74	4.78	234.91	250.00	-6
	4.85	4.83	4.87	244.80	250.00	-2
	5.05	5.03	5.07	248.65	250.00	-1
	5.16	5.14	5.18	242.80	250.00	-3

Compounds 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 10/30/18

GC Column (2) : MR-2

ID: .32 (mm)

Time Analyzed: 23:07

Lab File ID: 25PCBS18303001B.034.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: IC54XAA

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Aroclor-1254	4.32	4.30	4.34	244.43	250.00	-2
	4.42	4.40	4.44	240.11	250.00	-4
	4.49	4.47	4.51	240.95	250.00	-4
	4.56	4.54	4.58	247.47	250.00	-1
	4.71	4.69	4.73	242.69	250.00	-3
	4.79	4.77	4.81	241.46	250.00	-3

Compounds 6

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC54X1824C **IC54XAA ID: AA Batchnumber: 1830299999**
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 23:07:33
 Instrument : CP25--18274A
 Result file : 25PCBS18303001.034.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Analysis Report (B)

Injected on : Oct 30, 2018 23:07:33
 Instrument : CP25--18274B
 Result file : 25PCBS18303001B.034.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	26020.83	9.846611	6	126.66	1
3.38	3.40	3.42	54619.28	21.360159			2
+ 3.38	3.41	3.42	8005.941	3.130912			2
3.49	3.51	3.53	57591.05	17.544388			3
3.71	3.73	3.75	122245.4	32.344615			4
3.77	3.78	3.81	59930.27	19.255393			5
3.96	3.98	4.00	348105.7	146.435129			6

Height Summation: 668512.53
Amount Avg CF: 41.131049 **Linear:**

Aroclor-1221							
3.06	3.08	3.10	15172.01	10.796964	3	31.63	1
3.11	3.14	3.15	6637.713	5.95993			2
3.16	3.18	3.20	26020.83	7.148297			3

Height Summation: 47830.553
Amount Avg CF: 7.968397 **Linear:**

Aroclor-1232							
3.16	3.18	3.20	26020.83	8.74765	6	141.04	1
3.38	3.40	3.42	54619.28	47.278456			2
+ 3.38	3.41	3.42	8005.941	6.929944			2
3.49	3.51	3.53	57591.05	38.866628			3
3.71	3.73	3.75	122245.4	68.638171			4
3.77	3.78	3.81	59930.27	45.464763			5
E 3.96	3.98	4.00	348105.7	374.335156			6

Height Summation: 668512.53
Amount Avg CF: 97.221804 **Linear:**

Aroclor-1242							
3.16	3.18	3.20	26020.83	11.384063	6	132.54	1
3.38	3.40	3.42	54619.28	25.663645			2
+ 3.38	3.41	3.42	8005.941	3.761705			2
3.49	3.51	3.53	57591.05	21.235319			3
3.71	3.73	3.75	122245.4	37.792029			4
3.77	3.78	3.81	59930.27	24.844634			5
3.96	3.98	4.00	348105.7	192.497365			6

Height Summation: 668512.53
Amount Avg CF: 52.236176 **Linear:**

Aroclor-1248							
3.83	3.85	3.87	563018.9	180.949241	6	97.87	1
3.96	3.98	4.00	348105.7	99.160919			2
4.05	4.07	4.09	168024.9	56.450091			3
4.23	4.25	4.27	300351.9	101.079056			4
4.36	4.38	4.40	1319847	416.944047			5
4.61	4.63	4.65	1671648	709.433937			6

Height Summation: 4370996.4
Amount Avg CF: 260.669548 **Linear:**

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	44367.76	10.190681	6	104.46	1
3.27	3.30	3.31	87719.47	17.207336			2
+ 3.47	3.47	3.51	25326	5.122607			3
3.47	3.49	3.51	120645.3	24.402528			3
3.54	3.56	3.58	95102.87	18.559602			4
3.60	3.62	3.64	409979.9	101.972649			5
+ 3.60	3.64	3.64	19315.76	4.804331			5
3.71	3.72	3.75	590661.6	136.243636			6

Height Summation: 1348476.9
Amount Avg CF: 51.429406 **Linear:**

Aroclor-1221							
2.83	2.85	2.87	28036.49	11.035683	3	31.18	1
2.89	2.91	2.93	11269.3	6.221208			2
2.94	2.96	2.98	44367.76	7.210224			3

Height Summation: 83673.55
Amount Avg CF: 8.155705 **Linear:**

Aroclor-1232							
2.94	2.96	2.98	44367.76	8.900961	6	114.00	1
3.27	3.30	3.31	87719.47	38.234304			2
+ 3.47	3.47	3.51	25326	10.86585			3
3.47	3.49	3.51	120645.3	51.761578			3
3.54	3.56	3.58	95102.87	42.646078			4
E 3.60	3.62	3.64	409979.9	282.180051			5
+ 3.60	3.64	3.64	19315.76	13.294608			5
E 3.71	3.72	3.75	590661.6	347.883463			6

Height Summation: 1348476.9
Amount Avg CF: 128.601073 **Linear:**

Aroclor-1242							
2.94	2.96	2.98	44367.76	11.810618	6	107.08	1
3.27	3.30	3.31	87719.47	21.176779			2
+ 3.47	3.47	3.51	25326	6.011548			3
3.47	3.49	3.51	120645.3	28.637173			3
3.54	3.56	3.58	95102.87	23.127505			4
3.60	3.62	3.64	409979.9	135.692556			5
+ 3.60	3.64	3.64	19315.76	6.393008			5
3.71	3.72	3.75	590661.6	174.860493			6

Height Summation: 1348476.9
Amount Avg CF: 65.884187 **Linear:**

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC54X1824C IC54XAA ID: AA **Batchnumber:** 1830299999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 23:07:33
 Instrument : CP25-18274A
 Result file : 25PCBS18303001.034.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.57	4.59	811461.4	232.443458	6	2.55	1
4.61	4.63	4.65	1671648	239.188277			2
4.74	4.76	4.78	517621.3	234.905574			3
4.83	4.85	4.87	1180528	244.80191			4
5.03	5.05	5.07	961986.1	248.65137			5
5.14	5.16	5.18	1200534	242.798639			6

Height Summation: 6343778.8
Amount Avg CF: 240.464871 Linear:

Aroclor-1260							
4.74	4.76	4.78	517621.3	95.640656	6	92.07	1
4.94	4.96	4.98	393271.7	60.324928			2
+ 4.94	4.97	4.98	179226.5	27.492			2
5.14	5.16	5.18	1200534	152.693875			3
5.21	5.23	5.25	31484.19	8.253689			4
5.61	5.63	5.65	202708.5	17.795765			5
5.82	5.84	5.86	171518.4	27.037154			6

Height Summation: 2517138.09
Amount Avg CF: 60.291011 Linear:

Aroclor-1262							
5.21	5.23	5.25	31484.19	5.411926	4	82.12	1
5.61	5.63	5.65	202708.5	14.926994			3
5.82	5.84	5.86	171518.4	21.824731			4
6.25	6.27	6.29	10185.9	1.939096			6

Height Summation: 415896.99
Amount Avg CF: 11.025687 Linear:

Aroclor-1268							
5.81	5.84	5.85	171518.4	9.718755	5	143.93	1
6.00	6.03	6.04	1747.089	0.119034			3
6.07	6.08	6.11	8999.151	2.442623			4
6.24	6.27	6.28	10185.9	1.616883			5
6.44	6.46	6.48	1390.458	0.027352			6

Height Summation: 103840.008
Amount Avg CF: 2.784929 Linear:

Analysis Report (B)

Injected on : Oct 30, 2018 23:07:33
 Instrument : CP25-18274B
 Result file : 25PCBS18303001B.034.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	917790.3	180.740334	6	98.65	1
3.71	3.72	3.75	590661.6	94.736212			2
+ 3.80	3.80	3.84	115278.2	27.97364			3
3.80	3.82	3.84	170133.8	41.28501			3
3.93	3.95	3.97	2140552	266.686957			4
4.07	4.09	4.11	651844.6	176.569507			5
+ 4.07	4.11	4.11	420703.2	113.95869			5
4.30	4.32	4.34	2494120	714.654864			6

Height Summation: 6965102.3
Amount Avg CF: 245.778814 Linear:

Aroclor-1254							
4.30	4.32	4.34	2494120	244.431839	6	1.12	1
4.40	4.42	4.44	1150721	240.106943			2
4.47	4.49	4.51	1550823	240.952336			3
4.54	4.56	4.58	960311.5	247.409983			4
4.69	4.71	4.73	1074245	242.690021			5
4.77	4.79	4.81	1756223	241.456618			6

Height Summation: 8986443.5
Amount Avg CF: 242.85129 Linear:

Aroclor-1260							
4.54	4.56	4.58	960311.5	101.281953	6	92.41	1
4.64	4.66	4.68	839888.5	110.325956			2
4.77	4.79	4.81	1756223	185.386333			3
5.00	5.02	5.04	79785.29	13.606958			4
5.19	5.21	5.23	200394.5	14.400343			5
5.45	5.47	5.49	239091.3	25.237837			6

Height Summation: 4075694.09
Amount Avg CF: 75.039897 Linear:

Aroclor-1262							
4.81	4.84	4.85	115858.3	14.905708	6	73.85	1
5.00	5.02	5.04	79785.29	9.914163			2
5.20	5.21	5.24	200394.5	12.254972			3
5.41	5.43	5.45	9334.012	1.409752			4
5.46	5.47	5.50	239091.3	21.591067			5
5.83	5.85	5.87	15292.07	2.336406			6

Height Summation: 659755.472
Amount Avg CF: 10.402011 Linear:

Aroclor-1268							
5.41	5.43	5.45	9334.012	0.001971	3	134.95	1
5.46	5.47	5.50	239091.3	49.934171			2
5.83	5.85	5.87	15292.07	9.156539			5

Height Summation: 263717.382
Amount Avg CF: 19.69756 Linear:

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		22.25	4	40	
Aroclor-1221			0.5	0.1		2.32	3	5	
Aroclor-1232			0.5	0.2	E	27.79	4	10	

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IC54X1824C IC54XAA ID: AA **Batchnumber:** 1830299999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Oct 30, 2018 23:07:33
 Instrument : CP25--18274A
 Result file : 25PCBS18303001.034.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBS.MET

Analysis Report (B)

Injected on : Oct 30, 2018 23:07:33
 Instrument : CP25--18274B
 Result file : 25PCBS18303001B.034.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBSB.MET

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1242			0.5	0.1		23.11	4	30	
Aroclor-1248			0.5	0.1		5.88	4	40	
Aroclor-1254			0.5	0.1		0.99	4	40	
Aroclor-1260			0.5	0.15		21.80	4	40	
Aroclor-1262			0.5	0.2		5.82	4	40	
Aroclor-1268			0.5	0.16		** 150.45	4	40	

Units: ug/l

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 11/08/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 11:00

Lab File ID: 25PCBS18303009.005.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: AR164LL

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.93	2.90	2.96	42.38	40.06	6
Decachlorobiphenyl	6.62	6.58	6.64	36.35	40.04	-9
Aroclor-1016	3.18	3.16	3.20	193.77	200.40	-3
	3.40	3.38	3.42	189.48	200.40	-5
	3.52	3.49	3.53	199.44	200.40	0
	3.73	3.71	3.75	213.22	200.40	6
	3.79	3.77	3.81	210.65	200.40	5
	3.98	3.96	4.00	214.60	200.40	7
Aroclor-1260	4.76	4.74	4.78	205.18	200.44	2
	4.96	4.94	4.98	214.08	200.44	7
	5.17	5.14	5.18	208.01	200.44	4
	5.23	5.21	5.25	204.26	200.44	2
	5.64	5.61	5.65	216.17	200.44	8
	5.84	5.82	5.86	203.70	200.44	2

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 11/08/18

GC Column (2) : MR-2

ID: .32 (mm)

Time Analyzed: 11:00

Lab File ID: 25PCBS18303009B.005.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: AR164LL

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.68	2.65	2.71	41.36	40.06	3
Decachlorobiphenyl	6.21	6.18	6.24	35.49	40.04	-11
Aroclor-1016	2.96	2.94	2.98	196.91	200.40	-2
	3.29	3.27	3.31	197.10	200.40	-2
	3.49	3.47	3.51	198.15	200.40	-1
	3.56	3.54	3.58	208.86	200.40	4
	3.62	3.60	3.64	188.62	200.40	-6
	3.73	3.71	3.75	207.48	200.40	4
Aroclor-1260	4.56	4.54	4.58	213.58	200.44	7
	4.67	4.64	4.68	207.23	200.44	3
	4.80	4.77	4.81	217.01	200.44	8
	5.02	5.00	5.04	210.39	200.44	5
	5.22	5.19	5.23	216.91	200.44	8
	5.47	5.45	5.49	197.85	200.44	-1

Compounds 14

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LL ID: LL **Batchnumber:** 1831199999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 11:00:42
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.005.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 106% (33-137) Conc.: 42.38319
 %SSR(DCB) : 91% (10-148) Conc.: 36.34817

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	512048.9	193.765771	6	5.28	1
3.38	3.40	3.42	484511.9	189.479817			2
+ 3.38	3.41	3.42	204014.9	79.784843			2
3.49	3.52	3.53	654667.5	199.436208			3
3.71	3.73	3.75	805840.7	213.215441			4
3.77	3.79	3.81	655629.6	210.651568			5
3.96	3.98	4.00	510146.2	214.599544			6

Height Summation: **3622844.8**
 Amount Avg CF: **203.524725** Linear:

Aroclor-1221							
3.06	3.08	3.10	91959.88	65.442057	3	35.93	1
3.11	3.13	3.15	121911.2	109.462731			2
3.16	3.18	3.20	512048.9	140.667218			3

Height Summation: **725919.98**
 Amount Avg CF: **105.190669** Linear:

Aroclor-1232							
3.16	3.18	3.20	512048.9	172.139951	6	30.98	1
E 3.38	3.40	3.42	484511.9	419.393561			2
+ 3.38	3.41	3.42	204014.9	176.595323			2
E 3.49	3.52	3.53	654667.5	441.817229			3
E 3.71	3.73	3.75	805840.7	452.462276			4
E 3.77	3.79	3.81	655629.6	497.378773			5
E 3.96	3.98	4.00	610146.2	618.686265			6

Height Summation: **3622844.8**
 Amount Avg CF: **421.962842** Linear:

Aroclor-1242							
E 3.16	3.18	3.20	512048.9	224.020407	6	9.41	1
E 3.38	3.40	3.42	484511.9	227.654804			2
+ 3.38	3.41	3.42	204014.9	95.859301			2
E 3.49	3.52	3.53	654667.5	241.392951			3
E 3.71	3.73	3.75	805840.7	249.124753			4
E 3.77	3.79	3.81	655629.6	271.797166			5
E 3.96	3.98	4.00	510146.2	282.103393			6

Height Summation: **3622844.8**
 Amount Avg CF: **249.348912** Linear:

Aroclor-1248							
3.83	3.86	3.87	448533.2	144.15456	6	8.48	1
3.98	3.98	4.00	510146.2	145.319556			2
4.05	4.07	4.09	491755	165.211314			3
4.23	4.23	4.27	515976.3	173.644307			4
+ 4.23	4.25	4.27	99791.97	33.583534			4
4.36	4.39	4.40	541853.6	171.17335			5
4.61	4.64	4.65	351683.1	149.251473			6

Height Summation: **2859947.4**
 Amount Avg CF: **158.12576** Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 11:00:42
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.005.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 103% (33-137) Conc.: 41.35994
 %SSR(DCB) : 89% (10-148) Conc.: 35.48976

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	857283.2	196.906489	6	3.78	1
3.27	3.29	3.31	1004797	197.104242			2
+ 3.47	3.47	3.51	40710.93	8.234466			3
3.47	3.49	3.51	979639.1	198.14838			3
3.54	3.56	3.58	1070221	208.85675			4
3.60	3.62	3.64	758361.5	188.624201			5
3.71	3.73	3.75	899506.8	207.482723			6

Height Summation: **5569808.6**
 Amount Avg CF: **199.520464** Linear:

Aroclor-1221							
2.83	2.85	2.87	170790.5	67.226314	3	44.59	1
+ 2.89	2.90	2.93	69012.2	38.098128			2
2.89	2.91	2.93	125687	69.385405			2
2.94	2.96	2.98	857283.2	139.317473			3

Height Summation: **1153760.7**
 Amount Avg CF: **91.976397** Linear:

Aroclor-1232							
2.94	2.96	2.98	857283.2	171.986248	6	31.00	1
E 3.27	3.29	3.31	1004797	437.961086			2
+ 3.47	3.47	3.51	40710.93	17.46659			3
E 3.47	3.49	3.51	979639.1	420.303695			3
E 3.54	3.56	3.58	1070221	479.909056			4
E 3.60	3.62	3.64	758361.5	521.963361			5
E 3.71	3.73	3.75	899506.8	529.784806			6

Height Summation: **5569808.6**
 Amount Avg CF: **426.984709** Linear:

Aroclor-1242							
E 2.94	2.96	2.98	857283.2	228.207256	6	6.13	1
E 3.27	3.29	3.31	1004797	242.57287			2
+ 3.47	3.47	3.51	40710.93	9.663418			3
E 3.47	3.49	3.51	979639.1	232.533672			3
E 3.54	3.56	3.58	1070221	260.260718			4
E 3.60	3.62	3.64	758361.5	250.997695			5
E 3.71	3.73	3.75	899506.8	266.291567			6

Height Summation: **5569808.6**
 Amount Avg CF: **246.81063** Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D **AR164LL** **ID:** LL **Batchnumber:** 1831199999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 11:00:42
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.005.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.58	4.59	45546.11	13.046702	6	106.61	1
4.61	4.64	4.65	351683.1	50.320686			2
4.74	4.76	4.78	1110455	503.943847			3
4.83	4.85	4.87	194613.2	40.35625			4
5.03	5.05	5.07	636321.1	164.474428			5
5.14	5.17	5.18	1635465	330.760042			6

Height Summation: 3974083.51
Amount Avg CF: 183.816993 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.74	4.76	4.78	1110455	205.178273	6	2.56	1
4.94	4.96	4.98	1395644	214.081318			2
5.14	5.17	5.18	1635465	208.012009			3
5.21	5.23	5.25	779154.1	204.257938			4
5.61	5.64	5.65	2462343	216.168919			5
5.82	5.84	5.86	1292258	203.70397			6

Height Summation: 8675319.1
Amount Avg CF: 208.567071 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.21	5.23	5.25	779154.1	133.931484	6	40.71	1
+ 5.38	5.38	5.41	62211.27	13.275239			2
5.38	5.40	5.41	780899.9	166.635927			2
5.61	5.64	5.65	2462343	181.321348			3
5.82	5.84	5.86	1292258	164.432404			4
+ 5.87	5.88	5.91	34802.54	8.159899			5
5.87	5.89	5.91	146383.1	34.321383			5
6.25	6.27	6.29	600059.4	114.233665			6

Height Summation: 6061097.5
Amount Avg CF: 132.479368 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	1292258	73.223273	6	122.98	1
+ 5.87	5.88	5.91	34802.54	2.177356			2
5.87	5.89	5.91	146383.1	9.158184			2
6.00	6.03	6.04	52344.77	3.566402			3
6.07	6.09	6.11	47115.77	12.788548			4
6.24	6.27	6.28	600059.4	95.251829			5
6.44	6.47	6.48	182897.9	3.597812			6

Height Summation: 2321058.94
Amount Avg CF: 32.931008 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 11:00:42
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.005.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	746899.9	147.086908	6	44.44	1
3.71	3.73	3.75	899506.8	144.271892			2
+ 3.80	3.80	3.84	186154.4	45.172601			3
3.80	3.82	3.84	741848.6	180.018471			3
3.93	3.96	3.97	987607.4	123.043968			4
+ 4.07	4.09	4.11	32166.24	8.713085			5
4.07	4.11	4.11	66346.27	17.971658			5
+ 4.30	4.31	4.34	211366.1	60.563971			6
+ 4.30	4.33	4.34	157681.9	45.181522			6
4.30	4.34	4.34	506881.7	145.239793			6

Height Summation: 3949090.67
Amount Avg CF: 126.272115 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
+ 4.30	4.31	4.34	211366.1	20.714562	6	95.80	1
+ 4.30	4.33	4.34	157681.9	15.453337			1
4.30	4.34	4.34	506881.7	49.676049			1
4.40	4.42	4.44	1711974	357.216774			2
+ 4.47	4.47	4.51	20898.59	3.247027			3
4.47	4.49	4.51	175320.2	27.239609			3
4.54	4.56	4.58	2025086	521.859831			4
4.69	4.72	4.73	201860.1	45.603593			5
4.77	4.80	4.81	2055820	282.647103			6

Height Summation: 6676942
Amount Avg CF: 214.040493 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.54	4.56	4.58	2025086	213.58139	6	3.45	1
4.64	4.67	4.68	1577589	207.228714			2
4.77	4.80	4.81	2055820	217.011696			3
5.00	5.02	5.04	1233641	210.390931			4
5.19	5.22	5.23	3018489	216.90853			5
5.45	5.47	5.49	1874330	197.849255			6

Height Summation: 11784955
Amount Avg CF: 210.495086 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
4.81	4.83	4.85	947037.7	121.840794	6	24.43	1
5.00	5.02	5.04	1233641	153.292891			2
5.20	5.22	5.24	3018489	184.593379			3
5.41	5.43	5.45	635618.2	95.999912			4
5.46	5.47	5.50	1874330	169.260799			5
5.83	5.85	5.87	759150.3	115.987138			6

Height Summation: 8468266.2
Amount Avg CF: 140.162485 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LL ID: LL **Batchnumber:** 1831199999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 11:00:42
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.005.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 11:00:42
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.005.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
+ 5.41	5.41	5.45	29305.95	1.238733	6	112.28	1
5.41	5.43	5.45	635618.2	26.866932			1
5.46	5.47	5.50	1874330	78.36898			2
5.61	5.63	5.65	70361.68	3.385658			3
5.68	5.70	5.72	42620.32	8.236558			4
5.83	5.85	5.87	759150.3	91.003251			5
6.03	6.05	6.07	248728.2	3.276944			6
Height Summation:			3630808.7				
Amount Avg CF:			35.18972	Linear:			

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		1.99	4	40	
Aroclor-1221			0.5	0.1		13.40	3	5	
Aroclor-1232			0.5	0.2	E	1.18	4	10	
Aroclor-1242			0.5	0.1	E	1.02	4	30	
Aroclor-1248			0.5	0.1		22.40	4	40	
Aroclor-1254			0.5	0.1		15.19	4	40	
Aroclor-1260			0.5	0.15		0.92	4	40	
Aroclor-1262			0.5	0.2		5.64	4	40	
Aroclor-1268			0.5	0.16		6.63	4	40	

Units: ug/l

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNV ID: NV** **Batchnumber: 1831199999**
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 11:11:36
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.006.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 100% (33-137) Conc.: 0.199758
 %SSR(DCB) : 91% (10-148) Conc.: 0.181611

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	4526.65	0.017129	6	9.50	1
3.38	3.40	3.42	5001.283	0.019559			2
+ 3.38	3.41	3.42	1717.617	0.006717			2
3.49	3.51	3.53	5072.683	0.015453			3
3.71	3.73	3.75	6528.221	0.017273			4
3.77	3.79	3.81	4710.645	0.015135			5
3.96	3.98	4.00	4230.541	0.017796			6
Height Summation:			30070.023				
Amount Avg CF:			0.017058	Linear:			
Aroclor-1221							
3.06	3.08	3.10	1005.388	0.007155	3	158.69	1
3.11	3.12	3.15	36819.91	0.330602			2
3.16	3.18	3.20	4526.65	0.012435			3
Height Summation:			42351.948				
Amount Avg CF:			0.116731	Linear:			
Aroclor-1232							
3.16	3.18	3.20	4526.65	0.015218	6	30.52	1
3.38	3.40	3.42	5001.283	0.043291			2
+ 3.38	3.41	3.42	1717.617	0.014868			2
3.49	3.51	3.53	5072.683	0.034234			3
3.71	3.73	3.75	6528.221	0.035855			4
3.77	3.79	3.81	4710.645	0.035736			5
3.96	3.98	4.00	4230.541	0.045493			6
Height Summation:			30070.023				
Amount Avg CF:			0.035104	Linear:			
Aroclor-1242							
3.16	3.18	3.20	4526.65	0.019804	6	9.92	1
3.38	3.40	3.42	5001.283	0.023499			2
+ 3.38	3.41	3.42	1717.617	0.00807			2
3.49	3.51	3.53	5072.683	0.018704			3
3.71	3.73	3.75	6528.221	0.020182			4
3.77	3.79	3.81	4710.645	0.019528			5
3.96	3.98	4.00	4230.541	0.023394			6
Height Summation:			30070.023				
Amount Avg CF:			0.020852	Linear:			
Aroclor-1248							
3.83	3.86	3.87	4585.921	0.014739	6	12.45	1
3.96	3.98	4.00	4230.541	0.012051			2
4.05	4.07	4.09	3805.604	0.012785			3
4.23	4.23	4.27	4406.976	0.014831			4
4.36	4.38	4.40	4967.145	0.015691			5
4.61	4.64	4.65	2727.112	0.011574			6
Height Summation:			24723.299				
Amount Avg CF:			0.013612	Linear:			

Analysis Report (B)

Injected on : Nov 08, 2018 11:11:36
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.006.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 96% (33-137) Conc.: 0.192498
 %SSR(DCB) : 88% (10-148) Conc.: 0.176038

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.27	3.29	3.31	9255.68	0.018156	5	9.19	2
3.47	3.49	3.51	8994.029	0.018192			3
3.54	3.56	3.58	9000.286	0.017564			4
3.60	3.62	3.64	5856.945	0.014568			5
3.71	3.73	3.75	7966.748	0.018376			6
Height Summation:			41073.688				
Amount Avg CF:			0.017371	Linear:			
Aroclor-1221							
2.89	2.90	2.93	61326.06	0.33855	1		2
Height Summation:			61326.06				
Amount Avg CF:			0.33855	Linear:			
Aroclor-1232							
3.27	3.29	3.31	9255.68	0.040343	5	7.82	2
3.47	3.49	3.51	8994.029	0.038588			3
3.54	3.56	3.58	9000.286	0.040359			4
3.60	3.62	3.64	5856.945	0.040312			5
3.71	3.73	3.75	7966.748	0.046922			6
Height Summation:			41073.688				
Amount Avg CF:			0.041305	Linear:			
Aroclor-1242							
3.27	3.29	3.31	9255.68	0.022345	5	7.09	2
3.47	3.49	3.51	8994.029	0.021349			3
3.54	3.56	3.58	9000.286	0.021887			4
3.60	3.62	3.64	5856.945	0.019385			5
3.71	3.73	3.75	7966.748	0.023585			6
Height Summation:			41073.688				
Amount Avg CF:			0.02171	Linear:			
Aroclor-1248							
3.58	3.60	3.62	6717.707	0.013229	5	27.29	1
3.71	3.73	3.75	7966.748	0.012778			2
3.80	3.82	3.84	6310.758	0.015314			3
3.93	3.96	3.97	9710.110	0.012101			4
4.30	4.34	4.34	7742.07	0.022184			6
Height Summation:			38450.396				
Amount Avg CF:			0.015121	Linear:			
Aroclor-1254							
4.30	4.34	4.34	7742.07	0.007587	4	60.44	1
4.40	4.42	4.44	16414.51	0.03425			2
4.54	4.56	4.58	18206.75	0.046918			4
4.77	4.79	4.81	16249.51	0.022341			6
Height Summation:			58612.84				
Amount Avg CF:			0.027774	Linear:			

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNV ID:** NV **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 11:11:36
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.006.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.59	4.59	1944.336	0.00557	6	96.61	1
4.61	4.64	4.65	2727.112	0.003902			2
4.74	4.76	4.78	10139.43	0.046015			3
4.83	4.85	4.87	2622.12	0.005437			4
5.03	5.05	5.07	5919.814	0.015301			5
5.14	5.17	5.18	13293.58	0.026885			6

Height Summation: 36646.392
Amount Avg CF: 0.017185 Linear:

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.74	4.76	4.78	10139.43	0.018735	6	11.54	1
4.94	4.96	4.98	11852.49	0.018181			2
5.14	5.17	5.18	13293.58	0.016908			3
5.21	5.23	5.25	6565.817	0.017213			4
5.61	5.63	5.65	15612.32	0.013706			5
5.82	5.84	5.86	12265.97	0.019335			6

Height Summation: 69729.607
Amount Avg CF: 0.017346 Linear:

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.21	5.23	5.25	6565.817	0.011286	6	44.02	1
5.38	5.40	5.41	7720.369	0.016474			2
5.61	5.63	5.65	15612.32	0.011497			3
5.82	5.84	5.86	12265.97	0.015608			4
5.87	5.88	5.91	1133.944	0.002659			5
6.25	6.27	6.29	5171.512	0.009845			6

Height Summation: 48469.932
Amount Avg CF: 0.011228 Linear:

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	12265.97	0.00695	6	81.86	1
5.87	5.88	5.91	1133.944	0.000709			2
6.00	6.03	6.04	12872.75	0.008771			3
6.07	6.09	6.11	7624.229	0.020694			4
6.24	6.27	6.28	5171.512	0.008209			5
6.44	6.47	6.48	21859.58	0.0043			6

Height Summation: 60927.985
Amount Avg CF: 0.008272 Linear:

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		1.82	4	40	
Aroclor-1221			0.5	0.1		**97.44	3	5	
Aroclor-1232			0.5	0.2		16.23	4	10	
Aroclor-1242			0.5	0.1		4.03	4	30	
Aroclor-1248			0.5	0.1		10.51	4	40	
Aroclor-1254			0.5	0.1		**47.11	4	40	
Aroclor-1260			0.5	0.15		6.11	4	40	
Aroclor-1262			0.5	0.2		12.36	4	40	

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C PIBLKNV ID: NV **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 11:11:36
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.006.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 11:11:36
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.006.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Summary Report

<u>Compound Name</u>	<u>Column</u>	<u>Higher Amount Found</u>	<u>LOQ</u>	<u>MDL</u>	<u>Qualifiers</u>	<u>%Difference</u>	<u>No of Hits Required</u>	<u>Max %RSD</u>	<u>Comments</u>
Aroclor-1268			0.5	0.16		18.68	4	40	

Units: ug/l

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 11/08/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 13:11

Lab File ID: 25PCBS18303009.017.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: AR164LM

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.93	2.90	2.96	41.66	40.06	4
Decachlorobiphenyl	6.62	6.58	6.64	39.01	40.04	-3
Aroclor-1016	3.18	3.16	3.20	197.54	200.40	-1
	3.40	3.38	3.42	200.29	200.40	0
	3.51	3.49	3.53	201.59	200.40	1
	3.73	3.71	3.75	209.75	200.40	5
	3.79	3.77	3.81	213.71	200.40	7
	3.98	3.96	4.00	214.38	200.40	7
Aroclor-1260	4.76	4.74	4.78	213.00	200.44	6
	4.96	4.94	4.98	220.12	200.44	10
	5.17	5.14	5.18	220.55	200.44	10
	5.23	5.21	5.25	219.78	200.44	10
	5.63	5.61	5.65	223.95	200.44	12
	5.84	5.82	5.86	217.29	200.44	8

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 11/08/18

GC Column (2) : MR-2

ID: .32 (mm)

Time Analyzed: 13:11

Lab File ID: 25PCBS18303009B.017.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: AR164LM

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.68	2.65	2.71	40.64	40.06	1
Decachlorobiphenyl	6.21	6.18	6.24	40.55	40.04	1
Aroclor-1016	2.96	2.94	2.98	197.35	200.40	-2
	3.29	3.27	3.31	200.57	200.40	0
	3.49	3.47	3.51	209.72	200.40	5
	3.56	3.54	3.58	209.76	200.40	5
	3.62	3.60	3.64	196.06	200.40	-2
	3.73	3.71	3.75	216.48	200.40	8
Aroclor-1260	4.56	4.54	4.58	215.35	200.44	7
	4.66	4.64	4.68	210.83	200.44	5
	4.79	4.77	4.81	218.40	200.44	9
	5.02	5.00	5.04	220.68	200.44	10
	5.21	5.19	5.23	225.42	200.44	12
	5.47	5.45	5.49	212.50	200.44	6

Compounds 14

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LM ID: LM **Batchnumber:** 1831199999
Sample Amount: 1 Total Volume: 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 13:11:24
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.017.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 104% (33-137) Conc.: 41.66174
 %SSR(DCB) : 97% (10-148) Conc.: 39.00756

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	522029.8	197.542669	6	3.55	1
3.38	3.40	3.42	512142.9	200.285572			2
+ 3.38	3.41	3.42	216511.3	84.671855			2
3.49	3.51	3.53	661732.9	201.588594			3
3.71	3.73	3.75	792740	209.749158			4
3.77	3.79	3.81	665163	213.714617			5
3.96	3.98	4.00	509627.2	214.38122			6

Height Summation: **3663435.8**
 Amount Avg CF: **206.210305** Linear:

Aroclor-1221							
3.06	3.08	3.10	96417.75	68.614443	3	34.65	1
3.11	3.13	3.15	127616.5	114.585458			2
3.16	3.18	3.20	522029.8	143.409116			3

Height Summation: **746064.05**
 Amount Avg CF: **108.869672** Linear:

Aroclor-1232							
3.16	3.18	3.20	522029.8	175.495318	6	30.50	1
E 3.38	3.40	3.42	512142.9	443.310958			2
+ 3.38	3.41	3.42	216511.3	187.412208			2
E 3.49	3.51	3.53	661732.9	446.585474			3
E 3.71	3.73	3.75	792740	445.106514			4
E 3.77	3.79	3.81	665163	504.611075			5
E 3.96	3.98	4.00	509627.2	548.027159			6

Height Summation: **3663435.8**
 Amount Avg CF: **427.189416** Linear:

Aroclor-1242							
E 3.16	3.18	3.20	522029.8	228.387032	6	8.40	1
E 3.38	3.40	3.42	512142.9	240.637622			2
+ 3.38	3.41	3.42	216511.3	101.730912			2
E 3.49	3.51	3.53	661732.9	243.998147			3
E 3.71	3.73	3.75	792740	245.074686			4
E 3.77	3.79	3.81	665163	275.749323			5
E 3.96	3.98	4.00	509627.2	281.816394			6

Height Summation: **3663435.8**
 Amount Avg CF: **252.610534** Linear:

Aroclor-1248							
3.83	3.86	3.87	465377.2	149.568071	6	8.67	1
3.96	3.98	4.00	509627.2	145.171714			2
4.05	4.07	4.09	500219.1	168.054935			3
4.23	4.23	4.27	522509.3	175.842893			4
+ 4.23	4.25	4.27	98525.94	33.15747			4
4.36	4.38	4.40	566290.9	178.893174			5
4.61	4.64	4.65	367286.6	155.873473			6

Height Summation: **2931310.3**
 Amount Avg CF: **162.234043** Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 13:11:24
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.017.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 101% (33-137) Conc.: 40.64101
 %SSR(DCB) : 101% (10-148) Conc.: 40.54556

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	859225	197.352495	6	3.99	1
3.27	3.29	3.31	1022481	200.573193			2
+ 3.47	3.47	3.51	42887.7	8.674754			3
3.47	3.49	3.51	1036864	209.723073			3
3.54	3.56	3.58	1074850	209.760113			4
3.60	3.62	3.64	788242.8	196.056457			5
+ 3.60	3.64	3.64	246125.3	61.217755			5
3.71	3.73	3.75	938523.6	216.482446			6

Height Summation: **5720186.4**
 Amount Avg CF: **204.991296** Linear:

Aroclor-1221							
2.83	2.85	2.87	172562.4	67.923767	3	44.12	1
+ 2.89	2.90	2.93	63813.58	35.228234			2
2.89	2.91	2.93	126765.2	69.980624			2
2.94	2.96	2.98	859225	139.633036			3

Height Summation: **1158552.6**
 Amount Avg CF: **92.512476** Linear:

Aroclor-1232							
2.94	2.96	2.98	859225	172.375808	6	31.60	1
E 3.27	3.29	3.31	1022481	445.669015			2
+ 3.47	3.47	3.51	42887.7	18.40051			3
E 3.47	3.49	3.51	1036864	444.855428			3
E 3.54	3.56	3.58	1074850	481.984795			4
E 3.60	3.62	3.64	788242.8	542.529996			5
+ 3.60	3.64	3.64	246125.3	169.402572			5
E 3.71	3.73	3.75	938523.6	552.764629			6

Height Summation: **5720186.4**
 Amount Avg CF: **440.029945** Linear:

Aroclor-1242							
E 2.94	2.96	2.98	859225	228.72416	6	6.65	1
E 3.27	3.29	3.31	1022481	246.842049			2
+ 3.47	3.47	3.51	42887.7	10.180111			3
E 3.47	3.49	3.51	1036864	246.116956			3
E 3.54	3.56	3.58	1074850	261.386417			4
E 3.60	3.62	3.64	788242.8	260.887619			5
+ 3.60	3.64	3.64	246125.3	81.460996			5
E 3.71	3.73	3.75	938523.6	277.842168			6

Height Summation: **5720186.4**
 Amount Avg CF: **253.633228** Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D **AR164LM** **ID:** LM **Batchnumber:** 1831199999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 13:11:24
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.017.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.58	4.59	48404.07	13.865366	6	103.13	1
4.55	4.59	4.59	107110.9	30.681962			1
4.61	4.64	4.65	367286.6	52.553318			2
4.74	4.76	4.78	1152805	523.163016			3
4.83	4.85	4.87	203875.3	42.276899			4
5.03	5.05	5.07	669137.6	172.956741			5
5.14	5.17	5.18	1734056	350.699303			6
Height Summation:				4234271.4			
Amount Avg CF:				195.38854	Linear:		

Aroclor-1260							
4.74	4.76	4.78	1152805	213.003264	6	1.68	1
4.94	4.96	4.98	1434982	220.115472			2
5.14	5.17	5.18	1734056	220.55163			3
5.21	5.23	5.25	838356.1	219.777946			4
5.61	5.63	5.65	2550941	223.946931			5
5.82	5.84	5.86	1378424	217.286673			6
Height Summation:				9089564.1			
Amount Avg CF:				219.113653	Linear:		

Aroclor-1262							
5.21	5.23	5.25	838356.1	144.10792	6	22.09	1
5.38	5.40	5.41	847432.3	180.83325			2
5.61	5.63	5.65	2550941	187.845504			3
5.82	5.84	5.86	1378424	176.396632			4
5.87	5.89	5.91	443142.7	103.900454			5
6.25	6.27	6.29	661798.7	125.987012			6
Height Summation:				6720094.8			
Amount Avg CF:				153.011778	Linear:		

Aroclor-1268							
5.81	5.84	5.85	1378424	78.105701	6	110.22	1
5.87	5.89	5.91	443142.7	27.724392			2
6.00	6.03	6.04	57709.44	3.931913			3
6.07	6.09	6.11	50841.05	13.799694			4
6.24	6.27	6.28	661798.7	105.05216			5
6.44	6.47	6.48	196077.5	3.85707			6
Height Summation:				2787993.39			
Amount Avg CF:				38.745155	Linear:		

Analysis Report (B)

Injected on : Nov 08, 2018 13:11:24
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.017.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	753403.9	148.36774	6	44.21	1
3.71	3.73	3.75	938523.6	150.529796			2
+ 3.80	3.80	3.84	203000.2	49.260436			3
3.80	3.82	3.84	735976.5	178.593536			3
3.93	3.95	3.97	1017811	126.806973			4
+ 4.07	4.09	4.11	31927.02	8.648285			5
4.07	4.11	4.11	66070.27	17.896896			5
+ 4.30	4.31	4.34	209364.9	59.990555			6
+ 4.30	4.33	4.34	183805.9	52.666985			6
4.30	4.34	4.34	483379.3	138.505512			6
Height Summation:				3995164.57			
Amount Avg CF:				126.783409	Linear:		

Aroclor-1254							
+ 4.30	4.31	4.34	209364.9	20.518438	6	96.02	1
+ 4.30	4.33	4.34	183805.9	18.013574			1
4.30	4.34	4.34	483379.3	47.372737			1
4.40	4.42	4.44	1765389	368.362232			2
4.47	4.49	4.51	179562.1	27.898675			3
4.54	4.56	4.58	2041848	526.179358			4
4.69	4.72	4.73	205884.1	46.512683			5
4.77	4.79	4.81	2068970	284.455048			6
Height Summation:				6745032.5			
Amount Avg CF:				216.796789	Linear:		

Aroclor-1260							
4.54	4.50	4.58	2041848	215.349241	6	2.50	1
4.64	4.66	4.68	1605036	210.834093			2
4.77	4.79	4.81	2068970	218.399806			3
5.00	5.02	5.04	1293961	220.678187			4
5.19	5.21	5.23	3136880	225.416104			5
5.45	5.47	5.49	2013116	212.499133			6
Height Summation:				12159811			
Amount Avg CF:				217.196094	Linear:		

Aroclor-1262							
4.81	4.83	4.85	973183.6	125.204586	6	24.50	1
5.00	5.02	5.04	1293961	160.788286			2
5.20	5.21	5.24	3136880	191.833489			3
5.41	5.43	5.45	660580.3	99.770036			4
5.46	5.47	5.50	2013116	181.793826			5
5.83	5.85	5.87	826753.5	126.315925			6
Height Summation:				8904474.4			
Amount Avg CF:				147.617691	Linear:		

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LM ID: LM **Batchnumber:** 1831199999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 13:11:24
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.017.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 13:11:24
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.017.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
+ 5.41	5.41	5.45	30060.42	1.270623	6	113.31	1
5.41	5.43	5.45	660580.3	27.922054			1
5.46	5.47	5.50	2013116	84.171863			2
5.61	5.63	5.65	73917.57	3.55676			3
5.68	5.70	5.72	44684.14	8.6354			4
5.83	5.85	5.87	826753.5	99.107194			5
6.03	6.05	6.07	279265.5	3.679266			6
Height Summation:			3898317.01				
Amount Avg CF:			37.845423	Linear:			

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		0.59	4	40	
Aroclor-1221			0.5	0.1		16.24	3	5	
Aroclor-1232			0.5	0.2	E	2.96	4	10	
Aroclor-1242			0.5	0.1	E	0.40	4	30	
Aroclor-1248			0.5	0.1		24.53	4	40	
Aroclor-1254			0.5	0.1		10.39	4	40	
Aroclor-1260			0.5	0.15		0.88	4	40	
Aroclor-1262			0.5	0.2		3.59	4	40	
Aroclor-1268			0.5	0.16		2.35	4	40	

Units: ug/l

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNW ID:** NW **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 13:22:17
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.018.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 102% (33-137) Conc.: 0.203463
 %SSR(DCB) : 98% (10-148) Conc.: 0.195441

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	4278.241	0.016189	6	9.72	1
3.38	3.40	3.42	4621.287	0.018073			2
+ 3.49	3.50	3.53	623.547	0.0019			3
3.49	3.51	3.53	4683.746	0.014268			3
3.71	3.73	3.75	6082.443	0.016093			4
3.77	3.79	3.81	4420.835	0.014204			5
3.96	3.98	4.00	4098.202	0.01724			6

Height Summation: **28184.754**
 Amount Avg CF: **0.016011** Linear:

Aroclor-1221							
3.11	3.12	3.15	38241.73	0.343368	2	132.06	2
3.16	3.18	3.20	4278.241	0.011753			3

Height Summation: **42519.971**
 Amount Avg CF: **0.177561** Linear:

Aroclor-1232							
3.16	3.18	3.20	4278.241	0.014383	6	30.99	1
3.38	3.40	3.42	4621.287	0.040002			2
+ 3.49	3.50	3.53	623.547	0.004208			3
3.49	3.51	3.53	4683.746	0.031609			3
3.71	3.73	3.75	6082.443	0.034152			4
3.77	3.79	3.81	4420.835	0.033638			5
3.96	3.98	4.00	4098.202	0.04407			6

Height Summation: **28184.754**
 Amount Avg CF: **0.032959** Linear:

Aroclor-1242							
3.16	3.18	3.20	4278.241	0.018717	6	10.79	1
3.38	3.40	3.42	4621.287	0.021714			2
+ 3.49	3.50	3.53	623.547	0.002299			3
3.49	3.51	3.53	4683.746	0.01727			3
3.71	3.73	3.75	6082.443	0.018804			4
3.77	3.79	3.81	4420.835	0.018327			5
3.96	3.98	4.00	4098.202	0.022662			6

Height Summation: **28184.754**
 Amount Avg CF: **0.019582** Linear:

Aroclor-1248							
3.83	3.85	3.87	4609.153	0.014813	6	10.04	1
3.96	3.98	4.00	4098.202	0.011674			2
4.05	4.07	4.09	3615.813	0.012148			3
4.23	4.23	4.27	4254.849	0.014319			4
4.36	4.38	4.40	4675.022	0.014769			5
4.61	4.64	4.65	3138.758	0.013321			6

Height Summation: **24391.797**
 Amount Avg CF: **0.013507** Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 13:22:17
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.018.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 103% (33-137) Conc.: 0.205435
 %SSR(DCB) : 95% (10-148) Conc.: 0.189831

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.27	3.29	3.31	9052.273	0.017757	5	4.40	2
3.47	3.49	3.51	8305.007	0.016798			3
3.54	3.56	3.58	9077.033	0.017714			4
3.60	3.62	3.64	6412.613	0.01595			5
+ 3.71	3.71	3.75	1627.586	0.003754			6
3.71	3.73	3.75	7501.393	0.017303			6

Height Summation: **40348.319**
 Amount Avg CF: **0.017104** Linear:

Aroclor-1221							
2.89	2.90	2.93	67264.88	0.371335	1		2

Height Summation: **67264.88**
 Amount Avg CF: **0.371335** Linear:

Aroclor-1232							
3.27	3.29	3.31	9052.273	0.039456	5	8.75	2
3.47	3.49	3.51	8305.007	0.035632			3
3.54	3.56	3.58	9077.033	0.040703			4
3.60	3.62	3.64	6412.613	0.044137			5
3.71	3.73	3.75	7501.393	0.044181			6

Height Summation: **40348.319**
 Amount Avg CF: **0.040822** Linear:

Aroclor-1242							
3.27	3.29	3.31	9052.273	0.021854	5	4.78	2
3.47	3.49	3.51	8305.007	0.019713			3
3.54	3.56	3.58	9077.033	0.022074			4
3.60	3.62	3.64	6412.613	0.021224			5
3.71	3.73	3.75	7501.393	0.022207			6

Height Summation: **40348.319**
 Amount Avg CF: **0.021414** Linear:

Aroclor-1248							
3.58	3.60	3.62	6255.124	0.012318	4	9.82	1
+ 3.71	3.71	3.75	1627.586	0.00261			2
3.71	3.73	3.75	7501.393	0.012031			2
3.80	3.82	3.84	5809.504	0.014097			3
3.93	3.95	3.97	8990.409	0.011201			4

Height Summation: **28556.43**
 Amount Avg CF: **0.012412** Linear:

Aroclor-1254							
4.40	4.42	4.44	14948.87	0.031192	3	34.03	2
4.54	4.56	4.58	17853.19	0.046007			4
4.77	4.79	4.81	17113.68	0.023529			6

Height Summation: **49915.74**
 Amount Avg CF: **0.033576** Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNW ID:** NW **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 13:22:17
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.018.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.59	4.59	1718.178	0.004922	6	92.33	1
4.61	4.64	4.65	3138.758	0.004491			2
4.74	4.76	4.78	9401.955	0.042668			3
4.83	4.85	4.87	2559.732	0.005308			4
5.03	5.05	5.07	6342.583	0.016394			5
5.14	5.17	5.18	12823.3	0.025934			6

Height Summation: 35984.506
Amount Avg CF: 0.016619 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.74	4.76	4.78	9401.955	0.017372	6	13.32	1
4.94	4.96	4.98	11922.68	0.018288			2
5.14	5.17	5.18	12823.3	0.01631			3
5.21	5.23	5.25	6964.644	0.018258			4
5.61	5.63	5.65	14692.09	0.012898			5
5.82	5.84	5.86	12228.37	0.019276			6

Height Summation: 68033.039
Amount Avg CF: 0.017067 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.21	5.23	5.25	6964.644	0.011972	6	30.79	1
5.38	5.39	5.41	8543.245	0.01823			2
5.61	5.63	5.65	14692.09	0.010819			3
5.82	5.84	5.86	12228.37	0.01556			4
5.87	5.89	5.91	3594.253	0.008427			5
6.25	6.27	6.29	4842.892	0.009219			6

Height Summation: 50865.494
Amount Avg CF: 0.012371 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	12228.37	0.006929	6	83.26	1
5.87	5.89	5.91	3594.253	0.002249			2
6.00	6.03	6.04	13888.49	0.009463			3
6.07	6.09	6.11	8727.106	0.023688			4
6.24	6.27	6.28	4842.892	0.007687			5
6.44	6.47	6.48	23283.96	0.00458			6

Height Summation: 66565.071
Amount Avg CF: 0.009099 Linear:

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		6.60	4	40	
Aroclor-1221			0.5	0.1		** 70.61	3	5	
Aroclor-1232			0.5	0.2		21.31	4	10	
Aroclor-1242			0.5	0.1		8.94	4	30	
Aroclor-1248			0.5	0.1		8.45	4	40	
Aroclor-1254			0.5	0.1		** 67.56	4	40	
Aroclor-1260			0.5	0.15		4.03	4	40	
Aroclor-1262			0.5	0.2		0.59	4	40	

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C PIBLKNW ID: NW **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 13:22:17
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.018.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 13:22:17
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.018.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Summary Report

<u>Compound Name</u>	<u>Column</u>	<u>Higher Amount Found</u>	<u>LOQ</u>	<u>MDL</u>	<u>Qualifiers</u>	<u>%Difference</u>	<u>No of Hits Required</u>	<u>Max %RSD</u>	<u>Comments</u>
Aroclor-1268			0.5	0.16		15.53	4	40	

Units: ug/l

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 11/08/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 17:32

Lab File ID: 25PCBS18303009.038.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: AR164LW

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.93	2.90	2.96	42.29	40.06	6
Decachlorobiphenyl	6.61	6.58	6.64	40.42	40.04	1
Aroclor-1016	3.18	3.16	3.20	197.63	200.40	-1
	3.40	3.38	3.42	198.01	200.40	-1
	3.51	3.49	3.53	196.81	200.40	-2
	3.73	3.71	3.75	209.86	200.40	5
	3.79	3.77	3.81	208.60	200.40	4
	3.98	3.96	4.00	205.80	200.40	3
Aroclor-1260	4.76	4.74	4.78	206.93	200.44	3
	4.96	4.94	4.98	216.38	200.44	8
	5.17	5.14	5.18	218.91	200.44	9
	5.23	5.21	5.25	214.95	200.44	7
	5.63	5.61	5.65	219.07	200.44	9
	5.84	5.82	5.86	212.69	200.44	6

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 11/08/18

GC Column (2): MR-2

ID: .32 (mm)

Time Analyzed: 17:32

Lab File ID: 25PCBS18303009B.038.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: AR164LW

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.68	2.65	2.71	41.46	40.06	3
Decachlorobiphenyl	6.21	6.18	6.24	40.62	40.04	1
Aroclor-1016	2.96	2.94	2.98	196.61	200.40	-2
	3.29	3.27	3.31	195.87	200.40	-2
	3.49	3.47	3.51	204.81	200.40	2
	3.56	3.54	3.58	209.34	200.40	4
	3.62	3.60	3.64	192.25	200.40	-4
	3.73	3.71	3.75	207.54	200.40	4
Aroclor-1260	4.56	4.54	4.58	209.86	200.44	5
	4.66	4.64	4.68	204.95	200.44	2
	4.79	4.77	4.81	211.34	200.44	5
	5.02	5.00	5.04	215.70	200.44	8
	5.21	5.19	5.23	215.59	200.44	8
	5.47	5.45	5.49	216.20	200.44	8

Compounds 14

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LW ID: LW **Batchnumber:** 1831199999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 17:32:01
 Instrument : CP25-18274A
 Result file : 25PCBS18303009.038.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 106% (33-137) Conc.: 42.28695
 %SSR(DCB) : 101% (10-148) Conc.: 40.42374

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	522271.8	197.634245	6	2.94	1
3.38	3.40	3.42	506323.8	198.009875			2
+ 3.38	3.41	3.42	217557.3	85.080918			2
3.49	3.51	3.53	646049.1	196.810721			3
3.71	3.73	3.75	793152.2	209.858221			4
3.77	3.79	3.81	649234	208.596684			5
3.96	3.98	4.00	489233.3	205.802264			6

Height Summation: **3606264.2**
 Amount Avg CF: **202.785335** Linear:

Aroclor-1221							
3.06	3.08	3.10	97560.73	69.42783	3	34.35	1
3.11	3.13	3.15	124126.8	111.452094			2
3.16	3.18	3.20	522271.8	143.475597			3

Height Summation: **743959.33**
 Amount Avg CF: **108.118507** Linear:

Aroclor-1232							
3.16	3.18	3.20	522271.8	175.576673	6	29.71	1
E 3.38	3.40	3.42	506323.8	438.273944			2
+ 3.38	3.41	3.42	217557.3	188.317626			2
E 3.49	3.51	3.53	646049.1	436.000906			3
E 3.71	3.73	3.75	793152.2	445.337955			4
E 3.77	3.79	3.81	649234	492.526894			5
E 3.96	3.98	4.00	489233.3	526.096596			6

Height Summation: **3606264.2**
 Amount Avg CF: **418.968828** Linear:

Aroclor-1242							
E 3.16	3.18	3.20	522271.8	228.492906	6	7.07	1
E 3.38	3.40	3.42	506323.8	237.903435			2
+ 3.38	3.41	3.42	217557.3	102.22239			2
E 3.49	3.51	3.53	646049.1	238.215122			3
E 3.71	3.73	3.75	793152.2	245.202117			4
E 3.77	3.79	3.81	649234	269.145012			5
E 3.96	3.98	4.00	489233.3	270.538865			6

Height Summation: **3606264.2**
 Amount Avg CF: **248.24971** Linear:

Aroclor-1248							
3.83	3.86	3.87	441897.8	142.022002	6	9.62	1
3.96	3.98	4.00	489233.3	139.362336			2
4.05	4.07	4.09	499865.7	167.936206			3
4.23	4.23	4.27	498928.2	167.907017			4
+ 4.23	4.25	4.27	95911.98	32.27778			4
4.36	4.38	4.40	554316.6	175.110453			5
4.61	4.64	4.65	354684.8	150.52537			6

Height Summation: **2838926.4**
 Amount Avg CF: **157.143897** Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 17:32:01
 Instrument : CP25-18274B
 Result file : 25PCBS18303009B.038.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 103% (33-137) Conc.: 41.45879
 %SSR(DCB) : 101% (10-148) Conc.: 40.61765

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	855976.7	196.606404	6	3.51	1
3.27	3.29	3.31	998508.1	195.870591			2
+ 3.47	3.47	3.51	39347.24	7.958637			3
3.47	3.49	3.51	1012551	204.805362			3
3.54	3.56	3.58	1072686	209.337802			4
3.60	3.62	3.64	772921.3	192.245602			5
+ 3.60	3.64	3.64	236373.9	58.792328			5
3.71	3.73	3.75	899765.9	207.542488			6

Height Summation: **5612409**
 Amount Avg CF: **201.068041** Linear:

Aroclor-1221							
2.83	2.85	2.87	176774.3	69.581649	3	43.57	1
+ 2.89	2.90	2.93	65683.54	36.260544			2
2.89	2.91	2.93	124903.9	68.953095			2
2.94	2.96	2.98	855976.7	139.105154			3

Height Summation: **1157654.9**
 Amount Avg CF: **92.546633** Linear:

Aroclor-1232							
2.94	2.96	2.98	855976.7	171.724141	6	31.10	1
E 3.27	3.29	3.31	998508.1	435.219941			2
+ 3.47	3.47	3.51	39347.24	16.881513			3
E 3.47	3.49	3.51	1012551	434.424195			3
E 3.54	3.56	3.58	1072686	481.014413			4
E 3.60	3.62	3.64	772921.3	531.984548			5
+ 3.60	3.64	3.64	236373.9	162.690901			5
E 3.71	3.73	3.75	899765.9	529.937408			6

Height Summation: **5612409**
 Amount Avg CF: **430.717441** Linear:

Aroclor-1242							
E 2.94	2.96	2.98	855976.7	227.859468	6	5.89	1
E 3.27	3.29	3.31	998508.1	241.054636			2
+ 3.47	3.47	3.51	39347.24	9.339723			3
E 3.47	3.49	3.51	1012551	240.34586			3
E 3.54	3.56	3.58	1072686	260.860167			4
E 3.60	3.62	3.64	772921.3	255.816606			5
+ 3.60	3.64	3.64	236373.9	78.233539			5
E 3.71	3.73	3.75	899765.9	266.368271			6

Height Summation: **5612409**
 Amount Avg CF: **248.717501** Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LW ID: LW **Batchnumber:** 1831199999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 17:32:01
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.038.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
+ 4.55	4.58	4.59	45584.77	13.057776	6	103.30	1
4.55	4.59	4.59	107520.9	30.799407			1
4.61	4.64	4.65	354684.8	50.750185			2
4.74	4.76	4.78	1119920	508.239229			3
4.83	4.85	4.87	195191.1	40.476087			4
5.03	5.05	5.07	640688	165.603171			5
5.14	5.17	5.18	1721168	348.092806			6

Height Summation: 4139172.8
Amount Avg CF: 190.660148 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.74	4.76	4.78	1119920	206.927117	6	2.12	1
4.94	4.96	4.98	1410658	216.384353			2
5.14	5.17	5.18	1721168	218.912427			3
5.21	5.23	5.25	819948.9	214.952435			4
5.61	5.63	5.65	2495370	219.068357			5
5.82	5.84	5.86	1349235	212.68549			6

Height Summation: 8916299.9
Amount Avg CF: 214.821697 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.21	5.23	5.25	819948.9	140.943843	6	21.23	1
5.38	5.39	5.41	792819.1	169.17936			2
5.61	5.63	5.65	2495370	183.753381			3
5.82	5.84	5.86	1349235	171.6824			4
5.87	5.89	5.91	447318	104.879406			5
6.25	6.27	6.29	831790	120.274238			6

Height Summation: 6536481
Amount Avg CF: 148.452105 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	1349235	76.451763	6	107.03	1
5.87	5.89	5.91	447318	27.985612			2
6.00	6.03	6.04	60367.73	4.11303			3
6.07	6.09	6.11	56441.07	15.319697			4
6.24	6.27	6.28	631790	100.288659			5
6.44	6.47	6.48	201532.3	3.964372			6

Height Summation: 2746604.1
Amount Avg CF: 38.020522 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 17:32:01
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.038.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	727894.4	143.344157	6	43.74	1
3.71	3.73	3.75	899765.9	144.313449			2
+ 3.80	3.80	3.84	190751.9	46.288239			3
3.80	3.82	3.84	703655.1	170.75036			3
3.93	3.95	3.97	988832	123.196539			4
+ 4.07	4.09	4.11	33470.34	9.066335			5
4.07	4.11	4.11	65302.13	17.688825			5
+ 4.30	4.31	4.34	207710.9	59.516625			6
+ 4.30	4.32	4.34	176369.8	50.536275			6
4.30	4.34	4.34	507680.1	145.468563			6

Height Summation: 3893129.63
Amount Avg CF: 124.126982 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
+ 4.30	4.31	4.34	207710.9	20.356341	6	95.36	1
+ 4.30	4.32	4.34	176369.8	17.284812			1
4.30	4.34	4.34	507680.1	49.754294			1
4.40	4.42	4.44	1702181	355.173388			2
4.47	4.49	4.51	178761.1	27.774223			3
4.54	4.56	4.58	1989774	512.760013			4
4.69	4.72	4.73	204266.4	46.147217			5
4.77	4.79	4.81	2002062	275.25474			6

Height Summation: 6584714.6
Amount Avg CF: 211.143979 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.54	4.56	4.58	1989774	209.85711	6	2.09	1
4.64	4.66	4.68	1560236	204.949261			2
4.77	4.79	4.81	2002062	211.335963			3
5.00	5.02	5.04	1264778	215.701181			4
5.19	5.21	5.23	3000114	215.588103			5
5.45	5.47	5.49	2048207	216.203245			6

Height Summation: 11865161
Amount Avg CF: 212.272477 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
4.81	4.83	4.85	936510	120.486357	6	25.44	1
5.00	5.02	5.04	1264778	157.161991			2
5.20	5.21	5.24	3000114	183.46967			3
5.41	5.43	5.45	630541.6	95.233173			4
5.46	5.47	5.50	2048207	184.962708			5
5.83	5.85	5.87	812830.9	124.188754			6

Height Summation: 8692981.5
Amount Avg CF: 144.250442 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LW ID: LW **Batchnumber:** 1831199999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 17:32:01
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.038.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 17:32:01
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.038.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268					6	113.52	
5.41	5.43	5.45	630541.6	26.652349			1
5.46	5.47	5.50	2048207	85.639079			2
5.61	5.63	5.65	74846.77	3.601471			3
5.68	5.70	5.72	46375.51	8.962264			4
5.83	5.85	5.87	812830.9	97.43822			5
6.03	6.05	6.07	276705.2	3.645535			6
Height Summation:				3889506.98			
Amount Avg CF:				37.656486	Linear:		

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		0.85	4	40	
Aroclor-1221			0.5	0.1		15.52	3	5	
Aroclor-1232			0.5	0.2	E	2.77	4	10	
Aroclor-1242			0.5	0.1	E	0.19	4	30	
Aroclor-1248			0.5	0.1		23.48	4	40	
Aroclor-1254			0.5	0.1		10.20	4	40	
Aroclor-1260			0.5	0.15		1.19	4	40	
Aroclor-1262			0.5	0.2		2.87	4	40	
Aroclor-1268			0.5	0.16		0.96	4	40	

Units: ug/l

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKOG ID: OG** **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 17:42:53
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.039.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 102% (33-137) Conc.: 0.204299
 %SSR(DCB) : 95% (10-148) Conc.: 0.190516

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.19	3.20	3244.814	0.012279	6	17.89	1
3.38	3.40	3.42	2569.364	0.010048			2
3.49	3.51	3.53	2444.202	0.007446			3
3.71	3.73	3.75	3778.042	0.009996			4
3.77	3.79	3.81	2579.717	0.008289			5
3.96	3.98	4.00	2616.561	0.011007			6

Height Summation: 17232.7
 Amount Avg CF: 0.009844 Linear:

Aroclor-1221							
3.11	3.12	3.15	38028.89	0.341457	2	134.23	2
3.16	3.19	3.20	3244.814	0.008914			3

Height Summation: 41273.704
 Amount Avg CF: 0.175186 Linear:

Aroclor-1232							
3.16	3.19	3.20	3244.814	0.010908	6	29.29	1
3.38	3.40	3.42	2569.364	0.02224			2
3.49	3.51	3.53	2444.202	0.016495			3
3.71	3.73	3.75	3778.042	0.021213			4
3.77	3.79	3.81	2670.717	0.01067			5
3.96	3.98	4.00	2616.561	0.028137			6

Height Summation: 17232.7
 Amount Avg CF: 0.019761 Linear:

Aroclor-1242							
3.16	3.19	3.20	3244.814	0.014196	6	17.31	1
3.38	3.40	3.42	2569.364	0.012073			2
3.49	3.51	3.53	2444.202	0.009012			3
3.71	3.73	3.75	3778.042	0.01168			4
3.77	3.79	3.81	2579.717	0.010694			5
3.96	3.98	4.00	2616.561	0.014469			6

Height Summation: 17232.7
 Amount Avg CF: 0.012021 Linear:

Aroclor-1248							
3.83	3.85	3.87	3636.345	0.011687	6	18.98	1
3.96	3.98	4.00	2616.561	0.007454			2
4.05	4.07	4.09	2303.624	0.007739			3
4.23	4.23	4.27	2667.323	0.008976			4
4.36	4.38	4.40	2981.833	0.00942			5
4.61	4.64	4.65	1727.16	0.00733			6

Height Summation: 15932.846
 Amount Avg CF: 0.008768 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 17:42:53
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.039.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 96% (33-137) Conc.: 0.19143
 %SSR(DCB) : 99% (10-148) Conc.: 0.197736

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.27	3.29	3.31	5382.512	0.010559	5	10.82	2
3.47	3.49	3.51	5291.315	0.010703			3
3.54	3.56	3.58	5939.159	0.01159			4
3.60	3.62	3.64	4653.552	0.011575			5
3.71	3.72	3.75	3800.187	0.008766			6

Height Summation: 25066.725
 Amount Avg CF: 0.010638 Linear:

Aroclor-1221							
2.89	2.90	2.93	63638.62	0.351316	1		2

Height Summation: 63638.62
 Amount Avg CF: 0.351316 Linear:

Aroclor-1232							
3.27	3.29	3.31	5382.512	0.023461	5	15.92	2
3.47	3.49	3.51	5291.315	0.022702			3
3.54	3.56	3.58	5939.159	0.026632			4
3.60	3.62	3.64	4653.552	0.032029			5
3.71	3.72	3.75	3800.187	0.022382			6

Height Summation: 25066.725
 Amount Avg CF: 0.025441 Linear:

Aroclor-1242							
3.27	3.29	3.31	5382.512	0.012994	5	12.19	2
3.47	3.49	3.51	5291.315	0.01256			3
3.54	3.56	3.58	5939.159	0.014443			4
3.60	3.62	3.64	4653.552	0.015402			5
3.71	3.72	3.75	3800.187	0.01125			6

Height Summation: 25066.725
 Amount Avg CF: 0.01333 Linear:

Aroclor-1248							
3.58	3.60	3.62	4060.632	0.007997	3	13.52	1
3.71	3.72	3.75	3800.187	0.006095			2
3.93	3.95	3.97	5892.6	0.007341			4

Height Summation: 13753.419
 Amount Avg CF: 0.007144 Linear:

Aroclor-1254							
4.40	4.42	4.44	8956.522	0.018688	3	31.55	2
4.54	4.56	4.58	10475.74	0.026996			4
4.77	4.79	4.81	10587.35	0.014556			6

Height Summation: 30019.612
 Amount Avg CF: 0.02008 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKOG ID: OG** **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 17:42:53
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.039.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.61	4.64	4.65	1727.16	0.002471	4	87.17	2
4.74	4.76	4.78	6101.539	0.02769			3
4.83	4.85	4.87	2809.867	0.005827			4
5.14	5.17	5.18	8025.017	0.01623			6

Height Summation: 18663.583
Amount Avg CF: 0.013054 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.74	4.76	4.78	6101.539	0.011274	6	18.20	1
4.94	4.96	4.98	7533.196	0.011555			2
5.14	5.17	5.18	8025.017	0.010207			3
5.21	5.23	5.25	3785.745	0.009924			4
5.61	5.63	5.65	8944.542	0.007852			5
5.82	5.84	5.86	8708.079	0.013727			6

Height Summation: 43098.118
Amount Avg CF: 0.010757 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.21	5.23	5.25	3785.745	0.006507	6	41.31	1
5.38	5.40	5.41	4894.868	0.010445			2
5.61	5.63	5.65	8944.542	0.006587			3
5.82	5.84	5.86	8708.079	0.011081			4
5.87	5.87	5.91	1281.828	0.003005			5
6.25	6.27	6.29	3190.311	0.006073			6

Height Summation: 30805.373
Amount Avg CF: 0.007283 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	8708.079	0.004934	6	103.96	1
5.87	5.87	5.91	1281.828	0.000802			2
6.00	6.03	6.04	14223.09	0.009691			3
6.07	6.09	6.11	9202.476	0.024978			4
6.24	6.27	6.28	3190.311	0.005064			5
6.44	6.47	6.48	22367.34	0.0044			6

Height Summation: 58973.124
Amount Avg CF: 0.008312 Linear:

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		7.76	4	40	
Aroclor-1221			0.5	0.1		** 66.91	3	5	
Aroclor-1232			0.5	0.2		25.13	4	10	
Aroclor-1242			0.5	0.1		10.33	4	30	
Aroclor-1248			0.5	0.1		20.40	4	40	
Aroclor-1254			0.5	0.1		** 42.41	4	40	
Aroclor-1260			0.5	0.15		5.74	4	40	
Aroclor-1262			0.5	0.2		21.86	4	40	
Aroclor-1268			0.5	0.16		23.38	4	40	

Units: ug/l

Analysis Report (B)

Injected on : Nov 08, 2018 17:42:53
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.039.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.54	4.56	4.58	10475.74	0.011049	6	9.89	1
4.64	4.66	4.68	8682.967	0.011406			2
4.77	4.79	4.81	10587.35	0.011176			3
5.00	5.02	5.04	7962.029	0.013579			4
5.19	5.21	5.23	14950.27	0.010743			5
5.45	5.47	5.49	9853.479	0.010401			6

Height Summation: 62511.835
Amount Avg CF: 0.011392 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.00	5.02	5.04	7962.029	0.009894	4	7.08	2
5.20	5.21	5.24	14950.27	0.009143			3
5.46	5.47	5.50	9853.479	0.008898			5
5.83	5.85	5.87	5462.501	0.008346			6

Height Summation: 38228.279
Amount Avg CF: 0.00907 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.46	5.47	5.50	9853.479	0.00412	5	98.54	2
5.61	5.63	5.65	19437.54	0.009353			3
5.68	5.70	5.72	14807.77	0.028617			4
5.83	5.85	5.87	5462.501	0.006548			5
6.03	6.05	6.07	29758.17	0.003921			6

Height Summation: 79319.46
Amount Avg CF: 0.010512 Linear:

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274A

Date Analyzed: 11/08/18

GC Column (1): MR-1

ID: .32 (mm)

Time Analyzed: 19:42

Lab File ID: 25PCBS18303009.050.RAW

Initial Calibration: 25PCBS1830301

Lab Standard ID: AR164LP

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.93	2.90	2.96	41.68	40.06	4
Decachlorobiphenyl	6.61	6.58	6.64	40.67	40.04	2
Aroclor-1016	3.18	3.16	3.20	192.24	200.40	-4
	3.40	3.38	3.42	191.38	200.40	-5
	3.51	3.49	3.53	198.56	200.40	-1
	3.73	3.71	3.75	201.57	200.40	1
	3.79	3.77	3.81	202.41	200.40	1
	3.98	3.96	4.00	204.11	200.40	2
Aroclor-1260	4.76	4.74	4.78	207.14	200.44	3
	4.96	4.94	4.98	212.60	200.44	6
	5.17	5.14	5.18	220.86	200.44	10
	5.23	5.21	5.25	216.31	200.44	8
	5.63	5.61	5.65	214.36	200.44	7
	5.84	5.82	5.86	219.19	200.44	9

Compounds 14

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.:

Instrument: 18274B

Date Analyzed: 11/08/18

GC Column (2): MR-2

ID: .32 (mm)

Time Analyzed: 19:42

Lab File ID: 25PCBS18303009B.050.RAW

Initial Calibration: 25PCBS1830301B

Lab Standard ID: AR164LP

Init. Calib Date(s): 10/30/18

10/30/18

Calibration: 25PCBS1830301B

COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/kg)	NOM AMOUNT (ug/kg)	%D
		FROM	TO			
Tetrachloro-m-xylene	2.68	2.65	2.71	40.69	40.06	2
Decachlorobiphenyl	6.21	6.18	6.24	40.48	40.04	1
Aroclor-1016	2.96	2.94	2.98	193.00	200.40	-4
	3.29	3.27	3.31	195.10	200.40	-3
	3.49	3.47	3.51	202.92	200.40	1
	3.56	3.54	3.58	208.54	200.40	4
	3.62	3.60	3.64	189.28	200.40	-6
	3.72	3.71	3.75	206.79	200.40	3
Aroclor-1260	4.56	4.54	4.58	212.73	200.44	6
	4.66	4.64	4.68	207.46	200.44	4
	4.79	4.77	4.81	210.02	200.44	5
	5.02	5.00	5.04	202.10	200.44	1
	5.21	5.19	5.23	218.34	200.44	9
	5.47	5.45	5.49	214.41	200.44	7

Compounds 14

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D **AR164LP ID: LP** **Batchnumber: 1831199999**
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 19:42:33
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.050.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 104% (33-137) Conc.: 41.67664
 %SSR(DCB) : 102% (10-148) Conc.: 40.66867

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	508021.3	192.241676	6	2.72	1
3.38	3.40	3.42	489365.1	191.377775			2
+ 3.38	3.41	3.42	206589.3	80.791623			2
3.49	3.51	3.53	651784.4	198.557908			3
3.71	3.73	3.75	761811.9	201.565967			4
3.77	3.79	3.81	629979.1	202.410149			5
3.96	3.98	4.00	485212.8	204.110989			6

Height Summation: **3526174.6**
 Amount Avg CF: **198.377411** Linear:

Aroclor-1221							
3.06	3.08	3.10	96702.45	68.817046	3	33.70	1
3.11	3.13	3.15	118989.9	106.839728			2
3.16	3.18	3.20	508021.3	139.560779			3

Height Summation: **723713.65**
 Amount Avg CF: **105.072518** Linear:

Aroclor-1232							
3.16	3.18	3.20	508021.3	170.785958	6	29.99	1
E 3.38	3.40	3.42	489365.1	423.594491			2
+ 3.38	3.41	3.42	206589.3	178.823724			2
E 3.49	3.51	3.53	651784.4	439.871503			3
E 3.71	3.73	3.75	761811.9	427.741049			4
E 3.77	3.79	3.81	629979.1	477.919594			5
E 3.96	3.98	4.00	485212.8	521.773155			6

Height Summation: **3526174.6**
 Amount Avg CF: **410.280958** Linear:

Aroclor-1242							
E 3.16	3.18	3.20	508021.3	222.25834	6	7.44	1
E 3.38	3.40	3.42	489365.1	229.935149			2
+ 3.38	3.41	3.42	206589.3	97.068919			2
E 3.49	3.51	3.53	651784.4	240.329877			3
E 3.71	3.73	3.75	761811.9	235.513298			4
E 3.77	3.79	3.81	629979.1	261.16352			5
E 3.96	3.98	4.00	485212.8	268.315588			6

Height Summation: **3526174.6**
 Amount Avg CF: **242.919295** Linear:

Aroclor-1248							
3.83	3.85	3.87	437424.8	140.58442	6	37.63	1
3.96	3.98	4.00	485212.8	138.217061			2
4.05	4.07	4.09	484206.2	162.675199			3
4.23	4.25	4.27	100628.2	33.864955			4
4.36	4.38	4.40	537545.4	169.812375			5
4.61	4.63	4.65	349835.8	148.467494			6

Height Summation: **2394853.2**
 Amount Avg CF: **132.270251** Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 19:42:33
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.050.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 102% (33-137) Conc.: 40.69135
 %SSR(DCB) : 101% (10-148) Conc.: 40.4838

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	840263.4	192.997269	6	3.97	1
3.27	3.29	3.31	994562.8	195.096668			2
+ 3.47	3.47	3.51	40526.54	8.19717			3
3.47	3.49	3.51	1003208	202.915584			3
3.54	3.56	3.58	1068580	208.536504			4
3.60	3.62	3.64	761012.6	189.283599			5
+ 3.60	3.64	3.64	237640	59.10724			5
3.71	3.72	3.75	896508.6	206.79115			6

Height Summation: **5564135.4**
 Amount Avg CF: **199.270129** Linear:

Aroclor-1221							
2.83	2.85	2.87	169762.8	66.821792	3	44.48	1
+ 2.89	2.90	2.93	63155.3	34.864831			2
2.89	2.91	2.93	121852.1	67.268352			2
2.94	2.96	2.98	840263.4	136.551578			3

Height Summation: **1131878.3**
 Amount Avg CF: **90.213907** Linear:

Aroclor-1232							
2.94	2.96	2.98	840263.4	168.571774	6	31.25	1
E 3.27	3.29	3.31	994562.8	433.500303			2
+ 3.47	3.47	3.51	40526.54	17.387479			3
E 3.47	3.49	3.51	1003208	430.41568			3
E 3.54	3.56	3.58	1068580	479.173198			4
E 3.60	3.62	3.64	761012.6	523.788055			5
+ 3.60	3.64	3.64	237640	163.562329			5
E 3.71	3.72	3.75	896508.6	528.018948			6

Height Summation: **5564135.4**
 Amount Avg CF: **427.24466** Linear:

Aroclor-1242							
E 2.94	2.96	2.98	840263.4	223.676616	6	6.28	1
E 3.27	3.29	3.31	994562.8	240.102182			2
+ 3.47	3.47	3.51	40526.54	9.61965			3
E 3.47	3.49	3.51	1003208	238.128143			3
E 3.54	3.56	3.58	1068580	259.861653			4
E 3.60	3.62	3.64	761012.6	251.87514			5
+ 3.60	3.64	3.64	237640	78.652585			5
E 3.71	3.72	3.75	896508.6	265.403974			6

Height Summation: **5564135.4**
 Amount Avg CF: **246.507951** Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LP ID: LP **Batchnumber:** 1831199999
Sample Amount: 1 Total Volume: 1 ml Analyst: 9065 SDG: State:
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 19:42:33
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.050.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
+ 4.55	4.57	4.59	41477.72	11.88131	6	103.17	1
4.55	4.59	4.59	112272.8	32.160591			1
4.61	4.63	4.65	349835.8	50.056365			2
4.74	4.76	4.78	1121047	508.750681			3
4.83	4.85	4.87	192207.1	39.857306			4
5.03	5.05	5.07	645717.7	166.903233			5
5.14	5.17	5.18	1736455	351.184482			6

Height Summation: 4157535.4
Amount Avg CF: 191.485443 Linear:

Aroclor-1260

4.74	4.76	4.78	1121047	207.135353	6	2.29	1
4.94	4.96	4.98	1385996	212.601387			2
5.14	5.17	5.18	1736455	220.856755			3
5.21	5.23	5.25	825134.9	216.311963			4
5.61	5.63	5.65	2441782	214.363871			5
5.82	5.84	5.86	1390498	219.189948			6

Height Summation: 8900912.9
Amount Avg CF: 215.076546 Linear:

Aroclor-1262

5.21	5.23	5.25	825134.9	141.835282	6	37.17	1
5.38	5.39	5.41	782928.1	167.068723			2
5.61	5.63	5.65	2441782	179.807283			3
5.82	5.84	5.86	1390498	176.932879			4
+ 5.87	5.88	5.91	51396.43	12.050548			5
5.07	5.09	5.91	185110.2	43.401445			5
6.25	6.27	6.29	646847.9	123.14082			6

Height Summation: 6272301.1
Amount Avg CF: 138.697739 Linear:

Aroclor-1268

5.81	5.84	5.85	1390498	78.78985	6	120.77	1
+ 5.87	5.88	5.91	51396.43	3.215521			2
5.87	5.89	5.91	185110.2	11.581073			2
6.00	6.02	6.04	61660.36	4.2011			3
6.07	6.09	6.11	51574.8	13.998854			4
6.24	6.27	6.28	646847.9	102.67891			5
6.44	6.47	6.48	205828.9	4.048892			6

Height Summation: 2541520.16
Amount Avg CF: 35.883113 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 19:42:33
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.050.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	722362.2	142.254702	6	43.92	1
3.71	3.72	3.75	896508.6	143.791011			2
+ 3.80	3.80	3.84	182518.5	44.290306			3
3.80	3.82	3.84	716738.6	173.925228			3
3.93	3.95	3.97	986693.7	122.930132			4
+ 4.07	4.09	4.11	32643.31	8.842312			5
4.07	4.11	4.11	66291.66	17.956865			5
+ 4.30	4.30	4.34	211543.4	60.614774			6
+ 4.30	4.32	4.34	161059.8	46.149411			6
4.30	4.34	4.34	497440.2	142.534464			6

Height Summation: 3886034.96
Amount Avg CF: 123.898734 Linear:

Aroclor-1254

+ 4.30	4.30	4.34	211543.4	20.731938	6	96.26	1
+ 4.30	4.32	4.34	161059.8	15.784382			1
4.30	4.34	4.34	497440.2	48.750751			1
4.40	4.42	4.44	1715101	357.869247			2
4.47	4.49	4.51	174355.5	27.089723			3
4.54	4.56	4.58	2016969	519.768099			4
4.69	4.72	4.73	200980.4	45.404854			5
4.77	4.79	4.81	1989573	273.539048			6

Height Summation: 6594419.1
Amount Avg CF: 212.070287 Linear:

Aroclor-1260

4.54	4.56	4.58	2016969	212.725308	6	2.89	1
4.64	4.66	4.68	1579319	207.455963			2
4.77	4.79	4.81	1989573	210.018684			3
5.00	5.02	5.04	1185000	202.095466			4
5.19	5.21	5.23	3038412	218.340196			5
5.45	5.47	5.49	2031230	214.411198			6

Height Summation: 11840503
Amount Avg CF: 210.841136 Linear:

Aroclor-1262

4.81	4.82	4.85	958372.3	123.299043	6	25.65	1
5.00	5.02	5.04	1185000	147.248734			2
5.20	5.21	5.24	3038412	185.811754			3
5.41	5.43	5.45	625020.8	94.399345			4
5.46	5.47	5.50	2031230	183.429605			5
5.83	5.85	5.87	796036.4	121.622798			6

Height Summation: 8634071.5
Amount Avg CF: 142.635213 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: AR1641824D AR164LP ID: LP **Batchnumber:** 1831199999
Sample Amount: 1 **Total Volume:** 1 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 19:42:33
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.050.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 19:42:33
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.050.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268					6	113.00	
5.41	5.43	5.45	625020.8	26.418991			1
5.46	5.47	5.50	2031230	84.929241			2
5.61	5.63	5.65	72039.43	3.466388			3
5.68	5.69	5.72	47785.21	9.234695			4
5.83	5.85	5.87	796036.4	95.424977			5
6.03	6.05	6.07	277776	3.659642			6
Height Summation:			3849887.84				
Amount Avg CF:			37.188989	Linear:			

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		0.45	4	40	
Aroclor-1221			0.5	0.1		15.22	3	5	
Aroclor-1232			0.5	0.2	E	4.05	4	10	
Aroclor-1242			0.5	0.1	E	1.47	4	30	
Aroclor-1248			0.5	0.1		6.54	4	40	
Aroclor-1254			0.5	0.1		10.20	4	40	
Aroclor-1260			0.5	0.15		1.99	4	40	
Aroclor-1262			0.5	0.2		2.80	4	40	
Aroclor-1268			0.5	0.16		3.57	4	40	

Units: ug/l

Eurofins Lancaster Laboratories Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNZ ID:** NZ **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analytst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 19:53:25
 Instrument : CP25-18274A
 Result file : 25PCBS18303009.051.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 105% (33-137) Conc.: 0.210905
 %SSR(DCB) : 103% (10-148) Conc.: 0.206388

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	3515.438	0.013303	6	12.35	1
3.38	3.40	3.42	3879.748	0.015173			2
3.49	3.51	3.53	3839.64	0.011697			3
3.71	3.73	3.75	4983.323	0.013185			4
+ 3.77	3.77	3.81	691.158	0.002221			5
3.77	3.79	3.81	3274.237	0.01052			5
3.96	3.98	4.00	3133.005	0.013179			6

Height Summation: 22625.391
Amount Avg CF: 0.012843 Linear:

Aroclor-1221							
3.11	3.12	3.15	38433.7	0.346002	2	133.72	2
3.16	3.18	3.20	3515.438	0.009657			3

Height Summation: 41949.138
Amount Avg CF: 0.177375 Linear:

Aroclor-1232							
3.16	3.18	3.20	3515.438	0.011818	6	30.53	1
3.38	3.40	3.42	3879.748	0.033583			2
3.49	3.51	3.53	3839.64	0.025913			3
3.71	3.73	3.75	4983.323	0.02798			4
+ 3.77	3.77	3.81	691.158	0.005243			5
3.77	3.79	3.81	3274.237	0.024839			5
3.96	3.98	4.00	3133.005	0.033691			6

Height Summation: 22625.391
Amount Avg CF: 0.026304 Linear:

Aroclor-1242							
3.16	3.18	3.20	3515.438	0.01538	6	11.45	1
3.38	3.40	3.42	3879.748	0.01823			2
3.49	3.51	3.53	3839.64	0.014158			3
3.71	3.73	3.75	4983.323	0.015406			4
+ 3.77	3.77	3.81	691.158	0.002865			5
3.77	3.79	3.81	3274.237	0.013574			5
3.96	3.98	4.00	3133.005	0.017325			6

Height Summation: 22625.391
Amount Avg CF: 0.015679 Linear:

Aroclor-1248							
3.83	3.85	3.87	4869.942	0.015652	5	30.33	1
3.96	3.98	4.00	3133.005	0.008925			2
4.05	4.07	4.09	2318.594	0.00779			3
4.36	4.38	4.40	4074.432	0.012871			5
4.61	4.63	4.65	2136.561	0.009067			6

Height Summation: 16532.534
Amount Avg CF: 0.010861 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 19:53:25
 Instrument : CP25-18274B
 Result file : 25PCBS18303009B.051.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 98% (33-137) Conc.: 0.195464
 %SSR(DCB) : 100% (10-148) Conc.: 0.201069

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.27	3.29	3.31	6714.174	0.013171	5	9.82	2
3.47	3.49	3.51	7022.341	0.014204			3
3.54	3.56	3.58	6631.681	0.012942			4
3.60	3.62	3.64	4715.745	0.011729			5
+ 3.71	3.71	3.75	1289.894	0.002975			6
3.71	3.73	3.75	6595.876	0.015214			6

Height Summation: 31679.817
Amount Avg CF: 0.013452 Linear:

Aroclor-1221							
2.89	2.90	2.93	63176.45	0.348765	1		2
Height Summation: 63176.45							
Amount Avg CF: 0.348765 Linear:							

Aroclor-1232							
3.27	3.29	3.31	6714.174	0.029265	5	12.38	2
3.47	3.49	3.51	7022.341	0.030129			3
3.54	3.56	3.58	6631.681	0.029738			4
3.60	3.62	3.64	4715.745	0.032457			5
+ 3.71	3.71	3.75	1289.894	0.007597			6
3.71	3.73	3.75	6595.876	0.038848			6

Height Summation: 31679.817
Amount Avg CF: 0.032087 Linear:

Aroclor-1242							
3.27	3.29	3.31	6714.174	0.016209	5	9.24	2
3.47	3.49	3.51	7022.341	0.016669			3
3.54	3.56	3.58	6631.681	0.016127			4
3.60	3.62	3.64	4715.745	0.015608			5
+ 3.71	3.71	3.75	1289.894	0.003819			6
3.71	3.73	3.75	6595.876	0.019527			6

Height Summation: 31679.817
Amount Avg CF: 0.016828 Linear:

Aroclor-1248							
3.58	3.60	3.62	4780.696	0.009416	4	33.85	1
+ 3.71	3.71	3.75	1289.894	0.002069			2
3.71	3.73	3.75	6595.876	0.010579			2
3.93	3.95	3.97	7258.129	0.009043			4
4.30	4.34	4.34	6084.581	0.017435			6

Height Summation: 24719.281
Amount Avg CF: 0.011618 Linear:

Aroclor-1254							
4.30	4.34	4.34	6084.581	0.005963	4	52.82	1
4.40	4.42	4.44	13310.51	0.027773			2
4.54	4.56	4.58	13850.51	0.035692			4
4.77	4.79	4.81	19459.64	0.026754			6

Height Summation: 52705.241
Amount Avg CF: 0.024046 Linear:

Eurofins Lancaster Laboratories Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNZ ID:** NZ **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 19:53:25
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.051.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.59	4.59	1587.61	0.004548	6	93.98	1
4.61	4.63	4.65	2136.561	0.003057			2
4.74	4.76	4.78	8143.875	0.036958			3
4.83	4.85	4.87	2278.119	0.004724			4
5.03	5.05	5.07	5308.102	0.01372			5
5.14	5.17	5.18	10847.53	0.021938			6

Height Summation: 30301.797
Amount Avg CF: 0.014158 Linear:

Aroclor-1260							
4.74	4.76	4.78	8143.875	0.015047	6	16.43	1
4.94	4.96	4.98	8069.849	0.012379			2
5.14	5.17	5.18	10847.53	0.013797			3
5.21	5.23	5.25	5483.877	0.014376			4
5.61	5.63	5.65	11764.63	0.010328			5
5.82	5.84	5.86	10738.37	0.016927			6

Height Summation: 55048.131
Amount Avg CF: 0.013809 Linear:

Aroclor-1262							
5.21	5.23	5.25	5483.877	0.009426	6	36.20	1
5.38	5.39	5.41	8219.605	0.01754			2
5.61	5.63	5.65	11764.63	0.008663			3
5.82	5.84	5.86	10738.37	0.013664			4
5.87	5.89	5.91	3132.267	0.007344			5
6.25	6.27	6.29	4470.849	0.008511			6

Height Summation: 43809.598
Amount Avg CF: 0.010858 Linear:

Aroclor-1268							
5.81	5.84	5.85	10738.37	0.006085	6	104.40	1
5.87	5.89	5.91	3132.267	0.00196			2
6.00	6.02	6.04	16161.17	0.011011			3
6.07	6.09	6.11	11882.34	0.032252			4
6.24	6.27	6.28	4470.849	0.007097			5
6.44	6.47	6.48	25263.4	0.00497			6

Height Summation: 71648.396
Amount Avg CF: 0.010662 Linear:

Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.5	0.1		4.63	4	40	
Aroclor-1221			0.5	0.1		**65.15	3	5	
Aroclor-1232			0.5	0.2		19.81	4	10	
Aroclor-1242			0.5	0.1		7.07	4	30	
Aroclor-1248			0.5	0.1		6.73	4	40	
Aroclor-1254			0.5	0.1		**51.77	4	40	
Aroclor-1260			0.5	0.15		14.70	4	40	
Aroclor-1262			0.5	0.2		6.43	4	40	

Analysis Report (B)

Injected on : Nov 08, 2018 19:53:25
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.051.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.54	4.56	4.58	13850.51	0.014608	6	17.07	1
4.64	4.66	4.68	11572.98	0.015202			2
4.77	4.79	4.81	19459.64	0.020542			3
5.00	5.02	5.04	10569.45	0.018026			4
5.19	5.21	5.23	19880.7	0.014286			5
5.45	5.47	5.49	12637.87	0.01334			6

Height Summation: 87971.15
Amount Avg CF: 0.016001 Linear:

Aroclor-1262							
4.81	4.83	4.85	7685.721	0.009888	5	10.32	1
5.00	5.02	5.04	10569.45	0.013134			2
5.20	5.21	5.24	19880.7	0.012158			3
5.41	5.45	5.45	7486.476	0.011307			4
5.46	5.47	5.50	12637.87	0.011413			5

Height Summation: 58260.217
Amount Avg CF: 0.01158 Linear:

Aroclor-1268							
5.46	5.47	5.50	12637.87	0.005284	4	107.32	2
5.61	5.63	5.65	23188.1	0.011158			3
5.68	5.70	5.72	19562.48	0.037805			4
6.03	6.05	6.07	33121.92	0.004364			6

Height Summation: 88510.37
Amount Avg CF: 0.014653 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: IBLKX1824C **PIBLKNZ ID:** NZ **Batchnumber:** 1831199999
Sample Amount: 1000 **Total Volume:** 10 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10227

Analysis Report (A)

Injected on : Nov 08, 2018 19:53:25
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.051.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 19:53:25
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.051.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Summary Report

<u>Compound Name</u>	<u>Column</u>	<u>Higher Amount Found</u>	<u>LOQ</u>	<u>MDL</u>	<u>Qualifiers</u>	<u>%Difference</u>	<u>No of Hits Required</u>	<u>Max %RSD</u>	<u>Comments</u>
Aroclor-1268			0.5	0.16		32.44	4	40	

Units: ug/l

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 25PCBS18303001
Instrument CP25--18274A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
9065	25PCBS18303001.001	CONDITIONER		10/30/18 17:08	1830299999	1.00
9065	25PCBS18303001.002	CONDITIONER		10/30/18 17:19	1830299999	1.00
9065	25PCBS18303001.003	CONDITIONER		10/30/18 17:30	1830299999	1.00
9065	25PCBS18303001.004	CONDITIONER		10/30/18 17:40	1830299999	1.00
9065	25PCBS18303001.005	IBLKX1824C	PIBLKFR	10/30/18 17:51	1830299999	10.00
9065	25PCBS18303001.006	EVALX1824B	EVALXAA	10/30/18 18:02	1830299999	1.00
9065	25PCBS18303001.007	AR1611824D	AR161AA	10/30/18 18:13	1830299999	1.00
9065	25PCBS18303001.008	AR1621824D	AR162AA	10/30/18 18:24	1830299999	1.00
9065	25PCBS18303001.009	AR1631824D	AR163AA	10/30/18 18:35	1830299999	1.00
9065	25PCBS18303001.010	AR1641824D	AR164AA	10/30/18 18:46	1830299999	1.00
9065	25PCBS18303001.011	AR1651824D	AR165AA	10/30/18 18:57	1830299999	1.00
9065	25PCBS18303001.012	AR1661824C	AR166AA	10/30/18 19:08	1830299999	1.00
9065	25PCBS18303001.013	AR4811824C	AR481AA	10/30/18 19:19	1830299999	1.00
9065	25PCBS18303001.014	AR4821824C	AR482AA	10/30/18 19:30	1830299999	1.00
9065	25PCBS18303001.015	AR4831824C	AR483AA	10/30/18 19:41	1830299999	1.00
9065	25PCBS18303001.016	AR4841824C	AR484AA	10/30/18 19:51	1830299999	1.00
9065	25PCBS18303001.017	AR4851824C	AR485AA	10/30/18 20:02	1830299999	1.00
9065	25PCBS18303001.018	AR4861824C	AR486AA	10/30/18 20:13	1830299999	1.00
9065	25PCBS18303001.019	AR5411824C	AR541AA	10/30/18 20:24	1830299999	1.00
9065	25PCBS18303001.020	AR5421824C	AR542AA	10/30/18 20:35	1830299999	1.00
9065	25PCBS18303001.021	AR5431824C	AR543AA	10/30/18 20:46	1830299999	1.00
9065	25PCBS18303001.022	AR5441824C	AR544AA	10/30/18 20:57	1830299999	1.00
9065	25PCBS18303001.023	AR5451824C	AR545AA	10/30/18 21:07	1830299999	1.00
9065	25PCBS18303001.024	AR5461824C	AR546AA	10/30/18 21:18	1830299999	1.00
9065	25PCBS18303001.025	AR6241824B	AR624AA	10/30/18 21:29	1830299999	1.00
9065	25PCBS18303001.026	AR6841824B	AR684AA	10/30/18 21:40	1830299999	1.00
9065	25PCBS18303001.027	AR2141824E	AR214AA	10/30/18 21:51	1830299999	1.00
9065	25PCBS18303001.028	AR3241824D	AR324AA	10/30/18 22:02	1830299999	1.00
9065	25PCBS18303001.029	AR4241824E	AR424AA	10/30/18 22:12	1830299999	1.00
9065	25PCBS18303001.030	AR16XX1824B	AR16XAA	10/30/18 22:23	1830299999	1.00
9065	25PCBS18303001.031	MD16X1824E	MD16XAA	10/30/18 22:34	1830299999	1.00
9065	25PCBS18303001.032	IC16X1824D	IC16XAA	10/30/18 22:45	1830299999	1.00
9065	25PCBS18303001.033	IC48X1824C	IC48XAA	10/30/18 22:56	1830299999	1.00
9065	25PCBS18303001.034	IC54X1824C	IC54XAA	10/30/18 23:07	1830299999	1.00
9065	25PCBS18303001.035	BLANKA 10/26/18	C/PBLK06299	10/30/18 23:18	182990006A	2.00
9065	25PCBS18303001.036	LCSA 10/26/18	CAF I C.S06299	10/30/18 23:29	182990006A	2.00
9065	25PCBS18303001.037	LCSDA 10/26/18	CAFLCSD06299	10/30/18 23:40	182990006A	2.00
9065	25PCBS18303001.038	9868586 CAF	25E01	10/30/18 23:51	182990006A	2.00
9065	25PCBS18303001.039	BLANKA 10/26/18	ACPBLK37298	10/31/18 0:02	182980037A	10.00
9065	25PCBS18303001.040	LCSA 10/26/18	ACF LCS37298	10/31/18 0:13	182980037A	10.00
9065	25PCBS18303001.041	9863842 ACF	DF20 CE104	10/31/18 0:23	182980037A	200.00
9065	25PCBS18303001.042	BLANKA 10/26/18	ACPBLK34298	10/31/18 0:34	182980034A	10.00
9065	25PCBS18303001.043	LCSA 10/26/18	ACF LCS34298	10/31/18 0:45	182980034A	10.00
9065	25PCBS18303001.044	IBLKX1824C	PIBLKFS	10/31/18 0:56	1830299999	10.00
9065	25PCBS18303001.045	AR1641824D	AR164GU	10/31/18 1:07	1830299999	1.00
9065	25PCBS18303001.046	9865786 ACF	3B840	10/31/18 1:18	182980034A	10.00
9065	25PCBS18303001.047	9865786MS ACF	3B840MS	10/31/18 1:29	182980034A	10.00
9065	25PCBS18303001.048	9865786MSD ACF	3B840MSD	10/31/18 1:40	182980034A	10.00
9065	25PCBS18303001.049	9865977 ACF	C2301	10/31/18 1:51	182980034A	10.00
9065	25PCBS18303001.050	9865977 ACF	DF5 C2301	10/31/18 2:02	182980034A	50.00
9065	25PCBS18303001.051	9865978 ACF	C2302	10/31/18 2:12	182980034A	10.00
9065	25PCBS18303001.052	9865979 ACF	C2303	10/31/18 2:23	182980034A	10.00
9065	25PCBS18303001.053	9865980 ACF	C2304	10/31/18 2:34	182980034A	10.00
9065	25PCBS18303001.054	9865981 ACF	DF50 C2305	10/31/18 2:45	182980034A	500.00
9065	25PCBS18303001.055	9865982 ACF	DF50 C2306	10/31/18 2:56	182980034A	500.00
9065	25PCBS18303001.056	9865983 ACF	C2307	10/31/18 3:07	182980034A	10.00

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
9065	25PCBS18303001.057	9865984 ACF	C2308	10/31/18	3:18 182980034A	10.00
9065	25PCBS18303001.058	9865985 ACF DF10	C2309	10/31/18	3:29 182980034A	100.00
9065	25PCBS18303001.059	9865986 ACF	C2310	10/31/18	3:39 182980034A	10.00
9065	25PCBS18303001.060	9865987 ACF	C2311	10/31/18	3:50 182980034A	10.00
9065	25PCBS18303001.061	9865988 ACF	C2312	10/31/18	4:01 182980034A	10.00
9065	25PCBS18303001.062	9865989 ACF	C2313	10/31/18	4:12 182980034A	10.00
9065	25PCBS18303001.063	9865990 ACF	C2314	10/31/18	4:23 182980034A	10.00
9065	25PCBS18303001.064	9865991 ACF DF20	C2315	10/31/18	4:34 182980034A	200.00
9065	25PCBS18303001.065	AR1641824D	AR164GV	10/31/18	4:45 1830299999	1.00
9065	25PCBS18303001.066	IBLKX1824C	PIBLKFT	10/31/18	4:56 1830299999	10.00
9065	25PCBS18303001.067	9865992 ACF DF5	C2316	10/31/18	5:07 182980034A	50.00
9065	25PCBS18303001.068	9865993 ACF	C2317	10/31/18	5:18 182980034A	10.00
9065	25PCBS18303001.069	9865994 ACF	C2318	10/31/18	5:29 182980034A	10.00
9065	25PCBS18303001.070	9865995 ACF	C2319	10/31/18	5:40 182980034A	10.00
9065	25PCBS18303001.071	AR1641824D	AR164GW	10/31/18	5:51 1830299999	1.00
9065	25PCBS18303001.072	IBLKX1824C	PIBLKFU	10/31/18	6:02 1830299999	10.00
9065	25PCBS18303001.073	BLANKA 10/25/18 RI	PBLK32297	10/31/18	6:13 182970032A	2.00
9065	25PCBS18303001.074	LCSA 10/25/18 RI	CALCS32297	10/31/18	6:24 182970032A	2.00
9065	25PCBS18303001.075	9860354 RI CAF	O1006	10/31/18	6:35 182970032A	2.00
9065	25PCBS18303001.076	9860355 RI CAF	O1005	10/31/18	6:46 182970032A	2.00
9065	25PCBS18303001.077	9860356MS RI CAF	O1005	10/31/18	6:57 182970032A	2.00
9065	25PCBS18303001.078	9860357MSD RI CAFO	1005	10/31/18	7:07 182970032A	2.00
9065	25PCBS18303001.079	9861761 RI CAF	10MW4	10/31/18	7:19 182970032A	2.00
9065	25PCBS18303001.080	9861762 RI CAF	10MW3	10/31/18	7:29 182970032A	2.00
9065	25PCBS18303001.081	9861763 RI CAF	10MW2	10/31/18	7:40 182970032A	2.00
9065	25PCBS18303001.082	AR1641824D	AR164GX	10/31/18	7:51 1830299999	1.00
9065	25PCBS18303001.083	IBLKX1824C	PIBLKFW	10/31/18	8:02 1830299999	10.00
9065	25PCBS18303001.084	BLANKA 10/23/18 RI	PBLK12296	10/31/18	8:13 182960012A	2.00
9065	25PCBS18303001.085	LCSA 10/23/18 RI	CALCS12296	10/31/18	8:24 182960012A	2.00
9065	25PCBS18303001.086	LCSDA 10/23/18 RI	CLCSD12296	10/31/18	8:35 182960012A	2.00
9065	25PCBS18303001.087	9854342 RI CAF	97604	10/31/18	8:46 182960012A	2.00
9065	25PCBS18303001.088	9854344 RI CAF	97606	10/31/18	8:57 182960012A	2.00
9065	25PCBS18303001.089	9854345 RI CAF	97607	10/31/18	9:08 182960012A	2.00
9065	25PCBS18303001.090	BLANKA 10/25/18 RI	PBLK31297	10/31/18	9:19 182970031A	2.00
9065	25PCBS18303001.091	LCSA 10/25/18 RI	CALCS31297	10/31/18	9:30 182970031A	2.00
9065	25PCBS18303001.092	LCSDA 10/25/18 RI	CLCSD31297	10/31/18	9:41 182970031A	2.00
9065	25PCBS18303001.093	AR1641824D	AR164GY	10/31/18	9:51 1830299999	1.00
9065	25PCBS18303001.094	IBLKX1824C	PIBLKFW	10/31/18	10:02 1830299999	10.00
9065	25PCBS18303001.095	9859872 RI CAF	C3311	10/31/18	10:13 182970031A	2.00
9065	25PCBS18303001.096	9859873 RI CAF	C3312	10/31/18	10:24 182970031A	2.00
9065	25PCBS18303001.097	9859874 RI CAF	C3313	10/31/18	10:35 182970031A	2.00
9065	25PCBS18303001.098	9859875 RI CAF	C3314	10/31/18	10:46 182970031A	2.00
9065	25PCBS18303001.099	9861917 RI AF	GKPU1	10/31/18	10:57 182980007A	2.00
9065	25PCBS18303001.100	9861918 RI AF	GKP03	10/31/18	11:08 182980007A	2.00
9065	25PCBS18303001.101	9861919 RI AF	GKP04	10/31/18	11:19 182980007A	2.00
9065	25PCBS18303001.102	9861920 RI AF	GKPR1	10/31/18	11:30 182980007A	2.00
9065	25PCBS18303001.103	9861921 RI AF	GKP05	10/31/18	11:41 182980007A	2.00
9065	25PCBS18303001.104	9861922 RI AF	GKP02	10/31/18	11:52 182980007A	2.00
9065	25PCBS18303001.105	AR1641824D	AR164GZ	10/31/18	12:03 1830299999	1.00
9065	25PCBS18303001.106	IBLKX1824C	PIBLKFX	10/31/18	12:14 1830299999	10.00
9065	25PCBS18303001.107	9866412 RI ACF DF1	124E13	10/31/18	12:25 182970043A	100.00
9065	25PCBS18303001.109	IBLKX1824C	PIBLKFY	10/31/18	12:47 1830299999	10.00

Eurofins Lancaster Laboratories
Pesticide Residue Analysis
Runlog for 25PCBS18303009
Instrument CP25--18274A

Data Directory Path is - \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
9065	25PCBS18303009.001	CONDITIONER		11/8/18 10:17	1831199999	1.00
9065	25PCBS18303009.002	CONDITIONER		11/8/18 10:28	1831199999	1.00
9065	25PCBS18303009.003	CONDITIONER		11/8/18 10:38	1831199999	1.00
9065	25PCBS18303009.004	CONDITIONER		11/8/18 10:49	1831199999	1.00
9065	25PCBS18303009.005	AR1641824D	AR164LL	11/8/18 11:00	1831199999	1.00
9065	25PCBS18303009.006	IBLKX1824C	PIBLKNV	11/8/18 11:11	1831199999	10.00
9065	25PCBS18303009.007	AR4241824E	AA	11/8/18 11:22	1831199999	1.00
9065	25PCBS18303009.008	AR4841824C	AA	11/8/18 11:33	1831199999	1.00
9065	25PCBS18303009.009	AR5441824C	AA	11/8/18 11:44	1831199999	1.00
9065	25PCBS18303009.010	AR6241824B	AA	11/8/18 11:55	1831199999	1.00
9065	25PCBS18303009.011	AR6841824B	AA	11/8/18 12:06	1831199999	1.00
9065	25PCBS18303009.012	BLANKA 11/6/18 RI CPBLK10310		11/8/18 12:16	183100010A	2.00
9065	25PCBS18303009.013	LCSA 11/6/18 RI CAFLCS10310		11/8/18 12:27	183100010A	2.00
9065	25PCBS18303009.014	LCSDA 11/6/18 RI CALCSD10310		11/8/18 12:38	183100010A	2.00
9065	25PCBS18303009.015	BLANKA 11/6/18 RI APBLK02310		11/8/18 12:49	183100002A	10.00
9065	25PCBS18303009.016	LCSA 11/6/18 RI ACF LCS02310		11/8/18 13:00	183100002A	10.00
9065	25PCBS18303009.017	AR1641824D	AR164LM	11/8/18 13:11	1831199999	1.00
9065	25PCBS18303009.018	IBLKX1824C	PIBLKNW	11/8/18 13:22	1831199999	10.00
9065	25PCBS18303009.019	9883664 RI CAF	29E09	11/8/18 13:33	183100010A	2.00
9065	25PCBS18303009.020	9883671 RI CAF	29E16	11/8/18 13:44	183100010A	2.00
9065	25PCBS18303009.021	9883739 RI CAF	16F06	11/8/18 13:55	183100010A	2.00
9065	25PCBS18303009.022	AR1641824D	AR164LN	11/8/18 14:05	1831199999	1.00
9065	25PCBS18303009.023	IBLKX1824C	PIBLKNX	11/8/18 14:16	1831199999	10.00
9065	25PCBS18303009.024	9863076 RI ACF DF2IEG22L		11/8/18 14:27	183100002A	200.00
9065	25PCBS18303009.025	9863085 RI ACF DF2IEG22U		11/8/18 14:38	183100002A	200.00
9065	25PCBS18303009.026	9864579 RI ACF DF2E04		11/8/18 14:49	183100002A	2,000.00
9065	25PCBS18303009.027	9864579 RI ACF DF5E04		11/8/18 15:00	183100002A	5,000.00
9065	25PCBS18303009.028	9864579MS RI ACF E2E04MS		11/8/18 15:11	183100002A	2,000.00
9065	25PCBS18303009.029	9864579MS RI ACF E3E04MS		11/8/18 15:22	183100002A	5,000.00
9065	25PCBS18303009.030	9864579MSD RI ACF2E04MSD		11/8/18 15:33	183100002A	2,000.00
9065	25PCBS18303009.031	9864579MSD RI ACF2E04MSD		11/8/18 15:44	183100002A	5,000.00
9065	25PCBS18303009.032	AR1641824D	AR164LO	11/8/18 15:54	1831199999	1.00
9065	25PCBS18303009.037	CONDITIONER		11/8/18 17:21	1831199999	1.00
9065	25PCBS18303009.038	AR1641824D	AR164LW	11/8/18 17:32	1831199999	1.00
9065	25PCBS18303009.039	IBLKX1824C	PIBLKOG	11/8/18 17:42	1831199999	10.00
9065	25PCBS18303009.040	9877301 ACF DF20	27E23	11/8/18 17:53	183100002A	200.00
9065	25PCBS18303009.041	9872276R RI CAF	LIB10	11/8/18 18:04	183100010A	2.00
9065	25PCBS18303009.042	9874781R RI CAF	BRL01	11/8/18 18:15	183100010A	2.00
9065	25PCBS18303009.043	9874782R RI CAF	BRL02	11/8/18 18:26	183100010A	2.00
9065	25PCBS18303009.044	9881300 RI CAF	15T-2	11/8/18 18:37	183100010A	2.00
9065	25PCBS18303009.045	9881310 RI CAF	15T-3	11/8/18 18:48	183100010A	2.00
9065	25PCBS18303009.046	9881313 RI CAF	15T-6	11/8/18 18:58	183100010A	2.00
9065	25PCBS18303009.047	9882647 RI CAF	HYDRB	11/8/18 19:09	183100010A	2.00
9065	25PCBS18303009.048	9882648 RI CAF	HYDFB	11/8/18 19:20	183100010A	2.00
9065	25PCBS18303009.049	9882666 RI CAF	HYDTB	11/8/18 19:31	183100010A	2.00
9065	25PCBS18303009.050	AR1641824D	AR164LP	11/8/18 19:42	1831199999	1.00
9065	25PCBS18303009.051	IBLKX1824C	PIBLKNZ	11/8/18 19:53	1831199999	10.00
9065	25PCBS18303009.052	9882403 RI ACF DF5SHB83		11/8/18 20:04	183090028A	50.00
9065	25PCBS18303009.053	BLANKA 11/6/18 RI CPBLK20310		11/8/18 20:15	183100020A	10.00
9065	25PCBS18303009.054	LCSA 11/6/18 RI CAFLCS20310		11/8/18 20:26	183100020A	10.00
9065	25PCBS18303009.055	LCSDA 11/6/18 RI CALCSD20310		11/8/18 20:36	183100020A	10.00
9065	25PCBS18303009.056	9882093 RI CAF	T1202	11/8/18 20:47	183100020A	10.00
9065	25PCBS18303009.057	AR1641824D	AR164LQ	11/8/18 20:58	1831199999	1.00
9065	25PCBS18303009.058	IBLKX1824C	PIBLKOA	11/8/18 21:09	1831199999	10.00
9065	25PCBS18303009.059	AR4241824E	AA	11/8/18 21:20	1831199999	1.00
9065	25PCBS18303009.060	AR4841824C	AA	11/8/18 21:31	1831199999	1.00

Operator	File	LLI#	Client ID	Analysis Date	Batch	Dilution Factor
9065	25PCBS18303009.061	AR5441824C	AA	11/8/18 21:42	1831199999	1.00
9065	25PCBS18303009.062	AR6241824B	AA	11/8/18 21:53	1831199999	1.00
9065	25PCBS18303009.063	AR6841824B	AA	11/8/18 22:04	1831199999	1.00
9065	25PCBS18303009.064	BLANKA 11/7/18 CAF	PBLK22311	11/8/18 22:15	183110022A	2.00
9065	25PCBS18303009.065	LCSA 11/7/18 CAF	LCS22311	11/8/18 22:26	183110022A	2.00
9065	25PCBS18303009.066	LCSA 11/7/18 CAF	LCS22311	11/8/18 22:37	183110022A	2.00
9065	25PCBS18303009.067	9885050 CAF	30E14	11/8/18 22:47	183110022A	2.00
9065	25PCBS18303009.068	9885439 CAF	17F10	11/8/18 22:58	183110022A	2.00
9065	25PCBS18303009.069	AR1641824D	AR164LX	11/8/18 23:09	1831199999	1.00
9065	25PCBS18303009.070	IBLKX1824C	PIBLKOH	11/8/18 23:20	1831199999	10.00
9065	25PCBS18303009.071	BLANKA 11/7/18 ACF	PBLK11311	11/8/18 23:31	183110011A	5.00
9065	25PCBS18303009.072	LCSA 11/7/18 ACF	LCS11311	11/8/18 23:41	183110011A	5.00
9065	25PCBS18303009.073	9884738 ACF	OU201	11/8/18 23:52	183110011A	5.00
9065	25PCBS18303009.074	9884739 ACF	OU202	11/9/18 0:03	183110011A	5.00
9065	25PCBS18303009.075	9884740 ACF	OU203	11/9/18 0:14	183110011A	5.00
9065	25PCBS18303009.076	9884741MS ACF	OU203	11/9/18 0:25	183110011A	5.00
9065	25PCBS18303009.077	9884742MSD ACF	OU203	11/9/18 0:36	183110011A	5.00
9065	25PCBS18303009.078	9886720 ACF	NS411	11/9/18 0:47	183110011A	5.00
9065	25PCBS18303009.079	9886721 ACF	NS412	11/9/18 0:58	183110011A	5.00
9065	25PCBS18303009.080	9886722 ACF	NS413	11/9/18 1:09	183110011A	5.00
9065	25PCBS18303009.081	AR1641824D	AR164LY	11/9/18 1:20	1831199999	1.00
9065	25PCBS18303009.082	IBLKX1824C	PIBLKOI	11/9/18 1:31	1831199999	10.00
9065	25PCBS18303009.083	9886723 ACF	NS414	11/9/18 1:42	183110011A	5.00
9065	25PCBS18303009.084	9886724 ACF	NS415	11/9/18 1:53	183110011A	5.00
9065	25PCBS18303009.085	BLANKA 11/7/18 ACF	PBLK12311	11/9/18 2:03	183110012A	5.00
9065	25PCBS18303009.086	LCSA 11/7/18 ACF	LCS12311	11/9/18 2:14	183110012A	5.00
9065	25PCBS18303009.087	9881326R ACF	CST01	11/9/18 2:25	183110012A	5.00
9065	25PCBS18303009.088	9881330R ACF	CST05	11/9/18 2:36	183110012A	5.00
9065	25PCBS18303009.089	9881669 ACF	00026	11/9/18 2:47	183110012A	5.00
9065	25PCBS18303009.090	9882130 ACF	UDEF	11/9/18 2:58	183110012A	5.00
9065	25PCBS18303009.091	9884744 ACF	OU204	11/9/18 3:09	183110012A	5.00
9065	25PCBS18303009.092	9884745MS ACF	OU204	11/9/18 3:20	183110012A	5.00
9065	25PCBS18303009.093	AR1641824D	AR164LZ	11/9/18 3:31	1831199999	1.00
9065	25PCBS18303009.094	IBLKX1824C	PIBLKOJ	11/9/18 3:42	1831199999	10.00
9065	25PCBS18303009.095	9884746MSD ACF	OU204	11/9/18 3:53	183110012A	5.00
9065	25PCBS18303009.096	9884748 ACF	OU205	11/9/18 4:03	183110012A	5.00
9065	25PCBS18303009.097	9884749 ACF	OU206	11/9/18 4:14	183110012A	5.00
9065	25PCBS18303009.098	9886725 ACF	NS416	11/9/18 4:25	183110012A	5.00
9065	25PCBS18303009.099	9886726 ACF	NS417	11/9/18 4:36	183110012A	5.00
9065	25PCBS18303009.100	9886727 ACF	NS418	11/9/18 4:47	183110012A	5.00
9065	25PCBS18303009.101	AR1641824D	AR164MA	11/9/18 4:58	1831199999	1.00
9065	25PCBS18303009.102	IBLKX1824C	PIBLKOK	11/9/18 5:09	1831199999	10.00

Sample Data

Polychlorinated Biphenyls (PCBs)

Data Summary

Sample Name: **9881309** RI CAF 15T-2 Sample ID: AC Batchnumber: **183100010A**
 Sample Amount: 246 ml Total Volume: 2 ml Analyst: 9065 SDG: TID15 State: NY

Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 18:37:07
 Instrument 18274A
 Result file 25PCBS18303009.044.RAW
 Calibration file 25PCBS1830301
 Method file 25PCBA

%SSR(TCX) 114% (33 - 137) Conc: 0.348114
 %SSR(DCB) 33% (10 - 148) Conc: 0.099639

Single Component Data

Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.92	2.95	6642680	0.348114
Decachlorobiphenyl	6.58	6.61	6.64	1572874	0.099639

Analysis Report (B)

Injected on Nov 08, 2018 18:37:07
 Instrument 18274B
 Result file 25PCBS18303009B.044.RAW
 Calibration file 25PCBS1830301B
 Method file 25PCBAB

%SSR(TCX) 108% (33 - 137) Conc: 0.330493
 %SSR(DCB) 32% (10 - 148) Conc: 0.098231

Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.65	2.68	2.71	10374700	0.330493
Decachlorobiphenyl	6.18	6.21	6.24	2268679	0.098231

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.348114	0.0122	0.0244	0.0244		5.19	
<input checked="" type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.348114	0.0122	0.0244	0.0244			
<input checked="" type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.330493	0.0122	0.0244	0.0244			
<input type="checkbox"/> Decachlorobiphenyl	A	0.099639	0.0122	0.0244	0.0244		1.42	
<input checked="" type="checkbox"/> Decachlorobiphenyl-D1	A	0.099639	0.0122	0.0244	0.0244			
<input checked="" type="checkbox"/> Decachlorobiphenyl-D2	B	0.098231	0.0122	0.0244	0.0244			

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input checked="" type="checkbox"/> PCB-1016			<0.0813	<0.2439	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1221			<0.0813	<0.2439	<0.4065	D1		3	
<input checked="" type="checkbox"/> PCB-1232			<0.1626	<0.3252	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1242			<0.0813	<0.2439	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1248			<0.0013	<0.2439	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1254			<0.0813	<0.2439	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1260			<0.122	<0.2439	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1262			<0.1020	<0.3252	<0.4065	D1		4	
<input checked="" type="checkbox"/> PCB-1268			<0.1301	<0.2602	<0.4065	D1		4	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerio L. Tomayto
 Valerio L. Tomayto
 Principal Specialist

NOV 12 2018

Reviewed and digitally signed by Kirby B Turner on 11/11/2018 14:00:27

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: 9881309 RI CAF 15T-2 ID: AC Batchnumber: 183100010A
Sample Amount: 246 ml Total Volume: 2 ml Analyst: 9065 SDG: TID15 State: NY
Analyses: 10591



Analysis Report (A)

Injected on : Nov 08, 2018 18:37:07
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.044.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 114% (33-137) Conc.: 0.348114
 %SSR(DCB) : 33% (10-148) Conc.: 0.099639

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.19	3.20	14294.58	0.043978	6	76.35	1
3.38	3.39	3.42	3480.263	0.011065			2
3.49	3.49	3.53	15135.72	0.037487			3
3.71	3.73	3.75	5282.665	0.011364			4
3.77	3.77	3.81	7084.936	0.018507			5
+ 3.77	3.79	3.81	2118.772	0.005535			5
3.96	3.98	4.00	1131.735	0.003871			6

Height Summation: 46409.899
 Amount Avg CF: 0.021045 Linear:

Aroclor-1221							
3.06	3.07	3.10	5299.698	0.030662	3	147.68	1
3.11	3.12	3.15	78686.42	0.574404			2
3.16	3.19	3.20	14294.58	0.031926			3

Height Summation: 98280.698
 Amount Avg CF: 0.212331 Linear:

Aroclor-1232							
3.16	3.19	3.20	14294.58	0.039069	6	67.94	1
3.38	3.39	3.42	3480.263	0.024492			2
3.49	3.49	3.53	15135.72	0.083046			3
3.71	3.73	3.75	5282.665	0.024115			4
3.77	3.77	3.81	7084.936	0.043698			5
+ 3.77	3.79	3.81	2118.772	0.013068			5
3.96	3.98	4.00	1131.735	0.009094			6

Height Summation: 46409.899
 Amount Avg CF: 0.037386 Linear:

Aroclor-1242							
3.16	3.19	3.20	14294.58	0.050844	6	88.14	1
3.38	3.39	3.42	3480.263	0.013295			2
+ 3.49	3.49	3.53	15135.72	0.045373			3
3.49	3.53	3.53	24154.21	0.072409			3
3.71	3.73	3.75	5282.665	0.013277			4
3.77	3.77	3.81	7084.936	0.023879			5
+ 3.77	3.79	3.81	2118.772	0.007141			5
3.96	3.98	4.00	1131.735	0.005088			6

Height Summation: 55428.389
 Amount Avg CF: 0.029799 Linear:

Aroclor-1248							
3.83	3.84	3.87	18201.29	0.047559	6	122.68	1
3.96	3.98	4.00	1131.735	0.002621			2
4.05	4.08	4.09	33533.75	0.091594			3
+ 4.23	4.23	4.27	1480.181	0.00405			4
4.23	4.26	4.27	1773.427	0.004852			4
4.36	4.38	4.40	6975.945	0.017916			5
4.61	4.64	4.65	2018.657	0.006965			6

Height Summation: 63634.804
 Amount Avg CF: 0.028585 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 18:37:07
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.044.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 108% (33-137) Conc.: 0.330493
 %SSR(DCB) : 32% (10-148) Conc.: 0.098231

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
+ 3.27	3.29	3.31	3515.768	0.005607	5	180.94	2
3.27	3.31	3.31	15643.42	0.024948			2
3.47	3.47	3.51	9454.052	0.015547			3
3.54	3.58	3.58	3252.617	0.005161			4
3.60	3.62	3.64	14191.67	0.028698			5
3.71	3.74	3.75	218637.3	0.410012			6

Height Summation: 261179.059
 Amount Avg CF: 0.096873 Linear:

Aroclor-1221							
2.89	2.90	2.93	130784.5	0.586988	1		2

Height Summation: 130784.5
 Amount Avg CF: 0.586988 Linear:

Aroclor-1232							
+ 3.27	3.29	3.31	3515.768	0.012459	5	182.95	2
3.27	3.31	3.31	15643.42	0.055435			2
3.47	3.47	3.51	9454.052	0.032977			3
3.54	3.58	3.58	3252.617	0.011858			4
3.60	3.62	3.64	14191.67	0.079413			5
3.71	3.74	3.75	218637.3	1.046922			6

Height Summation: 261179.059
 Amount Avg CF: 0.245321 Linear:

Aroclor-1242							
+ 3.27	3.29	3.31	3515.768	0.0069	5	181.67	2
3.27	3.31	3.31	15643.42	0.030704			2
3.47	3.47	3.51	9454.052	0.018245			3
3.54	3.58	3.58	3252.617	0.006431			4
3.60	3.62	3.64	14191.67	0.038188			5
3.71	3.74	3.75	218637.3	0.526226			6

Height Summation: 261179.059
 Amount Avg CF: 0.123958 Linear:

Aroclor-1248							
+ 3.58	3.58	3.62	3252.617	0.005208	3	158.83	1
3.58	3.60	3.62	4346.074	0.006958			1
3.71	3.74	3.75	218637.3	0.285099			2
3.93	3.95	3.97	9627.646	0.009752			4

Height Summation: 232611.02
 Amount Avg CF: 0.100603 Linear:

Aroclor-1254							
4.40	4.42	4.44	16434.27	0.027879	4	39.10	2
4.47	4.50	4.51	10623.51	0.013419			3
4.54	4.55	4.58	5840.861	0.012237			4
4.77	4.80	4.81	18077.71	0.020207			6

Height Summation: 50976.351
 Amount Avg CF: 0.018436 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: 9881309 RI CAF 15T-2 ID: AC **Batchnumber:** 183100010A
Sample Amount: 246 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** TID15 **State:** NY
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 18:37:07
 Instrument : CP25-18274A
 Result file : 25PCBS18303009.044.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.58	4.59	27276.82	0.063524	4	107.80	1
4.61	4.64	4.65	2018.657	0.002348			2
4.74	4.77	4.78	1252.864	0.004623			3
4.83	4.85	4.87	22508.13	0.037947			4
Height Summation: 53056.471							
Amount Avg CF: 0.02711 Linear:							

Aroclor-1260							
4.74	4.77	4.78	1252.864	0.001882	3	104.63	1
4.94	4.95	4.98	6753.169	0.008422			2
5.82	5.83	5.86	20990.36	0.026901			6
Height Summation: 28996.393							
Amount Avg CF: 0.012402 Linear:							

Aroclor-1262							
5.38	5.39	5.41	1040.78	0.001806	4	117.85	2
5.61	5.65	5.65	7013.567	0.004199			3
5.82	5.83	5.86	20990.36	0.021715			4
6.25	6.26	6.29	2449.896	0.003792			6
Height Summation: 31494.603							
Amount Avg CF: 0.007878 Linear:							

Aroclor-1268							
5.81	5.83	5.85	20990.36	0.00967	5	57.27	1
6.00	6.02	6.04	14372.17	0.007961			3
6.07	6.09	6.11	5999.246	0.013239			4
6.24	6.26	6.28	2449.896	0.003162			5
6.44	6.47	6.48	21239.96	0.003397			6
Height Summation: 65051.632							
Amount Avg CF: 0.007486 Linear:							

Analysis Report (B)

Injected on : Nov 08, 2018 18:37:07
 Instrument : CP25-18274B
 Result file : 25PCBS18303009B.044.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1260							
4.54	4.55	4.58	5840.861	0.005008	4	52.99	1
4.64	4.68	4.68	5994.854	0.006402			2
4.77	4.80	4.81	18077.71	0.015514			3
5.45	5.48	5.49	17528.34	0.015043			6
Height Summation: 47441.765							
Amount Avg CF: 0.010492 Linear:							

Aroclor-1262							
5.46	5.48	5.50	17528.34	0.012869	1		5
Height Summation: 17528.34							
Amount Avg CF: 0.012869 Linear:							

Aroclor-1268							
5.46	5.48	5.50	17528.34	0.005958	4	96.90	2
5.61	5.63	5.65	33005.33	0.012912			3
5.68	5.69	5.72	20411.58	0.03207			4
6.03	6.05	6.07	28028.12	0.003002			6
Height Summation: 98973.37							
Amount Avg CF: 0.013486 Linear:							

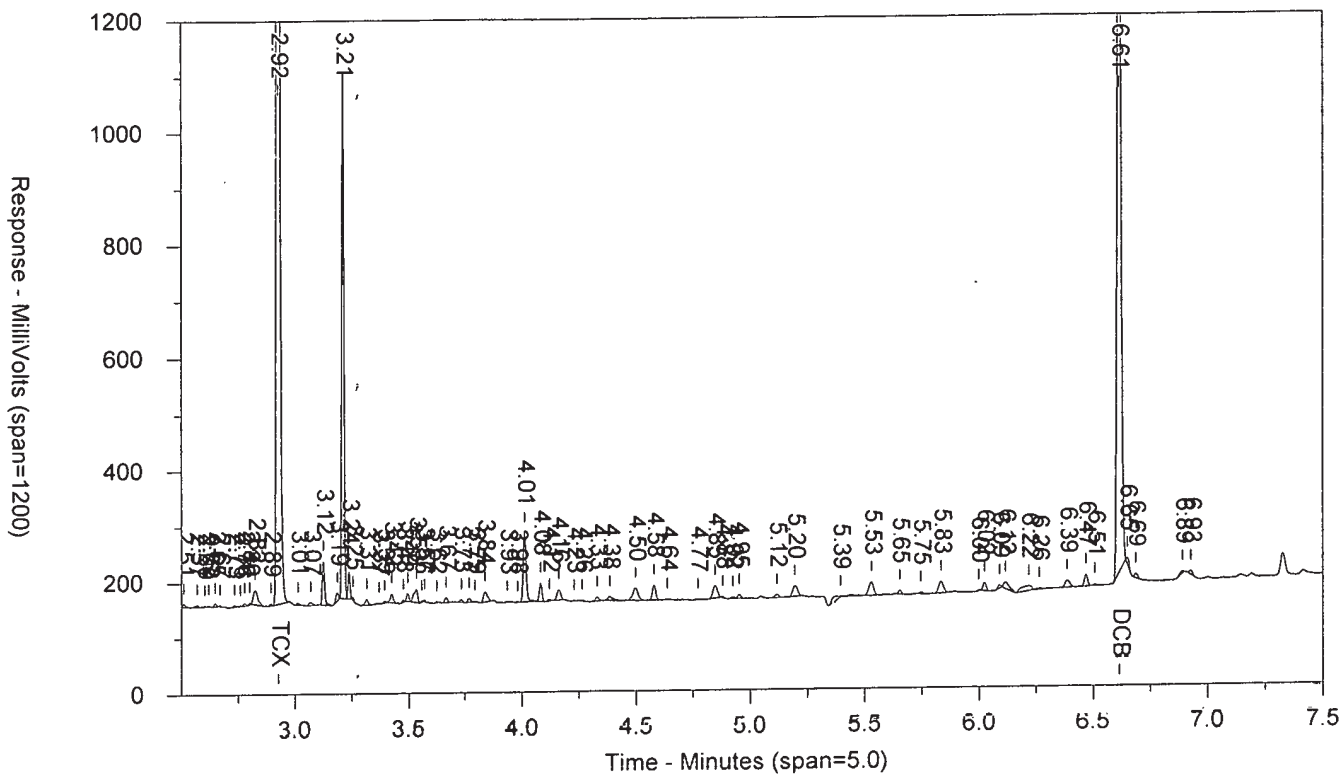
Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.4065	0.0813		** 128.61	4	40	
Aroclor-1221			0.4065	0.0813		** 93.74	3	5	
Aroclor-1232			0.4065	0.1626		** 147.10	4	10	
Aroclor-1242			0.4065	0.0813		** 122.48	4	30	
Aroclor-1248			0.4065	0.0813		** 111.49	4	40	
Aroclor-1254			0.4065	0.0813		38.09	4	40	
Aroclor-1260			0.4065	0.122		16.68	4	40	
Aroclor-1262			0.4065	0.1626		** 48.12	4	40	
Aroclor-1268			0.4065	0.1301		** 57.22	4	40	

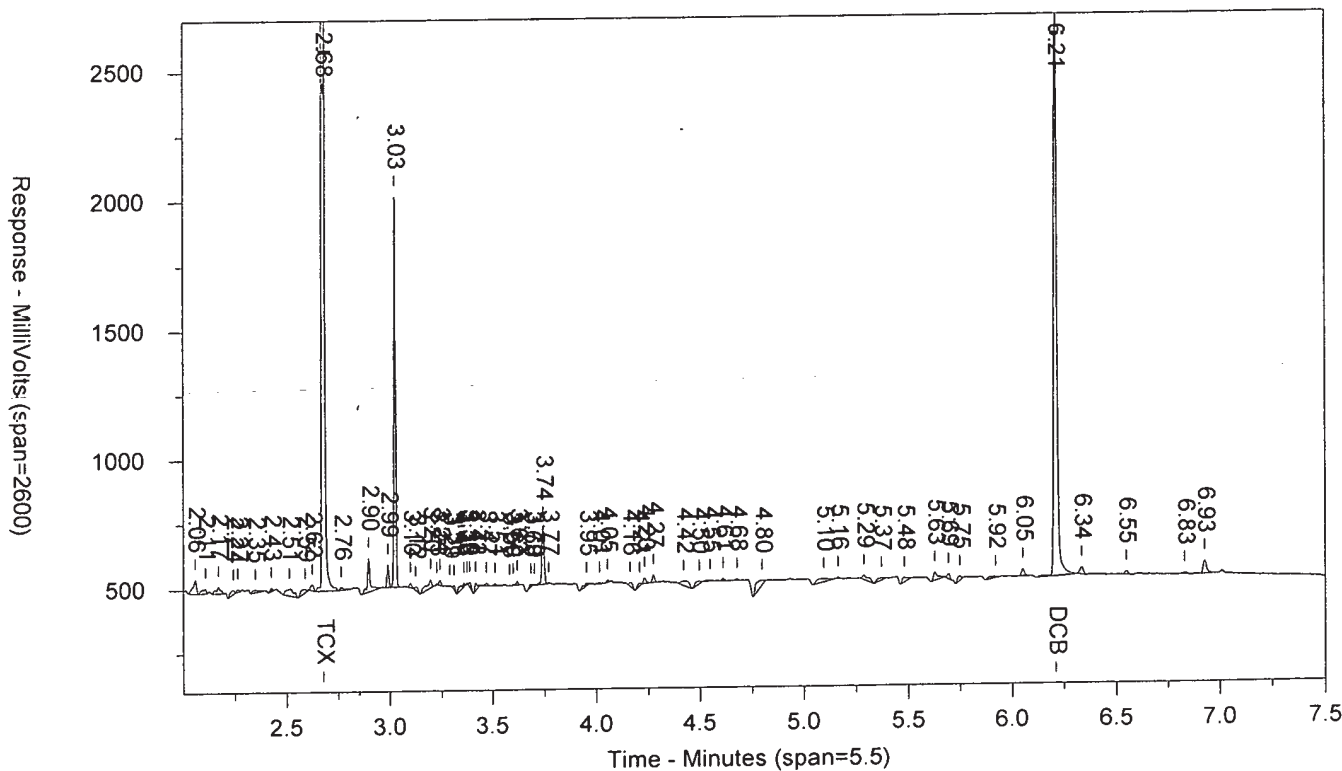
Units: ug/l

9881309 RI CAF AC15T-2 T 183100010A 10591 SW-846 8082A

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.044.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 9881309 RI CAF AC15T-2 T 183100010A 10591
Injected On: 11/8/2018 6:37:07 PM
Instrument ID: CP25-18274
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

SW-846 8082A
Sample Weight: 246
Dilution Factor: 2

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

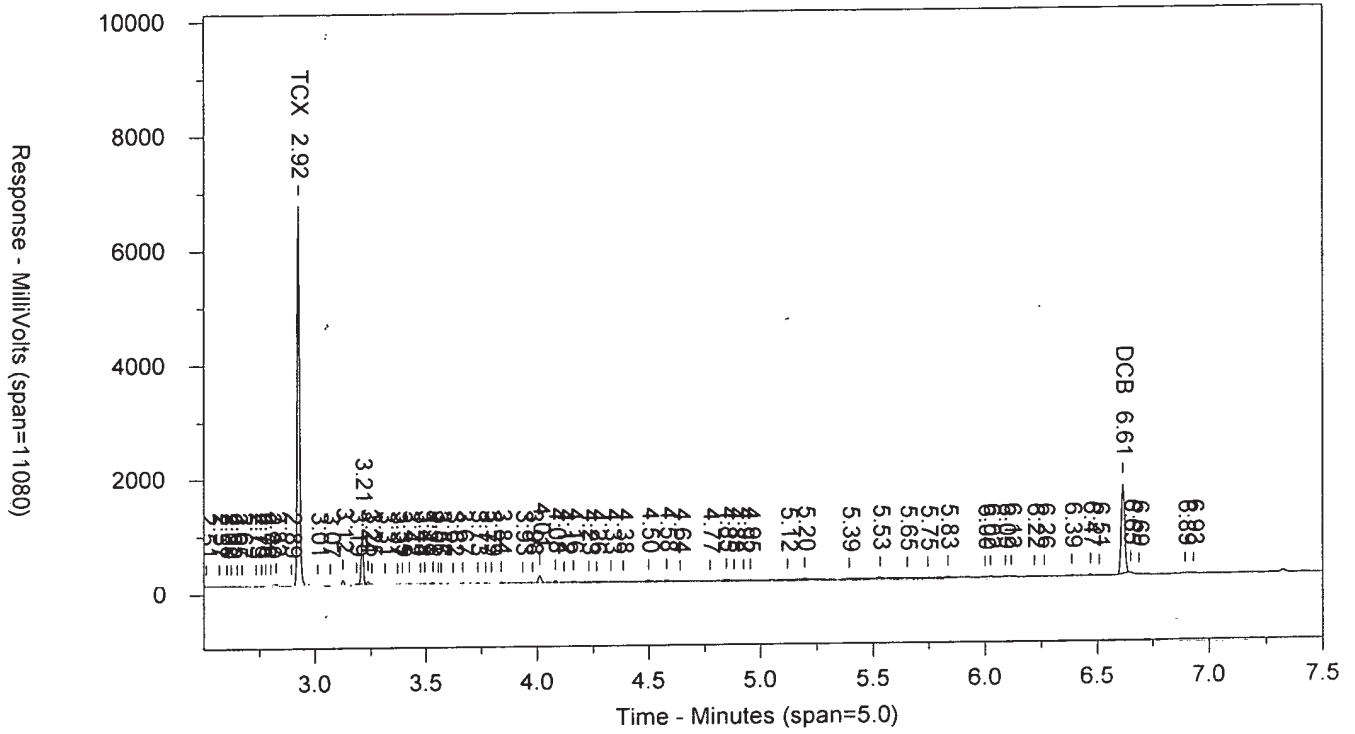
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	6642681	.348	TCX	2.678	10374700	.33	TCX
6.613	1572875	.1	DCB	6.21	2268679	.098	DCB

Files:

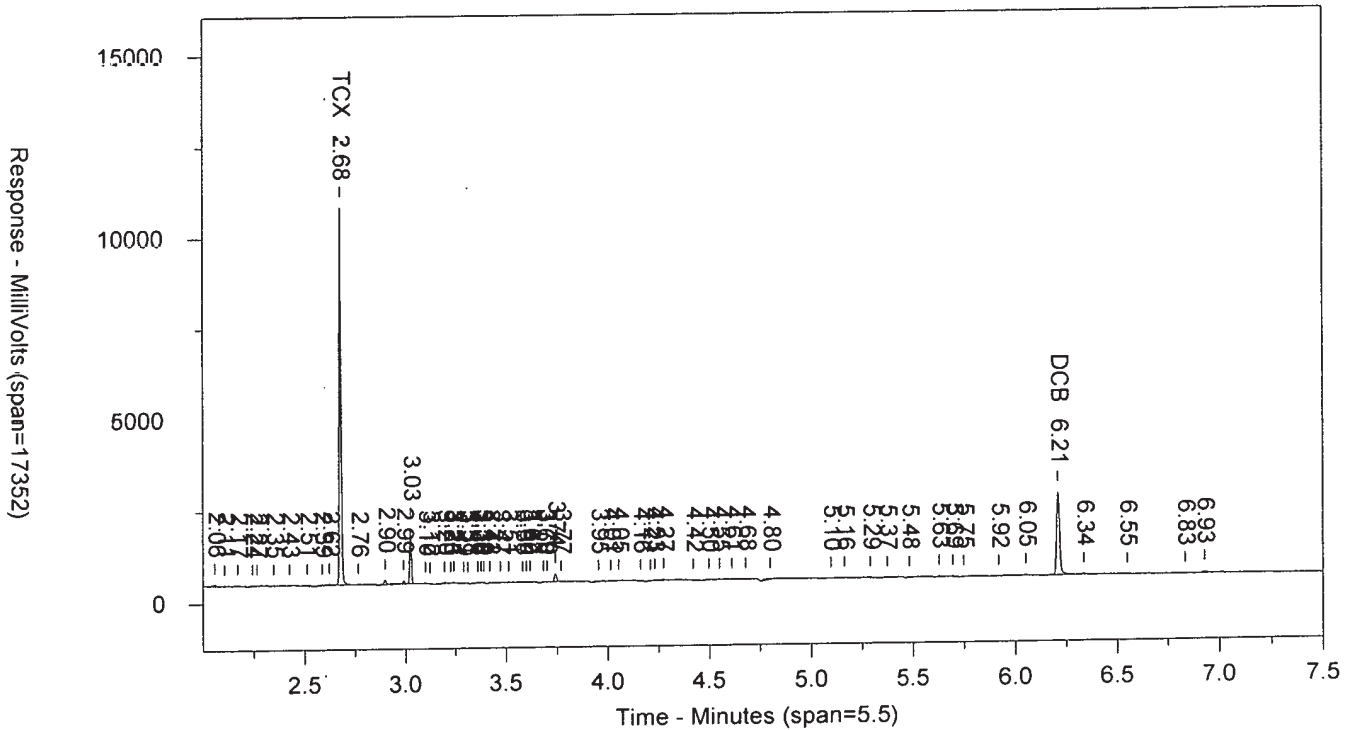
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Area File: 25pcbs18303009B.044.RAW
Method A: 25PCBA.MET
Method B: 25PCBAB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 11/8/2018 6:45:38 PM
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9881309 RI CAF AC15T-2 T 183100010A 10591 SW-846 8082A

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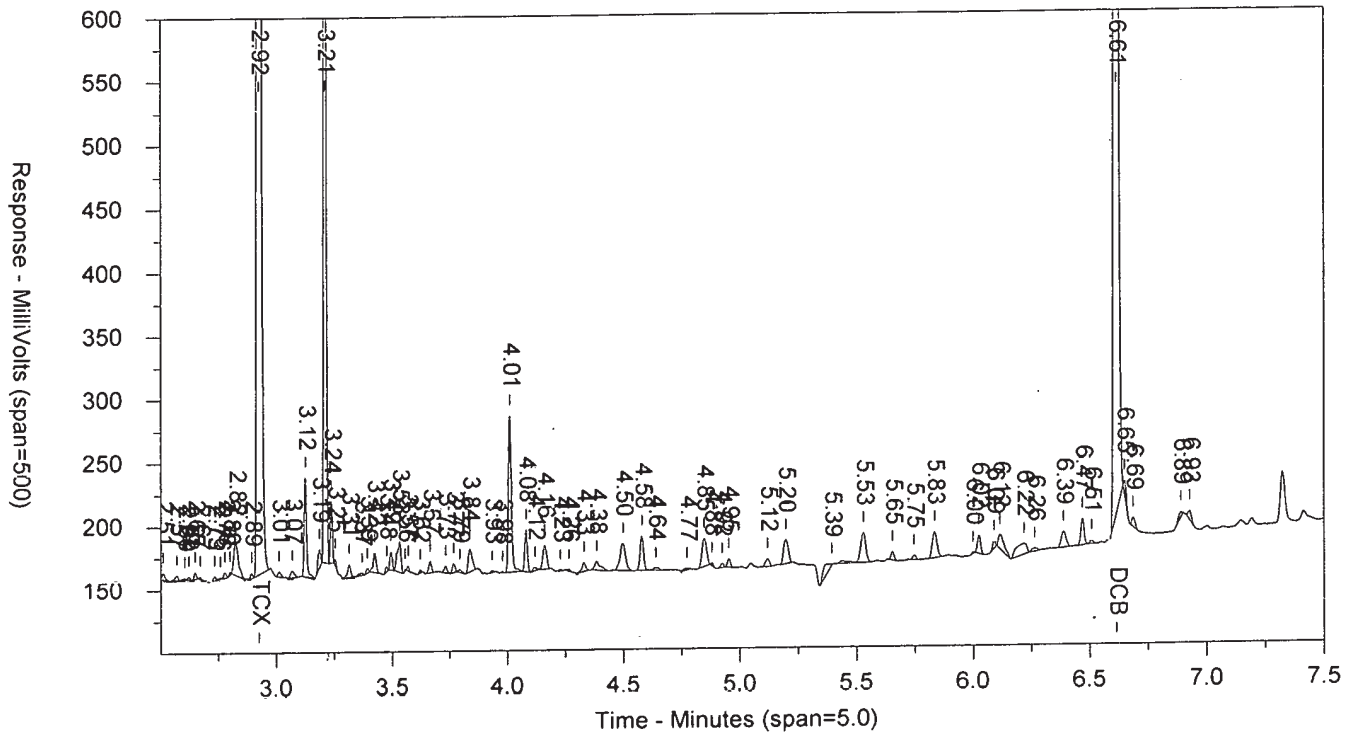


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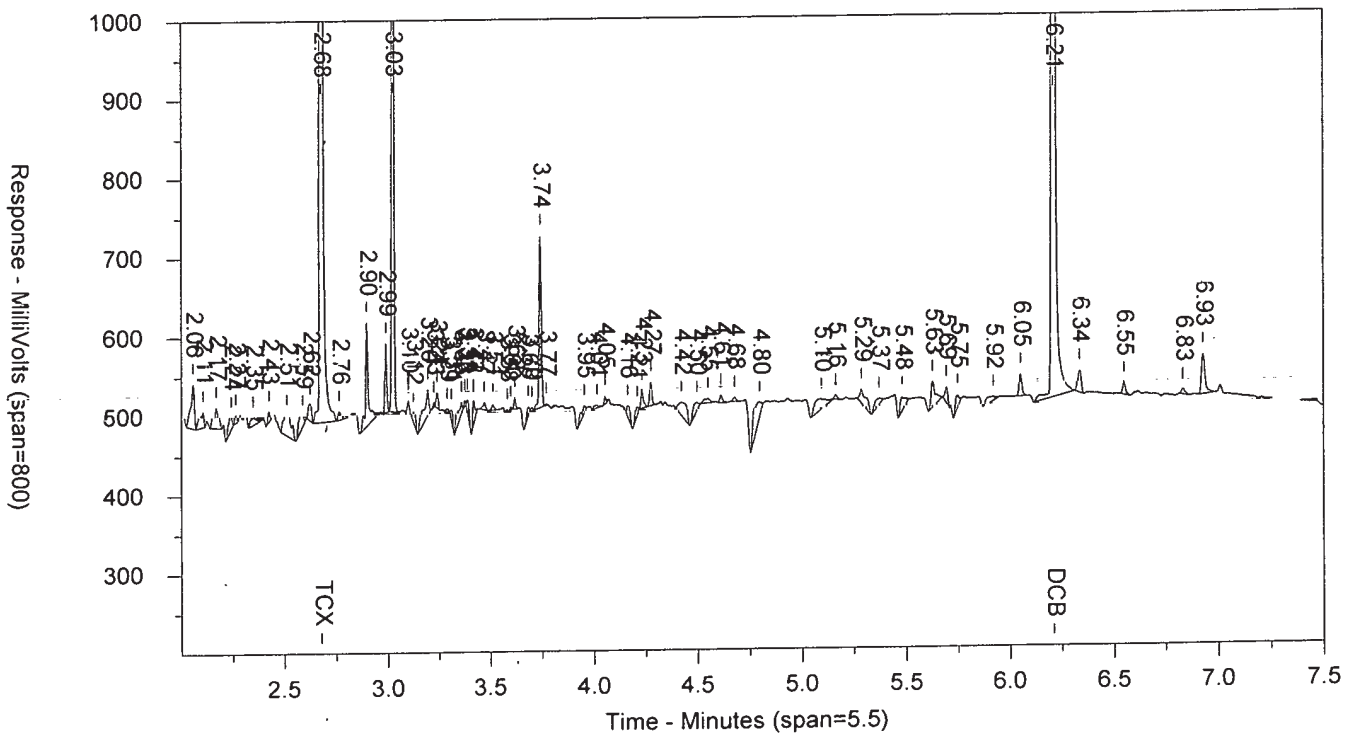


9881309 RI CAF AC15T-2 T 183100010A 10591 SW-846 8082A

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Data Summary

Sample Name: **9881310** RI CAF 15T-3 Sample ID: AC Batchnumber: **183100010A**
 Sample Amount: 247 ml Total Volume: 2 ml Analyst: 9065 SDG: TID15 State: NY
 Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 18:48:02
 Instrument 18274A
 Result file 25PCBS18303009.045.RAW
 Calibration file 25PCBS1830301
 Method file 25PCBA

%SSR(TCX) 73% (33 - 137) Conc: 0.221108
 %SSR(DCB) 28% (10 - 148) Conc: 0.085081

Single Component Data

Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	4236316	0.221108
Decachlorobiphenyl	6.58	6.61	6.64	1348527	0.085081

Analysis Report (B)

Injected on Nov 08, 2018 18:48:02
 Instrument 18274B
 Result file 25PCBS18303009B.045.RAW
 Calibration file 25PCBS1830301B
 Method file 25PCBAB

%SSR(TCX) 71% (33 - 137) Conc: 0.215897
 %SSR(DCB) 28% (10 - 148) Conc: 0.085818

Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.65	2.68	2.71	6804896	0.215897
Decachlorobiphenyl	6.18	6.21	6.24	1990042	0.085818

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.221108	0.0121	0.0243	0.0243		2.38	
<input checked="" type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.221108	0.0121	0.0243	0.0243			
<input checked="" type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.215897	0.0121	0.0243	0.0243			
<input type="checkbox"/> Decachlorobiphenyl	B	0.085818	0.0121	0.0243	0.0243		0.86	
<input checked="" type="checkbox"/> Decachlorobiphenyl-D1	A	0.085081	0.0121	0.0243	0.0243			
<input checked="" type="checkbox"/> Decachlorobiphenyl-D2	B	0.085818	0.0121	0.0243	0.0243			

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input checked="" type="checkbox"/> PCB-1016			<0.081	<0.2429	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1221			<0.081	<0.2429	<0.4049	D1		3	
<input checked="" type="checkbox"/> PCB-1232			<0.1619	<0.3239	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1242			<0.081	<0.2429	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1248			<0.001	<0.2429	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1254			<0.081	<0.2429	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1260			<0.1215	<0.2429	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1262			<0.1619	<0.3239	<0.4049	D1		4	
<input checked="" type="checkbox"/> PCB-1268			<0.1296	<0.2591	<0.4049	D1		4	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerio L. Tomayto
 Valerio L. Tomayto
 Principal Specialist

NOV 12 2018

Reviewed and digitally signed by Kirby B Turner on 11/11/2018 14:00:31

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: 9881310 RI CAF 15T-3 ID: AC **Batchnumber:** 183100010A
Sample Amount: 247 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** TID15 **State:** NY
Analyses: 10591



Analysis Report (A)

Injected on : Nov 08, 2018 18:48:02
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.045.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 73% (33-137) Conc.: 0.221108
 %SSR(DCB) : 28% (10-148) Conc.: 0.085081

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.19	3.20	8181.331	0.025068	6	61.89	1
3.38	3.40	3.42	2682.257	0.008494			2
+ 3.38	3.41	3.42	1475.983	0.004674			2
3.49	3.50	3.53	5417.59	0.013364			3
3.71	3.73	3.75	4238.974	0.009082			4
3.77	3.77	3.81	4623.423	0.012028			5
3.96	3.98	4.00	949.2529	0.003233			6

Height Summation: 26092.8279
Amount Avg CF: 0.011878 Linear:

Aroclor-1221							
3.06	3.07	3.10	1991.403	0.011475	3	153.77	1
3.11	3.12	3.15	50427.71	0.366627			2
3.16	3.19	3.20	8181.331	0.018199			3

Height Summation: 60600.444
Amount Avg CF: 0.1321 Linear:

Aroclor-1232							
3.16	3.19	3.20	8181.331	0.02227	6	36.73	1
3.38	3.40	3.42	2682.257	0.0188			2
+ 3.38	3.41	3.42	1475.983	0.010345			2
3.49	3.50	3.53	5417.59	0.029605			3
3.71	3.73	3.75	4238.974	0.019272			4
3.77	3.77	3.81	4623.423	0.0284			5
3.96	3.98	4.00	949.2529	0.008265			6

Height Summation: 26092.8279
Amount Avg CF: 0.021102 Linear:

Aroclor-1242							
3.16	3.19	3.20	8181.331	0.028982	6	58.71	1
3.38	3.40	3.42	2682.257	0.010205			2
+ 3.38	3.41	3.42	1475.983	0.005615			2
3.49	3.50	3.53	5417.59	0.016175			3
3.71	3.73	3.75	4238.974	0.010811			4
3.77	3.77	3.81	4623.423	0.01552			5
3.96	3.98	4.00	949.2529	0.00425			6

Height Summation: 26092.8279
Amount Avg CF: 0.014291 Linear:

Aroclor-1248							
3.83	3.84	3.87	10058.73	0.026176	6	85.32	1
3.96	3.98	4.00	949.2529	0.002189			2
4.05	4.08	4.09	11115.33	0.030238			3
+ 4.23	4.23	4.27	1039.435	0.002832			4
4.23	4.26	4.27	2175.825	0.005929			4
4.36	4.39	4.40	5360.07	0.013711			5
4.61	4.64	4.65	1428.853	0.00491			6

Height Summation: 31088.0609
Amount Avg CF: 0.013859 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 18:48:02
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.045.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 71% (33-137) Conc.: 0.215897
 %SSR(DCB) : 28% (10-148) Conc.: 0.085818

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.47	3.47	3.51	7074.198	0.011586	4	147.78	3
3.54	3.56	3.58	4041.152	0.006386			4
3.60	3.62	3.64	9816.131	0.019769			5
3.71	3.74	3.75	82103.16	0.153345			6

Height Summation: 103034.641
Amount Avg CF: 0.047772 Linear:

Aroclor-1221							
2.89	2.90	2.93	85197.45	0.380835	1		2

Height Summation: 85197.45
Amount Avg CF: 0.380835 Linear:

Aroclor-1232							
3.47	3.47	3.51	7074.198	0.024576	4	149.06	3
3.54	3.56	3.58	4041.152	0.014673			4
3.60	3.62	3.64	9816.131	0.054708			5
3.71	3.74	3.75	82103.16	0.391551			6

Height Summation: 103034.641
Amount Avg CF: 0.121376 Linear:

Aroclor-1242							
3.47	3.47	3.51	7074.198	0.013597	4	148.37	3
3.54	3.56	3.58	4041.152	0.007957			4
3.60	3.62	3.64	9816.131	0.026307			5
3.71	3.74	3.75	82103.16	0.196809			6

Height Summation: 103034.641
Amount Avg CF: 0.061168 Linear:

Aroclor-1248							
+ 3.58	3.58	3.62	3106.905	0.004954	3	144.76	1
3.58	3.60	3.62	3472.6	0.005537			1
3.71	3.74	3.75	82103.16	0.106628			2
3.93	3.96	3.97	7518.545	0.007585			4

Height Summation: 93094.305
Amount Avg CF: 0.039917 Linear:

Aroclor-1251							
4.40	4.42	4.44	11141.18	0.018823	1		2

Height Summation: 11141.18
Amount Avg CF: 0.018823 Linear:

Aroclor-1260							
4.64	4.68	4.68	6249.934	0.006648	2	2.43	2
5.45	5.48	5.49	8049.961	0.00688			6

Height Summation: 14299.895
Amount Avg CF: 0.006764 Linear:

Aroclor-1262							
5.41	5.43	5.45	6946.22	0.008495	2	25.65	4
5.46	5.48	5.50	8049.961	0.005886			5

Height Summation: 14996.181
Amount Avg CF: 0.007191 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: 9881310 RI CAF 15T-3 ID: AC **Batchnumber:** 183100010A
Sample Amount: 247 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** TID15 **State:** NY
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 18:48:02
 Instrument : CP25-18274A
 Result file : 25PCBS18303009.045.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.58	4.59	21320.66	0.049452	5	111.92	1
4.61	4.64	4.65	1428.853	0.001655			2
4.74	4.77	4.78	903.6917	0.003321			3
4.83	4.85	4.87	12288.13	0.020633			4
5.03	5.05	5.07	5671.992	0.011871			5

Height Summation: 41613.3267
Amount Avg CF: 0.017386 Linear:

Aroclor-1260							
4.74	4.77	4.78	903.6917	0.001352	3	95.47	1
4.94	4.95	4.98	4635.447	0.005757			2
5.82	5.83	5.86	11991.18	0.015305			6

Height Summation: 17530.3187
Amount Avg CF: 0.007472 Linear:

Aroclor-1262							
5.38	5.38	5.41	4842.582	0.008367	3	51.74	2
5.82	5.83	5.86	11991.18	0.012355			4
6.25	6.27	6.29	2514.312	0.003876			6

Height Summation: 19348.074
Amount Avg CF: 0.008199 Linear:

Aroclor-1268							
5.81	5.83	5.85	11991.18	0.005502	5	65.89	1
6.00	6.02	6.04	14263.99	0.007869			3
6.07	6.09	6.11	6256.756	0.013751			4
6.24	6.27	6.28	2514.312	0.003232			5
6.44	6.47	6.48	19336.93	0.00308			6

Height Summation: 54363.168
Amount Avg CF: 0.006687 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 18:48:02
 Instrument : CP25-18274B
 Result file : 25PCBS18303009B.045.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.41	5.43	5.45	6946.22	0.002377	5	128.16	1
5.46	5.48	5.50	8049.961	0.002725			2
5.61	5.63	5.65	23689.47	0.00923			3
5.68	5.69	5.72	20074.74	0.031413			4
6.03	6.05	6.07	26786.24	0.002858			6

Height Summation: 85546.631
Amount Avg CF: 0.009721 Linear:

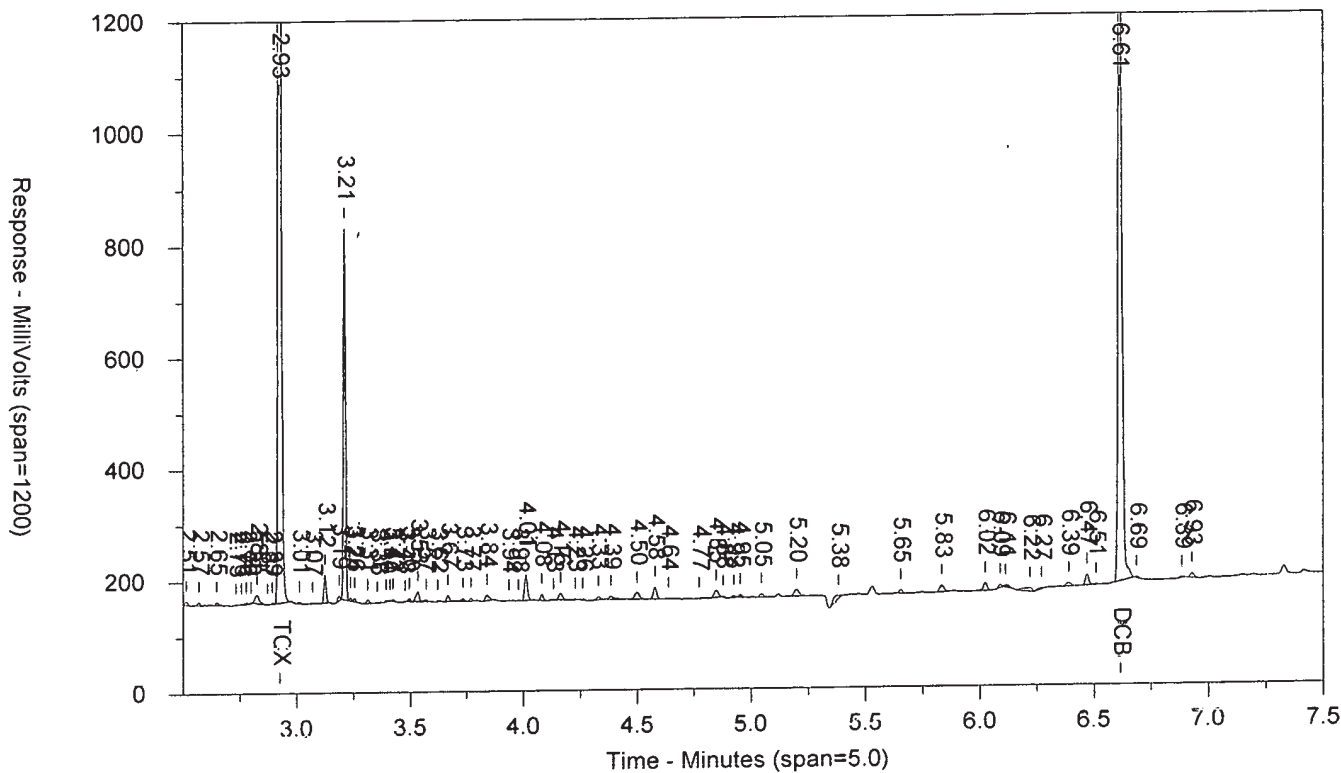
Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.4049	0.081		** 120.35	4	40	
Aroclor-1221			0.4049	0.081		** 96.98	3	5	
Aroclor-1232			0.4049	0.1619		** 140.76	4	10	
Aroclor-1242			0.4049	0.081		** 124.25	4	30	
Aroclor-1248			0.4049	0.081		** 96.91	4	40	
Aroclor-1254			0.4049	0.081		7.94	4	40	
Aroclor-1260			0.4049	0.1215		9.94	4	40	
Aroclor-1262			0.4049	0.1619		13.11	4	40	
Aroclor-1268			0.4049	0.1296		36.98	4	40	

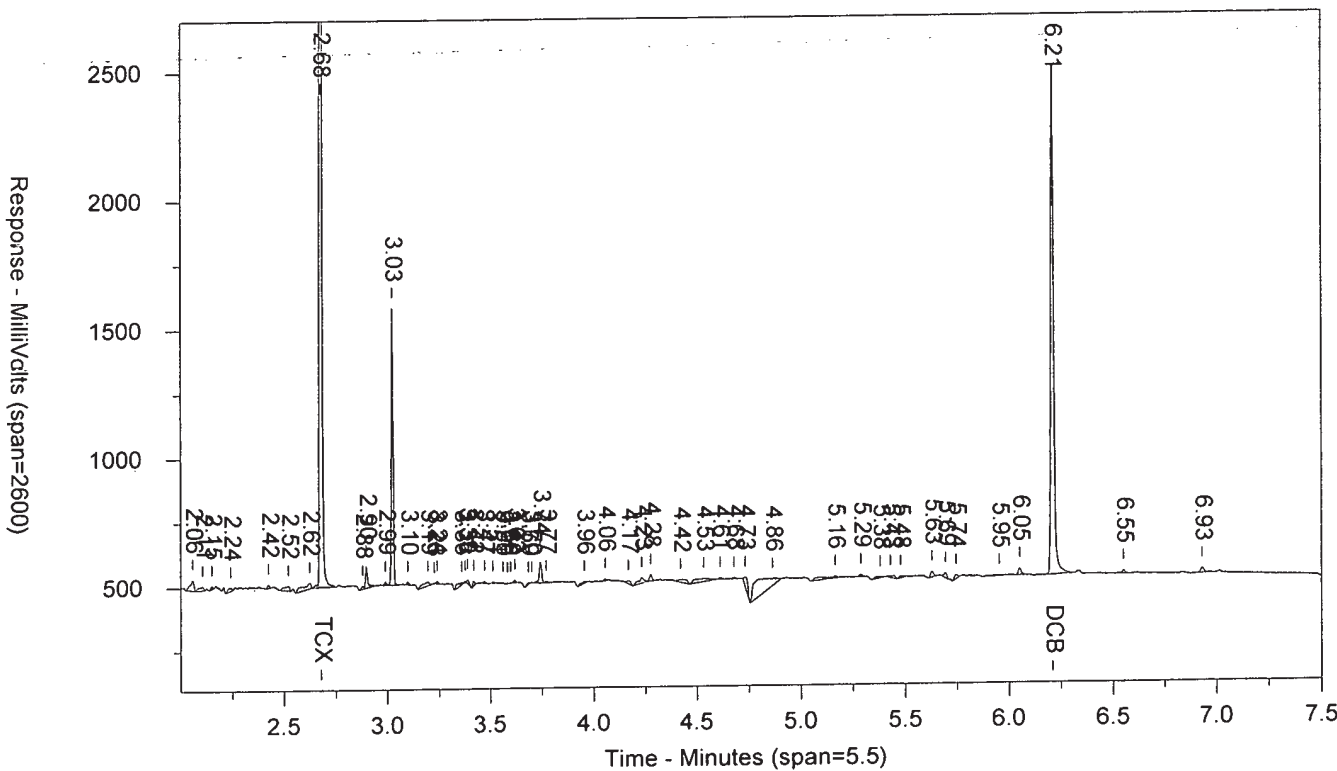
Units: ug/l

9881310 RI CAF AC15T-3 T 183100010A 10591 SW-846 8082A

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.045.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 9881310 RI CAF AC15T-3 T 183100010A 10591
 Injected On: 11/8/2018 6:48:02 PM
 Instrument ID: CP25-18274
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

SW-846 8082A
 Sample Weight: 247
 Dilution Factor: 2

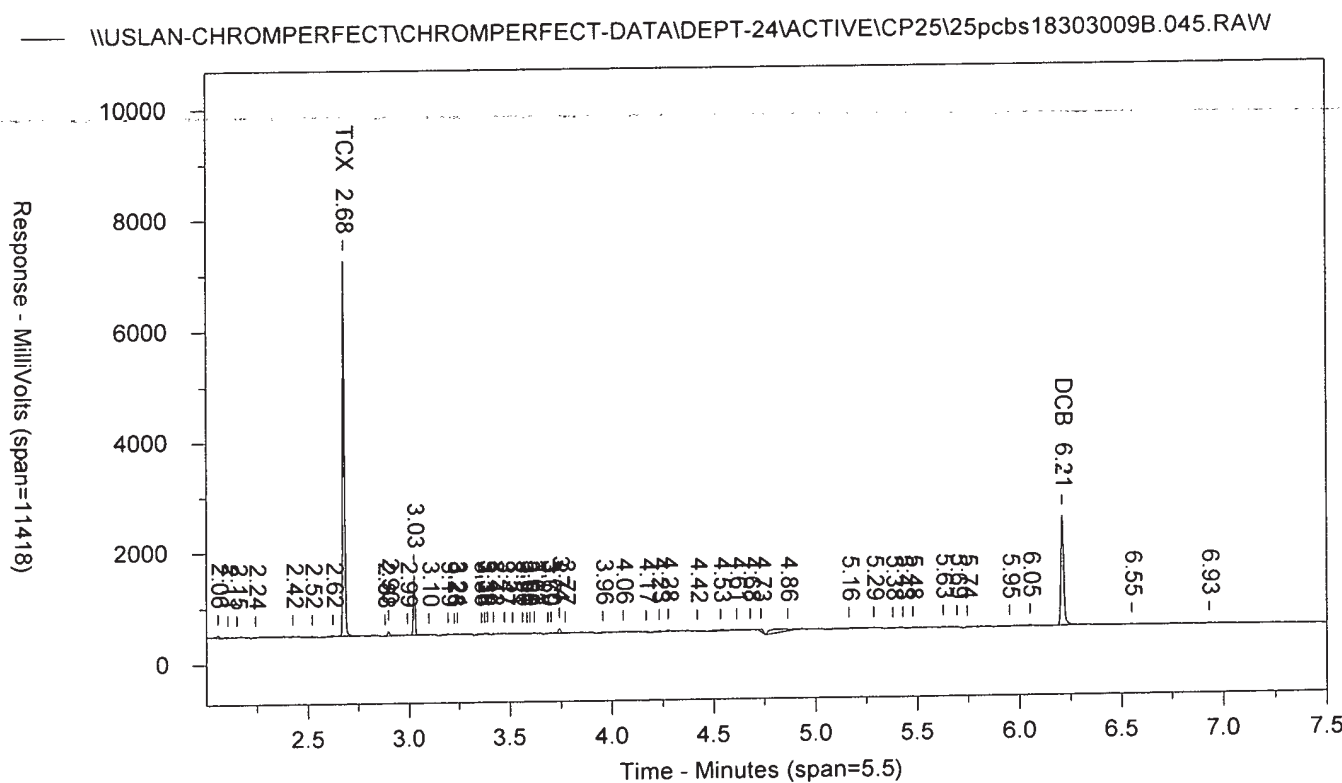
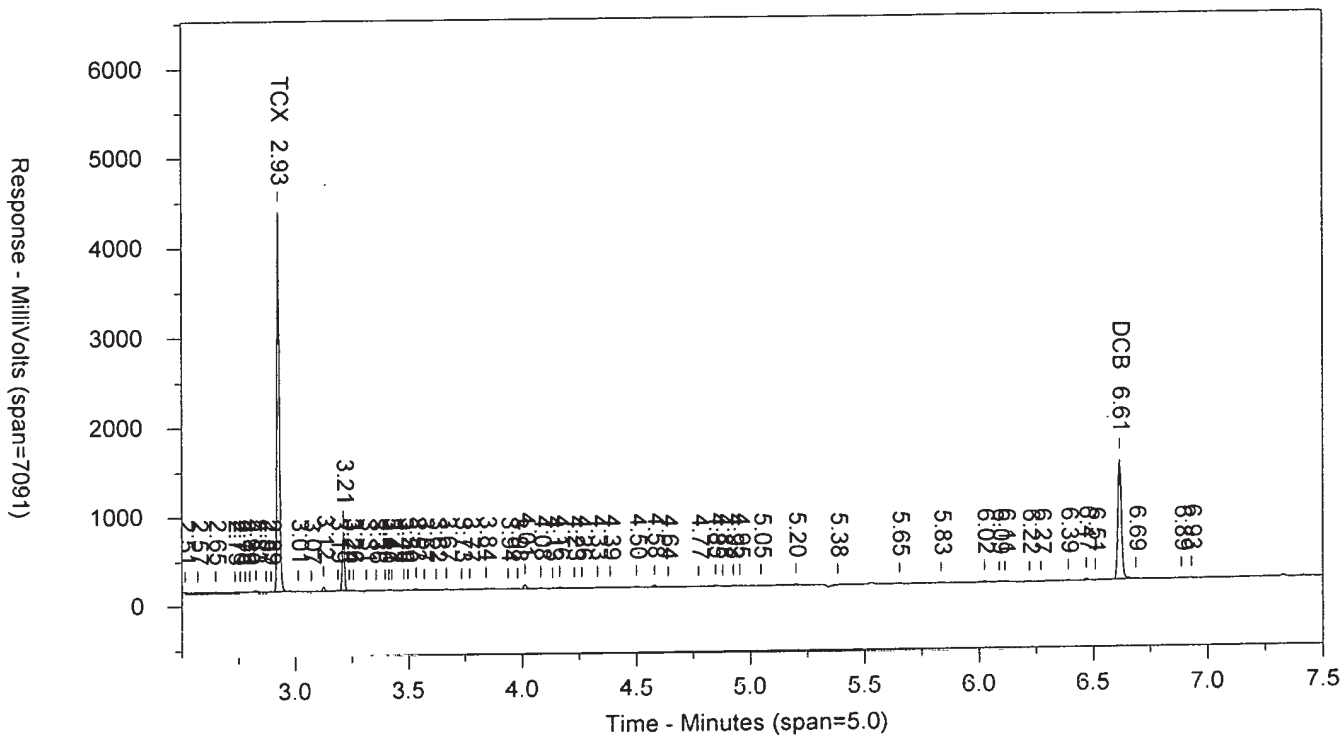
Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	4236316	.221	TCX	2.678	6804897	.216	TCX
6.615	1348527	.085	DCB	6.21	1990042	.086	DCB

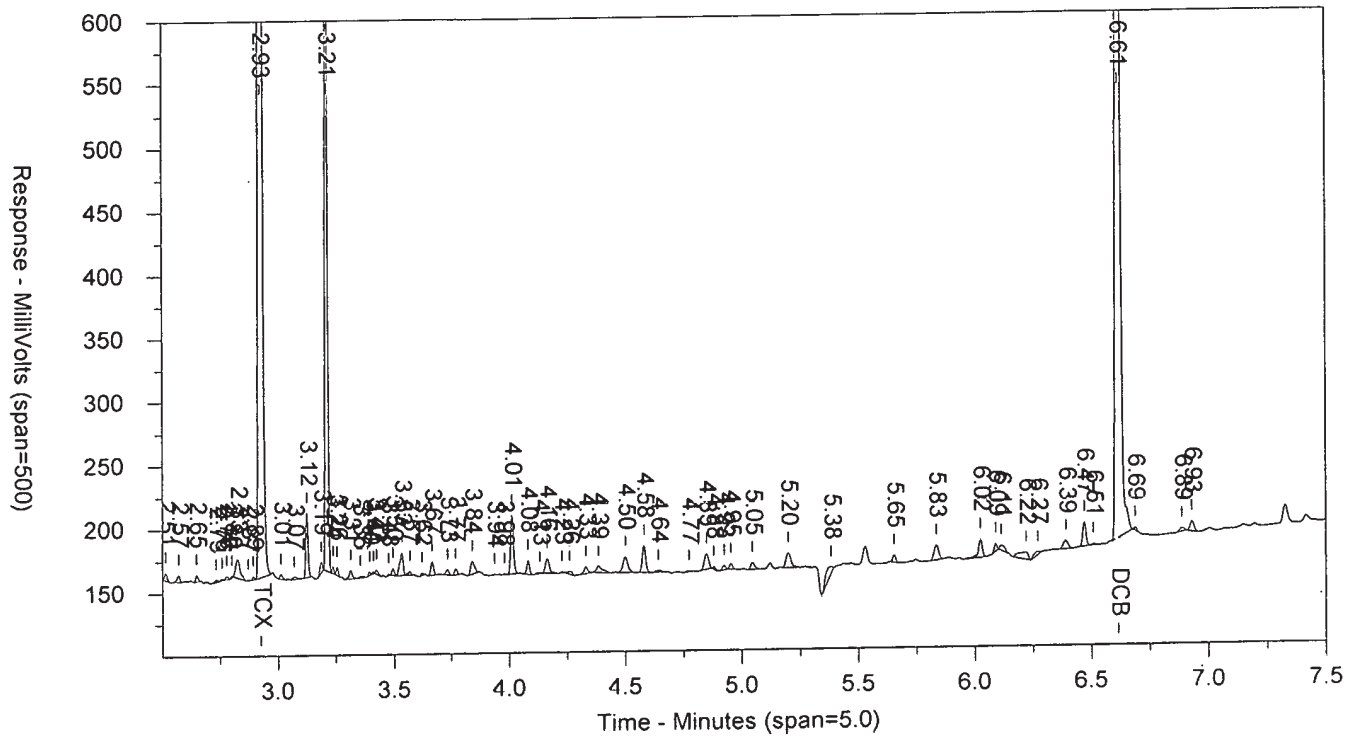
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 Area File: 25pcbs18303009B.045.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
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 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 6:56:32 PM
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9881310 RI CAF AC15T-3 T 183100010A 10591 SW-846 8082A

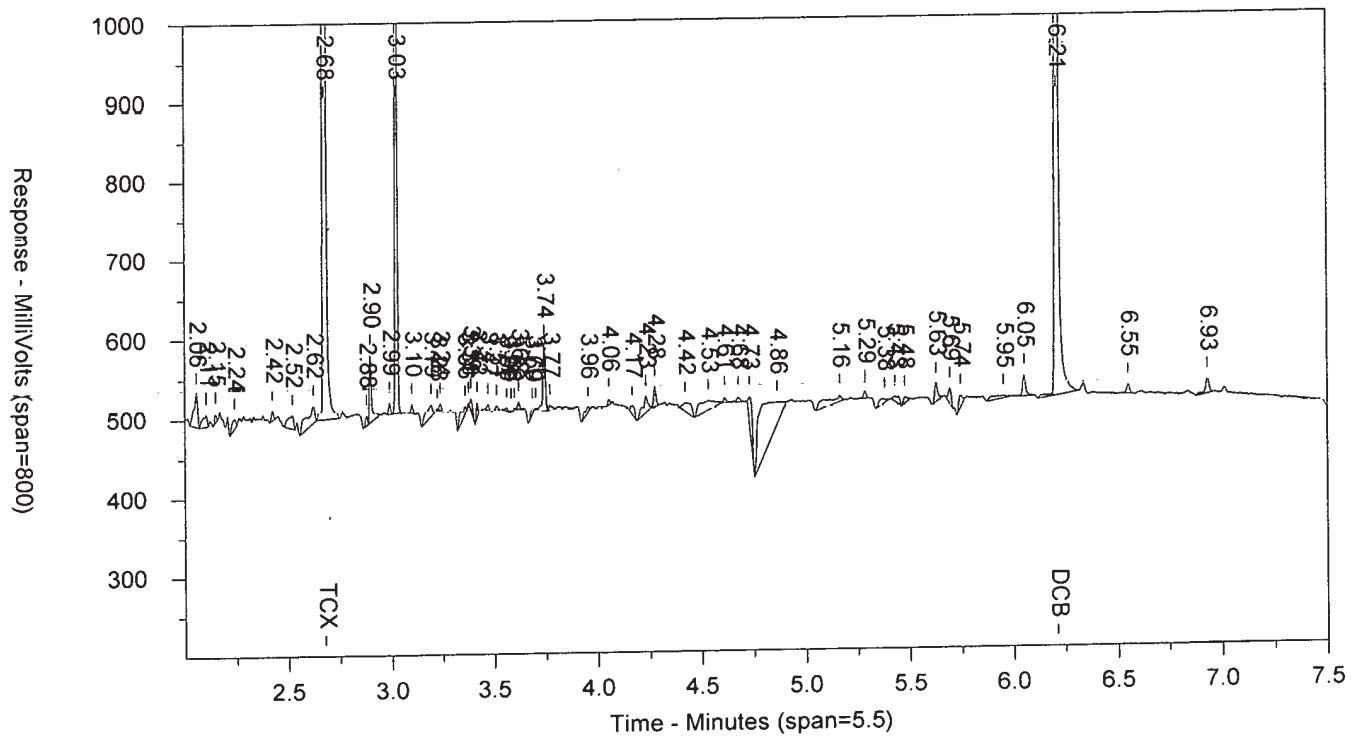


9881310 RI CAF AC15T-3 T 183100010A 10591 SW-846 8082A

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Data Summary

Sample Name: 9881313 **RI CAF** **15T-6** **Sample ID: AC Batchnumber: 183100010A**
Sample Amount: 248 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** TID15 **State:** NY
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 18:58:59
Instrument 18274A
Result file 25PCBS18303009.046.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

%SSR(TCX) 114% (33 - 137) **Conc:** 0.345969
%SSR(DCB) 83% (10 - 148) **Conc:** 0.249876

Analysis Report (B)

Injected on Nov 08, 2018 18:58:59
Instrument 18274B
Result file 25PCBS18303009B.046.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

%SSR(TCX) 108% (33 - 137) **Conc:** 0.327108
%SSR(DCB) 86% (10 - 148) **Conc:** 0.257855

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	6655424	0.345969	Tetrachloro-m-xylene	2.65	2.68	2.71	10351920	0.327108
Decachlorobiphenyl	6.58	6.62	6.64	3976529	0.249876	Decachlorobiphenyl	6.18	6.21	6.24	6003658	0.257855

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.345969	0.0121	0.0242	0.0242		5.60	
<input checked="" type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.345969	0.0121	0.0242	0.0242			
<input checked="" type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.327108	0.0121	0.0242	0.0242			
<input type="checkbox"/> Decachlorobiphenyl	B	0.257855	0.0121	0.0242	0.0242		3.14	
<input checked="" type="checkbox"/> Decachlorobiphenyl-D1	A	0.249876	0.0121	0.0242	0.0242			
<input checked="" type="checkbox"/> Decachlorobiphenyl-D2	B	0.257855	0.0121	0.0242	0.0242			

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input checked="" type="checkbox"/> PCB-1016			<0.0806	<0.2419	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1221			<0.0806	<0.2419	<0.4032	D1		3	
<input checked="" type="checkbox"/> PCB-1232			<0.1613	<0.3226	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1242			<0.0806	<0.2419	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1248			<0.0806	<0.2419	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1254			<0.0806	<0.2419	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1260			<0.121	<0.2419	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1262			<0.1613	<0.3226	<0.4032	D1		4	
<input checked="" type="checkbox"/> PCB-1268			<0.129	<0.2581	<0.4032	D1		4	

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
 Valerie L. Tomayko
 Principal Specialist

NOV 12 2018

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: 9881313 RI CAF 15T-6 ID: AC **Batchnumber:** 183100010A
Sample Amount: 248 ml Total Volume: 2 ml Analyst: 9065 SDG: TID15 State: NY
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 18:58:59
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.046.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET
 %SSR(TCX) : 114% (33-137) Conc.: 0.345969
 %SSR(DCB) : 83% (10-148) Conc.: 0.249876

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.19	3.20	9962.67	0.030403	3	51.85	1
3.38	3.41	3.42	3205.447	0.010109			2
3.71	3.74	3.75	8667.941	0.018495			4
Height Summation:			21836.058				
Amount Avg CF:			0.019669	Linear:			

Aroclor-1221							
3.06	3.07	3.10	2365.827	0.013578	3	158.12	1
3.11	3.13	3.15	79794.49	0.577795			2
3.16	3.19	3.20	9962.67	0.022072			3
Height Summation:			92122.987				
Amount Avg CF:			0.204481	Linear:			

Aroclor-1232							
3.16	3.19	3.20	9962.67	0.02701	3	29.51	1
3.38	3.41	3.42	3205.447	0.022376			2
3.71	3.74	3.75	8667.941	0.039249			4
Height Summation:			21836.058				
Amount Avg CF:			0.029545	Linear:			

Aroclor-1242							
3.16	3.19	3.20	9962.67	0.03515	3	50.34	1
3.38	3.41	3.42	3205.447	0.012146			2
3.71	3.74	3.75	8667.941	0.02161			4
Height Summation:			21836.058				
Amount Avg CF:			0.022969	Linear:			

Aroclor-1248							
3.83	3.84	3.87	9749.846	0.02527	4	54.68	1
4.05	4.08	4.09	6098.893	0.016524			3
4.36	4.39	4.40	1682.492	0.004286			5
4.61	4.65	4.65	5040.593	0.017252			6
Height Summation:			22571.824				
Amount Avg CF:			0.015833	Linear:			

Aroclor-1254							
4.55	4.58	4.59	5817.924	0.01344	5	61.83	1
4.61	4.65	4.65	5040.593	0.005816			2
4.74	4.76	4.78	835.5927	0.003058			3
4.83	4.85	4.87	4936.092	0.008255			4
5.14	5.17	5.18	2207.417	0.0036			6
Height Summation:			18837.6187				
Amount Avg CF:			0.006834	Linear:			

Aroclor-1260							
4.74	4.76	4.78	835.5927	0.001245	4	106.00	1
4.94	4.95	4.98	13257.16	0.0164			2
5.14	5.17	5.18	2207.417	0.002264			3
5.82	5.84	5.86	4878.672	0.006202			6
Height Summation:			21178.8417				
Amount Avg CF:			0.006528	Linear:			

Analysis Report (B)

Injected on : Nov 08, 2018 18:58:59
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.046.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET
 %SSR(TCX) : 108% (33-137) Conc.: 0.327108
 %SSR(DCB) : 86% (10-148) Conc.: 0.257855

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.27	3.31	3.31	4938.725	0.007813	4	93.83	2
3.54	3.56	3.58	3932.045	0.006188			4
3.60	3.62	3.64	15120.12	0.030329			5
3.71	3.71	3.75	3293.697	0.006127			6
Height Summation:			27284.587				
Amount Avg CF:			0.012614	Linear:			

Aroclor-1221							
2.89	2.90	2.93	132176.7	0.588452	1		2
Height Summation:			132176.7				
Amount Avg CF:			0.588452	Linear:			

Aroclor-1232							
3.27	3.31	3.31	4938.725	0.01736	4	104.05	2
3.54	3.56	3.58	3932.045	0.014219			4
3.60	3.62	3.64	15120.12	0.083926			5
3.71	3.71	3.75	3293.697	0.015644			6
Height Summation:			27284.587				
Amount Avg CF:			0.032787	Linear:			

Aroclor-1242							
3.27	3.31	3.31	4938.725	0.009615	4	97.66	2
3.54	3.56	3.58	3932.045	0.007711			4
3.60	3.62	3.64	15120.12	0.040358			5
3.71	3.71	3.75	3293.697	0.007863			6
Height Summation:			27284.587				
Amount Avg CF:			0.016387	Linear:			

Aroclor-1248							
3.71	3.71	3.75	3293.697	0.00426	3	74.77	2
3.93	3.95	3.97	7206.939	0.007241			4
4.30	4.34	4.34	7960.894	0.018396			6
Height Summation:			18461.53				
Amount Avg CF:			0.009966	Linear:			

Aroclor-1254							
4.30	4.34	4.34	7960.894	0.008292	1		1
Height Summation:			7960.894				
Amount Avg CF:			0.006292	Linear:			

Aroclor-1260							
5.00	5.02	5.04	3515.276	0.004835	2	12.90	4
5.45	5.48	5.49	6819.605	0.005805			6
Height Summation:			10334.881				
Amount Avg CF:			0.00532	Linear:			

Aroclor-1262							
5.00	5.02	5.04	3515.276	0.003523	2	24.05	2
5.46	5.48	5.50	6819.605	0.004966			5
Height Summation:			10334.881				
Amount Avg CF:			0.004245	Linear:			

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: 9881313 RI CAF 15T-6 ID: AC **Batchnumber:** 183100010A
Sample Amount: 248 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** TID15 **State:** NY
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 18:58:59
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.046.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1262							
5.38	5.40	5.41	3018.814	0.005195	3	38.91	2
5.82	5.84	5.86	4878.672	0.005006			4
6.25	6.27	6.29	1496.394	0.002297			6

Height Summation: 9393.88
Amount Avg CF: 0.004166 Linear:

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	4878.672	0.002229	5	134.08	1
6.00	6.02	6.04	31393.54	0.017249			3
6.07	6.09	6.11	21346.29	0.046726			4
6.24	6.27	6.28	1496.394	0.001916			5
6.44	6.47	6.48	22099.79	0.003506			6

Height Summation: 81214.686
Amount Avg CF: 0.014325 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 18:58:59
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.046.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.46	5.48	5.50	6819.605	0.0023	4	125.93	2
5.61	5.63	5.65	44183.52	0.017145			3
5.68	5.70	5.72	34512.75	0.053788			4
6.03	6.05	6.07	30730.26	0.003265			6

Height Summation: 116246.135
Amount Avg CF: 0.019125 Linear:

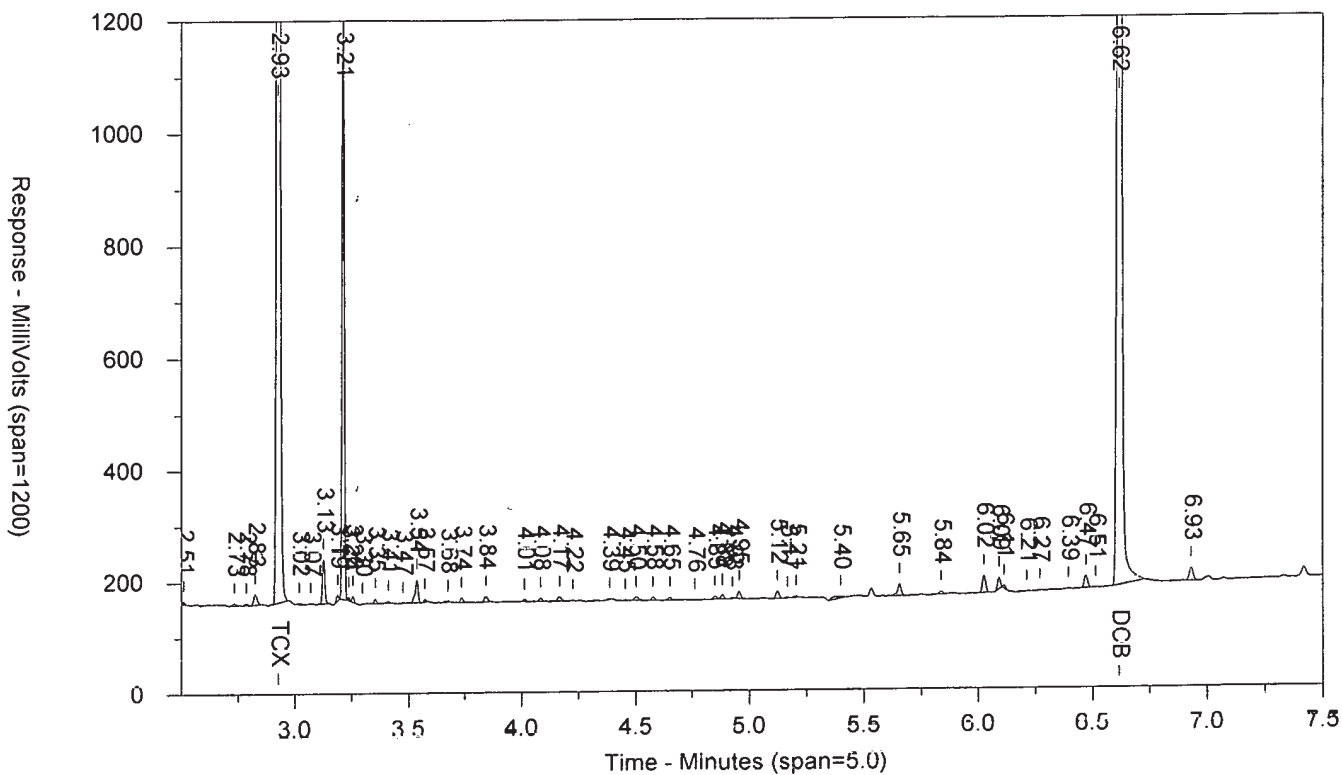
Summary Report

Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.4032	0.0806		** 43.71	4	40	
Aroclor-1221			0.4032	0.0806		** 96.85	3	5	
Aroclor-1232			0.4032	0.1613		10.40	4	10	
Aroclor-1242			0.4032	0.0806		33.45	4	30	
Aroclor-1248			0.4032	0.0806		** 45.49	4	40	
Aroclor-1254			0.4032	0.0806		8.26	4	40	
Aroclor-1260			0.4032	0.121		20.39	4	40	
Aroclor-1262			0.4032	0.1613		1.86	4	40	
Aroclor-1268			0.4032	0.129		28.70	4	40	

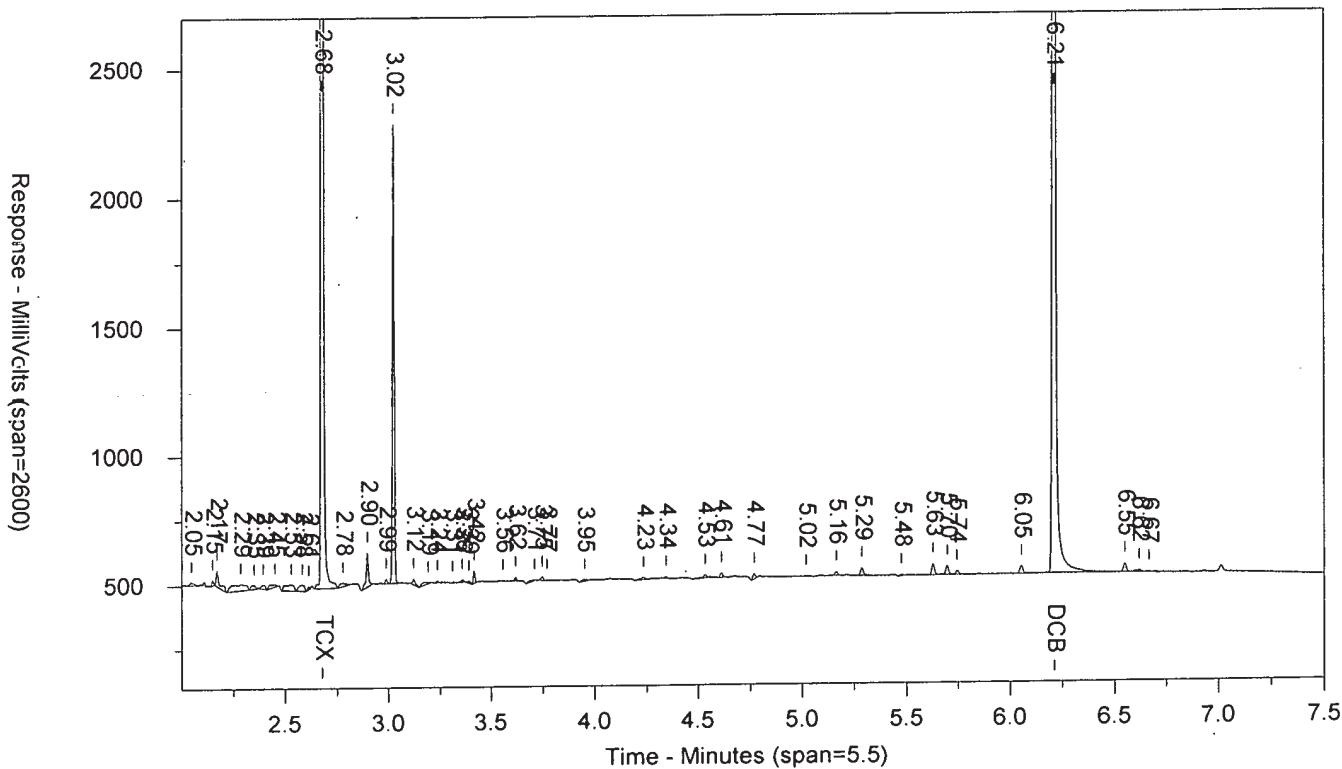
Units: ug/l

9881313 RI CAF AC15T-6 T 183100010A 10591 SW-846 8082A

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.046.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: 9881313 RI CAF AC15T-6 T 183100010A 10591
 Injected On: 11/8/2018 6:58:59 PM
 Instrument ID: CP25-18274
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

SW-846 8082A
 Sample Weight: 248
 Dilution Factor: 2

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

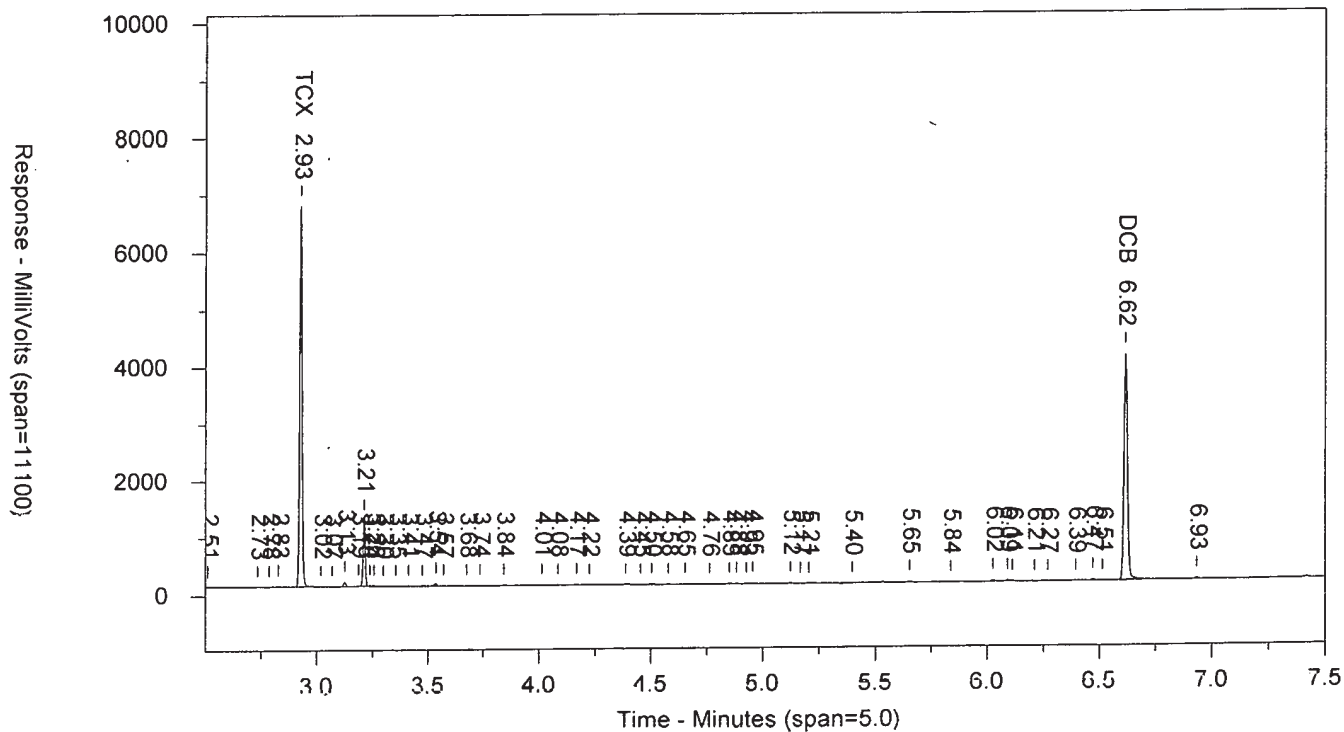
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.926	6655424	.346	TCX	2.678	10351920	.327	TCX
6.615	3976529	.25	DCB	6.21	6003659	.258	DCB

Files:

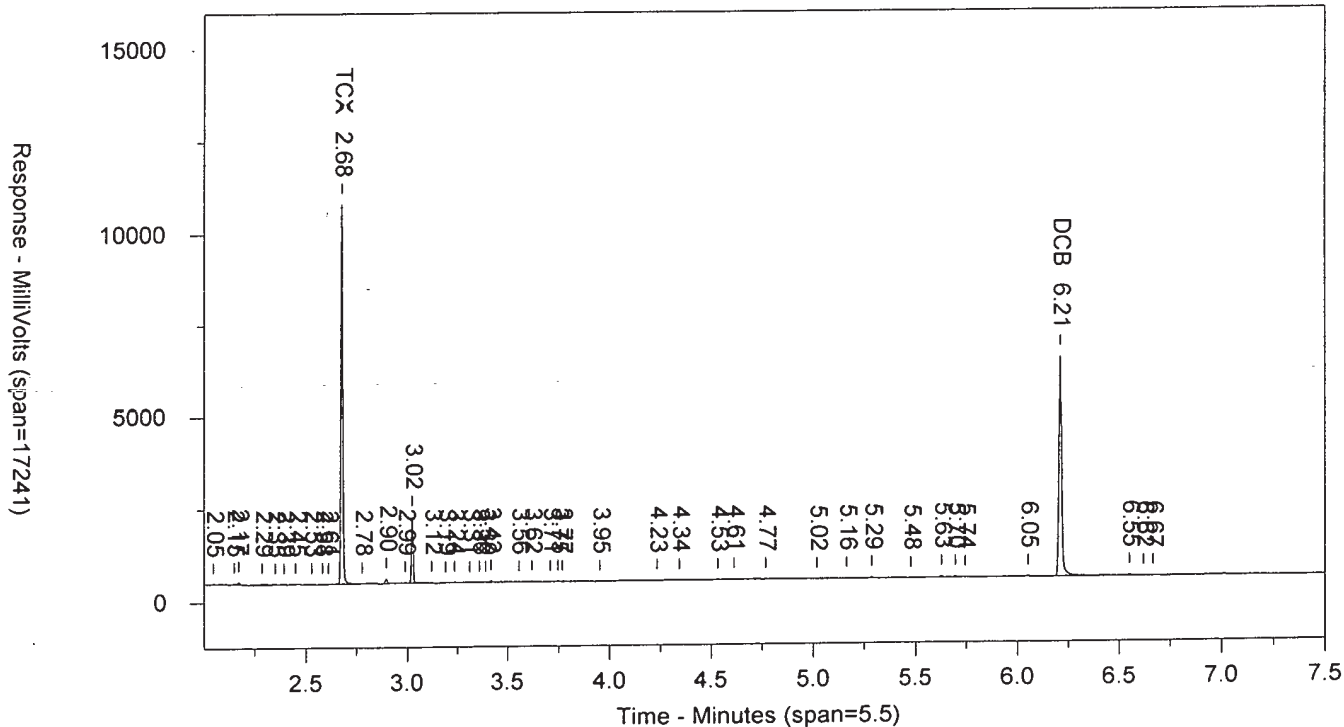
Area File: 25pcbs18303009.046.RAW
 Area File: 25pcbs18303009B.046.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 7:07:30 PM
 File Reported On: 11/8/2018 at 7:07:38 PM

9881313 RI CAF AC15T-6 T 183100010A 10591 SW-846 8082A

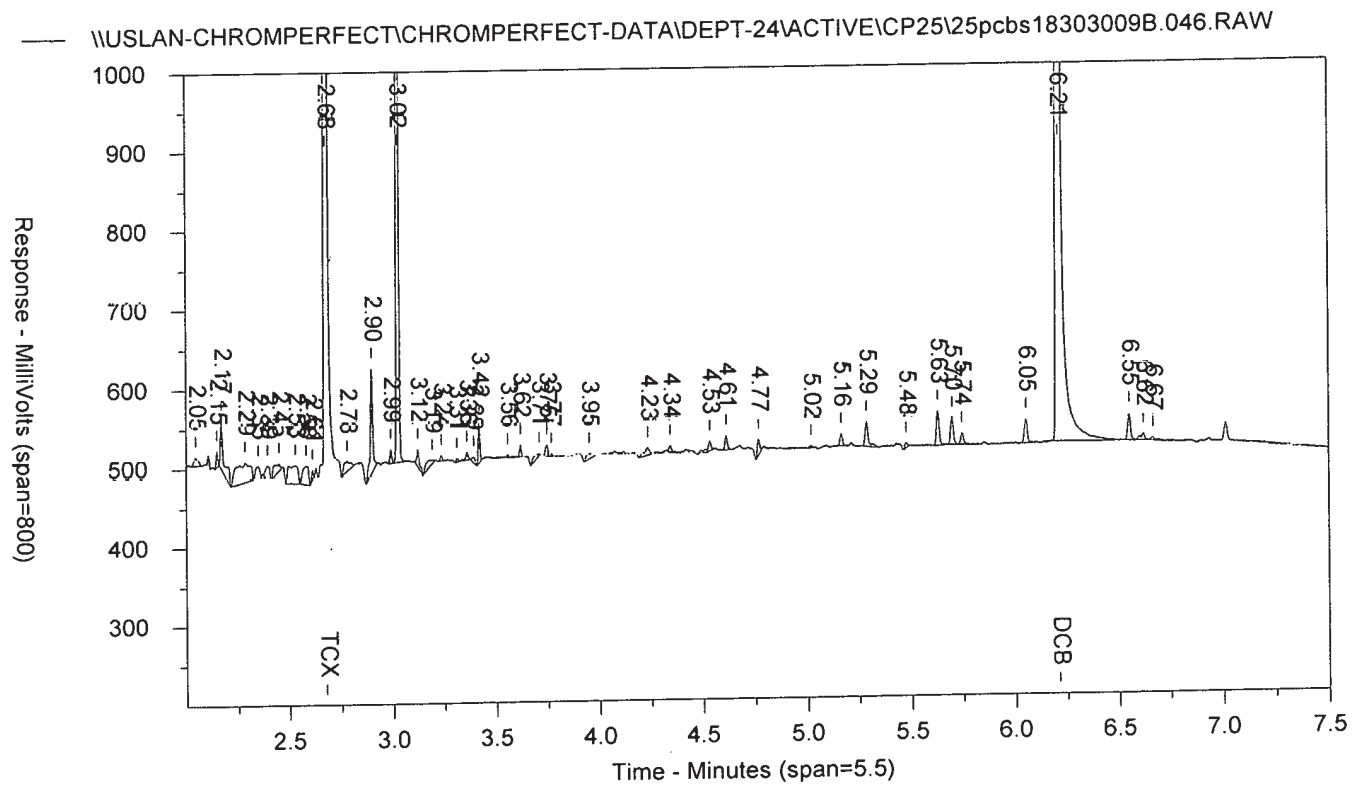
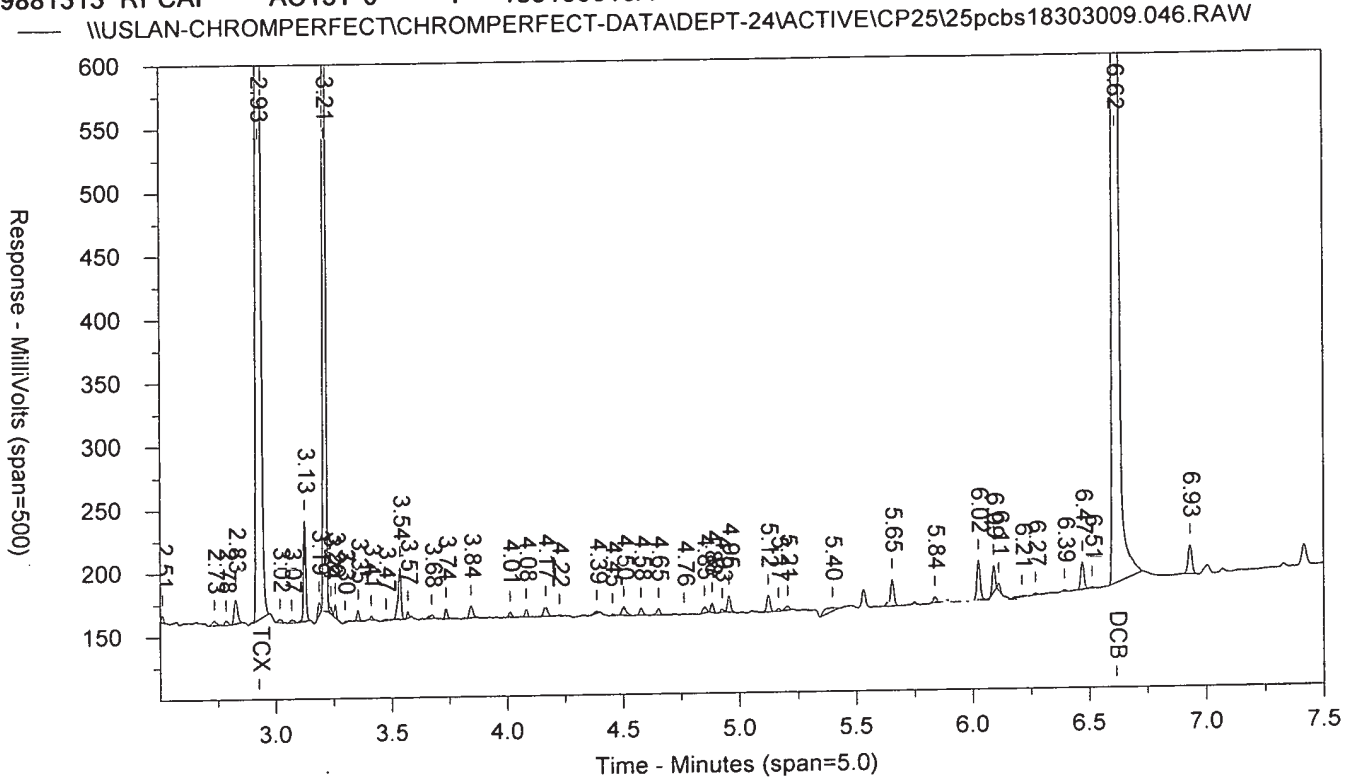
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9881313 RI CAF AC15T-6 T 183100010A 10591 SW-846 8082A



Standards Data

Polychlorinated Biphenyls (PCBs)

Eurofins Lancaster Laboratories
CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP25\25pcbs18303001.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25

Number of Entries: 109

<u>Samplename</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
1 CONDITIONER	1	MISC	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	
2 CONDITIONER	2	MISC	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	
3 CONDITIONER	3	MISC	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	
4 CONDITIONER	4	MISC	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	
5 IBLKX1824C	5	PIBLK	FR	EPT-24\ACTIVE\CP25\25PCBS.MET	1000	10	1	0	1830299999	10227
6 EVALX1824B	6	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
7 AR1611824D	7	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	1	1830299999	10227
8 AR1621824D	8	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	2	1830299999	10227
9 AR1631824D	9	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	3	1830299999	10227
10 AR1641824D	10	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	4	1830299999	10227
11 AR1651824D	11	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	5	1830299999	10227
12 AR1661824C	12	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	6	1830299999	10227
13 AR4811824C	13	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
14 AR4821824C	14	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
15 AR4831824C	15	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
16 AR4841824C	16	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
17 AR4851824C	17	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
18 AR4861824C	18	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
19 AR5411824C	19	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
20 AR5421824C	20	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
21 AR5431824C	21	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
22 AR5441824C	22	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
23 AR5451824C	23	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
24 AR5461824C	24	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
25 AR6241824B	25	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
26 AR6841824B	26	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
27 AR2141824E	27	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
28 AR3241824D	28	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
29 AR4241824E	29	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
30 AR16XX1824B	30	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
31 MD16X1824E	31	ICAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
32 IC16X1824D	32	CCAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
33 IC48X1824C	33	CCAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
34 IC54X1824C	34	CCAL	AA	EPT-24\ACTIVE\CP25\25PCBS.MET	1	1	1	0	1830299999	10227
35 BLANKA 10/26/18 CAF	35	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182990006A	10591
36 LCSA 10/26/18 CAF	36	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182990006A	10591
37 LCSDA 10/26/18 CAF	37	LCSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182990006A	10591
38 9868586 CAF	38	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	223	2	1	0	182990006A	10591
39 BLANKA 10/26/18 ACF	39	BLK	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30	10	1	0	182980037A	10885
40 LCSA 10/26/18 ACF	40	LCS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30	10	1	0	182980037A	10885
41 9863842 ACF DF20	41	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.3	200	1	0	182980037A	10885
42 BLANKA 10/26/18 ACF	42	BLK	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30	10	1	0	182980034A	10885
43 LCSA 10/26/18 ACF	43	LCS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30	10	1	0	182980034A	10885
44 IBLKX1824C	44	PIBLK	FS	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1830299999	10227
45 AR1641824D	45	CCAL	GU	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1830299999	10227
46 9865786 ACF	46	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.08	10	1	0	182980034A	10885
47 9865786MS ACF	47	MS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.24	10	1	0	182980034A	10885
48 9865786MSD ACF	48	MSD	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.4	10	1	0	182980034A	10885
49 9865977 ACF	49	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.04	10	1	0	182980034A	10885
50 9865977 ACF DF5	50	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.04	50	1	0	182980034A	10885



Eurofins Lancaster Laboratories
CHROM PERFECT SEQUENCE FILE

Sequence File: \\Uslan-chromperfect\chromperfect-data\Dept-24\Active\CP25\25pcbs18303001.seq

Chromatography Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25

Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25

Number of Entries: 109

<u>Samplename</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
51 9865978 ACF	51	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.35	10	1	0	182980034A	10885
52 9865979 ACF	52	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.27	10	1	0	182980034A	10885
53 9865980 ACF	53	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.3	10	1	0	182980034A	10885
54 9865981 ACF DF50	54	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.05	500	1	0	182980034A	10885
55 9865982 ACF DF50	55	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.01	500	1	0	182980034A	10885
56 9865983 ACF	56	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.5	10	1	0	182980034A	10885
57 9865984 ACF	57	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.07	10	1	0	182980034A	10885
58 9865985 ACF DF10	58	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.04	100	1	0	182980034A	10885
59 9865986 ACF	59	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.15	10	1	0	182980034A	10885
60 9865987 ACF	60	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.23	10	1	0	182980034A	10885
61 9865988 ACF	61	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.45	10	1	0	182980034A	10885
62 9865989 ACF	62	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.47	10	1	0	182980034A	10885
63 9865990 ACF	63	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.33	10	1	0	182980034A	10885
64 9865991 ACF DF20	64	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.32	200	1	0	182980034A	10885
65 AR1641824D	65	CCAL	GV	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1830299999	10227
66 IBLKX1824C	66	PIBLK	FT	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1830299999	10227
67 9865992 ACF DF5	67	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.35	50	1	0	182980034A	10885
68 9865993 ACF	68	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.36	10	1	0	182980034A	10885
69 9865994 ACF	69	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.32	10	1	0	182980034A	10885
70 9865995 ACF	70	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30.29	10	1	0	182980034A	10885
71 AR1641824D	71	CCAL	GW	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1830299999	10227
72 IBLKX1824C	72	PIBLK	FU	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1830299999	10227
73 BLANKA 10/25/18 RI C	73	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182970032A	10227
74 LCSA 10/25/18 RI CAF	74	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182970032A	10227
75 9860354 RI CAF	75	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	223	2	1	0	182970032A	10227
76 9860355 RI CAF	76	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	225	2	1	0	182970032A	10227
77 9860356MS RI CAF	77	MS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	224	2	1	0	182970032A	10227
78 9860357MSD RI CAF	78	MSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	248	2	1	0	182970032A	10227
79 9861761 RI CAF	79	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	198	2	1	0	182970032A	10227
80 9861762 RI CAF	80	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	233	2	1	0	182970032A	10227
81 9861763 RI CAF	81	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	248	2	1	0	182970032A	10227
82 AR1641824D	82	CCAL	GX	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1830299999	10227
83 IBLKX1824C	83	PIBLK	FV	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1830299999	10227
84 BLANKA 10/23/18 RI C	84	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182960012A	10227
85 LCSA 10/23/18 RI CAF	85	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182960012A	10227
86 LCSDA 10/23/18 RI CA	86	LCSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182960012A	10227
87 9854342 RI CAF	87	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	192	2	1	0	182960012A	10227
88 9854344 RI CAF	88	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	243	2	1	0	182960012A	10227
89 9854345 RI CAF	89	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	200	2	1	0	182960012A	10227
90 BLANKA 10/25/18 RI C	90	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182970031A	10227
91 LCSA 10/25/18 RI CAF	91	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182970031A	10227
92 LCSDA 10/25/18 RI CA	92	LCSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	182970031A	10227
93 AR1641824D	93	CCAL	GY	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1830299999	10227
94 IBLKX1824C	94	PIBLK	FW	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1830299999	10227
95 9859872 RI CAF	95	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	243	2	1	0	182970031A	10227
96 9859873 RI CAF	96	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	247	2	1	0	182970031A	10227
97 9859874 RI CAF	97	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	246	2	1	0	182970031A	10227
98 9859875 RI CAF	98	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	240	2	1	0	182970031A	10227
99 9861917 RI AF	99	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	238	2	1	0	182980007A	10591
100 9861918 RI AF	100	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	245	2	1	0	182980007A	10591

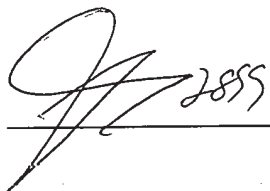


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CHROM PERFECT SEQUENCE FILE

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 Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25
 Number of Entries: 109

<u>Samplename</u>	<u>VP Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
101 9861919 RI AF	101 T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	235	2	1 0		182980007A	10591
102 9861920 RI AF	102 T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	223	2	1 0		182980007A	10591
103 9861921 RI AF	103 T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	247	2	1 0		182980007A	10591
104 9861922 RI AF	104 T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1 0		182980007A	10591
105 AR1641824D	105 CCAL	GZ	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1 0		1830299999	10227
106 IBLKX1824C	106 PIBLK	FX	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1 0		1830299999	10227
107 9866412 RI ACF DF10	107 T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.12	100	1 0		182970043A	10592
108 AR1641824D	108 CCAL	HA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1 0		1830299999	10227
109 IBLKX1824C	109 PIBLK	FY	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1 0		1830299999	10227

MW 15249
 10/31/18

Set-up by: 
 10/31/2018

Date: 31 Oct 18



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CHROM PERFECT SEQUENCE FILE

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 Number of Entries: 102

<u>Samplename</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
1 CONDITIONER	1	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
2 CONDITIONER	2	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
3 CONDITIONER	3	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
4 CONDITIONER	4	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
5 AR1641824D	5	CCAL	LL	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
6 IBLKX1824C	6	PIBLK	NV	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
7 AR4241824E	7	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
8 AR4841824C	8	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
9 AR5441824C	9	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
10 AR6241824B	10	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
11 AR6841824B	11	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
12 BLANKA 11/6/18 RI CA	12	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183100010A	10591
13 LCSA 11/6/18 RI CAF	13	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183100010A	10591
14 LCSDA 11/6/18 RI CAF	14	LCSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183100010A	10591
15 BLANKA 11/6/18 RI AC	15	BLK	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30	10	1	0	183100002A	10592
16 LCSA 11/6/18 RI ACF	16	LCS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	30	10	1	0	183100002A	10592
17 AR1641824D	17	CCAL	LM	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
18 IBLKX1824C	18	PIBLK	NW	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
19 9883664 RI CAF	19	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	246	2	1	0	183100010A	10591
20 9883671 RI CAF	20	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	247	2	1	0	183100010A	10591
21 9883739 RI CAF	21	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	242	2	1	0	183100010A	10591
22 AR1641824D	22	CCAL	LN	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
23 IBLKX1824C	23	PIBLK	NX	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
24 9863076 RI ACF DF20	24	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.1	200	1	0	183100002A	10592
25 9863085 RI ACF DF20	25	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.1	200	1	0	183100002A	10592
26 9864579 RI ACF DF200	26	T	AD	EPT-24\ACTIVE\CP25\25PCBA.MET	30.2	2000	1	0	183100002A	10592
27 9864579 RI ACF DF500	27	T	AE	EPT-24\ACTIVE\CP25\25PCBA.MET	30.2	5000	1	0	183100002A	10592
28 9864579MS RI ACF DF2	28	MS	AD	EPT-24\ACTIVE\CP25\25PCBA.MET	30	2000	1	0	183100002A	10592
29 9864579MS RI ACF DF5	29	MS	AE	EPT-24\ACTIVE\CP25\25PCBA.MET	30	5000	1	0	183100002A	10592
30 9864579MSD RI ACF DF	30	MSD	AD	EPT-24\ACTIVE\CP25\25PCBA.MET	30	2000	1	0	183100002A	10592
31 9864579MSD RI ACF DF	31	MSD	AE	EPT-24\ACTIVE\CP25\25PCBA.MET	30	5000	1	0	183100002A	10592
32 AR1641824D	32	CCAL	LO	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
33 IBLKX1824C	33	PIBLK	NY	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
34 CONDITIONER	34	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
35 CONDITIONER	35	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
36 CONDITIONER	36	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
37 CONDITIONER	37	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
38 AR1641824D	38	CCAL	LW	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
39 IBLKX1824C	39	PIBLK	OG	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
40 9877301 ACF DF20	40	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30	200	1	0	183100002A	10592
41 9872276R RI CAF	41	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	247	2	1	0	183100010A	10591
42 9874781R RI CAF	42	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	266	2	1	0	183100010A	10591
43 9874782R RI CAF	43	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	269	2	1	0	183100010A	10591
44 9881309 RI CAF	44	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	246	2	1	0	183100010A	10591
45 9881310 RI CAF	45	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	247	2	1	0	183100010A	10591
46 9881313 RI CAF	46	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	248	2	1	0	183100010A	10591
47 9882647 RI CAF	47	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183100010A	10591
48 9882648 RI CAF	48	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	248	2	1	0	183100010A	10591
49 9882666 RI CAF	49	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183100010A	10591
50 AR1641824D	50	CCAL	LP	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227



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CHROM PERFECT SEQUENCE FILE

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Number of Entries: 102

<u>Samplename</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
51 IBLKX1824C	51	PIBLK	NZ	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
52 9882403 RI ACF DF5	52	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	30.03	50	1	0	183090028A	10736
53 BLANKA 11/6/18 RI CA	53	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	183100020A	10591
54 LCSA 11/6/18 RI CAF	54	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	183100020A	10591
55 LCSDA 11/6/18 RI CAF	55	LCSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	183100020A	10591
56 9882093 RI CAF	56	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	1064	10	1	0	183100020A	10591
57 AR1641824D	57	CCAL	LQ	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
58 IBLKX1824C	58	PIBLK	OA	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
59 AR4241824E	59	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
60 AR4841824C	60	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
61 AR5441824C	61	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
62 AR6241824B	62	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
63 AR6841824B	63	MISC	AA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	
64 BLANKA 11/7/18 CAF	64	BLK	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183110022A	10591
65 LCSA 11/7/18 CAF	65	LCS	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183110022A	10591
66 LCSDA 11/7/18 CAF	66	LCSD	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	250	2	1	0	183110022A	10591
67 9885050 CAF	67	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	219	2	1	0	183110022A	10591
68 9885439 CAF	68	T	AC	EPT-24\ACTIVE\CP25\25PCBA.MET	239	2	1	0	183110022A	10591
69 AR1641824D	69	CCAL	LX	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
70 IBLKX1824C	70	PIBLK	OH	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
71 BLANKA 11/7/18 ACF	71	BLK	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	250	5	1	0	183110011A	14188
72 LCSA 11/7/18 ACF	72	LCS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	250	5	1	0	183110011A	14188
73 9884738 ACF	73	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	223	5	1	0	183110011A	14188
74 9884739 ACF	74	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	216	5	1	0	183110011A	14188
75 9884740 ACF	75	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	227	5	1	0	183110011A	14188
76 9884741MS ACF	76	MS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	223	5	1	0	183110011A	14188
77 9884742MSD ACF	77	MSD	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	229	5	1	0	183110011A	14188
78 9886720 ACF	78	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	213	5	1	0	183110011A	14188
79 9886721 ACF	79	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	220	5	1	0	183110011A	14188
80 9886722 ACF	80	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	223	5	1	0	183110011A	14188
81 AR1641824D	81	CCAL	LY	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
82 IBLKX1824C	82	PIBLK	OI	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
83 9886723 ACF	83	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	222	5	1	0	183110011A	14188
84 9886724 ACF	84	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	196	5	1	0	183110011A	14188
85 BLANKA 11/7/18 ACF	85	BLK	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	250	5	1	0	183110012A	14188
86 LCSA 11/7/18 ACF	86	LCS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	250	5	1	0	183110012A	14188
87 9881326R ACF	87	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	313	5	1	0	183110012A	14188
88 9881330R ACF	88	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	313	5	1	0	183110012A	14188
89 9881669 ACF	89	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	249	5	1	0	183110012A	14188
90 9882130 ACF	90	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	232	5	1	0	183110012A	14188
91 9884744 ACF	91	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	222	5	1	0	183110012A	14188
92 9884745MS ACF	92	MS	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	213	5	1	0	183110012A	14188
93 AR1641824D	93	CCAL	LZ	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
94 IBLKX1824C	94	PIBLK	OJ	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227
95 9884746MSD ACF	95	MSD	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	200	5	1	0	183110012A	14188
96 9884748 ACF	96	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	212	5	1	0	183110012A	14188
97 9884749 ACF	97	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	224	5	1	0	183110012A	14188
98 9886725 ACF	98	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	215	5	1	0	183110012A	14188
99 9886726 ACF	99	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	205	5	1	0	183110012A	14188
100 9886727 ACF	100	T	AB	EPT-24\ACTIVE\CP25\25PCBA.MET	214	5	1	0	183110012A	14188



Eurofins Lancaster Laboratories
CHROM PERFECT SEQUENCE FILE

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Method Directory: \\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25
Number of Entries: 102

<u>Samplename</u>	<u>VP</u>	<u>Code</u>	<u>ID</u>	<u>Method</u>	<u>Samp Amt</u>	<u>DF</u>	<u>Int Std</u>	<u>C</u>	<u>Batch Number</u>	<u>Analysis</u>
101 AR1641824D	101	CCAL	MA	EPT-24\ACTIVE\CP25\25PCBA.MET	1	1	1	0	1831199999	10227
102 IBLKX1824C	102	PIBLK	OK	EPT-24\ACTIVE\CP25\25PCBA.MET	1000	10	1	0	1831199999	10227

cm 13786 11/9/18



LANCASTER LABORATORIES

Sample Number: IBLKX1824C FRPIBLKFR PIBLK1830299999 10227 SW-846 8082
Injected On: 10/30/2018 5:51:47 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.005.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		11434	20635
2.15		2385	4432
2.22		12836	14621
2.311		7434	4512
2.329		3536	2159
2.375		2941	3408
2.422		15940	15828
2.493		2570	3313
2.57		2963	3022
2.673		1307	1386
2.776		66264	63177
2.824		11403	12927
2.924	TCX	3110338	2238045
3.011		1000	505
3.069		1880	1488
3.124		37798	25255
3.187		12458	12674
3.254		6144	4034
3.374		880	1406
3.398		1508	1000
3.428		2299	2325
3.524		12447	13396
3.568		6311	4395
3.667		7429	5868
3.734		919	940
3.77		3755	4206
3.839		12499	14315
3.997		1843	2185
4.049		1295	1197
4.12		2098	2209
4.162		13049	16080
4.248		1406	2191
4.401		1494	2442
4.497		16183	25451
4.57		1631	1211
4.846		15972	21442
4.879		7312	5807
4.923		5751	5670
5.12		11932	11289
5.194		15756	23323
5.528		25430	66063
5.652		14104	14346
5.83		16534	24578
6.022		17385	16476
6.087		12764	9383
6.112		12636	14518
6.289		23304	141593
6.382		9432	13285
6.467		23068	24159
6.577		2324	1717
6.612	DCB	2360066	2622250
6.883		7156	11150

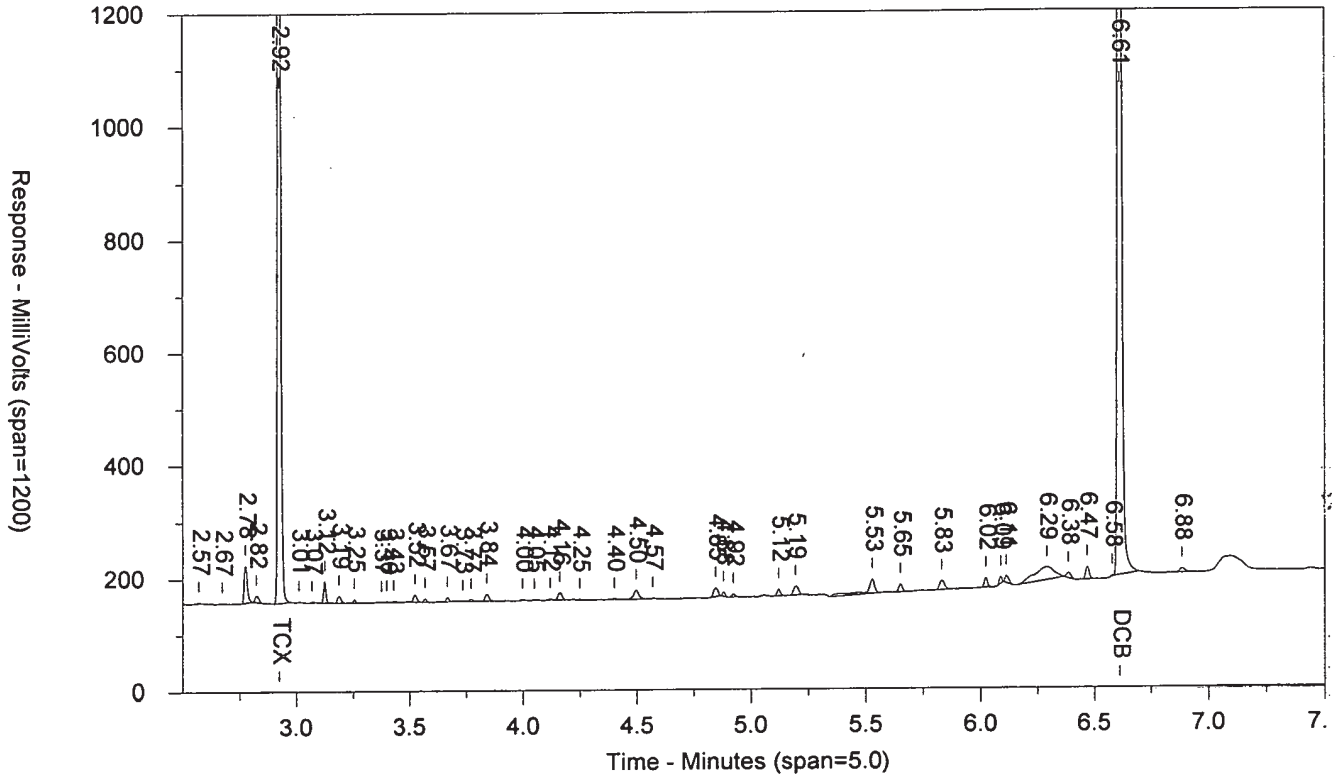
LANCASTER LABORATORIES

Sample Number: IBLKX1824C FRPIBLKFR PIBLK1830299999 10227 SW-846 8082
Injected On: 10/30/2018 5:51:47 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.005.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

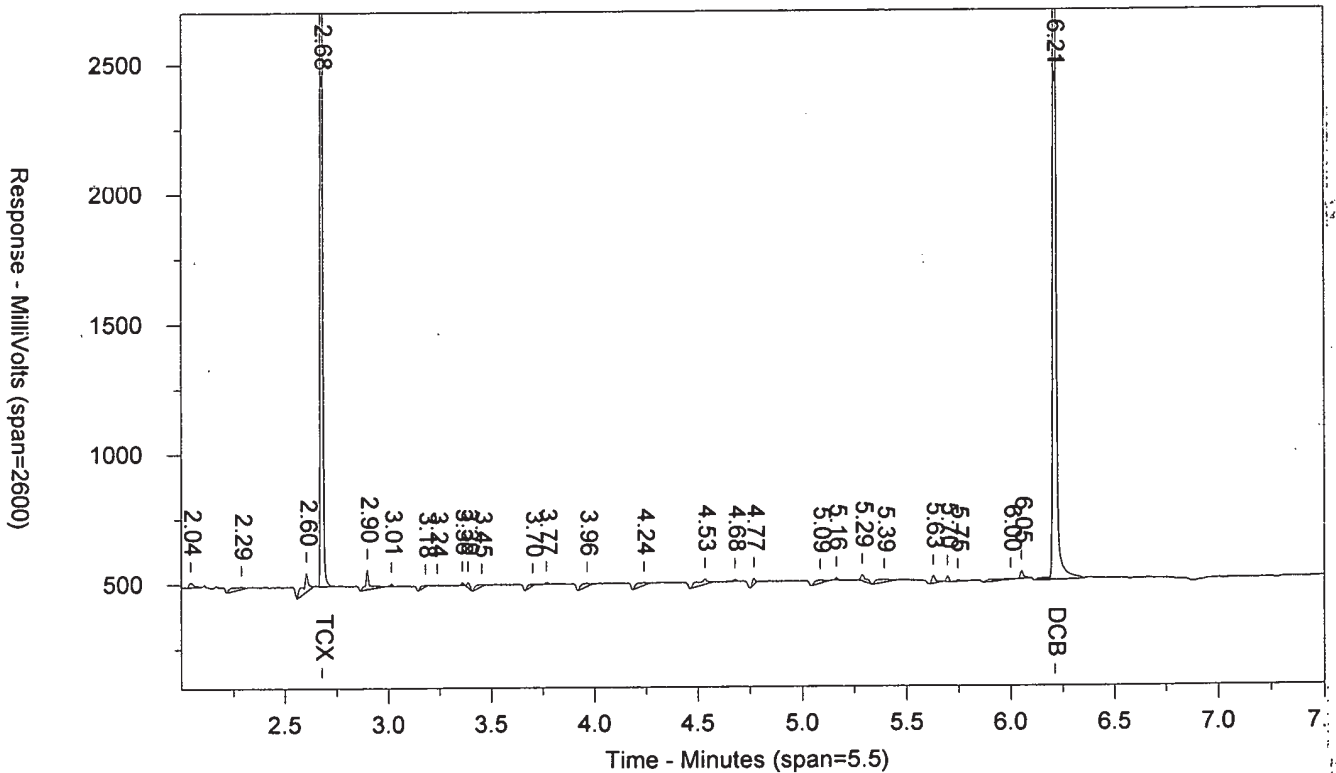
RT B	Compound B	Height B	Area B
2.044		18424	31519
2.289		8679	49065
2.603		72378	126863
2.678	TCX	4979812	3079502
2.898		76290	101090
3.015		11722	6797
3.182		4679	17883
3.239		2928	2308
3.36		11992	7347
3.387		20279	19932
3.454		7092	29779
3.7		6150	21475
3.768		8864	7115
3.964		12199	42675
4.239		12315	50715
4.534		20437	74706
4.677		7959	7399
4.768		24277	22000
5.088		12889	44048
5.164		9666	8876
5.287		25313	41819
5.392		11109	55981
5.628		29695	36891
5.696		21795	18285
5.745		7778	7399
5.999		3814	49473
6.052		31117	33124
6.211	DCB	3424385	3441286

IBLKX1824C FRPBLKFR PIBLK1830299999 10227 SW-846 808

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.005.RAW



LANCASTER LABORATORIES

Sample Number: IBLKX1824C FRPIBLKFR PIBLK1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 5:51:47 PM Sample Weight: 1000
 Instrument ID: CP25-18274 Dilution Factor: 10
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.924	3110338	.2	TCX	2.678	4979812	.195	TCX
6.612	2360066	.184	DCB	6.211	3424385	.182	DCB

Files:
 Area File: 25pcbs18303001.005.RAW
 Area File: 25pcbs18303001B.005.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
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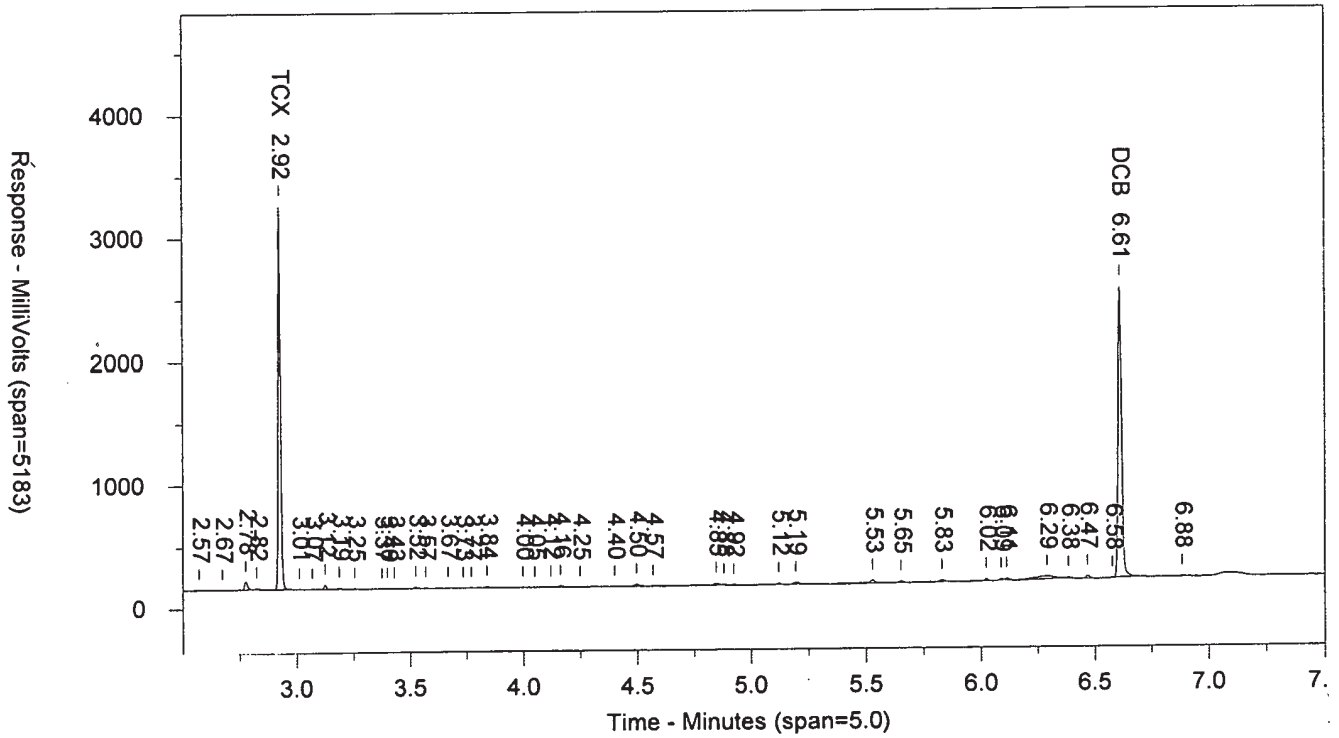
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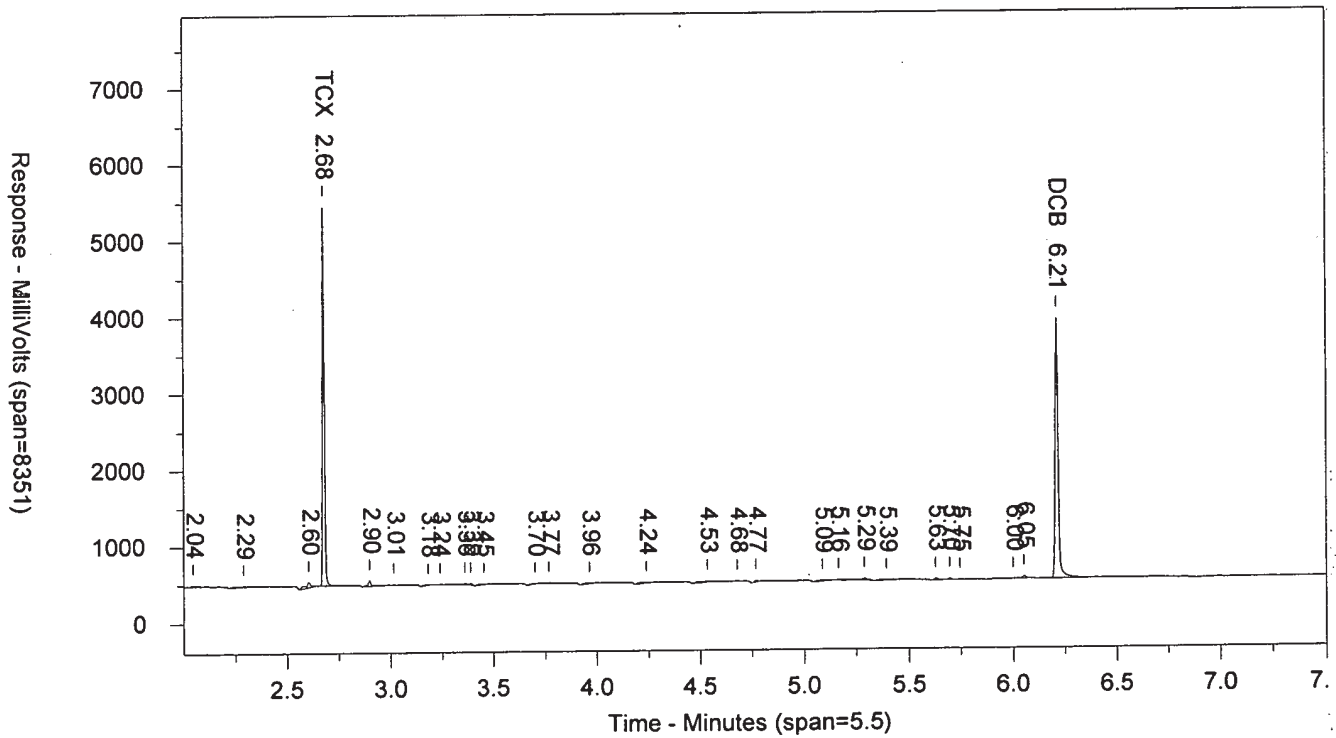
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SW-846 808:

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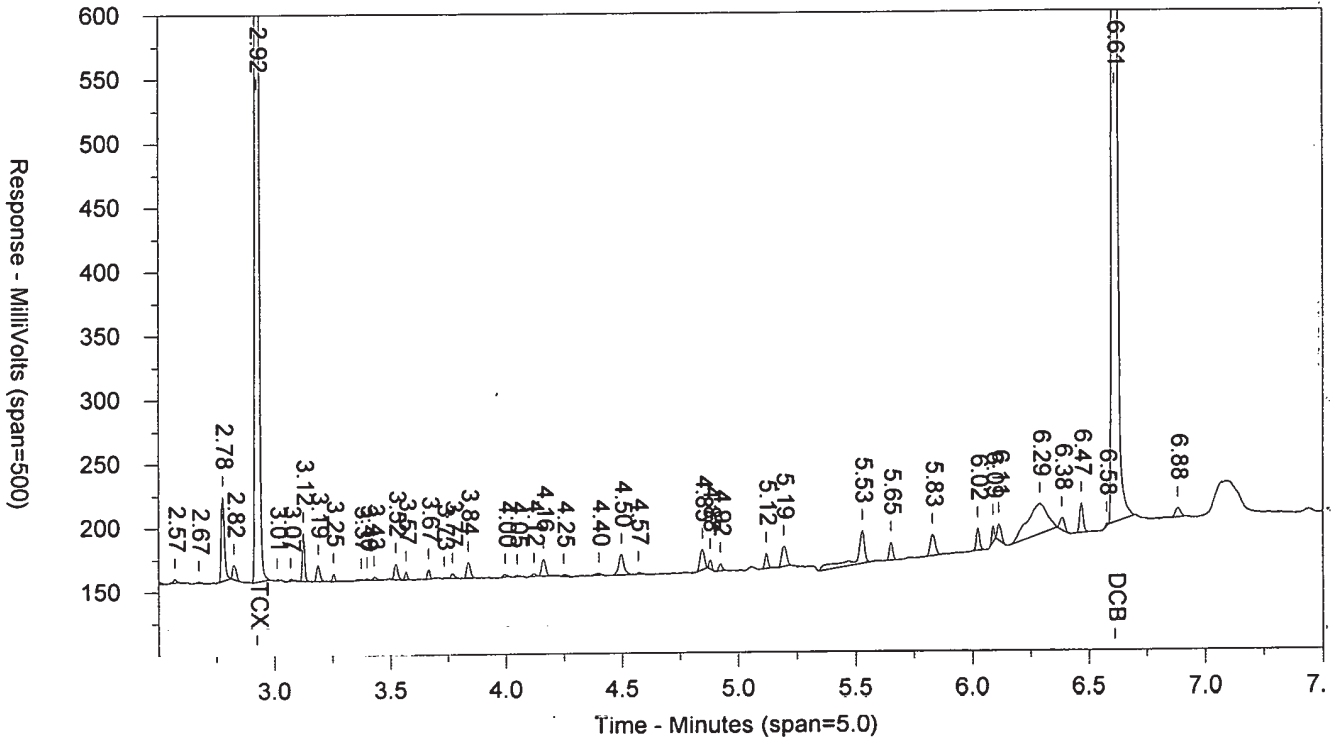


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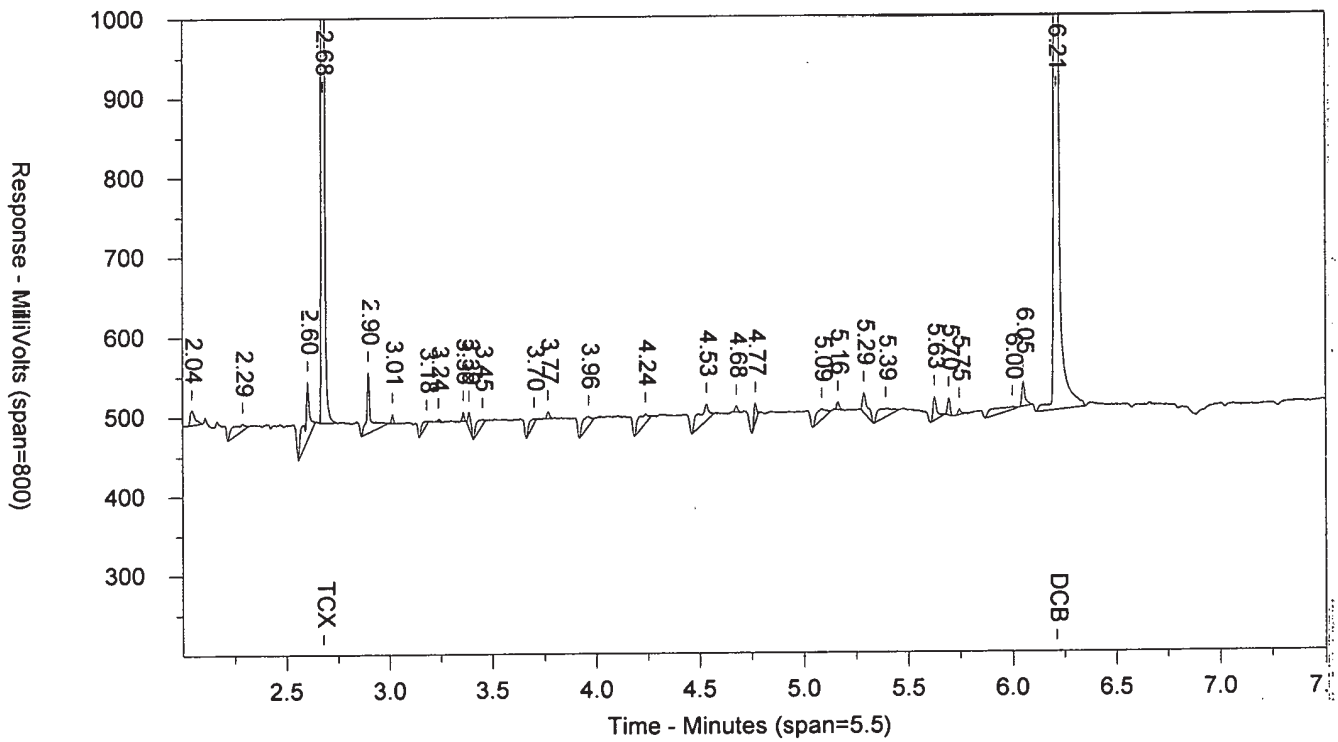


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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: EVALX1824B AAEVALXAA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:02:40 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.006.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		7451	9745
2.123		4849	2580
2.219		12931	16951
2.311		17955	11336
2.339		31258	20660
2.378		3177	4076
2.425		2262	2153
2.51		62177	45962
2.554		2166	1287
2.569		1699	1141
2.677		1209	1221
2.776		7872	6237
2.808		763	595
2.832		11048	8172
2.925	TCX	3014307	2245220
3.012		2939	2730
3.072		1129	941
3.125		37994	26867
3.211		2024021	1382482
3.254		25736	3611
3.313		2376	1661
3.355		1199	942
3.411		1735166	1175197
3.441		14914	9881
3.493		3065	2318
3.534		729113	514851
3.565		7896	5372
3.629		1321	978
3.666		18139	15277
3.703		22207	17292
3.733		4784	4020
3.769		2691	2176
3.812		117433	93531
3.843		6560	5088
3.923		1863	1277
3.954		1540	1168
3.992		3344	3706
4.06		2467	1701
4.09		31017	28190
4.139		2595	1776
4.167		25926	21885
4.208		13415	8299
4.224		55481	38227
4.301		833	1149
4.384		378644	361385
4.468		23181	2627
4.505		99980	11495
4.551		7047	5782
4.574		45878	38477
4.648		7518	5516
4.707		371281	354440
4.809		306367	293211
4.846		4046000	3736172
4.876		32925	17246

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.897		109140	85251
4.926		4693	2815
4.952		1171907	1096247
5.038		49603	70924
5.111		349121	346730
5.187		3357606	3219051
5.272		71187	102038
5.413		682521	845226
5.554		4142425	4004409
5.611		103537	93452
5.645		925399	879149
5.723		6300	7652
5.832		2333	3035
5.927		888	773
6.023		20971	20000
6.087		17047	15046
6.109		2301	1372
6.301		1329	7905
6.333		1895	2057
6.388		1867	1895
6.466		26706	28934
6.578		4850	4001
6.611	DCB	2589863	2824841
6.847		690	1347
6.885		2014	2504

LANCASTER LABORATORIES

Sample Number: EVALX1824B AAEVALXAA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:02:40 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.006.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.045		16268	28847
2.164		8187	9212
2.209		65339	40479
2.379		103842	67320
2.602		28029	104235
2.678	TCX	4952907	3077005
2.897		63950	43296
3.025		3262340	1840573
3.142		4962	2810
3.182		26964	20761
3.236		2651780	1554054
3.265		4519	2035
3.308		6509	4365
3.36		7720	4077
3.388		23512	15323
3.417		1085267	658939
3.473		5074	3062
3.505		2445	2009
3.522		6895	3262
3.54		201885	127788
3.572		7206	3950
3.617		10043	6408
3.653		5822	4686
3.741		6005	10561
3.769		14380	11547
3.842		14833	7241
3.891		4772	2625
3.914		50992	31320
3.935		112020	70156
3.96		10149	8568
4.073		578937	414141
4.15		7146	5225
4.231		81089	89778
4.276		8120	8192
4.338		26123	35744
4.453		477901	385122
4.523		6555046	5212409
4.557		180408	130503
4.612		1724865	1408826
4.66		15476	17369
4.722		78449	97574
4.768		18098	11689
4.796		5398151	4408750
4.86		533923	434488
4.967		59951	52134
5.124		797294	834569
5.229		5752723	5274320
5.283		38531	31322
5.31		57522	44432
5.415		1687089	1508704
5.468		36064	28575
5.629		28298	30483
5.697		29230	24302
5.746		11469	22444

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
6.052		34692	41140
6.211	DCB	3839457	3652620

EVALX1824B

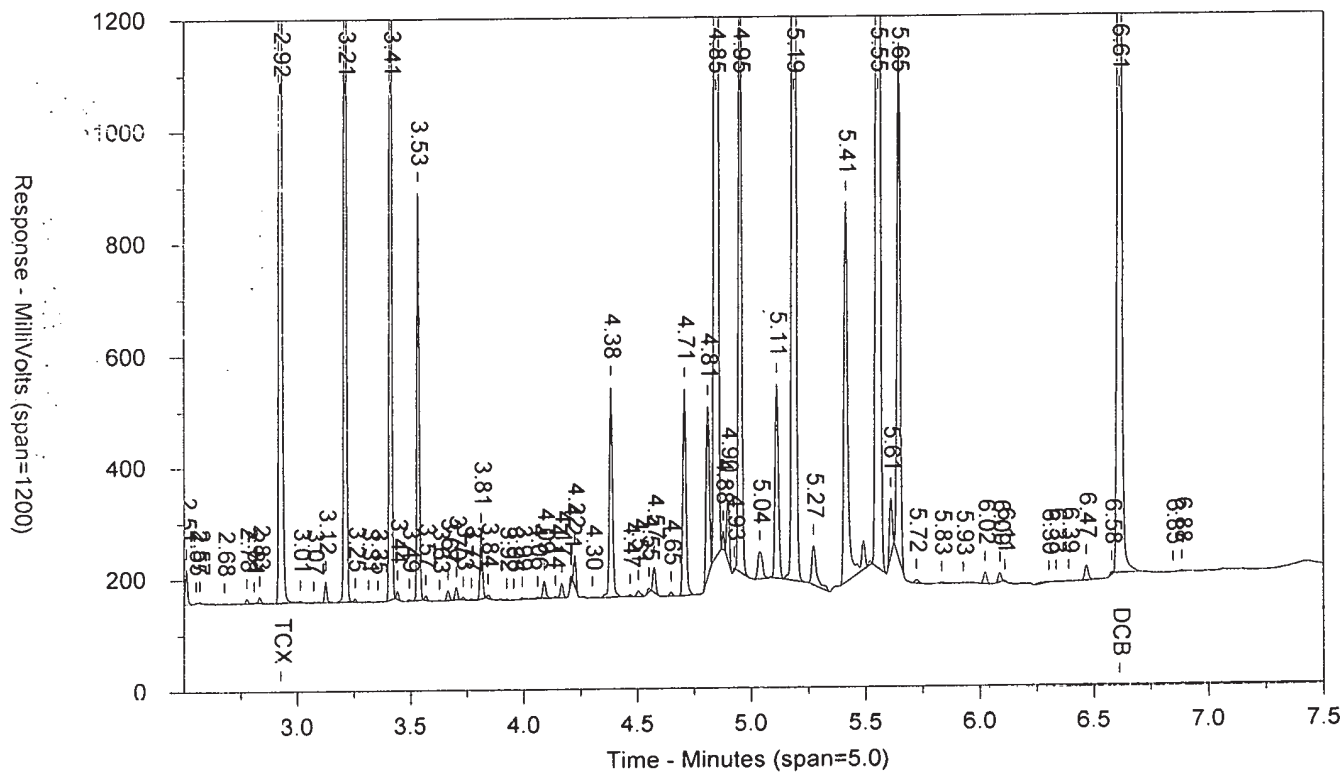
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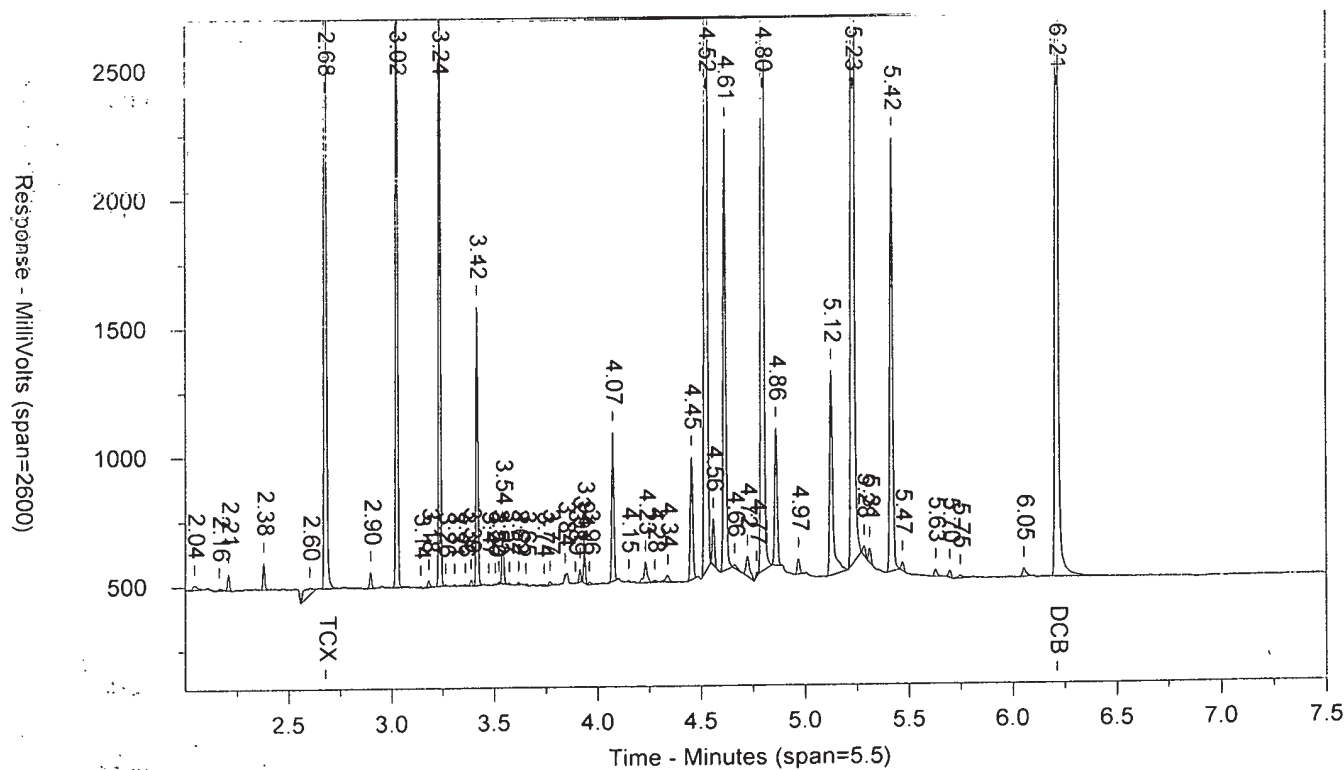
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: EVALX1824B AAEVALXAA ICAL 1830299999 10227
Injected On: 10/30/2018 6:02:40 PM
Instrument ID: CP25-18274
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

SW-846 8082

Sample Weight: 1
Dilution Factor: 1

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	3014307	20.375	TCX	2.678	4952907	20.409	TCX
6.611	2589863	21.724	DCB	6.211	3839457	22.394	DCB

Files:

Area File: 25pcbs18303001.006.RAW
Area File: 25pcbs18303001B.006.RAW
Method A: 25PCBS.MEI
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
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Area File Created On: 10/30/2018 6:11:12 PM
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EVALX1824B

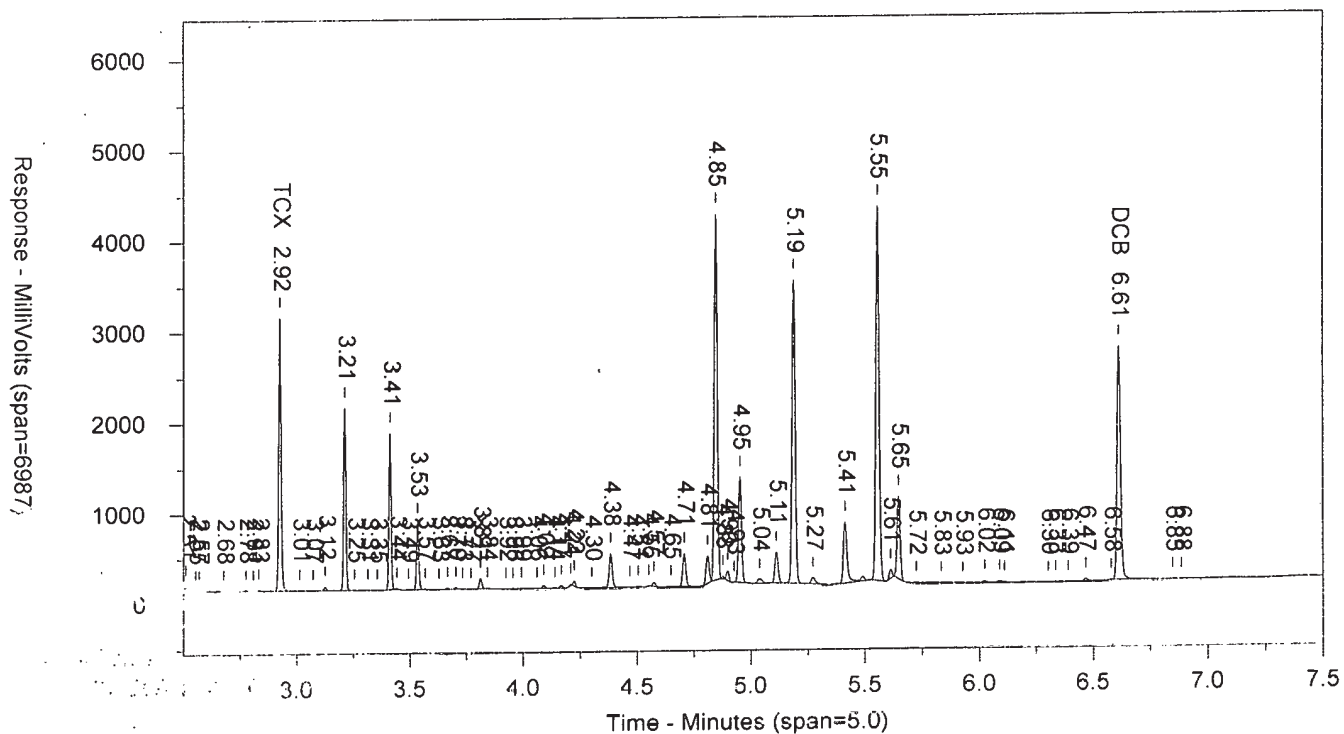
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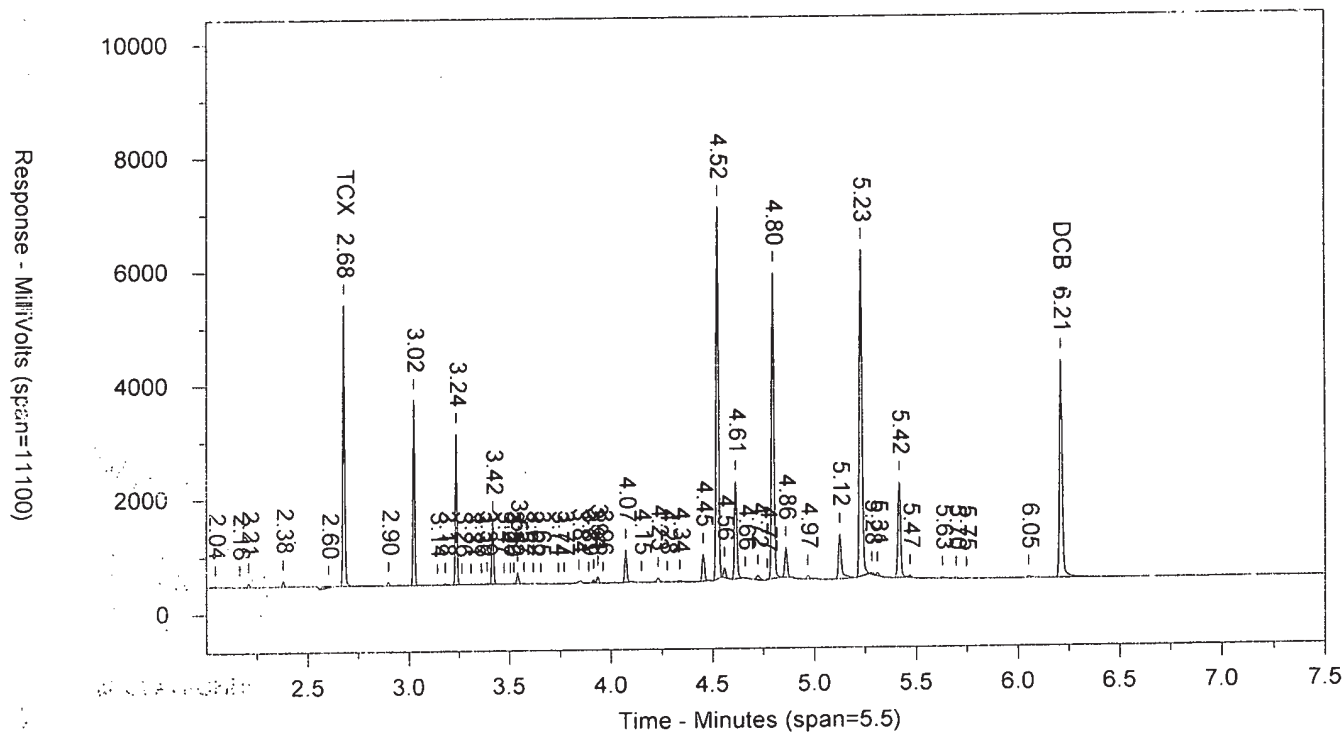
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SW-846 8082

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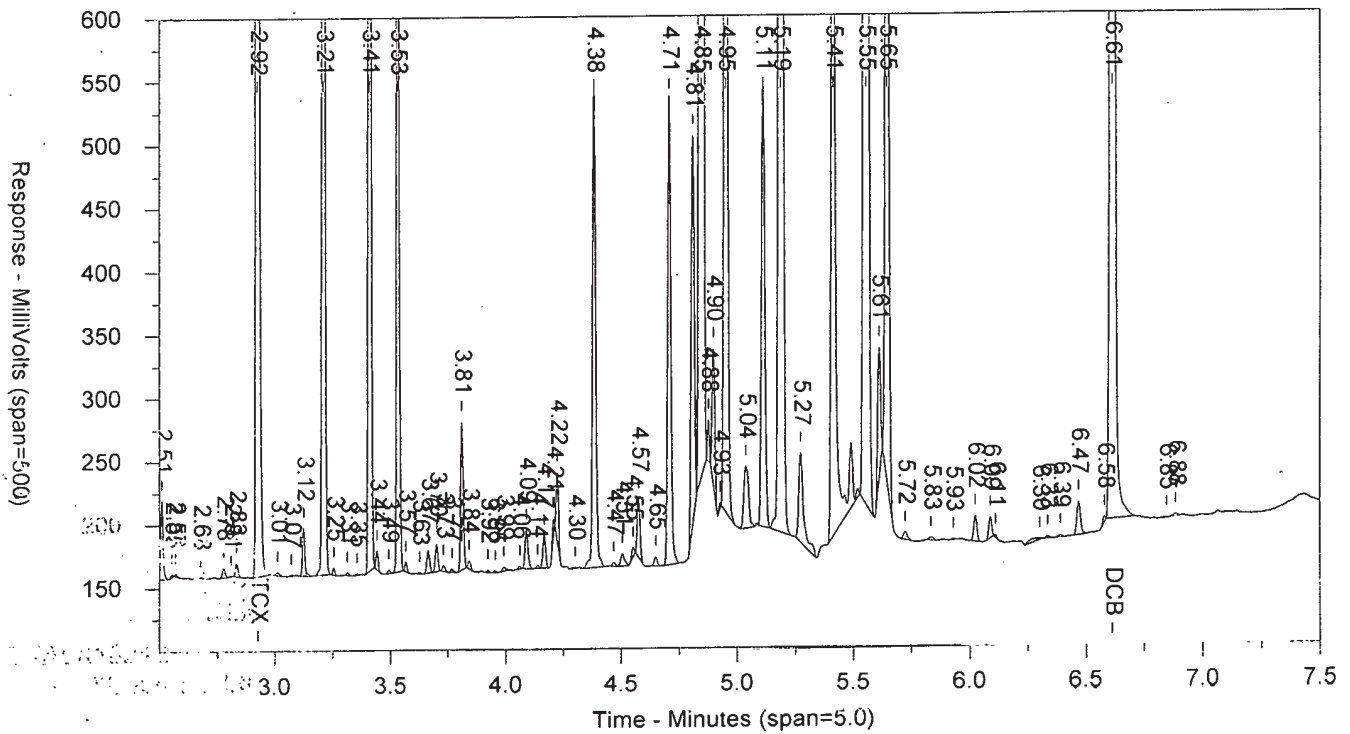
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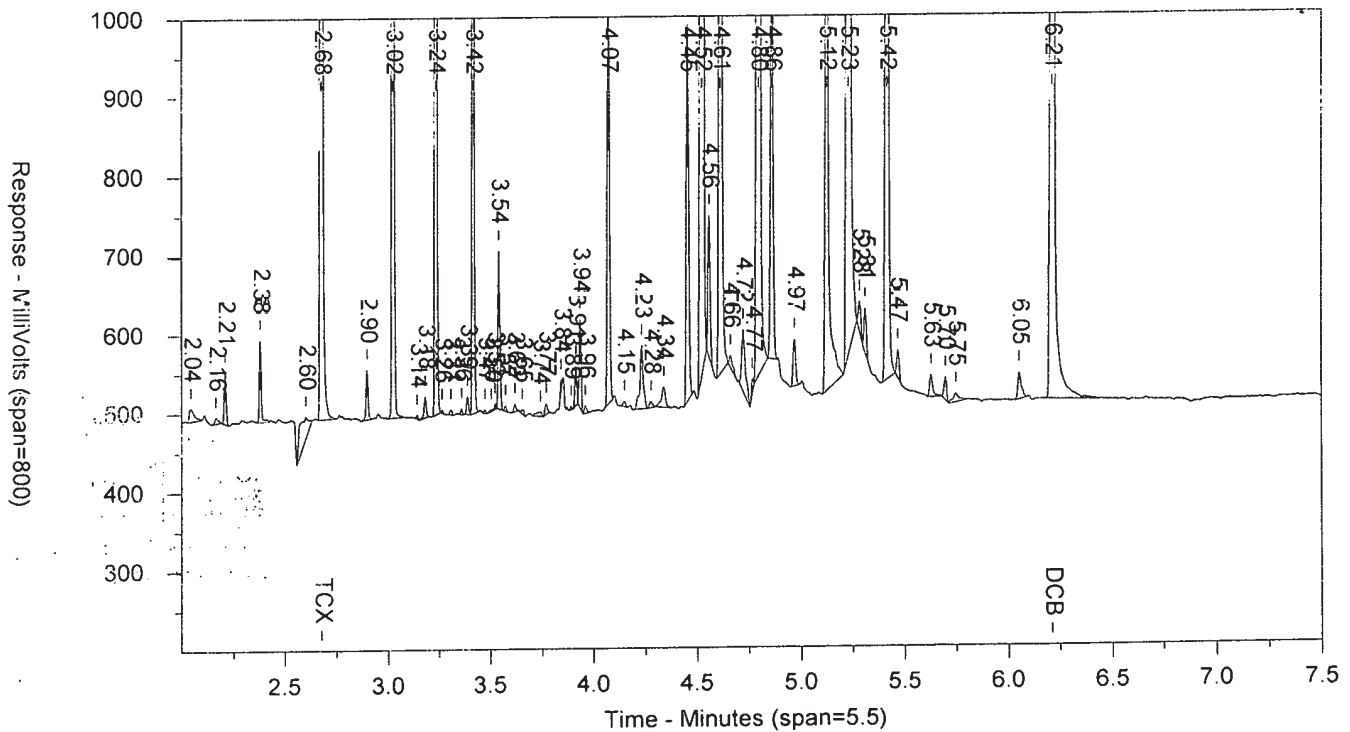
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR1611824D AAAR161AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:13:42 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.007.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.096		8292	14934
2.23		3880	5029
2.312		11023	7991
2.378		2056	2541
2.423		4861	4251
2.495		2423	3696
2.569		4080	5104
2.777		21346	18762
2.827		2732	3053
2.925	TCX	308789	223877
3.078		14841	13800
3.135		15057	13375
3.183		75503	55576
3.211		6329	3208
3.270		8814	6435
3.398		73203	44050
3.414		34786	18006
3.452		7244	4168
3.468		2616	1174
3.484		3276	2220
3.514		90270	74876
3.588		4606	3181
3.624		15563	9264
3.639		7826	3840
3.684		22699	16926
3.694		74837	42198
3.731		105438	82698
3.780		82112	67933
3.83		5206	3373
3.856		62454	46894
3.884		43838	39481
3.905		7590	4181
3.981		67454	51080
4.005		21877	13722
4.035		24597	17381
4.071		65820	69030
4.111		19142	15970
4.16		3622	3789
4.194		4612	3374
4.23		72250	54161
4.25		13864	7754
4.273		15619	11234
4.34		9503	8360
4.384		20466	74945
4.417		1909	1193
4.521		14047	19712
4.575		76052	4168
4.591		14900	10531
4.637		46489	41060
4.682		64414	72206
4.72		13158	9028
4.759		152363	147530
4.804		2812	3428
4.848		43982	44271

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.88		2660	1609
4.906		25920	27515
4.958		183327	243870
5.009		32714	28933
5.052		83246	91831
5.131		16136	21314
5.167		198524	189015
5.19		8152	3641
5.23		108702	102130
5.273		67021	66981
5.372		9444	9663
5.394		104419	96793
5.452		63702	101691
5.577		39719	34960
5.633		288500	323628
5.839		169233	185906
5.877		14036	14800
5.892		23616	17205
6.022		4347	4259
6.087		5275	4133
6.112		33263	31331
6.181		899	818
6.268		85150	87598
6.313		4510	4533
6.39		1445	1311
6.469		23299	23888
6.615	DCB	286269	321234
6.89		975	848

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1611824D AAAR161AA ICAL 183029999 10227 SW-846 8082
Injected On: 10/30/2018 6:13:42 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.007.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.044		14725	38181
2.602		21778	32164
2.678	TCX	500539	314595
2.849		29692	21831
2.909		27396	23886
2.962		124339	80194
3.025		14235	8750
3.074		15407	9928
3.17		107207	53306
3.182		34992	13618
3.223		12724	6325
3.238		14569	11608
3.269		11530	6441
3.294		143547	99257
3.332		8076	5080
3.377		24377	11417
3.391		26580	14661
3.417		6108	2941
3.444		63791	33806
3.453		129650	54863
3.474		6615	2587
3.480		135493	91666
3.563		139771	88793
3.598		101599	62813
3.622		111475	63872
3.64		30578	14822
3.679		2427	2690
3.727		121312	82649
3.751		44750	24436
3.771		52251	32347
3.802		28269	14978
3.819		88712	55857
3.863		35699	27838
3.908		10936	11823
3.934		21850	12840
3.955		135078	89736
3.981		24363	14598
4.021		15834	9693
4.058		106506	78580
4.108		14496	16701
4.205		11035	12500
4.265		26630	19510
4.307		29214	17295
4.326		19388	11110
4.339		66593	38305
4.365		39219	41842
4.419		222537	181802
4.491		23812	16673
4.518		56736	58115
4.56		248288	214205
4.614		11642	9522
4.664		201226	216313
4.719		26849	22422
4.757		49133	43267

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.795		245410	222371
4.828		124962	93340
4.867		87005	73025
4.969		30185	32415
5.02		154875	127122
5.095		86254	79468
5.131		45275	37009
5.161		30329	25741
5.193		10763	6698
5.215		338668	321682
5.29		14497	17359
5.43		81992	87423
5.475		238977	306177
5.63		7687	7359
5.676		7105	5059
5.748		46051	43793
5.854		99761	92543
6.053		31246	36499
6.213	DCB	403092	408402

AR1611824D

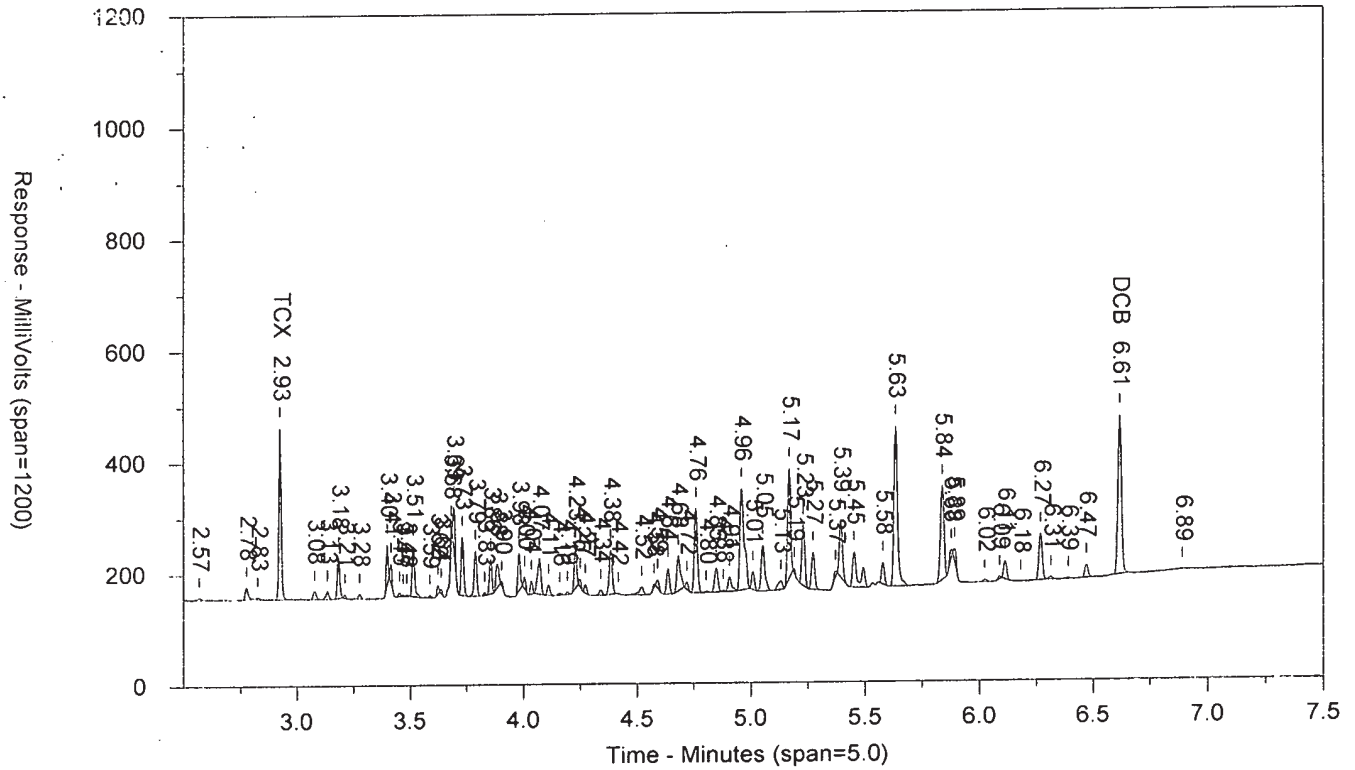
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ICAL 1830299999

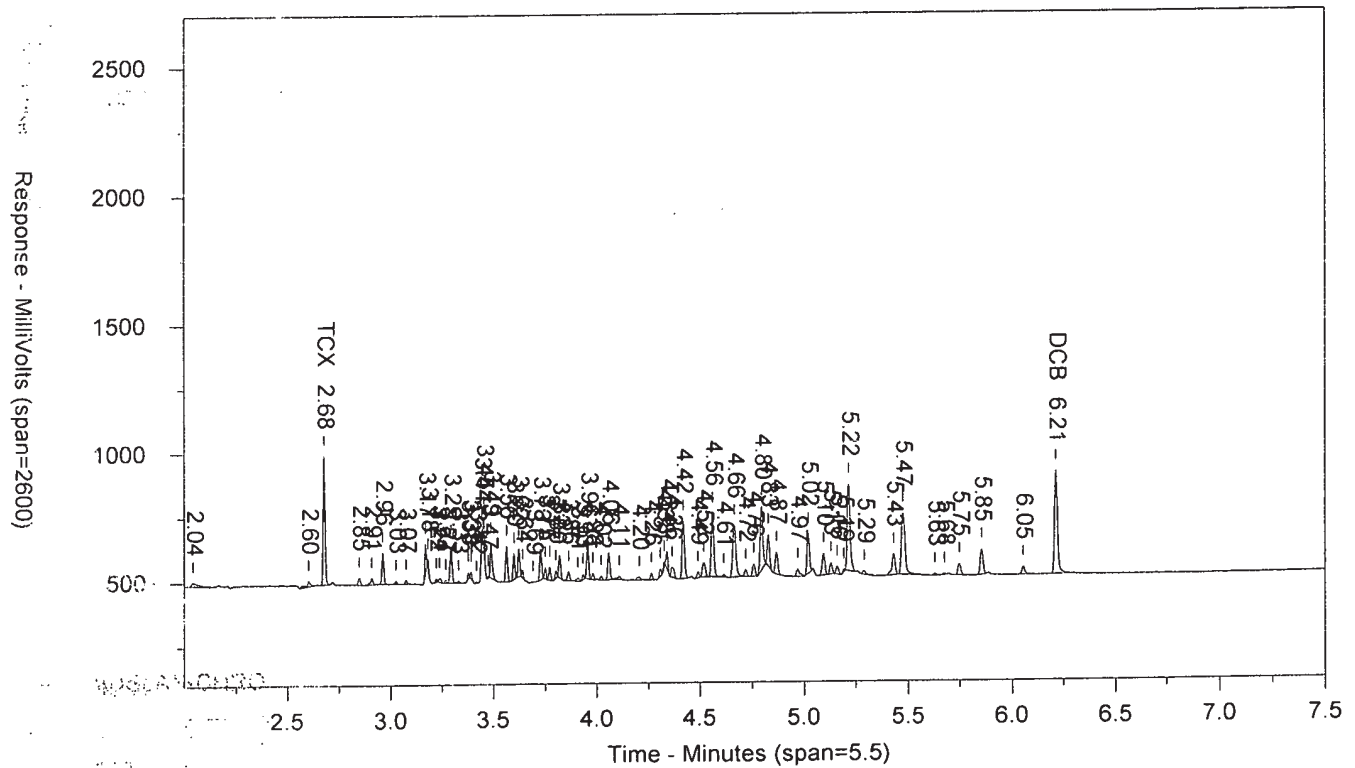
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR1611824D AAAR161AA ICAL 183029999 10227 SW-846 8082
 Injected On: 10/30/2018 6:13:42 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	308789	2.087	TCX	2.678	500539	2.063	TCX
6.615	286269	2.401	DCB	6.213	403092	2.351	DCB

Files:
 Area File: 25pcbs18303001.007.RAW
 Area File: 25pcbs18303001B.007.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 6:22:13 PM
 File Reported On: 10/30/2018 at 6:22:24 PM

AR1611824D

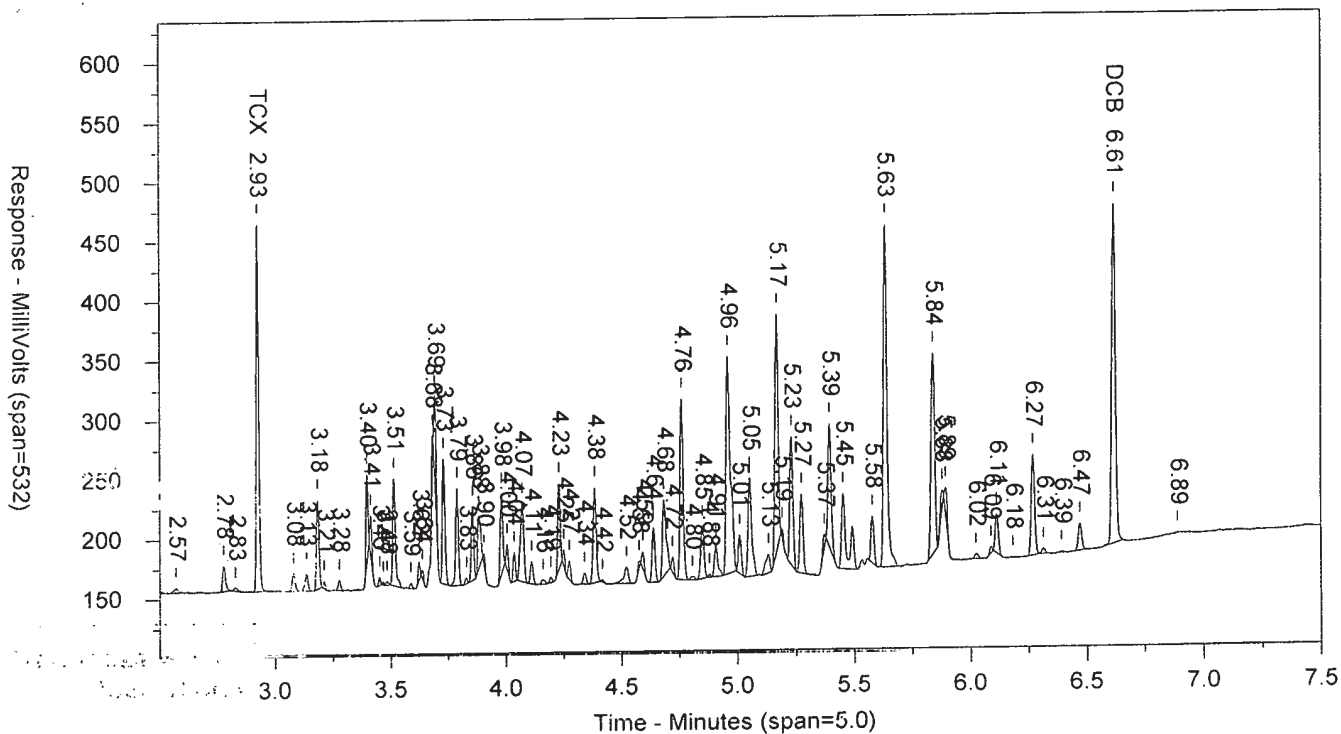
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ICAL 1830299999

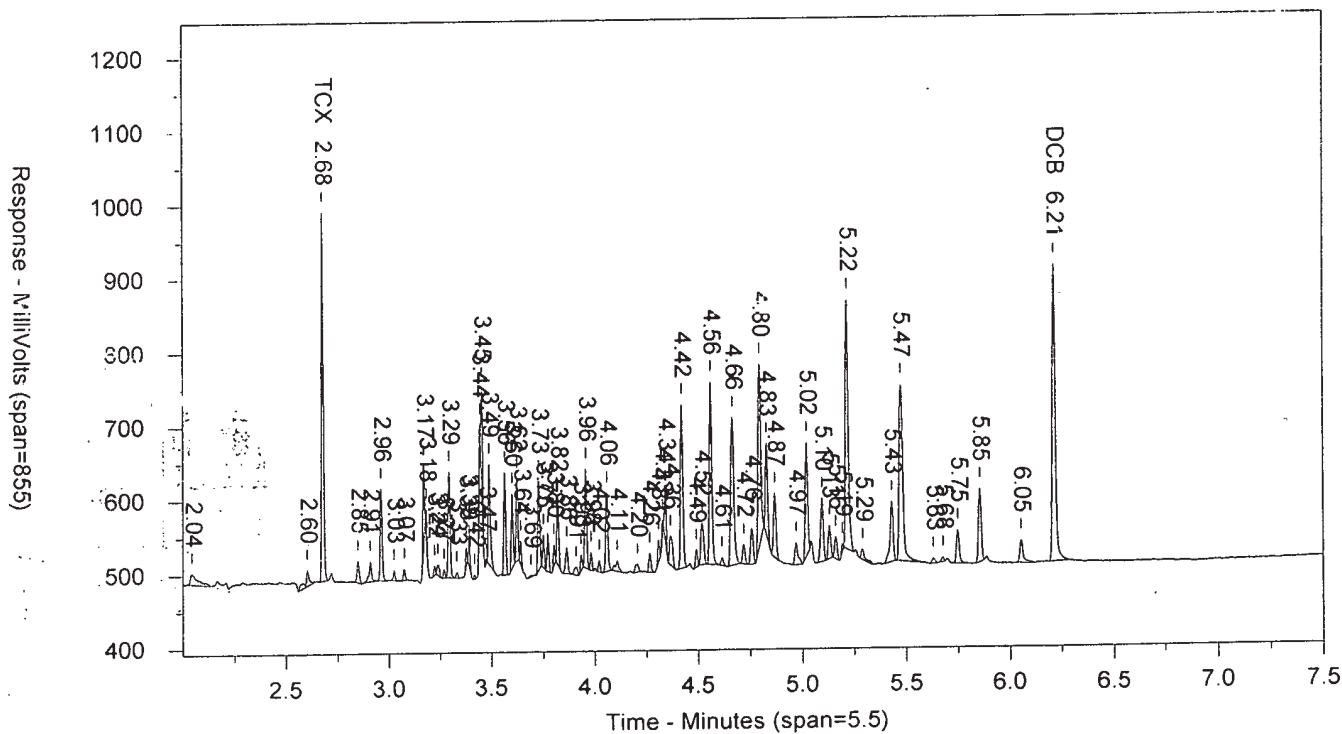
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SW-846 8082

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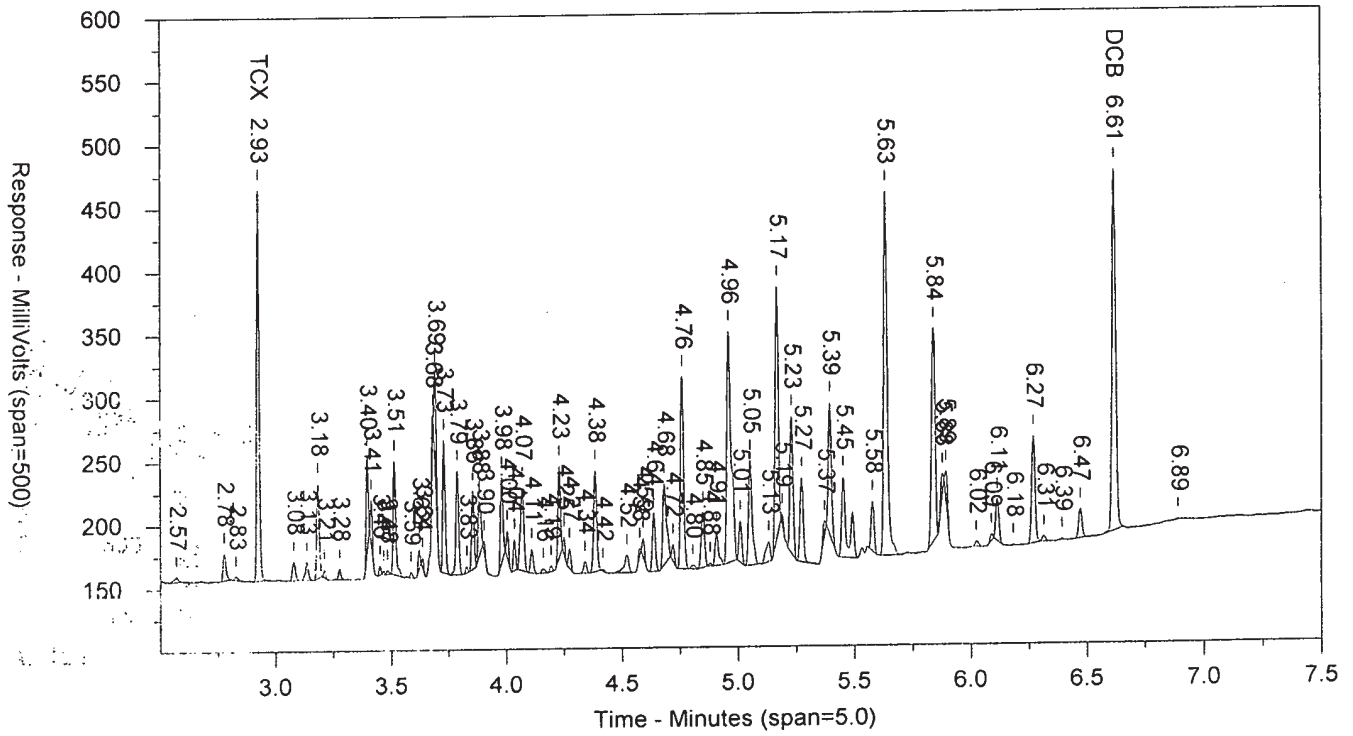
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ICAL 1830299999

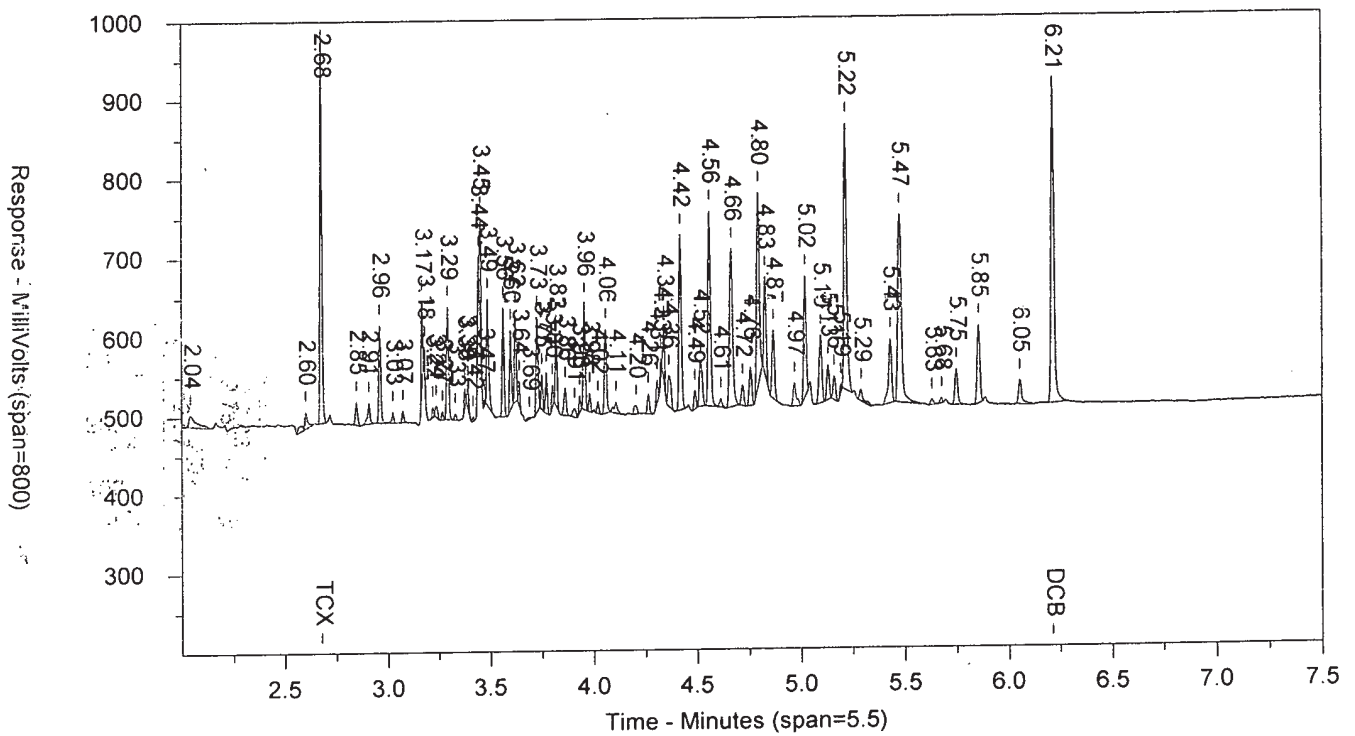
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1621824D AAAR162AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 6:24:35 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.008.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		8060	13777
2.227		3528	4023
2.311		13164	9766
2.377		2244	2489
2.422		2831	2878
2.494		2219	3754
2.569		5241	5534
2.776		18884	16478
2.925	TCX	598913	434755
3.078		30590	26877
3.134		29605	26440
3.182		146818	113887
3.255		1223	639
3.275		16884	12360
3.396		142607	87229
3.413		59394	30859
3.45		14773	8365
3.466		5474	2425
3.482		7712	4697
3.512		178049	139224
3.586		9228	6354
3.622		33906	19372
3.636		14101	6746
3.681		54672	36819
3.691		156964	86177
3.727		198098	160809
3.786		160190	132223
3.827		11956	8564
3.853		121796	90805
3.882		85023	77139
3.901		15108	7873
3.978		126874	96978
4.002		42022	26658
4.032		51557	36453
4.068		128568	138845
4.108		41258	33033
4.154		5477	4743
4.191		9330	7400
4.227		135534	102364
4.246		28964	15833
4.27		33725	23964
4.337		18857	16841
4.38		153294	144120
4.414		4072	3061
4.477		2305	1881
4.517		29702	31043
4.573		13004	8969
4.588		27230	20383
4.633		88077	82738
4.679		127502	147452
4.717		29797	20918
4.756		290340	281313
4.798		4938	4334
4.846		51941	56660

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.877		4549	2836
4.903		51506	50422
4.955		341145	455280
5.006		66303	59585
5.049		163031	185073
5.128		33235	40556
5.164		409465	440981
5.227		201452	196406
5.27		128011	128136
5.37		17328	18092
5.392		194746	183297
5.45		120932	222590
5.574		92554	88816
5.63		566675	624258
5.836		327228	352915
5.876		31510	33239
5.89		37505	27843
6.022		9470	9238
6.085		11555	8936
6.108		66528	59076
6.172		689	609
6.265		164634	168959
6.31		9614	9077
6.466		46881	47931
6.612	DCB	526710	591160

LANCASTER LABORATORIES

Sample Number: AR1621824D AAAR162AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:24:35 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.008.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

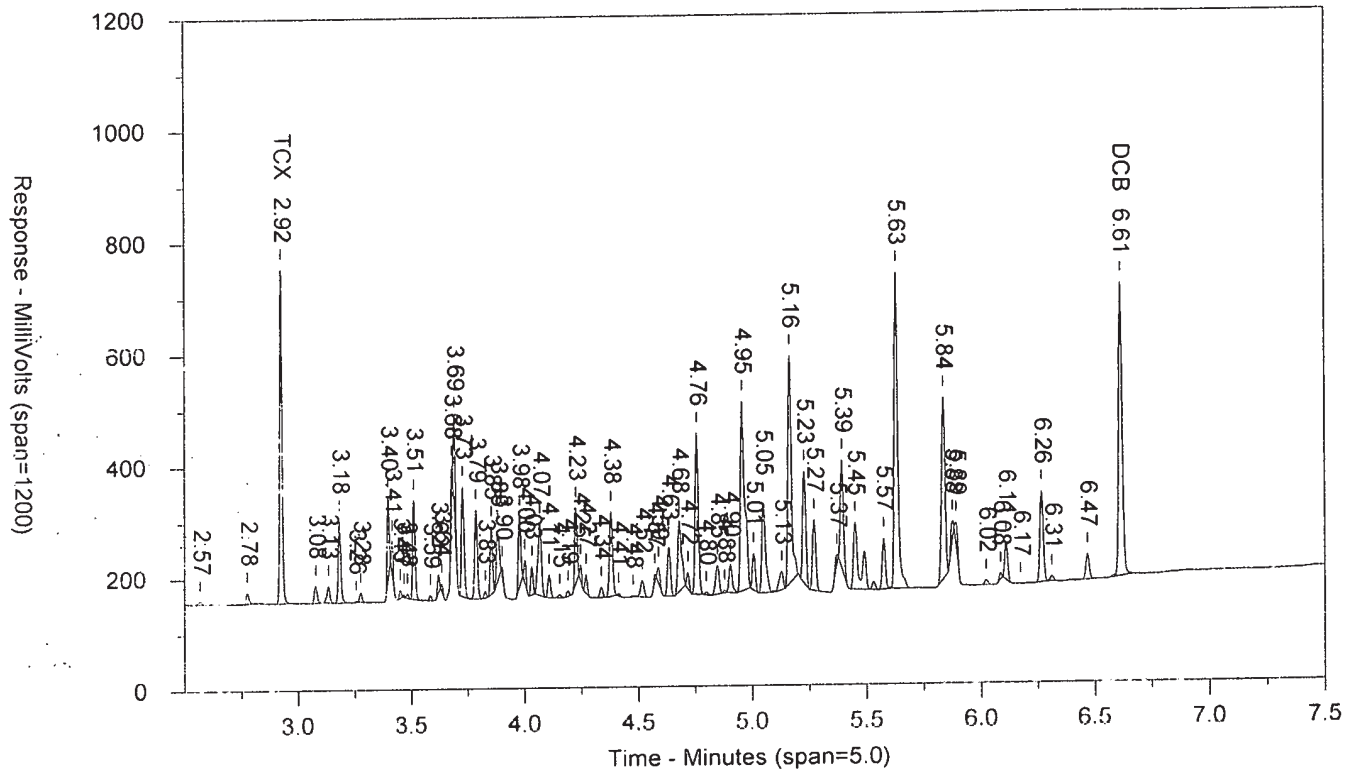
RT B	Compound B	Height B	Area B
2.045		13810	24737
2.603		22940	50834
2.678	TCX	944578	591212
2.72		21780	16531
2.849		55902	41957
2.909		52245	39943
2.962		236641	152940
3.074		30029	19880
3.17		200189	101938
3.181		52144	23453
3.222		32283	19330
3.213		22580	12979
3.269		20941	11763
3.293		276807	190152
3.331		16443	9766
3.36		2169	741
3.377		58718	29703
3.391		39204	19720
3.443		129179	61510
3.452		239155	108460
3.472		13479	4867
3.487		271866	180187
3.561		272442	176788
3.596		195538	122746
3.62		215826	126017
3.638		59113	28203
3.725		234636	158485
3.748		84496	46842
3.769		89586	56065
3.8		58074	30552
3.817		177174	109959
3.861		69534	51815
3.907		17683	17793
3.931		43191	26607
3.953		249261	173415
3.979		47435	28803
3.999		9616	4495
4.018		30217	19308
4.035		208058	152610
4.091		10190	6399
4.106		22762	14765
4.195		29004	34187
4.262		55377	41043
4.306		54743	33875
4.324		45711	23161
4.337		122288	70567
4.364		76386	81032
4.417		438500	352062
4.459		9525	8279
4.489		44126	30362
4.513		96079	72275
4.557		494277	416595
4.662		387672	411035
4.716		52222	44782

Chrom Perfect Chromatogram Report

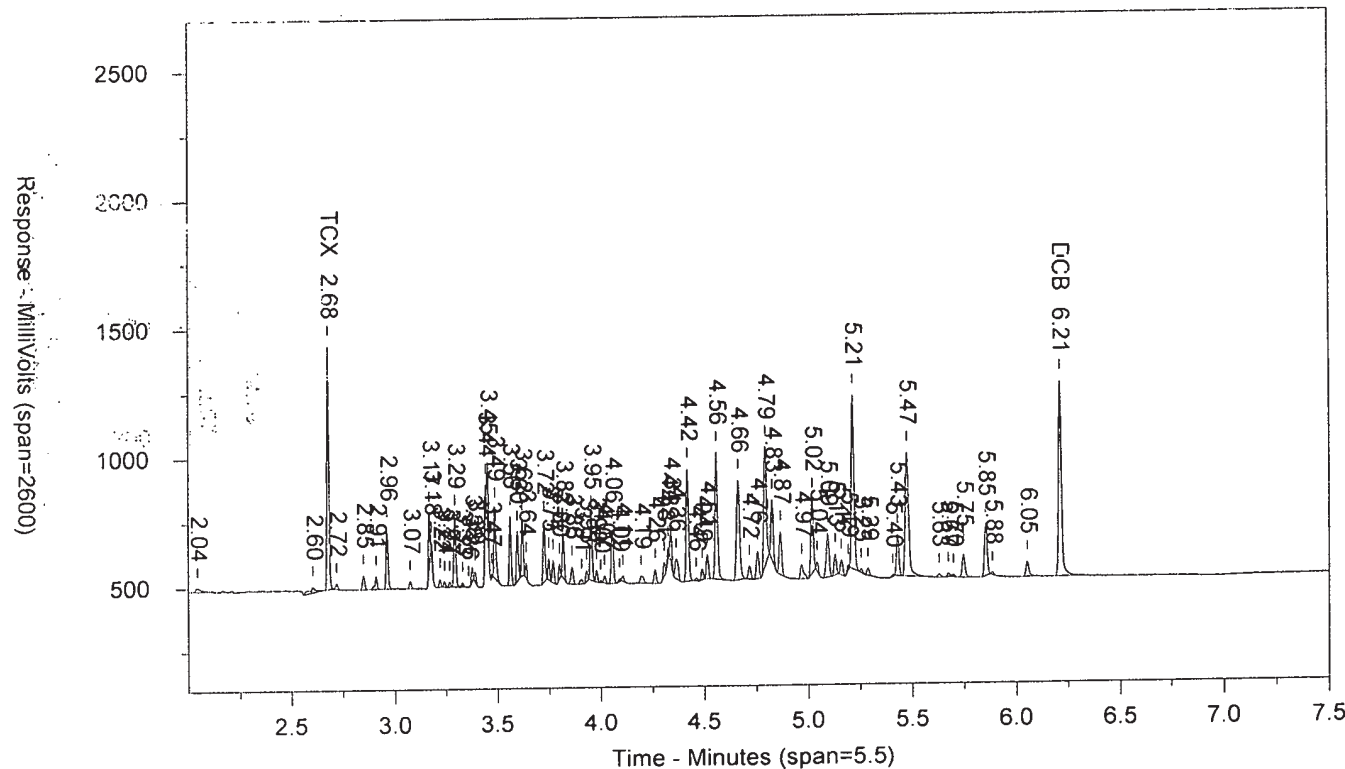
RT B	Compound B	Height B	Area B
4.756		109010	93396
4.793		462462	418246
4.826		231693	181245
4.865		167390	137979
4.968		58040	62342
5.019		290152	250449
5.043		36319	23184
5.093		170173	158257
5.129		83140	66522
5.159		59886	51286
5.192		22215	13619
5.214		677397	608513
5.254		13746	10008
5.287		28904	26453
5.405		7445	4619
5.428		162059	136248
5.474		483176	588545
5.628		13826	12743
5.673		14384	10427
5.697		9399	6588
5.746		91585	89297
5.852		203105	180021
5.885		10776	8179
6.052		61044	60321
6.211	DCB	762166	748510

AR1621824D AAR162AA ICAL 1830299999 10227 SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR1621824D AAAR162AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 6:24:35 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	598913	3.99	TCX	2.678	944578	3.832	TCX
6.211	526710	4.387	DCB	6.211	762166	4.359	DCB

Files:

Area File: 25pcbs18303001.008.RAW
 Area File: 25pcbs18303001b.008.RAW
 Method A: 25PCBS.MFT
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 6:33:07 PM
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AR1621824D

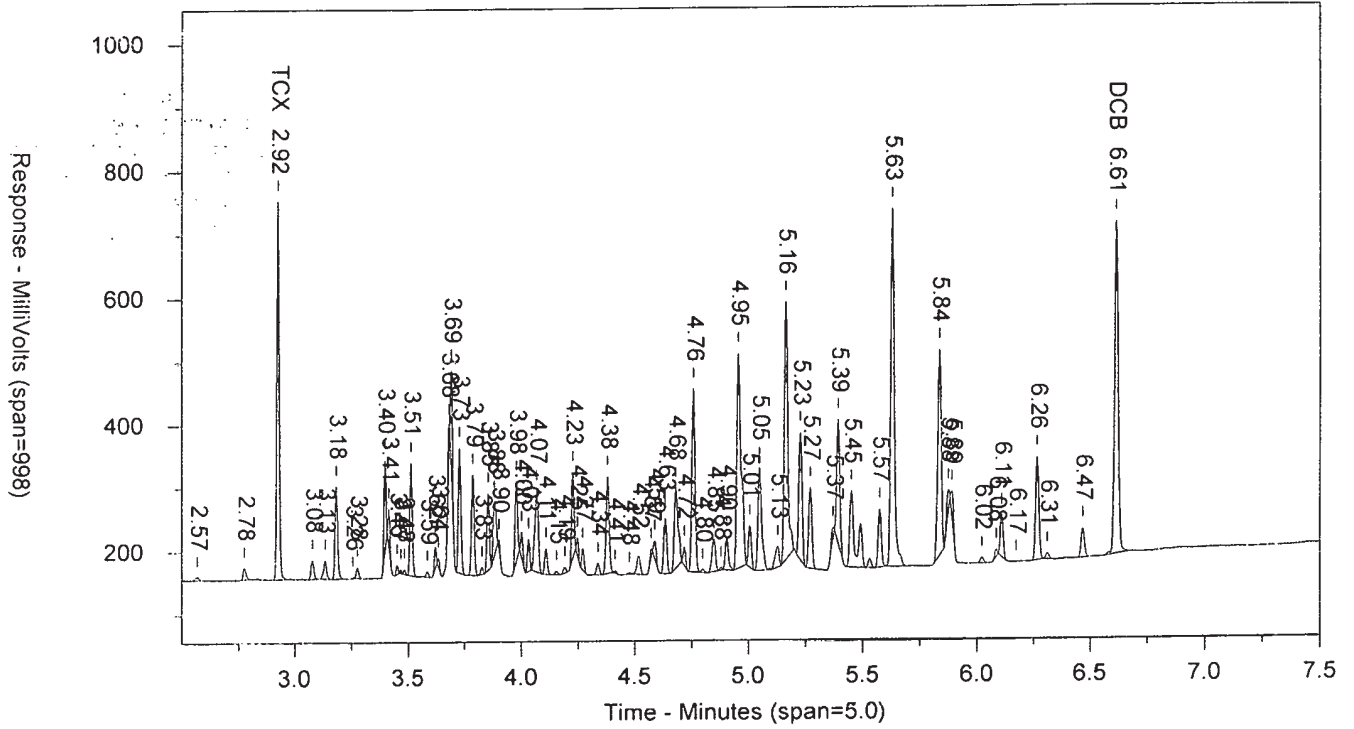
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ICAL 1830299999

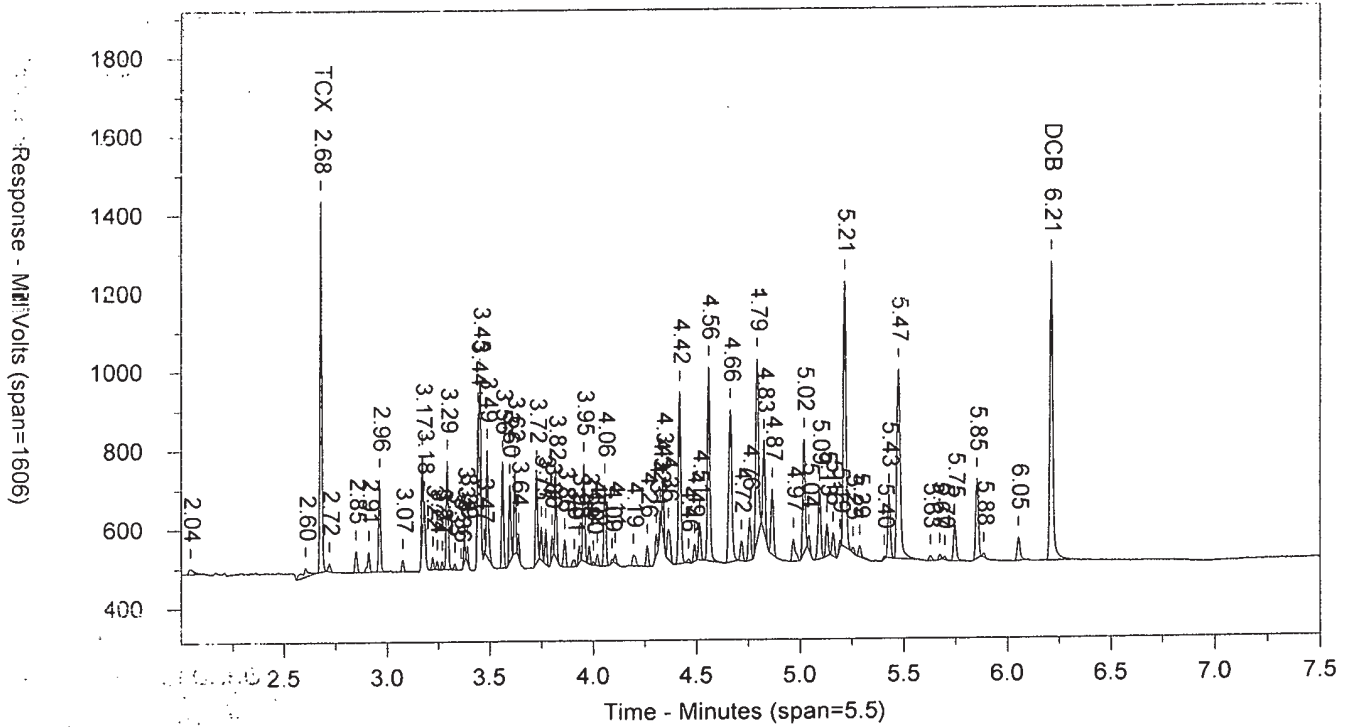
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SW-846 8082

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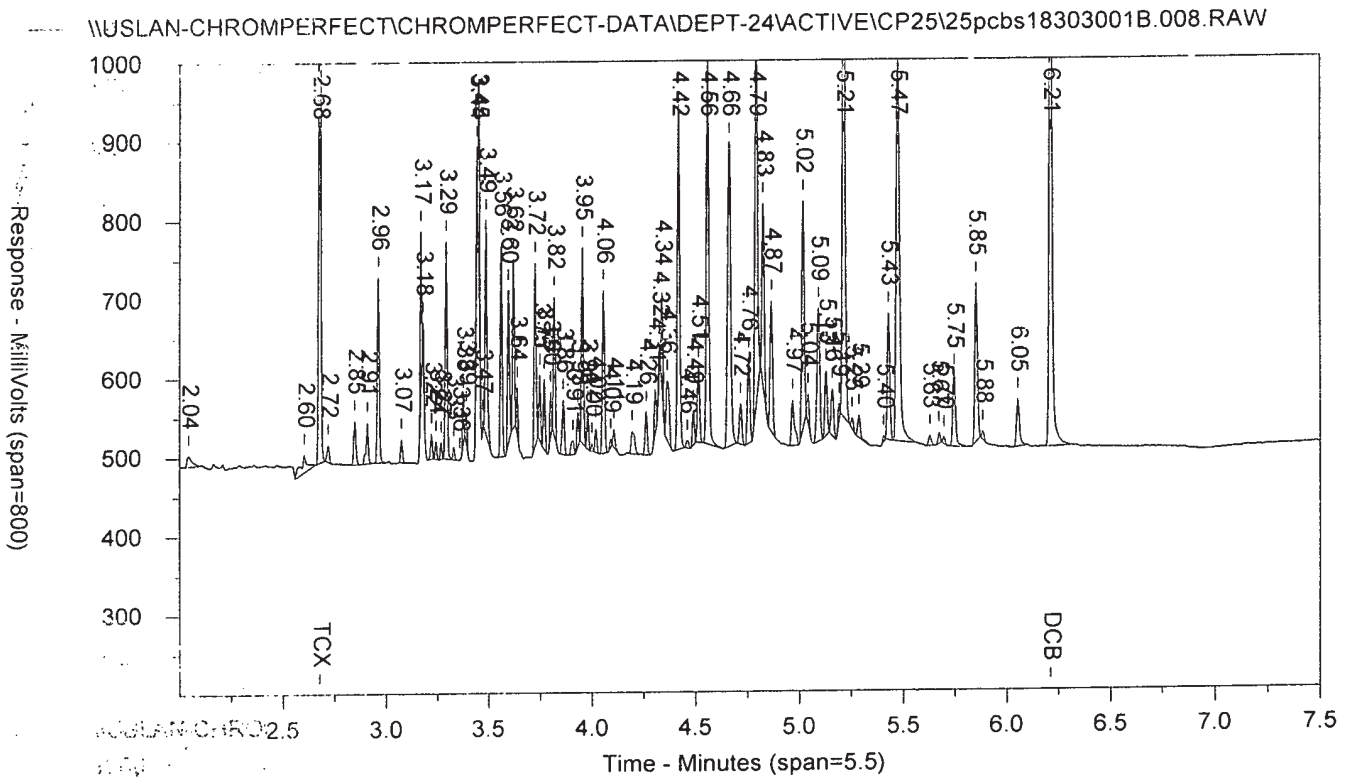
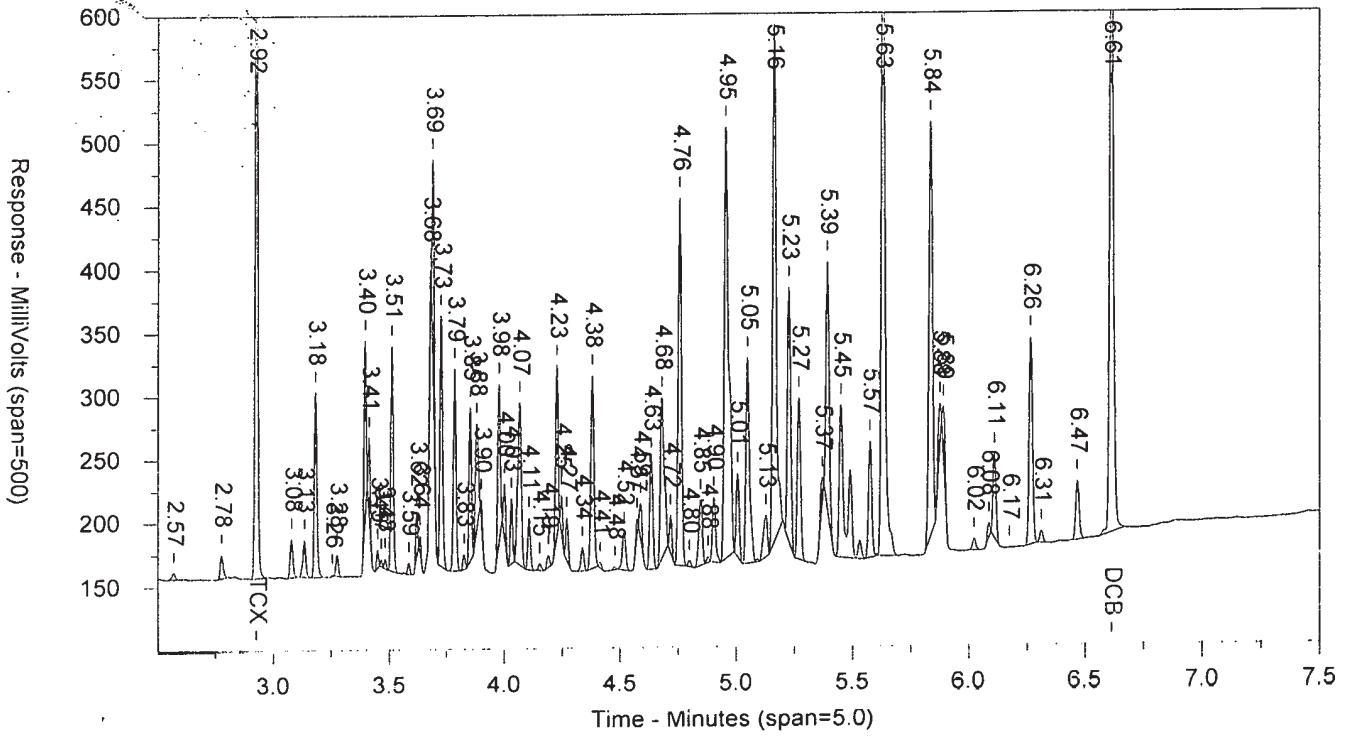
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ICAL 1830299999

10227

SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1631824D AAAR163AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:35:30 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.009.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.097		8389	14958
2.219		12898	14229
2.311		9940	6359
2.33		2919	1680
2.377		2271	2102
2.422		2416	2020
2.494		1926	1872
2.569		7736	8549
2.777		18810	16028
2.833		1955	2210
2.924	TCX	3056704	2255672
3.078		60355	54641
3.134		62666	67648
3.182		267602	211083
3.254		4799	2747
3.275		33438	24488
3.312		1056	646
3.396		257848	160792
3.413		104422	56923
3.449		28497	16475
3.465		11046	4932
3.482		16180	9540
3.511		339375	266297
3.567		5553	3325
3.585		17085	11273
3.621		64099	37099
3.635		29469	14392
3.681		58597	56075
3.69		303689	174144
3.727		372287	306486
3.786		313654	256478
3.826		24884	17165
3.853		218109	169231
3.881		160009	141535
3.901		33681	17874
3.977		234676	178971
4.002		78797	51342
4.032		99695	70594
4.068		234380	265168
4.108		80750	65448
4.153		10416	8273
4.19		18534	14674
4.226		248529	191115
4.246		49267	28925
4.27		65602	48969
4.337		39534	34024
4.381		273304	270685
4.415		17562	5227
4.476		14456	3788
4.517		59069	61472
4.573		25199	17915
4.587		57073	40780
4.633		173924	159761
4.68		230312	273495

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.717		54230	39951
4.756		541151	530683
4.798		9291	8232
4.846		100214	111238
4.878		12249	7935
4.903		98732	94609
4.955		659767	856174
5.006		121579	111374
5.049		303681	355742
5.128		70133	87716
5.164		776581	887779
5.228		372998	365984
5.271		235586	243305
5.371		24192	33437
5.391		351541	345968
5.449		210875	207127
5.489		113711	102061
5.574		173313	171987
5.63		1119487	1222668
5.836		646075	671204
5.877		28253	51402
5.889		67175	53313
6.022		29175	28886
6.084		28010	21687
6.108		124421	110666
6.264		311441	321479
6.309		20055	18424
6.385		2628	3893
6.464		103019	105368
6.61	DCB	2448309	2695673

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1631824D AAAR163AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:35:30 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.009.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		14577	24974
2.603		21543	39922
2.678	TCX	5086297	3064686
2.72		39569	27662
2.849		110596	77771
2.909		95021	98250
2.962		444019	285666
3.014		10915	6372
3.074		60041	39096
3.17		364930	186122
3.182		111722	45877
3.222		63938	38620
3.243		39794	23245
3.269		43191	23915
3.293		513766	359764
3.33		29897	18538
3.359		9358	4129
3.377		115848	59837
3.391		69874	34364
3.442		238071	121968
3.451		489661	210944
3.472		20999	8218
3.487		489337	342642
3.561		508535	336623
3.596		369027	229927
3.62		405735	235958
3.638		112482	56371
3.629		1047	2397
3.724		430757	297631
3.747		161387	90016
3.769		164987	102696
3.8		109014	59904
3.817		338320	209783
3.86		132311	100114
3.906		35412	35811
3.931		82469	49774
3.953		478533	326550
3.978		88685	54439
3.999		16124	8161
4.018		54451	35016
4.055		392477	286267
4.09		20387	11564
4.106		45469	29017
4.169		6595	5182
4.195		53747	66056
4.261		109370	80535
4.305		109909	66845
4.324		78174	43805
4.337		225703	134530
4.363		146494	154890
4.416		816416	666303
4.457		15447	13767
4.488		84128	57587
4.513		179577	133536

Chrom Perfect Chromatogram Report

RT-B	Compound B	Height B	Area B
4.557		937030	770573
4.662		731484	782634
4.716		101805	87418
4.755		203180	182154
4.793		919693	789994
4.825		451986	344195
4.864		315743	262807
4.968		111936	122918
5.018		578540	478379
5.042		71584	43948
5.093		316710	302697
5.129		164036	128629
5.159		116096	100120
5.191		46261	26638
5.214		1332020	1190436
5.255		26910	18229
5.286		66388	61679
5.405		14844	8760
5.429		305116	262984
5.473		932059	1166153
5.528		40640	36144
5.573		24221	18617
5.696		30229	21993
5.745		182150	175615
5.852		400631	347671
5.884		22797	17557
6.051		135196	129178
6.21	DCB	3582853	3493396

AR1631824D

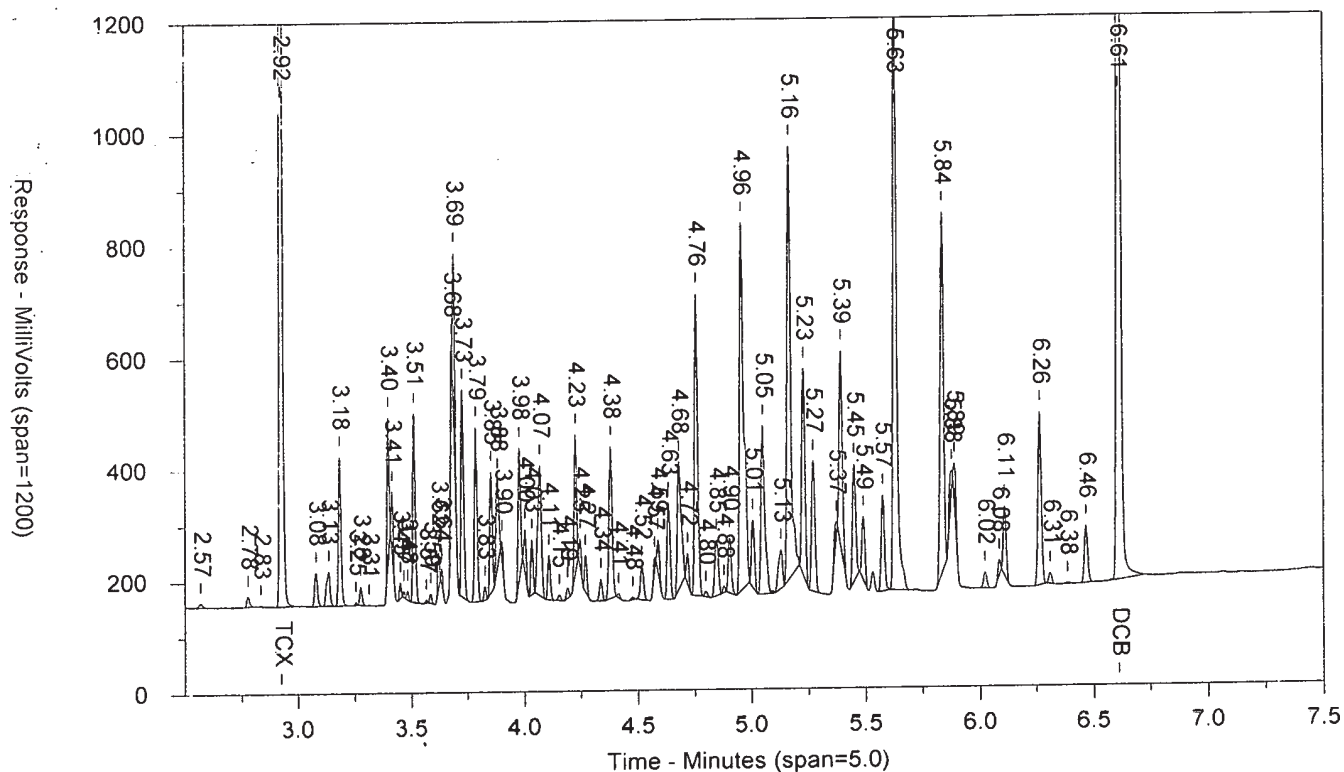
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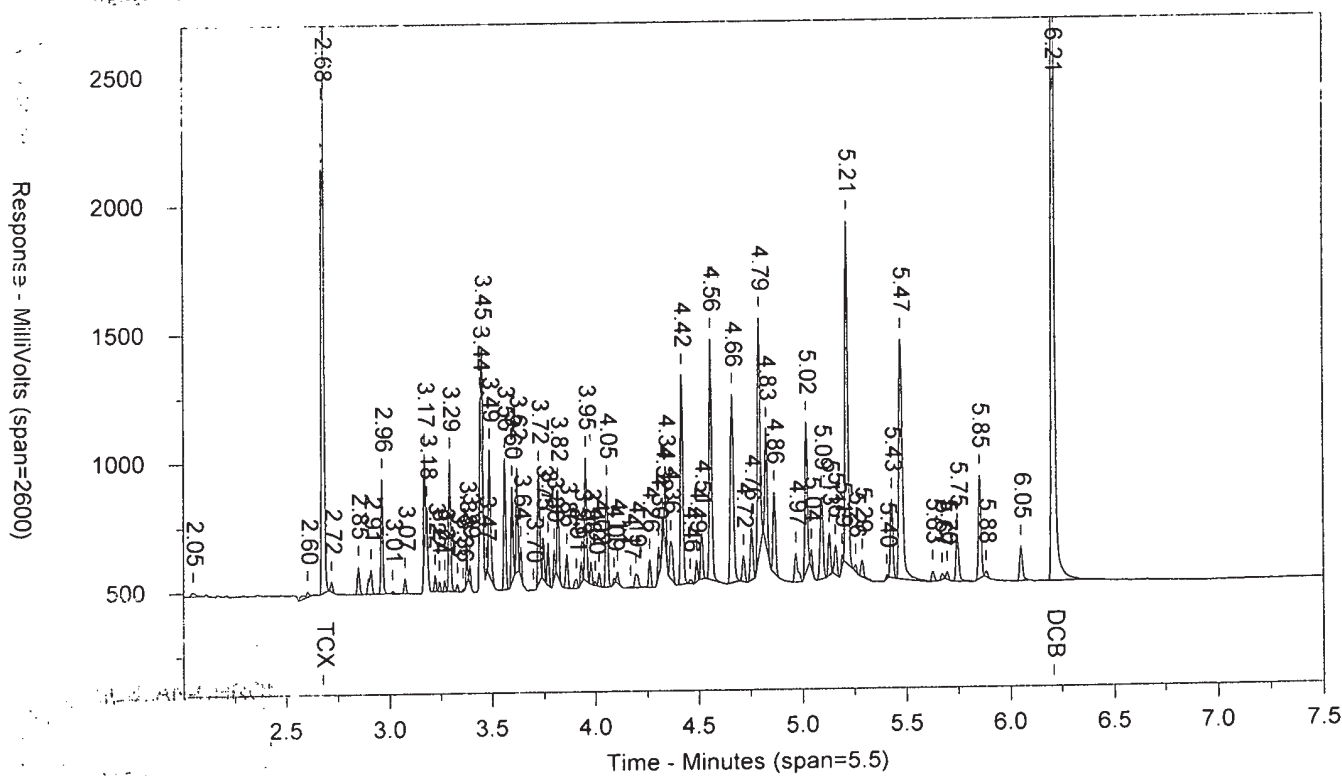
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR1631824D AAAR163AA ICAL 1830299999 10227
Injected On: 10/30/2018 6:35:30 PM
Instrument ID: CP25-18274
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

SW-846 8082

Sample Weight: 1
Dilution Factor: 1

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.924	3056704	20.249	TCX	2.678	5086297	20.443	TCX
6.61	2448309	20.242	DCB	6.21	3582853	20.215	DCB

Files:

Area File: 25pcbs18303001.009.RAW
Area File: 25pcbs18303001B.009.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 6:43:59 PM
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AR1631824D

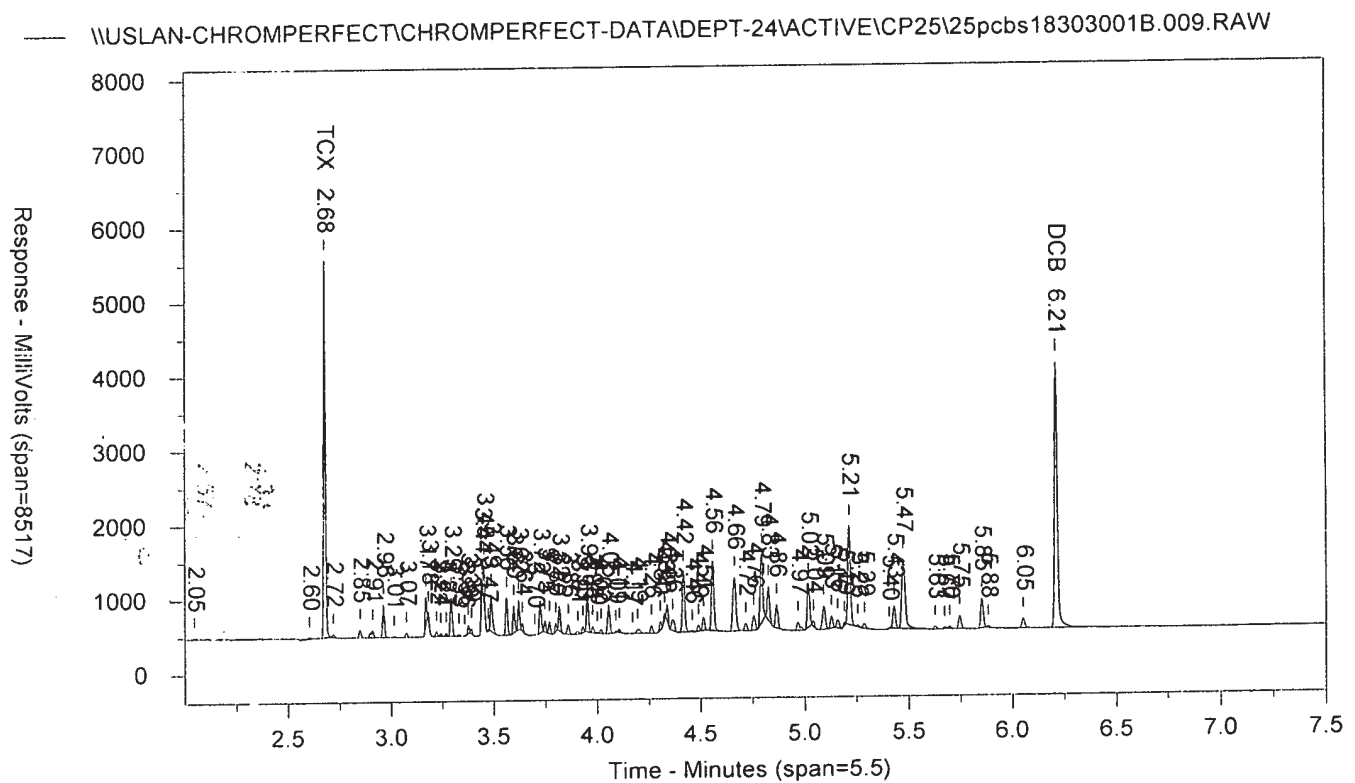
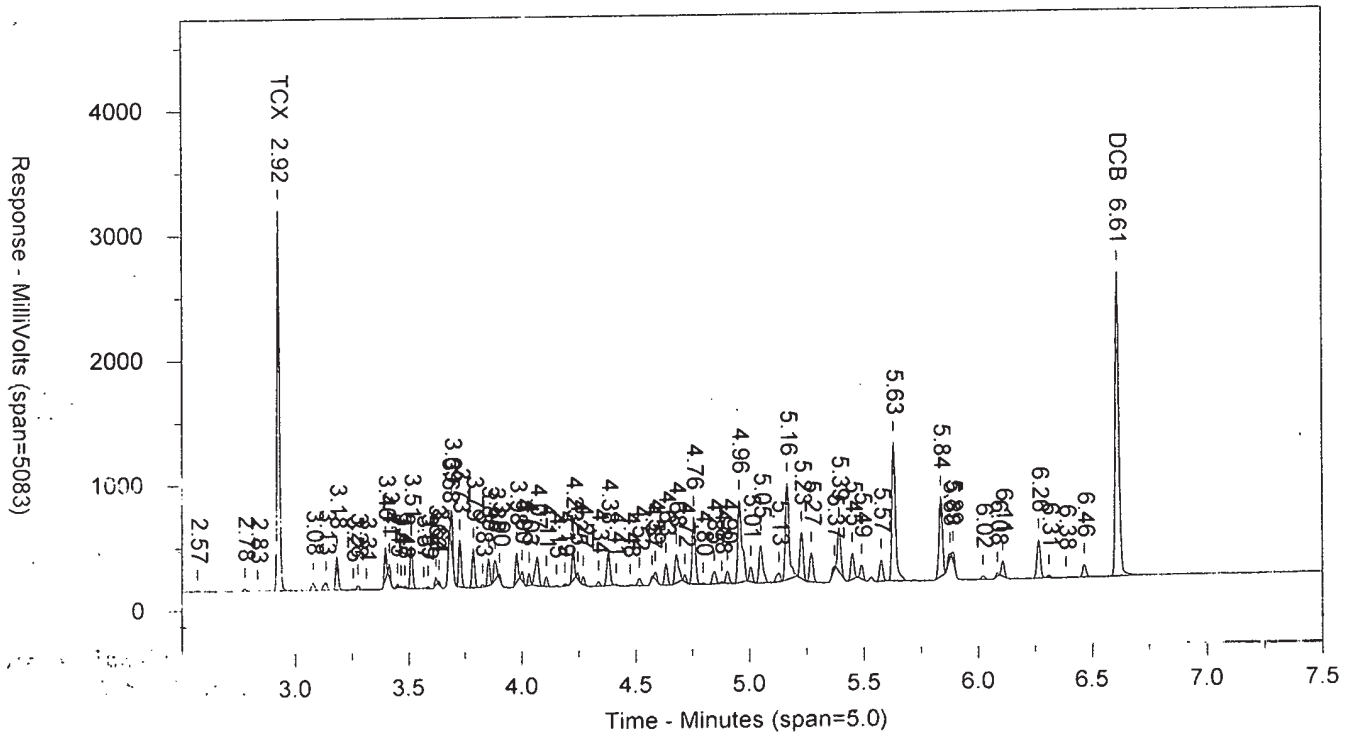
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ICAL 1830299999

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SW-846 8082

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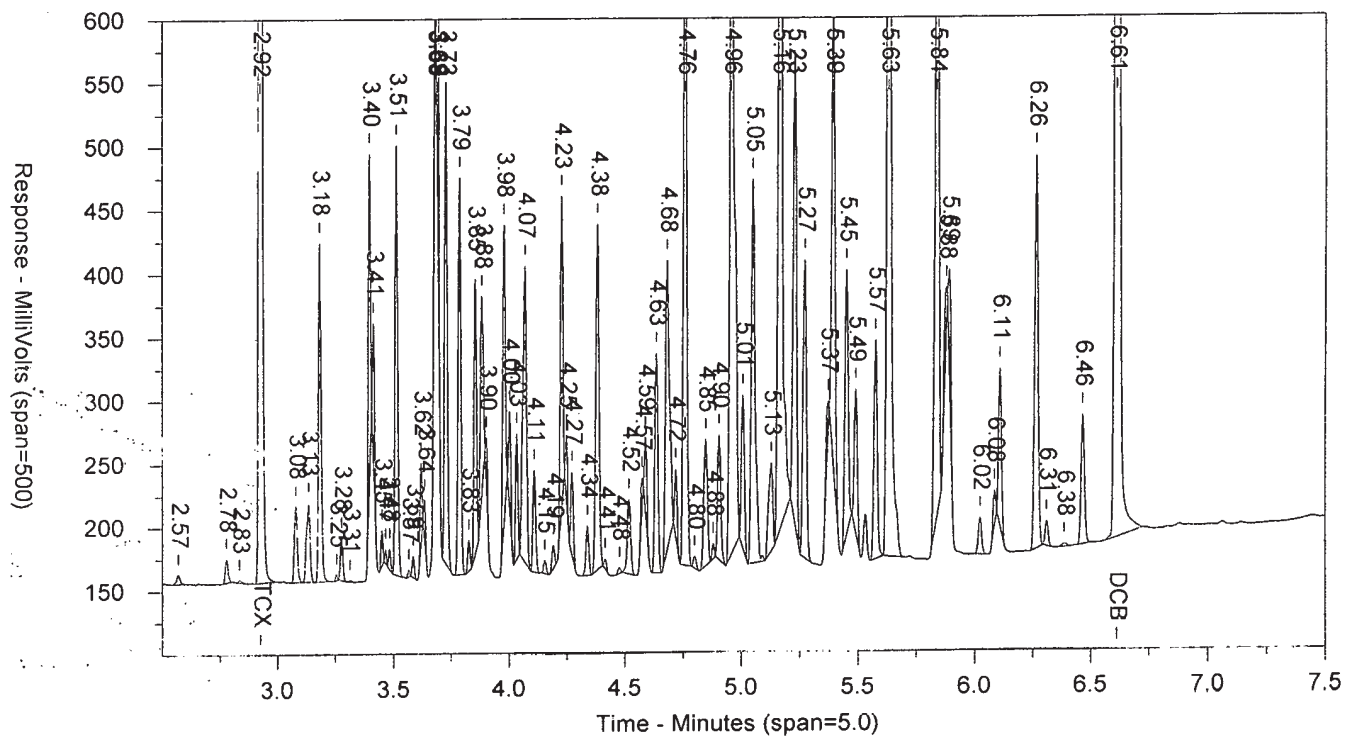
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ICAL 1830299999

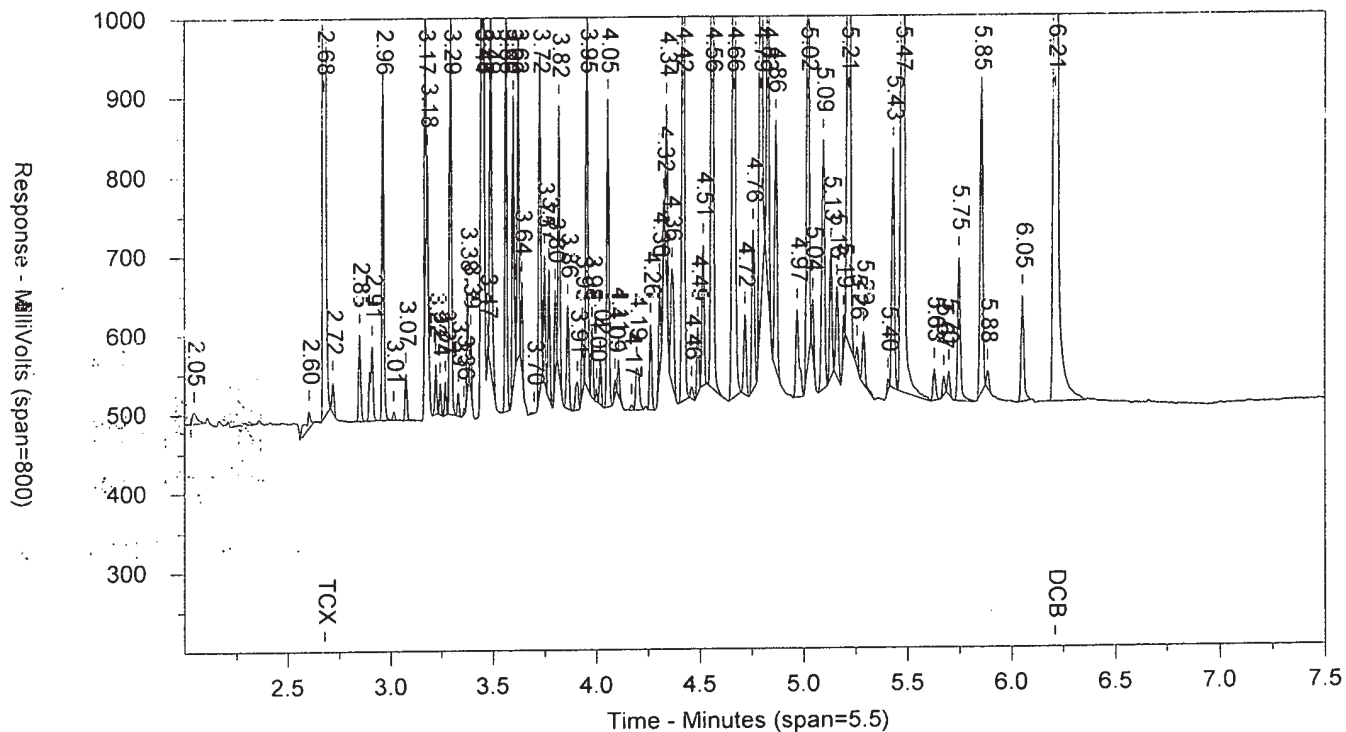
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1641824D AAAR164AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:46:23 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.010.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		7149	11702
2.219		25137	23966
2.311		7080	4164
2.33		8120	5379
2.374		2071	1983
2.423		5039	5032
2.569		12865	13445
2.776		17317	14735
2.832		6506	6800
2.925	TCX	6390003	4651791
3.078		124803	113728
3.134		120392	135323
3.182		533517	408197
3.254		9918	5378
3.275		72686	51154
3.313		1966	1298
3.397		505255	309578
3.413		205661	107255
3.45		58001	34173
3.466		26489	12008
3.483		32564	18733
3.512		658792	520628
3.547		1723	744
3.567		10804	6379
3.586		37756	25452
3.622		124301	71802
3.636		55797	27875
3.682		121686	92853
3.691		594775	346914
3.728		737500	602190
3.787		635686	509903
3.827		50809	36077
3.854		422147	317700
3.883		292132	273354
3.901		41751	21755
3.979		477901	355266
4.002		145998	93383
4.033		183445	135745
4.069		456120	518702
4.108		157134	129129
4.138		1186	376
4.154		20289	15605
4.191		39036	29812
4.227		476479	364633
4.247		104050	58394
4.271		126627	94409
4.338		78005	68717
4.381		528343	524180
4.415		15891	10540
4.477		8804	7881
4.517		123218	131621
4.573		49143	34632
4.588		105432	74165
4.634		333230	309889

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.68		442163	519034
4.717		106695	77824
4.756		1050530	1036428
4.799		21840	19049
4.847		183516	209331
4.879		29285	19788
4.904		192616	178818
4.956		1278580	1678464
5.006		226145	210104
5.049		588918	705049
5.128		129621	171199
5.164		1612399	1765991
5.228		755072	712189
5.271		469383	475131
5.37		65779	65856
5.391		738612	692983
5.45		408113	403751
5.489		214528	198779
5.575		341644	336690
5.631		2295582	2476836
5.837		1244407	1333571
5.879		44053	95472
5.99		155989	117296
6.023		57612	57333
6.086		51916	39788
6.109		222786	208433
6.267		600719	631052
6.312		40376	38154
6.467		191597	206126
6.614	DCB	1865646	5320384

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1641824D AAAR164AA ICAL 183029999 10227 SW-846 8082
 Injected On: 10/30/2018 6:46:23 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pchs18303001B.010.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.043		12717	22475
2.11		17197	14094
2.288		5451	18568
2.359		13560	12715
2.603		26606	72840
2.678	TCX	10296990	6302197
2.72		77650	55939
2.849		224403	159311
2.898		54336	26571
2.91		124840	60641
2.962		872891	551735
3.015		21133	13139
3.074		117673	76919
3.17		698487	358230
3.181		221964	82435
3.222		118713	74666
3.244		81383	47450
3.269		83558	46466
3.294		985969	697429
3.331		65329	39987
3.36		16449	7541
3.377		230033	119227
3.392		140173	67115
3.443		507476	243867
3.452		1003817	428617
3.473		46532	17625
3.487		992112	671483
3.562		1014869	661302
3.596		683591	439030
3.621		805902	458835
3.639		214159	106830
3.725		862187	574363
3.748		312222	174145
3.77		311220	195740
3.801		211691	114656
3.818		622815	390432
3.861		258385	195360
3.908		72369	72970
3.932		163945	99722
3.953		960636	634756
3.979		174031	107139
3.999		31245	16011
4.019		106134	69034
4.056		753479	550147
4.09		35417	22170
4.106		86420	55788
4.17		10172	7424
4.134		117302	139387
4.238		9333	5285
4.262		211129	157089
4.306		196956	123572
4.324		157429	83450
4.337		469620	267815
4.363		280068	303219

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.418		1667142	1306880
4.46		40524	33962
4.489		165843	113699
4.513		353397	263430
4.557		1818781	1508647
4.662		1517422	1542631
4.717		197064	171782
4.755		405861	372451
4.792		1898718	1598011
4.825		891633	651434
4.865		631786	520198
4.967		226044	242367
5.019		1170345	946641
5.042		143612	92243
5.093		637313	586296
5.128		316407	253649
5.159		236024	202831
5.191		97499	55006
5.214		2811239	2440691
5.254		53624	36594
5.286		129789	110168
5.406		24937	16387
5.428		572886	504564
5.474		1864258	2299024
5.628		73459	65693
5.673		52133	37828
5.897		58866	42460
5.746		358870	338528
5.853		795740	678079
5.885		41835	30605
6.053		266499	251591
6.211	DCB	7443800	6959854
6.663		6696	7231

AR1641824D

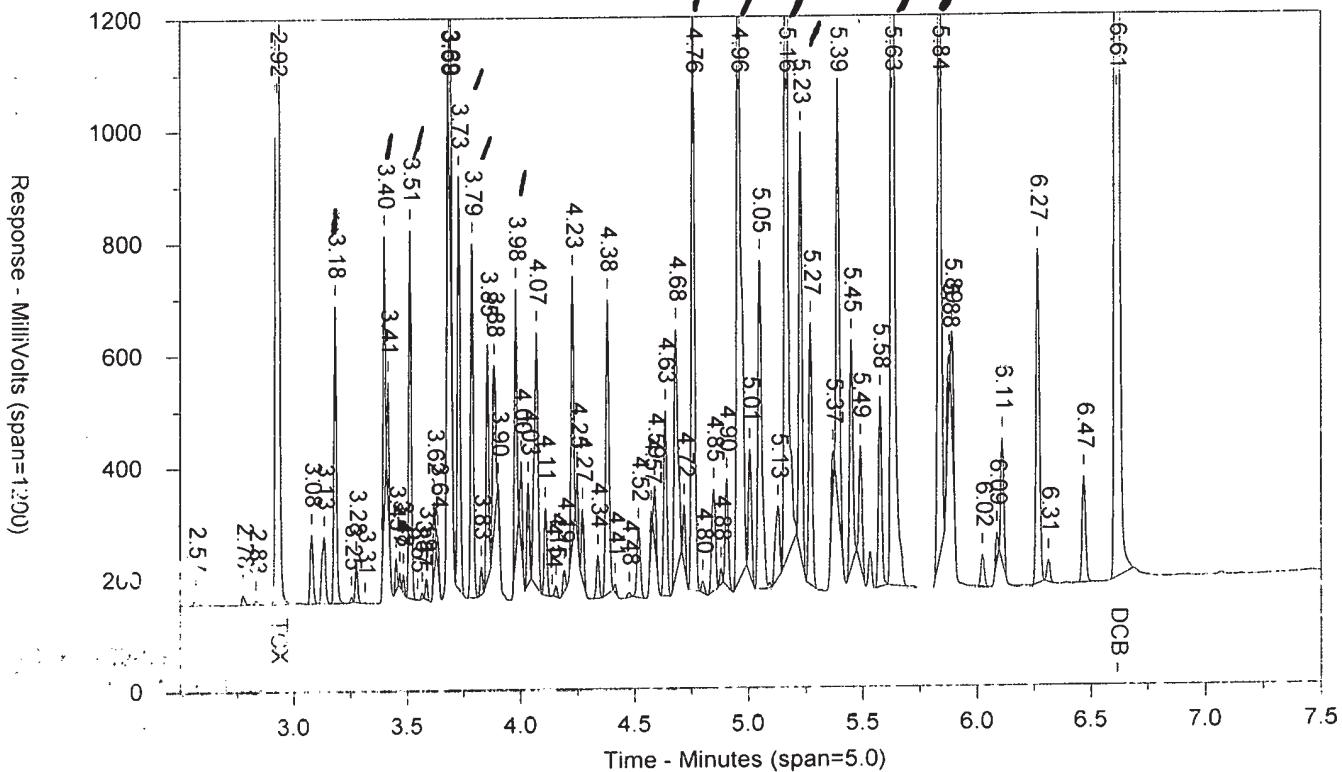
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ICAL 1830299999

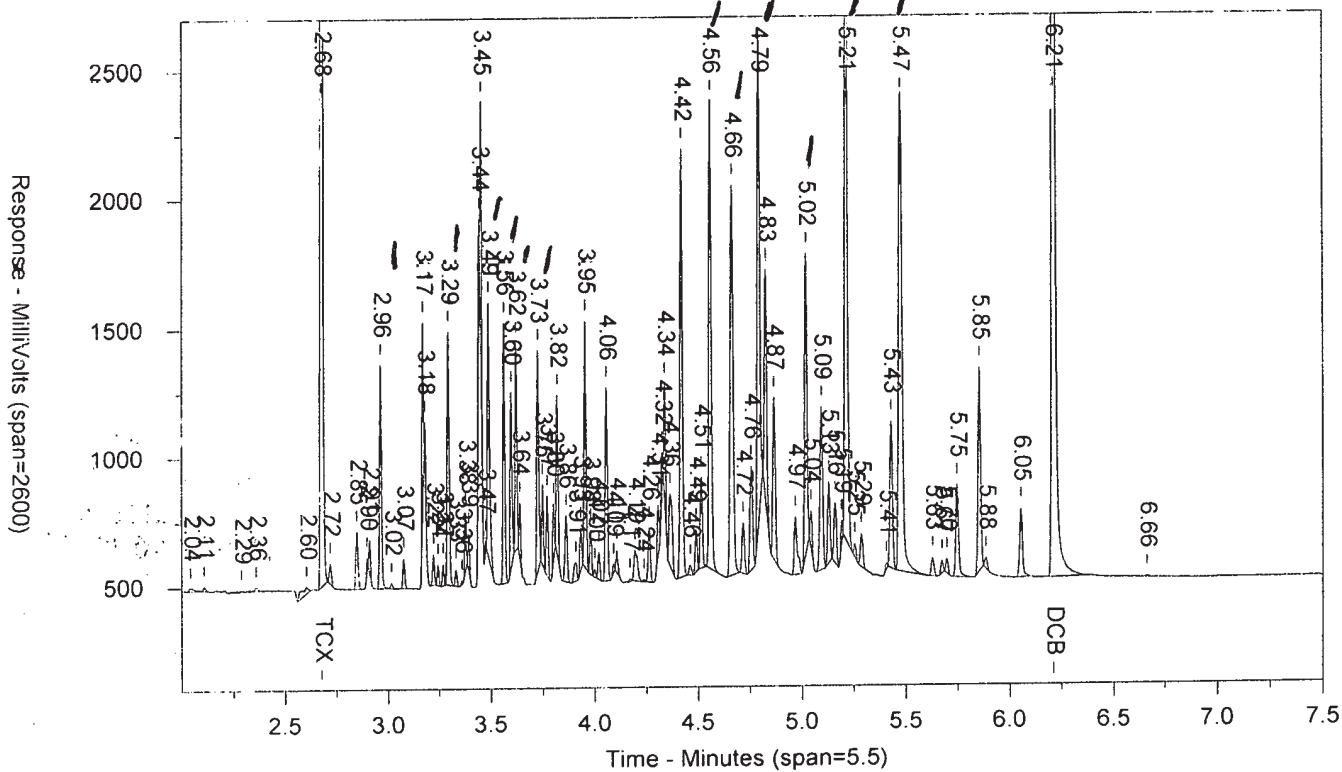
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR1641824D AAAR164AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 6:46:23 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	6390003	42.022	TCX	2.678	10296990	40.891	TCX
6.614	4865646	39.456	DCB	6.211	7443800	41.565	DCB

Files:

Area File: 25pcbs18303001.010.RAW
 Area File: 25pcbs18303001B.010.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 6:54:55 PM
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AR1641824D

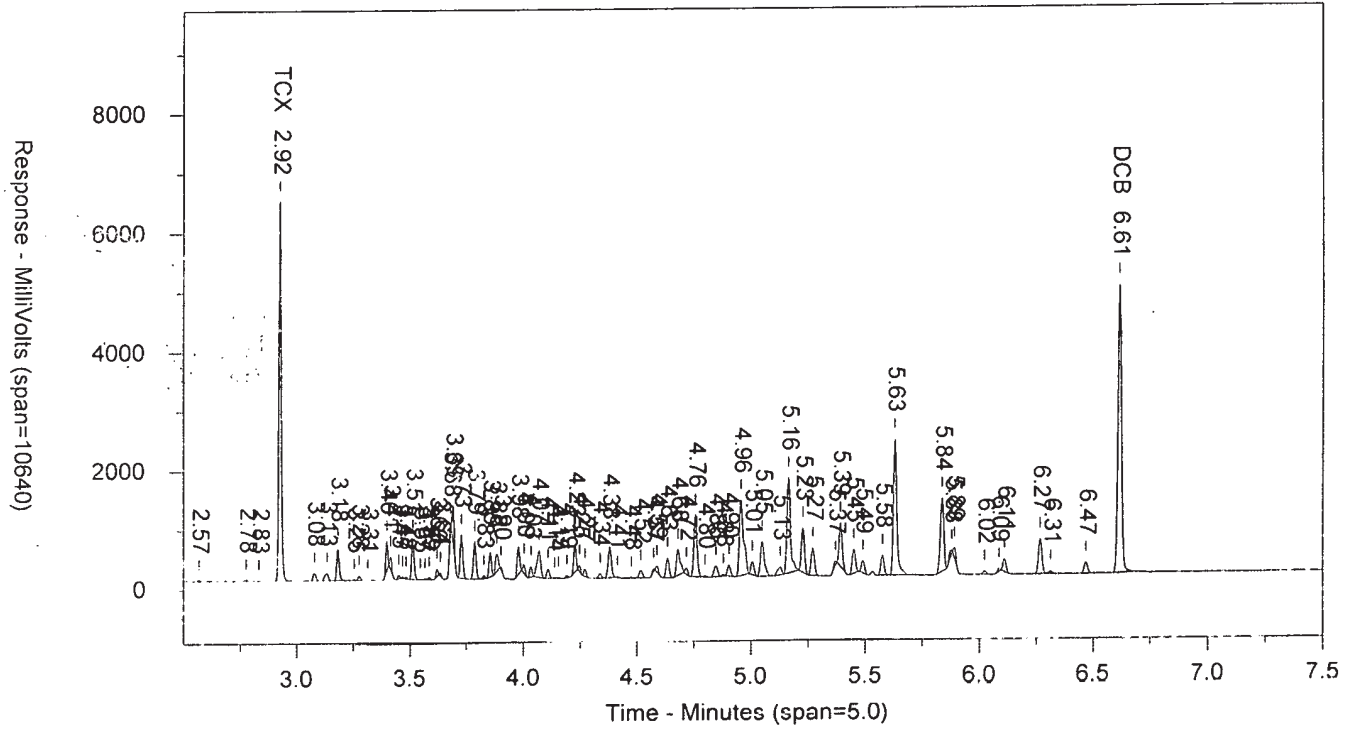
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ICAL 1830299999

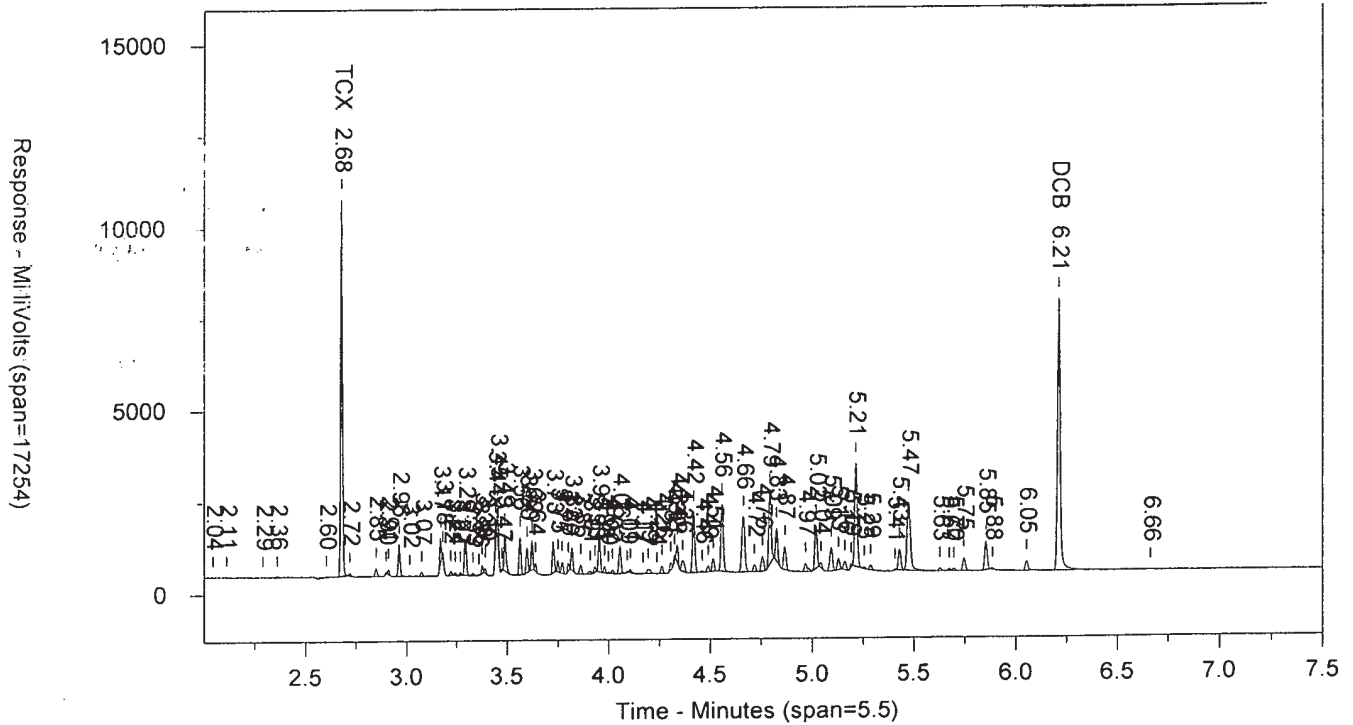
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SW-846 8082

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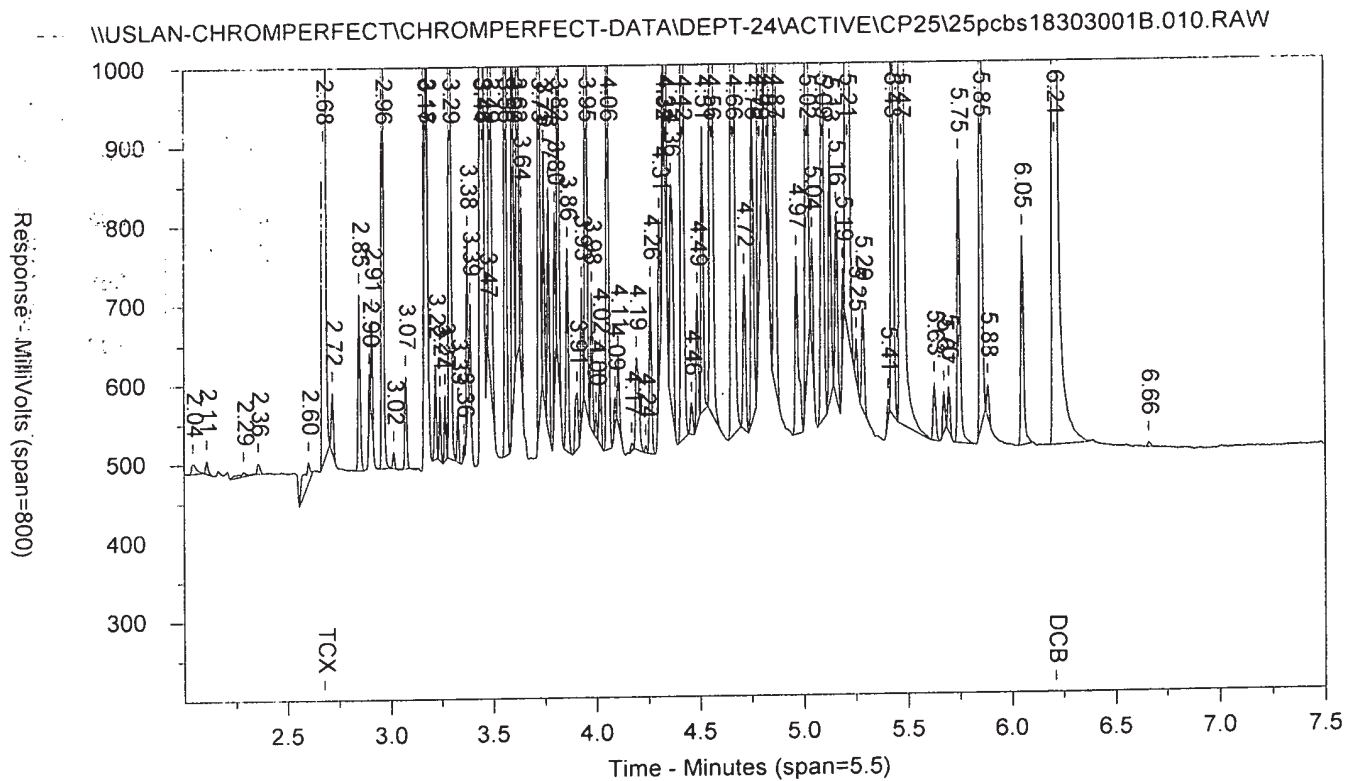
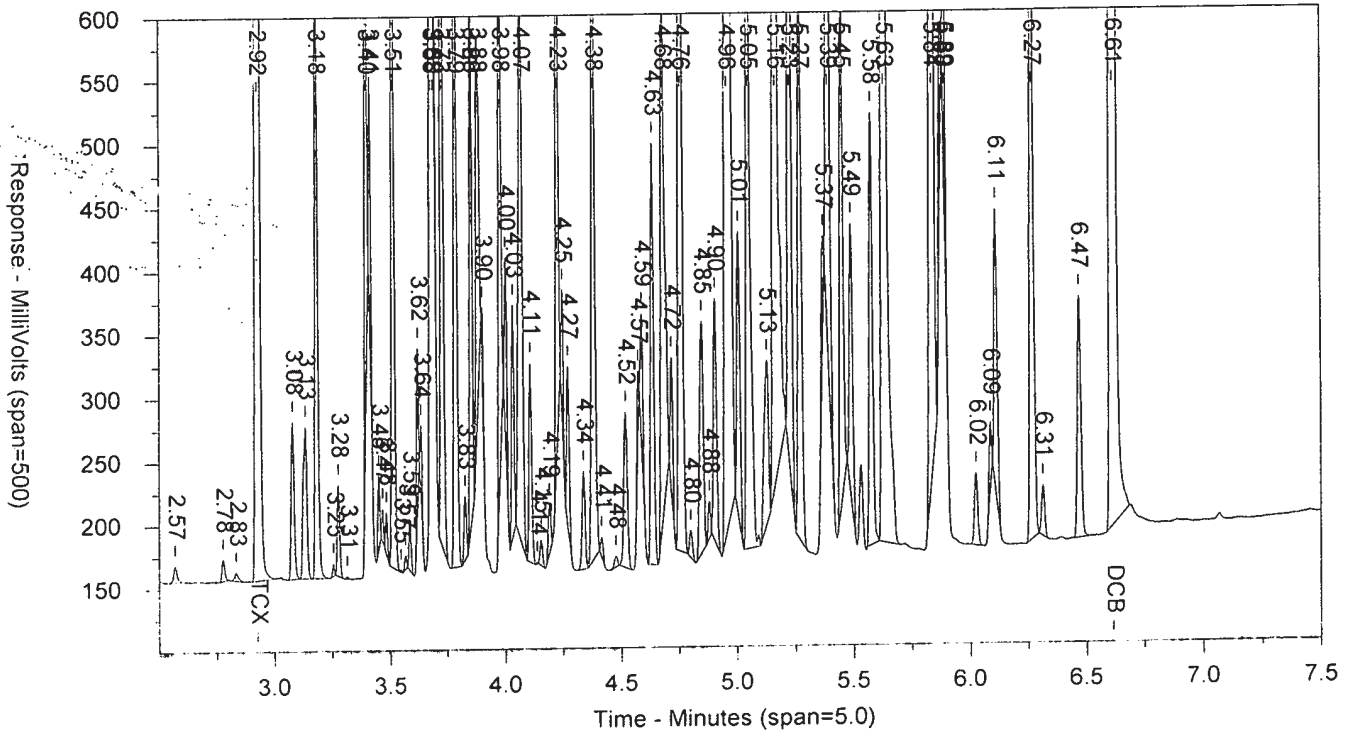
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ICAL 1830299999

10227

SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1651824D AAAR165AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 6:57:17 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.011.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.093		12775	21385
2.219		40728	36059
2.311		7650	4601
2.331		12831	8529
2.376		4677	4974
2.424		8817	8581
2.493		2905	4155
2.568		23329	25455
2.653		711	524
2.677		1171	1188
2.776		26264	23898
2.826		4418	3364
2.925	TCX	9939359	7351705
3.028		2172	1166
3.078		258825	238886
3.134		252879	260051
3.182		1095297	861577
3.254		14664	7955
3.276		150751	111630
3.313		3903	2601
3.396		1088673	670983
3.413		460310	242554
3.45		124804	71854
3.466		51071	22581
3.482		73479	42343
3.512		1388826	1119109
3.545		3496	1513
3.566		16582	10191
3.586		82944	56291
3.621		257429	152833
3.636		121907	62109
3.681		278126	235636
3.691		1466238	813338
3.727		1700359	1333459
3.787		1400081	1145595
3.827		108941	78268
3.854		931232	673923
3.881		648580	588899
3.902		110542	58366
3.978		1027346	775560
4.002		330669	209665
4.032		379039	284522
4.069		1024548	1142691
4.108		1323080	275980
4.153		53004	46323
4.19		81472	65270
4.226		1066716	798942
4.247		225009	122932
4.27		270067	200157
4.337		163662	149552
4.38		1175762	1127364
4.414		35890	23617
4.476		18959	15976
4.517		261239	275146

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.573		106194	75919
4.587		229461	152730
4.634		709642	678380
4.679		987673	1139234
4.717		232089	172115
4.756		2324202	2280073
4.798		48141	44054
4.845		399512	440883
4.877		49327	33576
4.903		403710	386627
4.955		2841732	3707613
5.005		464585	429998
5.049		1386980	1576259
5.128		269881	338264
5.164		3617329	3983802
5.227		1687649	1559095
5.27		1047681	1033606
5.37		132521	150484
5.392		1659157	1540836
5.45		911256	867247
5.489		475258	428010
5.53		133590	134369
5.574		763764	747817
5.63		5357405	5616735
5.717		5316	6342
5.837		2824350	2891251
5.877		161145	210832
5.889		329084	260509
6.022		100845	108707
6.085		101438	78424
6.109		500448	461345
6.265		1317838	1376754
6.31		83890	81546
6.387		8457	12036
6.466		379941	412430
6.612	DCB	7875793	8389106
6.882		6838	10306

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1651824D AAAR165AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 6:57:17 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Over Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.011.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.045		22569	33102
2.109		26577	21506
2.289		6417	25659
2.359		29380	27462
2.603		27000	42914
2.678	TCX	16291220	10125260
2.72		167079	122802
2.849		466832	331121
2.898		68674	33512
2.91		289164	149536
2.962		1862517	1187578
3.015		33227	18675
3.074		250481	170484
3.17		1529328	780621
3.182		525045	197419
3.222		264228	163196
3.244		164796	97044
3.269		178287	100480
3.293		2218635	1524634
3.331		131458	80984
3.36		22113	10008
3.377		502670	268124
3.392		286194	141401
3.442		1032051	517262
3.452		2377184	1053303
3.473		89911	32200
3.487		2131913	1495457
3.561		2274882	1487180
3.596		1527451	943888
3.62		1726302	995586
3.638		479463	233456
3.686		3947	4834
3.724		1850855	1261386
3.747		661815	371958
3.769		664372	417445
3.8		477045	250092
3.818		1451914	888768
3.861		548349	419249
3.906		155962	154035
3.931		346845	207743
3.953		2133942	1398588
3.978		378831	234585
3.999		67513	33828
4.018		229134	148030
4.055		1652842	1199055
4.09		83249	49854
4.106		191926	122445
4.151		5287	2762
4.172		26336	20314
4.194		245503	297334
4.237		15611	8135
4.261		464343	344070
4.305		424139	264483
4.324		376506	189094

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.337		1004490	581462
4.363		604966	650981
4.416		3763268	2949756
4.459		74886	66314
4.488		371847	252020
4.513		744202	570345
4.557		4333224	3442015
4.662		3435597	3528769
4.716		434817	378331
4.756		860065	754907
4.792		4405541	3784087
4.825		2081662	1494259
4.864		1443239	1159135
4.967		497937	538667
5.018		2715796	2173651
5.042		284946	183455
5.093		1439178	1298038
5.128		698161	566637
5.159		522689	440284
5.19		209942	126979
5.213		6741592	5735211
5.254		117531	83212
5.286		260357	231540
5.352		7795	11383
5.405		57215	36312
5.428		1307148	1111584
5.473		4580504	5308149
5.628		140947	129720
5.673		121606	89826
5.696		108765	77210
5.745		780870	732678
5.852		1762639	1511090
5.884		90427	69851
6.052		539382	540331
6.145		5333	10678
6.21	DCB	11523070	10930790
6.391		9717	22664
6.617		4657	13046
6.665		8755	9759
6.839		6062	17818

AR1651824D

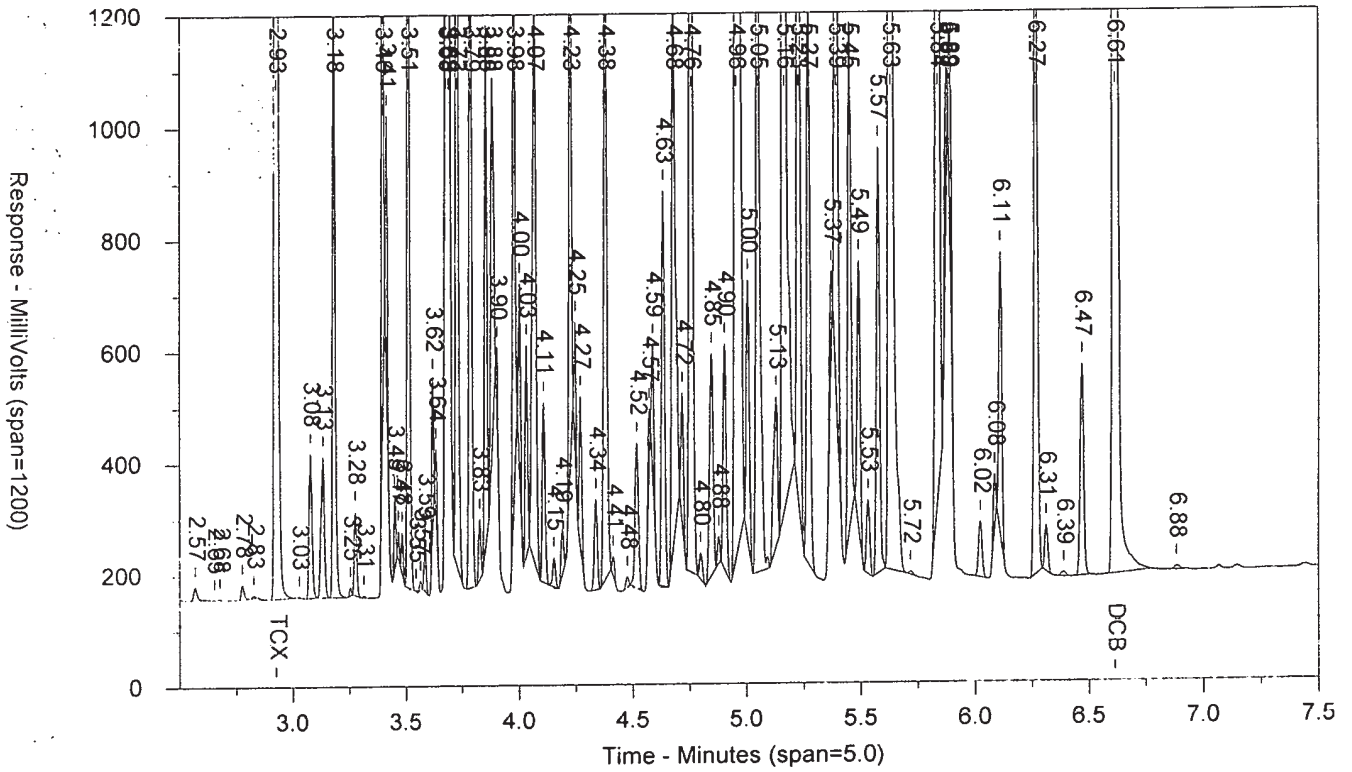
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ICAL 1830299999

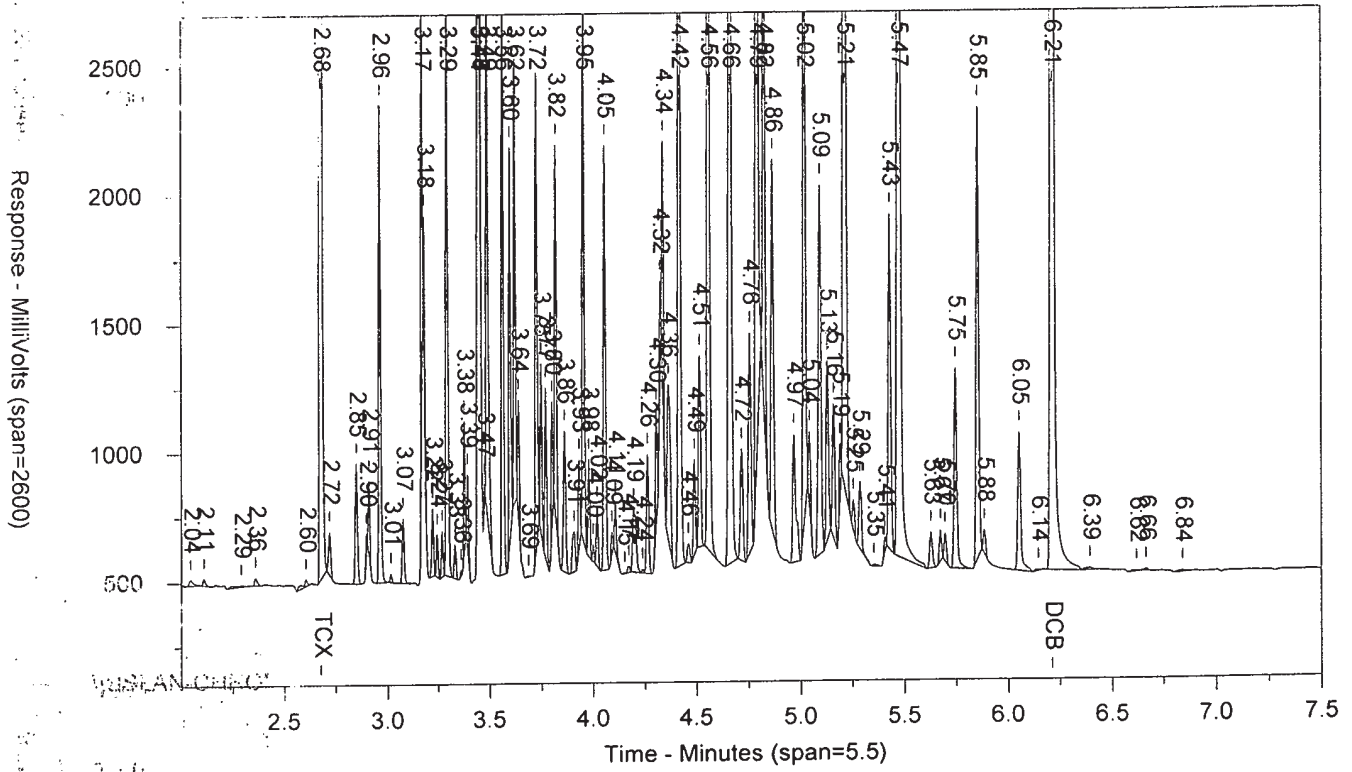
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR1651824D AAAR165AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 6:57:17 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	9939359	64.824	TCX	2.678	16291220	64.612	TCX
6.612	7875793	63.328	DCB	6.21	11523070	63.533	DCB

Files:

Area File: 25pcbs18303001.011.RAW
 Area File: 25pcbs18303001B.011.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 7:05:49 PM
 File Reported On: 10/30/2018 at 7:05:58 PM

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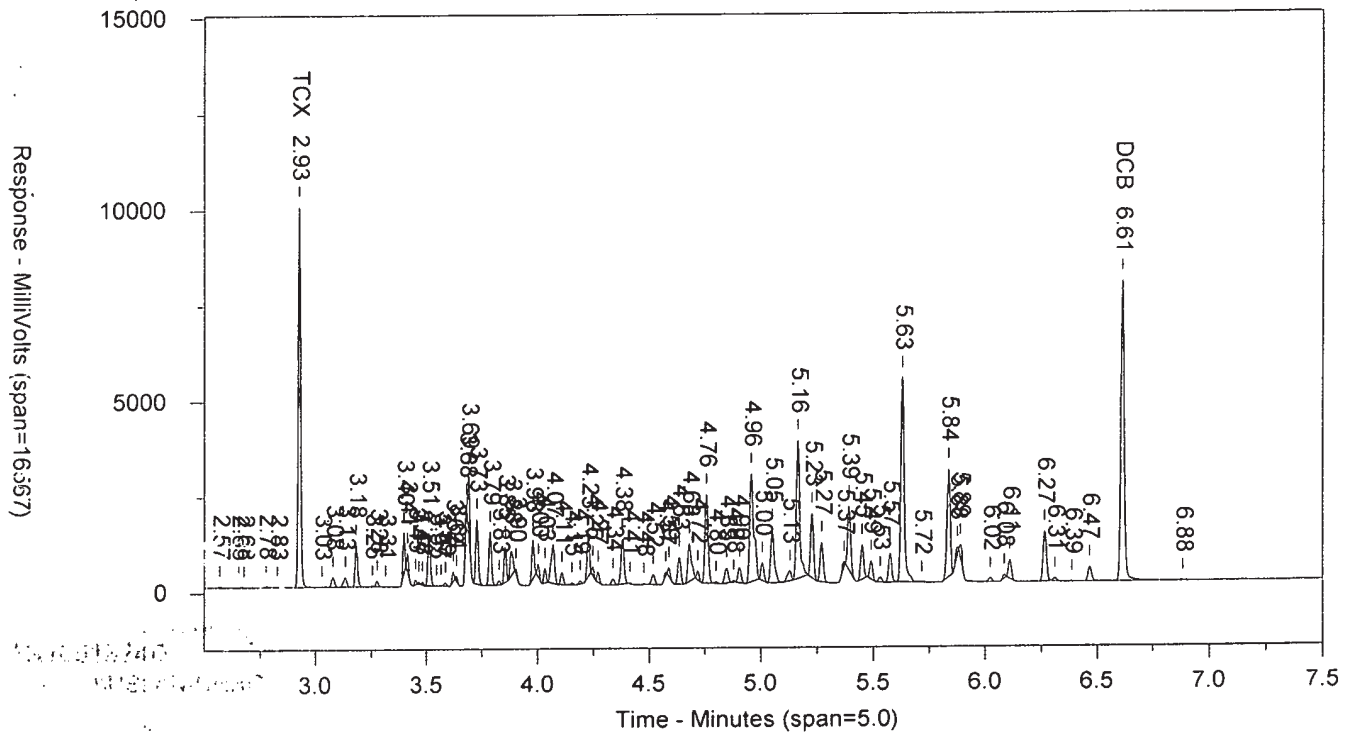
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ICAL 1830299999

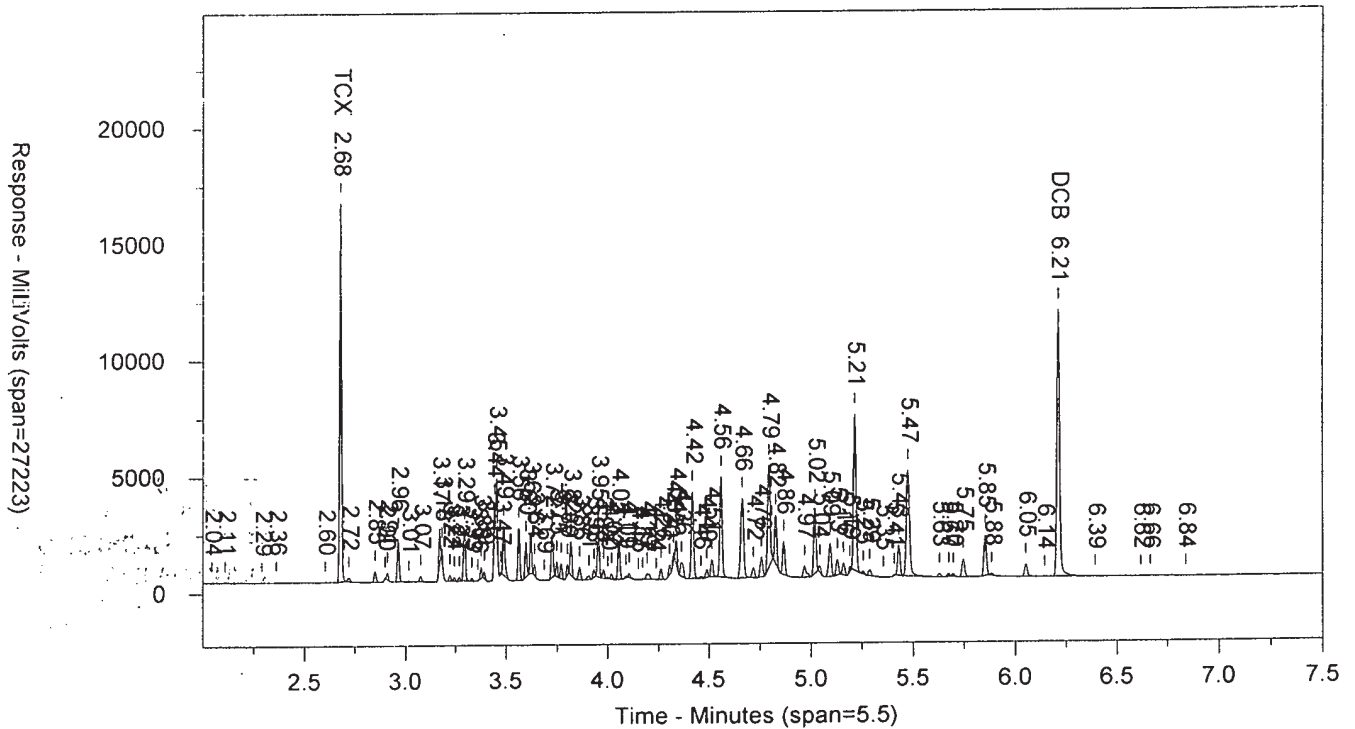
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SW-846 8082

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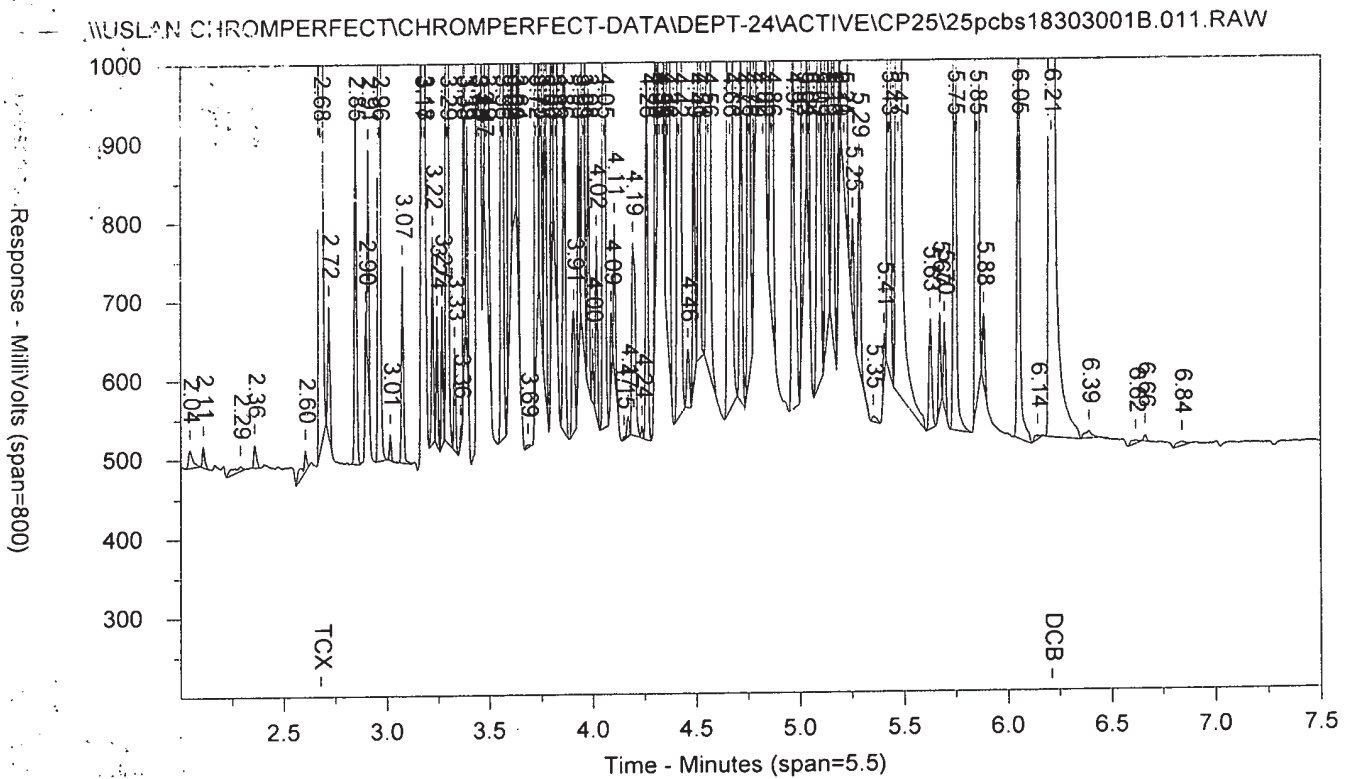
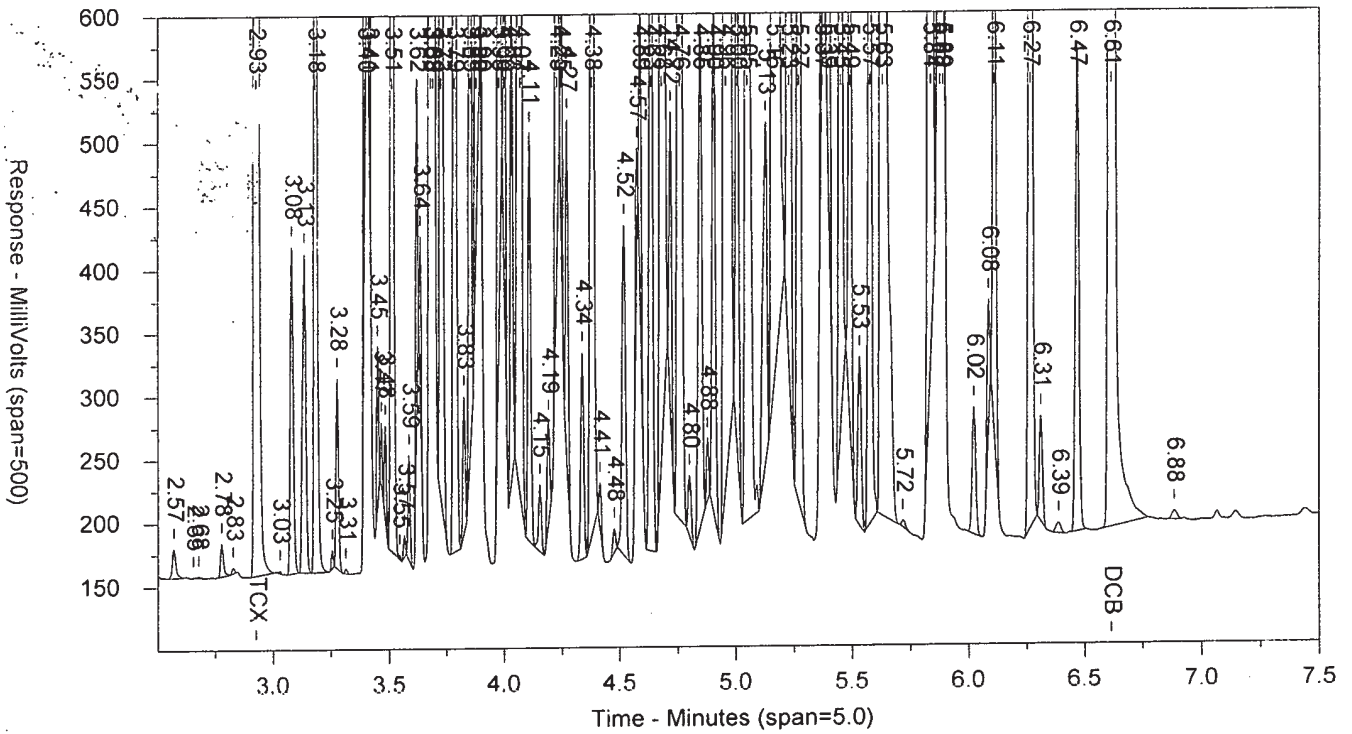
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ICAL 1830299999

10227

SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1661824C AAAR166AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:08:10 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.012.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.097		9186	16027
2.219		51142	44999
2.311		10138	5927
2.33		17109	11976
2.377		3232	3753
2.423		6383	6187
2.496		2356	3788
2.568		47408	48529
2.776		21845	18649
2.844		7443	8344
2.925	TCX	12472860	9355415
3.028		2694	1775
3.078		535889	496663
3.134		503611	474301
3.182		2307742	1831063
3.255		17639	9062
3.275		295890	231055
3.313		17701	5215
3.396		2310704	1409518
3.413		960043	506222
3.45		244980	144143
3.466		97205	41956
3.482		138919	79863
3.512		3097795	2402547
3.546		9091	3977
3.565		23523	15005
3.585		170191	121309
3.621		557276	318428
3.635		259125	126304
3.68		1159087	653582
3.691		3353930	1804032
3.727		3731587	2920273
3.786		3108270	2533646
3.826		216320	154099
3.853		1942672	1448054
3.882		1383978	1245798
3.901		286058	133960
3.977		2265135	1693752
4.001		673124	427623
4.032		830241	603027
4.067		2303566	2506225
4.108		695807	579792
4.153		105995	92146
4.19		156098	129759
4.226		2354364	1742330
4.246		428090	241882
4.27		569365	430356
4.337		338633	311399
4.381		2499547	2438776
4.414		68353	46762
4.476		43458	37603
4.517		523919	553278
4.573		226266	162938
4.587		437692	298089

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.634		1593310	1478228
4.679		2226058	2488500
4.716		516378	372559
4.756		5331655	5048792
4.798		89532	84605
4.847		889001	921879
4.877		86236	55869
4.903		885722	824227
4.955		6372845	8279168
5.006		1023223	925603
5.049		3272840	3534160
5.128		551133	688334
5.164		8086801	9023837
5.227		3680820	3452638
5.269		2304960	2272018
5.369		308853	311922
5.391		3803128	3461554
5.449		1994331	1897058
5.489		1046632	936181
5.574		1699322	1643489
5.63		12236540	12638670
5.716		6859	8165
5.836		6502546	6613598
5.889		1913223	3579880
6.022		172529	182426
6.084		196949	154065
6.108		1069562	987051
6.265		3008672	2986800
6.31		168106	166011
6.386		4338	5132
6.434		965	591
6.465		762809	819233
6.611	DCB	10221370	10750700
6.685		6304	5156
6.882		4880	7267

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1661824C AAAR166AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:08:10 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.012.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

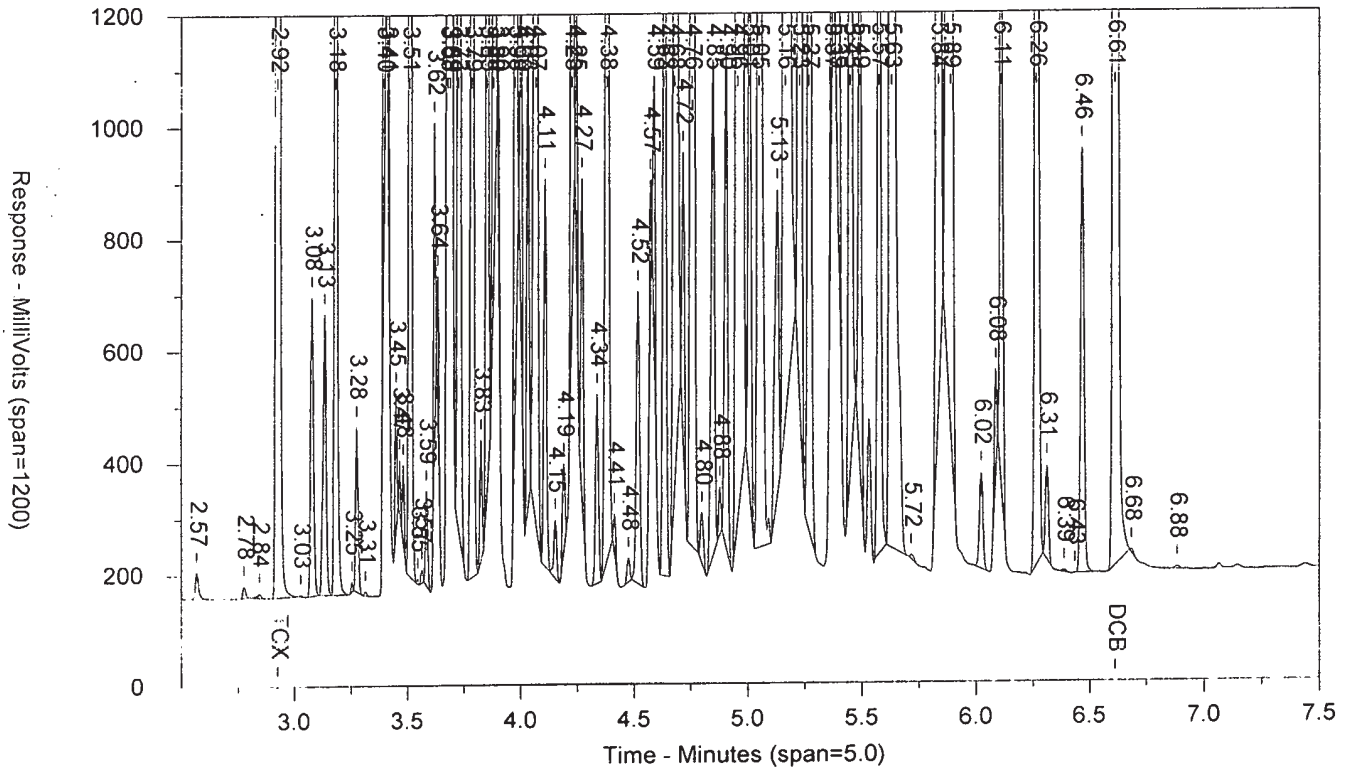
RT B	Compound B	Height B	Area B
2.047		15667	27058
2.11		34971	27065
2.292		4979	16212
2.359		60016	58526
2.603		22258	37484
2.678	TCX	21910070	13074030
2.72		339271	265211
2.848		959867	686205
2.909		800938	655330
2.962		3938734	2491120
3.015		43430	25391
3.074		508081	340235
3.17		3206210	1633517
3.181		1057950	431283
3.222		544067	341784
3.244		340835	200072
3.268		354376	204679
3.293		4865150	3253553
3.33		267598	166279
3.359		25717	11062
3.376		1083115	575016
3.391		612677	301715
3.419		5262	2089
3.442		2353796	1167650
3.452		5158882	2299626
3.472		182267	68151
3.486		4748335	3309790
3.561		5057473	3298841
3.596		3423128	2075197
3.62		3856195	2211734
3.638		1015163	505748
3.724		4198611	2791086
3.747		1507274	813414
3.769		1453505	881313
3.8		980653	533601
3.817		3264810	1987914
3.861		1189015	888831
3.907		293445	298041
3.931		753732	454572
3.953		4610057	3104013
3.979		846100	507805
3.999		141304	73070
4.018		490446	312185
4.055		3721667	2631133
4.09		178292	107722
4.106		388962	248635
4.151		10578	5347
4.171		40218	31854
4.195		516450	609548
4.238		24827	13042
4.261		1010478	746720
4.305		954710	571519
4.324		945420	458987
4.337		2429791	1325258

Chrom Perfect Chromatogram Report

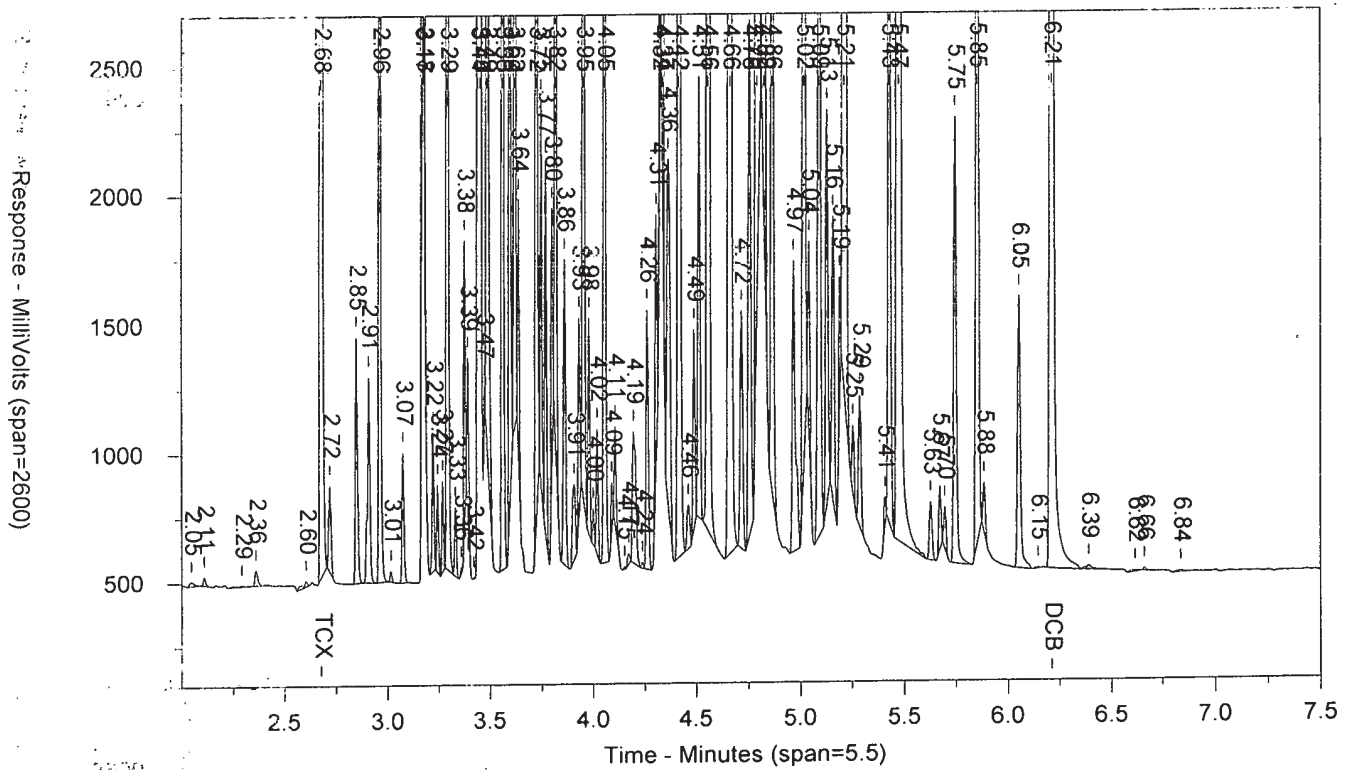
RT B	Compound B	Height B	Area B
4.364		1348254	1443958
4.416		8478878	6569485
4.461		171099	161324
4.488		780792	535215
4.513		1684765	1246050
4.557		10068820	7797005
4.662		8203220	7960940
4.716		924980	813717
4.755		2009794	1758456
4.792		10399650	8754935
4.825		4584628	3370716
4.864		3313086	2641002
4.967		1135195	1182373
5.018		6193271	4945047
5.042		754645	465772
5.092		3040357	2867492
5.129		1534505	1234904
5.159		1105162	937883
5.191		492215	287049
5.213		15727890	13297110
5.254		267293	195832
5.291		513925	442121
5.405		120196	76752
5.427		3010106	2448080
5.474		9942624	11905400
5.628		228903	211141
5.672		251695	191564
5.696		163052	121396
5.745		1743556	1568406
5.852		3993789	3370973
5.885		197002	145576
6.052		1061432	1038427
6.145		4672	8964
6.21	DCB	15097040	14179290
6.39		15889	30904
6.616		5823	16389
6.662		11822	10352
6.835		7487	19090

AR1661824C AAAR166AA ICAL 1830299999 10227 SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1661824C AAAR166AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:08:10 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	12472860	80.632	TCX	2.678	21910070	86.52	TCX
6.611	10221370	80.736	DCB	6.21	15097040	81.613	DCB

Files:
 Area File: 25pcbs18303001.012.RAW
 Area File: 25pcbs18303001B.012.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 7:16:41 PM
 File Reported On: 10/30/2018 at 7:16:49 PM

AR1661824C

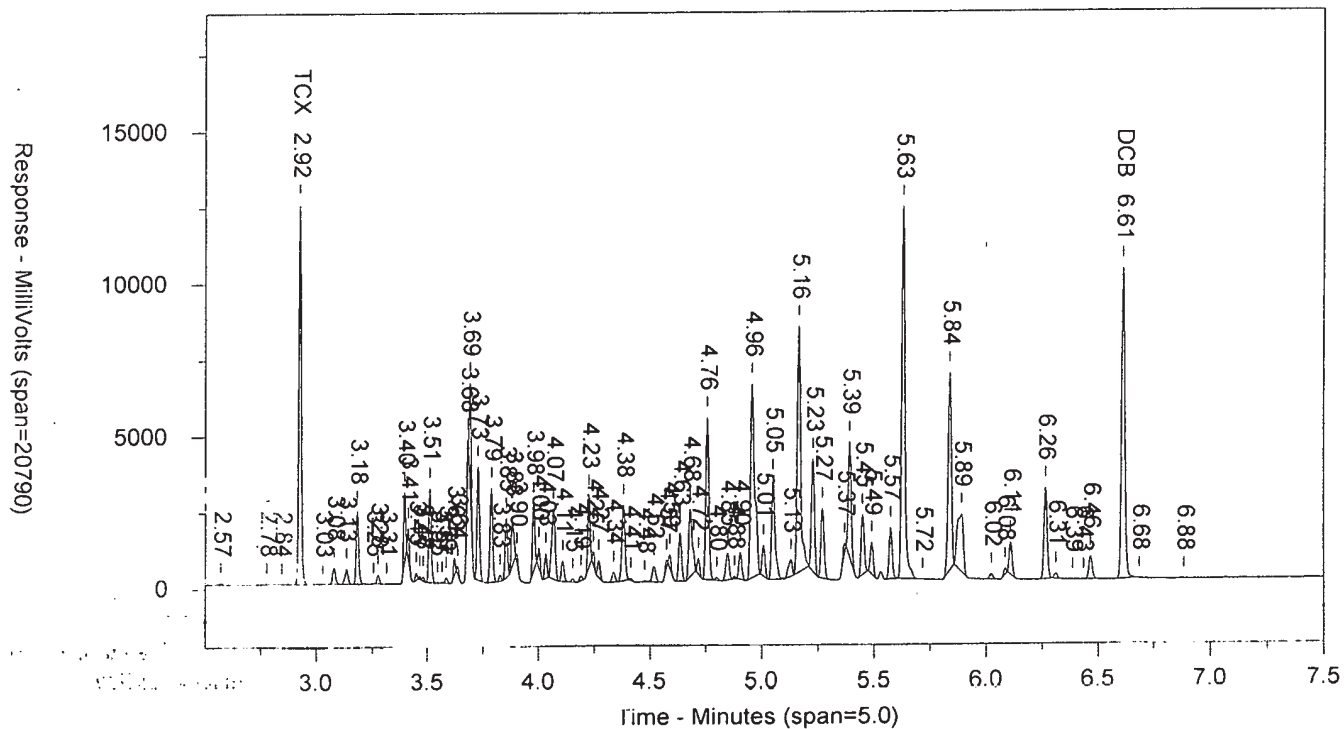
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ICAL 1830299999

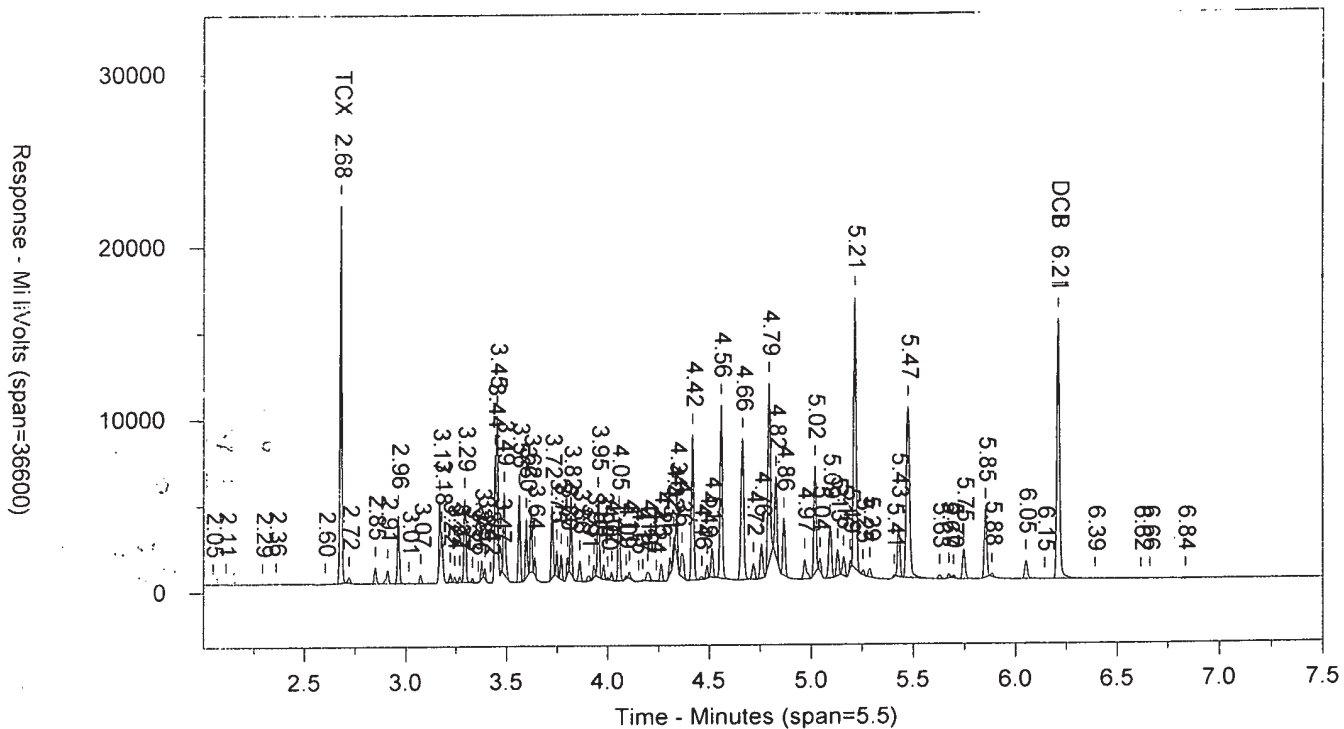
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SW-846 8082

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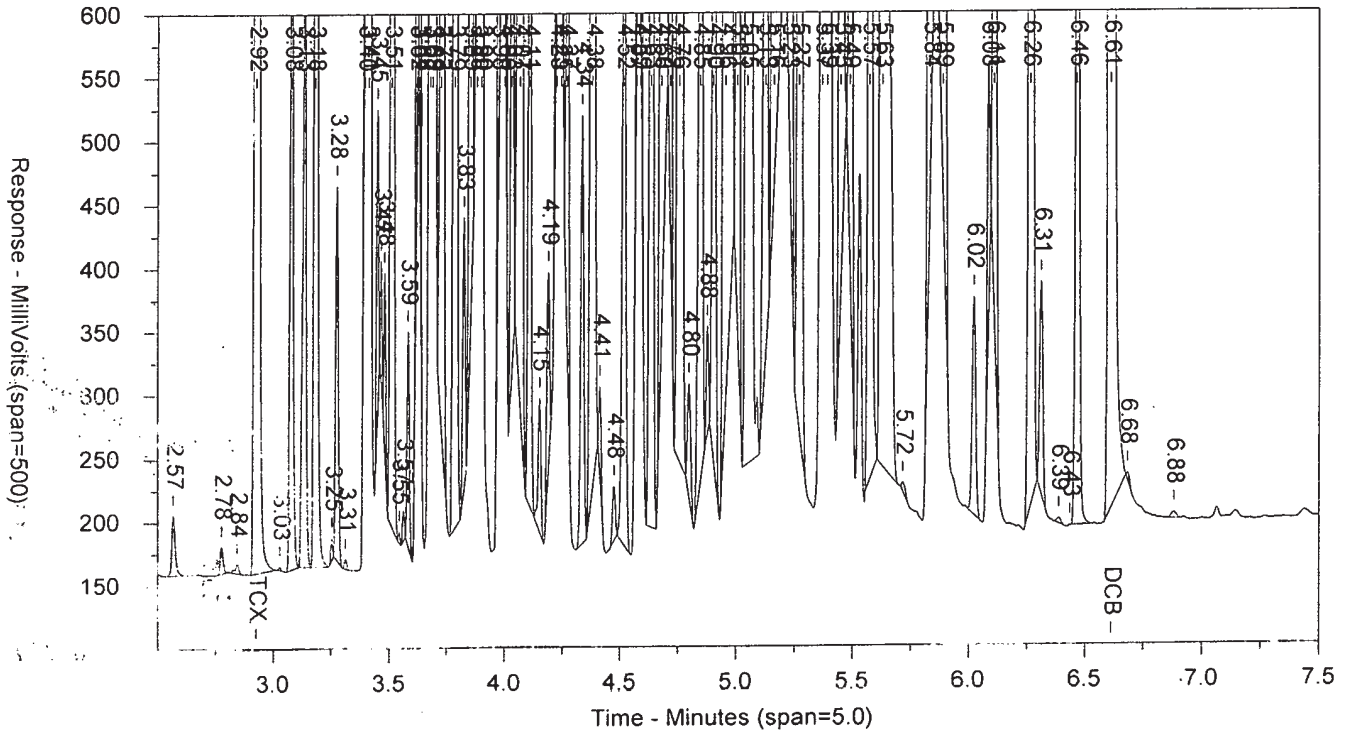


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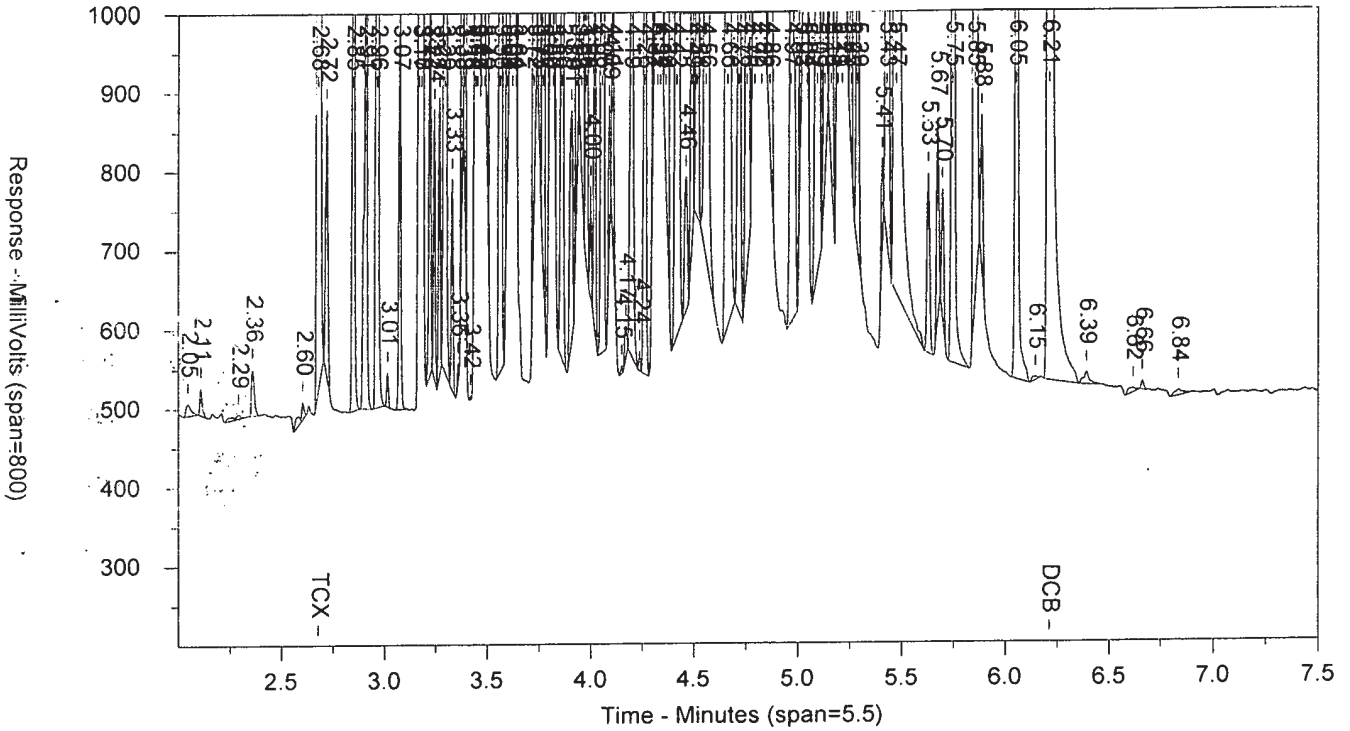


AR1661824C AAAR166AA ICAL 1830299999 10227 SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4811824C AAAR481AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:19:16 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.013.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT:A	Compound A	Height A	Area A
2.095		9075	15343
2.23		3175	3979
2.312		9653	6542
2.374		2196	2682
2.423		2522	2379
2.493		1778	2050
2.571		4651	4061
2.777		66559	66265
2.832		1695	1578
2.925	TCX	65410	46459
3.079		9634	8951
3.135		5340	4422
3.183		34341	26063
3.277		5275	4069
3.397		61494	37420
3.414		18196	8916
3.451		3638	2069
3.467		2458	1240
3.513		65643	49560
3.587		5760	4375
3.623		9885	5790
3.637		3547	1623
3.682		31339	18972
3.693		49109	26987
3.729		82718	65064
3.787		68949	56248
3.828		7621	5402
3.855		101346	76992
3.883		65401	55788
3.903		15780	8192
3.979		111588	85246
4.003		30141	19405
4.033		40156	28808
4.069		94220	94843
4.109		32602	25423
4.155		3168	2750
4.193		7781	6767
4.227		85373	61158
4.248		87034	56737
4.271		94085	71209
4.338		10406	9532
4.378		100213	87720
4.398		14379	6651
4.415		12830	7479
4.479		4465	3298
4.521		28819	26191
4.573		39434	34107
4.605		16679	11423
4.635		77489	66959
4.68		17772	18892
4.719		26011	21304
4.757		48599	46943
4.807		5342	4755
4.848		52709	48472

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.905		4041	3085
4.927		4781	3608
4.958		45292	37058
5.007		8821	7937
5.049		60094	64510
5.13		5199	6432
5.166		68187	64596
5.228		32199	28667
5.272		18269	18369
5.393		37463	54216
5.576		14296	13441
5.632		90104	98119
5.838		54973	57873
5.891		16633	30260
6.026		1260	1084
6.086		1748	1314
6.11		9823	9290
6.267		25986	26524
6.31		1129	864
6.383		827	639
6.468		7058	7411
6.547		702	1360
6.614	DCB	87019	97842
6.892		1040	2186

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4811824C AAAR481AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:19:16 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.013.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		17745	42081
2.58		10744	15471
2.603		62369	63918
2.678	TCX	102985	65901
2.85		18639	14979
2.91		9667	7936
2.962		56731	37511
3.074		8510	5046
3.171		77922	41660
3.182		17163	6197
3.223		8560	4828
3.245		8636	5443
3.27		4389	2527
3.294		95323	68367
3.331		10357	6294
3.377		14311	7058
3.39		14357	7851
3.443		69095	33612
3.453		81208	34569
3.473		13384	5557
3.488		95903	63677
3.563		115691	73436
3.597		161334	102192
3.621		156028	88568
3.639		44676	23055
3.726		193718	129082
3.749		59625	32464
3.77		69178	43664
3.801		32735	17510
3.818		130637	81095
3.862		53206	39099
3.91		11427	10618
3.932		87737	53112
3.955		234630	157759
3.98		143679	89118
4		12042	5906
4.019		14376	8172
4.056		85145	64373
4.092		99069	80468
4.121		44845	24439
4.169		8643	6295
4.205		40485	33861
4.262		66188	50477
4.297		30882	24097
4.325		103005	93226
4.364		12631	13030
4.418		94917	85221
4.456		9750	7489
4.489		59986	44457
4.515		13606	9688
4.558		78203	63160
4.663		63893	74854
4.713		51289	45284
4.756		13700	11850

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.794		80473	70531
4.827		35687	27303
4.866		24466	20025
4.968		7984	9140
5.02		45050	35918
5.095		25792	23159
5.13		11865	9425
5.161		8497	7313
5.215		104142	106314
5.429		24899	21784
5.476		73917	91298
5.748		13544	12220
5.853		32944	29216
6.054		10692	11548
6.212	DCB	118969	119949

AR4811824C

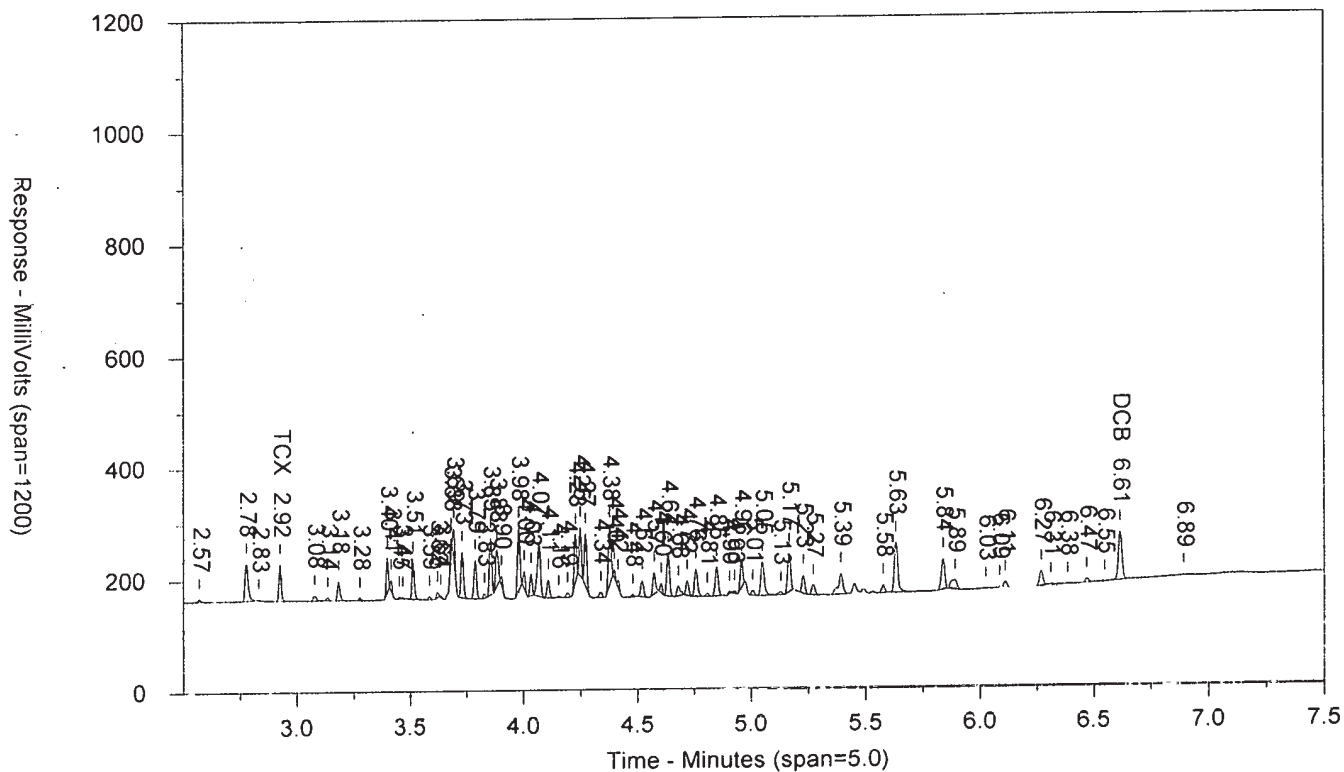
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ICAL 1830299999

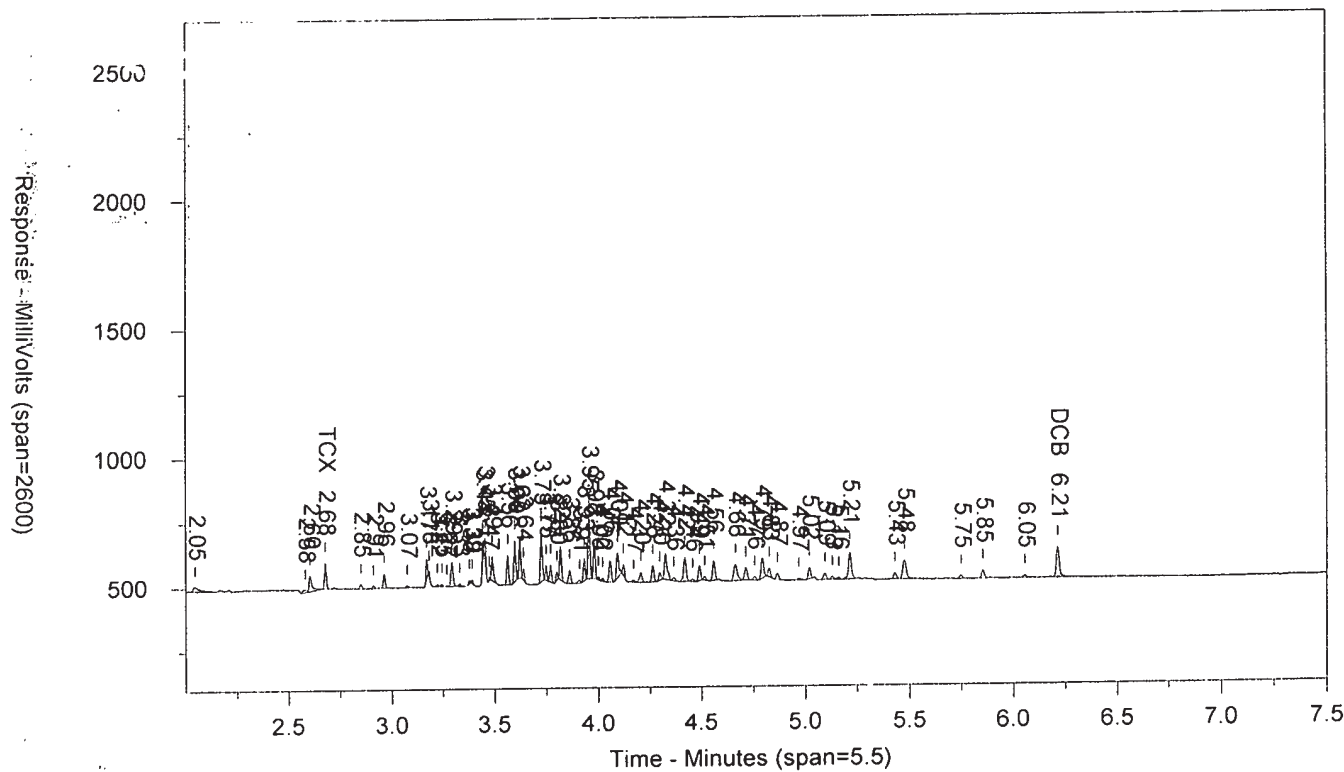
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4811824C AAR481AA ICAL 183029999 10227 SW-846 8082
 Injected On: 10/30/2018 7:19:16 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	65410	.422	TCX	2.678	102985	.404	TCX
6.614	87019	.678	DCB	6.212	118969	.634	DCB

Files:

Area File: 25pcbs18303001.013.RAW
 Area File: 25pcbs18303001B.013.RAW
 Method A: 25PCBS.MFT
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Callbration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 7:27:45 PM
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AR4811824C

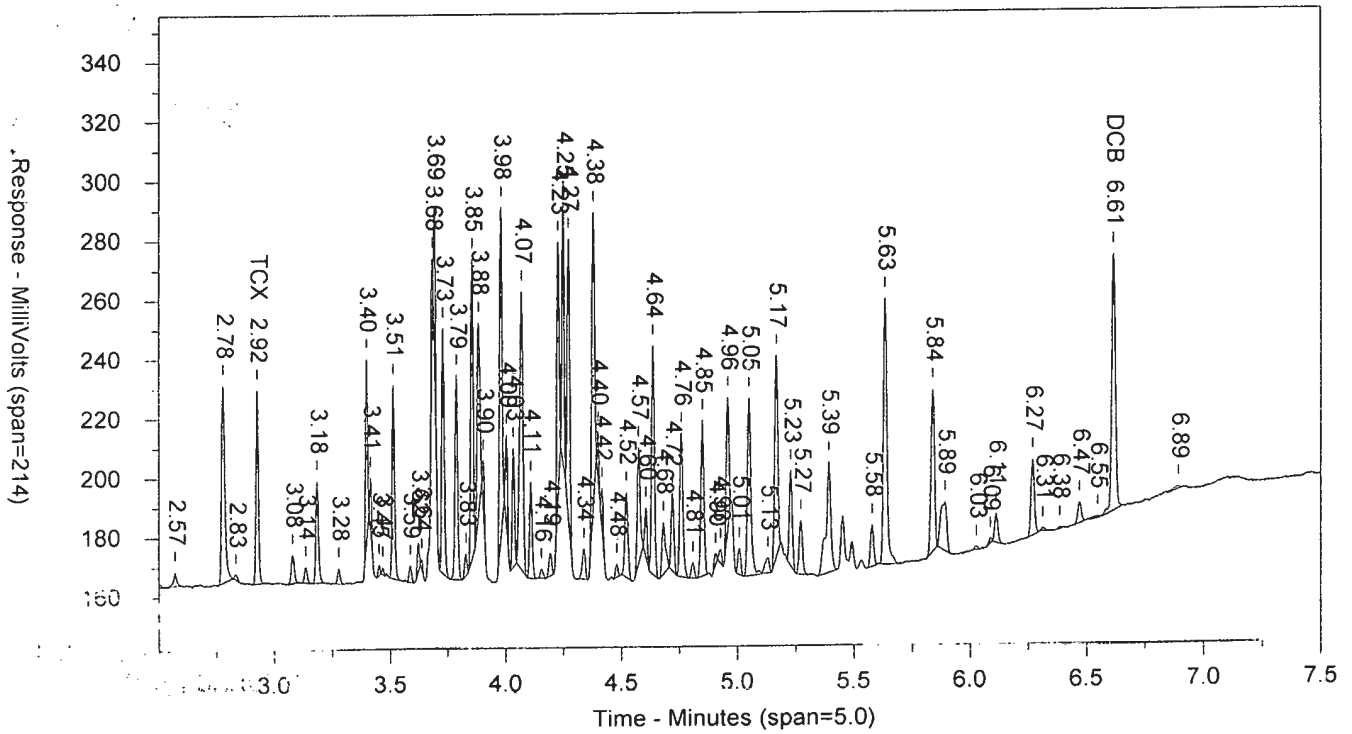
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ICAL 1830299999

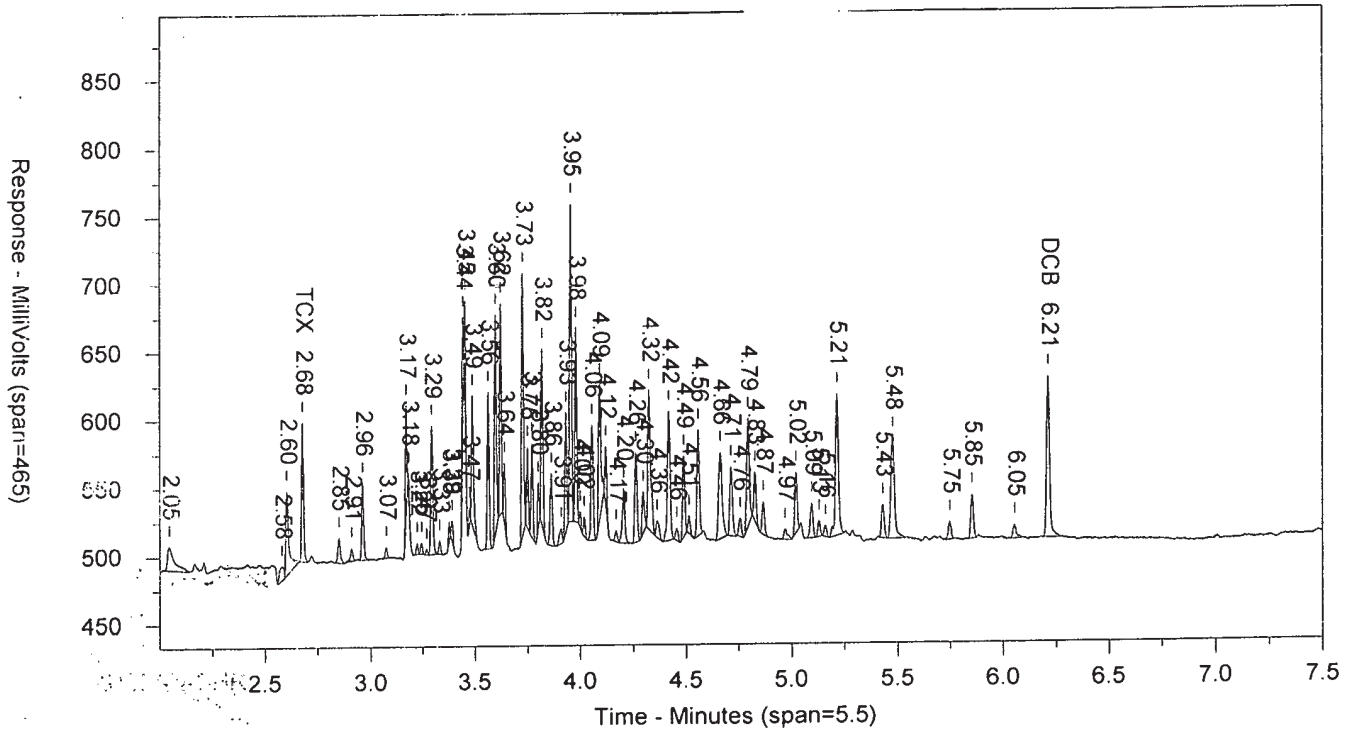
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SW-846 8082

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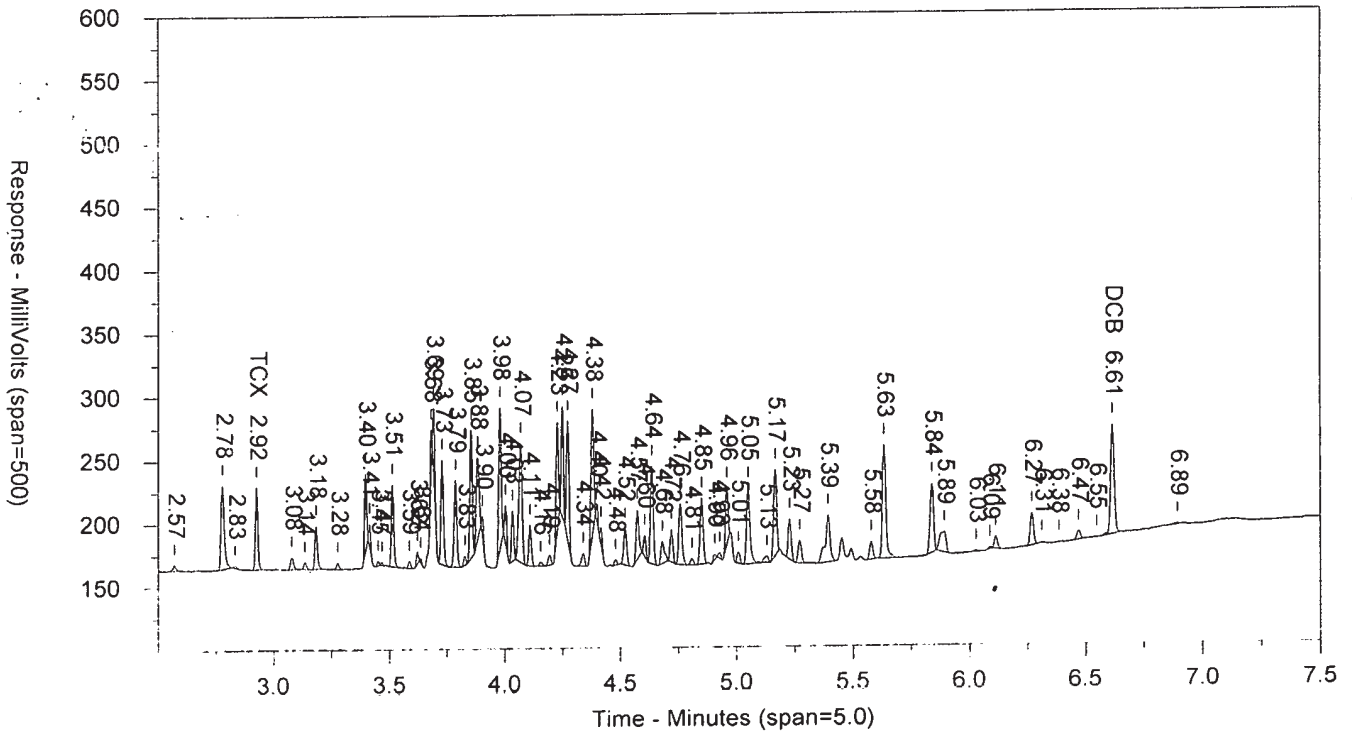
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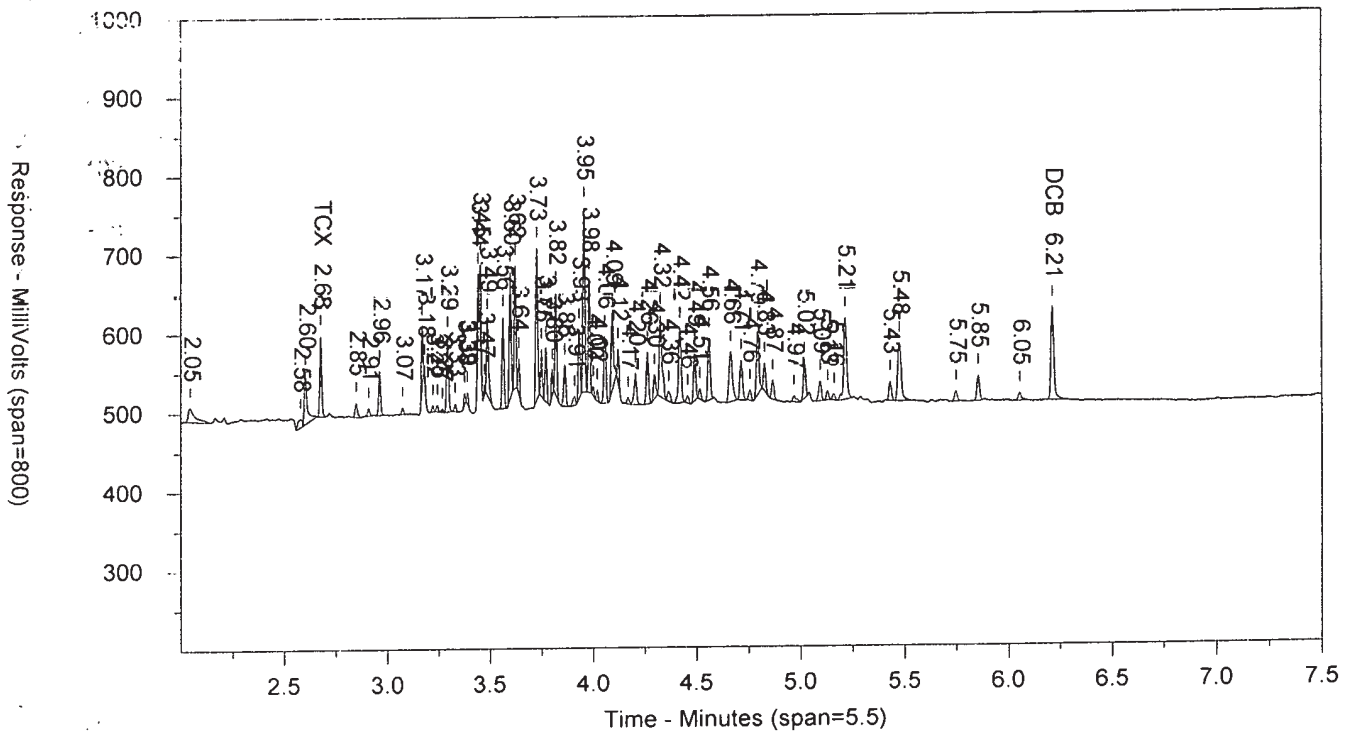
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4821824C AAAR482AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:30:09 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.014.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.096		8275	16405
2.145		2096	3082
2.229		2615	2234
2.311		10043	7006
2.376		2192	2580
2.421		3198	2994
2.492		1393	1775
2.57		3301	3110
2.776		11660	9121
2.831		1737	2080
2.927	TCX	4941	4262
3.078		12293	11084
3.135		5148	3965
3.182		32938	26436
3.276		5876	4501
3.396		77372	49641
3.413		19298	9461
3.449		4259	2427
3.466		4105	2104
3.512		81816	63386
3.586		9136	6535
3.622		11991	7027
3.681		46859	27183
3.691		56592	33744
3.728		108121	87107
3.786		90524	76428
3.828		12078	8320
3.854		162501	123005
3.881		102139	85533
3.902		26832	14431
3.978		176516	137391
4.002		48308	31858
4.033		63240	47349
4.068		149906	147987
4.109		51119	41727
4.154		5076	4512
4.193		13090	11084
4.227		125240	89815
4.247		145718	98293
4.27		163506	125197
4.337		15238	14469
4.376		157882	137487
4.397		34107	17171
4.414		25583	14182
4.454		1938	1314
4.478		7642	5803
4.52		49197	43505
4.572		72048	61078
4.604		36893	27989
4.634		117274	107991
4.678		2179	1652
4.719		45442	40550
4.756		10002	12403
4.806		9983	8960

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.848		85290	83561
4.925		10562	12687
4.955		7037	4750
4.973		3769	2632
5.047		77504	73720
5.165		19463	17741
5.19		743	355
5.228		2620	2045
5.375		4091	3846
5.575		4058	3592
5.63		8522	8599
5.834		6937	7670
5.893		2366	3586
6.112		1789	1800
6.265		3118	3066
6.468		1373	1124
6.583		1199	1118
6.613	DCB	934	543

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4821824C AAAR482AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:30:09 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.014.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.045		13265	32123
2.604		15364	34390
2.85		23900	18110
2.91		9710	7219
2.963		54906	37248
3.075		9789	6802
3.17		116224	59812
3.222		10560	6238
3.244		13198	8371
3.27		3291	1733
3.293		123547	85244
3.331		16272	9957
3.377		17063	8649
3.39		12175	6534
3.442		98088	47650
3.452		111397	46030
3.472		23463	9770
3.487		122689	82201
3.562		153693	100077
3.596		260788	163453
3.62		235907	135990
3.638		71607	36260
3.696		1663	1730
3.725		317587	207859
3.748		90520	51525
3.769		108978	67196
3.8		46667	24232
3.818		208220	127614
3.861		83067	61370
3.909		16816	14641
3.931		156703	97241
3.954		402446	258902
3.979		260853	167328
3.999		22423	11145
4.019		21148	12260
4.055		117048	84689
4.091		192587	152210
4.12		89810	49698
4.168		14950	10873
4.204		69127	55302
4.262		112013	88211
4.295		64487	46338
4.323		175733	135863
4.419		68530	68032
4.455		16915	12662
4.488		109932	98675
4.557		14448	10335
4.583		7040	5153
4.658		17326	25182
4.711		90657	86371
4.792		26105	24026
5.02		4609	4001
5.042		7260	5430
5.19		4085	2811

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.214		9969	8676
5.475		8635	9880

AR4821824C

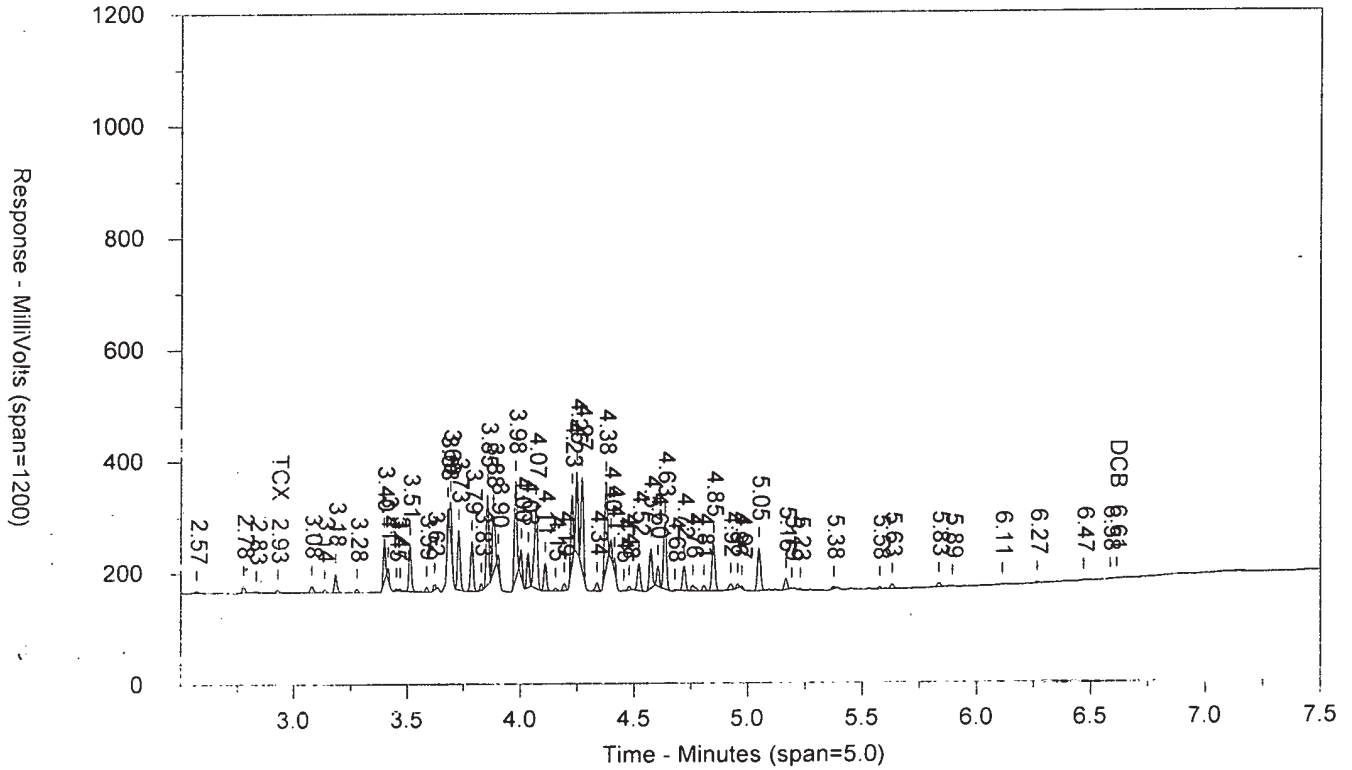
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ICAL 1830299999

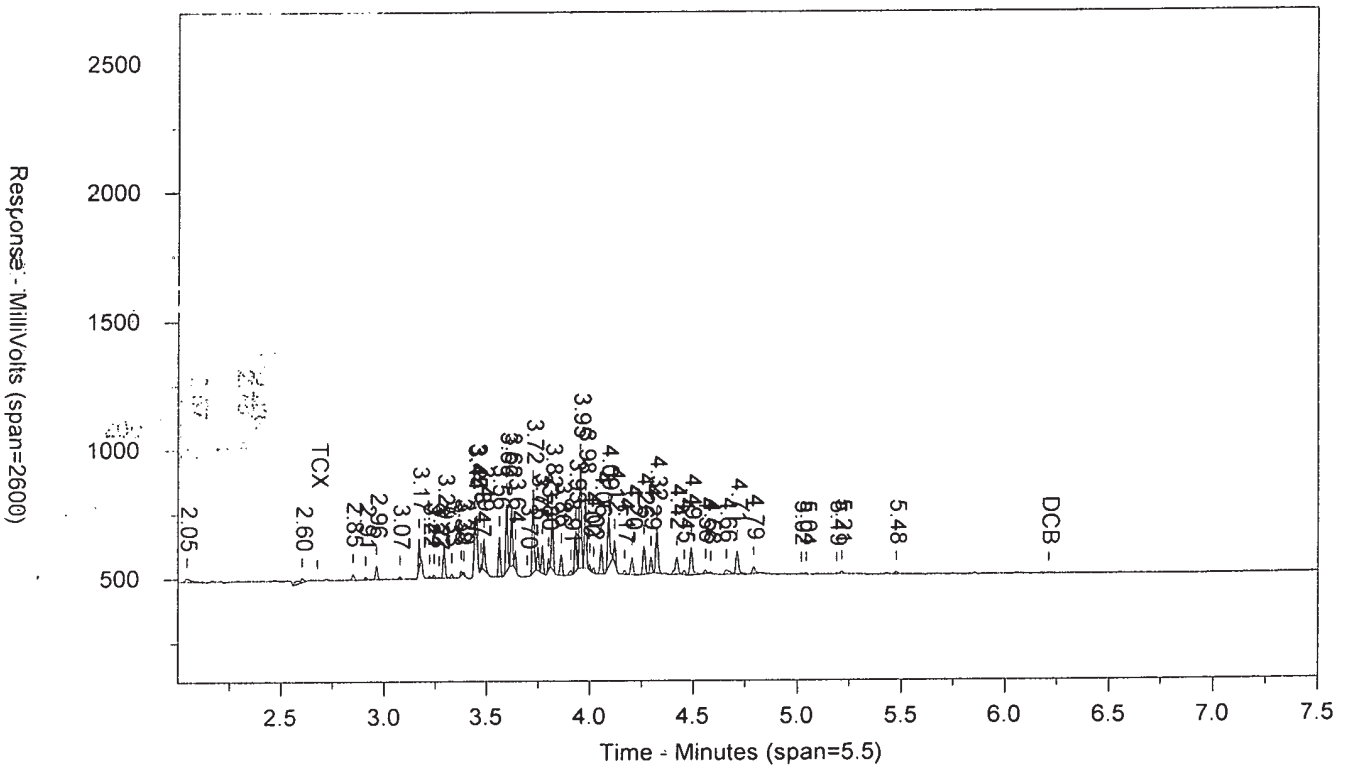
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR4821824C AAAR482AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:30:09 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.927	4941	.032	TCX		0		TCX
6.613	934	.007	DCB		0		DCB

Files:
 Area File: 25pcbs18303001.014.RAW
 Area File: 25pcbs18303001B.014.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 7:38:40 PM
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LANCASTER LABORATORIES
 1000 W. 10th St.
 Lancaster, PA 17602
 Tel: 717-397-1000
 Fax: 717-397-1001
 Email: info@lanlab.com
 www.lanlab.com

AR4821824C

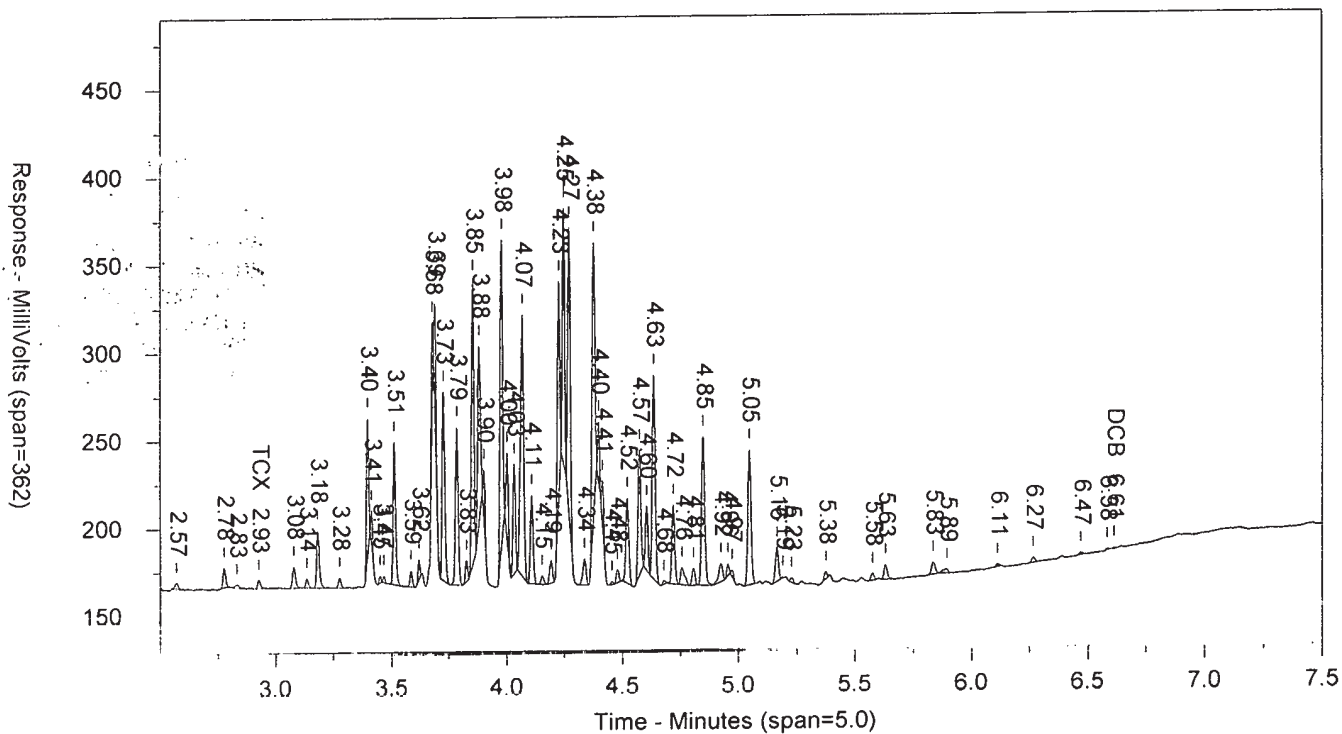
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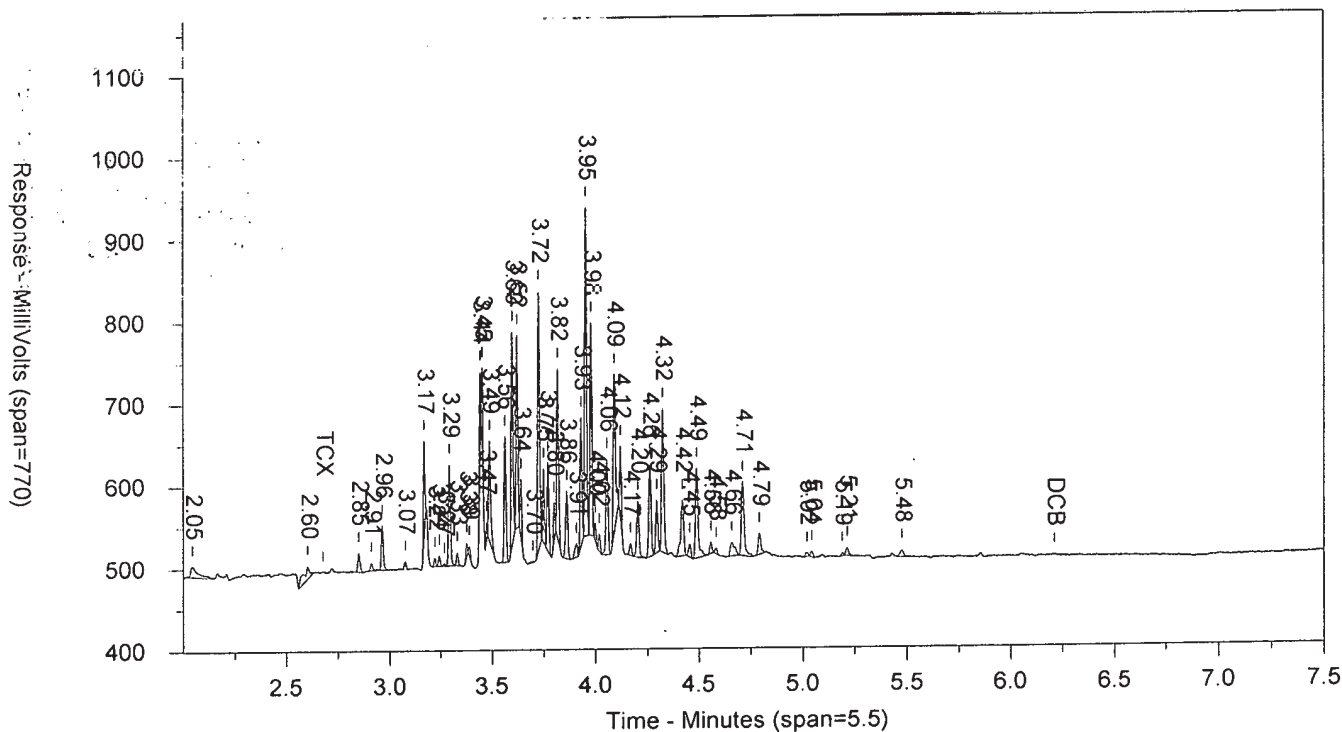
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SW-846 8082

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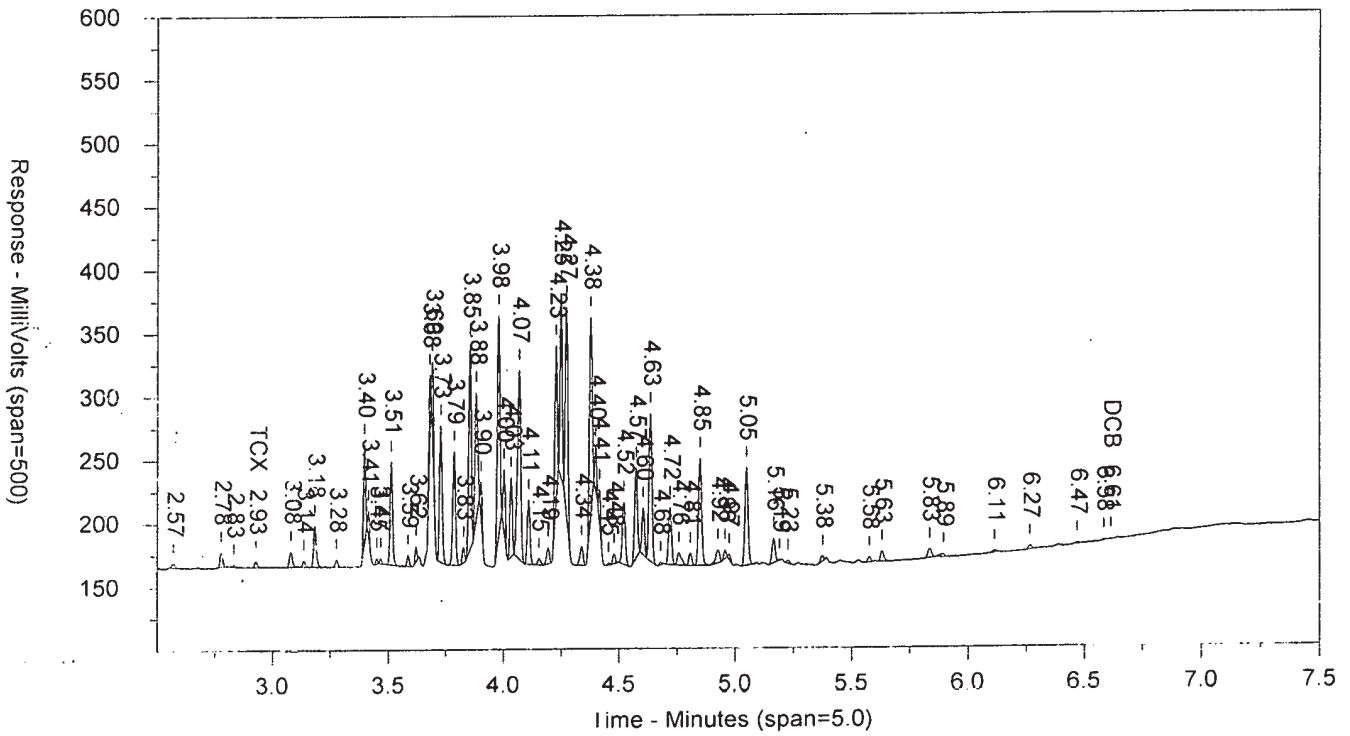
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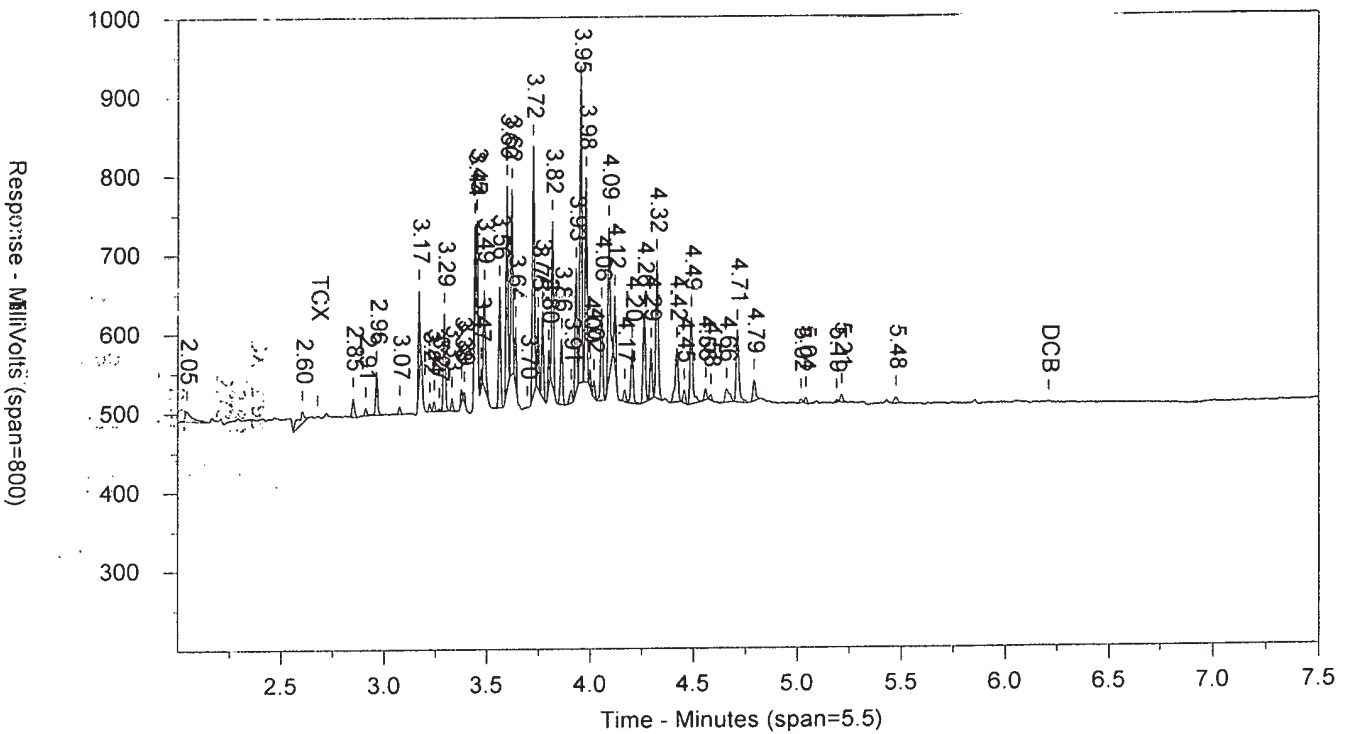
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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4831824C AAAR483AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:41:01 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c. to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.015.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.096		8478	15602
2.146		958	1016
2.228		3204	3985
2.311		7522	5560
2.38		2256	2826
2.424		2532	2025
2.57		4582	4458
2.776		32790	30290
2.926	TCX	7960	6753
3.079		21332	19552
3.135		10078	7840
3.182		62703	49279
3.275		12077	8675
3.396		147201	93615
3.412		7136	18913
3.45		8845	4938
3.467		7175	3732
3.512		155464	122432
3.561		1190	645
3.586		15955	11773
3.621		25504	14780
3.636		5744	2506
3.681		92349	55706
3.691		117097	65766
3.728		197427	163624
3.786		175699	150182
3.827		26697	17947
3.854		306732	233200
3.881		195141	160346
3.902		49478	27517
3.978		349640	263637
4.002		90438	58479
4.032		129080	94608
4.068		302107	290715
4.108		102127	84245
4.153		9755	7869
4.192		27157	23863
4.226		250487	173400
4.247		297585	192934
4.27		332495	250280
4.338		31855	30620
4.377		304387	268950
4.398		65119	33019
4.414		38268	23268
4.455		113969	2846
4.478		17197	12814
4.52		98006	89009
4.572		137052	121692
4.603		72714	57512
4.634		231663	212481
4.679		3434	2394
4.718		88709	82999
4.756		19911	23755
4.806		21315	18551

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.647		160398	163725
4.928		14457	19255
4.956		13676	9430
4.974		8714	5534
5.048		152879	150423
5.164		39301	35930
5.188		1564	797
5.227		5376	4292
5.374		8838	7070
5.573		7945	6985
5.601		1155	695
5.629		14619	15447
5.835		11159	12172
5.89		4778	7422
6.109		2169	2141
6.265		5507	5627
6.464		2695	2615
6.582	DCB	1802	2042

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4831824C AAAR483AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:41:01 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.015.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.047		15625	38633
2.604		36922	66373
2.72		10982	10717
2.85		41766	31350
2.911		17650	13093
2.963		99746	66934
3.074		19550	12805
3.17		211272	113056
3.182		34514	12936
3.222		20395	12013
3.244		19583	12061
3.269		6856	3566
3.294		236567	165911
3.331		26754	16983
3.377		44098	23147
3.391		17194	8549
3.443		210982	98119
3.452		200537	80407
3.473		40042	17223
3.487		234781	157428
3.562		304067	197718
3.596		518707	323074
3.62		454100	266125
3.638		150182	75086
3.725		607642	407553
3.748		192731	105299
3.769		209392	131342
3.8		88665	46846
3.817		401143	254500
3.861		164770	122189
3.908		32931	28044
3.931		308796	195260
3.954		802517	510454
3.978		526703	333401
3.999		44976	21488
4.018		39542	23259
4.055		232733	169832
4.091		377295	298244
4.12		189491	107348
4.168		30059	20485
4.203		137401	106004
4.262		227378	175633
4.295		130537	93334
4.324		353479	265998
4.419		141132	134183
4.456		32678	23281
4.489		211876	163971
4.557		27382	19187
4.582		15795	11019
4.66		36980	43904
4.712		195475	160989
4.794		52972	49015
5.02		8131	6022
5.042		15468	11387

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.192		6587	4794
5.213		18516	15542
5.429		8043	7559
5.475		14968	17869
5.851		8511	7891

AR4831824C

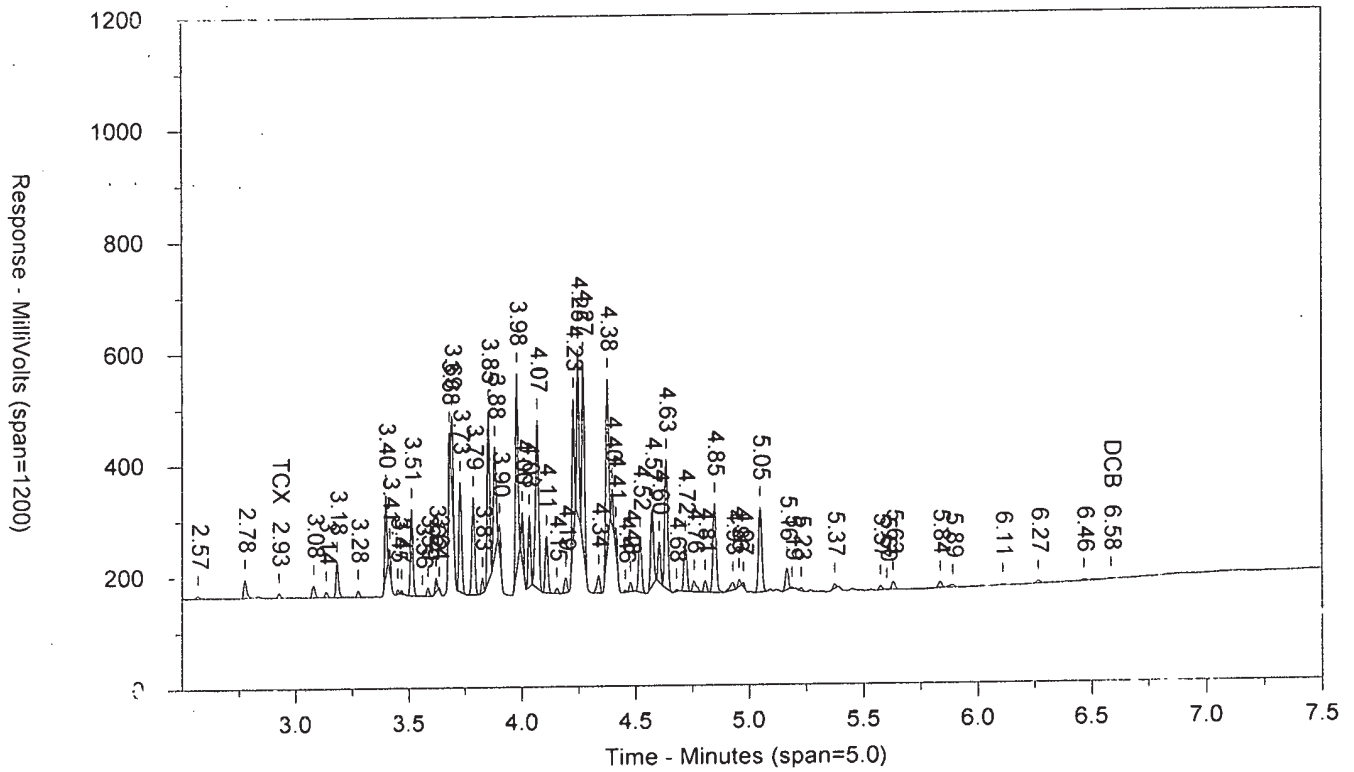
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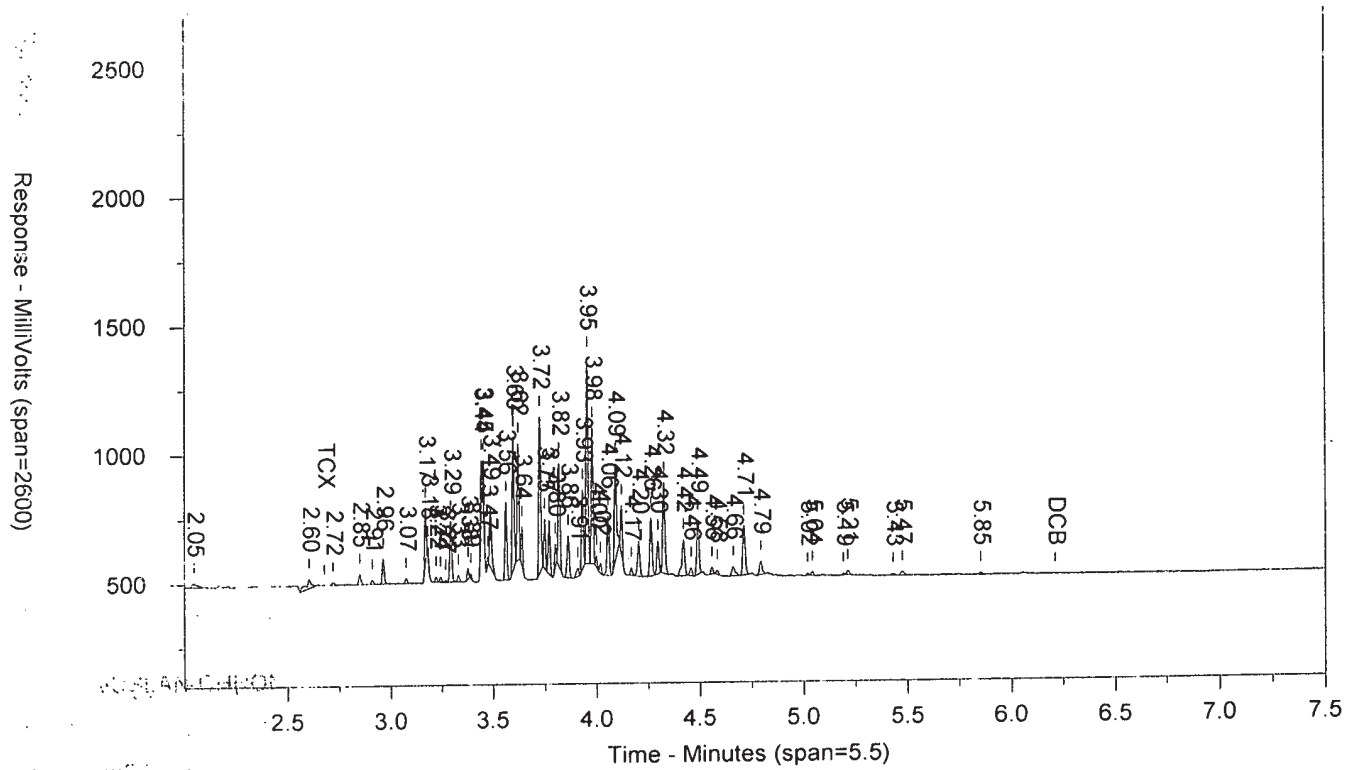
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LANCASTER LABORATORIES

Sample Number: AR4831824C AAAR483AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:41:01 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.926	7960	.051	TCX		0		TCX
6.582	1802	.014	DCB		0		DCB

Files:
 Area File: 25pcbs18303001.015.RAW
 Area File: 25pcbs18303001B.015.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
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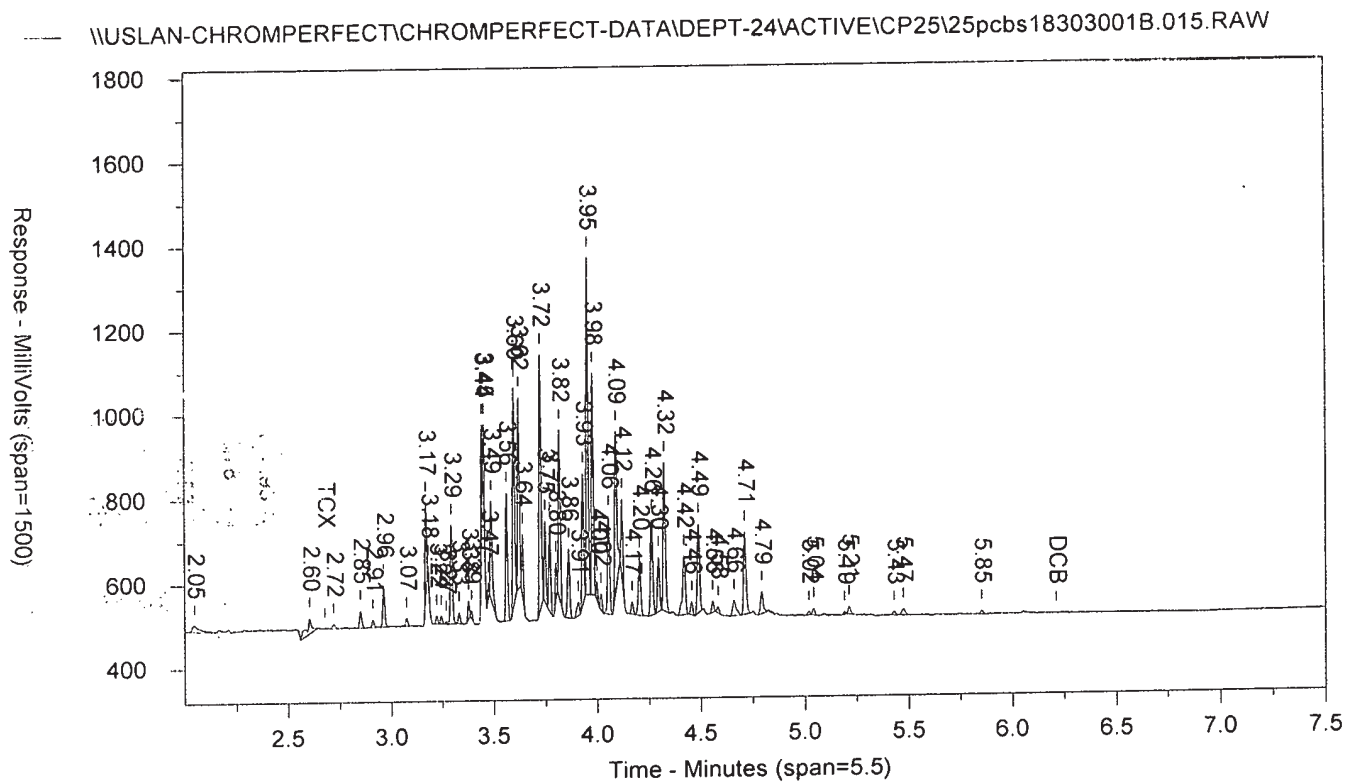
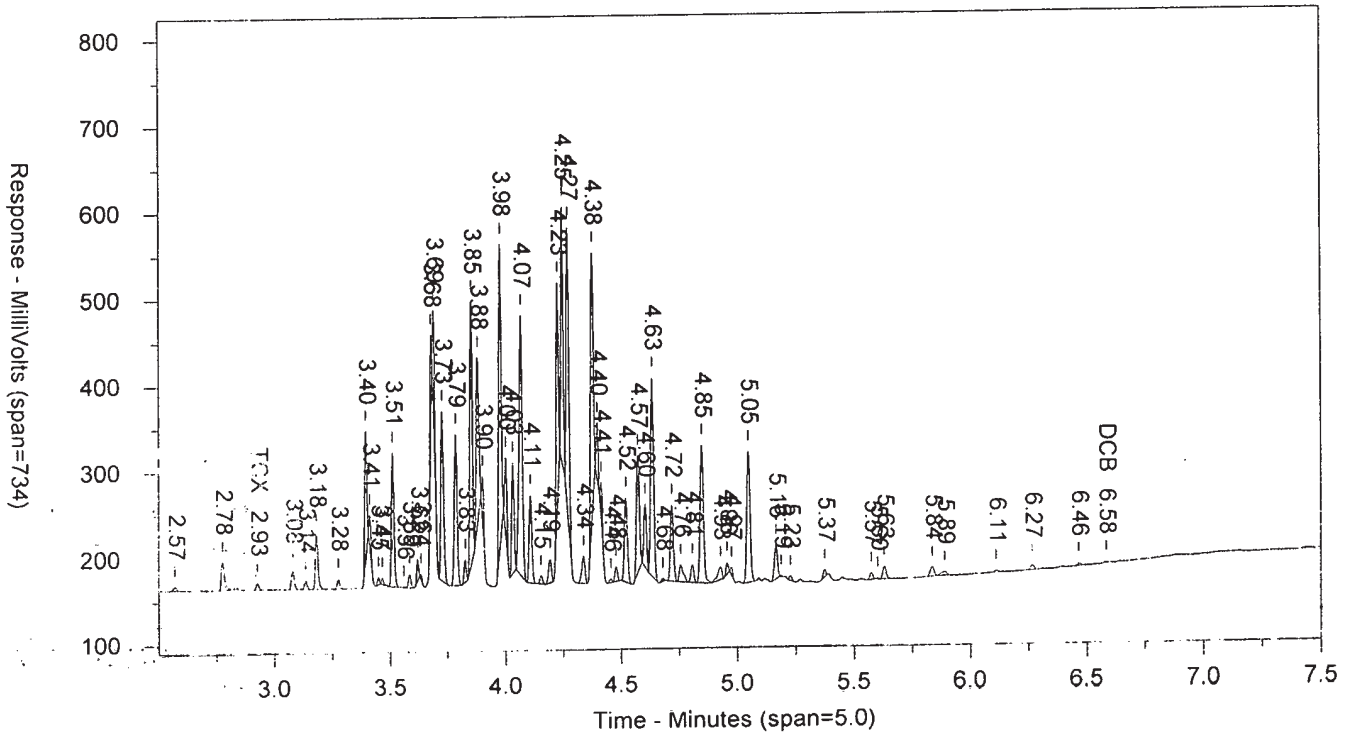
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ICAL 1830299999

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SW-846 8082

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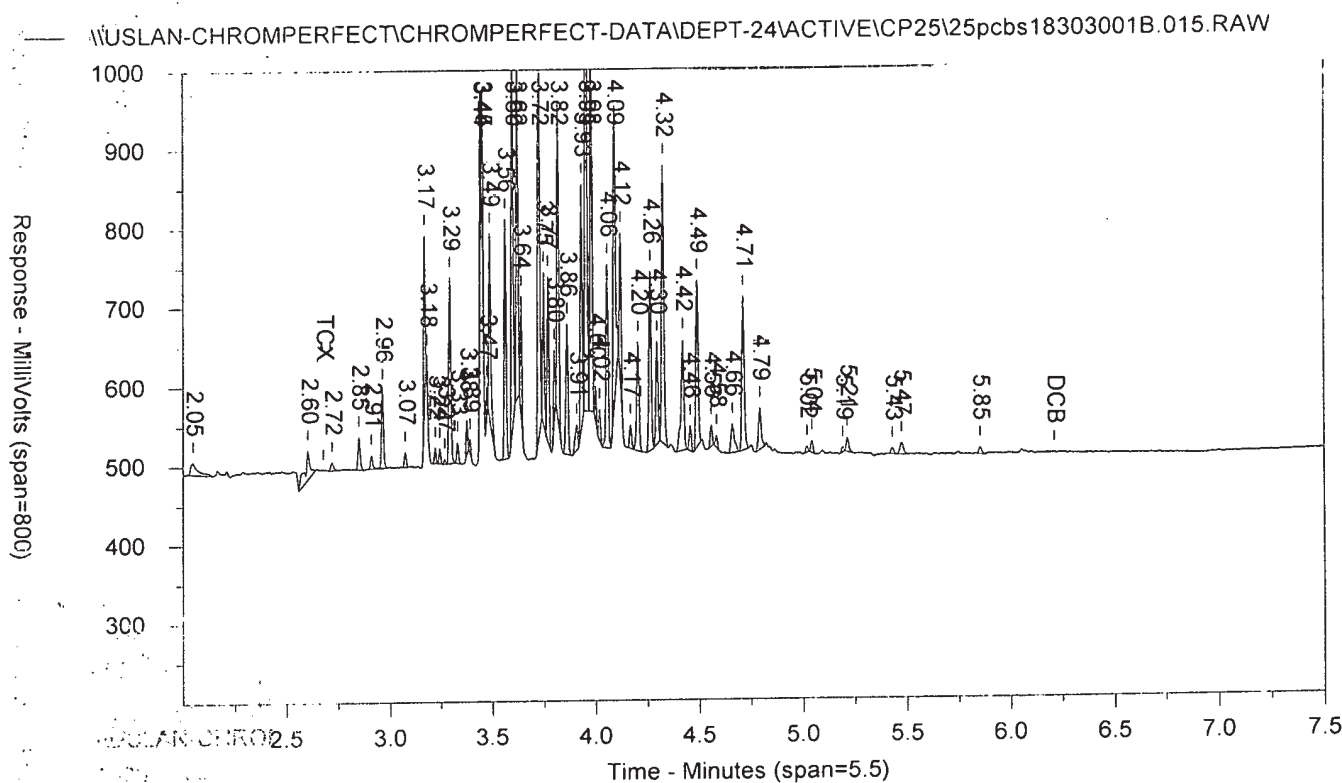
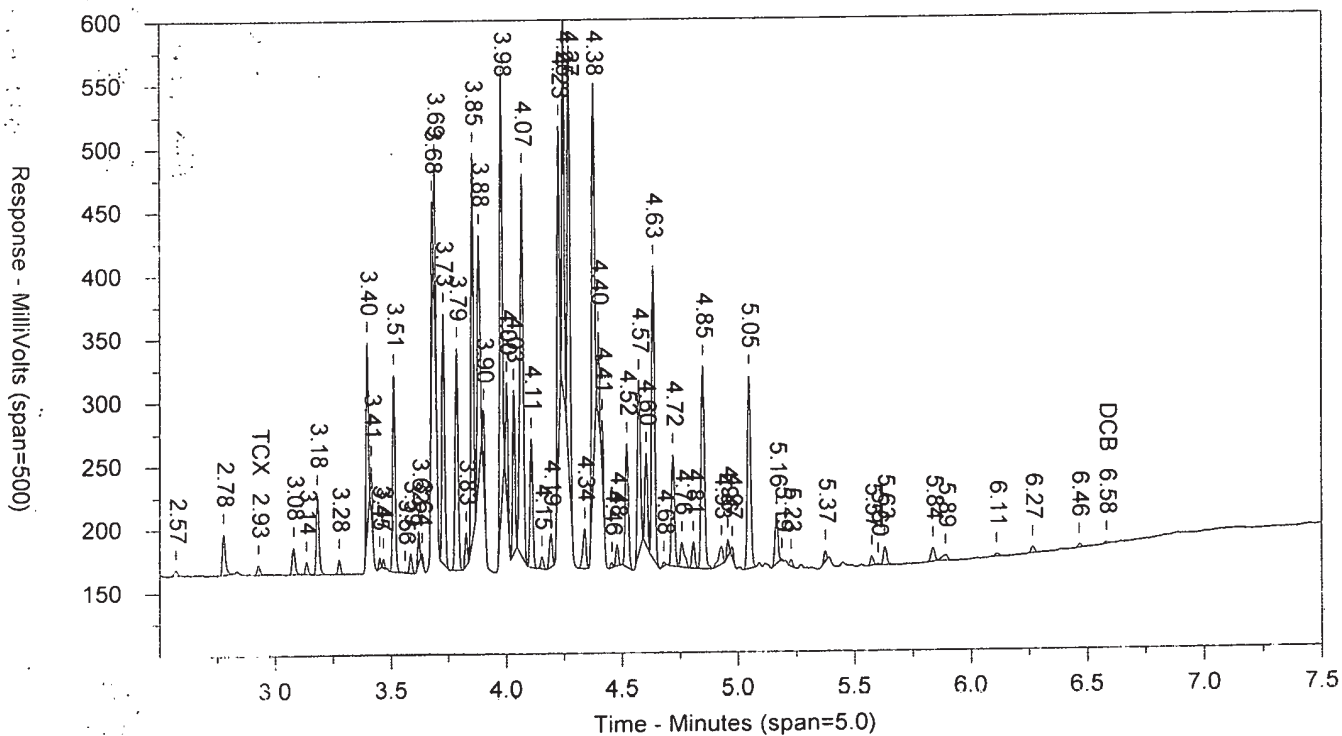
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ICAL 1830299999

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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4841824C AAAR484AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:51:57 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001.016.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.096		8505	14447
2.233		2652	3468
2.311		12737	9030
2.376		1815	1938
2.421		3077	3345
2.495		1649	2078
2.571		9512	9329
2.776		50587	48926
2.832		2119	2258
2.927	TCX	16999	14813
3.079		51382	45537
3.135		20863	15970
3.183		124260	97749
3.276		23590	17843
3.397		268196	173960
3.413		72814	36832
3.45		16571	9178
3.487		18388	9494
3.513		295669	236059
3.564		2446	1445
3.587		40087	29587
3.623		49283	29300
3.636		1431	4754
3.682		156348	94837
3.692		250801	139184
3.729		393819	322625
3.787		336275	287213
3.828		53148	35925
3.854		586135	428883
3.882		346016	291734
3.903		90173	50925
3.979		655082	499102
4.002		166300	107047
4.033		236228	174088
4.068		547615	548149
4.109		189835	158946
4.154		19447	15011
4.193		54783	47776
4.227		457106	316771
4.248		556716	362663
4.271		634707	473171
4.338		60147	59249
4.371		574697	506178
4.399		129370	65671
4.414		56332	36526
4.455		8567	5590
4.478		33061	25659
4.521		183314	169645
4.573		240419	224966
4.604		141805	106066
4.634		445117	394999
4.68		257248	5369
4.719		171700	155320
4.757		38589	46648

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.807		42098	36872
4.849		301261	299816
4.927		27447	33133
4.956		24991	18064
4.973		14952	10051
5.049		278848	283048
5.165		76763	69359
5.204		3155	1802
5.228		10307	8468
5.375		18297	14088
5.392		4446	3003
5.575		14688	13299
5.599		1815	1190
5.631		30181	31522
5.836		21194	22945
5.892		8824	13824
6.11		4119	4101
6.266		12410	11382
6.468		5909	6044
6.584	DCB	1749	2050
6.884		931	646

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4841824C AAAR484AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 7:51:57 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001B.016.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.047		17196	43071
2.211		12939	8558
2.603		55877	120796
2.721		24612	23742
2.85		88863	65812
2.91		35757	25763
2.963		198224	132809
3.074		40065	27764
3.17		400820	211702
3.181		71262	24205
3.222		38451	23121
3.245		43822	27107
3.268		12921	7207
3.294		452367	317841
3.331		61030	39642
3.377		85506	46677
3.392		33509	15399
3.442		372302	179677
3.452	+	415964	160465
3.473		86697	34809
3.487	+	463855	313159
3.561	+	581324	375466
3.597	+	939975	595395
3.621		879310	497697
3.639		262134	132565
3.725		1186033	767752
3.748		347979	196528
3.77		379404	241417
3.801		184950	96058
3.818		769223	473876
3.861		311439	229726
3.909		62508	53427
3.931		578516	362517
3.954		1498939	966675
3.979		1003681	630281
3.999		82948	40410
4.019		73652	43157
4.056		422500	311490
4.091		698043	556495
4.12		352631	201101
4.168		52775	37968
4.204		252755	200151
4.262		408278	326418
4.295		240040	173529
4.324		659057	494686
4.362		10751	11325
4.42		253718	253637
4.456		60247	44276
4.489		379846	303072
4.558		51739	35618
4.583		29767	20941
4.66		62703	72640
4.712		354423	301586
4.754		13912	10032

② cm 15786
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Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.793		100281	90154
5.019		14841	11084
5.043		30837	22733
5.091		8627	8489
5.192		12026	8561
5.214		33954	29582
5.429		16396	14553
5.476		28957	35771
5.748		6779	9643
5.853		16096	14954
6.053		8463	8690

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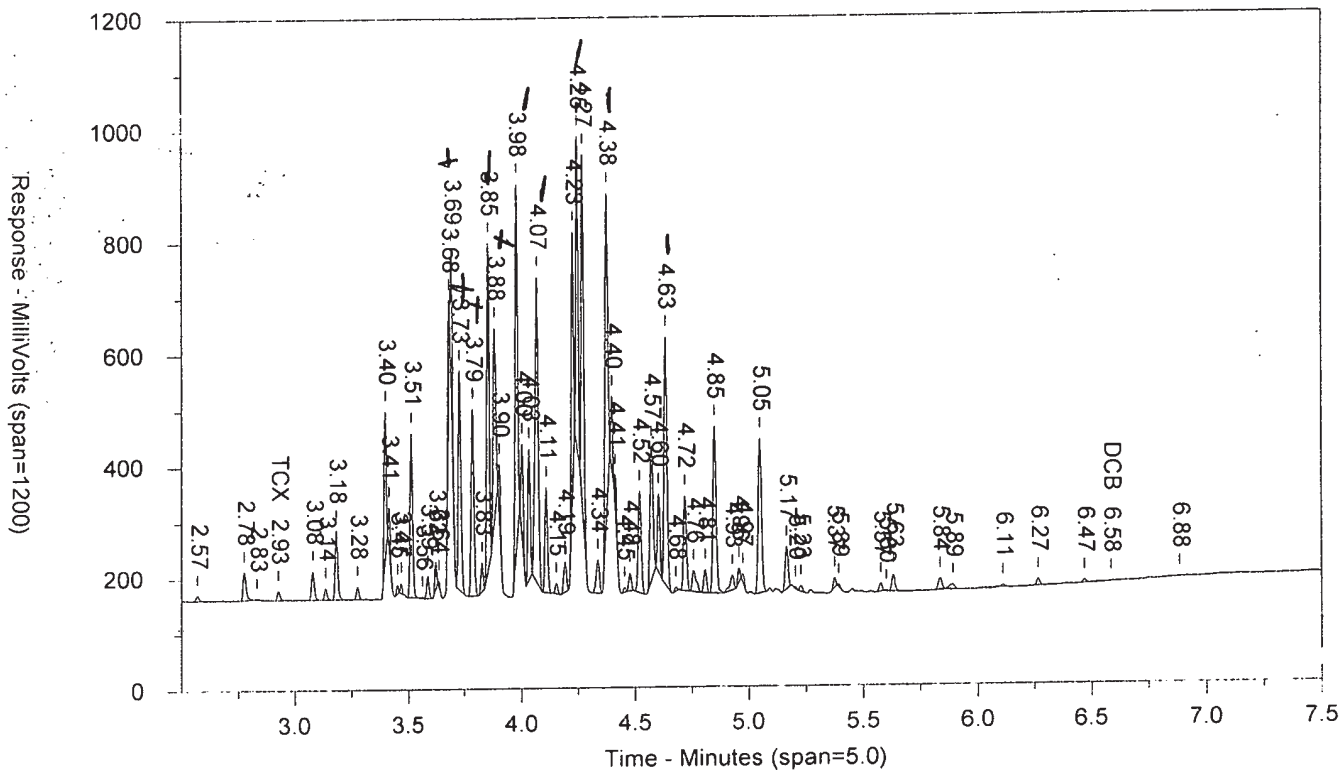
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ICAL 1830299999

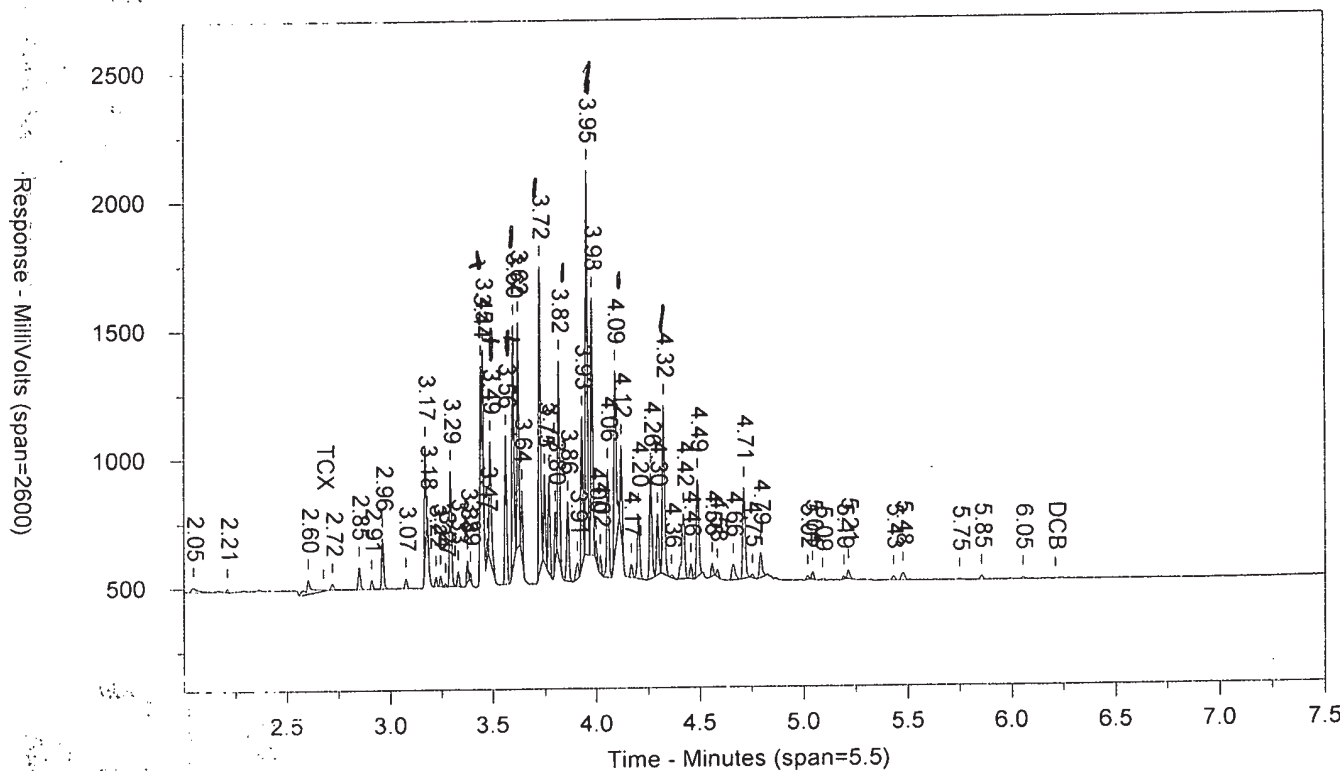
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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4841824C AAAR484AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 7:51:57 PM Sample Weight: 1
Instrument ID: CP25-18274 Dilution Factor: 1
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.927	16999	.11	TCX		0		TCX
6.584	1749	.014	DCB		0		DCB

Files:

Area File: 25pcbs18303001.016.RAW
Area File: 25pcbs18303001B.016.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 8:00:29 PM
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AR4841824C

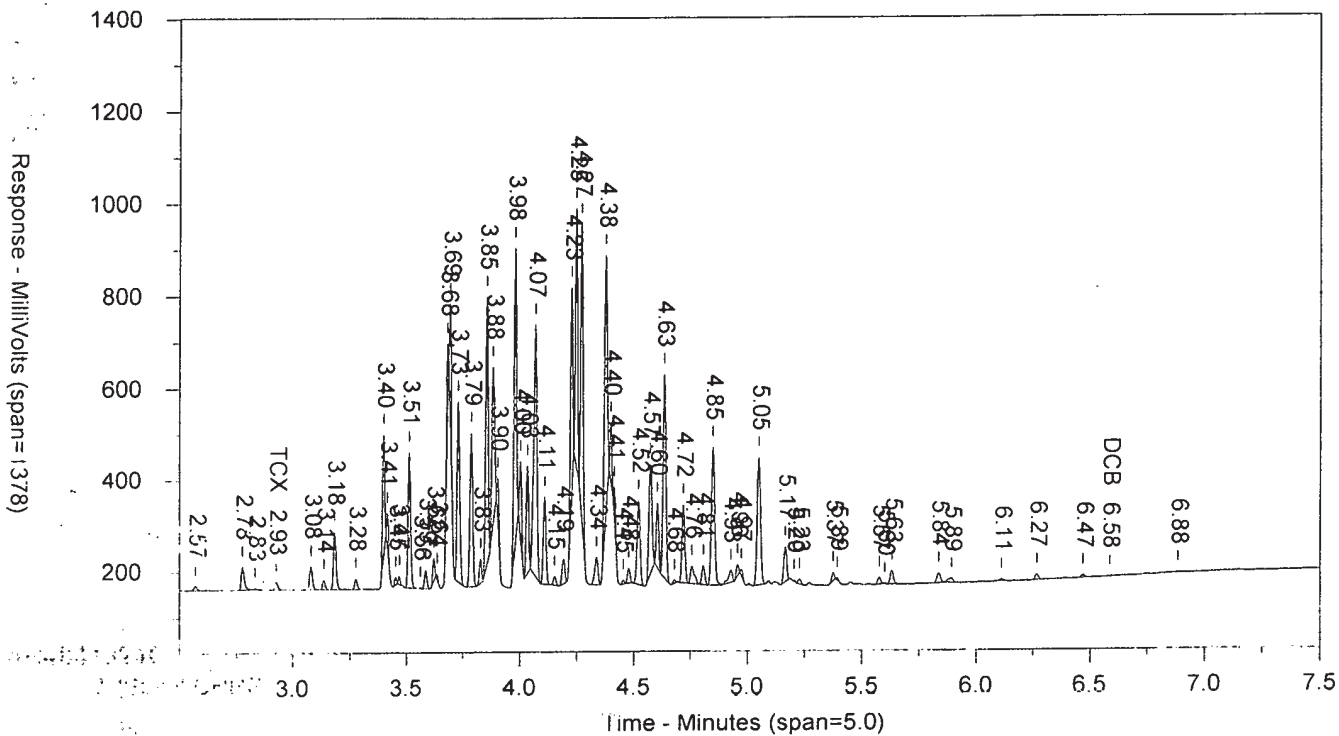
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ICAL 1830299999

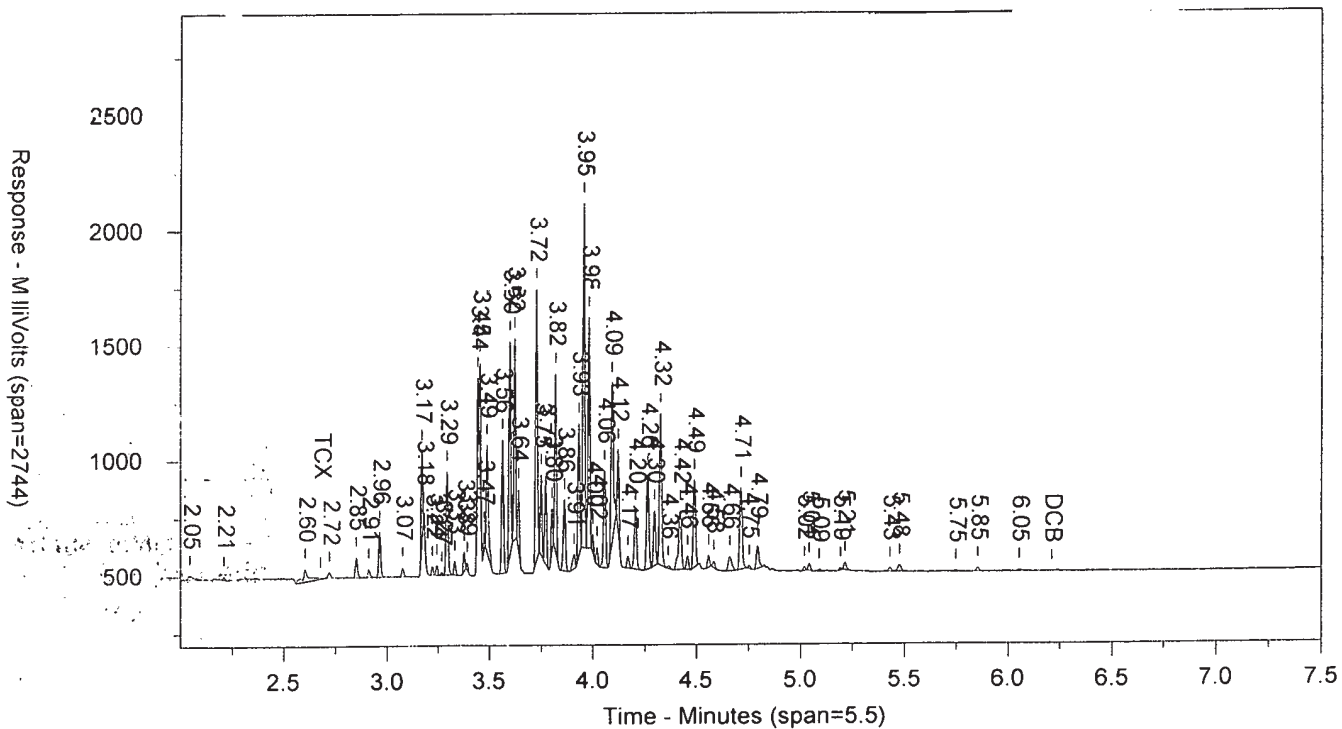
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SW-846 8082

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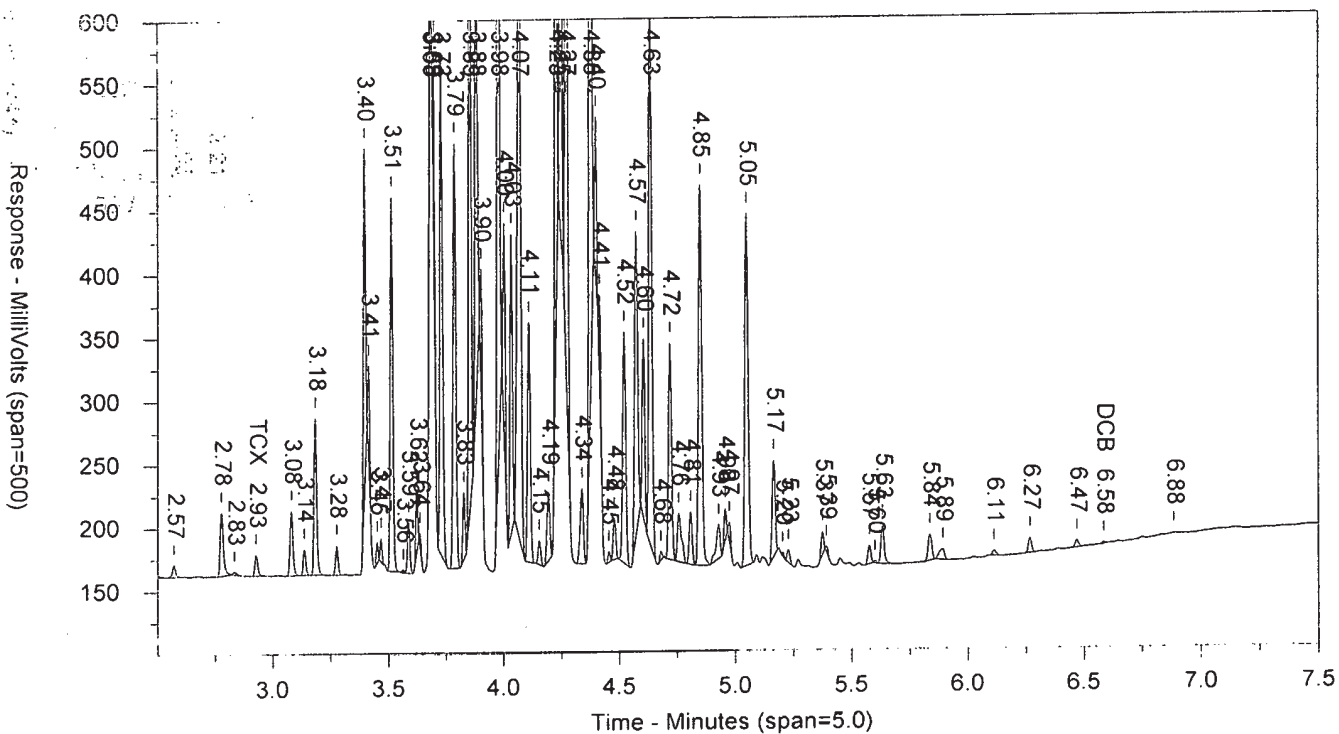
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ICAL 1830299999

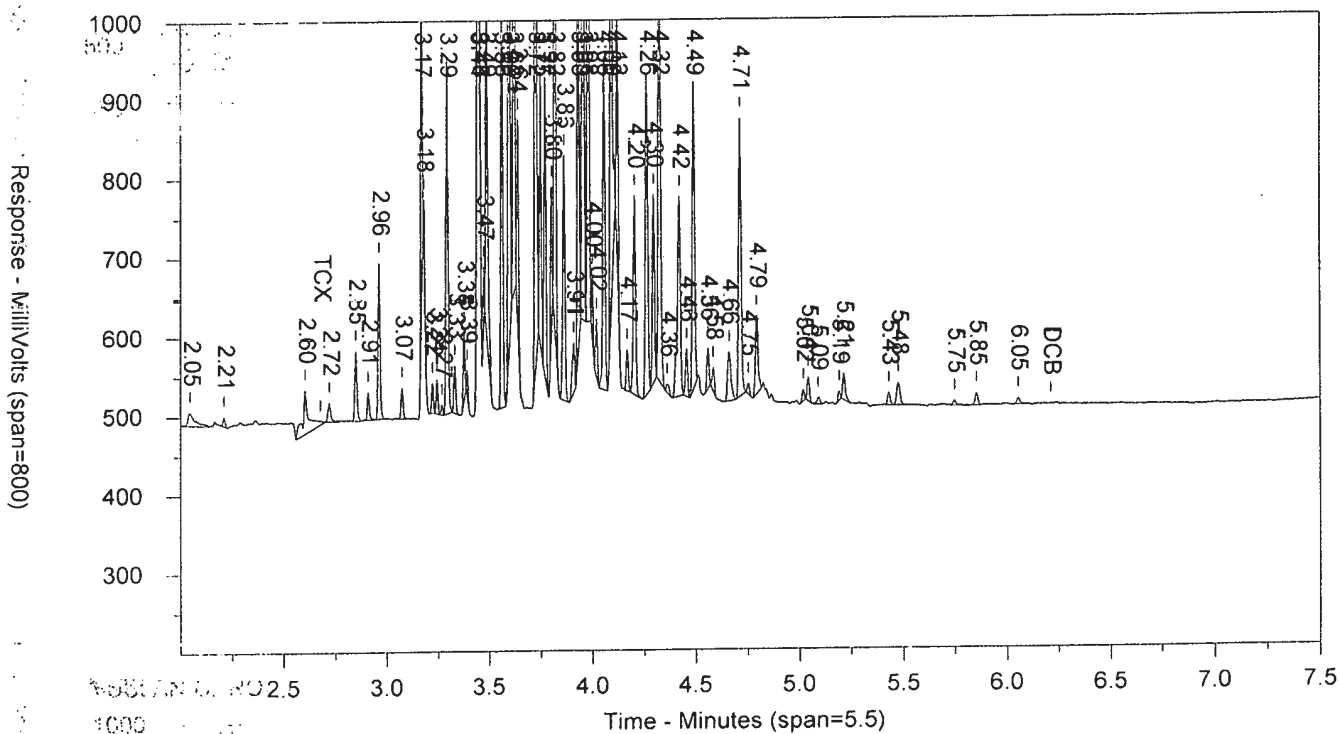
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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4851824C AAAR485AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:02:51 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.017.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		9493	16441
2.233		2283	2810
2.311		10558	7505
2.376		2378	2938
2.423		6723	6129
2.492		1646	1886
2.57		14336	16062
2.776		54718	53202
2.827		3957	5073
2.927	TCX	43752	37602
3.079		121039	110112
3.135		52396	39676
3.182		284413	227781
3.276		59470	44719
3.315		1949	1397
3.396		636377	405124
3.413		156810	83950
3.45		42098	23379
3.466		46233	24636
3.512		685194	547765
3.562		5588	3106
3.586		101993	73564
3.621		116869	69505
3.636		29637	13431
3.68		1414152	242640
3.691		581750	309735
3.728		926843	755875
3.788		814350	685362
3.827		118871	84207
3.854		1349984	991511
3.881		827812	689680
3.902		228366	117887
3.978		1576176	1184108
4.002		391115	246644
4.033		529509	397101
4.068		1317265	1308080
4.108		436433	369219
4.153		50286	41770
4.192		120536	108131
4.226		1125341	771237
4.247		1400666	899769
4.27		1538718	1152900
4.337		141952	141300
4.377		1495085	1228715
4.397		351639	179134
4.414		148912	88451
4.455		21528	14013
4.478		79644	62149
4.52		408096	385754
4.572		587859	531255
4.603		315862	241197
4.634		1046054	935676
4.679		58514	13799
4.718		388176	363280

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.756		90106	114857
4.806		101836	91987
4.848		664945	694347
4.928		56559	72413
4.956		59120	43073
4.973		40676	26856
5.049		694293	694530
5.091		17429	12915
5.117		15247	20180
5.155		176176	161556
5.186		6186	2937
5.204		7948	4231
5.227		28623	22124
5.27		13776	13483
5.374		45672	36613
5.392		14406	8684
5.574		35428	32936
5.599		3978	2590
5.63		73506	76884
5.835		55483	60084
5.891		23123	35874
6.023		2533	2423
6.085		1243	868
6.11		11372	12008
6.264		30273	30073
6.311		1323	1223
6.387		2311	2625
6.465		14631	14158
6.579		4894	5191
6.639	DCB	1320	1351
6.885		2105	4464

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4851824C AAAR485AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:02:51 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.017.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.043		18744	43676
2.362		13496	13022
2.603		58478	115052
2.721		57771	54927
2.85		209269	153883
2.91		84733	58396
2.962		442746	304873
3.074		94393	65010
3.17		894964	478525
3.181		150499	51566
3.222		92040	55719
3.245		102065	63179
3.269		30461	15935
3.294		1038145	732530
3.331		149236	94529
3.377		196960	105998
3.392		73815	35787
3.442		825283	406743
3.452		1012560	391480
3.472		182606	77929
3.487		1077316	737049
3.562		1392558	888575
3.596		2215002	1408273
3.62		2132338	1192404
3.638		639140	316593
3.682		3289	3024
3.724		2829950	1834374
3.748		797330	449834
3.77		890512	561901
3.801		399138	214874
3.817		1875281	1138803
3.861		705397	531794
3.909		150736	126808
3.931		1356221	850565
3.954		3737282	2373050
3.979		2472248	1550409
3.999		186260	90190
4:019		175956	103303
4:055		4974773	721200
4:091		1714444	1352388
4.12		874428	511083
4:168		128119	92573
4.204		587707	463039
4:262		1009870	779633
4.296		572446	408761
4.324		1568281	1183790
4.362		27904	27386
4.419		601788	597159
4.455		145514	105913
4.488		953795	728726
4.557		121557	81317
4.583		67890	48655
4.659		157139	166949
4.711		890252	747304

Chrom Perfect Chromatogram Report

Rt B	Compound B	Height B	Area B
4.753		31433	23374
4.793		235323	213064
4.825		17535	8254
4.865		18744	14137
4.983		11057	14952
5.018		36583	27029
5.042		68920	53039
5.093		19363	18662
5.129		8433	6766
5.158		6504	4606
5.191		30151	21038
5.213		80677	70049
5.287		6316	12772
5.428		39555	45719
5.475		65769	80298
5.628		6471	7779
5.745		14668	13281
5.853		38241	35402
6.052		19247	22412

AR4851824C

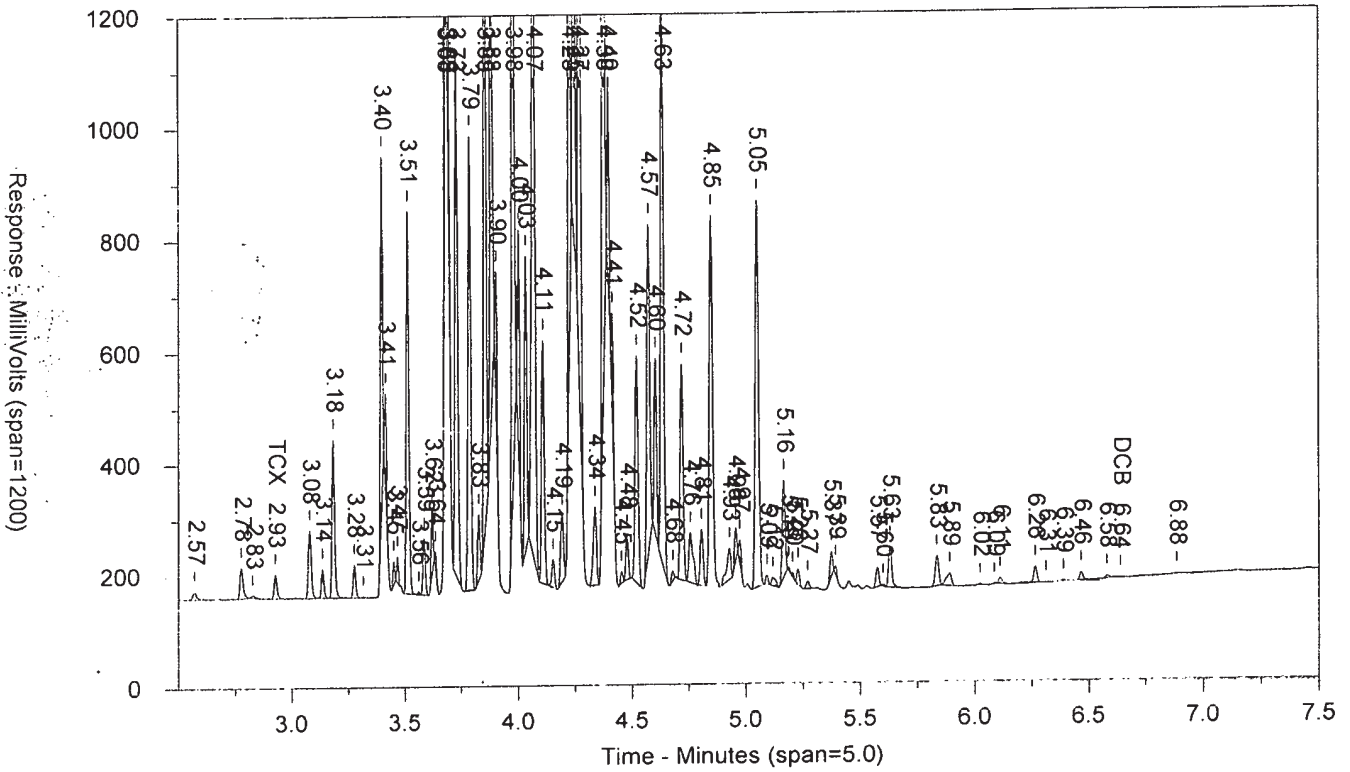
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ICAL 1830299999

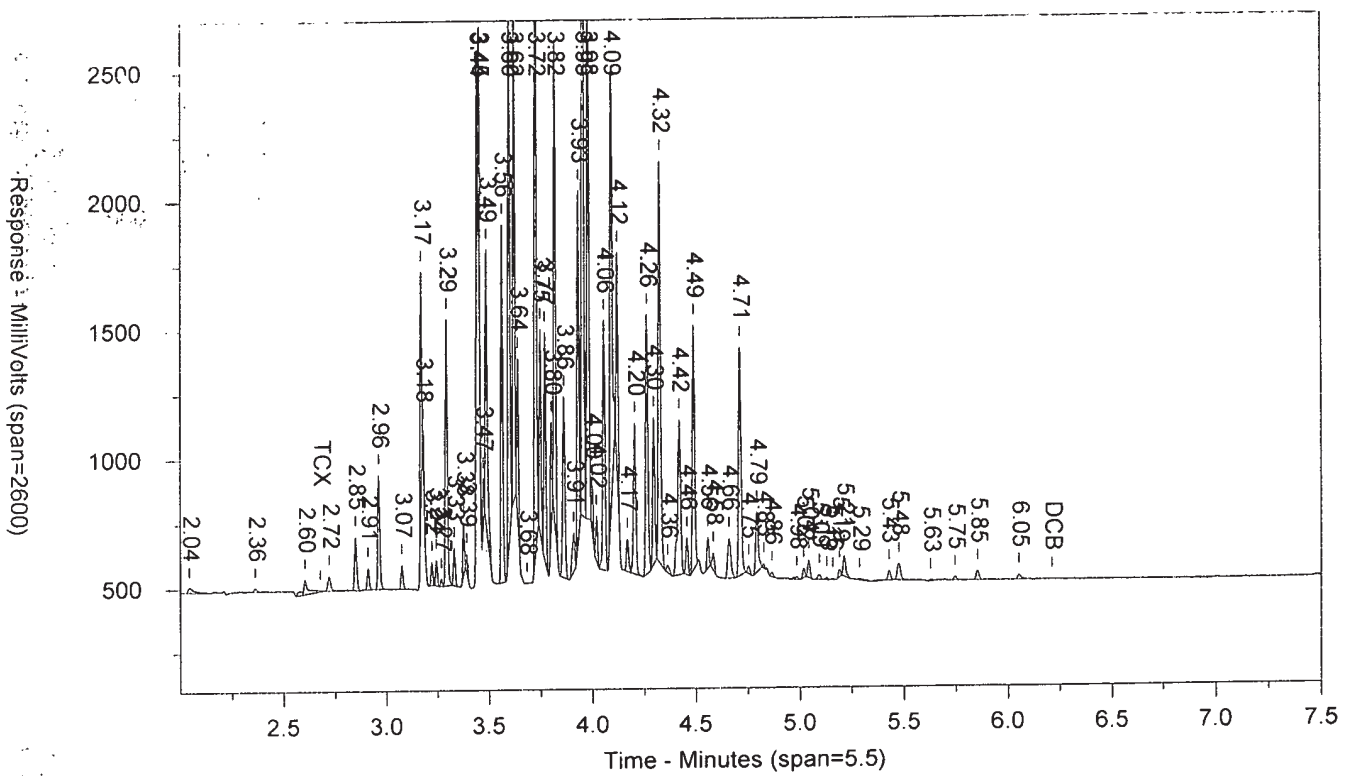
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4851824C AAAR485AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:02:51 PM Sample Weight: 1
Instrument ID: CP25-18274 Dilution Factor: 1
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.927	43752	.282	TCX		0		TCX
6.639	1320	.01	DCB		0		DCB

Files:
Area File: 25pcbs18303001.017.RAW
Area File: 25pcbs18303001B.017.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 8:11:22 PM
File Reported On: 10/30/2018 at 8:11:27 PM

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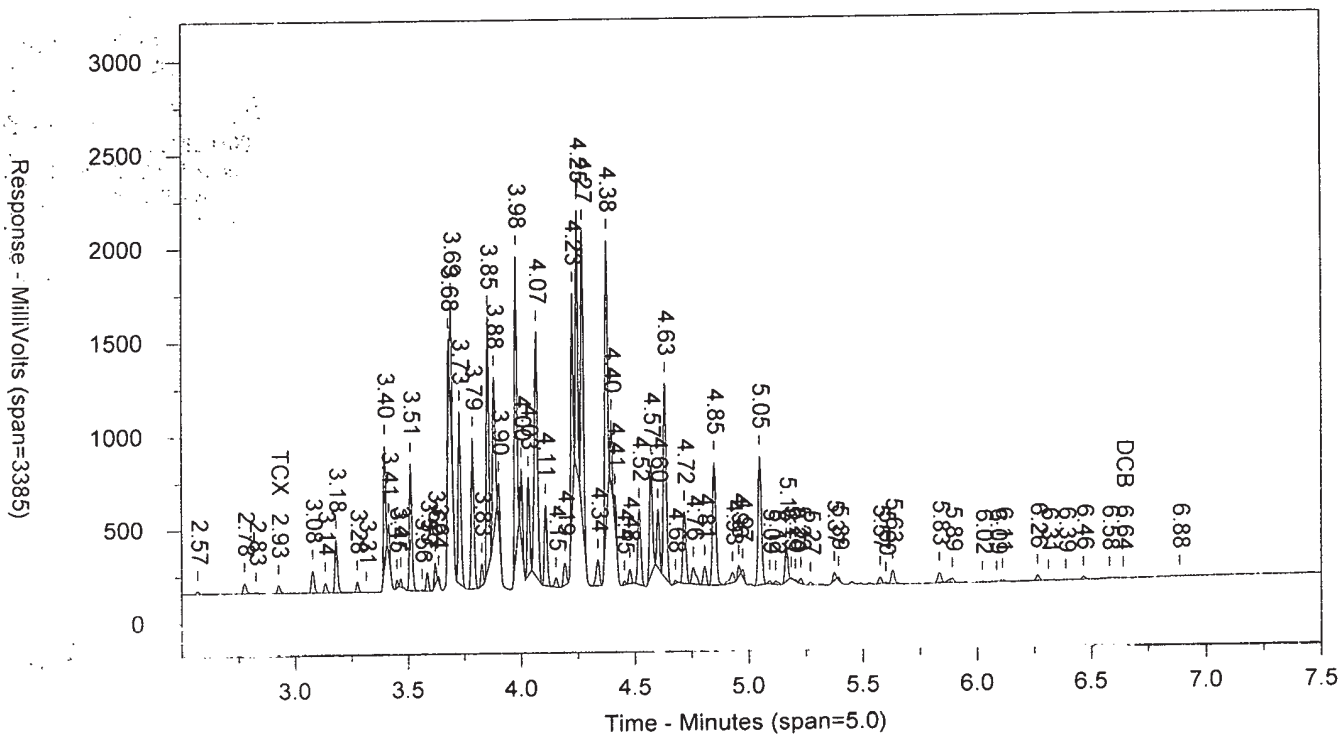
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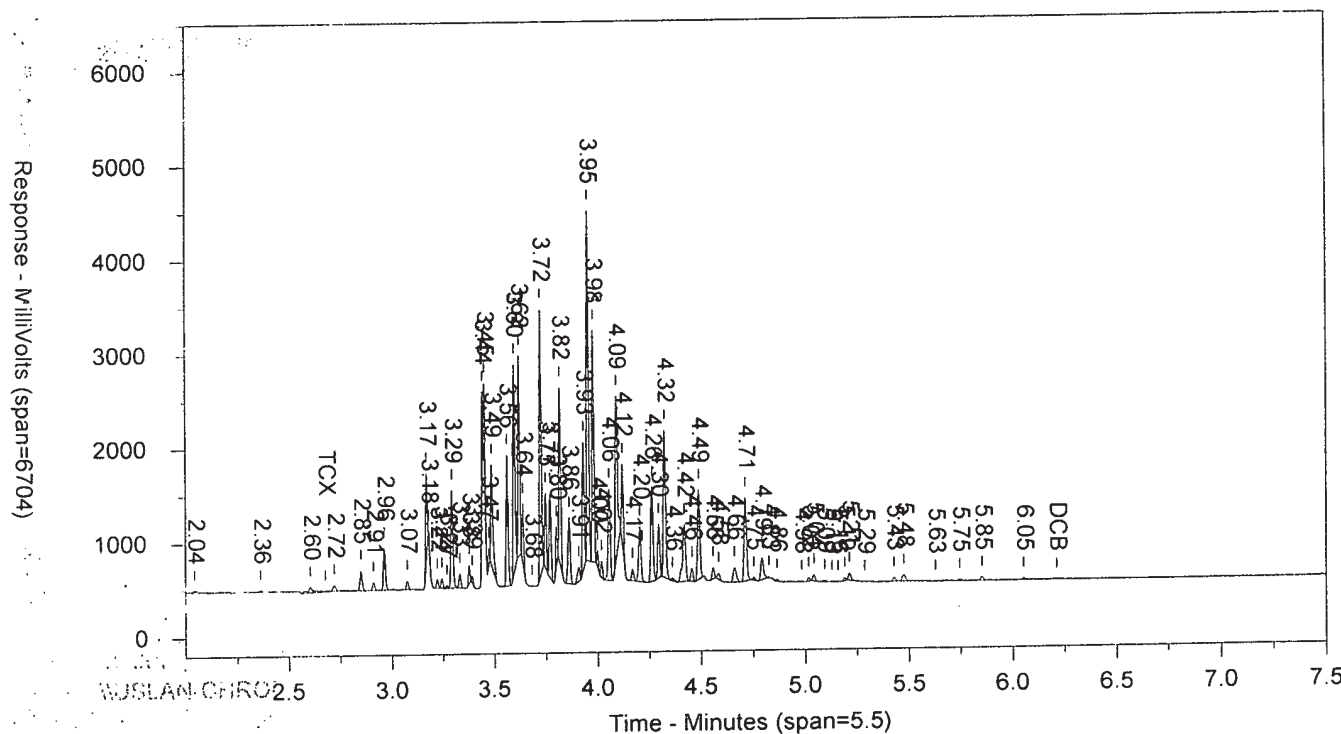
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SW-846 8082

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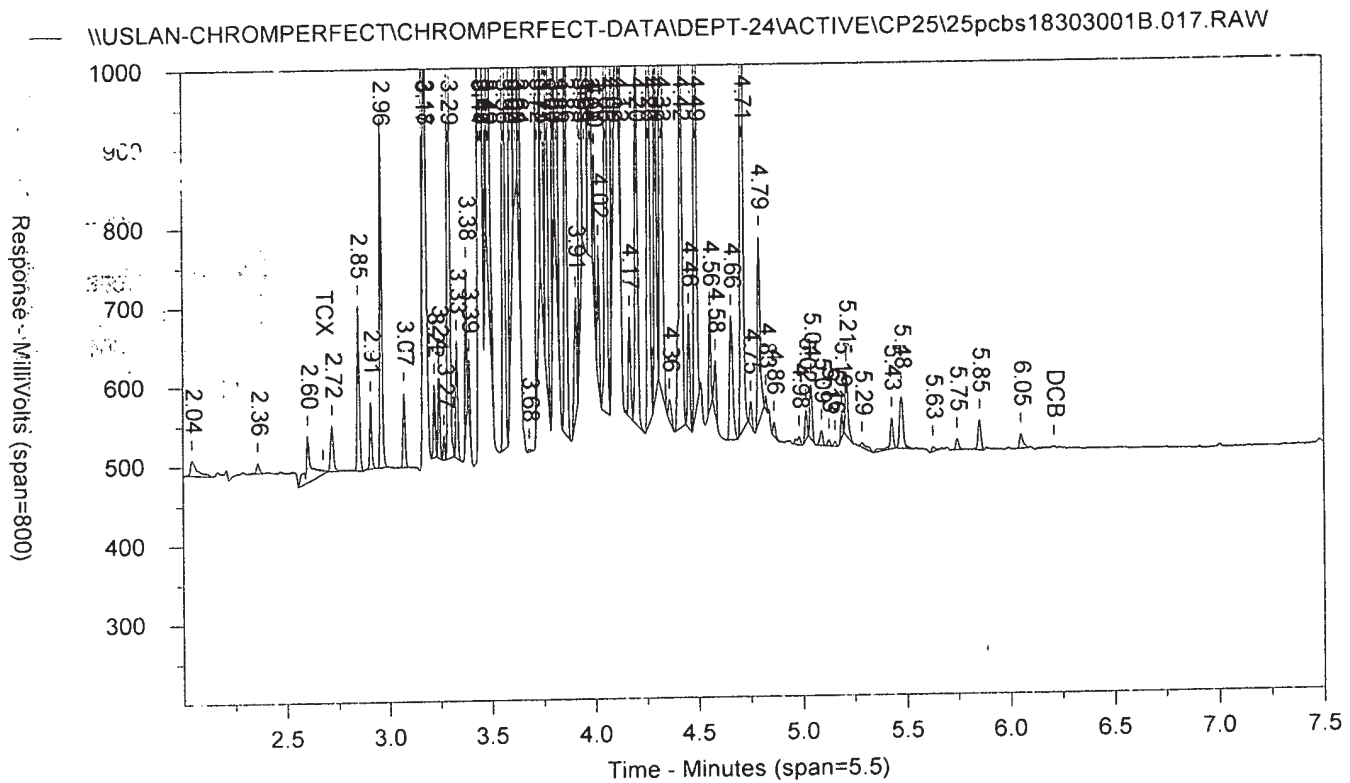
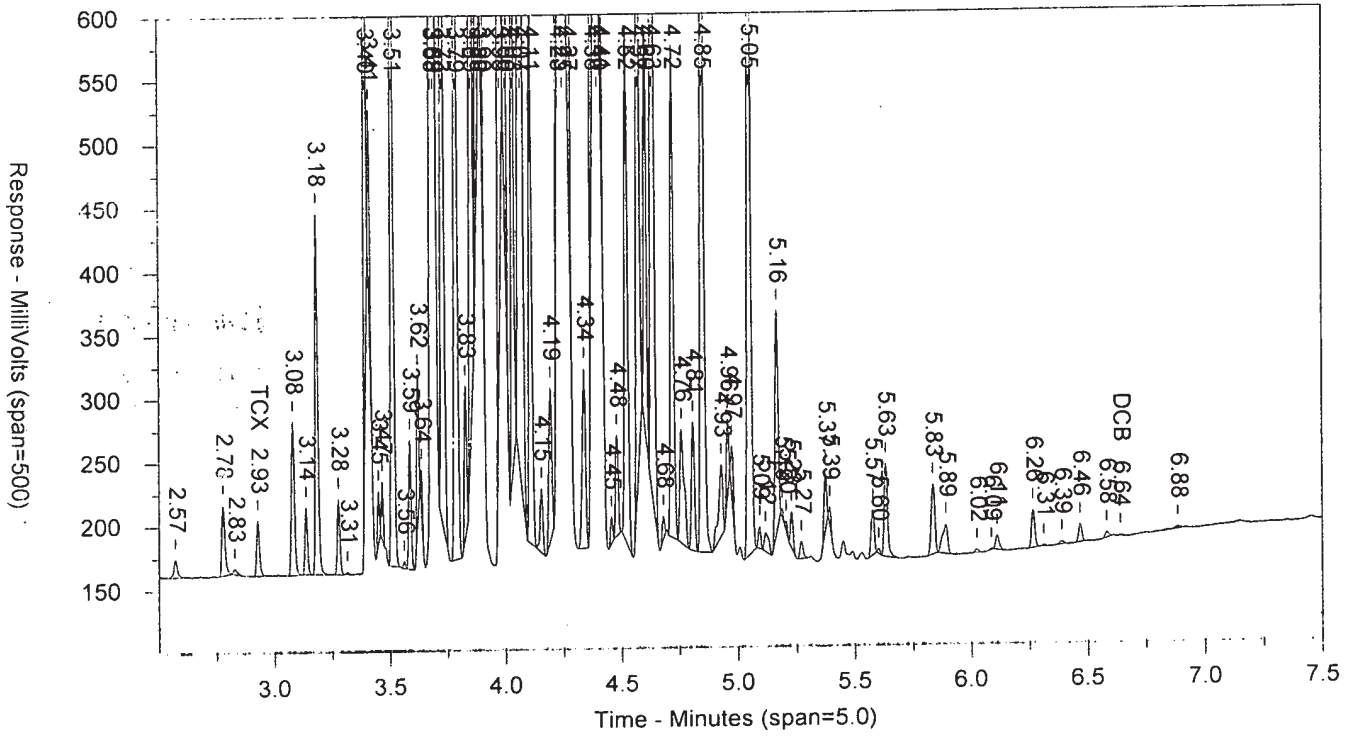
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ICAL 1830299999

10227

SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4861824C AAAR486AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:13:28 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.018.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		8290	13970
2.228		1941	2780
2.31		11725	8425
2.377		2363	2808
2.422		2671	2478
2.49		1591	1734
2.57		29565	30370
2.775		39523	35833
2.842		2908	3958
2.926	TCX	100465	90096
3.078		269537	253031
3.134		115540	89680
3.181		601087	482095
3.275		128719	98752
3.312		4624	3281
3.395		1294091	815508
3.411		339784	171769
3.448		81063	45955
3.465		114169	74253
3.51		1450465	1156443
3.544		1923	705
3.56		14472	7869
3.584		232999	177922
3.619		229040	137842
3.633		57441	28189
3.679		727066	434071
3.688		1274825	694455
3.726		2030428	1640153
3.784		1704349	1446878
3.824		236838	169063
3.851		2844456	2063606
3.878		1777816	1476973
3.899		400324	215154
3.975		3345268	2480800
3.999		795683	498907
4.03		1113084	818773
4.065		2868271	2764216
4.105		898046	748969
4.151		102134	85048
4.19		236510	214727
4.223		2451013	1657944
4.244		3041679	1959556
4.268		3298432	2490113
4.334		291576	281030
4.374		3099987	2595983
4.395		721425	380563
4.41		300697	150277
4.452		42111	28655
4.475		154697	124268
4.518		827065	791101
4.569		1221407	1100629
4.601		647036	494683
4.632		2192897	1956743
4.676		39730	28386

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.716		784290	738373
4.753		177557	223832
4.804		199924	185776
4.845		1452426	1442253
4.926		110481	141713
4.953		112399	84387
4.971		69951	46670
5.003		17696	14646
5.046		1522938	1491291
5.089		36439	28105
5.115		34393	44889
5.162		347180	328635
5.184		13453	5579
5.201		15203	7976
5.224		57277	46556
5.268		30959	29263
5.372		85053	72007
5.388		16662	13946
5.447		31183	48532
5.572		81516	72863
5.596		10700	6522
5.628		152274	159530
5.832		107633	116448
5.887		49675	79416
6.02		6372	6612
6.082		2396	1691
6.105		20856	18516
6.262		62936	64876
6.307		2551	2369
6.386		903	982
6.462		30404	31219
6.609	DCB	2030	1665

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4861824C AAAR486AA ICAL 183029999 10227 SW-846 8082
Injected On: 10/30/2018 8:13:28 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.018.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.048		16746	41368
2.364		35306	43126
2.603		40017	60811
2.721		129742	125124
2.85		476670	354308
2.911		185294	124952
2.963		972690	652491
3.075		205932	140862
3.17		1993619	1026026
3.181		331582	115618
3.222		195615	116416
3.244		251585	155059
3.269		60908	33169
3.293		2242947	1549529
3.33		366522	233307
3.376		423883	233323
3.391		160378	74805
3.442		1879740	858391
3.451		2146198	887966
3.472		362420	145276
3.486		2498233	1654129
3.56		2932817	1893874
3.595		4771195	2949293
3.619		4604169	2559444
3.637		1265402	650836
3.723		5997394	3892470
3.746		1690160	938041
3.768		1863580	1167670
3.799		889720	469245
3.816		3962764	2452449
3.86		1547521	1110825
3.907		305478	259978
3.929		3084126	1902631
3.952		8187852	5168668
3.977		5440820	3420166
3.997		357670	177426
4.017		350024	201892
4.053		2089715	1512831
4.089		3854186	2993408
4.118		2101467	1177217
4.166		260165	185481
4.202		1222448	968922
4.26		2189281	1673865
4.293		1219209	868878
4.322		3537277	2574828
4.36		61484	59710
4.417		1304065	1263560
4.453		295396	228934
4.487		2052326	1584860
4.511		54460	29203
4.555		251830	176514
4.581		152809	108522
4.657		318351	340665
4.71		2086319	1671136

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.751		84225	70136
4.791		494567	450658
4.823		35295	17328
4.833		37323	26843
4.965		10341	6017
4.983		17355	11556
5.017		74572	56767
5.041		158532	124206
5.091		42730	40937
5.127		17859	14313
5.157		12802	9890
5.189		62485	44536
5.212		175384	148169
5.283		12094	15235
5.426		78987	75832
5.474		142960	166304
5.626		8686	7904
5.744		29660	28732
5.851		79542	70848
6.05		43545	45058

AR4861824C

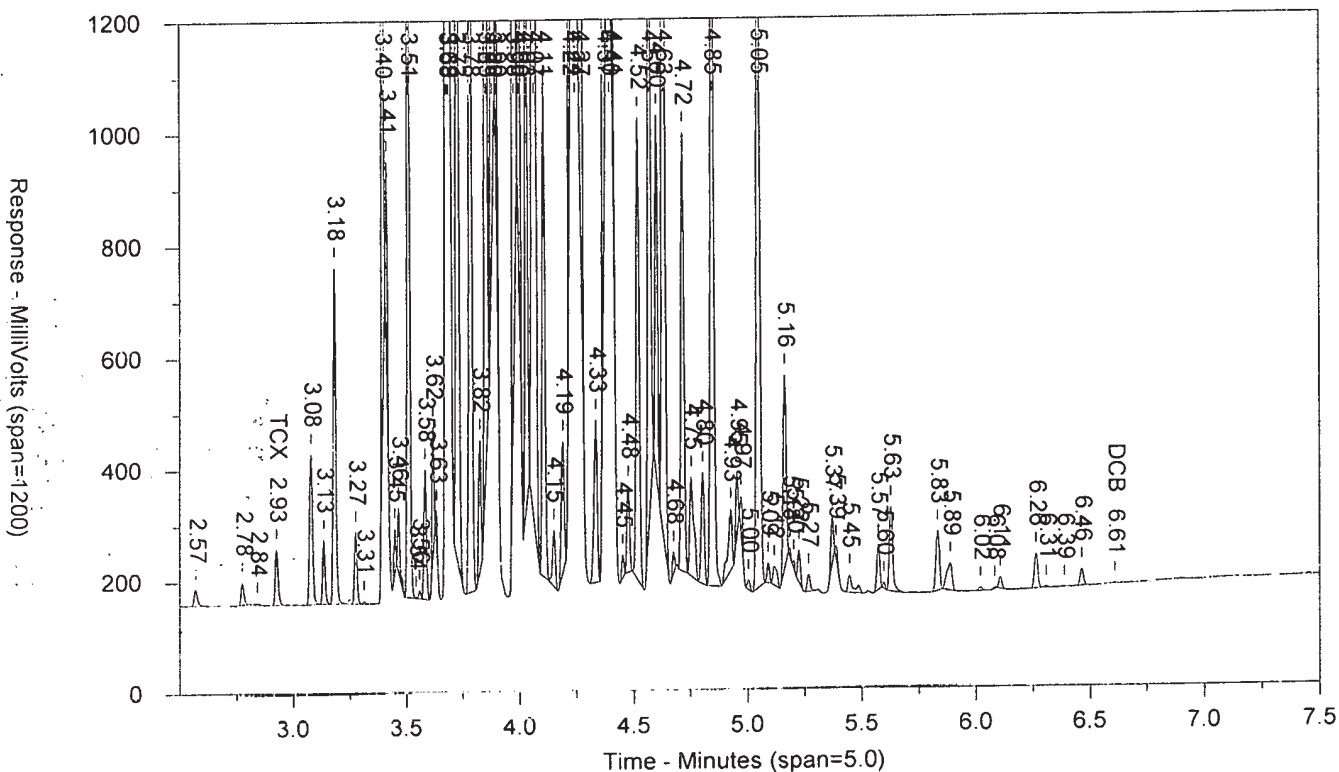
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ICAL 1830299999

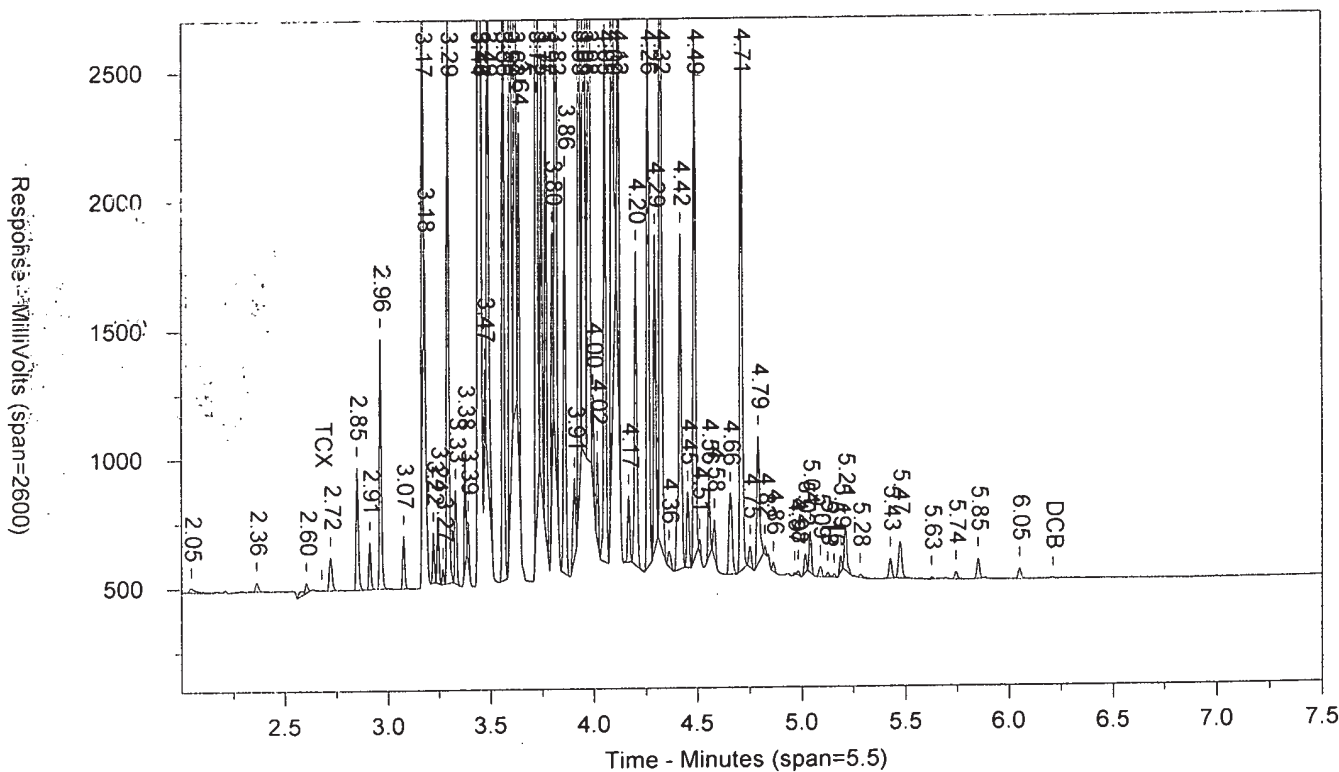
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4861824C AAAR486AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:13:28 PM Sample Weight: 1
Instrument ID: CP25-18274 Dilution Factor: 1
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	100465	.648	TCX		0		TCX
6.609	2230	.016	DCB		0		DCB

Files:
Area File: 25pcbs18303001.018.RAW
Area File: 25pcbs18303001B.018.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 8:21:58 PM
File Reported On: 10/30/2018 at 8:22:09 PM

Area File: 25pcbs18303001.018.RAW
Area File: 25pcbs18303001B.018.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 8:21:58 PM
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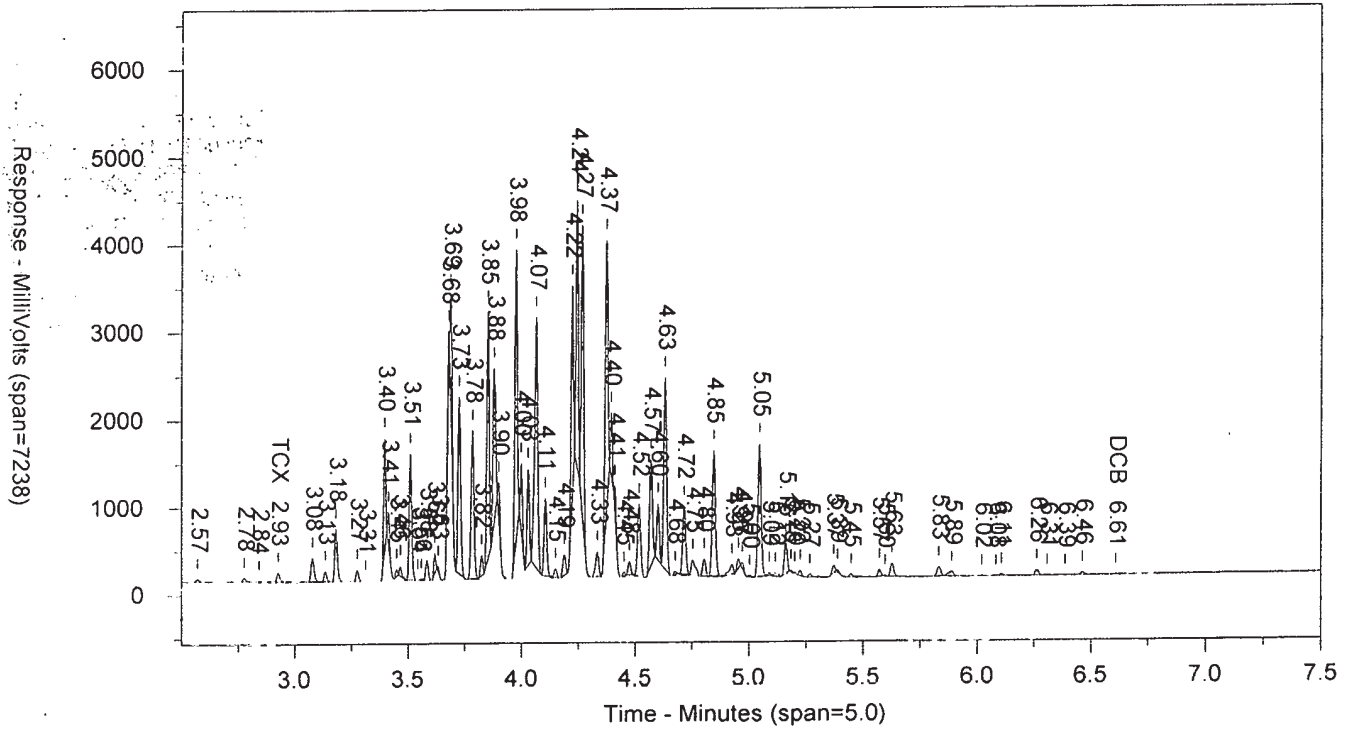
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ICAL 1830299999

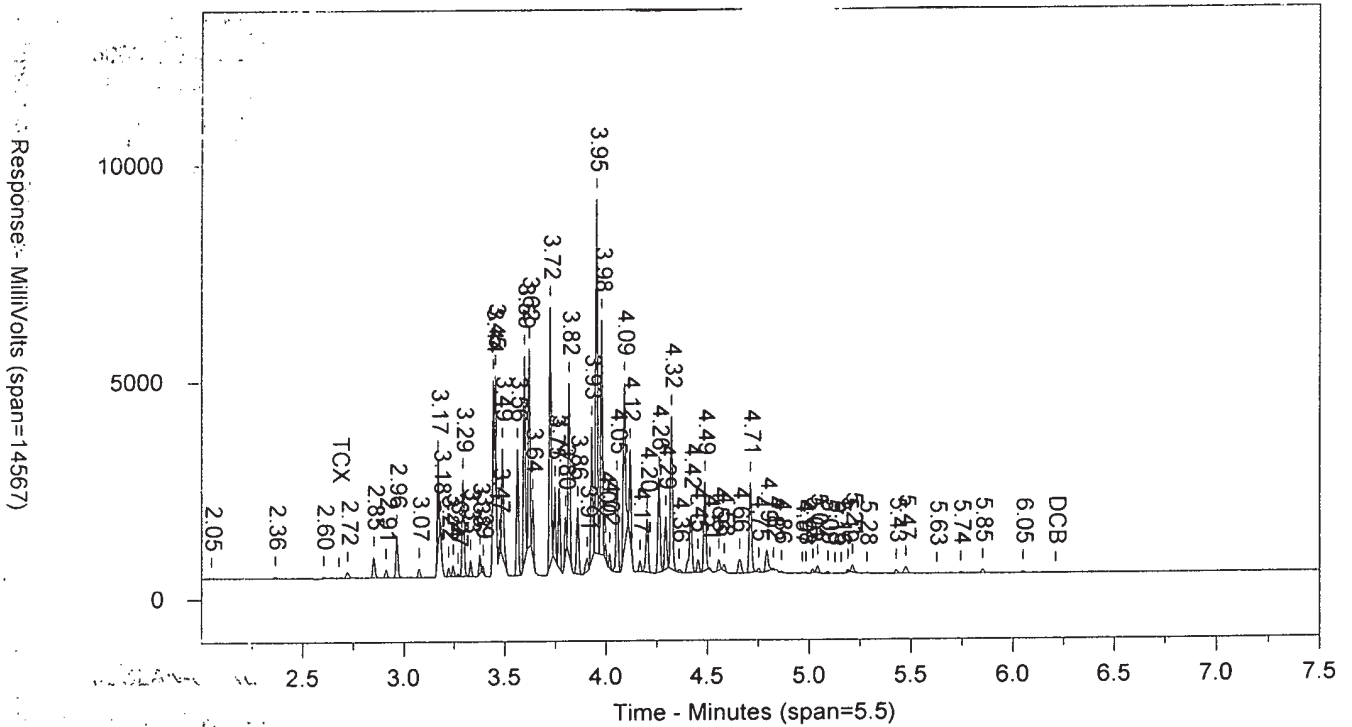
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SW-846 8082

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Chrom Perfect Chromatogram Report

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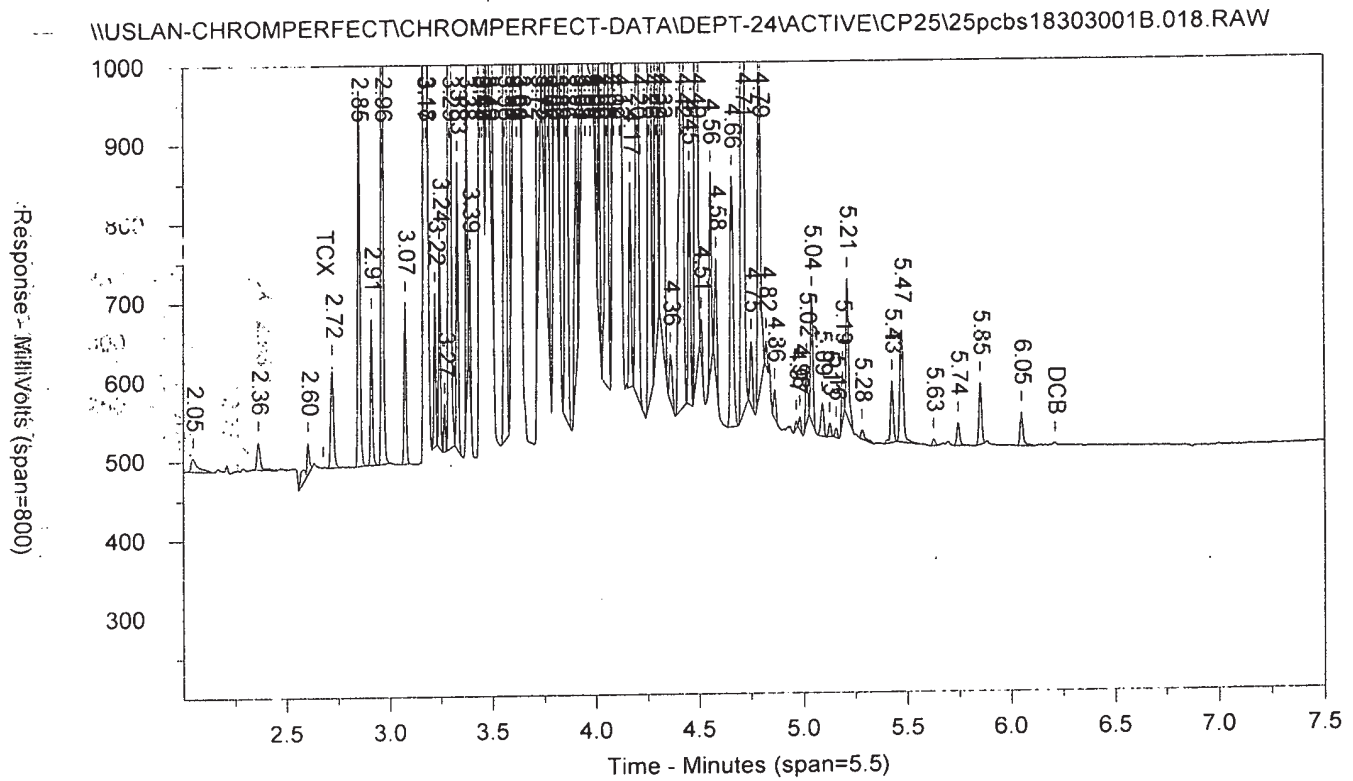
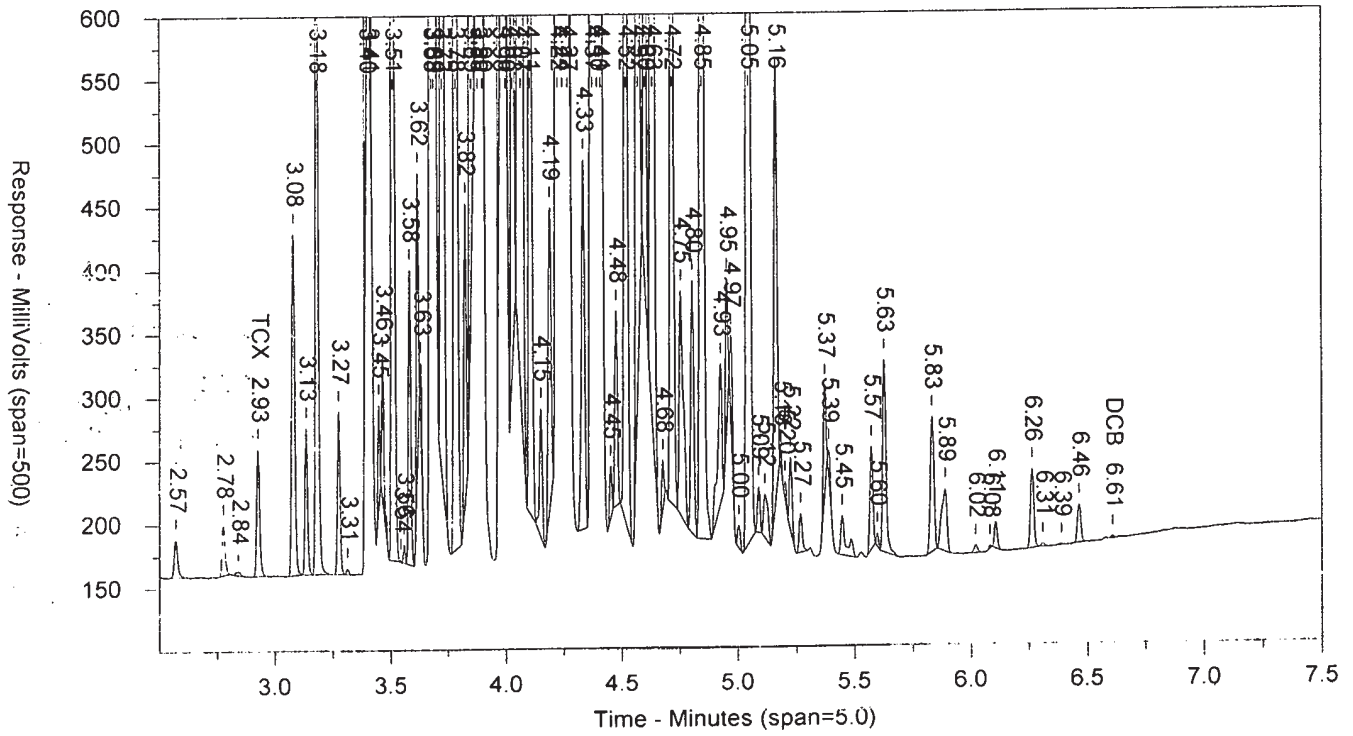
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5411824C AAAR541AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:24:30 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.019.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		8809	16422
2.144		2416	3700
2.311		11040	7662
2.377		1855	2110
2.422		784	735
2.493		1582	1689
2.571		4404	4791
2.776		57829	57552
2.836		1466	1359
2.929	TCX	1824	1432
3.079		3392	3213
3.137		1350	1045
3.182		5926	5026
3.278		1457	908
3.397		12347	8098
3.413		2433	1089
3.468		3481	2167
3.513		12473	9639
3.587		8023	6069
3.624		1831	1138
3.682		4215	2087
3.691		5561	4032
3.729		22944	18591
3.786		14327	12557
3.828		1879	1313
3.854		81328	62565
3.882		30021	35738
3.978		55809	43164
4.004		5284	3073
4.033		11353	8358
4.067		31350	33243
4.109		8393	6649
4.153		1600	1157
4.19		4911	3866
4.227		105339	78557
4.247		51905	30402
4.271		42884	31496
4.338		28405	24278
4.38		165007	174531
4.415		55062	42863
4.455		1884	1273
4.478		9287	7319
4.521		59403	54642
4.573		101777	91889
4.603		24310	16155
4.634		199750	180868
4.68		8133	5738
4.719		30606	24994
4.756		64495	67442
4.807		11750	10633
4.848		141946	140450
4.903		9471	7228
4.924		5090	3921
4.956		51397	39889

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.973		19932	13109
5.047		106743	105221
5.092		9926	7930
5.165		134726	128718
5.186		5556	2387
5.226		3370	2199
5.374		38236	31208
5.574		28617	25502
5.599		2959	2033
5.63		22673	21305
5.838		19008	18286
5.87		2926	2422
6.266		1437	1499
6.562	DCB	732	523

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5411824C AAAR541AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:24:30 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001B.019.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		15266	29600
2.603		59313	108862
2.963		10093	7799
3.075		2683	2167
3.171		17815	9478
3.221		2225	981
3.245		9169	6258
3.295		21353	14789
3.331		13373	9014
3.339		10882	10695
3.443		12295	6232
3.452		10428	4222
3.473		4851	2128
3.488		25151	18735
3.563		25078	16637
3.597		134935	83365
3.621		69211	41208
3.638		7957	3451
3.725		95099	62395
3.748		13242	7297
3.77		27347	18361
3.801		16863	9073
3.818		38753	22581
3.861		15250	11278
3.901		8476	7010
3.931		33946	19889
3.954		267715	183653
3.979		45541	26876
3.999		24698	13601
4.019		41585	25953
4.055		216908	154510
4.089		87293	56847
4.106		48303	27874
4.168		16919	12432
4.204		87121	70100
4.262		164347	126001
4.295		47467	36012
4.324		286327	220045
4.362		20166	19957
4.418		136710	119558
4.455		19372	14428
4.488		171463	131669
4.513		27169	17158
4.557		106750	86337
4.658		92250	109844
4.712		116641	98397
4.752		29062	24159
4.793		196142	198836
4.841		12400	7964
4.985		9611	8373
5.019		10437	7159
5.043		56522	48312
5.094		7107	6267
5.13		5522	4435

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.191		27015	19474
5.214		22216	19624
5.472		26496	31530

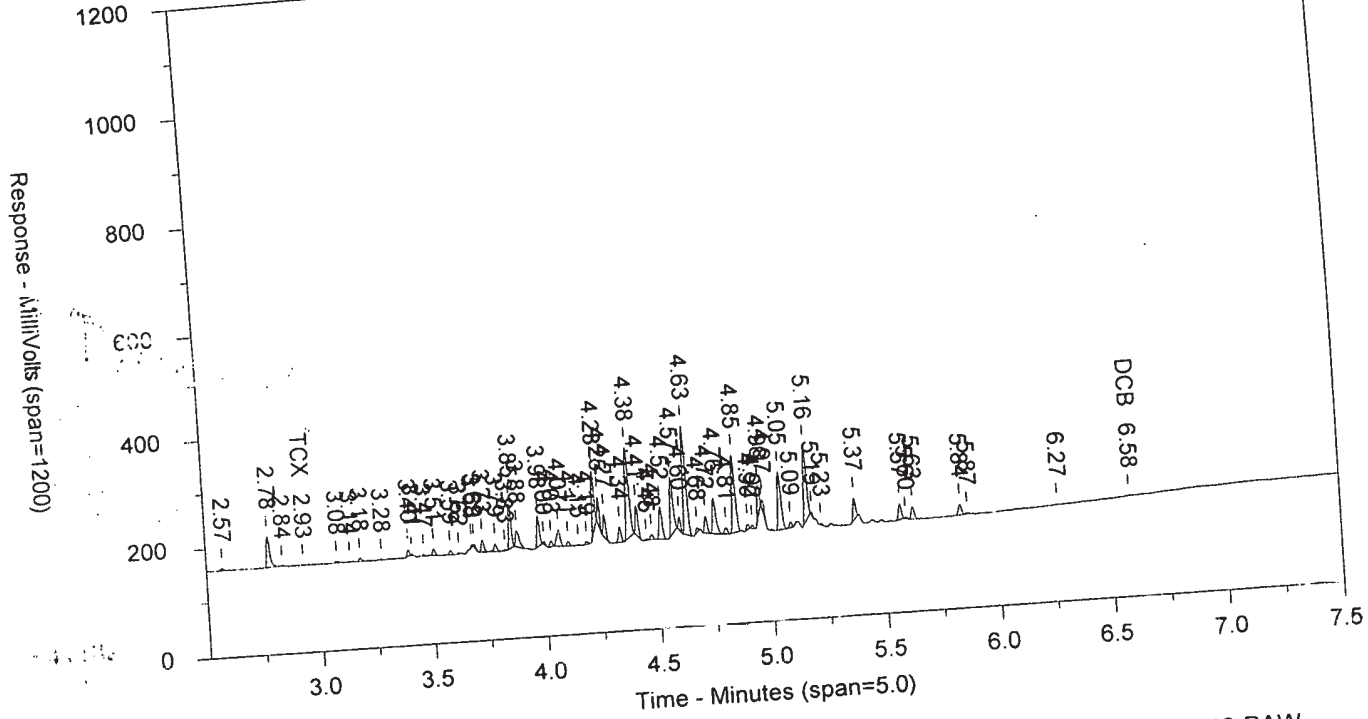
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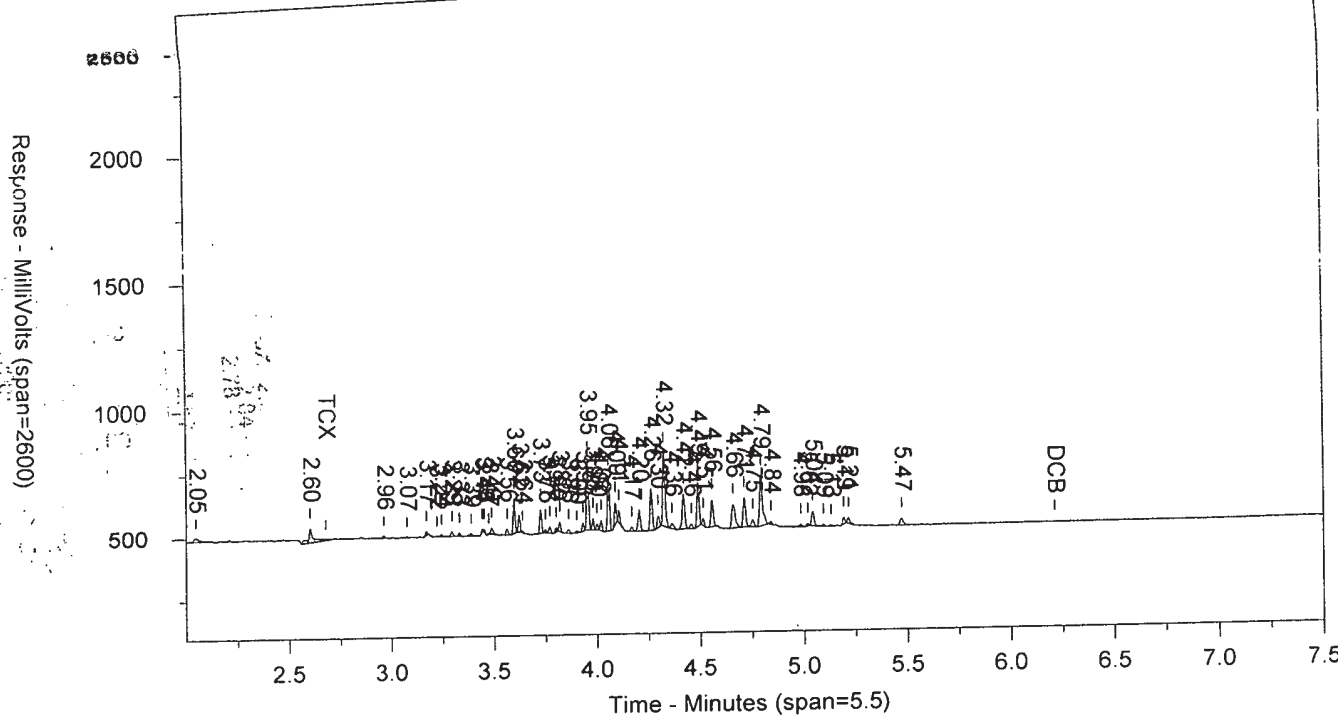
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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5411824C AAAR541AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:24:30 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul
 Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.929	1824	.012	TCX		0		TCX
6.582	732	.006	DCB		0		DCB

Files:
 Area File: 25pcbs18303001.019.RAW
 Area File: 25pcbs18303001B.019.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 8:33:00 PM
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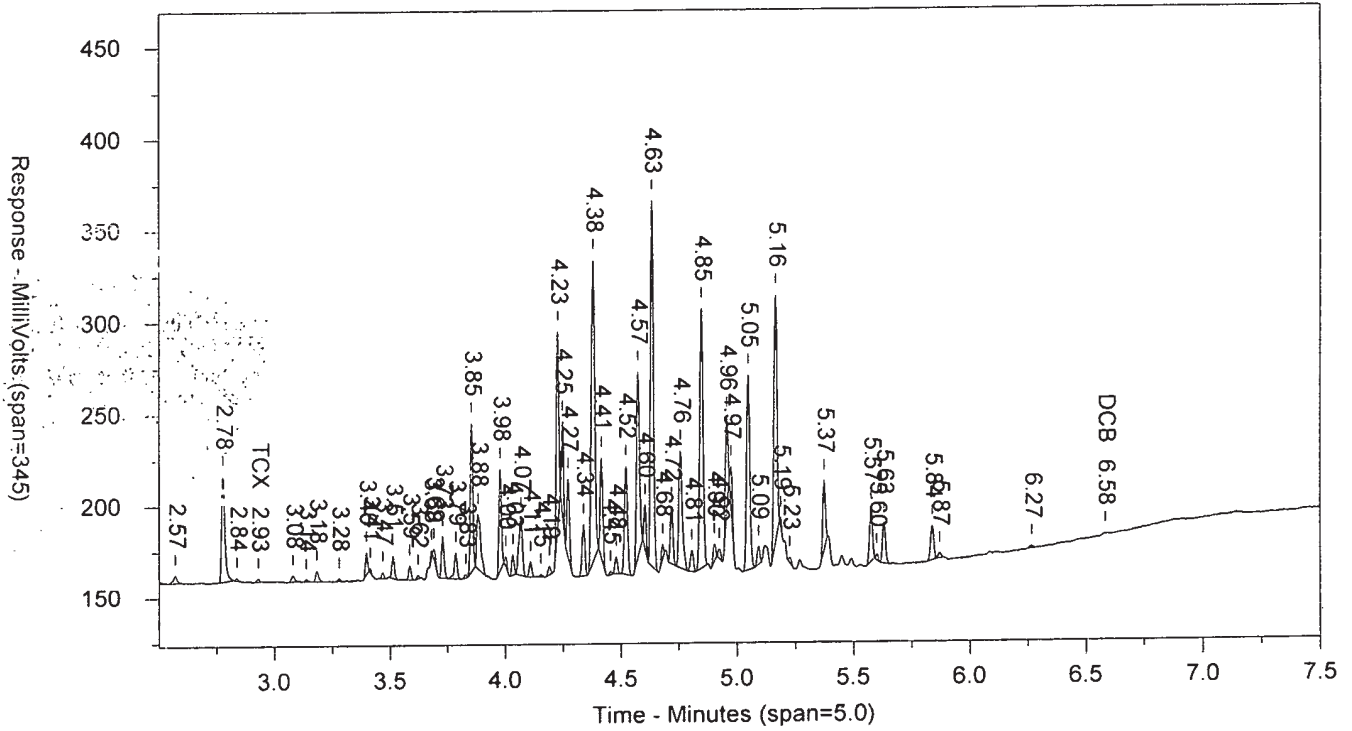
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ICAL 1830299999

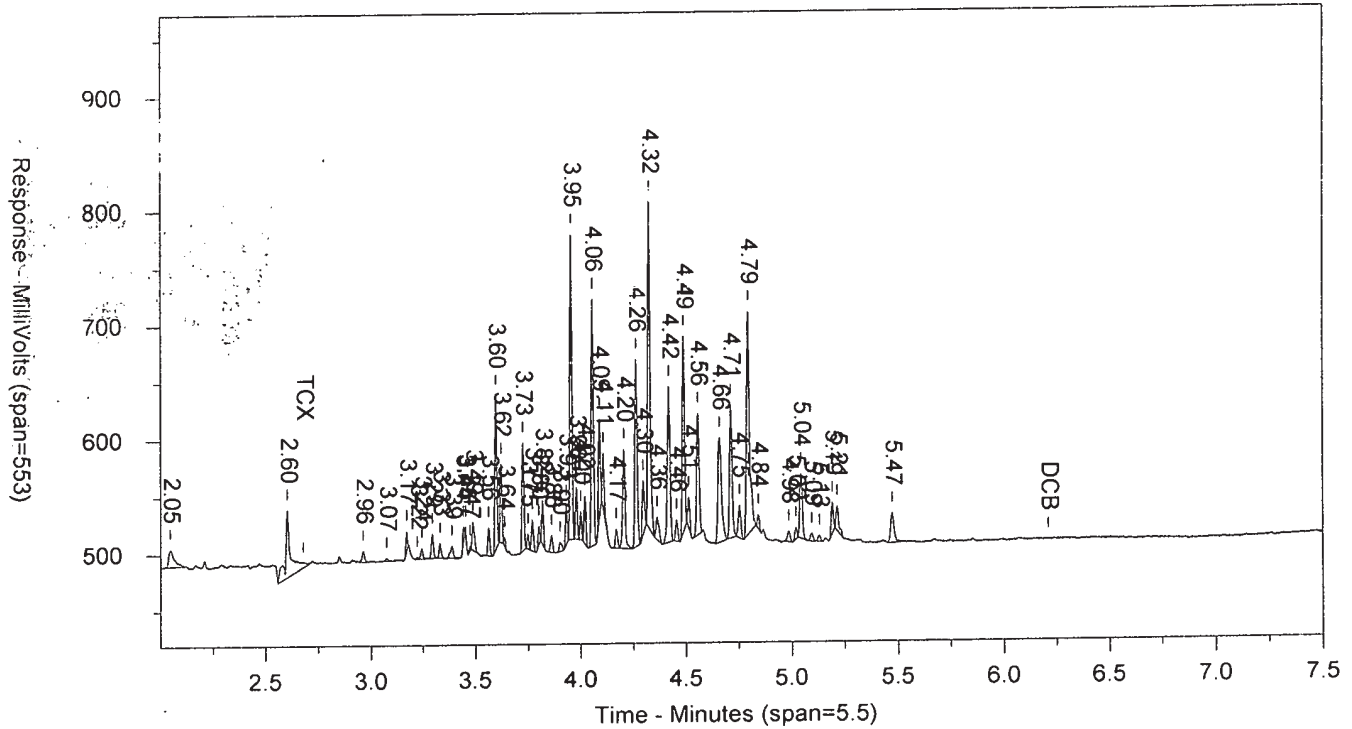
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SW-846 8082

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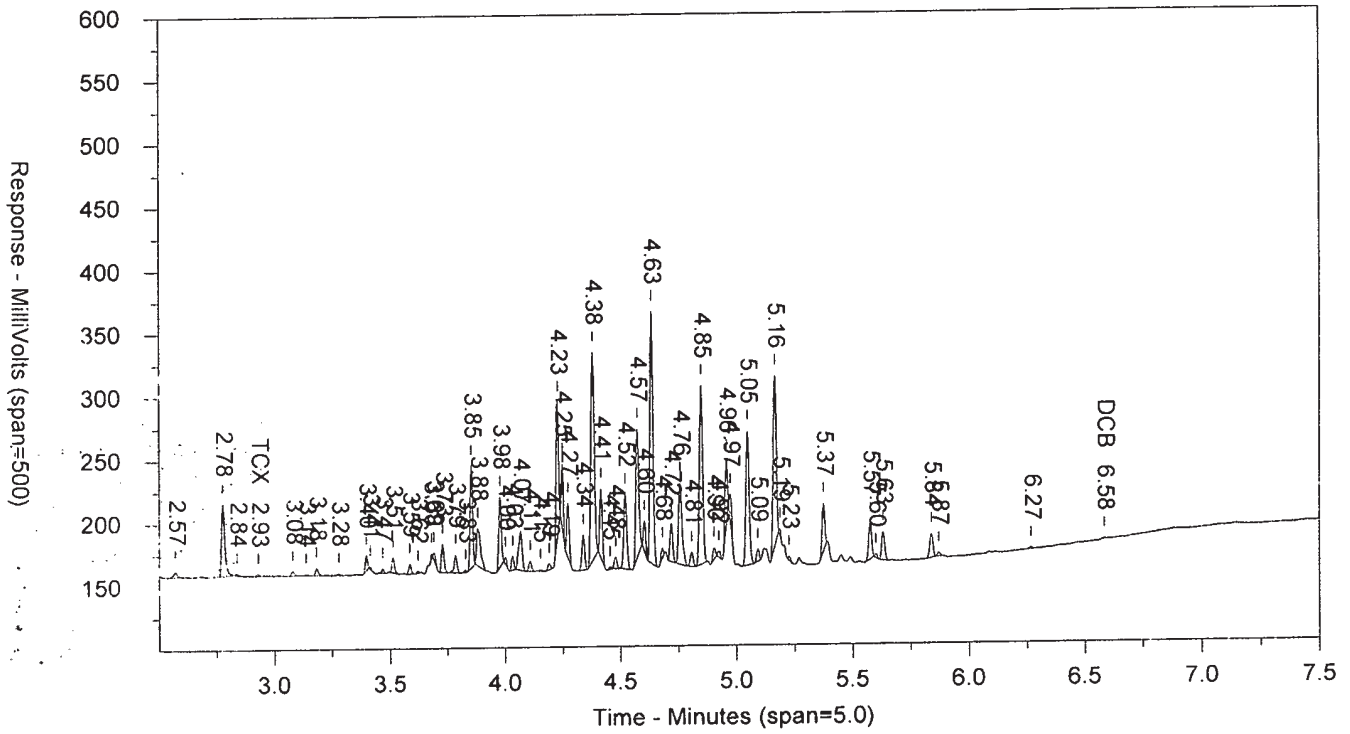


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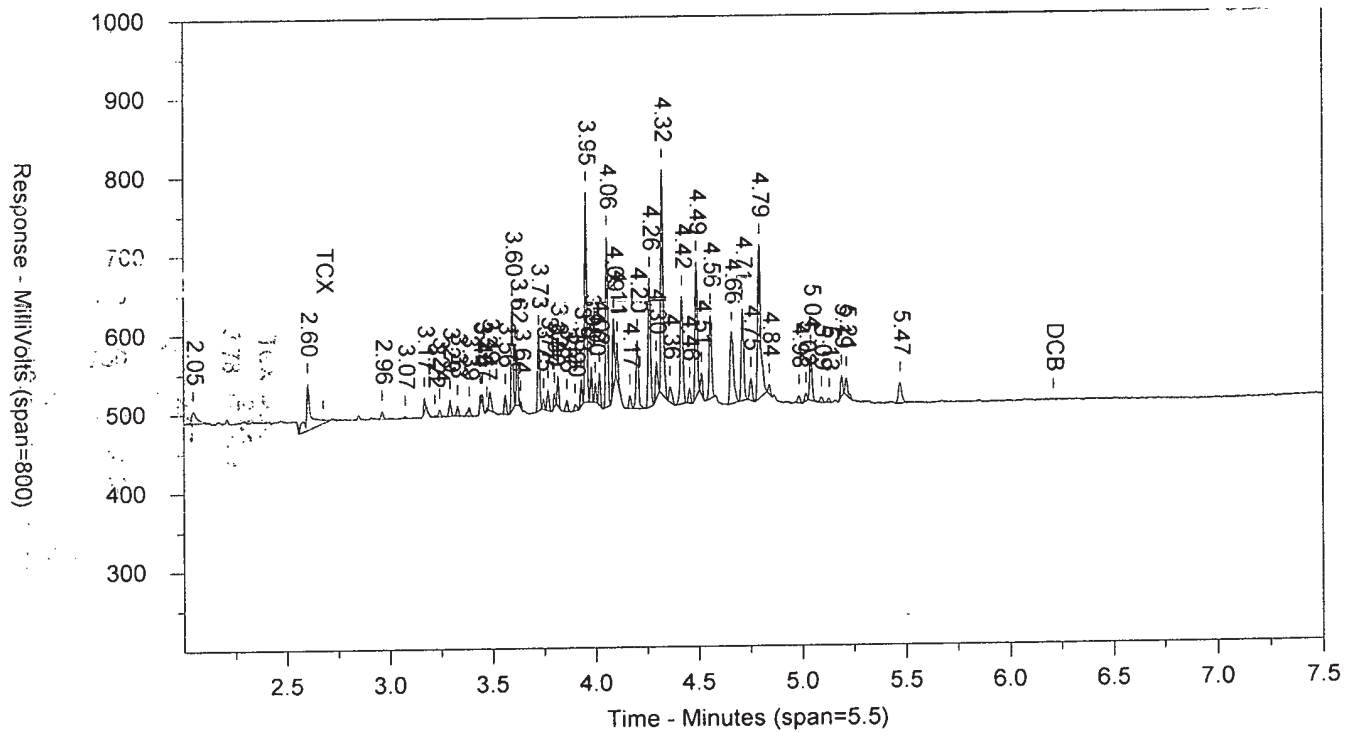


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LANCASTER LABORATORIES

Sample Number: AR5421824C AAAR542AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:35:22 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.020.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.093		8036	15831
2.231		2627	3273
2.311		11345	7958
2.378		2173	2727
2.423		1250	1093
2.496		1309	1029
2.57		4362	3293
2.776		25982	23399
2.835		2338	1805
2.928	TCX	1339	929
3.076		3201	2858
3.182		5173	4345
3.277		1728	1395
3.397		11006	7076
3.466		4565	3105
3.512		10364	8219
3.585		10796	8003
3.62		1486	887
3.664		5321	3146
3.678		1559	589
3.697		4191	3449
3.728		23489	19743
3.784		10498	7999
3.826		1656	1007
3.853		133908	101955
3.881		36054	41782
3.977		81722	63039
4.032		11473	8068
4.066		35426	39385
4.107		7447	6038
4.152		2003	1393
4.187		7379	5581
4.226		175190	137057
4.246		68722	41556
4.271		55012	41562
4.336		54391	47262
4.379		294109	307095
4.414		101948	86579
4.453		3323	2196
4.477		16755	13717
4.519		110656	100383
4.571		184557	169128
4.602		40501	28138
4.633		360152	334572
4.679		17972	12262
4.692		5867	3140
4.717		53551	44439
4.755		119328	129338
4.805		23083	19873
4.846		248121	257238
4.902		24042	18464
4.926		5645	3443
4.954		94345	73908
4.972		40342	25826

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
5.047		196751	194076
5.09		20989	16394
5.117		19693	28848
5.163		259820	239523
5.185		10050	4414
5.202		7597	4078
5.225		6066	4370
5.269		10145	12243
5.373		89117	123671
5.573		58541	52250
5.598		6326	3950
5.629		46102	42278
5.836		39455	35638
5.867		5537	5938
6.084		1518	1135
6.113		1314	1402
6.264		2071	2083
6.715		655	628
6.891		729	1333

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5421824C AAAR542AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:35:22 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.020.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.047		14399	35476
2.603		32275	63107
2.963		9198	7548
3.077		2817	1771
3.172		15347	8604
3.244		10833	7637
3.295		17442	13122
3.331		18850	12024
3.387		13676	11354
3.443		5378	2607
3.473		5369	2368
3.488		25500	21172
3.562		19575	12438
3.595		216795	136773
3.62		87356	54331
3.724		135777	87040
3.747		9335	4727
3.769		26631	19162
3.8		24083	12949
3.817		40069	22809
3.832		14242	11971
3.901		13205	12254
3.93		38992	21932
3.952		169125	314983
3.978		45018	25453
3.998		45849	25824
4.018		76949	48546
4.054		388644	285028
4.087		152162	96809
4.105		94724	53790
4.167		29829	21715
4.203		151315	122807
4.261		299510	232087
4.295		79472	61700
4.323		512856	406187
4.361		36585	37972
4.417		252879	225507
4.455		36803	28085
4.487		322258	245832
4.512		50743	34131
4.556		204251	169398
4.658		181538	201727
4.711		214837	182432
4.753		54831	47256
4.792		365768	380267
4.84		24199	15377
4.984		17212	14224
5.013		18486	12679
5.042		106144	91803
5.093		14946	12926
5.129		11898	9368
5.16		7013	6044
5.19		53615	39677
5.213		42443	38551

Chrom Perfect Chromatogram Report

RT: B	Compound B	Height B	Area B
5.47		50420	56430

AR5421824C

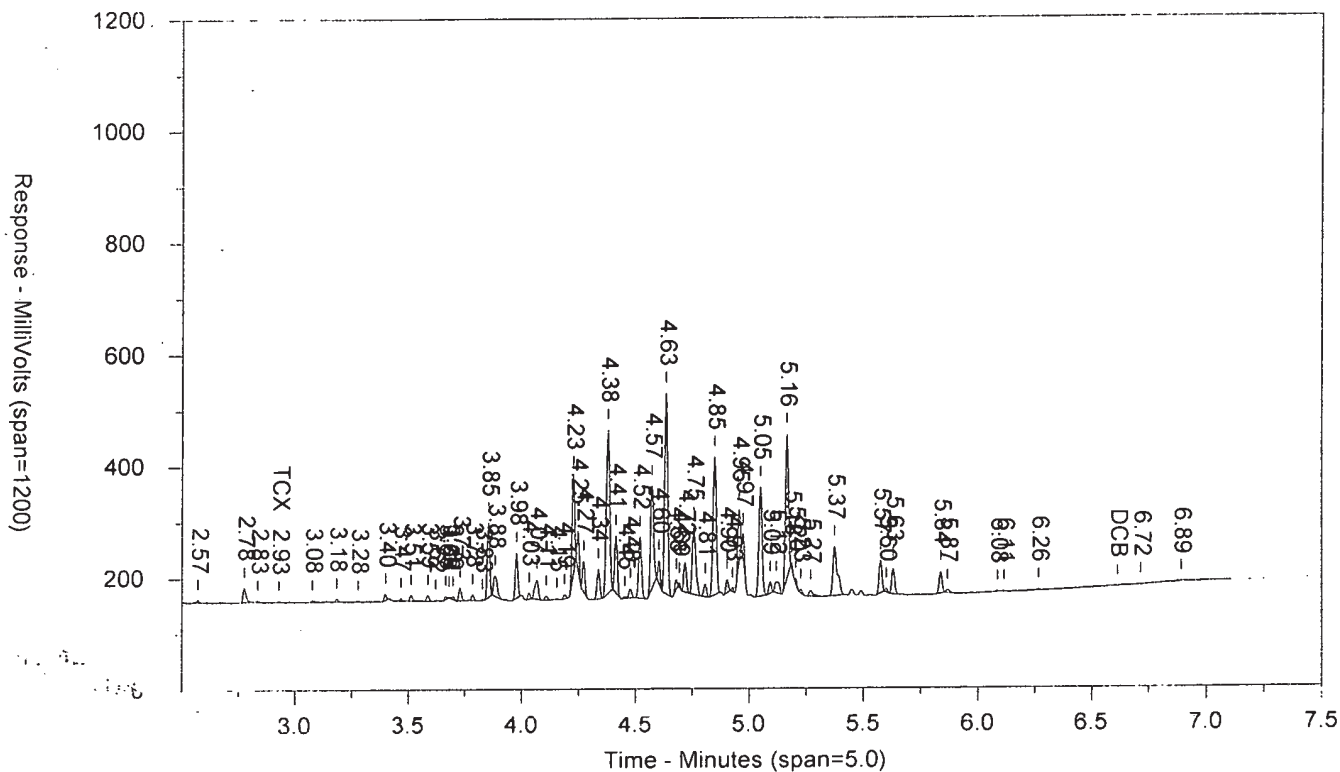
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ICAL 1830299999

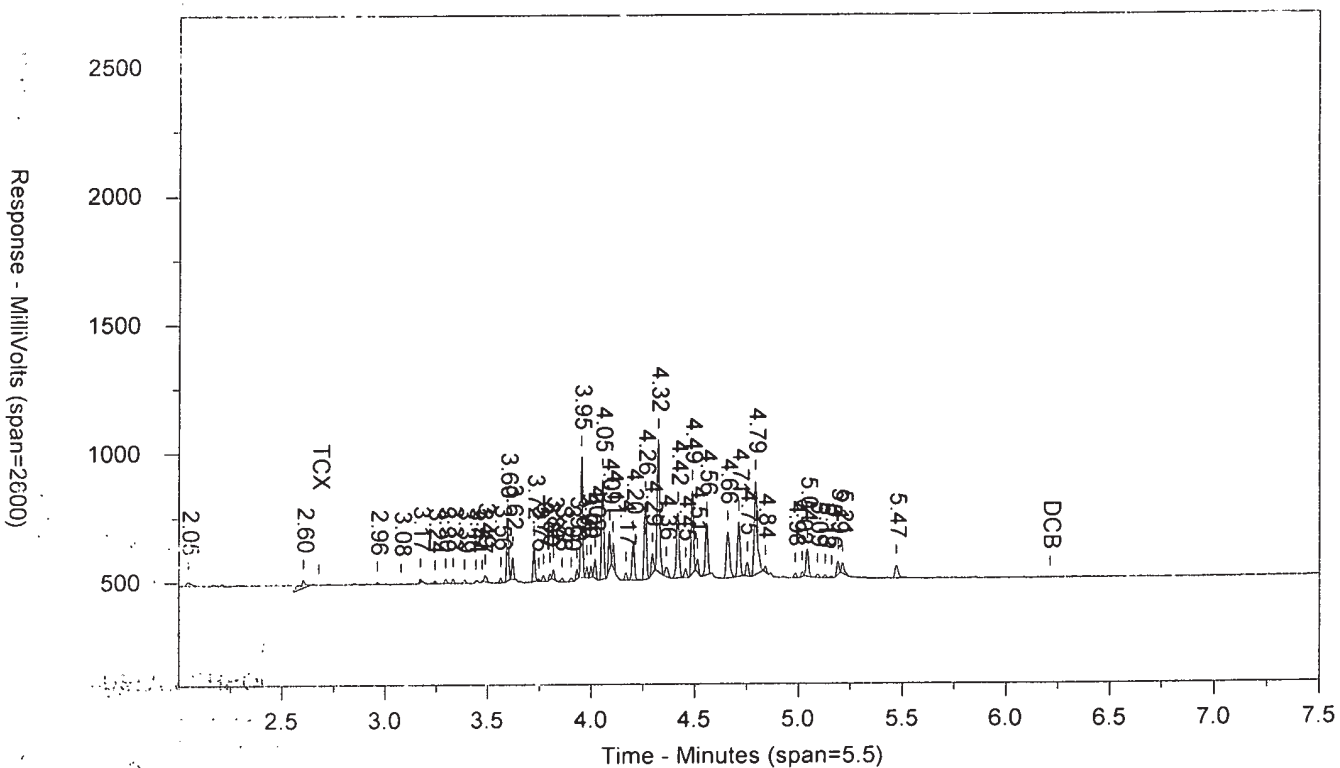
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5421824C AAR542AA ICAL 1830299999 10227

SW-846 8082

Injected On: 10/30/2018 8:35:22 PM

Sample Weight: 1

Instrument ID: CP25-18274

Dilution Factor: 1

Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min

Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um

Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um

Injection Volume: 1 ul

Threshold: 7

Calibration Type: external

Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	1339	.009	TCX		0		TCX

Files:

Area File: 25pcbs18303001.020.RAW

Area File: 25pcbs18303001B.020.RAW

Method A: 25PCBS.MET

Method B: 25PCBSB.MET

Calibration File A: 25PCBS1830301.CAL

Calibration File B: 25PCBS1830301b.CAL

Format A: pestD25.FMTA

Format B: pestD25.FMTB

Area File Created On: 10/30/2018 8:43:54 PM

File Reported On: 10/30/2018 at 8:43:59 PM

AR5421824C

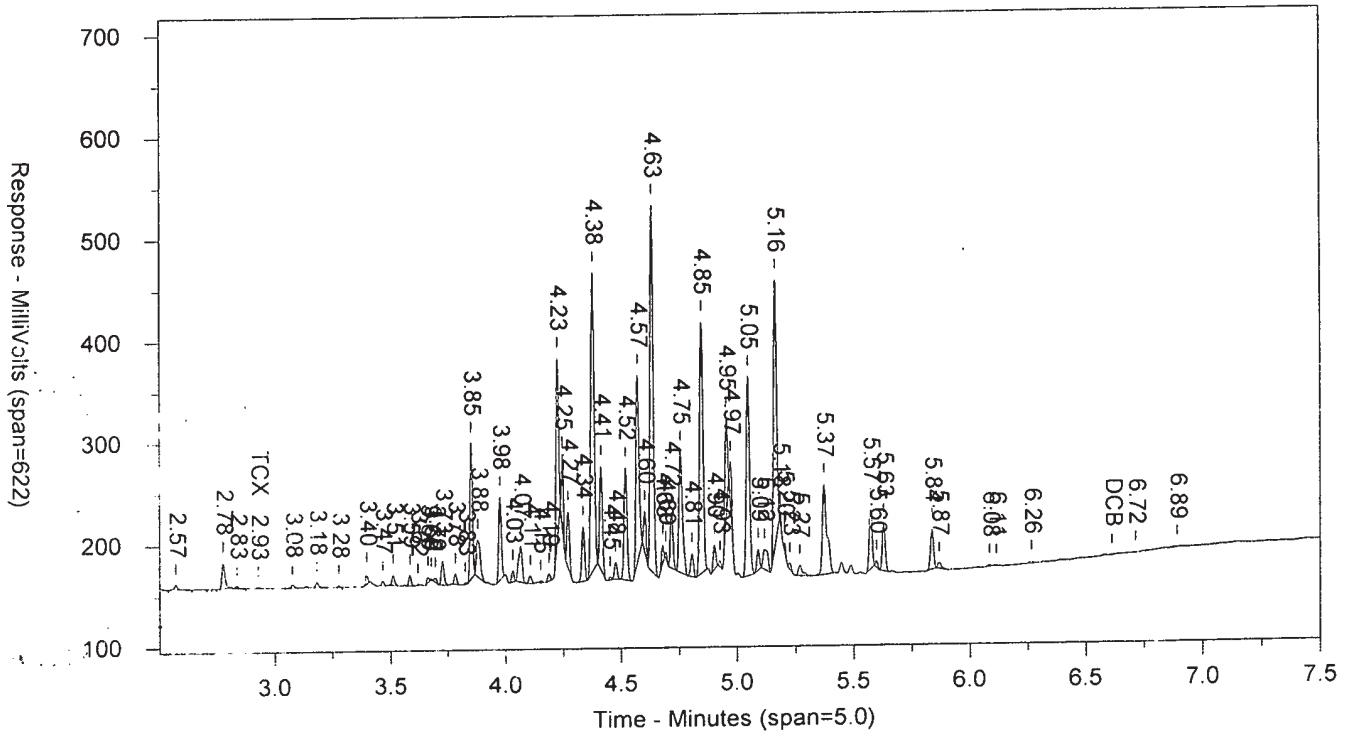
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ICAL 1830299999

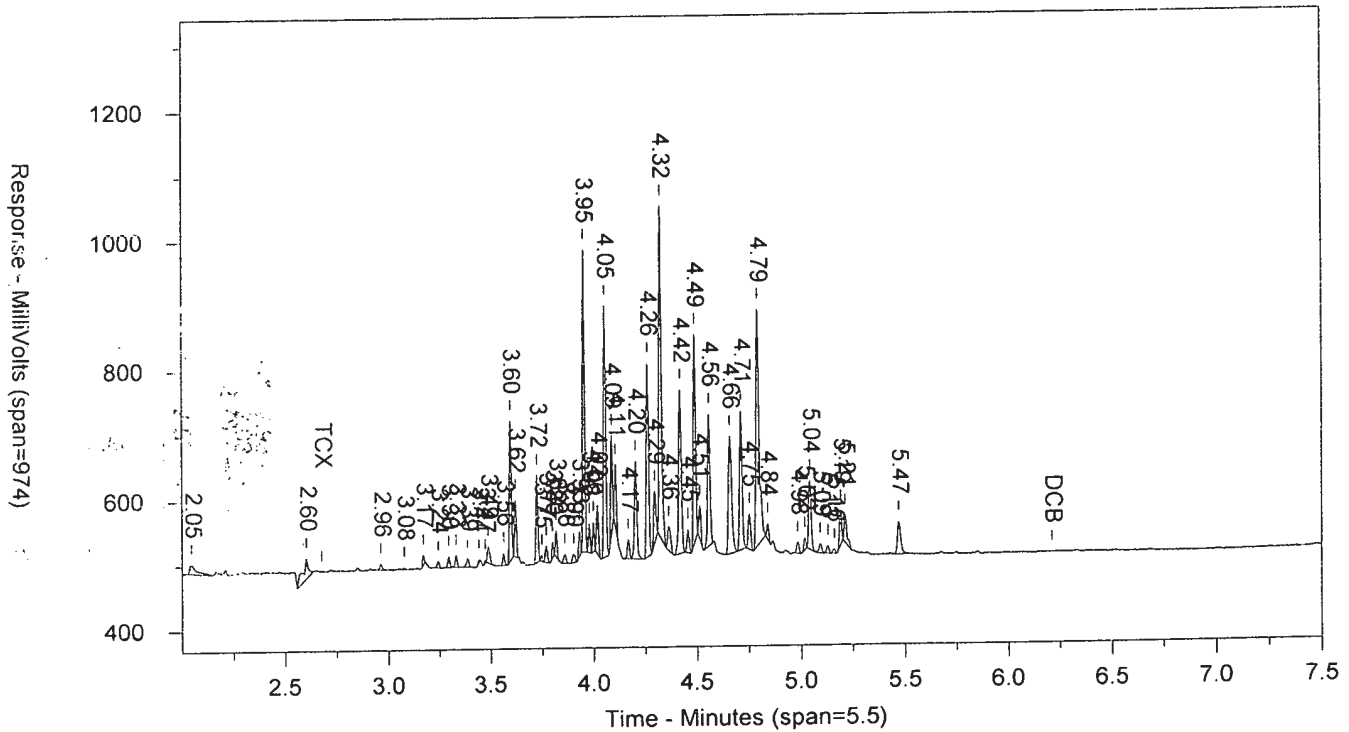
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SW-846 8082

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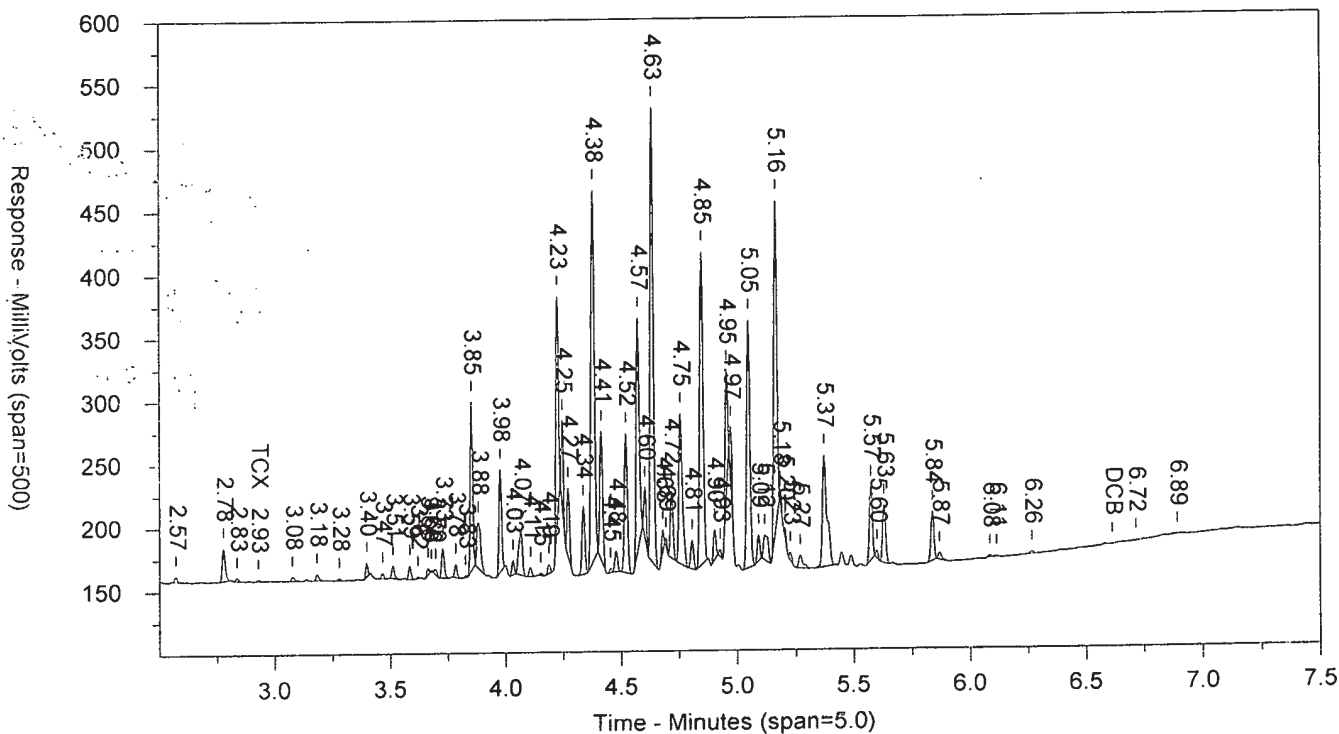
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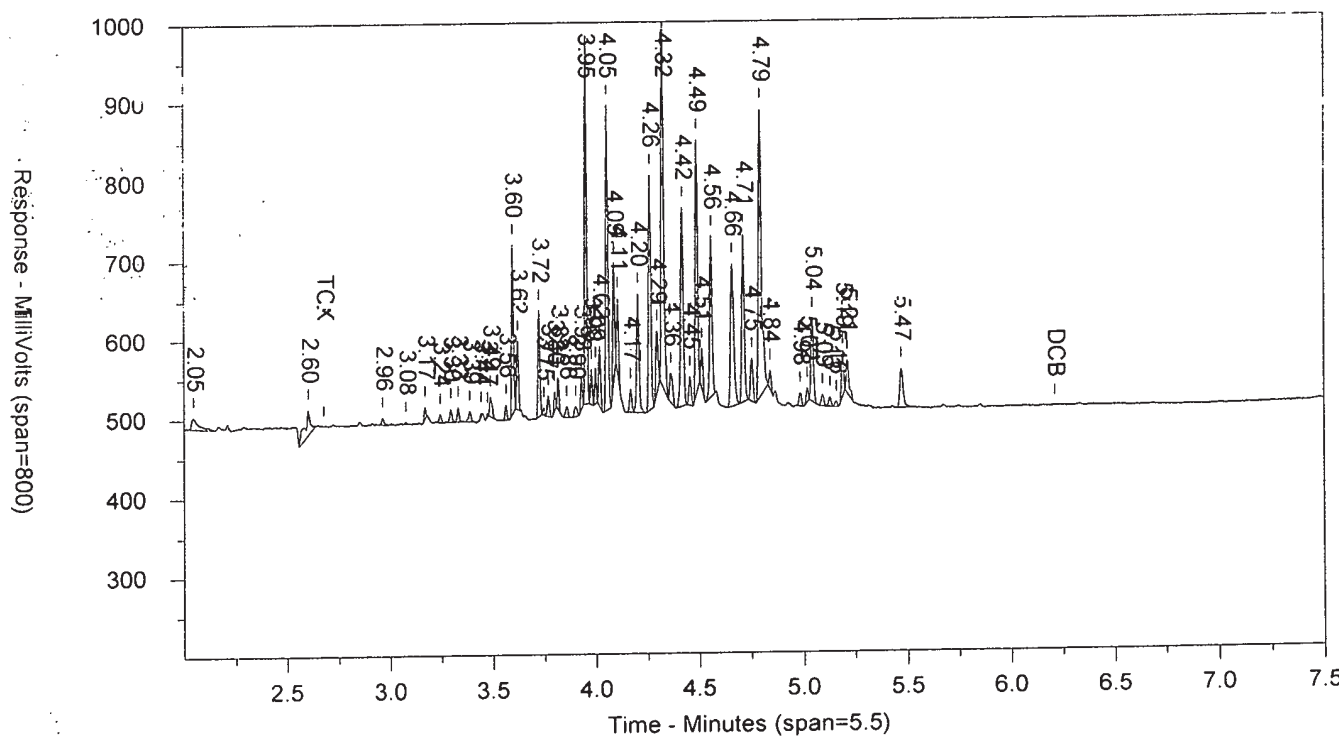
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5431824C AAAR543AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:46:11 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.021.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.099		10969	19877
2.23		1021	622
2.311		13099	9356
2.382		3831	5338
2.422		2353	1947
2.493		2508	3270
2.57		7753	8699
2.683		1571	1476
2.776		52818	51652
2.833		1508	1277
2.928	TCX	4019	3840
3.077		7486	7387
3.135		2964	2324
3.182		12005	10864
3.276		3228	2516
3.364		752	632
3.397		23486	14927
3.466		12016	9140
3.511		23915	19615
3.561		1543	967
3.585		25279	18440
3.621		3704	3765
3.664		2871	1501
3.678		4555	2199
3.697		8958	6762
3.728		54524	43220
3.783		24312	19614
3.827		2738	1816
3.852		232507	186726
3.884		76983	89583
3.976		152015	121173
4		5802	3111
4.031		24251	17052
4.065		70847	83270
4.107		14860	12226
4.154		7361	8284
4.188		15540	11923
4.225		342603	248434
4.245		117873	73311
4.27		101957	76524
4.336		103030	89978
4.378		546772	569052
4.413		184667	158242
4.454		6150	4041
4.477		31885	24414
4.519		198823	184447
4.571		333041	315585
4.602		77791	53005
4.632		676949	631540
4.678		28742	20763
4.692		16691	7969
4.716		103026	86996
4.755		229605	241210
4.805		45160	40164

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.846		470862	484940
4.901		47091	39076
4.925		8602	5377
4.954		174937	137750
4.971		68600	47376
5.046		377654	375002
5.089		43355	34671
5.116		41881	60247
5.163		491007	452839
5.185		18423	8523
5.201		15416	7999
5.225		14360	9732
5.268		20774	24563
5.373		132126	114623
5.449		20593	19240
5.572		113199	103407
5.598		13714	8610
5.628		87830	86320
5.719		7800	9526
5.836		80316	80625
5.867		11674	11015
6.081		3703	3033
6.113		7837	11239
6.175		7888	8404
6.261		5449	6077
6.327		1430	1842
6.381		13617	21039
6.463		1082	830
6.48		1403	921
6.577		2300	2318
6.608	DCB	2040	1386
6.635		13101	18426
6.879		18587	35001

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5431824C AAAR543AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:46:11 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.021.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.052		20609	61832
2.211		11340	7546
2.603		55196	94622
2.85		12041	9922
2.964		19272	13732
3.075		5997	3681
3.171		47265	50814
3.222		3246	1489
3.244		22194	14012
3.296		36038	23790
3.331		42015	27278
3.377		3678	1338
3.388		9782	6882
3.442		10962	5236
3.473		9975	4849
3.488		52961	44745
3.562		42996	27669
3.595		395746	249984
3.621		183625	110328
3.636		7789	2754
3.723		252707	164612
3.747		18194	9387
3.769		50259	35196
3.801		55173	29600
3.817		72734	40329
3.859		26508	22673
3.9		34467	37308
3.93		69538	40027
3.952		841379	584229
3.978		79824	45176
3.998		83739	46931
4.017		137685	88489
4.055		733571	529549
4.087		286525	180884
4.105		195694	109712
4.167		61358	46919
4.203		294522	241295
4.261		547338	437826
4.295		154763	116689
4.322		968365	778515
4.362		69233	69020
4.417		477966	421185
4.453		65952	49393
4.487		638169	474864
4.512		99220	63633
4.556		386897	318658
4.657		345181	377931
4.711		437757	362348
4.752		89795	79940
4.792		709287	743407
4.84		52664	34790
4.863		21936	16893
4.926		9053	9000
4.983		37797	30066

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.018		33747	23444
5.041		202091	162502
5.091		29807	24806
5.127		23414	19544
5.157		13471	10107
5.19		105368	78754
5.212		83310	74201
5.47		107095	214495
5.638		16992	22362
5.672		6306	11158
5.932		10818	60154
6.208	DCB	10055	60789
6.533		19065	225504
6.689		4474	55952
6.892		5639	37203

AR5431824C

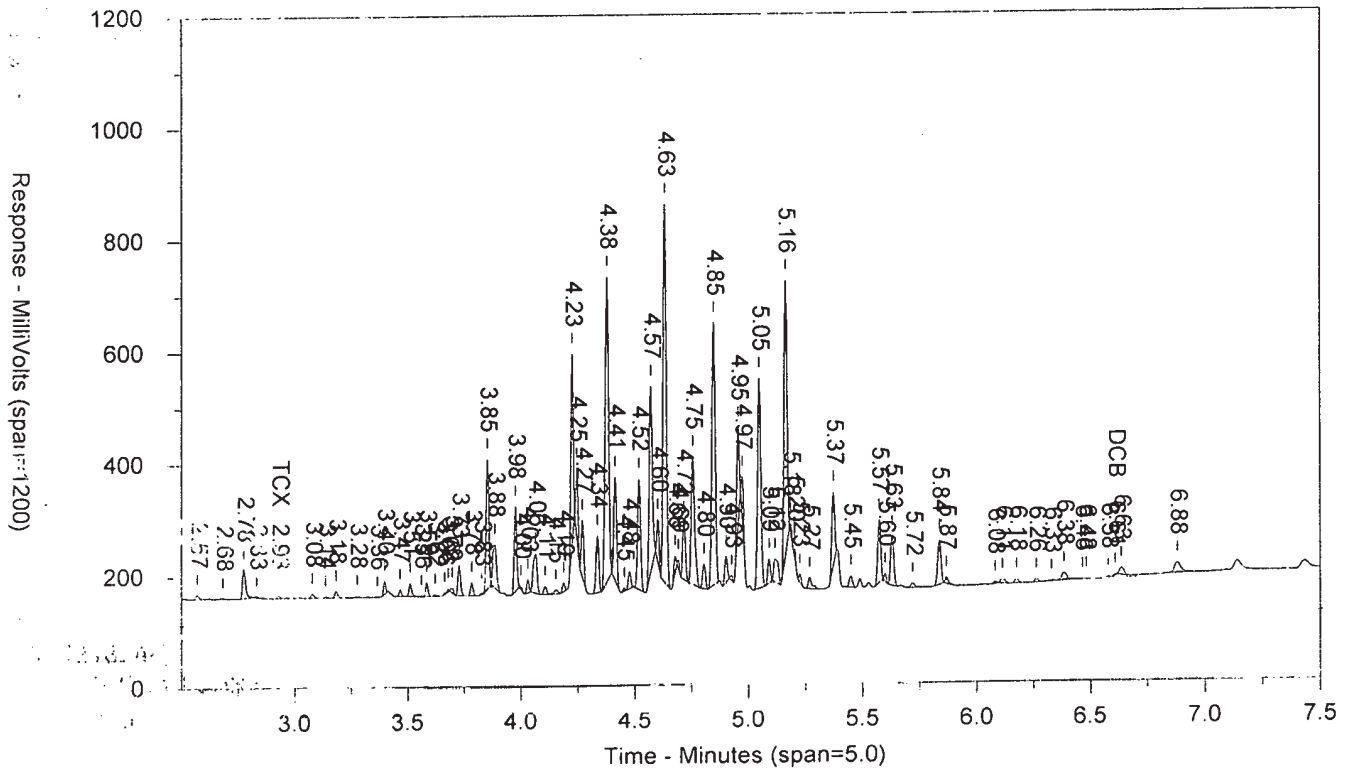
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ICAL 1830299999

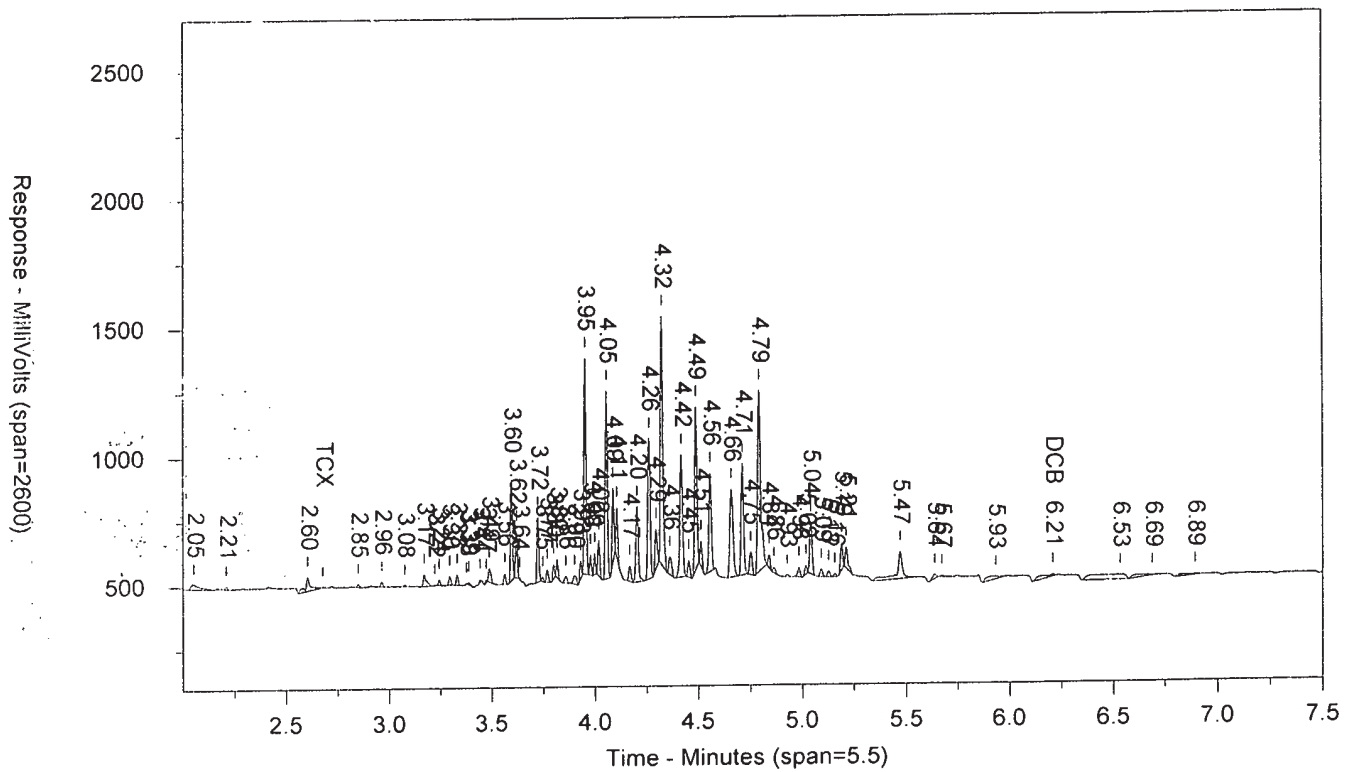
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5431824C AAAR543AA ICAL 1830299999 10227
 Injected On: 10/30/2018 8:46:11 PM
 Instrument ID: CP25-18274

SW-846 8082
 Sample Weight: 1
 Dilution Factor: 1

Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	4019	.026	TCX		0		TCX
6.608	2040	.016	DCB	6.208	10055	.054	DCB

Files:
 Area File: 25pcbs18303001.021.RAW
 Area File: 25pcbs1830301b.021.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 8:54:42 PM
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AR5431824C

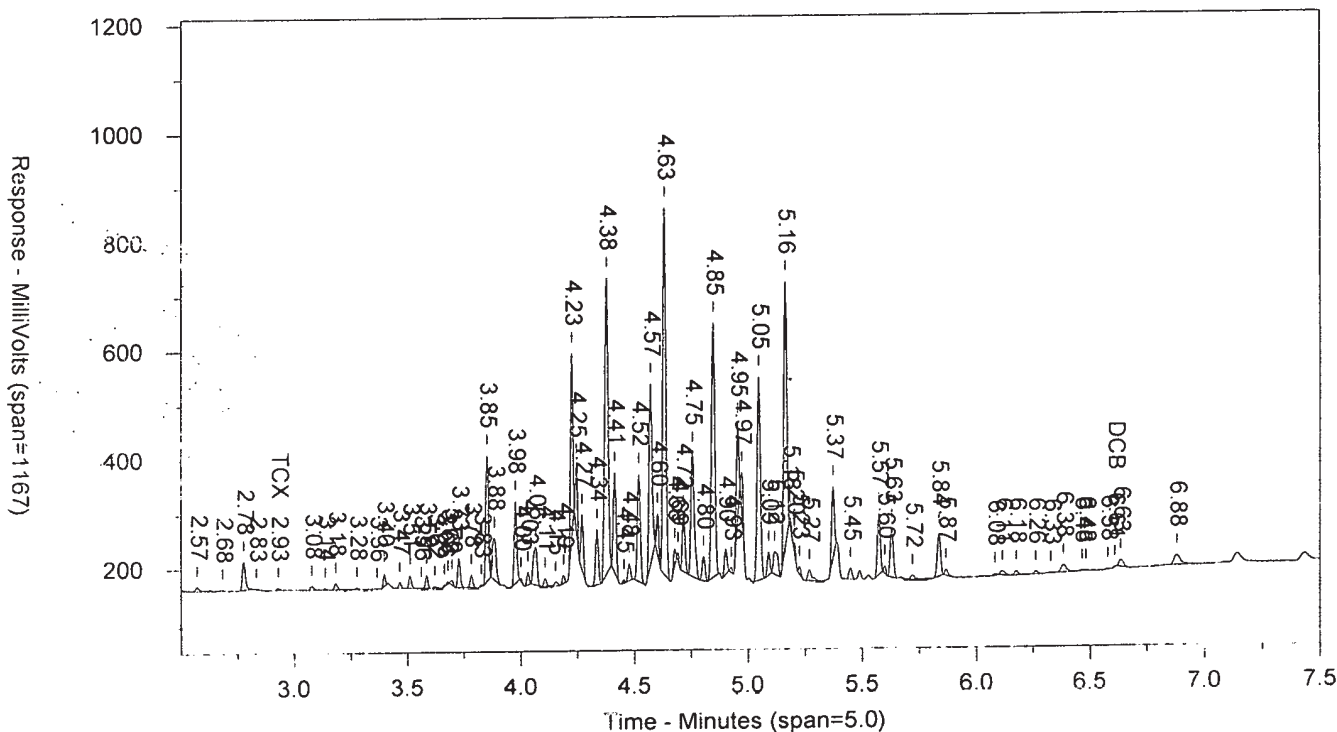
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ICAL 1830299999

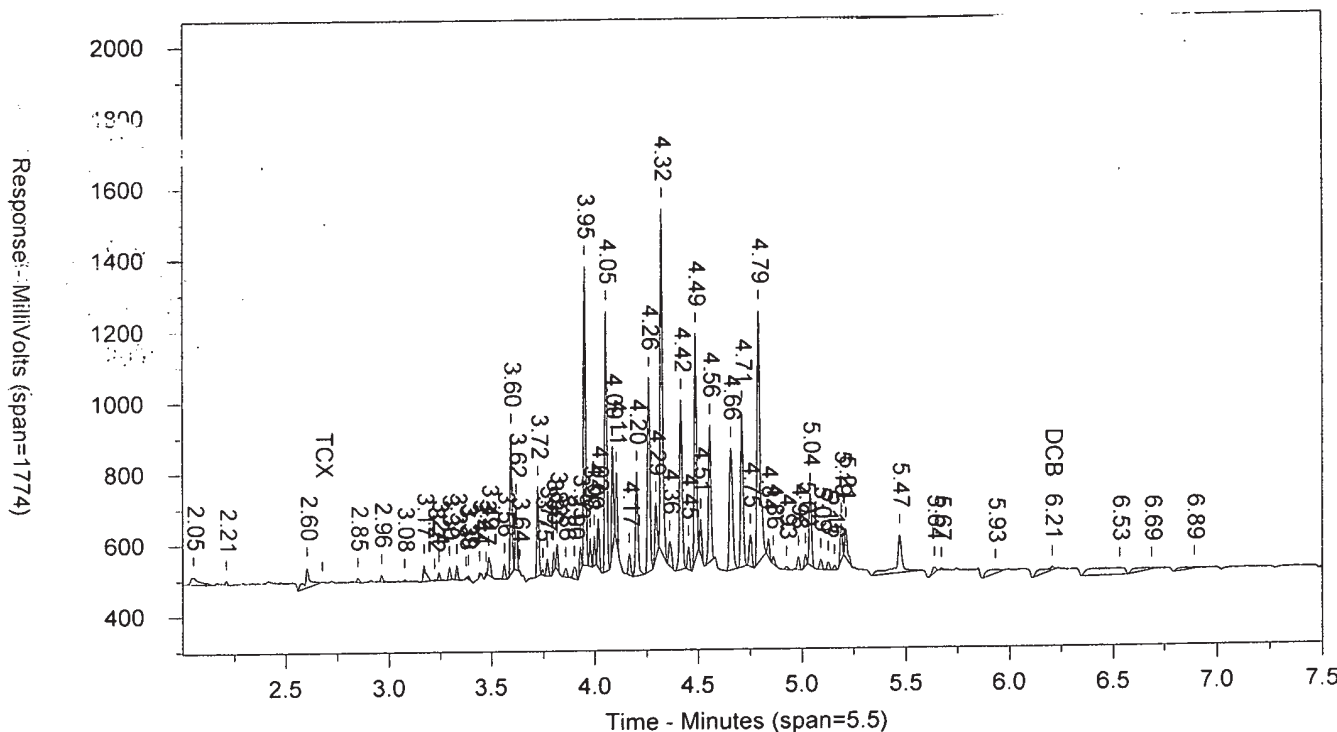
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SW-846 8082

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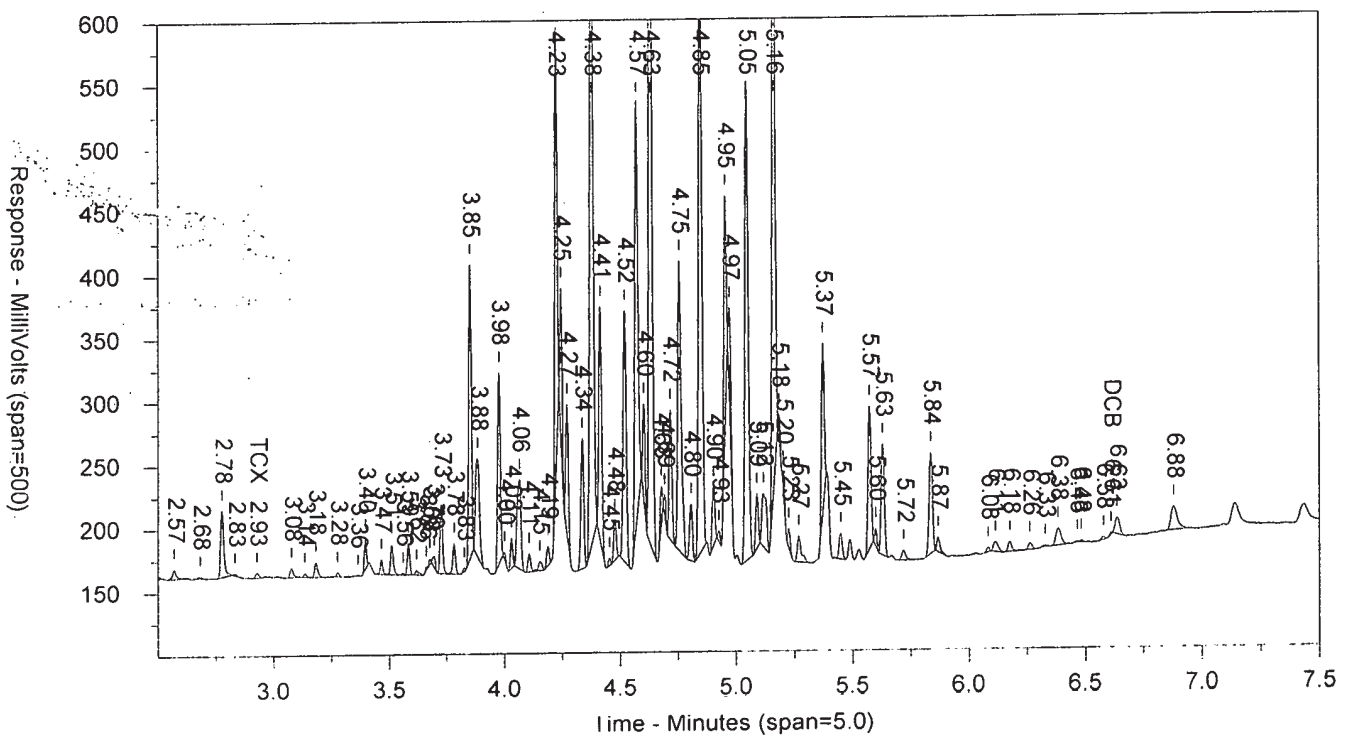


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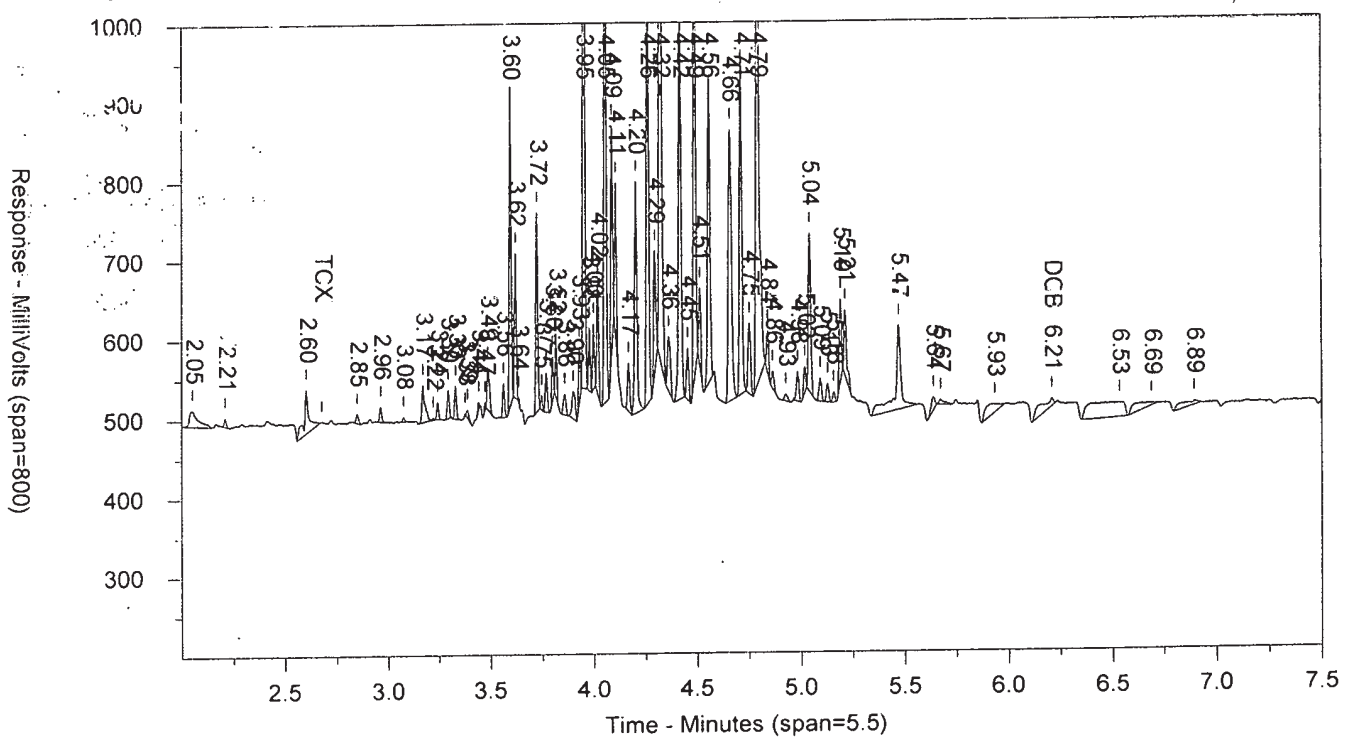


AR5431824C AAR543AA ICAL 1830299999 10227 SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5441824C AAR544AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 8:57:04 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.022.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		8307	16467
2.144		1370	1296
2.229		2383	3107
2.311		8401	6048
2.376		2192	2564
2.423		2556	1924
2.495		1388	1307
2.571		5249	6889
2.776		18624	15611
2.833		2668	1894
2.928	TCX	8373	7487
3.078		15000	14437
3.136		6653	5476
3.182		26609	21589
3.277		8005	6240
3.397		52699	33934
3.414		7840	5800
3.466		26897	21007
3.512		56976	43120
3.563		3515	2127
3.586		60661	44423
3.622		6004	3623
3.666		3871	2176
3.68		11420	5568
3.697		20772	15966
3.729		119734	96802
3.785		57286	46505
3.828		8373	5168
3.853		542039	430232
3.883		132864	196100
3.927		4514	2464
3.978		355747	281579
4.001		14753	7275
4.033		57229	40987
4.066		166389	193102
4.108		36634	28920
4.137		2183	1142
4.154		9420	6717
4.189		34782	25573
4.227		810556	599040
4.247		276443	169570
4.271		233618	176501
4.337		239280	210877
4.38		1307387	1345156
4.415		431907	362528
4.455		15735	10274
4.478		83696	66884
4.52		474188	440838
4.573		827982	768715
4.604		184408	122520
4.634		1684452	1536226
4.679		72885	53087
4.694		27386	13833
4.718		238013	194872

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.757		523914	554387
4.806		108492	99141
4.848		1175536	1208363
4.903		110323	94885
4.928		17543	10039
4.955		412534	321104
4.973		168773	115111
5.048		933268	923575
5.091		102499	81093
5.118		89391	137013
5.164		1183647	1094427
5.187		38596	17153
5.204		29583	18183
5.227		29846	21368
5.27		50022	60764
5.374		392958	565038
5.45		51046	47568
5.49		43788	40460
5.574		253361	241246
5.599		31648	21116
5.631		200380	196557
5.667		5628	5148
5.837		169701	166418
5.869		29480	28418
6.083		8784	7704
6.109		4380	3551
6.264		10789	11106
6.468		1311	1399
6.639	DCB	3748	5337
6.83		875	1022
6.878		9308	14174

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5441824C AAAR544AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:57:04 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001B.022.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.047		13566	31936
2.603		36988	136115
2.724		11323	12144
2.85		26709	19634
2.911		11006	9066
2.963		43127	30031
3.076		12332	9176
3.171		101012	104926
3.223		5974	3238
3.245		48079	31109
3.296		84605	61236
3.331		91855	59580
3.379		22222	26929
3.442		23841	12193
3.473		22968	10832
3.488		115022	97758
3.563		91676	61633
3.596		8921437	583296
3.62		261407407803	246889
3.637		16866	5997
3.656		16033	9969
3.724		579336	384735
3.748		44158	23033
3.77		103086	70338
3.801		113206	61957
3.817		172582	97120
3.86		66780	55267
3.902		64226	60563
3.931		173674	101689
3.953		2072479	1414843
3.979		200540	113267
3.999		202553	114830
4.019		334257	213271
4.055		1772002	1258472
4.088		639719	415259
4.106		445240	244886
4.168		130454	95049
4.204		667704	539828
4.261		1414830	1068335
4.296		375100	281074
4.323		2483457	1912456
4.362		168390	170208
4.417		1134046	1003582
4.455		167919	128699
4.488		1572065	1146581
4.513		223628	150145
4.557		938245	744173
4.582		41478	23087
4.658		800421	878003
4.712		1082411	884834
4.753		254481	222827
4.793		1731513	1766109
4.84		117663	77382
4.865		51512	34379

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.925		18962	21268
4.984		85978	81345
5.018		77765	53408
5.042		505957	421010
5.093		66846	57312
5.129		55142	45213
5.159		29320	24287
5.191		260061	188737
5.213		190557	174021
5.428		9945	7655
5.47		230609	273803
5.673		18139	35060
5.747		9596	9975
5.852		20516	19358
5.912		7297	24673
6.224	DCB	6675	82706
6.389		12851	40163
6.688		9997	110271
6.902		4410	59581

AR5441824C

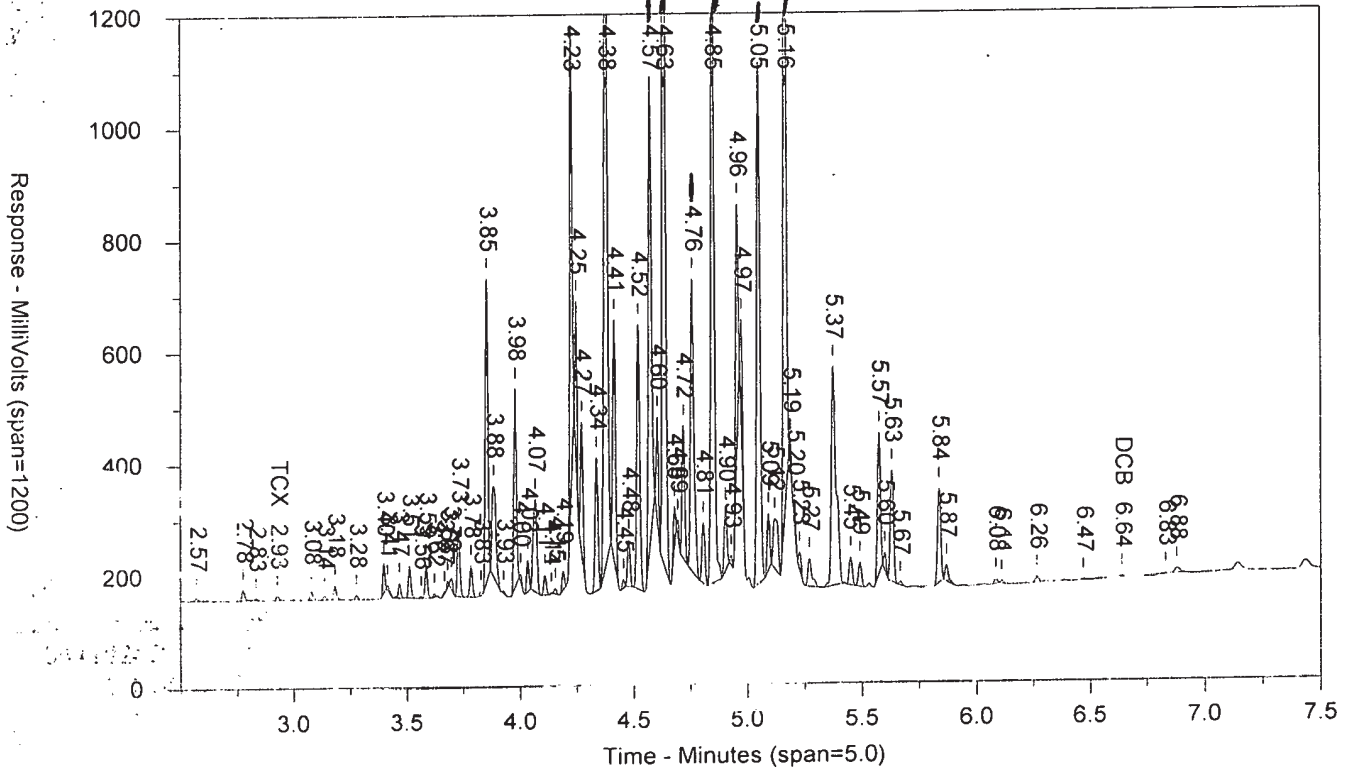
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ICAL 1830299999

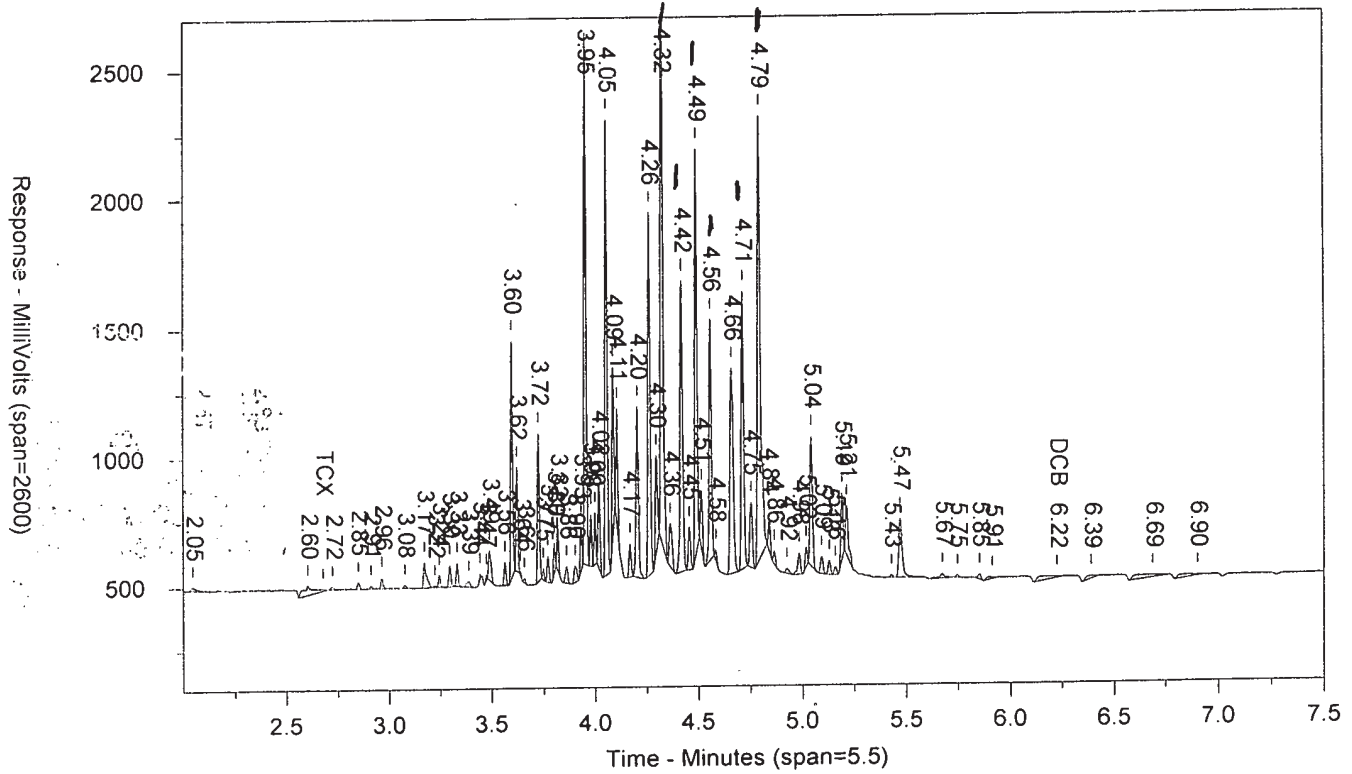
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5441824C AAAR544AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 8:57:04 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	8373	.054	TCX		0		TCX
6.639	3748	.029	DCB	6.224	6675	.036	DCB

Files:
 Area File: 25pcbs18303001.022.RAW
 Area File: 25pcbs18303001b.022.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 9:05:35 PM
 File Reported On: 10/30/2018 at 9:05:43 PM

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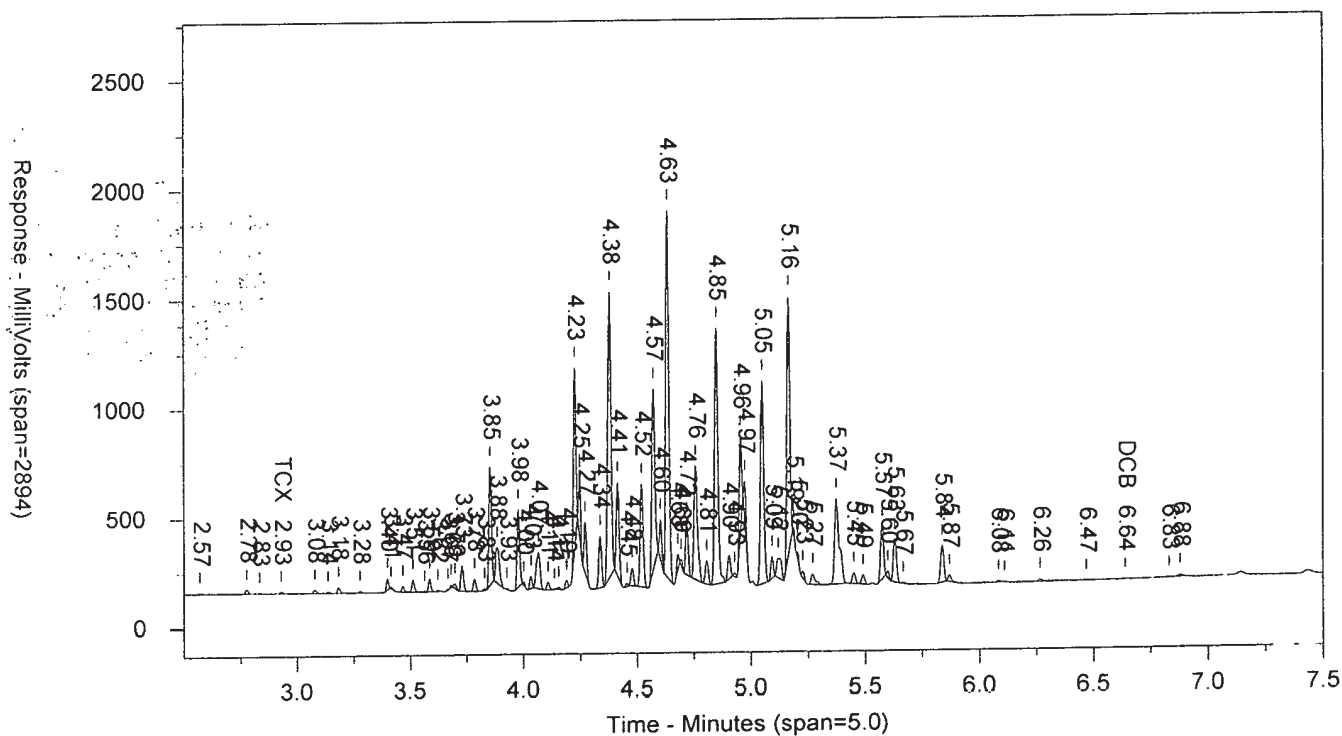
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ICAL 1830299999

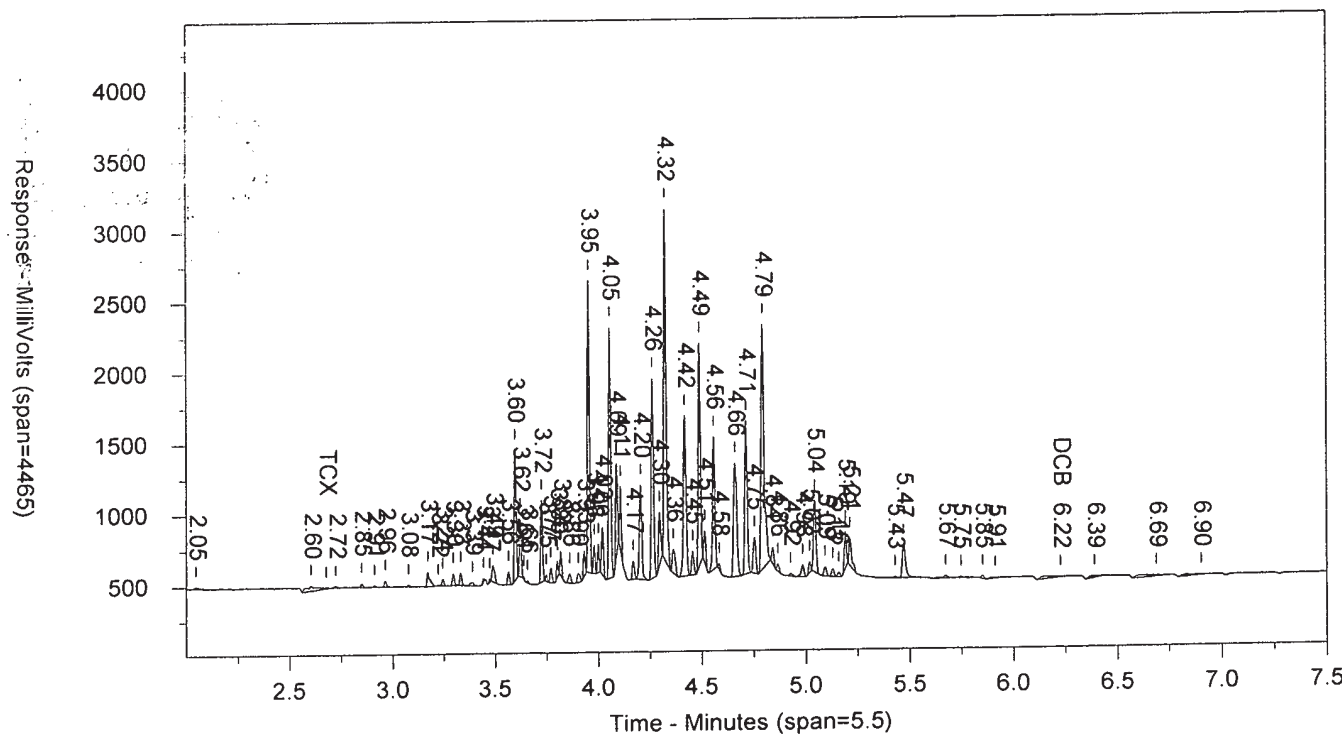
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SW-846 8082

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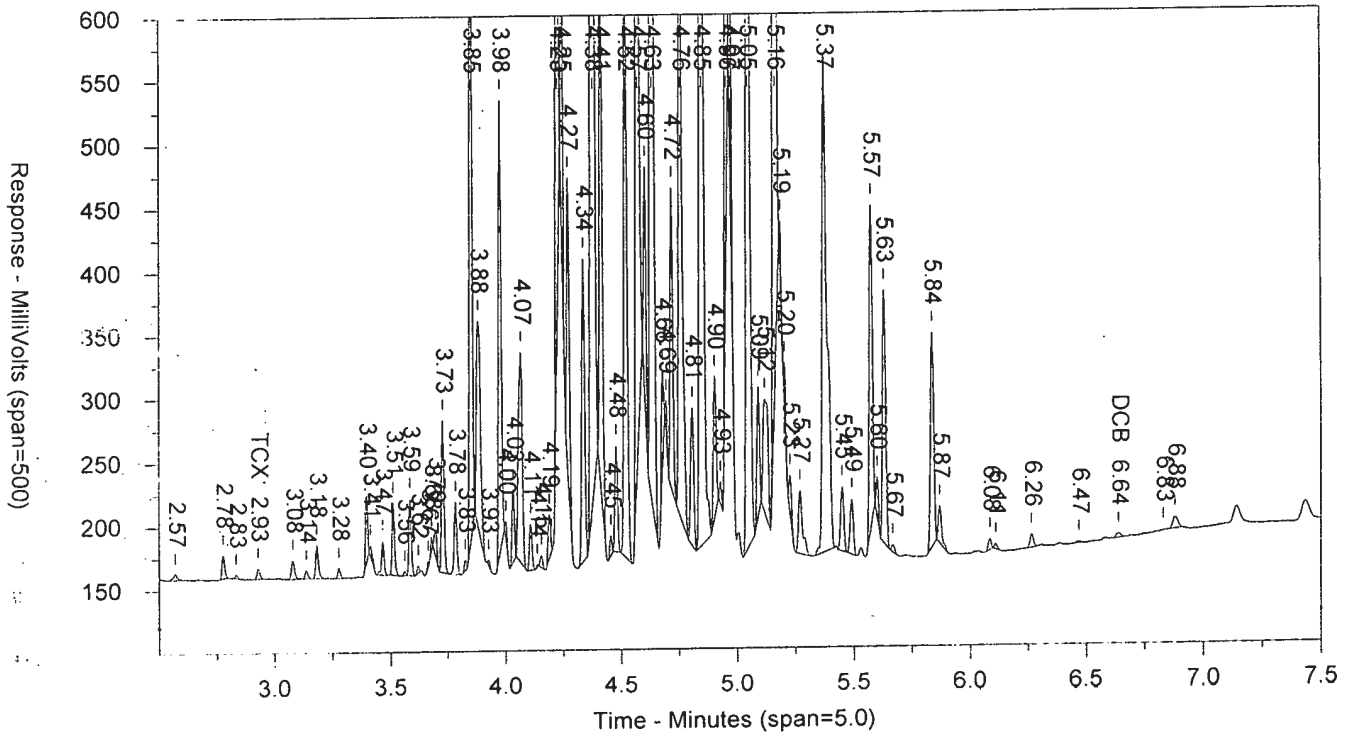
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ICAL 1830299999

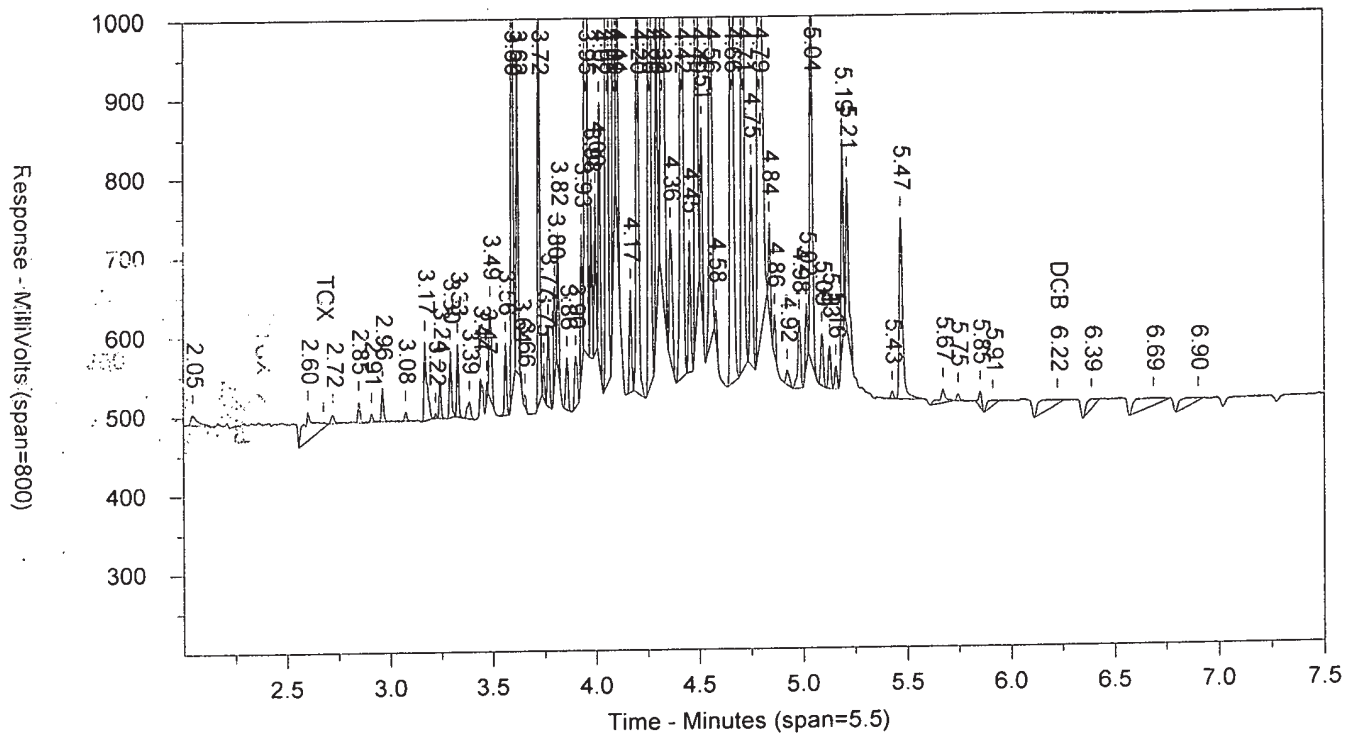
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5451824C AAAR545AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:07:59 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.023.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT:A	Compound A	Height A	Area A
2.097		7477	13171
2.228		2399	3418
2.311		8923	6325
2.378		2123	2519
2.422		4295	4016
2.492		1568	1269
2.571		7900	8637
2.776		19514	16978
2.831		2974	3364
2.928	TCX	16045	14541
3.078		30707	28258
3.136		13556	11083
3.182		55148	44163
3.277		15150	12248
3.388		100430	66473
3.413		15826	10655
3.467		59330	46473
3.512		112365	89891
3.563		6510	3990
3.587		122089	90675
3.622		114816	7234
3.68		26423	12866
3.698		41868	31929
3.73		233964	199806
3.785		113749	95431
3.827		17159	11177
3.854		1040132	794365
3.886		314169	368246
3.928		9976	5967
3.978		649750	523788
4.002		23925	13225
4.033		117684	83569
4.066		316916	377431
4.109		72262	58190
4.138		3678	2122
4.154		21106	14855
4.189		66473	50156
4.227		1575951	1144317
4.247		566391	337232
4.272		431808	334229
4.338		435316	389201
4.38		2515995	2577949
4.415		835304	673555
4.455		31272	20561
4.478		143772	122278
4.521		894556	831425
4.573		1619001	1479356
4.603		338935	228037
4.634		3353396	2998440
4.68		131241	96287
4.694		747167	23715
4.719		434975	369300
4.757		972978	1028073
4.807		193194	181456

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.848		2218199	2180953
4.904		201256	173542
4.928		33564	18600
4.956		777466	595725
4.973		321718	204427
5.049		1850595	1825270
5.092		184343	147593
5.118		158613	242598
5.165		2312743	2149451
5.187		59780	27144
5.203		42046	25908
5.227		53472	37760
5.27		95589	118397
5.375		656472	541529
5.45		96545	91667
5.49		82238	80574
5.574		516736	469923
5.6		61478	40326
5.631		371131	369137
5.668		13153	11514
5.839		313829	311980
5.869		56918	55552
6.018		1341	1116
6.084		19764	16505
6.109		8347	6732
6.267		21468	21233
6.467		3252	3683
6.582	DCB	2478	3709
6.646		1034	1161
6.887		1309	940

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5451824C AAAR545AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:07:59 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.023.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		14675	35621
2.291		4782	17364
2.603		27501	58153
2.723		21463	23921
2.85		55841	41345
2.912		21929	16980
2.963		81516	58919
3.076		25756	18400
3.171		199634	209176
3.224		11817	6641
3.245		95000	60343
3.296		167866	121592
3.331		184770	119451
3.378		13121	6464
3.389		15398	8109
3.442		48714	23977
3.452		27257	11030
3.473		43928	20818
3.488		236854	206177
3.563		188315	124181
3.596		1760992	1085084
3.621		772676	475165
3.638		29169	10112
3.657		33121	20580
3.725		1062065	722111
3.748		87246	44018
3.77		198950	135417
3.801		244104	136296
3.817		322137	177330
3.861		129628	110099
3.902		124130	115289
3.931		322800	187548
3.953		4129381	2739754
3.979		369105	211351
3.999		356211	203387
4.019		607097	386727
4.055		3443448	2413045
4.088		1238591	792273
4.106		797052	439322
4.168		249293	176292
4.204		1309053	1011734
4.262		2739280	2070676
4.296		700741	542871
4.324		5025123	3771466
4.362		312800	315715
4.418		2236031	1930016
4.455		314854	242508
4.488		3088708	2254227
4.513		435751	283385
4.557		1800090	1422719
4.582		70563	38495
4.659		1564926	1677337
4.712		2129697	1768596
4.753		492927	420342

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.793		3554720	3494969
4.841		225948	149844
4.864		96913	67073
4.925		33568	40226
4.984		167404	157312
5.019		151005	104953
5.043		972151	811117
5.093		127709	108864
5.13		108092	85542
5.16		55279	44808
5.191		491970	367878
5.214		363173	326858
5.428		18770	16333
5.471		441569	511755
5.674		27430	26809
5.747		17328	16305
5.853		28559	25914
6.053		7328	25582
6.159		4519	13413
6.396		8997	27832
6.686		4991	57000
6.863		5872	31828

AR5451824C

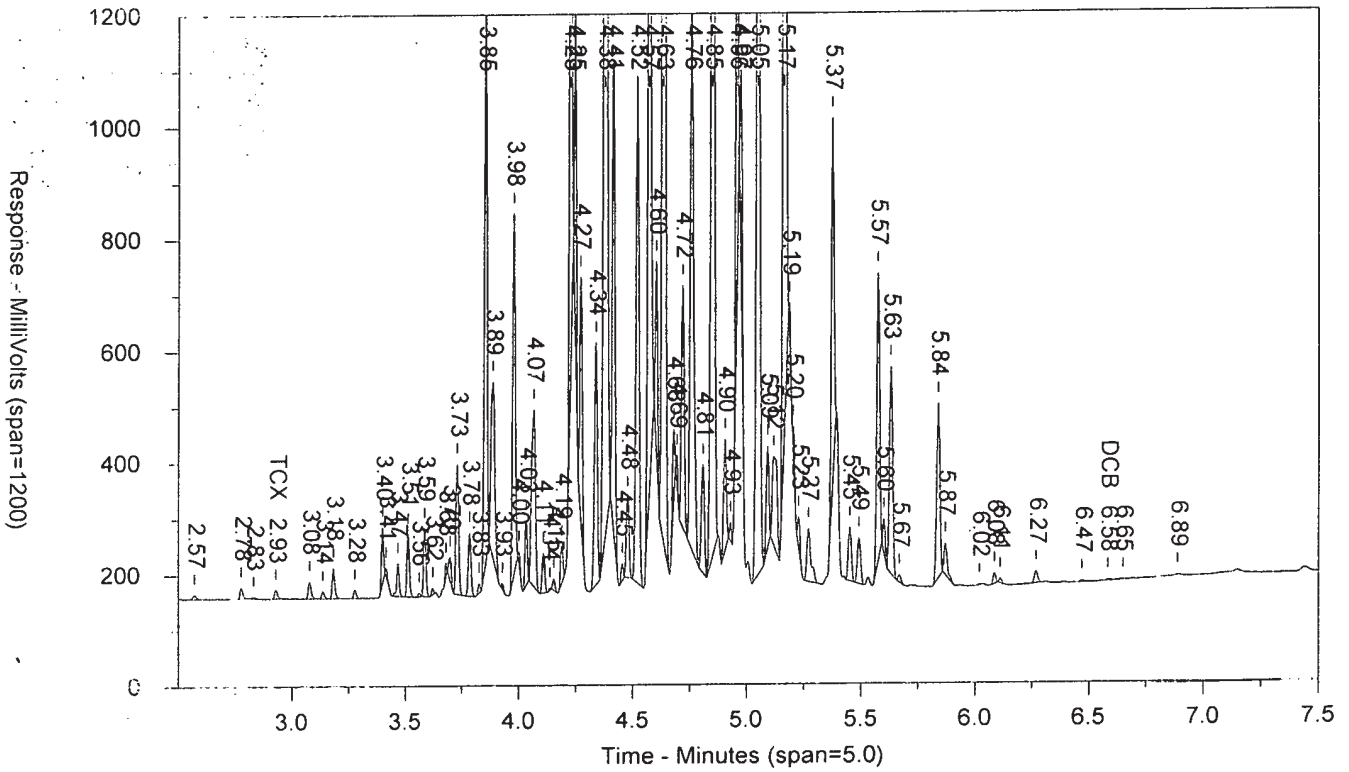
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ICAL 1830299999

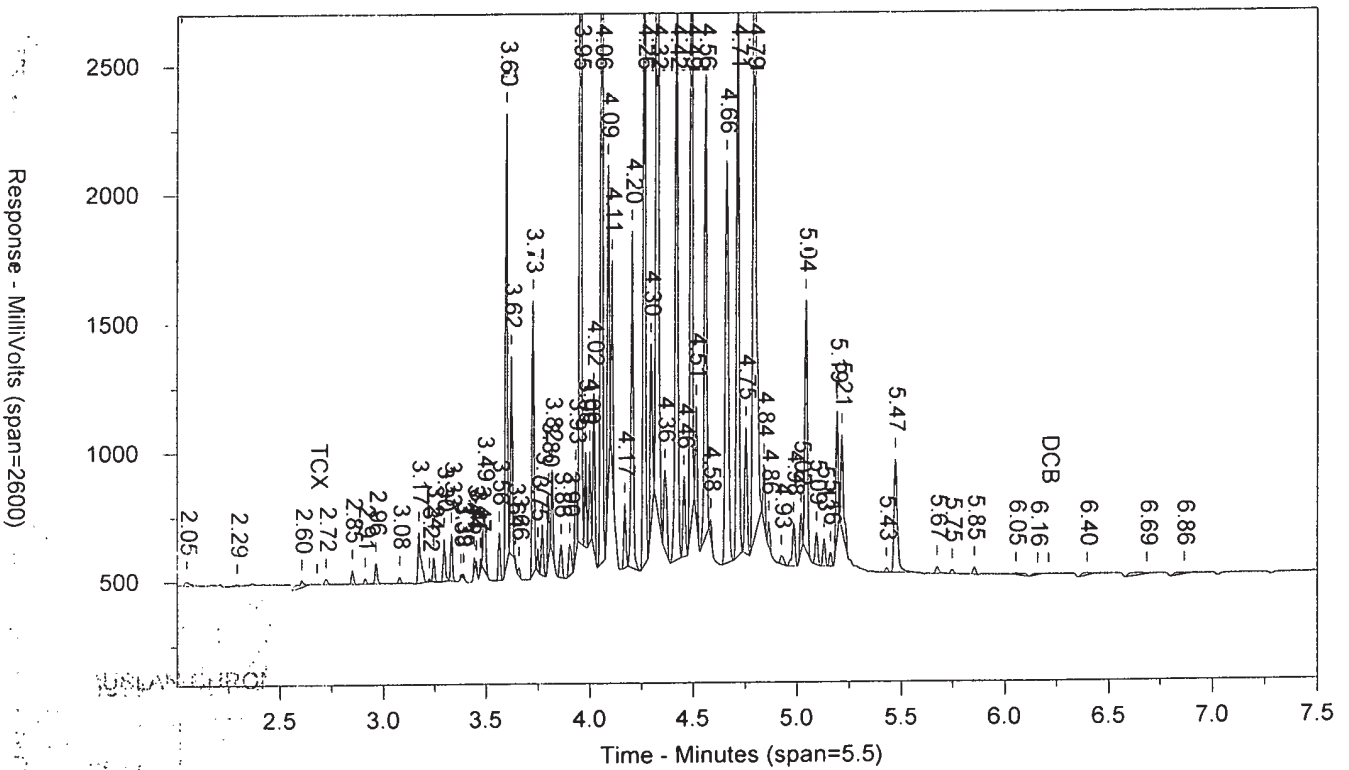
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5451824C AAAR545AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 9:07:59 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height
 Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	16045	.103	TCX		0		TCX
6.582	2478	.019	DCB		0		DCB

Files:
 Area File: 25pcbs18303001.023.RAW
 Area File: 25pcbs18303001B.023.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 9:16:31 PM
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Quantitation Type: External
 Quantitation: Height
 Threshold: 7
 Analyst: 9065

AR5451824C

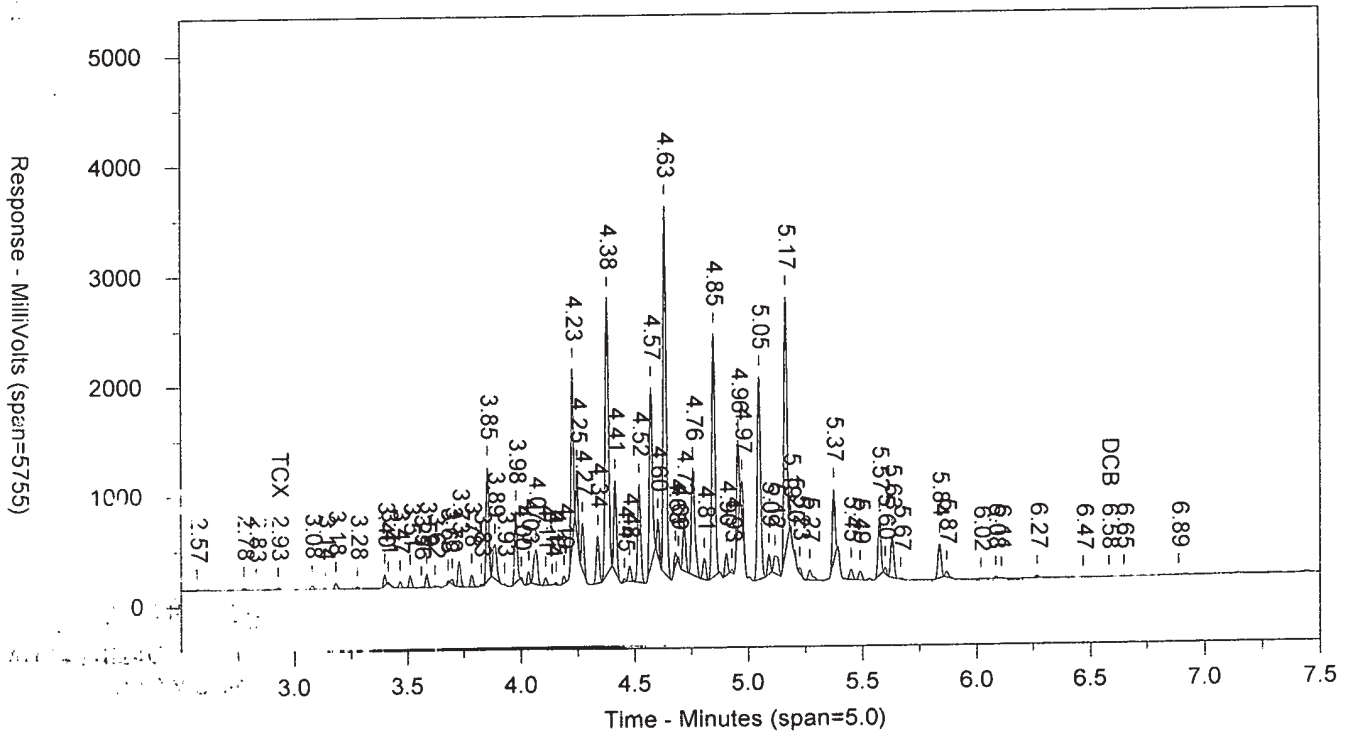
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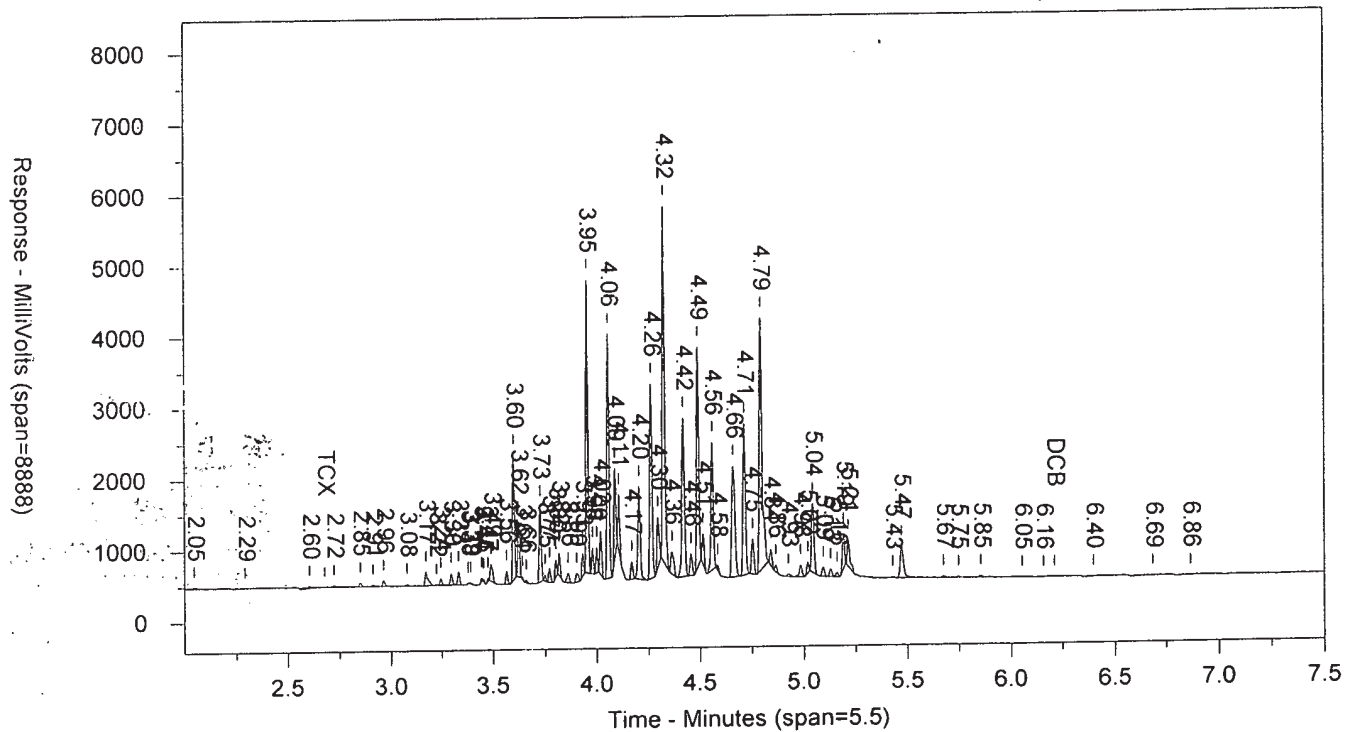
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SW-846 8082

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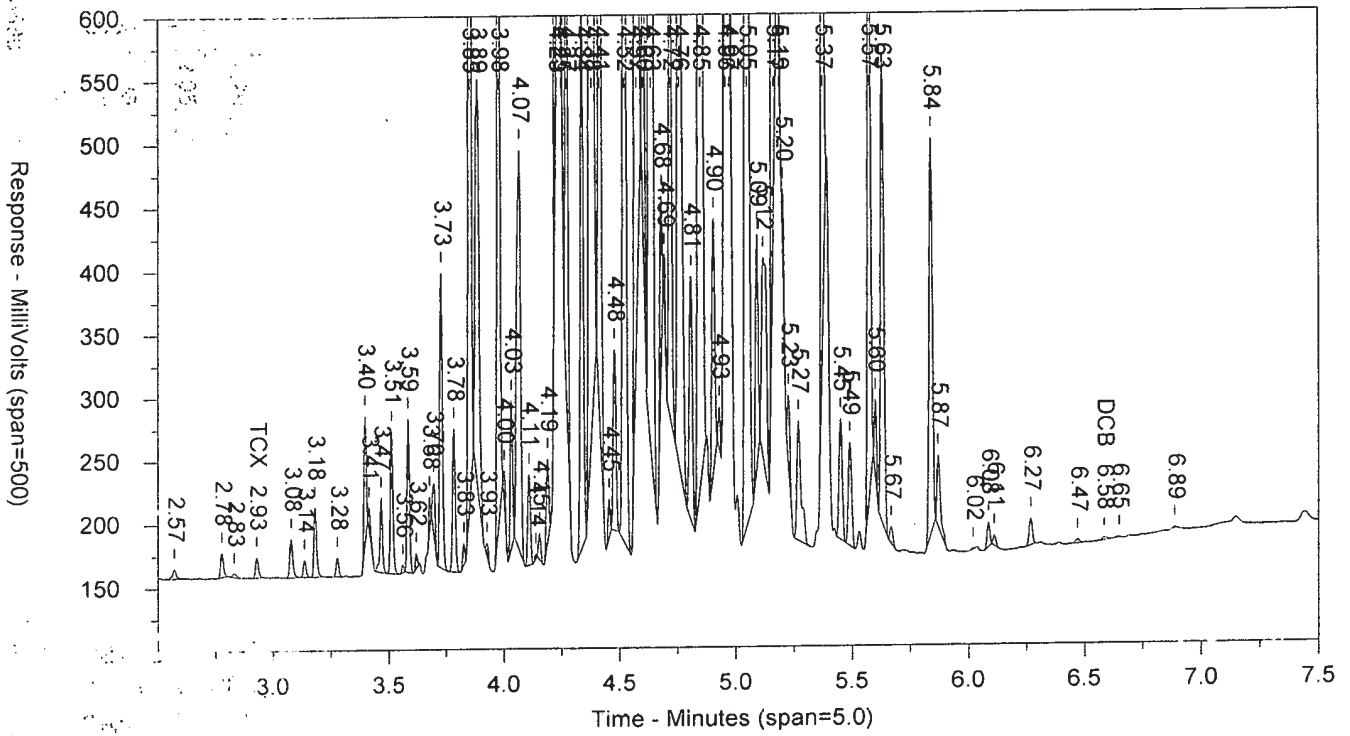
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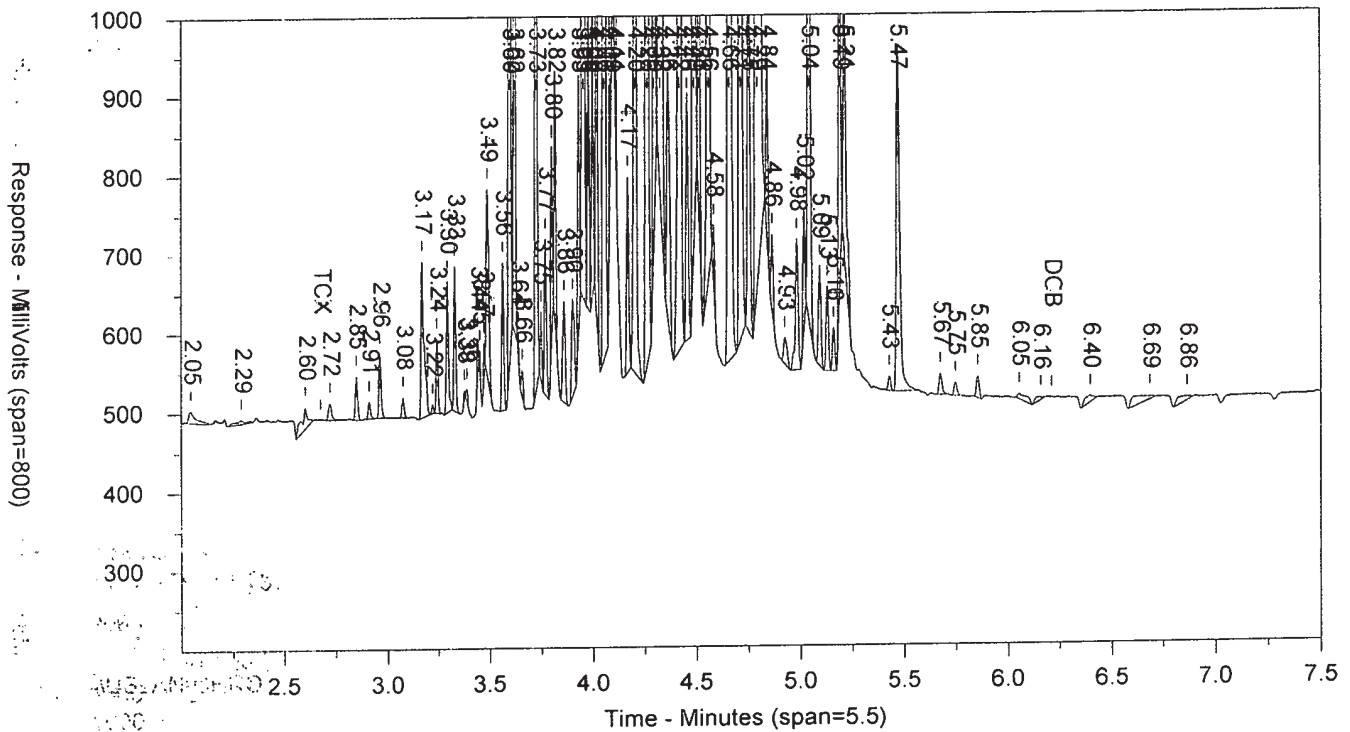
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5461824C AAAR546AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:18:51 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.024.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		7408	13388
2.233		2179	3238
2.311		9432	6658
2.376		1924	1798
2.423		3353	3007
2.497		4436	1784
2.571		12200	13310
2.776		36529	33301
2.833		5334	4064
2.928	TCX	32620	30003
3.078		59113	54244
3.136		26195	20839
3.182		104933	83894
3.278		31011	24657
3.313		1155	1012
3.397		180991	120809
3.414		32218	24721
3.452		3822	2113
3.467		105011	74214
3.512		212445	167744
3.563		13514	8203
3.587		230741	175467
3.623		24713	14147
3.636		6080	2697
3.681		46283	25795
3.699		80088	61907
3.73		444696	376395
3.785		212734	178824
3.828		36454	22797
3.854		2056594	1589986
3.885		603796	707240
3.928		10436	11606
3.978		1296770	1041157
4.002		51015	27578
4.034		201819	151466
4.067		645347	726678
4.109		139839	114025
4.138		8141	4508
4.154		41450	28956
4.19		121069	92722
4.228		3284526	2327146
4.247		1182900	707804
4.272		872893	662808
4.339		853431	763755
4.381		5324277	5254742
4.416		1673328	1344659
4.455		61431	39434
4.479		282815	232205
4.521		1806874	1651918
4.573		3420771	3053629
4.604		712272	478851
4.634		6760720	6168934
4.681		254408	193322
4.694		77836	44146

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.719		905508	751376
4.757		1991192	2053135
4.807		385505	354604
4.849		4608894	4510303
4.876		24661	12595
4.904		389319	331871
4.929		64788	36191
4.956		1518873	1167457
4.973		636038	405798
5.049		3927339	3813414
5.092		369825	292539
5.119		319560	478155
5.165		4977952	4420109
5.187		123540	60043
5.204		132287	73050
5.227		98120	69179
5.271		183168	226262
5.348		7498	5464
5.375		1247826	1080849
5.394		129818	68919
5.443		179701	170869
5.49		156417	155782
5.575		1024683	939665
5.6		101291	67052
5.631		736691	712075
5.669		25126	22363
5.715		3367	6142
5.838		1624278	598196
5.869		108703	105118
5.933		2460	2761
6.018		2412	1710
6.034		4460	3119
6.084		38530	33369
6.11		15859	12505
6.265		45246	43998
6.313		2915	2804
6.467		6263	5980
6.58		9233	13362
6.69		2048	1872
6.89		1205	1360

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR5461824C AAAR546AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:18:51 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.024.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		14693	35639
2.363		11505	16652
2.603		59523	192864
2.722		43141	47924
2.85		102639	77722
2.912		42510	31913
2.964		163347	113987
3.076		49762	37163
3.172		361933	383690
3.223		23406	13268
3.245		180580	115616
3.269		5337	2583
3.296		318563	230584
3.331		362699	230716
3.377		37112	19946
3.39		14938	7993
3.442		88806	42582
3.452		50186	20759
3.473		84677	39924
3.488		454611	386919
3.503		348565	235004
3.597		3635007	2188417
3.621		1500162	919614
3.638		64116	22115
3.657		63312	40138
3.725		2174332	1438263
3.748		175293	87812
3.77		365803	251459
3.801		469088	253578
3.817		632379	355966
3.861		254391	210710
3.902		231633	226238
3.932		625924	369407
3.954		8346918	5636610
3.979		773893	425754
3.999		704201	396583
4.019		1228260	769302
4.056		7010777	4964528
4.088		2643298	1644492
4.107		1588901	887118
4.168		479814	346797
4.204		2646371	2049279
4.263		5791161	4324584
4.296		1507193	1117029
4.324		10187390	7881136
4.363		621292	622078
4.418		4602355	3979191
4.455		639310	492301
4.469		6682550	4784914
4.513		824623	560211
4.558		3836338	2940892
4.583		147074	89335
4.66		3317469	3455392
4.713		4778186	3815753

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.754		975237	855110
4.794		7595699	7298322
4.841		460311	303362
4.865		192130	131132
4.926		72379	78827
4.984		329956	308391
5.019		293980	208753
5.043		2082079	1685111
5.093		251061	213599
5.13		207527	172328
5.16		115450	91032
5.192		1055183	772440
5.214		758857	647696
5.429		35513	29801
5.471		891708	996034
5.674		54381	57517
5.747		35491	33362
5.853		53365	48039
6.052		9005	14592
6.15		3188	7374
6.392		7423	17231
6.626		6388	24863
6.86		6242	31651

AR5461824C

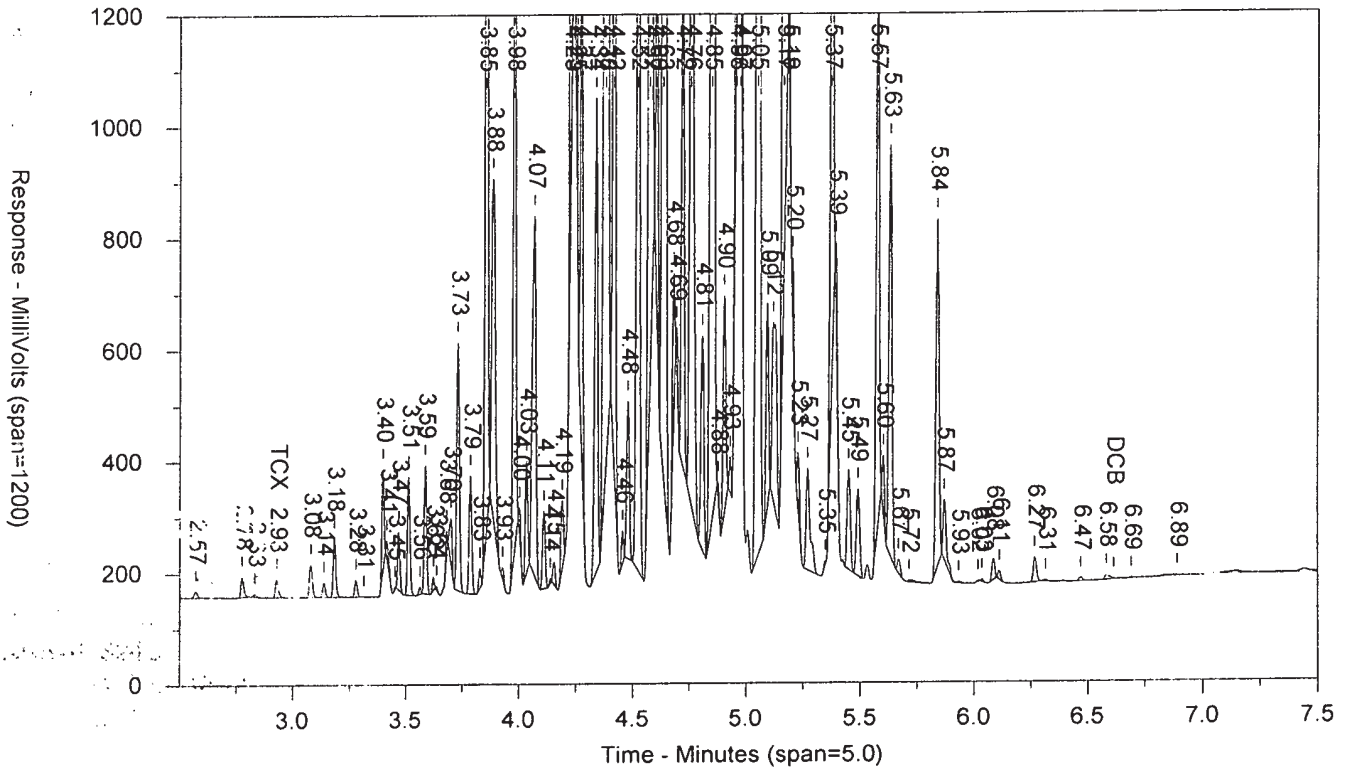
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ICAL 1830299999

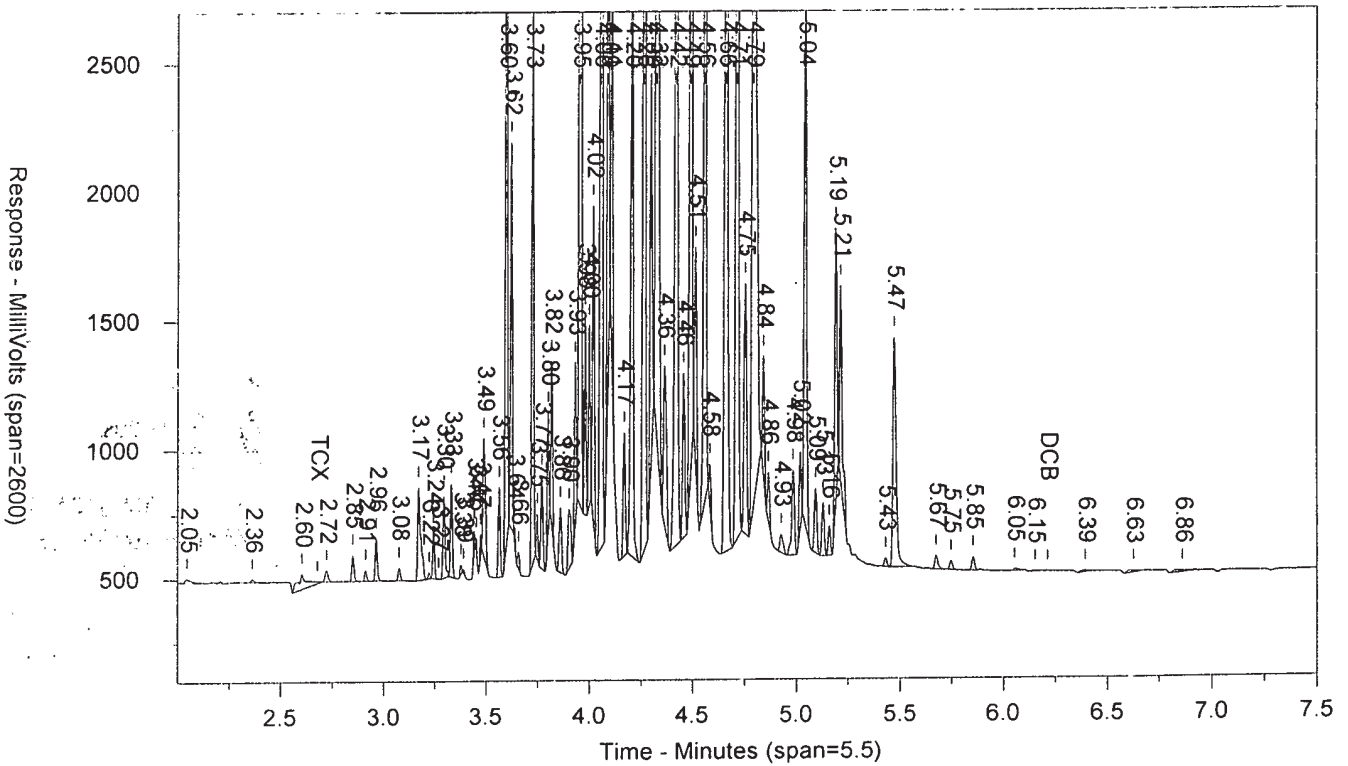
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR5461824C AAAR546AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 9:18:51 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: .1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	32620	.21	TCX		0		TCX

Files:
 Area File: 25pcbs18303001.024.RAW
 Area File: 25pcbs18303001B.024.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 9:27:23 PM
 File Reported On: 10/30/2018 at 9:27:31 PM

Report generated by
 Chrom Perfect
 Version 1.0.0.0

Chrom Perfect
 Version 1.0.0.0
 Report generated by
 Chrom Perfect
 Version 1.0.0.0

AR5461824C

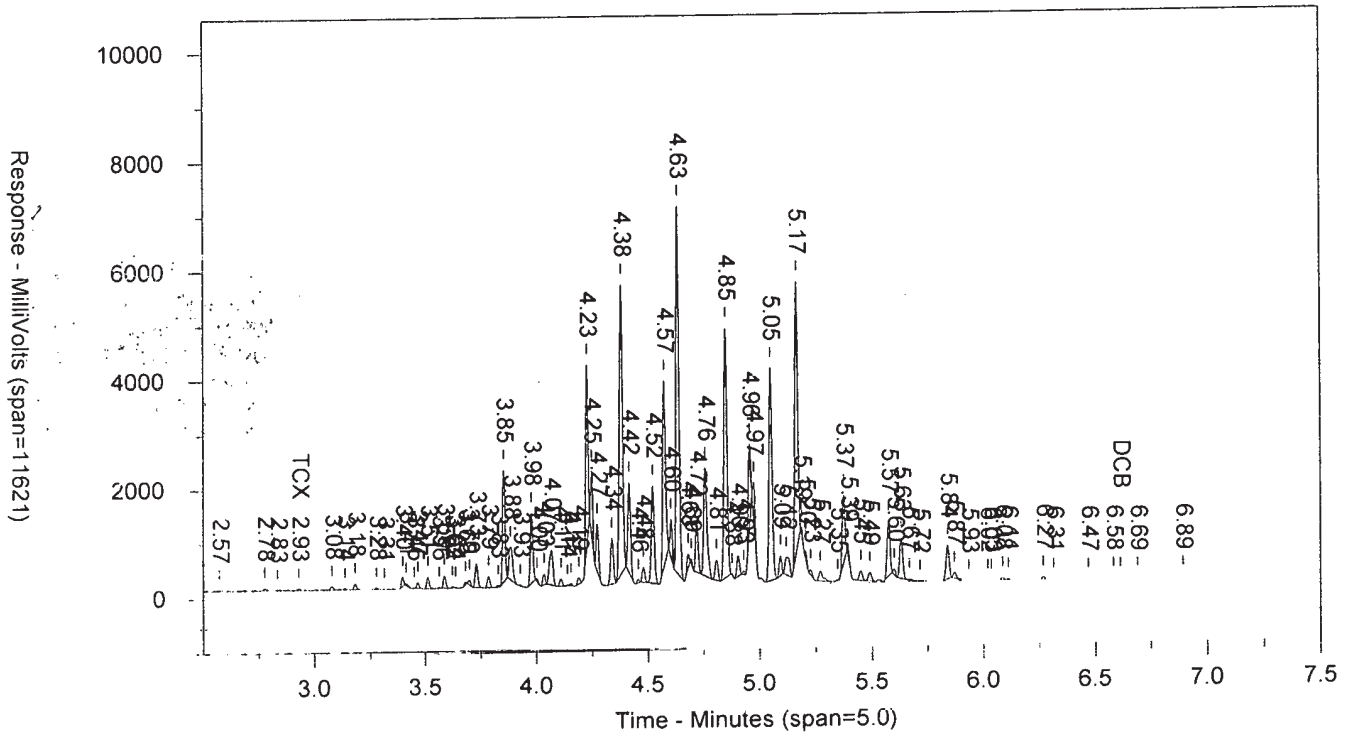
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ICAL 1830299999

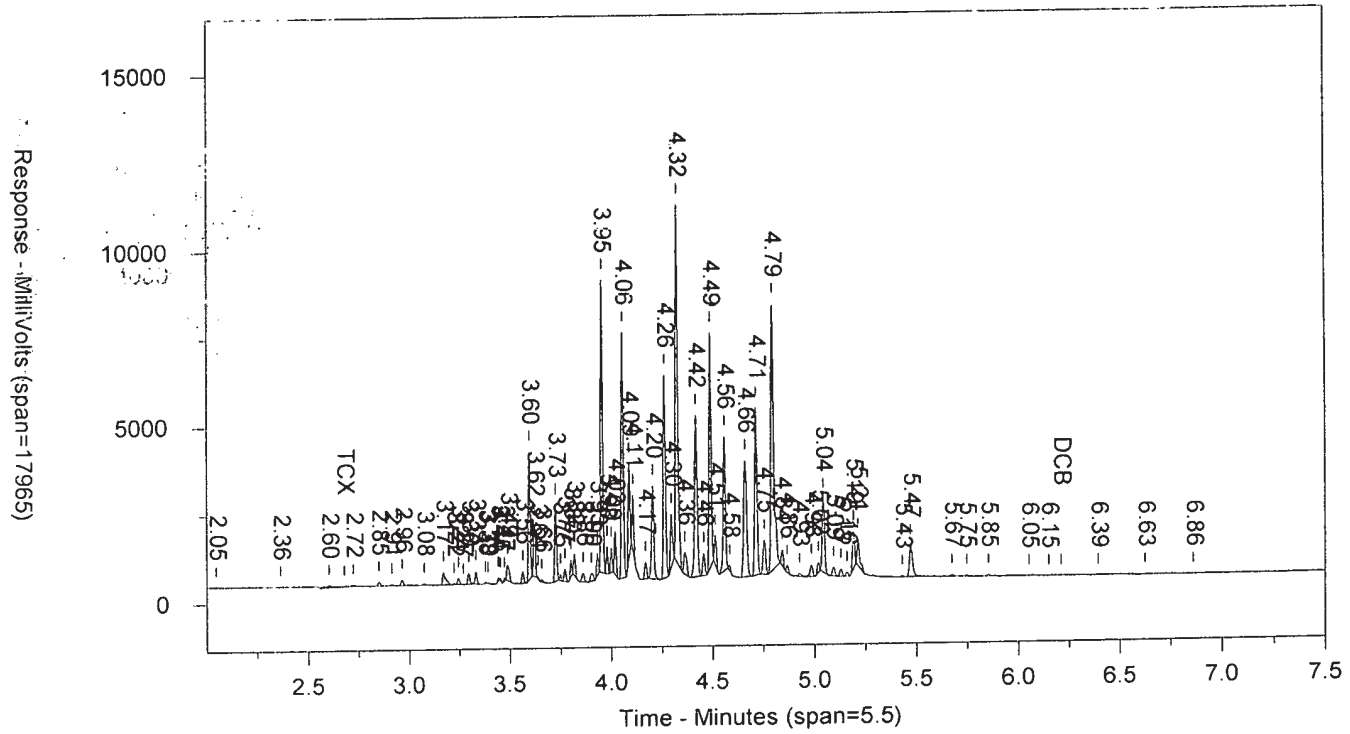
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SW-846 8082

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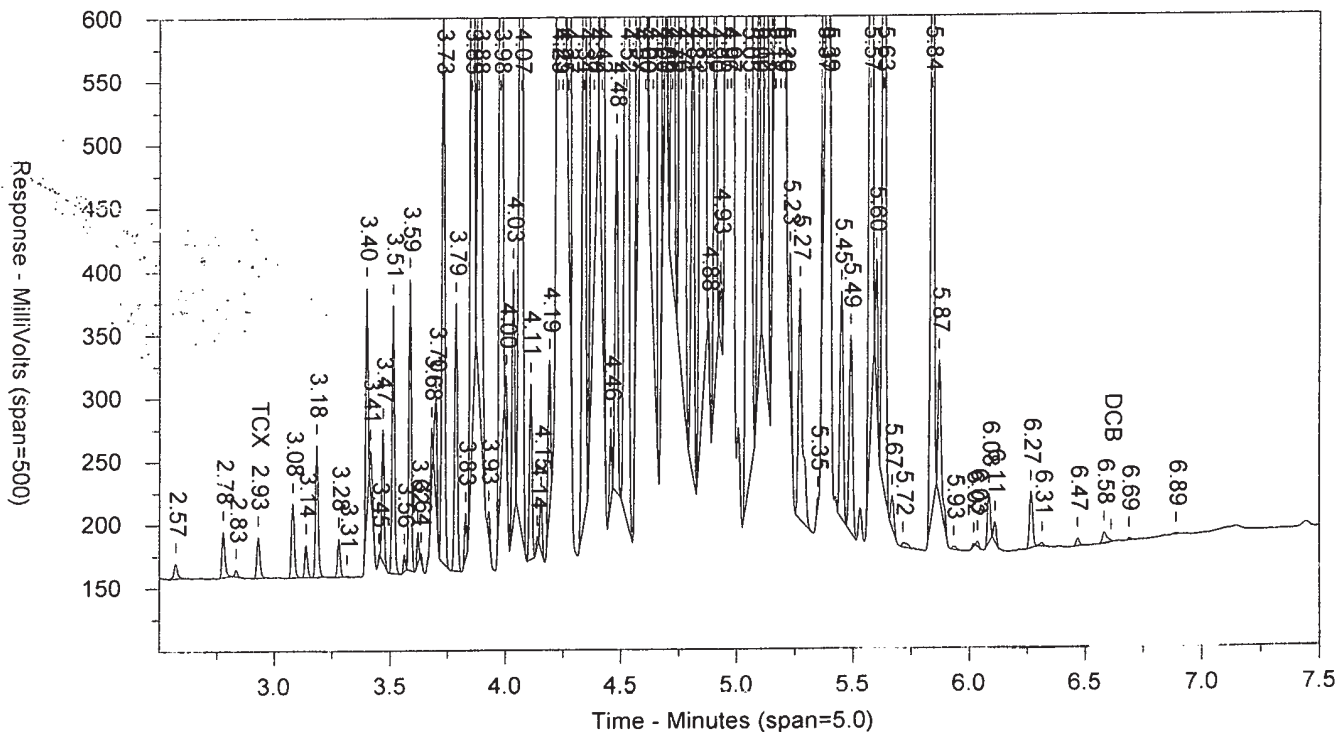
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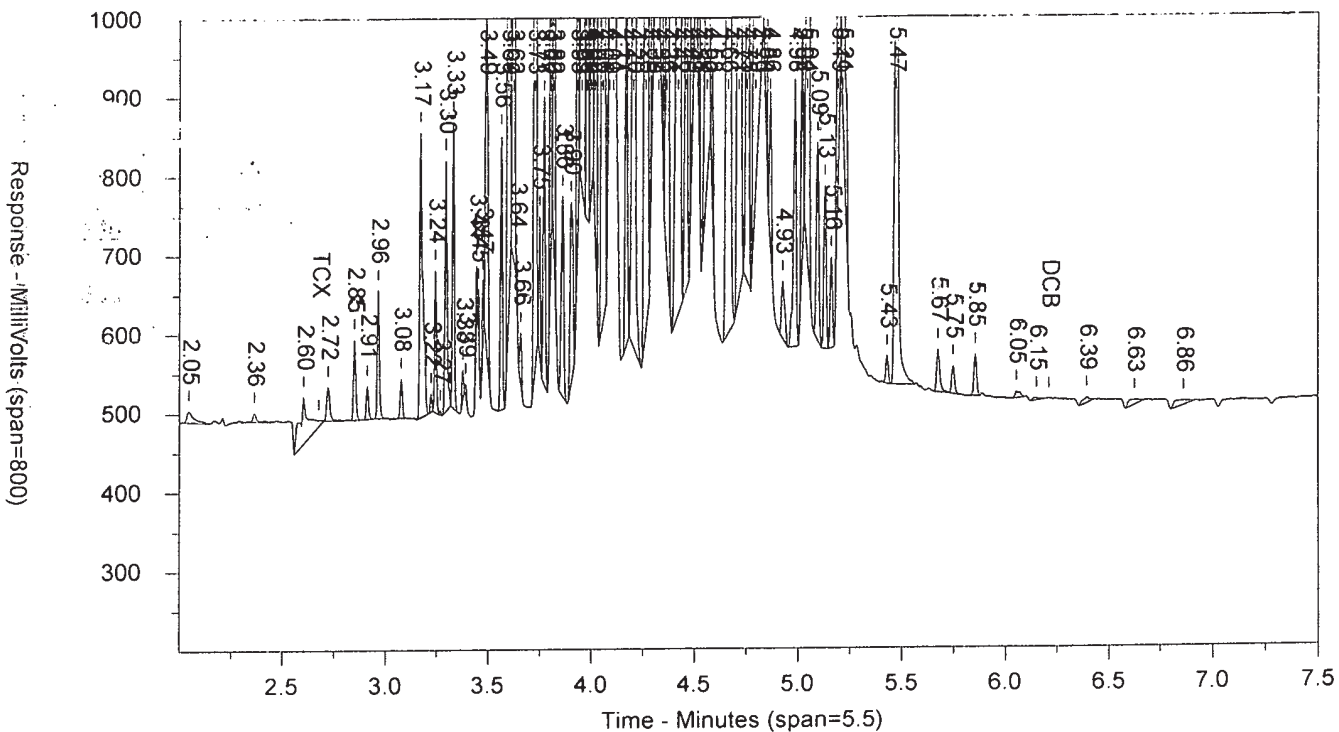
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR0241824B AAAR624AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 9:29:54 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.025.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		8244	14206
2.233		2582	3348
2.312		15206	10836
2.376		2243	2582
2.424		4198	3829
2.493		1718	2056
2.571		6133	6436
2.737		818	537
2.776		34801	32437
2.833		4364	3656
2.928	TCX	3696	3382
3.078		5196	4668
3.136		3335	2750
3.164		20003	16762
3.278		6517	5535
3.398		20957	12730
3.415		6420	3517
3.452		1100	650
3.469		5423	3375
3.495		22726	1371
3.514		32571	24042
3.589		18065	13505
3.624		3352	1952
3.669		2888	1852
3.684		3682	2183
3.694		14692	8982
3.732		39953	31786
3.788		40440	34944
3.831		3998	2738
3.857		36687	27333
3.892		76966	67070
3.921		5371	5790
3.981		28337	20677
4.005		4319	2586
4.035		7864	5301
4.062		39593	48905
4.112		9085	7277
4.141		1962	1393
4.159		1915	1757
4.192		29264	19871
4.223		140782	130538
4.249		21189	11268
4.274		19744	14737
4.34		17688	16047
4.383		196001	196481
4.417		21754	16345
4.477		13605	12911
4.519		149316	155846
4.591		135213	191360
4.636		108208	96069
4.682		434565	470045
4.72		81340	58725
4.759		738465	722299
4.801		45666	40909

Chrom Perfect Chromatogram Report

P.T. A	Compound A	Height A	Area A
4.849		79021	84722
4.881		22269	15650
4.906		88312	80967
4.959		864124	983044
5.009		380901	367922
5.052		377268	483653
5.131		41028	42053
5.165		727963	785616
5.207		7806	3838
5.23		1164675	1163316
5.273		509487	509467
5.368		181130	135849
5.395		938190	998675
5.452		455289	768269
5.534		53554	53594
5.576		188288	192155
5.633		2718715	2846648
5.837		1573352	1678339
5.892		853867	1328349
6.024		86609	88929
6.09		22810	16790
6.111		359825	347637
6.269		1051633	1090672
6.314		55428	54889
6.469		401026	438776
6.584		2119	2058
6.612	DCB	9769	9131
6.695		1936	1633
6.835		991	953
6.888		755	373

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR6241824B AAAR624AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:29:54 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.025.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.045		15988	37252
2.603		41592	76115
2.963		31460	21990
3.075		9711	7039
3.171		29625	15685
3.222		3966	2016
3.244		19662	13257
3.296		49714	37094
3.332		28121	18842
3.39		20812	23024
3.443		15156	6537
3.453		23859	11055
3.474		6109	2350
3.489		36049	33394
3.565		64508	44043
3.599		56803	36188
3.624		127471	82298
3.657		17345	12419
3.727		50891	34901
3.75		10638	5515
3.772		21108	14298
3.803		51865	30817
3.862		19360	16581
3.909		63288	68905
3.955		277083	242562
3.981		20083	11091
4.001		11618	6370
4.021		26615	16552
4.057		262157	192213
4.091		39152	24806
4.109		44126	25969
4.177		11843	8883
4.196		167290	162100
4.24		9507	5795
4.264		73844	55011
4.307		153331	107142
4.339		625909	510116
4.367		164424	170536
4.419		1122709	911385
4.461		68495	53814
4.49		65010	44588
4.516		151400	104627
4.56		1231751	1004703
4.665		1140231	1083646
4.719		218363	185643
4.759		338750	289881
4.795		714246	630126
4.828		1556104	1318008
4.867		691185	567285
4.969		342866	302164
5.021		1611131	1498616
5.095		667748	669796
5.131		199633	156870
5.16		185731	152099

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.216		3273690	2923518
5.257		31561	20402
5.289		209750	181793
5.407		46437	30249
5.429		1325530	1161049
5.478		2216939	2484833
5.63		113328	100211
5.674		15365	10409
5.698		70733	59188
5.747		512055	517163
5.854		1310334	1176970
5.887		57197	40650
6.054		556066	562785
6.213	DCB	15657	13672
6.707		10177	107635
6.843		6065	21315

AR6241824B

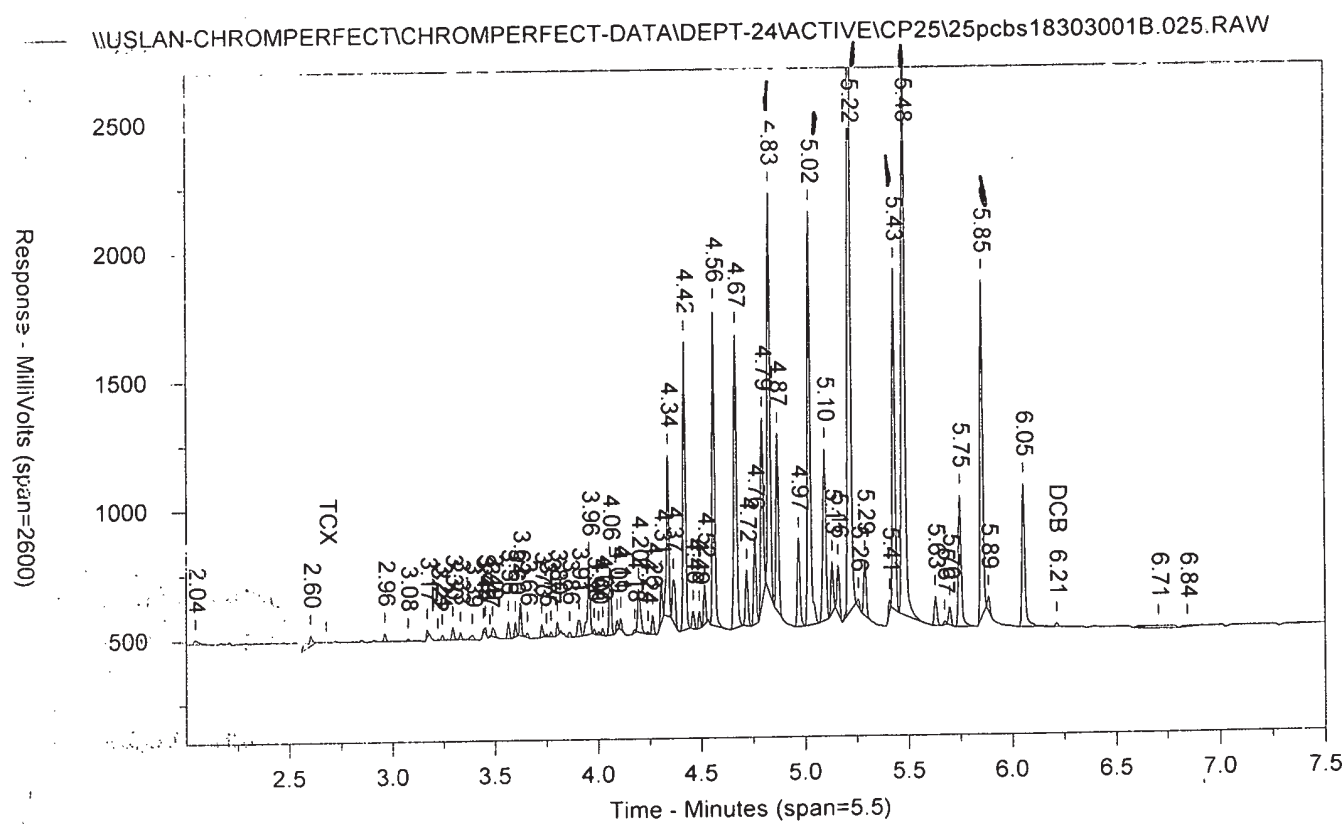
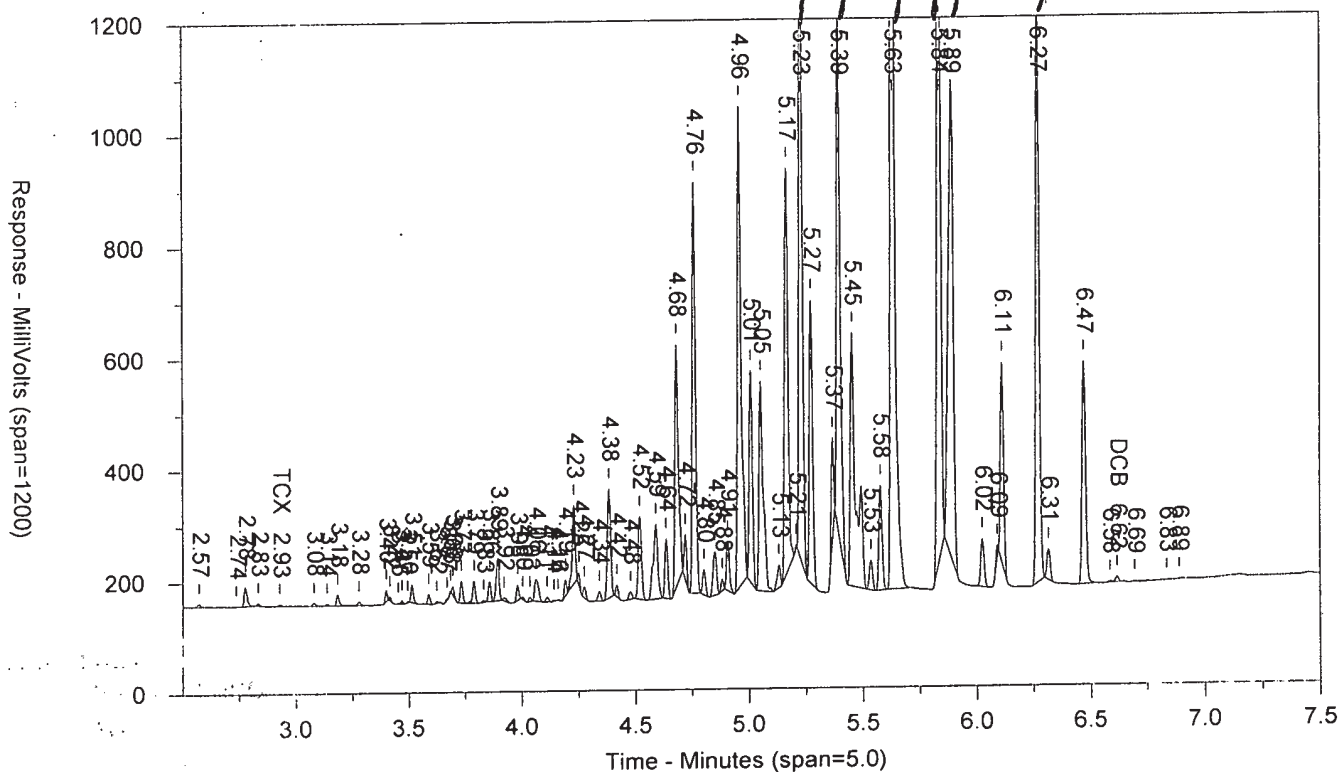
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ICAL 1830299999

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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR6241824B AAAR624AA ICAL 1830299999 10227
Injected On: 10/30/2018 9:29:54 PM
Instrument ID: CP25-18274
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

SW-846 8082
Sample Weight: 1
Dilution Factor: 1

Threshold: 7
Calibration Type: external
Quantitation: Height

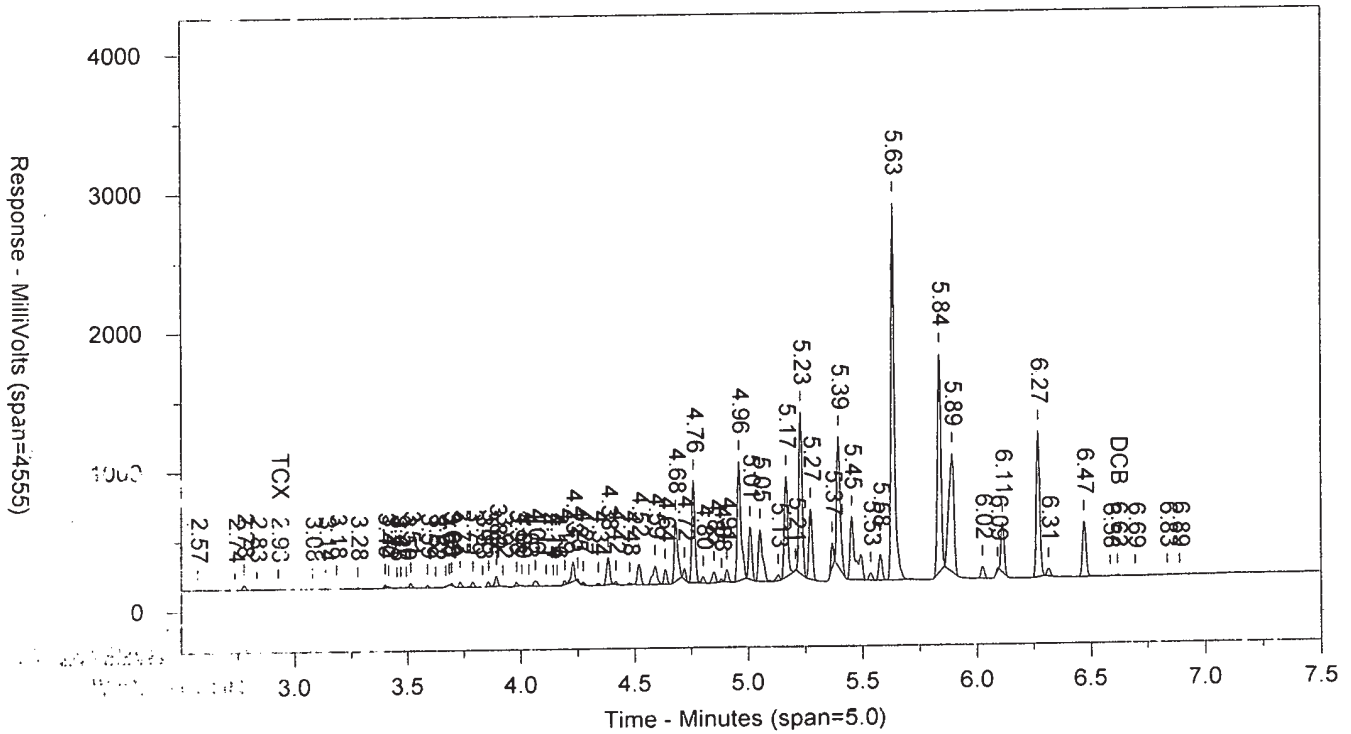
Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	3696	.024	TCX		0		TCX
6.616	9769	.076	DCB	6.213	15657	.083	DCB

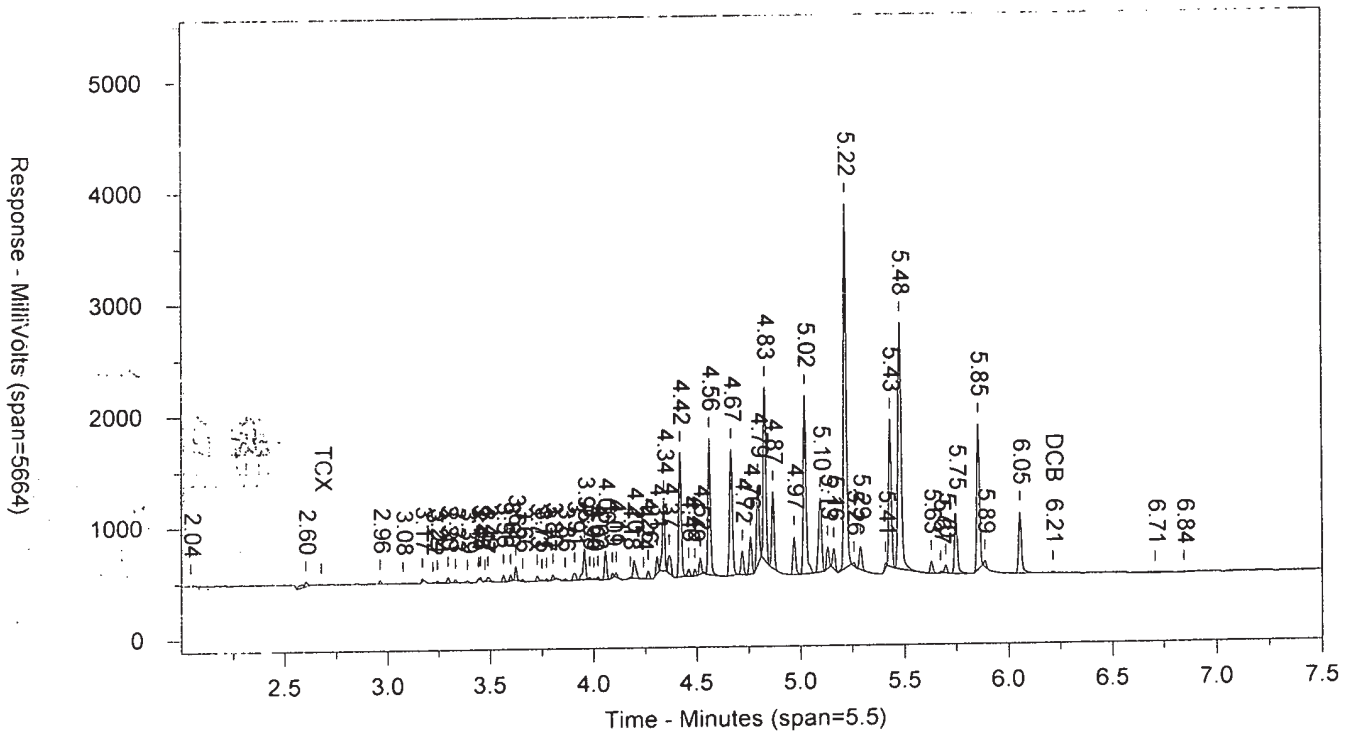
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Area File: 25pcbs18303001B.025.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
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AR6241824B AAAR624AA ICAL 1830299999 10227 SW-846 8082

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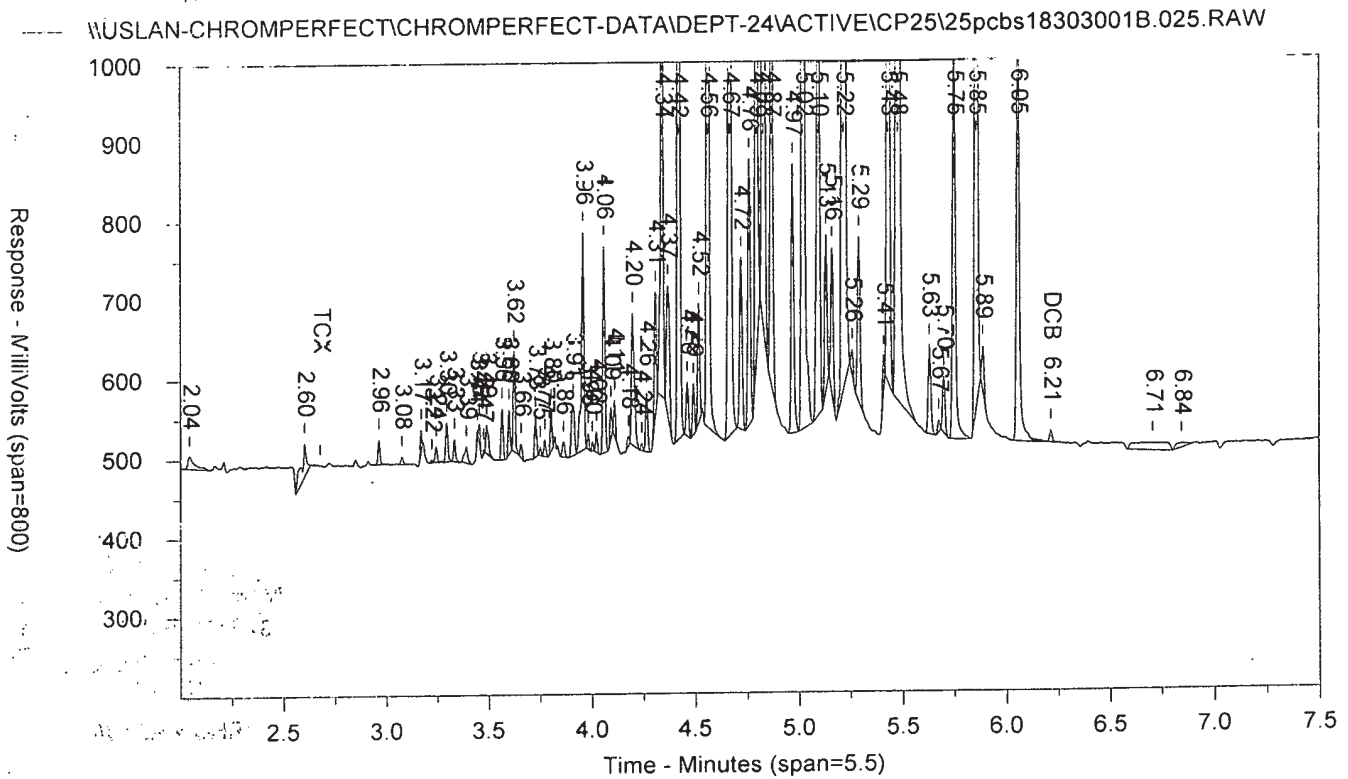
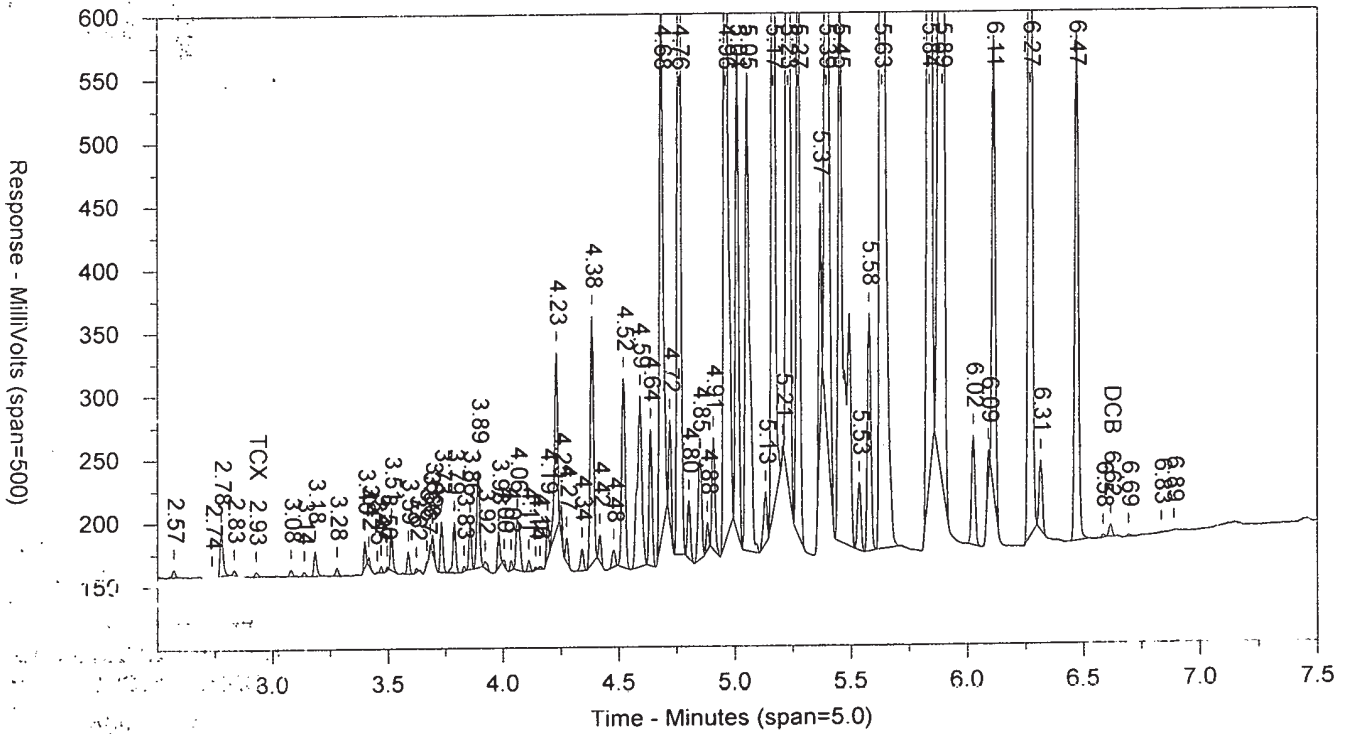
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ICAL 1830299999

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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR6841824B AAAR684AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:40:30 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.026.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		8426	14892
2.229		2204	2850
2.31		12271	8806
2.377		2209	2600
2.494		1590	1791
2.569		4177	4004
2.775		35630	32840
2.833		1680	1349
2.926	TCX	1195	888
3.076		1320	1081
3.181		6806	5816
3.277		2880	2225
3.395		4714	2907
3.465		2743	1851
3.493		1377	706
3.511		12877	9845
3.585		5584	4187
3.619		935	520
3.664		4145	2491
3.689		5836	6110
3.729		16272	13520
3.783		13457	10701
3.827		4041	2976
3.853		7213	5318
3.888		13308	12574
3.918		5518	6659
3.976		7804	5626
4.031		2336	1360
4.058		2986	1883
4.107		17082	22527
4.135		8649	7059
4.188		889	672
4.208		5991	3642
4.246		34951	41495
4.269		17268	12019
4.33		10111	7264
4.376		1407	1685
4.471		23954	21537
4.514		13447	13021
4.57		98132	95454
4.633		31449	38031
4.678		7395	6967
4.717		9543	9406
4.755		14727	12508
4.796		26245	23553
4.84		61910	57277
4.877		19392	19716
4.92		109356	102222
4.954		6153	5689
4.972		8069	6041
5.005		5644	3555
5.047		69105	67206
5.118		14899	25937
		43362	41654

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
5.159		25421	24817
5.204		12096	8763
5.226		514948	489458
5.269		46770	43459
5.364		40243	31922
5.404		719952	818392
5.47		206915	235972
5.529		52720	53804
5.573		7052	6257
5.629		243710	196136
5.649		130018	93350
5.831		3533167	3580792
5.89		3199968	3549904
6.02		2938375	3085443
6.086		737580	876010
6.264		1261203	1325598
6.308		5340	4193
6.34		4810	4642
6.464		10177340	10632640
6.611	DCB	1917197	2113110
6.688		6160	5791
6.926		5651	6372

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR6841824B AAAR684AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:40:30 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.026.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

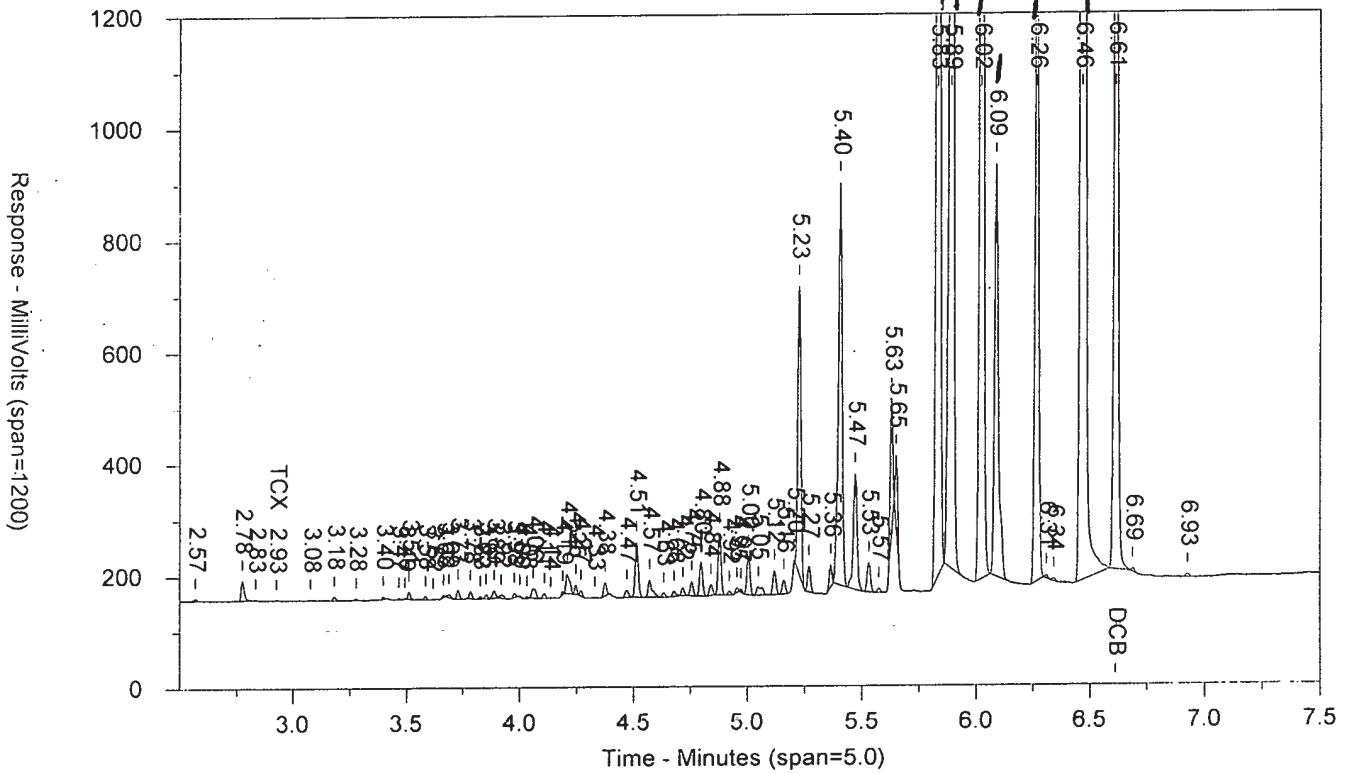
RT B	Compound B	Height B	Area B
2.049		15768	37261
2.604		43734	113261
2.963		11089	8966
3.078		5198	3486
3.171		6424	3534
3.244		7925	5073
3.296		22578	17090
3.331		7612	4187
3.388		11270	7070
3.417		4932	2501
3.495		17971	21028
3.563		24409	16834
3.596		11311	7601
3.621		25022	14468
3.655		13133	10483
3.725		17815	12129
3.748		5627	2910
3.768		13168	9151
3.801		23019	13701
3.867		14821	11263
3.908		60019	46652
3.938		24553	15694
3.955		32635	20263
3.979		17036	9905
4.055		7472	5200
4.091		10264	5898
4.105		18275	14279
4.174		12134	6985
4.193		122038	96068
4.238		36879	25186
4.305		11734	9123
4.337		14986	15213
4.369		6440	6709
4.418		56734	52534
4.458		87473	69404
4.487		8299	4818
4.51		15625	9125
4.532		141993	105551
4.661		125043	118032
4.715		30775	28206
4.764		72274	71164
4.793		15015	11443
4.824		730394	682037
4.864		56464	41509
4.966		66950	59773
5.016		1066981	1025718
5.083		292530	281787
5.143		7260	6159
5.164		49199	39761
5.212		435482	400714
5.286		319808	296189
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5.627		4160612	3688537

Chrom Perfect Chromatogram Report

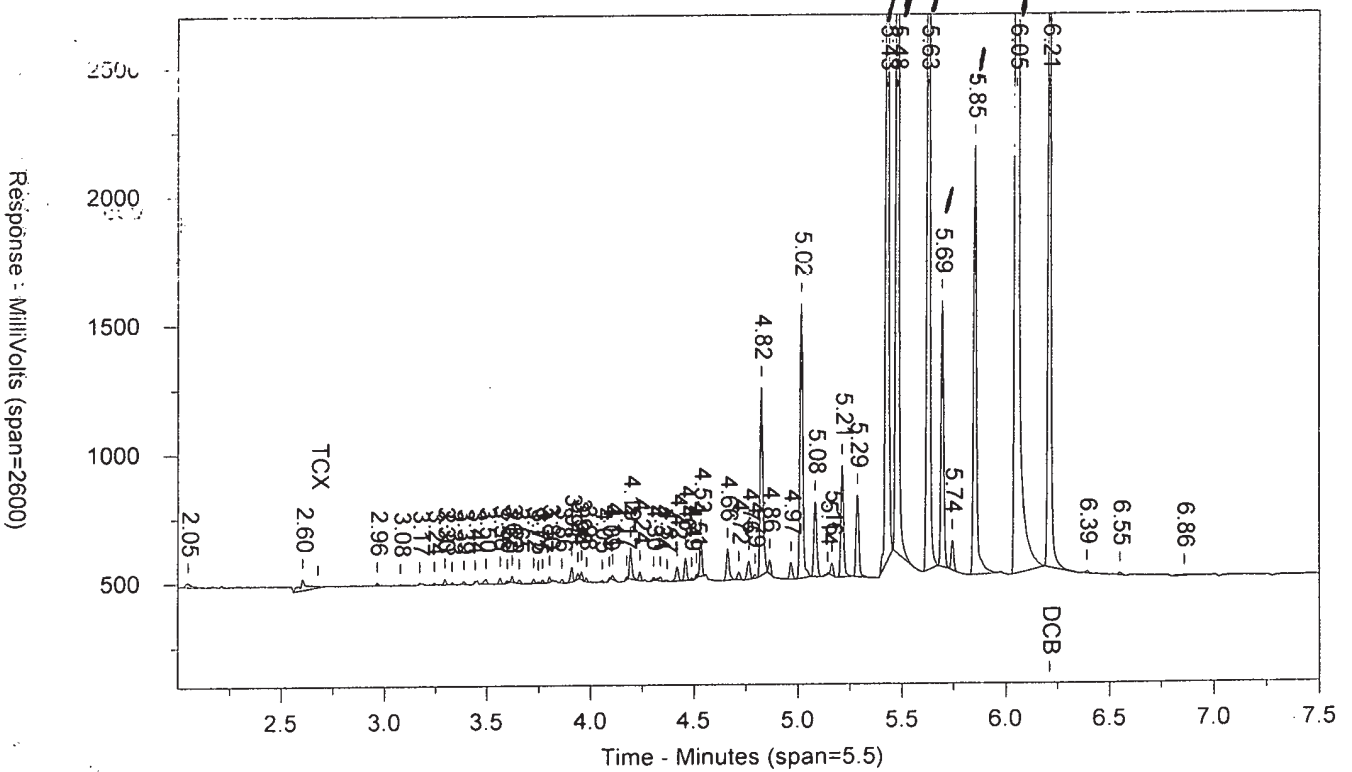
RT B	Compound B	Height B	Area B
5.695		1035941	903498
5.744		116906	100396
5.851		1670071	1651434
6.051		15195680	13697890
6.21	DCB	2886474	2735162
6.39		9585	9238
6.549		9634	11677
6.858		3831	14731

AR6841824B AAR684AA ICAL 1830299999 10227 SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR6841824B AAAR684AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 9:40:30 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.926	1195	008	TCX		0		TCX
6.611	1917197	14.939	DCB	6.21	2886474	15.373	DCB

Files:
 Area File: 25pcbs18303001.026.RAW
 Area File: 25pcbs18303001B.026.RAW
 Method A: 25PCBS.ME1
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
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AR6841824B

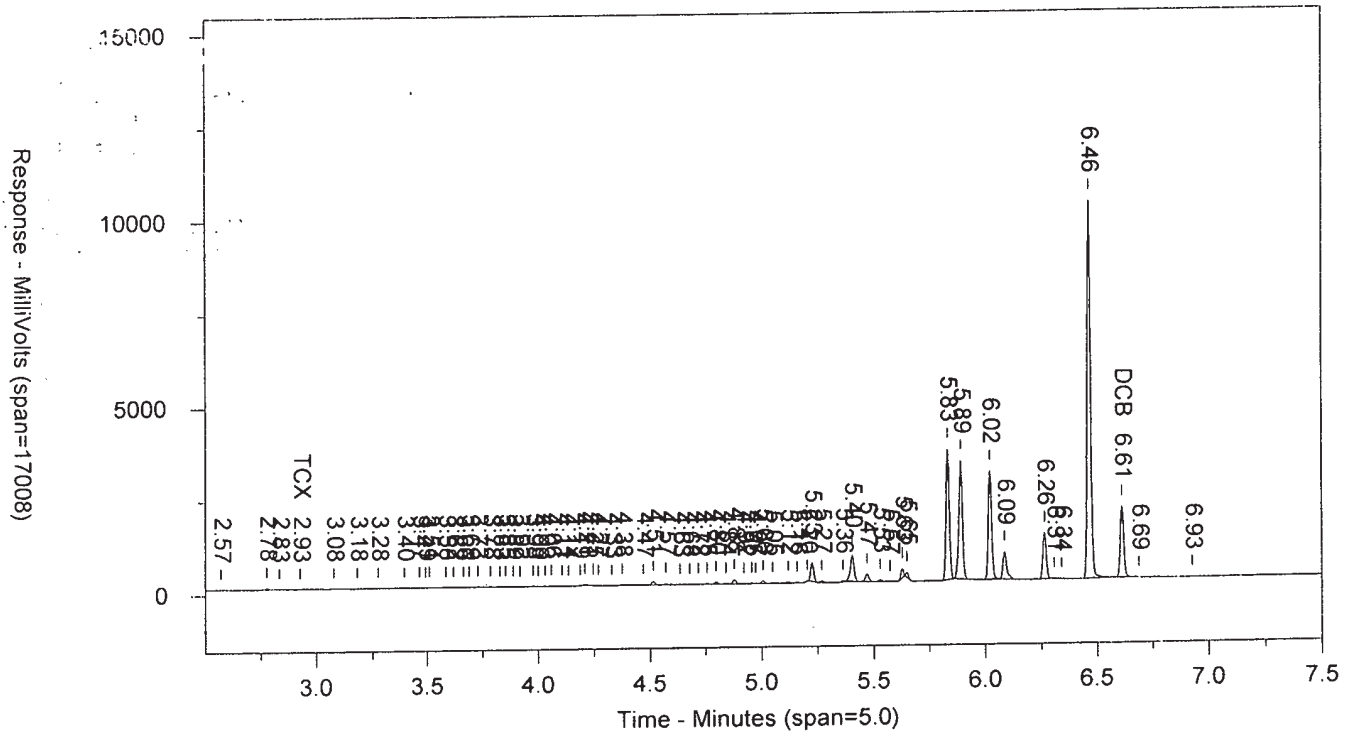
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ICAL 1830299999

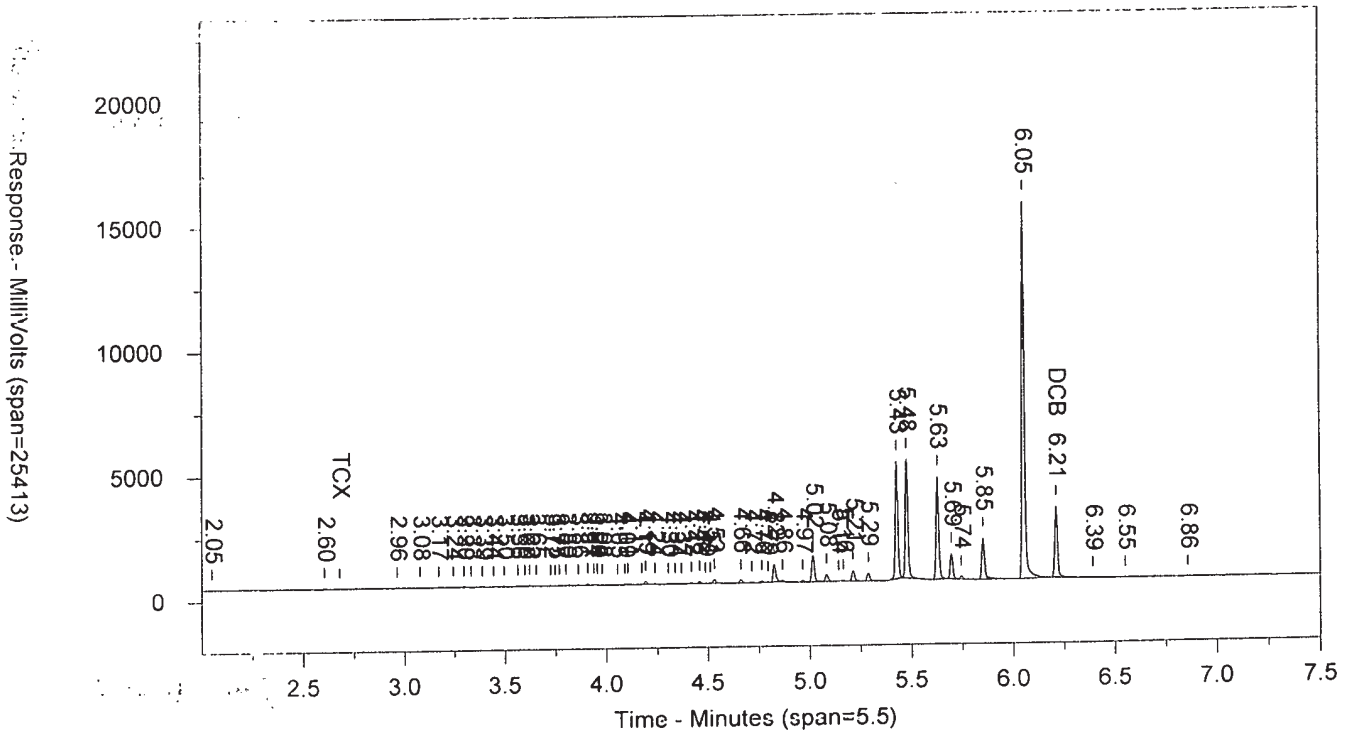
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SW-846 8082

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AR6841824B

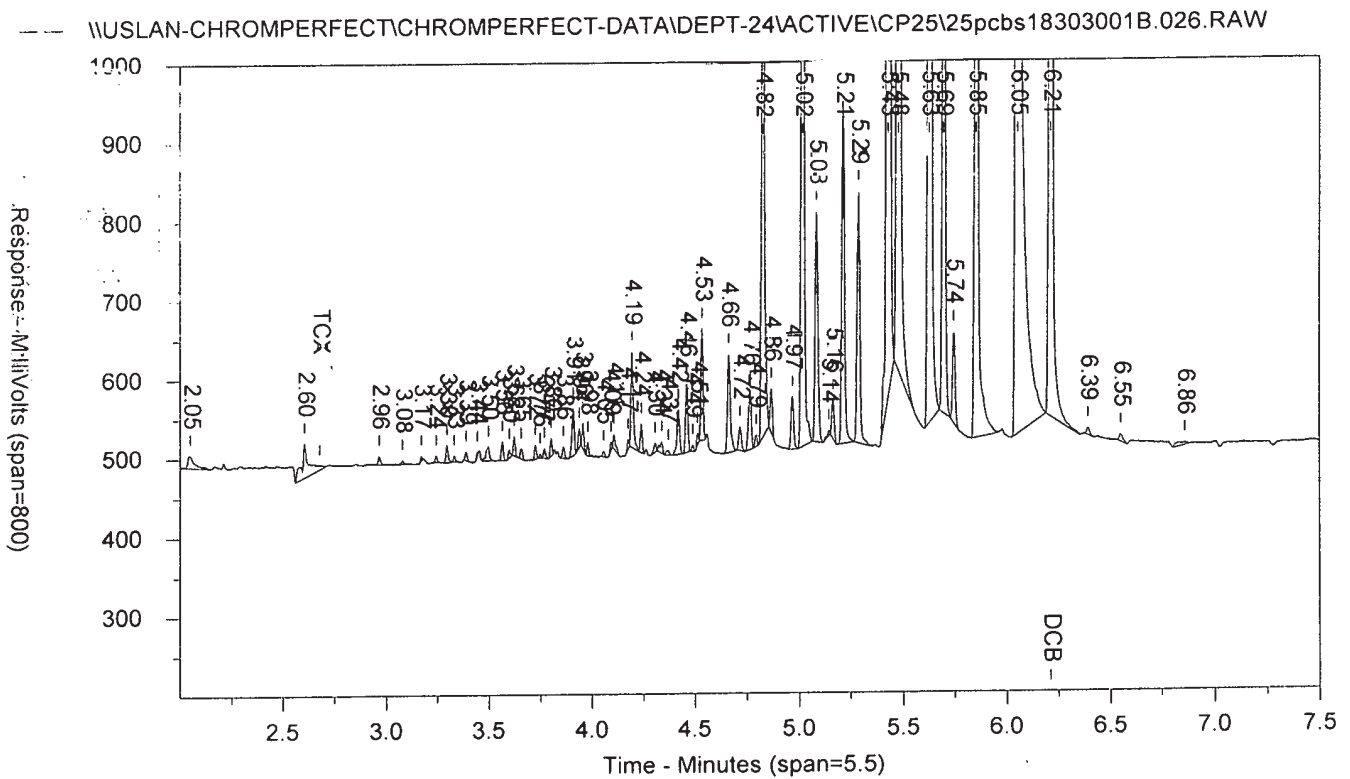
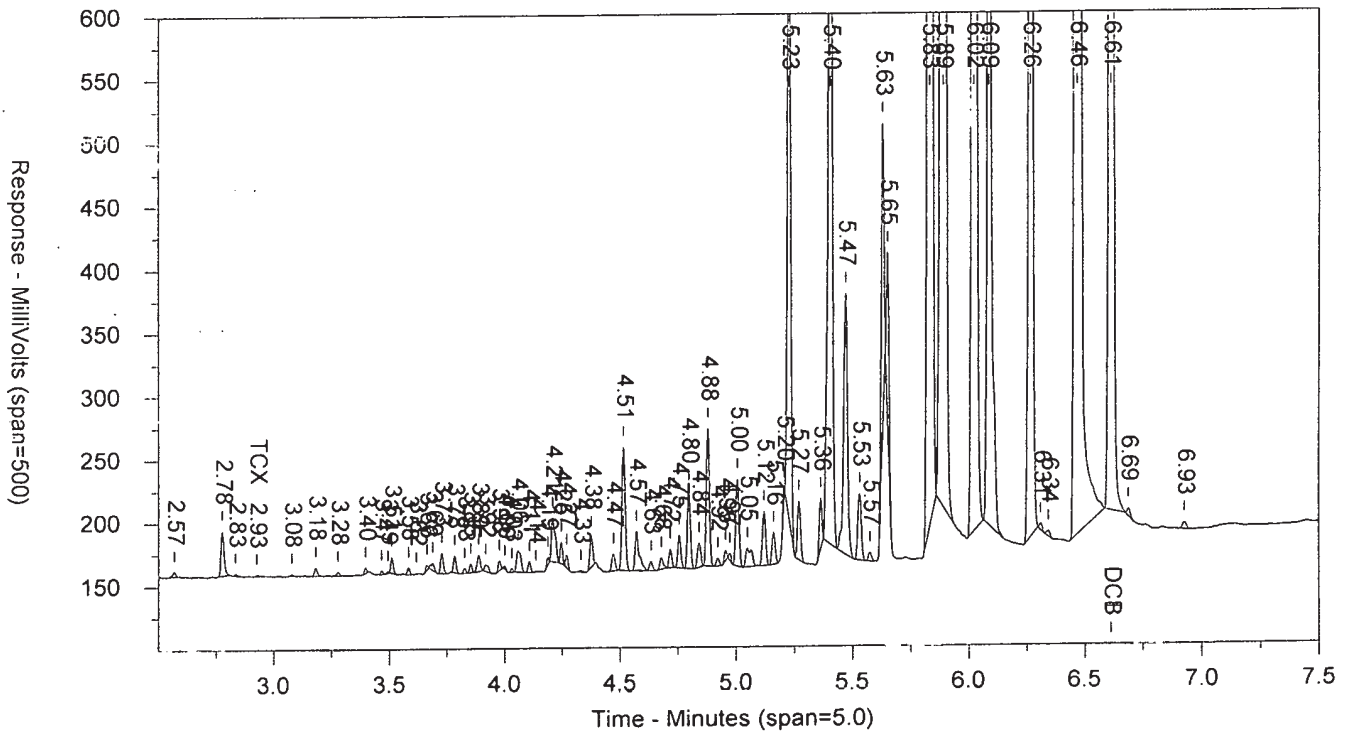
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ICAL 1830299999

10227

SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR2141824E AAAR214AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 9:51:07 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.027.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		8389	15799
2.228		2709	3659
2.31		10402	7331
2.378		2275	2669
2.422		1436	1017
2.493		1401	972
2.565		214224	178646
2.736		815	695
2.775		17456	14572
2.806		2268	1453
2.842		62706	50087
2.924	TCX	115406	92736
3.077		283431	248256
3.133		224638	164402
3.181		734217	583182
3.274		7335	5382
3.395		48829	28864
3.412		21970	16913
3.464		1242	420
3.481		72562	53294
3.51		62294	43879
3.584		4593	3356
3.619		11648	6474
3.634		9583	4953
3.689		99556	127767
3.725		72528	55895
3.785		41734	33472
3.825		1393	810
3.852		13618	10217
3.879		10333	8569
3.976		13624	9795
4.03		4455	3154
4.068		5306	3657
4.107		17661	18744
4.192		4439	3747
4.224		935	602
4.246		7824	5276
4.268		9755	6211
4.375		11886	8351
4.396		8684	6922
4.515		3495	2425
4.569		1548	1430
4.633		2070	1697
4.846		3542	3172
4.92		3016	3117
5.226		6077	6073
5.404		2508	2243
5.627		3655	5327
5.831		1981	3658
5.89		17958	18433
6.021		15674	16575
6.084		13886	13696
6.265		3246	2835
		5871	6195

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
6.464		51130	52238
6.61	DCB	9928	11384

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR2141824E AAAR214AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 9:51:07 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001B.027.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.045		23466	80750
2.358		318752	237610
2.603		21058	44756
2.632		100079	66812
2.719		141777	130893
2.849		512425	343324
2.91		365366	226709
2.962		1241151	786320
3.074		12288	8279
3.149		3022	1451
3.17		65697	32365
3.182		15588	5139
3.213		40465	30662
3.243		13692	7793
3.268		136982	82757
3.293		97837	63798
3.33		8582	6267
3.376		17881	7889
3.389		32985	18960
3.442		40035	18947
3.452		83989	36421
3.486		93601	78751
3.56		74918	46448
3.595		22759	14082
3.619		26031	14756
3.637		7647	3574
3.724		29392	19447
3.746		11770	6643
3.768		16068	10802
3.799		6048	3182
3.817		32761	20327
3.859		7692	5815
3.93		11262	6296
3.952		24165	15853
3.977		20002	12874
4.091		13367	10095
4.118		7755	4415
4.323		7259	8036
4.488		4758	4692
4.676		11550	11401
5.017		6225	7421
5.427		23241	21482
5.475		23412	21160
5.628		20091	18893
5.695		4909	4572
5.852		9115	8114
6.052		66942	70390
6.211	DCB	15497	16194
6.848		3470	13012

AR2141824E

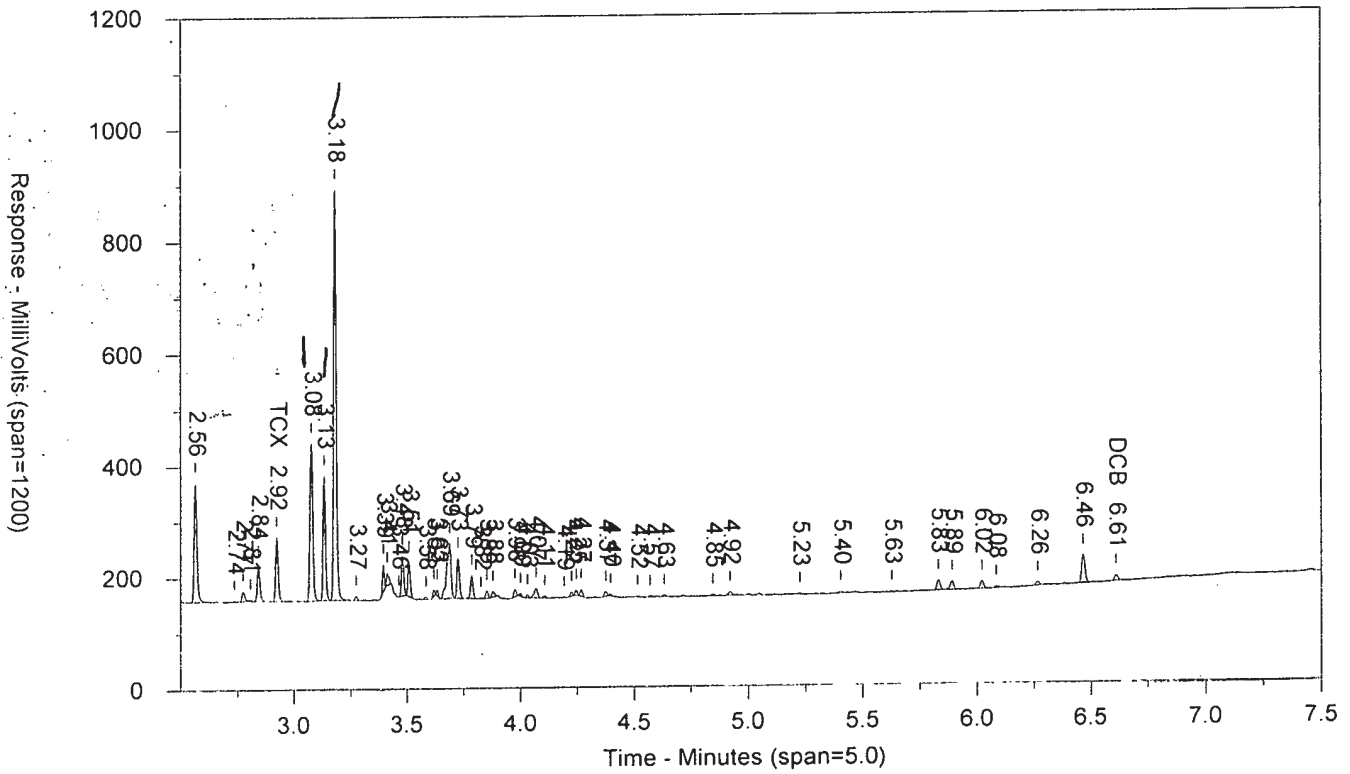
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ICAL 1830299999

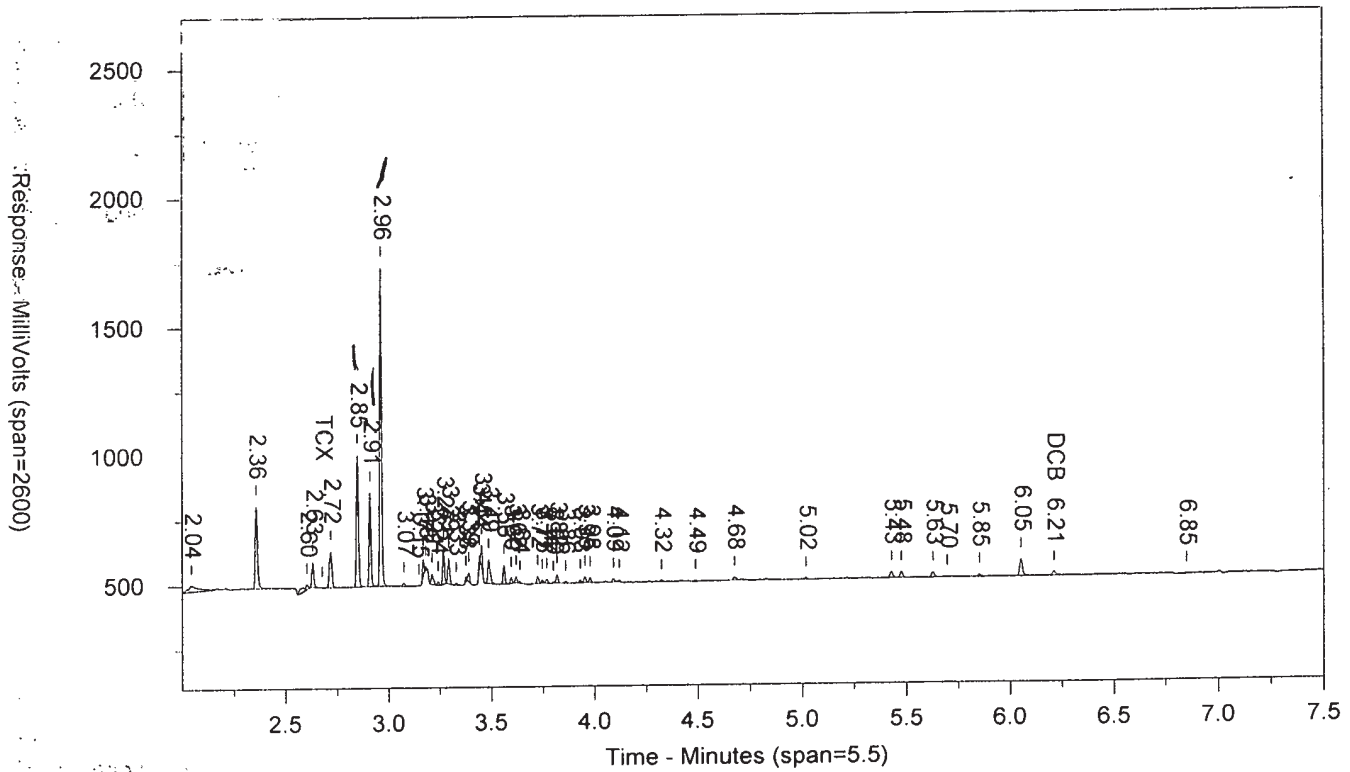
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR2141824E AAAR214AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 9:51:07 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

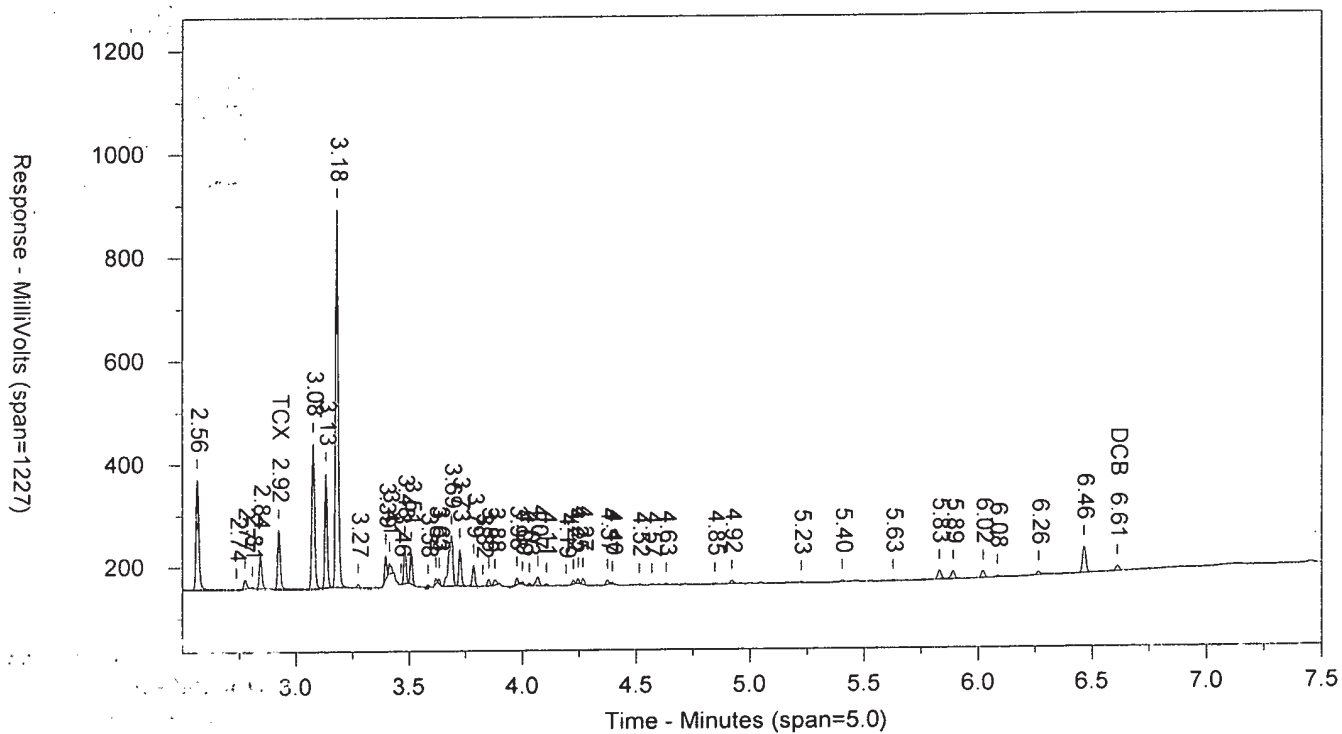
Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.924	115406	.744	TCX		0		TCX
6.61	9928	.077	DCB	6.211	15497	.083	DCB

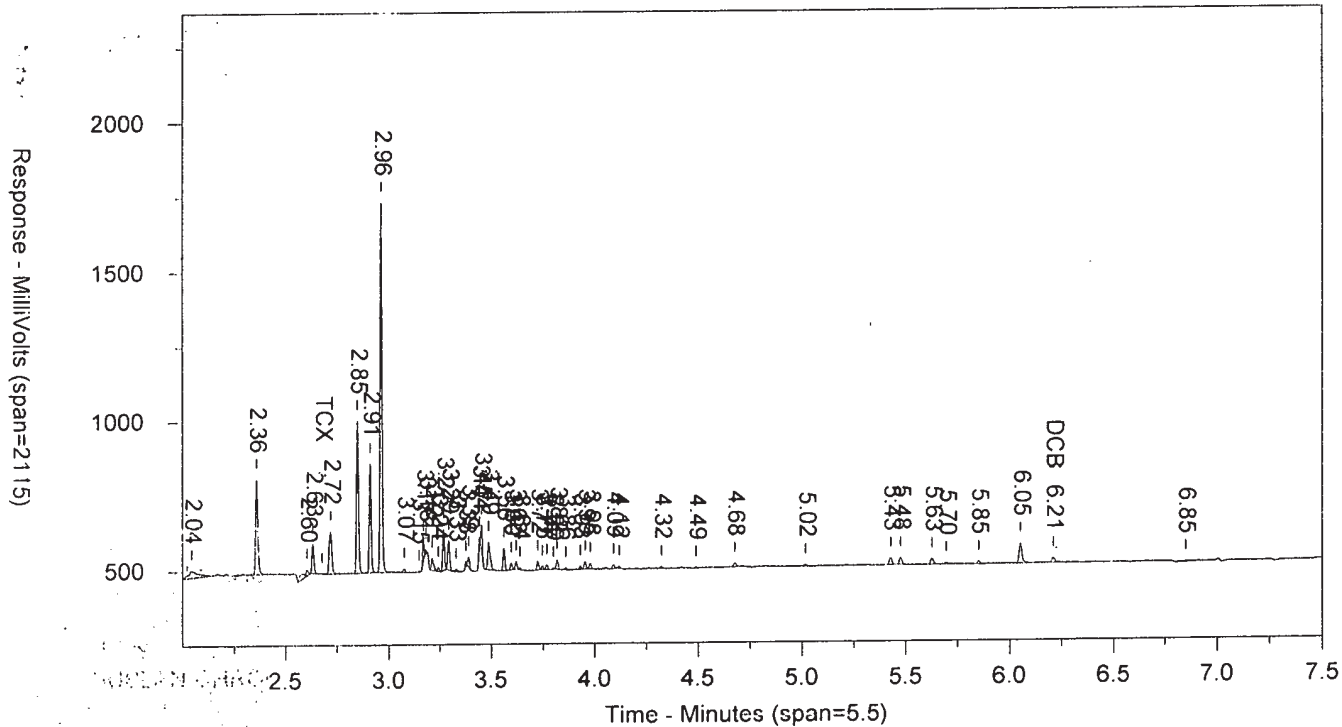
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 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 9:59:38 PM
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AR2141824E AAAR214AA ICAL 1830299999 10227 SW-846 8082

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AR2141824E

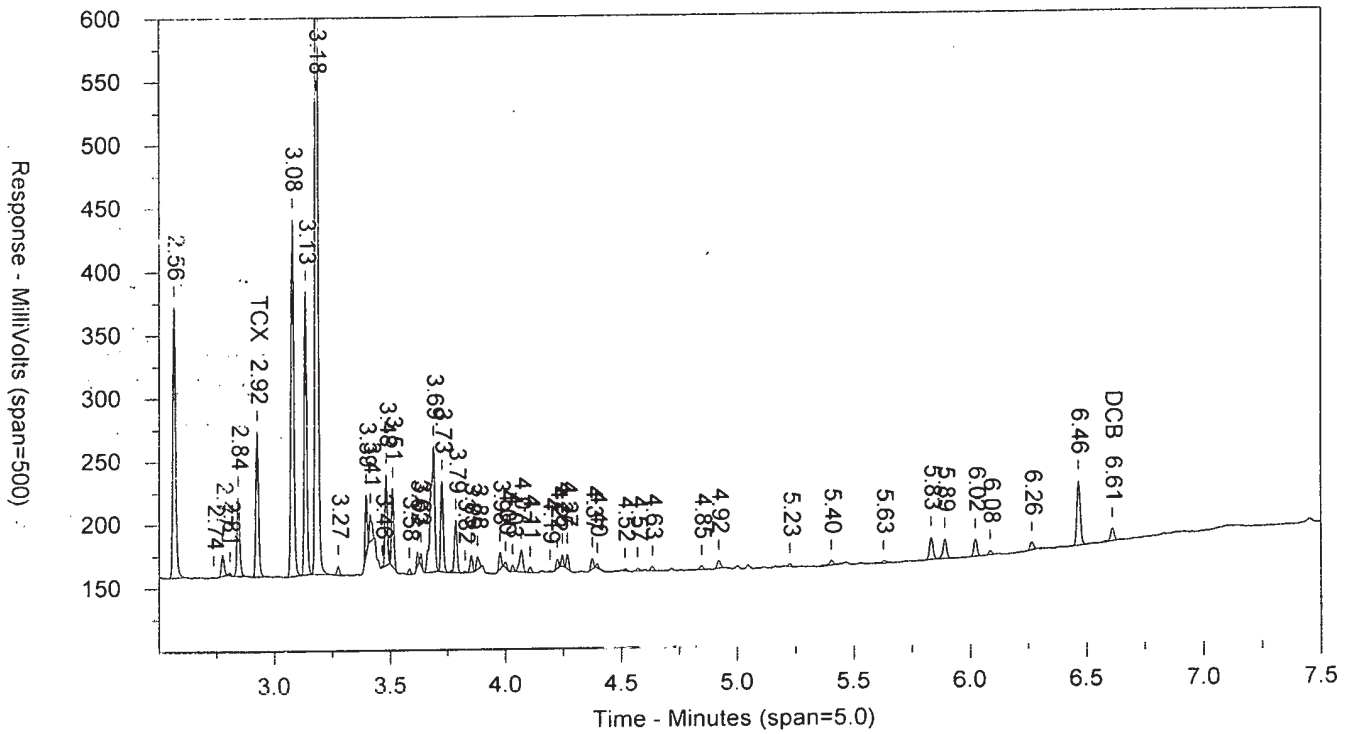
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ICAL 1830299999

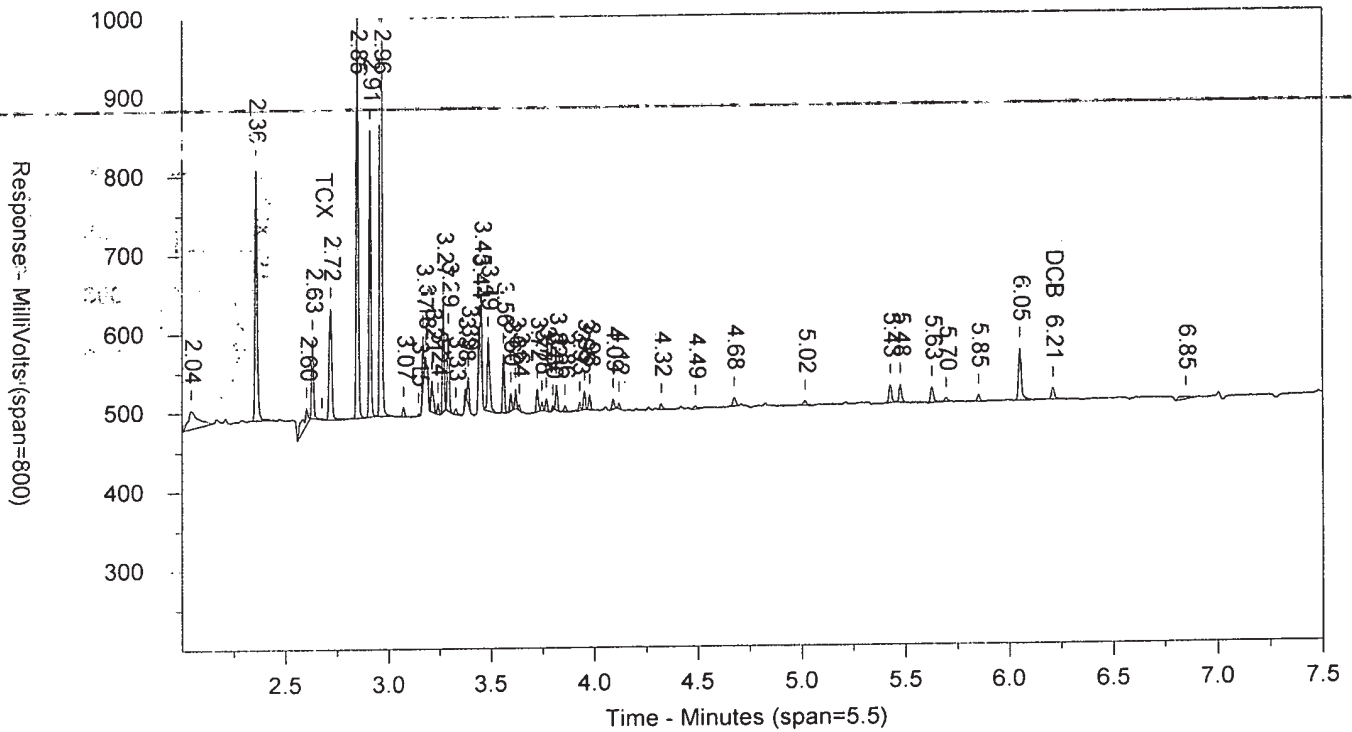
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR3241824D AAAR324AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:02:01 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.028.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.094		6974	12647
2.231		2561	3444
2.311		6990	4984
2.378		1916	2005
2.424		3164	2908
2.493		1540	1754
2.566		130071	109145
2.777		12819	10282
2.844		34408	29205
2.925	TCX	90182	72472
3.078		197807	179007
3.134		161780	121087
3.182		599621	470678
3.276		31572	23057
3.396		232902	143601
3.413		99651	55002
3.45		24124	12695
3.466		8484	3439
3.483		49284	31442
3.512		298723	235411
3.562		1579	860
3.586		19554	14337
3.622		55883	32237
3.636		25969	13470
3.682		73598	46616
3.692		266255	148685
3.729		359052	287762
3.787		265743	214951
3.827		18861	12853
3.854		162373	121799
3.881		123669	108581
3.903		32268	17150
3.978		187474	141561
4.002		64287	41938
4.033		77061	56259
4.069		200105	212361
4.109		65321	53608
4.154		12005	10582
4.194		14189	11881
4.227		122019	85607
4.247		161781	103000
4.27		191771	146599
4.33		10952	14313
4.377		148303	121050
4.398		67655	50496
4.457		1447	850
4.479		5073	3781
4.521		29174	25456
4.573		41779	36135
4.604		22004	16669
4.634		67104	60919
4.679		2216	1880
4.719		38122	33784
4.757		7920	9181

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.806		6482	5678
4.848		49799	48331
4.924		8912	10652
4.956		6077	4638
5.048		47163	47286
5.164		12181	11283
5.202		1424	1612
5.227		3167	2665
5.376		1077	1010
5.392		2696	2163
5.575		2409	2208
5.631		9699	10190
5.837		7010	7673
5.889		1550	2726
6.112		1493	1407
6.265		2196	1776
6.39		931	1185
6.587	DCB	1063	1356

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR3241824D AAAR324AA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:02:01 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.028.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.047		18236	54711
2.357		194858	147920
2.604		17600	54989
2.632		57287	38187
2.72		109811	100590
2.848		360171	247356
2.91		263595	167439
2.962		1004896	628441
3.074		54422	35459
3.17		322768	164533
3.182		105178	41449
3.222		59455	44808
3.244		38768	22226
3.269		100020	58257
3.294		462523	318226
3.331		33555	20272
3.377		105549	56315
3.392		68846	33738
3.443		179548	99311
3.453		431618	188703
3.473		14091	5442
3.487		469887	332053
3.562		449578	282949
3.597		263185	164640
3.621		292905	169348
3.639		89040	45309
3.726		342291	232751
3.749		132540	72578
3.777		130529	80194
3.801		76430	40905
3.818		294061	187151
3.862		105920	83700
3.91		19326	13817
3.932		186169	117332
3.955		370033	240227
3.98		324007	207761
4.019		11972	6466
4.056		71728	59536
4.092		207344	151309
4.12		139708	87243
4.168		9614	7427
4.205		43047	32568
4.263		68776	54497
4.295		40408	29325
4.325		99825	78431
4.42		47732	56273
4.457		11003	8522
4.479		66068	58943
4.557		12085	9168
4.66		6889	4592
4.712		57379	53941
4.795		16525	15533
5.02		5162	3657
5.095		3620	3183

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.215		12049	11094
5.473		8222	10989

AR3241824D

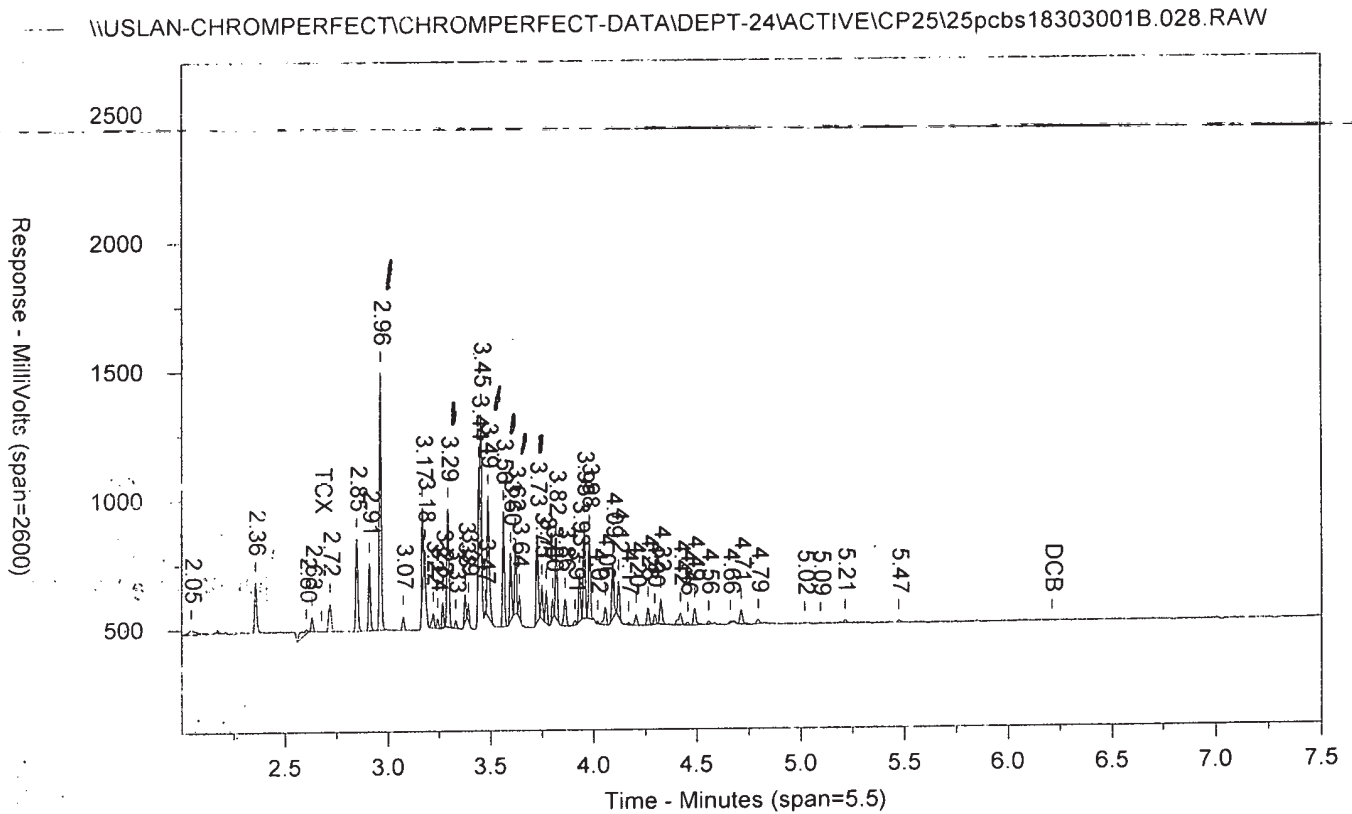
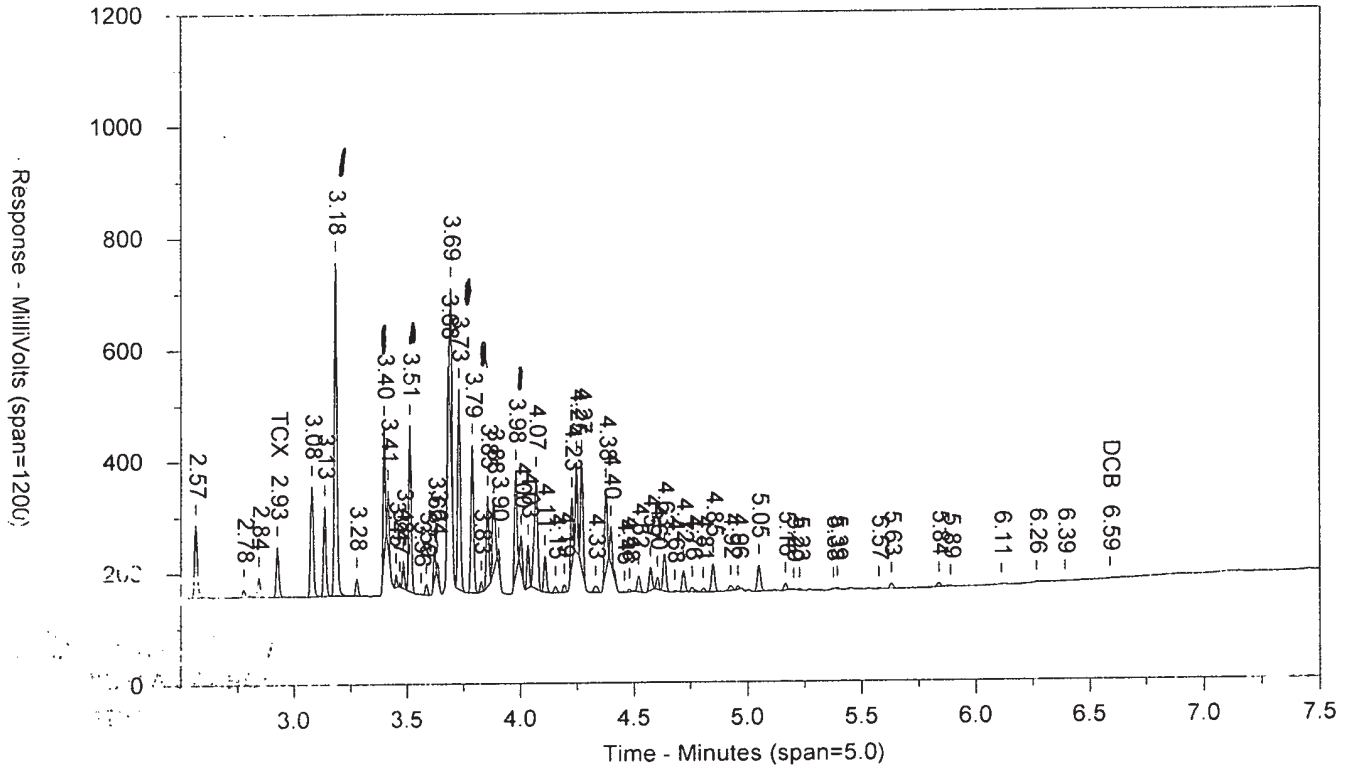
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ICAL 1830299999

10227

SW-846 8082

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LANCASTER LABORATORIES

Sample Number: AR3241824D AAAR324AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:02:01 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7.0
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	90182	.581	TCX		0		TCX
6.587	1063	.008	DCB		0		DCB

Files:
 Area File: 25pcbs18303001.028.RAW
 Area File: 25pcbs18303001B.028.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
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AR3241824D

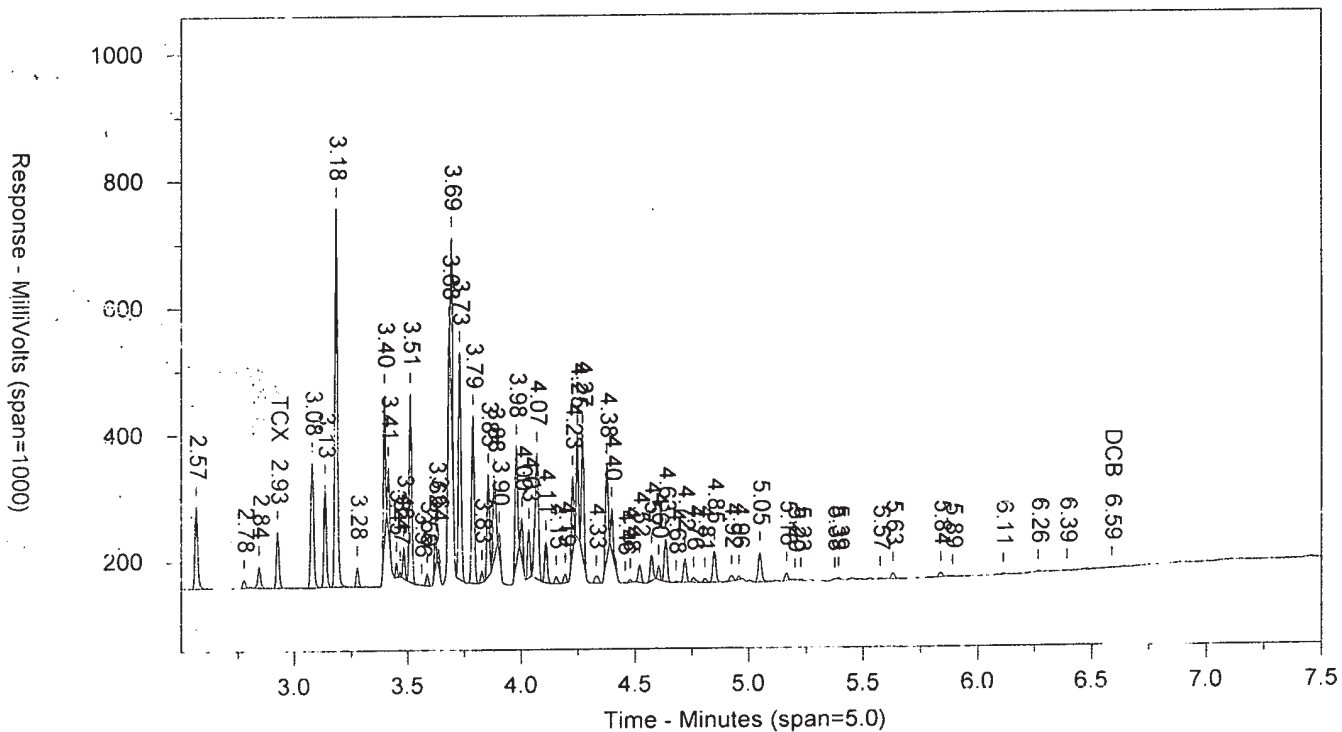
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ICAL 183029999

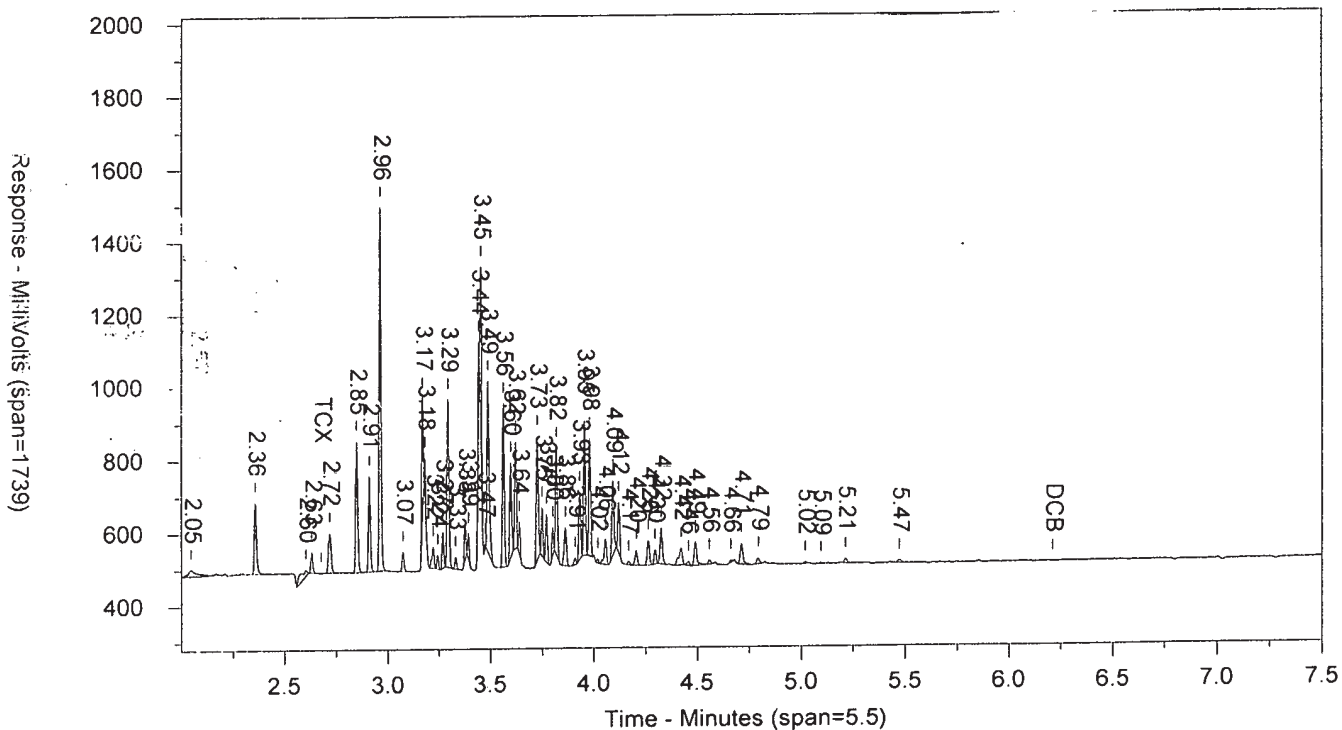
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SW-846 8082

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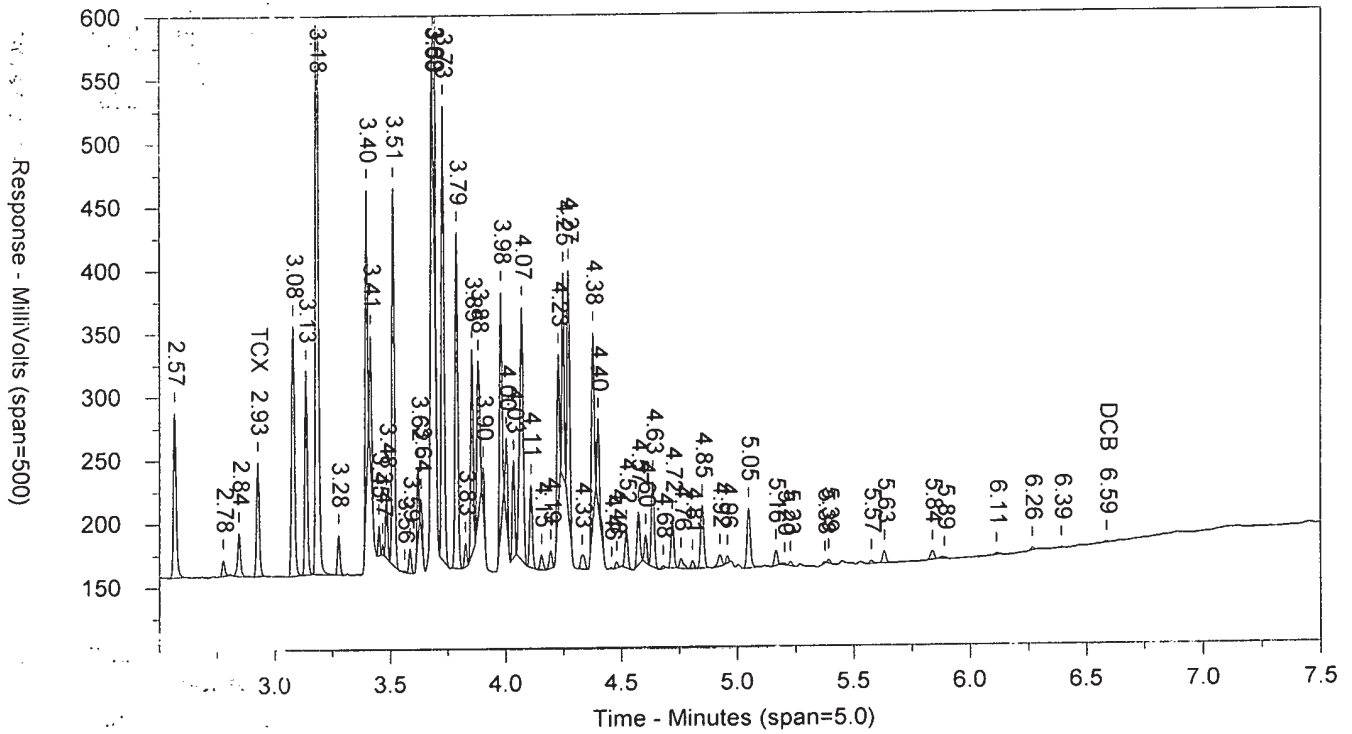
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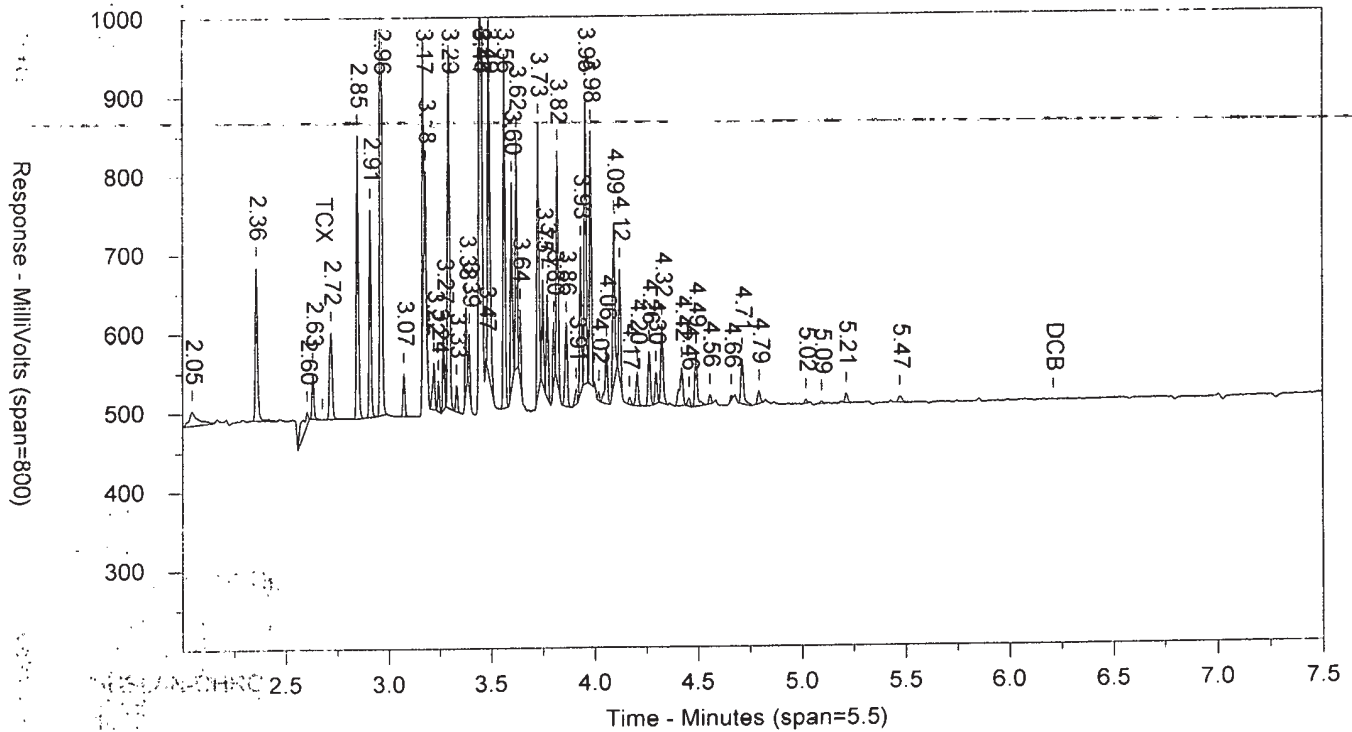
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4241824E AAAR424AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:12:57 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.029.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.097		8113	14080
2.233		1975	2591
2.311		14460	10287
2.378		1892	1984
2.425		1916	1695
2.492		1327	1373
2.569		15199	14596
2.777		52819	52281
2.833		2166	2747
2.926	TCX	63130	53187
3.078		116650	105489
3.135		97732	73719
3.182		454082	353930
3.276		58723	44039
3.314		1882	1203
3.397		422803	258093
3.413		167966	90120
3.45		48599	27481
3.467		22827	10200
3.483		25463	15131
3.513		538774	426580
3.548		1374	571
3.562		2833	1538
3.587		41386	29374
3.623		102089	59128
3.637		45446	21087
3.683		134344	90715
3.693		480754	272519
3.729		642603	513586
3.788		479208	397183
3.828		40470	28605
3.855		323769	240312
3.883		236604	206360
3.903		61093	33110
3.98		359250	279345
4.003		122727	77198
4.034		152913	111364
4.07		382926	415973
4.109		124735	105966
4.154		22517	18831
4.195		31589	26392
4.228		255971	178164
4.248		309323	203515
4.271		385669	293074
4.337		26912	32632
4.378		288520	241466
4.399		117458	103851
4.455		3638	2579
4.48		12387	9446
4.522		71726	66363
4.573		101250	90350
4.605		58822	44829
4.635		163423	146422
4.682		1502	1085

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.72		84661	75449
4.758		5356	3698
4.809		17001	15197
4.849		127122	128928
4.929		14088	17764
4.957		9246	6529
4.975		5194	3265
5.049		116211	115967
5.167		30687	26839
5.376		10549	9486
5.576		7913	6988
5.632		2680	2542
5.838		3489	3692
6.468		794	941
6.59	DCB	955	934

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4241824E AAAR424AA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:12:57 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001B.029.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		15967	39726
2.36		15462	15732
2.603		48816	35729
2.72		83553	76242
2.849		207863	149263
2.91		159732	103446
2.962		746286	473947
3.074		96300	64253
3.17		588620	301391
3.181		191072	71643
3.222		99379	61414
3.244		67497	39377
3.269		68390	37855
3.294		822899	571771
3.331		64094	39834
3.377		190560	100291
3.392		1110422	52832
3.443		1419681	192831
3.453		7804990	353427
3.473		33002	12109
3.487		836933	578848
3.562		816912	517970
3.597		519150	329955
3.621		600229	341407
3.639		183699	94857
3.726		671054	460200
3.749		255371	142283
3.771		255544	157019
3.801		158928	82986
3.819		557293	352545
3.861		209744	162929
3.91		40979	30008
3.932		397938	242541
3.955		761803	488517
3.98		628481	408583
4		26279	12007
4.019		26771	15139
4.053		163785	130148
4.092		419497	308961
4.12		269611	167688
4.169		21205	15041
4.204		99611	78366
4.263		170027	130624
4.296		99920	70179
4.324		240150	181741
4.42		97734	111348
4.456		26971	19995
4.489		167576	129719
4.558		19048	12893
4.584		14833	10327
4.659		20816	27428
4.713		151090	124565
4.794		44684	45716
5.044		15527	12428

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.192		8772	7215

AR4241824E

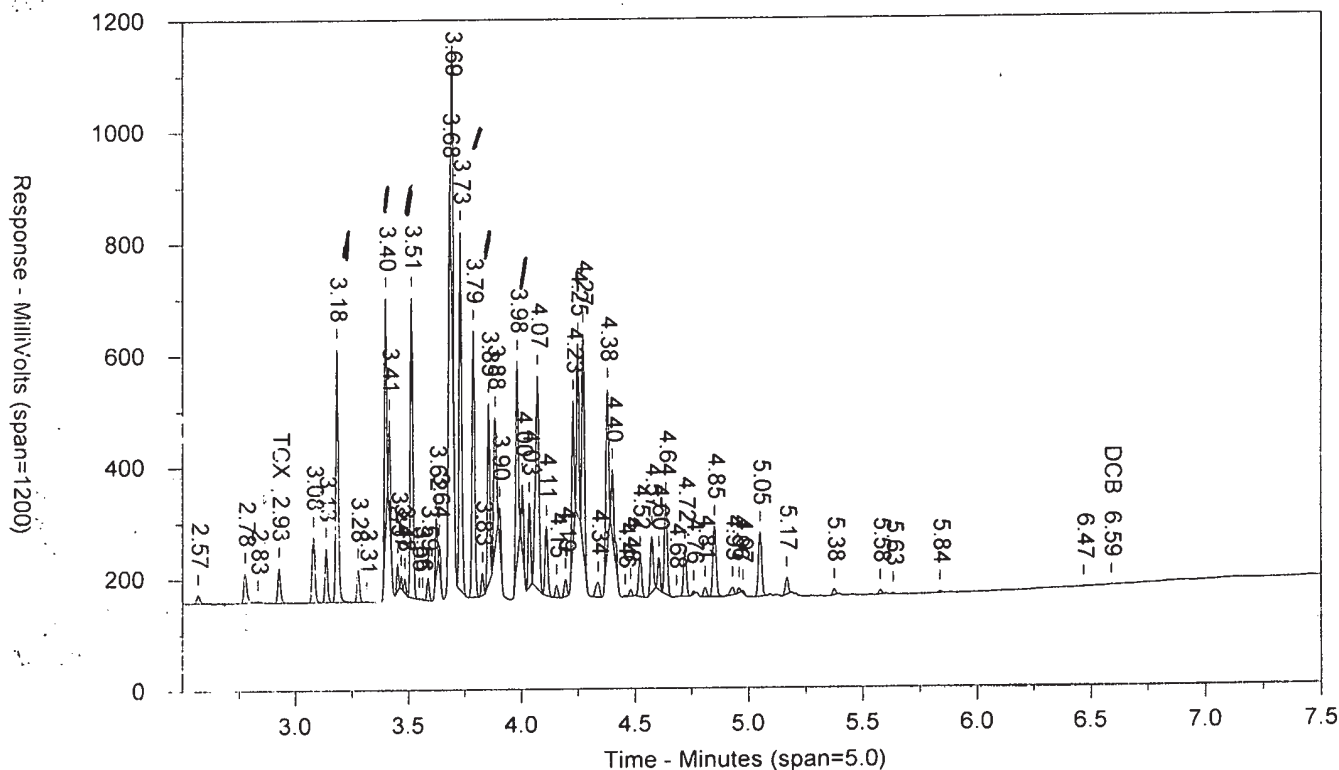
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ICAL 1830299999

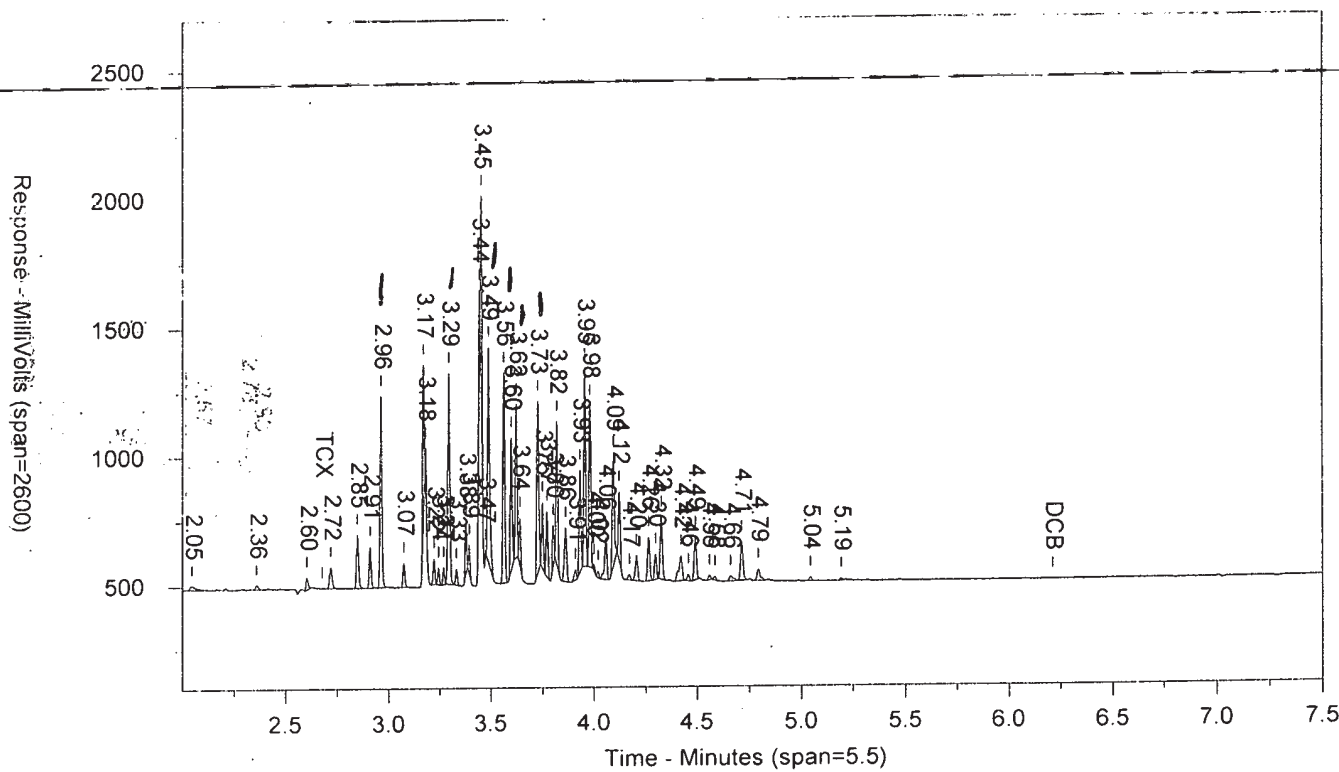
10227

SW-846 8082

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303001B.029.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR4241824E AAAR424AA ICAL 1830299999 10227

SW-846 8082

Injected On: 10/30/2018 10:12:57 PM

Sample Weight: 1

Instrument ID: CP25-18274

Dilution Factor: 1

Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min

Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um

Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um

Injection Volume: 1 ul

Threshold: 7

Calibration Type: external

Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.926	63130	.407	TCX		0		TCX
6.59	955	.007	DCB		0		DCB

Files:

Area File: 25pcbs18303001.029.RAW

Area File: 25pcbs18303001B.029.RAW

Method A: 25PCBS.MEI

Method B: 25PCBSB.MET

Calibration File A: 25PCBS1830301.CAL

Calibration File B: 25PCBS1830301b.CAL

Format A: pestD25.FMTA

Format B: pestD25.FMTB

Area File Created On: 10/30/2018 10:21:27 PM

File Reported On: 10/30/2018 at 10:21:39 PM

25pcbs18303001.029.RAW
 25pcbs18303001B.029.RAW
 25PCBS.MEI
 25PCBSB.MET
 25PCBS1830301.CAL
 25PCBS1830301b.CAL
 pestD25.FMTA
 pestD25.FMTB
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AR4241824E

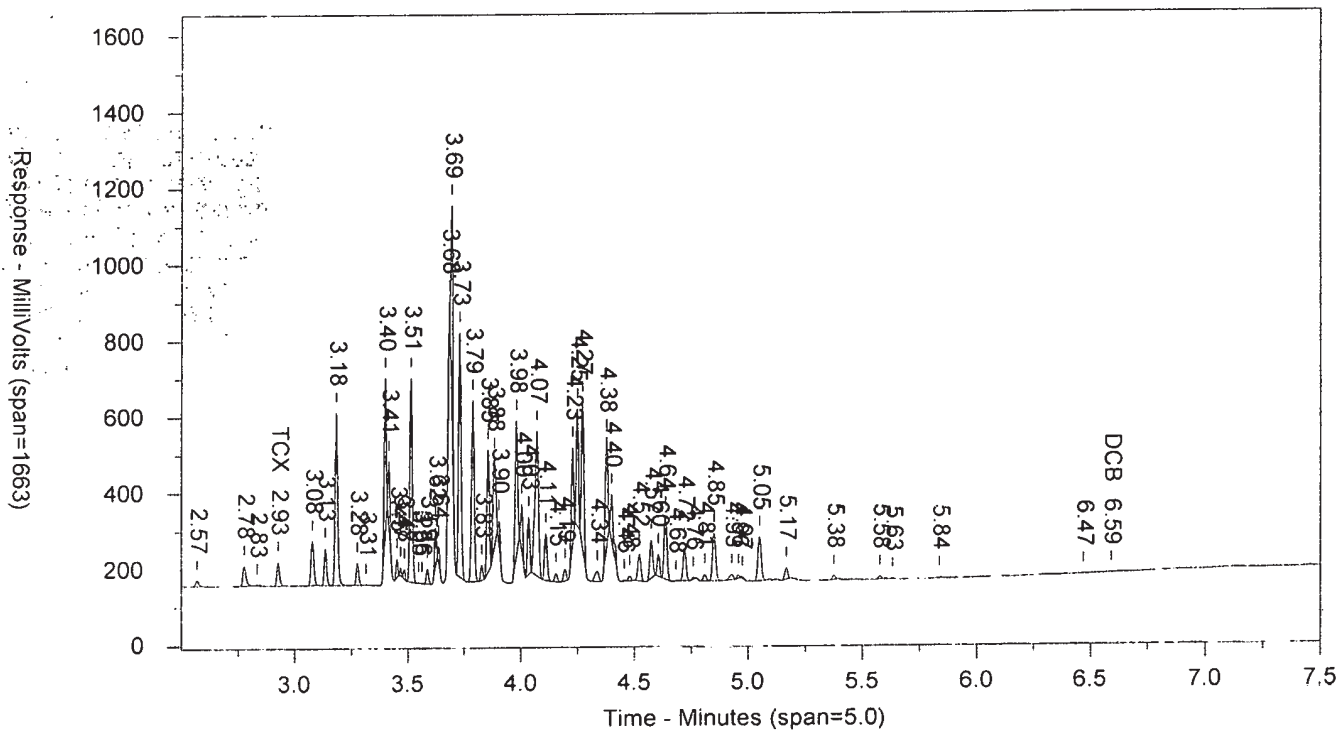
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ICAL 1830299999

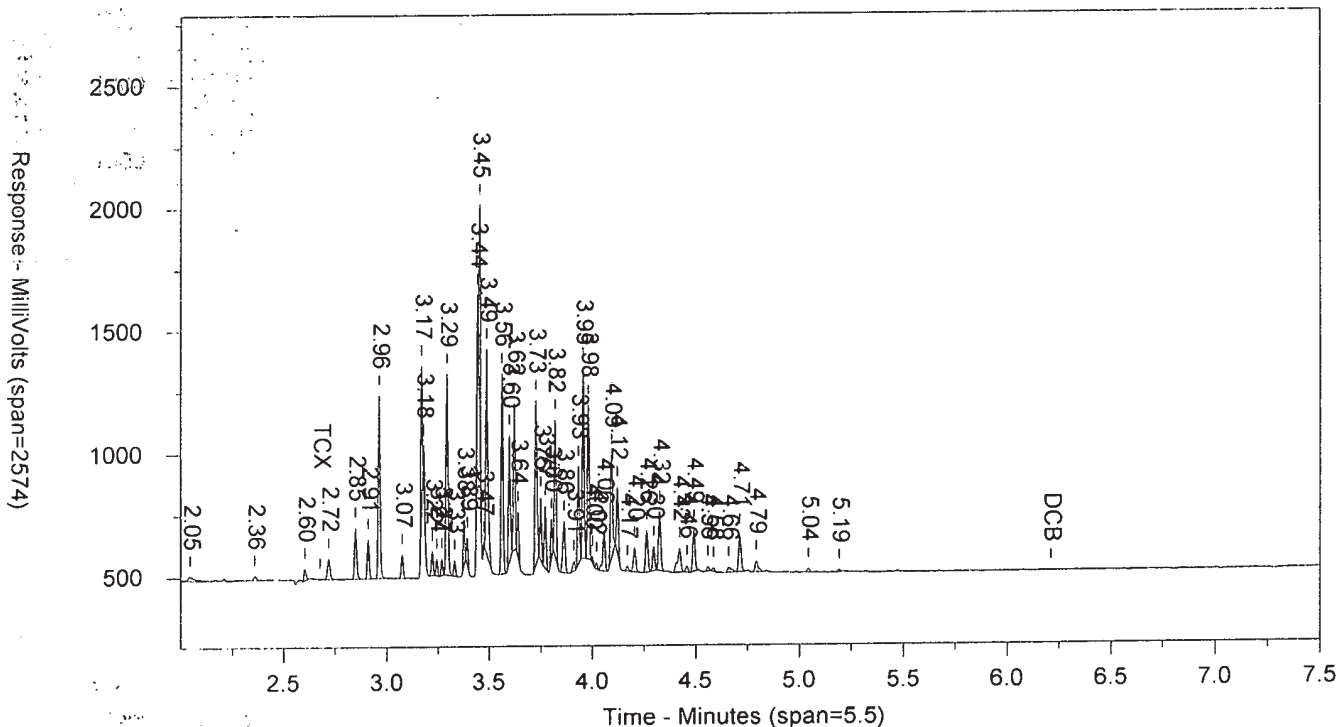
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SW-846 8082

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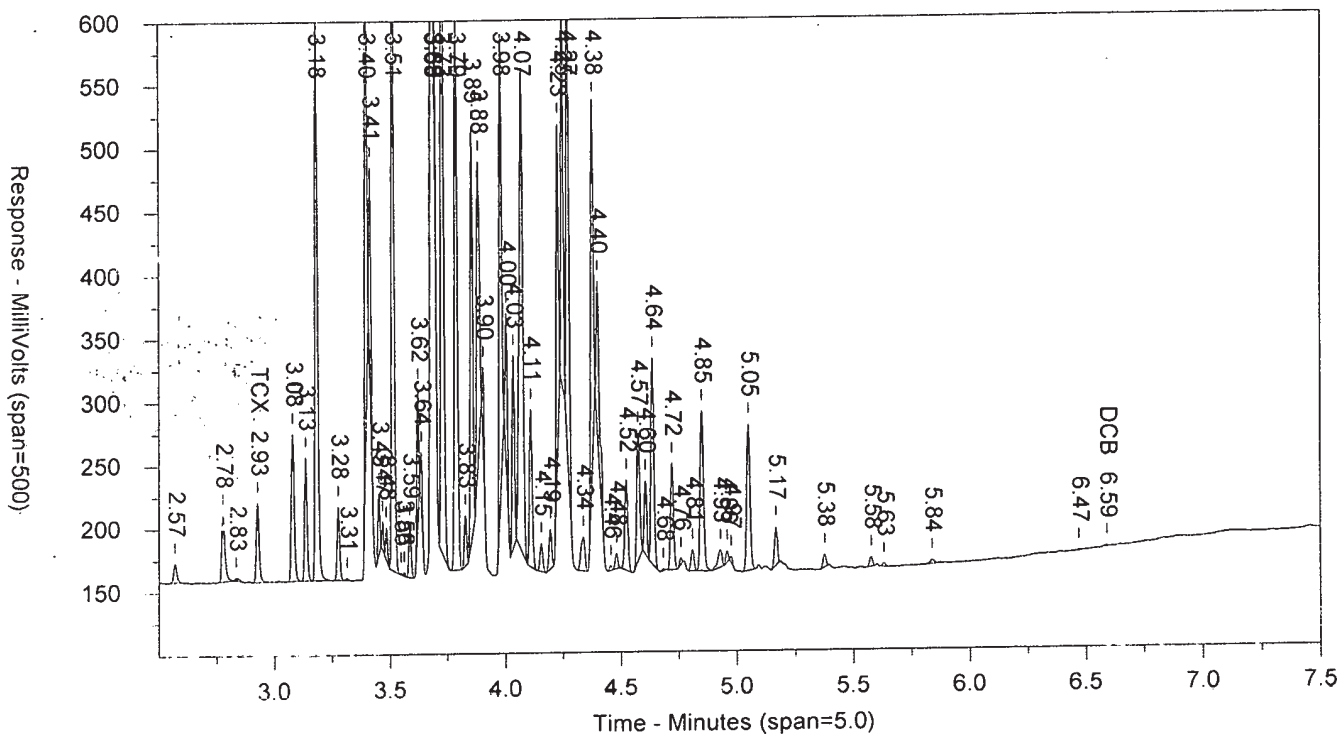
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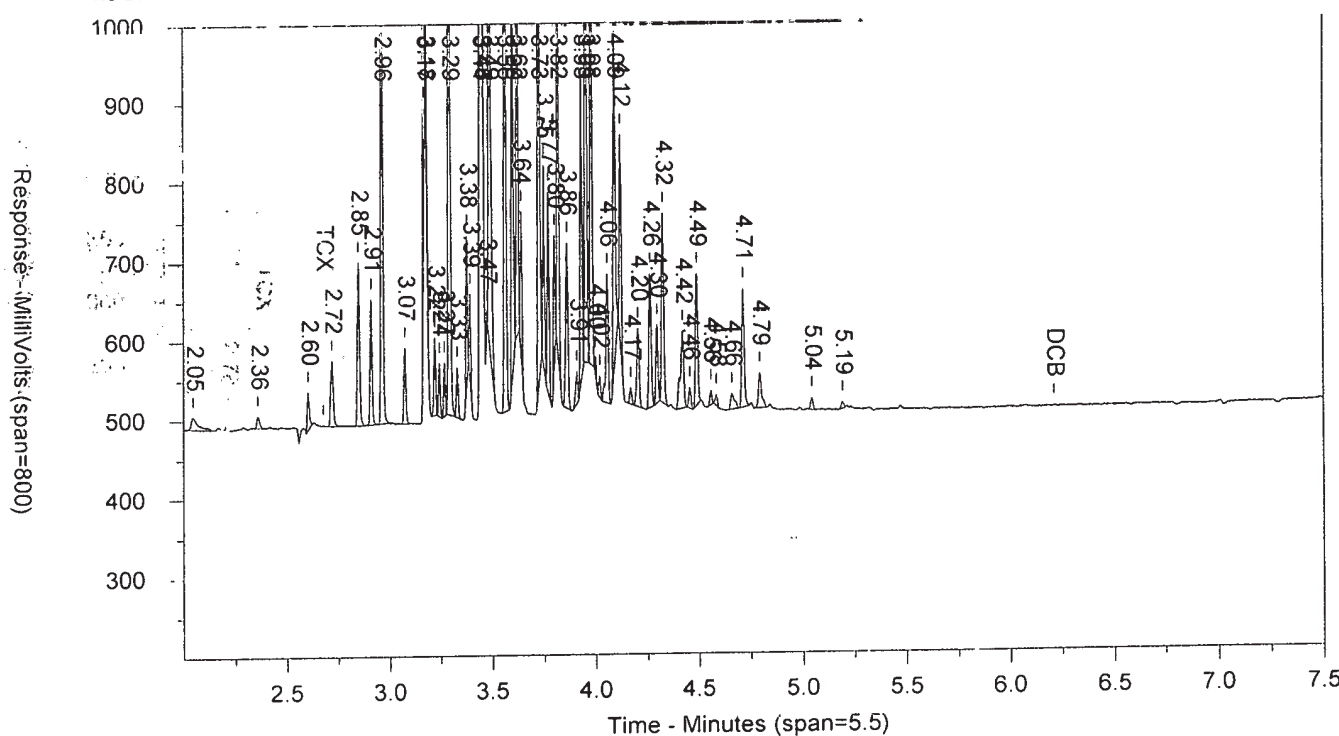
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR16XX1824B AAAR16XAA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:23:49 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.030.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		8582	16096
2.15		1152	1493
2.219		5613	6323
2.311		9932	6455
2.375		1733	1651
2.424		3675	3809
2.496		1562	1826
2.569		14312	15368
2.656		1611	1059
2.776		25849	22986
2.833		2332	2755
2.925	TCX	1440513	1069832
3.077		130781	117315
3.134		116088	97582
3.181		521956	413710
3.255		2012	931
3.275		70316	52411
3.315		2186	1487
3.397		504090	308009
3.413		214243	116357
3.45		59651	33859
3.466		24474	10882
3.483		33403	19532
3.513		648611	516938
3.566		3528	2144
3.586		26704	18189
3.622		116494	70909
3.637		53308	27315
3.682		170651	104883
3.692		630794	357759
3.729		719331	585519
3.787		590494	489730
3.828		47257	33151
3.855		378345	286758
3.883		279192	240848
3.903		76387	40717
3.979		441101	338771
4.003		140430	92334
4.034		1175153	130072
4.069		440889	476499
4.109		150230	123862
4.154		18814	15127
4.194		23806	19747
4.228		153062	111935
4.248		125159	80276
4.272		117467	87054
4.338		4354	5273
4.377		40539	34984
4.398		4016	2241
4.52		2784	4225
4.574		2903	2616
4.636		2649	2304
4.72		1242	1117
4.85		3909	3847

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.88		6319	5251
4.923		6941	7175
5.121		7708	7882
5.198		1583	1786
5.53		5425	14036
5.652		7150	7043
5.836		1399	1532
6.023		7343	8095
6.088		6143	5641
6.383		1228	1423
6.467		10294	10632
6.613	DCB	1166332	1281616

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR16XX1824B AAAR16XAA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:23:49 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Data File: 25pcbs18303001B.030.RAW
 Method File: 25PCBSB.MET
 Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.045		13574	22742
2.36		15815	15780
2.603		26517	39342
2.678	TCX	2308105	1423846
2.72		93404	74679
2.849		229274	165291
2.91		190818	138612
2.962		868876	557561
3.013		4982	3214
3.074		114747	76272
3.17		737617	373321
3.181		234975	87996
3.222		120487	74694
3.244		76653	44619
3.269		83566	46574
3.293		1016832	694144
3.33		45058	27521
3.36		4741	1936
3.377		234896	124664
3.392		132815	65206
3.443		428975	221530
3.453		955415	421207
3.473		43864	15543
3.487		968423	661712
3.562		990752	636180
3.597		610162	389397
3.621		690647	400650
3.639		227775	115480
3.726		821378	551903
3.749		299657	168904
3.771		293508	184363
3.801		169449	90792
3.818		637164	404014
3.862		247467	181746
3.91		28757	23788
3.932		174402	108846
3.955		368949	247844
3.98		173473	108863
4		26967	14069
4.056		15751	10043
4.092		19919	11849
4.107		17311	15151
4.492		4889	4971
4.533		9292	7244
4.678		8812	7678
4.768		10955	8505
5.289		10348	14524
5.629		10571	9356
5.698		10985	10171
6.053		15220	18079
6.212	DCB	1661723	1649505

AR16XX1824B

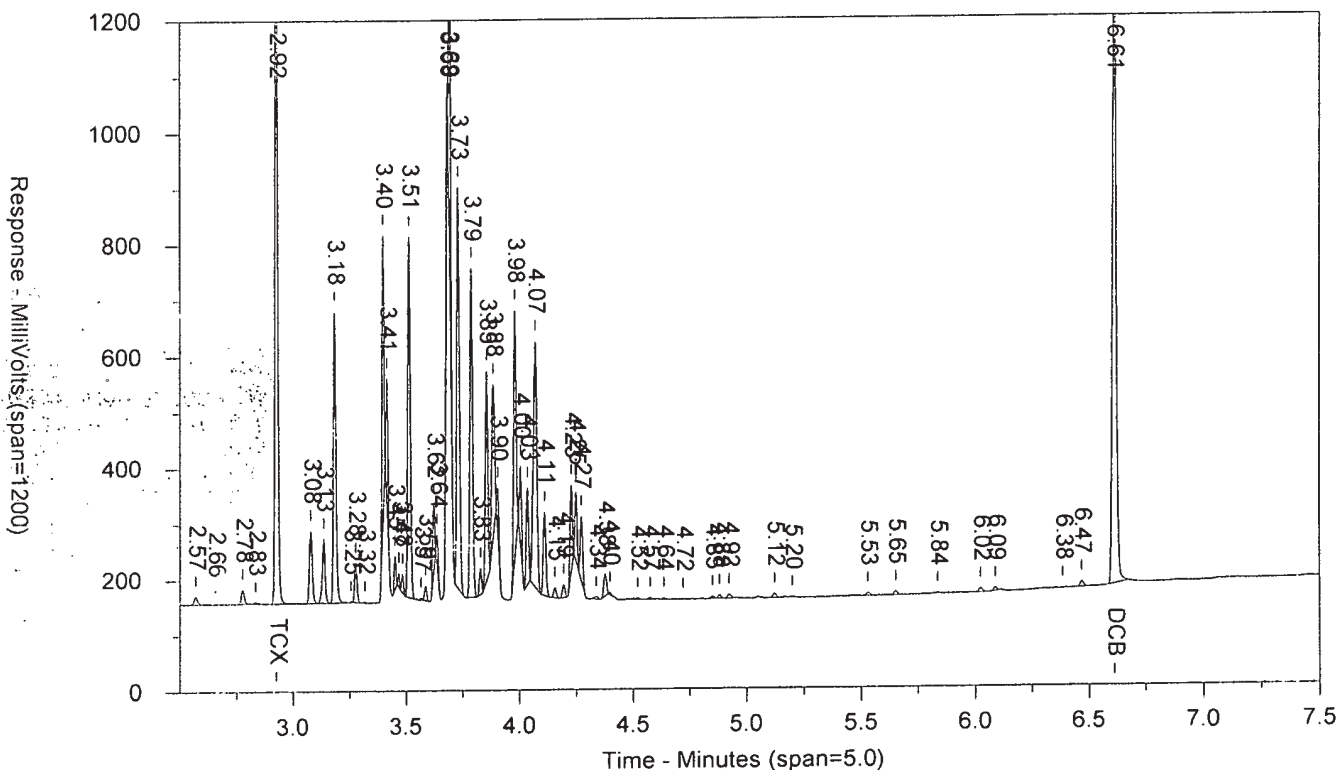
AAAR16XAA

ICAL 1830299999

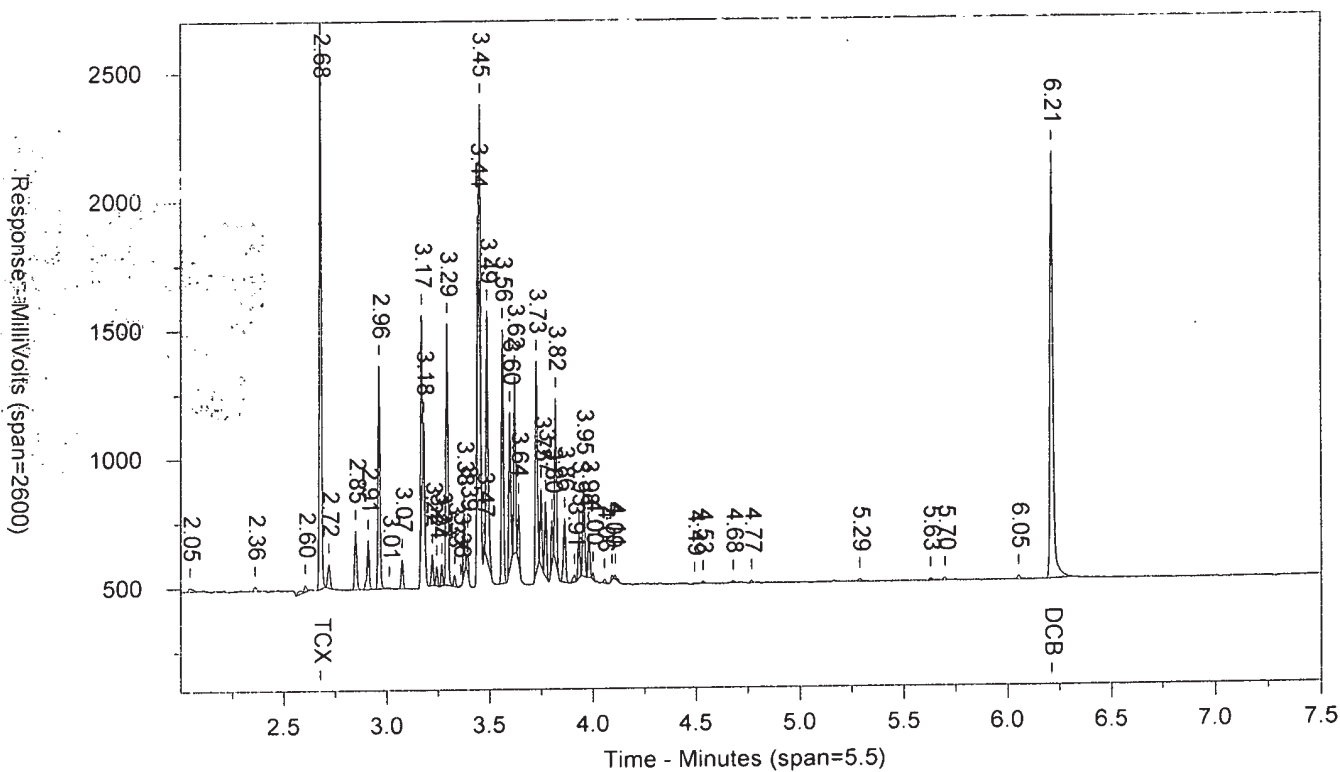
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR16XX1824B AAAR16XAA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:23:49 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	1440513	9.285	TCX	2.678	2308105	9.044	TCX
6.613	1166332	5.088	DCB	6.212	1661723	8.85	DCB

Files:
 Area File: 25pcbs18303001.030.RAW
 Area File: 25pcbs18303001B.030.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 10:32:20 PM
 File Reported On: 10/30/2018 at 10:32:29 PM

10/30/2018 10:32:29 PM
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 1166332
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 25PCBS1830301b.CAL
 pestD25.FMTA
 pestD25.FMTB

AR16XX1824B

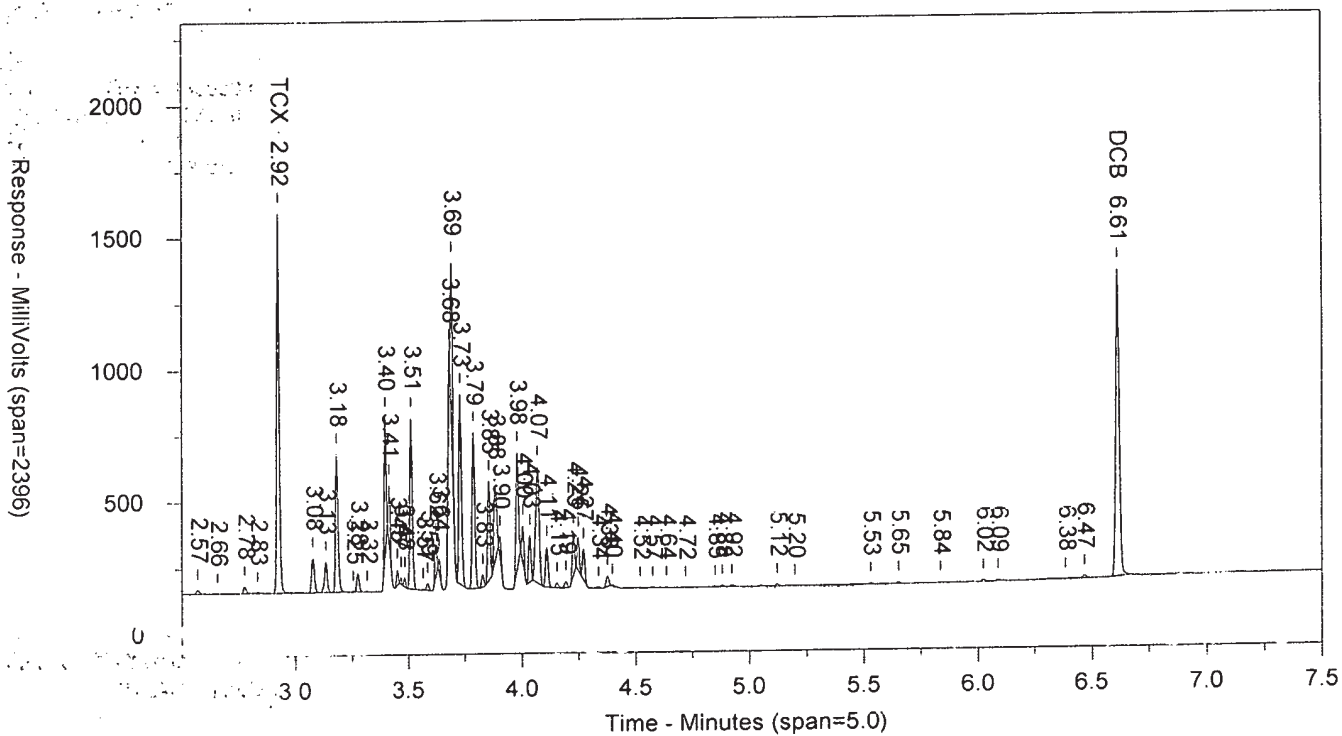
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ICAL 1830299999

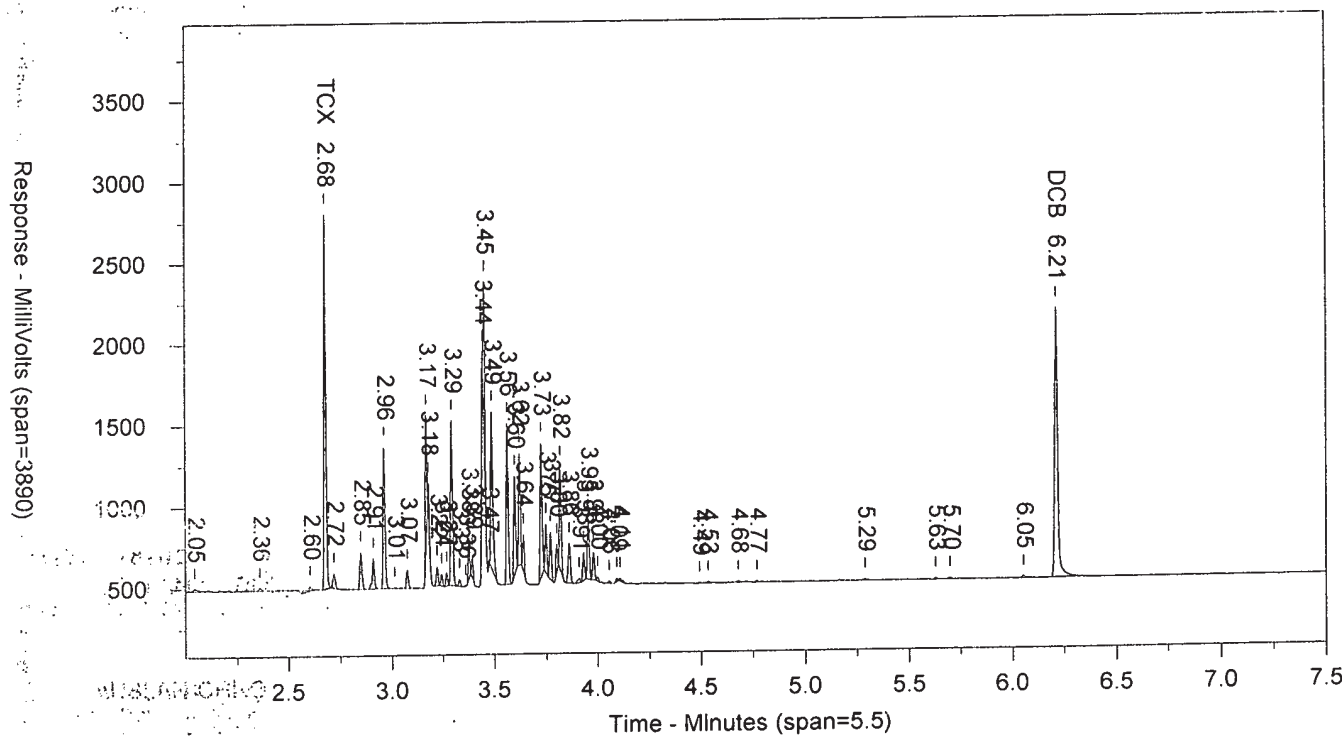
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SW-846 8082

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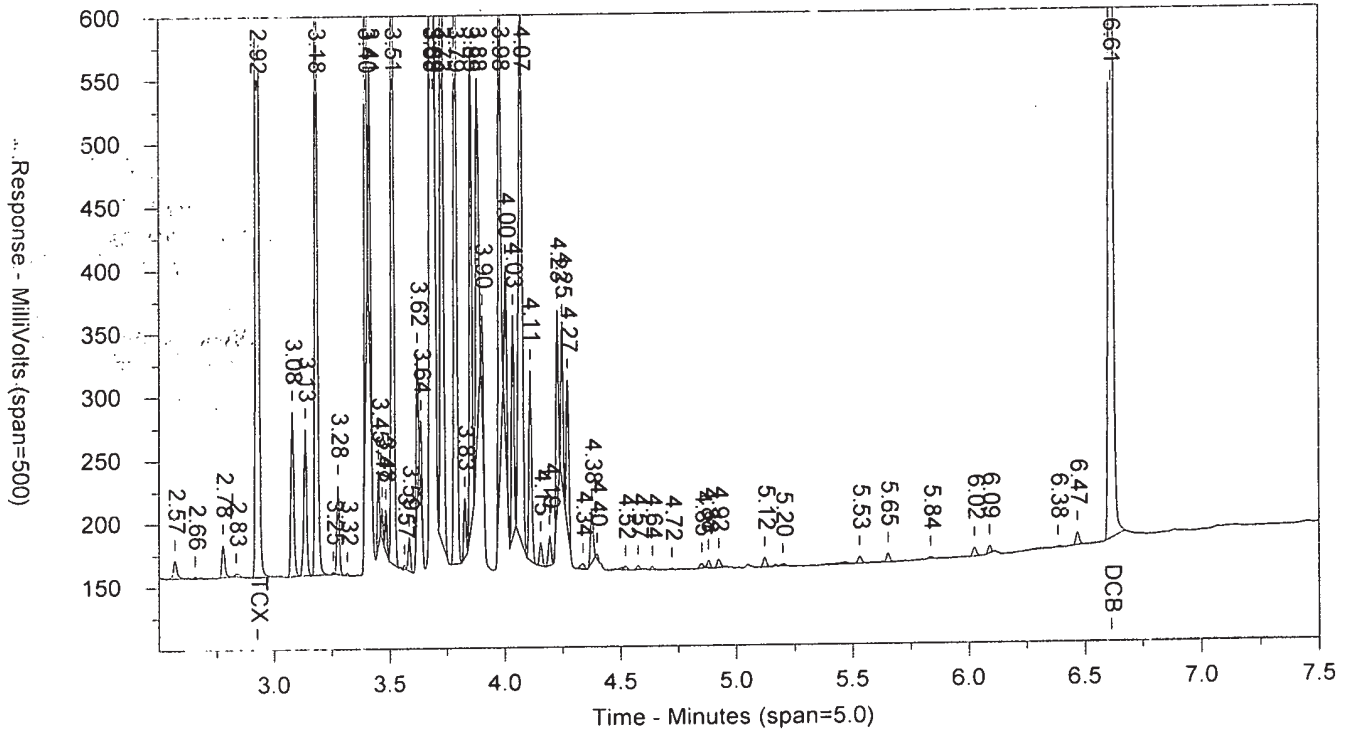
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ICAL 183029999

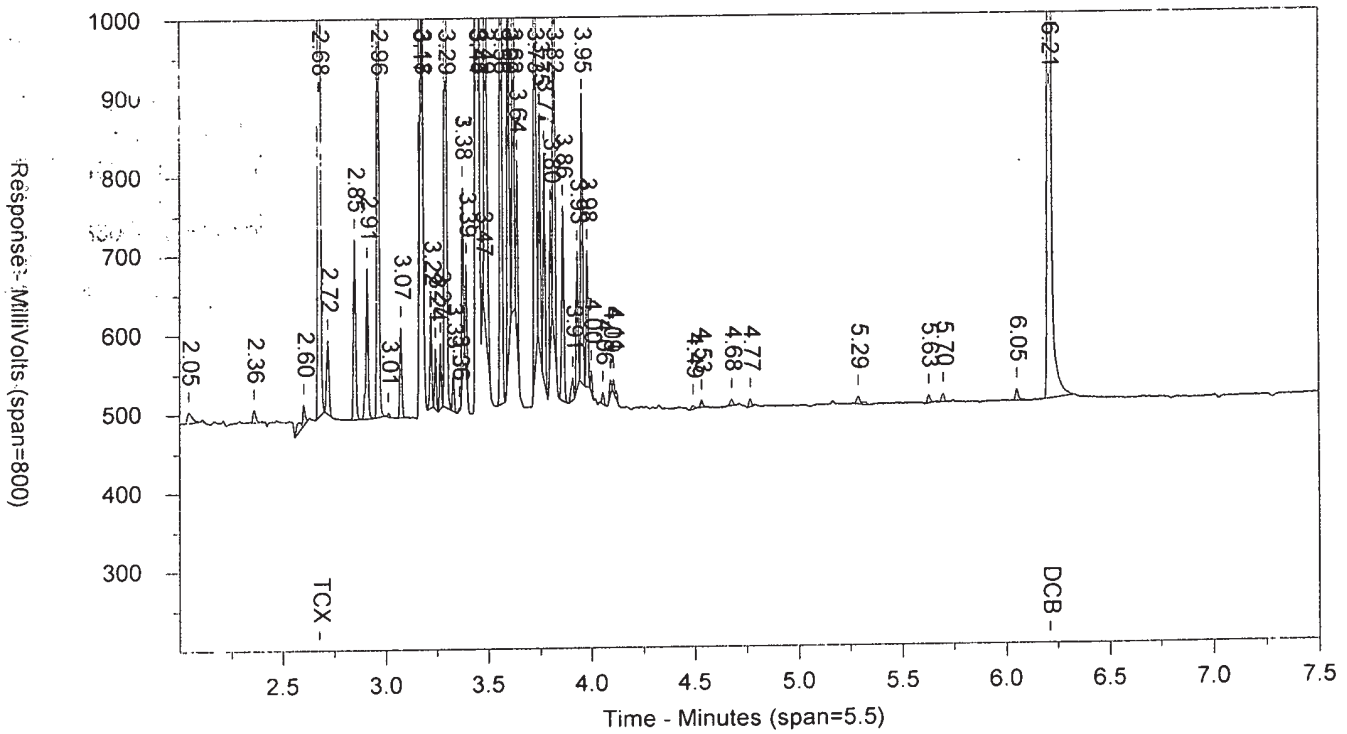
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: MD16X1824E AAMD16XAA ICAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:34:51 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.031.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		6667	12007
2.228		1352	1775
2.312		10589	7509
2.376		1633	1811
2.424		5724	5366
2.495		1291	1325
2.57		3638	4433
2.777		17653	15617
2.831		3634	4129
2.925	TCX	70806	48580
3.078		4954	4629
3.135		3590	2687
3.183		20692	17982
3.276		2797	2217
3.398		20515	12452
3.414		7252	3929
3.451		1803	984
3.484		701	412
3.514		23471	20298
3.589		2001	1228
3.624		4010	2493
3.668		4168	2521
3.683		6616	3510
3.693		20387	10549
3.72		26408	21067
3.788		20341	16569
3.855		16557	14856
3.885		13816	20416
3.98		16171	11364
4.004		5085	3222
4.035		5990	4303
4.07		15691	17502
4.11		4795	3622
4.164		2886	2909
4.193		1930	1330
4.229		15790	11758
4.25		3611	1876
4.272		3621	2625
4.341		2285	2239
4.384		17067	16751
4.517		5604	8727
4.575		1853	1050
4.589		3266	2361
4.636		9846	8995
4.682		14213	15663
4.72		3009	2279
4.758		34950	33041
4.799		988	904
4.849		8588	9724
4.905		3485	2340
4.926		3933	2964
4.958		42142	51535
5.052		18003	20429
5.129		3793	4818

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
5.166		47586	44393
5.229		22376	21202
5.273		14663	16447
5.393		27864	38952
5.576		9535	9351
5.632		71900	75887
5.838		43142	45639
5.879		2866	3333
6.087		1186	931
6.111		7945	8342
6.267		19537	19388
6.388		1693	2336
6.467		5026	5417
6.614	DCB	75258	78170

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: MD16X1824E AAMD16XAA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:34:51 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.031.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

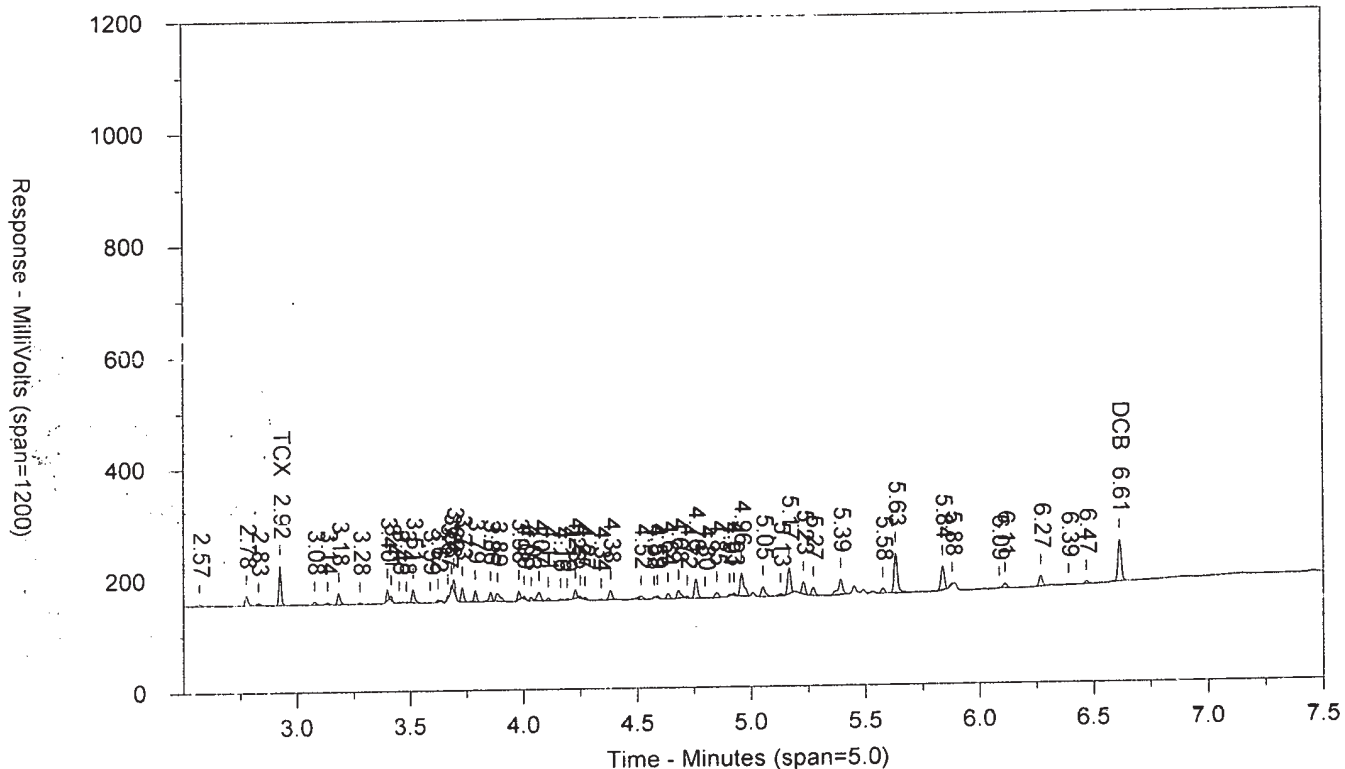
RT B	Compound B	Height B	Area B
2.045		11165	26029
2.603		23539	47432
2.678	TCX	111840	70399
2.848		9838	8883
2.91		7383	8534
2.962		36154	22501
3.011		1747	901
3.075		5044	3633
3.171		30245	15037
3.182		9092	3788
3.223		4003	2697
3.243		6053	4095
3.269		3094	1721
3.294		38710	27079
3.331		3381	1526
3.39		26548	31656
3.444		16066	8977
3.453		34755	14595
3.474		2882	977
3.488		36921	25614
3.562		37249	23630
3.598		26442	16793
3.622		31824	18044
3.64		7576	3318
3.704		2463	4537
3.727		31256	20798
3.75		10408	5553
3.771		17285	11320
3.802		7818	4062
3.819		23222	14593
3.862		8153	6246
3.955		34079	29417
4.056		24904	19674
4.263		6122	5676
4.307		6177	4285
4.339		21426	22761
4.364		8971	9861
4.419		52841	43415
4.494		5425	5239
4.515		10398	8651
4.559		59363	52536
4.664		46418	56201
4.717		6191	5282
4.794		55427	49334
4.827		27266	21934
4.867		20007	16174
4.97		6483	6422
5.02		34849	28878
5.095		19786	18868
5.131		9518	7873
5.161		7311	6220
5.215		81257	80226
5.429		18627	16979
5.476		57705	68136

Chrom Perfect Chromatogram Report

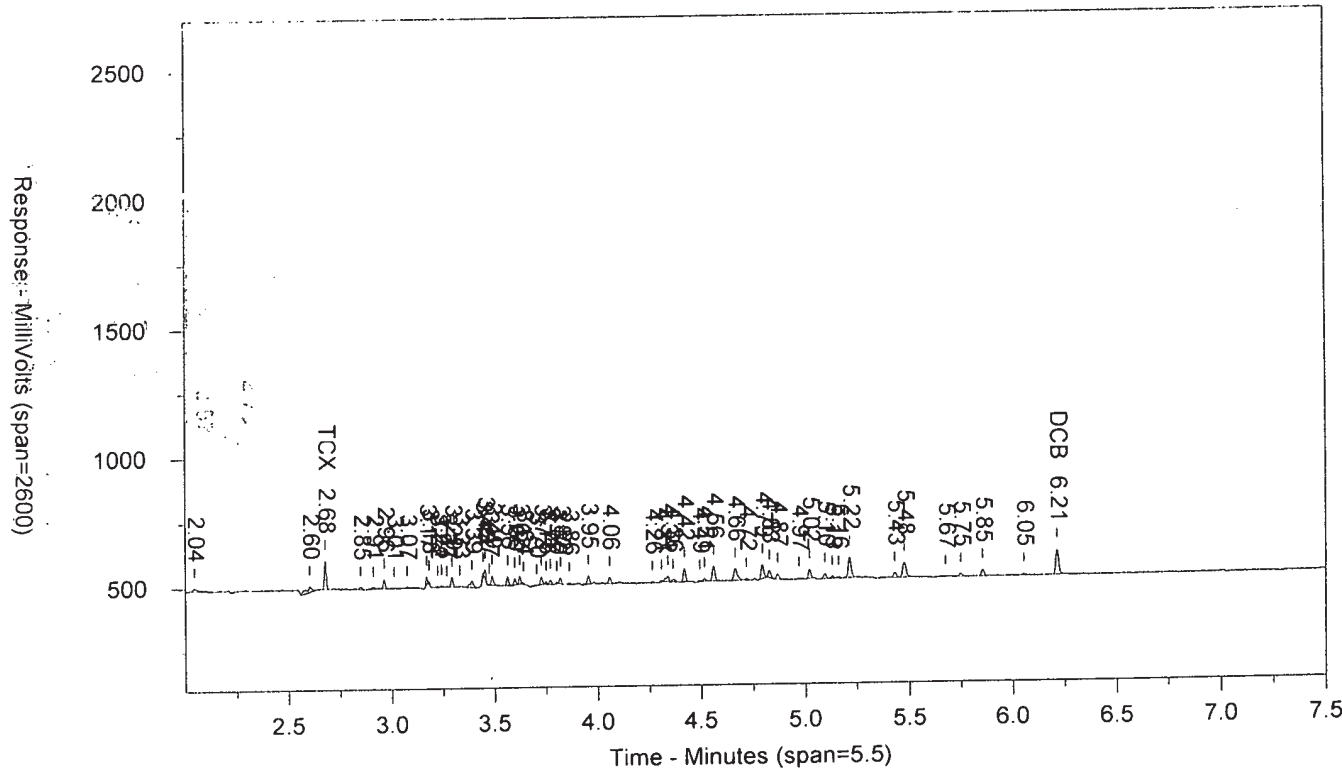
RT B	Compound B	Height B	Area B
5.673		3239	6369
5.748		11336	12975
5.854		25788	23301
6.053		7562	7273
6.213	DCB	97116	96347

MD16X1824E AAMD16XAA ICAL 1830299999 10227 SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: MD16X1824E AAMD16XAA ICAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:34:51 PM Sample Weight: 1
Instrument ID: CP25-18274 Dilution Factor: 1
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	70806	.456	TCX	2.678	111840	.438	TCX
6.614	75258	.586	DCB	6.213	97116	.517	DCB

Files:
Area File: 25pcbs18303001.031.RAW
Area File: 25pcbs18303001B.031.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 10:43:23 PM
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MD16X1824E

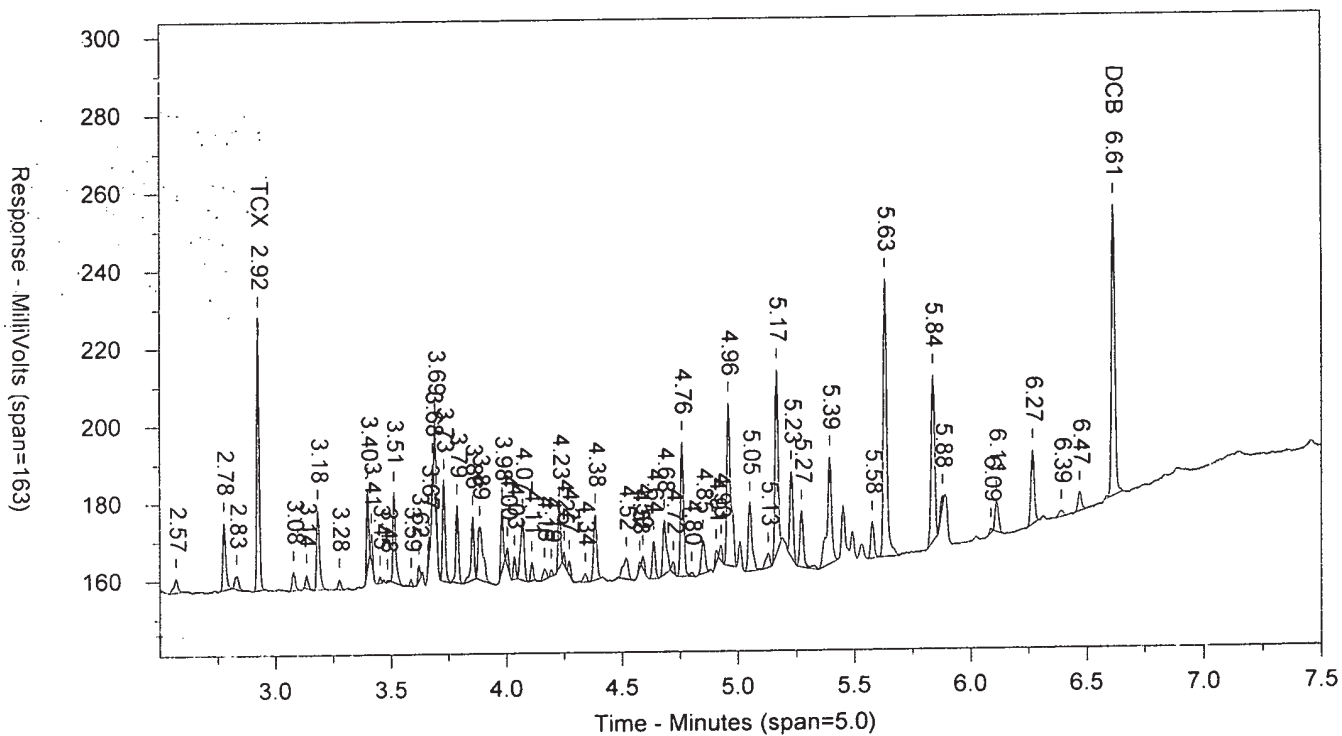
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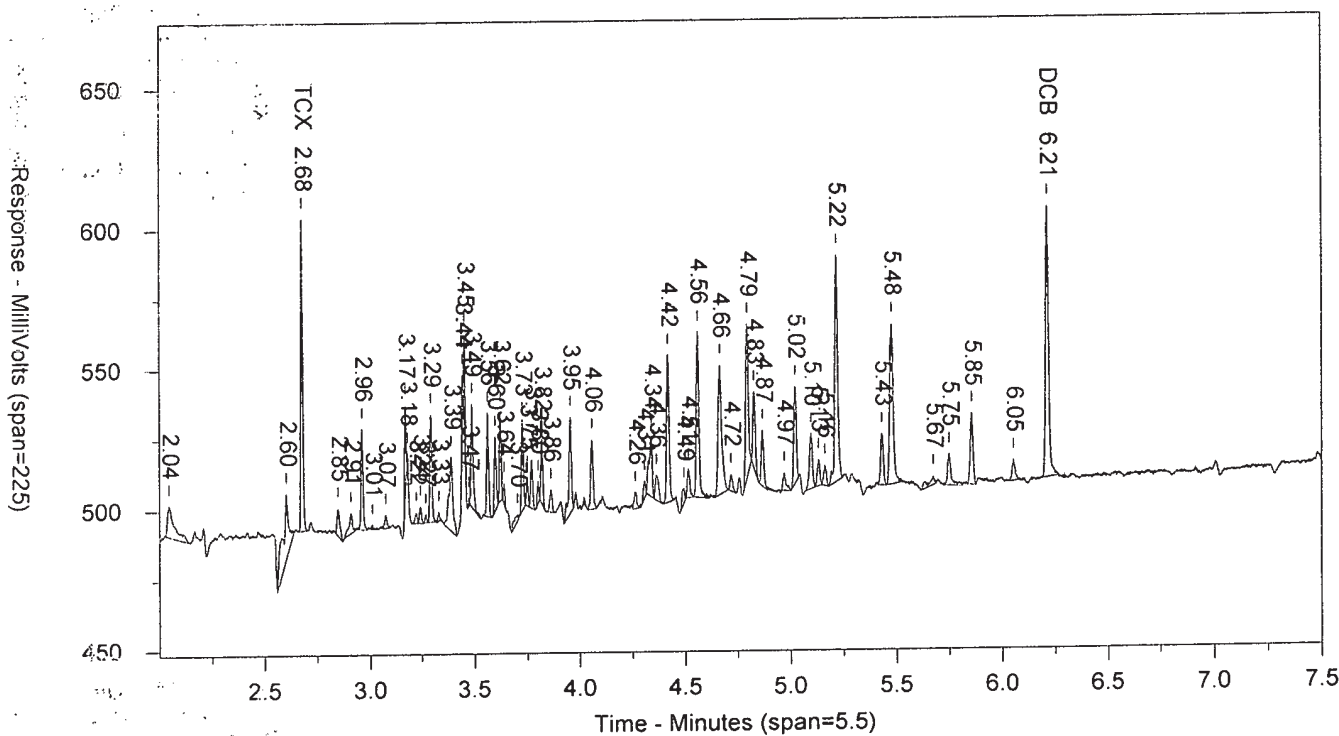
10227

SW-846 8082

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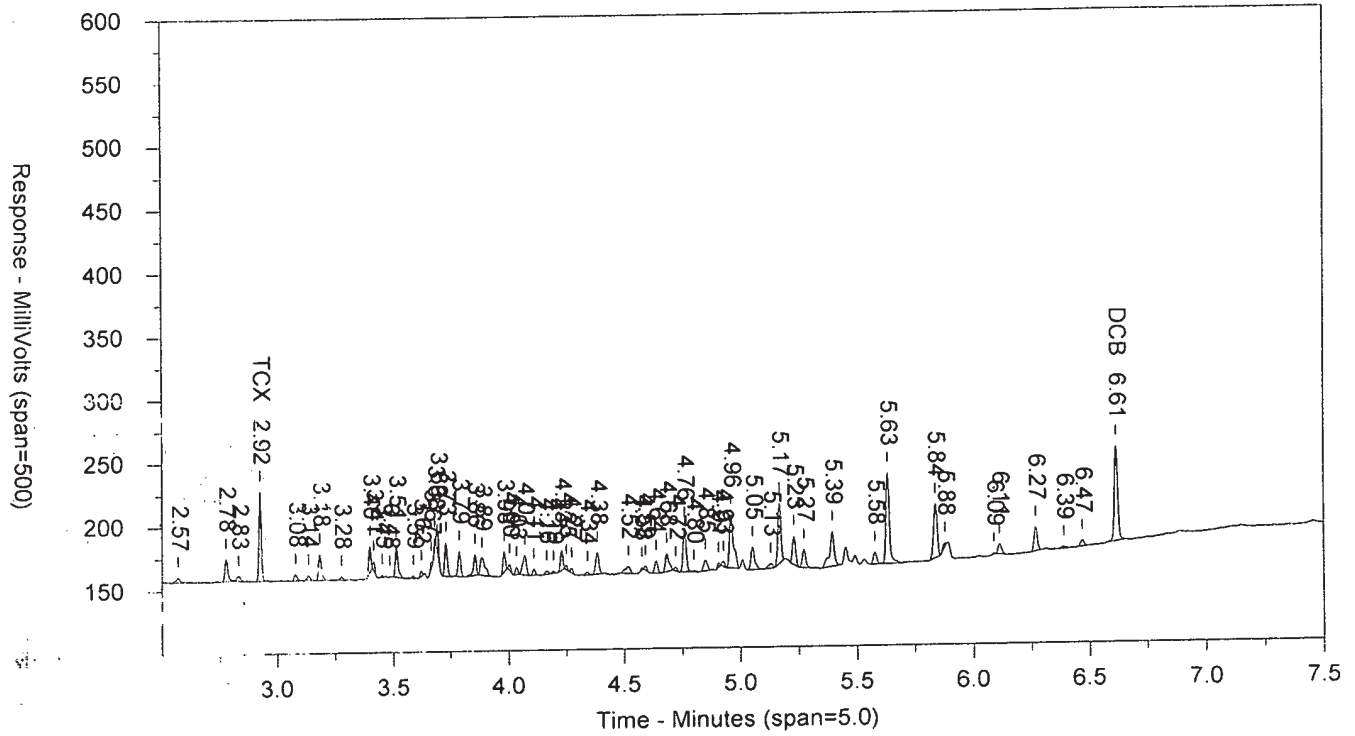
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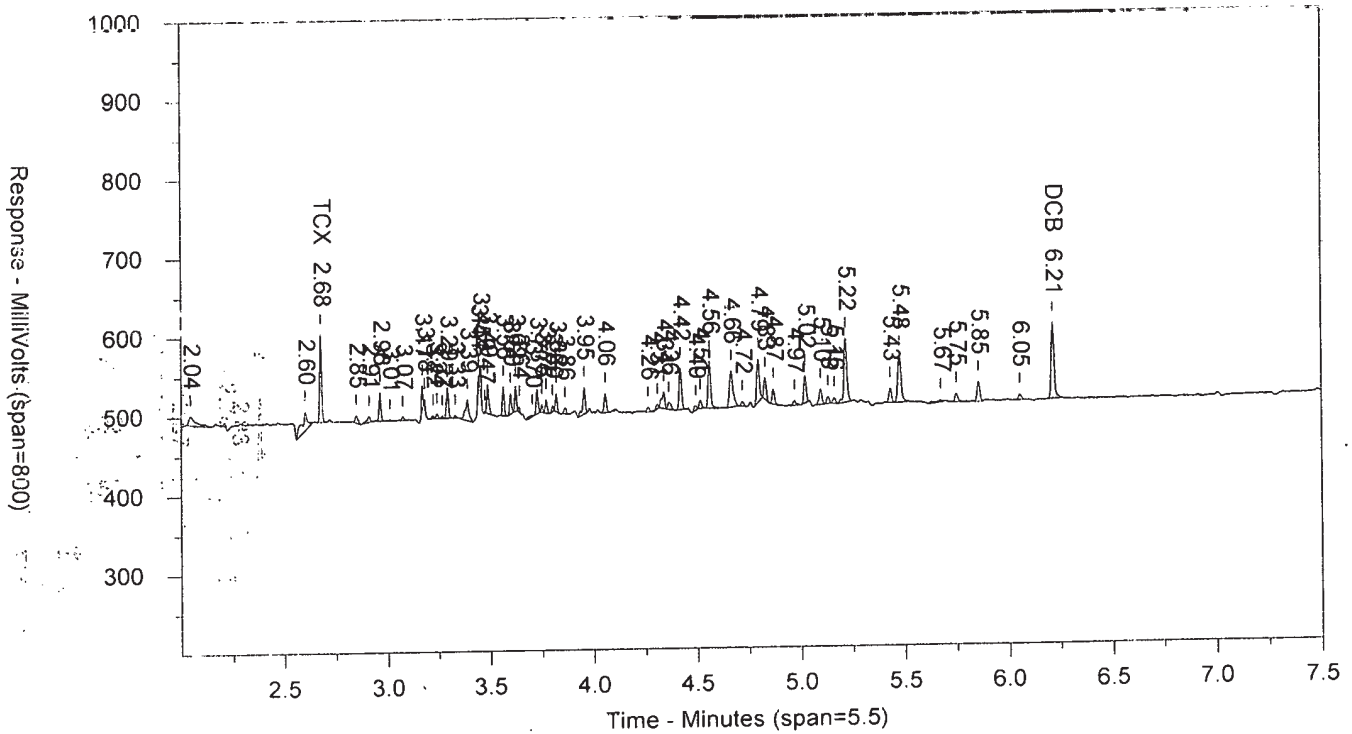
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC16X1824D AAIC16XAA CCAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:45:45 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.032.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.096		9886	16734
2.232		1788	1764
2.311		8310	5962
2.378		1449	1452
2.422		3231	3033
2.494		1373	1431
2.569		17645	17736
2.776		71820	71876
2.832		2367	3293
2.926	TCX	78974	66736
3.078		140143	127615
3.135		110942	84031
3.182		522790	412520
3.276		82447	61850
3.314		2262	1555
3.397		510369	319328
3.413		213875	110300
3.45		58454	32783
3.466		33803	16040
3.482		28272	15248
3.513		661226	536974
3.563		3864	2007
3.586		56763	40815
3.622		122160	71246
3.636		44921	23710
3.681		210981	128254
3.691		566417	321596
3.728		763713	596277
3.787		609852	509180
3.827		55108	37967
3.854		405437	304254
3.884		332198	571055
3.978		435164	333357
4.002		127413	83469
4.033		163387	120336
4.068		379460	428370
4.108		114307	92142
4.138		2330	1132
4.153		8725	6051
4.189		42869	31426
4.227		386318	312527
4.246		38330	20661
4.271		62050	47086
4.337		64270	56736
4.38		486172	475595
4.414		10931	7105
4.475		10693	10137
4.516		179990	185551
4.574		18635	18934
4.587		127102	93520
4.634		269762	256716
4.679		488712	549164
4.717		110490	81827
4.756		1072242	1063204

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.798		35543	30592
4.845		149500	169921
4.878		19276	12637
4.903		188441	182762
4.955		1302570	1678957
5.005		242184	226562
5.049		625042	712003
5.128		120679	140756
5.164		1585895	1710124
5.227		807799	768281
5.269		500784	491321
5.368		73417	73869
5.392		815591	777807
5.449		438372	440120
5.49		217104	203853
5.574		326286	328642
5.63		2428648	2664400
5.837		1360107	1451563
5.375		88013	102533
5.89		187650	141471
6.022		55162	55527
6.084		43021	31307
6.108		259144	246153
6.265		697246	728579
6.31		44365	41086
6.465		248488	259938
6.612	DCB	32786	32954
6.691		3342	3448
6.892		927	1034

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC16X1824D AAIC16XAA CCAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:45:45 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c:to:250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.032.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

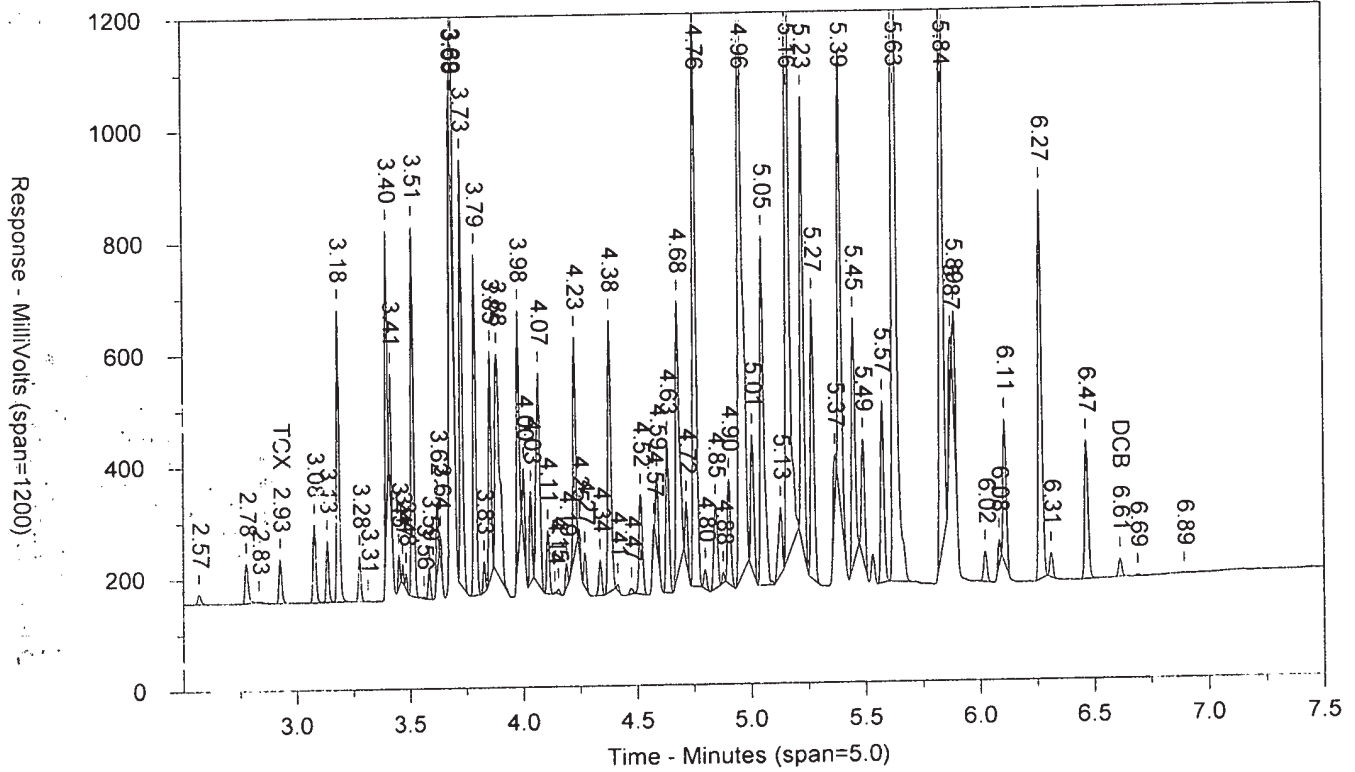
RT B	Compound B	Height B	Area B
2.045		19164	47488
2.361		20886	19506
2.584		11481	18645
2.603		71242	95492
2.72		104767	98423
2.849		252178	180059
2.909		181873	118217
2.962		864286	554899
3.074		128620	87667
3.17		731006	372226
3.181		241936	87838
3.222		119974	74923
3.244		93833	56130
3.269		75108	42674
3.293		1017116	716290
3.331		84624	53467
3.377		225688	121298
3.392		132197	63013
3.443		444626	209105
3.452		993188	431663
3.478		45994	16952
3.487		4969791	659260
3.561		1012916	662096
3.596		652571	415343
3.62		859890	491700
3.638		197964	98452
3.655		12268	6774
3.724		822452	549788
3.748		290951	159862
3.769		276469	173282
3.8		229869	124569
3.817		478557	286338
3.861		186655	138555
3.907		91083	96687
3.932		62463	39414
3.953		709709	478187
3.979		85245	49369
3.999		16785	8472
4.018		89002	59810
4.055		686564	502348
4.09		29789	17618
4.106		73073	46730
4.193		212955	230995
4.238		11159	6195
4.261		160992	119728
4.305		207830	133857
4.324		108364	52740
4.337		530156	318793
4.362		283886	302858
4.416		1690249	1336214
4.459		58239	48527
4.488		112444	73522
4.513		356283	266655
4.557		1902249	1545720

Chrom Perfect Chromatogram Report

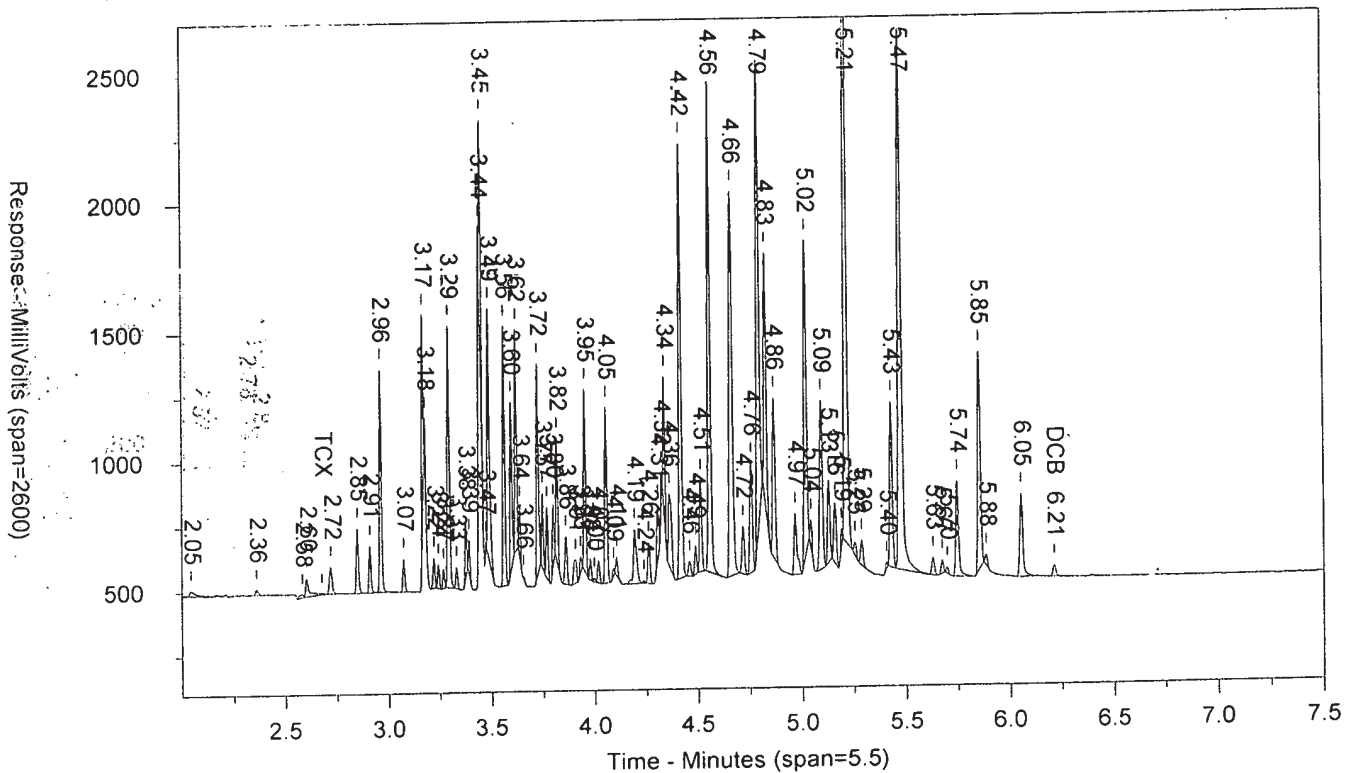
RT B	Compound B	Height B	Area B
4.662		1495106	1558719
4.716		186625	157896
4.756		425725	366207
4.792		1814083	1565138
4.825		983009	745753
4.865		626363	536201
4.966		238793	241090
5.018		1219417	1033228
5.042		106836	69856
5.093		657872	623577
5.128		320168	258811
5.152		233265	203497
5.19		75580	42752
5.213		3064727	2655086
5.254		51073	38114
5.286		98749	79056
5.405		24096	16514
5.428		643737	561558
5.473		2100851	2443015
5.628		70341	62794
5.673		53548	40997
5.696		24644	17006
5.745		372931	367901
5.852		849518	766949
5.884		41526	28949
6.052		323789	328715
6.211	DCB	45784	47692

IC16X1824D AAIC16XAA CCAL 1830299999 10227 SW-846 8082

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LANCASTER LABORATORIES

Sample Number: IC16X1824D AAIC16XAA CCAL 1830299999 10227

SW-846 8082

Injected On: 10/30/2018 10:45:45 PM

Sample Weight: 1

Instrument ID: CP25-18274

Dilution Factor: 1

Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min

Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um

Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um

Injection Volume: 1 ul

Threshold: 7

Calibration Type: external

Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.926	78974	.509	TCX		0		TCX
6.612	32786	.255	DCB	6.211	45784	.244	DCB

Files:

Area File: 25pcbs18303001.032.RAW

Area File: 25pcbs18303001b.032.RAW

Method A: 25PCBS.MET

Method B: 25PCBSB.MET

Calibration File A: 25PCBS1830301.CAL

Calibration File B: 25PCBS1830301b.CAL

Format A: pestD25.FMTA

Format B: pestD25.FMTB

Area File Created On: 10/30/2018 10:54:17 PM

File Reported On: 10/30/2018 at 10:54:25 PM

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 25pcbs18303001b.032.RAW
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 25PCBSB.MET
 25PCBS1830301.CAL
 25PCBS1830301b.CAL
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 pestD25.FMTB
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IC16X1824D

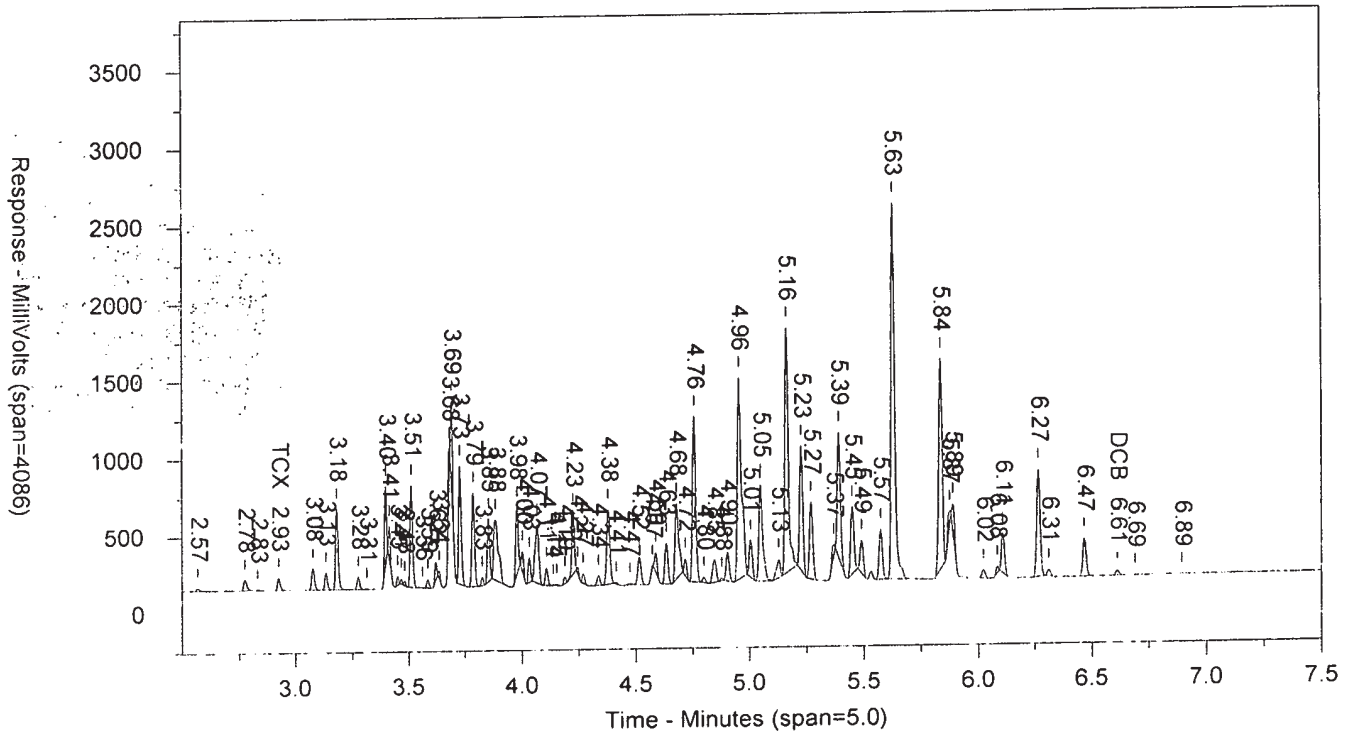
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CCAL 1830299999

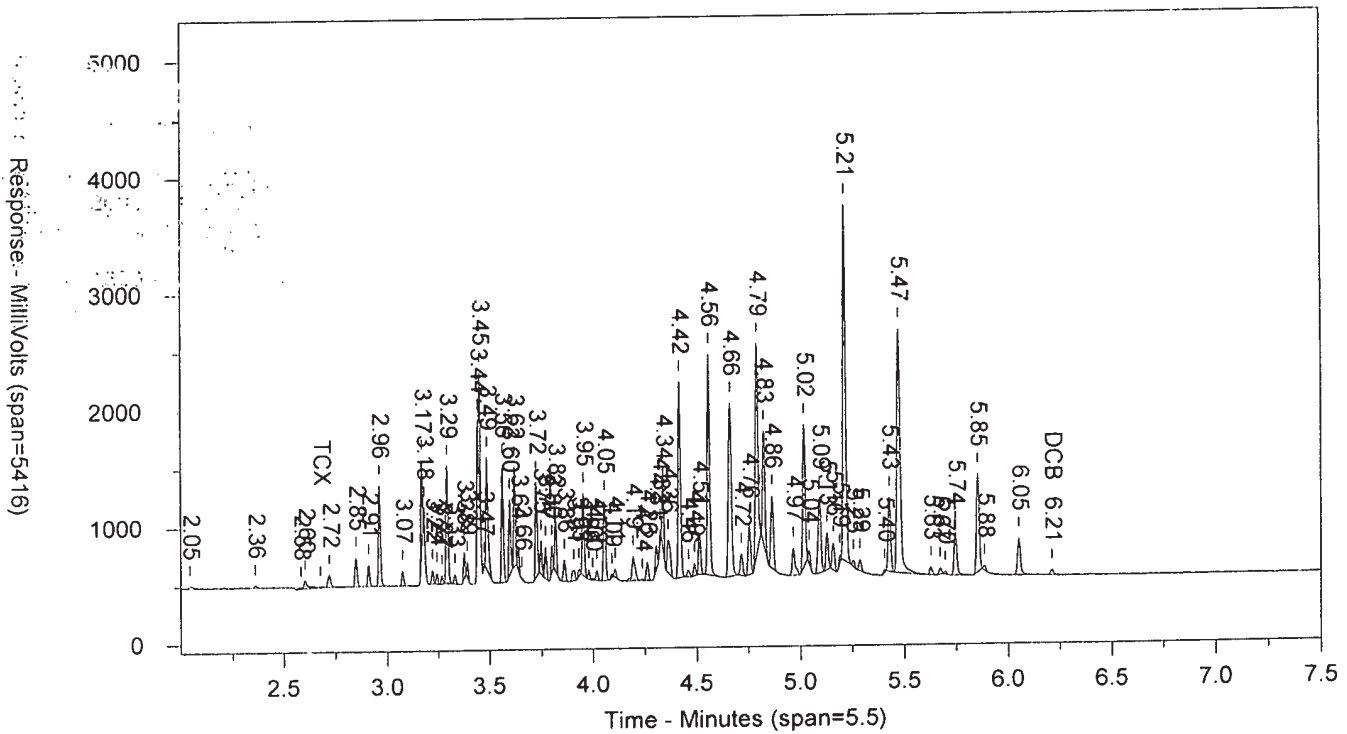
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC48X1824C AAIC48XAA CCAL 1830299999 10227 SW-846 8082
 Injected On: 10/30/2018 10:56:40 PM Injection Volume: 1 ul
 Instrument ID: CP25-18274 Analyst: 9065
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Date File: 25pcbs18303001.033.RAW
 Method File: 25PCBS.MET
 Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		7936	13881
2.232		1731	2087
2.311		9741	7050
2.38		1977	2555
2.423		2129	2316
2.57		8141	7594
2.776		45809	44505
2.832		2023	1880
2.927	TCX	17654	15533
3.079		52376	46402
3.135		17148	13736
3.182		106031	83931
3.276		21642	16814
3.314		977	600
3.396		255117	164745
3.413		64431	33133
3.45		14762	7886
3.467		21829	12717
3.512		275121	222601
3.563		2810	1580
3.586		49882	35510
3.622		45186	26192
3.636		9614	4283
3.681		153658	90933
3.691		206250	121469
3.728		383486	313161
3.786		325200	273341
3.826		51769	36418
3.854		557066	417388
3.881		351033	290439
3.902		91708	49267
3.978		637049	489778
4.002		163025	108555
4.032		234790	175195
4.067		553775	547076
4.108		186478	157907
4.153		18874	13963
4.192		54184	46362
4.226		459896	318520
4.246		553795	360568
4.27		638983	484562
4.336		60385	58228
4.376		574905	505900
4.397		140956	71802
4.413		62041	41206
4.455		8211	5628
4.477		34830	26181
4.52		186303	173677
4.572		242847	228728
4.603		143586	111591
4.634		435581	406860
4.679		5594	3794
4.718		176058	163760
4.756		37145	44403

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.806		45951	39703
4.847		311288	325890
4.927		29108	35699
4.956		25546	18290
4.973		16931	10557
5.048		327178	314985
5.165		83464	77231
5.227		4632	3548
5.374		24535	20103
5.573		18623	16322
5.598		2292	1542
5.629		19987	19200
5.836		15578	16757
5.891		3988	7383
6.023		1123	1103
6.089		765	758
6.111		1796	1531
6.265		5272	5225
6.385		765	624
6.466		3968	4100
6.608	DCB	926	1249
6.645		709	772
6.851		567	990
6.888		1208	1493

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC48X1824C AAIC48XAA CCAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 10:56:40 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.033.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT B	Compound B	Height B	Area B
2.046		15203	37249
2.603		50627	104804
2.721		24334	22745
2.85		92268	68887
2.91		29853	21612
2.963		170244	114971
3.074		38179	25702
3.17		387350	203276
3.222		36317	20933
3.244		49324	31319
3.269		8826	4616
3.294		418367	300379
3.331		76321	47842
3.377		69465	36615
3.391		32664	16319
3.442		365694	180542
3.452		371891	146501
3.473		77786	32669
3.487		447778	306055
3.562		546259	358432
3.596		945121	575134
3.62		869763	499136
3.638		267703	137302
3.725		1135933	751088
3.748		343380	194909
3.77		390764	245447
3.801		175911	94131
3.818		748187	468982
3.861		309355	227489
3.909		60436	53194
3.931		609024	376483
3.954		1489308	969142
3.979		1037791	655393
3.999		77430	38609
4.019		74183	42476
4.056		420741	311415
4.091		731063	566484
4.12		365657	205414
4.168		53385	38239
4.203		256353	207176
4.262		436465	333050
4.295		250014	181558
4.323		657715	510400
4.362		12270	11461
4.42		268720	262637
4.455		63657	48357
4.488		425923	332257
4.557		47954	34687
4.583		31537	22067
4.658		163798	74790
4.712		415614	341168
4.753		214166	10629
4.793		114609	114618
4.983		5452	4405

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
5.019		8272	6121
5.043		37740	30666
5.095		6239	5668
5.191		17008	12222
5.214		20850	19001
5.429		7110	6572
5.473		19862	23674
5.853		7911	7094
6.05		5811	6321

IC48X1824C

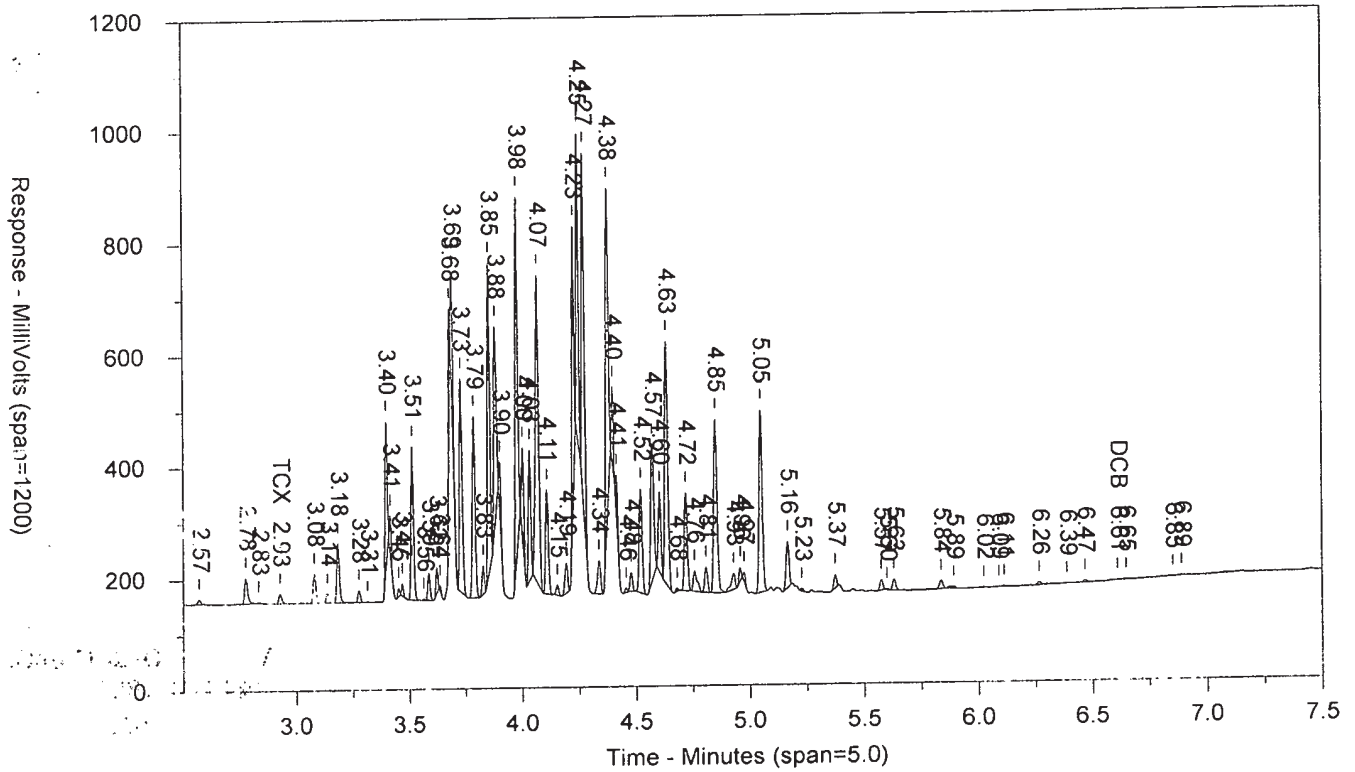
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CCAL 1830299999

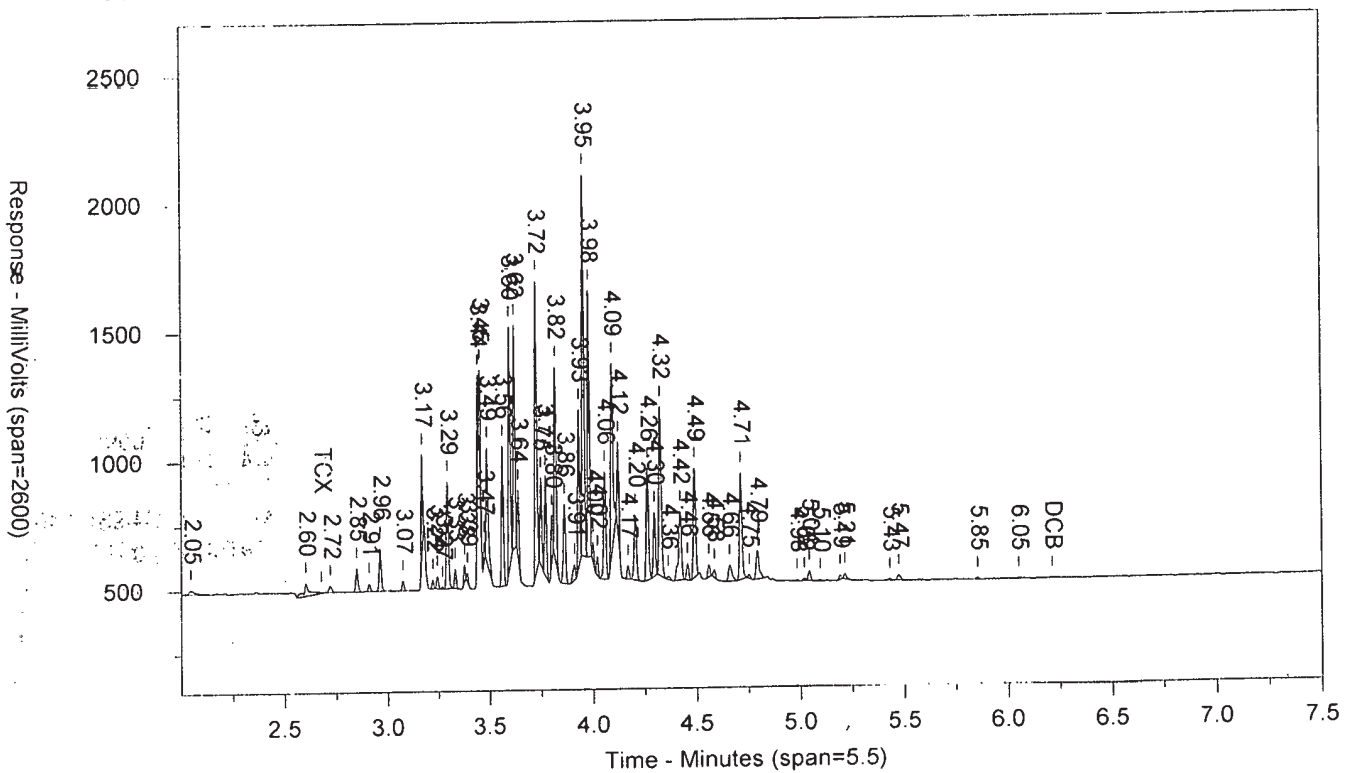
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SW-846 8082

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LANCASTER LABORATORIES

Sample Number: IC48X1824C AAIC48XAA CCAL 183029999 10227 SW-846 8082
 Injected On: 10/30/2018 10:56:40 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.927	17654	.114	TCX		0		TCX
6.608	926	.007	DCB		0		DCB

Files:

Area File: 25pcbs18303001.033.RAW
 Area File: 25pcbs18303001B.033.RAW
 Method A: 25PCBS.MET
 Method B: 25PCBSB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 10/30/2018 11:05:10 PM
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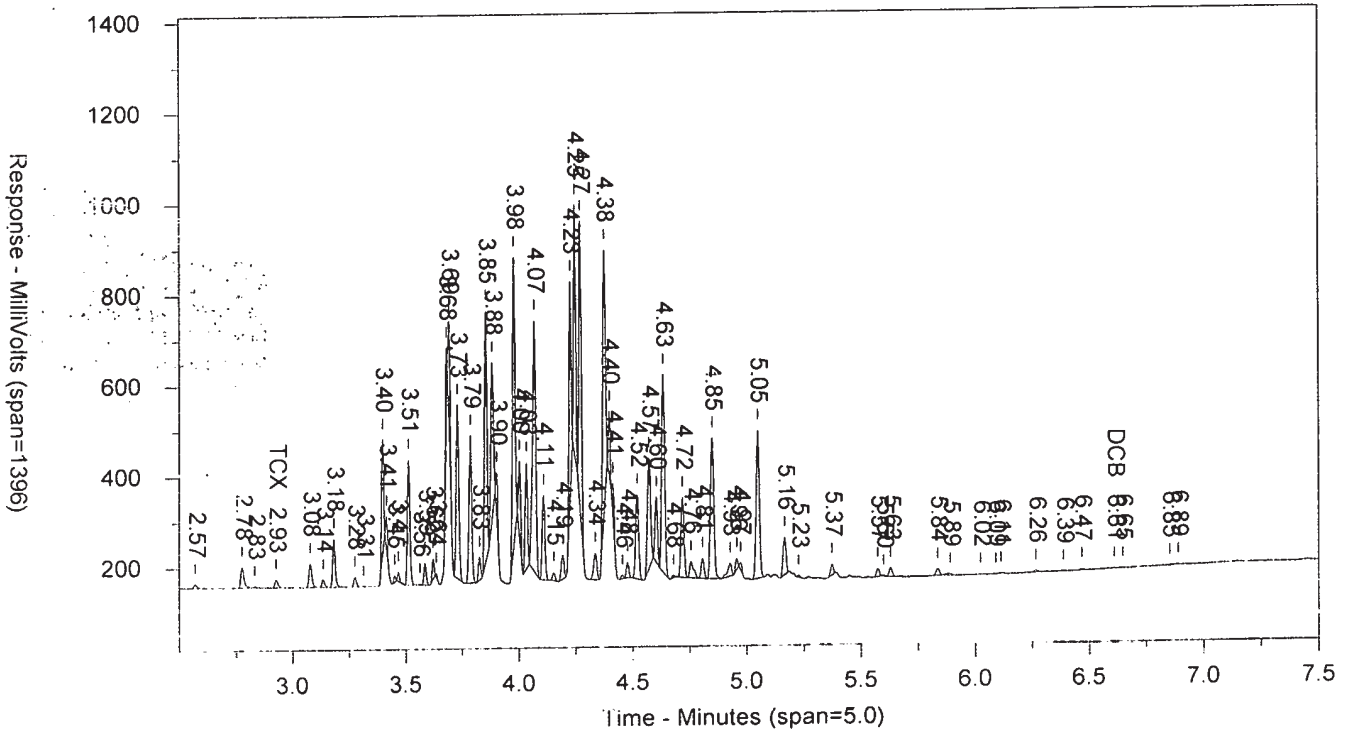
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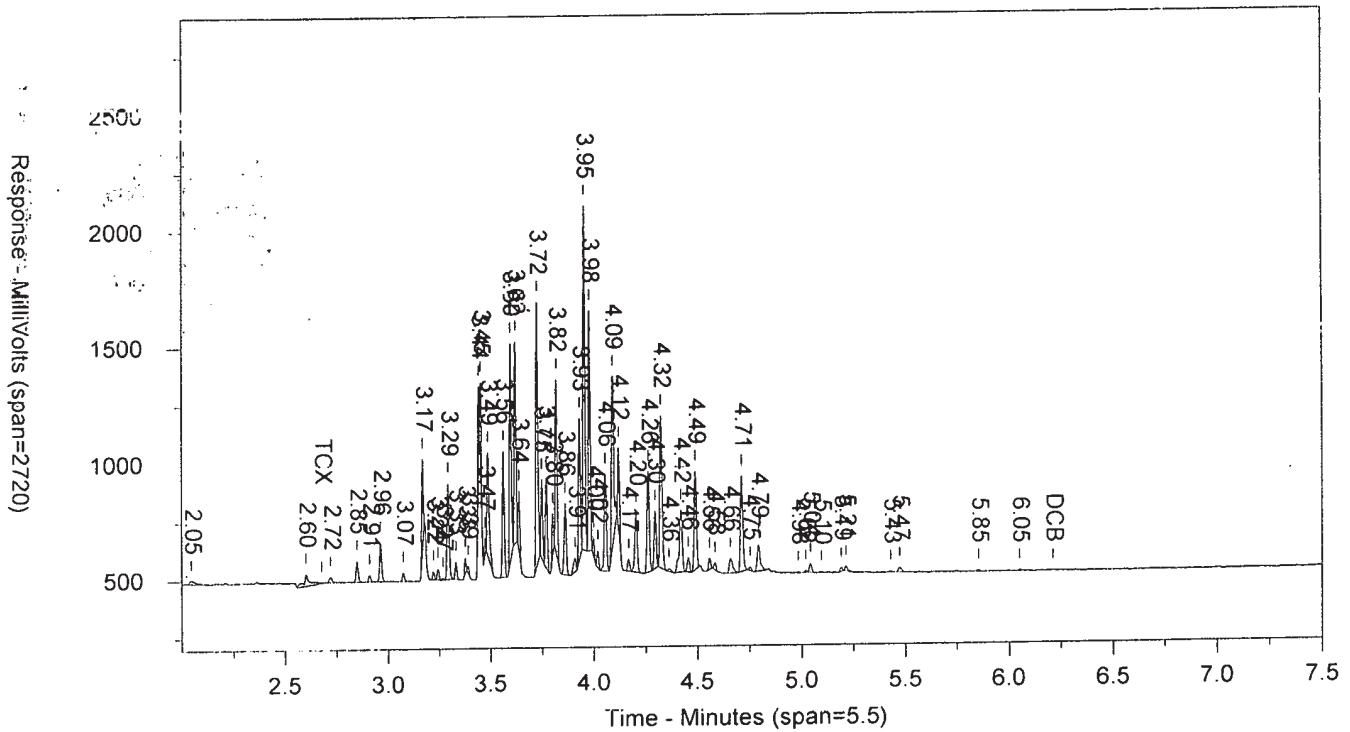
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SW-846 8082

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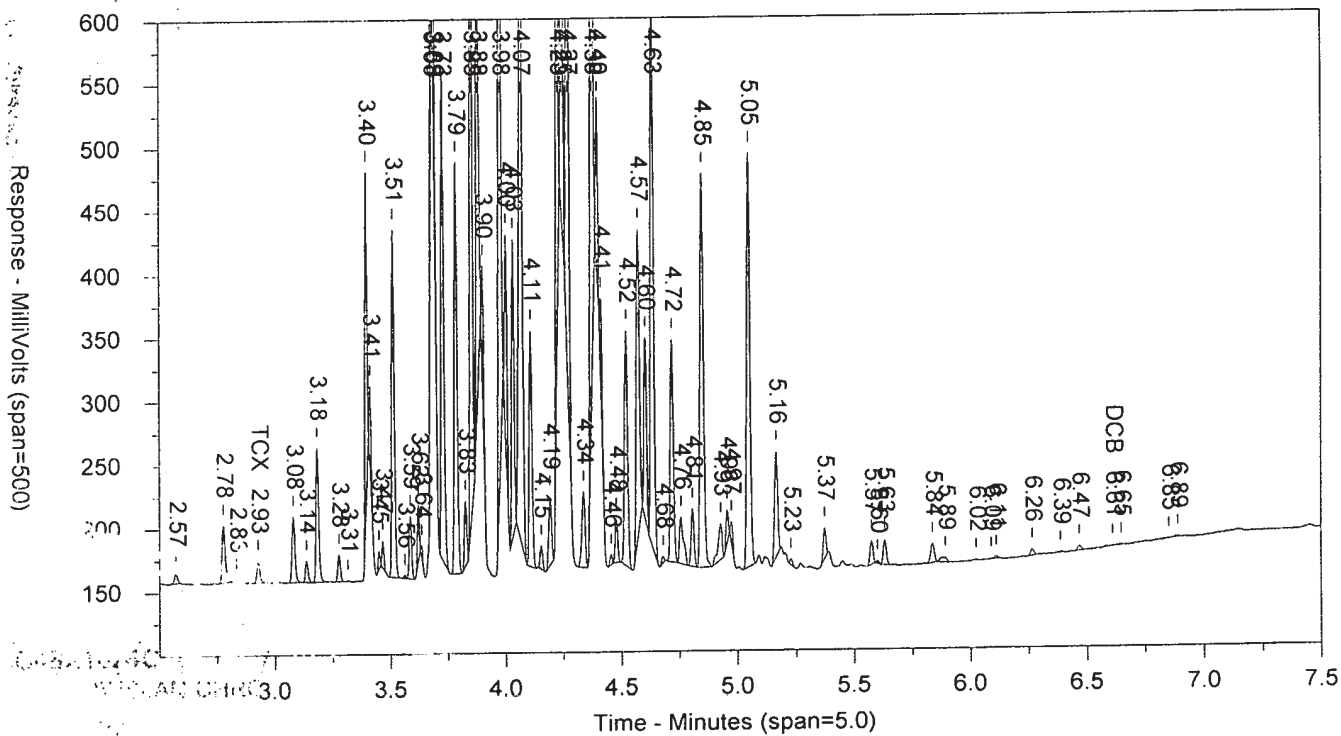
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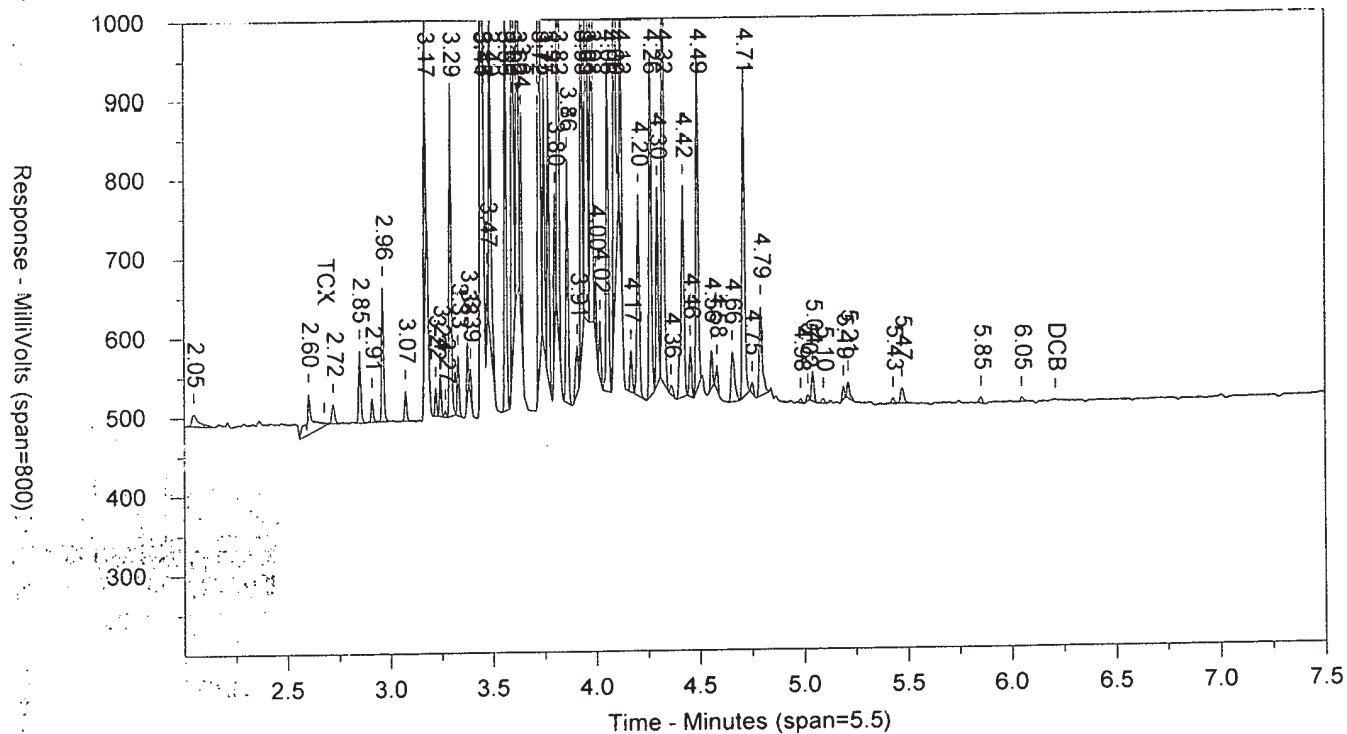
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC54X1824C AAIC54XAA CCAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 11:07:33 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Over Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Date File: 25pcbs18303001.034.RAW
Method File: 25PCBS.MET
Calibration File: 25PCBS1830301.CAL

RT A	Compound A	Height A	Area A
2.095		8513	14452
2.229		2374	2561
2.311		11376	7731
2.378		2045	2474
2.422		3200	3274
2.494		1332	1179
2.57		5945	5279
2.776		36653	34581
2.831		2533	2500
2.928	TCX	7978	7286
3.078		15172	13581
3.136		3638	5271
3.182		26021	22535
3.277		7815	6283
3.397		54619	34899
3.413		8006	5306
3.466		27834	21292
3.512		57591	45373
3.562		3435	1981
3.586		58969	42454
3.621		6036	3823
3.68		13110	6490
3.697		20475	15742
3.729		122245	99967
3.784		59930	48055
3.827		8803	5498
3.853		563019	428568
3.884		163840	194213
3.927		4266	2528
3.977		348106	281168
4		13653	6654
4.032		59586	42309
4.066		168025	197432
4.107		37894	29971
4.137		1859	1156
4.154		9867	6639
4.189		35610	25945
4.226		807420	603410
4.246		300352	175704
4.27		232030	176115
4.337		231716	211170
4.379		1319847	1347438
4.414		437754	363063
4.454		15465	10274
4.478		80543	66210
4.52		456652	439684
4.572		811461	765470
4.603		188443	123317
4.633		1671648	1546975
4.679		74086	54690
4.693		27453	14669
4.717		230727	196790
4.756		517621	556760
4.806		108372	100447

Chrom Perfect Chromatogram Report

RT A	Compound A	Height A	Area A
4.847		1180528	1213266
4.903		109576	94954
4.928		19749	10990
4.956		393272	312109
4.972		179227	111059
5.048		961986	933422
5.091		100427	80735
5.118		89936	137561
5.164		1200534	1118336
5.186		38061	18227
5.203		30008	19067
5.227		31484	21378
5.27		50602	60878
5.374		411738	572736
5.449		53926	48107
5.489		45758	41402
5.573		259460	246357
5.599		34231	21981
5.63		202709	198297
5.669		6274	5620
5.838		171518	169021
5.868		29581	28373
6.033		1747	2348
6.083		8999	7810
6.11		4057	3446
6.266		10186	10703
6.463		1390	1442
6.886		1241	1489

Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC54X1824C AAIC54XAA CCAL 1830299999 10227 SW-846 8082
Injected On: 10/30/2018 11:07:33 PM Injection Volume: 1 ul
Instrument ID: CP25-18274 Analyst: 9065
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Data File: 25pcbs18303001B.034.RAW
Method File: 25PCBSB.MET
Calibration File: 25PCBS1830301b.CAL

RT: B	Compound B	Height B	Area B
2.046		15619	37498
2.603		37723	54745
2.723		11112	11380
2.85		28036	22017
2.912		11269	9004
2.963		44368	31366
3.076		13274	9245
3.171		105572	109971
3.222		5610	2752
3.244		49558	30813
3.295		87719	63228
3.331		88384	56842
3.378		5408	2995
3.389		11357	5980
3.442		28651	13528
3.451		16420	6205
3.473		25326	11486
3.488		120645	99804
3.563		95103	63866
3.596		917790	582685
3.62		409980	246748
3.638		19316	6861
3.656		15951	9568
3.724		590662	387869
3.748		47344	24279
3.77		105719	71454
3.801		115278	64455
3.817		170134	97866
3.86		68230	56222
3.902		63710	59246
3.93		170518	100520
3.953		2140553	1419096
3.979		205517	117121
3.999		195187	112169
4.018		330106	208865
4.055		1765835	1260607
4.088		651845	415638
4.106		420703	236008
4.168		133926	95252
4.203		674614	535694
4.261		1424666	1067892
4.296		366817	283121
4.323		2494120	1917995
4.361		175073	170554
4.417		1150721	1009790
4.455		170346	129767
4.488		1550823	1140798
4.513		214448	151464
4.557		960312	748085
4.582		41262	23942
4.658		839889	878646
4.711		1074245	883010
4.752		243520	219258
4.792		1756223	1779350

Chrom Perfect Chromatogram Report

RT B	Compound B	Height B	Area B
4.84		115858	76855
4.865		52477	35707
4.926		19808	21144
4.984		87090	81765
5.018		79785	54437
5.042		497133	426089
5.093		68348	57188
5.129		54845	44991
5.159		29705	24006
5.191		251931	191296
5.214		200395	179508
5.427		9334	7873
5.471		239091	269231
5.672		13704	16448
5.747		9634	8657
5.853		15292	13905

IC54X1824C

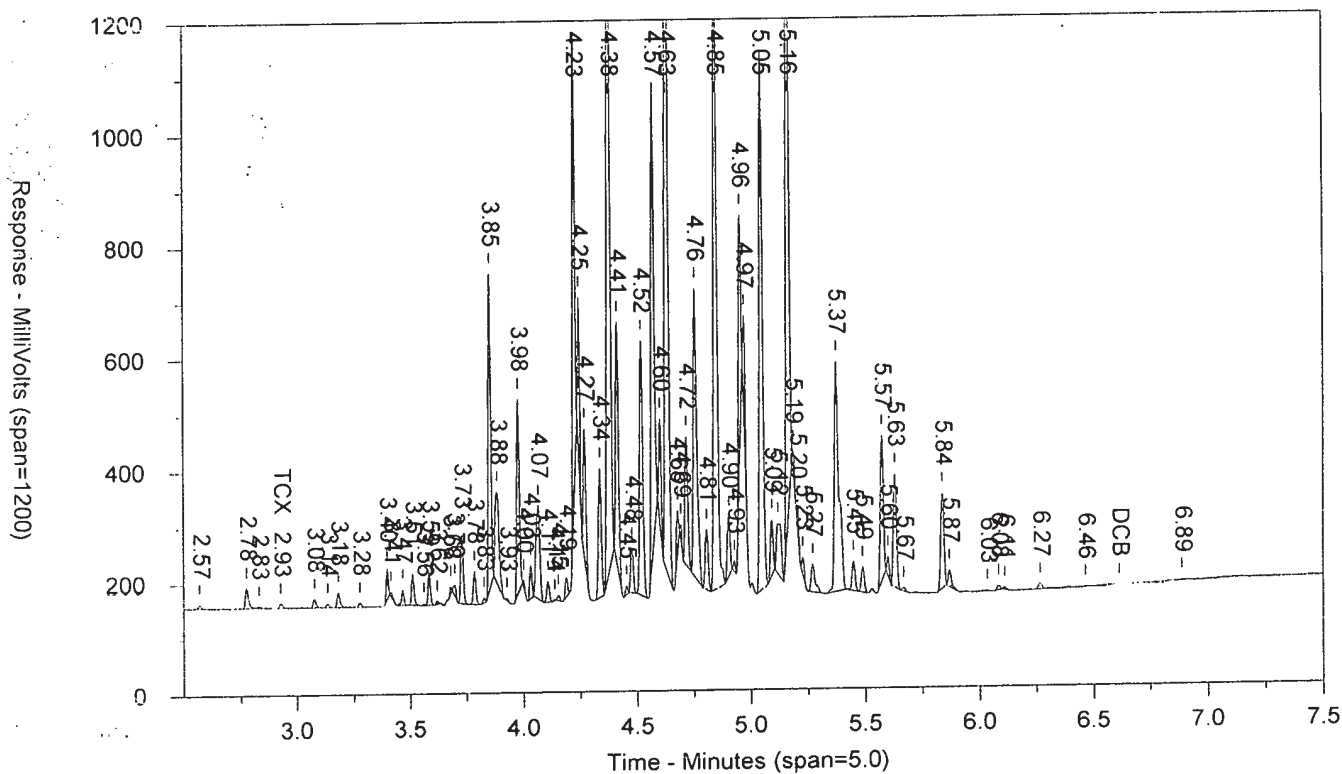
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CCAL 1830299999

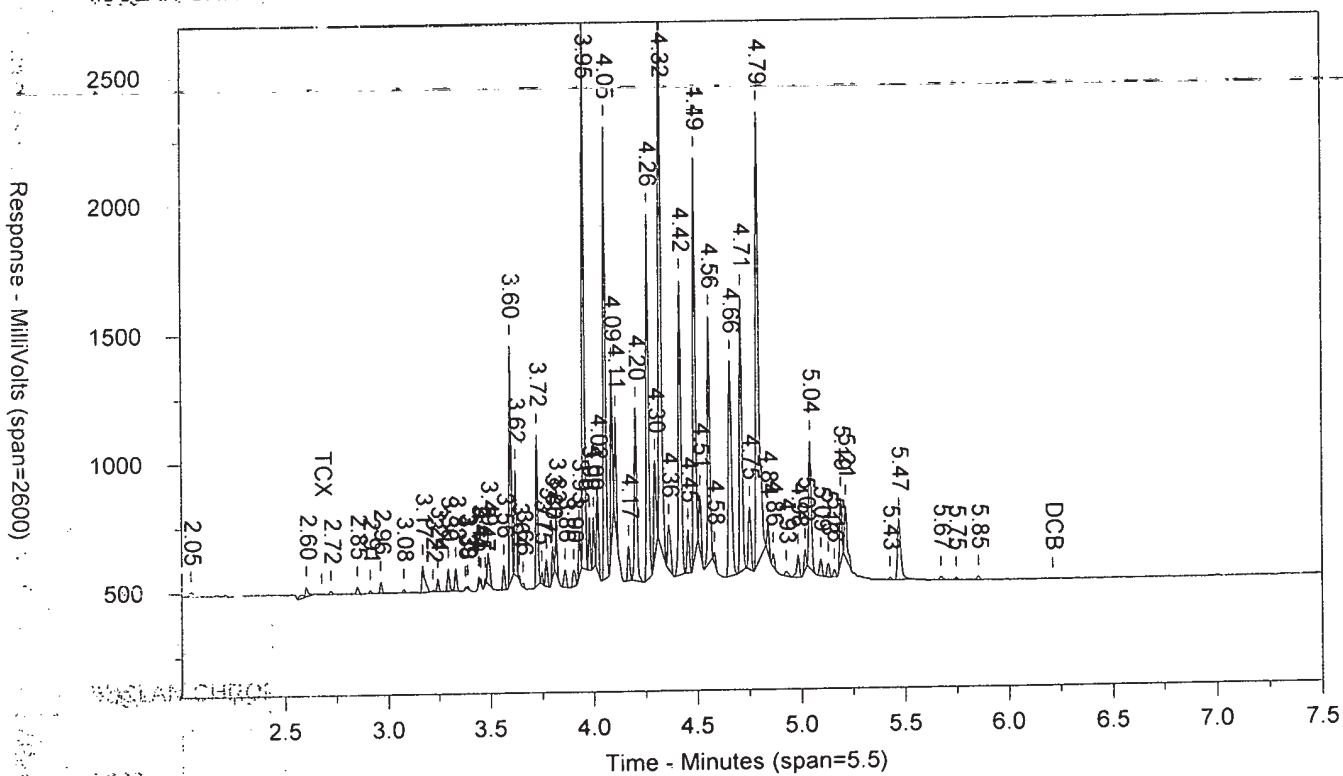
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IC54X1824C AAIC54XAA CCAL 183029999 10227 SW-846 8082
Injected On: 10/30/2018 11:07:33 PM Sample Weight: 1
Instrument ID: CP25-18274 Dilution Factor: 1
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7.0
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.928	7978	.051	TCX		0		TCX

Files:
Area File: 25pcbs18303001.034.RAW
Area File: 25pcbs18303001B.034.RAW
Method A: 25PCBS.MET
Method B: 25PCBSB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 10/30/2018 11:16:04 PM
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IC54X1824C

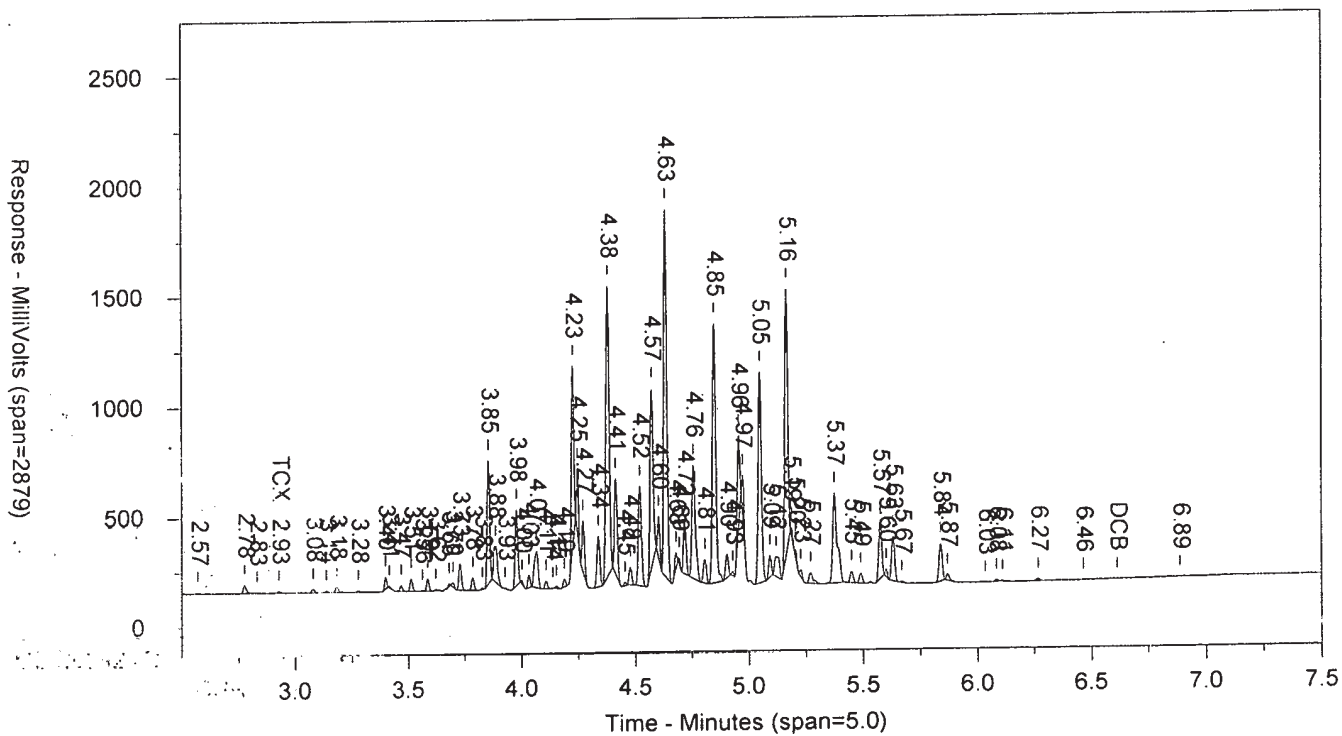
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CCAL 1830299999

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SW-846 8082

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IC54X1824C

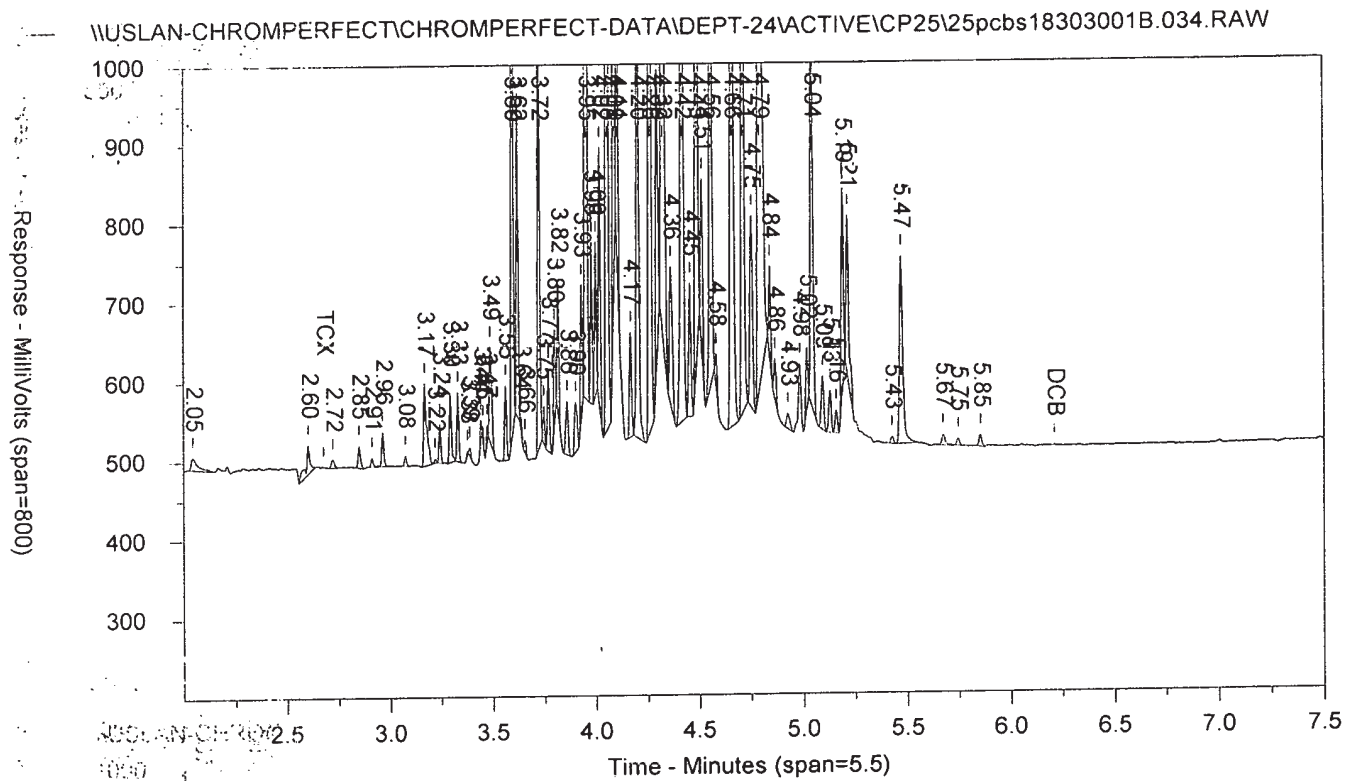
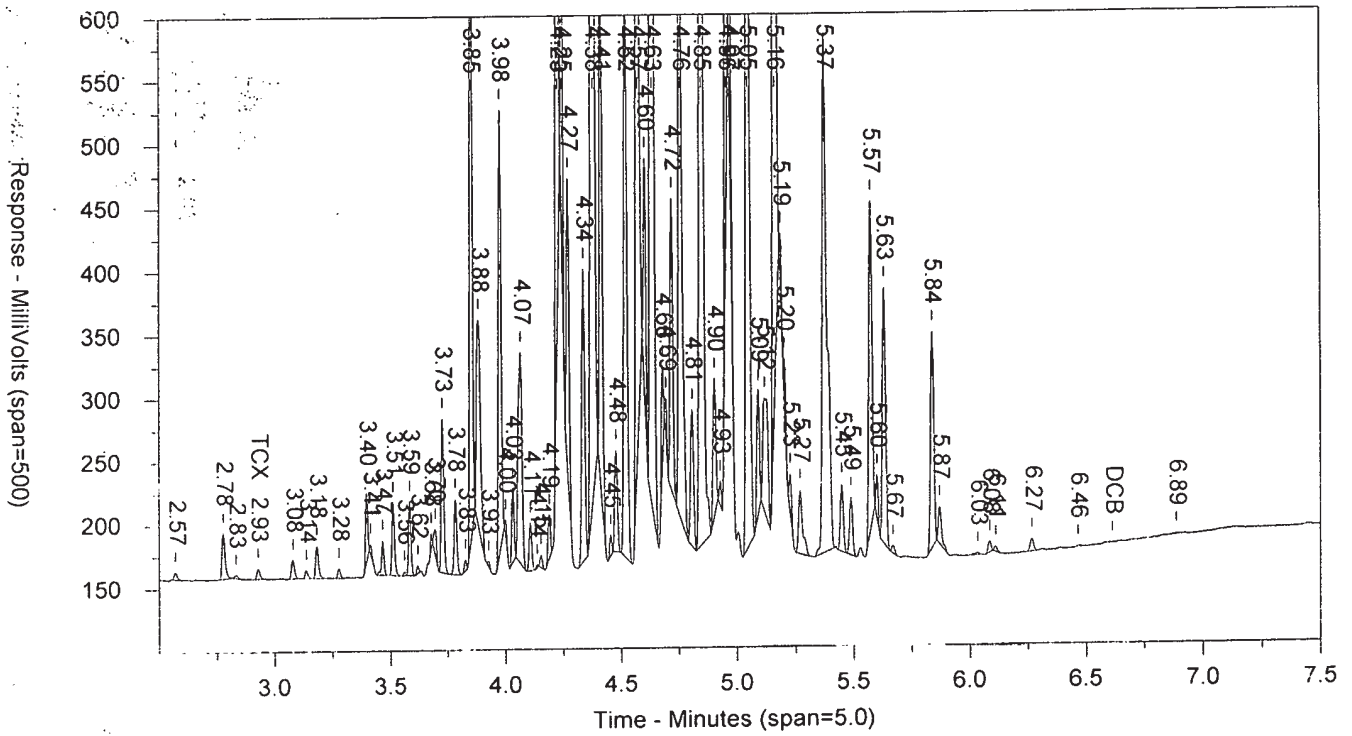
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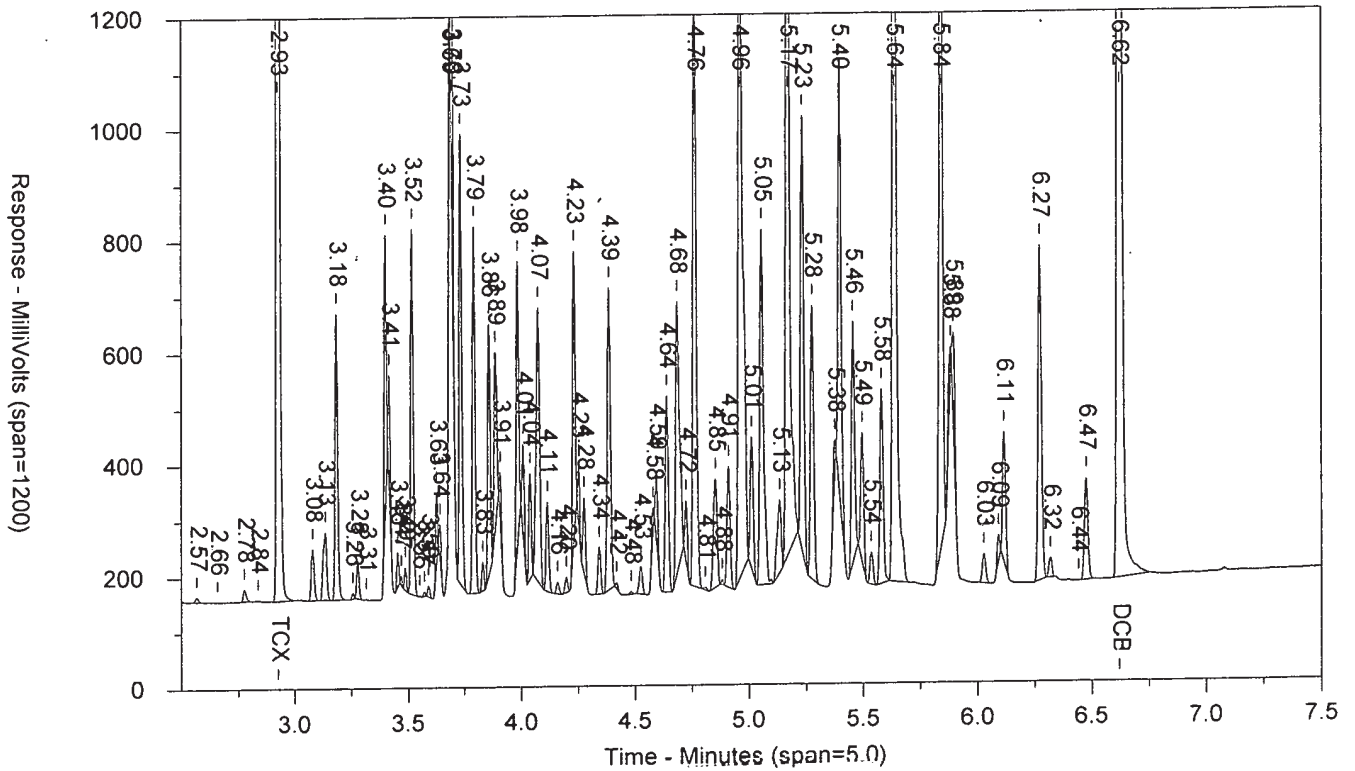
SW-846 8082

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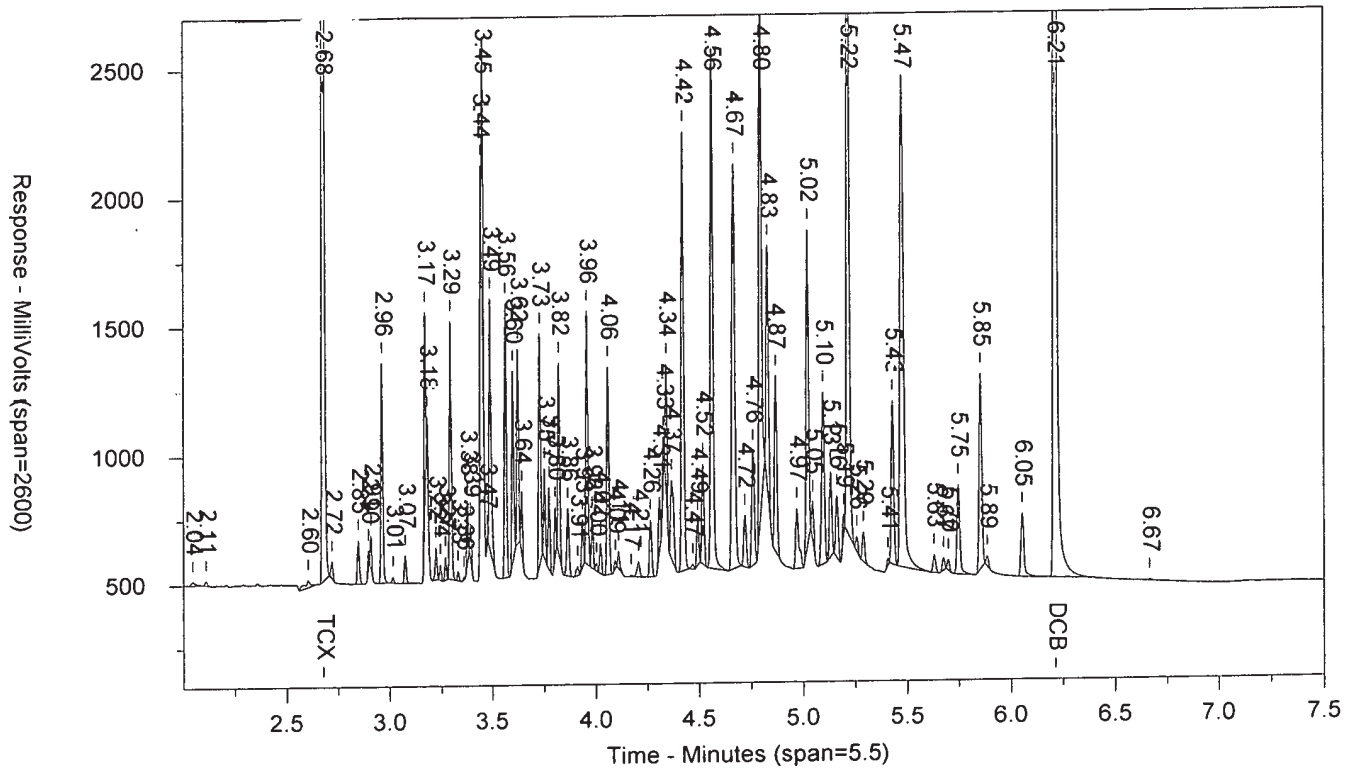


AR1641824D LLAR164LL CCAL 1831199999 10227 SW-846 8082A

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LANCASTER LABORATORIES

Sample Number: AR1641824D LLAR164LL CCAL 1831199999 10227 SW-846 8082A
 Injected On: 11/8/2018 11:00:42 AM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

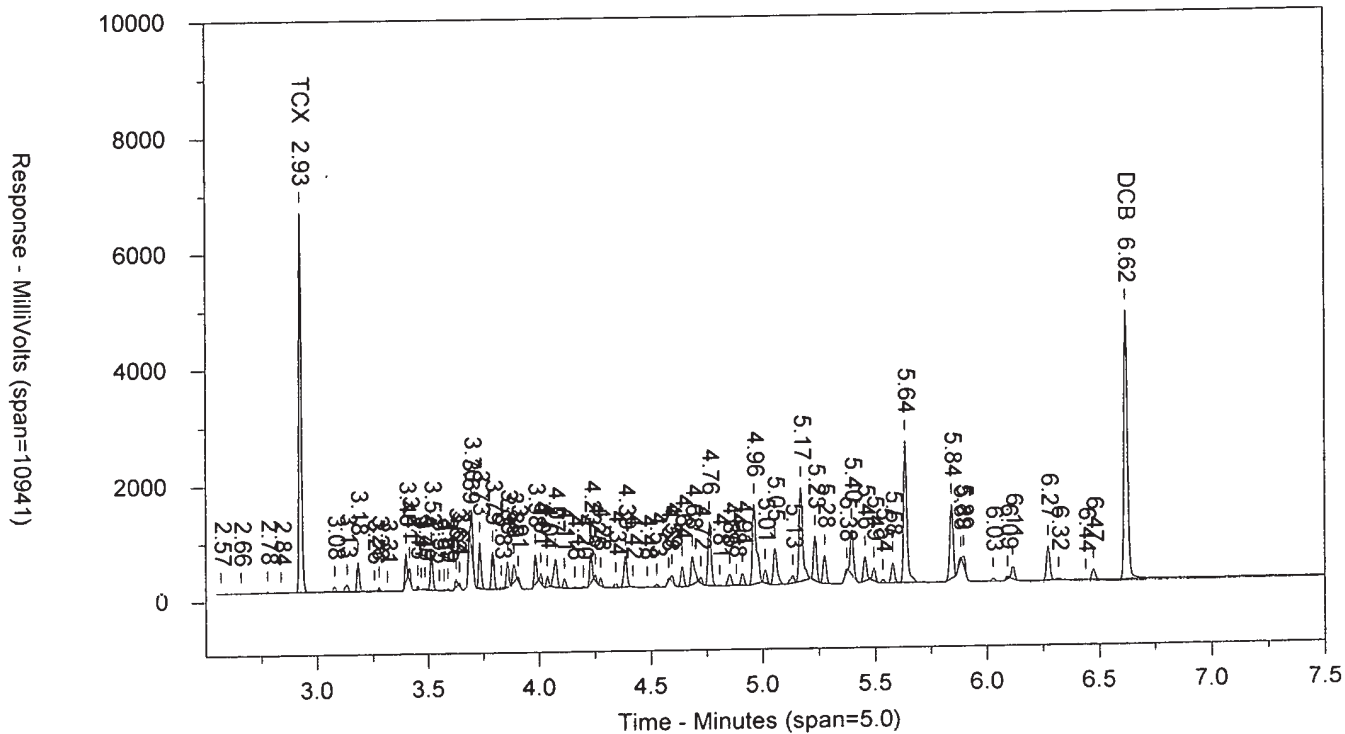
Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	6575227	42.383	TCX	2.678	10555710	41.36	TCX
6.62	4664888	36.348	DCB	6.213	6663804	35.49	DCB

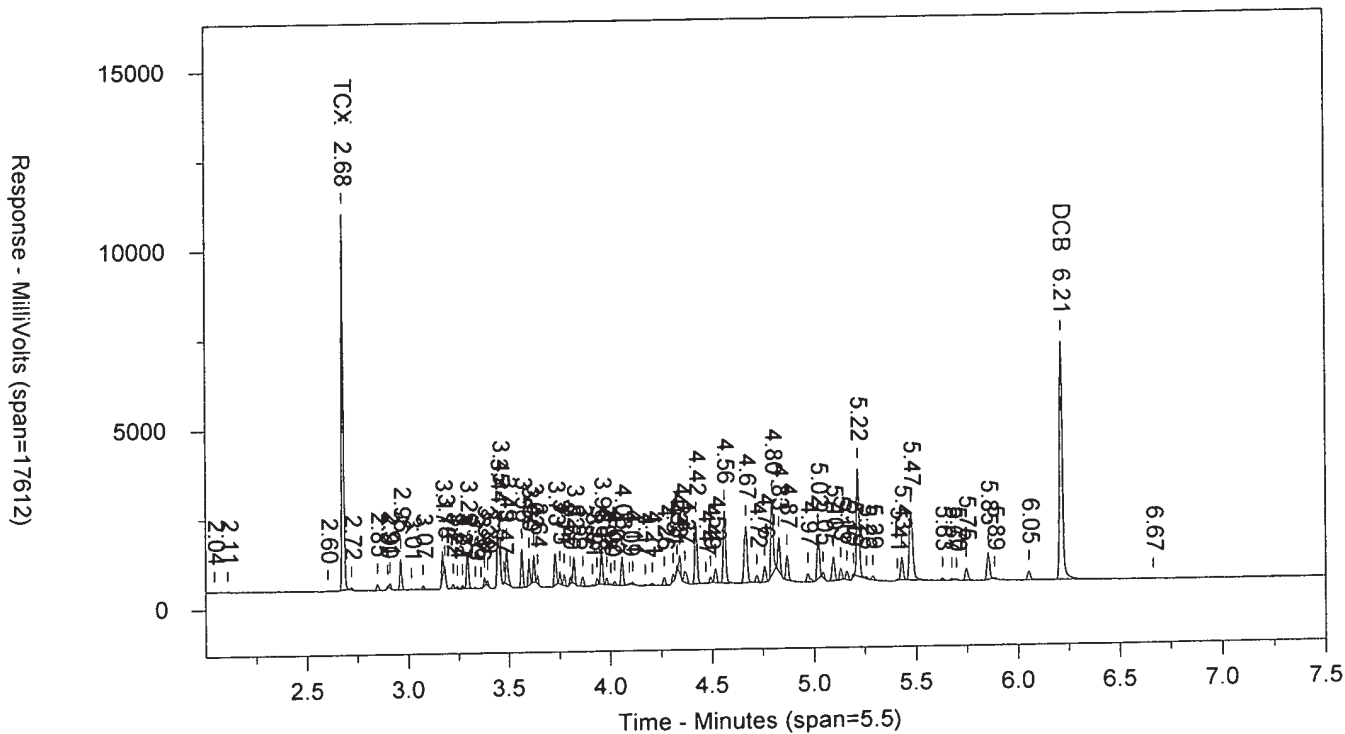
Files:
 Area File: 25pcbs18303009.005.RAW
 Area File: 25pcbs18303009B.005.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
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AR1641824D LLAR164LL CCAL 1831199999 10227 SW-846 8082A

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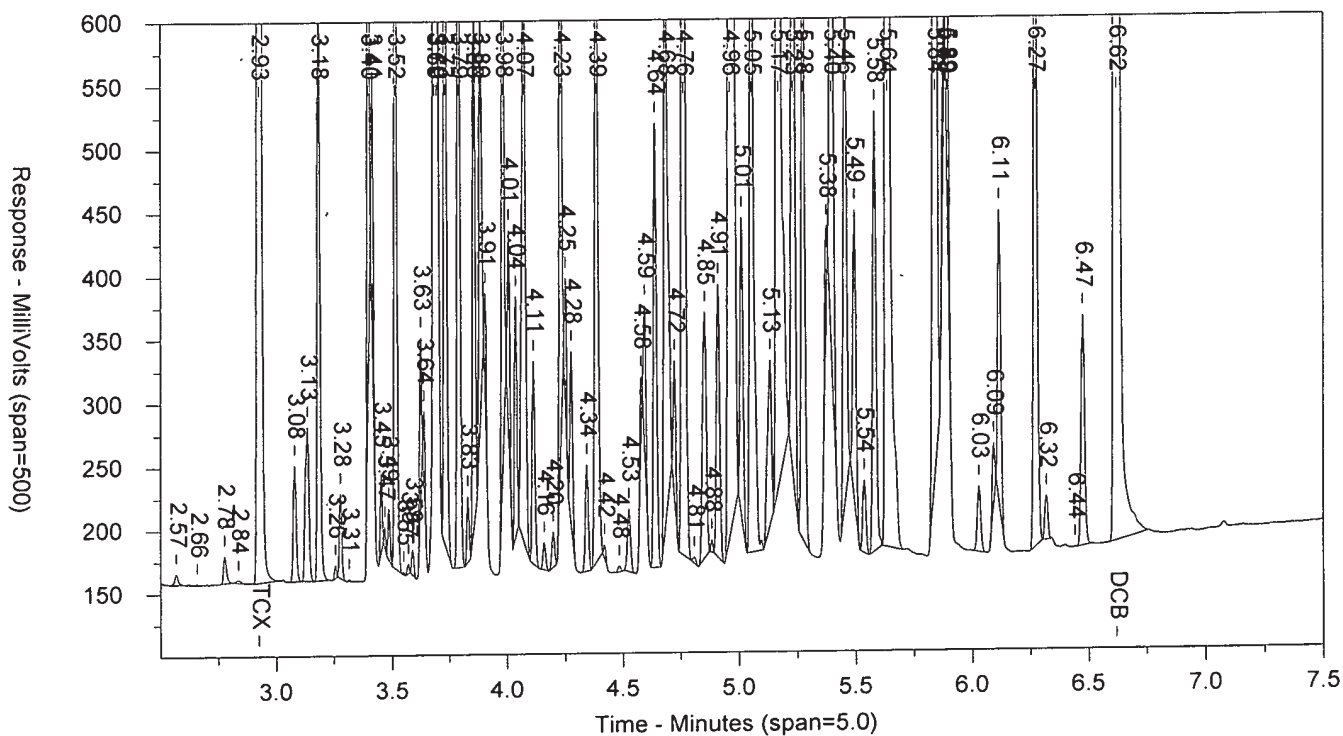
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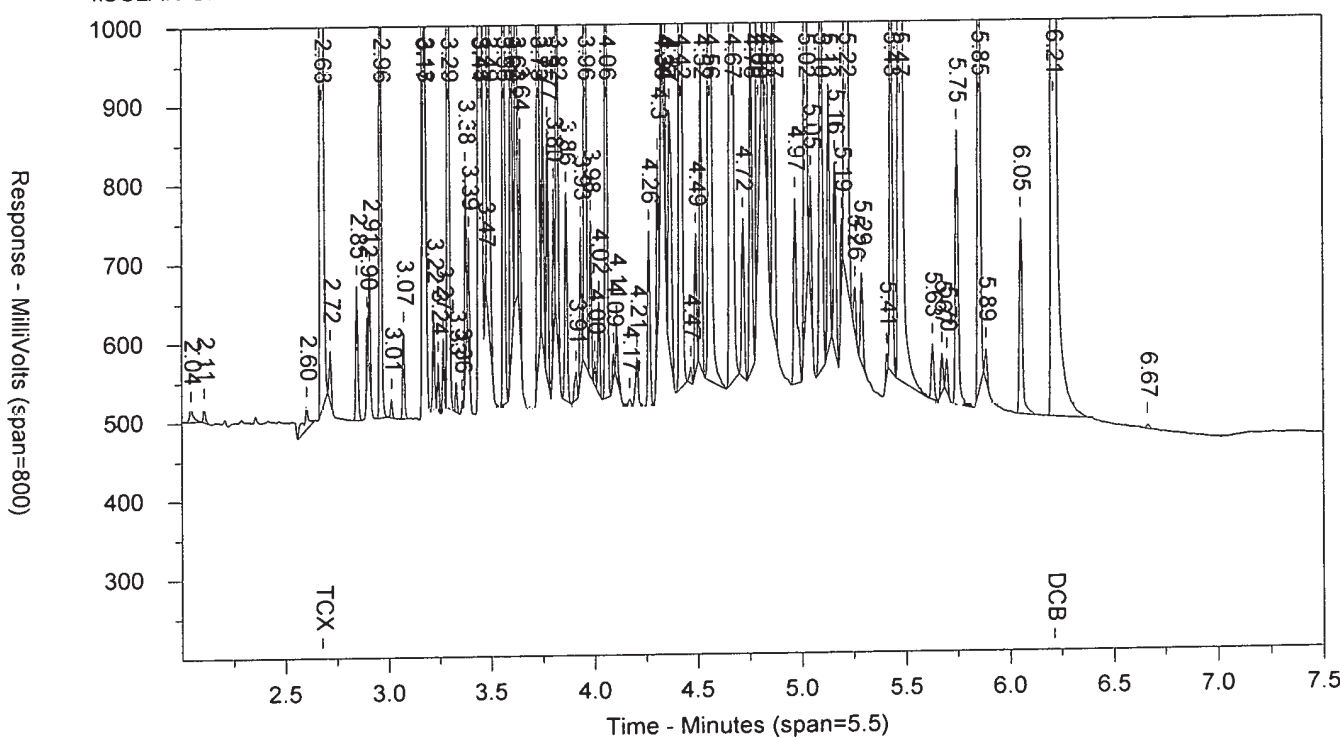
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SW-846 8082A

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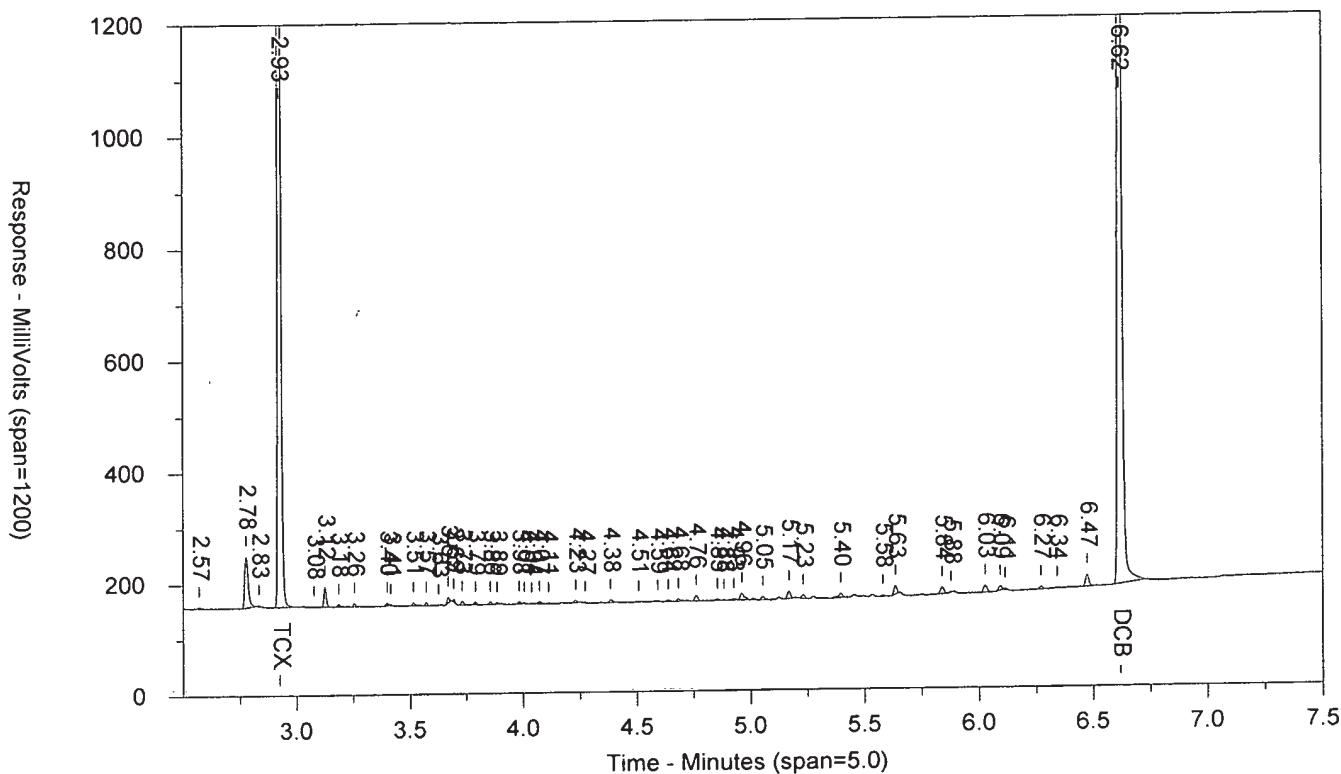
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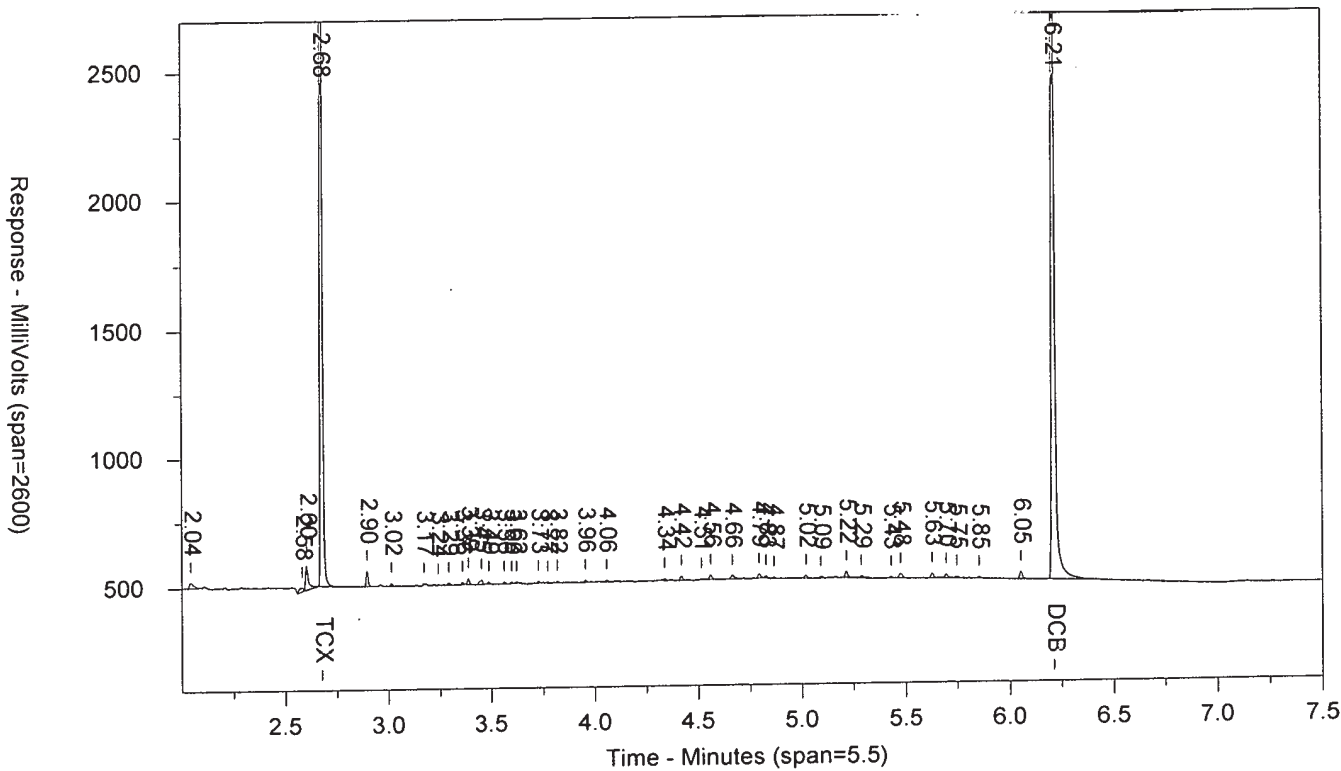
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SW-846 8082A

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IBLKX1824C NVPIBLKNV PIBLK1831199999 10227 SW-846 8082A
 Injected On: 11/8/2018 11:11:36 AM Sample Weight: 1000
 Instrument ID: CP25-18274 Dilution Factor: 10
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	3098993	.2	TCX	2.678	4912855	.192	TCX
6.618	2330775	.182	DCB	6.212	3305418	.176	DCB

Files:
 Area File: 25pcbs18303009.006.RAW
 Area File: 25pcbs18303009B.006.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 11:20:07 AM
 File Reported On: 11/8/2018 at 11:20:14 AM

IBLKX1824C

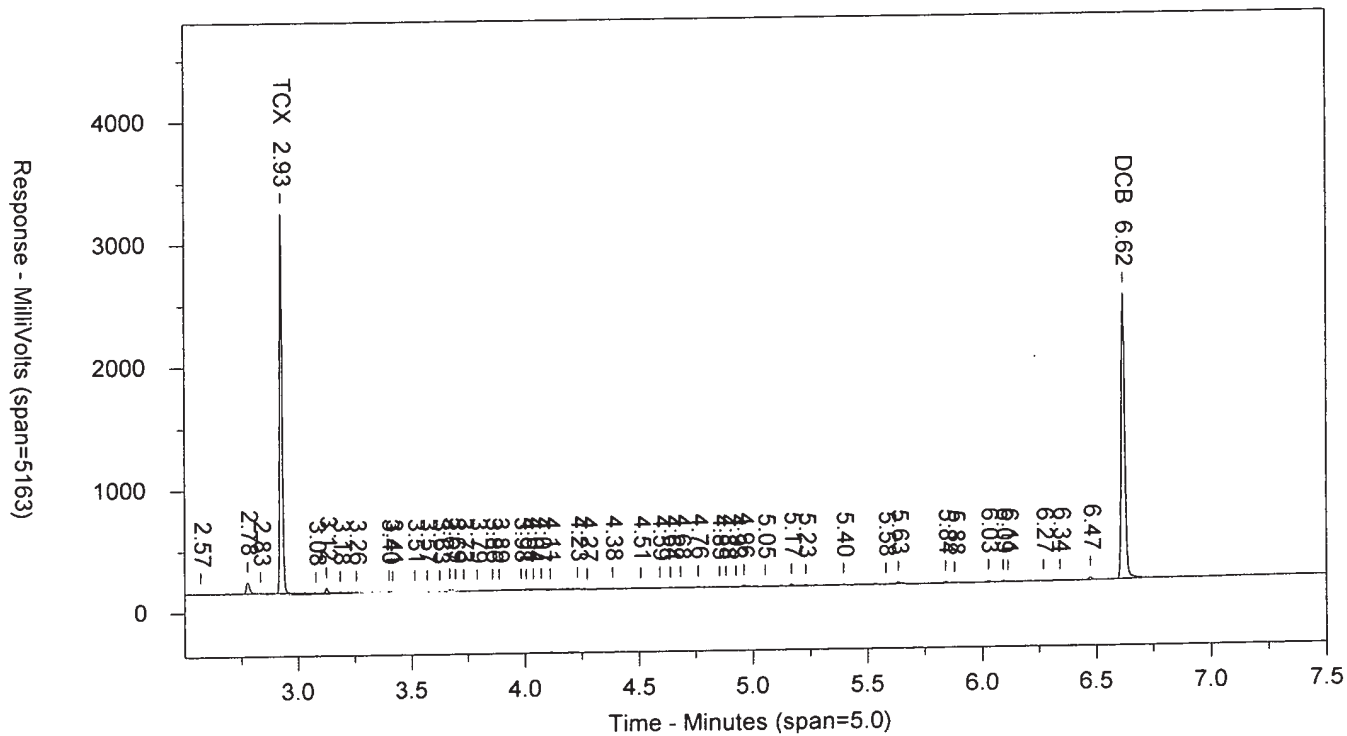
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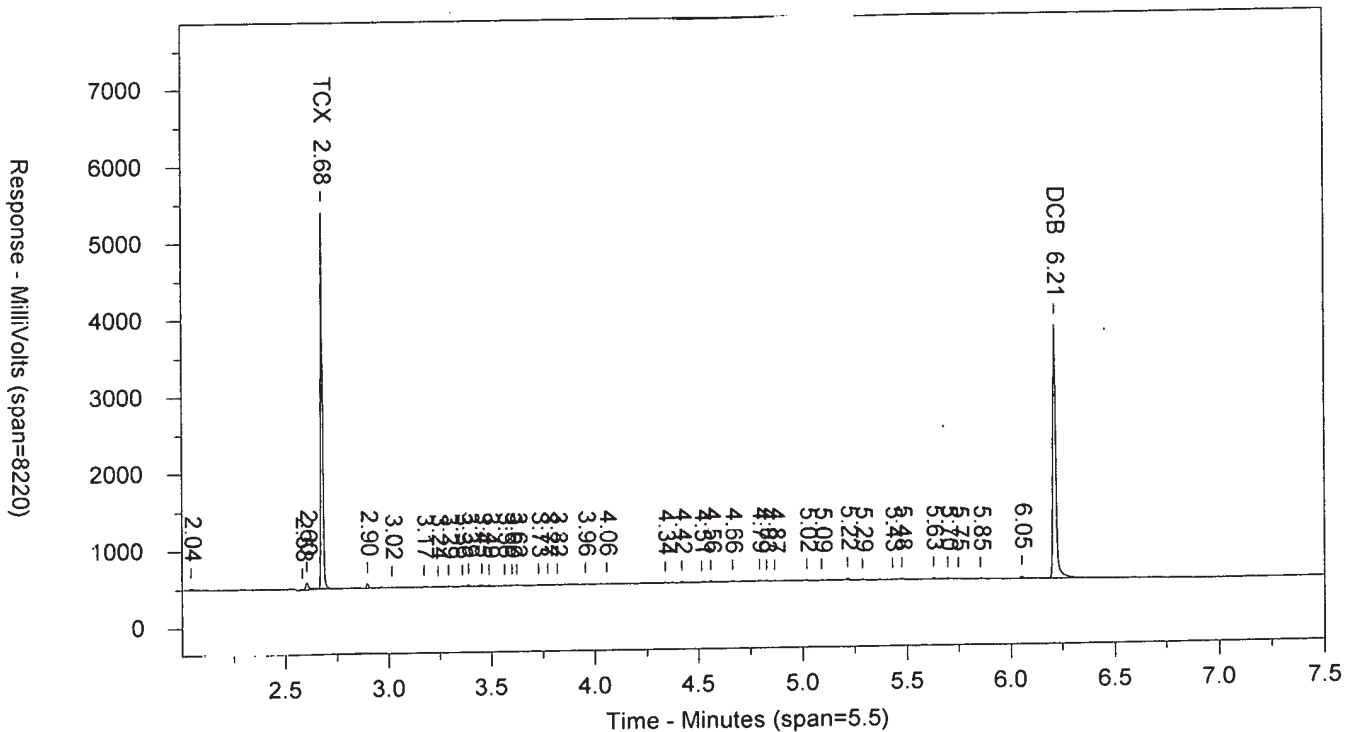
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SW-846 8082A

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AR1641824D

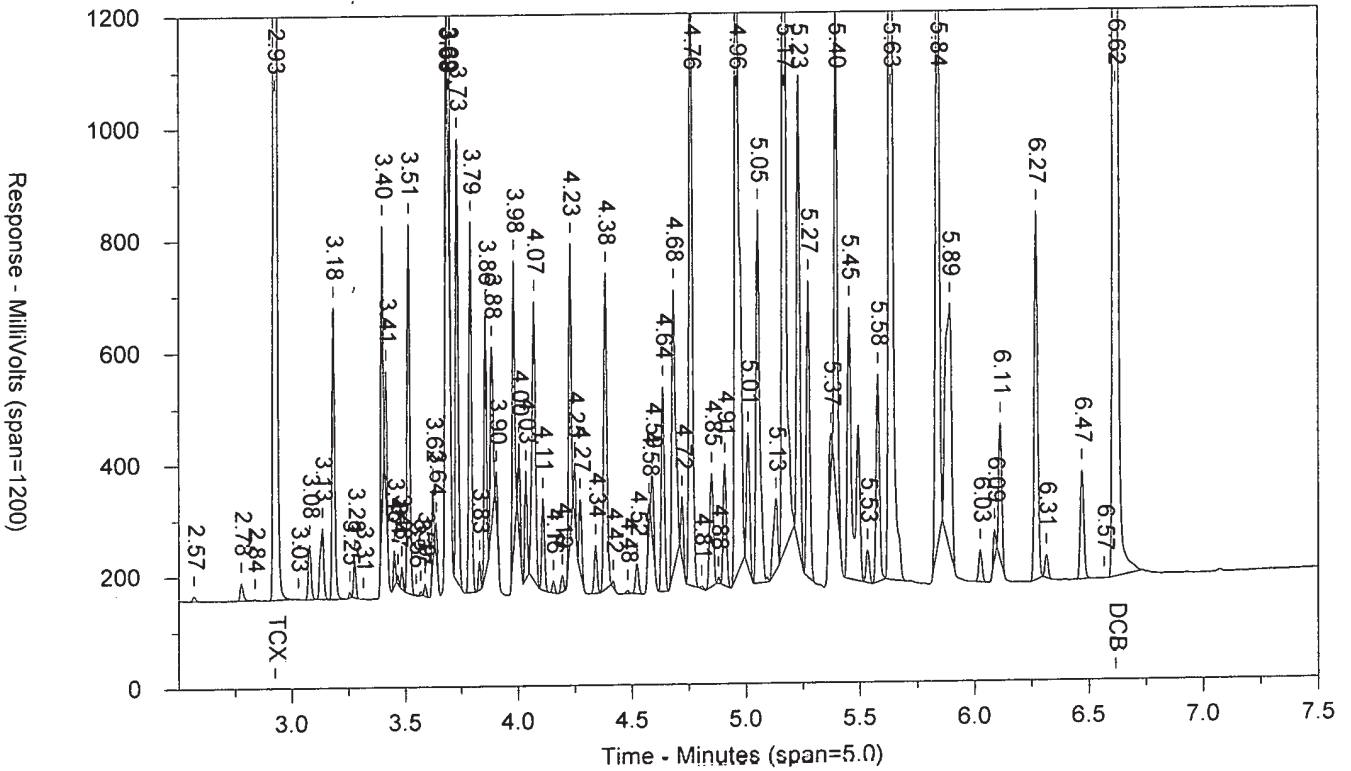
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CCAL 1831199999

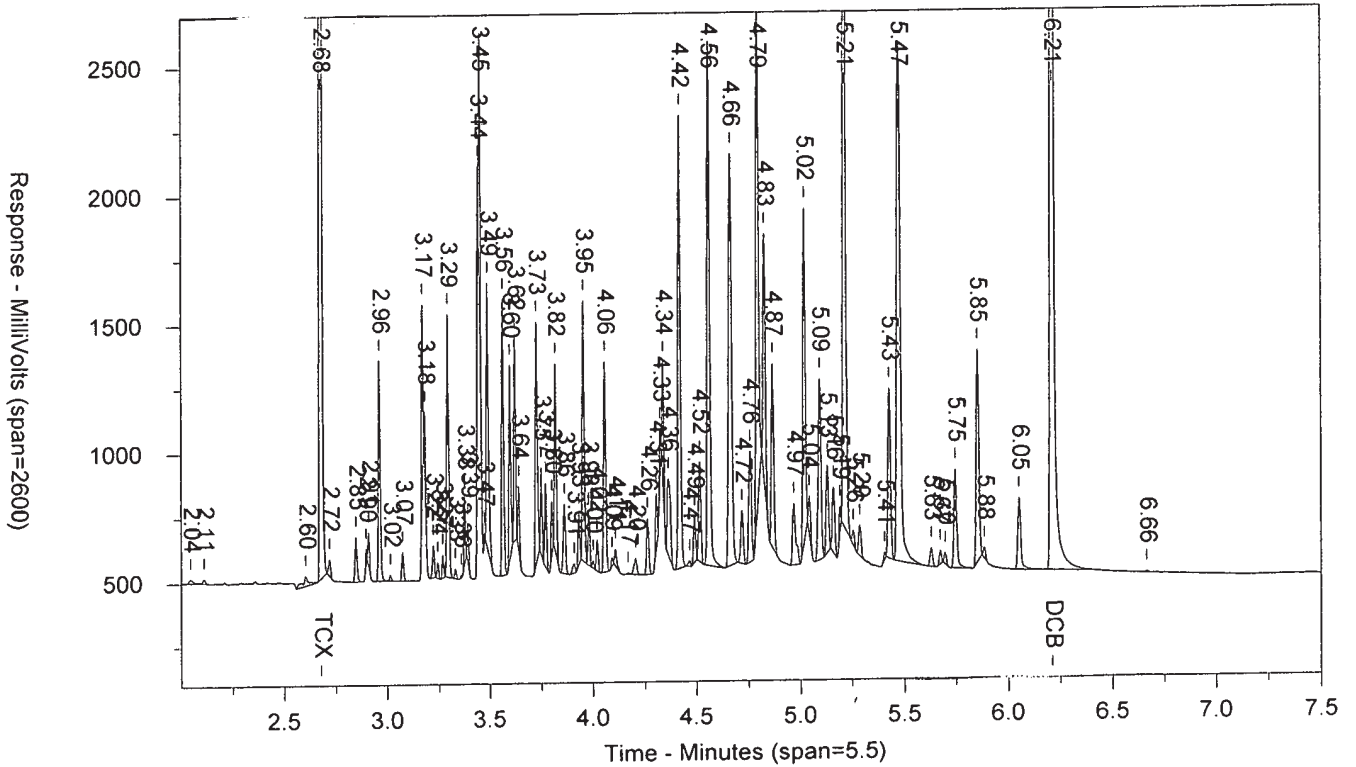
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1641824D LMAR164LM CCAL 1831199999 10227 SW-846 8082
 Injected On: 11/8/2018 1:11:24 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	6463302	41.662	TCX	2.678	10372220	40.641	TCX
6.616	5006192	39.008	DCB	6.21	7613116	40.546	DCB

Files:
 Area File: 25pcbs18303009.017.RAW
 Area File: 25pcbs18303009B.017.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 1:19:56 PM
 File Reported On: 11/8/2018 at 1:20:06 PM

AR1641824D

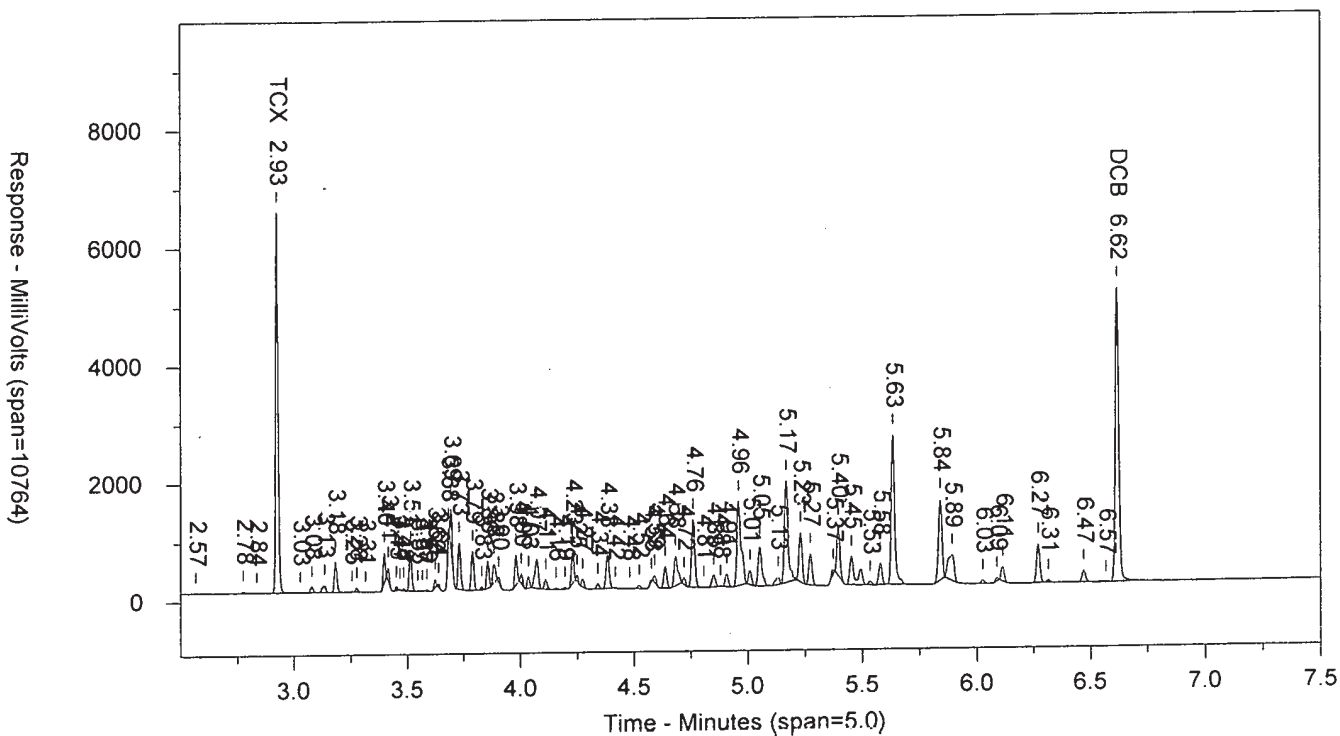
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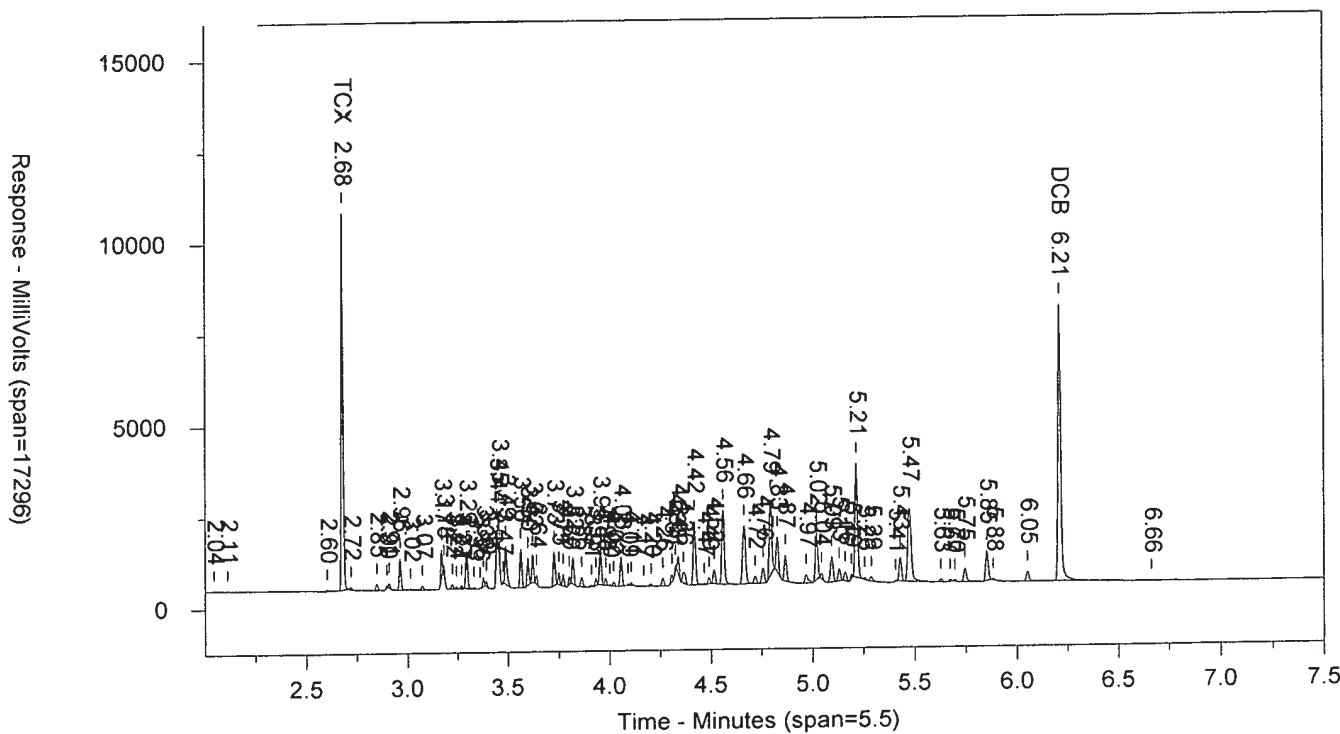
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SW-846 8082

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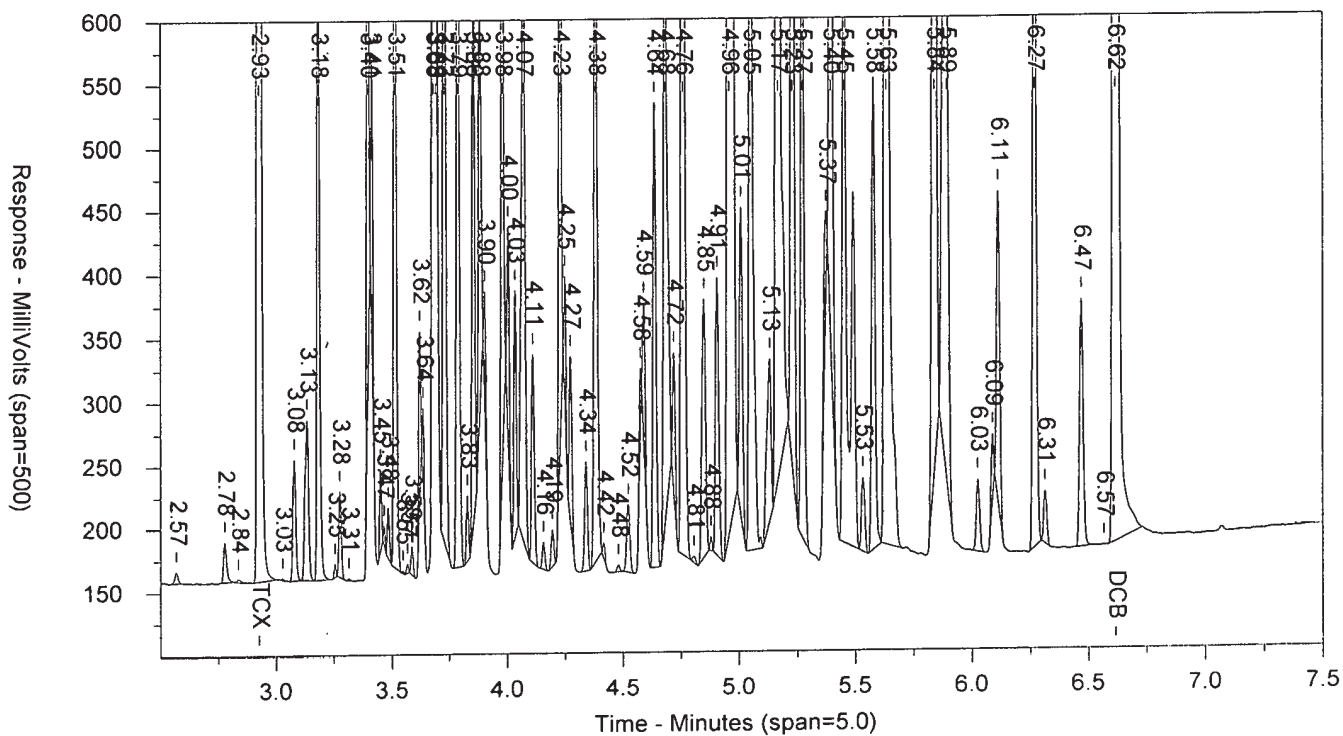
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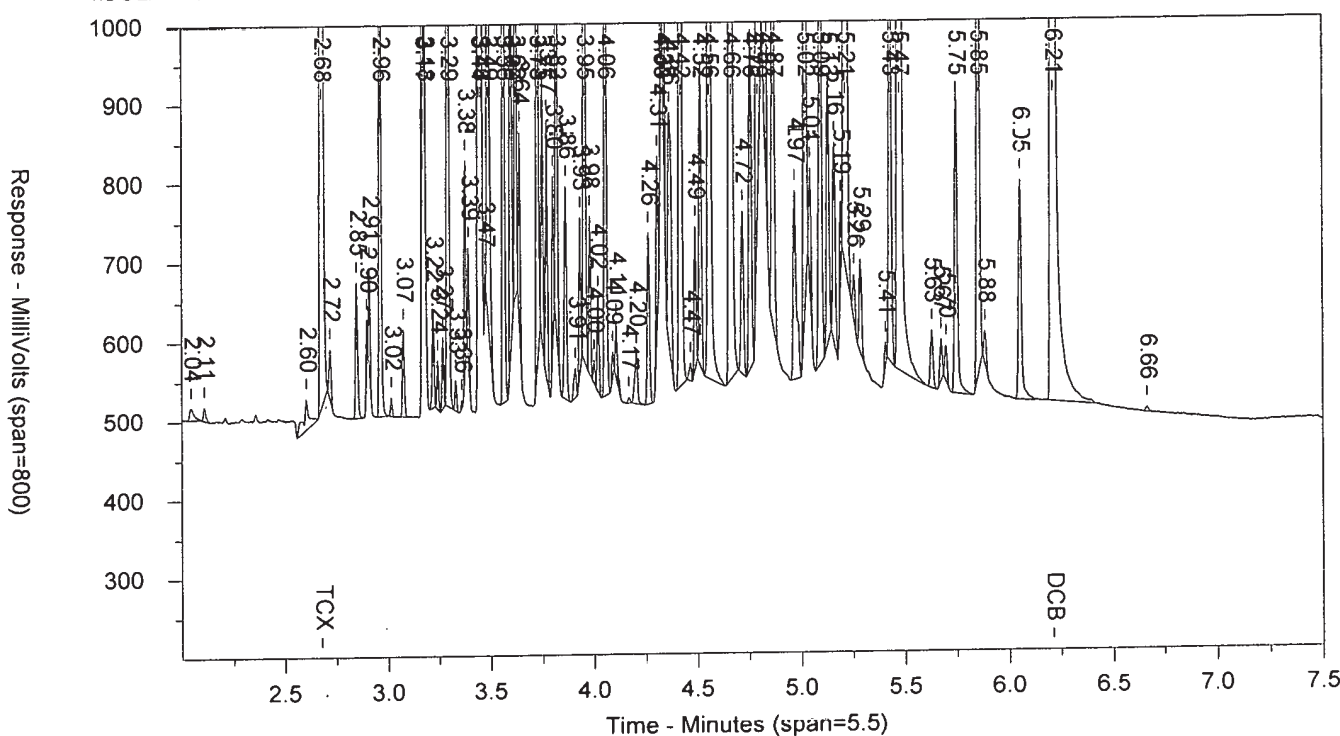
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SW-846 8082

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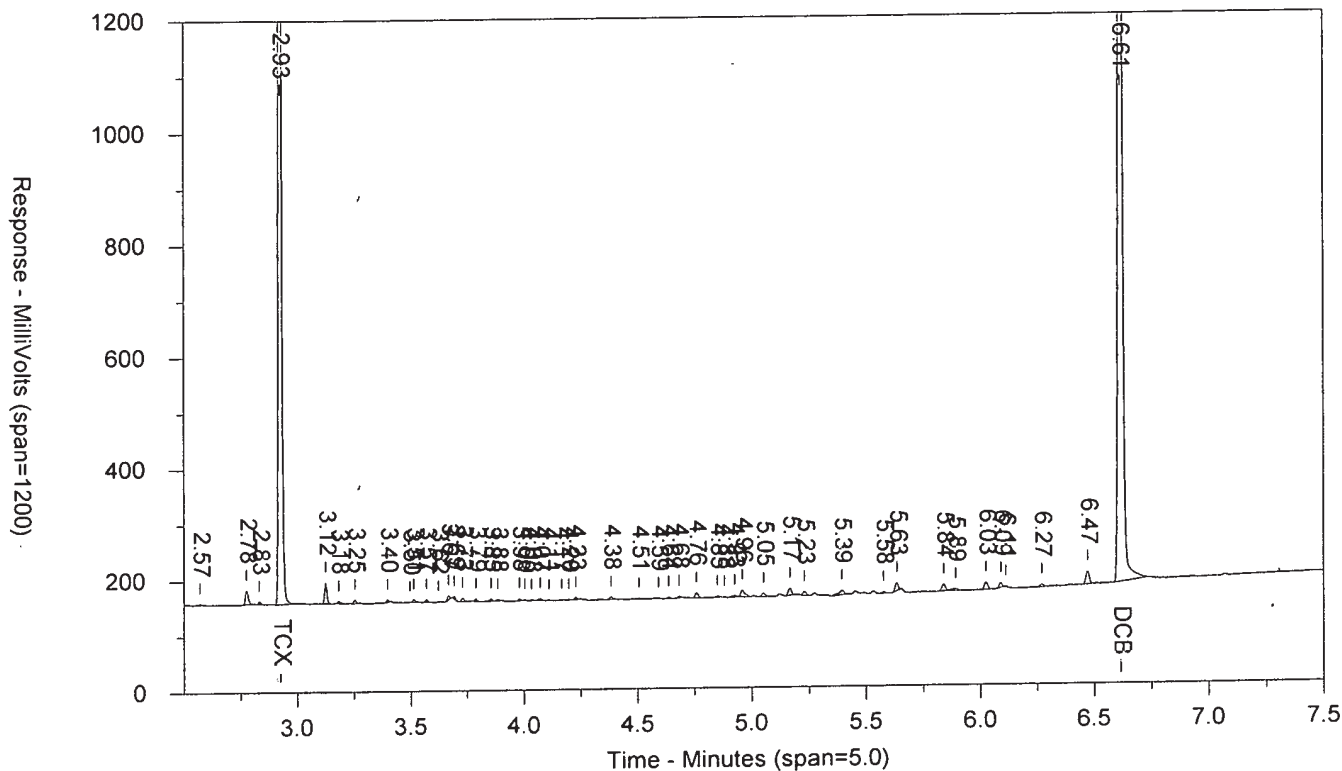
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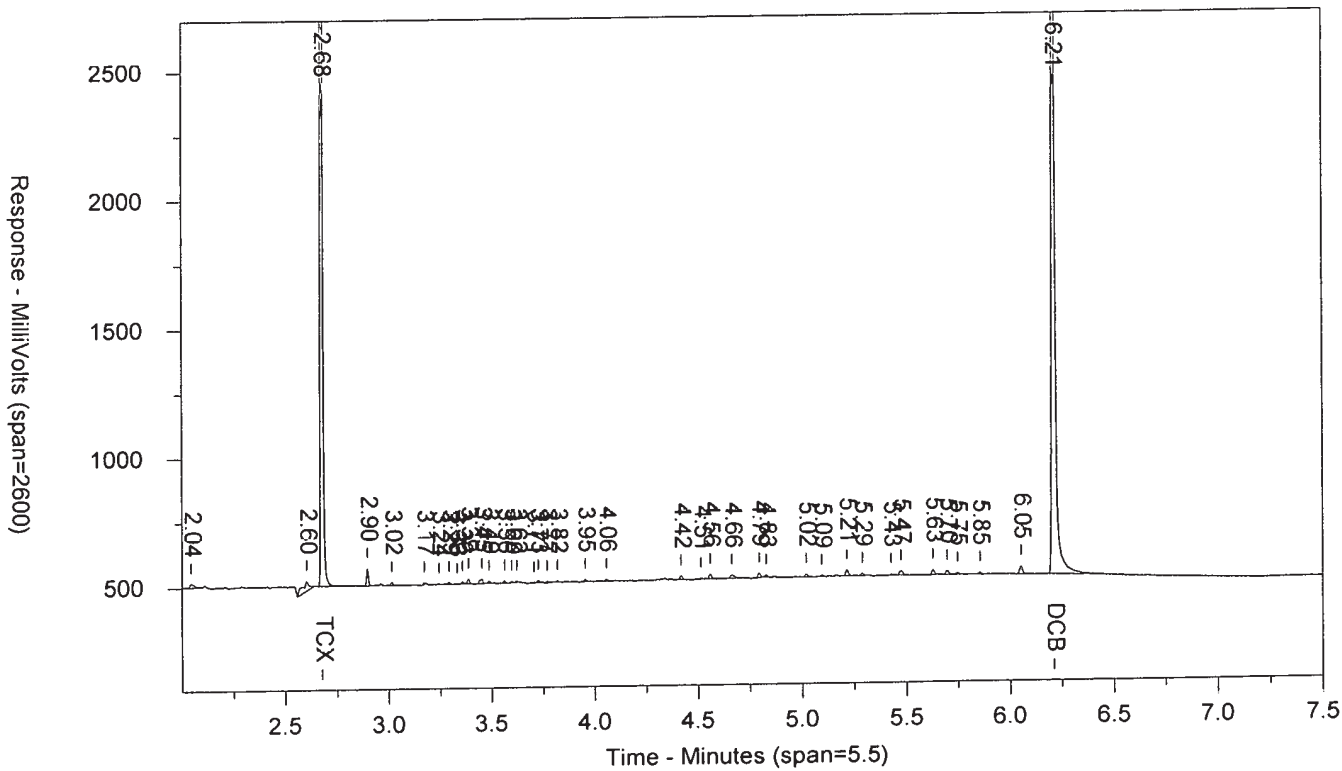
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SW-846 8082

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Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IBLKX1824C NWPIBLKNW PIBLK183199999 10227 SW-846 8082
 Injected On: 11/8/2018 1:22:17 PM Sample Weight: 1000
 Instrument ID: CP25-18274 Dilution Factor: 10
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	3156474	.203	TCX	2.678	5243019	.205	TCX
6.615	2508273	.195	DCB	6.211	3564398	.19	DCB

Files:
 Area File: 25pcbs18303009.018.RAW
 Area File: 25pcbs18303009B.018.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
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IBLKX1824C

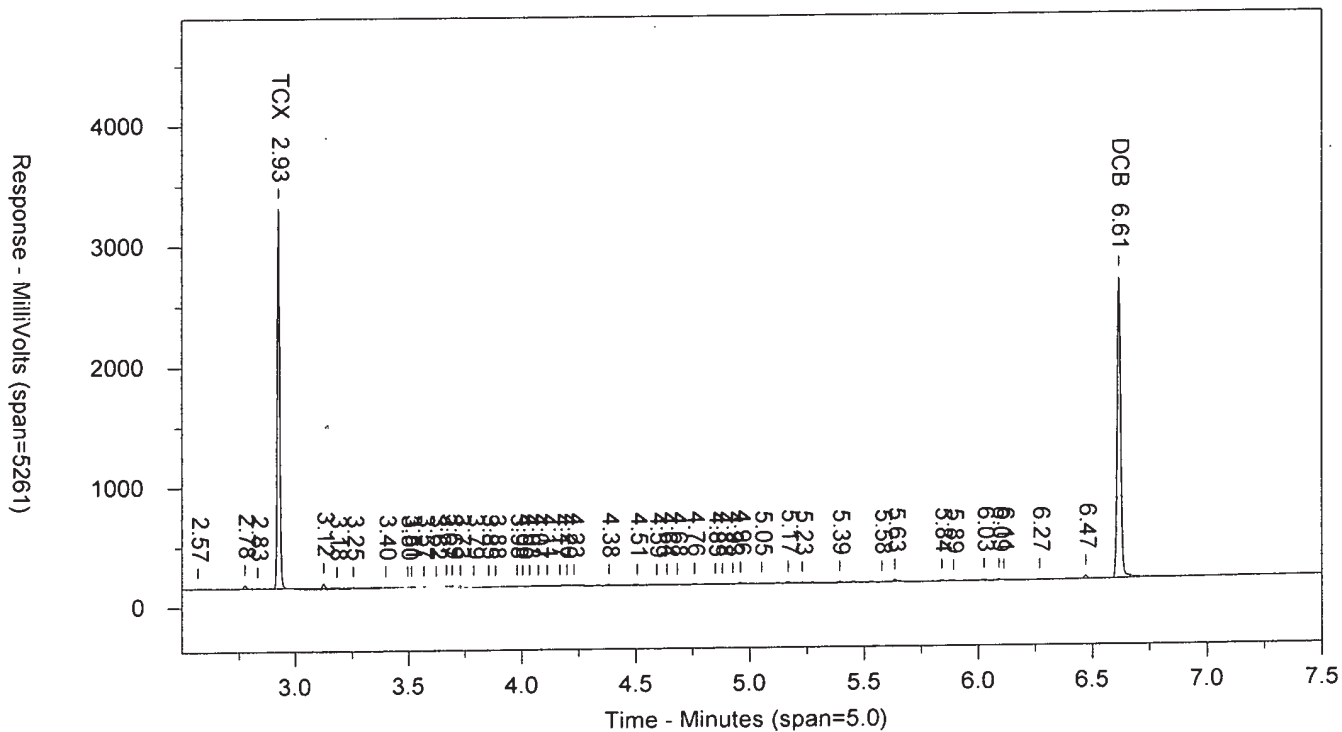
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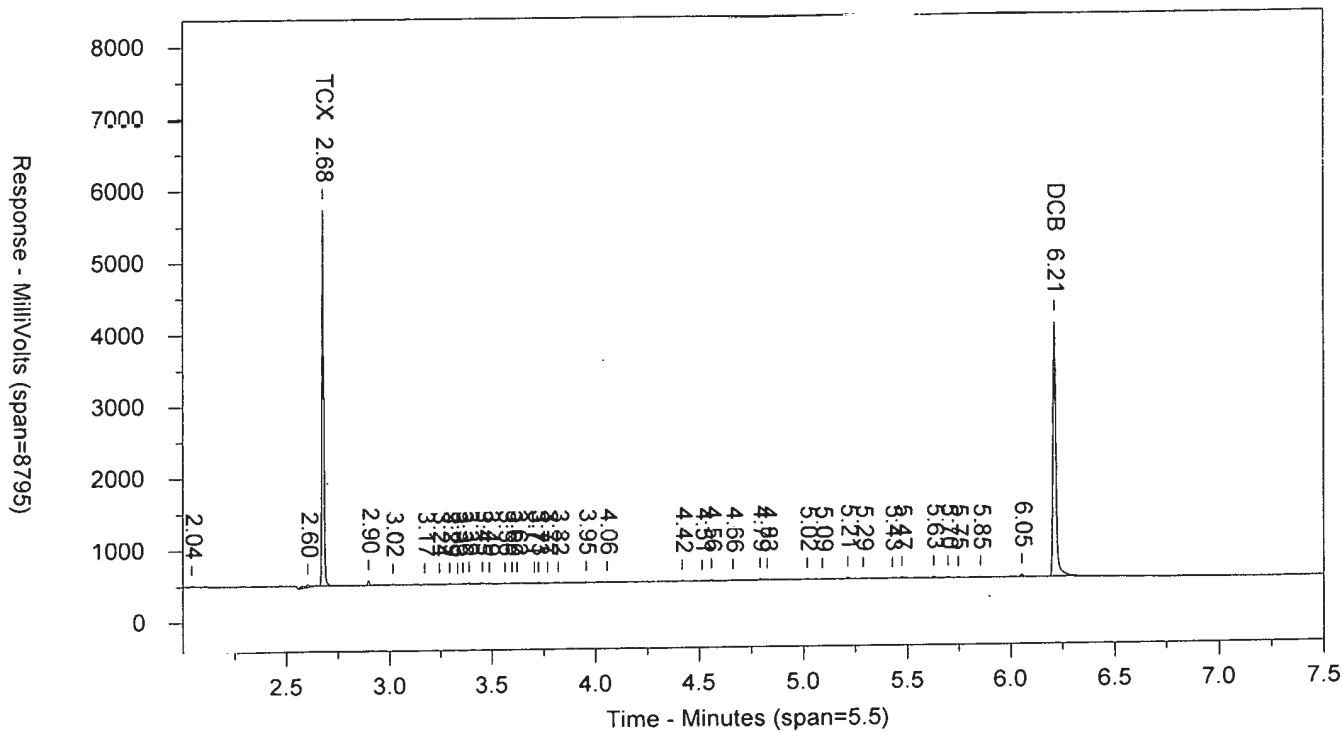
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SW-846 8082

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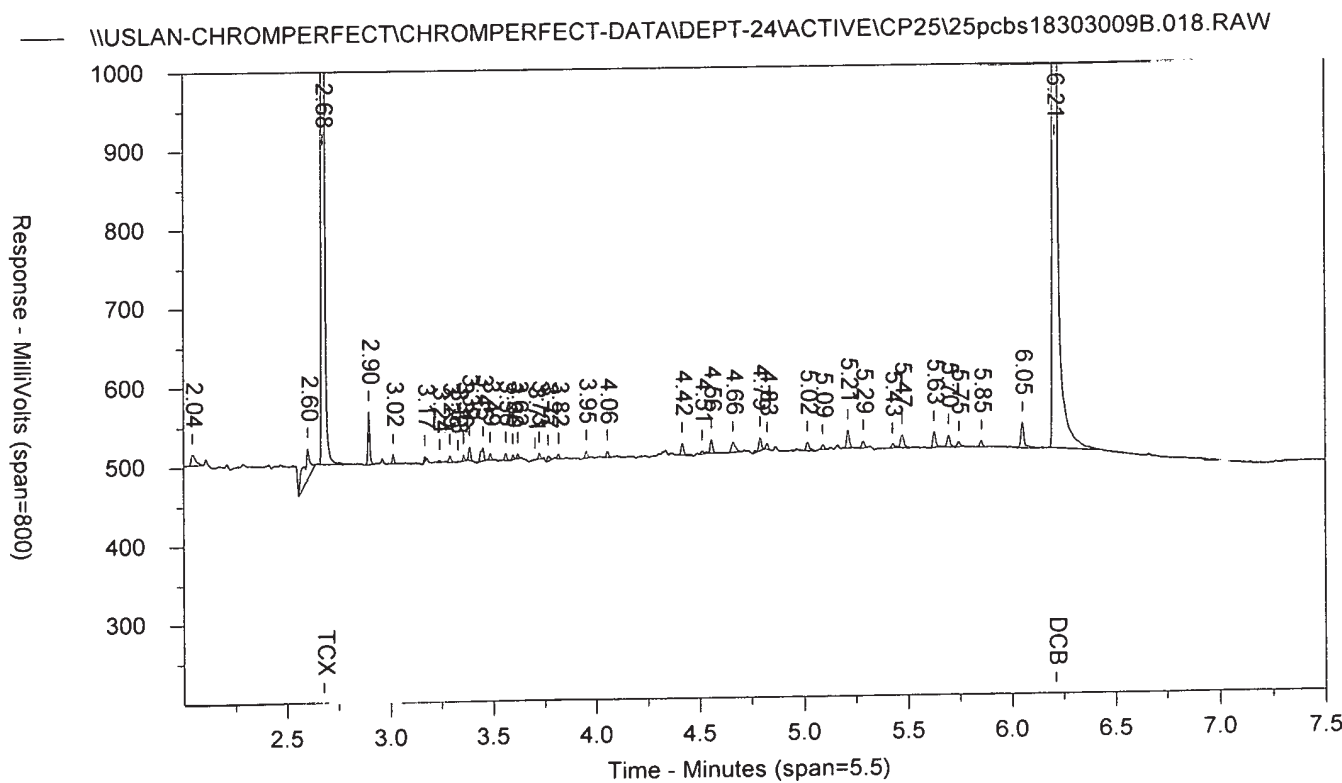
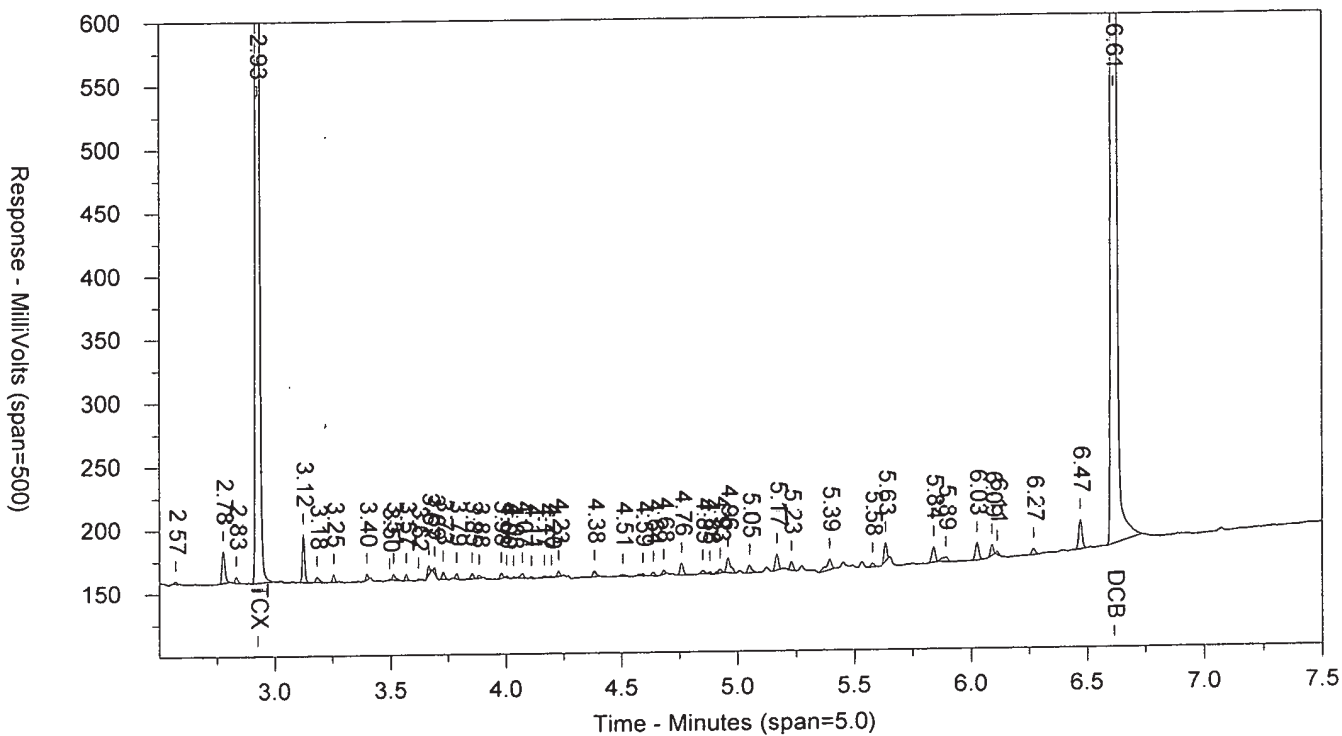


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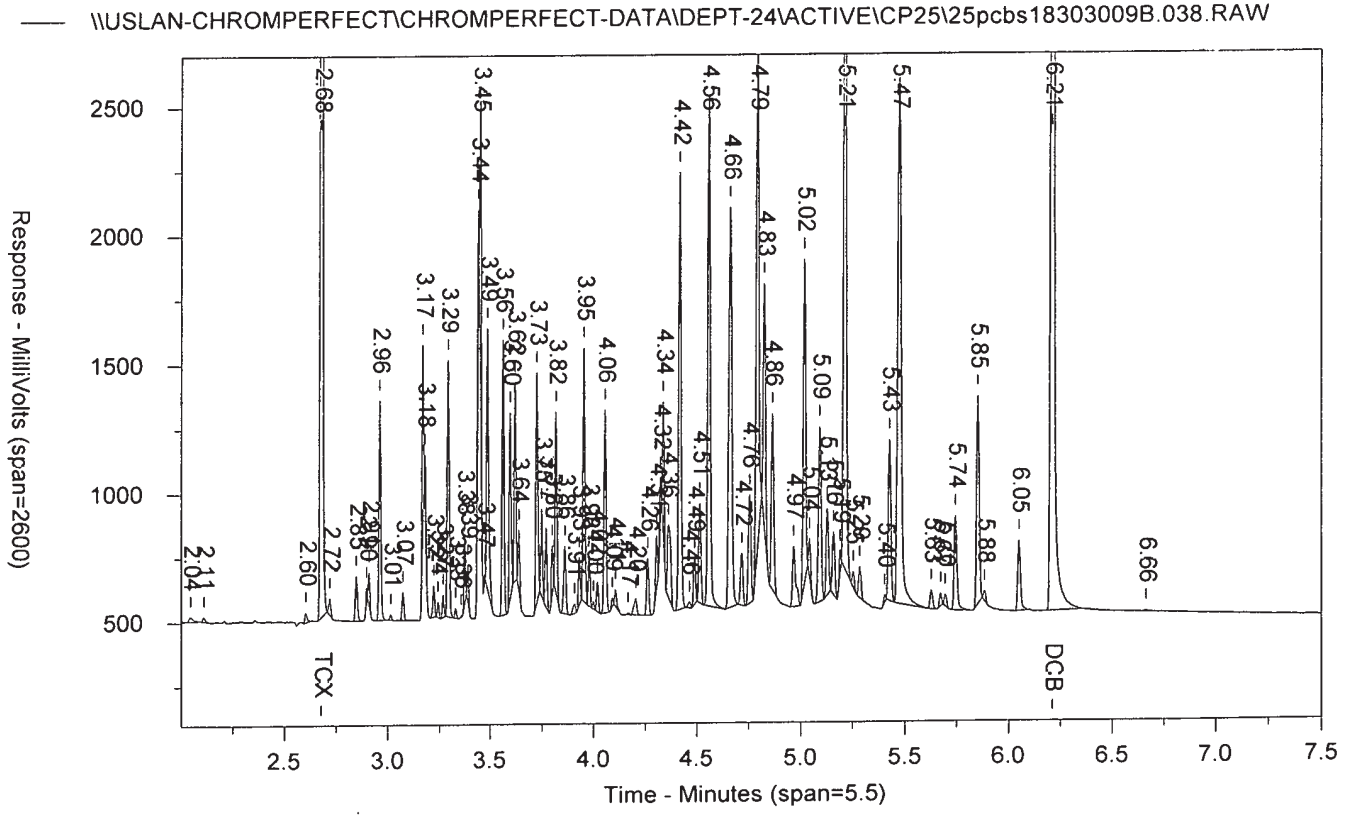
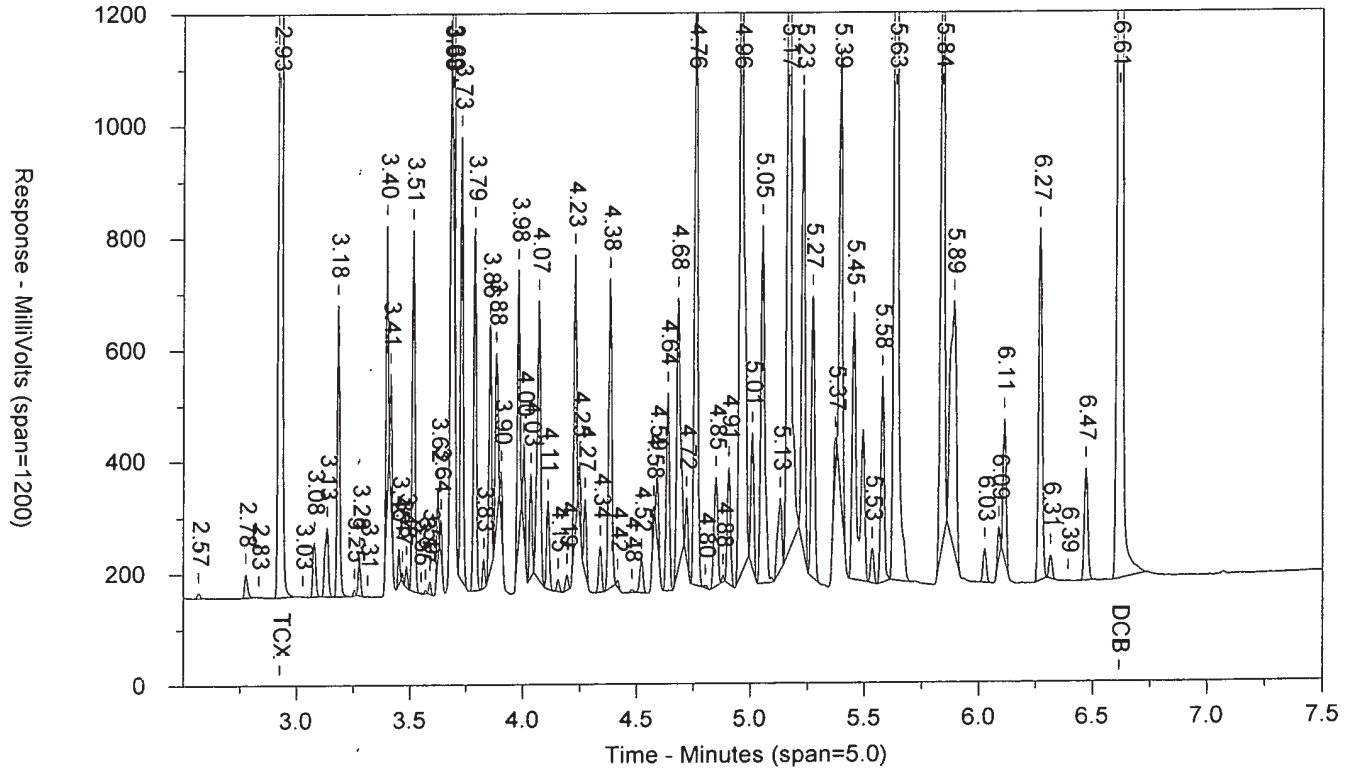


IBLKX1824C NWPIBLKNW PIBLK1831199999 10227 SW-846 8082

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009.018.RAW



AR1641824D LWAR164LW CCAL 1831199999 10227 SW-846 8082



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1641824D LWAR164LW CCAL 1831199999 10227 SW-846 8082
 Injected On: 11/8/2018 5:32:01 PM Sample Weight: 1
 Instrument ID: CP25-18274 Dilution Factor: 1
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	6560295	42.287	TCX	2.678	10580930	41.459	TCX
6.615	5187942	40.424	DCB	6.21	7626653	40.618	DCB

Files:
 Area File: 25pcbs18303009.038.RAW
 Area File: 25pcbs18303009B.038.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 5:40:33 PM
 File Reported On: 11/8/2018 at 5:41:07 PM

AR1641824D

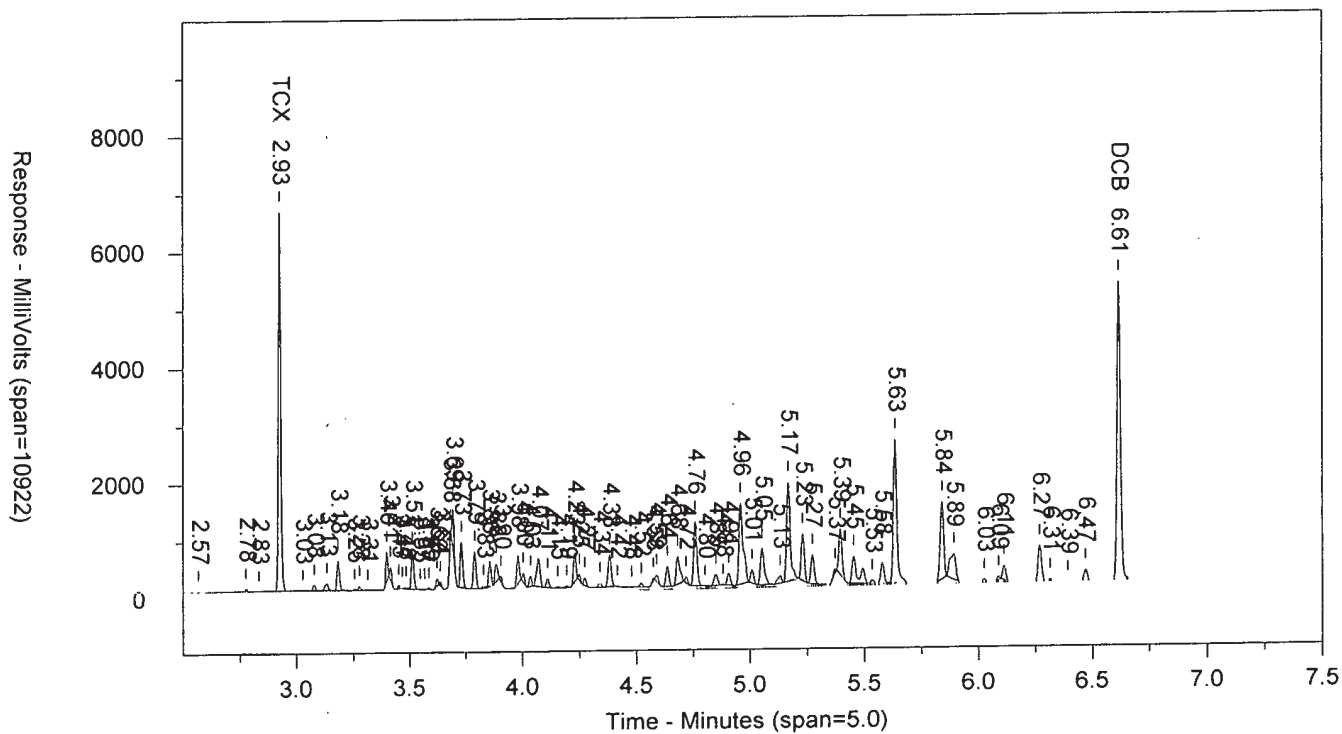
LWAR164LW

CCAL 1831199999

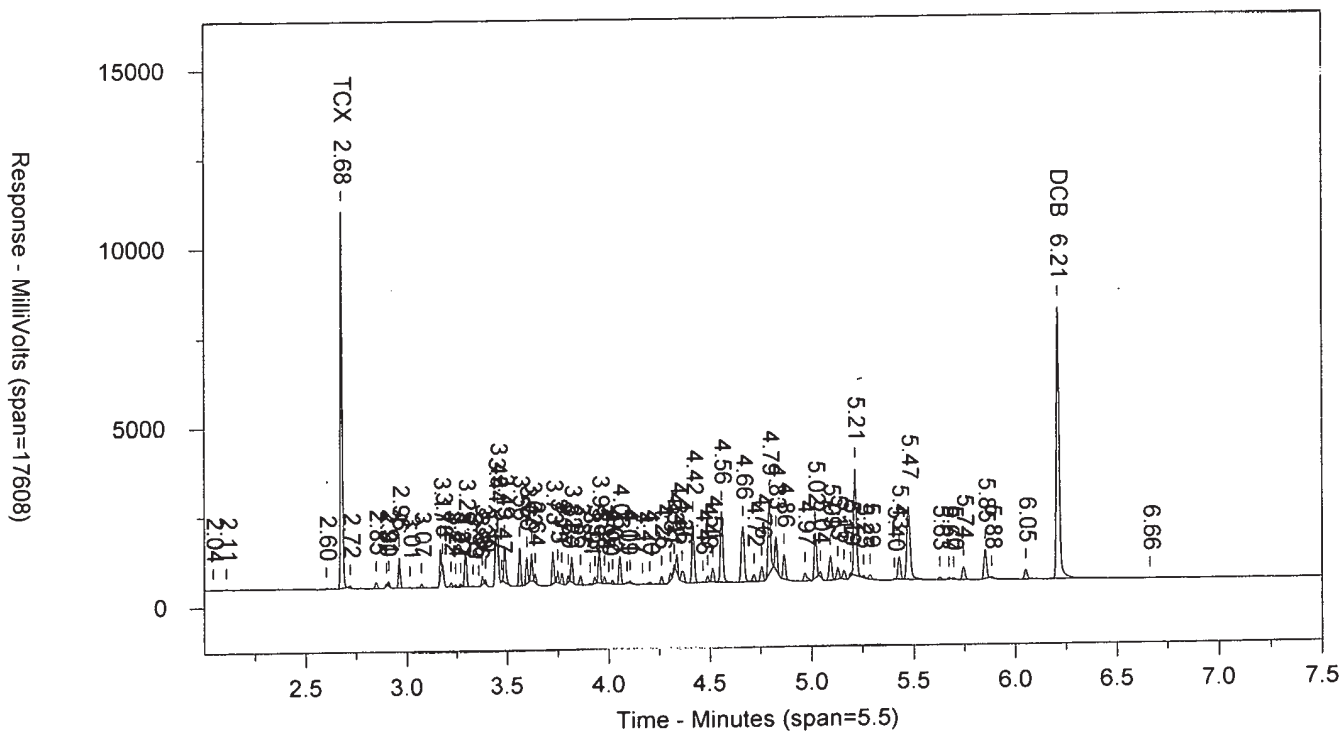
10227

SW-846 8082

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.038.RAW



AR1641824D

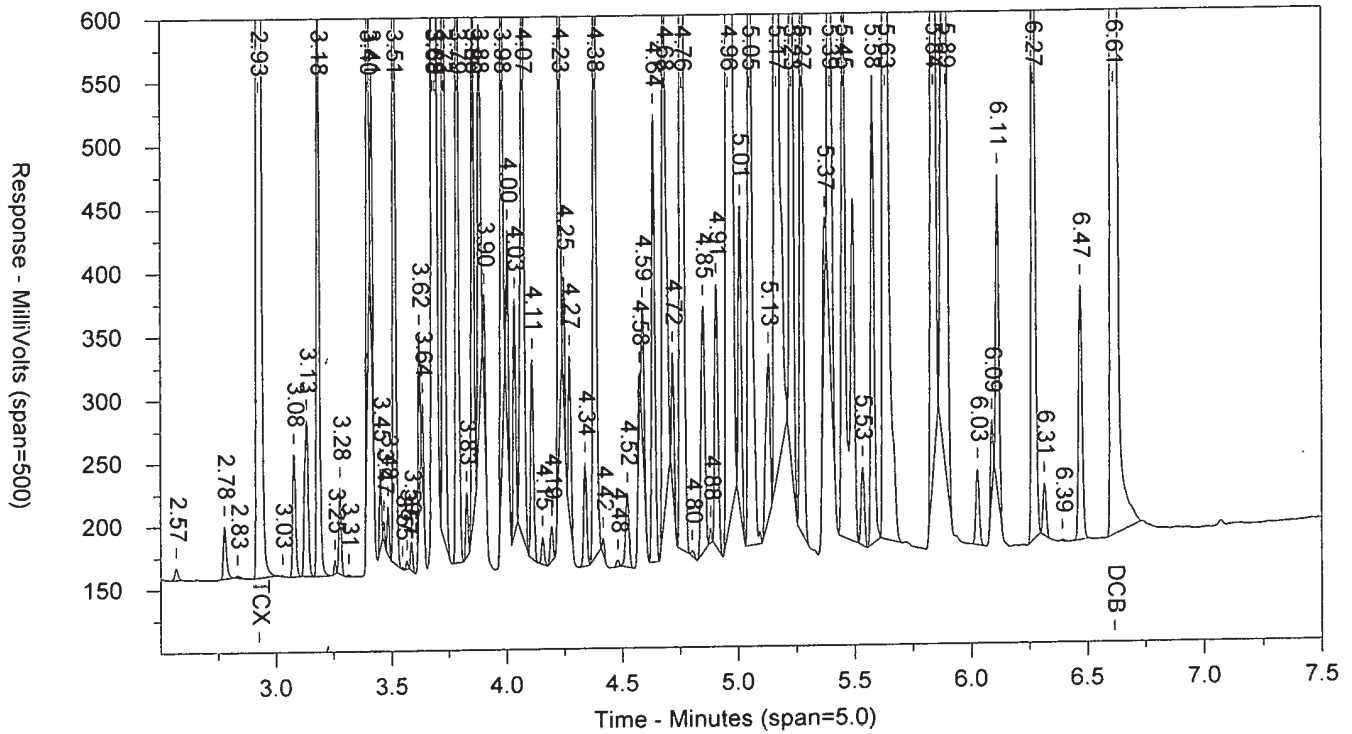
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CCAL 1831199999

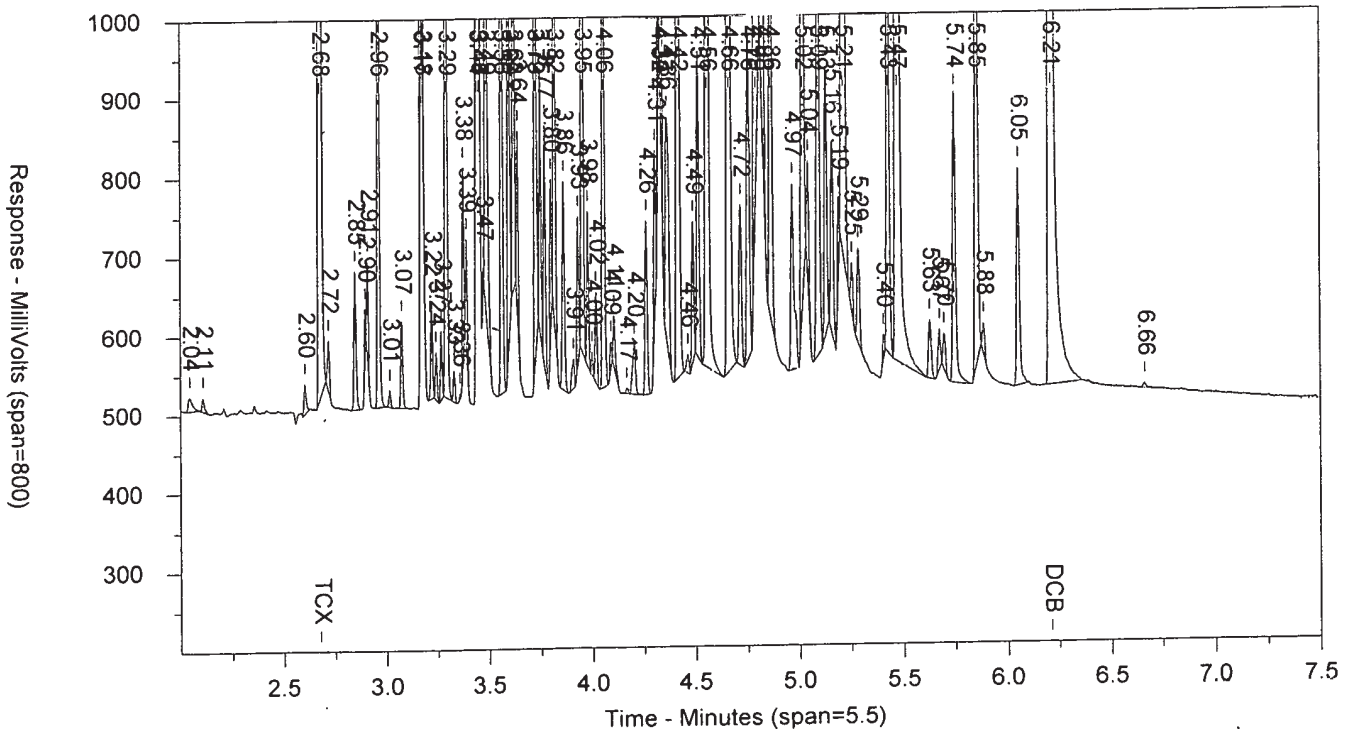
10227

SW-846 8082

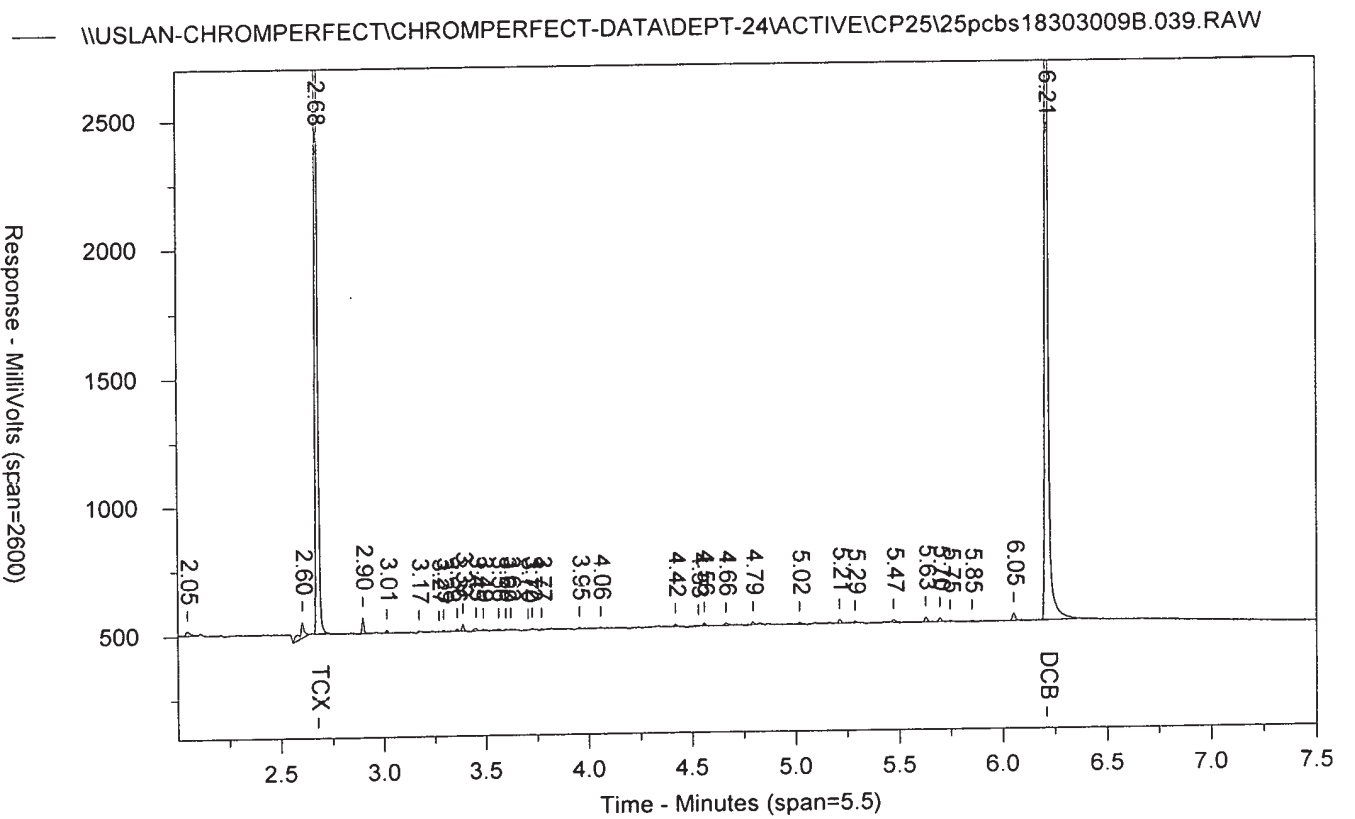
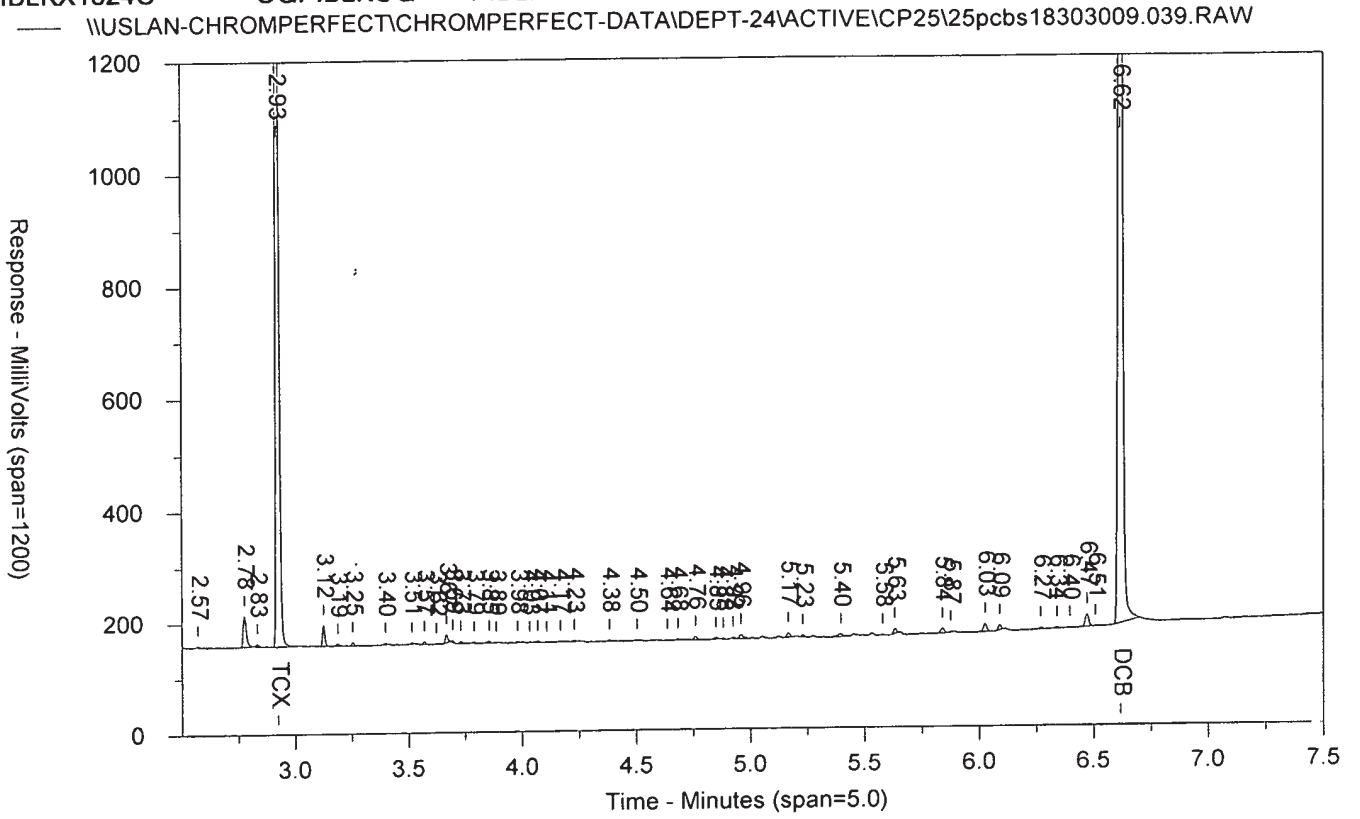
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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.038.RAW



IBLKX1824C OGIPLKOG PIBLK1831199999 10227 SW-846 8082



LANCASTER LABORATORIES

Sample Number: IBLKX1824C OGPIBLKOG PIBLK1831199999 10227 SW-846 8082
 Injected On: 11/8/2018 5:42:53 PM Sample Weight: 1000
 Instrument ID: CP25-18274 Dilution Factor: 10
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	3169447	.204	TCX	2.678	4885592	.191	TCX
6.616	2445060	.191	DCB	6.21	3712831	.198	DCB

Files:
 Area File: 25pcbs18303009.039.RAW
 Area File: 25pcbs18303000B.030.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 5:51:24 PM
 File Reported On: 11/8/2018 at 5:51:29 PM

IBLKX1824C

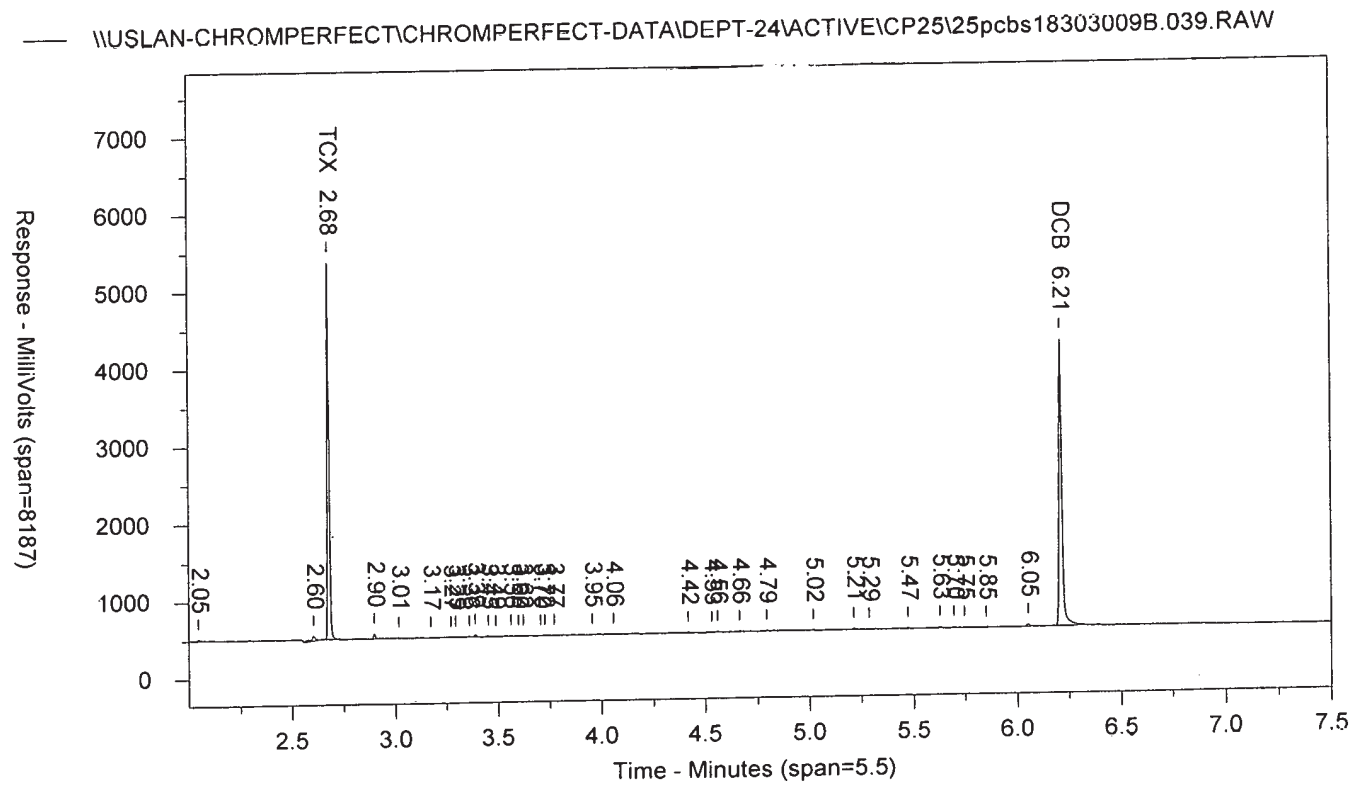
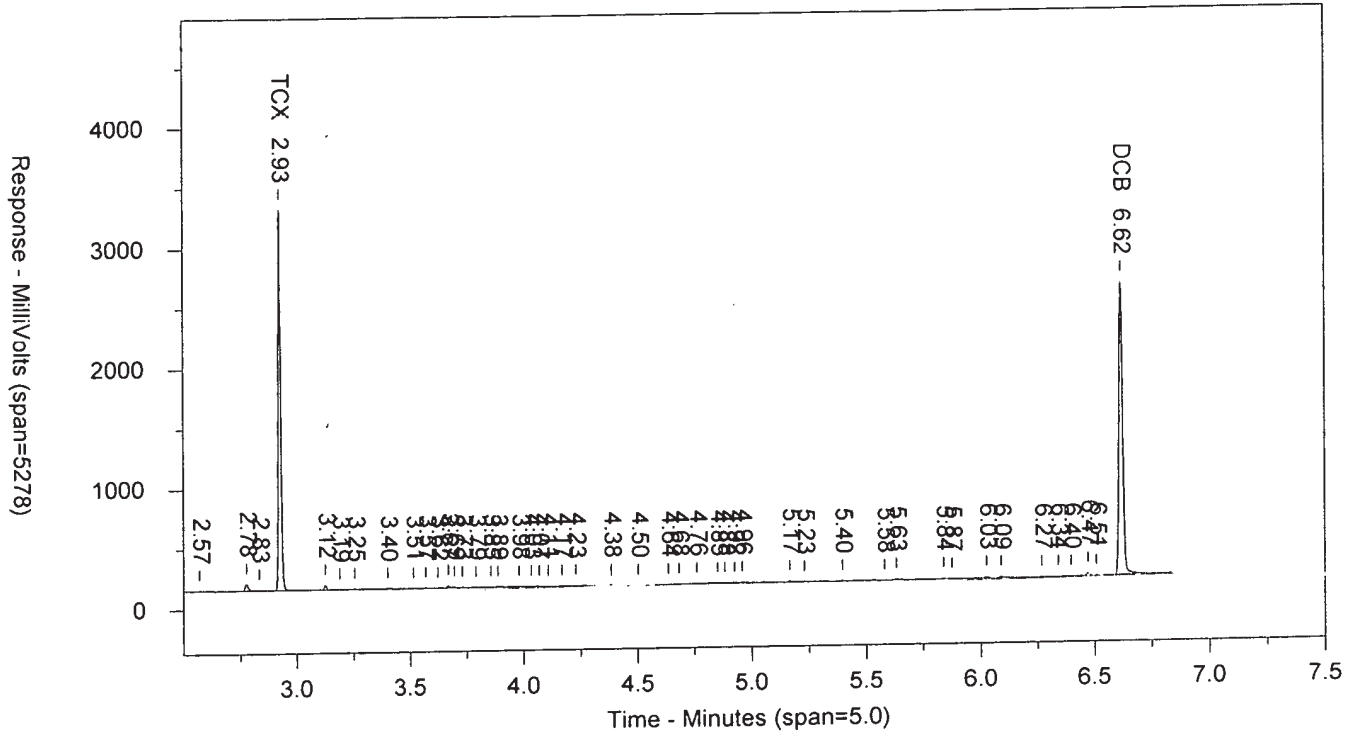
OGPIBLKOG

PIBLK1831199999

10227

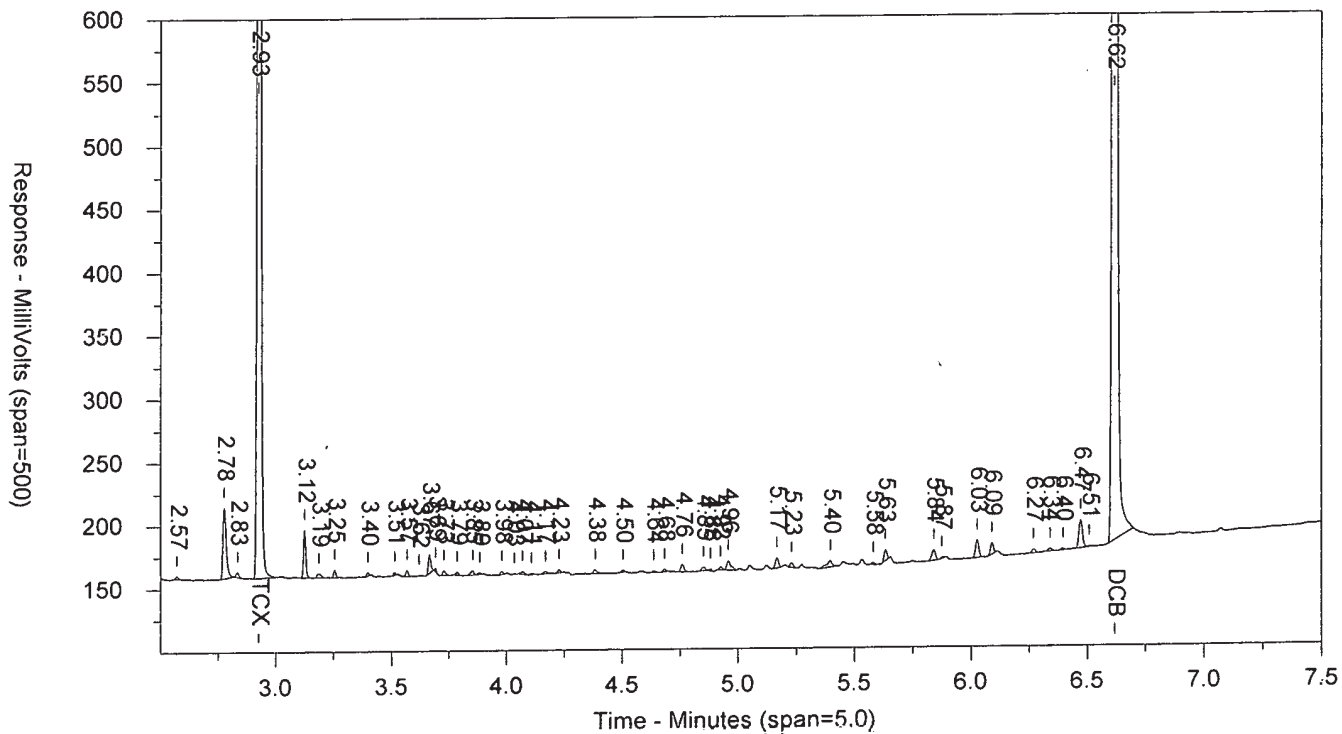
SW-846 8082

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009.039.RAW

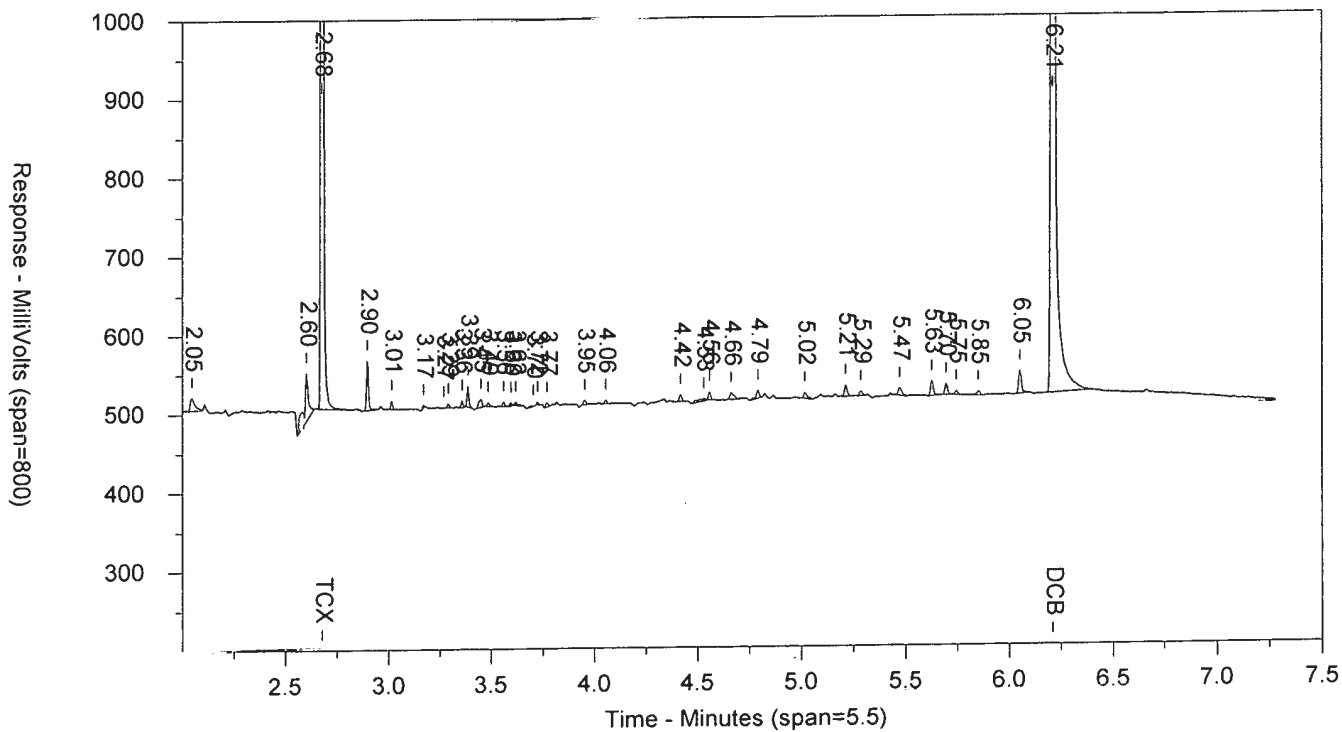


IBLKX1824C OGPIBLKOG PIBLK1831199999 10227 SW-846 8082

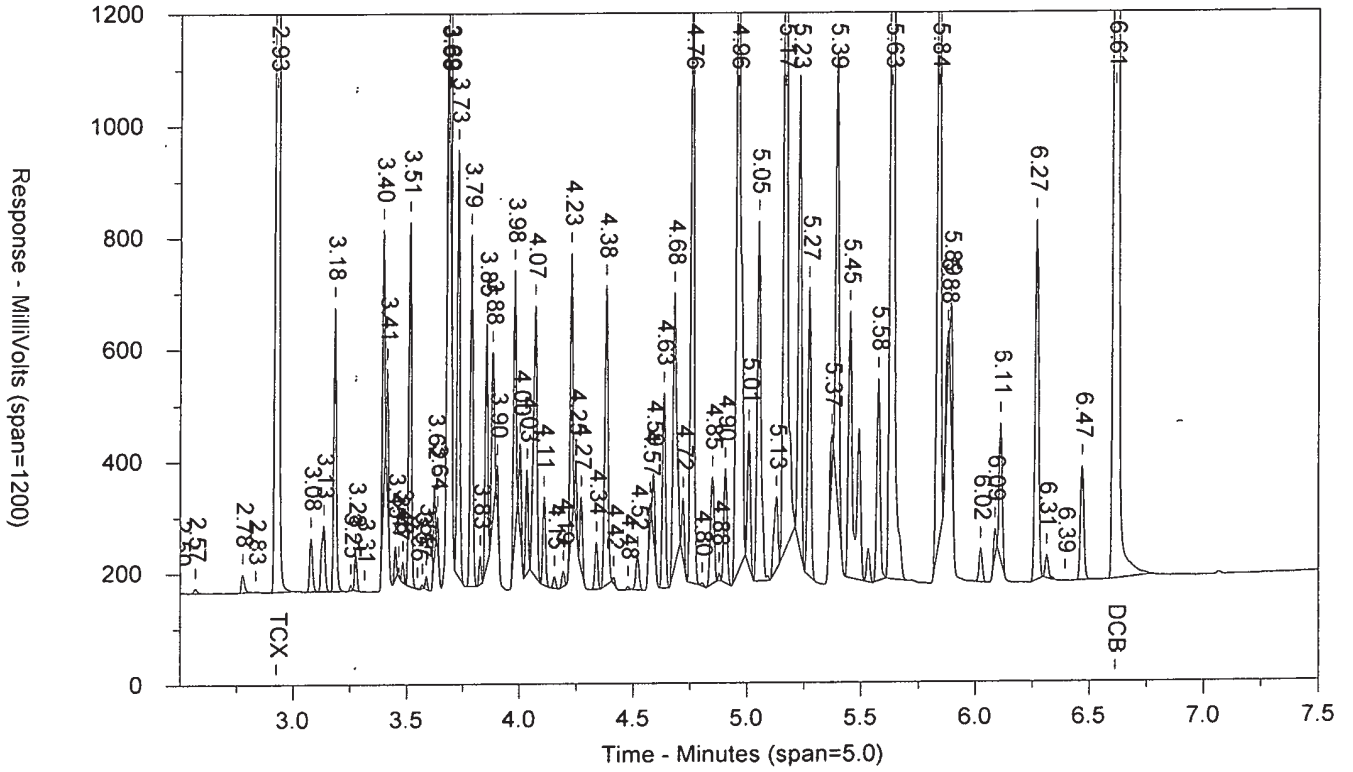
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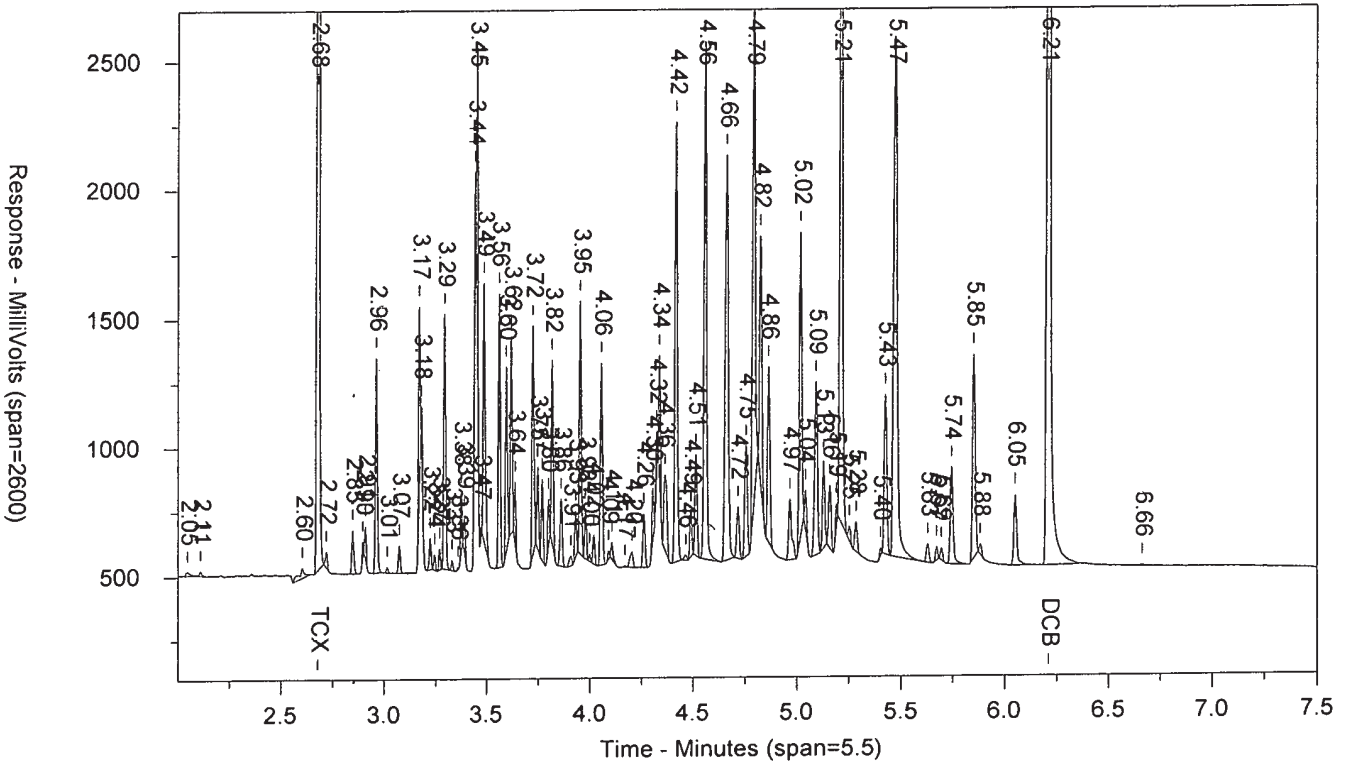
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AR1641824D LPAR164LP CCAL 1831199999 10227 SW-846 8082
\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009.050.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.050.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: AR1641824D LPAR164LP CCAL 1831199999 10227 SW-846 8082
Injected On: 11/8/2018 7:42:33 PM Sample Weight: 1
Instrument ID: CP25-18274 Dilution Factor: 1
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	6465614	41.677	TCX	2.678	10385070	40.691	TCX
6.612	5219377	40.669	DCB	6.209	7601519	40.484	DCB

Files:

Area File: 25pcbs18303009.050.RAW
Area File: 25pcbs18303009B.050.RAW
Method A: 25PCBA.MET
Method B: 25PCBAB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 11/8/2018 7:51:04 PM
File Reported On: 11/8/2018 at 7:51:08 PM

AR1641824D

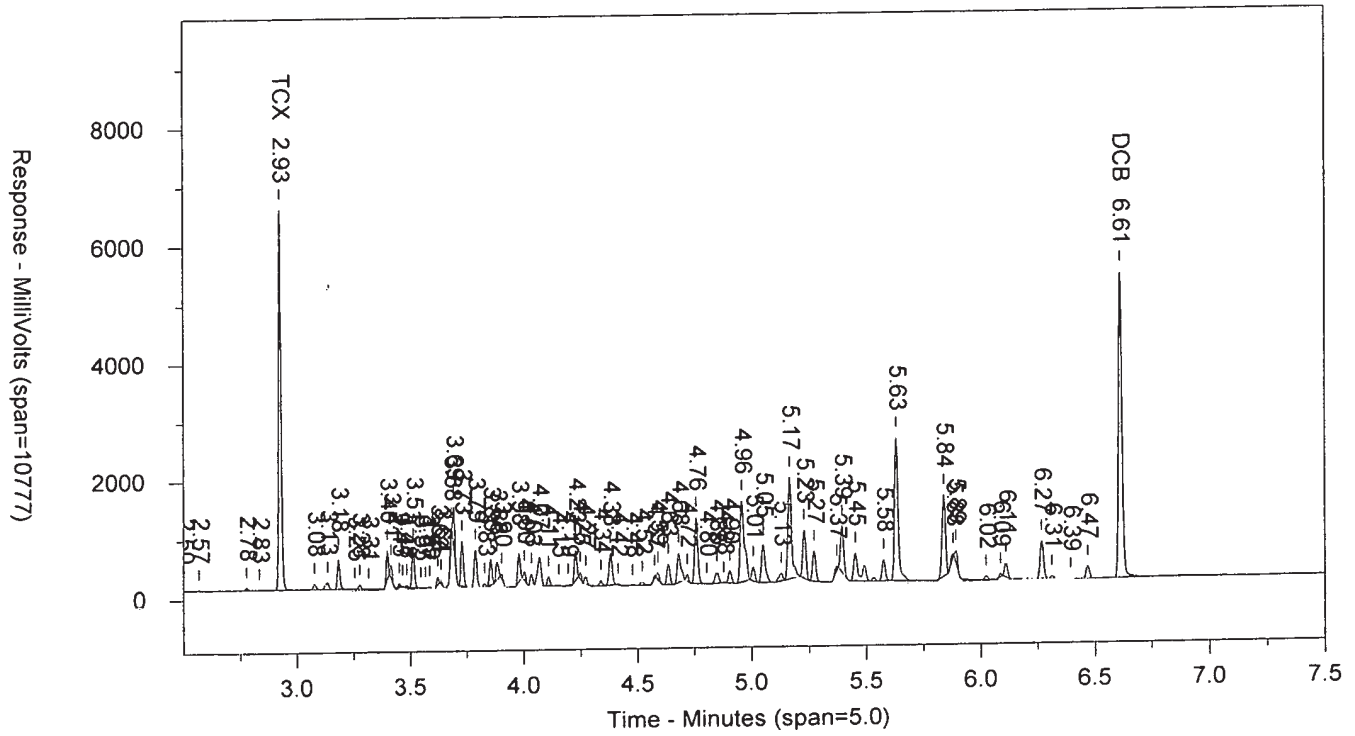
LPAR164LP

CCAL 183199999

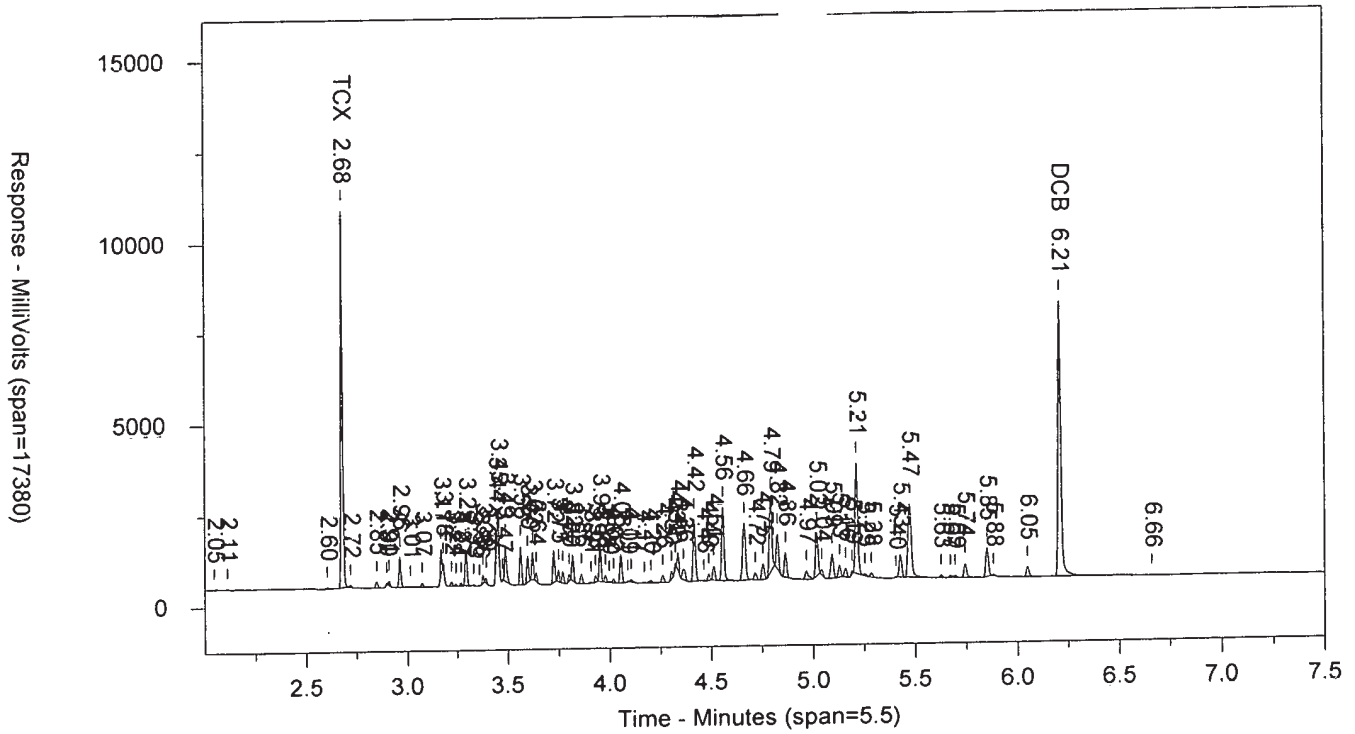
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SW-846 8082

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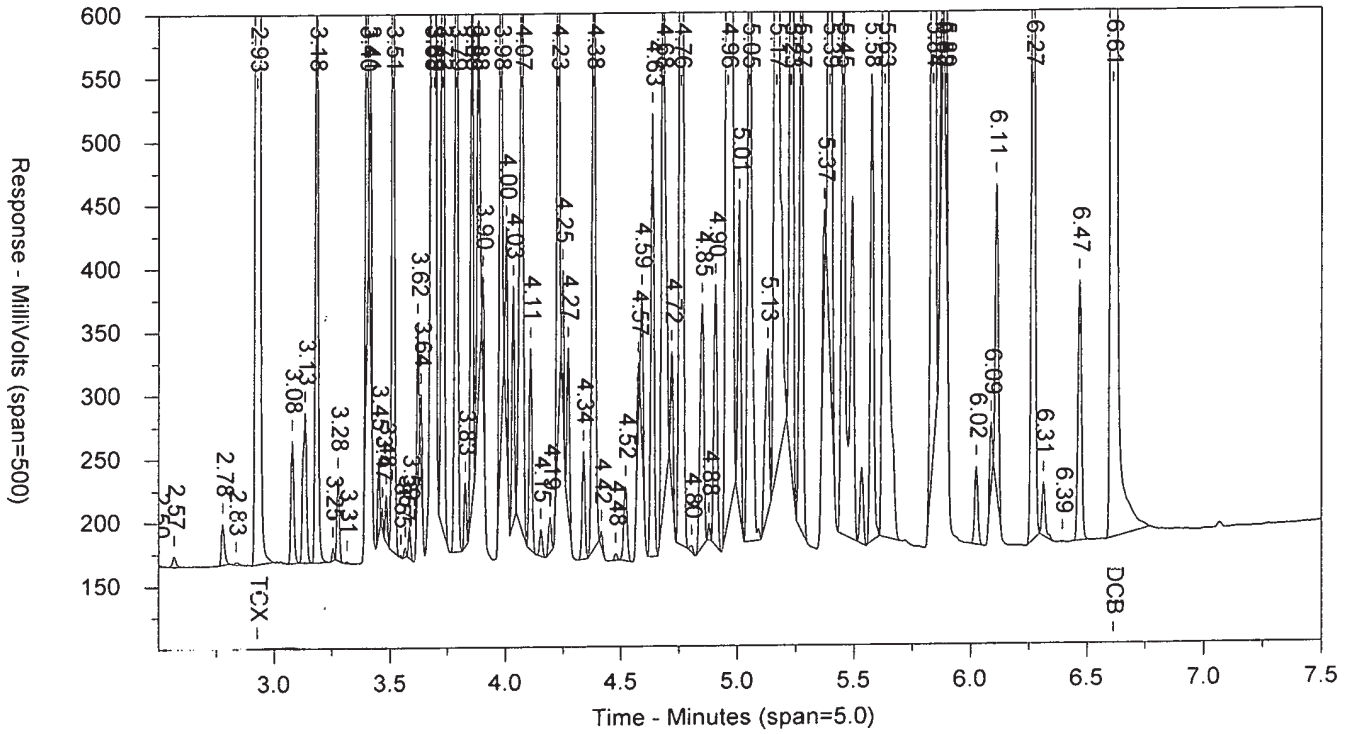


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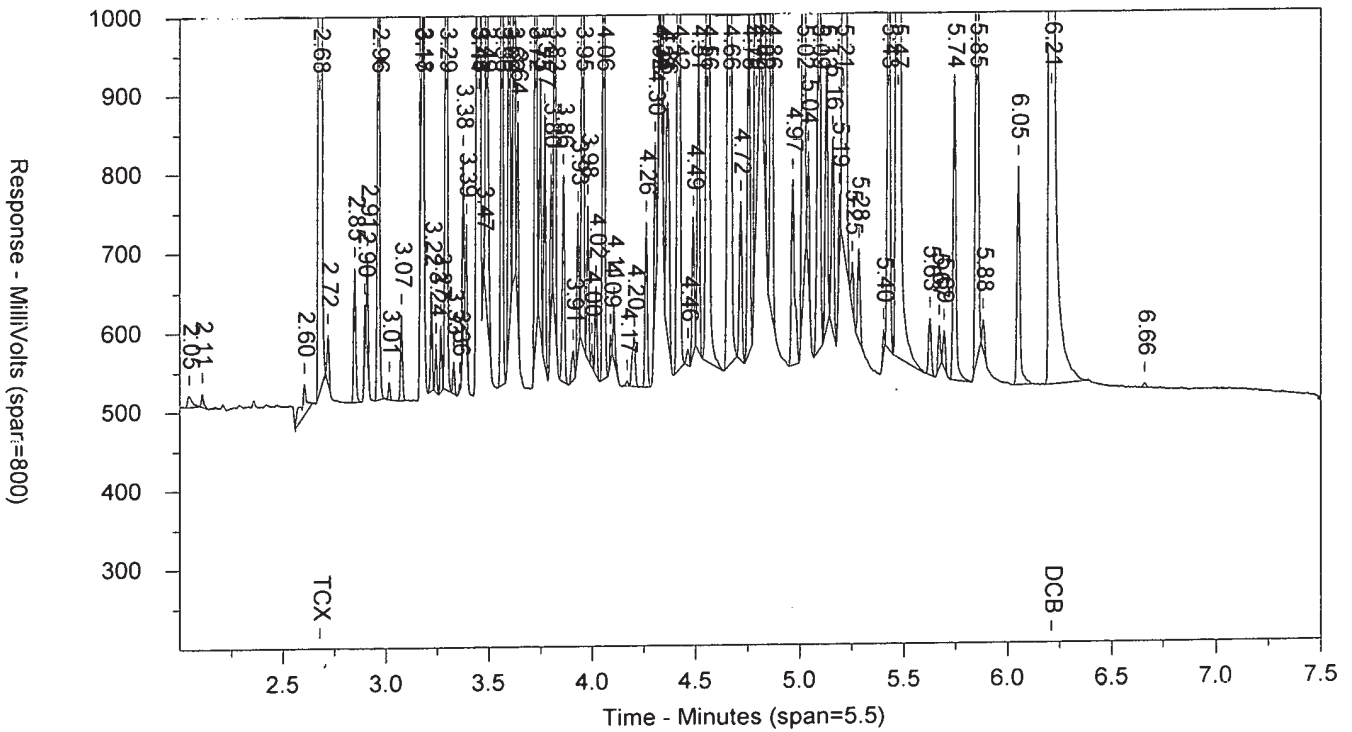


AR1641824D LPAR164LP CCAL 183119999 10227 SW-846 8082

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IBLKX1824C

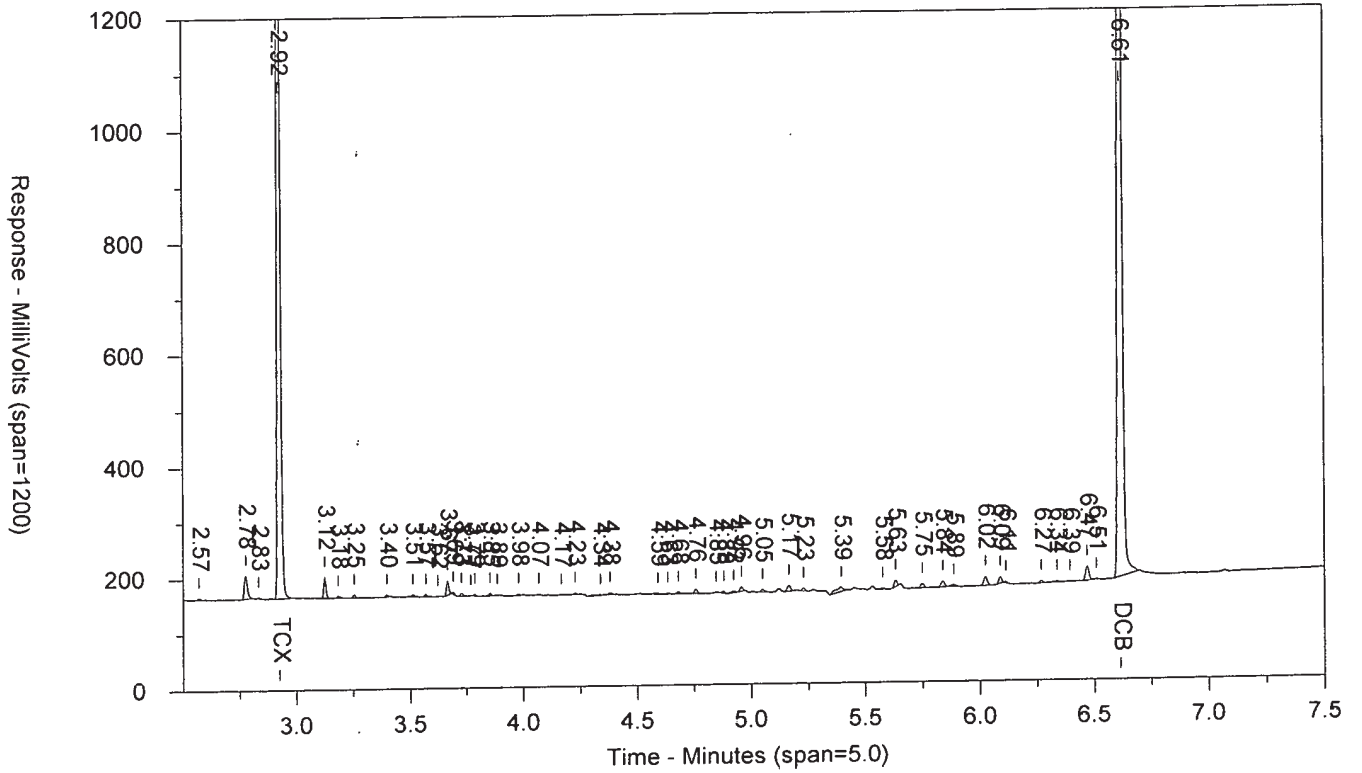
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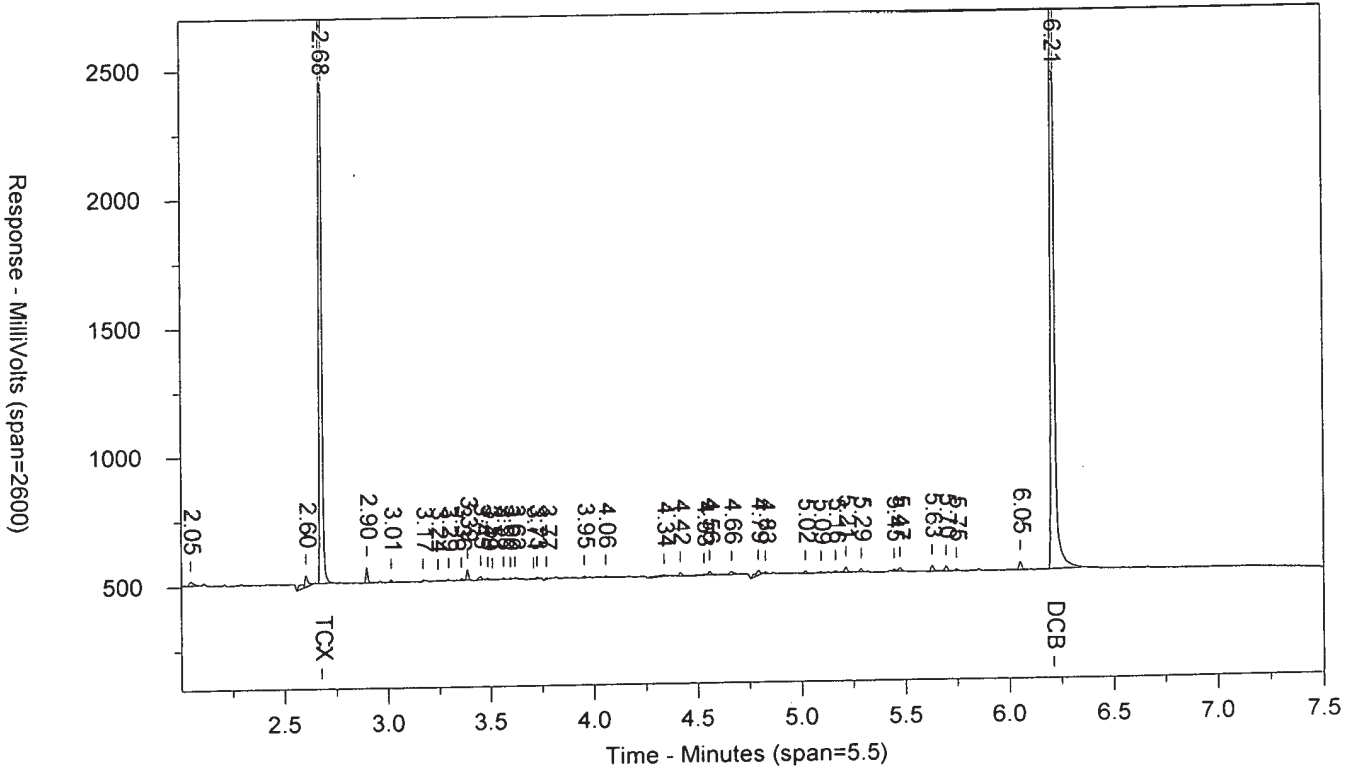
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SW-846 8082

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.051.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: IBLKX1824C NZPIBLKNZ PIBLK1831199999 10227 SW-846 8082
Injected On: 11/8/2018 7:53:25 PM Sample Weight: 1000
Instrument ID: CP25-18274 Dilution Factor: 10
Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
Injection Volume: 1 ul

Threshold: 7
Calibration Type: external
Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	3271926	.211	TCX	2.678	4988553	.195	TCX
6.614	2648759	.206	DCB	6.21	3775415	.201	DCB

Files:

Area File: 25pcbs18303009.051.RAW
Area File: 25pcbs18303009R.051 RAW
Method A: 25PCBA.MET
Method B: 25PCBAB.MET
Calibration File A: 25PCBS1830301.CAL
Calibration File B: 25PCBS1830301b.CAL
Format A: pestD25.FMTA
Format B: pestD25.FMTB
Area File Created On: 11/8/2018 8:01:57 PM
File Reported On: 11/8/2018 at 8:02:00 PM

IBLKX1824C

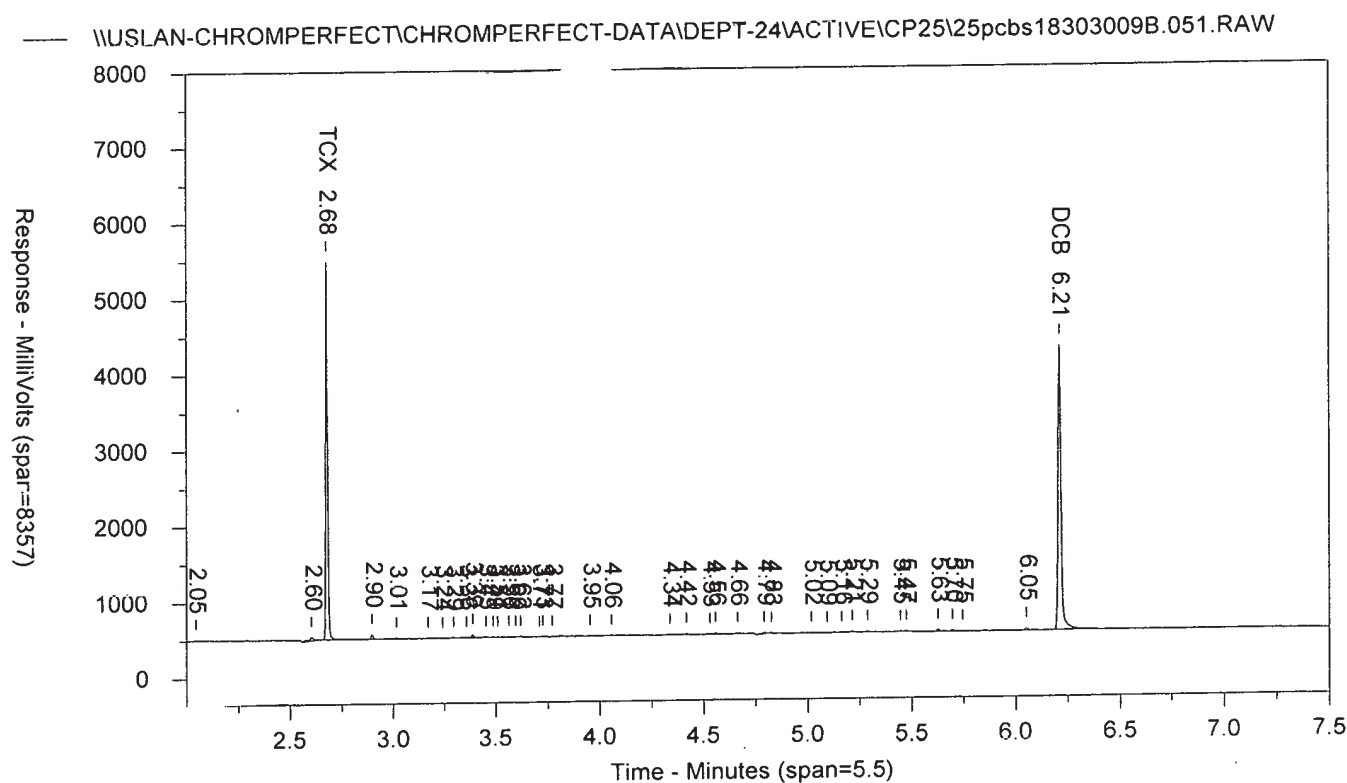
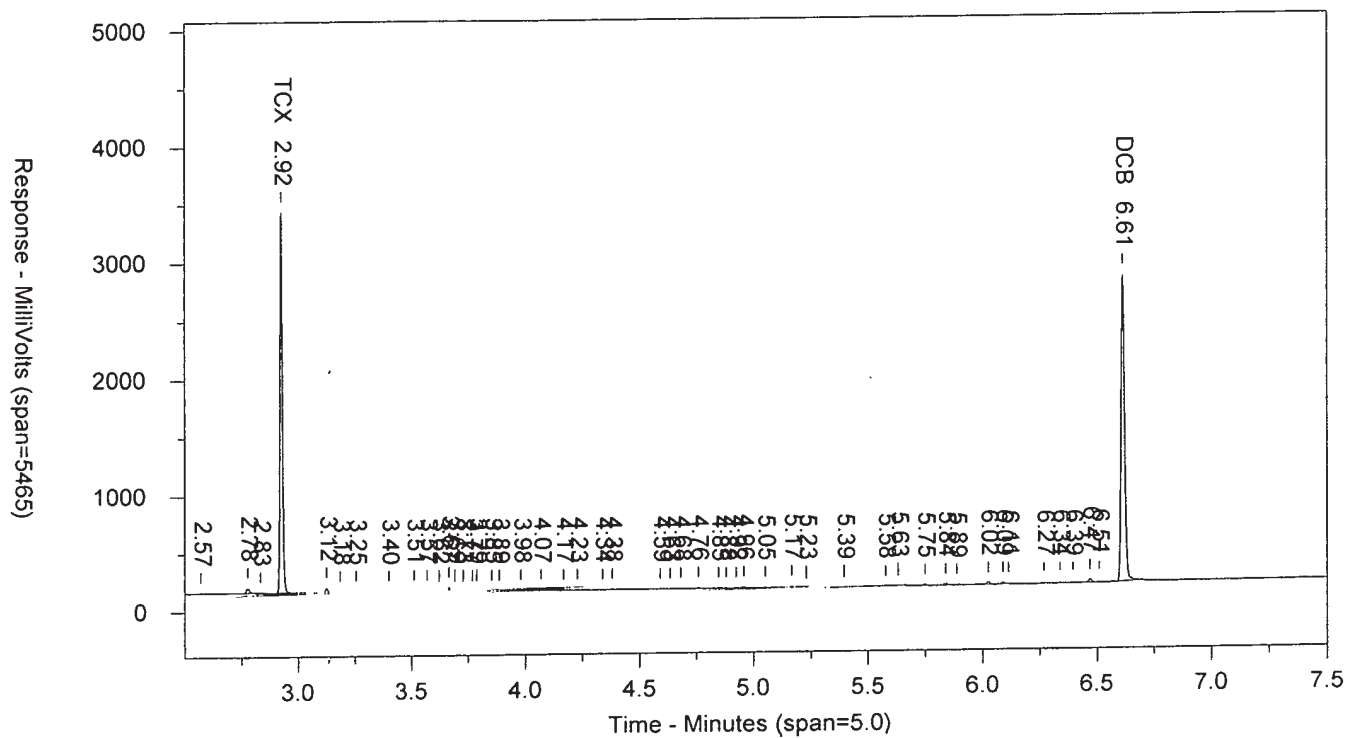
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PIBLK1831199999

10227

SW-846 8082

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IBLKX1824C

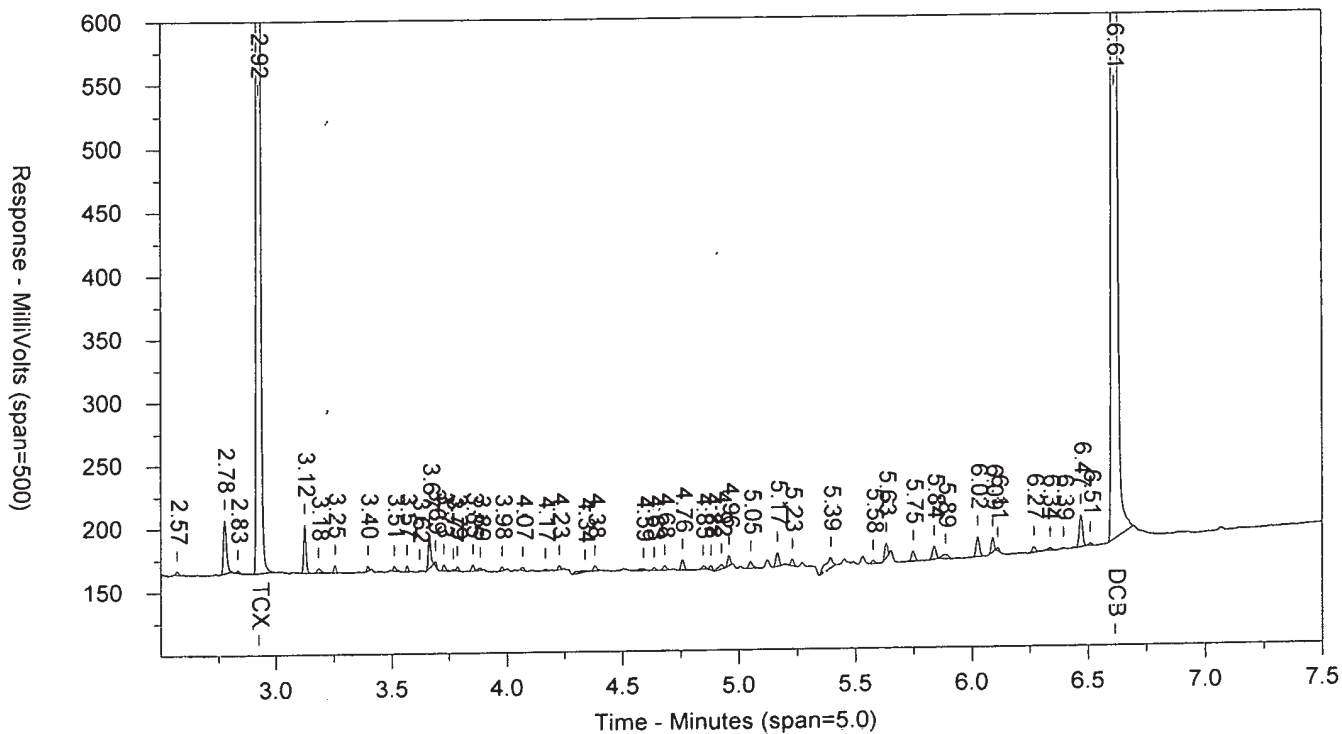
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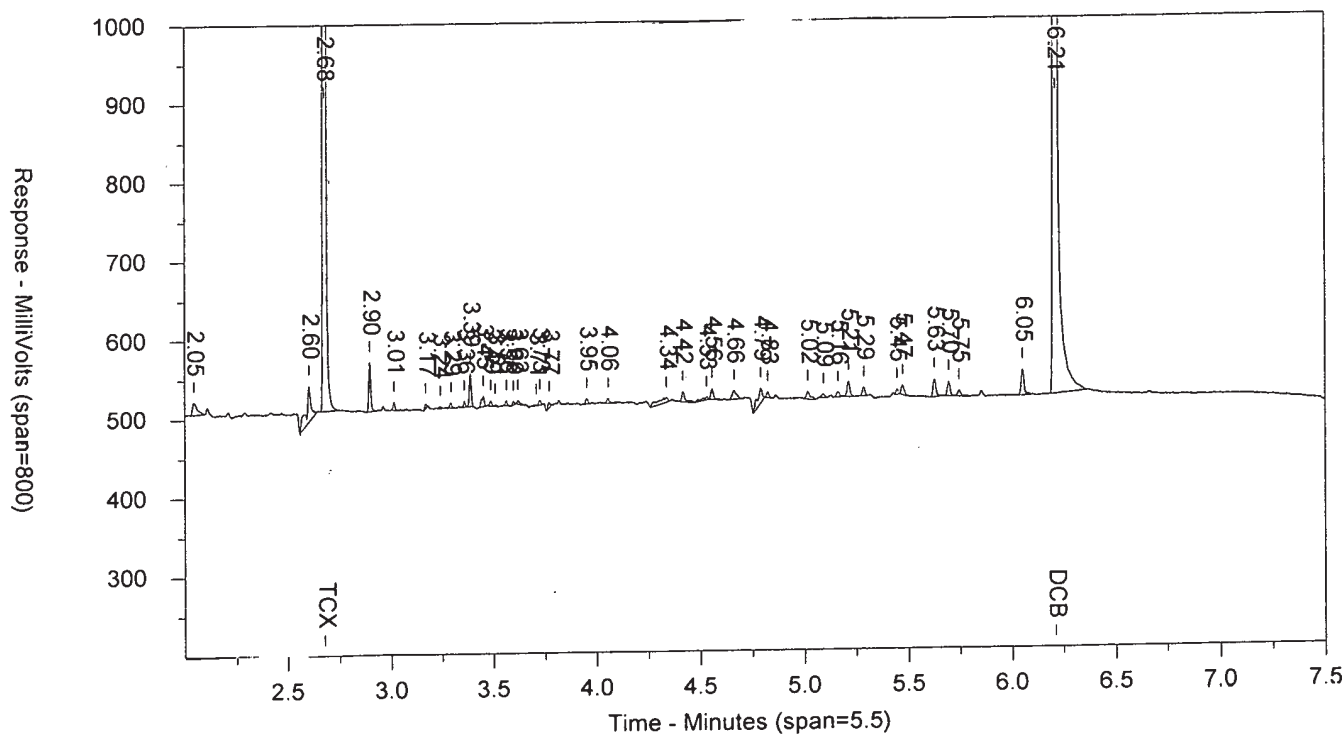
10227

SW-846 8082

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Raw QC Data

Polychlorinated Biphenyls (PCBs)

Data Summary

Sample Name: BLANKA 11/6/18 RI CA PBLK10310 BLK Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:16:55
Instrument 18274A
Result file 25PCBS18303009.012.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

%SSR(TCX) 64% (33 - 137) Conc: 0.192494
 %SSR(DCB) 60% (10 - 148) Conc: 0.179328

Analysis Report (B)

Injected on Nov 08, 2018 12:16:55
Instrument 18274B
Result file 25PCBS18303009B.012.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

%SSR(TCX) 60% (33 - 137) Conc: 0.180305
 %SSR(DCB) 62% (10 - 148) Conc: 0.183859

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	3732876	0.192494	Tetrachloro-m-xylene	2.65	2.68	2.71	5752097	0.180305
Decachlorobiphenyl	6.58	6.62	6.64	2876848	0.179328	Decachlorobiphenyl	6.18	6.21	6.24	4315338	0.183859

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.192494	0.012	0.024	0.024		6.54	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.192494	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.180305	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.183859	0.012	0.024	0.024		2.50	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.179328	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.183859	0.012	0.024	0.024			

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input type="checkbox"/> PCB-1016			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260			<0.12	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1262			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1268			<0.128	<0.256	<0.4			4	
<input type="checkbox"/> Total PCBs			<0.08	<0.24	<0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerio L. Tomayto
 Valerio L. Tomayto
 Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:31:48

Data Summary

Sample Name: BLANKA 11/6/18 RI CA PBLK10310 BLK Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:16:55
Instrument 18274A
Result file 25PCBS18303009.012.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

%SSR(TCX) 64% (30 - 150) Conc: 0.192494
 %SSR(DCB) 60% (30 - 150) Conc: 0.179328

Analysis Report (B)

Injected on Nov 08, 2018 12:16:55
Instrument 18274B
Result file 25PCBS18303009B.012.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

%SSR(TCX) 60% (30 - 150) Conc: 0.180305
 %SSR(DCB) 62% (30 - 150) Conc: 0.183859

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	3732876	0.192494	Tetrachloro-m-xylene	2.65	2.68	2.71	5752097	0.180305
Decachlorobiphenyl	6.58	6.62	6.64	2876848	0.179328	Decachlorobiphenyl	6.18	6.21	6.24	4315338	0.183859

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.192494	0.012	0.024	0.024		6.54	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.192494	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.180305	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.183859	0.012	0.024	0.024		2.50	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.179328	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.183859	0.012	0.024	0.024			

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input type="checkbox"/> PCB-1016			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260			<0.12	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1262			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1268			<0.128	<0.256	<0.4			4	
<input type="checkbox"/> Total PCBs			<0.08	<0.24	<0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerio L. Tomayto
 Valerio L. Tomayto
 Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:31:52

Data Summary

Sample Name: BLANKA 11/6/18 RI CA PBLK10310 BLK Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**

Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:16:55
Instrument 18274A
Result file 25PCBS18303009.012.RAW
Calibration file 25PCBS1830301
Method file 25PCBA
%SSR(TCX) 64% (30 - 150) **Conc:** 0.192494
%SSR(DCB) 60% (30 - 150) **Conc:** 0.179328

Analysis Report (B)

Injected on Nov 08, 2018 12:16:55
Instrument 18274B
Result file 25PCBS18303009B.012.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB
%SSR(TCX) 60% (30 - 150) **Conc:** 0.180305
%SSR(DCB) 62% (30 - 150) **Conc:** 0.183859

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	3732876	0.192494	Tetrachloro-m-xylene	2.65	2.68	2.71	5752097	0.180305
Decachlorobiphenyl	6.58	6.62	6.64	2876848	0.179328	Decachlorobiphenyl	6.18	6.21	6.24	4315338	0.183859

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.192494	0.012	0.024	0.024		6.54	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.192494	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.180305	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.183859	0.012	0.024	0.024		2.50	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.179328	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.183859	0.012	0.024	0.024			

Multiple Component Summary

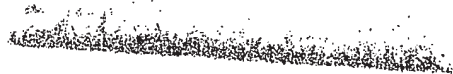
Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input type="checkbox"/> PCB-1016			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260			<0.12	<0.24	<0.4			4	
<input type="checkbox"/> Total PCBs			<0.08	<0.24	<0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Victoria L. Tomayko
 Victoria L. Tomayko
 Principal Specialist

NOV 08 2018



Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:31:55

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: BLANKA 11/6/18 RI CA **PBLK10310 ID:** AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591



Analysis Report (A)

Injected on	: Nov 08, 2018 12:16:55	Conc.:	0.192494
Instrument	: CP25--18274A	Conc.:	0.179328
Result file	: 25PCBS18303009.012.RAW		
Calibration file	: 25PCBS1830301.CAL		
Method file	: 25PCBA.MET		
%SSR(TCX)	: 64% (33-137)		
%SSR(DCB)	: 60% (10-148)		

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.19	3.20	1183.864	0.003584	2	0.80	1
3.38	3.40	3.42	1158.516	0.003625			2
<u>Height Summation:</u>				2342.38			
Amount Avg CF:				0.003604	Linear:		
Aroclor-1221							
3.11	3.12	3.15	102721	0.737856	2	140.43	2
3.16	3.19	3.20	1183.864	0.002602			3
<u>Height Summation:</u>				103904.864			
Amount Avg CF:				0.370229	Linear:		
Aroclor-1232							
3.16	3.19	3.20	1183.864	0.003184	2	61.06	1
3.38	3.40	3.42	1158.516	0.008022			2
<u>Height Summation:</u>				2342.38			
Amount Avg CF:				0.005603	Linear:		
Aroclor-1242							
3.16	3.19	3.20	1183.864	0.004144	2	3.52	1
3.38	3.40	3.42	1158.516	0.004355			2
<u>Height Summation:</u>				2342.38			
Amount Avg CF:				0.004249	Linear:		
Aroclor-1248							
4.05	4.08	4.09	4130.735	0.011102	2	77.24	3
4.36	4.40	4.40	1289.33	0.003258			5
<u>Height Summation:</u>				5420.065			
Amount Avg CF:				0.00718	Linear:		
Aroclor-1254							
4.55	4.58	4.59	1252.768	0.002871	2	69.46	1
5.14	5.17	5.18	605.5188	0.00098			6
<u>Height Summation:</u>				1858.2868			
Amount Avg CF:				0.001925	Linear:		
Aroclor-1260							
5.14	5.17	5.18	605.5188	0.000616	4	144.62	3
5.21	5.23	5.25	14803.54	0.031040			4
5.61	5.63	6.65	5459.582	0.003834			5
5.82	5.84	5.86	97984.42	0.123566			6
<u>Height Summation:</u>				118853.0608			
Amount Avg CF:				0.039766	Linear:		
Aroclor-1262							
5.21	5.23	5.25	14803.54	0.020357	6	88.26	1
5.38	5.41	5.41	27130.58	0.046315			2
5.61	5.63	5.65	5459.582	0.003216			3
5.82	5.84	5.86	97984.42	0.099744			4
5.87	5.89	5.91	86122.03	0.161539			5
6.25	6.27	6.29	40490.6	0.061666			6
<u>Height Summation:</u>				271990.752			
Amount Avg CF:				0.065473	Linear:		

Analysis Report (B)

Injected on	: Nov 08, 2018 12:16:55	Conc.:	0.180305
Instrument	: CP25--18274B	Conc.:	0.183859
Result file	: 25PCBS18303009B.012.RAW		
Calibration file	: 25PCBS1830301B.CAL		
Method file	: 25PCBAB.MET		
%SSR(TCX)	: 60% (33-137)		
%SSR(DCB)	: 62% (10-148)		

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.60	3.63	3.64	1805.739	0.003593	1		5
<u>Height Summation:</u>				1805.739			
Amount Avg CF:				0.003593	Linear:		
Aroclor-1221							
2.89	2.90	2.93	64764.29	0.286025	1		2
<u>Height Summation:</u>				64764.29			
Amount Avg CF:				0.286025	Linear:		
Aroclor-1232							
3.60	3.63	3.64	1805.739	0.009943	1		5
<u>Height Summation:</u>				1805.739			
Amount Avg CF:				0.009943	Linear:		
Aroclor-1242							
3.60	3.63	3.64	1805.739	0.004781	1		5
<u>Height Summation:</u>				1805.739			
Amount Avg CF:				0.004781	Linear:		
Aroclor-1260							
5.00	5.02	5.04	33364.4	0.045521	3	96.79	4
5.19	5.21	5.23	13734.41	0.007896			5
5.45	5.48	5.49	136172.8	0.114992			6
<u>Height Summation:</u>				183271.61			
Amount Avg CF:				0.056136	Linear:		
Aroclor-1262							
4.81	4.83	4.85	46208.73	0.04756	6	86.52	1
5.00	5.02	5.04	33364.4	0.033167			2
5.20	5.21	5.24	13734.41	0.006719			3
5.41	5.43	5.45	147603.5	0.178345			4
5.46	5.48	5.50	136172.8	0.098376			5
5.83	5.85	5.87	47607.64	0.05819			6
<u>Height Summation:</u>				424691.48			
Amount Avg CF:				0.070393	Linear:		
Aroclor-1268							
5.41	5.43	5.45	147603.5	0.049912	6	38.72	1
5.46	5.48	5.50	136172.8	0.045549			2
5.61	5.63	5.65	126372.1	0.048646			3
5.68	5.70	5.72	61155.79	0.094549			4
5.83	5.85	5.87	47607.64	0.045656			5
6.03	6.05	6.07	344678.2	0.036329			6
<u>Height Summation:</u>				863590.03			
Amount Avg CF:				0.05344	Linear:		

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: BLANKA 11/6/18 RI CA PBLK10310 ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml Total Volume: 2 ml Analyst: 9065 SDG: State:
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:16:55
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.012.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 12:16:55
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.012.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.81	5.84	5.85	97984.42	0.044417	6	18.06	1
5.87	5.89	5.91	86122.03	0.043105			2
6.00	6.03	6.04	95375.58	0.051986			3
6.07	6.09	6.11	29224.03	0.063458			4
6.24	6.27	6.28	40490.6	0.051419			5
6.44	6.47	6.48	244947.7	0.038547			6

Height Summation: 594144.36
Amount - Avg CF: 0.048822 Linear:

Summary Report

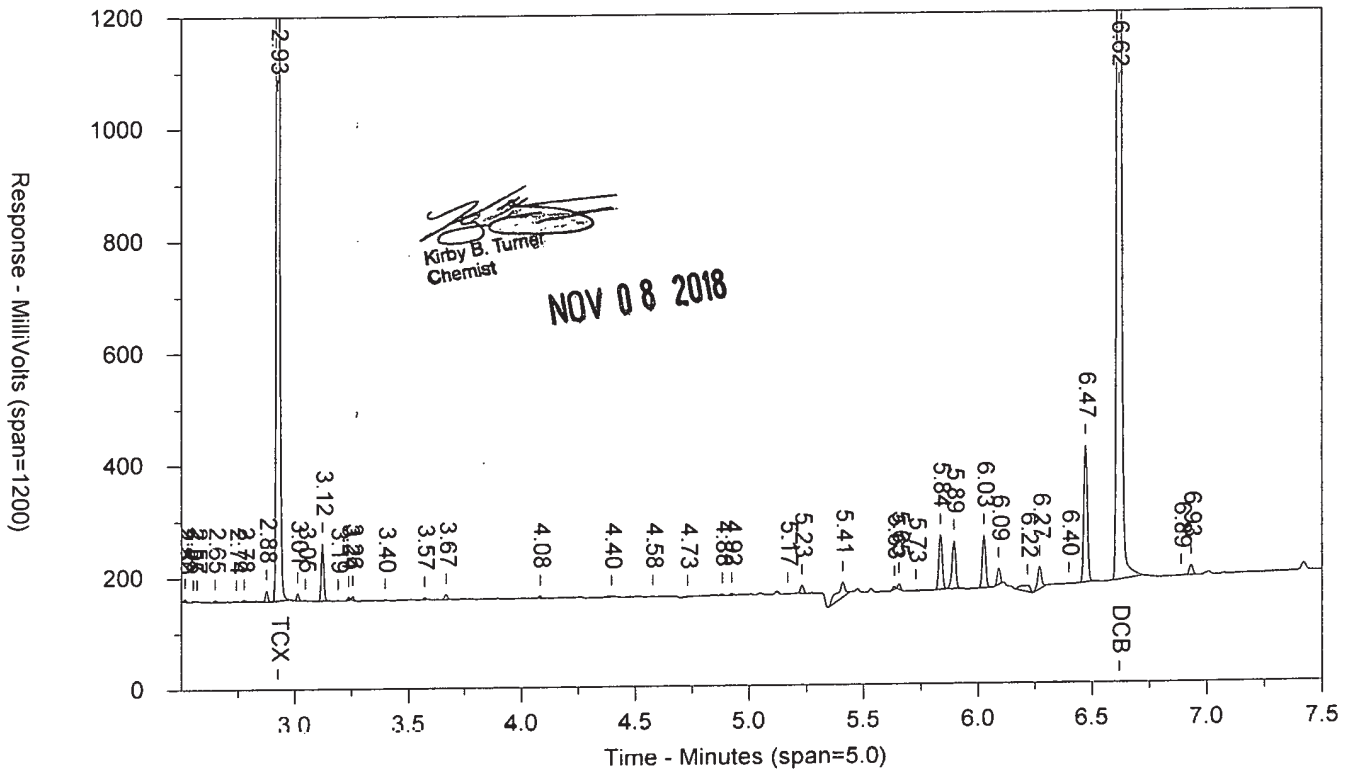
Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.4	0.08		0.31	4	40	
Aroclor-1221			0.4	0.08		25.66	3	5	
Aroclor-1232			0.4	0.16		** 55.83	4	10	
Aroclor-1242			0.4	0.08		11.78	4	30	
Aroclor-1248			0.4	0.08			4	40	
Aroclor-1254			0.4	0.08			4	40	
Aroclor-1260			0.4	0.12		34.14	4	40	
Aroclor-1262			0.4	0.16		7.24	4	40	
Aroclor-1268			0.4	0.128		9.03	4	40	

Units: ug/l

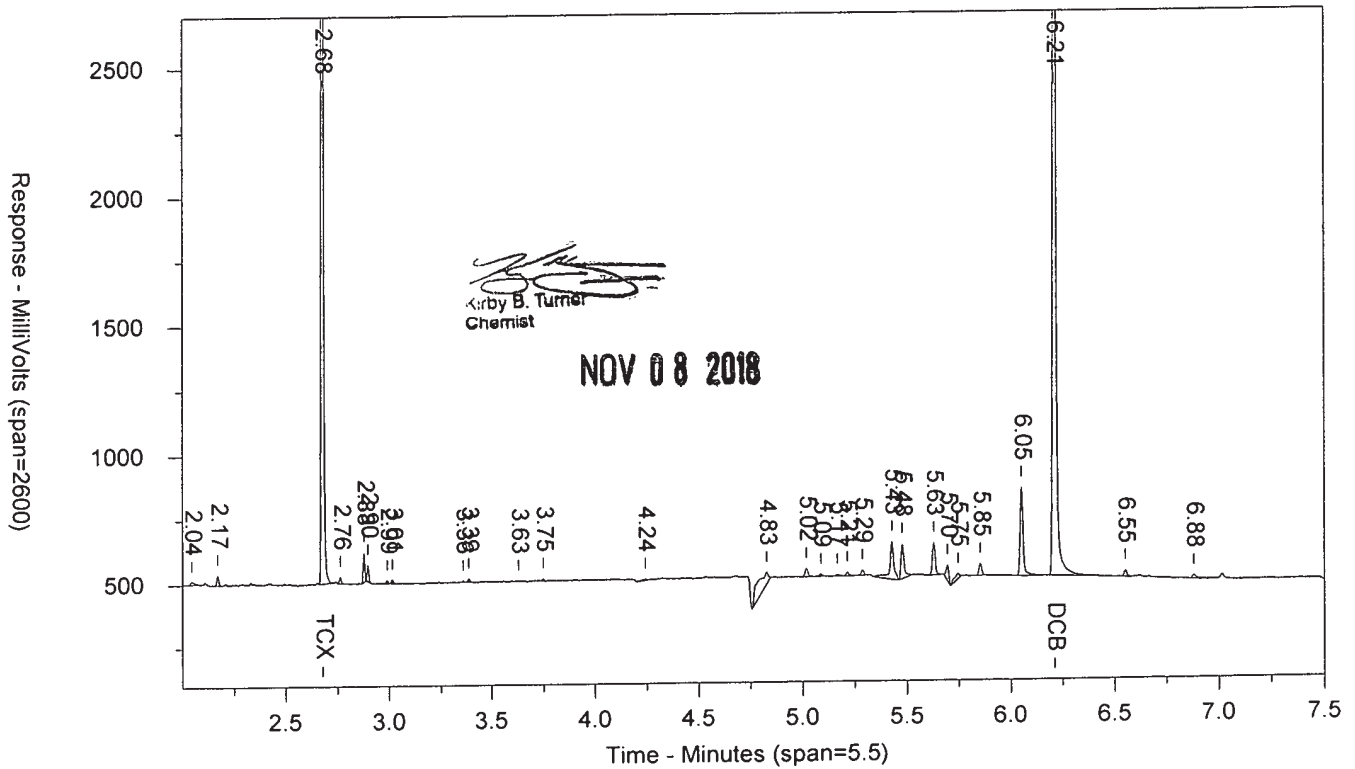
BLANKA 11/6/18 RI CAACPBLK10310 BLK 183100010A 10591

SW-846 8082

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.012.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: BLANKA 11/6/18 RI CAACPBLK10310 BLK 183100010A 10591 SW-846 8082A
 Injected On: 11/8/2018 12:16:55 PM Sample Weight: 250
 Instrument ID: CP25-18274 Dilution Factor: 2
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	3732876	.192	TCX	2.678	5752097	.18	TCX
6.617	2876848	.179	DCB	6.211	4315339	.184	DCB

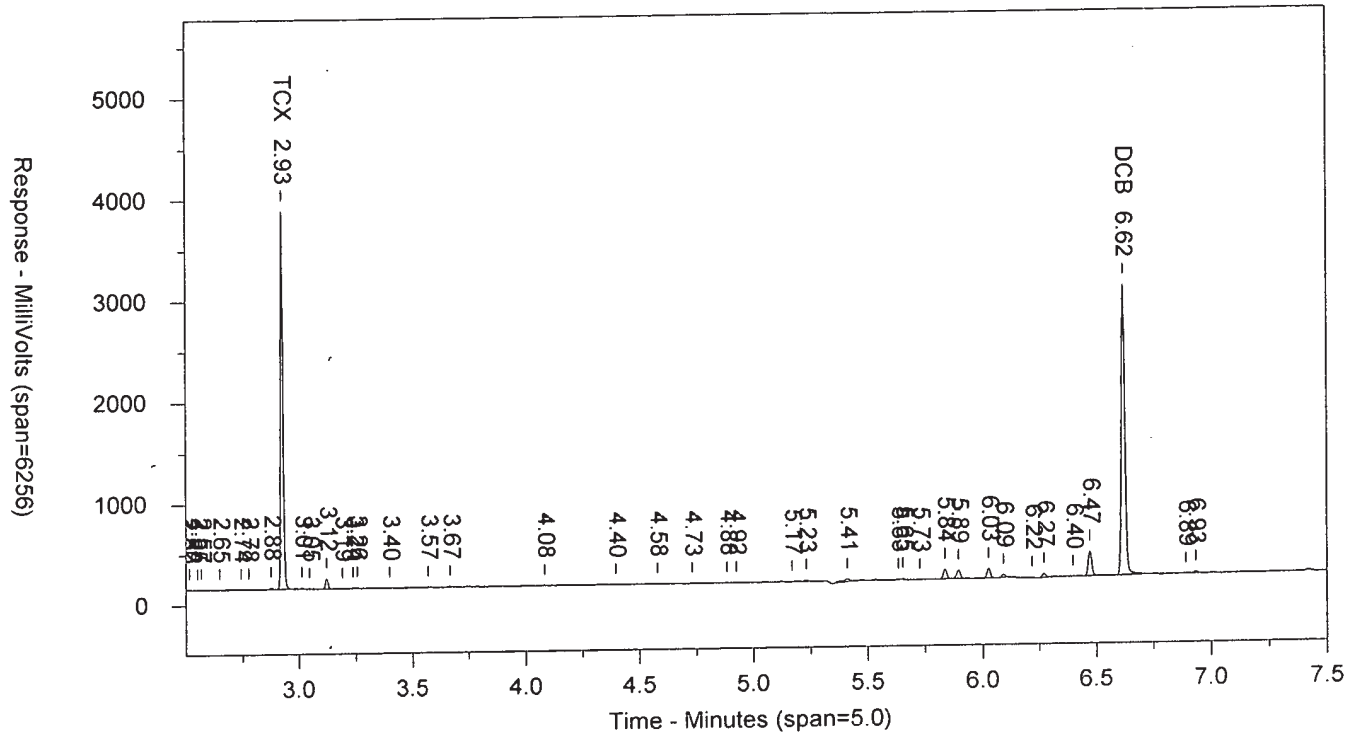
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Area File: 25pcbs18303009.012.RAW
 Area File: 25pcbs18303009B.012.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 12:25:26 PM
 File Reported On: 11/8/2018 at 12:25:34 PM

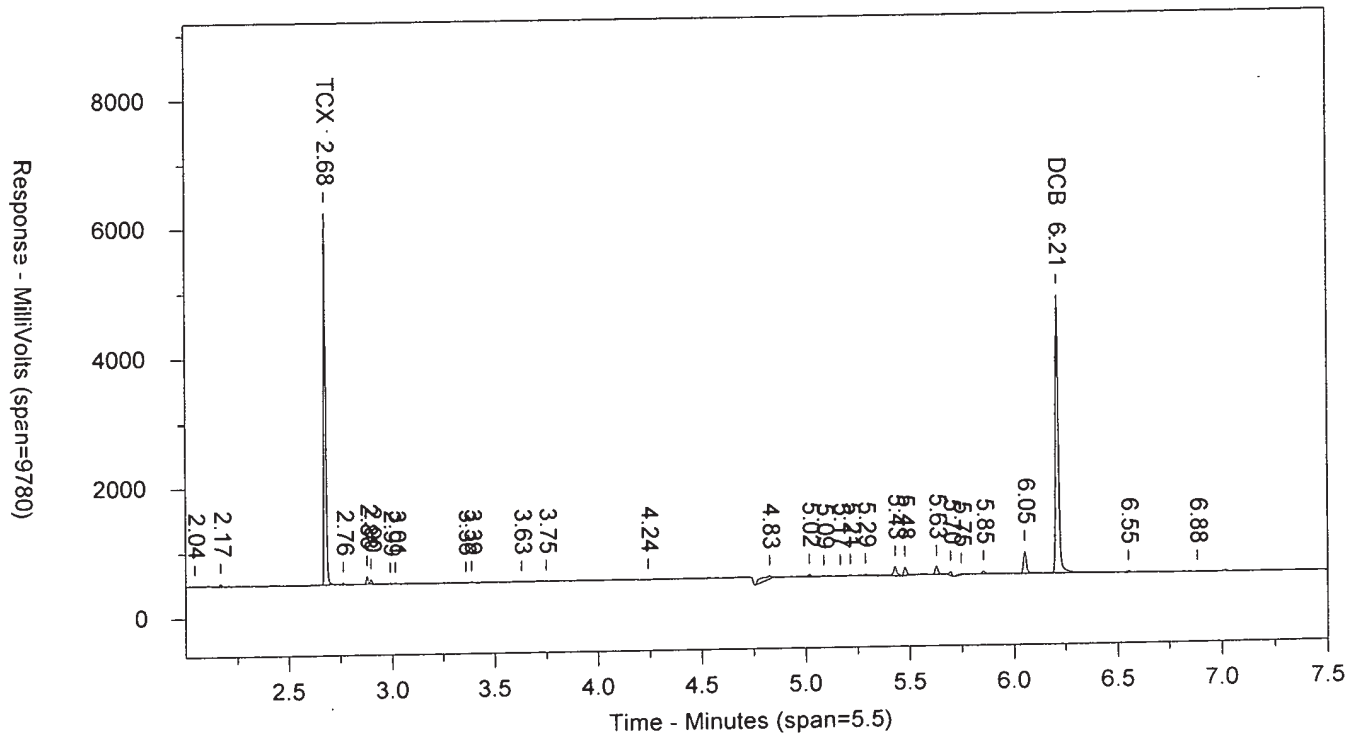
BLANKA 11/6/18 RI CAACPLK10310 BLK 183100010A 10591

SW-846 80

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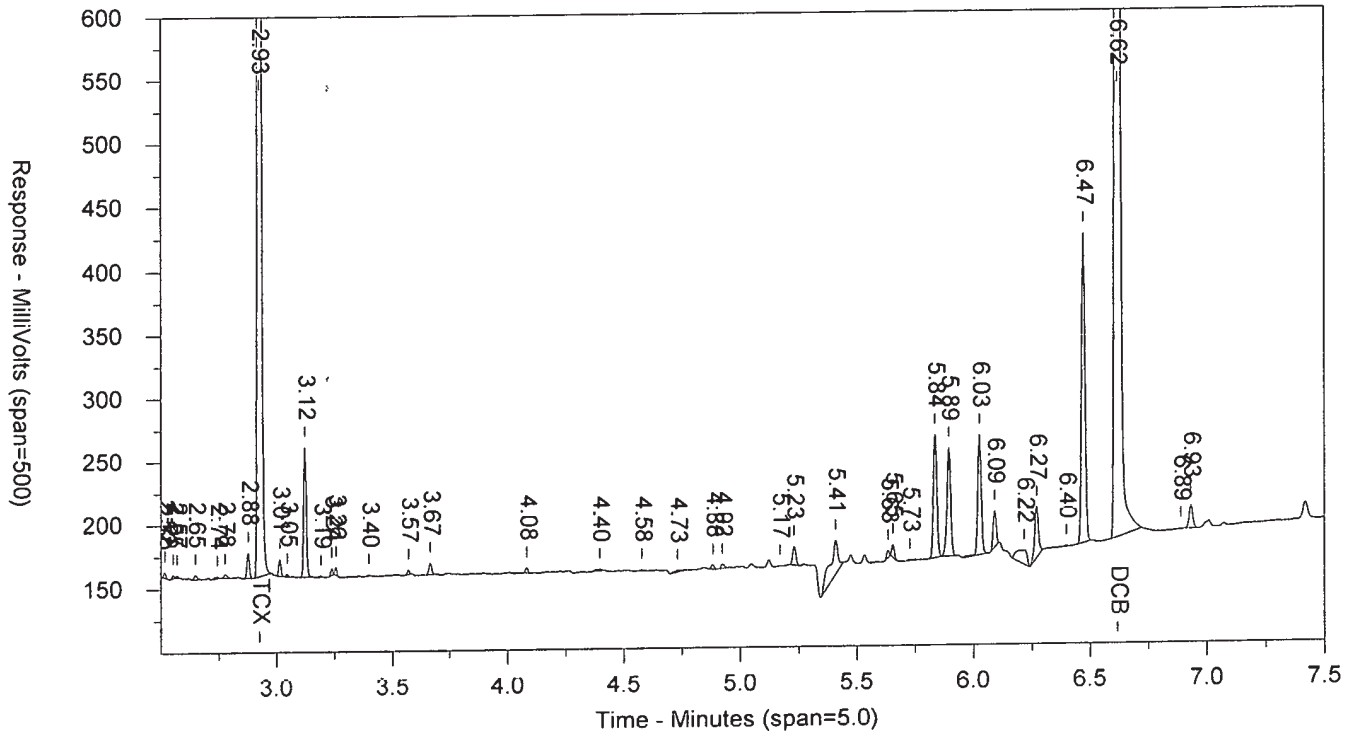
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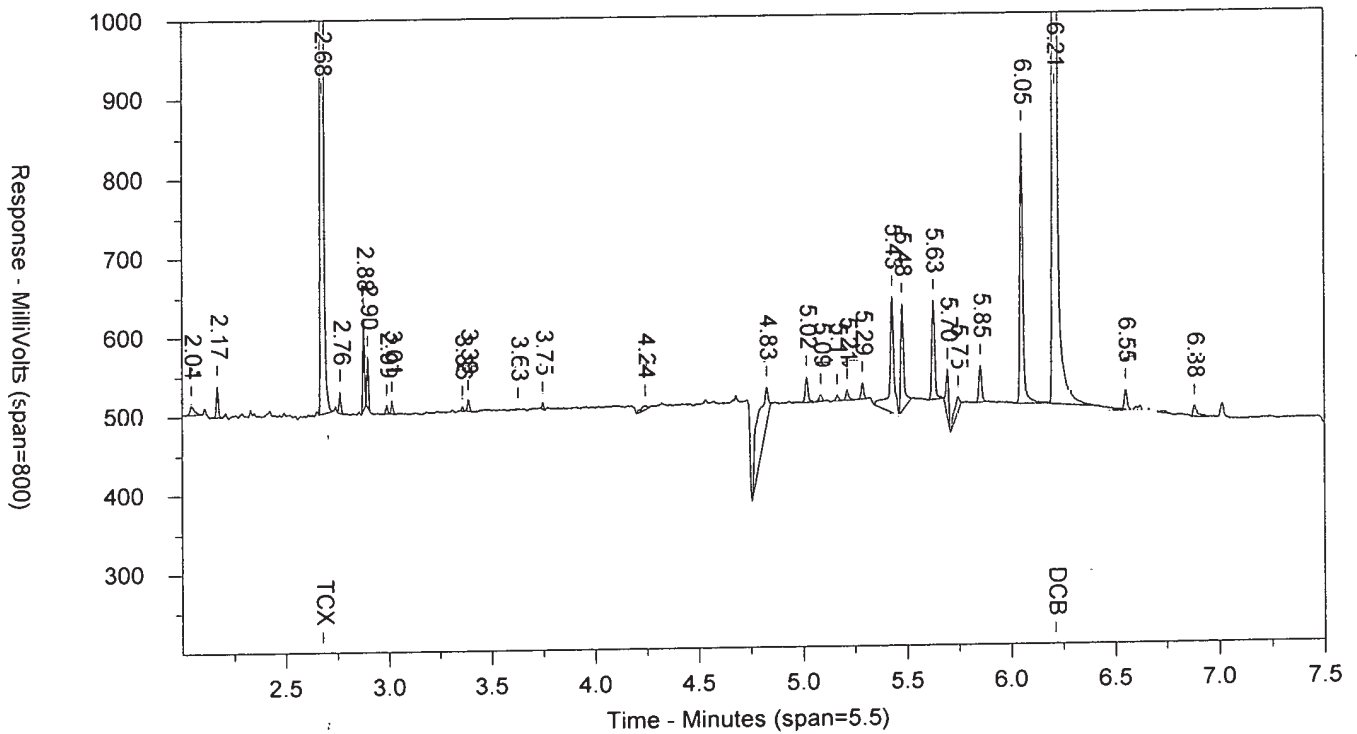
BLANKA 11/6/18 RI CAACPLK10310 BLK 183100010A 10591

SW-846 80

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Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 LCS Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:27:54
Instrument 18274A
Result file 25PCBS18303009.013.RAW
Calibration file 25PCBS1830301
Method file 25PCBA
%SSR(TCX) 71% (33 - 137) **Conc:** 0.21478
%SSR(DCB) 57% (10 - 148) **Conc:** 0.170617

Analysis Report (B)

Injected on Nov 08, 2018 12:27:54
Instrument 18274B
Result file 25PCBS18303009B.013.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB
%SSR(TCX) 70% (33 - 137) **Conc:** 0.209677
%SSR(DCB) 58% (10 - 148) **Conc:** 0.171747

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.92	2.95	4165058	0.21478	Tetrachloro-m-xylene	2.65	2.68	2.71	6689096	0.209677
Decachlorobiphenyl	6.58	6.62	6.64	2737096	0.170617	Decachlorobiphenyl	6.18	6.21	6.24	4031042	0.171747

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.21478	0.012	0.024	0.024		2.40	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.21478	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.209677	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.171747	0.012	0.024	0.024		0.66	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.170617	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.171747	0.012	0.024	0.024			

Multiple Component Data

Min	RT	Max	Height	Amount	Pks	%RSD Peak	Min	RT	Max	Height	Amount	Pks	%RSD Peak
Aroclor-1016						6.58	Aroclor-1016						6.55
3.16	3.18	3.20	1047356	3.170662	1		2.94	2.96	2.98	1677420	3.082248	1	
3.38	3.40	3.42	1045273	3.270229	2		3.27	3.29	3.31	2081162	3.26598	2	
3.49	3.51	3.53	1354628	3.301363	3		3.47	3.49	3.51	2240854	3.626001	3	
3.71	3.73	3.75	1713299	3.626541	4		3.54	3.50	3.58	2315837	3.615539	4	
3.77	3.79	3.81	1427916	3.670277	5		3.60	3.62	3.64	1791103	3.563951	5	
3.96	3.98	4.00	1088445	3.662947	6		3.71	3.73	3.75	1936974	3.574302	6	
Height summation: 7676917							Height summation: 12043350						
Concentration CF: 3.450337						L:	Concentration CF: 3.45467						L:
Aroclor-1260						11.06	Aroclor-1260						13.27
4.74	4.76	4.78	2322611	3.433182	1		4.54	4.56	4.58	4409900	3.72082	1	
4.94	4.96	4.98	2916533	3.578994	2		4.64	4.66	4.68	3419095	3.593	2	
5.14	5.17	5.18	3325401	3.383617	3		4.77	4.79	4.81	3837834	3.240964	3	
5.21	5.23	5.25	2077651	4.357307	4		5.00	5.02	5.04	3178668	4.33684	4	
5.61	5.63	5.65	6074810	4.266457	5		5.19	5.21	5.23	8094454	4.653338	5	
5.82	5.84	5.86	3083644	3.8887	6		5.45	5.47	5.49	4941466	4.172863	6	
Height summation: 19800650							Height summation: 27881417						
Concentration CF: 3.818043						L:	Concentration CF: 3.952971						L:

Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 LCS Sample ID: AC **Batchnumber: 183100010A**
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:27:54
Instrument 18274A
Result file 25PCBS18303009.013.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

Analysis Report (B)

Injected on Nov 08, 2018 12:27:54
Instrument 18274B
Result file 25PCBS18303009B.013.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input type="checkbox"/> PCB-1016	B	3.45467	0.08	0.24	0.4		0.13	4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260	B	3.952971	0.12	0.24	0.4		3.47	4	
<input type="checkbox"/> PCB-1262			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1268			<0.128	<0.256	<0.4			4	
<input type="checkbox"/> Total PCBs	A	7.407641	0.08	0.24	0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100


 Valerie L. Tomayko
 Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:31:59

Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 LCS Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:27:54
Instrument 18274A
Result file 25PCBS18303009.013.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

%SSR(TCX) 71% (30 - 150) Conc: 0.21478
 %SSR(DCB) 57% (30 - 150) Conc: 0.170617

Analysis Report (B)

Injected on Nov 08, 2018 12:27:54
Instrument 18274B
Result file 25PCBS18303009B.013.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

%SSR(TCX) 70% (30 - 150) Conc: 0.209677
 %SSR(DCB) 58% (30 - 150) Conc: 0.171747

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.92	2.95	4165058	0.21478	Tetrachloro-m-xylene	2.65	2.68	2.71	6689096	0.209677
Decachlorobiphenyl	6.58	6.62	6.64	2737096	0.170617	Decachlorobiphenyl	6.18	6.21	6.24	4031042	0.171747

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.21478	0.012	0.024	0.024		2.40	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.21478	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.209677	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.171747	0.012	0.024	0.024		0.66	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.170617	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.171747	0.012	0.024	0.024			

Multiple Component Data

Min	RT	Max	Height	Amount	Pks	%RSD	Peak	Min	RT	Max	Height	Amount	Pks	%RSD	Peak	
Aroclor-1016								Aroclor-1016								
6.58								6.55								
3.16	3.18	3.20	1047356	3.170662			1	2.94	2.96	2.98	1677420	3.082248			1	
3.38	3.40	3.42	1045273	3.270229			2	3.27	3.29	3.31	2081162	3.26598			2	
3.49	3.51	3.53	1354628	3.301363			3	3.47	3.49	3.51	2240854	3.626001			3	
3.71	3.73	3.75	1713299	3.626541			4	3.54	3.50	3.58	2315837	3.615539			4	
3.77	3.79	3.81	1427916	3.670277			5	3.60	3.62	3.64	1791103	3.563951			5	
3.96	3.98	4.00	1088445	3.662947			6	3.71	3.73	3.75	1936974	3.574302			6	
Height summation:				7676917	Height summation:				12043350	Concentration				CF:	3.450337	L:
Concentration				CF:	3.450337	Concentration				CF:	3.45467	L:				
Aroclor-1260								Aroclor-1260								
11.06								13.27								
4.74	4.76	4.78	2322611	3.433182			1	4.54	4.56	4.58	4409900	3.72082			1	
4.94	4.96	4.98	2916533	3.578994			2	4.64	4.66	4.68	3419095	3.593			2	
5.14	5.17	5.18	3325401	3.383617			3	4.77	4.79	4.81	3837834	3.240964			3	
5.21	5.23	5.25	2077651	4.357307			4	5.00	5.02	5.04	3178668	4.33684			4	
5.61	5.63	5.65	6074810	4.266457			5	5.19	5.21	5.23	8094454	4.653338			5	
5.82	5.84	5.86	3083644	3.8887			6	5.45	5.47	5.49	4941466	4.172863			6	
Height summation:				19800650	Height summation:				27881417	Concentration				CF:	3.818043	L:
Concentration				CF:	3.818043	Concentration				CF:	3.952971	L:				

Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 LCS Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:27:54
Instrument 18274A
Result file 25PCBS18303009.013.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

Analysis Report (B)

Injected on Nov 08, 2018 12:27:54
Instrument 18274B
Result file 25PCBS18303009B.013.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req.	
								Hits	Comments
<input type="checkbox"/> PCB-1016	B	3.45467	0.08	0.24	0.4		0.13	4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260	B	3.952971	0.12	0.24	0.4		3.47	4	
<input type="checkbox"/> PCB-1262			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1268			<0.128	<0.256	<0.4			4	
<input type="checkbox"/> Total PCBs	A	7.407641	0.08	0.24	0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayto
Valerie L. Tomayto
Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:02

Data Summary

Sample Name: **LCSA** 11/6/18 RI CAF LCS10310 LCS Sample ID: AC Batchnumber: **183100010A**
 Sample Amount: 250 ml Total Volume: 2 ml Analyst: 9065 SDG: State:

Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:27:54
 Instrument 18274A
 Result file 25PCBS18303009.013.RAW
 Calibration file 25PCBS1830301
 Method file 25PCBA

%SSR(TCX) 71% (30 - 150) Conc: 0.21478
 %SSR(DCB) 57% (30 - 150) Conc: 0.170617

Analysis Report (B)

Injected on Nov 08, 2018 12:27:54
 Instrument 18274B
 Result file 25PCBS18303009B.013.RAW
 Calibration file 25PCBS1830301B
 Method file 25PCBAB

%SSR(TCX) 70% (30 - 150) Conc: 0.209677
 %SSR(DCB) 58% (30 - 150) Conc: 0.171747

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.92	2.95	4165058	0.21478	Tetrachloro-m-xylene	2.65	2.68	2.71	6689096	0.209677
Decachlorobiphenyl	6.58	6.62	6.64	2737096	0.170617	Decachlorobiphenyl	6.18	6.21	6.24	4031042	0.171747

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.21478	0.012	0.024	0.024		2.40	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.21478	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.209677	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.171747	0.012	0.024	0.024		0.66	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.170617	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.171747	0.012	0.024	0.024			

Multiple Component Data

Min	RT	Max	Height	Amount	Pks	%RSD	Peak	Min	RT	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016								Aroclor-1016							
6.58								6.55							
3.16	3.18	3.20	1047356	3.170662			1	2.94	2.96	2.98	1677420	3.082248			1
3.38	3.40	3.42	1045273	3.270229			2	3.27	3.29	3.31	2081162	3.26598			2
3.49	3.51	3.53	1354628	3.301363			3	3.47	3.49	3.51	2240854	3.626001			3
3.71	3.73	3.75	1713299	3.626541			4	3.54	3.56	3.58	2315837	3.615539			4
3.77	3.79	3.81	1427916	3.670277			5	3.60	3.62	3.64	1791103	3.563951			5
3.96	3.98	4.00	1088445	3.662947			6	3.71	3.73	3.75	1900974	3.574302			6
Height summation: 7676917				Height summation: 12043350				Concentration CF: 3.450337				Concentration CF: 3.45467			
L:								L:							
Aroclor-1260								Aroclor-1260							
11.06								13.27							
4.74	4.76	4.78	2322611	3.433182			1	4.54	4.56	4.58	4409900	3.72082			1
4.94	4.96	4.98	2916533	3.578994			2	4.64	4.66	4.68	3419095	3.593			2
5.14	5.17	5.18	3325401	3.383617			3	4.77	4.79	4.81	3837834	3.240964			3
5.21	5.23	5.25	2077651	4.357307			4	5.00	5.02	5.04	3178668	4.33684			4
5.61	5.63	5.65	6074810	4.266467			5	5.19	5.21	5.23	8094454	4.653338			5
5.82	5.84	5.86	3083644	3.8887			6	5.45	5.47	5.49	4941466	4.112863			6
Height summation: 19800660				Height summation: 27881417				Concentration CF: 3.818043				Concentration CF: 3.952971			
L:								L:							

Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 LCS Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:27:54
Instrument 18274A
Result file 25PCBS18303009.013.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

Analysis Report (B)

Injected on Nov 08, 2018 12:27:54
Instrument 18274B
Result file 25PCBS18303009B.013.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req.	
								Hits	Comments
<input type="checkbox"/> PCB-1016	B	3.45467	0.08	0.24	0.4		0.13	4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260	B	3.952971	0.12	0.24	0.4		3.47	4	
<input type="checkbox"/> Total PCBs	A	7.407641	0.08	0.24	0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayto
Valerie L. Tomayto
Principal Spectroscopist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:06

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 ID: AC Batchnumber: 183100010A
Sample Amount: 250 ml Total Volume: 2 ml Analyst: 9065 SDG: State:
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:27:54
Instrument : CP25--18274A
Result file : 25PCBS18303009.013.RAW
Calibration file : 25PCBS1830301.CAL
Method file : 25PCBA.MET

%SSR(TCX) : 71% (33-137) Conc.: 0.21478
%SSR(DCB) : 57% (10-148) Conc.: 0.170617

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	1047356	3.170662	6	6.58	1
3.38	3.40	3.42	1045273	3.270229	2		2
+ 3.38	3.41	3.42	452079.6	1.414371	2		2
3.49	3.51	3.53	1354628	3.301363	3		3
3.71	3.73	3.75	1713299	3.626541	4		4
3.77	3.79	3.81	1427916	3.670277	5		5
3.96	3.98	4.00	1088445	3.662947	6		6

Height Summation: 7676917
Amount Avg CF: 3.450336 Linear:

Aroclor-1221							
3.06	3.08	3.10	193192.6	1.099864	3	36.17	1
3.11	3.13	3.15	223269.8	1.603772	2		2
E 3.16	3.18	3.20	1047356	2.30179	3		3

Height Summation: 1463818.4
Amount Avg CF: 1.668476 Linear:

Aroclor-1232							
E 3.16	3.18	3.20	1047356	2.816791	6	31.93	1
E 3.38	3.40	3.42	1045273	7.238308	2		2
E+ 3.38	3.41	3.42	452079.6	3.130561	2		2
E 3.49	3.51	3.53	1354628	7.313612	3		3
E 3.71	3.73	3.75	1713299	7.695845	4		4
E 3.77	3.79	3.81	1427916	8.666053	5		5
F 3.96	3.98	4.00	1000445	9.303067	6		6

Height Summation: 7676917
Amount Avg CF: 7.182379 Linear:

Aroclor-1242							
E 3.16	3.18	3.20	1047356	3.66573	6	10.90	1
E 3.38	3.40	3.42	1045273	3.929091	2		2
E+ 3.38	3.41	3.42	452079.6	1.699328	2		2
E 3.49	3.51	3.53	1354628	3.995893	3		3
E 3.71	3.73	3.75	1713299	4.237316	4		4
E 3.77	3.79	3.81	1427916	4.735644	5		5
E 3.96	3.98	4.00	1088445	4.815153	6		6

Height Summation: 7676917
Amount Avg CF: 4.229804 Linear:

Aroclor-1248							
3.83	3.86	3.87	970578.4	2.495482	6	9.51	1
3.96	3.98	4.00	1088445	2.480424	2		2
4.05	4.07	4.09	894910.8	2.405253	3		3
4.23	4.23	4.27	787423.7	2.119968	4		4
+ 4.23	4.25	4.27	119288.3	0.321158	4		4
4.36	4.38	4.40	945914.6	2.39054	5		5
4.61	4.64	4.65	575864.9	1.955139	6		6

Height Summation: 5263137.4
Amount Avg CF: 2.307801 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 12:27:54
Instrument : CP25--18274B
Result file : 25PCBS18303009B.013.RAW
Calibration file : 25PCBS1830301B.CAL
Method file : 25PCBAB.MET

%SSR(TCX) : 70% (33-137) Conc.: 0.209677
%SSR(DCB) : 58% (10-148) Conc.: 0.171747

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	1677420	3.082248	6	6.55	1
3.27	3.29	3.31	2081162	3.26598	2		2
+ 3.47	3.47	3.51	88083.05	0.14253	3		3
3.47	3.49	3.51	2240854	3.626001	3		3
3.54	3.56	3.58	2315837	3.615539	4		4
3.60	3.62	3.64	1791103	3.563951	5		5
+ 3.60	3.64	3.64	545539.1	1.085518	5		5
3.71	3.73	3.75	1936974	3.574302	6		6

Height Summation: 12043350
Amount Avg CF: 3.45467 Linear:

Aroclor-1221							
2.83	2.85	2.87	339605.8	1.069401	3	34.76	1
2.89	2.91	2.93	352661.7	1.557493	2		2
E 2.94	2.96	2.98	1677420	2.180786	3		3

Height Summation: 2369687.5
Amount Avg CF: 1.60256 Linear:

Aroclor-1232							
E 2.94	2.96	2.98	1677420	2.692162	6	33.83	1
E 3.27	3.29	3.31	2081162	7.256932	2		2
+ 3.47	3.47	3.51	88083.05	0.302329	3		3
E 3.47	3.49	3.51	2240854	7.691316	3		3
E 3.54	3.56	3.58	2315837	8.307751	4		4
E 3.60	3.62	3.64	1791103	9.862211	5		5
E+ 3.60	3.64	3.64	545539.1	3.003859	5		5
E 3.71	3.73	3.75	1936974	9.126596	6		6

Height Summation: 12043350
Amount Avg CF: 7.489495 Linear:

Aroclor-1242							
E 2.94	2.96	2.98	1677420	3.57221	6	10.07	1
E 3.27	3.29	3.31	2081162	4.019387	2		2
+ 3.47	3.47	3.51	88083.05	0.167264	3		3
E 3.47	3.49	3.51	2240854	4.255232	3		3
E 3.54	3.56	3.58	2315837	4.505398	4		4
E 3.60	3.62	3.64	1791103	4.742464	5		5
+ 3.60	3.64	3.64	545539.1	1.444473	5		5
E 3.71	3.73	3.75	1936974	4.587401	6		6

Height Summation: 12043350
Amount Avg CF: 4.280349 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: LCSA 11/6/18 RI CAF LCS10310 ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:27:54
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.013.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
4.55	4.58	4.59	48976.8	0.112235	6	106.25	1
4.55	4.59	4.59	221428.9	0.507427			1
4.61	4.64	4.65	575864.9	0.659182			2
E 4.74	4.76	4.78	2322611	8.432331			3
4.83	4.85	4.87	346763.9	0.575258			4
5.03	5.05	5.07	1350057	2.79167			5
5.14	5.17	5.18	3325401	5.380291			6
<u>Height Summation:</u>			8142126.7				
<u>Amount Avg CF:</u>			3.057693	Linear:			
Aroclor-1260							
4.74	4.76	4.78	2322611	3.433182	6	11.06	1
4.94	4.96	4.98	2916533	3.578994			2
5.14	5.17	5.18	3325401	3.383617			3
5.21	5.23	5.25	2077651	4.357307			4
5.61	5.63	5.65	6074810	4.266457			5
5.82	5.84	5.06	3083644	3.8887			6
<u>Height Summation:</u>			19800650				
<u>Amount Avg CF:</u>			3.818043	Linear:			
Aroclor-1262							
E 5.21	5.23	5.25	2077651	2.857077	6	17.45	1
E 5.38	5.40	5.41	1938945	3.310006			2
E 5.61	5.63	5.65	6074810	3.578682			3
E 5.82	5.84	5.86	3083644	3.139008			4
E 5.87	5.89	5.91	1140226	2.138724			5
E 6.25	6.27	6.29	1737234	2.645746			6
<u>Height Summation:</u>			16052510				
<u>Amount Avg CF:</u>			2.944874	Linear:			
Aroclor-1268							
5.81	5.84	5.85	3083644	1.397829	6	117.27	1
5.87	5.89	5.91	1140226	0.570689			2
6.00	6.03	6.04	91955.02	0.050121			3
6.07	6.09	6.11	86173.55	0.187119			4
E 6.24	6.27	6.28	1737234	2.206111			5
6.44	6.47	6.48	453807	0.071415			6
<u>Height Summation:</u>			6593039.57				
<u>Amount Avg CF:</u>			0.747214	Linear:			

Analysis Report (B)

Injected on : Nov 08, 2018 12:27:54
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.013.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	1611226	2.538388	6	48.30	1
3.71	3.73	3.75	1936974	2.48537			2
+ 3.80	3.80	3.84	355573.7	0.690274			3
3.80	3.82	3.84	1251518	2.429567			3
3.93	3.96	3.97	1521654	1.516638			4
4.07	4.09	4.11	100689.6	0.218196			5
+ 4.07	4.11	4.11	96716.3	0.209586			5
+ 4.30	4.31	4.34	411617.2	0.943545			6
+ 4.30	4.33	4.34	202869.7	0.465036			6
4.30	4.34	4.34	1158848	2.656412			6
<u>Height Summation:</u>			7500909.6				
<u>Amount Avg CF:</u>			1.974095	Linear:			
Aroclor-1254							
+ 4.30	4.31	4.34	411617.2	0.322719	6	97.56	1
+ 4.30	4.33	4.34	202869.7	0.159055			1
4.30	4.34	4.34	1158848	0.908567			1
4.40	4.42	4.44	3609224	6.024743			2
4.47	4.49	4.51	325901.1	0.405084			3
E 4.54	4.56	4.58	4409900	9.091366			4
4.69	4.72	4.73	486537	0.879335			5
4.77	4.79	4.81	3837834	4.221197			6
<u>Height Summation:</u>			13828244.1				
<u>Amount Avg CF:</u>			3.588382	Linear:			
Aroclor-1260							
4.64	4.56	4.60	4409900	3.72082	6	13.27	1
4.64	4.66	4.68	3419095	3.593			2
4.77	4.79	4.81	3837834	3.240964			3
5.00	5.02	5.04	3178668	4.33684			4
5.19	5.21	5.23	8094454	4.653338			5
5.45	5.47	5.49	4941466	4.172863			6
<u>Height Summation:</u>			27881417				
<u>Amount Avg CF:</u>			3.952971	Linear:			
Aroclor-1262							
E 4.81	4.83	4.85	2737866	2.817913	6	20.64	1
E 5.00	5.02	5.04	3178668	3.159864			2
E 5.20	5.21	5.24	8094454	3.960081			3
E 5.41	5.43	5.45	1794331	2.168039			4
E 5.46	5.47	5.50	4941466	3.569901			5
E 5.83	5.85	5.87	2271113	2.775945			6
<u>Height Summation:</u>			23017898				
<u>Amount Avg CF:</u>			3.07529	Linear:			

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: LCSA 11/6/18 RI CAF **LCS10310 ID:** AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:27:54
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.013.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 12:27:54
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.013.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
5.41	5.43	5.45	1794331	0.606756	6	118.08	1
E 5.46	5.47	5.50	4941466	1.65289			2
5.61	5.63	5.65	119675.3	0.046068			3
5.68	5.70	5.72	79142.12	0.122356			4
E 5.83	5.85	5.87	2271113	2.178			5
6.03	6.05	6.07	625997.8	0.065979			6
Height Summation:			9831725.22				
Amount Avg CF:			0.778675		Linear:		

Summary Report

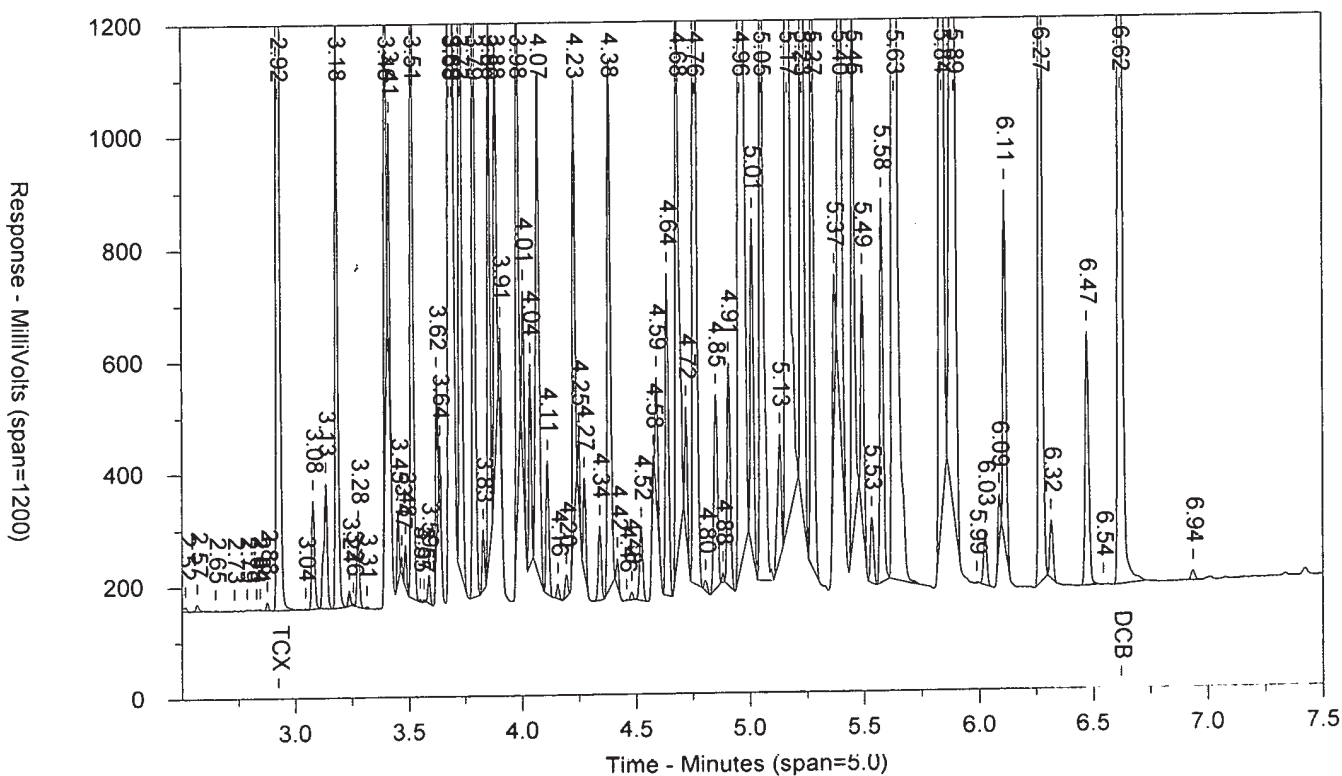
Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.4	0.08		0.13	4	40	
Aroclor-1221			0.4	0.08	E	4.03	3	5	
Aroclor-1232			0.4	0.16	E	4.19	4	10	
Aroclor-1242			0.4	0.08	E	1.19	4	30	
Aroclor-1248			0.4	0.08		15.59	4	40	
Aroclor-1254			0.4	0.08	E	15.97	4	40	
Aroclor-1260			0.4	0.12		3.47	4	40	
Aroclor-1262			0.4	0.16	E	4.33	4	40	
Aroclor-1268			0.4	0.128	E	4.12	4	40	

Units: ug/l

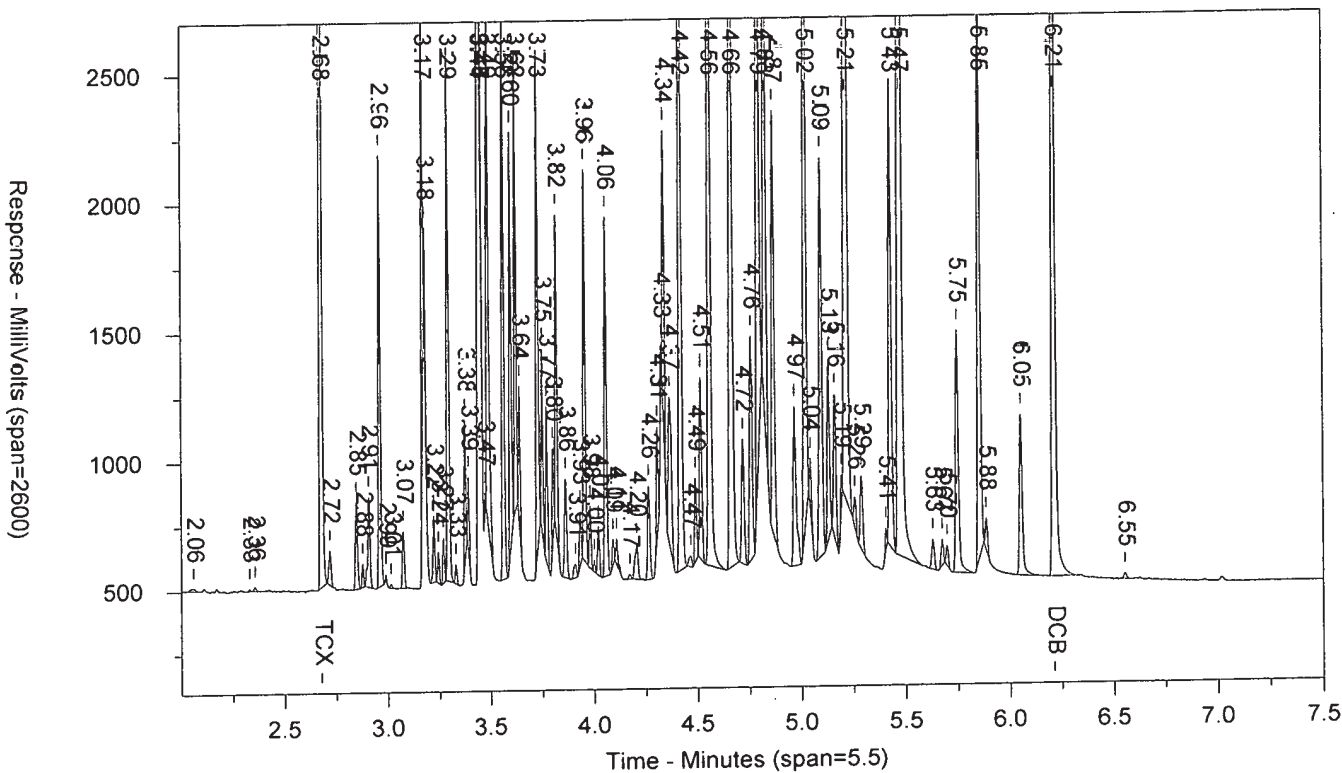
LCSA 11/6/18 RI CAF ACLCS10310 LCS 183100010A 10591

SW-846 8082A

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009.013.RAW



\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.013.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: LCSA 11/6/18 RI CAF ACLCS10310 LCS 183100010A 10591 SW-846 8082A
 Injected On: 11/8/2018 12:27:54 PM Sample Weight: 250
 Instrument ID: CP25-18274 Dilution Factor: 2
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

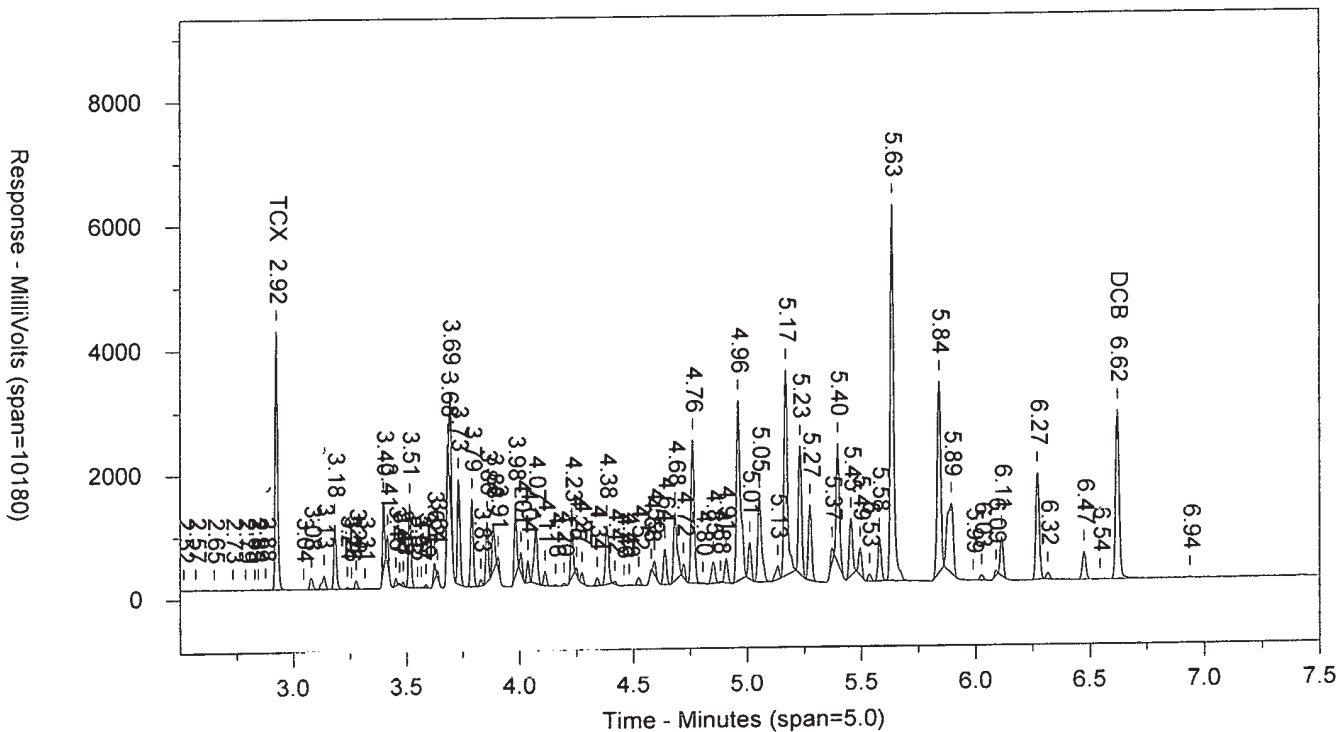
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	4165058	.215	TCX	2.678	6689096	.21	TCX
6.62	2737096	.171	DCB	6.212	4031042	.172	DCB

Files:
 Area File: 25pcbs18303009.013.RAW
 Area File: 25pcbs18303009B.013.RAW
 Method A: 25PCBA.MET
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 12:36:25 PM
 File Reported On: 11/8/2018 at 12:36:32 PM

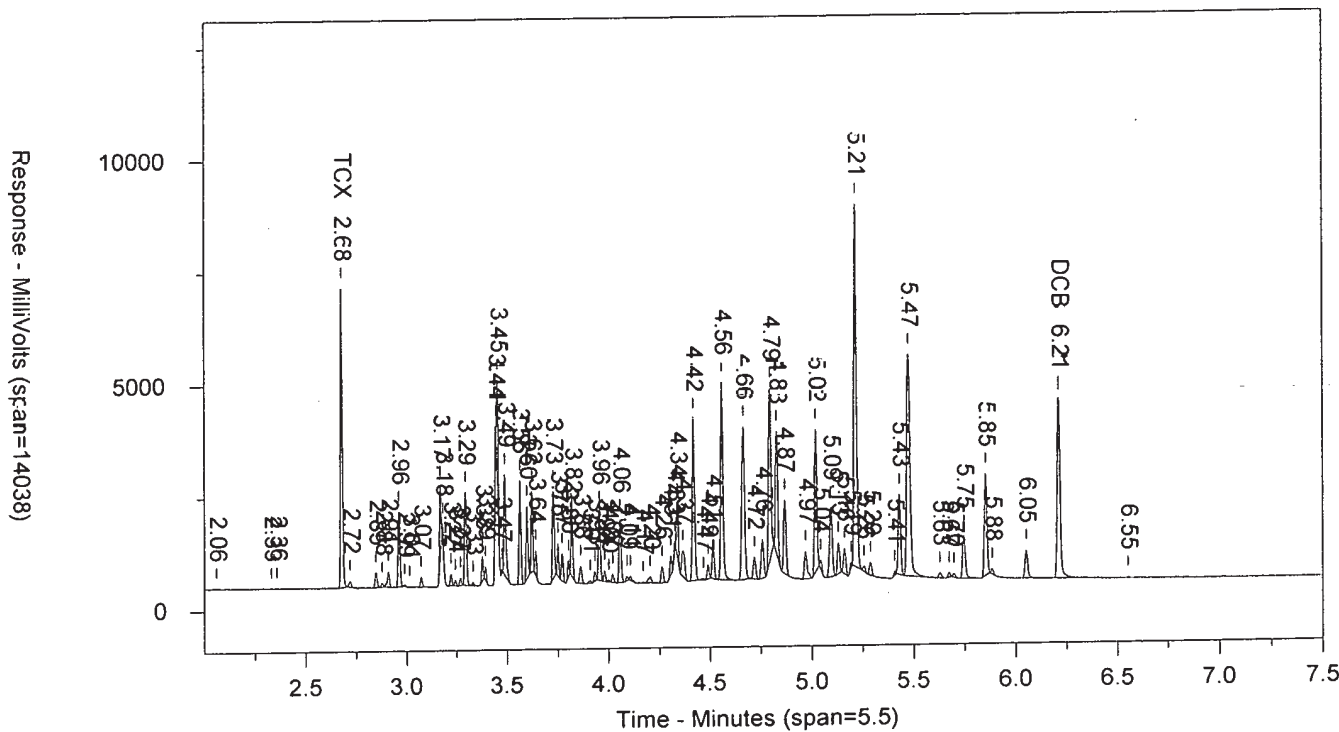
LCSA 11/6/18 RI CAF ACLCS10310 LCS 183100010A 10591

SW-846 808

\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009.013.RAW



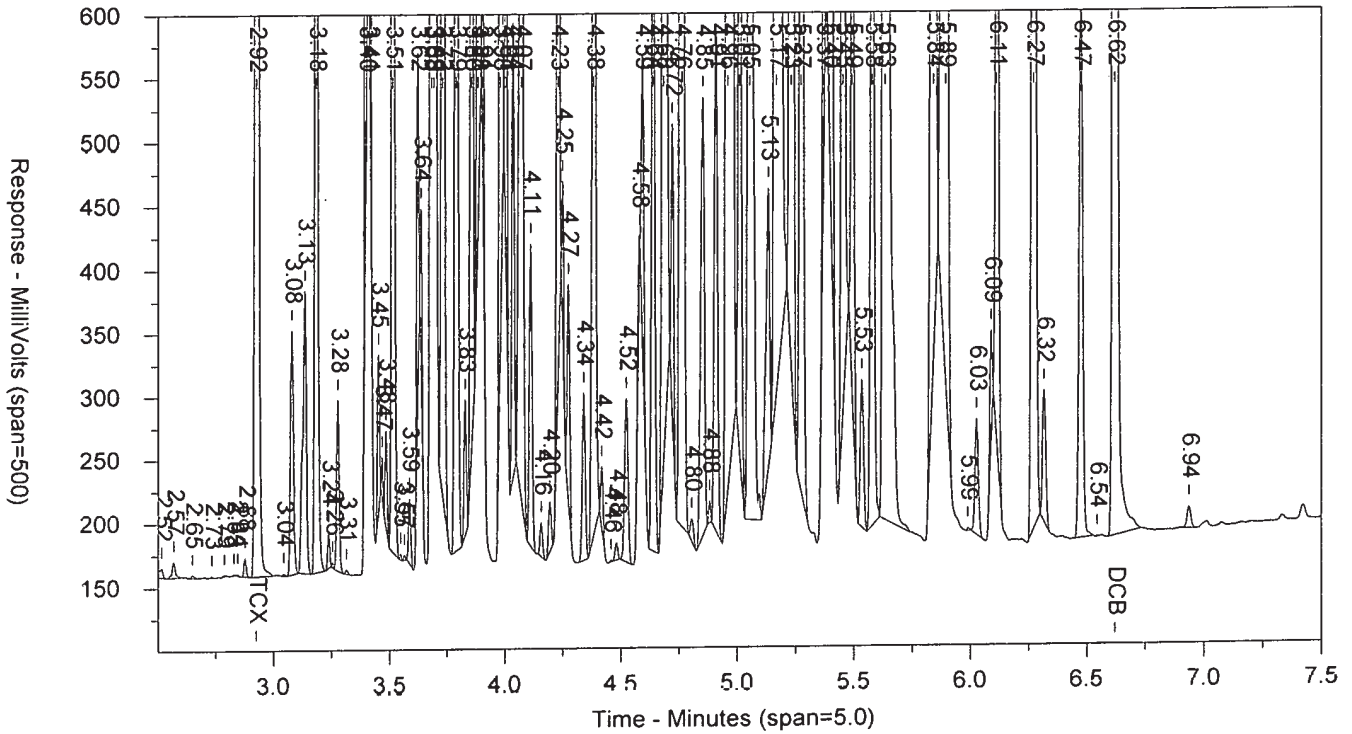
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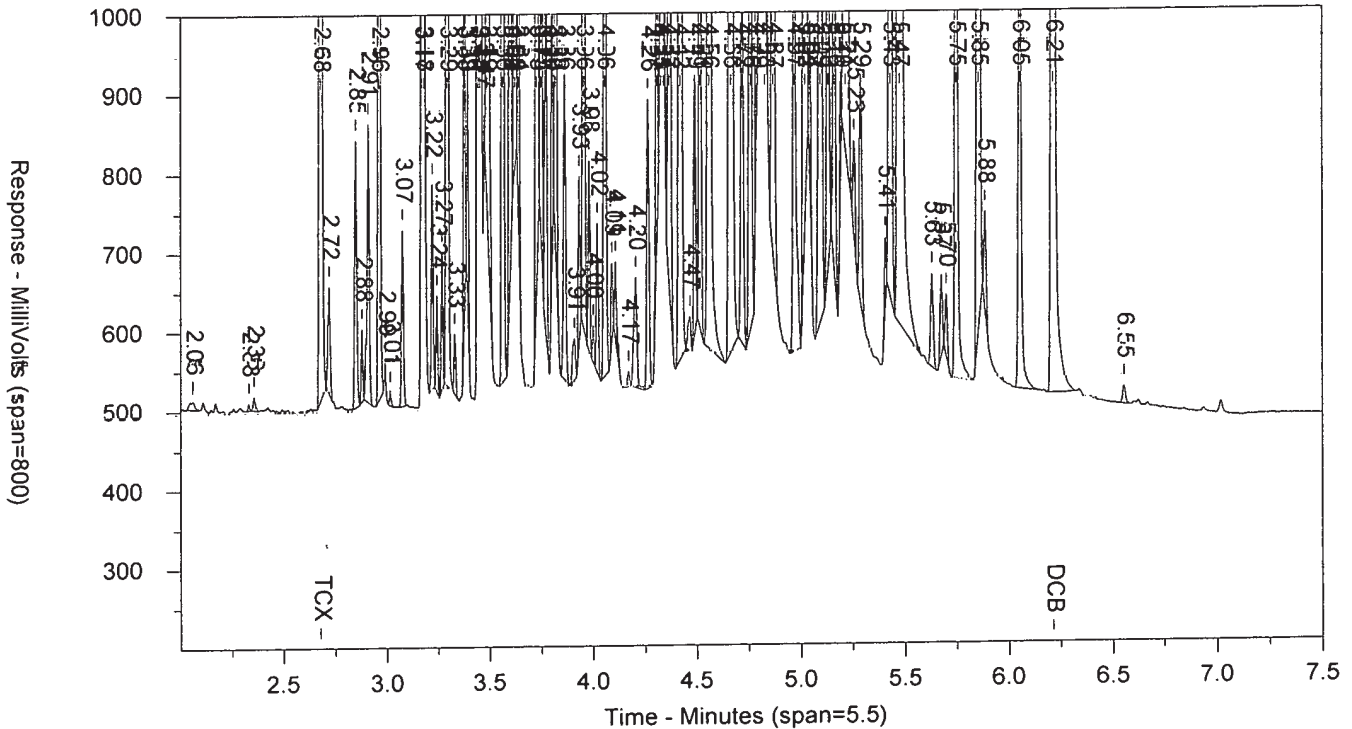
LCSA 11/6/18 RI CAF ACLCS10310 LCS 183100010A 10591

SW-846 808

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.013.RAW



Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 LCSD Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:38:48
Instrument 18274A
Result file 25PCBS18303009.014.RAW
Calibration file 25PCBS1830301
Method file 25PCBA
%SSR(TCX) 97% (33 - 137) Conc: 0.29143
%SSR(DCB) 67% (10 - 148) Conc: 0.19964

Analysis Report (B)

Injected on Nov 08, 2018 12:38:48
Instrument 18274B
Result file 25PCBS18303009B.014.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB
%SSR(TCX) 95% (33 - 137) Conc: 0.285622
%SSR(DCB) 68% (10 - 148) Conc: 0.203648

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	5651463	0.29143	Tetrachloro-m-xylene	2.65	2.68	2.71	9111909	0.285622
Decachlorobiphenyl	6.58	6.62	6.64	3202700	0.19964	Decachlorobiphenyl	6.18	6.21	6.24	4779792	0.203648

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.29143	0.012	0.024	0.024		2.01	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.29143	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.285622	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.203648	0.012	0.024	0.024		1.99	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.19964	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.203648	0.012	0.024	0.024			

Multiple Component Data

Min	RT	Max	Height	Amount	Pks	%RSD	Peak	Min	RT	Max	Height	Amount	Pks	%RSD	Peak								
Aroclor-1016								Aroclor-1016															
								7.12								7.50							
3.16	3.18	3.20	1390901	4.210676			1	2.94	2.96	2.98	2240383	4.116688			1								
3.38	3.40	3.42	1463947	4.580088			2	3.27	3.29	3.31	2876383	4.513925			2								
3.49	3.51	3.53	1836183	4.47496			3	3.47	3.49	3.51	3022459	4.890743			3								
3.71	3.73	3.75	2330747	4.933101			4	3.54	3.56	3.58	3280736	5.121962			4								
3.77	3.79	3.81	1951350	5.015697			5	3.60	3.62	3.64	2424316	4.823923			5								
3.96	3.98	4.00	1492191	5.021674			6	3.71	3.73	3.75	2631044	4.855071			6								
Height summation:				10465319	Height summation:				16475321	Height summation:				16475321									
Concentration				CF: 4.706098	Concentration				CF: 4.720385	Concentration				CF: 4.720385									
Aroclor-1260								Aroclor-1260															
								12.43								12.74							
4.74	4.76	4.78	3143712	4.646898			1	4.54	4.56	4.58	5998918	5.061542			1								
4.94	4.96	4.98	3929080	4.821531			2	4.64	4.66	4.68	4636602	4.872433			2								
5.14	5.17	5.18	4364174	4.440575			3	4.77	4.79	4.81	5246348	4.430422			3								
5.21	5.23	5.25	2835192	5.946043			4	5.00	5.02	5.04	4206576	5.739274			4								
5.61	5.63	5.65	8381237	5.886306			5	5.19	5.22	5.23	10899530	6.265919			5								
5.82	5.84	5.86	4243439	5.351287			6	5.45	5.47	5.49	6842122	5.777889			6								
Height summation:				26896834	Height summation:				37830096	Height summation:				37830096									
Concentration				CF: 5.182107	Concentration				CF: 5.357913	Concentration				CF: 5.357913									

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:09

Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 LCSD Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:38:48
Instrument 18274A
Result file 25PCBS18303009.014.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

Analysis Report (B)

Injected on Nov 08, 2018 12:38:48
Instrument 18274B
Result file 25PCBS18303009B.014.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req.	
								Hits	Comments
<input type="checkbox"/> PCB-1016	B	4.720385	0.08	0.24	0.4		0.30	4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260	B	5.357913	0.12	0.24	0.4		3.34	4	
<input type="checkbox"/> PCB-1262			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1268			<0.128	<0.256	<0.4			4	
<input type="checkbox"/> Total PCBs	A	10.078299	0.08	0.24	0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Valerie L. Tomayko
 Valerie L. Tomayko
 Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:09

Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 LCSD Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:38:48
Instrument 18274A
Result file 25PCBS18303009.014.RAW
Calibration file 25PCBS1830301
Method file 25PCBA
%SSR(TCX) 97% (30 - 150) Conc: 0.29143
%SSR(DCB) 67% (30 - 150) Conc: 0.19964

Analysis Report (B)

Injected on Nov 08, 2018 12:38:48
Instrument 18274B
Result file 25PCBS18303009B.014.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB
%SSR(TCX) 95% (30 - 150) Conc: 0.285622
%SSR(DCB) 68% (30 - 150) Conc: 0.203648

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	5651463	0.29143	Tetrachloro-m-xylene	2.65	2.68	2.71	9111909	0.285622
Decachlorobiphenyl	6.58	6.62	6.64	3202700	0.19964	Decachlorobiphenyl	6.18	6.21	6.24	4779792	0.203648

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.29143	0.012	0.024	0.024		2.01	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.29143	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.285622	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.203648	0.012	0.024	0.024		1.99	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.19964	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.203648	0.012	0.024	0.024			

Multiple Component Data

Min	RT	Max	Height	Amount	Pks	%RSD Peak	Min	RT	Max	Height	Amount	Pks	%RSD Peak
Aroclor-1016						7.12	Aroclor-1016						7.50
3.16	3.18	3.20	1390901	4.210676	1		2.94	2.96	2.98	2240383	4.116688	1	
3.38	3.40	3.42	1463947	4.580088	2		3.27	3.29	3.31	2876383	4.513925	2	
3.49	3.51	3.53	1836183	4.47496	3		3.47	3.49	3.51	3022459	4.890743	3	
3.71	3.73	3.75	2330747	4.933404	4		3.54	3.56	3.58	3280736	5.121962	4	
3.77	3.79	3.81	1951350	5.015697	5		3.60	3.62	3.64	2424316	4.823923	5	
3.96	3.98	4.00	1492191	5.021674	6		3.71	3.73	3.75	2631044	4.855071	6	
Height summation:				10465319			Height summation:				16475321		
Concentration CF:				4.706098	L:		Concentration CF:				4.720385	L:	
Aroclor-1260						12.43	Aroclor-1260						12.74
4.74	4.76	4.78	3143712	4.646898	1		4.54	4.56	4.58	5998918	5.061542	1	
4.94	4.96	4.98	3929080	4.821531	2		4.64	4.66	4.68	4636602	4.872433	2	
5.14	5.17	5.18	4364174	4.440575	3		4.77	4.79	4.81	5246348	4.430422	3	
5.21	5.23	5.25	2835192	5.946043	4		5.00	5.02	5.04	4206576	5.739274	4	
5.61	5.63	5.65	8381237	5.886306	5		5.19	5.22	5.23	10899530	6.265919	5	
5.82	5.84	5.86	4243430	6.361287	6		5.45	5.47	5.49	6842122	5.777889	6	
Height summation:				26896834			Height summation:				37830096		
Concentration CF:				5.182107	L:		Concentration CF:				5.357913	L:	

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:13

Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 LCSD Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:38:48
Instrument 18274A
Result file 25PCBS18303009.014.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

Analysis Report (B)

Injected on Nov 08, 2018 12:38:48
Instrument 18274B
Result file 25PCBS18303009B.014.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req. Hits	Comments
<input type="checkbox"/> PCB-1016	B	4.720385	0.08	0.24	0.4		0.30	4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260	B	5.357913	0.12	0.24	0.4		3.34	4	
<input type="checkbox"/> PCB-1262			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1268			<0.128	<0.256	<0.4			4	
<input type="checkbox"/> Total PCBs	A	10.078299	0.08	0.24	0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100


 Valerio L. Tomayko
 Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:13

Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 LCSD Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**

Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:38:48
Instrument 18274A
Result file 25PCBS18303009.014.RAW
Calibration file 25PCBS1830301
Method file 25PCBA
%SSR(TCX) 97% (30 - 150) Conc: 0.29143
%SSR(DCB) 67% (30 - 150) Conc: 0.19964

Analysis Report (B)

Injected on Nov 08, 2018 12:38:48
Instrument 18274B
Result file 25PCBS18303009B.014.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB
%SSR(TCX) 95% (30 - 150) Conc: 0.285622
%SSR(DCB) 68% (30 - 150) Conc: 0.203648

Single Component Data

Compound	Min	RT	Max	Height	Amount	Compound	Min	RT	Max	Height	Amount
Tetrachloro-m-xylene	2.90	2.93	2.95	5651463	0.29143	Tetrachloro-m-xylene	2.65	2.68	2.71	9111909	0.285622
Decachlorobiphenyl	6.58	6.62	6.64	3202700	0.19964	Decachlorobiphenyl	6.18	6.21	6.24	4779792	0.203648

Single Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	Comments
<input type="checkbox"/> Tetrachloro-m-xylene	A	0.29143	0.012	0.024	0.024		2.01	
<input type="checkbox"/> Tetrachloro-m-xylene-D1	A	0.29143	0.012	0.024	0.024			
<input type="checkbox"/> Tetrachloro-m-xylene-D2	B	0.285622	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl	B	0.203648	0.012	0.024	0.024		1.99	
<input type="checkbox"/> Decachlorobiphenyl-D1	A	0.19964	0.012	0.024	0.024			
<input type="checkbox"/> Decachlorobiphenyl-D2	B	0.203648	0.012	0.024	0.024			

Multiple Component Data

Min	RT	Max	Height	Amount	Pks	%RSD	Peak	Min	RT	Max	Height	Amount	Pks	%RSD	Peak								
Aroclor-1016								Aroclor-1016															
								7.12								7.50							
3.16	3.18	3.20	1390901	4.210676			1	2.94	2.96	2.98	2240383	4.116688			1								
3.38	3.40	3.42	1463947	4.580088			2	3.27	3.29	3.31	2876383	4.513925			2								
3.49	3.51	3.53	1836183	4.47496			3	3.47	3.49	3.51	3022459	4.890743			3								
3.71	3.73	3.75	2330747	4.933404			4	3.54	3.56	3.58	3280736	5.121962			4								
3.77	3.79	3.81	1951350	5.015697			5	3.60	3.62	3.64	2424316	4.823923			5								
3.96	3.98	4.00	1492191	5.021674			6	3.71	3.73	3.75	2631044	4.855071			6								
Height summation: 10465319								Height summation: 16475321															
Concentration CF: 4.706098								Concentration CF: 4.720385															
								12.43								12.74							
Aroclor-1260								Aroclor-1260															
4.74	4.76	4.78	3143712	4.646898			1	4.54	4.56	4.58	5998918	5.061542			1								
4.94	4.96	4.98	3929080	4.821531			2	4.64	4.66	4.68	4636602	4.872433			2								
5.14	5.17	5.18	4364174	4.440575			3	4.77	4.79	4.81	5246348	4.430422			3								
5.21	5.23	5.25	2835192	5.946043			4	5.00	5.02	5.04	4206576	5.739274			4								
5.61	5.63	5.65	8381237	5.886306			5	5.19	5.22	5.23	10899530	6.265919			5								
5.82	5.84	5.86	4243439	5.361287			6	5.45	5.47	5.49	6842122	5.777889			6								
Height summation: 26896834								Height summation: 37830096															
Concentration CF: 5.182107								Concentration CF: 5.357913															

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:17

Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 LCSD Sample ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on Nov 08, 2018 12:38:48
Instrument 18274A
Result file 25PCBS18303009.014.RAW
Calibration file 25PCBS1830301
Method file 25PCBA

Analysis Report (B)

Injected on Nov 08, 2018 12:38:48
Instrument 18274B
Result file 25PCBS18303009B.014.RAW
Calibration file 25PCBS1830301B
Method file 25PCBAB

Multiple Component Summary

Compound Name	Column	Amount Found	DL	LOD	LOQ	Qualifiers	%RPD	No Req.	
								Hits	Comments
<input type="checkbox"/> PCB-1016	B	4.720385	0.08	0.24	0.4		0.30	4	
<input type="checkbox"/> PCB-1221			<0.08	<0.24	<0.4			3	
<input type="checkbox"/> PCB-1232			<0.16	<0.32	<0.4			4	
<input type="checkbox"/> PCB-1242			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1248			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1254			<0.08	<0.24	<0.4			4	
<input type="checkbox"/> PCB-1260	B	5.357913	0.12	0.24	0.4		3.34	4	
<input type="checkbox"/> Total PCBs	A	10.078299	0.08	0.24	0.4				

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100


 Valerio L. Tomayko
 Principal Specialist

NOV 08 2018

Reviewed and digitally signed by Kirby B Turner on 11/8/2018 15:32:17

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:38:48
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.014.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

%SSR(TGX) : 97% (33-137) Conc.: 0.29143
 %SSR(DCB) : 67% (10-148) Conc.: 0.19964

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
3.16	3.18	3.20	1390901	4.210676	6	7.12	1
3.38	3.40	3.42	1463947	4.580088			2
+ 3.38	3.41	3.42	599624.6	1.875979			2
3.49	3.51	3.53	1836183	4.47496			3
3.71	3.73	3.75	2330747	4.933494			4
3.77	3.79	3.81	1951350	5.015697			5
3.96	3.98	4.00	1492191	5.021674			6

Height Summation: 10465319
Amount Avg CF: 4.706098 Linear:

Aroclor-1221							
3.06	3.08	3.10	251299.8	1.430674	3	48.50	1
+ 3.11	3.12	3.15	37723.06	0.270969			2
3.11	3.14	3.15	193692.9	1.391318			2
E 3.16	3.18	3.20	1390901	3.056805			3

Height Summation: 1835893.7
Amount Avg CF: 1.959599 Linear:

Aroclor-1232							
E 3.16	3.18	3.20	1390901	3.740731	6	32.41	1
E 3.38	3.40	3.42	1463947	10.137542			2
E+ 3.38	3.41	3.42	599624.6	4.152281			2
F 3.49	3.51	3.53	1030183	9.913518			3
E 3.71	3.73	3.75	2330747	10.469316			4
E 3.77	3.79	3.81	1951350	11.842785			5
E 3.96	3.98	4.00	1492191	12.83701			6

Height Summation: 10465319
Amount Avg CF: 9.823484 Linear:

Aroclor-1242							
E 3.16	3.18	3.20	1390901	4.868132	6	11.48	1
E 3.38	3.40	3.42	1463947	5.50285			2
E+ 3.38	3.41	3.42	599624.6	2.253937			2
E 3.49	3.51	3.53	1836183	5.416388			3
E 3.71	3.73	3.75	2330747	5.764383			4
E 3.77	3.79	3.81	1951350	6.471598			5
E 3.96	3.98	4.00	1492191	6.601279			6

Height Summation: 10465319
Amount Avg CF: 5.770772 Linear:

Aroclor-1248							
3.83	3.86	3.87	1300869	3.344701	6	9.54	1
3.96	3.98	4.00	1492191	3.400508			2
4.05	4.07	4.09	1231380	3.309582			3
4.23	4.23	4.27	1064320	2.865451			4
+ 4.23	4.25	4.27	155315.6	0.418154			4
4.36	4.38	4.40	1287093	3.252776			5
4.61	4.64	4.65	786011.2	2.668615			6

Height Summation: 7161864.2
Amount Avg CF: 3.140272 Linear:

Analysis Report (B)

Injected on : Nov 08, 2018 12:38:48
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.014.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

%SSR(TGX) : 95% (33-137) Conc.: 0.285622
 %SSR(DCB) : 68% (10-148) Conc.: 0.203648

Min	R.T	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1016							
2.94	2.96	2.98	2240383	4.116688	6	7.50	1
3.27	3.29	3.31	2876383	4.513925			2
+ 3.47	3.47	3.51	117085.7	0.18946			3
3.47	3.49	3.51	3022459	4.890743			3
3.54	3.56	3.58	3280736	5.121962			4
3.60	3.62	3.64	2424316	4.823923			5
+ 3.60	3.64	3.64	707667.2	1.408122			5
3.71	3.73	3.75	2631044	4.855071			6

Height Summation: 16475321
Amount Avg CF: 4.720385 Linear:

Aroclor-1221							
2.83	2.85	2.87	441973.2	1.391751	3	36.13	1
E 2.89	2.91	2.93	460803.5	2.03509			2
E 2.94	2.96	2.98	2240383	2.912685			3

Height Summation: 3143159.7
Amount Avg CF: 2.113175 Linear:

Aroclor-1232							
E 2.94	2.96	2.98	2240383	3.595685	6	34.03	1
E 3.27	3.29	3.31	2876383	10.029837			2
+ 3.47	3.47	3.51	117085.7	0.401875			3
E 3.47	3.49	3.51	3022459	10.37403			3
E 3.54	3.56	3.58	3280736	11.769195			4
E 3.60	3.62	3.64	2424316	13.340022			5
E+ 3.60	3.64	3.64	707667.2	3.896573			5
E 3.71	3.73	3.75	2631044	12.396901			6

Height Summation: 16475321
Amount Avg CF: 10.252412 Linear:

Aroclor-1242							
E 2.94	2.96	2.98	2240383	4.771088	6	10.85	1
E 3.27	3.29	3.31	2876383	5.555211			2
+ 3.47	3.47	3.51	117085.7	0.222338			3
E 3.47	3.49	3.51	3022459	5.739448			3
E 3.54	3.56	3.58	3280736	6.382582			4
E 3.60	3.62	3.64	2424316	6.419078			5
E+ 3.60	3.64	3.64	707667.2	1.873754			5
E 3.71	3.73	3.75	2631044	6.231191			6

Height Summation: 16475321
Amount Avg CF: 5.849766 Linear:

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:38:48
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.014.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1254							
+ 4.55	4.58	4.59	68594.34	0.157191	6	106.39	1
4.55	4.59	4.59	289640.2	0.66374			1
4.61	4.64	4.65	786011.2	0.899733			2
E 4.74	4.76	4.78	3143712	11.413371			3
4.83	4.85	4.87	451698.2	0.749336			4
5.03	5.05	5.07	1872254	3.871478			5
5.14	5.17	5.18	4364174	7.060961			6
<u>Height Summation:</u>			10907489.6				
<u>Amount Avg CF:</u>			4.10977	Linear:			

Aroclor-1260							
4.74	4.76	4.78	3143712	4.646898	6	12.43	1
4.94	4.96	4.98	3929080	4.821531			2
5.14	5.17	5.18	4364174	4.440575			3
5.21	5.23	5.25	2835192	5.946043			4
5.61	5.63	5.65	8381237	5.886306			5
5.82	5.84	5.86	4243439	5.351287			6
<u>Height Summation:</u>			26896834				
<u>Amount Avg CF:</u>			5.182107	Linear:			

Aroclor-1262							
E 5.21	5.23	5.25	2835192	3.898807	6	17.74	1
E 5.38	5.40	5.41	2698437	4.606547			2
E 5.61	5.63	5.65	8381237	4.937402			3
E 5.82	5.84	5.86	4243439	4.319626			4
E 5.87	5.89	5.91	1594845	2.991454			5
E 6.25	6.27	6.29	2321288	3.53524			6
<u>Height Summation:</u>			22074438				
<u>Amount Avg CF:</u>			4.048179	Linear:			

Aroclor-1268							
E 5.81	5.84	5.85	4243439	1.923569	6	117.56	1
5.87	5.89	5.91	1594845	0.798228			2
6.00	6.03	6.04	105651.1	0.057587			3
6.07	6.09	6.11	102514.7	0.222603			4
E 6.24	6.27	6.28	2321288	2.947801			5
G.44	0.47	0.48	580740	0.091391			6
<u>Height Summation:</u>			8948477.8				
<u>Amount Avg CF:</u>			1.006863	Linear:			

Analysis Report (B)

Injected on : Nov 08, 2018 12:38:48
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.014.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1248							
3.58	3.60	3.62	2175610	3.427541	6	48.54	1
3.71	3.73	3.75	2631044	3.375945			2
+ 3.80	3.80	3.84	497829	0.966433			3
3.80	3.82	3.84	1759280	3.415283			3
3.93	3.96	3.97	2031032	2.024337			4
4.07	4.09	4.11	140577.4	0.304633			5
+ 4.07	4.11	4.11	128815.1	0.279144			5
+ 4.30	4.31	4.34	538675.6	1.234799			6
+ 4.30	4.33	4.34	283307.4	0.649422			6
4.30	4.34	4.34	1587357	3.638678			6
<u>Height Summation:</u>			10324900.4				
<u>Amount Avg CF:</u>			2.697736	Linear:			

Aroclor-1254							
+ 4.30	4.31	4.34	538675.6	0.422336	6	98.18	1
+ 4.30	4.33	4.34	283307.4	0.22212			1
4.30	4.34	4.34	1587357	1.244529			1
F 4.40	4.42	4.44	4967379	8.29186			2
4.47	4.49	4.51	427753.9	0.531683			3
E 4.54	4.56	4.58	5998918	12.367255			4
4.69	4.72	4.73	606055.1	1.095344			5
4.77	4.79	4.81	5246348	5.770408			6
<u>Height Summation:</u>			18833811				
<u>Amount Avg CF:</u>			4.883513	Linear:			

Aroclor-1260							
4.54	4.56	4.58	5998918	5.061542	6	12.74	1
4.64	4.66	4.68	4636602	4.872433			2
4.77	4.79	4.81	5246348	4.430422			3
5.00	5.02	5.04	4206576	5.739274			4
5.19	5.22	5.23	10899530	6.265919			5
5.45	5.47	5.49	6842122	5.777889			6
<u>Height Summation:</u>			37830096				
<u>Amount Avg CF:</u>			5.357913	Linear:			

Aroclor-1262							
E 4.81	4.83	4.85	3703230	3.011502	6	20.61	1
E 5.00	5.02	5.04	4206576	4.181691			2
E 5.20	5.22	5.24	10899530	5.332419			3
E 5.41	5.43	5.45	2418002	2.921603			4
E 5.46	5.47	5.50	6842122	4.943006			5
E 5.83	5.85	5.87	3186511	3.894821			6
<u>Height Summation:</u>			31255971				
<u>Amount Avg CF:</u>			4.18084	Linear:			

Eurofins Lancaster Laboratories-Multiple Component Data Summary

Sample Name: LCSDA 11/6/18 RI CAF LCSD10310 ID: AC **Batchnumber:** 183100010A
Sample Amount: 250 ml **Total Volume:** 2 ml **Analyst:** 9065 **SDG:** **State:**
Analyses: 10591

Analysis Report (A)

Injected on : Nov 08, 2018 12:38:48
 Instrument : CP25--18274A
 Result file : 25PCBS18303009.014.RAW
 Calibration file : 25PCBS1830301.CAL
 Method file : 25PCBA.MET

Analysis Report (B)

Injected on : Nov 08, 2018 12:38:48
 Instrument : CP25--18274B
 Result file : 25PCBS18303009B.014.RAW
 Calibration file : 25PCBS1830301B.CAL
 Method file : 25PCBAB.MET

Min	R.T.	Max	Height	Amount	Pks	%RSD	Peak
Aroclor-1268							
+ 5.41	5.41	5.45	99720.72	0.033721	6	119.87	1
5.41	5.43	5.45	2418002	0.817652			1
E 5.46	5.47	5.50	6842122	2.288648			2
5.61	5.63	5.65	147095.6	0.056623			3
5.68	5.70	5.72	100784.7	0.155817			4
E 5.83	5.85	5.87	3186511	3.055868			5
6.03	6.05	6.07	800636.9	0.084386			6
Height Summation:			13495152.2				
Amount Avg CF:			1.076499	Linear:			

Summary Report

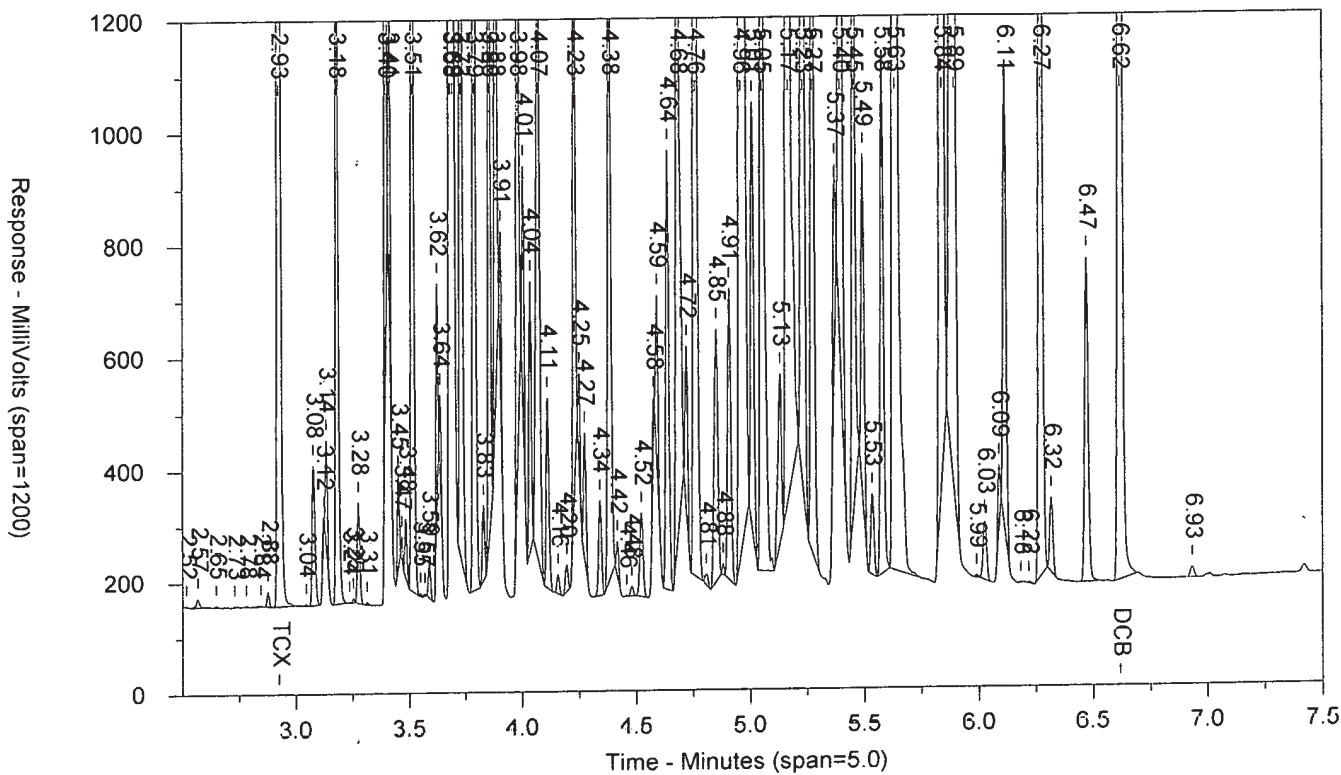
Compound Name	Column	Higher Amount Found	LOQ	MDL	Qualifiers	%Difference	No of Hits Required	Max %RSD	Comments
Aroclor-1016			0.4	0.08		0.30	4	40	
Aroclor-1221			0.4	0.08	E	7.54	3	5	
Aroclor-1232			0.4	0.16	E	4.27	4	10	
Aroclor-1242			0.4	0.08	E	1.36	4	30	
Aroclor-1248			0.4	0.08		15.16	4	40	
Aroclor-1254			0.4	0.08	E	17.21	4	40	
Aroclor-1260			0.4	0.12		3.34	4	40	
Aroclor-1262			0.4	0.16	E	3.22	4	40	
Aroclor-1268			0.4	0.128	E	6.68	4	40	

Units: ug/l

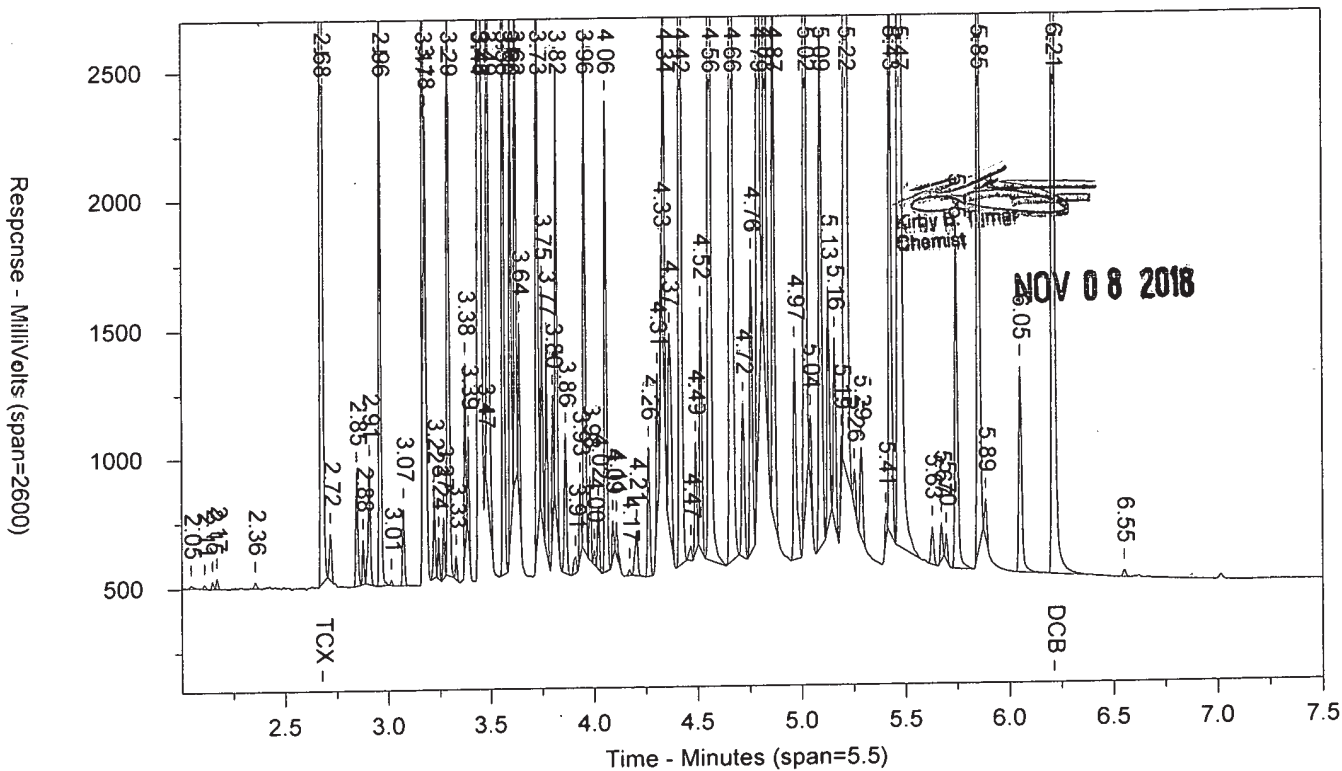
LCSDA 11/6/18 RI CAFACLSD10310 LCSD 183100010A 10591

SW-846 808

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.014.RAW



Chrom Perfect Chromatogram Report

LANCASTER LABORATORIES

Sample Number: LCSDA 11/6/18 RI CAFACLCS10310 LCSD 183100010A 10591 SW-846 8082A
 Injected On: 11/8/2018 12:38:48 PM Sample Weight: 250
 Instrument ID: CP25-18274 Dilution Factor: 2
 Oven Parameters: 110c to 250 @ 40c/min, to 280 @ 20c/min, to 330 @ 30c/min, hold for 5 min
 Column A ID: ZB Multiresidue-1 30m x 0.32mm x 0.5um
 Column B ID: ZB Multiresidue-2 30m x 0.32mm x 0.25um
 Injection Volume: 1 ul

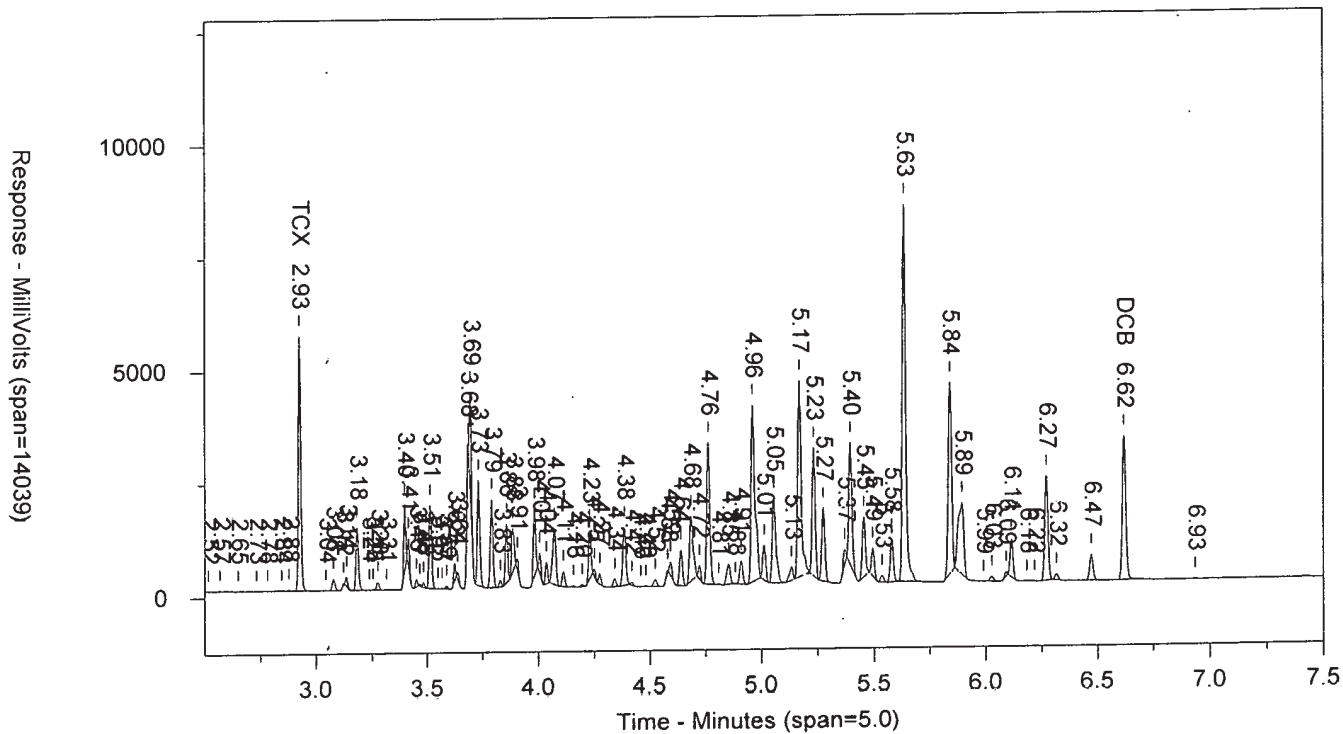
Threshold: 7
 Calibration Type: external
 Quantitation: Height

Analyst: 9065

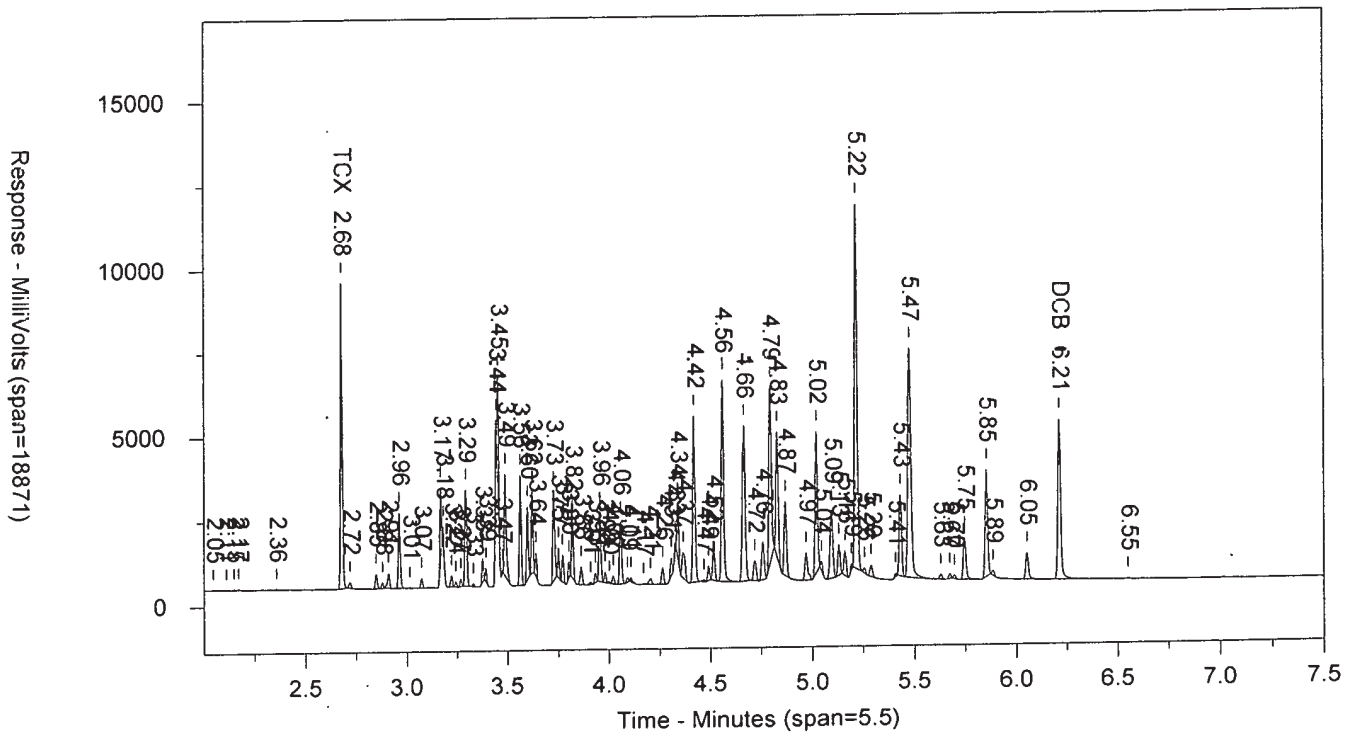
RT A	Height A	Amount A - PPB	Compound A	RT B	Height B	Amount B - PPB	Compound B
2.925	5651463	.291	TCX	2.678	9111909	.286	TCX
6.618	3202700	.2	DCB	6.212	4779792	.204	DCB

Files:
 Area File: 25pcbs18303009.014.RAW
 Area File: 25pcbs18303009B.014.RAW
 Method A: 25PCBA.MEI
 Method B: 25PCBAB.MET
 Calibration File A: 25PCBS1830301.CAL
 Calibration File B: 25PCBS1830301b.CAL
 Format A: pestD25.FMTA
 Format B: pestD25.FMTB
 Area File Created On: 11/8/2018 12:47:20 PM
 File Reported On: 11/8/2018 at 12:47:28 PM

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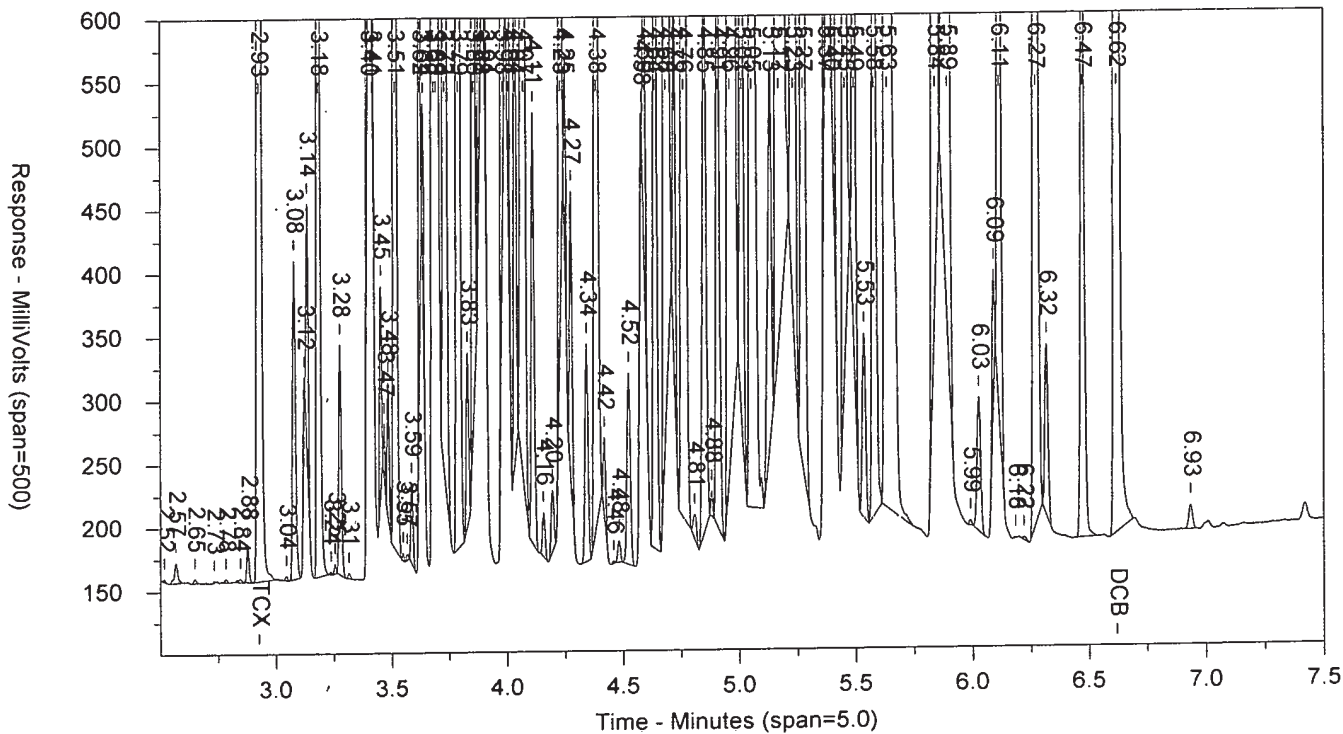
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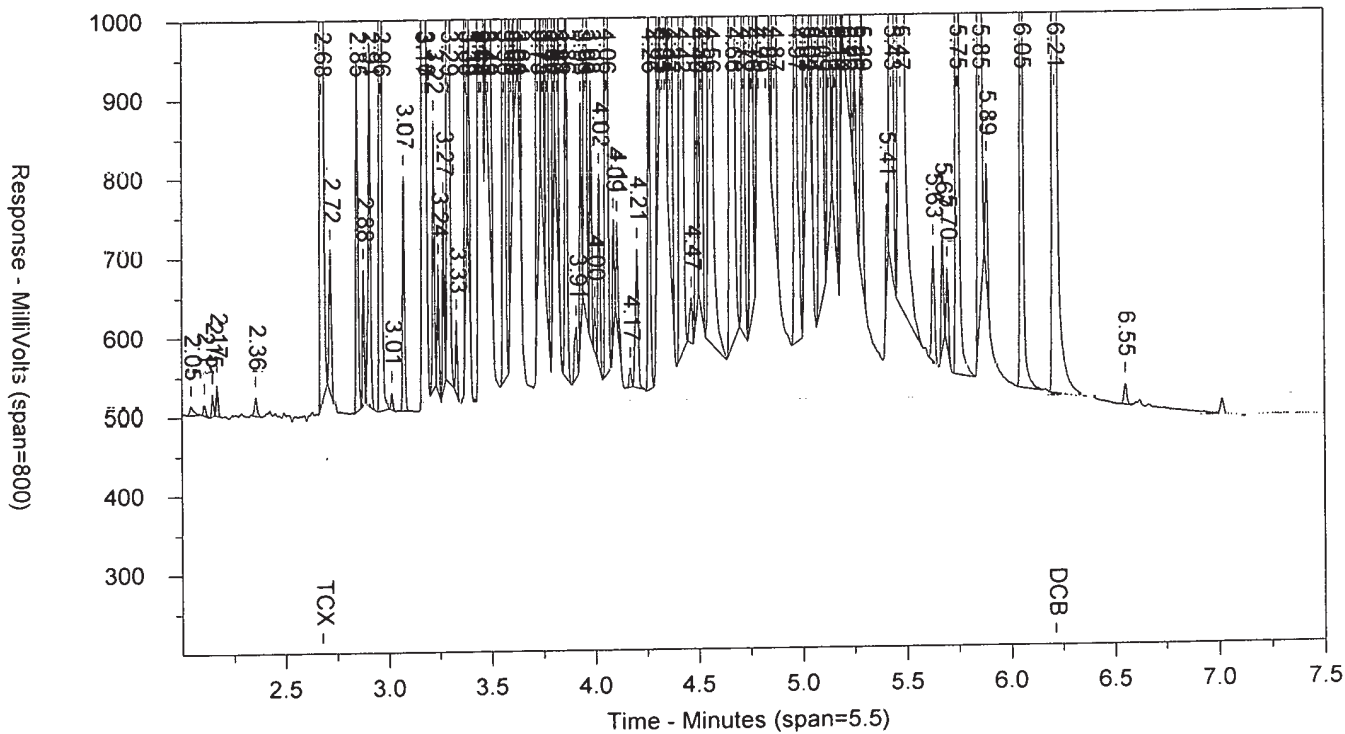
LCSDA 11/6/18 RI CAFACLSD10310 LCSD 183100010A 10591

SW-846 8

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\\USLAN-CHROMPERFECT\CHROMPERFECT-DATA\DEPT-24\ACTIVE\CP25\25pcbs18303009B.014.RAW



Extraction/Distillation/Digestion Logs

Polychlorinated Biphenyls (PCBs)

183100010A

Tech 1: *[Signature]* Tech 2: *[Signature]*

Dept. 24 Prep Analysis: 11121 PCB Waters Update IV Ext PCBs in Water by 8082A

Solvent Used	Lot No.
Hexane	181229
Methylene Chloride	187001
Sodium Sulfate	183098

QC	Sample Code	Amt (µl)	SS/S Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	BC	pH	BC	Comments
BLANKA	PBLK10310	250	SS1828324A	1.0		2	2	6	Na	Na	Na	
LCSA	LCS10310	250	SS1828324A	1.0	MS1829924A	2	2	6	Na	Na	Na	
LCSDA	LCSD10310	250	SS1828324A	1.0	MS1829924A	2	2	6	Na	Na	Na	

Spike Solutions: Witness: *M2*
 MS1829924A MINI SEP. PCB SPIKE
 SS1828324A MINI SEP. SW846 SURR.

183100010A
SS1828324A *3 mg/250* *11/6/18*

Sample #	Sample Code	Amt (µl)	SS/S Sol.	Amt (mL)	FV (mL)	pH	pH	BC	BC	pH	Comments	Analyses	List	Due Date	Prio
1	9872276 R	247	SS1828324A	1.0	2	8	8	153D	153D	8	Clear	10591	9480	11/07/2018	N
2	9874781 R	246	SS1828324A	1.0	2	8	8	153C	153C	8	Clear	10591	1870	11/08/2018	N
3	9874782 R	249	SS1828324A	1.0	2	8	8	153C	153C	8	Clear	10591	1870	11/08/2018	N
4	9881309	246	SS1828324A	1.0	2	10	10	153B	153B	8	Yellow	10591	20624	11/13/2018	N
5	9881310	247	SS1828324A	1.0	2	10	10	153E	153E	8	Yellow	10591	20624	11/13/2018	N
6	9881313	248	SS1828324A	1.0	2	10	10	153B	153B	9	Yellow	10591	20624	11/13/2018	N
7	9882647	250	SS1828324A	1.0	2	6	6	153B	153B	8	Clear	10591	1870	11/13/2018	N
8	9882648	248	SS1828324A	1.0	2	6	6	153A	153A	8	Clear	10591	1870	11/13/2018	N
9	9882666	250	SS1828324A	1.0	2	6	6	153A	153A	8	Clear	10591	1870	11/13/2018	N
10	9883664	246	SS1828324A	1.0	2	6	6	153A	153A	8	Clear	10591	17138	11/08/2018	S
11	9883671	247	SS1828324A	1.0	2	6	6	153A	153A	8	Clear	10591	17138	11/08/2018	S
12	9883739	242	SS1828324A	1.0	2	6	6	153A	153A	8	Clear	10591	30710	11/08/2018	S

18-16301
11/6/18

Bench#	—	Bench#	—
Work Station	Bench 1	Micro Temp	100?
Balance #	25456		

R-VAP ID	—	C	R-VAP ID	—	C
S-bath ID	95.0	C	S-bath ID	—	C
M-vap	Y00C		N-Evap	—	C

183100010A



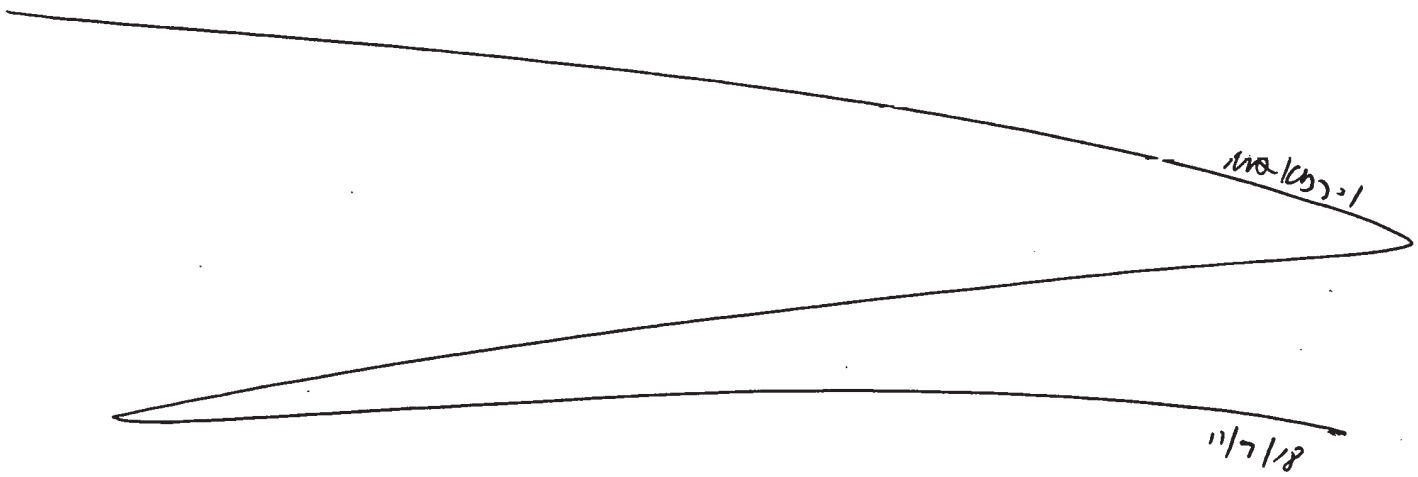
Prep-Process Worksheet

Acid Cleanup
Prep: 11121 PCB Waters Update IV Ext
Batch No: 183100010A

Verified: <u>HA 9016</u>
Start Date: <u>11/7/18</u>
Start Time: <u>01:30</u>
Tech 1: <u>VSJ</u>
Tech 2: <u>—</u>

Sample #	QC	Aliquot (g)	Final Volume (mL)	D.F.		Comments
				Aliq	F.V.	
BLANKA		1	1			
LCSA		2	2			
LCSDA		2	2			

Sample #	QC	Aliquot (g)	Final Volume (mL)	D.F.		Comments	Analyses
				Aliq	F.V.		
1 9872276		2	2				10591
2 9874781		2	2				10591
3 9874782		2	2				10591
4 9881309		1	1				10591
5 9881310		1	1				10591
6 9881313		1	1				10591
7 9882647		2	2				10591 14184
8 9882648		2	2				10591 14184
9 9882666		2	2				10591 14184
10 9883664		2	2				10591
11 9883671		2	2				10591
12 9883739		2	2				10591



Additional Comment: _____

DF = Dilution Factor FV = Final Volume

Solvent Used	Lot No.	Solvent Used	Lot No.
H ₂ O	184517		

Prep-Process Worksheet

Copper

Prep Analysis # 11121 PCB Waters Update IV Ext

Prep Group # 19 PCBs in water Update IV

Verified: W 047

Start Date: 11/07/2018

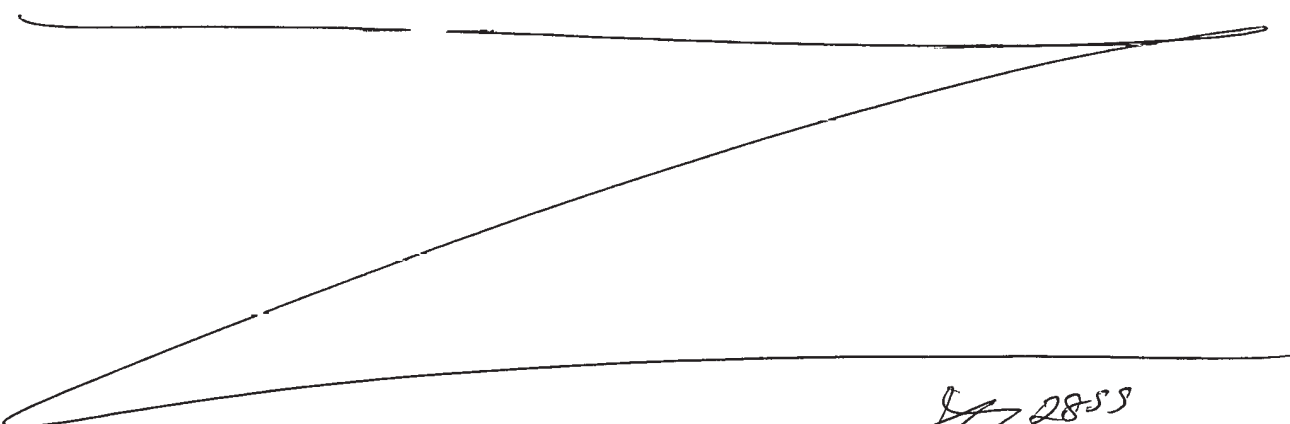
Start Time: 17:25

Tech 1: AR 2855

Tech 2: _____

BATCH NO. **183100010A**

Sample #	Aliquot (ml)	Parent ID	Final Volume (ml)	Comments	Analyses
1	BLANKA (AC)	1 AB	1		
2	LCSA (AC)	1 AB	1		
3	LCSDA (AC)	1 AB	1		
4	9872276 (AC)	1 AB	1		10591
5	9874781 (AC)	1 AB	1		10591
6	9874782 (AC)	1 AB	1		10591
7	9881309 (AC)	1 AB	1		10591
8	9881310 (AC)	1 AB	1		10591
9	9881313 (AC)	1 AB	1		10591
10	9882647 (AC)	1 AB	1		10591
11	9882648 (AC)	1 AB	1		10591
12	9882666 (AC)	1 AB	1		10591
13	9883664 (AC)	1 AB	1		10591
14	9883671 (AC)	1 AB	1		10591
15	9883739 (AC)	1 AB	1		10591



AR 2855
7/20/18

Additional Comment: _____

page 1 of 1

Solvent Used	Lot No.	Solvent Used	Lot No.
<i>copper</i>	<i>811 200-BF</i>		

Dioxins/Furans by HRMS Data

Case Narrative/Conformance Summary

Dioxins/Furans by HRMS

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID15

HRMS Group

Fraction: Dioxins/Furans by HRMS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
9881309	OU2-1-MW008WT	X		1	
9881310	OU2-1-MW008WT-DUP	X		1	Field Duplicate Sample
9881313	OU2-1-MW009WT	X		1	

LABORATORY SUBMITTED QC:

Sample #	Matrix	
	Liquid	Solid
BLK313007	X	
OPR313007	X	

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

SAMPLE PREPARATION:

No problems were encountered with the extraction of these samples.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specifications.

SAMPLE ANALYSIS:

All samples were analyzed by SW846 Method 8290A.

No problems were encountered with the analysis of the samples.

DATA INTERPRETATION:

Data was processed and interpreted using standard operating procedures.

Quality Control and Calibration Summary Forms

Dioxins/Furans by HRMS

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: OPR313007
Sample (vol): 1000 (ml)		Lab File ID: 18NOV10-16
Water Sample Prep: SEPF		Date Collected: N/A
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 07:33
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Analyte	Selected Ions	Peak RT	Ion Ratio	Concentration	Qual.	DL
2378-TCDF	304/306	29.42	0.80	206		0.812
2378-TCDD	320/322	30.58	0.81	205		0.873
12378-PeCDF	340/342	35.47	1.56	1040		2.76
23478-PeCDF	340/342	36.75	1.58	1050		2.50
12378-PeCDD	356/358	37.16	1.55	1080		3.16
123478-HxCDF	374/376	40.46	1.24	1100		2.50
123678-HxCDF	374/376	40.61	1.24	1090		2.50
234678-HxCDF	374/376	41.30	1.23	1090		2.50
123478-HxCDD	390/392	41.50	1.25	1050		2.50
123678-HxCDD	390/392	41.62	1.27	1050		2.50
123789-HxCDD	390/392	41.93	1.24	1060		2.50
123789-HxCDF	374/376	42.31	1.25	1060		2.50
1234678-HpCDF	408/410	44.04	1.04	1090		2.50
1234678-HpCDD	424/426	45.24	1.05	1050		4.53
1234789-HpCDF	408/410	45.79	1.05	1090		2.50
OCDD	458/460	48.27	0.88	2060		36.2
OCDF	442/444	48.44	0.90	2110		6.15

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-1278-TCDD (CRS)	332/334	30.99	0.80	0.65 - 0.90	56	31 - 191
13C12-2378-TCDF	316/318	29.40	0.81	0.65 - 0.90	56	40 - 135
13C12-2378-TCDD	332/334	30.56	0.80	0.65 - 0.90	71	40 - 135
13C12-12378-PeCDF	352/354	35.45	1.57	1.32 - 1.79	65	40 - 135
13C12-23478-PeCDF	352/354	36.73	1.59	1.32 - 1.79	63	40 - 135
13C12-12378-PeCDD	368/370	37.15	1.65	1.32 - 1.79	69	40 - 135
13C12-123478-HxCDF	384/386	40.43	0.53	0.43 - 0.60	67	40 - 135
13C12-123678-HxCDF	384/386	40.58	0.53	0.43 - 0.60	65	40 - 135
13C12-234678-HxCDF	384/386	41.28	0.53	0.43 - 0.60	56	40 - 135
13C12-123478-HxCDD	402/404	41.48	1.26	1.05 - 1.44	73	40 - 135
13C12-123678-HxCDD	402/404	41.61	1.26	1.05 - 1.44	70	40 - 135
13C12-123789-HxCDD	402/404	41.92	1.24	1.05 - 1.44	65	40 - 135
13C12-123789-HxCDF	384/386	42.29	0.54	0.43 - 0.60	66	40 - 135
13C12-1234678-HpCDF	418/420	44.02	0.47	0.37 - 0.52	66	40 - 135
13C12-1234678-HpCDD	436/438	45.23	1.05	0.88 - 1.21	66	40 - 135
13C12-1234789-HpCDF	418/420	45.78	0.45	0.37 - 0.52	61	40 - 135
13C12-OCDD	470/472	48.25	0.90	0.76 - 1.03	59	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: OPR313007
Sample (vol): 1000 (ml)		Lab File ID: 18NOV10-16
Water Sample Prep: SEPF		Date Collected: N/A
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 07:33
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-OCDF	454/456	48.43	0.90	0.76 - 1.03	56	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: BLK313007
Sample (vol): 1000 (ml)		Lab File ID: 18NOV10-18
Water Sample Prep: SEPF		Date Collected: N/A
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 09:26
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Analyte	Selected Ions	Peak RT	Ion Ratio	Concentration	Qual.	DL
2378-TCDF	304/306	29.42	1.08 *		U	0.812
2378-TCDD	320/322	30.60	0.68		U	0.873
12378-PeCDF	340/342	35.48	0.71 *		U	2.76
23478-PeCDF	340/342	36.75	1.63		U	2.50
12378-PeCDD	356/358	37.15	1.42		U	3.16
123478-HxCDF	374/376	40.46	1.16		U	2.50
123678-HxCDF	374/376	40.61	1.25		U	2.50
234678-HxCDF	374/376	41.31	1.54 *		U	2.50
123478-HxCDD	390/392	41.48	0.96 *		U	2.50
123678-HxCDD	390/392	41.61	1.01 *		U	2.50
123789-HxCDD	390/392	41.92	1.24		U	2.50
123789-HxCDF	374/376	42.31	1.58 *		U	2.50
1234678-HpCDF	408/410	44.05	0.86 *		U	2.50
1234678-HpCDD	424/426	45.23	0.79 *		U	4.53
1234789-HpCDF	408/410	45.77	0.80 *		U	2.50
OCDD	458/460	48.26	0.91		U	36.2
OCDF	442/444	48.42	0.91		U	6.15

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-1278-TCDD (CRS)	332/334	31.01	0.79	0.65 - 0.90	60	35 - 197
13C12-2378-TCDF	316/318	29.40	0.80	0.65 - 0.90	61	40 - 135
13C12-2378-TCDD	332/334	30.56	0.83	0.65 - 0.90	72	40 - 135
13C12-12378-PeCDF	352/354	35.45	1.61	1.32 - 1.79	67	40 - 135
13C12-23478-PeCDF	352/354	36.73	1.59	1.32 - 1.79	68	40 - 135
13C12-12378-PeCDD	368/370	37.15	1.57	1.32 - 1.79	71	40 - 135
13C12-123478-HxCDF	384/386	40.43	0.54	0.43 - 0.60	64	40 - 135
13C12-123678-HxCDF	384/386	40.58	0.53	0.43 - 0.60	63	40 - 135
13C12-234678-HxCDF	384/386	41.28	0.53	0.43 - 0.60	58	40 - 135
13C12-123478-HxCDD	402/404	41.48	1.26	1.05 - 1.44	73	40 - 135
13C12-123678-HxCDD	402/404	41.59	1.26	1.05 - 1.44	70	40 - 135
13C12-123789-HxCDD	402/404	41.92	1.26	1.05 - 1.44	66	40 - 135
13C12-123789-HxCDF	384/386	42.28	0.52	0.43 - 0.60	71	40 - 135
13C12-1234678-HpCDF	418/420	44.02	0.46	0.37 - 0.52	67	40 - 135
13C12-1234678-HpCDD	436/438	45.22	1.07	0.88 - 1.21	73	40 - 135
13C12-1234789-HpCDF	418/420	45.77	0.46	0.37 - 0.52	67	40 - 135
13C12-OCDD	470/472	48.25	0.89	0.76 - 1.03	70	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: BLK313007
Sample (vol): 1000 (ml)		Lab File ID: 18NOV10-18
Water Sample Prep: SEPF		Date Collected: N/A
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 09:26
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-OCDF	454/456	48.42	0.90	0.76 - 1.03	65	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: 9881309
Sample (vol): 1040 (ml)		Lab File ID: 18NOV10-24
Water Sample Prep: SEPF		Date Collected: 11/02/2018 10:10
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 15:06
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Analyte	Selected Ions	Peak RT	Ion Ratio	Concentration	Qual.	DL
2378-TCDF	304/306	29.44	2.72 *		U	0.781
2378-TCDD	320/322	30.57	1.34 *		U	0.839
12378-PeCDF	340/342	35.47	1.14 *		U	2.65
23478-PeCDF	340/342	36.76	0.48 *		U	2.40
12378-PeCDD	356/358	37.18	38.21 *		U	3.04
123478-HxCDF	374/376	40.48	1.40		U	2.40
123678-HxCDF	374/376	40.62	1.32		U	2.40
234678-HxCDF	374/376	41.31	2.15 *		U	2.40
123478-HxCDD	390/392	41.49	1.41		U	2.40
123678-HxCDD	390/392	41.62	1.06		U	2.40
123789-HxCDD	390/392	41.92	2.13 *		U	2.40
123789-HxCDF	374/376	42.31	1.50 *		U	2.40
1234678-HpCDF	408/410	44.05	1.20	4.79	J	2.40
1234678-HpCDD	424/426	45.24	1.01	8.72	J	4.36
1234789-HpCDF	408/410	45.78	1.30 *		U	2.40
OCDD	458/460	48.27	0.83	106		34.8
OCDF	442/444	48.44	0.81	5.95	J	5.91

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-1278-TCDD (CRS)	332/334	31.01	0.77	0.65 - 0.90	49	35 - 197
13C12-2378-TCDF	316/318	29.41	0.80	0.65 - 0.90	54	40 - 135
13C12-2378-TCDD	332/334	30.57	0.79	0.65 - 0.90	74	40 - 135
13C12-12378-PeCDF	352/354	35.47	1.56	1.32 - 1.79	53	40 - 135
13C12-23478-PeCDF	352/354	36.75	1.57	1.32 - 1.79	57	40 - 135
13C12-12378-PeCDD	368/370	37.16	1.59	1.32 - 1.79	59	40 - 135
13C12-123478-HxCDF	384/386	40.45	0.52	0.43 - 0.60	53	40 - 135
13C12-123678-HxCDF	384/386	40.60	0.54	0.43 - 0.60	52	40 - 135
13C12-234678-HxCDF	384/386	41.30	0.54	0.43 - 0.60	49	40 - 135
13C12-123478-HxCDD	402/404	41.49	1.28	1.05 - 1.44	62	40 - 135
13C12-123678-HxCDD	402/404	41.61	1.23	1.05 - 1.44	56	40 - 135
13C12-123789-HxCDD	402/404	41.92	1.26	1.05 - 1.44	57	40 - 135
13C12-123789-HxCDF	384/386	42.30	0.53	0.43 - 0.60	69	40 - 135
13C12-1234678-HpCDF	418/420	44.04	0.46	0.37 - 0.52	52	40 - 135
13C12-1234678-HpCDD	436/438	45.23	1.05	0.88 - 1.21	57	40 - 135
13C12-1234789-HpCDF	418/420	45.78	0.46	0.37 - 0.52	49	40 - 135
13C12-OCDD	470/472	48.25	0.90	0.76 - 1.03	53	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: 9881309
Sample (vol): 1040 (ml)		Lab File ID: 18NOV10-24
Water Sample Prep: SEPF		Date Collected: 11/02/2018 10:10
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 15:06
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-OCDF	454/456	48.43	0.91	0.76 - 1.03	46	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: 9881310
Sample (vol): 1010 (ml)		Lab File ID: 18NOV10-25
Water Sample Prep: SEPF		Date Collected: 11/02/2018 10:10
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 16:03
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Analyte	Selected Ions	Peak RT	Ion Ratio	Concentration	Qual.	DL
2378-TCDF	304/306	29.39	0.19 *		U	0.804
2378-TCDD	320/322	30.60	1.05 *		U	0.864
12378-PeCDF	340/342	35.45	1.61		U	2.73
23478-PeCDF	340/342	36.75	3.29 *		U	2.48
12378-PeCDD	356/358	37.13	2.81 *		U	3.13
123478-HxCDF	374/376	40.45	1.43		U	2.48
123678-HxCDF	374/376	40.58	1.64 *		U	2.48
234678-HxCDF	374/376	41.28	0.95 *		U	2.48
123478-HxCDD	390/392	41.48	0.38 *		U	2.48
123678-HxCDD	390/392	41.62	0.29 *		U	2.48
123789-HxCDD	390/392	41.91	1.32		U	2.48
123789-HxCDF	374/376	42.28	1.03 *		U	2.48
1234678-HpCDF	408/410	44.02	1.07	4.64	J	2.48
1234678-HpCDD	424/426	45.22	1.20	9.61	J	4.49
1234789-HpCDF	408/410	45.77	0.76 *		U	2.48
OCDD	458/460	48.25	0.90	113		35.8
OCDF	442/444	48.42	0.96	6.61	J	6.09

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-1278-TCDD (CRS)	332/334	30.98	0.82	0.65 - 0.90	49	35 - 197
13C12-2378-TCDF	316/318	29.39	0.78	0.65 - 0.90	55	40 - 135
13C12-2378-TCDD	332/334	30.55	0.79	0.65 - 0.90	70	40 - 135
13C12-12378-PeCDF	352/354	35.44	1.55	1.32 - 1.79	54	40 - 135
13C12-23478-PeCDF	352/354	36.72	1.57	1.32 - 1.79	55	40 - 135
13C12-12378-PeCDD	368/370	37.13	1.59	1.32 - 1.79	59	40 - 135
13C12-123478-HxCDF	384/386	40.42	0.53	0.43 - 0.60	45	40 - 135
13C12-123678-HxCDF	384/386	40.57	0.54	0.43 - 0.60	44	40 - 135
13C12-234678-HxCDF	384/386	41.27	0.54	0.43 - 0.60	44	40 - 135
13C12-123478-HxCDD	402/404	41.47	1.27	1.05 - 1.44	58	40 - 135
13C12-123678-HxCDD	402/404	41.59	1.27	1.05 - 1.44	52	40 - 135
13C12-123789-HxCDD	402/404	41.90	1.24	1.05 - 1.44	56	40 - 135
13C12-123789-HxCDF	384/386	42.26	0.53	0.43 - 0.60	61	40 - 135
13C12-1234678-HpCDF	418/420	44.00	0.45	0.37 - 0.52	48	40 - 135
13C12-1234678-HpCDD	436/438	45.20	1.06	0.88 - 1.21	54	40 - 135
13C12-1234789-HpCDF	418/420	45.76	0.46	0.37 - 0.52	48	40 - 135
13C12-OCDD	470/472	48.23	0.90	0.76 - 1.03	54	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: 9881310
Sample (vol): 1010 (ml)		Lab File ID: 18NOV10-25
Water Sample Prep: SEPF		Date Collected: 11/02/2018 10:10
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 16:03
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-OCDF	454/456	48.41	0.90	0.76 - 1.03	46	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: 9881313
Sample (vol): 1030 (ml)		Lab File ID: 18NOV10-26
Water Sample Prep: SEPF		Date Collected: 11/02/2018 10:10
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 16:59
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Analyte	Selected Ions	Peak RT	Ion Ratio	Concentration	Qual.	DL
2378-TCDF	304/306	29.46	0.89		U	0.788
2378-TCDD	320/322	30.64	1.31 *		U	0.848
12378-PeCDF	340/342	35.49	0.61 *		U	2.68
23478-PeCDF	340/342	36.77	0.60 *		U	2.43
12378-PeCDD	356/358	37.18	7.02 *		U	3.07
123478-HxCDF	374/376	40.45	6.19 *		U	2.43
123678-HxCDF	374/376	40.63	2.81 *		U	2.43
234678-HxCDF	374/376	41.30	2.88 *		U	2.43
123478-HxCDD	390/392	41.54	1.20		U	2.43
123678-HxCDD	390/392	41.61	0.76 *		U	2.43
123789-HxCDD	390/392	41.93	0.95 *		U	2.43
123789-HxCDF	374/376	42.31	1.21		U	2.43
1234678-HpCDF	408/410	44.05	1.01		U	2.43
1234678-HpCDD	424/426	45.26	0.95		U	4.40
1234789-HpCDF	408/410	45.79	1.47 *		U	2.43
OCDD	458/460	48.27	0.93		U	35.1
OCDF	442/444	48.45	0.81		U	5.97

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-1278-TCDD (CRS)	332/334	31.01	0.80	0.65 - 0.90	50	35 - 197
13C12-2378-TCDF	316/318	29.42	0.79	0.65 - 0.90	59	40 - 135
13C12-2378-TCDD	332/334	30.59	0.82	0.65 - 0.90	74	40 - 135
13C12-12378-PeCDF	352/354	35.47	1.61	1.32 - 1.79	56	40 - 135
13C12-23478-PeCDF	352/354	36.75	1.57	1.32 - 1.79	59	40 - 135
13C12-12378-PeCDD	368/370	37.17	1.62	1.32 - 1.79	60	40 - 135
13C12-123478-HxCDF	384/386	40.45	0.53	0.43 - 0.60	47	40 - 135
13C12-123678-HxCDF	384/386	40.60	0.53	0.43 - 0.60	46	40 - 135
13C12-234678-HxCDF	384/386	41.30	0.52	0.43 - 0.60	49	40 - 135
13C12-123478-HxCDD	402/404	41.50	1.25	1.05 - 1.44	61	40 - 135
13C12-123678-HxCDD	402/404	41.61	1.25	1.05 - 1.44	56	40 - 135
13C12-123789-HxCDD	402/404	41.93	1.26	1.05 - 1.44	62	40 - 135
13C12-123789-HxCDF	384/386	42.30	0.53	0.43 - 0.60	70	40 - 135
13C12-1234678-HpCDF	418/420	44.04	0.46	0.37 - 0.52	51	40 - 135
13C12-1234678-HpCDD	436/438	45.24	1.06	0.88 - 1.21	60	40 - 135
13C12-1234789-HpCDF	418/420	45.78	0.45	0.37 - 0.52	55	40 - 135
13C12-OCDD	470/472	48.26	0.91	0.76 - 1.03	64	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611	Lab Sample ID: 9881313
Sample (vol): 1030 (ml)		Lab File ID: 18NOV10-26
Water Sample Prep: SEPF		Date Collected: 11/02/2018 10:10
Concentration Extract Volume: 20.0 (uL)		Date Extracted: 11/09/2018 11:39
Injection Volume: 1.00 (uL) % Solid/Lipids: N/A		Date Analyzed: 11/10/2018 16:59
GC Column: DB5MS	ID: 0.25 (mm)	Dilution Factor: 1.0

Concentration Units: pg/l

Labeled Compounds	Selected Ions	Peak RT	Ion Ratio	Ion Ratio Limits	% REC	Recovery Limits
13C12-OCDF	454/456	48.43	0.90	0.76 - 1.03	52	40 - 135

Abbreviations:

B = Detected in Method Blank	E = Exceeds calibration range
U = Undetected	F = Interference is present
J = Estimated concentration between EDL and LOQ	N = See comment in Case Narrative
C = Concentration confirmed on second column	S = The detector is saturated
Q = Estimated Maximum Possible Concentration	* = Outside QC Limits

SDG No.: TID15

Matrix: WATER	Instrument ID: DF17611
Sample vol: 1000 (ml)	Lab Sample ID: OPR313007
Water Sample PREP: SEPF	Lab File ID: 18NOV10-16
Concentrated Extract Volume: 20.0 (uL)	Date Received: N/A
Injection Volume: 1.00 (uL) %SOLID/LIPIDS: N/A	Date Extracted: 11/09/2018 11:39
GC Column: DB5MS ID: 0.25 (mm)	Date Analyzed: 11/10/2018 07:33
Method Reference: SW-846 8290A Feb 2007 Rev 1	Dilution Factor: 1.0

Concentration Units: pg/l

Spike Analyte	Spike Added	Amount Recovered	Percent Recovery	QC Limits
2378-TCDF	200	206	103	72 - 138
2378-TCDD	200	205	102	71 - 125
12378-PeCDF	1000	1040	104	82 - 130
23478-PeCDF	1000	1050	105	77 - 129
12378-PeCDD	1000	1080	108	76 - 121
123478-HxCDF	1000	1100	110	80 - 130
123678-HxCDF	1000	1090	109	79 - 131
234678-HxCDF	1000	1090	109	81 - 130
123478-HxCDD	1000	1050	105	80 - 126
123678-HxCDD	1000	1050	105	78 - 134
123789-HxCDD	1000	1060	106	76 - 137
123789-HxCDF	1000	1060	106	83 - 130
1234678-HpCDF	1000	1090	109	81 - 130
1234678-HpCDD	1000	1050	105	79 - 122
1234789-HpCDF	1000	1090	109	77 - 128
OCDD	2000	2060	103	81 - 135
OCDF	2000	2110	105	66 - 150

* Outside Quality Control (QC) limits.

SDG No.: TID15

Matrix: WATER

Lab Sample ID: BLK313007

Water Sample Prep: SEPF

Lab File ID: 18NOV10-18

Sample vol: 1.00 (L)

GC Column: DB5MS

ID: 0.25 (mm)

Date Analyzed: 11/10/2018 09:26

This Method Blank applies to Samples:

Lab Sample ID	Lab File ID	Date Analyzed
OPR313007	18NOV10-16	11/10/2018 07:33
9881309	18NOV10-24	11/10/2018 15:06
9881310	18NOV10-25	11/10/2018 16:03
9881313	18NOV10-26	11/10/2018 16:59

SDG No.: TID15

GC Column: DB5MS

ID: 0.25 (mm)

Instrument ID	Lab File ID	Sample ID	Analysis Date/Time	Compound Name	% Valley	QC Limits (%)
DF17611	18NOV02-02	CPS01	11/02/2018 15:25	2378-TCDD	12.242	25
DF17611	18NOV06-02	CPS02	11/06/2018 11:28	2378-TCDD	15.949	25
DF17611	18NOV10-14	CPS03	11/10/2018 05:43	2378-TCDD	17.151	25

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611

Init. Calib. Date/Times: 11/02/2018 17:16 11/06/2018 13:18

Lab Sample ID	Lab File ID	Date/Time Analyzed
CPS01	18NOV02-02	11/02/2018 15:25
CSL01	18NOV02-04	11/02/2018 17:16
CS101	18NOV02-05	11/02/2018 18:30
CS201	18NOV02-06	11/02/2018 19:24
CS301	18NOV02-07	11/02/2018 20:20
CS401	18NOV02-08	11/02/2018 21:17
CS501	18NOV02-09	11/02/2018 22:14
CPS02	18NOV06-02	11/06/2018 11:28
ICV	18NOV06-04	11/06/2018 13:18
CPS03	18NOV10-14	11/10/2018 05:43
CS3CC03	18NOV10-15	11/10/2018 06:37
OPR313007	18NOV10-16	11/10/2018 07:33
BLK313007	18NOV10-18	11/10/2018 09:26
9881309	18NOV10-24	11/10/2018 15:06
9881310	18NOV10-25	11/10/2018 16:03
9881313	18NOV10-26	11/10/2018 16:59
CS3CC04	18NOV10-28	11/10/2018 18:16

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611

Init. Calib. Date/Times: 11/02/2018 17:16 11/02/2018 22:14

Lab File Names: CSL = 18NOV02-04; CS1 = 18NOV02-05; CS2 = 18NOV02-06;
CS3 = 18NOV02-07; CS4 = 18NOV02-08; CS5 = 18NOV02-09;

Analyte	Type	RF						Mean RF	%RSD	QC Limits (%)
		CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDF	TARGET	1.189	0.974	1.007	1.041	1.063	1.036	1.051	7.05	± 20
2378-TCDD	TARGET	1.485	1.129	1.196	1.213	1.247	1.231	1.250	9.76	± 20
12378-PeCDF	TARGET	0.959	0.900	0.928	0.965	0.953	0.919	0.937	2.73	± 20
23478-PeCDF	TARGET	1.042	1.016	1.050	1.067	1.078	1.050	1.050	2.04	± 20
12378-PeCDD	TARGET	1.039	0.995	0.957	1.000	1.027	0.991	1.002	2.90	± 20
123478-HxCDF	TARGET	1.090	1.068	1.112	1.165	1.136	1.110	1.114	3.07	± 20
123678-HxCDF	TARGET	1.090	1.051	1.068	1.100	1.091	1.042	1.074	2.23	± 20
234678-HxCDF	TARGET	1.180	1.105	1.122	1.187	1.172	1.130	1.149	2.99	± 20
123478-HxCDD	TARGET	1.010	1.006	0.983	1.045	1.048	0.982	1.012	2.85	± 20
123678-HxCDD	TARGET	0.992	0.999	1.014	1.000	1.026	0.985	1.003	1.49	± 20
123789-HxCDD	TARGET	1.053	1.004	1.052	1.091	1.081	1.037	1.053	2.97	± 20
123789-HxCDF	TARGET	1.136	1.042	1.055	1.094	1.085	1.033	1.074	3.58	± 20
1234678-HpCDF	TARGET	1.075	1.199	1.179	1.251	1.217	1.192	1.185	5.04	± 20
1234678-HpCDD	TARGET	1.009	0.994	1.014	1.041	1.051	1.008	1.019	2.12	± 20
1234789-HpCDF	TARGET	1.236	1.202	1.196	1.256	1.279	1.221	1.232	2.60	± 20
OCDD	TARGET	0.968	0.951	0.977	1.014	0.993	1.014	0.986	2.56	± 20
OCDF	TARGET	0.860	0.824	0.848	0.881	0.854	0.908	0.862	3.34	± 20
13C12-1278-TCDD (CRS)	LABELED	1.071	1.035	1.024	1.110	1.012	1.014	1.044	3.70	± 20
13C12-2378-TCDF	LABELED	2.152	2.042	2.000	2.058	2.002	1.967	2.037	3.19	± 20
13C12-2378-TCDD	LABELED	1.036	1.008	0.973	1.027	0.995	0.999	1.006	2.26	± 20
13C12-12378-PeCDF	LABELED	1.995	1.886	1.860	1.979	1.912	1.925	1.926	2.72	± 20
13C12-23478-PeCDF	LABELED	2.005	1.847	1.832	1.998	1.897	1.945	1.921	3.87	± 20
13C12-12378-PeCDD	LABELED	1.080	0.983	0.997	1.076	1.036	1.060	1.039	3.94	± 20
13C12-123478-HxCDF	LABELED	1.450	1.395	1.402	1.494	1.457	1.482	1.447	2.82	± 20
13C12-123678-HxCDF	LABELED	1.513	1.494	1.480	1.594	1.557	1.640	1.546	4.02	± 20
13C12-234678-HxCDF	LABELED	1.398	1.375	1.372	1.467	1.401	1.472	1.414	3.15	± 20
13C12-123478-HxCDD	LABELED	1.020	0.936	0.946	1.021	0.989	1.079	0.999	5.35	± 20
13C12-123678-HxCDD	LABELED	1.036	0.985	0.962	1.070	1.044	1.125	1.037	5.63	± 20
13C12-123789-HxCDD	LABELED	0.999	0.942	0.923	0.996	0.981	1.033	0.979	4.09	± 20
13C12-123789-HxCDF	LABELED	1.311	1.274	1.244	1.348	1.323	1.383	1.314	3.80	± 20
13C12-1234678-HpCDF	LABELED	1.313	1.258	1.221	1.404	1.297	1.408	1.317	5.77	± 20
13C12-1234678-HpCDD	LABELED	0.989	0.926	0.880	1.047	0.939	1.054	0.972	7.16	± 20
13C12-1234789-HpCDF	LABELED	1.090	1.056	1.011	1.189	1.084	1.206	1.106	6.90	± 20
13C12-OCDD	LABELED	1.015	0.922	0.865	1.137	0.988	1.242	1.028	13.55	± 20
13C12-OCDF	LABELED	1.428	1.380	1.271	1.659	1.477	1.832	1.508	13.51	± 20

* Outside QC Limits.

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611

Init. Calib. Date/Times: 11/02/2018 17:16 11/02/2018 22:14

Lab File Names: CSL = 18NOV02-04; CS1 = 18NOV02-05; CS2 = 18NOV02-06;
CS3 = 18NOV02-07; CS4 = 18NOV02-08; CS5 = 18NOV02-09;

Analytes	Type	Selected Ion	Ion Abundance Ratio					Ion Ratio	
			CSL	CS1	CS2	CS3	CS4	CS5	QC Limits
2378-TCDF	TARGET	304/306	0.82	0.82	0.79	0.81	0.81	0.80	0.65 - 0.90
2378-TCDD	TARGET	320/322	0.70	0.84	0.84	0.79	0.81	0.80	0.65 - 0.90
12378-PeCDF	TARGET	340/342	1.62	1.68	1.58	1.57	1.55	1.58	1.32 - 1.79
23478-PeCDF	TARGET	340/342	1.46	1.50	1.59	1.57	1.54	1.59	1.32 - 1.79
12378-PeCDD	TARGET	356/358	1.78	1.62	1.59	1.60	1.59	1.55	1.32 - 1.79
123478-HxCDF	TARGET	374/376	1.17	1.26	1.27	1.24	1.23	1.24	1.05 - 1.44
123678-HxCDF	TARGET	374/376	1.27	1.30	1.21	1.25	1.25	1.26	1.05 - 1.44
234678-HxCDF	TARGET	374/376	1.34	1.20	1.25	1.25	1.22	1.25	1.05 - 1.44
123478-HxCDD	TARGET	390/392	1.31	1.33	1.25	1.26	1.27	1.26	1.05 - 1.44
123678-HxCDD	TARGET	390/392	1.25	1.18	1.29	1.27	1.24	1.27	1.05 - 1.44
123789-HxCDD	TARGET	390/392	1.22	1.29	1.27	1.26	1.25	1.26	1.05 - 1.44
123789-HxCDF	TARGET	374/376	1.15	1.25	1.25	1.26	1.25	1.24	1.05 - 1.44
1234678-HpCDF	TARGET	408/410	1.08	0.99	1.01	1.04	1.05	1.04	0.88 - 1.21
1234678-HpCDD	TARGET	424/426	1.15	1.12	1.05	1.05	1.06	1.06	0.88 - 1.21
1234789-HpCDF	TARGET	408/410	0.90	1.02	1.08	1.03	1.05	1.05	0.88 - 1.21
OCDD	TARGET	458/460	0.87	0.88	0.91	0.90	0.90	0.89	0.76 - 1.03
OCDF	TARGET	442/444	0.85	0.88	0.89	0.90	0.90	0.88	0.76 - 1.03
13C12-1278-TCDD (CRS)	LABELED	332/334	0.81	0.79	0.80	0.85	0.79	0.80	0.65 - 0.90
13C12-2378-TCDF	LABELED	316/318	0.80	0.78	0.79	0.78	0.79	0.80	0.65 - 0.90
13C12-2378-TCDD	LABELED	332/334	0.80	0.79	0.80	0.79	0.79	0.83	0.65 - 0.90
13C12-12378-PeCDF	LABELED	352/354	1.60	1.62	1.60	1.58	1.59	1.59	1.32 - 1.79
13C12-23478-PeCDF	LABELED	352/354	1.57	1.59	1.59	1.61	1.59	1.59	1.32 - 1.79
13C12-12378-PeCDD	LABELED	368/370	1.61	1.59	1.62	1.61	1.62	1.59	1.32 - 1.79
13C12-123478-HxCDF	LABELED	384/386	0.53	0.54	0.53	0.53	0.53	0.54	0.43 - 0.60
13C12-123678-HxCDF	LABELED	384/386	0.53	0.53	0.55	0.54	0.54	0.53	0.43 - 0.60
13C12-234678-HxCDF	LABELED	384/386	0.53	0.53	0.54	0.54	0.54	0.53	0.43 - 0.60
13C12-123478-HxCDD	LABELED	402/404	1.28	1.27	1.29	1.32	1.26	1.29	1.05 - 1.44
13C12-123678-HxCDD	LABELED	402/404	1.25	1.27	1.28	1.27	1.27	1.26	1.05 - 1.44
13C12-123789-HxCDD	LABELED	402/404	1.28	1.26	1.25	1.29	1.28	1.26	1.05 - 1.44
13C12-123789-HxCDF	LABELED	384/386	0.54	0.53	0.54	0.53	0.53	0.52	0.43 - 0.60
13C12-1234678-HpCDF	LABELED	418/420	0.46	0.46	0.47	0.47	0.47	0.47	0.37 - 0.52
13C12-1234678-HpCDD	LABELED	436/438	1.07	1.05	1.07	1.07	1.08	1.08	0.88 - 1.21
13C12-1234789-HpCDF	LABELED	418/420	0.46	0.46	0.46	0.46	0.46	0.46	0.37 - 0.52
13C12-OCDD	LABELED	470/472	0.90	0.90	0.91	0.91	0.90	0.90	0.76 - 1.03
13C12-OCDF	LABELED	454/456	0.91	0.90	0.91	0.91	0.91	0.91	0.76 - 1.03

* Outside QC Limits.

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611
 Lab File ID: 18NOV10-15 Lab Sample ID: CS3CC03 Date/Time Analyzed: 11/10/2018 06:37
 Init. Calib. Date/Times: 11/02/2018 17:16 11/06/2018 13:18

Analytes	Type	Selected Ions	RF	Mean RF	%D	%D Limit	Ion Ratio	Ion Ratio QC Limits
2378-TCDF	TARGET	304/306	1.028	1.051	2.27	20	0.78	0.65 - 0.90
2378-TCDD	TARGET	320/322	1.230	1.250	1.62	20	0.80	0.65 - 0.90
12378-PeCDF	TARGET	340/342	0.926	0.937	1.18	20	1.57	1.32 - 1.79
23478-PeCDF	TARGET	340/342	1.043	1.050	0.73	20	1.56	1.32 - 1.79
12378-PeCDD	TARGET	356/358	0.997	1.002	0.45	20	1.59	1.32 - 1.79
123478-HxCDF	TARGET	374/376	1.140	1.114	2.32	20	1.25	1.05 - 1.44
123678-HxCDF	TARGET	374/376	1.104	1.074	2.82	20	1.25	1.05 - 1.44
234678-HxCDF	TARGET	374/376	1.185	1.149	3.09	20	1.25	1.05 - 1.44
123478-HxCDD	TARGET	390/392	1.003	1.012	0.90	20	1.29	1.05 - 1.44
123678-HxCDD	TARGET	390/392	0.986	1.003	1.70	20	1.22	1.05 - 1.44
123789-HxCDD	TARGET	390/392	1.048	1.053	0.45	20	1.25	1.05 - 1.44
123789-HxCDF	TARGET	374/376	1.080	1.074	0.52	20	1.25	1.05 - 1.44
1234678-HpCDF	TARGET	408/410	1.240	1.185	4.58	20	1.04	0.88 - 1.21
1234678-HpCDD	TARGET	424/426	1.017	1.019	0.20	20	1.05	0.88 - 1.21
1234789-HpCDF	TARGET	408/410	1.272	1.232	3.25	20	1.05	0.88 - 1.21
OCDD	TARGET	458/460	0.990	0.986	0.43	20	0.90	0.76 - 1.03
OCDF	TARGET	442/444	0.893	0.862	3.53	20	0.90	0.76 - 1.03
13C12-1278-TCDD (CRS)	LABELED	332/334	0.110	1.044	89.46 *	20	0.74	0.65 - 0.90
13C12-2378-TCDF	LABELED	316/318	2.065	2.037	1.40	30	0.80	0.65 - 0.90
13C12-2378-TCDD	LABELED	332/334	1.046	1.006	3.97	30	0.80	0.65 - 0.90
13C12-12378-PeCDF	LABELED	352/354	1.879	1.926	2.44	30	1.58	1.32 - 1.79
13C12-23478-PeCDF	LABELED	352/354	1.872	1.921	2.55	30	1.59	1.32 - 1.79
13C12-12378-PeCDD	LABELED	368/370	1.066	1.039	2.59	30	1.58	1.32 - 1.79
13C12-123478-HxCDF	LABELED	384/386	1.411	1.447	2.45	30	0.54	0.43 - 0.60
13C12-123678-HxCDF	LABELED	384/386	1.482	1.546	4.18	30	0.53	0.43 - 0.60
13C12-234678-HxCDF	LABELED	384/386	1.358	1.414	3.97	30	0.54	0.43 - 0.60
13C12-123478-HxCDD	LABELED	402/404	1.043	0.999	4.40	30	1.27	1.05 - 1.44
13C12-123678-HxCDD	LABELED	402/404	1.082	1.037	4.33	30	1.25	1.05 - 1.44
13C12-123789-HxCDD	LABELED	402/404	1.035	0.979	5.77	30	1.25	1.05 - 1.44
13C12-123789-HxCDF	LABELED	384/386	1.315	1.314	0.09	30	0.54	0.43 - 0.60
13C12-1234678-HpCDF	LABELED	418/420	1.284	1.317	2.51	30	0.48	0.37 - 0.52
13C12-1234678-HpCDD	LABELED	436/438	1.024	0.972	5.31	30	1.05	0.88 - 1.21
13C12-1234789-HpCDF	LABELED	418/420	1.089	1.106	1.50	30	0.47	0.37 - 0.52
13C12-OCDD	LABELED	470/472	1.031	1.028	0.25	30	0.91	0.76 - 1.03
13C12-OCDF	LABELED	454/456	1.429	1.508	5.21	30	0.90	0.76 - 1.03

* Outside QC Limits.

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611
 Lab File ID: 18NOV10-28 Lab Sample ID: CS3CC04 Date/Time Analyzed: 11/10/2018 18:16
 Init. Calib. Date/Times: 11/02/2018 17:16 11/06/2018 13:18

Analytes	Type	Selected Ions	RF	Mean RF	%D	%D Limit	Ion Ratio	Ion Ratio QC Limits
2378-TCDF	TARGET	304/306	0.988	1.051	6.04	20	0.79	0.65 - 0.90
2378-TCDD	TARGET	320/322	1.207	1.250	3.45	20	0.81	0.65 - 0.90
12378-PeCDF	TARGET	340/342	0.913	0.937	2.58	20	1.58	1.32 - 1.79
23478-PeCDF	TARGET	340/342	1.039	1.050	1.13	20	1.57	1.32 - 1.79
12378-PeCDD	TARGET	356/358	0.992	1.002	0.95	20	1.59	1.32 - 1.79
123478-HxCDF	TARGET	374/376	1.137	1.114	2.06	20	1.24	1.05 - 1.44
123678-HxCDF	TARGET	374/376	1.079	1.074	0.53	20	1.24	1.05 - 1.44
234678-HxCDF	TARGET	374/376	1.174	1.149	2.17	20	1.23	1.05 - 1.44
123478-HxCDD	TARGET	390/392	1.012	1.012	0.08	20	1.28	1.05 - 1.44
123678-HxCDD	TARGET	390/392	0.981	1.003	2.20	20	1.20	1.05 - 1.44
123789-HxCDD	TARGET	390/392	1.030	1.053	2.14	20	1.24	1.05 - 1.44
123789-HxCDF	TARGET	374/376	1.079	1.074	0.40	20	1.25	1.05 - 1.44
1234678-HpCDF	TARGET	408/410	1.213	1.185	2.35	20	1.04	0.88 - 1.21
1234678-HpCDD	TARGET	424/426	1.005	1.019	1.45	20	1.06	0.88 - 1.21
1234789-HpCDF	TARGET	408/410	1.260	1.232	2.31	20	1.05	0.88 - 1.21
OCDD	TARGET	458/460	0.991	0.986	0.49	20	0.89	0.76 - 1.03
OCDF	TARGET	442/444	0.886	0.862	2.77	20	0.90	0.76 - 1.03
13C12-1278-TCDD (CRS)	LABELED	332/334	0.112	1.044	89.30 *	20	0.82	0.65 - 0.90
13C12-2378-TCDF	LABELED	316/318	2.053	2.037	0.81	30	0.80	0.65 - 0.90
13C12-2378-TCDD	LABELED	332/334	1.049	1.006	4.20	30	0.82	0.65 - 0.90
13C12-12378-PeCDF	LABELED	352/354	1.927	1.926	0.02	30	1.57	1.32 - 1.79
13C12-23478-PeCDF	LABELED	352/354	1.923	1.921	0.15	30	1.54	1.32 - 1.79
13C12-12378-PeCDD	LABELED	368/370	1.101	1.039	6.02	30	1.59	1.32 - 1.79
13C12-123478-HxCDF	LABELED	384/386	1.373	1.447	5.11	30	0.54	0.43 - 0.60
13C12-123678-HxCDF	LABELED	384/386	1.458	1.546	5.70	30	0.54	0.43 - 0.60
13C12-234678-HxCDF	LABELED	384/386	1.330	1.414	5.95	30	0.54	0.43 - 0.60
13C12-123478-HxCDD	LABELED	402/404	1.020	0.999	2.17	30	1.29	1.05 - 1.44
13C12-123678-HxCDD	LABELED	402/404	1.068	1.037	3.00	30	1.27	1.05 - 1.44
13C12-123789-HxCDD	LABELED	402/404	1.019	0.979	4.13	30	1.26	1.05 - 1.44
13C12-123789-HxCDF	LABELED	384/386	1.265	1.314	3.72	30	0.54	0.43 - 0.60
13C12-1234678-HpCDF	LABELED	418/420	1.282	1.317	2.62	30	0.48	0.37 - 0.52
13C12-1234678-HpCDD	LABELED	436/438	1.013	0.972	4.20	30	1.05	0.88 - 1.21
13C12-1234789-HpCDF	LABELED	418/420	1.067	1.106	3.54	30	0.47	0.37 - 0.52
13C12-OCDD	LABELED	470/472	1.018	1.028	0.93	30	0.90	0.76 - 1.03
13C12-OCDF	LABELED	454/456	1.396	1.508	7.39	30	0.91	0.76 - 1.03

* Outside QC Limits.

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611
 Lab File ID: 18NOV10-15 Lab Sample ID: CS3CC03 Date/Time Analyzed: 11/10/2018 06:37
 Init. Calib. Date/Times: 11/02/2018 17:16 11/06/2018 13:18

Analytes	Type	RT	RRT	RRT QC Limits
2378-TCDF	TARGET	29.40	1.001	0.999-1.003
2378-TCDD	TARGET	30.58	1.001	0.999-1.002
12378-PeCDF	TARGET	35.47	1.001	0.999-1.002
23478-PeCDF	TARGET	36.74	1.000	0.999-1.002
12378-PeCDD	TARGET	37.16	1.001	0.999-1.002
123478-HxCDF	TARGET	40.45	1.000	0.999-1.001
123678-HxCDF	TARGET	40.59	1.000	0.997-1.005
234678-HxCDF	TARGET	41.28	1.000	0.999-1.001
123478-HxCDD	TARGET	41.48	1.000	0.999-1.001
123678-HxCDD	TARGET	41.60	1.000	0.998-1.004
123789-HxCDD	TARGET	41.91	1.000	1.000-1.019
123789-HxCDF	TARGET	42.29	1.000	0.999-1.001
1234678-HpCDF	TARGET	44.02	1.000	0.999-1.001
1234678-HpCDD	TARGET	45.22	1.000	0.999-1.001
1234789-HpCDF	TARGET	45.78	1.000	0.999-1.001
OCDD	TARGET	48.25	1.000	0.999-1.001
OCDF	TARGET	48.42	1.000	0.999-1.008
13C12-1278-TCDD (CRS)	LABELED	30.99	1.043	0.988-1.056
13C12-2378-TCDF	LABELED	29.38	0.989	0.923-1.103
13C12-2378-TCDD	LABELED	30.55	1.028	0.976-1.043
13C12-12378-PeCDF	LABELED	35.43	1.193	1.000-1.425
13C12-23478-PeCDF	LABELED	36.73	1.236	1.011-1.526
13C12-12378-PeCDD	LABELED	37.13	1.250	1.000-1.567
13C12-123478-HxCDF	LABELED	40.43	1.002	0.989-1.015
13C12-123678-HxCDF	LABELED	40.58	1.006	0.993-1.019
13C12-234678-HxCDF	LABELED	41.27	1.023	0.992-1.053
13C12-123478-HxCDD	LABELED	41.47	1.028	1.016-1.039
13C12-123678-HxCDD	LABELED	41.59	1.031	1.019-1.041
13C12-123789-HxCDD	LABELED	41.90	1.038	1.027-1.049
13C12-123789-HxCDF	LABELED	42.28	1.048	1.012-1.082
13C12-1234678-HpCDF	LABELED	44.01	1.091	1.067-1.109
13C12-1234678-HpCDD	LABELED	45.21	1.120	1.105-1.129
13C12-1234789-HpCDF	LABELED	45.76	1.134	1.084-1.178
13C12-OCDD	LABELED	48.23	1.195	1.051-1.330
13C12-OCDF	LABELED	48.41	1.200	1.056-1.335

RRT = (RT of analyte) / (RT of appropriate labeled compound).

* RRT exceeds the acceptable range

SDG No.: TID15

GC Column: DB5MS ID: 0.25 (mm) Instrument ID: DF17611
 Lab File ID: 18NOV10-28 Lab Sample ID: CS3CC04 Date/Time Analyzed: 11/10/2018 18:16
 Init. Calib. Date/Times: 11/02/2018 17:16 11/06/2018 13:18

Analytes	Type	RT	RRT	RRT QC Limits
2378-TCDF	TARGET	29.54	1.001	0.999-1.003
2378-TCDD	TARGET	30.70	1.001	0.999-1.002
12378-PeCDF	TARGET	35.54	1.001	0.999-1.002
23478-PeCDF	TARGET	36.81	1.001	0.999-1.002
12378-PeCDD	TARGET	37.22	1.000	0.999-1.002
123478-HxCDF	TARGET	40.49	1.000	0.999-1.001
123678-HxCDF	TARGET	40.64	1.000	0.997-1.005
234678-HxCDF	TARGET	41.32	1.000	0.999-1.001
123478-HxCDD	TARGET	41.52	1.000	0.999-1.001
123678-HxCDD	TARGET	41.65	1.000	0.998-1.004
123789-HxCDD	TARGET	41.96	1.000	1.000-1.019
123789-HxCDF	TARGET	42.32	1.000	0.999-1.001
1234678-HpCDF	TARGET	44.06	1.000	0.999-1.001
1234678-HpCDD	TARGET	45.25	1.000	0.999-1.001
1234789-HpCDF	TARGET	45.80	1.000	0.999-1.001
OCDD	TARGET	48.28	1.000	0.999-1.001
OCDF	TARGET	48.44	1.000	0.999-1.008
13C12-1278-TCDD (CRS)	LABELED	31.11	1.043	0.988-1.056
13C12-2378-TCDF	LABELED	29.50	0.989	0.923-1.103
13C12-2378-TCDD	LABELED	30.67	1.028	0.976-1.043
13C12-12378-PeCDF	LABELED	35.51	1.190	1.000-1.425
13C12-23478-PeCDF	LABELED	36.79	1.233	1.011-1.526
13C12-12378-PeCDD	LABELED	37.21	1.247	1.000-1.567
13C12-123478-HxCDF	LABELED	40.47	1.002	0.989-1.015
13C12-123678-HxCDF	LABELED	40.62	1.006	0.993-1.019
13C12-234678-HxCDF	LABELED	41.31	1.023	0.992-1.053
13C12-123478-HxCDD	LABELED	41.51	1.028	1.016-1.039
13C12-123678-HxCDD	LABELED	41.63	1.031	1.019-1.041
13C12-123789-HxCDD	LABELED	41.94	1.038	1.027-1.049
13C12-123789-HxCDF	LABELED	42.31	1.048	1.012-1.082
13C12-1234678-HpCDF	LABELED	44.05	1.091	1.067-1.109
13C12-1234678-HpCDD	LABELED	45.24	1.120	1.105-1.129
13C12-1234789-HpCDF	LABELED	45.79	1.134	1.084-1.178
13C12-OCDD	LABELED	48.26	1.195	1.051-1.330
13C12-OCDF	LABELED	48.44	1.199	1.056-1.335

RRT = (RT of analyte) / (RT of appropriate labeled compound).

* RRT exceeds the acceptable range

Sample Data

Dioxins/Furans by HRMS

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 15:06
Number of Entries 276
Comment S:10914:12936:17961
Vial 78
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW008WT Grab Groundwater
Sample ID 9881309
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

Quan x:\18nov10\18nov10-24.quan
Data x:\18nov10\18nov10-24.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.04
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.44	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
2	2378-TCDD	30.57	failed	failed	passed	failed	passed	passed	Failed on: CAA Ratio1A
3	12378-PeCDF	35.47	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
4	23478-PeCDF	36.76	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
5	12378-PeCDD	37.18	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
6	123478-HxCDF	40.48	passed	passed	passed	passed	passed	passed	
7	123678-HxCDF	40.62	passed	passed	passed	passed	passed	passed	
8	234678-HxCDF	41.31	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
9	123789-HxCDD	41.49	passed	passed	passed	passed	passed	passed	
10	123678-HxCDD	41.62	passed	passed	passed	passed	passed	passed	
11	123789-HxCDD	41.92	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
12	123789-HxCDF	42.31	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
13	1234678-HpCDF	44.05	passed	passed	passed	passed	passed	passed	
14	1234678-HpCDD	45.24	passed	passed	passed	passed	passed	passed	
15	1234789-HpCDF	45.78	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
16	OCDD	48.27	passed	passed	passed	passed	passed	passed	
17	OCDF	48.44	passed	passed	passed	passed	passed	passed	
18	13C12-1278-TCDD (CRS)	31.01	passed	passed	passed	passed	passed	passed	
19	13C12-1234-TCDD	29.73	passed	passed	passed	passed	passed	passed	
20	13C12-123468-HxCDD	40.37	passed	passed	passed	passed	passed	passed	
21	13C12-2378-TCDF	29.41	passed	passed	passed	passed	passed	passed	
22	13C12-2378-TCDD	30.57	passed	passed	passed	passed	passed	passed	
23	13C12-12378-PeCDF	35.47	passed	passed	passed	passed	passed	passed	
24	13C12-23478-PeCDF	36.75	passed	passed	passed	passed	passed	passed	
25	13C12-12378-PeCDD	37.16	passed	passed	passed	passed	passed	passed	
26	13C12-123478-HxCDF	40.45	passed	passed	passed	passed	passed	passed	
27	13C12-123678-HxCDF	40.60	passed	passed	passed	passed	passed	passed	
28	13C12-234678-HxCDF	41.30	passed	passed	passed	passed	passed	passed	
29	13C12-123478-HxCDD	41.49	passed	passed	passed	passed	passed	passed	
30	13C12-123678-HxCDD	41.61	passed	passed	passed	passed	passed	passed	
31	13C12-123789-HxCDD	41.92	passed	passed	passed	passed	passed	passed	
32	13C12-123789-HxCDF	42.30	passed	passed	passed	passed	passed	passed	
33	13C12-1234678-HpCDF	44.04	passed	passed	passed	passed	passed	passed	
34	13C12-1234678-HpCDD	45.23	passed	passed	passed	passed	passed	passed	
35	13C12-1234789-HpCDF	45.78	passed	passed	passed	passed	passed	passed	
36	13C12-OCDD	48.25	passed	passed	passed	passed	passed	passed	
37	13C12-OCDF	48.43	passed	passed	passed	passed	passed	passed	

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 15:06
Number of Entries 276
Comment S:10914:12936:17961
Vial 78
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW008WT Grab Groundwater
Sample ID 9881309
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

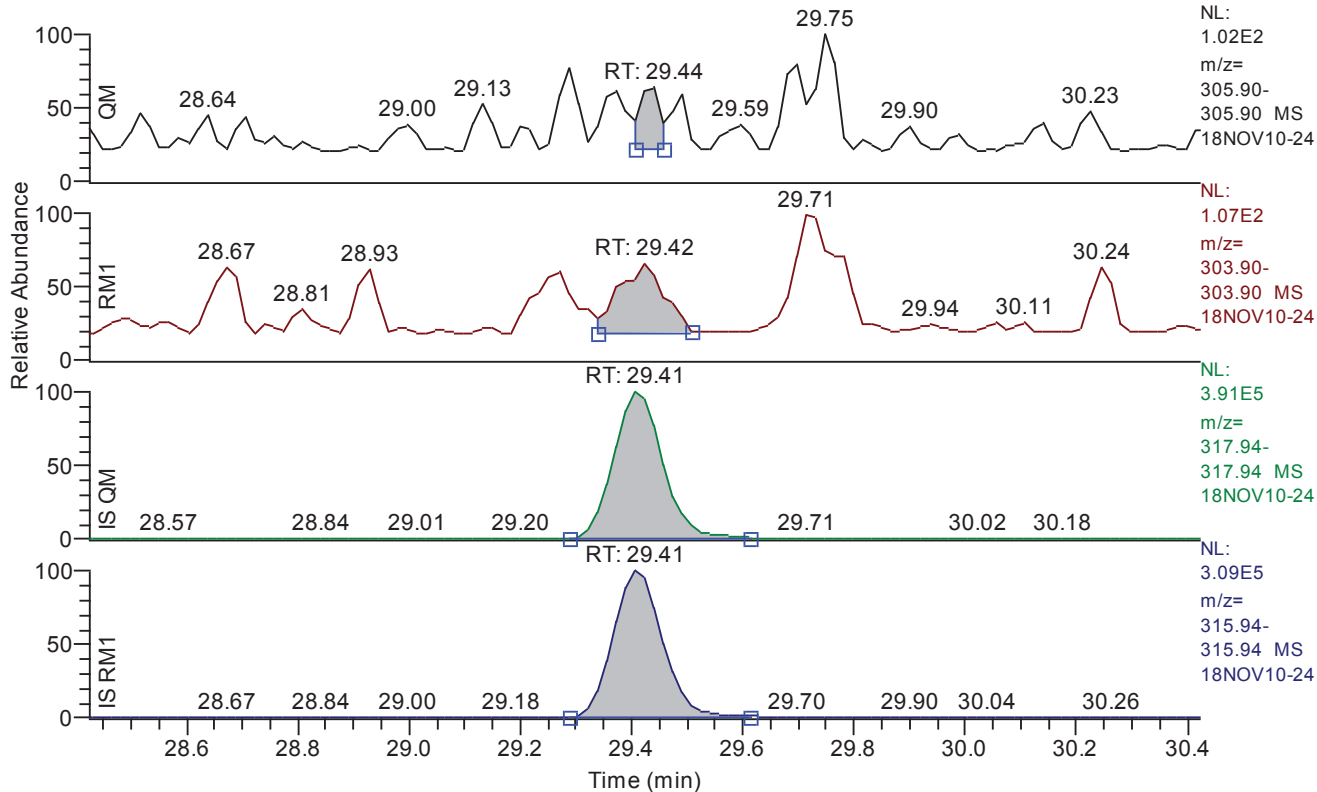
Quan x:\18nov10\18nov10-24.quan
Data x:\18nov10\18nov10-24.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.04
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.42 - 30.42 SM: 3G

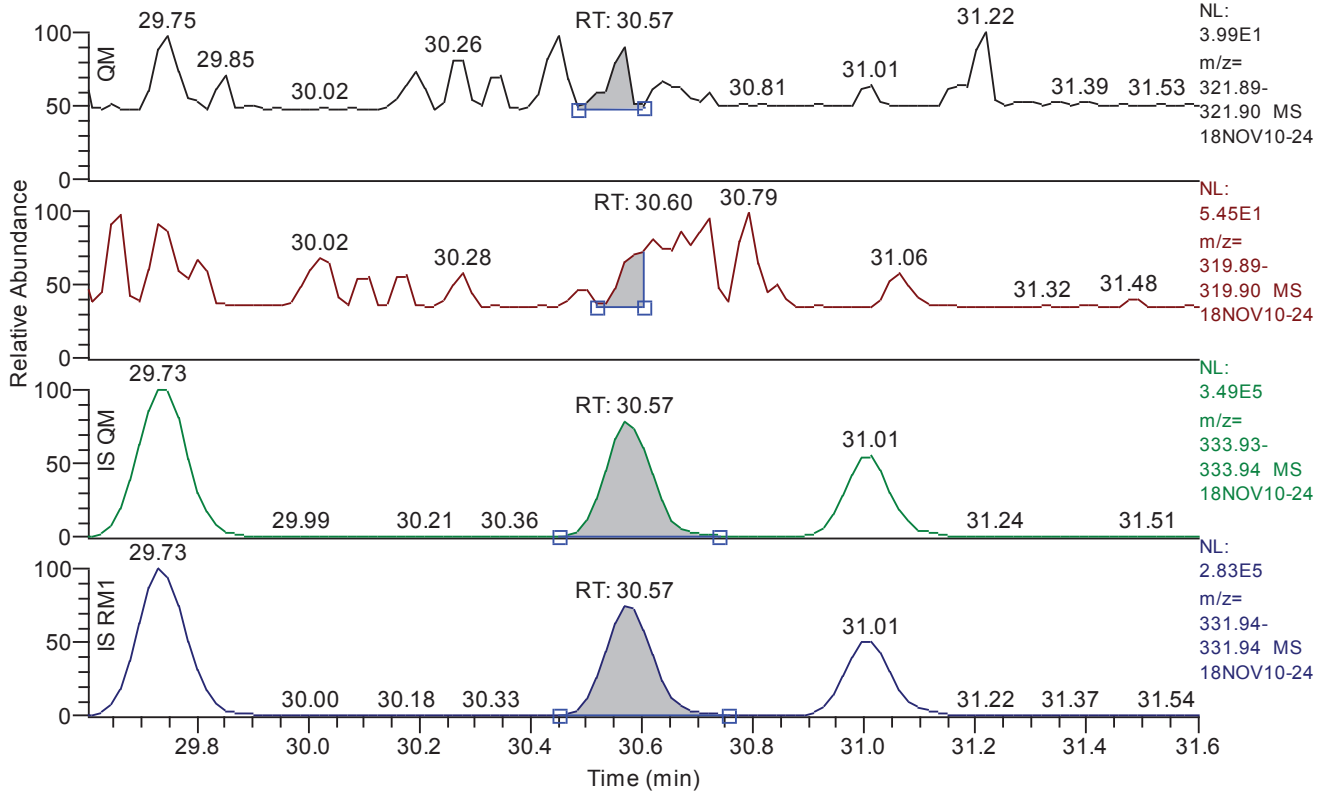


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.44
QM Area	106
QM Integration Mode	A
RM1 Area	289
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1180
Unqualified Amount (A)	0.165243
Adjusted Amount (A)	n.d.
Signal-to-Noise	5
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 29.60 - 31.60 SM: 3G

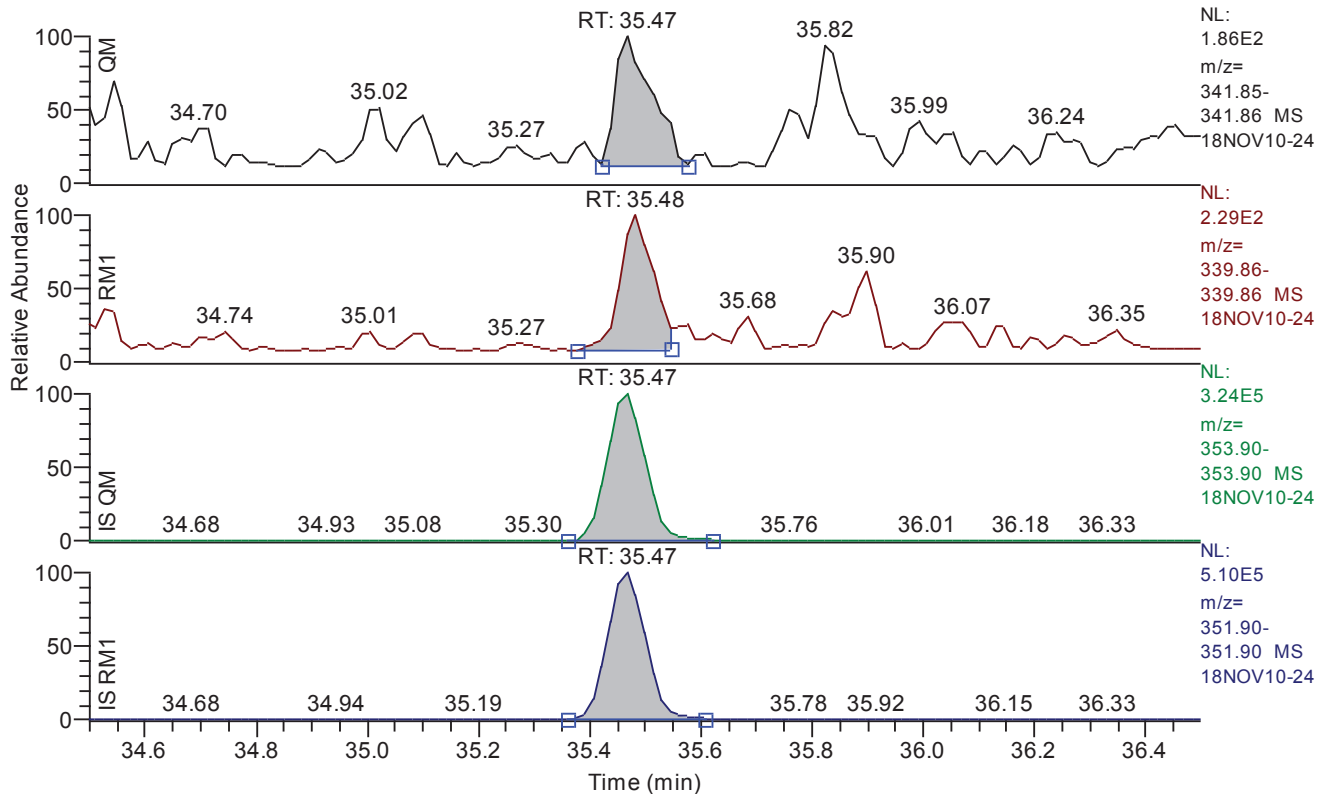


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.57
QM Area	43
QM Integration Mode	A
RM1 Area	58
RM1 Integration Mode	M
ManInt	1
Detection Limit (A)	0.0585
Unqualified Amount (A)	0.052456
Adjusted Amount (A)	n.d. < 0.0585
Signal-to-Noise	5
Client Flags	
Status Overview	failed
Status Info	Failed on: CAA Ratio1A

Chromatogram

RT: 34.50 - 36.50 SM: 3G

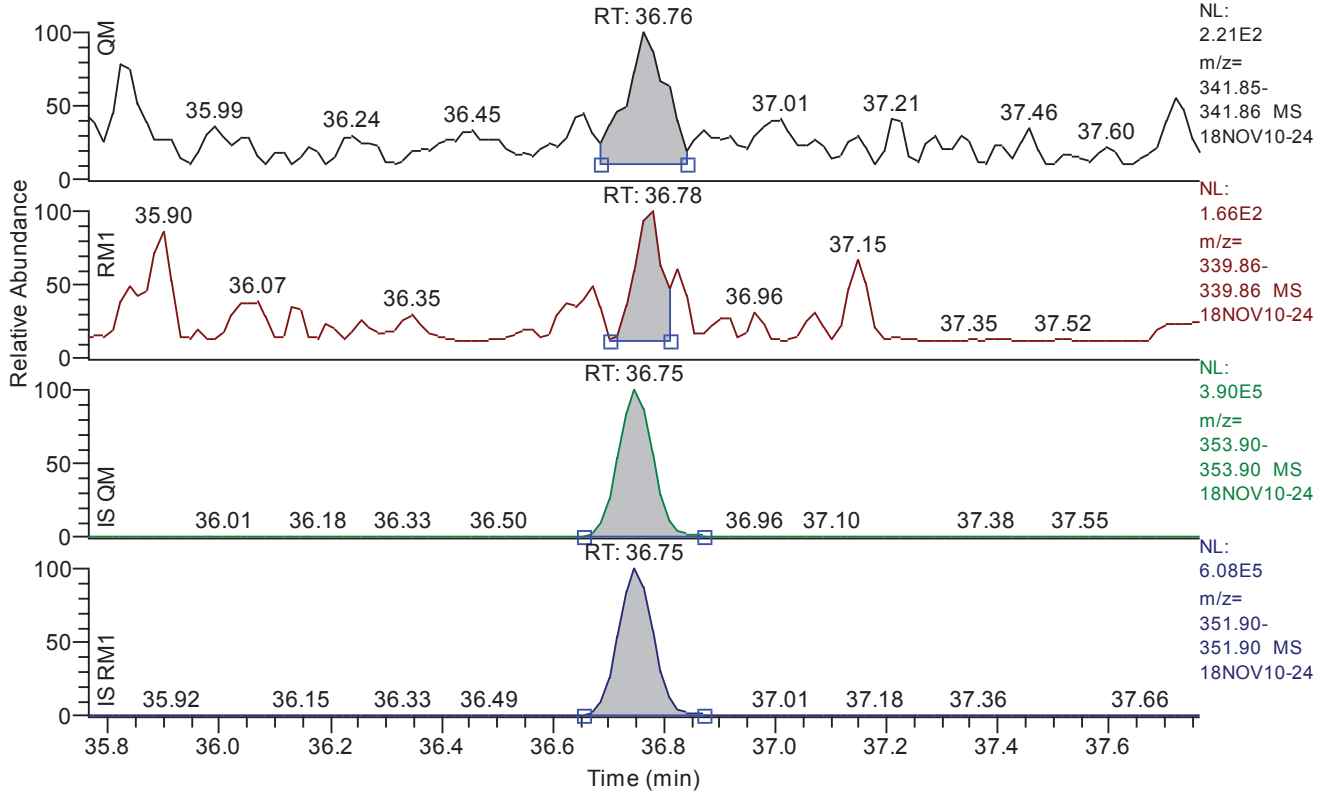


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.47
QM Area	748
QM Integration Mode	A
RM1 Area	850
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1203
Unqualified Amount (A)	0.813631
Adjusted Amount (A)	n.d.
Signal-to-Noise	19
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 35.76 - 37.76 SM: 3G

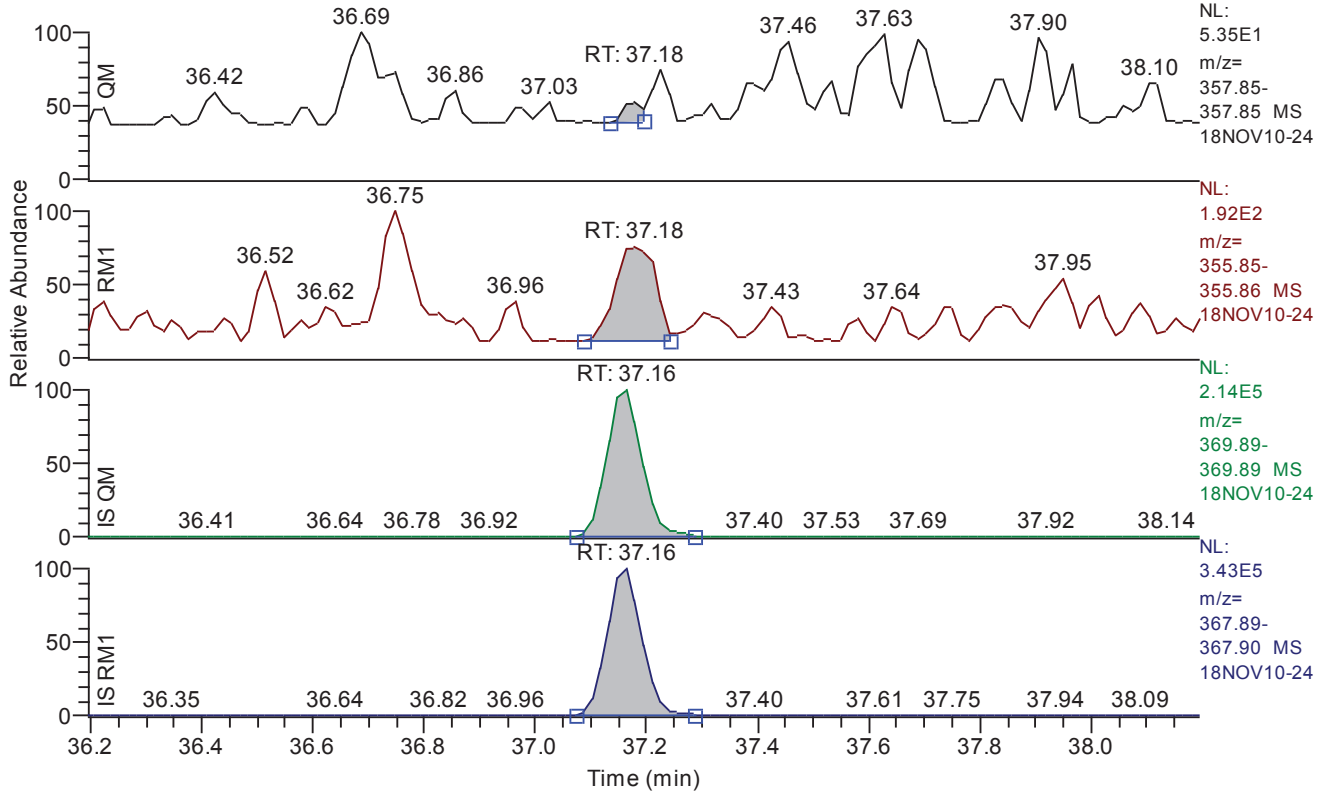


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.76
QM Area	987
QM Integration Mode	A
RM1 Area	476
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0898
Unqualified Amount (A)	0.614402
Adjusted Amount (A)	n.d.
Signal-to-Noise	17
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 36.19 - 38.19 SM: 3G

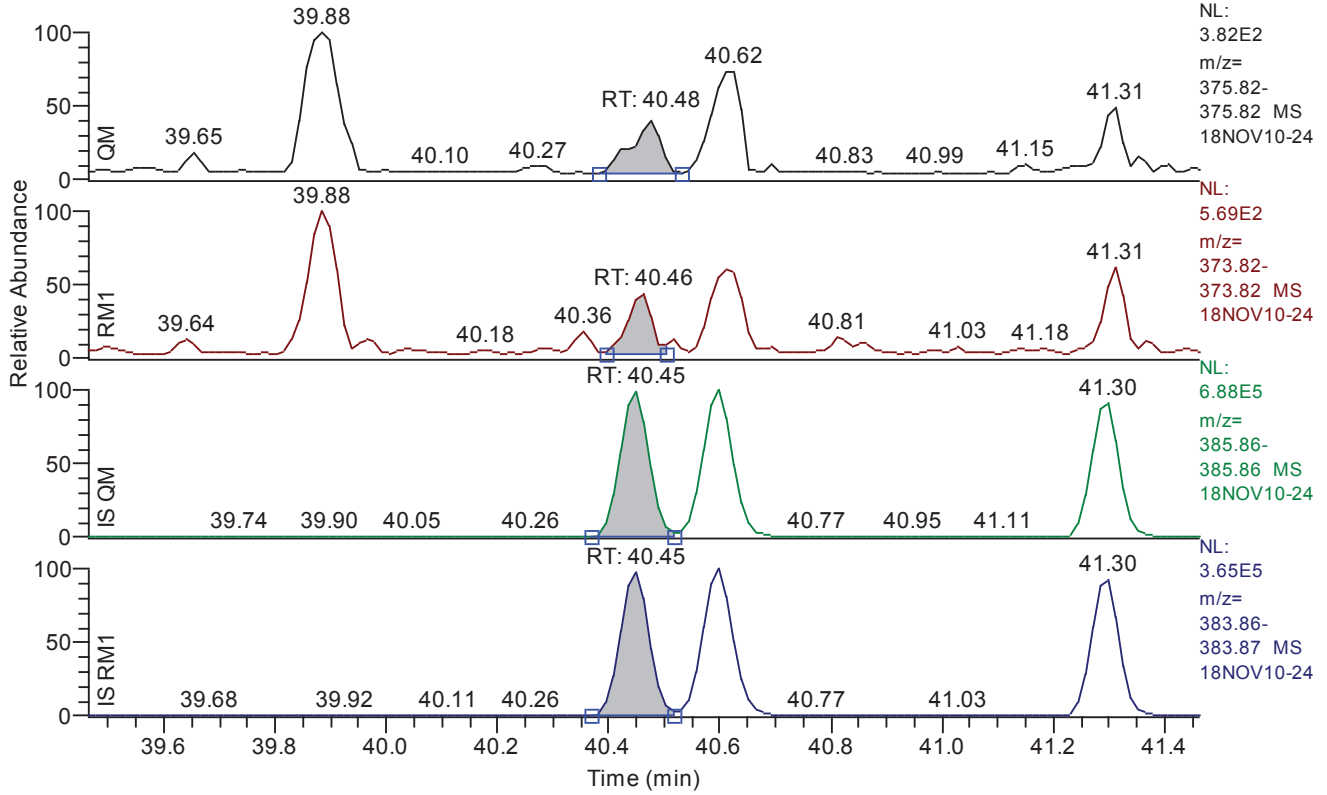


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.18
QM Area	16
QM Integration Mode	A
RM1 Area	617
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1718
Unqualified Amount (A)	0.496084
Adjusted Amount (A)	n.d.
Signal-to-Noise	7
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 39.46 - 41.46 SM: 3G

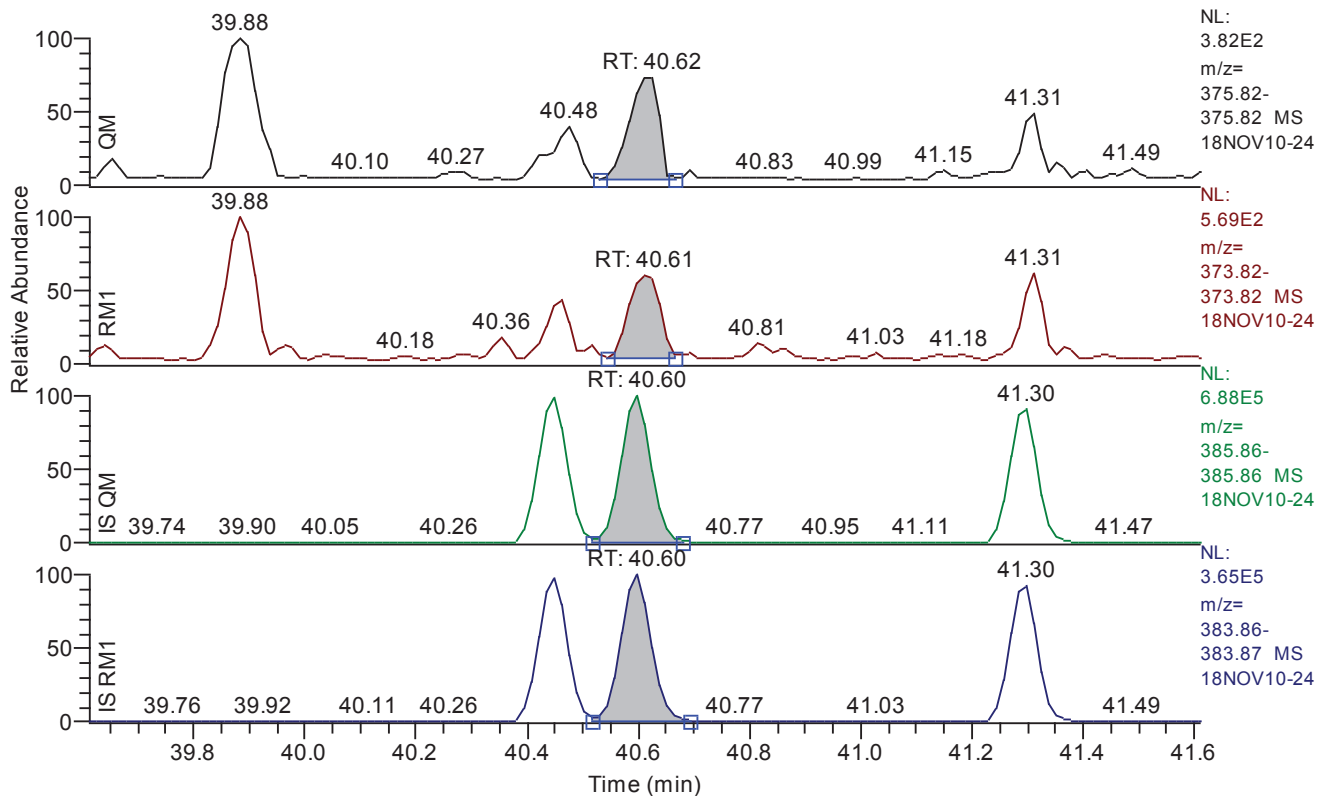


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.48
QM Area	500
QM Integration Mode	A
RM1 Area	697
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0964
Unqualified Amount (A)	0.552603
Adjusted Amount (A)	0.5526
Signal-to-Noise	16
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.61 - 41.61 SM: 3G

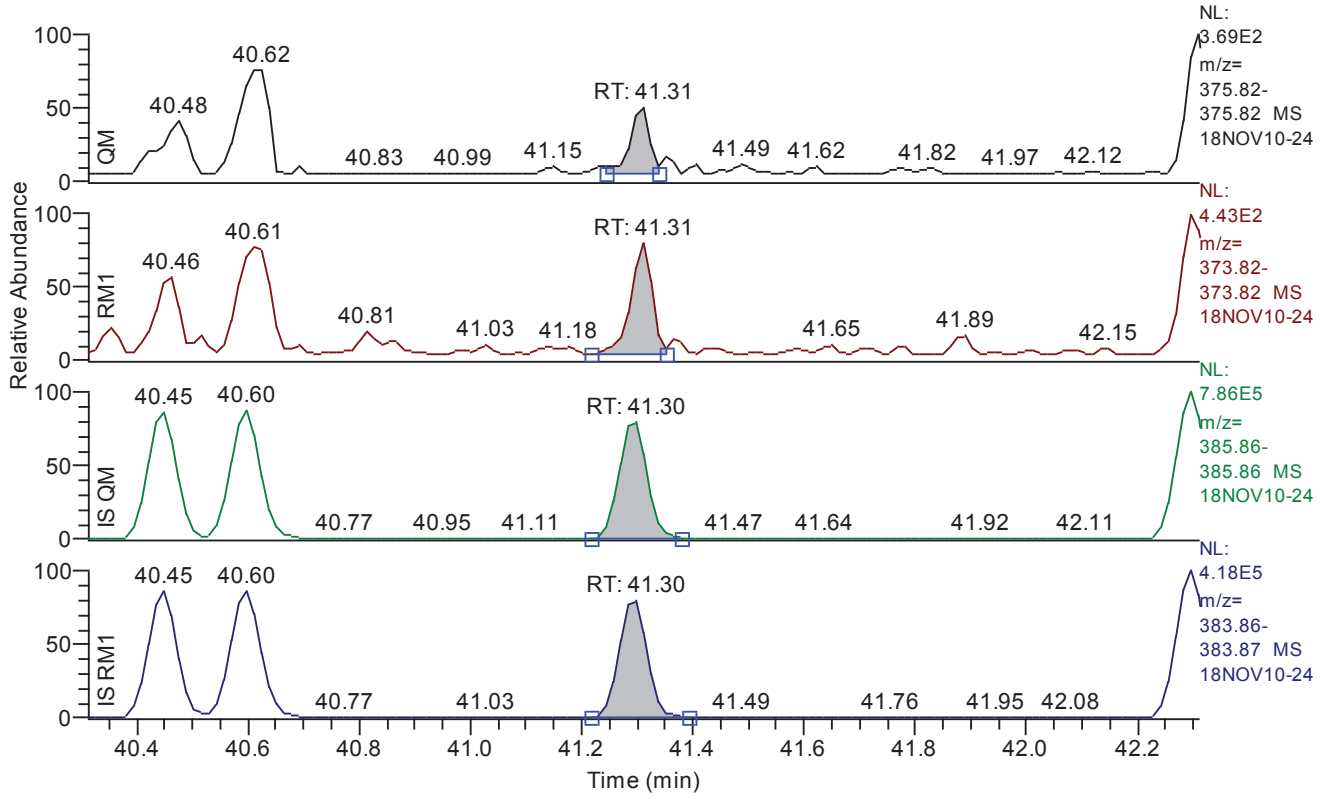


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.62
QM Area	960
QM Integration Mode	A
RM1 Area	1265
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0994
Unqualified Amount (A)	1.019938
Adjusted Amount (A)	1.0199
Signal-to-Noise	25
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.31 - 42.31 SM: 3G

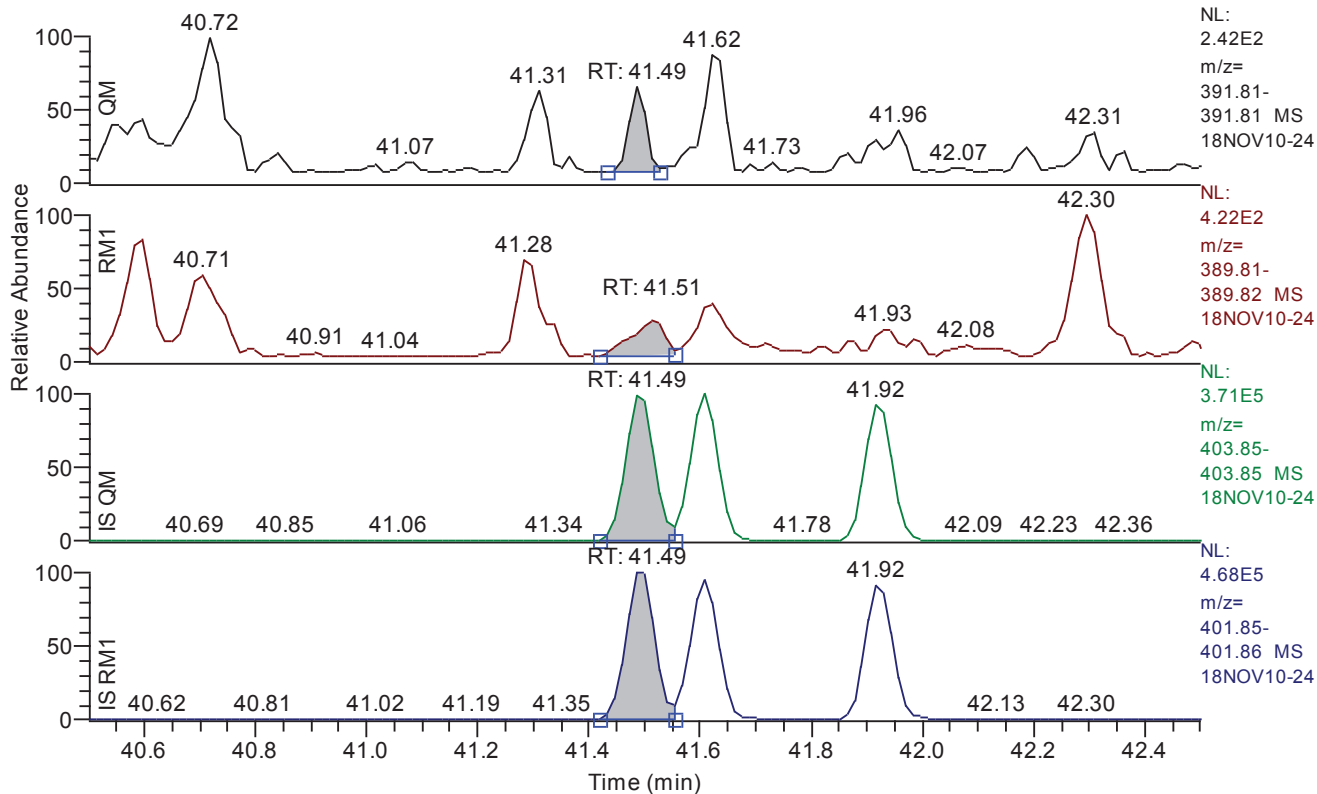


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.31
QM Area	416
QM Integration Mode	A
RM1 Area	894
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1003
Unqualified Amount (A)	0.644144
Adjusted Amount (A)	n.d.
Signal-to-Noise	22
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.50 - 42.50 SM: 3G

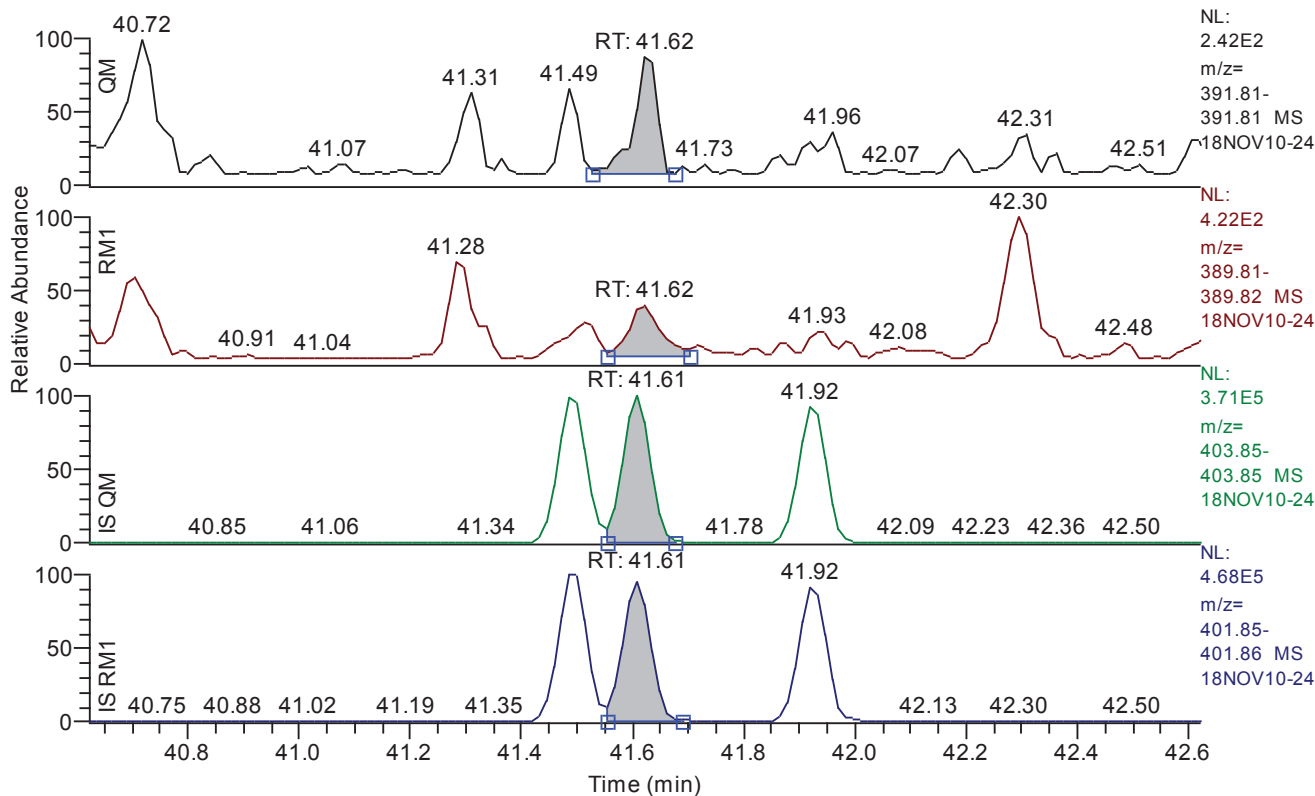


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.49
QM Area	292
QM Integration Mode	A
RM1 Area	411
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1170
Unqualified Amount (A)	0.443259
Adjusted Amount (A)	0.4433
Signal-to-Noise	12
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.62 - 42.62 SM: 3G

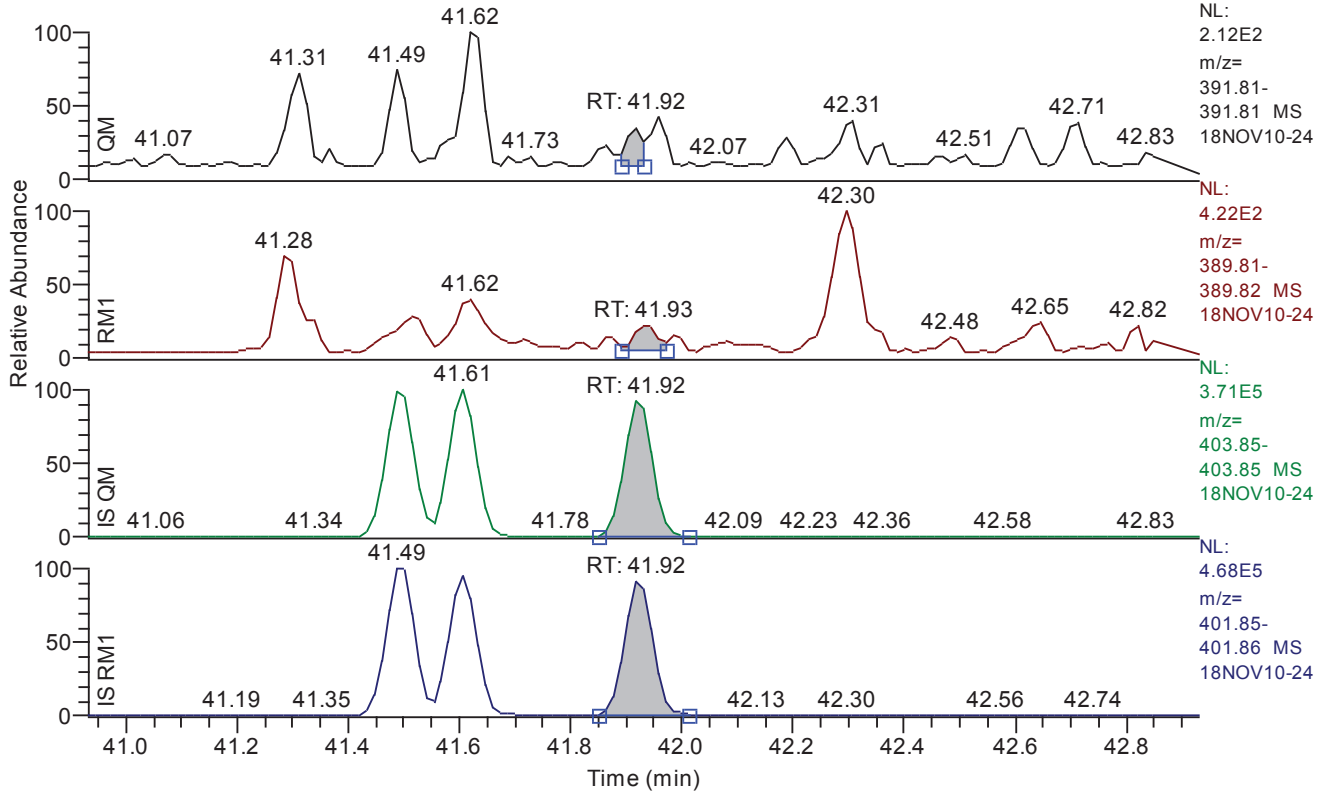


Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.62
QM Area	560
QM Integration Mode	A
RM1 Area	593
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1205
Unqualified Amount (A)	0.780990
Adjusted Amount (A)	0.7810
Signal-to-Noise	16
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.93 - 42.93 SM: 3G

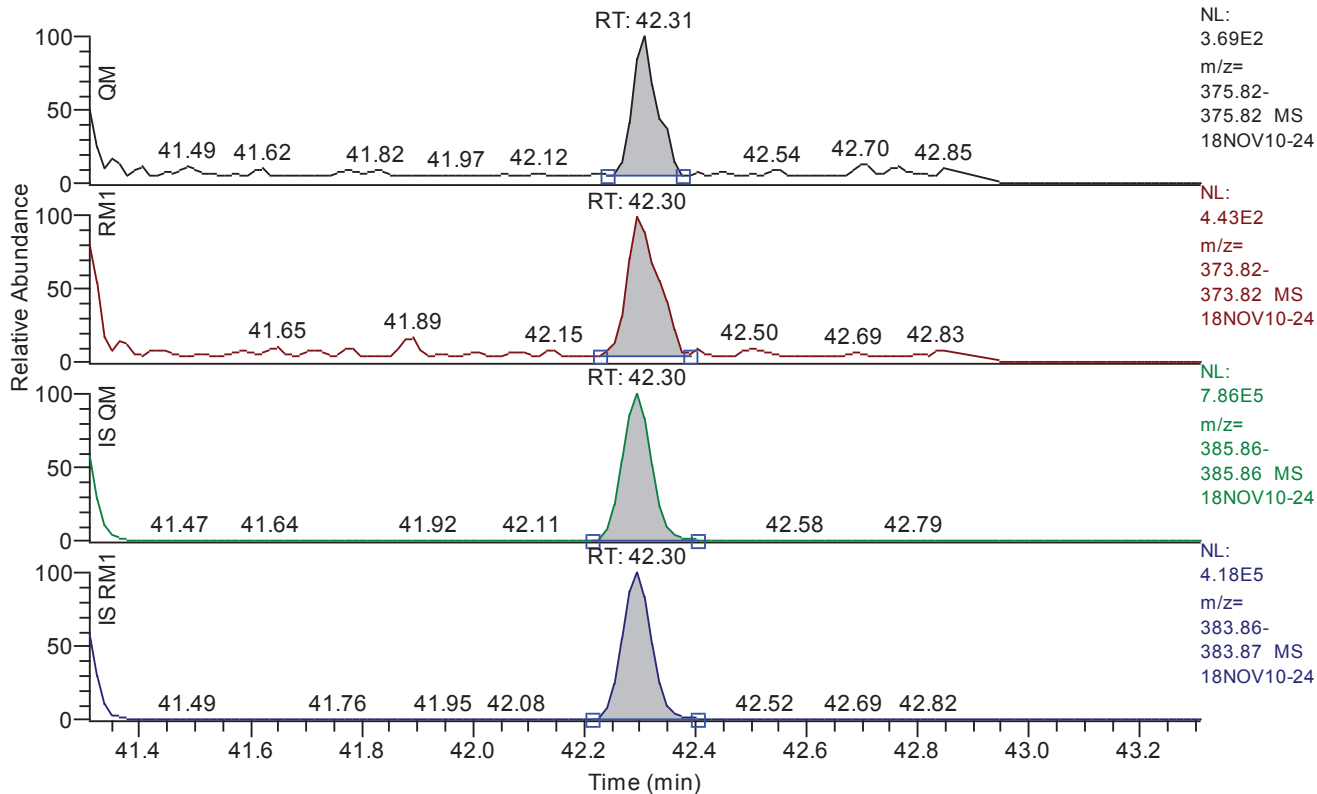


Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.92
QM Area	97
QM Integration Mode	A
RM1 Area	206
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1218
Unqualified Amount (A)	0.203430
Adjusted Amount (A)	n.d.
Signal-to-Noise	6
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 41.31 - 43.31 SM: 3G

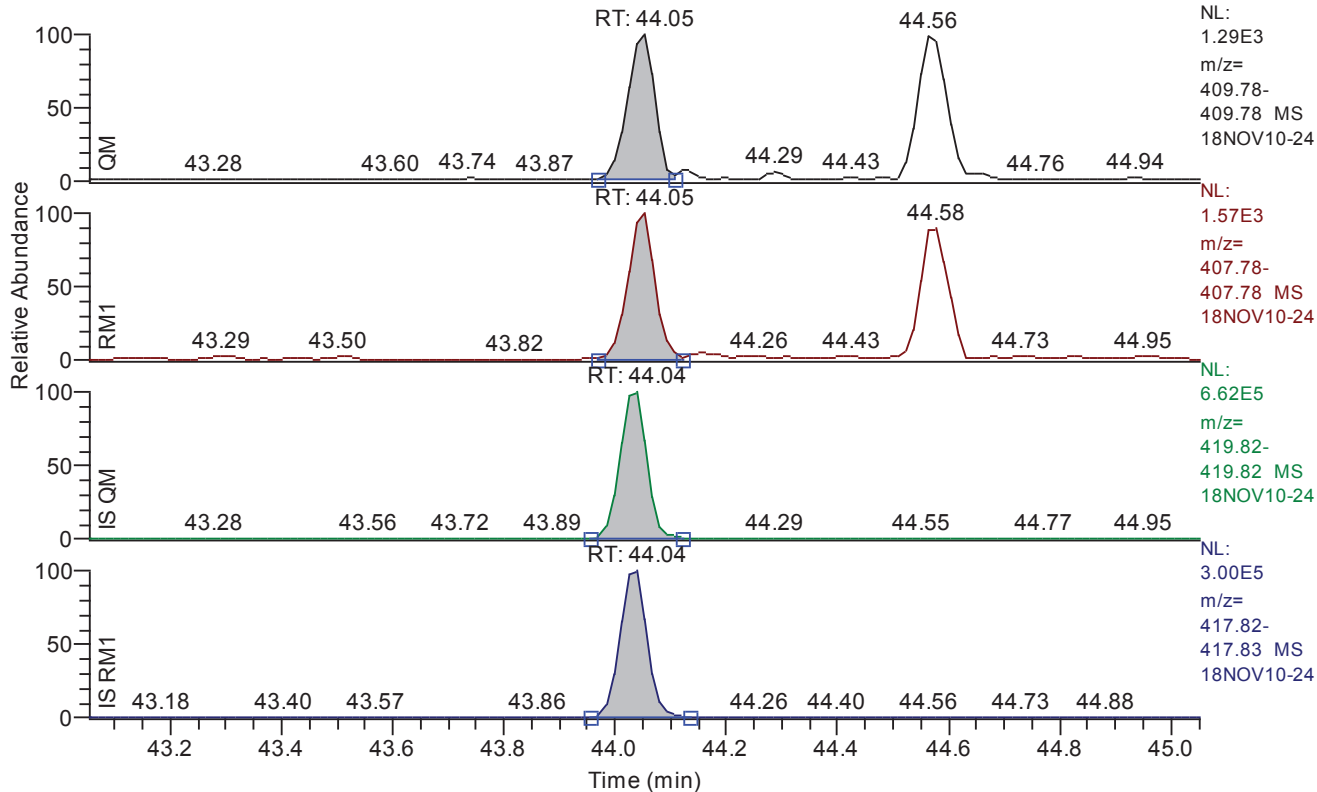


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.31
QM Area	1091
QM Integration Mode	A
RM1 Area	1641
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0865
Unqualified Amount (A)	1.103612
Adjusted Amount (A)	n.d.
Signal-to-Noise	33
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 43.05 - 45.05 SM: 3G

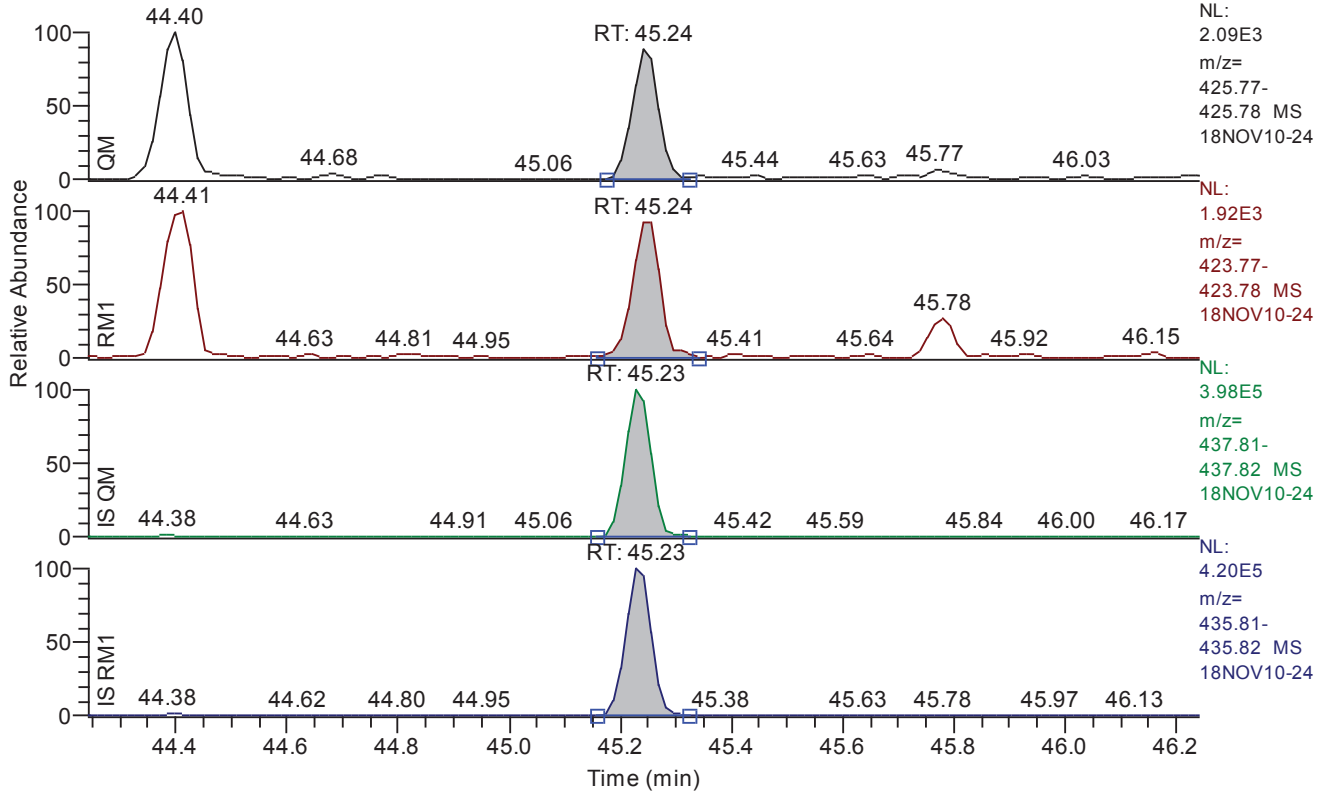


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.05
QM Area	4473
QM Integration Mode	A
RM1 Area	5364
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0668
Unqualified Amount (A)	4.790903
Adjusted Amount (A)	4.7909
Signal-to-Noise	179
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.24 - 46.24 SM: 3G

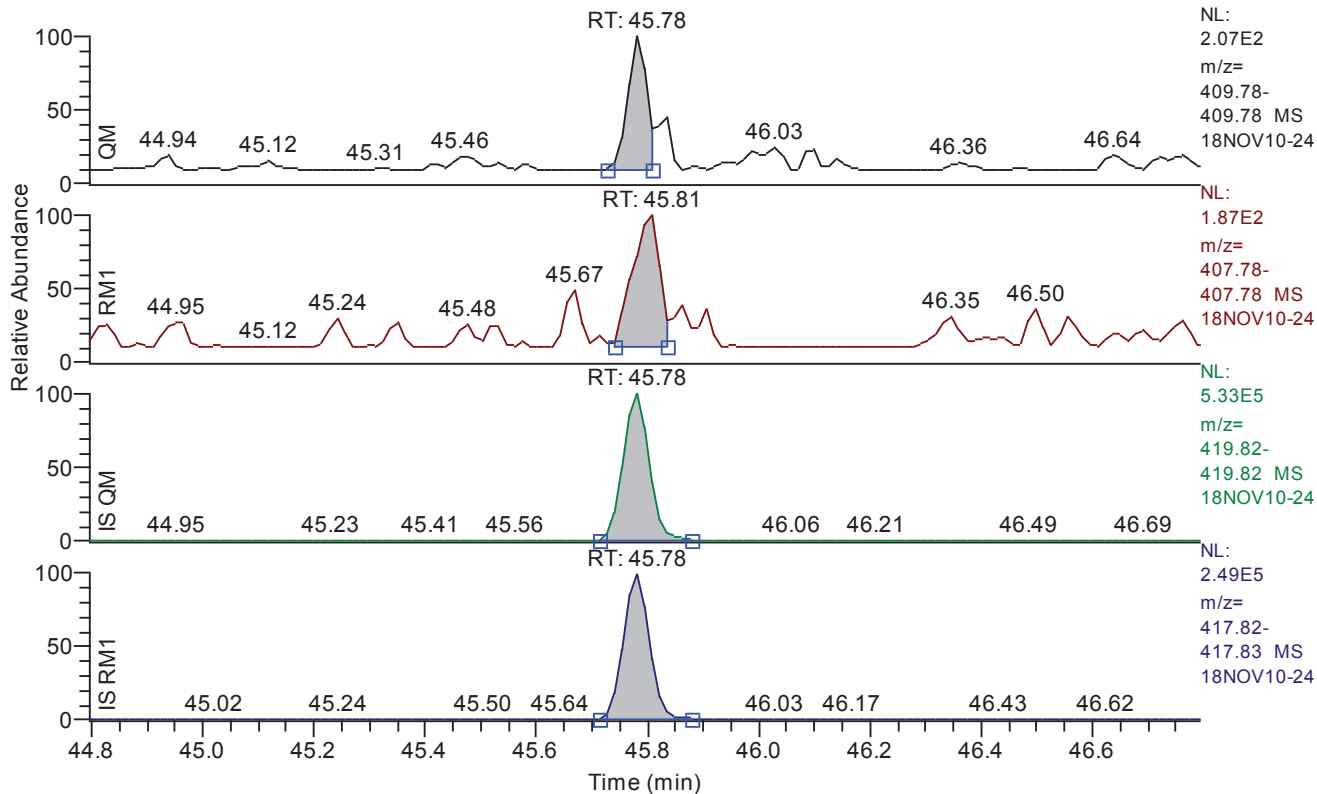


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.24
QM Area	6201
QM Integration Mode	A
RM1 Area	6286
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1324
Unqualified Amount (A)	8.719831
Adjusted Amount (A)	8.7198
Signal-to-Noise	158
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.79 - 46.79 SM: 3G

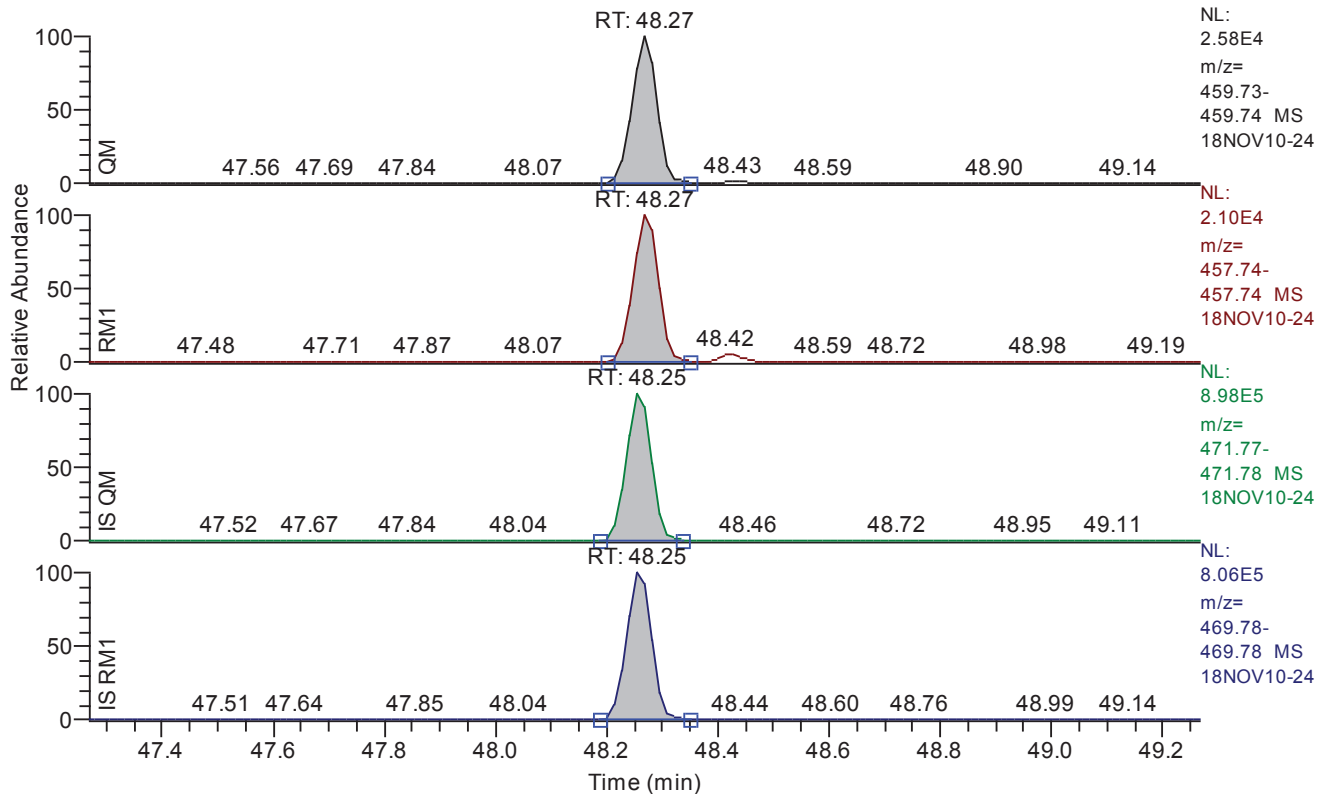


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.78
QM Area	443
QM Integration Mode	A
RM1 Area	577
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0790
Unqualified Amount (A)	0.607389
Adjusted Amount (A)	n.d.
Signal-to-Noise	22
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 47.27 - 49.27 SM: 3G

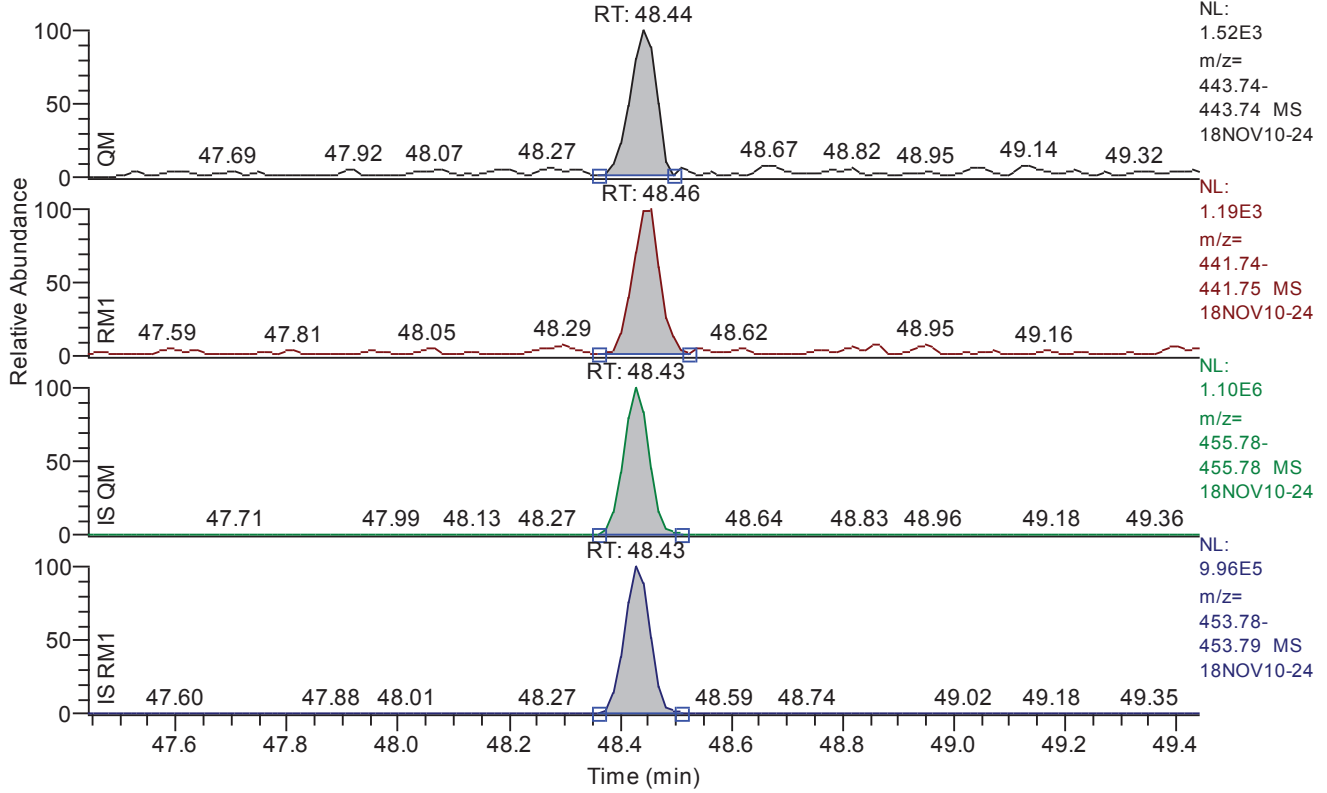


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.27
QM Area	79519
QM Integration Mode	A
RM1 Area	66292
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2200
Unqualified Amount (A)	106.352215
Adjusted Amount (A)	106.3522
Signal-to-Noise	1217
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.44 - 49.44 SM: 3G

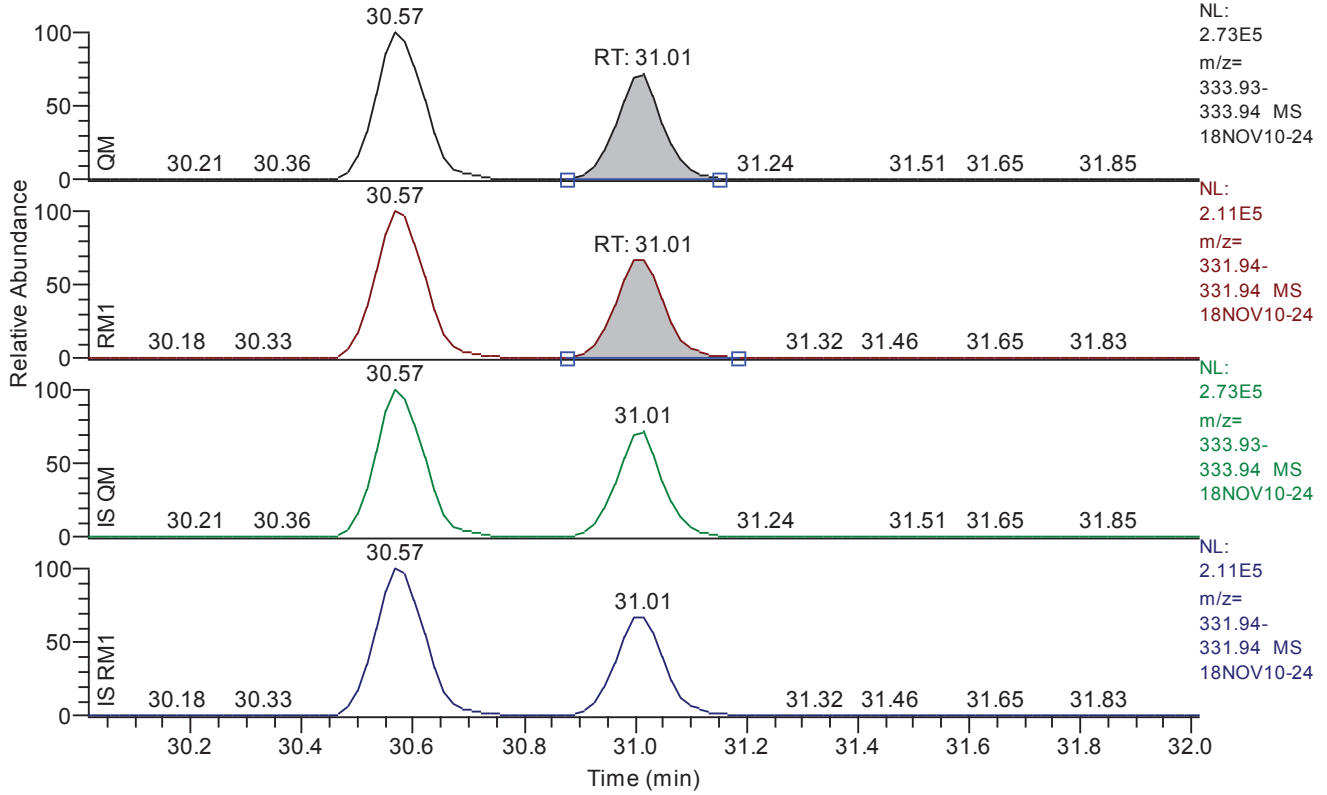


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.44
QM Area	4938
QM Integration Mode	A
RM1 Area	4013
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1527
Unqualified Amount (A)	5.954207
Adjusted Amount (A)	5.9542
Signal-to-Noise	92
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 30.01 - 32.01 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	31.01
QM Area	1148994
QM Integration Mode	A
RM1 Area	882263
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2734
Unqualified Amount (A)	942.414791
Adjusted Amount (A)	942.4148
Signal-to-Noise	9008
Client Flags	
Status Overview	passed
Status Info	

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 15:06
Number of Entries 276
Comment S:10914:12936:17961
Vial 78
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW008WT Grab Groundwater
Sample ID 9881309
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

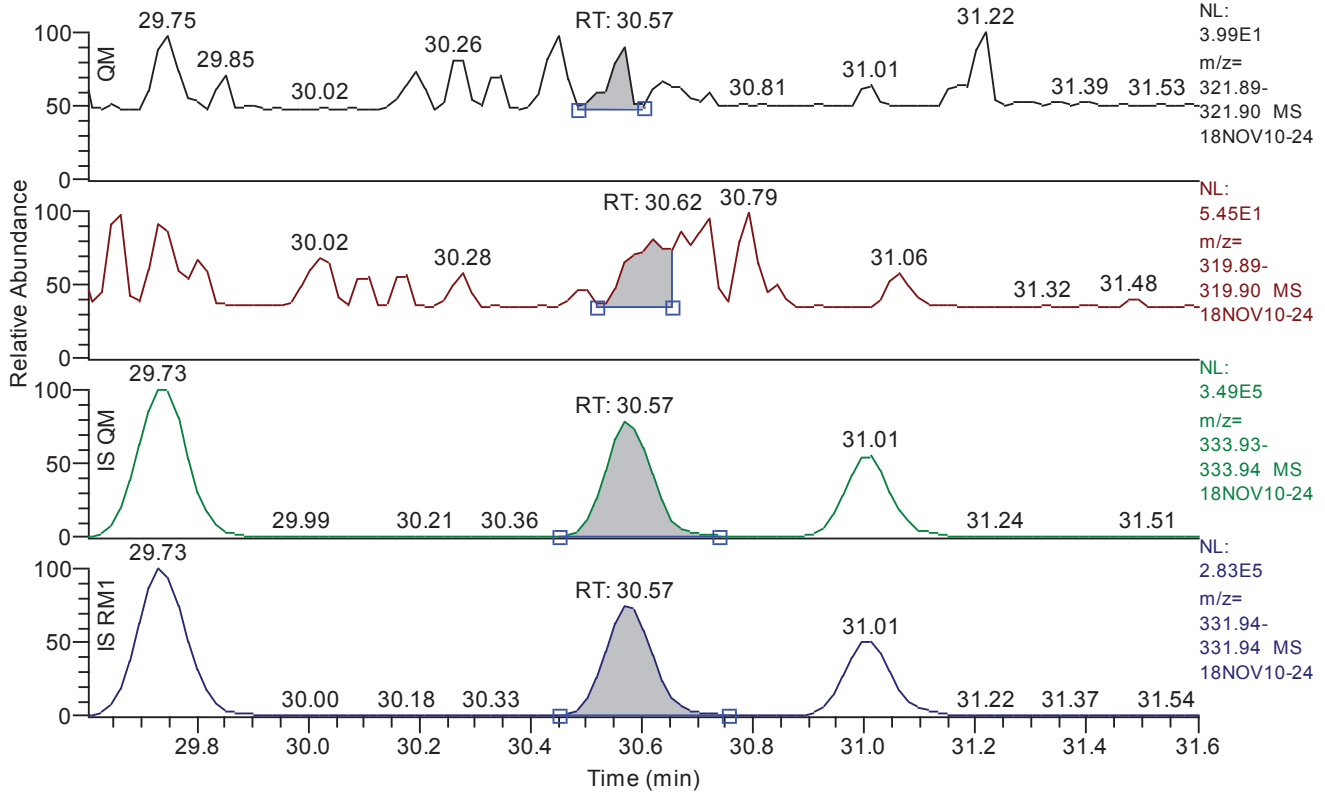
Quan x:\18nov10\18nov10-24.quan
Data x:\18nov10\18nov10-24.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.04
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 29.60 - 31.60 SM: 3G



Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.57
QM Area	43
QM Integration Mode	A
RM1 Area	128
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.0585
Unqualified Amount (A)	0.089087
Adjusted Amount (A)	n.d.
Signal-to-Noise	6
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A RM1Time2 > max

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.40	29.44	29.42	29.41	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.58	30.57	30.60	30.57	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.47	35.47	35.48	35.47	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.74	36.76	36.78	36.75	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.16	37.18	37.18	37.16	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.45	40.48	40.46	40.45	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.59	40.62	40.61	40.60	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.28	41.31	41.31	41.30	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.48	41.49	41.51	41.49	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.60	41.62	41.62	41.61	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.91	41.92	41.93	41.92	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.29	42.31	42.30	42.30	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.02	44.05	44.05	44.04	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.22	45.24	45.24	45.23	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.78	45.78	45.81	45.78	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.25	48.27	48.27	48.25	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.42	48.44	48.46	48.43	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.99	31.01	31.01	31.01	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.71	29.73	29.73	29.73	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.35	40.37	40.37	40.37	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.38	29.41	29.41	29.56	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.55	30.57	30.57	30.57	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.43	35.47	35.47	35.14	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.73	36.75	36.75	36.75	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.13	37.16	37.16	37.16	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.43	40.45	40.45	40.41	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.58	40.60	40.60	40.49	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.27	41.30	41.30	41.15	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.47	41.49	41.49	41.49	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.59	41.61	41.61	41.61	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.90	41.92	41.92	41.92	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.28	42.30	42.30	42.27	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.01	44.04	44.04	44.01	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.21	45.23	45.23	45.23	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.76	45.78	45.78	45.89	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.23	48.25	48.25	48.25	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.41	48.43	48.43	48.46	passed	passed



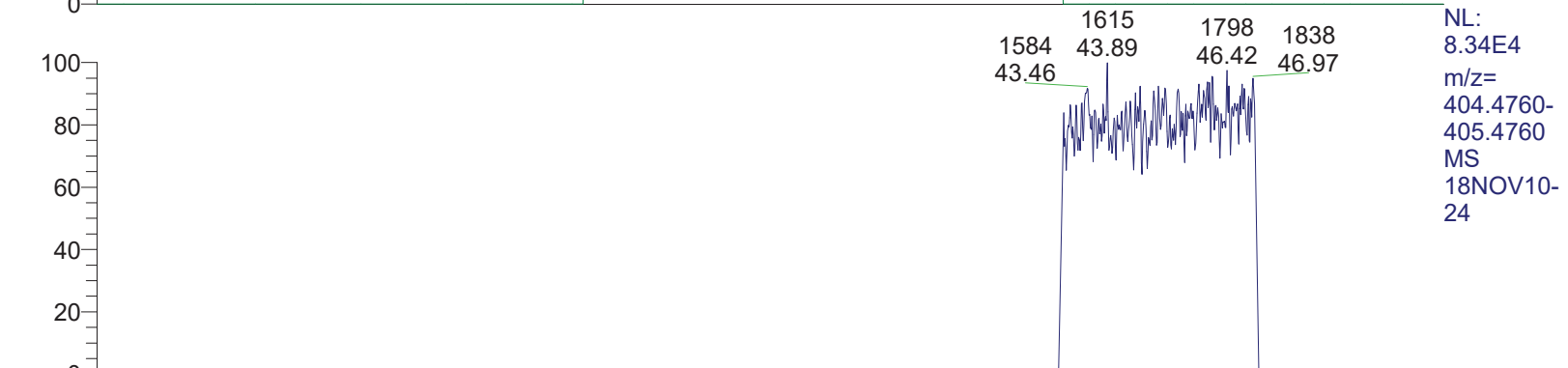
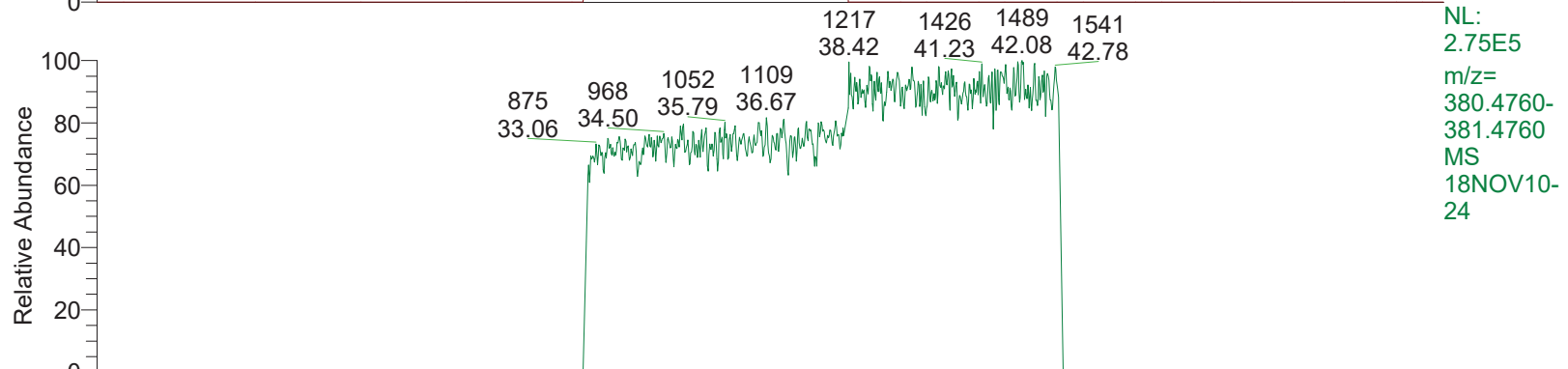
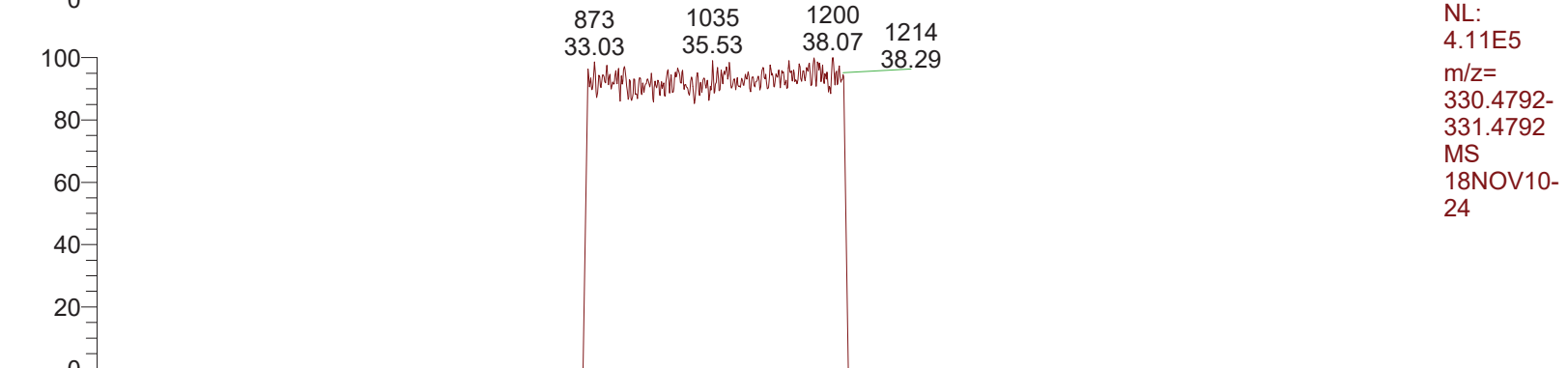
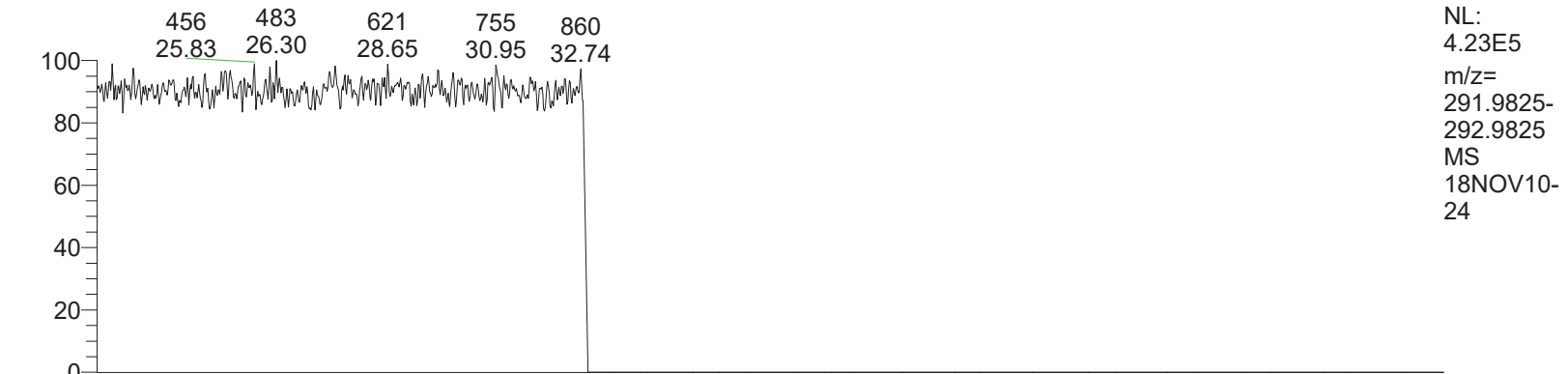
Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.44	2.7215	0.6450 - 0.8950	failed	---	0 - 0	passed
2	2378-TCDD	30.57	1.3410	0.6450 - 0.8950	failed	---	0 - 0	passed
3	12378-PeCDF	35.47	1.1353	1.3150 - 1.7850	failed	---	0 - 0	passed
4	23478-PeCDF	36.76	0.4823	1.3150 - 1.7850	failed	---	0 - 0	passed
5	12378-PeCDD	37.18	38.2111	1.3150 - 1.7850	failed	---	0 - 0	passed
6	123478-HxCDF	40.48	1.3953	1.0450 - 1.4350	passed	---	0 - 0	passed
7	123678-HxCDF	40.62	1.3178	1.0450 - 1.4350	passed	---	0 - 0	passed
8	234678-HxCDF	41.31	2.1515	1.0450 - 1.4350	failed	---	0 - 0	passed
9	123478-HxCDD	41.49	1.4055	1.0450 - 1.4350	passed	---	0 - 0	passed
10	123678-HxCDD	41.62	1.0597	1.0450 - 1.4350	passed	---	0 - 0	passed
11	123789-HxCDD	41.92	2.1302	1.0450 - 1.4350	failed	---	0 - 0	passed
12	123789-HxCDF	42.31	1.5040	1.0450 - 1.4350	failed	---	0 - 0	passed
13	1234678-HpCDF	44.05	1.1991	0.8750 - 1.2050	passed	---	0 - 0	passed
14	1234678-HpCDD	45.24	1.0138	0.8750 - 1.2050	passed	---	0 - 0	passed
15	1234789-HpCDF	45.78	1.3019	0.8750 - 1.2050	failed	---	0 - 0	passed
16	OCDD	48.27	0.8337	0.7550 - 1.0250	passed	---	0 - 0	passed
17	OCDF	48.44	0.8127	0.7550 - 1.0250	passed	---	0 - 0	passed
18	13C12-1278-TCDD (CRS)	31.01	0.7679	0.6450 - 0.8950	passed	49.01	35 - 197	passed
19	13C12-1234-TCDD	29.73	0.7882	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.37	1.2788	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.41	0.7959	0.6450 - 0.8950	passed	54.04	40 - 135	passed
22	13C12-2378-TCDD	30.57	0.7862	0.6450 - 0.8950	passed	73.90	40 - 135	passed
23	13C12-12378-PeCDF	35.47	1.5620	1.3150 - 1.7850	passed	52.71	40 - 135	passed
24	13C12-23478-PeCDF	36.75	1.5676	1.3150 - 1.7850	passed	57.19	40 - 135	passed
25	13C12-12378-PeCDD	37.16	1.5948	1.3150 - 1.7850	passed	59.46	40 - 135	passed
26	13C12-123478-HxCDF	40.45	0.5223	0.4250 - 0.5950	passed	52.95	40 - 135	passed
27	13C12-123678-HxCDF	40.60	0.5380	0.4250 - 0.5950	passed	51.78	40 - 135	passed
28	13C12-234678-HxCDF	41.30	0.5387	0.4250 - 0.5950	passed	49.29	40 - 135	passed
29	13C12-123478-HxCDD	41.49	1.2801	1.0450 - 1.4350	passed	61.79	40 - 135	passed
30	13C12-123678-HxCDD	41.61	1.2301	1.0450 - 1.4350	passed	55.90	40 - 135	passed
31	13C12-123789-HxCDD	41.92	1.2561	1.0450 - 1.4350	passed	56.90	40 - 135	passed
32	13C12-123789-HxCDF	42.30	0.5345	0.4250 - 0.5950	passed	69.10	40 - 135	passed
33	13C12-1234678-HpCDF	44.04	0.4593	0.3650 - 0.5150	passed	51.81	40 - 135	passed
34	13C12-1234678-HpCDD	45.23	1.0491	0.8750 - 1.2050	passed	56.90	40 - 135	passed
35	13C12-1234789-HpCDF	45.78	0.4606	0.3650 - 0.5150	passed	48.60	40 - 135	passed
36	13C12-OCDD	48.25	0.8996	0.7550 - 1.0250	passed	53.27	40 - 135	passed
37	13C12-OCDF	48.43	0.9087	0.7550 - 1.0250	passed	45.54	40 - 135	passed

Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	failed	29.44	106	A	289	A	0.1180	0.165243	n.d.	0.000000	5	
2	2378-TCDD	failed	30.57	43	A	58	M	0.0585	0.052456	n.d. < 0.0585	0.000000	5	
3	12378-PeCDF	failed	35.47	748	A	850	A	0.1203	0.813631	n.d.	0.000000	19	
4	23478-PeCDF	failed	36.76	987	A	476	A	0.0898	0.614402	n.d.	0.000000	17	
5	12378-PeCDD	failed	37.18	16	A	617	A	0.1718	0.496084	n.d.	0.000000	7	
6	123478-HxCDF	passed	40.48	500	A	697	A	0.0964	0.552603	0.5526	0.000000	16	
7	123678-HxCDF	passed	40.62	960	A	1265	A	0.0994	1.019938	1.0199	0.000000	25	
8	234678-HxCDF	failed	41.31	416	A	894	A	0.1003	0.644144	n.d.	0.000000	22	
9	123478-HxCDD	passed	41.49	292	A	411	A	0.1170	0.443259	0.4433	0.000000	12	
10	123678-HxCDD	passed	41.62	560	A	593	A	0.1205	0.780990	0.7810	0.000000	16	
11	123789-HxCDD	failed	41.92	97	A	206	A	0.1218	0.203430	n.d.	0.000000	6	
12	123789-HxCDF	failed	42.31	1091	A	1641	A	0.0865	1.103612	n.d.	0.000000	33	
13	1234678-HpCDF	passed	44.05	4473	A	5364	A	0.0668	4.790903	4.7909	0.000000	179	
14	1234678-HpCDD	passed	45.24	6201	A	6286	A	0.1324	8.719831	8.7198	0.000000	158	
15	1234789-HpCDF	failed	45.78	443	A	577	A	0.0790	0.607389	n.d.	0.000000	22	
16	OCDD	passed	48.27	79519	A	66292	A	0.2200	106.352215	106.3522	0.000000	1217	
17	OCDF	passed	48.44	4938	A	4013	A	0.1527	5.954207	5.9542	0.000000	92	
18	13C12-1278-TCDD (CRS)	passed	31.01	1148994	A	882263	A	0.2734	942.414791	942.4148	1923.076923	9008	
19	13C12-1234-TCDD	passed	29.73	2219669	A	1749434	A	0.2856	1923.076923	1923.0769	1923.076923	16836	
20	13C12-123468-HxCDD	passed	40.37	2142455	A	2739827	A	0.2419	1923.076923	1923.0769	1923.076923	19874	
21	13C12-2378-TCDF	passed	29.41	2432602	A	1936166	A	0.1615	1039.198686	1039.1987	1923.076923	16158	
22	13C12-2378-TCDD	passed	30.57	1652638	A	1299254	A	0.2837	1421.177905	1421.1779	1923.076923	12880	
23	13C12-12378-PeCDF	passed	35.47	1573130	A	2457273	A	0.4451	1013.716479	1013.7165	1923.076923	7399	
24	13C12-23478-PeCDF	passed	36.75	1697867	A	2661506	A	0.4465	1099.796000	1099.7960	1923.076923	8844	
25	13C12-12378-PeCDD	passed	37.16	944798	A	1506770	A	0.3432	1143.525116	1143.5251	1923.076923	11880	
26	13C12-123478-HxCDF	passed	40.45	2456841	A	1283218	A	0.3370	1018.210602	1018.2106	1923.076923	7586	
27	13C12-123678-HxCDF	passed	40.60	2541571	A	1367433	A	0.3153	995.862759	995.8628	1923.076923	7632	
28	13C12-234678-HxCDF	passed	41.30	2211598	A	1191426	A	0.3448	947.939042	947.9390	1923.076923	7064	
29	13C12-123478-HxCDD	passed	41.49	1321389	A	1691565	A	0.2422	1188.350588	1188.3506	1923.076923	12239	
30	13C12-123678-HxCDD	passed	41.61	1269167	A	1561152	A	0.2333	1075.062077	1075.0621	1923.076923	11995	
31	13C12-123789-HxCDD	passed	41.92	1205317	A	1514015	A	0.2471	1094.223441	1094.2234	1923.076923	11297	
32	13C12-123789-HxCDF	passed	42.30	2888254	A	1543647	A	0.3711	1328.857759	1328.8578	1923.076923	8770	
33	13C12-1234678-HpCDF	passed	44.04	2282690	A	1048481	A	0.3130	996.372724	996.3727	1923.076923	8289	
34	13C12-1234678-HpCDD	passed	45.23	1318319	A	1383021	A	0.3070	1094.304150	1094.3042	1923.076923	9734	
35	13C12-1234789-HpCDF	passed	45.78	1796780	A	827673	A	0.3727	934.647336	934.6473	1923.076923	6738	
36	13C12-OCDD	passed	48.25	2814951	A	2532331	A	0.1127	2048.775704	2048.7757	3846.153846	52278	
37	13C12-OCDF	passed	48.43	3512620	A	3191875	A	0.1232	1751.476575	1751.4766	3846.153846	40170	

RT: 22.50 - 51.00



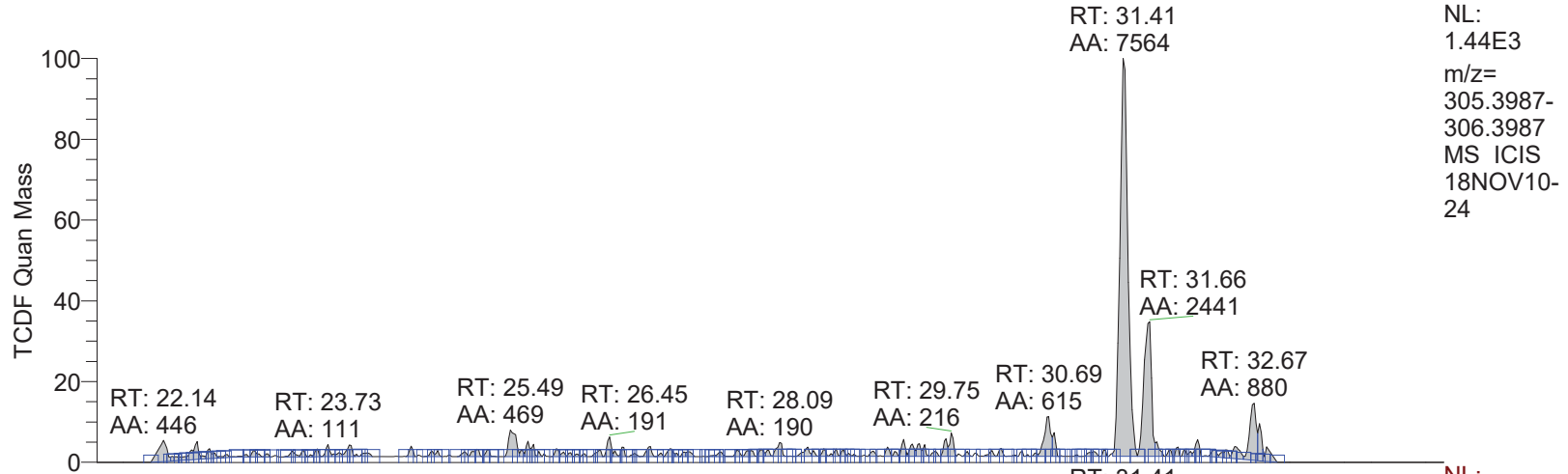
APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

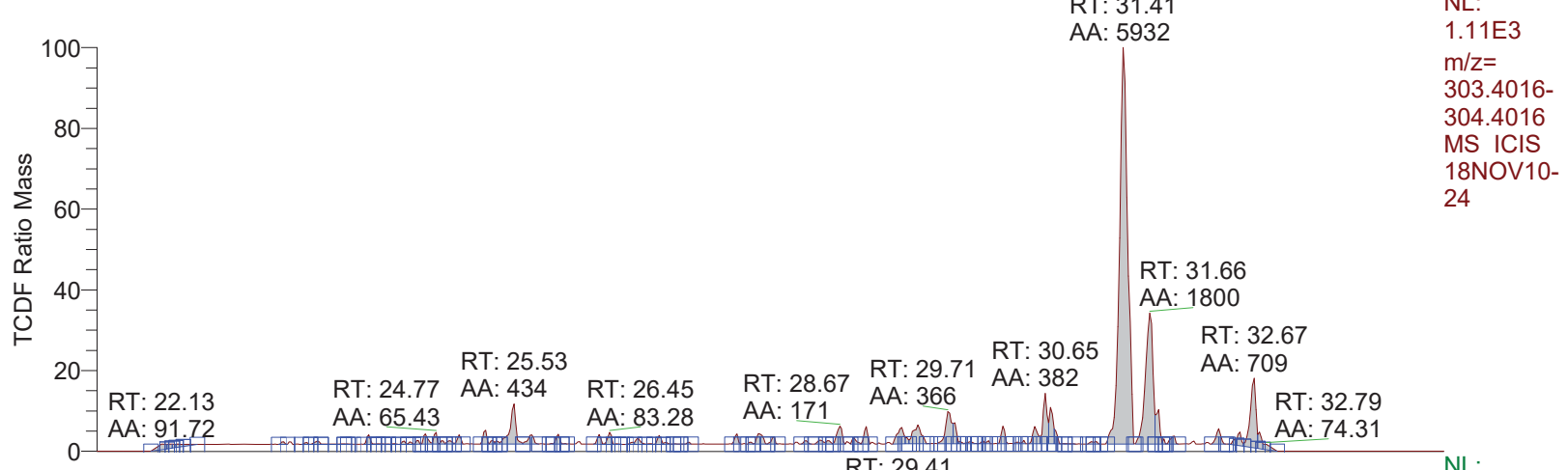
24 26 28 30 32 34 36 38 40 42 44 46 48 50

Time (min)

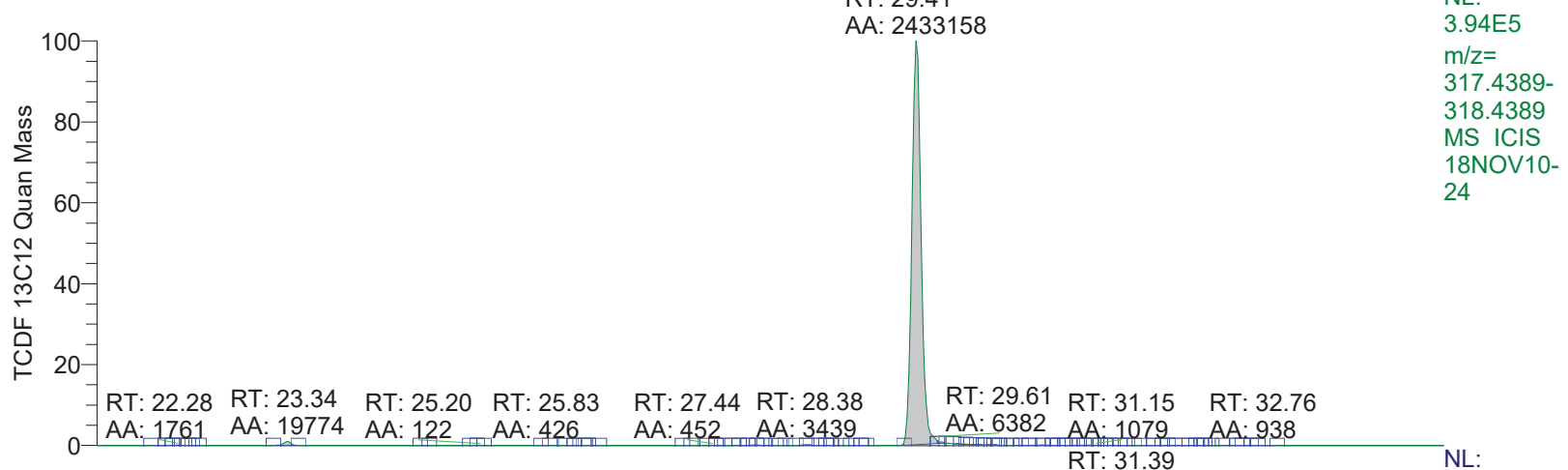
RT: 21.50 - 34.50



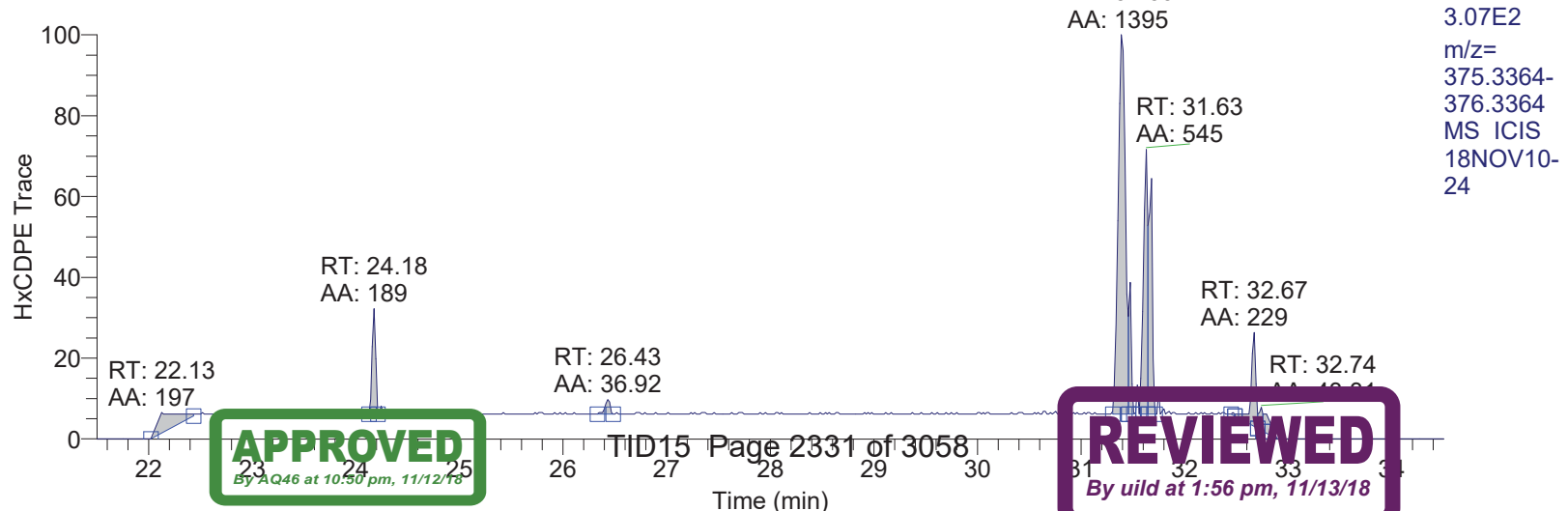
NL: 1.44E3
m/z= 305.3987-306.3987
MS ICIS 18NOV10-24



NL: 1.11E3
m/z= 303.4016-304.4016
MS ICIS 18NOV10-24



NL: 3.94E5
m/z= 317.4389-318.4389
MS ICIS 18NOV10-24

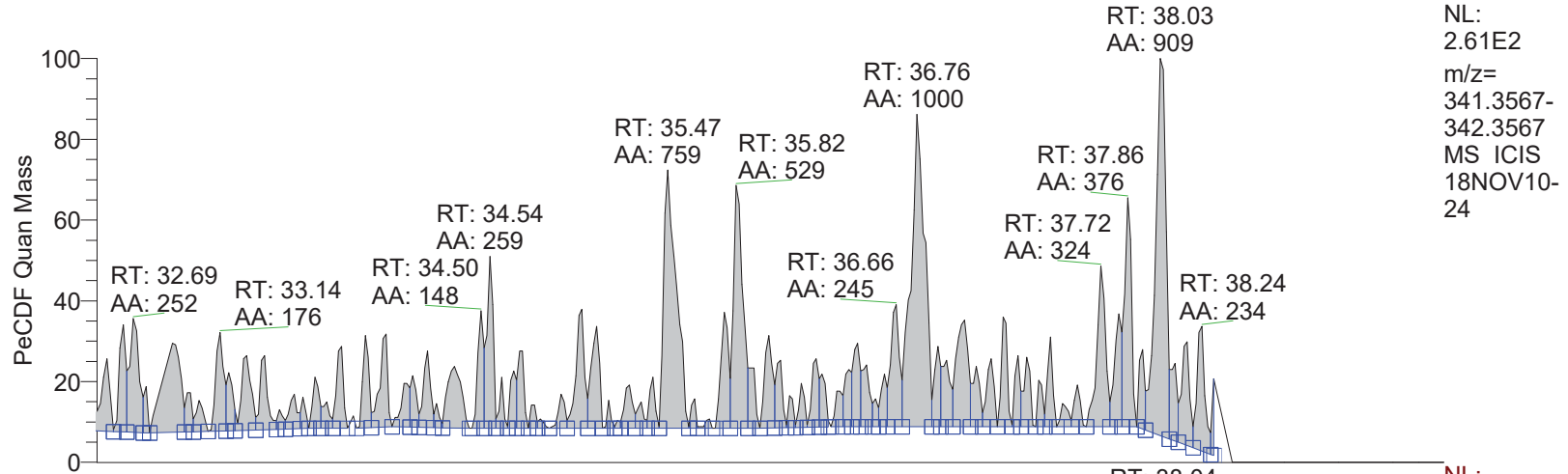


NL: 3.07E2
m/z= 375.3364-376.3364
MS ICIS 18NOV10-24

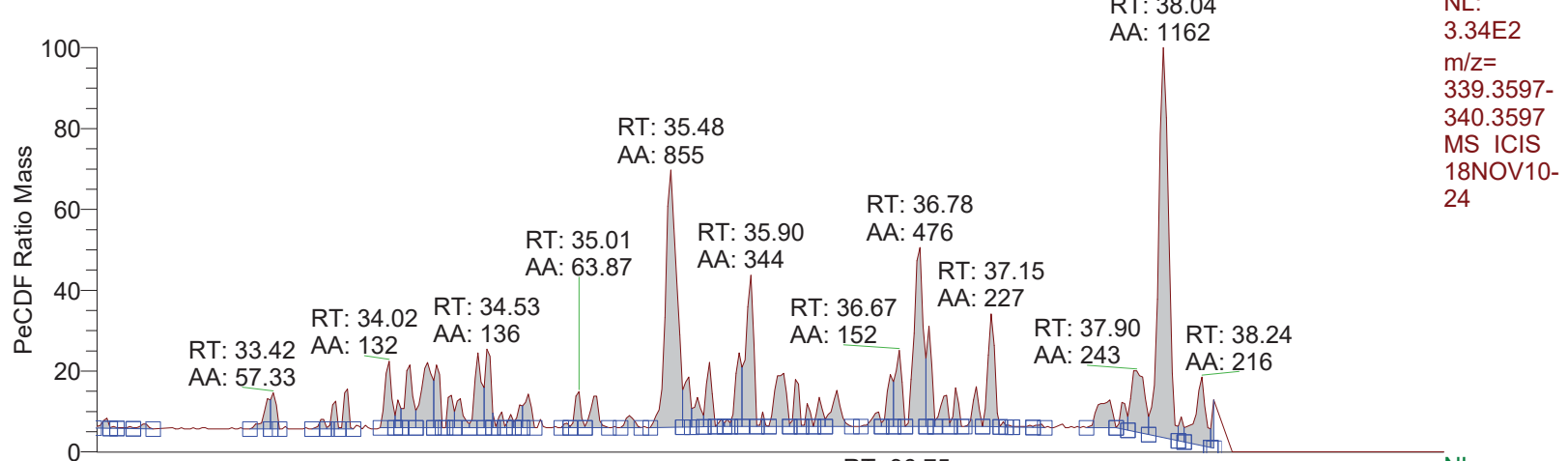
APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

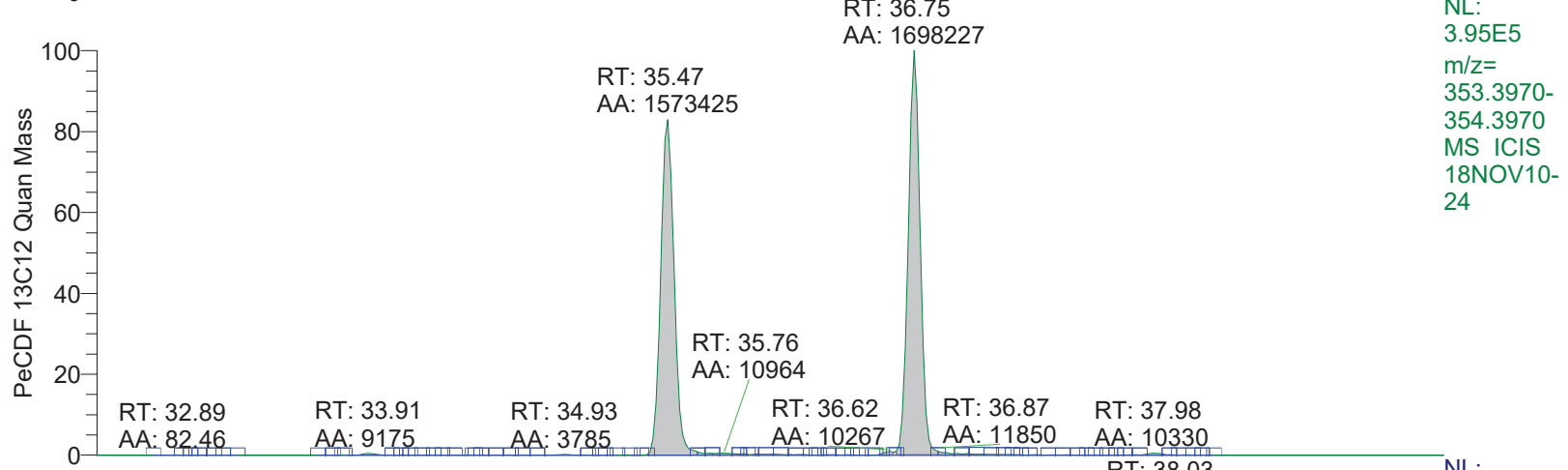
RT: 32.50 - 39.50



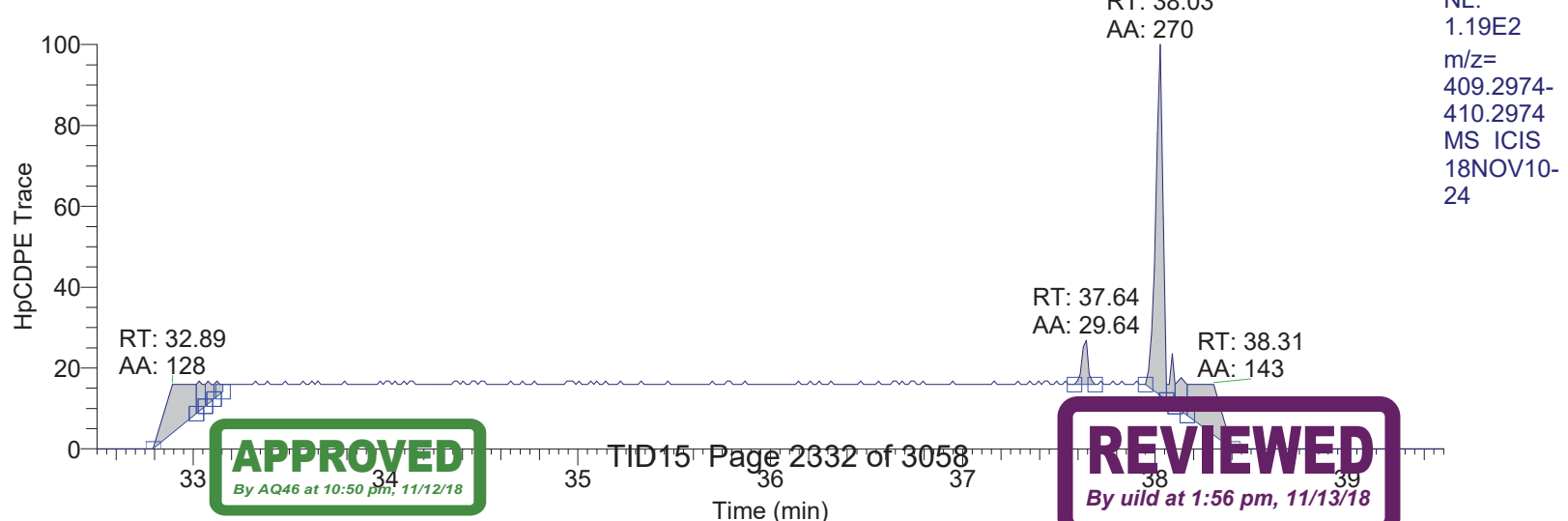
NL:
2.61E2
m/z=
341.3567-
342.3567
MS ICIS
18NOV10-
24



NL:
3.34E2
m/z=
339.3597-
340.3597
MS ICIS
18NOV10-
24



NL:
3.95E5
m/z=
353.3970-
354.3970
MS ICIS
18NOV10-
24

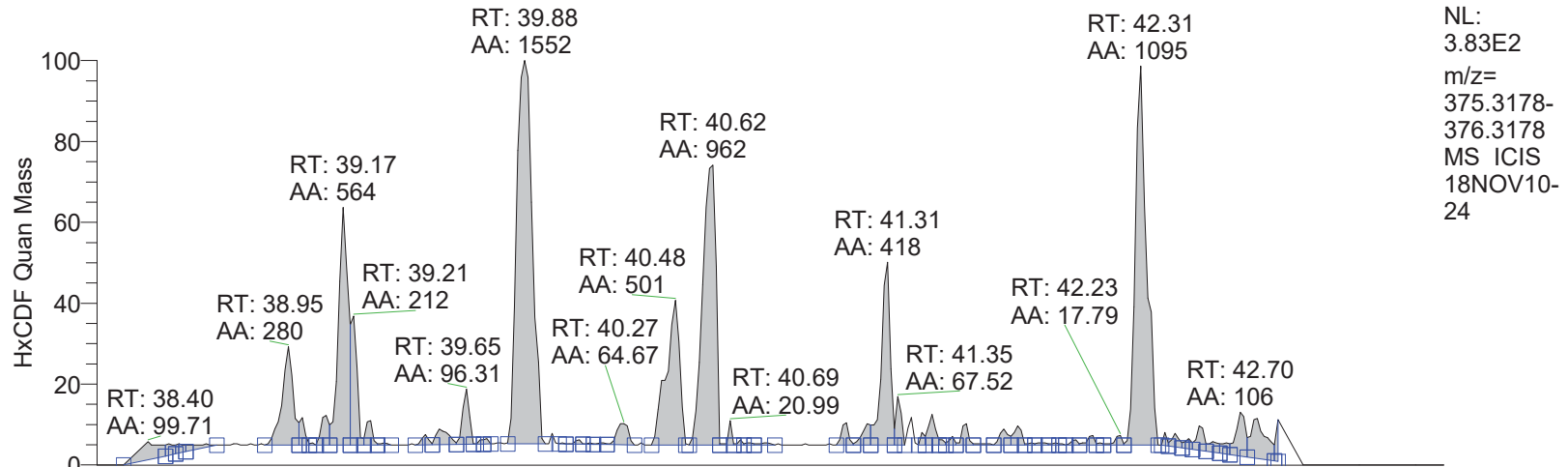


NL:
1.19E2
m/z=
409.2974-
410.2974
MS ICIS
18NOV10-
24

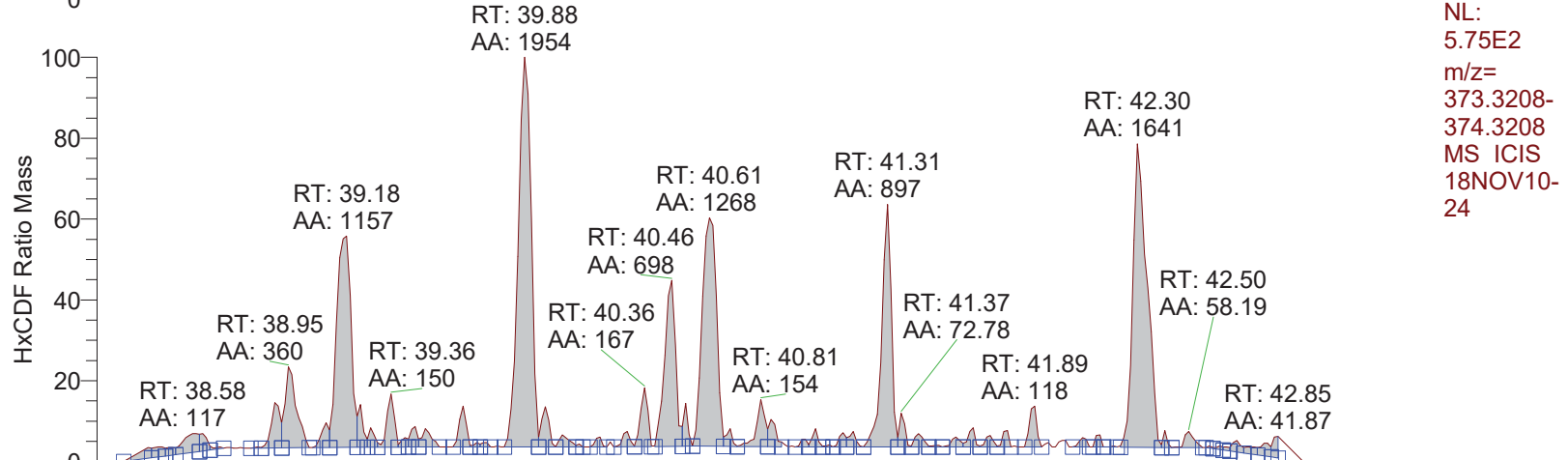
APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

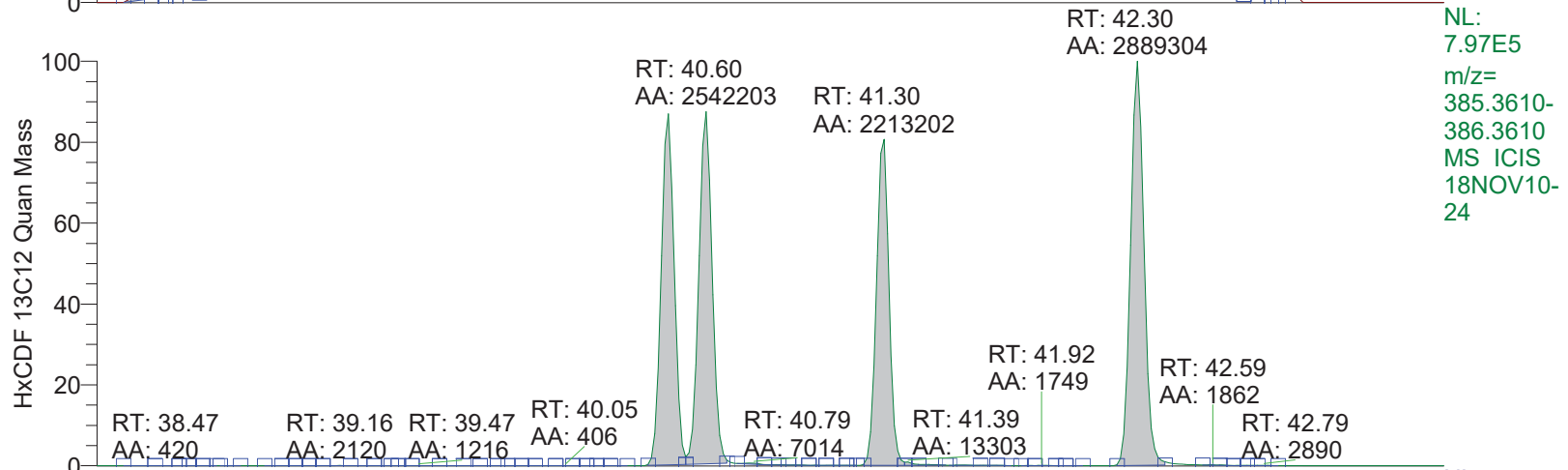
RT: 38.20 - 43.50



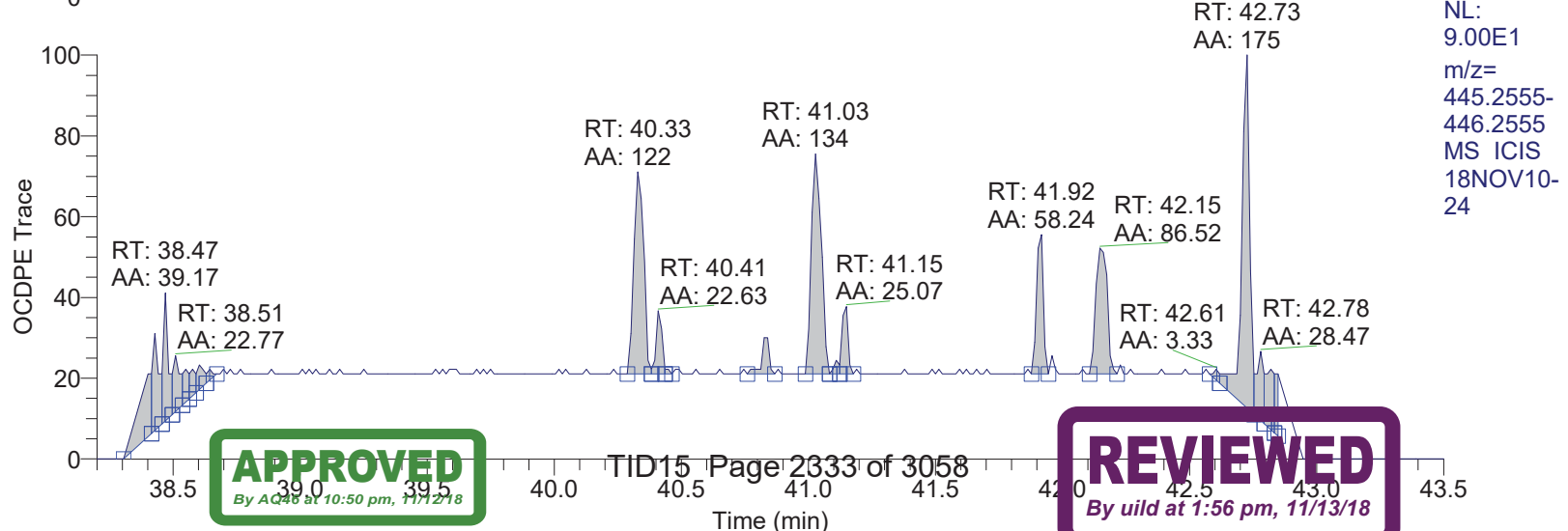
NL: 3.83E2
m/z= 375.3178-376.3178
MS ICIS 18NOV10-24



NL: 5.75E2
m/z= 373.3208-374.3208
MS ICIS 18NOV10-24



NL: 7.97E5
m/z= 385.3610-386.3610
MS ICIS 18NOV10-24

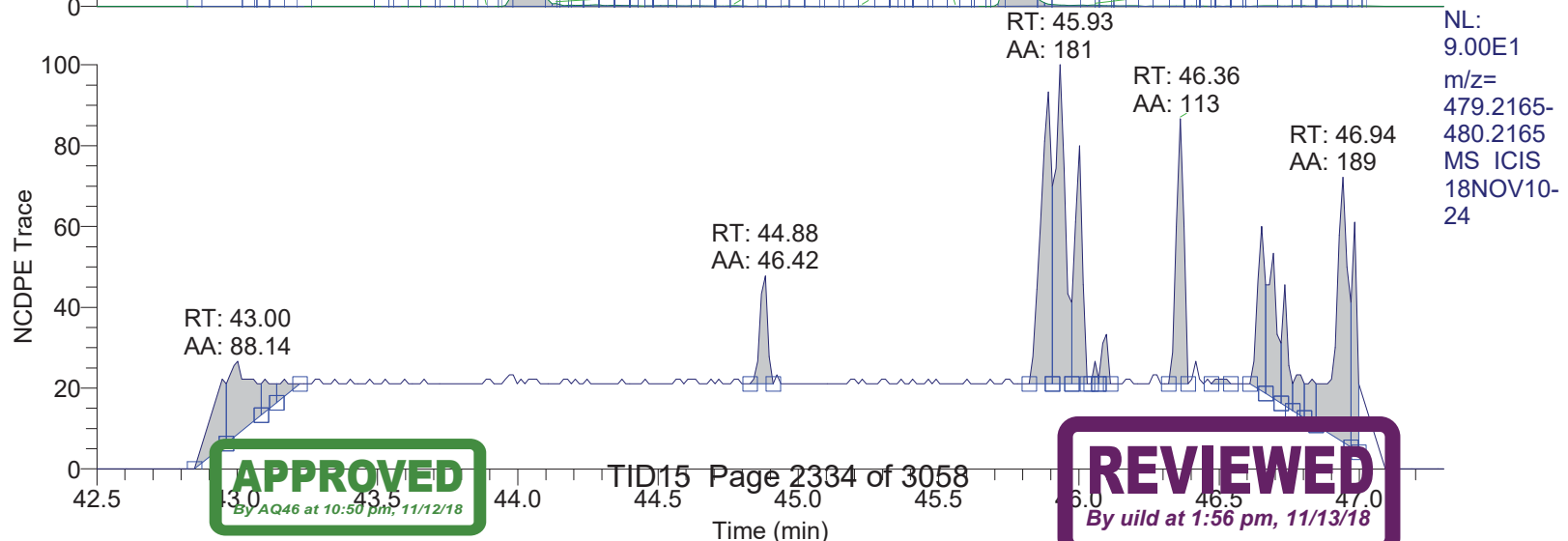
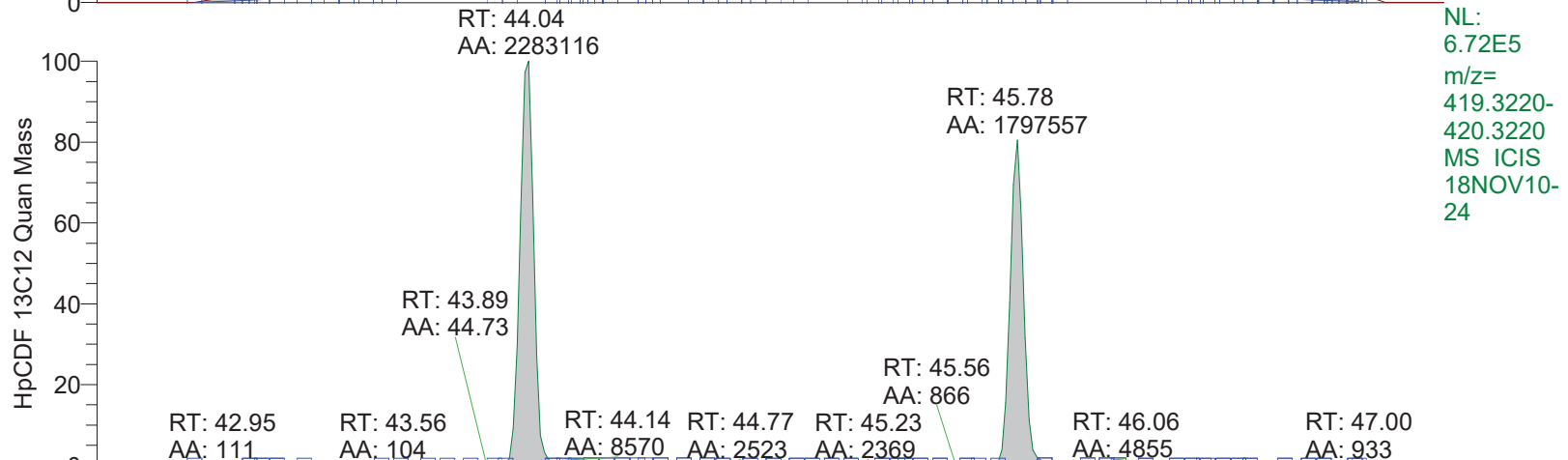
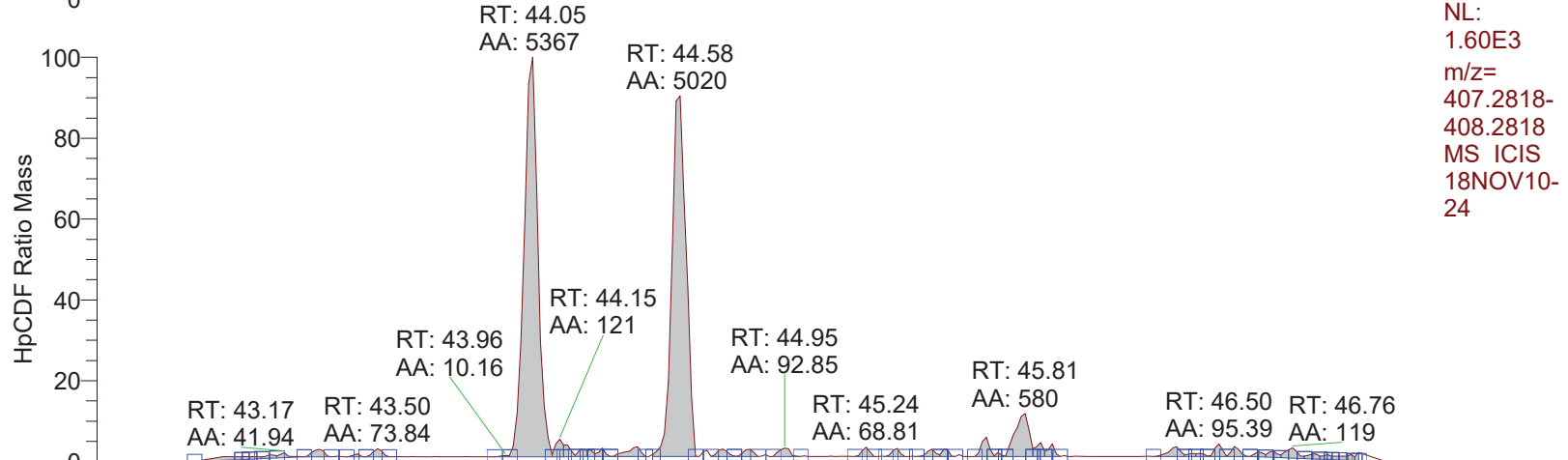
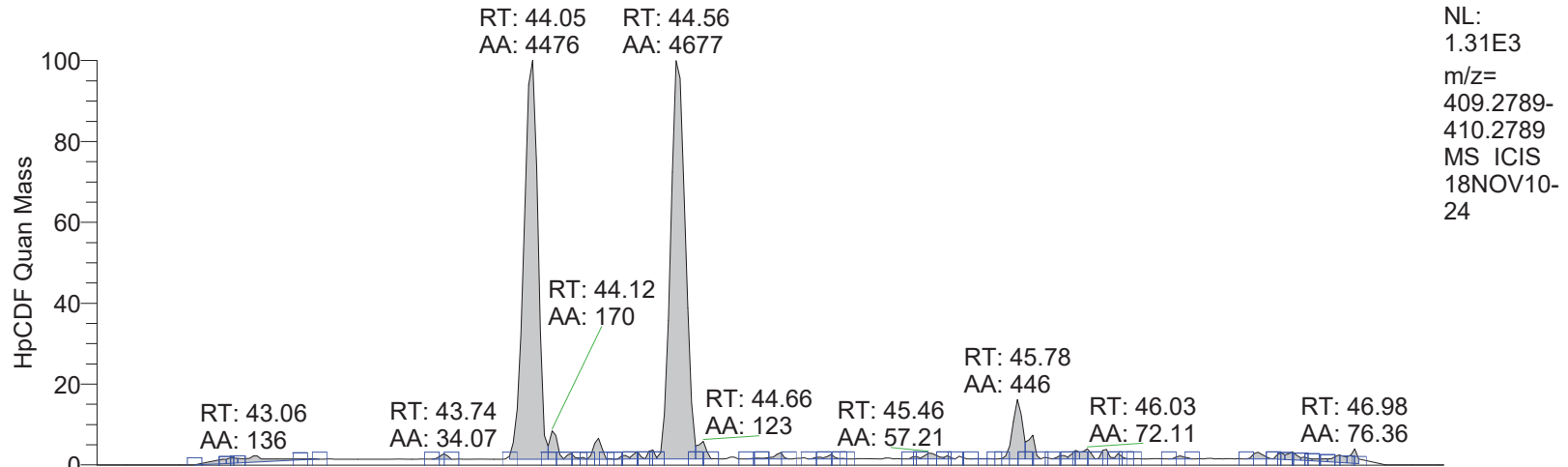


NL: 9.00E1
m/z= 445.2555-446.2555
MS ICIS 18NOV10-24

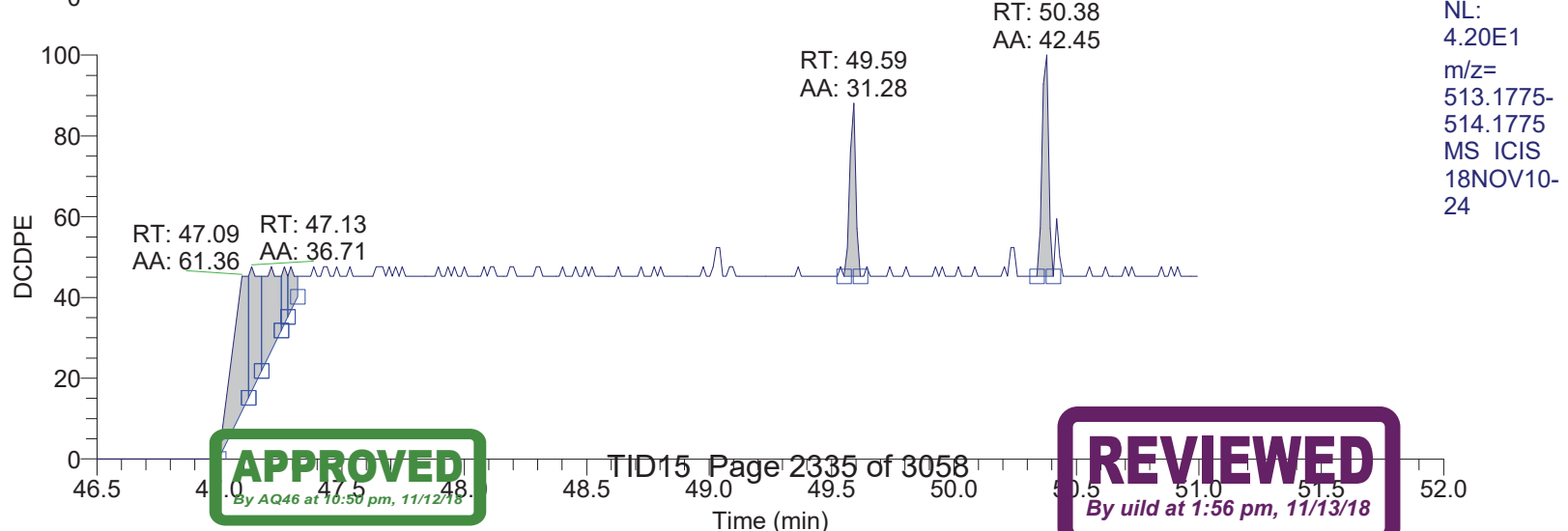
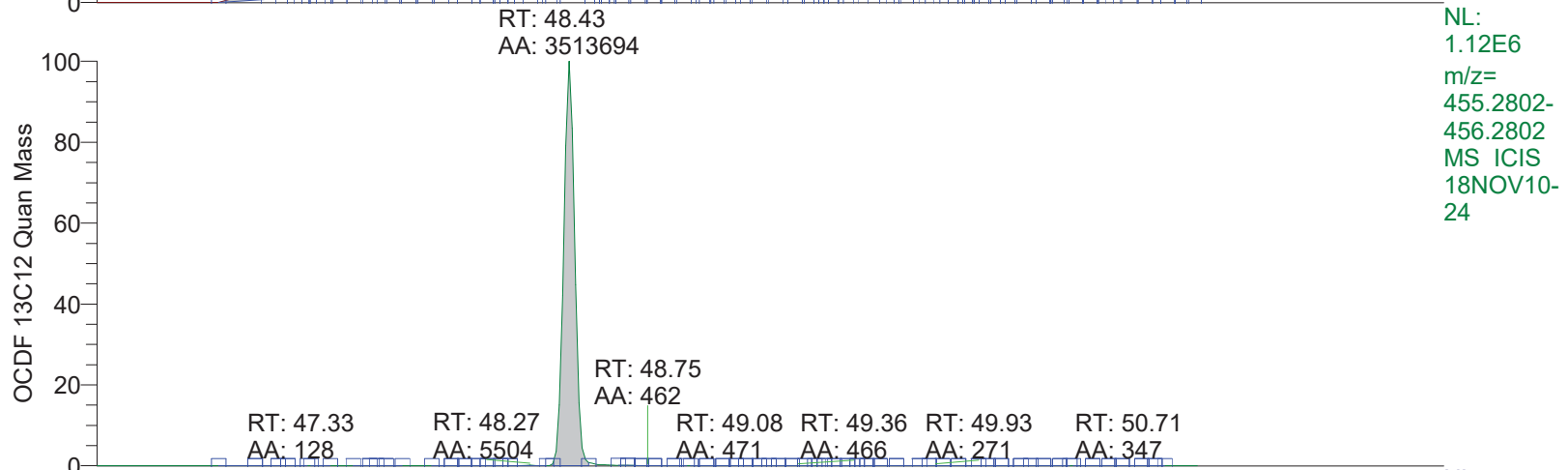
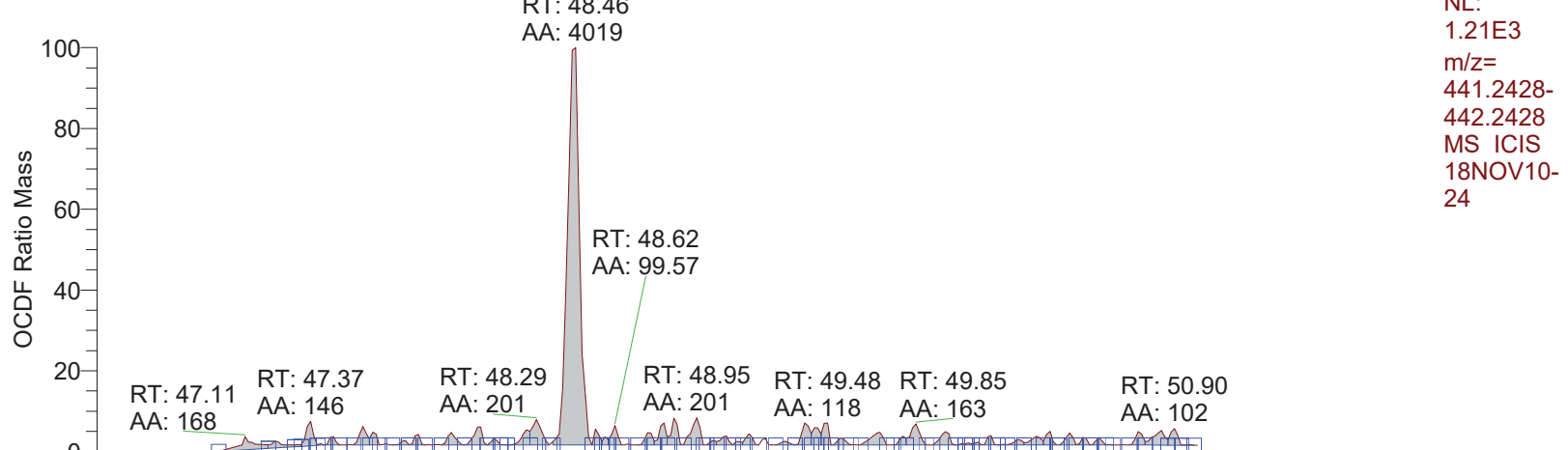
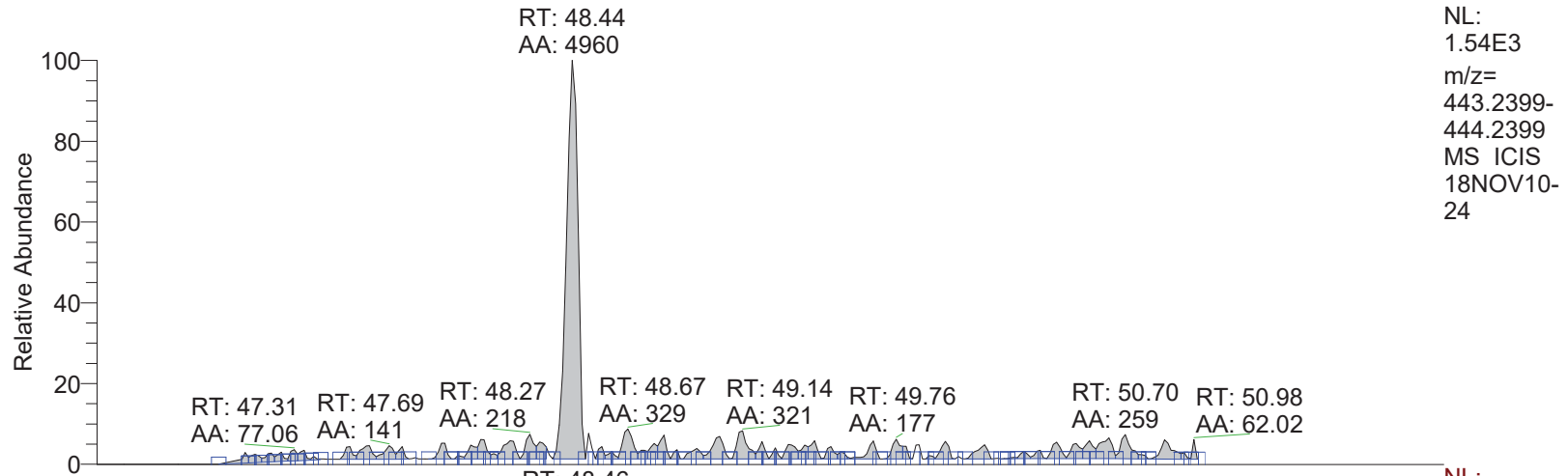
APPROVED
By AC46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

RT: 42.50 - 47.30



RT: 46.50 - 52.00



18NOV10-24

*** file opened Sat Nov 10 15:11:53 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 15:11:53

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes

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MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	94.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0076	FVINLET	0.0379	FVSRG	0.0362
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSRG	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	94.0000	LKM	442.9723	MASS	94.0000
MDAC	1379102.0218	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9856	RELEN	0.0000
RES	12667.8001	RPUSHER	-6.0733	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	94.0000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.4e-008 mbar
Pirani Analyse: 7.6e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.7e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11521.
MID Time window 2: Resolution is 11208.
MID Time window 3: Resolution is 10807.
MID Time window 4: Resolution is 11915.



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MID Time Window 5: Resolution is 11371.
MID Time Window 6: Resolution is 12667.

Amplifier Offset: 81.

*** File closed Sat Nov 10 16:02:54 2018



Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 16:03
Number of Entries 272
Comment S:10914:12936:17961
Vial 79
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW008WT-DUP Grab Groundwater
Sample ID 9881310
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

Quan x:\18nov10\18nov10-25.quan
Data x:\18nov10\18nov10-25.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.01
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.39	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
2	2378-TCDD	30.60	failed	passed	failed	failed	passed	passed	Failed on: Ratio1A RM1Time < min
3	12378-PeCDF	35.45	passed	passed	passed	passed	passed	passed	
4	23478-PeCDF	36.75	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
5	12378-PeCDD	37.13	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
6	123478-HxCDF	40.45	passed	passed	passed	passed	passed	passed	
7	123678-HxCDF	40.58	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
8	234678-HxCDF	41.28	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
9	123478-HxCDD	41.48	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
10	123678-HxCDD	41.62	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
11	123789-HxCDD	41.91	passed	passed	passed	passed	passed	passed	
12	123789-HxCDF	42.28	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
13	1234678-HpCDF	44.02	passed	passed	passed	passed	passed	passed	
14	1234678-HpCDD	45.22	passed	passed	passed	passed	passed	passed	
15	1234789-HpCDF	45.77	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
16	OCDD	48.25	passed	passed	passed	passed	passed	passed	
17	OCDF	48.42	passed	passed	passed	passed	passed	passed	
18	13C12-1278-TCDD (CRS)	30.98	passed	passed	passed	passed	passed	passed	
19	13C12-1234-TCDD	29.71	passed	passed	passed	passed	passed	passed	
20	13C12-123468-HxCDD	40.35	passed	passed	passed	passed	passed	passed	
21	13C12-2378-TCDF	29.39	passed	passed	passed	passed	passed	passed	
22	13C12-2378-TCDD	30.55	passed	passed	passed	passed	passed	passed	
23	13C12-12378-PeCDF	35.44	passed	passed	passed	passed	passed	passed	
24	13C12-23478-PeCDF	36.72	passed	passed	passed	passed	passed	passed	
25	13C12-12378-PeCDD	37.13	passed	passed	passed	passed	passed	passed	
26	13C12-123478-HxCDF	40.42	passed	passed	passed	passed	passed	passed	
27	13C12-123678-HxCDF	40.57	passed	passed	passed	passed	passed	passed	
28	13C12-234678-HxCDF	41.27	passed	passed	passed	passed	passed	passed	
29	13C12-123478-HxCDD	41.47	passed	passed	passed	passed	passed	passed	
30	13C12-123678-HxCDD	41.59	passed	passed	passed	passed	passed	passed	
31	13C12-123789-HxCDD	41.90	passed	passed	passed	passed	passed	passed	
32	13C12-123789-HxCDF	42.26	passed	passed	passed	passed	passed	passed	
33	13C12-1234678-HpCDF	44.00	passed	passed	passed	passed	passed	passed	
34	13C12-1234678-HpCDD	45.20	passed	passed	passed	passed	passed	passed	
35	13C12-1234789-HpCDF	45.76	passed	passed	passed	passed	passed	passed	
36	13C12-OCDD	48.23	passed	passed	passed	passed	passed	passed	
37	13C12-OCDF	48.41	passed	passed	passed	passed	passed	passed	

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 16:03
Number of Entries 272
Comment S:10914:12936:17961
Vial 79
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW008WT-DUP Grab Groundwater
Sample ID 9881310
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

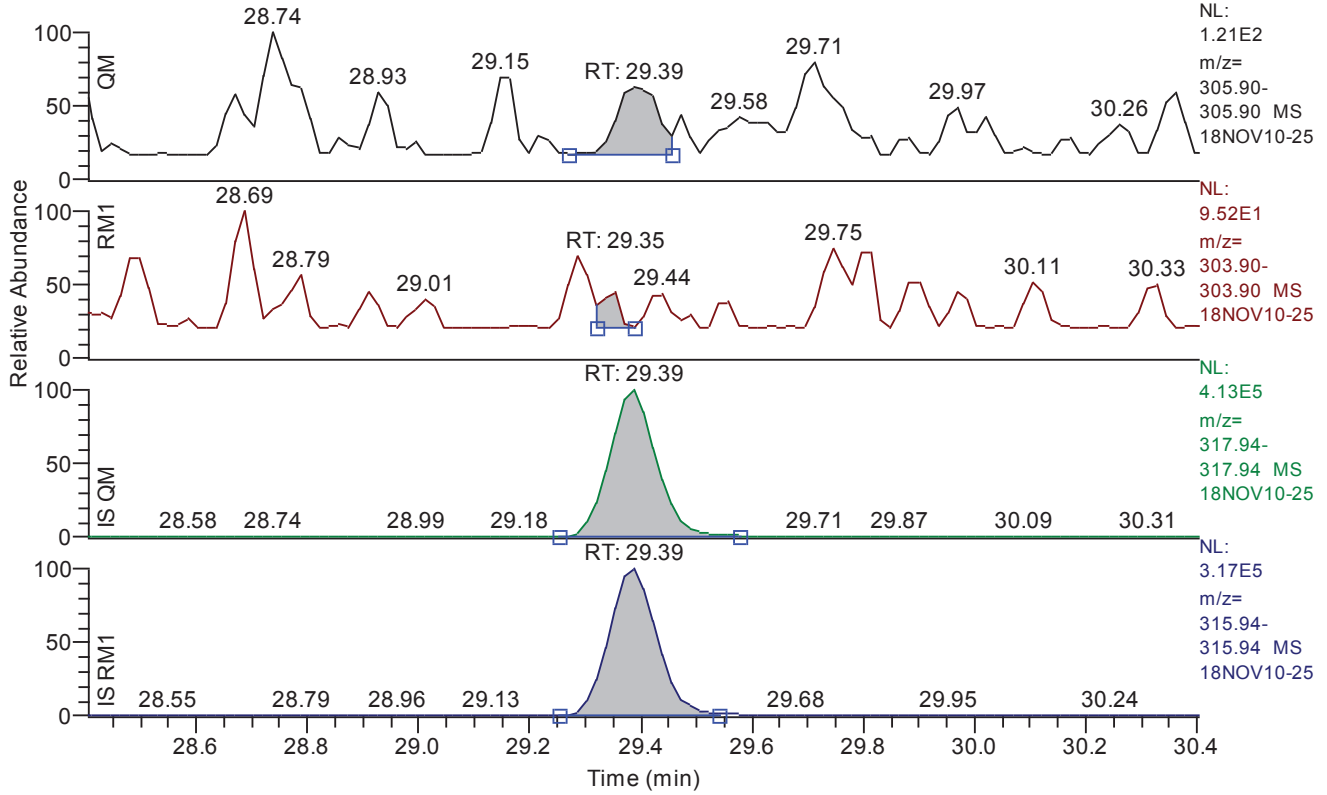
Quan x:\18nov10\18nov10-25.quan
Data x:\18nov10\18nov10-25.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.01
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.40 - 30.40 SM: 3G

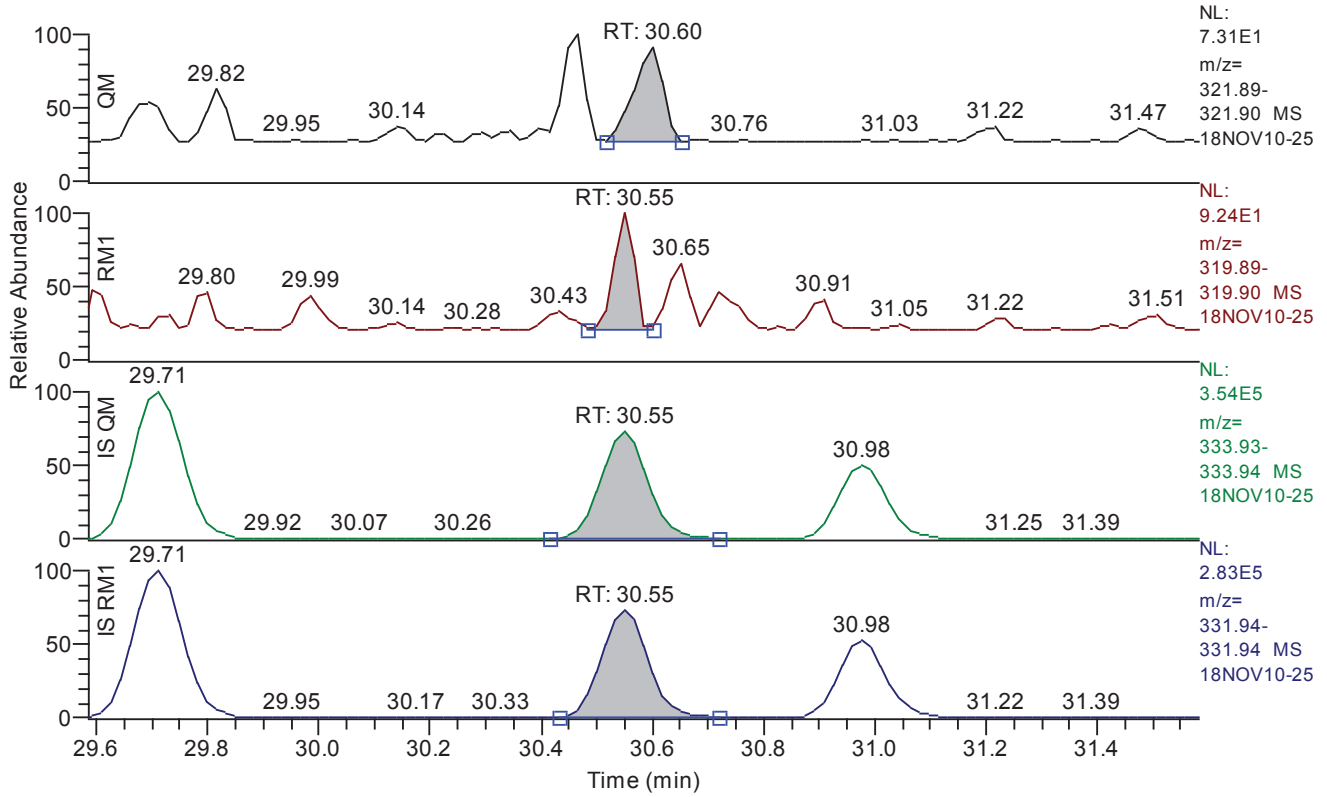


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.39
QM Area	292
QM Integration Mode	A
RM1 Area	55
RM1 Integration Mode	M
ManInt	1
Detection Limit (A)	0.1245
Unqualified Amount (A)	0.149023
Adjusted Amount (A)	n.d.
Signal-to-Noise	4
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 29.58 - 31.58 SM: 3G

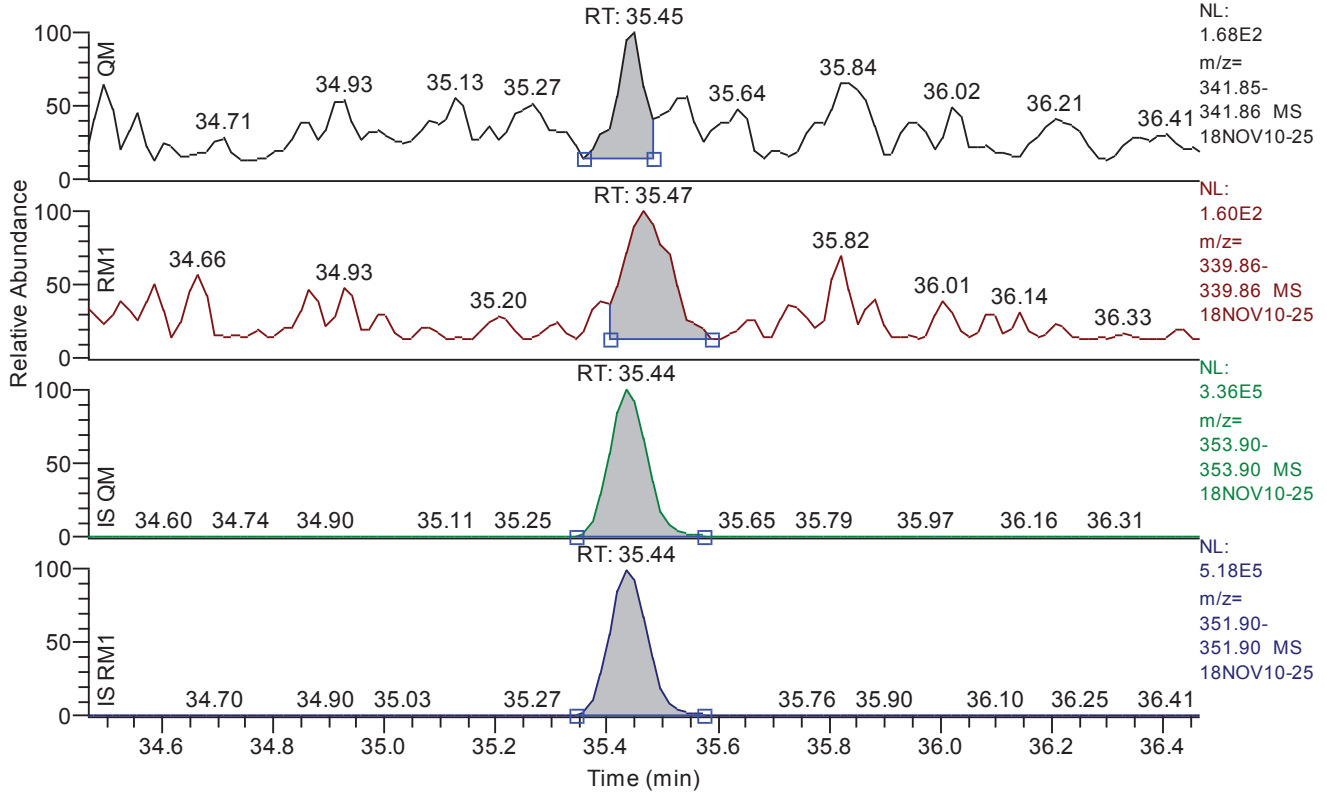


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.60
QM Area	175
QM Integration Mode	A
RM1 Area	184
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0697
Unqualified Amount (A)	0.204874
Adjusted Amount (A)	n.d.
Signal-to-Noise	14
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A RM1Time < min

Chromatogram

RT: 34.47 - 36.47 SM: 3G

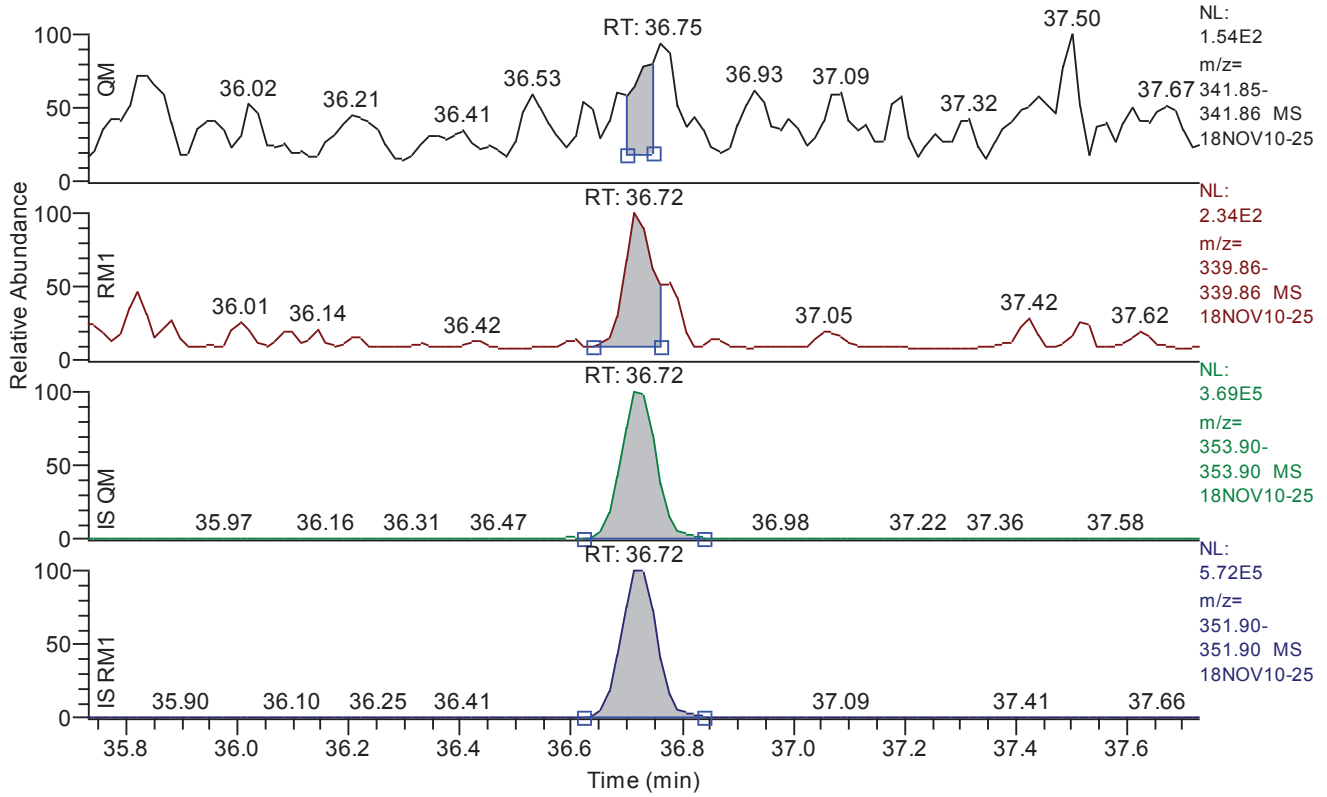


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.45
QM Area	485
QM Integration Mode	A
RM1 Area	780
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1255
Unqualified Amount (A)	0.656455
Adjusted Amount (A)	0.6565
Signal-to-Noise	14
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.73 - 37.73 SM: 3G

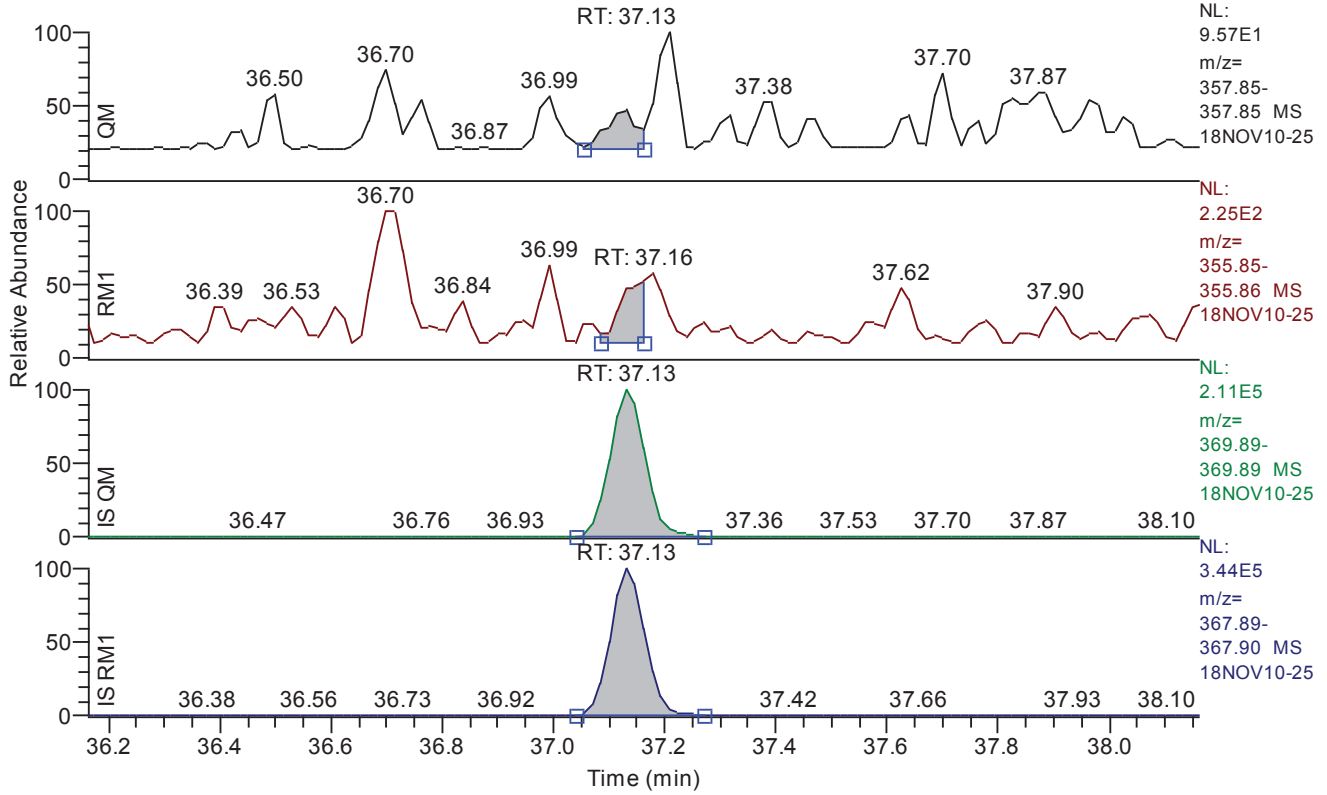


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.75
QM Area	223
QM Integration Mode	M
RM1 Area	733
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.1016
Unqualified Amount (A)	0.432010
Adjusted Amount (A)	n.d.
Signal-to-Noise	15
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 36.16 - 38.16 SM: 3G

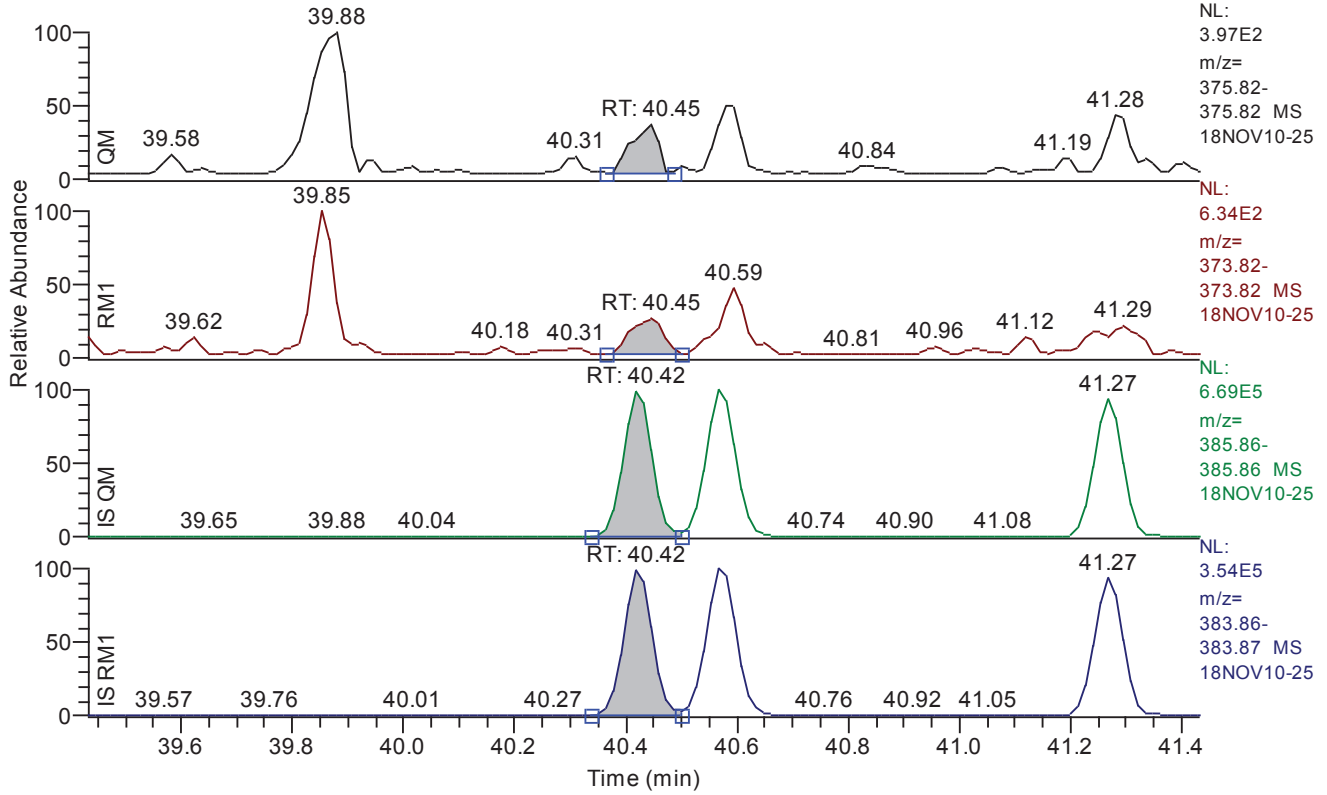


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.13
QM Area	97
QM Integration Mode	A
RM1 Area	272
RM1 Integration Mode	M
ManInt	1
Detection Limit (A)	0.2396
Unqualified Amount (A)	0.301178
Adjusted Amount (A)	n.d.
Signal-to-Noise	5
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 39.43 - 41.43 SM: 3G

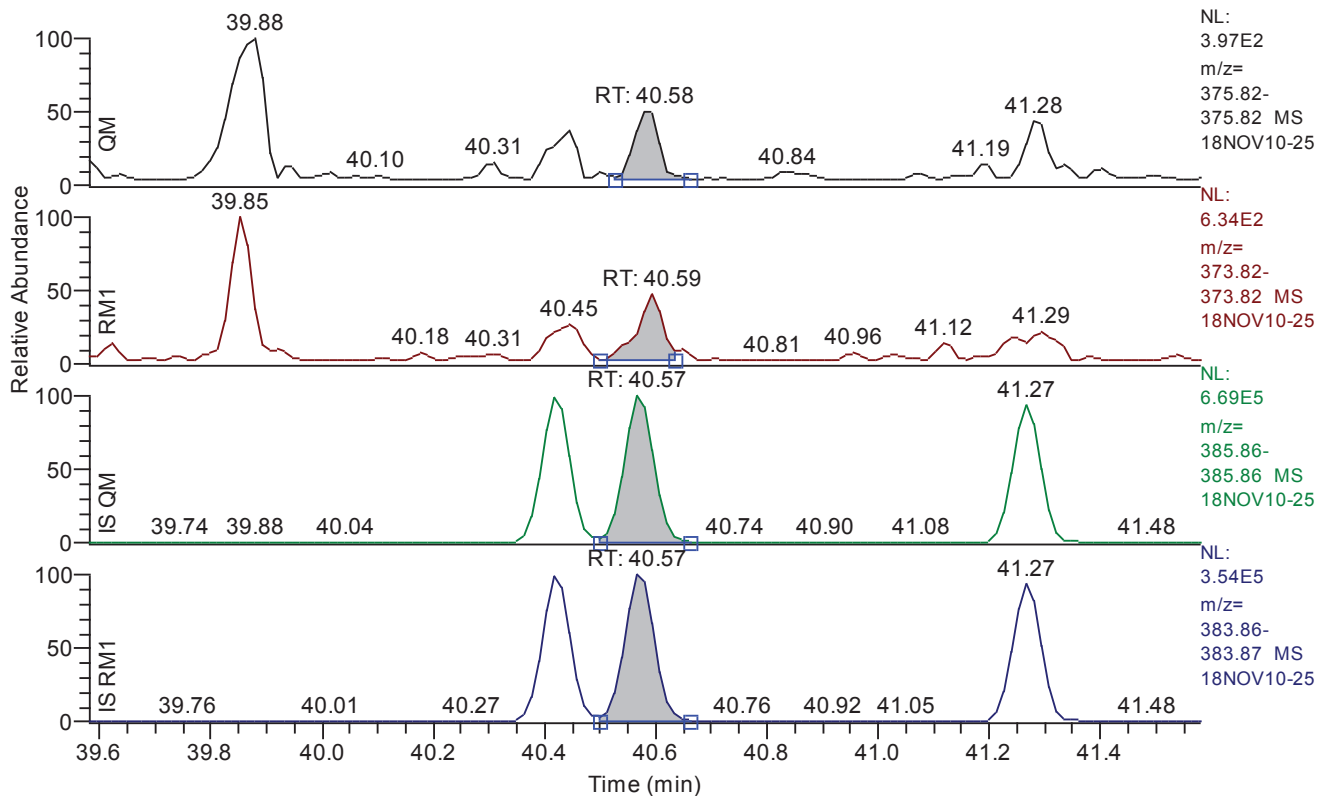


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.45
QM Area	438
QM Integration Mode	A
RM1 Area	628
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1028
Unqualified Amount (A)	0.525792
Adjusted Amount (A)	0.5258
Signal-to-Noise	12
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.58 - 41.58 SM: 3G



NL: 3.97E2
 m/z= 375.82-375.82 MS
 18NOV10-25

NL: 6.34E2
 m/z= 373.82-373.82 MS
 18NOV10-25

NL: 6.69E5
 m/z= 385.86-385.86 MS
 18NOV10-25

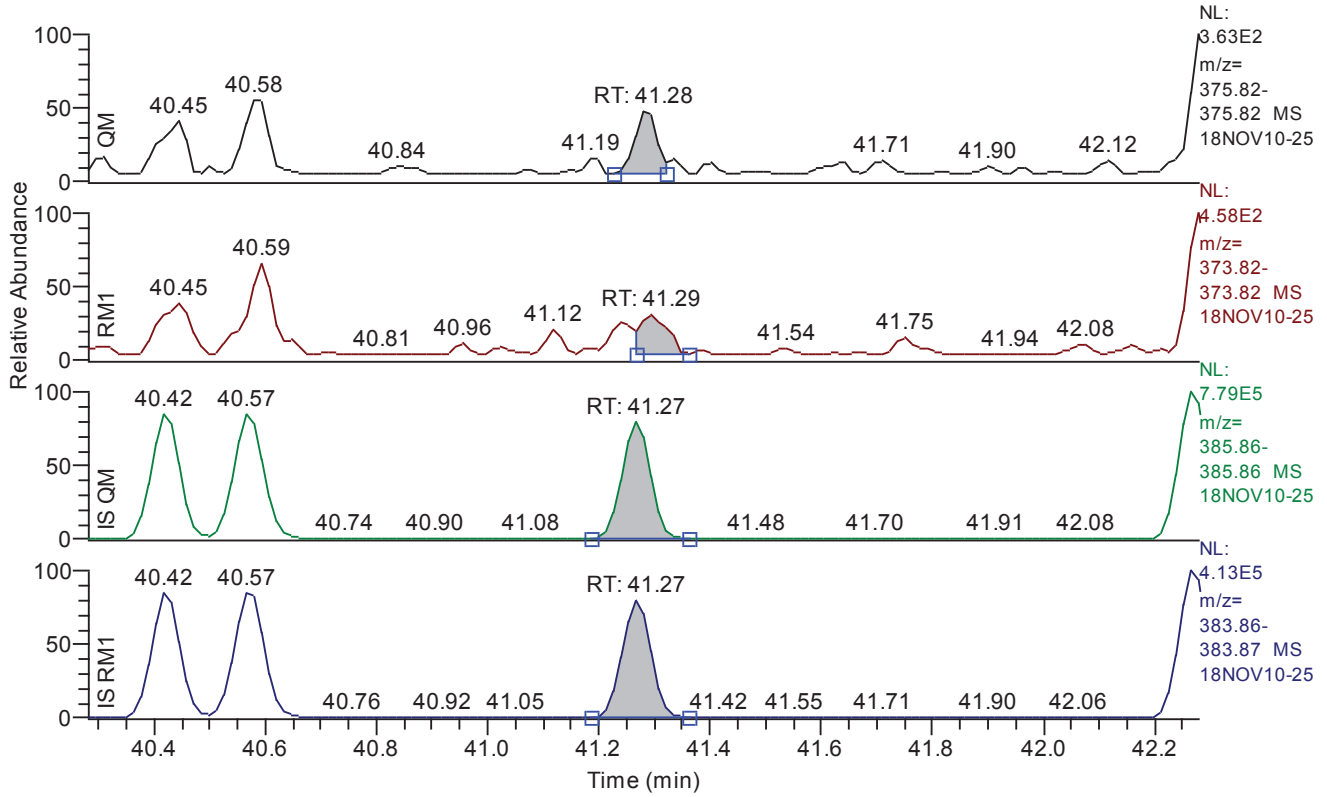
NL: 3.54E5
 m/z= 383.86-383.87 MS
 18NOV10-25

Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.58
QM Area	554
QM Integration Mode	A
RM1 Area	908
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1061
Unqualified Amount (A)	0.715721
Adjusted Amount (A)	n.d.
Signal-to-Noise	20
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.28 - 42.28 SM: 3G

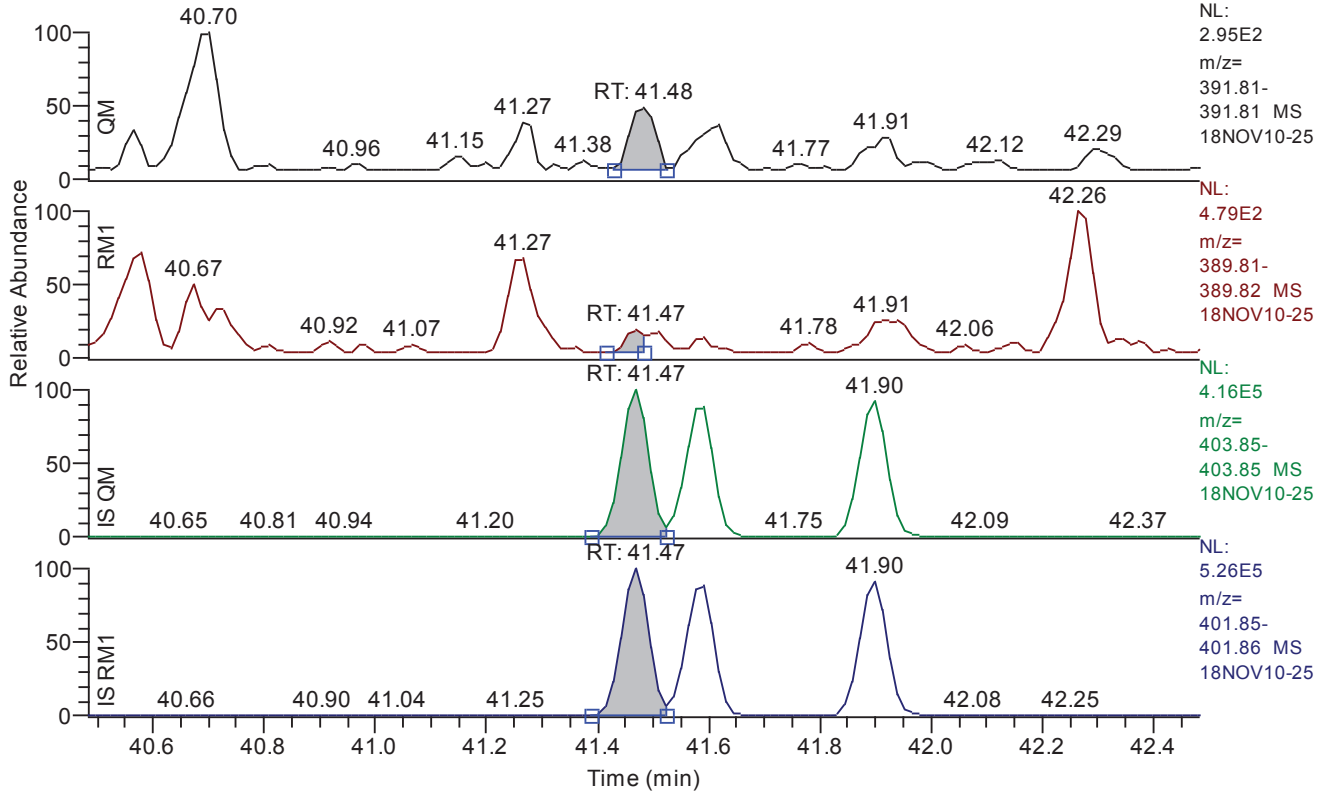


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.28
QM Area	434
QM Integration Mode	A
RM1 Area	413
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1047
Unqualified Amount (A)	0.425120
Adjusted Amount (A)	n.d.
Signal-to-Noise	12
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.48 - 42.48 SM: 3G

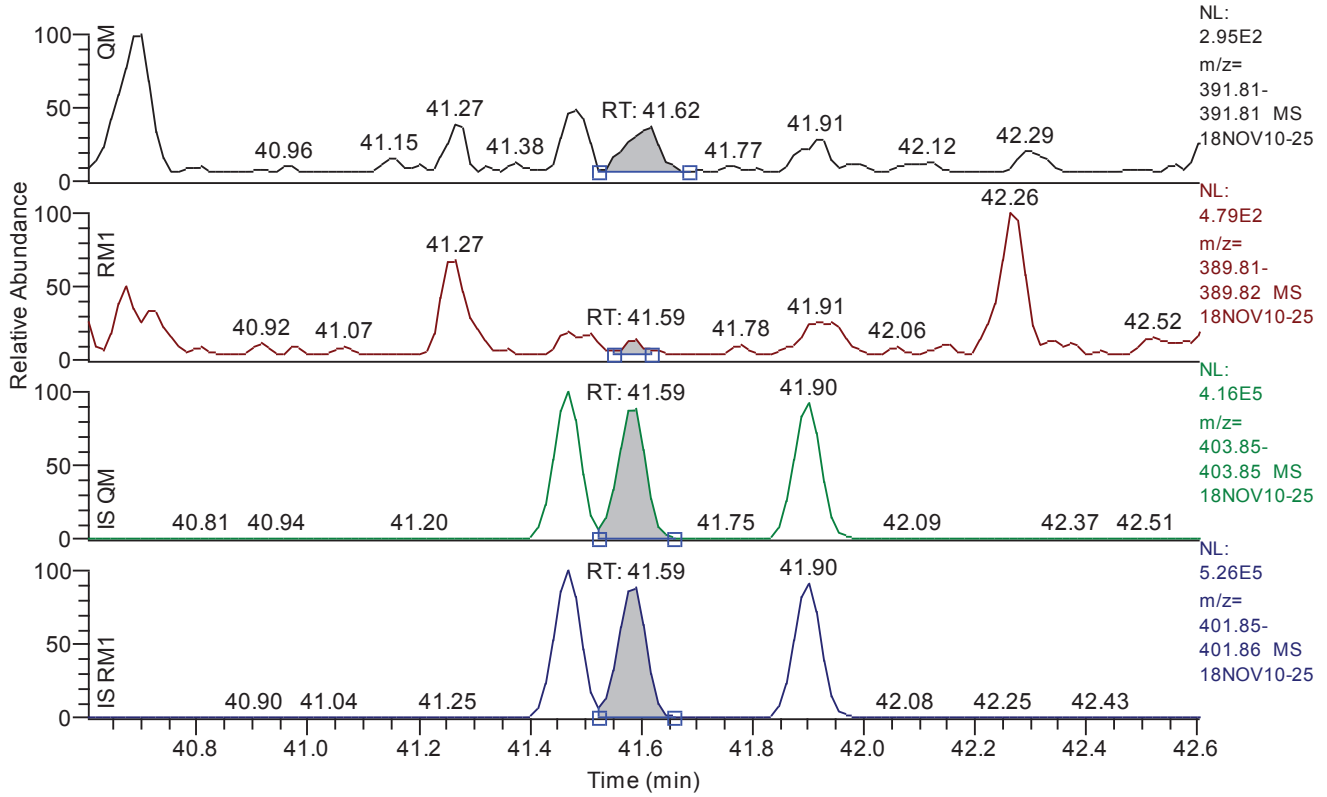


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.48
QM Area	401
QM Integration Mode	A
RM1 Area	153
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1138
Unqualified Amount (A)	0.339354
Adjusted Amount (A)	n.d.
Signal-to-Noise	9
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.60 - 42.60 SM: 3G

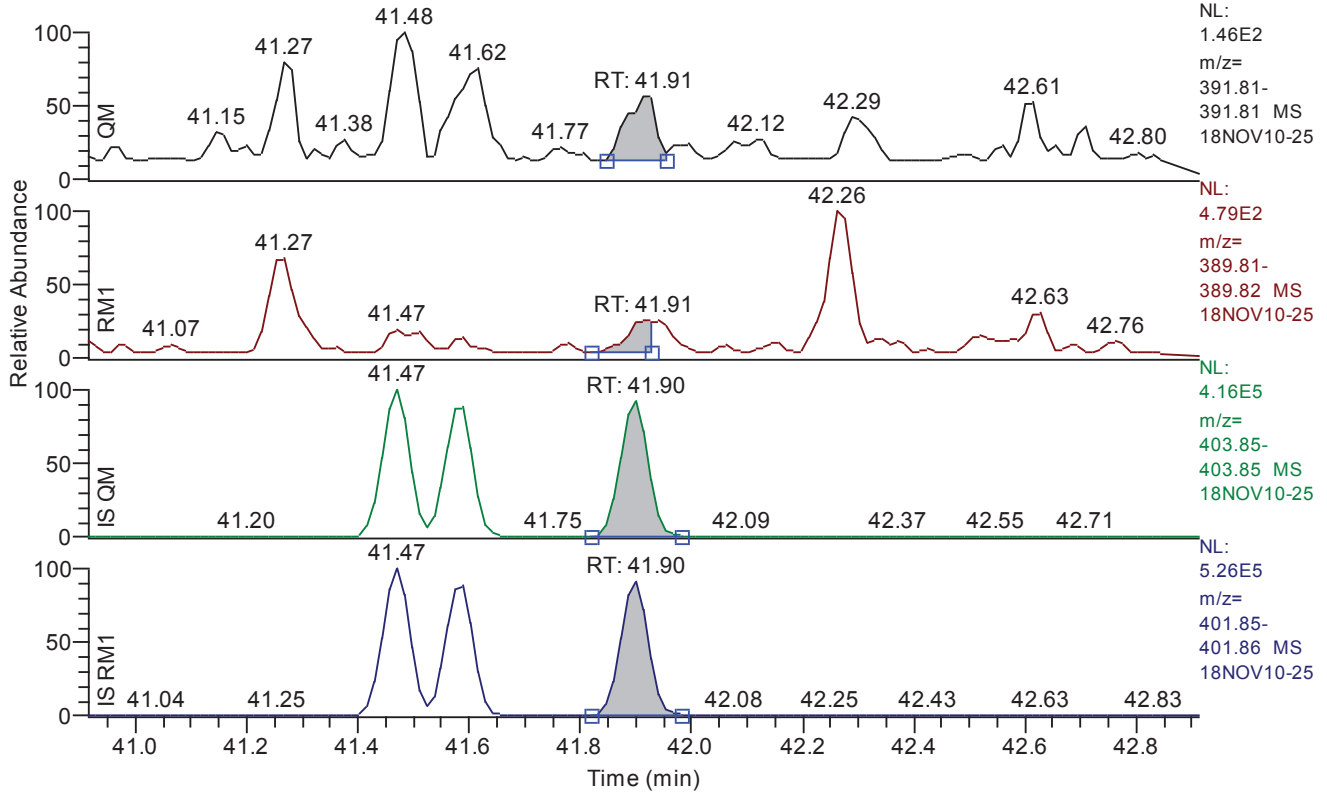


Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.62
QM Area	383
QM Integration Mode	A
RM1 Area	111
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1297
Unqualified Amount (A)	0.328753
Adjusted Amount (A)	n.d.
Signal-to-Noise	6
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.91 - 42.91 SM: 3G

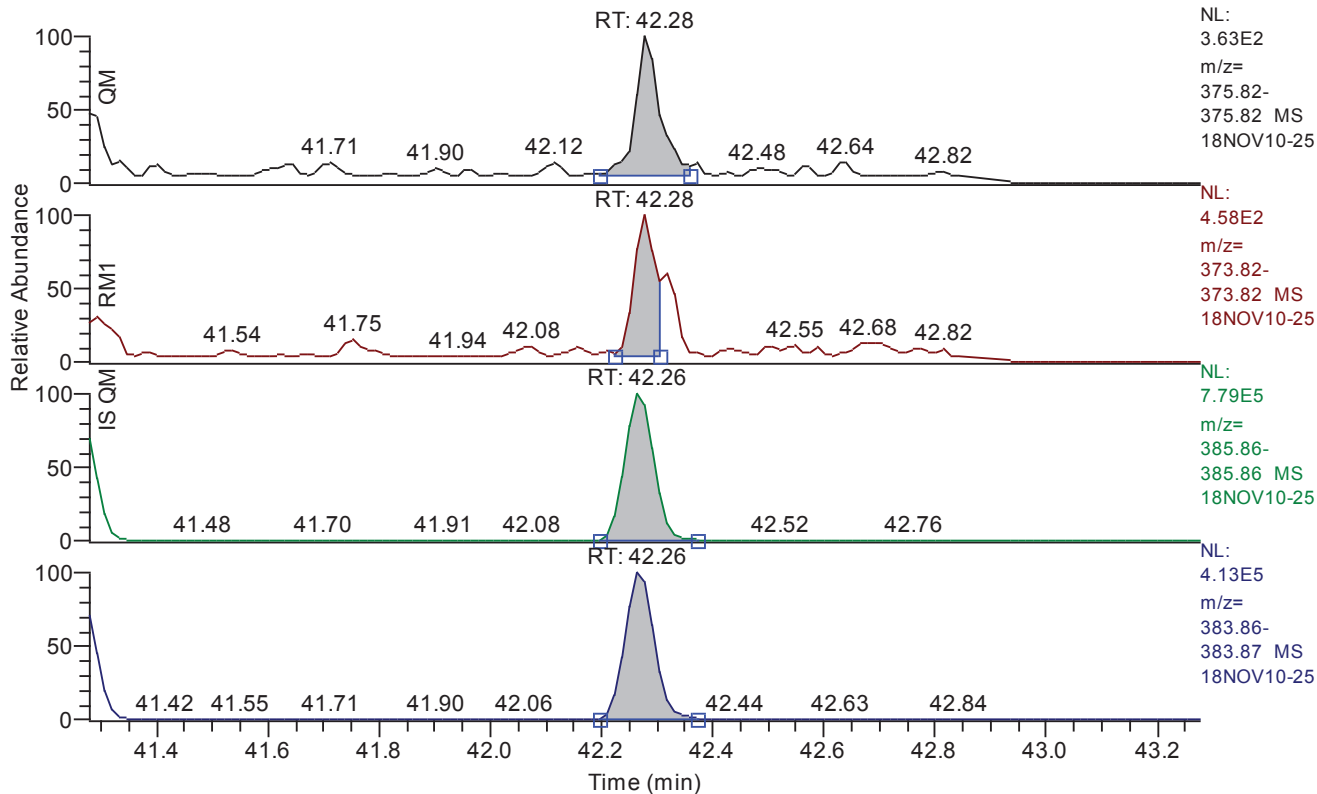


Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.91
QM Area	235
QM Integration Mode	A
RM1 Area	310
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1180
Unqualified Amount (A)	0.339730
Adjusted Amount (A)	0.3397
Signal-to-Noise	8
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 41.28 - 43.28 SM: 3G

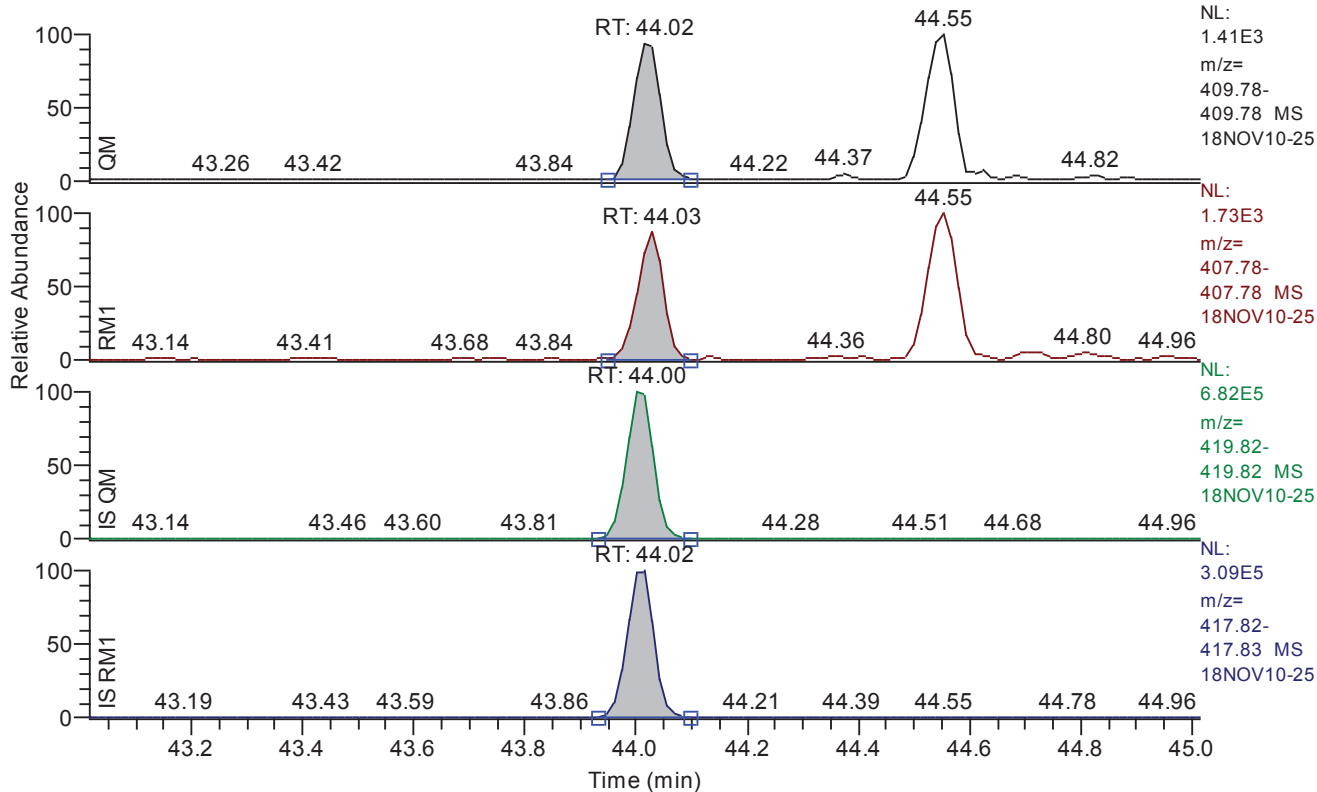


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.28
QM Area	1081
QM Integration Mode	A
RM1 Area	1115
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0903
Unqualified Amount (A)	0.922596
Adjusted Amount (A)	n.d.
Signal-to-Noise	33
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 43.02 - 45.02 SM: 3G

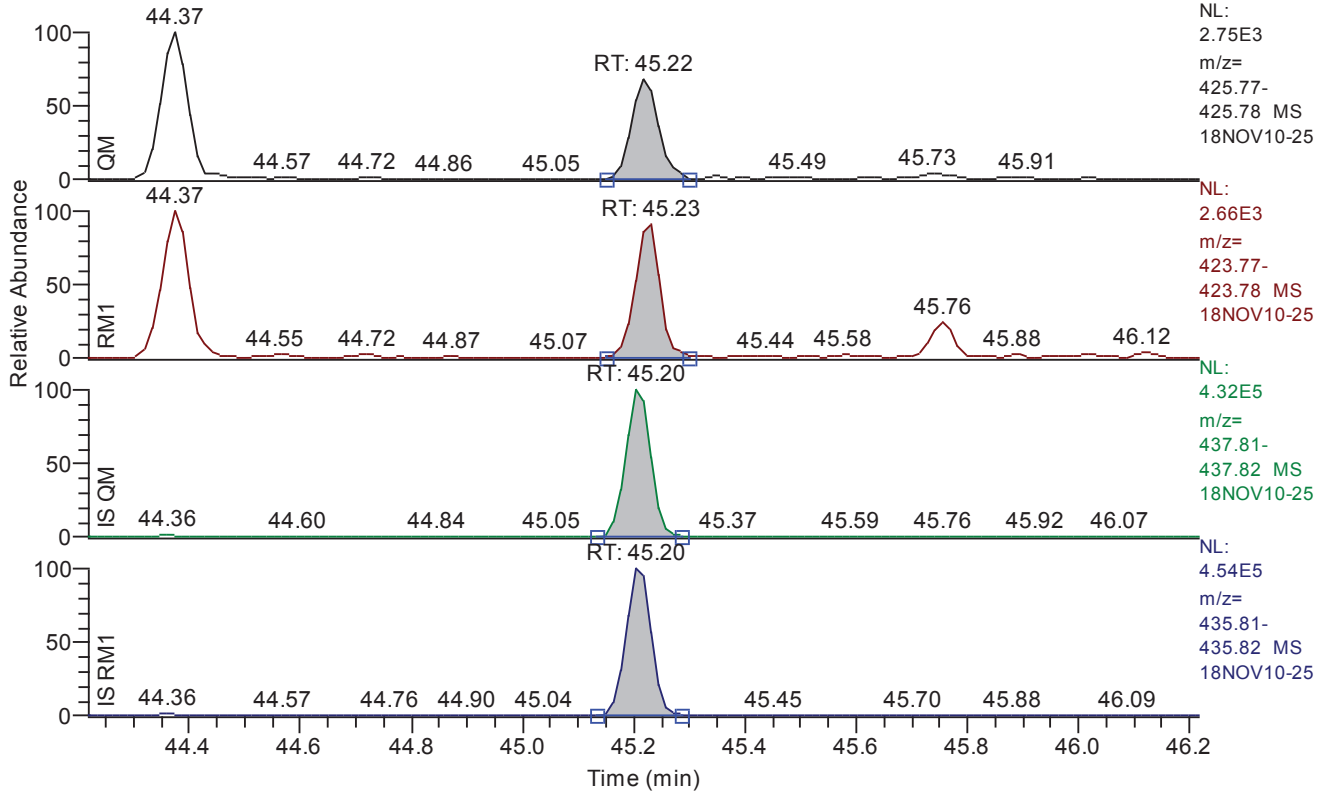


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.02
QM Area	4620
QM Integration Mode	A
RM1 Area	4945
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0638
Unqualified Amount (A)	4.641279
Adjusted Amount (A)	4.6413
Signal-to-Noise	187
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.22 - 46.22 SM: 3G

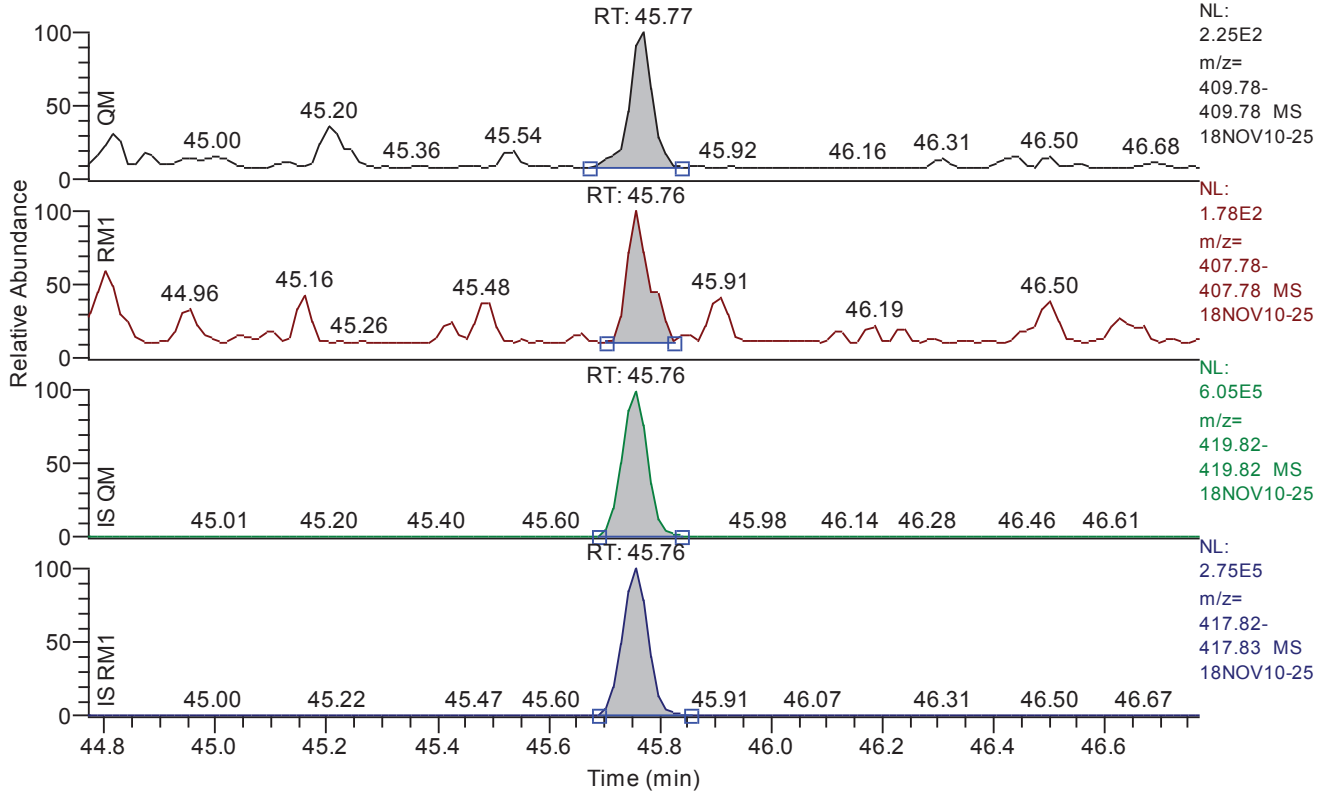


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.22
QM Area	6473
QM Integration Mode	A
RM1 Area	7752
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1292
Unqualified Amount (A)	9.605498
Adjusted Amount (A)	9.6055
Signal-to-Noise	183
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.77 - 46.77 SM: 3G

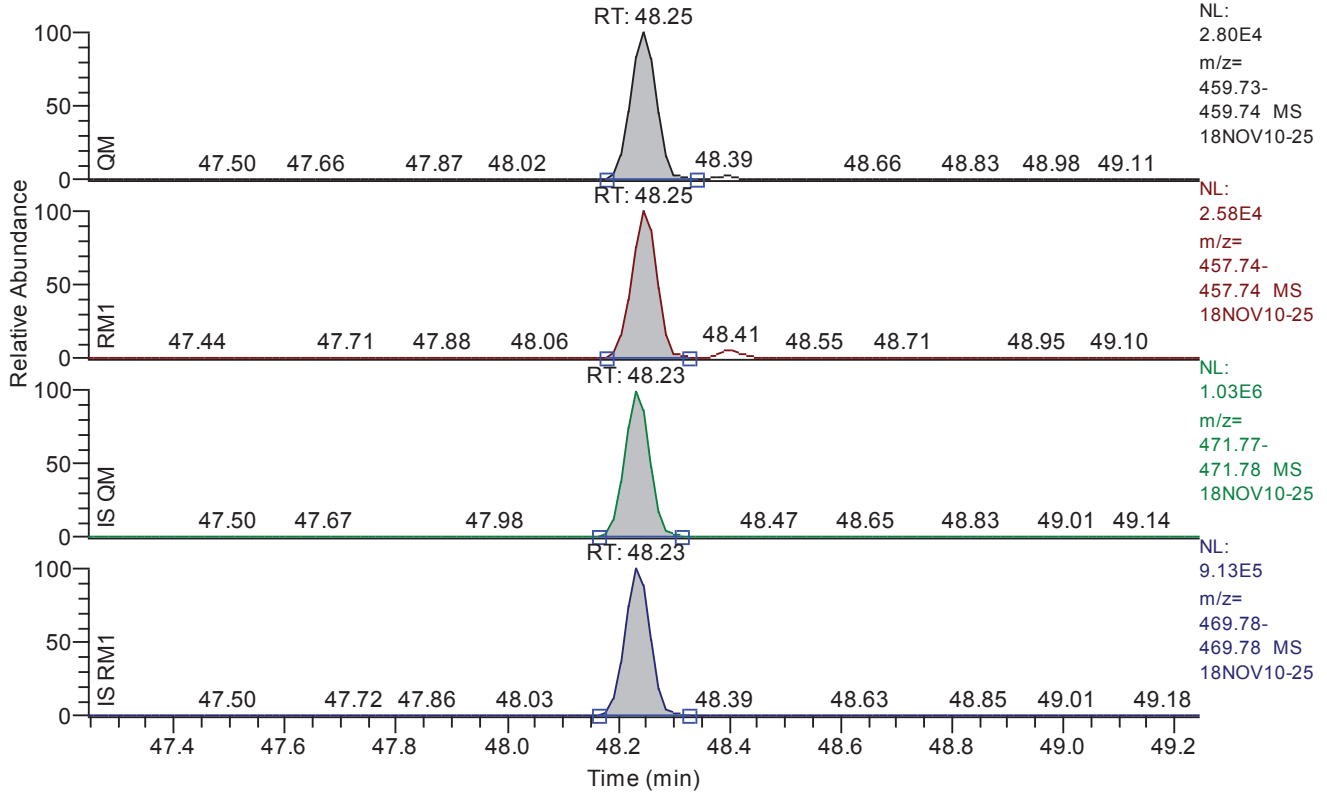


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.77
QM Area	606
QM Integration Mode	A
RM1 Area	462
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0691
Unqualified Amount (A)	0.594471
Adjusted Amount (A)	n.d.
Signal-to-Noise	24
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 47.25 - 49.25 SM: 3G

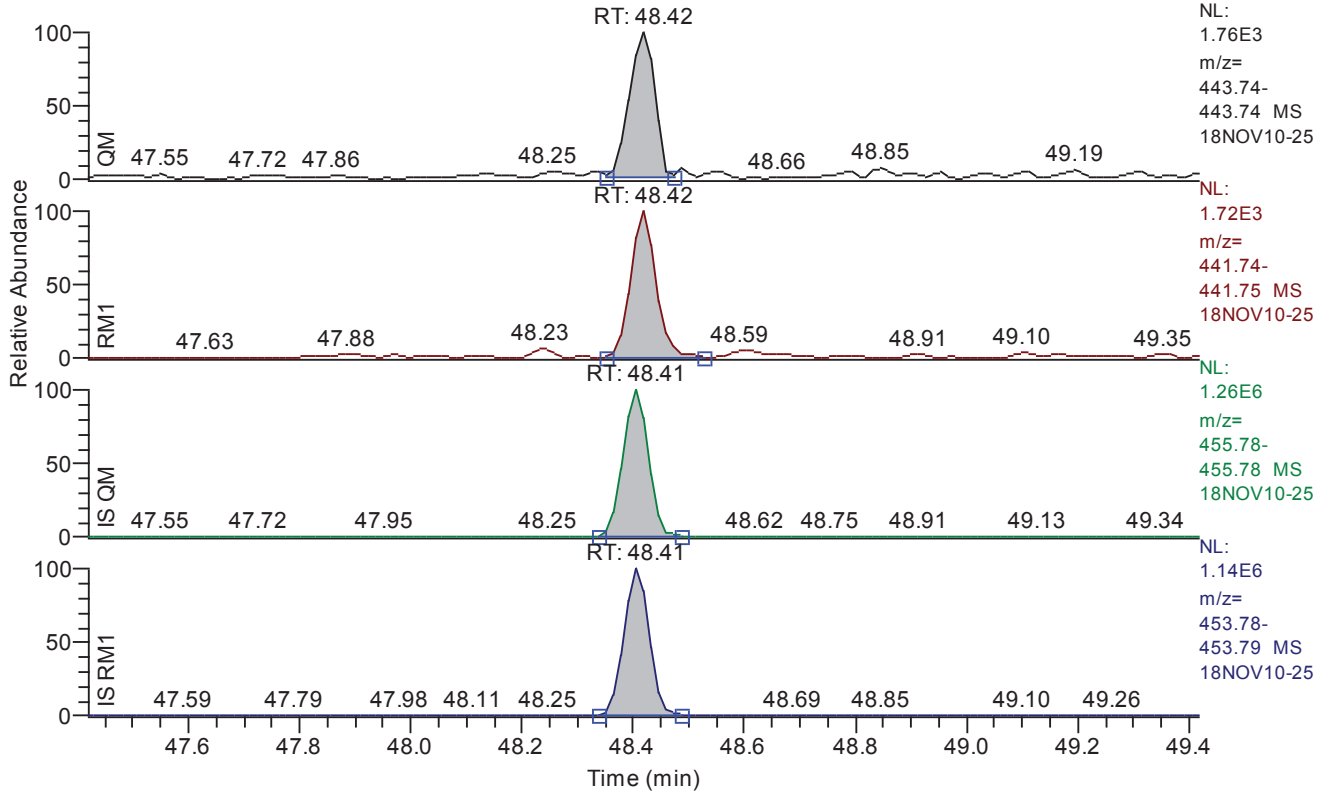


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.25
QM Area	90227
QM Integration Mode	A
RM1 Area	81175
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2015
Unqualified Amount (A)	113.334448
Adjusted Amount (A)	113.3344
Signal-to-Noise	1377
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.42 - 49.42 SM: 3G

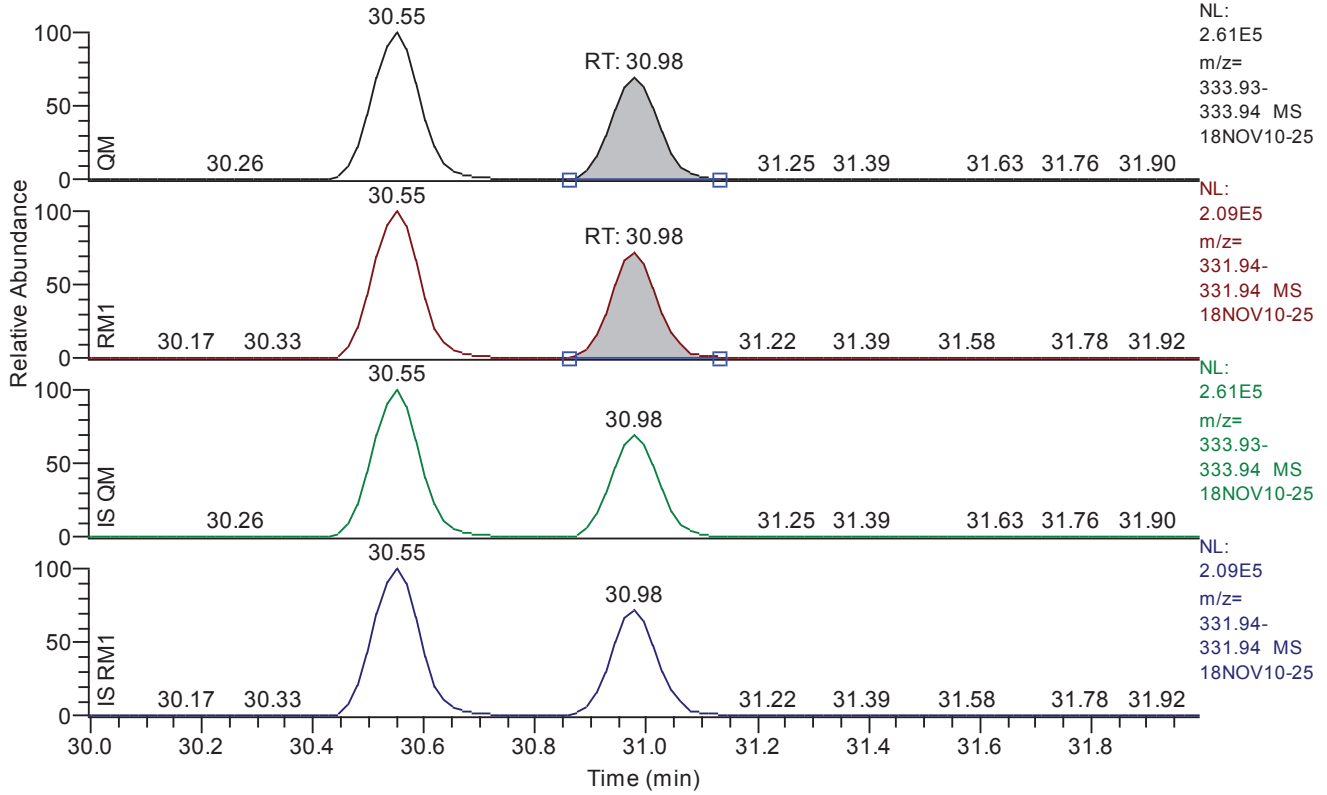


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.42
QM Area	5554
QM Integration Mode	A
RM1 Area	5328
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1402
Unqualified Amount (A)	6.609225
Adjusted Amount (A)	6.6092
Signal-to-Noise	118
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.99 - 31.99 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	30.98
QM Area	1099338
QM Integration Mode	A
RM1 Area	900225
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2826
Unqualified Amount (A)	962.242814
Adjusted Amount (A)	962.2428
Signal-to-Noise	8732
Client Flags	
Status Overview	passed
Status Info	

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 16:03
Number of Entries 272
Comment S:10914:12936:17961
Vial 79
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW008WT-DUP Grab Groundwater
Sample ID 9881310
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

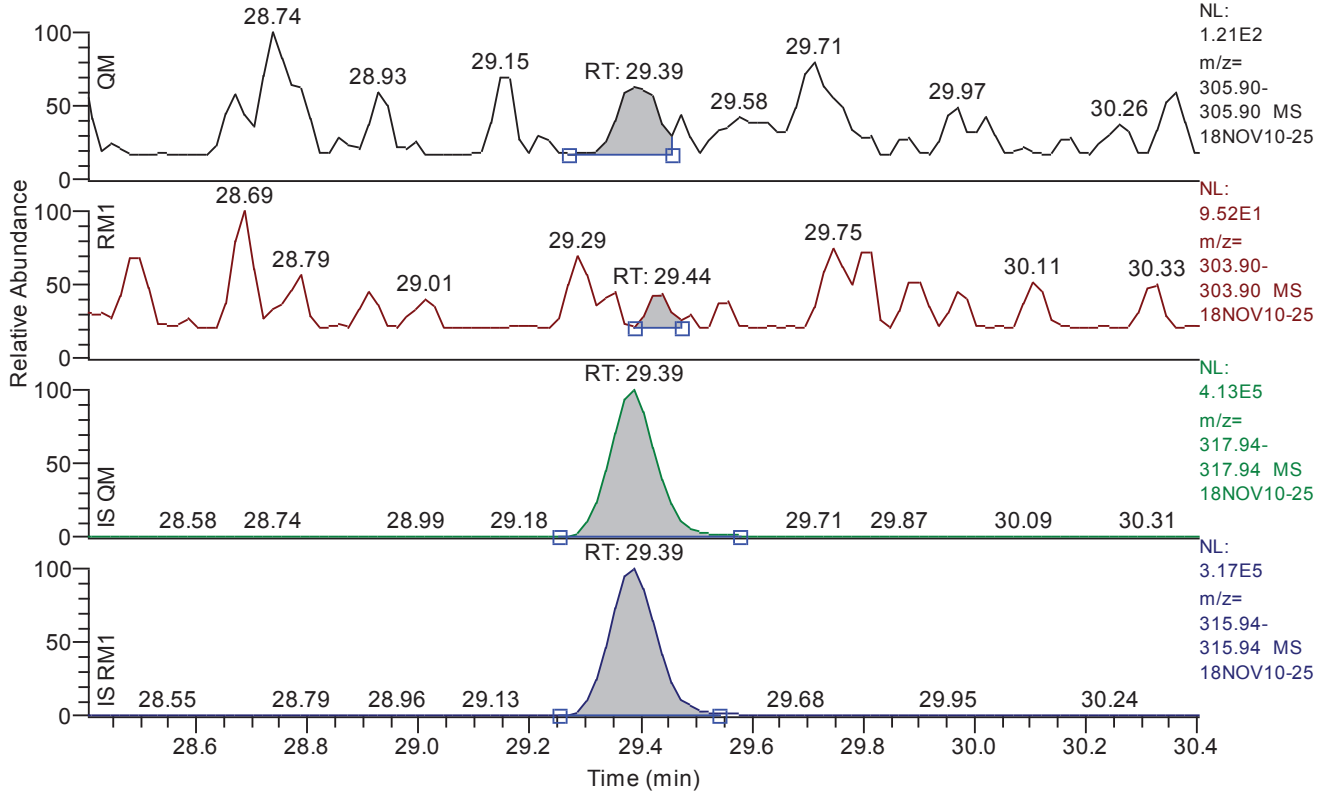
Quan x:\18nov10\18nov10-25.quan
Data x:\18nov10\18nov10-25.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.01
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.40 - 30.40 SM: 3G

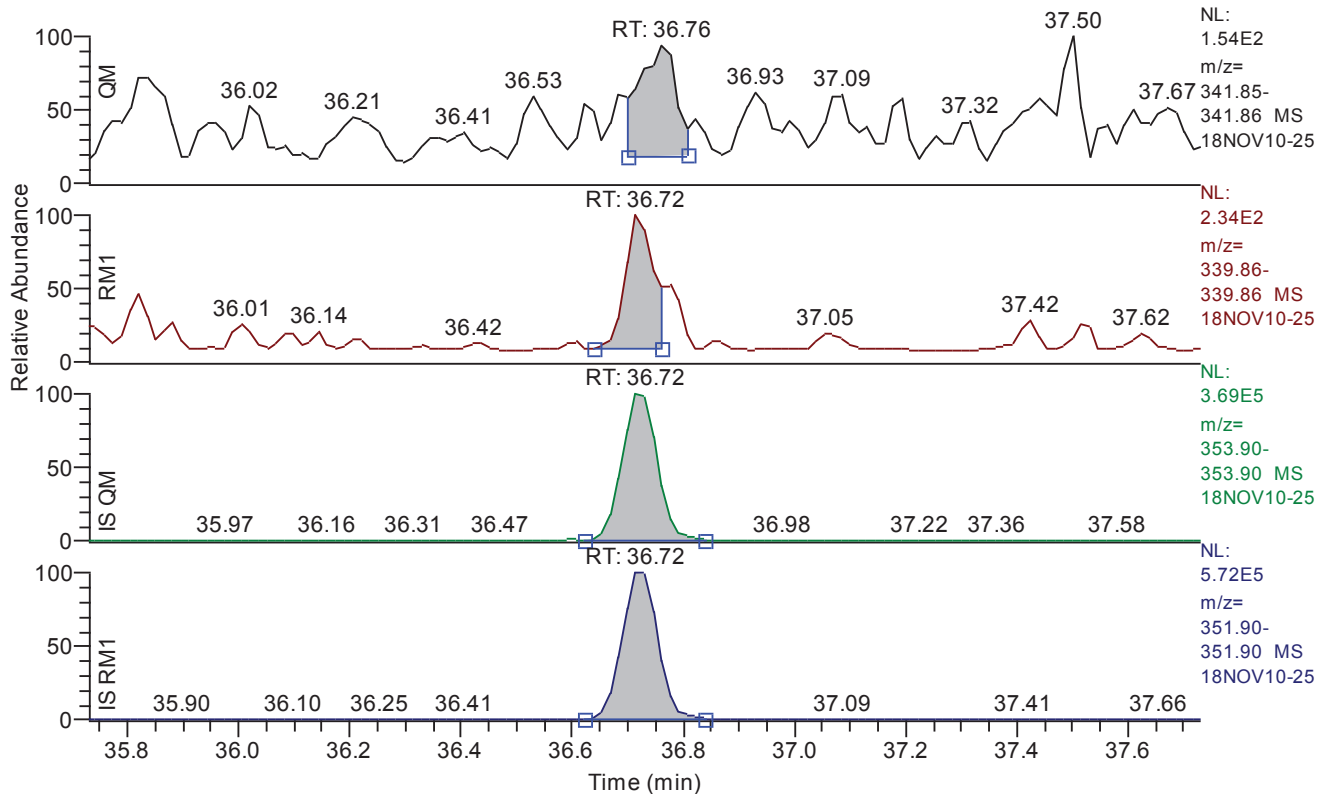


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.39
QM Area	292
QM Integration Mode	A
RM1 Area	64
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.1245
Unqualified Amount (A)	0.153246
Adjusted Amount (A)	n.d.
Signal-to-Noise	4
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A RM1Time2 > max

Chromatogram

RT: 35.73 - 37.73 SM: 3G

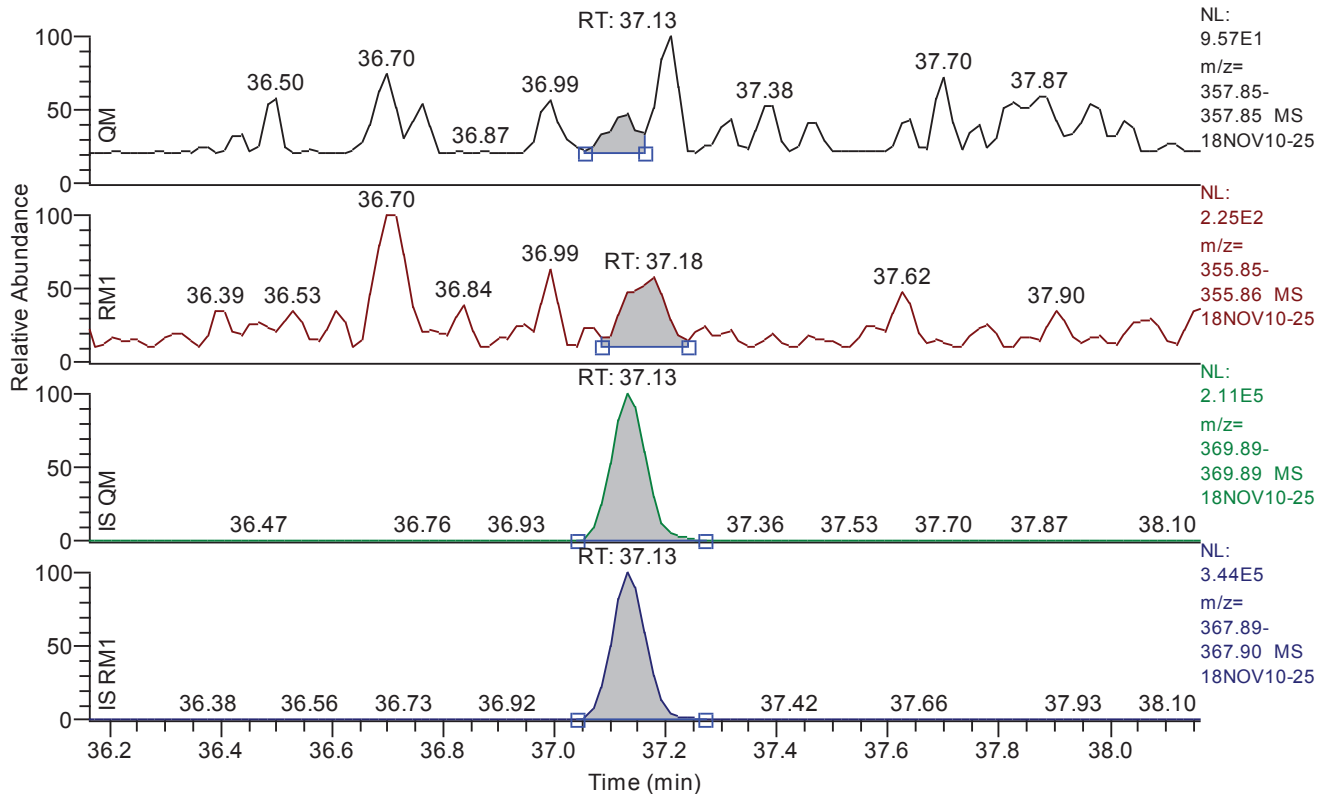


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.76
QM Area	531
QM Integration Mode	A
RM1 Area	733
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.1016
Unqualified Amount (A)	0.571501
Adjusted Amount (A)	n.d.
Signal-to-Noise	16
Client Flags	
Status Overview	failed
Status Info	Failed on: RM1Time < min

Chromatogram

RT: 36.16 - 38.16 SM: 3G



Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.13
QM Area	97
QM Integration Mode	A
RM1 Area	551
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.2396
Unqualified Amount (A)	0.529197
Adjusted Amount (A)	n.d.
Signal-to-Noise	5
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A RM1Time2 > max

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.40	29.39	29.35	29.39	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.58	30.60	30.55	30.55	failed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.47	35.45	35.47	35.44	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.74	36.75	36.72	36.72	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.16	37.13	37.16	37.13	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.45	40.45	40.45	40.42	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.59	40.58	40.59	40.57	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.28	41.28	41.29	41.27	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.48	41.48	41.47	41.47	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.60	41.62	41.59	41.59	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.91	41.91	41.91	41.90	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.29	42.28	42.28	42.26	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.02	44.02	44.03	44.00	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.22	45.22	45.23	45.20	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.78	45.77	45.76	45.76	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.25	48.25	48.25	48.23	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.42	48.42	48.42	48.41	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.99	30.98	30.98	30.98	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.71	29.71	29.71	29.71	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.35	40.35	40.35	40.35	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.38	29.39	29.39	29.30	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.55	30.55	30.55	30.55	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.43	35.44	35.44	35.33	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.73	36.72	36.72	36.72	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.13	37.13	37.13	37.13	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.43	40.42	40.42	40.43	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.58	40.57	40.57	40.46	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.27	41.27	41.27	41.25	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.47	41.47	41.47	41.47	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.59	41.59	41.59	41.59	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.90	41.90	41.90	41.90	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.28	42.26	42.26	42.25	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.01	44.00	44.02	43.99	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.21	45.20	45.20	45.20	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.76	45.76	45.76	45.69	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.23	48.23	48.23	48.23	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.41	48.41	48.41	48.47	passed	passed

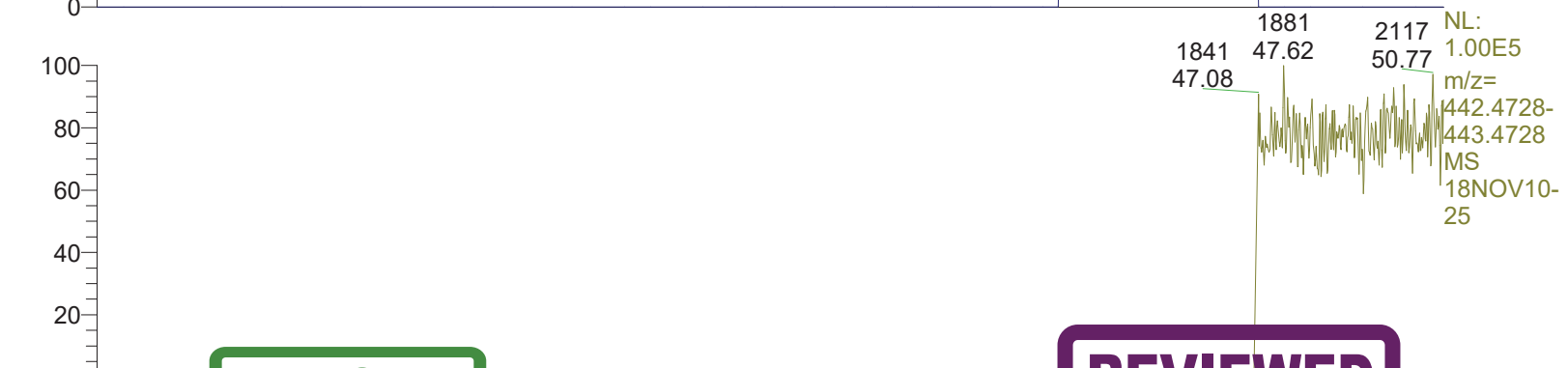
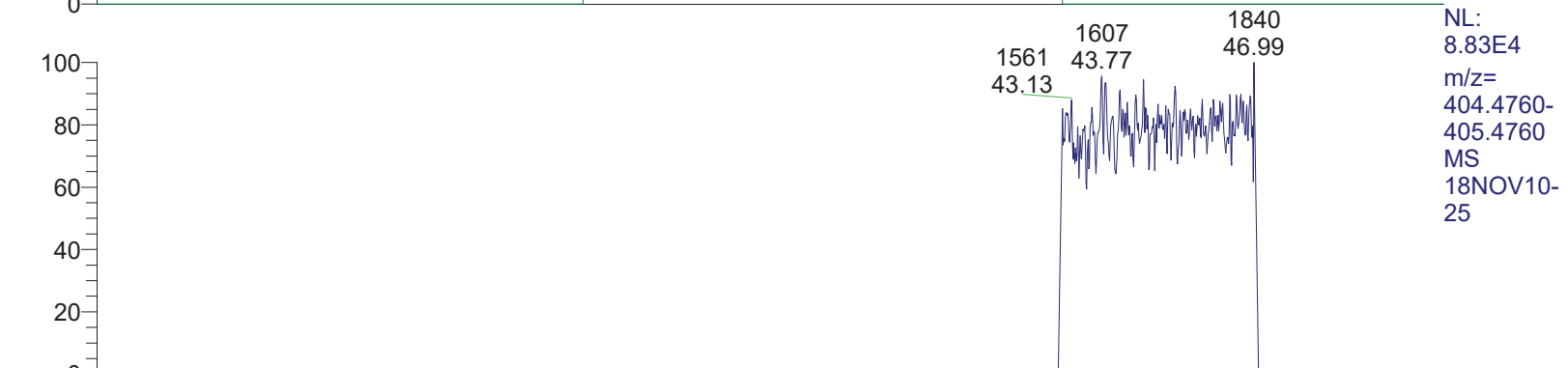
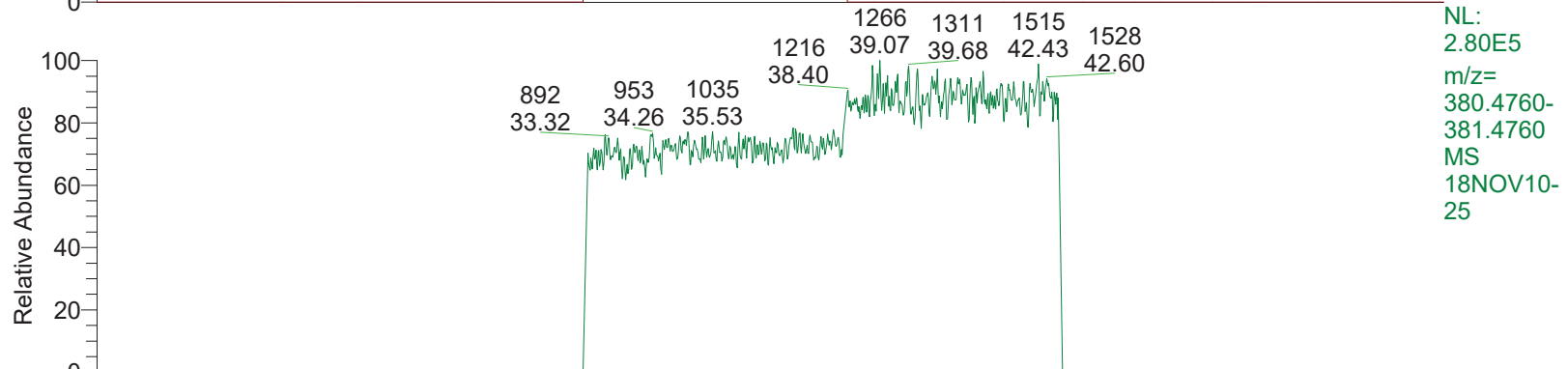
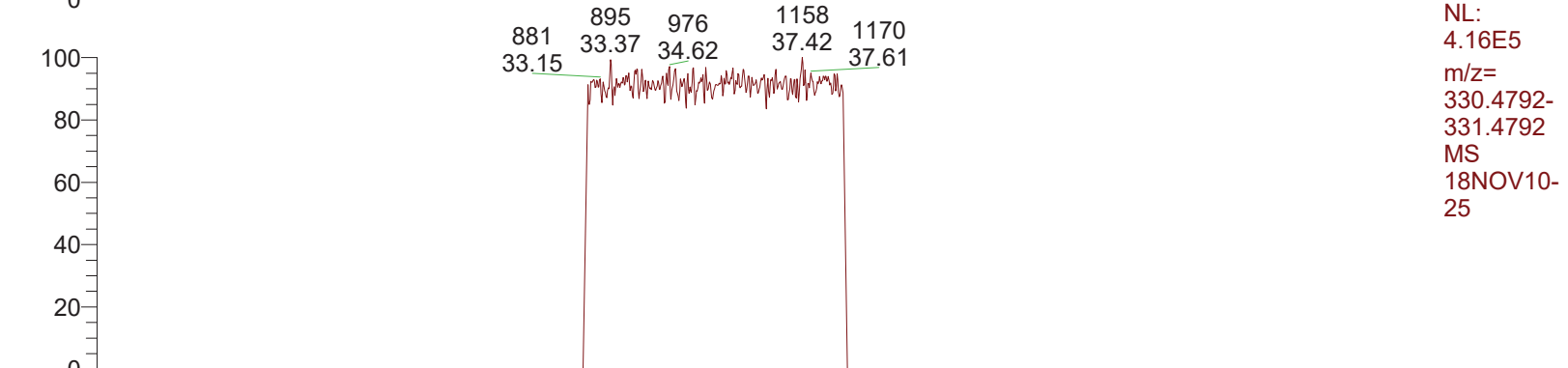
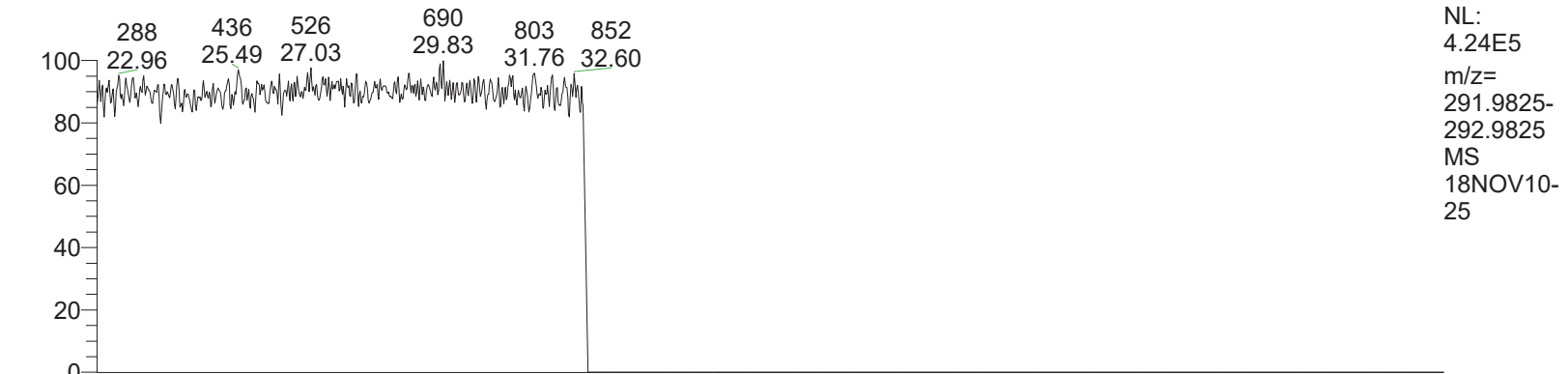
Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.39	0.1870	0.6450 - 0.8950	failed	---	0 - 0	passed
2	2378-TCDD	30.60	1.0500	0.6450 - 0.8950	failed	---	0 - 0	passed
3	12378-PeCDF	35.45	1.6091	1.3150 - 1.7850	passed	---	0 - 0	passed
4	23478-PeCDF	36.75	3.2877	1.3150 - 1.7850	failed	---	0 - 0	passed
5	12378-PeCDD	37.13	2.8083	1.3150 - 1.7850	failed	---	0 - 0	passed
6	123478-HxCDF	40.45	1.4326	1.0450 - 1.4350	passed	---	0 - 0	passed
7	123678-HxCDF	40.58	1.6398	1.0450 - 1.4350	failed	---	0 - 0	passed
8	234678-HxCDF	41.28	0.9522	1.0450 - 1.4350	failed	---	0 - 0	passed
9	123478-HxCDD	41.48	0.3808	1.0450 - 1.4350	failed	---	0 - 0	passed
10	123678-HxCDD	41.62	0.2890	1.0450 - 1.4350	failed	---	0 - 0	passed
11	123789-HxCDD	41.91	1.3202	1.0450 - 1.4350	passed	---	0 - 0	passed
12	123789-HxCDF	42.28	1.0315	1.0450 - 1.4350	failed	---	0 - 0	passed
13	1234678-HpCDF	44.02	1.0702	0.8750 - 1.2050	passed	---	0 - 0	passed
14	1234678-HpCDD	45.22	1.1977	0.8750 - 1.2050	passed	---	0 - 0	passed
15	1234789-HpCDF	45.77	0.7625	0.8750 - 1.2050	failed	---	0 - 0	passed
16	OCDD	48.25	0.8997	0.7550 - 1.0250	passed	---	0 - 0	passed
17	OCDF	48.42	0.9594	0.7550 - 1.0250	passed	---	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.98	0.8189	0.6450 - 0.8950	passed	48.59	35 - 197	passed
19	13C12-1234-TCDD	29.71	0.7936	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.35	1.2493	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.39	0.7754	0.6450 - 0.8950	passed	54.59	40 - 135	passed
22	13C12-2378-TCDD	30.55	0.7912	0.6450 - 0.8950	passed	70.01	40 - 135	passed
23	13C12-12378-PeCDF	35.44	1.5489	1.3150 - 1.7850	passed	53.63	40 - 135	passed
24	13C12-23478-PeCDF	36.72	1.5658	1.3150 - 1.7850	passed	55.10	40 - 135	passed
25	13C12-12378-PeCDD	37.13	1.5945	1.3150 - 1.7850	passed	59.17	40 - 135	passed
26	13C12-123478-HxCDF	40.42	0.5251	0.4250 - 0.5950	passed	45.48	40 - 135	passed
27	13C12-123678-HxCDF	40.57	0.5351	0.4250 - 0.5950	passed	44.50	40 - 135	passed
28	13C12-234678-HxCDF	41.27	0.5372	0.4250 - 0.5950	passed	44.32	40 - 135	passed
29	13C12-123478-HxCDD	41.47	1.2667	1.0450 - 1.4350	passed	58.34	40 - 135	passed
30	13C12-123678-HxCDD	41.59	1.2711	1.0450 - 1.4350	passed	52.23	40 - 135	passed
31	13C12-123789-HxCDD	41.90	1.2363	1.0450 - 1.4350	passed	56.22	40 - 135	passed
32	13C12-123789-HxCDF	42.26	0.5323	0.4250 - 0.5950	passed	61.00	40 - 135	passed
33	13C12-1234678-HpCDF	44.00	0.4532	0.3650 - 0.5150	passed	47.73	40 - 135	passed
34	13C12-1234678-HpCDD	45.20	1.0569	0.8750 - 1.2050	passed	54.01	40 - 135	passed
35	13C12-1234789-HpCDF	45.76	0.4601	0.3650 - 0.5150	passed	47.70	40 - 135	passed
36	13C12-OCDD	48.23	0.9016	0.7550 - 1.0250	passed	53.93	40 - 135	passed
37	13C12-OCDF	48.41	0.8955	0.7550 - 1.0250	passed	45.78	40 - 135	passed

Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	failed	29.39	292	A	55	M	0.1245	0.149023	n.d.	0.000000	4	
2	2378-TCDD	failed	30.60	175	A	184	A	0.0697	0.204874	n.d.	0.000000	14	
3	12378-PeCDF	passed	35.45	485	A	780	A	0.1255	0.656455	0.6565	0.000000	14	
4	23478-PeCDF	failed	36.75	223	M	733	A	0.1016	0.432010	n.d.	0.000000	15	
5	12378-PeCDD	failed	37.13	97	A	272	M	0.2396	0.301178	n.d.	0.000000	5	
6	123478-HxCDF	passed	40.45	438	A	628	A	0.1028	0.525792	0.5258	0.000000	12	
7	123678-HxCDF	failed	40.58	554	A	908	A	0.1061	0.715721	n.d.	0.000000	20	
8	234678-HxCDF	failed	41.28	434	A	413	A	0.1047	0.425120	n.d.	0.000000	12	
9	123478-HxCDD	failed	41.48	401	A	153	A	0.1138	0.339354	n.d.	0.000000	9	
10	123678-HxCDD	failed	41.62	383	A	111	A	0.1297	0.328753	n.d.	0.000000	6	
11	123789-HxCDD	passed	41.91	235	A	310	A	0.1180	0.339730	0.3397	0.000000	8	
12	123789-HxCDF	failed	42.28	1081	A	1115	A	0.0903	0.922596	n.d.	0.000000	33	
13	1234678-HpCDF	passed	44.02	4620	A	4945	A	0.0638	4.641279	4.6413	0.000000	187	
14	1234678-HpCDD	passed	45.22	6473	A	7752	A	0.1292	9.605498	9.6055	0.000000	183	
15	1234789-HpCDF	failed	45.77	606	A	462	A	0.0691	0.594471	n.d.	0.000000	24	
16	OCDD	passed	48.25	90227	A	81175	A	0.2015	113.334448	113.3344	0.000000	1377	
17	OCDF	passed	48.42	5554	A	5328	A	0.1402	6.609225	6.6092	0.000000	118	
18	13C12-1278-TCDD (CRS)	passed	30.98	1099338	A	900225	A	0.2826	962.242814	962.2428	1980.198020	8732	
19	13C12-1234-TCDD	passed	29.71	2196832	A	1743493	A	0.2952	1980.198020	1980.1980	1980.198020	16772	
20	13C12-123468-HxCDD	passed	40.35	2435127	A	3042312	A	0.2175	1980.198020	1980.1980	1980.198020	22758	
21	13C12-2378-TCDF	passed	29.39	2467600	A	1913425	A	0.1791	1080.905212	1080.9052	1980.198020	15548	
22	13C12-2378-TCDD	passed	30.55	1549823	A	1226235	A	0.2933	1386.273296	1386.2733	1980.198020	12354	
23	13C12-12378-PeCDF	passed	35.44	1597021	A	2473584	A	0.4303	1061.938216	1061.9382	1980.198020	8006	
24	13C12-23478-PeCDF	passed	36.72	1625019	A	2544493	A	0.4316	1091.052692	1091.0527	1980.198020	8824	
25	13C12-12378-PeCDD	passed	37.13	933441	A	1488418	A	0.3366	1171.717970	1171.7180	1980.198020	12337	
26	13C12-123478-HxCDF	passed	40.42	2363128	A	1240929	A	0.2929	900.550653	900.5507	1980.198020	7781	
27	13C12-123678-HxCDF	passed	40.57	2454813	A	1313530	A	0.2741	881.132255	881.1323	1980.198020	7821	
28	13C12-234678-HxCDF	passed	41.27	2233174	A	1199632	A	0.2997	877.651245	877.6512	1980.198020	7398	
29	13C12-123478-HxCDD	passed	41.47	1407810	A	1783327	A	0.2178	1155.193728	1155.1937	1980.198020	14102	
30	13C12-123678-HxCDD	passed	41.59	1306378	A	1660508	A	0.2098	1034.323272	1034.3233	1980.198020	12483	
31	13C12-123789-HxCDD	passed	41.90	1347846	A	1666326	A	0.2222	1113.189441	1113.1894	1980.198020	13073	
32	13C12-123789-HxCDF	passed	42.26	2864344	A	1524610	A	0.3226	1207.832629	1207.8326	1980.198020	9178	
33	13C12-1234678-HpCDF	passed	44.00	2369036	A	1073634	A	0.3126	945.099588	945.0996	1980.198020	7858	
34	13C12-1234678-HpCDD	passed	45.20	1398516	A	1478053	A	0.3159	1069.524524	1069.5245	1980.198020	9411	
35	13C12-1234789-HpCDF	passed	45.76	1979269	A	910678	A	0.3722	944.617960	944.6180	1980.198020	6977	
36	13C12-OCDD	passed	48.23	3193991	A	2879713	A	0.1314	2135.857175	2135.8572	3960.396040	47003	
37	13C12-OCDF	passed	48.41	3989130	A	3572364	A	0.1121	1813.022404	1813.0224	3960.396040	46225	

RT: 22.50 - 51.00

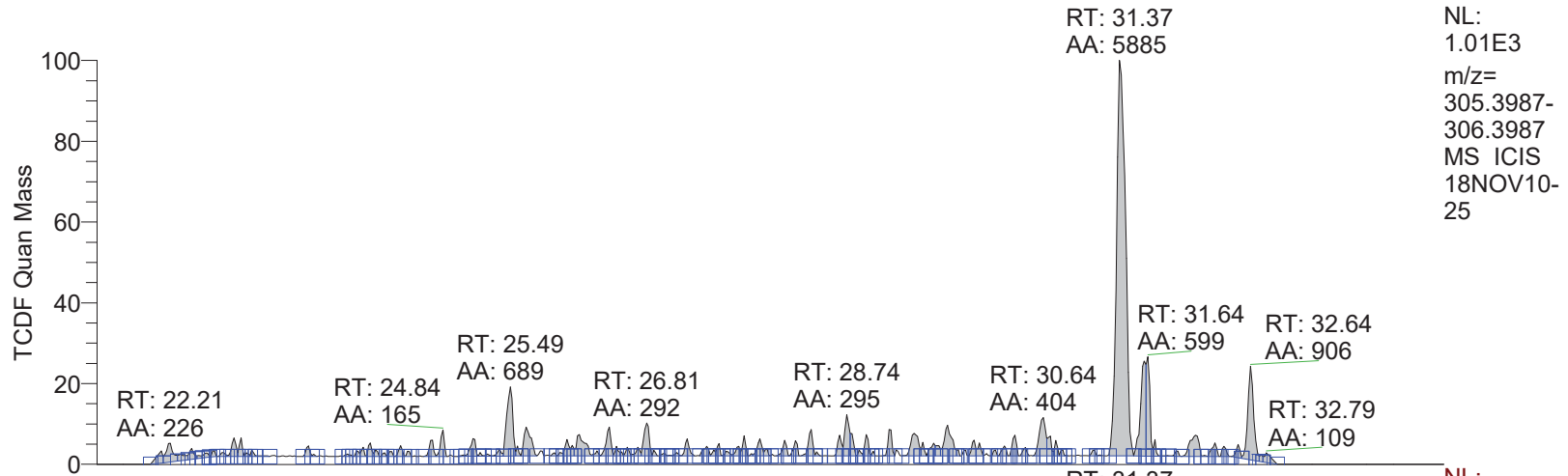


APPROVED
By AQ46 at 10:50 pm, 11/12/18

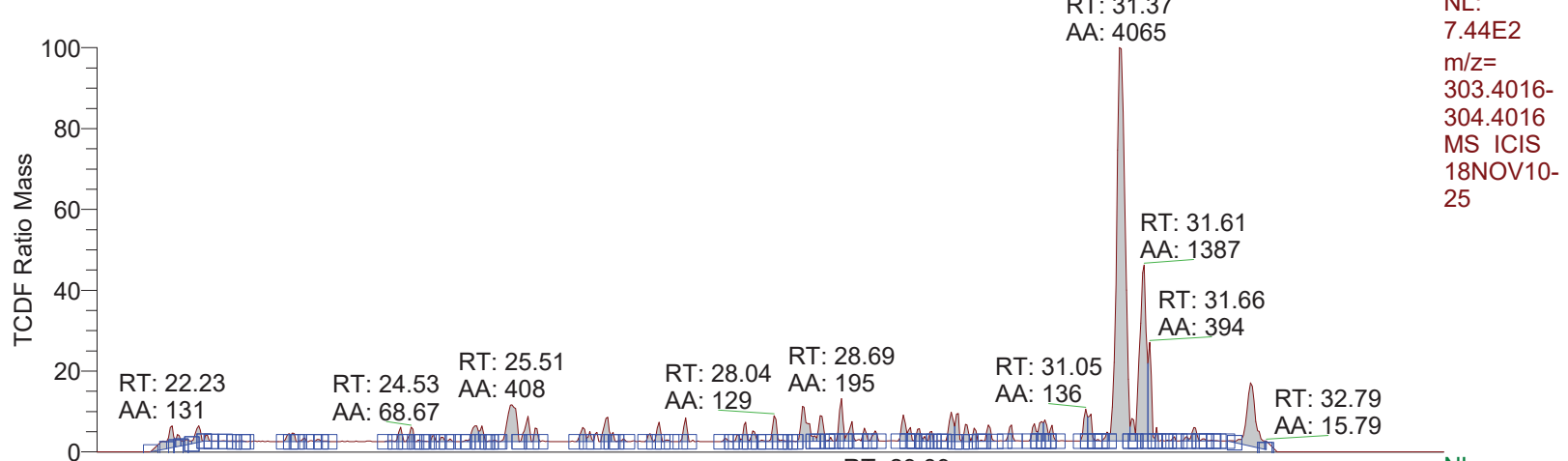
REVIEWED
By uild at 1:56 pm, 11/13/18

Time (min)

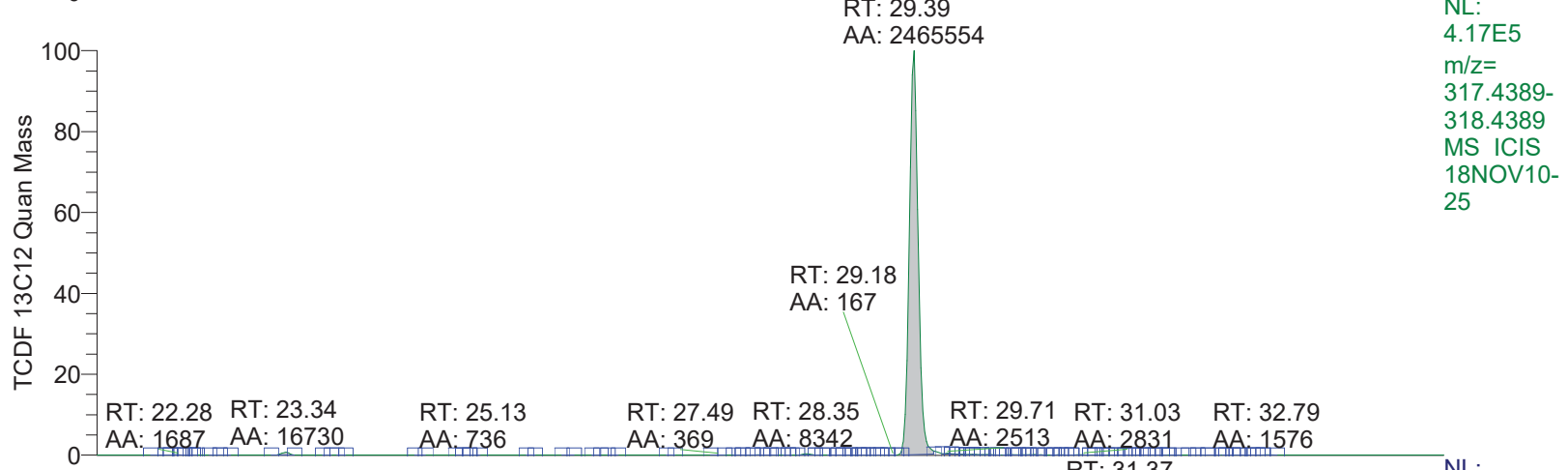
RT: 21.50 - 34.50



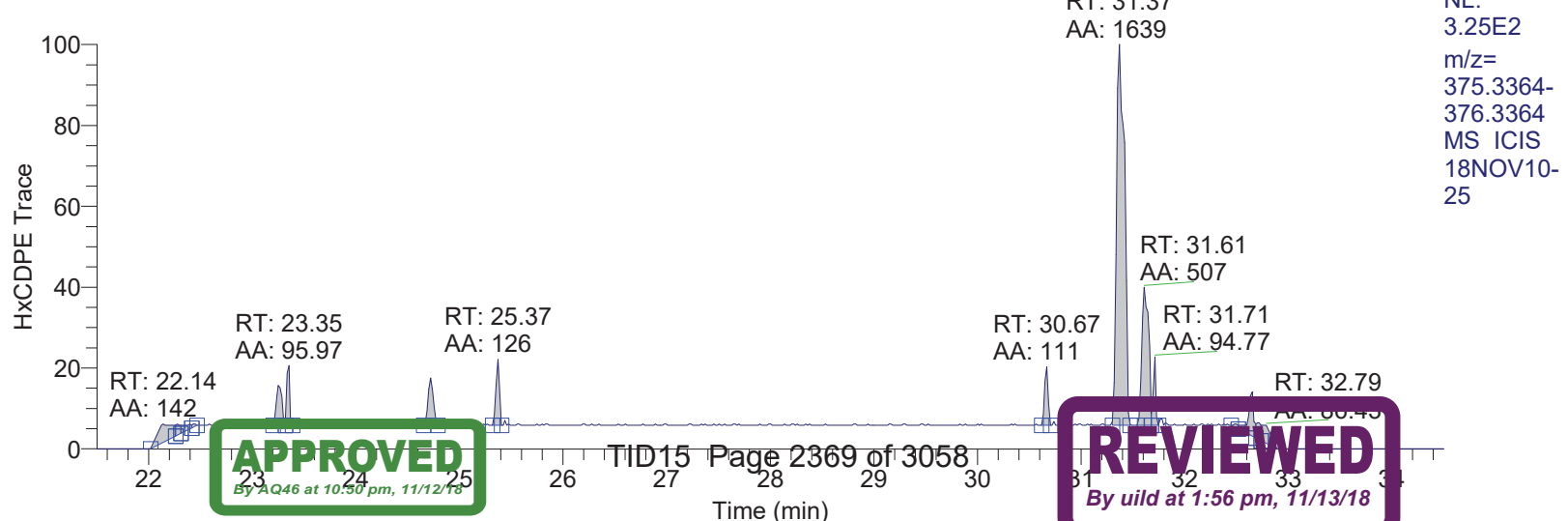
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305.3987-
306.3987
MS ICIS
18NOV10-
25



NL:
7.44E2
m/z=
303.4016-
304.4016
MS ICIS
18NOV10-
25



NL:
4.17E5
m/z=
317.4389-
318.4389
MS ICIS
18NOV10-
25

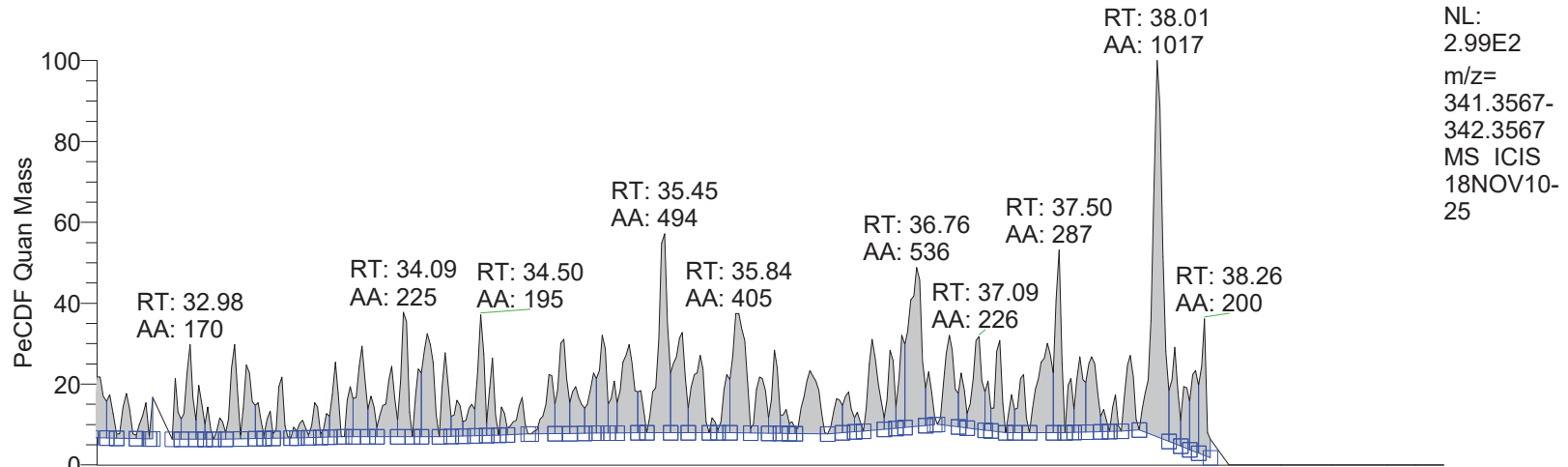


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3.25E2
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MS ICIS
18NOV10-
25

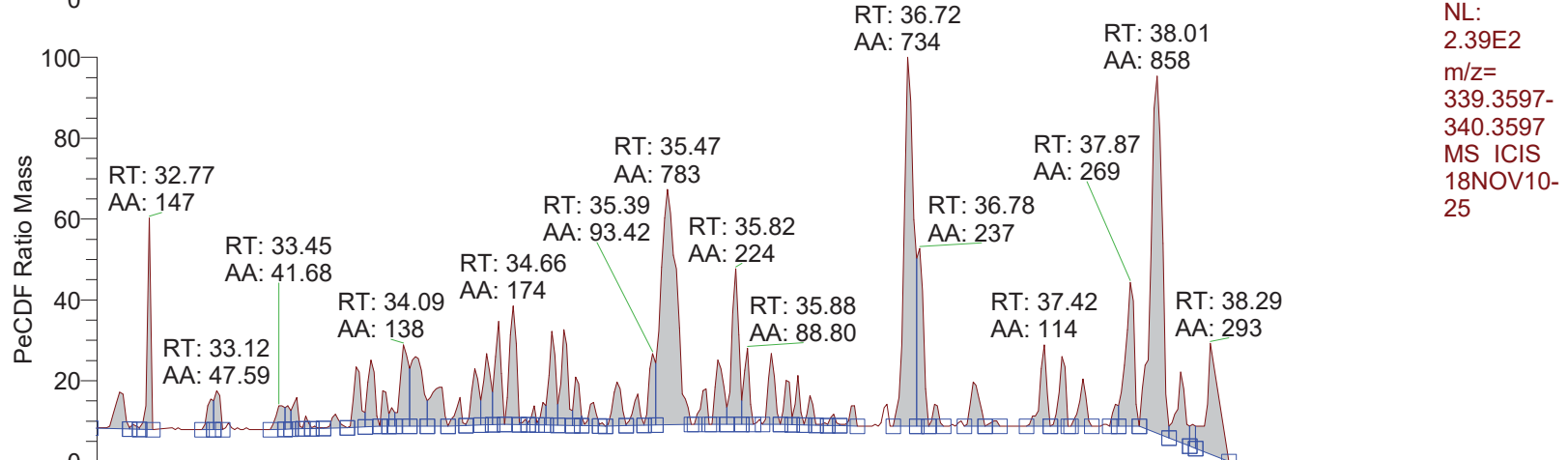
APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

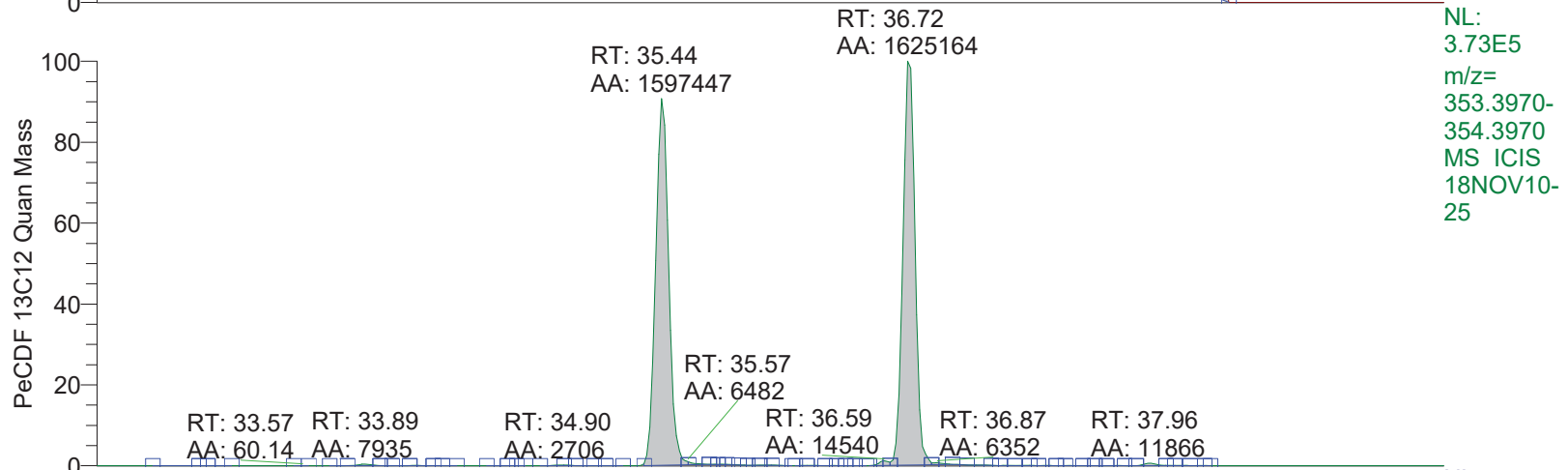
RT: 32.50 - 39.50



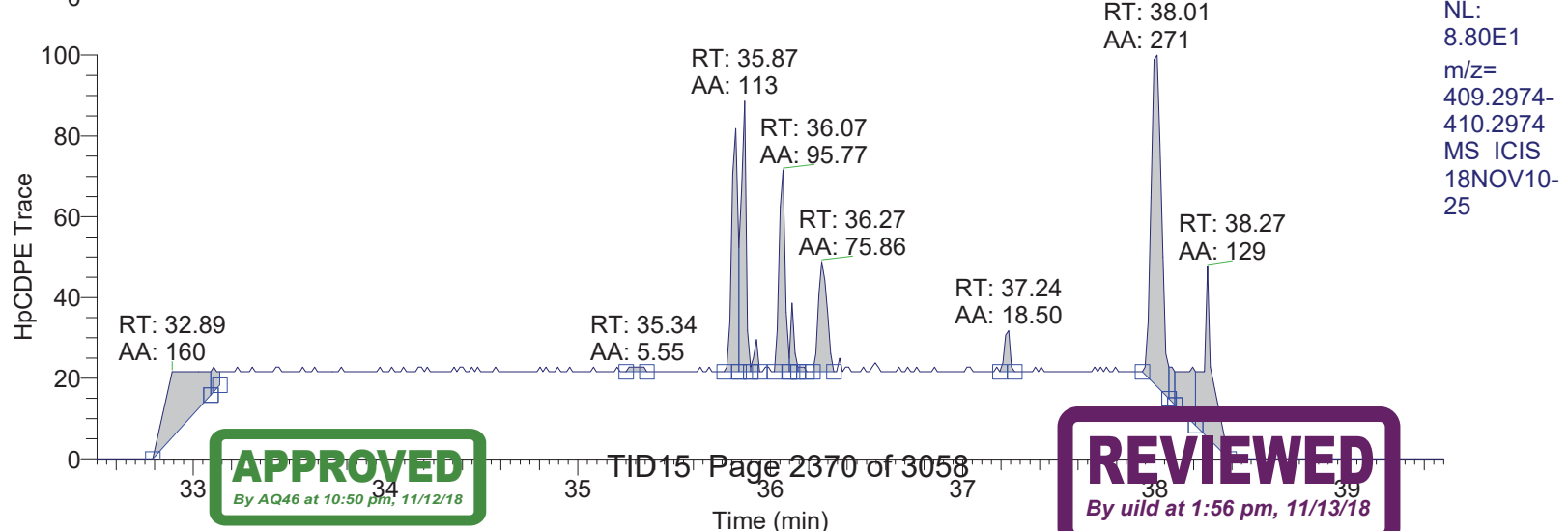
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342.3567
MS ICIS
18NOV10-
25



NL:
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340.3597
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18NOV10-
25



NL:
3.73E5
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353.3970-
354.3970
MS ICIS
18NOV10-
25



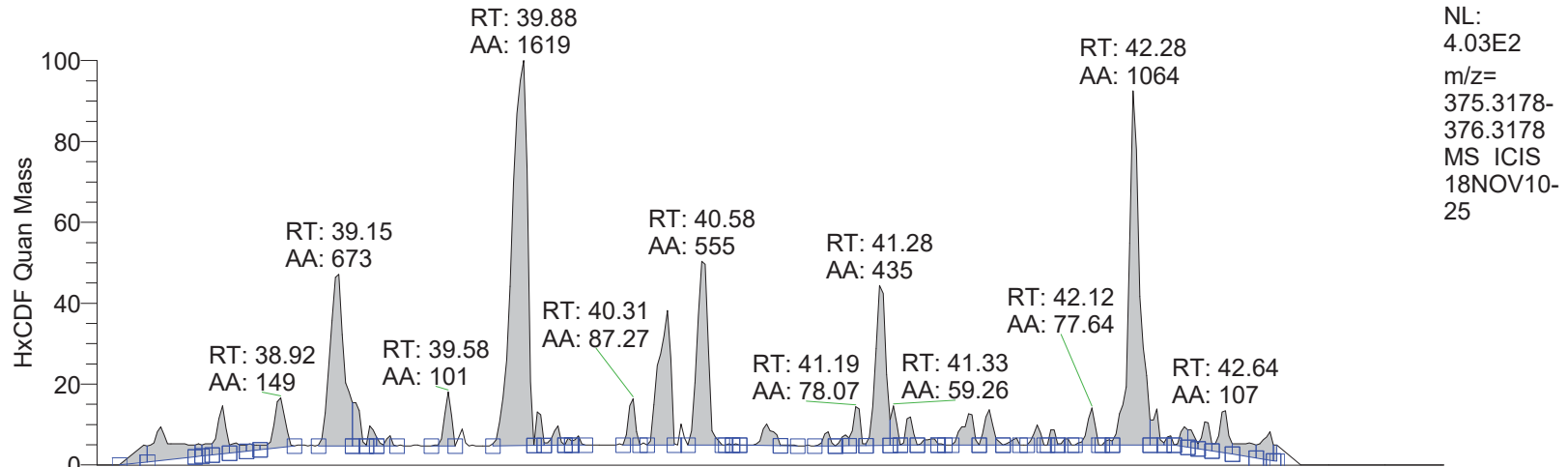
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MS ICIS
18NOV10-
25

APPROVED
By AQ46 at 10:50 pm, 11/12/18

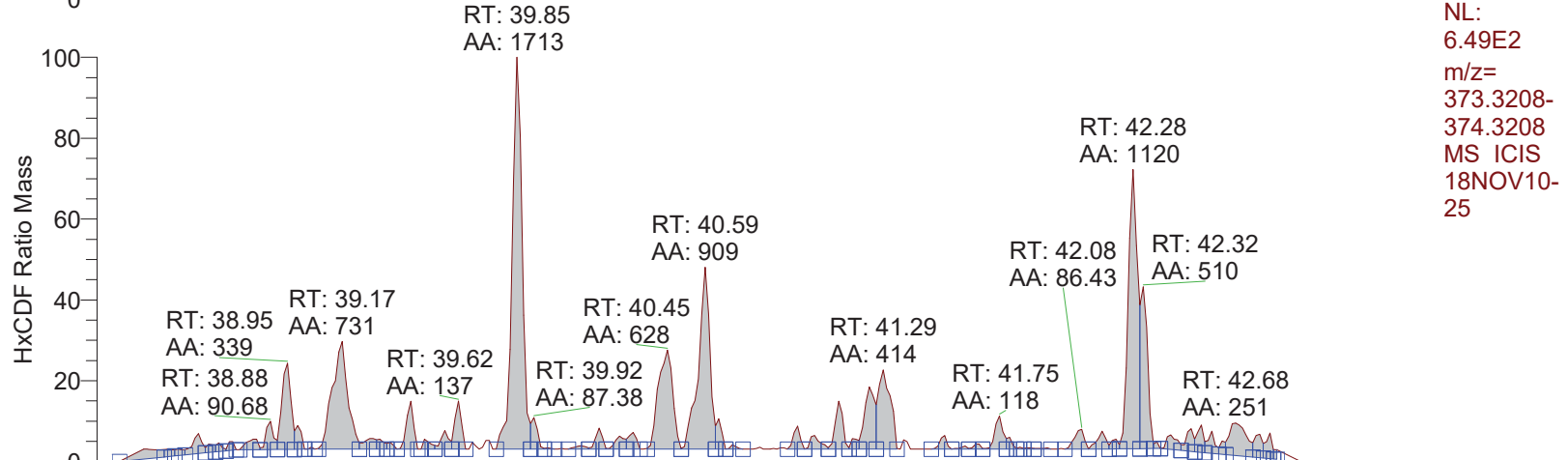
REVIEWED
By uild at 1:56 pm, 11/13/18

Time (min)

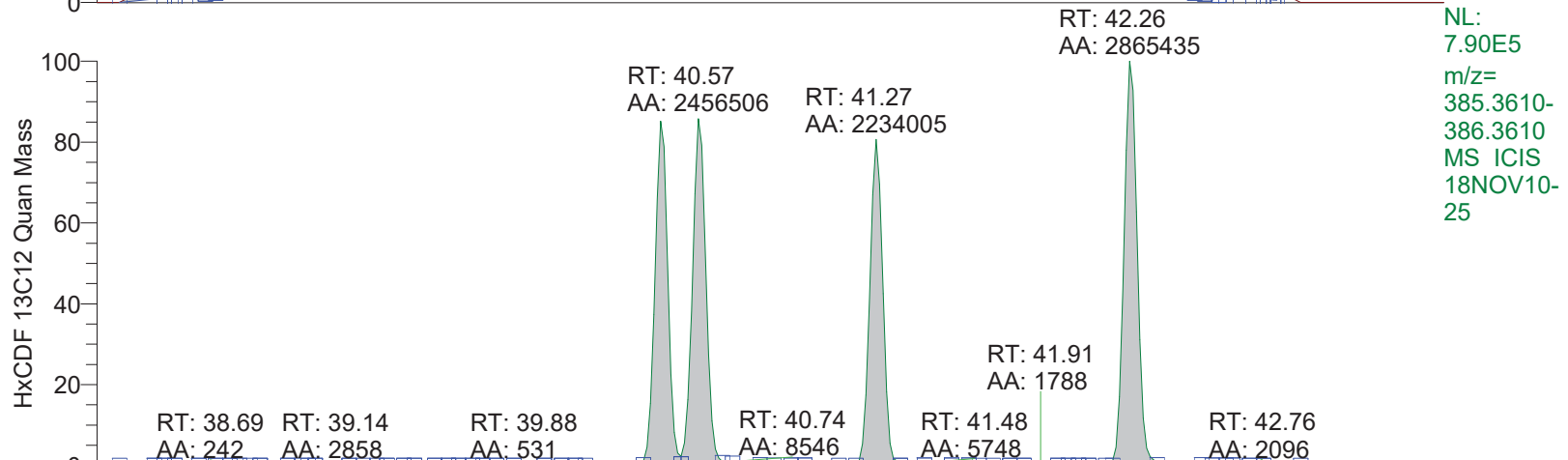
RT: 38.20 - 43.50



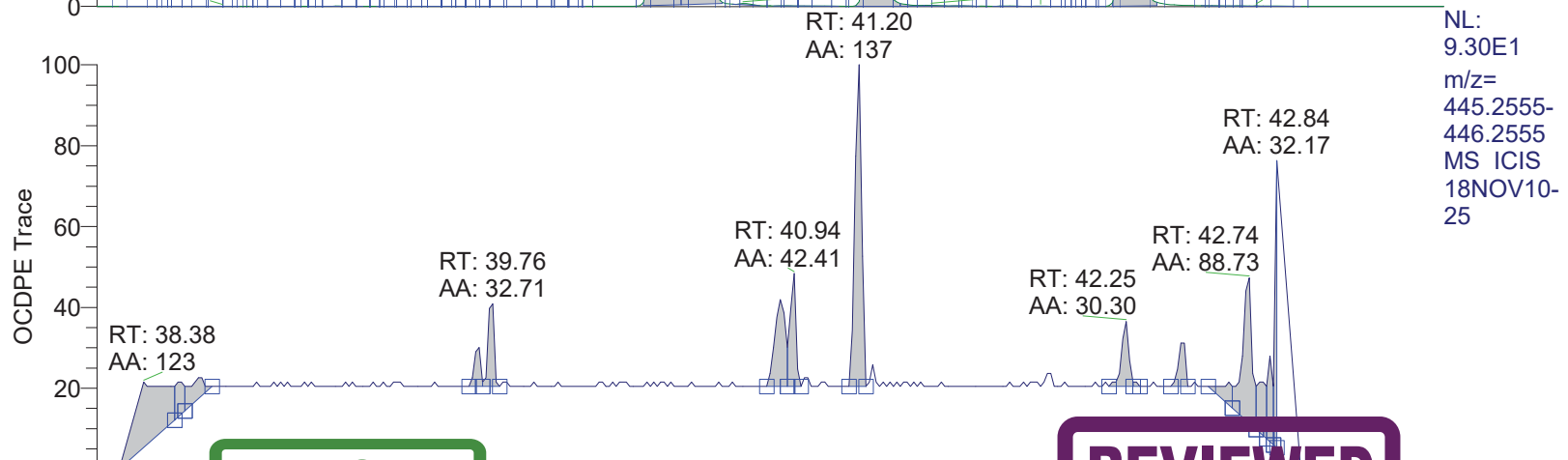
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18NOV10-
25



NL:
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374.3208
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18NOV10-
25



NL:
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386.3610
MS ICIS
18NOV10-
25

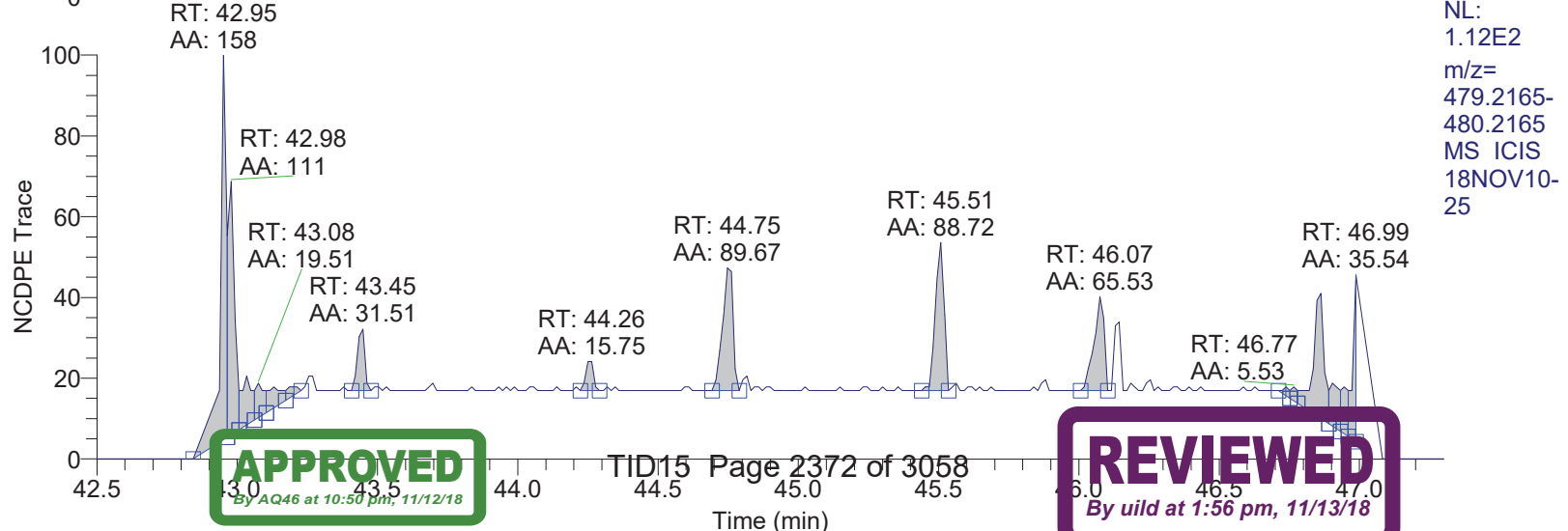
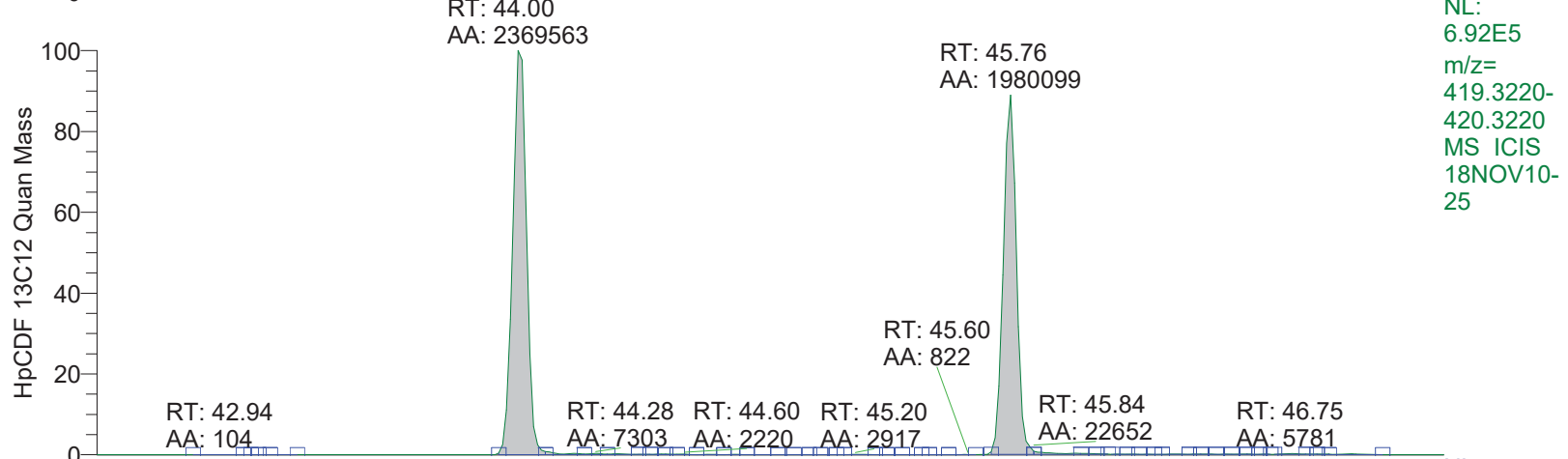
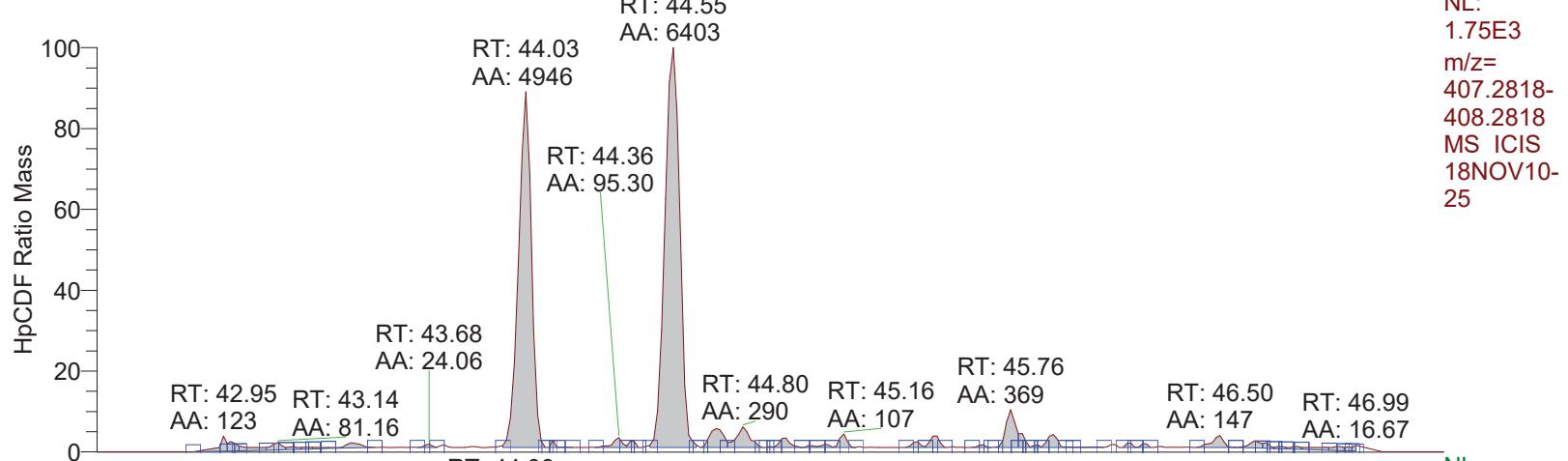
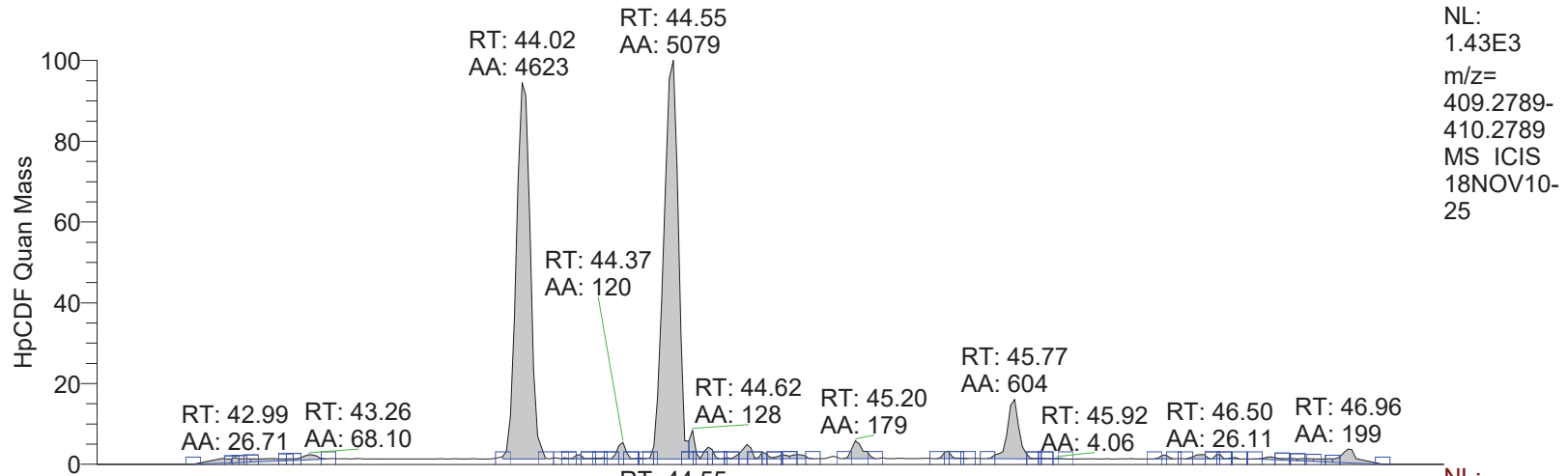


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446.2555
MS ICIS
18NOV10-
25

APPROVED
By AC46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

RT: 42.50 - 47.30

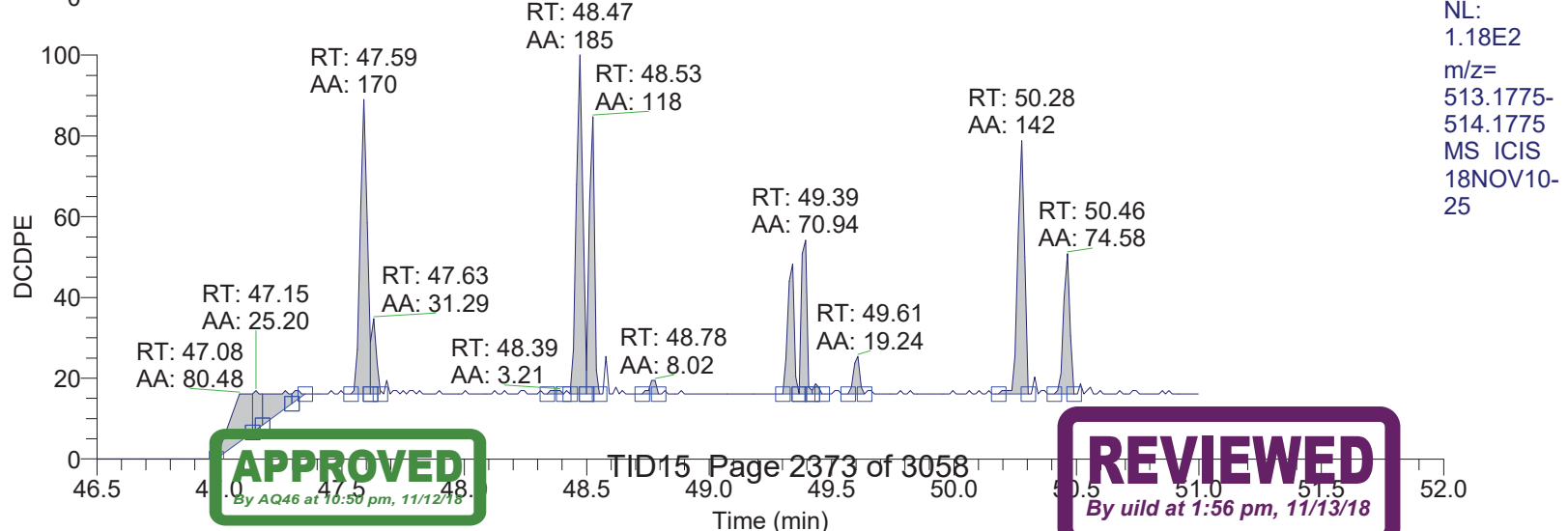
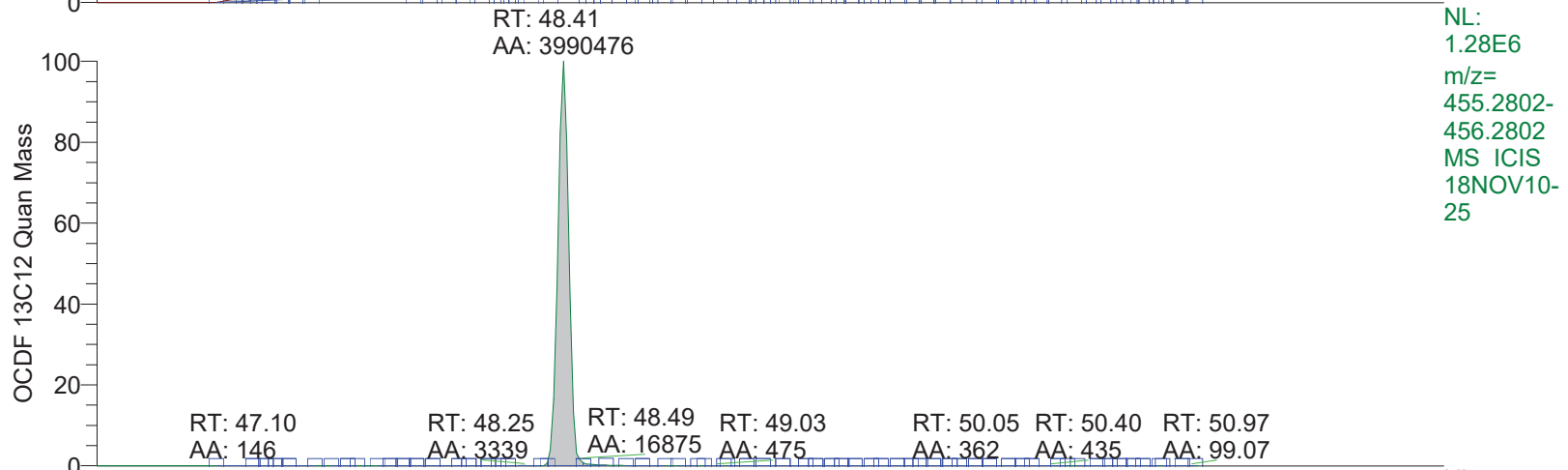
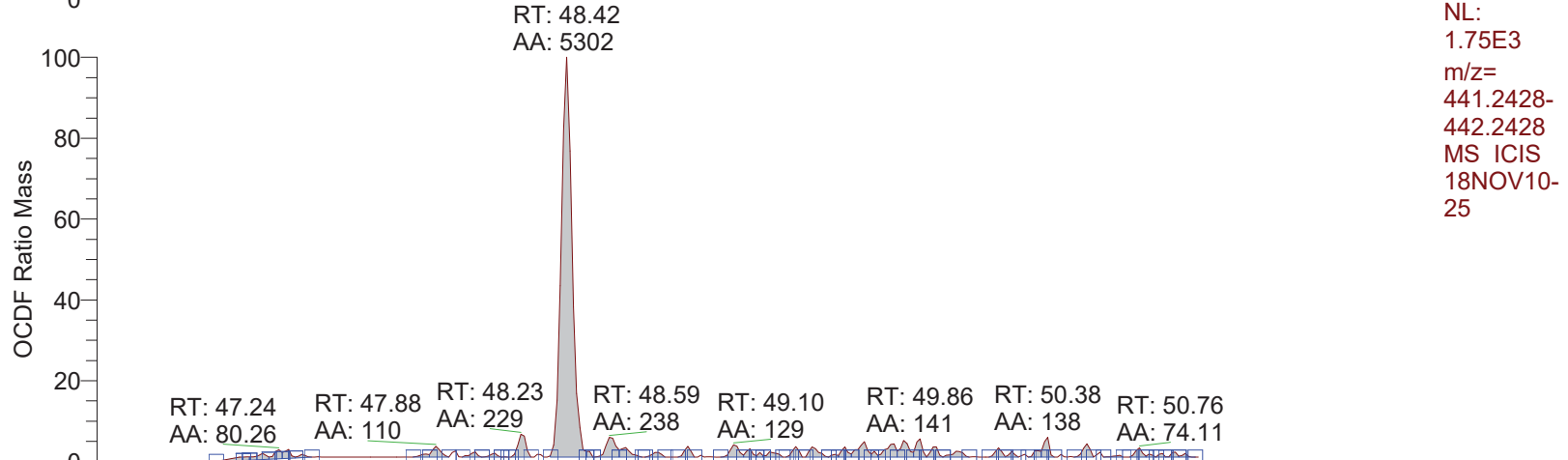
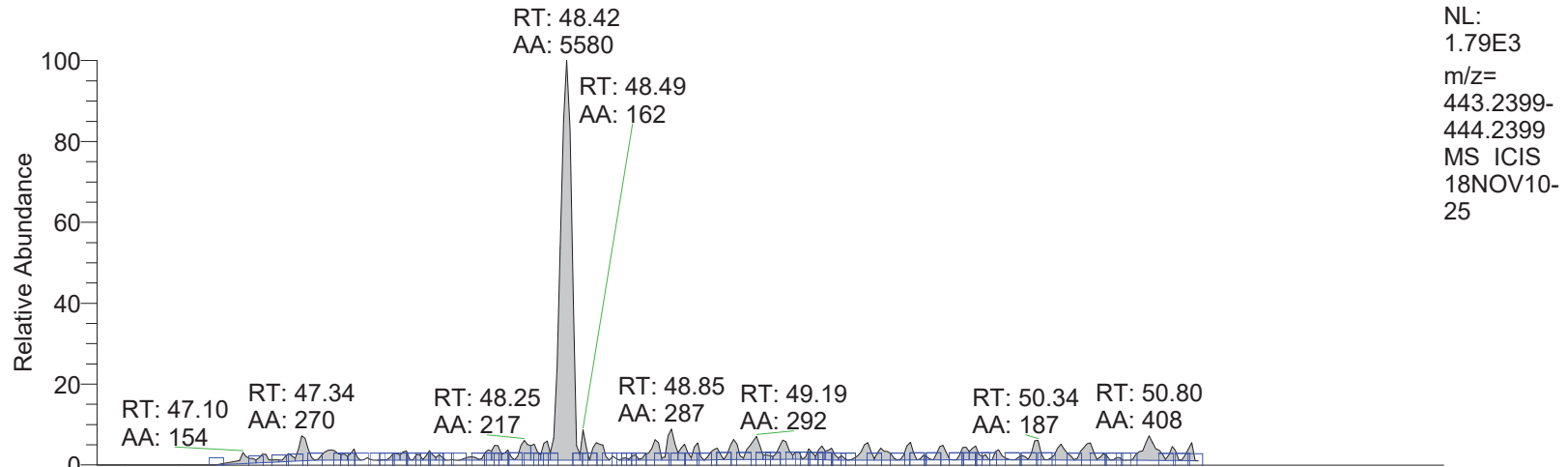


APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

Time (min)

RT: 46.50 - 52.00



18NOV10-25

*** file opened Sat Nov 10 16:08:28 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 16:08:27

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes

MID window end time was 22.010000 minutes

MID window terminated after 32.800000 minutes

MID window end time was 32.800000 minutes

18NOV10-25

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	93.5000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0077	FVINLET	0.0383	FVSR	0.0366
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	93.5000	LKM	442.9723	MASS	93.5000
MDAC	1372781.8584	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9866	RELEN	0.0000
RES	11378.4007	RPUSHER	-6.0879	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	93.5000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.0e-005 mbar
Analyzer Penning: 6.5e-008 mbar
Pirani Analyse: 7.7e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 10628.
MID Time window 2: Resolution is 11049.
MID Time window 3: Resolution is 11173.
MID Time window 4: Resolution is 11576.



18NOV10-25

MID Time Window 5: Resolution is 11657.
MID Time Window 6: Resolution is 11378.

Amplifier Offset: 81.

*** File closed Sat Nov 10 16:59:29 2018



Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 16:59
Number of Entries 251
Comment S:10914:12936:17961
Vial 80
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW009WT Grab Groundwater
Sample ID 9881313
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

Quan x:\18nov10\18nov10-26.quan
Data x:\18nov10\18nov10-26.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.03
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.46	passed	passed	passed	passed	passed	passed	
2	2378-TCDD	30.64	failed	failed	passed	failed	passed	passed	Failed on: CAA Ratio1A
3	12378-PeCDF	35.49	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
4	23478-PeCDF	36.77	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
5	12378-PeCDD	37.18	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
6	123478-HxCDF	40.45	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
7	123678-HxCDF	40.63	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
8	234678-HxCDF	41.30	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
9	123478-HxCDD	41.54	passed	passed	passed	passed	passed	passed	
10	123678-HxCDD	41.61	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
11	123789-HxCDD	41.93	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
12	123789-HxCDF	42.31	passed	passed	passed	passed	passed	passed	
13	1234678-HpCDF	44.05	passed	passed	passed	passed	passed	passed	
14	1234678-HpCDD	45.26	passed	passed	passed	passed	passed	passed	
15	1234789-HpCDF	45.79	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
16	OCDD	48.27	passed	passed	passed	passed	passed	passed	
17	OCDF	48.45	passed	passed	passed	passed	passed	passed	
18	13C12-1278-TCDD (CRS)	31.01	passed	passed	passed	passed	passed	passed	
19	13C12-1234-TCDD	29.75	passed	passed	passed	passed	passed	passed	
20	13C12-123468-HxCDD	40.38	passed	passed	passed	passed	passed	passed	
21	13C12-2378-TCDF	29.42	passed	passed	passed	passed	passed	passed	
22	13C12-2378-TCDD	30.59	passed	passed	passed	passed	passed	passed	
23	13C12-12378-PeCDF	35.47	passed	passed	passed	passed	passed	passed	
24	13C12-23478-PeCDF	36.75	passed	passed	passed	passed	passed	passed	
25	13C12-12378-PeCDD	37.17	passed	passed	passed	passed	passed	passed	
26	13C12-123478-HxCDF	40.45	passed	passed	passed	passed	passed	passed	
27	13C12-123678-HxCDF	40.60	passed	passed	passed	passed	passed	passed	
28	13C12-234678-HxCDF	41.30	passed	passed	passed	passed	passed	passed	
29	13C12-123478-HxCDD	41.50	passed	passed	passed	passed	passed	passed	
30	13C12-123678-HxCDD	41.61	passed	passed	passed	passed	passed	passed	
31	13C12-123789-HxCDD	41.93	passed	passed	passed	passed	passed	passed	
32	13C12-123789-HxCDF	42.30	passed	passed	passed	passed	passed	passed	
33	13C12-1234678-HpCDF	44.04	passed	passed	passed	passed	passed	passed	
34	13C12-1234678-HpCDD	45.24	passed	passed	passed	passed	passed	passed	
35	13C12-1234789-HpCDF	45.78	passed	passed	passed	passed	passed	passed	
36	13C12-OCDD	48.26	passed	passed	passed	passed	passed	passed	
37	13C12-OCDF	48.43	passed	passed	passed	passed	passed	passed	

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 16:59
Number of Entries 251
Comment S:10914:12936:17961
Vial 80
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007 OU2-1-MW009WT Grab Groundwater
Sample ID 9881313
Inst ID DF17611-18NOV10
Client Tidewater Inc.
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

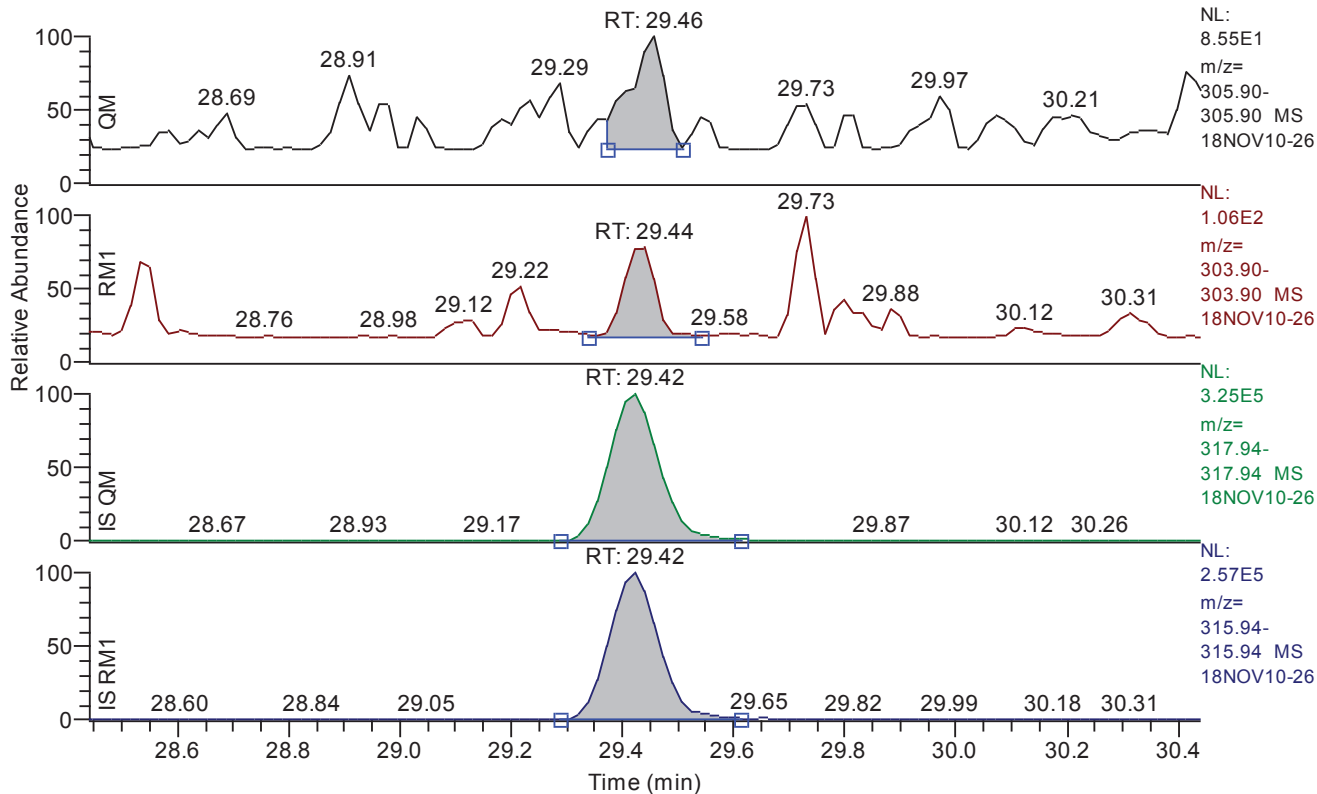
Quan x:\18nov10\18nov10-26.quan
Data x:\18nov10\18nov10-26.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.03
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.44 - 30.44 SM: 3G

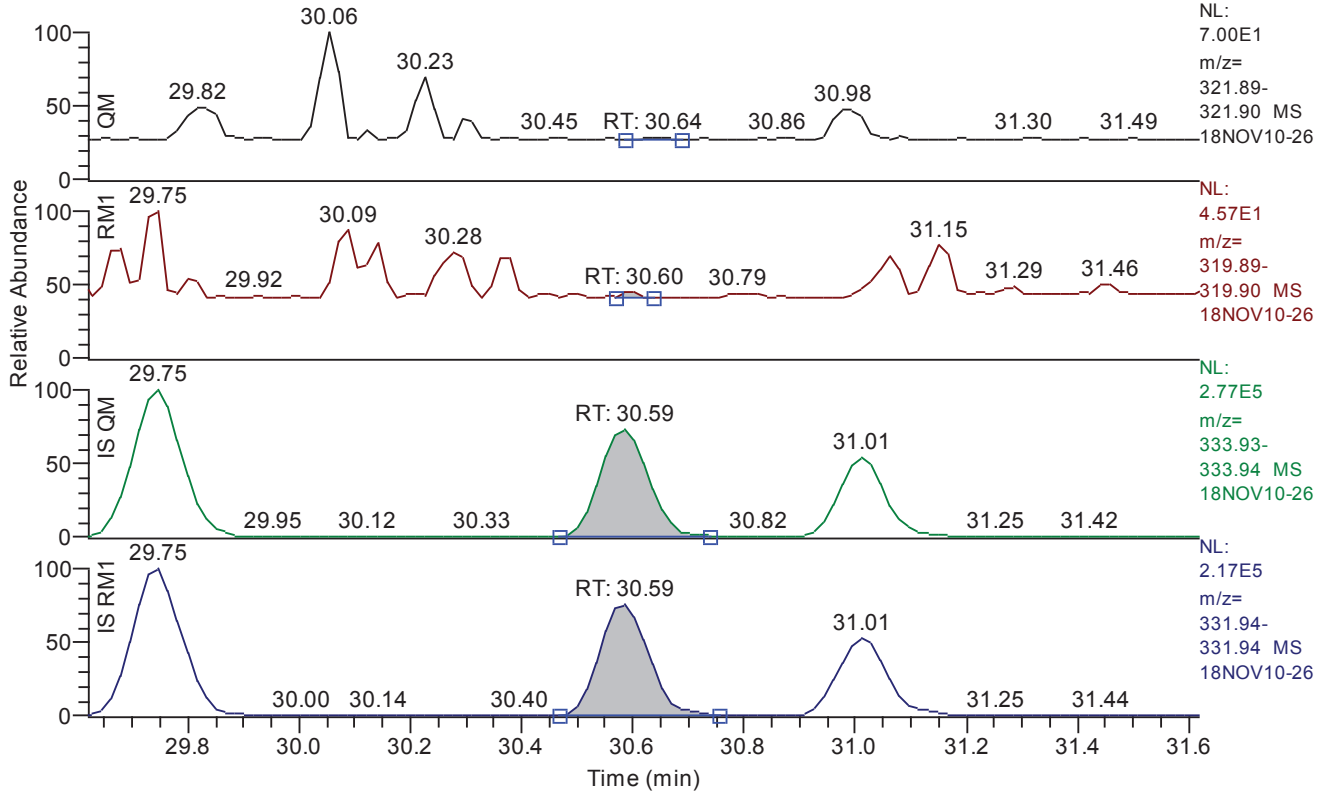


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.46
QM Area	292
QM Integration Mode	A
RM1 Area	260
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0992
Unqualified Amount (A)	0.277521
Adjusted Amount (A)	0.2775
Signal-to-Noise	10
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.62 - 31.62 SM: 3G

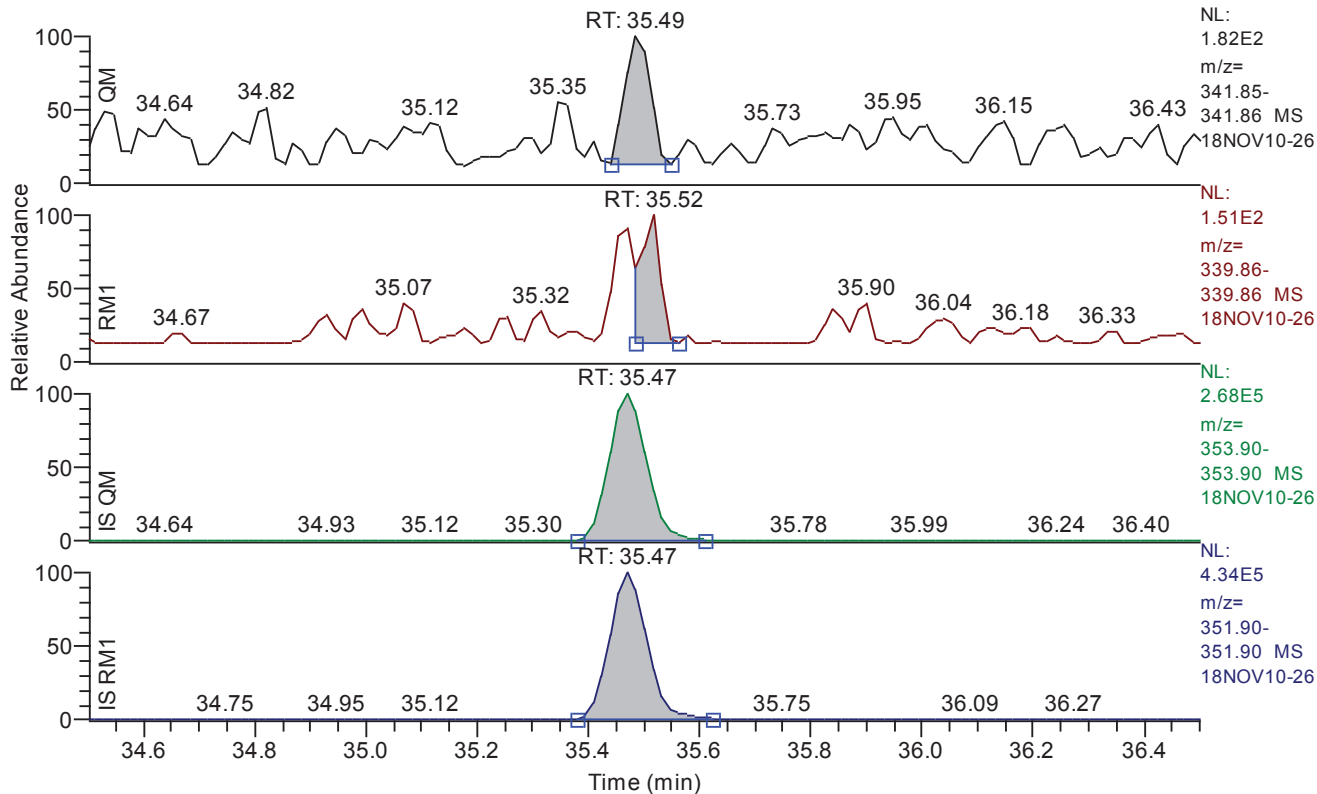


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.64
QM Area	3
QM Integration Mode	A
RM1 Area	4
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0617
Unqualified Amount (A)	0.004842
Adjusted Amount (A)	n.d. < 0.0617
Signal-to-Noise	0
Client Flags	
Status Overview	failed
Status Info	Failed on: CAA Ratio1A

Chromatogram

RT: 34.50 - 36.50 SM: 3G

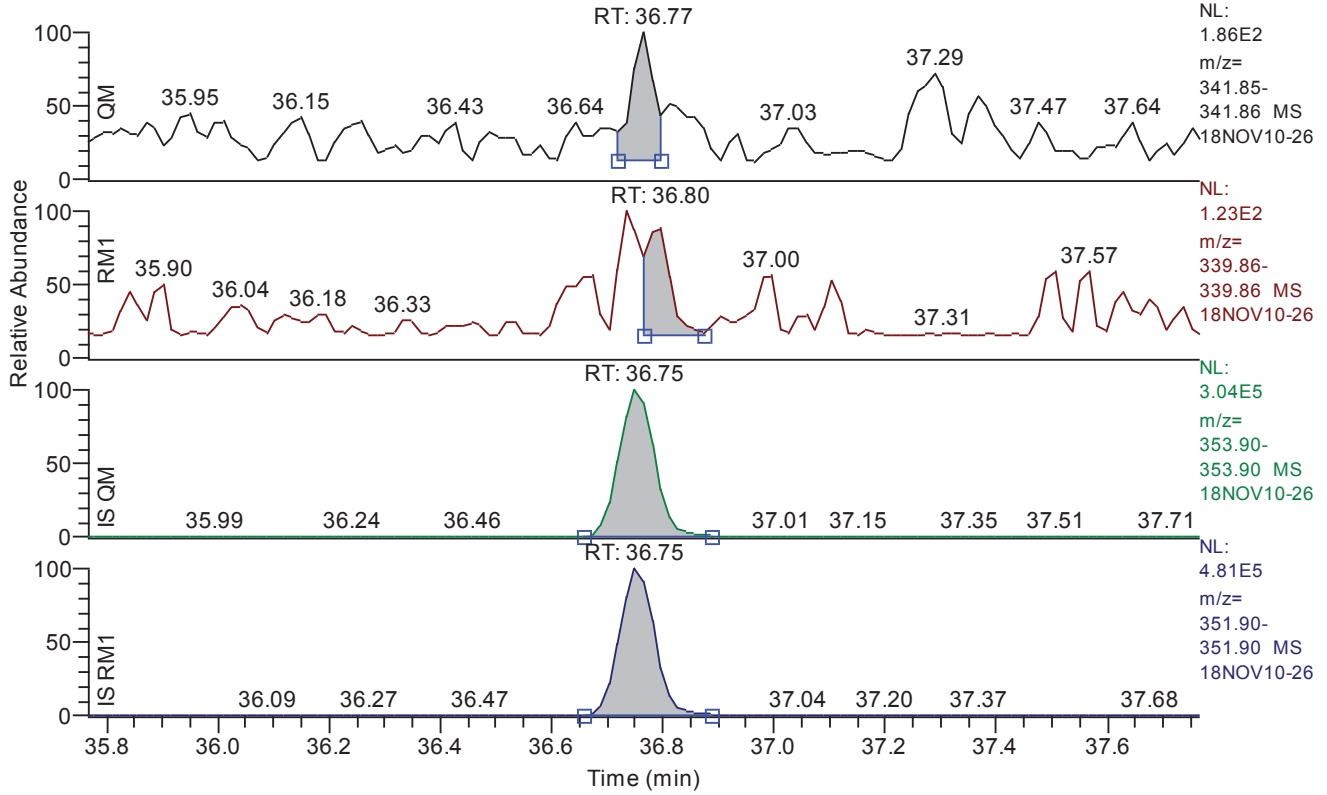


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.49
QM Area	504
QM Integration Mode	A
RM1 Area	307
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1460
Unqualified Amount (A)	0.509396
Adjusted Amount (A)	n.d.
Signal-to-Noise	15
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 35.77 - 37.77 SM: 3G

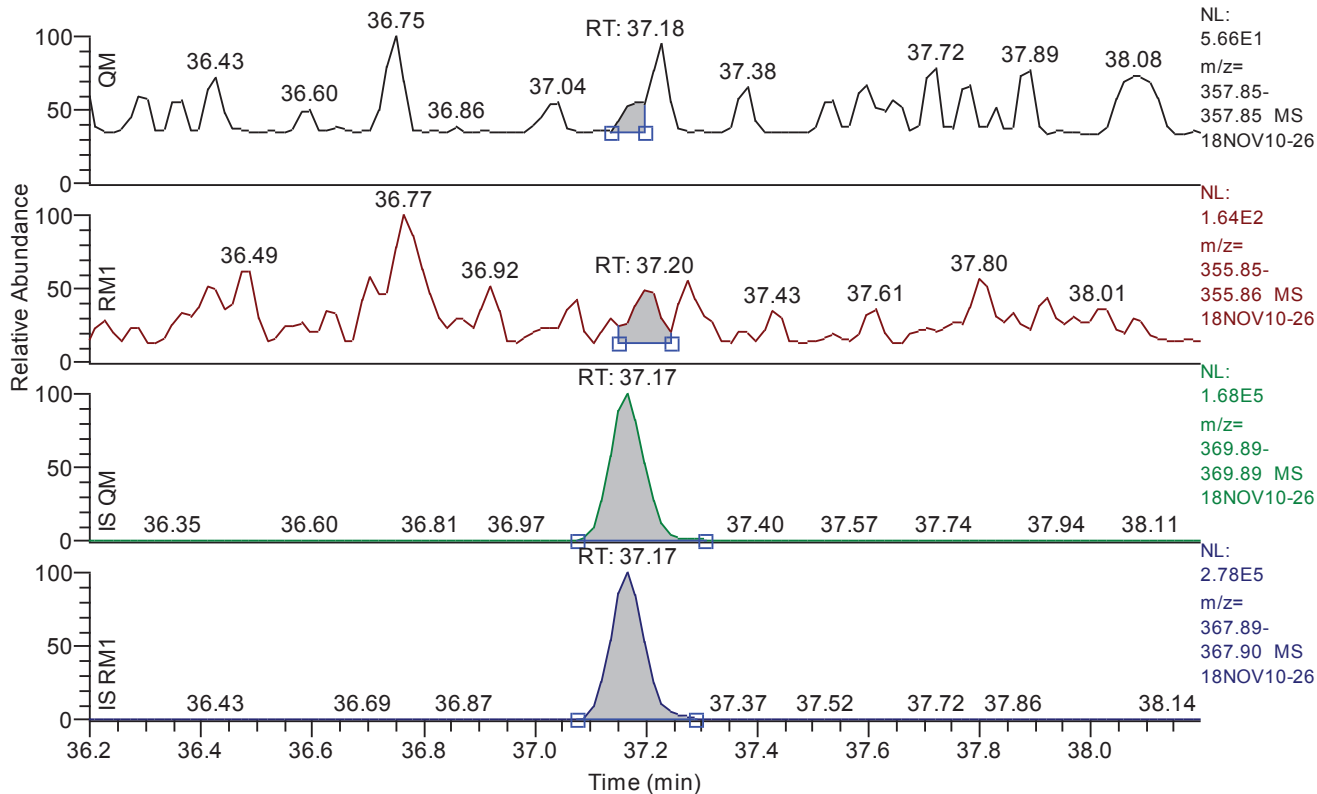


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.77
QM Area	441
QM Integration Mode	A
RM1 Area	265
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1168
Unqualified Amount (A)	0.376587
Adjusted Amount (A)	n.d.
Signal-to-Noise	13
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 36.20 - 38.20 SM: 3G

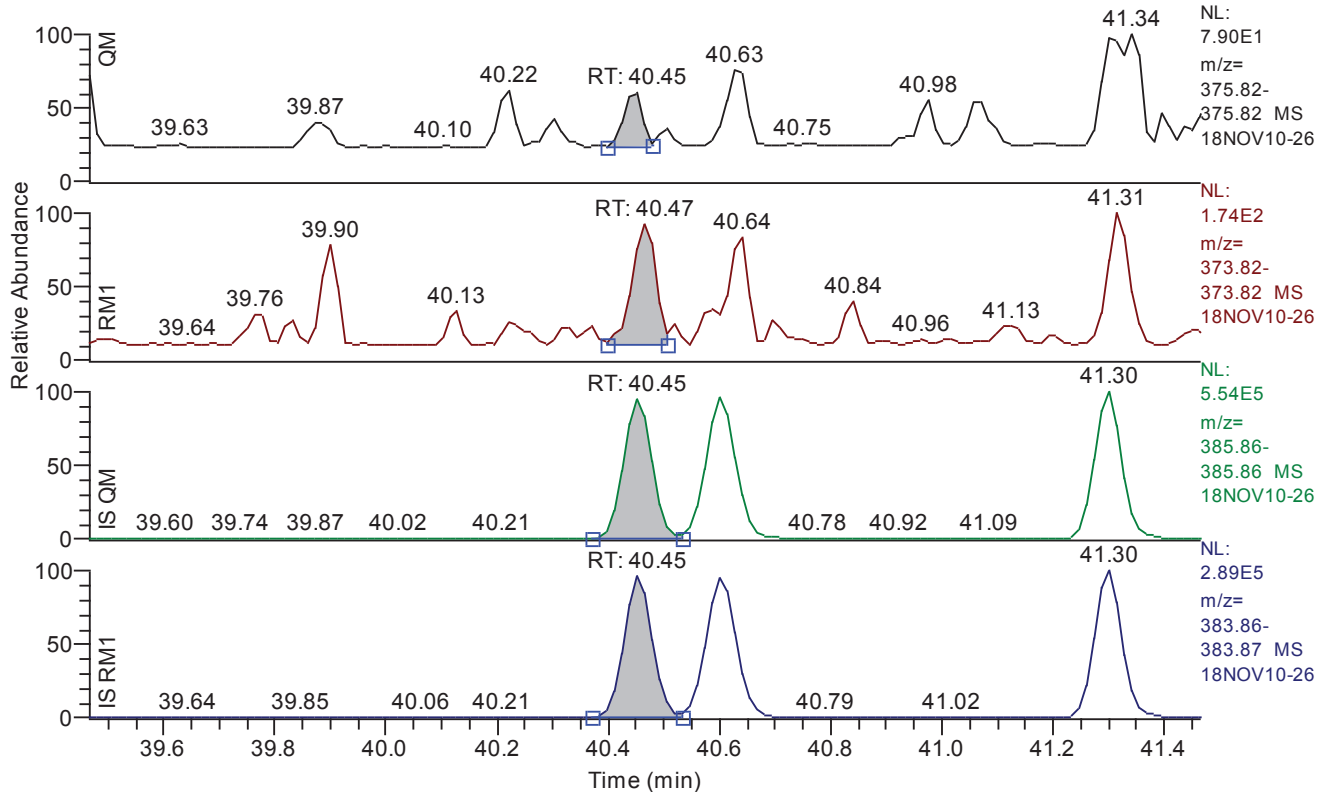


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.18
QM Area	29
QM Integration Mode	A
RM1 Area	203
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2280
Unqualified Amount (A)	0.233339
Adjusted Amount (A)	n.d.
Signal-to-Noise	3
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 39.47 - 41.47 SM: 3G

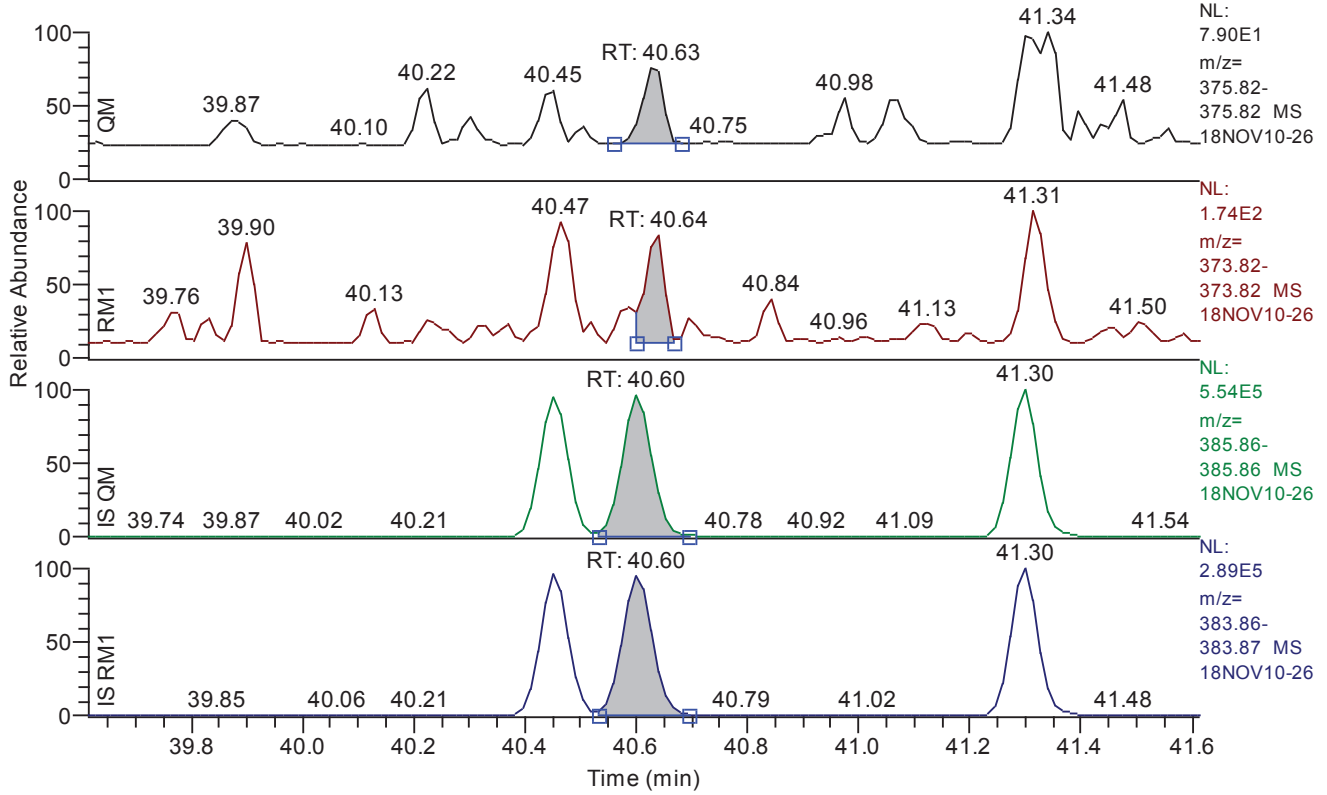


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.45
QM Area	68
QM Integration Mode	A
RM1 Area	421
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0782
Unqualified Amount (A)	0.299410
Adjusted Amount (A)	n.d.
Signal-to-Noise	12
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 39.61 - 41.61 SM: 3G

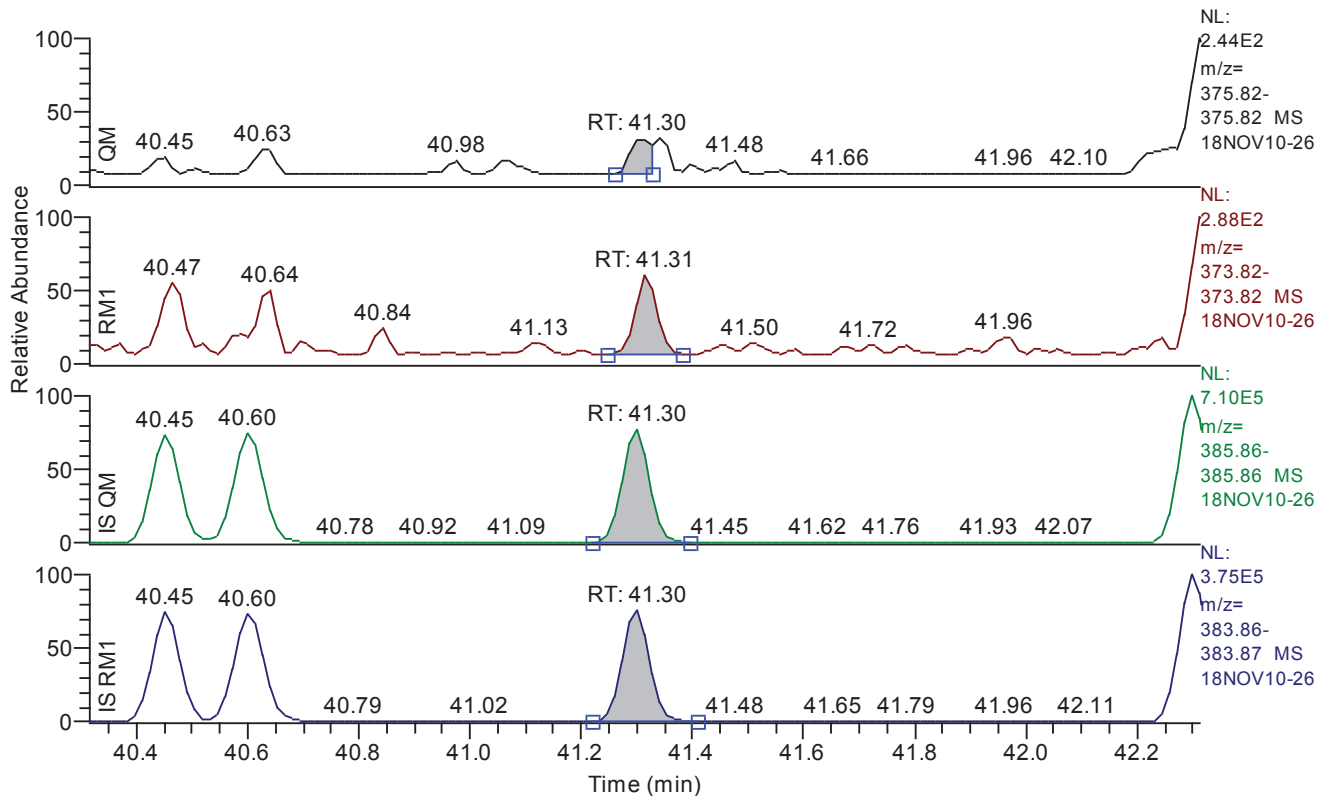


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.63
QM Area	107
QM Integration Mode	A
RM1 Area	300
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0808
Unqualified Amount (A)	0.245288
Adjusted Amount (A)	n.d.
Signal-to-Noise	12
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.31 - 42.31 SM: 3G

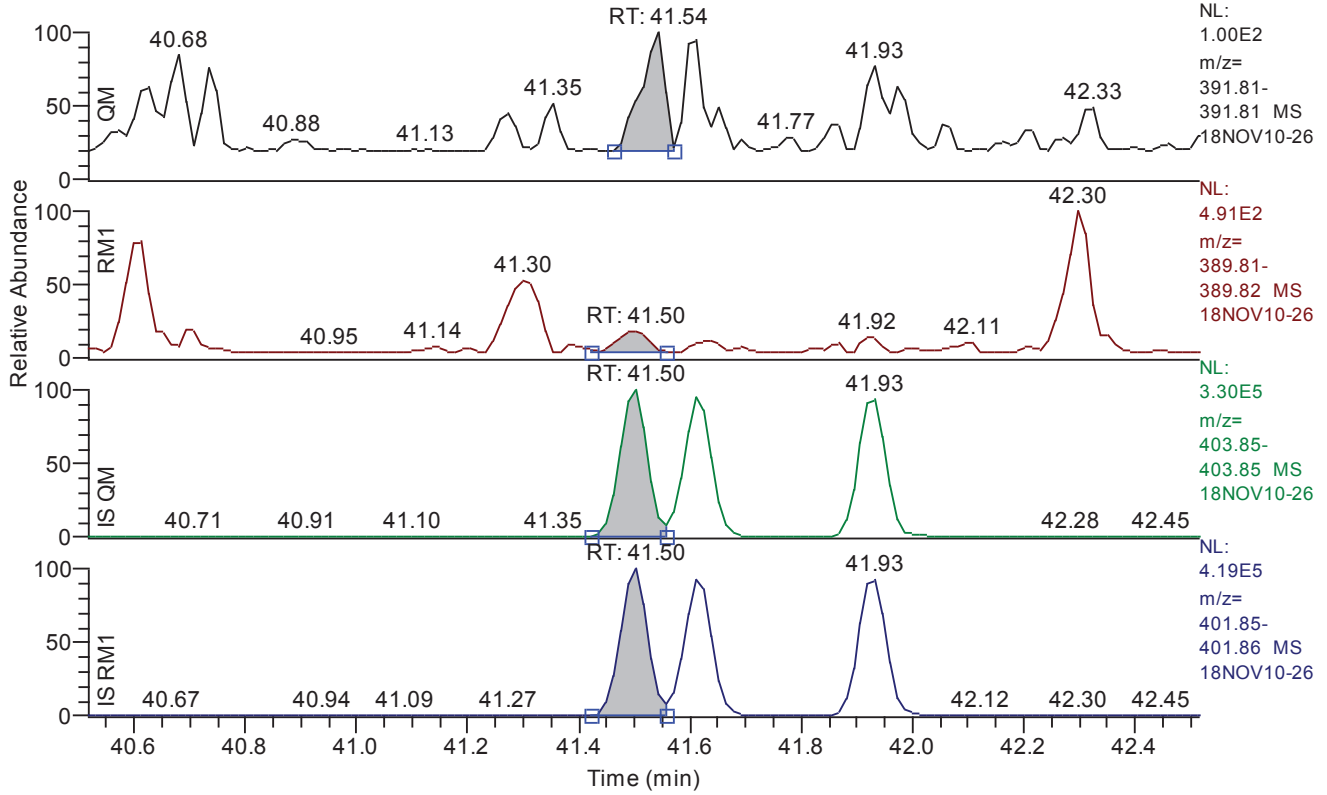


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.30
QM Area	146
QM Integration Mode	A
RM1 Area	420
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0724
Unqualified Amount (A)	0.331198
Adjusted Amount (A)	n.d.
Signal-to-Noise	15
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.52 - 42.52 SM: 3G

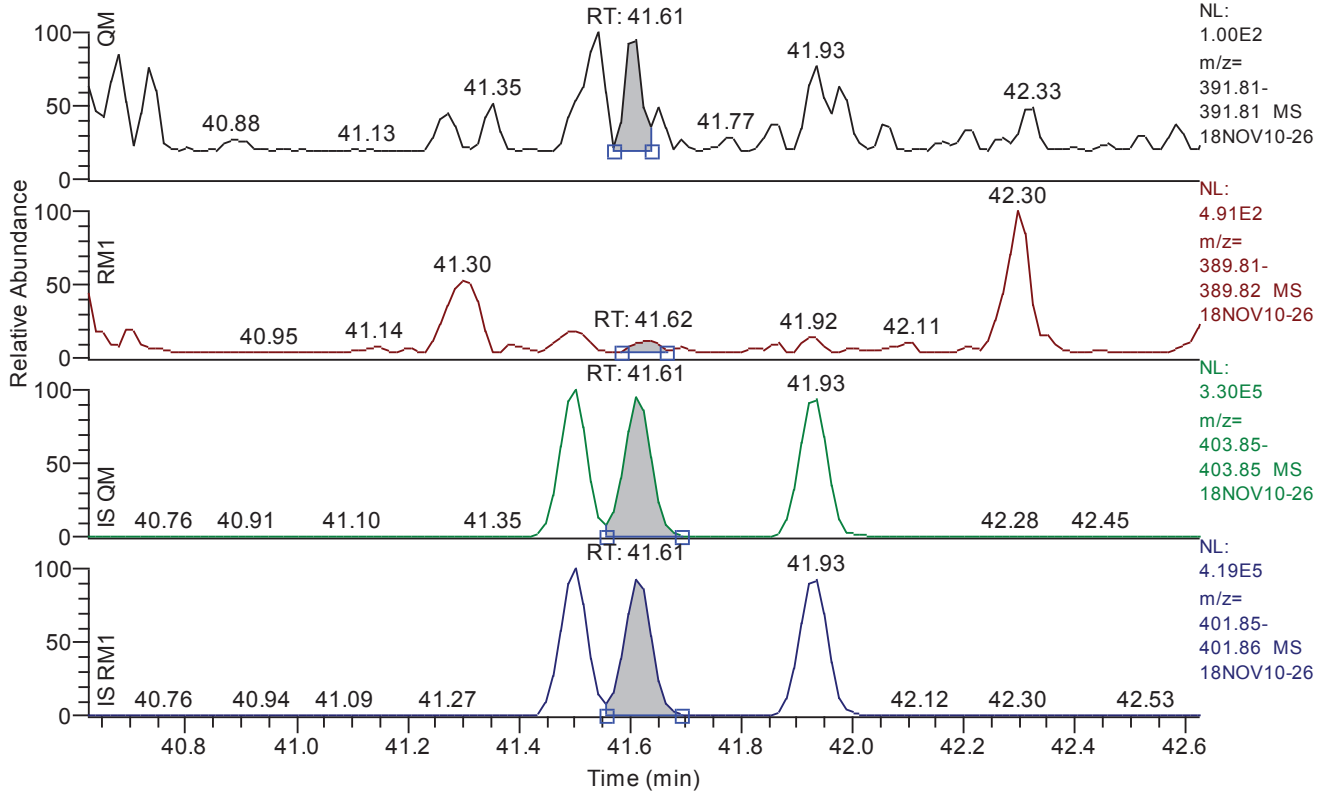


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.54
QM Area	239
QM Integration Mode	A
RM1 Area	287
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0981
Unqualified Amount (A)	0.393481
Adjusted Amount (A)	0.3935
Signal-to-Noise	10
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.62 - 42.62 SM: 3G

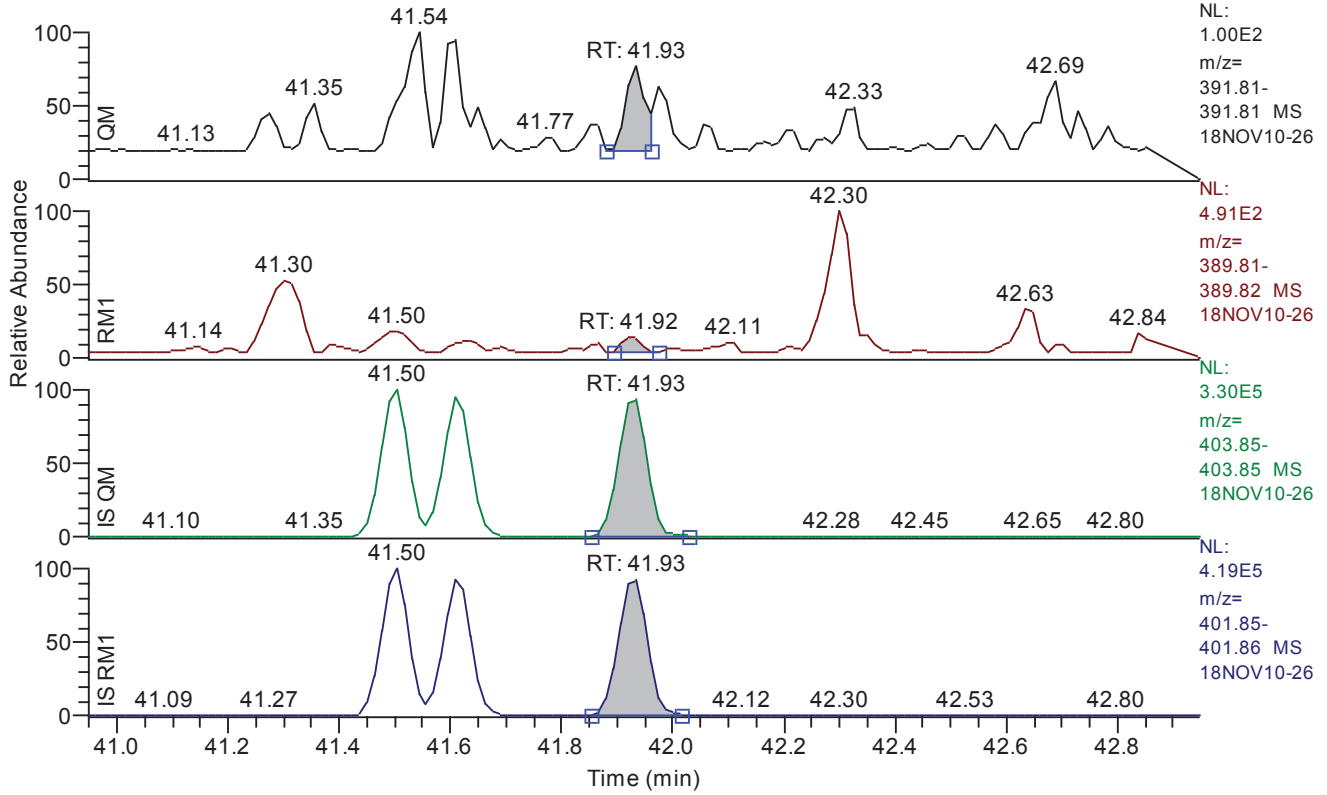


Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.61
QM Area	168
QM Integration Mode	A
RM1 Area	128
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1056
Unqualified Amount (A)	0.237738
Adjusted Amount (A)	n.d.
Signal-to-Noise	7
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.95 - 42.95 SM: 3G



NL: 1.00E2
 m/z= 391.81-391.81 MS
 18NOV10-26

NL: 4.91E2
 m/z= 389.81-389.82 MS
 18NOV10-26

NL: 3.30E5
 m/z= 403.85-403.85 MS
 18NOV10-26

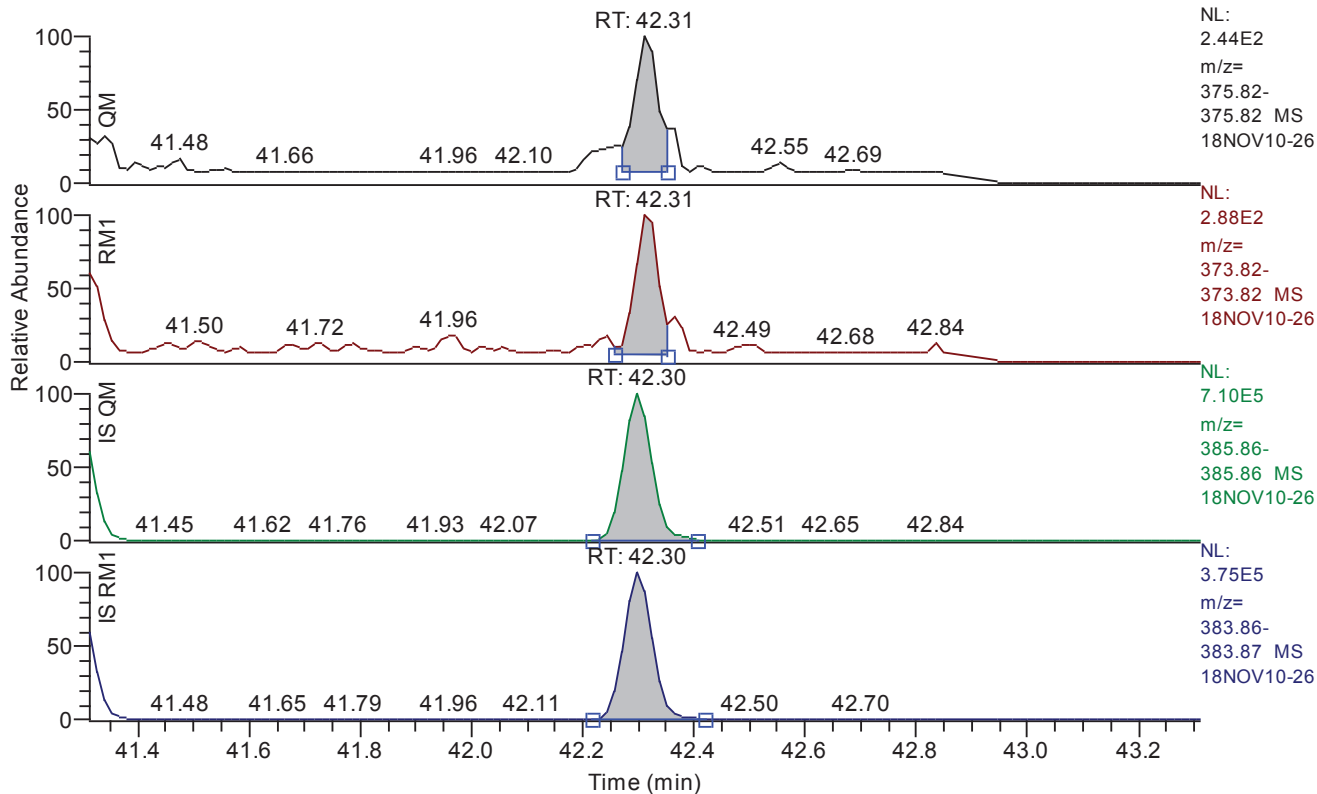
NL: 4.19E5
 m/z= 401.85-401.86 MS
 18NOV10-26

Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.93
QM Area	136
QM Integration Mode	A
RM1 Area	129
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1010
Unqualified Amount (A)	0.193554
Adjusted Amount (A)	n.d.
Signal-to-Noise	7
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 41.31 - 43.31 SM: 3G

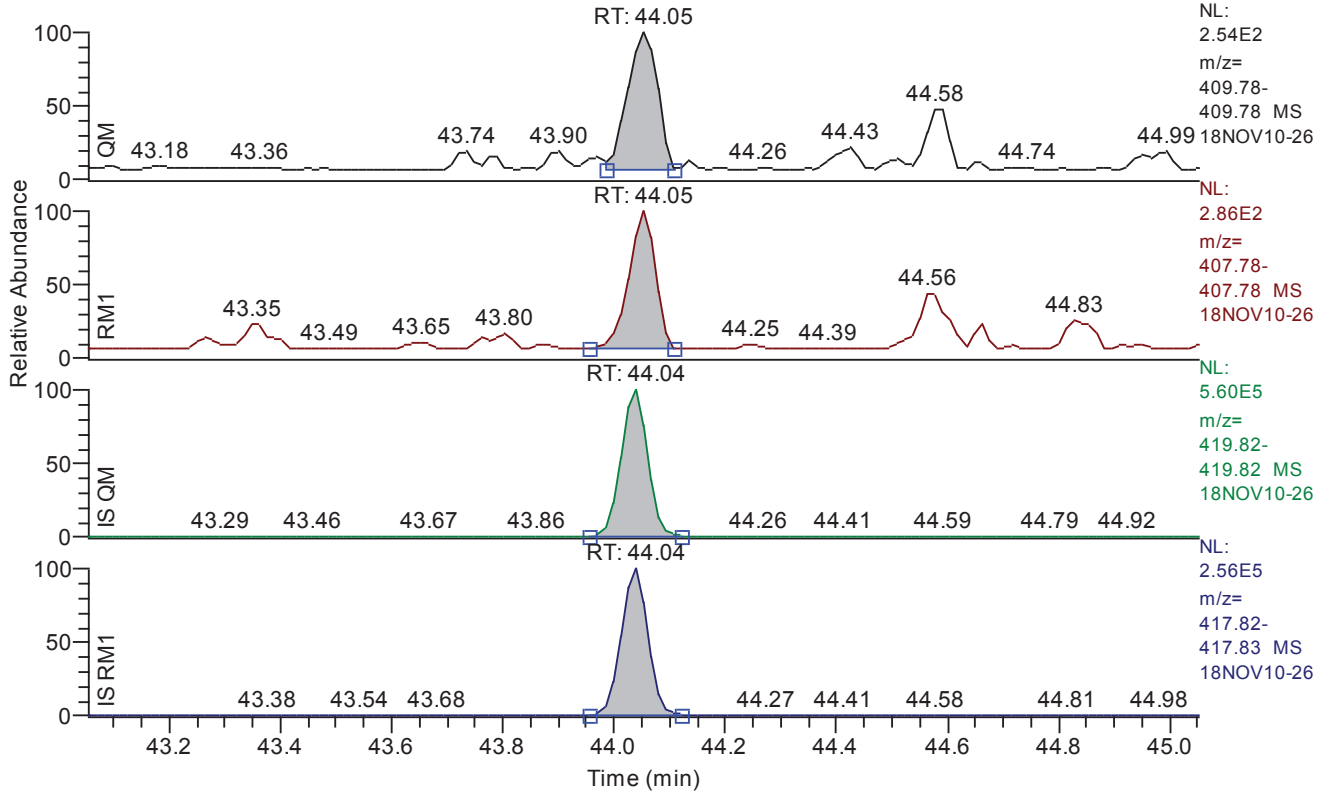


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.31
QM Area	657
QM Integration Mode	A
RM1 Area	795
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0601
Unqualified Amount (A)	0.677445
Adjusted Amount (A)	0.6774
Signal-to-Noise	34
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 43.05 - 45.05 SM: 3G

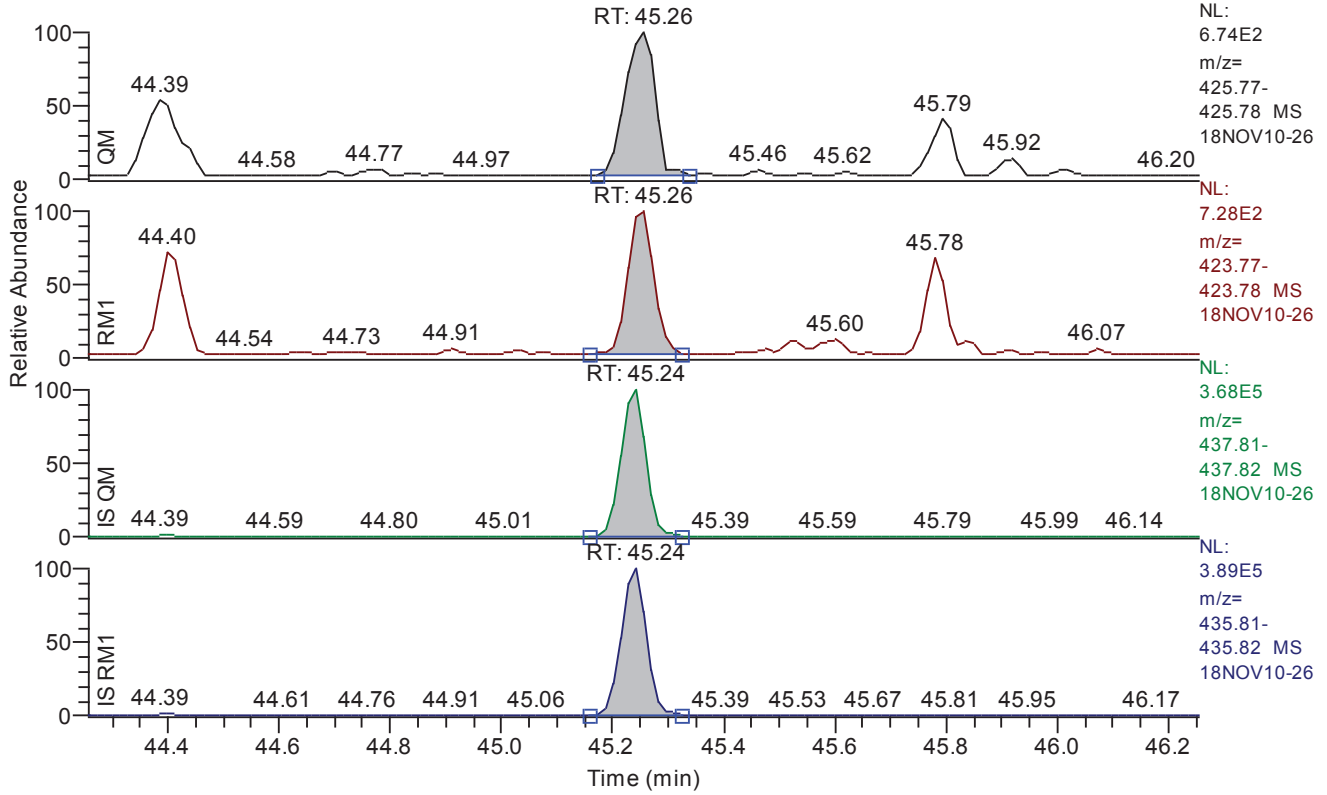


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.05
QM Area	901
QM Integration Mode	A
RM1 Area	913
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0672
Unqualified Amount (A)	1.061208
Adjusted Amount (A)	1.0612
Signal-to-Noise	38
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.26 - 46.26 SM: 3G

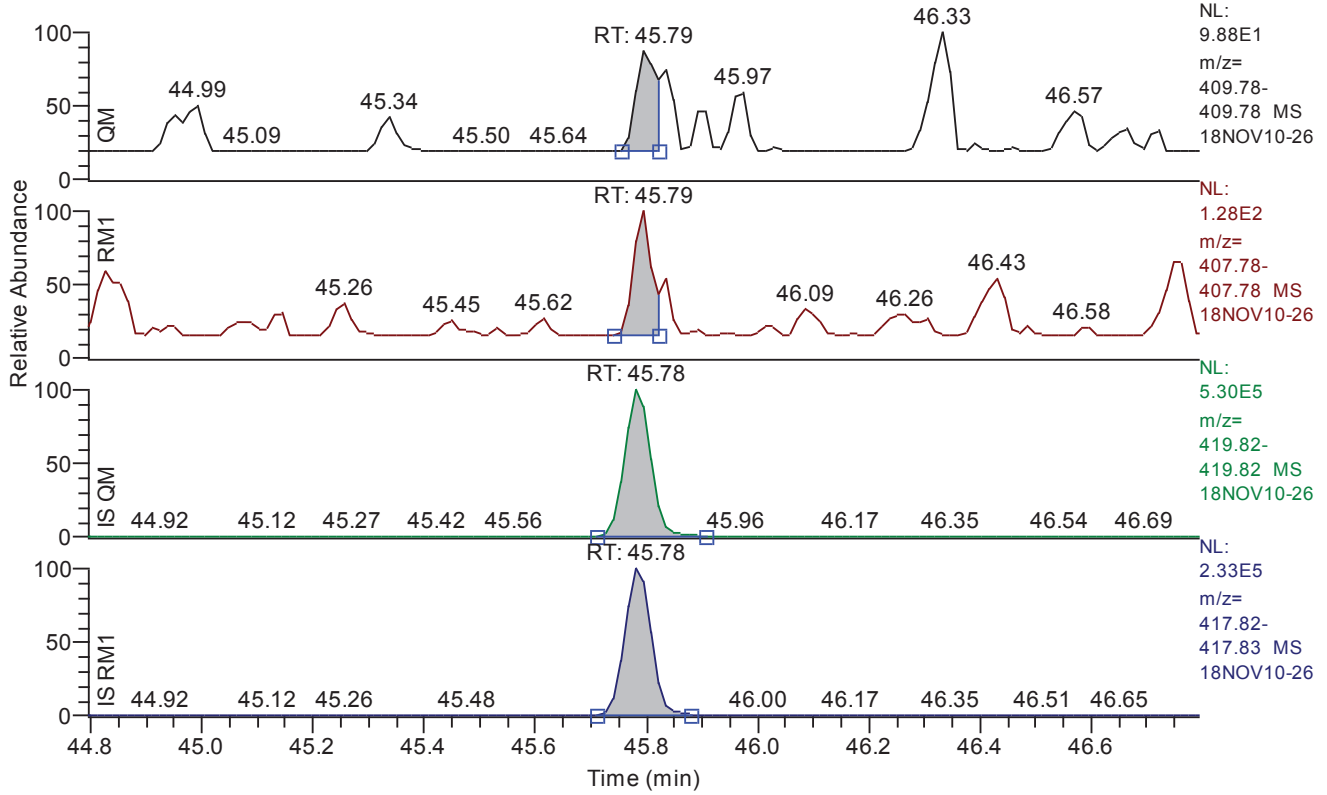


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.26
QM Area	2522
QM Integration Mode	A
RM1 Area	2402
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1079
Unqualified Amount (A)	3.844479
Adjusted Amount (A)	3.8445
Signal-to-Noise	80
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.79 - 46.79 SM: 3G

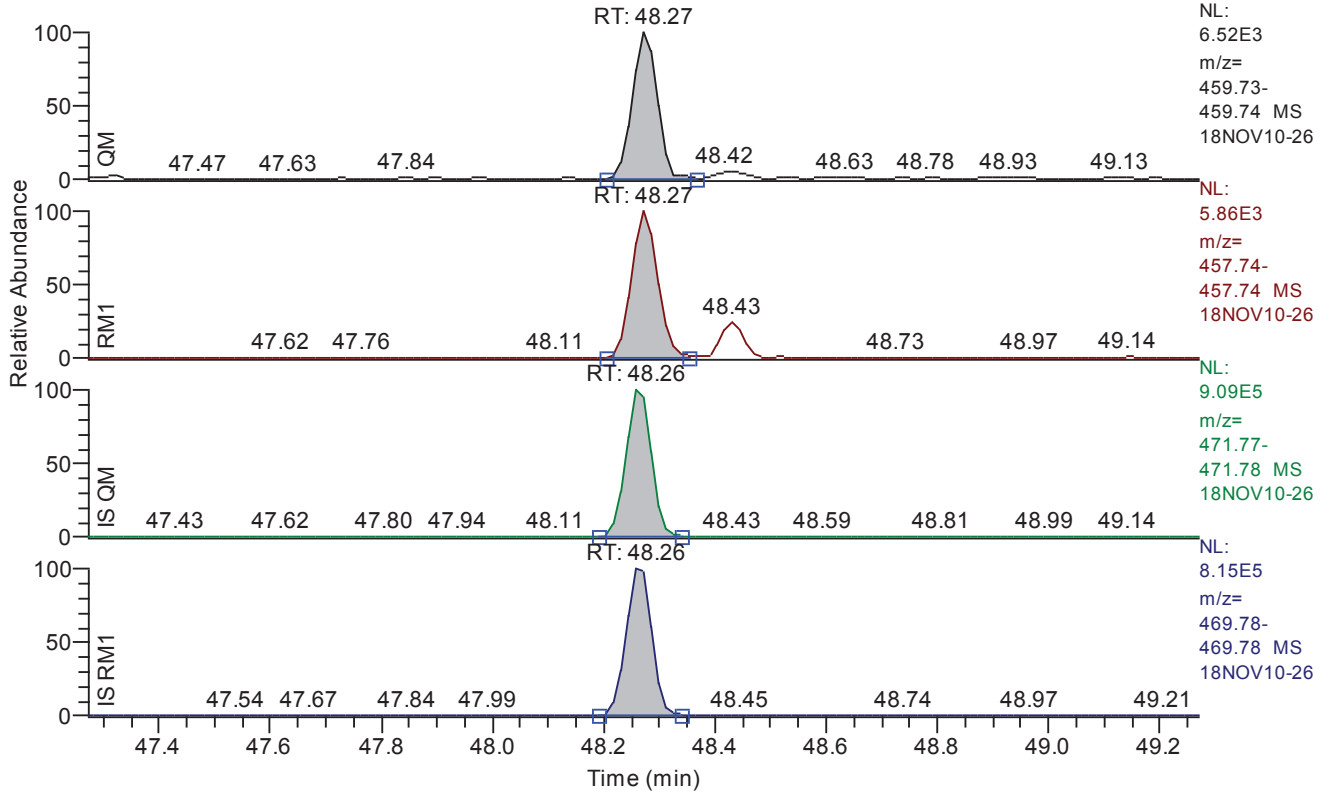


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.79
QM Area	169
QM Integration Mode	A
RM1 Area	249
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0693
Unqualified Amount (A)	0.256172
Adjusted Amount (A)	n.d.
Signal-to-Noise	13
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 47.27 - 49.27 SM: 3G

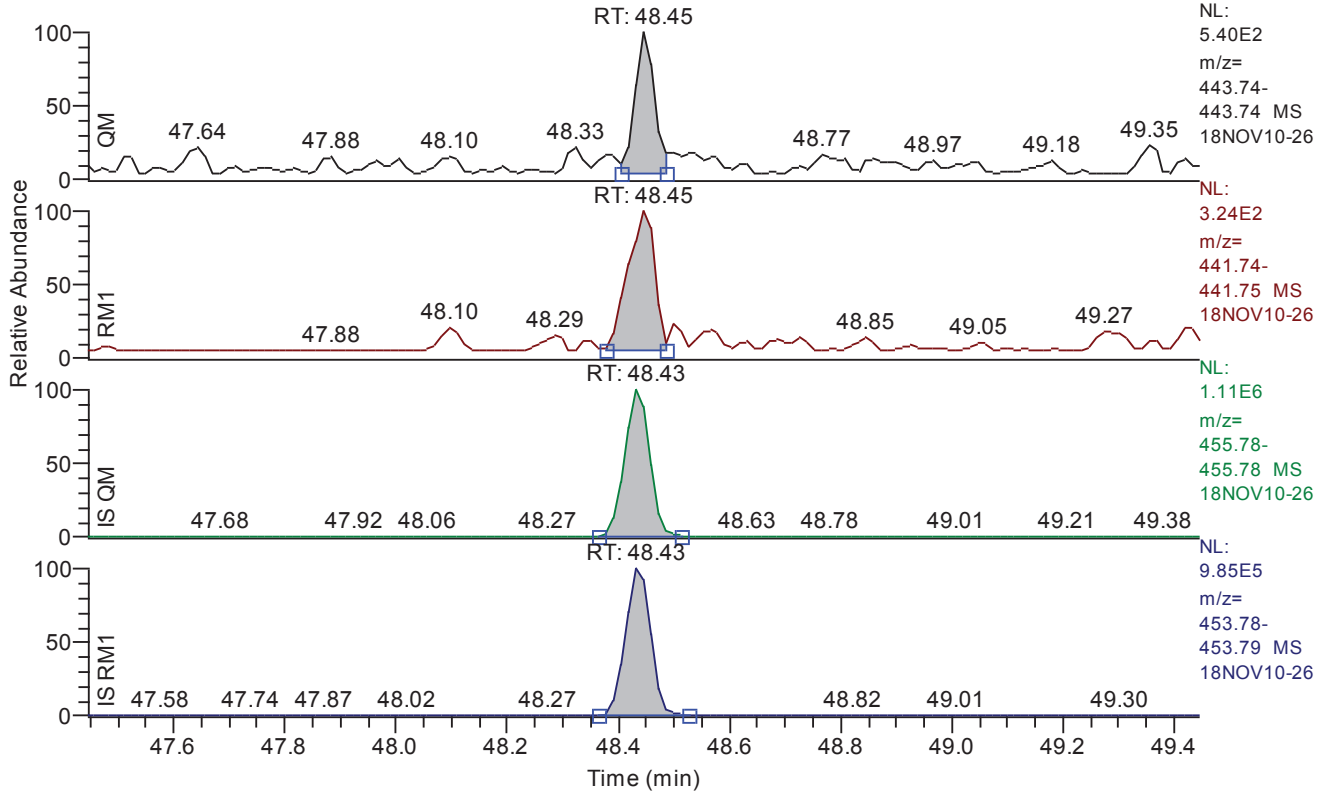


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.27
QM Area	20243
QM Integration Mode	A
RM1 Area	18876
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2046
Unqualified Amount (A)	27.984815
Adjusted Amount (A)	27.9848
Signal-to-Noise	344
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.45 - 49.45 SM: 3G

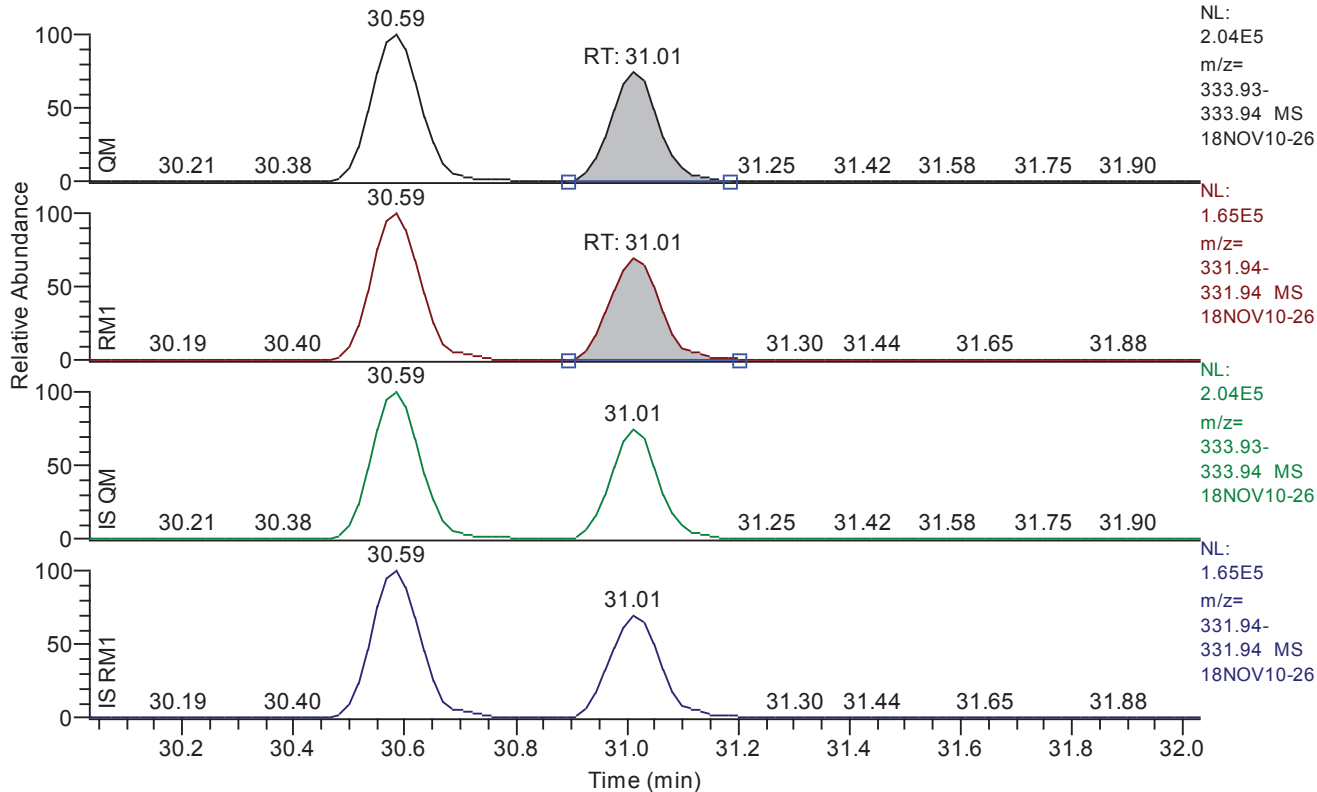


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.45
QM Area	1246
QM Integration Mode	A
RM1 Area	1014
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1468
Unqualified Amount (A)	1.543511
Adjusted Amount (A)	1.5435
Signal-to-Noise	30
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 30.03 - 32.03 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	31.01
QM Area	888447
QM Integration Mode	A
RM1 Area	712483
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3200
Unqualified Amount (A)	971.089652
Adjusted Amount (A)	971.0897
Signal-to-Noise	7827
Client Flags	
Status Overview	passed
Status Info	

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.40	29.46	29.44	29.42	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.58	30.64	30.60	30.59	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.47	35.49	35.52	35.47	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.74	36.77	36.80	36.75	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.16	37.18	37.20	37.17	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.45	40.45	40.47	40.45	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.59	40.63	40.64	40.60	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.28	41.30	41.31	41.30	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.48	41.54	41.50	41.50	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.60	41.61	41.62	41.61	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.91	41.93	41.92	41.93	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.29	42.31	42.31	42.30	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.02	44.05	44.05	44.04	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.22	45.26	45.26	45.24	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.78	45.79	45.79	45.78	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.25	48.27	48.27	48.26	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.42	48.45	48.45	48.43	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.99	31.01	31.01	31.01	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.71	29.75	29.75	29.75	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.35	40.38	40.37	40.38	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.38	29.42	29.42	29.46	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.55	30.59	30.59	30.59	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.43	35.47	35.47	35.46	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.73	36.75	36.75	36.84	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.13	37.17	37.17	37.17	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.43	40.45	40.45	40.47	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.58	40.60	40.60	40.55	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.27	41.30	41.30	41.17	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.47	41.50	41.50	41.50	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.59	41.61	41.61	41.61	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.90	41.93	41.93	41.93	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.28	42.30	42.30	42.34	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.01	44.04	44.04	44.08	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.21	45.24	45.24	45.24	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.76	45.78	45.78	45.73	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.23	48.26	48.26	48.26	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.41	48.43	48.43	48.41	passed	passed



Entry Parameters

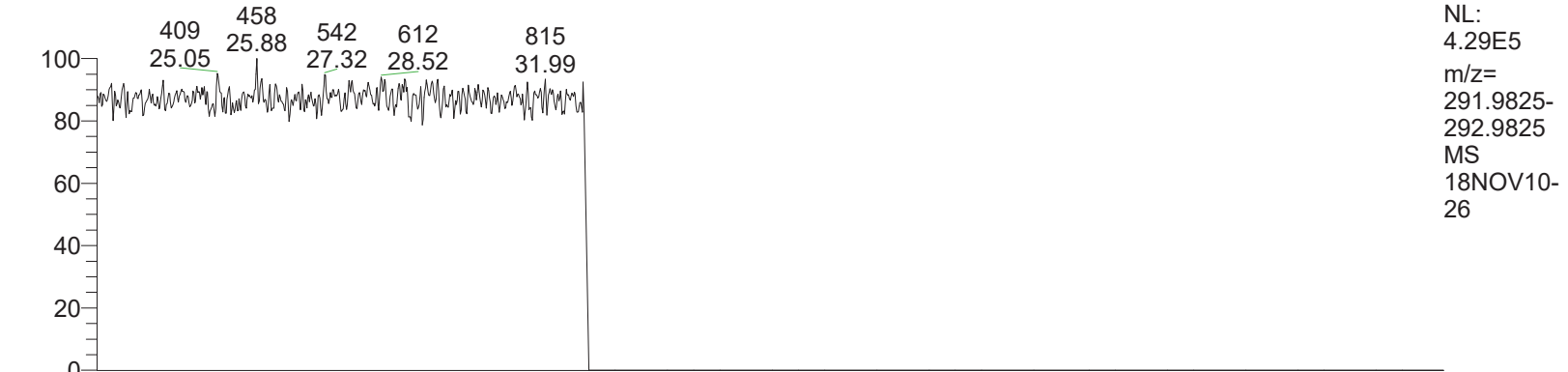
No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.46	0.8894	0.6450 - 0.8950	passed	---	0 - 0	passed
2	2378-TCDD	30.64	1.3070	0.6450 - 0.8950	failed	---	0 - 0	passed
3	12378-PeCDF	35.49	0.6088	1.3150 - 1.7850	failed	---	0 - 0	passed
4	23478-PeCDF	36.77	0.5997	1.3150 - 1.7850	failed	---	0 - 0	passed
5	12378-PeCDD	37.18	7.0219	1.3150 - 1.7850	failed	---	0 - 0	passed
6	123478-HxCDF	40.45	6.1865	1.0450 - 1.4350	failed	---	0 - 0	passed
7	123678-HxCDF	40.63	2.8051	1.0450 - 1.4350	failed	---	0 - 0	passed
8	234678-HxCDF	41.30	2.8843	1.0450 - 1.4350	failed	---	0 - 0	passed
9	123478-HxCDD	41.54	1.2020	1.0450 - 1.4350	passed	---	0 - 0	passed
10	123678-HxCDD	41.61	0.7635	1.0450 - 1.4350	failed	---	0 - 0	passed
11	123789-HxCDD	41.93	0.9521	1.0450 - 1.4350	failed	---	0 - 0	passed
12	123789-HxCDF	42.31	1.2097	1.0450 - 1.4350	passed	---	0 - 0	passed
13	1234678-HpCDF	44.05	1.0129	0.8750 - 1.2050	passed	---	0 - 0	passed
14	1234678-HpCDD	45.26	0.9524	0.8750 - 1.2050	passed	---	0 - 0	passed
15	1234789-HpCDF	45.79	1.4748	0.8750 - 1.2050	failed	---	0 - 0	passed
16	OCDD	48.27	0.9324	0.7550 - 1.0250	passed	---	0 - 0	passed
17	OCDF	48.45	0.8143	0.7550 - 1.0250	passed	---	0 - 0	passed
18	13C12-1278-TCDD (CRS)	31.01	0.8019	0.6450 - 0.8950	passed	50.01	35 - 197	passed
19	13C12-1234-TCDD	29.75	0.7890	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.38	1.2695	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.42	0.7916	0.6450 - 0.8950	passed	58.90	40 - 135	passed
22	13C12-2378-TCDD	30.59	0.8158	0.6450 - 0.8950	passed	73.87	40 - 135	passed
23	13C12-12378-PeCDF	35.47	1.6117	1.3150 - 1.7850	passed	55.90	40 - 135	passed
24	13C12-23478-PeCDF	36.75	1.5737	1.3150 - 1.7850	passed	58.84	40 - 135	passed
25	13C12-12378-PeCDD	37.17	1.6192	1.3150 - 1.7850	passed	60.49	40 - 135	passed
26	13C12-123478-HxCDF	40.45	0.5311	0.4250 - 0.5950	passed	46.93	40 - 135	passed
27	13C12-123678-HxCDF	40.60	0.5288	0.4250 - 0.5950	passed	46.30	40 - 135	passed
28	13C12-234678-HxCDF	41.30	0.5249	0.4250 - 0.5950	passed	48.60	40 - 135	passed
29	13C12-123478-HxCDD	41.50	1.2546	1.0450 - 1.4350	passed	61.12	40 - 135	passed
30	13C12-123678-HxCDD	41.61	1.2477	1.0450 - 1.4350	passed	55.54	40 - 135	passed
31	13C12-123789-HxCDD	41.93	1.2629	1.0450 - 1.4350	passed	61.55	40 - 135	passed
32	13C12-123789-HxCDF	42.30	0.5281	0.4250 - 0.5950	passed	70.28	40 - 135	passed
33	13C12-1234678-HpCDF	44.04	0.4586	0.3650 - 0.5150	passed	50.68	40 - 135	passed
34	13C12-1234678-HpCDD	45.24	1.0607	0.8750 - 1.2050	passed	59.81	40 - 135	passed
35	13C12-1234789-HpCDF	45.78	0.4450	0.3650 - 0.5150	passed	55.45	40 - 135	passed
36	13C12-OCDD	48.26	0.9054	0.7550 - 1.0250	passed	63.82	40 - 135	passed
37	13C12-OCDF	48.43	0.9023	0.7550 - 1.0250	passed	52.11	40 - 135	passed

Entry Parameters

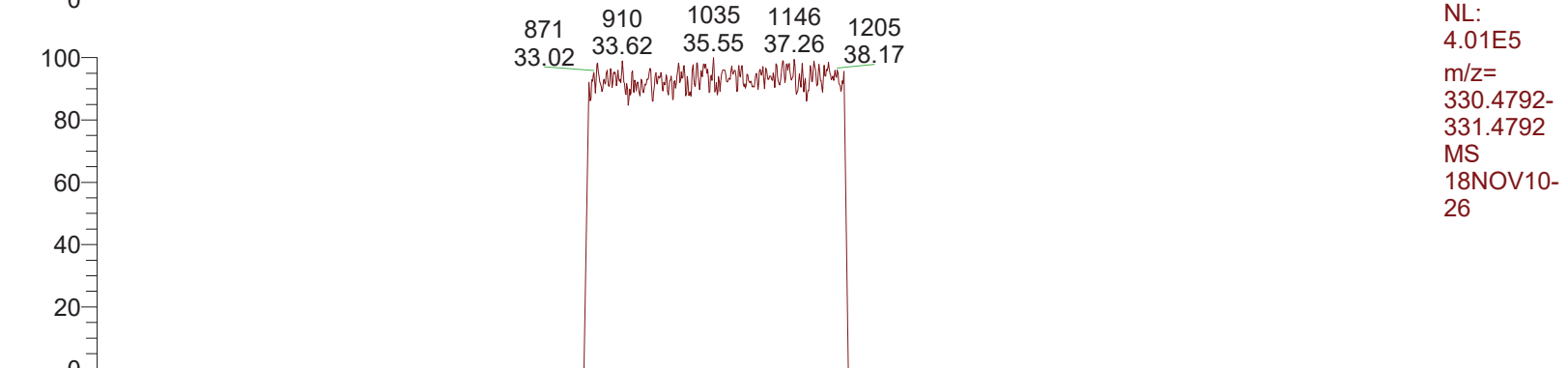
No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.46	292	A	260	A	0.0992	0.277521	0.2775	0.000000	10	
2	2378-TCDD	failed	30.64	3	A	4	A	0.0617	0.004842	n.d. < 0.0617	0.000000	0	
3	12378-PeCDF	failed	35.49	504	A	307	A	0.1460	0.509396	n.d.	0.000000	15	
4	23478-PeCDF	failed	36.77	441	A	265	A	0.1168	0.376587	n.d.	0.000000	13	
5	12378-PeCDD	failed	37.18	29	A	203	A	0.2280	0.233339	n.d.	0.000000	3	
6	123478-HxCDF	failed	40.45	68	A	421	A	0.0782	0.299410	n.d.	0.000000	12	
7	123678-HxCDF	failed	40.63	107	A	300	A	0.0808	0.245288	n.d.	0.000000	12	
8	234678-HxCDF	failed	41.30	146	A	420	A	0.0724	0.331198	n.d.	0.000000	15	
9	123478-HxCDD	passed	41.54	239	A	287	A	0.0981	0.393481	0.3935	0.000000	10	
10	123678-HxCDD	failed	41.61	168	A	128	A	0.1056	0.237738	n.d.	0.000000	7	
11	123789-HxCDD	failed	41.93	136	A	129	A	0.1010	0.193554	n.d.	0.000000	7	
12	123789-HxCDF	passed	42.31	657	A	795	A	0.0601	0.677445	0.6774	0.000000	34	
13	1234678-HpCDF	passed	44.05	901	A	913	A	0.0672	1.061208	1.0612	0.000000	38	
14	1234678-HpCDD	passed	45.26	2522	A	2402	A	0.1079	3.844479	3.8445	0.000000	80	
15	1234789-HpCDF	failed	45.79	169	A	249	A	0.0693	0.256172	n.d.	0.000000	13	
16	OCDD	passed	48.27	20243	A	18876	A	0.2046	27.984815	27.9848	0.000000	344	
17	OCDF	passed	48.45	1246	A	1014	A	0.1468	1.543511	1.5435	0.000000	30	
18	13C12-1278-TCDD (CRS)	passed	31.01	888447	A	712483	A	0.3200	971.089652	971.0897	1941.747573	7827	
19	13C12-1234-TCDD	passed	29.75	1713407	A	1351934	A	0.3342	1941.747573	1941.7476	1941.747573	14527	
20	13C12-123468-HxCDD	passed	40.38	1848643	A	2346766	A	0.3317	1941.747573	1941.7476	1941.747573	14635	
21	13C12-2378-TCDF	passed	29.42	2052678	A	1624815	A	0.1947	1143.670839	1143.6708	1941.747573	14404	
22	13C12-2378-TCDD	passed	30.59	1254932	A	1023735	A	0.3321	1434.294684	1434.2947	1941.747573	10820	
23	13C12-12378-PeCDF	passed	35.47	1263921	A	2037125	A	0.5232	1085.498574	1085.4986	1941.747573	6843	
24	13C12-23478-PeCDF	passed	36.75	1345779	A	2117918	A	0.5248	1142.451309	1142.4513	1941.747573	7633	
25	13C12-12378-PeCDD	passed	37.17	735341	A	1190698	A	0.4214	1174.564117	1174.5641	1941.747573	10017	
26	13C12-123478-HxCDF	passed	40.45	1860506	A	988061	A	0.2867	911.235155	911.2352	1941.747573	8293	
27	13C12-123678-HxCDF	passed	40.60	1964352	A	1038719	A	0.2683	898.967181	898.9672	1941.747573	8332	
28	13C12-234678-HxCDF	passed	41.30	1890708	A	992387	A	0.2933	943.667987	943.6680	1941.747573	8678	
29	13C12-123478-HxCDD	passed	41.50	1135864	A	1425076	A	0.3321	1186.851271	1186.8513	1941.747573	9628	
30	13C12-123678-HxCDD	passed	41.61	1074918	A	1341196	A	0.3199	1078.351488	1078.3515	1941.747573	9035	
31	13C12-123789-HxCDD	passed	41.93	1117079	A	1410720	A	0.3389	1195.173450	1195.1735	1941.747573	8999	
32	13C12-123789-HxCDF	passed	42.30	2534974	A	1338690	A	0.3158	1364.756596	1364.7566	1941.747573	11184	
33	13C12-1234678-HpCDF	passed	44.04	1919589	A	880371	A	0.3457	984.059677	984.0597	1941.747573	7666	
34	13C12-1234678-HpCDD	passed	45.24	1184102	A	1255947	A	0.3391	1161.454241	1161.4542	1941.747573	9813	
35	13C12-1234789-HpCDF	passed	45.78	1780510	A	792307	A	0.4117	1076.620568	1076.6206	1941.747573	7155	
36	13C12-OCDD	passed	48.26	2889180	A	2615721	A	0.1267	2478.309768	2478.3098	3883.495146	56592	
37	13C12-OCDF	passed	48.43	3465813	A	3127070	A	0.1730	2023.757064	2023.7571	3883.495146	34359	



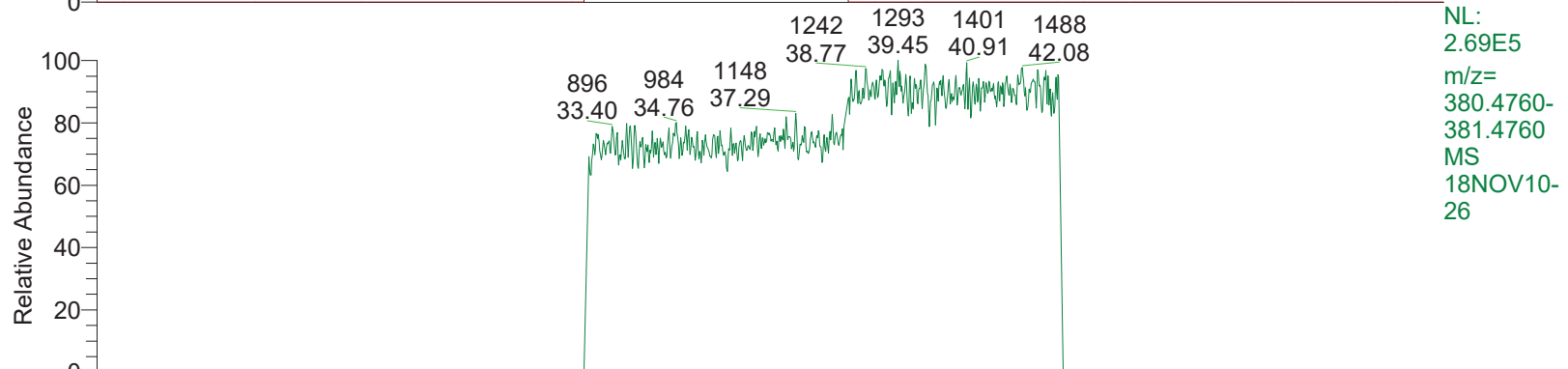
RT: 22.50 - 51.00



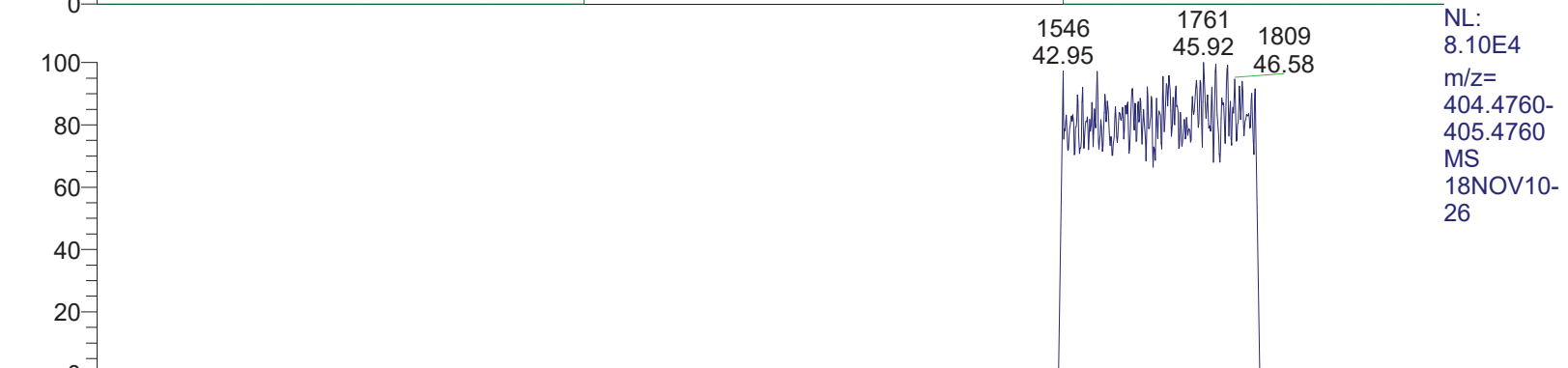
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18NOV10-
26



NL:
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331.4792
MS
18NOV10-
26



NL:
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m/z=
380.4760-
381.4760
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NL:
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18NOV10-
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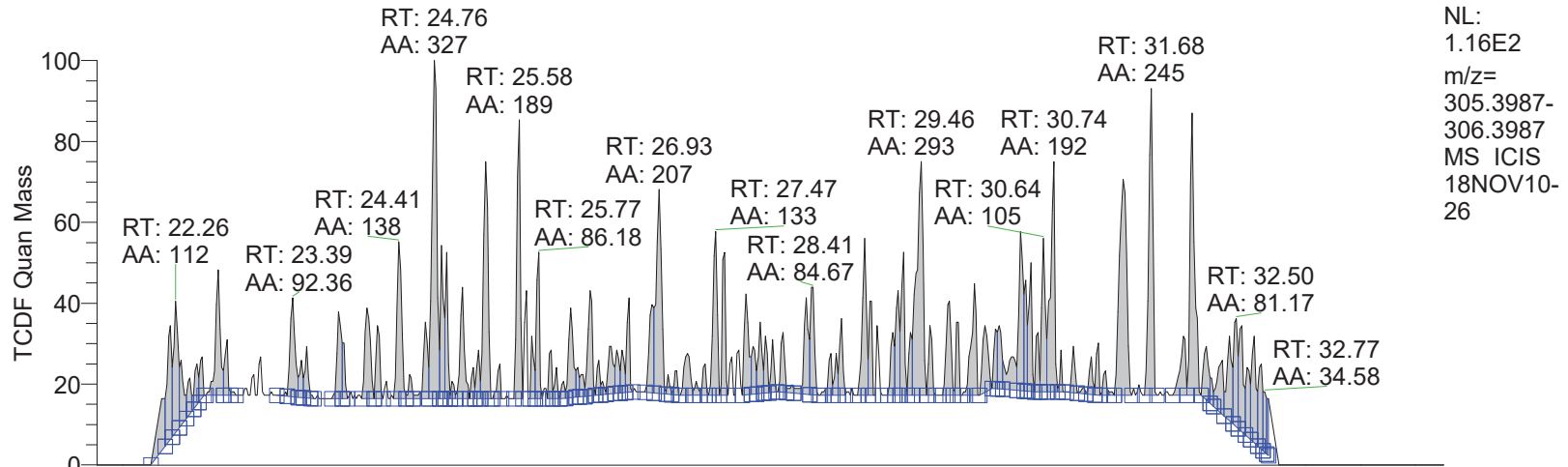
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APPROVED
By AQ46 at 10:50 pm, 11/12/18

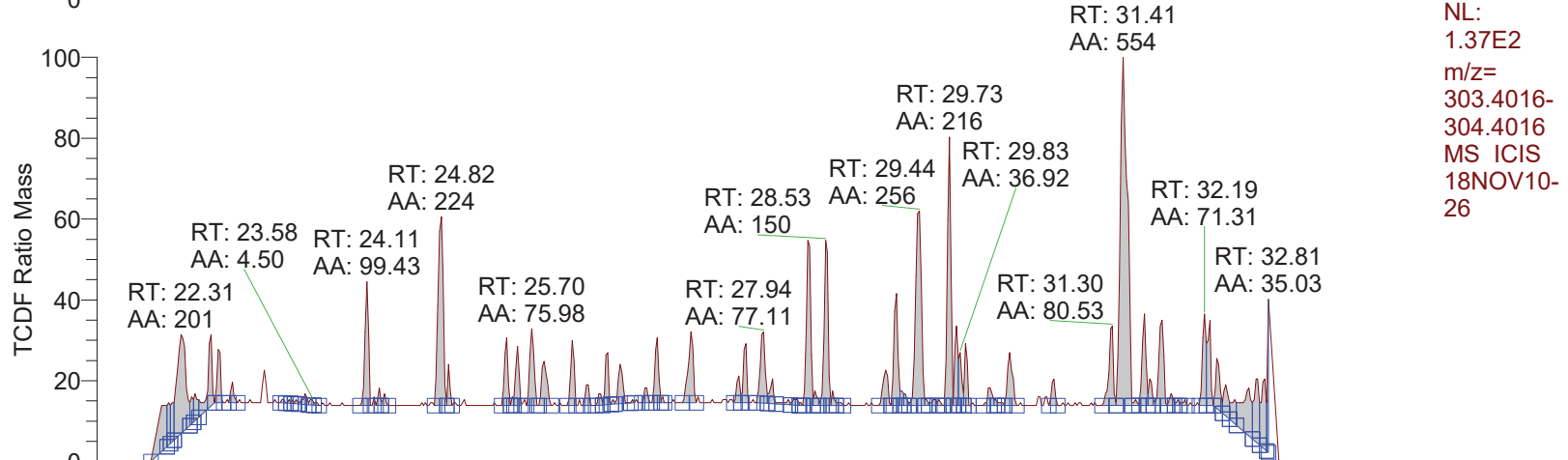
REVIEWED
By uild at 1:56 pm, 11/13/18

Time (min) axis labels: 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50

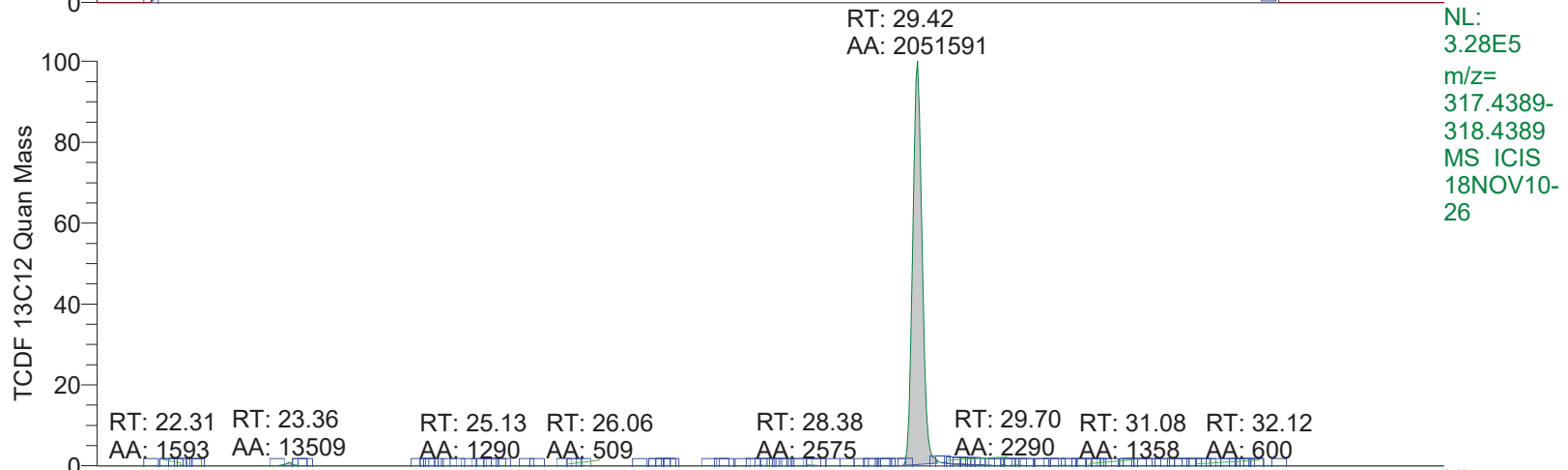
RT: 21.50 - 34.50



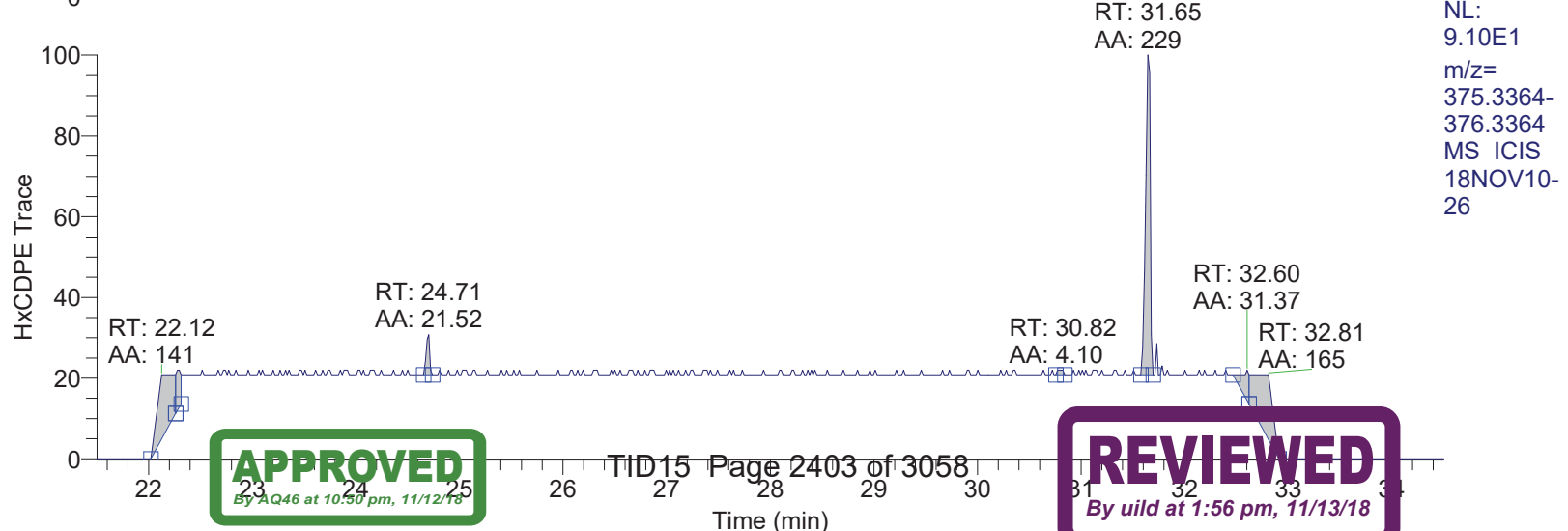
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MS ICIS
18NOV10-
26



NL:
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26



NL:
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18NOV10-
26

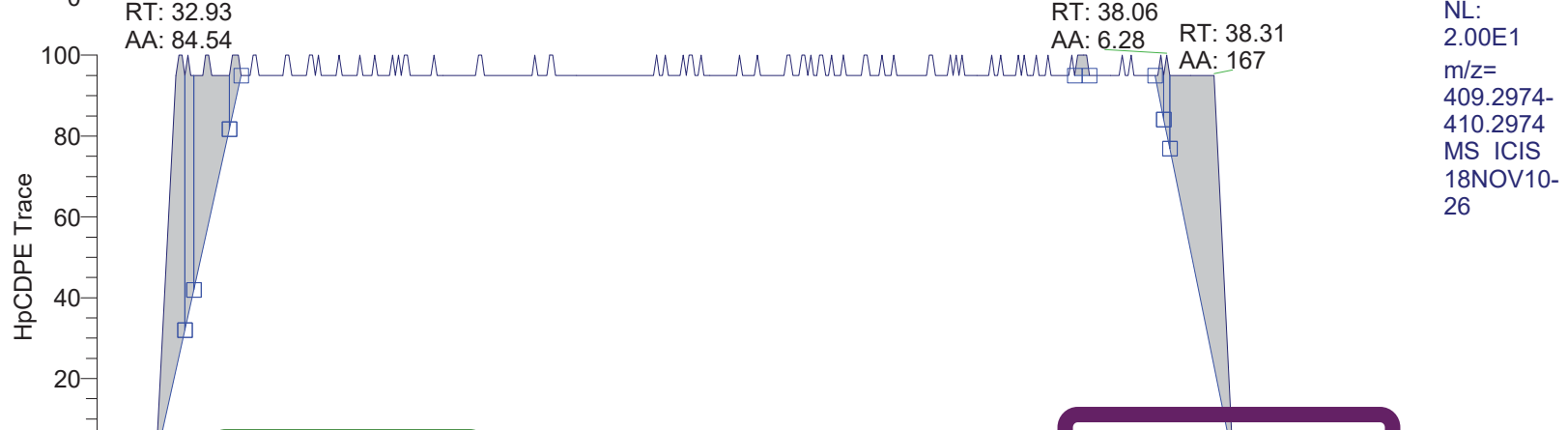
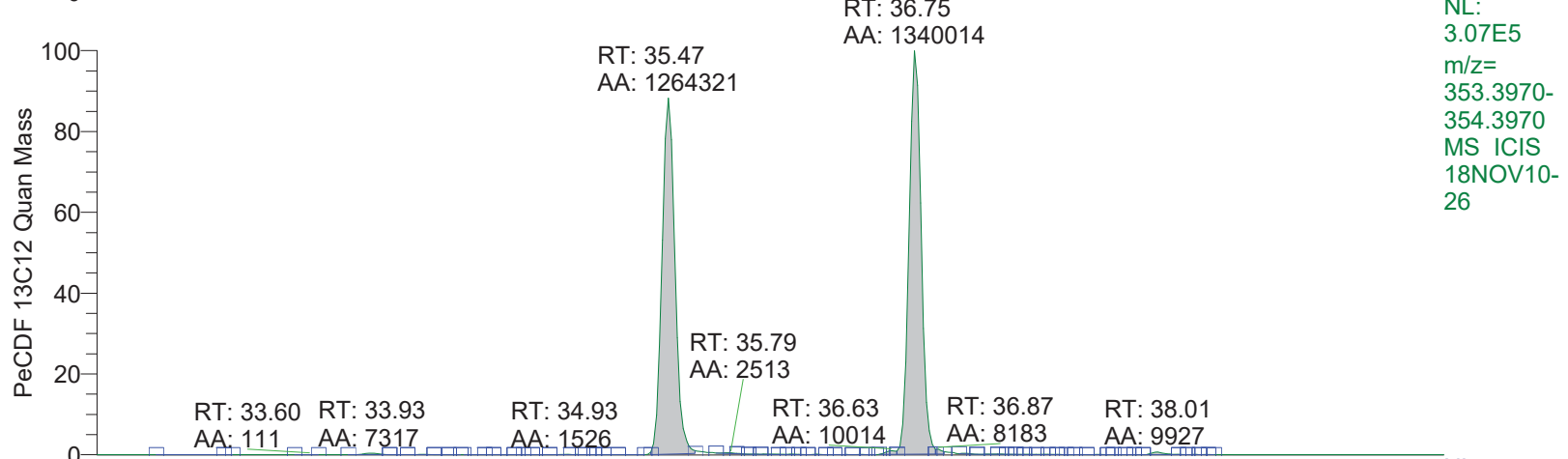
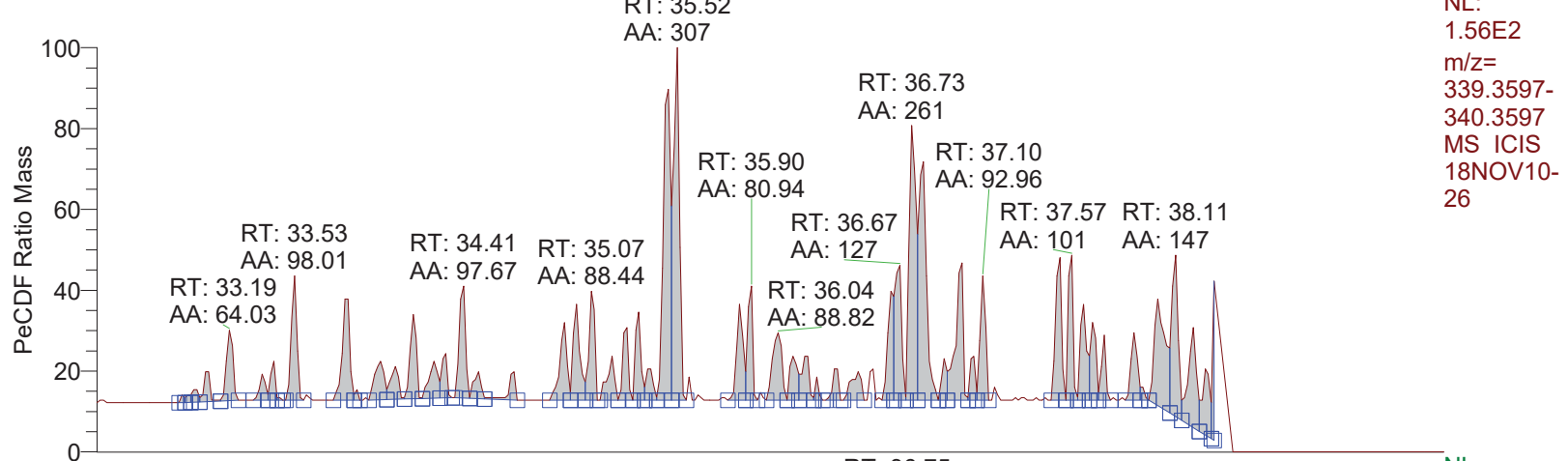
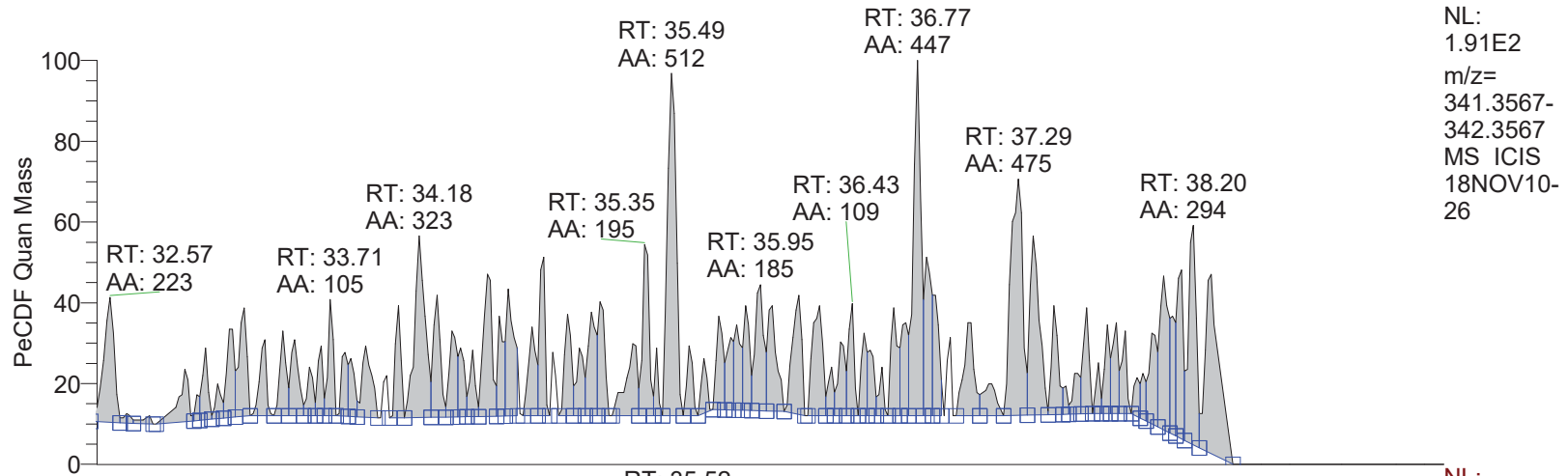


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APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

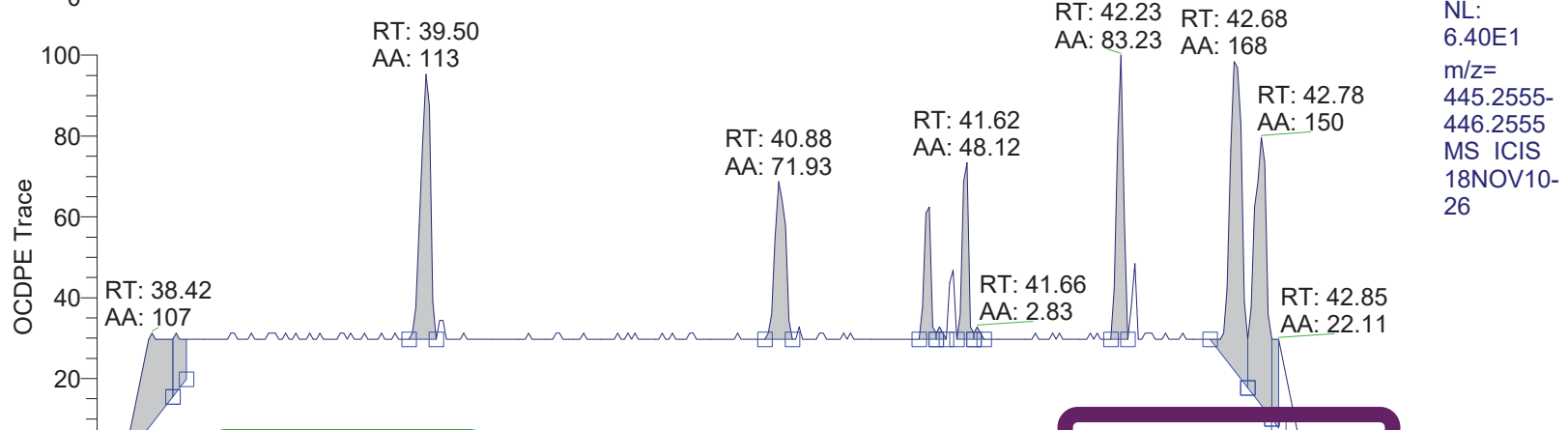
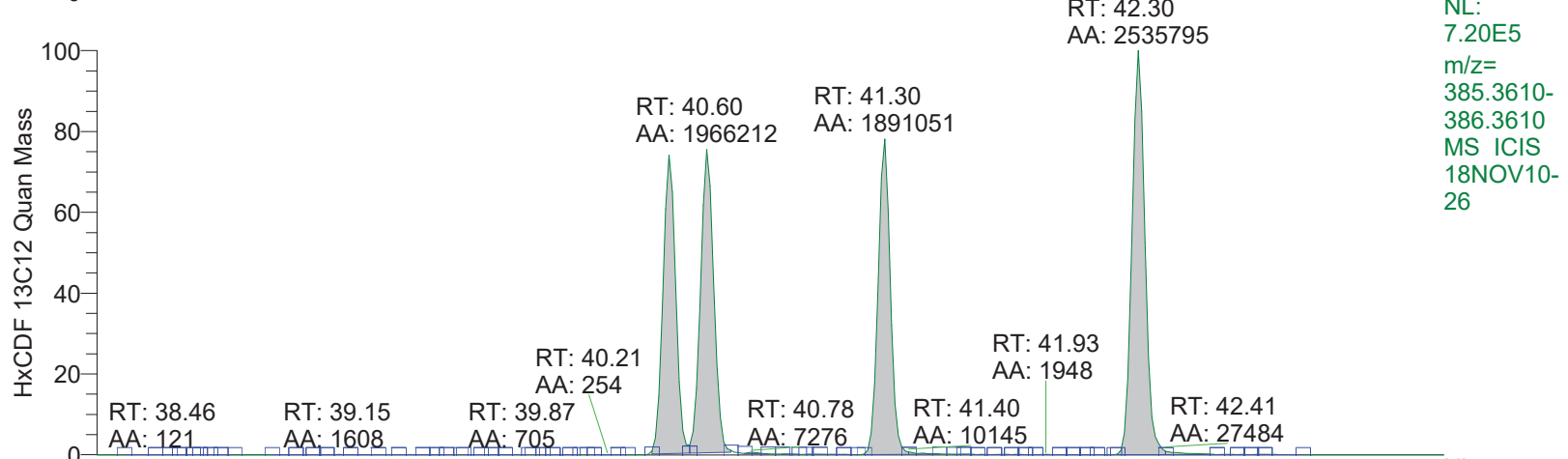
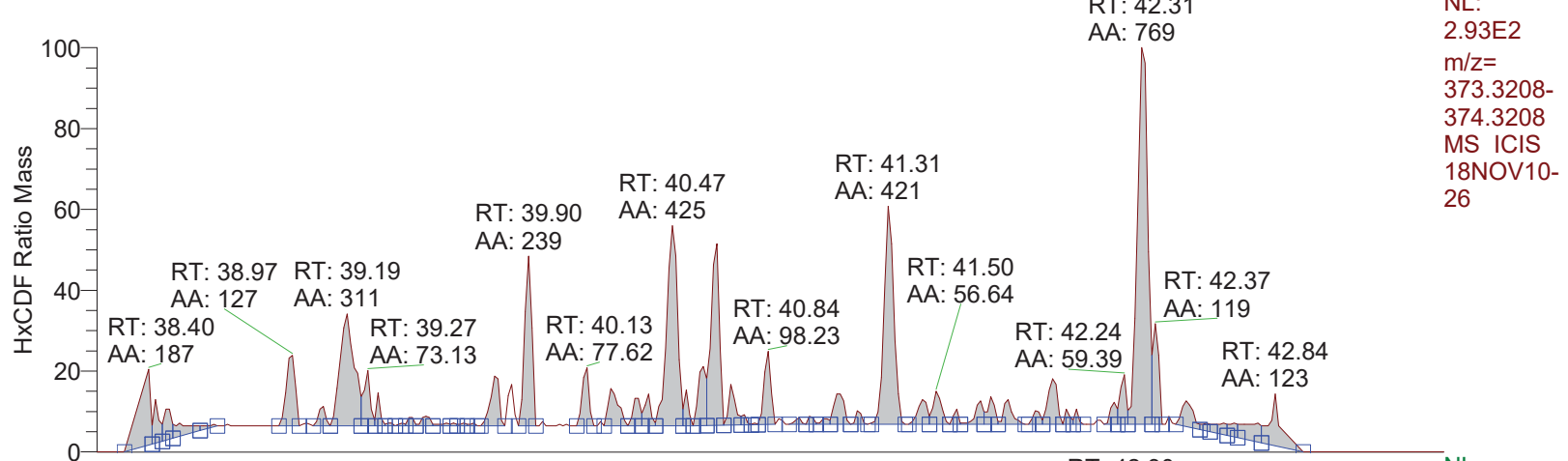
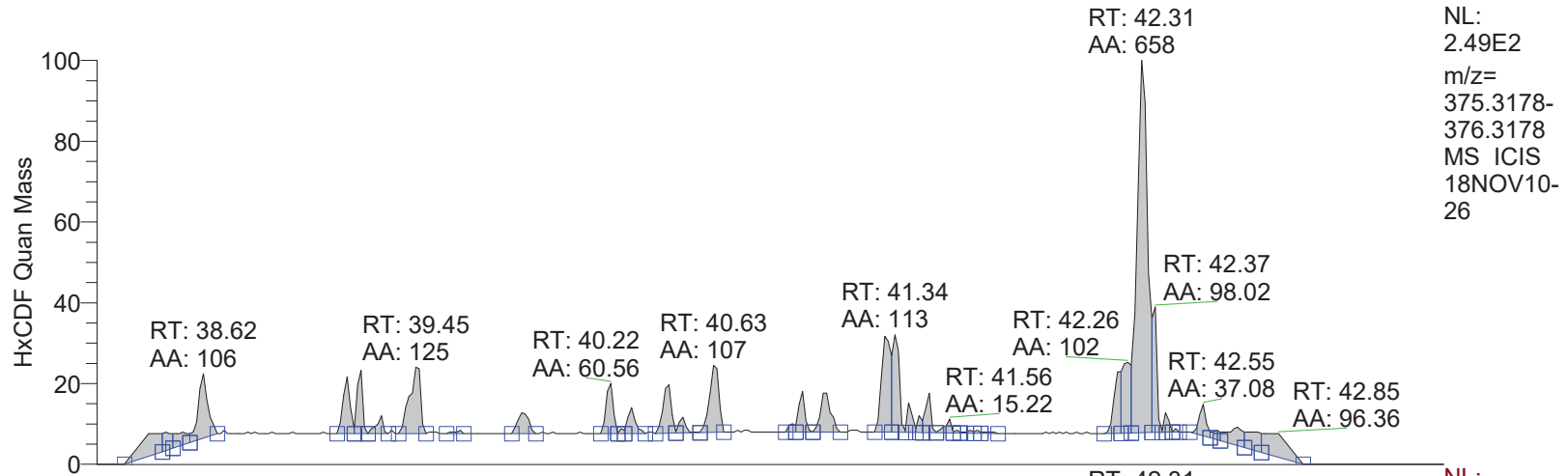
RT: 32.50 - 39.50



APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

RT: 38.20 - 43.50

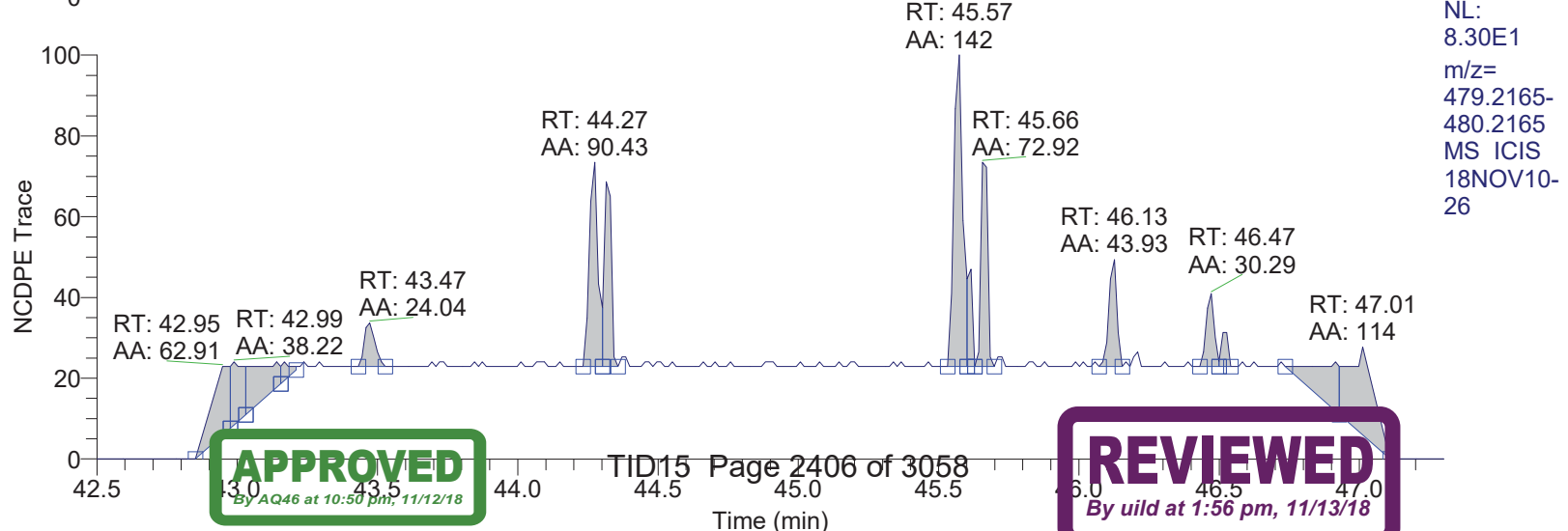
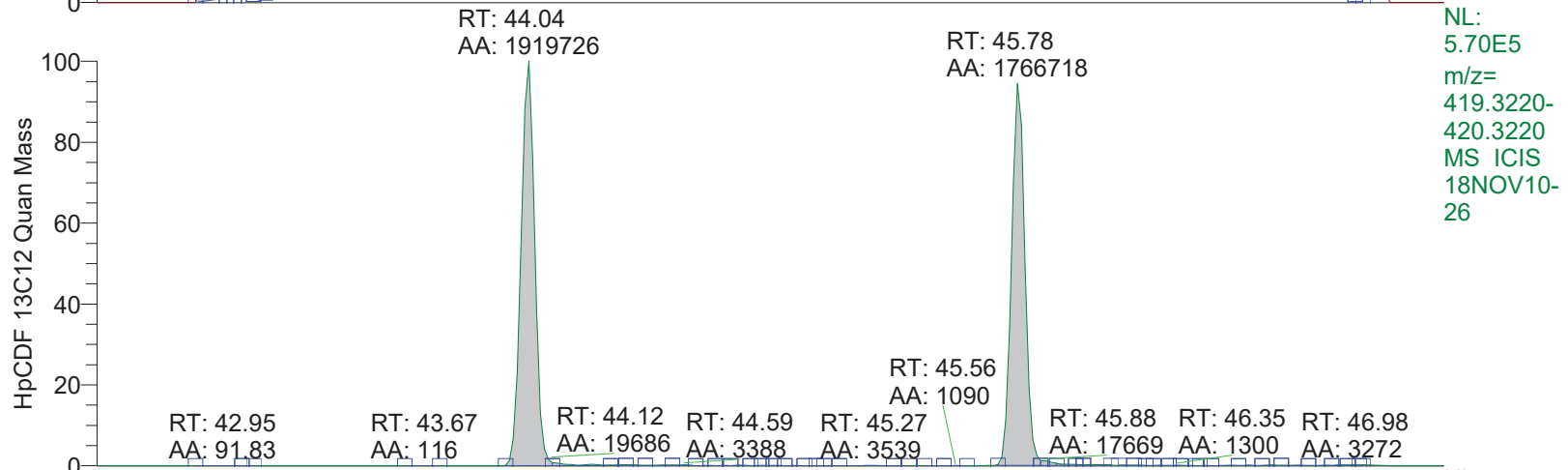
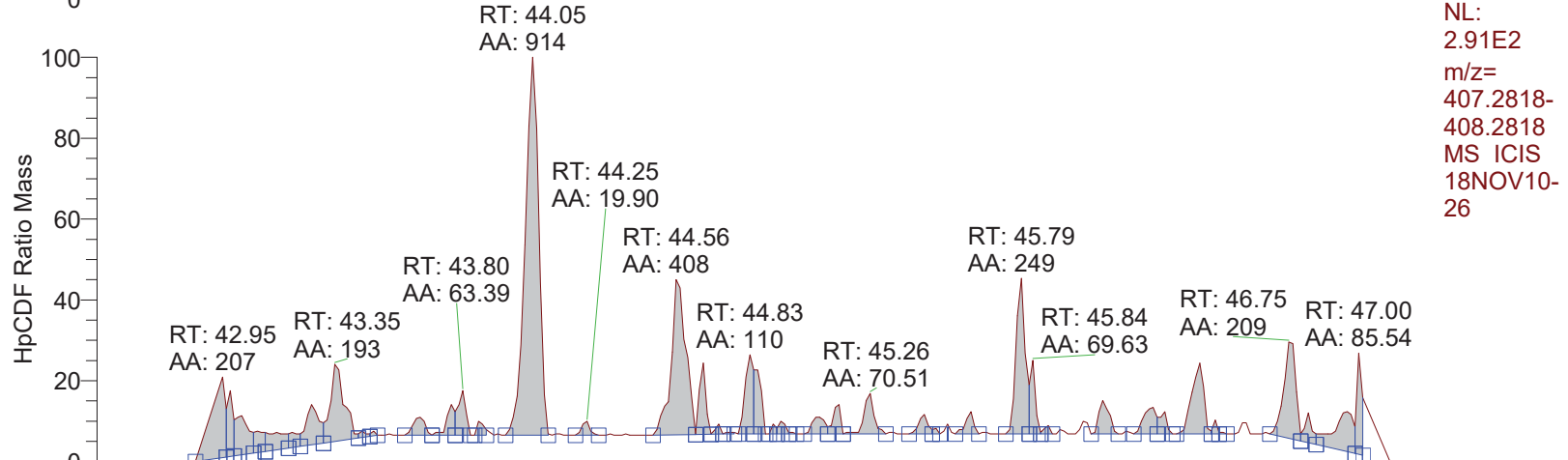
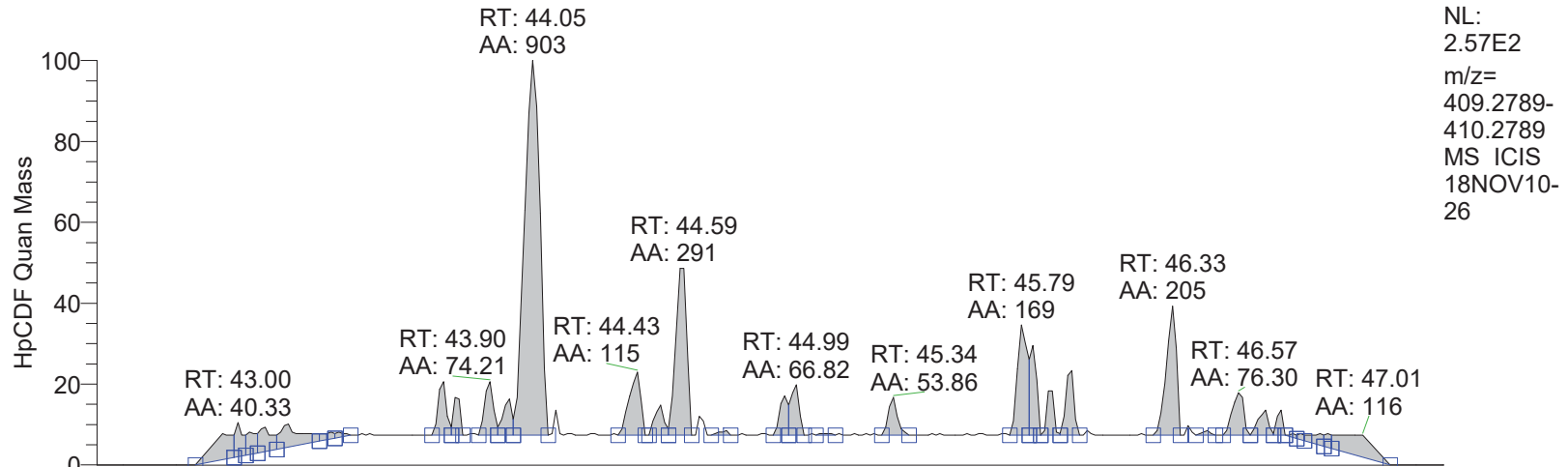


APPROVED
By AC46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

Time (min)

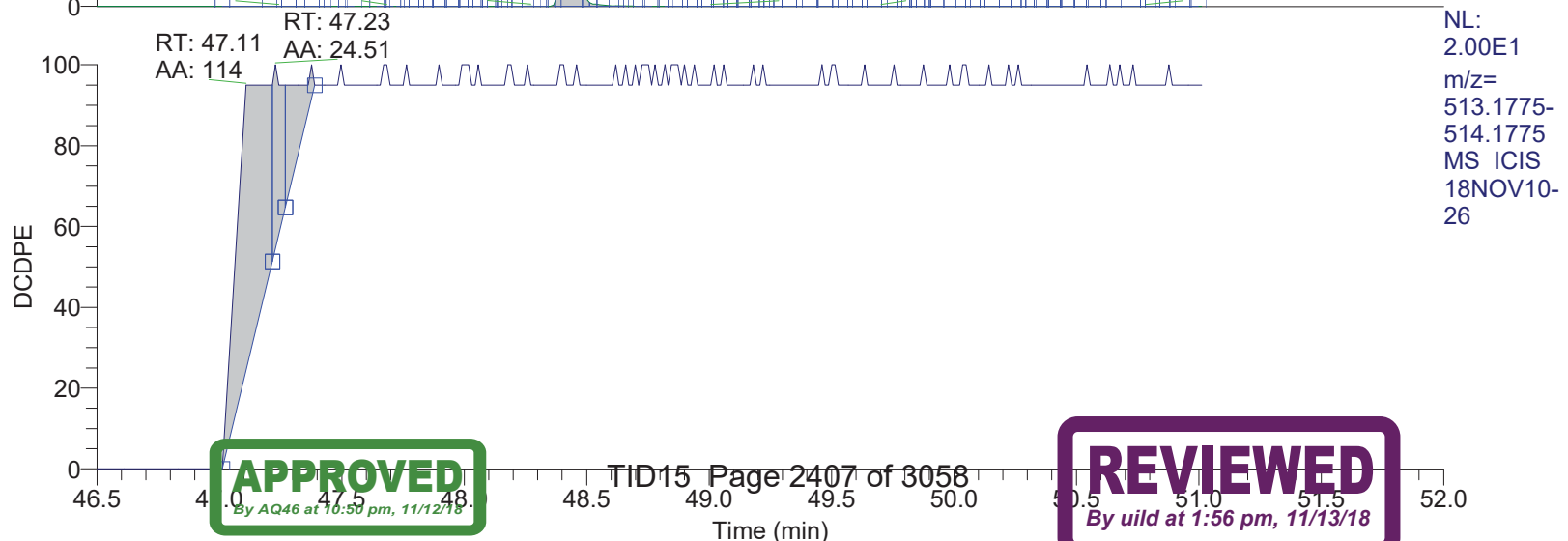
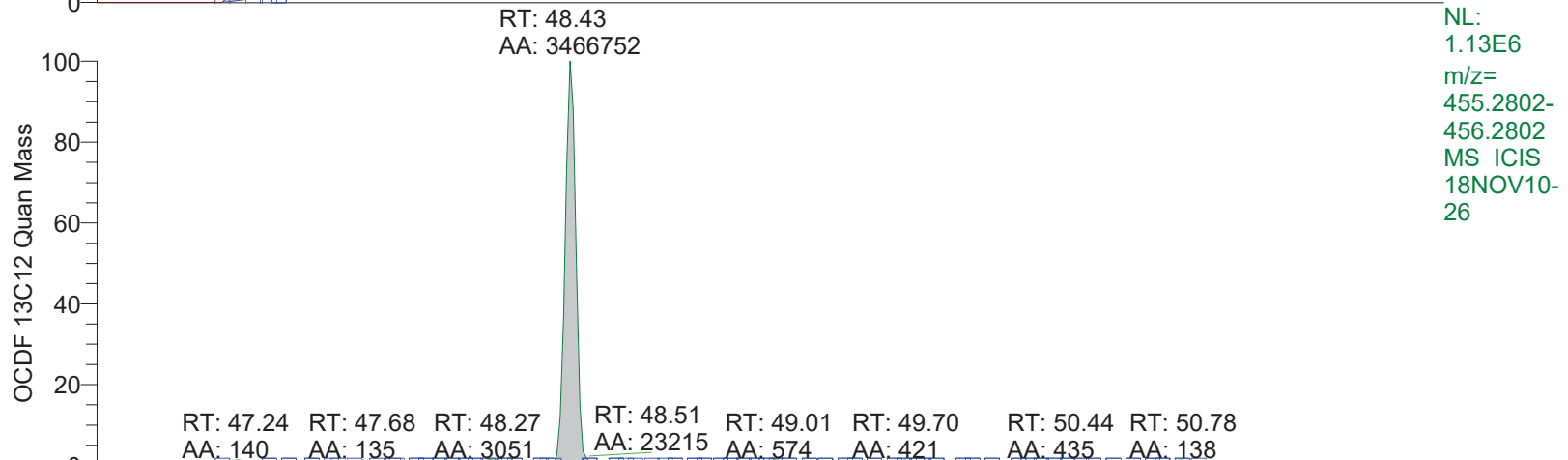
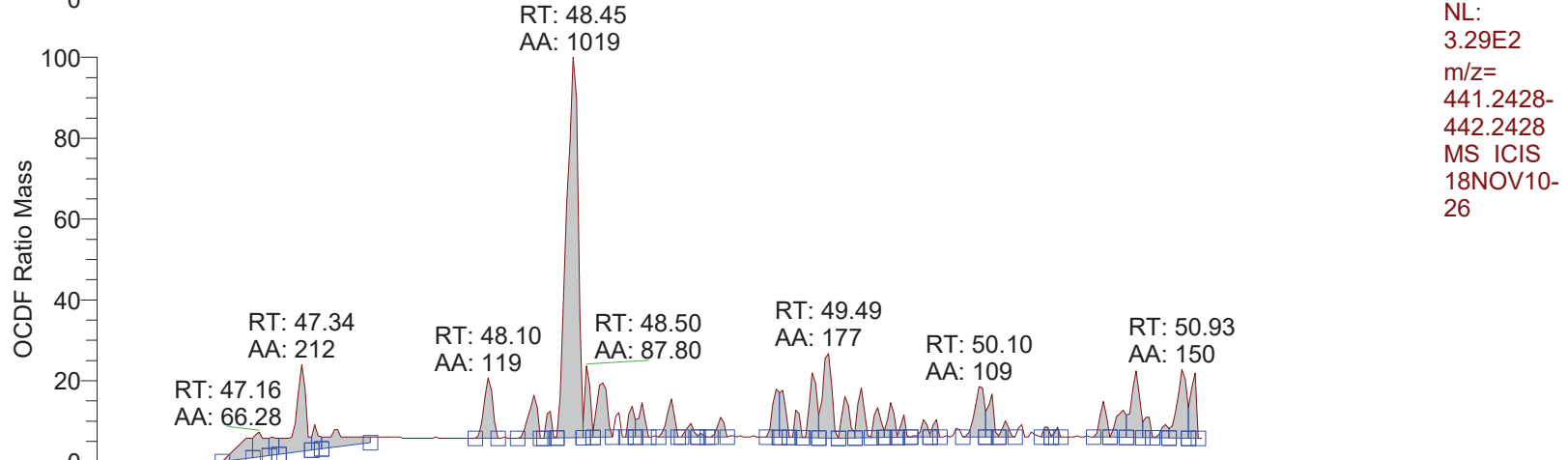
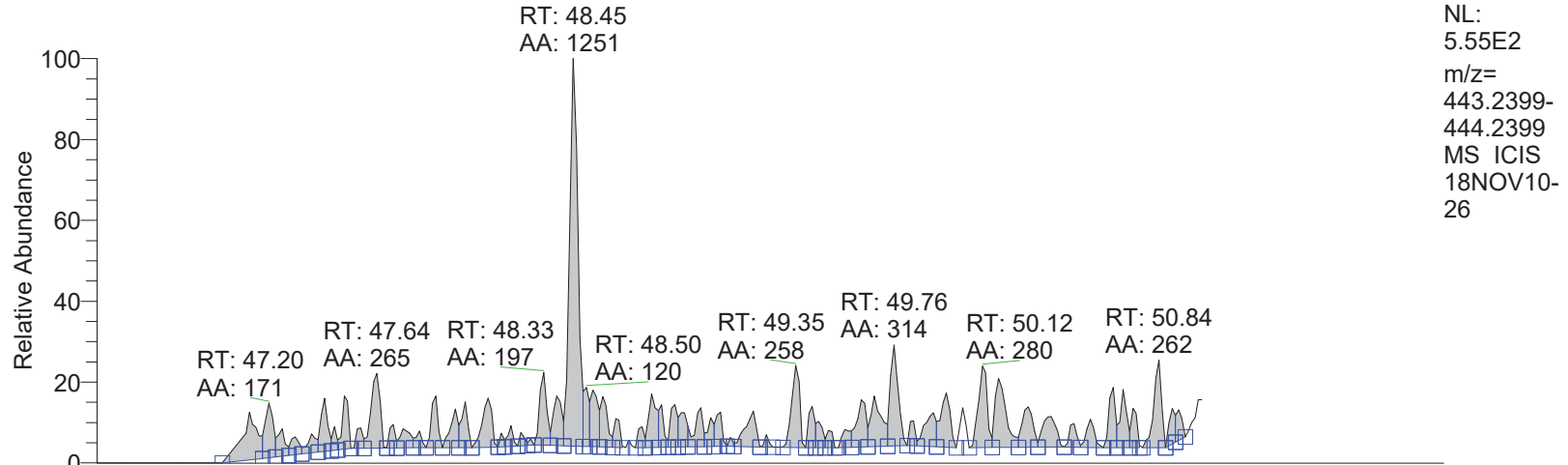
RT: 42.50 - 47.30



APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:56 pm, 11/13/18

RT: 46.50 - 52.00



18NOV10-26

*** file opened Sat Nov 10 17:05:02 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 17:05:01

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

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218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes

18NOV10-26

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	93.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0076	FVINLET	0.0379	FVSR	0.0360
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	93.0000	LKM	442.9723	MASS	93.0000
MDAC	1366455.6938	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9846	RELEN	0.0000
RES	12364.8957	RPUSHER	-6.0733	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	93.0000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.4e-008 mbar
Pirani Analyse: 7.5e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11263.
MID Time window 2: Resolution is 11006.
MID Time window 3: Resolution is 11516.
MID Time window 4: Resolution is 11339.



18NOV10-26

MID Time Window 5: Resolution is 11722.
MID Time Window 6: Resolution is 12364.

Amplifier Offset: 82.

*** File closed Sat Nov 10 17:56:03 2018



Standards Data

Dioxins/Furans by HRMS

Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 15:25
Number of Entries 26
Comment
Vial 2
Sample Name TDTFWD - ST1823237B
Sample ID CPS01
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

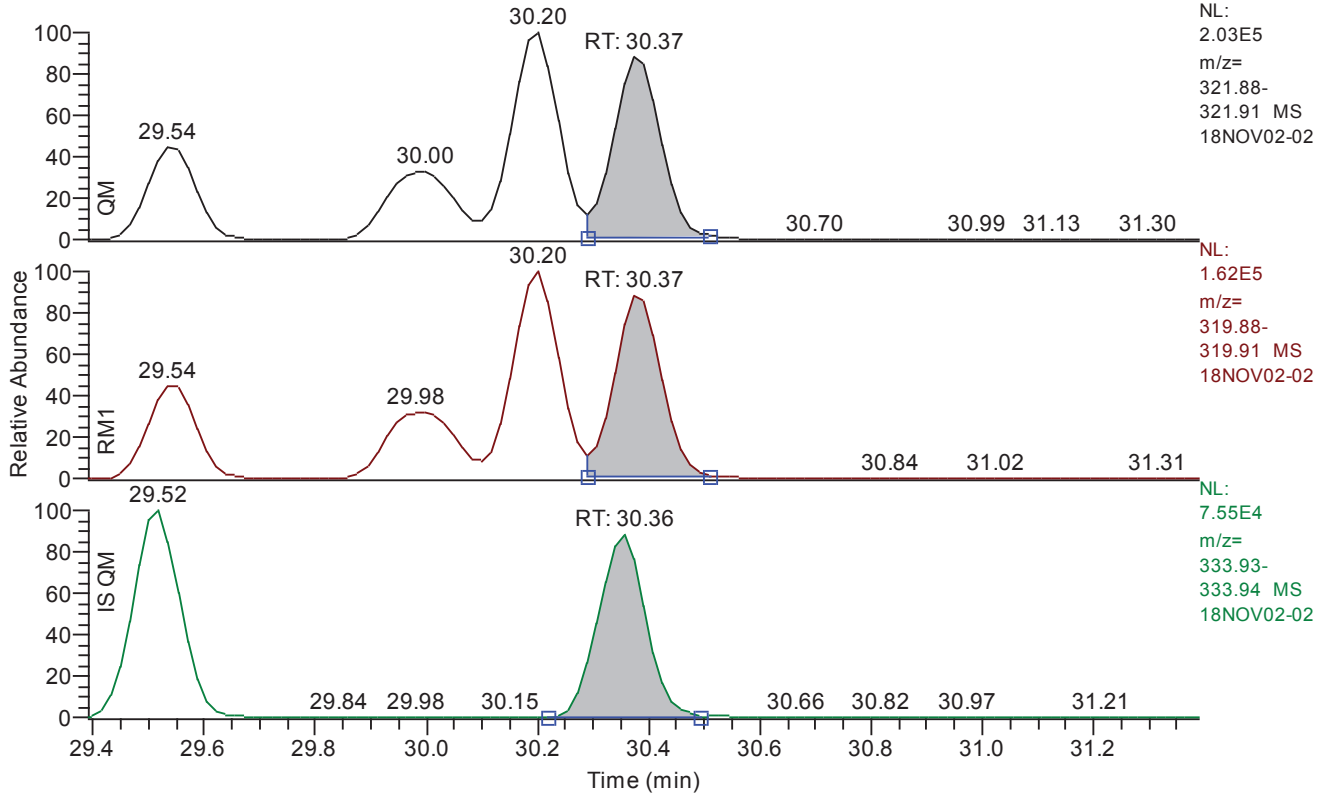
Quan x:\18nov02\18nov02-02.quan
Data x:\18nov02\18nov02-02.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height No Summation
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 1.0
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

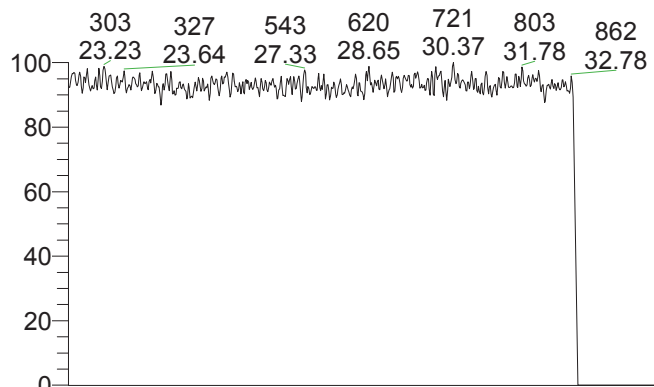
RT: 29.39 - 31.39 SM: 3G



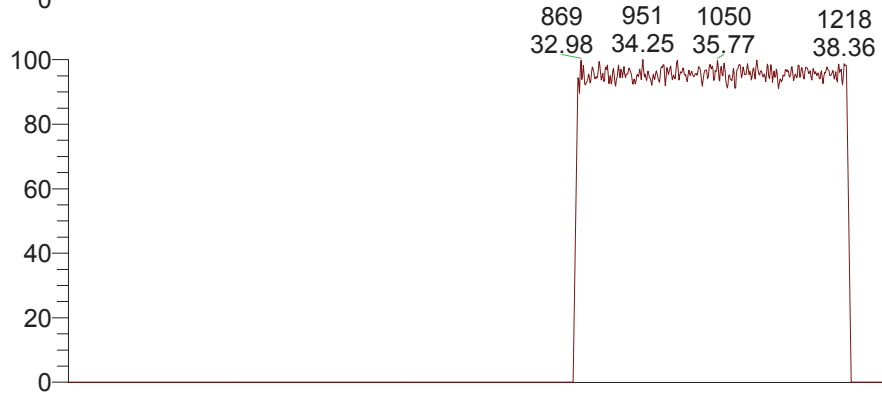
Entry Parameters

Smoothing Points	3
Compound Name	2378-TCDD
Quan. Mass	321.8936 +/- 50 ppm
QM Integration Mode	A
Ratio Mass 1	319.8965 +/- 50 ppm
RM1 Integration Mode	A
ManInt	0
RM1 Retention Time	30.37
RM1 Left Baseline Height	2162.36
RM1 Left Height	16180
RM1 Height	141485
GC Res (%) left	12.241831

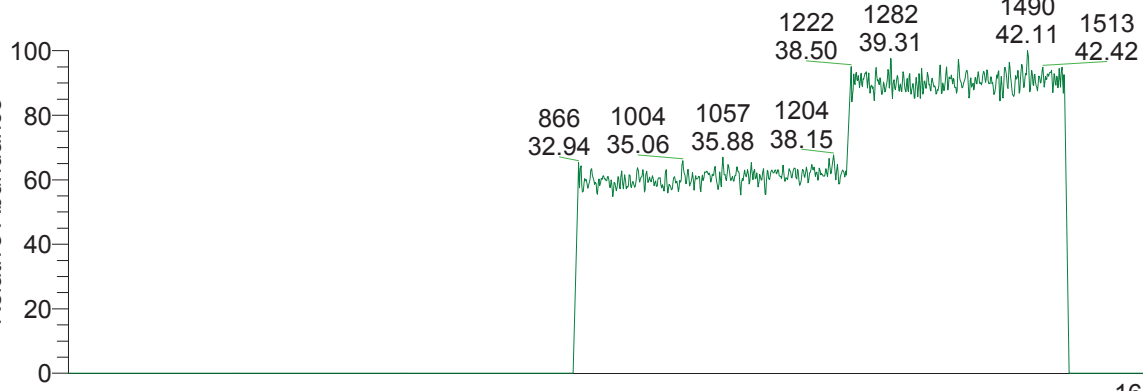
RT: 22.50 - 51.00



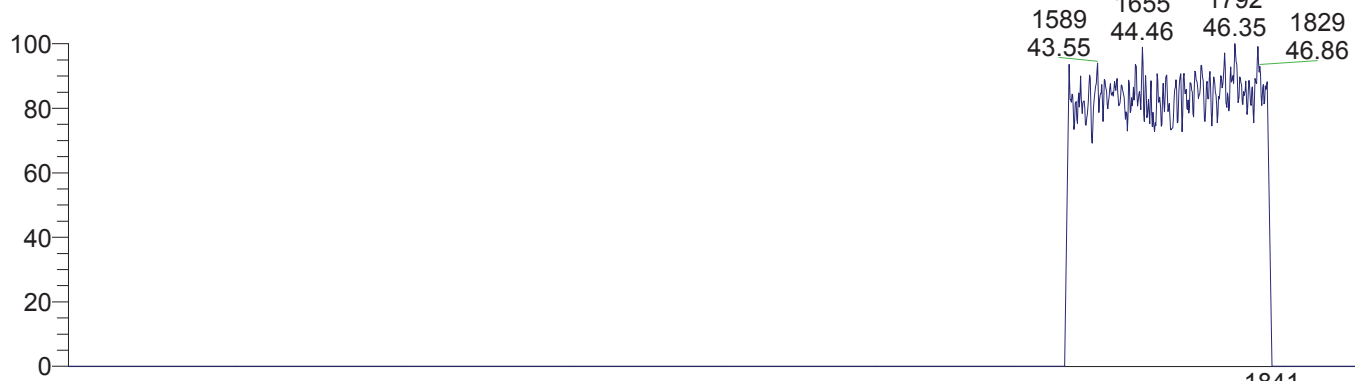
NL:
8.71E5
m/□
291.9825-
292.9825
MS
18NOV02-
02



NL:
8.98E5
m/□
330.4792-
331.4792
MS
18NOV02-
02



NL:
6.16E5
m/□
380.4760-
381.4760
MS
18NOV02-
02



NL:
1.46E5
m/□
404.4760-
405.4760
MS
18NOV02-
02



NL:
1.72E5
m/□
442.4728-
443.4728
MS
18NOV02-
02

APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 15:28:57 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 15:28:56

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 1af585a9-84ae-4575-bfd7-43925d10e3f3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:36 min	38:23 min	0.90 sec
# 4	38:23 min	4:27 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



18NOV02-02

MID window terminated after 38.400000 minutes
MID window end time was 38.400000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	99.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0379	FVSR	0.0366
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	99.0000	LKM	442.9723	MASS	99.0000
MDAC	1441894.7239	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9861	RELEN	0.0000
RES	11282.9301	RPUSHER	-6.0733	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	99.0000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.5e-008 mbar
Pirani Analyse: 7.2e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11287.
MID Time window 2: Resolution is 11072.
MID Time window 3: Resolution is 11626.
MID Time window 4: Resolution is 11561.



18NOV02-02

MID Time Window 5: Resolution is 11897.
MID Time Window 6: Resolution is 11282.

Amplifier Offset: 81.

*** File closed Fri Nov 02 16:19:59 2018



DF17611-18NOV02DFICAL									
Compound Name	RF Area	RF Area	RF Area	RF Area	RF Area	RF Area	Average	Std Dev	% RSD
	18NOV02-04	18NOV02-05	18NOV02-06	18NOV02-07	18NOV02-08	18NOV02-09			
2378-TCDF	1.1889	0.9736	1.0066	1.0406	1.0627	1.0357	1.0514	0.0741	7.05
2378-TCDD	1.4846	1.1285	1.1960	1.2134	1.2471	1.2314	1.2502	0.1220	9.76
12378-PeCDF	0.9587	0.9000	0.9275	0.9648	0.9527	0.9190	0.9371	0.0256	2.73
23478-PeCDF	1.0420	1.0162	1.0496	1.0672	1.0782	1.0496	1.0504	0.0214	2.04
12378-PeCDD	1.0391	0.9951	0.9568	1.0004	1.0270	0.9913	1.0016	0.0290	2.90
123478-HxCDF	1.0897	1.0680	1.1124	1.1654	1.1361	1.1103	1.1137	0.0342	3.07
123678-HxCDF	1.0900	1.0507	1.0677	1.1001	1.0910	1.0415	1.0735	0.0239	2.23
234678-HxCDF	1.1802	1.1053	1.1223	1.1866	1.1723	1.1296	1.1494	0.0344	2.99
123478-HxCDD	1.0104	1.0061	0.9828	1.0451	1.0475	0.9818	1.0123	0.0289	2.85
123678-HxCDD	0.9918	0.9988	1.0136	1.0004	1.0263	0.9854	1.0027	0.0149	1.49
123789-HxCDD	1.0527	1.0037	1.0517	1.0906	1.0810	1.0372	1.0528	0.0313	2.97
123789-HxCDF	1.1359	1.0420	1.0549	1.0941	1.0851	1.0333	1.0742	0.0385	3.58
1234678-HpCDF	1.0746	1.1985	1.1794	1.2509	1.2173	1.1919	1.1854	0.0597	5.04
1234678-HpCDD	1.0094	0.9936	1.0138	1.0408	1.0505	1.0084	1.0194	0.0217	2.12
1234789-HpCDF	1.2359	1.2024	1.1955	1.2562	1.2786	1.2207	1.2316	0.0320	2.60
OCDD	0.9680	0.9511	0.9773	1.0135	0.9930	1.0139	0.9861	0.0253	2.56
OCDF	0.8600	0.8239	0.8484	0.8806	0.8535	0.9077	0.8624	0.0288	3.34
13C12-1278-TCDD (CRS)	1.0713	1.0353	1.0238	1.1096	1.0121	1.0137	1.0443	0.0387	3.70
13C12-1234-TCDD	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00
13C12-123468-HxCDD	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00
13C12-2378-TCDF	2.1517	2.0419	2.0001	2.0584	2.0020	1.9671	2.0369	0.0650	3.19
13C12-2378-TCDD	1.0360	1.0084	0.9733	1.0268	0.9950	0.9987	1.0064	0.0227	2.26
13C12-12378-PeCDF	1.9949	1.8862	1.8602	1.9794	1.9123	1.9252	1.9264	0.0523	2.72
13C12-23478-PeCDF	2.0047	1.8469	1.8316	1.9984	1.8967	1.9448	1.9205	0.0743	3.87
13C12-12378-PeCDD	1.0800	0.9830	0.9970	1.0757	1.0364	1.0603	1.0387	0.0409	3.94
13C12-123478-HxCDF	1.4499	1.3946	1.4023	1.4943	1.4573	1.4824	1.4468	0.0409	2.82
13C12-123678-HxCDF	1.5131	1.4937	1.4802	1.5935	1.5565	1.6397	1.5461	0.0621	4.02
13C12-234678-HxCDF	1.3979	1.3746	1.3716	1.4669	1.4013	1.4719	1.4140	0.0446	3.15
13C12-123478-HxCDD	1.0204	0.9360	0.9459	1.0213	0.9890	1.0793	0.9987	0.0535	5.35
13C12-123678-HxCDD	1.0364	0.9853	0.9622	1.0696	1.0438	1.1246	1.0370	0.0584	5.63
13C12-123789-HxCDD	0.9986	0.9421	0.9233	0.9962	0.9805	1.0326	0.9789	0.0401	4.09
13C12-123789-HxCDF	1.3107	1.2740	1.2440	1.3475	1.3230	1.3828	1.3137	0.0499	3.80
13C12-1234678-HpCDF	1.3132	1.2584	1.2210	1.4038	1.2968	1.4081	1.3169	0.0760	5.77
13C12-1234678-HpCDD	0.9887	0.9257	0.8803	1.0470	0.9386	1.0538	0.9723	0.0696	7.16
13C12-1234789-HpCDF	1.0898	1.0558	1.0113	1.1890	1.0841	1.2062	1.1060	0.0764	6.90
13C12-OCDD	1.0146	0.9221	0.8652	1.1365	0.9879	1.2420	1.0280	0.1394	13.55
13C12-OCDF	1.4281	1.3798	1.2711	1.6588	1.4772	1.8316	1.5078	0.2037	13.51
Total TCDF	1.1889	0.9736	1.0066	1.0406	1.0627	1.0357	1.0514	0.0741	7.05
Total TCDD	1.4846	1.1285	1.1960	1.2134	1.2471	1.2314	1.2502	0.1220	9.76
Total PeCDD	1.0391	0.9951	0.9568	1.0004	1.0270	0.9913	1.0016	0.0290	2.90
Total PeCDF	1.0004	0.9575	0.9881	1.0162	1.0152	0.9846	0.9937	0.0221	2.22
Total HpCDD	1.0094	0.9936	1.0138	1.0408	1.0505	1.0084	1.0194	0.0217	2.12
Total HxCDF	1.1228	1.0666	1.0898	1.1368	1.1209	1.0784	1.1026	0.0281	2.55
Total HxCDD	1.0179	1.0028	1.0157	1.0443	1.0511	1.0007	1.0221	0.0211	2.06
Total HpCDF	1.1478	1.2002	1.1867	1.2533	1.2452	1.2052	1.2064	0.0389	3.23



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 17:16
Number of Entries	64
Comment	
Vial	3
Sample Name	CALDF11837C
Sample ID	CSL01
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

Quan	x:\18nov02\18nov02-04.quan
Data	x:\18nov02\18nov02-04.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT Status	Status Info
1	2378-TCDF	29.20	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.36	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.27	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.56	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	36.98	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.29	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.44	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.16	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.36	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.47	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.79	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.17	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.92	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.13	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.69	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.17	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.35	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.76	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.47	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.20	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.15	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.31	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.25	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.55	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	36.96	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.28	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.43	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.14	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.35	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.45	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.78	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.15	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.90	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.12	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.67	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.16	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.33	passed	passed	passed	passed	passed	passed	passed
38	Total TCDF	28.23	passed (1)	---	---	---	---	---	---
39	Total TCDD	28.96	passed (1)	---	---	---	---	---	---
40	Total PeCDF	34.83	passed (2)	---	---	---	---	---	---
41	Total PeCDD	35.77	passed (1)	---	---	---	---	---	---
42	Total HxCDF	40.50	passed (4)	---	---	---	---	---	---
43	Total HxCDD	40.73	passed (3)	---	---	---	---	---	---
44	Total HpCDD	44.73	passed (1)	---	---	---	---	---	---
45	Total HpCDF	44.83	passed (2)	---	---	---	---	---	---
46	Single TCDF	29.20	passed	passed	passed	passed	passed	passed	passed
47	Single TCDD	30.36	passed	passed	passed	passed	passed	passed	passed
48	Single PeCDD	36.98	passed	passed	passed	passed	passed	passed	passed
49	Single PeCDF	36.56	passed	passed	passed	passed	passed	passed	passed
50	Single PeCDD	35.27	passed	passed	passed	passed	passed	passed	passed
51	Single HpCDD	45.13	passed	passed	passed	passed	passed	passed	passed
52	Single HxCDF	41.16	passed	passed	passed	passed	passed	passed	passed
53	Single HxCDF	40.29	passed	passed	passed	passed	passed	passed	passed
54	Single HxCDF	40.44	passed	passed	passed	passed	passed	passed	passed
55	Single HxCDF	42.17	passed	passed	passed	passed	passed	passed	passed
56	Single HxCDD	41.79	passed	passed	passed	passed	passed	passed	passed
57	Single HxCDD	41.36	passed	passed	passed	passed	passed	passed	passed
58	Single HxCDD	41.47	passed	passed	passed	passed	passed	passed	passed
59	Single HpCDF	45.69	passed	passed	passed	passed	passed	passed	passed
60	Single HpCDD	43.92	passed	passed	passed	passed	passed	passed	passed



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 17:16
Number of Entries 64
Comment
Vial 3
Sample Name CALDF11837C
Sample ID CSL01
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

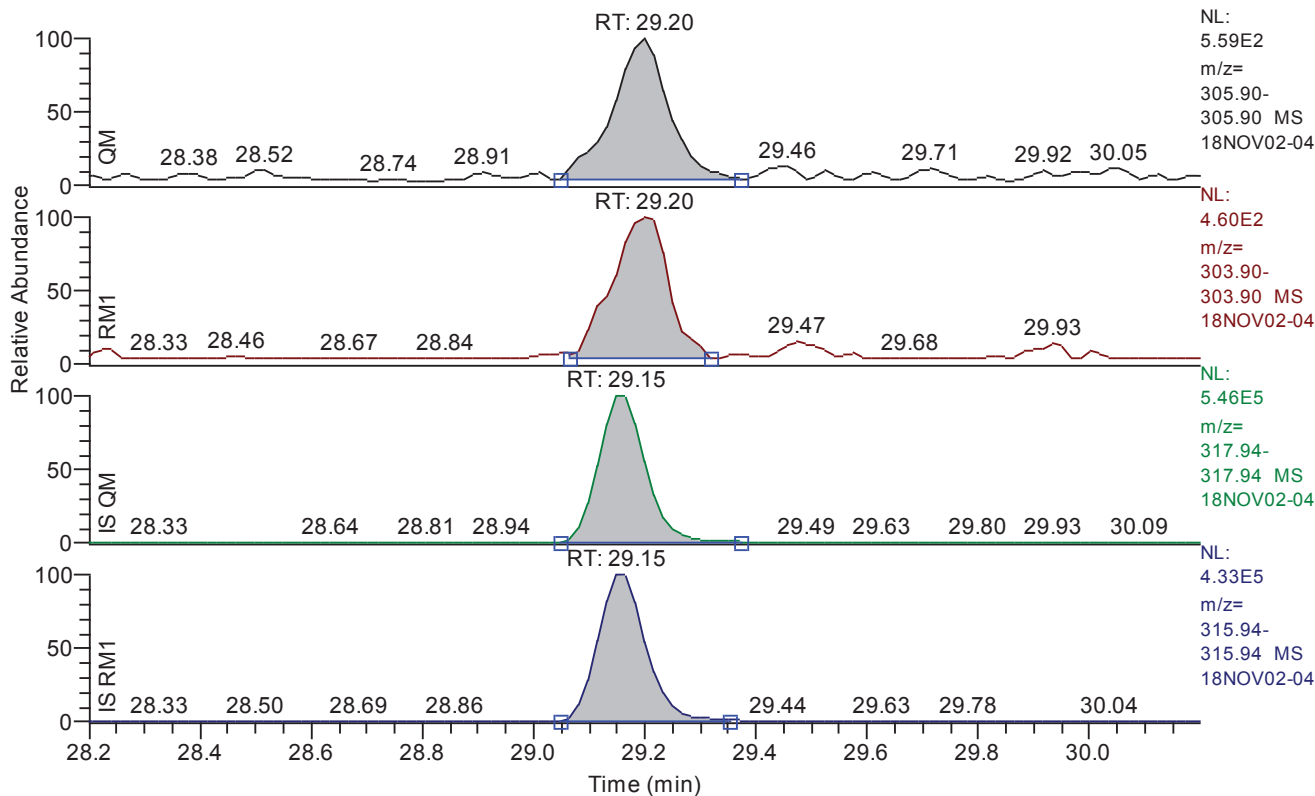
Quan x:\18nov02\18nov02-04.quan
Data x:\18nov02\18nov02-04.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.20 - 30.20 SM: 3G



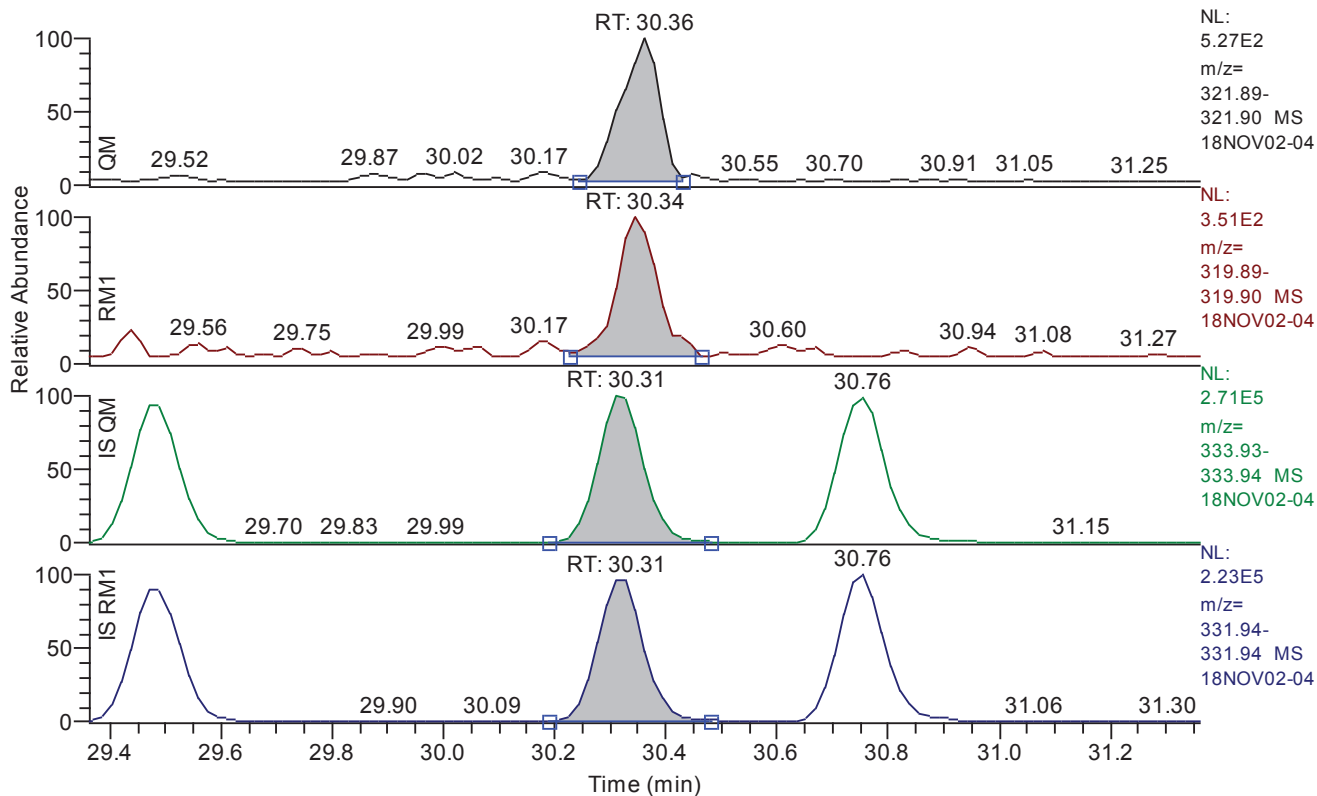
Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.20
QM Area	3862
QM Integration Mode	A
RM1 Area	3172
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0033
Unqualified Amount (A)	0.100000
Adjusted Amount (A)	0.1000
Signal-to-Noise	64
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.36 - 31.36 SM: 3G

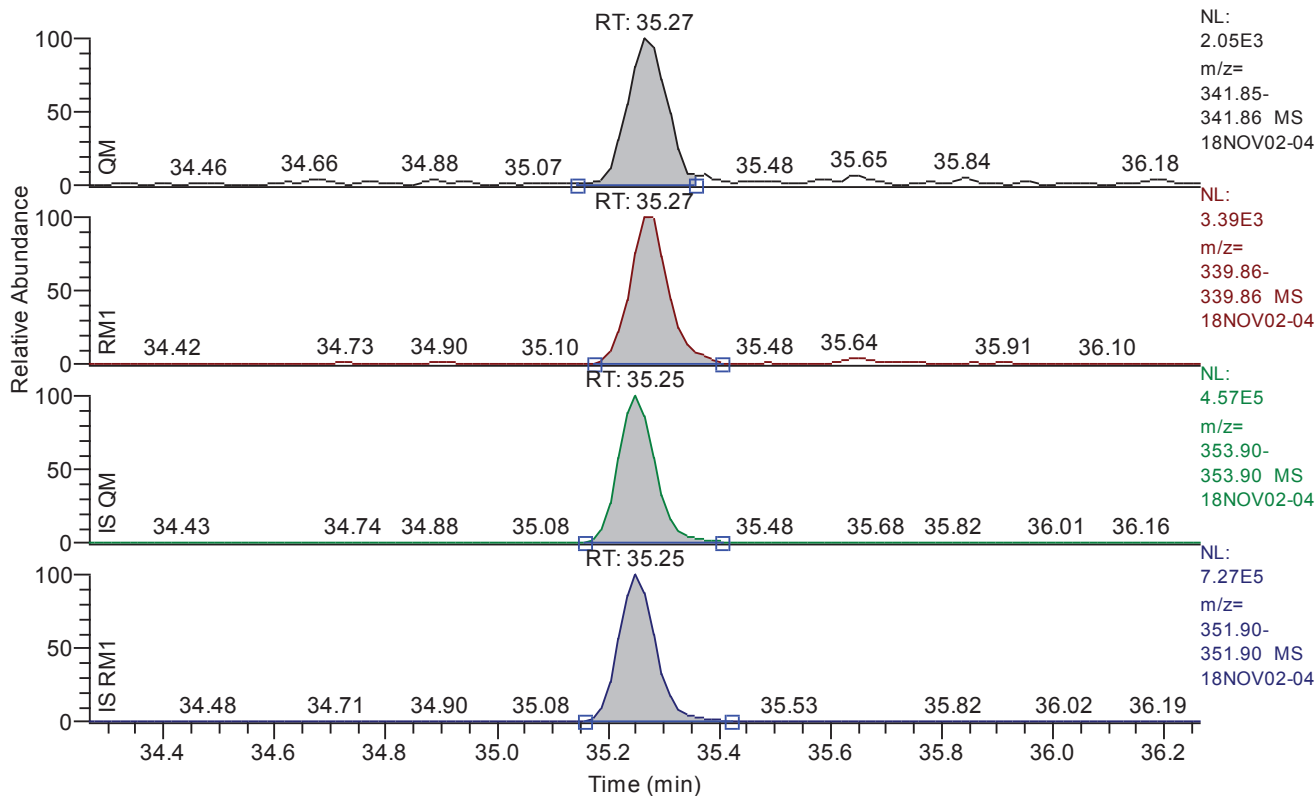


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.36
QM Area	2484
QM Integration Mode	A
RM1 Area	1745
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0032
Unqualified Amount (A)	0.100000
Adjusted Amount (A)	0.1000
Signal-to-Noise	90
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.27 - 36.27 SM: 3G

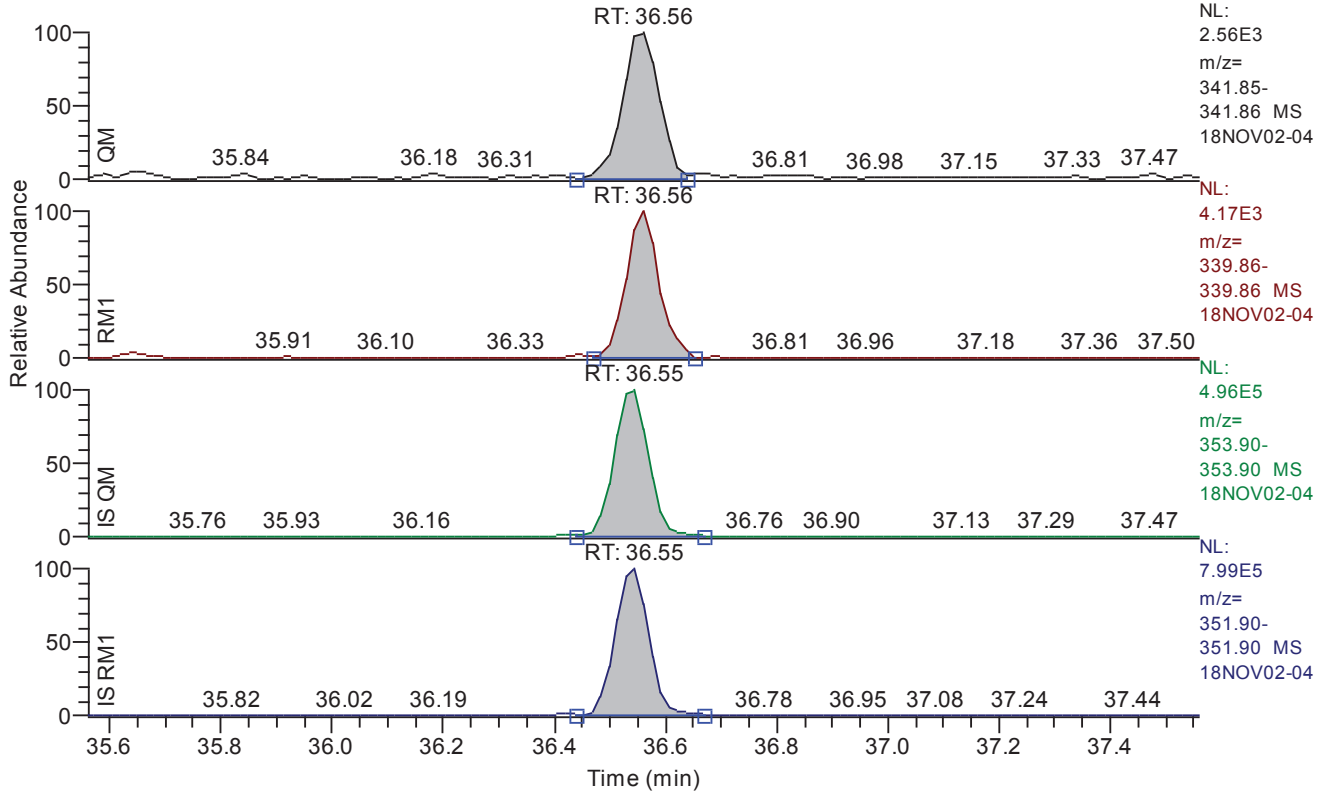


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.27
QM Area	10017
QM Integration Mode	A
RM1 Area	16273
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0037
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	322
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.56 - 37.56 SM: 3G

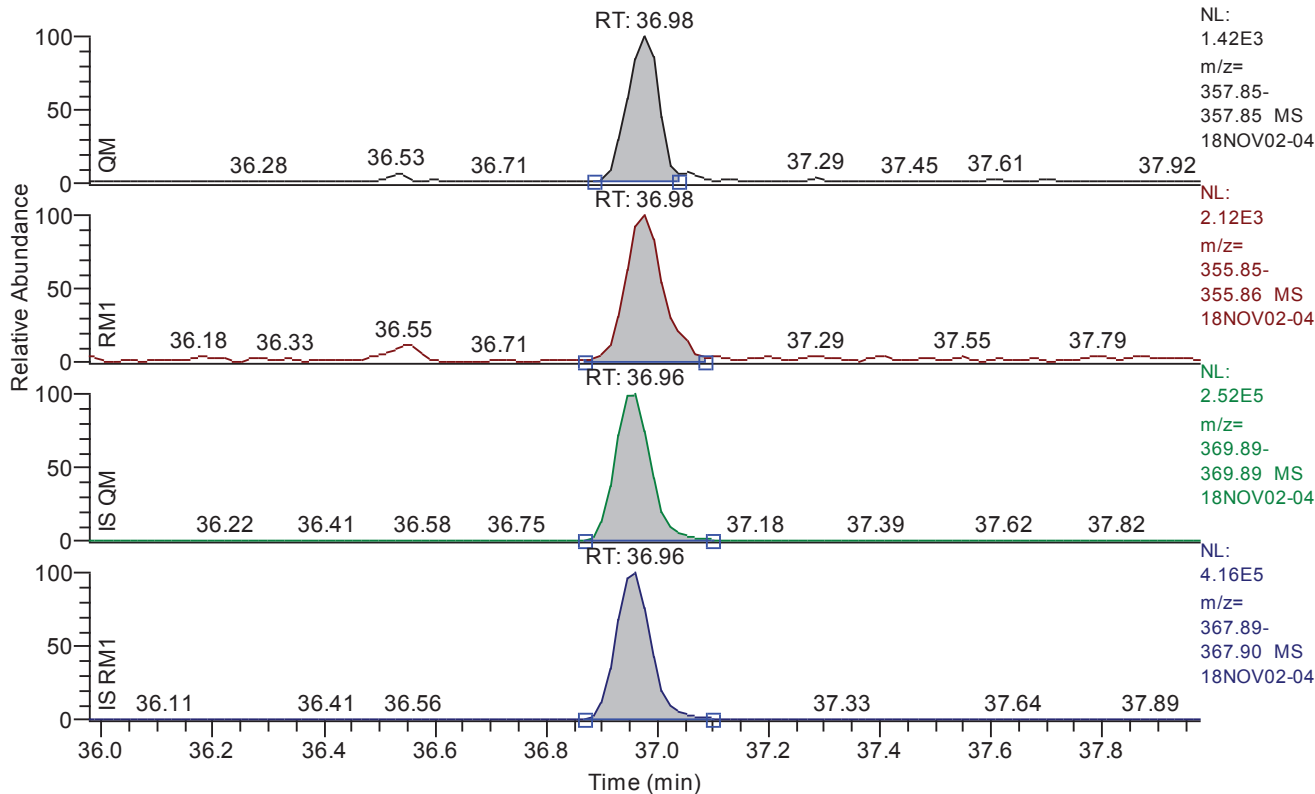


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.56
QM Area	11665
QM Integration Mode	A
RM1 Area	17051
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0031
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	399
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.98 - 37.98 SM: 3G



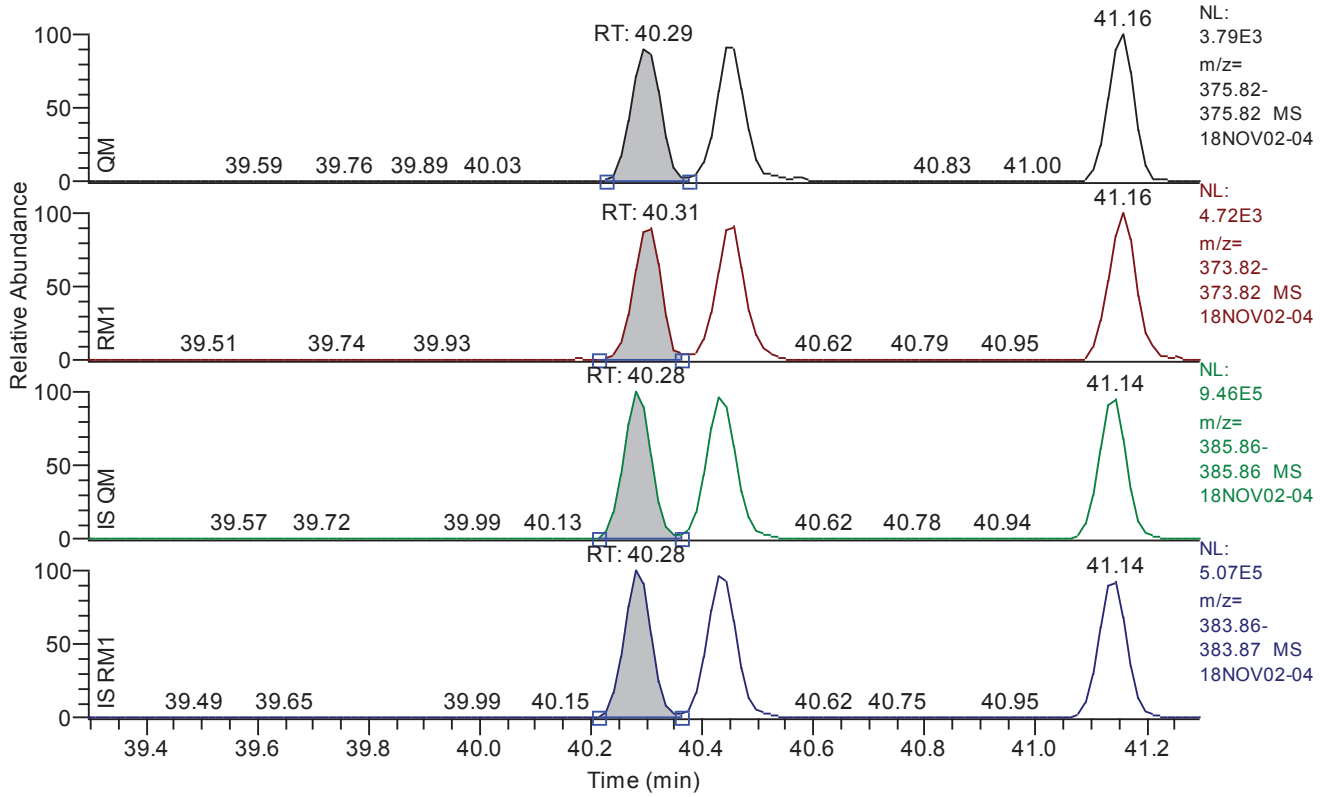
Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	36.98
QM Area	5545
QM Integration Mode	A
RM1 Area	9883
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0076
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	166
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 39.29 - 41.29 SM: 3G



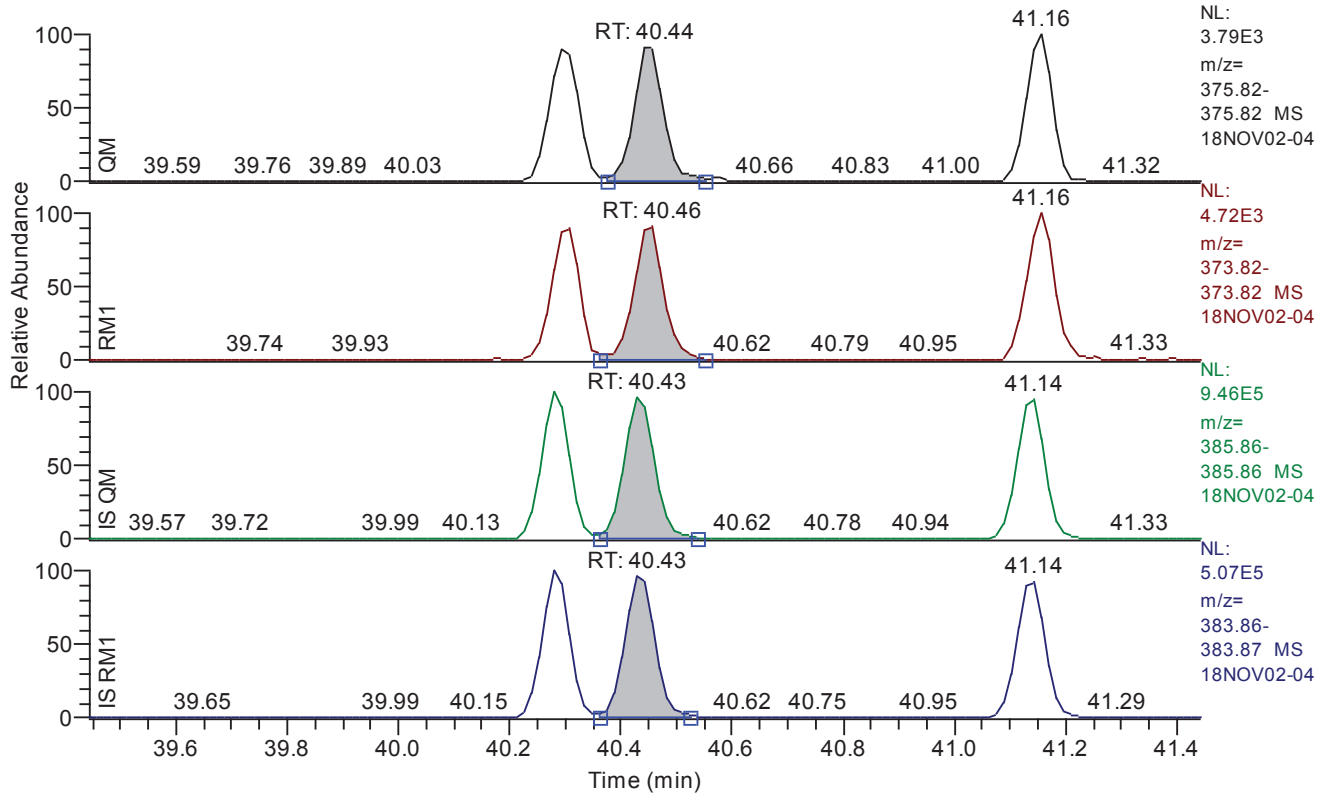
Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.29
QM Area	12654
QM Integration Mode	A
RM1 Area	14795
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0027
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	450
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 39.44 - 41.44 SM: 3G



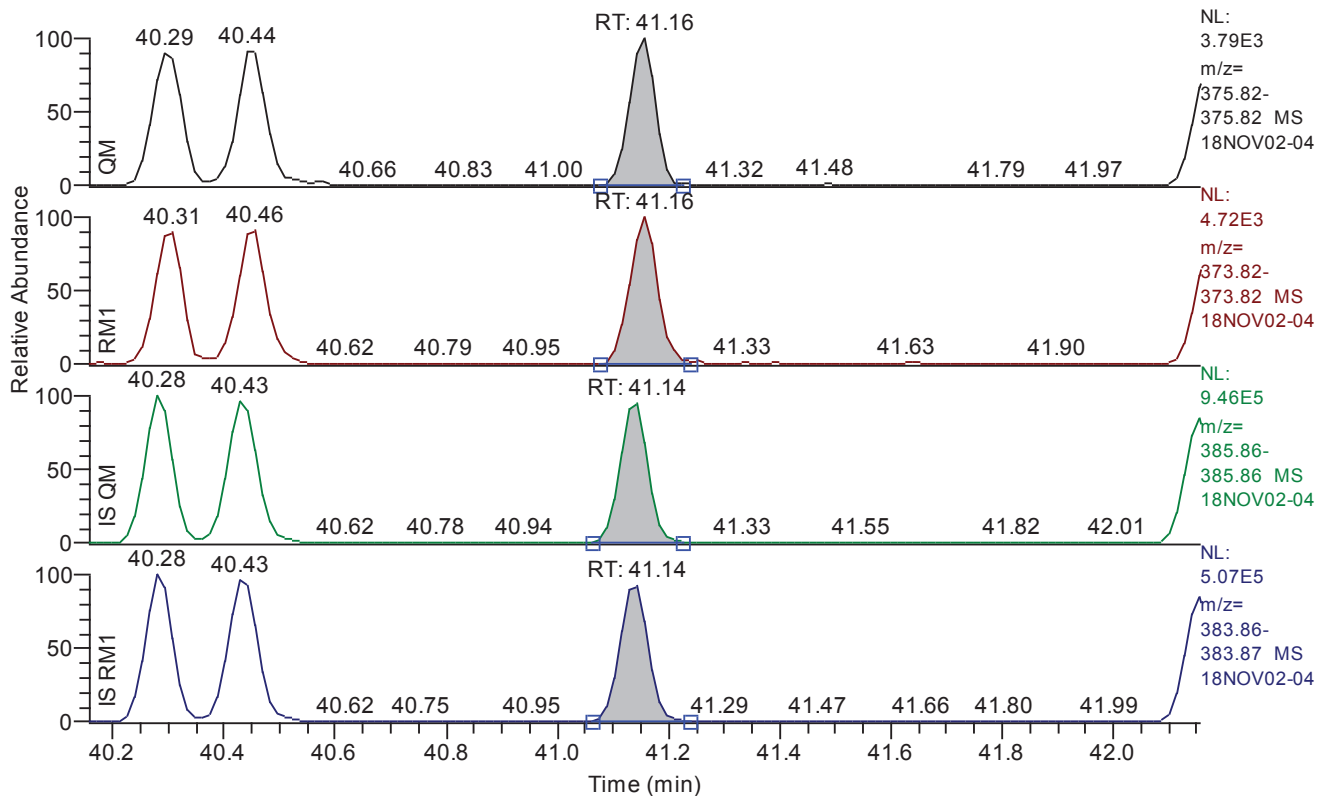
Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.44
QM Area	12626
QM Integration Mode	A
RM1 Area	16026
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0028
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	454
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.16 - 42.16 SM: 3G



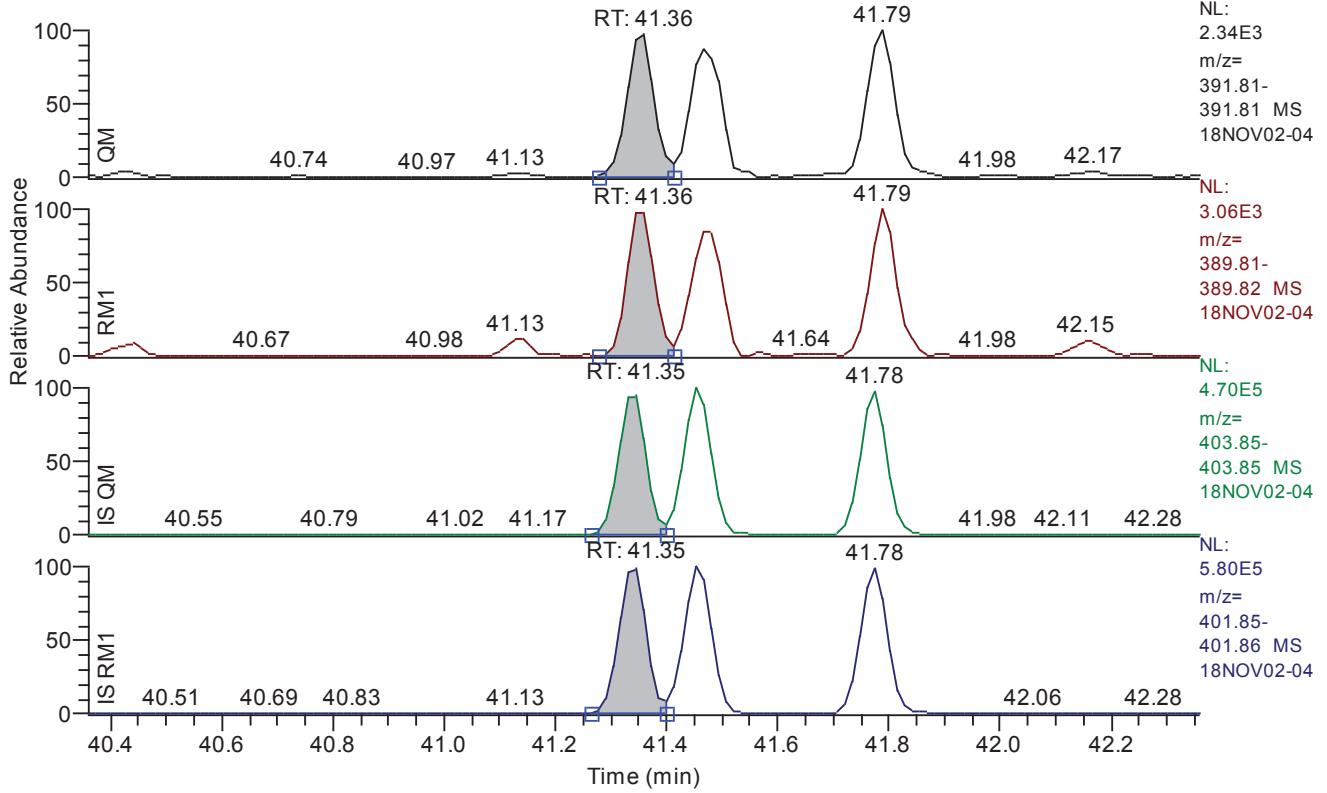
Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.16
QM Area	12236
QM Integration Mode	A
RM1 Area	16425
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0026
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	498
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.36 - 42.36 SM: 3G



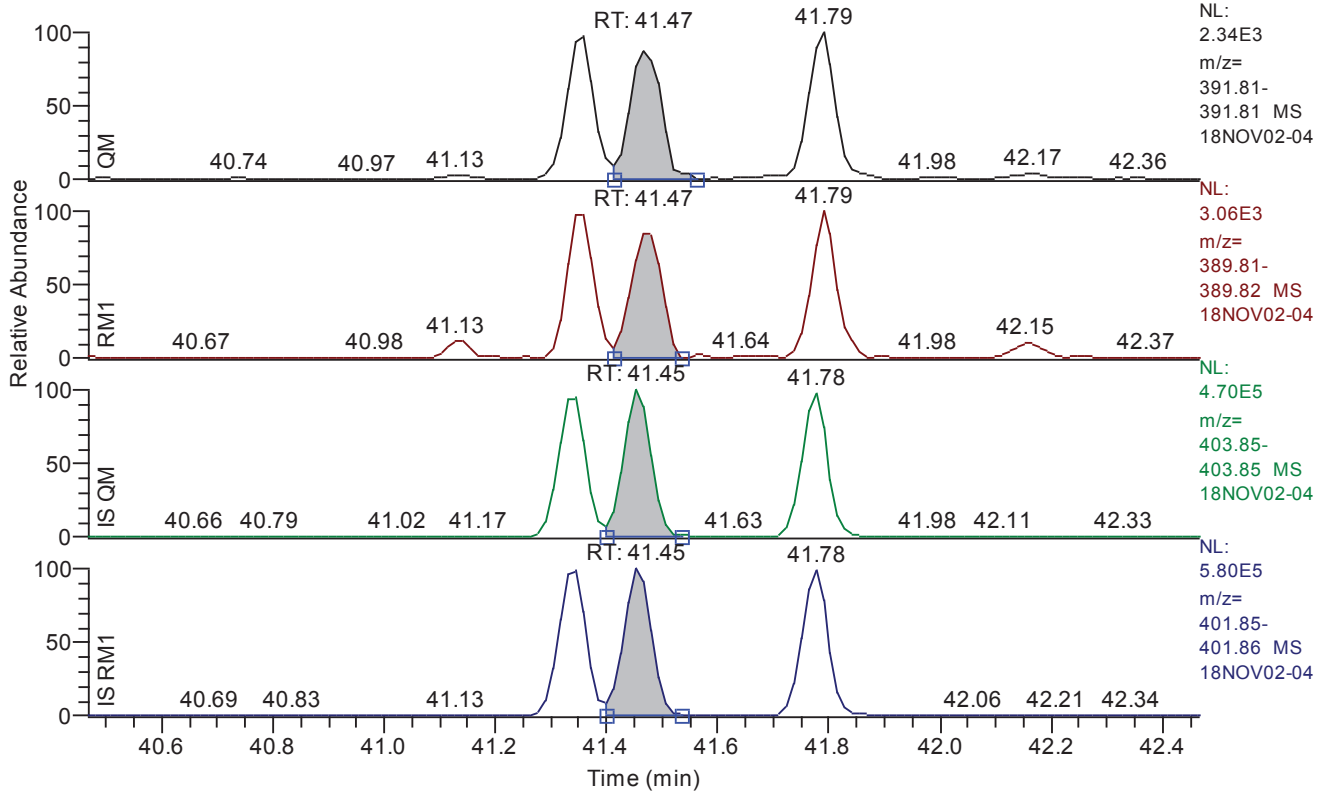
Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.36
QM Area	7760
QM Integration Mode	A
RM1 Area	10151
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0042
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	303
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.47 - 42.47 SM: 3G



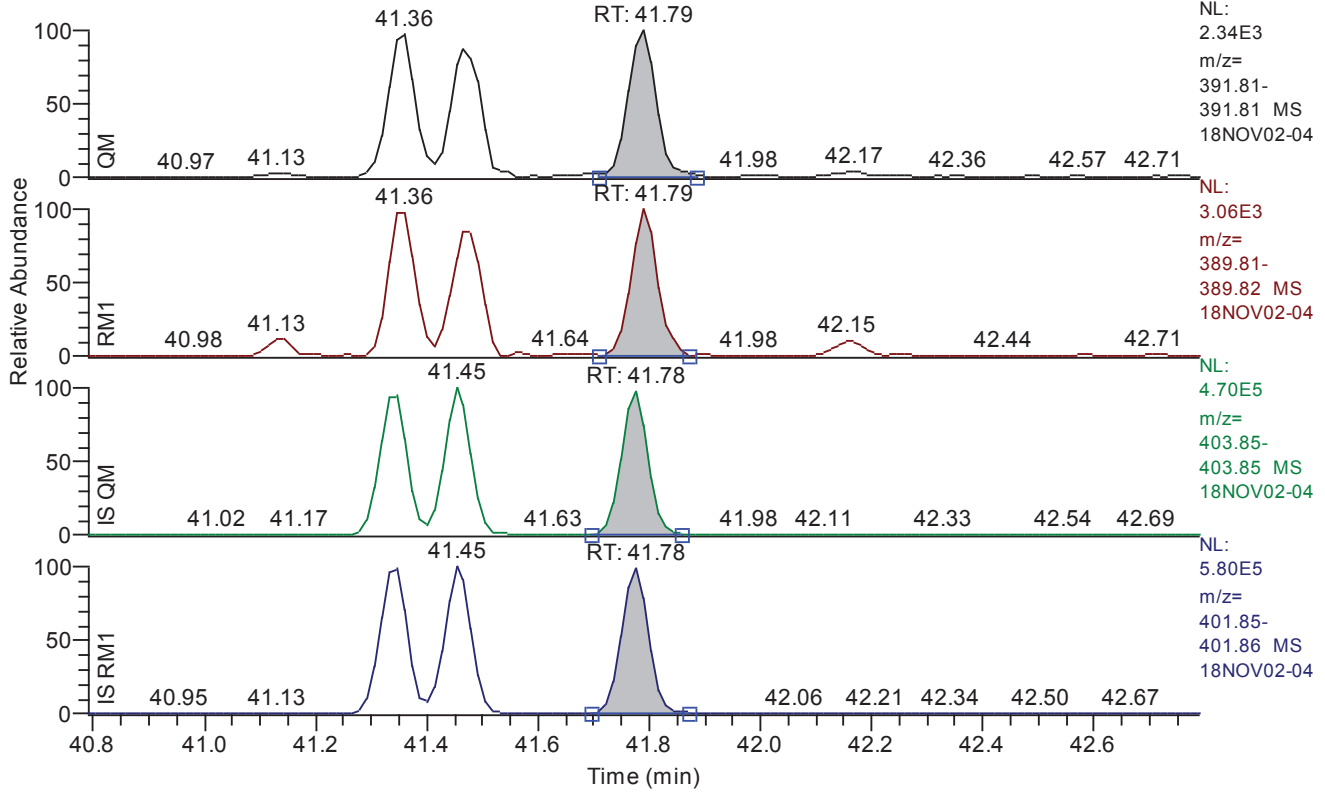
Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.47
QM Area	7925
QM Integration Mode	A
RM1 Area	9932
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0042
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	265
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.79 - 42.79 SM: 3G



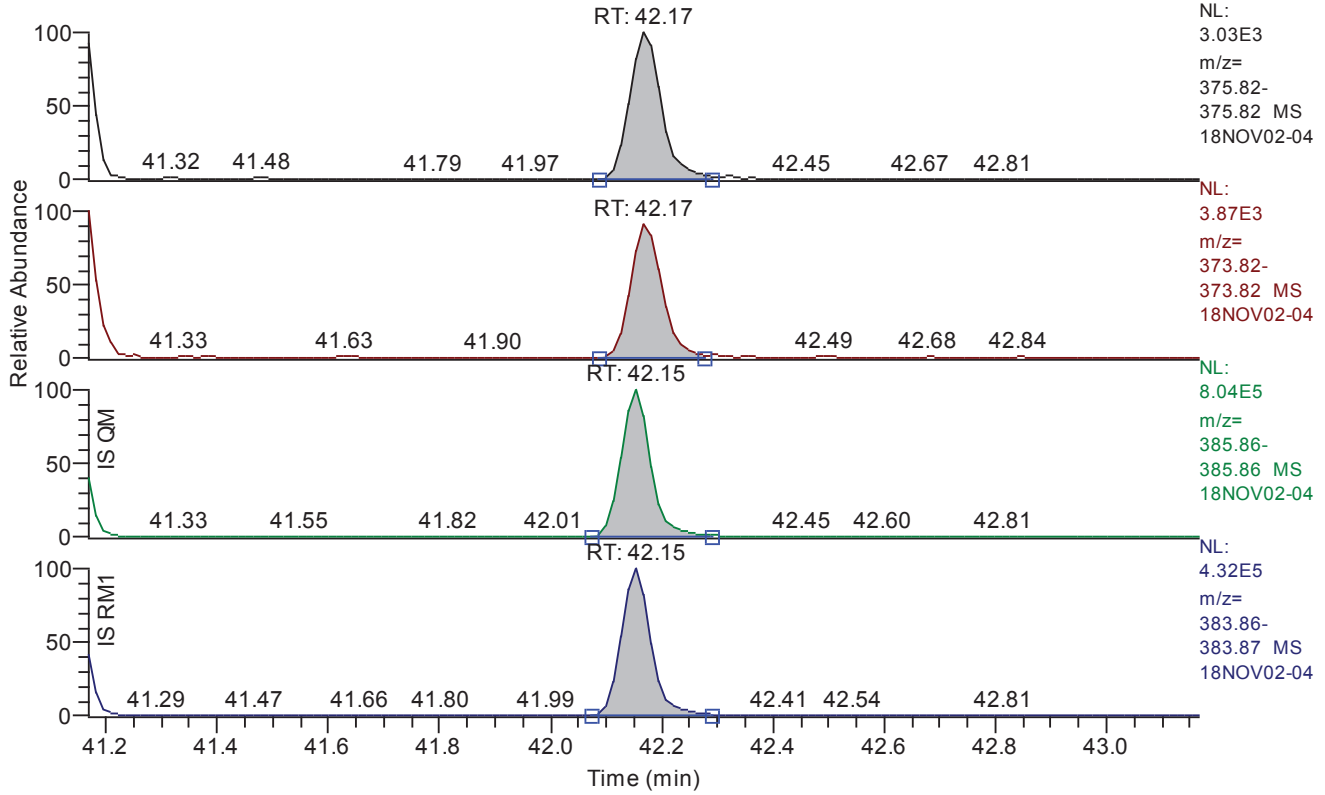
Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.79
QM Area	8214
QM Integration Mode	A
RM1 Area	10048
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0040
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	309
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 41.17 - 43.17 SM: 3G

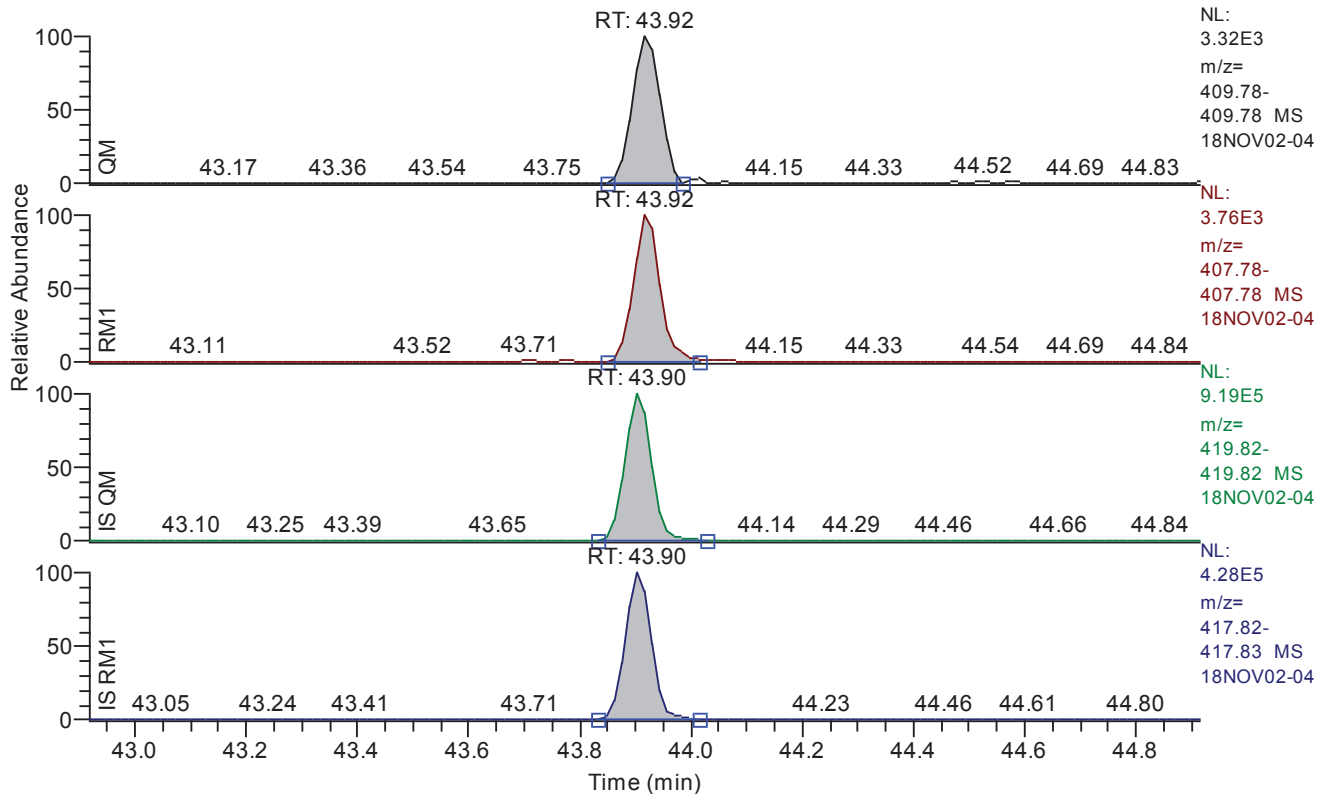


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.17
QM Area	12011
QM Integration Mode	A
RM1 Area	13854
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0030
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	384
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 42.92 - 44.92 SM: 3G



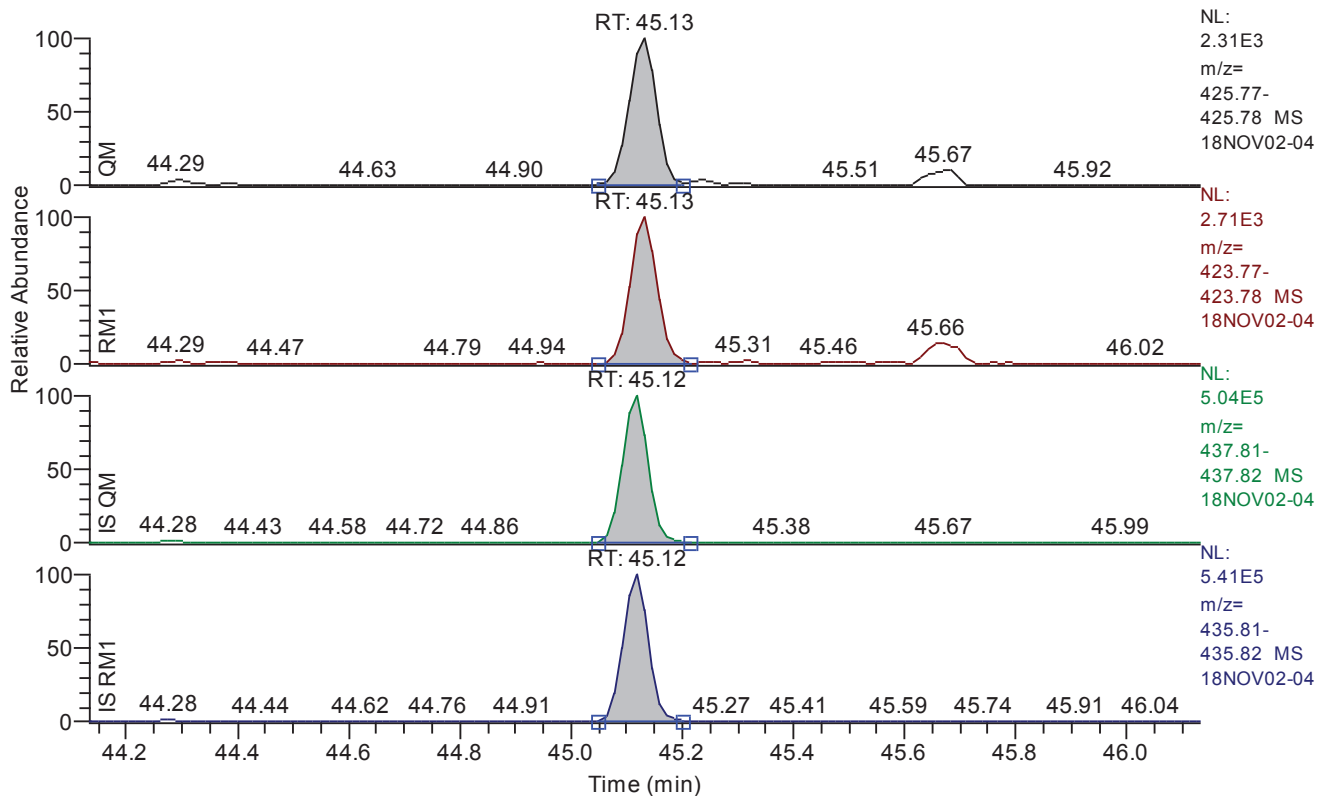
Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.92
QM Area	11785
QM Integration Mode	A
RM1 Area	12732
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0021
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	581
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.13 - 46.13 SM: 3G

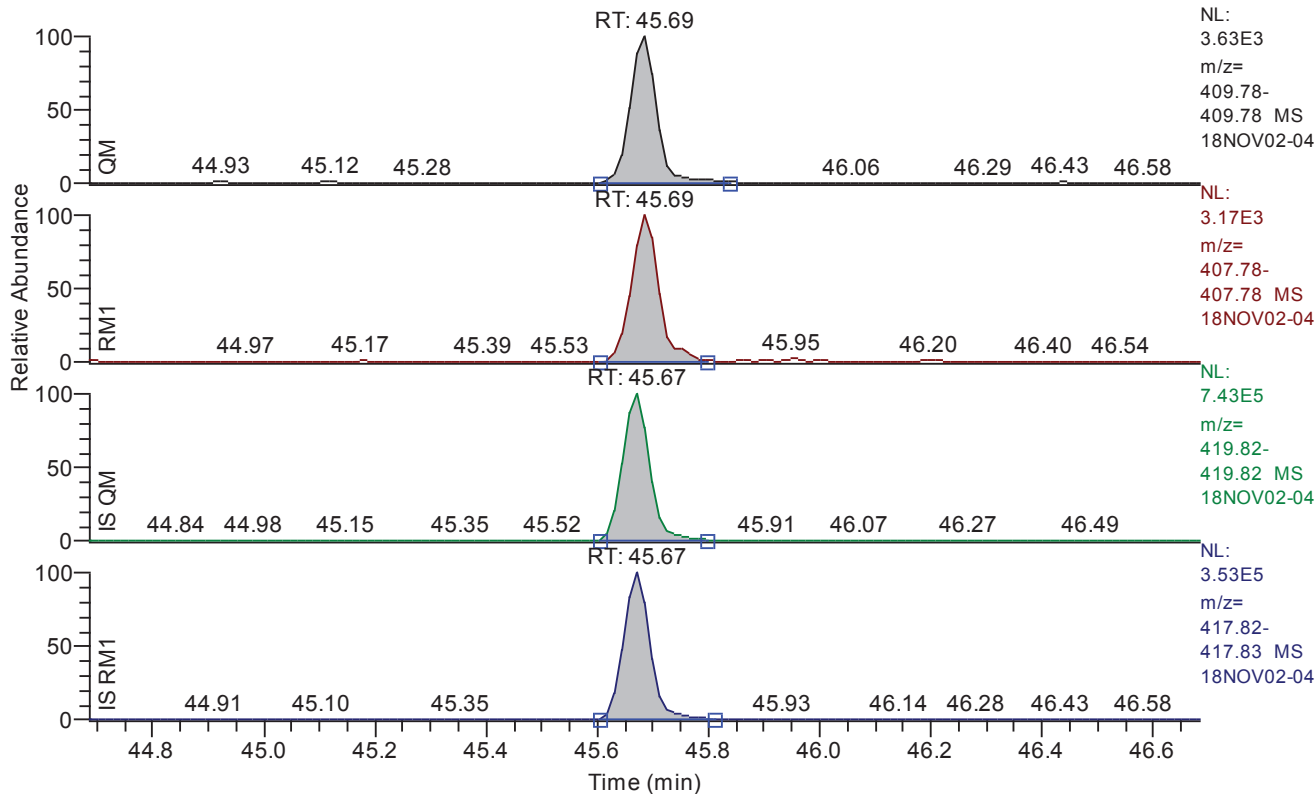


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.13
QM Area	8068
QM Integration Mode	A
RM1 Area	9271
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0029
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	410
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.69 - 46.69 SM: 3G



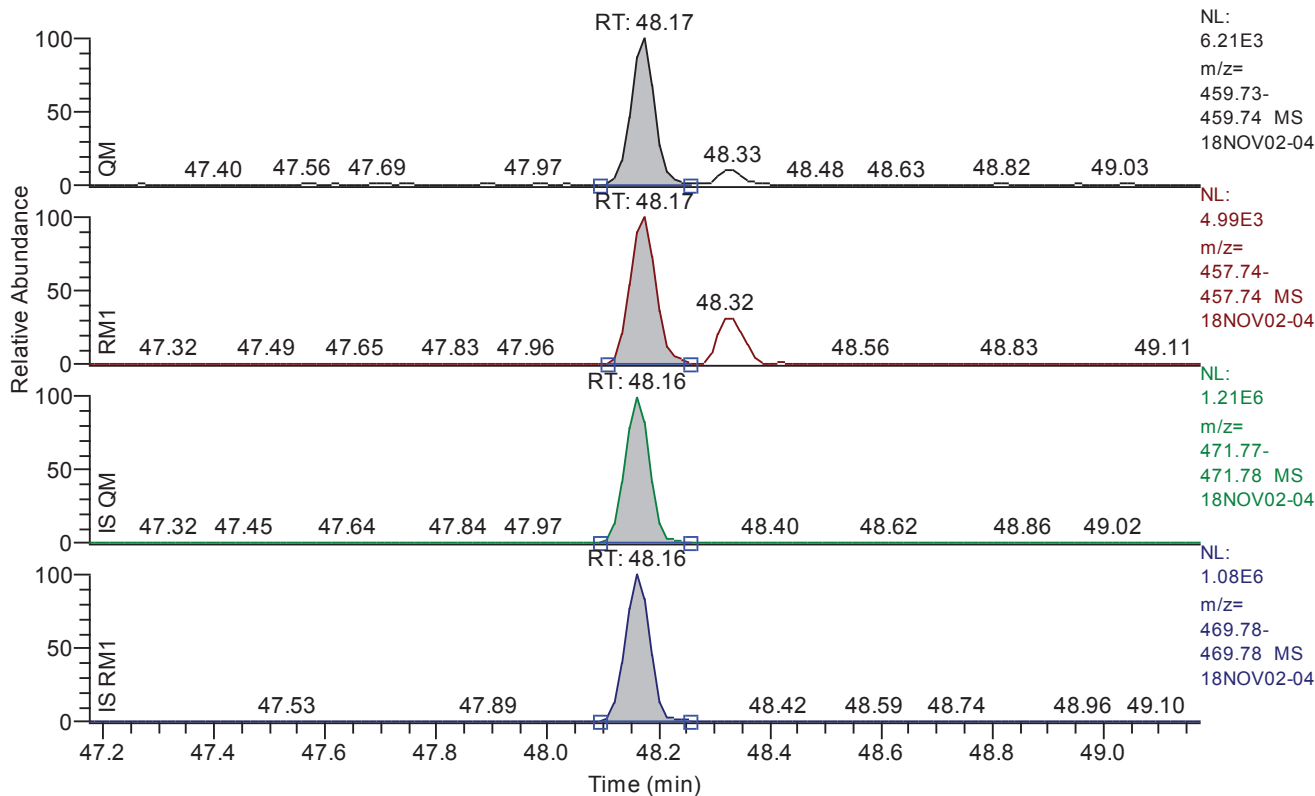
Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.69
QM Area	12320
QM Integration Mode	A
RM1 Area	11080
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0022
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	558
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.17 - 49.17 SM: 3G



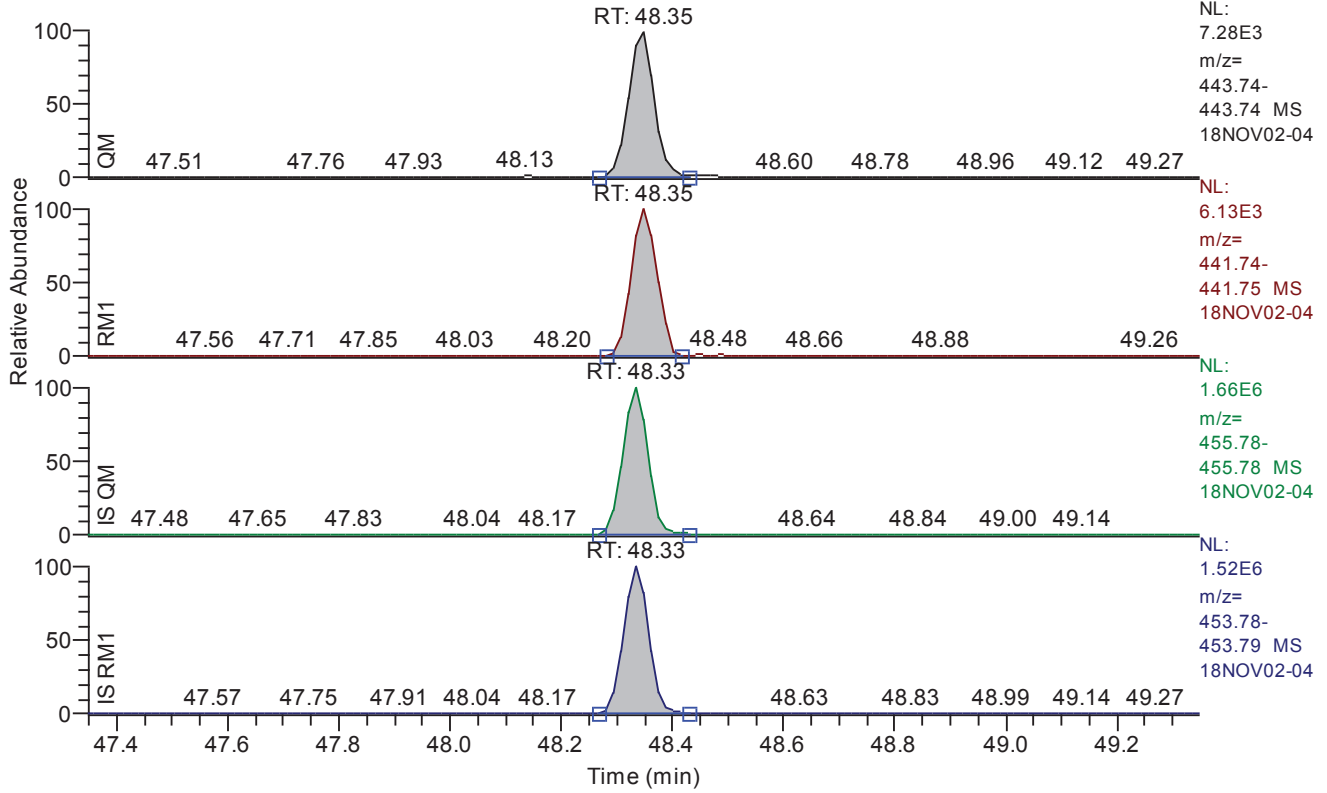
Entry Parameters

Compound Name	OCDD
QM Retention Time	48.17
QM Area	18254
QM Integration Mode	A
RM1 Area	15872
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	1.000000
Adjusted Amount (A)	1.0000
Signal-to-Noise	413
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.35 - 49.35 SM: 3G



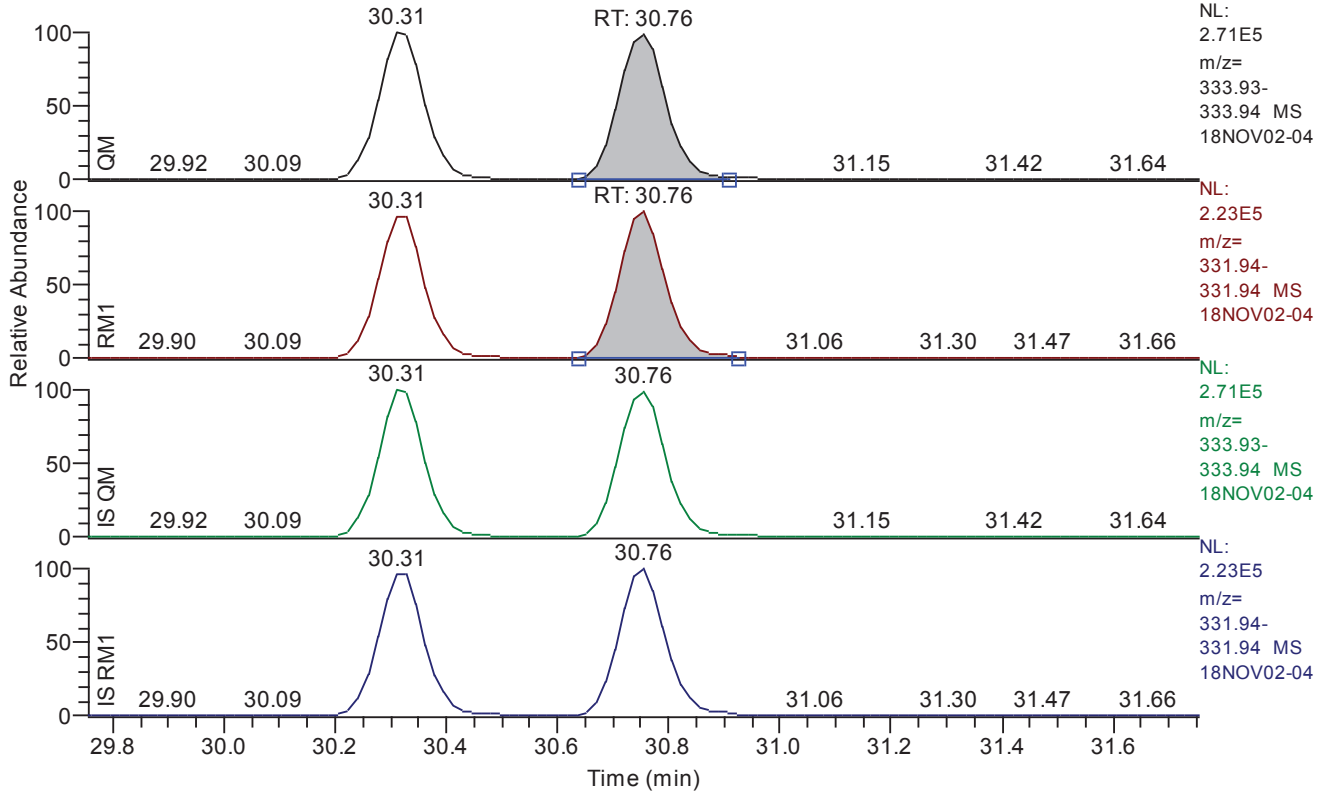
Entry Parameters

Compound Name	OCDF
QM Retention Time	48.35
QM Area	23104
QM Integration Mode	A
RM1 Area	19571
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0042
Unqualified Amount (A)	1.000000
Adjusted Amount (A)	1.0000
Signal-to-Noise	584
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.76 - 31.76 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	30.76
QM Area	1627694
QM Integration Mode	A
RM1 Area	1317946
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0239
Unqualified Amount (A)	100.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	10444
Client Flags	
Status Overview	passed
Status Info	



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 17:16
Number of Entries 64
Comment
Vial 3
Sample Name CALDF11837C
Sample ID CSL01
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

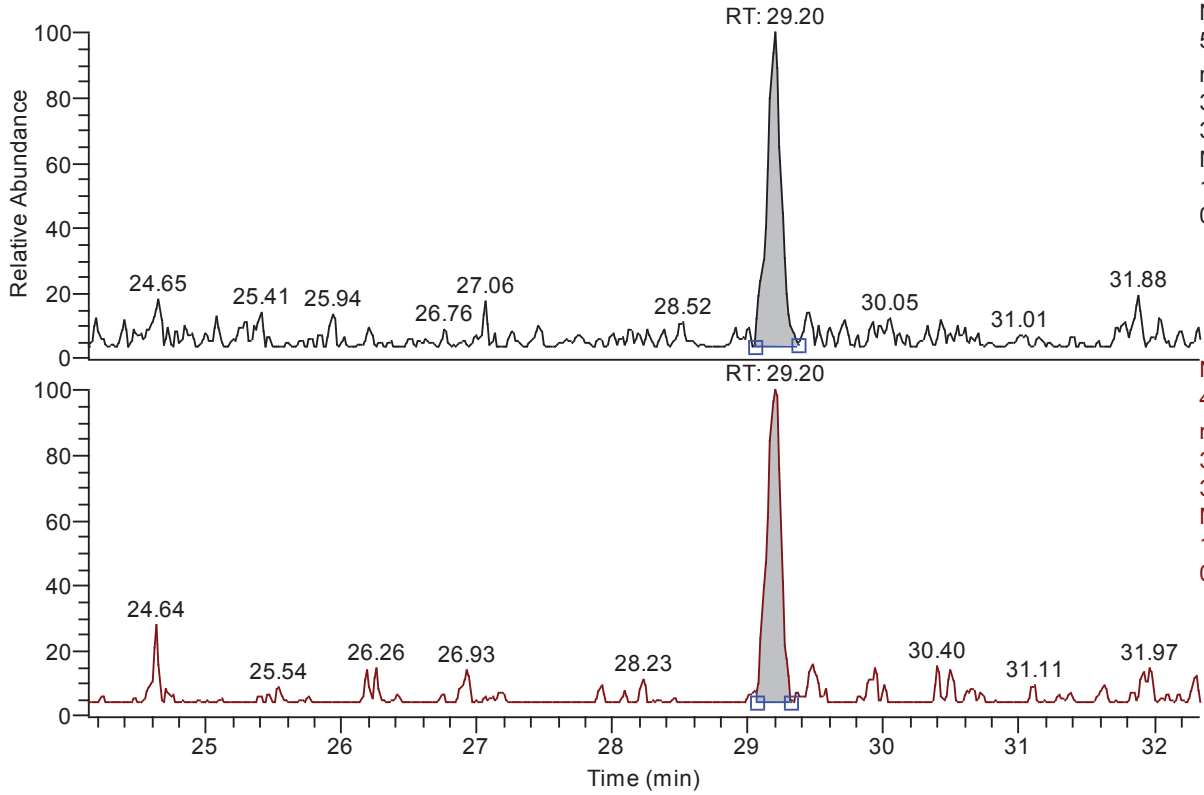
Quan x:\18nov02\18nov02-04.quan
Data x:\18nov02\18nov02-04.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 24.13 - 32.33 SM: 3G



NL:
5.59E2
m/z=
305.90-
305.90
MS
18NOV02-
04

NL:
4.60E2
m/z=
303.90-
303.90
MS
18NOV02-
04

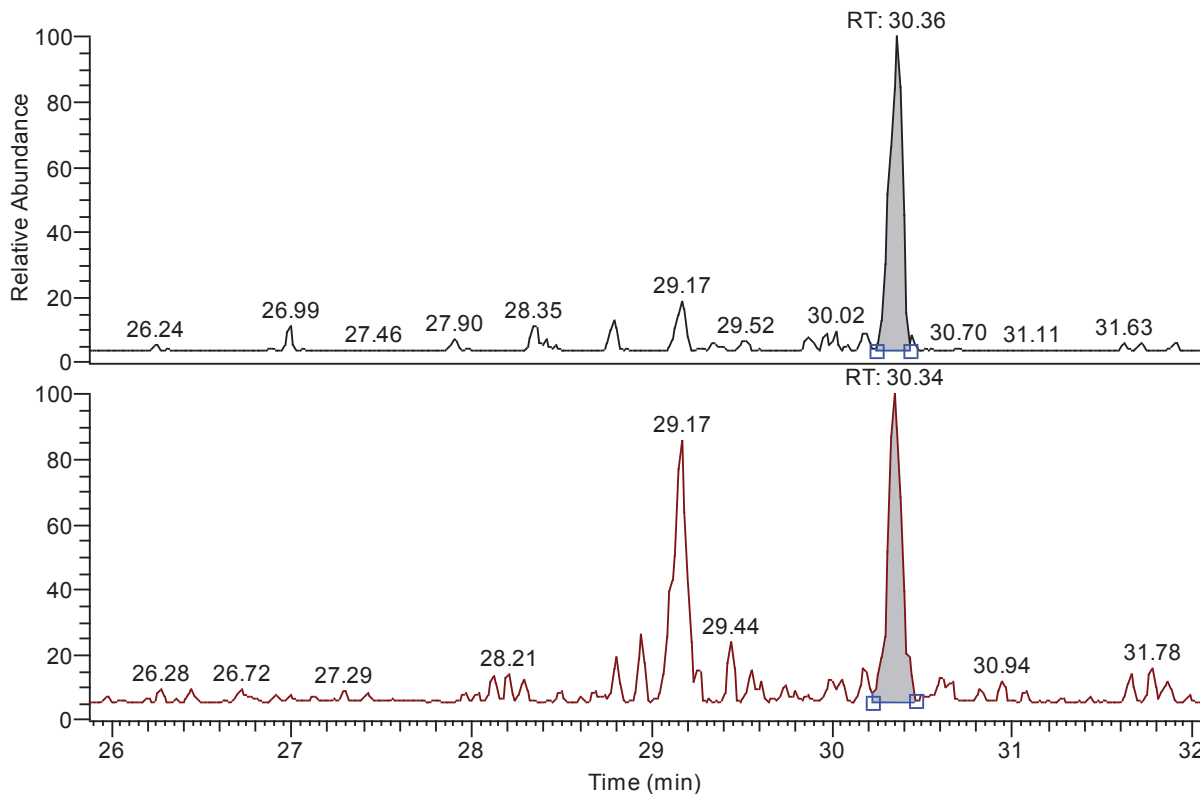
Entry Parameters

Compound Name	Total TCDF
QM Retention Time	28.23
QM Area	3862
QM Integration Mode	A
RM1 Area	3172
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0033
Unqualified Amount (A)	0.100000
Adjusted Amount (A)	0.1000
Signal-to-Noise	64
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 25.87 - 32.05 SM: 3G



NL:
 5.27E2
 m/z=
 321.89-
 321.90
 MS
 18NOV02-
 04

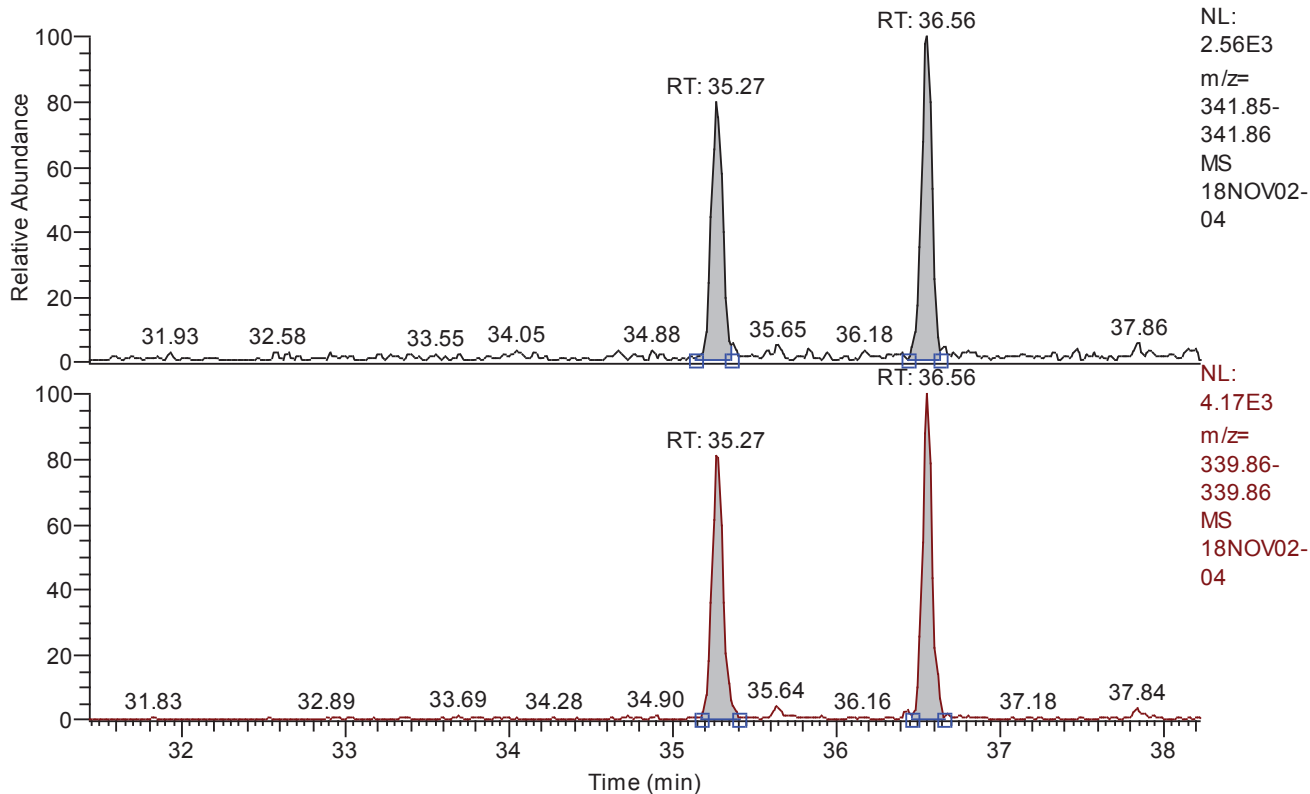
NL:
 3.51E2
 m/z=
 319.89-
 319.90
 MS
 18NOV02-
 04

Entry Parameters

Compound Name	Total TCDD
QM Retention Time	28.96
QM Area	2484
QM Integration Mode	A
RM1 Area	1745
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0032
Unqualified Amount (A)	0.100000
Adjusted Amount (A)	0.1000
Signal-to-Noise	90
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 31.43 - 38.23 SM: 3G



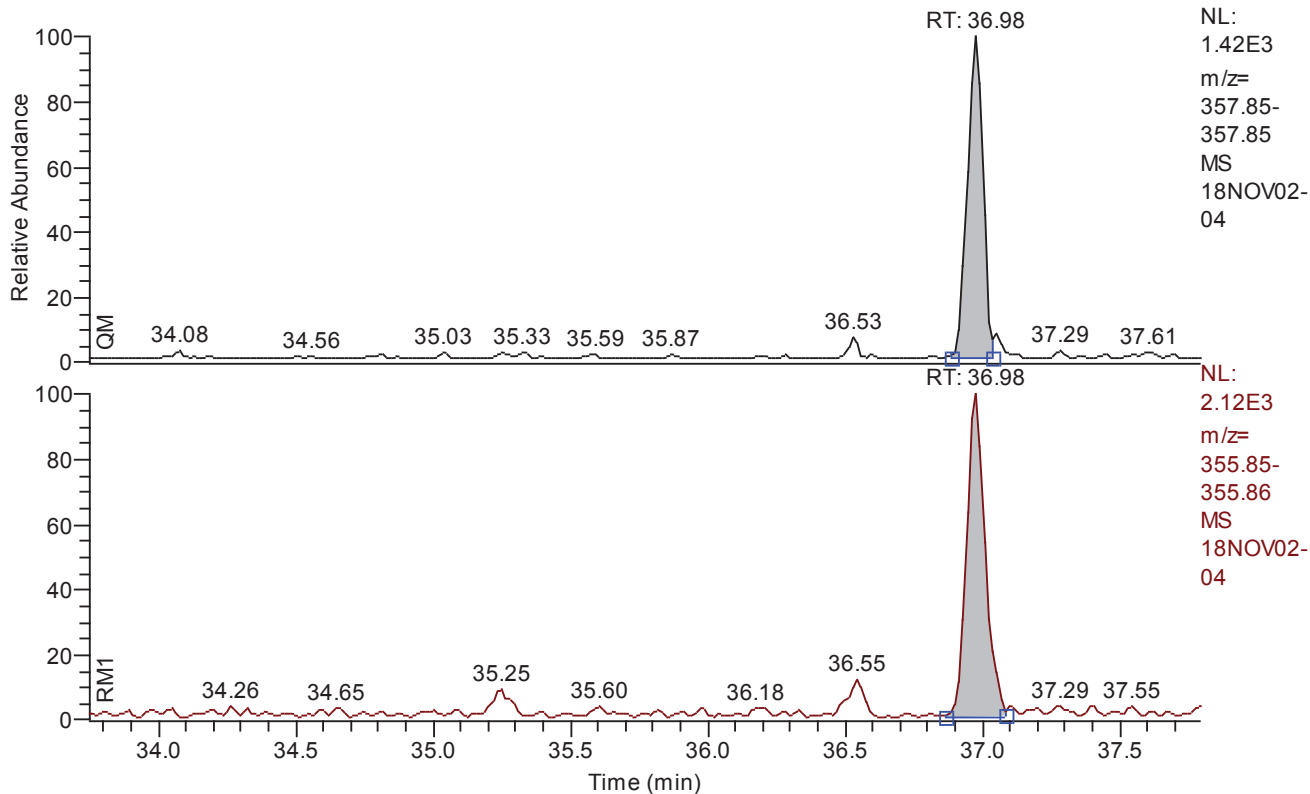
Entry Parameters

Compound Name	Total PeCDF
QM Retention Time	34.83
QM Area	21683
QM Integration Mode	A
RM1 Area	33324
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0034
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	1.0000
Signal-to-Noise	361
Client Flags	
Status Overview	passed (2)
Status Info	



Chromatogram

RT: 33.75 - 37.79 SM: 3G



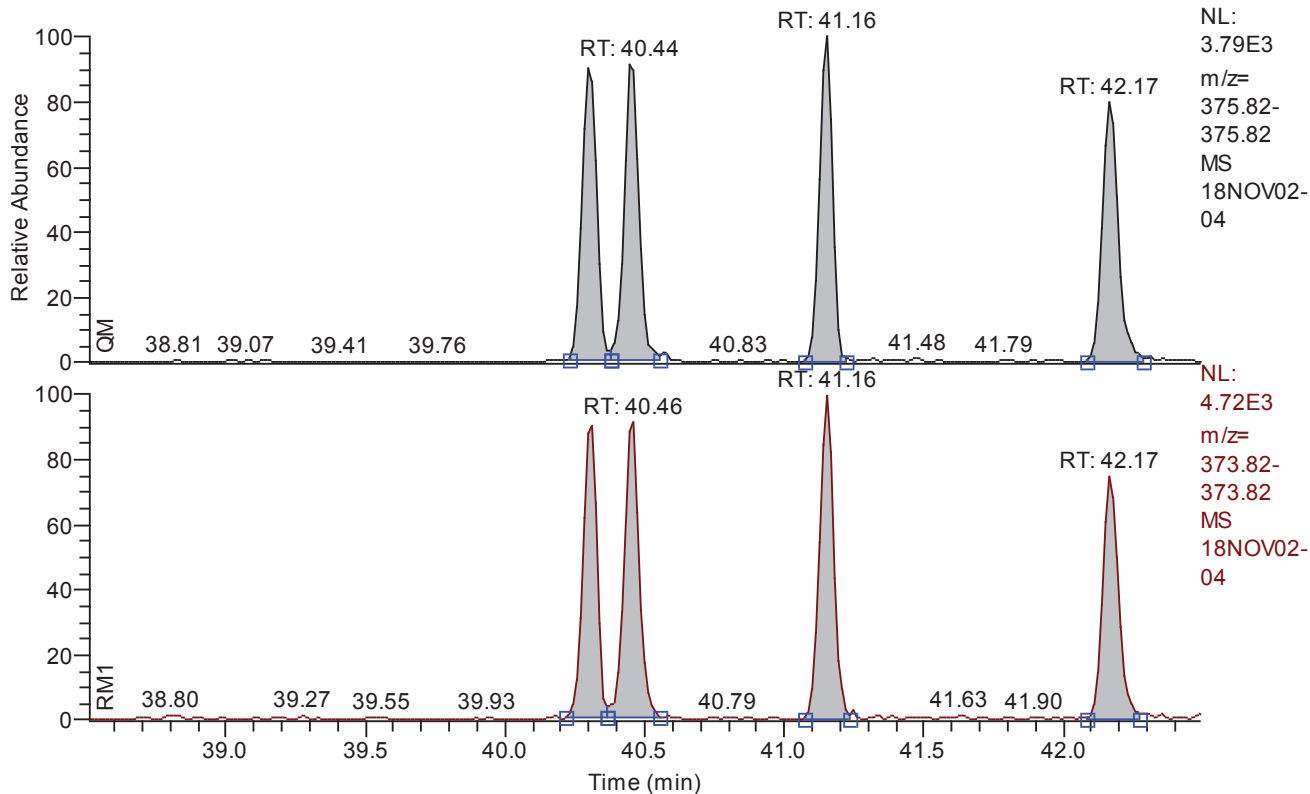
Entry Parameters

Compound Name	Total PeCDD
QM Retention Time	35.77
QM Area	5545
QM Integration Mode	A
RM1 Area	9883
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0076
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	166
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 38.51 - 42.49 SM: 3G



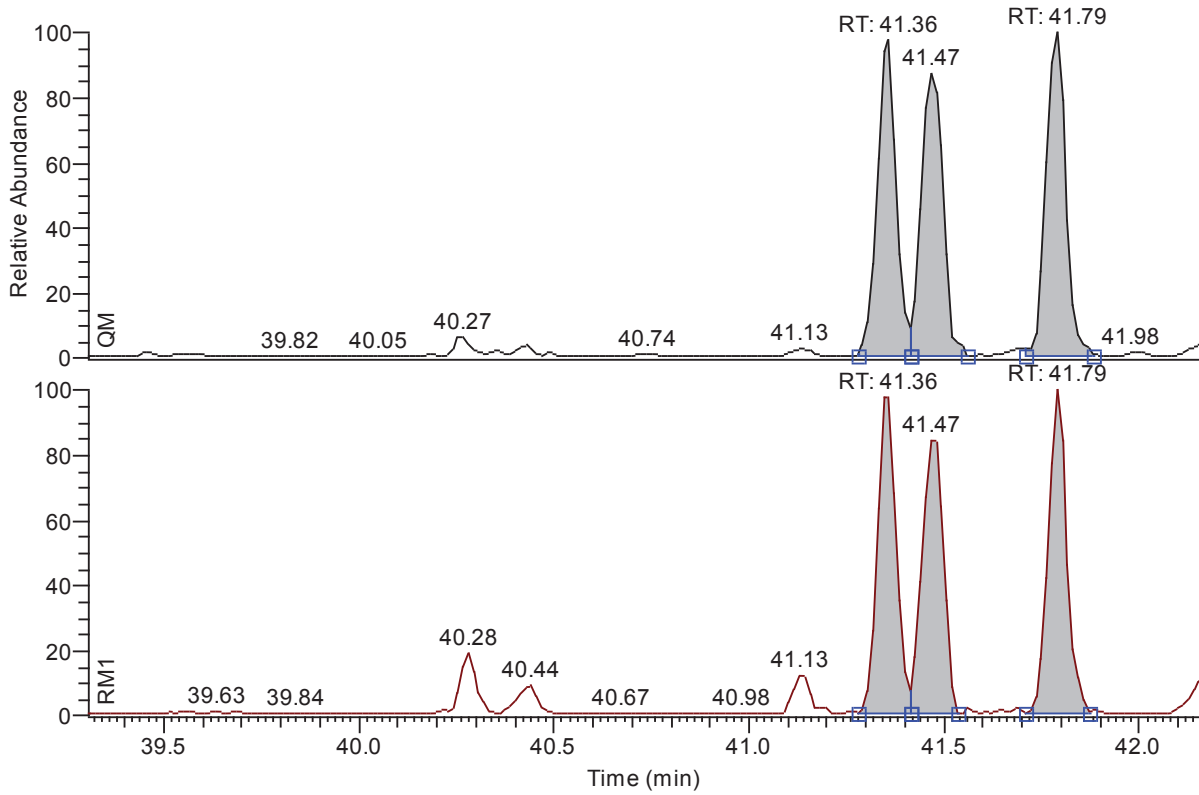
Entry Parameters

Compound Name	Total HxCDF
QM Retention Time	40.50
QM Area	49527
QM Integration Mode	A
RM1 Area	61100
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0028
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	2.0000
Signal-to-Noise	447
Client Flags	
Status Overview	passed (4)
Status Info	



Chromatogram

RT: 39.31 - 42.15 SM: 3G



NL:
2.34E3
m/z=
391.81-
391.81
MS
18NOV02-
04

NL:
3.06E3
m/z=
389.81-
389.82
MS
18NOV02-
04

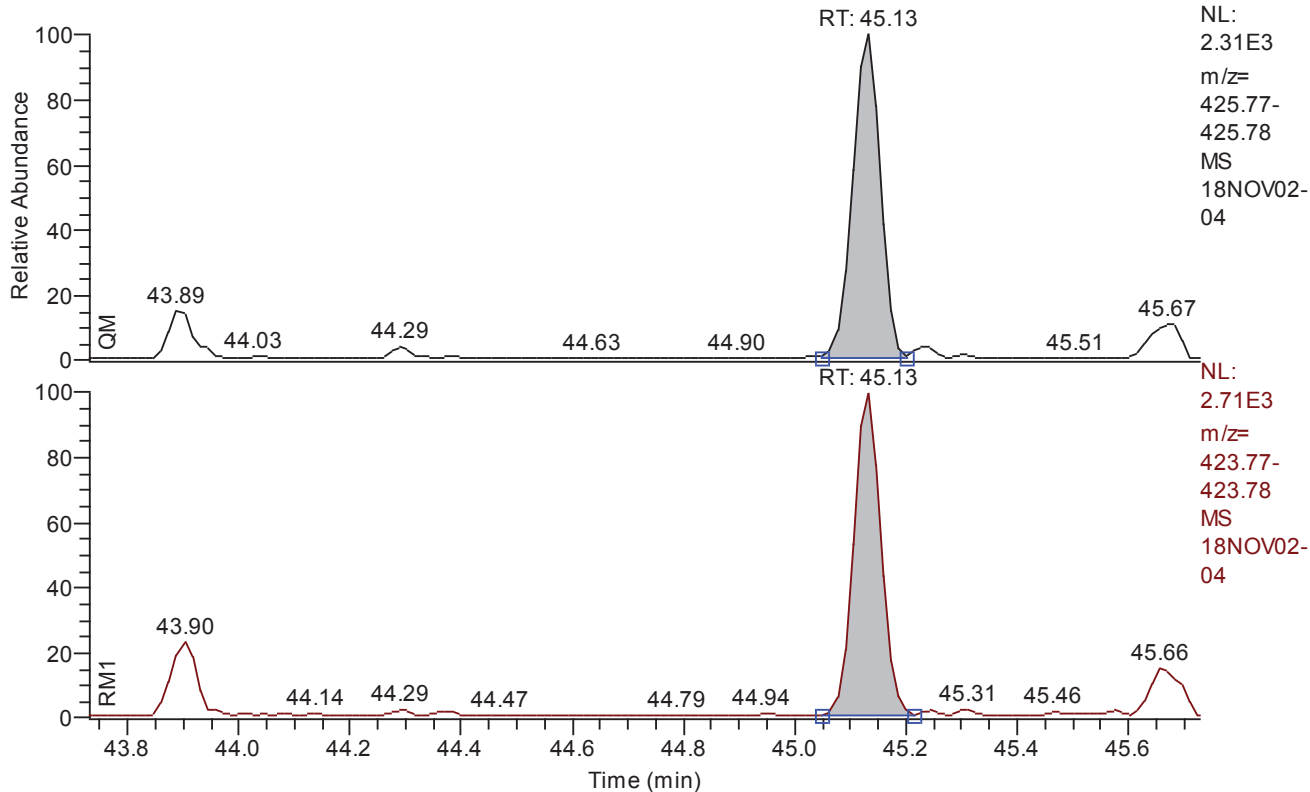
Entry Parameters

Compound Name	Total HxCDD
QM Retention Time	40.73
QM Area	23899
QM Integration Mode	A
RM1 Area	30131
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0041
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	1.5000
Signal-to-Noise	293
Client Flags	
Status Overview	passed (3)
Status Info	



Chromatogram

RT: 43.73 - 45.73 SM: 3G



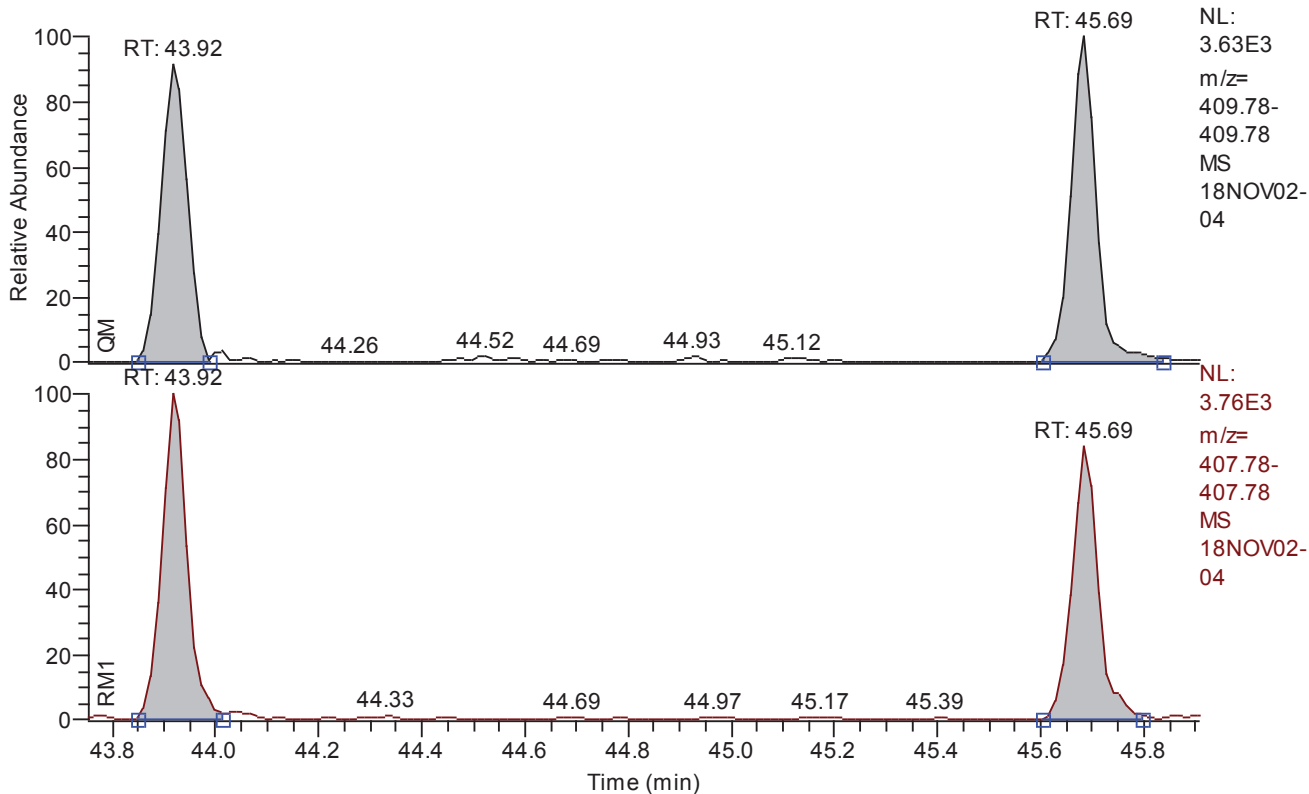
Entry Parameters

Compound Name	Total HpCDD
QM Retention Time	44.73
QM Area	8068
QM Integration Mode	A
RM1 Area	9271
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0029
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	410
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 43.75 - 45.91 SM: 3G



Entry Parameters

Compound Name	Total HpCDF
QM Retention Time	44.83
QM Area	24105
QM Integration Mode	A
RM1 Area	23812
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0022
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	1.0000
Signal-to-Noise	570
Client Flags	
Status Overview	passed (2)
Status Info	



Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Retention Time	RM1 Retention Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.20	29.20	29.20	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.36	30.36	30.34	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.27	35.27	35.27	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.56	36.56	36.56	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	36.98	36.98	36.98	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.29	40.29	40.31	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.44	40.44	40.46	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.16	41.16	41.16	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.36	41.36	41.36	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.47	41.47	41.47	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.79	41.79	41.79	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.17	42.17	42.17	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	43.92	43.92	43.92	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.13	45.13	45.13	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.69	45.69	45.69	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.17	48.17	48.17	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.35	48.35	48.35	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.76	30.76	30.76	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.47	29.47	29.47	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.20	40.20	40.20	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.15	29.15	29.15	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.31	30.31	30.31	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.25	35.25	35.25	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.55	36.55	36.55	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	36.96	36.96	36.96	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.28	40.28	40.28	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.43	40.43	40.43	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.14	41.14	41.14	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.35	41.35	41.35	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.45	41.45	41.45	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.78	41.78	41.78	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.15	42.15	42.15	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	43.90	43.90	43.90	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.12	45.12	45.12	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.67	45.67	45.67	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.16	48.16	48.16	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.33	48.33	48.33	passed	passed
38	Total TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	28.23	28.23	28.23	---	---
39	Total TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	28.96	28.96	28.96	---	---
40	Total PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	34.83	34.83	34.83	---	---
41	Total PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	35.77	35.77	35.77	---	---
42	Total HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.50	40.50	40.50	---	---
43	Total HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	40.73	40.73	40.73	---	---
44	Total HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	44.73	44.73	44.73	---	---
45	Total HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	44.83	44.83	44.83	---	---
46	Single TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	29.20	29.20	29.20	passed	passed
47	Single TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	30.36	30.36	30.34	passed	passed
48	Single PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	36.98	36.98	36.98	passed	passed
49	Single PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	36.56	36.56	36.56	passed	passed
50	Single PeCDD	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	35.27	35.27	35.27	passed	passed
51	Single HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	45.13	45.13	45.13	passed	passed
52	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	41.16	41.16	41.16	passed	passed
53	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.29	40.29	40.31	passed	passed
54	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.44	40.44	40.46	passed	passed
55	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	42.17	42.17	42.17	passed	passed
56	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.79	41.79	41.79	passed	passed
57	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.36	41.36	41.36	passed	passed
58	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.47	41.47	41.47	passed	passed
59	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	45.69	45.69	45.69	passed	passed
60	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	43.92	43.92	43.92	passed	passed



Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.20	0.8213	0.6450 - 0.8950	passed	100.00	0 - 0	passed
2	2378-TCDD	30.36	0.7024	0.6450 - 0.8950	passed	100.00	0 - 0	passed
3	12378-PeCDF	35.27	1.6245	1.3150 - 1.7850	passed	100.00	0 - 0	passed
4	23478-PeCDF	36.56	1.4617	1.3150 - 1.7850	passed	100.00	0 - 0	passed
5	12378-PeCDD	36.98	1.7825	1.3150 - 1.7850	passed	100.00	0 - 0	passed
6	123478-HxCDF	40.29	1.1692	1.0450 - 1.4350	passed	100.00	0 - 0	passed
7	123678-HxCDF	40.44	1.2693	1.0450 - 1.4350	passed	100.00	0 - 0	passed
8	234678-HxCDF	41.16	1.3424	1.0450 - 1.4350	passed	100.00	0 - 0	passed
9	123478-HxCDD	41.36	1.3082	1.0450 - 1.4350	passed	100.00	0 - 0	passed
10	123678-HxCDD	41.47	1.2533	1.0450 - 1.4350	passed	100.00	0 - 0	passed
11	123789-HxCDD	41.79	1.2232	1.0450 - 1.4350	passed	100.00	0 - 0	passed
12	123789-HxCDF	42.17	1.1535	1.0450 - 1.4350	passed	100.00	0 - 0	passed
13	1234678-HpCDF	43.92	1.0803	0.8750 - 1.2050	passed	100.00	0 - 0	passed
14	1234678-HpCDD	45.13	1.1491	0.8750 - 1.2050	passed	100.00	0 - 0	passed
15	1234789-HpCDF	45.69	0.8994	0.8750 - 1.2050	passed	100.00	0 - 0	passed
16	OCDD	48.17	0.8695	0.7550 - 1.0250	passed	100.00	0 - 0	passed
17	OCDF	48.35	0.8471	0.7550 - 1.0250	passed	100.00	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.76	0.8097	0.6450 - 0.8950	passed	100.00	0 - 0	passed
19	13C12-1234-TCDD	29.47	0.7999	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.20	1.2603	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.15	0.8009	0.6450 - 0.8950	passed	100.00	0 - 0	passed
22	13C12-2378-TCDD	30.31	0.7981	0.6450 - 0.8950	passed	100.00	0 - 0	passed
23	13C12-12378-PeCDF	35.25	1.5986	1.3150 - 1.7850	passed	100.00	0 - 0	passed
24	13C12-23478-PeCDF	36.55	1.5698	1.3150 - 1.7850	passed	100.00	0 - 0	passed
25	13C12-12378-PeCDD	36.96	1.6147	1.3150 - 1.7850	passed	100.00	0 - 0	passed
26	13C12-123478-HxCDF	40.28	0.5306	0.4250 - 0.5950	passed	100.00	0 - 0	passed
27	13C12-123678-HxCDF	40.43	0.5344	0.4250 - 0.5950	passed	100.00	0 - 0	passed
28	13C12-234678-HxCDF	41.14	0.5347	0.4250 - 0.5950	passed	100.00	0 - 0	passed
29	13C12-123478-HxCDD	41.35	1.2801	1.0450 - 1.4350	passed	100.00	0 - 0	passed
30	13C12-123678-HxCDD	41.45	1.2457	1.0450 - 1.4350	passed	100.00	0 - 0	passed
31	13C12-123789-HxCDD	41.78	1.2764	1.0450 - 1.4350	passed	100.00	0 - 0	passed
32	13C12-123789-HxCDF	42.15	0.5375	0.4250 - 0.5950	passed	100.00	0 - 0	passed
33	13C12-1234678-HpCDF	43.90	0.4586	0.3650 - 0.5150	passed	100.00	0 - 0	passed
34	13C12-1234678-HpCDD	45.12	1.0683	0.8750 - 1.2050	passed	100.00	0 - 0	passed
35	13C12-1234789-HpCDF	45.67	0.4626	0.3650 - 0.5150	passed	100.00	0 - 0	passed
36	13C12-OCDD	48.16	0.9015	0.7550 - 1.0250	passed	100.00	0 - 0	passed
37	13C12-OCDF	48.33	0.9097	0.7550 - 1.0250	passed	100.00	0 - 0	passed
38	Total TCDF	28.23	0.8213	0.6450 - 0.8950	---	100.00	0 - 0	---
39	Total TCDD	28.96	0.7024	0.6450 - 0.8950	---	100.00	0 - 0	---
40	Total PeCDF	34.83	1.5369	1.3150 - 1.7850	---	100.00	0 - 0	---
41	Total PeCDD	35.77	1.7825	1.3150 - 1.7850	---	100.00	0 - 0	---
42	Total HxCDF	40.50	1.2337	1.0450 - 1.4350	---	100.00	0 - 0	---
43	Total HxCDD	40.73	1.2608	1.0450 - 1.4350	---	100.00	0 - 0	---
44	Total HpCDD	44.73	1.1491	0.8750 - 1.2050	---	100.00	0 - 0	---
45	Total HpCDF	44.83	0.9878	0.8750 - 1.2050	---	100.00	0 - 0	---
46	Single TCDF	29.20	0.8213	0.6450 - 0.8950	passed	100.00	0 - 0	passed
47	Single TCDD	30.36	0.7024	0.6450 - 0.8950	passed	100.00	0 - 0	passed
48	Single PeCDD	36.98	1.7825	1.3150 - 1.7850	passed	100.00	0 - 0	passed
49	Single PeCDF	36.56	1.4617	1.3150 - 1.7850	passed	100.00	0 - 0	passed
50	Single PeCDF	35.27	1.6245	1.3150 - 1.7850	passed	100.00	0 - 0	passed
51	Single HpCDD	45.13	1.1491	0.8750 - 1.2050	passed	100.00	0 - 0	passed
52	Single HxCDF	41.16	1.3424	1.0450 - 1.4350	passed	100.00	0 - 0	passed
53	Single HxCDF	40.29	1.1692	1.0450 - 1.4350	passed	100.00	0 - 0	passed
54	Single HxCDF	40.44	1.2693	1.0450 - 1.4350	passed	100.00	0 - 0	passed
55	Single HxCDF	42.17	1.1535	1.0450 - 1.4350	passed	100.00	0 - 0	passed
56	Single HxCDD	41.79	1.2232	1.0450 - 1.4350	passed	100.00	0 - 0	passed
57	Single HxCDD	41.36	1.3082	1.0450 - 1.4350	passed	100.00	0 - 0	passed
58	Single HxCDD	41.47	1.2533	1.0450 - 1.4350	passed	100.00	0 - 0	passed
59	Single HpCDF	45.69	0.8994	0.8750 - 1.2050	passed	100.00	0 - 0	passed
60	Single HpCDF	43.92	1.0803	0.8750 - 1.2050	passed	100.00	0 - 0	passed



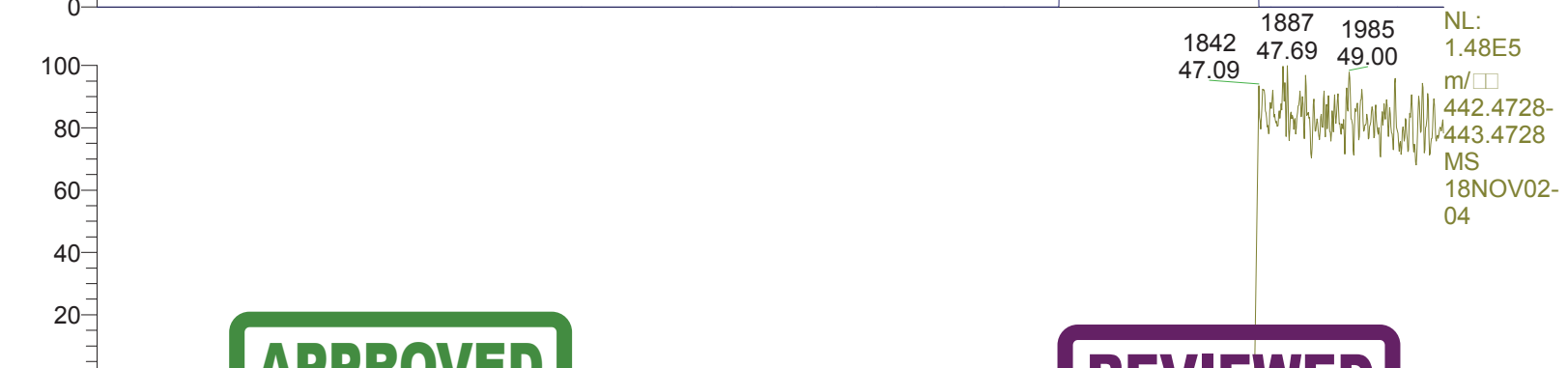
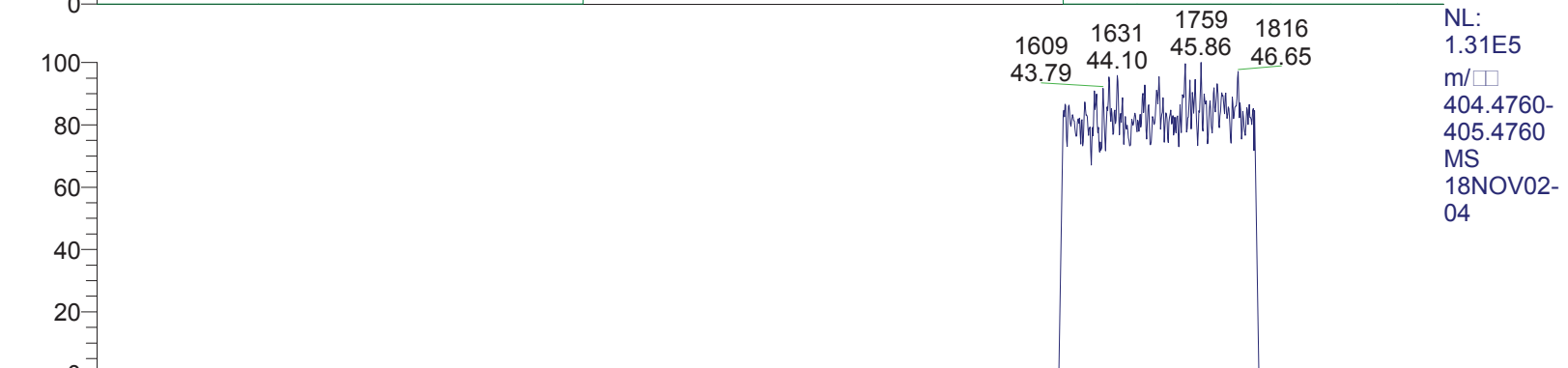
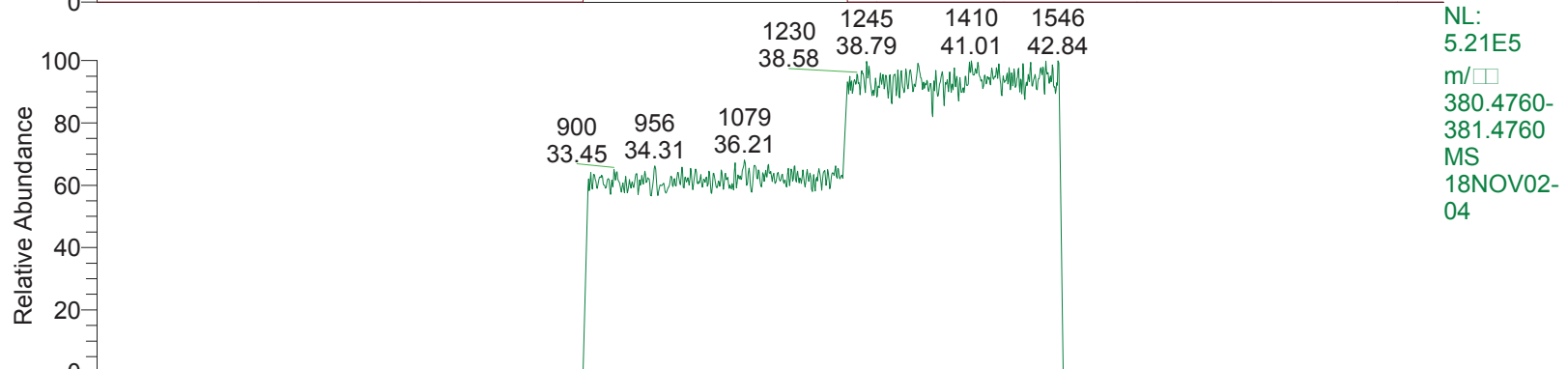
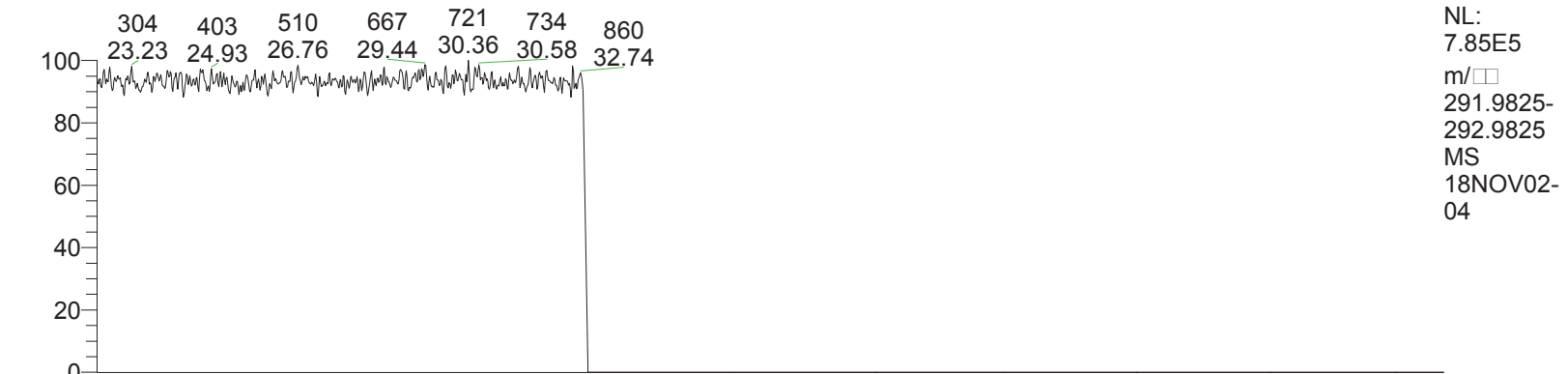
Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.20	3862	A	3172	A	0.0033	0.100000	0.1000	0.100000	64	
2	2378-TCDD	passed	30.36	2484	A	1745	A	0.0032	0.100000	0.1000	0.100000	90	
3	12378-PeCDF	passed	35.27	10017	A	16273	A	0.0037	0.500000	0.5000	0.500000	322	
4	23478-PeCDF	passed	36.56	11665	A	17051	A	0.0031	0.500000	0.5000	0.500000	399	
5	12378-PeCDD	passed	36.98	5545	A	9883	A	0.0076	0.500000	0.5000	0.500000	166	
6	123478-HxCDF	passed	40.29	12654	A	14795	A	0.0027	0.500000	0.5000	0.500000	450	
7	123678-HxCDF	passed	40.44	12626	A	16026	A	0.0028	0.500000	0.5000	0.500000	454	
8	234678-HxCDF	passed	41.16	12236	A	16425	A	0.0026	0.500000	0.5000	0.500000	498	
9	123478-HxCDD	passed	41.36	7760	A	10151	A	0.0042	0.500000	0.5000	0.500000	303	
10	123678-HxCDD	passed	41.47	7925	A	9932	A	0.0042	0.500000	0.5000	0.500000	265	
11	123789-HxCDD	passed	41.79	8214	A	10048	A	0.0040	0.500000	0.5000	0.500000	309	
12	123789-HxCDF	passed	42.17	12011	A	13854	A	0.0030	0.500000	0.5000	0.500000	384	
13	1234678-HpCDF	passed	43.92	11785	A	12732	A	0.0021	0.500000	0.5000	0.500000	581	
14	1234678-HpCDD	passed	45.13	8068	A	9271	A	0.0029	0.500000	0.5000	0.500000	410	
15	1234789-HpCDF	passed	45.69	12320	A	11080	A	0.0022	0.500000	0.5000	0.500000	558	
16	OCDD	passed	48.17	18254	A	15872	A	0.0061	1.000000	1.0000	1.000000	413	
17	OCDF	passed	48.35	23104	A	19571	A	0.0042	1.000000	1.0000	1.000000	584	
18	13C12-1278-TCDD (CRS)	passed	30.76	1627694	A	1317946	A	0.0239	100.000000	100.0000	100.000000	10444	
19	13C12-1234-TCDD	passed	29.47	1527579	A	1221927	A	0.0256	100.000000	100.0000	100.000000	9749	
20	13C12-123468-HxCDD	passed	40.20	1537229	A	1937371	A	0.0197	100.000000	100.0000	100.000000	12692	
21	13C12-2378-TCDF	passed	29.15	3285104	A	2631006	A	0.0122	100.000000	100.0000	100.000000	20369	
22	13C12-12378-TCDD	passed	30.31	1584125	A	1264301	A	0.0248	100.000000	100.0000	100.000000	10364	
23	13C12-12378-PeCDF	passed	35.25	2110722	A	3374192	A	0.0320	100.000000	100.0000	100.000000	10124	
24	13C12-23478-PeCDF	passed	36.55	2144907	A	3367020	A	0.0318	100.000000	100.0000	100.000000	11057	
25	13C12-12378-PeCDD	passed	36.96	1135630	A	1833724	A	0.0206	100.000000	100.0000	100.000000	16370	
26	13C12-123478-HxCDF	passed	40.28	3291454	A	1746500	A	0.0242	100.000000	100.0000	100.000000	10972	
27	13C12-123678-HxCDF	passed	40.43	3426259	A	1831067	A	0.0232	100.000000	100.0000	100.000000	10579	
28	13C12-234678-HxCDF	passed	41.14	3164883	A	1692208	A	0.0251	100.000000	100.0000	100.000000	10382	
29	13C12-123478-HxCDD	passed	41.35	1554881	A	1990451	A	0.0193	100.000000	100.0000	100.000000	13796	
30	13C12-123678-HxCDD	passed	41.45	1603608	A	1997570	A	0.0190	100.000000	100.0000	100.000000	14132	
31	13C12-123789-HxCDD	passed	41.78	1524155	A	1945474	A	0.0197	100.000000	100.0000	100.000000	13988	
32	13C12-123789-HxCDF	passed	42.15	2961903	A	1592111	A	0.0268	100.000000	100.0000	100.000000	9347	
33	13C12-1234678-HpCDF	passed	43.90	3128191	A	1434643	A	0.0233	100.000000	100.0000	100.000000	11723	
34	13C12-1234678-HpCDD	passed	45.12	1660935	A	1774444	A	0.0223	100.000000	100.0000	100.000000	12581	
35	13C12-1234789-HpCDF	passed	45.67	2589008	A	1197565	A	0.0280	100.000000	100.0000	100.000000	9537	
36	13C12-OCDD	passed	48.16	3708074	A	3342664	A	0.0109	200.000000	200.0000	200.000000	55267	
37	13C12-OCDF	passed	48.33	5196694	A	4727405	A	0.0132	200.000000	200.0000	200.000000	44676	
38	Total TCDF	passed (1)	28.23	3862	A	3172	A	0.0033	0.100000	0.1000	0.100000	64	
39	Total TCDD	passed (1)	28.96	2484	A	1745	A	0.0032	0.100000	0.1000	0.100000	90	
40	Total PeCDF	passed (2)	34.83	21683	A	33324	A	0.0034	0.500000	0.5000	0.500000	361	
41	Total PeCDD	passed (1)	35.77	5545	A	9883	A	0.0076	0.500000	0.5000	0.500000	166	
42	Total HxCDF	passed (4)	40.50	49527	A	61100	A	0.0028	0.500000	0.5000	0.500000	447	
43	Total HxCDD	passed (3)	40.73	23899	A	30131	A	0.0041	0.500000	0.5000	0.500000	293	
44	Total HpCDD	passed (1)	44.73	8068	A	9271	A	0.0029	0.500000	0.5000	0.500000	410	
45	Total HpCDF	passed (2)	44.83	24105	A	23812	A	0.0022	0.500000	0.5000	0.500000	570	
46	Single TCDF	passed	29.20	3862	A	3172	A	0.0033	0.100000	0.1000	0.100000	64	
47	Single TCDD	passed	30.36	2484	A	1745	A	0.0032	0.100000	0.1000	0.100000	90	
48	Single PeCDF	passed	36.98	5545	A	9883	A	0.0076	0.500000	0.5000	0.500000	166	
49	Single PeCDD	passed	36.56	11665	A	17051	A	0.0032	0.500000	0.5000	0.500000	399	
50	Single PeCDF	passed	35.27	10017	A	16273	A	0.0035	0.500000	0.5000	0.500000	322	
51	Single HpCDD	passed	45.13	8068	A	9271	A	0.0029	0.500000	0.5000	0.500000	410	
52	Single HxCDF	passed	41.16	12236	A	16425	A	0.0027	0.500000	0.5000	0.500000	498	
53	Single HxCDF	passed	40.29	12654	A	14795	A	0.0028	0.500000	0.5000	0.500000	450	
54	Single HxCDF	passed	40.44	12626	A	16026	A	0.0027	0.500000	0.5000	0.500000	454	
55	Single HxCDF	passed	42.17	12011	A	13854	A	0.0030	0.500000	0.5000	0.500000	384	
56	Single HxCDD	passed	41.79	8214	A	10048	A	0.0041	0.500000	0.5000	0.500000	309	
57	Single HxCDD	passed	41.36	7760	A	10151	A	0.0041	0.500000	0.5000	0.500000	303	
58	Single HxCDD	passed	41.47	7925	A	9932	A	0.0042	0.500000	0.5000	0.500000	265	
59	Single HpCDF	passed	45.69	12320	A	11080	A	0.0022	0.500000	0.5000	0.500000	558	
60	Single HpCDF	passed	43.92	11785	A	12732	A	0.0021	0.500000	0.5000	0.500000	581	

APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

RT: 22.50 - 51.00



APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 17:22:10 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 17:22:09

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 1af585a9-84ae-4575-bfd7-43925d10e3f3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
Window # 1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
Window # 2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



18NOV02-04

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	98.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0383	FVSR	0.0368
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	98.0000	LKM	442.9723	MASS	98.0000
MDAC	1429408.8034	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9836	RELEN	0.0000
RES	11626.2589	RPUSHER	-6.0879	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	98.0000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.2e-003 mbar
Pirani Source: 3.7e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11858.
MID Time window 2: Resolution is 11603.
MID Time window 3: Resolution is 12023.
MID Time window 4: Resolution is 12062.



18NOV02-04

MID Time Window 5: Resolution is 11500.
MID Time Window 6: Resolution is 11626.

Amplifier Offset: 81.

*** File closed Fri Nov 02 18:13:11 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 18:30
Number of Entries 64
Comment
Vial 4
Sample Name CALDF21837C
Sample ID CS101
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

Quan x:\18nov02\18nov02-05.quan
Data x:\18nov02\18nov02-05.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT Status	Status Info
1	2378-TCDF	29.23	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.41	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.31	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.59	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.01	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.33	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.47	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.17	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.38	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.50	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.82	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.18	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.94	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.14	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.71	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.18	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.36	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.82	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.54	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.23	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.21	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.37	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.30	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.57	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	36.99	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.31	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.46	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.16	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.36	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.48	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.79	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.17	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.93	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.14	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.69	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.17	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.34	passed	passed	passed	passed	passed	passed	passed
38	Total TCDF	28.23	passed (1)	---	---	---	---	---	---
39	Total TCDD	28.96	passed (1)	---	---	---	---	---	---
40	Total PeCDF	34.83	passed (2)	---	---	---	---	---	---
41	Total PeCDD	35.77	passed (1)	---	---	---	---	---	---
42	Total HxCDF	40.50	passed (4)	---	---	---	---	---	---
43	Total HxCDD	40.73	passed (3)	---	---	---	---	---	---
44	Total HpCDD	44.73	passed (1)	---	---	---	---	---	---
45	Total HpCDF	44.83	passed (2)	---	---	---	---	---	---
46	Single TCDF	29.23	passed	passed	passed	passed	passed	passed	passed
47	Single TCDD	30.41	passed	passed	passed	passed	passed	passed	passed
48	Single PeCDD	37.01	passed	passed	passed	passed	passed	passed	passed
49	Single PeCDF	36.59	passed	passed	passed	passed	passed	passed	passed
50	Single PeCDD	35.31	passed	passed	passed	passed	passed	passed	passed
51	Single HpCDD	45.14	passed	passed	passed	passed	passed	passed	passed
52	Single HxCDF	41.17	passed	passed	passed	passed	passed	passed	passed
53	Single HxCDF	40.33	passed	passed	passed	passed	passed	passed	passed
54	Single HxCDF	40.47	passed	passed	passed	passed	passed	passed	passed
55	Single HxCDF	42.18	passed	passed	passed	passed	passed	passed	passed
56	Single HxCDD	41.50	passed	passed	passed	passed	passed	passed	passed
57	Single HxCDD	41.38	passed	passed	passed	passed	passed	passed	passed
58	Single HxCDD	41.82	passed	passed	passed	passed	passed	passed	passed
59	Single HpCDF	43.94	passed	passed	passed	passed	passed	passed	passed
60	Single HpCDF	45.71	passed	passed	passed	passed	passed	passed	passed



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 18:30
Number of Entries 64
Comment
Vial 4
Sample Name CALDF21837C
Sample ID CS101
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

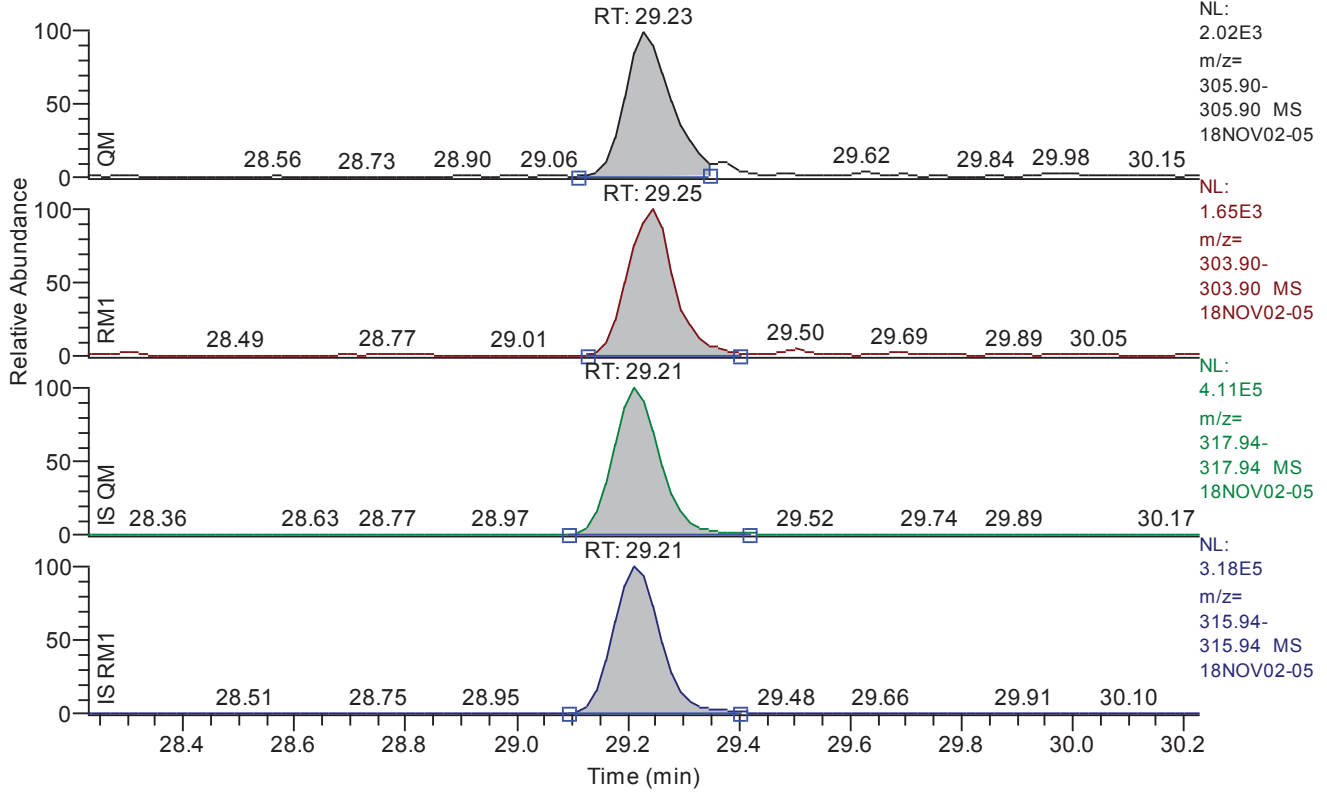
Quan x:\18nov02\18nov02-05.quan
Data x:\18nov02\18nov02-05.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.23 - 30.23 SM: 3G



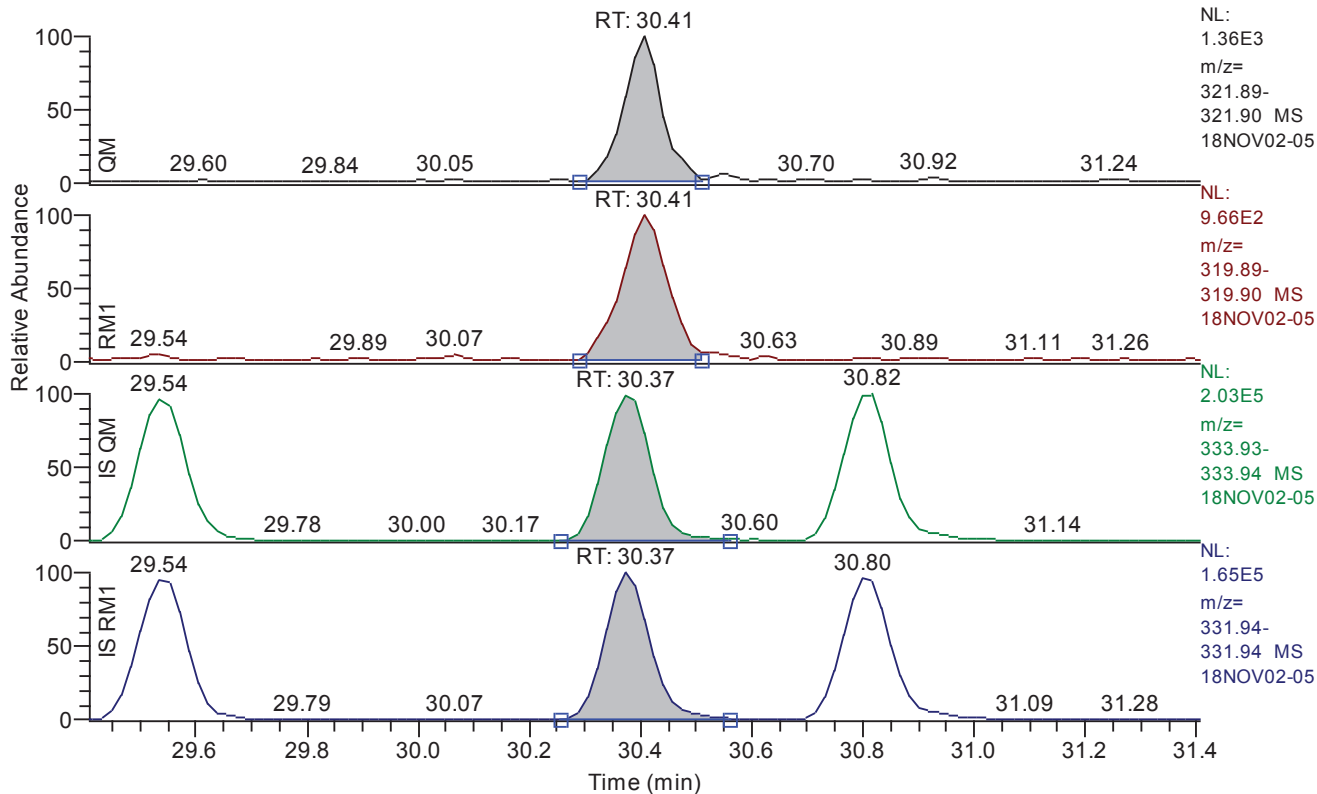
Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.23
QM Area	11663
QM Integration Mode	A
RM1 Area	9567
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0045
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	283
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.41 - 31.41 SM: 3G

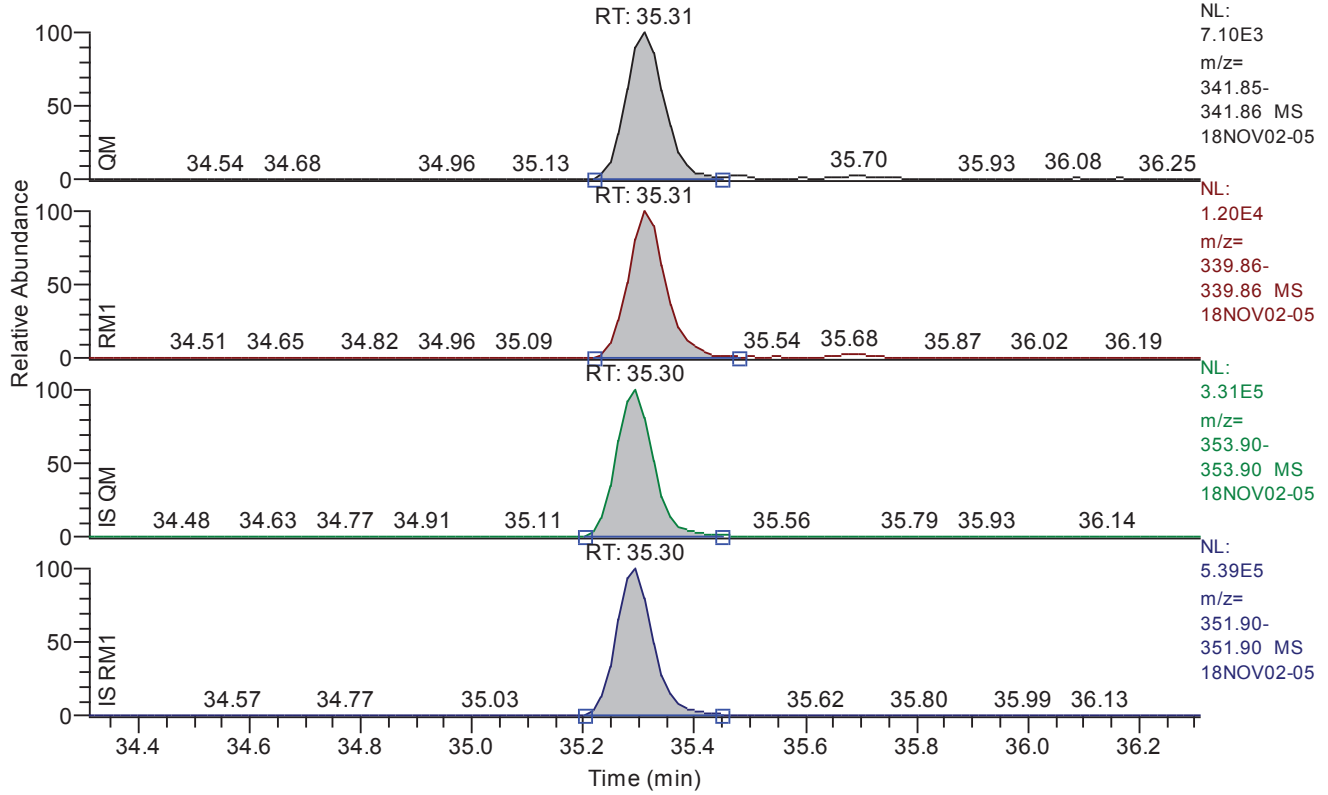


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.41
QM Area	6593
QM Integration Mode	A
RM1 Area	5559
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	228
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.31 - 36.31 SM: 3G

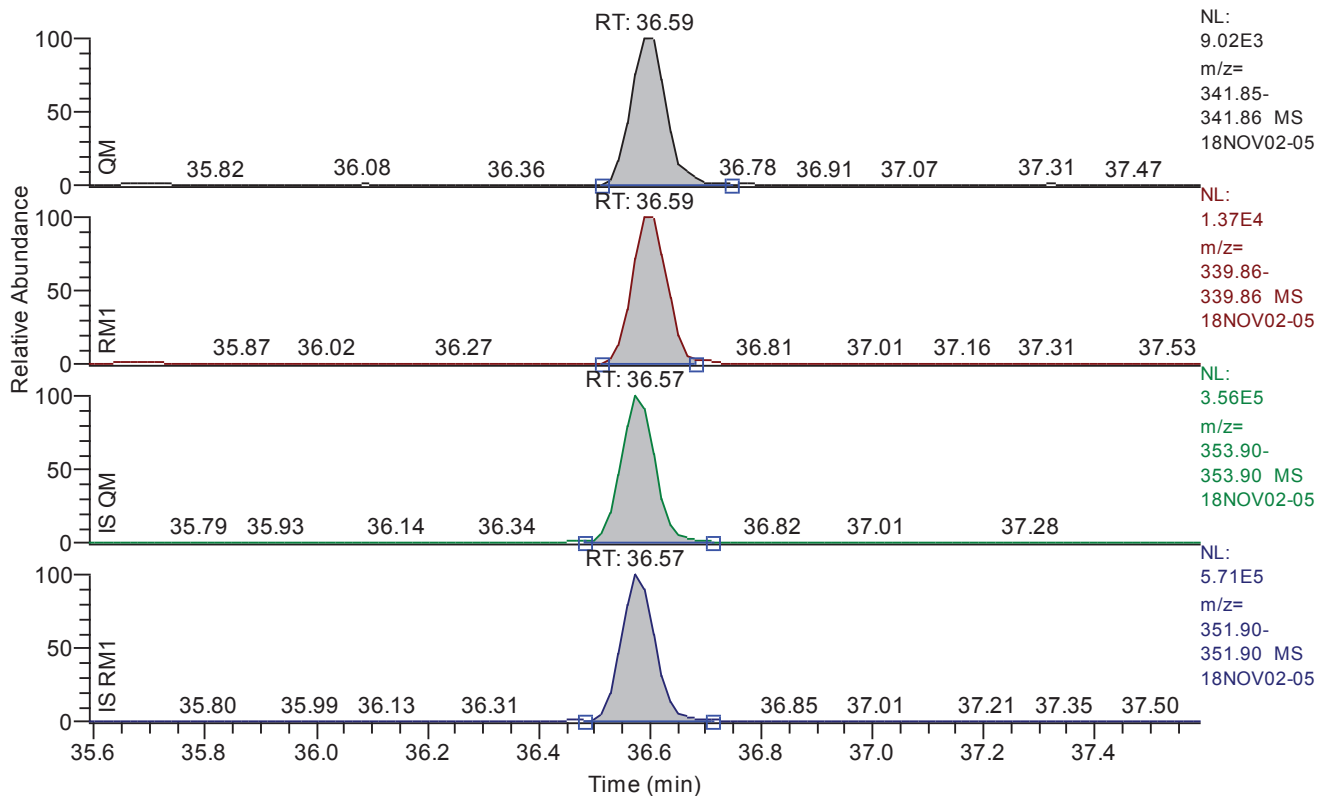


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.31
QM Area	33768
QM Integration Mode	A
RM1 Area	56873
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0051
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1199
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.59 - 37.59 SM: 3G

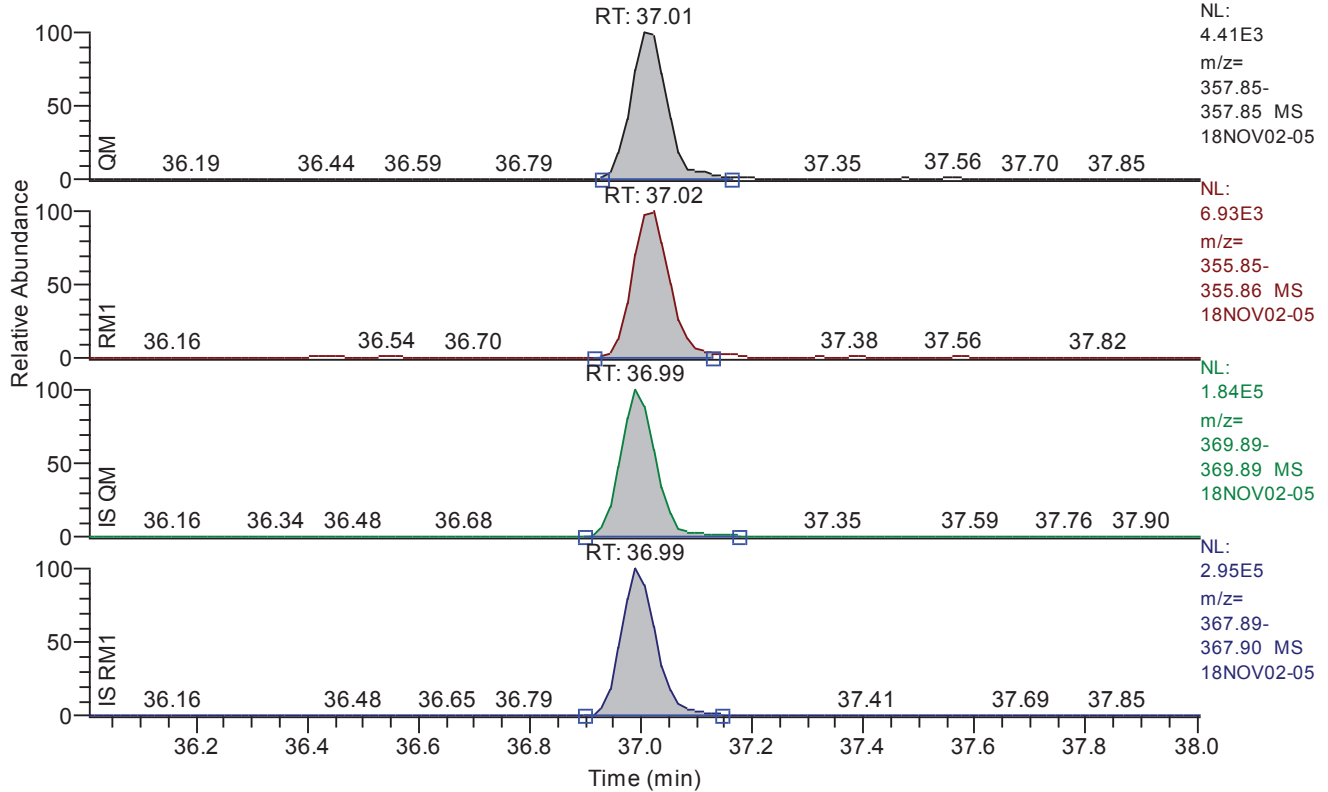


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.59
QM Area	40124
QM Integration Mode	A
RM1 Area	60081
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0042
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1427
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.01 - 38.01 SM: 3G

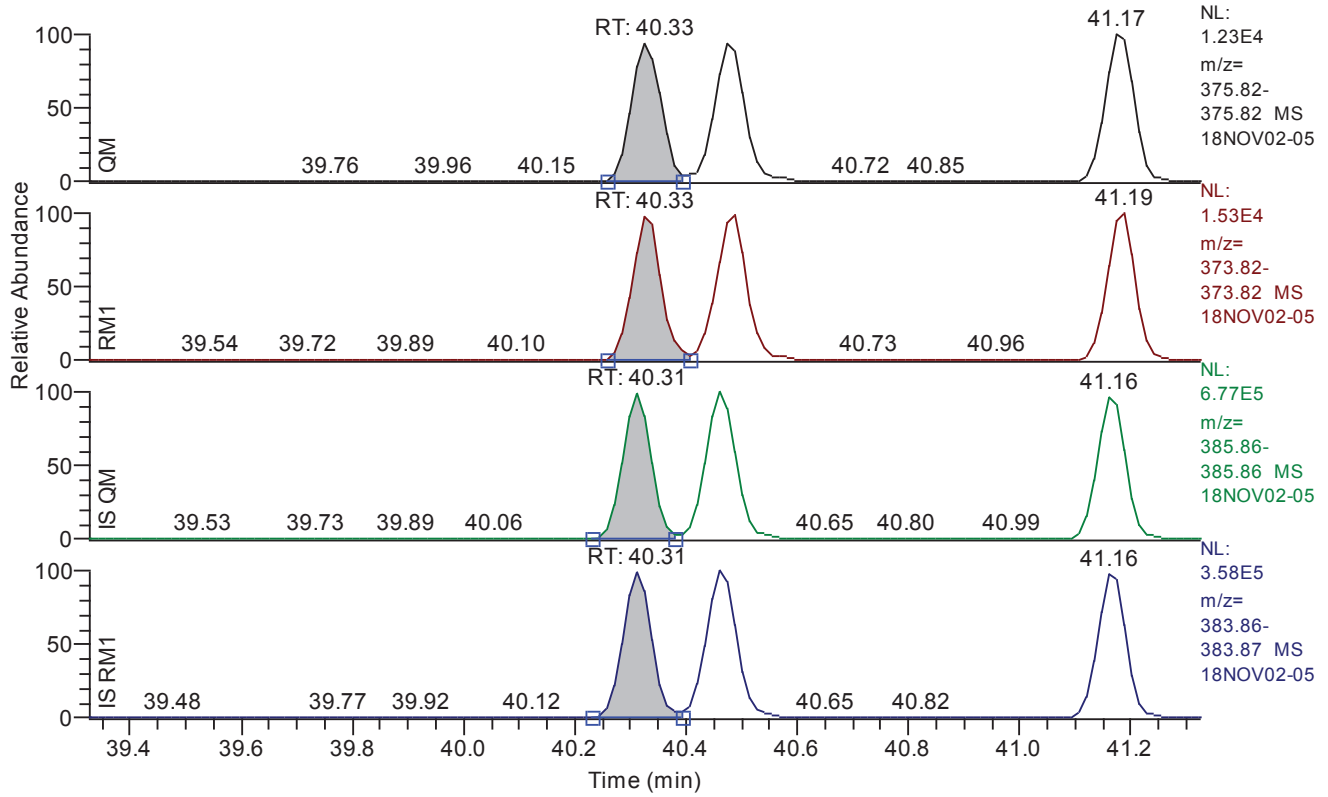


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.01
QM Area	19955
QM Integration Mode	A
RM1 Area	32276
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0108
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	546
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.33 - 41.33 SM: 3G

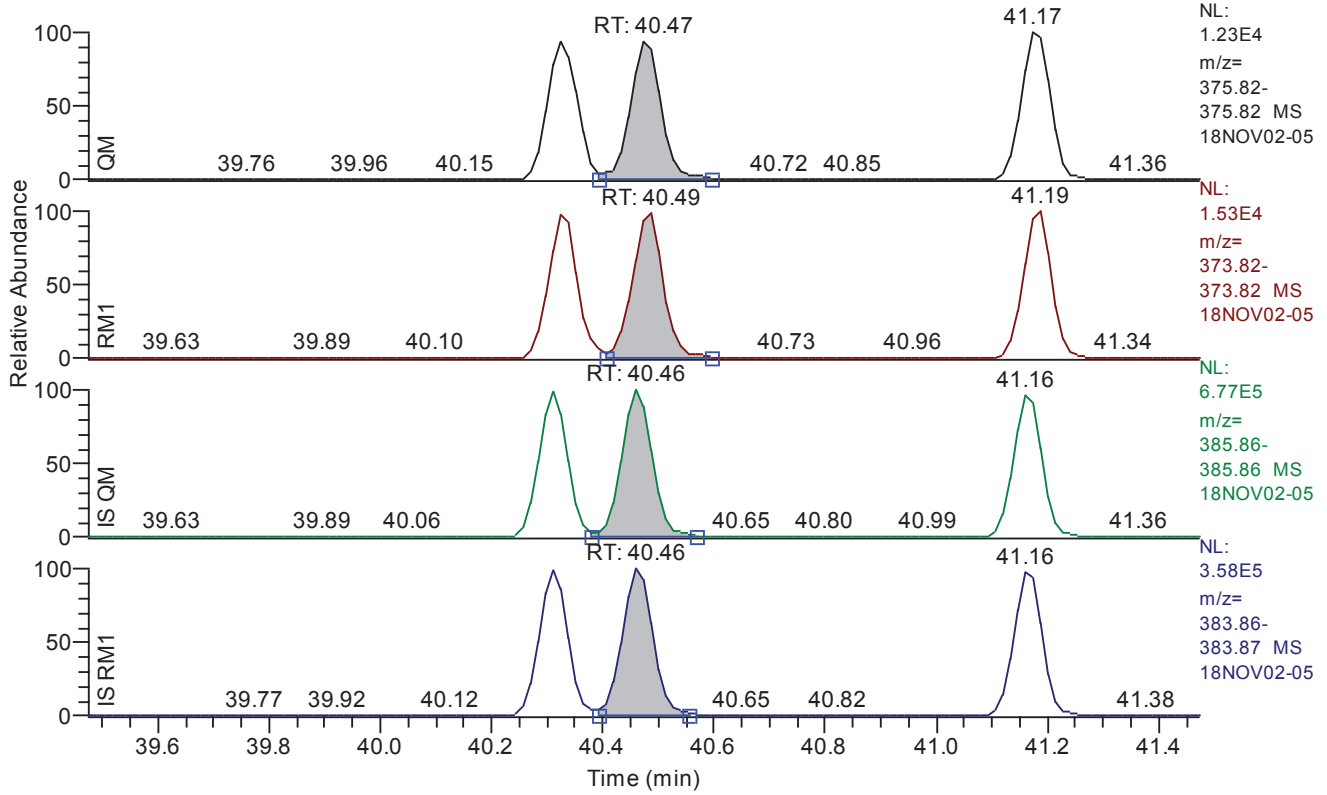


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.33
QM Area	42954
QM Integration Mode	A
RM1 Area	53913
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	989
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.47 - 41.47 SM: 3G

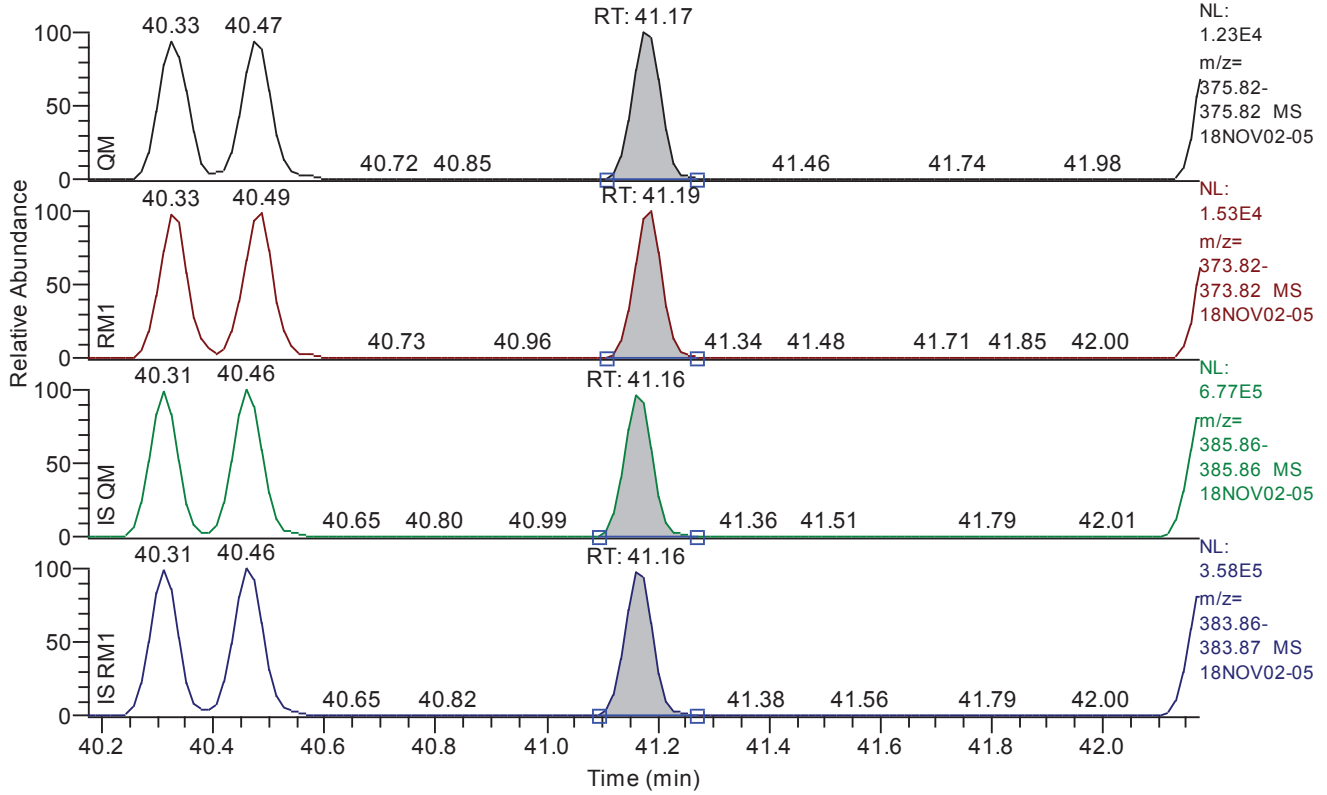


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.47
QM Area	44435
QM Integration Mode	A
RM1 Area	57631
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0062
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1002
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.17 - 42.17 SM: 3G



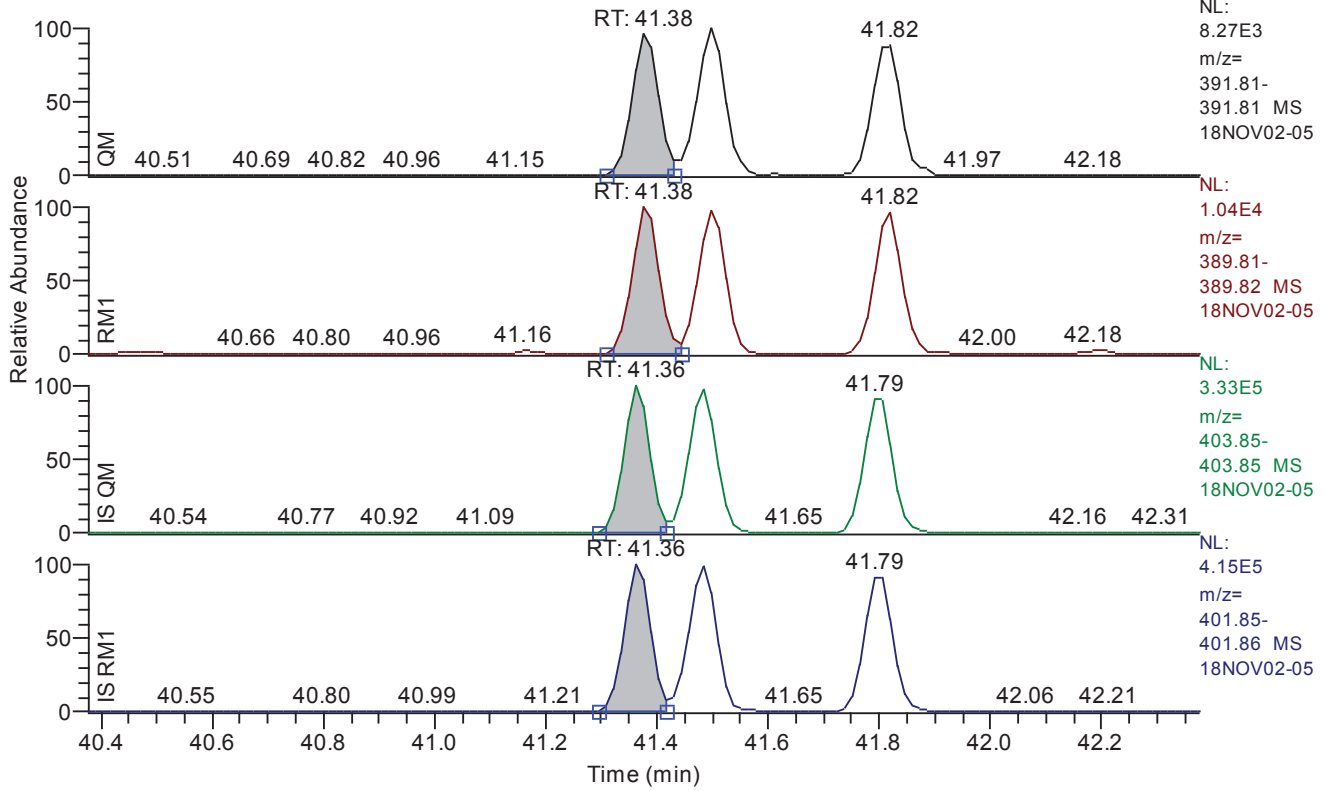
Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.17
QM Area	45013
QM Integration Mode	A
RM1 Area	53797
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0060
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1034
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.38 - 42.38 SM: 3G



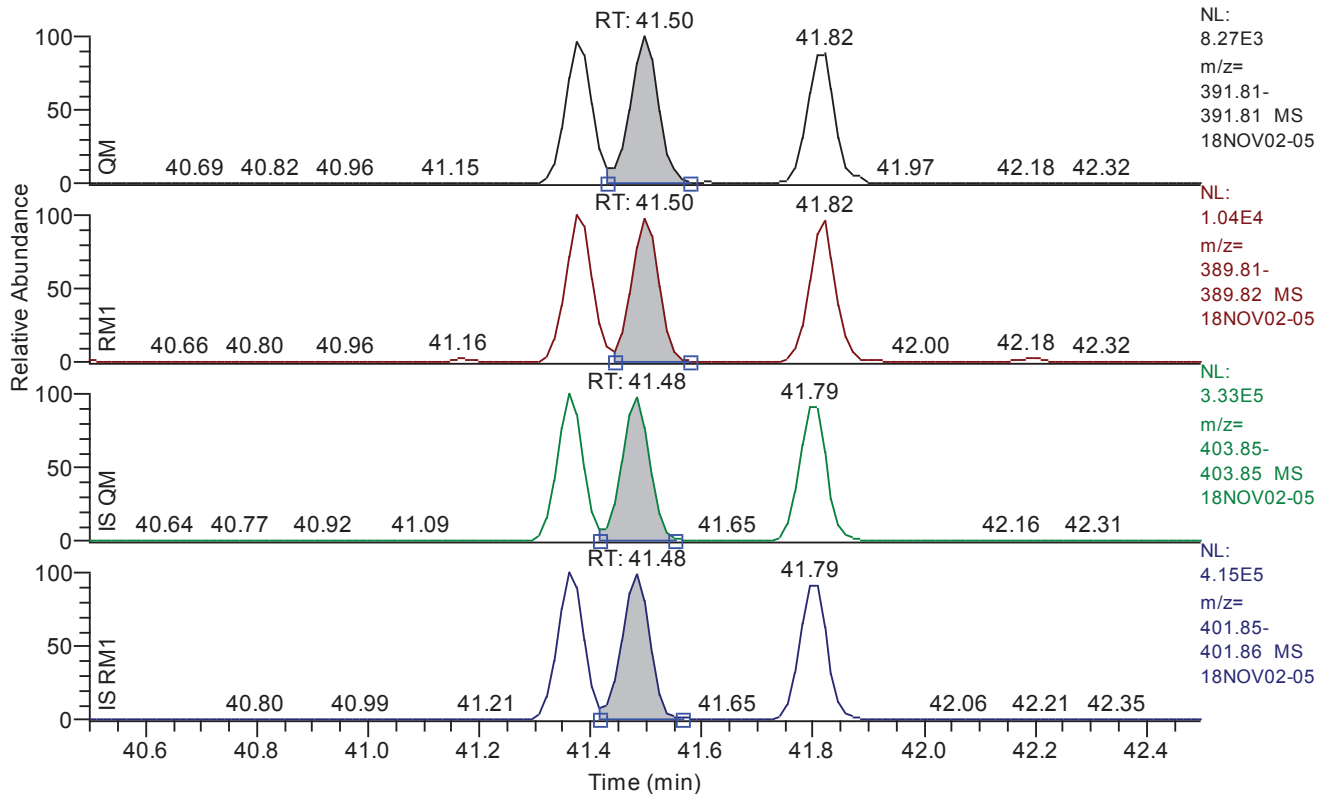
Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.38
QM Area	26285
QM Integration Mode	A
RM1 Area	34957
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	998
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.50 - 42.50 SM: 3G



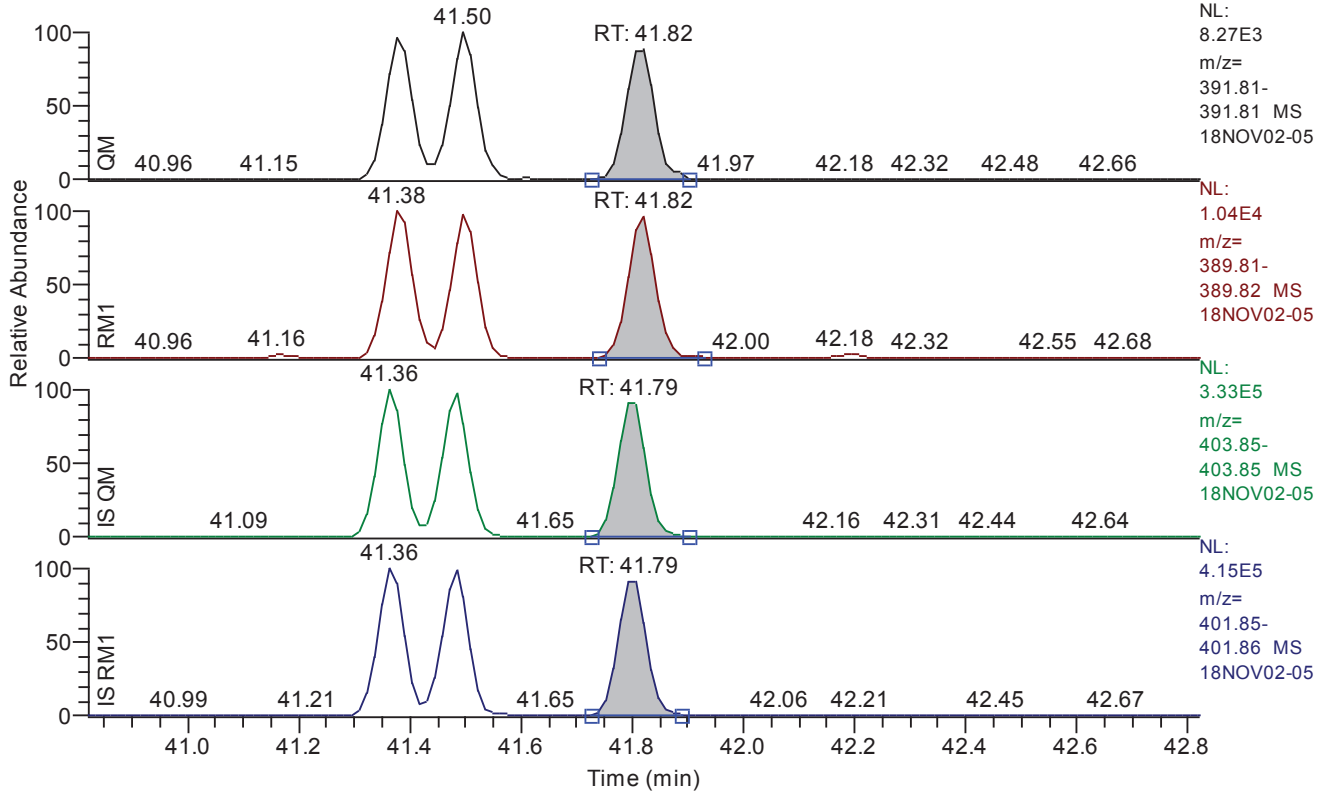
Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.50
QM Area	29304
QM Integration Mode	A
RM1 Area	34700
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0063
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1002
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.82 - 42.82 SM: 3G



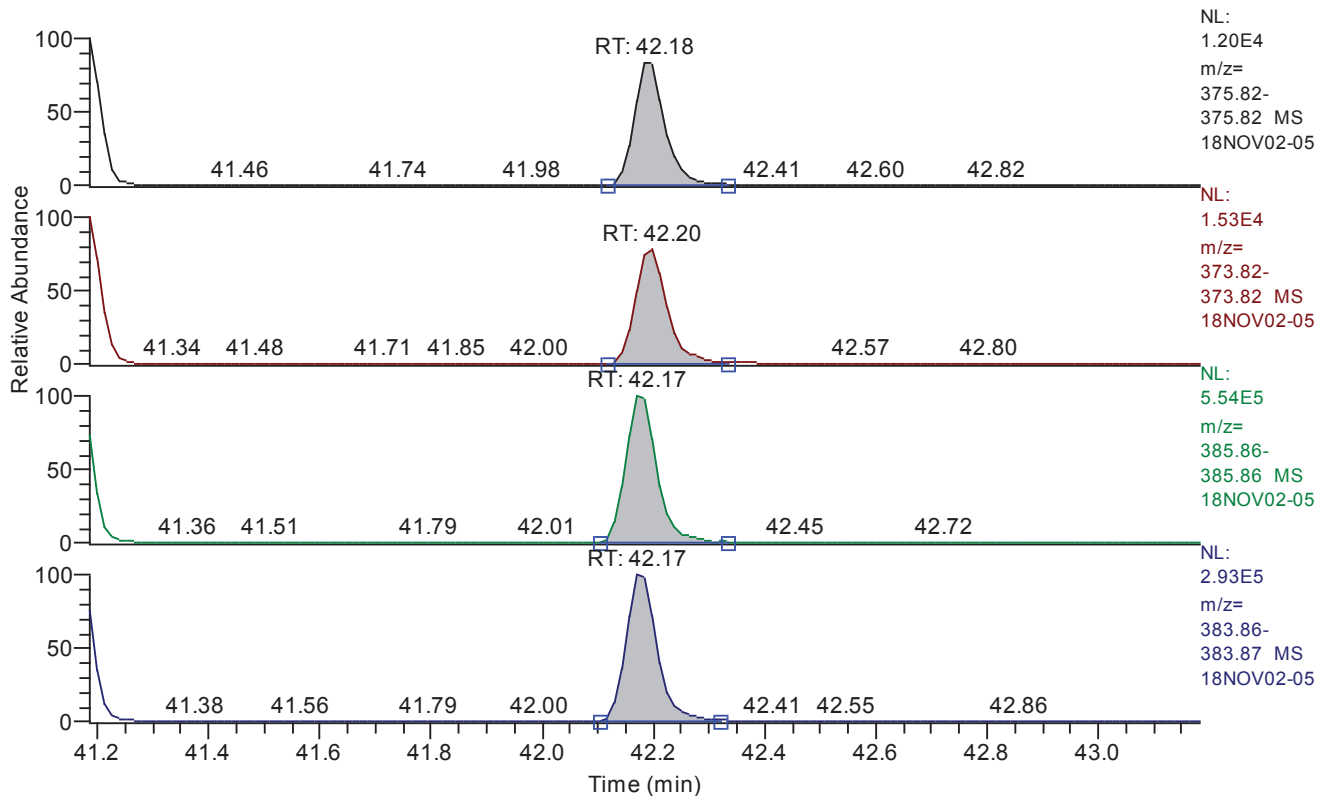
Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.82
QM Area	26822
QM Integration Mode	A
RM1 Area	34668
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0066
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	945
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 41.18 - 43.18 SM: 3G

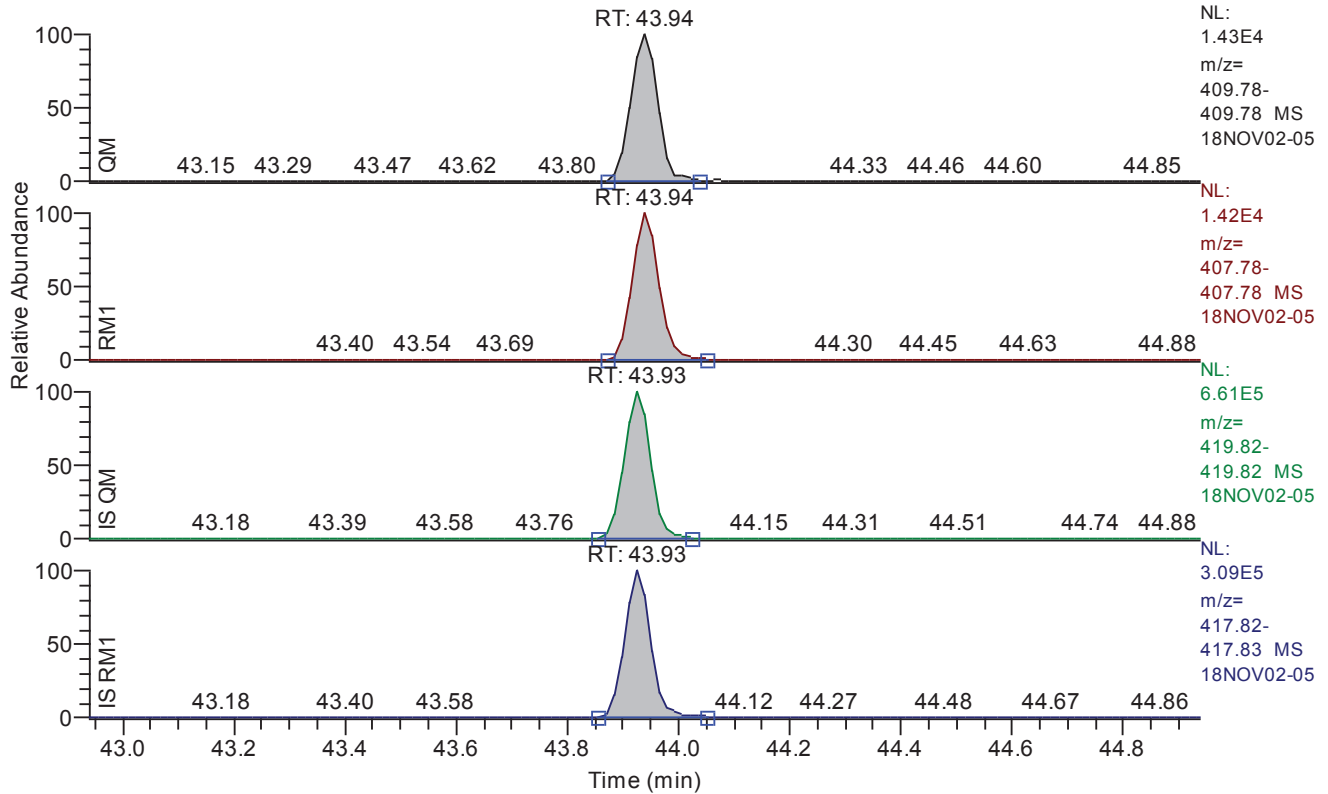


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.18
QM Area	38440
QM Integration Mode	A
RM1 Area	47888
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0076
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	825
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 42.94 - 44.94 SM: 3G



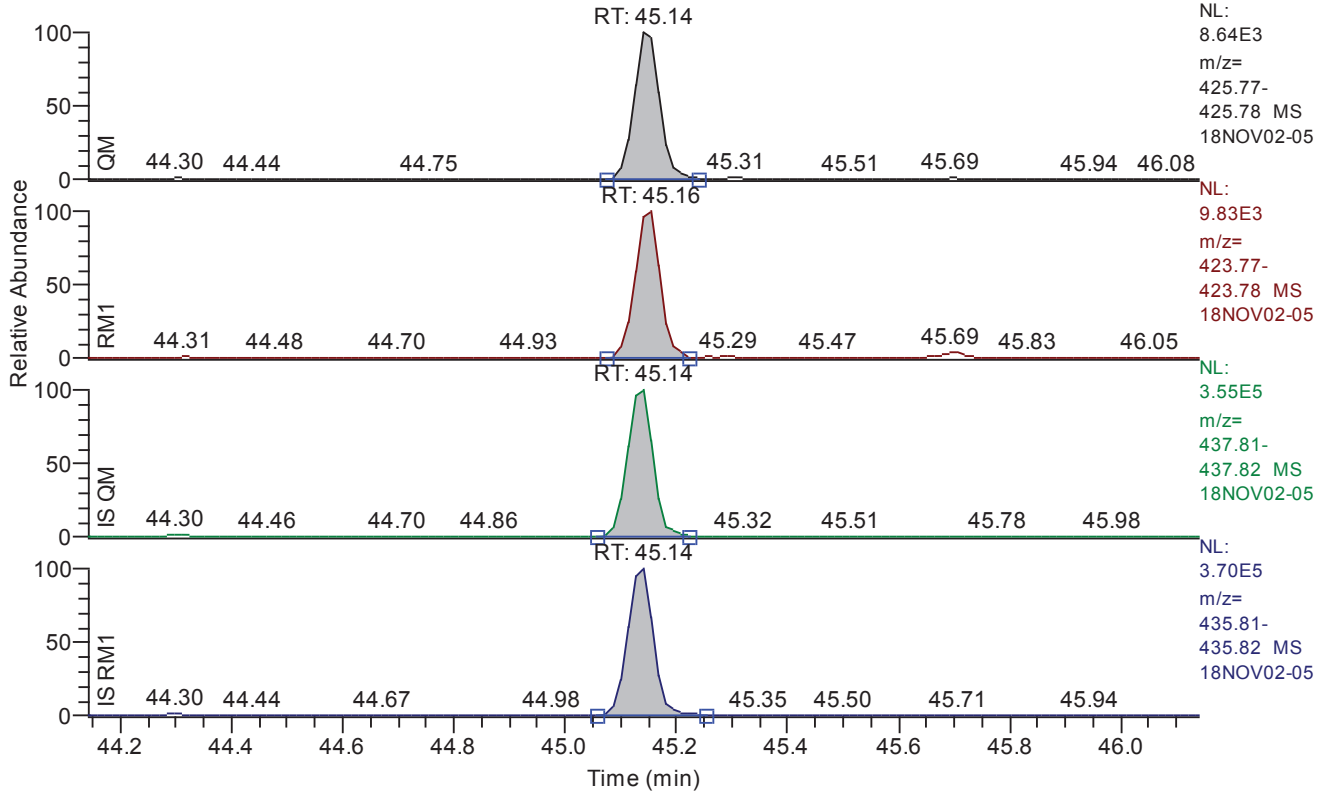
Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.94
QM Area	49385
QM Integration Mode	A
RM1 Area	48693
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0047
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1303
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.14 - 46.14 SM: 3G



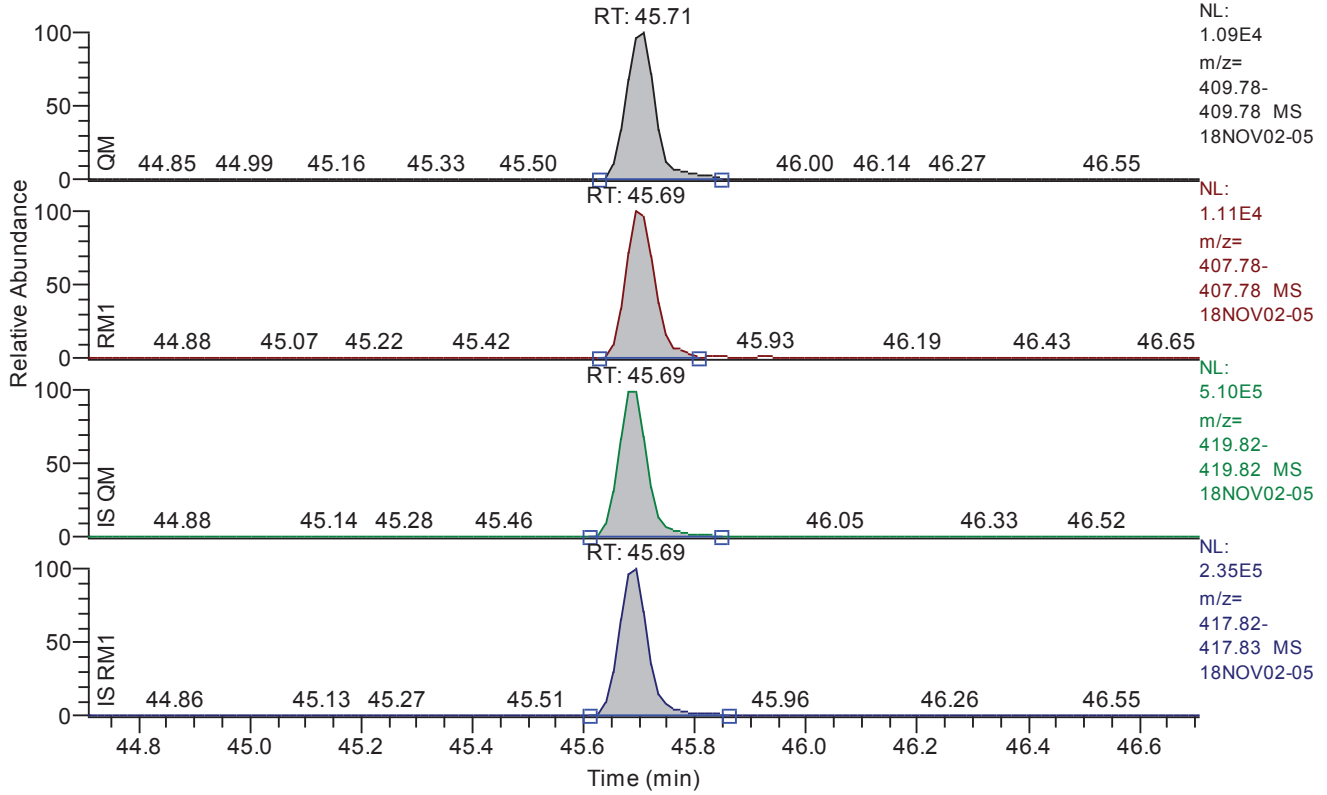
Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.14
QM Area	28158
QM Integration Mode	A
RM1 Area	31652
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0066
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	971
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.71 - 46.71 SM: 3G



NL:
1.09E4
m/z=
409.78-
409.78 MS
18NOV02-05

NL:
1.11E4
m/z=
407.78-
407.78 MS
18NOV02-05

NL:
5.10E5
m/z=
419.82-
419.82 MS
18NOV02-05

NL:
2.35E5
m/z=
417.82-
417.83 MS
18NOV02-05

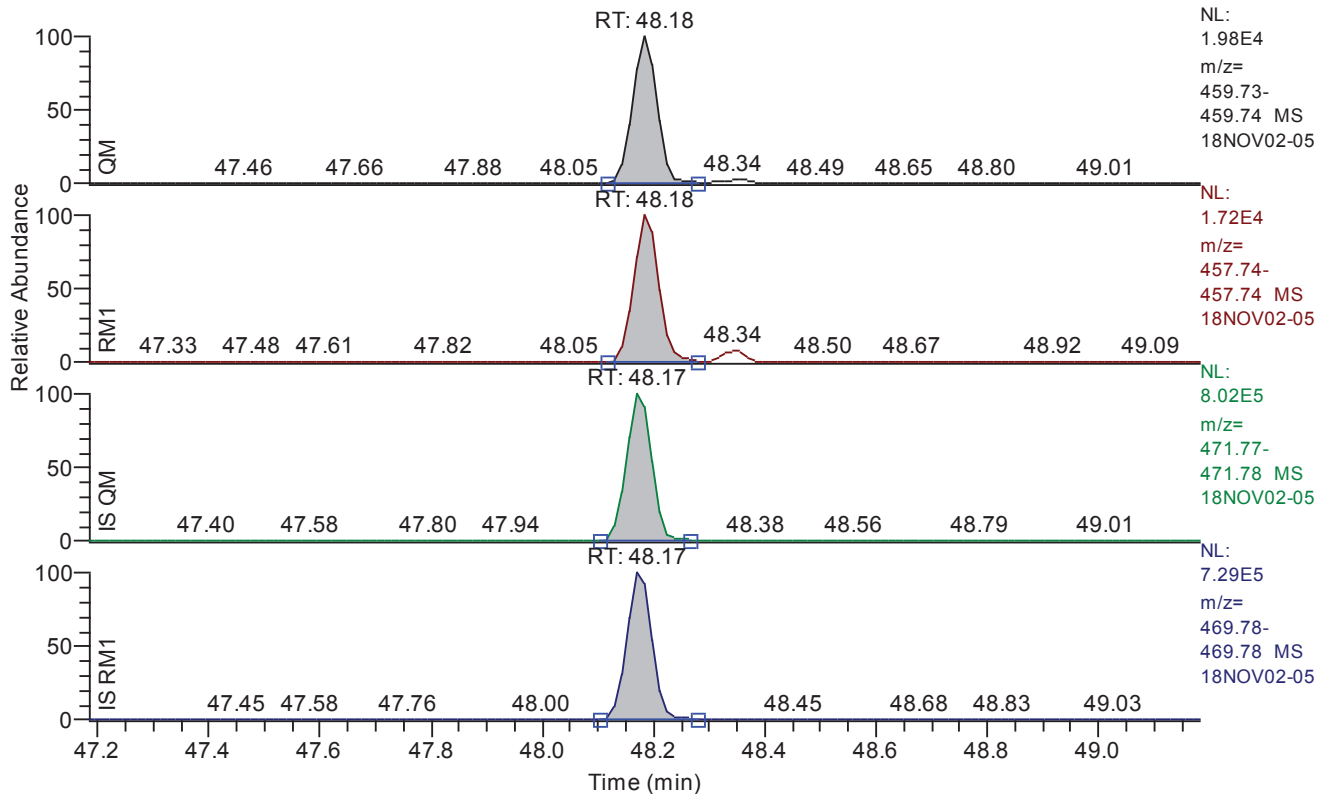
Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.71
QM Area	40863
QM Integration Mode	A
RM1 Area	41697
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	1006
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.18 - 49.18 SM: 3G



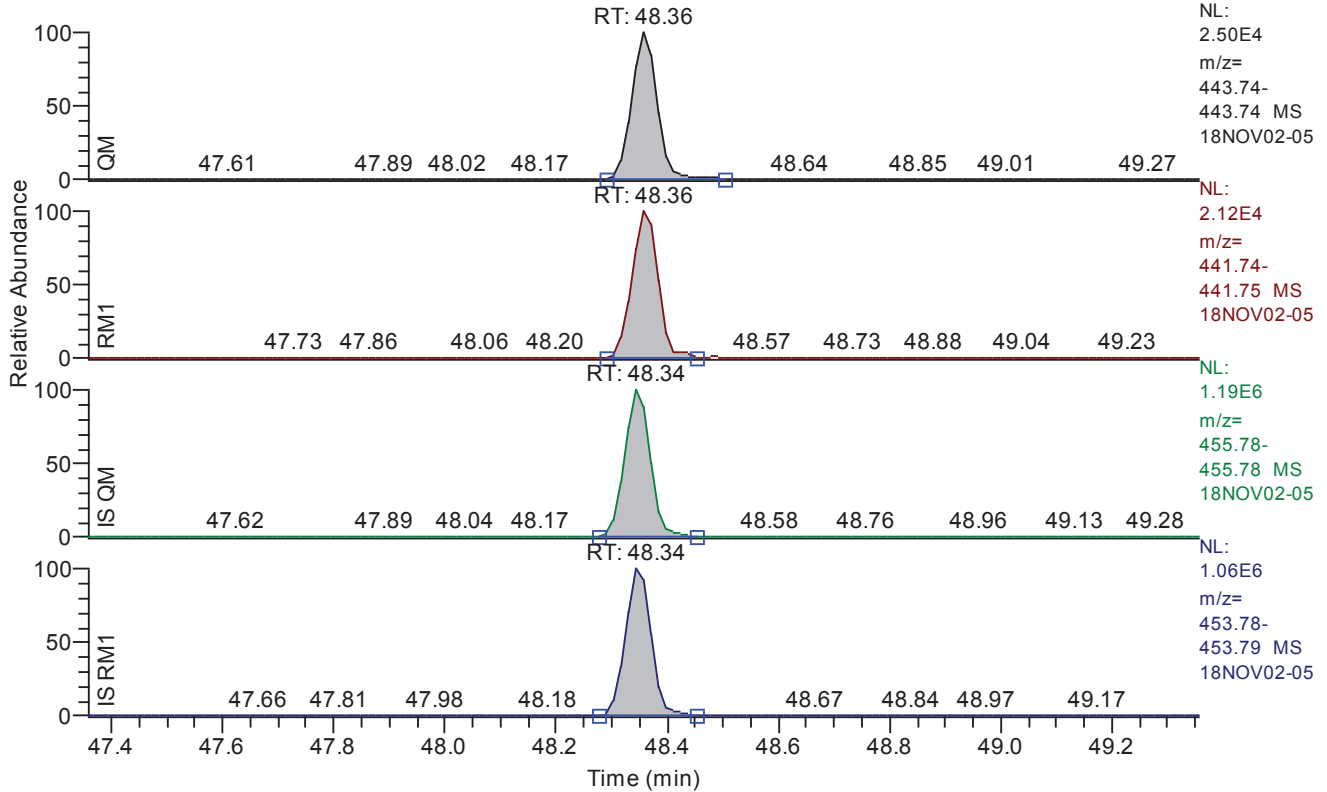
Entry Parameters

Compound Name	OCDD
QM Retention Time	48.18
QM Area	60621
QM Integration Mode	A
RM1 Area	53443
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	5.000000
Adjusted Amount (A)	5.0000
Signal-to-Noise	1333
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.36 - 49.36 SM: 3G



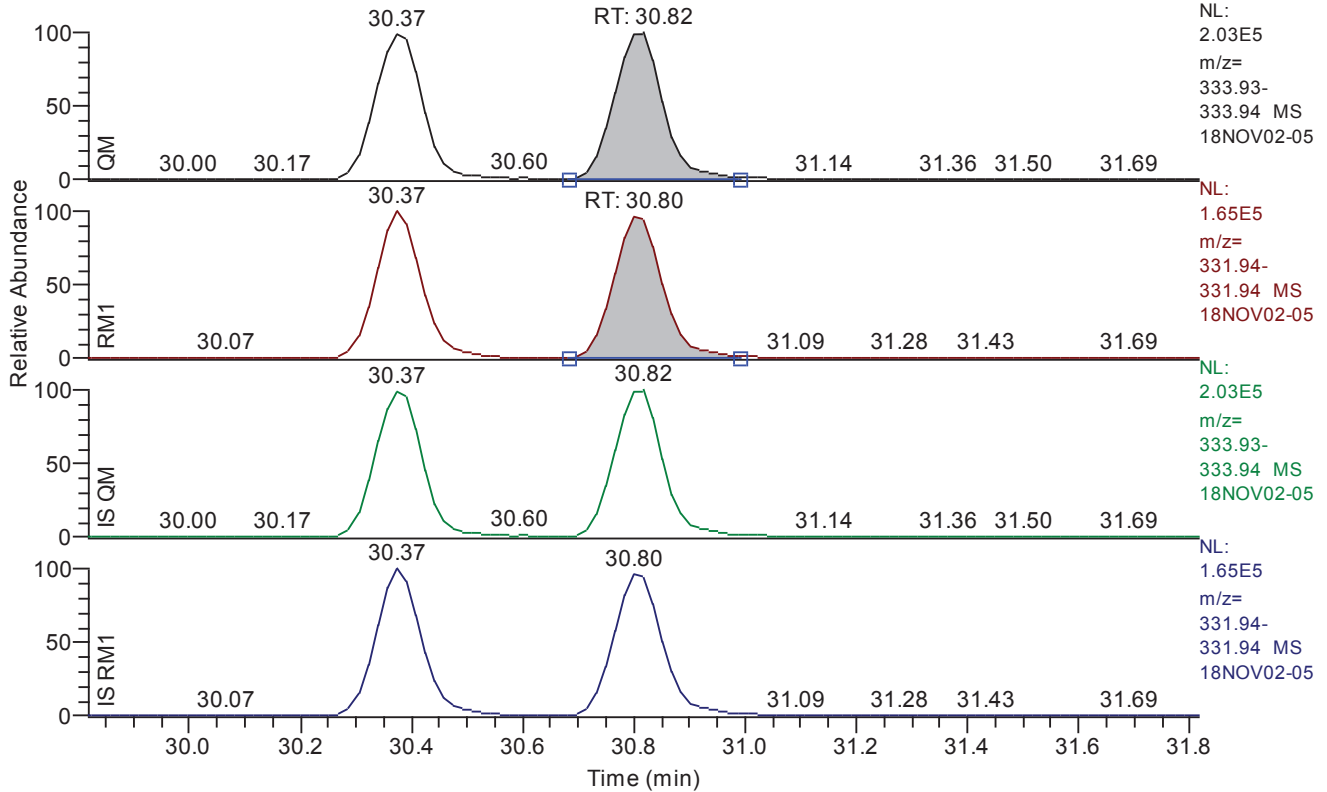
Entry Parameters

Compound Name	OCDF
QM Retention Time	48.36
QM Area	78746
QM Integration Mode	A
RM1 Area	69126
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0073
Unqualified Amount (A)	5.000000
Adjusted Amount (A)	5.0000
Signal-to-Noise	1705
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.82 - 31.82 SM: 3G



Entry Parameters

Compound Name 13C12-1278-TCDD (CRS)
 QM Retention Time 30.82
 QM Area 1234918
 QM Integration Mode A
 RM1 Area 976256
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.0277
 Unqualified Amount (A) 100.000000
 Adjusted Amount (A) 100.0000
 Signal-to-Noise 8898
 Client Flags
 Status Overview passed
 Status Info



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 18:30
Number of Entries	64
Comment	
Vial	4
Sample Name	CALDF21837C
Sample ID	CS101
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

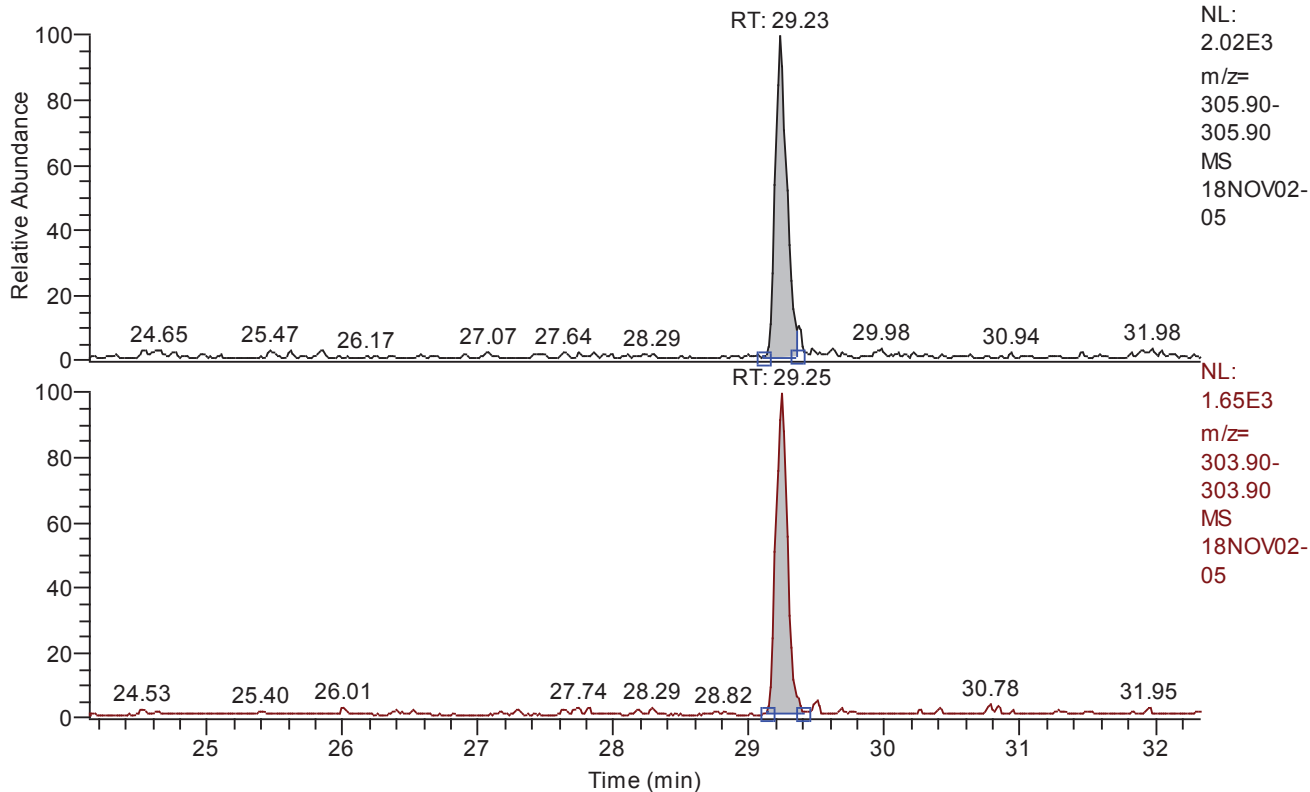
Quan	x:\18nov02\18nov02-05.quan
Data	x:\18nov02\18nov02-05.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 24.13 - 32.33 SM: 3G



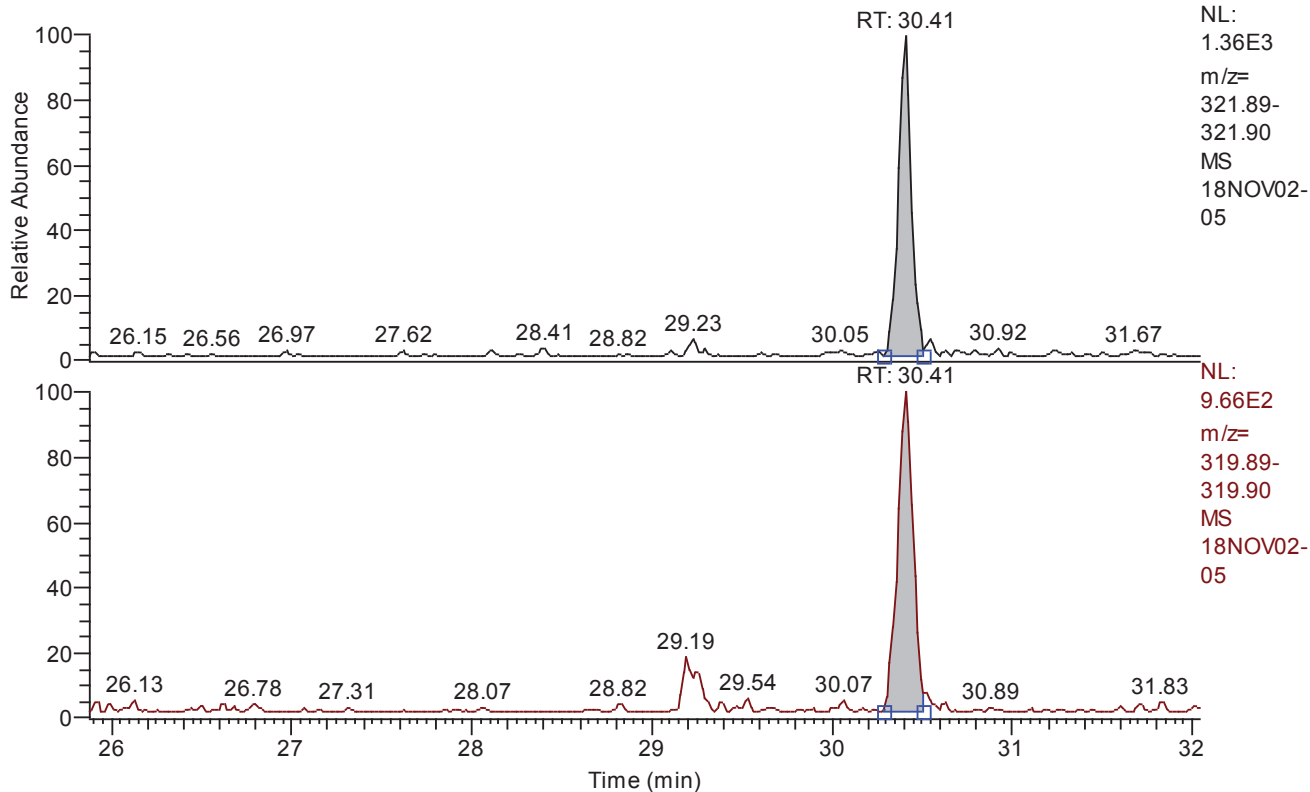
Entry Parameters

Compound Name	Total TCDF
QM Retention Time	28.23
QM Area	11663
QM Integration Mode	A
RM1 Area	9567
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0045
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 25.87 - 32.05 SM: 3G



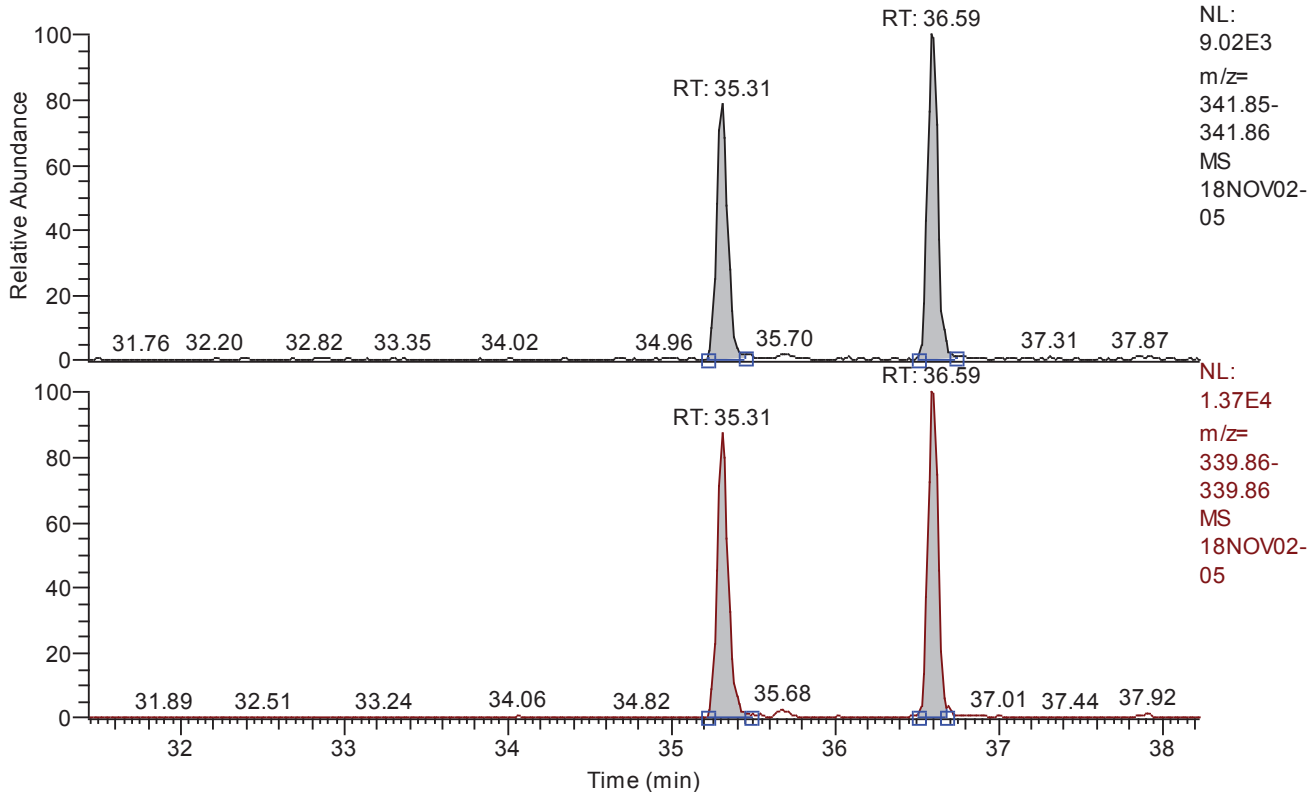
Entry Parameters

Compound Name	Total TCDD
QM Retention Time	28.96
QM Area	6593
QM Integration Mode	A
RM1 Area	5559
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	0.500000
Adjusted Amount (A)	0.5000
Signal-to-Noise	228
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 31.43 - 38.23 SM: 3G



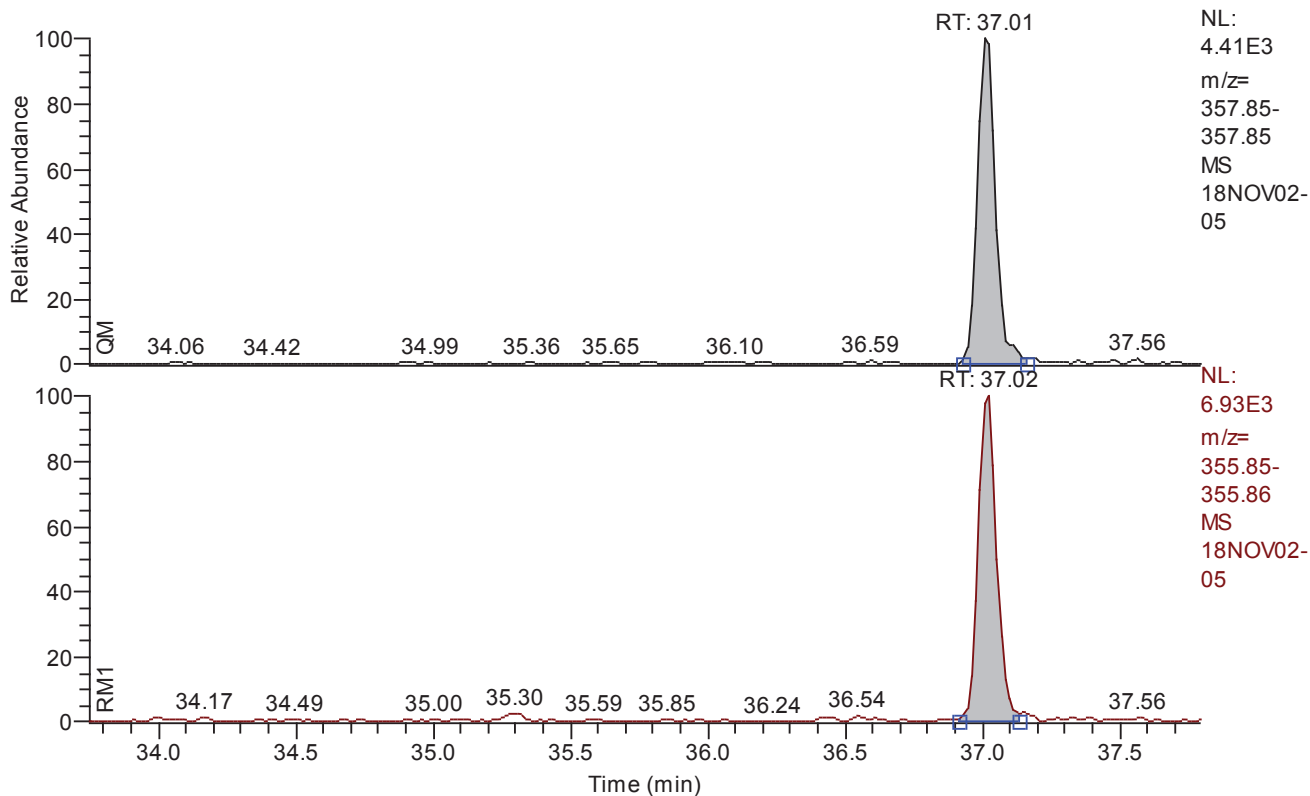
Entry Parameters

Compound Name	Total PeCDF
QM Retention Time	34.83
QM Area	73892
QM Integration Mode	A
RM1 Area	116954
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0046
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	5.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (2)
Status Info	



Chromatogram

RT: 33.75 - 37.79 SM: 3G

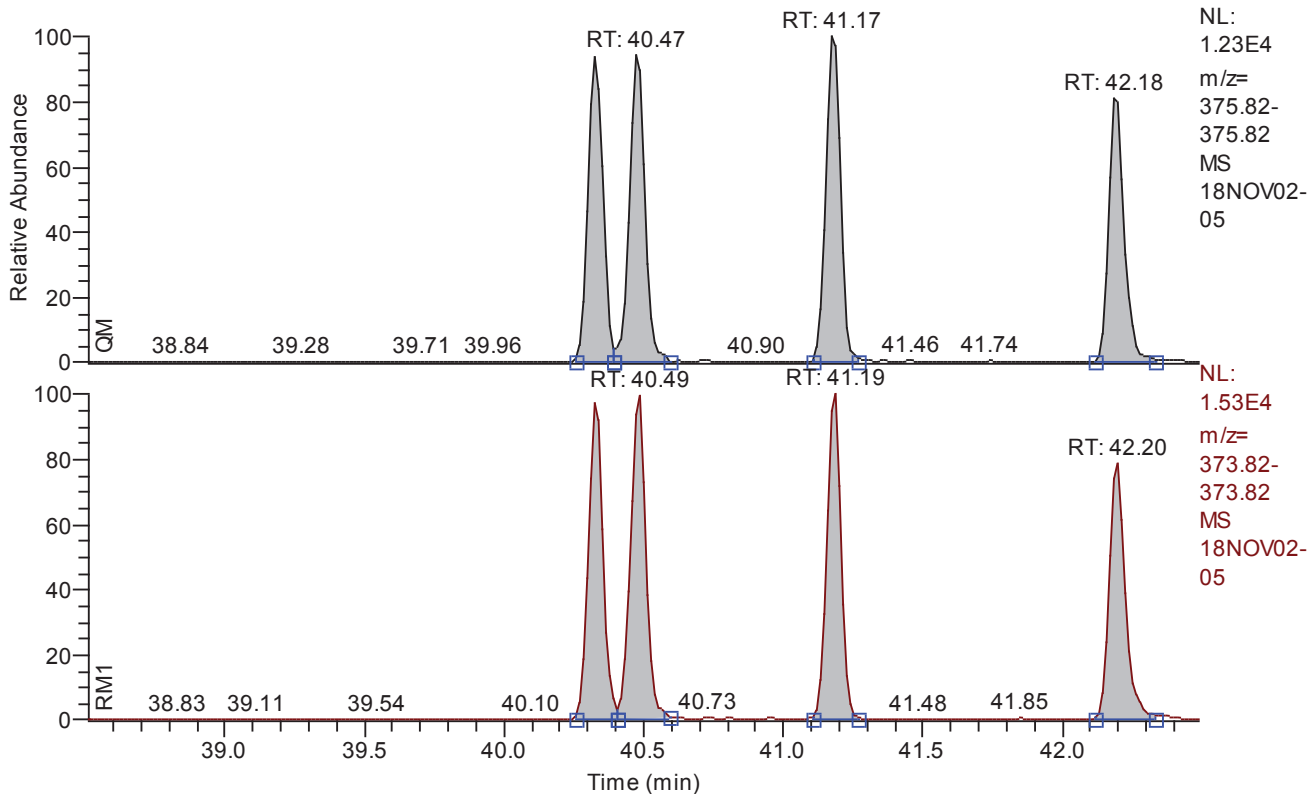


Entry Parameters

Compound Name	Total PeCDD
QM Retention Time	35.77
QM Area	19955
QM Integration Mode	A
RM1 Area	32276
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0108
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 38.51 - 42.49 SM: 3G

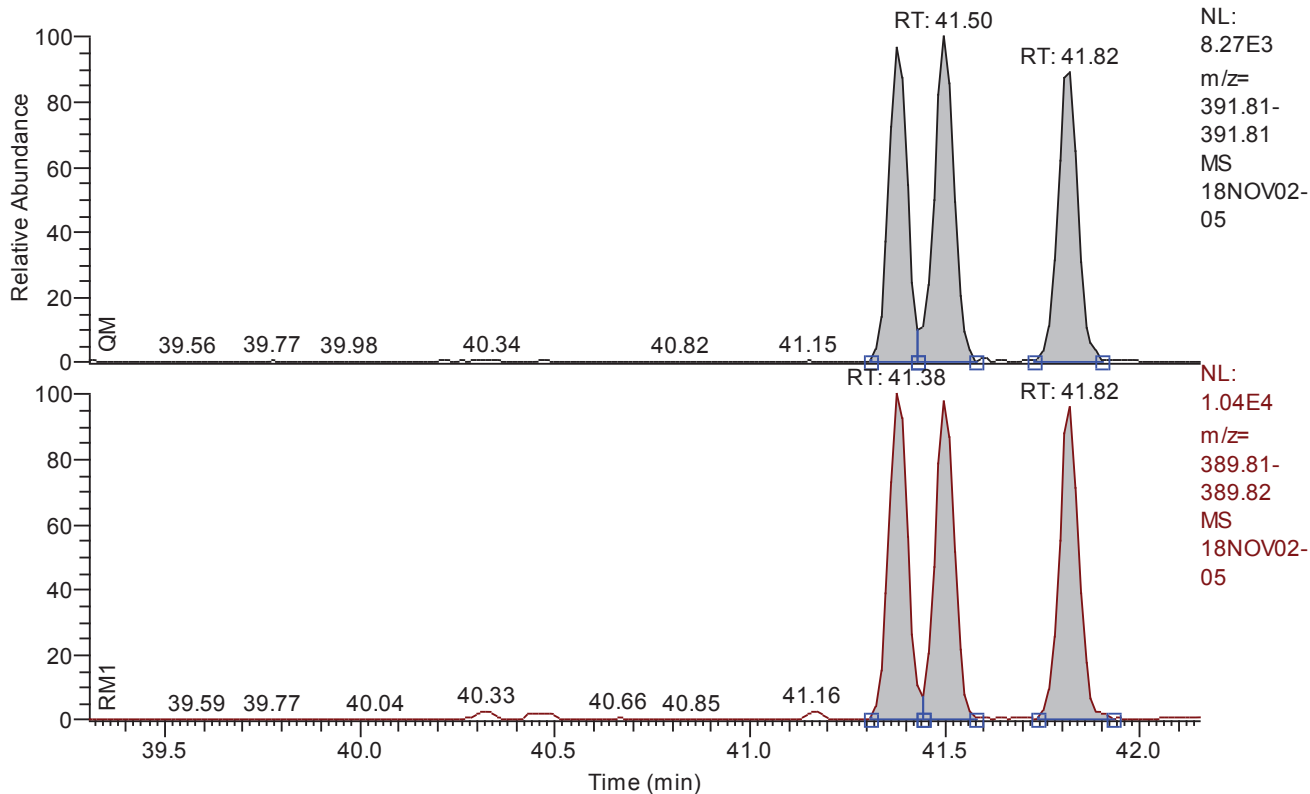


Entry Parameters

Compound Name	Total HxCDF
QM Retention Time	40.50
QM Area	170843
QM Integration Mode	A
RM1 Area	213228
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0064
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	10.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (4)
Status Info	

Chromatogram

RT: 39.31 - 42.15 SM: 3G

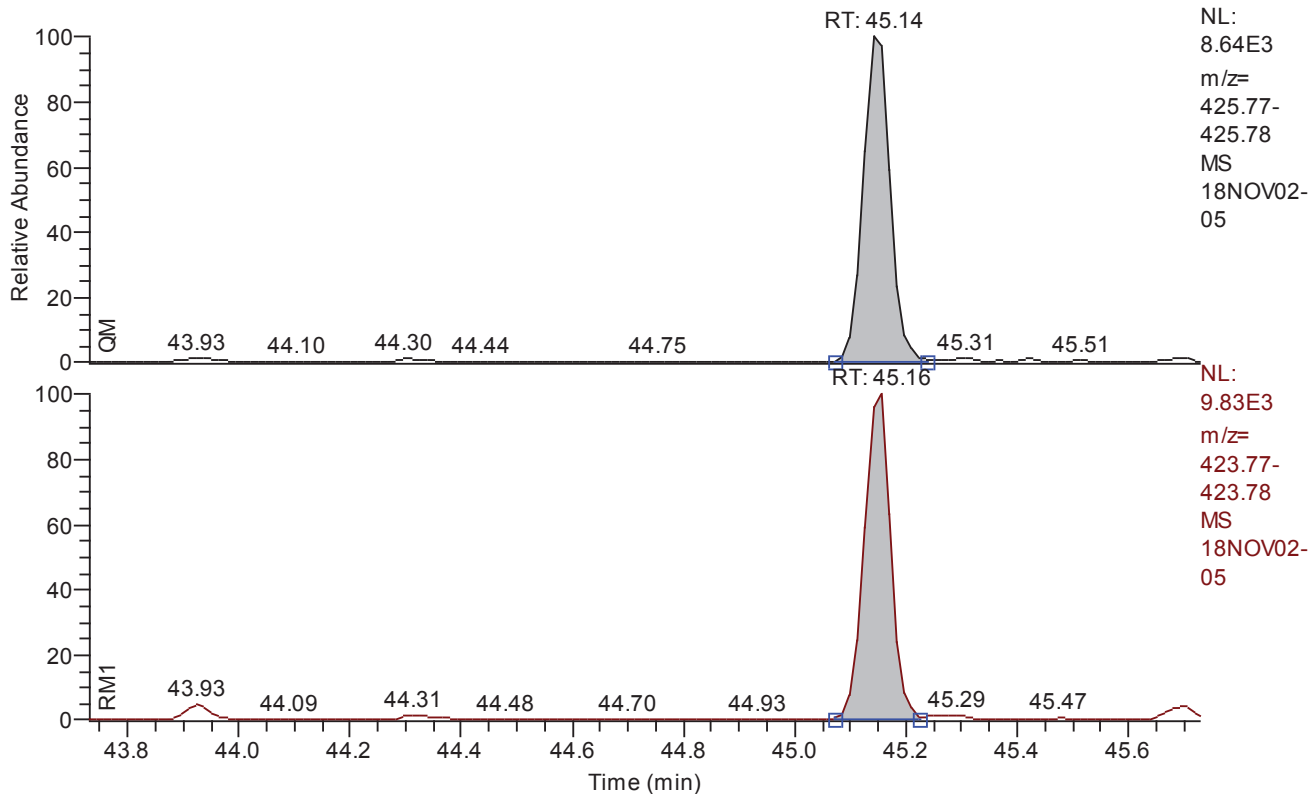


Entry Parameters

Compound Name	Total HxCDD
QM Retention Time	40.73
QM Area	82411
QM Integration Mode	A
RM1 Area	104325
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0063
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	7.5000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (3)
Status Info	

Chromatogram

RT: 43.73 - 45.73 SM: 3G

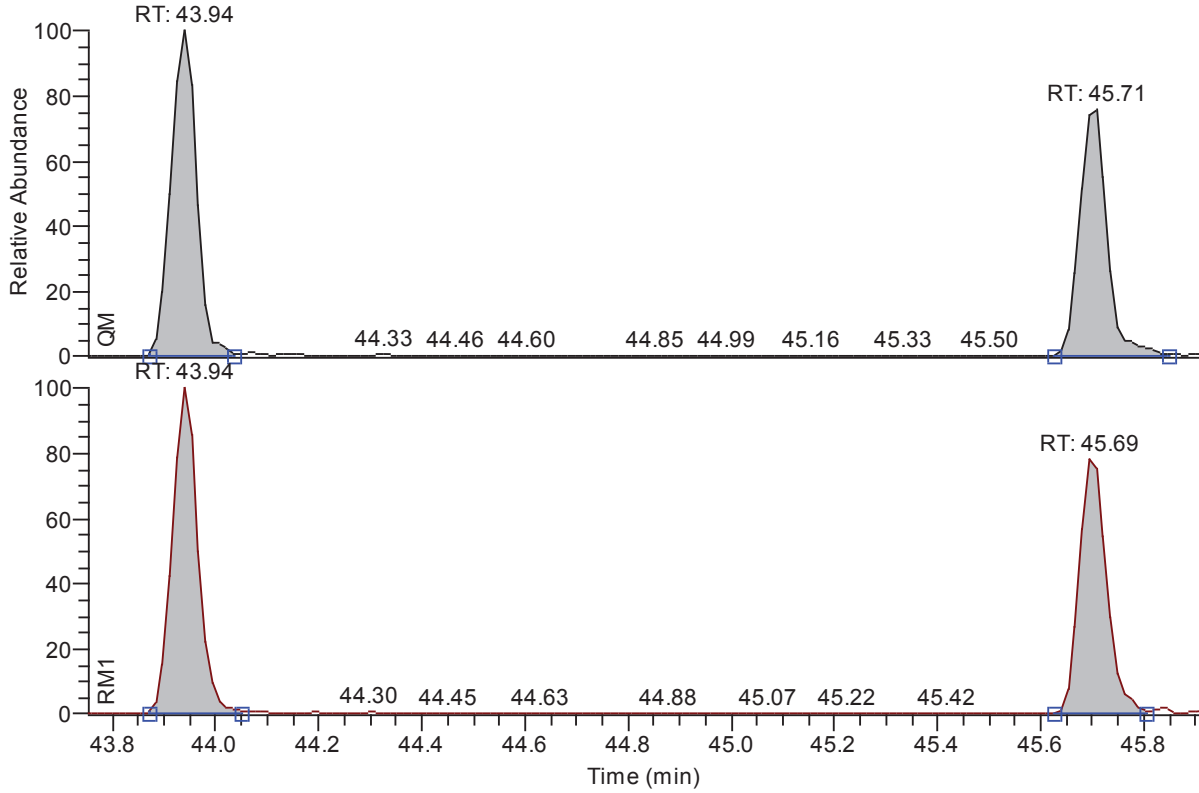


Entry Parameters

Compound Name	Total HpCDD
QM Retention Time	44.73
QM Area	28158
QM Integration Mode	A
RM1 Area	31652
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0066
Unqualified Amount (A)	2.500000
Adjusted Amount (A)	2.5000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 43.75 - 45.91 SM: 3G



NL:
1.43E4
m/z=
409.78-
409.78
MS
18NOV02-
05

NL:
1.42E4
m/z=
407.78-
407.78
MS
18NOV02-
05

Entry Parameters

Compound Name	Total HpCDF
QM Retention Time	44.83
QM Area	90248
QM Integration Mode	A
RM1 Area	90390
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0049
Unqualified Amount (A)	2.302235
Adjusted Amount (A)	4.6045
Signal-to-Noise	---
Client Flags	
Status Overview	passed (2)
Status Info	



Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Retention Time	RM1 Retention Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.23	29.23	29.25	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.41	30.41	30.41	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.31	35.31	35.31	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.59	36.59	36.59	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	37.01	37.01	37.02	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.33	40.33	40.33	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.47	40.47	40.49	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.17	41.17	41.19	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.38	41.38	41.38	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.50	41.50	41.50	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.82	41.82	41.82	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.18	42.18	42.20	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	43.94	43.94	43.94	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.14	45.14	45.16	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.71	45.71	45.69	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.18	48.18	48.18	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.36	48.36	48.36	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.82	30.82	30.80	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.54	29.54	29.54	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.23	40.23	40.23	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.21	29.21	29.21	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.37	30.37	30.37	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.30	35.30	35.30	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.57	36.57	36.57	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	36.99	36.99	36.99	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.31	40.31	40.31	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.46	40.46	40.46	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.16	41.16	41.16	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.36	41.36	41.36	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.48	41.48	41.48	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.79	41.79	41.79	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.17	42.17	42.17	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	43.93	43.93	43.93	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.14	45.14	45.14	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.69	45.69	45.69	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.17	48.17	48.17	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.34	48.34	48.34	passed	passed
38	Total TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	28.23	28.23	28.23	---	---
39	Total TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	28.96	28.96	28.96	---	---
40	Total PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	34.83	34.83	34.83	---	---
41	Total PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	35.77	35.77	35.77	---	---
42	Total HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.50	40.50	40.50	---	---
43	Total HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	40.73	40.73	40.73	---	---
44	Total HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	44.73	44.73	44.73	---	---
45	Total HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	44.83	44.83	44.83	---	---
46	Single TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	29.23	29.23	29.25	passed	passed
47	Single TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	30.41	30.41	30.41	passed	passed
48	Single PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	37.01	37.01	37.02	passed	passed
49	Single PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	36.59	36.59	36.59	passed	passed
50	Single PeCDD	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	35.31	35.31	35.31	passed	passed
51	Single HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	45.14	45.14	45.16	passed	passed
52	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	41.17	41.17	41.19	passed	passed
53	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.33	40.33	40.33	passed	passed
54	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.47	40.47	40.49	passed	passed
55	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	42.18	42.18	42.20	passed	passed
56	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.50	41.50	41.50	passed	passed
57	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.38	41.38	41.38	passed	passed
58	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.82	41.82	41.82	passed	passed
59	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	43.94	43.94	43.94	passed	passed
60	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	45.71	45.71	45.69	passed	passed



Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.23	0.8203	0.6450 - 0.8950	passed	100.00	0 - 0	passed
2	2378-TCDD	30.41	0.8432	0.6450 - 0.8950	passed	100.00	0 - 0	passed
3	12378-PeCDF	35.31	1.6843	1.3150 - 1.7850	passed	100.00	0 - 0	passed
4	23478-PeCDF	36.59	1.4974	1.3150 - 1.7850	passed	100.00	0 - 0	passed
5	12378-PeCDD	37.01	1.6175	1.3150 - 1.7850	passed	100.00	0 - 0	passed
6	123478-HxCDF	40.33	1.2551	1.0450 - 1.4350	passed	100.00	0 - 0	passed
7	123678-HxCDF	40.47	1.2970	1.0450 - 1.4350	passed	100.00	0 - 0	passed
8	234678-HxCDF	41.17	1.1951	1.0450 - 1.4350	passed	100.00	0 - 0	passed
9	123478-HxCDD	41.38	1.3299	1.0450 - 1.4350	passed	100.00	0 - 0	passed
10	123678-HxCDD	41.50	1.1841	1.0450 - 1.4350	passed	100.00	0 - 0	passed
11	123789-HxCDD	41.82	1.2925	1.0450 - 1.4350	passed	100.00	0 - 0	passed
12	123789-HxCDF	42.18	1.2458	1.0450 - 1.4350	passed	100.00	0 - 0	passed
13	1234678-HpCDF	43.94	0.9860	0.8750 - 1.2050	passed	100.00	0 - 0	passed
14	1234678-HpCDD	45.14	1.1241	0.8750 - 1.2050	passed	100.00	0 - 0	passed
15	1234789-HpCDF	45.71	1.0204	0.8750 - 1.2050	passed	100.00	0 - 0	passed
16	OCDD	48.18	0.8816	0.7550 - 1.0250	passed	100.00	0 - 0	passed
17	OCDF	48.36	0.8778	0.7550 - 1.0250	passed	100.00	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.82	0.7905	0.6450 - 0.8950	passed	100.00	0 - 0	passed
19	13C12-1234-TCDD	29.54	0.8016	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.23	1.2675	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.21	0.7828	0.6450 - 0.8950	passed	100.00	0 - 0	passed
22	13C12-2378-TCDD	30.37	0.7926	0.6450 - 0.8950	passed	100.00	0 - 0	passed
23	13C12-12378-PeCDF	35.30	1.6182	1.3150 - 1.7850	passed	100.00	0 - 0	passed
24	13C12-23478-PeCDF	36.57	1.5903	1.3150 - 1.7850	passed	100.00	0 - 0	passed
25	13C12-12378-PeCDD	36.99	1.5864	1.3150 - 1.7850	passed	100.00	0 - 0	passed
26	13C12-123478-HxCDF	40.31	0.5369	0.4250 - 0.5950	passed	100.00	0 - 0	passed
27	13C12-123678-HxCDF	40.46	0.5305	0.4250 - 0.5950	passed	100.00	0 - 0	passed
28	13C12-234678-HxCDF	41.16	0.5322	0.4250 - 0.5950	passed	100.00	0 - 0	passed
29	13C12-123478-HxCDD	41.36	1.2670	1.0450 - 1.4350	passed	100.00	0 - 0	passed
30	13C12-123678-HxCDD	41.48	1.2696	1.0450 - 1.4350	passed	100.00	0 - 0	passed
31	13C12-123789-HxCDD	41.79	1.2605	1.0450 - 1.4350	passed	100.00	0 - 0	passed
32	13C12-123789-HxCDF	42.17	0.5276	0.4250 - 0.5950	passed	100.00	0 - 0	passed
33	13C12-1234678-HpCDF	43.93	0.4607	0.3650 - 0.5150	passed	100.00	0 - 0	passed
34	13C12-1234678-HpCDD	45.14	1.0451	0.8750 - 1.2050	passed	100.00	0 - 0	passed
35	13C12-1234789-HpCDF	45.69	0.4640	0.3650 - 0.5150	passed	100.00	0 - 0	passed
36	13C12-OCDD	48.17	0.9008	0.7550 - 1.0250	passed	100.00	0 - 0	passed
37	13C12-OCDF	48.34	0.9048	0.7550 - 1.0250	passed	100.00	0 - 0	passed
38	Total TCDF	28.23	---	0.6450 - 0.8950	---	100.00	0 - 0	---
39	Total TCDD	28.96	0.8432	0.6450 - 0.8950	---	100.00	0 - 0	---
40	Total PeCDF	34.83	---	1.3150 - 1.7850	---	100.00	0 - 0	---
41	Total PeCDD	35.77	---	1.3150 - 1.7850	---	100.00	0 - 0	---
42	Total HxCDF	40.50	---	1.0450 - 1.4350	---	100.00	0 - 0	---
43	Total HxCDD	40.73	---	1.0450 - 1.4350	---	100.00	0 - 0	---
44	Total HpCDF	44.73	---	0.8750 - 1.2050	---	100.00	0 - 0	---
45	Total HpCDD	44.83	---	0.8750 - 1.2050	---	92.09	0 - 0	---
46	Single TCDF	29.23	0.8203	0.6450 - 0.8950	passed	100.00	0 - 0	passed
47	Single TCDD	30.41	0.8432	0.6450 - 0.8950	passed	100.00	0 - 0	passed
48	Single PeCDD	37.01	1.6175	1.3150 - 1.7850	passed	100.00	0 - 0	passed
49	Single PeCDF	36.59	1.4974	1.3150 - 1.7850	passed	105.01	0 - 0	passed
50	Single PeCDF	35.31	1.6843	1.3150 - 1.7850	passed	94.99	0 - 0	passed
51	Single HpCDD	45.14	1.1241	0.8750 - 1.2050	passed	100.00	0 - 0	passed
52	Single HxCDF	41.17	1.1951	1.0450 - 1.4350	passed	102.91	0 - 0	passed
53	Single HxCDF	40.33	1.2551	1.0450 - 1.4350	passed	100.88	0 - 0	passed
54	Single HxCDF	40.47	1.2970	1.0450 - 1.4350	passed	106.30	0 - 0	passed
55	Single HxCDF	42.18	1.2458	1.0450 - 1.4350	passed	89.91	0 - 0	passed
56	Single HxCDD	41.50	1.1841	1.0450 - 1.4350	passed	102.83	0 - 0	passed
57	Single HxCDD	41.38	1.3299	1.0450 - 1.4350	passed	98.39	0 - 0	passed
58	Single HxCDD	41.82	1.2925	1.0450 - 1.4350	passed	98.79	0 - 0	passed
59	Single HpCDF	43.94	0.9860	0.8750 - 1.2050	passed	100.00	0 - 0	passed
60	Single HpCDF	45.71	1.0204	0.8750 - 1.2050	passed	84.18	0 - 0	passed

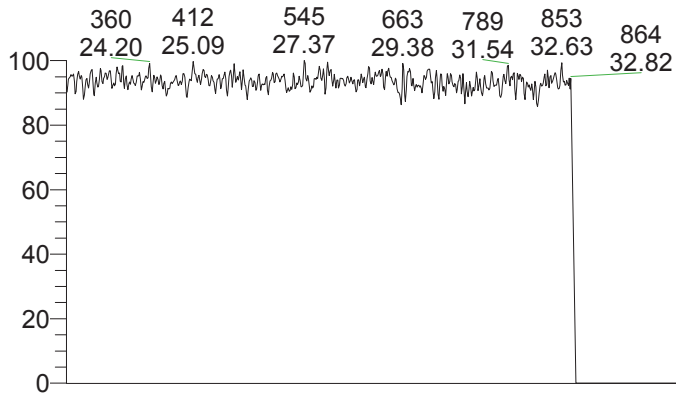


Entry Parameters

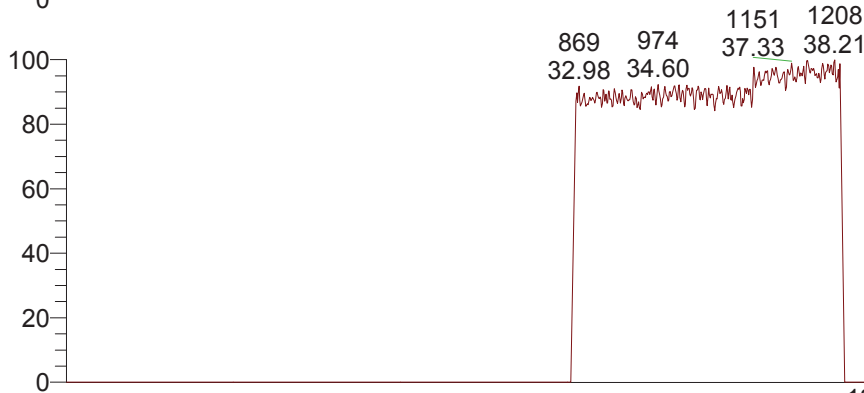
No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.23	11663	A	9567	A	0.0045	0.500000	0.5000	0.500000	283	
2	2378-TCDD	passed	30.41	6593	A	5559	A	0.0061	0.500000	0.5000	0.500000	228	
3	12378-PeCDF	passed	35.31	33768	A	56873	A	0.0051	2.500000	2.5000	2.500000	1199	
4	23478-PeCDF	passed	36.59	40124	A	60081	A	0.0042	2.500000	2.5000	2.500000	1427	
5	12378-PeCDD	passed	37.01	19955	A	32276	A	0.0108	2.500000	2.5000	2.500000	546	
6	123478-HxCDF	passed	40.33	42954	A	53913	A	0.0061	2.500000	2.5000	2.500000	989	
7	123678-HxCDF	passed	40.47	44435	A	57631	A	0.0062	2.500000	2.5000	2.500000	1002	
8	234678-HxCDF	passed	41.17	45013	A	53797	A	0.0060	2.500000	2.5000	2.500000	1034	
9	123478-HxCDD	passed	41.38	26285	A	34957	A	0.0061	2.500000	2.5000	2.500000	998	
10	123678-HxCDD	passed	41.50	29304	A	34700	A	0.0063	2.500000	2.5000	2.500000	1002	
11	123789-HxCDD	passed	41.82	26822	A	34668	A	0.0066	2.500000	2.5000	2.500000	945	
12	123789-HxCDF	passed	42.18	38440	A	47888	A	0.0076	2.500000	2.5000	2.500000	825	
13	1234678-HpCDF	passed	43.94	49385	A	48693	A	0.0047	2.500000	2.5000	2.500000	1303	
14	1234678-HpCDD	passed	45.14	28158	A	31652	A	0.0066	2.500000	2.5000	2.500000	971	
15	1234789-HpCDF	passed	45.71	40863	A	41697	A	0.0061	2.500000	2.5000	2.500000	1006	
16	OCDD	passed	48.18	60621	A	53443	A	0.0095	5.000000	5.0000	5.000000	1333	
17	OCDF	passed	48.36	78746	A	69126	A	0.0073	5.000000	5.0000	5.000000	1705	
18	13C12-1278-TCDD (CRS)	passed	30.82	1234918	A	976256	A	0.0277	100.000000	100.0000	100.000000	8898	
19	13C12-1234-TCDD	passed	29.54	1185463	A	950228	A	0.0287	100.000000	100.0000	100.000000	8706	
20	13C12-123468-HxCDD	passed	40.23	1147238	A	1454078	A	0.0265	100.000000	100.0000	100.000000	9442	
21	13C12-2378-TCDF	passed	29.21	2446074	A	1914835	A	0.0141	100.000000	100.0000	100.000000	17890	
22	13C12-2378-TCDD	passed	30.37	1201439	A	952259	A	0.0285	100.000000	100.0000	100.000000	9053	
23	13C12-12378-PeCDF	passed	35.30	1538587	A	2489800	A	0.0459	100.000000	100.0000	100.000000	7121	
24	13C12-23478-PeCDF	passed	36.57	1522763	A	2421585	A	0.0469	100.000000	100.0000	100.000000	7589	
25	13C12-12378-PeCDD	passed	36.99	811737	A	1287749	A	0.0255	100.000000	100.0000	100.000000	13585	
26	13C12-123478-HxCDF	passed	40.31	2360604	A	1267320	A	0.0308	100.000000	100.0000	100.000000	8185	
27	13C12-123678-HxCDF	passed	40.46	2538617	A	1346840	A	0.0288	100.000000	100.0000	100.000000	8212	
28	13C12-234678-HxCDF	passed	41.16	2333709	A	1242022	A	0.0313	100.000000	100.0000	100.000000	8030	
29	13C12-123478-HxCDD	passed	41.36	1074004	A	1360812	A	0.0283	100.000000	100.0000	100.000000	9691	
30	13C12-123678-HxCDD	passed	41.48	1129329	A	1433828	A	0.0269	100.000000	100.0000	100.000000	9524	
31	13C12-123789-HxCDD	passed	41.79	1084087	A	1366526	A	0.0281	100.000000	100.0000	100.000000	8916	
32	13C12-123789-HxCDF	passed	42.17	2169467	A	1144545	A	0.0338	100.000000	100.0000	100.000000	6760	
33	13C12-1234678-HpCDF	passed	43.93	2241008	A	1032427	A	0.0327	100.000000	100.0000	100.000000	8089	
34	13C12-1234678-HpCDD	passed	45.14	1177427	A	1230486	A	0.0290	100.000000	100.0000	100.000000	9266	
35	13C12-1234789-HpCDF	passed	45.69	1876109	A	870488	A	0.0390	100.000000	100.0000	100.000000	6213	
36	13C12-OCDD	passed	48.17	2523720	A	2273373	A	0.0151	200.000000	200.0000	200.000000	37743	
37	13C12-OCDF	passed	48.34	3768765	A	3409939	A	0.0163	200.000000	200.0000	200.000000	34366	
38	Total TCDF	passed (1)	28.23	11663	A	9567	A	0.0045	0.500000	0.5000	0.500000	---	
39	Total TCDD	passed (1)	28.96	6593	A	5559	A	0.0061	0.500000	0.5000	0.500000	228	
40	Total PeCDF	passed (2)	34.83	73892	A	116954	A	0.0046	2.500000	5.0000	2.500000	---	
41	Total PeCDD	passed (1)	35.77	19955	A	32276	A	0.0108	2.500000	2.5000	2.500000	---	
42	Total HxCDF	passed (4)	40.50	170843	A	213228	A	0.0064	2.500000	10.0000	2.500000	---	
43	Total HxCDD	passed (3)	40.73	82411	A	104325	A	0.0063	2.500000	7.5000	2.500000	---	
44	Total HpCDD	passed (1)	44.73	28158	A	31652	A	0.0066	2.500000	2.5000	2.500000	---	
45	Total HpCDF	passed (2)	44.83	90248	A	90390	A	0.0049	2.302235	4.6045	2.500000	---	
46	Single TCDF	passed	29.23	11663	A	9567	A	0.0045	0.500000	0.5000	0.500000	283	
47	Single TCDD	passed	30.41	6593	A	5559	A	0.0061	0.500000	0.5000	0.500000	228	
48	Single PeCDD	passed	37.01	19955	A	32276	A	0.0108	2.500000	2.5000	2.500000	546	
49	Single PeCDF	passed	36.59	40124	A	60081	A	0.0046	2.625283	2.6253	2.500000	1427	
50	Single PeCDF	passed	35.31	33768	A	56873	A	0.0046	2.374717	2.3747	2.500000	1199	
51	Single HpCDD	passed	45.14	28158	A	31652	A	0.0066	2.500000	2.5000	2.500000	971	
52	Single HxCDF	passed	41.17	45013	A	53797	A	0.0064	2.572714	2.5727	2.500000	1034	
53	Single HxCDF	passed	40.33	42954	A	53913	A	0.0064	2.522117	2.5221	2.500000	989	
54	Single HxCDF	passed	40.47	44435	A	57631	A	0.0064	2.657466	2.6575	2.500000	1002	
55	Single HxCDF	passed	42.18	38440	A	47888	A	0.0064	2.247703	2.2477	2.500000	825	
56	Single HxCDD	passed	41.50	29304	A	34700	A	0.0063	2.570647	2.5706	2.500000	1002	
57	Single HxCDD	passed	41.38	26285	A	34957	A	0.0063	2.459713	2.4597	2.500000	998	
58	Single HxCDD	passed	41.82	26822	A	34668	A	0.0063	2.469640	2.4696	2.500000	945	
59	Single HpCDF	passed	43.94	49385	A	48693	A	0.0049	2.500000	2.5000	2.500000	1303	
60	Single HpCDF	passed	45.71	40863	A	41697	A	0.0049	2.104470	2.1045	2.500000	1006	



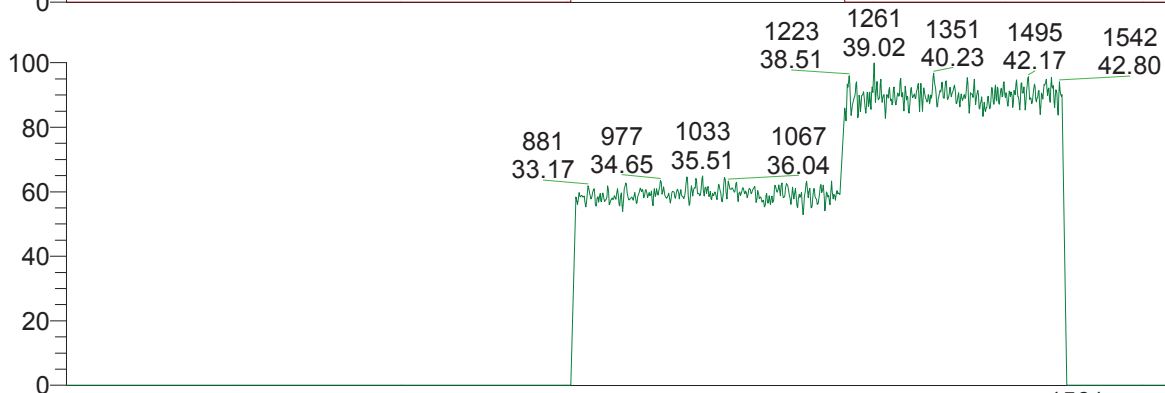
RT: 22.50 - 51.00



NL:
7.12E5
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291.9825-
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MS
18NOV02-
05



NL:
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m/[]
330.4792-
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MS
18NOV02-
05



NL:
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m/[]
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MS
18NOV02-
05



NL:
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m/[]
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MS
18NOV02-
05



NL:
1.45E5
m/[]
442.4728-
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MS
18NOV02-
05

APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 18:33:18 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 18:33:18

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 7349737c-0d23-45de-89a6-193501cb8be3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
Window # 1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
Window # 2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



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MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	97.5000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0381	FVSR	0.0366
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	97.5000	LKM	442.9723	MASS	97.5000
MDAC	1423147.7521	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9851	RELEN	0.0000
RES	12522.1302	RPUSHER	-6.0733	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	97.5000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.1e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11519.
MID Time window 2: Resolution is 11784.
MID Time window 3: Resolution is 11623.
MID Time window 4: Resolution is 12654.



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MID Time Window 5: Resolution is 13320.
MID Time Window 6: Resolution is 12522.

Amplifier Offset: 81.

*** File closed Fri Nov 02 19:24:20 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 19:24
Number of Entries 64
Comment
Vial 5
Sample Name CALDF31837B
Sample ID CS201
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

Quan x:\18nov02\18nov02-06.quan
Data x:\18nov02\18nov02-06.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT Status	Status Info
1	2378-TCDF	29.25	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.41	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.31	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.61	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.03	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.34	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.49	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.19	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.39	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.51	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.82	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.20	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.95	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.15	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.70	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.19	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.36	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.81	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.54	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.24	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.22	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.38	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.30	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.58	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	36.99	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.32	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.47	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.17	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.38	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.50	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.81	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.18	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.93	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.14	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.69	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.18	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.35	passed	passed	passed	passed	passed	passed	passed
38	Total TCDF	28.23	passed (1)	---	---	---	---	---	---
39	Total TCDD	28.96	passed (1)	---	---	---	---	---	---
40	Total PeCDF	34.83	passed (2)	---	---	---	---	---	---
41	Total PeCDD	35.77	passed (1)	---	---	---	---	---	---
42	Total HxCDF	40.50	passed (4)	---	---	---	---	---	---
43	Total HxCDD	40.73	passed (3)	---	---	---	---	---	---
44	Total HpCDD	44.73	passed (1)	---	---	---	---	---	---
45	Total HpCDF	44.83	passed (2)	---	---	---	---	---	---
46	Single TCDF	29.25	passed	passed	passed	passed	passed	passed	passed
47	Single TCDD	30.41	passed	passed	passed	passed	passed	passed	passed
48	Single PeCDD	37.03	passed	passed	passed	passed	passed	passed	passed
49	Single PeCDF	36.61	passed	passed	passed	passed	passed	passed	passed
50	Single PeCDD	35.31	passed	passed	passed	passed	passed	passed	passed
51	Single HpCDD	45.15	passed	passed	passed	passed	passed	passed	passed
52	Single HxCDF	40.34	passed	passed	passed	passed	passed	passed	passed
53	Single HxCDF	40.49	passed	passed	passed	passed	passed	passed	passed
54	Single HxCDF	41.19	passed	passed	passed	passed	passed	passed	passed
55	Single HxCDF	42.20	passed	passed	passed	passed	passed	passed	passed
56	Single HxCDD	41.39	passed	passed	passed	passed	passed	passed	passed
57	Single HxCDD	41.51	passed	passed	passed	passed	passed	passed	passed
58	Single HxCDD	41.82	passed	passed	passed	passed	passed	passed	passed
59	Single HpCDF	43.95	passed	passed	passed	passed	passed	passed	passed
60	Single HpCDD	45.70	passed	passed	passed	passed	passed	passed	passed



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 19:24
Number of Entries	64
Comment	
Vial	5
Sample Name	CALDF31837B
Sample ID	CS201
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

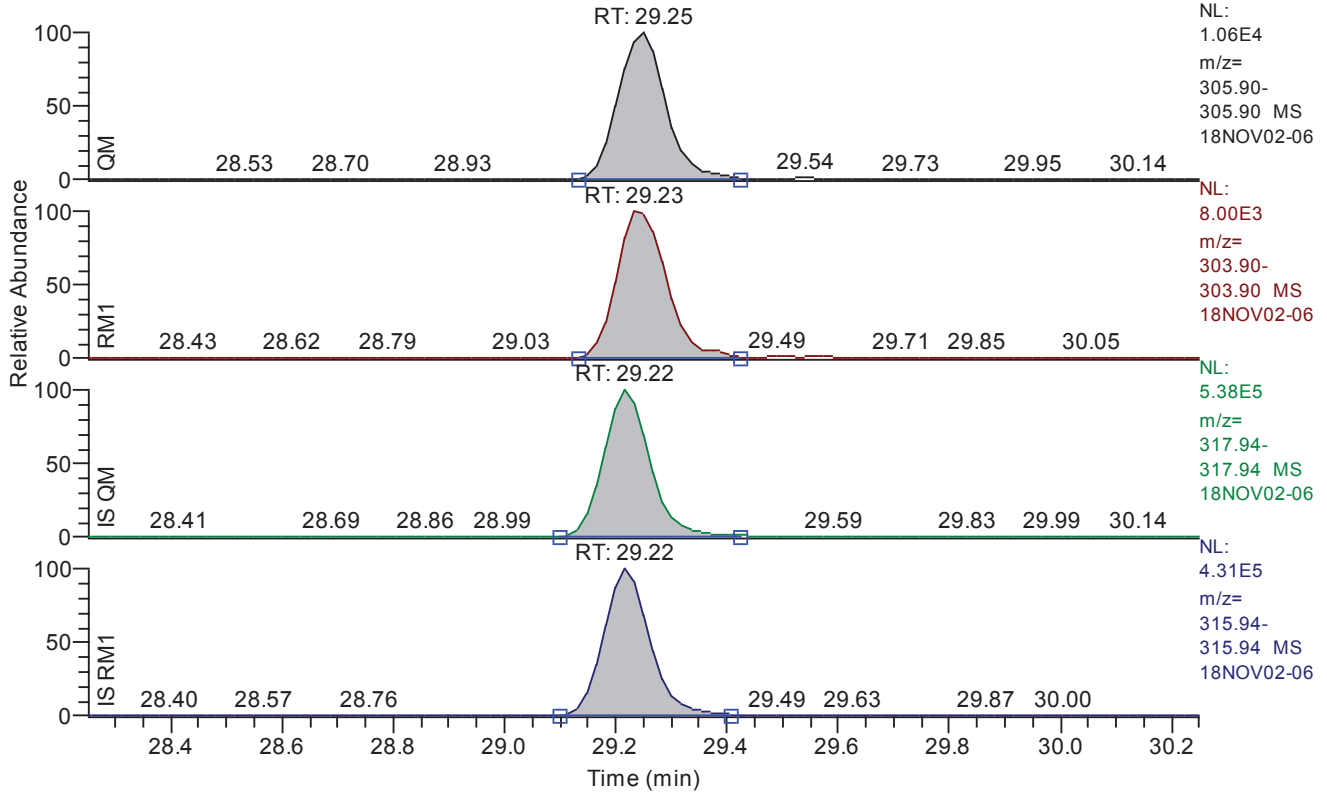
Quan	x:\18nov02\18nov02-06.quan
Data	x:\18nov02\18nov02-06.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 28.25 - 30.25 SM: 3G



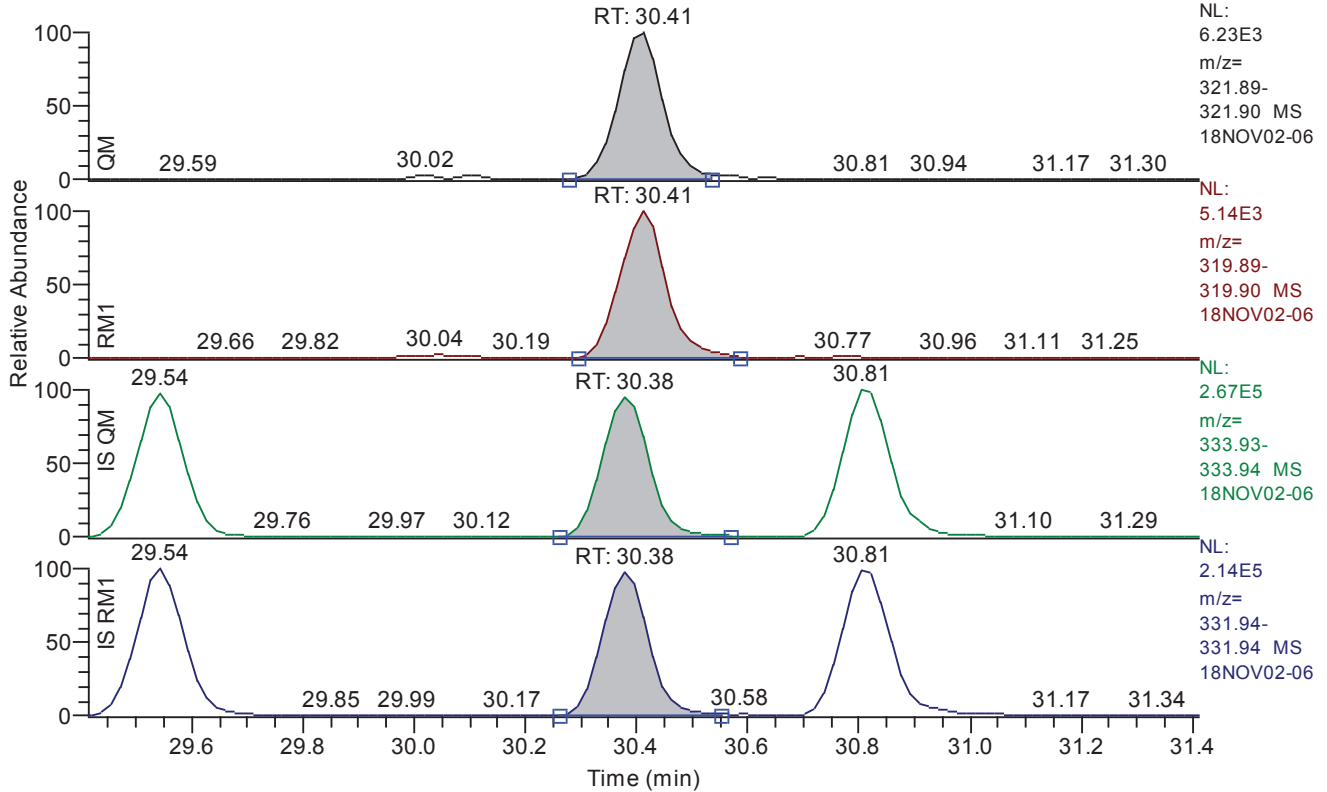
Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.25
QM Area	63319
QM Integration Mode	A
RM1 Area	50139
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0043
Unqualified Amount (A)	2.000000
Adjusted Amount (A)	2.0000
Signal-to-Noise	1117
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.41 - 31.41 SM: 3G

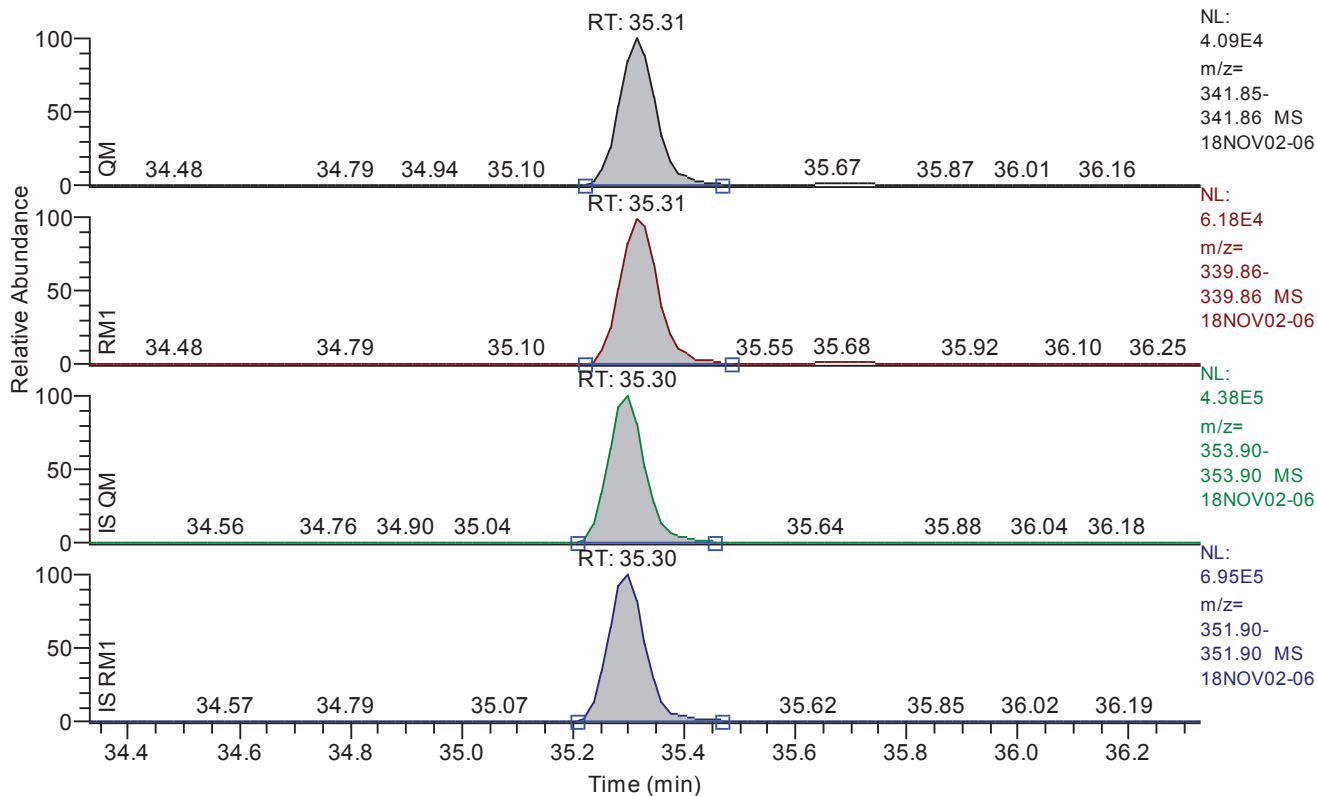


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.41
QM Area	35633
QM Integration Mode	A
RM1 Area	29959
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0049
Unqualified Amount (A)	2.000000
Adjusted Amount (A)	2.0000
Signal-to-Noise	1036
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.33 - 36.33 SM: 3G

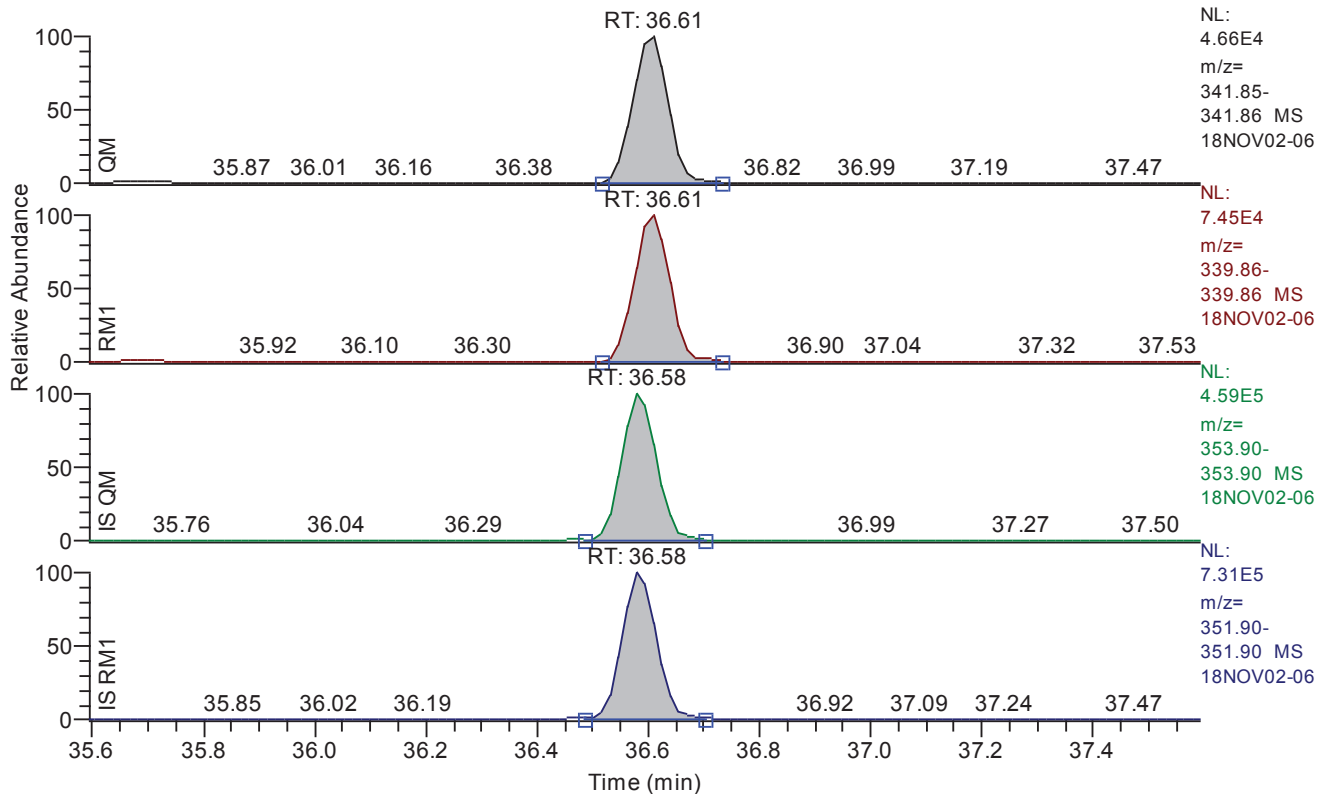


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.31
QM Area	188739
QM Integration Mode	A
RM1 Area	297406
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0054
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	4501
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.59 - 37.59 SM: 3G



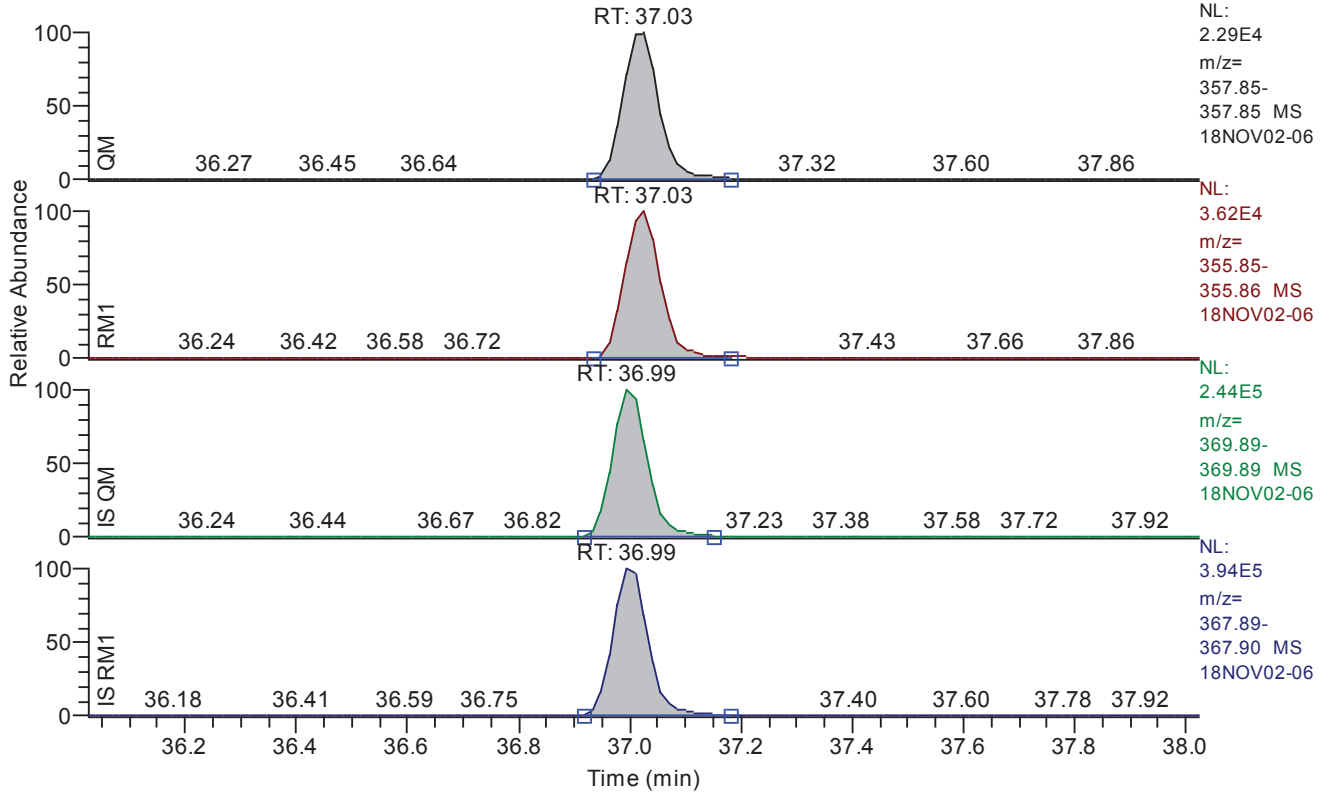
Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.61
QM Area	209394
QM Integration Mode	A
RM1 Area	332257
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0046
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	5307
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 36.02 - 38.02 SM: 3G

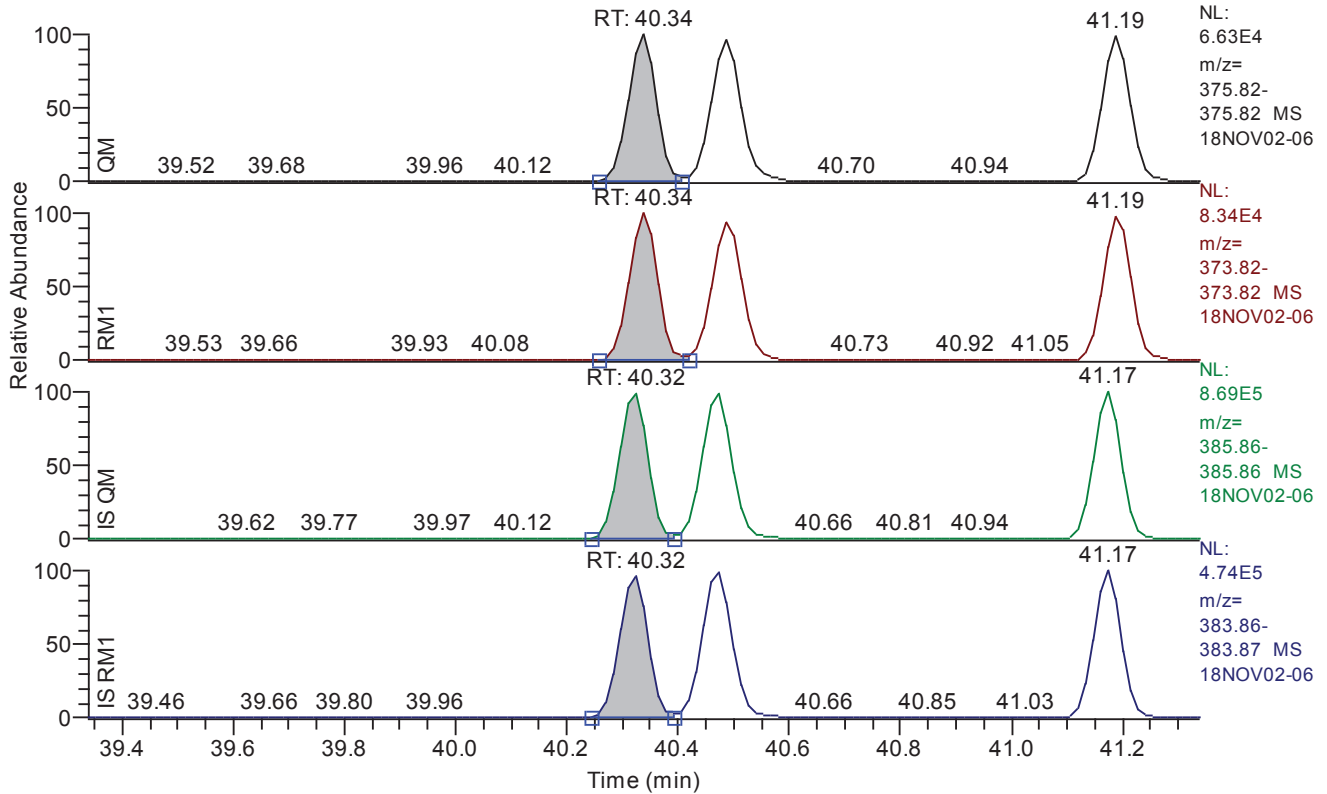


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.03
QM Area	103978
QM Integration Mode	A
RM1 Area	164810
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0100
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2419
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.34 - 41.34 SM: 3G

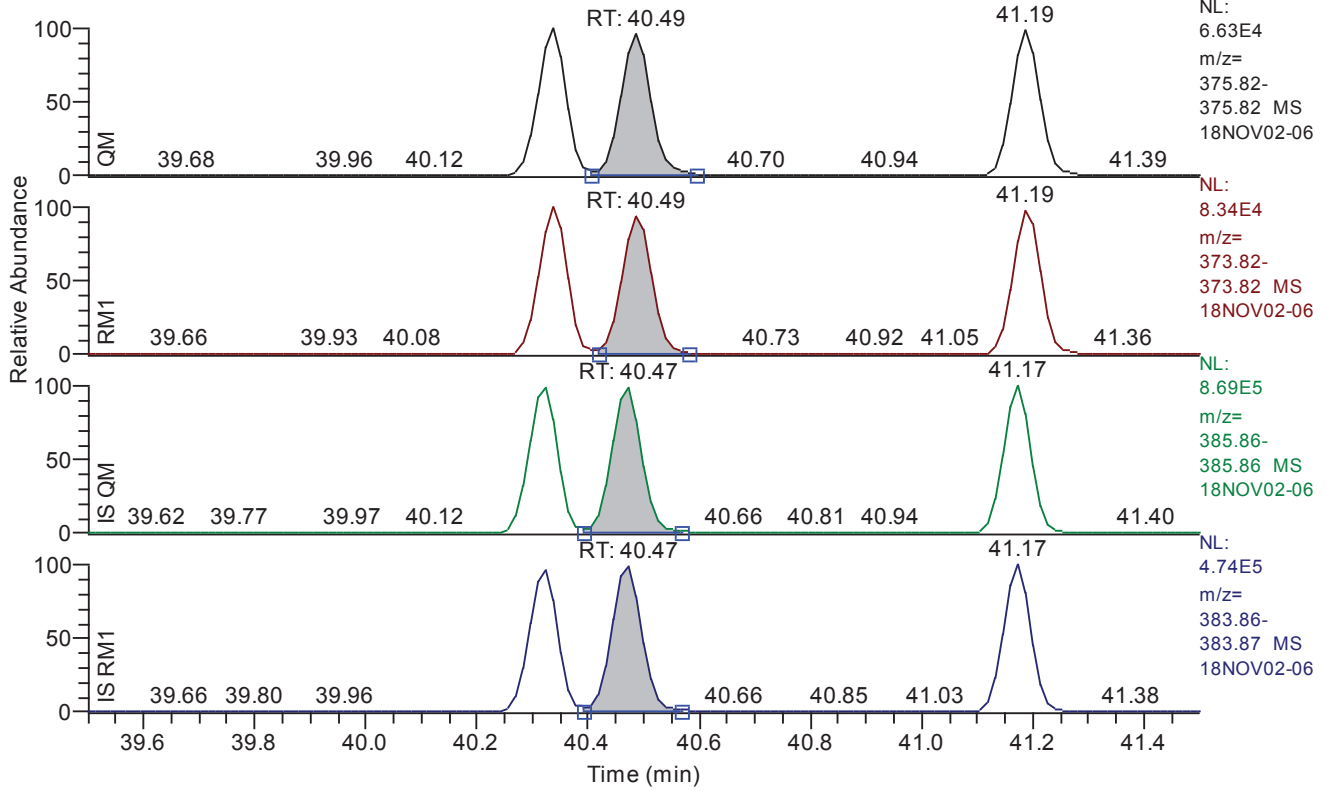


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.34
QM Area	231830
QM Integration Mode	A
RM1 Area	293579
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0076
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3348
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.50 - 41.50 SM: 3G



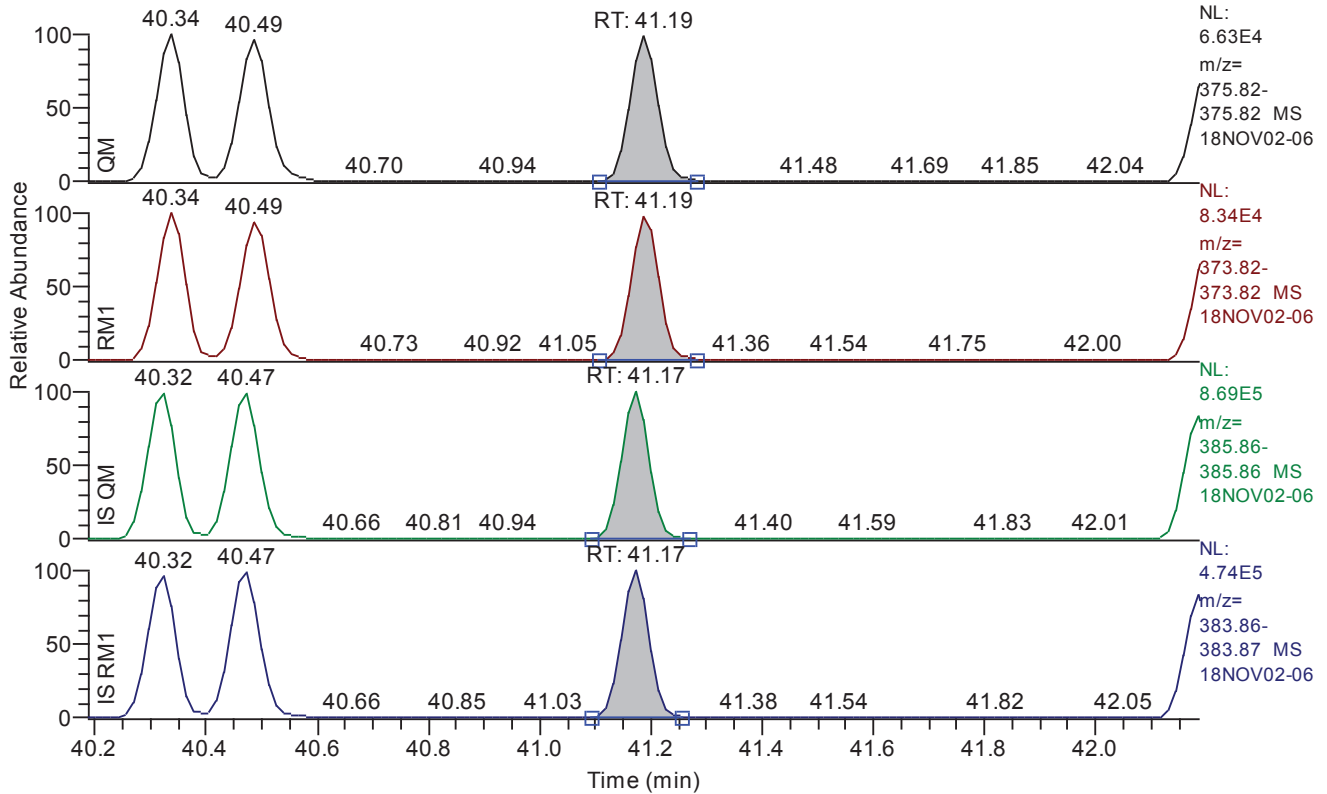
Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.49
QM Area	240410
QM Integration Mode	A
RM1 Area	291928
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0079
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3194
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.19 - 42.19 SM: 3G

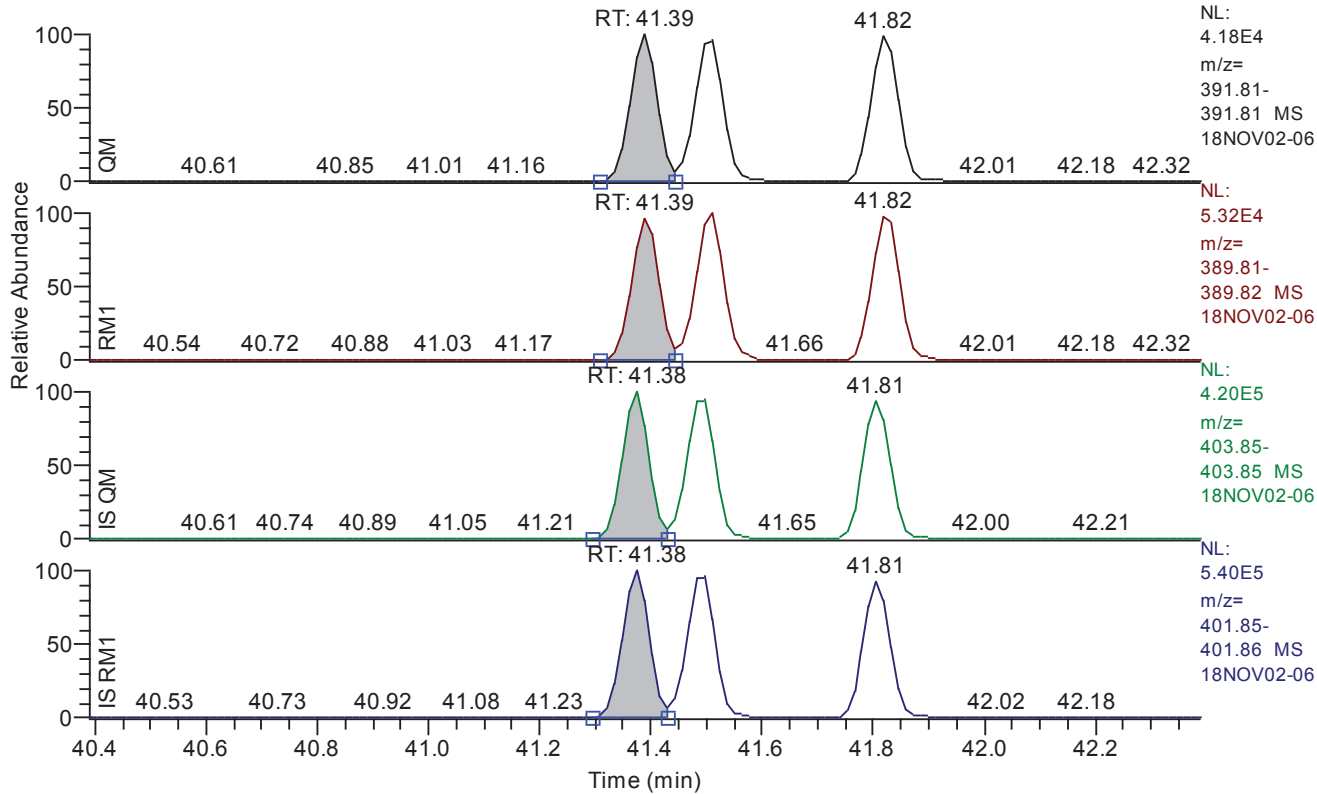


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.19
QM Area	230773
QM Integration Mode	A
RM1 Area	287693
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0074
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3308
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.39 - 42.39 SM: 3G



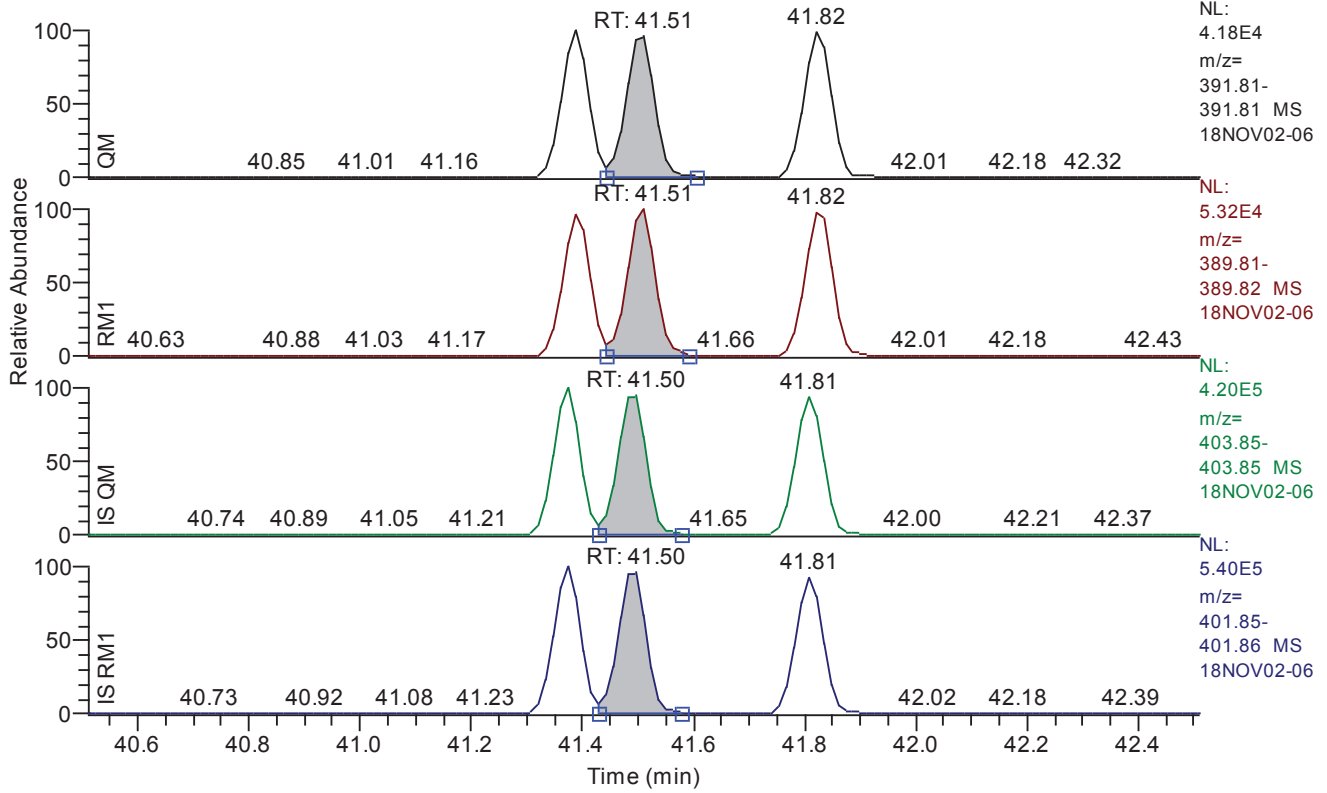
Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.39
QM Area	139421
QM Integration Mode	A
RM1 Area	173700
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0070
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3514
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.51 - 42.51 SM: 3G



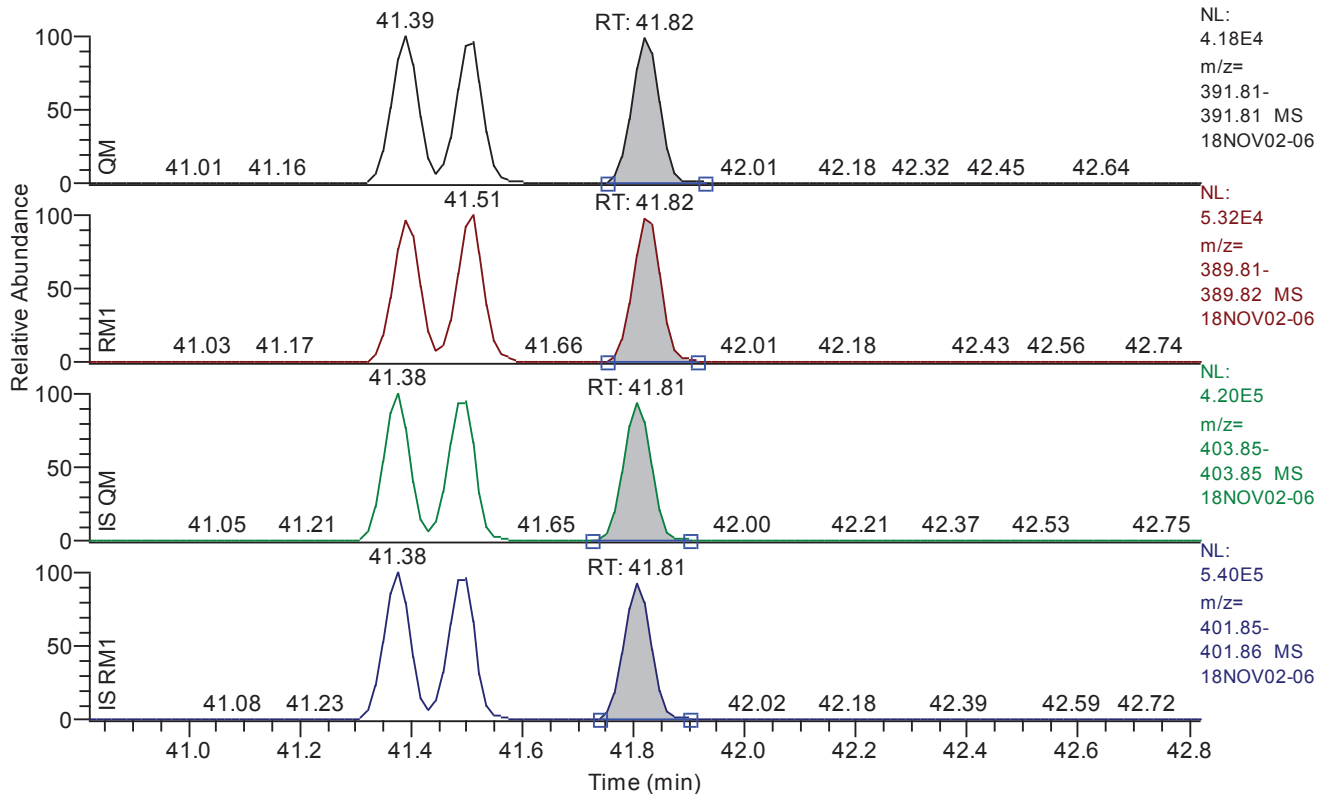
Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.51
QM Area	143306
QM Integration Mode	A
RM1 Area	185202
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0071
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3522
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.82 - 42.82 SM: 3G



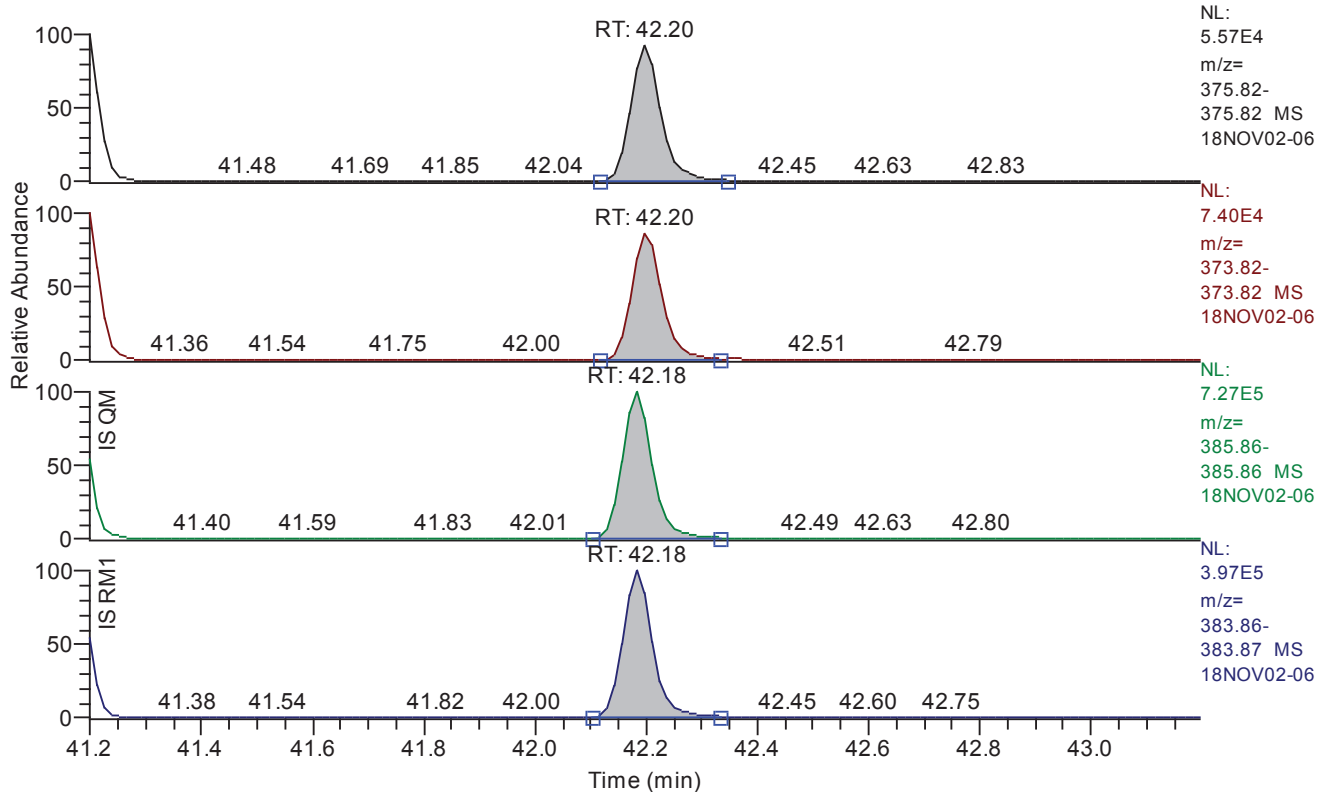
Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.82
QM Area	144257
QM Integration Mode	A
RM1 Area	182786
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0070
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3542
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 41.20 - 43.20 SM: 3G



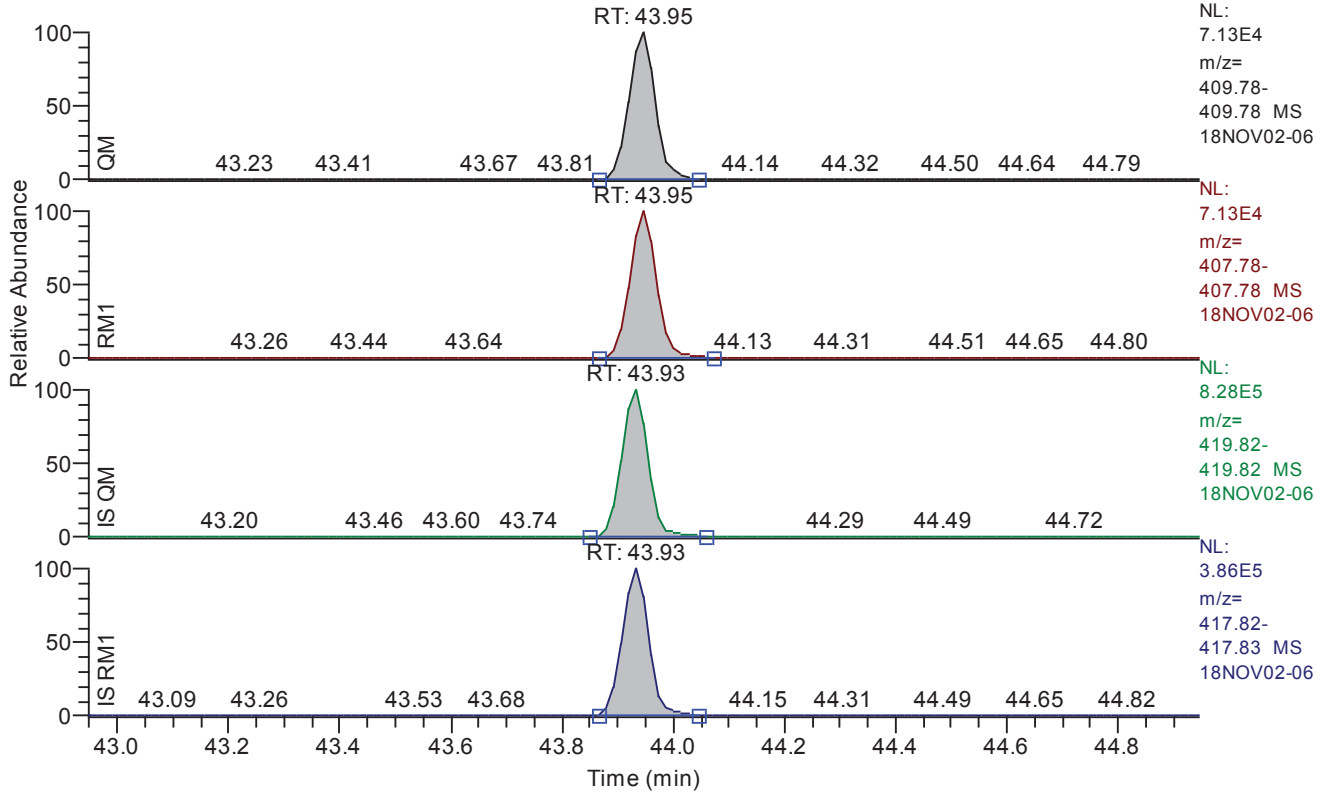
Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.20
QM Area	196273
QM Integration Mode	A
RM1 Area	245712
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0094
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2601
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 42.95 - 44.95 SM: 3G



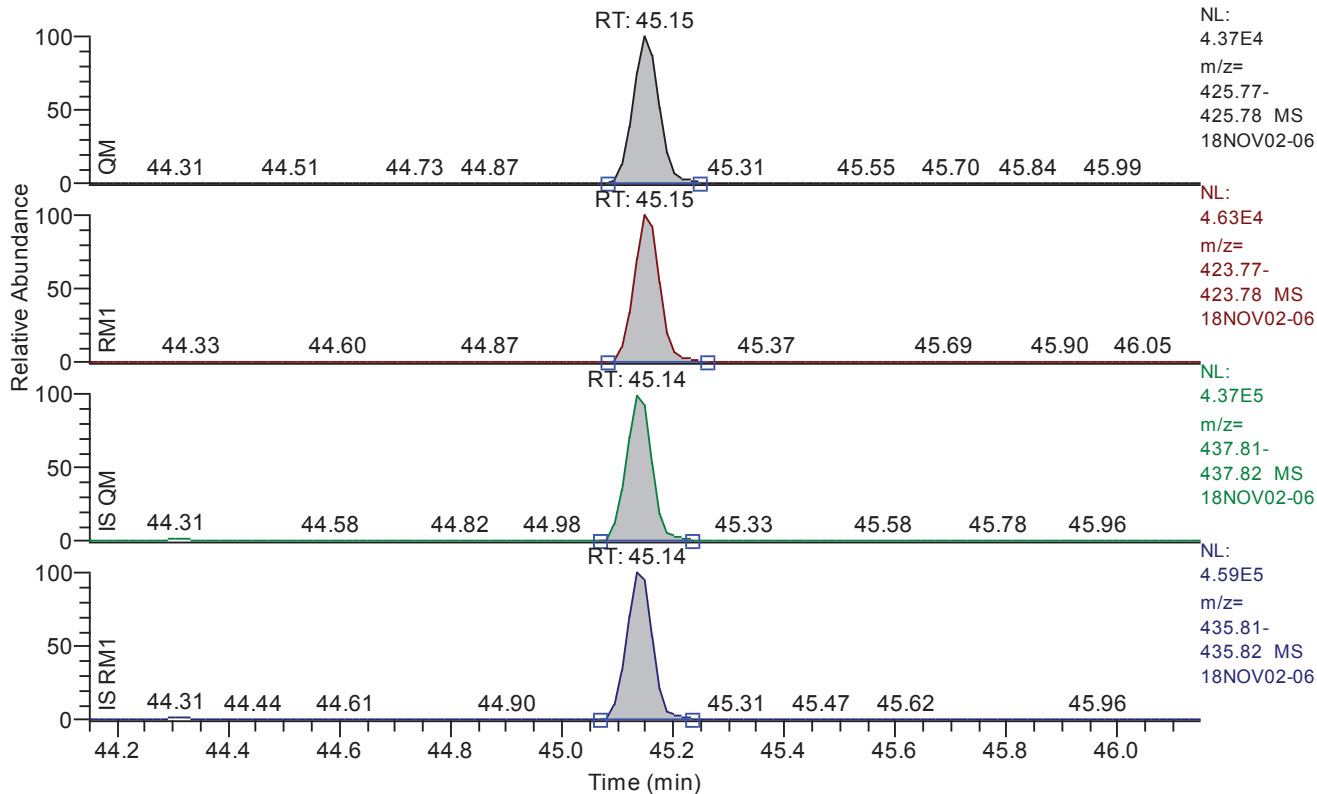
Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.95
QM Area	241263
QM Integration Mode	A
RM1 Area	243751
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0077
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	3214
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.15 - 46.15 SM: 3G



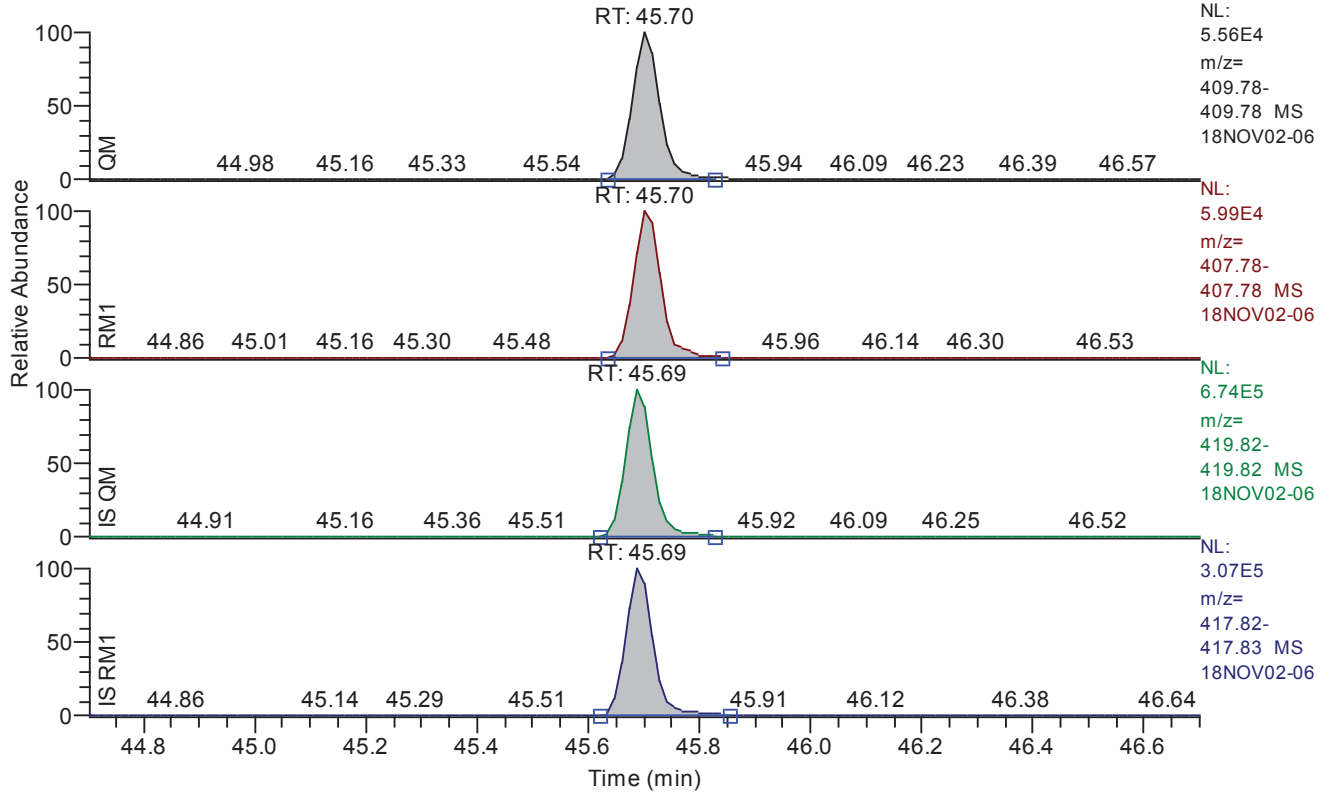
Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.15
QM Area	146591
QM Integration Mode	A
RM1 Area	154013
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0092
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2708
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.70 - 46.70 SM: 3G

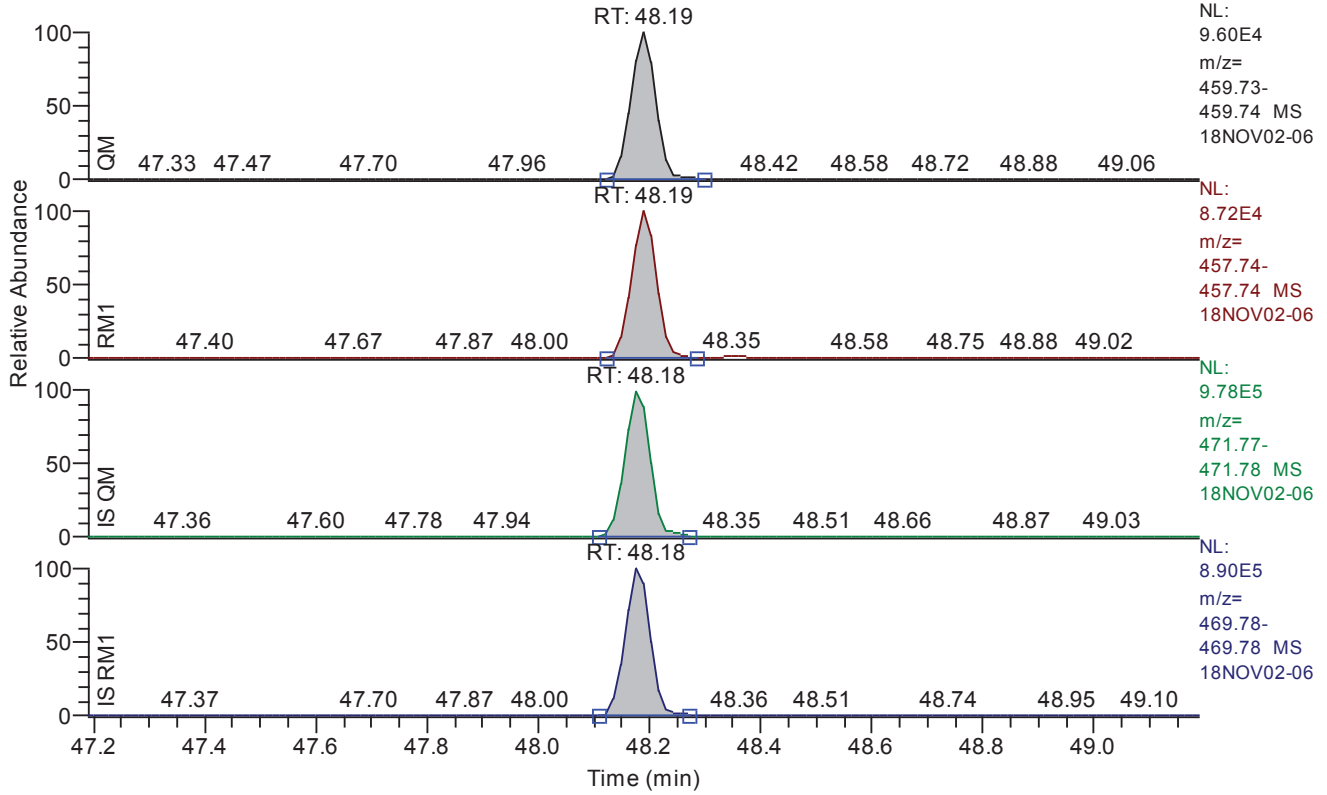


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.70
QM Area	195500
QM Integration Mode	A
RM1 Area	211710
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2603
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.19 - 49.19 SM: 3G

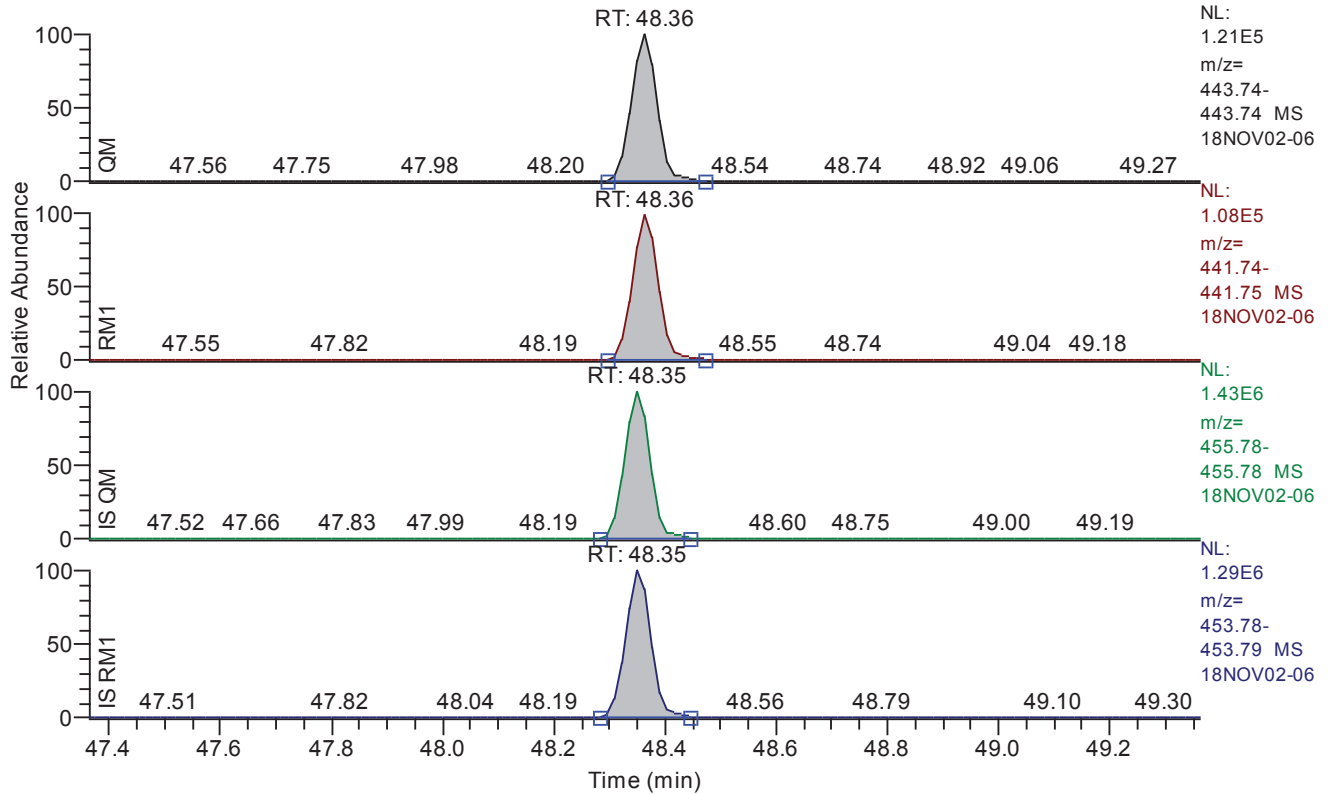


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.19
QM Area	298848
QM Integration Mode	A
RM1 Area	270778
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0091
Unqualified Amount (A)	20.000000
Adjusted Amount (A)	20.0000
Signal-to-Noise	5509
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.36 - 49.36 SM: 3G



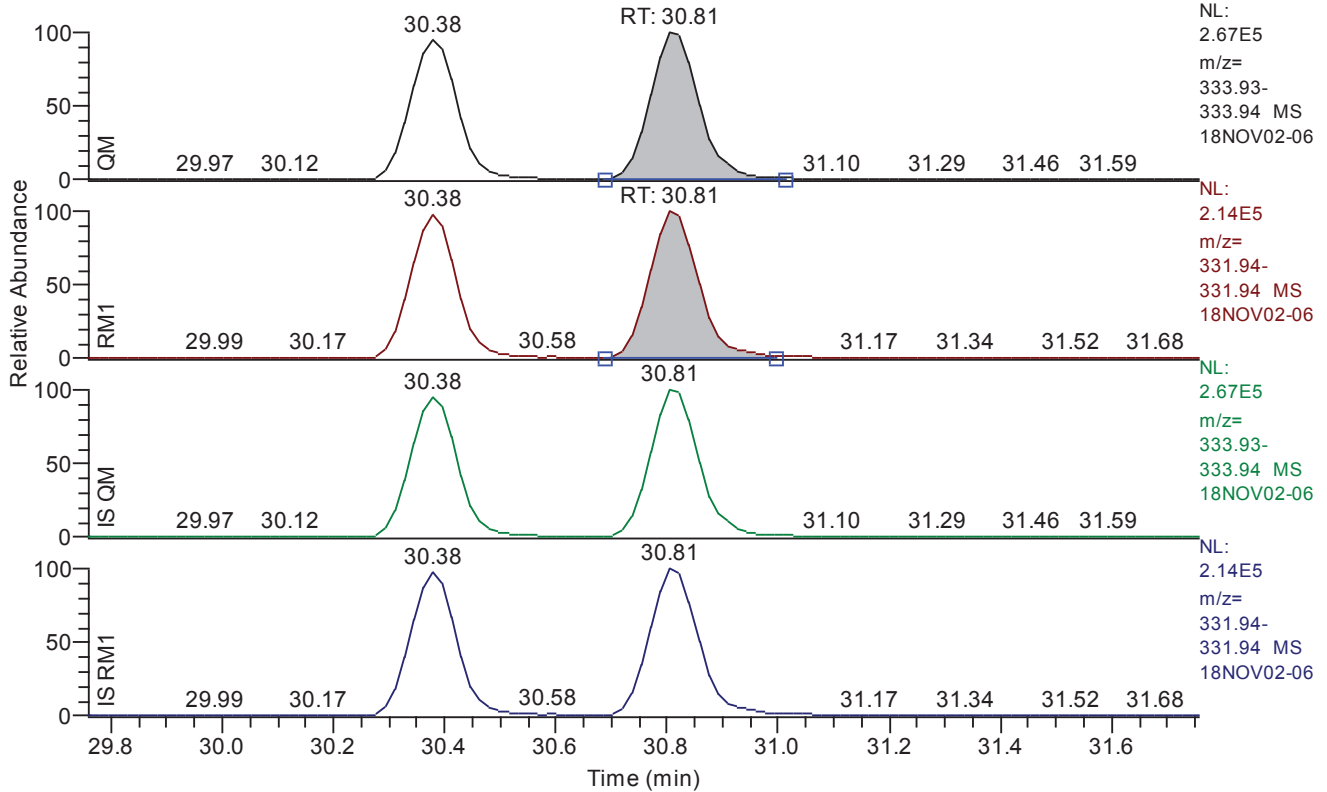
Entry Parameters

Compound Name	OCDF
QM Retention Time	48.36
QM Area	384546
QM Integration Mode	A
RM1 Area	341894
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0075
Unqualified Amount (A)	20.000000
Adjusted Amount (A)	20.0000
Signal-to-Noise	6592
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.76 - 31.76 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	30.81
QM Area	1600108
QM Integration Mode	A
RM1 Area	1284490
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0238
Unqualified Amount (A)	100.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	10313
Client Flags	
Status Overview	passed
Status Info	



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 19:24
Number of Entries 64
Comment
Vial 5
Sample Name CALDF31837B
Sample ID CS201
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

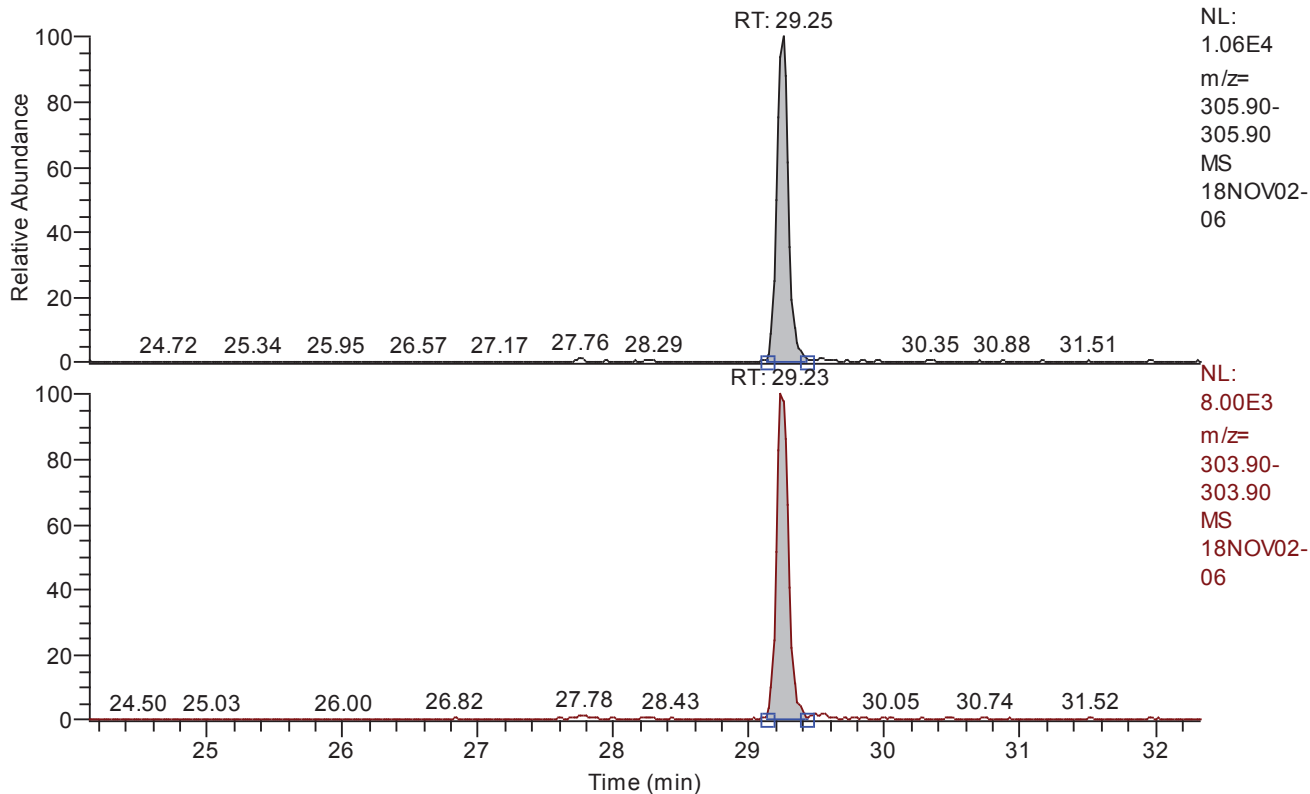
Quan x:\18nov02\18nov02-06.quan
Data x:\18nov02\18nov02-06.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 24.13 - 32.33 SM: 3G

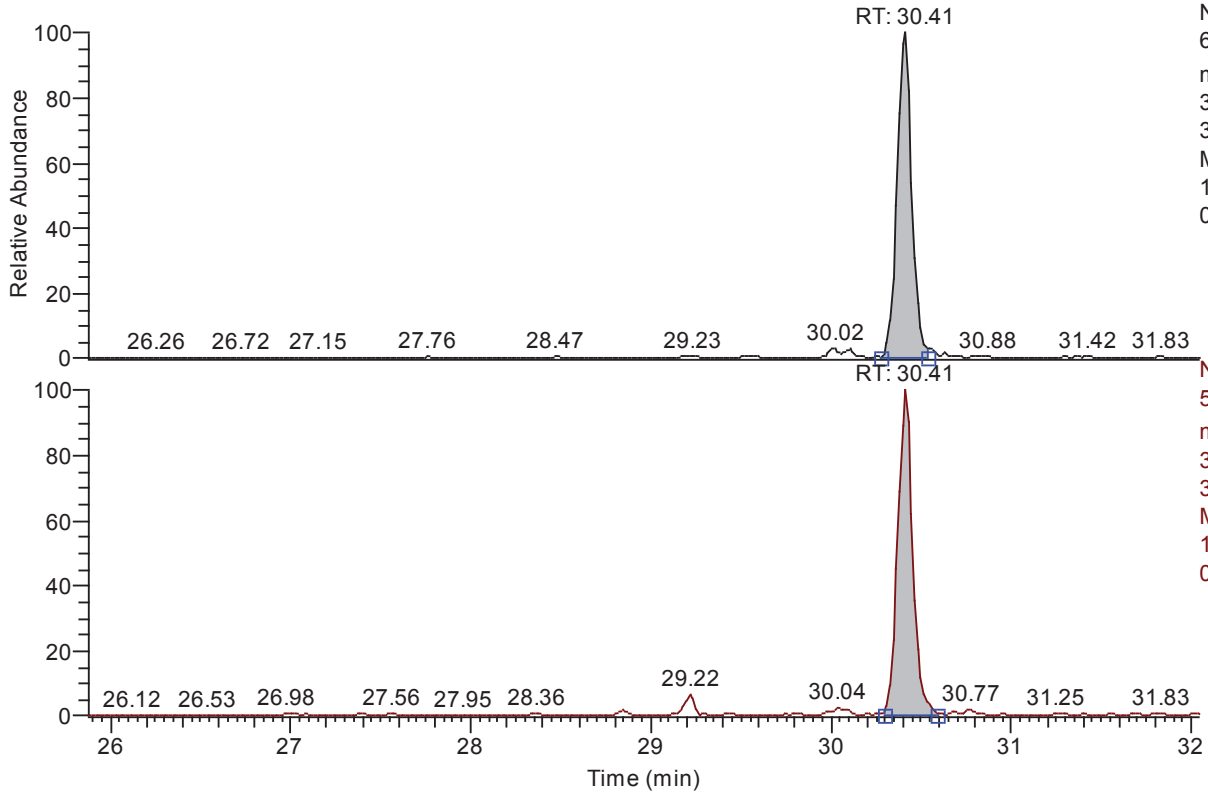


Entry Parameters

Compound Name	Total TCDF
QM Retention Time	28.23
QM Area	63319
QM Integration Mode	A
RM1 Area	50139
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0043
Unqualified Amount (A)	2.000000
Adjusted Amount (A)	2.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 25.87 - 32.05 SM: 3G



NL:
6.23E3
m/z=
321.89-
321.90
MS
18NOV02-
06

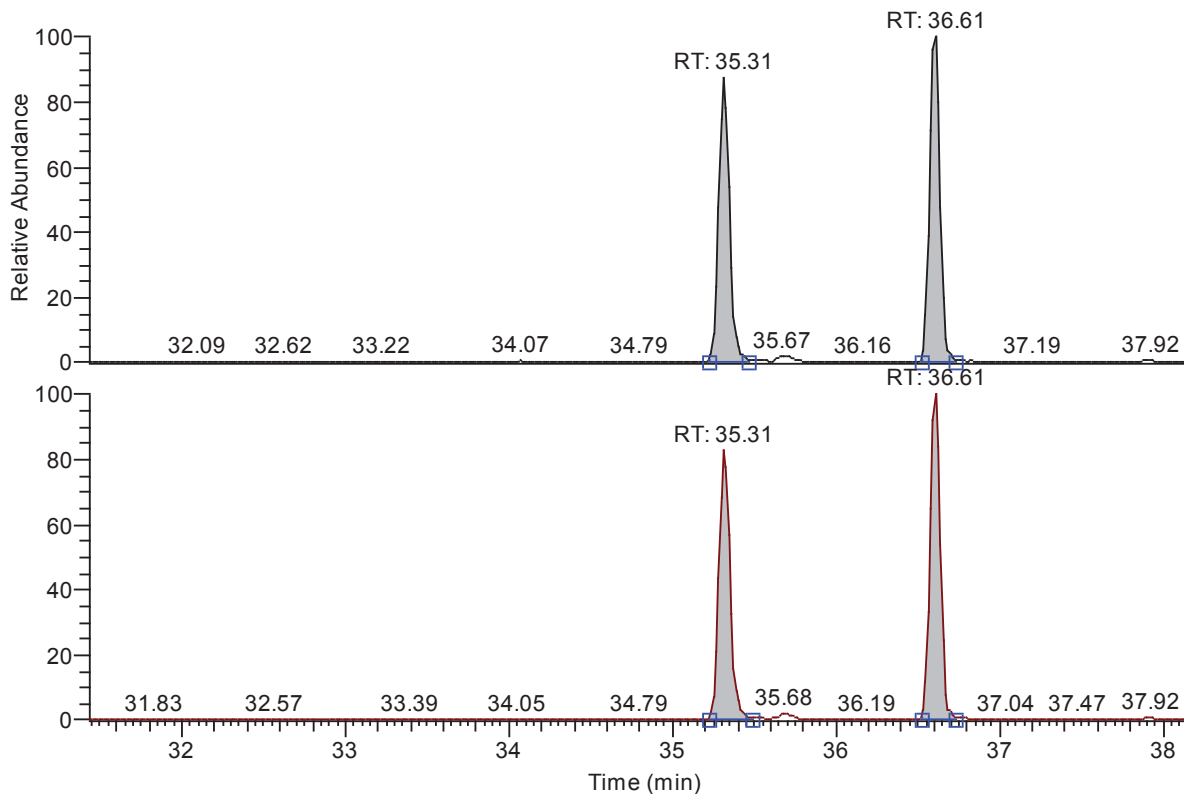
NL:
5.14E3
m/z=
319.89-
319.90
MS
18NOV02-
06

Entry Parameters

Compound Name	Total TCDD
QM Retention Time	28.96
QM Area	35633
QM Integration Mode	A
RM1 Area	29959
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0049
Unqualified Amount (A)	2.000000
Adjusted Amount (A)	2.0000
Signal-to-Noise	1036
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 31.43 - 38.23 SM: 3G



NL:
4.66E4
m/z=
341.85-
341.86
MS
18NOV02-
06

NL:
7.45E4
m/z=
339.86-
339.86
MS
18NOV02-
06

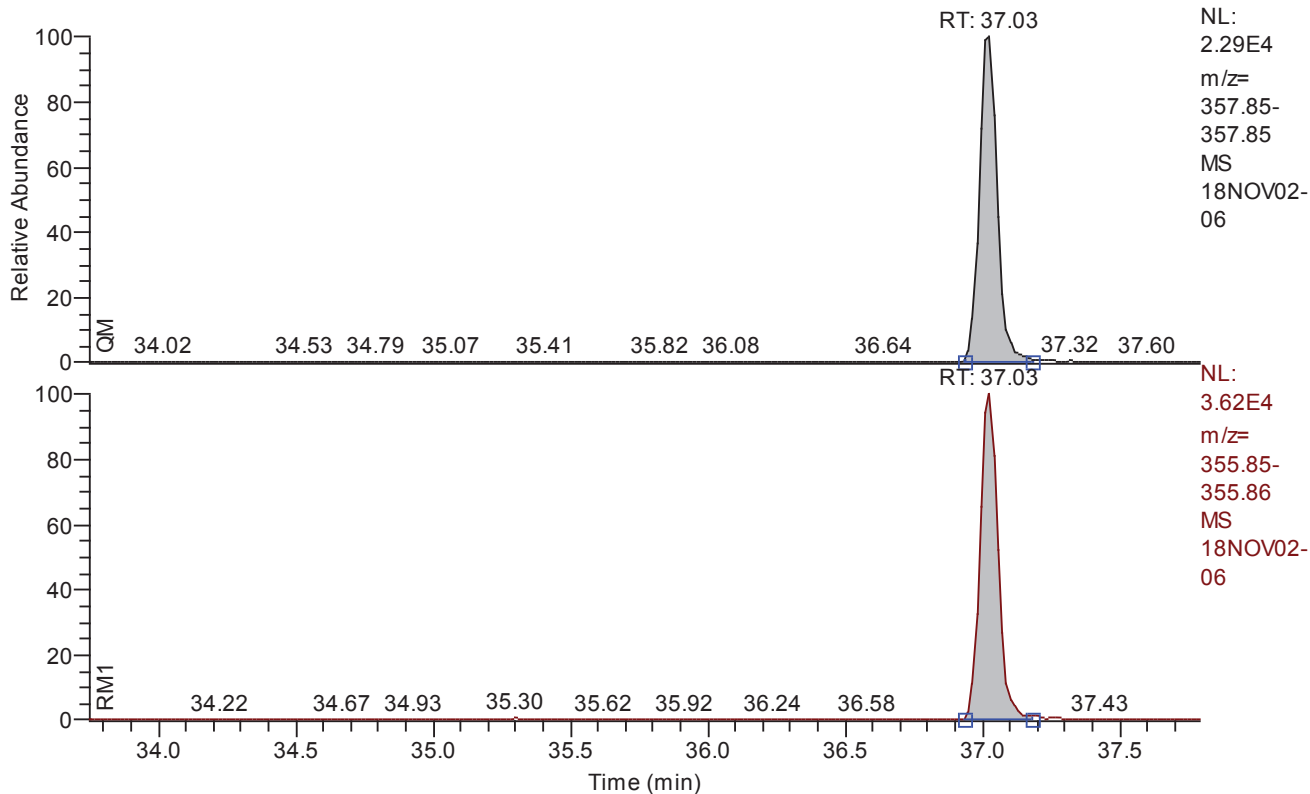
Entry Parameters

Compound Name	Total PeCDF
QM Retention Time	34.83
QM Area	398133
QM Integration Mode	A
RM1 Area	629663
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0050
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	20.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (2)
Status Info	



Chromatogram

RT: 33.75 - 37.79 SM: 3G

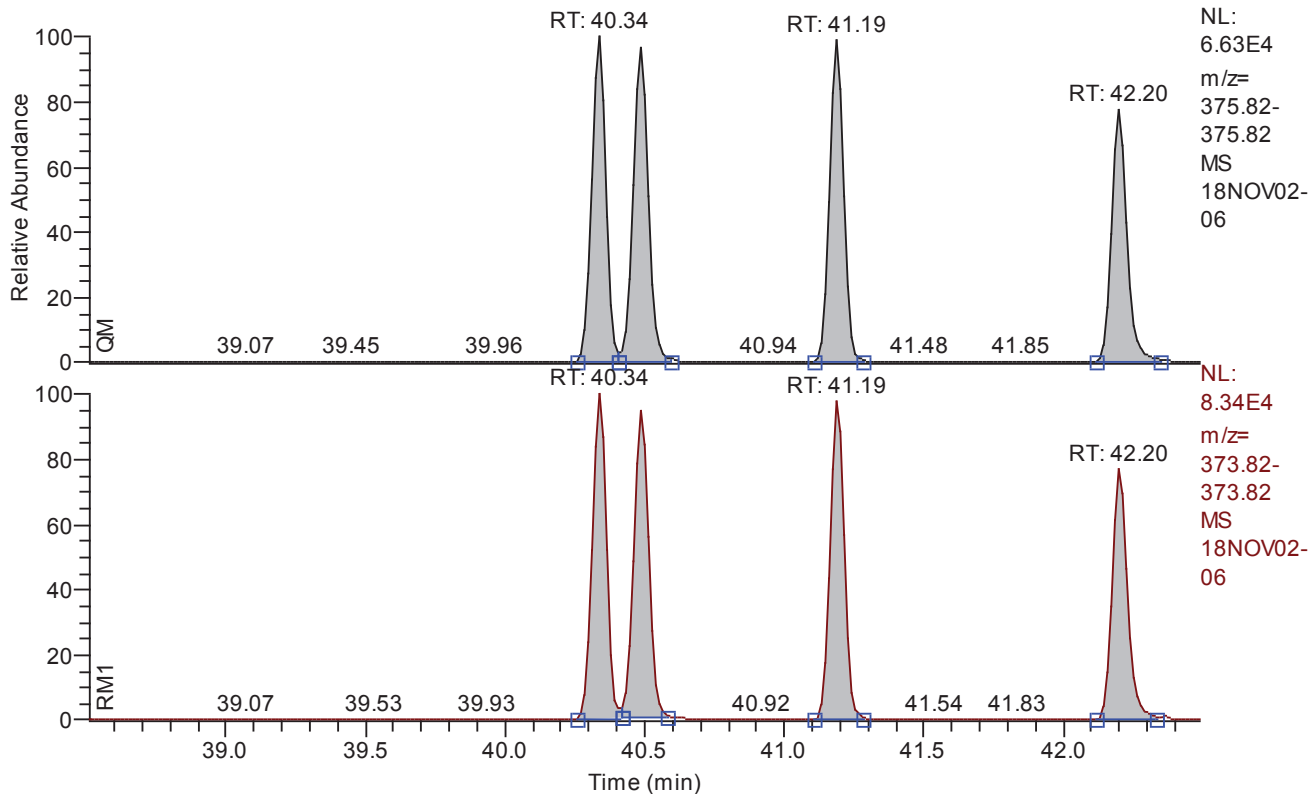


Entry Parameters

Compound Name	Total PeCDD
QM Retention Time	35.77
QM Area	103978
QM Integration Mode	A
RM1 Area	164810
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0100
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 38.51 - 42.49 SM: 3G

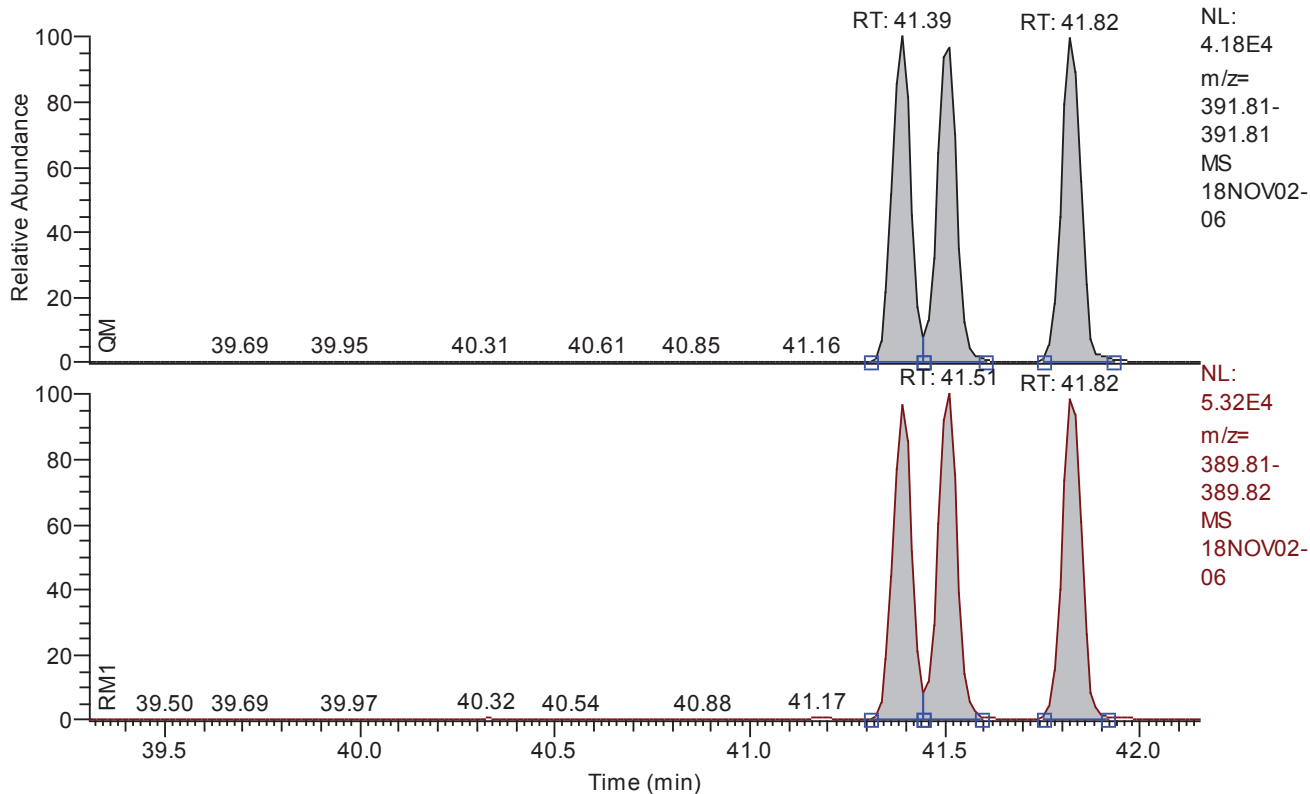


Entry Parameters

Compound Name	Total HxCDF
QM Retention Time	40.50
QM Area	899286
QM Integration Mode	A
RM1 Area	1118911
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0080
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	40.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (4)
Status Info	

Chromatogram

RT: 39.31 - 42.15 SM: 3G

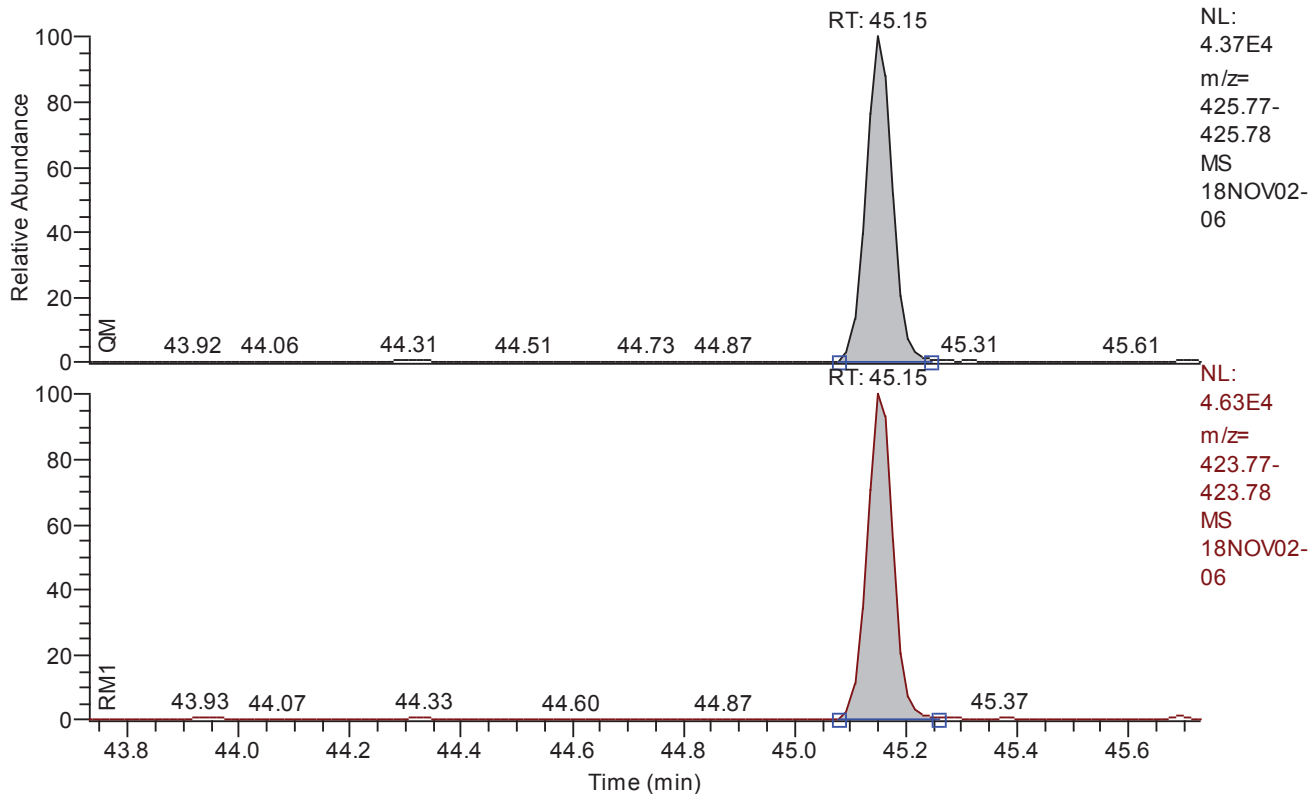


Entry Parameters

Compound Name	Total HxCDD
QM Retention Time	40.73
QM Area	426984
QM Integration Mode	A
RM1 Area	541688
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0071
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	30.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (3)
Status Info	

Chromatogram

RT: 43.73 - 45.73 SM: 3G



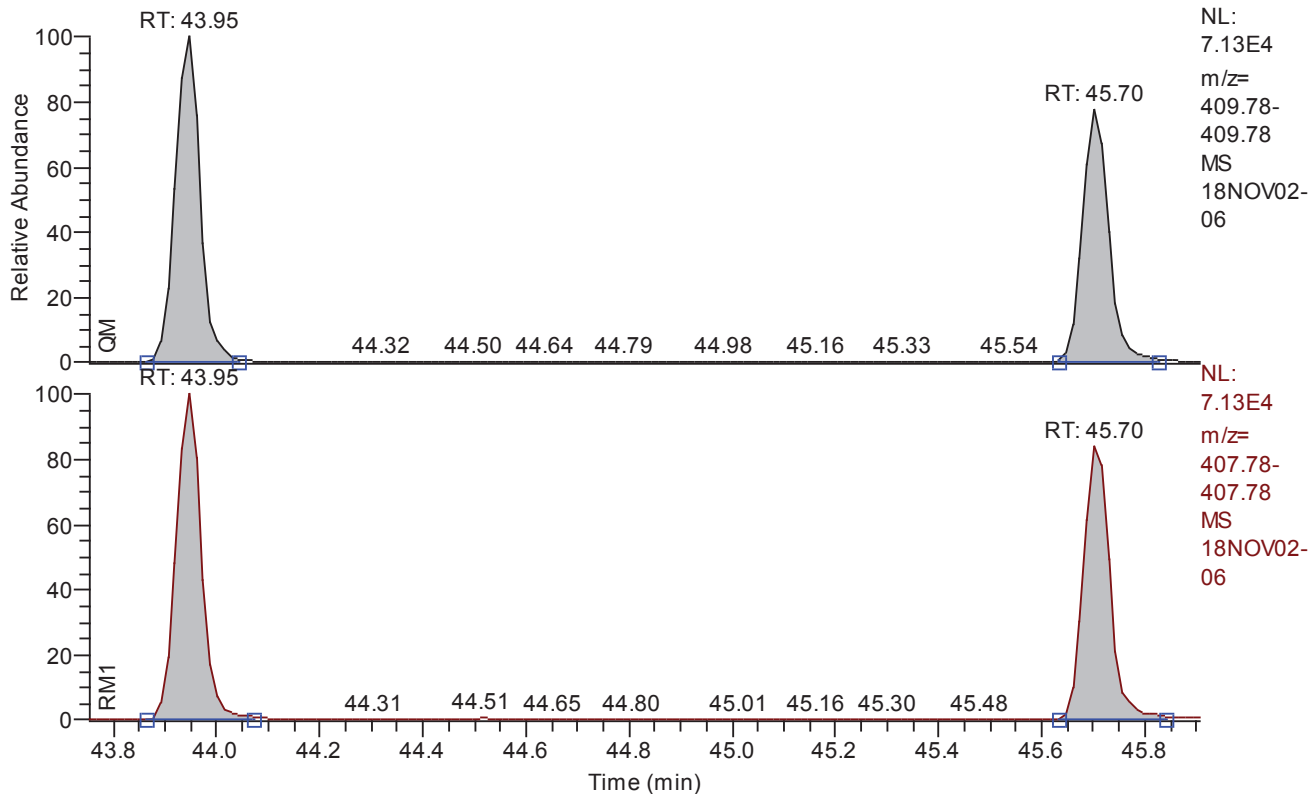
Entry Parameters

Compound Name	Total HpCDD
QM Retention Time	44.73
QM Area	146591
QM Integration Mode	A
RM1 Area	154013
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0092
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	---
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 43.75 - 45.91 SM: 3G



Entry Parameters

Compound Name	Total HpCDF
QM Retention Time	44.83
QM Area	436763
QM Integration Mode	A
RM1 Area	455461
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0078
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	18.3958
Signal-to-Noise	---
Client Flags	
Status Overview	passed (2)
Status Info	

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Retention Time	RM1 Retention Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.25	29.25	29.23	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.41	30.41	30.41	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.31	35.31	35.31	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.61	36.61	36.61	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	37.03	37.03	37.03	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.34	40.34	40.34	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.49	40.49	40.49	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.19	41.19	41.19	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.39	41.39	41.39	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.51	41.51	41.51	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.82	41.82	41.82	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.20	42.20	42.20	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	43.95	43.95	43.95	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.15	45.15	45.15	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.70	45.70	45.70	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.19	48.19	48.19	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.36	48.36	48.36	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.81	30.81	30.81	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.54	29.54	29.54	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.24	40.24	40.24	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.22	29.22	29.22	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.38	30.38	30.38	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.30	35.30	35.30	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.58	36.58	36.58	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	36.99	36.99	36.99	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.32	40.32	40.32	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.47	40.47	40.47	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.17	41.17	41.17	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.38	41.38	41.38	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.50	41.50	41.50	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.81	41.81	41.81	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.18	42.18	42.18	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	43.93	43.93	43.93	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.14	45.14	45.14	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.69	45.69	45.69	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.18	48.18	48.18	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.35	48.35	48.35	passed	passed
38	Total TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	28.23	28.23	28.23	---	---
39	Total TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	28.96	28.96	28.96	---	---
40	Total PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	34.83	34.83	34.83	---	---
41	Total PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	35.77	35.77	35.77	---	---
42	Total HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.50	40.50	40.50	---	---
43	Total HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	40.73	40.73	40.73	---	---
44	Total HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	44.73	44.73	44.73	---	---
45	Total HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	44.83	44.83	44.83	---	---
46	Single TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	29.25	29.25	29.23	passed	passed
47	Single TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	30.41	30.41	30.41	passed	passed
48	Single PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	37.03	37.03	37.03	passed	passed
49	Single PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	36.61	36.61	36.61	passed	passed
50	Single PeCDD	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	35.31	35.31	35.31	passed	passed
51	Single HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	45.15	45.15	45.15	passed	passed
52	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.34	40.34	40.34	passed	passed
53	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.49	40.49	40.49	passed	passed
54	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	41.19	41.19	41.19	passed	passed
55	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	42.20	42.20	42.20	passed	passed
56	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.39	41.39	41.39	passed	passed
57	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.51	41.51	41.51	passed	passed
58	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.82	41.82	41.82	passed	passed
59	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	43.95	43.95	43.95	passed	passed
60	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	45.70	45.70	45.70	passed	passed

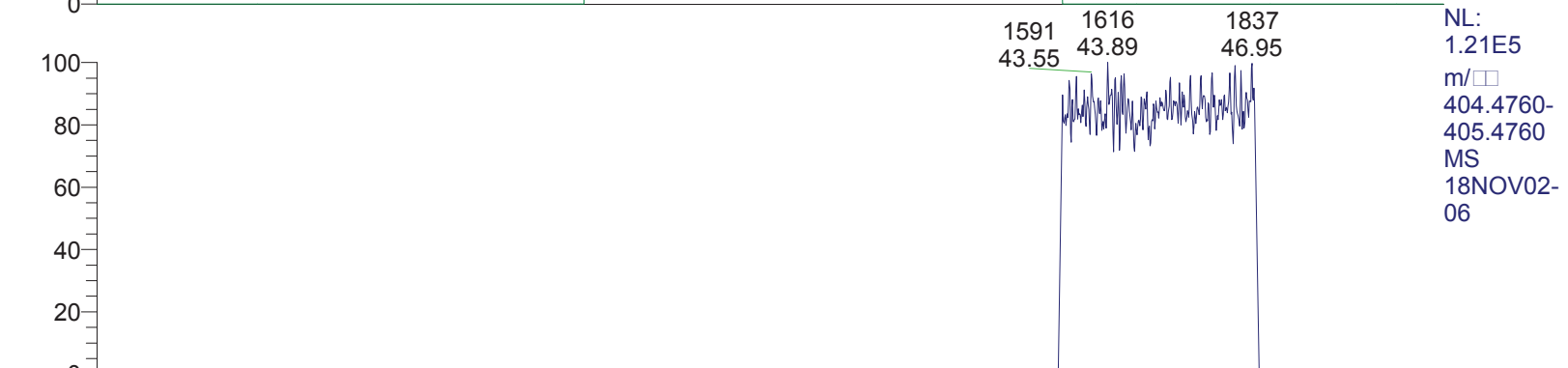
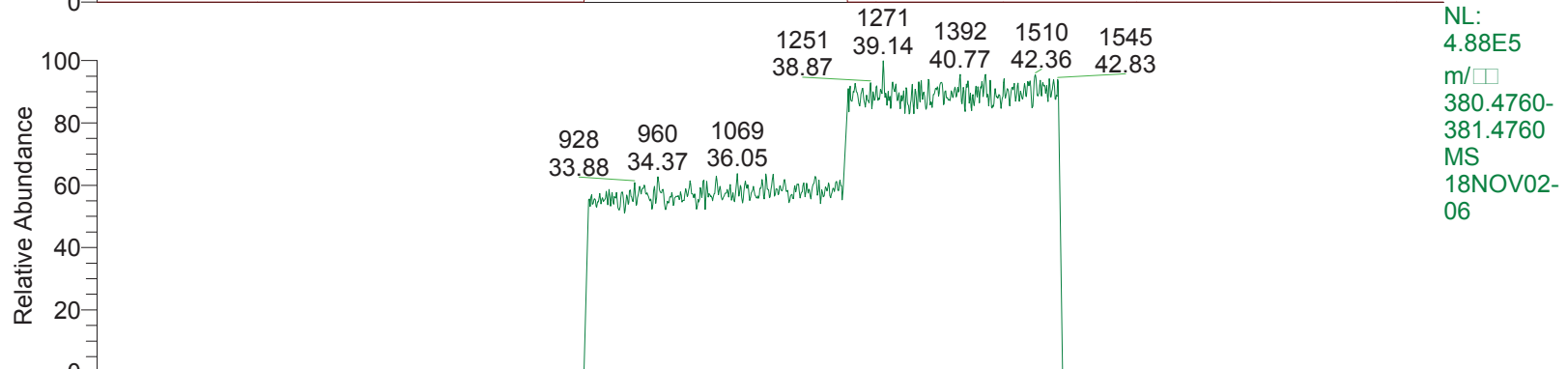
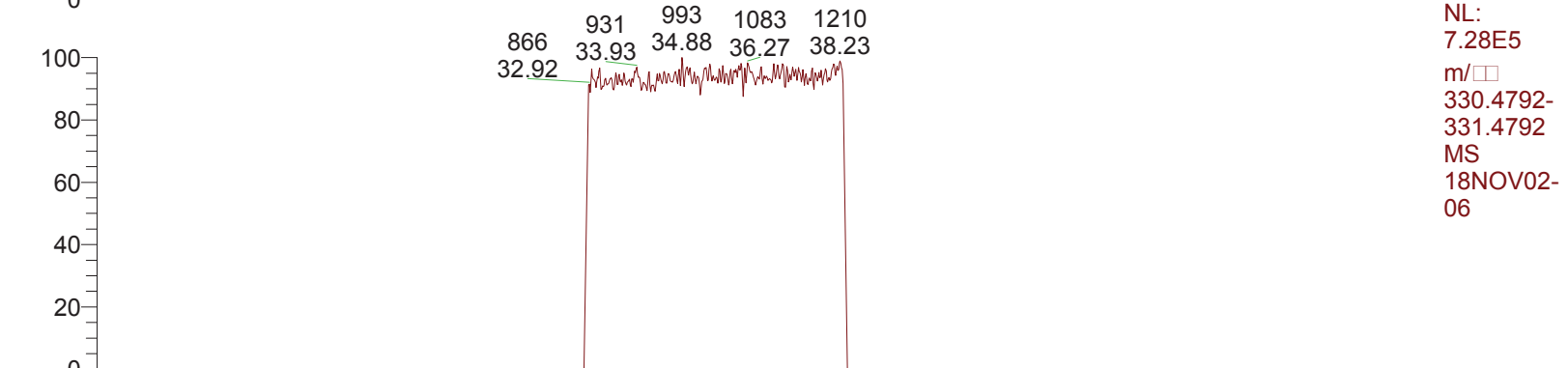
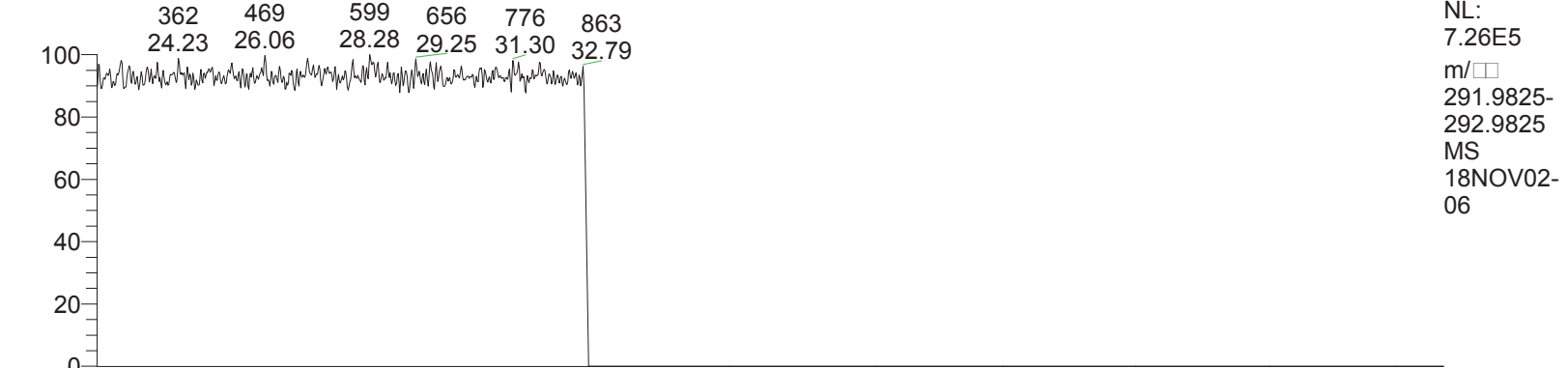


Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.25	0.7919	0.6450 - 0.8950	passed	100.00	0 - 0	passed
2	2378-TCDD	30.41	0.8408	0.6450 - 0.8950	passed	100.00	0 - 0	passed
3	12378-PeCDF	35.31	1.5758	1.3150 - 1.7850	passed	100.00	0 - 0	passed
4	23478-PeCDF	36.61	1.5868	1.3150 - 1.7850	passed	100.00	0 - 0	passed
5	12378-PeCDD	37.03	1.5850	1.3150 - 1.7850	passed	100.00	0 - 0	passed
6	123478-HxCDF	40.34	1.2664	1.0450 - 1.4350	passed	100.00	0 - 0	passed
7	123678-HxCDF	40.49	1.2143	1.0450 - 1.4350	passed	100.00	0 - 0	passed
8	234678-HxCDF	41.19	1.2466	1.0450 - 1.4350	passed	100.00	0 - 0	passed
9	123478-HxCDD	41.39	1.2459	1.0450 - 1.4350	passed	100.00	0 - 0	passed
10	123678-HxCDD	41.51	1.2924	1.0450 - 1.4350	passed	100.00	0 - 0	passed
11	123789-HxCDD	41.82	1.2671	1.0450 - 1.4350	passed	100.00	0 - 0	passed
12	123789-HxCDF	42.20	1.2519	1.0450 - 1.4350	passed	100.00	0 - 0	passed
13	1234678-HpCDF	43.95	1.0103	0.8750 - 1.2050	passed	100.00	0 - 0	passed
14	1234678-HpCDD	45.15	1.0506	0.8750 - 1.2050	passed	100.00	0 - 0	passed
15	1234789-HpCDF	45.70	1.0829	0.8750 - 1.2050	passed	100.00	0 - 0	passed
16	OCDD	48.19	0.9061	0.7550 - 1.0250	passed	100.00	0 - 0	passed
17	OCDF	48.36	0.8891	0.7550 - 1.0250	passed	100.00	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.81	0.8028	0.6450 - 0.8950	passed	100.00	0 - 0	passed
19	13C12-1234-TCDD	29.54	0.8216	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.24	1.2870	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.22	0.7938	0.6450 - 0.8950	passed	100.00	0 - 0	passed
22	13C12-2378-TCDD	30.38	0.8038	0.6450 - 0.8950	passed	100.00	0 - 0	passed
23	13C12-12378-PeCDF	35.30	1.5997	1.3150 - 1.7850	passed	100.00	0 - 0	passed
24	13C12-23478-PeCDF	36.58	1.5876	1.3150 - 1.7850	passed	100.00	0 - 0	passed
25	13C12-12378-PeCDD	36.99	1.6225	1.3150 - 1.7850	passed	100.00	0 - 0	passed
26	13C12-123478-HxCDF	40.32	0.5272	0.4250 - 0.5950	passed	100.00	0 - 0	passed
27	13C12-123678-HxCDF	40.47	0.5490	0.4250 - 0.5950	passed	100.00	0 - 0	passed
28	13C12-234678-HxCDF	41.17	0.5425	0.4250 - 0.5950	passed	100.00	0 - 0	passed
29	13C12-123478-HxCDD	41.38	1.2929	1.0450 - 1.4350	passed	100.00	0 - 0	passed
30	13C12-123678-HxCDD	41.50	1.2791	1.0450 - 1.4350	passed	100.00	0 - 0	passed
31	13C12-123789-HxCDD	41.81	1.2467	1.0450 - 1.4350	passed	100.00	0 - 0	passed
32	13C12-123789-HxCDF	42.18	0.5448	0.4250 - 0.5950	passed	100.00	0 - 0	passed
33	13C12-1234678-HpCDF	43.93	0.4667	0.3650 - 0.5150	passed	100.00	0 - 0	passed
34	13C12-1234678-HpCDD	45.14	1.0655	0.8750 - 1.2050	passed	100.00	0 - 0	passed
35	13C12-1234789-HpCDF	45.69	0.4601	0.3650 - 0.5150	passed	100.00	0 - 0	passed
36	13C12-OCDD	48.18	0.9081	0.7550 - 1.0250	passed	100.00	0 - 0	passed
37	13C12-OCDF	48.35	0.9076	0.7550 - 1.0250	passed	100.00	0 - 0	passed
38	Total TCDF	28.23	---	0.6450 - 0.8950	---	100.00	0 - 0	---
39	Total TCDD	28.96	0.8408	0.6450 - 0.8950	---	100.00	0 - 0	---
40	Total PeCDF	34.83	---	1.3150 - 1.7850	---	100.00	0 - 0	---
41	Total PeCDD	35.77	---	1.3150 - 1.7850	---	100.00	0 - 0	---
42	Total HxCDF	40.50	---	1.0450 - 1.4350	---	100.00	0 - 0	---
43	Total HxCDD	40.73	---	1.0450 - 1.4350	---	100.00	0 - 0	---
44	Total HpCDF	44.73	---	0.8750 - 1.2050	---	100.00	0 - 0	---
45	Total HpCDD	44.83	---	0.8750 - 1.2050	---	100.00	0 - 0	---
46	Single TCDF	29.25	0.7919	0.6450 - 0.8950	passed	100.00	0 - 0	passed
47	Single TCDD	30.41	0.8408	0.6450 - 0.8950	passed	100.00	0 - 0	passed
48	Single PeCDD	37.03	1.5850	1.3150 - 1.7850	passed	100.00	0 - 0	passed
49	Single PeCDF	36.61	1.5868	1.3150 - 1.7850	passed	100.00	0 - 0	passed
50	Single PeCDF	35.31	1.5758	1.3150 - 1.7850	passed	100.00	0 - 0	passed
51	Single HpCDD	45.15	1.0506	0.8750 - 1.2050	passed	100.00	0 - 0	passed
52	Single HxCDF	40.34	1.2664	1.0450 - 1.4350	passed	100.00	0 - 0	passed
53	Single HxCDF	40.49	1.2143	1.0450 - 1.4350	passed	100.00	0 - 0	passed
54	Single HxCDF	41.19	1.2466	1.0450 - 1.4350	passed	100.00	0 - 0	passed
55	Single HxCDF	42.20	1.2519	1.0450 - 1.4350	passed	100.00	0 - 0	passed
56	Single HxCDD	41.39	1.2459	1.0450 - 1.4350	passed	100.00	0 - 0	passed
57	Single HxCDD	41.51	1.2924	1.0450 - 1.4350	passed	100.00	0 - 0	passed
58	Single HxCDD	41.82	1.2671	1.0450 - 1.4350	passed	100.00	0 - 0	passed
59	Single HpCDF	43.95	1.0103	0.8750 - 1.2050	passed	100.00	0 - 0	passed
60	Single HpCDF	45.70	1.0829	0.8750 - 1.2050	passed	100.00	0 - 0	passed



RT: 22.50 - 51.00



APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 19:29:51 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 19:29:50

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 7349737c-0d23-45de-89a6-193501cb8be3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
Window # 1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
Window # 2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



18NOV02-06

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	97.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0383	FVSR	0.0364
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	97.0000	LKM	442.9723	MASS	97.0000
MDAC	1416877.9667	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9851	RELEN	0.0000
RES	12803.4606	RPUSHER	-6.0586	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	97.0000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.2e-003 mbar
Pirani Source: 3.7e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11967.
MID Time window 2: Resolution is 11800.
MID Time window 3: Resolution is 12091.
MID Time window 4: Resolution is 12095.



18NOV02-06

MID Time Window 5: Resolution is 12619.
MID Time Window 6: Resolution is 12803.

Amplifier Offset: 81.

*** File closed Fri Nov 02 20:20:52 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 20:20
Number of Entries 64
Comment
Vial 6
Sample Name CALDF41837H
Sample ID CS301
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

Quan x:\18nov02\18nov02-07.quan
Data x:\18nov02\18nov02-07.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT Status	Status Info
1	2378-TCDF	29.33	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.50	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.39	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.68	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.10	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.41	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.56	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.26	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.45	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.57	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.89	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.25	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.99	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.21	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.76	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.23	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.41	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.92	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.64	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.31	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.32	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.48	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.37	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.65	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.09	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.38	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.53	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.23	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.43	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.55	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.86	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.24	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.99	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.19	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.75	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.22	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.39	passed	passed	passed	passed	passed	passed	passed
38	Total TCDF	28.23	passed (1)	---	---	---	---	---	---
39	Total TCDD	28.96	passed (1)	---	---	---	---	---	---
40	Total PeCDF	34.83	passed (2)	---	---	---	---	---	---
41	Total PeCDD	35.77	passed (1)	---	---	---	---	---	---
42	Total HxCDF	40.50	passed (4)	---	---	---	---	---	---
43	Total HxCDD	40.73	passed (3)	---	---	---	---	---	---
44	Total HpCDD	44.73	passed (1)	---	---	---	---	---	---
45	Total HpCDF	44.83	passed (2)	---	---	---	---	---	---
46	Single TCDF	29.33	passed	passed	passed	passed	passed	passed	passed
47	Single TCDD	30.50	passed	passed	passed	passed	passed	passed	passed
48	Single PeCDD	37.10	passed	passed	passed	passed	passed	passed	passed
49	Single PeCDF	36.68	passed	passed	passed	passed	passed	passed	passed
50	Single PeCDD	35.39	passed	passed	passed	passed	passed	passed	passed
51	Single HpCDD	45.21	passed	passed	passed	passed	passed	passed	passed
52	Single HxCDF	40.41	passed	passed	passed	passed	passed	passed	passed
53	Single HxCDF	40.56	passed	passed	passed	passed	passed	passed	passed
54	Single HxCDF	41.26	passed	passed	passed	passed	passed	passed	passed
55	Single HxCDF	42.25	passed	passed	passed	passed	passed	passed	passed
56	Single HxCDD	41.57	passed	passed	passed	passed	passed	passed	passed
57	Single HxCDD	41.45	passed	passed	passed	passed	passed	passed	passed
58	Single HxCDD	41.89	passed	passed	passed	passed	passed	passed	passed
59	Single HpCDF	43.99	passed	passed	passed	passed	passed	passed	passed
60	Single HpCDD	45.76	passed	passed	passed	passed	passed	passed	passed



Quantitation Settings

Data File Parameter

Acq. Data 2018/11/02 20:20
 Number of Entries 64
 Comment
 Vial 6
 Sample Name CALDF41837H
 Sample ID CS301
 Inst ID DF17611-18NOV02
 Client
 Analyst maz02012
 GC Column DB5MS 60 M x 0.25um x 0.25mm
 BatchNo
 Barcode

Files Parameter

Quan x:\18nov02\18nov02-07.quan
 Data x:\18nov02\18nov02-07.raw
 Response x:\responsefiles\df17611-18nov02dfical.resp
 Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
 Mass Ref

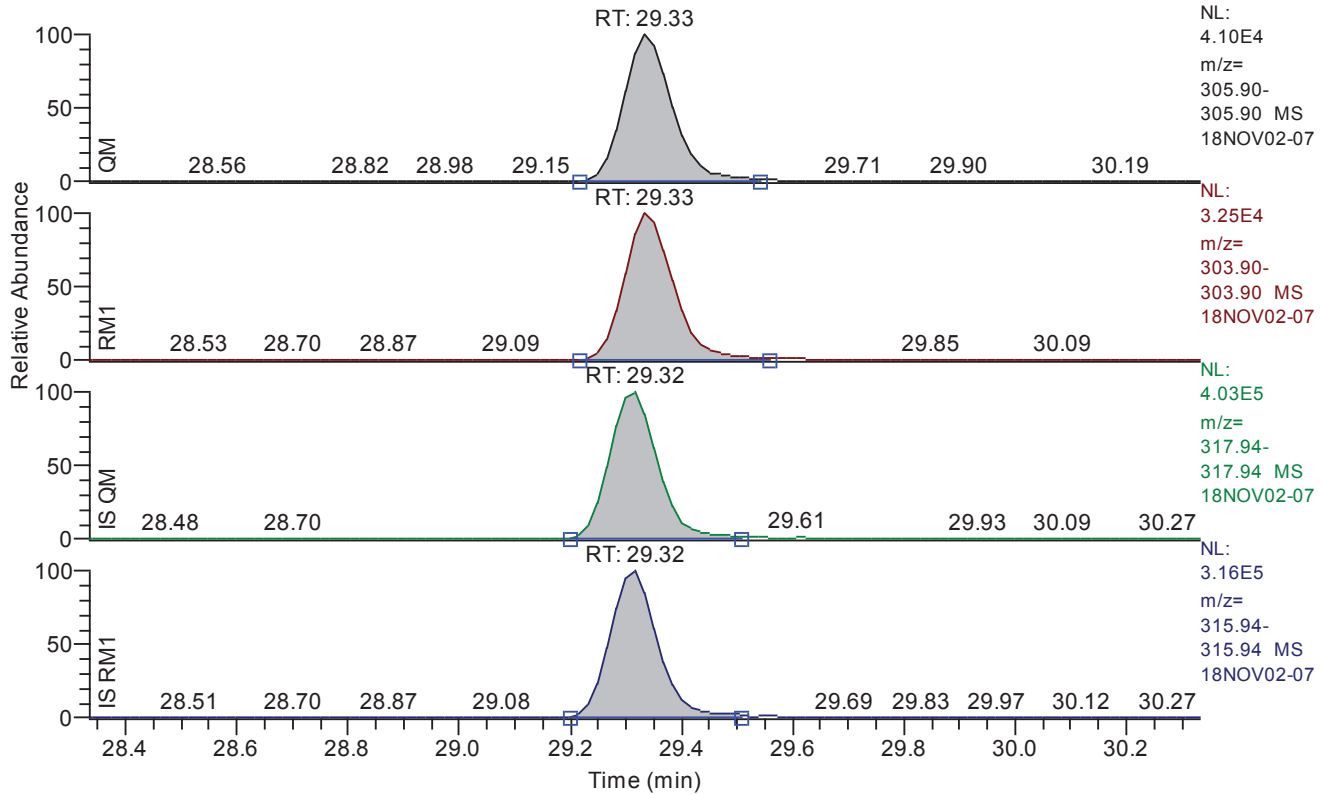
Quan Parameter

QualBrowser Compatibility Compatibility off
 Sum Area/Height Sum QM RM1
 Quantitation Status Depend on Area
 Injection Volume [hIJV] 1.0
 Sample Volume [hSV] 1.0
 Sample Weight [hSWT] 1.0
 Dilution Factor [hDF] 1.0
 Det. Limit Factor [hDLF] 2.5
 Response Factor Mode Single Point (Spec. RF)
 Fit Calc. Mode Linear Fit
 Regression Mode Non weighted Regression
 Weighted Regression Factor 1.0



Chromatogram

RT: 28.33 - 30.33 SM: 3G



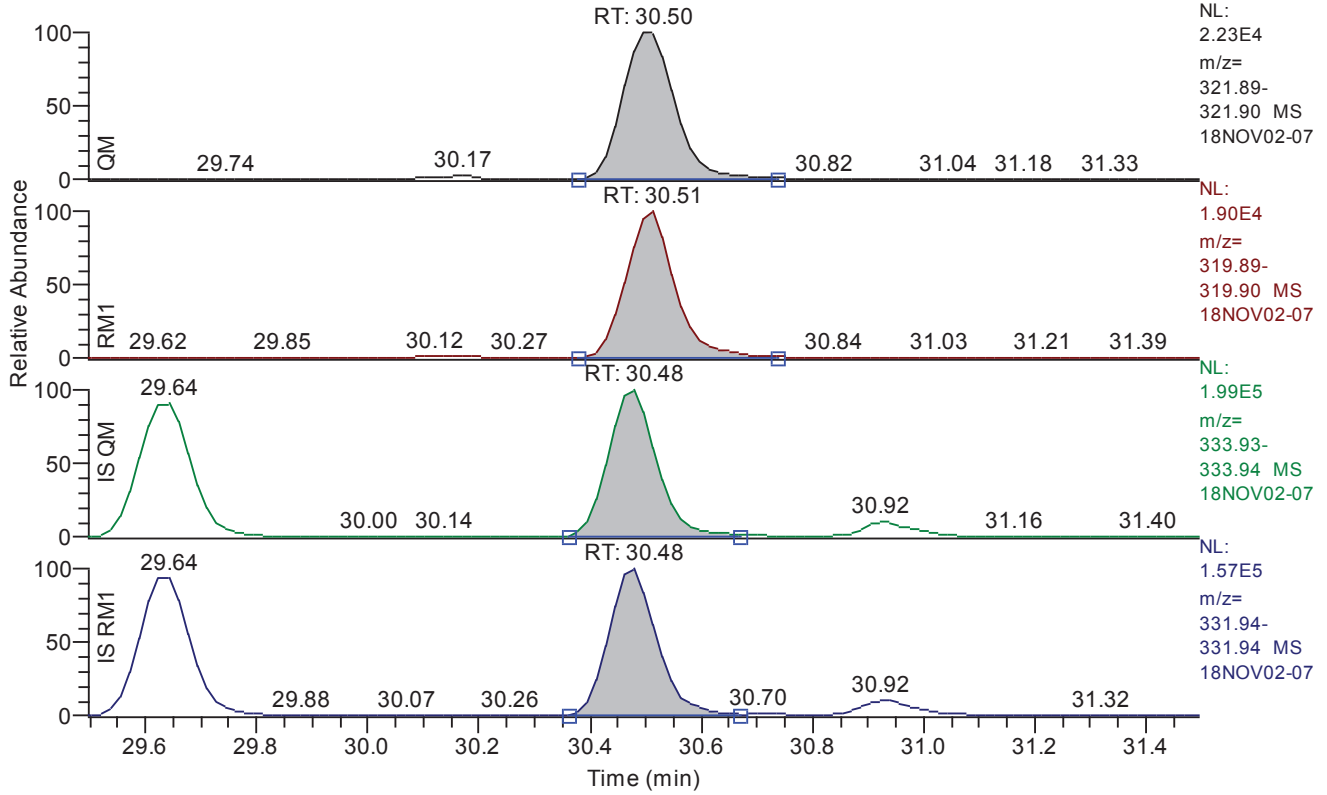
Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.33
QM Area	251321
QM Integration Mode	A
RM1 Area	202352
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2575
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.50 - 31.50 SM: 3G



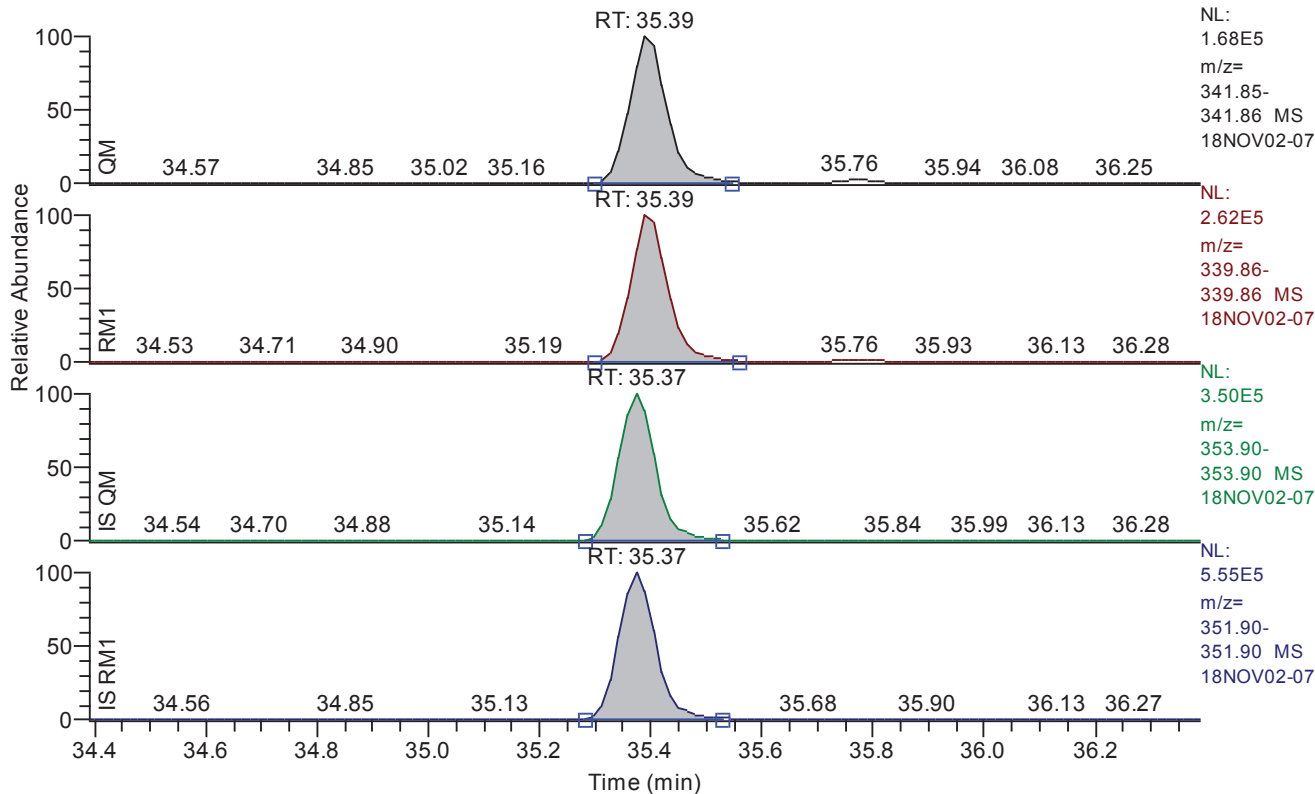
Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.50
QM Area	147096
QM Integration Mode	A
RM1 Area	116809
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2517
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 34.39 - 36.39 SM: 3G



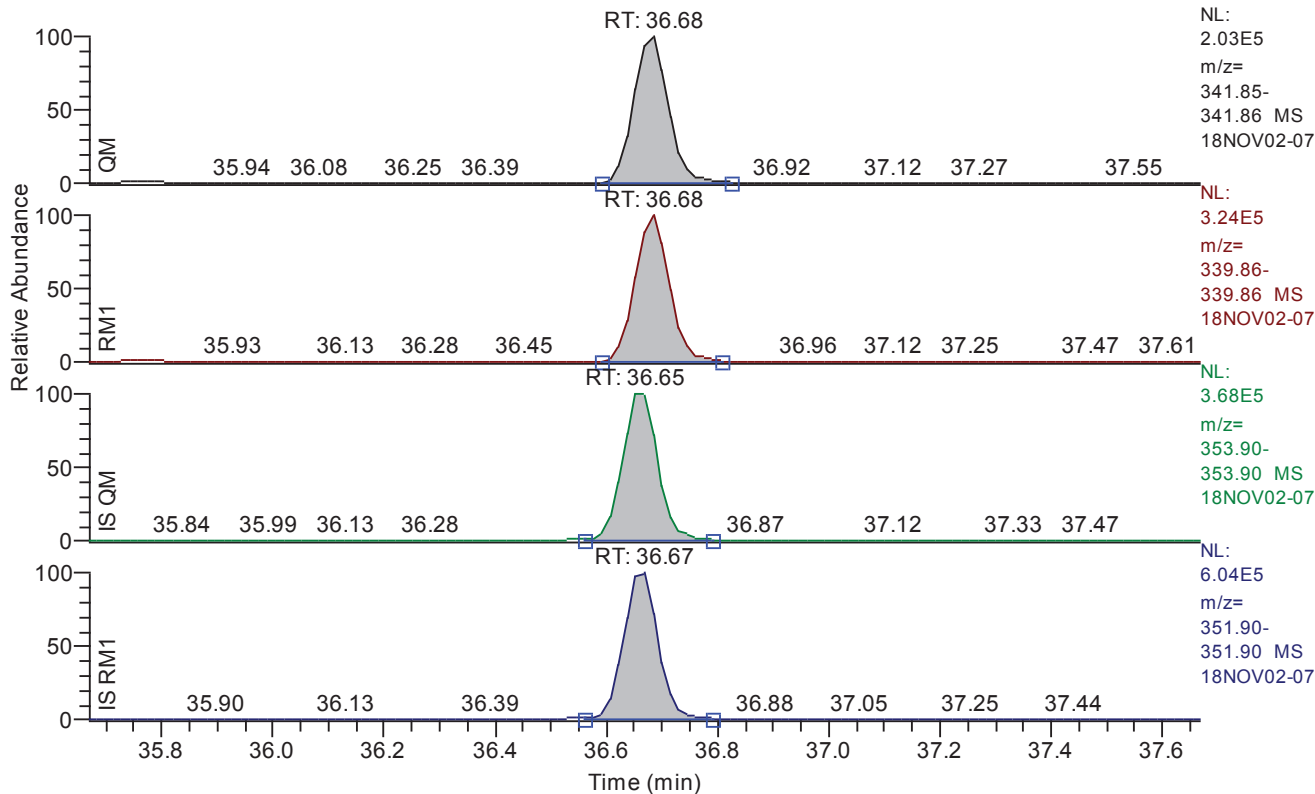
Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.39
QM Area	788300
QM Integration Mode	A
RM1 Area	1234225
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0099
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	12456
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 35.67 - 37.67 SM: 3G

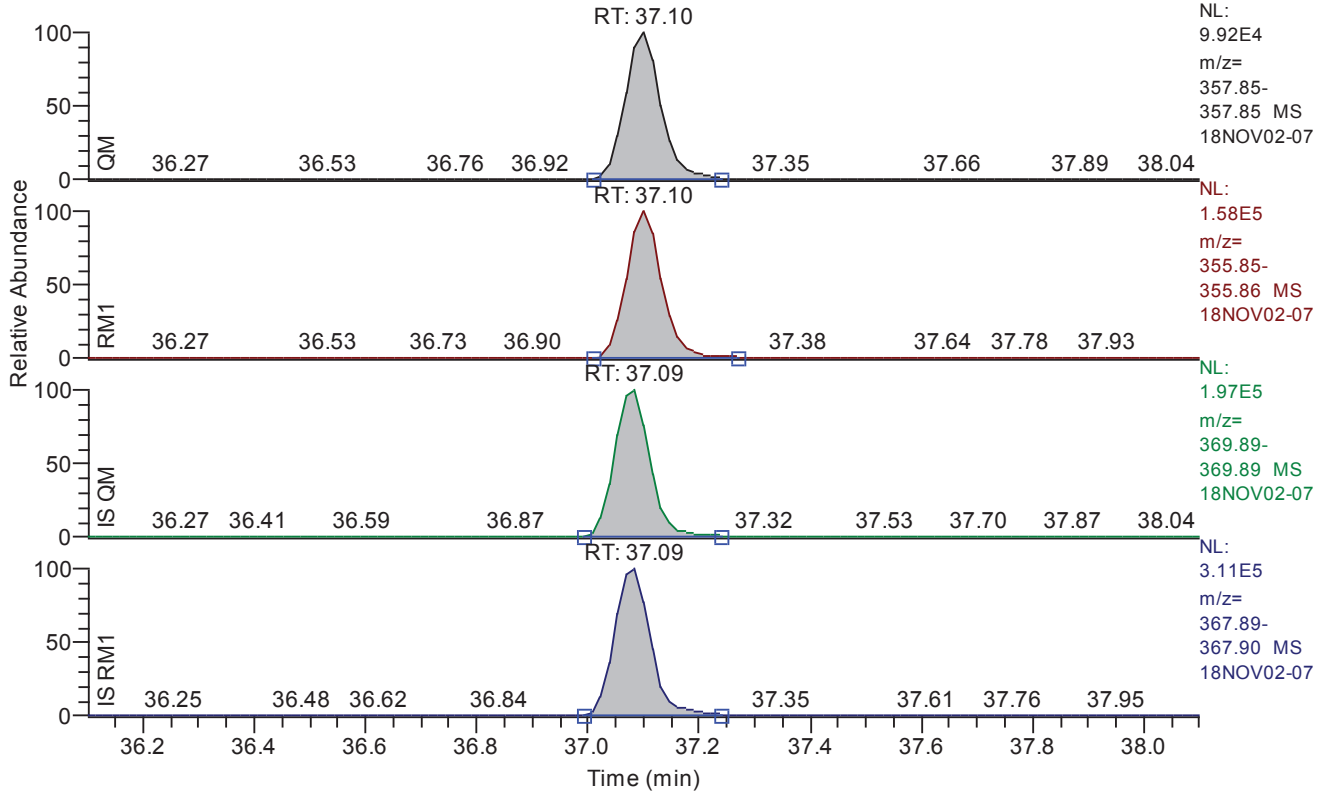


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.68
QM Area	878432
QM Integration Mode	A
RM1 Area	1380099
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0083
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	15270
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.10 - 38.10 SM: 3G

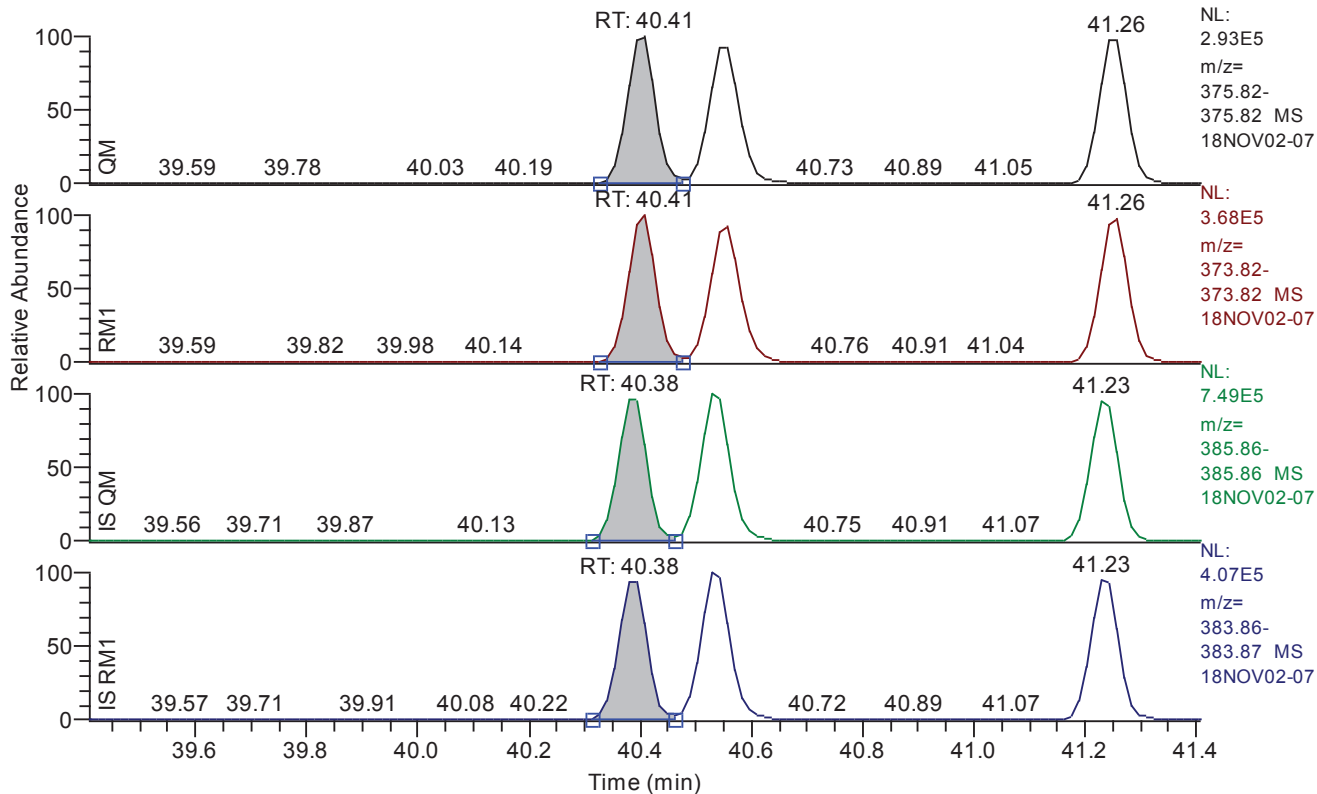


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.10
QM Area	438255
QM Integration Mode	A
RM1 Area	701442
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0158
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	8013
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.41 - 41.41 SM: 3G



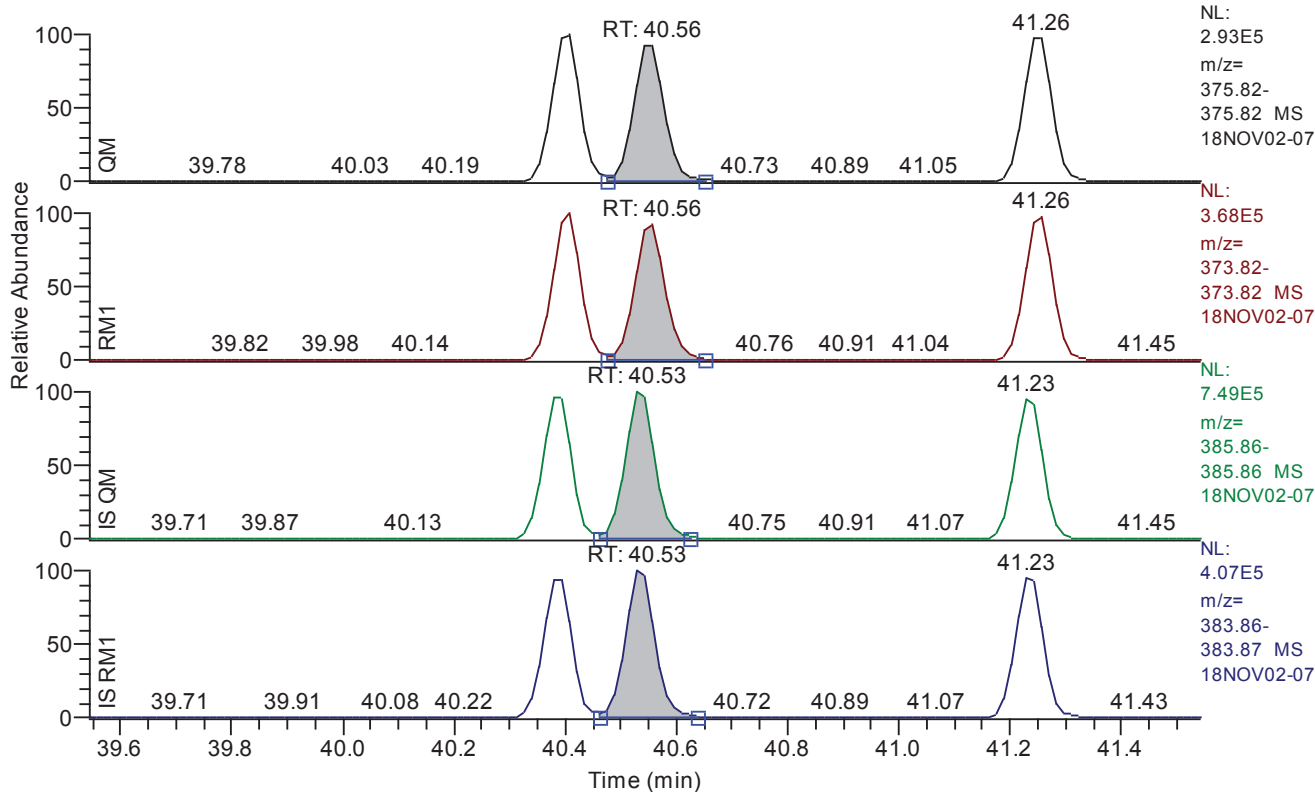
Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.41
QM Area	1036885
QM Integration Mode	A
RM1 Area	1284347
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0157
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	8170
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 39.54 - 41.54 SM: 3G



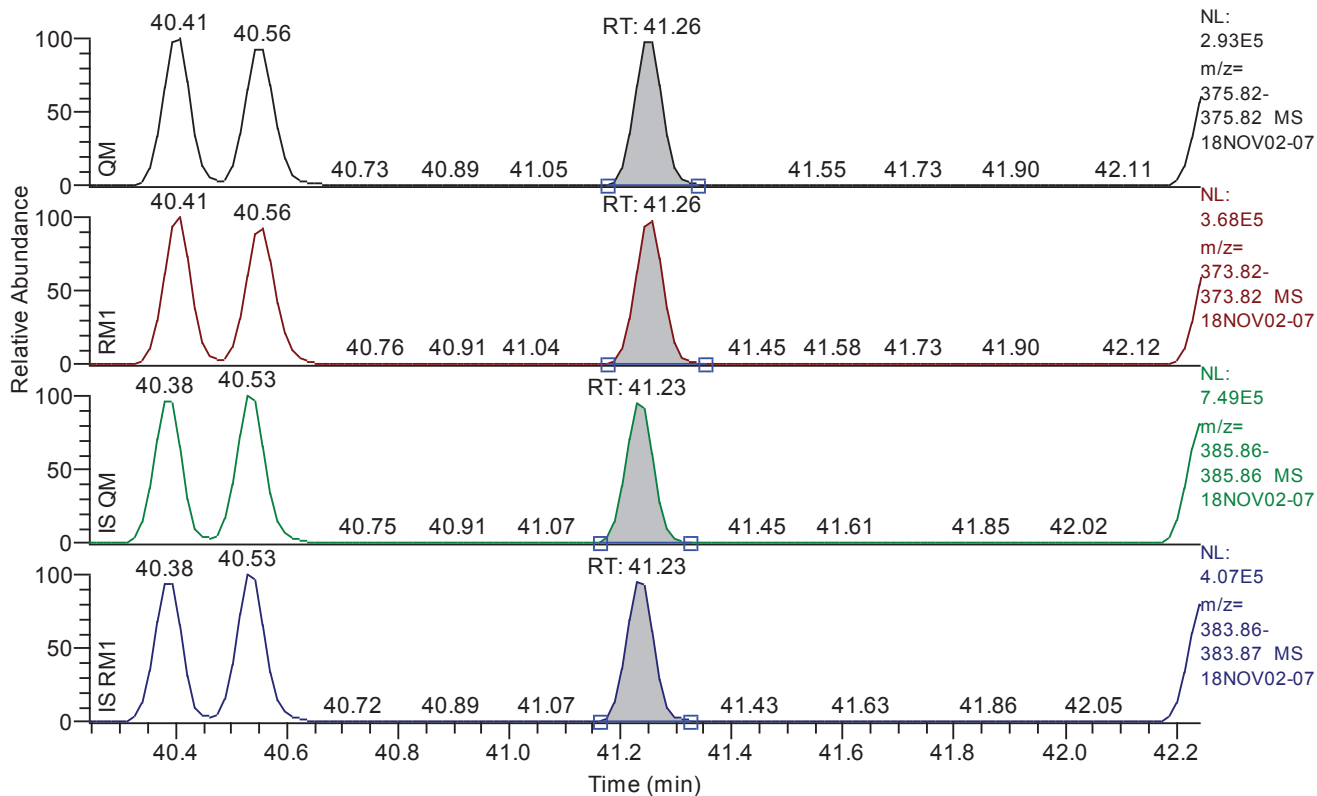
Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.56
QM Area	1037006
QM Integration Mode	A
RM1 Area	1299559
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0159
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	7587
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.24 - 42.24 SM: 3G



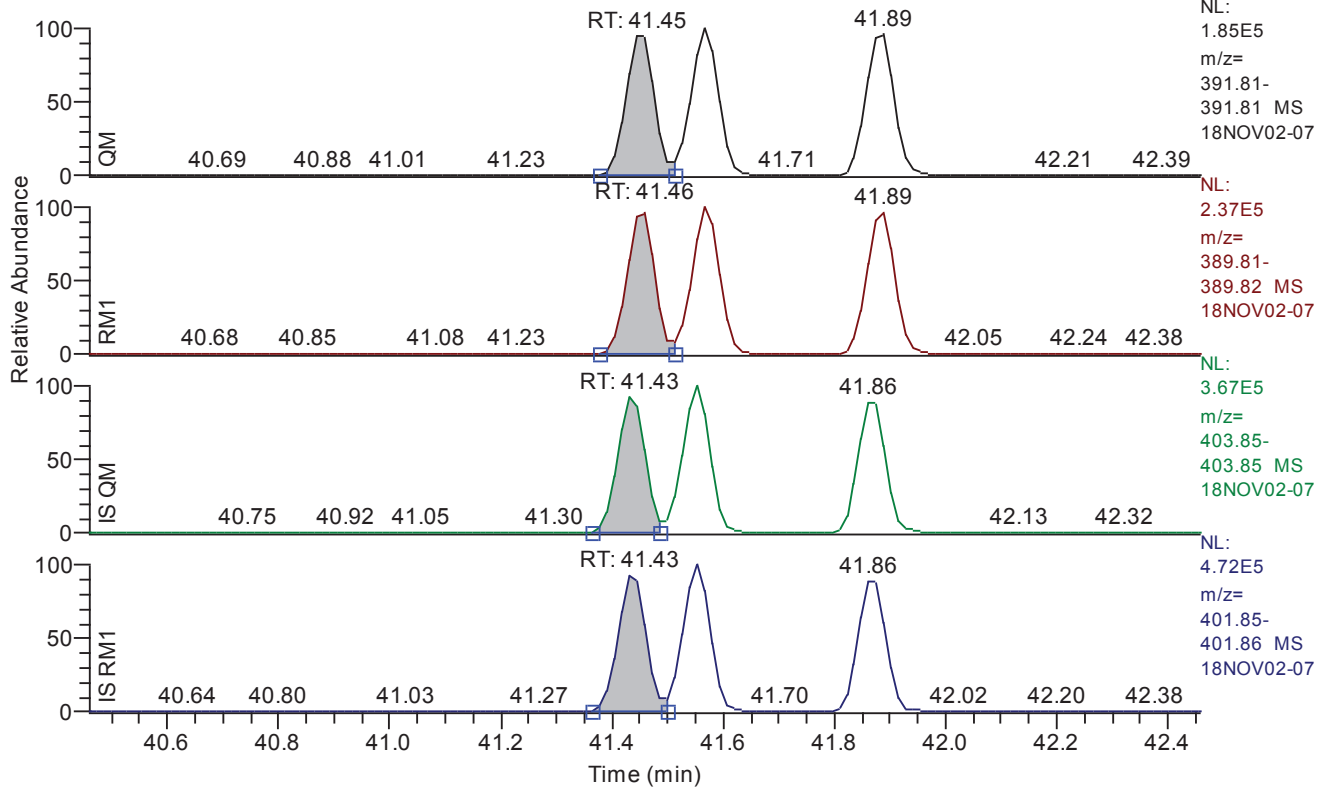
Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.26
QM Area	1033180
QM Integration Mode	A
RM1 Area	1286848
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0154
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	8005
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.46 - 42.46 SM: 3G



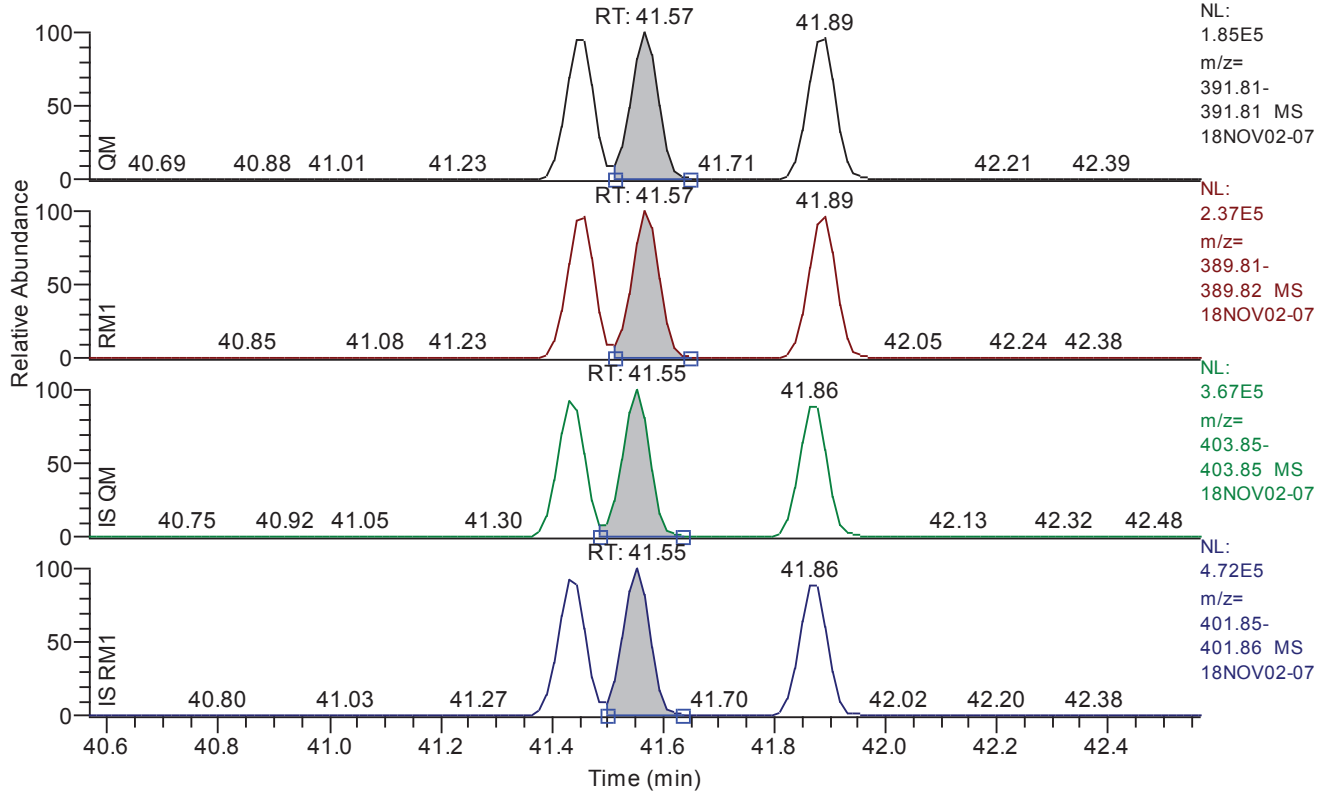
Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.45
QM Area	628259
QM Integration Mode	A
RM1 Area	794491
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0116
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	10644
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.57 - 42.57 SM: 3G



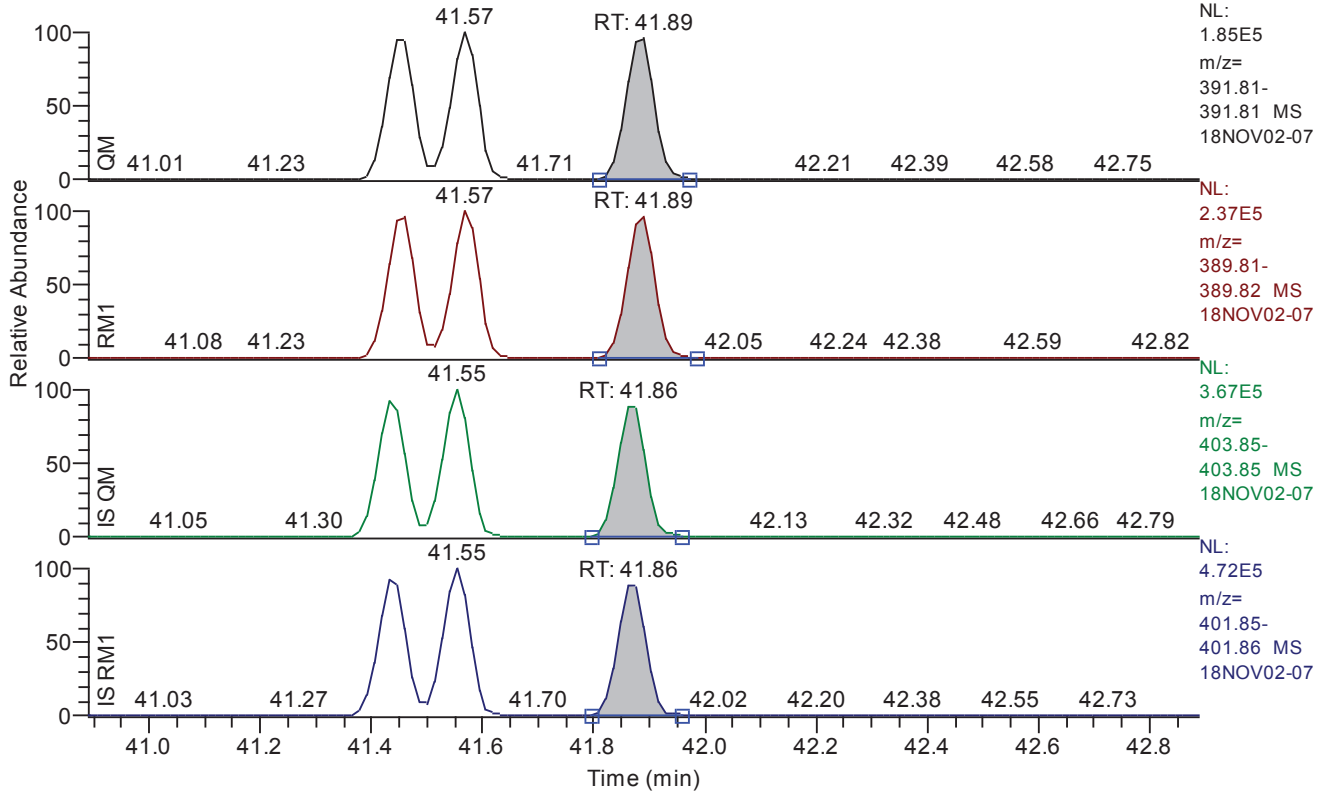
Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.57
QM Area	627171
QM Integration Mode	A
RM1 Area	799069
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0113
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	11057
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.89 - 42.89 SM: 3G



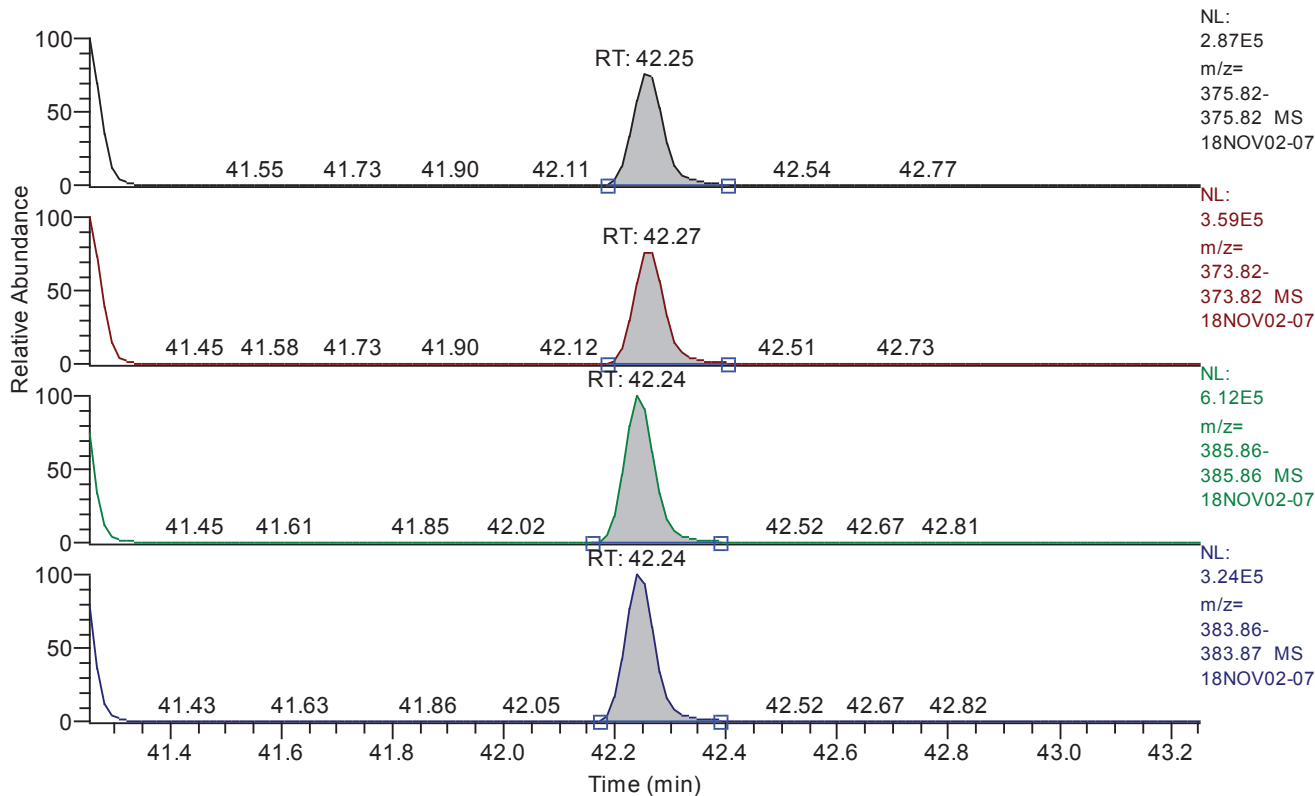
Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.89
QM Area	639384
QM Integration Mode	A
RM1 Area	808773
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0116
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	10757
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 41.25 - 43.25 SM: 3G

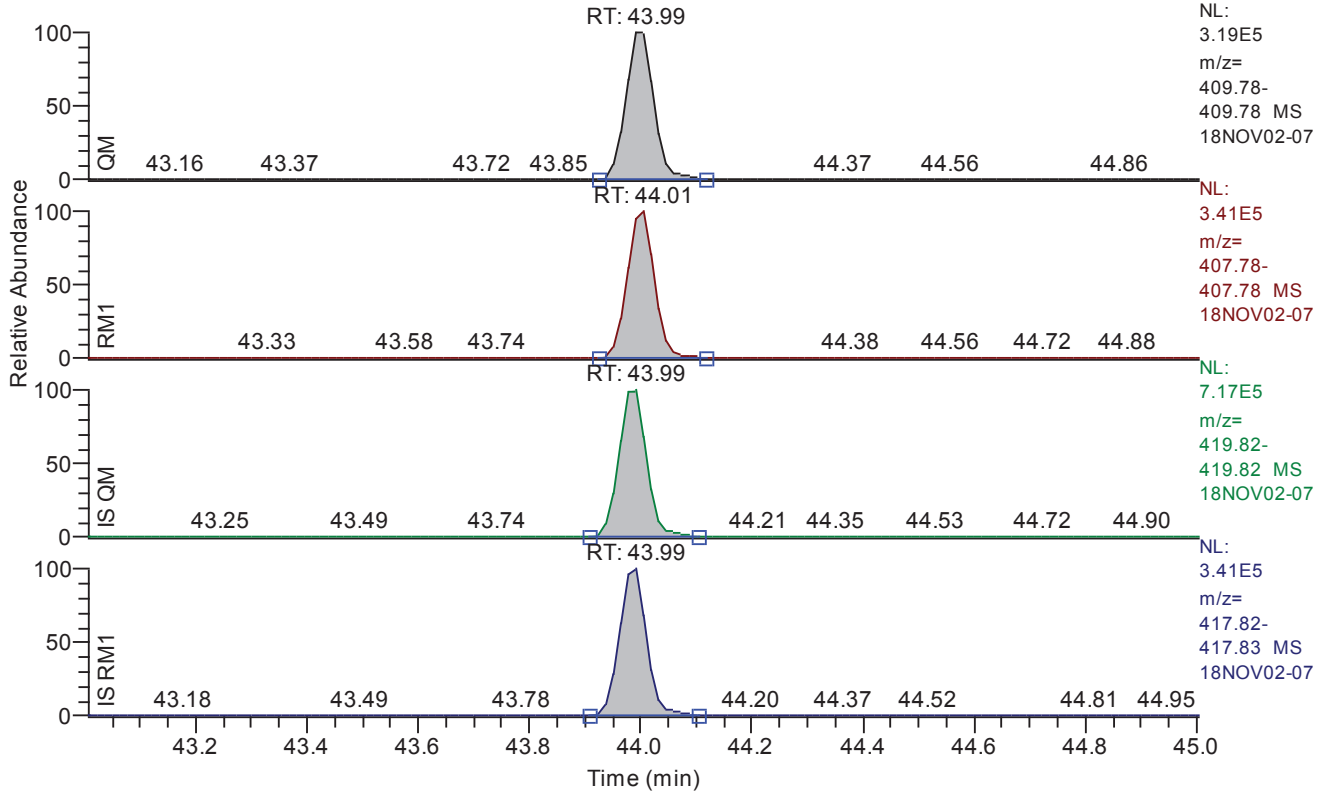


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.25
QM Area	870377
QM Integration Mode	A
RM1 Area	1094560
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0197
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	6131
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 43.01 - 45.01 SM: 3G



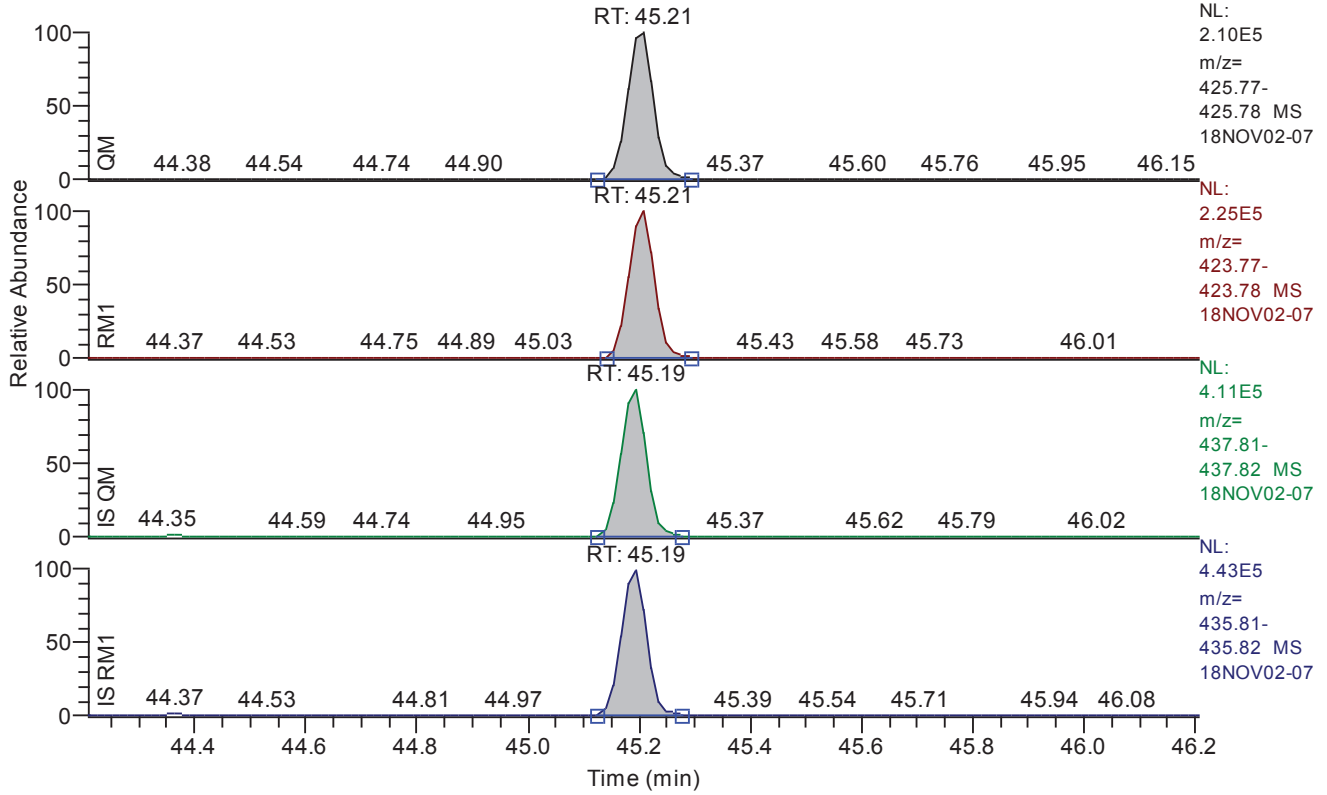
Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.99
QM Area	1147032
QM Integration Mode	A
RM1 Area	1193386
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0167
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	7462
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.21 - 46.21 SM: 3G



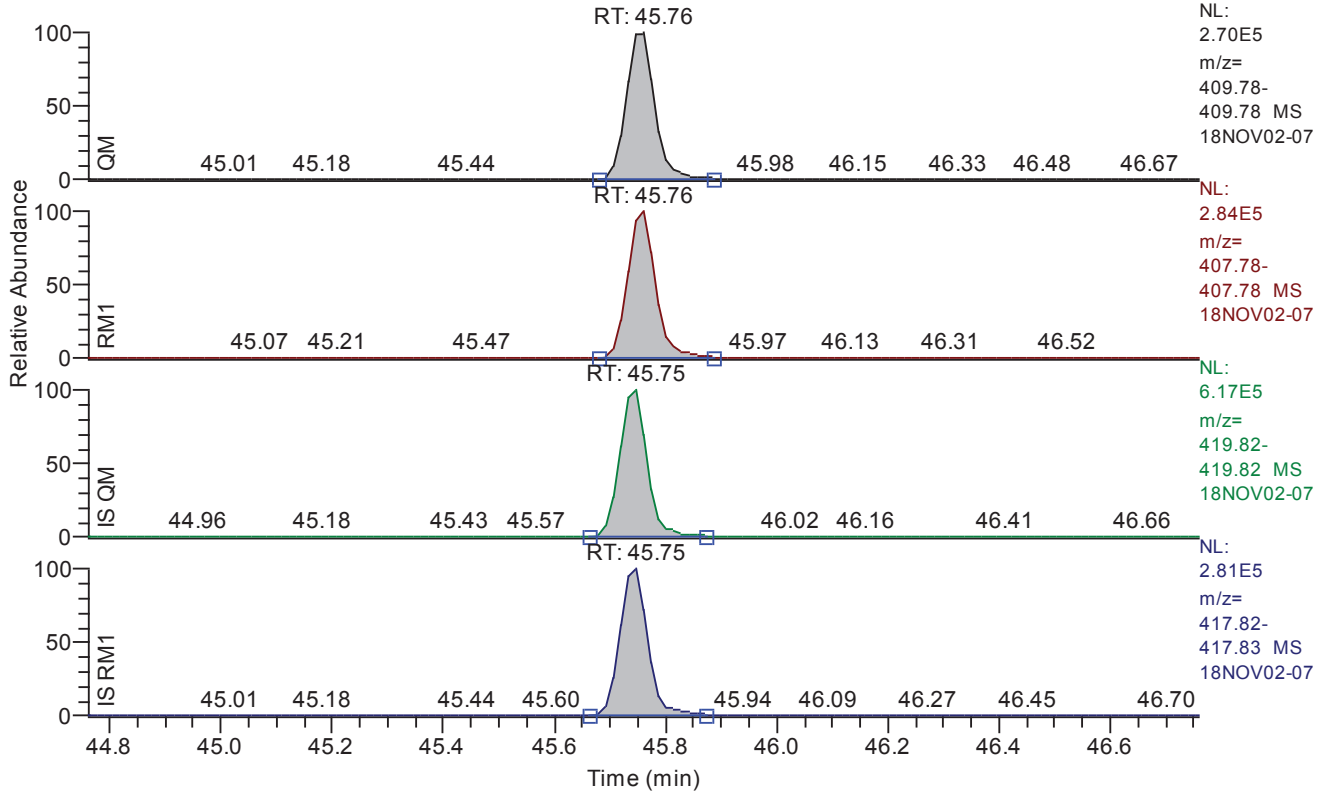
Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.21
QM Area	706988
QM Integration Mode	A
RM1 Area	745393
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0164
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	7431
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.76 - 46.76 SM: 3G



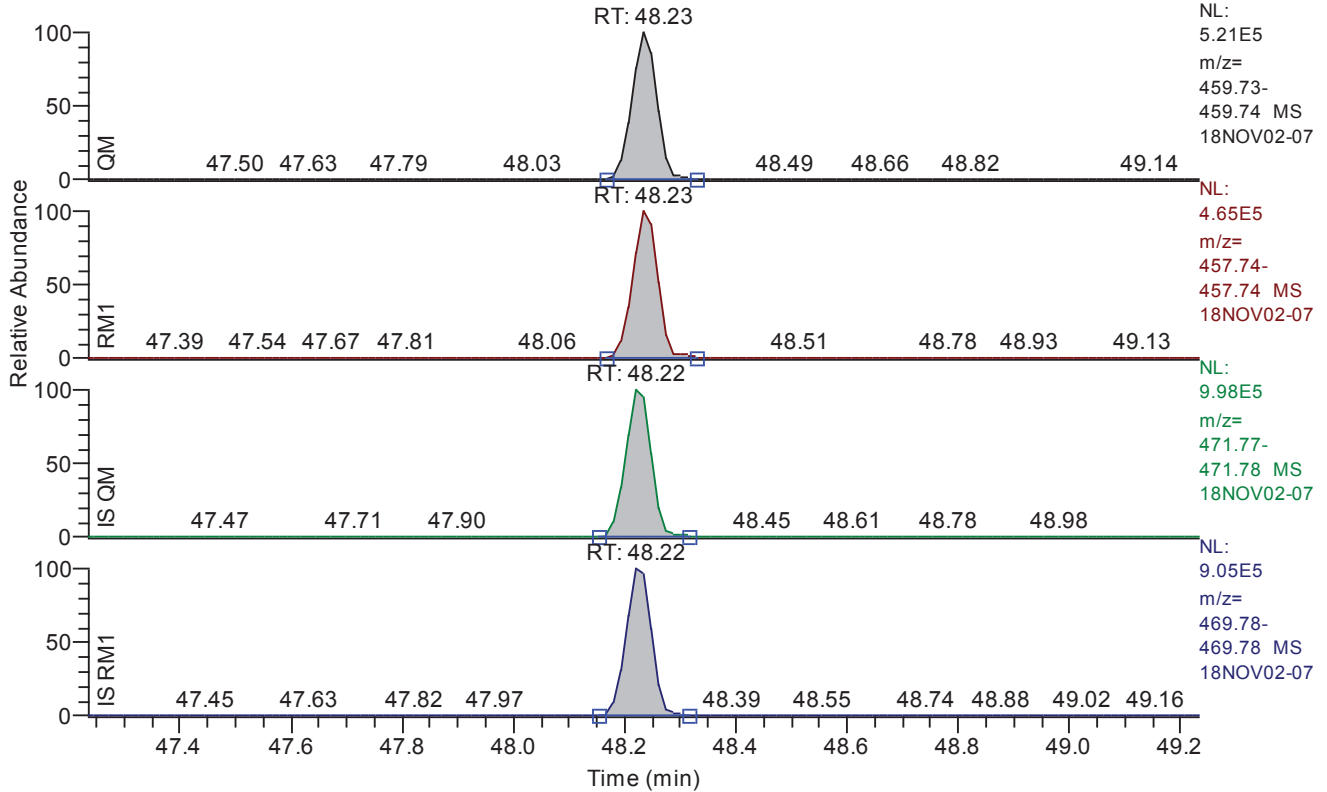
Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.76
QM Area	979683
QM Integration Mode	A
RM1 Area	1011092
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0196
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	6259
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.23 - 49.23 SM: 3G



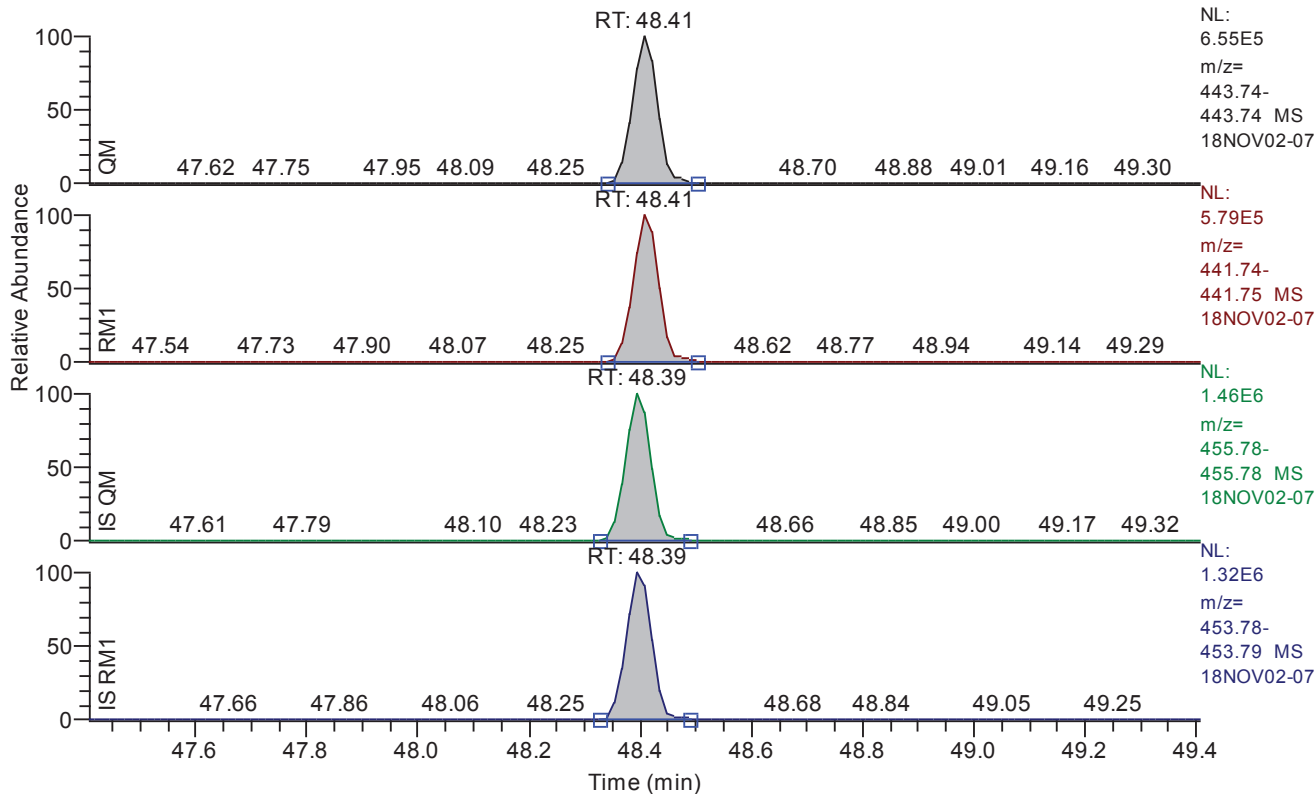
Entry Parameters

Compound Name	OCDD
QM Retention Time	48.23
QM Area	1613076
QM Integration Mode	A
RM1 Area	1457367
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0118
Unqualified Amount (A)	100.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	21601
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.41 - 49.41 SM: 3G



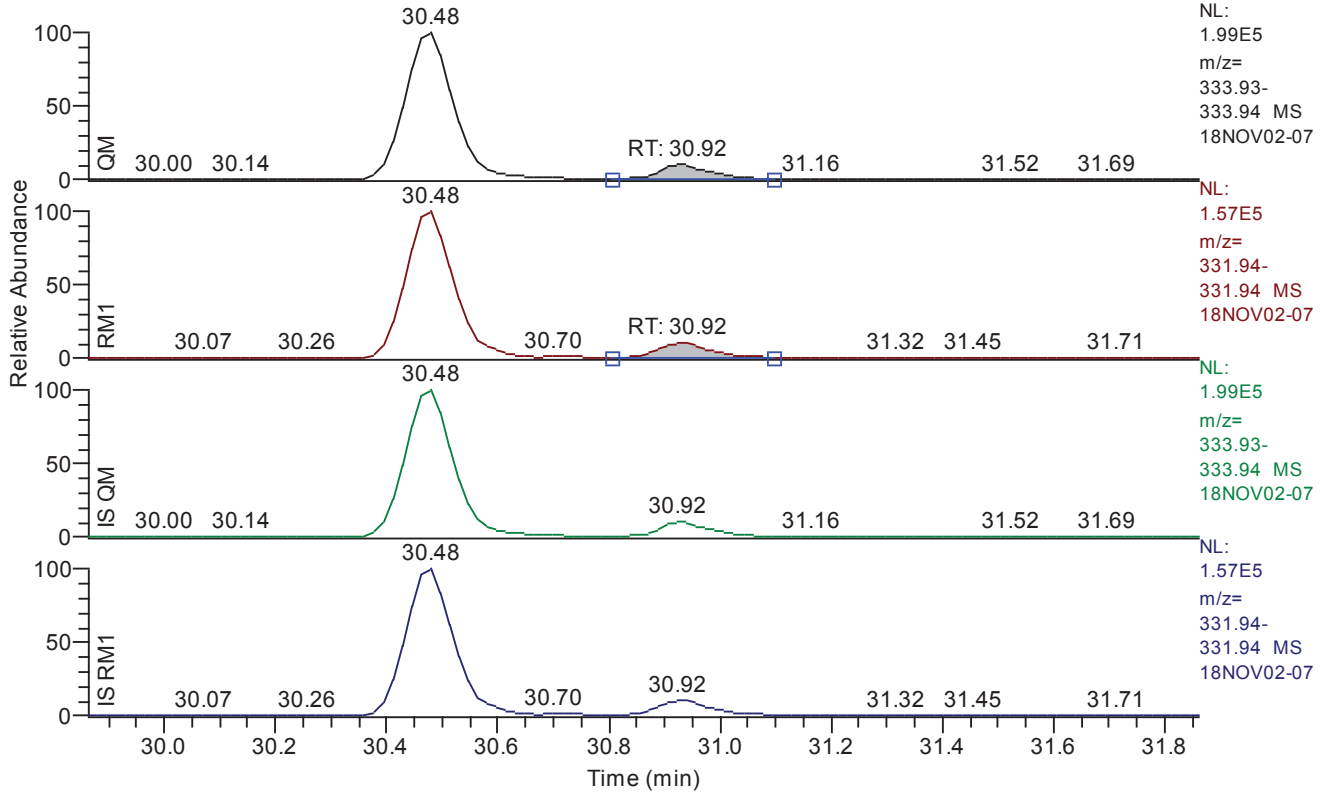
Entry Parameters

Compound Name	OCDF
QM Retention Time	48.41
QM Area	2049645
QM Integration Mode	A
RM1 Area	1844391
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0103
Unqualified Amount (A)	100.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	24571
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.86 - 31.86 SM: 3G



Entry Parameters

Compound Name 13C12-1278-TCDD (CRS)
 QM Retention Time 30.92
 QM Area 127150
 QM Integration Mode A
 RM1 Area 107879
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.0347
 Unqualified Amount (A) 10.000000
 Adjusted Amount (A) 10.0000
 Signal-to-Noise 717
 Client Flags
 Status Overview passed
 Status Info



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 20:20
Number of Entries 64
Comment
Vial 6
Sample Name CALDF41837H
Sample ID CS301
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

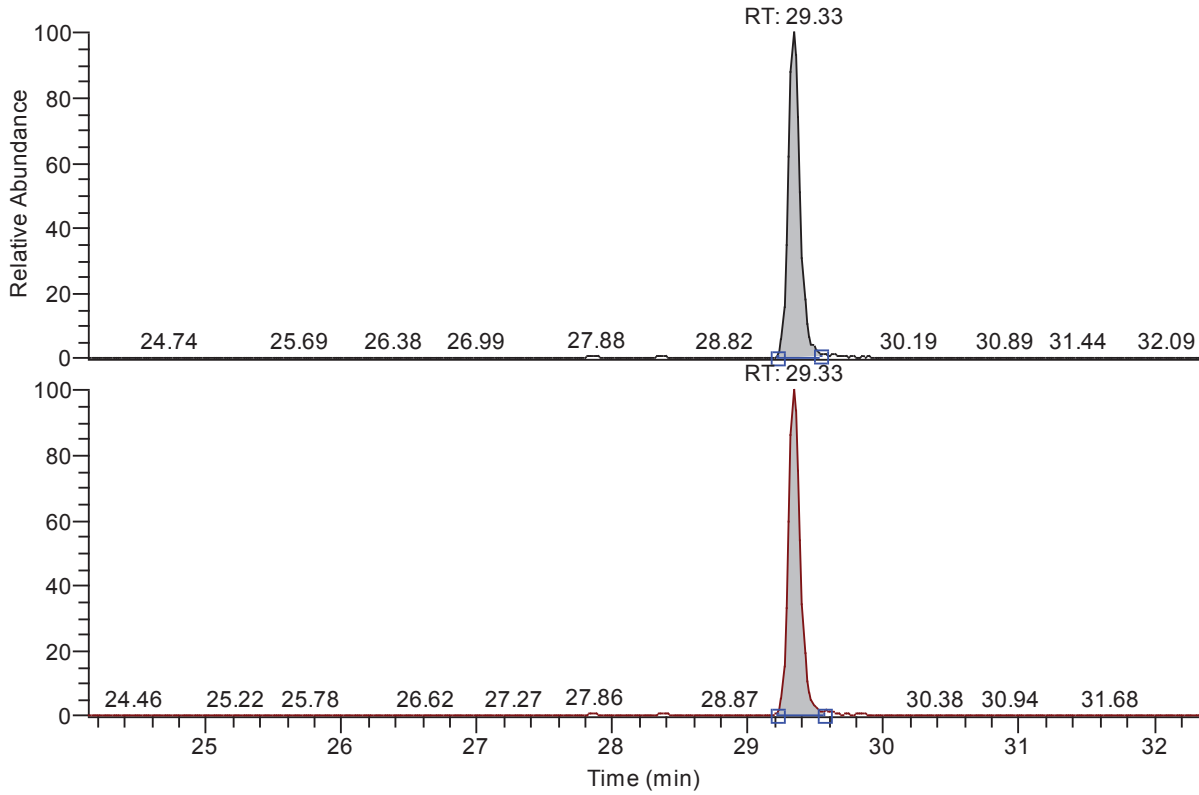
Quan x:\18nov02\18nov02-07.quan
Data x:\18nov02\18nov02-07.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 24.13 - 32.33 SM: 3G



NL:
4.10E4
m/z=
305.90-
305.90
MS
18NOV02-
07

NL:
3.25E4
m/z=
303.90-
303.90
MS
18NOV02-
07

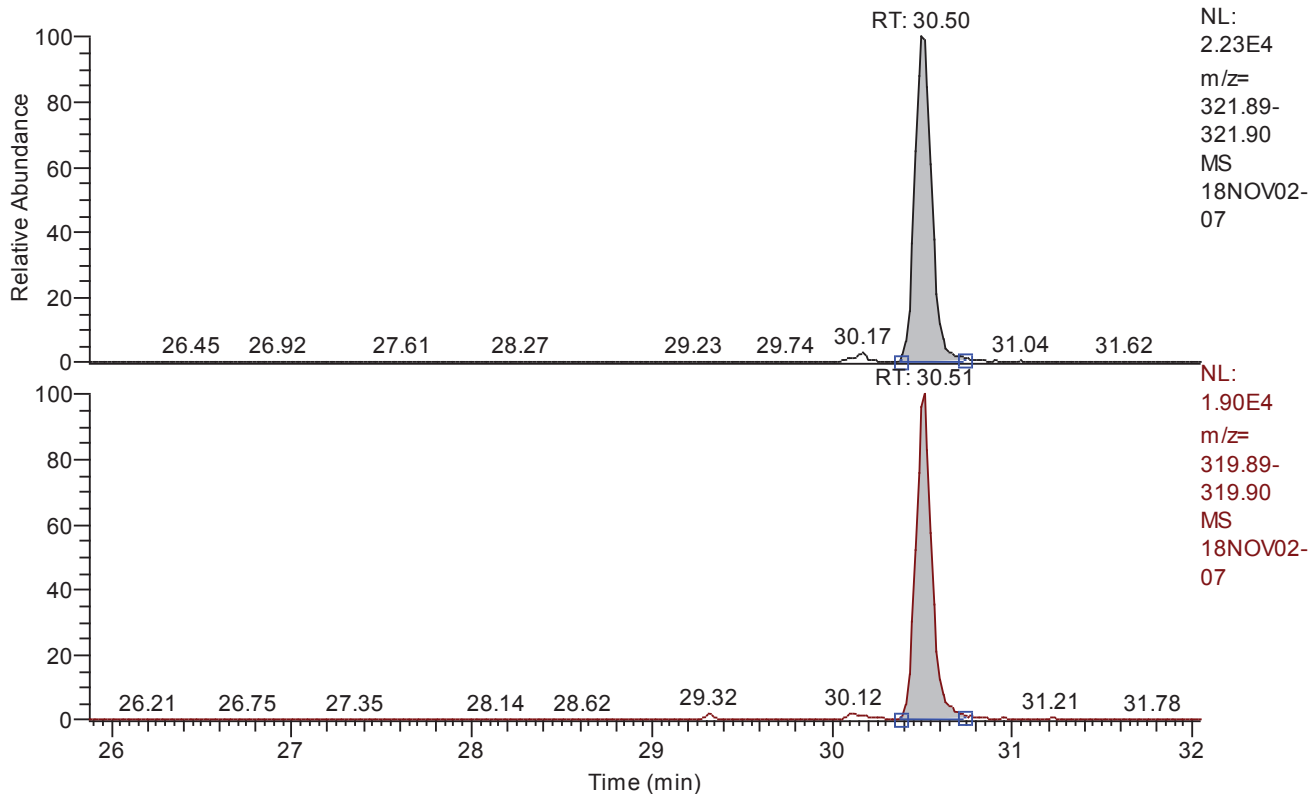
Entry Parameters

Compound Name	Total TCDF
QM Retention Time	28.23
QM Area	251321
QM Integration Mode	A
RM1 Area	202352
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2575
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 25.87 - 32.05 SM: 3G



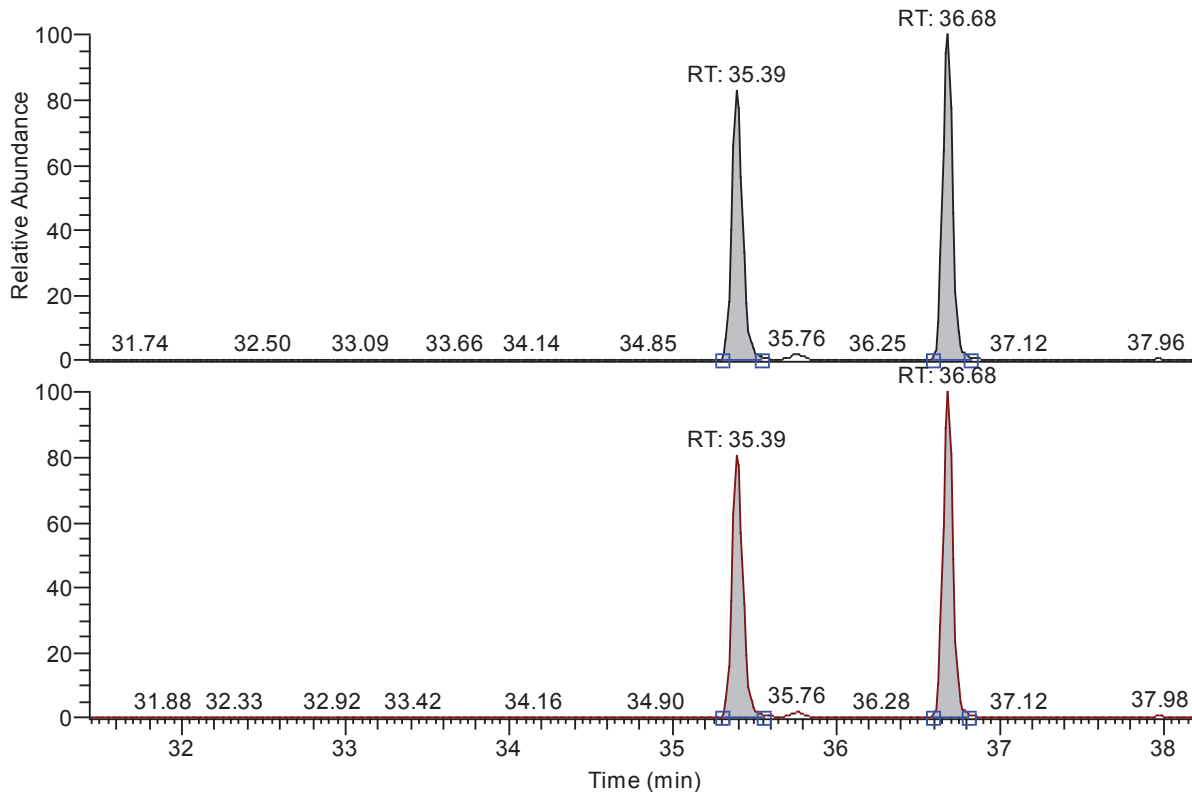
Entry Parameters

Compound Name	Total TCDD
QM Retention Time	28.96
QM Area	147096
QM Integration Mode	A
RM1 Area	116809
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	10.000000
Adjusted Amount (A)	10.0000
Signal-to-Noise	2517
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 31.43 - 38.23 SM: 3G



NL:
 2.03E5
 m/z=
 341.85-
 341.86
 MS
 18NOV02-
 07

NL:
 3.24E5
 m/z=
 339.86-
 339.86
 MS
 18NOV02-
 07

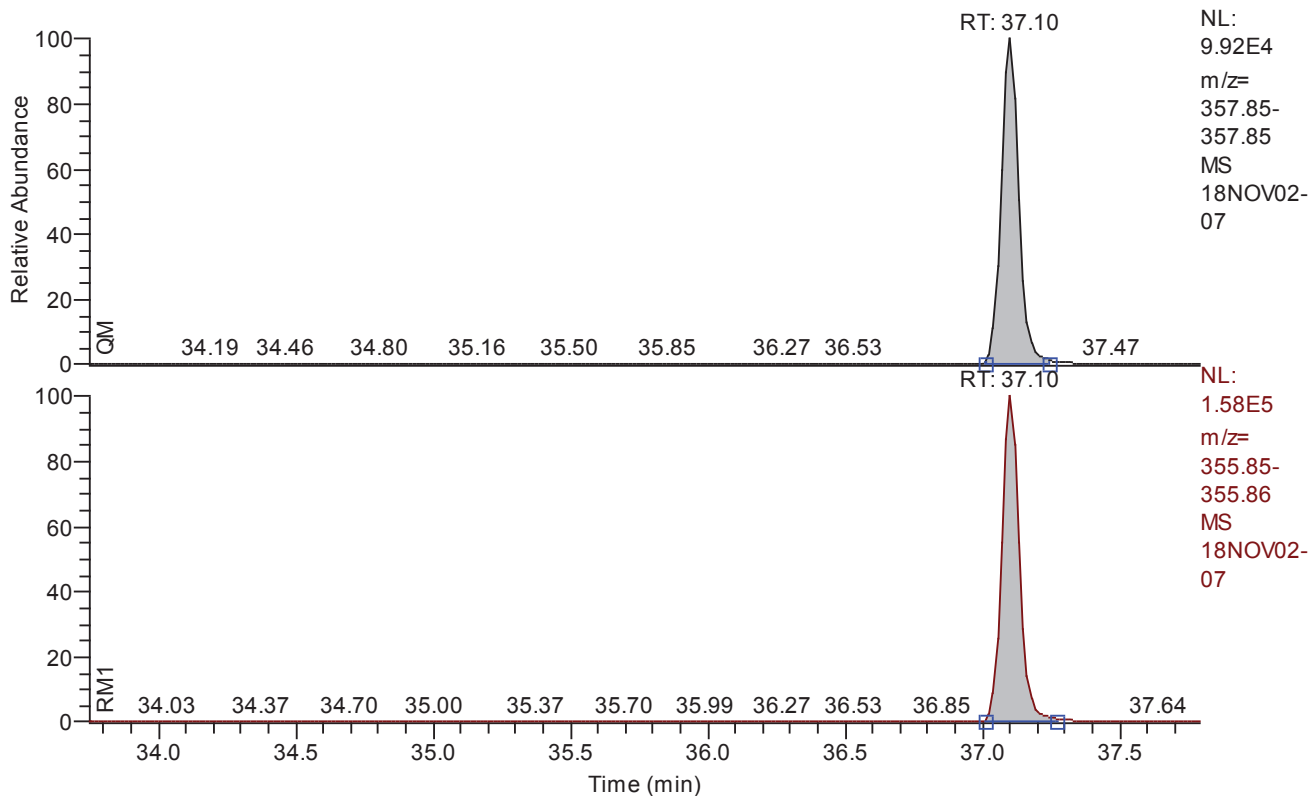
Entry Parameters

Compound Name	Total PeCDF
QM Retention Time	34.83
QM Area	1666732
QM Integration Mode	A
RM1 Area	2614324
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0091
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	13863
Client Flags	
Status Overview	passed (2)
Status Info	



Chromatogram

RT: 33.75 - 37.79 SM: 3G



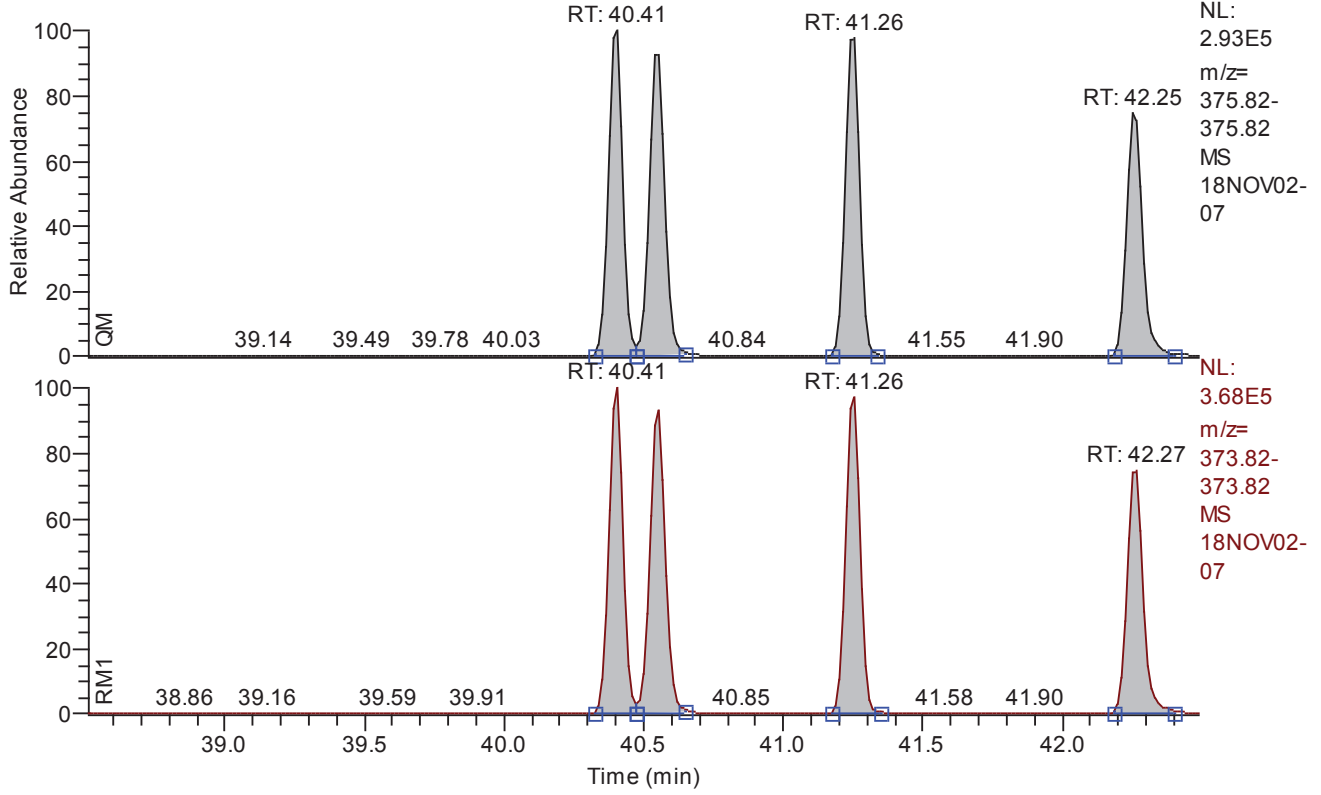
Entry Parameters

Compound Name	Total PeCDD
QM Retention Time	35.77
QM Area	438255
QM Integration Mode	A
RM1 Area	701442
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0158
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	8013
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 38.51 - 42.49 SM: 3G

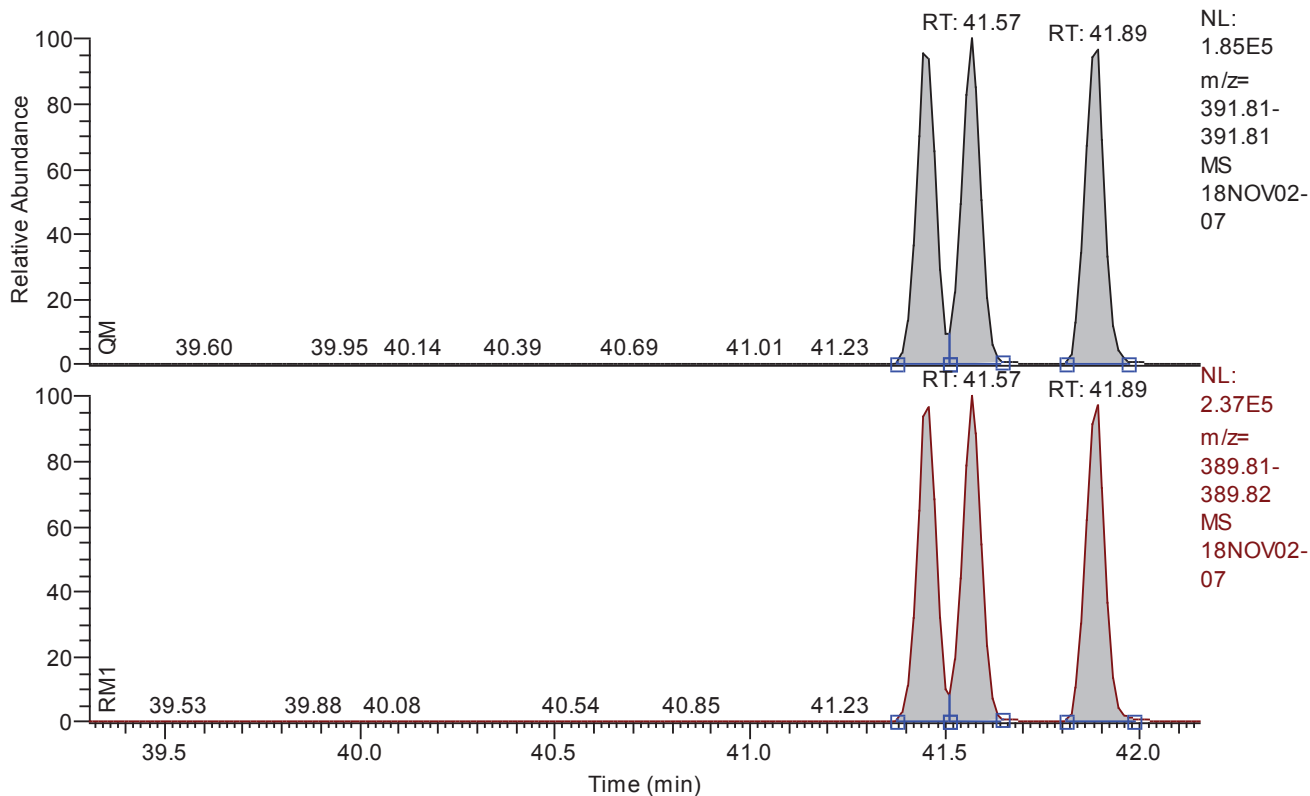


Entry Parameters

Compound Name	Total HxCDF
QM Retention Time	40.50
QM Area	3977447
QM Integration Mode	A
RM1 Area	4965315
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0166
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	7473
Client Flags	
Status Overview	passed (4)
Status Info	

Chromatogram

RT: 39.31 - 42.15 SM: 3G



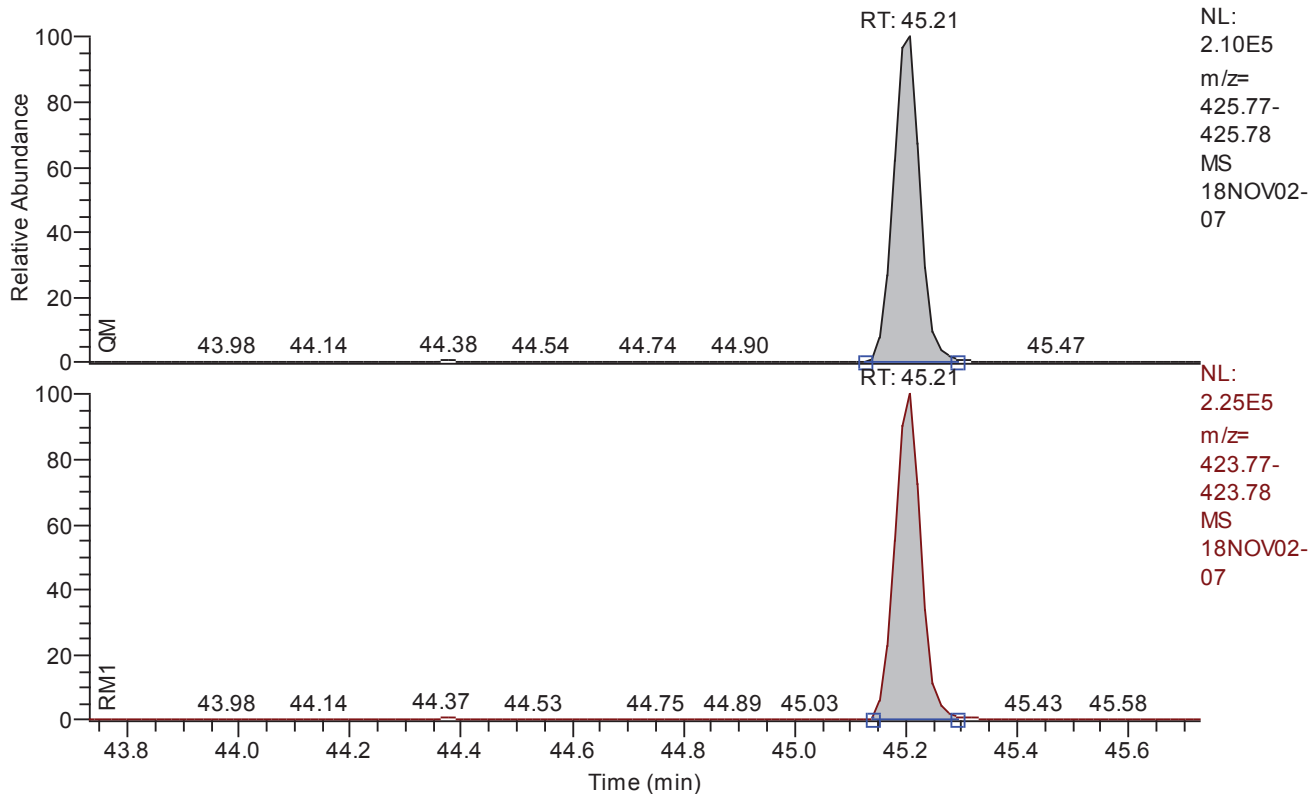
Entry Parameters

Compound Name	Total HxCDD
QM Retention Time	40.73
QM Area	1894813
QM Integration Mode	A
RM1 Area	2402333
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0115
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	150.0000
Signal-to-Noise	10819
Client Flags	
Status Overview	passed (3)
Status Info	



Chromatogram

RT: 43.73 - 45.73 SM: 3G

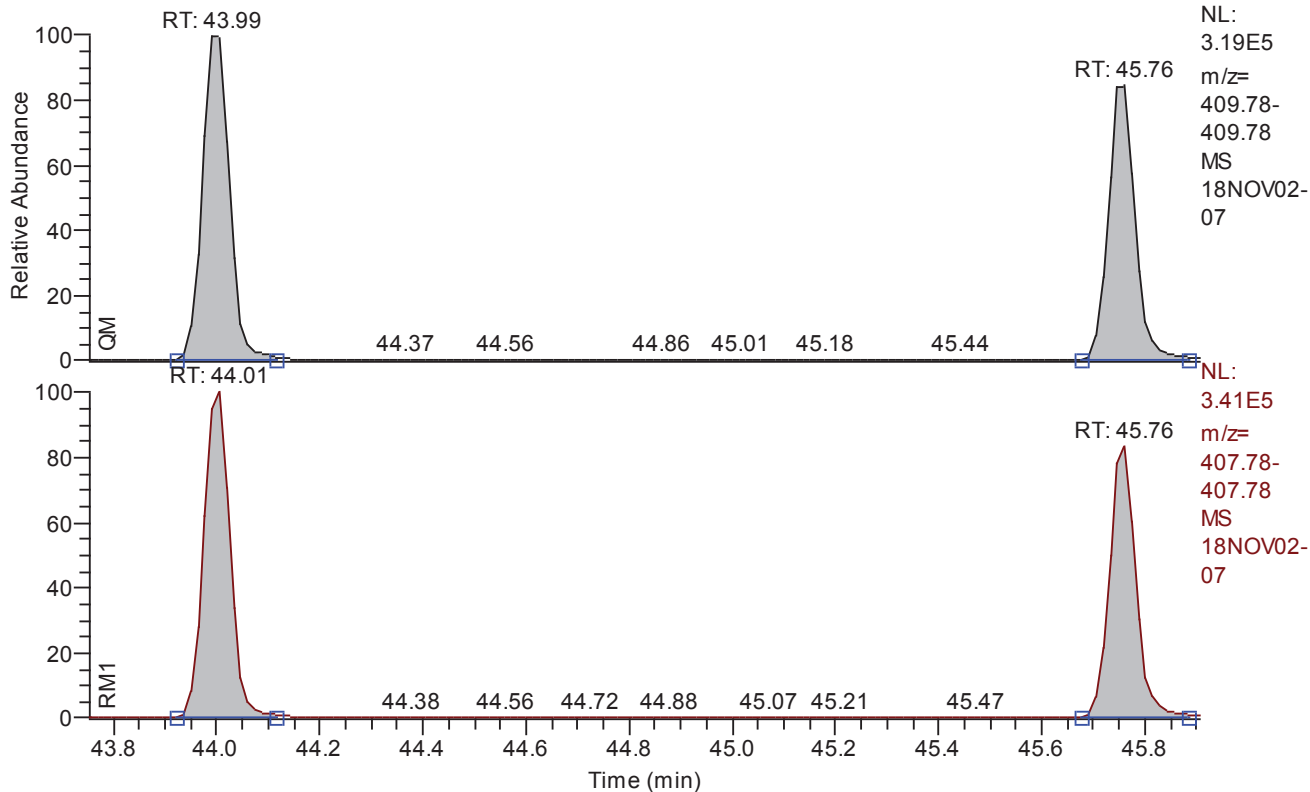


Entry Parameters

Compound Name	Total HpCDD
QM Retention Time	44.73
QM Area	706988
QM Integration Mode	A
RM1 Area	745393
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0164
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	50.0000
Signal-to-Noise	7431
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 43.75 - 45.91 SM: 3G



Entry Parameters

Compound Name	Total HpCDF
QM Retention Time	44.83
QM Area	2126714
QM Integration Mode	A
RM1 Area	2204478
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0181
Unqualified Amount (A)	50.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	6860
Client Flags	
Status Overview	passed (2)
Status Info	



Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Retention Time	RM1 Retention Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.33	29.33	29.33	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.50	30.50	30.51	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.39	35.39	35.39	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.68	36.68	36.68	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	37.10	37.10	37.10	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.41	40.41	40.41	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.56	40.56	40.56	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.26	41.26	41.26	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.45	41.45	41.46	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.57	41.57	41.57	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.89	41.89	41.89	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.25	42.25	42.27	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	43.99	43.99	44.01	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.21	45.21	45.21	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.76	45.76	45.76	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.23	48.23	48.23	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.41	48.41	48.41	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.92	30.92	30.92	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.64	29.64	29.64	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.31	40.31	40.31	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.32	29.32	29.32	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.48	30.48	30.48	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.37	35.37	35.37	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.65	36.65	36.67	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	37.09	37.09	37.09	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.38	40.38	40.38	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.53	40.53	40.53	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.23	41.23	41.23	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.43	41.43	41.43	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.55	41.55	41.55	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.86	41.86	41.86	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.24	42.24	42.24	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	43.99	43.99	43.99	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.19	45.19	45.19	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.75	45.75	45.75	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.22	48.22	48.22	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.39	48.39	48.39	passed	passed
38	Total TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	28.23	28.23	28.23	---	---
39	Total TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	28.96	28.96	28.96	---	---
40	Total PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	34.83	34.83	34.83	---	---
41	Total PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	35.77	35.77	35.77	---	---
42	Total HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.50	40.50	40.50	---	---
43	Total HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	40.73	40.73	40.73	---	---
44	Total HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	44.73	44.73	44.73	---	---
45	Total HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	44.83	44.83	44.83	---	---
46	Single TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	29.33	29.33	29.33	passed	passed
47	Single TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	30.50	30.50	30.51	passed	passed
48	Single PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	37.10	37.10	37.10	passed	passed
49	Single PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	36.68	36.68	36.68	passed	passed
50	Single PeCDD	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	35.39	35.39	35.39	passed	passed
51	Single HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	45.21	45.21	45.21	passed	passed
52	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.41	40.41	40.41	passed	passed
53	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.56	40.56	40.56	passed	passed
54	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	41.26	41.26	41.26	passed	passed
55	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	42.25	42.25	42.27	passed	passed
56	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.57	41.57	41.57	passed	passed
57	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.45	41.45	41.46	passed	passed
58	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.89	41.89	41.89	passed	passed
59	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	43.99	43.99	44.01	passed	passed
60	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	45.76	45.76	45.76	passed	passed



Entry Parameters

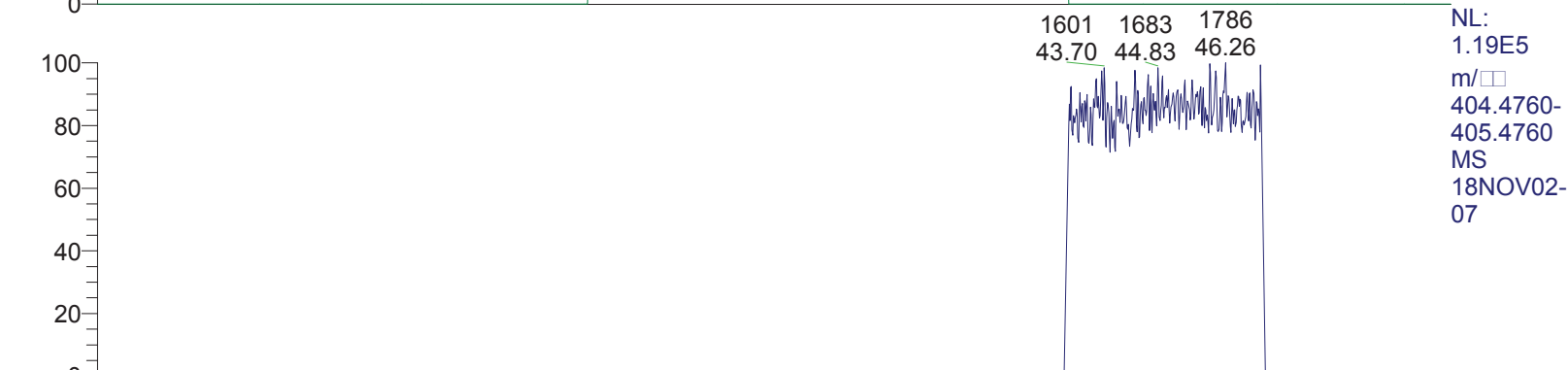
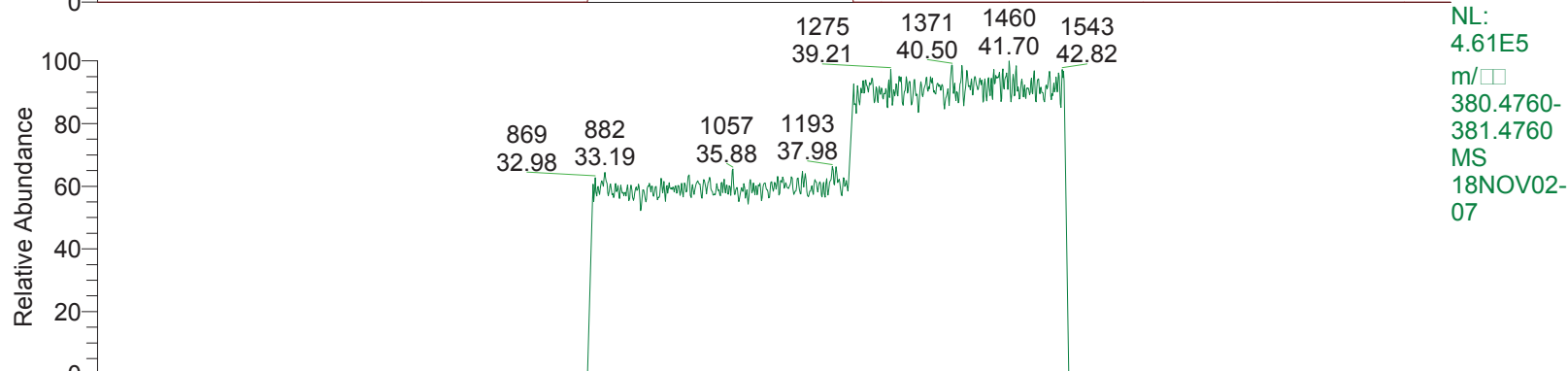
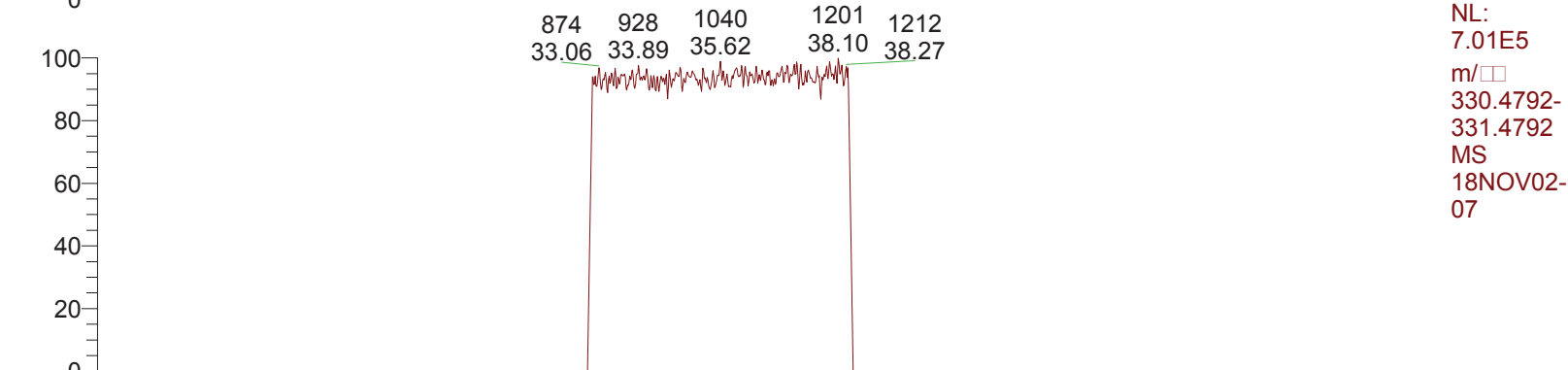
No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.33	0.8052	0.6450 - 0.8950	passed	100.00	0 - 0	passed
2	2378-TCDD	30.50	0.7941	0.6450 - 0.8950	passed	100.00	0 - 0	passed
3	12378-PeCDF	35.39	1.5657	1.3150 - 1.7850	passed	100.00	0 - 0	passed
4	23478-PeCDF	36.68	1.5711	1.3150 - 1.7850	passed	100.00	0 - 0	passed
5	12378-PeCDD	37.10	1.6005	1.3150 - 1.7850	passed	100.00	0 - 0	passed
6	123478-HxCDF	40.41	1.2387	1.0450 - 1.4350	passed	100.00	0 - 0	passed
7	123678-HxCDF	40.56	1.2532	1.0450 - 1.4350	passed	100.00	0 - 0	passed
8	234678-HxCDF	41.26	1.2455	1.0450 - 1.4350	passed	100.00	0 - 0	passed
9	123478-HxCDD	41.45	1.2646	1.0450 - 1.4350	passed	100.00	0 - 0	passed
10	123678-HxCDD	41.57	1.2741	1.0450 - 1.4350	passed	100.00	0 - 0	passed
11	123789-HxCDD	41.89	1.2649	1.0450 - 1.4350	passed	100.00	0 - 0	passed
12	123789-HxCDF	42.25	1.2576	1.0450 - 1.4350	passed	100.00	0 - 0	passed
13	1234678-HpCDF	43.99	1.0404	0.8750 - 1.2050	passed	100.00	0 - 0	passed
14	1234678-HpCDD	45.21	1.0543	0.8750 - 1.2050	passed	100.00	0 - 0	passed
15	1234789-HpCDF	45.76	1.0321	0.8750 - 1.2050	passed	100.00	0 - 0	passed
16	OCDD	48.23	0.9035	0.7550 - 1.0250	passed	100.00	0 - 0	passed
17	OCDF	48.41	0.8999	0.7550 - 1.0250	passed	100.00	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.92	0.8484	0.6450 - 0.8950	passed	100.00	0 - 0	passed
19	13C12-1234-TCDD	29.64	0.7955	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.31	1.2784	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.32	0.7773	0.6450 - 0.8950	passed	100.00	0 - 0	passed
22	13C12-2378-TCDD	30.48	0.7929	0.6450 - 0.8950	passed	100.00	0 - 0	passed
23	13C12-12378-PeCDF	35.37	1.5825	1.3150 - 1.7850	passed	100.00	0 - 0	passed
24	13C12-23478-PeCDF	36.65	1.6110	1.3150 - 1.7850	passed	100.00	0 - 0	passed
25	13C12-12378-PeCDD	37.09	1.6062	1.3150 - 1.7850	passed	100.00	0 - 0	passed
26	13C12-123478-HxCDF	40.38	0.5321	0.4250 - 0.5950	passed	100.00	0 - 0	passed
27	13C12-123678-HxCDF	40.53	0.5427	0.4250 - 0.5950	passed	100.00	0 - 0	passed
28	13C12-234678-HxCDF	41.23	0.5382	0.4250 - 0.5950	passed	100.00	0 - 0	passed
29	13C12-123478-HxCDD	41.43	1.3176	1.0450 - 1.4350	passed	100.00	0 - 0	passed
30	13C12-123678-HxCDD	41.55	1.2651	1.0450 - 1.4350	passed	100.00	0 - 0	passed
31	13C12-123789-HxCDD	41.86	1.2913	1.0450 - 1.4350	passed	100.00	0 - 0	passed
32	13C12-123789-HxCDF	42.24	0.5275	0.4250 - 0.5950	passed	100.00	0 - 0	passed
33	13C12-1234678-HpCDF	43.99	0.4666	0.3650 - 0.5150	passed	100.00	0 - 0	passed
34	13C12-1234678-HpCDD	45.19	1.0719	0.8750 - 1.2050	passed	100.00	0 - 0	passed
35	13C12-1234789-HpCDF	45.75	0.4644	0.3650 - 0.5150	passed	100.00	0 - 0	passed
36	13C12-OCDD	48.22	0.9073	0.7550 - 1.0250	passed	100.00	0 - 0	passed
37	13C12-OCDF	48.39	0.9088	0.7550 - 1.0250	passed	100.00	0 - 0	passed
38	Total TCDF	28.23	0.8052	0.6450 - 0.8950	---	100.00	0 - 0	---
39	Total TCDD	28.96	0.7941	0.6450 - 0.8950	---	100.00	0 - 0	---
40	Total PeCDF	34.83	1.5685	1.3150 - 1.7850	---	100.00	0 - 0	---
41	Total PeCDD	35.77	1.6005	1.3150 - 1.7850	---	100.00	0 - 0	---
42	Total HxCDF	40.50	1.2484	1.0450 - 1.4350	---	100.00	0 - 0	---
43	Total HxCDD	40.73	1.2678	1.0450 - 1.4350	---	100.00	0 - 0	---
44	Total HpCDD	44.73	1.0543	0.8750 - 1.2050	---	100.00	0 - 0	---
45	Total HpCDF	44.83	1.0366	0.8750 - 1.2050	---	100.00	0 - 0	---
46	Single TCDF	29.33	0.8052	0.6450 - 0.8950	passed	100.00	0 - 0	passed
47	Single TCDD	30.50	0.7941	0.6450 - 0.8950	passed	100.00	0 - 0	passed
48	Single PeCDD	37.10	1.6005	1.3150 - 1.7850	passed	100.00	0 - 0	passed
49	Single PeCDF	36.68	1.5711	1.3150 - 1.7850	passed	100.00	0 - 0	passed
50	Single PeCDF	35.39	1.5657	1.3150 - 1.7850	passed	100.00	0 - 0	passed
51	Single HpCDD	45.21	1.0543	0.8750 - 1.2050	passed	100.00	0 - 0	passed
52	Single HxCDF	40.41	1.2387	1.0450 - 1.4350	passed	100.00	0 - 0	passed
53	Single HxCDF	40.56	1.2532	1.0450 - 1.4350	passed	100.00	0 - 0	passed
54	Single HxCDF	41.26	1.2455	1.0450 - 1.4350	passed	100.00	0 - 0	passed
55	Single HxCDF	42.25	1.2576	1.0450 - 1.4350	passed	100.00	0 - 0	passed
56	Single HxCDD	41.57	1.2741	1.0450 - 1.4350	passed	100.00	0 - 0	passed
57	Single HxCDD	41.45	1.2646	1.0450 - 1.4350	passed	100.00	0 - 0	passed
58	Single HxCDD	41.89	1.2649	1.0450 - 1.4350	passed	100.00	0 - 0	passed
59	Single HpCDF	43.99	1.0404	0.8750 - 1.2050	passed	100.00	0 - 0	passed
60	Single HpCDF	45.76	1.0321	0.8750 - 1.2050	passed	100.00	0 - 0	passed



Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.33	251321	A	202352	A	0.0095	10.000000	10.0000	10.000000	2575	
2	2378-TCDD	passed	30.50	147096	A	116809	A	0.0095	10.000000	10.0000	10.000000	2517	
3	12378-PeCDF	passed	35.39	788300	A	1234225	A	0.0099	50.000000	50.0000	50.000000	12456	
4	23478-PeCDF	passed	36.68	878432	A	1380099	A	0.0083	50.000000	50.0000	50.000000	15270	
5	12378-PeCDD	passed	37.10	438255	A	701442	A	0.0158	50.000000	50.0000	50.000000	8013	
6	123478-HxCDF	passed	40.41	1036885	A	1284347	A	0.0157	50.000000	50.0000	50.000000	8170	
7	123678-HxCDF	passed	40.56	1037006	A	1299559	A	0.0159	50.000000	50.0000	50.000000	7587	
8	234678-HxCDF	passed	41.26	1033180	A	1286848	A	0.0154	50.000000	50.0000	50.000000	8005	
9	123478-HxCDD	passed	41.45	628259	A	794491	A	0.0116	50.000000	50.0000	50.000000	10644	
10	123678-HxCDD	passed	41.57	627171	A	799069	A	0.0113	50.000000	50.0000	50.000000	11057	
11	123789-HxCDD	passed	41.89	639384	A	808773	A	0.0116	50.000000	50.0000	50.000000	10757	
12	123789-HxCDF	passed	42.25	870377	A	1094560	A	0.0197	50.000000	50.0000	50.000000	6131	
13	1234678-HpCDF	passed	43.99	1147032	A	1193386	A	0.0167	50.000000	50.0000	50.000000	7462	
14	1234678-HpCDD	passed	45.21	706988	A	745393	A	0.0164	50.000000	50.0000	50.000000	7431	
15	1234789-HpCDF	passed	45.76	979683	A	1011092	A	0.0196	50.000000	50.0000	50.000000	6259	
16	OCDD	passed	48.23	1613076	A	1457367	A	0.0118	100.000000	100.0000	100.000000	21601	
17	OCDF	passed	48.41	2049645	A	1844391	A	0.0103	100.000000	100.0000	100.000000	24571	
18	13C12-1278-TCDD (CRS)	passed	30.92	127150	A	107879	A	0.0347	10.000000	10.0000	10.000000	717	
19	13C12-1234-TCDD	passed	29.64	1179692	A	938433	A	0.0385	100.000000	100.0000	100.000000	6491	
20	13C12-123468-HxCDD	passed	40.31	1169984	A	1495747	A	0.0238	100.000000	100.0000	100.000000	10522	
21	13C12-2378-TCDF	passed	29.32	2453128	A	1906748	A	0.0157	100.000000	100.0000	100.000000	16747	
22	13C12-2378-TCDD	passed	30.48	1213080	A	961850	A	0.0375	100.000000	100.0000	100.000000	6960	
23	13C12-12378-PeCDF	passed	35.37	1623435	A	2569103	A	0.0487	100.000000	100.0000	100.000000	7077	
24	13C12-23478-PeCDF	passed	36.65	1621146	A	2611623	A	0.0482	100.000000	100.0000	100.000000	7605	
25	13C12-12378-PeCDD	passed	37.09	874234	A	1404187	A	0.0278	100.000000	100.0000	100.000000	12804	
26	13C12-123478-HxCDF	passed	40.38	2600052	A	1383365	A	0.0254	100.000000	100.0000	100.000000	9738	
27	13C12-123678-HxCDF	passed	40.53	2753400	A	1494375	A	0.0238	100.000000	100.0000	100.000000	10145	
28	13C12-234678-HxCDF	passed	41.23	2542233	A	1368202	A	0.0259	100.000000	100.0000	100.000000	9743	
29	13C12-123478-HxCDD	passed	41.43	1174765	A	1547837	A	0.0233	100.000000	100.0000	100.000000	11035	
30	13C12-123678-HxCDD	passed	41.55	1258771	A	1592530	A	0.0222	100.000000	100.0000	100.000000	11811	
31	13C12-123789-HxCDD	passed	41.86	1159010	A	1496654	A	0.0238	100.000000	100.0000	100.000000	10571	
32	13C12-123789-HxCDF	passed	42.24	2351497	A	1240499	A	0.0282	100.000000	100.0000	100.000000	8255	
33	13C12-1234678-HpCDF	passed	43.99	2551599	A	1190473	A	0.0274	100.000000	100.0000	100.000000	9227	
34	13C12-1234678-HpCDD	passed	45.19	1347044	A	1443854	A	0.0201	100.000000	100.0000	100.000000	13626	
35	13C12-1234789-HpCDF	passed	45.75	2164286	A	1005152	A	0.0323	100.000000	100.0000	100.000000	7827	
36	13C12-OCDD	passed	48.22	3176986	A	2882357	A	0.0189	200.000000	200.0000	200.000000	29741	
37	13C12-OCDF	passed	48.39	4633232	A	4210701	A	0.0137	200.000000	200.0000	200.000000	40986	
38	Total TCDF	passed (1)	28.23	251321	A	202352	A	0.0095	10.000000	10.0000	10.000000	2575	
39	Total TCDD	passed (1)	28.96	147096	A	116809	A	0.0095	10.000000	10.0000	10.000000	2517	
40	Total PeCDF	passed (2)	34.83	1666732	A	2614324	A	0.0091	50.000000	50.0000	50.000000	13863	
41	Total PeCDD	passed (1)	35.77	438255	A	701442	A	0.0158	50.000000	50.0000	50.000000	8013	
42	Total HxCDF	passed (4)	40.50	3977447	A	4965315	A	0.0166	50.000000	200.0000	50.000000	7473	
43	Total HxCDD	passed (3)	40.73	1894813	A	2402333	A	0.0115	50.000000	150.0000	50.000000	10819	
44	Total HpCDD	passed (1)	44.73	706988	A	745393	A	0.0164	50.000000	50.0000	50.000000	7431	
45	Total HpCDF	passed (2)	44.83	2126714	A	2204478	A	0.0181	50.000000	100.0000	50.000000	6860	
46	Single TCDF	passed	29.33	251321	A	202352	A	0.0095	10.000000	10.0000	10.000000	2575	
47	Single TCDD	passed	30.50	147096	A	116809	A	0.0095	10.000000	10.0000	10.000000	2517	
48	Single PeCDF	passed	37.10	438255	A	701442	A	0.0158	50.000000	50.0000	50.000000	8013	
49	Single PeCDD	passed	36.68	878432	A	1380099	A	0.0086	50.000000	50.0000	50.000000	15270	
50	Single HxCDF	passed	35.39	788300	A	1234225	A	0.0096	50.000000	50.0000	50.000000	12456	
51	Single HxCDD	passed	45.21	706988	A	745393	A	0.0164	50.000000	50.0000	50.000000	7431	
52	Single HxCDF	passed	40.41	1036885	A	1284347	A	0.0159	50.000000	50.0000	50.000000	8170	
53	Single HxCDF	passed	40.56	1037006	A	1299559	A	0.0158	50.000000	50.0000	50.000000	7587	
54	Single HxCDF	passed	41.26	1033180	A	1286848	A	0.0159	50.000000	50.0000	50.000000	8005	
55	Single HxCDF	passed	42.25	870377	A	1094560	A	0.0188	50.000000	50.0000	50.000000	6131	
56	Single HxCDD	passed	41.57	627171	A	799069	A	0.0116	50.000000	50.0000	50.000000	11057	
57	Single HxCDD	passed	41.45	628259	A	794491	A	0.0116	50.000000	50.0000	50.000000	10644	
58	Single HxCDD	passed	41.89	639384	A	808773	A	0.0114	50.000000	50.0000	50.000000	10757	
59	Single HpCDF	passed	43.99	1147032	A	1193386	A	0.0167	50.000000	50.0000	50.000000	7462	
60	Single HpCDF	passed	45.76	979683	A	1011092	A	0.0196	50.000000	50.0000	50.000000	6259	

RT: 22.50 - 51.00



APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 20:26:24 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 20:26:23

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 7349737c-0d23-45de-89a6-193501cb8be3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



18NOV02-07

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	96.5000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0381	FVSR	0.0364
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	96.5000	LKM	442.9723	MASS	96.5000
MDAC	1410600.9560	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9841	RELEN	0.0000
RES	12218.2380	RPUSHER	-6.0879	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	96.5000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.2e-003 mbar
Pirani Source: 3.7e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11662.
MID Time window 2: Resolution is 11430.
MID Time window 3: Resolution is 12034.
MID Time window 4: Resolution is 12001.



18NOV02-07

MID Time Window 5: Resolution is 12904.
MID Time Window 6: Resolution is 12218.

Amplifier Offset: 81.

*** File closed Fri Nov 02 21:17:26 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 21:17
Number of Entries 64
Comment
Vial 7
Sample Name CALDF51837B
Sample ID CS401
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

Quan x:\18nov02\18nov02-08.quan
Data x:\18nov02\18nov02-08.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT Status	Status Info
1	2378-TCDF	29.31	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.49	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.36	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.66	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.07	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.39	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.53	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.22	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.42	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.54	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.85	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.23	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.97	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.17	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.73	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.21	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.39	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.88	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.61	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.29	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.29	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.45	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.35	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.64	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.06	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.36	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.51	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.21	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.41	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.53	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.84	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.22	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.96	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.16	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.71	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.20	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.37	passed	passed	passed	passed	passed	passed	passed
38	Total TCDF	28.23	passed (1)	---	---	---	---	---	---
39	Total TCDD	28.96	passed (1)	---	---	---	---	---	---
40	Total PeCDF	34.83	passed (2)	---	---	---	---	---	---
41	Total PeCDD	35.77	passed (1)	---	---	---	---	---	---
42	Total HxCDF	40.50	passed (4)	---	---	---	---	---	---
43	Total HxCDD	40.73	passed (3)	---	---	---	---	---	---
44	Total HpCDD	44.73	passed (1)	---	---	---	---	---	---
45	Total HpCDF	44.83	passed (2)	---	---	---	---	---	---
46	Single TCDF	29.31	passed	passed	passed	passed	passed	passed	passed
47	Single TCDD	30.49	passed	passed	passed	passed	passed	passed	passed
48	Single PeCDD	37.07	passed	passed	passed	passed	passed	passed	passed
49	Single PeCDF	36.66	passed	passed	passed	passed	passed	passed	passed
50	Single PeCDD	35.36	passed	passed	passed	passed	passed	passed	passed
51	Single HpCDD	45.17	passed	passed	passed	passed	passed	passed	passed
52	Single HxCDF	41.22	passed	passed	passed	passed	passed	passed	passed
53	Single HxCDF	40.39	passed	passed	passed	passed	passed	passed	passed
54	Single HxCDF	40.53	passed	passed	passed	passed	passed	passed	passed
55	Single HxCDF	42.23	passed	passed	passed	passed	passed	passed	passed
56	Single HxCDD	41.54	passed	passed	passed	passed	passed	passed	passed
57	Single HxCDD	41.42	passed	passed	passed	passed	passed	passed	passed
58	Single HxCDD	41.85	passed	passed	passed	passed	passed	passed	passed
59	Single HpCDF	43.97	passed	passed	passed	passed	passed	passed	passed
60	Single HpCDD	45.73	passed	passed	passed	passed	passed	passed	passed



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/02 21:17
Number of Entries 64
Comment
Vial 7
Sample Name CALDF51837B
Sample ID CS401
Inst ID DF17611-18NOV02
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

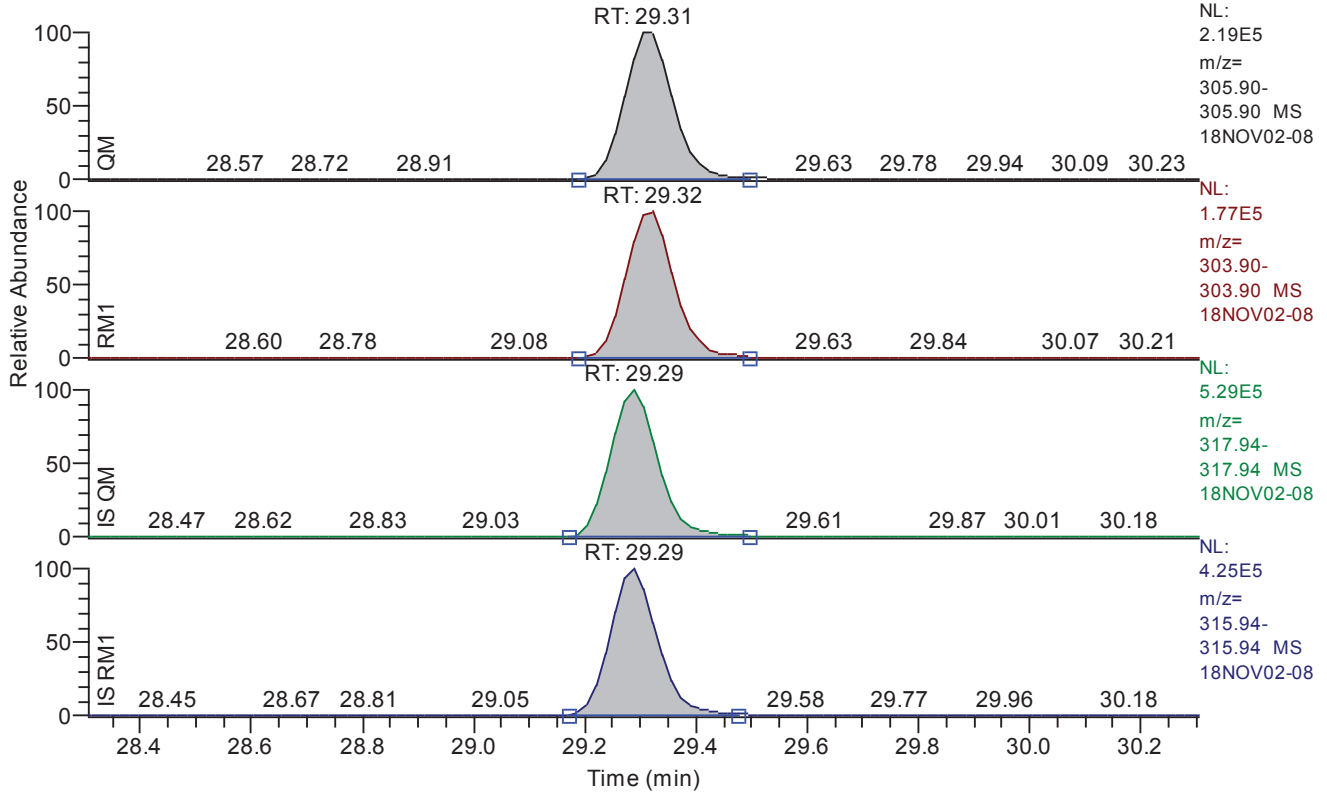
Quan x:\18nov02\18nov02-08.quan
Data x:\18nov02\18nov02-08.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Single Point (Spec. RF)
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.31 - 30.31 SM: 3G

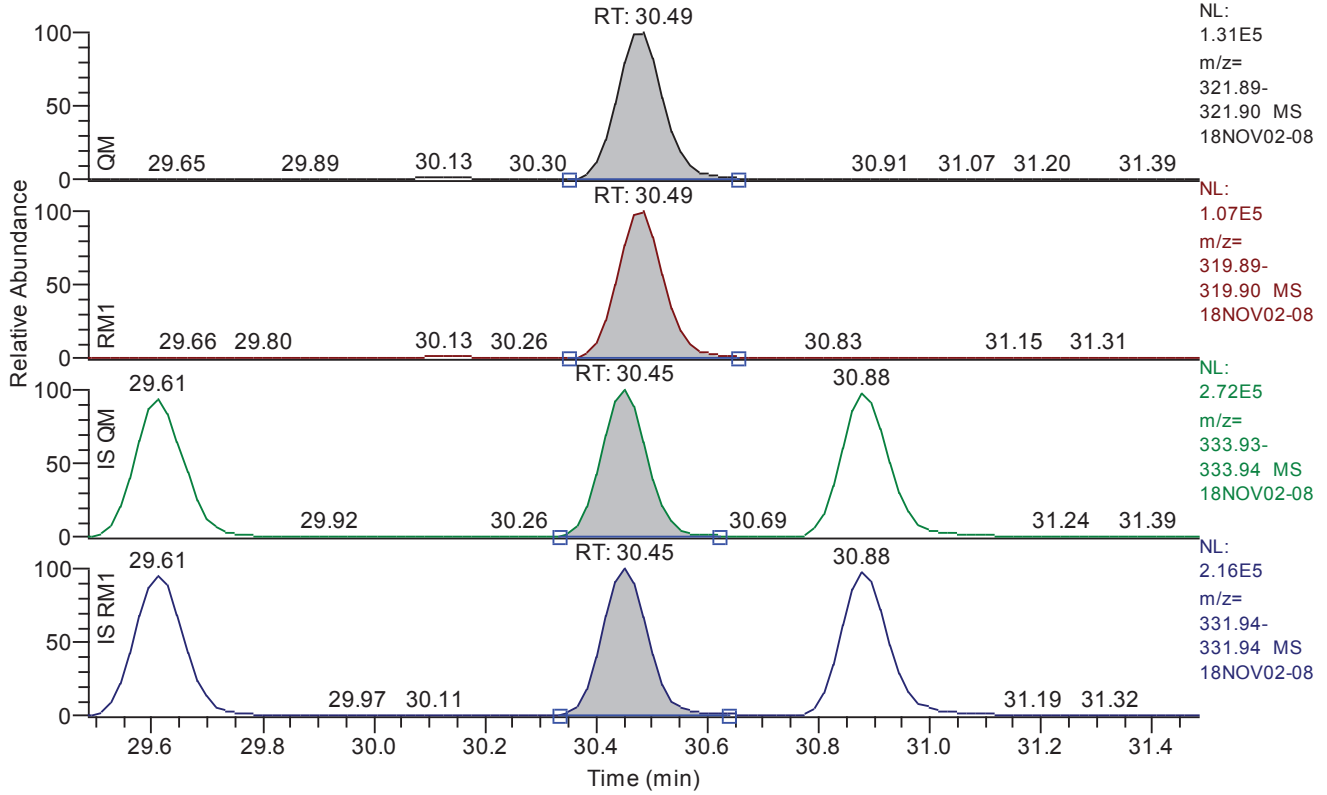


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.31
QM Area	1345764
QM Integration Mode	A
RM1 Area	1084970
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0105
Unqualified Amount (A)	40.000000
Adjusted Amount (A)	40.0000
Signal-to-Noise	9243
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.49 - 31.49 SM: 3G

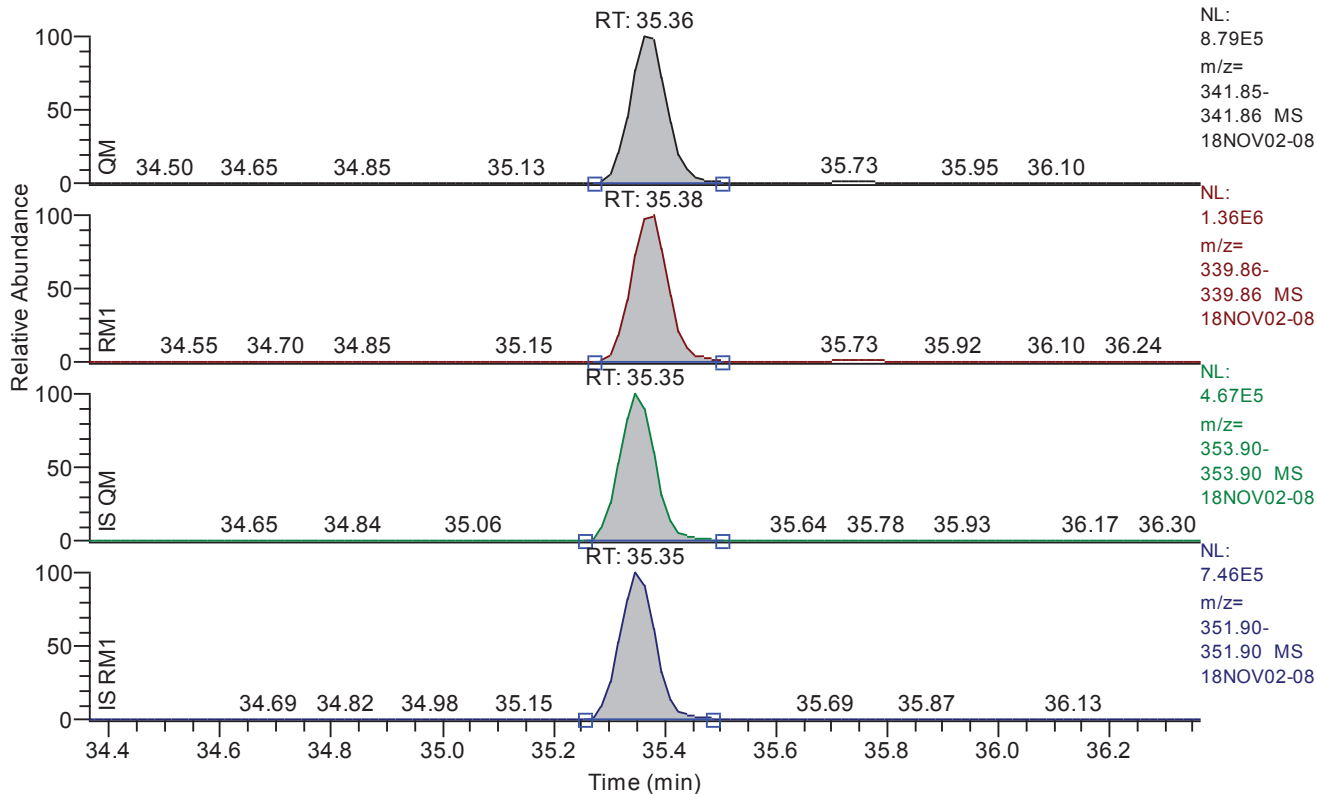


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.49
QM Area	783452
QM Integration Mode	A
RM1 Area	634232
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0101
Unqualified Amount (A)	40.000000
Adjusted Amount (A)	40.0000
Signal-to-Noise	9693
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.36 - 36.36 SM: 3G



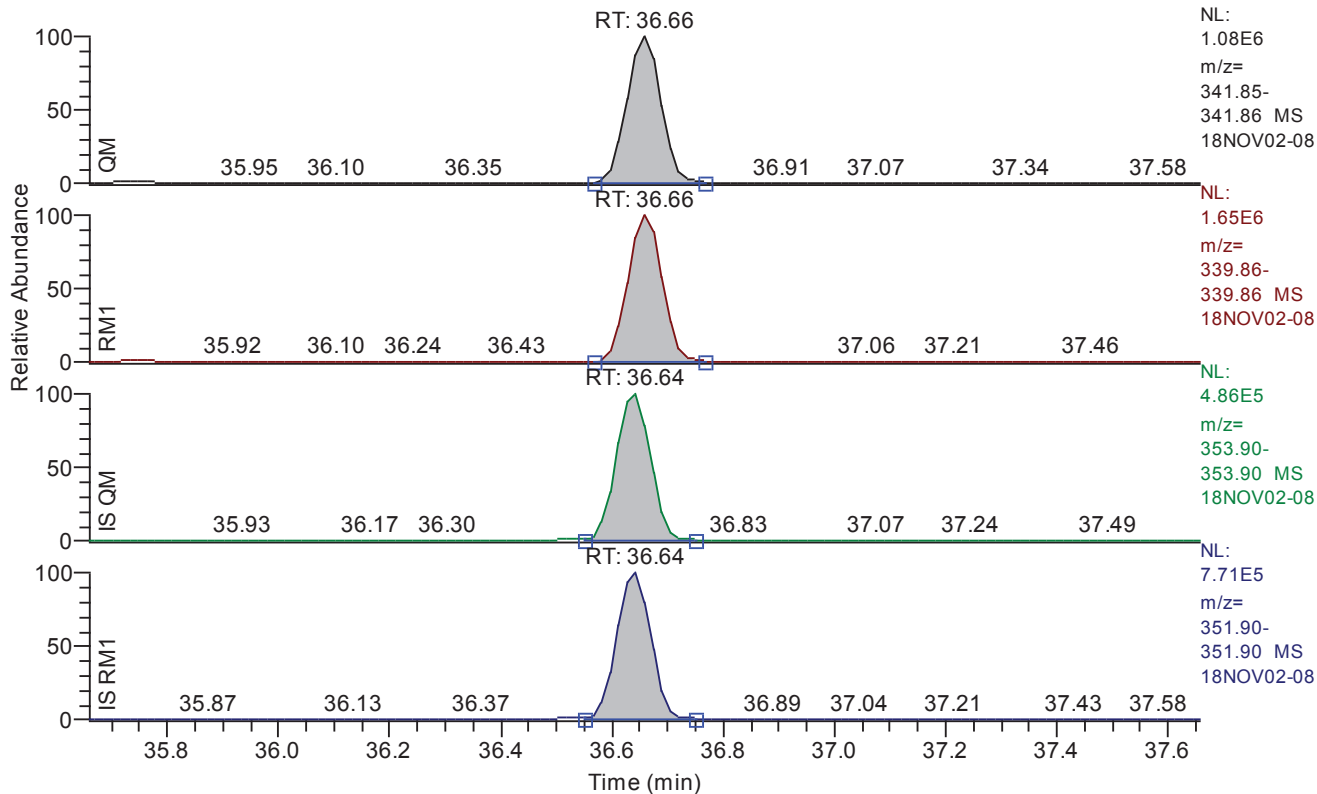
Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.36
QM Area	4078765
QM Integration Mode	A
RM1 Area	6328757
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0116
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	41863
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 35.66 - 37.66 SM: 3G

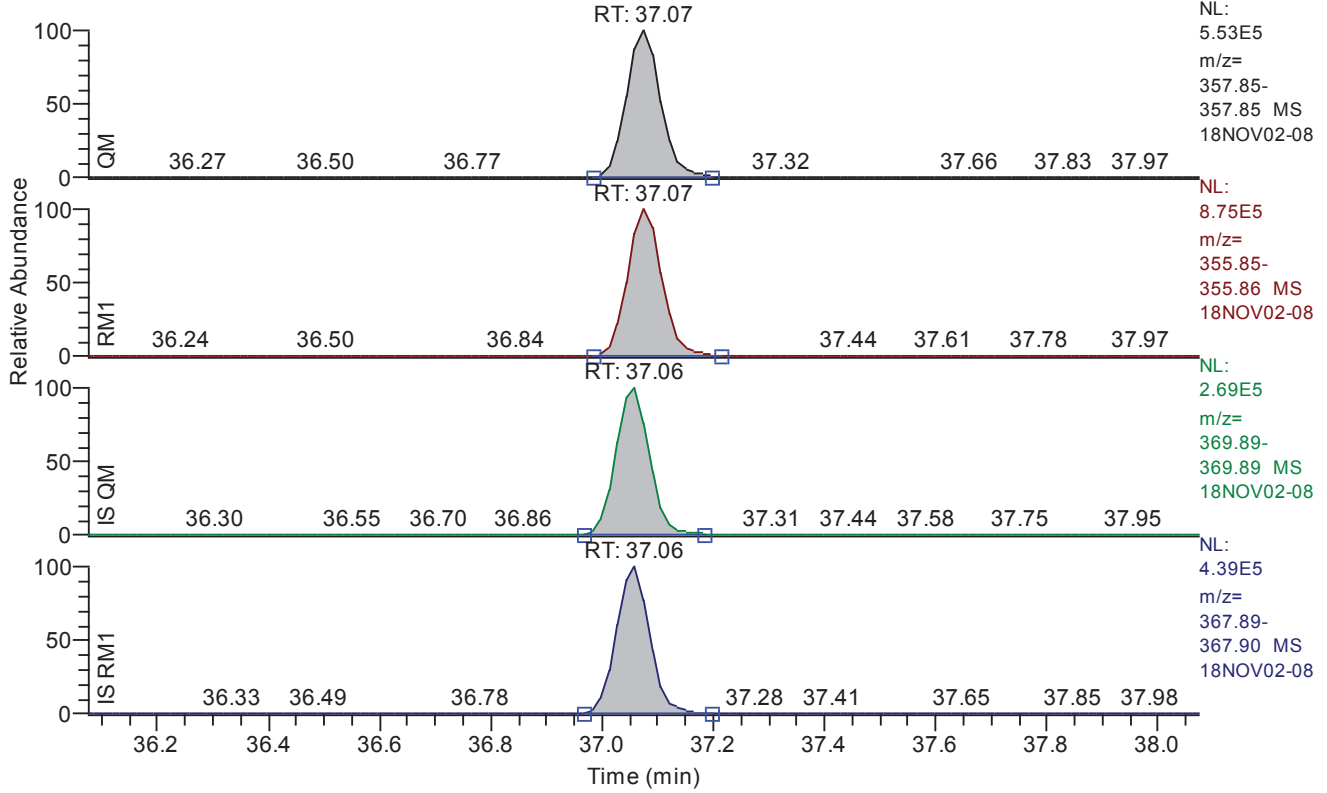


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.66
QM Area	4590509
QM Integration Mode	A
RM1 Area	7092007
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0099
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	51015
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.07 - 38.07 SM: 3G



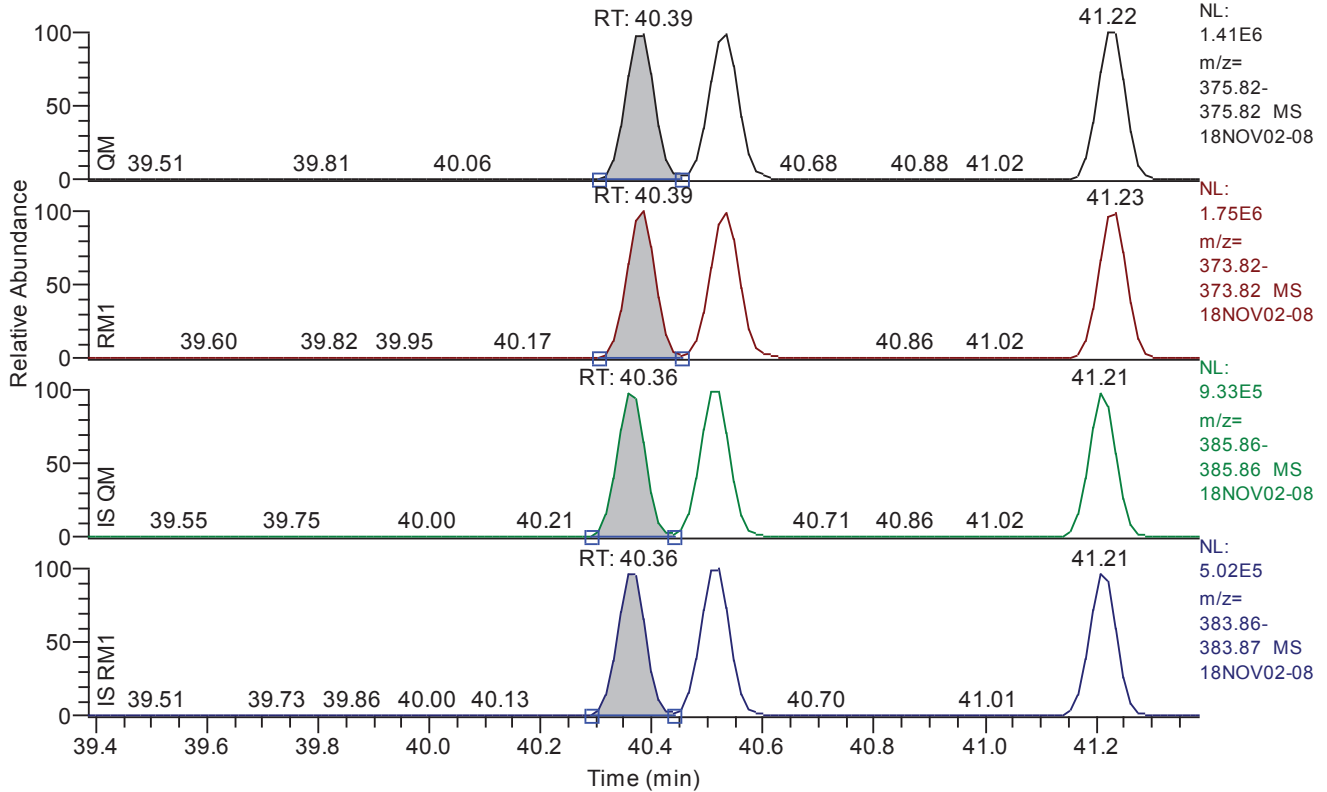
Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.07
QM Area	2343612
QM Integration Mode	A
RM1 Area	3736560
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0200
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	24579
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 39.39 - 41.39 SM: 3G



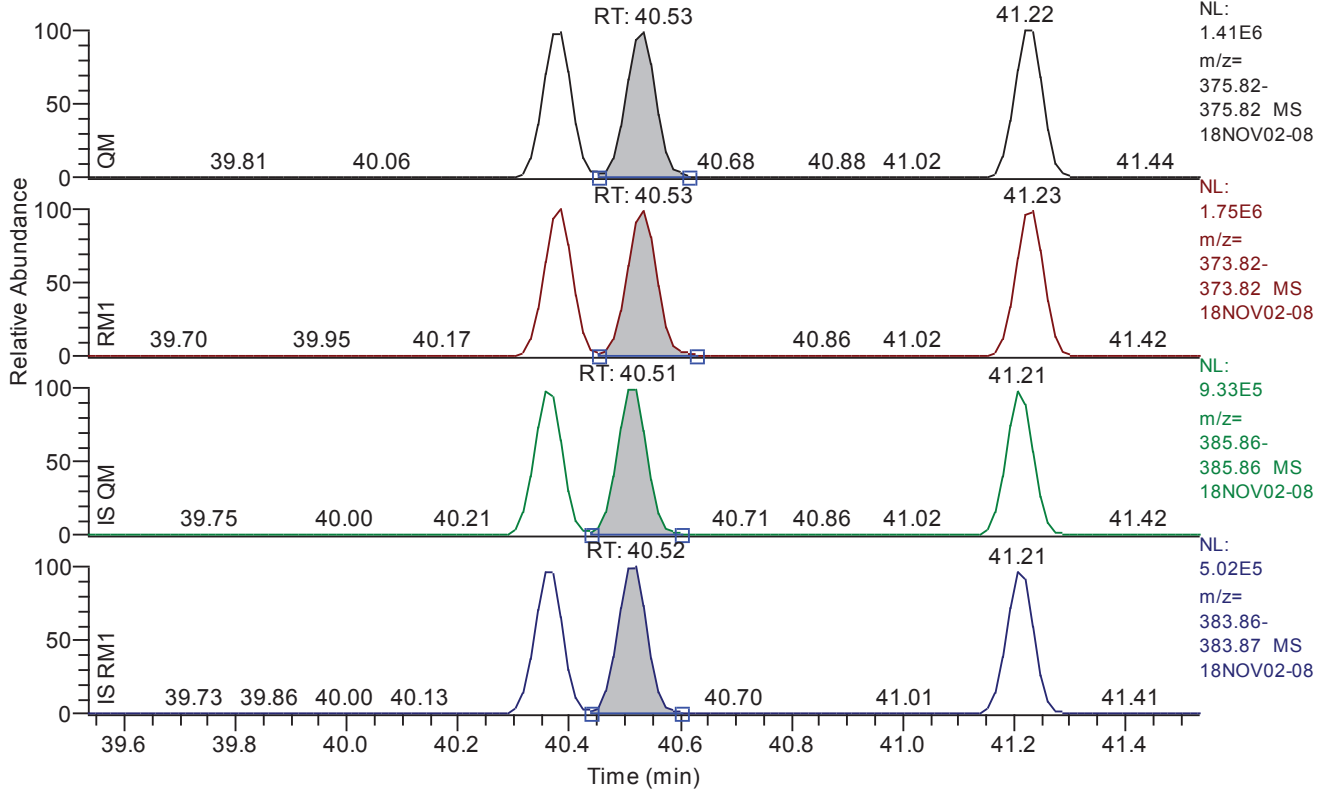
Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.39
QM Area	5103571
QM Integration Mode	A
RM1 Area	6278509
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0245
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	20214
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 39.53 - 41.53 SM: 3G



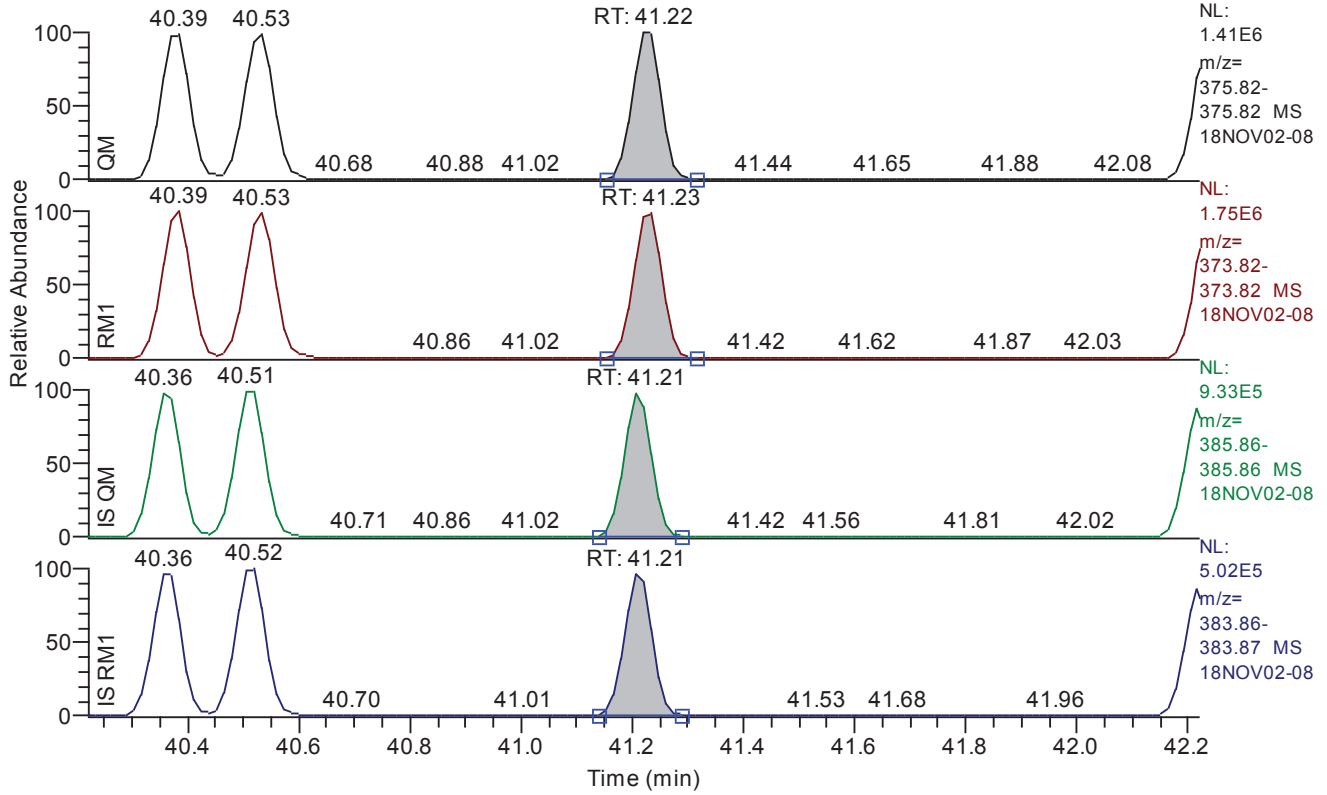
Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.53
QM Area	5198980
QM Integration Mode	A
RM1 Area	6474670
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0250
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	20065
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.22 - 42.22 SM: 3G

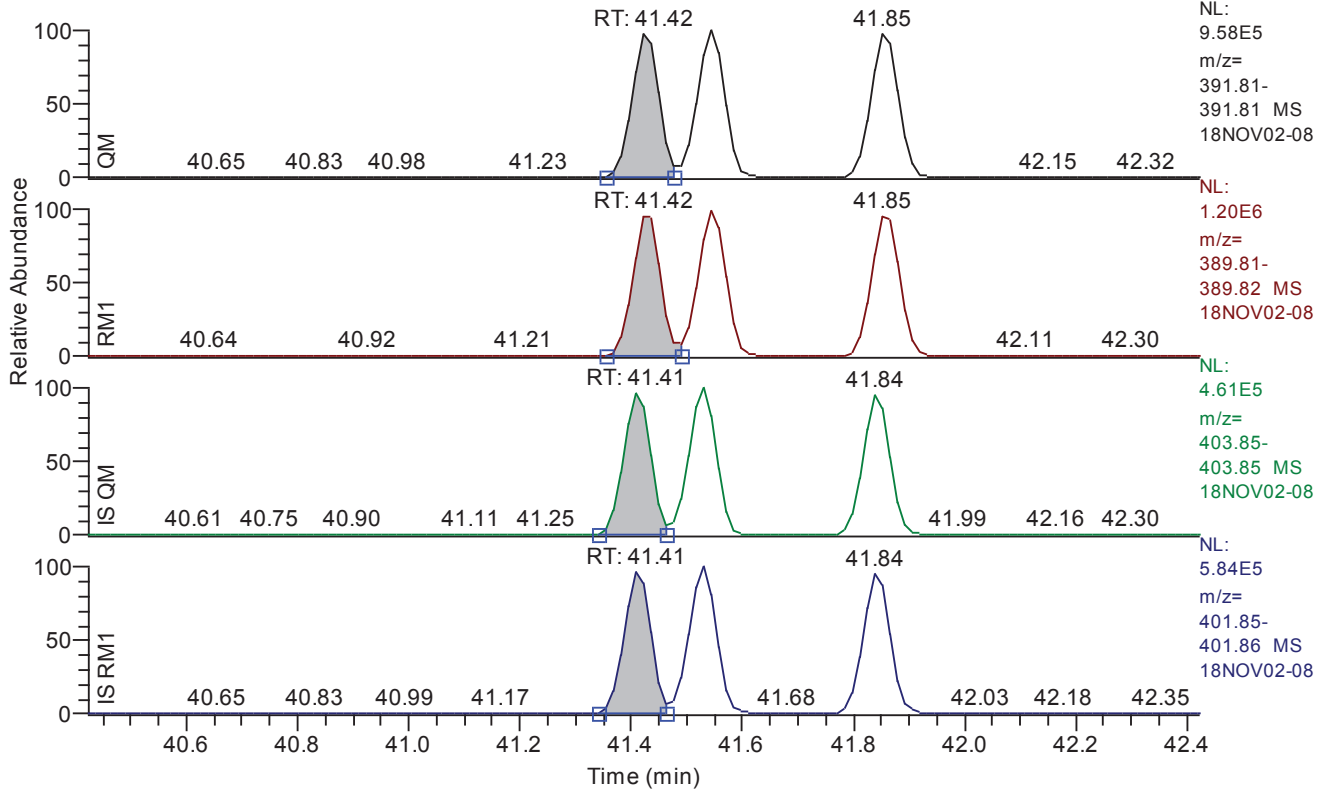


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.22
QM Area	5077447
QM Integration Mode	A
RM1 Area	6215655
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0238
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	20168
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.42 - 42.42 SM: 3G



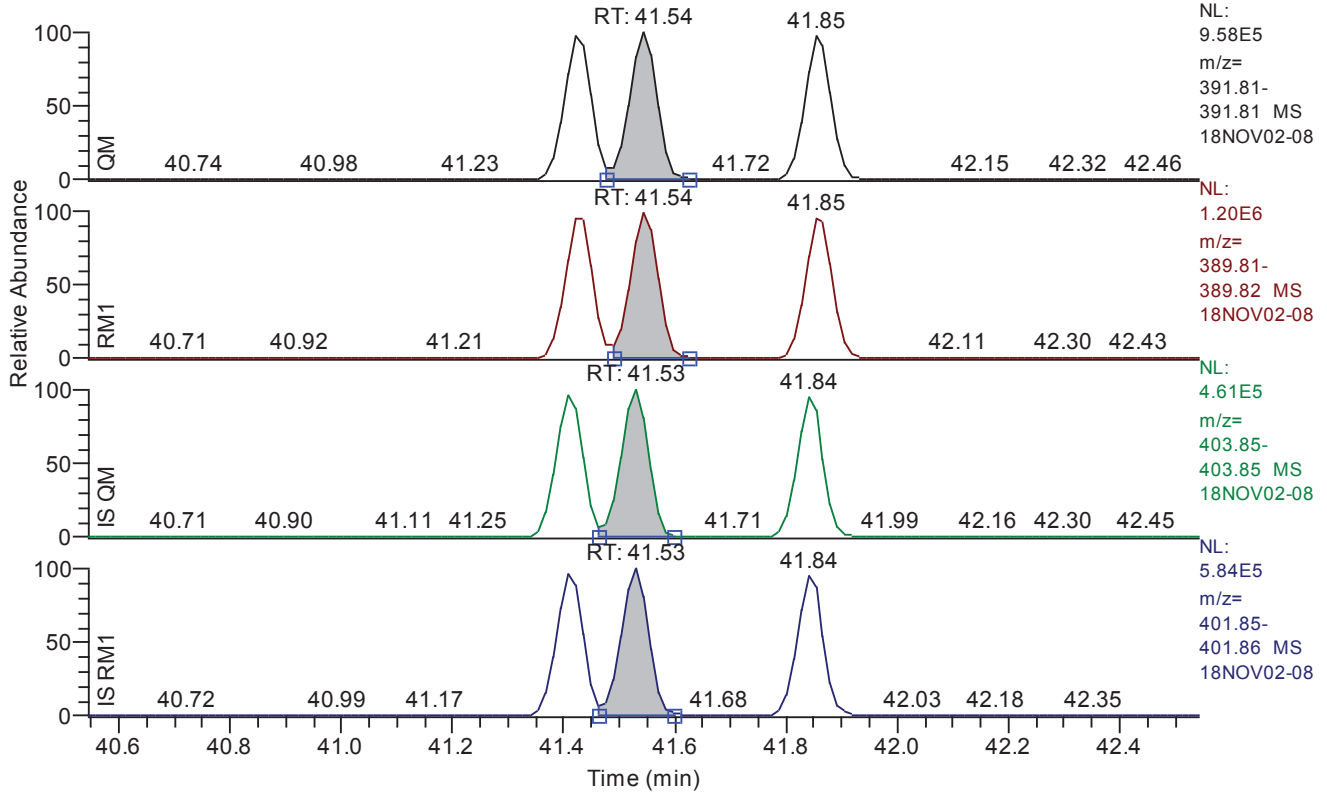
Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.42
QM Area	3142621
QM Integration Mode	A
RM1 Area	3979570
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0179
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	27249
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.54 - 42.54 SM: 3G

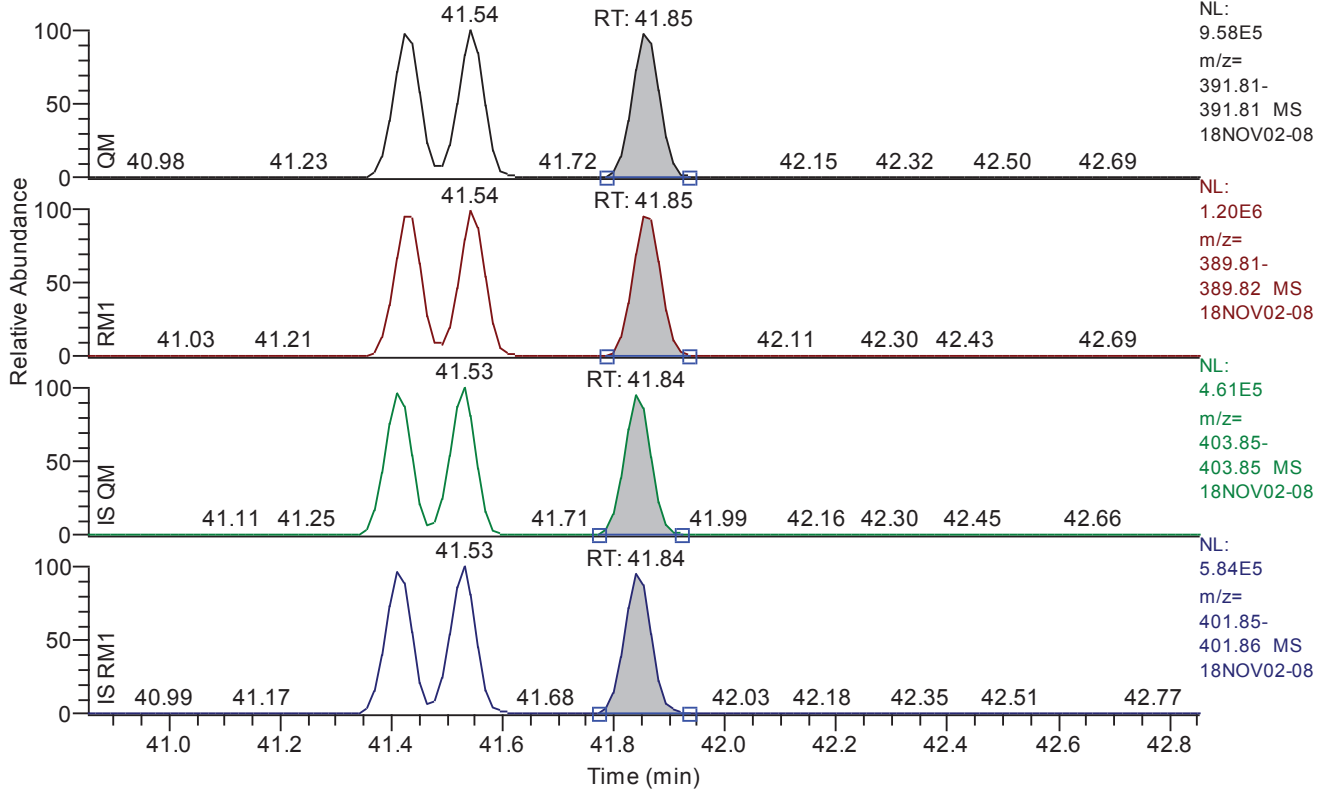


Entry Parameters

Compound Name 123678-HxCDD
 QM Retention Time 41.54
 QM Area 3290380
 QM Integration Mode A
 RM1 Area 4073701
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.0178
 Unqualified Amount (A) 200.000000
 Adjusted Amount (A) 200.0000
 Signal-to-Noise 28275
 Client Flags
 Status Overview passed
 Status Info

Chromatogram

RT: 40.85 - 42.85 SM: 3G



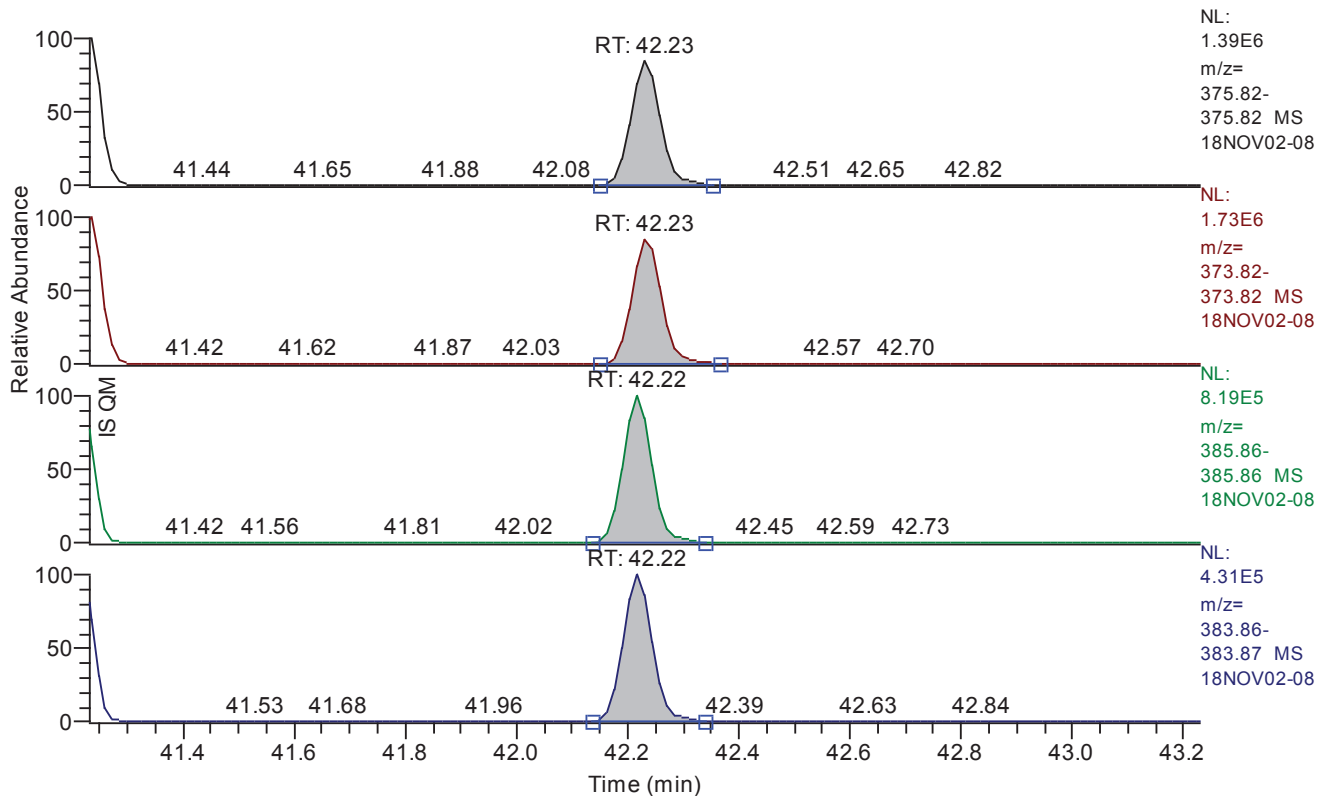
Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.85
QM Area	3232687
QM Integration Mode	A
RM1 Area	4053735
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0177
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	27277
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 41.23 - 43.23 SM: 3G



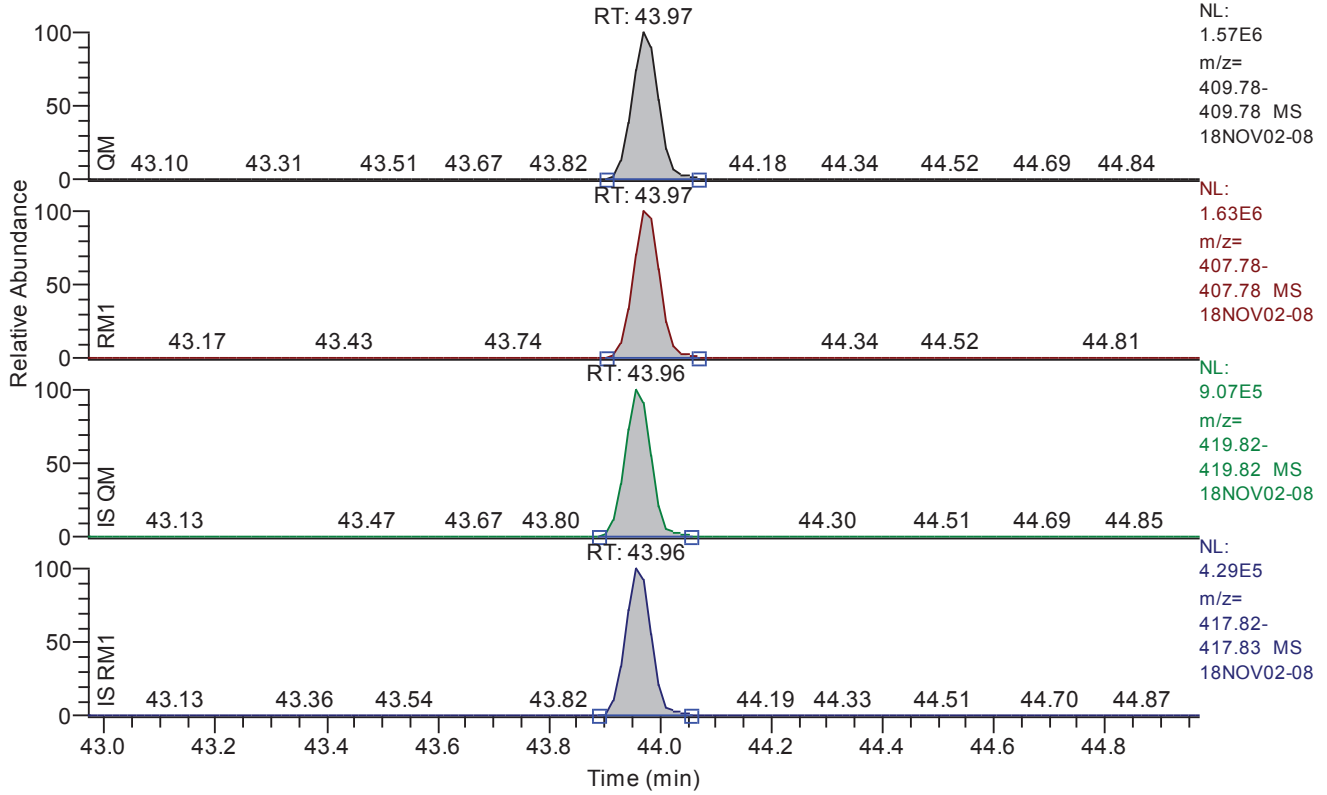
Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.23
QM Area	4381503
QM Integration Mode	A
RM1 Area	5487289
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0287
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	17068
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 42.97 - 44.97 SM: 3G



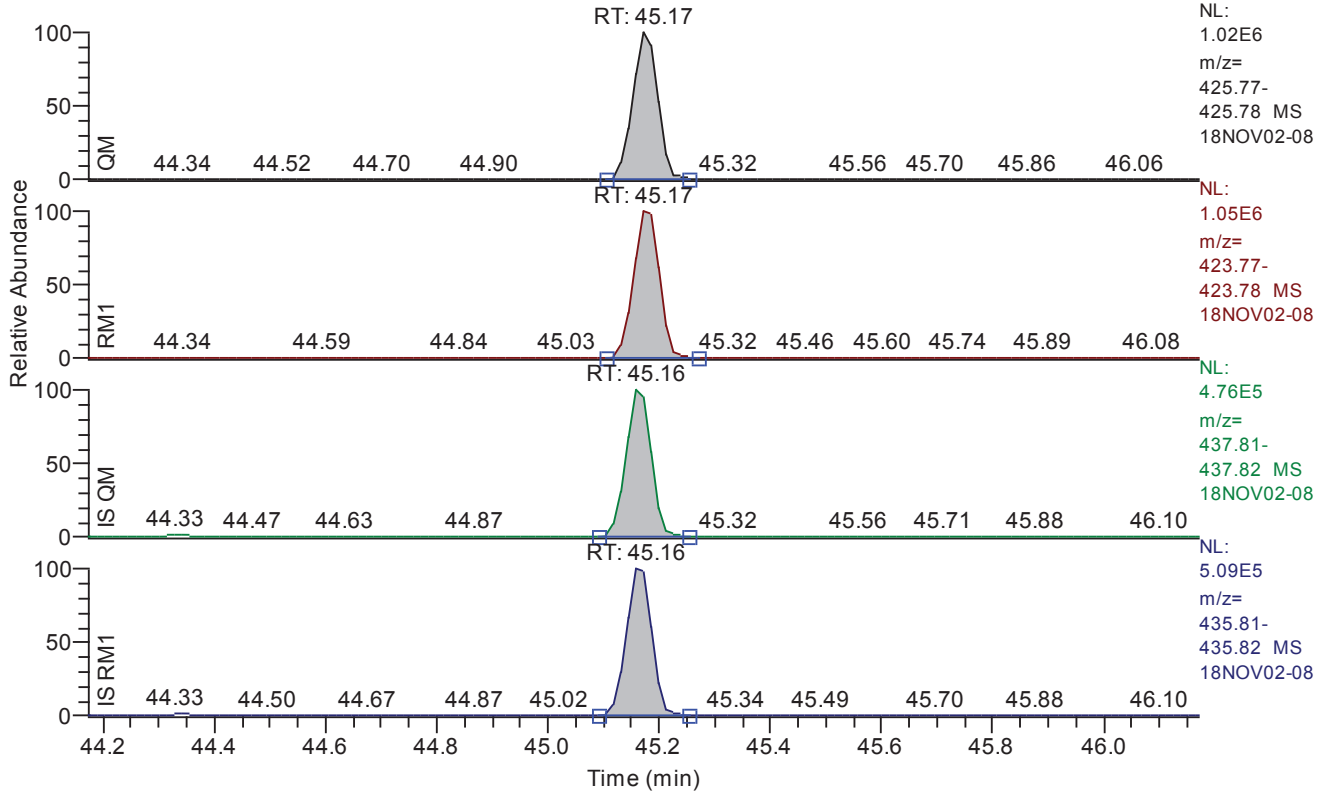
Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.97
QM Area	5287251
QM Integration Mode	A
RM1 Area	5564597
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0301
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	16295
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.17 - 46.17 SM: 3G



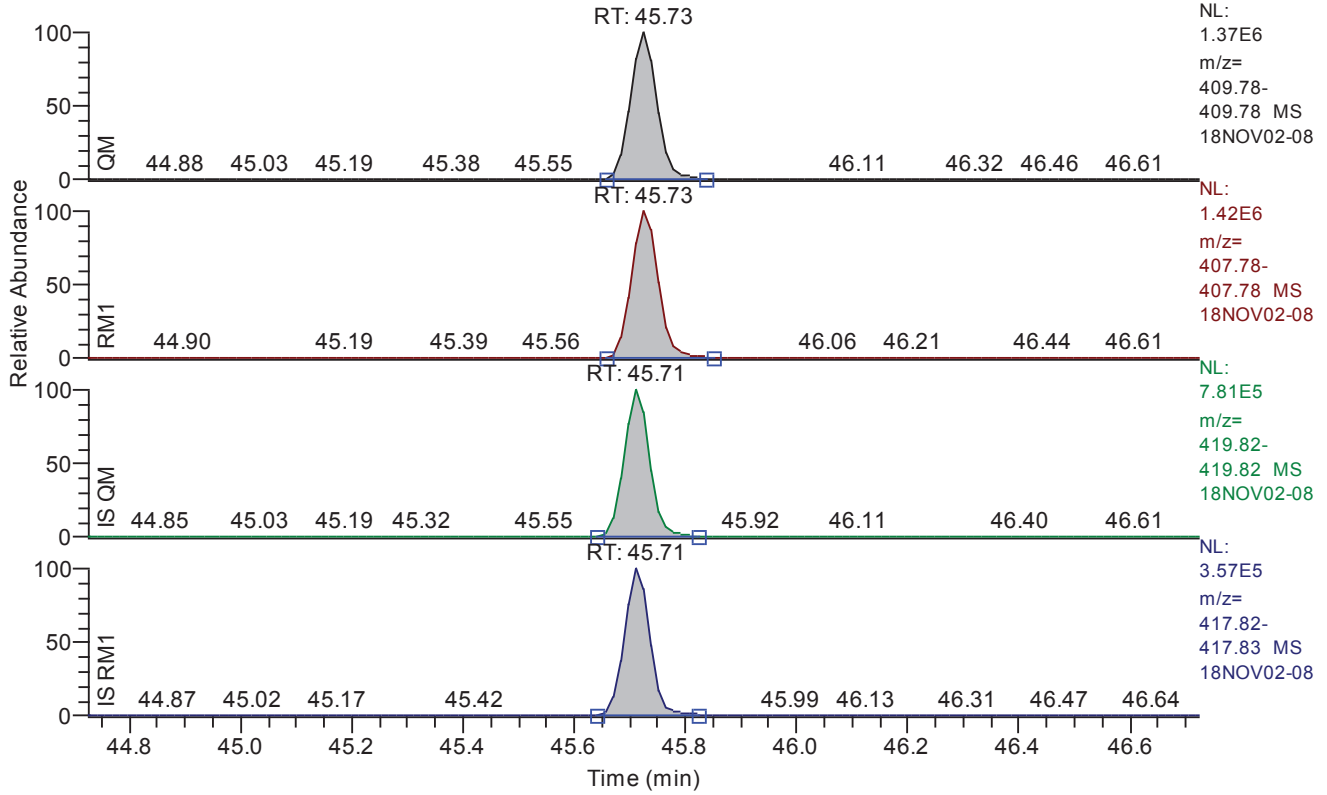
Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.17
QM Area	3293798
QM Integration Mode	A
RM1 Area	3484438
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0248
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	20155
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.73 - 46.73 SM: 3G



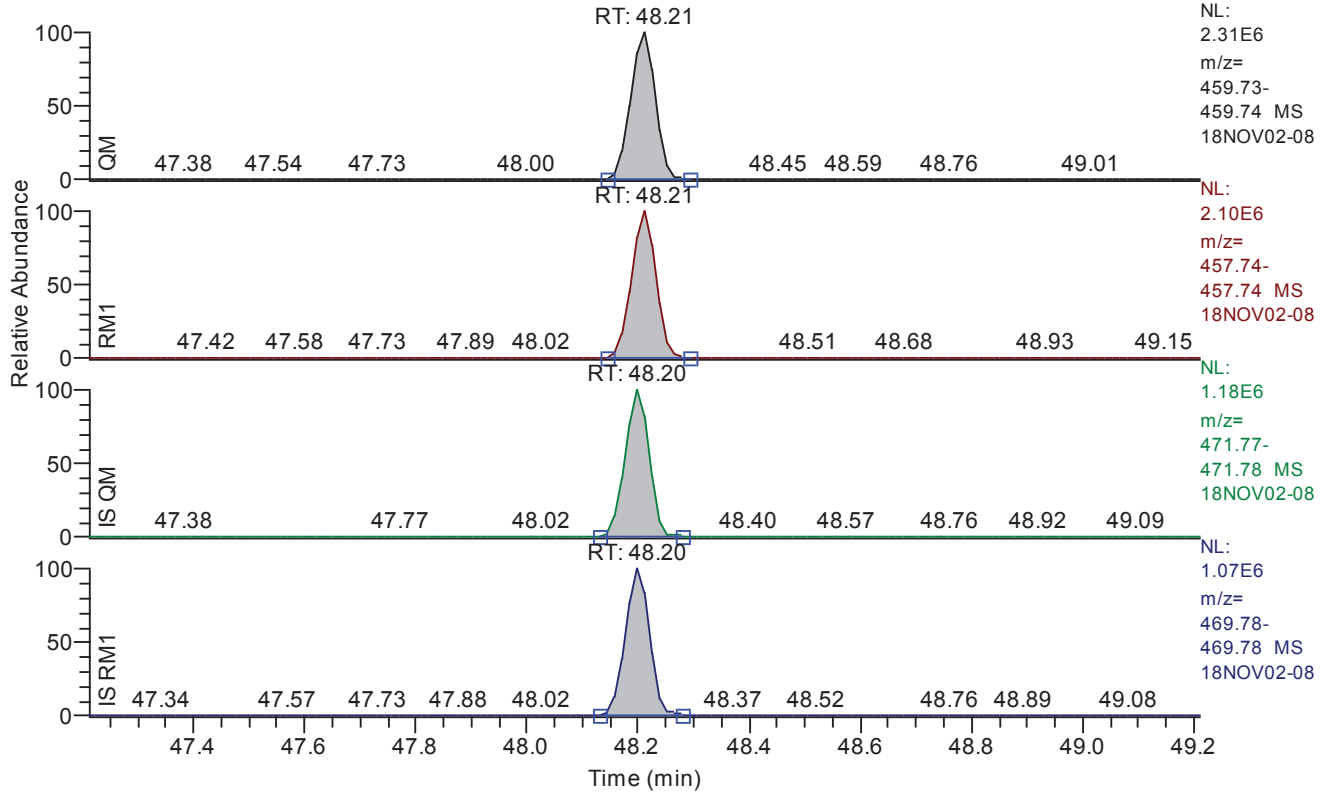
Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.73
QM Area	4652358
QM Integration Mode	A
RM1 Area	4876445
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0337
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	14234
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.21 - 49.21 SM: 3G



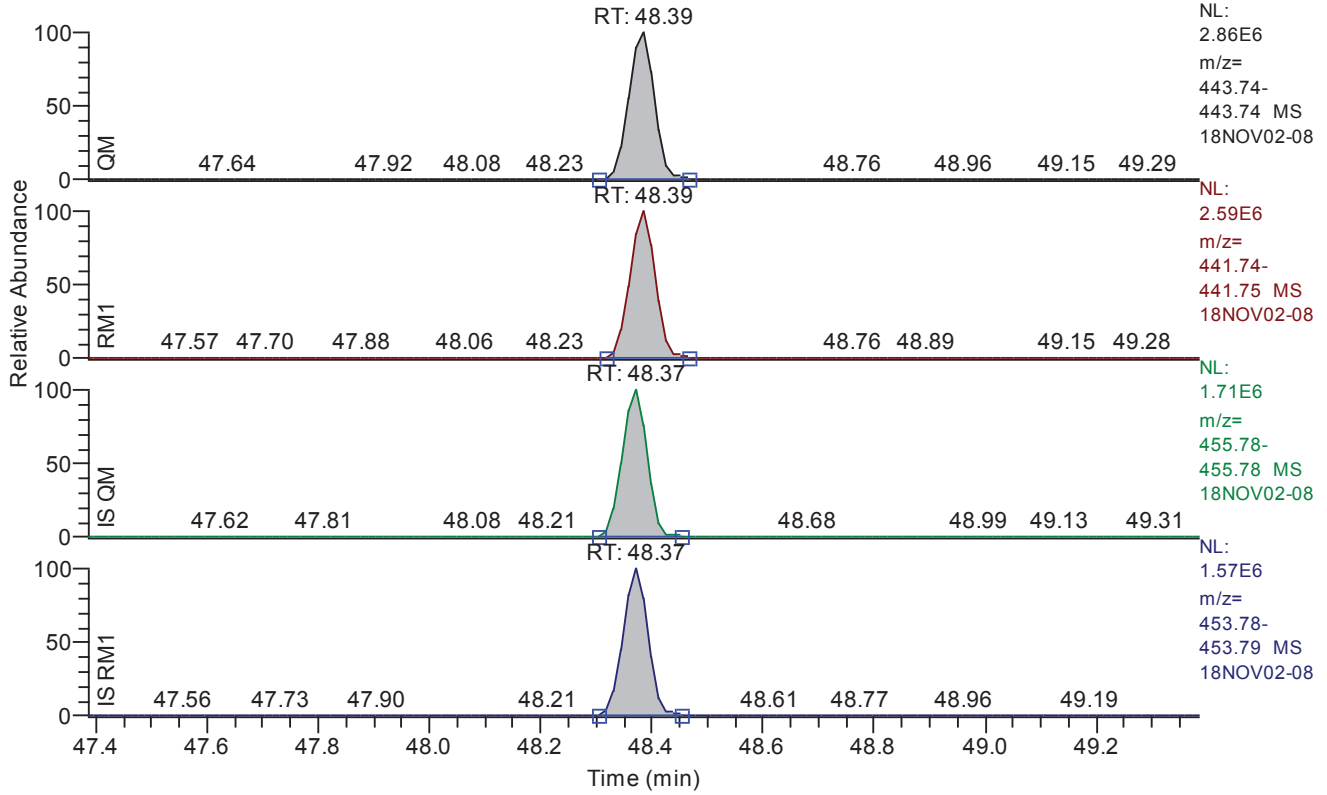
Entry Parameters

Compound Name	OCDD
QM Retention Time	48.21
QM Area	7086447
QM Integration Mode	A
RM1 Area	6400324
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0155
Unqualified Amount (A)	400.000000
Adjusted Amount (A)	400.0000
Signal-to-Noise	63246
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.39 - 49.39 SM: 3G

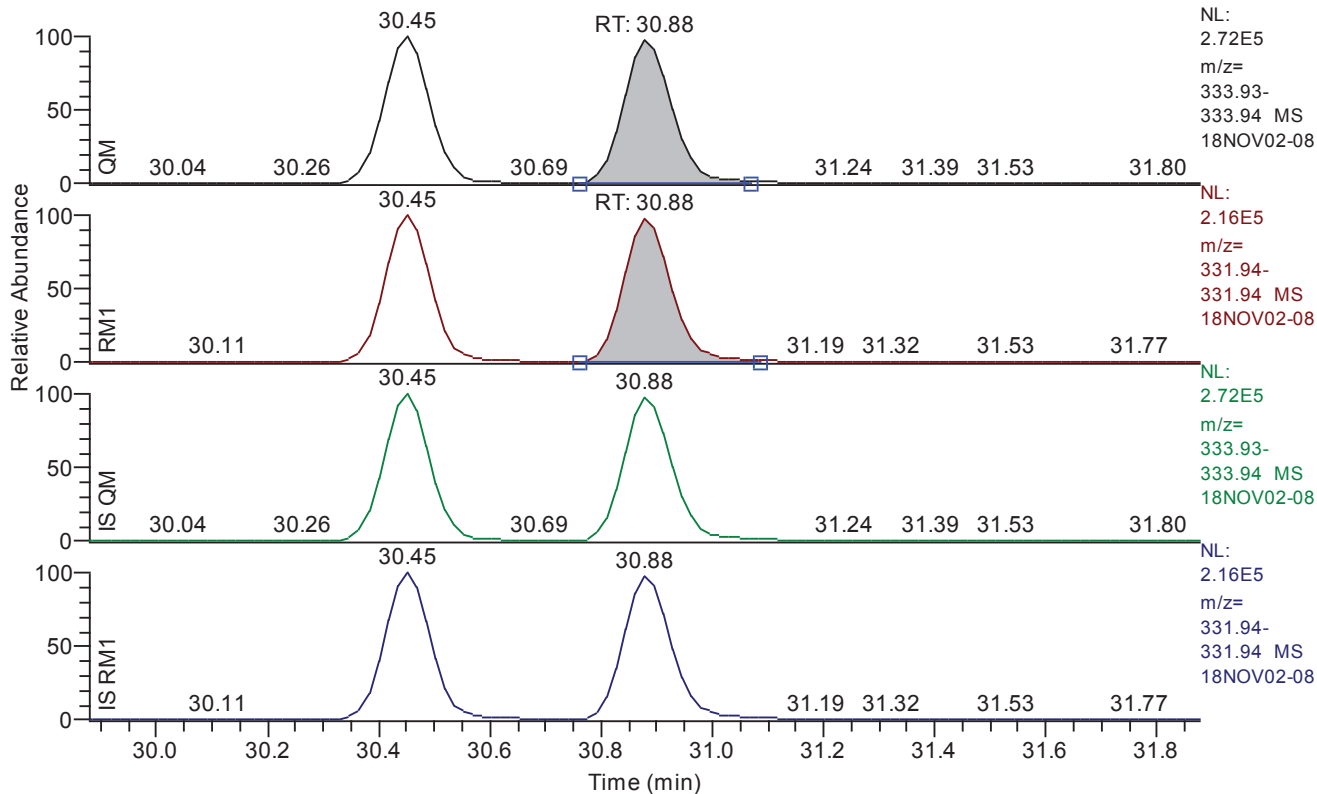


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.39
QM Area	9137144
QM Integration Mode	A
RM1 Area	8197565
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0141
Unqualified Amount (A)	400.000000
Adjusted Amount (A)	400.0000
Signal-to-Noise	69382
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.88 - 31.88 SM: 3G



Entry Parameters

Compound Name 13C12-1278-TCDD (CRS)
 QM Retention Time 30.88
 QM Area 1617259
 QM Integration Mode A
 RM1 Area 1273508
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.0222
 Unqualified Amount (A) 100.000000
 Adjusted Amount (A) 100.0000
 Signal-to-Noise 11333
 Client Flags
 Status Overview passed
 Status Info



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 21:17
Number of Entries	64
Comment	
Vial	7
Sample Name	CALDF51837B
Sample ID	CS401
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

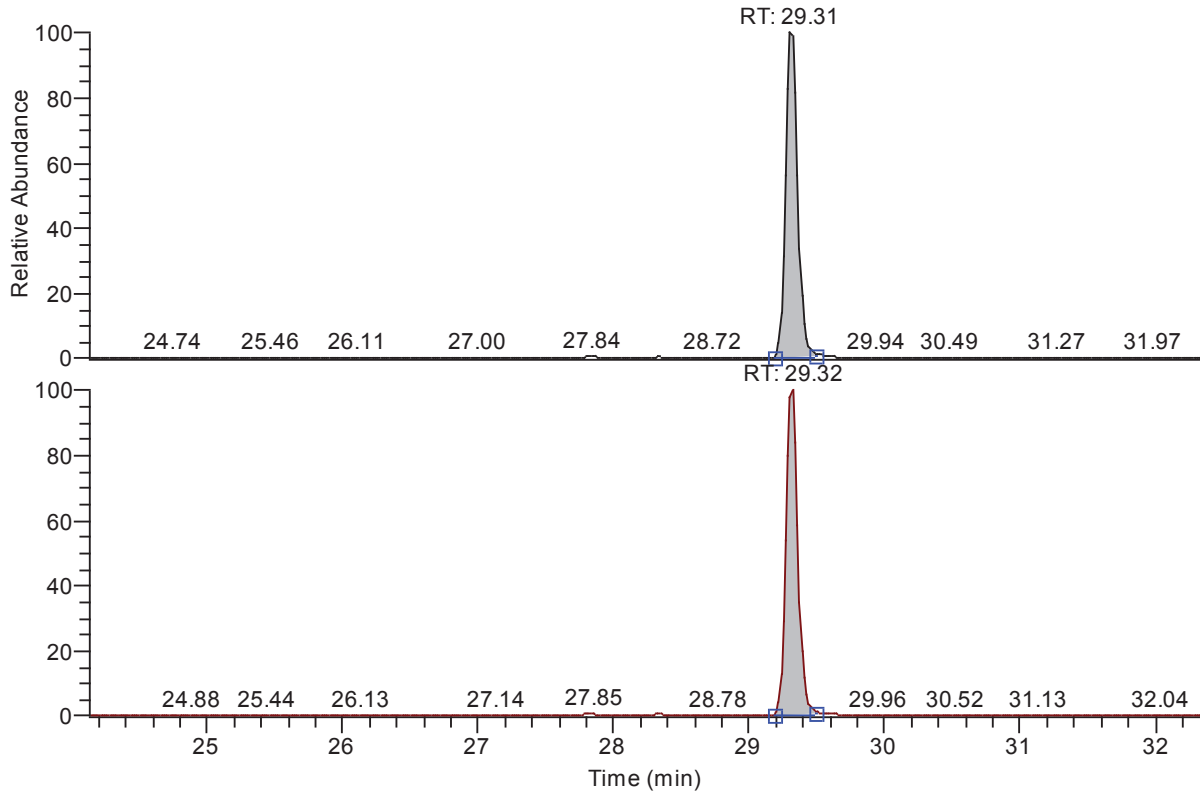
Quan	x:\18nov02\18nov02-08.quan
Data	x:\18nov02\18nov02-08.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 24.13 - 32.33 SM: 3G



NL:
 2.19E5
 m/z=
 305.90-
 305.90
 MS
 18NOV02-
 08

NL:
 1.77E5
 m/z=
 303.90-
 303.90
 MS
 18NOV02-
 08

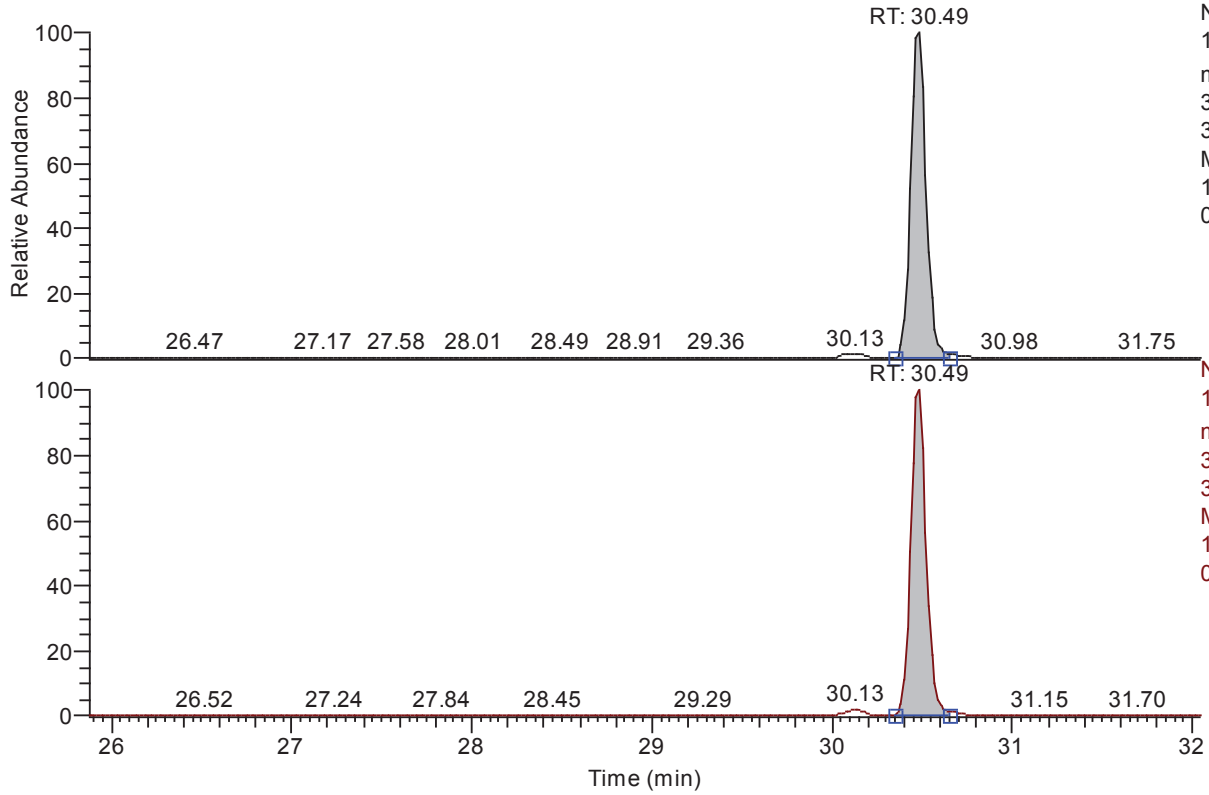
Entry Parameters

Compound Name	Total TCDF
QM Retention Time	28.23
QM Area	1345764
QM Integration Mode	A
RM1 Area	1084970
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0105
Unqualified Amount (A)	40.000000
Adjusted Amount (A)	40.0000
Signal-to-Noise	9243
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 25.87 - 32.05 SM: 3G



NL:
 1.31E5
 m/z=
 321.89-
 321.90
 MS
 18NOV02-
 08

NL:
 1.07E5
 m/z=
 319.89-
 319.90
 MS
 18NOV02-
 08

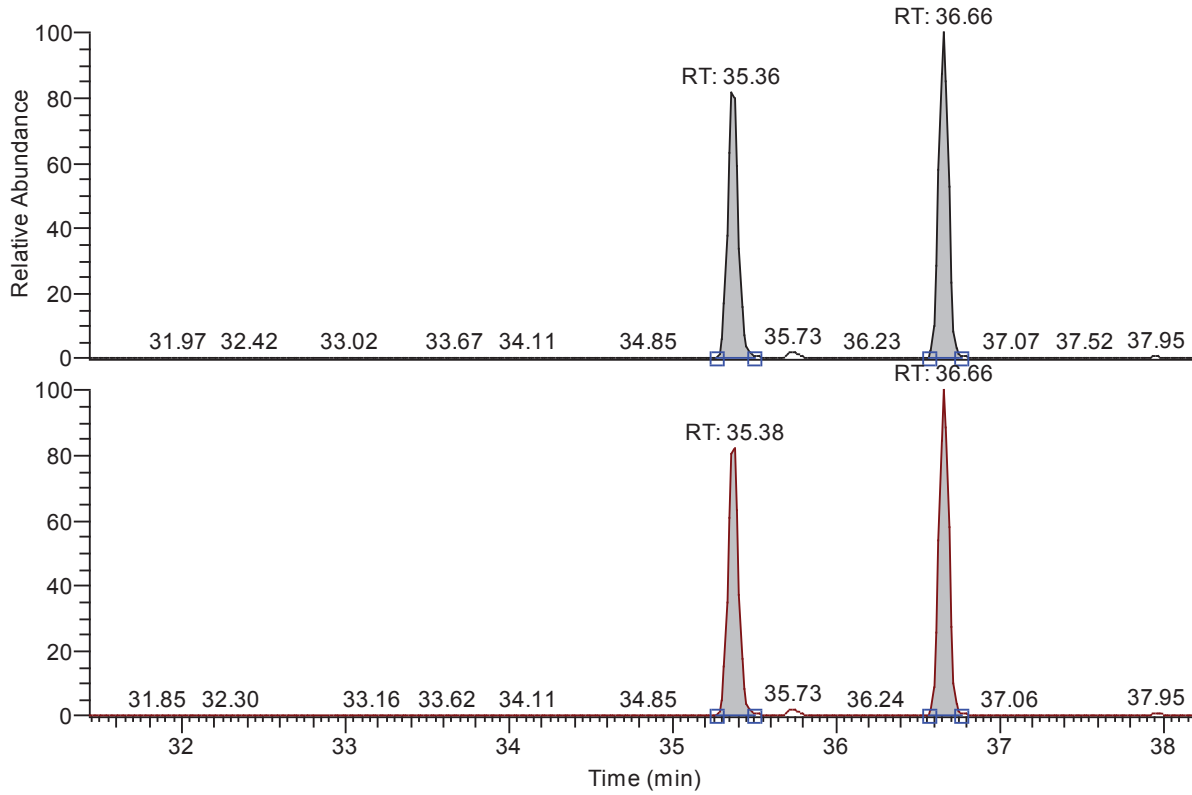
Entry Parameters

Compound Name	Total TCDD
QM Retention Time	28.96
QM Area	783452
QM Integration Mode	A
RM1 Area	634232
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0101
Unqualified Amount (A)	40.000000
Adjusted Amount (A)	40.0000
Signal-to-Noise	9693
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 31.43 - 38.23 SM: 3G



NL:
 1.08E6
 m/z=
 341.85-
 341.86
 MS
 18NOV02-
 08

NL:
 1.65E6
 m/z=
 339.86-
 339.86
 MS
 18NOV02-
 08

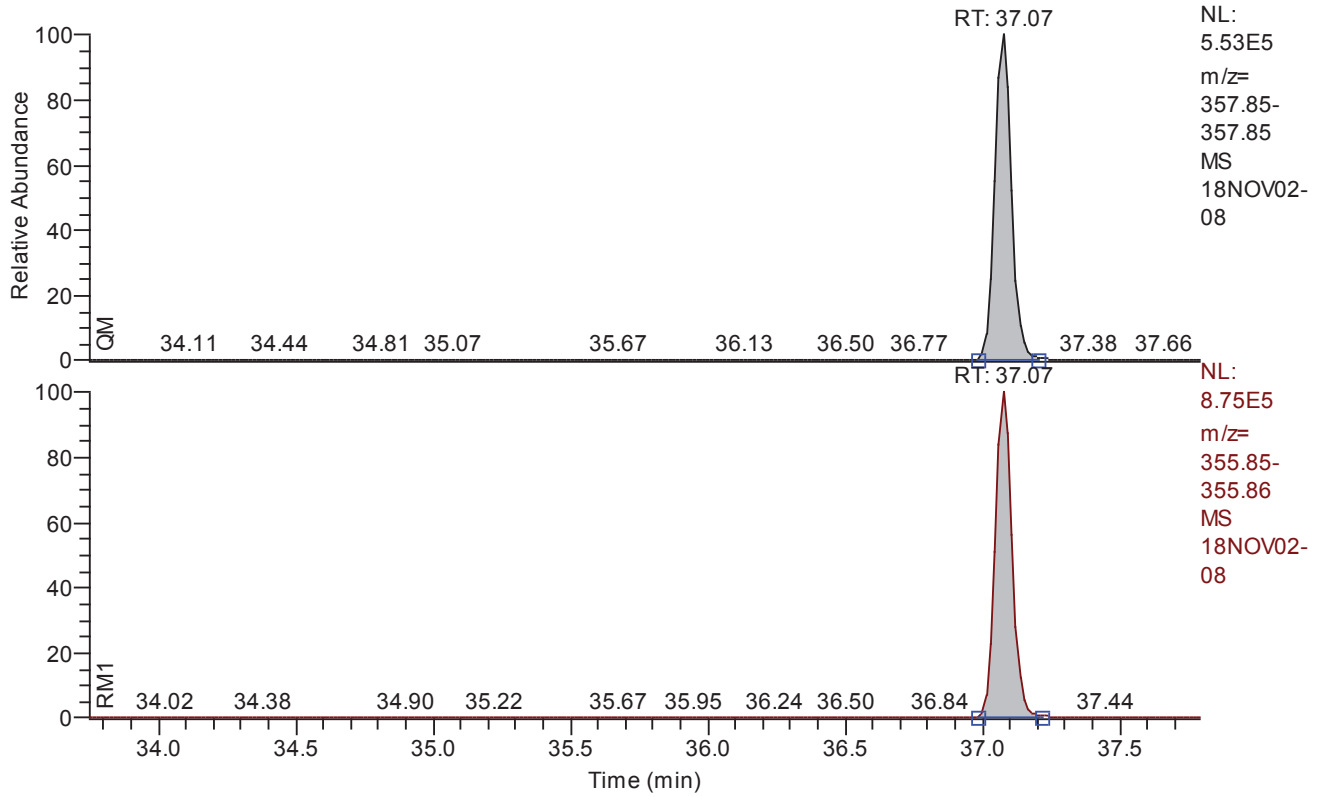
Entry Parameters

Compound Name	Total PeCDF
QM Retention Time	34.83
QM Area	8669274
QM Integration Mode	A
RM1 Area	13420764
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0107
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	400.0000
Signal-to-Noise	46439
Client Flags	
Status Overview	passed (2)
Status Info	



Chromatogram

RT: 33.75 - 37.79 SM: 3G



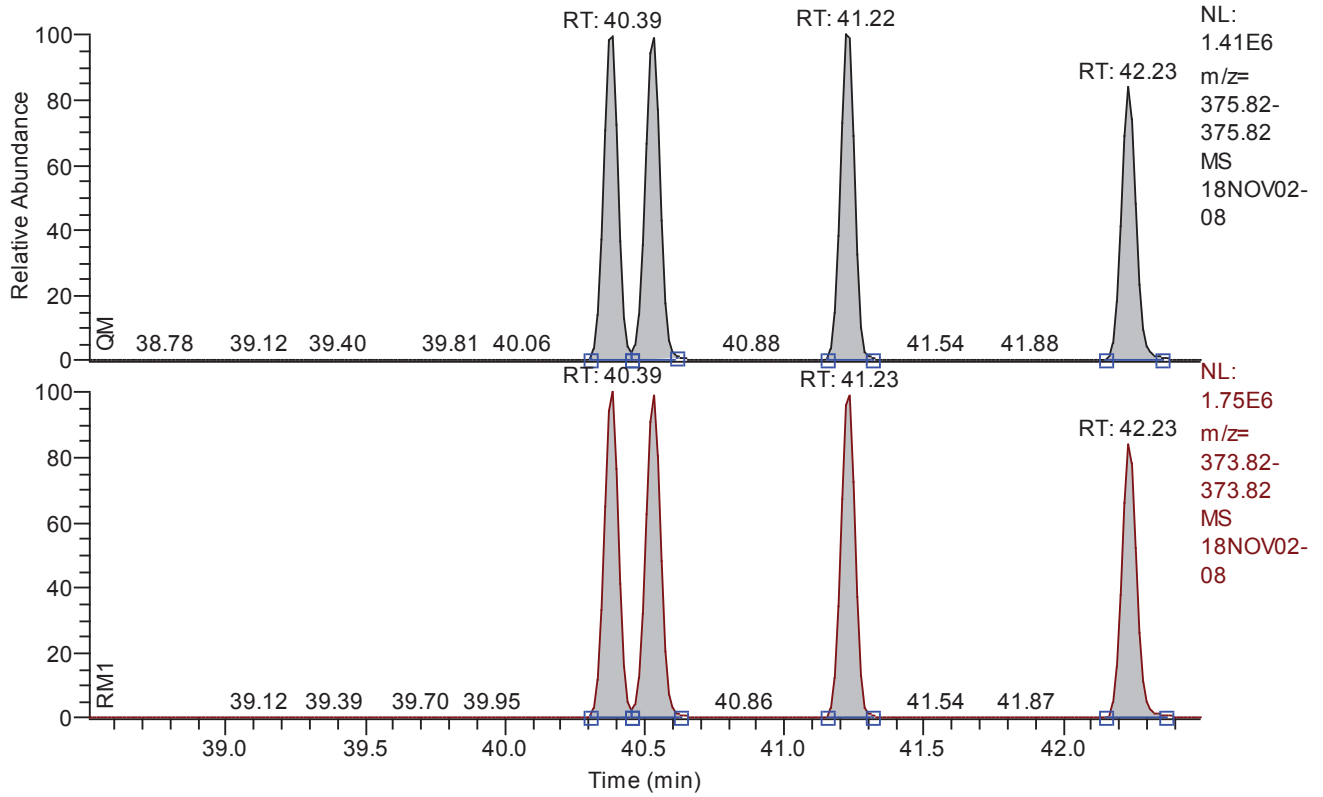
Entry Parameters

Compound Name	Total PeCDD
QM Retention Time	35.77
QM Area	2343612
QM Integration Mode	A
RM1 Area	3736560
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0200
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	24579
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 38.51 - 42.49 SM: 3G



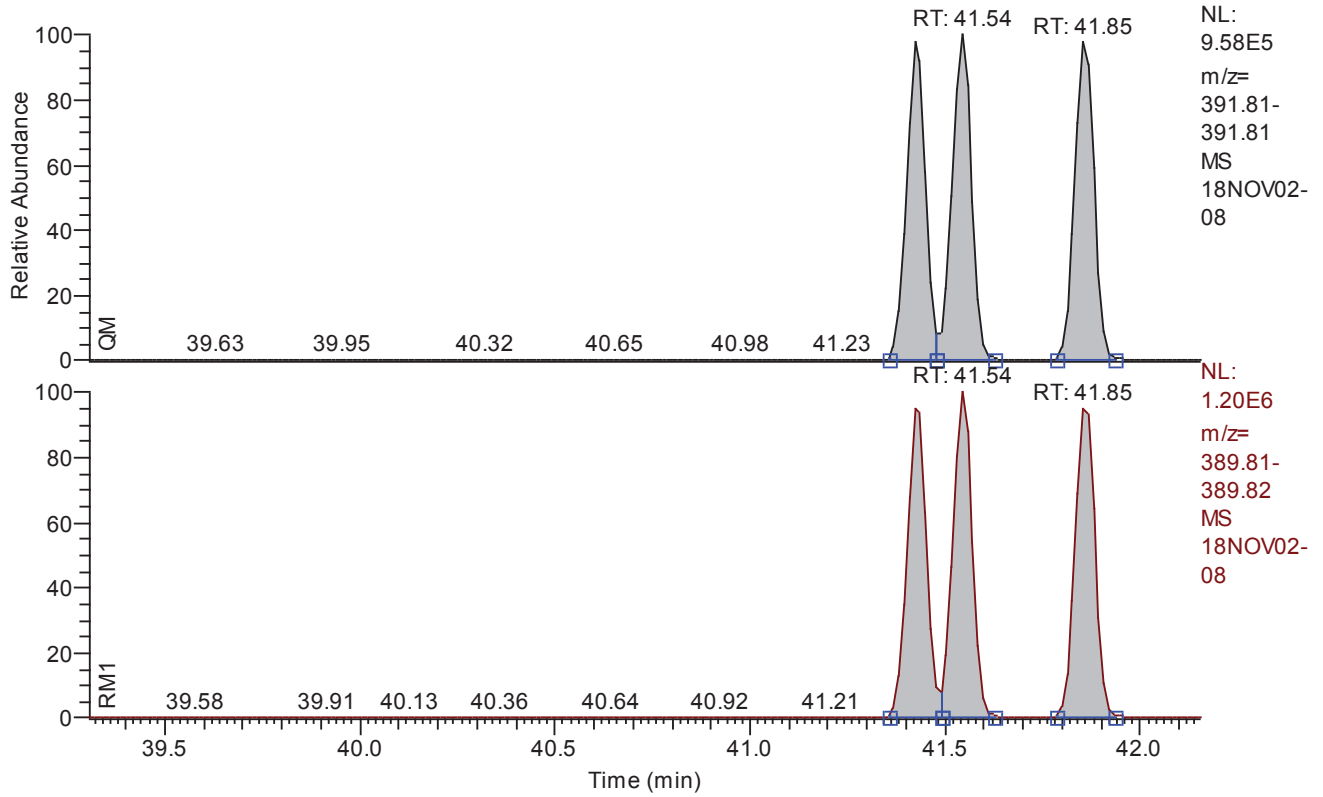
Entry Parameters

Compound Name	Total HxCDF
QM Retention Time	40.50
QM Area	19761502
QM Integration Mode	A
RM1 Area	24456123
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0255
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	800.0000
Signal-to-Noise	19379
Client Flags	
Status Overview	passed (4)
Status Info	



Chromatogram

RT: 39.31 - 42.15 SM: 3G

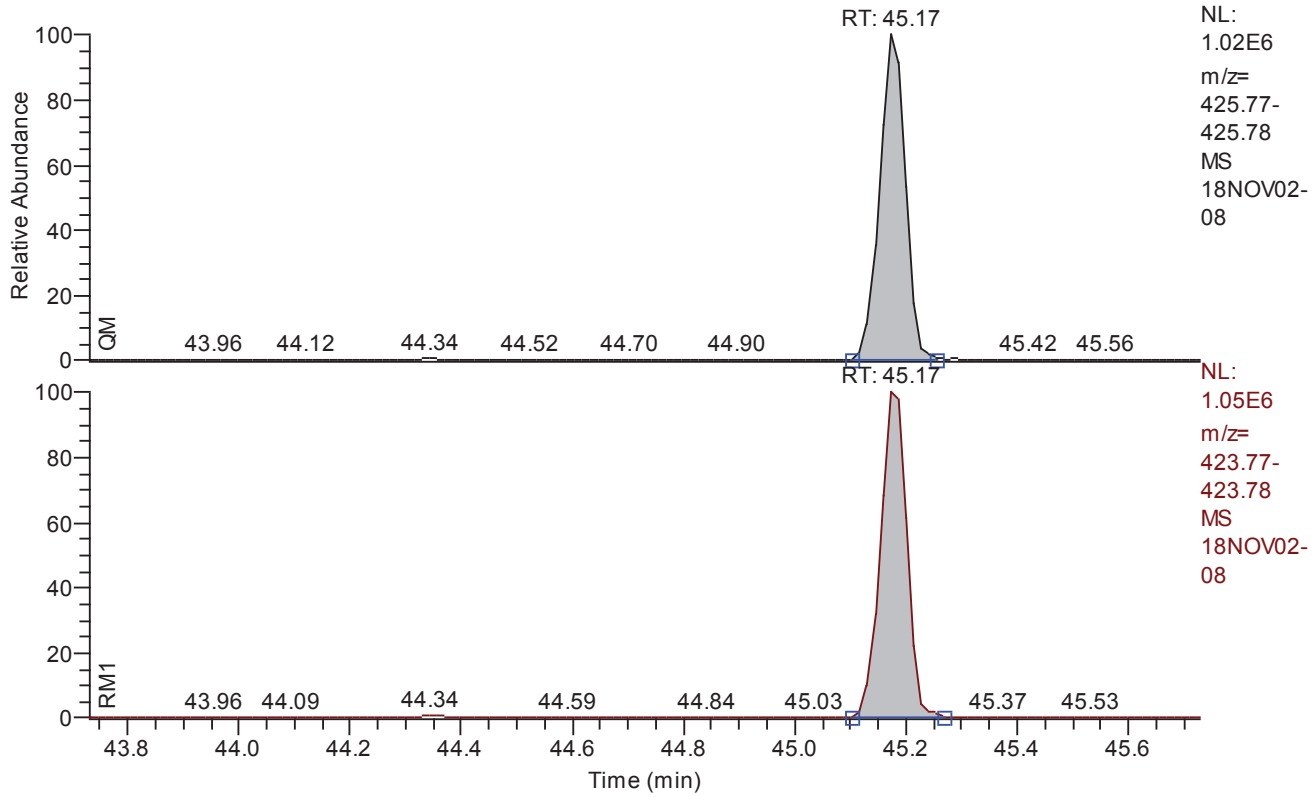


Entry Parameters

Compound Name	Total HxCDD
QM Retention Time	40.73
QM Area	9665689
QM Integration Mode	A
RM1 Area	12107005
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0178
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	600.0000
Signal-to-Noise	27600
Client Flags	
Status Overview	passed (3)
Status Info	

Chromatogram

RT: 43.73 - 45.73 SM: 3G



NL:
 1.02E6
 m/z=
 425.77-
 425.78
 MS
 18NOV02-
 08

NL:
 1.05E6
 m/z=
 423.77-
 423.78
 MS
 18NOV02-
 08

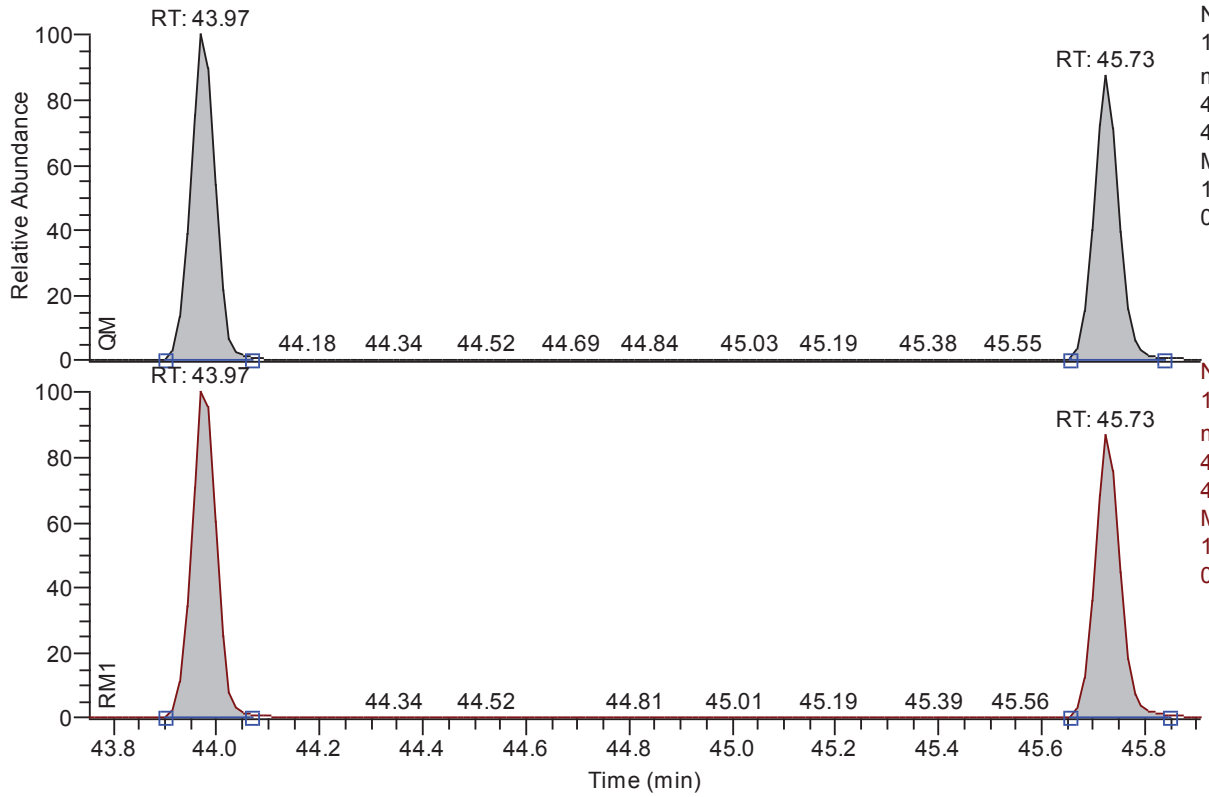
Entry Parameters

Compound Name	Total HpCDD
QM Retention Time	44.73
QM Area	3293798
QM Integration Mode	A
RM1 Area	3484438
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0248
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	20155
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 43.75 - 45.91 SM: 3G



NL:
 1.57E6
 m/z=
 409.78-
 409.78
 MS
 18NOV02-
 08

NL:
 1.63E6
 m/z=
 407.78-
 407.78
 MS
 18NOV02-
 08

Entry Parameters

Compound Name	Total HpCDF
QM Retention Time	44.83
QM Area	9939609
QM Integration Mode	A
RM1 Area	10441041
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0319
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	400.0000
Signal-to-Noise	15265
Client Flags	
Status Overview	passed (2)
Status Info	



Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Retention Time	RM1 Retention Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.31	29.31	29.32	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.49	30.49	30.49	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.36	35.36	35.38	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.66	36.66	36.66	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	37.07	37.07	37.07	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.39	40.39	40.39	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.53	40.53	40.53	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.22	41.22	41.23	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.42	41.42	41.42	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.54	41.54	41.54	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.85	41.85	41.85	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.23	42.23	42.23	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	43.97	43.97	43.97	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.17	45.17	45.17	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.73	45.73	45.73	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.21	48.21	48.21	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.39	48.39	48.39	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.88	30.88	30.88	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.61	29.61	29.61	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.29	40.29	40.29	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.29	29.29	29.29	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.45	30.45	30.45	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.35	35.35	35.35	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.64	36.64	36.64	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	37.06	37.06	37.06	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.36	40.36	40.36	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.51	40.51	40.52	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.21	41.21	41.21	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.41	41.41	41.41	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.53	41.53	41.53	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.84	41.84	41.84	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.22	42.22	42.22	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	43.96	43.96	43.96	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.16	45.16	45.16	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.71	45.71	45.71	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.20	48.20	48.20	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.37	48.37	48.37	passed	passed
38	Total TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	28.23	28.23	28.23	---	---
39	Total TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	28.96	28.96	28.96	---	---
40	Total PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	34.83	34.83	34.83	---	---
41	Total PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	35.77	35.77	35.77	---	---
42	Total HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.50	40.50	40.50	---	---
43	Total HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	40.73	40.73	40.73	---	---
44	Total HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	44.73	44.73	44.73	---	---
45	Total HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	44.83	44.83	44.83	---	---
46	Single TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	29.31	29.31	29.32	passed	passed
47	Single TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	30.49	30.49	30.49	passed	passed
48	Single PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	37.07	37.07	37.07	passed	passed
49	Single PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	36.66	36.66	36.66	passed	passed
50	Single PeCDD	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	35.36	35.36	35.38	passed	passed
51	Single HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	45.17	45.17	45.17	passed	passed
52	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	41.22	41.22	41.23	passed	passed
53	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.39	40.39	40.39	passed	passed
54	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.53	40.53	40.53	passed	passed
55	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	42.23	42.23	42.23	passed	passed
56	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.54	41.54	41.54	passed	passed
57	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.42	41.42	41.42	passed	passed
58	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.85	41.85	41.85	passed	passed
59	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	43.97	43.97	43.97	passed	passed
60	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	45.73	45.73	45.73	passed	passed



Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.31	0.8062	0.6450 - 0.8950	passed	100.00	0 - 0	passed
2	2378-TCDD	30.49	0.8095	0.6450 - 0.8950	passed	100.00	0 - 0	passed
3	12378-PeCDF	35.36	1.5516	1.3150 - 1.7850	passed	100.00	0 - 0	passed
4	23478-PeCDF	36.66	1.5449	1.3150 - 1.7850	passed	100.00	0 - 0	passed
5	12378-PeCDD	37.07	1.5944	1.3150 - 1.7850	passed	100.00	0 - 0	passed
6	123478-HxCDF	40.39	1.2302	1.0450 - 1.4350	passed	100.00	0 - 0	passed
7	123678-HxCDF	40.53	1.2454	1.0450 - 1.4350	passed	100.00	0 - 0	passed
8	234678-HxCDF	41.22	1.2242	1.0450 - 1.4350	passed	100.00	0 - 0	passed
9	123478-HxCDD	41.42	1.2663	1.0450 - 1.4350	passed	100.00	0 - 0	passed
10	123678-HxCDD	41.54	1.2381	1.0450 - 1.4350	passed	100.00	0 - 0	passed
11	123789-HxCDD	41.85	1.2540	1.0450 - 1.4350	passed	100.00	0 - 0	passed
12	123789-HxCDF	42.23	1.2524	1.0450 - 1.4350	passed	100.00	0 - 0	passed
13	1234678-HpCDF	43.97	1.0525	0.8750 - 1.2050	passed	100.00	0 - 0	passed
14	1234678-HpCDD	45.17	1.0579	0.8750 - 1.2050	passed	100.00	0 - 0	passed
15	1234789-HpCDF	45.73	1.0482	0.8750 - 1.2050	passed	100.00	0 - 0	passed
16	OCDD	48.21	0.9032	0.7550 - 1.0250	passed	100.00	0 - 0	passed
17	OCDF	48.39	0.8972	0.7550 - 1.0250	passed	100.00	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.88	0.7874	0.6450 - 0.8950	passed	100.00	0 - 0	passed
19	13C12-1234-TCDD	29.61	0.8154	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.29	1.2999	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.29	0.7918	0.6450 - 0.8950	passed	100.00	0 - 0	passed
22	13C12-2378-TCDD	30.45	0.7882	0.6450 - 0.8950	passed	100.00	0 - 0	passed
23	13C12-12378-PeCDF	35.35	1.5915	1.3150 - 1.7850	passed	100.00	0 - 0	passed
24	13C12-23478-PeCDF	36.64	1.5851	1.3150 - 1.7850	passed	100.00	0 - 0	passed
25	13C12-12378-PeCDD	37.06	1.6161	1.3150 - 1.7850	passed	100.00	0 - 0	passed
26	13C12-123478-HxCDF	40.36	0.5327	0.4250 - 0.5950	passed	100.00	0 - 0	passed
27	13C12-123678-HxCDF	40.51	0.5355	0.4250 - 0.5950	passed	100.00	0 - 0	passed
28	13C12-234678-HxCDF	41.21	0.5380	0.4250 - 0.5950	passed	100.00	0 - 0	passed
29	13C12-123478-HxCDD	41.41	1.2579	1.0450 - 1.4350	passed	100.00	0 - 0	passed
30	13C12-123678-HxCDD	41.53	1.2692	1.0450 - 1.4350	passed	100.00	0 - 0	passed
31	13C12-123789-HxCDD	41.84	1.2815	1.0450 - 1.4350	passed	100.00	0 - 0	passed
32	13C12-123789-HxCDF	42.22	0.5316	0.4250 - 0.5950	passed	100.00	0 - 0	passed
33	13C12-1234678-HpCDF	43.96	0.4654	0.3650 - 0.5150	passed	100.00	0 - 0	passed
34	13C12-1234678-HpCDD	45.16	1.0782	0.8750 - 1.2050	passed	100.00	0 - 0	passed
35	13C12-1234789-HpCDF	45.71	0.4596	0.3650 - 0.5150	passed	100.00	0 - 0	passed
36	13C12-OCDD	48.20	0.9041	0.7550 - 1.0250	passed	100.00	0 - 0	passed
37	13C12-OCDF	48.37	0.9099	0.7550 - 1.0250	passed	100.00	0 - 0	passed
38	Total TCDF	28.23	0.8062	0.6450 - 0.8950	---	100.00	0 - 0	---
39	Total TCDD	28.96	0.8095	0.6450 - 0.8950	---	100.00	0 - 0	---
40	Total PeCDF	34.83	1.5481	1.3150 - 1.7850	---	100.00	0 - 0	---
41	Total PeCDD	35.77	1.5944	1.3150 - 1.7850	---	100.00	0 - 0	---
42	Total HxCDF	40.50	1.2376	1.0450 - 1.4350	---	100.00	0 - 0	---
43	Total HxCDD	40.73	1.2526	1.0450 - 1.4350	---	100.00	0 - 0	---
44	Total HpCDD	44.73	1.0579	0.8750 - 1.2050	---	100.00	0 - 0	---
45	Total HpCDF	44.83	1.0504	0.8750 - 1.2050	---	100.00	0 - 0	---
46	Single TCDF	29.31	0.8062	0.6450 - 0.8950	passed	100.00	0 - 0	passed
47	Single TCDD	30.49	0.8095	0.6450 - 0.8950	passed	100.00	0 - 0	passed
48	Single PeCDD	37.07	1.5944	1.3150 - 1.7850	passed	100.00	0 - 0	passed
49	Single PeCDF	36.66	1.5449	1.3150 - 1.7850	passed	100.00	0 - 0	passed
50	Single PeCDF	35.36	1.5516	1.3150 - 1.7850	passed	100.00	0 - 0	passed
51	Single HpCDD	45.17	1.0579	0.8750 - 1.2050	passed	100.00	0 - 0	passed
52	Single HxCDF	41.22	1.2242	1.0450 - 1.4350	passed	100.00	0 - 0	passed
53	Single HxCDF	40.39	1.2302	1.0450 - 1.4350	passed	100.00	0 - 0	passed
54	Single HxCDF	40.53	1.2454	1.0450 - 1.4350	passed	100.00	0 - 0	passed
55	Single HxCDF	42.23	1.2524	1.0450 - 1.4350	passed	100.00	0 - 0	passed
56	Single HxCDD	41.54	1.2381	1.0450 - 1.4350	passed	100.00	0 - 0	passed
57	Single HxCDD	41.42	1.2663	1.0450 - 1.4350	passed	100.00	0 - 0	passed
58	Single HxCDD	41.85	1.2540	1.0450 - 1.4350	passed	100.00	0 - 0	passed
59	Single HpCDF	43.97	1.0525	0.8750 - 1.2050	passed	100.00	0 - 0	passed
60	Single HpCDF	45.73	1.0482	0.8750 - 1.2050	passed	100.00	0 - 0	passed

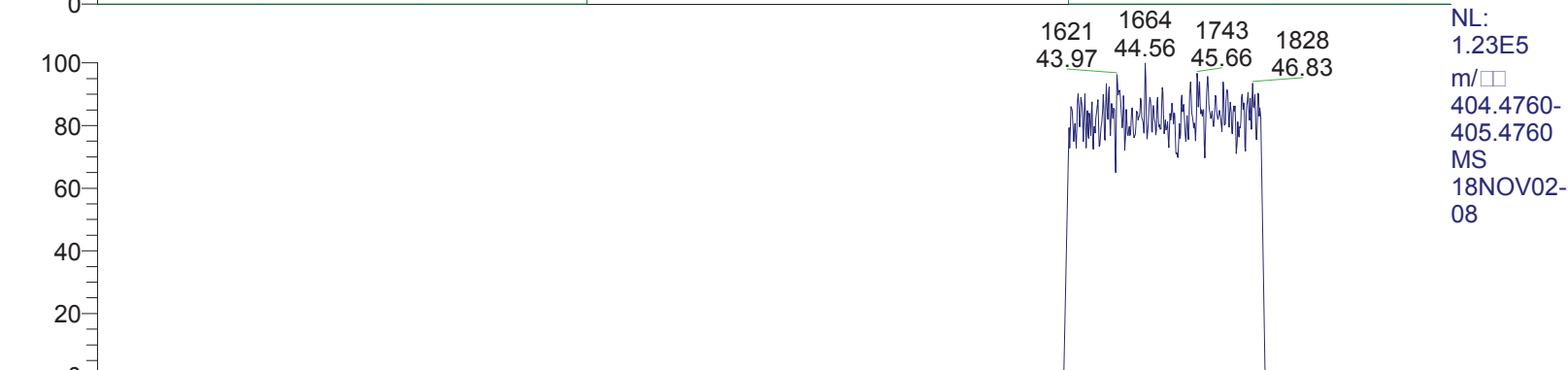
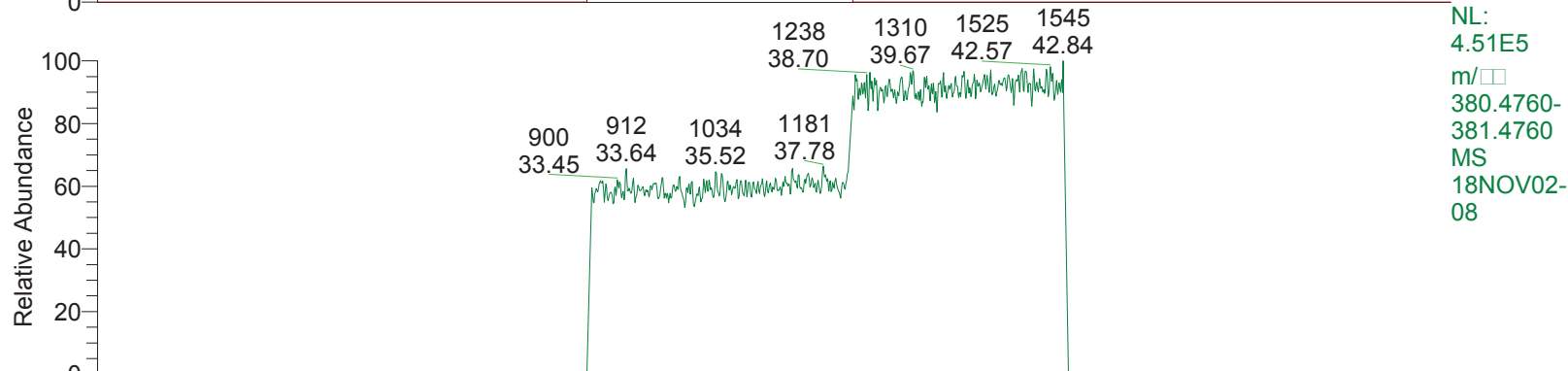
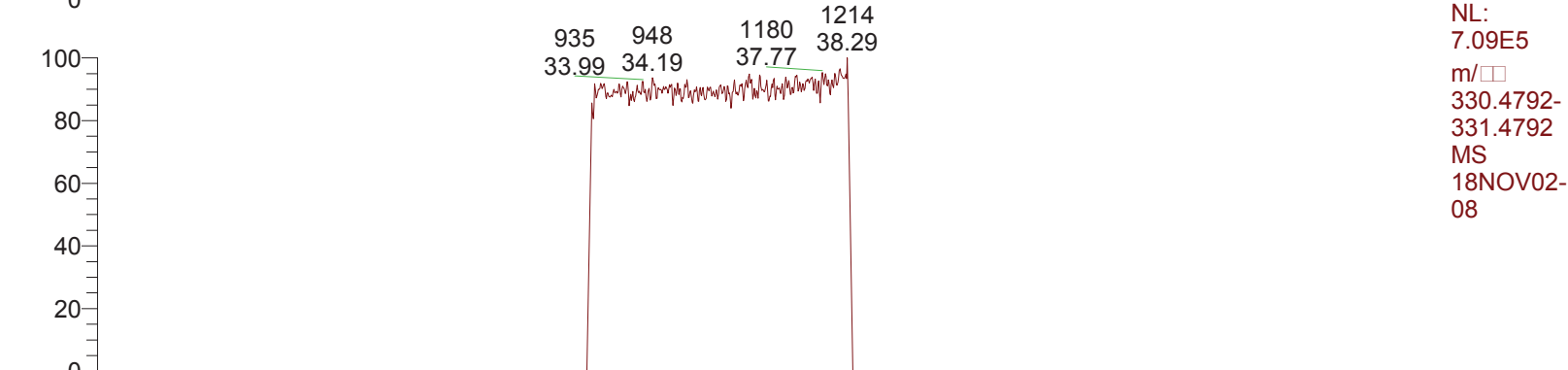
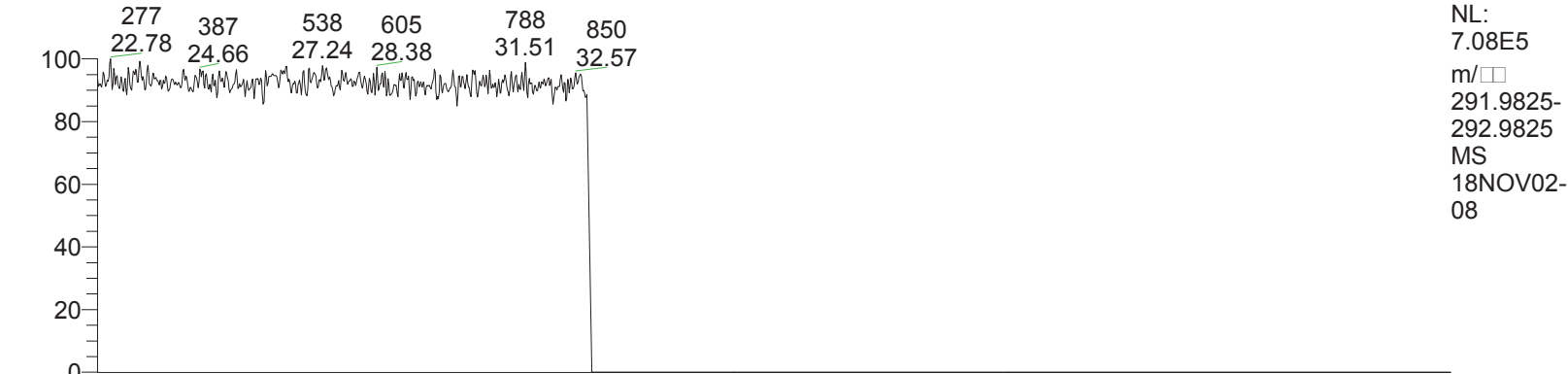


Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.31	1345764	A	1084970	A	0.0105	40.000000	40.0000	40.000000	9243	
2	2378-TCDD	passed	30.49	783452	A	634232	A	0.0101	40.000000	40.0000	40.000000	9693	
3	12378-PeCDF	passed	35.36	4078765	A	6328757	A	0.0116	200.000000	200.0000	200.000000	41863	
4	23478-PeCDF	passed	36.66	4590509	A	7092007	A	0.0099	200.000000	200.0000	200.000000	51015	
5	12378-PeCDD	passed	37.07	2343612	A	3736560	A	0.0200	200.000000	200.0000	200.000000	24579	
6	123478-HxCDF	passed	40.39	5103571	A	6278509	A	0.0245	200.000000	200.0000	200.000000	20214	
7	123678-HxCDF	passed	40.53	5198980	A	6474670	A	0.0250	200.000000	200.0000	200.000000	20065	
8	234678-HxCDF	passed	41.22	5077447	A	6215655	A	0.0238	200.000000	200.0000	200.000000	20168	
9	123478-HxCDD	passed	41.42	3142621	A	3979570	A	0.0179	200.000000	200.0000	200.000000	27249	
10	123678-HxCDD	passed	41.54	3290380	A	4073701	A	0.0178	200.000000	200.0000	200.000000	28275	
11	123789-HxCDD	passed	41.85	3232687	A	4053735	A	0.0177	200.000000	200.0000	200.000000	27277	
12	123789-HxCDF	passed	42.23	4381503	A	5487289	A	0.0287	200.000000	200.0000	200.000000	17068	
13	1234678-HpCDF	passed	43.97	5287251	A	5564597	A	0.0301	200.000000	200.0000	200.000000	16295	
14	1234678-HpCDD	passed	45.17	3293798	A	3484438	A	0.0248	200.000000	200.0000	200.000000	20155	
15	1234789-HpCDF	passed	45.73	4652358	A	4876445	A	0.0337	200.000000	200.0000	200.000000	14234	
16	OCDD	passed	48.21	7086447	A	6400324	A	0.0155	400.000000	400.0000	400.000000	63246	
17	OCDF	passed	48.39	9137144	A	8197565	A	0.0141	400.000000	400.0000	400.000000	69382	
18	13C12-1278-TCDD (CRS)	passed	30.88	1617259	A	1273508	A	0.0222	100.000000	100.0000	100.000000	11333	
19	13C12-1234-TCDD	passed	29.61	1573313	A	1282930	A	0.0225	100.000000	100.0000	100.000000	11105	
20	13C12-123468-HxCDD	passed	40.29	1494530	A	1942666	A	0.0196	100.000000	100.0000	100.000000	12736	
21	13C12-2378-TCDF	passed	29.29	3191304	A	2526937	A	0.0115	100.000000	100.0000	100.000000	22196	
22	13C12-2378-TCDD	passed	30.45	1589257	A	1252701	A	0.0226	100.000000	100.0000	100.000000	11617	
23	13C12-12378-PeCDF	passed	35.35	2107599	A	3354260	A	0.0358	100.000000	100.0000	100.000000	9515	
24	13C12-23478-PeCDF	passed	36.64	2095665	A	3321753	A	0.0361	100.000000	100.0000	100.000000	9853	
25	13C12-12378-PeCDD	passed	37.06	1131491	A	1828646	A	0.0220	100.000000	100.0000	100.000000	16674	
26	13C12-123478-HxCDF	passed	40.36	3268216	A	1740955	A	0.0206	100.000000	100.0000	100.000000	12093	
27	13C12-123678-HxCDF	passed	40.51	3484165	A	1865930	A	0.0193	100.000000	100.0000	100.000000	12367	
28	13C12-234678-HxCDF	passed	41.21	3131832	A	1684861	A	0.0214	100.000000	100.0000	100.000000	12066	
29	13C12-123478-HxCDD	passed	41.41	1505606	A	1893944	A	0.0198	100.000000	100.0000	100.000000	13374	
30	13C12-123678-HxCDD	passed	41.53	1580983	A	2006657	A	0.0188	100.000000	100.0000	100.000000	13785	
31	13C12-123789-HxCDD	passed	41.84	1477160	A	1893029	A	0.0200	100.000000	100.0000	100.000000	13116	
32	13C12-123789-HxCDF	passed	42.22	2969101	A	1578417	A	0.0227	100.000000	100.0000	100.000000	10811	
33	13C12-1234678-HpCDF	passed	43.96	3041844	A	1415616	A	0.0197	100.000000	100.0000	100.000000	13545	
34	13C12-1234678-HpCDD	passed	45.16	1552343	A	1673762	A	0.0211	100.000000	100.0000	100.000000	12874	
35	13C12-1234789-HpCDF	passed	45.71	2552911	A	1173301	A	0.0236	100.000000	100.0000	100.000000	11530	
36	13C12-OCDD	passed	48.20	3566432	A	3224433	A	0.0085	200.000000	200.0000	200.000000	69321	
37	13C12-OCDF	passed	48.37	5316706	A	4837855	A	0.0115	200.000000	200.0000	200.000000	49863	
38	Total TCDF	passed (1)	28.23	1345764	A	1084970	A	0.0105	40.000000	40.0000	40.000000	9243	
39	Total TCDD	passed (1)	28.96	783452	A	634232	A	0.0101	40.000000	40.0000	40.000000	9693	
40	Total PeCDF	passed (2)	34.83	8669274	A	13420764	A	0.0107	200.000000	400.0000	200.000000	46439	
41	Total PeCDD	passed (1)	35.77	2343612	A	3736560	A	0.0200	200.000000	200.0000	200.000000	24579	
42	Total HxCDF	passed (4)	40.50	19761502	A	24456123	A	0.0255	200.000000	800.0000	200.000000	19379	
43	Total HxCDD	passed (3)	40.73	9665689	A	12107005	A	0.0178	200.000000	600.0000	200.000000	27600	
44	Total HpCDF	passed (1)	44.73	3293798	A	3484438	A	0.0248	200.000000	200.0000	200.000000	20155	
45	Total HpCDD	passed (2)	44.83	9939609	A	10441041	A	0.0319	200.000000	400.0000	200.000000	15265	
46	Single TCDF	passed	29.31	1345764	A	1084970	A	0.0105	40.000000	40.0000	40.000000	9243	
47	Single TCDD	passed	30.49	783452	A	634232	A	0.0101	40.000000	40.0000	40.000000	9693	
48	Single PeCDD	passed	37.07	2343612	A	3736560	A	0.0200	200.000000	200.0000	200.000000	24579	
49	Single PeCDF	passed	36.66	4590509	A	7092007	A	0.0101	200.000000	200.0000	200.000000	51015	
50	Single PeCDD	passed	35.36	4078765	A	6328757	A	0.0113	200.000000	200.0000	200.000000	41863	
51	Single HpCDD	passed	45.17	3293798	A	3484438	A	0.0248	200.000000	200.0000	200.000000	20155	
52	Single HxCDF	passed	41.22	5077447	A	6215655	A	0.0248	200.000000	200.0000	200.000000	20168	
53	Single HxCDD	passed	40.39	5103571	A	6278509	A	0.0247	200.000000	200.0000	200.000000	20214	
54	Single HxCDF	passed	40.53	5198980	A	6474670	A	0.0240	200.000000	200.0000	200.000000	20065	
55	Single HxCDD	passed	42.23	4381503	A	5487289	A	0.0284	200.000000	200.0000	200.000000	17068	
56	Single HxCDD	passed	41.54	3290380	A	4073701	A	0.0176	200.000000	200.0000	200.000000	28275	
57	Single HxCDD	passed	41.42	3142621	A	3979570	A	0.0182	200.000000	200.0000	200.000000	27249	
58	Single HxCDD	passed	41.85	3232687	A	4053735	A	0.0177	200.000000	200.0000	200.000000	27277	
59	Single HpCDF	passed	43.97	5287251	A	5564597	A	0.0299	200.000000	200.0000	200.000000	16295	
60	Single HpCDF	passed	45.73	4652358	A	4876445	A	0.0340	200.000000	200.0000	200.000000	14234	



RT: 22.50 - 51.00



APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 21:22:59 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 21:22:58

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 7349737c-0d23-45de-89a6-193501cb8be3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
Window # 1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
Window # 2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



18NOV02-08

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	96.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0381	FVSR	0.0370
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	96.0000	LKM	442.9723	MASS	96.0000
MDAC	1404316.6950	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9851	RELEN	0.0000
RES	12073.4270	RPUSHER	-6.0879	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	96.0000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.7e-008 mbar
Pirani Analyse: 7.2e-003 mbar
Pirani Source: 3.7e-002 mbar
Pirani Inlet System: 3.9e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 12142.
MID Time window 2: Resolution is 12566.
MID Time window 3: Resolution is 11955.
MID Time window 4: Resolution is 12819.



18NOV02-08

MID Time Window 5: Resolution is 12062.
MID Time Window 6: Resolution is 12073.

Amplifier Offset: 81.

*** File closed Fri Nov 02 22:14:00 2018



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 22:14
Number of Entries	64
Comment	
Vial	8
Sample Name	CALDF61837B
Sample ID	CS501
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

Quan	x:\18nov02\18nov02-09.quan
Data	x:\18nov02\18nov02-09.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT Status	Status Info
1	2378-TCDF	29.28	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.46	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.36	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.64	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.05	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.36	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.51	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.21	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.41	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.54	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.85	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.22	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.96	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.16	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.71	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.21	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.38	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.87	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.61	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.27	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.27	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.43	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.33	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.62	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.04	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.35	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.50	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.20	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.40	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.52	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.83	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.21	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.95	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.15	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.70	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.19	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.37	passed	passed	passed	passed	passed	passed	passed
38	Total TCDF	28.23	passed (1)	---	---	---	---	---	---
39	Total TCDD	28.96	passed (1)	---	---	---	---	---	---
40	Total PeCDF	34.83	passed (2)	---	---	---	---	---	---
41	Total PeCDD	35.77	passed (1)	---	---	---	---	---	---
42	Total HxCDF	40.50	passed (4)	---	---	---	---	---	---
43	Total HxCDD	40.73	passed (3)	---	---	---	---	---	---
44	Total HpCDD	44.73	passed (1)	---	---	---	---	---	---
45	Total HpCDF	44.83	passed (2)	---	---	---	---	---	---
46	Single TCDF	29.28	passed	passed	passed	passed	passed	passed	passed
47	Single TCDD	30.46	passed	passed	passed	passed	passed	passed	passed
48	Single PeCDD	37.05	passed	passed	passed	passed	passed	passed	passed
49	Single PeCDF	36.64	passed	passed	passed	passed	passed	passed	passed
50	Single PeCDD	35.36	passed	passed	passed	passed	passed	passed	passed
51	Single HpCDD	45.16	passed	passed	passed	passed	passed	passed	passed
52	Single HxCDF	41.21	passed	passed	passed	passed	passed	passed	passed
53	Single HxCDF	40.36	passed	passed	passed	passed	passed	passed	passed
54	Single HxCDF	40.51	passed	passed	passed	passed	passed	passed	passed
55	Single HxCDF	42.22	passed	passed	passed	passed	passed	passed	passed
56	Single HxCDD	41.85	passed	passed	passed	passed	passed	passed	passed
57	Single HxCDD	41.41	passed	passed	passed	passed	passed	passed	passed
58	Single HxCDD	41.54	passed	passed	passed	passed	passed	passed	passed
59	Single HpCDF	43.96	passed	passed	passed	passed	passed	passed	passed
60	Single HpCDF	45.71	passed	passed	passed	passed	passed	passed	passed



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 22:14
Number of Entries	64
Comment	
Vial	8
Sample Name	CALDF61837B
Sample ID	CS501
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

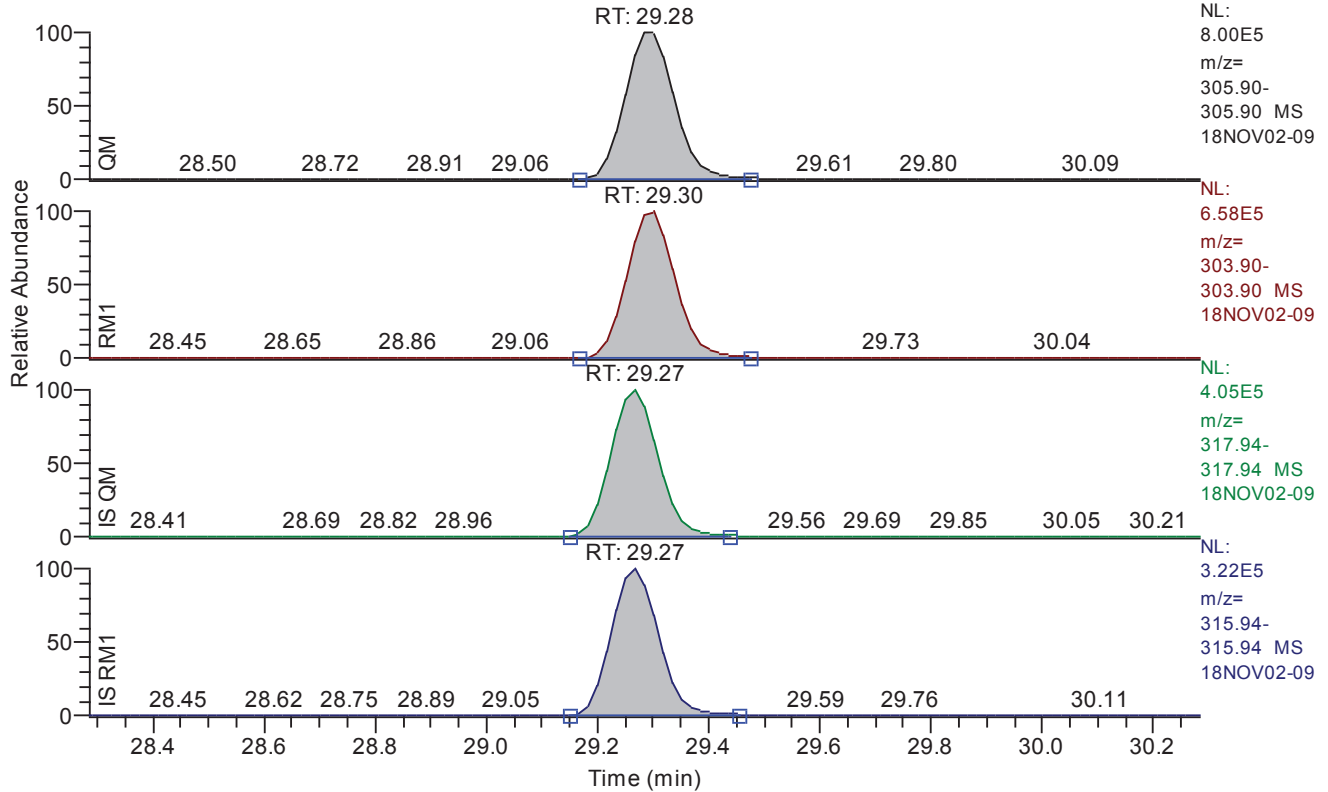
Quan	x:\18nov02\18nov02-09.quan
Data	x:\18nov02\18nov02-09.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 28.28 - 30.28 SM: 3G



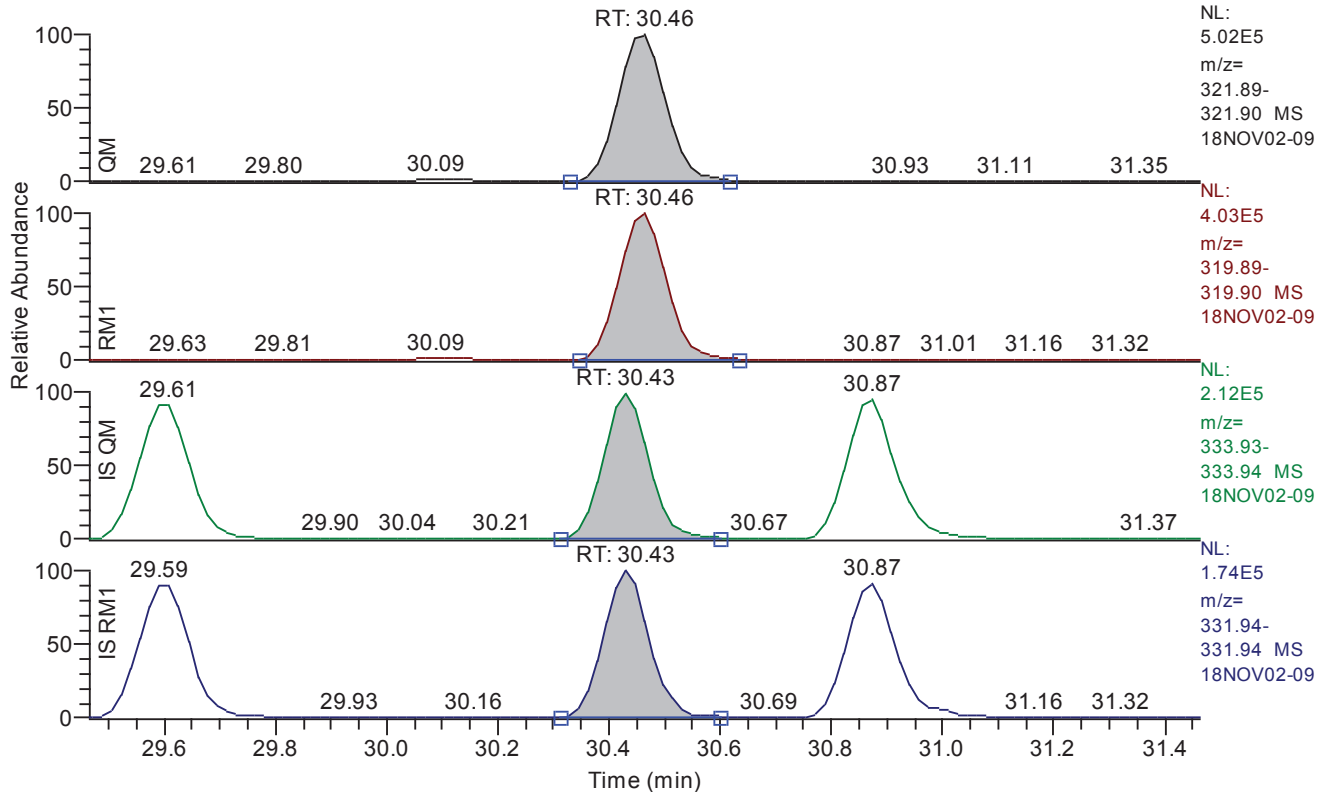
Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.28
QM Area	5023433
QM Integration Mode	A
RM1 Area	4035652
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0253
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	19145
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.46 - 31.46 SM: 3G



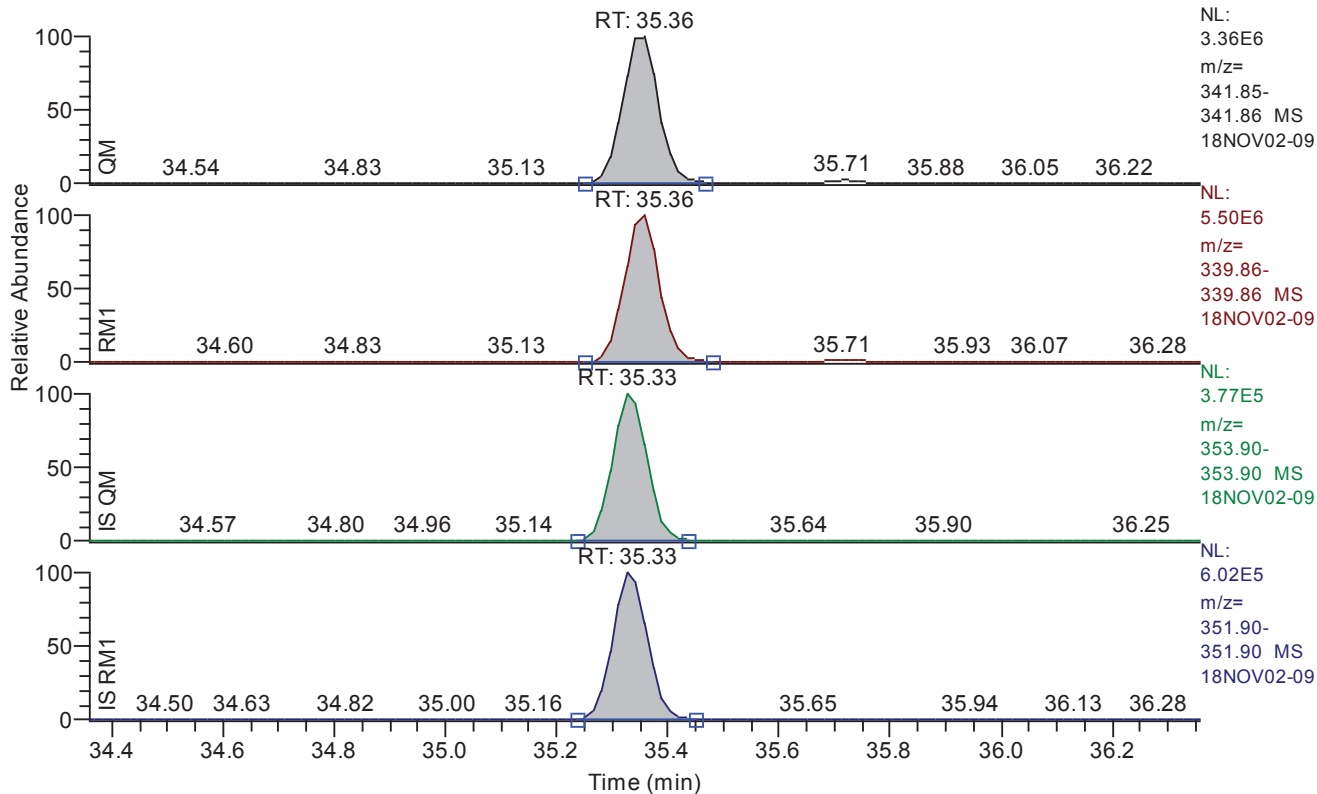
Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.46
QM Area	3036548
QM Integration Mode	A
RM1 Area	2432152
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0208
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	22903
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 34.36 - 36.36 SM: 3G

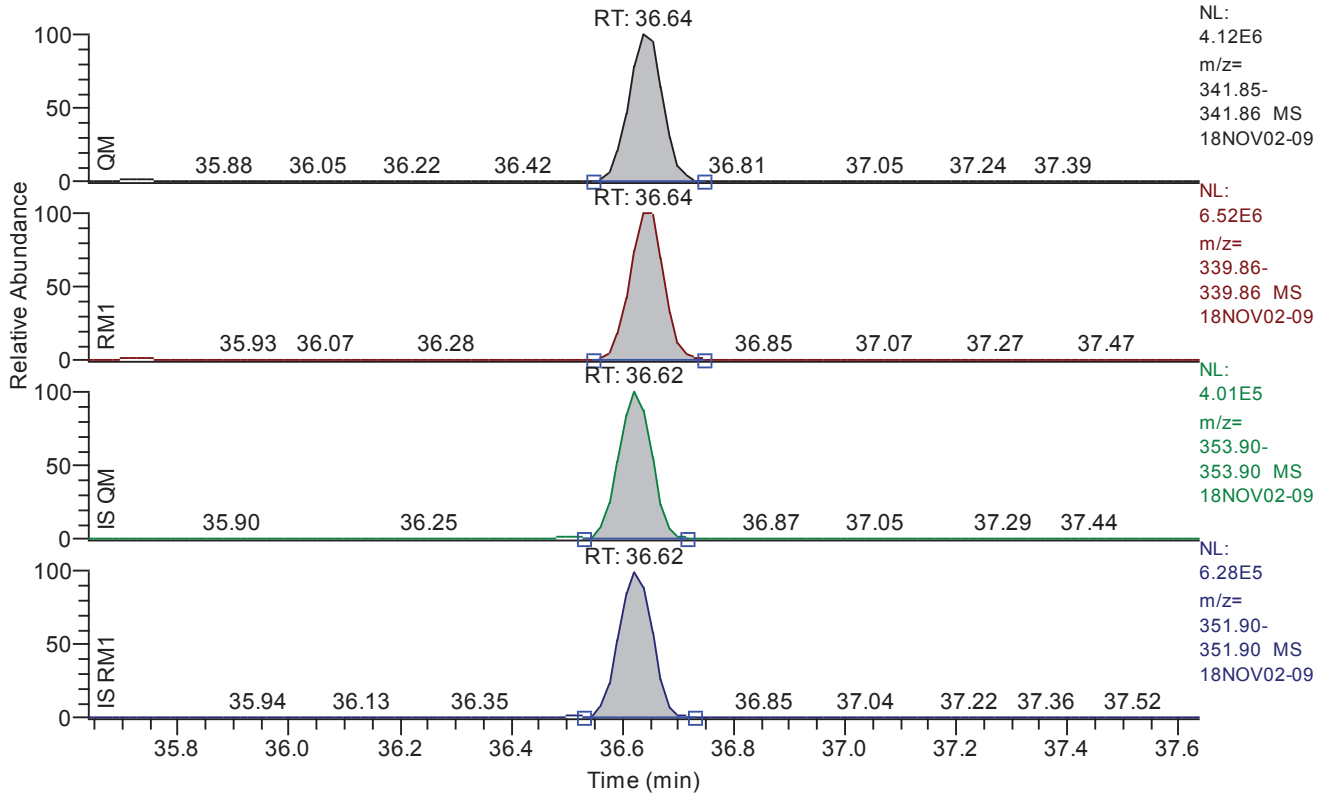


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.36
QM Area	15246182
QM Integration Mode	A
RM1 Area	24090624
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0178
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	137971
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.64 - 37.64 SM: 3G



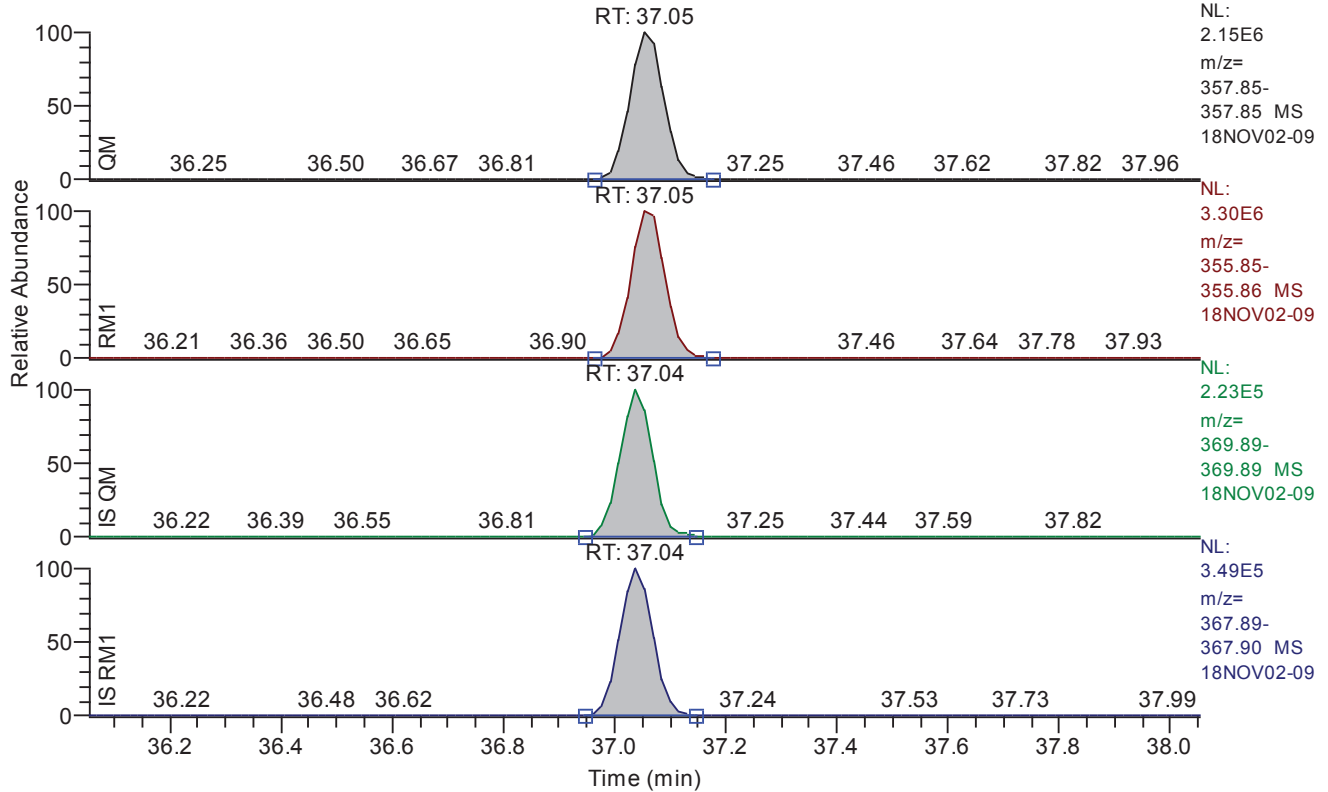
Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.64
QM Area	17553881
QM Integration Mode	A
RM1 Area	27829216
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0149
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	165642
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 36.05 - 38.05 SM: 3G

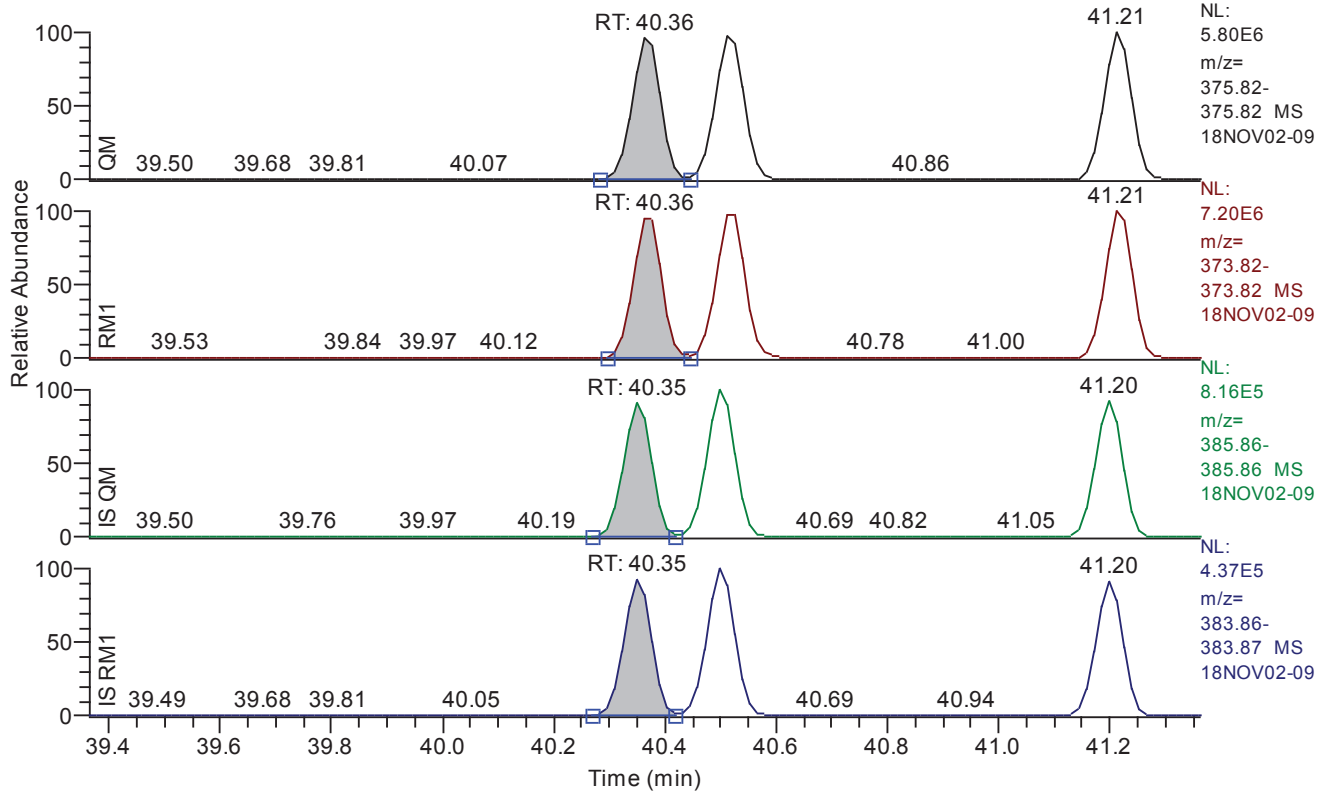


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.05
QM Area	9175622
QM Integration Mode	A
RM1 Area	14194264
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0319
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	75311
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.36 - 41.36 SM: 3G



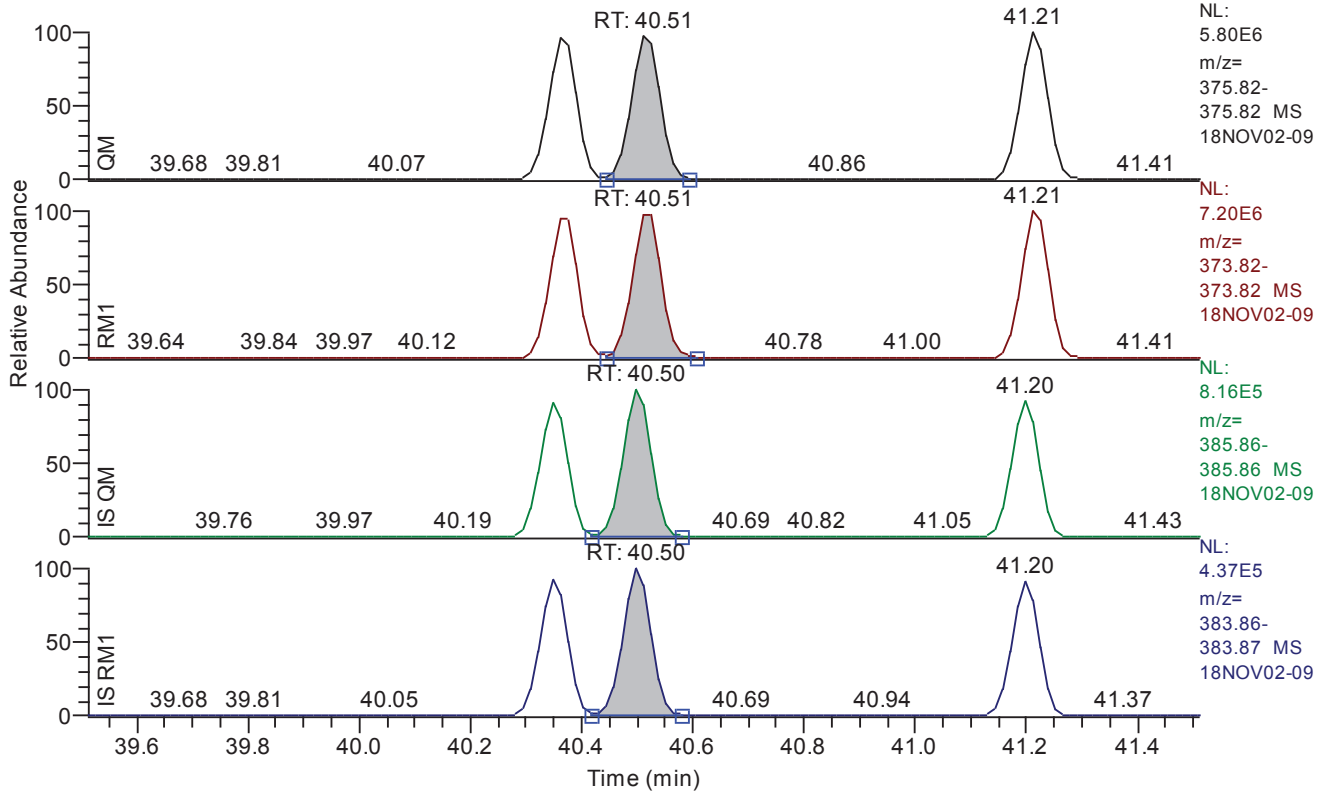
Entry Parameters

Compound Name 123478-HxCDF
 QM Retention Time 40.36
 QM Area 19794616
 QM Integration Mode A
 RM1 Area 24585933
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.0454
 Unqualified Amount (A) 1000.000000
 Adjusted Amount (A) 1000.0000
 Signal-to-Noise 54054
 Client Flags
 Status Overview passed
 Status Info



Chromatogram

RT: 39.51 - 41.51 SM: 3G



NL: 5.80E6
m/z= 375.82-375.82 MS
18NOV02-09

NL: 7.20E6
m/z= 373.82-373.82 MS
18NOV02-09

NL: 8.16E5
m/z= 385.86-385.86 MS
18NOV02-09

NL: 4.37E5
m/z= 383.86-383.87 MS
18NOV02-09

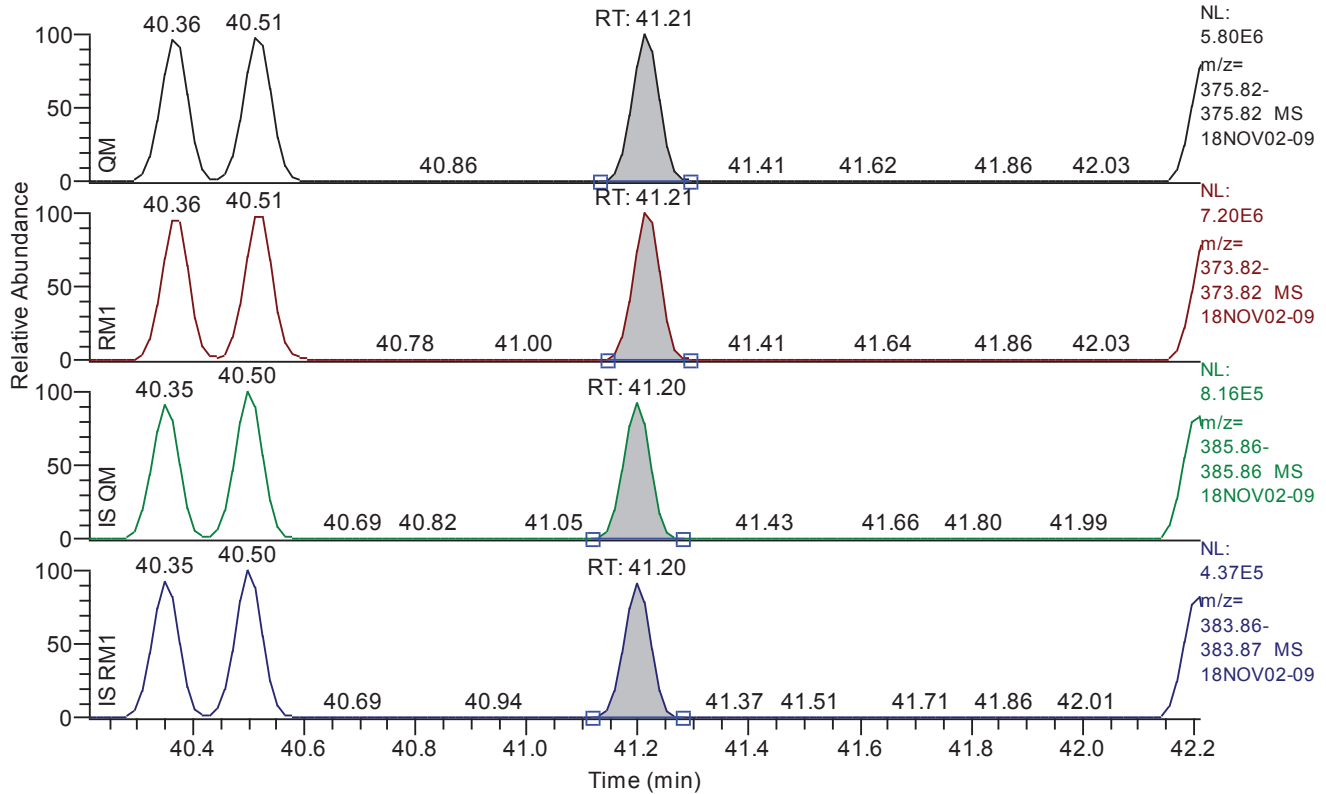
Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.51
QM Area	20390774
QM Integration Mode	A
RM1 Area	25656045
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0444
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	54773
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.21 - 42.21 SM: 3G



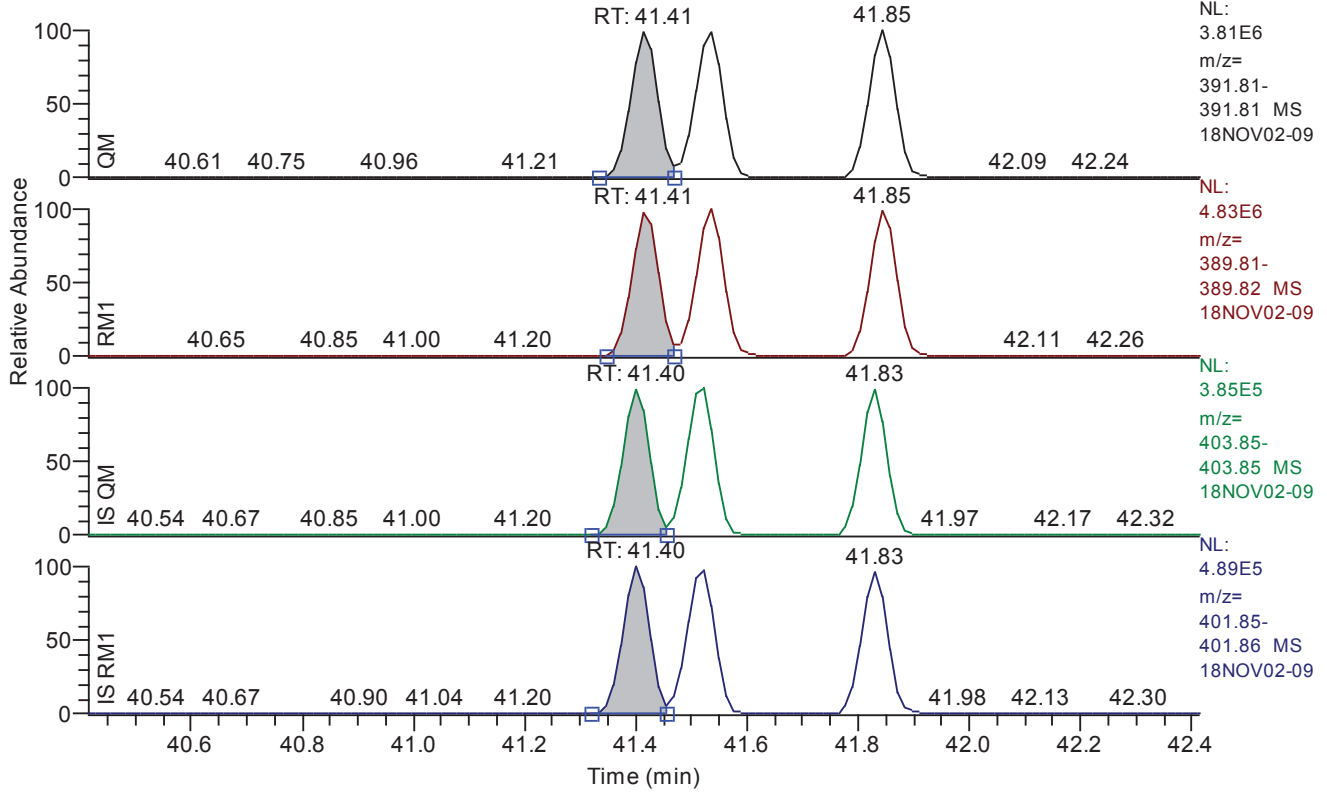
Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.21
QM Area	19952973
QM Integration Mode	A
RM1 Area	24879577
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0442
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	56163
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.41 - 42.41 SM: 3G



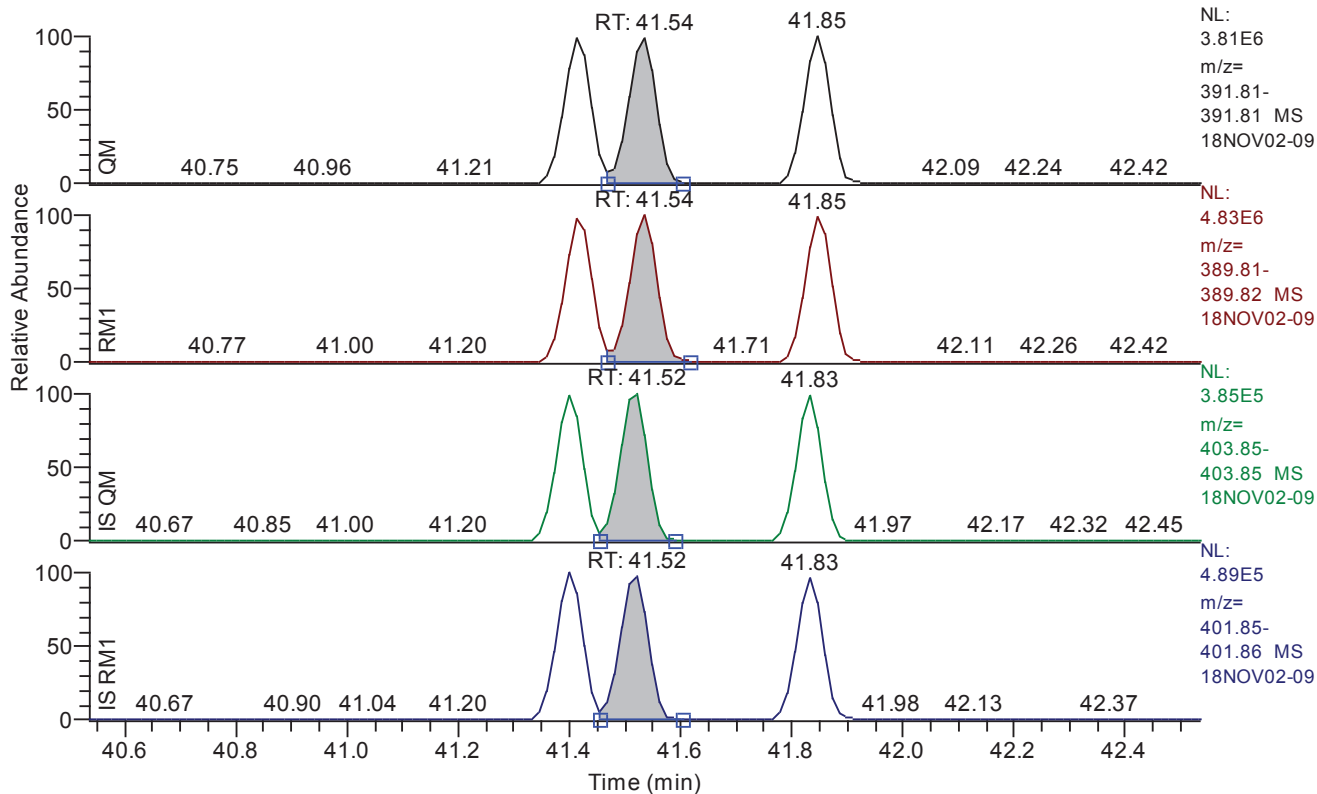
Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.41
QM Area	12655384
QM Integration Mode	A
RM1 Area	15917427
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0235
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	105450
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.54 - 42.54 SM: 3G



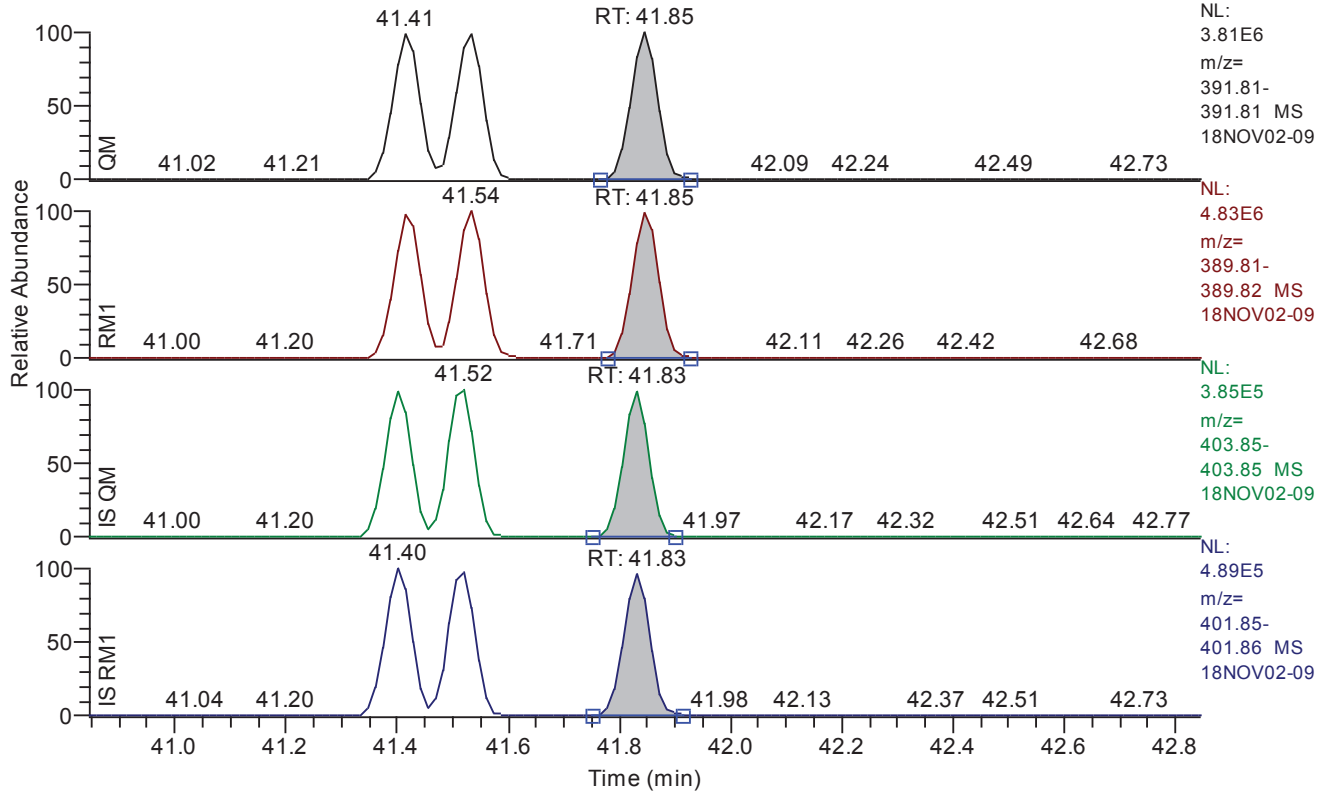
Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.54
QM Area	13179734
QM Integration Mode	A
RM1 Area	16702342
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0236
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	106742
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 40.85 - 42.85 SM: 3G



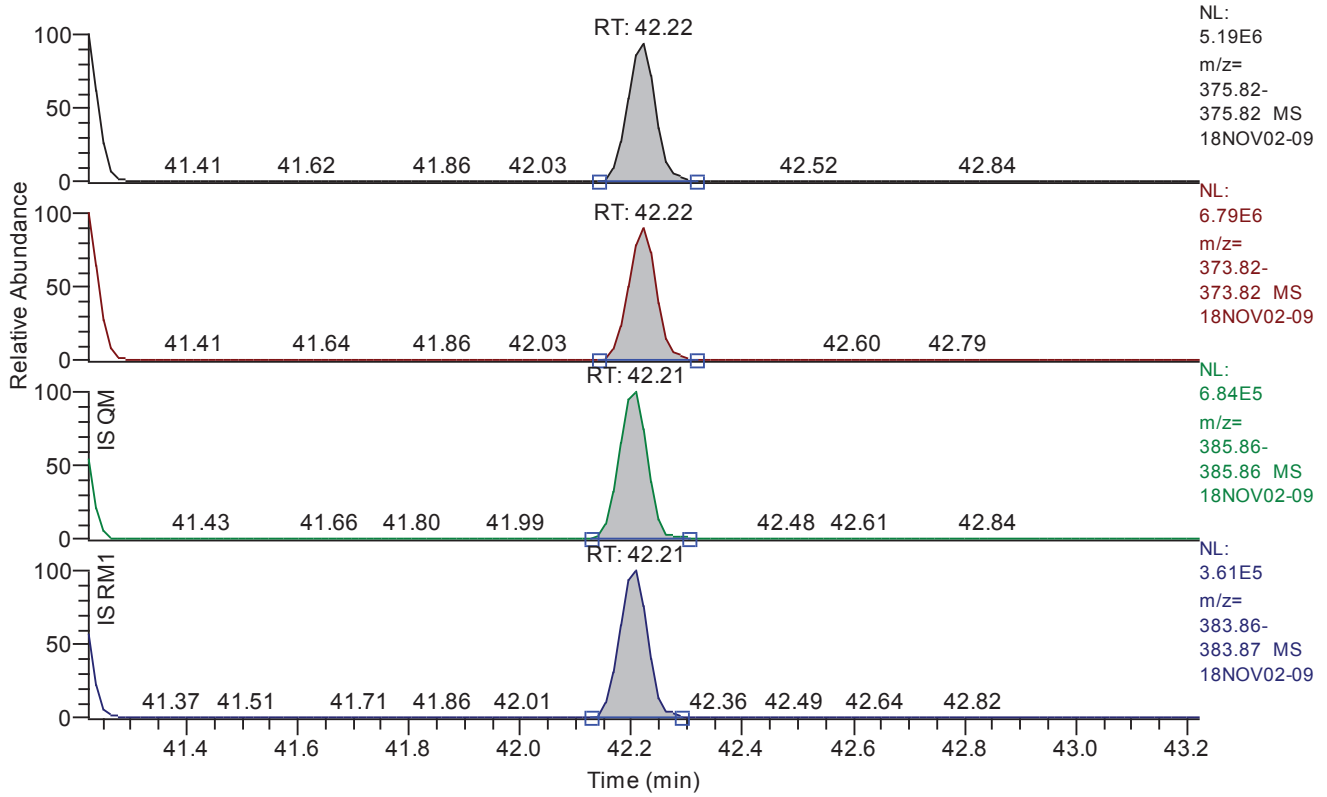
Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.85
QM Area	12798618
QM Integration Mode	A
RM1 Area	16081796
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0228
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	107229
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 41.22 - 43.22 SM: 3G



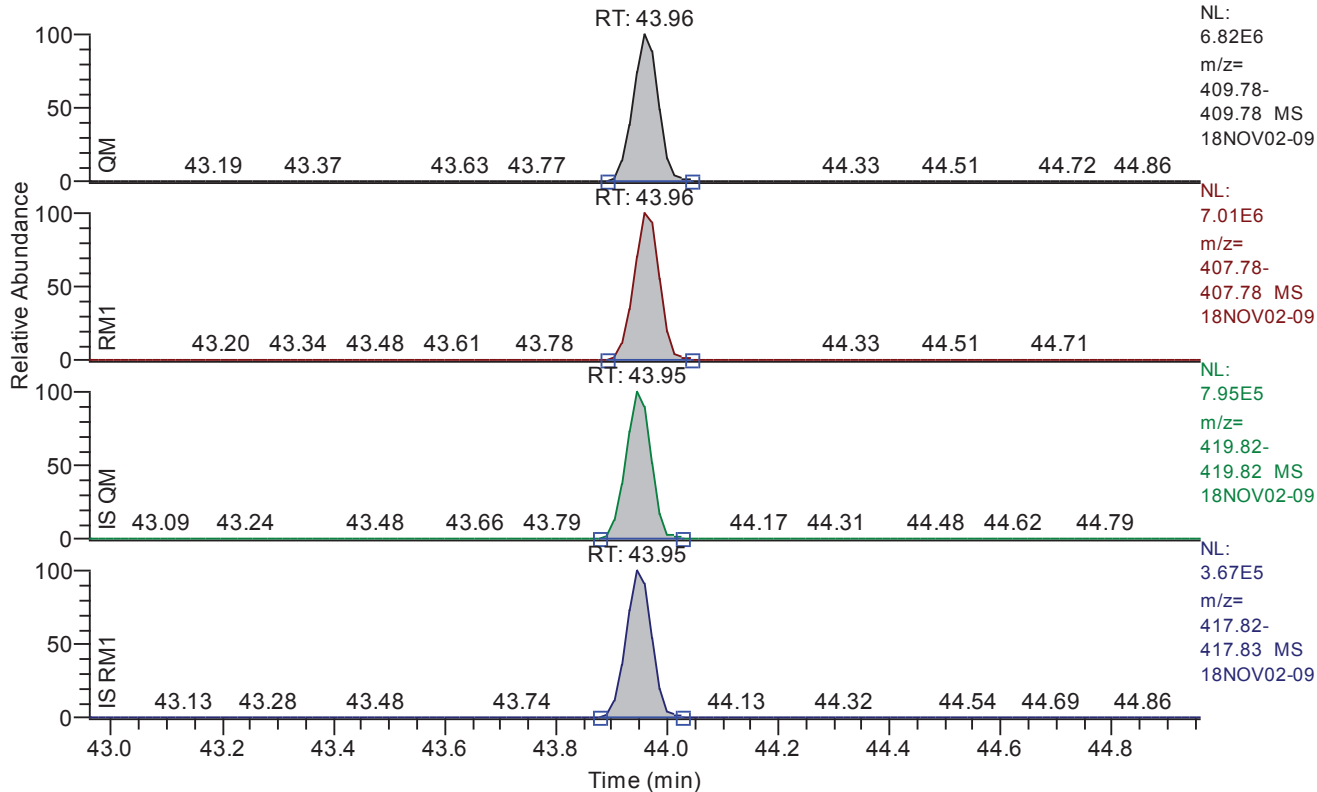
Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.22
QM Area	17181998
QM Integration Mode	A
RM1 Area	21345725
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0536
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	47855
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 42.96 - 44.96 SM: 3G



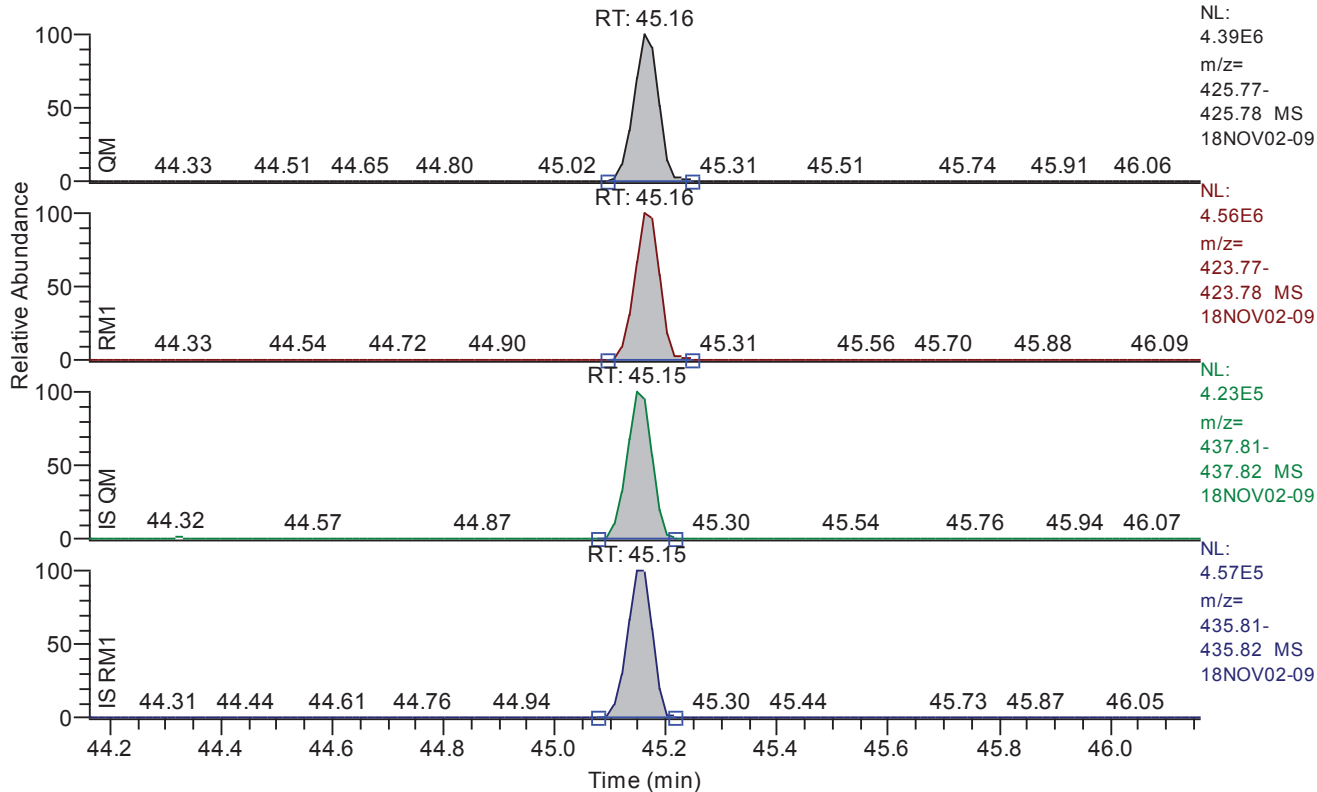
Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.96
QM Area	22141760
QM Integration Mode	A
RM1 Area	23113383
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0461
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	54091
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.16 - 46.16 SM: 3G



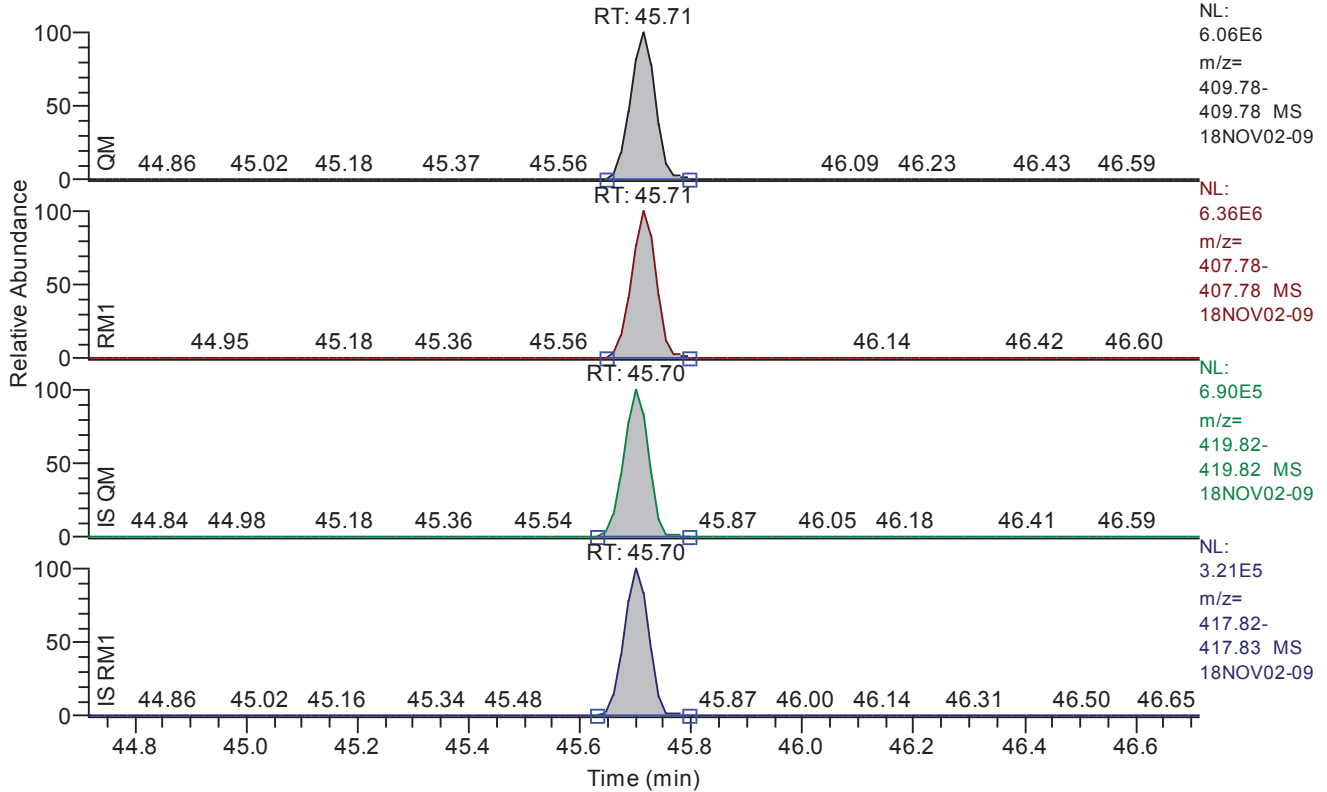
Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.16
QM Area	13941245
QM Integration Mode	A
RM1 Area	14712475
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0515
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	49023
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 44.71 - 46.71 SM: 3G



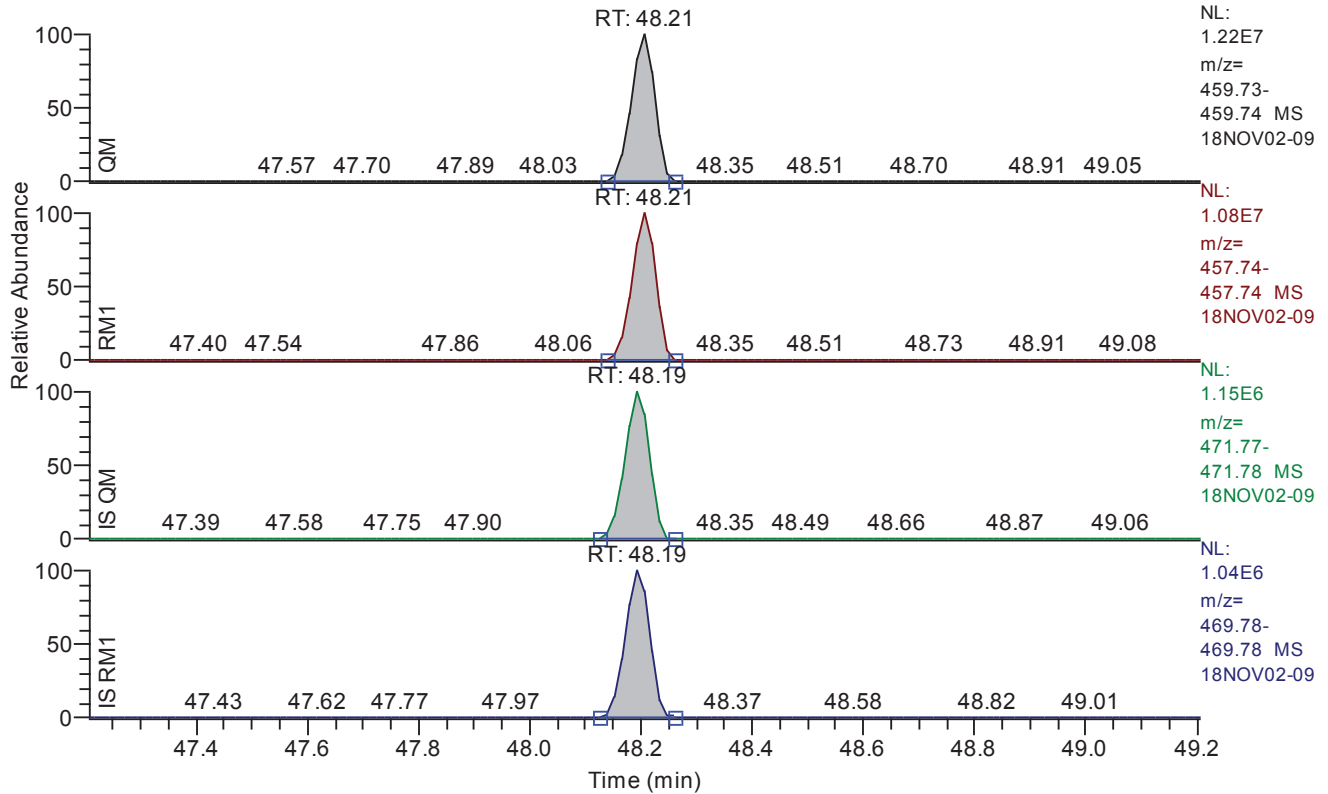
Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.71
QM Area	19394847
QM Integration Mode	A
RM1 Area	20305725
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0518
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	48580
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.21 - 49.21 SM: 3G



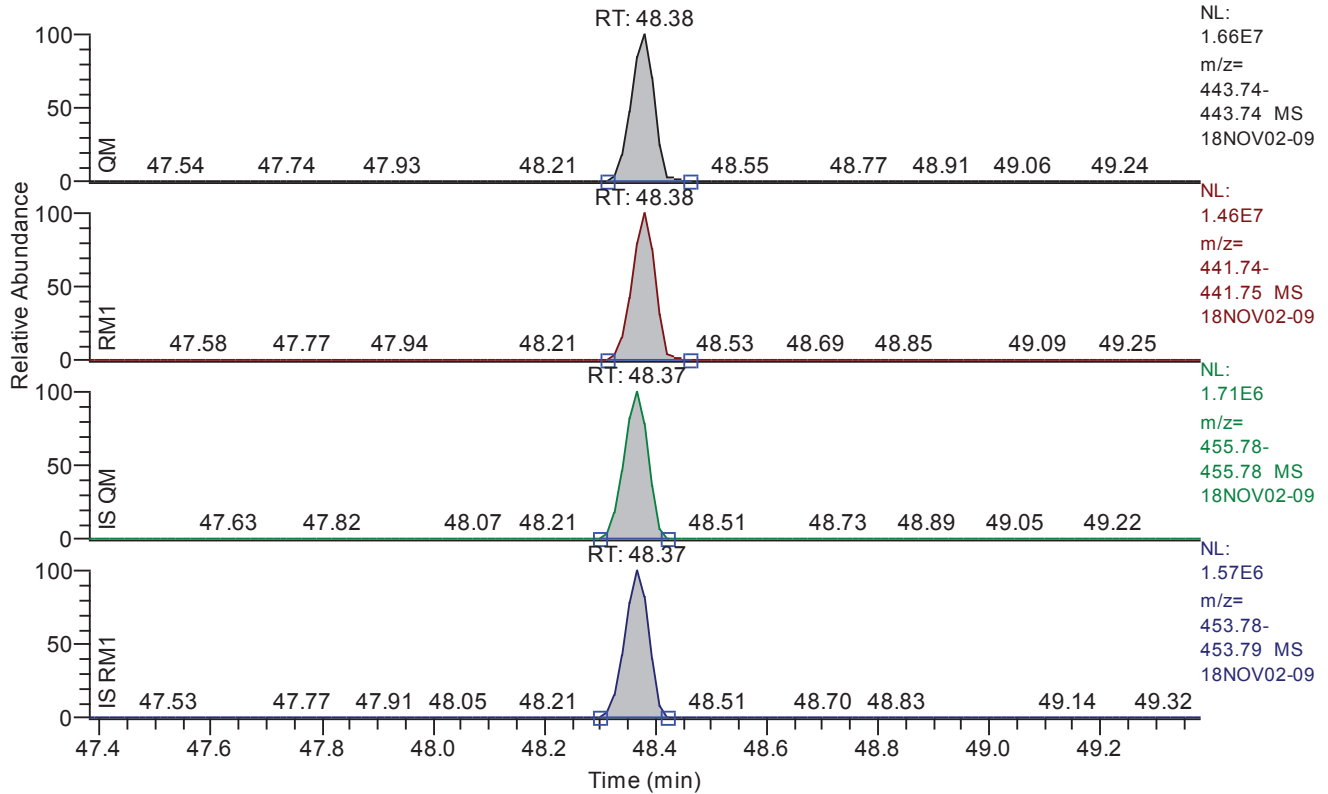
Entry Parameters

Compound Name	OCDD
QM Retention Time	48.21
QM Area	35966635
QM Integration Mode	A
RM1 Area	31944657
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0227
Unqualified Amount (A)	2000.000000
Adjusted Amount (A)	2000.0000
Signal-to-Noise	229025
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 47.38 - 49.38 SM: 3G



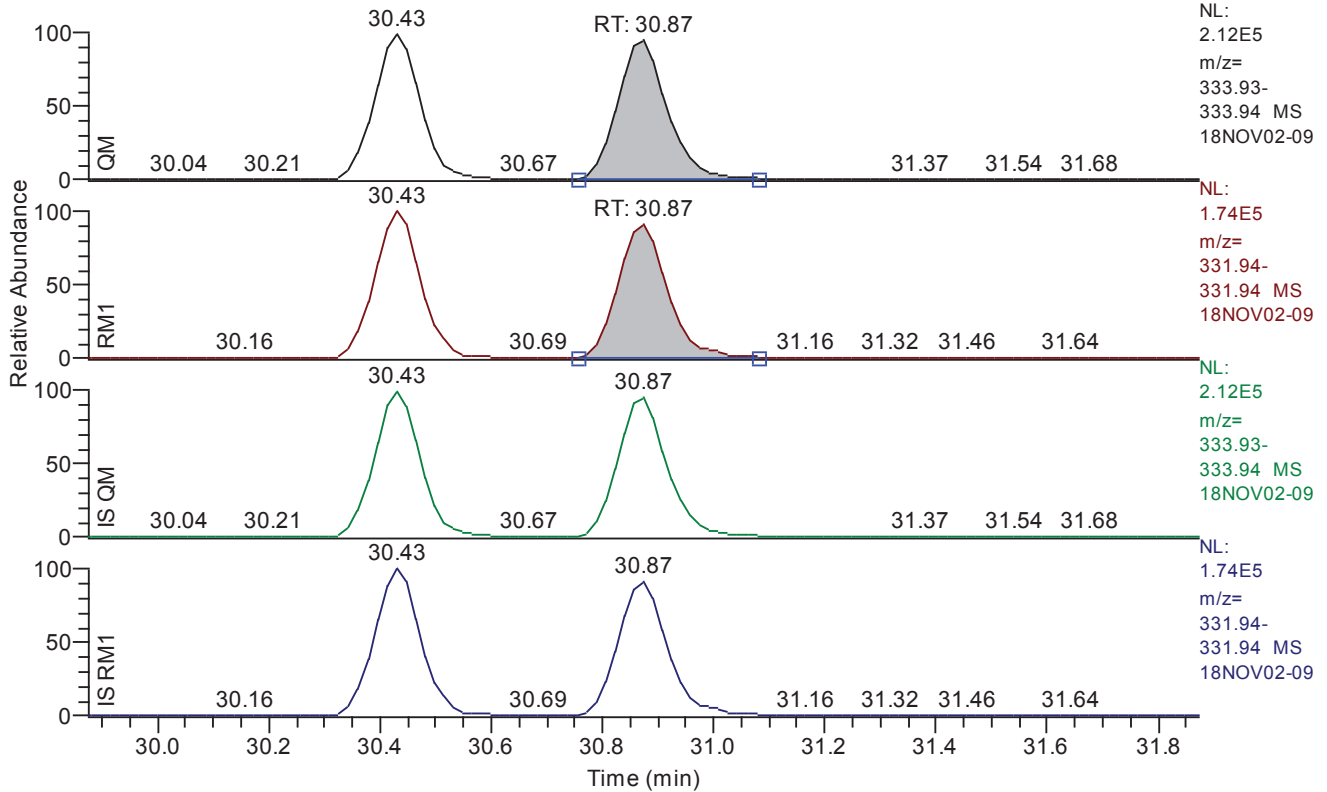
Entry Parameters

Compound Name	OCDF
QM Retention Time	48.38
QM Area	47739931
QM Integration Mode	A
RM1 Area	41916993
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0187
Unqualified Amount (A)	2000.000000
Adjusted Amount (A)	2000.0000
Signal-to-Noise	279744
Client Flags	
Status Overview	passed
Status Info	



Chromatogram

RT: 29.87 - 31.87 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	30.87
QM Area	1254701
QM Integration Mode	A
RM1 Area	999029
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0331
Unqualified Amount (A)	100.000000
Adjusted Amount (A)	100.0000
Signal-to-Noise	7647
Client Flags	
Status Overview	passed
Status Info	

Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/02 22:14
Number of Entries	64
Comment	
Vial	8
Sample Name	CALDF61837B
Sample ID	CS501
Inst ID	DF17611-18NOV02
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

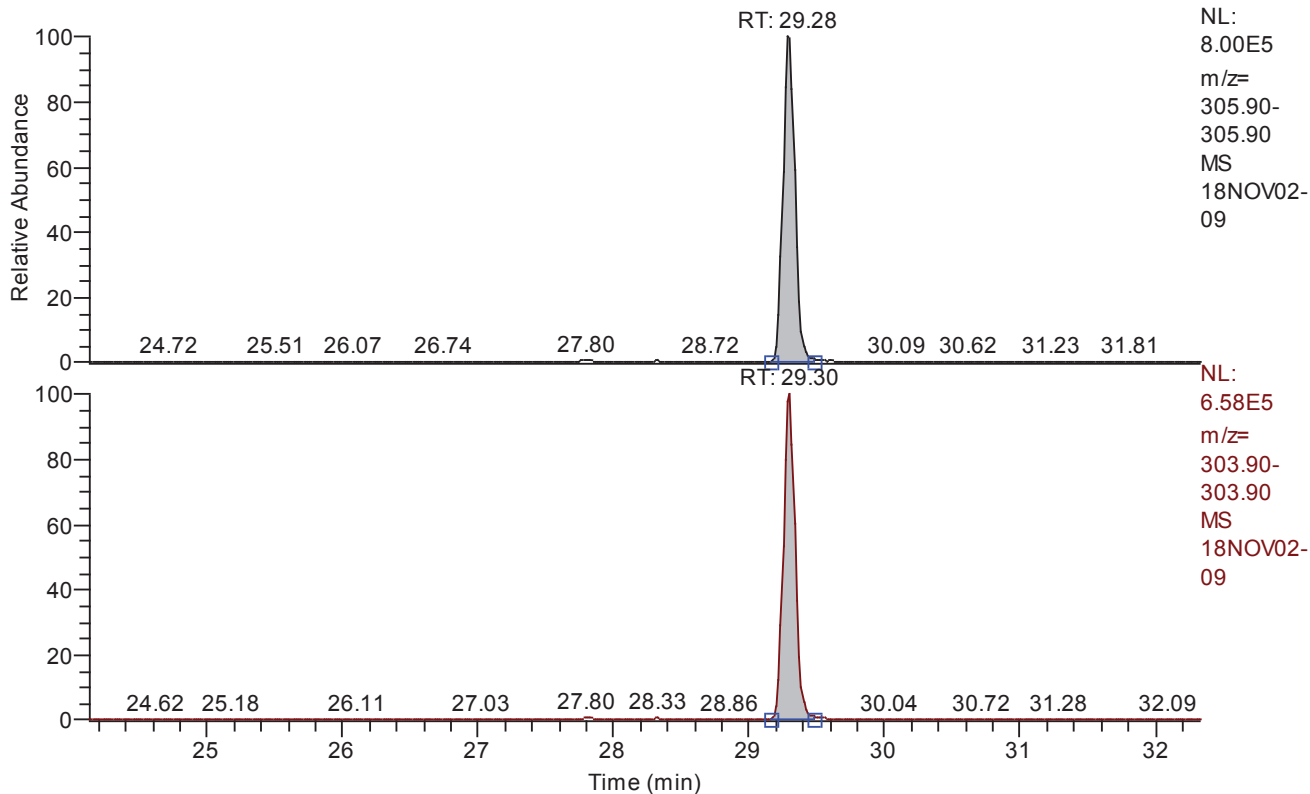
Quan	x:\18nov02\18nov02-09.quan
Data	x:\18nov02\18nov02-09.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Single Point (Spec. RF)
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 24.13 - 32.33 SM: 3G

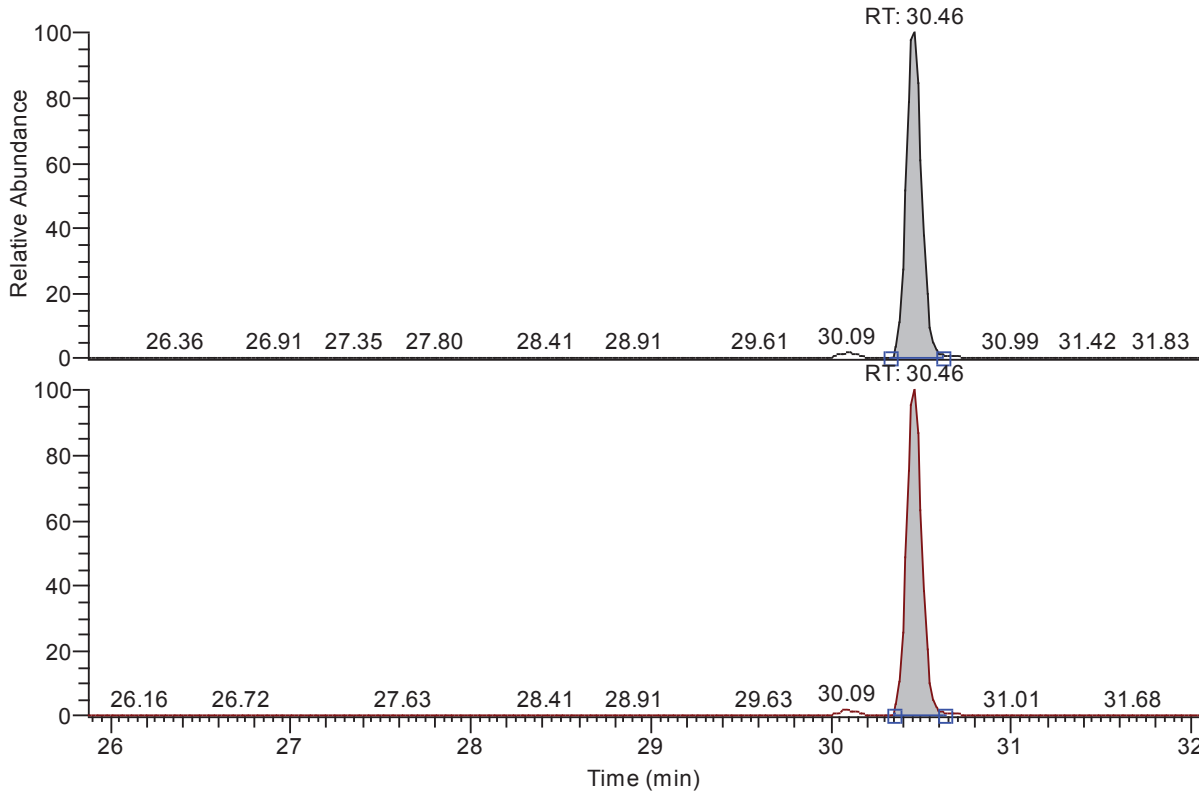


Entry Parameters

Compound Name	Total TCDF
QM Retention Time	28.23
QM Area	5023433
QM Integration Mode	A
RM1 Area	4035652
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0253
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	19145
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 25.87 - 32.05 SM: 3G



NL:
5.02E5
m/z=
321.89-
321.90
MS
18NOV02-
09

NL:
4.03E5
m/z=
319.89-
319.90
MS
18NOV02-
09

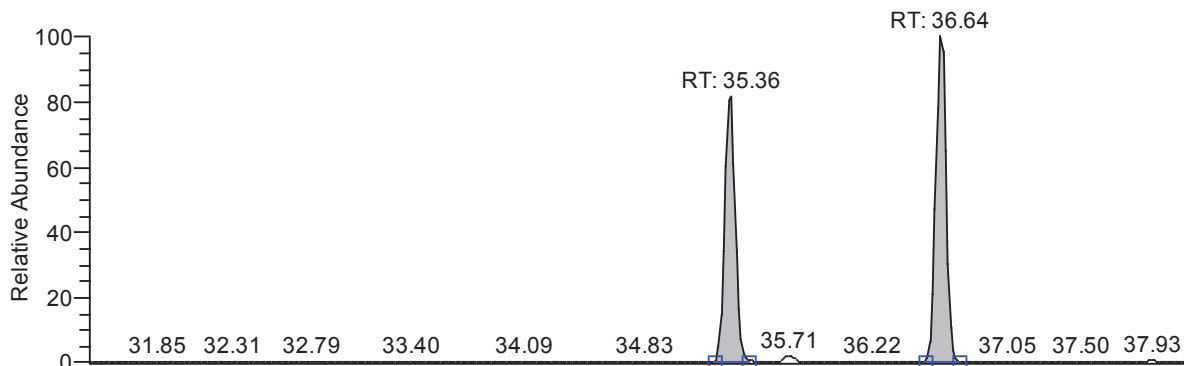
Entry Parameters

Compound Name	Total TCDD
QM Retention Time	28.96
QM Area	3036548
QM Integration Mode	A
RM1 Area	2432152
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0208
Unqualified Amount (A)	200.000000
Adjusted Amount (A)	200.0000
Signal-to-Noise	22903
Client Flags	
Status Overview	passed (1)
Status Info	

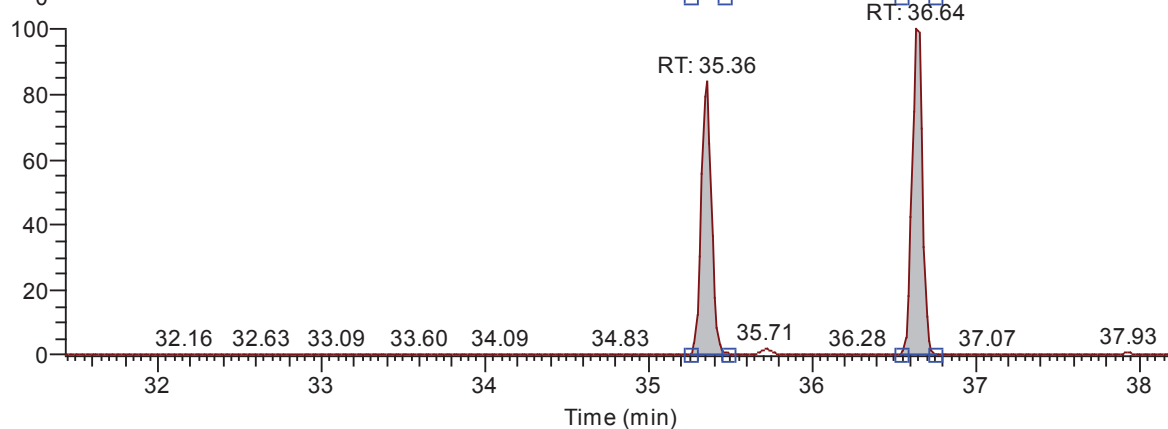


Chromatogram

RT: 31.43 - 38.23 SM: 3G



NL:
4.12E6
m/z=
341.85-
341.86
MS
18NOV02-
09



NL:
6.52E6
m/z=
339.86-
339.86
MS
18NOV02-
09

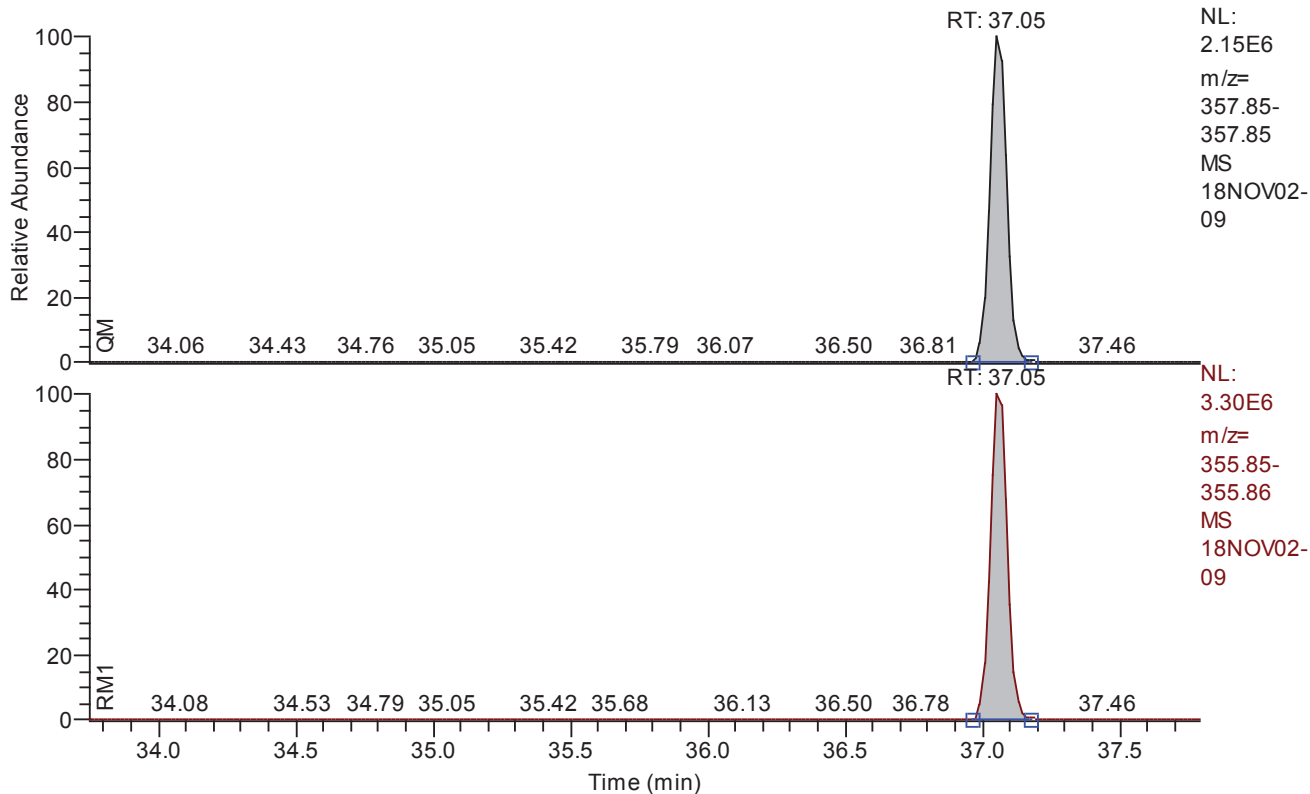
Entry Parameters

Compound Name	Total PeCDF
QM Retention Time	34.83
QM Area	32800063
QM Integration Mode	A
RM1 Area	51919840
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0162
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	2000.0000
Signal-to-Noise	151807
Client Flags	
Status Overview	passed (2)
Status Info	



Chromatogram

RT: 33.75 - 37.79 SM: 3G

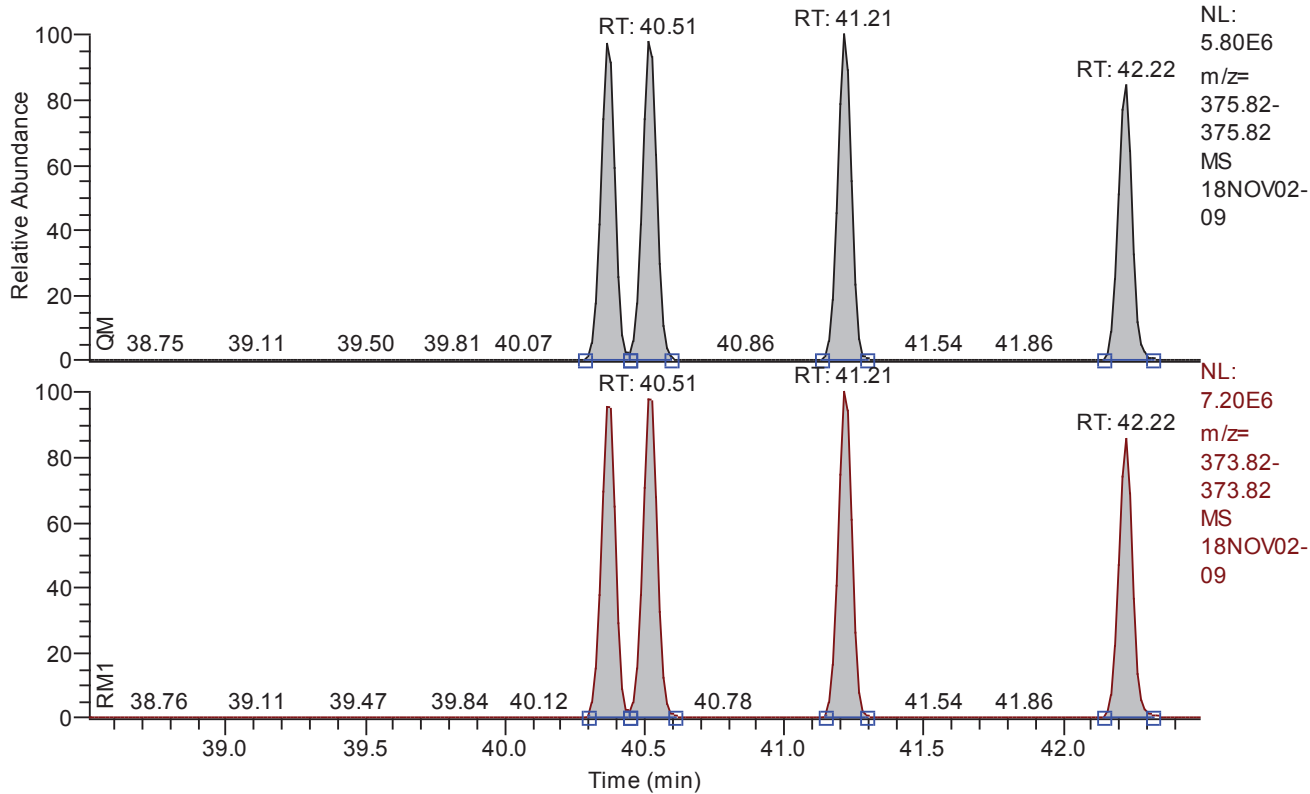


Entry Parameters

Compound Name	Total PeCDD
QM Retention Time	35.77
QM Area	9175622
QM Integration Mode	A
RM1 Area	14194264
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0319
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	75311
Client Flags	
Status Overview	passed (1)
Status Info	

Chromatogram

RT: 38.51 - 42.49 SM: 3G



NL:
5.80E6
m/z=
375.82-
375.82
MS
18NOV02-
09

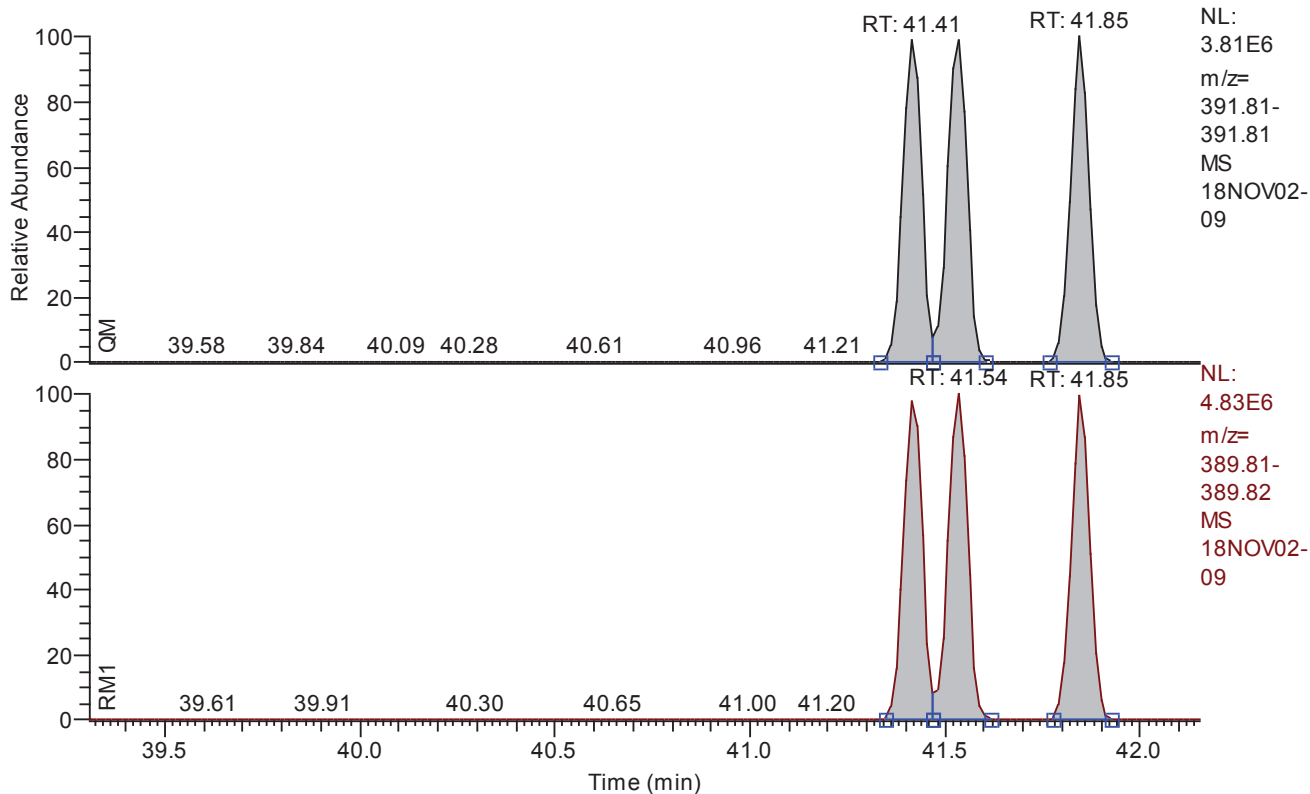
NL:
7.20E6
m/z=
373.82-
373.82
MS
18NOV02-
09

Entry Parameters

Compound Name	Total HxCDF
QM Retention Time	40.50
QM Area	77320361
QM Integration Mode	A
RM1 Area	96467280
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0466
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	4000.0000
Signal-to-Noise	53211
Client Flags	
Status Overview	passed (4)
Status Info	

Chromatogram

RT: 39.31 - 42.15 SM: 3G

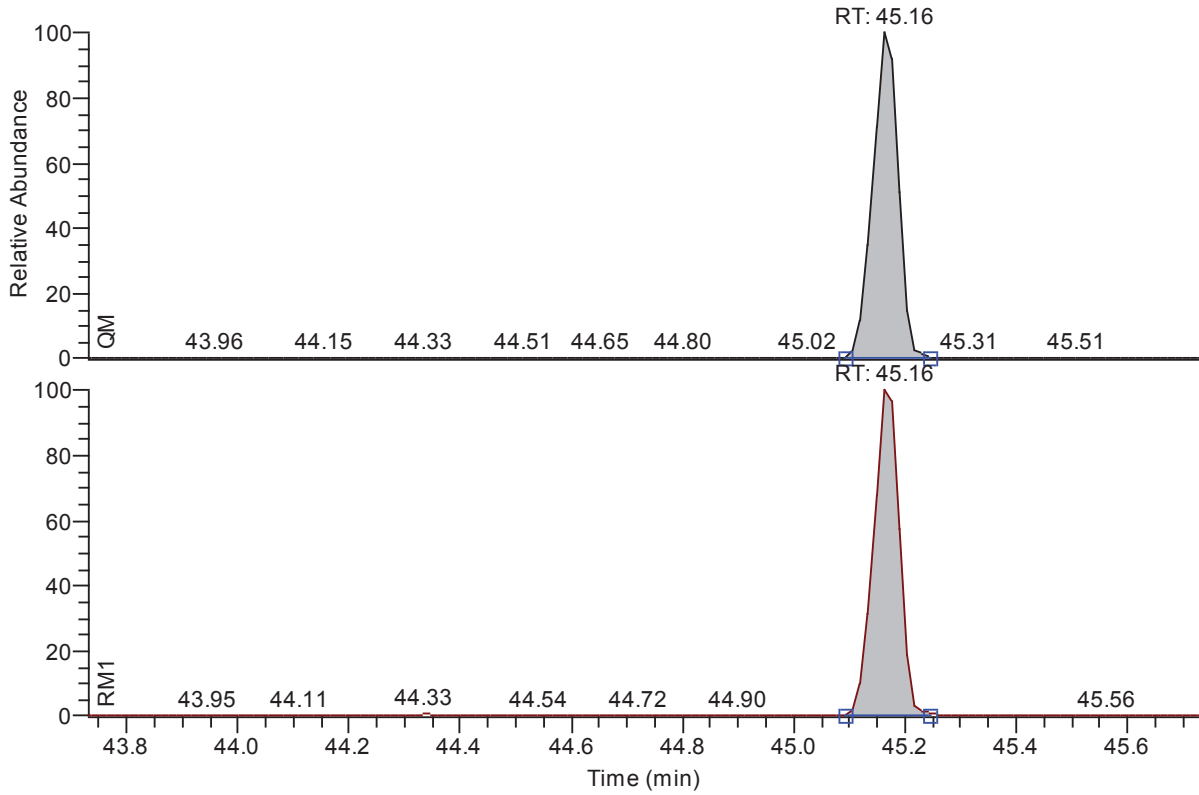


Entry Parameters

Compound Name	Total HxCDD
QM Retention Time	40.73
QM Area	38633737
QM Integration Mode	A
RM1 Area	48701565
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0233
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	3000.0000
Signal-to-Noise	106473
Client Flags	
Status Overview	passed (3)
Status Info	

Chromatogram

RT: 43.73 - 45.73 SM: 3G



NL:
4.39E6
m/z=
425.77-
425.78
MS
18NOV02-
09

NL:
4.56E6
m/z=
423.77-
423.78
MS
18NOV02-
09

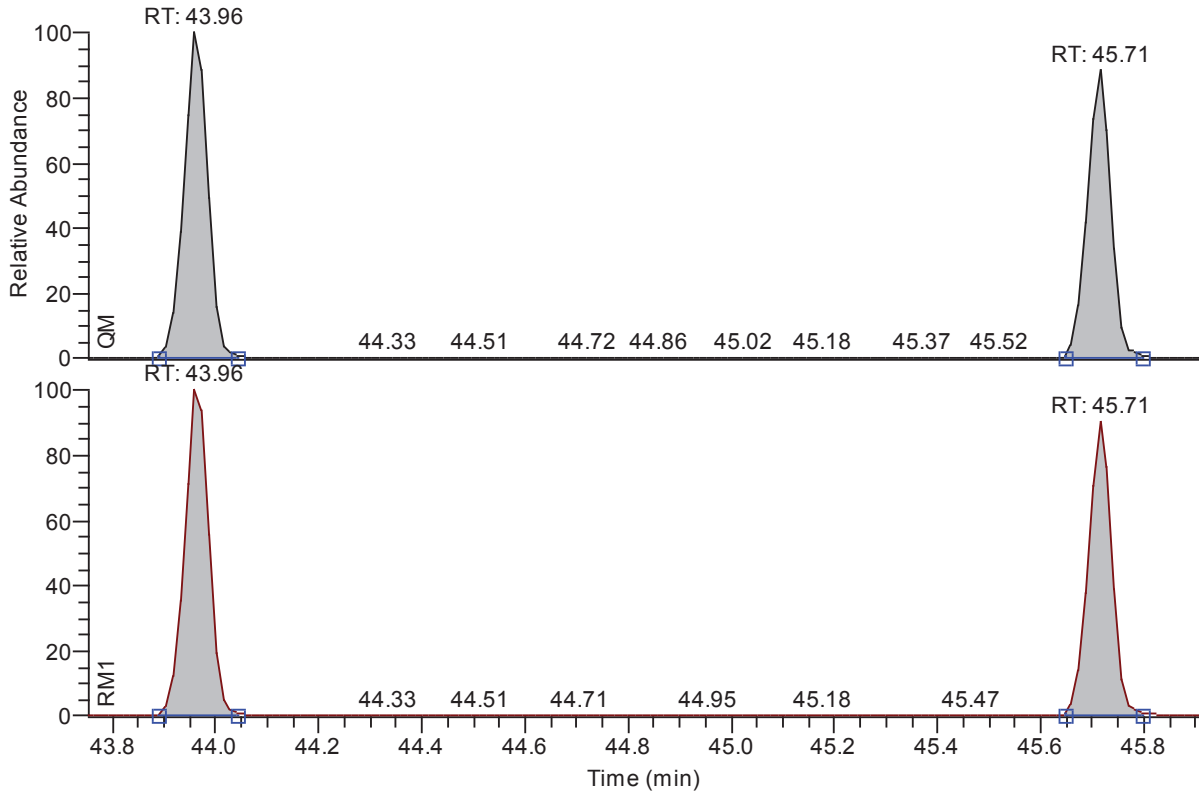
Entry Parameters

Compound Name	Total HpCDD
QM Retention Time	44.73
QM Area	13941245
QM Integration Mode	A
RM1 Area	14712475
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0515
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	1000.0000
Signal-to-Noise	49023
Client Flags	
Status Overview	passed (1)
Status Info	



Chromatogram

RT: 43.75 - 45.91 SM: 3G



NL:
6.82E6
m/z=
409.78-
409.78
MS
18NOV02-
09

NL:
7.01E6
m/z=
407.78-
407.78
MS
18NOV02-
09

Entry Parameters

Compound Name	Total HpCDF
QM Retention Time	44.83
QM Area	41536607
QM Integration Mode	A
RM1 Area	43419108
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0522
Unqualified Amount (A)	1000.000000
Adjusted Amount (A)	2139.9116
Signal-to-Noise	51335
Client Flags	
Status Overview	passed (2)
Status Info	



Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Retention Time	RM1 Retention Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.28	29.28	29.30	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.46	30.46	30.46	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.36	35.36	35.36	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.64	36.64	36.64	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	37.05	37.05	37.05	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.36	40.36	40.36	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.51	40.51	40.51	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.21	41.21	41.21	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.41	41.41	41.41	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.54	41.54	41.54	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.85	41.85	41.85	passed	passed
12	123789-HpCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.22	42.22	42.22	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	43.96	43.96	43.96	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.16	45.16	45.16	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.71	45.71	45.71	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.21	48.21	48.21	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.38	48.38	48.38	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.87	30.87	30.87	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.61	29.61	29.59	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.27	40.27	40.28	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.27	29.27	29.27	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.43	30.43	30.43	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.33	35.33	35.33	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.62	36.62	36.62	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	37.04	37.04	37.04	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.35	40.35	40.35	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.50	40.50	40.50	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.20	41.20	41.20	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.40	41.40	41.40	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.52	41.52	41.52	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.83	41.83	41.83	passed	passed
32	13C12-123789-HpCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.21	42.21	42.21	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	43.95	43.95	43.95	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.15	45.15	45.15	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.70	45.70	45.70	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.19	48.19	48.19	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.37	48.37	48.37	passed	passed
38	Total TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	28.23	28.23	28.23	---	---
39	Total TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	28.96	28.96	28.96	---	---
40	Total PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	34.83	34.83	34.83	---	---
41	Total PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	35.77	35.77	35.77	---	---
42	Total HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.50	40.50	40.50	---	---
43	Total HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	40.73	40.73	40.73	---	---
44	Total HpCDF	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	44.73	44.73	44.73	---	---
45	Total HpCDD	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	44.83	44.83	44.83	---	---
46	Single TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	7.46	29.28	29.28	29.30	passed	passed
47	Single TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	5.61	30.46	30.46	30.46	passed	passed
48	Single PeCDF	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	3.68	37.05	37.05	37.05	passed	passed
49	Single PeCDD	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	36.64	36.64	36.64	passed	passed
50	Single PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	6.18	35.36	35.36	35.36	passed	passed
51	Single HpCDF	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	1.07	45.16	45.16	45.16	passed	passed
52	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	41.21	41.21	41.21	passed	passed
53	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.36	40.36	40.36	passed	passed
54	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	40.51	40.51	40.51	passed	passed
55	Single HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	3.62	42.22	42.22	42.22	passed	passed
56	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.85	41.85	41.85	passed	passed
57	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.41	41.41	41.41	passed	passed
58	Single HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	2.59	41.54	41.54	41.54	passed	passed
59	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	43.96	43.96	43.96	passed	passed
60	Single HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	1.96	45.71	45.71	45.71	passed	passed



Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.28	0.8034	0.6450 - 0.8950	passed	100.00	0 - 0	passed
2	2378-TCDD	30.46	0.8010	0.6450 - 0.8950	passed	100.00	0 - 0	passed
3	12378-PeCDF	35.36	1.5801	1.3150 - 1.7850	passed	100.00	0 - 0	passed
4	23478-PeCDF	36.64	1.5854	1.3150 - 1.7850	passed	100.00	0 - 0	passed
5	12378-PeCDD	37.05	1.5470	1.3150 - 1.7850	passed	100.00	0 - 0	passed
6	123478-HxCDF	40.36	1.2421	1.0450 - 1.4350	passed	100.00	0 - 0	passed
7	123678-HxCDF	40.51	1.2582	1.0450 - 1.4350	passed	100.00	0 - 0	passed
8	234678-HxCDF	41.21	1.2469	1.0450 - 1.4350	passed	100.00	0 - 0	passed
9	123478-HxCDD	41.41	1.2578	1.0450 - 1.4350	passed	100.00	0 - 0	passed
10	123678-HxCDD	41.54	1.2673	1.0450 - 1.4350	passed	100.00	0 - 0	passed
11	123789-HxCDD	41.85	1.2565	1.0450 - 1.4350	passed	100.00	0 - 0	passed
12	123789-HxCDF	42.22	1.2423	1.0450 - 1.4350	passed	100.00	0 - 0	passed
13	1234678-HpCDF	43.96	1.0439	0.8750 - 1.2050	passed	100.00	0 - 0	passed
14	1234678-HpCDD	45.16	1.0553	0.8750 - 1.2050	passed	100.00	0 - 0	passed
15	1234789-HpCDF	45.71	1.0470	0.8750 - 1.2050	passed	100.00	0 - 0	passed
16	OCDD	48.21	0.8882	0.7550 - 1.0250	passed	100.00	0 - 0	passed
17	OCDF	48.38	0.8780	0.7550 - 1.0250	passed	100.00	0 - 0	passed
18	13C12-1278-TCDD (CRS)	30.87	0.7962	0.6450 - 0.8950	passed	100.00	0 - 0	passed
19	13C12-1234-TCDD	29.61	0.8145	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.27	1.2944	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.27	0.7993	0.6450 - 0.8950	passed	100.00	0 - 0	passed
22	13C12-2378-TCDD	30.43	0.8284	0.6450 - 0.8950	passed	100.00	0 - 0	passed
23	13C12-12378-PeCDF	35.33	1.5925	1.3150 - 1.7850	passed	100.00	0 - 0	passed
24	13C12-23478-PeCDF	36.62	1.5853	1.3150 - 1.7850	passed	100.00	0 - 0	passed
25	13C12-12378-PeCDD	37.04	1.5861	1.3150 - 1.7850	passed	100.00	0 - 0	passed
26	13C12-123478-HxCDF	40.35	0.5416	0.4250 - 0.5950	passed	100.00	0 - 0	passed
27	13C12-123678-HxCDF	40.50	0.5298	0.4250 - 0.5950	passed	100.00	0 - 0	passed
28	13C12-234678-HxCDF	41.20	0.5271	0.4250 - 0.5950	passed	100.00	0 - 0	passed
29	13C12-123478-HxCDD	41.40	1.2932	1.0450 - 1.4350	passed	100.00	0 - 0	passed
30	13C12-123678-HxCDD	41.52	1.2613	1.0450 - 1.4350	passed	100.00	0 - 0	passed
31	13C12-123789-HxCDD	41.83	1.2643	1.0450 - 1.4350	passed	100.00	0 - 0	passed
32	13C12-123789-HxCDF	42.21	0.5235	0.4250 - 0.5950	passed	100.00	0 - 0	passed
33	13C12-1234678-HpCDF	43.95	0.4676	0.3650 - 0.5150	passed	100.00	0 - 0	passed
34	13C12-1234678-HpCDD	45.15	1.0839	0.8750 - 1.2050	passed	100.00	0 - 0	passed
35	13C12-1234789-HpCDF	45.70	0.4613	0.3650 - 0.5150	passed	100.00	0 - 0	passed
36	13C12-OCDD	48.19	0.9048	0.7550 - 1.0250	passed	100.00	0 - 0	passed
37	13C12-OCDF	48.37	0.9144	0.7550 - 1.0250	passed	100.00	0 - 0	passed
38	Total TCDF	28.23	0.8034	0.6450 - 0.8950	---	100.00	0 - 0	---
39	Total TCDD	28.96	0.8010	0.6450 - 0.8950	---	100.00	0 - 0	---
40	Total PeCDF	34.83	1.5829	1.3150 - 1.7850	---	100.00	0 - 0	---
41	Total PeCDD	35.77	1.5470	1.3150 - 1.7850	---	100.00	0 - 0	---
42	Total HxCDF	40.50	1.2476	1.0450 - 1.4350	---	100.00	0 - 0	---
43	Total HxCDD	40.73	1.2606	1.0450 - 1.4350	---	100.00	0 - 0	---
44	Total HpCDD	44.73	1.0553	0.8750 - 1.2050	---	100.00	0 - 0	---
45	Total HpCDF	44.83	1.0453	0.8750 - 1.2050	---	100.00	0 - 0	---
46	Single TCDF	29.28	0.8034	0.6450 - 0.8950	passed	100.00	0 - 0	passed
47	Single TCDD	30.46	0.8010	0.6450 - 0.8950	passed	100.00	0 - 0	passed
48	Single PeCDD	37.05	1.5470	1.3150 - 1.7850	passed	100.00	0 - 0	passed
49	Single PeCDF	36.64	1.5854	1.3150 - 1.7850	passed	100.00	0 - 0	passed
50	Single PeCDF	35.36	1.5801	1.3150 - 1.7850	passed	100.00	0 - 0	passed
51	Single HpCDD	45.16	1.0553	0.8750 - 1.2050	passed	100.00	0 - 0	passed
52	Single HxCDF	41.21	1.2469	1.0450 - 1.4350	passed	100.00	0 - 0	passed
53	Single HxCDF	40.36	1.2421	1.0450 - 1.4350	passed	100.00	0 - 0	passed
54	Single HxCDF	40.51	1.2582	1.0450 - 1.4350	passed	100.00	0 - 0	passed
55	Single HxCDF	42.22	1.2423	1.0450 - 1.4350	passed	100.00	0 - 0	passed
56	Single HxCDD	41.85	1.2565	1.0450 - 1.4350	passed	100.00	0 - 0	passed
57	Single HxCDD	41.41	1.2578	1.0450 - 1.4350	passed	100.00	0 - 0	passed
58	Single HxCDD	41.54	1.2673	1.0450 - 1.4350	passed	100.00	0 - 0	passed
59	Single HpCDF	43.96	1.0439	0.8750 - 1.2050	passed	100.00	0 - 0	passed
60	Single HpCDF	45.71	1.0470	0.8750 - 1.2050	passed	100.00	0 - 0	passed

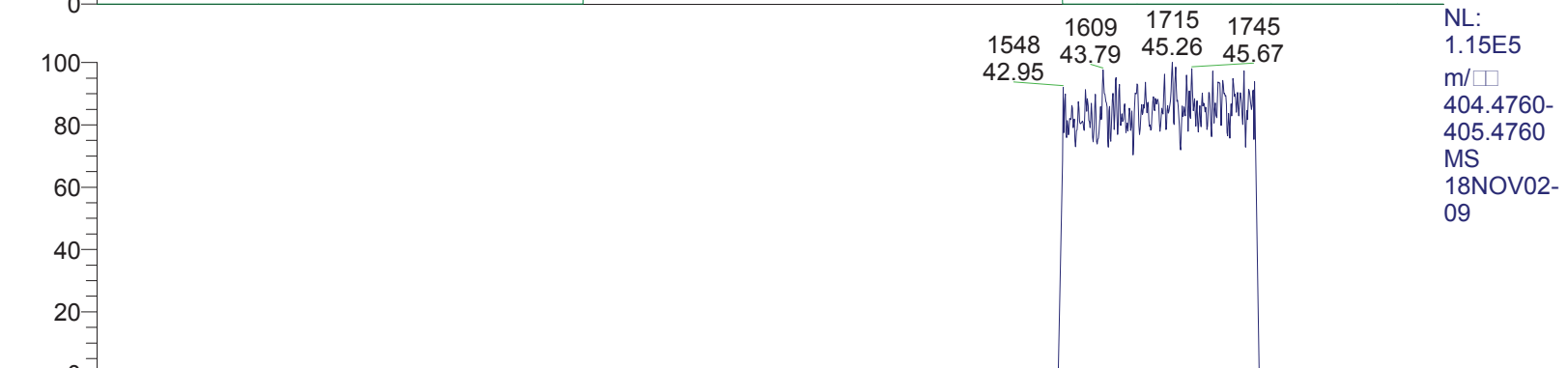
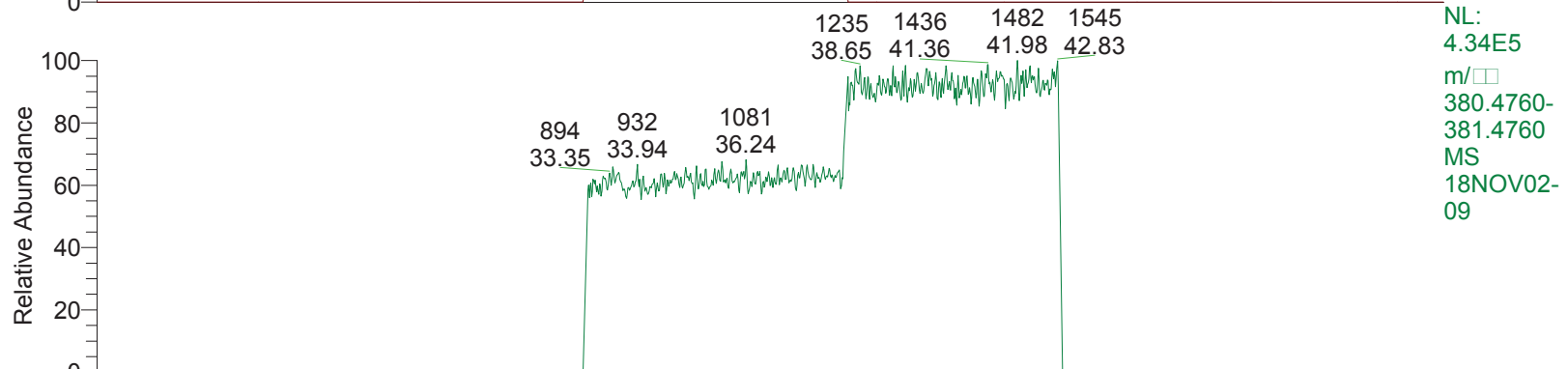
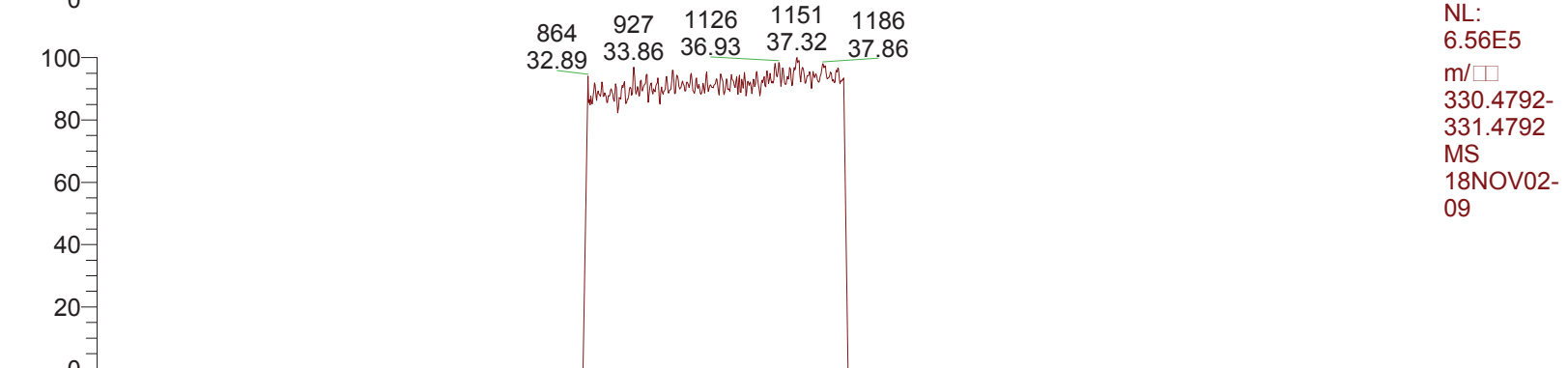
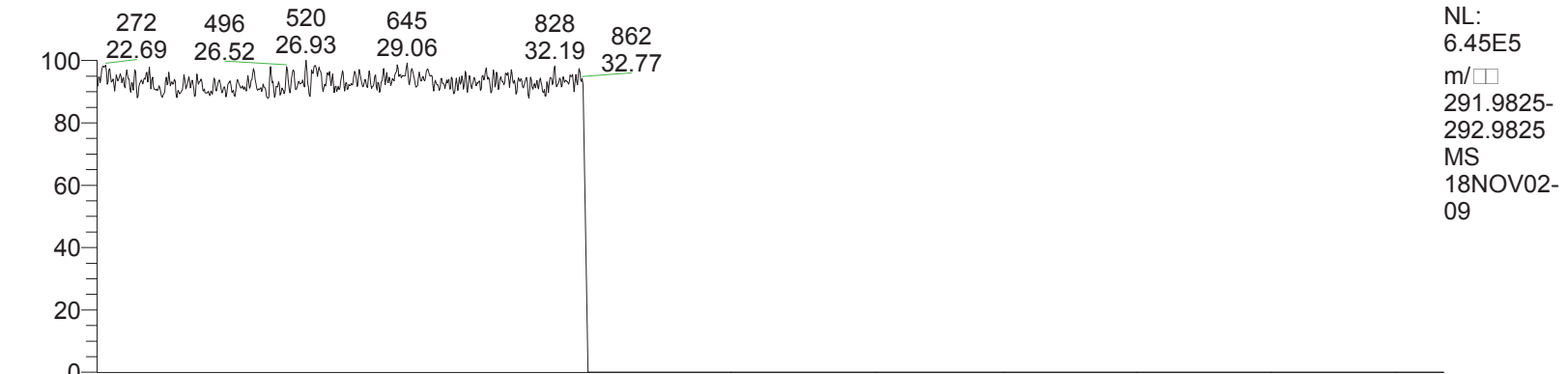


Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.28	5023433	A	4035652	A	0.0253	200.000000	200.0000	200.000000	19145	
2	2378-TCDD	passed	30.46	3036548	A	2432152	A	0.0208	200.000000	200.0000	200.000000	22903	
3	12378-PeCDF	passed	35.36	15246182	A	24090624	A	0.0178	1000.000000	1000.0000	1000.000000	137971	
4	23478-PeCDF	passed	36.64	17553881	A	27829216	A	0.0149	1000.000000	1000.0000	1000.000000	165642	
5	12378-PeCDD	passed	37.05	9175622	A	14194264	A	0.0319	1000.000000	1000.0000	1000.000000	75311	
6	123478-HxCDF	passed	40.36	19794616	A	24585933	A	0.0454	1000.000000	1000.0000	1000.000000	54054	
7	123678-HxCDF	passed	40.51	20390774	A	25656045	A	0.0444	1000.000000	1000.0000	1000.000000	54773	
8	234678-HxCDF	passed	41.21	19952973	A	24879577	A	0.0442	1000.000000	1000.0000	1000.000000	56163	
9	123478-HxCDD	passed	41.41	12655384	A	15917427	A	0.0235	1000.000000	1000.0000	1000.000000	105450	
10	123678-HxCDD	passed	41.54	13179734	A	16702342	A	0.0236	1000.000000	1000.0000	1000.000000	106742	
11	123789-HxCDD	passed	41.85	12798618	A	16081796	A	0.0228	1000.000000	1000.0000	1000.000000	107229	
12	123789-HxCDF	passed	42.22	17181998	A	21345725	A	0.0536	1000.000000	1000.0000	1000.000000	47855	
13	1234678-HpCDF	passed	43.96	22141760	A	23113383	A	0.0461	1000.000000	1000.0000	1000.000000	54091	
14	1234678-HpCDD	passed	45.16	13941245	A	14712475	A	0.0515	1000.000000	1000.0000	1000.000000	49023	
15	1234789-HpCDF	passed	45.71	19394847	A	20305725	A	0.0518	1000.000000	1000.0000	1000.000000	48580	
16	OCDD	passed	48.21	35966635	A	31944657	A	0.0227	2000.000000	2000.0000	2000.000000	229025	
17	OCDF	passed	48.38	47739931	A	41916993	A	0.0187	2000.000000	2000.0000	2000.000000	279744	
18	13C12-1278-TCDD (CRS)	passed	30.87	1254701	A	999029	A	0.0331	100.000000	100.0000	100.000000	7647	
19	13C12-1234-TCDD	passed	29.61	1225319	A	998005	A	0.0335	100.000000	100.0000	100.000000	7460	
20	13C12-123468-HxCDD	passed	40.27	1175229	A	1521188	A	0.0146	100.000000	100.0000	100.000000	17108	
21	13C12-2378-TCDF	passed	29.27	2430707	A	1942844	A	0.0137	100.000000	100.0000	100.000000	19074	
22	13C12-2378-TCDD	passed	30.43	1214433	A	1006047	A	0.0336	100.000000	100.0000	100.000000	8161	
23	13C12-12378-PeCDF	passed	35.33	1651064	A	2629365	A	0.0351	100.000000	100.0000	100.000000	10277	
24	13C12-23478-PeCDF	passed	36.62	1672494	A	2651454	A	0.0347	100.000000	100.0000	100.000000	10804	
25	13C12-12378-PeCDD	passed	37.04	911588	A	1445872	A	0.0176	100.000000	100.0000	100.000000	21803	
26	13C12-123478-HxCDF	passed	40.35	2592815	A	1404394	A	0.0167	100.000000	100.0000	100.000000	15651	
27	13C12-123678-HxCDF	passed	40.50	2890180	A	1531089	A	0.0151	100.000000	100.0000	100.000000	17040	
28	13C12-234678-HxCDF	passed	41.20	2598909	A	1369868	A	0.0168	100.000000	100.0000	100.000000	15809	
29	13C12-123478-HxCDD	passed	41.40	1269124	A	1641218	A	0.0135	100.000000	100.0000	100.000000	20111	
30	13C12-123678-HxCDD	passed	41.52	1340982	A	1691370	A	0.0130	100.000000	100.0000	100.000000	19951	
31	13C12-123789-HxCDD	passed	41.83	1229720	A	1554688	A	0.0142	100.000000	100.0000	100.000000	19663	
32	13C12-123789-HxCDF	passed	42.21	2447426	A	1281295	A	0.0179	100.000000	100.0000	100.000000	14242	
33	13C12-1234678-HpCDF	passed	43.95	2587134	A	1209800	A	0.0213	100.000000	100.0000	100.000000	13111	
34	13C12-1234678-HpCDD	passed	45.15	1363511	A	1477891	A	0.0208	100.000000	100.0000	100.000000	13541	
35	13C12-1234789-HpCDF	passed	45.70	2225604	A	1026779	A	0.0248	100.000000	100.0000	100.000000	11395	
36	13C12-OCDD	passed	48.19	3516412	A	3181572	A	0.0083	200.000000	200.0000	200.000000	71667	
37	13C12-OCDF	passed	48.37	5159630	A	4718077	A	0.0075	200.000000	200.0000	200.000000	80165	
38	Total TCDF	passed (1)	28.23	5023433	A	4035652	A	0.0253	200.000000	200.0000	200.000000	19145	
39	Total TCDD	passed (1)	28.96	3036548	A	2432152	A	0.0208	200.000000	200.0000	200.000000	22903	
40	Total PeCDF	passed (2)	34.83	32800063	A	51919840	A	0.0162	1000.000000	2000.0000	1000.000000	151807	
41	Total PeCDD	passed (1)	35.77	9175622	A	14194264	A	0.0319	1000.000000	1000.0000	1000.000000	75311	
42	Total HxCDF	passed (4)	40.50	77320361	A	96467280	A	0.0466	1000.000000	4000.0000	1000.000000	53211	
43	Total HxCDD	passed (3)	40.73	38633737	A	48701565	A	0.0233	1000.000000	3000.0000	1000.000000	106473	
44	Total HpCDF	passed (1)	44.73	13941245	A	14712475	A	0.0515	1000.000000	1000.0000	1000.000000	49023	
45	Total HpCDD	passed (2)	44.83	41536607	A	43419108	A	0.0522	1000.000000	2139.9116	1000.000000	51335	
46	Single TCDF	passed	29.28	5023433	A	4035652	A	0.0253	200.000000	200.0000	200.000000	19145	
47	Single TCDD	passed	30.46	3036548	A	2432152	A	0.0208	200.000000	200.0000	200.000000	22903	
48	Single PeCDF	passed	37.05	9175622	A	14194264	A	0.0319	1000.000000	1000.0000	1000.000000	75311	
49	Single PeCDD	passed	36.64	17553881	A	27829216	A	0.0162	1000.000000	1071.3680	1000.000000	165642	
50	Single PeCDF	passed	35.36	15246182	A	24090624	A	0.0162	1000.000000	928.6320	1000.000000	137971	
51	Single HpCDF	passed	45.16	13941245	A	14712475	A	0.0515	1000.000000	1000.0000	1000.000000	49023	
52	Single HxCDF	passed	41.21	19952973	A	24879577	A	0.0466	1000.000000	1031.8927	1000.000000	56163	
53	Single HxCDF	passed	40.36	19794616	A	24585933	A	0.0466	1000.000000	1021.4892	1000.000000	54054	
54	Single HxCDF	passed	40.51	20390774	A	25656045	A	0.0466	1000.000000	1059.8411	1000.000000	54773	
55	Single HxCDF	passed	42.22	17181998	A	21345725	A	0.0466	1000.000000	886.7770	1000.000000	47855	
56	Single HxCDD	passed	41.85	12798618	A	16081796	A	0.0233	1000.000000	992.0529	1000.000000	107229	
57	Single HxCDD	passed	41.41	12655384	A	15917427	A	0.0233	1000.000000	981.4866	1000.000000	105450	
58	Single HxCDD	passed	41.54	13179734	A	16702342	A	0.0233	1000.000000	1026.4604	1000.000000	106742	
59	Single HpCDF	passed	43.96	22141760	A	23113383	A	0.0522	1000.000000	1139.9116	1000.000000	54091	
60	Single HpCDF	passed	45.71	19394847	A	20305725	A	0.0522	1000.000000	1000.0000	1000.000000	48580	



RT: 22.50 - 51.00



APPROVED
By uma9 at 2:07 pm, 11/7/18

REVIEWED
By uild at 4:18 pm, 11/7/18

*** file opened Fri Nov 02 22:19:34 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 02-Nov-18 22:19:33

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : 7349737c-0d23-45de-89a6-193501cb8be3

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes



18NOV02-09

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	95.5000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9992	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4255.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0072	FVINLET	0.0379	FVSRG	0.0364
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSRG	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	95.5000	LKM	442.9723	MASS	95.5000
MDAC	1398025.1587	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9851	RELEN	0.0000
RES	12530.2003	RPUSHER	-6.1026	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	788.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0207	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	95.5000	XLENS_POT	972.0000
XLENS_SYM	-2.5000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.7e-008 mbar
Pirani Analyse: 7.2e-003 mbar
Pirani Source: 3.7e-002 mbar
Pirani Inlet System: 3.9e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11963.
MID Time window 2: Resolution is 11833.
MID Time window 3: Resolution is 12474.
MID Time window 4: Resolution is 12139.



18NOV02-09

MID Time Window 5: Resolution is 12487.
MID Time Window 6: Resolution is 12530.

Amplifier Offset: 81.

*** File closed Fri Nov 02 23:10:35 2018



Quantitation Settings

Data File Parameter

Acq. Data 2018/11/06 11:28
 Number of Entries 26
 Comment
 Vial 2
 Sample Name TDTFWD - ST1823237B
 Sample ID CPS02
 Inst ID DF17611-18NOV06
 Client
 Analyst maz02012
 GC Column DB5MS 60 M x 0.25um x 0.25mm
 BatchNo
 Barcode

Files Parameter

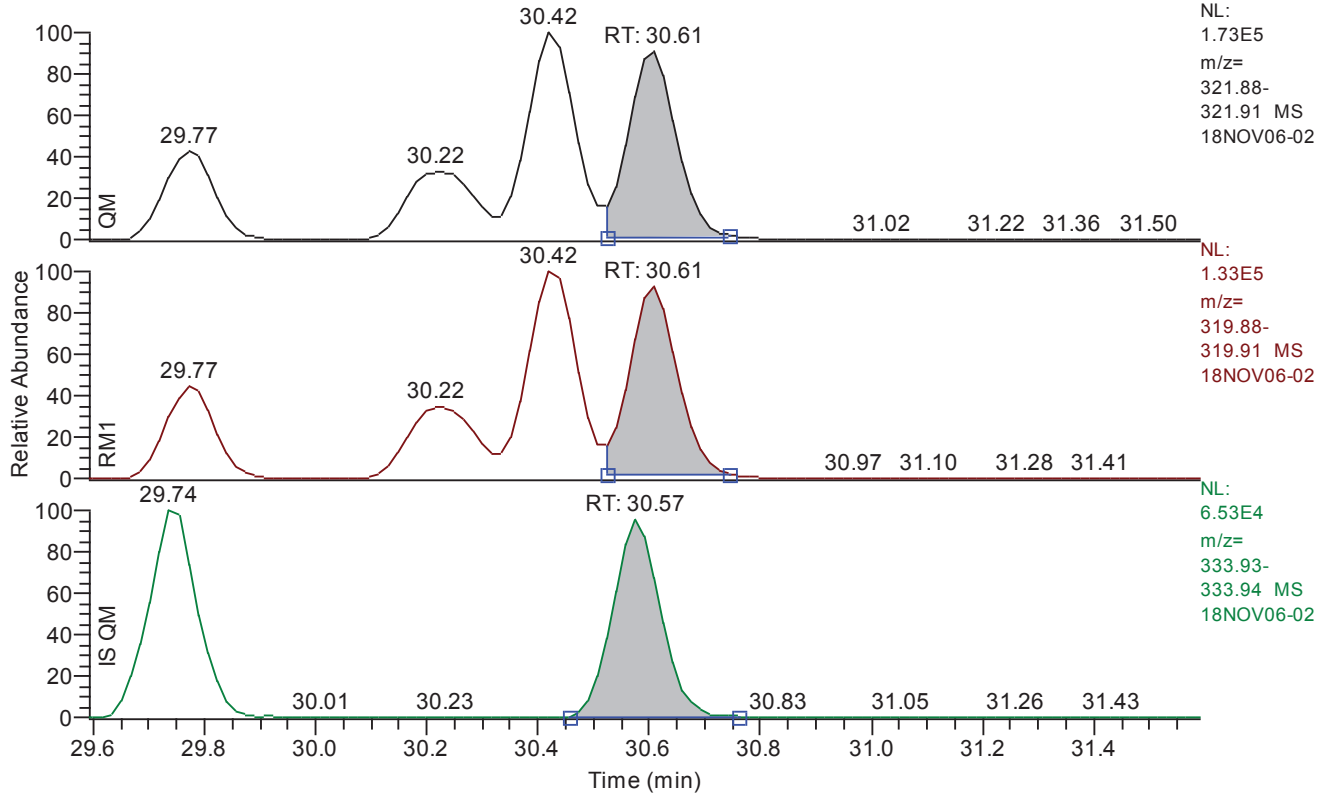
Quan x:\18nov06\18nov06-02.quan
 Data x:\18nov06\18nov06-02.raw
 Response x:\responsefiles\df17611-18nov02dfical.resp
 Script
 Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
 Sum Area/Height No Summation
 Quantitation Status Depend on Area
 Injection Volume [hIJV] 1.0
 Sample Volume [hSV] 1.0
 Sample Weight [hSWT] 1.0
 Dilution Factor [hDF] 1.0
 Det. Limit Factor [hDLF] 1.0
 Response Factor Mode Average RF
 Fit Calc. Mode Linear Fit
 Regression Mode Non weighted Regression
 Weighted Regression Factor 1.0

Chromatogram

RT: 29.59 - 31.59 SM: 3G

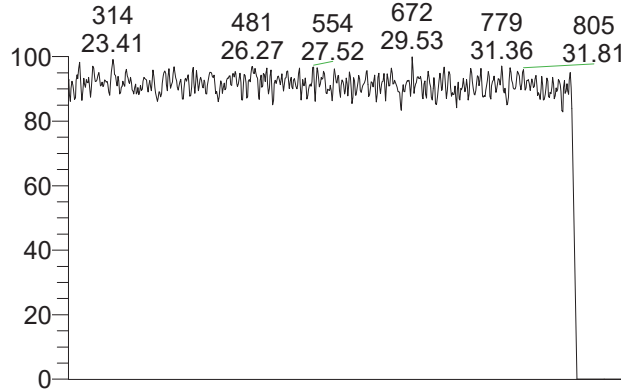


Entry: 2378-TCDD IS: 13C12-2378-TCDD

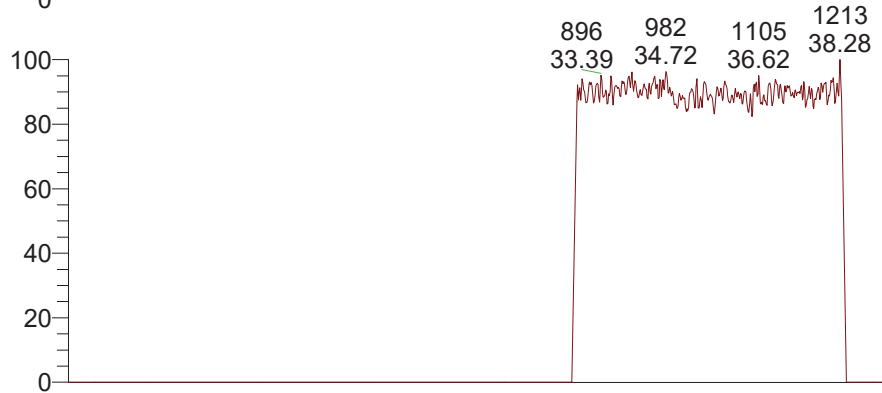
Entry Parameters

Smoothing Points	3
Compound Name	2378-TCDD
Quan. Mass	321.8936 +/- 50 ppm
QM Integration Mode	A
Ratio Mass 1	319.8965 +/- 50 ppm
RM1 Integration Mode	A
ManInt	0
RM1 Retention Time	30.61
RM1 Left Baseline Height	2433.21
RM1 Left Height	18136
RM1 Height	121684
GC Res (%) left	15.949484

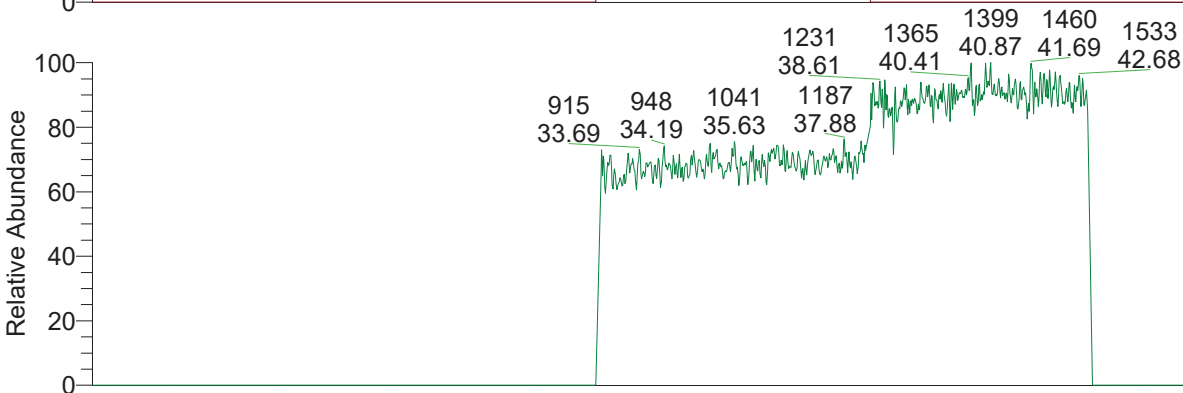
RT: 22.50 - 51.00



NL:
4.24E5
m/z=
291.9825-
292.9825
MS
18NOV06-
02



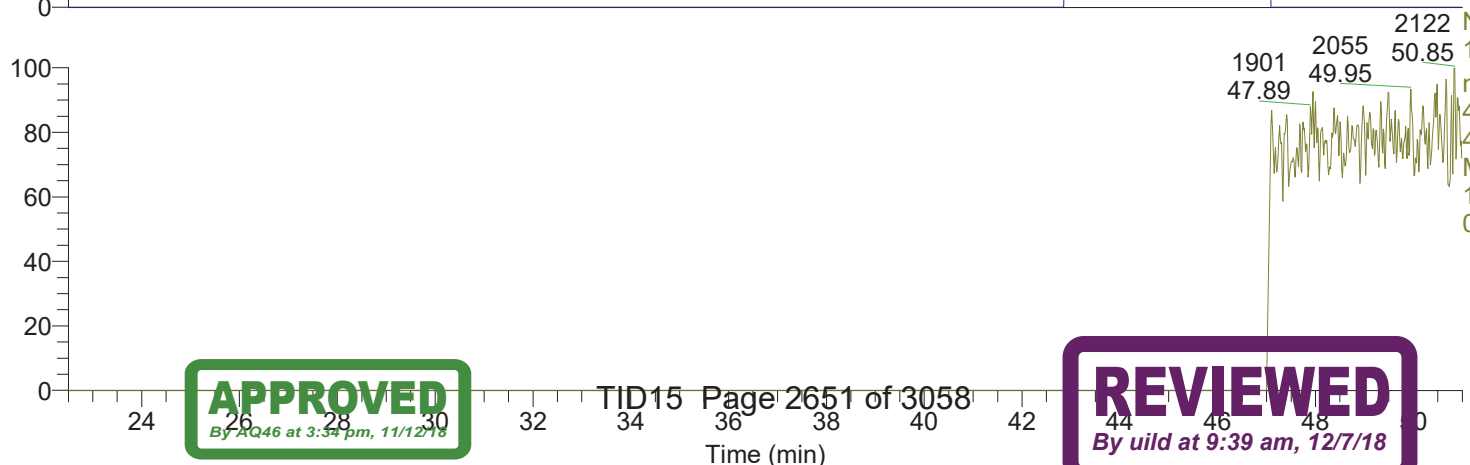
NL:
4.26E5
m/z=
330.4792-
331.4792
MS
18NOV06-
02



NL:
2.64E5
m/z=
380.4760-
381.4760
MS
18NOV06-
02



NL:
8.33E4
m/z=
404.4760-
405.4760
MS
18NOV06-
02



NL:
1.00E5
m/z=
442.4728-
443.4728
MS
18NOV06-
02

APPROVED
By RQ46 at 3:34 pm, 11/12/18

REVIEWED
By uild at 9:39 am, 12/7/18

Time (min)

*** file opened Tue Nov 06 11:31:09 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 06-Nov-18 11:31:09

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : ea75024e-0155-484c-9427-82df5291ad01

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes

MID window end time was 22.010000 minutes

MID window terminated after 32.800000 minutes

MID window end time was 32.800000 minutes

18NOV06-02

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	99.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9993	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	3913.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0074	FVINLET	0.0376	FVSR	0.0362
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	99.0000	LKM	442.9723	MASS	99.0000
MDAC	1441894.7239	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9851	RELEN	0.0000
RES	12543.8922	RPUSHER	-6.0733	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	808.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0196	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	99.0000	XLENS_POT	1000.0000
XLENS_SYM	-7.0000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.0e-005 mbar
Analyzer Penning: 6.7e-008 mbar
Pirani Analyse: 7.4e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11753.
MID Time window 2: Resolution is 11695.
MID Time window 3: Resolution is 11867.
MID Time window 4: Resolution is 12471.



18NOV06-02

MID Time Window 5: Resolution is 12556.
MID Time Window 6: Resolution is 12543.

Amplifier Offset: 81.

*** File closed Tue Nov 06 12:22:11 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/06 13:18
Number of Entries 249
Comment
Vial 9
Sample Name SSDFX1837C
Sample ID ICV
Inst ID DF17611-18NOV06
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

Quan x:\18nov06\18nov06-04.quan
Data x:\18nov06\18nov06-04.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	RRT	Status Info
1	2378-TCDF	29.32	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.48	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.37	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.65	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.08	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.38	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.53	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.23	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.43	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.54	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.86	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.24	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	43.98	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.18	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.73	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.21	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.38	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.87	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.61	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.29	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.28	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.44	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.36	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.64	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.05	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.35	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.52	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.22	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.40	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.53	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.85	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.21	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	43.96	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.16	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.72	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.19	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.37	passed	passed	passed	passed	passed	passed	passed

Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/06 13:18
Number of Entries 249
Comment
Vial 9
Sample Name SSDFX1837C
Sample ID ICV
Inst ID DF17611-18NOV06
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

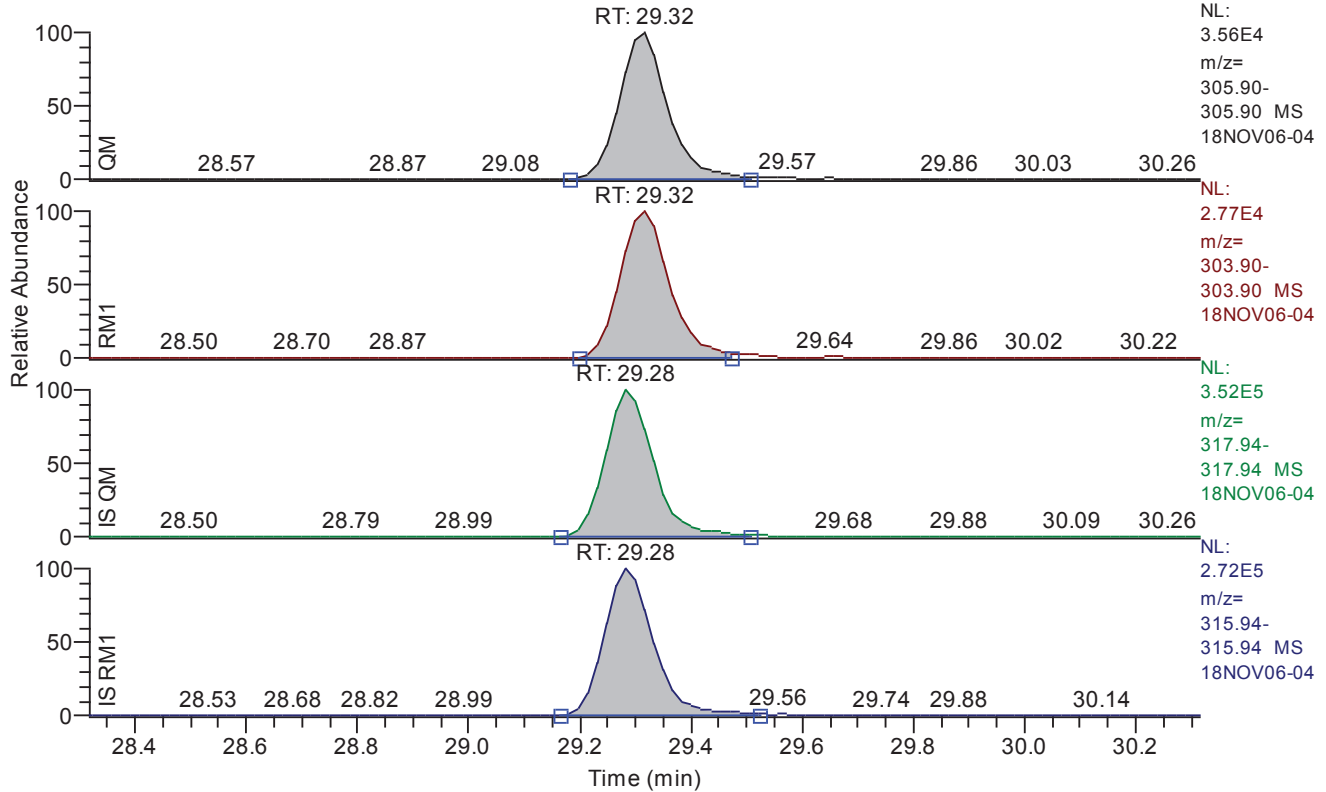
Quan x:\18nov06\18nov06-04.quan
Data x:\18nov06\18nov06-04.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.32 - 30.32 SM: 3G



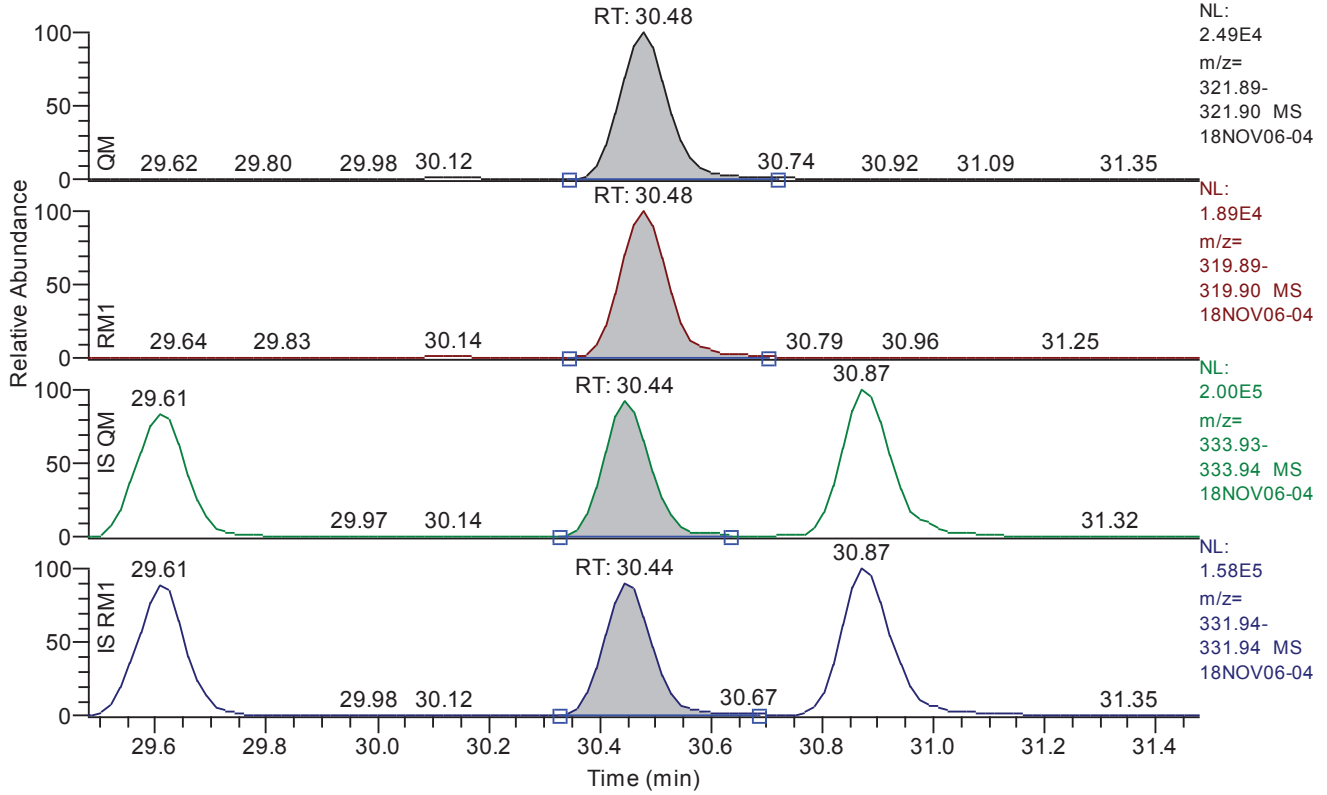
Entry: 2378-tcdf IS: 13C12-2378-TCDF

Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.32
QM Area	216418
QM Integration Mode	A
RM1 Area	172253
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0095
Unqualified Amount (A)	9.656744
Adjusted Amount (A)	9.6567
Signal-to-Noise	2532
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.48 - 31.48 SM: 3G



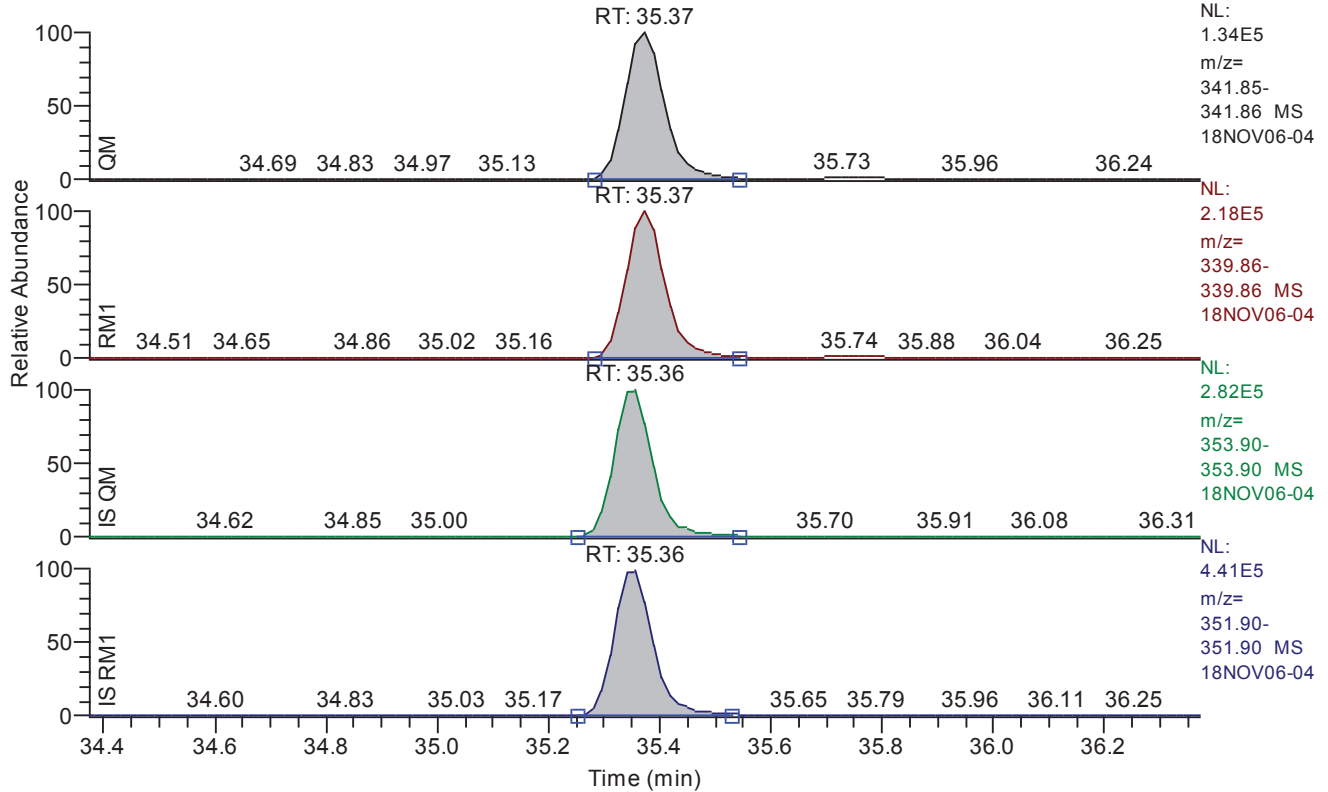
Entry: 2378-tcdd IS: 13C12-2378-TCDD

Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.48
QM Area	155742
QM Integration Mode	A
RM1 Area	117349
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0092
Unqualified Amount (A)	11.029019
Adjusted Amount (A)	11.0290
Signal-to-Noise	2895
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.37 - 36.37 SM: 3G



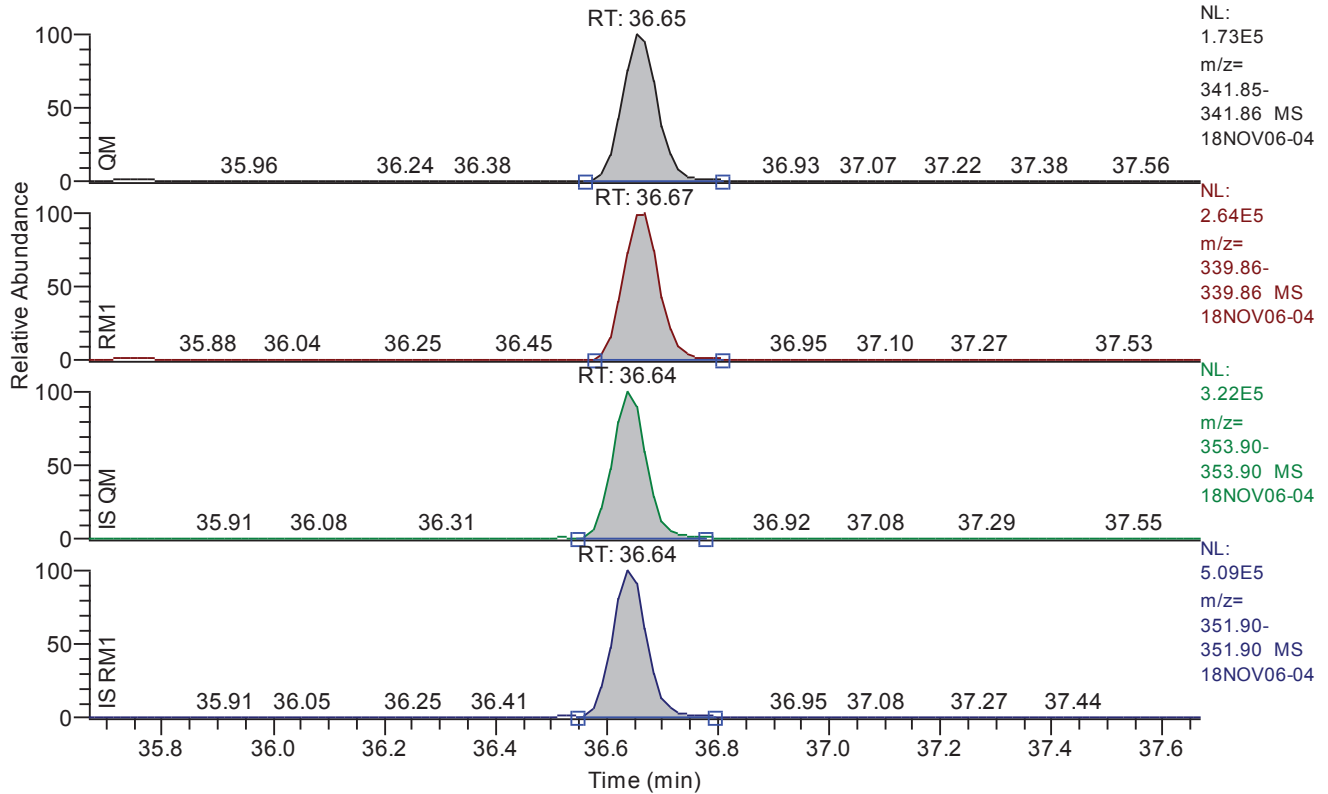
Entry: 12378-pecdf IS: 13C12-12378-PeCDF

Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.37
QM Area	663407
QM Integration Mode	A
RM1 Area	1052260
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0114
Unqualified Amount (A)	52.329698
Adjusted Amount (A)	52.3297
Signal-to-Noise	11454
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.67 - 37.67 SM: 3G



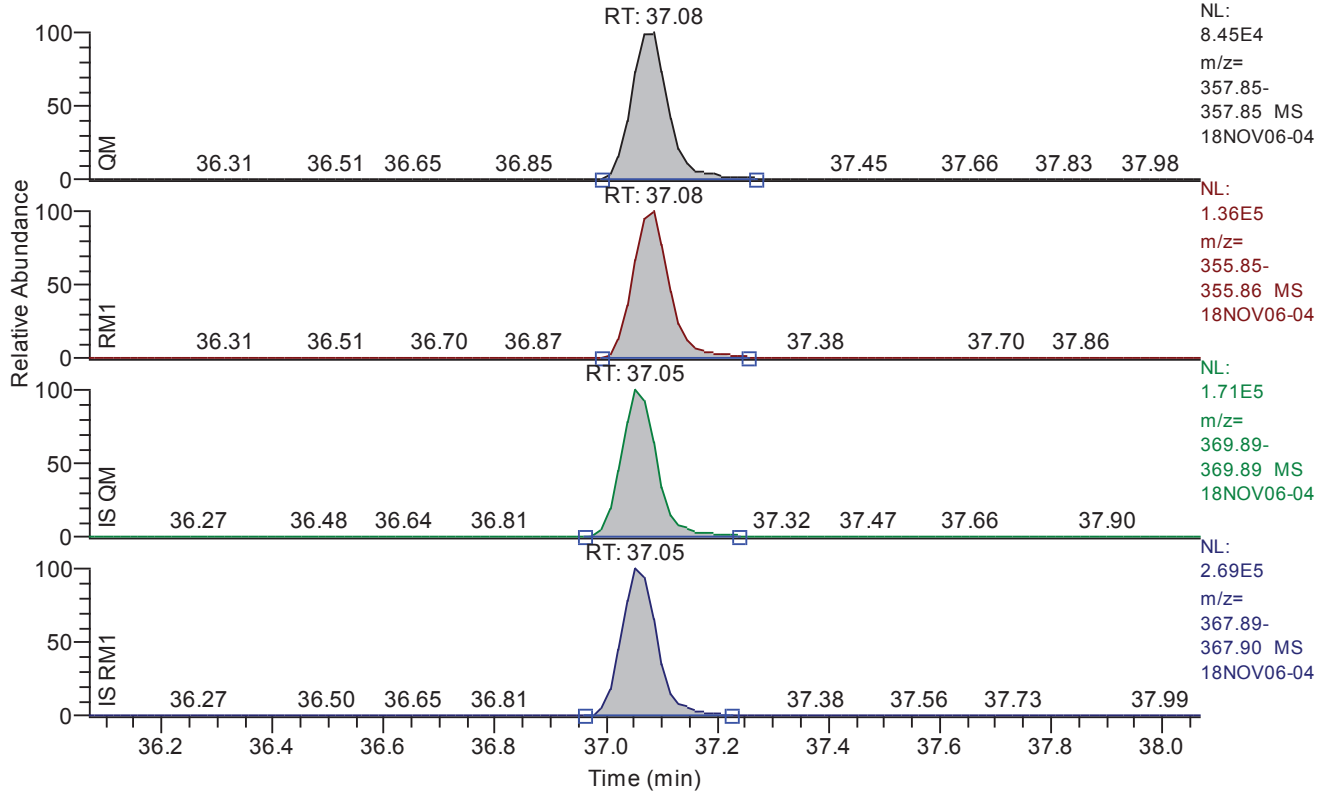
Entry: 23478-pecdf IS: 13C12-23478-PeCDF

Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.65
QM Area	772160
QM Integration Mode	A
RM1 Area	1196418
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0088
Unqualified Amount (A)	52.452196
Adjusted Amount (A)	52.4522
Signal-to-Noise	14242
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.07 - 38.07 SM: 3G



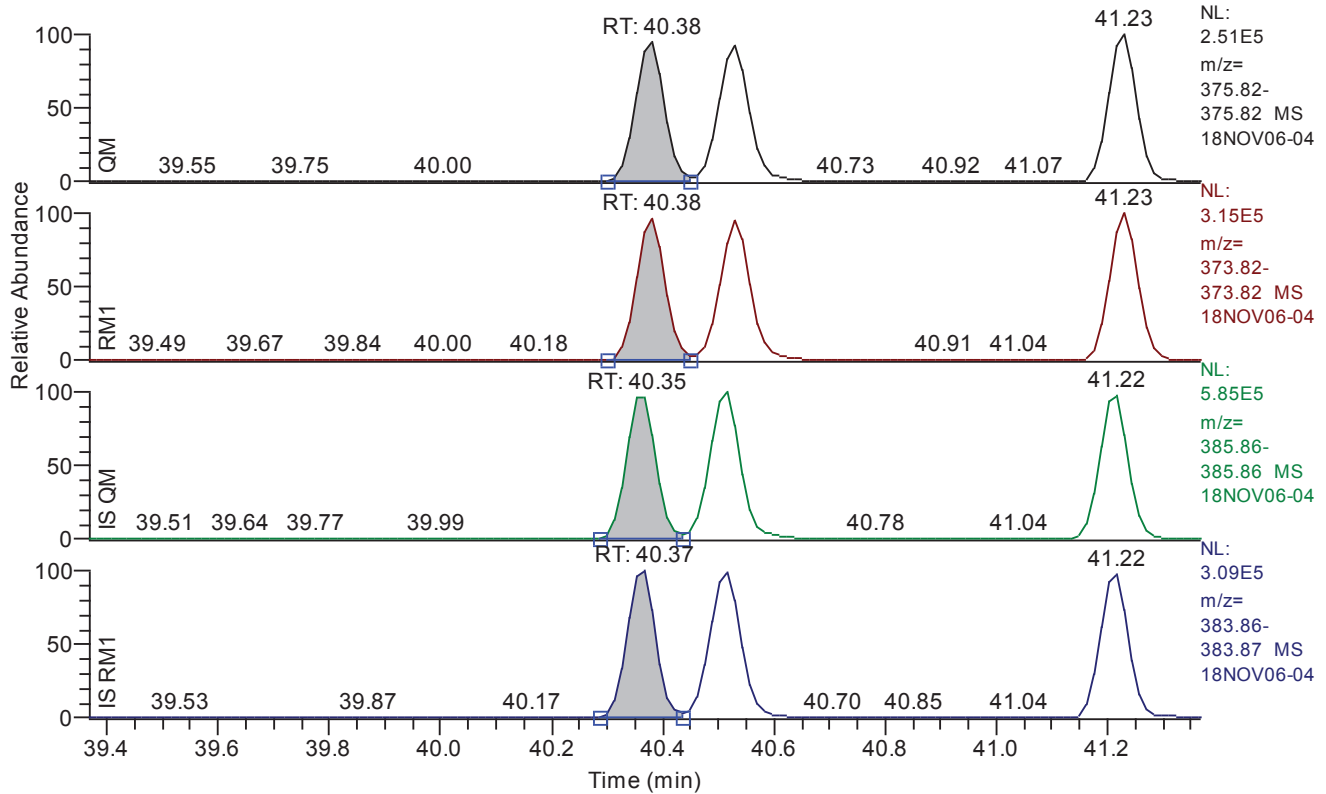
Entry: 12378-pecdd IS: 13C12-12378-PeCDD

Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.08
QM Area	391122
QM Integration Mode	A
RM1 Area	622900
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0177
Unqualified Amount (A)	51.545096
Adjusted Amount (A)	51.5451
Signal-to-Noise	7048
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.37 - 41.37 SM: 3G



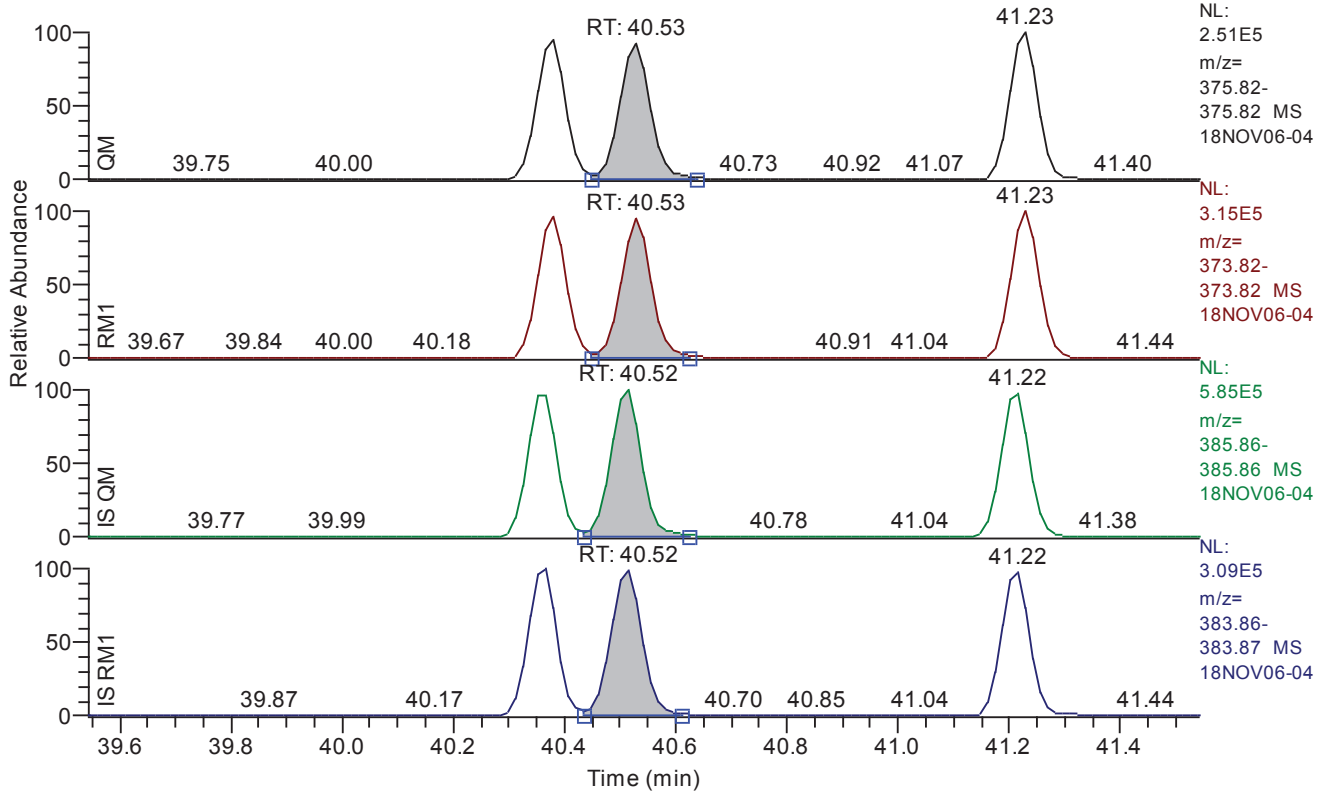
Entry: 123478-hxcdf IS: 13C12-123478-HxCDF

Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.38
QM Area	861764
QM Integration Mode	A
RM1 Area	1084703
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0255
Unqualified Amount (A)	54.425062
Adjusted Amount (A)	54.4251
Signal-to-Noise	5483
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.54 - 41.54 SM: 3G



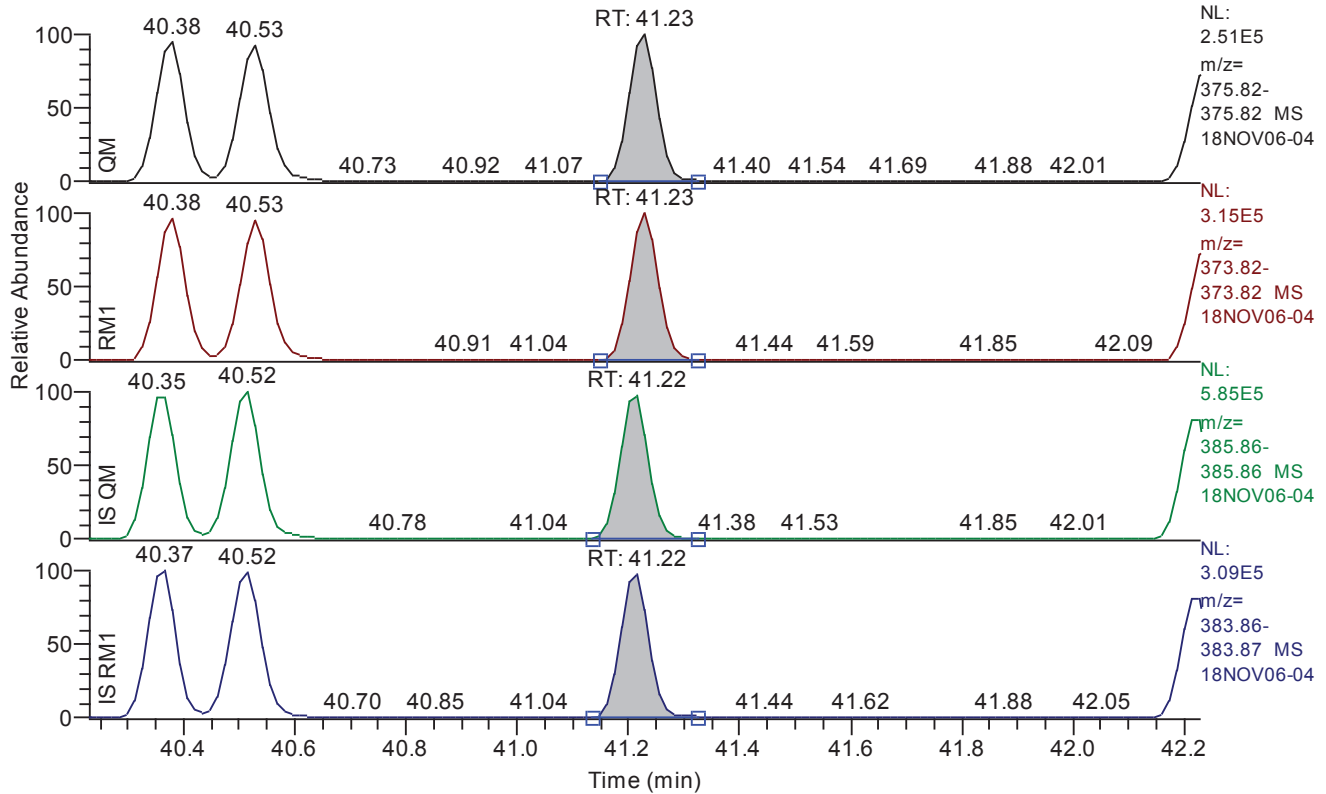
Entry: 123678-hxcdf IS: 13C12-123678-HxCDF

Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.53
QM Area	888212
QM Integration Mode	A
RM1 Area	1115291
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0261
Unqualified Amount (A)	54.601614
Adjusted Amount (A)	54.6016
Signal-to-Noise	5333
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.23 - 42.23 SM: 3G



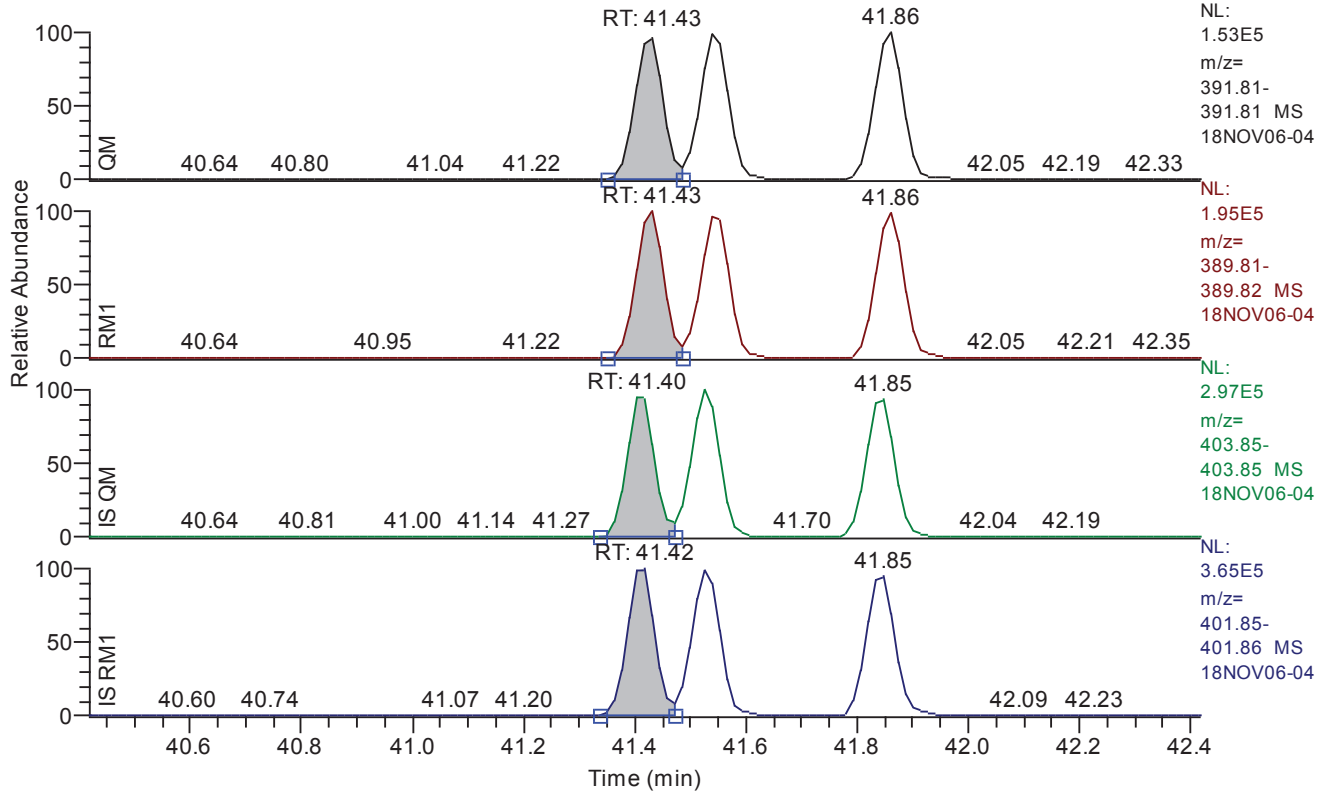
Entry: 234678-hxcdf IS: 13C12-234678-HxCDF

Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.23
QM Area	889456
QM Integration Mode	A
RM1 Area	1120178
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0247
Unqualified Amount (A)	55.596376
Adjusted Amount (A)	55.5964
Signal-to-Noise	5686
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.42 - 42.42 SM: 3G



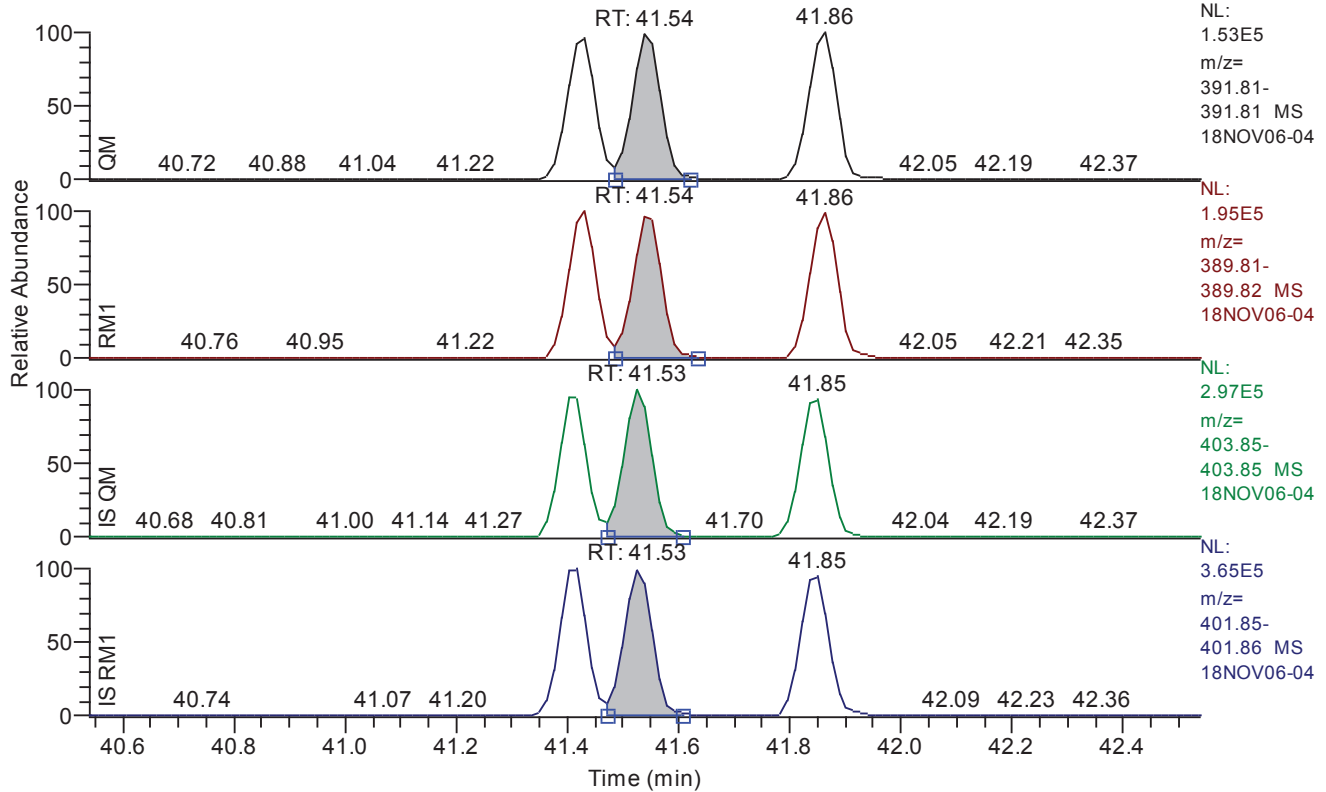
Entry: 123478-hxcdd IS: 13C12-123478-HxCDD

Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.43
QM Area	522244
QM Integration Mode	A
RM1 Area	671805
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0179
Unqualified Amount (A)	52.691675
Adjusted Amount (A)	52.6917
Signal-to-Noise	7313
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.54 - 42.54 SM: 3G



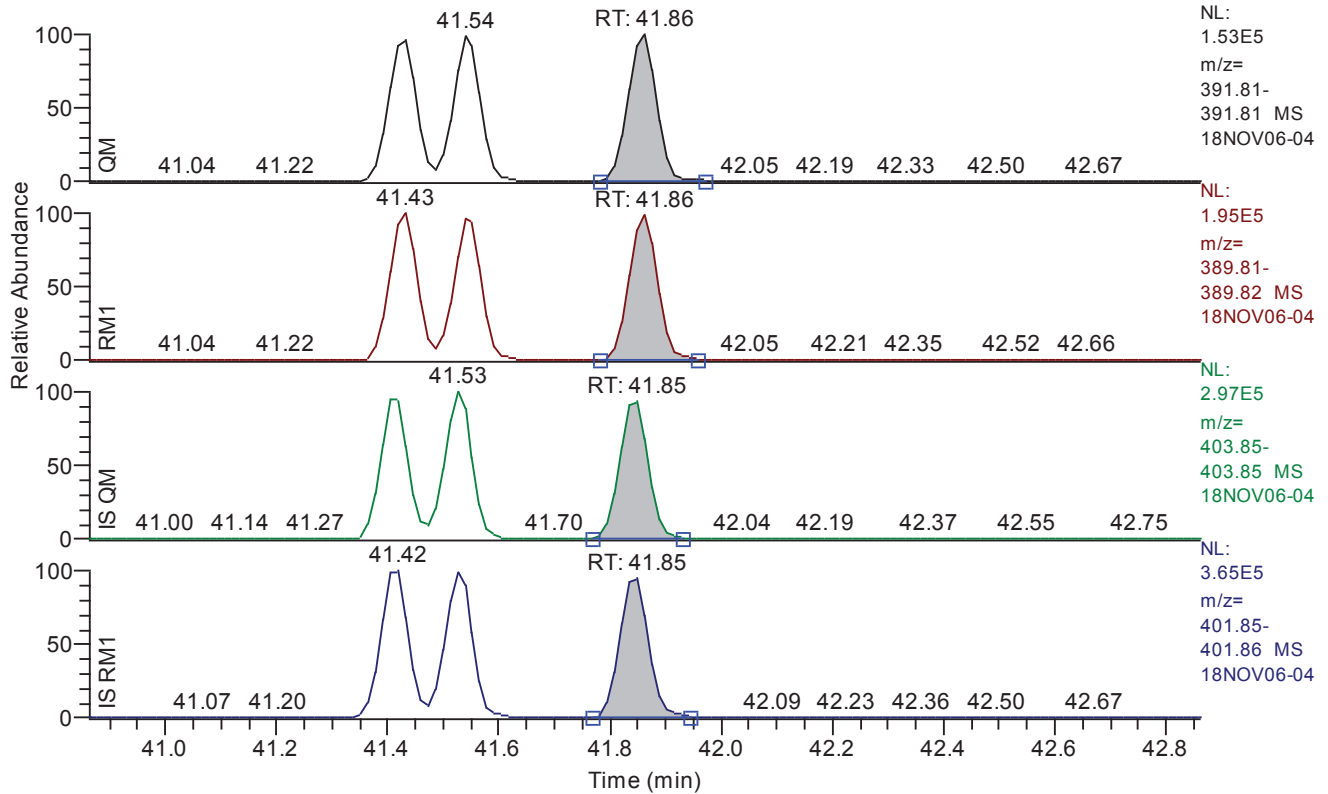
Entry: 123678-hxcdd IS: 13C12-123678-HxCDD

Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.54
QM Area	531587
QM Integration Mode	A
RM1 Area	675466
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0177
Unqualified Amount (A)	52.355389
Adjusted Amount (A)	52.3554
Signal-to-Noise	7270
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.86 - 42.86 SM: 3G



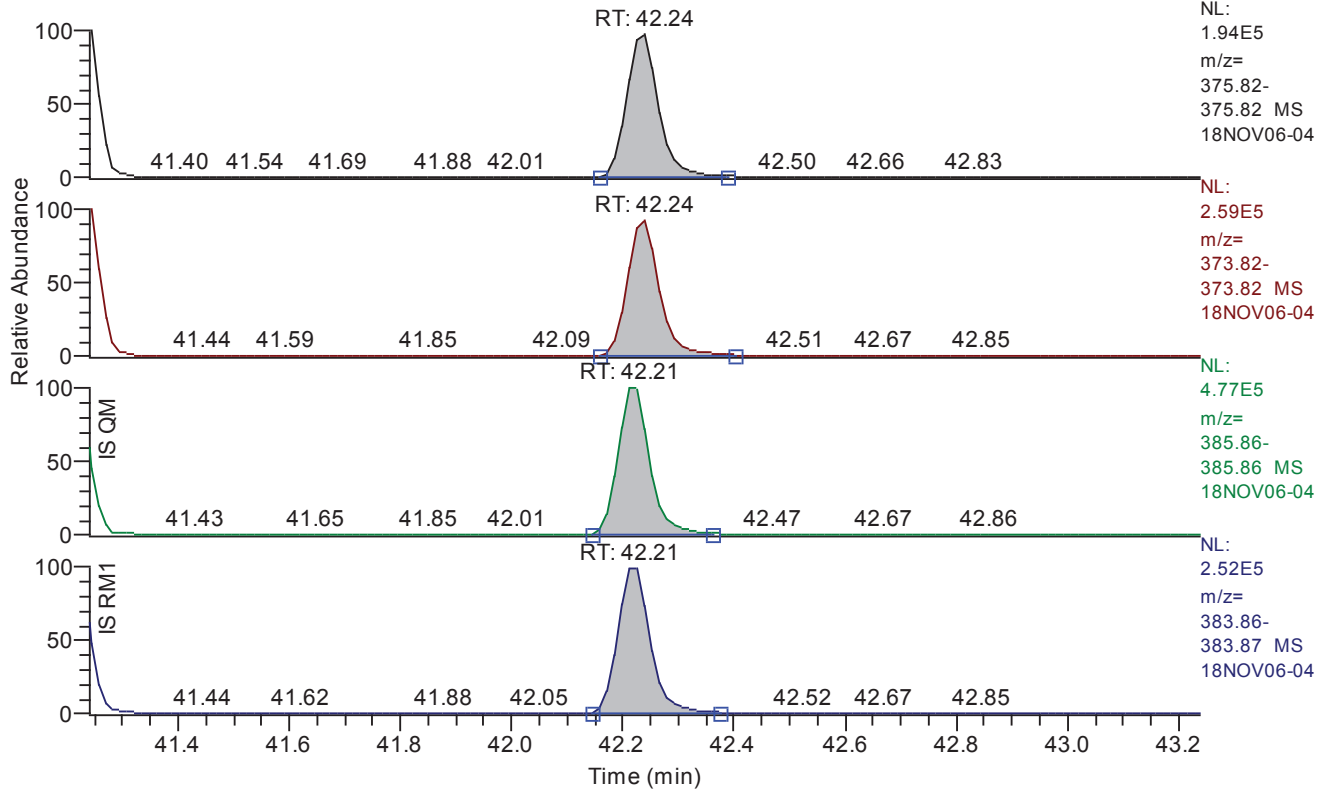
Entry: 123789-hxcdd IS: 13C12-123789-HxCDD

Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.86
QM Area	549848
QM Integration Mode	A
RM1 Area	686266
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0177
Unqualified Amount (A)	52.221432
Adjusted Amount (A)	52.2214
Signal-to-Noise	7393
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 41.24 - 43.24 SM: 3G



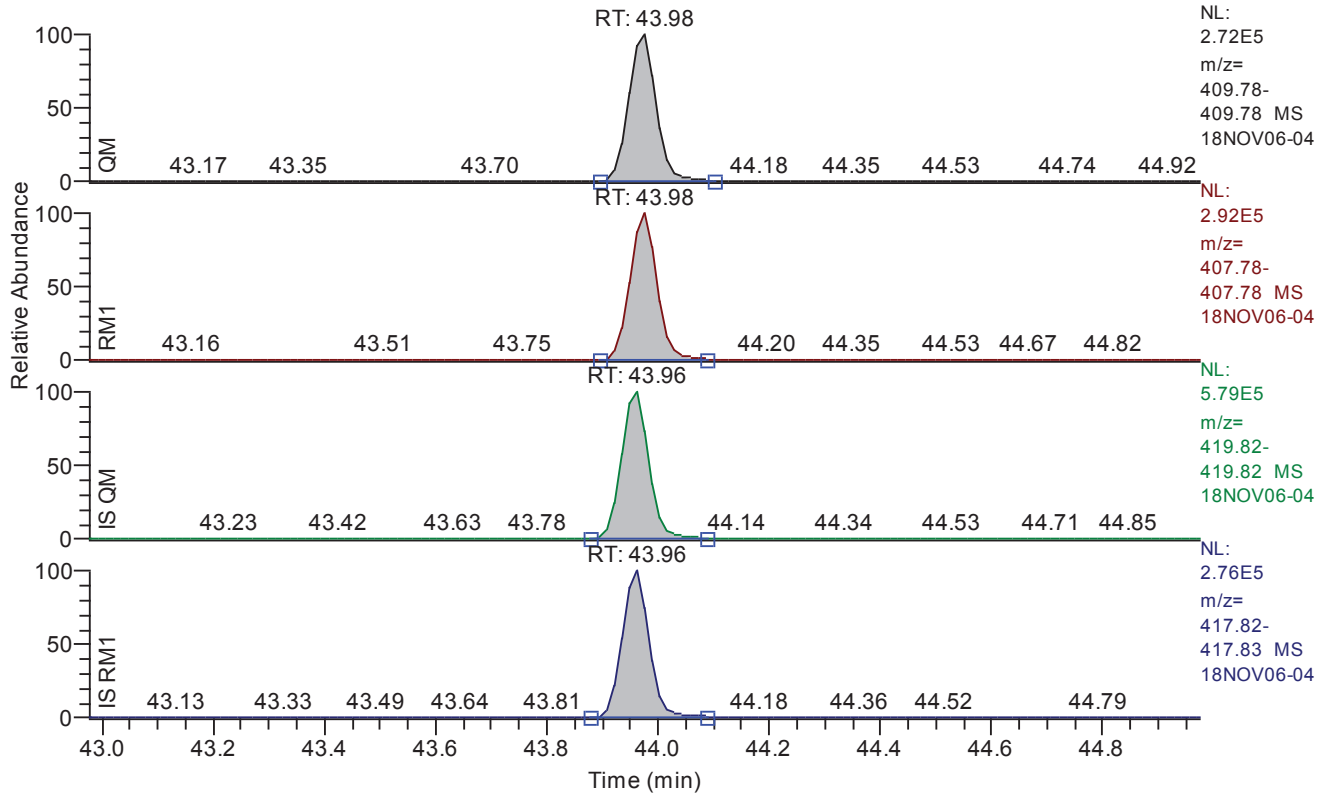
Entry: 123789-hxcdf IS: 13C12-123789-HxCDF

Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.24
QM Area	758573
QM Integration Mode	A
RM1 Area	963343
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0318
Unqualified Amount (A)	54.998573
Adjusted Amount (A)	54.9986
Signal-to-Noise	4321
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 42.98 - 44.98 SM: 3G



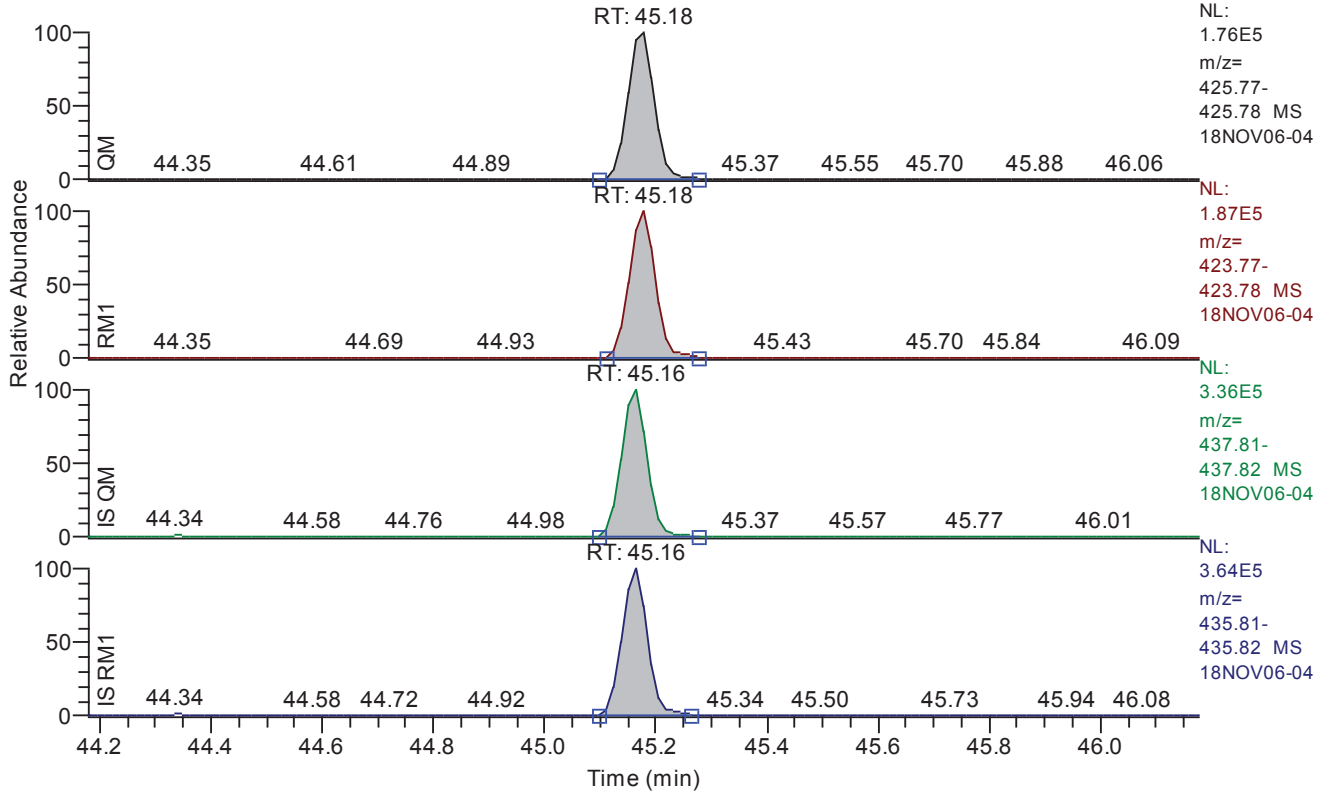
Entry: 1234678-hpcdf IS: 13C12-1234678-HpCDF

Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	43.98
QM Area	968396
QM Integration Mode	A
RM1 Area	1009265
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0218
Unqualified Amount (A)	55.852391
Adjusted Amount (A)	55.8524
Signal-to-Noise	6395
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.18 - 46.18 SM: 3G



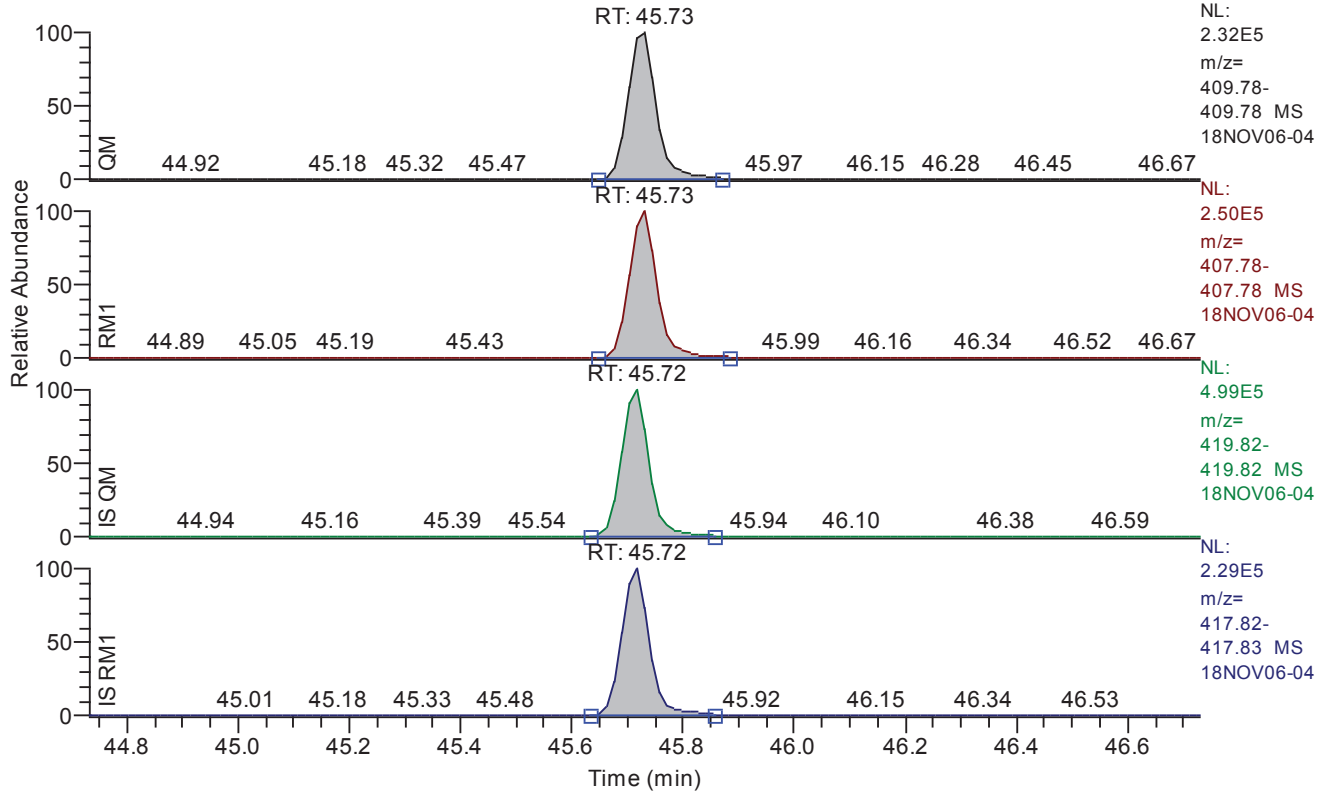
Entry: 1234678-hpcdd IS: 13C12-1234678-HpCDD

Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.18
QM Area	599464
QM Integration Mode	A
RM1 Area	624289
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0208
Unqualified Amount (A)	52.185227
Adjusted Amount (A)	52.1852
Signal-to-Noise	6127
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.73 - 46.73 SM: 3G



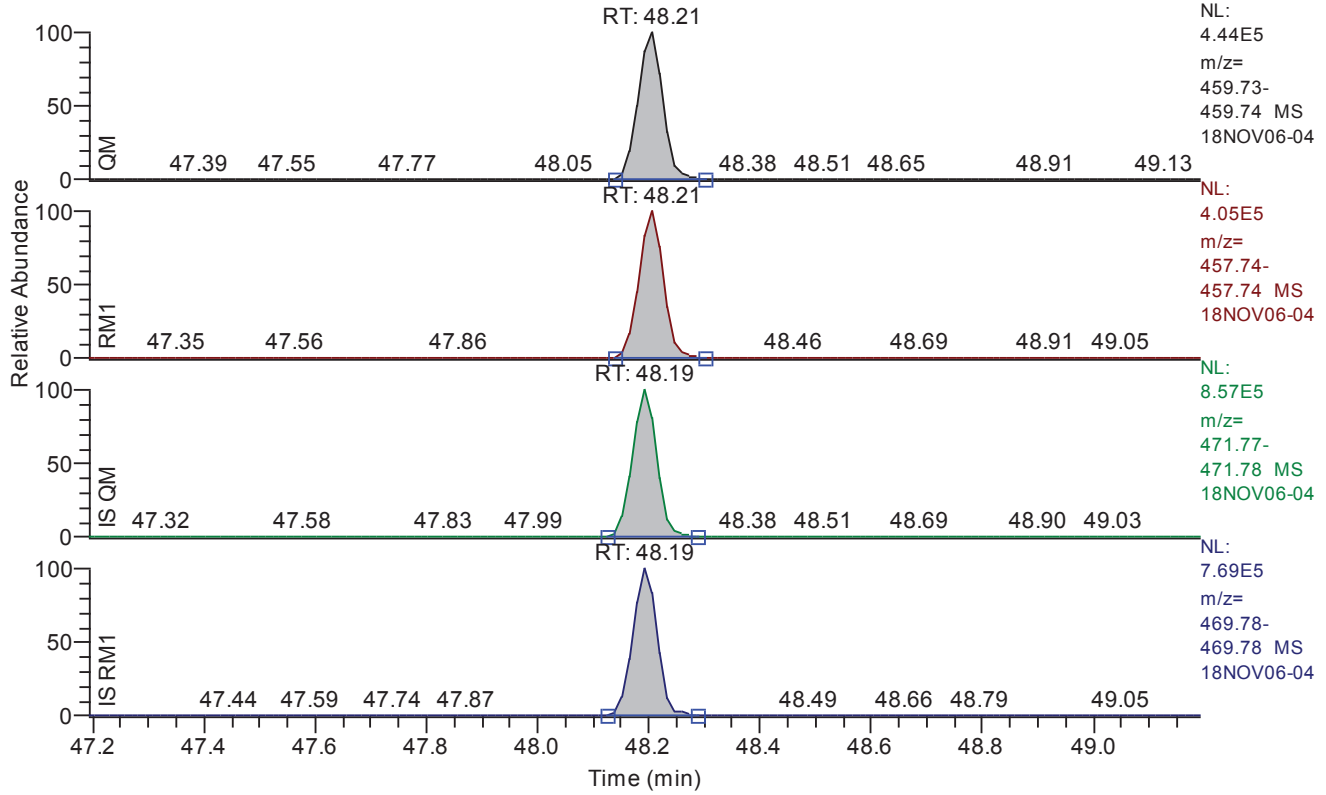
Entry: 1234789-hpcdf IS: 13C12-1234789-HpCDF

Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.73
QM Area	841032
QM Integration Mode	A
RM1 Area	891752
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0246
Unqualified Amount (A)	54.685696
Adjusted Amount (A)	54.6857
Signal-to-Noise	5453
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.19 - 49.19 SM: 3G



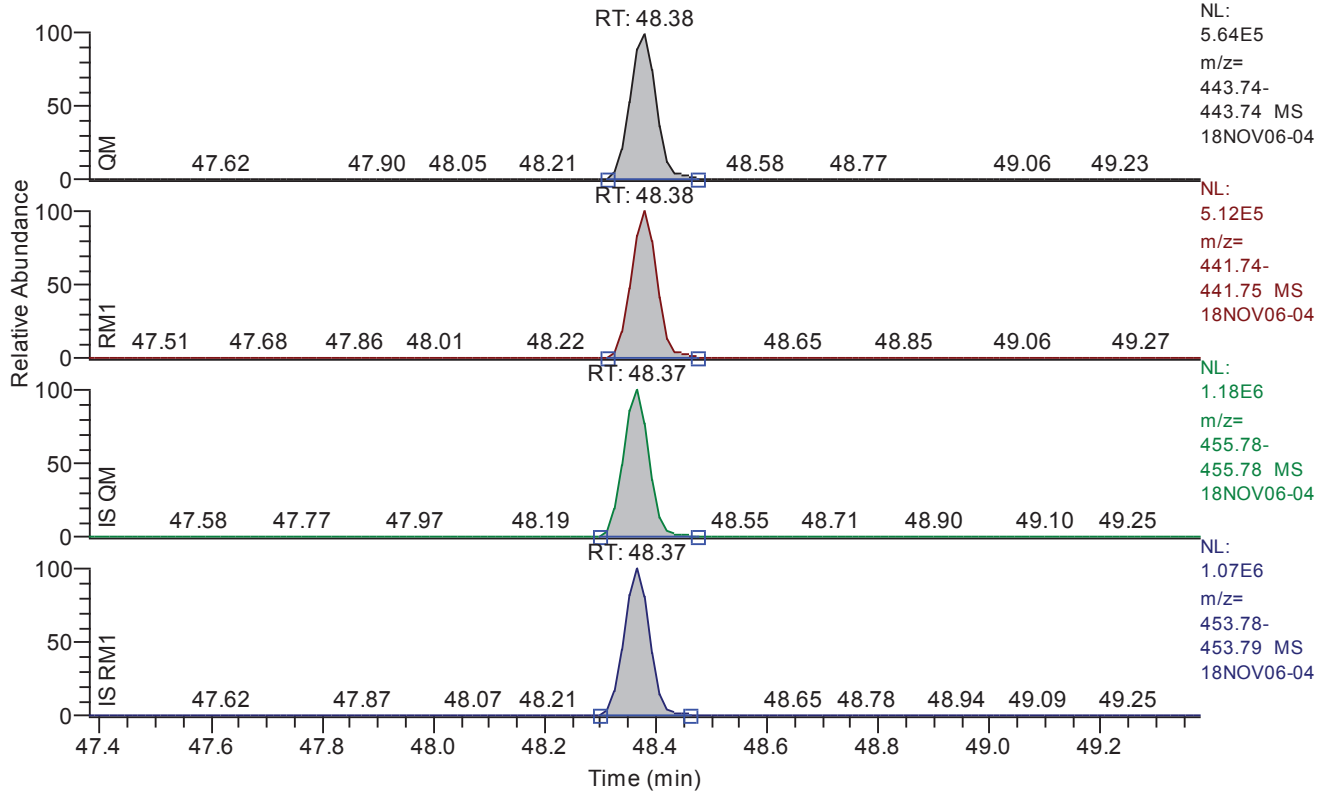
Entry: ocdd IS: 13C12-OCDD

Entry Parameters

Compound Name	OCDD
QM Retention Time	48.21
QM Area	1367176
QM Integration Mode	A
RM1 Area	1236784
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0163
Unqualified Amount (A)	106.799372
Adjusted Amount (A)	106.7994
Signal-to-Noise	16211
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.38 - 49.38 SM: 3G



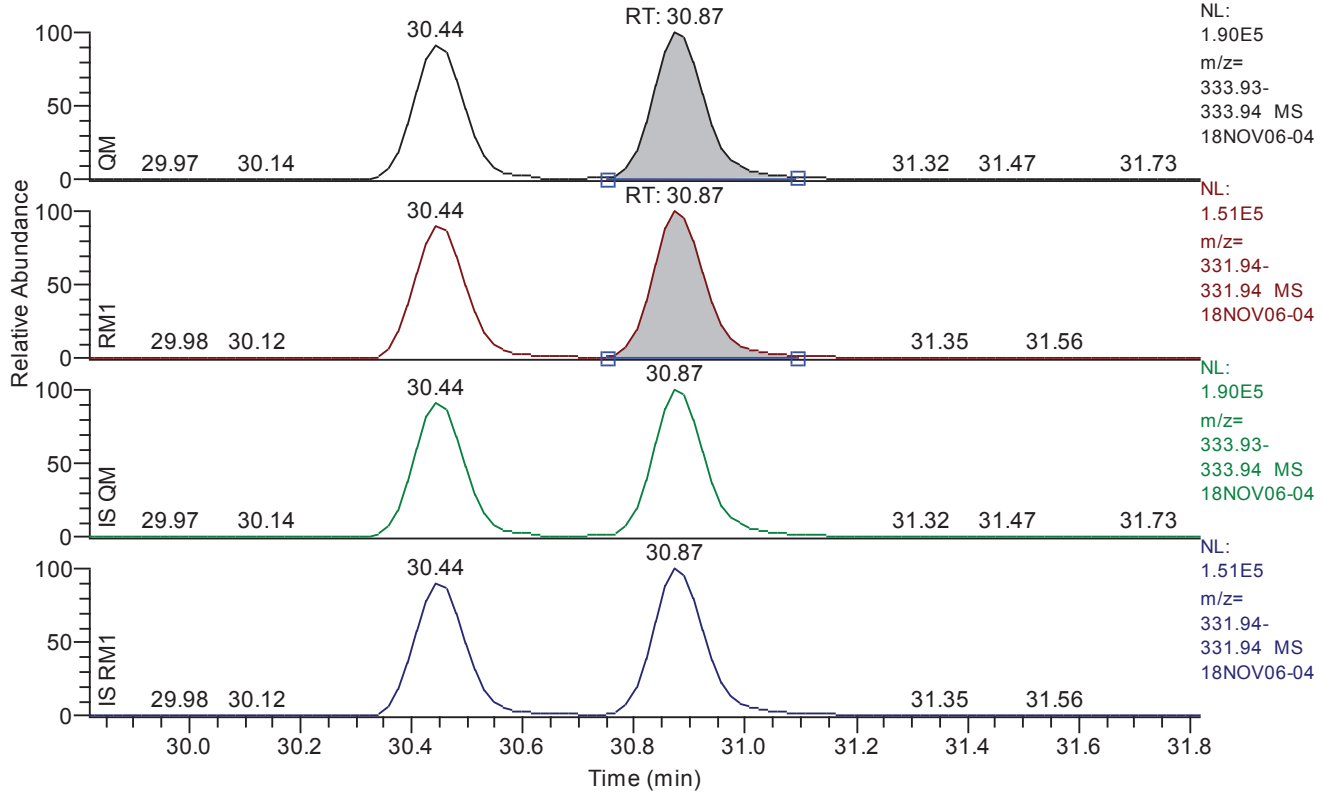
Entry: ocdf IS: 13C12-OCDF

Entry Parameters

Compound Name	OCDF
QM Retention Time	48.38
QM Area	1816226
QM Integration Mode	A
RM1 Area	1653647
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0139
Unqualified Amount (A)	111.879320
Adjusted Amount (A)	111.8793
Signal-to-Noise	19951
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.82 - 31.82 SM: 5G



Entry: 1278-TCDD IS: 13C12-1234-TCDD

Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	30.87
QM Area	1239294
QM Integration Mode	A
RM1 Area	992566
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0320
Unqualified Amount (A)	110.966424
Adjusted Amount (A)	110.9664
Signal-to-Noise	8144
Client Flags	
Status Overview	passed
Status Info	

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	RT Window [min]	Specified RT [min]	QM Time	RM1 Time	RM1 Time Status	RRT Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	0.67	29.31	29.32	29.32	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	0.67	30.43	30.48	30.48	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	35.14	35.37	35.37	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	0.67	36.38	36.65	36.67	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	0.67	36.78	37.08	37.08	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.63	40.38	40.38	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	40.78	40.53	40.53	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	41.46	41.23	41.23	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.66	41.43	41.43	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	41.77	41.54	41.54	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	0.67	42.10	41.86	41.86	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	0.67	42.47	42.24	42.24	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	44.19	43.98	43.98	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	0.67	45.40	45.18	45.18	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	0.67	45.95	45.73	45.73	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	0.67	48.40	48.21	48.21	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	0.67	48.59	48.38	48.38	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	1.00	30.82	30.87	30.87	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	29.61	29.61	29.61	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	1.00	40.53	40.29	40.29	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	0.67	29.27	29.28	29.28	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	0.67	30.40	30.44	30.44	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	35.12	35.36	35.36	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	0.67	36.35	36.64	36.64	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	0.67	36.76	37.05	37.05	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.61	40.35	40.37	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	40.75	40.52	40.52	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	41.45	41.22	41.22	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.65	41.40	41.42	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	41.76	41.53	41.53	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	0.67	42.08	41.85	41.85	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	0.67	42.45	42.21	42.21	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	44.18	43.96	43.96	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	0.67	45.38	45.16	45.16	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	0.67	45.94	45.72	45.72	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	0.67	48.40	48.19	48.19	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	1.00	48.58	48.37	48.37	passed	passed

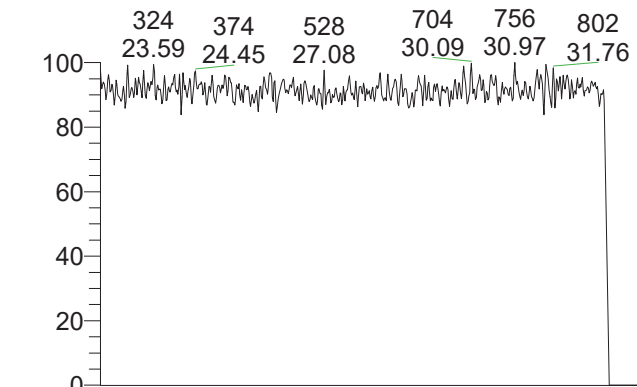
Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.32	0.7959	0.6450 - 0.8950	passed	96.57	80 - 120	passed
2	2378-TCDD	30.48	0.7535	0.6450 - 0.8950	passed	110.29	80 - 120	passed
3	12378-PeCDF	35.37	1.5861	1.3150 - 1.7850	passed	104.66	80 - 120	passed
4	23478-PeCDF	36.65	1.5494	1.3150 - 1.7850	passed	104.90	80 - 120	passed
5	12378-PeCDD	37.08	1.5926	1.3150 - 1.7850	passed	103.09	80 - 120	passed
6	123478-HxCDF	40.38	1.2587	1.0450 - 1.4350	passed	108.85	80 - 120	passed
7	123678-HxCDF	40.53	1.2557	1.0450 - 1.4350	passed	109.20	80 - 120	passed
8	234678-HxCDF	41.23	1.2594	1.0450 - 1.4350	passed	111.19	80 - 120	passed
9	123478-HxCDD	41.43	1.2864	1.0450 - 1.4350	passed	105.38	80 - 120	passed
10	123678-HxCDD	41.54	1.2707	1.0450 - 1.4350	passed	104.71	80 - 120	passed
11	123789-HxCDD	41.86	1.2481	1.0450 - 1.4350	passed	104.44	80 - 120	passed
12	123789-HxCDF	42.24	1.2699	1.0450 - 1.4350	passed	110.00	80 - 120	passed
13	1234678-HpCDF	43.98	1.0422	0.8750 - 1.2050	passed	111.70	80 - 120	passed
14	1234678-HpCDD	45.18	1.0414	0.8750 - 1.2050	passed	104.37	80 - 120	passed
15	1234789-HpCDF	45.73	1.0603	0.8750 - 1.2050	passed	109.37	80 - 120	passed
16	OCDD	48.21	0.9046	0.7550 - 1.0250	passed	106.80	80 - 120	passed
17	OCDF	48.38	0.9105	0.7550 - 1.0250	passed	111.88	80 - 120	passed
18	13C12-1278-TCDD (CRS)	30.87	0.8009	0.6450 - 0.8950	passed	110.97	80 - 120	passed
19	13C12-1234-TCDD	29.61	0.8036	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.29	1.2519	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.28	0.7837	0.6450 - 0.8950	passed	97.59	80 - 120	passed
22	13C12-2378-TCDD	30.44	0.8001	0.6450 - 0.8950	passed	102.19	80 - 120	passed
23	13C12-12378-PeCDF	35.36	1.5607	1.3150 - 1.7850	passed	94.30	80 - 120	passed
24	13C12-23478-PeCDF	36.64	1.6160	1.3150 - 1.7850	passed	96.59	80 - 120	passed
25	13C12-12378-PeCDD	37.05	1.5680	1.3150 - 1.7850	passed	98.17	80 - 120	passed
26	13C12-123478-HxCDF	40.35	0.5280	0.4250 - 0.5950	passed	96.90	80 - 120	passed
27	13C12-123678-HxCDF	40.52	0.5366	0.4250 - 0.5950	passed	96.51	80 - 120	passed
28	13C12-234678-HxCDF	41.22	0.5288	0.4250 - 0.5950	passed	97.09	80 - 120	passed
29	13C12-123478-HxCDD	41.40	1.2923	1.0450 - 1.4350	passed	97.86	80 - 120	passed
30	13C12-123678-HxCDD	41.53	1.2213	1.0450 - 1.4350	passed	96.79	80 - 120	passed
31	13C12-123789-HxCDD	41.85	1.2624	1.0450 - 1.4350	passed	100.27	80 - 120	passed
32	13C12-123789-HxCDF	42.21	0.5364	0.4250 - 0.5950	passed	96.86	80 - 120	passed
33	13C12-1234678-HpCDF	43.96	0.4672	0.3650 - 0.5150	passed	99.02	80 - 120	passed
34	13C12-1234678-HpCDD	45.16	1.0619	0.8750 - 1.2050	passed	103.28	80 - 120	passed
35	13C12-1234789-HpCDF	45.72	0.4604	0.3650 - 0.5150	passed	101.55	80 - 120	passed
36	13C12-OCDD	48.19	0.8994	0.7550 - 1.0250	passed	104.99	80 - 120	passed
37	13C12-OCDF	48.37	0.9037	0.7550 - 1.0250	passed	104.13	80 - 120	passed

Entry Parameters

No.	Compound Name	Status Overview	QM Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-N
1	2378-TCDF	passed	29.32	216418	A	172253	A	0.009515	9.656744	9.6567	10.0	2532
2	2378-TCDD	passed	30.48	155742	A	117349	A	0.009246	11.029019	11.0290	10.0	2895
3	12378-PeCDF	passed	35.37	663407	A	1052260	A	0.011352	52.329698	52.3297	50.0	11454
4	23478-PeCDF	passed	36.65	772160	A	1196418	A	0.008808	52.452196	52.4522	50.0	14242
5	12378-PeCDD	passed	37.08	391122	A	622900	A	0.017738	51.545096	51.5451	50.0	7048
6	123478-HxCDF	passed	40.38	861764	A	1084703	A	0.025483	54.425062	54.4251	50.0	5483
7	123678-HxCDF	passed	40.53	888212	A	1115291	A	0.026079	54.601614	54.6016	50.0	5333
8	234678-HxCDF	passed	41.23	889456	A	1120178	A	0.024663	55.596376	55.5964	50.0	5686
9	123478-HxCDD	passed	41.43	522244	A	671805	A	0.017901	52.691675	52.6917	50.0	7313
10	123678-HxCDD	passed	41.54	531587	A	675466	A	0.017717	52.355389	52.3554	50.0	7270
11	123789-HxCDD	passed	41.86	549848	A	686266	A	0.017704	52.221432	52.2214	50.0	7393
12	123789-HxCDF	passed	42.24	758573	A	963343	A	0.031765	54.998573	54.9986	50.0	4321
13	1234678-HpCDF	passed	43.98	968396	A	1009265	A	0.021785	55.852391	55.8524	50.0	6395
14	1234678-HpCDD	passed	45.18	599464	A	624289	A	0.020783	52.185227	52.1852	50.0	6127
15	1234789-HpCDF	passed	45.73	841032	A	891752	A	0.024647	54.685696	54.6857	50.0	5453
16	OCDD	passed	48.21	1367176	A	1236784	A	0.016332	106.799372	106.7994	100.0	16211
17	OCDF	passed	48.38	1816226	A	1653647	A	0.013899	111.879320	111.8793	100.0	19951
18	13C12-1278-TCDD	passed	30.87	1239294	A	992566	A	0.031963	110.966424	110.9664	100.0	8144
19	13C12-1234-TCDD	passed	29.61	1067829	A	858136	A	0.033380	100.000000	100.0000	100.0	7489
20	13C12-123468-HxCDD	passed	40.29	1017234	A	1273472	A	0.024137	100.000000	100.0000	100.0	10358
21	13C12-2378-TCDF	passed	29.28	2146301	A	1681974	A	0.017120	97.586568	97.5866	100.0	14398
22	13C12-2378-TCDD	passed	30.44	1100307	A	880331	A	0.033169	102.188109	102.1881	100.0	7903
23	13C12-12378-PeCDF	passed	35.36	1366251	A	2132279	A	0.048560	94.297701	94.2977	100.0	6217
24	13C12-23478-PeCDF	passed	36.64	1365746	A	2207099	A	0.048707	96.593898	96.5939	100.0	7147
25	13C12-12378-PeCDD	passed	37.05	764793	A	1199232	A	0.029017	98.173948	98.1739	100.0	11765
26	13C12-123478-HxCDF	passed	40.35	2101671	A	1109712	A	0.028257	96.896545	96.8965	100.0	8367
27	13C12-123678-HxCDF	passed	40.52	2224472	A	1193566	A	0.026442	96.508866	96.5089	100.0	8482
28	13C12-234678-HxCDF	passed	41.22	2057054	A	1087806	A	0.028912	97.089805	97.0898	100.0	8377
29	13C12-123478-HxCDD	passed	41.40	976594	A	1262016	A	0.024169	97.855993	97.8560	100.0	10449
30	13C12-123678-HxCDD	passed	41.53	1035082	A	1264123	A	0.023276	96.790533	96.7905	100.0	10658
31	13C12-123789-HxCDD	passed	41.85	993776	A	1254560	A	0.024658	100.267886	100.2679	100.0	10159
32	13C12-123789-HxCDF	passed	42.21	1897063	A	1017534	A	0.031121	96.855406	96.8554	100.0	6959
33	13C12-1234678-HpCDF	passed	43.96	2035902	A	951129	A	0.031553	99.019676	99.0197	100.0	8032
34	13C12-1234678-HpCDD	passed	45.16	1115630	A	1184683	A	0.027569	103.276736	103.2767	100.0	10197
35	13C12-1234789-HpCDF	passed	45.72	1761805	A	811052	A	0.037569	101.550406	101.5504	100.0	6833
36	13C12-OCDD	passed	48.19	2603425	A	2341471	A	0.016336	209.978766	209.9788	200.0	37821
37	13C12-OCDF	passed	48.37	3778320	A	3414545	A	0.018514	208.255797	208.2558	200.0	31490

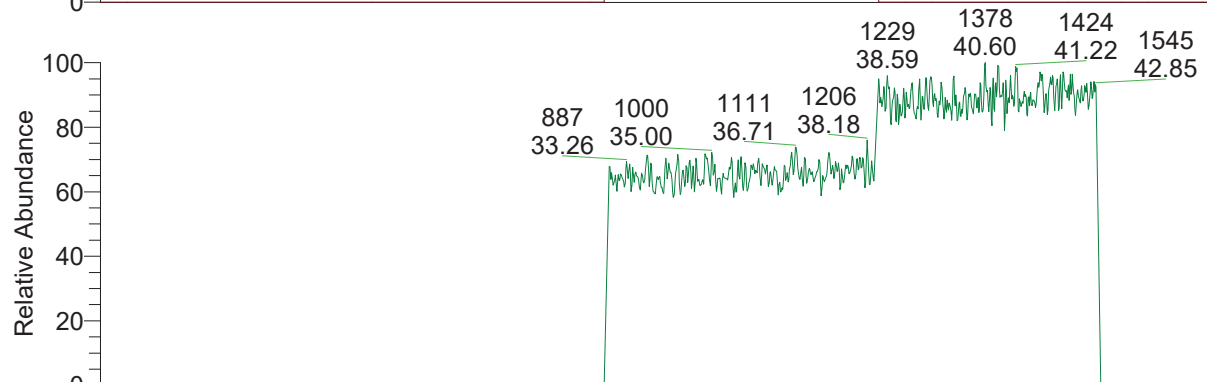
RT: 22.50 - 51.00



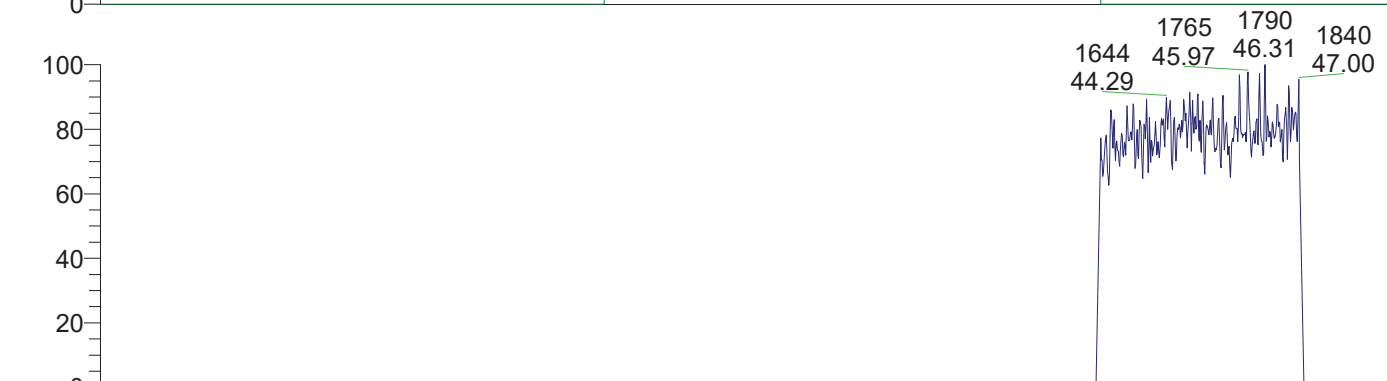
NL:
4.51E5
m/z=
291.9825-
292.9825
MS
18NOV06-
04



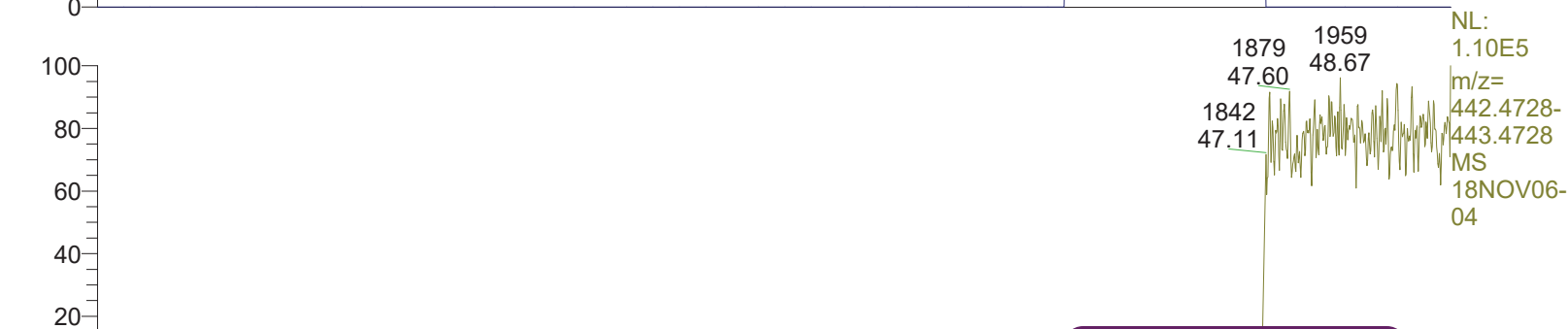
NL:
4.34E5
m/z=
330.4792-
331.4792
MS
18NOV06-
04



NL:
2.77E5
m/z=
380.4760-
381.4760
MS
18NOV06-
04



NL:
9.45E4
m/z=
404.4760-
405.4760
MS
18NOV06-
04



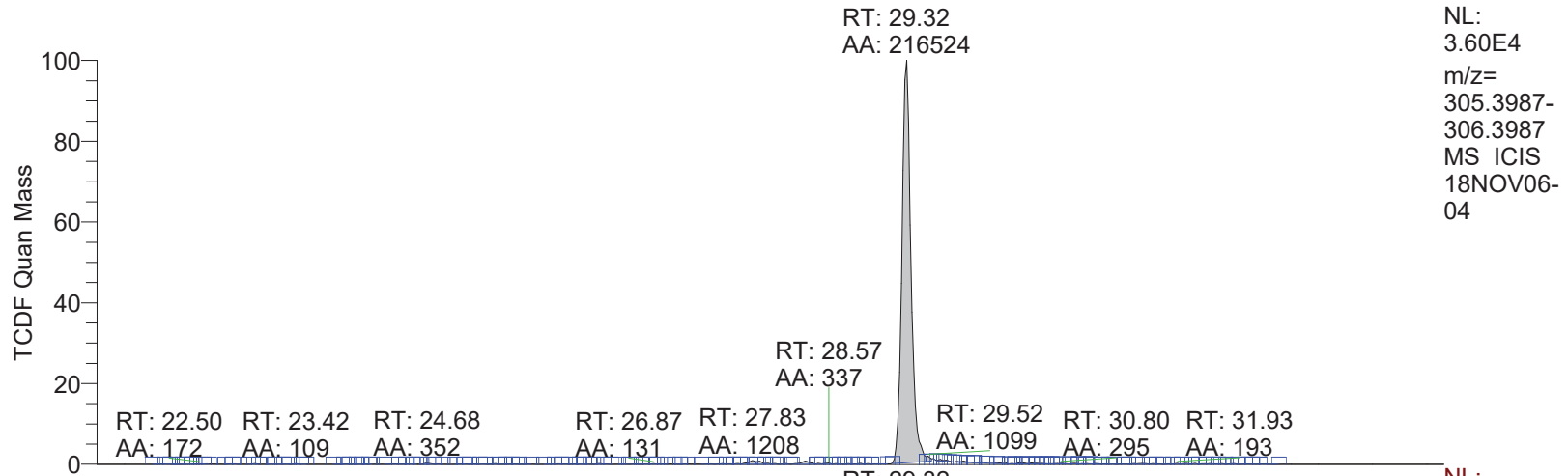
NL:
1.10E5
m/z=
442.4728-
443.4728
MS
18NOV06-
04

APPROVED
By RQ46 at 3:34 pm, 11/12/18

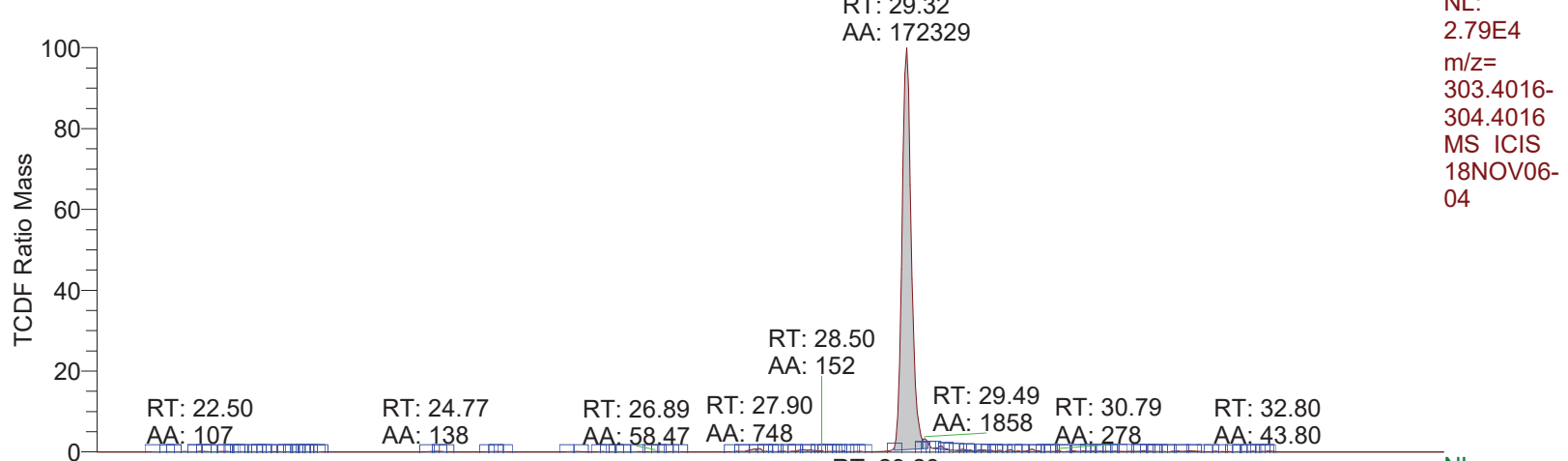
REVIEWED
By uild at 3:47 pm, 11/12/18

Time (min)

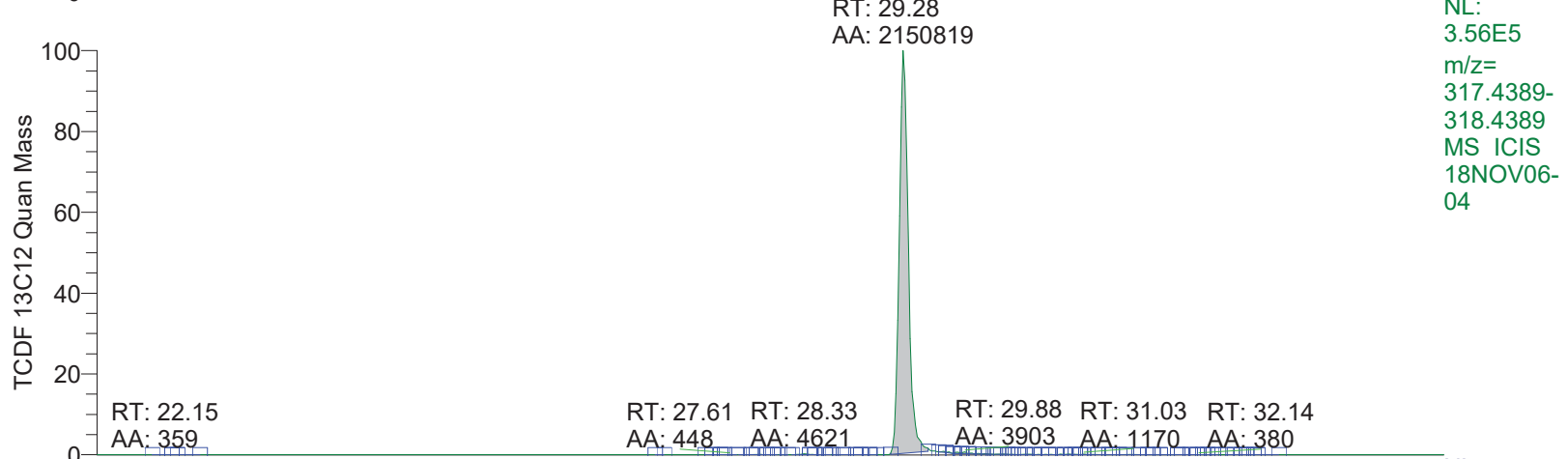
RT: 21.50 - 34.50



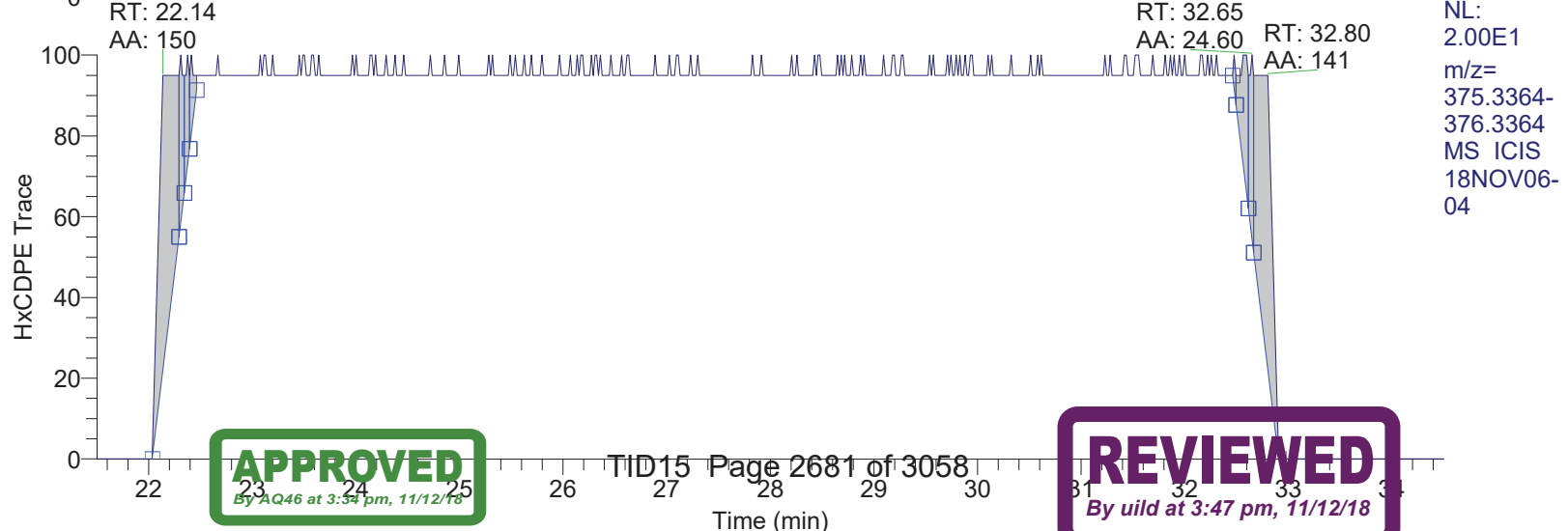
NL:
3.60E4
m/z=
305.3987-
306.3987
MS ICIS
18NOV06-
04



NL:
2.79E4
m/z=
303.4016-
304.4016
MS ICIS
18NOV06-
04



NL:
3.56E5
m/z=
317.4389-
318.4389
MS ICIS
18NOV06-
04

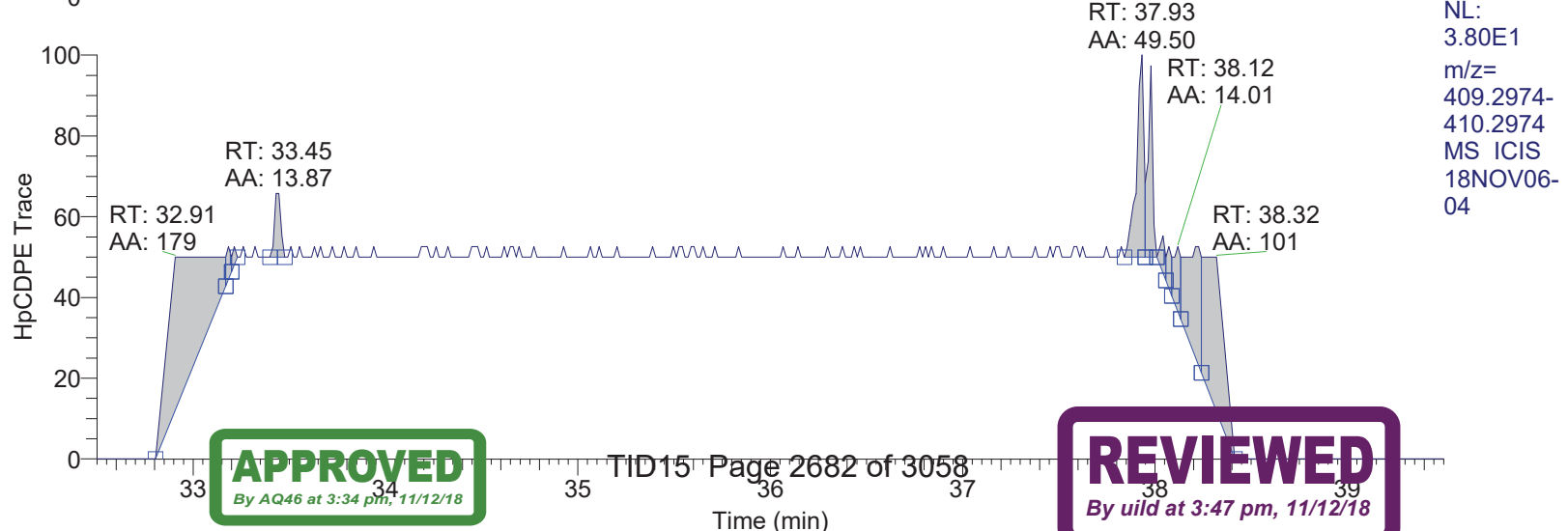
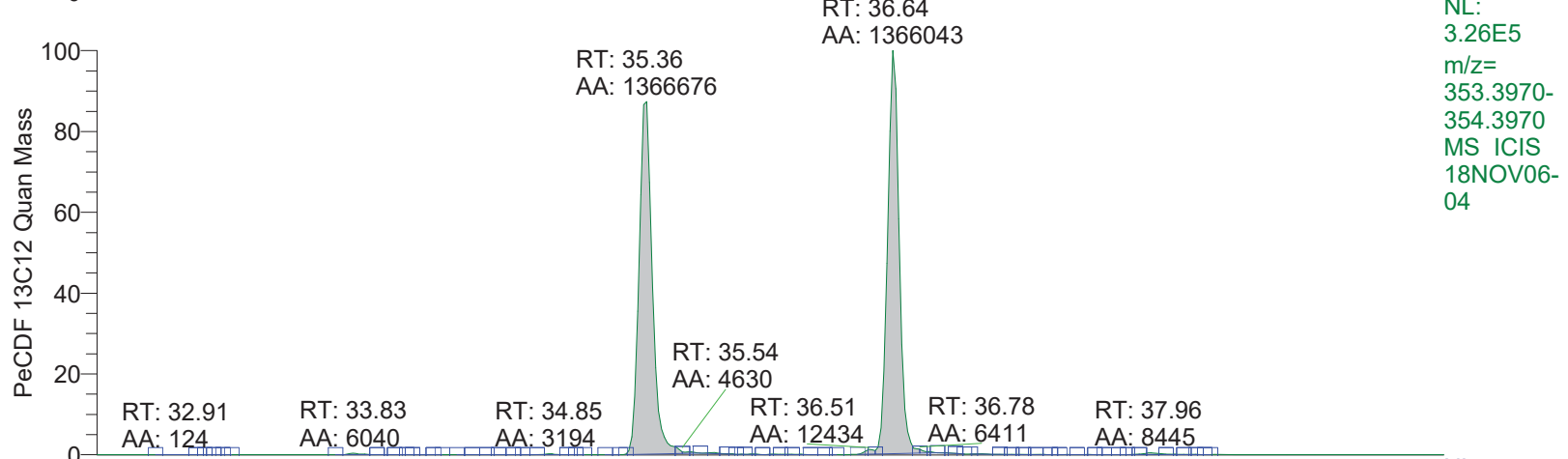
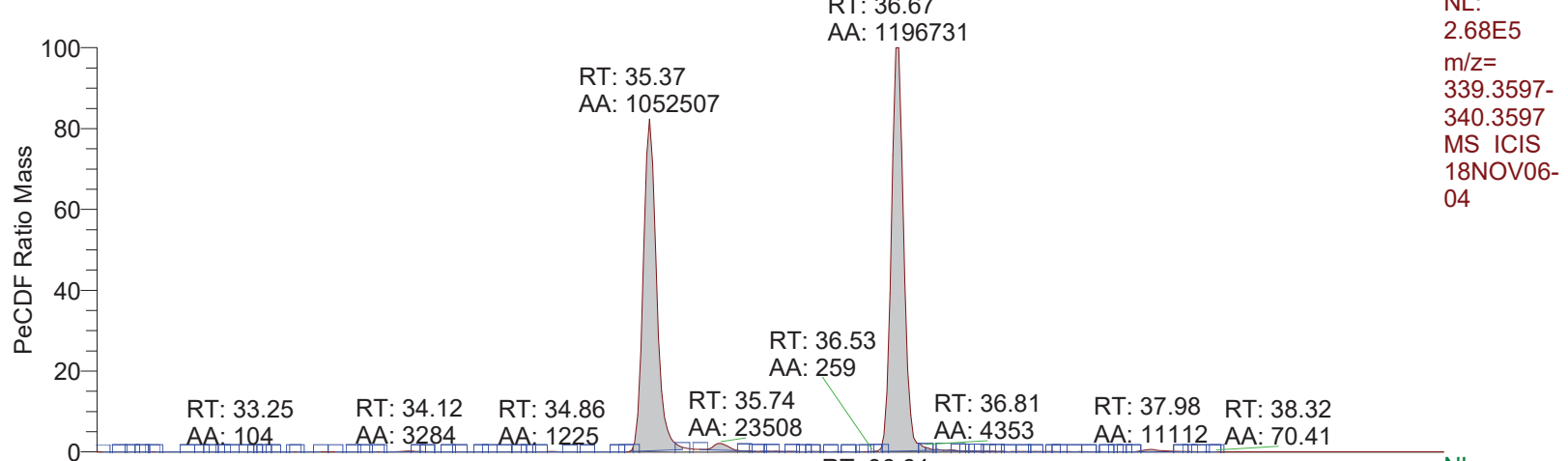
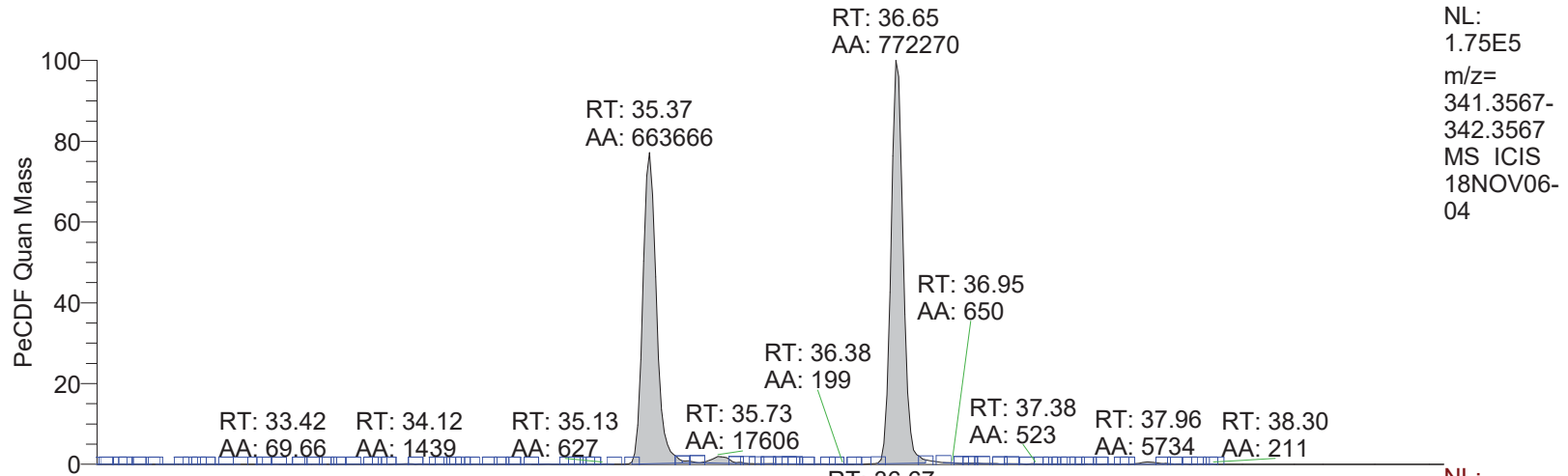


NL:
2.00E1
m/z=
375.3364-
376.3364
MS ICIS
18NOV06-
04

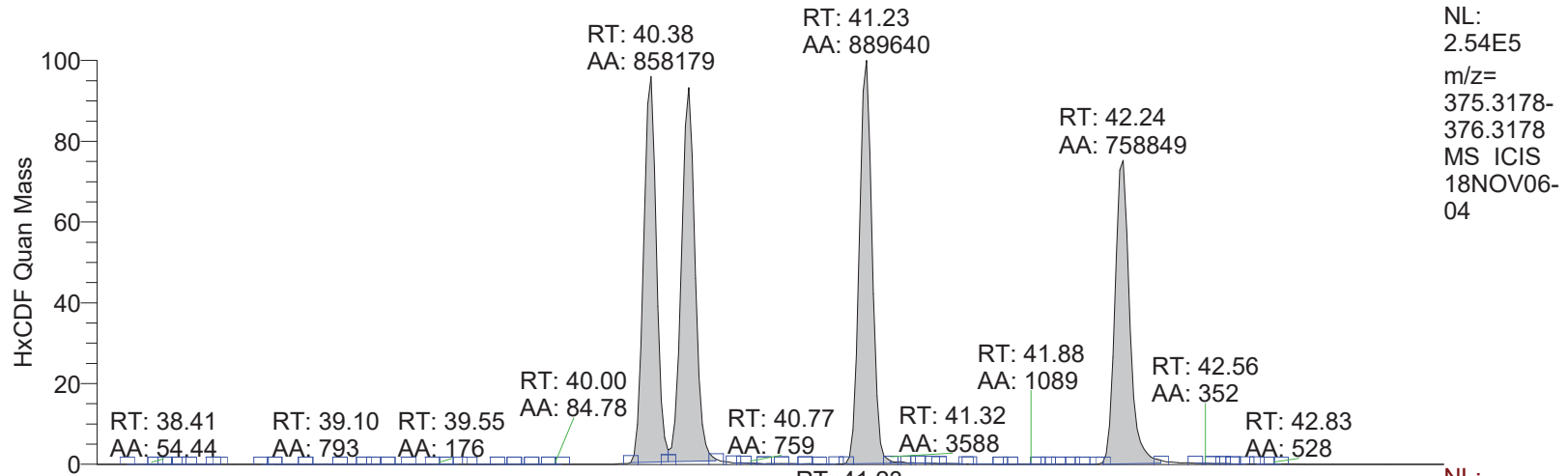
APPROVED
By AQ46 at 3:54 pm, 11/12/18

REVIEWED
By uild at 3:47 pm, 11/12/18

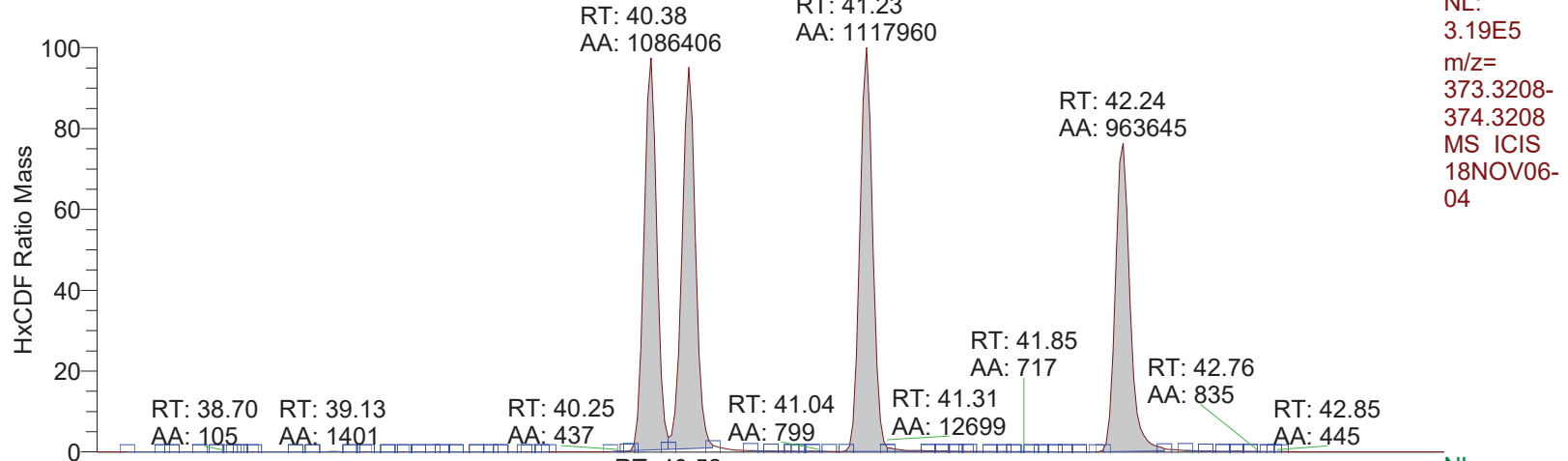
RT: 32.50 - 39.50



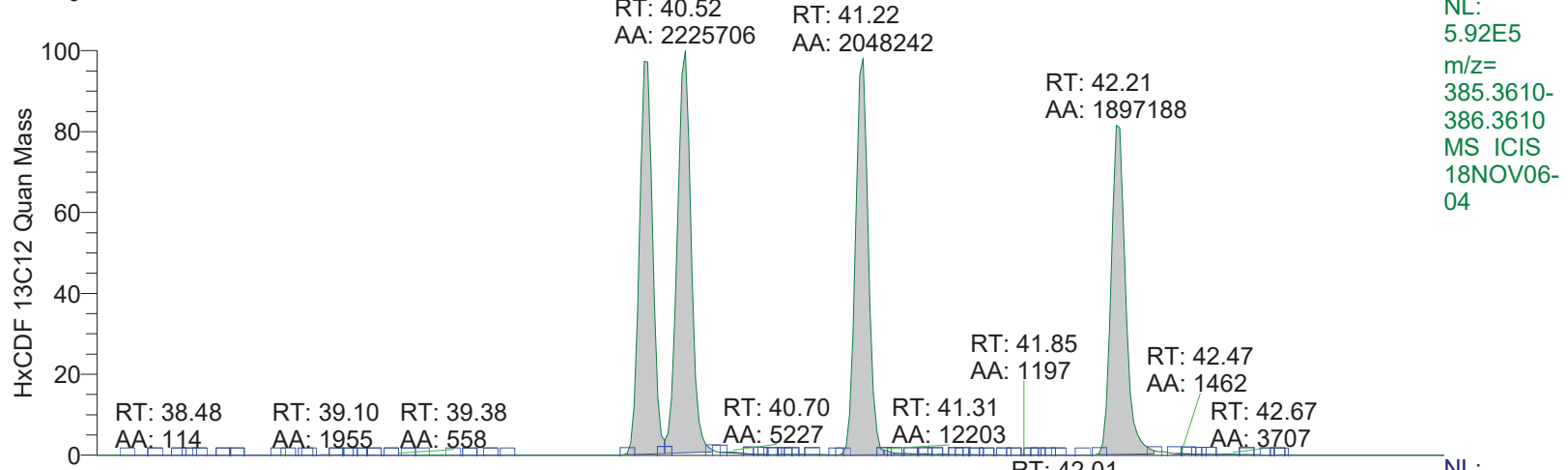
RT: 38.20 - 43.50



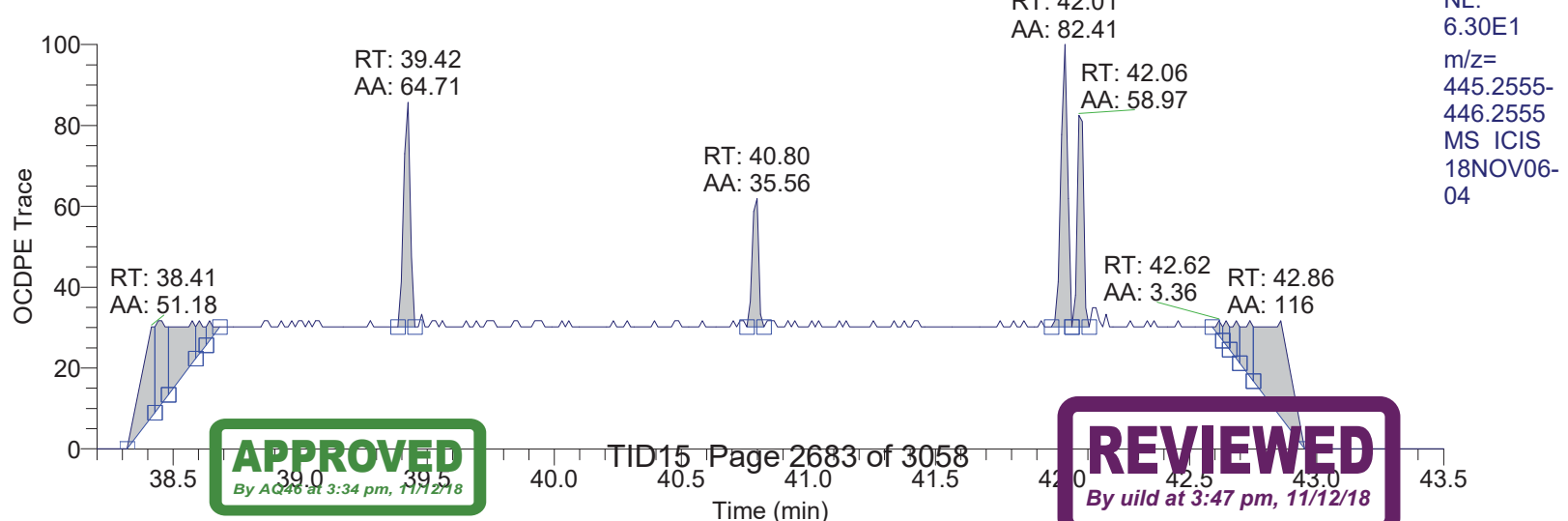
NL:
2.54E5
m/z=
375.3178-
376.3178
MS ICIS
18NOV06-
04



NL:
3.19E5
m/z=
373.3208-
374.3208
MS ICIS
18NOV06-
04



NL:
5.92E5
m/z=
385.3610-
386.3610
MS ICIS
18NOV06-
04

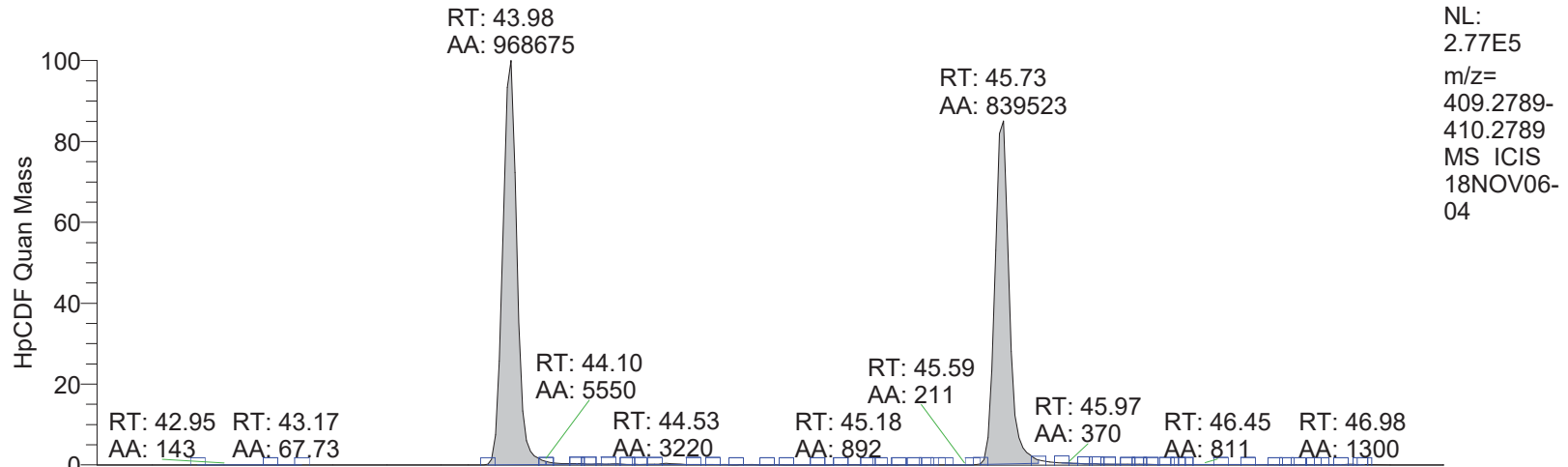


NL:
6.30E1
m/z=
445.2555-
446.2555
MS ICIS
18NOV06-
04

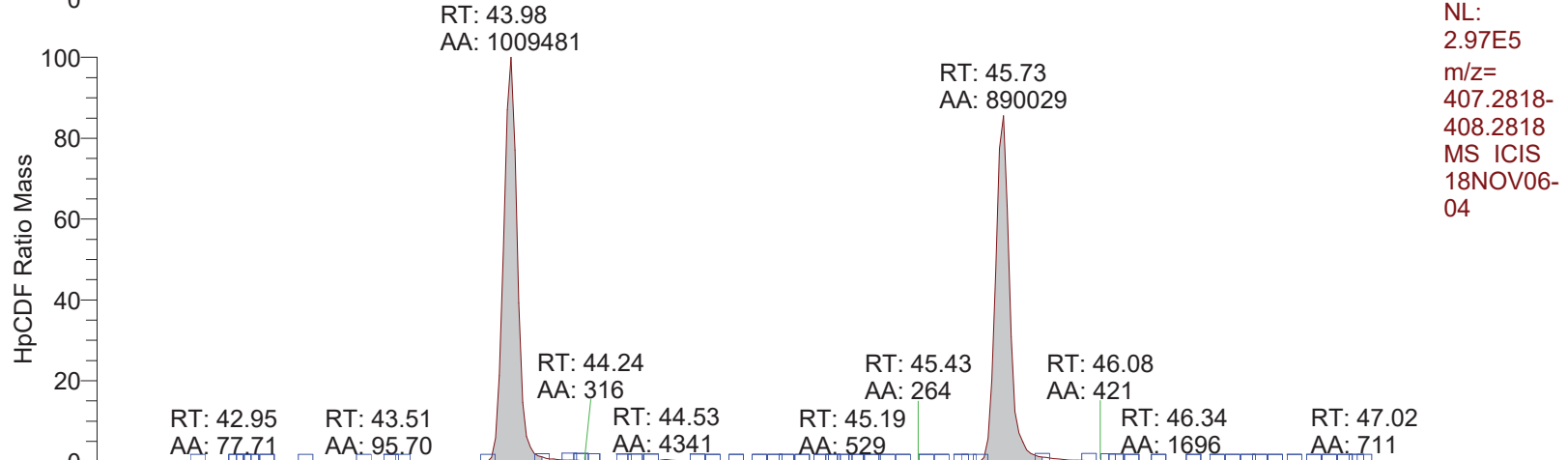
APPROVED
By AQ48 at 3:34 pm, 11/12/18

REVIEWED
By uild at 3:47 pm, 11/12/18

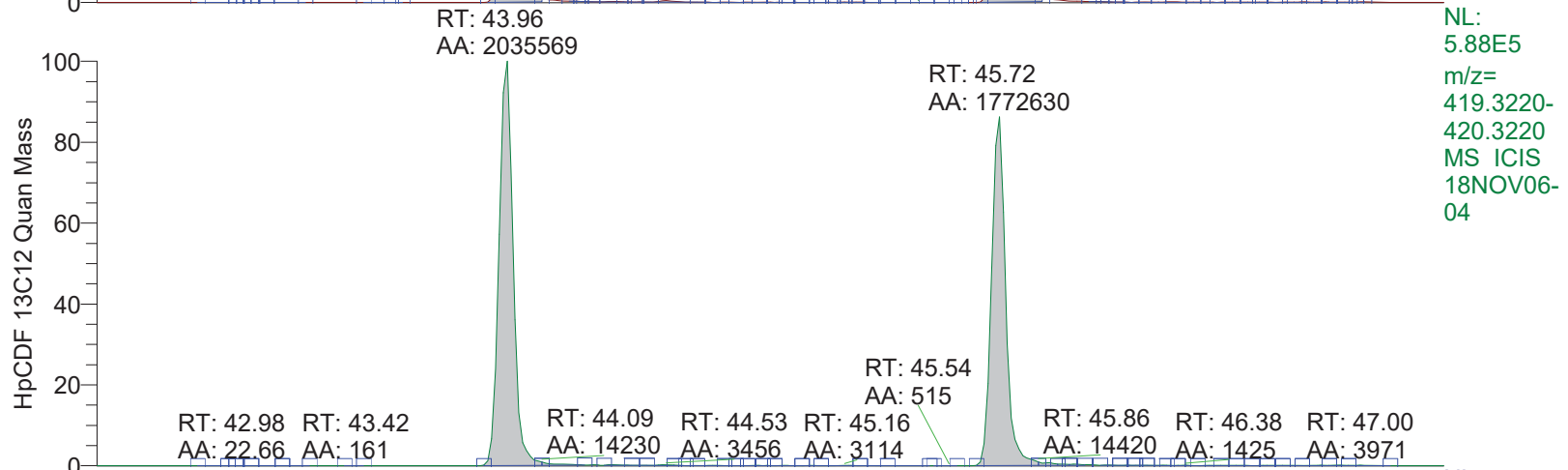
RT: 42.50 - 47.30



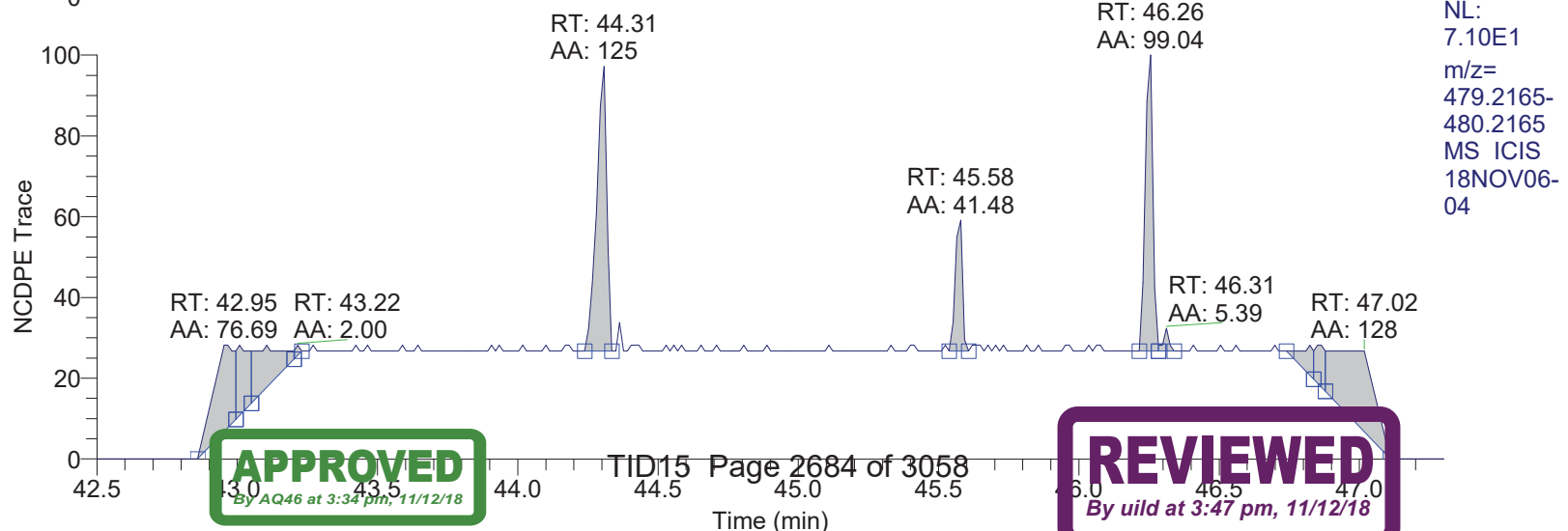
NL: 2.77E5
m/z= 409.2789-410.2789
MS ICIS 18NOV06-04



NL: 2.97E5
m/z= 407.2818-408.2818
MS ICIS 18NOV06-04



NL: 5.88E5
m/z= 419.3220-420.3220
MS ICIS 18NOV06-04

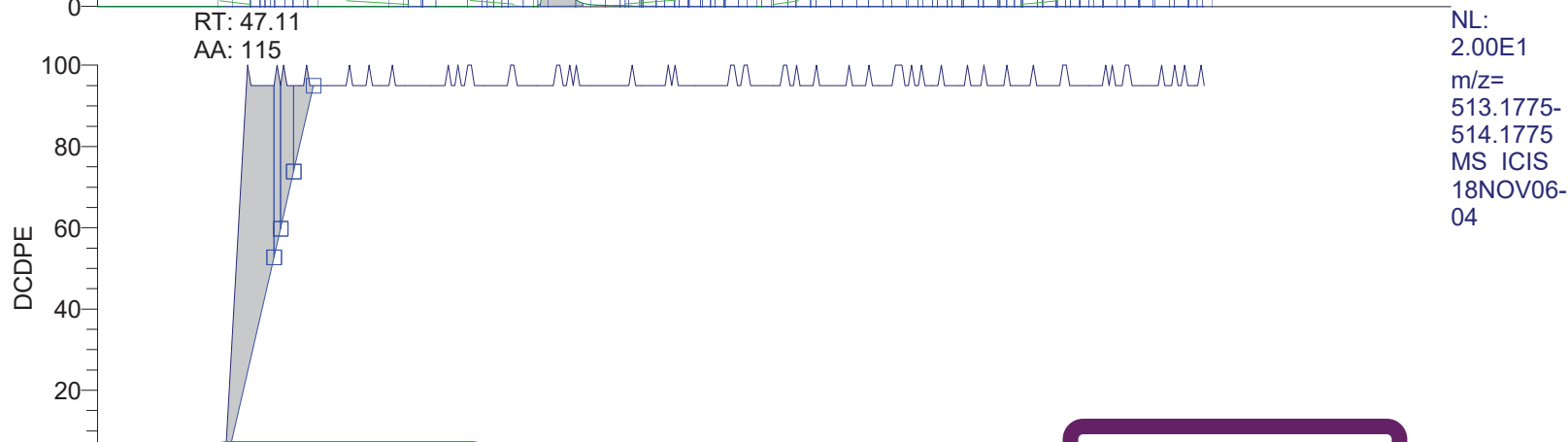
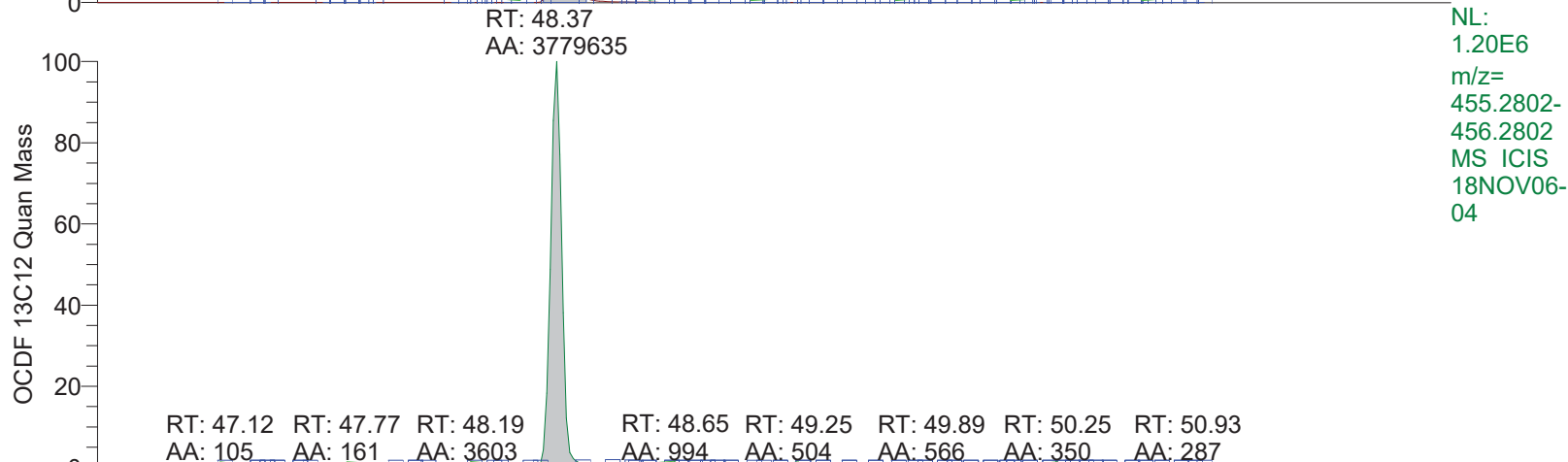
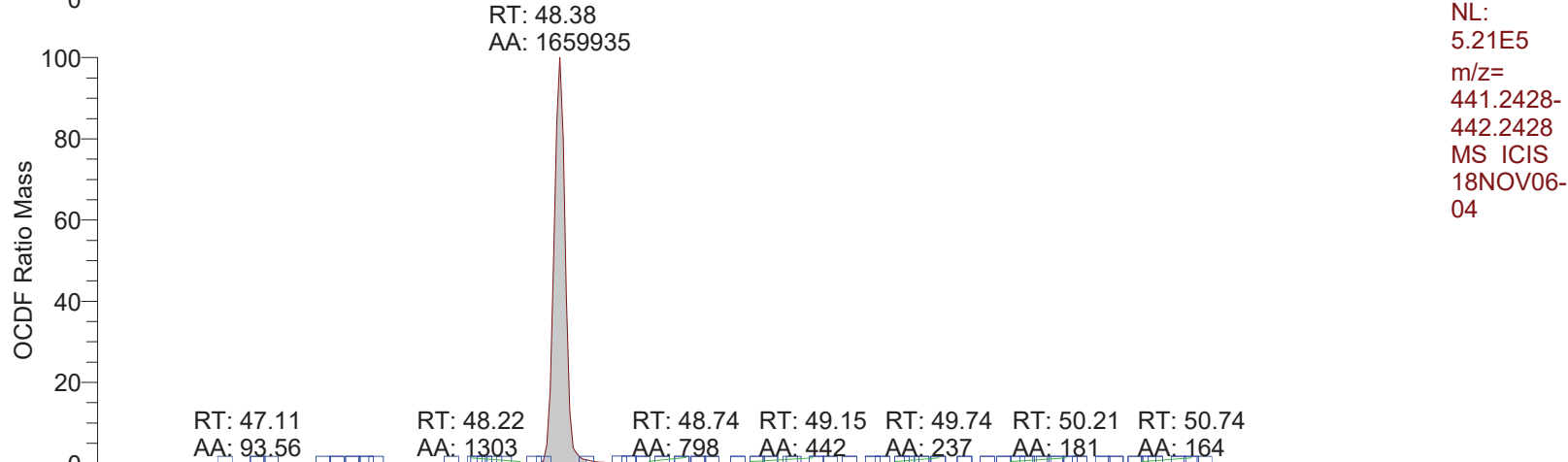
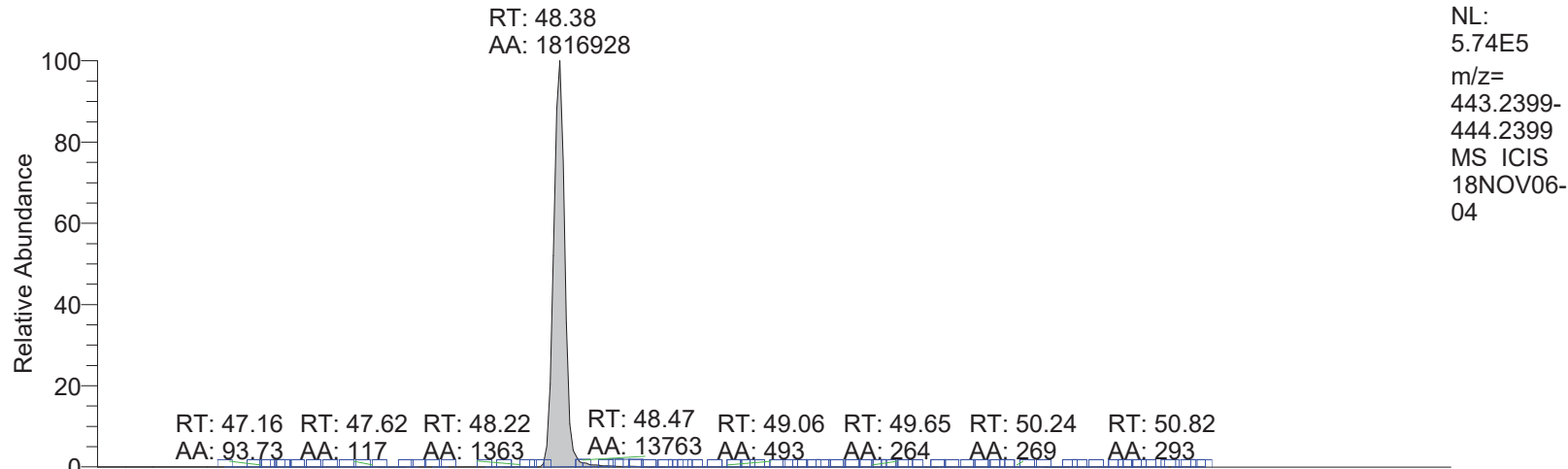


NL: 7.10E1
m/z= 479.2165-480.2165
MS ICIS 18NOV06-04

APPROVED
By AQ46 at 3:34 pm, 11/12/18

REVIEWED
By uild at 3:47 pm, 11/12/18

RT: 46.50 - 52.00



APPROVED
By AQ46 at 3:33 pm, 11/12/18

REVIEWED
By uild at 3:47 pm, 11/12/18

*** file opened Tue Nov 06 13:24:15 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 06-Nov-18 13:24:14

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : ea75024e-0155-484c-9427-82df5291ad01

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
Window # 1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
Window # 2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes

MID window end time was 22.010000 minutes

MID window terminated after 32.800000 minutes

MID window end time was 32.800000 minutes

18NOV06-04

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	98.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	0.9993	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	3913.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	346.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	166.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	10.6500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0074	FVINLET	0.0376	FVSR	0.0364
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	782.0000
LENS_SYM	26.7500	LM	299.9723	LMII	500.0000
LMASS	98.0000	LKM	442.9723	MASS	98.0000
MDAC	1429408.8034	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9827	RELEN	0.0000
RES	12350.6918	RPUSHER	-6.0147	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	808.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0196	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	98.0000	XLENS_POT	1000.0000
XLENS_SYM	-7.0000	YLENS_POT	860.0000	YLENS_SYM	-34.0000

Source Gauge: 2.0e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.3e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11778.
MID Time window 2: Resolution is 12051.
MID Time window 3: Resolution is 11862.
MID Time window 4: Resolution is 11912.



18NOV06-04

MID Time Window 5: Resolution is 13317.
MID Time Window 6: Resolution is 12350.

Amplifier Offset: 81.

*** File closed Tue Nov 06 14:15:16 2018



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/10 05:43
Number of Entries	26
Comment	
Vial	2
Sample Name	TDTFWD - ST1828537A
Sample ID	CPS03
Inst ID	DF17611-18NOV10
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

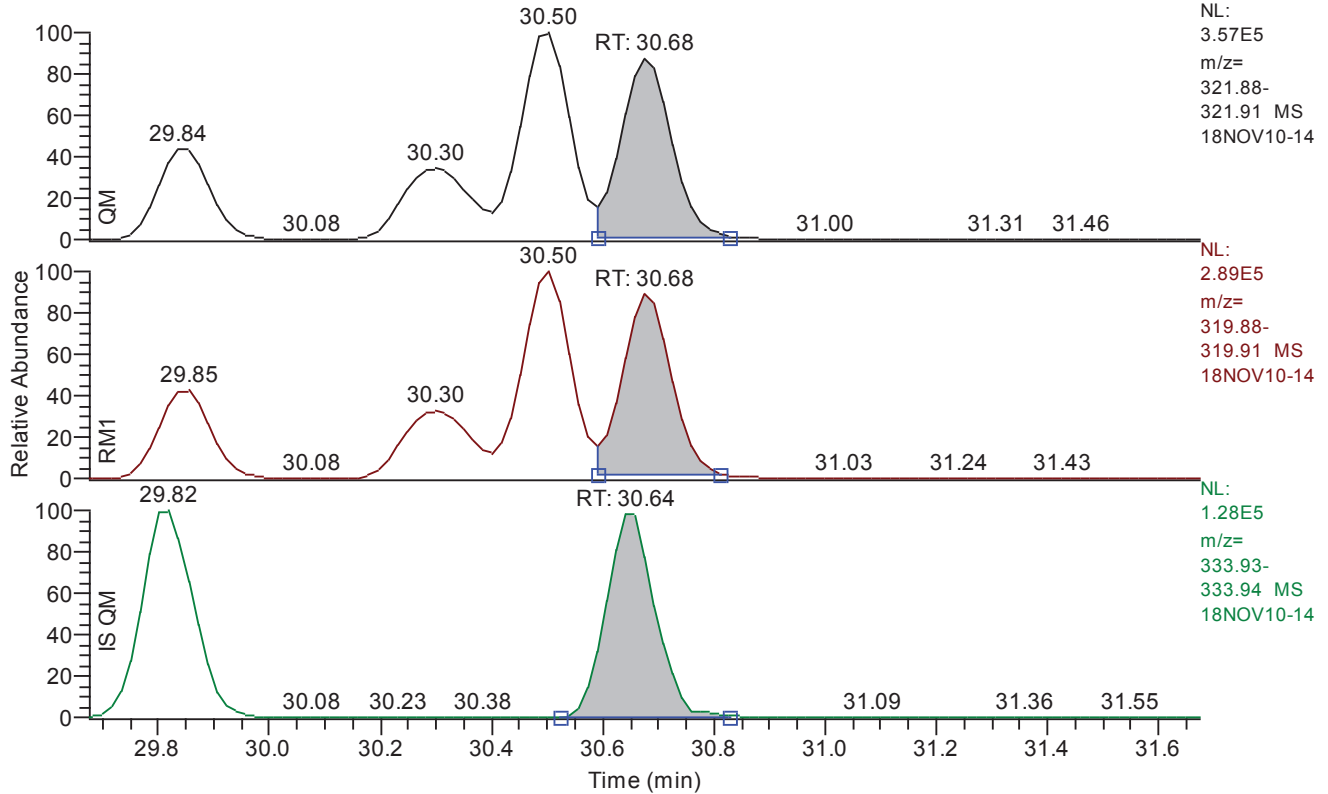
Quan	x:\18nov10\18nov10-14.quan
Data	x:\18nov10\18nov10-14.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	No Summation
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	1.0
Response Factor Mode	Average RF
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

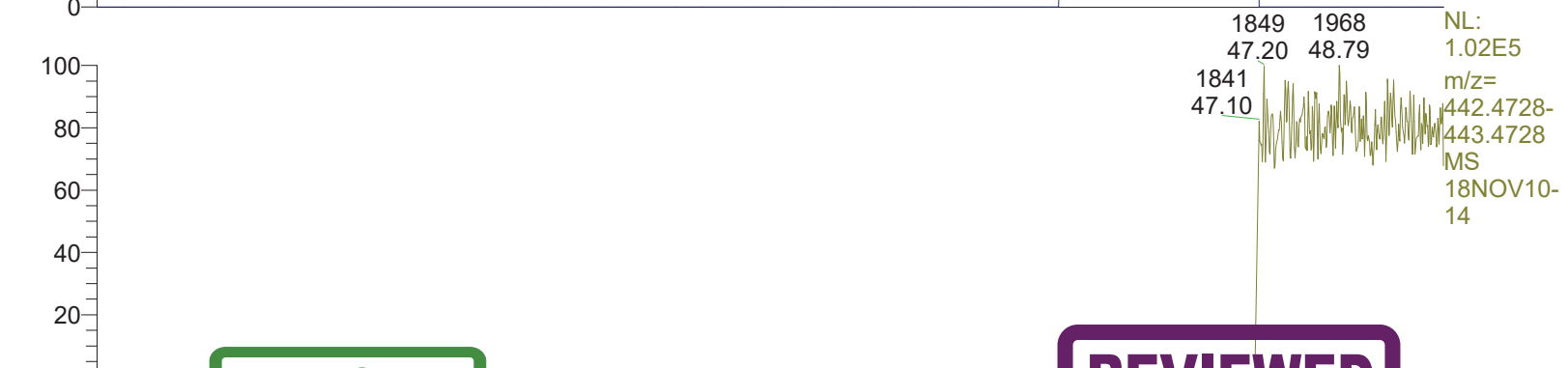
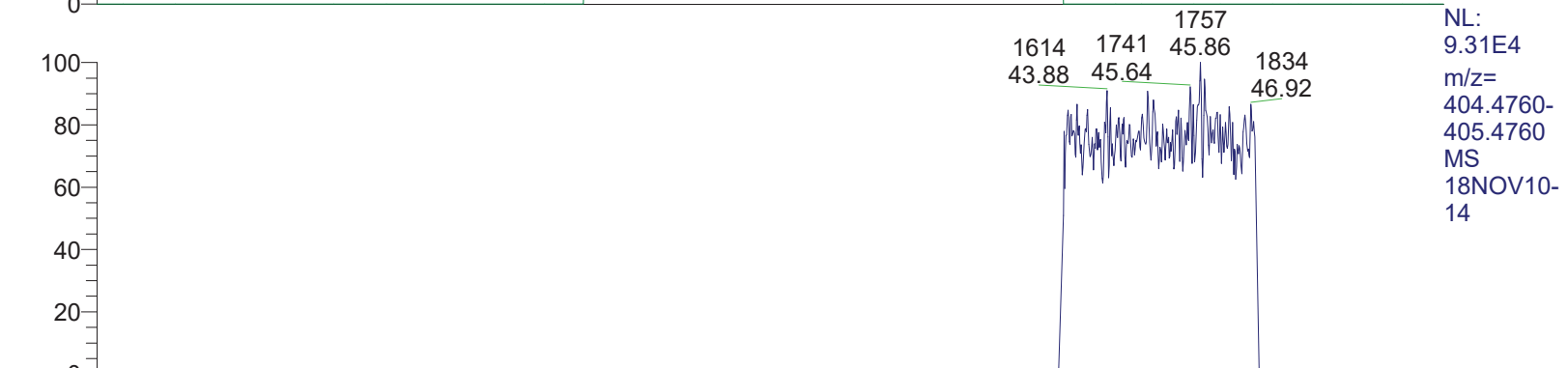
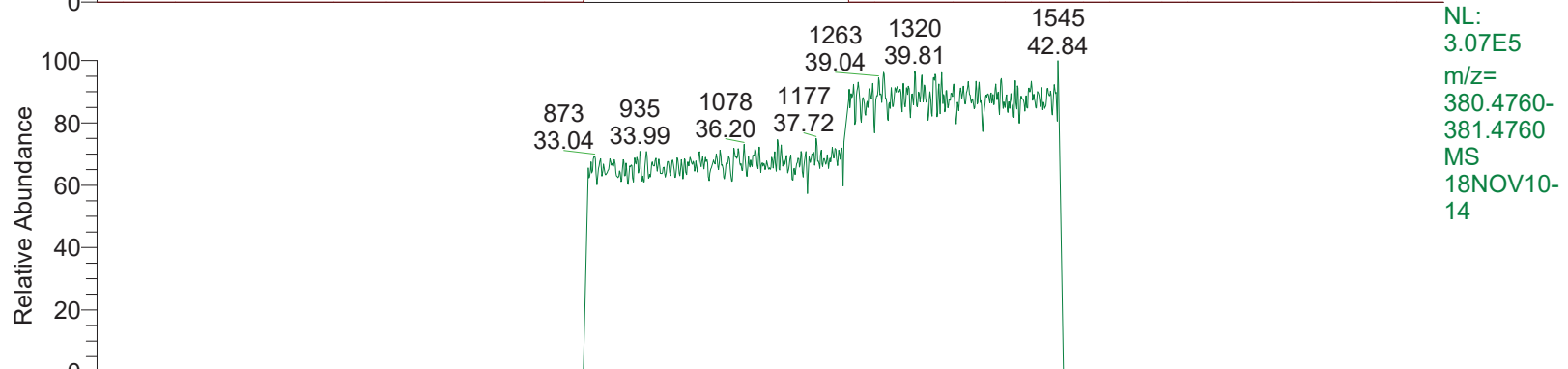
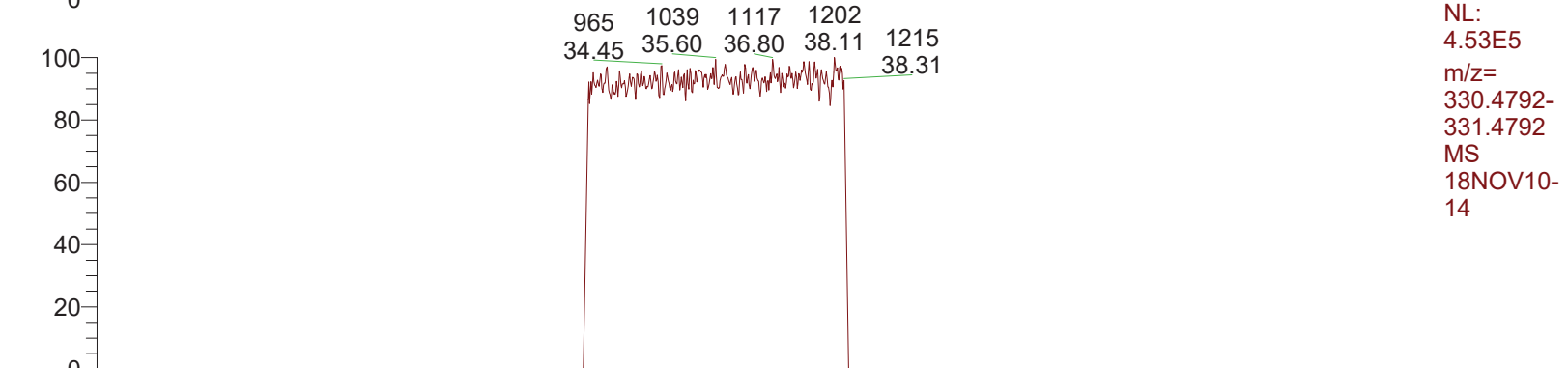
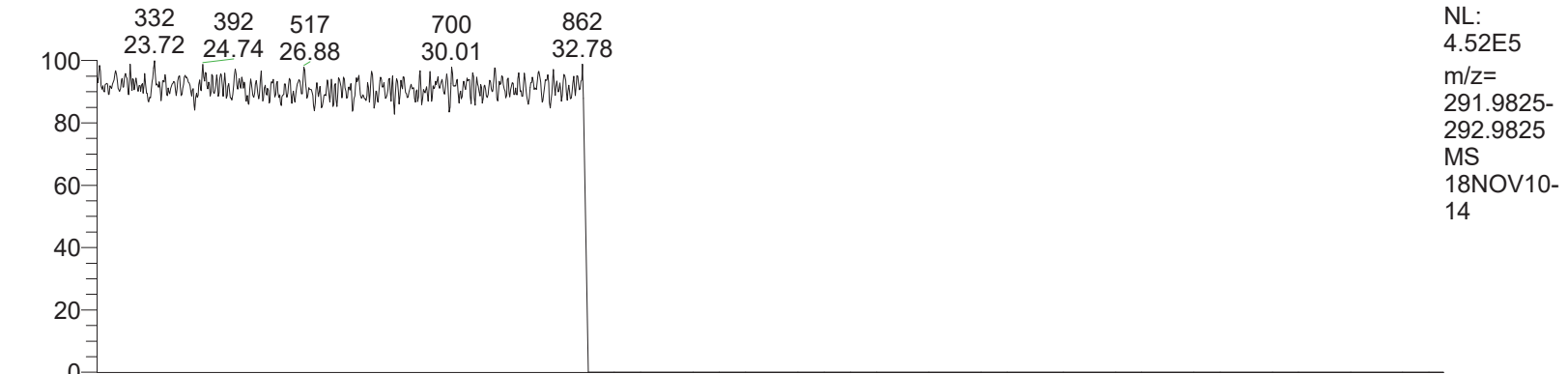
RT: 29.68 - 31.68 SM: 3G



Entry Parameters

Smoothing Points	3
Compound Name	2378-TCDD
Quan. Mass	321.8936 +/- 50 ppm
QM Integration Mode	A
Ratio Mass 1	319.8965 +/- 50 ppm
RM1 Integration Mode	A
ManInt	0
RM1 Retention Time	30.68
RM1 Left Baseline Height	5863.26
RM1 Left Height	39002
RM1 Height	252752
GC Res (%) left	17.151479

RT: 22.50 - 51.00



APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:42 pm, 11/13/18

Time (min)

18NOV10-14

*** file opened Sat Nov 10 05:46:06 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 05:46:06

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
Window # 1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
Window # 2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



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331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes

Page 2



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MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	99.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0076	FVINLET	0.0379	FVSR	0.0366
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	99.0000	LKM	442.9723	MASS	99.0000
MDAC	1441894.7239	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9861	RELEN	0.0000
RES	11661.4475	RPUSHER	-6.0733	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	99.0000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.7e-008 mbar
Pirani Analyse: 7.6e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11417.
MID Time window 2: Resolution is 11681.
MID Time window 3: Resolution is 11625.
MID Time window 4: Resolution is 11587.



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MID Time Window 5: Resolution is 12756.
MID Time Window 6: Resolution is 11661.

Amplifier Offset: 80.

*** File closed Sat Nov 10 06:37:07 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/10 06:37
Number of Entries 62
Comment
Vial 6
Sample Name VER-CALDF41837G
Sample ID CS3CC03
Inst ID DF17611-18NOV10
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo
Barcode

Files Parameter

Quan x:\18nov10\18nov10-15.quan
Data x:\18nov10\18nov10-15.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 1.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.40	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.58	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.47	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.74	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.16	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.45	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.59	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.28	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.48	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.60	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.91	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.29	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	44.02	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.22	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.78	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.25	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.42	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.99	failed	passed	passed	passed	passed	passed	Failed on: RF
19	13C12-1234-TCDD	29.71	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.35	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.38	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.55	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.43	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.73	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.13	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.43	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.58	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.27	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.47	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.59	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.90	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.28	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	44.01	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.21	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.76	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.23	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.41	passed	passed	passed	passed	passed	passed	passed

Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/10 06:37
Number of Entries	62
Comment	
Vial	6
Sample Name	VER-CALDF41837G
Sample ID	CS3CC03
Inst ID	DF17611-18NOV10
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

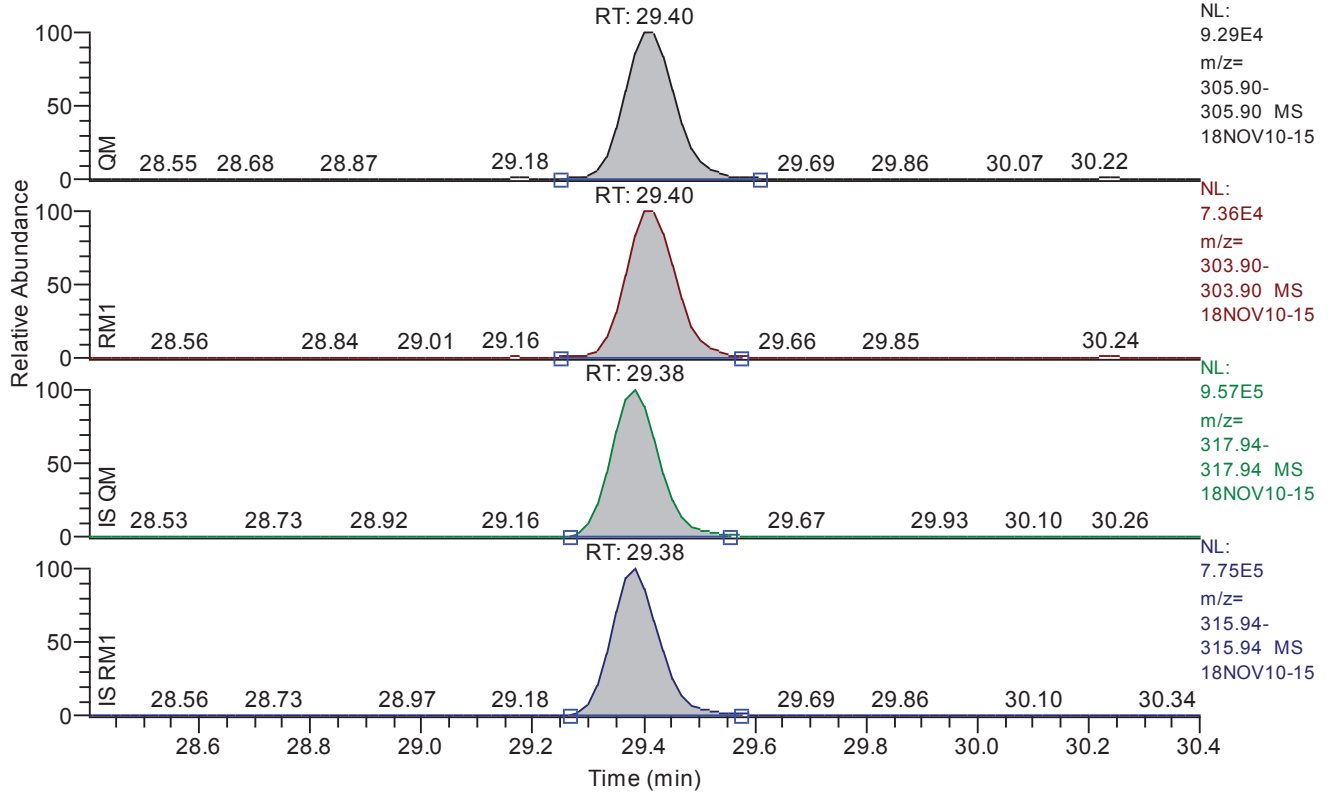
Quan	x:\18nov10\18nov10-15.quan
Data	x:\18nov10\18nov10-15.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Average RF
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 28.40 - 30.40 SM: 3G

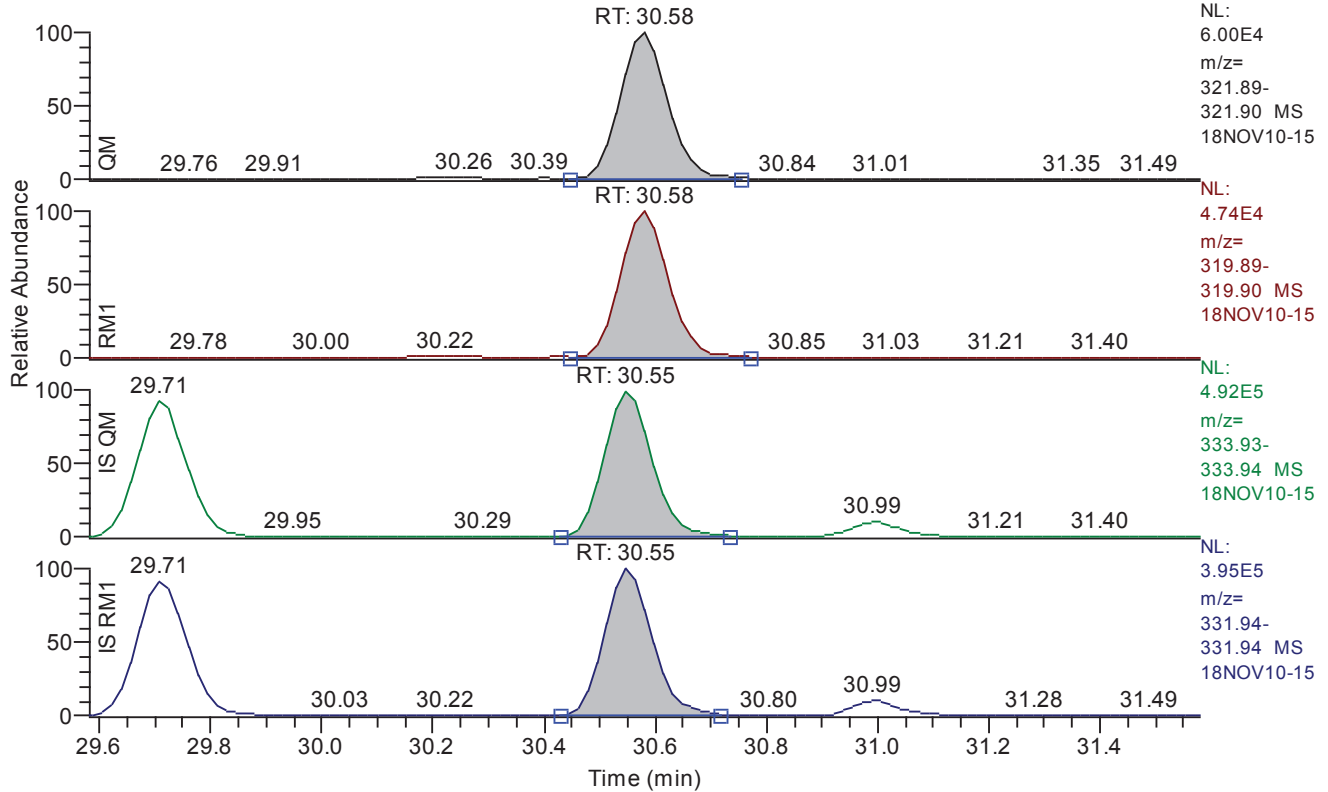


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.40
QM Area	607220
QM Integration Mode	A
RM1 Area	472710
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0070
Unqualified Amount (A)	9.772946
Adjusted Amount (A)	9.7729
Signal-to-Noise	3280
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.58 - 31.58 SM: 3G

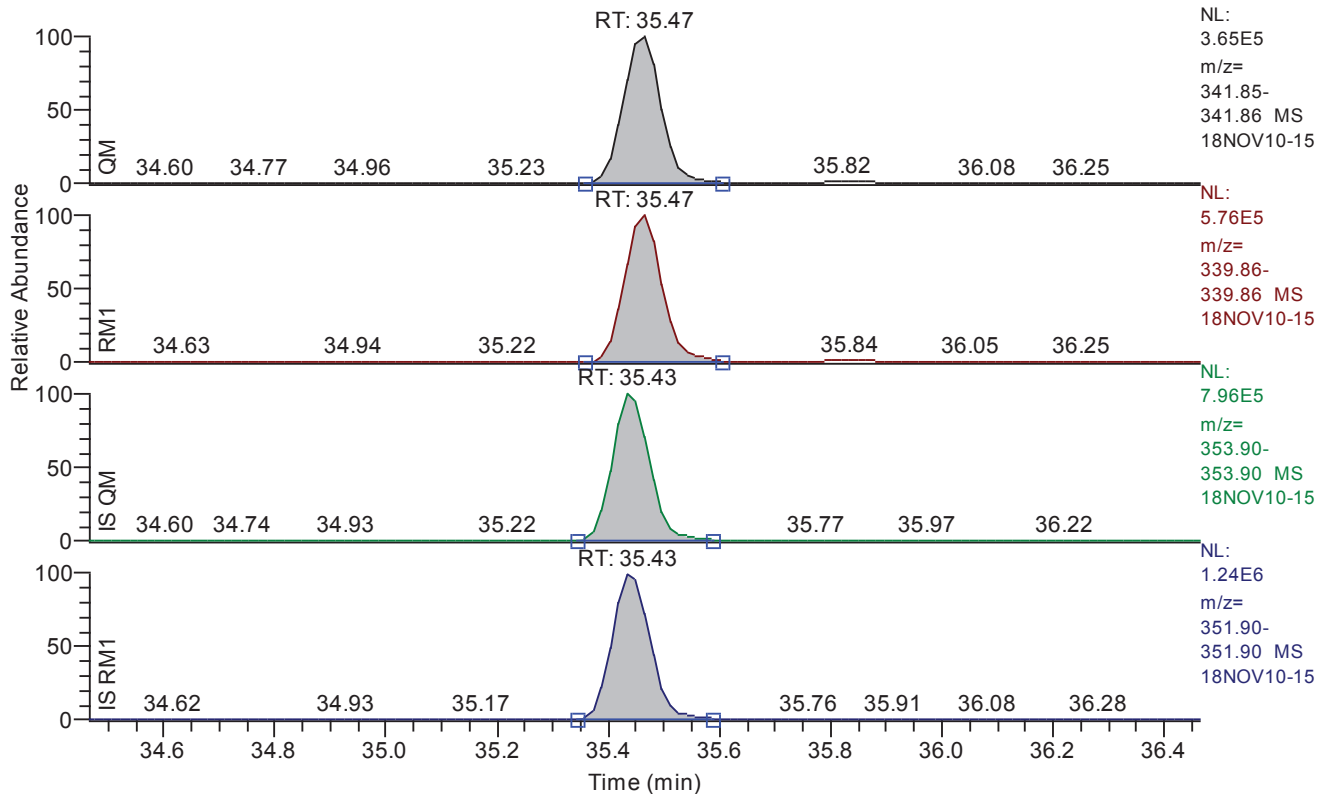


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.58
QM Area	363574
QM Integration Mode	A
RM1 Area	291295
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0067
Unqualified Amount (A)	9.837882
Adjusted Amount (A)	9.8379
Signal-to-Noise	3617
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.47 - 36.47 SM: 3G

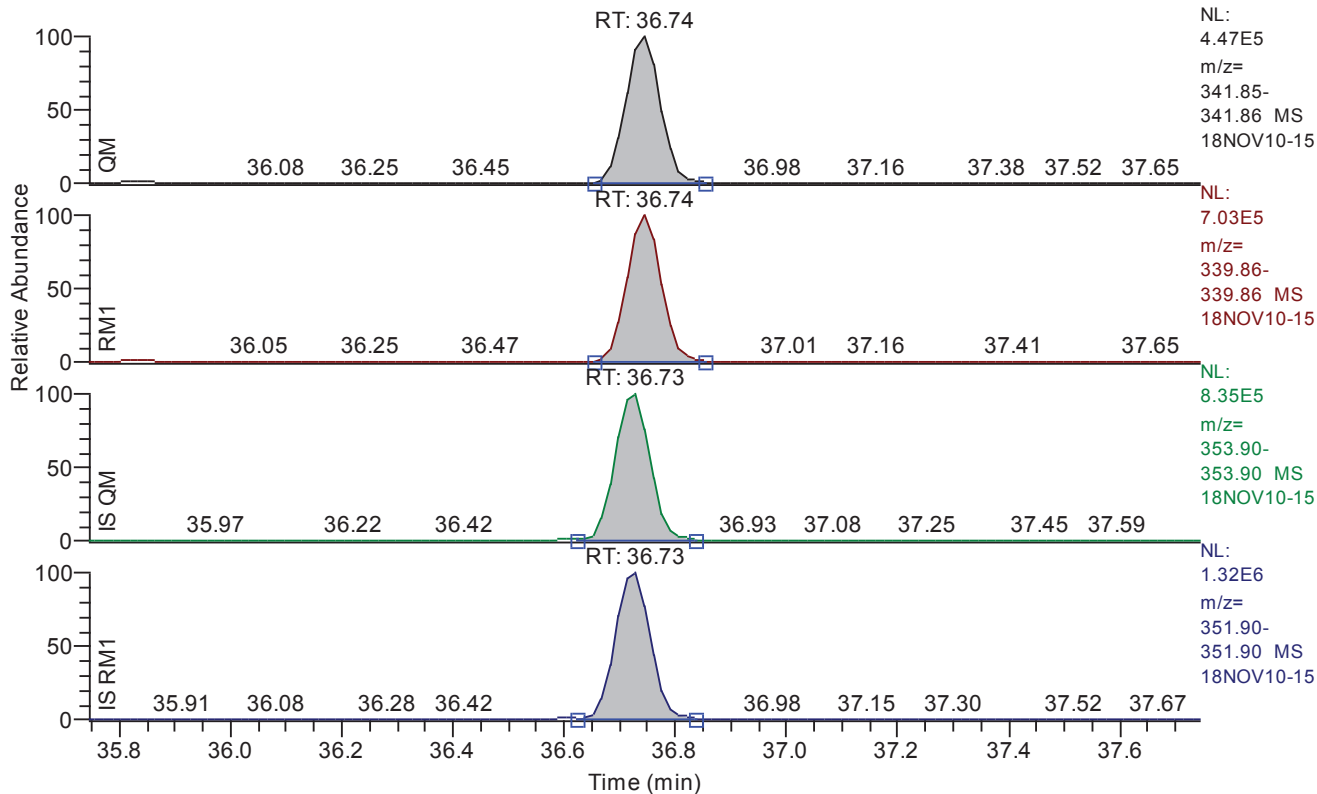


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.47
QM Area	1723594
QM Integration Mode	A
RM1 Area	2705156
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0055
Unqualified Amount (A)	49.410787
Adjusted Amount (A)	49.4108
Signal-to-Noise	22268
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.74 - 37.74 SM: 3G

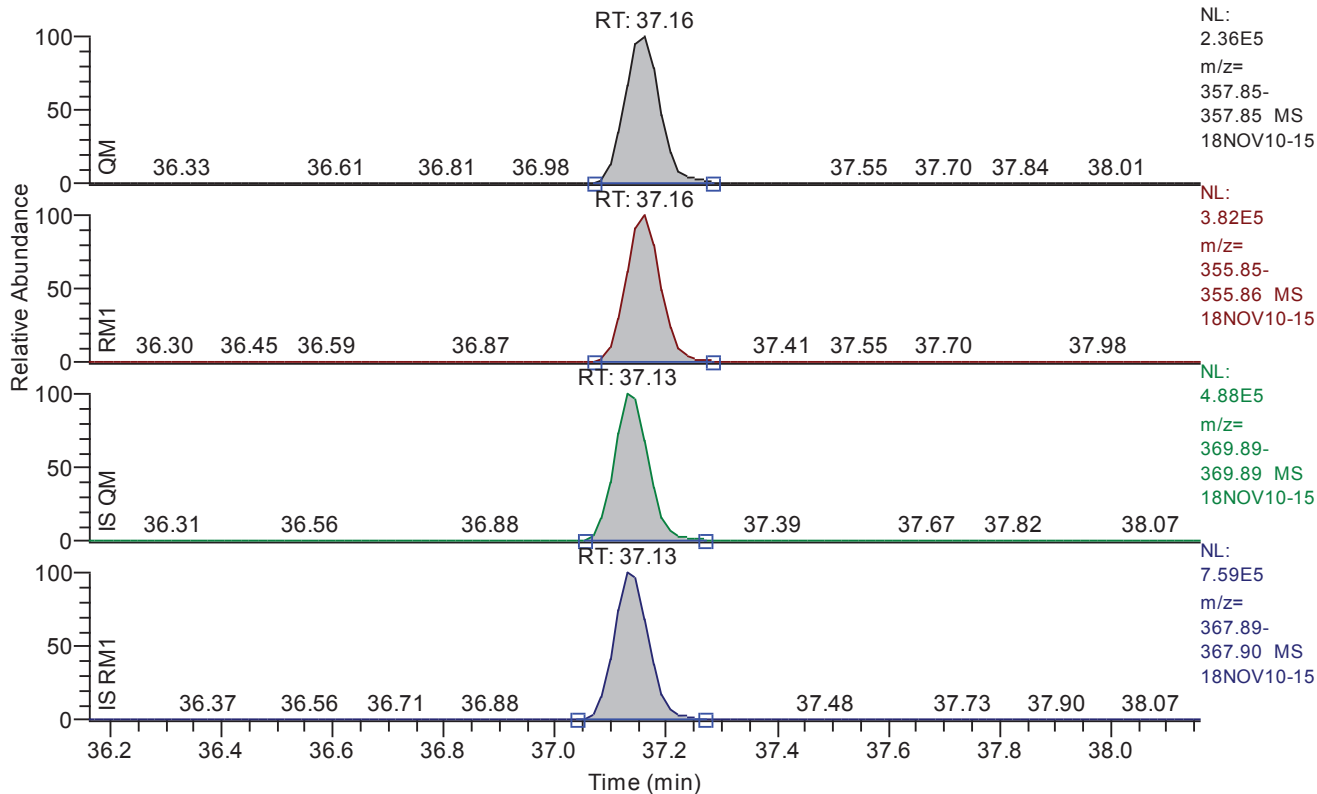


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.74
QM Area	1941483
QM Integration Mode	A
RM1 Area	3024341
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0047
Unqualified Amount (A)	49.636835
Adjusted Amount (A)	49.6368
Signal-to-Noise	27220
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.16 - 38.16 SM: 3G

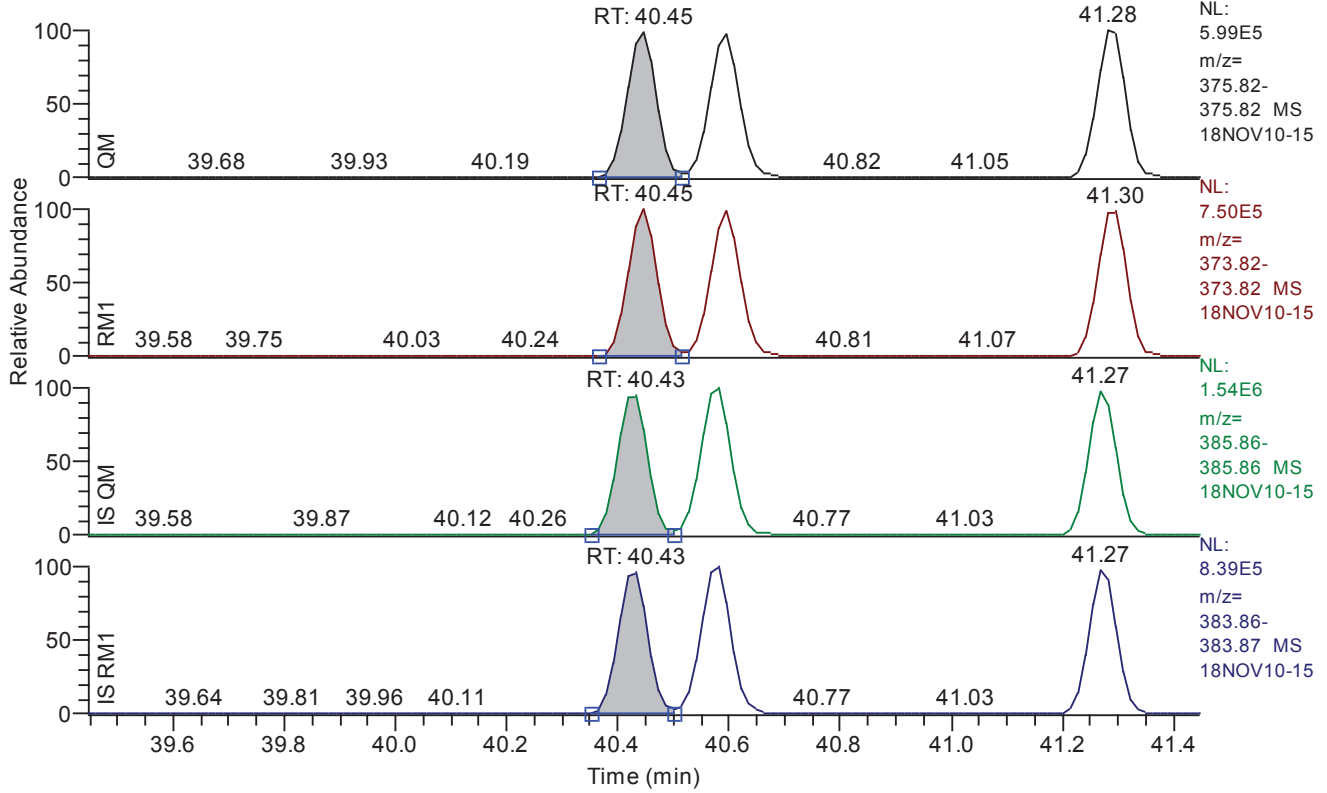


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.16
QM Area	1044924
QM Integration Mode	A
RM1 Area	1658758
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0104
Unqualified Amount (A)	49.776087
Adjusted Amount (A)	49.7761
Signal-to-Noise	11895
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.45 - 41.45 SM: 3G

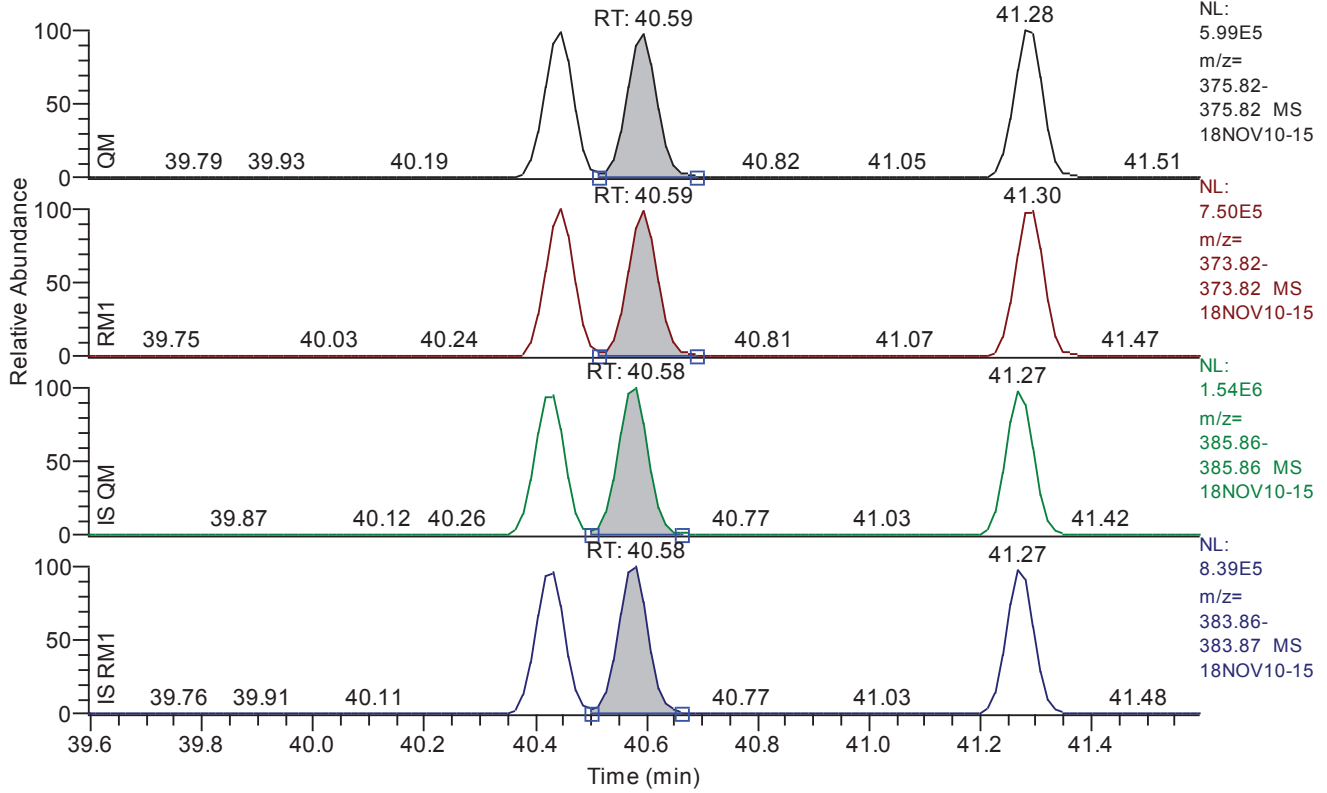


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.45
QM Area	2170249
QM Integration Mode	A
RM1 Area	2704093
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0115
Unqualified Amount (A)	51.161530
Adjusted Amount (A)	51.1615
Signal-to-Noise	11462
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.59 - 41.59 SM: 3G

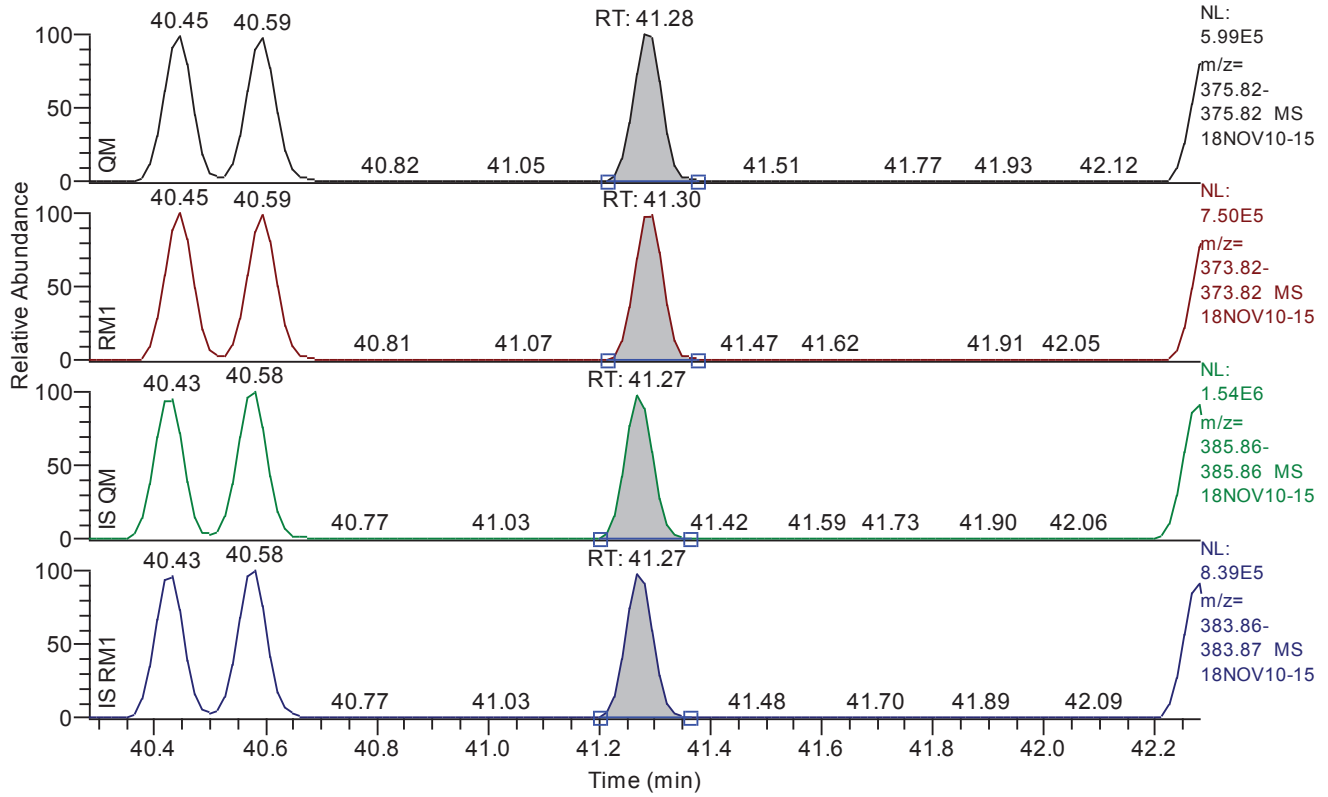


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.59
QM Area	2198325
QM Integration Mode	A
RM1 Area	2757655
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0115
Unqualified Amount (A)	51.409331
Adjusted Amount (A)	51.4093
Signal-to-Noise	11269
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.28 - 42.28 SM: 3G

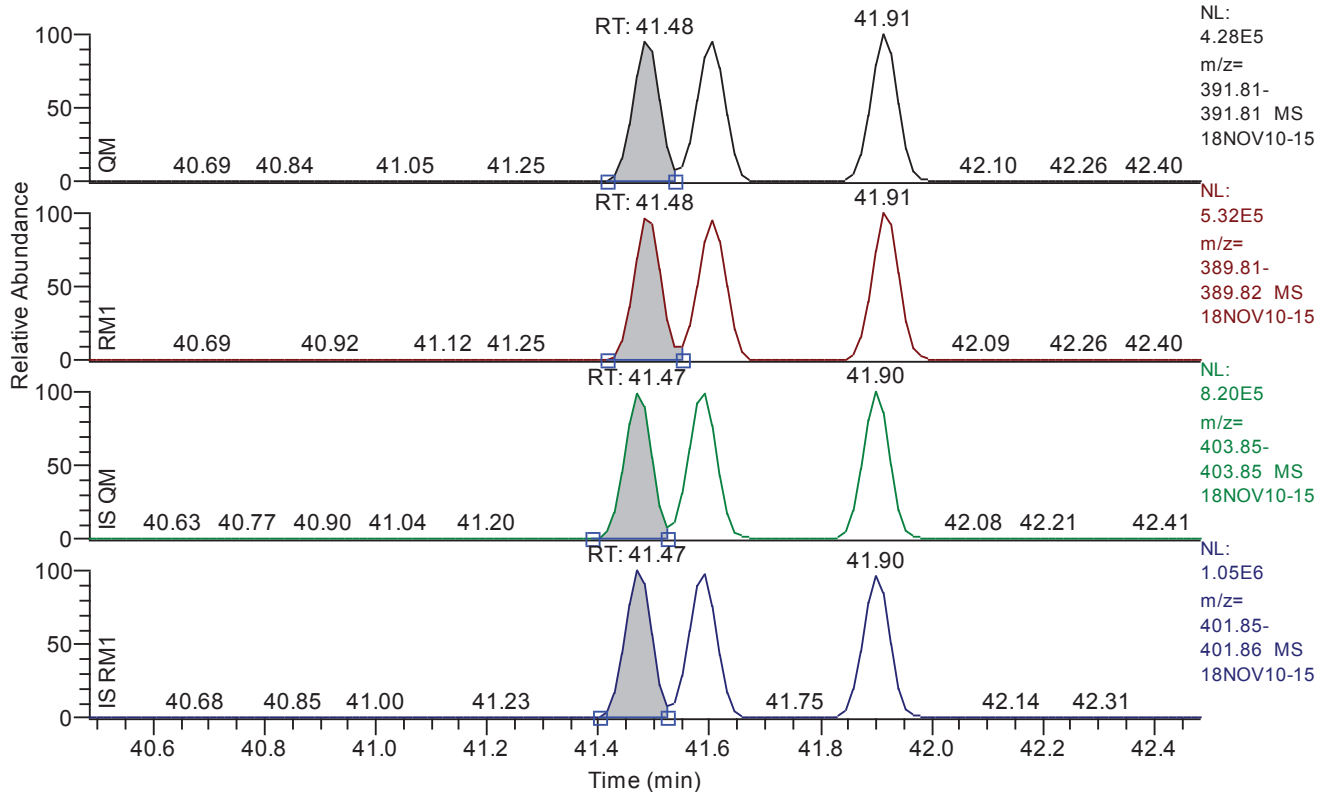


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.28
QM Area	2166531
QM Integration Mode	A
RM1 Area	2709620
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0109
Unqualified Amount (A)	51.542902
Adjusted Amount (A)	51.5429
Signal-to-Noise	11460
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.48 - 42.48 SM: 3G

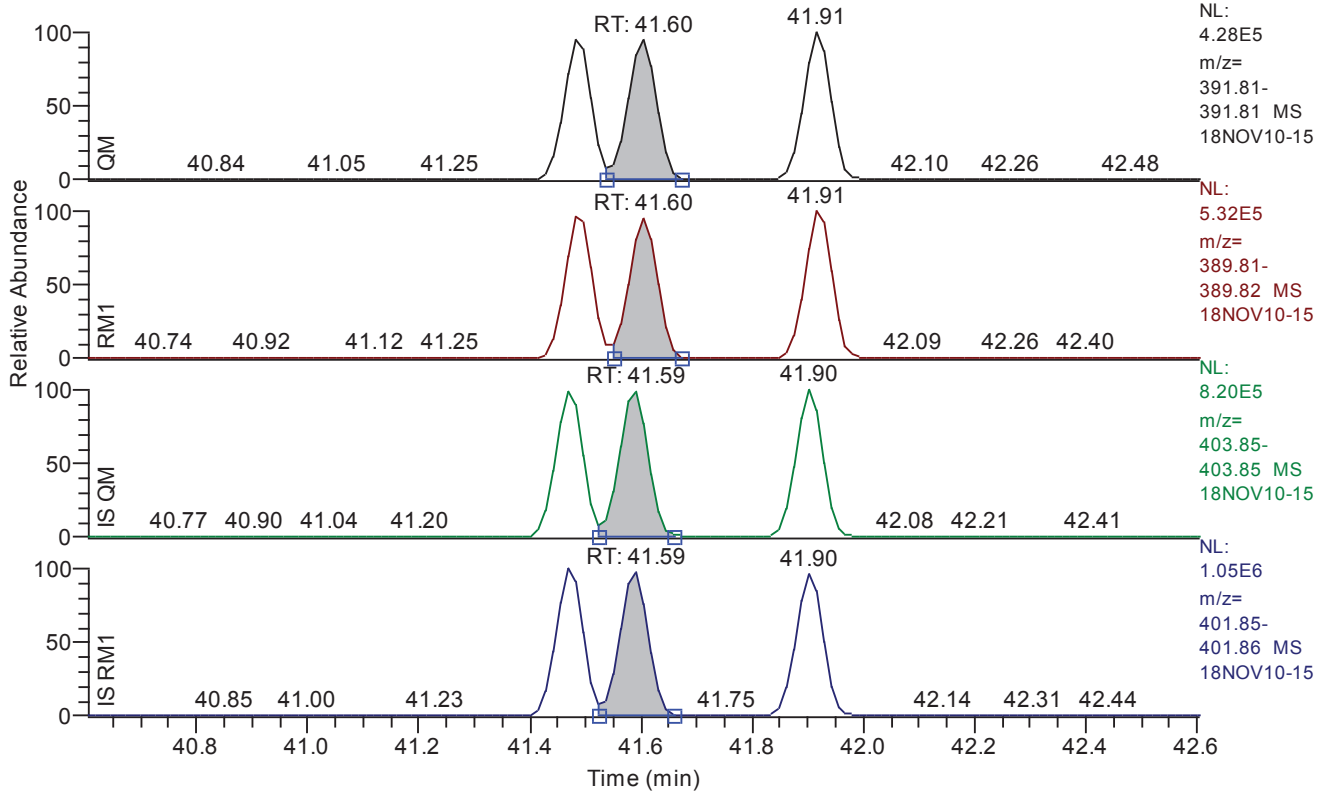


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.48
QM Area	1382638
QM Integration Mode	A
RM1 Area	1787193
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0069
Unqualified Amount (A)	49.547884
Adjusted Amount (A)	49.5479
Signal-to-Noise	17629
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.60 - 42.60 SM: 3G

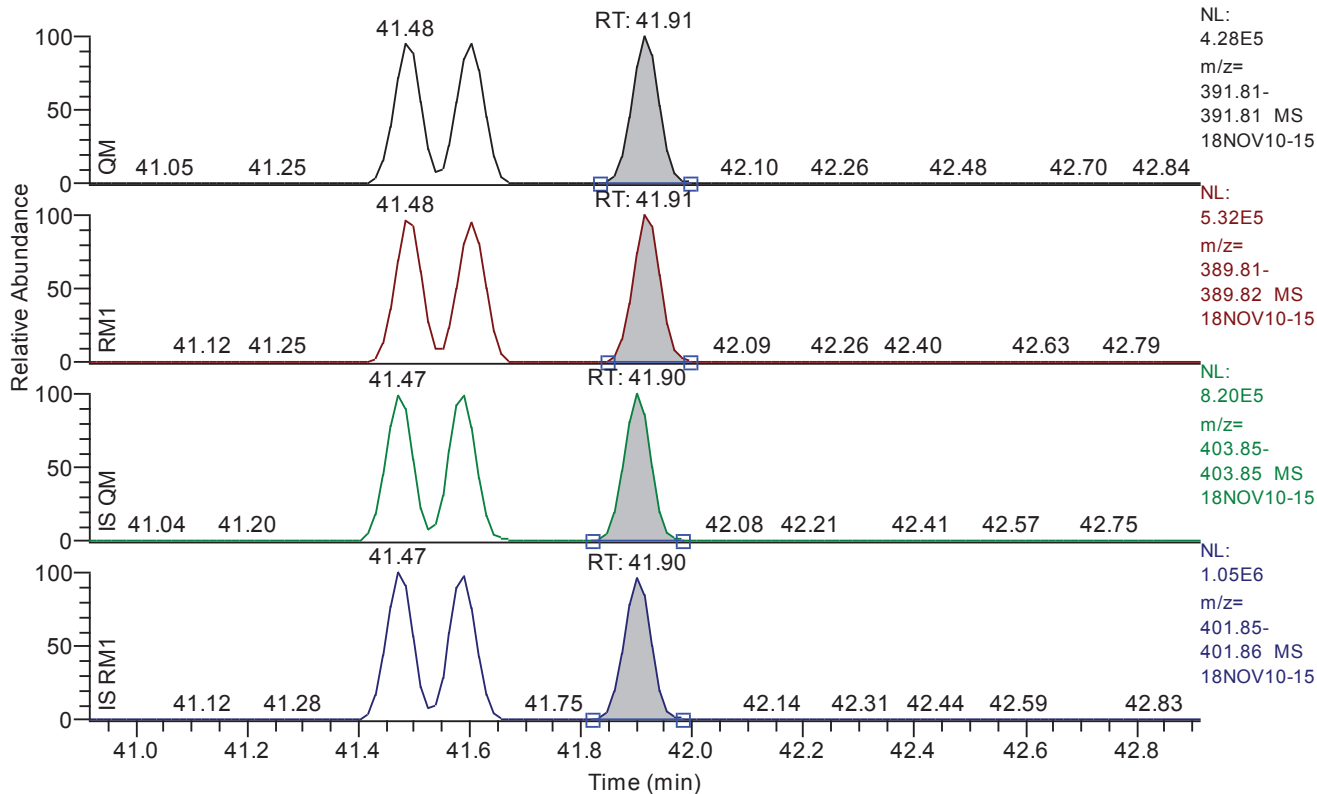


Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.60
QM Area	1454089
QM Integration Mode	A
RM1 Area	1778023
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0071
Unqualified Amount (A)	49.151601
Adjusted Amount (A)	49.1516
Signal-to-Noise	17501
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.91 - 42.91 SM: 3G

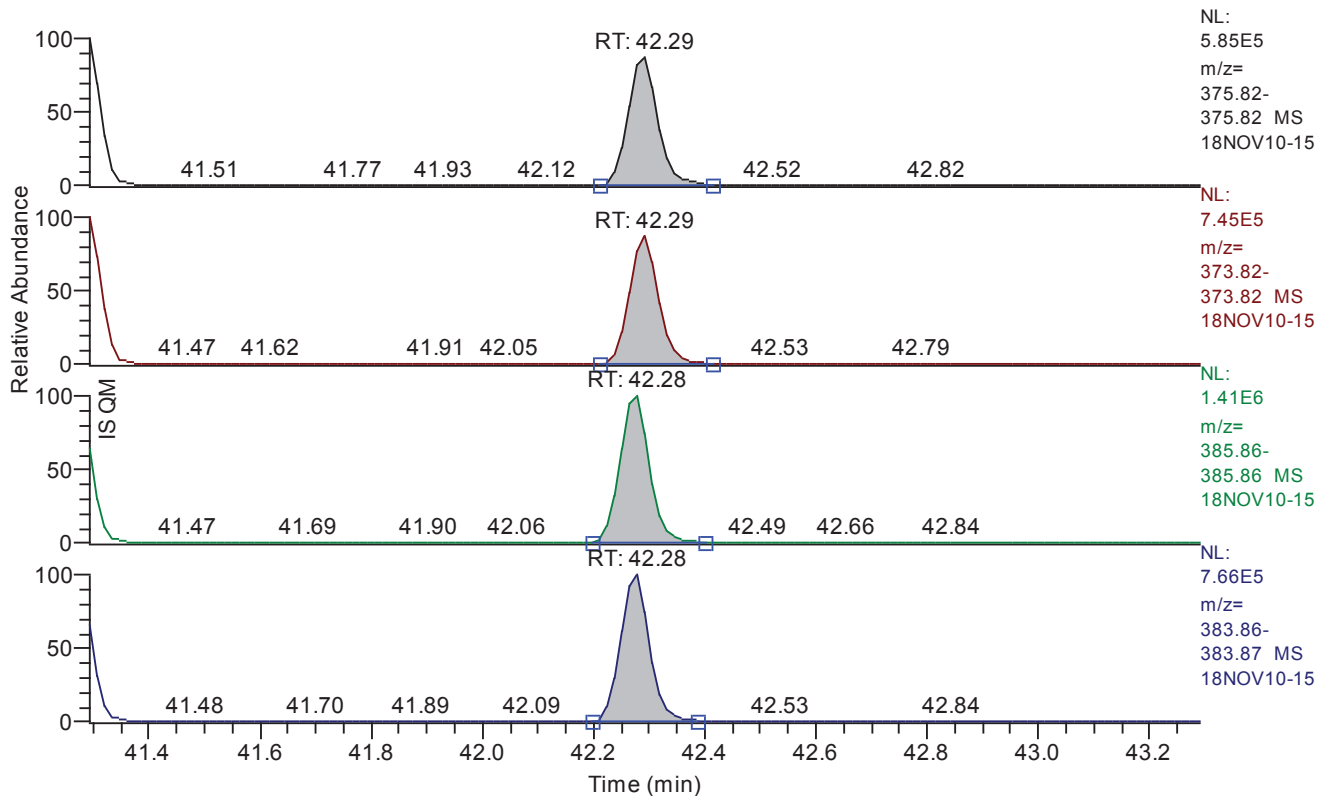


Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.91
QM Area	1458571
QM Integration Mode	A
RM1 Area	1830248
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0068
Unqualified Amount (A)	49.776330
Adjusted Amount (A)	49.7763
Signal-to-Noise	18319
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 41.29 - 43.29 SM: 3G

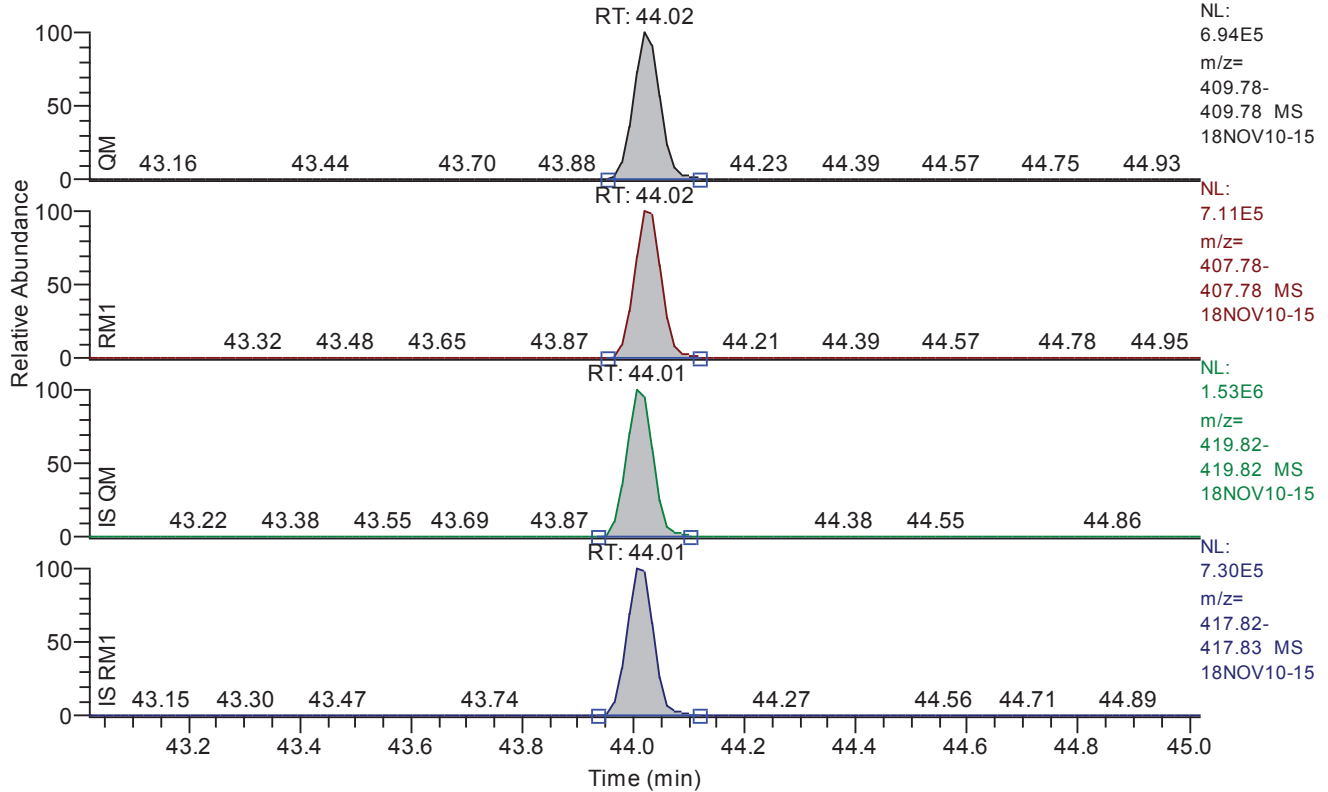


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.29
QM Area	1911444
QM Integration Mode	A
RM1 Area	2391526
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0126
Unqualified Amount (A)	50.261978
Adjusted Amount (A)	50.2620
Signal-to-Noise	9952
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 43.02 - 45.02 SM: 3G

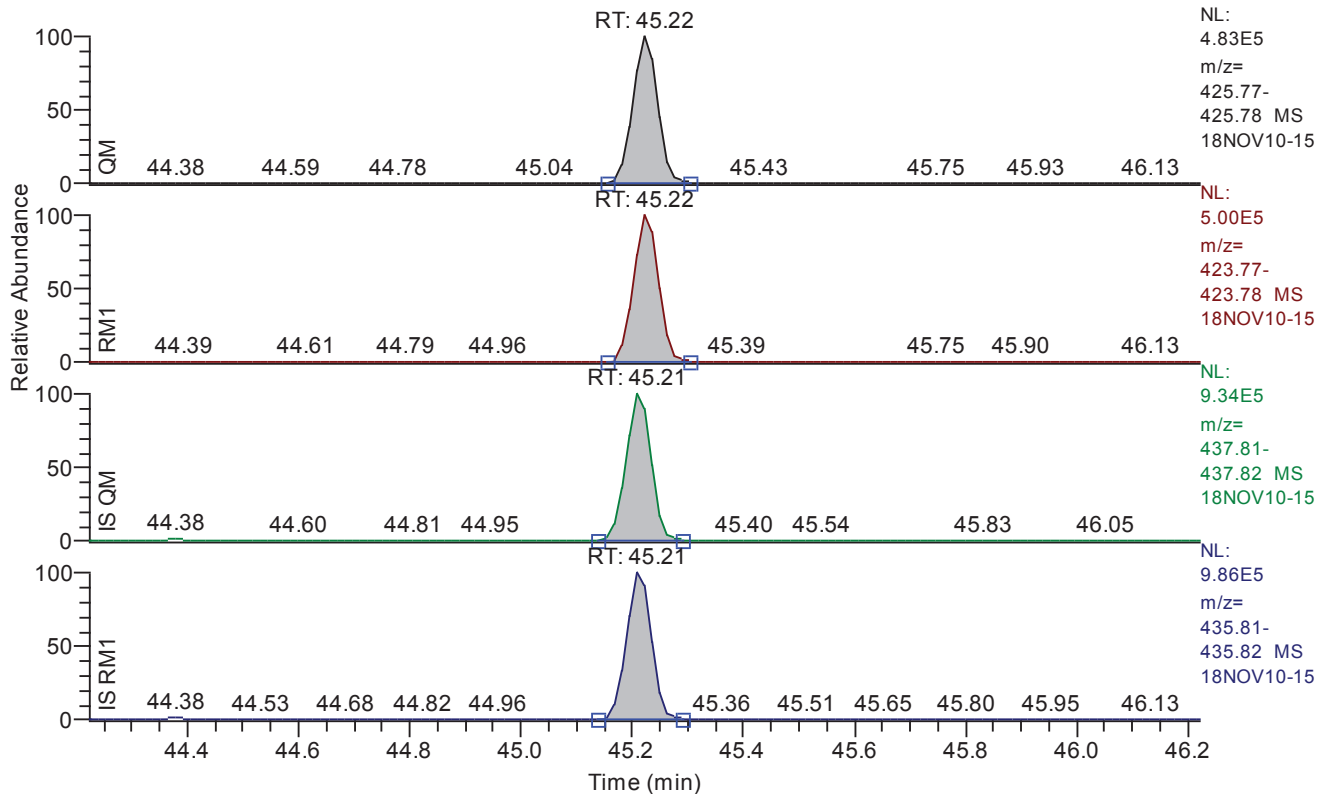


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.02
QM Area	2364367
QM Integration Mode	A
RM1 Area	2459287
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0109
Unqualified Amount (A)	52.289919
Adjusted Amount (A)	52.2899
Signal-to-Noise	11995
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.22 - 46.22 SM: 3G

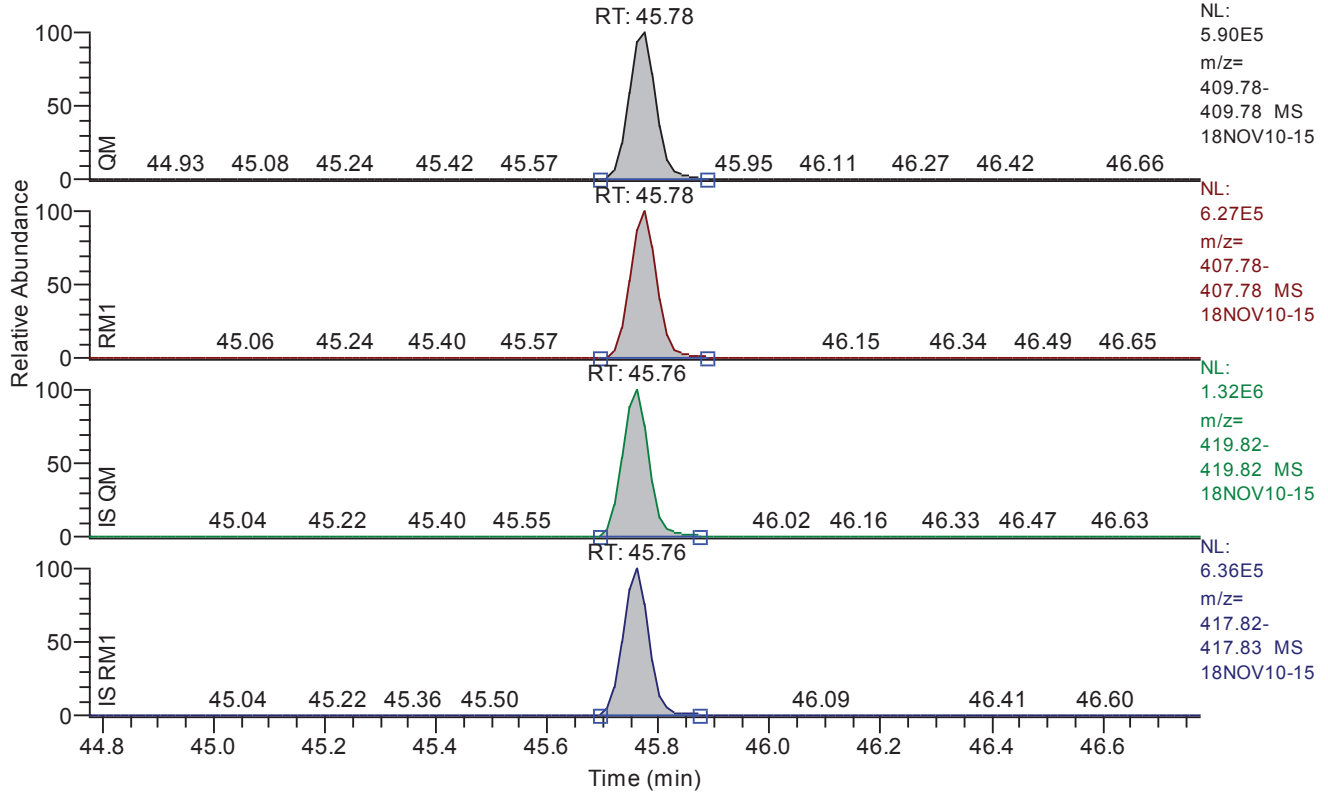


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.22
QM Area	1541012
QM Integration Mode	A
RM1 Area	1616339
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0104
Unqualified Amount (A)	49.900119
Adjusted Amount (A)	49.9001
Signal-to-Noise	12047
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.78 - 46.78 SM: 3G

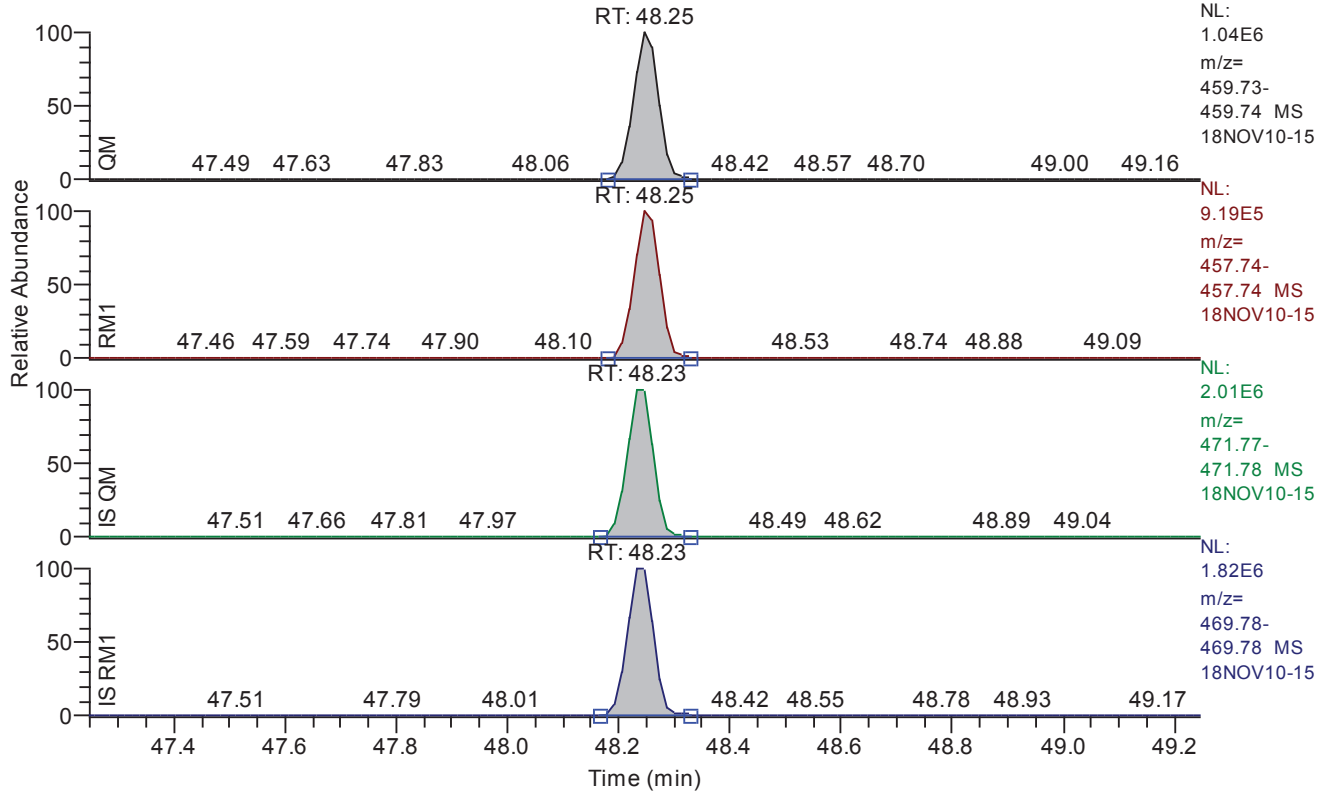


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.78
QM Area	2048846
QM Integration Mode	A
RM1 Area	2149747
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0122
Unqualified Amount (A)	51.626537
Adjusted Amount (A)	51.6265
Signal-to-Noise	10380
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.25 - 49.25 SM: 3G

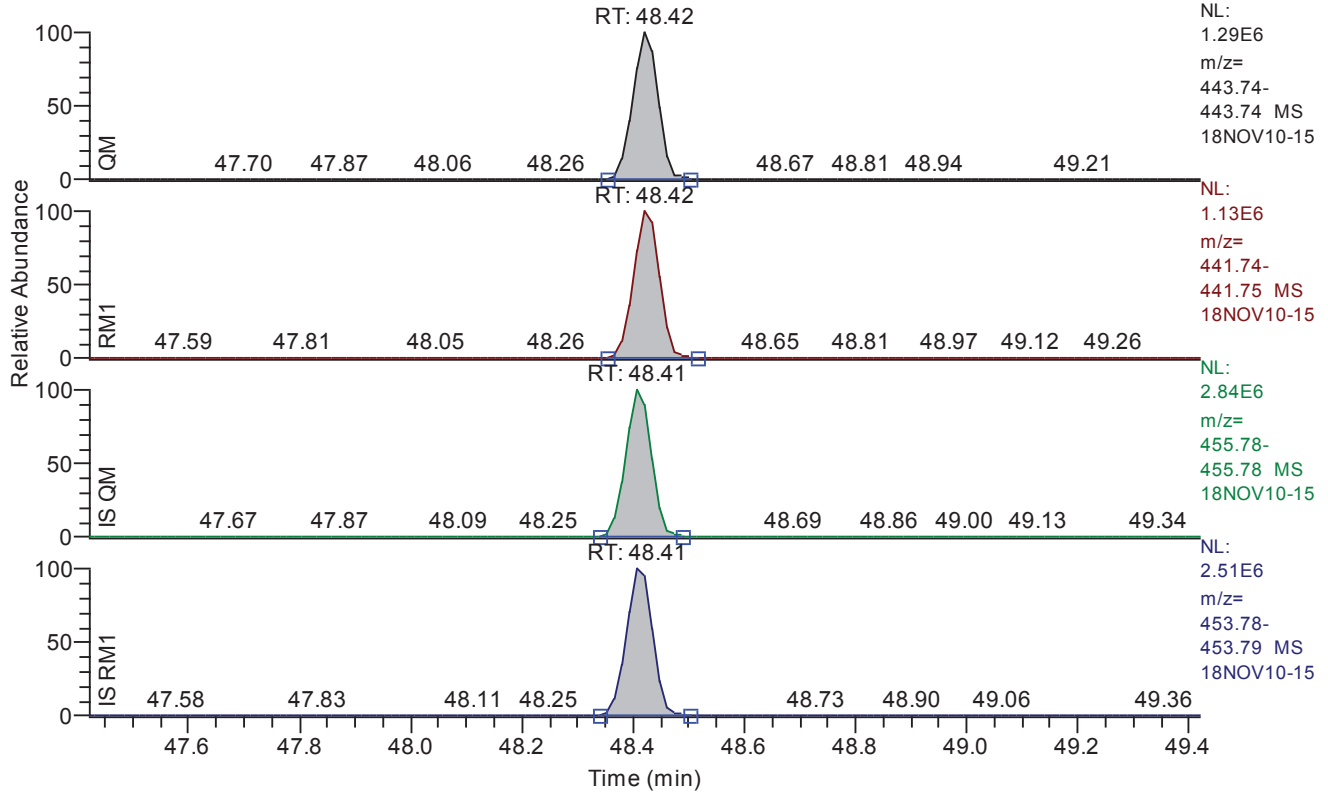


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.25
QM Area	3262345
QM Integration Mode	A
RM1 Area	2924525
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0079
Unqualified Amount (A)	100.432144
Adjusted Amount (A)	100.4321
Signal-to-Noise	32719
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.42 - 49.42 SM: 3G

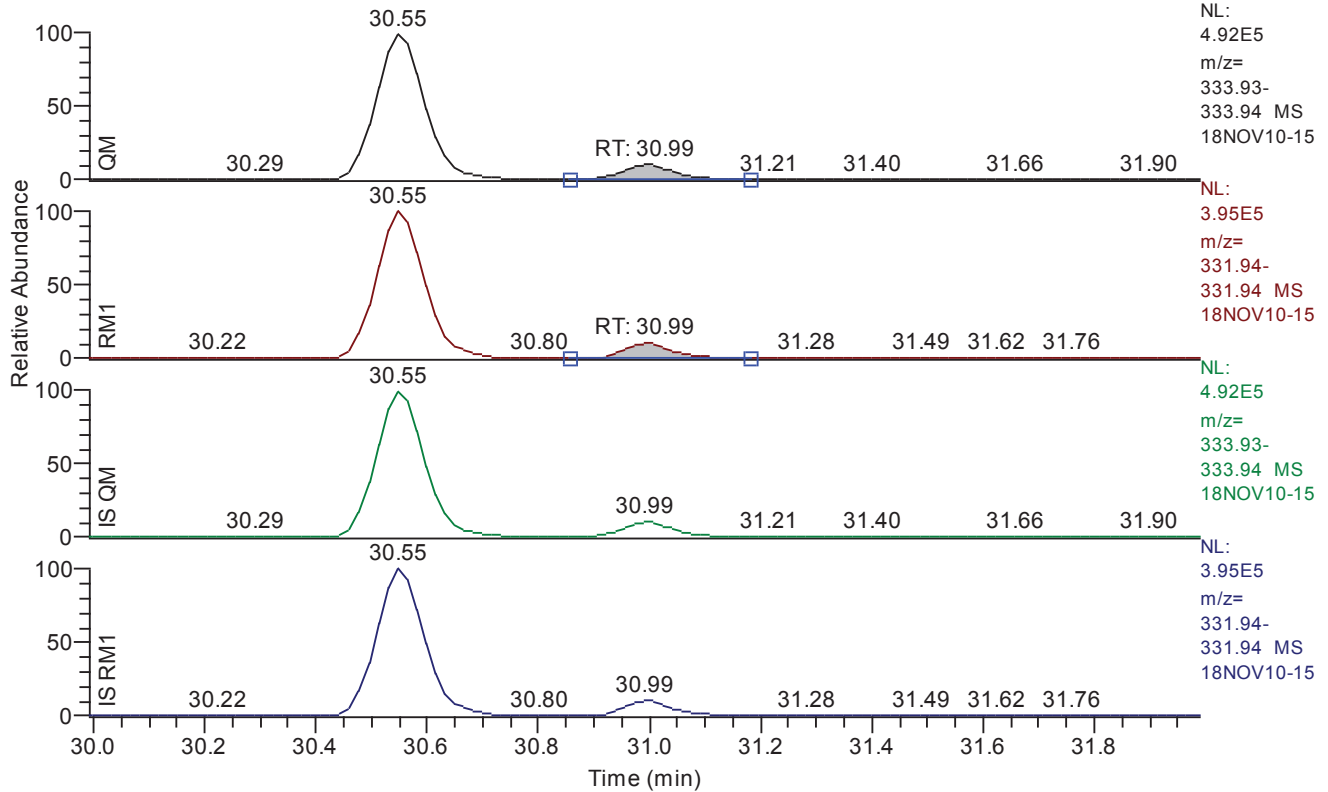


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.42
QM Area	4073993
QM Integration Mode	A
RM1 Area	3660093
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0061
Unqualified Amount (A)	103.528541
Adjusted Amount (A)	103.5285
Signal-to-Noise	42771
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.99 - 31.99 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	30.99
QM Area	321275
QM Integration Mode	A
RM1 Area	238955
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0116
Unqualified Amount (A)	10.541595
Adjusted Amount (A)	n.d.
Signal-to-Noise	2203
Client Flags	
Status Overview	failed
Status Info	Failed on: RF

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.40	29.40	29.40	29.38	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.58	30.58	30.58	30.55	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.47	35.47	35.47	35.43	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.74	36.74	36.74	36.73	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.16	37.16	37.16	37.13	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.45	40.45	40.45	40.43	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.59	40.59	40.59	40.58	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.28	41.28	41.30	41.27	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.48	41.48	41.48	41.47	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.60	41.60	41.60	41.59	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.91	41.91	41.91	41.90	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.29	42.29	42.29	42.28	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.02	44.02	44.02	44.01	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.22	45.22	45.22	45.21	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.78	45.78	45.78	45.76	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.25	48.25	48.25	48.23	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.42	48.42	48.42	48.41	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.99	30.99	30.99	30.99	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.71	29.71	29.71	29.71	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.35	40.35	40.35	40.35	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.38	29.38	29.38	29.62	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.55	30.55	30.55	30.55	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.43	35.43	35.43	35.43	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.73	36.73	36.73	36.78	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.13	37.13	37.13	37.13	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.43	40.43	40.43	40.51	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.58	40.58	40.58	40.55	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.27	41.27	41.27	41.35	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.47	41.47	41.47	41.47	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.59	41.59	41.59	41.59	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.90	41.90	41.90	41.90	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.28	42.28	42.28	42.18	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.01	44.01	44.01	44.01	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.21	45.21	45.21	45.21	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.76	45.76	45.76	45.71	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.23	48.23	48.23	48.23	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.41	48.41	48.41	48.23	passed	passed

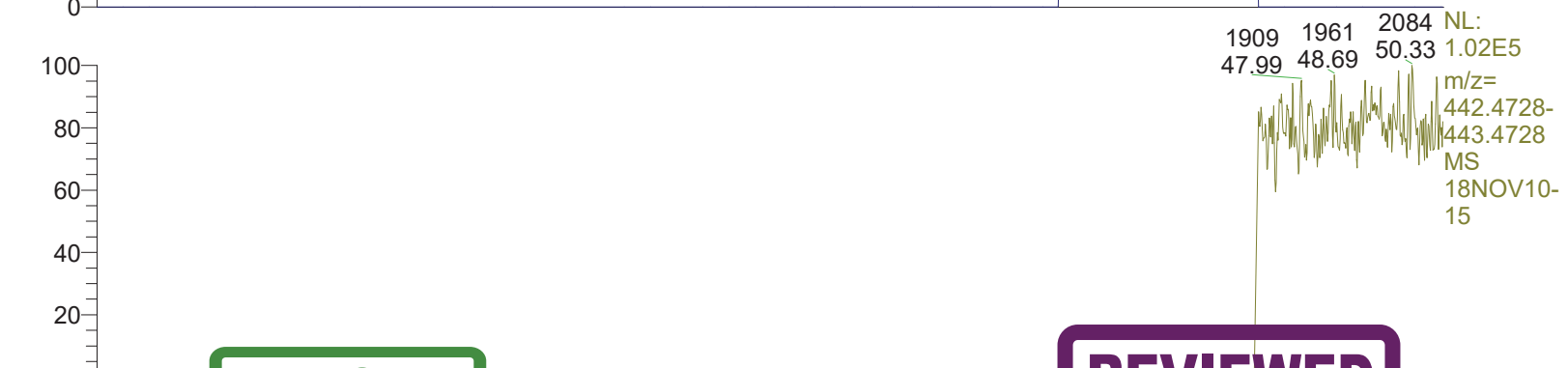
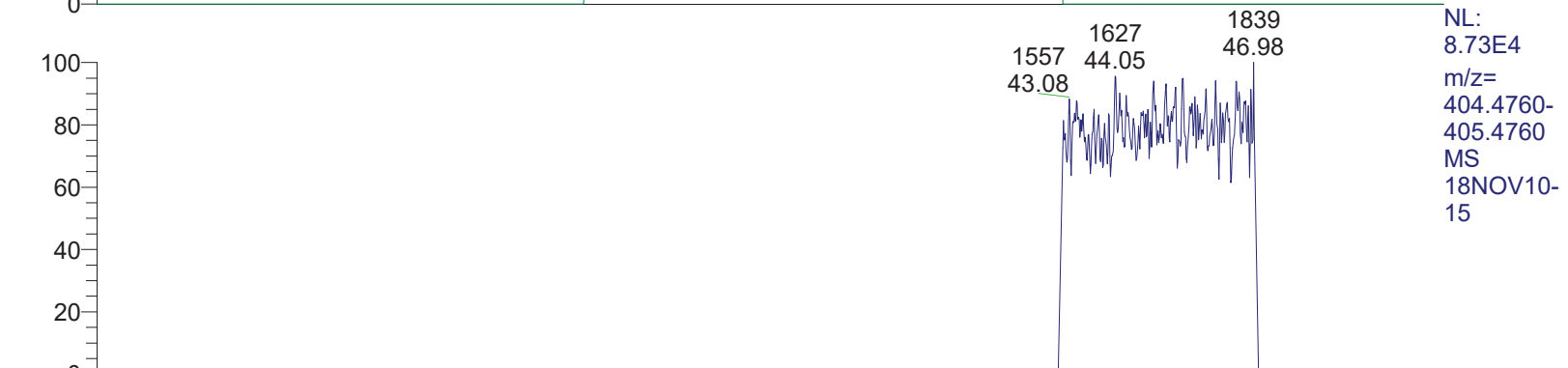
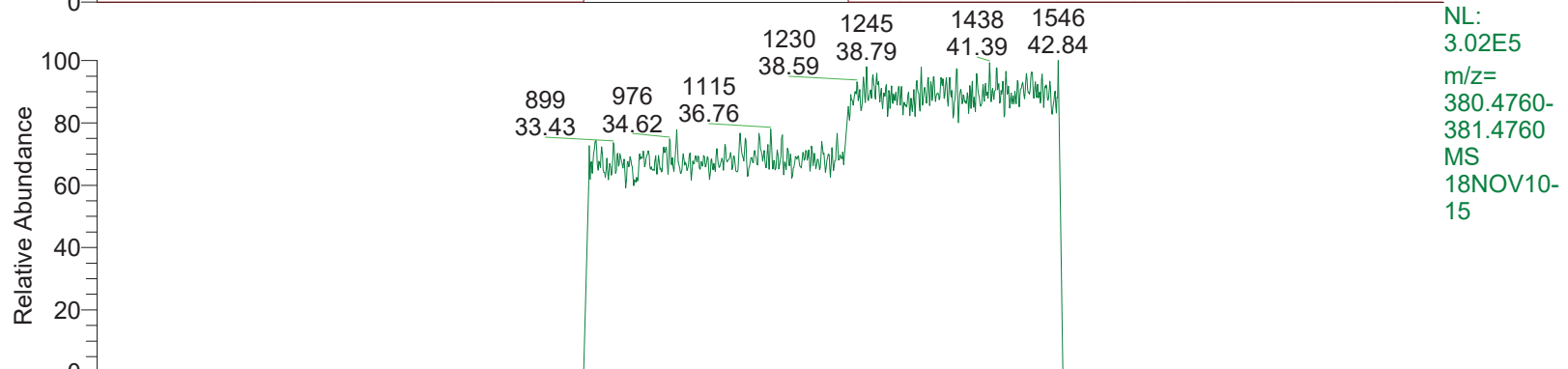
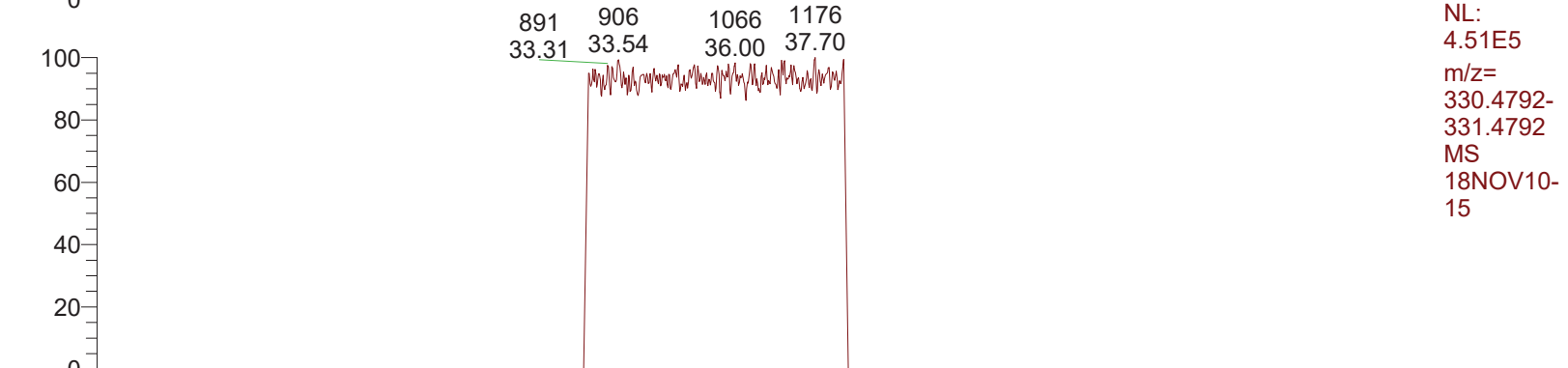
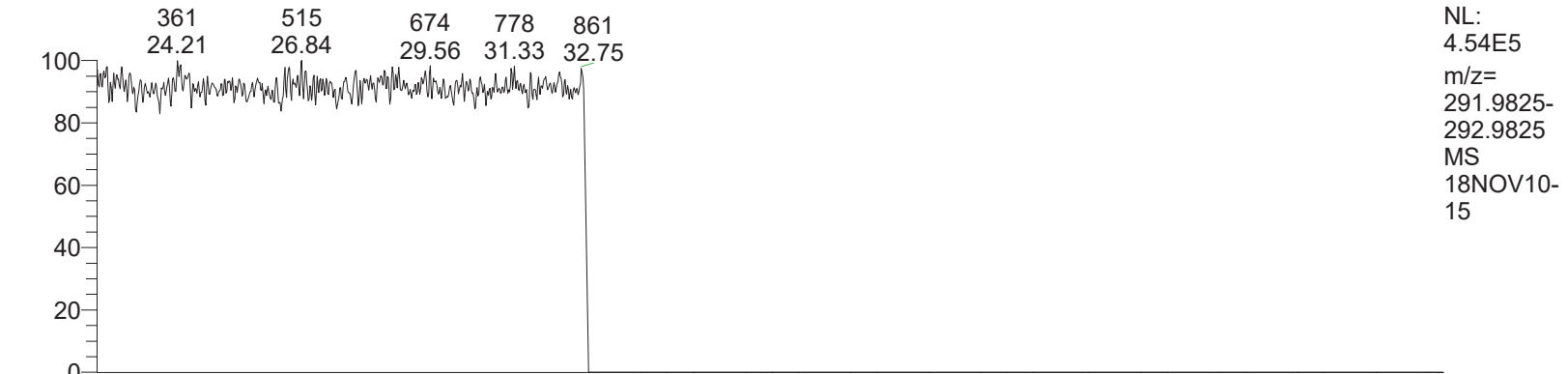
Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Calculated RF (A)	Response File RF (A)	RF Limit	RF Status
1	2378-TCDF	29.40	0.7785	0.6450 - 0.8950	passed	1.0275	1.0514	0.9604 - 1.4556	passed
2	2378-TCDD	30.58	0.8012	0.6450 - 0.8950	passed	1.2299	1.2502	1.0982 - 1.6646	passed
3	12378-PeCDF	35.47	1.5695	1.3150 - 1.7850	passed	0.9261	0.9371	0.8789 - 1.3321	passed
4	23478-PeCDF	36.74	1.5577	1.3150 - 1.7850	passed	1.0428	1.0504	0.9685 - 1.4681	passed
5	12378-PeCDD	37.16	1.5874	1.3150 - 1.7850	passed	0.9972	1.0016	0.9173 - 1.3903	passed
6	123478-HxCDF	40.45	1.2460	1.0450 - 1.4350	passed	1.1395	1.1137	0.9988 - 1.5138	passed
7	123678-HxCDF	40.59	1.2544	1.0450 - 1.4350	passed	1.1038	1.0735	0.9563 - 1.4495	passed
8	234678-HxCDF	41.28	1.2507	1.0450 - 1.4350	passed	1.1849	1.1494	1.0204 - 1.5466	passed
9	123478-HxCDD	41.48	1.2926	1.0450 - 1.4350	passed	1.0031	1.0123	0.9181 - 1.3915	passed
10	123678-HxCDD	41.60	1.2228	1.0450 - 1.4350	passed	0.9857	1.0027	0.9053 - 1.3723	passed
11	123789-HxCDD	41.91	1.2548	1.0450 - 1.4350	passed	1.0481	1.0528	0.9606 - 1.4560	passed
12	123789-HxCDF	42.29	1.2512	1.0450 - 1.4350	passed	1.0798	1.0742	0.9515 - 1.4421	passed
13	1234678-HpCDF	44.02	1.0401	0.8750 - 1.2050	passed	1.2397	1.1854	1.0778 - 1.6336	passed
14	1234678-HpCDD	45.22	1.0489	0.8750 - 1.2050	passed	1.0174	1.0194	0.9502 - 1.4402	passed
15	1234789-HpCDF	45.78	1.0492	0.8750 - 1.2050	passed	1.2716	1.2316	1.1050 - 1.6748	passed
16	OCDD	48.25	0.8964	0.7550 - 1.0250	passed	0.9904	0.9861	0.8908 - 1.3502	passed
17	OCDF	48.42	0.8984	0.7550 - 1.0250	passed	0.8928	0.8624	0.7890 - 1.1958	passed
18	13C12-1278-TCDD (CRS)	30.99	0.7438	0.6450 - 0.8950	passed	0.1101	1.0443	0.7083 - 1.3301	failed
19	13C12-1234-TCDD	29.71	0.8038	0.6450 - 0.8950	passed	1.0000	1.0000	1.0000 - 1.0000	passed
20	13C12-123468-HxCDD	40.35	1.2710	1.0450 - 1.4350	passed	1.0000	1.0000	1.0000 - 1.0000	passed
21	13C12-2378-TCDF	29.38	0.8048	0.6450 - 0.8950	passed	2.0653	2.0369	1.6559 - 3.1093	passed
22	13C12-2378-TCDD	30.55	0.7999	0.6450 - 0.8950	passed	1.0463	1.0064	0.6937 - 1.3027	passed
23	13C12-12378-PeCDF	35.43	1.5767	1.3150 - 1.7850	passed	1.8794	1.9264	1.5155 - 2.8457	passed
24	13C12-23478-PeCDF	36.73	1.5885	1.3150 - 1.7850	passed	1.8715	1.9205	1.5317 - 2.8761	passed
25	13C12-12378-PeCDD	37.13	1.5819	1.3150 - 1.7850	passed	1.0656	1.0387	0.6937 - 1.3025	passed
26	13C12-123478-HxCDF	40.43	0.5424	0.4250 - 0.5950	passed	1.4114	1.4468	1.1993 - 2.2519	passed
27	13C12-123678-HxCDF	40.58	0.5342	0.4250 - 0.5950	passed	1.4815	1.5461	1.2787 - 2.4011	passed
28	13C12-234678-HxCDF	41.27	0.5409	0.4250 - 0.5950	passed	1.3579	1.4140	1.1620 - 2.1818	passed
29	13C12-123478-HxCDD	41.47	1.2718	1.0450 - 1.4350	passed	1.0427	0.9987	0.6941 - 1.3033	passed
30	13C12-123678-HxCDD	41.59	1.2473	1.0450 - 1.4350	passed	1.0819	1.0370	0.7190 - 1.3500	passed
31	13C12-123789-HxCDD	41.90	1.2518	1.0450 - 1.4350	passed	1.0354	0.9789	0.6747 - 1.2669	passed
32	13C12-123789-HxCDF	42.28	0.5351	0.4250 - 0.5950	passed	1.3149	1.3137	1.0701 - 2.0093	passed
33	13C12-1234678-HpCDF	44.01	0.4794	0.3650 - 0.5150	passed	1.2839	1.3169	1.0489 - 1.9695	passed
34	13C12-1234678-HpCDD	45.21	1.0534	0.8750 - 1.2050	passed	1.0240	0.9723	0.6249 - 1.1733	passed
35	13C12-1234789-HpCDF	45.76	0.4696	0.3650 - 0.5150	passed	1.0894	1.1060	0.8481 - 1.5925	passed
36	13C12-OCDD	48.23	0.9120	0.7550 - 1.0250	passed	1.0306	1.0280	0.6744 - 1.2662	passed
37	13C12-OCDF	48.41	0.9036	0.7550 - 1.0250	passed	1.4292	1.5078	1.1379 - 2.1367	passed

Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.40	607220	A	472710	A	0.0070	9.772946	9.7729	10.000000	3280	
2	2378-TCDD	passed	30.58	363574	A	291295	A	0.0067	9.837882	9.8379	10.000000	3617	
3	12378-PeCDF	passed	35.47	1723594	A	2705156	A	0.0055	49.410787	49.4108	50.000000	22268	
4	23478-PeCDF	passed	36.74	1941483	A	3024341	A	0.0047	49.636835	49.6368	50.000000	27220	
5	12378-PeCDD	passed	37.16	1044924	A	1658758	A	0.0104	49.776087	49.7761	50.000000	11895	
6	123478-HxCDF	passed	40.45	2170249	A	2704093	A	0.0115	51.161530	51.1615	50.000000	11462	
7	123678-HxCDF	passed	40.59	2198325	A	2757655	A	0.0115	51.409331	51.4093	50.000000	11269	
8	234678-HxCDF	passed	41.28	2166531	A	2709620	A	0.0109	51.542902	51.5429	50.000000	11460	
9	123478-HxCDD	passed	41.48	1382638	A	1787193	A	0.0069	49.547884	49.5479	50.000000	17629	
10	123678-HxCDD	passed	41.60	1454089	A	1778023	A	0.0071	49.151601	49.1516	50.000000	17501	
11	123789-HxCDD	passed	41.91	1458571	A	1830248	A	0.0068	49.776330	49.7763	50.000000	18319	
12	123789-HxCDF	passed	42.29	1911444	A	2391526	A	0.0126	50.261978	50.2620	50.000000	9952	
13	1234678-HpCDF	passed	44.02	2364367	A	2459287	A	0.0109	52.289919	52.2899	50.000000	11995	
14	1234678-HpCDD	passed	45.22	1541012	A	1616339	A	0.0104	49.900119	49.9001	50.000000	12047	
15	1234789-HpCDF	passed	45.78	2048846	A	2149747	A	0.0122	51.626537	51.6265	50.000000	10380	
16	OCDD	passed	48.25	3262345	A	2924525	A	0.0079	100.432144	100.4321	100.000000	32719	
17	OCDF	passed	48.42	4073993	A	3660093	A	0.0061	103.528541	103.5285	100.000000	42771	
18	13C12-1278-TCDD (CRS)	failed	30.99	321275	A	238955	A	0.0116	10.541595	n.d.	100.000000	2203	
19	13C12-1234-TCDD	passed	29.71	2821286	A	2267723	A	0.0122	100.000000	100.0000	100.000000	20556	
20	13C12-123468-HxCDD	passed	40.35	2669047	A	3392304	A	0.0163	100.000000	100.0000	100.000000	15359	
21	13C12-2378-TCDF	passed	29.38	5823608	A	4686862	A	0.0091	101.396792	101.3968	100.000000	26373	
22	13C12-2378-TCDD	passed	30.55	2958261	A	2366336	A	0.0121	103.967430	103.9674	100.000000	22165	
23	13C12-12378-PeCDF	passed	35.43	3711870	A	5852585	A	0.0243	97.564268	97.5643	100.000000	13230	
24	13C12-23478-PeCDF	passed	36.73	3679232	A	5844617	A	0.0244	97.445801	97.4458	100.000000	13990	
25	13C12-12378-PeCDD	passed	37.13	2100284	A	3322496	A	0.0184	102.585583	102.5856	100.000000	19905	
26	13C12-123478-HxCDF	passed	40.43	5546484	A	3008448	A	0.0162	97.551182	97.5512	100.000000	14505	
27	13C12-123678-HxCDF	passed	40.58	5853090	A	3126985	A	0.0152	95.823089	95.8231	100.000000	15067	
28	13C12-234678-HxCDF	passed	41.27	5341579	A	2889168	A	0.0166	96.030992	96.0310	100.000000	14828	
29	13C12-123478-HxCDD	passed	41.47	2781915	A	3537971	A	0.0163	104.404220	104.4042	100.000000	17068	
30	13C12-123678-HxCDD	passed	41.59	2918108	A	3639748	A	0.0157	104.331812	104.3318	100.000000	16737	
31	13C12-123789-HxCDD	passed	41.90	2787065	A	3488729	A	0.0166	105.771625	105.7716	100.000000	16793	
32	13C12-123789-HxCDF	passed	42.28	5191694	A	2778097	A	0.0179	100.090331	100.0903	100.000000	13787	
33	13C12-1234678-HpCDF	passed	44.01	5260342	A	2521597	A	0.0168	97.492094	97.4921	100.000000	15247	
34	13C12-1234678-HpCDD	passed	45.21	3022597	A	3184119	A	0.0161	105.311884	105.3119	100.000000	18274	
35	13C12-1234789-HpCDF	passed	45.76	4493296	A	2110226	A	0.0200	98.501190	98.5012	100.000000	13167	
36	13C12-OCDD	passed	48.23	6534455	A	5959210	A	0.0082	200.497032	200.4970	200.000000	67606	
37	13C12-OCDF	passed	48.41	9101248	A	8224303	A	0.0074	189.575449	189.5754	200.000000	71469	

RT: 22.50 - 51.00



APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:42 pm, 11/13/18

Time (min)

18NOV10-15

*** file opened Sat Nov 10 06:42:41 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 06:42:40

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1				
mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47
Window # 2				
mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



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331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes

Page 2



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MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	98.5000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0075	FVINLET	0.0381	FVSR	0.0368
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	98.5000	LKM	442.9723	MASS	98.5000
MDAC	1435656.4809	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2159.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9827	RELEN	0.0000
RES	12602.0106	RPUSHER	-6.1026	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	98.5000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.5e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11465.
MID Time window 2: Resolution is 11644.
MID Time window 3: Resolution is 11513.
MID Time window 4: Resolution is 12026.



18NOV10-15

MID Time Window 5: Resolution is 12536.
MID Time Window 6: Resolution is 12602.

Amplifier Offset: 81.

*** File closed Sat Nov 10 07:33:42 2018



Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/10 18:16
Number of Entries	62
Comment	
Vial	6
Sample Name	VER-CALDF41837G
Sample ID	CS3CC04
Inst ID	DF17611-18NOV10
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

Quan	x:\18nov10\18nov10-28.quan
Data	x:\18nov10\18nov10-28.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Average RF
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.54	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.70	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.54	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.81	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.22	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.49	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.64	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.32	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.52	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.65	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.96	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.32	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	44.06	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.25	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.80	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.28	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.44	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	31.11	failed	passed	passed	passed	passed	passed	Failed on: RF
19	13C12-1234-TCDD	29.83	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.39	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.50	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.67	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.51	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.79	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.21	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.47	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.62	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.31	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.51	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.63	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.94	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.31	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	44.05	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.24	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.79	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.26	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.44	passed	passed	passed	passed	passed	passed	passed

Quantitation Settings**Data File Parameter**

Acq. Data	2018/11/10 18:16
Number of Entries	62
Comment	
Vial	6
Sample Name	VER-CALDF41837G
Sample ID	CS3CC04
Inst ID	DF17611-18NOV10
Client	
Analyst	maz02012
GC Column	DB5MS 60 M x 0.25um x 0.25mm
BatchNo	
Barcode	

Files Parameter

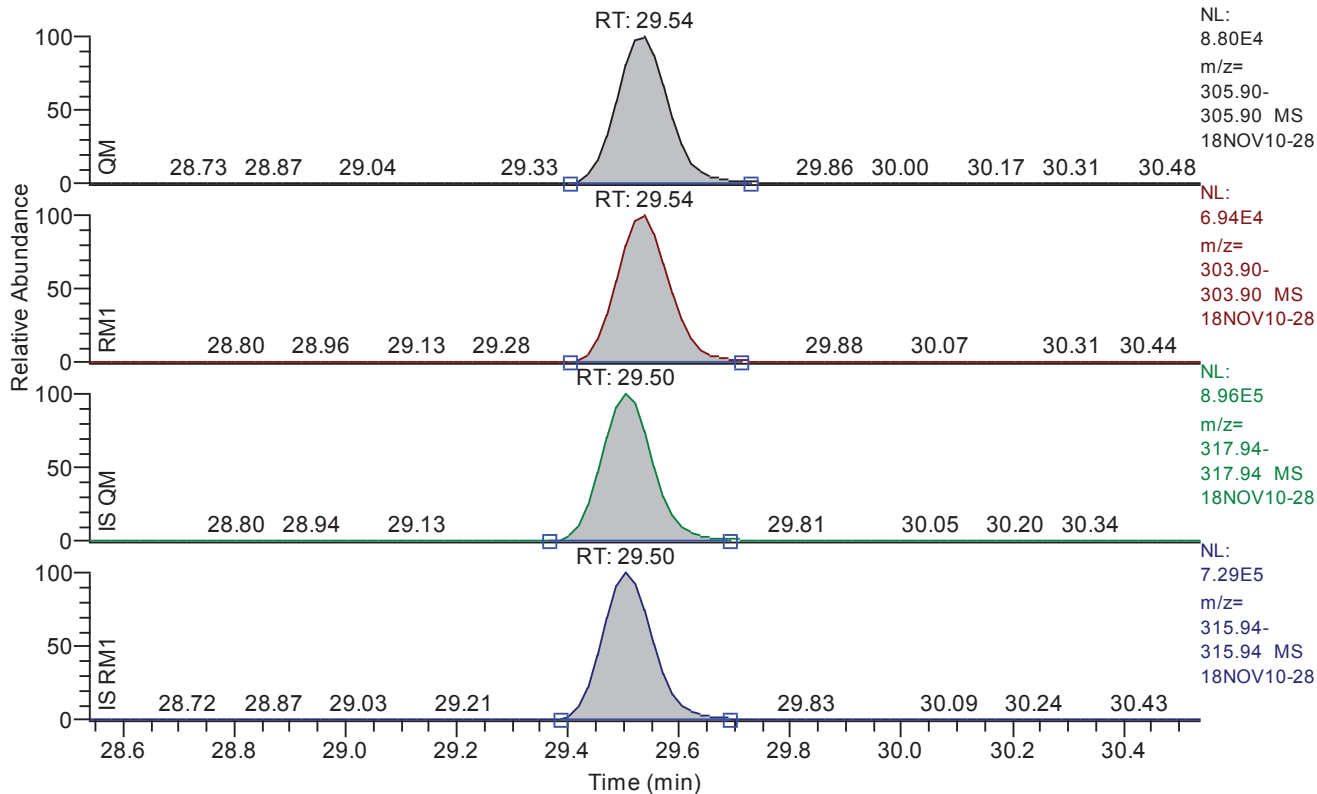
Quan	x:\18nov10\18nov10-28.quan
Data	x:\18nov10\18nov10-28.raw
Response	x:\responsefiles\df17611-18nov02dfical.resp
Script	C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref	

Quan Parameter

QualBrowser Compatibility	Compatibility off
Sum Area/Height	Sum QM RM1
Quantitation Status	Dependent on Area
Injection Volume [hIJV]	1.0
Sample Volume [hSV]	1.0
Sample Weight [hSWT]	1.0
Dilution Factor [hDF]	1.0
Det. Limit Factor [hDLF]	2.5
Response Factor Mode	Average RF
Fit Calc. Mode	Linear Fit
Regression Mode	Non weighted Regression
Weighted Regression Factor	1.0

Chromatogram

RT: 28.54 - 30.54 SM: 3G

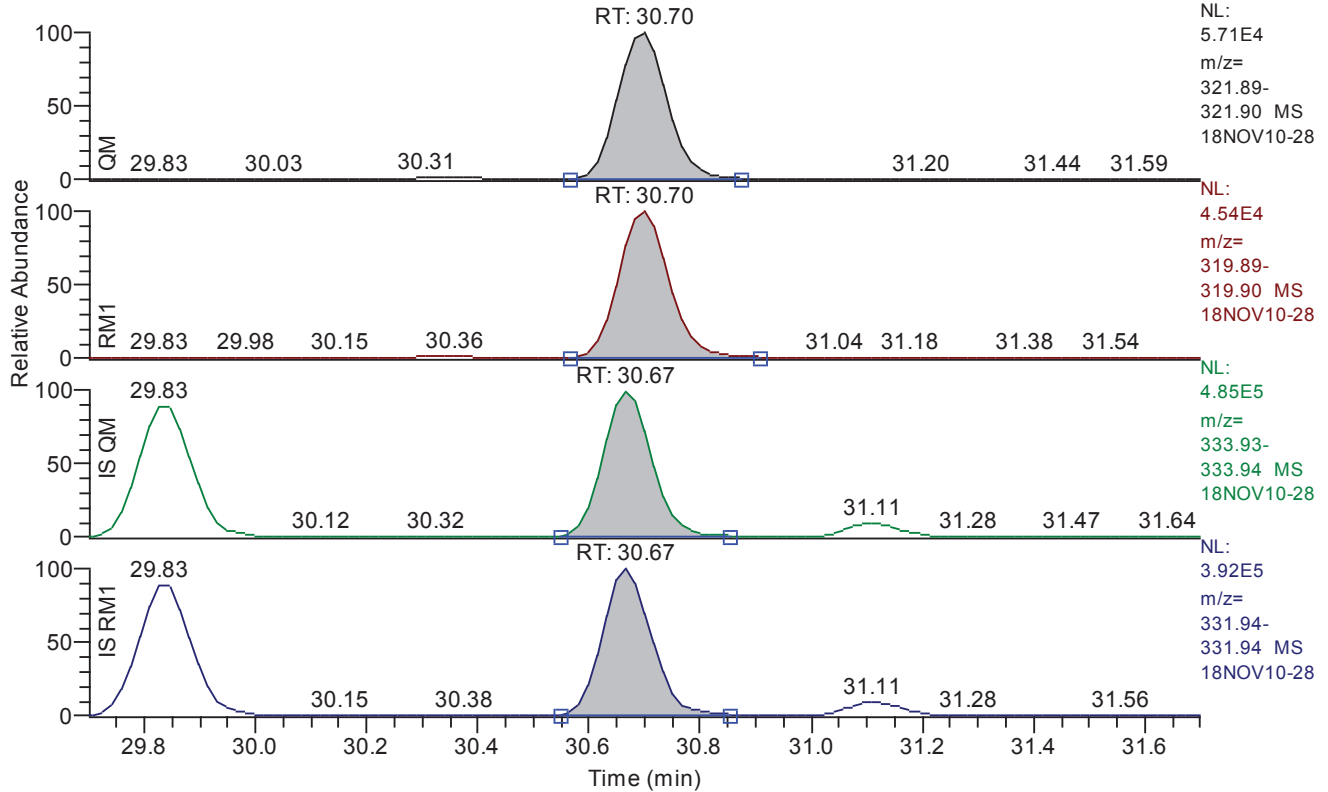


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.54
QM Area	582911
QM Integration Mode	A
RM1 Area	460702
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0053
Unqualified Amount (A)	9.395630
Adjusted Amount (A)	9.3956
Signal-to-Noise	4328
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.70 - 31.70 SM: 3G

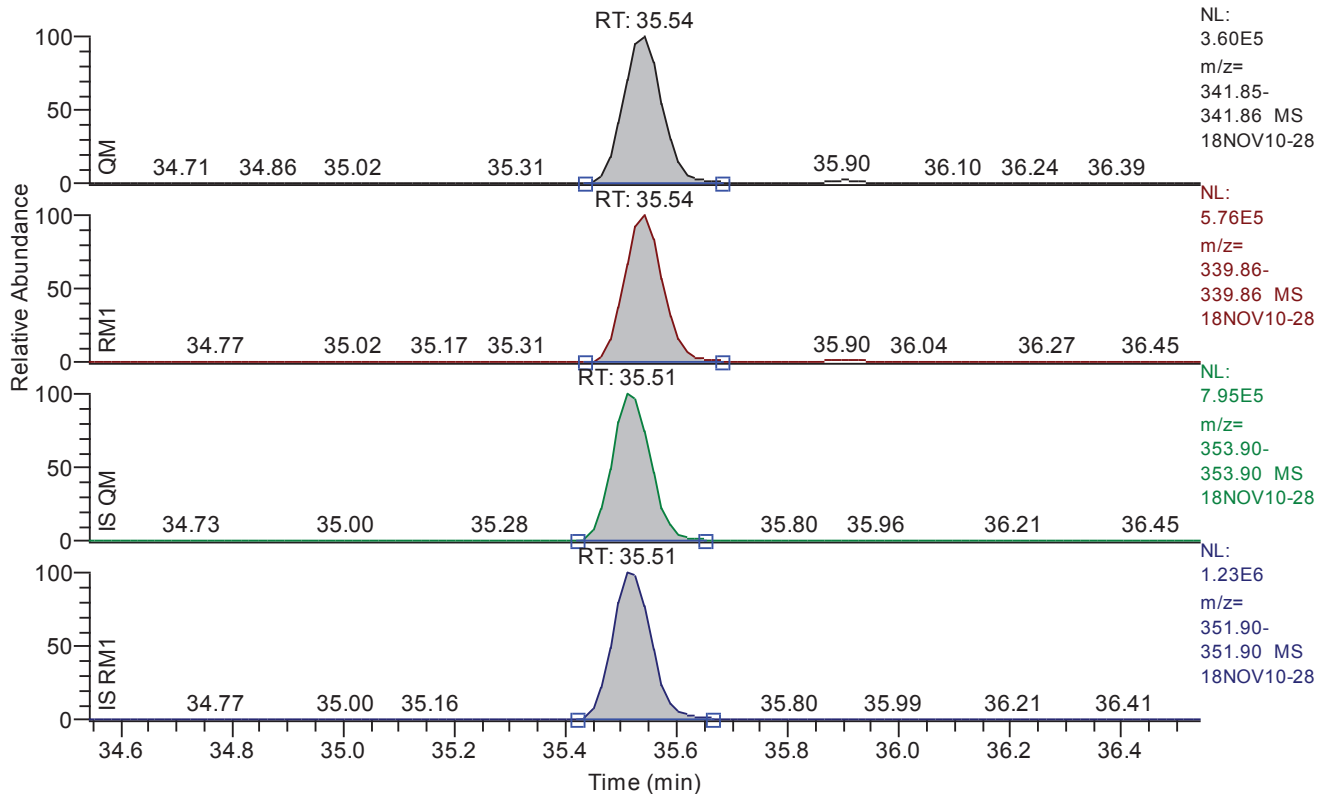


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.70
QM Area	359117
QM Integration Mode	A
RM1 Area	292118
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0046
Unqualified Amount (A)	9.654716
Adjusted Amount (A)	9.6547
Signal-to-Noise	5069
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.54 - 36.54 SM: 3G

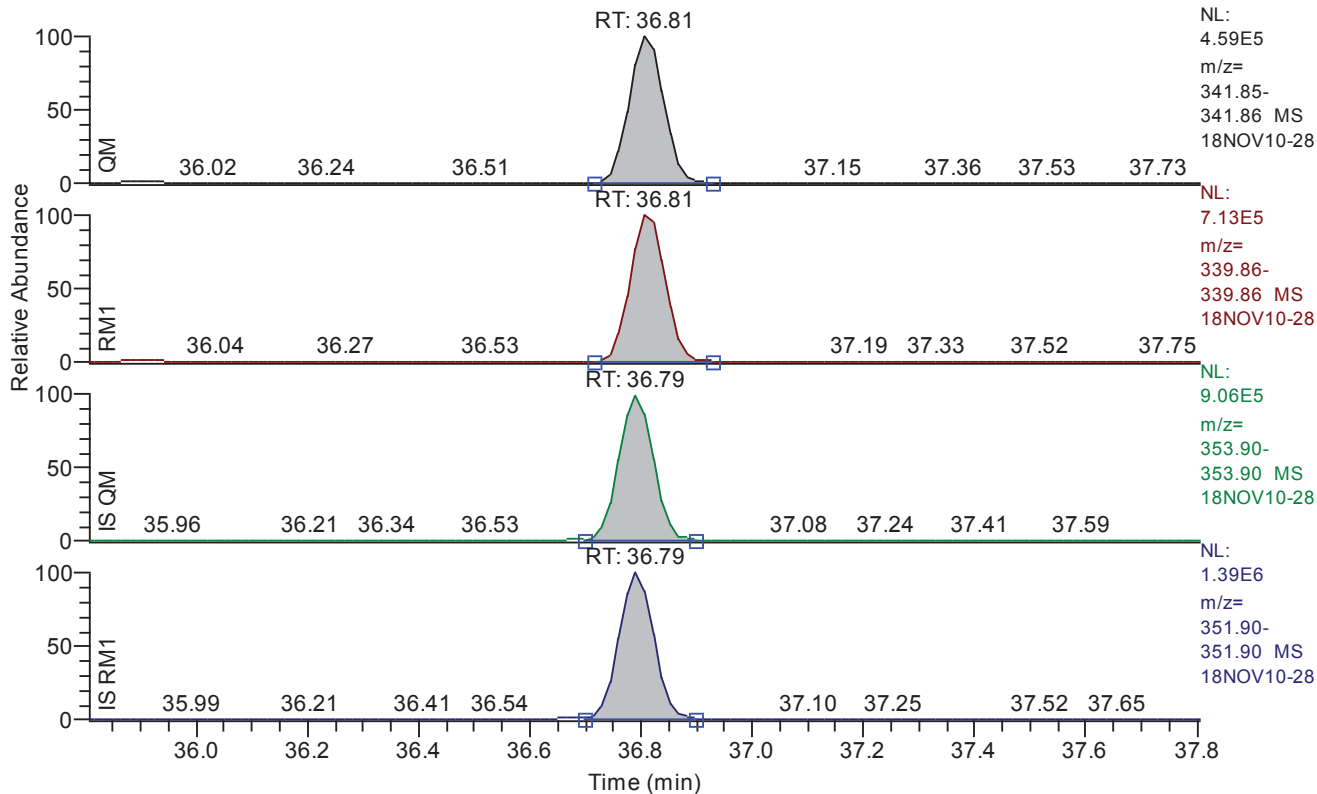


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.54
QM Area	1753260
QM Integration Mode	A
RM1 Area	2771909
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0050
Unqualified Amount (A)	48.709292
Adjusted Amount (A)	48.7093
Signal-to-Noise	24365
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.81 - 37.81 SM: 3G

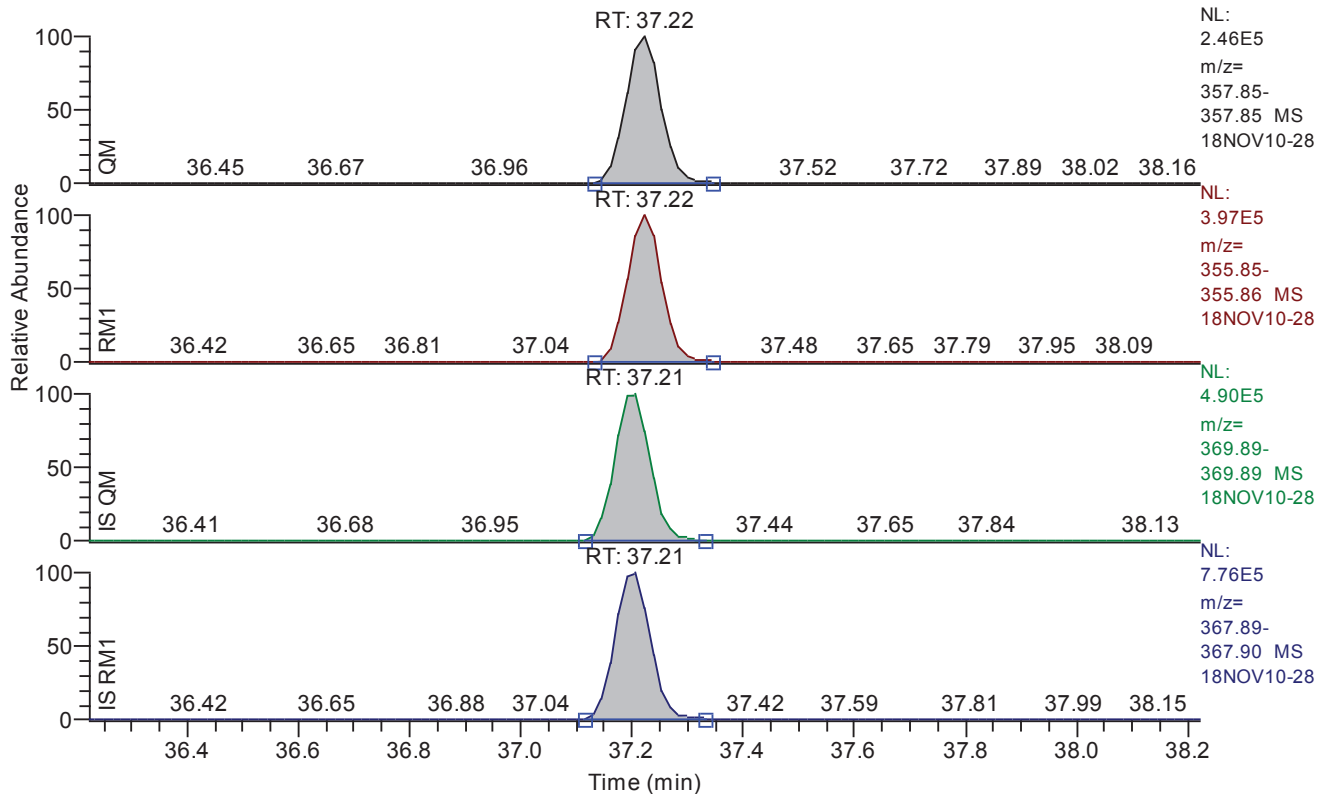


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.81
QM Area	1998718
QM Integration Mode	A
RM1 Area	3140724
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0040
Unqualified Amount (A)	49.437045
Adjusted Amount (A)	49.4370
Signal-to-Noise	30505
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.22 - 38.22 SM: 3G

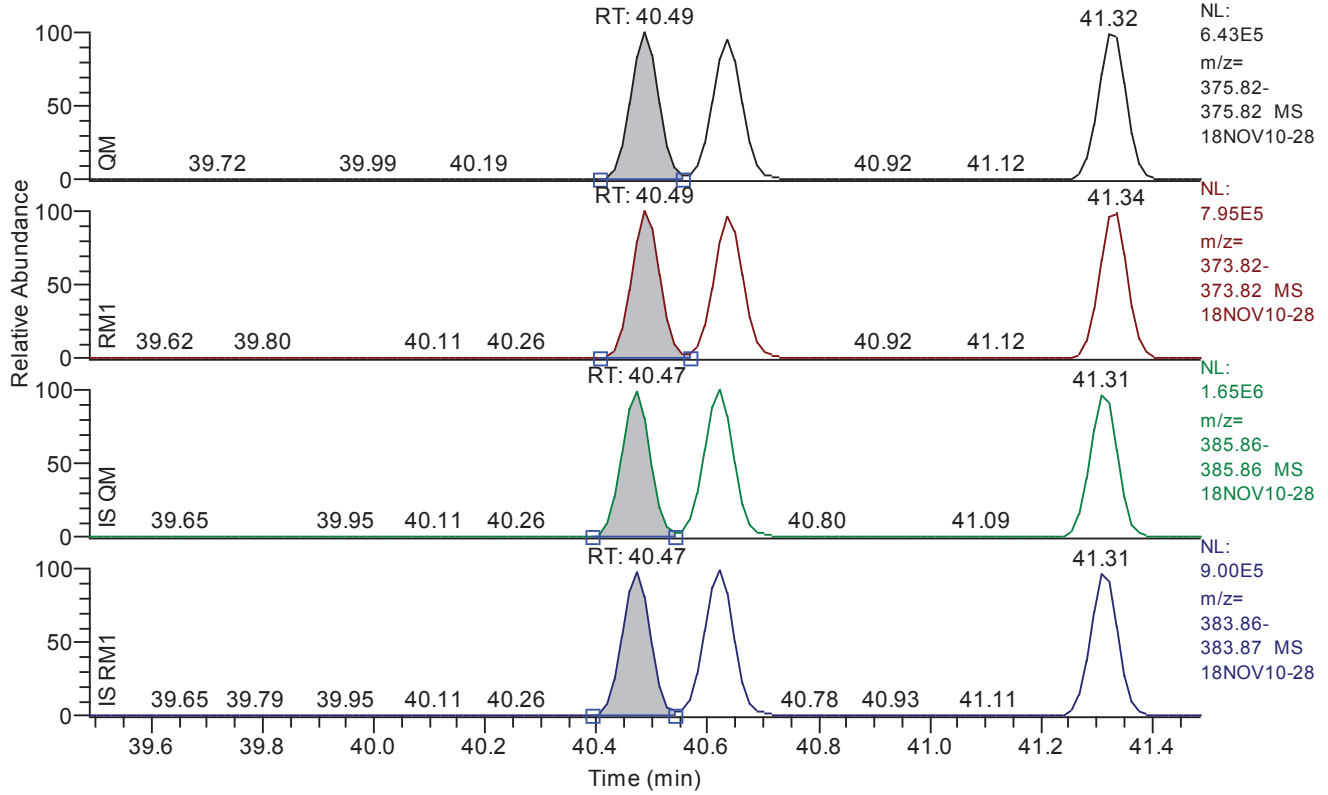


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.22
QM Area	1086870
QM Integration Mode	A
RM1 Area	1723977
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0087
Unqualified Amount (A)	49.525637
Adjusted Amount (A)	49.5256
Signal-to-Noise	14595
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.49 - 41.49 SM: 3G

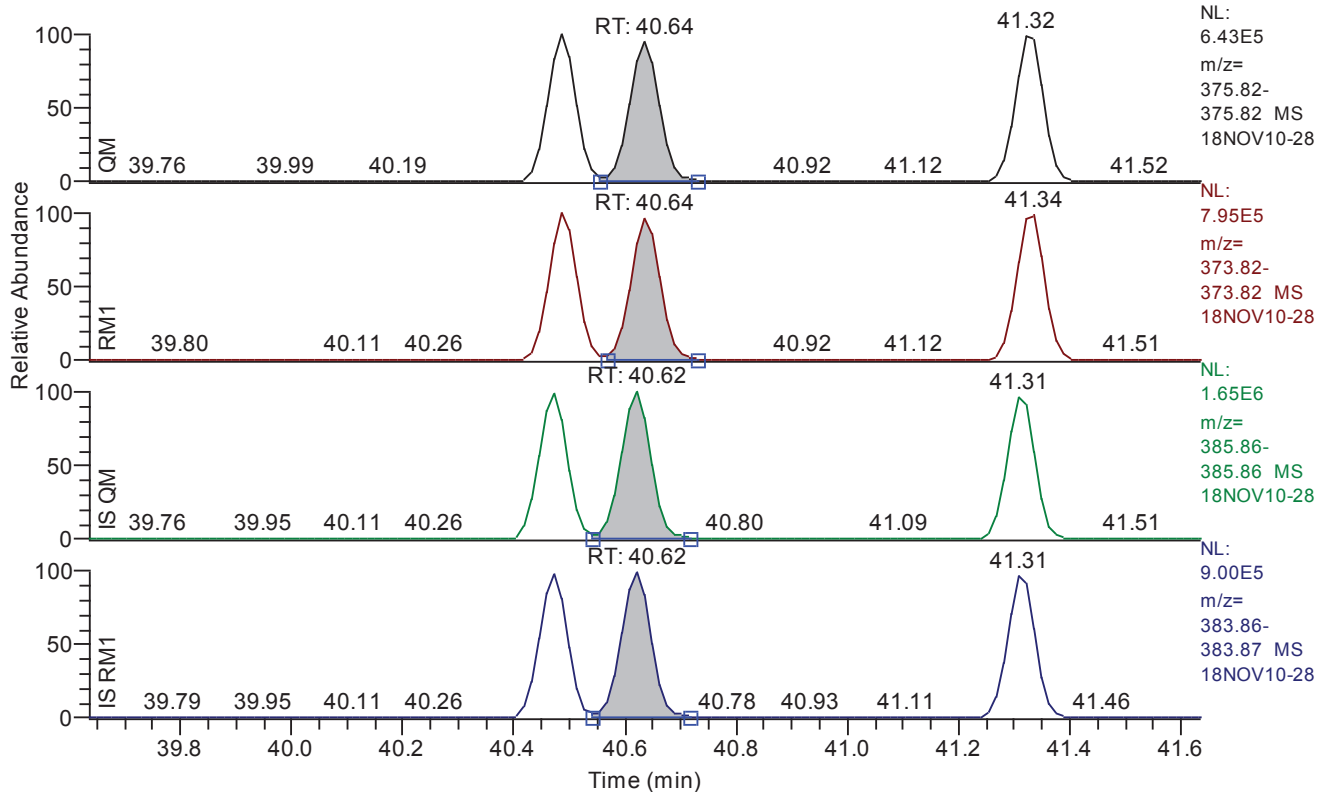


Entry Parameters

Compound Name 123478-HxCDF
 QM Retention Time 40.49
 QM Area 2258638
 QM Integration Mode A
 RM1 Area 2809767
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.0110
 Unqualified Amount (A) 51.028235
 Adjusted Amount (A) 51.0282
 Signal-to-Noise 11598
 Client Flags
 Status Overview passed
 Status Info

Chromatogram

RT: 39.64 - 41.64 SM: 3G

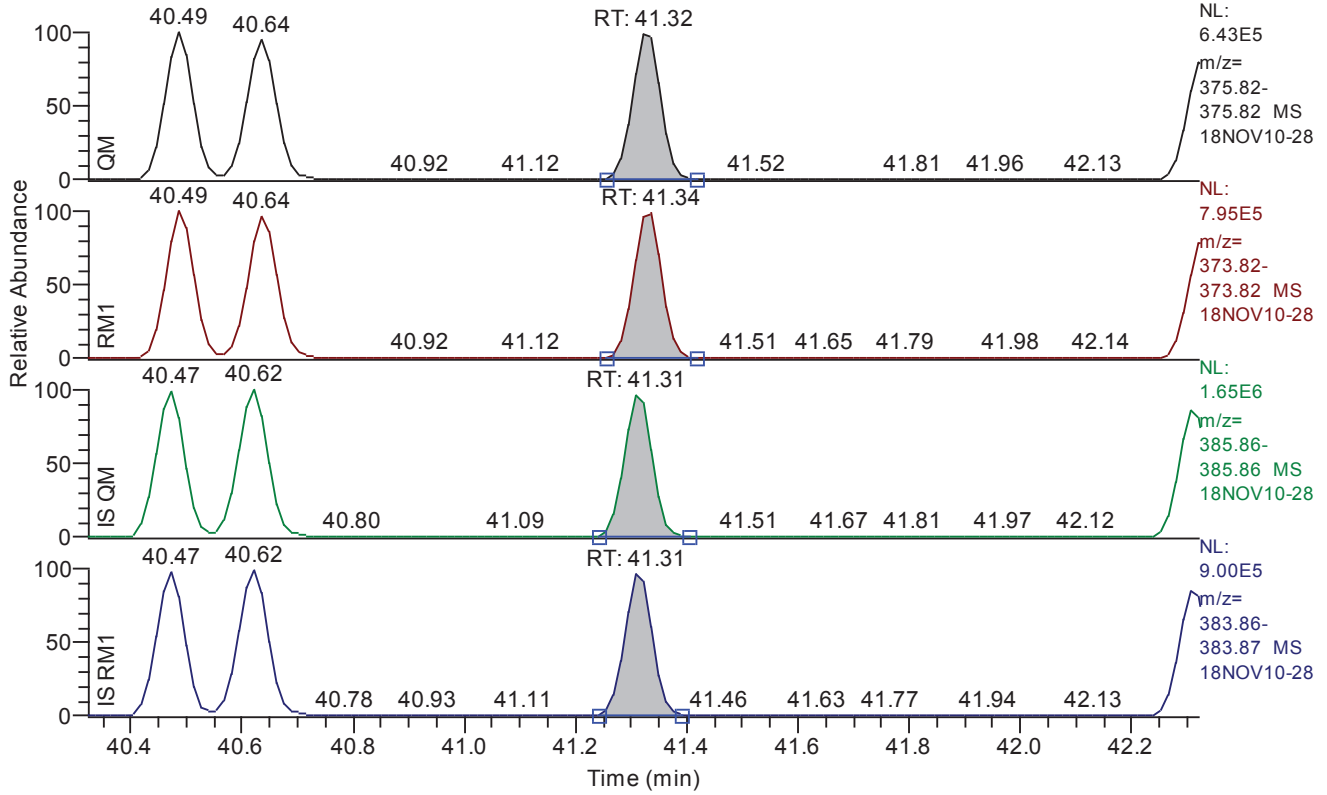


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.64
QM Area	2284374
QM Integration Mode	A
RM1 Area	2826465
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0113
Unqualified Amount (A)	50.265000
Adjusted Amount (A)	50.2650
Signal-to-Noise	11151
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.32 - 42.32 SM: 3G

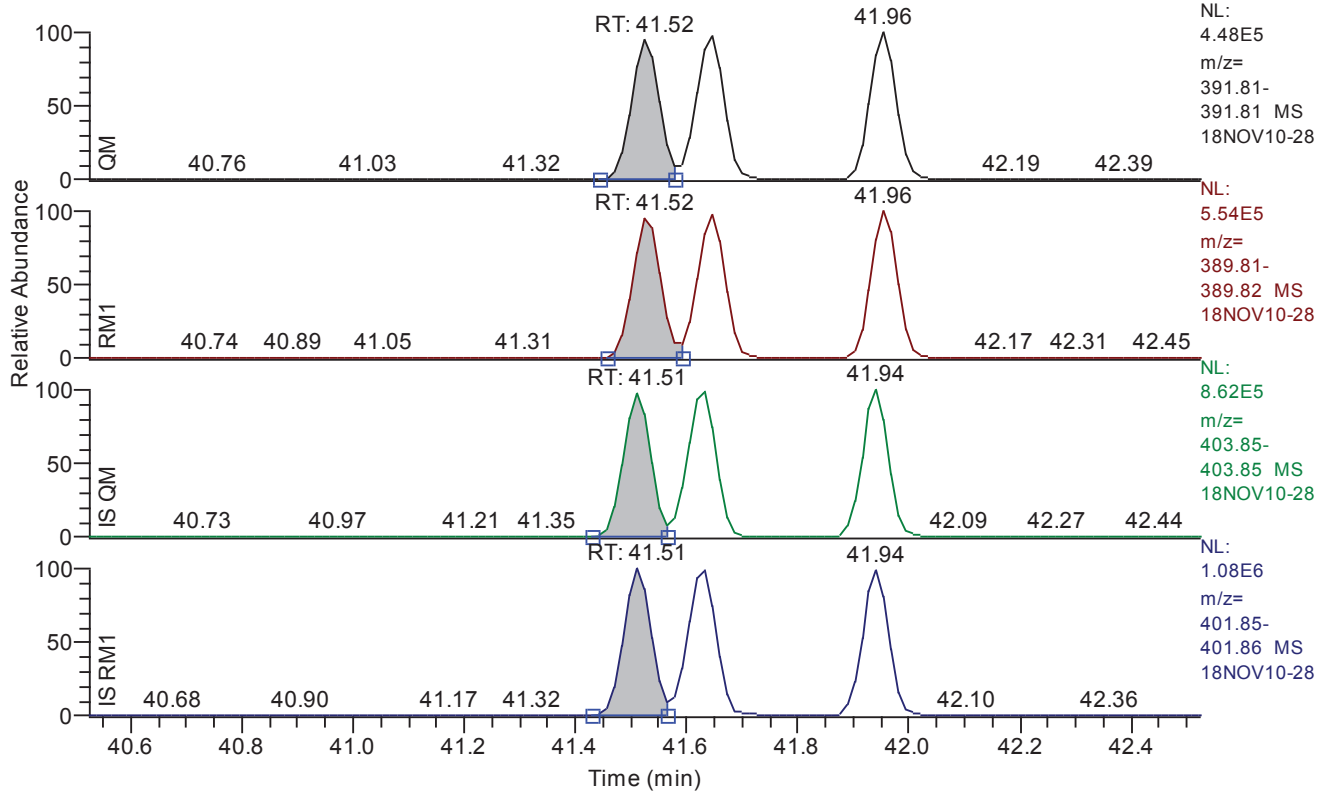


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.32
QM Area	2271077
QM Integration Mode	A
RM1 Area	2801488
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0109
Unqualified Amount (A)	51.083293
Adjusted Amount (A)	51.0833
Signal-to-Noise	11538
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.52 - 42.52 SM: 3G

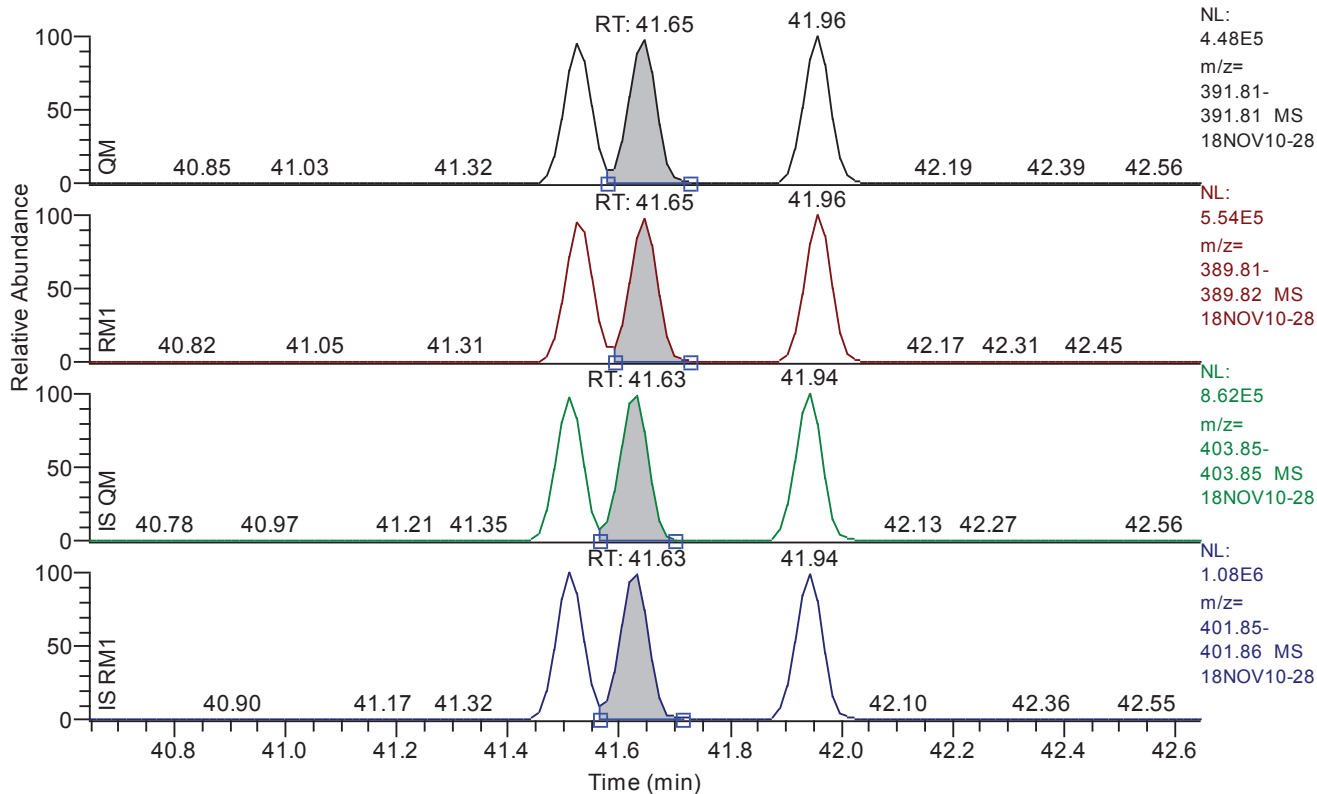


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.52
QM Area	1473322
QM Integration Mode	A
RM1 Area	1878863
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0073
Unqualified Amount (A)	49.960671
Adjusted Amount (A)	49.9607
Signal-to-Noise	16824
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.65 - 42.65 SM: 3G

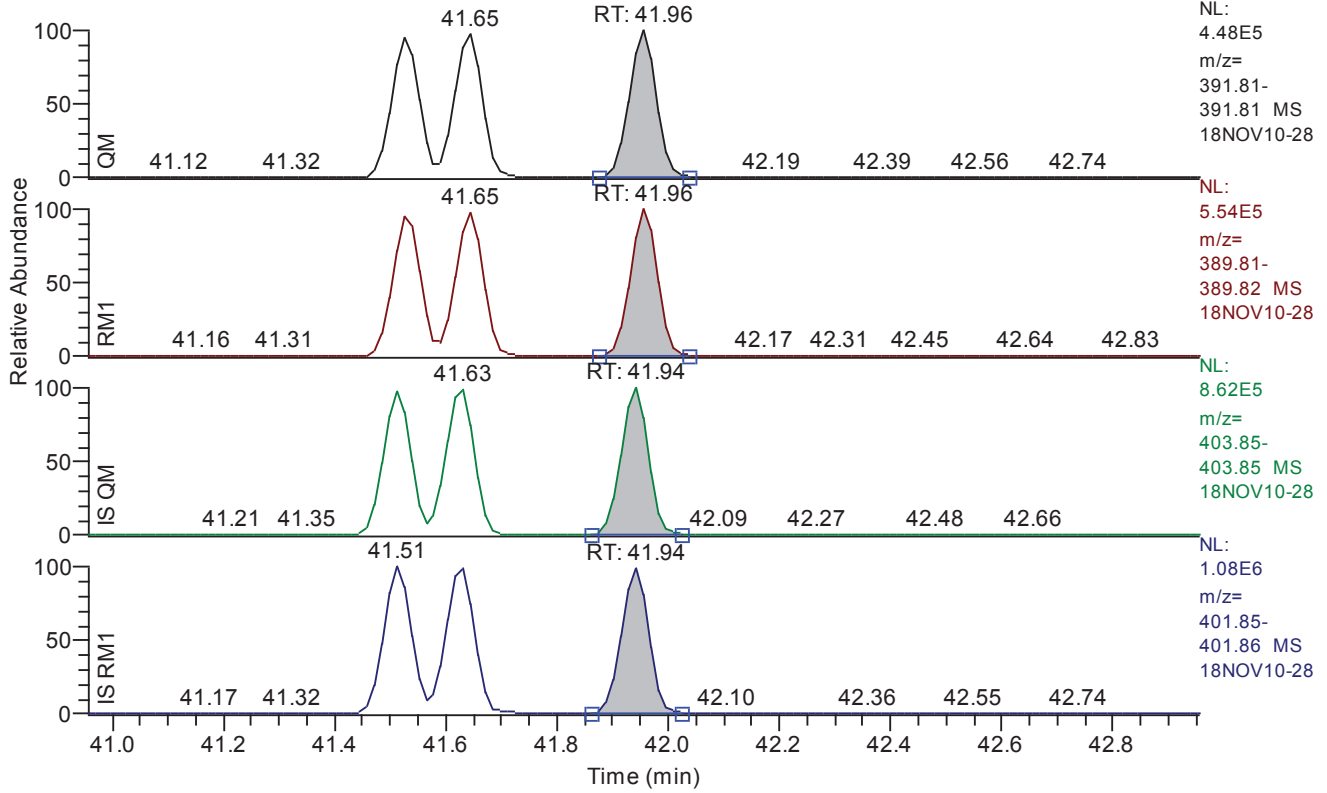


Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.65
QM Area	1547423
QM Integration Mode	A
RM1 Area	1854812
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0074
Unqualified Amount (A)	48.899586
Adjusted Amount (A)	48.8996
Signal-to-Noise	17293
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.96 - 42.96 SM: 3G

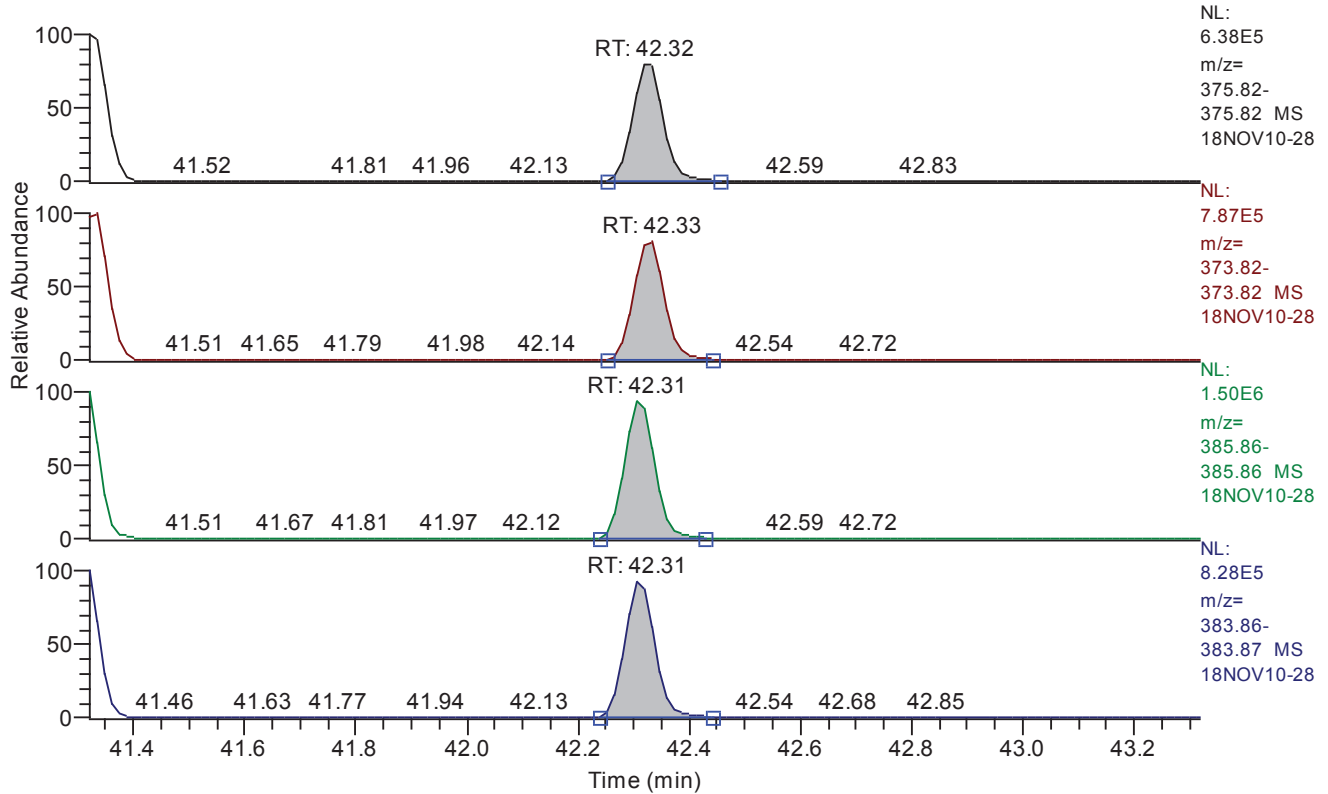


Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.96
QM Area	1522974
QM Integration Mode	A
RM1 Area	1887934
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0070
Unqualified Amount (A)	48.929718
Adjusted Amount (A)	48.9297
Signal-to-Noise	17627
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 41.32 - 43.32 SM: 3G

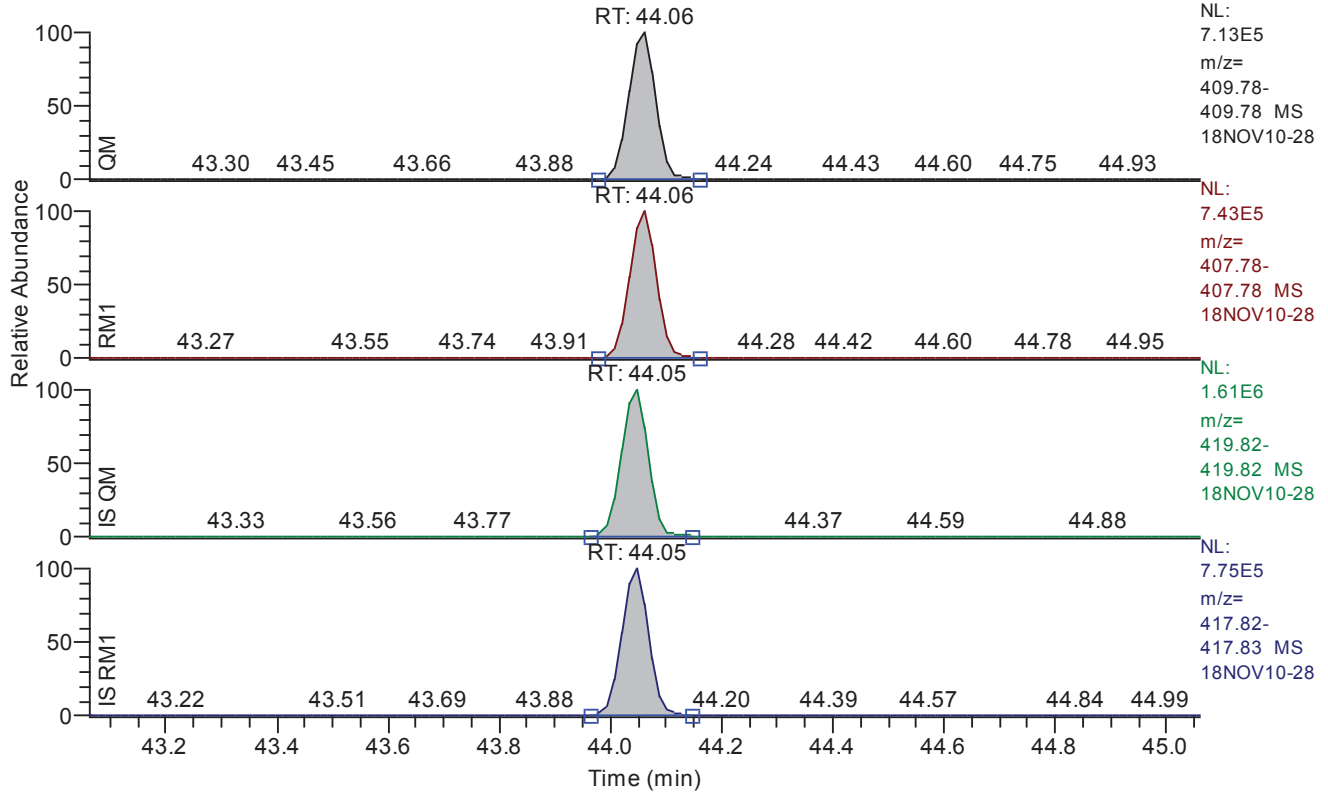


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.32
QM Area	1971054
QM Integration Mode	A
RM1 Area	2459642
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0132
Unqualified Amount (A)	50.199793
Adjusted Amount (A)	50.1998
Signal-to-Noise	9318
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 43.06 - 45.06 SM: 3G

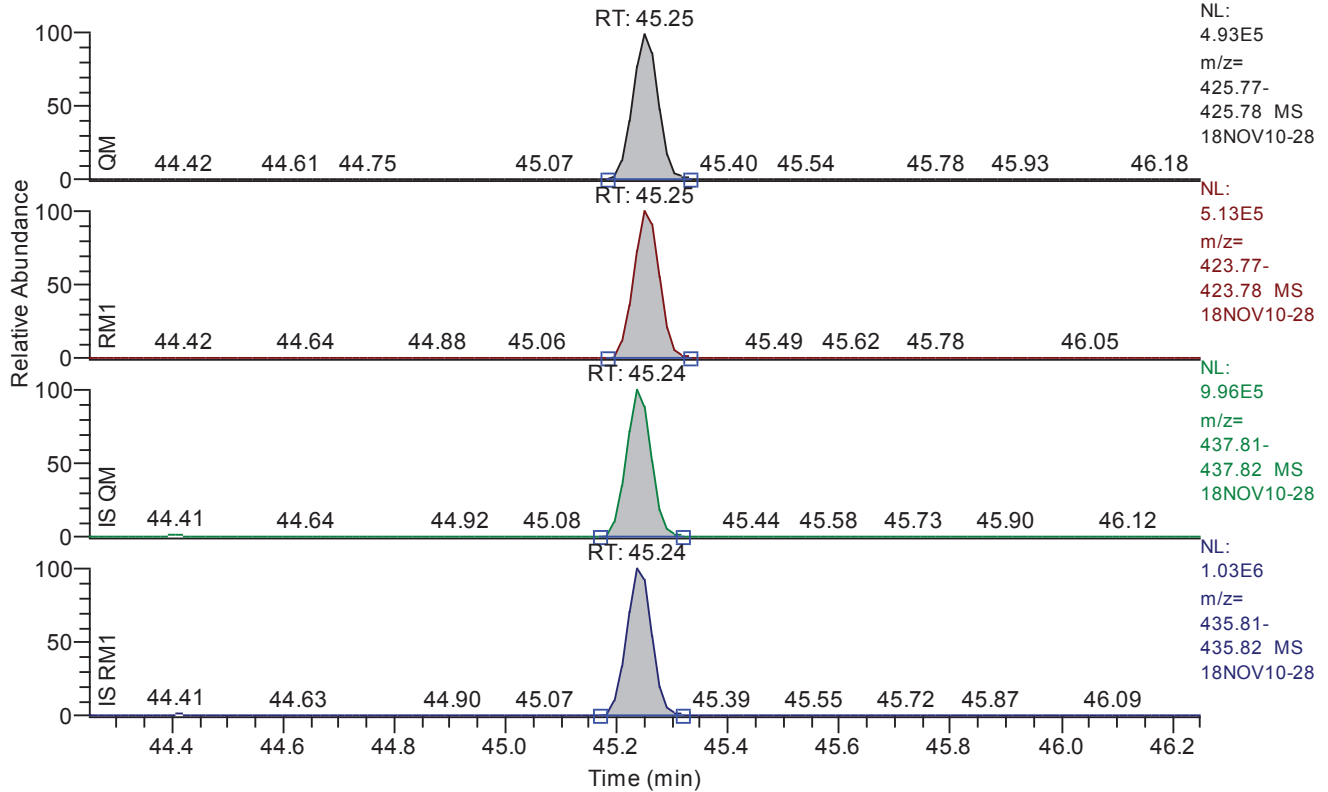


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.06
QM Area	2481986
QM Integration Mode	A
RM1 Area	2571757
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0120
Unqualified Amount (A)	51.175880
Adjusted Amount (A)	51.1759
Signal-to-Noise	10703
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.25 - 46.25 SM: 3G

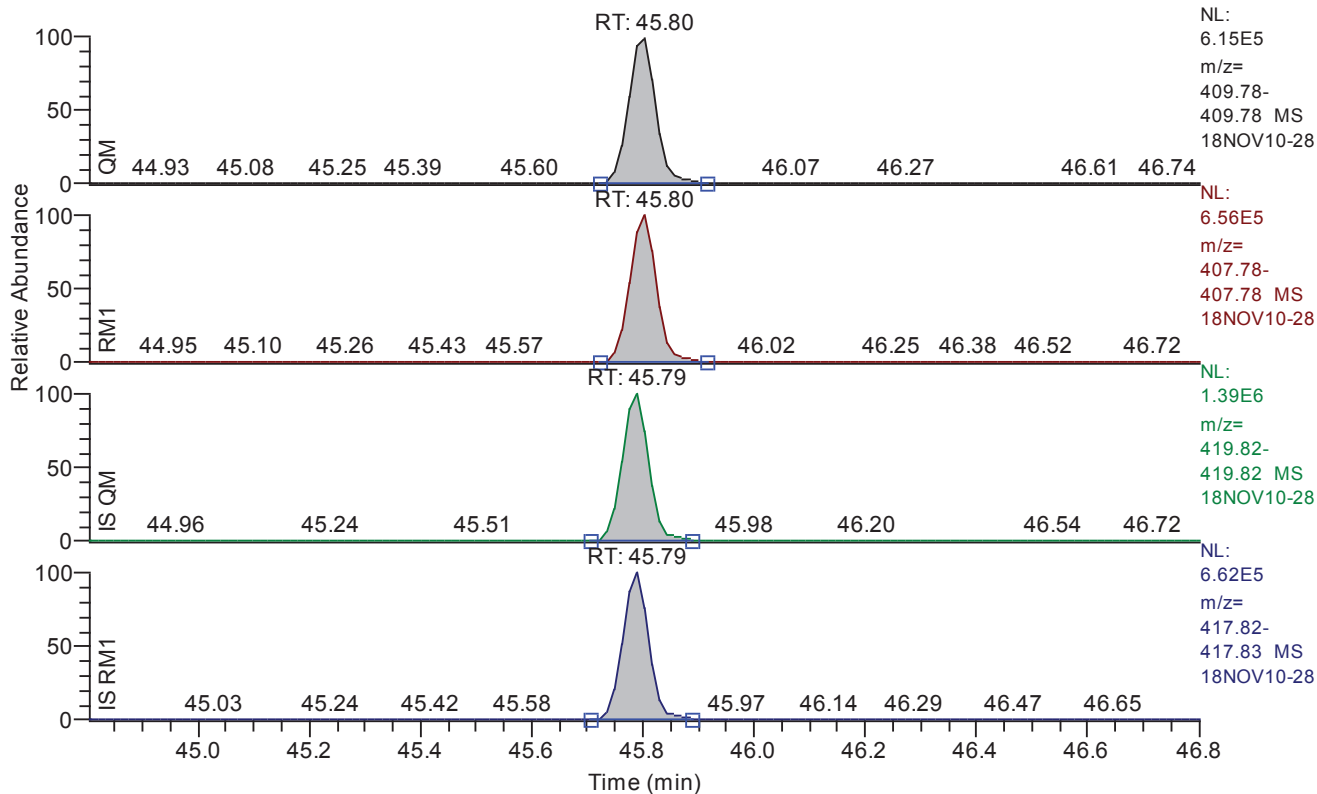


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.25
QM Area	1602269
QM Integration Mode	A
RM1 Area	1703791
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0104
Unqualified Amount (A)	49.275843
Adjusted Amount (A)	49.2758
Signal-to-Noise	11696
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.80 - 46.80 SM: 3G

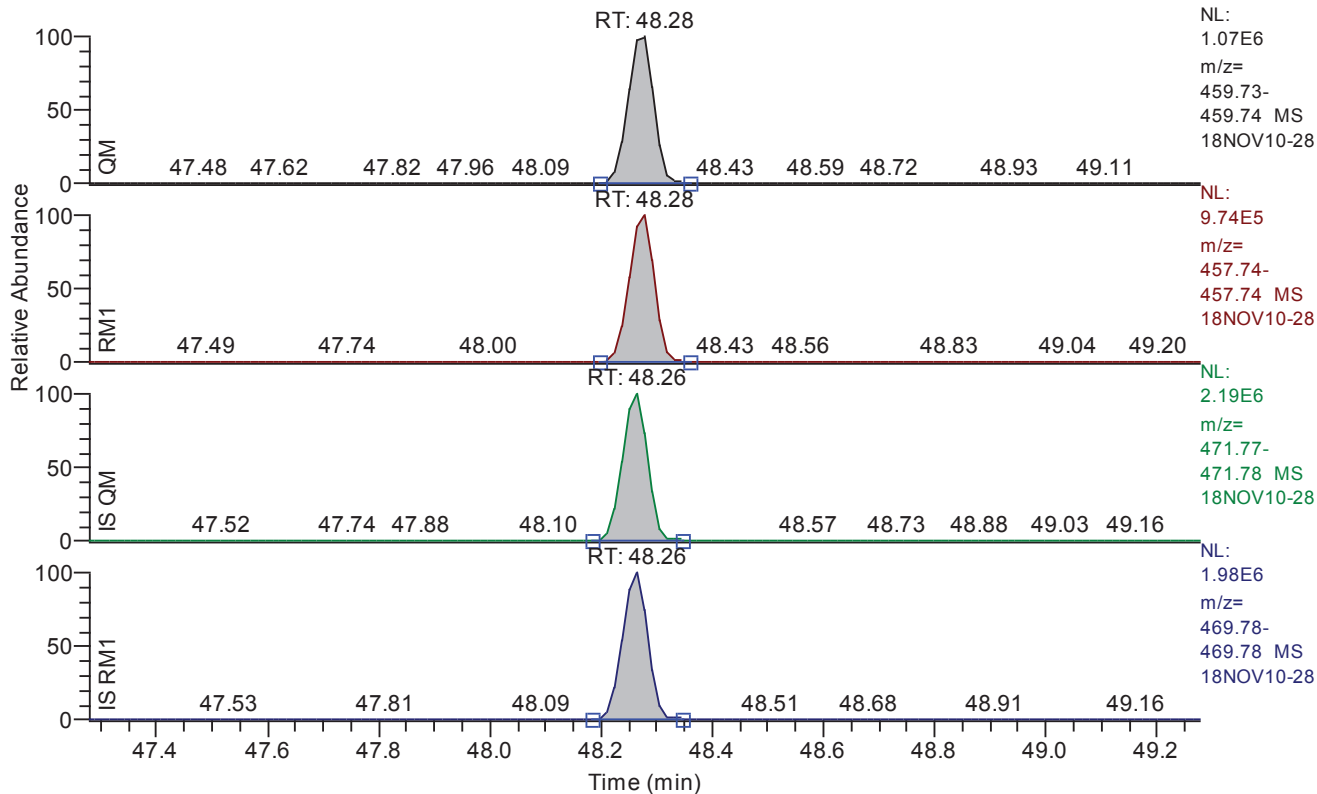


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.80
QM Area	2130153
QM Integration Mode	A
RM1 Area	2236026
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0135
Unqualified Amount (A)	51.153686
Adjusted Amount (A)	51.1537
Signal-to-Noise	9344
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.28 - 49.28 SM: 3G

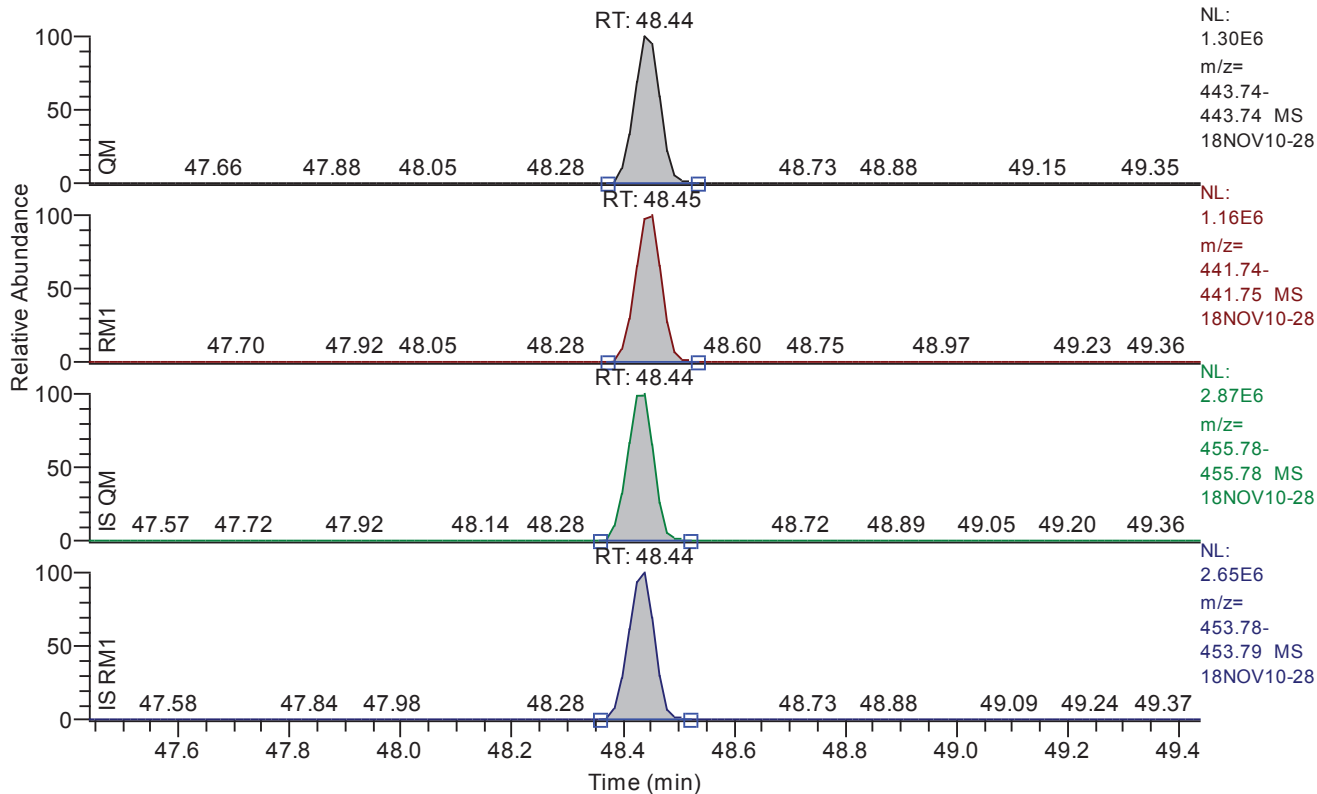


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.28
QM Area	3467818
QM Integration Mode	A
RM1 Area	3088207
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0074
Unqualified Amount (A)	100.489276
Adjusted Amount (A)	100.4893
Signal-to-Noise	33657
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.44 - 49.44 SM: 3G

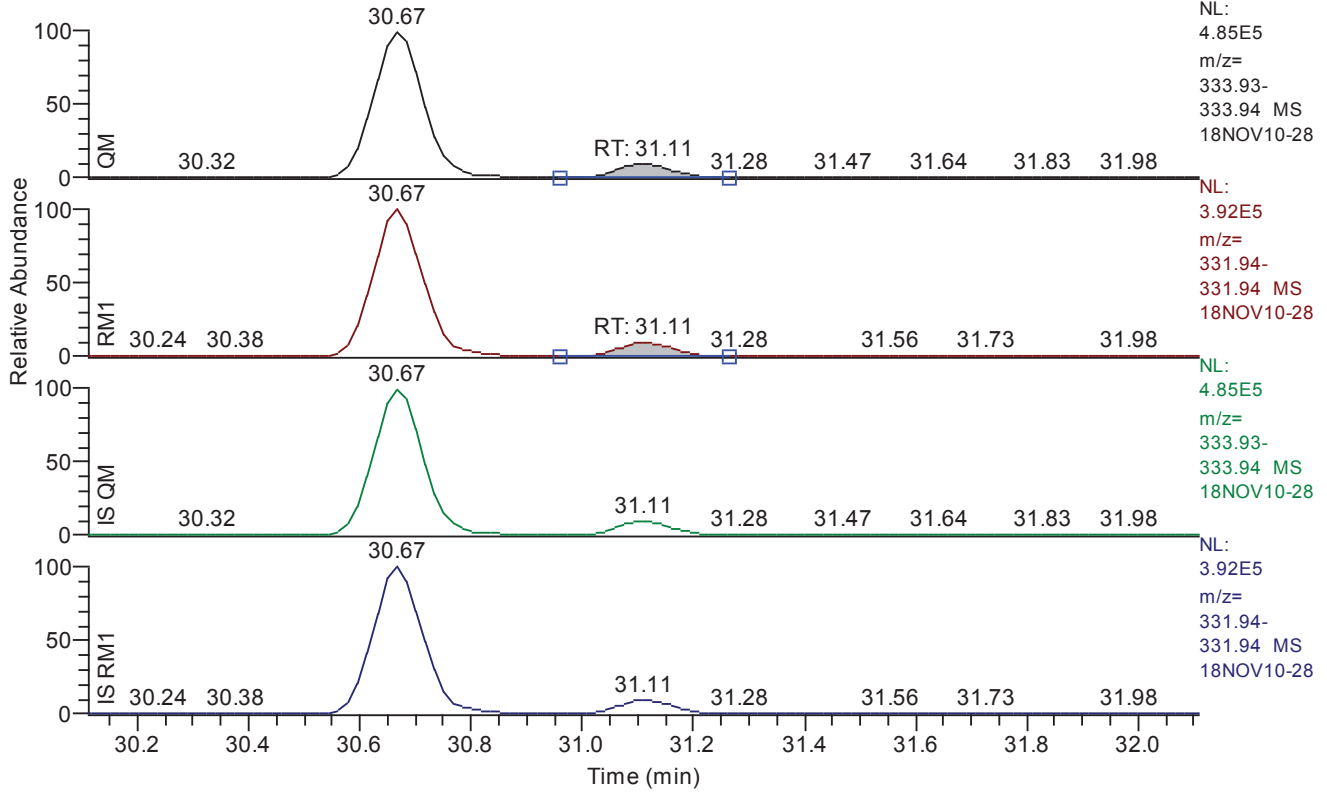


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.44
QM Area	4229324
QM Integration Mode	A
RM1 Area	3809815
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0057
Unqualified Amount (A)	102.774755
Adjusted Amount (A)	102.7748
Signal-to-Noise	45768
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 30.11 - 32.11 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	31.11
QM Area	315943
QM Integration Mode	A
RM1 Area	259015
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0150
Unqualified Amount (A)	10.700308
Adjusted Amount (A)	n.d.
Signal-to-Noise	1697
Client Flags	
Status Overview	failed
Status Info	Failed on: RF

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.54	29.54	29.54	29.50	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.70	30.70	30.70	30.67	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.54	35.54	35.54	35.51	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.81	36.81	36.81	36.79	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.22	37.22	37.22	37.21	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.49	40.49	40.49	40.47	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.64	40.64	40.64	40.62	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.32	41.32	41.34	41.31	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.52	41.52	41.52	41.51	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.65	41.65	41.65	41.63	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.96	41.96	41.96	41.94	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.32	42.32	42.33	42.31	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.06	44.06	44.06	44.05	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.25	45.25	45.25	45.24	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.80	45.80	45.80	45.79	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.28	48.28	48.28	48.26	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.44	48.44	48.45	48.44	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	31.11	31.11	31.11	31.11	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.83	29.83	29.83	29.83	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.39	40.39	40.39	40.39	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.50	29.50	29.50	29.49	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.67	30.67	30.67	30.67	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.51	35.51	35.51	35.51	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.79	36.79	36.79	36.78	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.21	37.21	37.21	37.21	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.47	40.47	40.47	40.33	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.62	40.62	40.62	40.72	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.31	41.31	41.31	41.47	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.51	41.51	41.51	41.51	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.63	41.63	41.63	41.63	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.94	41.94	41.94	41.94	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.31	42.31	42.31	42.33	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.05	44.05	44.05	44.03	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.24	45.24	45.24	45.24	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.79	45.79	45.79	45.79	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.26	48.26	48.26	48.26	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.44	48.44	48.44	48.41	passed	passed

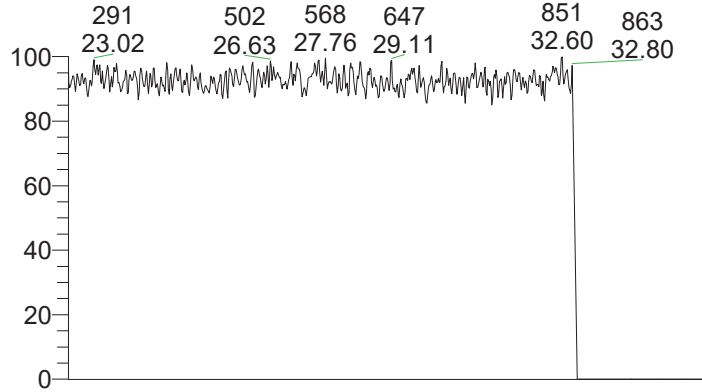
Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Calculated RF (A)	Response File RF (A)	RF Limit	RF Status
1	2378-TCDF	29.54	0.7903	0.6450 - 0.8950	passed	0.9878	1.0514	0.9604 - 1.4556	passed
2	2378-TCDD	30.70	0.8134	0.6450 - 0.8950	passed	1.2070	1.2502	1.0982 - 1.6646	passed
3	12378-PeCDF	35.54	1.5810	1.3150 - 1.7850	passed	0.9129	0.9371	0.8789 - 1.3321	passed
4	23478-PeCDF	36.81	1.5714	1.3150 - 1.7850	passed	1.0386	1.0504	0.9685 - 1.4681	passed
5	12378-PeCDD	37.22	1.5862	1.3150 - 1.7850	passed	0.9921	1.0016	0.9173 - 1.3903	passed
6	123478-HxCDF	40.49	1.2440	1.0450 - 1.4350	passed	1.1366	1.1137	0.9988 - 1.5138	passed
7	123678-HxCDF	40.64	1.2373	1.0450 - 1.4350	passed	1.0792	1.0735	0.9563 - 1.4495	passed
8	234678-HxCDF	41.32	1.2336	1.0450 - 1.4350	passed	1.1743	1.1494	1.0204 - 1.5466	passed
9	123478-HxCDD	41.52	1.2753	1.0450 - 1.4350	passed	1.0115	1.0123	0.9181 - 1.3915	passed
10	123678-HxCDD	41.65	1.1986	1.0450 - 1.4350	passed	0.9807	1.0027	0.9053 - 1.3723	passed
11	123789-HxCDD	41.96	1.2396	1.0450 - 1.4350	passed	1.0303	1.0528	0.9606 - 1.4560	passed
12	123789-HxCDF	42.32	1.2479	1.0450 - 1.4350	passed	1.0785	1.0742	0.9515 - 1.4421	passed
13	1234678-HpCDF	44.06	1.0362	0.8750 - 1.2050	passed	1.2133	1.1854	1.0778 - 1.6336	passed
14	1234678-HpCDD	45.25	1.0634	0.8750 - 1.2050	passed	1.0047	1.0194	0.9502 - 1.4402	passed
15	1234789-HpCDF	45.80	1.0497	0.8750 - 1.2050	passed	1.2600	1.2316	1.1050 - 1.6748	passed
16	OCDD	48.28	0.8905	0.7550 - 1.0250	passed	0.9910	0.9861	0.8908 - 1.3502	passed
17	OCDF	48.44	0.9008	0.7550 - 1.0250	passed	0.8863	0.8624	0.7890 - 1.1958	passed
18	13C12-1278-TCDD (CRS)	31.11	0.8198	0.6450 - 0.8950	passed	0.1117	1.0443	0.7083 - 1.3301	failed
19	13C12-1234-TCDD	29.83	0.8078	0.6450 - 0.8950	passed	1.0000	1.0000	1.0000 - 1.0000	passed
20	13C12-123468-HxCDD	40.39	1.2619	1.0450 - 1.4350	passed	1.0000	1.0000	1.0000 - 1.0000	passed
21	13C12-2378-TCDF	29.50	0.8027	0.6450 - 0.8950	passed	2.0533	2.0369	1.6559 - 3.1093	passed
22	13C12-2378-TCDD	30.67	0.8168	0.6450 - 0.8950	passed	1.0486	1.0064	0.6937 - 1.3027	passed
23	13C12-12378-PeCDF	35.51	1.5694	1.3150 - 1.7850	passed	1.9267	1.9264	1.5155 - 2.8457	passed
24	13C12-23478-PeCDF	36.79	1.5396	1.3150 - 1.7850	passed	1.9234	1.9205	1.5317 - 2.8761	passed
25	13C12-12378-PeCDD	37.21	1.5934	1.3150 - 1.7850	passed	1.1012	1.0387	0.6937 - 1.3025	passed
26	13C12-123478-HxCDF	40.47	0.5389	0.4250 - 0.5950	passed	1.3730	1.4468	1.1993 - 2.2519	passed
27	13C12-123678-HxCDF	40.62	0.5443	0.4250 - 0.5950	passed	1.4580	1.5461	1.2787 - 2.4011	passed
28	13C12-234678-HxCDF	41.31	0.5386	0.4250 - 0.5950	passed	1.3299	1.4140	1.1620 - 2.1818	passed
29	13C12-123478-HxCDD	41.51	1.2853	1.0450 - 1.4350	passed	1.0204	0.9987	0.6941 - 1.3033	passed
30	13C12-123678-HxCDD	41.63	1.2661	1.0450 - 1.4350	passed	1.0681	1.0370	0.7190 - 1.3500	passed
31	13C12-123789-HxCDD	41.94	1.2599	1.0450 - 1.4350	passed	1.0193	0.9789	0.6747 - 1.2669	passed
32	13C12-123789-HxCDF	42.31	0.5418	0.4250 - 0.5950	passed	1.2649	1.3137	1.0701 - 2.0093	passed
33	13C12-1234678-HpCDF	44.05	0.4762	0.3650 - 0.5150	passed	1.2824	1.3169	1.0489 - 1.9695	passed
34	13C12-1234678-HpCDD	45.24	1.0499	0.8750 - 1.2050	passed	1.0131	0.9723	0.6249 - 1.1733	passed
35	13C12-1234789-HpCDF	45.79	0.4720	0.3650 - 0.5150	passed	1.0669	1.1060	0.8481 - 1.5925	passed
36	13C12-OCDD	48.26	0.9027	0.7550 - 1.0250	passed	1.0184	1.0280	0.6744 - 1.2662	passed
37	13C12-OCDF	48.44	0.9058	0.7550 - 1.0250	passed	1.3963	1.5078	1.1379 - 2.1367	passed

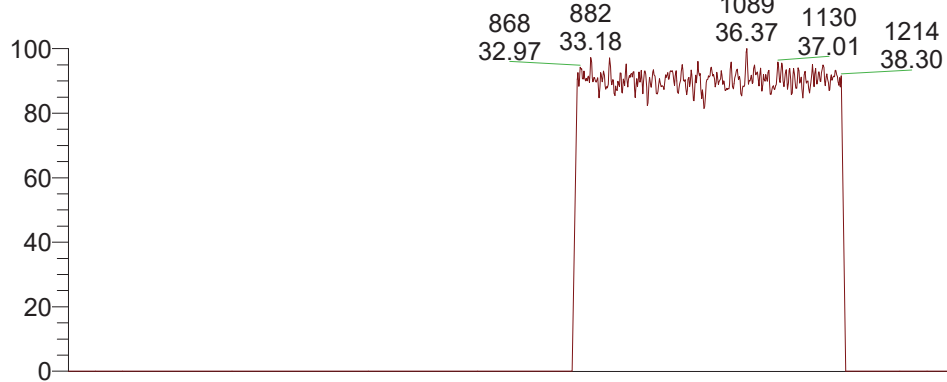
Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.54	582911	A	460702	A	0.0053	9.395630	9.3956	10.000000	4328	
2	2378-TCDD	passed	30.70	359117	A	292118	A	0.0046	9.654716	9.6547	10.000000	5069	
3	12378-PeCDF	passed	35.54	1753260	A	2771909	A	0.0050	48.709292	48.7093	50.000000	24365	
4	23478-PeCDF	passed	36.81	1998718	A	3140724	A	0.0040	49.437045	49.4370	50.000000	30505	
5	12378-PeCDD	passed	37.22	1086870	A	1723977	A	0.0087	49.525637	49.5256	50.000000	14595	
6	123478-HxCDF	passed	40.49	2258638	A	2809767	A	0.0110	51.028235	51.0282	50.000000	11598	
7	123678-HxCDF	passed	40.64	2284374	A	2826465	A	0.0113	50.265000	50.2650	50.000000	11151	
8	234678-HxCDF	passed	41.32	2271077	A	2801488	A	0.0109	51.083293	51.0833	50.000000	11538	
9	123478-HxCDD	passed	41.52	1473322	A	1878863	A	0.0073	49.960671	49.9607	50.000000	16824	
10	123678-HxCDD	passed	41.65	1547423	A	1854812	A	0.0074	48.899586	48.8996	50.000000	17293	
11	123789-HxCDD	passed	41.96	1522974	A	1887934	A	0.0070	48.929718	48.9297	50.000000	17627	
12	123789-HxCDF	passed	42.32	1971054	A	2459642	A	0.0132	50.199793	50.1998	50.000000	9318	
13	1234678-HpCDF	passed	44.06	2481986	A	2571757	A	0.0120	51.175880	51.1759	50.000000	10703	
14	1234678-HpCDD	passed	45.25	1602269	A	1703791	A	0.0104	49.275843	49.2758	50.000000	11696	
15	1234789-HpCDF	passed	45.80	2130153	A	2236026	A	0.0135	51.153686	51.1537	50.000000	9344	
16	OCDD	passed	48.28	3467818	A	3088207	A	0.0074	100.489276	100.4893	100.000000	33657	
17	OCDF	passed	48.44	4229324	A	3809815	A	0.0057	102.774755	102.7748	100.000000	45768	
18	13C12-1278-TCDD (CRS)	failed	31.11	315943	A	259015	A	0.0150	10.700308	n.d.	100.000000	1697	
19	13C12-1234-TCDD	passed	29.83	2846159	A	2299166	A	0.0156	100.000000	100.0000	100.000000	16008	
20	13C12-123468-HxCDD	passed	40.39	2871907	A	3624122	A	0.0117	100.000000	100.0000	100.000000	21370	
21	13C12-2378-TCDF	passed	29.50	5860742	A	4704167	A	0.0090	100.806430	100.8064	100.000000	28293	
22	13C12-2378-TCDD	passed	30.67	2969809	A	2425700	A	0.0155	104.198933	104.1989	100.000000	17921	
23	13C12-12378-PeCDF	passed	35.51	3858339	A	6055089	A	0.0242	100.017223	100.0172	100.000000	13924	
24	13C12-23478-PeCDF	passed	36.79	3896938	A	5999725	A	0.0243	100.152032	100.1520	100.000000	15708	
25	13C12-12378-PeCDD	passed	37.21	2184847	A	3481383	A	0.0167	106.017835	106.0178	100.000000	23317	
26	13C12-123478-HxCDF	passed	40.47	5795433	A	3123336	A	0.0189	94.894798	94.8948	100.000000	13074	
27	13C12-123678-HxCDF	passed	40.62	6133224	A	3338279	A	0.0177	94.304111	94.3041	100.000000	13180	
28	13C12-234678-HxCDF	passed	41.31	5615074	A	3024249	A	0.0193	94.053157	94.0532	100.000000	12829	
29	13C12-123478-HxCDD	passed	41.51	2900381	A	3727855	A	0.0117	102.171159	102.1712	100.000000	23436	
30	13C12-123678-HxCDD	passed	41.63	3061897	A	3876705	A	0.0113	103.002670	103.0027	100.000000	23360	
31	13C12-123789-HxCDD	passed	41.94	2929902	A	3691484	A	0.0120	104.128816	104.1288	100.000000	23534	
32	13C12-123789-HxCDF	passed	42.31	5329024	A	2887499	A	0.0208	96.284156	96.2842	100.000000	11341	
33	13C12-1234678-HpCDF	passed	44.05	5643141	A	2687482	A	0.0197	97.382440	97.3824	100.000000	13105	
34	13C12-1234678-HpCDD	passed	45.24	3210654	A	3370731	A	0.0157	104.196788	104.1968	100.000000	18815	
35	13C12-1234789-HpCDF	passed	45.79	4708355	A	2222223	A	0.0234	96.462125	96.4621	100.000000	11222	
36	13C12-OCDD	passed	48.26	6954020	A	6277584	A	0.0078	198.130845	198.1308	200.000000	73793	
37	13C12-OCDF	passed	48.44	9518654	A	8622347	A	0.0073	185.215706	185.2157	200.000000	71280	

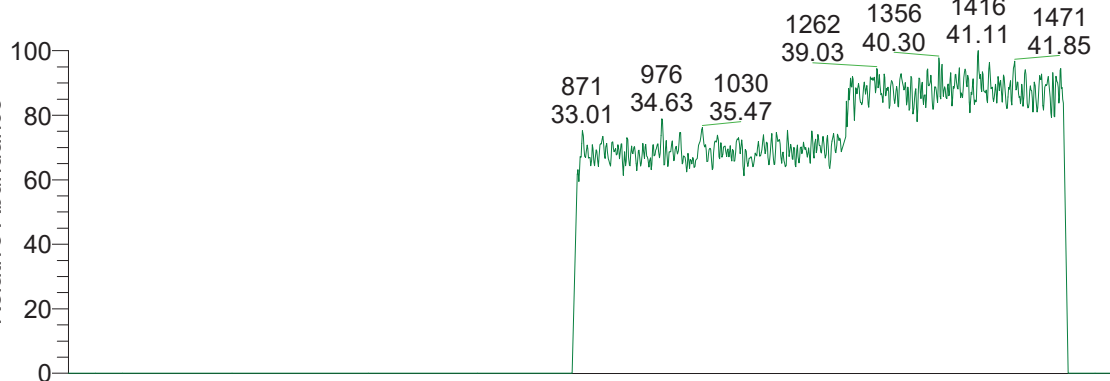
RT: 22.50 - 51.00



NL:
4.13E5
m/z=
291.9825-
292.9825
MS
18NOV10-
28



NL:
4.16E5
m/z=
330.4792-
331.4792
MS
18NOV10-
28



NL:
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m/z=
380.4760-
381.4760
MS
18NOV10-
28



NL:
8.32E4
m/z=
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405.4760
MS
18NOV10-
28



NL:
1.04E5
m/z=
442.4728-
443.4728
MS
18NOV10-
28

APPROVED
By AQ46 at 10:51 pm, 11/12/18

REVIEWED
By uild at 1:42 pm, 11/13/18

24 26 28 30 32 34 36 38 40 42 44 46 48 50
Time (min)

18NOV10-28

*** file opened Sat Nov 10 18:19:43 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 18:19:42

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1

mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47

Window # 2

mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes

MID window end time was 22.010000 minutes

MID window terminated after 32.800000 minutes

MID window end time was 32.800000 minutes

18NOV10-28

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	99.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4080.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0076	FVINLET	0.0376	FVSR	0.0362
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	99.0000	LKM	442.9723	MASS	99.0000
MDAC	1441894.7239	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9875	RELEN	0.0000
RES	11632.8979	RPUSHER	-6.0879	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0205	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	99.0000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.4e-008 mbar
Pirani Analyse: 7.6e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11578.
MID Time window 2: Resolution is 11409.
MID Time window 3: Resolution is 11661.
MID Time window 4: Resolution is 11083.



18NOV10-28

MID Time Window 5: Resolution is 10920.
MID Time Window 6: Resolution is 11632.

Amplifier Offset: 80.

*** File closed Sat Nov 10 19:10:43 2018



Raw QC Data

Dioxins/Furans by HRMS

Quantitation Settings

Data File Parameter

Acq. Data 2018/11/10 09:26
Number of Entries 255
Comment BLK:10914:12936
Vial 72
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007
Sample ID BLK313007
Inst ID DF17611-18NOV10
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

Quan x:\18nov10\18nov10-18.quan
Data x:\18nov10\18nov10-18.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.42	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
2	2378-TCDD	30.60	passed	passed	passed	passed	passed	passed	
3	12378-PeCDF	35.48	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
4	23478-PeCDF	36.75	passed	passed	passed	passed	passed	passed	
5	12378-HxCDD	37.15	passed	passed	passed	passed	passed	passed	
6	123478-HxCDF	40.46	passed	passed	passed	passed	passed	passed	
7	123678-HxCDF	40.61	passed	passed	passed	passed	passed	passed	
8	234678-HxCDF	41.31	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
9	123478-HxCDD	41.48	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
10	123678-HxCDD	41.61	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
11	123789-HxCDD	41.92	passed	passed	passed	passed	passed	passed	
12	123789-HxCDF	42.31	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
13	1234678-HpCDF	44.05	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
14	1234678-HpCDD	45.23	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
15	1234789-HpCDF	45.77	failed	passed	passed	failed	passed	passed	Failed on: Ratio1A
16	OCDD	48.26	passed	passed	passed	passed	passed	passed	
17	OCDF	48.42	passed	passed	passed	passed	passed	passed	
18	13C12-1278-TCDD (CRS)	31.01	passed	passed	passed	passed	passed	passed	
19	13C12-1234-TCDD	29.72	passed	passed	passed	passed	passed	passed	
20	13C12-123468-HxCDD	40.35	passed	passed	passed	passed	passed	passed	
21	13C12-2378-TCDF	29.40	passed	passed	passed	passed	passed	passed	
22	13C12-2378-TCDD	30.56	passed	passed	passed	passed	passed	passed	
23	13C12-12378-PeCDF	35.45	passed	passed	passed	passed	passed	passed	
24	13C12-23478-PeCDF	36.73	passed	passed	passed	passed	passed	passed	
25	13C12-12378-PeCDD	37.15	passed	passed	passed	passed	passed	passed	
26	13C12-123478-HxCDF	40.43	passed	passed	passed	passed	passed	passed	
27	13C12-123678-HxCDF	40.58	passed	passed	passed	passed	passed	passed	
28	13C12-234678-HxCDF	41.28	passed	passed	passed	passed	passed	passed	
29	13C12-123478-HxCDD	41.48	passed	passed	passed	passed	passed	passed	
30	13C12-123678-HxCDD	41.59	passed	passed	passed	passed	passed	passed	
31	13C12-123789-HxCDD	41.92	passed	passed	passed	passed	passed	passed	
32	13C12-123789-HxCDF	42.28	passed	passed	passed	passed	passed	passed	
33	13C12-1234678-HpCDF	44.02	passed	passed	passed	passed	passed	passed	
34	13C12-1234678-HpCDD	45.22	passed	passed	passed	passed	passed	passed	
35	13C12-1234789-HpCDF	45.77	passed	passed	passed	passed	passed	passed	
36	13C12-OCDD	48.25	passed	passed	passed	passed	passed	passed	
37	13C12-OCDF	48.42	passed	passed	passed	passed	passed	passed	

Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/10 09:26
Number of Entries 255
Comment BLK:10914:12936
Vial 72
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007
Sample ID BLK313007
Inst ID DF17611-18NOV10
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

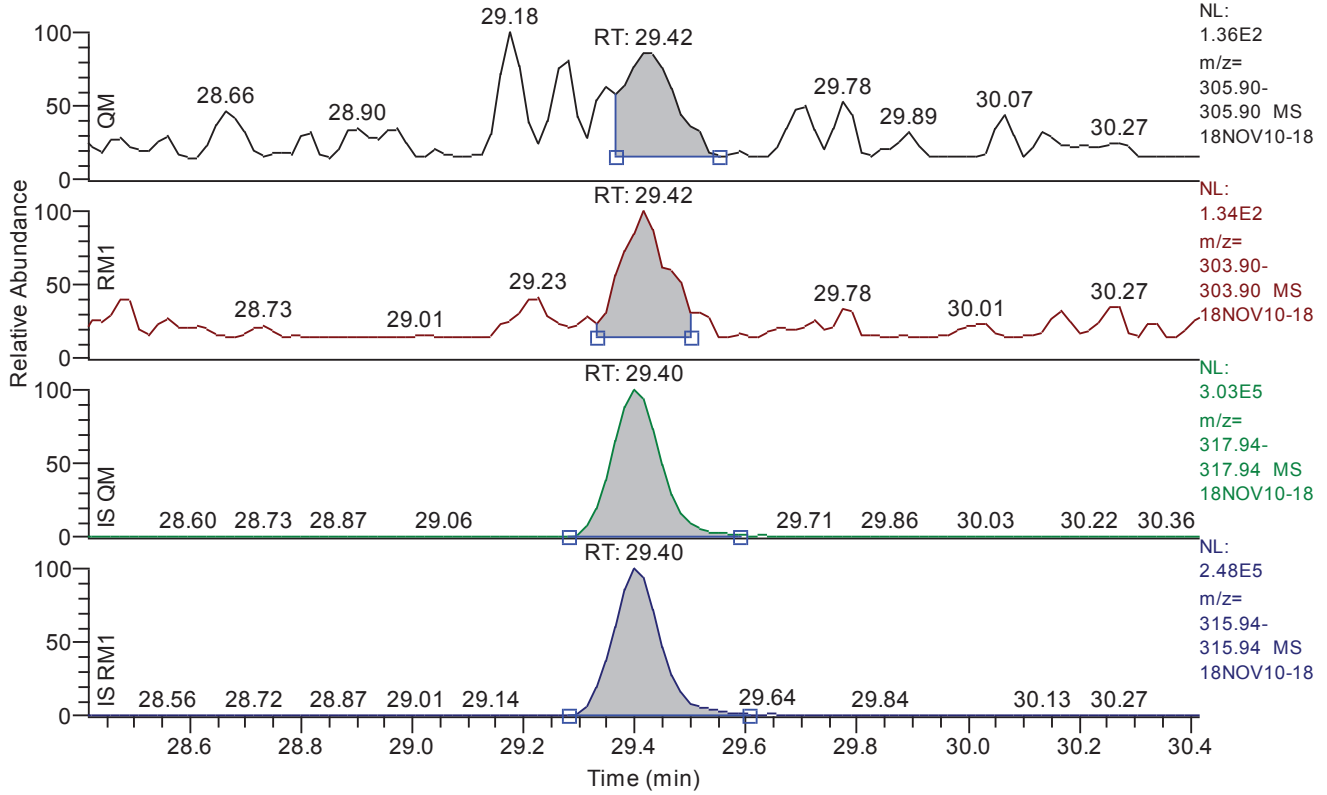
Quan x:\18nov10\18nov10-18.quan
Data x:\18nov10\18nov10-18.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.42 - 30.42 SM: 3G

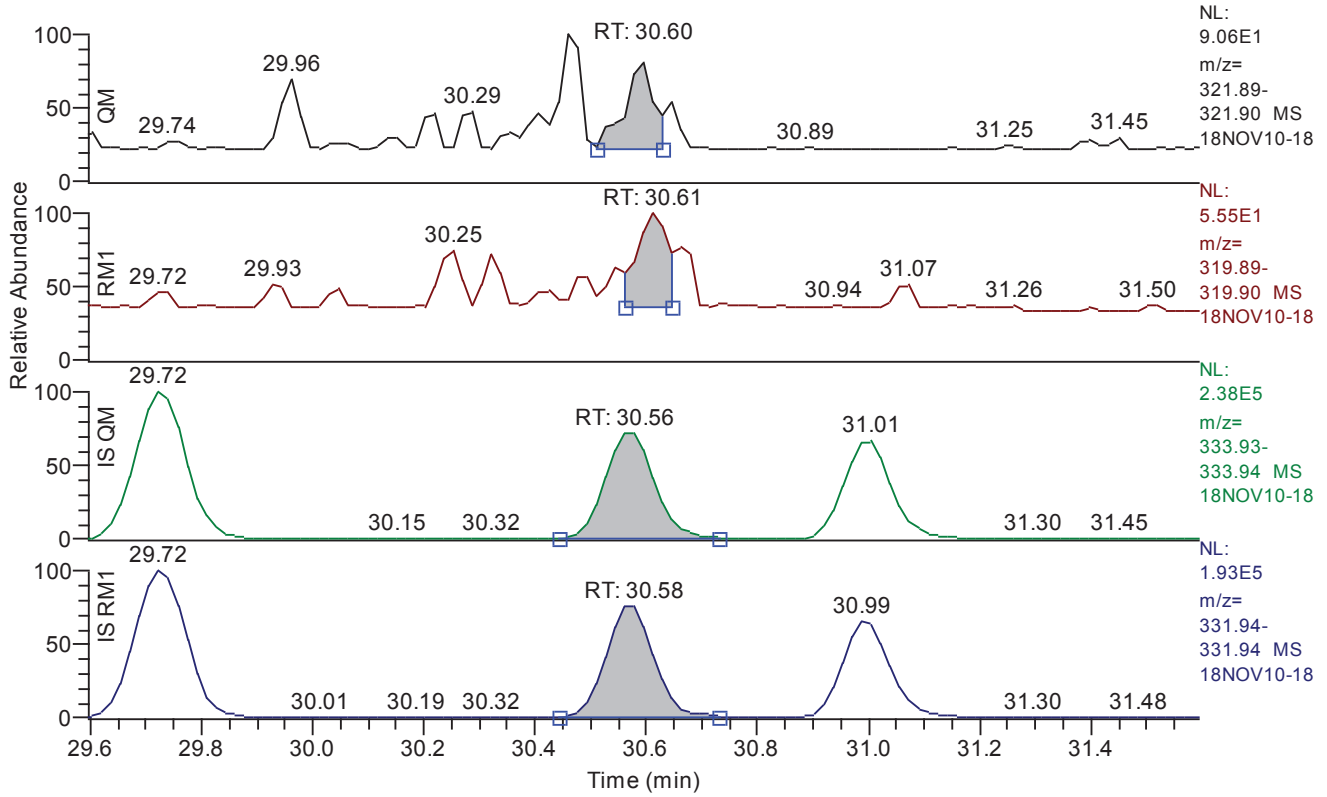


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.42
QM Area	621
QM Integration Mode	A
RM1 Area	672
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1213
Unqualified Amount (A)	0.726722
Adjusted Amount (A)	n.d.
Signal-to-Noise	15
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 29.60 - 31.60 SM: 3G

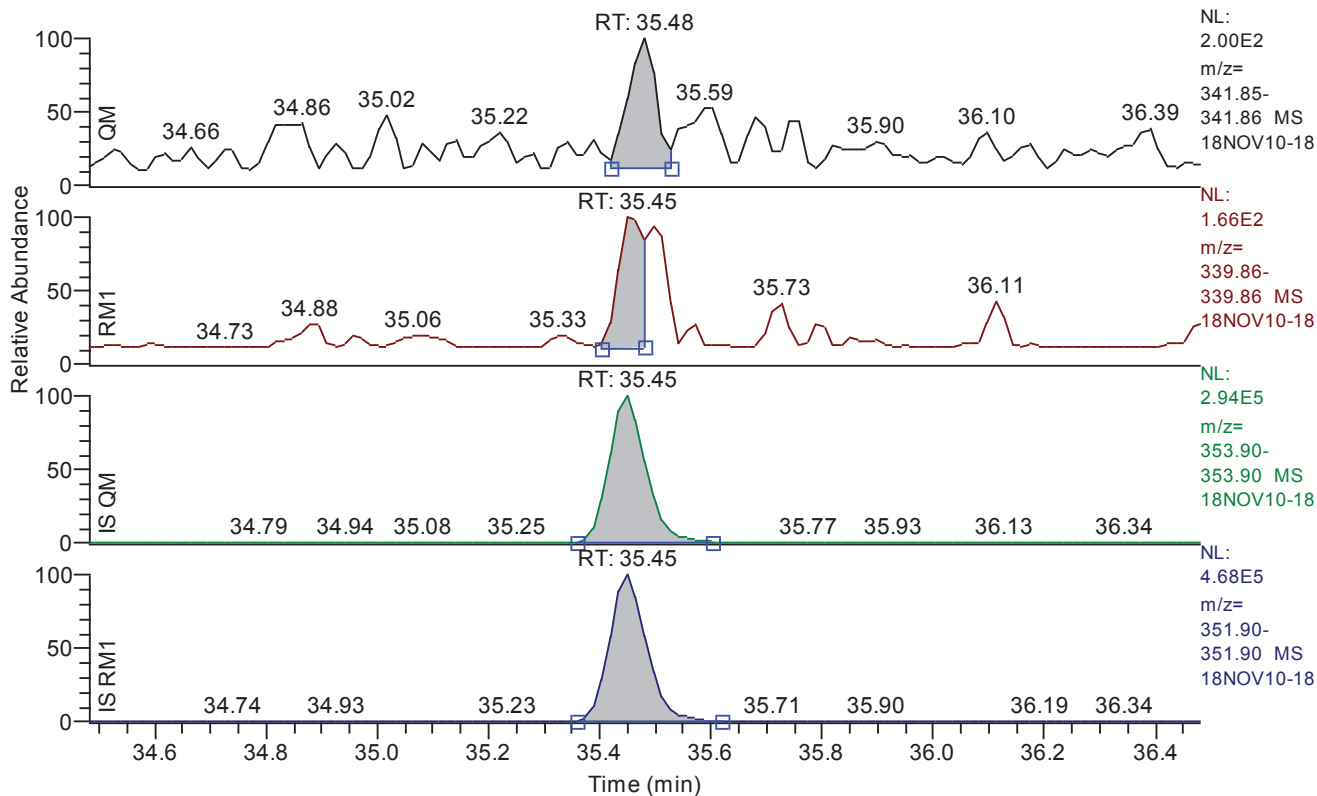


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.60
QM Area	195
QM Integration Mode	A
RM1 Area	132
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0880
Unqualified Amount (A)	0.265163
Adjusted Amount (A)	0.2652
Signal-to-Noise	13
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.48 - 36.48 SM: 3G

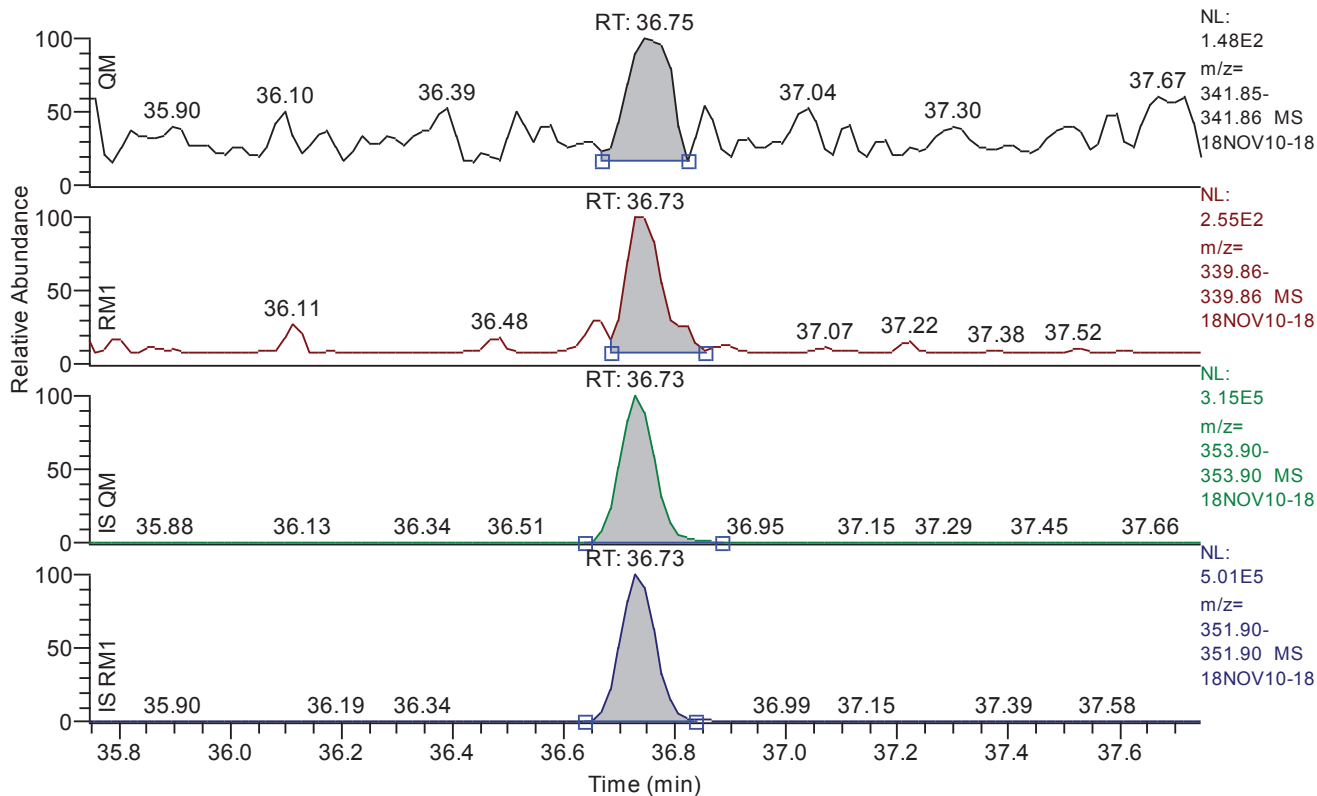


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.48
QM Area	608
QM Integration Mode	A
RM1 Area	432
RM1 Integration Mode	M
ManInt	1
Detection Limit (A)	0.1074
Unqualified Amount (A)	0.629130
Adjusted Amount (A)	n.d.
Signal-to-Noise	21
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 35.75 - 37.75 SM: 3G

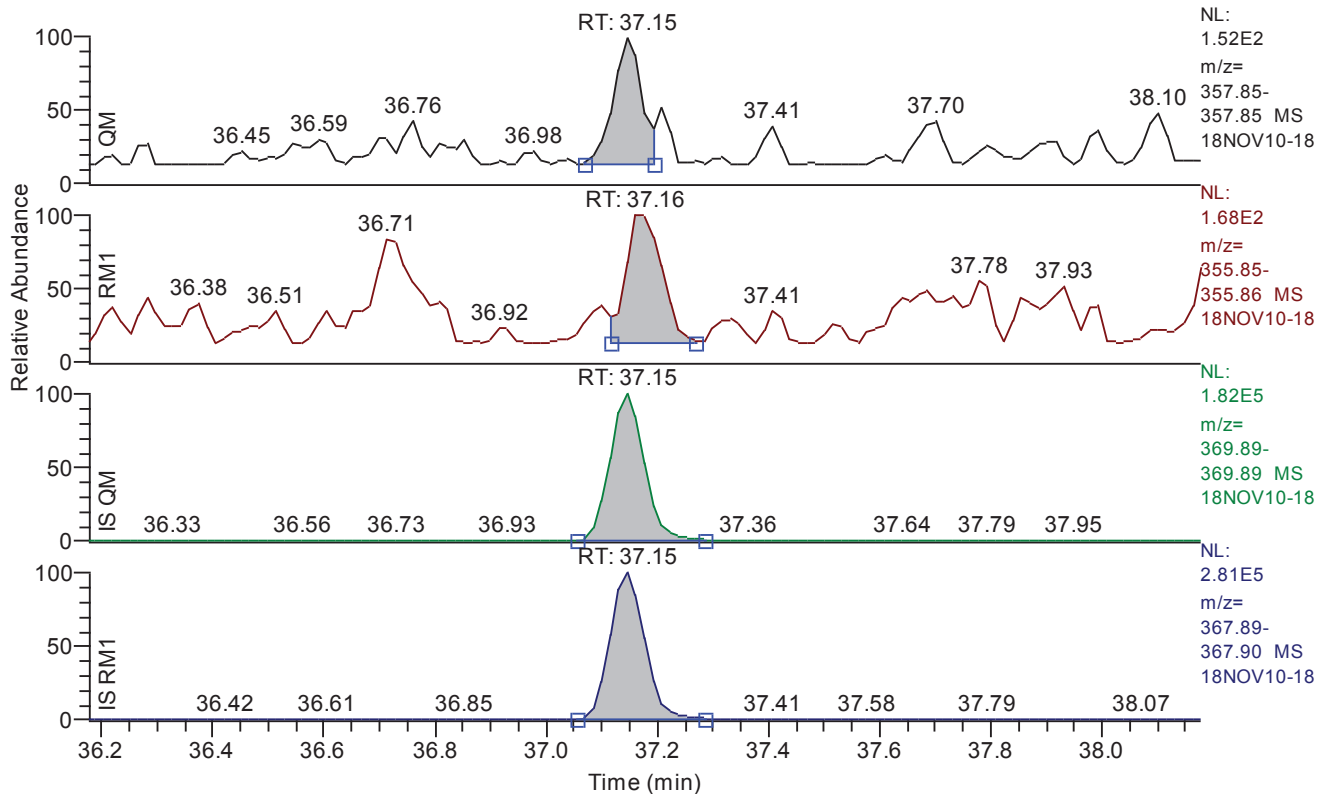


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.75
QM Area	673
QM Integration Mode	A
RM1 Area	1099
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0896
Unqualified Amount (A)	0.940956
Adjusted Amount (A)	0.9410
Signal-to-Noise	23
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.18 - 38.18 SM: 3G

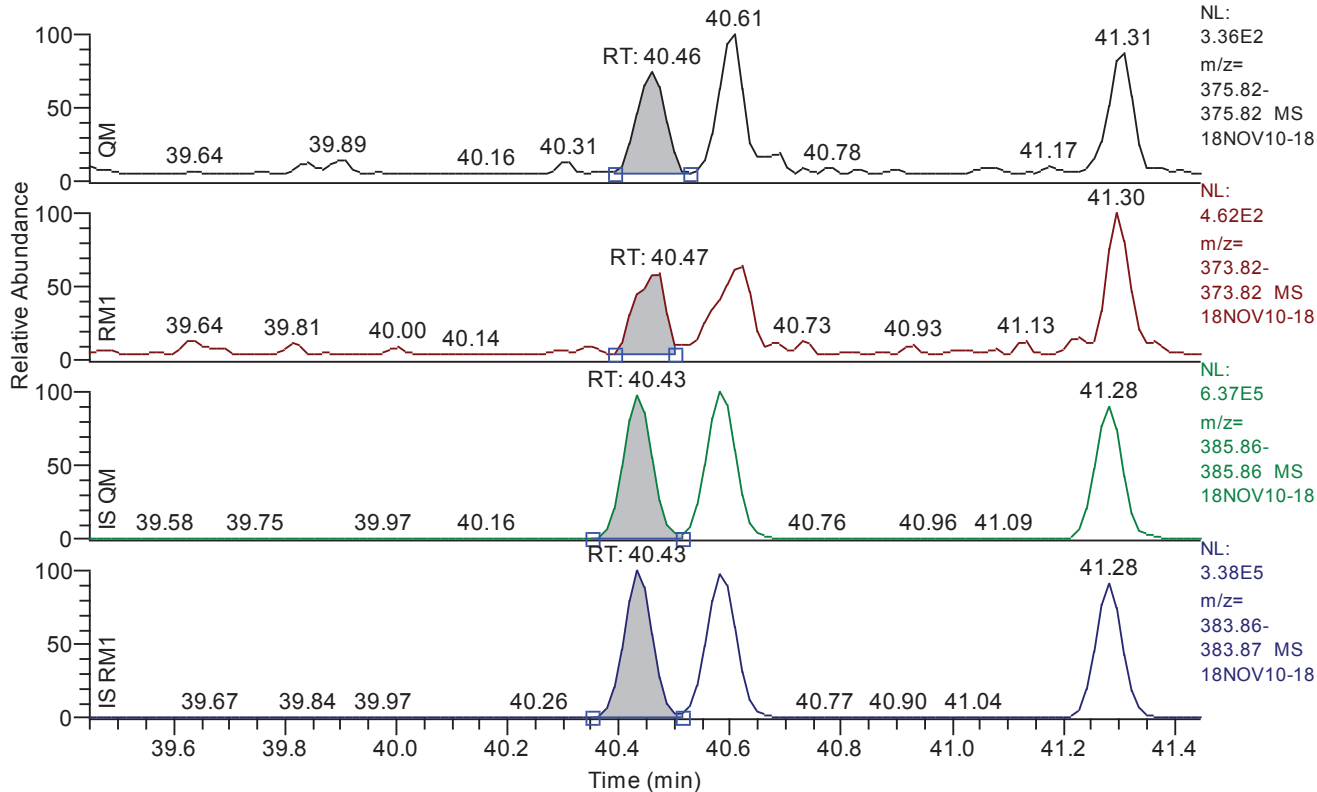


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.15
QM Area	467
QM Integration Mode	M
RM1 Area	661
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.2128
Unqualified Amount (A)	1.113450
Adjusted Amount (A)	1.1134
Signal-to-Noise	14
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.45 - 41.45 SM: 3G

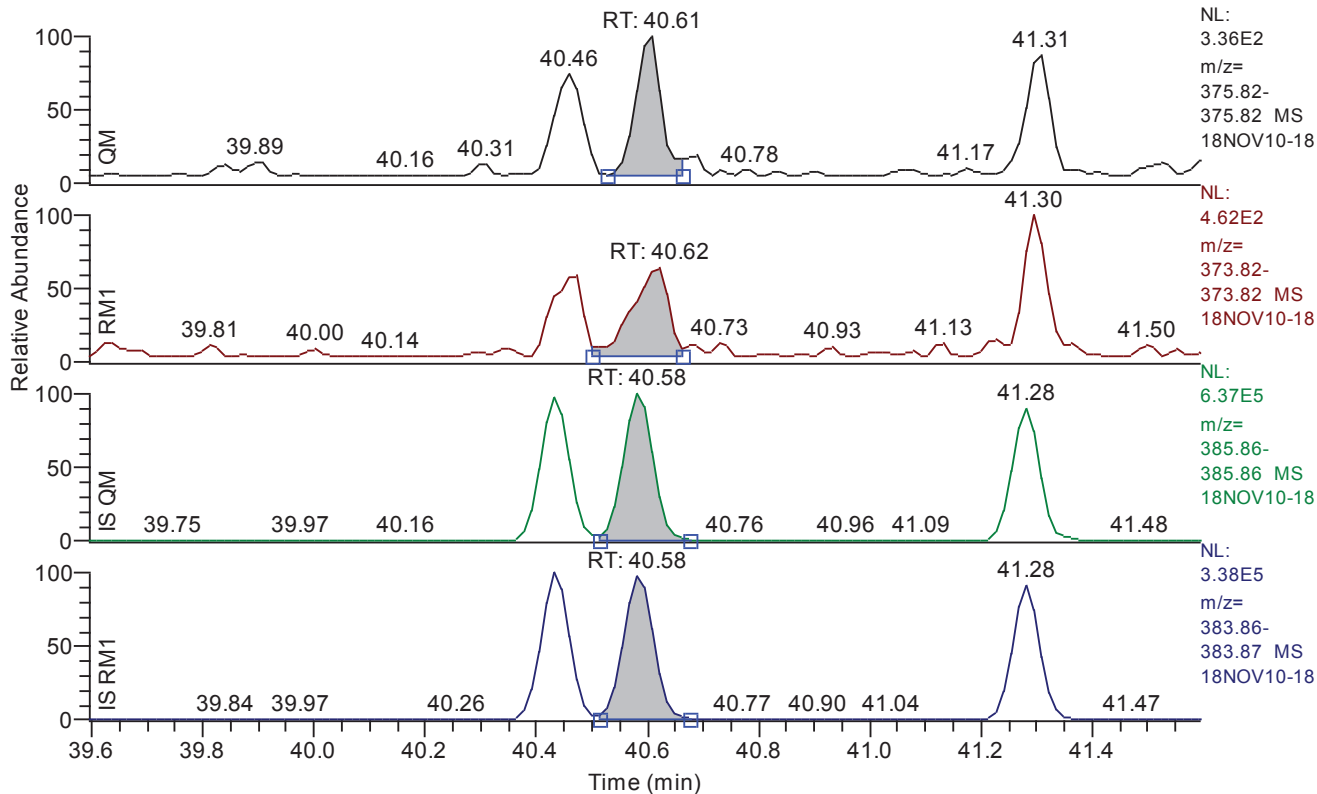


Entry Parameters

Compound Name	123478-HxCDF
QM Retention Time	40.46
QM Area	830
QM Integration Mode	A
RM1 Area	960
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0904
Unqualified Amount (A)	0.927530
Adjusted Amount (A)	0.9275
Signal-to-Noise	25
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.59 - 41.59 SM: 3G

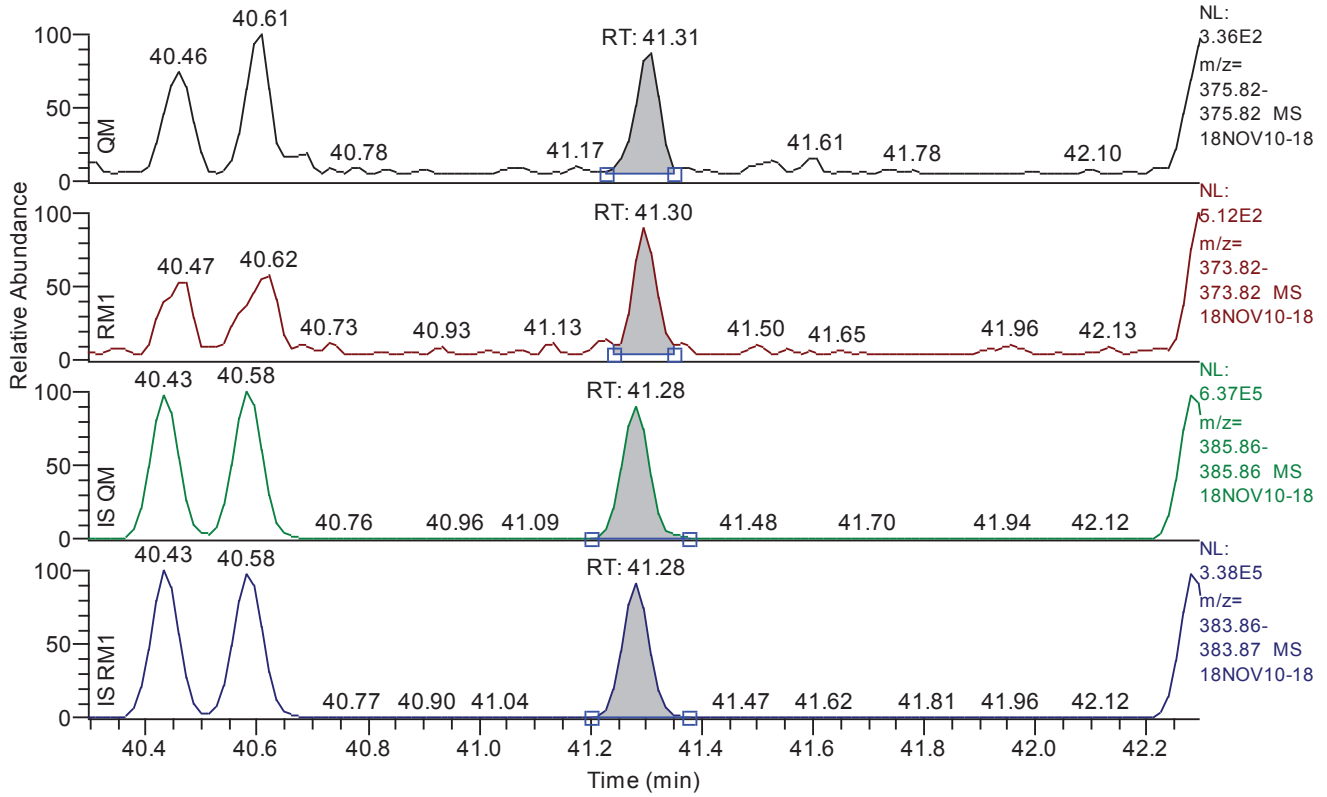


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.61
QM Area	1011
QM Integration Mode	A
RM1 Area	1267
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0936
Unqualified Amount (A)	1.170159
Adjusted Amount (A)	1.1702
Signal-to-Noise	31
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.30 - 42.30 SM: 3G

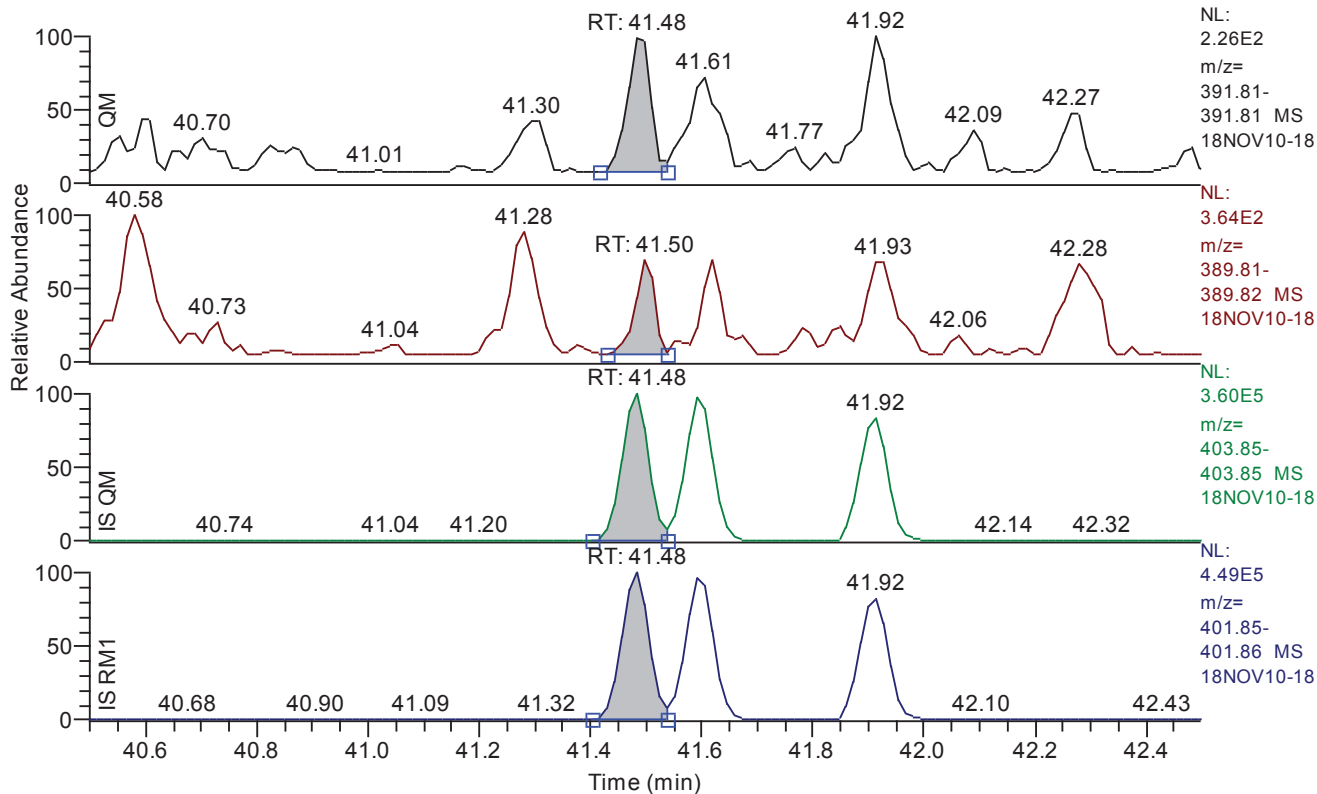


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.31
QM Area	849
QM Integration Mode	A
RM1 Area	1304
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0951
Unqualified Amount (A)	1.222840
Adjusted Amount (A)	n.d.
Signal-to-Noise	37
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.50 - 42.50 SM: 3G

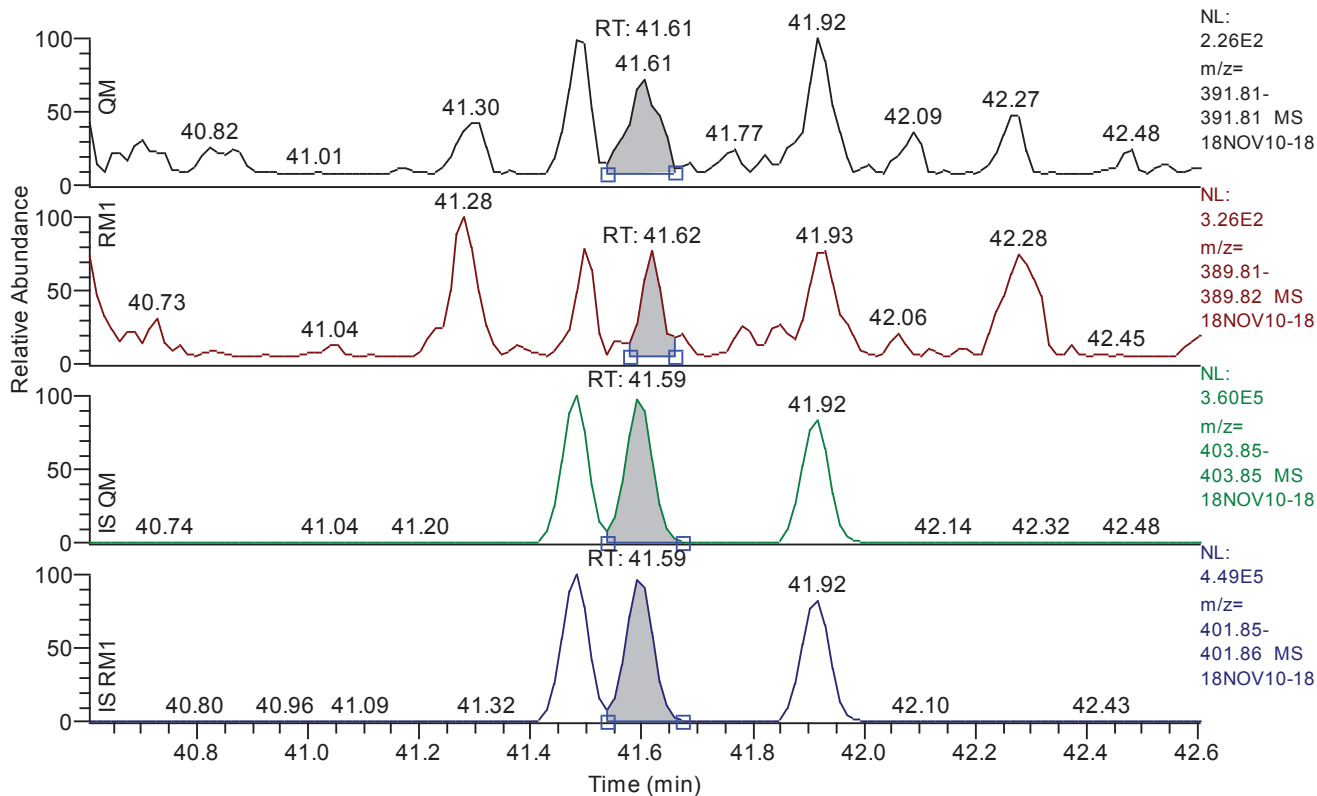


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.48
QM Area	601
QM Integration Mode	A
RM1 Area	577
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1198
Unqualified Amount (A)	0.852127
Adjusted Amount (A)	n.d.
Signal-to-Noise	23
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.61 - 42.61 SM: 3G

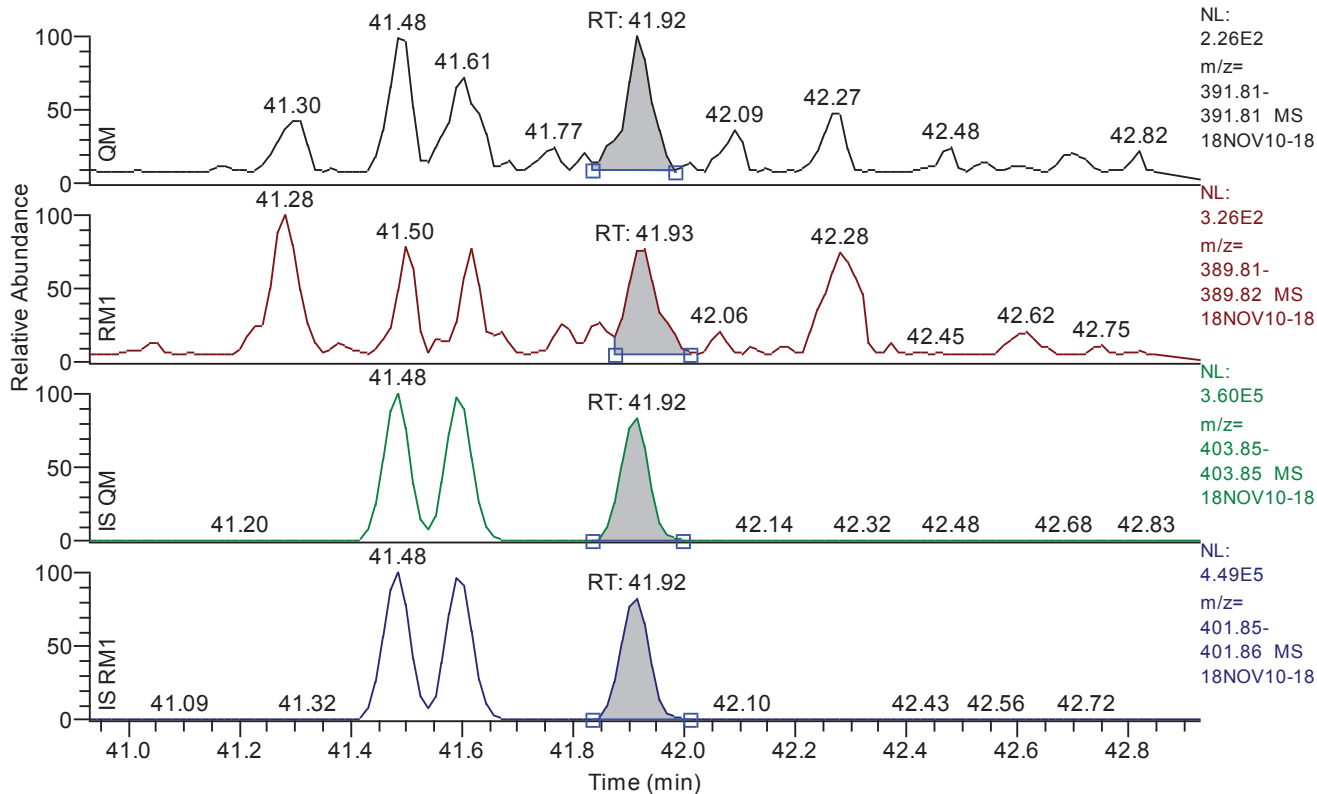


Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.61
QM Area	566
QM Integration Mode	A
RM1 Area	569
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1246
Unqualified Amount (A)	0.827710
Adjusted Amount (A)	n.d.
Signal-to-Noise	19
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 40.93 - 42.93 SM: 3G



NL: 2.26E2
 m/z= 391.81-391.81 MS
 18NOV10-18

NL: 3.26E2
 m/z= 389.81-389.82 MS
 18NOV10-18

NL: 3.60E5
 m/z= 403.85-403.85 MS
 18NOV10-18

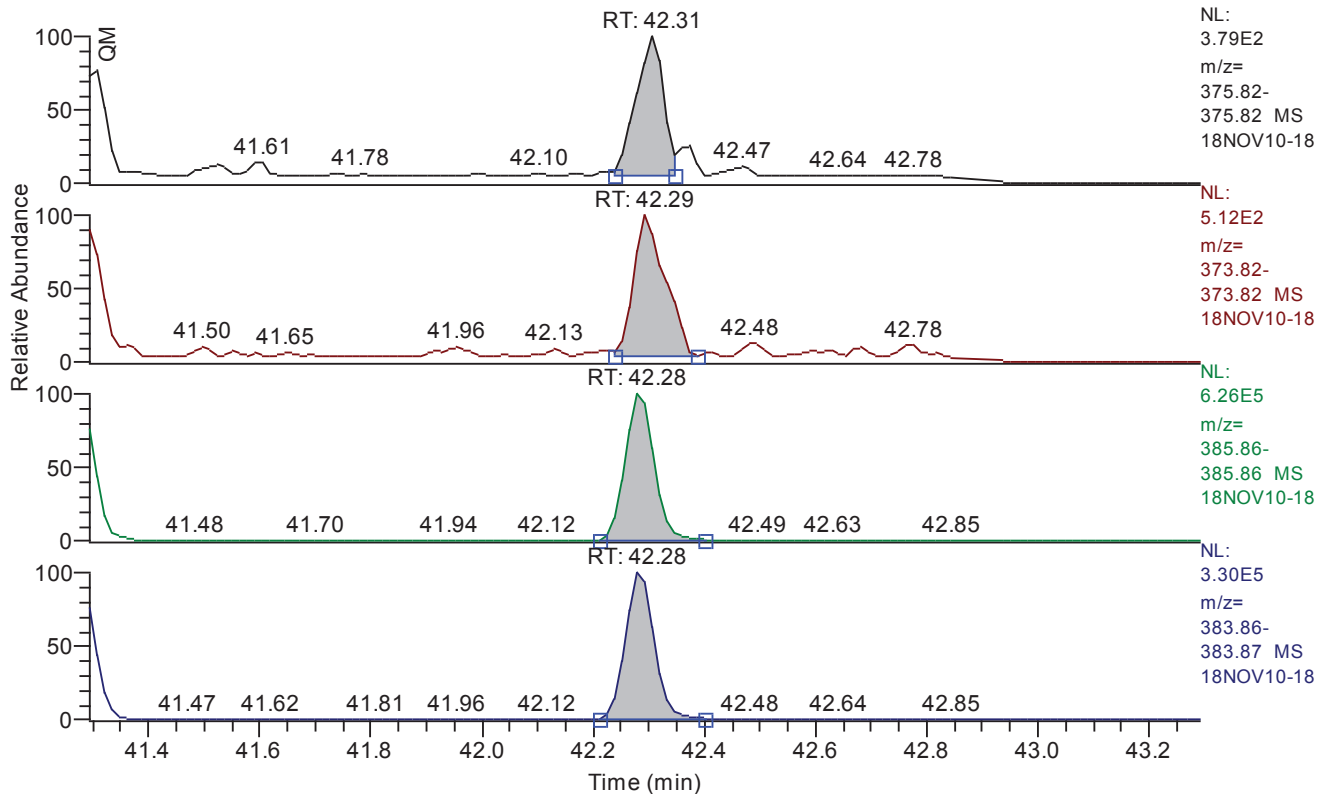
NL: 4.49E5
 m/z= 401.85-401.86 MS
 18NOV10-18

Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.92
QM Area	709
QM Integration Mode	A
RM1 Area	879
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1374
Unqualified Amount (A)	1.238666
Adjusted Amount (A)	1.2387
Signal-to-Noise	22
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 41.29 - 43.29 SM: 3G

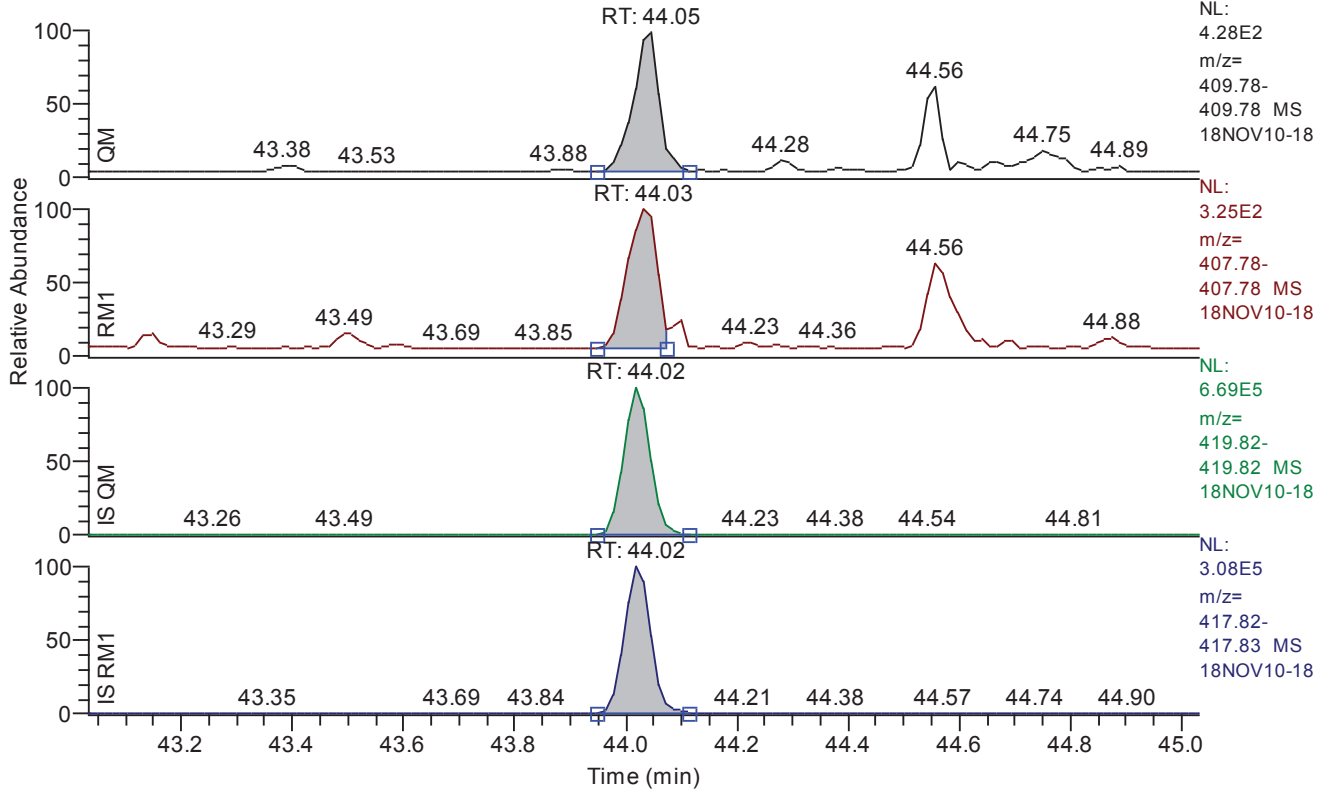


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.31
QM Area	1235
QM Integration Mode	A
RM1 Area	1950
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0942
Unqualified Amount (A)	1.703533
Adjusted Amount (A)	n.d.
Signal-to-Noise	44
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 43.03 - 45.03 SM: 3G

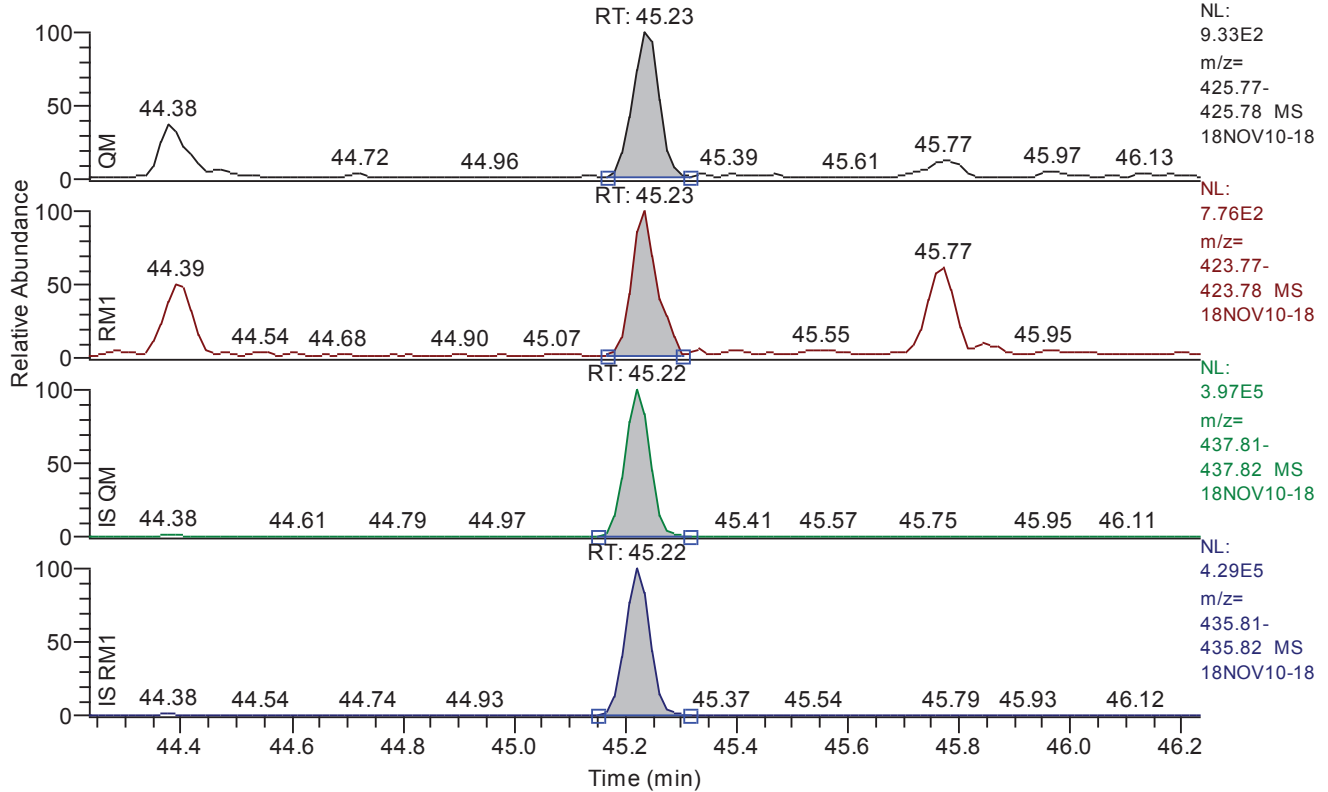


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.05
QM Area	1347
QM Integration Mode	A
RM1 Area	1154
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0621
Unqualified Amount (A)	1.270516
Adjusted Amount (A)	n.d.
Signal-to-Noise	50
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 44.23 - 46.23 SM: 3G

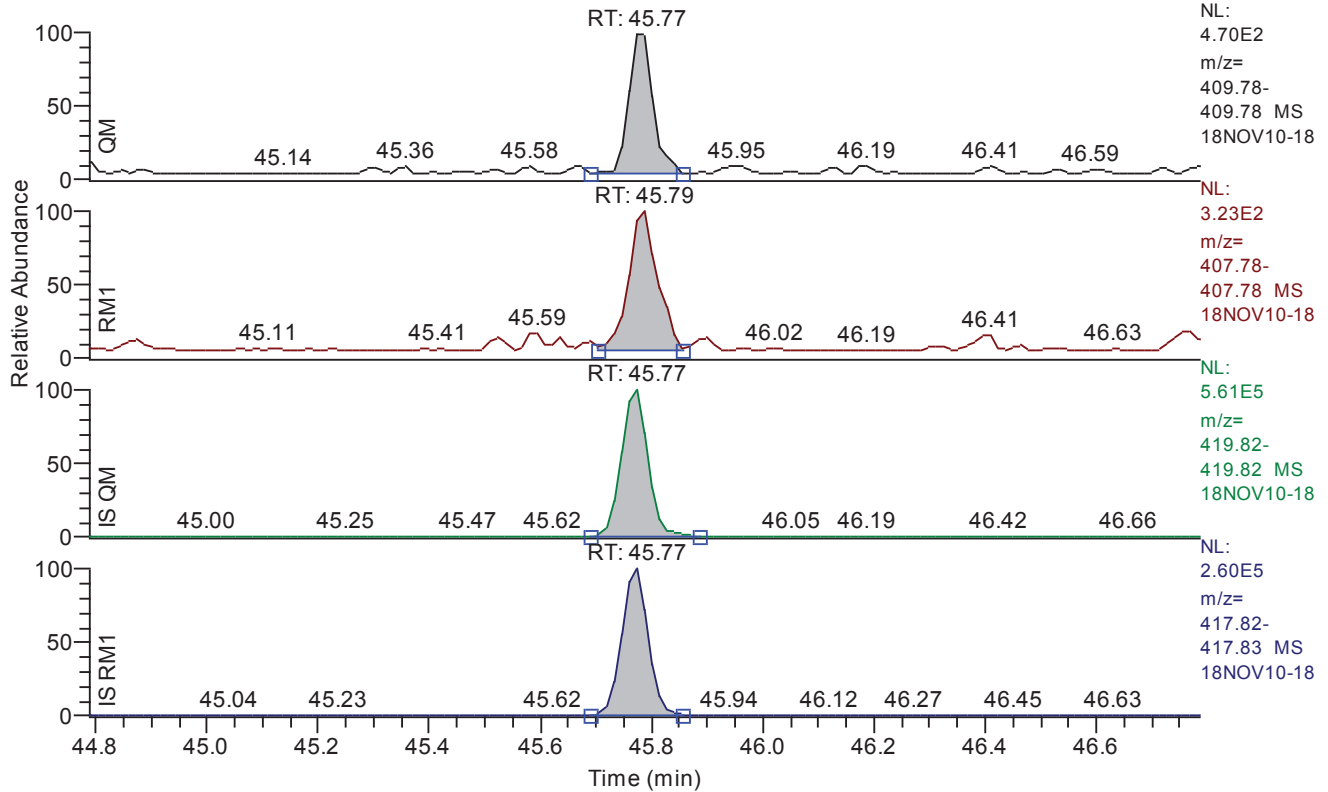


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.23
QM Area	3125
QM Integration Mode	A
RM1 Area	2455
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0959
Unqualified Amount (A)	4.129991
Adjusted Amount (A)	n.d.
Signal-to-Noise	104
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 44.79 - 46.79 SM: 3G

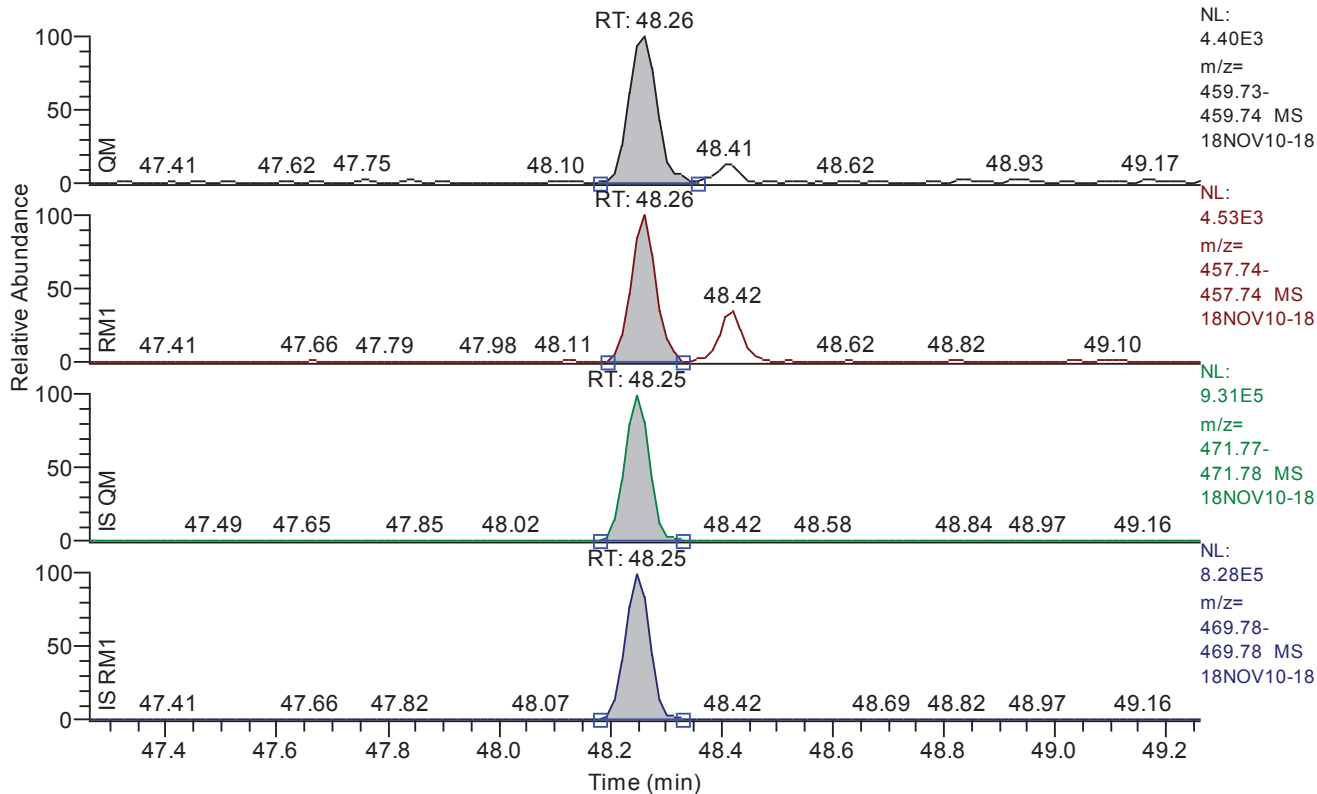


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.77
QM Area	1407
QM Integration Mode	A
RM1 Area	1125
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.0712
Unqualified Amount (A)	1.471354
Adjusted Amount (A)	n.d.
Signal-to-Noise	52
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 47.26 - 49.26 SM: 3G

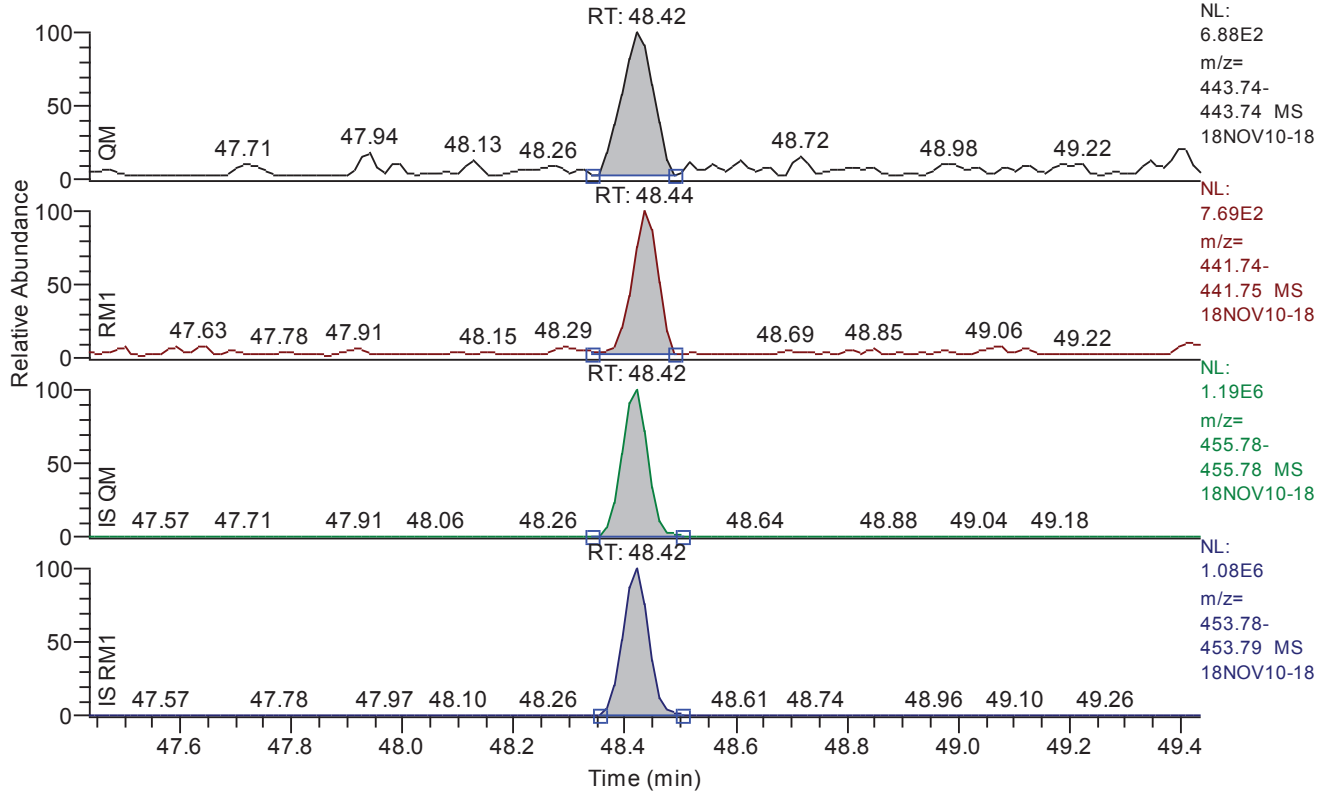


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.26
QM Area	15419
QM Integration Mode	A
RM1 Area	13975
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1924
Unqualified Amount (A)	22.169543
Adjusted Amount (A)	22.1695
Signal-to-Noise	266
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.44 - 49.44 SM: 3G

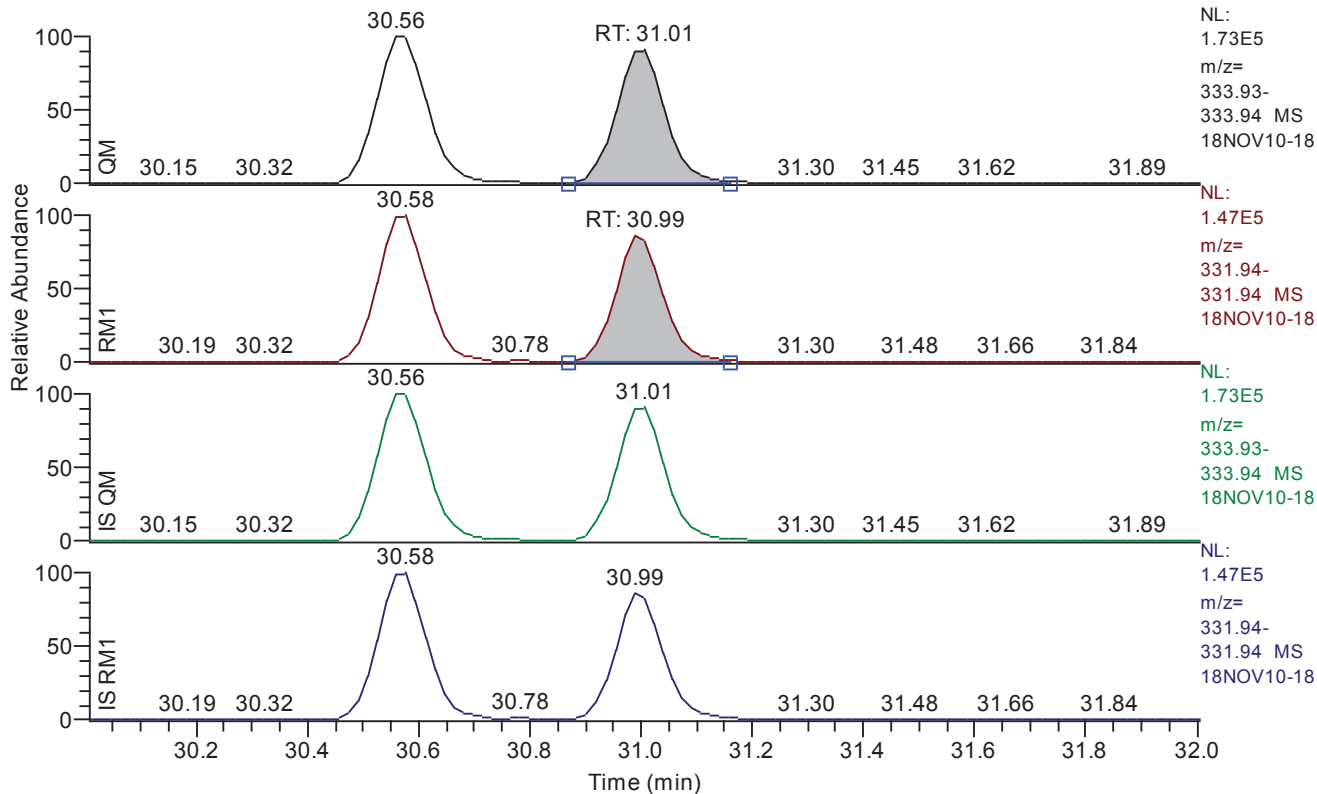


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.42
QM Area	2654
QM Integration Mode	A
RM1 Area	2414
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1389
Unqualified Amount (A)	3.221835
Adjusted Amount (A)	3.2218
Signal-to-Noise	52
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 30.01 - 32.01 SM: 3G



Entry Parameters

Compound Name	13C12-1278-TCDD (CRS)
QM Retention Time	31.01
QM Area	960972
QM Integration Mode	A
RM1 Area	756586
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3333
Unqualified Amount (A)	1204.088805
Adjusted Amount (A)	1204.0888
Signal-to-Noise	9509
Client Flags	
Status Overview	passed
Status Info	

Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/10 09:26
Number of Entries 255
Comment BLK:10914:12936
Vial 72
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007
Sample ID BLK313007
Inst ID DF17611-18NOV10
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

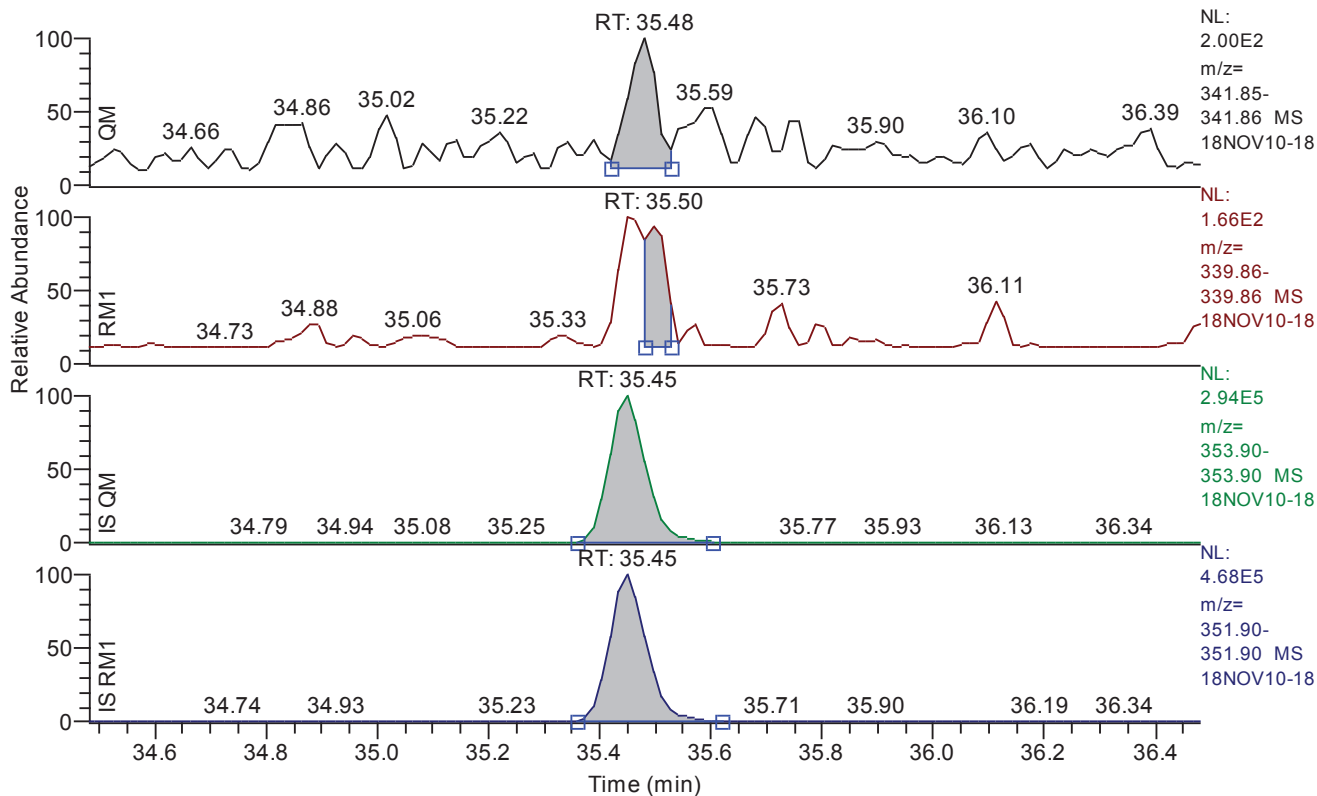
Quan x:\18nov10\18nov10-18.quan
Data x:\18nov10\18nov10-18.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 34.48 - 36.48 SM: 3G

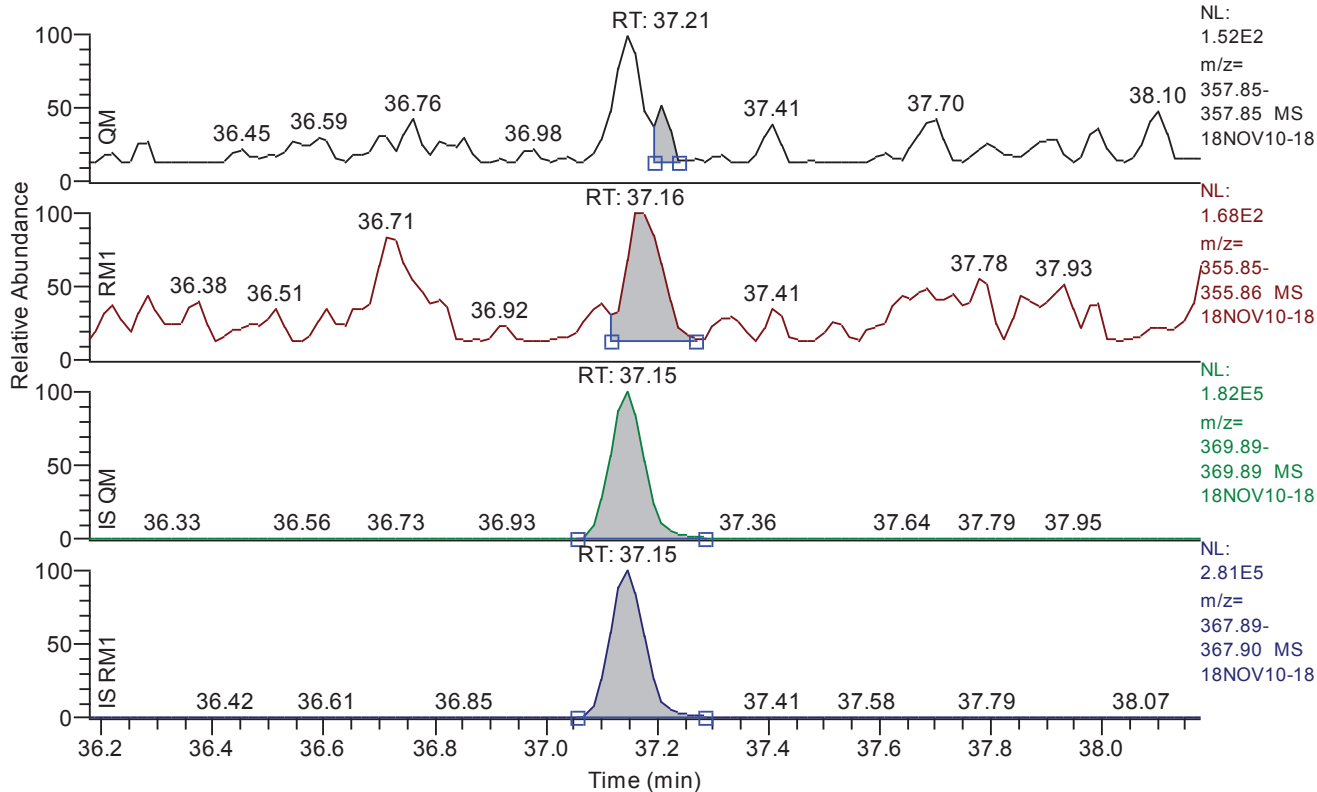


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.48
QM Area	608
QM Integration Mode	A
RM1 Area	320
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.1074
Unqualified Amount (A)	0.561567
Adjusted Amount (A)	n.d.
Signal-to-Noise	20
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A

Chromatogram

RT: 36.18 - 38.18 SM: 3G



Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.21
QM Area	104
QM Integration Mode	A
RM1 Area	661
RM1 Integration Mode	A
ManInt	1
Detection Limit (A)	0.2128
Unqualified Amount (A)	0.755624
Adjusted Amount (A)	n.d.
Signal-to-Noise	10
Client Flags	
Status Overview	failed
Status Info	Failed on: Ratio1A RM1Time < min RM2Time < min

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.40	29.42	29.42	29.40	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.58	30.60	30.61	30.56	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.47	35.48	35.45	35.45	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.74	36.75	36.73	36.73	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.16	37.15	37.16	37.15	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.45	40.46	40.47	40.43	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.59	40.61	40.62	40.58	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.28	41.31	41.30	41.28	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.48	41.48	41.50	41.48	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.60	41.61	41.62	41.59	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.91	41.92	41.93	41.92	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.29	42.31	42.29	42.28	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.02	44.05	44.03	44.02	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.22	45.23	45.23	45.22	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.78	45.77	45.79	45.77	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.25	48.26	48.26	48.25	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.42	48.42	48.44	48.42	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.99	31.01	30.99	31.01	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.71	29.72	29.72	29.72	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.35	40.35	40.37	40.35	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.38	29.40	29.40	29.50	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.55	30.56	30.58	30.58	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.43	35.45	35.45	35.50	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.73	36.73	36.73	36.79	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.13	37.15	37.15	37.15	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.43	40.43	40.43	40.42	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.58	40.58	40.58	40.57	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.27	41.28	41.28	41.26	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.47	41.48	41.48	41.48	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.59	41.59	41.59	41.59	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.90	41.92	41.92	41.92	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.28	42.28	42.28	42.25	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.01	44.02	44.02	44.09	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.21	45.22	45.22	45.22	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.76	45.77	45.77	45.69	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.23	48.25	48.25	48.25	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.41	48.42	48.42	48.38	passed	passed



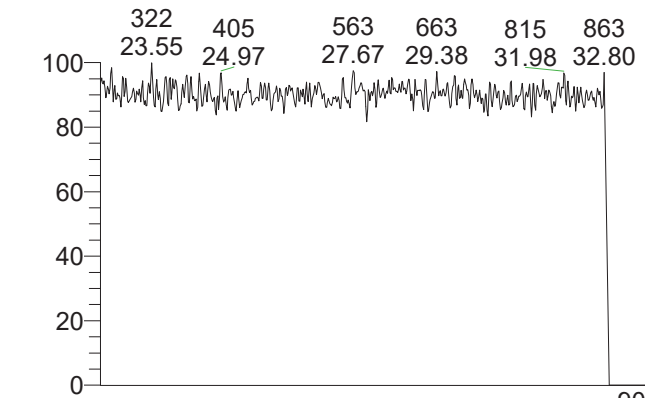
Entry Parameters

No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.42	1.0823	0.6450 - 0.8950	failed	---	0 - 0	passed
2	2378-TCDD	30.60	0.6775	0.6450 - 0.8950	passed	---	0 - 0	passed
3	12378-PeCDF	35.48	0.7103	1.3150 - 1.7850	failed	---	0 - 0	passed
4	23478-PeCDF	36.75	1.6326	1.3150 - 1.7850	passed	---	0 - 0	passed
5	12378-PeCDD	37.15	1.4158	1.3150 - 1.7850	passed	---	0 - 0	passed
6	123478-HxCDF	40.46	1.1564	1.0450 - 1.4350	passed	---	0 - 0	passed
7	123678-HxCDF	40.61	1.2533	1.0450 - 1.4350	passed	---	0 - 0	passed
8	234678-HxCDF	41.31	1.5368	1.0450 - 1.4350	failed	---	0 - 0	passed
9	123478-HxCDD	41.48	0.9609	1.0450 - 1.4350	failed	---	0 - 0	passed
10	123678-HxCDD	41.61	1.0063	1.0450 - 1.4350	failed	---	0 - 0	passed
11	123789-HxCDD	41.92	1.2394	1.0450 - 1.4350	passed	---	0 - 0	passed
12	123789-HxCDF	42.31	1.5795	1.0450 - 1.4350	failed	---	0 - 0	passed
13	1234678-HpCDF	44.05	0.8565	0.8750 - 1.2050	failed	---	0 - 0	passed
14	1234678-HpCDD	45.23	0.7855	0.8750 - 1.2050	failed	---	0 - 0	passed
15	1234789-HpCDF	45.77	0.7999	0.8750 - 1.2050	failed	---	0 - 0	passed
16	OCDD	48.26	0.9063	0.7550 - 1.0250	passed	---	0 - 0	passed
17	OCDF	48.42	0.9096	0.7550 - 1.0250	passed	---	0 - 0	passed
18	13C12-1278-TCDD (CRS)	31.01	0.7873	0.6450 - 0.8950	passed	60.20	35 - 197	passed
19	13C12-1234-TCDD	29.72	0.8229	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.35	1.2741	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.40	0.7997	0.6450 - 0.8950	passed	60.86	40 - 135	passed
22	13C12-2378-TCDD	30.56	0.8277	0.6450 - 0.8950	passed	71.87	40 - 135	passed
23	13C12-12378-PeCDF	35.45	1.6136	1.3150 - 1.7850	passed	67.05	40 - 135	passed
24	13C12-23478-PeCDF	36.73	1.5904	1.3150 - 1.7850	passed	68.34	40 - 135	passed
25	13C12-12378-PeCDD	37.15	1.5687	1.3150 - 1.7850	passed	71.27	40 - 135	passed
26	13C12-123478-HxCDF	40.43	0.5355	0.4250 - 0.5950	passed	63.86	40 - 135	passed
27	13C12-123678-HxCDF	40.58	0.5290	0.4250 - 0.5950	passed	62.55	40 - 135	passed
28	13C12-234678-HxCDF	41.28	0.5270	0.4250 - 0.5950	passed	57.77	40 - 135	passed
29	13C12-123478-HxCDD	41.48	1.2649	1.0450 - 1.4350	passed	72.95	40 - 135	passed
30	13C12-123678-HxCDD	41.59	1.2569	1.0450 - 1.4350	passed	70.32	40 - 135	passed
31	13C12-123789-HxCDD	41.92	1.2583	1.0450 - 1.4350	passed	66.32	40 - 135	passed
32	13C12-123789-HxCDF	42.28	0.5199	0.4250 - 0.5950	passed	70.66	40 - 135	passed
33	13C12-1234678-HpCDF	44.02	0.4598	0.3650 - 0.5150	passed	67.24	40 - 135	passed
34	13C12-1234678-HpCDD	45.22	1.0675	0.8750 - 1.2050	passed	72.70	40 - 135	passed
35	13C12-1234789-HpCDF	45.77	0.4571	0.3650 - 0.5150	passed	67.37	40 - 135	passed
36	13C12-OCDD	48.25	0.8903	0.7550 - 1.0250	passed	69.75	40 - 135	passed
37	13C12-OCDF	48.42	0.9011	0.7550 - 1.0250	passed	64.51	40 - 135	passed

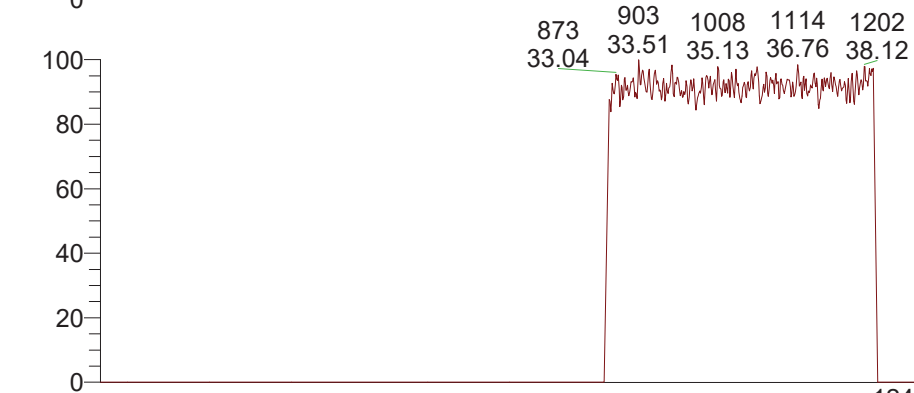
Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	failed	29.42	621	A	672	A	0.1213	0.726722	n.d.	0.000000	15	
2	2378-TCDD	passed	30.60	195	A	132	A	0.0880	0.265163	0.2652	0.000000	13	
3	12378-PeCDF	failed	35.48	608	A	432	M	0.1074	0.629130	n.d.	0.000000	21	
4	23478-PeCDF	passed	36.75	673	A	1099	A	0.0896	0.940956	0.9410	0.000000	23	
5	12378-PeCDD	passed	37.15	467	M	661	A	0.2128	1.113450	1.1134	0.000000	14	
6	123478-HxCDF	passed	40.46	830	A	960	A	0.0904	0.927530	0.9275	0.000000	25	
7	123678-HxCDF	passed	40.61	1011	A	1267	A	0.0936	1.170159	1.1702	0.000000	31	
8	234678-HxCDF	failed	41.31	849	A	1304	A	0.0951	1.222840	n.d.	0.000000	37	
9	123478-HxCDD	failed	41.48	601	A	577	A	0.1198	0.852127	n.d.	0.000000	23	
10	123678-HxCDD	failed	41.61	566	A	569	A	0.1246	0.827710	n.d.	0.000000	19	
11	123789-HxCDD	passed	41.92	709	A	879	A	0.1374	1.238666	1.2387	0.000000	22	
12	123789-HxCDF	failed	42.31	1235	A	1950	A	0.0942	1.703533	n.d.	0.000000	44	
13	1234678-HpCDF	failed	44.05	1347	A	1154	A	0.0621	1.270516	n.d.	0.000000	50	
14	1234678-HpCDD	failed	45.23	3125	A	2455	A	0.0959	4.129991	n.d.	0.000000	104	
15	1234789-HpCDF	failed	45.77	1407	A	1125	A	0.0712	1.471354	n.d.	0.000000	52	
16	OCDD	passed	48.26	15419	A	13975	A	0.1924	22.169543	22.1695	0.000000	266	
17	OCDF	passed	48.42	2654	A	2414	A	0.1389	3.221835	3.2218	0.000000	52	
18	13C12-1278-TCDD (CRS)	passed	31.01	960972	A	756586	A	0.3333	1204.088805	1204.0888	2000.000000	9509	
19	13C12-1234-TCDD	passed	29.72	1498597	A	1233245	A	0.3481	2000.000000	2000.0000	2000.000000	14364	
20	13C12-123468-HxCDD	passed	40.35	1649096	A	2101184	A	0.3210	2000.000000	2000.0000	2000.000000	15575	
21	13C12-2378-TCDF	passed	29.40	1881681	A	1504769	A	0.2311	1217.178551	1217.1786	2000.000000	13574	
22	13C12-2378-TCDD	passed	30.56	1081086	A	894835	A	0.3459	1437.433118	1437.4331	2000.000000	10676	
23	13C12-12378-PeCDF	passed	35.45	1350081	A	2178482	A	0.6165	1341.022058	1341.0221	2000.000000	7455	
24	13C12-23478-PeCDF	passed	36.73	1384151	A	2201363	A	0.6184	1366.814492	1366.8145	2000.000000	7976	
25	13C12-12378-PeCDD	passed	37.15	787292	A	1235043	A	0.5434	1425.361382	1425.3614	2000.000000	9531	
26	13C12-123478-HxCDF	passed	40.43	2256764	A	1208433	A	0.3939	1277.260827	1277.2608	2000.000000	8479	
27	13C12-123678-HxCDF	passed	40.58	2372247	A	1254802	A	0.3686	1251.063386	1251.0634	2000.000000	8498	
28	13C12-234678-HxCDF	passed	41.28	2006221	A	1057363	A	0.4031	1155.414077	1155.4141	2000.000000	7808	
29	13C12-123478-HxCDD	passed	41.48	1206347	A	1525932	A	0.3215	1459.048154	1459.0482	2000.000000	12653	
30	13C12-123678-HxCDD	passed	41.59	1211797	A	1523068	A	0.3096	1406.457392	1406.4574	2000.000000	12287	
31	13C12-123789-HxCDD	passed	41.92	1078148	A	1356586	A	0.3280	1326.440174	1326.4402	2000.000000	10610	
32	13C12-123789-HxCDF	passed	42.28	2290499	A	1190809	A	0.4339	1413.264241	1413.2642	2000.000000	8436	
33	13C12-1234678-HpCDF	passed	44.02	2274780	A	1045905	A	0.4197	1344.761002	1344.7610	2000.000000	8899	
34	13C12-1234678-HpCDD	passed	45.22	1282203	A	1368668	A	0.4172	1453.928912	1453.9289	2000.000000	10233	
35	13C12-1234789-HpCDF	passed	45.77	1917897	A	876652	A	0.4997	1347.451850	1347.4519	2000.000000	7478	
36	13C12-OCDD	passed	48.25	2845002	A	2532982	A	0.1817	2789.801673	2789.8017	4000.000000	47370	
37	13C12-OCDF	passed	48.42	3837599	A	3458095	A	0.1523	2580.461464	2580.4615	4000.000000	49745	

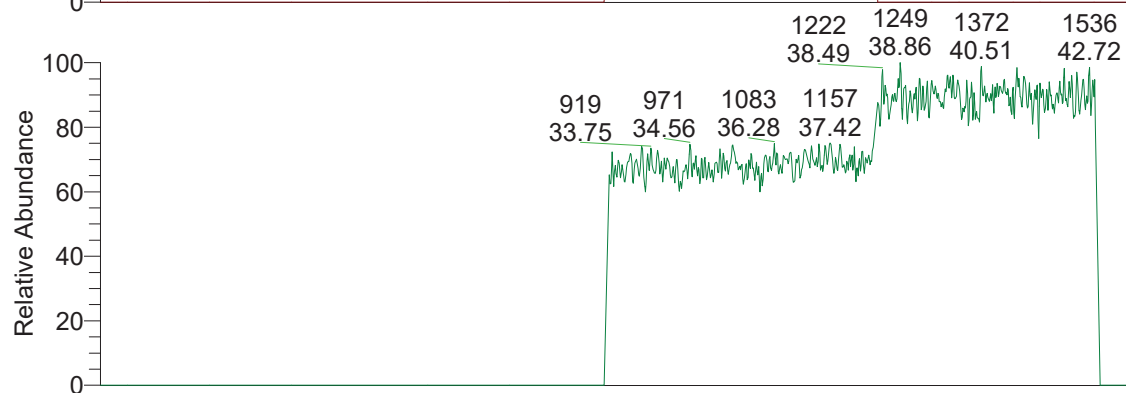
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18NOV10-
18



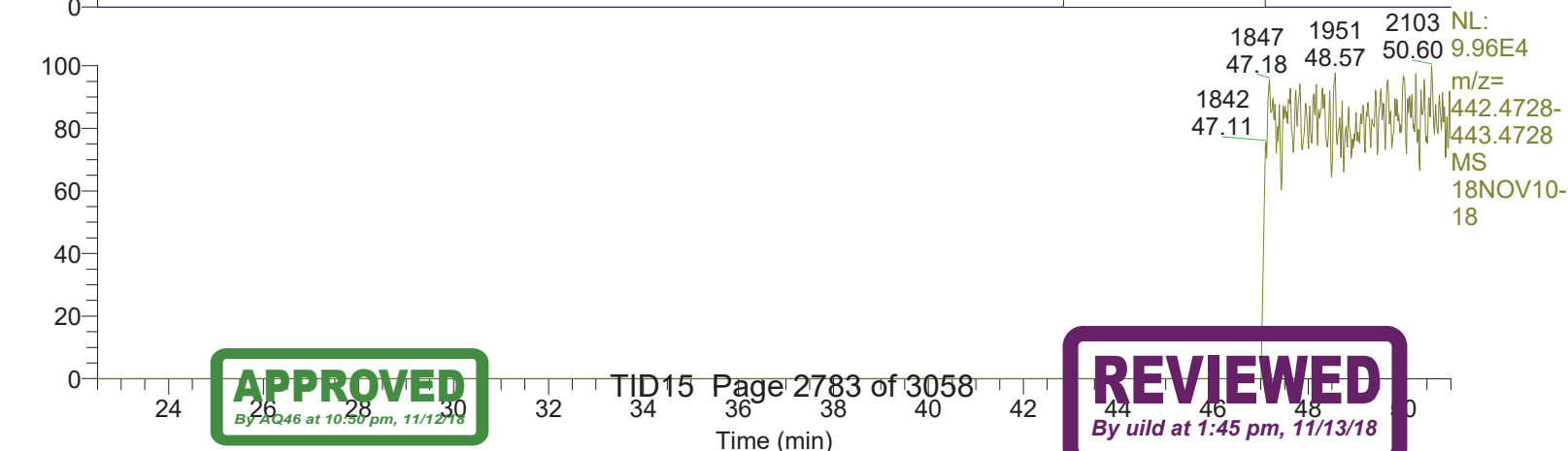
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18NOV10-
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18NOV10-
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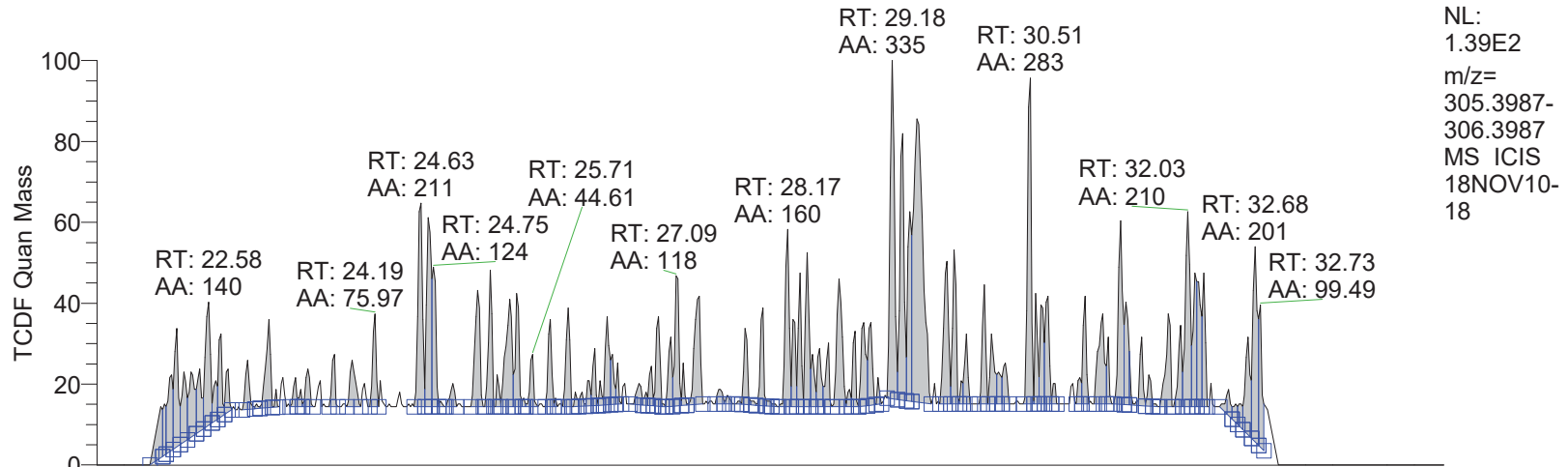
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APPROVED
By AQ46 at 10:50 pm, 11/12/18

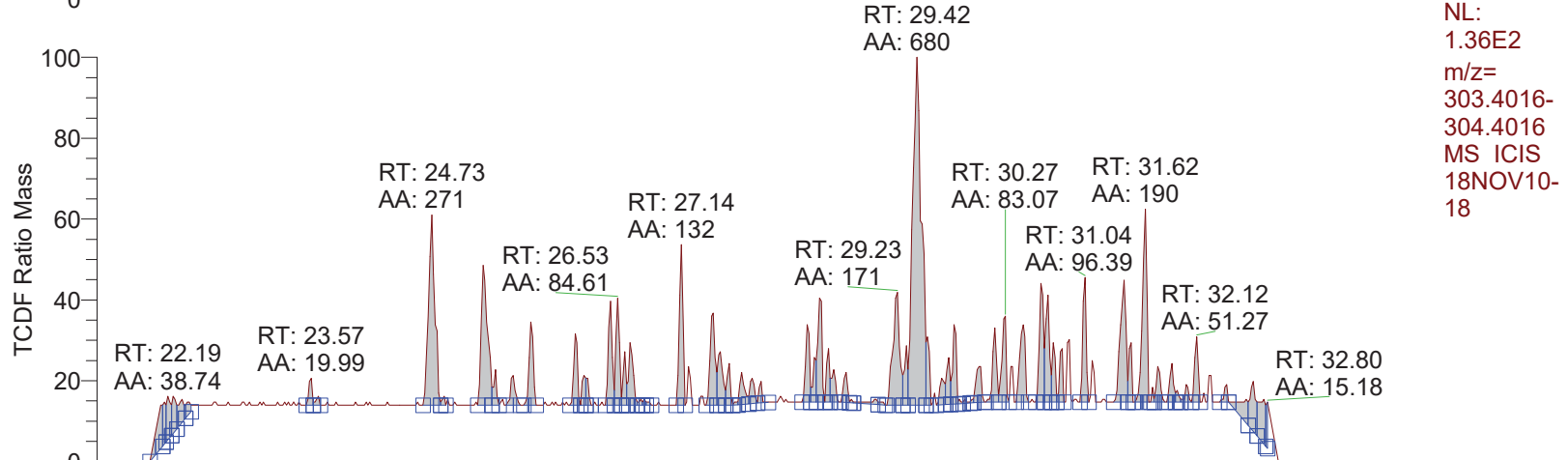
REVIEWED
By uild at 1:45 pm, 11/13/18

Time (min) 24 26 28 30 32 34 36 38 40 42 44 46 48 50

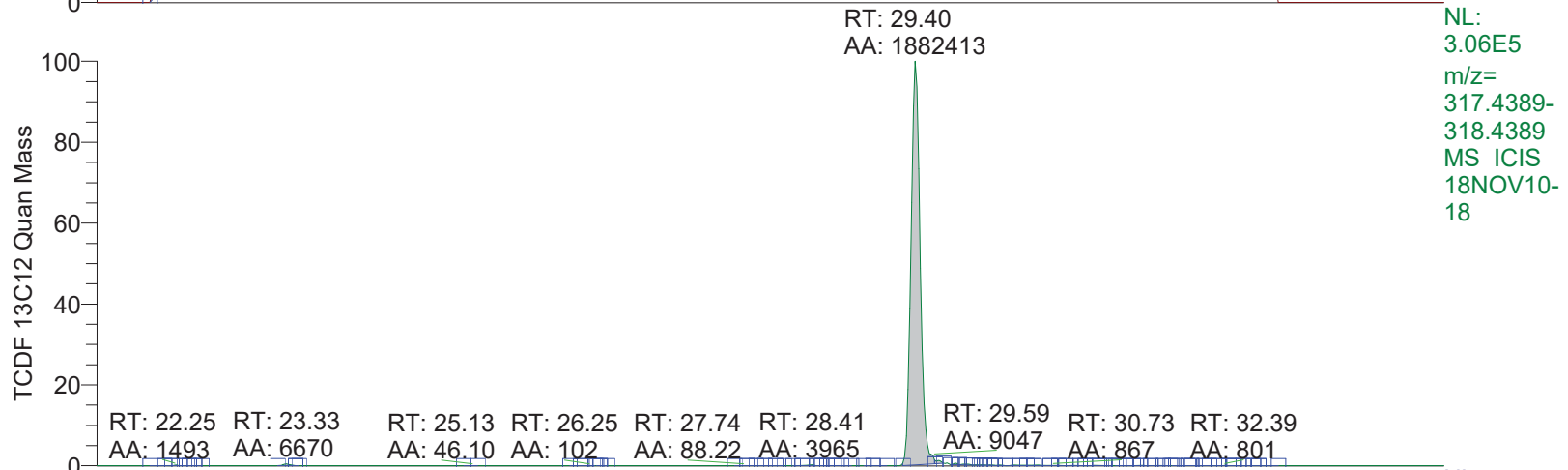
RT: 21.50 - 34.50



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MS ICIS
18NOV10-
18



NL:
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18NOV10-
18



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MS ICIS
18NOV10-
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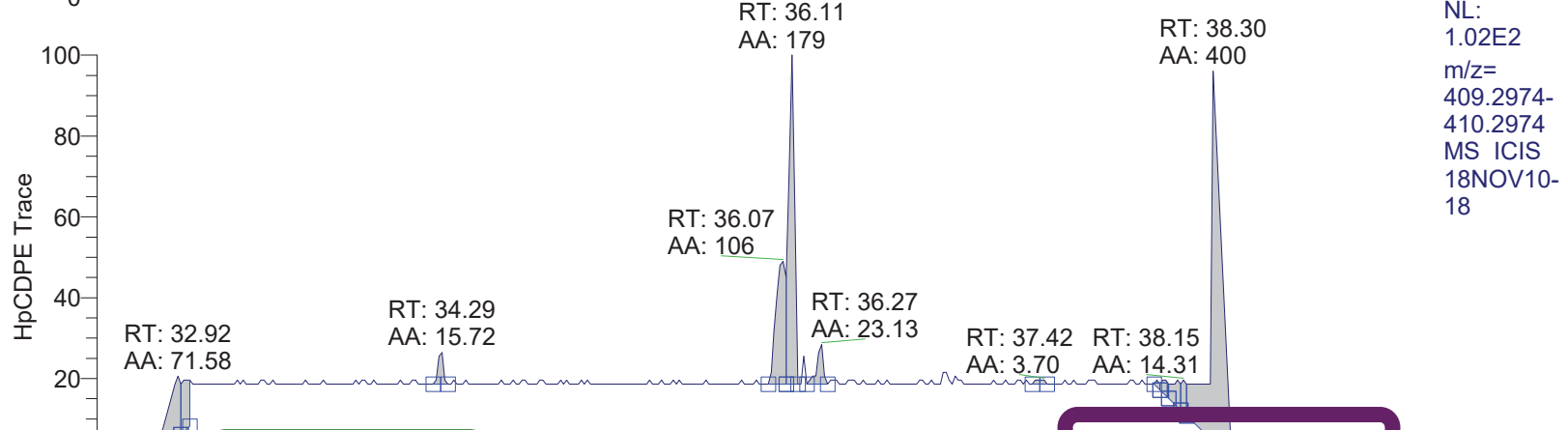
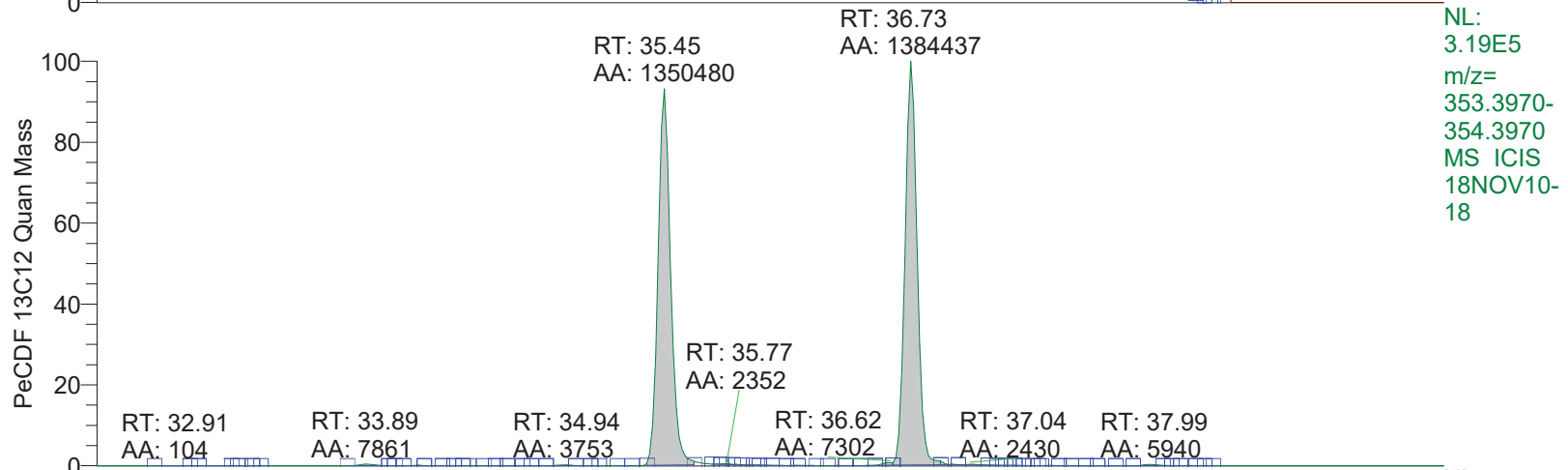
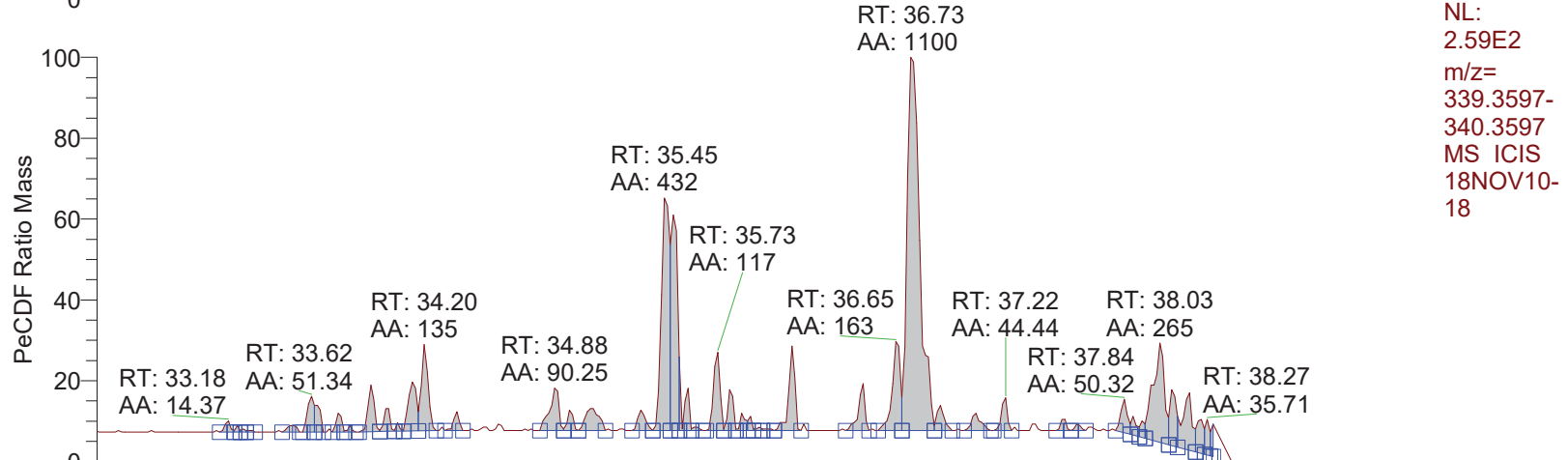
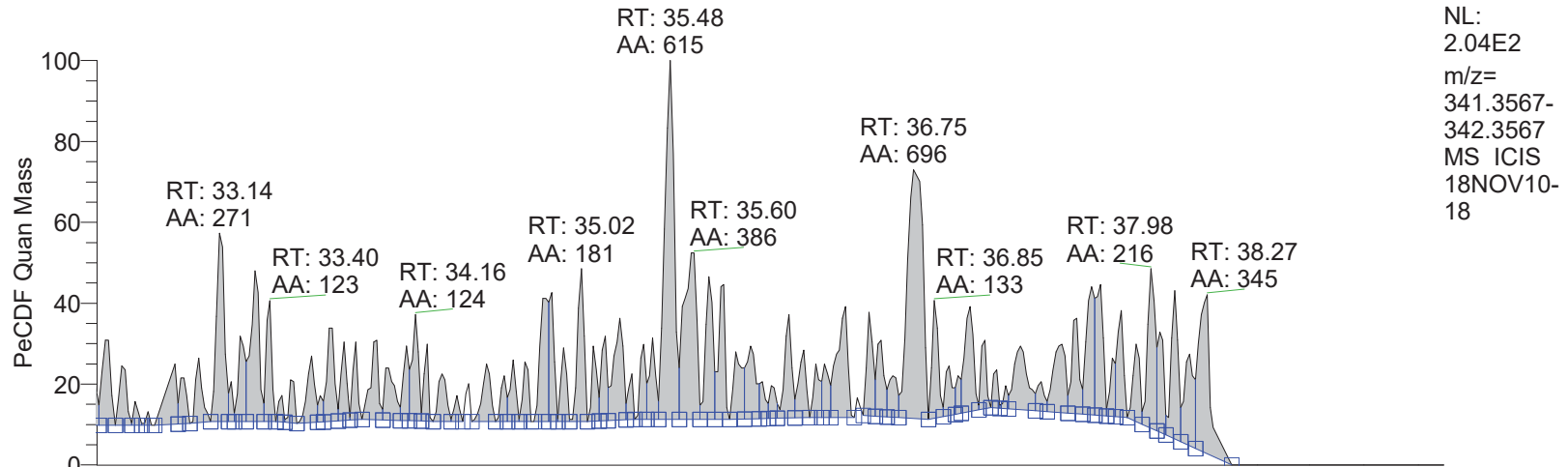


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18

APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:45 pm, 11/13/18

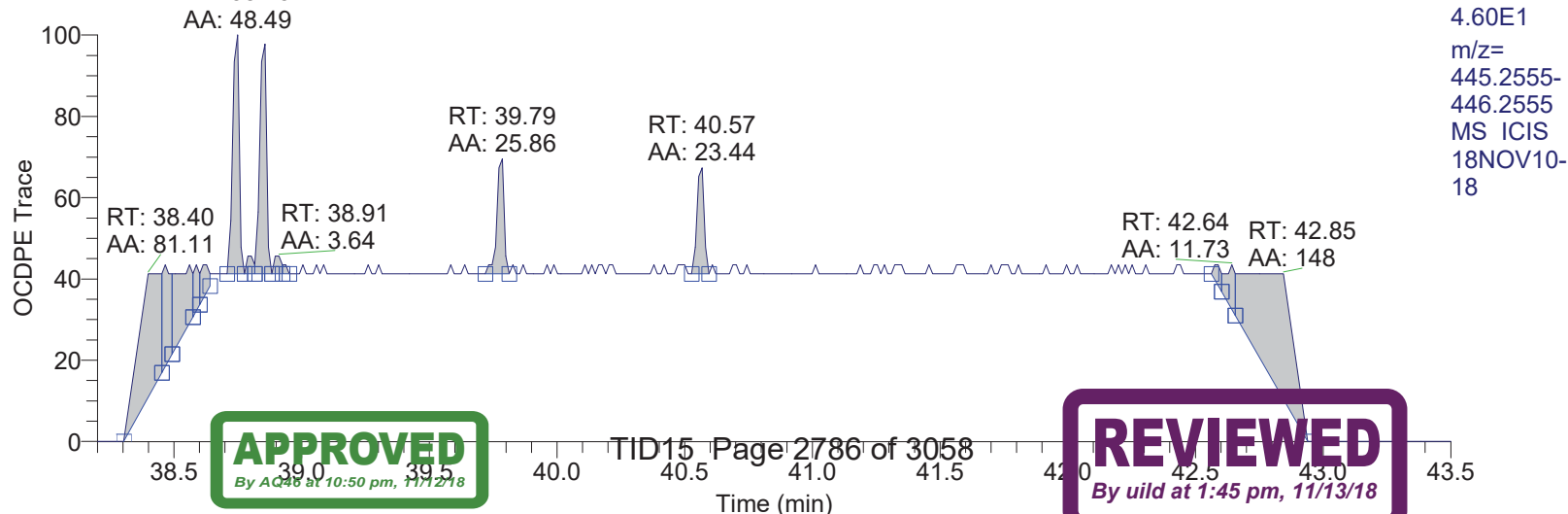
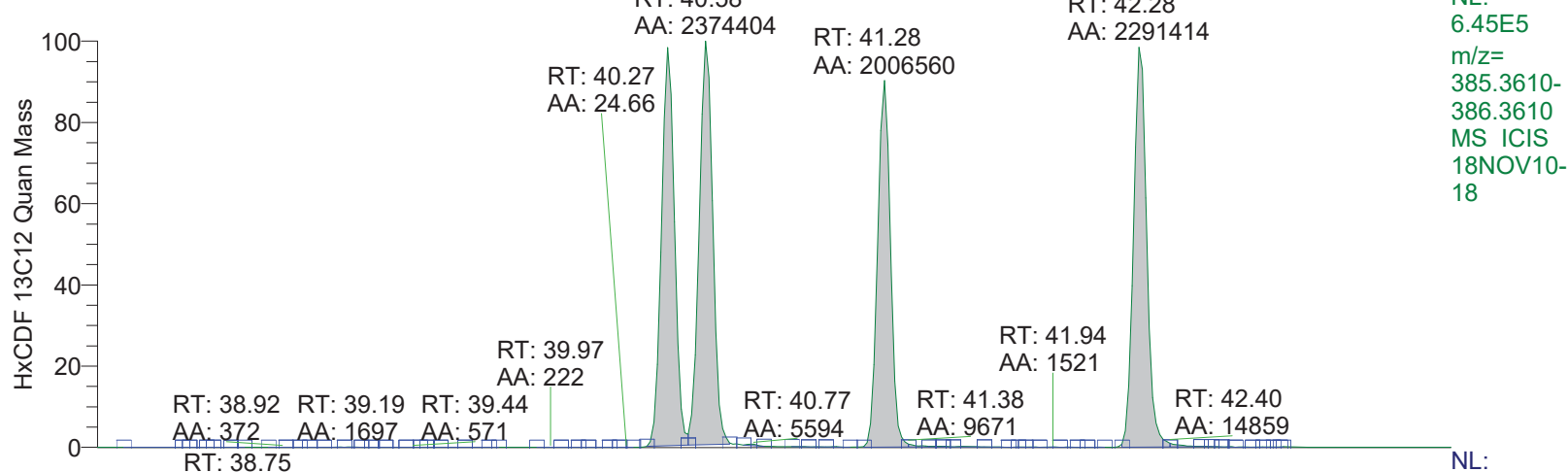
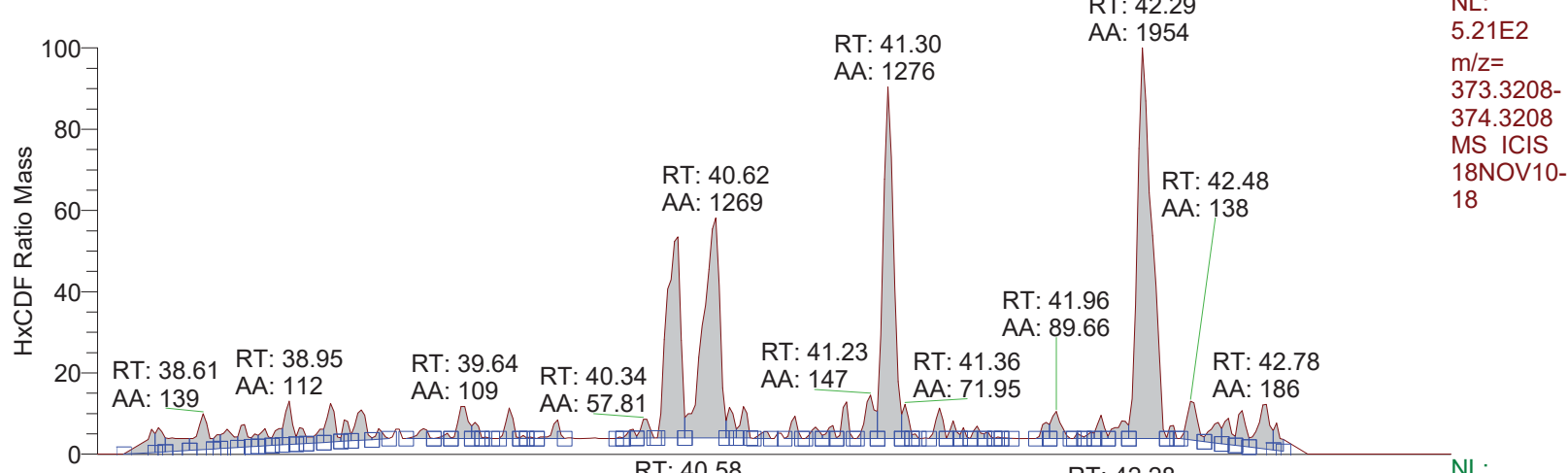
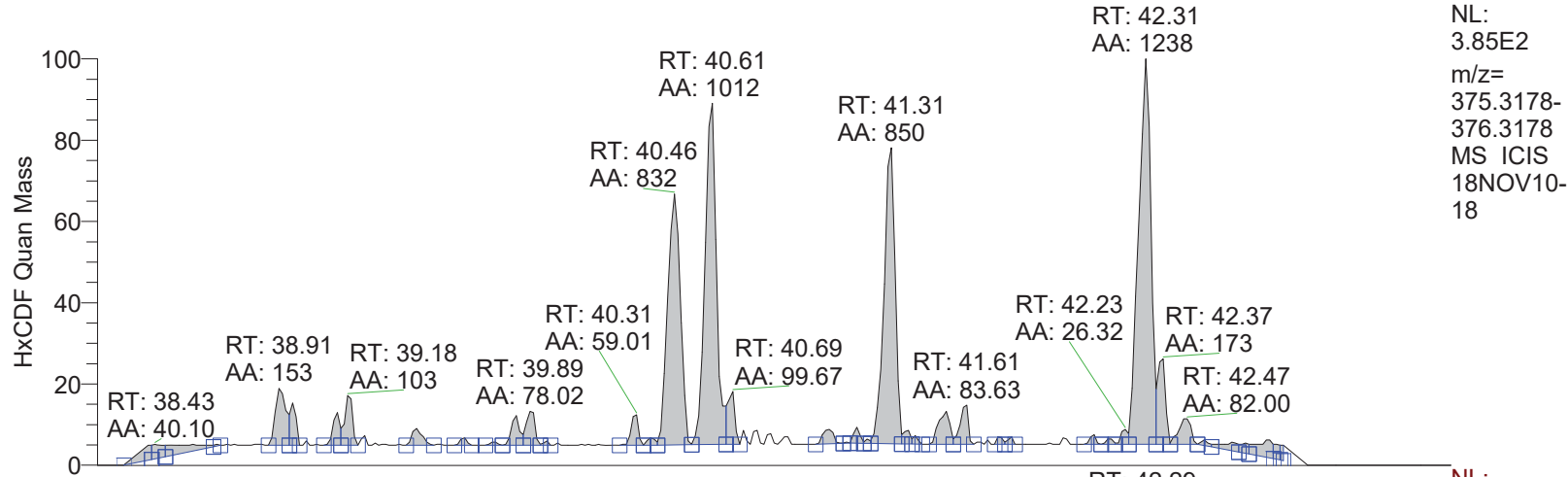
RT: 32.50 - 39.50



APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:45 pm, 11/13/18

RT: 38.20 - 43.50

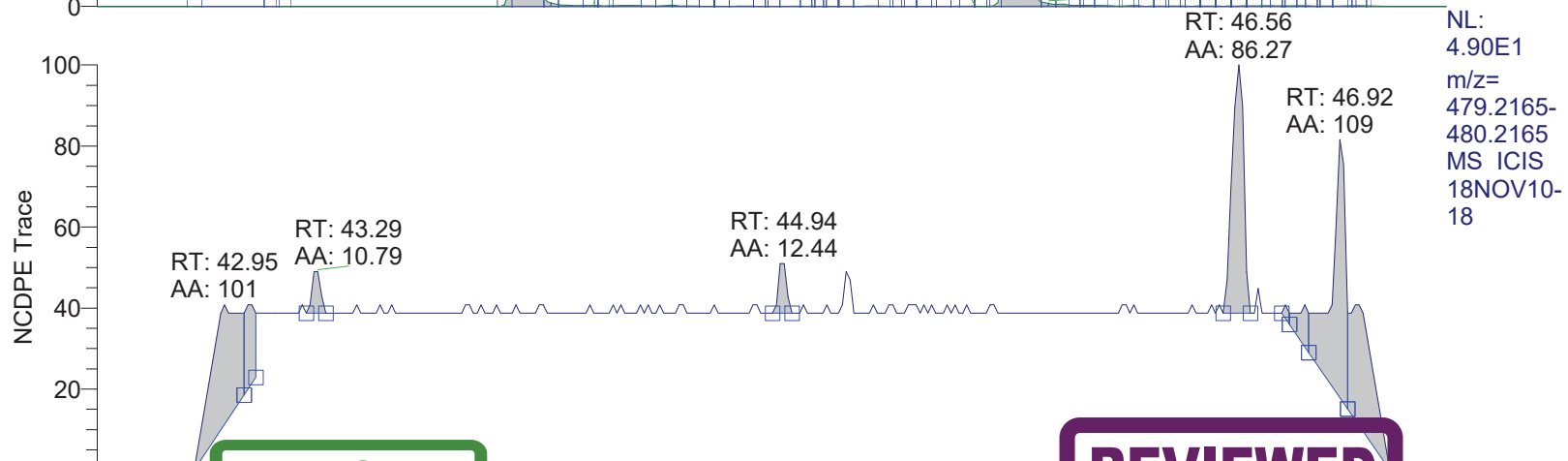
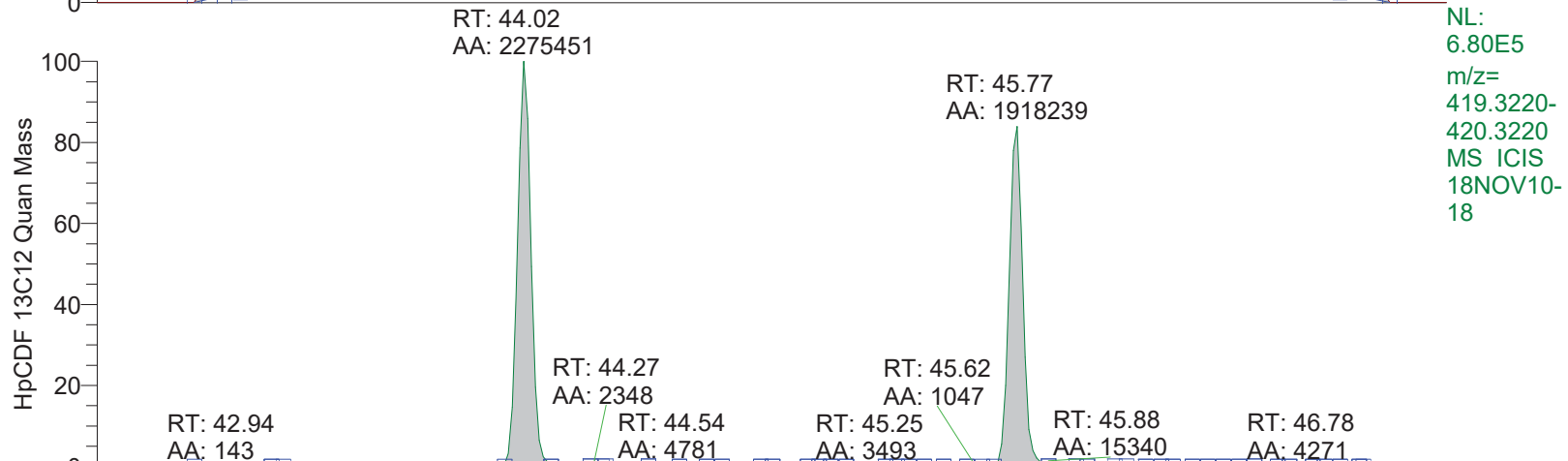
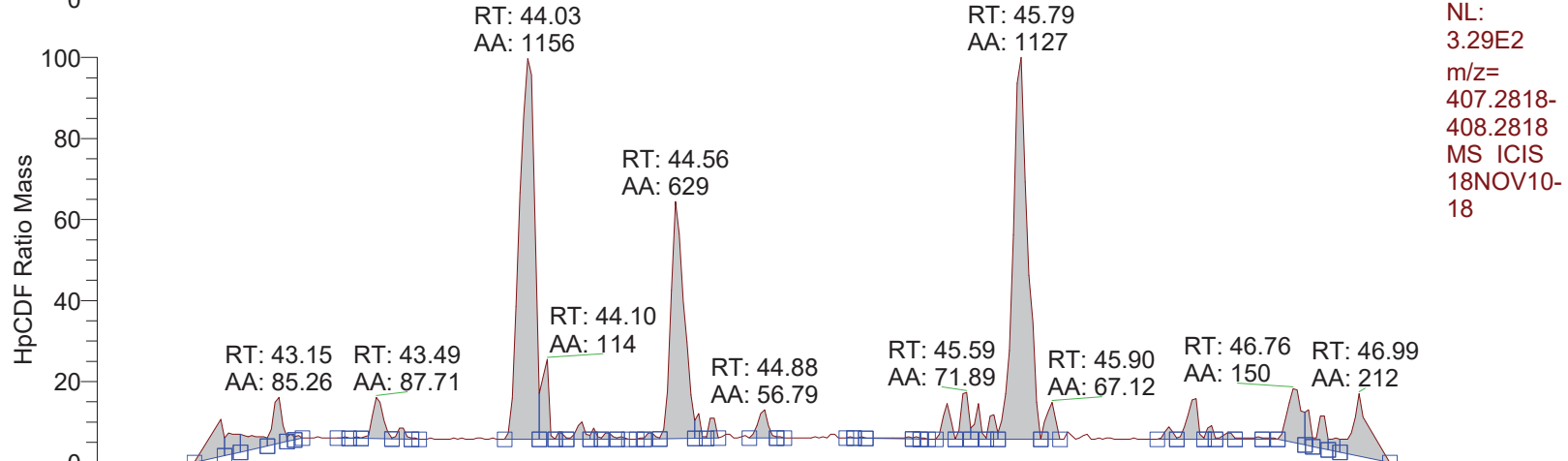
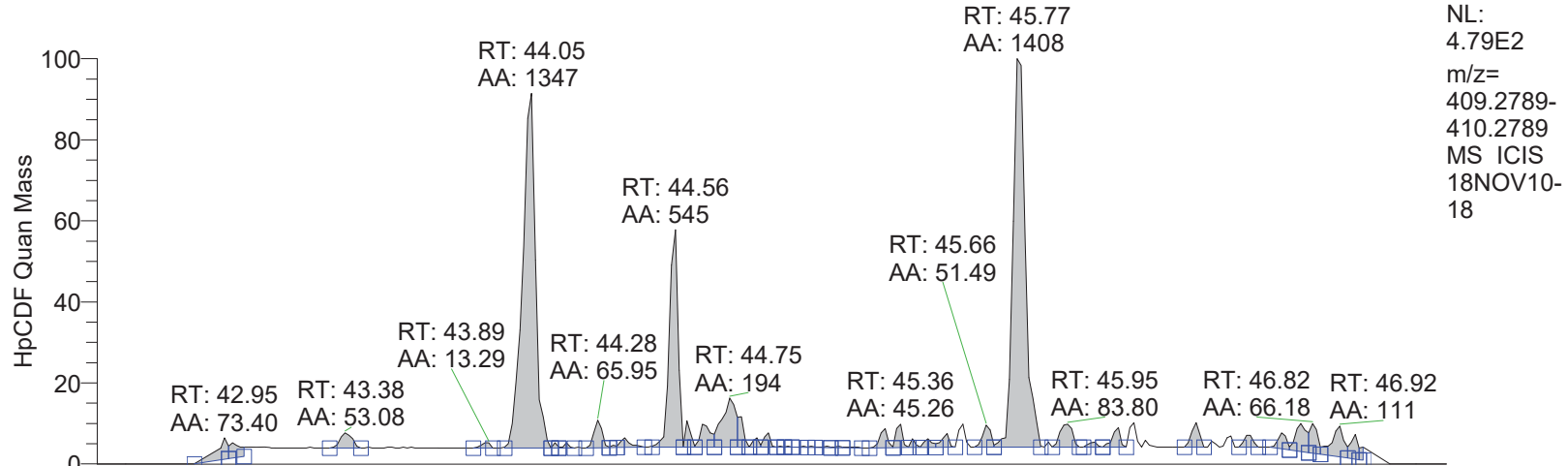


APPROVED
By AC46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:45 pm, 11/13/18

Time (min)

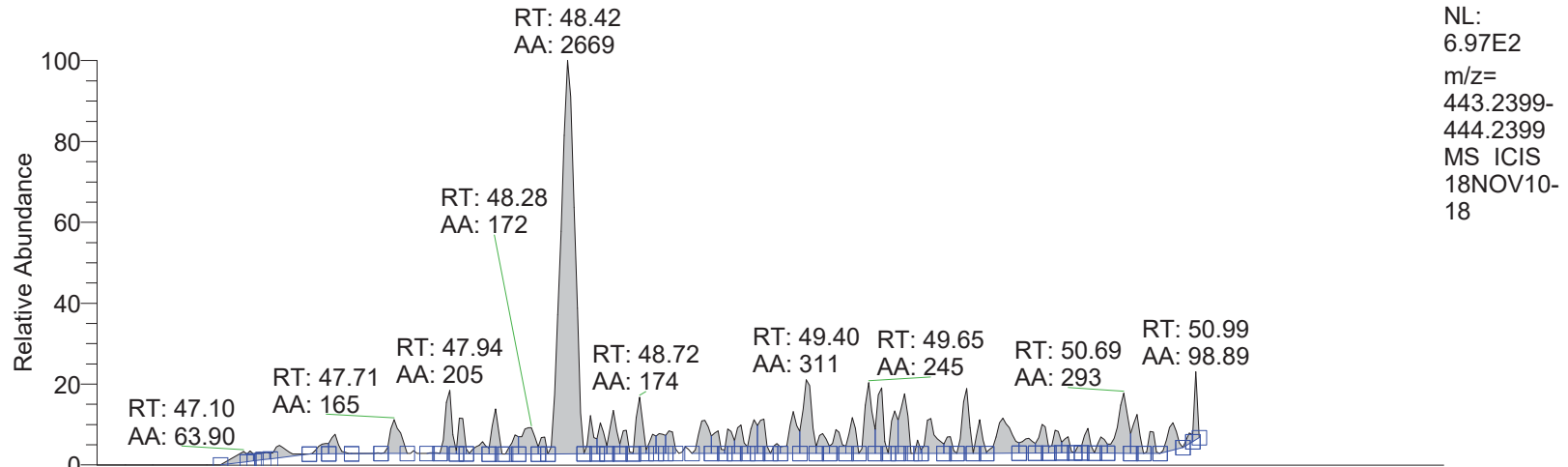
RT: 42.50 - 47.30



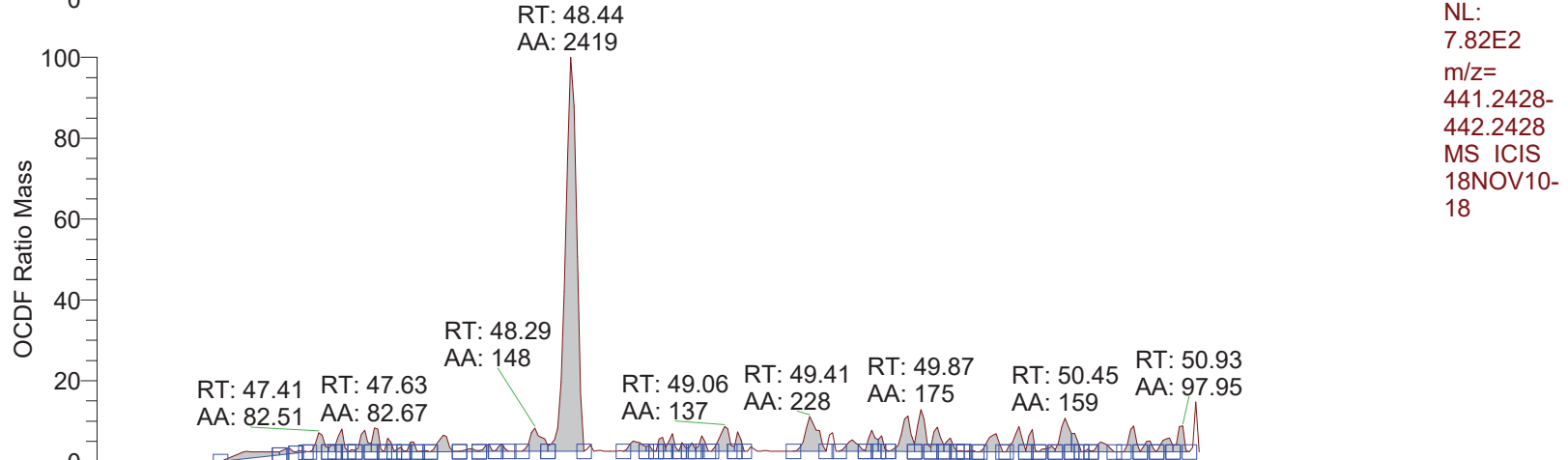
APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:45 pm, 11/13/18

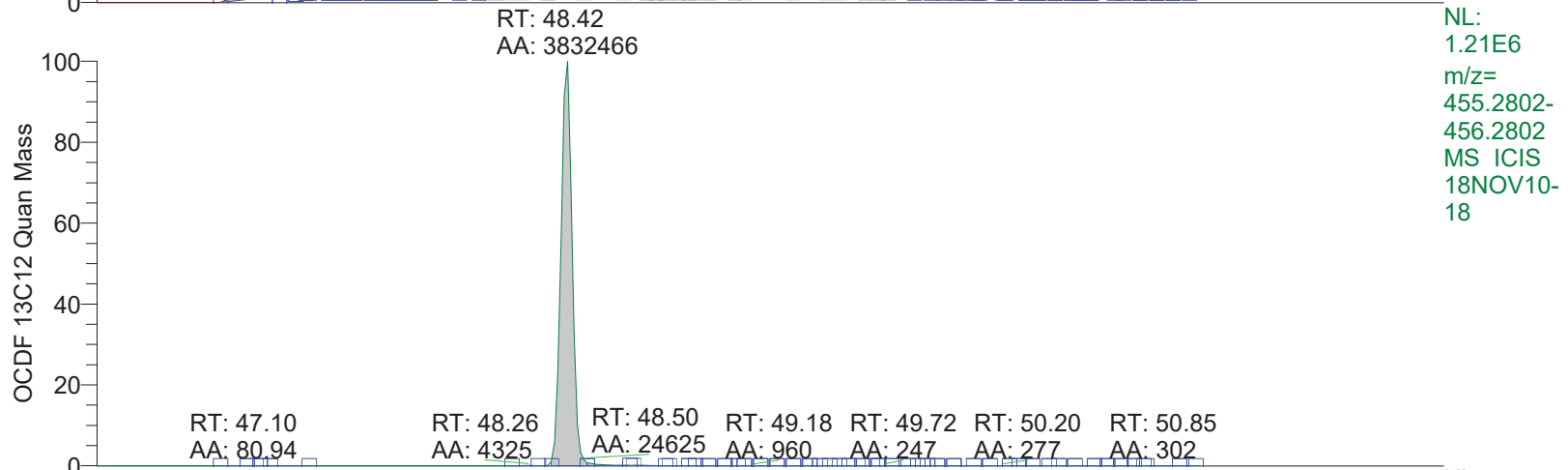
RT: 46.50 - 52.00



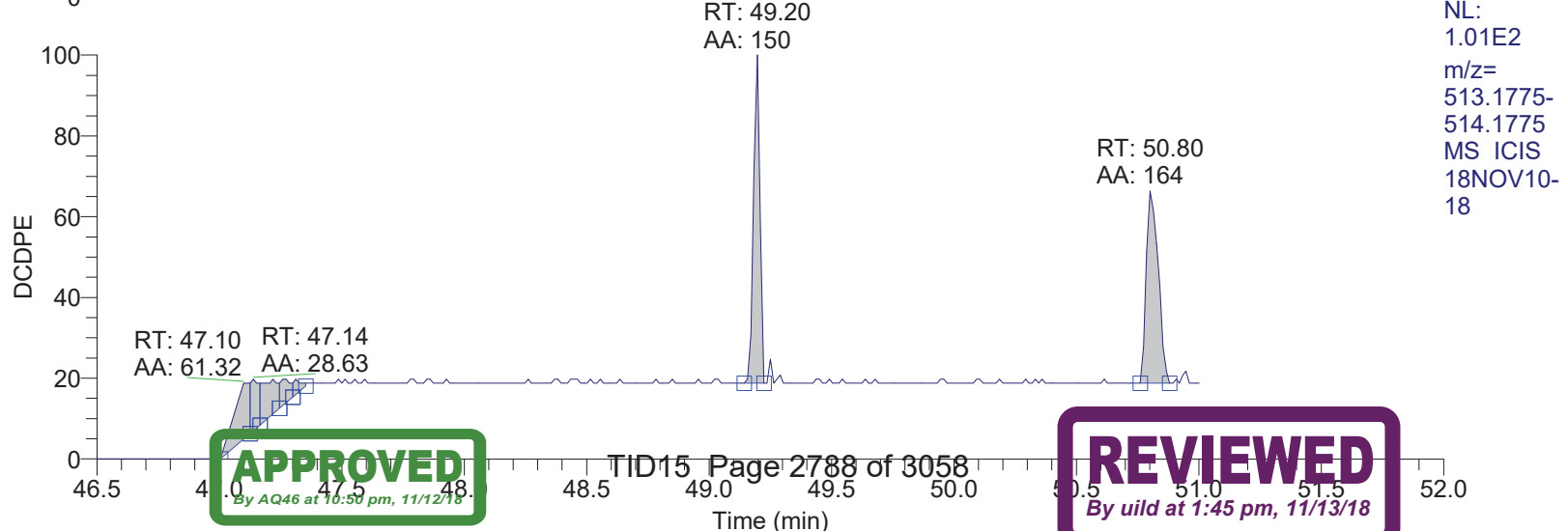
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MS ICIS
18NOV10-
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18



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APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:45 pm, 11/13/18

18NOV10-18

*** file opened Sat Nov 10 09:32:22 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 09:32:22

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window # 1				
mass	F	int	gr	time (ms)
218.0129		1	1	95
218.9851	l	20	1	4
220.0100		1	1	95
230.0532		2	1	47
232.0502		2	1	47
251.9739		1	1	95
253.9710		1	1	95
264.0142		2	1	47
266.0112		2	1	47
285.9350		1	1	95
287.9320		1	1	95
292.9819	c	20	1	4
297.9752		2	1	47
299.9723		2	1	47
Window # 2				
mass	F	int	gr	time (ms)
292.9819	l	20	1	5
303.9011		1	1	118
305.8981		1	1	118
315.9413		5	1	23
317.9384		5	1	23
319.8960		1	1	118
321.8930		1	1	118



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331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes

Page 2



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MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	97.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0077	FVINLET	0.0379	FVSR	0.0362
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	97.0000	LKM	442.9723	MASS	97.0000
MDAC	1416877.9667	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9856	RELEN	0.0000
RES	11653.1849	RPUSHER	-6.0879	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	97.0000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.5e-008 mbar
Pirani Analyse: 7.7e-003 mbar
Pirani Source: 3.6e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11470.
MID Time window 2: Resolution is 11597.
MID Time window 3: Resolution is 10960.
MID Time window 4: Resolution is 11641.



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MID Time Window 5: Resolution is 13091.
MID Time Window 6: Resolution is 11653.

Amplifier Offset: 81.

*** File closed Sat Nov 10 10:23:24 2018



Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/10 07:33
Number of Entries 63
Comment LCS:10914:12936
Vial 71
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007
Sample ID OPR313007
Inst ID DF17611-18NOV10
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

Quan x:\18nov10\18nov10-16.quan
Data x:\18nov10\18nov10-16.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Entry Parameters

No.	Compound Name	QM Retention Time	Status Overview	Amount Status	RM1 Time Status	Ratio1 Status	Recovery Status	Native vs Labeled Time Status	Status Info
1	2378-TCDF	29.42	passed	passed	passed	passed	passed	passed	passed
2	2378-TCDD	30.58	passed	passed	passed	passed	passed	passed	passed
3	12378-PeCDF	35.47	passed	passed	passed	passed	passed	passed	passed
4	23478-PeCDF	36.75	passed	passed	passed	passed	passed	passed	passed
5	12378-PeCDD	37.16	passed	passed	passed	passed	passed	passed	passed
6	123478-HxCDF	40.46	passed	passed	passed	passed	passed	passed	passed
7	123678-HxCDF	40.61	passed	passed	passed	passed	passed	passed	passed
8	234678-HxCDF	41.30	passed	passed	passed	passed	passed	passed	passed
9	123478-HxCDD	41.50	passed	passed	passed	passed	passed	passed	passed
10	123678-HxCDD	41.62	passed	passed	passed	passed	passed	passed	passed
11	123789-HxCDD	41.93	passed	passed	passed	passed	passed	passed	passed
12	123789-HxCDF	42.31	passed	passed	passed	passed	passed	passed	passed
13	1234678-HpCDF	44.04	passed	passed	passed	passed	passed	passed	passed
14	1234678-HpCDD	45.24	passed	passed	passed	passed	passed	passed	passed
15	1234789-HpCDF	45.79	passed	passed	passed	passed	passed	passed	passed
16	OCDD	48.27	passed	passed	passed	passed	passed	passed	passed
17	OCDF	48.44	passed	passed	passed	passed	passed	passed	passed
18	13C12-1278-TCDD (CRS)	30.99	passed	passed	passed	passed	passed	passed	passed
19	13C12-1234-TCDD	29.73	passed	passed	passed	passed	passed	passed	passed
20	13C12-123468-HxCDD	40.37	passed	passed	passed	passed	passed	passed	passed
21	13C12-2378-TCDF	29.40	passed	passed	passed	passed	passed	passed	passed
22	13C12-2378-TCDD	30.56	passed	passed	passed	passed	passed	passed	passed
23	13C12-12378-PeCDF	35.45	passed	passed	passed	passed	passed	passed	passed
24	13C12-23478-PeCDF	36.73	passed	passed	passed	passed	passed	passed	passed
25	13C12-12378-PeCDD	37.15	passed	passed	passed	passed	passed	passed	passed
26	13C12-123478-HxCDF	40.43	passed	passed	passed	passed	passed	passed	passed
27	13C12-123678-HxCDF	40.58	passed	passed	passed	passed	passed	passed	passed
28	13C12-234678-HxCDF	41.28	passed	passed	passed	passed	passed	passed	passed
29	13C12-123478-HxCDD	41.48	passed	passed	passed	passed	passed	passed	passed
30	13C12-123678-HxCDD	41.61	passed	passed	passed	passed	passed	passed	passed
31	13C12-123789-HxCDD	41.92	passed	passed	passed	passed	passed	passed	passed
32	13C12-123789-HxCDF	42.29	passed	passed	passed	passed	passed	passed	passed
33	13C12-1234678-HpCDF	44.02	passed	passed	passed	passed	passed	passed	passed
34	13C12-1234678-HpCDD	45.23	passed	passed	passed	passed	passed	passed	passed
35	13C12-1234789-HpCDF	45.78	passed	passed	passed	passed	passed	passed	passed
36	13C12-OCDD	48.25	passed	passed	passed	passed	passed	passed	passed
37	13C12-OCDF	48.43	passed	passed	passed	passed	passed	passed	passed

Quantitation Settings**Data File Parameter**

Acq. Data 2018/11/10 07:33
Number of Entries 63
Comment LCS:10914:12936
Vial 71
Sample Name SW-846 8290A Feb 2007 Rev 1 18313007
Sample ID OPR313007
Inst ID DF17611-18NOV10
Client
Analyst maz02012
GC Column DB5MS 60 M x 0.25um x 0.25mm
BatchNo 18313007
Barcode

Files Parameter

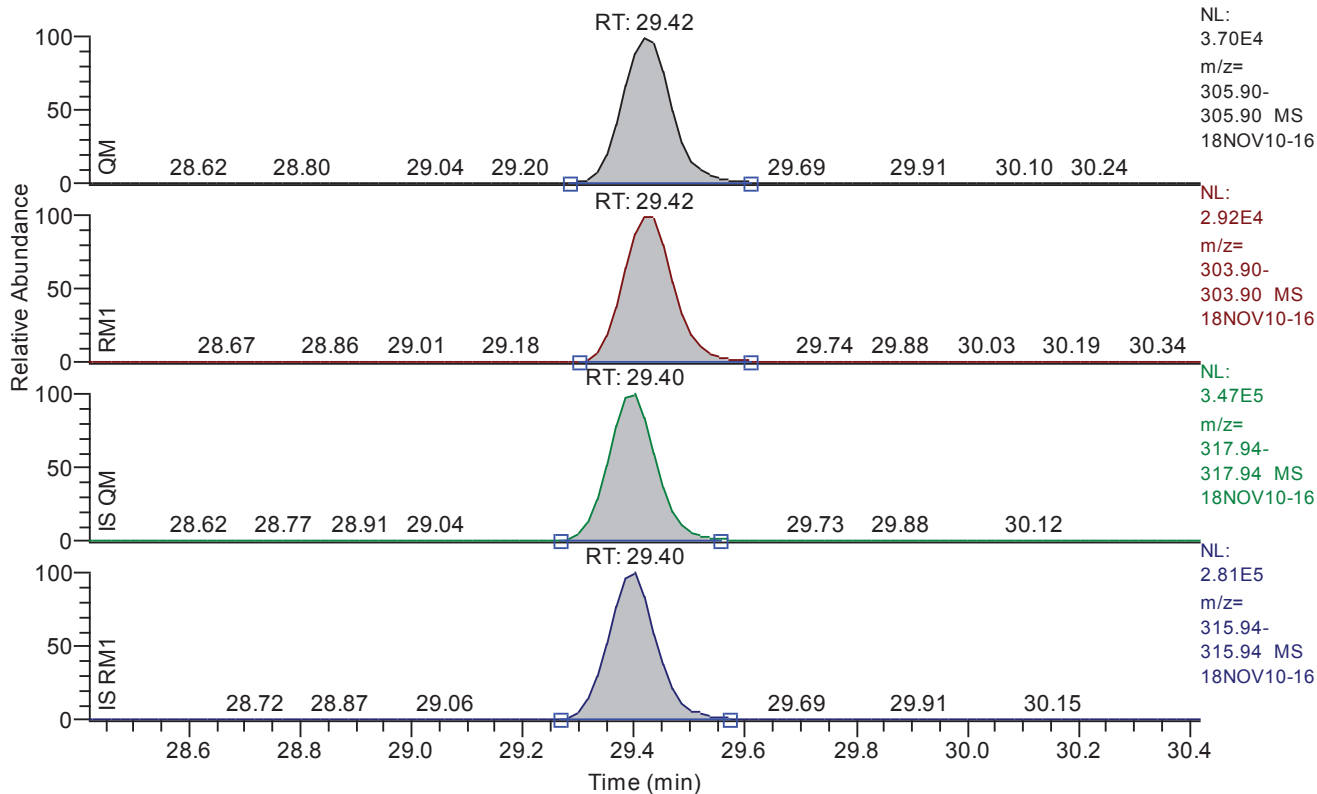
Quan x:\18nov10\18nov10-16.quan
Data x:\18nov10\18nov10-16.raw
Response x:\responsefiles\df17611-18nov02dfical.resp
Script C:\XCALIBUR\SYSTEM\DFS\SCRIPTS\SCRIPT1.QSC
Mass Ref

Quan Parameter

QualBrowser Compatibility Compatibility off
Sum Area/Height Sum QM RM1
Quantitation Status Depend on Area
Injection Volume [hIJV] 1.0
Sample Volume [hSV] 20.0
Sample Weight [hSWT] 1.0
Dilution Factor [hDF] 1.0
Det. Limit Factor [hDLF] 2.5
Response Factor Mode Average RF
Fit Calc. Mode Linear Fit
Regression Mode Non weighted Regression
Weighted Regression Factor 1.0

Chromatogram

RT: 28.42 - 30.42 SM: 3G

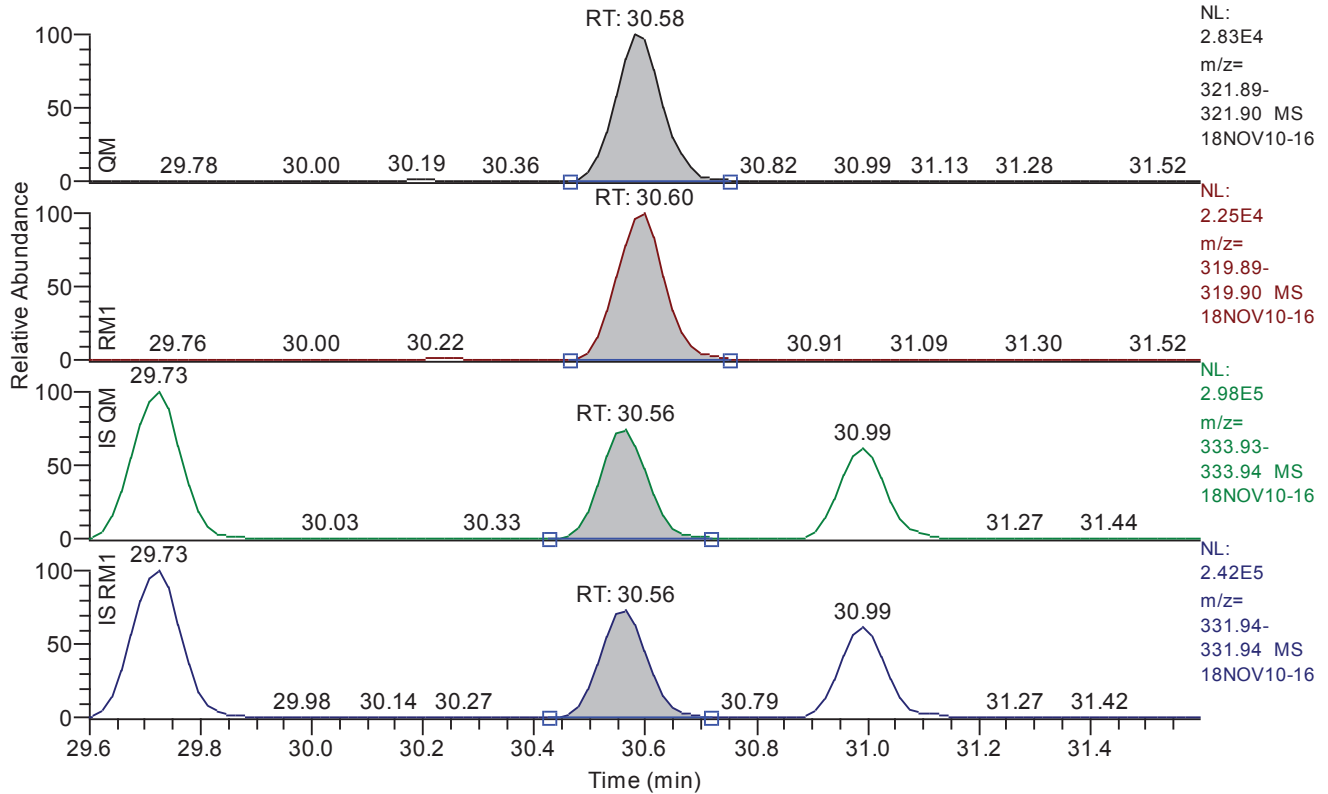


Entry Parameters

Compound Name	2378-TCDF
QM Retention Time	29.42
QM Area	231606
QM Integration Mode	A
RM1 Area	185219
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2082
Unqualified Amount (A)	206.178064
Adjusted Amount (A)	206.1781
Signal-to-Noise	2408
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 29.60 - 31.60 SM: 3G

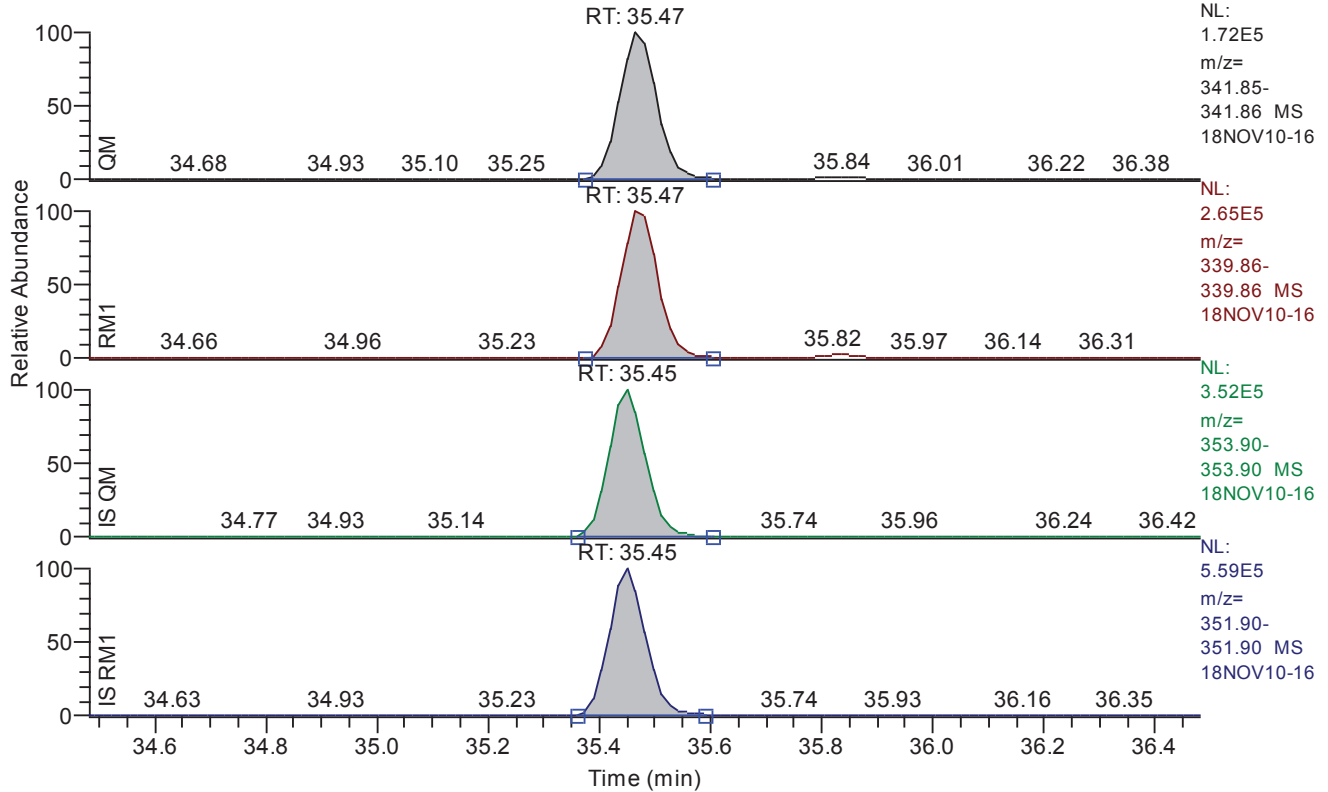


Entry Parameters

Compound Name	2378-TCDD
QM Retention Time	30.58
QM Area	170947
QM Integration Mode	A
RM1 Area	139066
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1766
Unqualified Amount (A)	204.721181
Adjusted Amount (A)	204.7212
Signal-to-Noise	2861
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 34.48 - 36.48 SM: 3G

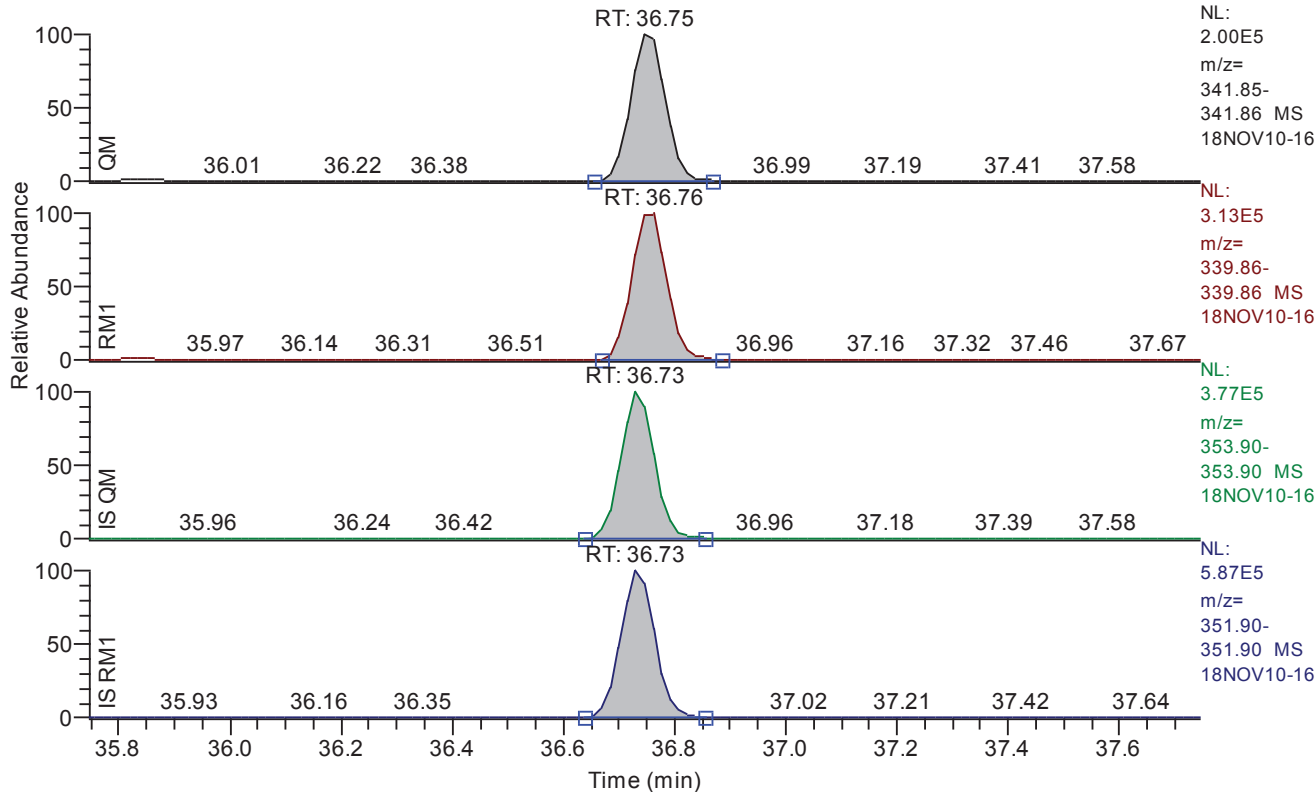


Entry Parameters

Compound Name	12378-PeCDF
QM Retention Time	35.47
QM Area	799383
QM Integration Mode	A
RM1 Area	1247293
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1828
Unqualified Amount (A)	1040.949792
Adjusted Amount (A)	1040.9498
Signal-to-Noise	13993
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 35.75 - 37.75 SM: 3G

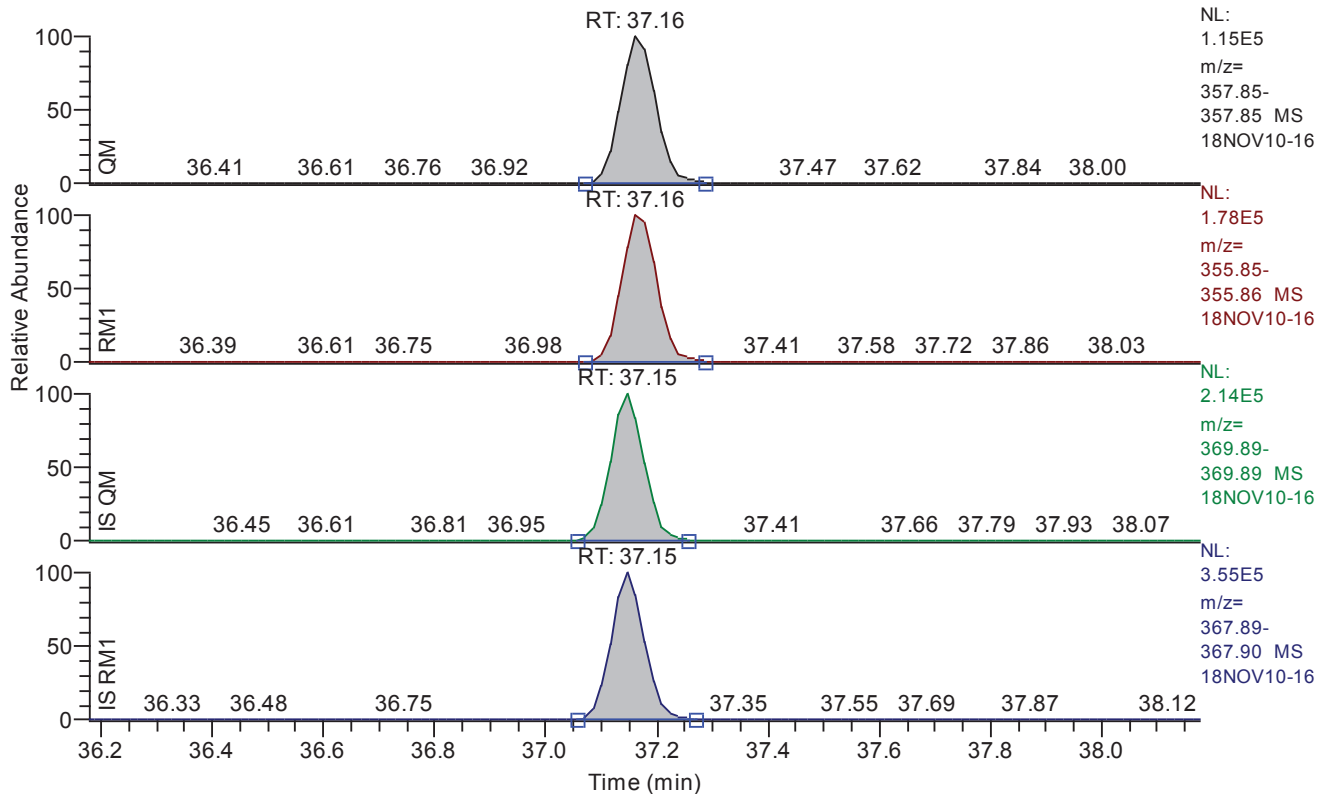


Entry Parameters

Compound Name	23478-PeCDF
QM Retention Time	36.75
QM Area	873100
QM Integration Mode	A
RM1 Area	1380716
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.1541
Unqualified Amount (A)	1051.227134
Adjusted Amount (A)	1051.2271
Signal-to-Noise	16445
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 36.18 - 38.18 SM: 3G

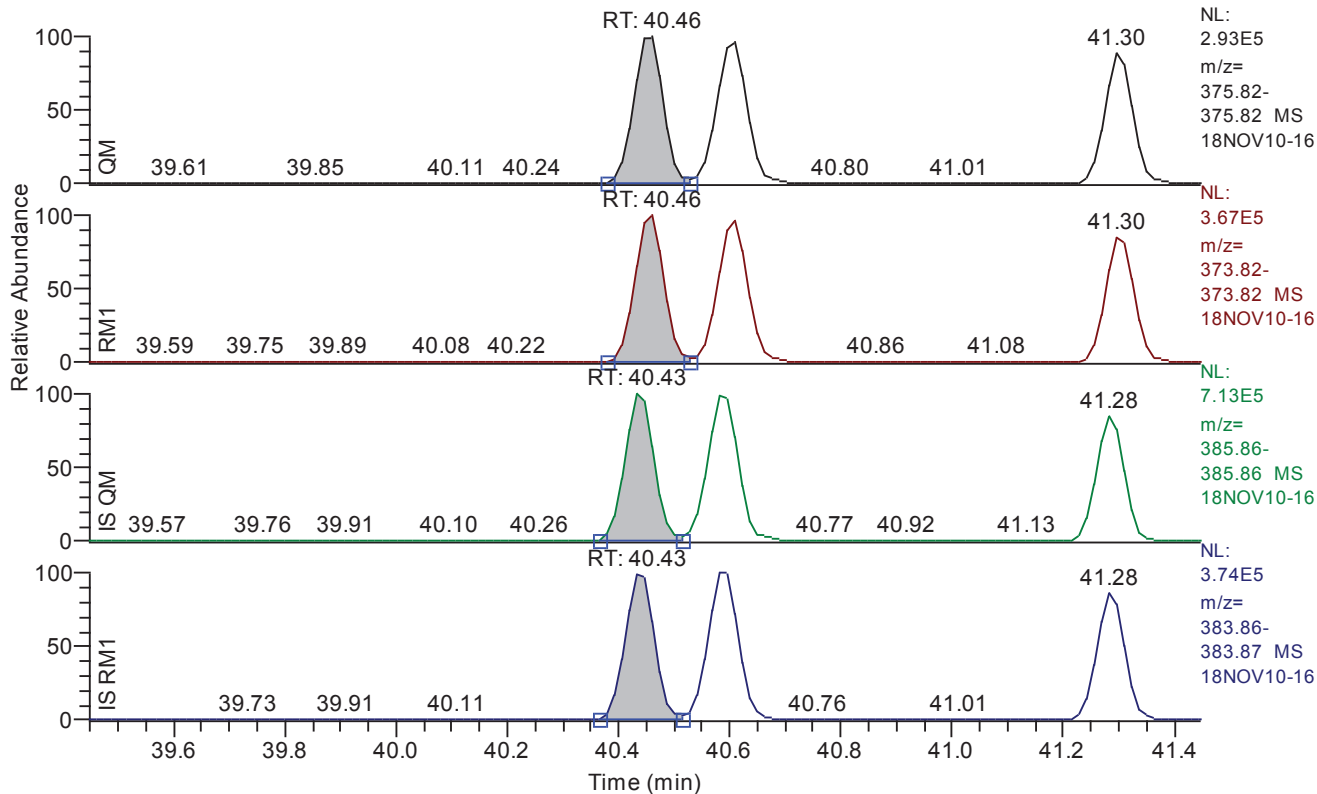


Entry Parameters

Compound Name	12378-PeCDD
QM Retention Time	37.16
QM Area	508498
QM Integration Mode	A
RM1 Area	786814
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3140
Unqualified Amount (A)	1078.489404
Adjusted Amount (A)	1078.4894
Signal-to-Noise	8198
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 39.45 - 41.45 SM: 3G

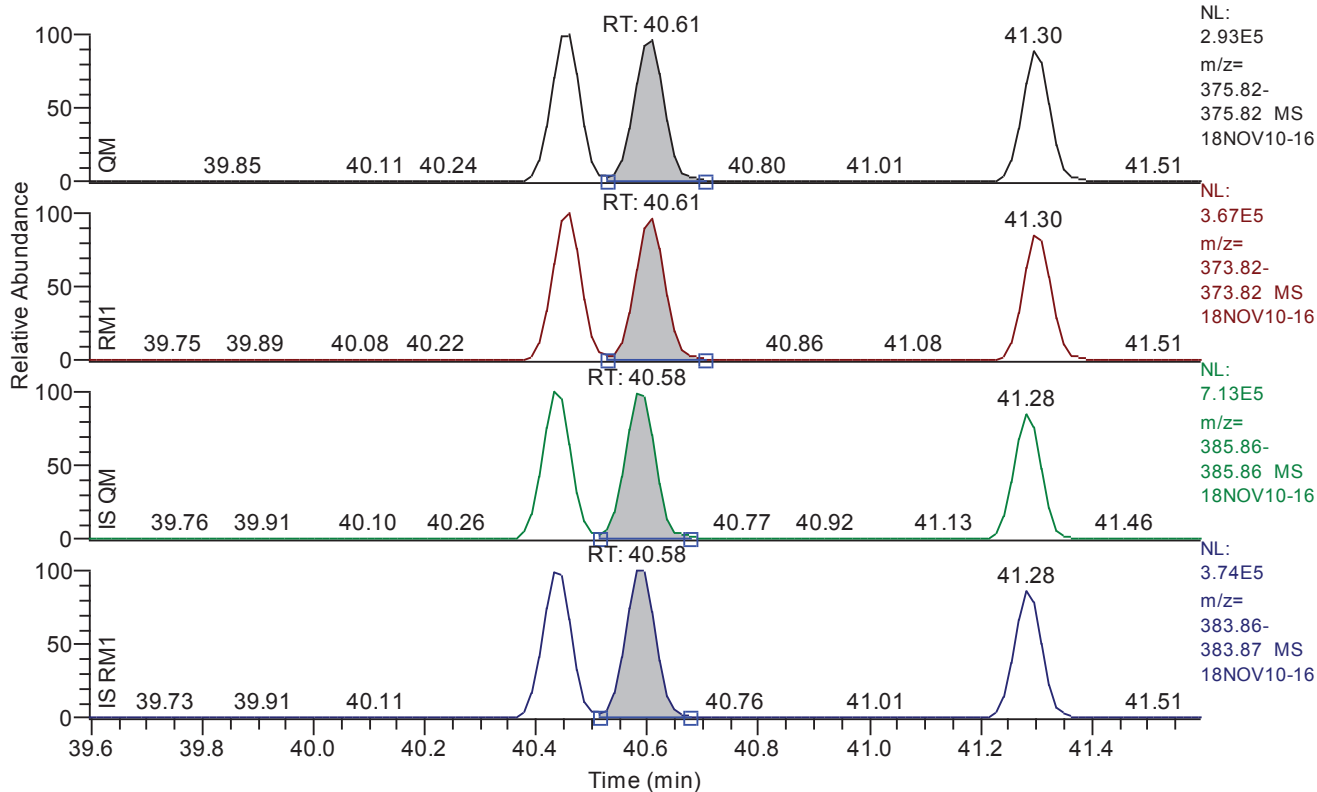


Entry Parameters

Compound Name 123478-HxCDF
 QM Retention Time 40.46
 QM Area 1075920
 QM Integration Mode A
 RM1 Area 1330683
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.3313
 Unqualified Amount (A) 1098.832664
 Adjusted Amount (A) 1098.8327
 Signal-to-Noise 8250
 Client Flags
 Status Overview passed
 Status Info

Chromatogram

RT: 39.60 - 41.60 SM: 3G

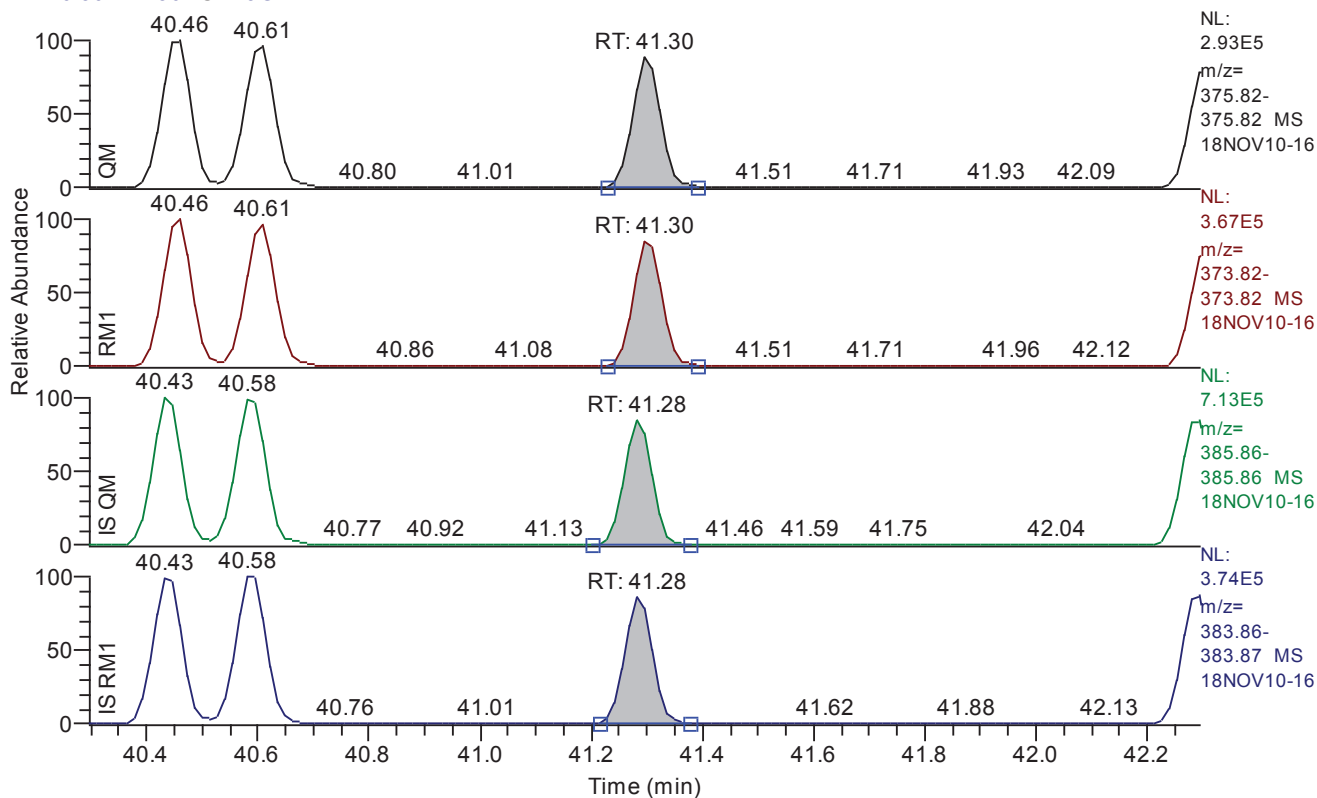


Entry Parameters

Compound Name	123678-HxCDF
QM Retention Time	40.61
QM Area	1072010
QM Integration Mode	A
RM1 Area	1327316
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3465
Unqualified Amount (A)	1094.103299
Adjusted Amount (A)	1094.1033
Signal-to-Noise	7966
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.30 - 42.30 SM: 3G

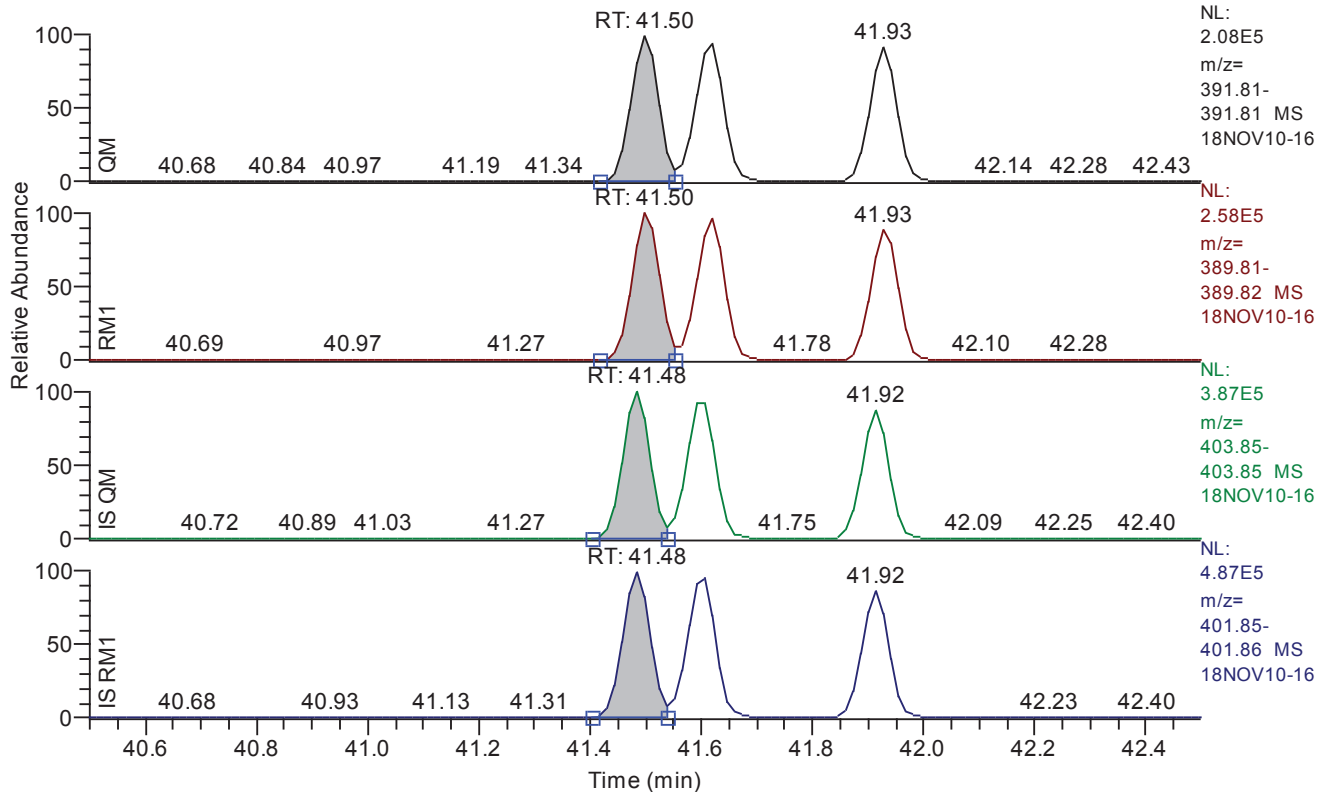


Entry Parameters

Compound Name	234678-HxCDF
QM Retention Time	41.30
QM Area	913946
QM Integration Mode	A
RM1 Area	1120991
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3712
Unqualified Amount (A)	1089.699847
Adjusted Amount (A)	1089.6998
Signal-to-Noise	7170
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.50 - 42.50 SM: 3G

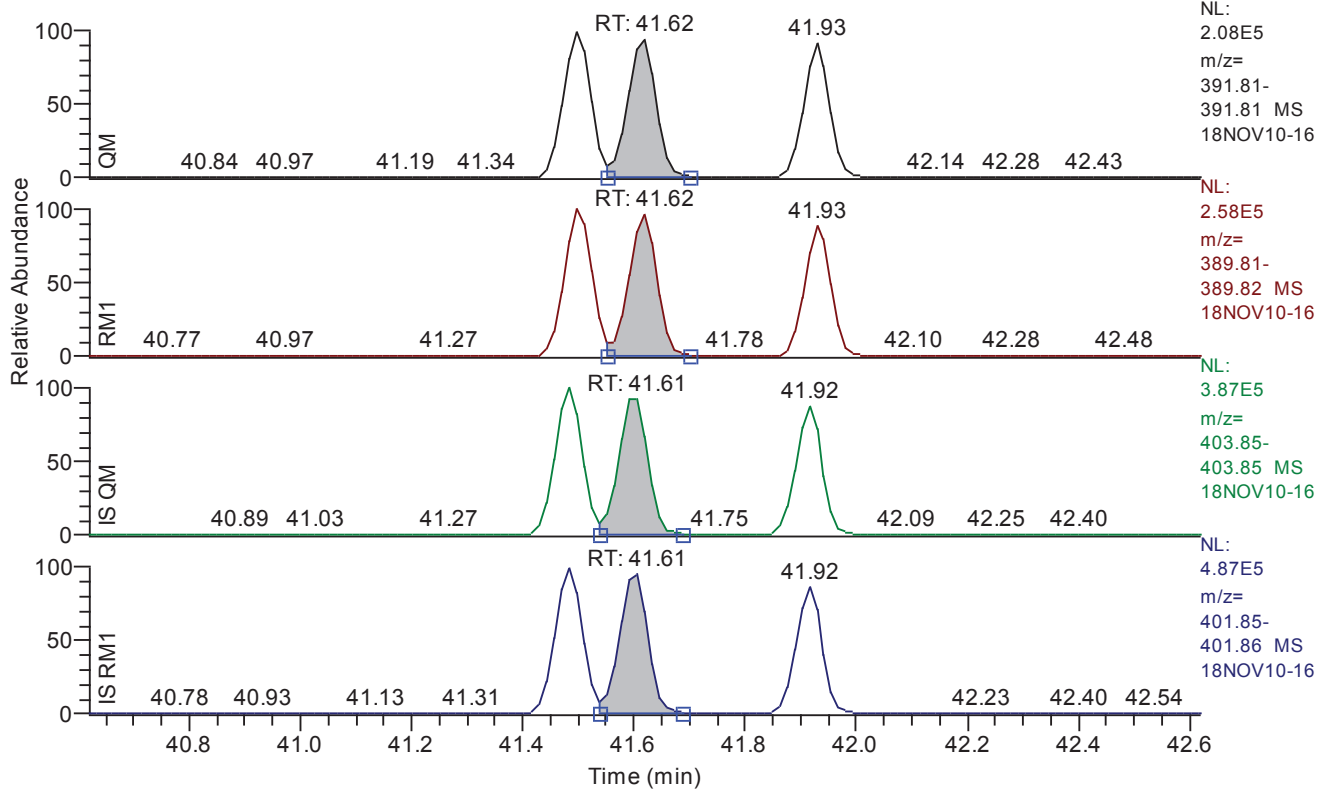


Entry Parameters

Compound Name	123478-HxCDD
QM Retention Time	41.50
QM Area	706876
QM Integration Mode	A
RM1 Area	886576
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2448
Unqualified Amount (A)	1054.819460
Adjusted Amount (A)	1054.8195
Signal-to-Noise	10734
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.62 - 42.62 SM: 3G



NL: 2.08E5
 m/z= 391.81-391.81 MS
 18NOV10-16

NL: 2.58E5
 m/z= 389.81-389.82 MS
 18NOV10-16

NL: 3.87E5
 m/z= 403.85-403.85 MS
 18NOV10-16

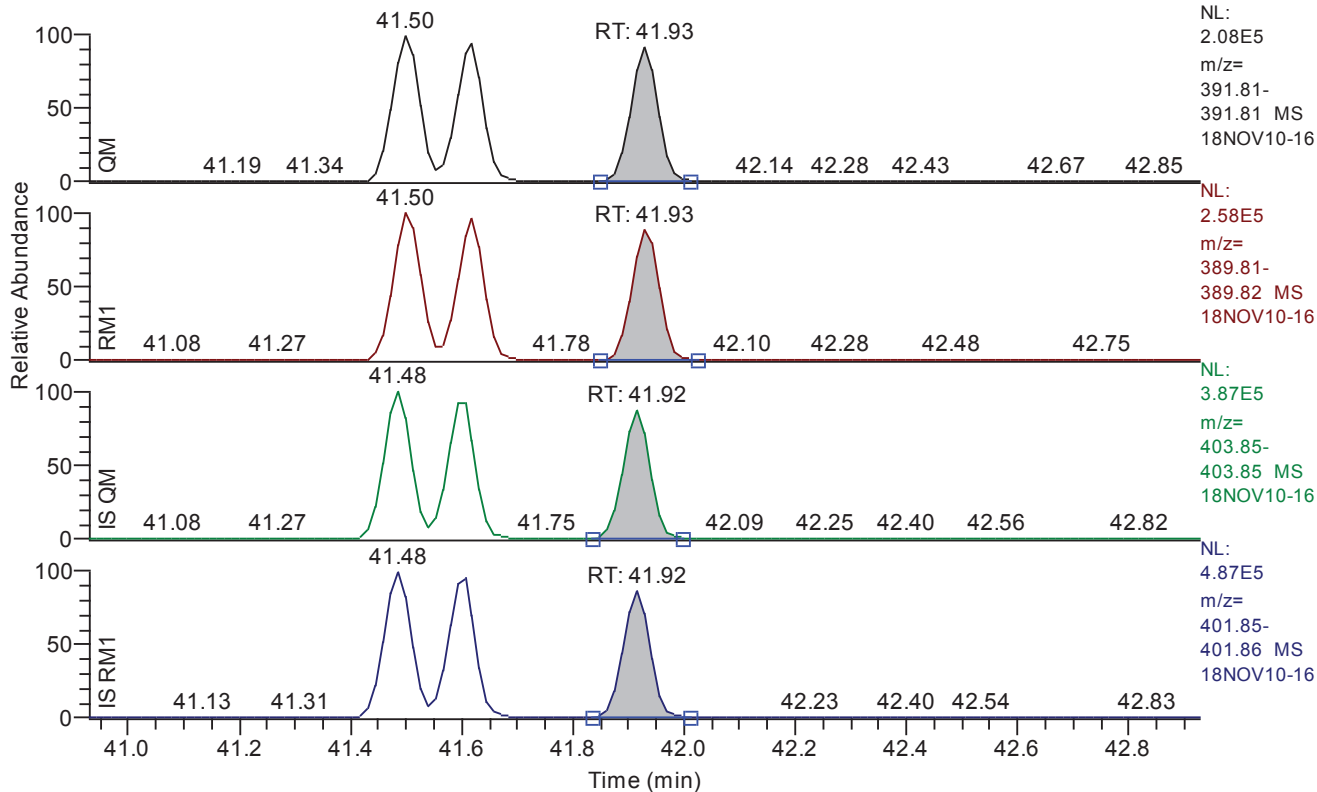
NL: 4.87E5
 m/z= 401.85-401.86 MS
 18NOV10-16

Entry Parameters

Compound Name	123678-HxCDD
QM Retention Time	41.62
QM Area	684875
QM Integration Mode	A
RM1 Area	870505
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2612
Unqualified Amount (A)	1046.828684
Adjusted Amount (A)	1046.8287
Signal-to-Noise	10212
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 40.93 - 42.93 SM: 3G

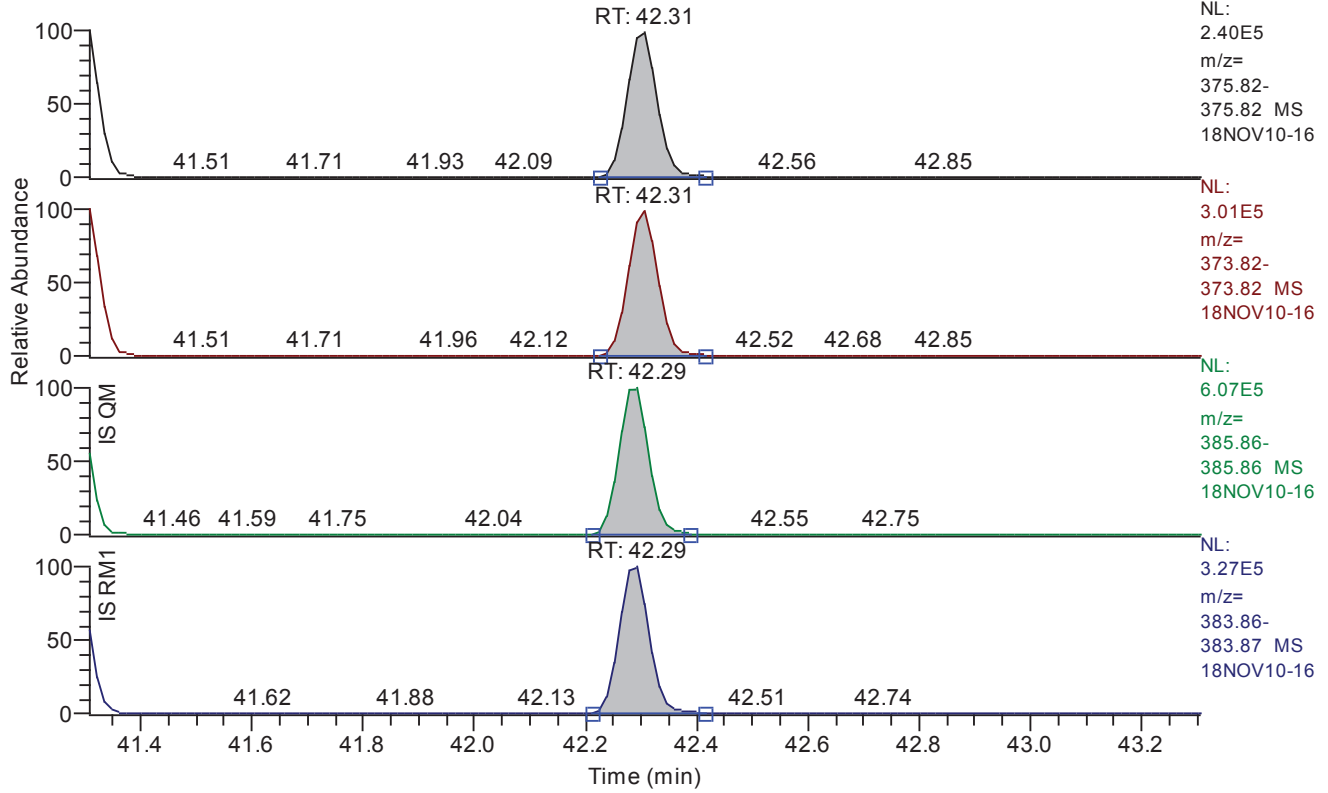


Entry Parameters

Compound Name	123789-HxCDD
QM Retention Time	41.93
QM Area	642771
QM Integration Mode	A
RM1 Area	796895
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2715
Unqualified Amount (A)	1064.291005
Adjusted Amount (A)	1064.2910
Signal-to-Noise	9682
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 41.31 - 43.31 SM: 3G

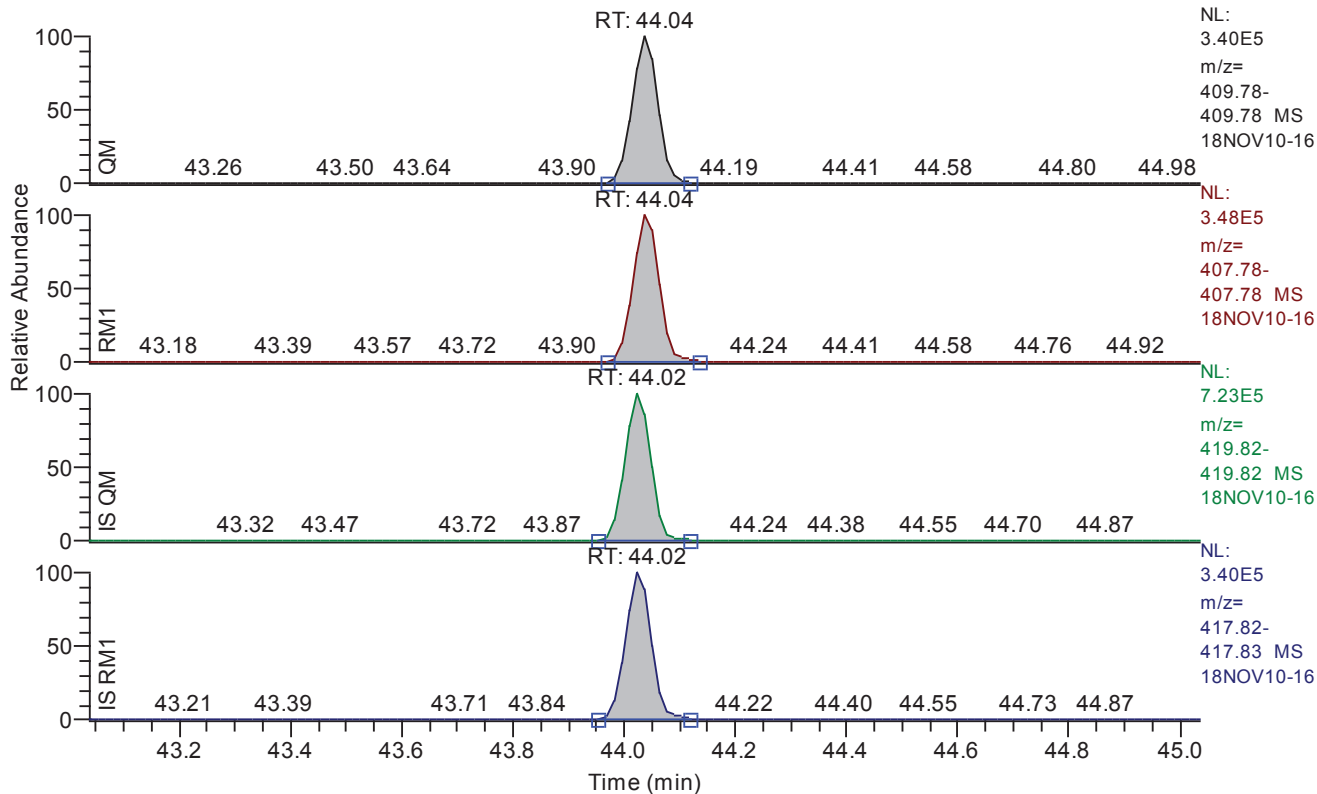


Entry Parameters

Compound Name	123789-HxCDF
QM Retention Time	42.31
QM Area	896611
QM Integration Mode	A
RM1 Area	1120459
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3977
Unqualified Amount (A)	1063.414471
Adjusted Amount (A)	1063.4145
Signal-to-Noise	6729
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 43.04 - 45.04 SM: 3G

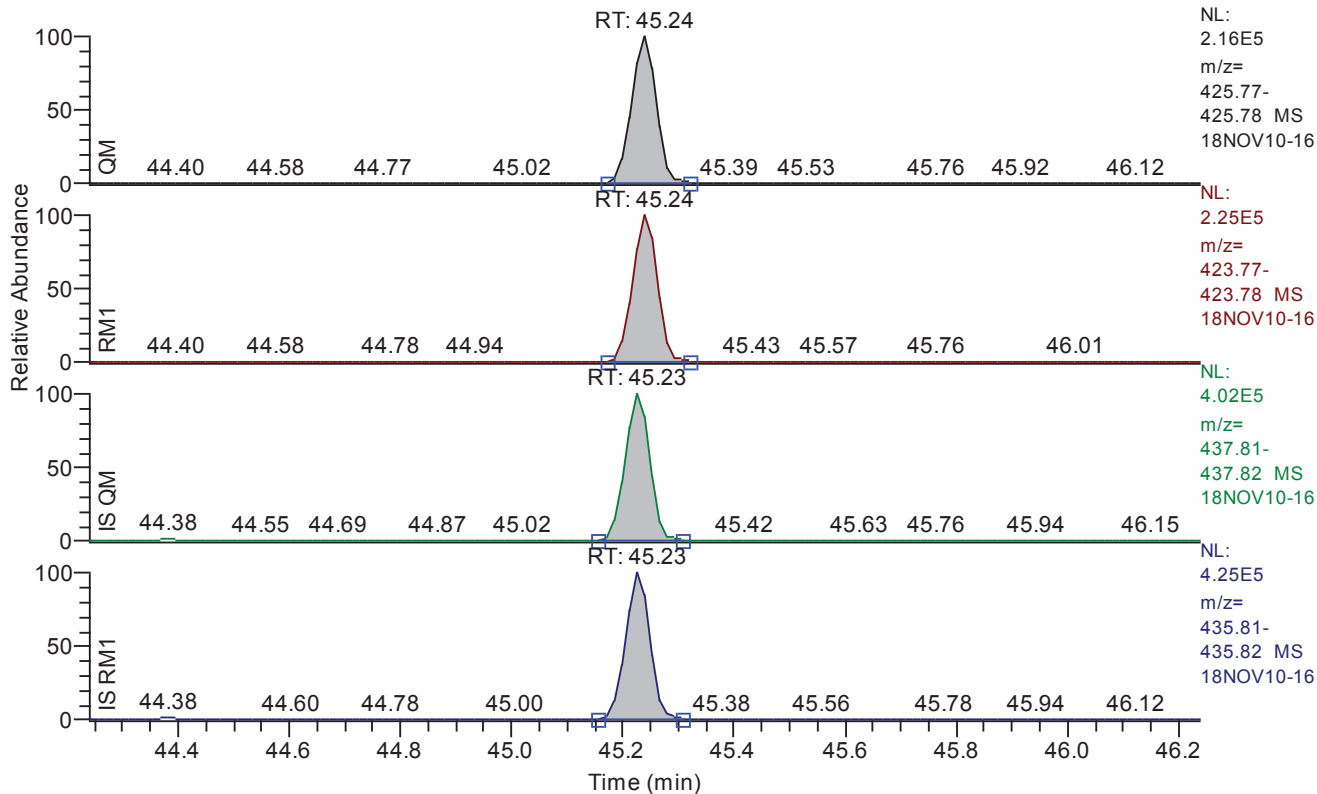


Entry Parameters

Compound Name	1234678-HpCDF
QM Retention Time	44.04
QM Area	1124392
QM Integration Mode	A
RM1 Area	1164467
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3457
Unqualified Amount (A)	1091.392975
Adjusted Amount (A)	1091.3930
Signal-to-Noise	7899
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.24 - 46.24 SM: 3G

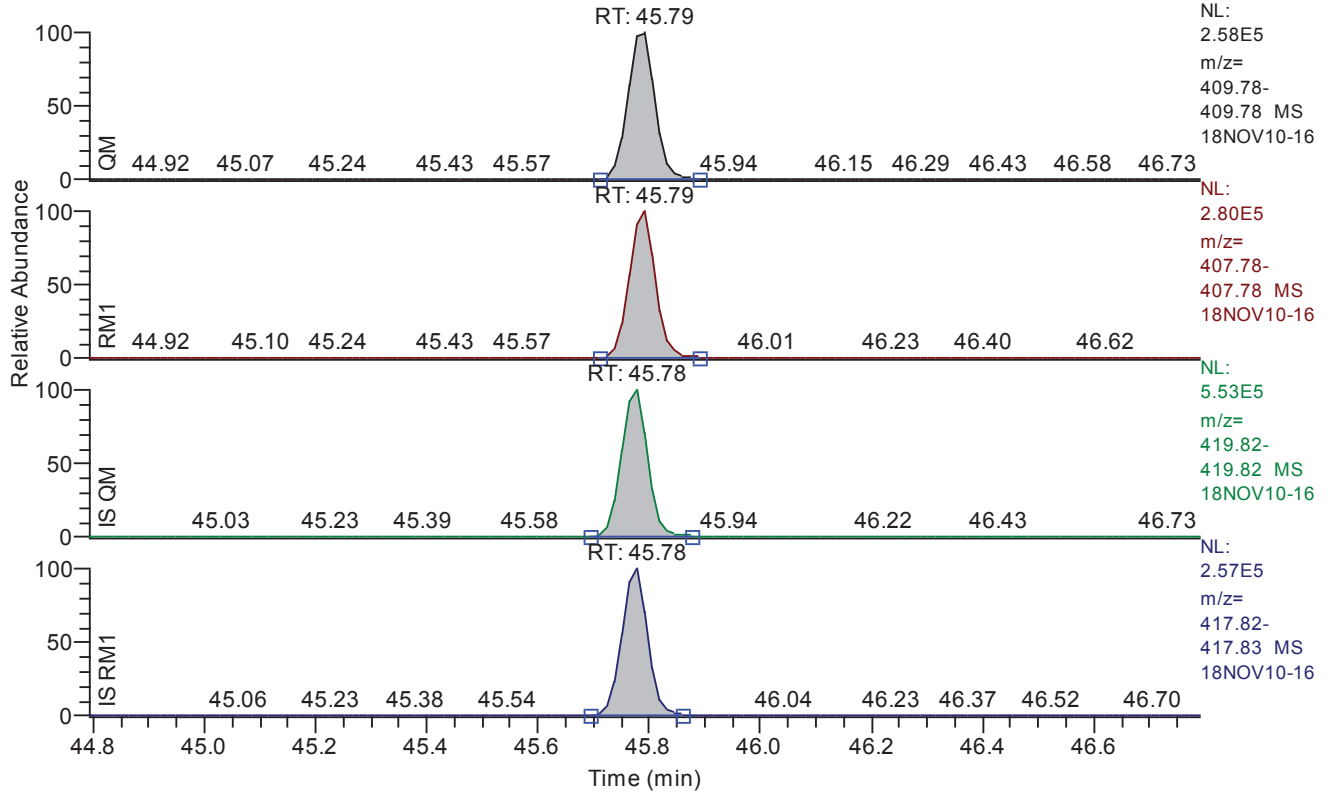


Entry Parameters

Compound Name	1234678-HpCDD
QM Retention Time	45.24
QM Area	685119
QM Integration Mode	A
RM1 Area	716106
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3522
Unqualified Amount (A)	1048.971183
Adjusted Amount (A)	1048.9712
Signal-to-Noise	7413
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 44.79 - 46.79 SM: 3G

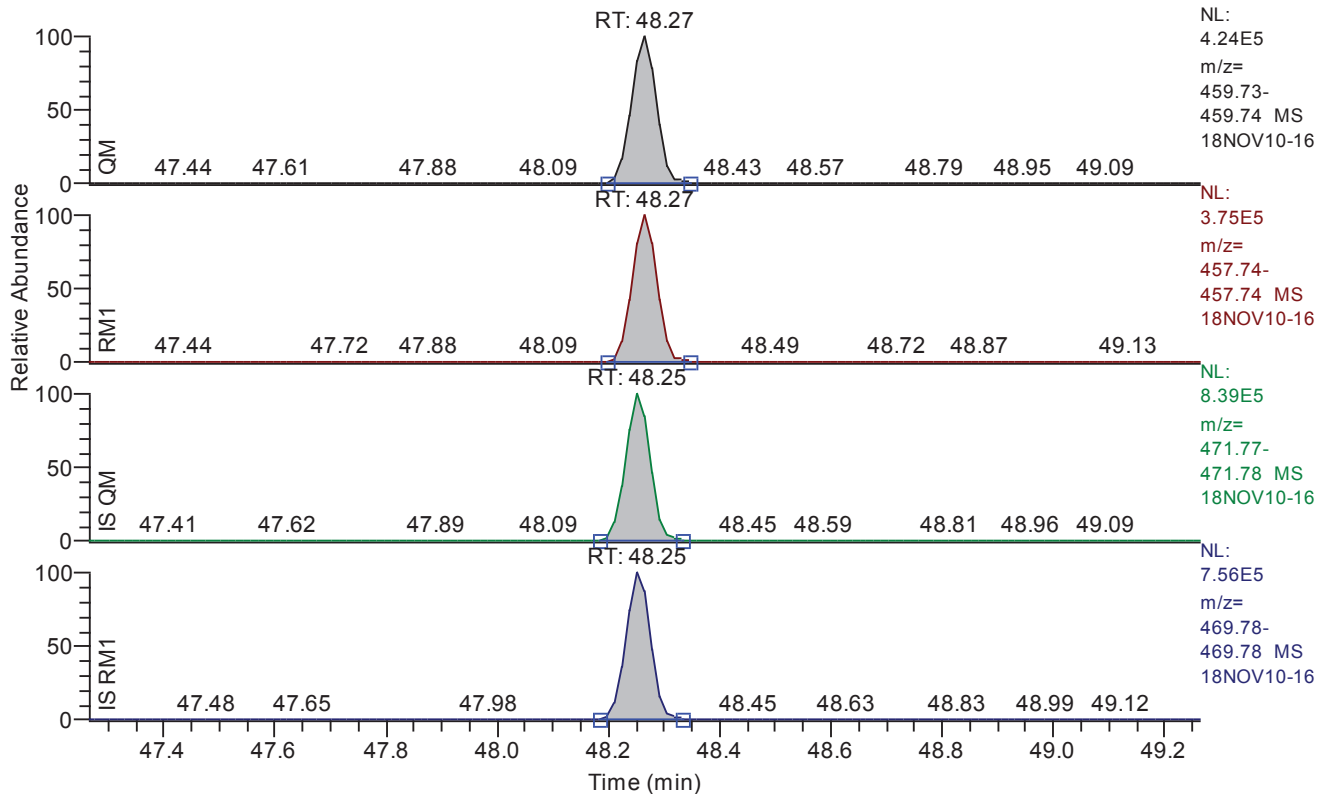


Entry Parameters

Compound Name	1234789-HpCDF
QM Retention Time	45.79
QM Area	899080
QM Integration Mode	A
RM1 Area	942202
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.4368
Unqualified Amount (A)	1093.992362
Adjusted Amount (A)	1093.9924
Signal-to-Noise	6167
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.27 - 49.27 SM: 3G

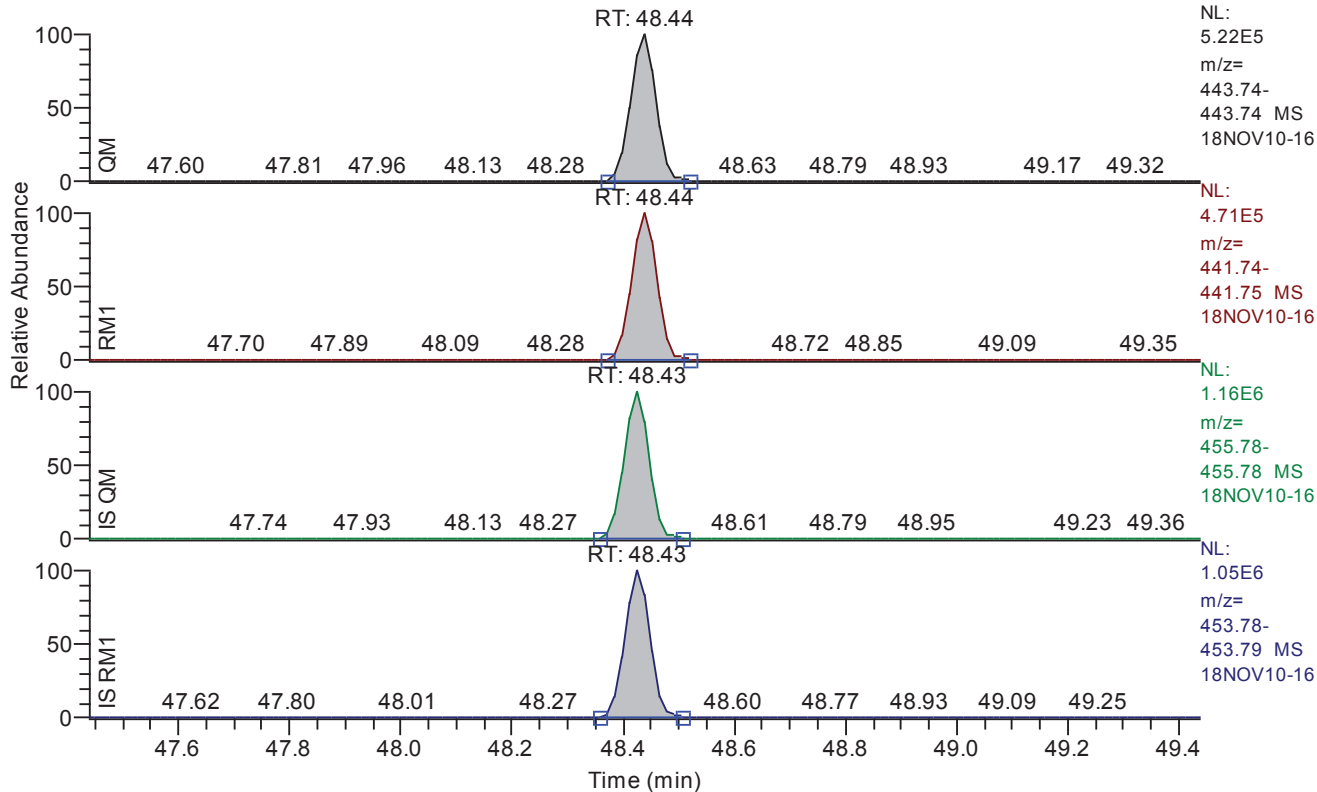


Entry Parameters

Compound Name	OCDD
QM Retention Time	48.27
QM Area	1323900
QM Integration Mode	A
RM1 Area	1165651
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.3174
Unqualified Amount (A)	2057.991586
Adjusted Amount (A)	2057.9916
Signal-to-Noise	16000
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 47.44 - 49.44 SM: 3G

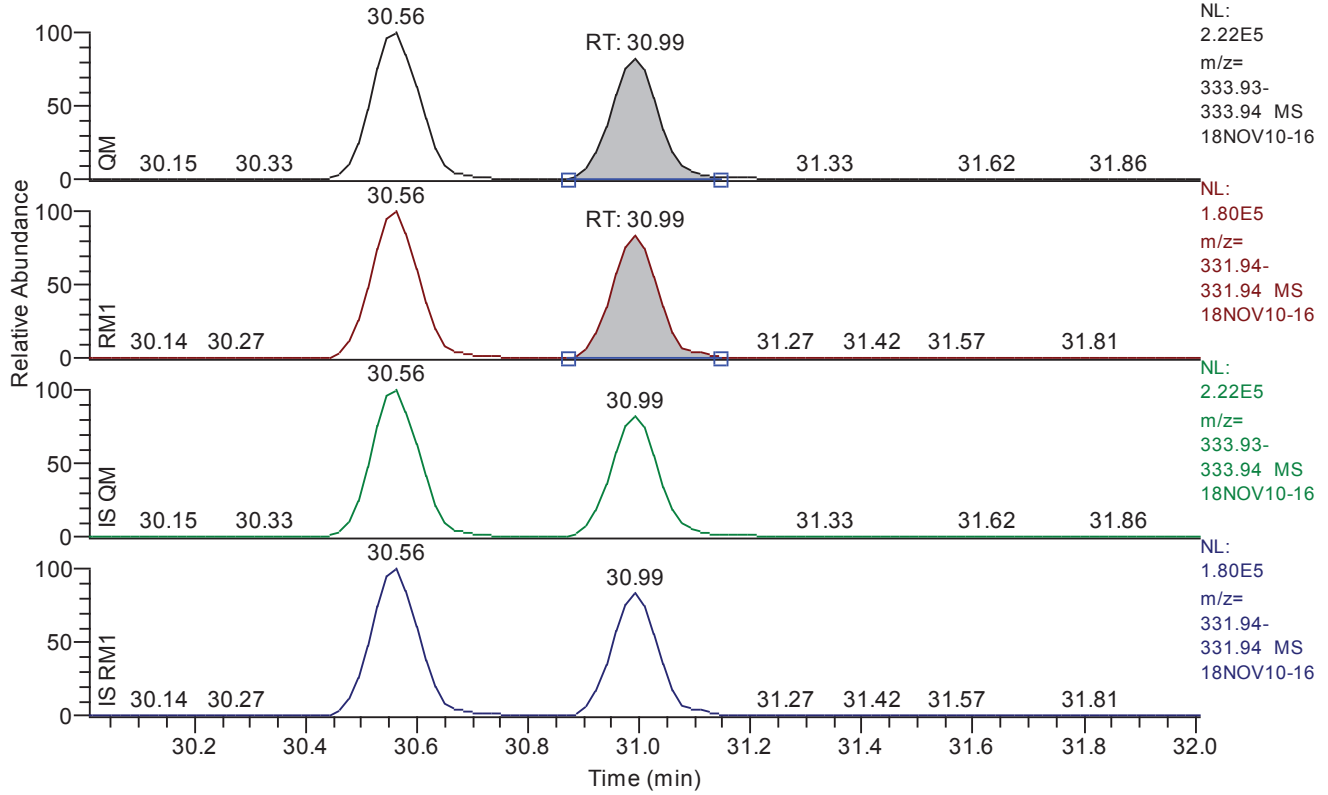


Entry Parameters

Compound Name	OCDF
QM Retention Time	48.44
QM Area	1643645
QM Integration Mode	A
RM1 Area	1481973
RM1 Integration Mode	A
ManInt	0
Detection Limit (A)	0.2480
Unqualified Amount (A)	2107.777481
Adjusted Amount (A)	2107.7775
Signal-to-Noise	21029
Client Flags	
Status Overview	passed
Status Info	

Chromatogram

RT: 30.01 - 32.01 SM: 3G



Entry Parameters

Compound Name 13C12-1278-TCDD (CRS)
 QM Retention Time 30.99
 QM Area 1094023
 QM Integration Mode A
 RM1 Area 879343
 RM1 Integration Mode A
 ManInt 0
 Detection Limit (A) 0.3819
 Unqualified Amount (A) 1121.804499
 Adjusted Amount (A) 1121.8045
 Signal-to-Noise 7729
 Client Flags
 Status Overview passed
 Status Info

Entry Parameters

No.	Compound Name	Quan. Mass	Ratio Mass 1	Specified RT [min]	QM Retention Time	RM1 Retention Time	Labeled RT	RM1 Time Status	Native vs Labeled Time Status
1	2378-TCDF	305.8987 +/- 5 ppm	303.9016 +/- 5 ppm	29.40	29.42	29.42	29.40	passed	passed
2	2378-TCDD	321.8936 +/- 5 ppm	319.8965 +/- 5 ppm	30.58	30.58	30.60	30.56	passed	passed
3	12378-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	35.47	35.47	35.47	35.45	passed	passed
4	23478-PeCDF	341.8567 +/- 5 ppm	339.8597 +/- 5 ppm	36.74	36.75	36.76	36.73	passed	passed
5	12378-PeCDD	357.8516 +/- 5 ppm	355.8546 +/- 5 ppm	37.16	37.16	37.16	37.15	passed	passed
6	123478-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.45	40.46	40.46	40.43	passed	passed
7	123678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	40.59	40.61	40.61	40.58	passed	passed
8	234678-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	41.28	41.30	41.30	41.28	passed	passed
9	123478-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.48	41.50	41.50	41.48	passed	passed
10	123678-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.60	41.62	41.62	41.61	passed	passed
11	123789-HxCDD	391.8127 +/- 5 ppm	389.8157 +/- 5 ppm	41.91	41.93	41.93	41.92	passed	passed
12	123789-HxCDF	375.8178 +/- 5 ppm	373.8208 +/- 5 ppm	42.29	42.31	42.31	42.29	passed	passed
13	1234678-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	44.02	44.04	44.04	44.02	passed	passed
14	1234678-HpCDD	425.7737 +/- 5 ppm	423.7766 +/- 5 ppm	45.22	45.24	45.24	45.23	passed	passed
15	1234789-HpCDF	409.7789 +/- 5 ppm	407.7818 +/- 5 ppm	45.78	45.79	45.79	45.78	passed	passed
16	OCDD	459.7348 +/- 5 ppm	457.7377 +/- 5 ppm	48.25	48.27	48.27	48.25	passed	passed
17	OCDF	443.7399 +/- 5 ppm	441.7428 +/- 5 ppm	48.42	48.44	48.44	48.43	passed	passed
18	13C12-1278-TCDD (CRS)	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.99	30.99	30.99	30.99	passed	passed
19	13C12-1234-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	29.71	29.73	29.73	29.73	passed	passed
20	13C12-123468-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	40.35	40.37	40.37	40.37	passed	passed
21	13C12-2378-TCDF	317.9389 +/- 5 ppm	315.9419 +/- 5 ppm	29.38	29.40	29.40	29.27	passed	passed
22	13C12-2378-TCDD	333.9339 +/- 5 ppm	331.9368 +/- 5 ppm	30.55	30.56	30.56	30.56	passed	passed
23	13C12-12378-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	35.43	35.45	35.45	35.27	passed	passed
24	13C12-23478-PeCDF	353.8970 +/- 5 ppm	351.9000 +/- 5 ppm	36.73	36.73	36.73	36.70	passed	passed
25	13C12-12378-PeCDD	369.8919 +/- 5 ppm	367.8949 +/- 5 ppm	37.13	37.15	37.15	37.15	passed	passed
26	13C12-123478-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.43	40.43	40.43	40.41	passed	passed
27	13C12-123678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	40.58	40.58	40.58	40.54	passed	passed
28	13C12-234678-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	41.27	41.28	41.28	41.28	passed	passed
29	13C12-123478-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.47	41.48	41.48	41.48	passed	passed
30	13C12-123678-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.59	41.61	41.61	41.61	passed	passed
31	13C12-123789-HxCDD	403.8529 +/- 5 ppm	401.8559 +/- 5 ppm	41.90	41.92	41.92	41.92	passed	passed
32	13C12-123789-HxCDF	385.8610 +/- 5 ppm	383.8639 +/- 5 ppm	42.28	42.29	42.29	42.29	passed	passed
33	13C12-1234678-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	44.01	44.02	44.02	44.01	passed	passed
34	13C12-1234678-HpCDD	437.8140 +/- 5 ppm	435.8169 +/- 5 ppm	45.21	45.23	45.23	45.23	passed	passed
35	13C12-1234789-HpCDF	419.8220 +/- 5 ppm	417.8253 +/- 5 ppm	45.76	45.78	45.78	45.75	passed	passed
36	13C12-OCDD	471.7750 +/- 5 ppm	469.7779 +/- 5 ppm	48.23	48.25	48.25	48.25	passed	passed
37	13C12-OCDF	455.7802 +/- 5 ppm	453.7831 +/- 5 ppm	48.41	48.43	48.43	48.45	passed	passed



Entry Parameters

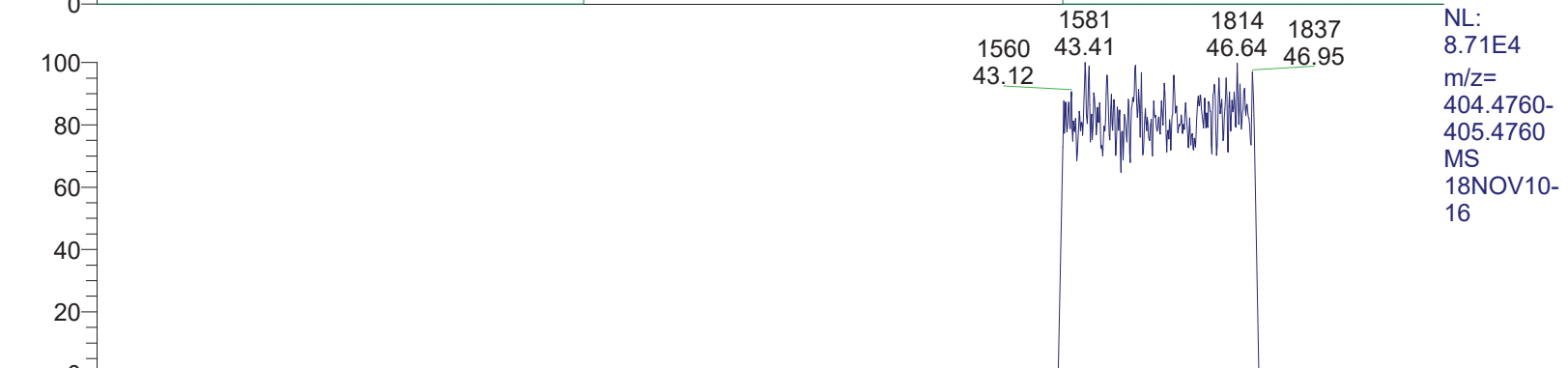
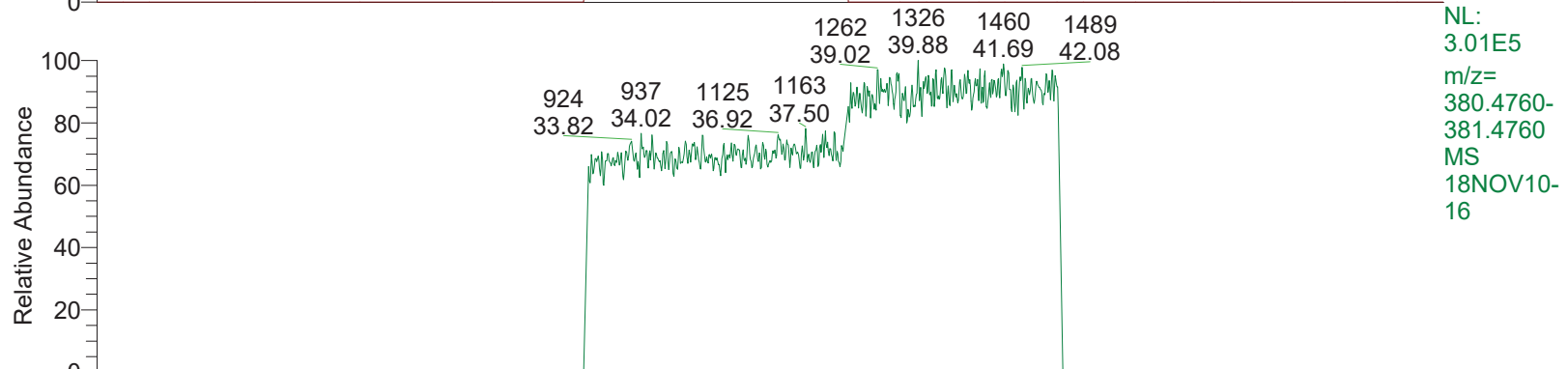
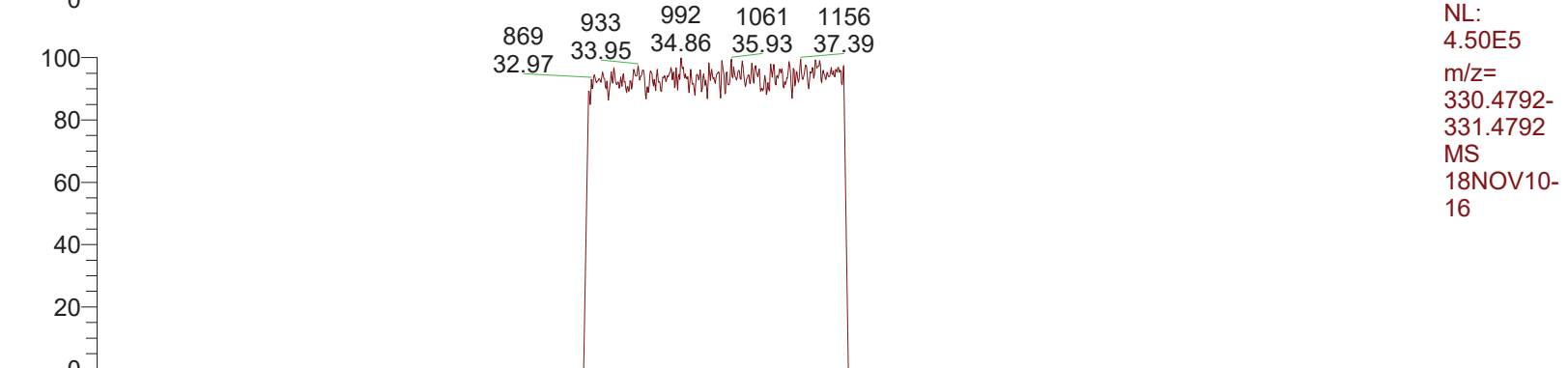
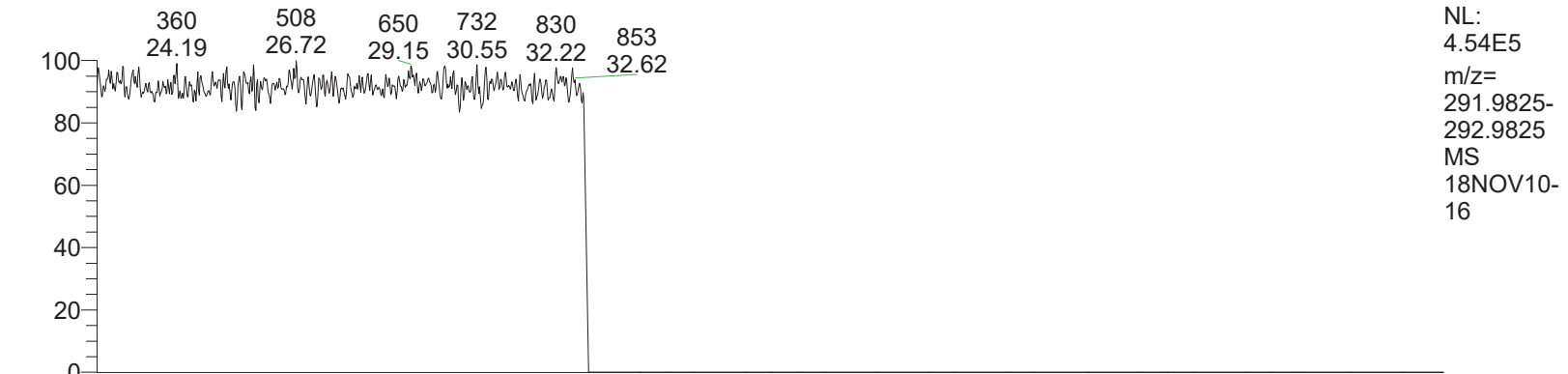
No.	Compound Name	QM Retention Time	RM1 Ratio (A)	Ratio1 Limit	Ratio1 Status	Percent Recovery (A)	Recovery Limit	Recovery Status
1	2378-TCDF	29.42	0.7997	0.6450 - 0.8950	passed	103.09	72 - 138	passed
2	2378-TCDD	30.58	0.8135	0.6450 - 0.8950	passed	102.36	71 - 125	passed
3	12378-PeCDF	35.47	1.5603	1.3150 - 1.7850	passed	104.09	82 - 130	passed
4	23478-PeCDF	36.75	1.5814	1.3150 - 1.7850	passed	105.12	77 - 129	passed
5	12378-PeCDD	37.16	1.5473	1.3150 - 1.7850	passed	107.85	76 - 121	passed
6	123478-HxCDF	40.46	1.2368	1.0450 - 1.4350	passed	109.88	80 - 130	passed
7	123678-HxCDF	40.61	1.2382	1.0450 - 1.4350	passed	109.41	79 - 131	passed
8	234678-HxCDF	41.30	1.2265	1.0450 - 1.4350	passed	108.97	81 - 130	passed
9	123478-HxCDD	41.50	1.2542	1.0450 - 1.4350	passed	105.48	80 - 126	passed
10	123678-HxCDD	41.62	1.2710	1.0450 - 1.4350	passed	104.68	78 - 134	passed
11	123789-HxCDD	41.93	1.2398	1.0450 - 1.4350	passed	106.43	76 - 137	passed
12	123789-HxCDF	42.31	1.2497	1.0450 - 1.4350	passed	106.34	83 - 130	passed
13	1234678-HpCDF	44.04	1.0356	0.8750 - 1.2050	passed	109.14	81 - 130	passed
14	1234678-HpCDD	45.24	1.0452	0.8750 - 1.2050	passed	104.90	79 - 122	passed
15	1234789-HpCDF	45.79	1.0480	0.8750 - 1.2050	passed	109.40	77 - 128	passed
16	OCDD	48.27	0.8805	0.7550 - 1.0250	passed	102.90	81 - 135	passed
17	OCDF	48.44	0.9016	0.7550 - 1.0250	passed	105.39	66 - 150	passed
18	13C12-1278-TCDD (CRS)	30.99	0.8038	0.6450 - 0.8950	passed	56.09	31 - 191	passed
19	13C12-1234-TCDD	29.73	0.8165	0.6450 - 0.8950	passed	100.00	0 - 0	passed
20	13C12-123468-HxCDD	40.37	1.2689	1.0450 - 1.4350	passed	100.00	0 - 0	passed
21	13C12-2378-TCDF	29.40	0.8123	0.6450 - 0.8950	passed	56.04	40 - 135	passed
22	13C12-2378-TCDD	30.56	0.7969	0.6450 - 0.8950	passed	71.45	40 - 135	passed
23	13C12-12378-PeCDF	35.45	1.5687	1.3150 - 1.7850	passed	64.66	40 - 135	passed
24	13C12-23478-PeCDF	36.73	1.5886	1.3150 - 1.7850	passed	63.09	40 - 135	passed
25	13C12-12378-PeCDD	37.15	1.6528	1.3150 - 1.7850	passed	68.53	40 - 135	passed
26	13C12-123478-HxCDF	40.43	0.5276	0.4250 - 0.5950	passed	66.82	40 - 135	passed
27	13C12-123678-HxCDF	40.58	0.5322	0.4250 - 0.5950	passed	64.95	40 - 135	passed
28	13C12-234678-HxCDF	41.28	0.5338	0.4250 - 0.5950	passed	56.48	40 - 135	passed
29	13C12-123478-HxCDD	41.48	1.2634	1.0450 - 1.4350	passed	73.45	40 - 135	passed
30	13C12-123678-HxCDD	41.61	1.2648	1.0450 - 1.4350	passed	70.24	40 - 135	passed
31	13C12-123789-HxCDD	41.92	1.2383	1.0450 - 1.4350	passed	64.52	40 - 135	passed
32	13C12-123789-HxCDF	42.29	0.5351	0.4250 - 0.5950	passed	66.07	40 - 135	passed
33	13C12-1234678-HpCDF	44.02	0.4658	0.3650 - 0.5150	passed	66.04	40 - 135	passed
34	13C12-1234678-HpCDD	45.23	1.0480	0.8750 - 1.2050	passed	66.24	40 - 135	passed
35	13C12-1234789-HpCDF	45.78	0.4512	0.3650 - 0.5150	passed	60.74	40 - 135	passed
36	13C12-OCDD	48.25	0.9003	0.7550 - 1.0250	passed	58.65	40 - 135	passed
37	13C12-OCDF	48.43	0.9024	0.7550 - 1.0250	passed	56.06	40 - 135	passed

Entry Parameters

No.	Compound Name	Status Overview	QM Retention Time	QM Area	QM Mode	RM1 Area	RM1 Mode	Detection Limit (A)	Unqualified Amount (A)	Adjusted Amount (A)	AdjSpecAMT	Signal-to-Noise	Client Flags
1	2378-TCDF	passed	29.42	231606	A	185219	A	0.2082	206.178064	206.1781	200.000000	2408	
2	2378-TCDD	passed	30.58	170947	A	139066	A	0.1766	204.721181	204.7212	200.000000	2861	
3	12378-PeCDF	passed	35.47	799383	A	1247293	A	0.1828	1040.949792	1040.9498	1000.000000	13993	
4	23478-PeCDF	passed	36.75	873100	A	1380716	A	0.1541	1051.227134	1051.2271	1000.000000	16445	
5	12378-PeCDD	passed	37.16	508498	A	786814	A	0.3140	1078.489404	1078.4894	1000.000000	8198	
6	123478-HxCDF	passed	40.46	1075920	A	1330683	A	0.3313	1098.832664	1098.8327	1000.000000	8250	
7	123678-HxCDF	passed	40.61	1072010	A	1327316	A	0.3465	1094.103299	1094.1033	1000.000000	7966	
8	234678-HxCDF	passed	41.30	913946	A	1120991	A	0.3712	1089.699847	1089.6998	1000.000000	7170	
9	123478-HxCDD	passed	41.50	706876	A	886576	A	0.2448	1054.819460	1054.8195	1000.000000	10734	
10	123678-HxCDD	passed	41.62	684875	A	870505	A	0.2612	1046.828684	1046.8287	1000.000000	10212	
11	123789-HxCDD	passed	41.93	642771	A	796895	A	0.2715	1064.291005	1064.2910	1000.000000	9682	
12	123789-HxCDF	passed	42.31	896611	A	1120459	A	0.3977	1063.414471	1063.4145	1000.000000	6729	
13	1234678-HpCDF	passed	44.04	1124392	A	1164467	A	0.3457	1091.392975	1091.3930	1000.000000	7899	
14	1234678-HpCDD	passed	45.24	685119	A	716106	A	0.3522	1048.971183	1048.9712	1000.000000	7413	
15	1234789-HpCDF	passed	45.79	899080	A	942202	A	0.4368	1093.992362	1093.9924	1000.000000	6167	
16	OCDD	passed	48.27	1323900	A	1165651	A	0.3174	2057.991586	2057.9916	2000.000000	16000	
17	OCDF	passed	48.44	1643645	A	1481973	A	0.2480	2107.777481	2107.7775	2000.000000	21029	
18	13C12-1278-TCDD (CRS)	passed	30.99	1094023	A	879343	A	0.3819	1121.804499	1121.8045	2000.000000	7729	
19	13C12-1234-TCDD	passed	29.73	1854667	A	1514274	A	0.3988	2000.000000	2000.0000	2000.000000	12536	
20	13C12-123468-HxCDD	passed	40.37	1793256	A	2275410	A	0.3584	2000.000000	2000.0000	2000.000000	13951	
21	13C12-2378-TCDF	passed	29.40	2122074	A	1723786	A	0.1905	1120.895794	1120.8958	2000.000000	14942	
22	13C12-2378-TCDD	passed	30.56	1348217	A	1074381	A	0.3963	1429.097135	1429.0971	2000.000000	9317	
23	13C12-12378-PeCDF	passed	35.45	1633540	A	2562604	A	0.5466	1293.155236	1293.1552	2000.000000	7998	
24	13C12-23478-PeCDF	passed	36.73	1576932	A	2505108	A	0.5482	1261.820698	1261.8207	2000.000000	8466	
25	13C12-12378-PeCDD	passed	37.15	904007	A	1494137	A	0.3376	1370.595740	1370.5957	2000.000000	15032	
26	13C12-123478-HxCDF	passed	40.43	2574717	A	1358491	A	0.3323	1336.319497	1336.3195	2000.000000	9939	
27	13C12-123678-HxCDF	passed	40.58	2666478	A	1419098	A	0.3109	1298.945614	1298.9456	2000.000000	9856	
28	13C12-234678-HxCDF	passed	41.28	2118586	A	1130829	A	0.3400	1129.600156	1129.6002	2000.000000	8593	
29	13C12-123478-HxCDD	passed	41.48	1318666	A	1665955	A	0.3589	1469.079654	1469.0797	2000.000000	10764	
30	13C12-123678-HxCDD	passed	41.61	1308480	A	1655012	A	0.3456	1404.773234	1404.7732	2000.000000	10183	
31	13C12-123789-HxCDD	passed	41.92	1148051	A	1421651	A	0.3661	1290.419151	1290.4192	2000.000000	9331	
32	13C12-123789-HxCDF	passed	42.29	2300488	A	1231071	A	0.3659	1321.475343	1321.4753	2000.000000	8583	
33	13C12-1234678-HpCDF	passed	44.02	2413927	A	1124396	A	0.3198	1320.767864	1320.7679	2000.000000	11152	
34	13C12-1234678-HpCDD	passed	45.23	1279650	A	1341035	A	0.3671	1324.883569	1324.8836	2000.000000	10235	
35	13C12-1234789-HpCDF	passed	45.78	1883396	A	849862	A	0.3808	1214.769728	1214.7697	2000.000000	8496	
36	13C12-OCDD	passed	48.25	2582176	A	2324631	A	0.1149	2346.197062	2346.1971	4000.000000	59676	
37	13C12-OCDF	passed	48.43	3615588	A	3262682	A	0.1569	2242.444489	2242.4445	4000.000000	41260	



RT: 22.50 - 51.00



APPROVED
By AQ46 at 10:50 pm, 11/12/18

REVIEWED
By uild at 1:45 pm, 11/13/18

Time (min)

18NOV10-16

*** file opened Sat Nov 10 07:39:14 2018 ***

Started by - Xcalibur
Instrument Internet name - DFS MS
Instrument model - DFS MS
Instrument service number - 0000
Workstation internet name - US19INS07624

Analysis started at: 10-Nov-18 07:39:13

Analysis will stop at user request

Firmware Version: 2.02

MCAL file name: mcal1.cal

Sequence : a22d5ac6-7a6a-480e-b3d0-c3f6f370acda

MID procedure: PFK18FEB21_DF+1MID

Mid Time windows:

	Start	Measure	End	Cycletime
# 1	18:00 min	4:00 min	22:00 min	1.00 sec
# 2	22:00 min	10:47 min	32:47 min	1.00 sec
# 3	32:47 min	5:30 min	38:17 min	0.90 sec
# 4	38:17 min	4:33 min	42:51 min	0.80 sec
# 5	42:51 min	4:08 min	47:00 min	0.80 sec
# 6	47:00 min	4:00 min	51:00 min	0.80 sec

Mid Masses:

Window #	mass	F	int	gr	time (ms)
1	218.0129		1	1	95
	218.9851	l	20	1	4
	220.0100		1	1	95
	230.0532		2	1	47
	232.0502		2	1	47
	251.9739		1	1	95
	253.9710		1	1	95
	264.0142		2	1	47
	266.0112		2	1	47
	285.9350		1	1	95
	287.9320		1	1	95
	292.9819	c	20	1	4
	297.9752		2	1	47
	299.9723		2	1	47
2	292.9819	l	20	1	5
	303.9011		1	1	118
	305.8981		1	1	118
	315.9413		5	1	23
	317.9384		5	1	23
	319.8960		1	1	118
	321.8930		1	1	118



331.9363		5	1	23
333.9333		5	1	23
339.8592		1	1	118
341.8562		1	1	118
354.9787	c	20	1	5
375.8364		2	1	59
Window # 3				
mass	F	int	gr	time (ms)
330.9787	l	20	1	6
339.8592		1	1	133
341.8562		1	1	133
351.8994		3	1	44
353.8965		3	1	44
355.8541		1	1	133
357.8511		1	1	133
367.8943		3	1	44
369.8914		3	1	44
380.9755	c	20	1	6
409.7969		2	1	66
Window # 4				
mass	F	int	gr	time (ms)
373.8201		1	1	117
375.8172		1	1	117
380.9755	l	20	1	5
383.8634		3	1	39
385.8604		3	1	39
389.8151		1	1	117
391.8121		1	1	117
401.8554		3	1	39
403.8524		3	1	39
430.9723	c	20	1	5
445.7550		2	1	58
Window # 5				
mass	F	int	gr	time (ms)
404.9755	l	20	1	5
407.7812		1	1	117
409.7783		1	1	117
417.8244		3	1	39
419.8215		3	1	39
423.7761		1	1	117
425.7732		1	1	117
435.8164		3	1	39
437.8134		3	1	39
479.7160		2	1	58
480.9691	c	20	1	5
Window # 6				
mass	F	int	gr	time (ms)
441.7422		1	1	95
442.9723	l	20	1	4
443.7393		1	1	95
453.7825		1	1	95
455.7795		1	1	95
457.7372		1	1	95
459.7342		1	1	95
469.7774		3	1	31
471.7745		3	1	31
492.9691	c	20	1	4
513.6770		2	1	47

MID window terminated after 22.016667 minutes
MID window end time was 22.010000 minutes
MID window terminated after 32.800000 minutes
MID window end time was 32.800000 minutes

18NOV10-16

MID window terminated after 38.300000 minutes
MID window end time was 38.300000 minutes
MID window terminated after 42.850000 minutes
MID window end time was 42.850000 minutes
MID window terminated after 47.000000 minutes
MID window end time was 47.000000 minutes
MID window terminated after 51.000000 minutes
MID window end time was 51.000000 minutes

Tune file name: C:\xcalibur\System\DFS\MSI\18AUG08Tune.DFSTune

DFS - Parameter

ACCU	1000.0000	BCORRS	0.0169	BMASS	98.0000
BQUAD	3.1000	CAPIL	0.0000	CAPTSET	200.0000
CCURR	0.0000	COUNTING	0.0000	DELAY	0.0000
DRAW	-25.0000	DRAWC	0.0000	DRAWS	0.0000
DYNVOLTAGE	20.0000	ECORR	1.0000	ECURR	1.0000
EDAC	7969177.0000	EDACG	0.9995	EDACZ	4065.0000
ELEN	-50.0000	EMULT	2400.0000	ENS	344.0000
ENSBR	3.1000	ERATIO	1.0000	ESA	679.0600
ESIPAR	0.0000	EXS	165.0000	EXSBR	-4.3000
FDMA	18000000.0000	FILTER	100.0000	FLENS	1.0000
FM	299.9723	FMII	50.0000	FQUAD	11.3500
FQUADGAIN	0.0000	FREQ	400.0000	FSLOPE	36000000.0000
FVANAL	0.0075	FVINLET	0.0381	FVSR	0.0366
FWIN	0.7000	HCURR	0.0000	HVANAL	0.0000
HVSR	0.0000	ICAL0	0.0011	ICAL1	0.4030
ICAL2	0.5865	IONEN	0.0000	IST	0.0000
ISTC	260.0000	ISTS	260.0000	LENS_POT	764.0000
LENS_SYM	33.7500	LM	299.9723	LMII	500.0000
LMASS	98.0000	LKM	442.9723	MASS	98.0000
MDAC	1429408.8034	MRANGE	1318.7819	NSAM	200.0000
NSCAN	2158.0000	NSMAX	2.0000	NSMIN	66.0000
NPEAK	11.0000	MULT	-2.0000	PSAM	10.0000
PUSHER	-6.0000	RECURR	0.9871	RELEN	0.0000
RES	12274.2367	RPUSHER	-6.0000	RDRAW	0.0000
RDRAWC	0.0000	RWIN	2.0000	SCIDLE	0.0000
SHIELD_POT	740.0000	SHIELD_SYM	0.0000	SHIGH	180.0000
SKIM	7.0000	SLOW	60.0000	SS	2.0000
SW	0.0210	TANAL	0.0000	TCURR	0.0000
TD	5.0000	TS	0.0002	THRESH	2.0000
TIS	0.0010	TREF	120.0000	TSAM	200.0000
TSET	0.0000	TUBEL	0.0000	UROT	0.0000
USERVAR	0.0000	UTQ1	150.0000	UTQ2	190.0000
UTQ3	80.0000	VMASS	98.0000	XLENS_POT	1000.0000
XLENS_SYM	-8.2500	YLENS_POT	670.0000	YLENS_SYM	-61.2500

Source Gauge: 2.1e-005 mbar
Analyzer Penning: 6.6e-008 mbar
Pirani Analyse: 7.6e-003 mbar
Pirani Source: 3.7e-002 mbar
Pirani Inlet System: 3.8e-002 mbar

Scantype is magnetic

Sourcemode is EI POS

MID Time window 1: Resolution is 11188.
MID Time window 2: Resolution is 11191.
MID Time window 3: Resolution is 11359.
MID Time window 4: Resolution is 11769.



18NOV10-16

MID Time Window 5: Resolution is 12072.
MID Time Window 6: Resolution is 12274.

Amplifier offset: 80.

*** File closed Sat Nov 10 08:30:14 2018



Extraction Logs

Dioxins/Furans by HRMS

Organic Extraction Batchlog

Assigned to: 0 Reviewed by: JAD 12811 Start Date: 11/09/18 Start time: 11:29
 Tech 1: DMZ 308 Tech 2: JP 26809 Sox Start: NA Sox Stop: NA
 Dry Start: NA Dry Stop: NA

18313007

Analyses on Batch: Dioxins/Furans in Water - 8290

Dept: 37	QC	Sample Code	Amt (L)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (uL)	Filter (Y/N)	IS amt (uL)	BC	Comments
	9876335MS	14T04	1.05	LCSDFX1837AS	0.1	PARDFX1837AP	0.1	20	N	10	243b	
	9876336MSD	14T04	1.05	LCSDFX1837AS	0.1	PARDFX1837AP	0.1	20		10	D6	
	BLANKA	BLK313007	1.0	LCSDFX1837AS	0.1			20		10	Z	
	LCSA	OPR313007	1.0	LCSDFX1837AS	0.1	PARDFX1837AP	0.1	20		10		

Solvent Used	Lot No.
21mm filter paper	16815315
90mm filter paper	NA
Filter (Y/N)	N
M-vap	15614
Microvap Temp	40
S-bath ID	17607
Sox Start	NA
Sox Stop	NA
Spike Time	11:39
Witness	DMZ 308
glass fiber thimble	NA
hexane	184810
methylene chloride	1873570
sodium sulfate	30810218C
toluene	NA

Spike Solutions: Witness: DMZ 308 Instrument: DF 17611 Micro Temp: 100? NA
 PARDFX1837AP DF Perform and Rec Spike
 LCSDFX1837AS DF Labeled Comp Spike Sequence: X118N016

Sample #	Sample Code	Amt (L)	SS/IS Sol.	Amt (mL)	FV (uL)	Filter Y/N	IS amt (uL)	BC	Comments	Analyses	Due Date	Prio
1	9876332 R	1.04	LCSDFX1837AS	0.1	20	N	10	243b	⑤ JP 26809 11/09/18	12936	11/13/2018	N
2	9876334 R	1.05	LCSDFX1837AS	0.1	20		10	243b	D6	12936	11/13/2018	N
3	9876342 R	1.05	LCSDFX1837AS	0.1	20		10	243b		12936	11/13/2018	N
4	9881309	1.04	LCSDFX1837AS	0.1	20		10	243b		12936	11/15/2018	N
5	9881310	1.01	LCSDFX1837AS	0.1	20		10	243b		12936	11/15/2018	N
6	9881313	1.03	LCSDFX1837AS	0.1	20		10	243b		12936	11/15/2018	N

IS Added by: JAD 12811 Date: 11/9/18

Internal Standard	<u>1827437B</u>	Balance #	<u>17779</u>	S-bath ID	<u>17607</u>	Micro Unit	<u>95 C</u>	M-vap	<u>15614</u>	40 C	18313007
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DF column cleanup
Prep: 10914 Dioxins/Furans in Water - SepF
Batch: 18313007

Reviewed by: <u>JAD12811</u>
Start Date: <u>11/09/18</u>
Start Time: <u>15:40</u>
Tech 1: <u>NA</u>
Tech 2: <u>JP 26809</u>

Sample #	Aliquot (mL) E=entire extract	CSPDFK1831A) Cleanup std	amt	Comments	Analyses
1 9876332	E	✓	0.1		12936
2 9876334	↓	↓	↓		12936
3 9876335 MS				12936	
4 9876336 MS				12936	
5 9876342				12936	
6 9881309				12936	
7 9881310				12936	
8 9881313				12936	
9 BLANKA					
10 LCSA					Z

NA JP 26809
11/09/18

Additional Comment: _____

DF = Dilution Factor FV = Final Volume

Media Used	Lot No.	Solvent Used	Lot No.
sodium sulfate	308110215C	hexane	184810
silica gel	308103018E	5% methylene chloride:	268091109181A
acid silica gel	2588210718	hexane	
basic silica gel	308110218D	methylene chloride	187356
AgNO3 silica gel	1261610315A	2:1 Toluene:Hexane	NA
alumina	0108035		

Miscellaneous	Lot No.
13mm filter paper	80823707
Nonane	NA

M-Evap 15614 40 C

The documented temperatures are NIST corrected.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID15

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix		Comments
		Liquid	Solid	
9881309	OU2-1-MW008WT	X		
9881310	OU2-1-MW008WT-DUP	X		Field Duplicate Sample
9881311	OU2-1-MW008WT-F	X		
9881312	OU2-1-MW008WT-F-DUP	X		Field Duplicate Sample
9881313	OU2-1-MW009WT	X		
9881314	OU2-1-MW009WT-F	X		

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

Method defined actions are taken for any failed matrix QC.

Batch#: 183110571303 (Sample number(s): 9881309-9881314, UNSPK: 9881313, BKG: 9881313)
The recovery(ies) for the following analyte(s) in the MSD were below the acceptance window: Mercury

Batch#: 183091063901D (Sample number(s): 9881309-9881314, UNSPK: 9881311, BKG: 9881311)
The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: Barium

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID15

ICP Metals

Fraction: Metals in Liquid

Batch#: 183091063901B (Sample number(s): 9881309-9881314, UNSPK: 9881311, BKG: 9881311)
The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: Calcium

Batch#: 183091063901A (Sample number(s): 9881309-9881314, UNSPK: 9881311, BKG: 9881311)
The recovery(ies) for the following analyte(s) in the MS and MSD were below the acceptance window: Arsenic, Iron, Magnesium, Manganese, Potassium, Sodium
The recovery(ies) for the following analyte(s) in the MS and MSD exceeded the acceptance window indicating a positive bias: Chromium

Sample Duplicate

Batch#: 183091063901A (Sample number(s): 9881309-9881314, UNSPK: 9881311, BKG: 9881311)
The duplicate RPD for the following analyte(s) is outside the acceptance window: Chromium, Nickel

SAMPLE ANALYSIS:

Refer to analysis run log for samples requiring dilutions.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

(Sample number(s): 9881309-9881314: Analysis: 13495)
The ICV,CCV RSD is greater than 5% for Thorium.
Outlier recovery/result: ICV, CCV RSD > 5%; Acceptance limits: < 5%
ICV RSD%- 5.9%, reading 0.58, acceptance limits: 0.54-0.66
1st CCV RSD%- 5.3%, reading 0.49, acceptance limits: 0.45-0.55
2nd CCV RSD%- 10.7%, reading 0.48, acceptance limits: 0.45-0.55
3rd CCV RSD%- 2.2%, reading 0.49, acceptance limits: 0.45-0.55

No other problems were encountered with the analysis of the samples.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

Case Narrative/Conformance Summary

CLIENT: Tidewater, Inc.
SDG: TID15

ICP Metals

Fraction: Metals in Liquid

Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid



Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Lab Sample ID: 9881309

% Solids: 0.0

Concentration Units: UG/L

Date Received: 11/02/2018

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	U		MS
7440-36-0	Antimony	0.41	U		MS
7440-38-2	Arsenic	15.4			MS
7440-39-3	Barium	1730			MS
7440-41-7	Beryllium	0.091	U		MS
7440-43-9	Cadmium	0.15	U		MS
7440-70-2	Calcium	263000			MS
7440-47-3	Chromium	2.5	B		MS
7440-48-4	Cobalt	2.5			MS
7440-50-8	Copper	9.9	U		MS
7439-89-6	Iron	42200			MS
7439-92-1	Lead	1.1	U		MS
7439-95-4	Magnesium	32400			MS
7439-96-5	Manganese	704			MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	0.60	U		MS
7440-09-7	Potassium	19900			MS
7782-49-2	Selenium	0.65	U		MS
7440-22-4	Silver	0.17	U		MS
7440-23-5	Sodium	39500			MS
7440-28-0	Thallium	0.11	U		MS
7440-29-1	Thorium	205	U		P
7440-61-1	Uranium	0.11	U		MS
7440-62-2	Vanadium	1.9			MS
7440-66-6	Zinc	6.2	U		MS

Comments:

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U = Below MDL, B = Below LOQ</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Lab Sample ID: 9881310
Concentration Units: UG/L

% Solids: 0.0
Date Received: 11/02/2018

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	U		MS
7440-36-0	Antimony	0.41	U		MS
7440-38-2	Arsenic	15.5			MS
7440-39-3	Barium	1620			MS
7440-41-7	Beryllium	0.091	U		MS
7440-43-9	Cadmium	0.15	U		MS
7440-70-2	Calcium	261000			MS
7440-47-3	Chromium	2.7	B		MS
7440-48-4	Cobalt	2.3			MS
7440-50-8	Copper	9.9	U		MS
7439-89-6	Iron	41800			MS
7439-92-1	Lead	1.1	U		MS
7439-95-4	Magnesium	32000			MS
7439-96-5	Manganese	684			MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	0.63	B		MS
7440-09-7	Potassium	19900			MS
7782-49-2	Selenium	0.65	U		MS
7440-22-4	Silver	0.17	U		MS
7440-23-5	Sodium	39500			MS
7440-28-0	Thallium	0.11	U		MS
7440-29-1	Thorium	205	U		P
7440-61-1	Uranium	0.11	U		MS
7440-62-2	Vanadium	2.2			MS
7440-66-6	Zinc	6.2	U		MS

Comments:

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U = Below MDL, B = Below LOQ</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Lab Sample ID: 9881311, 9881311BKG
Concentration Units: UG/L

% Solids: 0.0
Date Received: 11/02/2018

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	U		MS
7440-36-0	Antimony	0.41	U		MS
7440-38-2	Arsenic	17.0			MS
7440-39-3	Barium	1820			MS
7440-41-7	Beryllium	0.091	U		MS
7440-43-9	Cadmium	0.15	U		MS
7440-70-2	Calcium	277000			MS
7440-47-3	Chromium	2.3	B		MS
7440-48-4	Cobalt	2.8			MS
7440-50-8	Copper	9.9	U		MS
7439-89-6	Iron	45900			MS
7439-92-1	Lead	1.1	U		MS
7439-95-4	Magnesium	35300			MS
7439-96-5	Manganese	766			MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	0.60	U		MS
7440-09-7	Potassium	21700			MS
7782-49-2	Selenium	0.65	U		MS
7440-22-4	Silver	0.17	U		MS
7440-23-5	Sodium	43300			MS
7440-28-0	Thallium	0.11	U		MS
7440-29-1	Thorium	205	U		P
7440-61-1	Uranium	0.11	U		MS
7440-62-2	Vanadium	1.9			MS
7440-66-6	Zinc	6.2	U		MS

Comments:

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U = Below MDL, B = Below LOQ</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Lab Sample ID: 9881312
Concentration Units: UG/L

% Solids: 0.0
Date Received: 11/02/2018

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	U		MS
7440-36-0	Antimony	0.41	U		MS
7440-38-2	Arsenic	15.0			MS
7440-39-3	Barium	1710			MS
7440-41-7	Beryllium	0.091	U		MS
7440-43-9	Cadmium	0.15	U		MS
7440-70-2	Calcium	272000			MS
7440-47-3	Chromium	1.9	B		MS
7440-48-4	Cobalt	2.3			MS
7440-50-8	Copper	9.9	U		MS
7439-89-6	Iron	44400			MS
7439-92-1	Lead	1.1	U		MS
7439-95-4	Magnesium	34300			MS
7439-96-5	Manganese	746			MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	0.60	U		MS
7440-09-7	Potassium	21300			MS
7782-49-2	Selenium	0.65	U		MS
7440-22-4	Silver	0.17	U		MS
7440-23-5	Sodium	41800			MS
7440-28-0	Thallium	0.11	U		MS
7440-29-1	Thorium	205	U		P
7440-61-1	Uranium	0.11	U		MS
7440-62-2	Vanadium	1.8			MS
7440-66-6	Zinc	6.2	U		MS

Comments:

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U = Below MDL, B = Below LOQ</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Lab Sample ID: 9881313, 9881313BKG
Concentration Units: UG/L

% Solids: 0.0
Date Received: 11/02/2018

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	U		MS
7440-36-0	Antimony	0.41	U		MS
7440-38-2	Arsenic	2.8			MS
7440-39-3	Barium	73.6			MS
7440-41-7	Beryllium	0.091	U		MS
7440-43-9	Cadmium	0.15	U		MS
7440-70-2	Calcium	87400			MS
7440-47-3	Chromium	0.70	U		MS
7440-48-4	Cobalt	0.32	B		MS
7440-50-8	Copper	9.9	U		MS
7439-89-6	Iron	2380			MS
7439-92-1	Lead	1.1	U		MS
7439-95-4	Magnesium	25200			MS
7439-96-5	Manganese	1190			MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	0.60	U		MS
7440-09-7	Potassium	4760			MS
7782-49-2	Selenium	0.65	U		MS
7440-22-4	Silver	0.17	U		MS
7440-23-5	Sodium	19400			MS
7440-28-0	Thallium	0.11	U		MS
7440-29-1	Thorium	205	U		P
7440-61-1	Uranium	1.1			MS
7440-62-2	Vanadium	0.28	B		MS
7440-66-6	Zinc	6.2	U		MS

Comments:

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U = Below MDL, B = Below LOQ</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY

FORM 1

INORGANIC ANALYSIS DATA SHEET

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Lab Sample ID: 9881314, 9881314BKG
Concentration Units: UG/L

% Solids: 0.0
Date Received: 11/02/2018

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	19.7	U		MS
7440-36-0	Antimony	0.41	U		MS
7440-38-2	Arsenic	2.9			MS
7440-39-3	Barium	69.2			MS
7440-41-7	Beryllium	0.091	U		MS
7440-43-9	Cadmium	0.15	U		MS
7440-70-2	Calcium	85800			MS
7440-47-3	Chromium	0.70	U		MS
7440-48-4	Cobalt	0.19	B		MS
7440-50-8	Copper	9.9	U		MS
7439-89-6	Iron	2430			MS
7439-92-1	Lead	1.1	U		MS
7439-95-4	Magnesium	26900			MS
7439-96-5	Manganese	1250			MS
7439-97-6	Mercury	0.050	U		CV
7440-02-0	Nickel	1.1	B		MS
7440-09-7	Potassium	5010			MS
7782-49-2	Selenium	0.65	U		MS
7440-22-4	Silver	0.17	U		MS
7440-23-5	Sodium	20700			MS
7440-28-0	Thallium	0.11	U		MS
7440-29-1	Thorium	205	U		P
7440-61-1	Uranium	1.2			MS
7440-62-2	Vanadium	0.24	U		MS
7440-66-6	Zinc	6.2	U		MS

Comments:

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U = Below MDL, B = Below LOQ</p>
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Quality Control and Calibration Summary Forms

Metals in Liquid

SDG No.: TID15

Matrix: WATER

<u>Analyte</u>	<u>Batch Number</u>	<u>Lab Sample ID</u>
Thorium	183301063501	9881309
		9881310
		9881311
		9881312
		9881313
		9881314BKG
		9881314MS
		9881314MSD
		9881314DUP
		P33063AB
		P33063AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

SDG No.: TID15

Matrix: WATER

<u>Analyte</u>	<u>Batch Number</u>	<u>Lab Sample ID</u>
Aluminum	183091063901	9881309
Antimony		9881310
Arsenic		9881311BKG
Barium		9881311MS
Beryllium		9881311MSD
Cadmium		9881311DUP
Calcium		9881312
Chromium		9881313
Cobalt		9881314
Copper		P30963AB
Iron		P30963AQ
Lead		
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Thallium		
Uranium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

SDG No.: TID15

Matrix: WATER

<u>Analyte</u>	<u>Batch Number</u>	<u>Lab Sample ID</u>
Mercury	183110571303	9881309
		9881310
		9881311
		9881312
		9881313BKG
		9881313MS
		9881313MSD
		9881313DUP
		9881314
		P31171CB
		P31171CQ

LEGEND:

BKG = Background

DUP = Duplicate

MS = Matrix Spike

MSD = Matrix Spike Duplicate

B = Blank

Q = Laboratory Control Sample

Y = Laboratory Control Sample Duplicate



Method: P
Run Name: 1833201T73
Calibration Date(s): 11/28/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Thorium		600.0	581.22	96.9	500.0	490.78	98.2	500.0	475.74	95.1

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: P
Run Name: 1833201T73
Calibration Date(s): 11/28/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Thorium					500.0	494.53	98.9			

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: MS
Run Name: 1831006E05
Calibration Date(s): 11/06/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum	27	5000.0	4945.14	98.9	2500.0	2530.89	101.2	2500.0	2546.69	101.9
Antimony	121	50.0	55.56	111.1*	25.0	24.66	98.6	25.0	24.93	99.7
Arsenic	75	500.0	507.77	101.6	250.0	250.28	100.1	250.0	247.06	98.8
Barium	137	500.0	496.89	99.4	250.0	248.54	99.4	250.0	242.29	96.9
Beryllium	9	50.0	49.84	99.7	25.0	25.58	102.3	25.0	25.78	103.1
Cadmium	111	50.0	50.24	100.5	25.0	25.83	103.3	25.0	23.64	94.6
Calcium										
Chromium	52	500.0	527.50	105.5	250.0	263.18	105.3	250.0	258.97	103.6
Cobalt	59	500.0	512.39	102.5	250.0	258.77	103.5	250.0	246.84	98.7
Copper	63	500.0	517.51	103.5	250.0	253.88	101.6	250.0	244.34	97.7
Iron	57	5000.0	5346.33	106.9	2500.0	2665.12	106.6	2500.0	2692.81	107.7
Lead	208	50.0	50.72	101.4	25.0	26.04	104.2	25.0	25.94	103.8
Magnesium	24	5000.0	5220.79	104.4	2500.0	2517.08	100.7	2500.0	2618.52	104.7
Manganese	55	500.0	517.69	103.5	250.0	259.75	103.9	250.0	268.55	107.4
Nickel	60	500.0	517.91	103.6	250.0	254.68	101.9	250.0	248.92	99.6
Potassium	39	5000.0	5067.90	101.4	2500.0	2525.29	101.0	2500.0	2556.19	102.2
Selenium	78	50.0	51.48	103.0	25.0	26.12	104.5	25.0	25.85	103.4
Silver	107	50.0	53.31	106.6	25.0	26.89	107.6	25.0	25.68	102.7
Sodium	23	5000.0	4954.65	99.1	2500.0	2566.24	102.6	2500.0	2564.66	102.6
Thallium	203	50.0	50.41	100.8	25.0	25.23	100.9	25.0	26.36	105.4
Uranium	238	50.0	50.10	100.2	25.0	25.31	101.2	25.0	25.11	100.4
Vanadium	51	500.0	515.88	103.2	250.0	256.99	102.8	250.0	260.19	104.1
Zinc	66	500.0	511.75	102.4	250.0	269.46	107.8	250.0	259.39	103.8

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1831006E05
Calibration Date(s): 11/06/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum	27				2500.0	2561.02	102.4			
Antimony	121				25.0	24.35	97.4			
Arsenic	75				250.0	241.10	96.4			
Barium	137				250.0	235.74	94.3			
Beryllium	9				25.0	26.09	104.4			
Cadmium	111				25.0	24.21	96.8			
Calcium										
Chromium	52				250.0	255.94	102.4			
Cobalt	59				250.0	242.71	97.1			
Copper	63				250.0	246.17	98.5			
Iron	57				2500.0	2573.83	103.0			
Lead	208				25.0	26.36	105.4			
Magnesium	24				2500.0	2646.54	105.9			
Manganese	55				250.0	263.85	105.5			
Nickel	60				250.0	243.57	97.4			
Potassium	39				2500.0	2505.11	100.2			
Selenium	78				25.0	26.47	105.9			
Silver	107				25.0	25.06	100.2			
Sodium	23				2500.0	2537.39	101.5			
Thallium	203				25.0	25.75	103.0			
Uranium	238				25.0	25.45	101.8			
Vanadium										
Zinc	66				250.0	257.78	103.1			

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: MS
Run Name: 1831610E07
Calibration Date(s): 11/12/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony	121	50.0	52.04	104.1	25.0	26.17	104.7	25.0	26.18	104.7
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	44	5000.0	5173.77	103.5	2500.0	2493.87	99.8	2500.0	2667.16	106.7
Chromium										
Cobalt	59	500.0	509.75	102.0	250.0	252.81	101.1	250.0	256.05	102.4
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Uranium										
Vanadium	51	500.0	506.33	101.3	250.0	261.94	104.8	250.0	260.49	104.2
Zinc										

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence



Method: MS
Run Name: 1831610E07
Calibration Date(s): 11/12/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	44				2500.0	2520.58	100.8			
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Uranium										
Vanadium	51				250.0	256.44	102.6			
Zinc										

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer

MS = ICP Mass Spectrometry

CV = Cold Vapor

AF = Cold Vapor Atomic Fluorescence



Method: MS
Run Name: 1831804E07
Calibration Date(s): 11/14/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	44	5000.0	5237.44	104.7	2500.0	2609.23	104.4	2500.0	2711.01	108.4
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Uranium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110

(2) Control Limits: 90 - 110

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: CV
Run Name: 1831202M07
Calibration Date(s): 11/08/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.33	93.2	1.0	0.97	97.0	1.0	0.93	93.0

(1) Control Limits: 90 - 110

(2) Control Limits: 80 - 120

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: CV
Run Name: 1831202M07
Calibration Date(s): 11/08/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.94	94.0	1.0	0.90	90.0

(1) Control Limits: 90 - 110

(2) Control Limits: 80 - 120

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: CV
Run Name: 1831202M07
Calibration Date(s): 11/08/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.90	90.0	1.0	0.91	91.0

(1) Control Limits: 90 - 110

(2) Control Limits: 80 - 120

* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: P
Run Name: 1833201T73
Calibration Date(s): 11/28/2018
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Thorium		500.0	520.84	104.2		

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1831006E05
Calibration Date(s): 11/06/2018
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Aluminum	27	400.0	430.87	107.7		
Antimony	121	2.0	2.52	126.0		
Arsenic	75	2.0	1.93	96.5		
Barium	137	4.0	4.33	108.3		
Beryllium	9	0.5	0.49	98.0		
Cadmium	111	1.0	1.05	105.0		
Calcium						
Chromium	52	4.0	4.79	119.8		
Cobalt	59	1.0	0.90	90.0		
Copper	63	40.0	38.79	97.0		
Iron	57	100.0	112.88	112.9		
Lead	208	3.0	3.09	103.0		
Magnesium	24	100.0	111.87	111.9		
Manganese	55	10.0	9.84	98.4		
Nickel	60	4.0	3.88	97.0		
Potassium	39	400.0	415.54	103.9		
Selenium	78	2.0	2.11	105.5		
Silver	107	0.5	0.52	104.0		
Sodium	23	900.0	971.94	108.0		
Thallium	203	0.5	0.54	108.0		
Uranium	238	0.5	0.52	104.0		
Vanadium	51	1.0	1.25	125.0		
Zinc	66	15.0	15.72	104.8		

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: MS
Run Name: 1831610E07
Calibration Date(s): 11/12/2018
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Aluminum						
Antimony	121	2.0	2.35	117.5		
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium	44	700.0	769.44	109.9		
Chromium						
Cobalt	59	1.0	1.12	112.0		
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Uranium						
Vanadium	51	1.0	0.97	97.0		
Zinc						

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence



Method: MS
Run Name: 1831804E07
Calibration Date(s): 11/14/2018
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium	44	700.0	765.98	109.4		
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Nickel						
Potassium						
Selenium						
Silver						
Sodium						
Thallium						
Uranium						
Vanadium						
Zinc						

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence



Method: CV
Run Name: 1831202M07
Calibration Date(s): 11/08/2018
Concentration Units: UG/L

Analyte	Mass	Initial			Final	
		True	Found	%R	Found	%R
Mercury		0.2	0.17	85.0		

Control limits: 80% - 120%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.

For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: P
Run Name: 1833201T73
Calibration Date(s): 11/28/2018
Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
			C	1	C	2	C	3	C	Mass	C	Batch Number	
Thorium		59.8	U	59.8	U	59.8	U	59.8	U		205.000	U	183301063501

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below IDL/MDL B= Below LOQ</p>
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Method: MS
Run Name: 1831006E05
Calibration Date(s): 11/06/2018
Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)			Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)					
			C		1	C	2	C	3	C	Mass		C	Batch Number		
Aluminum	27	30.8	U		30.8	U		30.8	U		30.8	U	27	19.700	U	183091063901A
Antimony	121	1.4	B		0.52	U		0.55	B		0.52	U				
Arsenic	75	0.40	U		0.40	U		0.40	U		0.40	U	75	0.680	U	183091063901A
Barium	137	0.73	U		0.73	U		0.73	U		0.73	U	137	0.750	U	183091063901A
Beryllium	9	0.067	U		0.067	U		0.067	U		0.067	U	9	0.091	U	183091063901A
Cadmium	111	0.17	U		0.17	U		0.17	U		0.17	U	111	0.150	U	183091063901A
Calcium																
Chromium	52	1.1	B		0.50	B		0.50	U		0.60	B	52	0.700	U	183091063901A
Cobalt	59	0.40	B		0.24	B		0.33	B		0.21	U	59	0.160	U	183091063901A
Copper	63	1.1	U		1.1	U		1.1	U		1.1	U	63	9.900	U	183091063901A
Iron	57	14.9	U		14.9	U		14.9	U		14.9	U	57	22.800	U	183091063901A
Lead	208	0.21	U		0.21	U		0.21	U		0.21	U	208	1.100	U	183091063901A
Magnesium	24	11.6	U		11.6	U		11.6	U		11.6	U	24	10.400	U	183091063901A
Manganese	55	0.95	U		0.95	U		0.95	U		0.95	U	55	4.900	U	183091063901A
Nickel	60	0.57	B		0.41	U		0.41	U		0.41	U	60	0.600	U	183091063901A
Potassium	39	41.2	U		66.1	B		41.2	U		62.8	B	39	107.000	U	183091063901A
Selenium	78	0.50	U		0.50	U		0.50	U		0.50	U	78	0.650	U	183091063901A
Silver	107	0.098	U		0.098	U		0.098	U		0.098	U	107	0.170	U	183091063901A
Sodium	23	50.0	U		50.0	U		50.0	U		50.0	U	23	50.000	U	183091063901A
Thallium	203	0.13	U		0.13	U		0.13	U		0.13	U	203	0.110	U	183091063901A
Uranium	238	0.080	U		0.080	U		0.080	U		0.080	U	238	0.110	U	183091063901A
Vanadium	51	0.60	B		0.42	B		0.36	B				51	0.240	U	183091063901A
Zinc	66	4.7	B		3.8	B		4.5	B		4.0	B	66	6.200	U	183091063901A

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below IDL/MDL
B= Below LOQ



Method: MS
Run Name: 1831610E07
Calibration Date(s): 11/12/2018
Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
			C	1	C	2	C	3	C	Mass		C	Batch Number
Aluminum													
Antimony	121	0.74	B	0.56	B	0.52	U			121	0.410	U	183091063901A
Arsenic													
Barium													
Beryllium													
Cadmium													
Calcium	44	79.0	U	79.0	U	79.0	U	79.0	U	44	59.800	U	183091063901A
Chromium													
Cobalt	59	0.21	U	0.21	U	0.21	U						
Copper													
Iron													
Lead													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium													
Thallium													
Uranium													
Vanadium	51	0.21	U	0.21	U	0.21	U	0.21	U				
Zinc													

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below IDL/MDL B= Below LOQ</p>
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Method: MS
Run Name: 1831804E07
Calibration Date(s): 11/14/2018

Analyte	Mass	Initial Calibration		Continuing Calibration						Preparation			
		Blank (ug/L)		Blank (ug/L)						Blank (UG/L)			
			C	1	C	2	C	3	C	Mass		C	Batch Number
Aluminum													
Antimony													
Arsenic													
Barium													
Beryllium													
Cadmium													
Calcium	44	79.0	U	79.0	U	79.0	U						
Chromium													
Cobalt													
Copper													
Iron													
Lead													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium													
Thallium													
Uranium													
Vanadium													
Zinc													

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below IDL/MDL B= Below LOQ</p>
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Method: CV
Run Name: 1831202M07
Calibration Date(s): 11/08/2018
Preparation Blank Matrix: WATER

Analyte	Mass	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
		1	C	1	C	2	C	3	C	Mass	C	Batch Number
Mercury		0.050	U	0.050	U	0.050	U	0.050	U	0.050	U	183110571303

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below IDL/MDL B= Below LOQ</p>
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Method: CV
Run Name: 1831202M07
Calibration Date(s): 11/08/2018

Analyte	Mass	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)		
		C		1	C	2	C	3	C	Mass	C	Batch Number
Mercury				0.050	U	0.050	U	0.050	U			

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ



Instrument ID: 18255
Run Name: 1833201T73
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000		502432	100.5						
Calcium	500000		509823	102.0						
Iron	200000		201877	100.9						
Magnesium	500000		536161	107.2						
Thorium	0		-42							

Control Limits: All Metals 80%-120%

Instrument ID: 19204
Run Name: 1831006E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000		104876	104.9		
Antimony	121	0		2			
Arsenic	75	0		1			
Barium	137	0		1			
Beryllium	9	0		0			
Cadmium	111	0		0			
Calcium	44	300000		288179	96.1		
Carbon	13	20000		NA			
Chloride	37	100000		NA			
Chromium	52	0		1			
Cobalt	59	0		1			
Copper	63	0		1			
Iron	57	250000		279772	111.9		
Lead	208	0		1			
Magnesium	24	100000		105979	106.0		
Manganese	55	0		4			
Molybdenum	98	2000		2090	104.5		
Nickel	60	0		2			
Phosphorus	31	10000		NA			
Potassium	39	100000		103916	103.9		
Selenium	78	0		0			
Silver	107	0		0			
Sodium	23	250000		258891	103.6		
Sulfur	34	10000		NA			
Thallium	203	0		0			
Titanium	47	2000		2252	112.6		
Uranium	238	0		0			
Vanadium	51	0		0			
Zinc	66	0		3			

Control Limits: All Metals 80%-120%

Instrument ID: 27813
 Run Name: 1831610E07
 Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000		106167	106.2		
Antimony	121	0		1			
Arsenic							
Barium							
Beryllium							
Cadmium							
Calcium	44	300000		308045	102.7		
Carbon	13	20000		NA			
Chloride	37	100000		NA			
Chromium							
Cobalt	59	0		1			
Copper							
Iron	57	250000		257129	102.9		
Lead							
Magnesium	24	100000		102767	102.8		
Manganese							
Molybdenum	98	2000		2076	103.8		
Nickel							
Phosphorus	31	10000		NA			
Potassium	39	100000		100699	100.7		
Selenium							
Silver							
Sodium	23	250000		254317	101.7		
Sulfur	34	10000		NA			
Thallium							
Titanium	47	2000		2104	105.2		
Uranium							
Vanadium	51	0		0			
Zinc							

Control Limits: All Metals 80%-120%

Instrument ID: 27813
 Run Name: 1831804E07
 Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000		110325	110.3		
Antimony							
Arsenic							
Barium							
Beryllium							
Cadmium							
Calcium	44	300000		313606	104.5		
Carbon	13	20000		NA			
Chloride	37	100000		NA			
Chromium							
Cobalt							
Copper							
Iron	57	250000		262405	105.0		
Lead							
Magnesium	24	100000		103283	103.3		
Manganese							
Molybdenum	98	2000		2246	112.3		
Nickel							
Phosphorus	31	10000		NA			
Potassium	39	100000		106294	106.3		
Selenium							
Silver							
Sodium	23	250000		251211	100.5		
Sulfur	34	10000		NA			
Thallium							
Titanium	47	2000		2177	108.9		
Uranium							
Vanadium							
Zinc							

Control Limits: All Metals 80%-120%



Background Lab Sample ID: 9881311BKG Matrix Spike Lab Sample ID: 9881311MS Matrix Spike Duplicate Lab Sample ID: 9881311MSD
Batch Number(s): 183091063901

Analyte	Mass	BKG Sample		MS Sample		MSD Sample		MS Spike		MSD Spike		MS		MSD		Control Limit	
		Result	C	Result	C	Result	C	Added	Units	%R	Q	Added	%R	Q	%R	Q	RPD
Aluminum	27	19.7000	U	2045.5058		2044.3274		2000.0000	UG/L	102	2000.0000	102	102	0	84 - 117	20	MS
Antimony	121	0.4060	U	6.9755		6.5941		6.0000	UG/L	116	6.0000	116	110	6	85 - 117	20	MS
Arsenic	75	17.0341		24.6876		23.9997		10.0000	UG/L	77	10.0000	77	70	3	84 - 116	20	MS
Barium	137	1818.9016		1633.3952		1663.5554		50.0000	UG/L	-371	50.0000	-311	-311	2		20	MS
Beryllium	9	0.0910	U	4.0391		4.1525		4.0000	UG/L	101	4.0000	104	104	3	83 - 121	20	MS
Cadmium	111	0.1510	U	4.9330		4.3492		5.0000	UG/L	99	5.0000	87	87	13	87 - 115	20	MS
Calcium	44	276677.9628		251747.1324		265085.4639		4000.0000	UG/L	-623	4000.0000	-290	-290	5		20	MS
Chromium	52	2.3056	B	66.3144		66.5227		50.0000	UG/L	128	50.0000	128	128	0	85 - 116	20	MS
Cobalt	59	2.8239		249.7980		239.5738		250.0000	UG/L	99	250.0000	99	95	4	86 - 115	20	MS
Copper	63	9.9100	U	49.2867		48.3971		50.0000	UG/L	99	50.0000	97	97	2	85 - 118	20	MS
Iron	57	45935.0394		40747.6127		43658.0088		1000.0000	UG/L	-519	1000.0000	-228	-228	7		20	MS
Lead	208	1.0700	U	15.9927		15.8945		15.0000	UG/L	107	15.0000	106	106	1	88 - 115	20	MS
Magnesium	24	35335.2789		32647.5350		34441.8766		2000.0000	UG/L	-134	2000.0000	-45	-45	5		20	MS
Manganese	55	765.7264		724.7159		757.2545		50.0000	UG/L	-82	50.0000	-17	-17	4		20	MS
Nickel	60	0.6040	U	51.6600		53.9469		50.0000	UG/L	103	50.0000	108	108	4	85 - 117	20	MS
Potassium	39	21690.3559		29222.5850		30315.7130		10000.0000	UG/L	75	10000.0000	86	86	4	87 - 115	20	MS
Selenium	78	0.6520	U	10.9712		10.4085		10.0000	UG/L	110	10.0000	104	104	5	80 - 120	20	MS
Silver	107	0.1700	U	50.9676		48.7645		50.0000	UG/L	102	50.0000	98	98	4	85 - 116	20	MS
Sodium	23	43287.9172		48446.6263		49273.8806		10000.0000	UG/L	52	10000.0000	60	60	2		20	MS
Thallium	203	0.1090	U	1.9920		2.0610		2.0000	UG/L	100	2.0000	103	103	3	82 - 116	20	MS
Uranium	238	0.1140	U	26.2878		26.5857		25.0000	UG/L	105	25.0000	106	106	1	75 - 125	20	MS
Vanadium	51	1.9036		53.7399		55.1932		50.0000	UG/L	104	50.0000	107	107	3	86 - 115	20	MS
Zinc	66	6.1800	U	494.6585		475.4312		500.0000	UG/L	99	500.0000	95	95	4	83 - 119	20	MS

Note: Results shown are reported on an as-received basis.
If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:

P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U = Below MDL, B = Below LOQ

FLAGS:

N = Matrix Spike OOS, * = Duplicate OOS



Background Lab Sample ID: 9881313BKG Matrix Spike Lab Sample ID: 9881313MS Matrix Spike Duplicate Lab Sample ID: 9881313MSD
Batch Number(s): 183110571303

Analyte	Mass	BKG Sample		MS Sample		MSD Sample		MS Spike Added		MSD Spike Added		Units		MS		MSD		Control Limit			
		Result	C	Result	C	Result	C	Result	%R	Q	%R	Q	RPD	Q	%R	Q	RPD	Q	%R	RPD	M
Mercury		0.0500	U	0.8317		0.7959		1.0000	UG/L	83		80	N	4		82	-	119		20	CV

Note: Results shown are reported on an as-received basis.

If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL, B= Below LOQ

FLAGS:

N = Matrix Spike OOS, * = Duplicate OOS



Background Lab Sample ID: 9881314BKG Matrix Spike Lab Sample ID: 9881314MS Matrix Spike Duplicate Lab Sample ID: 9881314MSD
Batch Number(s): 183301063501

Analyte	Mass	BKG Sample		MS Sample		MSD Sample		MS Spike Added		MSD Spike Added		Units		MS		MSD		Control Limit		
		Result	C	Result	C	Result	C	Result	C	%R	Q	%R	Q	RPD	Q	%R	Q	%R	RPD	M
Thorium		205.0000	U	456.0900	B	425.2600	B	500.0000	B	500.0000	UG/L	91		85		7	75 - 125		20	P

Note: Results shown are reported on an as-received basis.

If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:

P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS



Background Lab Sample ID: 9881311BKG

Analyte	Mass	Sample Result (SR)	C	Spike Added (SA)	Spiked Sample Result (SSR)	C	SRR %R	Spiked Sample Duplicate (SSD)	C	SSD %R	M
Arsenic	75	17.0341		4.0000	20.9604		98	NA	U	NA	MS
Chromium	52	2.3056	B	8.0000	10.0092		96	NA	U	NA	MS
Potassium	39	21690.3559		800.0000	21058.8915		-79	NA	U	NA	MS

Comments:

Note: Results shown are reported on an as-received basis.

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below MDL B= Below LOQ</p>
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Background Lab Sample ID: 9881311BKG

9881311DUP

Batch Number(s): 1830910639

01

Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Max RPD	Q	M
Aluminum	27		19.7000	U	19.7000	U			MS	
Antimony	121		0.4060	U	0.4060	U			MS	
Arsenic	75		17.0341		14.8171		14		MS	
Barium	137		1818.9016		1696.1938		7		MS	
Beryllium	9		0.0910	U	0.0910	U			MS	
Cadmium	111		0.1510	U	0.1510	U			MS	
Calcium	44		276677.9628		272353.5554		2		MS	
Chromium	52	4.0	2.3056	B	6.9335		100		*	MS
Cobalt	59	1.0	2.8239		2.4353		15		MS	
Copper	63		9.9100	U	9.9100	U			MS	
Iron	57		45935.0394		43549.1049		5		MS	
Lead	208		1.0700	U	1.0700	U			MS	
Magnesium	24		35335.2789		33858.5136		4		MS	
Manganese	55		765.7264		723.0506		6		MS	
Nickel	60		0.6040	U	0.7962	B	200		MS	
Potassium	39		21690.3559		20924.0070		4		MS	
Selenium	78		0.6520	U	0.6520	U			MS	
Silver	107		0.1700	U	0.1700	U			MS	
Sodium	23		43287.9172		41184.7749		5		MS	
Thallium	203		0.1090	U	0.1090	U			MS	
Uranium	238		0.1140	U	0.1140	U			MS	
Vanadium	51	1.0	1.9036		1.6157		16		MS	
Zinc	66		6.1800	U	6.1800	U			MS	

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > Max OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer</p> <p>MS = ICP Mass Spectrometry</p> <p>CV = Cold Vapor</p> <p>AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below MDL</p> <p>B= Below LOQ</p> <p>FLAGS:</p> <p>* = Duplicate Out of Spec</p>
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QUALITY ASSURANCE SUMMARY

FORM 6

DUPLICATES

SDG No.: TID15

Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9881313BKG

9881313DUP

Batch Number(s): 1831105713

03

Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Max RPD	Q	M
Mercury			0.0500	U	0.0500	U			CV	

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > Max OR |(S) - (D)| > LOQ for values < 5x LOQ).

The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer</p> <p>MS = ICP Mass Spectrometry</p> <p>CV = Cold Vapor</p> <p>AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below MDL</p> <p>B= Below LOQ</p> <p>FLAGS:</p> <p>* = Duplicate Out of Spec</p>
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QUALITY ASSURANCE SUMMARY

FORM 6

DUPLICATES

SDG No.: TID15

Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9881314BKG

9881314DUP

Batch Number(s): 1833010635

01

Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Max RPD	Q	M
Thorium			205.0000	U	205.0000	U			P	

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > Max OR |(S) - (D)| > LOQ for values < 5x LOQ).

The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer</p> <p>MS = ICP Mass Spectrometry</p> <p>CV = Cold Vapor</p> <p>AF = Cold Vapor Atomic Fluorescence</p>	<p>CONCENTRATION QUALIFIERS:</p> <p>U= Below MDL</p> <p>B= Below LOQ</p> <p>FLAGS:</p> <p>* = Duplicate Out of Spec</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: TID15
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum	27	183091063901	UG/L	2000.000	2102.551		84 - 117	105	MS	Yes
Antimony	121	183091063901	UG/L	6.000	6.511		85 - 117	109	MS	Yes
Arsenic	75	183091063901	UG/L	10.000	10.130		84 - 116	101	MS	Yes
Barium	137	183091063901	UG/L	50.000	46.336		86 - 114	93	MS	Yes
Beryllium	9	183091063901	UG/L	4.000	4.079		83 - 121	102	MS	Yes
Cadmium	111	183091063901	UG/L	5.000	5.123		87 - 115	102	MS	Yes
Calcium	44	183091063901	UG/L	4000.000	4273.716		87 - 118	107	MS	Yes
Chromium	52	183091063901	UG/L	50.000	54.593		85 - 116	109	MS	Yes
Cobalt	59	183091063901	UG/L	250.000	240.982		86 - 115	96	MS	Yes
Copper	63	183091063901	UG/L	50.000	48.462		85 - 118	97	MS	Yes
Iron	57	183091063901	UG/L	1000.000	1079.280		87 - 118	108	MS	Yes
Lead	208	183091063901	UG/L	15.000	15.185		88 - 115	101	MS	Yes
Magnesium	24	183091063901	UG/L	2000.000	2128.560		83 - 118	106	MS	Yes
Manganese	55	183091063901	UG/L	50.000	53.874		87 - 115	108	MS	Yes
Mercury		183110571303	UG/L	1.000	0.819		82 - 119	82	CV	Yes
Nickel	60	183091063901	UG/L	50.000	49.310		85 - 117	99	MS	Yes
Potassium	39	183091063901	UG/L	10000.000	10468.055		87 - 115	105	MS	Yes
Selenium	78	183091063901	UG/L	10.000	10.384		80 - 120	104	MS	Yes
Silver	107	183091063901	UG/L	50.000	50.537		85 - 116	101	MS	Yes
Sodium	23	183091063901	UG/L	10000.000	10594.410		85 - 117	106	MS	Yes
Thallium	203	183091063901	UG/L	2.000	2.082		82 - 116	104	MS	Yes
Thorium		183301063501	UG/L	500.000	463.950	B	88 - 113	93	P	Yes
Uranium	238	183091063901	UG/L	25.000	25.520		86 - 115	102	MS	Yes
Vanadium	51	183091063901	UG/L	50.000	53.332		86 - 115	107	MS	Yes
Zinc	66	183091063901	UG/L	500.000	481.615		83 - 119	96	MS	Yes

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:

U= Below MDL
B= Below LOQ



QUALITY ASSURANCE SUMMARY

FORM 9

SERIAL DILUTIONS

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Background Lab Sample ID: 9881311BKG

Serial Dilution Lab Sample ID: 9881311L

Batch Number(s): 183091063901

Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum	27	19.7000	U	98.5000	U			MS
Antimony	121	0.4060	U	2.0300	U			MS
Arsenic	75	17.0341		17.4549			2	MS
Barium	137	1818.9016		1718.1598			6	MS
Beryllium	9	0.0910	U	0.4550	U			MS
Cadmium	111	0.1510	U	0.7550	U			MS
Calcium	44	276677.9628		294174.7417			6	MS
Chromium	52	2.3056	B	9.1034	B	295		MS
Cobalt	59	2.8239		2.6855	B		5	MS
Copper	63	9.9100	U	49.5500	U			MS
Iron	57	45935.0394		45095.8139			2	MS
Lead	208	1.0700	U	5.3500	U			MS
Magnesium	24	35335.2789		34326.0837			3	MS
Manganese	55	765.7264		757.3319			1	MS
Nickel	60	0.6040	U	3.0200	U			MS
Potassium	39	21690.3559		21747.5295			0	MS
Selenium	78	0.6520	U	3.2600	U			MS
Silver	107	0.1700	U	0.8500	U			MS
Sodium	23	43287.9172		41252.5074			5	MS
Thallium	203	0.1090	U	0.5450	U			MS
Uranium	238	0.1140	U	0.5700	U			MS
Vanadium	51	1.9036		1.9354	B		2	MS
Zinc	66	6.1800	U	30.9000	U			MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:

U= Below MDL
B= Below LOQ

FLAGS:

E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution



QUALITY ASSURANCE SUMMARY

FORM 9

SERIAL DILUTIONS

SDG No.: TID15

Matrix: WATER

Level (low/med): LOW

Background Lab Sample ID: 9881314BKG

Serial Dilution Lab Sample ID: 9881314L

Batch Number(s): 183301063501

Concentration Units: UG/L

Analyte	Mass	Initial Sample		Serial Dilution		% Diff.	Q	M
		Result (I)	C	Result (S)	C			
Thorium		205.0000	U	1025.0000	U			P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:

U= Below MDL
B= Below LOQ

FLAGS:

E = Matrix Effects exist as proven by
Serial Dilution or Spiked Dilution

Method: P
Instrument ID: 18255
Date: 07/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Thorium	401.91		59.8

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Instrument ID: 19204
Date: 07/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Aluminum	27		30.8
Antimony	121		0.52
Arsenic	75		0.40
Barium	137		0.73
Beryllium	9		0.067
Cadmium	111		0.17
Calcium			
Chromium	52		0.50
Cobalt	59		0.21
Copper	63		1.1
Iron	57		14.9
Lead	208		0.21
Magnesium	24		11.6
Manganese	55		0.95
Nickel	60		0.41
Potassium	39		41.2
Selenium	78		0.50
Silver	107		0.098
Sodium	23		50.0
Thallium	203		0.13
Uranium	238		0.080
Vanadium	51		0.21
Zinc	66		2.0

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Instrument ID: 27813
Date: 09/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Aluminum			
Antimony	121		0.29
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium	44		79.0
Chromium			
Cobalt	59		0.13
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Uranium			
Vanadium	51		0.21
Zinc			

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: CV
Instrument ID: 17384
Date: 07/2018

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.050

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: P
Date: 06/2018

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Thorium	401.91		500	205

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: MS
Date: 07/2018

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	27		400	19.7
Antimony	121		2.0	0.41
Arsenic				
Barium	137		4.0	0.75
Beryllium	9		0.50	0.091
Cadmium	111		1.0	0.15
Calcium				
Chromium	52		4.0	0.70
Cobalt	59		1.0	0.16
Copper	63		40.0	9.9
Iron				
Lead				
Magnesium	24		100	10.4
Manganese				
Nickel	60		4.0	0.60
Potassium	39		400	107
Selenium				
Silver				
Sodium	23		900	50.0
Thallium	203		0.50	0.11
Uranium	238		0.50	0.11
Vanadium	51		1.0	0.24
Zinc				

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

METHODS:

- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence



Method: MS
Date: 09/2018

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum				
Antimony	121		2.0	0.41
Arsenic	75		2.0	0.68
Barium				
Beryllium				
Cadmium				
Calcium	44		700	59.8
Chromium				
Cobalt	59		1.0	0.16
Copper				
Iron	57		100	22.8
Lead	208		3.0	1.1
Magnesium				
Manganese	55		10.0	4.9
Nickel				
Potassium				
Selenium	78		2.0	0.65
Silver	107		0.50	0.17
Sodium				
Thallium				
Uranium				
Vanadium	51		1.0	0.24
Zinc	66		15.0	6.2

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: CV
Date: 06/2018

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.050

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Instrument ID: 18255
Date: 04/2018

Analyte	Wavelength (nm)	Interelement Correction Factor for:				
		AL	CA	FE	MG	ZR
Thorium	401.91	0.0000000	0.0000000	0.0010490	0.0000000	0.0085540

Comments:



Method: P
Instrument ID: 18255
Date: 10/2018

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Thorium	401.913	10.00	20000.0

Comments:

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence



Method: P

Batch Number: 183301063501

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9881309	11/26/2018	50.00	50
9881310	11/26/2018	50.00	50
9881311	11/26/2018	50.00	50
9881312	11/26/2018	50.00	50
9881313	11/26/2018	25.00	25
9881314BKG	11/26/2018	25.00	25
9881314DUP	11/26/2018	25.00	25
9881314MSD	11/26/2018	25.00	25
9881314MS	11/26/2018	25.00	25
P33063AB	11/26/2018	50.00	50
P33063AQ	11/26/2018	1.00	1

METHODS:

P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:

BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate



Method: MS
Batch Number: 183091063901

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9881309	11/06/2018	50.00	50
9881310	11/06/2018	50.00	50
9881312	11/06/2018	50.00	50
9881313	11/06/2018	50.00	50
9881314	11/06/2018	50.00	50
9881311BKG	11/06/2018	25.00	25
9881311DUP	11/06/2018	25.00	25
9881311MSD	11/06/2018	25.00	25
9881311MS	11/06/2018	25.00	25
P30963AB	11/06/2018	50.00	50
P30963AQ	11/06/2018	1.00	1

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	LEGEND: BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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Method: CV
Batch Number: 183110571303

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9881309	11/08/2018	40.00	40
9881310	11/08/2018	40.00	40
9881311	11/08/2018	40.00	40
9881312	11/08/2018	40.00	40
9881314	11/08/2018	40.00	40
9881313BKG	11/08/2018	40.00	40
9881313DUP	11/08/2018	40.00	40
9881313MSD	11/08/2018	40.00	40
9881313MS	11/08/2018	40.00	40
P31171CB	11/08/2018	40.00	40
P31171CQ	11/08/2018	1.00	1

METHODS: P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	LEGEND: BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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Method: P
Instrument ID: 18255
Run Name: 1833201T73

Run Start Date: 11/28/2018
Run End Date: 11/28/2018

Lab Sample ID	D/F	Time	Analytes																																			
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K S	S E	A G	N A	T L	T H	U	V	Z N											
S0	1.00	09:02																							X													
S	1.00	09:04																																				
S	1.00	09:07																							X													
S	1.00	09:10																																				
ICV	1.00	09:12																						X														
ICB	1.00	09:15																						X														
LLC	1.00	09:18																						X														
ICSA	1.00	09:20																						X														
CCV	1.00	09:23																						X														
CCB	1.00	09:25																						X														
P33063AB	1.00	09:28																						X														
P33063AQ	1.00	09:31																						X														
9881314BKG	1.00	09:33																						X														
9881314A	1.00	09:36																																				
9881314DUP	1.00	09:38																						X														
9881314MS	1.00	09:41																						X														
9881314MSD	1.00	09:44																						X														
9881314L	5.00	09:46																						X														
9881309	1.00	09:49																						X														
9881310	1.00	09:52																						X														
CCV	1.00	09:55																						X														
CCB	1.00	09:57																						X														
9881311	1.00	10:00																						X														
9881312	1.00	10:03																						X														
9881313	1.00	10:05																						X														
CCV	1.00	10:08																						X														
CCB	1.00	10:10																						X														

<p>METHODS:</p> <ul style="list-style-type: none"> P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence 	<p>LEGEND:</p> <ul style="list-style-type: none"> BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate
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Method: MS
Instrument ID: 27813
Run Name: 1831610E07

Run Start Date: 11/12/2018
Run End Date: 11/12/2018

Lab Sample ID	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	N A	T L	T H	U	V	Z	N
S0	1.00	17:45		X					X	X																		X
S	1.00	17:48		X					X	X																		X
ICV	1.00	17:50		X					X	X																		X
ICB	1.00	17:52		X					X	X																		X
LLC	1.00	17:55		X					X	X																		X
ICSA	1.00	17:57		X					X	X																		X
ZZZZZZ	1.00	17:59																										
CCV	1.00	18:01		X					X	X																		X
CCB	1.00	18:03		X					X	X																		X
P30963AB	1.00	18:05		X					X																			
P30963AQ	1.00	18:07		X					X																			X
9881311BKG	1.00	18:10								X																		X
9881311A	1.00	18:12																										
9881311DUP	1.00	18:14																										X
9881311MS	1.00	18:16		X																								X
9881311MSD	1.00	18:18		X																								X
9881311L	5.00	18:20								X																		X
ZZZZZZ	1.00	18:22																										
9881309	1.00	18:25																										X
CCV	1.00	18:27		X					X	X																		X
CCB	1.00	18:29		X					X	X																		X
9881310	1.00	18:31																										X
9881312	1.00	18:33																										X
9881313	1.00	18:35							X																			X
9881314	1.00	18:37							X																			X
CCV	1.00	18:40							X																			X
CCB	1.00	18:42							X																			X

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>LEGEND:</p> <p>BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate</p>
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Lancaster Laboratories
Environmental

QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: TID15

Method: MS
Instrument ID: 27813
Run Name: 1831804E07

Run Start Date: 11/14/2018
Run End Date: 11/14/2018

Lab Sample ID	D/F	Time	Analytes																																			
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	H G	N I	K I	S E	A G	N A	T L	T H	U	V	Z N											
S0	1.00	10:35						X																														
S	1.00	10:37						X																														
ICV	1.00	10:40						X																														
ICB	1.00	10:42						X																														
LLC	1.00	10:44						X																														
ICSA	1.00	10:46						X																														
ZZZZZZ	1.00	10:48																																				
CCV	1.00	10:50						X																														
CCB	1.00	10:53						X																														
9881311BKG	5.00	10:55						X																														
9881311A	5.00	10:57																																				
9881311DUP	5.00	10:59						X																														
9881311MS	5.00	11:01						X																														
9881311MSD	5.00	11:03						X																														
9881311L	25.00	11:05						X																														
9881309	5.00	11:08						X																														
9881310	5.00	11:10						X																														
9881312	5.00	11:12						X																														
CCV	1.00	11:14						X																														
CCB	1.00	11:16						X																														

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>LEGEND:</p> <p>BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate</p>
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Method: CV
Instrument ID: 17384
Run Name: 1831202M07

Run Start Date: 11/08/2018
Run End Date: 11/08/2018

Lab Sample ID	D/F	Time	Analytes																									
			A L	S B	A S	B A	B E	C D	C A	C R	C O	C U	F E	P B	M G	M N	M G	H I	N I	K I	S E	A G	N A	T L	T H	U	V	Z N
ZZZZZZ	1.00	12:46																										
ZZZZZZ	1.00	12:48																										
ZZZZZZ	1.00	12:50																										
P31171CB	1.00	12:52																										
P31171CQ	1.00	12:54																										
9881313BKG	1.00	12:56																										
9881313DUP	1.00	12:58																										
9881313MS	1.00	13:00																										
9881313MSD	1.00	13:02																										
CCV	1.00	13:04																										
CCB	1.00	13:06																										
9881309	1.00	13:08																										
9881310	1.00	13:10																										
9881311	1.00	13:12																										
9881312	1.00	13:14																										
9881314	1.00	13:16																										
CCV	1.00	13:20																										
CCB	1.00	13:22																										

<p>METHODS:</p> <p>P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence</p>	<p>LEGEND:</p> <p>BKG = Background DUP = Duplicate MS = Matrix Spike MSD = Matrix Spike Duplicate A = Post Digest Spike L = Serial Dilution B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate</p>
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Instrument ID: 19204
Run Name: 1831006E05

Start Date: 11/06/2018
End Date: 11/06/2018

Standard	Elements Applies to	Standard	Elements Applies to
BI-3-209	PB, TL, U	IN-2-115	SE
IN-3-115	AG, AS, BA, CD, CO, CU, NI, SB, ZN	SC-1-45	BE
SC-3-45	AL, CR, FE, K, MG, MN, NA, V		

Lab Sample ID	Time	Internal Standards %RI For:													
		Element SC-1-45	Q	Element SC-3-45	Q	Element IN-2-115	Q	Element IN-3-115	Q	Element BI-3-209	Q	Element	Q	Element	Q
S0	17:55	100		100		100		100		100					
S	17:58	99		104		101		101		103					
ICV	18:01	102		100		100		101		102					
ICB	18:03	100		100		101		103		100					
LLC	18:06	100		96		100		106		101					
ICSA	18:08	96		94		95		94		93					
ZZZZZZ	18:10														
CCV	18:13	97		100		100		100		99					
CCB	18:15	98		99		99		100		99					
P30963AB	18:18	102		98		99		102		100					
P30963AQ	18:20	100		96		100		105		100					
9881311BKG	18:22	101		99		99		101		101					
9881311A	18:25	103		105		98		100		98					
9881311DUP	18:27	102		99		98		101		99					
9881311MS	18:30	104		99		97		102		97					
9881311MSD	18:32	103		102		98		107		97					
9881311L	18:35	103		99		99		104		103					
ZZZZZZ	18:37														
9881309	18:39	102		103		98		101		98					
CCV	18:42	105		103		100		107		102					
CCB	18:44	102		103		100		103		101					
9881310	18:47	104		102		99		106		101					
9881312	18:49	106		101		99		106		101					
9881313	18:51	106		106		101		104		103					
9881314	18:54	106		98		100		103		103					
CCV	18:56	102		104		100		107		101					
CCB	18:59	103		99		100		107		98					

<p>LEGEND:</p> <p>BKG = Background MS = Matrix Spike DUP = Duplicate MSD = Matrix Spike Duplicate L = Serial Dilution A = Post Digest Spike B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate</p> <p>FLAG:</p> <p>R = Internal Standard Relative Intensity OOS</p>	<p>INTERNAL STANDARD ELEMENTS:</p> <p>BE = Beryllium LI = Lithium BI = Bismuth SC = Scandium GE = Germanium TB = Terbium HO = Holmium Y = Yttrium IN = Indium</p>
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Instrument ID: 27813
Run Name: 1831610E07

Start Date: 11/12/2018
End Date: 11/12/2018

Standard	Elements Applies to	Standard	Elements Applies to
IN-3-115	CO, SB	SC-3-45	CA, V

Lab Sample ID	Time	Internal Standards %RI For:											
		Element SC-3-45	Q	Element IN-3-115	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	17:45	100		100									
S	17:48	101		101									
ICV	17:50	98		98									
ICB	17:52	93		95									
LLC	17:55	99		97									
ICSA	17:57	87		92									
ZZZZZZ	17:59												
CCV	18:01	94		98									
CCB	18:03	91		96									
P30963AB	18:05	101		104									
P30963AQ	18:07	95		98									
9881311BKG	18:10	102		104									
9881311A	18:12	98		100									
9881311DUP	18:14	97											
9881311MS	18:16	100		98									
9881311MSD	18:18	94		97									
9881311L	18:20	97		100									
ZZZZZZ	18:22												
9881309	18:25	100											
CCV	18:27	96		99									
CCB	18:29	95		93									
9881310	18:31	94											
9881312	18:33	97											
9881313	18:35	106											
9881314	18:37	103											
CCV	18:40	97		98									
CCB	18:42	93		98									

<p>LEGEND:</p> <p>BKG = Background MS = Matrix Spike DUP = Duplicate MSD = Matrix Spike Duplicate L = Serial Dilution A = Post Digest Spike B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate</p> <p>FLAG:</p> <p>R = Internal Standard Relative Intensity OOS</p>	<p>INTERNAL STANDARD ELEMENTS:</p> <p>BE = Beryllium LI = Lithium BI = Bismuth SC = Scandium GE = Germanium TB = Terbium HO = Holmium Y = Yttrium IN = Indium</p>
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Instrument ID: 27813
Run Name: 1831804E07

Start Date: 11/14/2018
End Date: 11/14/2018

Standard	Elements Applies to	Standard	Elements Applies to
GE-3-72	CA		

Lab Sample ID	Time	Internal Standards %RI For:											
		Element GE-3-72	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	10:35	100											
S	10:37	104											
ICV	10:40	101											
ICB	10:42	96											
LLC	10:44	96											
ICSA	10:46	94											
ZZZZZZ	10:48												
CCV	10:50	96											
CCB	10:53	95											
9881311BKG	10:55	100											
9881311A	10:57	99											
9881311DUP	10:59	97											
9881311MS	11:01	96											
9881311MSD	11:03	96											
9881311L	11:05	97											
9881309	11:08	96											
9881310	11:10	96											
9881312	11:12	96											
CCV	11:14	94											
CCB	11:16	94											

<p>LEGEND: BKG = Background MS = Matrix Spike DUP = Duplicate MSD = Matrix Spike Duplicate L = Serial Dilution A = Post Digest Spike B = Blank Q = Laboratory Control Sample Y = Laboratory Control Sample Duplicate</p> <p>FLAG: R = Internal Standard Relative Intensity OOS</p>	<p>INTERNAL STANDARD ELEMENTS: BE = Beryllium LI = Lithium BI = Bismuth SC = Scandium GE = Germanium TB = Terbium HO = Holmium Y = Yttrium IN = Indium</p>
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Raw Data

Metals in Liquid

ICP Data

Metals in Liquid

ICP-AES Run Data Report



Reviewed By
Deborah A Krady

Reviewed Date
11/28/2018 11:51AM

Data File Name 1833201T73.TXT
Run Name: 1833201T73

Verified By:
Deborah A Krady

Verified Date
11/28/2018 12:03PM

Method Reference Name(s):

Analyst Employee:

3472

Instrument Parameters:

Individual Integration Time: 10.00 sec

Total Integration Time: 30.00 sec

Rinse Time: 15.00 sec

<u>Element</u>	<u>Analyte Name</u>	<u>Wavelength Value</u>
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TE	Tellurium	214.28
TH	Thorium	401.91
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
W	Tungsten	207.91
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 1

Date/Time: 11/28/2018 09:02

Sample Number: S0

ELEMENT	CONC (ppm)	AVERAGE		INTEGRATIONS		
		INTENSITY	% RSD	#1	#2	#3
AG	0.000	-43.23040	15.386	-0.01075	-0.00948	-0.01284
AL	0.000	4.56667	52.836	0.08936	0.06379	0.02646
AS	0.000	-0.25954	257.316	-0.00892	0.00139	0.00078
B	0.000	1.67150	55.451	0.00001	0.00000	0.00001
BA	0.000	223.63659	5.002	0.00112	0.00109	0.00120
BE	0.000	78.60936	11.280	0.02011	0.02229	0.01777
CA	0.000	3.60000	76.089	0.00029	0.00084	0.00172
CD	0.000	-2.34728	57.136	-0.02217	-0.03112	-0.00798
CO	0.000	7.45389	26.217	0.07189	0.07714	0.04543
CR	0.000	-14.95427	24.949	-0.00005	-0.00008	-0.00009
CU	0.000	-0.21675	2719.513	0.00060	-0.00192	0.00114
FE	0.000	4.50000	35.787	0.00147	0.00070	0.00138
K	0.000	23.96667	83.774	0.30070	0.58462	0.05821
LI	0.000	-17.16667	26.134	-0.00562	-0.00327	-0.00463
MG	0.000	0.86667	9.275	0.00022	0.00021	0.00025
MN	0.000	19.95969	8.403	0.00557	0.00475	0.00495
MO	0.000	-0.75904	21.483	-0.00641	-0.00811	-0.00529
NA	0.000	-39.39848	17.971	-0.01038	-0.01220	-0.00848
NI	0.000	3.03525	64.866	0.03846	0.00680	0.03381
P	0.000	1.03517	35.941	0.00017	0.00012	0.00025
PB	0.000	-3.16847	51.853	-0.01285	-0.04140	-0.02847
S	0.000	0.93204	34.725	0.00023	0.00013	0.00013
SB	0.000	-0.69249	109.978	-0.00024	-0.00015	0.00002
SE	0.000	0.39954	205.700	-0.00462	0.00610	0.00896
SI	0.000	2.56970	42.415	0.00044	0.00099	0.00060
SN	0.000	0.47939	201.821	0.01265	0.00401	-0.00416
SR	0.000	-90.21363	16.893	-0.00046	-0.00054	-0.00039
TH	0.000	-1.80000	51.001	-0.00020	-0.00063	-0.00060
TI	0.000	30.83644	27.451	0.01024	0.00603	0.00732
TL	0.000	1.08842	50.081	0.00710	0.00636	0.01491
V	0.000	-21.17221	45.801	-0.00807	-0.00494	-0.00319
W	0.000	0.92907	93.559	0.00013	0.00033	0.00003
Y1	0.000	5750.89040	0.280	5763.09178	5732.60899	5756.97042
Y2A	0.000	196007.00374	0.450	196562.22339	194990.72125	196468.06657
Y2R	0.000	3804.55454	0.706	3832.78636	3801.58636	3779.29091
ZN	0.000	5.67275	16.915	0.04929	0.05770	0.04101
ZR	0.000	-12.75000	11.321	-0.00373	-0.00297	-0.00335

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 2

Date/Time: 11/28/2018 09:04

Sample Number: S1

ELEMENT	CONC (ppm)	AVERAGE		INTEGRATIONS		
		INTENSITY	% RSD	#1	#2	#3
AL	50.000	1578.89325	0.592	21.17062	21.42141	21.27530
CA	50.000	12811.01802	0.187	3.45925	3.44728	3.45742
FE	50.000	4978.58309	0.427	1.33800	1.34901	1.34071
K	50.000	8132.39493	0.408	109.18287	109.69933	110.07325
MG	50.000	23820.30315	0.384	6.39529	6.43467	6.44073
NA	50.000	25864.63652	0.294	6.95218	6.98010	6.99219
S	50.000	3495.82162	0.067	0.62675	0.62602	0.62601
SI	50.000	3628.29404	0.582	0.97528	0.98502	0.97504
Y1	50.000	5582.07737	0.234	5567.13545	5587.72191	5591.37476
Y2R	50.000	3708.31287	0.649	3730.77551	3682.91101	3711.25209

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 3

Date/Time: 11/28/2018 09:07

Sample Number: S2

ELEMENT	CONC (ppm)	AVERAGE		INTEGRATIONS		
		INTENSITY	% RSD	#1	#2	#3
AG	1.000	11136.58699	0.262	2.92136	2.92368	2.93563
AS	1.000	129.05878	1.230	1.13790	1.15759	1.13038
B	1.000	3102.83865	0.362	0.01637	0.01625	0.01630
BA	1.000	386282.90058	1.026	2.01279	2.02519	2.05342
BE	1.000	392125.12951	0.412	102.68382	102.97043	103.51883
CD	1.000	9242.32896	0.150	81.67274	81.74831	81.91232
CO	1.000	3169.05674	0.200	27.98655	28.09870	28.03616
CU	1.000	8793.54250	0.194	2.31601	2.30720	2.31006
LI	1.000	3429.21675	0.292	0.91602	0.91069	0.91318
MN	1.000	46477.17463	0.268	12.24420	12.17967	12.22115
NI	1.000	2007.61535	0.153	17.74662	17.74954	17.79504
P	1.000	176.87912	0.339	0.03141	0.03130	0.03120
PB	1.000	781.31615	0.218	6.91916	6.89607	6.92439
SE	1.000	101.69307	0.408	0.89626	0.90358	0.89957
SR	1.000	503469.60107	0.337	2.64509	2.65589	2.63818
TH	1.000	44.03462	2.005	0.01149	0.01196	0.01172
TL	1.000	122.01823	0.416	1.08478	1.07766	1.07648
W	1.000	553.84511	0.330	0.09777	0.09838	0.09788
Y1	1.000	5650.87798	0.227	5659.35877	5636.14297	5657.13221
Y2A	1.000	190246.62260	0.279	190391.40257	190690.02173	189658.44350
Y2R	1.000	3754.78936	0.575	3755.34386	3776.10369	3732.92052
ZN	1.000	4690.94515	0.171	41.46104	41.46974	41.58811

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 4

Date/Time: 11/28/2018 09:10

Sample Number: S3

ELEMENT	CONC (ppm)	AVERAGE		INTEGRATIONS		
		INTENSITY	% RSD	#1	#2	#3
CR	1.000	8928.54090	0.239	0.04562	0.04546	0.04566
MO	1.000	1049.04726	0.062	9.07601	9.06530	9.07337
SB	1.000	233.94496	0.218	0.04054	0.04037	0.04047
SN	1.000	379.95764	0.569	3.28784	3.30320	3.26597
TI	1.000	41491.24440	0.134	10.59012	10.57659	10.60497
V	1.000	11605.49855	0.292	2.96505	2.95260	2.96920
Y1	1.000	5782.06787	0.183	5771.92078	5781.26254	5793.02028
Y2A	1.000	195888.08559	0.148	195607.83076	196187.84518	195868.58083
Y2R	1.000	3799.24242	0.595	3824.15000	3793.53636	3780.04091
ZR	1.000	578.53333	0.925	0.15134	0.15160	0.15390

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 5

Date/Time: 11/28/2018 09:12

Sample Number: **ICV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.60136	6,686.11	0.251	0.60295	0.59995	0.60118
___ AL	30.25384	970.94	1.483	30.76168	30.08805	29.91180
___ AS	0.59898	76.03	0.820	0.59833	0.59443	0.60419
___ B	0.71598	2,292.49	0.305	0.71467	0.71850	0.71476
___ BA	0.61021	235,081.11	0.389	0.61196	0.61116	0.60751
___ BE	0.58551	228,695.66	0.437	0.58699	0.58699	0.58256
___ CA	29.54612	7,681.87	0.068	29.56332	29.52410	29.55094
___ CD	0.60124	5,560.84	0.148	0.60165	0.60022	0.60186
___ CO	0.59486	1,885.59	0.075	0.59496	0.59437	0.59524
___ CR	0.59396	5,124.03	1.115	0.59773	0.59783	0.58631
___ CU	0.60454	5,266.96	0.344	0.60245	0.60661	0.60457
___ FE	29.66841	3,013.22	0.869	29.93753	29.64381	29.42388
___ K	29.82164	4,921.02	0.516	29.99819	29.75167	29.71504
___ LI	0.60122	2,056.60	0.945	0.60778	0.59794	0.59794
___ MG	29.80700	14,466.67	0.787	30.05456	29.77877	29.58768
___ MN	0.60294	27,918.06	0.301	0.60283	0.60481	0.60119
___ MO	0.61008	622.90	0.235	0.61140	0.60855	0.61031
___ NA	29.39968	15,380.22	0.601	29.57465	29.40319	29.22120
___ NI	0.59733	1,194.95	0.101	0.59789	0.59669	0.59741
___ P	0.60546	107.16	0.827	0.60663	0.59996	0.60978
___ PB	0.59171	463.58	0.742	0.59667	0.59015	0.58831
___ S	30.70764	2,163.40	0.372	30.73691	30.58176	30.80425
___ SB	0.61582	140.90	1.591	0.61955	0.60471	0.62321
___ SE	0.60672	60.64	1.363	0.61373	0.60884	0.59760
___ SI	31.34908	2,305.77	0.689	31.59855	31.21814	31.23054
___ SN	0.58492	216.73	0.399	0.58761	0.58346	0.58369
___ SR	0.60809	305,270.38	0.904	0.61369	0.60789	0.60270
___ TH	0.58122	25.97	5.868	0.60496	0.54214	0.59656
___ TI	0.61287	24,647.51	0.273	0.61095	0.61368	0.61399
___ TL	0.60401	74.04	0.433	0.60624	0.60466	0.60114
___ V	0.60978	6,847.40	0.569	0.61215	0.61139	0.60579
___ W	0.60758	335.99	0.420	0.60972	0.60475	0.60827
___ Y1	5633.27706	5,633.28	0.133	5637.57201	5637.61746	5624.64170
___ Y2A	189477.98596	189,477.99	0.596	188629.85202	189044.36106	190759.74479
___ Y2R	3755.02917	3,755.03	0.522	3732.41331	3765.39238	3767.28182
___ ZN	0.59804	2,810.38	0.515	0.60053	0.59460	0.59900
___ ZR	0.62738	363.22	0.695	0.63027	0.62949	0.62237

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 6

Date/Time: 11/28/2018 09:15

Sample Number: ICB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00022	-35.18	441.497	0.00106	0.00044	-0.00084
___ AL	-0.08921	1.50	92.556	-0.08538	-0.00862	-0.17362
___ AS	-0.00349	-1.34	121.246	0.00127	-0.00682	-0.00491
___ B	0.00078	4.04	88.440	0.00152	0.00064	0.00017
___ BA	0.00003	237.51	146.244	0.00001	0.00007	0.00000
___ BE	0.00004	93.54	13.644	0.00004	0.00005	0.00004
___ CA	-0.00128	3.18	763.301	0.00073	0.00735	-0.01193
___ CD	0.00012	-0.33	125.545	0.00004	0.00003	0.00030
___ CO	-0.00060	5.46	60.225	-0.00032	-0.00101	-0.00048
___ CR	-0.00003	-13.66	822.351	-0.00011	0.00025	-0.00023
___ CU	0.00411	4.59	81.415	0.00025	0.00584	0.00624
___ FE	0.00803	5.18	34.880	0.01115	0.00720	0.00573
___ K	0.09490	38.62	50.148	0.05947	0.07622	0.14899
___ LI	0.00403	-10.32	49.591	0.00176	0.00552	0.00481
___ MG	0.00005	0.87	1303.022	0.00302	0.00281	-0.00569
___ MN	0.00011	26.10	217.883	0.00038	0.00002	-0.00007
___ MO	0.00030	-0.44	145.922	-0.00011	0.00024	0.00078
___ NA	0.05426	-18.45	37.691	0.04952	0.03660	0.07667
___ NI	0.00146	5.95	82.854	0.00110	0.00282	0.00048
___ P	-0.00224	0.63	79.817	-0.00376	-0.00027	-0.00270
___ PB	-0.00025	-2.80	690.400	-0.00059	-0.00175	0.00161
___ S	-0.00502	0.57	255.113	-0.00207	-0.01903	0.00605
___ SB	0.00323	0.06	186.397	0.00239	0.00962	-0.00233
___ SE	0.00548	0.61	177.247	0.00273	-0.00256	0.01628
___ SI	0.02126	4.05	39.320	0.03077	0.01789	0.01511
___ SN	0.00043	0.64	605.161	-0.00241	0.00265	0.00104
___ SR	0.00011	-66.00	10.387	0.00009	0.00011	0.00011
___ TH	-0.04879	-3.95	212.476	0.07085	-0.11190	-0.10532
___ TI	0.00016	36.76	162.951	0.00007	0.00046	-0.00005
___ TL	-0.00580	0.37	19.638	-0.00711	-0.00506	-0.00523
___ V	-0.00047	-13.68	52.655	-0.00074	-0.00026	-0.00040
___ W	-0.00091	0.42	25.182	-0.00097	-0.00066	-0.00111
___ Y1	5682.04204	5,682.04	0.027	5681.79365	5683.69227	5680.64018
___ Y2A	191733.54249	191,733.54	0.819	189951.23975	192338.14588	192911.24183
___ Y2R	3698.93182	3,698.93	0.038	3700.24545	3699.12727	3697.42273
___ ZN	0.00065	8.69	12.127	0.00073	0.00064	0.00057
___ ZR	0.02126	-9.95	2.879	0.02144	0.02058	0.02177

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 7

Date/Time: 11/28/2018 09:18

Sample Number: LLC

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.01022	37.69	1.291	0.01020	0.01036	0.01010
___ AL	0.32699	16.53	15.488	0.27731	0.37854	0.32510
___ AS	0.04995	5.77	10.168	0.05579	0.04661	0.04744
___ B	0.05021	162.34	2.011	0.05082	0.04904	0.05077
___ BA	0.00523	2,337.15	1.864	0.00531	0.00512	0.00525
___ BE	0.00498	2,096.84	0.745	0.00500	0.00494	0.00499
___ CA	0.50618	136.77	0.329	0.50745	0.50680	0.50430
___ CD	0.00527	48.68	1.962	0.00522	0.00539	0.00520
___ CO	0.00477	23.09	4.254	0.00472	0.00499	0.00459
___ CR	0.01491	120.19	0.712	0.01503	0.01481	0.01490
___ CU	0.02158	349.87	10.224	0.01932	0.02372	0.02171
___ FE	0.19428	24.57	4.222	0.18484	0.19971	0.19829
___ K	0.58595	121.00	10.253	0.64932	0.57870	0.52982
___ LI	0.05319	160.92	1.838	0.05350	0.05397	0.05209
___ MG	0.10304	51.80	8.091	0.11170	0.09507	0.10236
___ MN	0.01031	498.57	1.077	0.01039	0.01018	0.01035
___ MO	0.01098	10.80	0.617	0.01103	0.01100	0.01090
___ NA	1.03182	498.98	0.648	1.02410	1.03543	1.03592
___ NI	0.01287	29.58	9.727	0.01146	0.01331	0.01384
___ P	0.10050	19.17	2.020	0.09824	0.10109	0.10217
___ PB	0.01407	9.16	6.098	0.01417	0.01317	0.01488
___ S	0.51062	37.91	1.562	0.50210	0.51790	0.51186
___ SB	0.05081	11.11	1.792	0.05158	0.05104	0.04980
___ SE	0.05083	5.34	12.540	0.04848	0.04597	0.05805
___ SI	0.51748	40.83	3.765	0.52861	0.52884	0.49498
___ SN	0.04993	19.53	3.384	0.05089	0.05093	0.04798
___ SR	0.00526	2,623.48	0.358	0.00527	0.00524	0.00527
___ TH	0.52084	22.32	6.203	0.55814	0.50168	0.50270
___ TI	0.01040	464.68	2.206	0.01015	0.01060	0.01044
___ TL	0.03076	4.93	9.767	0.03252	0.02729	0.03246
___ V	0.00937	106.03	7.127	0.01012	0.00915	0.00884
___ W	0.02951	17.68	4.924	0.02815	0.02934	0.03104
___ Y1	5811.17647	5,811.18	0.130	5814.23782	5802.57184	5816.71976
___ Y2A	196735.09215	196,735.09	0.477	196104.53638	197813.71997	196287.02010
___ Y2R	3790.97424	3,790.97	0.111	3792.35909	3794.33182	3786.23182
___ ZN	0.02039	103.89	0.587	0.02051	0.02039	0.02027
___ ZR	0.06518	29.53	3.966	0.06431	0.06809	0.06314

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 8

Date/Time: 11/28/2018 09:20

Sample Number: **ICSA**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.03960	-398.71	4.913	-0.03735	-0.04082	-0.04062
___ AL	502.43223	15,715.80	0.855	500.60683	507.33696	499.35291
___ AS	-0.02838	-7.48	27.043	-0.03493	-0.03027	-0.01994
___ B	-0.29754	376.87	0.693	-0.29859	-0.29886	-0.29516
___ BA	0.00042	342.46	6.270	0.00043	0.00044	0.00039
___ BE	-0.00018	3.78	5.130	-0.00018	-0.00018	-0.00019
___ CA	509.82293	121,155.43	0.459	508.92704	512.48061	508.06115
___ CD	-0.00312	94.91	4.961	-0.00329	-0.00310	-0.00299
___ CO	-0.00023	5.92	498.122	-0.00003	0.00081	-0.00148
___ CR	0.00045	-8.36	190.537	0.00024	0.00140	-0.00028
___ CU	0.00741	106.01	25.182	0.00666	0.00953	0.00603
___ FE	201.87745	18,503.66	0.417	202.07296	202.60390	200.95549
___ K	0.19420	53.18	32.884	0.13001	0.19485	0.25772
___ LI	-0.01102	14.99	44.970	-0.01214	-0.00560	-0.01532
___ MG	536.16134	211,460.52	1.134	535.38245	542.59367	530.50790
___ MN	0.00477	216.42	3.176	0.00492	0.00477	0.00462
___ MO	-0.00044	-4.39	194.788	-0.00107	0.00053	-0.00078
___ NA	0.06689	-11.57	15.270	0.07484	0.05537	0.07045
___ NI	0.00285	-2.74	32.101	0.00206	0.00386	0.00264
___ P	0.00804	2.20	36.724	0.00928	0.00467	0.01017
___ PB	-0.00813	59.84	67.809	-0.01187	-0.01073	-0.00180
___ S	-0.08314	-2.65	8.958	-0.07857	-0.09174	-0.07912
___ SB	-0.00258	4.34	69.726	-0.00403	-0.00057	-0.00313
___ SE	0.01154	-1.00	281.296	0.02317	0.03660	-0.02514
___ SI	0.01676	3.62	159.650	0.04750	0.00411	-0.00133
___ SN	0.00223	1.18	14.928	0.00191	0.00257	0.00222
___ SR	0.00039	6,417.16	25.920	0.00042	0.00028	0.00047
___ TH	-0.04158	2.78	120.879	0.00774	-0.09272	-0.03975
___ TI	-0.00745	-243.32	4.153	-0.00763	-0.00709	-0.00763
___ TL	0.00595	1.62	79.990	0.01068	0.00116	0.00601
___ V	-0.00060	-13.28	104.739	-0.00007	-0.00128	-0.00044
___ W	0.00300	5.58	37.898	0.00191	0.00291	0.00418
___ Y1	5105.18635	5,105.19	0.362	5126.31828	5097.08393	5092.15684
___ Y2A	169814.68746	169,814.69	0.248	169772.81355	170255.28520	169415.96364
___ Y2R	3596.47199	3,596.47	0.687	3602.27045	3569.39134	3617.75418
___ ZN	0.00792	109.33	1.406	0.00795	0.00779	0.00801
___ ZR	0.01244	-21.34	54.394	0.00563	0.01916	0.01254

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 9

Date/Time: 11/28/2018 09:23

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.49686	5,523.54	0.389	0.49875	0.49489	0.49695
___ AL	25.02107	800.81	0.205	25.07596	25.01287	24.97438
___ AS	0.49682	63.15	1.626	0.49099	0.49343	0.50604
___ B	0.48780	1,578.04	0.407	0.49001	0.48720	0.48618
___ BA	0.50762	195,855.60	0.210	0.50722	0.50882	0.50681
___ BE	0.48658	190,322.12	0.218	0.48647	0.48769	0.48558
___ CA	24.67297	6,395.83	0.285	24.63885	24.75374	24.62632
___ CD	0.49777	4,620.26	0.103	0.49834	0.49735	0.49762
___ CO	0.49882	1,588.08	0.056	0.49875	0.49858	0.49912
___ CR	0.49501	4,274.11	0.385	0.49512	0.49686	0.49306
___ CU	0.51106	4,456.42	0.154	0.51181	0.51112	0.51025
___ FE	24.51198	2,485.76	0.760	24.34162	24.71078	24.48353
___ K	25.02292	4,118.51	0.338	25.07647	25.06676	24.92551
___ LI	0.50523	1,718.32	0.016	0.50515	0.50523	0.50531
___ MG	24.94281	12,081.30	0.243	24.88107	25.00197	24.94540
___ MN	0.50084	23,224.27	0.220	0.49994	0.50206	0.50050
___ MO	0.49964	511.85	0.308	0.50100	0.49797	0.49995
___ NA	24.95651	13,003.02	0.290	24.95348	25.03028	24.88578
___ NI	0.49868	1,001.73	0.246	0.49762	0.50002	0.49840
___ P	0.49939	88.89	0.559	0.49641	0.49979	0.50195
___ PB	0.49109	385.72	0.715	0.48821	0.49005	0.49500
___ S	24.73912	1,749.38	0.346	24.81243	24.64498	24.75996
___ SB	0.49126	112.67	0.165	0.49091	0.49218	0.49068
___ SE	0.49878	50.04	3.972	0.51130	0.50910	0.47594
___ SI	24.97237	1,830.88	0.269	24.95574	25.04629	24.91509
___ SN	0.49025	182.39	0.528	0.48796	0.48974	0.49306
___ SR	0.50399	253,341.29	0.329	0.50591	0.50311	0.50296
___ TH	0.49078	21.55	5.282	0.51421	0.49519	0.46294
___ TI	0.51017	20,549.08	0.137	0.51093	0.50957	0.50999
___ TL	0.51096	63.02	0.474	0.51262	0.50818	0.51208
___ V	0.50932	5,727.78	0.224	0.50870	0.51064	0.50862
___ W	0.49852	276.88	0.594	0.49941	0.50093	0.49521
___ Y1	5653.73542	5,653.74	0.036	5652.97383	5652.16653	5656.06590
___ Y2A	189731.42719	189,731.43	0.393	189809.99275	188949.81419	190434.47462
___ Y2R	3741.85176	3,741.85	0.487	3753.90349	3720.90709	3750.74471
___ ZN	0.49837	2,351.40	0.227	0.49965	0.49751	0.49795
___ ZR	0.51517	293.67	0.663	0.51366	0.51908	0.51277

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 10

Date/Time: 11/28/2018 09:25

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00044	-45.38	68.884	-0.00046	-0.00073	-0.00013
___ AL	0.02096	5.00	172.515	0.03436	0.04850	-0.01999
___ AS	-0.00193	-1.13	220.912	-0.00684	0.00029	0.00077
___ B	0.00017	2.27	330.088	-0.00038	0.00073	0.00015
___ BA	0.00004	238.01	163.793	-0.00003	0.00009	0.00005
___ BE	0.00007	102.84	6.905	0.00007	0.00006	0.00007
___ CA	0.02923	10.90	33.008	0.03983	0.02687	0.02098
___ CD	0.00009	-0.63	110.352	0.00000	0.00020	0.00008
___ CO	-0.00043	5.96	82.055	-0.00059	-0.00067	-0.00002
___ CR	0.00033	-10.51	100.604	0.00018	0.00070	0.00009
___ CU	0.00330	9.83	4.678	0.00347	0.00316	0.00329
___ FE	0.01893	6.22	20.146	0.01723	0.01626	0.02330
___ K	0.16395	49.27	56.988	0.23676	0.05860	0.19647
___ LI	-0.00436	-38.43	135.597	-0.00191	-0.00007	-0.01110
___ MG	0.02375	12.17	46.467	0.02464	0.01229	0.03431
___ MN	-0.00001	19.23	319.169	0.00002	0.00000	-0.00006
___ MO	0.00120	0.49	114.514	0.00176	0.00222	-0.00037
___ NA	0.04492	-23.03	13.745	0.04163	0.05204	0.04108
___ NI	0.00003	3.04	455.346	-0.00001	-0.00010	0.00021
___ P	-0.00008	1.00	2778.378	0.00006	-0.00238	0.00207
___ PB	-0.00079	-3.16	626.620	-0.00584	0.00402	-0.00054
___ S	-0.00790	0.36	130.615	-0.01064	-0.01657	0.00351
___ SB	0.00255	-0.09	104.960	0.00251	-0.00011	0.00525
___ SE	0.00821	0.88	201.838	0.00146	0.02709	-0.00392
___ SI	0.00484	2.82	154.152	0.00023	0.00084	0.01345
___ SN	-0.00098	0.11	91.643	-0.00012	-0.00191	-0.00090
___ SR	0.00009	-74.47	40.515	0.00008	0.00006	0.00013
___ TH	-0.01200	-2.27	143.593	-0.00039	-0.03180	-0.00381
___ TI	0.00020	38.12	73.583	0.00005	0.00021	0.00035
___ TL	-0.00542	0.41	106.482	-0.00950	-0.00793	0.00118
___ V	-0.00074	-16.59	10.632	-0.00081	-0.00066	-0.00076
___ W	-0.00109	0.32	251.725	-0.00426	0.00061	0.00037
___ Y1	5637.63235	5,637.63	0.173	5646.71435	5627.32173	5638.86098
___ Y2A	190736.29711	190,736.30	0.395	190670.50443	190017.44734	191520.93958
___ Y2R	3660.00758	3,660.01	0.044	3661.74545	3659.74091	3658.53636
___ ZN	0.00041	7.50	75.496	0.00016	0.00032	0.00076
___ ZR	0.01638	-11.83	22.210	0.01271	0.01998	0.01645

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 11

Date/Time: 11/28/2018 09:28

Sample Number: **PBW**

Class: ****

Batch: 183301063501

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00095	-31.69	48.672	0.00146	0.00081	0.00057
___ AL	-0.05203	2.88	82.979	-0.09324	-0.05570	-0.00714
___ AS	0.00161	-0.69	360.584	-0.00492	0.00357	0.00617
___ B	0.00058	3.65	49.761	0.00032	0.00090	0.00053
___ BA	0.00005	253.93	38.029	0.00007	0.00005	0.00003
___ BE	0.00002	87.47	46.218	0.00002	0.00003	0.00001
___ CA	0.02415	10.03	11.358	0.02117	0.02472	0.02657
___ CD	0.00007	-0.89	84.507	0.00013	0.00004	0.00003
___ CO	-0.00046	6.06	142.273	-0.00119	-0.00029	0.00009
___ CR	-0.00001	-13.95	3691.856	-0.00041	-0.00007	0.00044
___ CU	0.00149	-2.58	178.349	-0.00124	0.00165	0.00405
___ FE	0.01710	6.30	3.474	0.01705	0.01653	0.01772
___ K	0.00014	24.03	3262.310	-0.01229	-0.11813	0.13085
___ LI	-0.00120	-29.02	321.445	0.00274	-0.00138	-0.00496
___ MG	0.01956	10.62	11.603	0.02041	0.01699	0.02128
___ MN	0.00049	44.09	29.138	0.00054	0.00061	0.00033
___ MO	0.00027	-0.49	28.314	0.00018	0.00032	0.00029
___ NA	0.05727	-17.45	14.818	0.06672	0.05031	0.05478
___ NI	0.00591	15.31	7.444	0.00558	0.00641	0.00573
___ P	0.00218	1.45	71.159	0.00393	0.00165	0.00096
___ PB	0.00018	-2.49	2688.817	-0.00381	-0.00114	0.00549
___ S	-0.00174	0.83	815.147	-0.00856	0.01457	-0.01123
___ SB	0.00367	0.18	73.367	0.00333	0.00116	0.00651
___ SE	0.00843	0.93	89.614	0.00811	0.00104	0.01614
___ SI	0.01642	3.81	57.031	0.00821	0.01443	0.02662
___ SN	-0.00173	-0.17	98.532	-0.00092	-0.00368	-0.00058
___ SR	0.00011	-68.17	16.434	0.00012	0.00010	0.00009
___ TH	-0.00240	-1.92	2035.426	0.04947	-0.00941	-0.04725
___ TI	0.00006	33.63	313.737	0.00004	-0.00011	0.00025
___ TL	-0.00332	0.69	101.046	-0.00716	-0.00091	-0.00190
___ V	-0.00056	-14.75	29.867	-0.00075	-0.00045	-0.00048
___ W	-0.00119	0.27	98.852	0.00008	-0.00141	-0.00225
___ Y1	5838.40053	5,838.40	0.188	5831.29032	5832.87880	5851.03246
___ Y2A	198122.91184	198,122.91	0.041	198066.69448	198086.20909	198215.83194
___ Y2R	3821.22424	3,821.22	0.198	3824.22273	3826.83636	3812.61364
___ ZN	0.00046	8.14	19.072	0.00052	0.00051	0.00036
___ ZR	0.01643	-12.10	27.486	0.01473	0.01301	0.02154

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 12

Date/Time: 11/28/2018 09:31

Sample Number: LCSW

Class: ****

Batch: 183301063501

Initial Vol: 1.00

Final Vol: 1.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.04955	533.56	1.788	0.04928	0.05055	0.04884
___ AL	2.10020	76.20	3.962	2.00882	2.17164	2.12013
___ AS	0.14729	19.07	4.470	0.14462	0.14247	0.15479
___ B	1.91318	6,104.09	0.255	1.90880	1.91230	1.91844
___ BA	2.01797	798,163.40	0.614	2.01716	2.00600	2.03076
___ BE	0.04821	19,427.40	0.121	0.04823	0.04815	0.04826
___ CA	3.91366	1,040.20	0.571	3.90438	3.89743	3.93917
___ CD	0.05007	470.17	0.590	0.04980	0.05001	0.05038
___ CO	0.50875	1,654.74	0.438	0.50759	0.50735	0.51132
___ CR	0.19683	1,736.33	0.651	0.19695	0.19549	0.19804
___ CU	0.25838	2,343.64	0.552	0.25864	0.25684	0.25965
___ FE	0.97804	106.32	0.957	0.98882	0.97190	0.97341
___ K	9.91336	1,679.35	0.999	9.92521	10.00596	9.80892
___ LI	0.98717	3,442.43	0.150	0.98812	0.98547	0.98793
___ MG	1.98855	990.30	0.514	2.00035	1.98222	1.98307
___ MN	0.50361	23,972.90	0.243	0.50243	0.50487	0.50351
___ MO	1.96172	2,053.05	0.616	1.95379	1.95573	1.97563
___ NA	9.85654	5,210.87	0.250	9.85093	9.83513	9.88354
___ NI	0.51060	1,047.50	0.239	0.50926	0.51165	0.51088
___ P	0.98292	176.92	1.463	0.98283	0.96858	0.99735
___ PB	0.14932	114.92	1.819	0.14809	0.15243	0.14744
___ S	0.96004	69.20	0.852	0.96103	0.95141	0.96767
___ SB	0.52516	103.60	0.205	0.52392	0.52567	0.52589
___ SE	0.13631	14.31	12.914	0.11771	0.13851	0.15271
___ SI	1.02716	82.32	0.861	1.03533	1.01777	1.02839
___ SN	3.80012	1,438.08	0.363	3.78953	3.79510	3.81573
___ SR	1.01018	520,714.81	0.388	1.01300	1.00570	1.01184
___ TH	0.46395	20.08	10.125	0.45803	0.51361	0.42022
___ TI	0.98372	40,574.38	0.297	0.98118	0.98691	0.98308
___ TL	0.15070	19.83	4.528	0.14295	0.15579	0.15337
___ V	0.51910	5,706.21	0.334	0.51817	0.51802	0.52110
___ W	0.19843	114.26	0.464	0.19844	0.19751	0.19935
___ Y1	5766.60551	5,766.61	0.492	5790.78277	5773.65653	5735.37723
___ Y2A	194761.37959	194,761.38	0.331	194346.84268	195504.45926	194432.83683
___ Y2R	3817.90303	3,817.90	0.436	3827.25000	3827.77727	3798.68182
___ ZN	0.49079	2,351.85	0.538	0.48863	0.49001	0.49374
___ ZR	0.97789	579.03	0.406	0.97399	0.98192	0.97775

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 13

Date/Time: 11/28/2018 09:33

Sample Number: 9881314

Class: U***

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00071	-32.77	75.865	0.00010	0.00089	0.00113
___ AL	0.04540	5.95	197.655	0.14847	0.00295	-0.01523
___ AS	0.00312	-0.55	96.180	0.00132	0.00658	0.00145
___ B	0.05618	160.29	1.237	0.05571	0.05698	0.05585
___ BA	0.07159	27,984.08	0.205	0.07157	0.07174	0.07145
___ BE	0.00001	80.05	81.201	0.00001	0.00000	0.00001
___ CA	79.25057	20,612.35	0.462	79.65581	79.15357	78.94233
___ CD	0.00004	0.52	377.445	0.00019	0.00001	-0.00009
___ CO	-0.00029	6.39	127.204	0.00006	-0.00068	-0.00025
___ CR	-0.00004	-13.71	752.346	0.00031	-0.00016	-0.00028
___ CU	0.00273	22.36	39.242	0.00312	0.00152	0.00355
___ FE	2.11632	222.20	0.939	2.13908	2.10749	2.10240
___ K	4.78041	813.05	1.005	4.73105	4.78312	4.82705
___ LI	-0.00174	-18.31	249.963	-0.00675	0.00072	0.00082
___ MG	23.80509	11,636.99	0.274	23.88023	23.77135	23.76369
___ MN	1.10299	51,525.64	0.185	1.10288	1.10509	1.10102
___ MO	0.00304	1.79	29.628	0.00401	0.00224	0.00286
___ NA	18.44484	9,683.54	0.336	18.51065	18.43635	18.38752
___ NI	0.00129	5.42	94.326	0.00146	0.00240	0.00000
___ P	0.13206	24.12	2.211	0.13540	0.13001	0.13078
___ PB	-0.00166	-3.85	160.204	0.00140	-0.00303	-0.00335
___ S	25.14049	1,778.28	0.520	25.29135	25.07200	25.05813
___ SB	0.01137	1.30	38.381	0.01625	0.00783	0.01003
___ SE	-0.01659	-0.65	58.202	-0.02548	-0.00632	-0.01797
___ SI	8.15740	604.77	0.748	8.21067	8.17074	8.09079
___ SN	0.00154	1.04	72.315	0.00208	0.00026	0.00227
___ SR	0.30352	154,521.44	0.331	0.30435	0.30381	0.30240
___ TH	-0.00573	-1.98	528.418	-0.03987	0.00487	0.01782
___ TI	-0.00033	16.71	7.126	-0.00032	-0.00036	-0.00031
___ TL	-0.00164	0.68	419.701	-0.00955	0.00312	0.00150
___ V	-0.00052	-14.32	110.912	-0.00110	-0.00048	0.00004
___ W	0.00182	1.93	161.453	0.00327	-0.00156	0.00374
___ Y1	5643.83856	5,643.84	0.552	5610.76772	5648.12786	5672.62009
___ Y2A	191094.14315	191,094.14	0.080	191256.11748	191073.81492	190952.49705
___ Y2R	3775.19820	3,775.20	0.303	3762.22277	3779.45121	3783.92062
___ ZN	0.00498	29.59	6.256	0.00517	0.00462	0.00514
___ ZR	0.01322	-14.02	6.292	0.01415	0.01293	0.01257

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 14

Date/Time: 11/28/2018 09:36

Sample Number: 9881314

Class: UP**

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.01965	215.55	1.131	0.01972	0.01982	0.01940
___ AL	0.93466	35.12	2.766	0.91807	0.92147	0.96446
___ AS	0.48986	62.98	1.895	0.50010	0.48748	0.48199
___ B	0.23710	725.46	0.242	0.23765	0.23650	0.23713
___ BA	0.11658	45,870.48	0.256	0.11669	0.11624	0.11681
___ BE	0.01867	7,441.13	0.176	0.01870	0.01864	0.01866
___ CA	76.20405	19,964.53	0.542	75.87895	76.66840	76.06480
___ CD	0.04714	437.34	0.530	0.04737	0.04687	0.04717
___ CO	0.09426	306.80	0.791	0.09341	0.09479	0.09457
___ CR	0.18676	1,618.65	0.328	0.18627	0.18657	0.18745
___ CU	0.48482	4,148.77	0.272	0.48453	0.48626	0.48367
___ FE	2.47420	260.81	0.603	2.48637	2.45754	2.47869
___ K	6.46991	1,099.60	1.290	6.42497	6.56622	6.41854
___ LI	0.95275	3,318.65	0.377	0.95611	0.95319	0.94896
___ MG	23.50842	11,573.45	0.311	23.43909	23.50143	23.58474
___ MN	1.10745	51,820.91	0.113	1.10602	1.10807	1.10827
___ MO	0.19630	200.69	0.515	0.19742	0.19546	0.19601
___ NA	19.40473	10,261.31	0.145	19.37234	19.41844	19.42343
___ NI	0.14063	285.61	0.223	0.14069	0.14090	0.14029
___ P	1.09035	192.91	0.287	1.09012	1.08734	1.09358
___ PB	0.46581	363.49	0.128	0.46586	0.46638	0.46519
___ S	24.83220	1,763.02	0.165	24.85740	24.78482	24.85438
___ SB	0.40447	89.90	0.710	0.40468	0.40723	0.40150
___ SE	0.73315	74.90	1.918	0.74692	0.73373	0.71881
___ SI	8.68831	648.89	0.168	8.68422	8.67619	8.70453
___ SN	0.55803	208.22	0.509	0.56047	0.55492	0.55871
___ SR	0.30869	157,365.65	0.133	0.30831	0.30863	0.30913
___ TH	0.06676	1.62	21.550	0.07273	0.05035	0.07720
___ TI	0.09653	3,943.72	0.092	0.09650	0.09663	0.09647
___ TL	0.95216	116.39	0.547	0.94693	0.95219	0.95735
___ V	0.09690	1,073.12	0.504	0.09674	0.09652	0.09745
___ W	0.19281	107.55	1.293	0.19569	0.19139	0.19136
___ Y1	5668.65777	5,668.66	0.072	5671.67291	5663.98392	5670.31647
___ Y2A	191425.00657	191,425.01	0.540	191174.08220	192560.47897	190540.45854
___ Y2R	3801.62214	3,801.62	0.391	3817.85046	3788.65862	3798.35735
___ ZN	0.11570	553.05	0.428	0.11571	0.11521	0.11620
___ ZR	0.96148	557.25	0.873	0.95293	0.96180	0.96970

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 15

Date/Time: 11/28/2018 09:38

Sample Number: 9881314

Class: D***

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00084	-30.04	95.859	0.00166	0.00080	0.00006
___ AL	0.00804	4.68	1965.796	-0.09903	-0.06648	0.18963
___ AS	0.00900	0.22	35.364	0.01256	0.00643	0.00802
___ B	0.05440	154.02	1.073	0.05418	0.05396	0.05506
___ BA	0.07094	27,549.31	0.136	0.07084	0.07102	0.07097
___ BE	-0.00002	69.04	91.957	0.00000	-0.00002	-0.00003
___ CA	78.45694	20,243.34	0.084	78.38435	78.47415	78.51232
___ CD	-0.00005	-0.27	386.911	-0.00025	0.00008	0.00003
___ CO	-0.00016	6.79	100.210	-0.00028	0.00002	-0.00023
___ CR	-0.00012	-14.31	392.556	-0.00049	0.00041	-0.00028
___ CU	0.00384	27.75	63.715	0.00334	0.00168	0.00650
___ FE	2.09354	218.08	0.987	2.07715	2.11675	2.08674
___ K	4.73935	799.77	2.214	4.75819	4.83358	4.62629
___ LI	0.00173	-6.39	46.848	0.00082	0.00197	0.00238
___ MG	23.51474	11,403.49	0.184	23.46841	23.52193	23.55387
___ MN	1.09250	50,691.69	0.197	1.09014	1.09436	1.09300
___ MO	0.00303	1.80	30.678	0.00203	0.00319	0.00388
___ NA	18.26148	9,509.37	0.673	18.12657	18.29063	18.36722
___ NI	0.00116	5.17	96.225	0.00212	-0.00007	0.00143
___ P	0.13092	23.91	1.906	0.13089	0.13343	0.12844
___ PB	-0.00522	-6.64	5.513	-0.00555	-0.00511	-0.00500
___ S	24.67777	1,744.47	0.995	24.39702	24.85154	24.78475
___ SB	0.01303	1.70	25.099	0.01519	0.00927	0.01464
___ SE	-0.01068	-0.08	42.047	-0.01487	-0.01123	-0.00594
___ SI	8.03530	590.97	0.390	8.02352	8.01156	8.07082
___ SN	0.00019	0.54	1411.427	-0.00045	-0.00206	0.00307
___ SR	0.30102	152,210.41	0.178	0.30041	0.30120	0.30143
___ TH	-0.01707	-2.48	323.390	-0.00281	0.02961	-0.07801
___ TI	-0.00048	10.70	36.515	-0.00052	-0.00063	-0.00029
___ TL	-0.00843	-0.14	80.944	-0.00261	-0.00674	-0.01594
___ V	-0.00104	-20.31	23.311	-0.00087	-0.00132	-0.00093
___ W	-0.00004	0.90	3643.885	-0.00152	-0.00020	0.00159
___ Y1	5640.21242	5,640.21	0.201	5653.16125	5635.46888	5632.00712
___ Y2A	189806.29508	189,806.30	0.221	190180.27973	189352.94118	189885.66434
___ Y2R	3744.81090	3,744.81	0.823	3780.33634	3724.97548	3729.12088
___ ZN	0.00159	13.82	4.016	0.00161	0.00164	0.00152
___ ZR	0.01734	-11.72	36.382	0.02004	0.01013	0.02184

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 16

Date/Time: 11/28/2018 09:41

Sample Number: 9881314

Class: R***

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.05076	533.95	3.107	0.04900	0.05125	0.05204
___ AL	2.09291	75.31	2.883	2.04414	2.07422	2.16037
___ AS	0.15515	19.54	7.841	0.14820	0.16920	0.14805
___ B	2.04066	6,306.06	1.756	2.00038	2.05256	2.06902
___ BA	2.10581	808,866.82	2.124	2.05706	2.11542	2.14494
___ BE	0.04926	19,277.92	1.835	0.04828	0.04946	0.05006
___ CA	84.02080	21,884.36	0.474	84.17136	83.56883	84.32222
___ CD	0.04927	452.71	1.704	0.04994	0.04955	0.04833
___ CO	0.49464	1,568.72	1.062	0.49698	0.49832	0.48862
___ CR	0.19790	1,695.60	1.493	0.19458	0.19888	0.20024
___ CU	0.26049	2,305.43	1.709	0.25535	0.26327	0.26285
___ FE	3.11510	325.46	1.178	3.14610	3.07459	3.12461
___ K	14.93368	2,494.09	0.994	14.99827	14.76383	15.03895
___ LI	1.00084	3,470.31	0.264	0.99941	0.99923	1.00388
___ MG	26.03164	12,740.84	0.461	26.14916	25.90930	26.03646
___ MN	1.62306	75,025.07	1.731	1.59214	1.63003	1.64702
___ MO	2.02014	2,060.22	1.103	2.03590	2.02986	1.99465
___ NA	28.54919	15,042.52	0.612	28.72307	28.37346	28.55103
___ NI	0.49420	988.21	1.090	0.49767	0.49695	0.48800
___ P	1.14714	201.06	1.368	1.15534	1.15704	1.12905
___ PB	0.14394	107.74	0.636	0.14495	0.14370	0.14317
___ S	26.50580	1,866.09	1.175	26.73651	26.62926	26.15164
___ SB	0.55050	105.69	1.361	0.55830	0.54984	0.54336
___ SE	0.13383	14.66	4.666	0.13762	0.12662	0.13724
___ SI	9.23680	688.87	0.392	9.24570	9.19700	9.26768
___ SN	3.89434	1,436.48	1.084	3.90686	3.92888	3.84727
___ SR	1.31105	657,459.18	1.963	1.28140	1.32766	1.32408
___ TH	0.45609	19.61	10.056	0.40541	0.46812	0.49475
___ TI	1.01364	40,602.14	1.805	0.99300	1.02005	1.02787
___ TL	0.14369	18.29	3.946	0.14046	0.15024	0.14038
___ V	0.53251	5,683.62	1.470	0.52374	0.53498	0.53881
___ W	0.20357	114.16	2.112	0.20509	0.20690	0.19871
___ Y1	5621.07332	5,621.07	0.709	5603.26622	5593.20473	5666.74902
___ Y2A	189183.41483	189,183.41	1.548	192386.51304	188520.00634	186643.72510
___ Y2R	3782.33905	3,782.34	0.548	3758.42692	3793.93879	3794.65145
___ ZN	0.48999	2,289.17	0.995	0.49276	0.49286	0.48436
___ ZR	1.00957	592.29	1.422	1.02129	0.99356	1.01386

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 17

Date/Time: 11/28/2018 09:44

Sample Number: 9881314

Class: M***

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.04979	527.91	1.233	0.04982	0.04917	0.05039
___ AL	2.05093	73.41	6.022	2.04767	1.92909	2.17602
___ AS	0.15614	19.75	3.572	0.14983	0.15814	0.16043
___ B	2.06307	6,387.18	0.152	2.05956	2.06556	2.06410
___ BA	2.11653	814,665.17	0.602	2.10865	2.10970	2.13122
___ BE	0.04977	19,515.67	0.556	0.04949	0.05005	0.04978
___ CA	88.08555	22,777.42	0.519	87.78141	88.61109	87.86414
___ CD	0.04994	460.53	0.108	0.04994	0.05000	0.04989
___ CO	0.49833	1,585.92	0.034	0.49842	0.49813	0.49844
___ CR	0.20007	1,717.73	1.026	0.19832	0.19955	0.20233
___ CU	0.26698	2,354.80	1.546	0.26621	0.27145	0.26330
___ FE	3.22282	334.25	0.344	3.21206	3.22221	3.23418
___ K	15.34571	2,544.75	0.471	15.27633	15.34012	15.42068
___ LI	1.01577	3,498.76	0.442	1.01121	1.02019	1.01590
___ MG	27.28070	13,256.00	0.654	27.08667	27.43731	27.31811
___ MN	1.67875	77,756.97	0.467	1.67113	1.68678	1.67835
___ MO	2.06816	2,116.46	0.373	2.07578	2.06034	2.06835
___ NA	29.73409	15,562.01	0.278	29.66396	29.82530	29.71301
___ NI	0.49895	1,001.11	0.537	0.50103	0.49593	0.49990
___ P	1.16813	205.43	0.113	1.16898	1.16881	1.16661
___ PB	0.14716	110.54	0.522	0.14728	0.14787	0.14634
___ S	27.70824	1,957.45	0.406	27.82753	27.60376	27.69343
___ SB	0.56656	109.26	2.486	0.58102	0.55288	0.56577
___ SE	0.12348	13.73	14.950	0.12758	0.10331	0.13954
___ SI	9.73481	720.82	0.707	9.65575	9.76746	9.78122
___ SN	3.98415	1,474.66	0.302	3.98257	3.97300	3.99687
___ SR	1.33438	670,540.11	0.888	1.32273	1.33397	1.34643
___ TH	0.42526	18.07	8.209	0.42828	0.38893	0.45856
___ TI	1.03814	41,666.92	0.571	1.03339	1.04478	1.03623
___ TL	0.14315	18.28	3.138	0.14116	0.14829	0.14000
___ V	0.53623	5,728.19	0.163	0.53604	0.53719	0.53547
___ W	0.20931	117.74	1.876	0.21338	0.20555	0.20901
___ Y1	5640.17868	5,640.18	0.244	5640.47705	5653.79688	5626.26212
___ Y2A	189533.71514	189,533.72	0.526	190630.79047	189289.17965	188681.17530
___ Y2R	3756.49186	3,756.49	0.268	3767.29377	3754.85909	3747.32273
___ ZN	0.49690	2,329.32	0.308	0.49790	0.49514	0.49765
___ ZR	1.04355	607.71	0.596	1.03664	1.04869	1.04532

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 18

Date/Time: 11/28/2018 09:46

Sample Number: 9881314

Class: UL**

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 5.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00085	-33.38	61.597	0.00100	0.00128	0.00027
___ AL	0.06187	6.55	134.034	0.04651	-0.01230	0.15141
___ AS	-0.00124	-1.08	349.017	-0.00494	0.00350	-0.00226
___ B	0.01419	43.63	1.744	0.01417	0.01394	0.01444
___ BA	0.01365	5,616.50	0.318	0.01370	0.01361	0.01364
___ BE	-0.00002	71.23	86.722	-0.00001	-0.00001	-0.00003
___ CA	14.74697	3,876.92	0.162	14.72181	14.74988	14.76922
___ CD	-0.00009	-2.02	69.417	-0.00004	-0.00006	-0.00015
___ CO	-0.00092	4.55	39.731	-0.00080	-0.00062	-0.00132
___ CR	0.00023	-11.55	348.283	-0.00070	0.00070	0.00069
___ CU	0.00186	8.20	92.190	0.00384	0.00082	0.00092
___ FE	0.39129	44.92	2.589	0.39201	0.38082	0.40104
___ K	0.96375	183.53	9.508	0.89667	0.92642	1.06816
___ LI	0.00225	-14.47	166.356	0.00542	0.00318	-0.00187
___ MG	4.47594	2,209.93	0.337	4.47565	4.46103	4.49116
___ MN	0.20958	9,983.00	0.381	0.21030	0.20971	0.20872
___ MO	0.00065	-0.19	55.626	0.00024	0.00093	0.00078
___ NA	3.47758	1,794.20	0.592	3.49330	3.45428	3.48517
___ NI	0.00185	6.84	32.050	0.00177	0.00131	0.00248
___ P	0.02302	5.18	8.518	0.02098	0.02490	0.02319
___ PB	0.00005	-2.55	2338.206	0.00002	-0.00106	0.00118
___ S	4.58299	333.89	0.290	4.56993	4.59649	4.58255
___ SB	0.00726	0.90	14.576	0.00641	0.00844	0.00692
___ SE	-0.00644	-0.42	63.124	-0.00461	-0.00361	-0.01110
___ SI	1.51103	114.55	1.099	1.52796	1.49478	1.51034
___ SN	0.00004	0.50	3380.956	-0.00128	0.00154	-0.00013
___ SR	0.05688	29,378.80	0.148	0.05691	0.05694	0.05678
___ TH	0.01136	-1.27	662.462	-0.07549	0.05694	0.05262
___ TI	0.00054	52.85	27.323	0.00069	0.00053	0.00039
___ TL	-0.00265	0.73	287.958	-0.00644	0.00614	-0.00765
___ V	-0.00102	-19.85	53.374	-0.00072	-0.00165	-0.00070
___ W	-0.00063	0.59	296.349	0.00013	-0.00278	0.00074
___ Y1	5799.34425	5,799.34	0.174	5810.20933	5790.30376	5797.51967
___ Y2A	194553.54033	194,553.54	0.327	194471.85866	193962.44072	195226.32161
___ Y2R	3789.88182	3,789.88	0.537	3811.58182	3786.80000	3771.26364
___ ZN	0.00068	9.16	22.856	0.00072	0.00080	0.00050
___ ZR	0.01410	-13.08	36.743	0.01885	0.00858	0.01485

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 19

Date/Time: 11/28/2018 09:49

Sample Number: 9881309

Class: ****

Batch: 183301063501

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00734	-112.57	2.235	-0.00750	-0.00717	-0.00734
___ AL	-0.02962	3.51	106.766	-0.02892	-0.06158	0.00165
___ AS	0.01094	-0.86	53.335	0.01678	0.01093	0.00511
___ B	0.74485	2,446.11	0.341	0.74625	0.74192	0.74638
___ BA	1.68790	639,535.10	0.400	1.69568	1.68436	1.68367
___ BE	-0.00010	36.16	13.124	-0.00010	-0.00009	-0.00011
___ CA	243.64031	62,362.62	0.114	243.95915	243.45401	243.50777
___ CD	-0.00087	20.93	18.453	-0.00084	-0.00073	-0.00105
___ CO	0.00106	10.46	37.462	0.00125	0.00060	0.00133
___ CR	0.00164	0.95	45.966	0.00086	0.00171	0.00236
___ CU	0.00488	62.61	50.724	0.00709	0.00536	0.00220
___ FE	39.33864	4,001.90	0.190	39.42251	39.31463	39.27878
___ K	20.12688	3,346.20	0.602	20.26682	20.05698	20.05682
___ LI	0.18659	660.77	2.261	0.18232	0.19076	0.18668
___ MG	31.03982	15,137.50	0.326	31.12688	30.92867	31.06390
___ MN	0.66663	30,423.42	0.209	0.66823	0.66575	0.66590
___ MO	0.00253	0.10	47.224	0.00120	0.00287	0.00352
___ NA	37.84226	19,913.07	0.285	37.96333	37.75651	37.80693
___ NI	0.00210	4.80	41.161	0.00115	0.00283	0.00231
___ P	0.61166	106.04	0.893	0.60541	0.61551	0.61405
___ PB	-0.00360	-5.28	120.396	-0.00306	-0.00818	0.00044
___ S	0.50786	37.34	3.011	0.49332	0.50647	0.52380
___ SB	0.01507	2.25	27.255	0.01371	0.01182	0.01969
___ SE	-0.02487	-1.05	38.349	-0.02188	-0.03554	-0.01718
___ SI	24.04951	1,777.63	0.133	24.03889	24.02413	24.08553
___ SN	0.00504	2.29	75.825	0.00807	0.00630	0.00075
___ SR	2.01902	1,000,723.05	0.544	2.02479	2.00635	2.02592
___ TH	-0.02369	-1.59	205.022	-0.06349	-0.03802	0.03043
___ TI	-0.00236	-64.11	9.639	-0.00251	-0.00210	-0.00246
___ TL	0.00179	1.15	252.456	0.00495	-0.00339	0.00381
___ V	0.00077	0.37	98.175	0.00131	0.00108	-0.00009
___ W	0.00382	2.99	56.850	0.00140	0.00445	0.00561
___ Y1	5539.71597	5,539.72	0.298	5541.07717	5522.55694	5555.51381
___ Y2A	186647.10766	186,647.11	0.333	185931.64611	187047.57829	186962.09857
___ Y2R	3774.38008	3,774.38	0.515	3795.74441	3769.66129	3757.73453
___ ZN	0.00865	60.01	3.328	0.00834	0.00891	0.00870
___ ZR	0.01779	-13.03	16.132	0.01628	0.02110	0.01598

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 20

Date/Time: 11/28/2018 09:52

Sample Number: 9881310

Class: ****

Batch: 183301063501

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
AG	-0.00871	-127.47	5.937	-0.00926	-0.00863	-0.00824
AL	0.03262	5.51	207.741	0.01203	0.10830	-0.02246
AS	0.01708	-0.10	15.512	0.01404	0.01830	0.01890
B	0.76490	2,496.38	0.536	0.76738	0.76715	0.76016
BA	1.73860	655,131.35	0.526	1.72864	1.74055	1.74661
BE	-0.00009	39.29	21.237	-0.00011	-0.00008	-0.00008
CA	247.70072	63,170.47	0.124	247.50804	247.53938	248.05473
CD	-0.00066	23.28	24.023	-0.00077	-0.00074	-0.00048
CO	0.00121	10.89	59.159	0.00052	0.00195	0.00116
CR	0.00137	-1.37	50.891	0.00061	0.00197	0.00153
CU	0.00565	72.00	20.388	0.00601	0.00659	0.00436
FE	39.98029	4,052.98	0.375	39.81390	40.10438	40.02261
K	20.43173	3,385.39	0.095	20.43110	20.41258	20.45150
LI	0.18964	669.84	1.354	0.18670	0.19145	0.19077
MG	31.50008	15,309.75	0.065	31.51224	31.51138	31.47662
MN	0.67663	30,709.85	0.386	0.67554	0.67960	0.67474
MO	0.00217	-0.29	21.165	0.00258	0.00167	0.00227
NA	38.46847	20,177.31	0.070	38.48258	38.48521	38.43763
NI	0.00147	3.52	70.975	0.00098	0.00076	0.00267
P	0.63121	109.13	0.343	0.63352	0.63087	0.62923
PB	-0.00372	-5.34	111.145	-0.00679	0.00098	-0.00534
S	0.50227	36.90	3.359	0.48737	0.52059	0.49886
SB	0.01143	1.43	40.798	0.00666	0.01597	0.01165
SE	-0.01603	-0.17	60.295	-0.02695	-0.01257	-0.00857
SI	24.44984	1,801.28	0.360	24.38997	24.40876	24.55079
SN	0.00343	1.71	33.932	0.00469	0.00321	0.00239
SR	2.05212	1,011,554.02	0.289	2.04632	2.05817	2.05185
TH	-0.01537	-1.18	124.350	-0.01784	-0.03314	0.00486
TI	-0.00241	-65.93	10.395	-0.00267	-0.00239	-0.00217
TL	-0.00027	0.90	2770.823	-0.00302	-0.00599	0.00820
V	0.00127	6.15	8.679	0.00120	0.00140	0.00121
W	0.00137	1.64	164.323	-0.00062	0.00380	0.00091
Y1	5525.91151	5,525.91	0.400	5507.73718	5519.49958	5550.49779
Y2A	185624.36977	185,624.37	0.472	186161.44545	184612.81675	186098.84711
Y2R	3762.09136	3,762.09	0.190	3762.69333	3768.92806	3754.65268
ZN	0.00391	38.51	10.553	0.00387	0.00352	0.00434
ZR	0.01905	-12.07	13.991	0.02180	0.01886	0.01648

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 21

Date/Time: 11/28/2018 09:55

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.49405	5,481.30	1.050	0.49995	0.49195	0.49023
___ AL	25.27853	808.72	1.080	25.47921	25.38870	24.96768
___ AS	0.49738	63.50	0.975	0.49943	0.50088	0.49184
___ B	0.49870	1,608.01	0.714	0.50115	0.50033	0.49461
___ BA	0.51527	198,372.10	0.308	0.51673	0.51550	0.51359
___ BE	0.48922	190,936.96	0.393	0.49117	0.48917	0.48733
___ CA	24.58325	6,370.88	0.545	24.66337	24.42861	24.65778
___ CD	0.49574	4,622.06	0.639	0.49586	0.49885	0.49252
___ CO	0.49794	1,592.37	0.587	0.49997	0.49925	0.49459
___ CR	0.50006	4,308.34	0.383	0.50195	0.50009	0.49812
___ CU	0.51815	4,501.48	0.840	0.52042	0.52090	0.51313
___ FE	24.51942	2,485.89	0.155	24.49059	24.50527	24.56240
___ K	25.58677	4,209.58	0.611	25.74054	25.42792	25.59184
___ LI	0.50802	1,727.48	0.395	0.50602	0.51003	0.50803
___ MG	25.41475	12,304.70	0.441	25.54205	25.33128	25.37091
___ MN	0.50174	23,215.49	0.540	0.50447	0.50168	0.49906
___ MO	0.49786	512.30	0.696	0.49991	0.49982	0.49386
___ NA	25.39421	13,228.25	0.358	25.49604	25.32143	25.36516
___ NI	0.49682	1,002.46	0.603	0.49945	0.49745	0.49356
___ P	0.49821	89.09	1.036	0.49375	0.50386	0.49701
___ PB	0.49131	387.64	0.862	0.49225	0.49499	0.48668
___ S	24.59531	1,746.95	0.846	24.54994	24.82224	24.41374
___ SB	0.48801	112.48	0.709	0.48506	0.49182	0.48716
___ SE	0.48727	49.11	3.597	0.49448	0.46729	0.50004
___ SI	25.07748	1,838.06	0.434	25.18233	24.96495	25.08515
___ SN	0.48555	181.46	0.406	0.48597	0.48728	0.48340
___ SR	0.50602	253,800.04	0.551	0.50867	0.50629	0.50311
___ TH	0.47574	20.86	10.700	0.47956	0.42303	0.52462
___ TI	0.51208	20,580.44	0.655	0.51527	0.51240	0.50858
___ TL	0.51243	63.49	1.415	0.51414	0.50447	0.51867
___ V	0.51451	5,774.59	0.741	0.51891	0.51227	0.51234
___ W	0.50033	279.11	0.754	0.50089	0.50380	0.49631
___ Y1	5679.13950	5,679.14	0.608	5664.03972	5654.72154	5718.65723
___ Y2A	189316.04372	189,316.04	0.335	188588.24812	189751.29065	189608.59240
___ Y2R	3740.82727	3,740.83	0.411	3724.38025	3754.82149	3743.28008
___ ZN	0.49622	2,351.86	0.623	0.49615	0.49935	0.49316
___ ZR	0.52595	299.62	0.197	0.52608	0.52692	0.52485

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 22

Date/Time: 11/28/2018 09:57

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.00018	-35.84	158.920	0.00026	-0.00014	0.00041
___ AL	0.06215	6.20	150.390	0.06619	-0.03327	0.15354
___ AS	0.00157	-0.68	208.172	0.00166	0.00479	-0.00174
___ B	0.00254	9.48	3.578	0.00253	0.00246	0.00264
___ BA	0.00023	312.65	19.171	0.00026	0.00025	0.00018
___ BE	0.00001	79.09	591.936	0.00004	0.00002	-0.00004
___ CA	0.01263	6.72	109.195	0.02774	0.00074	0.00940
___ CD	-0.00007	-2.15	115.501	0.00000	-0.00006	-0.00015
___ CO	-0.00079	4.88	6.658	-0.00081	-0.00073	-0.00084
___ CR	-0.00018	-14.91	110.905	-0.00014	-0.00040	-0.00001
___ CU	0.00487	11.62	38.869	0.00527	0.00281	0.00652
___ FE	0.00297	4.65	212.299	0.00886	0.00376	-0.00369
___ K	0.09012	37.65	17.464	0.09400	0.10357	0.07281
___ LI	-0.00070	-26.20	552.096	0.00203	0.00097	-0.00510
___ MG	0.00642	3.92	92.691	0.00012	0.01194	0.00718
___ MN	0.00008	24.68	85.781	0.00012	0.00012	0.00000
___ MO	0.00050	-0.23	65.901	0.00044	0.00021	0.00086
___ NA	0.06094	-14.89	27.787	0.05218	0.08046	0.05018
___ NI	0.00041	3.84	179.800	-0.00040	0.00057	0.00107
___ P	-0.00037	0.97	393.424	-0.00092	-0.00147	0.00128
___ PB	-0.00497	-6.55	29.919	-0.00405	-0.00669	-0.00418
___ S	0.00291	1.14	134.517	-0.00091	0.00691	0.00272
___ SB	0.00463	0.39	104.220	-0.00031	0.00933	0.00488
___ SE	0.00356	0.42	61.360	0.00299	0.00598	0.00172
___ SI	0.02822	4.53	14.801	0.02888	0.03203	0.02375
___ SN	-0.00059	0.26	128.036	-0.00023	-0.00008	-0.00147
___ SR	0.00025	6.11	6.933	0.00024	0.00027	0.00023
___ TH	-0.04715	-3.85	98.113	-0.06569	0.00551	-0.08127
___ TI	0.00018	37.17	108.229	0.00009	0.00040	0.00005
___ TL	-0.00285	0.73	83.873	-0.00327	-0.00500	-0.00028
___ V	-0.00078	-17.22	70.024	-0.00140	-0.00035	-0.00060
___ W	-0.00010	0.87	854.802	-0.00112	0.00035	0.00047
___ Y1	5722.45183	5,722.45	1.005	5781.96250	5718.17455	5667.21846
___ Y2A	190794.51416	190,794.51	0.415	190123.57473	191667.65665	190592.31111
___ Y2R	3678.65758	3,678.66	0.644	3687.11364	3696.97273	3651.88636
___ ZN	0.00059	8.47	42.627	0.00076	0.00030	0.00071
___ ZR	0.01602	-12.90	12.005	0.01621	0.01783	0.01400

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 23

Date/Time: 11/28/2018 10:00

Sample Number: 9881311

Class: ****

Batch: 183301063501

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
AG	-0.00842	-125.36	3.829	-0.00832	-0.00816	-0.00878
AL	0.05335	6.19	87.418	0.02338	0.02959	0.10708
AS	0.01473	-0.40	54.119	0.01175	0.02376	0.00868
B	0.76077	2,488.47	1.158	0.77026	0.75285	0.75920
BA	1.73110	653,396.26	1.445	1.74414	1.70226	1.74689
BE	-0.00010	34.64	27.871	-0.00012	-0.00007	-0.00012
CA	248.82310	63,483.16	2.040	252.68075	243.07180	250.71676
CD	-0.00070	23.02	47.091	-0.00043	-0.00061	-0.00107
CO	0.00112	10.63	52.476	0.00171	0.00114	0.00053
CR	0.00371	18.52	7.930	0.00347	0.00404	0.00363
CU	0.00317	54.59	71.757	0.00217	0.00578	0.00157
FE	40.11813	4,068.90	1.995	40.64641	39.19746	40.51053
K	20.40090	3,382.18	1.937	20.79961	20.00941	20.39370
LI	0.18700	661.26	1.678	0.18943	0.18346	0.18813
MG	31.53067	15,332.35	2.163	32.11438	30.78123	31.69639
MN	0.67094	30,503.25	1.078	0.67755	0.66321	0.67205
MO	0.00170	-0.77	23.938	0.00153	0.00141	0.00216
NA	38.50932	20,209.11	2.189	39.22589	37.58068	38.72139
NI	0.00090	2.40	135.620	-0.00030	0.00213	0.00087
P	0.60475	104.63	1.840	0.61125	0.59190	0.61111
PB	-0.00535	-6.59	47.135	-0.00294	-0.00514	-0.00798
S	0.48488	35.70	1.564	0.48487	0.47730	0.49247
SB	0.01919	3.19	19.562	0.01486	0.02157	0.02113
SE	-0.01906	-0.46	57.336	-0.02894	-0.00732	-0.02092
SI	24.57052	1,811.15	1.861	24.92945	24.05582	24.72631
SN	0.00066	0.70	423.126	0.00094	-0.00227	0.00332
SR	2.03799	1,006,326.47	1.278	2.06426	2.01217	2.03755
TH	-0.00683	-0.80	409.296	0.01540	-0.03821	0.00232
TI	-0.00259	-73.11	8.491	-0.00284	-0.00249	-0.00243
TL	0.00500	1.52	224.080	0.01309	-0.00779	0.00971
V	0.00154	9.32	46.172	0.00171	0.00214	0.00076
W	0.00218	2.09	85.902	0.00008	0.00369	0.00277
Y1	5527.66568	5,527.67	0.364	5508.57486	5548.69591	5525.72627
Y2A	185950.94181	185,950.94	0.972	184521.72453	187981.62437	185349.47653
Y2R	3764.83125	3,764.83	1.489	3723.46518	3828.65423	3742.37434
ZN	0.00523	44.54	2.363	0.00533	0.00509	0.00526
ZR	0.01251	-15.77	19.551	0.00983	0.01306	0.01463

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 24

Date/Time: 11/28/2018 10:03

Sample Number: 9881312

Class: ****

Batch: 183301063501

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00788	-118.71	10.621	-0.00878	-0.00774	-0.00712
___ AL	0.02752	5.34	265.232	0.11164	-0.01017	-0.01891
___ AS	0.01954	0.20	30.837	0.01315	0.02036	0.02511
___ B	0.74726	2,449.86	1.004	0.74697	0.73990	0.75490
___ BA	1.69773	642,684.35	0.600	1.69179	1.69192	1.70949
___ BE	-0.00006	51.49	55.517	-0.00003	-0.00010	-0.00005
___ CA	243.30628	62,189.37	0.421	243.75837	242.13291	244.02756
___ CD	-0.00066	21.73	38.721	-0.00072	-0.00087	-0.00037
___ CO	0.00165	11.72	23.673	0.00145	0.00141	0.00210
___ CR	0.00196	3.60	56.324	0.00260	0.00068	0.00258
___ CU	0.00373	54.21	46.324	0.00197	0.00381	0.00542
___ FE	39.20605	3,982.82	0.526	39.12804	39.04999	39.44010
___ K	20.14213	3,343.83	0.443	20.09413	20.08709	20.24518
___ LI	0.18832	665.80	1.758	0.19159	0.18497	0.18841
___ MG	31.02357	15,107.88	0.358	31.11238	30.89894	31.05938
___ MN	0.65532	29,880.86	0.688	0.65436	0.65137	0.66023
___ MO	0.00063	-1.76	190.188	-0.00074	0.00113	0.00151
___ NA	37.98630	19,960.11	0.403	37.98113	37.83591	38.14186
___ NI	0.00095	2.47	42.792	0.00142	0.00076	0.00067
___ P	0.62457	103.32	8.071	0.59533	0.59561	0.68278
___ PB	-0.00655	-7.28	29.838	-0.00689	-0.00830	-0.00444
___ S	0.51057	35.83	8.364	0.48319	0.48875	0.55977
___ SB	0.01958	3.08	31.633	0.01544	0.01660	0.02670
___ SE	-0.03462	-1.90	23.305	-0.03151	-0.02857	-0.04378
___ SI	24.19706	1,785.93	0.678	24.21830	24.02350	24.34939
___ SN	0.00143	0.93	128.398	-0.00068	0.00229	0.00268
___ SR	2.00422	992,522.84	0.478	1.99780	1.99965	2.01523
___ TH	-0.01959	-1.40	151.635	0.00116	-0.00631	-0.05363
___ TI	-0.00257	-72.59	5.292	-0.00270	-0.00259	-0.00243
___ TL	0.00027	0.91	1758.035	-0.00492	0.00164	0.00408
___ V	0.00138	7.63	31.551	0.00144	0.00177	0.00091
___ W	0.00144	1.52	274.504	-0.00138	-0.00025	0.00595
___ Y1	5306.61120	5,306.61	7.021	5509.53293	5533.65279	4876.64788
___ Y2A	186484.22003	186,484.22	0.813	187767.98940	186874.30676	184810.36393
___ Y2R	3768.99595	3,769.00	0.465	3772.04654	3784.80071	3750.14060
___ ZN	0.00434	38.41	14.070	0.00398	0.00399	0.00504
___ ZR	0.02133	-10.79	3.001	0.02155	0.02183	0.02061

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 25

Date/Time: 11/28/2018 10:05

Sample Number: 9881313

Class: ****

Batch: 183301063501

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol Symbol: DU

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
AG	0.00048	-34.63	129.569	0.00073	-0.00023	0.00094
AL	0.01786	5.04	439.156	0.03857	0.08388	-0.06886
AS	0.00542	-0.25	62.347	0.00269	0.00437	0.00920
B	0.05719	161.33	0.890	0.05721	0.05768	0.05667
BA	0.07170	27,580.97	0.244	0.07150	0.07183	0.07177
BE	-0.00001	71.24	96.890	0.00000	-0.00001	-0.00002
CA	77.55004	20,042.16	0.334	77.57750	77.79390	77.27872
CD	-0.00024	-2.04	90.610	-0.00046	-0.00003	-0.00023
CO	-0.00026	6.42	241.306	0.00001	0.00019	-0.00098
CR	0.00013	-12.00	309.721	0.00046	-0.00033	0.00026
CU	0.00243	19.22	93.334	0.00141	0.00503	0.00085
FE	2.09279	218.35	0.782	2.10375	2.10064	2.07398
K	4.73048	799.52	1.142	4.77152	4.75068	4.66925
LI	0.00187	-5.98	293.561	-0.00370	0.00204	0.00727
MG	23.41804	11,374.43	0.585	23.56949	23.30238	23.38224
MN	1.09593	50,377.69	0.507	1.08963	1.10010	1.09807
MO	0.00264	1.39	12.810	0.00294	0.00227	0.00269
NA	17.98148	9,377.59	0.333	18.04603	17.92775	17.97064
NI	0.00141	5.61	27.075	0.00160	0.00166	0.00097
P	0.12894	23.33	2.935	0.12558	0.12820	0.13304
PB	-0.00671	-7.70	52.157	-0.00390	-0.01063	-0.00561
S	24.84900	1,739.28	0.636	24.75151	25.03146	24.76404
SB	0.01196	1.45	48.803	0.00902	0.01868	0.00817
SE	-0.00496	0.48	109.592	-0.01115	-0.00100	-0.00272
SI	7.99104	588.64	0.161	7.99198	7.97773	8.00342
SN	-0.00065	0.23	651.926	-0.00305	-0.00318	0.00427
SR	0.30155	151,046.39	0.496	0.29985	0.30215	0.30265
TH	-0.00553	-1.96	732.810	0.02299	-0.05187	0.01230
TI	-0.00047	10.72	9.460	-0.00042	-0.00051	-0.00049
TL	-0.00327	0.47	247.904	-0.00732	0.00607	-0.00856
V	-0.00098	-19.25	28.544	-0.00119	-0.00066	-0.00108
W	-0.00082	0.49	191.403	0.00079	-0.00233	-0.00090
Y1	5584.74971	5,584.75	0.523	5601.99639	5551.02554	5601.22720
Y2A	188040.61668	188,040.62	0.180	188147.49582	187662.20430	188312.14991
Y2R	3750.61902	3,750.62	0.539	3727.54983	3759.09816	3765.20906
ZN	0.00563	32.27	5.158	0.00536	0.00594	0.00560
ZR	0.01736	-11.47	32.770	0.01573	0.02368	0.01266

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 26

Date/Time: 11/28/2018 10:08

Sample Number: **CCV**

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	0.49700	5,458.21	0.187	0.49692	0.49612	0.49797
___ AL	25.42919	809.57	0.372	25.53849	25.37789	25.37119
___ AS	0.50162	63.23	1.212	0.50159	0.49555	0.50771
___ B	0.50200	1,601.49	0.698	0.49820	0.50509	0.50272
___ BA	0.51786	197,389.14	0.259	0.51722	0.51940	0.51697
___ BE	0.49158	189,951.82	0.260	0.49016	0.49264	0.49193
___ CA	24.54779	6,330.56	0.203	24.51026	24.60422	24.52890
___ CD	0.50230	4,621.86	0.036	0.50232	0.50246	0.50211
___ CO	0.50224	1,585.13	0.044	0.50238	0.50236	0.50199
___ CR	0.50372	4,296.83	0.677	0.50008	0.50422	0.50685
___ CU	0.52077	4,484.73	0.575	0.52010	0.52404	0.51816
___ FE	24.51098	2,472.80	0.506	24.64017	24.49975	24.39302
___ K	25.64986	4,199.19	0.850	25.83497	25.70505	25.40956
___ LI	0.50340	1,703.13	0.110	0.50276	0.50378	0.50366
___ MG	25.35188	12,214.13	0.534	25.50823	25.27696	25.27043
___ MN	0.50340	23,060.77	0.090	0.50320	0.50308	0.50391
___ MO	0.50583	513.73	0.479	0.50430	0.50862	0.50457
___ NA	25.42822	13,180.86	0.553	25.58955	25.36384	25.33126
___ NI	0.50325	1,002.18	0.311	0.50237	0.50506	0.50233
___ P	0.50616	89.31	0.694	0.50252	0.50953	0.50641
___ PB	0.49672	386.82	0.279	0.49826	0.49557	0.49634
___ S	25.04902	1,755.99	0.164	25.04376	25.01074	25.09254
___ SB	0.49695	113.03	0.953	0.49920	0.49151	0.50014
___ SE	0.50838	50.57	0.500	0.50547	0.51019	0.50947
___ SI	25.23157	1,840.24	0.962	25.47761	25.22485	24.99226
___ SN	0.49183	181.39	0.138	0.49163	0.49127	0.49258
___ SR	0.50924	252,877.34	0.709	0.50984	0.50537	0.51251
___ TH	0.49453	21.61	2.291	0.48531	0.49111	0.50718
___ TI	0.51372	20,441.93	0.218	0.51487	0.51366	0.51263
___ TL	0.51558	63.04	0.756	0.51110	0.51821	0.51741
___ V	0.51690	5,742.95	0.592	0.51357	0.51958	0.51754
___ W	0.50470	277.88	0.293	0.50301	0.50533	0.50577
___ Y1	5604.95242	5,604.95	0.152	5606.12054	5595.88418	5612.85254
___ Y2A	187438.21001	187,438.21	0.586	188470.60588	187558.77305	186285.25111
___ Y2R	3722.44330	3,722.44	0.461	3704.08302	3738.09222	3725.15466
___ ZN	0.50360	2,355.42	0.153	0.50441	0.50287	0.50350
___ ZR	0.52097	295.66	0.128	0.52166	0.52032	0.52093

LANCASTER LABORATORIES

Run Name: 1833201T73

Instrument ID: 18255

Tube: 27

Date/Time: 11/28/2018 10:10

Sample Number: CCB

ELEMENT	AVERAGE	AVERAGE	%RSD	INTEGRATIONS		
	CONC (ppm)	INTENSITY		#1	#2	#3
___ AG	-0.00037	-42.97	222.009	-0.00119	0.00044	-0.00036
___ AL	-0.01032	3.98	709.421	-0.01953	0.06705	-0.07848
___ AS	0.00232	-0.58	120.897	0.00337	0.00446	-0.00086
___ B	0.00389	13.72	28.034	0.00365	0.00294	0.00509
___ BA	0.00018	292.28	12.516	0.00020	0.00018	0.00015
___ BE	0.00001	80.27	106.806	0.00002	0.00001	0.00000
___ CA	0.01064	6.18	119.222	0.01978	-0.00384	0.01598
___ CD	-0.00007	-2.17	153.494	-0.00007	0.00004	-0.00019
___ CO	-0.00071	5.08	12.889	-0.00081	-0.00064	-0.00066
___ CR	0.00032	-10.54	113.282	0.00057	-0.00009	0.00047
___ CU	0.00324	3.49	103.262	0.00664	0.00312	-0.00004
___ FE	0.01086	5.42	191.382	-0.00579	0.00422	0.03414
___ K	0.11133	40.87	83.661	0.20972	0.09975	0.02452
___ LI	-0.00110	-27.50	321.366	-0.00281	0.00296	-0.00345
___ MG	0.00764	4.48	22.302	0.00873	0.00852	0.00568
___ MN	0.00006	23.24	66.248	0.00002	0.00009	0.00009
___ MO	-0.00001	-0.75	1974.126	0.00045	-0.00111	0.00063
___ NA	0.05323	-18.79	8.118	0.05555	0.04825	0.05590
___ NI	0.00126	5.48	27.792	0.00154	0.00087	0.00136
___ P	0.00016	1.04	1705.950	0.00116	-0.00290	0.00221
___ PB	-0.00329	-5.13	35.427	-0.00250	-0.00463	-0.00275
___ S	-0.00540	0.53	192.406	-0.00174	-0.01712	0.00267
___ SB	0.00310	0.04	59.561	0.00313	0.00124	0.00493
___ SE	0.00564	0.62	118.723	0.01246	-0.00093	0.00540
___ SI	0.01904	3.85	61.876	0.03064	0.00708	0.01941
___ SN	-0.00075	0.20	446.666	-0.00383	0.00285	-0.00128
___ SR	0.00023	-2.04	15.781	0.00027	0.00021	0.00021
___ TH	-0.02953	-3.05	203.596	-0.08326	-0.04071	0.03539
___ TI	0.00002	30.71	1995.763	-0.00026	0.00051	-0.00019
___ TL	-0.00511	0.45	22.963	-0.00420	-0.00470	-0.00643
___ V	-0.00068	-15.77	65.192	-0.00030	-0.00058	-0.00117
___ W	-0.00025	0.78	1023.731	-0.00314	0.00070	0.00169
___ Y1	5634.21075	5,634.21	0.114	5631.90177	5641.47642	5629.25407
___ Y2A	189773.26505	189,773.27	0.248	189290.48381	190232.61153	189796.69981
___ Y2R	3662.89849	3,662.90	0.099	3660.50909	3661.09545	3667.09091
___ ZN	0.00080	9.32	39.492	0.00054	0.00071	0.00115
___ ZR	0.01838	-11.08	17.149	0.02097	0.01930	0.01487

ICP-MS Data

Metals in Liquid



Date File Name: 18K06E00.E05

Method Reference Name(s):

Run Name: 1831006E05

Analyst: 3472

Reviewed By: Bradley M Berlot
Reviewed Date: 11/06/2018 19:35

Verified By: Deborah A Krady
Parker D Lindstrom
Verified Date: 11/07/2018 12:40
11/14/2018 22:30

Instrument Parameters:

Rinse Time (sec): 25.00

<u>INTERNAL STD.</u>	<u>ELEMENT</u>	<u>MASS</u>
SC-1		45
	BE	9
	B	11

SC-3		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57

IN-2		115
	SE	78

IN-3		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137

BI-3		209
	TL	203
	PB	208
	U	238

Run Name: 1831006E05
 Tube Number: 1
 Sample Number: **S0**

Date/Time: 11/06/2018 17:55:51

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
BE	9	0.00000	17.33300	0.000	-0.00245	-0.00473	0.00719
B	11	0.00000	5954.64300	0.000	-0.54452	-0.44008	0.98460
NA	23	0.00000	19895.03300	0.000	-6.90450	5.05206	1.85244
MG	24	0.00000	46.66700	0.000	0.06407	-0.22635	0.16228
AL	27	0.00000	33.33300	0.000	-2.74412	1.47328	1.27084
K	39	0.00000	3810.71300	0.000	23.84614	-11.74484	-12.10130
CA	44	0.00000	6.66700	0.000	19.93452	-9.96726	-9.96726
SC-1	45	1558427	0	0.000	1602069	1578342	1494870
SC-2	45	511785.44700	0.00000	0.000	517163.35000	511184.13000	507008.86000
SC-3	45	12566.52700	0.00000	0.000	13067.19000	12156.04000	12476.35000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	3.33300	0.000	0.01924	-0.00962	-0.00962
CR	52	0.00000	450.03300	0.000	0.34709	-0.00730	-0.33979
MN	55	0.00000	53.33300	0.000	-0.20308	-0.01648	0.21957
FE	57	0.00000	66.67000	0.000	-5.39992	-0.73185	6.13176
CO	59	0.00000	160.01300	0.000	0.03466	-0.05932	0.02466
NI	60	0.00000	103.34300	0.000	-0.00968	-0.03349	0.04317
CU	63	0.00000	390.02300	0.000	0.12731	-0.04480	-0.08251
ZN	66	0.00000	6.66700	0.000	0.05480	-0.10205	0.04726
GE-1	72	1498352	0	0.000	1527934	1498575	1468546
GE-2	72	974095.32300	0.00000	0.000	978236.55000	970425.61000	973623.81000
GE-3	72	43558.50000	0.00000	0.000	42418.43000	44424.30000	43832.77000
AS	75	0.00000	8.66700	0.000	-0.15532	0.18145	-0.02613
SE	78	0.00000	12.66700	0.000	-0.00619	0.01147	-0.00529
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	966.76000	0.000	-0.44107	0.22561	0.21547
AG	107	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-2	115	448628.34000	0.00000	0.000	448765.19000	451935.04000	445184.79000
IN-3	115	12325.50700	0.00000	0.000	12275.61000	11805.17000	12895.74000
SN	120	0.00000	160.01300	0.000	-0.09620	-0.06743	0.16363
SB	121	0.00000	20.00000	0.000	0.11545	-0.11181	-0.00364
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
TB-3	159	80642.81700	0.00000	0.000	78070.50000	80222.41000	83635.54000
TL	203	0.00000	36.67000	0.000	0.04277	-0.04441	0.00164
PB	208	0.00000	343.35700	0.000	0.00482	-0.02845	0.02363
BI-3	209	69831.73300	0.00000	0.000	66670.58000	70712.46000	72112.16000
U	238	0.00000	13.33300	0.000	-0.00078	-0.00382	0.00460

Run Name: 1831006E05
 Tube Number: 2
 Sample Number: S1

Date/Time: 11/06/2018 17:58:32

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1542912	0	0.000	1529442	1563133	1536162
SC-3	45	13016.93300	0.00000	0.000	12616.36000	13007.12000	13427.32000
AL	27	10000.00000	54338.30700	2.900	10304.67117	9728.59703	9966.73179
B	11	1000.00000	307363.34300	0.700	1002.82420	992.39678	1004.77902
BE	9	100.00000	75712.99700	0.700	100.58500	99.28639	100.12862
CA	44	10000.00000	6668.69700	0.900	10011.81698	10086.51131	9901.67171
CR	52	1000.00000	443851.00700	1.500	1016.23859	996.15954	987.60187
FE	57	10000.00000	73654.47300	2.100	10217.04233	9978.35282	9804.60485
K	39	10000.00000	114004.99300	1.600	10176.74194	9963.97963	9859.27843
MG	24	10000.00000	240091.71000	2.800	10321.70011	9843.37693	9834.92296
MN	55	1000.00000	126753.82300	2.900	1027.79957	1003.03751	969.16292
NA	23	10000.00000	554302.66000	0.800	10047.76935	10042.50640	9909.72425
TI	47	1000.00000	5794.84300	1.900	978.08613	1007.47095	1014.44291
V	51	1000.00000	345049.29300	2.600	1024.23429	1002.93827	972.82744
IN-2	115	455094.29700	0.00000	0.000	452829.97000	463837.13000	448615.79000
IN-3	115	12474.69700	0.00000	0.000	12835.52000	12295.94000	12292.63000
AG	107	100.00000	100936.23000	2.800	96.90281	102.45194	100.64525
AS	75	1000.00000	44155.21700	3.400	962.14278	1009.66371	1028.19351
BA	137	1000.00000	55661.44300	4.700	954.05893	997.22276	1048.71832
CD	111	100.00000	8450.78000	5.400	95.46884	98.57779	105.95337
CO	59	1000.00000	929879.10000	3.400	960.38346	1021.45328	1018.16326
CU	63	1000.00000	805785.32700	2.700	968.69880	1014.10021	1017.20098
MO	98	100.00000	49882.27000	4.500	94.85525	102.87046	102.27429
NI	60	1000.00000	273606.67700	2.700	969.19504	1013.34676	1017.45819
SB	121	100.00000	17896.52300	3.500	96.18995	103.14146	100.66859
SE	78	100.00000	10932.21000	1.400	101.28783	98.48592	100.22625
SN	120	100.00000	19866.10300	1.300	98.57759	101.23935	100.18307
SR	88	100.00000	9066.89700	2.800	96.89524	100.81129	102.29347
ZN	66	1000.00000	64769.40300	2.400	972.97506	1007.62656	1019.39838
BI-3	209	72192.45700	0.00000	0.000	71548.31000	69477.18000	75551.88000
PB	208	100.00000	278198.62000	3.000	100.61194	102.62102	96.76704
TL	203	100.00000	86897.80000	4.700	98.33447	105.30090	96.36463
U	238	100.00000	356222.49300	4.700	101.11302	104.01972	94.86726
SC-2	45	512122.28300	0.00000	0.000	507772.96000	511195.93000	517397.96000
GE-1	72	1457087	0	0.000	1516082	1452577	1402602
GE-2	72	977436.47000	0.00000	0.000	962965.92000	985870.61000	983472.88000
GE-3	72	43896.99300	0.00000	0.000	43613.37000	43742.70000	44334.91000
TB-3	159	82520.99700	0.00000	0.000	81319.90000	82457.72000	83785.37000

Run Name: 1831006E05
 Tube Number: 3
 Sample Number: **ICV**

Date/Time: 11/06/2018 18:01:13

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1583783	0	0.000	1631494	1591572	1528282
SC-3	45	12536.36700	0.00000	0.000	12206.08000	12296.24000	13106.78000
AL	27	4945.14247	25905.52300	5.300	4695.78720	5215.77145	4923.86877
B	11	659.29883	210002.03300	1.900	647.63654	657.95698	672.30297
BE	9	49.84277	38735.74000	1.500	49.10756	49.86475	50.55601
CA	44	4316.15469	2773.76000	4.300	4280.16927	4518.87699	4149.41780
CR	52	527.50079	225599.18300	2.800	536.28343	535.82268	510.39626
FE	57	5346.33202	37934.22700	4.000	5413.16763	5517.66561	5108.16281
K	39	5067.90121	57474.72000	4.200	5247.64034	5126.30268	4829.76060
MG	24	5220.79042	120682.83300	3.800	5307.61543	5362.88649	4991.86933
MN	55	517.68569	63218.36000	2.800	532.28875	517.46914	503.29918
NA	23	4954.65025	274443.39300	2.500	4922.52430	5089.13664	4852.28983
TI	47	532.80642	2970.49000	9.200	497.15063	588.55363	512.71500
V	51	515.88268	171431.82700	2.200	520.49634	523.97599	503.17571
IN-2	115	450595.40300	0.00000	0.000	446740.89000	455702.33000	449342.99000
IN-3	115	12397.53000	0.00000	0.000	11300.02000	12666.65000	13225.92000
AG	107	53.30586	53329.46300	6.000	56.50042	53.34178	50.07539
AS	75	507.77147	22226.35300	6.100	541.33281	501.70977	480.27182
BA	137	496.89332	27473.82300	2.100	508.71576	493.69653	488.26767
CD	111	50.23651	4214.72300	5.000	52.64529	47.61770	50.44655
CO	59	512.38923	472509.91700	5.400	542.99817	504.24506	489.92446
CU	63	517.50645	413116.63300	7.600	560.45092	509.16173	482.90671
MO	98	51.20354	25796.31700	6.400	54.24653	51.66639	47.69770
NI	60	517.90876	140335.92300	8.100	565.50400	501.60947	486.61281
SB	121	55.55735	9880.96000	2.800	57.18855	55.41429	54.06919
SE	78	51.48299	5578.72300	2.700	51.62048	50.05409	52.77440
SN	120	51.73782	10291.26300	4.600	52.80810	49.02364	53.38170
SR	88	51.37962	4604.40000	11.900	56.96992	52.34365	44.82529
ZN	66	511.74949	32824.42000	7.500	554.54233	501.09374	479.61241
BI-3	209	71027.60300	0.00000	0.000	69033.38000	71084.85000	72964.58000
PB	208	50.72439	139101.82300	1.800	50.82166	51.57860	49.77292
TL	203	50.40924	43166.85700	0.400	50.34619	50.61370	50.26782
U	238	50.09769	175757.53000	2.000	50.94874	50.36210	48.98223
SC-2	45	509336.67300	0.00000	0.000	501695.46000	523668.98000	502645.58000
GE-1	72	1493580	0	0.000	1519526	1508003	1453211
GE-2	72	970108.37000	0.00000	0.000	969775.30000	976854.75000	963695.06000
GE-3	72	42976.90700	0.00000	0.000	42880.36000	42167.30000	43883.06000
TB-3	159	80706.14700	0.00000	0.000	80312.77000	80051.75000	81753.92000

Run Name: 1831006E05
 Tube Number: 4
 Sample Number: ICB

Date/Time: 11/06/2018 18:03:39

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1553599	0	0.000	1564145	1540989	1555663
SC-3	45	12609.89300	0.00000	0.000	12596.50000	12186.40000	13046.78000
AL	27	1.26049	40.00000	275.000	3.09988	3.41997	-2.73838
B	11	144.48140	49804.94700	3.400	149.58094	144.14337	139.71990
BE	9	-0.00005	17.33300	0.000	-0.00978	0.00100	0.00863
CA	44	72.90657	53.33300	33.500	98.59965	70.19019	49.92986
CR	52	1.13341	936.75700	52.700	0.44573	1.43530	1.51919
FE	57	6.53974	113.34000	190.500	-6.65196	18.11051	8.16066
K	39	33.09652	4167.57300	163.000	92.58071	19.42562	-12.71678
MG	24	5.59097	180.01000	127.100	1.00213	1.99301	13.77777
MN	55	0.20382	80.00300	229.800	-0.11276	-0.01754	0.74175
NA	23	-2.48792	19825.14000	0.000	-9.59845	16.30258	-14.16789
TI	47	2.41810	13.33300	117.100	0.00000	5.53192	1.72237
V	51	0.60402	206.68300	92.800	-0.00962	0.73301	1.08866
IN-2	115	453822.90000	0.00000	0.000	456630.56000	450343.90000	454494.24000
IN-3	115	12648.42000	0.00000	0.000	12626.14000	12645.03000	12674.09000
AG	107	0.05528	56.67000	100.200	0.00978	0.03908	0.11697
AS	75	0.39383	26.66700	62.300	0.11182	0.51338	0.55630
BA	137	0.59007	33.33300	62.400	0.70954	0.17712	0.88357
CD	111	0.01554	1.33300	86.600	0.00000	0.02333	0.02328
CO	59	0.40269	543.38000	96.700	0.10324	0.26192	0.84290
CU	63	0.45145	770.06300	72.500	0.18373	0.35415	0.81646
MO	98	-0.65573	666.72000	0.000	-1.17078	-0.82929	0.03288
NI	60	0.56740	263.35300	104.100	0.12444	0.34005	1.23772
SB	121	1.41345	276.68700	23.600	1.04830	1.48781	1.70426
SE	78	0.07410	20.89000	29.600	0.08927	0.04894	0.08410
SN	120	-0.06746	150.01000	0.000	-0.26663	0.23310	-0.16884
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	4.71865	316.69000	35.400	5.69332	2.79123	5.67140
BI-3	209	69818.19000	0.00000	0.000	68320.01000	69636.33000	71498.23000
PB	208	0.00538	360.02000	1118.900	-0.05538	0.00664	0.06487
TL	203	0.06216	90.00700	86.600	0.00420	0.11058	0.07171
U	238	0.07626	280.02000	95.500	0.01692	0.05431	0.15755
SC-2	45	511602.91000	0.00000	0.000	511217.49000	512088.47000	511502.77000
GE-1	72	1466353	0	0.000	1470585	1458805	1469671
GE-2	72	979366.44700	0.00000	0.000	973589.44000	978006.24000	986503.66000
GE-3	72	41810.00700	0.00000	0.000	39528.76000	42439.89000	43461.37000
TB-3	159	78646.90000	0.00000	0.000	74930.69000	79519.63000	81490.38000

Run Name: 1831006E05
 Tube Number: 5
 Sample Number: LLC

Date/Time: 11/06/2018 18:06:04

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1558583	0	0.000	1586591	1548280	1540877
SC-3	45	12109.36300	0.00000	0.000	11395.41000	12386.17000	12546.51000
AL	27	430.87354	2210.29300	5.400	431.03055	407.65148	453.93860
B	11	101.71261	36932.23000	1.400	100.12606	101.98071	103.03106
BE	9	0.48642	389.34300	8.400	0.48592	0.44585	0.52747
CA	44	648.01170	406.69700	20.500	727.28843	494.79796	721.94870
CR	52	4.79242	2410.35000	5.800	4.69868	4.57103	5.10755
FE	57	112.87993	836.73700	12.300	116.23826	124.74364	97.65787
K	39	415.54320	7899.50000	16.400	494.06900	379.10451	373.45609
MG	24	111.87150	2537.04700	11.600	124.05095	98.21211	113.35145
MN	55	9.84191	1210.12700	16.800	10.73524	7.93448	10.85602
NA	23	971.93744	67367.42000	4.500	1019.70448	961.04323	935.06461
TI	47	21.59321	116.67700	8.300	19.72165	21.77259	23.28539
V	51	1.25219	406.69700	13.000	1.11544	1.20812	1.43301
IN-2	115	450274.95300	0.00000	0.000	443948.20000	449602.65000	457274.01000
IN-3	115	13015.46300	0.00000	0.000	12741.20000	13543.30000	12761.89000
AG	107	0.51513	543.37700	15.200	0.57209	0.54733	0.42595
AS	75	1.92943	98.00000	10.100	1.97094	1.71716	2.10019
BA	137	4.32998	253.35000	29.200	3.51583	5.78851	3.68562
CD	111	1.04767	92.66700	11.100	0.94940	1.17638	1.01722
CO	59	0.89641	1040.10000	20.900	0.67968	1.00547	1.00407
CU	63	38.79141	33008.40700	2.900	38.44091	37.86491	40.06840
MO	98	1.21147	1643.53300	34.300	0.80256	1.63431	1.19756
NI	60	3.87774	1213.46300	13.800	3.69851	3.45686	4.47786
SB	121	2.51589	490.04000	24.100	1.96844	2.41176	3.16749
SE	78	2.10511	240.22300	2.400	2.06011	2.09454	2.16069
SN	120	1.61874	500.04300	32.000	2.21250	1.37863	1.26510
SR	88	6.72378	636.71300	4.600	6.36865	6.90546	6.89723
ZN	66	15.71991	1066.76300	12.800	15.76698	13.68964	17.70309
BI-3	209	70491.32700	0.00000	0.000	68649.79000	71859.08000	70965.11000
PB	208	3.09210	8738.41300	3.200	3.20475	3.04506	3.02648
TL	203	0.54108	496.71000	7.000	0.57237	0.49861	0.55226
U	238	0.52380	1836.91700	8.500	0.55053	0.54831	0.47255
SC-2	45	518839.95300	0.00000	0.000	515363.55000	517071.32000	524084.99000
GE-1	72	1479663	0	0.000	1515603	1485882	1437504
GE-2	72	984688.42300	0.00000	0.000	978054.20000	976667.80000	999343.27000
GE-3	72	43438.14300	0.00000	0.000	42959.98000	43792.43000	43562.02000
TB-3	159	79578.47000	0.00000	0.000	77052.80000	80534.94000	81147.67000

Run Name: 1831006E05
 Tube Number: 6
 Sample Number: ICSA

Date/Time: 11/06/2018 18:08:29

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1494793	0	0.000	1492492	1485204	1506682
SC-3	45	11785.75000	0.00000	0.000	11555.56000	11755.88000	12045.81000
AL	27	104876.28555	515751.21700	1.500	106244.47902	105146.64682	103237.73082
B	11	49.04694	20041.66000	3.300	50.79247	48.70165	47.64670
BE	9	0.02087	32.00000	48.600	0.01816	0.03208	0.01236
CA	44	288178.81285	173833.13000	1.400	288319.16161	292182.21609	284035.06087
CR	52	0.74240	716.72300	34.700	1.03729	0.62726	0.56264
FE	57	279771.68357	1865024.71000	1.100	279342.16312	277072.06985	282900.81775
K	39	103915.54116	1039529.78000	0.800	102969.43626	104622.84145	104154.34578
MG	24	105978.87257	2304051.68300	1.500	107301.37087	106441.61517	104193.63166
MN	55	3.53910	456.70300	48.500	2.31587	5.50090	2.80052
NA	23	258890.67456	12528516.48000	1.000	260962.96055	259893.29843	255815.76470
TI	47	2252.20476	11809.07700	2.500	2270.49275	2296.83095	2189.29058
V	51	0.10891	36.66700	95.200	0.15353	0.18282	-0.00962
IN-2	115	428345.63700	0.00000	0.000	431883.30000	429307.62000	423845.99000
IN-3	115	11611.47300	0.00000	0.000	11384.76000	11564.59000	11885.07000
AG	107	0.05015	46.66700	69.700	0.07596	0.06409	0.01039
AS	75	0.81432	42.00000	69.700	0.74133	0.28709	1.41453
BA	137	1.16152	60.00300	30.800	1.57401	0.96834	0.94222
CD	111	0.07516	6.00000	99.100	0.00000	0.07654	0.14895
CO	59	0.86270	896.74300	0.400	0.86372	0.85918	0.86521
CU	63	1.10856	1200.13000	18.400	1.19576	0.87492	1.25500
MO	98	2090.02940	952912.38300	0.800	2096.05721	2102.03019	2072.00080
NI	60	1.77316	550.04000	22.200	1.54123	1.55072	2.22754
SB	121	1.53109	273.35300	12.800	1.72614	1.33571	1.53141
SE	78	0.02735	14.89000	92.800	-0.00183	0.04420	0.03969
SN	120	-0.30781	93.34000	0.000	-0.26209	-0.21601	-0.44532
SR	88	19.01114	1606.86000	8.400	18.36315	17.83976	20.83051
ZN	66	3.09783	193.34700	22.500	3.11151	2.39555	3.78643
BI-3	209	65096.06000	0.00000	0.000	65274.42000	64780.32000	65233.44000
PB	208	0.86306	2483.58000	9.400	0.77137	0.92651	0.89132
TL	203	-0.01470	23.33300	0.000	0.00646	-0.03159	-0.01896
U	238	0.04072	143.34300	50.600	0.03029	0.02743	0.06444
SC-2	45	496649.80700	0.00000	0.000	494732.41000	494667.92000	500549.09000
GE-1	72	1374713	0	0.000	1419299	1318867	1385972
GE-2	72	917321.47000	0.00000	0.000	916510.53000	911444.91000	924008.97000
GE-3	72	40525.82000	0.00000	0.000	39539.59000	40171.66000	41866.21000
TB-3	159	78530.59000	0.00000	0.000	75917.53000	79901.74000	79772.50000

Run Name: 1831006E05
 Tube Number: 7
 Sample Number: RINSE

Date/Time: 11/06/2018 18:10:53

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1507526	0	0.000	1527807	1498060	1496711
SC-3	45	13026.83700	0.00000	0.000	12356.21000	13807.64000	12916.66000
AL	27	208.98712	1173.48700	91.600	63.40936	137.64502	425.90696
B	11	17.53538	10931.63700	3.800	17.62234	18.14905	16.83473
BE	9	0.00149	18.00000	292.900	0.00654	-0.00104	-0.00102
CA	44	327.33704	226.68300	73.500	100.71094	301.34200	579.95817
CR	52	0.14246	526.71000	107.200	0.07091	0.03858	0.31788
FE	57	518.25587	3901.17300	93.500	135.09056	356.85254	1062.82452
K	39	54.20565	4511.02000	140.000	125.27466	-25.75137	63.09368
MG	24	152.61068	3727.76700	99.600	34.40149	99.28200	324.14854
MN	55	0.30153	93.34300	42.200	0.39225	0.15616	0.35619
NA	23	198.12262	31189.41700	106.800	61.38204	91.12391	441.86190
TI	47	7.51713	43.33700	93.800	3.63726	3.25492	15.65922
V	51	0.07570	30.00000	58.600	0.05141	0.12692	0.04876
IN-2	115	443592.21700	0.00000	0.000	444456.00000	441822.30000	444498.35000
IN-3	115	12095.76700	0.00000	0.000	11364.88000	12136.13000	12786.29000
AG	107	0.00679	6.66700	173.200	0.00000	0.02036	0.00000
AS	75	-0.07432	5.33300	0.000	0.04717	-0.20133	-0.06880
BA	137	0.12408	6.66700	87.100	0.19707	0.00000	0.17516
CD	111	0.03983	3.33300	63.900	0.02596	0.02431	0.06922
CO	59	-0.07023	93.33700	0.000	-0.07853	-0.09558	-0.03657
CU	63	-0.07698	320.02300	0.000	0.05423	-0.13350	-0.15166
MO	98	7.39663	4544.54300	64.200	3.20561	6.42539	12.55890
NI	60	-0.00987	100.00700	0.000	-0.14041	-0.04297	0.15377
SB	121	0.08040	33.33300	164.600	0.01093	0.23300	-0.00272
SE	78	-0.00897	11.55300	0.000	-0.03014	0.04584	-0.04262
SN	120	-0.55792	50.00000	0.000	-0.59534	-0.55734	-0.52110
SR	88	0.03585	3.33300	173.200	0.00000	0.00000	0.10756
ZN	66	0.81052	56.67000	85.600	1.42291	0.05660	0.95206
BI-3	209	68813.20700	0.00000	0.000	64489.98000	69898.87000	72050.77000
PB	208	-0.03991	230.01000	0.000	-0.01486	-0.04216	-0.06272
TL	203	-0.01693	23.33300	0.000	-0.04441	0.01498	-0.02136
U	238	0.00015	13.33300	2356.500	0.00246	-0.00382	0.00180
SC-2	45	496539.87300	0.00000	0.000	490609.91000	499528.00000	499481.71000
GE-1	72	1453994	0	0.000	1454998	1458018	1448967
GE-2	72	943735.14000	0.00000	0.000	953902.56000	945334.75000	931968.11000
GE-3	72	42408.19300	0.00000	0.000	41003.61000	42849.85000	43371.12000
TB-3	159	79146.91300	0.00000	0.000	77022.54000	78926.75000	81491.45000

Run Name: 1831006E05
 Tube Number: 8
 Sample Number: **CCV**

Date/Time: 11/06/2018 18:13:18

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1508479	0	0.000	1533389	1501359	1490688
SC-3	45	12509.70300	0.00000	0.000	12676.49000	12466.29000	12386.33000
AL	27	2530.89454	13250.26300	4.000	2641.48404	2507.17384	2444.02574
B	11	255.96649	81199.59700	2.100	249.86969	257.50878	260.52100
BE	9	25.58322	18950.16700	0.800	25.40124	25.80494	25.54347
CA	44	2597.82295	1670.19700	5.600	2718.24126	2435.06184	2640.16574
CR	52	263.17912	112601.51700	3.100	258.16854	258.74226	272.62656
FE	57	2665.11991	18914.02300	5.600	2493.32089	2757.11460	2744.92425
K	39	2525.28812	30498.48700	4.800	2406.66197	2522.66722	2646.53517
MG	24	2517.08026	58123.14300	4.000	2406.31489	2538.54250	2606.38340
MN	55	259.75310	31694.73000	3.000	254.52391	256.09713	268.63828
NA	23	2566.23852	151421.90700	3.100	2475.76270	2621.00446	2601.94841
TI	47	265.37381	1476.83000	15.200	241.10947	311.88089	243.13106
V	51	256.98700	85251.75300	2.500	252.20296	254.42398	264.33406
IN-2	115	446992.06000	0.00000	0.000	454171.05000	442420.91000	444384.22000
IN-3	115	12296.09000	0.00000	0.000	11461.28000	12715.01000	12711.98000
AG	107	26.89121	26731.75700	4.100	27.91265	25.71527	27.04572
AS	75	250.28143	10888.46300	4.000	261.84122	243.64956	245.35351
BA	137	248.54016	13634.57000	5.200	254.17818	233.87433	257.56796
CD	111	25.82798	2151.53700	2.500	26.28500	25.08582	26.11313
CO	59	258.76802	237070.64700	4.000	270.34837	250.44343	255.51227
CU	63	253.88200	201634.60000	5.100	268.44882	244.13994	249.05725
MO	98	25.44588	13203.93000	7.300	27.59637	24.21695	24.52431
NI	60	254.67534	68644.59000	5.800	270.59277	241.45965	251.97360
SB	121	24.66483	4357.65700	6.500	26.42569	24.24801	23.32078
SE	78	26.11601	2813.63300	2.000	25.72327	25.91968	26.70508
SN	120	25.84493	5171.28000	5.700	27.13233	26.16956	24.23288
SR	88	28.37227	2530.36300	14.700	30.48187	23.58129	31.05366
ZN	66	269.46293	17181.87300	7.000	284.51093	248.41092	275.46693
BI-3	209	69412.16700	0.00000	0.000	67987.41000	68681.79000	71567.30000
PB	208	26.03919	69947.79700	1.500	26.02128	26.44901	25.64726
TL	203	25.23081	21139.01000	3.700	24.18980	26.02730	25.47534
U	238	25.30616	86810.53700	1.400	25.44355	24.91359	25.56133
SC-2	45	508032.78300	0.00000	0.000	517723.16000	498837.81000	507537.38000
GE-1	72	1447625	0	0.000	1482564	1431610	1428702
GE-2	72	950852.30300	0.00000	0.000	957745.30000	940932.64000	953878.97000
GE-3	72	41502.50700	0.00000	0.000	40261.99000	42579.42000	41666.11000
TB-3	159	78177.20300	0.00000	0.000	76036.08000	78583.32000	79912.21000

Run Name: 1831006E05
 Tube Number: 9
 Sample Number: CCB

Date/Time: 11/06/2018 18:15:42

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1531799	0	0.000	1520216	1572137	1503043
SC-3	45	12479.72700	0.00000	0.000	12386.38000	12276.09000	12776.71000
AL	27	5.01450	60.00300	186.500	-4.47712	5.30011	14.22052
B	11	50.40905	20937.63300	6.100	53.68993	47.58650	49.95070
BE	9	-0.00516	13.33300	0.000	0.00669	-0.00207	-0.02010
CA	44	109.27031	76.67000	51.400	84.66870	69.60456	173.53767
CR	52	0.50226	660.05300	98.500	-0.02661	0.58028	0.95310
FE	57	11.26983	146.67700	104.500	-2.32169	17.91052	18.22065
K	39	66.12255	4470.98700	86.700	123.14385	66.76268	8.46114
MG	24	5.90594	183.34300	71.100	1.92838	5.49629	10.29315
MN	55	0.21586	80.00700	162.500	0.39022	-0.18789	0.44526
NA	23	27.19088	21153.87000	16.300	30.51252	28.88526	22.17487
TI	47	1.77725	10.00000	99.000	1.81420	0.00000	3.51755
V	51	0.42056	143.34000	66.100	0.14259	0.42041	0.69867
IN-2	115	446316.01700	0.00000	0.000	446846.01000	446365.21000	445736.83000
IN-3	115	12268.03000	0.00000	0.000	11714.49000	12054.70000	13034.90000
AG	107	0.05677	56.67000	14.700	0.05273	0.05124	0.06635
AS	75	0.28961	22.00000	143.900	-0.05668	0.17352	0.75200
BA	137	0.47396	26.66700	72.900	0.19119	0.37159	0.85911
CD	111	0.05404	4.66700	105.000	0.00000	0.04895	0.11317
CO	59	0.23728	386.69300	141.600	-0.01265	0.10519	0.61930
CU	63	0.32318	653.39000	90.700	0.14371	0.16432	0.66150
MO	98	-0.86239	553.38700	0.000	-1.21516	-0.89893	-0.47309
NI	60	0.11626	136.67700	341.600	-0.34219	0.33751	0.35346
SB	121	0.50929	110.00700	76.100	0.72176	0.06176	0.74434
SE	78	0.07741	20.88700	40.700	0.08130	0.04417	0.10676
SN	120	-0.26396	106.67300	0.000	-0.33177	-0.03046	-0.42965
SR	88	0.03517	3.33300	173.200	0.00000	0.00000	0.10550
ZN	66	3.84317	250.01300	26.300	4.99361	3.09264	3.44327
BI-3	209	68936.24000	0.00000	0.000	66549.58000	69435.47000	70823.67000
PB	208	-0.00304	333.35000	0.000	-0.03396	-0.05654	0.08137
TL	203	0.03578	66.67000	95.500	0.01796	0.07516	0.01420
U	238	0.05619	206.68300	70.800	0.02964	0.03699	0.10193
SC-2	45	496590.91700	0.00000	0.000	488485.66000	498078.39000	503208.70000
GE-1	72	1438858	0	0.000	1440630	1482098	1393846
GE-2	72	941500.22000	0.00000	0.000	934489.28000	941863.89000	948147.49000
GE-3	72	42515.30300	0.00000	0.000	41104.69000	43993.66000	42447.56000
TB-3	159	77687.45000	0.00000	0.000	75915.89000	77707.79000	79438.67000

Run Name: 1831006E05
 Tube Number: 10
 Sample Number: **PBW**

Date/Time: 11/06/2018 18:18:07
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1595066	0	0.000	1622381	1602199	1560619
SC-3	45	12339.43300	0.00000	0.000	11805.63000	12696.37000	12516.30000
AL	27	16.50472	120.00700	101.900	-2.35220	21.90050	29.96585
B	11	15.70816	10998.37000	2.700	15.95917	15.95275	15.21258
BE	9	-0.00062	17.33300	0.000	0.00232	-0.01009	0.00592
CA	44	42.70698	33.33300	18.300	39.67841	51.58298	36.85955
CR	52	-0.02423	430.03300	0.000	-0.05107	0.17970	-0.20133
FE	57	7.87111	120.00700	149.400	11.51087	-5.28135	17.38383
K	39	36.73759	4110.85700	106.300	73.67696	-4.11709	40.65290
MG	24	0.05700	46.66700	1301.600	0.74480	-0.72915	0.15535
MN	55	1.03039	176.67700	22.700	1.03981	1.25956	0.79179
NA	23	11.82030	20142.11000	62.700	9.42450	5.90630	20.13010
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02172	10.00000	147.200	0.05426	-0.00962	0.02051
IN-2	115	446285.33700	0.00000	0.000	446151.30000	438601.96000	454102.75000
IN-3	115	12609.59000	0.00000	0.000	12896.63000	12806.76000	12125.38000
AG	107	0.00661	6.66700	86.700	0.00000	0.00965	0.01019
AS	75	0.00966	9.33300	1531.400	0.06146	-0.15723	0.12475
BA	137	0.06157	3.33300	173.200	0.00000	0.00000	0.18471
CD	111	0.00763	0.66700	173.200	0.02288	0.00000	0.00000
CO	59	-0.07308	93.34000	0.000	-0.06893	-0.11010	-0.04020
CU	63	-0.10947	310.02300	0.000	-0.15456	-0.09175	-0.08211
MO	98	-1.17218	403.36300	0.000	-1.54392	-1.36160	-0.61101
NI	60	0.59180	266.69300	111.300	-0.16900	0.97183	0.97258
SB	121	-0.03830	13.33300	0.000	-0.05773	-0.00289	-0.05429
SE	78	0.02987	15.78000	40.200	0.03183	0.04077	0.01701
SN	120	-0.56786	50.00000	0.000	-0.57272	-0.52157	-0.60931
SR	88	0.03555	3.33300	173.200	0.10663	0.00000	0.00000
ZN	66	0.91653	66.67000	57.500	1.39109	0.34899	1.00952
BI-3	209	69623.59000	0.00000	0.000	68640.12000	68260.39000	71970.26000
PB	208	-0.03598	246.68000	0.000	-0.05950	-0.03630	-0.01215
TL	203	-0.04441	0.00000	0.000	-0.04441	-0.04441	-0.04441
U	238	0.00585	33.33300	56.100	0.00208	0.00804	0.00743
SC-2	45	504155.82700	0.00000	0.000	508414.84000	495763.43000	508289.21000
GE-1	72	1502998	0	0.000	1535149	1512907	1460937
GE-2	72	968316.26300	0.00000	0.000	971137.80000	949582.10000	984228.89000
GE-3	72	42348.20000	0.00000	0.000	40903.13000	42057.86000	44083.61000
TB-3	159	79334.25700	0.00000	0.000	77205.05000	79780.43000	81017.29000

Run Name: 1831006E05
 Tube Number: 11
 Sample Number: LCSW

Date/Time: 11/06/2018 18:20:31
 Batch: 183091063901A
 Class: *****

Initial Vol: 1.00

Final Vol: 1.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1552245	0	0.000	1578970	1560082	1517683
SC-3	45	12069.23700	0.00000	0.000	12035.82000	11865.76000	12306.13000
AL	27	2102.55104	10621.32300	1.400	2132.79170	2098.76711	2076.09432
B	11	268.71072	87419.60700	2.200	261.80903	272.33265	271.99049
BE	9	4.07906	3123.71300	1.900	4.00770	4.15842	4.07107
CA	44	3900.78951	2413.68700	8.600	4113.60915	4073.85417	3514.90521
CR	52	54.59254	22880.19300	2.100	53.28208	55.34900	55.14654
FE	57	1079.27984	7435.71300	6.000	1026.59602	1059.32545	1151.91806
K	39	10468.05541	110503.17700	1.900	10297.87147	10679.39219	10426.90256
MG	24	2128.55981	47439.43300	0.900	2115.47642	2150.38927	2119.81375
MN	55	53.87358	6385.14000	1.900	54.68685	52.70666	54.22724
NA	23	10594.40953	543361.23000	1.400	10527.90966	10759.37340	10495.94554
TI	47	227.73833	1223.45700	13.300	261.41570	202.65365	219.14565
V	51	53.86291	17241.74300	1.400	54.41172	54.20551	52.97149
IN-2	115	446870.45000	0.00000	0.000	435941.72000	456187.53000	448482.10000
IN-3	115	12987.22300	0.00000	0.000	12461.36000	13484.71000	13015.60000
AG	107	50.53716	53105.47700	1.900	51.26489	49.47271	50.87388
AS	75	10.12956	475.34300	3.500	10.04291	10.52211	9.82367
BA	137	46.33579	2690.41000	5.600	43.32103	47.84115	47.84520
CD	111	5.12278	450.01000	9.900	5.70608	4.87922	4.78306
CO	59	240.98198	233346.55300	3.500	248.07425	231.78848	243.08321
CU	63	48.46217	41040.23700	3.300	48.99367	46.67822	49.71463
MO	98	46.62917	24781.19700	0.800	46.21758	46.91511	46.75483
NI	60	49.31047	14147.99000	2.300	50.61084	48.67043	48.65015
SB	121	6.83898	1296.80000	7.400	6.32517	7.33678	6.85500
SE	78	10.38431	1125.60700	3.900	10.65287	9.91298	10.58707
SN	120	49.87821	10408.10700	3.900	47.91264	49.94600	51.77599
SR	88	40.20911	3800.73700	4.400	39.29556	42.22997	39.10181
ZN	66	481.61491	32443.42700	6.100	515.39712	461.95924	467.48837
BI-3	209	69807.74300	0.00000	0.000	67192.89000	69898.33000	72332.01000
PB	208	15.18467	41165.85700	2.900	15.07468	15.66884	14.81049
TL	203	2.08188	1790.23000	10.000	2.06853	1.87985	2.29727
U	238	25.52031	87980.70700	3.700	25.76554	26.31407	24.48132
SC-2	45	502793.73000	0.00000	0.000	492464.60000	509271.13000	506645.46000
GE-1	72	1482289	0	0.000	1498971	1505577	1442320
GE-2	72	957300.48300	0.00000	0.000	946778.27000	961679.60000	963443.58000
GE-3	72	42519.02700	0.00000	0.000	42478.70000	42760.33000	42318.05000
TB-3	159	79441.82700	0.00000	0.000	78462.46000	81550.43000	78312.59000

Run Name: 1831006E05
 Tube Number: 12
 Sample Number: 9881311

Date/Time: 11/06/2018 18:22:56
 Batch: 183091063901A
 Class: U*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1568657	0	0.000	1596736	1563060	1546175
SC-3	45	12496.44300	0.00000	0.000	12306.37000	12526.43000	12656.53000
AL	27	12.69580	100.00700	58.400	5.27129	12.71980	20.09632
B	11	1113.58836	347280.14300	1.500	1095.53582	1129.20788	1116.02138
BE	9	0.00149	18.66700	452.400	-0.00494	0.00849	0.00092
CA	44	259835.63737	166242.00300	2.700	252079.93694	265484.36992	261942.60525
CR	52	2.30555	1426.82000	5.300	2.36523	2.16466	2.38677
FE	57	45935.03937	324718.77000	0.800	45555.41798	46282.13785	45967.56229
K	39	21690.35589	233076.78300	1.500	21326.85078	21783.35186	21960.86504
MG	24	35335.27890	814747.56700	1.000	35135.86284	35748.68007	35121.29379
MN	55	765.72642	93254.13000	0.900	760.78671	762.51240	773.88015
NA	23	43287.91715	2237972.83300	0.100	43244.82496	43306.46107	43312.46542
TI	47	4.16737	23.33300	89.400	0.00000	7.17567	5.32643
V	51	1.85195	616.71300	10.100	2.01272	1.64602	1.89712
IN-2	115	442827.18300	0.00000	0.000	446846.86000	437824.08000	443810.61000
IN-3	115	12396.25300	0.00000	0.000	12864.25000	12152.99000	12171.52000
AG	107	0.08052	80.00700	51.800	0.03841	0.08133	0.12180
AS	75	17.03407	755.36700	12.900	15.60618	15.92711	19.56893
BA	137	1818.90162	100534.29700	6.300	1686.03770	1887.59055	1883.07661
CD	111	0.00809	0.66700	173.200	0.00000	0.02428	0.00000
CO	59	3.22772	3130.53700	28.200	2.46482	2.98337	4.23497
CU	63	0.05244	436.70000	197.600	0.17125	-0.01933	0.00539
MO	98	-0.40886	770.06300	0.000	-0.75015	-0.61416	0.13772
NI	60	0.44236	223.34700	59.300	0.32773	0.25667	0.74267
SB	121	0.13047	43.33300	86.000	0.21348	0.17513	0.00279
SE	78	0.15854	29.33300	12.100	0.13726	0.17430	0.16407
SN	120	0.72431	300.02300	67.100	0.16603	0.95282	1.05408
SR	88	2428.82507	218602.73000	7.200	2233.70851	2481.90588	2570.86082
ZN	66	2.85680	190.01000	25.400	2.44257	2.43307	3.69476
BI-3	209	70351.36300	0.00000	0.000	68863.93000	70391.29000	71798.87000
PB	208	-0.01230	313.35300	0.000	-0.04087	-0.00587	0.00983
TL	203	-0.01260	26.66700	0.000	0.01587	-0.02082	-0.03285
U	238	0.10951	396.69700	57.800	0.06673	0.07957	0.18225
SC-2	45	513399.46000	0.00000	0.000	515163.47000	513023.51000	512011.40000
GE-1	72	1463039	0	0.000	1492769	1457221	1439128
GE-2	72	960663.08700	0.00000	0.000	960720.61000	961002.49000	960266.16000
GE-3	72	42676.18700	0.00000	0.000	42899.76000	42669.43000	42459.37000
TB-3	159	79988.85000	0.00000	0.000	79970.95000	77205.46000	82790.14000

Run Name: 1831006E05
 Tube Number: 13
 Sample Number: 9881311

Date/Time: 11/06/2018 18:25:22
 Batch: 183091063901A
 Class: UP*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1603394	0	0.000	1591295	1608505	1610382
SC-3	45	13166.96000	0.00000	0.000	13076.86000	12836.75000	13587.27000
AL	27	812.94223	4497.62000	7.200	778.02989	880.47572	780.32107
B	11	1271.48604	404470.23000	0.800	1281.99424	1261.60478	1270.85909
BE	9	1.01331	815.36700	8.100	0.91993	1.04923	1.07078
CA	44	245297.71508	165360.07300	1.400	241998.33250	245064.12635	248830.68641
CR	52	10.00923	4957.82700	3.500	10.38091	9.95433	9.69246
FE	57	43569.37165	324464.42000	1.400	43052.83801	44233.98874	43421.28821
K	39	21058.89153	238428.97700	1.900	21136.65029	21418.12792	20621.89637
MG	24	33531.15798	814209.39000	2.800	33351.50388	34555.90451	32686.06554
MN	55	726.98311	93219.77000	3.500	730.40249	750.26809	700.27875
NA	23	42427.69881	2310709.08000	2.000	42781.19869	43048.01551	41453.88223
TI	47	63.47895	373.36000	31.300	42.96363	64.77386	82.69937
V	51	3.62940	1270.13300	4.400	3.50843	3.80922	3.57055
IN-2	115	439658.54300	0.00000	0.000	432122.79000	446092.02000	440760.82000
IN-3	115	12379.78700	0.00000	0.000	11647.44000	12756.20000	12735.72000
AG	107	0.86168	860.08700	15.400	0.97587	0.71670	0.89247
AS	75	20.96041	925.37300	7.100	22.68927	20.12400	20.06798
BA	137	1802.02722	99546.14700	2.000	1838.72249	1764.88797	1802.47121
CD	111	1.97339	164.66700	19.200	2.35575	1.96596	1.59846
CO	59	4.48862	4300.90000	3.200	4.58302	4.55871	4.32415
CU	63	77.11835	61976.99700	3.900	80.54940	75.48176	75.32390
MO	98	3.29963	2577.08000	9.700	3.03557	3.65735	3.20596
NI	60	8.09553	2293.67700	12.600	9.09279	7.05384	8.13997
SB	121	3.77919	693.39300	27.600	3.24168	3.11422	4.98167
SE	78	4.16350	451.56300	2.400	4.26069	4.06128	4.16855
SN	120	4.14148	970.10300	4.900	4.12757	3.94574	4.35114
SR	88	2405.77116	216247.84700	4.800	2524.50283	2293.69924	2399.11141
ZN	66	34.18105	2206.98700	10.500	32.79963	38.24291	31.50061
BI-3	209	68212.10700	0.00000	0.000	67082.58000	67213.79000	70339.95000
PB	208	6.15454	16498.62700	4.000	6.43428	6.05038	5.97898
TL	203	0.96861	833.41000	22.600	0.72292	1.14142	1.04149
U	238	1.02953	3480.71000	3.200	1.06145	1.03226	0.99487
SC-2	45	508775.08300	0.00000	0.000	504304.80000	512759.56000	509260.89000
GE-1	72	1510197	0	0.000	1528396	1485844	1516351
GE-2	72	959553.24300	0.00000	0.000	940754.52000	980951.63000	956953.58000
GE-3	72	42742.39000	0.00000	0.000	41615.54000	42207.16000	44404.47000
TB-3	159	79682.00700	0.00000	0.000	79788.97000	81339.46000	77917.59000

Run Name: 1831006E05
 Tube Number: 14
 Sample Number: 9881311

Date/Time: 11/06/2018 18:27:47
 Batch: 183091063901A
 Class: D*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1590506	0	0.000	1602315	1631202	1538001
SC-3	45	12389.67700	0.00000	0.000	11715.67000	12145.95000	13307.41000
AL	27	2.59030	46.67000	309.200	-4.36637	11.34622	0.79106
B	11	1131.02630	357520.68700	1.100	1120.22581	1128.82127	1144.03183
BE	9	-0.00058	17.33300	0.000	0.00517	-0.00532	-0.00161
CA	44	249747.71606	158078.22700	5.000	254346.82638	259209.50045	235686.82134
CR	52	6.93354	3360.60000	7.400	7.52348	6.71241	6.56474
FE	57	43549.10492	304446.83300	5.700	45185.89638	44791.78330	40669.63508
K	39	20924.00702	222581.95000	4.900	21364.23906	21665.68785	19742.09415
MG	24	33858.51357	772456.52300	4.700	34856.73860	34678.35517	32040.44694
MN	55	723.05059	87085.37700	5.900	744.55366	750.74898	673.84913
NA	23	41184.77495	2107233.46000	5.400	42368.25138	42556.69740	38629.37607
TI	47	0.61670	3.33300	173.200	0.00000	1.85011	0.00000
V	51	2.08356	683.39300	26.600	1.95373	2.69140	1.60555
IN-2	115	437920.72700	0.00000	0.000	439280.51000	438666.64000	435815.03000
IN-3	115	12430.95700	0.00000	0.000	11793.04000	12093.99000	13405.84000
AG	107	0.00307	3.33300	173.200	0.00000	0.00000	0.00921
AS	75	14.81709	658.02300	10.100	16.08411	15.21158	13.15558
BA	137	1696.19380	93992.77000	3.500	1733.79158	1727.59220	1627.19761
CD	111	0.02280	2.00000	96.700	0.00000	0.02440	0.04402
CO	59	2.43531	2417.01000	3.000	2.51105	2.36660	2.42828
CU	63	0.19602	556.71000	87.000	0.00819	0.23901	0.34086
MO	98	-0.40091	783.40300	0.000	-0.57191	-0.43876	-0.19207
NI	60	0.79625	320.02300	24.200	1.01073	0.63679	0.74123
SB	121	0.17058	50.00300	71.500	0.30223	0.06120	0.14832
SE	78	0.15714	28.89000	36.800	0.20492	0.17374	0.09275
SN	120	0.71428	303.35300	99.700	-0.06666	1.32781	0.88170
SR	88	2276.23275	205393.72000	4.200	2304.38577	2354.47113	2169.84134
ZN	66	1.80657	123.34300	15.500	2.02063	1.49018	1.90889
BI-3	209	69224.53700	0.00000	0.000	68660.69000	69346.07000	69666.85000
PB	208	-0.01513	300.02000	0.000	-0.01792	-0.04522	0.01776
TL	203	-0.02838	13.33300	0.000	-0.02023	-0.03244	-0.03249
U	238	0.01957	80.00300	0.900	0.01977	0.01953	0.01942
SC-2	45	508374.65300	0.00000	0.000	502331.71000	509261.71000	513530.54000
GE-1	72	1451918	0	0.000	1483340	1494623	1377792
GE-2	72	947198.71000	0.00000	0.000	946087.41000	948605.69000	946903.03000
GE-3	72	40770.41700	0.00000	0.000	39158.81000	40553.54000	42598.90000
TB-3	159	79783.35000	0.00000	0.000	77304.86000	80816.56000	81228.63000

Run Name: 1831006E05
 Tube Number: 15
 Sample Number: 9881311

Date/Time: 11/06/2018 18:30:11
 Batch: 183091063901A
 Class: R*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1621299	0	0.000	1618889	1633948	1611059
SC-3	45	12473.01700	0.00000	0.000	11955.81000	12406.25000	13056.99000
AL	27	2045.50584	10664.62000	5.600	2109.00658	2115.31304	1912.19791
B	11	1299.22210	417787.94700	0.800	1310.48308	1297.05088	1290.13233
BE	9	4.03906	3231.06700	1.300	4.09467	4.02928	3.99323
CA	44	231247.80236	147647.36000	0.600	230227.67618	232753.99391	230761.73699
CR	52	66.31439	28601.29300	3.400	68.89483	65.43042	64.61793
FE	57	40747.61272	287224.33300	3.400	42256.10476	40452.63798	39534.09542
K	39	29222.58504	311877.19000	2.100	29856.29031	29208.43948	28603.02532
MG	24	32647.53500	750667.46000	3.100	33652.01939	32672.69916	31617.88646
MN	55	724.71591	88049.16300	1.700	732.11369	731.74955	710.28450
NA	23	48446.62625	2496170.48300	2.100	49616.39074	48082.87924	47640.60878
TI	47	283.34530	1573.52300	1.800	280.08283	280.78511	289.16796
V	51	55.12323	18226.38000	2.300	55.97609	55.73916	53.65445
IN-2	115	433761.07000	0.00000	0.000	441310.54000	436145.63000	423827.04000
IN-3	115	12549.18000	0.00000	0.000	12302.38000	12619.96000	12725.20000
AG	107	50.96756	51783.26000	2.400	50.47550	50.05100	52.37617
AS	75	24.68759	1106.05700	2.100	24.27158	25.26723	24.52395
BA	137	1633.39518	91541.07000	3.200	1610.47123	1597.31208	1692.40221
CD	111	4.93300	420.01000	12.400	4.65266	4.51219	5.63414
CO	59	249.79802	233908.38000	0.600	251.61174	248.54270	249.23962
CU	63	49.28671	40341.68000	1.900	50.20173	48.34786	49.31055
MO	98	47.83229	24533.84300	3.000	48.08586	46.27981	49.13121
NI	60	51.65998	14328.28300	2.100	50.45351	51.88785	52.63858
SB	121	6.28768	1153.44700	19.200	5.44448	5.74689	7.67168
SE	78	10.97124	1153.60700	5.600	10.95622	10.36750	11.59001
SN	120	53.70775	10811.75700	3.700	53.69120	51.71762	55.71445
SR	88	2147.65726	196027.72700	2.600	2102.26448	2129.79521	2210.91208
ZN	66	494.65849	32243.29000	1.500	496.80208	500.97128	486.20211
BI-3	209	68014.55300	0.00000	0.000	67052.84000	68208.78000	68782.04000
PB	208	15.99266	42237.13300	1.300	15.74991	16.15167	16.07640
TL	203	1.99202	1670.21300	15.000	1.77580	1.86666	2.33359
U	238	26.28781	88353.57000	1.500	26.05049	26.73583	26.07711
SC-2	45	509028.14300	0.00000	0.000	504815.30000	512448.90000	509820.23000
GE-1	72	1479710	0	0.000	1492925	1472535	1473669
GE-2	72	952589.33300	0.00000	0.000	943166.00000	968841.55000	945760.45000
GE-3	72	43010.17000	0.00000	0.000	42909.89000	43030.16000	43090.46000
TB-3	159	79167.42000	0.00000	0.000	77265.32000	80333.83000	79903.11000

Run Name: 1831006E05
 Tube Number: 16
 Sample Number: 9881311

Date/Time: 11/06/2018 18:32:37
 Batch: 183091063901A
 Class: M*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1610578	0	0.000	1613518	1632102	1586114
SC-3	45	12823.39000	0.00000	0.000	12406.27000	12806.74000	13257.16000
AL	27	2044.32740	10964.97000	4.000	2109.51709	2071.44400	1952.02112
B	11	1483.27124	472899.57700	1.000	1476.64277	1472.78587	1500.38507
BE	9	4.15255	3299.08700	3.300	3.99720	4.21125	4.24919
CA	44	246031.55882	161468.52300	0.800	248348.54111	245237.44676	244508.68860
CR	52	66.52266	29503.18700	3.700	67.54097	68.31164	63.71538
FE	57	43658.00880	316667.95700	0.200	43778.87665	43619.15890	43575.99085
K	39	30315.71297	332705.34300	0.300	30312.34788	30231.70128	30403.08976
MG	24	34441.87658	814901.88700	0.300	34406.79786	34561.24365	34357.58821
MN	55	757.25450	94656.61000	1.500	744.07472	763.09062	764.59816
NA	23	49273.88058	2611053.97000	0.400	49392.75286	49393.67677	49035.21211
TI	47	272.65559	1556.85000	6.600	255.42295	291.30738	271.23643
V	51	53.96849	18369.91300	3.400	52.93979	52.87501	56.09066
IN-2	115	440950.80700	0.00000	0.000	438596.28000	437444.78000	446811.36000
IN-3	115	13233.85300	0.00000	0.000	13145.68000	13190.23000	13365.65000
AG	107	48.76452	52231.86000	3.600	48.68101	50.54769	47.06485
AS	75	23.99966	1134.06300	8.400	22.14327	26.13618	23.71952
BA	137	1663.55544	98310.84700	4.400	1579.92593	1713.16490	1697.57548
CD	111	4.34920	390.01000	8.400	4.75817	4.22764	4.06178
CO	59	239.57375	236613.14000	2.900	231.84769	245.54429	241.32928
CU	63	48.39707	41789.22700	0.300	48.43761	48.22578	48.52781
MO	98	46.41618	25138.49300	3.900	44.44637	47.96779	46.83439
NI	60	53.94689	15773.31000	4.200	53.58094	51.91226	56.34748
SB	121	6.16734	1190.12700	28.100	5.99013	7.97912	4.53278
SE	78	10.40847	1113.60700	2.400	10.56868	10.53327	10.12346
SN	120	51.39475	10918.49300	3.800	49.13460	52.42391	52.62574
SR	88	2200.13317	211755.14000	3.400	2118.89620	2216.38327	2265.12005
ZN	66	475.43115	32684.23700	1.900	466.67686	485.01760	474.59900
BI-3	209	67974.81300	0.00000	0.000	67224.58000	67917.97000	68781.89000
PB	208	15.89445	41950.78000	0.100	15.91075	15.89239	15.88021
TL	203	2.06104	1723.54000	5.100	2.17870	1.97261	2.03181
U	238	26.58565	89317.69300	2.700	25.96562	26.43907	27.35227
SC-2	45	511093.69000	0.00000	0.000	514000.03000	512862.26000	506418.78000
GE-1	72	1458593	0	0.000	1466424	1479585	1429770
GE-2	72	956654.54300	0.00000	0.000	953286.39000	950072.49000	966604.75000
GE-3	72	41776.18000	0.00000	0.000	40372.38000	42046.83000	42909.33000
TB-3	159	80199.40300	0.00000	0.000	78221.40000	80786.65000	81590.16000

Run Name: 1831006E05
 Tube Number: 17
 Sample Number: 9881311

Date/Time: 11/06/2018 18:35:03
 Batch: 183091063901A
 Class: UL*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 5.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1612177	0	0.000	1619749	1616955	1599827
SC-3	45	12446.33000	0.00000	0.000	11575.50000	12716.56000	13046.93000
AL	27	9.47253	83.33700	56.400	6.00895	6.77880	15.62984
B	11	367.61338	121973.16000	0.900	369.61385	369.48612	363.74017
BE	9	0.00582	22.66700	212.100	0.01997	-0.00264	0.00012
CA	44	51749.48126	32971.02700	0.300	51931.91195	51598.90208	51717.62974
CR	52	1.82067	1220.12300	21.000	1.59160	1.60885	2.26157
FE	57	9019.16278	63507.14700	1.800	9176.32635	9036.76333	8844.39866
K	39	4349.50590	49437.07000	6.400	4664.05445	4244.17994	4140.28331
MG	24	6865.21673	157442.90300	4.100	7187.86384	6674.18095	6733.60541
MN	55	151.46638	18410.13300	3.000	153.38841	146.21532	154.79540
NA	23	8250.50147	440125.11300	3.800	8613.59883	8105.82431	8032.08128
TI	47	1.14823	6.66700	173.200	0.00000	0.00000	3.44470
V	51	0.52906	180.01300	39.900	0.38129	0.43517	0.77073
IN-2	115	443727.20700	0.00000	0.000	439961.59000	451482.45000	439737.58000
IN-3	115	12857.47700	0.00000	0.000	12074.10000	12783.44000	13714.89000
AG	107	0.07700	83.33700	93.400	0.01023	0.06765	0.15313
AS	75	3.49097	166.66700	21.200	4.24289	3.46606	2.76396
BA	137	343.63195	19746.16000	3.200	341.38415	333.84724	355.66446
CD	111	0.01434	1.33300	173.200	0.00000	0.00000	0.04302
CO	59	0.83279	976.75700	47.200	0.70456	0.51948	1.27432
CU	63	0.02880	436.70300	525.000	-0.09320	-0.01836	0.19794
MO	98	-0.69864	666.73000	0.000	-1.15404	-0.80208	-0.13981
NI	60	0.25323	180.01300	87.000	0.03428	0.47490	0.25052
SB	121	0.04676	30.00000	210.300	-0.05405	0.05187	0.14246
SE	78	0.01822	14.44700	96.300	0.02133	-0.00067	0.03401
SN	120	0.10234	186.67700	36.900	0.12554	0.12269	0.05879
SR	88	454.80220	42462.49300	4.000	461.44429	468.96586	433.99644
ZN	66	2.41766	170.01000	38.600	2.29016	1.55493	3.40788
BI-3	209	72104.75700	0.00000	0.000	70824.88000	71416.53000	74072.86000
PB	208	-0.03120	270.01300	0.000	-0.07627	-0.04397	0.02664
TL	203	-0.00224	36.66700	0.000	-0.00924	0.00209	0.00042
U	238	0.09321	350.02700	82.700	0.03048	0.06987	0.17927
SC-2	45	516177.72700	0.00000	0.000	510942.69000	521153.82000	516436.67000
GE-1	72	1524198	0	0.000	1524372	1560290	1487932
GE-2	72	962454.57000	0.00000	0.000	957823.35000	972239.59000	957300.77000
GE-3	72	44920.07700	0.00000	0.000	42628.84000	45889.77000	46241.62000
TB-3	159	81588.77000	0.00000	0.000	80324.30000	80897.15000	83544.86000

Run Name: 1831006E05
 Tube Number: 18
 Sample Number: 9827173

Date/Time: 11/06/2018 18:37:27
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1616980	0	0.000	1624841	1595531	1630570
SC-3	45	12523.12700	0.00000	0.000	12736.71000	12316.22000	12516.45000
AL	27	779.79879	4108.00000	6.000	789.77194	820.69404	728.93038
B	11	196.94509	68408.14000	1.100	198.95928	197.16574	194.71024
BE	9	0.02345	36.66700	32.400	0.02737	0.02829	0.01469
CA	44	79759.30106	51117.24300	4.100	76195.67457	80374.56923	82707.65939
CR	52	2.43850	1486.86000	21.300	2.20395	2.07655	3.03501
FE	57	621.30042	4464.33700	7.200	597.35409	672.65160	593.89557
K	39	3537.49470	41256.81300	1.800	3466.68312	3560.65724	3585.14372
MG	24	26915.57250	621717.97300	3.300	25900.09967	27584.05686	27262.56098
MN	55	284.26217	34715.57000	4.600	271.65746	283.20890	297.92016
NA	23	7797.76734	420113.34000	3.800	7454.44657	7960.51167	7978.34379
TI	47	26.80519	150.02700	38.500	37.05912	16.42264	26.93380
V	51	5.51851	1836.90700	4.200	5.70458	5.25675	5.59421
IN-2	115	444924.64000	0.00000	0.000	450343.29000	441062.88000	443367.75000
IN-3	115	12574.71000	0.00000	0.000	12023.87000	12524.52000	13175.74000
AG	107	0.00685	6.66700	173.200	0.02055	0.00000	0.00000
AS	75	1.10428	58.00000	17.100	1.30193	0.92614	1.08477
BA	137	119.87513	6732.13300	1.600	119.99422	117.88069	121.75047
CD	111	0.03953	3.33300	37.600	0.04908	0.04711	0.02239
CO	59	0.68004	803.40000	21.100	0.60784	0.58734	0.84494
CU	63	1.01526	1223.45300	1.100	1.00304	1.01751	1.02523
MO	98	5.46671	3687.41000	7.500	4.99853	5.75709	5.64452
NI	60	5.98502	1750.20000	11.300	6.59641	6.09905	5.25960
SB	121	3.36759	630.05000	16.500	2.73060	3.61949	3.75268
SE	78	2.11975	238.89000	12.200	2.06620	1.89172	2.40133
SN	120	-0.04846	153.34300	0.000	-0.02844	-0.21162	0.09468
SR	88	242.16662	22122.84000	4.100	244.62743	250.57996	231.29249
ZN	66	44.92832	2940.46700	2.100	45.70433	43.87283	45.20779
BI-3	209	70370.94300	0.00000	0.000	69667.51000	69908.24000	71537.08000
PB	208	0.31933	1210.11700	21.600	0.39790	0.29209	0.26802
TL	203	0.02670	60.00300	135.700	0.06285	0.02684	-0.00959
U	238	2.58305	8993.85300	3.700	2.67595	2.48711	2.58609
SC-2	45	507411.94300	0.00000	0.000	507468.04000	506089.99000	508677.80000
GE-1	72	1523617	0	0.000	1547628	1512488	1510733
GE-2	72	968151.65300	0.00000	0.000	967472.88000	967225.45000	969756.63000
GE-3	72	42211.27700	0.00000	0.000	40934.32000	42789.58000	42909.93000
TB-3	159	79837.33000	0.00000	0.000	77163.25000	81360.14000	80988.60000

Run Name: 1831006E05
 Tube Number: 19
 Sample Number: **9881309**

Date/Time: 11/06/2018 18:39:53
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1594329	0	0.000	1607214	1584197	1591577
SC-3	45	12896.67300	0.00000	0.000	12996.71000	12176.02000	13517.29000
AL	27	10.50869	90.00700	78.300	2.80699	19.17441	9.54466
B	11	1098.72359	348365.44700	0.700	1092.69814	1107.74460	1095.72802
BE	9	-0.00067	17.33300	0.000	0.00255	-0.00480	0.00024
CA	44	239618.69390	158001.01000	4.800	229018.18387	251801.93175	238035.96608
CR	52	2.48996	1550.18700	10.500	2.29697	2.78748	2.38541
FE	57	42223.52987	307484.11000	5.300	41116.85324	44817.14412	40736.59224
K	39	19921.15891	220976.59000	4.500	19094.00956	20857.85534	19811.61183
MG	24	32376.71806	769373.76300	4.500	31377.59657	34050.25682	31702.30079
MN	55	703.76619	88347.56700	3.900	684.65009	734.97690	691.67158
NA	23	39528.21433	2106941.79000	5.400	38776.37093	41927.98512	37880.28693
TI	47	1.76785	10.00000	97.900	3.45801	1.84554	0.00000
V	51	1.95784	676.72700	17.200	2.13741	1.56980	2.16630
IN-2	115	441150.63300	0.00000	0.000	433563.39000	444176.58000	445711.93000
IN-3	115	12475.16700	0.00000	0.000	12211.81000	12441.28000	12772.41000
AG	107	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AS	75	15.43743	690.69300	2.600	15.34040	15.87118	15.10071
BA	137	1725.39513	96127.84300	1.800	1710.69984	1705.28997	1760.19559
CD	111	0.06383	5.33300	86.600	0.09664	0.09486	0.00000
CO	59	2.52032	2503.69000	7.600	2.73755	2.37117	2.45224
CU	63	0.31898	650.06000	79.800	0.61238	0.15642	0.18813
MO	98	-0.51063	730.06700	0.000	-0.76694	-0.50279	-0.26215
NI	60	0.53181	250.02000	9.900	0.47763	0.53508	0.58272
SB	121	0.33618	80.00300	61.100	0.51648	0.11243	0.37964
SE	78	0.12810	26.00000	26.700	0.14507	0.08879	0.15044
SN	120	0.86131	330.02300	41.100	1.25528	0.75911	0.56955
SR	88	2279.70322	206837.53000	1.200	2255.81176	2272.28790	2311.00999
ZN	66	3.14222	210.01700	13.800	3.05170	3.61259	2.76237
BI-3	209	68262.67000	0.00000	0.000	67524.81000	67856.87000	69406.33000
PB	208	0.83602	2533.57300	11.200	0.75677	0.93994	0.81135
TL	203	0.00022	36.66700	11751.000	-0.01982	0.02900	-0.00852
U	238	0.02864	110.00300	55.700	0.01417	0.02601	0.04576
SC-2	45	506742.20300	0.00000	0.000	505569.91000	499822.06000	514834.64000
GE-1	72	1471412	0	0.000	1524330	1456625	1433280
GE-2	72	944697.51300	0.00000	0.000	940949.13000	959557.25000	933586.16000
GE-3	72	42870.47000	0.00000	0.000	41195.18000	43221.54000	44194.69000
TB-3	159	80967.96700	0.00000	0.000	78662.61000	80474.77000	83766.52000

Run Name: 1831006E05
 Tube Number: 20
 Sample Number: **CCV**

Date/Time: 11/06/2018 18:42:17

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1632262	0	0.000	1643823	1636871	1616090
SC-3	45	12896.78700	0.00000	0.000	12726.69000	12656.71000	13306.96000
AL	27	2546.68688	13737.46000	2.000	2525.47706	2603.94377	2510.63982
B	11	362.94114	121992.00700	0.900	361.13811	361.06182	366.62348
BE	9	25.78004	20663.19300	0.600	25.60534	25.84638	25.88841
CA	44	3284.25805	2173.62000	5.200	3168.08372	3479.01238	3205.67805
CR	52	258.97346	114268.01300	3.400	249.17171	266.47459	261.27409
FE	57	2692.80706	19705.30300	2.000	2661.56791	2754.69991	2662.15336
K	39	2556.18742	31791.39300	3.000	2471.16626	2620.71955	2576.67645
MG	24	2618.52124	62354.98700	3.600	2518.24668	2707.21555	2630.10149
MN	55	268.54937	33769.94700	2.700	272.76302	272.56599	260.31909
NA	23	2564.65920	156069.85300	2.400	2495.90413	2608.85691	2589.21656
TI	47	273.26843	1570.17000	6.800	257.81885	268.12338	293.86306
V	51	260.19002	88957.45700	3.600	256.48307	270.85736	253.22963
IN-2	115	450658.22000	0.00000	0.000	455479.10000	446700.77000	449794.79000
IN-3	115	13132.15000	0.00000	0.000	12464.33000	13568.80000	13363.32000
AG	107	25.68159	27289.56300	1.400	26.04359	25.31082	25.69035
AS	75	247.06023	11491.62700	2.000	251.09384	241.38837	248.69848
BA	137	242.29354	14208.67700	3.800	239.11990	235.02589	252.73483
CD	111	23.64358	2102.85700	3.700	24.35912	22.68086	23.89077
CO	59	246.84107	241807.03000	1.200	250.28355	244.60361	245.63604
CU	63	244.34350	207538.36300	2.400	249.90630	238.16036	244.96384
MO	98	23.17007	12953.78700	4.100	24.04834	22.15400	23.30788
NI	60	248.91765	71764.37300	2.200	254.59967	243.87327	248.28000
SB	121	24.93414	4711.08000	6.500	25.63298	23.07522	26.09422
SE	78	25.84651	2807.63300	2.800	25.25857	25.62049	26.66046
SN	120	25.88277	5528.11700	7.500	27.93152	24.05112	25.66566
SR	88	31.84195	3043.89700	18.600	29.35365	27.57255	38.59964
ZN	66	259.39276	17682.49000	3.000	268.10473	253.23195	256.84160
BI-3	209	71349.52700	0.00000	0.000	68902.45000	73256.37000	71889.76000
PB	208	25.93776	71628.43700	1.100	25.99115	25.61732	26.20480
TL	203	26.35707	22688.63000	1.200	26.60760	26.45418	26.00944
U	238	25.11311	88545.85000	4.700	24.63858	24.24209	26.45865
SC-2	45	508022.20300	0.00000	0.000	512247.92000	504102.96000	507715.73000
GE-1	72	1525441	0	0.000	1511284	1524497	1540541
GE-2	72	972052.30300	0.00000	0.000	988873.11000	957039.91000	970243.89000
GE-3	72	43388.11000	0.00000	0.000	42016.99000	42980.19000	45167.15000
TB-3	159	81588.24300	0.00000	0.000	78633.17000	82708.72000	83422.84000

Run Name: 1831006E05
 Tube Number: 21
 Sample Number: **CCB**

Date/Time: 11/06/2018 18:44:43

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1590541	0	0.000	1607657	1597098	1566870
SC-3	45	12946.86700	0.00000	0.000	11975.94000	12976.91000	13887.75000
AL	27	1.47343	43.33700	405.900	1.59185	-4.56516	7.39358
B	11	110.36619	40382.97300	0.600	109.65963	111.00247	110.43647
BE	9	-0.00315	15.33300	0.000	-0.01267	0.00782	-0.00460
CA	44	167.57424	116.67300	52.000	153.18126	261.03610	88.50536
CR	52	0.34056	610.05300	24.900	0.37596	0.40204	0.24367
FE	57	12.00643	156.67700	57.400	17.11854	4.16778	14.73299
K	39	40.55066	4330.97300	192.300	129.75912	-14.50539	6.39826
MG	24	8.36556	250.01700	28.200	5.68442	10.10335	9.30890
MN	55	0.40859	103.33700	166.300	1.19026	-0.04320	0.07872
NA	23	-19.07506	19420.98300	0.000	6.44721	-15.18080	-48.49159
TI	47	2.40535	13.33300	86.800	3.75275	3.46329	0.00000
V	51	0.36390	133.34300	87.600	0.11632	0.25191	0.72348
IN-2	115	448498.28700	0.00000	0.000	438493.41000	448782.57000	458218.88000
IN-3	115	12681.64300	0.00000	0.000	12133.93000	12735.16000	13175.84000
AG	107	0.00636	6.66700	86.600	0.00000	0.00970	0.00938
AS	75	0.15172	16.00000	78.700	0.03142	0.15349	0.27023
BA	137	0.29790	16.66700	93.700	0.55374	0.00000	0.33997
CD	111	0.03037	2.66700	86.600	0.00000	0.04633	0.04478
CO	59	0.32909	483.37000	109.000	0.04812	0.20617	0.73298
CU	63	0.18334	556.72000	111.600	-0.01859	0.17797	0.39065
MO	98	-0.87791	560.04300	0.000	-1.05317	-0.89763	-0.68292
NI	60	0.39563	216.68300	73.200	0.44557	0.08432	0.65701
SB	121	0.55409	120.00700	40.200	0.75043	0.60019	0.31166
SE	78	-0.00627	12.00000	0.000	-0.02258	0.00616	-0.00239
SN	120	-0.21872	120.01000	0.000	-0.24426	-0.12225	-0.28964
SR	88	0.40428	36.67000	60.800	0.68014	0.32396	0.20875
ZN	66	4.51788	303.35300	21.300	5.45220	3.52687	4.57458
BI-3	209	70605.32300	0.00000	0.000	69606.73000	70641.30000	71567.94000
PB	208	-0.02732	273.34300	0.000	-0.05672	-0.02100	-0.00425
TL	203	0.03351	66.67000	162.100	-0.00863	0.01435	0.09480
U	238	0.04168	160.01000	102.200	0.00781	0.02770	0.08951
SC-2	45	514158.41700	0.00000	0.000	509342.49000	511982.53000	521150.23000
GE-1	72	1505541	0	0.000	1494837	1534598	1487188
GE-2	72	961542.01300	0.00000	0.000	940649.75000	967986.70000	975989.59000
GE-3	72	44050.06300	0.00000	0.000	43692.05000	43662.30000	44795.84000
TB-3	159	81051.76700	0.00000	0.000	78805.54000	81772.34000	82577.42000

Run Name: 1831006E05
 Tube Number: 22
 Sample Number: 9881310

Date/Time: 11/06/2018 18:47:07
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1617484	0	0.000	1653572	1594525	1604356
SC-3	45	12826.77700	0.00000	0.000	11995.90000	12736.52000	13747.91000
AL	27	15.41958	116.67700	25.500	13.56591	19.92984	12.76299
B	11	1053.53597	339171.40700	0.900	1059.96976	1058.62215	1042.01600
BE	9	0.00160	19.33300	264.300	-0.00309	0.00275	0.00514
CA	44	237552.82630	155657.88000	5.200	243204.81720	245964.75875	223488.90295
CR	52	2.72232	1636.86300	21.100	3.38334	2.43443	2.34918
FE	57	41817.84484	302741.51000	4.900	43720.59147	42074.96565	39657.97739
K	39	19888.90275	219114.43700	5.700	20744.45551	20322.05511	18600.19764
MG	24	32022.51656	756145.66300	5.200	33230.88240	32711.87126	30124.79602
MN	55	684.19965	85352.37300	4.600	709.07029	694.44084	649.08782
NA	23	39485.01794	2092057.15700	5.300	41321.41592	39947.60894	37186.02894
TI	47	0.58811	3.33300	173.200	0.00000	1.76433	0.00000
V	51	1.80774	613.38300	17.400	2.12792	1.79637	1.49892
IN-2	115	444973.89700	0.00000	0.000	448544.94000	451278.82000	435097.93000
IN-3	115	13020.17300	0.00000	0.000	12062.75000	13063.33000	13934.44000
AG	107	0.00657	6.66700	86.800	0.01024	0.00946	0.00000
AS	75	15.54205	720.69300	17.300	17.17157	17.00835	12.44621
BA	137	1621.62698	94072.36700	4.800	1678.58915	1653.06845	1533.22332
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	2.31746	2410.34700	7.100	2.48439	2.31165	2.15635
CU	63	0.12710	523.37000	100.900	-0.01582	0.23228	0.16485
MO	98	-0.73218	650.05300	0.000	-0.89966	-0.65208	-0.64479
NI	60	0.62704	286.68700	14.400	0.71501	0.63106	0.53506
SB	121	0.22628	63.33300	29.700	0.23510	0.15514	0.28860
SE	78	0.17607	31.33700	9.500	0.16732	0.16560	0.19529
SN	120	0.78914	326.69700	53.200	1.12348	0.92636	0.31756
SR	88	2168.25941	204838.51700	4.500	2269.97994	2159.99539	2074.80290
ZN	66	3.30606	226.68000	36.800	4.68687	2.84598	2.38532
BI-3	209	70524.70000	0.00000	0.000	69595.80000	70381.36000	71596.94000
PB	208	0.83126	2603.58300	9.600	0.82745	0.91271	0.75362
TL	203	-0.01315	26.66700	0.000	-0.04441	0.01457	-0.00962
U	238	0.01434	63.33700	50.200	0.00781	0.02207	0.01314
SC-2	45	513574.93000	0.00000	0.000	510478.00000	520101.95000	510144.84000
GE-1	72	1511532	0	0.000	1562098	1498285	1474213
GE-2	72	964613.19000	0.00000	0.000	972352.49000	961786.16000	959700.92000
GE-3	72	42919.46300	0.00000	0.000	42748.82000	43100.10000	42909.47000
TB-3	159	80994.58000	0.00000	0.000	80151.30000	80957.69000	81874.75000

Run Name: 1831006E05
 Tube Number: 23
 Sample Number: 9881312

Date/Time: 11/06/2018 18:49:31
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1647726	0	0.000	1684921	1650404	1607851
SC-3	45	12636.58700	0.00000	0.000	12146.08000	13047.14000	12716.54000
AL	27	4.44101	56.66700	140.700	7.39833	-2.73848	8.66318
B	11	1168.22450	382273.98700	2.500	1143.97236	1159.56017	1201.14096
BE	9	0.00450	22.00000	159.300	0.00138	-0.00058	0.01268
CA	44	254096.90894	164265.26700	2.600	259535.19185	246637.30309	256118.23188
CR	52	1.90488	1266.79700	18.400	2.24103	1.54161	1.93201
FE	57	44428.55193	317402.63000	2.400	45380.57966	43265.53199	44639.54415
K	39	21306.02481	231393.74000	4.100	21700.17993	20309.57472	21908.31977
MG	24	34274.02441	798746.08000	2.400	34827.21907	33330.57648	34664.27767
MN	55	745.69516	91830.54700	0.800	742.23426	742.44913	752.40210
NA	23	41834.70404	2187670.75300	1.600	41625.62884	41292.77878	42585.70451
TI	47	1.23340	6.66700	173.200	3.70019	0.00000	0.00000
V	51	1.93574	650.05000	12.300	2.19462	1.72444	1.88815
IN-2	115	443356.05700	0.00000	0.000	437636.04000	447231.21000	445200.92000
IN-3	115	13108.22700	0.00000	0.000	11913.55000	13505.19000	13905.94000
AG	107	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AS	75	15.00736	702.03000	10.300	16.77279	14.39591	13.85338
BA	137	1713.48005	100019.58300	5.000	1812.26270	1667.80251	1660.37494
CD	111	0.01456	1.33300	173.200	0.00000	0.04369	0.00000
CO	59	2.34033	2463.71000	11.900	2.13487	2.65748	2.22864
CU	63	-0.11403	320.02700	0.000	-0.13982	-0.11238	-0.08989
MO	98	-0.76484	646.71700	0.000	-1.24966	-0.69615	-0.34870
NI	60	0.59377	276.68300	43.000	0.88181	0.39536	0.50416
SB	121	0.01361	23.33300	803.600	0.06382	-0.11181	0.08881
SE	78	0.17453	31.11000	24.000	0.12996	0.18055	0.21308
SN	120	0.78943	343.55700	156.000	-0.12739	0.30675	2.18893
SR	88	2287.05877	217628.41000	3.100	2368.12458	2260.77957	2232.27218
ZN	66	1.19305	86.67300	64.600	1.51430	1.75152	0.31334
BI-3	209	70298.38700	0.00000	0.000	68873.76000	70009.33000	72012.07000
PB	208	-0.02409	280.01000	0.000	-0.01827	-0.02375	-0.03024
TL	203	-0.00508	33.33300	0.000	-0.02030	0.01488	-0.00982
U	238	0.01343	60.00300	42.400	0.00794	0.01931	0.01305
SC-2	45	513463.78300	0.00000	0.000	509402.61000	513364.84000	517623.90000
GE-1	72	1508408	0	0.000	1518873	1512450	1493902
GE-2	72	971193.94700	0.00000	0.000	947431.55000	986243.27000	979907.02000
GE-3	72	44037.40700	0.00000	0.000	42849.96000	44234.53000	45027.73000
TB-3	159	80928.12000	0.00000	0.000	78330.45000	82950.54000	81503.37000

Run Name: 1831006E05
 Tube Number: 24
 Sample Number: 9881313

Date/Time: 11/06/2018 18:51:55
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1650083	0	0.000	1635701	1665491	1649059
SC-3	45	13360.59000	0.00000	0.000	12576.20000	13847.99000	13657.58000
AL	27	-5.25007	6.66700	0.000	-6.41171	-4.68131	-4.65719
B	11	191.33181	68000.32300	0.300	191.54998	191.75397	190.69147
BE	9	-0.00137	17.33300	0.000	-0.00287	-0.01057	0.00933
CA	44	79376.17821	54232.17700	3.100	82220.33877	77685.07120	78223.12465
CR	52	-0.03697	460.03000	0.000	-0.11200	-0.04938	0.05047
FE	57	2377.55822	18029.54000	3.700	2393.64582	2281.59417	2457.43467
K	39	4759.29310	57775.58000	3.000	4910.83923	4626.63524	4740.40483
MG	24	25158.19561	619646.09700	2.900	25872.81018	24410.71100	25191.06567
MN	55	1194.68891	155243.17300	5.100	1263.34435	1148.09571	1172.62668
NA	23	19394.50505	1082675.03700	3.700	19946.86752	18595.98244	19640.66519
TI	47	0.54845	3.33300	173.200	0.00000	0.00000	1.64534
V	51	0.29731	110.00700	39.800	0.17027	0.31714	0.40452
IN-2	115	454524.44700	0.00000	0.000	458545.15000	453836.65000	451191.54000
IN-3	115	12833.13000	0.00000	0.000	12125.86000	12936.78000	13436.75000
AG	107	0.01610	16.66700	35.800	0.02038	0.00955	0.01839
AS	75	2.78112	134.66700	19.800	3.33887	2.76767	2.23682
BA	137	73.59946	4220.94700	2.800	71.86470	73.07501	75.85866
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.31950	473.37000	22.600	0.23629	0.36614	0.35606
CU	63	0.19073	560.04300	91.700	0.35202	0.21542	0.00477
MO	98	0.90192	1463.49300	40.600	0.56626	1.29223	0.84728
NI	60	0.56092	263.35000	34.000	0.74691	0.57047	0.36538
SB	121	-0.02209	16.66700	0.000	-0.05429	-0.00399	-0.00800
SE	78	0.38400	54.66700	22.100	0.31860	0.35371	0.47968
SN	120	-0.52286	60.00000	0.000	-0.50492	-0.62240	-0.44126
SR	88	350.36060	32688.09700	0.600	352.57815	349.65368	348.84997
ZN	66	1.39743	100.00700	19.700	1.48600	1.08863	1.61767
BI-3	209	71930.24000	0.00000	0.000	71306.61000	72323.23000	72160.88000
PB	208	0.01913	406.70000	73.000	0.00350	0.03037	0.02353
TL	203	-0.02122	20.00000	0.000	0.00216	-0.03293	-0.03290
U	238	1.14734	4090.94300	3.700	1.14884	1.10466	1.18851
SC-2	45	522415.90700	0.00000	0.000	509296.44000	529795.23000	528156.05000
GE-1	72	1549617	0	0.000	1545142	1542922	1560787
GE-2	72	995651.68000	0.00000	0.000	992324.75000	1005946	988684.13000
GE-3	72	43853.14300	0.00000	0.000	43311.31000	44163.87000	44084.25000
TB-3	159	81959.72700	0.00000	0.000	81258.54000	82768.14000	81852.50000

Run Name: 1831006E05
 Tube Number: 25
 Sample Number: **9881314**

Date/Time: 11/06/2018 18:54:19
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1654425	0	0.000	1675631	1632168	1655477
SC-3	45	12369.59300	0.00000	0.000	12496.49000	12546.43000	12065.86000
AL	27	2.58999	46.66700	108.000	3.17600	5.04775	-0.45377
B	11	134.29025	49740.56300	1.100	135.53647	134.61951	132.71475
BE	9	-0.00715	12.66700	0.000	-0.01065	0.00217	-0.01296
CA	44	82176.31922	52006.81300	4.200	79308.44377	81164.11612	86056.39778
CR	52	-0.00919	436.70000	0.000	0.05838	-0.08639	0.00046
FE	57	2427.86150	17034.87300	6.800	2294.19345	2376.73367	2612.65738
K	39	5014.09431	56169.51000	4.800	4914.97251	4838.16736	5289.14306
MG	24	26861.11799	612724.92700	4.500	25719.22036	26716.32274	28147.81088
MN	55	1252.24035	150802.44000	5.600	1190.42136	1237.80314	1328.49656
NA	23	20677.28616	1067765.01000	4.500	19883.22555	20447.87568	21700.75723
TI	47	2.44041	13.33300	86.600	3.59643	0.00000	3.72479
V	51	0.35523	120.01000	24.100	0.44300	0.35104	0.27166
IN-2	115	448097.96000	0.00000	0.000	448515.08000	447227.70000	448551.10000
IN-3	115	12749.82300	0.00000	0.000	11825.18000	13167.12000	13257.17000
AG	107	0.00313	3.33300	173.200	0.00000	0.00938	0.00000
AS	75	2.89716	139.33300	10.700	3.23783	2.62993	2.82373
BA	137	69.22704	3947.51000	7.700	65.73326	75.37056	66.57728
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.19395	350.02300	27.500	0.15596	0.25485	0.17102
CU	63	0.37570	713.39700	25.700	0.37344	0.47354	0.28011
MO	98	0.94881	1480.18700	32.700	0.63150	0.96363	1.25129
NI	60	1.05565	400.03000	46.100	1.19972	1.45414	0.51309
SB	121	-0.07662	6.66700	0.000	-0.11181	-0.05884	-0.05920
SE	78	0.42989	58.88700	27.800	0.48938	0.29237	0.50791
SN	120	-0.67048	30.00000	0.000	-0.71106	-0.57776	-0.72262
SR	88	332.28276	30783.60300	3.300	338.34427	338.72116	319.78285
ZN	66	1.11637	80.00700	49.900	1.36355	1.50665	0.47890
BI-3	209	71873.96700	0.00000	0.000	70472.63000	74344.12000	70805.15000
PB	208	-0.05086	213.34000	0.000	-0.04654	-0.02980	-0.07625
TL	203	-0.01329	26.66700	0.000	-0.02085	-0.03324	0.01422
U	238	1.24963	4451.09300	2.500	1.28029	1.25156	1.21706
SC-2	45	517065.39700	0.00000	0.000	515971.20000	515226.40000	519998.59000
GE-1	72	1591765	0	0.000	1623756	1586423	1565116
GE-2	72	990317.27700	0.00000	0.000	991477.72000	984459.91000	995014.20000
GE-3	72	44104.05000	0.00000	0.000	42037.35000	45176.89000	45097.91000
TB-3	159	80769.02300	0.00000	0.000	78059.10000	80202.08000	84045.89000

Run Name: 1831006E05
 Tube Number: 26
 Sample Number: **CCV**

Date/Time: 11/06/2018 18:56:44

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1592820	0	0.000	1607983	1634666	1535813
SC-3	45	13037.02000	0.00000	0.000	12516.60000	12786.64000	13807.82000
AL	27	2561.02387	13954.31000	3.000	2635.11093	2566.11666	2481.84402
B	11	304.43726	100806.40700	2.000	299.33418	302.65580	311.32181
BE	9	26.08678	20400.82000	1.100	25.80078	26.08851	26.37106
CA	44	2683.74079	1793.54000	6.600	2784.30917	2786.38223	2480.53096
CR	52	255.94151	114008.71700	4.600	257.07927	267.06457	243.68070
FE	57	2573.82640	19040.87300	2.000	2550.80667	2632.37446	2538.29808
K	39	2505.10756	31494.25300	8.100	2654.05613	2585.85017	2275.41638
MG	24	2646.53566	63668.21300	2.400	2721.03587	2613.34169	2605.22942
MN	55	263.85092	33515.84300	3.500	271.43085	266.73332	253.38859
NA	23	2537.39269	156143.21700	3.400	2574.16413	2598.80321	2439.21072
TI	47	274.35915	1586.85700	13.200	269.32941	312.85951	240.88855
V	51	257.97790	89068.81700	4.800	261.67115	268.13066	244.13190
IN-2	115	446623.87700	0.00000	0.000	439365.76000	451487.01000	449018.86000
IN-3	115	13146.94300	0.00000	0.000	12669.88000	13421.35000	13349.60000
AG	107	25.06149	26651.64000	4.200	26.01198	23.94689	25.22562
AS	75	241.09849	11229.43700	2.000	244.60888	235.70205	242.98455
BA	137	235.74087	13834.78300	1.800	238.42614	230.92095	237.87553
CD	111	24.21388	2156.86700	4.800	24.77907	22.86409	24.99848
CO	59	242.71314	237957.00700	3.400	251.68978	235.83852	240.61112
CU	63	246.16966	209387.91300	1.600	250.75172	244.16308	243.59419
MO	98	24.24593	13517.63300	7.400	26.18329	22.64713	23.90737
NI	60	243.57169	70316.75000	3.400	248.97612	234.09267	247.64630
SB	121	24.34956	4617.73300	8.400	22.51756	26.55299	23.97814
SE	78	26.46972	2849.19700	2.200	26.69523	25.80923	26.90470
SN	120	23.96733	5144.62000	6.700	24.76609	22.10689	25.02900
SR	88	25.59660	2450.38300	7.600	23.55740	25.82543	27.40698
ZN	66	257.77564	17595.61000	3.400	267.24851	249.69519	256.38321
BI-3	209	70542.59300	0.00000	0.000	70553.38000	69808.61000	71265.79000
PB	208	26.35648	71966.30300	1.300	25.99201	26.39646	26.68098
TL	203	25.75399	21916.93700	3.600	26.14880	26.42803	24.68514
U	238	25.44916	88717.57700	1.000	25.54671	25.16819	25.63257
SC-2	45	510069.66700	0.00000	0.000	501622.77000	513963.23000	514623.00000
GE-1	72	1498585	0	0.000	1502152	1540584	1453018
GE-2	72	967930.43000	0.00000	0.000	952348.74000	965919.28000	985523.27000
GE-3	72	42973.73700	0.00000	0.000	42307.80000	42428.63000	44184.78000
TB-3	159	79847.98700	0.00000	0.000	76932.89000	82074.73000	80536.34000

Run Name: 1831006E05
 Tube Number: 27
 Sample Number: CCB

Date/Time: 11/06/2018 18:59:09

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	1606308	0	0.000	1630401	1606537	1581985
SC-3	45	12499.84300	0.00000	0.000	11916.03000	12626.46000	12957.04000
AL	27	-0.75058	30.00000	0.000	-6.41171	6.87292	-2.71294
B	11	88.65302	33968.91000	0.100	88.68966	88.56734	88.70205
BE	9	0.00162	19.33300	759.900	0.00719	0.01018	-0.01250
CA	44	125.36647	86.67000	35.000	104.79941	175.72131	95.57869
CR	52	0.59942	703.39300	42.500	0.38311	0.53517	0.87998
FE	57	1.74049	80.00300	266.600	-2.03995	0.34339	6.91802
K	39	62.75905	4427.68700	114.200	144.12386	35.30637	8.84691
MG	24	8.11732	236.68300	62.100	3.44884	7.43431	13.46881
MN	55	0.39645	103.33700	147.500	-0.00798	0.13042	1.06691
NA	23	-0.40823	19758.31700	0.000	15.60644	-11.07486	-5.75626
TI	47	1.73430	10.00000	173.200	0.00000	0.00000	5.20290
V	51	0.34638	120.00700	66.900	0.14859	0.28903	0.60151
IN-2	115	447679.66000	0.00000	0.000	439779.80000	449792.98000	453466.20000
IN-3	115	13172.83300	0.00000	0.000	12545.87000	13346.14000	13626.49000
AG	107	0.01615	16.66700	127.700	0.03939	0.00000	0.00907
AS	75	0.26796	22.00000	49.500	0.20387	0.17957	0.42045
BA	137	0.11188	6.66700	173.200	0.00000	0.33563	0.00000
CD	111	0.02180	2.00000	99.300	0.00000	0.02211	0.04330
CO	59	0.18277	356.69300	148.900	-0.08741	0.17877	0.45697
CU	63	0.16158	560.04700	205.600	0.00293	-0.06147	0.54329
MO	98	-0.84839	600.05300	0.000	-1.28739	-0.69971	-0.55806
NI	60	0.30853	203.35000	188.300	-0.16307	0.13133	0.95732
SB	121	0.48547	113.34000	22.600	0.38851	0.46308	0.60480
SE	78	0.03163	16.00000	93.600	0.06555	0.01830	0.01104
SN	120	-0.18935	130.00700	0.000	-0.06130	-0.10668	-0.40006
SR	88	0.10092	10.00000	173.200	0.00000	0.00000	0.30277
ZN	66	3.98760	276.68700	41.200	5.88388	3.07205	3.00689
BI-3	209	68614.57000	0.00000	0.000	66227.19000	69687.48000	69929.04000
PB	208	-0.00216	333.35300	0.000	-0.04134	-0.00091	0.03578
TL	203	0.03678	66.67300	109.700	0.06842	-0.00867	0.05058
U	238	0.03884	146.67700	88.900	0.00535	0.03685	0.07433
SC-2	45	513416.77700	0.00000	0.000	509831.95000	512943.86000	517474.52000
GE-1	72	1518073	0	0.000	1535202	1511929	1507089
GE-2	72	980850.68700	0.00000	0.000	986013.89000	973547.17000	982991.00000
GE-3	72	44251.03000	0.00000	0.000	42006.90000	44645.39000	46100.80000
TB-3	159	80944.06000	0.00000	0.000	78220.42000	81691.95000	82919.81000

US EPA Tune Check Report

Operator Name US19_USR_INS14259
Acq/Data Batch C:\Agilent\ICPMH\1\DATA\~EPATUNEaa.b
Acq. Date-Time 11/6/2018 5:12:29 PM
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

[No Gas]

Sensitivity

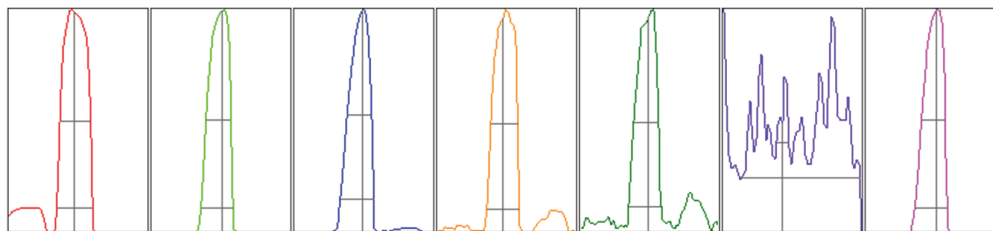
Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
7	10.00	1581	15812.89			0.898	5.000
89	10.00	6882	68820.32			0.479	5.000
205	10.00	3237	32370.43			0.858	5.000
70	1.00	76	762.28	0.00		2.655	
156	1.00	12	119.91	0.00		11.296	
220	1.00	1	12.20	0.00		27.431	
140	10.00	5880	58797.30	0.00		0.686	

Mass	RSD% (Flag)
7	
89	
205	
70	
156	
220	
140	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	1587	1582	1589	1557	1592
89	6839	6920	6883	6861	6907
205	3240	3231	3209	3224	3282
70	74	76	78	75	78
156	12	14	10	13	11
220	1	1	1	1	2
140	5941	5845	5868	5847	5897

Integration Time [sec] 0.1

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	2473.75	6.95	6.90 - 7.10	
89	13080.88	89.05	88.90 - 89.10	
205	6386.79	205.00	204.90 - 205.10	
70	131.81	69.95	-	
156	22.40	156.00	-	
220	1.35	219.80	-	
140	11797.16	140.05	-	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.67	0.770	0.800	
89	0.55	0.690	0.800	
205	0.52	0.708	0.800	
70	0.59	0.697		
156	0.53	0.706		
220	0.27	2.535		
140	0.51	0.707		

Integration Time [sec] 0.1
 Acquisition Time [sec] 260.3
 Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.25 L/min	Dilution Gas	0.70 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.60 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	20 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.3 V	Deflect	14.8 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-20 V
Omega Bias	-90 V	Cell Exit	-59 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	123	Axis Gain	0.9988	QP Bias	-3.0 V
Mass Offset	126	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	-1.4 mm
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EM

Discriminator	4.5 mV	Analog HV	1752 V	Pulse HV	1236 V
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Date File Name: 18K12J00.E07

Method Reference Name(s):

Run Name: 1831610E07

Analyst: 25839

Reviewed By: Bradley M Berlot
Reviewed Date: 11/12/2018 22:05

Verified By: Parker D Lindstrom
Verified Date: 11/14/2018 22:30

Instrument Parameters:

Rinse Time (sec): 25.00

<u>INTERNAL STD.</u>	<u>ELEMENT</u>	<u>MASS</u>
SC-1		45
	BE	9
	B	11

SC-3		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57

IN-2		115
	SE	78

IN-3		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137

BI-3		209
	TL	205
	PB	208
	U	238

Run Name: 1831610E07
 Tube Number: 1
 Sample Number: **S0**

Date/Time: 11/12/2018 17:45:56

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
BE	9	0.00000	1.33300	0.000	0.01218	-0.00609	-0.00609
B	11	0.00000	2002.14700	0.000	0.27321	1.22626	-1.49948
NA	23	0.00000	9003.00300	0.000	4.46773	-0.62596	-3.84177
MG	24	0.00000	23.33300	0.000	-0.31401	0.16116	0.15285
AL	27	0.00000	26.66700	0.000	-1.86294	1.64512	0.21782
K	39	0.00000	12442.29300	0.000	7.75735	0.33567	-8.09302
CA	44	0.00000	30.00000	0.000	0.47233	-0.14434	-0.32799
SC-1	45	467678.45700	0.00000	0.000	479371.44000	459959.95000	463703.98000
SC-2	45	87574.29700	0.00000	0.000	87078.24000	86977.45000	88667.20000
SC-3	45	30074.94000	0.00000	0.000	29209.90000	30331.96000	30682.96000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	10.00000	0.000	-0.02238	0.02255	-0.00017
CR	52	0.00000	136.67300	0.000	-0.00470	-0.08585	0.09056
MN	55	0.00000	46.66700	0.000	-0.01884	0.07816	-0.05932
FE	57	0.00000	16.66700	0.000	0.34409	0.27602	-0.62011
CO	59	0.00000	23.33300	0.000	-0.00346	-0.00370	0.00716
NI	60	0.00000	20.00000	0.000	-0.04139	0.04218	-0.00079
CU	63	0.00000	73.33300	0.000	0.01153	-0.02038	0.00885
ZN	66	0.00000	10.00000	0.000	0.00162	-0.11100	0.10938
GE-1	72	400005.36000	0.00000	0.000	403799.37000	400743.28000	395473.43000
GE-2	72	110726.48000	0.00000	0.000	109141.09000	110944.70000	112093.65000
GE-3	72	82677.11300	0.00000	0.000	80736.32000	85301.73000	81993.29000
AS	75	0.00000	8.66700	0.000	-0.01019	0.05764	-0.04744
SE	78	0.00000	0.44700	0.000	0.00999	0.01032	-0.02031
SR	88	0.00000	3.33300	0.000	0.01726	-0.00863	-0.00863
MO	98	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AG	107	0.00000	3.33300	0.000	-0.00343	-0.00343	0.00687
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-2	115	121513.98000	0.00000	0.000	121731.48000	120426.10000	122384.36000
IN-3	115	38741.02700	0.00000	0.000	38327.55000	38721.67000	39173.86000
SN	120	0.00000	226.69000	0.000	-0.11626	-0.03445	0.15071
SB	121	0.00000	13.33300	0.000	-0.03374	0.01716	0.01657
BA	137	0.00000	3.33300	0.000	0.04256	-0.02128	-0.02128
TB-3	159	111208.73000	0.00000	0.000	109266.77000	111796.78000	112562.64000
TL	205	0.00000	13.33300	0.000	-0.00163	0.00336	-0.00173
PB	208	0.00000	40.00000	0.000	-0.00364	0.00369	-0.00005
BI-3	209	73491.24700	0.00000	0.000	72357.94000	74249.25000	73866.55000
U	238	0.00000	0.00000	0.000	0.00000	0.00000	0.00000

Run Name: 1831610E07
 Tube Number: 2
 Sample Number: S1

Date/Time: 11/12/2018 17:48:19

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	479422.42700	0.00000	0.000	478450.58000	484117.84000	475698.86000
SC-3	45	30418.76300	0.00000	0.000	30201.73000	30642.52000	30412.04000
AL	27	10000.00000	142954.34000	1.600	10065.28754	9813.27396	10121.43850
B	11	1000.00000	89630.05300	1.900	982.26679	998.46976	1019.26346
BE	9	100.00000	21892.55000	0.900	99.09881	100.10427	100.79692
CA	44	10000.00000	18769.12300	2.700	10196.25700	9694.07186	10109.67114
CR	52	1000.00000	556305.60300	0.600	1006.50881	996.89084	996.60035
FE	57	10000.00000	113207.71300	0.800	10048.46247	10041.06292	9910.47460
K	39	10000.00000	383870.69700	0.900	10101.29927	9951.28985	9947.41088
MG	24	10000.00000	414010.82700	0.800	10087.60794	9944.75637	9967.63568
MN	55	1000.00000	294330.61300	0.300	1002.90526	998.97225	998.12249
NA	23	10000.00000	855900.76700	1.100	10123.71321	9921.26592	9955.02087
TI	47	1000.00000	12839.33300	2.000	980.33201	1021.16603	998.50197
V	51	1000.00000	446481.03300	0.900	1010.53861	996.91464	992.54675
IN-2	115	122138.73300	0.00000	0.000	121494.78000	121637.90000	123283.52000
IN-3	115	39121.10300	0.00000	0.000	39866.88000	38523.73000	38972.70000
AG	107	100.00000	96952.40300	2.200	98.44472	102.47803	99.07725
AS	75	1000.00000	58343.81300	2.800	968.15407	1014.94861	1016.89732
BA	137	1000.00000	159849.19000	2.200	975.28301	1006.02032	1018.69666
CD	111	100.00000	13549.88300	1.600	98.20521	100.68405	101.11074
CO	59	1000.00000	898257.46000	1.700	981.00135	1014.40322	1004.59543
CU	63	1000.00000	659320.12000	1.900	980.51787	1017.91103	1001.57110
MO	98	100.00000	55044.26000	2.200	98.20264	102.40363	99.39373
NI	60	1000.00000	240499.63700	1.700	980.16478	1009.18176	1010.65346
SB	121	100.00000	39703.98000	2.200	97.51739	101.71353	100.76908
SE	78	100.00000	2219.28700	1.700	98.06689	101.18050	100.75261
SN	120	100.00000	47458.00300	1.900	97.83390	101.54263	100.62347
SR	88	100.00000	39421.80700	1.800	97.89265	101.20218	100.90517
ZN	66	1000.00000	90633.35000	0.900	989.25087	1006.49398	1004.25515
BI-3	209	74396.63700	0.00000	0.000	73243.06000	73977.76000	75969.09000
PB	208	100.00000	262545.79300	1.900	101.70297	100.29507	98.00196
TL	205	100.00000	195781.31300	1.000	100.28944	100.87342	98.83714
U	238	100.00000	249288.74700	2.000	101.55644	100.73821	97.70535
SC-2	45	88848.45700	0.00000	0.000	88979.73000	88747.88000	88817.76000
GE-1	72	410590.12300	0.00000	0.000	408540.19000	412951.36000	410278.82000
GE-2	72	111871.65300	0.00000	0.000	109956.69000	113454.38000	112203.89000
GE-3	72	83008.60300	0.00000	0.000	82214.36000	82082.93000	84728.52000
TB-3	159	113496.74300	0.00000	0.000	111482.83000	113430.64000	115576.76000

Run Name: 1831610E07
 Tube Number: 3
 Sample Number: **ICV**

Date/Time: 11/12/2018 17:50:43

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	458491.27300	0.00000	0.000	458260.31000	461179.84000	456033.67000
SC-3	45	29369.94300	0.00000	0.000	29850.94000	29249.66000	29009.23000
AL	27	5078.47625	70092.08700	3.100	4899.38842	5153.65489	5182.38545
B	11	795.89739	68623.60700	0.700	794.67379	790.94801	802.07035
BE	9	51.62636	10809.91300	1.100	52.05556	51.82091	51.00263
CA	44	5173.77054	9386.71000	5.700	4846.48523	5412.90259	5261.92380
CR	52	515.96064	277139.66300	2.500	503.21221	515.35535	529.31437
FE	57	4936.26992	53954.10000	3.000	4798.60430	5089.09550	4921.10996
K	39	5016.17343	191953.22000	1.600	4934.39272	5015.01162	5099.11596
MG	24	5096.42768	203708.88000	2.000	5027.91365	5045.49756	5215.87183
MN	55	512.73988	145685.10000	3.500	492.05302	520.61609	525.55052
NA	23	4866.52144	406601.59300	2.600	4743.58411	4856.11465	4999.86556
TI	47	526.44428	6525.04000	3.900	528.77430	504.80079	545.75774
V	51	506.32998	218242.65300	2.100	496.81556	504.61120	517.56318
IN-2	115	122430.24300	0.00000	0.000	123470.33000	121590.44000	122229.96000
IN-3	115	38041.09300	0.00000	0.000	37968.55000	39017.51000	37137.22000
AG	107	51.86802	48905.79000	1.300	51.21499	51.82075	52.56833
AS	75	511.83560	29037.82700	3.100	504.50407	501.09382	529.90893
BA	137	501.64251	77953.23000	3.500	492.35235	490.78311	521.79208
CD	111	51.27606	6754.31300	2.500	51.39304	49.92267	52.51248
CO	59	509.75361	445177.52000	2.600	503.36098	500.64568	525.25415
CU	63	514.30815	329693.62700	2.700	514.91393	500.28672	527.72379
MO	98	51.35168	27477.35700	3.300	51.40361	49.65671	52.99471
NI	60	507.33055	118621.24700	3.000	502.23630	495.32631	524.42903
SB	121	52.03816	20095.23300	2.300	52.66498	50.66691	52.78258
SE	78	49.73326	1106.26300	5.500	47.65698	52.83139	48.71142
SN	120	52.59567	24365.29700	4.400	52.15021	50.52202	55.11476
SR	88	50.08635	19196.71300	2.800	50.49079	48.52166	51.24661
ZN	66	510.96850	45024.04700	3.300	498.58975	504.15766	530.15809
BI-3	209	73414.37700	0.00000	0.000	72570.02000	74198.15000	73474.96000
PB	208	49.67742	128749.18000	0.800	49.80642	49.25018	49.97566
TL	205	50.70680	97974.61000	1.500	50.90661	49.89201	51.32178
U	238	50.15972	123413.11300	2.000	50.29111	49.07778	51.11026
SC-2	45	87057.74300	0.00000	0.000	86484.65000	86937.05000	87751.53000
GE-1	72	393251.85700	0.00000	0.000	391870.23000	396086.28000	391799.06000
GE-2	72	110313.45700	0.00000	0.000	109382.31000	110189.56000	111368.50000
GE-3	72	80031.85300	0.00000	0.000	79719.91000	80242.66000	80132.99000
TB-3	159	109424.33300	0.00000	0.000	107885.36000	109589.31000	110798.33000

Run Name: 1831610E07
 Tube Number: 4
 Sample Number: ICB

Date/Time: 11/12/2018 17:52:52

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	450815.87700	0.00000	0.000	451606.32000	449596.59000	451244.72000
SC-3	45	28060.75300	0.00000	0.000	27786.72000	28277.84000	28117.70000
AL	27	1.41153	43.33300	273.200	0.43470	5.66284	-1.86294
B	11	216.47687	19758.31300	2.700	222.88914	215.11557	211.42591
BE	9	0.00362	2.00000	267.800	0.01331	0.00365	-0.00609
CA	44	4.97048	36.66700	175.600	-4.51517	6.76165	12.66496
CR	52	0.26496	263.34300	30.000	0.20459	0.23541	0.35487
FE	57	1.69589	33.33300	32.300	1.40548	1.35509	2.32709
K	39	-1.66821	11554.86700	0.000	9.28967	-0.23821	-14.05609
MG	24	0.21795	30.00000	239.100	-0.30112	0.21395	0.74101
MN	55	0.02351	50.00000	309.900	-0.04879	0.02238	0.09694
NA	23	3.94130	8712.78700	84.600	4.38567	0.40741	7.03082
TI	47	0.27930	3.33300	173.200	0.00000	0.83791	0.00000
V	51	-0.00617	6.66700	0.000	0.00214	0.00172	-0.02238
IN-2	115	119706.26000	0.00000	0.000	117848.30000	119893.53000	121376.95000
IN-3	115	36903.50000	0.00000	0.000	37689.66000	36826.13000	36194.71000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	0.03138	10.00000	112.400	0.02775	0.06833	-0.00195
BA	137	0.00125	3.33300	3112.500	-0.02128	-0.02128	0.04632
CD	111	0.00511	0.66700	173.200	0.01532	0.00000	0.00000
CO	59	0.04429	60.00000	67.100	0.07779	0.02111	0.03397
CU	63	0.23603	216.67700	2.300	0.23402	0.24214	0.23193
MO	98	0.10894	56.66700	53.900	0.09426	0.17365	0.05889
NI	60	0.00494	20.00000	928.400	-0.04068	0.00450	0.05098
SB	121	0.74199	290.01000	14.300	0.61992	0.79580	0.81027
SE	78	0.00005	0.44300	74819.300	-0.02031	0.04076	-0.02031
SN	120	-0.07944	180.01000	0.000	-0.06610	-0.14626	-0.02597
SR	88	0.04542	20.00000	156.800	-0.00863	0.12609	0.01878
ZN	66	0.16049	23.33300	82.200	0.23258	0.24064	0.00826
BI-3	209	70032.61000	0.00000	0.000	67925.41000	71282.04000	70890.38000
PB	208	-0.00598	23.33300	0.000	-0.00705	0.00051	-0.01139
TL	205	0.00592	23.33300	147.000	0.01550	0.00378	-0.00152
U	238	0.02692	63.33300	35.300	0.02196	0.02093	0.03788
SC-2	45	84945.83700	0.00000	0.000	84654.24000	84955.82000	85227.45000
GE-1	72	385332.45700	0.00000	0.000	388936.09000	384559.29000	382501.99000
GE-2	72	106145.65000	0.00000	0.000	105413.57000	105181.52000	107841.86000
GE-3	72	79479.18700	0.00000	0.000	78745.17000	79891.75000	79800.64000
TB-3	159	106796.51700	0.00000	0.000	105999.98000	107461.58000	106927.99000

Run Name: 1831610E07
 Tube Number: 5
 Sample Number: LLC

Date/Time: 11/12/2018 17:55:01

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	453945.15000	0.00000	0.000	456174.29000	450363.67000	455297.49000
SC-3	45	29673.91700	0.00000	0.000	28287.84000	30522.29000	30211.62000
AL	27	421.49877	5898.04700	5.200	434.57840	396.35123	433.56667
B	11	122.88139	12132.25700	2.800	120.69335	126.88349	121.06733
BE	9	0.53094	111.33300	4.000	0.53160	0.50936	0.55187
CA	44	769.44092	1436.78300	5.400	752.72860	738.99055	816.60362
CR	52	4.23718	2433.61000	0.700	4.23790	4.26792	4.20572
FE	57	97.07554	1086.74300	6.700	103.96328	96.24291	91.02043
K	39	374.74316	25826.63700	7.500	406.78468	354.07281	363.37200
MG	24	99.30627	4023.98300	9.700	108.54368	89.23862	100.13650
MN	55	9.90199	2880.38300	12.100	11.20529	9.66183	8.83886
NA	23	892.37453	82534.50000	3.700	928.74758	865.06376	883.31226
TI	47	25.52827	320.01300	6.600	24.29155	24.84211	27.45117
V	51	0.97081	430.02300	23.700	1.23008	0.89284	0.78950
IN-2	115	116904.14700	0.00000	0.000	115571.56000	117202.17000	117938.71000
IN-3	115	37534.32000	0.00000	0.000	35235.36000	38462.53000	38905.07000
AG	107	0.44225	416.69000	14.800	0.37443	0.44762	0.50472
AS	75	1.93578	116.66700	7.500	2.01896	1.76724	2.02115
BA	137	4.22988	653.37000	7.400	3.93728	4.55947	4.19289
CD	111	0.99372	128.66700	19.200	1.14698	0.78055	1.05363
CO	59	1.11786	983.40000	8.100	1.22208	1.06073	1.07076
CU	63	41.81428	26491.66700	4.800	43.31915	42.58036	39.54334
MO	98	2.08168	1096.75300	10.000	2.23861	2.16165	1.84478
NI	60	4.43740	1043.40700	9.900	4.48641	3.97605	4.84974
SB	121	2.35094	906.73000	5.100	2.48340	2.32344	2.24599
SE	78	2.15621	46.22000	21.100	2.32936	1.63910	2.50017
SN	120	2.00583	1126.76000	15.400	2.07841	2.27262	1.66646
SR	88	6.30425	2390.27700	5.100	6.07470	6.67383	6.16422
ZN	66	15.96480	1396.79000	4.200	16.30573	16.38755	15.20113
BI-3	209	72114.08000	0.00000	0.000	70870.56000	72096.55000	73375.13000
PB	208	3.04500	7791.22300	2.500	2.96360	3.05841	3.11298
TL	205	0.49402	950.07300	13.800	0.48107	0.56765	0.43334
U	238	0.52381	1266.77700	16.200	0.45050	0.61666	0.50426
SC-2	45	83453.65700	0.00000	0.000	83306.27000	83356.31000	83698.39000
GE-1	72	384946.70000	0.00000	0.000	388163.35000	381848.51000	384828.24000
GE-2	72	109030.76300	0.00000	0.000	108759.16000	107922.37000	110410.76000
GE-3	72	80276.51000	0.00000	0.000	78834.95000	79498.61000	82495.97000
TB-3	159	109084.62000	0.00000	0.000	108077.17000	108550.06000	110626.63000

Run Name: 1831610E07
 Tube Number: 6
 Sample Number: ICSA

Date/Time: 11/12/2018 17:57:10

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	450816.03300	0.00000	0.000	447321.48000	452402.10000	452724.52000
SC-3	45	26127.17700	0.00000	0.000	26053.93000	25772.99000	26554.61000
AL	27	106167.42072	1303020.16300	3.200	107014.25936	109108.87304	102379.12975
B	11	58.70419	6764.22000	3.000	59.77405	59.66263	56.67590
BE	9	0.03281	8.00000	30.400	0.04287	0.03264	0.02293
CA	44	308045.18494	495784.69300	2.000	309547.93673	313433.15968	301154.45841
CR	52	0.56103	386.68700	12.000	0.48660	0.57952	0.61697
FE	57	257129.32853	2499198.35000	2.800	255380.37264	265120.87384	250886.73910
K	39	100699.36202	3221522.14000	2.200	101472.52251	102421.82779	98203.73575
MG	24	102767.16831	3653443.59000	2.500	103504.15065	104840.16582	99957.18845
MN	55	3.91506	1030.07300	7.300	4.24371	3.73012	3.77134
NA	23	254317.17329	18501125.97300	2.500	256947.04124	258995.53963	247008.93901
TI	47	2104.12033	23195.75700	3.100	2074.26266	2177.91237	2060.18596
V	51	0.09108	43.33300	60.600	0.13452	0.10980	0.02894
IN-2	115	112478.90300	0.00000	0.000	113333.13000	111415.77000	112687.81000
IN-3	115	35621.45300	0.00000	0.000	34642.62000	35934.80000	36286.94000
AG	107	0.02297	23.33300	27.500	0.01986	0.03025	0.01880
AS	75	0.87821	54.66700	8.200	0.85621	0.82002	0.95841
BA	137	1.07745	160.01000	4.800	1.03828	1.13637	1.05770
CD	111	0.21594	26.66700	10.200	0.19999	0.24100	0.20684
CO	59	0.84516	713.37700	10.300	0.77832	0.94329	0.81387
CU	63	1.27422	833.38300	7.400	1.17222	1.29116	1.35928
MO	98	2076.32475	1040497.01300	2.400	2130.94105	2062.72536	2035.30784
NI	60	1.46986	340.01700	16.900	1.60649	1.18356	1.61954
SB	121	1.46075	540.03000	2.500	1.50237	1.44713	1.43276
SE	78	0.02335	0.89000	81.800	0.01224	0.04540	0.01242
SN	120	-0.24442	103.33300	0.000	-0.31626	-0.23009	-0.18691
SR	88	16.95688	6088.16300	3.100	17.49620	16.45242	16.92201
ZN	66	4.64157	393.35000	18.900	3.62709	5.17445	5.12316
BI-3	209	68531.31300	0.00000	0.000	67914.79000	68708.91000	68970.24000
PB	208	0.82515	2033.46700	4.500	0.78569	0.83005	0.85971
TL	205	0.00421	20.00000	347.700	-0.00128	0.02077	-0.00688
U	238	0.04791	110.00700	18.300	0.04832	0.05646	0.03894
SC-2	45	79887.25700	0.00000	0.000	80671.76000	78610.17000	80379.84000
GE-1	72	383933.03000	0.00000	0.000	377191.21000	390450.03000	384157.85000
GE-2	72	101065.86000	0.00000	0.000	99169.55000	102653.53000	101374.50000
GE-3	72	74388.85000	0.00000	0.000	74170.74000	75537.96000	73457.85000
TB-3	159	106524.50000	0.00000	0.000	106091.58000	107119.42000	106362.50000

Run Name: 1831610E07
 Tube Number: 7
 Sample Number: RINSE

Date/Time: 11/12/2018 17:59:19

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	434806.89700	0.00000	0.000	439654.06000	427996.36000	436770.27000
SC-3	45	27623.36700	0.00000	0.000	27686.89000	27516.39000	27666.82000
AL	27	0.44513	30.00000	344.800	1.98027	-1.08954	0.44466
B	11	25.03128	3849.18300	3.400	24.08372	25.68498	25.32515
BE	9	0.01410	4.00000	142.200	-0.00609	0.01438	0.03402
CA	44	13.18311	50.00000	44.600	7.25169	13.29569	19.00195
CR	52	0.35910	306.68000	19.400	0.28524	0.36805	0.42402
FE	57	11.47728	133.33700	5.300	11.12229	12.17810	11.13145
K	39	-22.29282	10680.87000	0.000	-17.58692	-24.23524	-25.05631
MG	24	2.27172	106.67000	41.000	3.15001	2.37170	1.29345
MN	55	-0.07309	23.33300	0.000	-0.08572	-0.08526	-0.04830
NA	23	36.85592	11107.79700	15.800	32.18350	43.37103	35.01322
TI	47	0.85797	10.00000	99.800	0.00000	0.86109	1.71282
V	51	0.02691	20.00000	91.300	0.02684	0.00238	0.05150
IN-2	115	118766.45700	0.00000	0.000	117880.97000	121856.40000	116562.00000
IN-3	115	37039.00000	0.00000	0.000	36307.14000	36638.06000	38171.80000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	-0.05428	5.33300	0.000	-0.07627	-0.07694	-0.00962
BA	137	-0.02128	0.00000	0.000	-0.02128	-0.02128	-0.02128
CD	111	0.01029	1.33300	86.700	0.00000	0.01576	0.01512
CO	59	0.00910	30.00000	10.300	0.00979	0.00947	0.00804
CU	63	0.21355	203.34300	23.500	0.26355	0.16299	0.21410
MO	98	3.16784	1653.49000	8.900	2.85758	3.23913	3.40681
NI	60	-0.06963	3.33300	0.000	-0.08383	-0.08383	-0.04122
SB	121	0.04479	30.00000	173.000	-0.03374	0.04695	0.12115
SE	78	-0.01022	0.22300	0.000	-0.02031	0.00996	-0.02031
SN	120	-0.31167	76.66700	0.000	-0.23269	-0.37058	-0.33173
SR	88	0.00040	3.33300	3929.300	-0.00863	0.01845	-0.00863
ZN	66	0.97220	93.33700	27.100	0.72121	0.94932	1.24606
BI-3	209	72288.33300	0.00000	0.000	71031.35000	71625.09000	74208.56000
PB	208	-0.00490	26.66700	0.000	-0.00342	-0.00352	-0.00775
TL	205	0.00189	16.66700	430.800	0.00917	-0.00688	0.00336
U	238	0.00682	16.66700	90.700	0.00840	0.00000	0.01206
SC-2	45	79370.48300	0.00000	0.000	79042.36000	80720.77000	78348.32000
GE-1	72	378539.07000	0.00000	0.000	380812.22000	374997.77000	379807.22000
GE-2	72	102331.79000	0.00000	0.000	102604.38000	103036.83000	101354.16000
GE-3	72	76623.91300	0.00000	0.000	73618.75000	78634.15000	77618.84000
TB-3	159	107377.58000	0.00000	0.000	106151.30000	106886.71000	109094.73000

Run Name: 1831610E07
 Tube Number: 8
 Sample Number: **CCV**

Date/Time: 11/12/2018 18:01:28

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	442995.85000	0.00000	0.000	443401.75000	438926.20000	446659.60000
SC-3	45	28214.49700	0.00000	0.000	26153.94000	28949.26000	29540.29000
AL	27	2541.32608	33695.53300	3.200	2571.37108	2604.35838	2448.24878
B	11	272.28434	23930.98300	0.500	272.79681	273.44493	270.61128
BE	9	25.66473	5192.25300	1.600	25.68173	26.06340	25.24906
CA	44	2493.86754	4350.80000	6.800	2690.10502	2395.14034	2396.35726
CR	52	264.44002	136300.59700	4.200	277.20348	259.60182	256.51476
FE	57	2607.47247	27326.30300	5.600	2773.44004	2541.72610	2507.25127
K	39	2527.56871	98507.67300	5.900	2690.19358	2494.29153	2398.22103
MG	24	2542.21997	97404.28700	5.700	2706.80643	2490.61125	2429.24225
MN	55	262.44484	71505.34700	5.900	279.02397	259.60254	248.70800
NA	23	2516.00421	205626.70300	5.300	2668.69429	2458.48156	2420.83678
TI	47	273.00659	3253.81300	5.500	269.10468	260.31134	289.60376
V	51	261.94470	108248.67000	5.200	277.33838	256.76891	251.72682
IN-2	115	117897.08300	0.00000	0.000	115790.19000	118429.16000	119471.90000
IN-3	115	38024.00700	0.00000	0.000	37564.15000	38764.84000	37743.03000
AG	107	27.42702	25851.03300	1.000	27.40872	27.15440	27.71795
AS	75	252.47289	14329.14000	1.400	248.33651	254.38511	254.69706
BA	137	257.01991	39931.75700	3.900	254.64596	248.40710	268.00666
CD	111	26.53161	3495.79300	2.800	26.25450	27.36316	25.97718
CO	59	252.81473	220759.19700	2.100	250.52904	249.06107	258.85409
CU	63	254.78440	163351.01700	1.900	251.86528	252.24615	260.24176
MO	98	26.57909	14220.93000	2.500	26.36366	26.06099	27.31261
NI	60	255.35666	59709.98300	2.000	253.03481	251.76759	261.26756
SB	121	26.17229	10110.64700	1.600	26.20898	25.72693	26.58094
SE	78	25.43559	545.34700	4.700	24.35335	26.72328	25.23013
SN	120	25.97553	12148.96300	1.400	25.63052	25.95496	26.34110
SR	88	25.36094	9720.25300	1.700	25.41187	24.90612	25.76484
ZN	66	254.85643	22461.30700	2.500	248.39770	254.86286	261.30872
BI-3	209	73779.60700	0.00000	0.000	72228.04000	74671.70000	74439.08000
PB	208	25.95595	67633.84700	1.000	25.68165	26.00464	26.18156
TL	205	25.20802	48961.35700	1.000	25.10659	25.49557	25.02190
U	238	25.28073	62517.56300	0.600	25.18284	25.21386	25.44549
SC-2	45	79679.86000	0.00000	0.000	77937.28000	80591.46000	80510.84000
GE-1	72	383802.74300	0.00000	0.000	382958.98000	379051.13000	389398.12000
GE-2	72	103385.93300	0.00000	0.000	101112.84000	104950.52000	104094.44000
GE-3	72	79516.16000	0.00000	0.000	76925.81000	80232.83000	81389.84000
TB-3	159	109545.02300	0.00000	0.000	105395.46000	112965.31000	110274.30000

Run Name: 1831610E07
 Tube Number: 9
 Sample Number: CCB

Date/Time: 11/12/2018 18:03:38

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	445969.85300	0.00000	0.000	440956.17000	445992.77000	450960.62000
SC-3	45	27296.21300	0.00000	0.000	27777.24000	26694.91000	27416.49000
AL	27	2.55409	56.66700	45.900	3.50005	2.92028	1.24195
B	11	79.62763	8394.36700	4.800	84.05192	77.80312	77.02787
BE	9	-0.00278	0.66700	0.000	0.00384	-0.00609	-0.00609
CA	44	21.28348	63.33700	113.000	48.08437	14.20329	1.56278
CR	52	0.18723	216.67700	55.300	0.14568	0.30506	0.11096
FE	57	3.10977	46.66700	49.400	1.40647	3.53755	4.38528
K	39	-10.44120	10944.40700	0.000	-26.60097	-2.56817	-2.15447
MG	24	0.42453	36.66700	99.900	0.49251	0.81065	-0.02956
MN	55	-0.07088	23.33300	0.000	-0.12317	0.03322	-0.12268
NA	23	15.61093	9356.52700	41.600	11.80040	23.10355	11.92885
TI	47	0.29586	3.33300	173.200	0.00000	0.88759	0.00000
V	51	0.00270	10.00000	921.100	-0.02238	0.00315	0.02732
IN-2	115	114360.55300	0.00000	0.000	112789.04000	115651.64000	114640.98000
IN-3	115	37165.57300	0.00000	0.000	36808.14000	36978.90000	37709.68000
AG	107	0.00020	3.33300	3091.200	-0.00343	0.00748	-0.00343
AS	75	-0.01748	7.33300	0.000	-0.04085	0.06743	-0.07902
BA	137	0.02293	6.66700	167.000	0.04520	0.04489	-0.02128
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.02832	46.66700	102.100	0.03296	-0.00264	0.05464
CU	63	0.19133	190.01000	31.300	0.17784	0.25672	0.13944
MO	98	0.09539	50.00000	52.800	0.03861	0.13451	0.11306
NI	60	-0.02604	13.33300	0.000	-0.08383	-0.03985	0.04557
SB	121	0.55863	223.34300	15.600	0.50172	0.65913	0.51505
SE	78	0.00079	0.44300	4604.900	-0.02031	0.04300	-0.02031
SN	120	-0.29771	83.33300	0.000	-0.30361	-0.25965	-0.32987
SR	88	0.00934	6.66700	333.200	0.04529	-0.00863	-0.00863
ZN	66	0.27731	33.33300	49.800	0.35808	0.35591	0.11793
BI-3	209	70220.48300	0.00000	0.000	68508.84000	71724.72000	70427.89000
PB	208	-0.00863	16.66700	0.000	-0.00712	-0.01144	-0.00734
TL	205	0.00385	20.00000	280.400	-0.00688	0.00372	0.01470
U	238	0.01832	43.33300	33.100	0.01307	0.02496	0.01695
SC-2	45	77628.21300	0.00000	0.000	77544.84000	77303.27000	78036.53000
GE-1	72	383014.16300	0.00000	0.000	377449.41000	386815.23000	384777.85000
GE-2	72	102435.85700	0.00000	0.000	99542.08000	104940.03000	102825.46000
GE-3	72	76529.27000	0.00000	0.000	75808.98000	77759.08000	76019.75000
TB-3	159	107717.63300	0.00000	0.000	106091.20000	107966.50000	109095.20000

Run Name: 1831610E07
 Tube Number: 10
 Sample Number: **PBW**

Date/Time: 11/12/2018 18:05:47
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	498097.96000	0.00000	0.000	498205.54000	501322.57000	494765.77000
SC-3	45	30509.01700	0.00000	0.000	29710.61000	30672.75000	31143.69000
AL	27	0.45777	33.33300	348.600	-0.43037	2.29996	-0.49629
B	11	26.45488	4539.37000	3.200	27.13771	25.51242	26.71450
BE	9	0.00270	2.00000	2.100	0.00270	0.00265	0.00276
CA	44	12.34819	53.33300	114.000	27.50668	-0.32270	9.86059
CR	52	0.10874	200.01000	110.000	-0.02722	0.19766	0.15579
FE	57	6.13794	86.67000	16.100	5.74020	7.26552	5.40809
K	39	-45.47760	10931.07000	0.000	-42.24606	-44.86690	-49.31983
MG	24	1.03735	66.67000	23.900	0.91826	0.87172	1.32207
MN	55	0.31268	140.00700	41.400	0.18752	0.44623	0.30430
NA	23	3.58414	9439.97300	71.400	6.08703	3.69376	0.97162
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00709	6.66700	0.000	0.02349	-0.02238	-0.02238
IN-2	115	128459.80000	0.00000	0.000	125950.99000	127514.46000	131913.95000
IN-3	115	40371.65300	0.00000	0.000	39706.20000	40057.47000	41351.29000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	-0.09395	3.33300	0.000	-0.01505	-0.11666	-0.15013
BA	137	0.06089	13.33300	233.700	0.22522	-0.02128	-0.02128
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	-0.00841	16.66700	0.000	-0.02619	-0.00445	0.00540
CU	63	0.09892	143.34000	51.600	0.15666	0.08025	0.05986
MO	98	0.06493	36.66700	43.200	0.08948	0.07095	0.03437
NI	60	-0.05664	6.66700	0.000	-0.04287	-0.04323	-0.08383
SB	121	0.05595	36.66700	155.500	0.13999	-0.03374	0.06158
SE	78	-0.01067	0.22300	0.000	-0.02031	0.00862	-0.02031
SN	120	-0.35368	63.33300	0.000	-0.31674	-0.40090	-0.34341
SR	88	0.00788	6.66700	362.800	-0.00863	0.04091	-0.00863
ZN	66	0.74797	80.00000	44.400	0.75868	1.07432	0.41092
BI-3	209	79274.41000	0.00000	0.000	78644.45000	78040.16000	81138.62000
PB	208	-0.00589	26.66700	0.000	0.00262	-0.01539	-0.00491
TL	205	0.00600	26.66700	124.700	0.01245	0.00773	-0.00219
U	238	0.00255	6.66700	173.200	0.00000	0.00765	0.00000
SC-2	45	90146.18300	0.00000	0.000	89633.27000	90428.04000	90377.24000
GE-1	72	429428.87000	0.00000	0.000	428234.95000	430086.67000	429964.99000
GE-2	72	116665.56300	0.00000	0.000	114199.03000	116386.26000	119411.40000
GE-3	72	86391.63300	0.00000	0.000	85734.37000	86830.67000	86609.86000
TB-3	159	118778.03000	0.00000	0.000	117039.95000	119017.38000	120276.76000

Run Name: 1831610E07
 Tube Number: 11
 Sample Number: LCSW

Date/Time: 11/12/2018 18:07:55
 Batch: 183091063901A
 Class: *****

Initial Vol: 1.00

Final Vol: 1.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	446683.74000	0.00000	0.000	444836.71000	449146.59000	446067.92000
SC-3	45	28488.26300	0.00000	0.000	27746.60000	29079.57000	28638.62000
AL	27	2061.22448	27606.23300	2.600	2120.87715	2017.71519	2045.08111
B	11	276.81149	24500.55300	1.500	272.85140	276.69871	280.88435
BE	9	4.13482	844.69700	4.300	3.93258	4.25560	4.21628
CA	44	4273.71580	7532.18000	2.600	4190.92740	4400.19402	4230.02599
CR	52	52.22583	27322.95000	2.700	53.24042	50.61925	52.81780
FE	57	1048.68777	11127.96300	2.700	1078.88255	1022.88480	1044.29595
K	39	10208.77722	366650.15000	2.400	10445.57385	9959.00697	10221.75084
MG	24	2037.57123	79005.81700	2.600	2053.86312	1978.99288	2079.85769
MN	55	51.80351	14320.72700	2.300	51.61027	50.69567	53.10461
NA	23	10199.35421	817177.10000	2.100	10388.43445	9962.15036	10247.47781
TI	47	274.48626	3300.48300	5.600	267.32463	264.03368	292.10047
V	51	53.33211	22304.28000	2.300	53.96533	51.88926	54.14175
IN-2	115	120530.50700	0.00000	0.000	119013.37000	119648.26000	122929.89000
IN-3	115	38107.41300	0.00000	0.000	36680.69000	37471.77000	40169.78000
AG	107	54.26600	51223.85300	2.600	54.66879	55.42703	52.70220
AS	75	9.46495	546.01000	4.700	9.97572	9.18942	9.22972
BA	137	50.06488	7792.48700	3.700	50.42589	51.71299	48.05575
CD	111	5.12204	677.35700	6.900	4.72208	5.25409	5.38994
CO	59	253.88405	222039.43300	2.400	259.21824	255.02741	247.40649
CU	63	52.69640	33873.63300	4.200	54.67107	53.14942	50.26871
MO	98	51.13080	27390.50700	3.600	52.27663	52.10381	49.01196
NI	60	51.74530	12138.77700	2.800	51.06402	53.41662	50.75527
SB	121	6.51082	2523.65700	9.100	6.89811	6.80447	5.82986
SE	78	9.89421	217.11300	1.300	9.81655	9.82555	10.04052
SN	120	52.96787	24565.52700	4.000	54.92462	53.26764	50.71135
SR	88	39.67138	15228.56000	2.400	39.96802	40.44893	38.59718
ZN	66	509.75171	44957.20300	4.400	516.10256	528.31099	484.84157
BI-3	209	72968.70000	0.00000	0.000	70819.99000	73434.84000	74651.27000
PB	208	15.36463	39594.65000	2.000	15.71390	15.18074	15.19925
TL	205	2.13723	4110.78700	9.600	2.32220	2.17198	1.91751
U	238	25.93154	63415.65300	1.300	26.15353	25.54460	26.09650
SC-2	45	83500.19000	0.00000	0.000	83990.10000	82993.66000	83516.81000
GE-1	72	384331.80300	0.00000	0.000	384233.43000	384990.35000	383771.63000
GE-2	72	107619.61700	0.00000	0.000	106924.19000	107377.65000	108557.01000
GE-3	72	80477.81000	0.00000	0.000	76180.99000	83330.19000	81922.25000
TB-3	159	111975.00000	0.00000	0.000	107975.92000	114176.47000	113772.61000

Run Name: 1831610E07
 Tube Number: 12
 Sample Number: 9881311

Date/Time: 11/12/2018 18:10:04
 Batch: 183091063901A
 Class: U*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	498095.26700	0.00000	0.000	499608.51000	497875.50000	496801.79000
SC-3	45	30652.66000	0.00000	0.000	30151.72000	31103.45000	30702.81000
AL	27	5.75047	110.00300	77.400	5.19513	10.45353	1.60275
B	11	992.42107	92433.40300	1.200	982.30460	989.92238	1005.03623
BE	9	-0.00021	1.33300	0.000	-0.00609	-0.00609	0.01154
CA	44	279504.13310	527880.30300	0.800	278378.39091	278137.18349	281996.82491
CR	52	2.08930	1310.10000	5.800	2.01941	2.02038	2.22813
FE	57	44788.61630	510883.82300	0.800	44591.18487	44564.05084	45210.61319
K	39	21771.16355	827238.50300	0.900	21718.96059	21608.40052	21986.12953
MG	24	36117.19417	1506860.45000	0.700	35851.44429	36203.11769	36297.02053
MN	55	757.38902	224654.29300	1.000	752.31762	753.34701	766.50242
NA	23	42119.69899	3603110.78000	0.900	42504.18214	41790.21942	42064.69540
TI	47	0.25393	3.33300	173.200	0.00000	0.76179	0.00000
V	51	1.90362	866.72700	13.400	1.74021	1.77387	2.19677
IN-2	115	127075.28000	0.00000	0.000	125288.46000	128173.24000	127764.14000
IN-3	115	40201.97000	0.00000	0.000	39059.45000	41013.95000	40532.51000
AG	107	-0.00015	3.33300	0.000	-0.00343	0.00640	-0.00343
AS	75	16.07290	972.04000	5.100	17.01482	15.73914	15.46473
BA	137	1882.73646	309262.29300	1.900	1903.55770	1841.43356	1903.21812
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	2.82388	2626.99000	9.800	3.14035	2.62838	2.70289
CU	63	0.22320	226.67700	30.300	0.29782	0.20595	0.16582
MO	98	0.58808	333.35000	11.600	0.50939	0.62373	0.63114
NI	60	0.55968	160.00700	44.800	0.33258	0.82832	0.51813
SB	121	0.16893	83.33700	71.500	0.04195	0.18250	0.28234
SE	78	0.13376	3.55700	32.700	0.12600	0.09436	0.18090
SN	120	0.71141	580.03300	1.700	0.72500	0.70776	0.70148
SR	88	2269.60550	919357.72300	1.700	2295.00961	2226.26327	2287.54363
ZN	66	2.14465	210.01000	35.800	1.98879	1.46775	2.97741
BI-3	209	76065.72700	0.00000	0.000	75526.37000	77356.32000	75314.49000
PB	208	0.00693	60.00000	91.000	0.01087	0.01025	-0.00034
TL	205	0.00139	16.66700	401.700	-0.00185	0.00786	-0.00183
U	238	0.03537	90.00300	20.500	0.03950	0.02700	0.03962
SC-2	45	91514.25700	0.00000	0.000	90709.14000	91916.48000	91917.15000
GE-1	72	425958.88700	0.00000	0.000	421604.25000	428352.69000	427919.72000
GE-2	72	115177.28700	0.00000	0.000	115539.61000	114088.35000	115903.90000
GE-3	72	84564.30700	0.00000	0.000	83058.64000	86218.10000	84416.18000
TB-3	159	116394.15300	0.00000	0.000	114367.23000	118229.84000	116585.39000

Run Name: 1831610E07
 Tube Number: 13
 Sample Number: 9881311

Date/Time: 11/12/2018 18:12:12
 Batch: 183091063901A
 Class: UP*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	462961.07300	0.00000	0.000	454042.06000	465969.68000	468871.48000
SC-3	45	29373.32700	0.00000	0.000	29540.32000	28778.66000	29801.00000
AL	27	816.11312	11287.93700	2.200	826.24215	826.69025	795.40696
B	11	1208.06091	104136.70300	1.400	1228.11730	1196.34078	1199.72466
BE	9	0.98430	209.33300	10.800	0.97787	1.09368	0.88136
CA	44	261804.37666	473699.82300	2.500	255808.25175	268858.55830	260746.31993
CR	52	15.72227	8572.75700	4.300	15.58681	16.46223	15.11777
FE	57	41746.84439	456253.62300	1.800	40957.54991	42411.00597	41871.97731
K	39	20934.18096	762571.76000	1.900	20579.34029	21376.33717	20846.86544
MG	24	33715.33255	1347609.35700	1.700	33312.96795	34381.71545	33451.31426
MN	55	721.10566	204914.98700	2.100	710.70696	738.52392	714.08610
NA	23	41141.82070	3372203.70000	2.400	40330.65514	42263.77342	40831.03353
TI	47	52.36238	650.03700	11.800	55.34789	45.28536	56.45390
V	51	3.32564	1443.46000	6.200	3.55274	3.26853	3.15564
IN-2	115	119552.68000	0.00000	0.000	118051.83000	119758.18000	120848.03000
IN-3	115	38615.76300	0.00000	0.000	38059.43000	38808.17000	38979.69000
AG	107	1.07977	1036.73700	4.400	1.09906	1.02580	1.11444
AS	75	20.10270	1166.72000	4.900	19.86168	19.26828	21.17814
BA	137	1755.16816	277001.14300	0.900	1752.16152	1741.15908	1772.18388
CD	111	2.09720	280.67000	5.400	1.97204	2.12747	2.19209
CO	59	4.60550	4107.39000	5.000	4.56253	4.85560	4.39836
CU	63	80.10910	52218.11300	1.300	79.09299	81.12436	80.10996
MO	98	4.23310	2300.27300	1.300	4.29455	4.19335	4.21139
NI	60	8.40602	2016.88300	7.400	7.69482	8.67655	8.84668
SB	121	3.97944	1573.48300	7.400	3.66900	4.25790	4.01142
SE	78	4.01255	87.55700	8.500	4.05196	4.33134	3.65436
SN	120	4.57940	2360.28300	3.400	4.73920	4.57440	4.42461
SR	88	2092.55920	814402.15000	0.500	2081.66941	2095.37754	2100.63065
ZN	66	30.80544	2767.02700	5.400	29.15306	30.81362	32.44964
BI-3	209	73253.58000	0.00000	0.000	72721.04000	74238.67000	72801.03000
PB	208	5.85599	15177.30000	2.100	5.86564	5.73016	5.97217
TL	205	1.03603	2010.23700	3.200	1.02260	1.01180	1.07369
U	238	0.97787	2400.32000	8.800	1.07508	0.94859	0.90994
SC-2	45	86420.77000	0.00000	0.000	85498.96000	86071.70000	87691.65000
GE-1	72	394779.94000	0.00000	0.000	389786.71000	393444.17000	401108.94000
GE-2	72	110101.65300	0.00000	0.000	107921.67000	109816.90000	112566.39000
GE-3	72	81717.71000	0.00000	0.000	80665.33000	83581.31000	80906.49000
TB-3	159	112670.61300	0.00000	0.000	112280.75000	112563.91000	113167.18000

Run Name: 1831610E07
 Tube Number: 14
 Sample Number: 9881311

Date/Time: 11/12/2018 18:14:20
 Batch: 183091063901A
 Class: D*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	472262.93300	0.00000	0.000	470363.82000	472075.42000	474349.56000
SC-3	45	29129.65700	0.00000	0.000	28668.83000	29410.06000	29310.08000
AL	27	6.15967	110.00300	50.500	4.81789	9.71548	3.94565
B	11	1159.21145	102031.14000	0.700	1153.26473	1168.46992	1155.89970
BE	9	0.00318	2.00000	1.200	0.00322	0.00319	0.00314
CA	44	266139.36422	477611.95000	1.200	269902.66117	264358.62311	264156.80837
CR	52	6.90486	3807.29300	7.500	7.46039	6.42901	6.82516
FE	57	42831.97425	464248.62700	0.900	43293.90183	42532.25942	42669.76151
K	39	20734.53512	749254.72700	0.600	20871.83656	20693.40881	20638.35999
MG	24	34526.47757	1368742.22000	1.200	34814.11241	34043.46641	34721.85390
MN	55	723.84188	204021.87000	0.700	729.45342	720.73265	721.33957
NA	23	40307.69680	3277337.86700	0.600	40503.20356	40379.88199	40040.00486
TI	47	0.26947	3.33300	173.200	0.00000	0.00000	0.80840
V	51	1.61569	700.04000	20.700	1.76004	1.85413	1.23289
IN-2	115	118343.41300	0.00000	0.000	115178.98000	119785.53000	120065.73000
IN-3	115	38492.08000	0.00000	0.000	36803.93000	39210.43000	39461.88000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	15.61571	904.70000	3.600	15.95351	15.92284	14.97079
BA	137	1769.30358	278153.50300	2.600	1821.13874	1738.20463	1748.56736
CD	111	0.00491	0.66700	173.200	0.00000	0.01472	0.00000
CO	59	2.83245	2520.31300	10.900	3.18057	2.59498	2.72178
CU	63	0.24903	233.34700	27.400	0.32297	0.23572	0.18840
MO	98	0.45495	246.67700	17.700	0.44407	0.38057	0.54020
NI	60	0.79071	206.67700	6.600	0.84428	0.78732	0.74055
SB	121	0.07599	43.33300	66.300	0.01981	0.11705	0.09112
SE	78	0.08425	2.22300	96.100	0.17087	0.01048	0.07139
SN	120	0.60453	506.69700	17.900	0.50650	0.72034	0.58674
SR	88	2143.36580	830766.68300	3.400	2226.78058	2095.36957	2107.94725
ZN	66	2.12737	200.01000	20.900	1.88291	2.64121	1.85799
BI-3	209	73092.54300	0.00000	0.000	72741.09000	73323.88000	73212.66000
PB	208	-0.00117	36.66700	0.000	0.00409	0.00007	-0.00765
TL	205	-0.00515	3.33300	0.000	-0.00688	-0.00688	-0.00169
U	238	0.02584	63.33300	39.500	0.02461	0.03662	0.01630
SC-2	45	84902.01700	0.00000	0.000	82853.74000	87087.98000	84764.33000
GE-1	72	401884.64300	0.00000	0.000	397466.01000	408826.01000	399361.91000
GE-2	72	108203.86300	0.00000	0.000	105271.90000	109422.65000	109917.04000
GE-3	72	81295.30300	0.00000	0.000	80856.27000	80554.93000	82474.71000
TB-3	159	111614.97000	0.00000	0.000	110364.62000	111423.49000	113056.80000

Run Name: 1831610E07
 Tube Number: 15
 Sample Number: 9881311

Date/Time: 11/12/2018 18:16:28
 Batch: 183091063901A
 Class: R*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	470045.54000	0.00000	0.000	474289.37000	472798.00000	463049.25000
SC-3	45	29931.23700	0.00000	0.000	29079.51000	30973.34000	29740.86000
AL	27	2055.75217	28912.16000	4.400	2136.49997	1957.56696	2073.18958
B	11	1373.79682	119978.81000	0.100	1375.02524	1373.71547	1372.64975
BE	9	4.06420	874.03000	6.800	4.06662	4.33886	3.78712
CA	44	243685.64977	449013.82000	4.000	252503.12866	233034.13729	245519.68338
CR	52	64.02330	35156.42700	2.300	65.07517	62.30271	64.69202
FE	57	39031.99392	434458.48300	3.100	39930.27127	37657.50689	39508.20361
K	39	28604.61464	1056610.45300	3.700	29538.36626	27452.39717	28823.08048
MG	24	33279.20570	1354900.23700	2.800	34189.48503	32327.21566	33320.91643
MN	55	698.99955	202322.09700	3.100	719.01551	676.18934	701.79381
NA	23	46291.72640	3863209.73700	3.700	47992.77532	44538.38790	46344.01599
TI	47	251.67640	3177.10700	9.500	242.02954	234.11732	278.88234
V	51	53.73991	23606.18300	2.700	54.72843	52.08558	54.40573
IN-2	115	122201.97700	0.00000	0.000	120586.34000	124691.52000	121328.07000
IN-3	115	37810.76700	0.00000	0.000	36808.96000	37765.48000	38857.86000
AG	107	55.11530	51638.37700	2.200	56.02904	55.60676	53.71011
AS	75	25.78430	1462.75000	0.400	25.71475	25.73424	25.90392
BA	137	1721.24743	265866.46300	2.400	1754.75967	1733.48208	1675.50052
CD	111	5.29886	693.35700	7.400	5.42713	5.61078	4.85866
CO	59	262.77280	228092.88700	2.500	269.06154	263.07638	256.18048
CU	63	53.22635	33987.18300	1.000	53.85046	52.98729	52.84129
MO	98	53.31049	28355.84000	4.000	55.61476	51.35928	52.95744
NI	60	53.65332	12485.76000	3.100	55.57407	52.91414	52.47174
SB	121	6.97548	2690.35300	1.800	6.84721	6.98610	7.09314
SE	78	10.34515	230.22300	4.400	10.02286	10.86963	10.14295
SN	120	53.85989	24795.94300	3.700	55.47533	54.49749	51.60684
SR	88	2035.22854	775175.17000	2.700	2090.92870	2032.10153	1982.65540
ZN	66	510.97230	44763.18000	1.700	519.71117	502.07563	511.13011
BI-3	209	72519.52000	0.00000	0.000	70557.87000	74209.57000	72791.12000
PB	208	15.26446	39100.45300	1.500	15.36611	14.99904	15.42822
TL	205	1.99180	3810.69300	5.900	2.11537	1.88288	1.97715
U	238	26.82845	65194.39700	1.400	27.24058	26.52256	26.72221
SC-2	45	87580.34000	0.00000	0.000	86423.00000	88676.77000	87641.25000
GE-1	72	399883.91000	0.00000	0.000	403463.82000	403475.38000	392712.53000
GE-2	72	111170.57300	0.00000	0.000	109757.00000	113141.43000	110613.29000
GE-3	72	80873.65300	0.00000	0.000	79892.00000	80876.80000	81852.16000
TB-3	159	111735.59300	0.00000	0.000	109890.93000	111332.56000	113983.29000

Run Name: 1831610E07
 Tube Number: 16
 Sample Number: 9881311

Date/Time: 11/12/2018 18:18:36
 Batch: 183091063901A
 Class: M*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	457915.20300	0.00000	0.000	455161.01000	456902.65000	461681.95000
SC-3	45	28244.42000	0.00000	0.000	28798.82000	28037.38000	27897.06000
AL	27	2175.77152	28888.91000	3.800	2081.83655	2209.14939	2236.32861
B	11	1484.98830	126180.04700	0.600	1495.92049	1480.94956	1478.09484
BE	9	4.19949	879.36300	3.300	4.08381	4.35581	4.15886
CA	44	274547.90229	477614.14700	3.100	265152.49140	276951.41594	281539.79951
CR	52	71.50781	37047.64700	2.200	69.86239	71.70748	72.95358
FE	57	44281.58265	465267.05000	2.800	42911.96690	44586.66760	45346.11346
K	39	31745.03071	1105753.94000	2.900	30725.18465	32005.67505	32504.23243
MG	24	37373.62308	1436281.02000	2.700	36361.61671	37360.36967	38398.88287
MN	55	785.07189	214493.72300	2.900	758.85136	795.85401	800.51031
NA	23	51741.69979	4075901.50300	2.200	50431.07118	52488.71755	52305.31064
TI	47	265.98754	3170.44300	1.700	263.31830	271.31207	263.33226
V	51	55.19324	22881.86700	3.400	53.03511	56.10667	56.43793
IN-2	115	119971.10300	0.00000	0.000	117793.78000	118871.04000	123248.49000
IN-3	115	37475.24000	0.00000	0.000	37500.95000	36841.62000	38083.15000
AG	107	54.15918	50307.00300	1.000	53.86191	54.75924	53.85639
AS	75	27.51493	1545.42700	6.600	26.41758	29.62286	26.50434
BA	137	1844.24463	282412.87300	2.300	1803.77588	1888.35778	1840.60023
CD	111	5.16680	670.68700	2.600	5.01907	5.28128	5.20006
CO	59	262.46991	225861.65700	2.200	258.62363	269.19498	259.59112
CU	63	53.32391	33756.67700	1.000	53.34640	52.76941	53.85593
MO	98	52.94807	27914.85300	3.400	53.18342	54.59919	51.06160
NI	60	54.61925	12605.85000	1.500	54.32966	53.97795	55.55014
SB	121	6.59414	2520.31000	4.300	6.90418	6.51999	6.35824
SE	78	10.09888	220.44700	4.000	10.01187	10.53826	9.74652
SN	120	54.41151	24839.39700	2.400	52.96068	55.51615	54.75771
SR	88	2184.31896	824822.74700	2.000	2154.58543	2234.34038	2164.03107
ZN	66	514.03834	44632.87700	1.200	511.73501	520.89741	509.48259
BI-3	209	71869.02300	0.00000	0.000	70950.75000	72639.65000	72016.67000
PB	208	15.63111	39691.35000	2.000	15.29293	15.67907	15.92132
TL	205	2.04245	3877.37700	8.000	1.88933	2.02314	2.21487
U	238	26.83707	64648.27000	1.600	26.50259	26.68281	27.32581
SC-2	45	86815.57000	0.00000	0.000	87298.29000	85869.73000	87278.69000
GE-1	72	390029.76000	0.00000	0.000	386790.58000	391389.80000	391908.90000
GE-2	72	110511.55700	0.00000	0.000	108053.09000	111145.92000	112335.66000
GE-3	72	79817.52000	0.00000	0.000	78333.25000	80273.29000	80846.02000
TB-3	159	110624.50300	0.00000	0.000	107834.72000	112292.29000	111746.50000

Run Name: 1831610E07
 Tube Number: 17
 Sample Number: 9881311

Date/Time: 11/12/2018 18:20:46
 Batch: 183091063901A
 Class: UL*****

Initial Vol: 25.00

Final Vol: 25.00

DF: 5.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	443025.29000	0.00000	0.000	437513.27000	440894.64000	450667.96000
SC-3	45	29313.42000	0.00000	0.000	28408.23000	29600.75000	29931.28000
AL	27	4.16769	83.33700	41.600	2.63180	6.04617	3.82510
B	11	545.81421	46055.92000	3.300	562.89122	547.53583	527.01558
BE	9	0.01700	4.66700	34.300	0.01393	0.02371	0.01335
CA	44	50766.05989	91685.20300	1.800	51805.17010	50080.82713	50412.18242
CR	52	1.57788	980.06700	12.000	1.38840	1.76597	1.57926
FE	57	8079.94964	88115.63300	2.200	8288.44007	7972.72780	7978.68106
K	39	3936.91064	152955.83700	1.800	4014.31098	3875.57648	3920.84445
MG	24	6337.62262	252768.74000	2.300	6479.29211	6339.61367	6193.96208
MN	55	138.28154	39253.74000	1.500	140.25824	136.07096	138.51541
NA	23	7600.14048	628681.41300	2.800	7838.63362	7528.25545	7433.53238
TI	47	1.08673	13.33300	46.300	1.66812	0.80046	0.79162
V	51	0.38709	176.67300	32.700	0.28939	0.53003	0.34184
IN-2	115	120579.39700	0.00000	0.000	121485.18000	120877.77000	119375.24000
IN-3	115	38694.23700	0.00000	0.000	38571.21000	38047.93000	39463.57000
AG	107	-0.00003	3.33300	0.000	-0.00343	-0.00343	0.00679
AS	75	3.49068	210.00000	6.100	3.63904	3.58543	3.24757
BA	137	334.43676	52891.70700	0.400	333.35510	333.99736	335.95783
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.53709	500.02700	14.900	0.47057	0.62619	0.51452
CU	63	0.06202	113.34000	75.500	0.08767	0.09042	0.00796
MO	98	0.22000	120.00300	23.800	0.16580	0.22410	0.27010
NI	60	0.22257	73.33700	73.200	0.12701	0.12991	0.41079
SB	121	0.03405	26.66700	40.700	0.04291	0.01806	0.04117
SE	78	0.01997	0.88700	174.700	0.03996	0.04026	-0.02031
SN	120	0.15001	296.67700	72.900	0.11759	0.06057	0.27188
SR	88	403.21683	157238.19300	0.800	400.06792	406.25513	403.32743
ZN	66	0.96938	96.67000	25.500	0.78427	1.25048	0.87340
BI-3	209	72495.77000	0.00000	0.000	70387.78000	72640.43000	74459.10000
PB	208	-0.00372	30.00000	0.000	-0.00331	-0.01149	0.00364
TL	205	0.00357	20.00000	141.500	0.00392	-0.00165	0.00843
U	238	0.02064	50.00000	53.900	0.02967	0.00821	0.02404
SC-2	45	85592.59000	0.00000	0.000	85931.14000	85589.44000	85257.19000
GE-1	72	383654.05700	0.00000	0.000	376873.00000	386410.19000	387678.98000
GE-2	72	109275.75300	0.00000	0.000	107822.03000	109614.73000	110390.50000
GE-3	72	80497.74300	0.00000	0.000	78945.92000	79538.95000	83008.36000
TB-3	159	110923.60000	0.00000	0.000	106898.20000	111394.69000	114477.91000

Run Name: 1831610E07
 Tube Number: 18
 Sample Number: 9827173

Date/Time: 11/12/2018 18:22:54
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	467548.66300	0.00000	0.000	463037.14000	471141.67000	468467.18000
SC-3	45	29323.52000	0.00000	0.000	29089.64000	29771.31000	29109.61000
AL	27	433.52937	6001.40000	4.100	418.88939	453.59111	428.10763
B	11	256.56882	23912.92300	2.300	263.45535	253.30679	252.94432
BE	9	0.04082	10.00000	40.400	0.05066	0.02180	0.05001
CA	44	88641.37679	160154.57300	2.400	87404.82376	87375.71427	91143.59236
CR	52	1.75663	1073.41300	18.100	2.02701	1.40535	1.83753
FE	57	563.48406	6168.20700	8.200	513.19252	603.46529	573.79435
K	39	3481.90885	136739.31000	2.300	3499.19657	3396.03273	3550.49726
MG	24	26607.18171	1061791.13000	2.500	26215.01188	26224.54482	27381.98841
MN	55	284.74504	80827.00700	3.700	273.88357	285.41265	294.93889
NA	23	7587.86838	628146.82300	2.300	7493.44862	7479.95050	7790.20602
TI	47	6.19346	76.66700	7.000	5.70166	6.36699	6.51172
V	51	4.80430	2076.88700	7.500	4.56856	4.62358	5.22078
IN-2	115	119486.61000	0.00000	0.000	117584.16000	120085.09000	120790.58000
IN-3	115	39323.42300	0.00000	0.000	38761.49000	40055.78000	39153.00000
AG	107	0.00672	10.00000	150.000	-0.00343	0.01671	0.00687
AS	75	0.74752	52.66700	8.600	0.68009	0.75369	0.80877
BA	137	113.96924	18322.66000	1.900	111.53664	115.88360	114.48749
CD	111	0.04442	6.00000	89.200	0.08937	0.01441	0.02949
CO	59	0.66425	623.37000	5.700	0.64790	0.63698	0.70789
CU	63	1.11347	813.38700	11.800	1.03574	1.26526	1.03941
MO	98	6.03275	3337.17300	4.100	6.28867	5.80159	6.00799
NI	60	5.74967	1410.11300	3.000	5.70733	5.60141	5.94025
SB	121	3.22503	1300.11700	3.500	3.22058	3.11545	3.33907
SE	78	2.34236	51.33300	16.000	2.13324	2.11911	2.77472
SN	120	-0.04787	206.67700	0.000	-0.09901	-0.13211	0.08751
SR	88	218.94025	86769.75700	1.700	216.14785	217.51016	223.16275
ZN	66	44.96303	4107.39000	2.300	44.10579	46.12668	44.65662
BI-3	209	74926.28700	0.00000	0.000	74288.72000	74551.56000	75938.58000
PB	208	0.30760	853.38000	17.100	0.29738	0.36470	0.26073
TL	205	0.05753	126.67300	37.800	0.07497	0.06448	0.03315
U	238	2.63949	6628.62700	5.000	2.51485	2.77829	2.62531
SC-2	45	84522.83300	0.00000	0.000	84040.67000	83838.75000	85689.08000
GE-1	72	399851.97300	0.00000	0.000	394725.03000	402833.24000	401997.65000
GE-2	72	108378.36300	0.00000	0.000	107246.94000	106974.19000	110913.96000
GE-3	72	82585.94000	0.00000	0.000	81690.48000	82143.44000	83923.90000
TB-3	159	112219.32300	0.00000	0.000	111251.72000	111089.98000	114316.27000

Run Name: 1831610E07
 Tube Number: 19
 Sample Number: **9881309**

Date/Time: 11/12/2018 18:25:03
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	456543.58700	0.00000	0.000	470725.19000	447072.45000	451833.12000
SC-3	45	29954.67300	0.00000	0.000	29119.69000	30652.89000	30091.44000
AL	27	8.99394	153.34000	24.700	6.90692	11.32883	8.74608
B	11	1022.73306	87205.83000	3.000	987.44594	1043.04590	1037.70735
BE	9	0.00674	2.66700	84.400	0.00321	0.00371	0.01330
CA	44	259905.52222	479559.52300	2.000	262961.89445	253960.54701	262794.12521
CR	52	2.38089	1440.12300	2.800	2.38157	2.44631	2.31479
FE	57	41810.67266	465929.07000	1.900	42324.07136	40891.63825	42216.30836
K	39	20110.72650	747428.01000	2.500	20476.63803	19529.15407	20326.38741
MG	24	33540.41431	1366768.26300	2.800	34444.59304	32561.26165	33615.38825
MN	55	712.43246	206456.45000	1.500	721.66017	700.60588	715.03134
NA	23	39092.98742	3268144.42700	1.600	39621.65962	38411.38738	39245.91525
TI	47	1.32025	16.66700	35.100	1.62737	1.54597	0.78741
V	51	1.91843	853.38300	7.500	1.84942	1.82250	2.08335
IN-2	115	119296.69700	0.00000	0.000	118537.10000	119343.55000	120009.44000
IN-3	115	39279.08000	0.00000	0.000	38166.62000	40140.70000	39529.92000
AG	107	0.00009	3.33300	6736.300	0.00714	-0.00343	-0.00343
AS	75	15.23039	900.70000	3.700	15.55421	14.58146	15.55549
BA	137	1751.71504	281155.38700	0.900	1768.01421	1737.10444	1750.02646
CD	111	0.02000	2.66700	115.900	0.04538	0.00000	0.01461
CO	59	2.59116	2360.27300	2.400	2.65525	2.58849	2.52975
CU	63	0.34263	300.01300	35.200	0.47842	0.30155	0.24791
MO	98	0.44721	246.67700	14.700	0.52130	0.42486	0.39547
NI	60	0.59129	163.34300	23.100	0.47022	0.56453	0.73913
SB	121	0.13255	66.67000	68.700	0.09536	0.23632	0.06598
SE	78	0.19471	4.66700	41.200	0.10369	0.22554	0.25491
SN	120	0.86414	640.04000	25.300	0.68815	0.79559	1.10867
SR	88	2100.15424	831184.93700	1.700	2120.86083	2058.42603	2121.17587
ZN	66	2.77456	263.34700	31.700	2.49029	3.76039	2.07299
BI-3	209	74604.26300	0.00000	0.000	72388.50000	76823.64000	74600.65000
PB	208	0.80197	2150.15300	5.100	0.83014	0.75551	0.82026
TL	205	-0.00688	0.00000	0.000	-0.00688	-0.00688	-0.00688
U	238	0.02566	63.33300	65.700	0.04122	0.00777	0.02800
SC-2	45	86085.48300	0.00000	0.000	85981.35000	86343.20000	85931.90000
GE-1	72	391681.26000	0.00000	0.000	398033.67000	385223.20000	391786.91000
GE-2	72	108382.79000	0.00000	0.000	109181.53000	107066.24000	108900.60000
GE-3	72	81687.63300	0.00000	0.000	78050.92000	84275.50000	82736.48000
TB-3	159	113681.15300	0.00000	0.000	109920.70000	115364.96000	115757.80000

Run Name: 1831610E07
 Tube Number: 20
 Sample Number: **CCV**

Date/Time: 11/12/2018 18:27:12

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	456932.68700	0.00000	0.000	458944.17000	459065.58000	452788.31000
SC-3	45	29005.87700	0.00000	0.000	28578.41000	29309.84000	29129.38000
AL	27	2583.35812	35229.37000	2.200	2649.41518	2553.39803	2547.26114
B	11	518.79953	45260.85300	0.700	514.52996	520.31786	521.55078
BE	9	26.02201	5430.34300	1.800	26.24382	25.49243	26.32979
CA	44	2667.16225	4794.28000	4.300	2767.31420	2692.29701	2541.87553
CR	52	258.28878	137090.70300	2.000	264.38310	255.48206	255.00118
FE	57	2550.56582	27543.30300	0.900	2571.90924	2527.88780	2551.90043
K	39	2548.66935	102219.07700	2.700	2628.89498	2510.35098	2506.76209
MG	24	2575.39313	101692.44000	0.800	2566.90867	2559.12386	2600.14685
MN	55	265.96277	74674.65700	0.700	267.55195	263.81546	266.52090
NA	23	2531.71107	213085.28300	2.100	2590.30627	2482.81250	2522.01444
TI	47	256.41062	3140.44700	6.600	237.98156	260.34251	270.90778
V	51	260.48771	110907.88000	1.000	260.89277	257.73066	262.83970
IN-2	115	120453.26700	0.00000	0.000	119071.01000	119283.15000	123005.64000
IN-3	115	38209.63300	0.00000	0.000	37396.12000	37854.55000	39378.23000
AG	107	26.84657	25420.41300	2.200	27.05681	27.31619	26.16670
AS	75	254.46316	14507.32700	1.500	256.45182	256.96026	249.97741
BA	137	255.48890	39885.18700	2.500	255.85744	261.70734	248.90192
CD	111	26.25152	3472.45300	3.600	27.05200	26.51079	25.19177
CO	59	256.04805	224593.52300	2.700	259.76548	260.37841	248.00024
CU	63	257.51444	165842.29300	2.500	263.12199	259.10837	250.31297
MO	98	26.08137	14010.64000	5.700	27.09060	26.78128	24.37225
NI	60	252.15473	59241.17300	1.800	252.33766	256.65749	247.46903
SB	121	26.18127	10164.05300	1.500	25.98426	26.63282	25.92674
SE	78	25.91180	567.34300	2.300	26.60963	25.54698	25.57879
SN	120	26.05175	12238.97700	2.900	25.99165	26.83133	25.33228
SR	88	25.21015	9706.89700	2.900	25.39324	25.82011	24.41711
ZN	66	255.90878	22658.33700	1.300	259.57253	255.28673	252.86708
BI-3	209	73755.70300	0.00000	0.000	71423.18000	75546.14000	74297.79000
PB	208	25.58833	66631.18700	1.400	25.90383	25.18798	25.67318
TL	205	25.42923	49359.42300	1.400	25.85426	25.23049	25.20295
U	238	25.37493	62695.37000	3.400	26.31467	25.20366	24.60646
SC-2	45	83771.68000	0.00000	0.000	82591.13000	84261.64000	84462.27000
GE-1	72	393183.31300	0.00000	0.000	391883.59000	391693.35000	395973.00000
GE-2	72	107747.19300	0.00000	0.000	106369.28000	107479.08000	109393.22000
GE-3	72	80521.26700	0.00000	0.000	78171.65000	82254.09000	81138.06000
TB-3	159	109249.75700	0.00000	0.000	106505.08000	109337.07000	111907.12000

Run Name: 1831610E07
 Tube Number: 21
 Sample Number: CCB

Date/Time: 11/12/2018 18:29:21

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	438038.62700	0.00000	0.000	442128.67000	435569.68000	436417.53000
SC-3	45	28471.54700	0.00000	0.000	27877.03000	29049.19000	28488.42000
AL	27	0.39580	30.00000	341.000	1.95405	-0.39775	-0.36891
B	11	207.60198	18488.69000	1.100	209.94600	207.36976	205.49019
BE	9	-0.00274	0.66700	0.000	-0.00609	0.00396	-0.00609
CA	44	14.25511	53.33300	27.300	18.73652	11.73945	12.28937
CR	52	0.26071	263.34700	91.800	0.53667	0.10961	0.13585
FE	57	2.89822	46.66700	80.200	3.32411	4.97985	0.39069
K	39	-16.53284	11197.91700	0.000	10.51633	-34.92037	-25.19447
MG	24	0.38246	36.66700	140.800	0.22516	-0.05968	0.98192
MN	55	-0.08799	20.00000	0.000	-0.08623	-0.05364	-0.12410
NA	23	6.72831	9066.38000	63.800	3.25028	11.52186	5.41279
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00936	13.33300	391.000	-0.02238	0.00108	0.04937
IN-2	115	120413.62700	0.00000	0.000	119080.27000	119986.97000	122173.64000
IN-3	115	36129.33000	0.00000	0.000	35224.24000	36958.04000	36205.71000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	-0.06447	4.66700	0.000	-0.15013	-0.04129	-0.00199
BA	137	-0.02128	0.00000	0.000	-0.02128	-0.02128	-0.02128
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	-0.01394	10.00000	0.000	-0.00146	-0.02619	-0.01416
CU	63	0.12827	146.67300	59.600	0.07297	0.09640	0.21544
MO	98	0.04584	23.33300	98.800	0.02017	0.01923	0.09813
NI	60	-0.05377	6.66700	0.000	-0.03765	-0.03982	-0.08383
SB	121	0.43224	170.00700	35.500	0.55377	0.25955	0.48341
SE	78	0.02016	0.88700	173.900	0.04118	-0.02031	0.03962
SN	120	-0.21543	116.67000	0.000	-0.20147	-0.30434	-0.14048
SR	88	0.00990	6.66700	162.200	0.01954	-0.00863	0.01878
ZN	66	0.43889	46.66700	111.300	-0.11100	0.82334	0.60432
BI-3	209	70776.31300	0.00000	0.000	69774.57000	71513.61000	71040.76000
PB	208	-0.01271	6.66700	0.000	-0.01133	-0.01539	-0.01140
TL	205	0.00034	13.33300	2450.800	0.00946	-0.00156	-0.00688
U	238	0.01406	33.33300	45.600	0.01283	0.00834	0.02100
SC-2	45	84469.20700	0.00000	0.000	84613.18000	83628.32000	85166.12000
GE-1	72	374726.93700	0.00000	0.000	380402.81000	368393.51000	375384.49000
GE-2	72	106847.26000	0.00000	0.000	105645.82000	107045.28000	107850.68000
GE-3	72	77069.35700	0.00000	0.000	74271.24000	78030.86000	78905.97000
TB-3	159	105879.20000	0.00000	0.000	102342.56000	108005.07000	107289.97000

Run Name: 1831610E07
 Tube Number: 22
 Sample Number: 9881310

Date/Time: 11/12/2018 18:31:30
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	468042.87000	0.00000	0.000	470111.71000	462416.59000	471600.31000
SC-3	45	28324.64300	0.00000	0.000	28498.18000	28618.52000	27857.23000
AL	27	9.88409	156.67300	37.200	13.81976	9.29210	6.54042
B	11	964.74226	84485.94000	1.500	949.67834	977.37272	967.17573
BE	9	-0.00609	0.00000	0.000	-0.00609	-0.00609	-0.00609
CA	44	265251.09895	462792.78000	2.700	262891.22411	259450.09701	273411.97572
CR	52	2.87162	1616.81300	9.100	2.82277	3.15391	2.63818
FE	57	42440.30208	447252.56000	1.900	41903.92810	42071.28746	43345.69067
K	39	20460.26009	718935.19700	2.500	20145.67333	20184.89294	21050.21399
MG	24	34371.15916	1324777.58700	2.000	34176.40159	33800.09857	35136.97730
MN	55	715.75400	196132.35300	2.500	709.49280	701.78792	735.98127
NA	23	39996.64945	3161798.49300	1.800	39693.68244	39476.06201	40820.20389
TI	47	0.55429	6.66700	173.200	1.66286	0.00000	0.00000
V	51	2.24097	940.06700	10.300	2.17720	2.04889	2.49683
IN-2	115	119384.84700	0.00000	0.000	119547.79000	118709.96000	119896.79000
IN-3	115	37728.06000	0.00000	0.000	37704.17000	37303.27000	38176.74000
AG	107	0.00013	3.33300	4616.700	0.00727	-0.00343	-0.00343
AS	75	15.09644	858.03000	2.000	15.42676	14.83933	15.02321
BA	137	1748.58047	269611.94000	0.500	1737.96701	1753.36255	1754.41185
CD	111	0.01032	1.33300	173.200	0.00000	0.03095	0.00000
CO	59	2.61393	2286.93300	4.900	2.50333	2.75235	2.58612
CU	63	0.43310	346.68700	8.700	0.40699	0.47619	0.41610
MO	98	0.35170	186.67700	11.500	0.39578	0.34289	0.31643
NI	60	0.70710	183.34300	25.200	0.52015	0.87545	0.72569
SB	121	0.22849	100.00300	58.500	0.22762	0.36253	0.09532
SE	78	0.11268	2.88700	30.900	0.13303	0.07244	0.13258
SN	120	0.85601	610.03700	13.800	0.96611	0.87069	0.73123
SR	88	2077.36274	789852.98300	1.000	2056.06972	2095.08739	2080.93113
ZN	66	2.86225	260.01000	6.800	2.86564	2.66620	3.05492
BI-3	209	72770.84700	0.00000	0.000	71584.37000	73032.34000	73695.83000
PB	208	0.81651	2136.81700	3.600	0.79609	0.84984	0.80360
TL	205	0.00012	13.33300	2733.900	0.00374	-0.00167	-0.00172
U	238	0.02880	70.00000	39.300	0.04168	0.02043	0.02429
SC-2	45	85314.42000	0.00000	0.000	85357.55000	85156.78000	85428.93000
GE-1	72	396016.01000	0.00000	0.000	397067.81000	397315.62000	393664.60000
GE-2	72	108230.62300	0.00000	0.000	106642.47000	106853.63000	111195.77000
GE-3	72	80431.02700	0.00000	0.000	79851.69000	79830.93000	81610.46000
TB-3	159	111143.84700	0.00000	0.000	111181.68000	108972.72000	113277.14000

Run Name: 1831610E07
 Tube Number: 23
 Sample Number: 9881312

Date/Time: 11/12/2018 18:33:38
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	466811.29300	0.00000	0.000	469035.85000	460807.26000	470590.77000
SC-3	45	29236.44300	0.00000	0.000	29360.03000	29069.53000	29279.77000
AL	27	5.18010	96.67000	43.600	4.66061	7.65486	3.22484
B	11	1165.21477	101356.73300	1.200	1155.98626	1180.75349	1158.90456
BE	9	0.01889	5.33300	27.400	0.02192	0.01292	0.02183
CA	44	271067.42609	488248.62300	2.700	264759.30143	278932.57166	269510.40518
CR	52	2.23361	1326.77000	3.800	2.24822	2.14147	2.31112
FE	57	43145.01679	469385.66700	1.500	42416.78190	43292.33343	43725.93503
K	39	20995.67570	761312.56700	2.100	20491.21656	21336.61134	21159.19921
MG	24	35613.76020	1417051.85300	2.000	34815.76115	36127.91924	35897.60022
MN	55	733.47105	207493.74000	2.300	714.46999	744.35705	741.58612
NA	23	41061.90959	3350720.78000	1.100	40611.89907	41546.58492	41027.24478
TI	47	1.35189	16.66700	34.900	0.80702	1.63017	1.61847
V	51	1.84966	803.38700	2.900	1.83415	1.80580	1.90902
IN-2	115	118880.17700	0.00000	0.000	118613.24000	118211.97000	119815.32000
IN-3	115	38095.22300	0.00000	0.000	37747.94000	38469.43000	38068.30000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	16.66493	955.37300	2.000	17.04286	16.47642	16.47550
BA	137	1823.46116	283895.62000	2.000	1797.59024	1808.40347	1864.38977
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	2.81662	2486.96700	5.500	2.73116	2.72472	2.99397
CU	63	0.17782	186.67700	61.700	0.12346	0.30411	0.10590
MO	98	0.39797	213.34300	10.900	0.37649	0.36943	0.44799
NI	60	0.48635	133.34000	34.000	0.56254	0.29669	0.59982
SB	121	0.11319	56.66700	53.600	0.14900	0.04311	0.14746
SE	78	0.13415	3.33300	23.500	0.16533	0.13476	0.10236
SN	120	0.38568	400.02000	18.700	0.37205	0.46364	0.32134
SR	88	2188.93393	840419.65000	1.600	2157.22993	2183.21970	2226.35215
ZN	66	1.28957	123.34000	41.300	1.60435	0.67443	1.58991
BI-3	209	73635.62300	0.00000	0.000	71233.15000	74892.04000	74781.68000
PB	208	-0.00012	40.00000	0.000	-0.00744	0.00731	-0.00023
TL	205	-0.00341	6.66700	0.000	-0.00154	-0.00688	-0.00180
U	238	0.02825	70.00000	48.000	0.02094	0.01992	0.04389
SC-2	45	86129.27700	0.00000	0.000	85781.35000	85981.18000	86625.30000
GE-1	72	394481.81700	0.00000	0.000	397275.31000	388524.17000	397645.97000
GE-2	72	109419.81700	0.00000	0.000	108637.33000	109302.41000	110319.71000
GE-3	72	81466.50700	0.00000	0.000	78664.50000	82896.93000	82838.09000
TB-3	159	111470.43700	0.00000	0.000	108277.72000	114469.06000	111664.53000

Run Name: 1831610E07
 Tube Number: 24
 Sample Number: 9881313

Date/Time: 11/12/2018 18:35:45
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	507998.48000	0.00000	0.000	501017.10000	511489.13000	511489.21000
SC-3	45	31841.83700	0.00000	0.000	31474.49000	32787.06000	31263.96000
AL	27	4.16383	90.00000	19.000	4.89850	3.32967	4.26334
B	11	329.84164	32776.81000	3.300	342.10973	326.71096	320.70423
BE	9	-0.00032	1.33300	0.000	0.00265	-0.00609	0.00247
CA	44	87426.95203	171514.98700	1.200	87204.78414	86517.10650	88558.96545
CR	52	0.35788	353.35000	32.900	0.44697	0.40246	0.22421
FE	57	2287.69479	27109.25700	3.200	2297.50386	2209.55355	2356.02695
K	39	4819.03844	200428.01000	1.700	4815.60916	4739.93612	4901.57003
MG	24	25527.27395	1105902.01700	2.100	25753.26353	24921.28786	25907.27046
MN	55	1218.84895	375382.58700	2.300	1219.64592	1190.70279	1246.19815
NA	23	20324.67986	1810475.28700	2.600	20329.40490	19802.02321	20842.61146
TI	47	0.25093	3.33300	173.200	0.75281	0.00000	0.00000
V	51	0.27727	140.00700	7.900	0.30233	0.26854	0.26094
IN-2	115	134572.05000	0.00000	0.000	132891.79000	133861.36000	136963.00000
IN-3	115	42176.25000	0.00000	0.000	41359.87000	43597.22000	41571.66000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	2.87344	190.00000	6.200	3.02695	2.67937	2.91400
BA	137	73.55257	12672.87000	3.800	76.21691	70.67459	73.76623
CD	111	0.00441	0.66700	173.200	0.00000	0.01324	0.00000
CO	59	0.33212	346.68700	21.600	0.27915	0.30344	0.41377
CU	63	0.43582	390.01700	18.300	0.49019	0.47288	0.34439
MO	98	1.80828	1073.41300	13.000	1.58065	1.79294	2.05126
NI	60	0.63563	186.67700	3.700	0.62407	0.66235	0.62046
SB	121	0.03717	30.00000	112.500	0.06156	-0.01113	0.06108
SE	78	0.48011	12.22000	14.400	0.55962	0.44562	0.43507
SN	120	-0.31482	86.67000	0.000	-0.40350	-0.23664	-0.30431
SR	88	312.85692	132921.83000	2.500	316.29826	303.90156	318.37094
ZN	66	1.26007	133.34000	26.200	1.45455	0.87907	1.44657
BI-3	209	80605.51000	0.00000	0.000	78985.19000	80897.16000	81934.18000
PB	208	0.03976	156.67000	15.900	0.04560	0.04065	0.03302
TL	205	0.00248	20.00000	321.700	-0.00207	-0.00218	0.01167
U	238	1.21785	3290.52700	4.500	1.22785	1.15825	1.26744
SC-2	45	94083.92000	0.00000	0.000	94804.49000	93446.49000	94000.78000
GE-1	72	435438.26300	0.00000	0.000	432594.92000	436473.43000	437246.44000
GE-2	72	122039.55300	0.00000	0.000	121136.06000	123393.66000	121588.94000
GE-3	72	89078.19000	0.00000	0.000	87878.48000	90443.11000	88912.98000
TB-3	159	122402.77300	0.00000	0.000	120428.96000	121901.17000	124878.19000

Run Name: 1831610E07
 Tube Number: 25
 Sample Number: 9881314

Date/Time: 11/12/2018 18:37:54
 Batch: 183091063901A
 Class: *****

Initial Vol: 50.00

Final Vol: 50.00

DF: 1.00

Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	492956.77700	0.00000	0.000	488805.54000	490536.20000	499528.59000
SC-3	45	30856.52700	0.00000	0.000	30853.17000	31865.36000	29851.05000
AL	27	4.38682	90.00000	61.100	2.27562	3.47986	7.40497
B	11	198.85032	20015.28000	1.900	199.65834	202.15575	194.73686
BE	9	0.00280	2.00000	3.700	0.00287	0.00284	0.00268
CA	44	85763.81496	162927.35700	4.300	84614.29101	82780.99629	89896.15757
CR	52	0.40191	366.68700	17.900	0.31915	0.43844	0.44813
FE	57	2260.66226	25953.74000	3.600	2254.78669	2182.24983	2344.95028
K	39	4826.59757	194400.83700	4.100	4772.83803	4660.98890	5045.96576
MG	24	25352.92740	1063814.22700	4.100	25116.95749	24452.74511	26489.07960
MN	55	1186.00778	353789.74700	4.100	1171.14264	1146.18783	1240.69288
NA	23	20213.90961	1743970.65000	4.500	20241.05997	19301.03150	21099.63735
TI	47	0.26458	3.33300	173.200	0.00000	0.00000	0.79375
V	51	0.22587	113.34000	43.300	0.26471	0.29835	0.11456
IN-2	115	128193.05000	0.00000	0.000	123942.77000	129671.64000	130964.74000
IN-3	115	41508.66300	0.00000	0.000	41070.76000	42013.40000	41441.83000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	3.18796	206.66700	2.000	3.24520	3.20093	3.11773
BA	137	72.85672	12362.58000	3.800	71.08819	71.41615	76.06584
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.37564	383.35000	26.200	0.39793	0.46096	0.26803
CU	63	0.59736	496.70000	32.400	0.69670	0.72092	0.37447
MO	98	1.96981	1150.09000	8.800	2.02435	1.77596	2.10912
NI	60	0.84180	236.67700	30.600	0.54984	1.03891	0.93665
SB	121	0.02956	26.66700	46.200	0.03824	0.03663	0.01382
SE	78	0.36306	8.88700	34.300	0.48291	0.23441	0.37186
SN	120	-0.31080	86.66700	0.000	-0.34245	-0.30619	-0.28376
SR	88	308.43101	129029.70000	1.700	304.62808	306.44208	314.22286
ZN	66	0.92965	100.00300	30.000	0.83488	0.71092	1.24314
BI-3	209	78861.80000	0.00000	0.000	78009.95000	79388.46000	79186.99000
PB	208	-0.00461	30.00000	0.000	-0.00449	-0.00825	-0.00108
TL	205	-0.00369	6.66700	0.000	-0.00688	0.00270	-0.00688
U	238	1.20448	3183.86000	1.100	1.18966	1.21036	1.21342
SC-2	45	90498.73700	0.00000	0.000	87148.97000	92731.95000	91615.29000
GE-1	72	425927.24700	0.00000	0.000	422454.13000	425010.66000	430316.95000
GE-2	72	117412.05700	0.00000	0.000	114400.85000	118897.73000	118937.59000
GE-3	72	87072.33700	0.00000	0.000	85411.98000	86961.40000	88843.63000
TB-3	159	117954.45700	0.00000	0.000	115810.61000	118692.57000	119360.19000

Run Name: 1831610E07
 Tube Number: 26
 Sample Number: **CCV**

Date/Time: 11/12/2018 18:40:04

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	443020.30300	0.00000	0.000	445392.45000	438036.40000	445632.06000
SC-3	45	29279.92000	0.00000	0.000	29811.03000	28728.77000	29299.96000
AL	27	2488.03022	34253.49300	1.800	2442.44267	2489.23473	2532.41326
B	11	377.23976	32425.46000	1.800	369.48516	381.11786	381.11626
BE	9	26.66699	5395.65300	1.200	26.94412	26.75650	26.30034
CA	44	2520.58389	4574.20300	5.200	2374.41952	2560.59179	2626.74036
CR	52	254.56240	136367.78700	2.900	246.70231	261.01921	255.96569
FE	57	2466.65801	26878.78700	4.400	2410.42097	2593.12182	2396.43122
K	39	2433.21787	99064.80300	2.300	2372.52232	2442.82775	2484.30353
MG	24	2494.95487	99423.93000	2.000	2438.67725	2533.39746	2512.78990
MN	55	255.64143	72450.20000	1.200	252.16408	258.16311	256.59712
NA	23	2478.17799	210743.74700	1.300	2442.34366	2502.00694	2490.18337
TI	47	259.92507	3210.45300	4.800	245.63141	266.43297	267.71082
V	51	256.44307	110199.76700	1.800	251.23229	259.38557	258.71135
IN-2	115	118134.75700	0.00000	0.000	115108.97000	116118.78000	123176.52000
IN-3	115	37899.48700	0.00000	0.000	36969.67000	38710.27000	38018.52000
AG	107	27.43818	25770.80000	2.800	27.81671	26.55546	27.94237
AS	75	257.07288	14538.02000	1.800	259.08461	251.69317	260.44085
BA	137	253.53397	39260.00300	2.100	259.20987	248.94758	252.44446
CD	111	25.72673	3375.76300	4.400	26.41119	24.41809	26.35089
CO	59	257.45498	224044.18300	1.700	261.55132	252.91974	257.89389
CU	63	259.31631	165664.26300	2.300	265.99588	254.41860	257.53445
MO	98	25.23277	13463.50000	2.700	24.45962	25.58313	25.65555
NI	60	254.02961	59191.01700	2.400	259.27086	247.26760	255.55037
SB	121	25.94340	9987.21300	2.800	26.79110	25.58470	25.45438
SE	78	25.67263	551.34700	1.400	26.02793	25.32734	25.66261
SN	120	25.40198	11835.42700	6.300	26.92495	23.72274	25.55825
SR	88	25.06852	9576.83000	1.900	25.52511	25.12088	24.55959
ZN	66	254.52329	22344.52300	3.800	265.02351	245.95313	252.59324
BI-3	209	73903.48300	0.00000	0.000	73243.18000	73233.27000	75234.00000
PB	208	25.24288	65869.84300	1.600	25.60452	25.32499	24.79914
TL	205	25.12439	48877.70000	0.300	25.08670	25.19948	25.08700
U	238	25.30428	62681.74300	0.700	25.35762	25.11153	25.44369
SC-2	45	82290.56700	0.00000	0.000	79806.57000	83396.73000	83668.40000
GE-1	72	376824.05700	0.00000	0.000	380303.59000	377088.08000	373080.50000
GE-2	72	105421.09700	0.00000	0.000	103833.52000	106179.67000	106250.10000
GE-3	72	80128.99300	0.00000	0.000	79578.70000	79207.76000	81600.52000
TB-3	159	111332.49000	0.00000	0.000	111453.85000	109668.61000	112875.01000

Run Name: 1831610E07
 Tube Number: 27
 Sample Number: CCB

Date/Time: 11/12/2018 18:42:13

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS		
					#1	#2	#3
SC-1	45	433140.69700	0.00000	0.000	433625.38000	434963.47000	430833.24000
SC-3	45	27933.98700	0.00000	0.000	26845.35000	28167.65000	28788.96000
AL	27	1.67830	46.66700	91.800	0.51527	3.42572	1.09393
B	11	174.48365	15660.84700	1.400	177.23925	173.59849	172.61322
BE	9	0.00739	2.66700	78.800	0.01411	0.00398	0.00408
CA	44	13.28775	50.00000	139.600	32.17135	12.61377	-4.92188
CR	52	0.32363	290.01700	62.000	0.46496	0.41207	0.09384
FE	57	0.71841	23.33300	193.800	-0.49490	0.41217	2.23795
K	39	-5.87577	11344.72000	0.000	17.53758	-16.37987	-18.78501
MG	24	0.32108	33.33300	250.100	0.52924	0.99954	-0.56555
MN	55	-0.02369	36.66700	0.000	-0.00637	0.05979	-0.12448
NA	23	7.17175	8926.33000	27.400	7.24216	5.16947	9.10362
TI	47	0.27434	3.33300	173.200	0.00000	0.00000	0.82303
V	51	0.01010	13.33300	136.700	0.00300	0.02600	0.00129
IN-2	115	116793.57000	0.00000	0.000	115238.25000	119553.14000	115589.32000
IN-3	115	37830.17700	0.00000	0.000	37780.03000	38070.05000	37640.45000
AG	107	-0.00343	0.00000	0.000	-0.00343	-0.00343	-0.00343
AS	75	-0.05563	5.33300	0.000	-0.07915	-0.04447	-0.04326
BA	137	0.04357	10.00000	148.700	0.10825	-0.02128	0.04373
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	-0.01091	13.33300	0.000	-0.01466	0.00813	-0.02619
CU	63	0.08101	123.33700	39.100	0.09184	0.10589	0.04531
MO	98	0.06884	36.66700	15.400	0.07523	0.07466	0.05663
NI	60	-0.02665	13.33300	0.000	0.00227	0.00162	-0.08383
SB	121	0.47004	193.34300	9.000	0.46186	0.43220	0.51606
SE	78	0.00087	0.44300	4219.000	0.04322	-0.02031	-0.02031
SN	120	-0.25720	103.33700	0.000	-0.24245	-0.30957	-0.21958
SR	88	0.01760	10.00000	0.900	0.01763	0.01743	0.01773
ZN	66	0.15486	23.33300	84.600	0.23176	0.22915	0.00368
BI-3	209	70494.78000	0.00000	0.000	69844.60000	71634.13000	70005.61000
PB	208	-0.01272	6.66700	0.000	-0.01539	-0.01144	-0.01134
TL	205	0.01822	46.66700	43.600	0.00944	0.02495	0.02026
U	238	0.01405	33.33300	44.400	0.00854	0.02083	0.01279
SC-2	45	81050.14300	0.00000	0.000	81043.04000	81556.35000	80551.04000
GE-1	72	373307.02700	0.00000	0.000	370681.48000	373803.67000	375435.93000
GE-2	72	104493.47300	0.00000	0.000	103177.32000	106098.71000	104204.39000
GE-3	72	77247.43000	0.00000	0.000	76795.12000	77247.40000	77699.77000
TB-3	159	106413.65000	0.00000	0.000	103803.58000	107250.50000	108186.87000

US EPA Tune Check Report

Operator Name US19_USR_INS27814
Acq/Data Batch D:\Agilent\ICPMH\1\DATA\EPA_Tune.b
Acq. Date-Time 2018-11-12 17:14:16
Report Comment ---
Instrument Name G8403A SG18254097

[No Gas]

Sensitivity

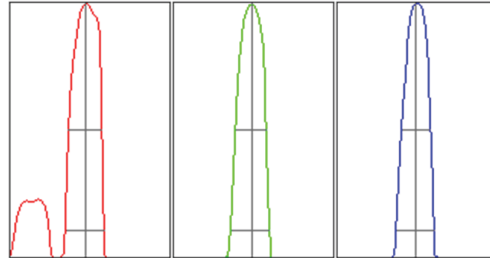
Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
7	10.00	722	7217.99			0.961	5.000
89	10.00	3003	30033.09			0.569	5.000
205	10.00	1501	15006.65			0.750	5.000

Mass	RSD% (Flag)
7	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	727	728	713	726	716
89	3027	2996	2981	3003	3010
205	1512	1488	1506	1508	1489

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	1195.66	6.95	6.90 - 7.10	
89	5370.17	89.00	88.90 - 89.10	
205	2788.11	205.00	204.90 - 205.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.63	0.729	0.800	
89	0.58	0.737	0.800	
205	0.56	0.717	0.800	

Integration Time [sec] 0.1
 Acquisition Time [sec] 113.7
 Y Axis Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.65 L/min	Dilution Gas	0.45 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	12.6 V	Deflect	17.2 V
Extract 2	-250.0 V	Cell Entrance	-40 V	Plate Bias	-50 V
Omega Bias	-90 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9997	QP Bias	-3.0 V
Mass Offset	125	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	0.2 mm	Torch V	-0.1 mm
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EM

Discriminator	4.5 mV	Analog HV	2138 V	Pulse HV	1688 V
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Date File Name: 18K10D66E67

. et59MRetæende Namefsr:

Run Name: 1831860E67

Analyst: 307J

Recie(eM) y: Recie(eMDate
v atædwB En/ le 11M0V618 1J:J3

PeðieM) y: PeðieMDate
v ææeD kinMstæm 11M0V618 JJ:JL

4nstæument v ææmetææ:

Rinse l ime fsedr: JSæ6

<u>4NI ERNAK TI D2</u>	<u>Eke. ENI</u>	<u>. ATT</u>
SC-1		0S
) E	L
)	11

SC-3		0S
	NA	J3
	. G	J0
	Ak	J7
	K	3L
	I 4	07
	P	S1
	CR	SJ
	. N	SS
	FE	S7

GE-3		7J
	CA	00

IN-2		11S
	TE	78

IN-3		11S
	CO	SL
	N4	U6
	CZ	U3
	gN	UU
	AT	7S
	TR	88
	. O	L8
	AG	167
	CD	111
	TN	1J6
	T)	1J1
) A	137

BI-3		J6L
	I k	J6S
	v)	J68
	Z	J38

Run Name: 1831860E67
Tube Number: 1
Sample Number: S0

Date/Time: 11M0V618 16:3S:J7

Note: All Analyte values are in ppb, except for internal standards, C, v, T and MCK are in d9units per second

Element	ATT	CONC2. EAN fppbr	Cv T. EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
BE	L	626666	82UJ766	62666	626131S	-626116U	-6266J6L
B	11	626666	306L27666	62666	-62688L	12S36S0	-62U1US
NA	J3	626666	1JLS02J766	62666	1632U1SJ	-S32110U	-S62S66U
MG	J0	626666	0132L366	62666	L21831	-U26L31U	-32JJS1S
AL	J7	626666	10620366	62666	162SS303	-U2USLL	-028703
K	3L	626666	1160026366	62666	U27L1US	-827S808	12UUBJ
CA	00	626666	SU2UJ766	62666	S2718J6	-J2S03US	-32170SS
SC-1	0S	U6L6JJ27366	626666	62666	U68172US666	U681JU20666	SL81JJ2S3666
SC-2	0S	163SJ62J6766	626666	62666	16J37S2J666	160U62B3666	163SUS2J7666
SC-3	0S	063U2.1666	626666	62666	01UUL2B7666	3L8302.0666	3LS832.J666
TI	07	626666	U2UJ766	62666	62608JS	-62J01J	-62J01J
V	S1	626666	S626366	62666	62671SU	-62670S6	6266JL0
CR	SJ	626666	3U623766	62666	626J001	-626JSJU	-62LL1S
MN	SS	626666	1U2L8666	62666	626SSS7	-626LUU	-626S8L1
FE	S7	626666	17621366	62666	10213J60	-162680U	-0260706
CO	SL	626666	386208366	62666	626JS10	-6261761	-6266813
NI	U6	626666	17320666	62666	12603S1	-6266313	-6260638
CU	U3	626666	S6620366	62666	626L0SU	-6261J78	-626817L
ZN	UU	626666	S626666	62666	62677JU	-626UJ30	6268S68
GE-1	7J	S0LU602JS366	626666	62666	SS88J0217666	S0L1072J1666	S0680J218666
GE-2	7J	13J3JL21366	626666	62666	13JJ662S666	13JS3028666	13JJS121666
GE-3	7J	1107632SJ666	626666	62666	110U732B6666	1136JL273666	11U0672B3666
AS	7S	626666	JU26366	62666	626117	-62610UU	-6268US1
SE	78	626666	62J366	62666	-62668U8	626173U	-62668U8
SR	88	626666	S323366	62666	6261S80	-62688LS	-626JU8L
MO	L8	626666	17U270666	62666	6267833	-626U1U3	-6261U76
AG	167	626666	J6321666	62666	6266J73	-6268063	-6261876
CD	111	626666	1323366	62666	6261603	-6267LJ1	-62631JJ
IN-2	11S	1U0U30278366	626666	62666	1U3SS82SU666	1US8S62J666	1U00L02B7666
IN-3	11S	S01372L766	626666	62666	S08S1276666	S33862U666	S01812.3666
SN	1J6	626666	J8U2L8666	62666	626UU7	-6267J3J	6266S8S
SB	1J1	626666	3U2UJ766	62666	-6261077	-6261367	626J780
BA	137	626666	1U2UJ766	62666	-6263087	-6268SLJ	626J686
TB-3	1SL	1S1088271766	626666	62666	1S3LS128666	1S6JLJ2U666	1S6JJ12.1666
TL	J6S	626666	11U2L666	62666	626UU8	-62631J7	-6263S01
PB	J68	626666	JJ620366	62666	626733J	-6260U6	-626J71J
BI-3	J6L	1666762J6766	626666	62666	1618J62B666	LL3L12J1666	L8LLL2S8666
U	J38	626666	1U273666	62666	626L6UL	-6260766	-62603U8

Run Name: 1831860E67
 Tube Number: J
 Sample Number: S1

Date/Time: 11M0V618 16:37:S6

N9te: All Analyte values are in ppb, except 4nternal TtanMadM6, C, v, T anMCK are in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T. EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U3JUS72S666	626666	62666	U33SUS267666	U3S6002SJ666	U3L3U32JU666
SC-3	0S	0J301270366	626666	62666	0J7832J666	0JJ0120666	0J66627666
Ak	J7	1666626666	18171J2.6666	62066	1660S2J137U	LLL62JW38	LLU02SJ38U
)	11	1666266666	16SSSS2.1766	12166	LL62L888	LL72J8JU	161127180U
) E	L	166266666	J073J2J6766	62J66	LL2.8USU	1662J57J7	LL28SU17
CR	SJ	1666266666	U8U3L2JU366	62666	LL72J0USL	16632L7LU	LL82SS0S
FE	S7	16666266666	10JJ7S2JU666	12J66	166672JUW8	161S027003L	L8372LJU3
K	3L	16666266666	08U71L27666	12J66	L8762608J	LL072.3L66	1618120SU18
. G	J0	16666266666	SJ0LSJ2.0766	62J66	LL032SU688	166U8203S17	LL88263L0
. N	SS	1666266666	386U02SJ366	12166	L872JLSL1	16682J8S0S	16602J18U
NA	J3	16666266666	11178372.8666	12666	L81J27SJU6	166J32J78SS	161U32U88S
I 4	07	1666266666	1SL7L2J1766	62666	16632JLJ1	LL72JULLS	LL82JU380
P	S1	1666266666	SS307L2L666	62766	LLL2.13UU	16672JU67	LLJ2BJ0J7
GE-3	7J	11LJ6J26666	626666	62666	11L1J82JU666	11883S2U666	11LU032J8666
CA	00	16666266666	J0367266666	12666	161082J17U8	LL1J2J067J	LL3L2701U6
IN-2	11S	176J882L366	626666	62666	1U8L802J666	1U73US2.3666	170S13203666
IN-3	11S	SU8662J366	626666	62666	SU0U62J666	SUU602U666	S73372L666
AG	167	166266666	1JSUL620766	62J66	1662.31S6	LL26U63	166266U07
AT	7S	1666266666	7JJ712JU666	J2666	166826180	16102J18L6	L7727LJU
) A	137	1666266666	J6J8U32S666	62666	LLS2J3171	166L20S88J	LLS26L07
CD	111	166266666	1708U2J6666	12066	1612J5111	LL2J6S60	LL2J0380
CO	SL	1666266666	11168JJ2L766	12J66	161J2S8S7	LLL2JL70	L882J11U
CZ	U3	1666266666	8176L82JU366	12066	16672J118U	166L263U01	L832S173
. O	L8	166266666	7618126666	32666	163206JJL	L72JU8J	L827368L
N4	U6	1666266666	JL033820666	12666	161026J8U6	LL72J30L	L88207L1
T)	1J1	166266666	S613728666	J2J66	L8231SJ	16J2SU683	L82J67US
TE	78	166266666	JU0J2J7666	12J66	LL27US3	L82.6S61	1612310U
TN	1J6	166266666	US172JL366	12J66	1662.1637	1662L31L	L82LJU0
TR	88	166266666	S60832JU366	12J66	1662S7S0	L82J578	1662S1U8
gN	UU	1666266666	110US12SU766	J2J66	16J1261U66	16682J8668	L76263LJ
BI-3	J6L	16JL0U23766	626666	62666	16J777231666	1630S320666	16JU672JU666
v)	J68	166266666	3J88182J766	62J66	1662S1L78	LL2013S	1662J3887
I k	J6S	166266666	J0ULJ12.3766	12066	1612J3331	L82J73U3	1662JL36U
Z	J38	166266666	31SUL32J1766	62066	1662J7783	LL28SU18	LL2JUSLL
SC-2	0S	1680U127S766	626666	62666	16U7JS20666	16L6112.7666	16LU072JU666
GE-1	7J	SU8U8820666	626666	62666	S737LS2JL666	SUS1S127S666	SUUU72J8666
GE-2	7J	138S8728766	626666	62666	13U1172J3666	13U0812J666	1031US2J1666
TB-3	1SL	1S813L2J5766	626666	62666	1SUL3U2J666	1S7S3J2.1666	1SLL0L270666

Run Name: 1831860E67
I ube Numbea 3
Tample Numbea ICV

DateV ime: 11M0V618 16:06:1J

N9te: All Analyte values aœ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aœ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U3187721366	626666	6266	UUUJ25666	U3JU8023666	U3U3JU2U666
SC-3	0S	0178628366	626666	6266	3L8002B666	0J08J2B666	036132B0666
Ak	J7	0LLU276LU	8LS7S2U666	3266	S1LJ21U7J	0LU328JS7	08302SLS7
)	11	71L23JL6	7UBJU2U666	1266	73626313	71S277L08	71121U67
) E	L	S621USS3	1J3L02U666	J266	S12S8L6	S62SUL1	08257678
CR	SJ	S672SUJ57	303U8U2L766	J2766	SJ3213J7L	S632338S6	0LU21U0J
FE	S7	S66J266110	76JSU2U766	J2766	S1S0266JJ	0L012887L8	0L6L21UJ1
K	3L	0L33260661	J0JS012L766	3266	S68721101	0LS02USJ8	07S72J0333
. G	J0	0LU02863J	JS71072U766	3266	S1S626U67	0L162.036L	08312B17L
. N	SS	S672378S	1L6S00213666	J2166	S172JLLU6	S682B8SU6	0LU26J83S
NA	J3	0SJU2761J7	S6U662U0666	3266	0U702180U	0S6J2B8S7	006J2UJ186
I 4	07	S3U2S681	80SU260666	1266	S0321U83	SJU21171	S3L26J3L6
P	S1	S6J2SUJ37	J7036627L666	J266	S1728318	0L721J6J0	0L326LSUL
GE-3	7J	11S03L28S766	626666	6266	11016L278666	11U7JL2B3666	11S07L2U666
CA	00	SJ3720JLS	1J3S821666	3266	S168278LSL	S01628SU30	S1LJ2B8JLJ
IN-2	11S	1U07U12U0666	626666	6266	1U177U2U0666	1U30U3217666	1UL60S2S1666
IN-3	11S	SSJ71230666	626666	6266	S063623S666	SSU1123666	SU17J2U0666
AG	167	S62613U	U1L772S366	12766	S1257L88	S62S701	S62BU86
AT	7S	S1U218766	3U3102L666	62766	S1L27378J	S1U20L30	S1J2738J
) A	137	S1J283L6	16117L21366	62766	S112181SS	S6L2.8J6J	S1U28813
CD	111	S6267S1	8SU2U666	12166	S62UUU6	S621UWJ	0L273L7J
CO	SL	S1J2LS37	SS011721766	62.66	S1727L16J	S162LLS8	S6L2LS56
CZ	U3	S1S2JL80	01638321S666	62.66	S172UUJ0	S1L2181J	S1626J17
. O	L8	S627J38L	3073326666	62766	S62S3SS	S62J6US8	S12111SS
N4	U6	S1U20LSS	108161218766	1266	SJJ257JLU	SJ62J0U8	S672US161
T)	1J1	S1273LSJ	JSJ762L366	32766	0L288SU7	S32J7363	S12JSL80
TE	78	SJ2687J	13SJ25U766	J2766	S3203LSJ	S0218S1	S12U813
TN	1J6	SJ26U0L3	318132U666	J266	SJ2630S	S320SU77	S62730S8
TR	88	S12JSSJ	JS3L62L366	J266	S1218311	S62SS360	S320606
gN	UU	SJJ28U0	S831128766	12766	SJ62S8LL	S312U061	S102.3783
BI-3	J6L	166SJ12U766	626666	6266	L733727666	1617S62B666	16J07S2U666
v)	J68	S62706JU	1UWL76278666	J266	S121U1L	S1216UJ	0L21L3L1
I k	J6S	S62JU37	1JJ17U27S766	1266	S1207368	S627ULS	0L2J376U
Z	J38	0L2573SS	1SJ88S2U1666	6266	0L2781J6	0L2J8L0J	0L2U5661
SC-2	0S	1638UU27766	626666	6266	16066U2J666	16JJ8S2U1666	16S36S27666
GE-1	7J	SUL380213366	626666	6266	SUU6S621L666	SU71U821J666	S70L302L666
GE-2	7J	1303S027J766	626666	6266	13061727J666	1331862U666	13S8US27666
TB-3	1SL	1S38S02U6366	626666	6266	10L8S820666	1SU3U2L666	1SS0U828666

Run Name: 1831860E67
I ube Numbea 0
Tample Numbea ICB

DateV ime: 11M0V618 16:0J:JJ

N9te: All Analyte values aœ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aœ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U6801120766	626666	62666	U61U862U666	U6838J2L666	U1S176273666
SC-3	0S	388US208766	626666	62666	3877J2I0666	380712L666	3L3S32I3666
Ak	J7	-S2S380L	0626666	62666	-U2I178S	-72B1U16	-32I81S1
)	11	1712S076	J61832S0366	32066	17720JUL	1UL2J3LL	1UU268700
) E	L	-626J7L	8266666	62666	-62B1L36	-626JUJ	62613U6
CR	SJ	626S6U7	3732S666	1032366	-623J77	62LLS8	6268SJ6
FE	S7	-L2JJ87	0323366	62666	-828U60	-112SS0J6	-726J838
K	3L	172I31JS	1137027L766	7S2366	JL2806L	172J618	0268L07
. G	J0	-S2U7J7	10U2J766	62666	-S2U16J	-32JJ88	-S2JS7L1
. N	SS	-62I0JSL	7323366	62666	-62ILOJ1	-62I78L7	-62IS0S8
NA	J3	-SJ206SS	UL882S0666	62666	-SJ2J313	-S3278J30	-S6271U18
I 4	07	6271JJ7	1U2UJ766	SS2I66	62ISLU1	62LS060	62JJ31S
P	S1	-62BJ8S6	3323366	62666	-62B73L7	-626S3L3	6260J3L
GE-3	7J	1160J626666	626666	62666	1160U120666	1167032I6666	1166S72U666
CA	00	-3266SSL	0U2UJ766	62666	J2I1J10	-162J7S7	-12LS3S
IN-2	11S	1S806120766	626666	62666	1SL3082IS666	1SS7162U666	1U610U273666
IN-3	11S	SJUL62I1666	626666	62666	S13LJ2S666	SJLL82B1666	S3U7L2.7666
AG	167	-6268L6S	L3233766	62666	-62I1SL8	-62B1LU	-626SL1L
AT	7S	-62JJ8L	1626666	62666	-62IJ88J	-62LSS7	-62B00J8
) A	137	-623JLL	1626666	62666	-623100	-6268SLJ	6261806
CD	111	-6267160	1233366	62666	-6267LJ1	-626S0U8	-6267LJ1
CO	SL	-62IL676	UU2UJ766	62666	-626SS7	-62IS88J	-62667UL
CZ	U3	-62IS8LL	J8U28666	62666	-62I783U	-62I716U	-62BJ7SU
. O	L8	-62I8LS8	0U2UJ766	62666	-62I8JU8	-62IUL77	-62I1U8
N4	U6	-6266J6U	3626666	62666	-6263US1	-62IUSLJ	-6266370
T)	1J1	62DLJ3U	JU320766	3S2766	62LS3U	62L38S	6268788
TE	78	6260S7S	1233366	1632I66	-62668U8	6267011	626718J
TN	1J6	626S030	3162B1766	J32I66	626S61S	626U80S	6260003
TR	88	-626U7U8	J626666	62666	-6268813	-6268886	-626JU11
gN	UU	6260S6S	S323366	JJ62366	-626UL0U	62I6S8U	626L87S
BI-3	J6L	L73772J7666	626666	62666	L833023666	LU1LL278666	L7SL82B6666
v)	J68	-626S030	0323366	62666	-626SJ33	-626S80L	-626SJJ1
I k	J6S	-626J6L0	U323366	62666	-626JU80	-626JU87	-6266LSL
Z	J38	-626J0S8	8U2UJ766	62666	-626J763	-6263UU1	-6261611
SC-2	0S	LLU62I1666	626666	62666	166L0S2.6666	LU0702.3666	161SSL26666
GE-1	7J	S0778S27366	626666	62666	S0US727666	S0SULL23666	SS10J82J666
GE-2	7J	1JLJJ82L766	626666	62666	1J8L132U666	1J8SLL20666	13617J2L666
TB-3	1SL	10US0J20366	626666	62666	10SJS82I3666	10S0S128666	108L1U2U666

Run Name: 1831860E67
 Tube Number: S
 Sample Number: LLC

Date/Time: 11M0V618 16:00:31

Note: All Analyte values are in ppb, except for internal standards, C, v, T and MCK are in units reported

Element	. ATT	CONC2. EAN fppbr	Cv T. EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U60S0027366	626666	6266	U6S163270666	U6LLU8251666	SL8SW27666
SC-3	0S	3LL0820766	626666	6266	387J127S666	06L8723666	0613S2U666
Ak	J7	0132LJS3U	7J1S2L8366	1266	0672I0J0L	0162L0L3U	0J1280J1
)	11	16L216871	1061L2J366	J2166	1682LSSU	1672067S	111278L81
) E	L	62S106J	13626666	J266	62SJ1L1	6266L8	62S1LOU
CR	SJ	02LJ73	31J327U766	162.66	0271873	327LSJU	02U0J1
FE	S7	1612U8LS	1S36213766	72.66	LJ2383U	16U218J0L	16U07161
K	3L	01S20J71	JLS3U2L366	S266	0382LUU3	3L326JS3U	01S266U1S
. G	J0	L7201U7	SJJ0203766	U066	160207SL3	LS28830	LJ2U670
. N	SS	1620016	37U7218766	3266	162L7LU	162LJ0U	L2D188
NA	J3	8JS2007S	L8SL12J666	J2166	80S213L8S	81627J86	81L2171U6
I 4	07	JS2JS8J	3832S366	1J2.66	JU2UW13	JU2701S1	J127383
P	S1	12JULL	U3U271666	82.66	12J36J3	1211LU8	123167
GE-3	7J	116U7L217666	626666	6266	168SS206666	1160S121S666	1136362U666
CA	00	7US2833J	1786217766	02166	70S26LUL	7S621676U	86J2133J6
IN-2	11S	1SLUS62U766	626666	6266	1U6JJ62L666	1S833026666	1U63L0251666
IN-3	11S	SJ0772U766	626666	6266	S17U123666	SJ01327666	S3JS727666
AG	167	621J13	U7327766	8266	62033L	627S36	6217U8
AT	7S	J21676S	1US23366	1L2166	J2S101	J216WS	12U30L
) A	137	32L7US	70U27J366	02.66	327611L	028108	32.16JL
CD	111	121177	17U26666	72766	1288LJ	1261J3U	62.306J
CO	SL	621118	11LU27U366	1J2166	628866	62L8UL	62S088
CZ	U3	012U661	3J6SL20666	12766	0J28S63	0127L070	012166JU
. O	L8	1278738	13JU278366	102066	12SJSS0	127L796	J23L11
N4	U6	02100J6	1JL3203366	82166	327L601	0217773	02U00S
T)	1J1	J21L73	16U321766	112166	12.8JJS	J27S78	J216117
TE	78	J210373	S323366	10266	J28S76	12L131	J2S01L
TN	1J6	127681J	1JU6216366	U2.66	12SL808	12L008	123106
TR	88	U23LJS	310327L666	32166	U27U7	U2UULL	U2S7036
gN	UU	172L0L38	1LS621L766	82066	1U216S7U	182706US	182.617J
BI-3	J6L	LU78621S766	626666	6266	L00872.8666	L7JLU2S666	L8SS2.3666
v)	J68	3216J80	L7L127766	32766	32J3106	3216S3	32UUSL
I k	J6S	62L08S	1JU6216766	8266	62L0LS	62S3SU	62S1U60
Z	J38	62070L8	1SU21766	S266	626S88	62SJ80	62UW3
SC-2	0S	16601J2S366	626666	6266	16JJUS217666	L7U8320666	161J882S666
GE-1	7J	S08LLJ28766	626666	6266	SS37SJ211666	SS6S072J666	S0JU7U2J666
GE-2	7J	13688S2L8366	626666	6266	1JL83L2L666	1363032L666	13J0732L7666
TB-3	1SL	1076U2L766	626666	6266	10337820666	1086U027666	10L70S278666

Run Name: 1831860E67
I ube Numbea U
Tample Numbea ICSA

DateV ime: 11M0M618 16:0U:06

N9te: All Analyte values aœ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aœ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	SLJ36627S766	626666	62666	SL8S3UJ7666	SL808028666	S8J8812J666
SC-3	0S	37L7L2S366	626666	62666	386S62J7666	388112.1666	376772J8666
Ak	J7	1163JS2J8608	17LU3JJ21666	J2166	16LSUB2U036	16800S2L1JS	11JLU72J8S8L
)	11	08216J7U	7L1120366	32666	082B788S	0L2J00U3	0U2J8081
) E	L	6261J37	1123366	J772J66	6260LJ6	626UUU	-626187S
CR	SJ	6268S76	S76263666	0J2766	626J80U	62J6SJ7	62DJ33U
FE	S7	JW060266LL0	3303U7L2J0666	J2666	JS8U832J730U	JSL17326SLSS	JUL3SU2LU86
K	3L	16WU3J26S770	0S3L16J263766	J2766	16SL3J266763	163U8026S7JU	16L31S2168L3
. G	J0	163J83210LS	08S8S112J8666	12.66	16JS6J26308J	16178126J161	16SSUS268L6J
. N	SS	32618J0	1J8U27U766	U2666	326S0U0	32U6SS	32J3LS3
NA	J3	JS1J1627L030	J08L17UJ2L766	J2666	J0L07126018J	J0S8872.1081	JS8J7J2JU3L
I 4	07	J17U2673J0	311832J366	J2666	J1JU267JL	J17L26661J	JJ0J0210731
P	S1	-626331J	36266666	62666	-62613J8	-626S0J8	-6263186
GE-3	7J	167SJ82JL666	626666	62666	16US862J666	168UU72J666	167337270666
CA	00	313U6U2U0J7	U8U63J263666	62066	31JU67263JLS	31JLLL277S8L	31SJ112783L7
IN-2	11S	1S17L7267666	626666	62666	108L17206666	1SJ1U6268666	1S031S263666
IN-3	11S	S66U826U666	626666	62666	S6J37268666	S1063266666	08SU2J6666
AG	167	62666S6	18UJ7766	UJJ02J66	-6261SU0	-6261L1J	6263WS
AT	7S	627371U	762J766	JJ2666	6266LU	62670U0	627J7J0
) A	137	12666SL	J8320766	1L2766	1266LJ8	12J1S6	12076L8
CD	111	62180L1	062J766	0S2666	6268L6J	62J3UL8	62J871
CO	SL	62J3LU8	L73206666	162666	62763U6	6267613	62J0S33
CZ	U3	J2.3LLS	JS7U2L366	S2J66	J2781U1	32166J	J2J8J3
. O	L8	JJ0S21JL0	138S6LU2L766	32666	JJ6U2JJ83	J1L0267U7	J33U26833
N4	U6	12JUS7	07U2L666	132J66	126016L	1260176	12JLU1
T)	1J1	126LUL7	US6263766	72J66	12J1J73	12JL676	120870U
TE	78	6211060	J26L666	102666	6216UBL	621J3JL	6216J8S
TN	1J6	-626JSL1	JS6261366	62666	-621SSU7	-62663JU	62681J6
TR	88	18268U7S	868S2.0666	32666	17261871	182J7S1	182J1060
gN	UU	02J700L	07U2L666	102J66	0268J70	3278ULL	02.S373
BI-3	J6L	LJUS0267366	626666	62666	L381J268666	L11702J8666	LJL7U2U666
v)	J68	62680J6	J81U268766	02666	62.13U3	626L737	62601S8
I k	J6S	-6263L13	J6266666	62666	-62636J7	-626086S	-6263L68
Z	J38	-6261113	1J6266366	62666	-6263J76	62667J7	-62667LS
SC-2	0S	L7LSJ268666	626666	62666	L718L2J666	LL683268666	L7S83260666
GE-1	7J	S3L80L2J3666	626666	62666	S037L7266666	S06S7J206666	S3S1U27S666
GE-2	7J	1J0SU7263766	626666	62666	1JS67L266666	1J36862.1666	1JSS0J206666
TB-3	1SL	10SJ072J6666	626666	62666	103LL02J6666	10SU112J6666	10U13726S666

Run Name: 1831860E67
I ube Numbea 7
Tample Numbea RINSE

DateV ime: 11M0V618 16:08:08

N9te: All Analyte values aœ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aœ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	S7JLU2U766	626666	62666	S777SL2J1666	S7JL07216666	SUBJ632SL666
SC-3	0S	371362U666	626666	62666	3U33S2U3666	373382L666	377182U666
Ak	J7	-S2U088	3U2U766	62666	-U238UU	-32S6JS	-U28S73
)	11	172183U6	07L0278766	02.66	1U2808S	1U276SJU	1821U6UL
) E	L	-6263S1	723366	62666	-6218U6	62683S	-6266J8
CR	SJ	-626873L	J7320366	62666	-620LS7	-62LS8U	-6211U73
FE	S7	128UL3	17U27766	18S2S66	S27137L	-121SS10	1216J1S
K	3L	J72JU7	11J8820366	J3266	3327S1SS	J12600J1	JU280JU
. G	J0	-U2SJ8J	7323366	62666	-U21J617	-721S081	-U21L308
. N	SS	-6266JJ7	S626666	62666	-621U877	-6263S1	-62330SJ
NA	J3	-3J2L08L	8SUW271666	62666	-J72S3L10	-302JULU	-3U287SLJ
I 4	07	12100LS	J323366	UU266	127U0U	62J8S87	12J803U
P	S1	-626U83	1323366	62666	-6267JUS	-62673J1	-626S310
GE-3	7J	16USS72U8666	626666	62666	16S6U627666	16ULU327666	167U082.6666
CA	00	3211106	U626666	J3U266	82U061	-S2.6U3	72J7U0J
IN-2	11S	1S36LS21J666	626666	62666	10LL0J21L666	1SU3SL2J666	1S1L8021S666
IN-3	11S	S663S28766	626666	62666	0L6LS280666	0LUU727L666	S130023666
AG	167	-6216J30	7323366	62666	-62160JL	-6268U86	-6211SL3
AT	7S	-62JU06	L23366	62666	-6211300	-6211SJL	-621S168
) A	137	-626U713	323366	62666	-6268SLJ	-62JLSS	-6268SLJ
CD	111	-62670LL	62UJ766	62666	-6267LJ1	-6267LJ1	-626U5SS
CO	SL	-62J77L	JU2U766	62666	-62330S6	-621L3SS	-623SS33
CZ	U8	-6211LSJ	3732S366	62666	-6268U66	-621UJ38	-621161L
. O	L8	J21008L	1S0327366	1U2766	J2180SS	J2U0US0	12.63SL
N4	U6	-62607SS	1U2U766	62666	-6267J3J	-626S3L6	-626S3U0
T)	1J1	626J6L1	0323366	1S3266	-62667S1	62610SJ	626SS76
TE	78	6266673	62J366	JJ3J266	-62668U8	-62668U8	6261LSS
TN	1J6	-62608U1	7323366	62666	-623306J	-623S73	-6267U6L
TR	88	-626US16	J626666	62666	-6268711	-6260J61	-626UJ17
gN	UU	626011U	16626366	UU2766	626S71S	62U0J38	621J3LS
BI-3	J6L	L37LS203366	626666	62666	L387J213666	L3L632S666	L3U162J666
v)	J68	-626S0L6	0626666	62666	-62608J0	-626U1SL	-626S087
I k	J6S	-6263071	3626666	62666	-62636J8	-62603U1	-62636J3
Z	J38	-6263LUU	0626666	62666	-6260UU	-626JLJS	-6260311
SC-2	0S	LJ01721S766	626666	62666	L1J032U666	L0S03216666	L10U02J1666
GE-1	7J	SJ00UU2L666	626666	62666	SJ768S2.3666	SJLU10217666	S1UU827666
GE-2	7J	1J17662J7666	626666	62666	11L7032U666	1JJ01S2L666	1JL062U666
TB-3	1SL	1016382U366	626666	62666	137U762L666	10JJ3U2SL666	103J6L26666

Run Name: 1831860E67
I ube Numbea 8
Tample Numbea **CCV**

DateV ime: 11M0V618 16:S6:SU

N9te: All Analyte values aœ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aœ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U61U732L366	626666	6266	SL33UL2JL666	U63SL82L8666	U686S1261666
SC-3	0S	38S782J7766	626666	6266	3778L26666	3L1U32J0666	387812L666
Ak	J7	JSL82701U	0311326366	6266	JU632786U7	JS832JS067	JU68268773
)	11	JU02SS7L	JL6U2JU666	1266	JU02081S	JU826L1U1	JSL2J7U6
) E	L	JS213831	SL182SJ366	1266	JS268S70	J02716S1	JS2118U7
CR	SJ	J7127J16U	1761SL2L366	J266	J712BU01	JU021L83	J77217LLS
FE	S7	JU3J2J783	30JS026666	1266	JS862U076	JU7326US01	JU0027S338
K	3L	JU6U66U8U	1J33SL2J3366	J2166	JU3268L37	JS00268S0U	JU0J20S7S
. G	J0	JU6S2J68UL	1J0L662J8766	6266	JS8826878J	JSLU01377	JU862BJ00L
. N	SS	JUL2SLL8	L37362J7366	1266	J7J2L778	JUL2J1138	JU72J767L
NA	J3	J0312J7771	JSU8SS2J666	12166	J00L26S8J7	J3LL276UUS	J00020U8J1
I 4	07	JU32L1087	380726366	S2J66	JU0278LJU	J772JS86L	J0L27L7JS
P	S1	JUU0J06	13006U2666	1266	JU32JU61	JUU0JJ1S	JUL267L63
GE-3	7J	16LL1U2L666	626666	6266	1673J7273666	11JU8U26U666	16L73U268666
CA	00	JU6L2JLSJ	S880273666	02166	J7JL267U11	JS1L26LU17	JS7L261UWL
IN-2	11S	1S8US02L766	626666	6266	1S0JU7261666	1S88S827S666	1U8382L3666
IN-3	11S	SJL71277766	626666	6266	SJJU7263666	SJU8U2L666	S06162L666
AG	167	J72J6U70	3JS602L3666	J2J66	JU2LS80	J82J61SS	J72J2J83
AT	7S	JU72L66L	186072L666	1266	JUU06S76	J762J60L6	JUS2SLUL
) A	137	JUU2783U7	S607U2J7766	J266	JUS27001S	J73233180	JU12J7S6J
CD	111	J72J0LJJ	003U273666	J266	JU2786US	J727USL0	JU26168
CO	SL	JU32JU1L3	J733L02J0666	1266	JU26U6L	JU821783	JSL2L18U
CZ	U3	JUS2JU110	J6J0J626J666	1266	JU026S0SS	JU8267U8	JU326JU6
. O	L8	JU26J08	1730126S366	J266	JS2LU76	J72606S1	JS276J3
N4	U6	JUU2JU631	73J6026S366	J266	JU32J6718	J702J6S6	JU62J03J3
T)	1J1	JU2671L1	1JSLJ27S766	12166	JU26S018	JU267L63	J72J8JS1
TE	78	JU2J3L00	U0U261766	12166	JU26SSU1	JS26ULS	JU26SS7U
TN	1J6	JU26SS00	1SSUL2J7366	32J66	J72JU167	JS26013J	JS27U6LJ
TR	88	JS2L30U7	1JJSJ260666	3266	J0268U6U	JU2J1U33	JU2761U3
gN	UU	J7626316S	J88LL26S366	0266	J762J7J0	J832J0S63	JSLU2J688
BI-3	J6L	LU033263366	626666	6266	LS1712J7666	L7U6L2JS666	LUSJ6268666
v)	J68	JU2J711U	816812L8666	1266	JS2681J7	JU2J131	JU2616L1
I k	J6S	JU263J3S	U1J1826766	1266	JU2600S7	JU2631S1	JU26J6LU
Z	J38	JS278U60	7U37026J366	6266	JS26L8J0	JS276738	JU26SJ0L
SC-2	0S	L7LSL268366	626666	6266	L08SS2L666	LLJ632J666	LL818268666
GE-1	7J	S03LS62J366	626666	6266	S3U0162J3666	S0S1U6263666	SS6J81261666
GE-2	7J	1J817S263666	626666	6266	1J373826666	1367L8268666	1JLLL6271666
TB-3	1SL	10S070218366	626666	6266	1007032L666	1008J02J1666	10U8S0263666

Run Name: 1831860E67
I ube Numbea L
Tample Numbea CCB

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N9te: All Analyte values aœ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCk aœ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	CvT . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	S7033621766	626666	62666	SUL67UJ0666	S730L12J666	S860JJ218666
SC-3	0S	3LJ032U866	626666	62666	3887J2J6666	3L16J2J7666	3L7S02J666
Ak	J7	-U250138	J323366	62666	-U27JJ0J	-72JS8L	-S257S8J
)	11	U3276S3S	L1132U766	02666	US2571JL	U02777U0	U627U71J
) E	L	-6261SS6	02UJ766	62666	-626J73J	6266831	-626J70L
CR	SJ	-6260380	31U2J8366	62666	626LJLU	-6217L10	-6260S30
FE	S7	-162601L6	36266666	62666	-727JL3U	-1126UJ71	-1626JLU0
K	3L	U0L76L	1161720366	1S02J66	1723L31	-62768U	J2U6SL
. G	J0	-U261J16	U3233766	62666	-S23S11	-72JL383	-726737
. N	SS	-6266S63	1U2UJ766	62666	-62386J	-626SJS3	-626J0S0
NA	J3	-082J63LL	7008278666	62666	-S623SS7	-0727138S	-0727U5S
I 4	07	-621LU86	3233366	62666	62JS78S	-626J01J	-626J01J
P	S1	-626U11J	1U2UJ766	62666	-626S030	-626S0S7	-626700U
GE-3	7J	16L3S62J766	626666	62666	167JU828666	11633627L666	1160S1261666
CA	00	-127U886	S6266666	62666	32J6U0	-J2611UL	-U08U00
IN-2	11S	1S07LL2L366	626666	62666	1SJ8U12.7666	1S308L2U666	1S86082JS666
IN-3	11S	SJU762.7666	626666	62666	S1SU02JS666	S37762.3666	SJU77273666
AG	167	-62688S3	L3233366	62666	-6267JJU	-62680U0	-62168U8
AT	7S	-62J3066	L233366	62666	-621L6U	-62J73U	-62J8063
) A	137	-626S616	U2UJ766	62666	-62631U	-6268SLJ	-6263J77
CD	111	-6267LJJ	626666	62666	-6267LJ1	-6267LJ1	-6267LJ1
CO	SL	-62666JL	SU2UJ766	62666	-62JLS8J	-62JL8JU	-6266U7L
CZ	U3	-6266738	JS6261666	62666	-62J073S	-626LJ7U	-62J8J63
. O	L8	-62J7J73	L6266666	62666	-62J661	-62JSU66	-626LJ1L
N4	U6	-626JU6L	J3233366	62666	-6263U7U	-6263L83	-62661UL
T)	1J1	62JS18S	1S320666	S3266	626LL11	6266J7U	626S3U8
TE	78	626USS1	1277766	JU066	6267SUJ	6267S31	6260SSU
TN	1J6	-6217U8J	17U2J7366	62666	-62JU06L	-62JUW3	-62J061U
TR	88	-626LS7L	U2UJ766	62666	-62J166S	-62J166S	-626U7J8
gN	UU	-62J608U	JU2UJ766	62666	-62JUWLU	-62J78UL	-62J7JLS
BI-3	J6L	LW5LU07666	626666	62666	L31J72U666	L75UL23666	L867J2J666
v)	J68	-626U6U8	J3233366	62666	-626U1S3	-626U180	-626S8U8
I k	J6S	-626JL1U	03233366	62666	-626J118	-6263LS6	-626JU7L
Z	J38	-62600SU	JU2UJ766	62666	-6260USU	-626061L	-6260ULJ
SC-2	0S	LU3702.7766	626666	62666	LU0SS2J7666	LSS7L2.S666	L768L271666
GE-1	7J	SJ0S372S666	626666	62666	SJ61U826666	SJ1U102J1666	S317082.0666
GE-2	7J	1JSLSJ2L366	626666	62666	1JSLLU2S1666	1J01L128666	1J7U7126L666
TB-3	1SL	100L672J666	626666	62666	10J6LU2J3666	100LS32J666	107U732J666

Run Name: 1831860E67
I ube Numbea 16
Tample Numbea 9881311

DateV ime: 11M0V618 16:SS:10
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Class: Z*****

4nitial P9l: JS26

Final P9l: JS26

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aee in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aee in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U1J7062S1366	626666	6266	U117JU271666	U1U83627666	U6LUU32U666
SC-3	0S	3L7112J3766	626666	6266	38L1J20666	3L6JJ2J1666	011L827U666
Ak	J7	-S2U1LJ	0323366	6266	-S2JS60	-023U5L	-U2J013
)	11	1LJ20JJ0	JJ0S328666	1266	1L12BJSS	1L6213JUL	1LS2U808
) E	L	-626JL6	826666	6266	-626J8S	-62631J	-626J73
CR	SJ	62S681	S7327666	JS2J66	62778S	62JJ76	62S187
FE	S7	L6LS2S1L67	1J1JL127U366	3266	LJ1127J87	L3J821S3J	870S27U63
K	3L	037U2630L	J6S8SJ2L366	1266	00S12L1S0	03802U81J	0JL026S7L
. G	J0	ULS726J17	30J00ULS1766	J266	76J62B1J03	711U2B388J	U73326SSJU
. N	SS	1SJ2JS80L	S0UUL23766	12166	1SJ26U63	1S026U7U	1S121U8
NA	J3	863S2LLJ6	800S0J28766	J266	816U2S38U	8JJ32UL38	77772703S
I 4	07	62608S	U2UJ766	1S3J62166	-62J01J	-62J01J	62BU86
P	S1	62J8SJ	1LU27366	S1266	6210JJ0	623SUL	62J7773
GE-3	7J	110JSU28766	626666	6266	1131LJ2S7666	1137US27666	11S8112DJ666
CA	00	SS33S2LJS7	1J8UUS2J666	6266	SS01326706	SSS702LJ17	SS61L27810
IN-2	11S	1U6JJ721S766	626666	6266	1S7L1S27J666	1S8LJS27666	1U3806268666
IN-3	11S	S3JSJ2J366	626666	6266	S17S32L666	S338L2SL666	S0U102BL666
AG	167	-6216U80	7323366	6266	-621JS16	-6216L08	-6268SLS
AT	7S	J2LJSU7	J6723366	182J66	321J617	J26ULL	J21SL8S
) A	137	3802B70U6	73J6021666	6266	3882U0SS	3812S87J7	3802771LL
CD	111	-6267S1U	62UJ766	6266	-6267LJ1	-626U760	-6267LJ1
CO	SL	62U6U0	U0327666	0J2J66	6213880	6218U5L	62SU08
CZ	U8	-6217J76	J8621366	6266	-621SL8	-621SU0L	-6230SU1
. O	L8	-621SLJ3	U2UJ766	6266	-6268L17	-621U63	-6217J0L
N4	U6	-620SS63	0323366	6266	-62UW0J	-62631S	-623LLS3
T)	1J1	626S1SU	U626666	7U2J66	6267USU	626718U	6266US
TE	78	626178J	62UJ766	10U266	-62668U8	626180L	62603US
TN	1J6	-6213L16	J6621666	6266	-621JLL8	-626SSJL	-6213J63
TR	88	07721U6U	JJSS8J27766	J2166	08626SUU	0802B31J6	0US27U133
gN	UU	6268J6L	L626666	JJ266	6266U3	6218706	626SJJJ
BI-3	J6L	L811L2JS666	626666	6266	L8S3U23666	L7660273666	L881727L666
v)	J68	-626S1JS	S323366	6266	-6260L18	-626SS30	-6260LJ0
I k	J6S	-6263387	3323366	6266	-626038J	-626368S	-626JULS
Z	J38	-626S6J7	1626666	6266	-626S6JU	-626S3S7	-6260UL7
SC-2	0S	1667L12U366	626666	6266	166LLS2LS666	LLS7U21666	161861263666
GE-1	7J	SSU0S326666	626666	6266	SSUULL2SU666	SS830L236666	SSU31121666
GE-2	7J	1367SS2L666	626666	6266	1J81US2S666	1316L6278666	13366820666
TB-3	1SL	1088JJ2J766	626666	6266	107SLJ2JL666	107L8U276666	1S688L2L666

Run Name: 1831860E67
I ube Numbea 11
Tample Numbea 9881311

DateV ime: 11M0V618 16:S7:JJ
) atd5: 1836L16U3L61A
Class: Zv*****

4nitial P9l: JS26

Final P9l: JS26

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aee in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aee in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T. EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U6L6UL2S666	626666	62666	U160LU2J7666	U637LL2U666	U1JL1321J666
SC-3	0S	066JJ21666	626666	62666	3L8802L6666	06JSS2L0666	3LLJS21L666
Ak	J7	70L2LU0S7	1366U267666	J2666	7UL2S11S3	7062616JS	7062671LS
)	11	31U2J070	30S1S27366	12666	3112S877	31L2L6U3U	3182L6L6L
) E	L	62L3S80	J3123366	U2L66	62UL68	62L77L	62L06UU
CR	SJ	72803L	S0U02S366	32666	72U0S8S	82LU8SL	7283873
FE	S7	L3172801J	1JS3682L766	62766	LJS62S010	L31L2U8JU	L3812ULLU
K	3L	S6L62LU8LJ	J3LSU72U766	12166	S6LJ21SU6	S63J21306L	S10U2S76U
. G	J0	76LJ2887J	3SJ60726366	62766	76SU26S76	76732U138	710721LL67
. N	SS	1712JS61	U17782LU766	12666	17J21LJSL	17J2L7787	1U82760SU
NA	J3	LS8U271L7	1613SU32UJ366	12166	LS312U887	LSJ32878S	L76S2SL18
I 4	07	SJ201J6	7LU271766	02666	S627S77U	S02LS73	S1267616
P	S1	J21L0LS	11LU27U666	1J2166	J21USLJ	12L6J6S	J201U88
GE-3	7J	1136S02U766	626666	62666	1131J126666	1130US0S666	11JS772S666
CA	00	SU03L2J768	1JL80L23766	J2166	SSJ0U273SLJ	SU3U2S38JU	S776U26767
IN-2	11S	1S8U8S218766	626666	62666	1S7LJL2L666	1S780S2J666	1U6J862S666
IN-3	11S	S368J23366	626666	62666	S1J302UJ666	S01762L666	S38032L666
AG	167	62L10L3	1J76216366	1U2666	62L3SU7	627S881	126S636
AT	7S	U280L6	0L62L7766	U2666	U2687J	721731S	7267J8S
) A	137	3L72L37LU	7S03J2L366	12666	06021J3L8	3L021JJ3S	3LS2SU7S0
CD	111	12L616	3J120366	82L66	12L8LJ7	12L8S1L	12L1S83
CO	SL	J26SSJ	J8U72U766	32L66	J266SL	J2636S3	J28S0J
CZ	U3	782U1UL	U66J02S7666	32166	862L00S0	7U2J88J	7U2L6176
. O	L8	32L8SU3	JS86231766	02666	32SUS08	32SJ803	32J71L8
N4	U6	U2L6S7J	J6762UJ366	132166	U2L718	U27318L	7288816
T)	1J1	32L67J	18U621L366	162666	32J18LU	02U6U0	32L1JSS
TE	78	0216818	16123366	132666	32J1600	026116	0261366
TN	1J6	32LSL03	J016231766	02166	32L166	32L767	327L6JJ
TR	88	08U2S0JL	JJL36621S366	62L66	0L12U718	0832S0730	080271J3U
gN	UU	36261L03	3JU627766	L2666	3127SLSS	JU2611J8	312870S
BI-3	J6L	L78U7278666	626666	62666	L70J728666	L7706216666	L803S2U666
v)	J68	S2SSJU	17SU82U366	J2666	S2773S	S2JJS1	S2JSSL3
I k	J6S	62LU676	J3UU27366	S2166	62LJ06	62L637J	62L8U66
Z	J38	628S38	J81728366	U2666	628006S	628S788	62L50J1
SC-2	0S	LL68J2L666	626666	62666	LLUU7261666	L80382J666	LL10J270666
GE-1	7J	SS6001273766	626666	62666	S086812S1666	S083S12J8666	SS08LJ21666
GE-2	7J	13633027J666	626666	62666	131L382L666	1JL61320666	1366SJ213666
TB-3	1SL	10870S263666	626666	62666	108U1J216666	10LUSL213666	107LU27U666

Run Name: 1831860E67
I ube Numbea 1J
Tample Numbea 9881311

DateV ime: 11M0V618 16:SL:36
) atd5: 1836L16U3L61A
Class: D*****

4nitial P9l: JS26

Final P9l: JS26

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aae in ppb, exdept 4nteal TtanMadV, C, v, T anMCK aae in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U6880S273666	626666	62666	U1616L2SJ666	U16370261666	U6U6S32U666
SC-3	0S	061J821666	626666	62666	3L7S0216666	063U028666	06JUS29666
Ak	J7	-S206USU	0323366	62666	-U21W0J	-U218L1J	-328U813
)	11	J3L206SU1	JUL1J26666	62.66	J012J018S	J372SL378	J382.81J6
) E	L	-62JS11	J2UJ766	62666	-62J7LJ	-621LS0	-62J787
CR	SJ	12S7JS	160627366	L266	1216S1	121760S	62L677
FE	S7	870S26J10	117L0827366	62766	876627S70U	88112770S7	87J027006
K	3L	0J1U2L613	J6688627666	62766	01812J3J8	0J062507L8	0J827LL13
. G	J0	UUL82JSJ7L	3333L0213366	62066	UU7U28710L	UU8U28JU7	U731260J6
. N	SS	103278SS1	SJ61621S366	12166	1002078J3	10028JSJ7	10J26JSJ7
NA	J3	7U8726U7J	81701326U66	62666	7US82138L	7U7S26LL11	77J72.671U
I 4	07	-62J01J	626666	62666	-62J01J	-62J01J	-62J01J
P	S1	6200L8	J3621366	1S2166	62U8J1	6218S3L	62813U
GE-3	7J	111SSJ207666	626666	62666	11616L27666	11113S261666	11301J273666
CA	00	S0076271168	1J3U0L2.7666	12166	S0U332J73U	SS60J20L3S3	S373U21J33
IN-2	11S	1U681126S366	626666	62666	1U6S132U666	1U33U52.8666	1SLSS3260666
IN-3	11S	S061L261366	626666	62666	S3LS12U666	S377126L666	S03302L666
AG	167	-62L8L1	8323766	62666	-6280LJ	-6280US	-621J717
AT	7S	J27LLSU	J1826666	82766	J2U81J	327U78	J2L37L
) A	137	3U82LS0J0	711LU26U666	12666	3U271J8	3U8271SL0	37S277SSJ
CD	111	-627LJJ	626666	62666	-627LJ1	-627LJ1	-627LJ1
CO	SL	6216U1S	SL32U766	U72.66	627131	621LU06	628S670
CZ	U3	-621USJ0	JL621366	62666	-621UJ3	-621U301	-6211U68
. O	L8	-6210107	8626366	62666	-621JUJU	-621SU66	-6210J1U
N4	U6	-628S61	U323366	62666	-62U113	-62J038	-62UUS6
T)	1J1	-62J786	J323366	62666	-621370	-62630U1	-6263S6S
TE	78	626S3UU	12SS366	JL266	620073	626001J	6267J1J
TN	1J6	-62180J6	17U2J766	62666	-621LS11	-6217717	-6218633
TR	88	0S32161U3	J17308210766	62666	0S62J6SU	0SS2U0677	0SJ203SS
gN	UU	6218U68	7626366	17S266	-628877U	626L786	62608J6
BI-3	J6L	L70US27366	626666	62666	LS1U628666	L811021S666	LL1J62L666
v)	J68	-62U188	J626666	62666	-62U0L7	-62US67	-626SSUJ
I k	J6S	-62068L	1U2UJ766	62666	-6263LJL	-6263LSS	-6260380
Z	J38	-6263766	S626666	62666	-626S610	-62633UJ	-626J7J0
SC-2	0S	16687J213666	626666	62666	16168726666	16118726666	166301261666
GE-1	7J	S0LS81216666	626666	62666	SSJ0682U666	S008JL20S666	SS1S6S2L666
GE-2	7J	13171320366	626666	62666	13J67626S666	131J3J20S666	131837263666
TB-3	1SL	10731L2J3766	626666	62666	10U7JS21666	107J682L666	1086JS21666

Run Name: 1831860E67
I ube Numbea 13
Tample Numbea 9881311

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Class: R*****

4nitial P9l: JS26

Final P9l: JS26

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aee in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aee in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U67S7S270366	626666	6266	U167702L666	U1J80321666	SLL16L23666
SC-3	0S	38L6L2J366	626666	6266	3886J2U666	387L12.7666	3L13320666
Ak	J7	0J7250110	7JUS23366	3266	00J2L3J6	01S201U56	0J02037J
)	11	JSU2731JJ	J8SS12L366	1266	JS3208USS	JSU20U30	JU62J3878
) E	L	627LJ0U	1LU2UJ766	13266	62U6JL	62J73S3	6203S7
CR	SJ	132J0100	8L03266766	U266	1321S81J	1321JL8L	102J3U36
FE	S7	8JLU2036L	1680LL2J7366	J266	86U2B67SJ	8077280303	8307287831
K	3L	SL80213081	J71L0S203766	6266	SLU321U0	SLLJ2L0L7	SLLU2L3JJ
. G	J0	USS32783JJ	31U8U2UJ666	1266	U0872U33S	UUS27636L	US102783J3
. N	SS	10J26L7J	0LL1S2.7666	1266	10127SLUL	1062.U1U3	1002678S
NA	J3	L16L2JUS8	L3LUU28666	6266	L60L27U8L	L11L266S1	L1SL27LLU0
I 4	07	0L2S0J3	73327766	8266	0L20SJS8	S32SUS3	0S2J03U6
P	S1	162J8JS8	S081218366	S2166	162LSUJ	16218068	112JU860
GE-3	7J	1160372S366	626666	6266	1678312U666	1110U827666	11J611273666
CA	00	S630L2JU08	1131U72J3666	12166	S60JU206L7	0L7UU2SL83L	S68SS2J0668
IN-2	11S	1SU8L327766	626666	6266	1S08SL2S1666	1S88JL2S1666	1SULL12U666
IN-3	11S	SJ3172L766	626666	6266	S16LU2S0666	SJ37J2.6666	S308J27S666
AG	167	162L361	1J8LL2J366	1266	11216S03	16236U3	1120JLU
AT	7S	0287S6	3J320366	32766	02J11SJ	02SS667	0266L1
) A	137	3072BLU00	US61623366	1266	3082LU60	3S62.S13U	3002101L3
CD	111	62L86L	1S723366	82.66	623UL1	62.8838	62BU8L7
CO	SL	S32771U6	SS3SJ208766	1266	S02JS380	S02JWUL	SJ230UW
CZ	U3	162L87L	8JLL2J366	J266	16281S8	162SJ6U8	162L011
. O	L8	16256L30	UL012.S666	3266	1628S730	16201S81	162JS087
N4	U6	1627J131	36U72L766	L2.66	112.3SL1	162667SU	162J60S
T)	1J1	12J8663	UU276366	162766	12JS0SS	12JS717	12J837
TE	78	J2S3L1	S72SS366	112066	J200U7	J2667SS	J266LS6
TN	1J6	L278S61	S88120S766	72766	L27LJ07	162S3SL7	L2JU5L
TR	88	0JS28J77	1L7UL32L666	62.66	0J8276630	0JU28867	0J121SLL1
gN	UU	16U2SL67	11JU2L.666	12.66	1672731J8	160203177	16U2J1017
BI-3	J6L	LU77726766	626666	6266	L037S2.8666	L777627666	L81802S7666
v)	J68	J2.31U0	LJU823766	J2.66	J2.63J7	J2738J	326178J
I k	J6S	62U316	LS3206766	82.66	628S16	62J73L	627U86
Z	J38	S21063U	1S06L2L.666	1266	S21J830	S21LL6S	S2L376
SC-2	0S	L87602J1366	626666	6266	L88UJ2J7666	LLJ332.6666	L861U27666
GE-1	7J	S0S0J827766	626666	6266	S070S32U666	S076S12J6666	S0177L2J666
GE-2	7J	1J8J1L2L366	626666	6266	1JS8102J666	1JL6S32S1666	1JL78L2U666
TB-3	1SL	100LJ320366	626666	6266	101S0820666	1008312J0666	10838L2.S666

Run Name: 1831860E67
I ube Numbea 10
Tample Numbea 9881311

DateV ime: 11M0V618 11:63:07
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Class: . *****

4nitial P9l: JS26

Final P9l: JS26

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aae in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aae in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	SLL6UL276366	626666	6266	SLJ0812J0666	U60S3U2J666	U661L127S666
SC-3	0S	3LJ8328766	626666	6266	3LS8026666	38LLJ20666	3LJ732J666
Ak	J7	3L72U8JU0	U83127L766	12.66	38L2JS88J	0632UJ3S	0662JU70
)	11	J782UJL	36JUL2B366	12766	J832.88US	J7S2J8J	J7U2.7S3L
) E	L	62673L	1L723366	172766	62US71	62U7LS	62J8S6
CR	SJ	1325U0S	8L7U2S766	32066	132J3760	1320876S	1026U3S
FE	S7	8SJ625UJ	11J08S20766	1266	83LJ2B3U3L	8SSS278U68	8U13267706
K	3L	U1JU2L103	J8681026766	1266	U6182JL30	U17728UUL	U18320S8J7
. G	J0	U8772J306S	33S6S323366	12066	U7US27071U	UL082J3L3S	UL17271SUS
. N	SS	1S02J67U6	S073U20666	6266	1SS2LLL7	1S32.81J7	1S0201S0
NA	J3	L3SL26JJ80	L7107J206766	12066	LJ1625U36U	L06U27L87J	L0SL276U7S
I 4	07	SS23SUJ	83328766	102.66	0727L8J8	SS2J7LL	U0286SL
P	S1	162J6W1	S0L02SJ366	J2766	162JLJ3	162J8817	162761J3
GE-3	7J	116J3S2S3766	626666	6266	16LS002J666	111SJ7231666	16LU8S218666
CA	00	S361726LJ77	118L3S26J766	12166	S316S2J363L	SJ06L2JL0LS	S3S3S2.SJL7
IN-2	11S	1U1L102.0766	626666	6266	1S7S3S27L666	1U3J6266666	1U088827S666
IN-3	11S	S17U32J3666	626666	6266	S680U27666	SJ68127J666	SJ3U126666
AG	167	162LS78	1J7U2J766	12166	1126J71L	11216L70	1626S603
AT	7S	S2J8133	3L82J7766	S2166	S2USSU	S2LUUL	S20J1LS
) A	137	3U7211SJ	U86612J3766	12166	37J2JUUL	3UU270837	3U02SLS6
CD	111	1267UU	18026666	J266	1216LL3	126ULJS	126S6UL
CO	SL	S321LJJ0	S017128366	3266	SS23L77	SJ26U71S	SJ21UL81
CZ	U3	16230S61	81UL2J766	U2166	11268801	L2SS16	L2L1S3
. O	L8	1621SUUL	UU0820666	3266	L277837	162UJ8U1	162U36L
N4	U6	11216J0U	310620S766	12166	112607L7	112J3U3	11266S7J
T)	1J1	126171J	U3U276366	132166	121830J	121U06U	126388
TE	78	J21S778	SU28766	82.66	J218LU	J2603U3	J261671
TN	1J6	1620608S	U171257766	3266	16261JL6	16261LL	16211LU
TR	88	00827JJ81	J6W372.3666	12166	0S028LU7	0032613UU	0072US6L
gN	UU	16L20836	110702.0666	S266	1132J38U7	1132618U6	16J2687U3
BI-3	J6L	LSSL7208366	626666	6266	LS6762JL666	LS87U206666	LS80S27U666
v)	J68	3263861	L07828766	02766	326SJLL	J268L03	32171U6
I k	J6S	626UUL7	L0U20666	8266	6260U80	6266668	62607LL
Z	J38	S2JL0S	1S773237766	J2766	S2J638U	S2L6J1	S21L0J8
SC-2	0S	16JJS260766	626666	6266	LLLJ826S666	16J70726L666	1606L7206666
GE-1	7J	S3867L2J1666	626666	6266	SJLSL02JS666	S0JL78270666	S01UU2J0666
GE-2	7J	131S182U366	626666	6266	1JLS872U666	13171U27U666	133JSJ27666
TB-3	1SL	10076123366	626666	6266	1013882JS666	10UUJ2J6666	10U6LS26S666

Run Name: 1831860E67
I ube Numbea 1S
Tample Numbea 9881311

DateV ime: 11M0V618 11:6S:SS
) atd5: 1836L16U3L61A
Class: ZK*****

4nitial P9l: JS26

Final P9l: JS26

DF: JS26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aee in ppb, exdept 4ntenal TtanMadV, C, v, T anMCK aee in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	U667UL2J666	626666	62666	SL7S6U261666	U6387L2I7666	U66LJJ2I8666
SC-3	0S	3L6UL207766	626666	62666	37018276666	0616S2I7666	3LU802SU666
Ak	J7	-U2I1U66	3626666	62666	-S2JL3S	-U27SL31	-U2I1SL30
)	11	L72I0L3J	1J7832S766	32I66	1662S38U7	LU27LL6	L027JL06
) E	L	-62613SL	S23366	62666	-62616UJ	-626168L	-6261LJ8
CR	SJ	62I6636	0U32S766	1S2766	62I1U6	62I6US7	62I6S77J
FE	S7	18SU250616	J00L126U666	J2I66	18L826S7J	18J62661SU	18S627I366
K	3L	L172S3U8	S68S827666	S2I66	LU2611S1	8862I3S0S	L6J2S1068
. G	J0	10U62I88UJ	7166L2I6366	02666	1S6L2I1LLJ	13LS23SSS	107S26I6S6
. N	SS	312I137U	111612J666	S2I66	33207JU	362SSSJ	362I380L
NA	J3	1UW72L8U3	1781782.3766	J2666	1U782BU07L	1S8L268776	1U1S20306
I 4	07	626J1JJ	U2UJ766	3U3S2066	-626J01J	-626J01J	62.11L6
P	S1	-626683S	0323366	62666	62668S3	-626SSSS	626J1L7
GE-3	7J	11671S2J766	626666	62666	16L10620666	11166028666	11J66J2SU666
CA	00	117UU28LU7	JUSS72.8766	62666	11ULJ27S866	1177L2L8LS	118J82S1J6S
IN-2	11S	1SS33S2I366	626666	62666	1S6SL72SS666	1S3UU626666	1U170L2L666
IN-3	11S	SJJJL27L766	626666	62666	S16LJ203666	SJJ8U2I666	S33162US666
AG	167	-626L6U8	L626666	62666	-62686J3	-626L6L1	-62I66L6
AT	7S	62I6660	0026666	012I66	62JUUS	62I6L778	62I0S7L
) A	137	81266LUJ	1S1182L366	02666	8J20387	8327JL0	7U26S067
CD	111	-6267673	123366	62666	-626S37U	-6267LJ1	-6267LJ1
CO	SL	-62IUSL1	1L320366	62666	-62I0S6L	-62I6L886	-62I6S380
CZ	U3	-6201U00	1UU27366	62666	-626SJUS	-626S3J1J	-626U0S0
. O	L8	-62ILL1S	0626666	62666	-62I8JJJ	-62I8063	-62I311L
N4	U6	-620LL6L	3626666	62666	-6260711	-626S707J	-626S7S03
T)	1J1	-626068L	1U2UJ766	62666	-626S0SL	-626SS16	-626I1JL8
TE	78	626188J	62UJ766	108266	-62668U8	6260711	626186J
TN	1J6	-62ISUL7	18U27766	62666	-62IU110	-62IJ68U	-62688L1
TR	88	L82.3661	0SL182I6666	12.66	166271US0	LU2.6J13	LL2I7I3U
gN	UU	-6260U6J	0323366	62666	-62IU11L	62I13S1	6266LUJ
BI-3	J6L	LS1612U6766	626666	62666	L3U1J2I666	L3S0L28666	L810J2BJ666
v)	J68	-626U6U6	J323366	62666	-626S8JJ	-626U0L1	-626S8U8
I k	J6S	-626067U	1U2UJ766	62666	-62603U6	-6263L13	-6263LSS
Z	J38	-62608L7	1323366	62666	-626S3S7	-6260311	-626S6JS
SC-2	0S	L8J012J666	626666	62666	LSSJ626S666	L706126666	1618612I666
GE-1	7J	S01L8L26666	626666	62666	S3L8L02I666	S06S7828666	S0S0LU2.1666
GE-2	7J	1J76JU26J766	626666	62666	1J086U20666	1JU381278666	1JL88L2LU666
TB-3	1SL	1038U72I7666	626666	62666	106783261666	10S6US2IS666	10S7S32IS666

Run Name: 1831860E67
I ube Numbea 1U
Tample Numbea 9881309

DateV ime: 11M0V618 11:68:63
) atd5: 1836L16U3L61A
Class: *****

4nitial P9l: S626

Final P9l: S626

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aee in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aee in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	S8J3SJ21366	626666	6266	S81S6S28666	S7738L28666	S881W218666
SC-3	0S	3LJ1L2U866	626666	6266	3L0L3271666	3LU8020666	380862.0666
Ak	J7	162JS16	36320666	J372.66	372SU011	-326873	-32866L
)	11	J61250618	JJ18J2.8766	J2766	1LL237613	J672J031S	1L72J67JS
) E	L	-626017	723366	6266	-626111	-6218S8	6267J6
CR	SJ	62JS13S	7U6211766	07266	62LS8S0	62JSS08	620663
FE	S7	8USL210SSU	1101672LS766	J2166	8U31280JJ6	80L12J106U	88S02J8601
K	3L	01W2J7U86	1L388S2.6666	3266	0108280U8	0603267S3	0JLS273818
. G	J0	UU6621LU83	3J166U2SU666	J2166	US1626J16	US332SJJ0U	U7S72USL0
. N	SS	1002J7LL6	S11J721366	32.66	10026308	13L2103LU	1S62LJJS
NA	J3	7S7L23SUU	787U7J2.3366	J266	7SJ827J6L3	70302.8LUS	777023LJ8
I 4	07	J237S0	3U2J7366	J6L266	U2LU68U	-62J01J	-62J01J
P	S1	6267US	JSL2J7766	J62.66	620870	621118	62U36J
GE-3	7J	11600621366	626666	6266	116S8J27666	1687L723666	111L01280666
CA	00	SJUW28L31	1183S32.8766	12166	SJU628SJL	S3JL72166U	SJ636281LL
IN-2	11S	1SS706251666	626666	6266	1S0L362U666	1SU6SU21666	1SUW302U666
IN-3	11S	SJ6S72J366	626666	6266	SJ63326666	S60L82J666	S3U12U0666
AG	167	-62LS3U	8323766	6266	-62LLJ3	-626033J	-62103S1
AT	7S	3217L1L	J0123766	JL2166	021866J	3217S88	J281UL
) A	137	3U62113SL	UUUU21366	12.66	3SU2U0U80	3UU276L70	3S7218018
CD	111	-620S77	S23366	6266	6268JS	-62UU80	-6267LJ1
CO	SL	621L178	USU271666	3U066	623SJ08	623S373	621UL10
CZ	U8	-621LSS3	JSL28666	6266	-62136SU	-6237U83	-6237LJ6
. O	L8	621L88	18621766	1S7J2.66	6237778	-621766	-621611J
N4	U6	-626313	8323766	6266	621LJJ	-621LU0	-62031U7
T)	1J1	621108	0626666	SJL266	-62110J	628637	-62630S1
TE	78	62SS7L	12SS766	S72166	6270S3	6218LL	6267380
TN	1J6	-623JS7	JSL2J7766	6266	626808	-6208L6	-626S736
TR	88	00S27633	J6S8JJ2S766	J2.66	0032J868	0S72LS0J7	0302J8U
gN	UU	126JS8	1S3230366	082166	120S6L	62UJ03J	6238333
BI-3	J6L	L037726766	626666	6266	L00S120666	L068023666	L0SL721S666
v)	J68	6213J66	U63237666	J1266	621U3L0	62168J3	621J380
I k	J6S	-623UW7	JU2UJ766	6266	-62JSL7	-6203UW	-6263LJ3
Z	J38	-623S10	S323766	6266	-626SJ1	-626S616	-626S61J
SC-2	0S	L8S1L211666	626666	6266	L8WL28666	LLJ0321666	L7U832.0666
GE-1	7J	SJL0J327366	626666	6266	S360862.7666	SJUUS621S666	S3110626666
GE-2	7J	1JU0S72SJ666	626666	6266	1JU763218666	1JSSLJ2LS666	1J767U03666
TB-3	1SL	1033S120L766	626666	6266	101S0820666	10JJU21S666	10W7L26666

Run Name: 1831860E67
I ube Numbea 17
Tample Numbea 9881310

DateV ime: 11M0V618 11:16:13
) atd5: 1836L16U3L61A
Class: *****

4nitial P9l: S626

Final P9l: S626

DF: S26

v d9t9d9l: DOD-Z0

N9te: All Analyte values aee in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aee in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	SL1LJ72L366	626666	6266	SL3LJ0261666	S8S7832SL666	SLU6732L8666
SC-3	0S	3L0772L3666	626666	6266	3L6SJ27S666	3LJ0326L666	0613S2SS9666
Ak	J7	-32SL1L6	7323366	6266	-32I0S6S	-02SU73	-32I73L3
)	11	J132I770L	J3U82SS766	1266	J112L886U	J1727J617	J162J0JS
) E	L	-62J1LJ	323366	6266	-62160U	-62J7S8	-62J773
CR	SJ	62SUU6	76U271666	3266	62SU0J6	62S031J	62S860L
FE	S7	80JU6SU37	11177U00666	12L66	8S172L001	8087236SU	8J732J001U
K	3L	06JL27S86	18LJ772L666	1266	06S1263SJL	06U721J33	3LU2L7L86
. G	J0	U0S727J0S7	31U18623666	12I66	U07U27017	USJ023J6U	U37J27U707
. N	SS	13L2U6U1	0L7U2L7666	12I66	1012I31J7	1062I1876	1382I318S
NA	J3	73S728163	77616S2L366	1266	73SU2L8711	70SS273U	7JU628J3U
I 4	07	62I3U88	1626666	080266	-62J01J	-62J01J	12SS73L
P	S1	620SSJ	JJU27766	1J266	627U66	62LU0	62U38J
GE-3	7J	116JJS2J666	626666	6266	1681732J3666	1117162J1666	1167LJ2J666
CA	00	SJJS27S6S0	117J3127U666	1266	SJ8712686L	S1S38278J6	SJ38U2US3J
IN-2	11S	1S006U23666	626666	6266	10L7SS2U666	1S0U0L2J1666	1S881S2J666
IN-3	11S	S1UL627766	626666	6266	S1J0J23666	S171328666	SJ11S27J666
AG	167	-62I3U7J	3U2U766	6266	-62I0J33	-62IJS6U	-62I0J77
AT	7S	J27JU11	J6026666	1L2I66	J2I30S0	J2UU8S	32I7UL3
) A	137	3UU26016	UU3S2L6666	1266	3S7276767	3U72L0J0S	3U12UW77
CD	111	-6267683	123366	6266	-6267LJ1	-626S067	-6267LJ1
CO	SL	62I716L	U3327666	J12766	62I63U8	62IL7S6	62I1J6L
CZ	U3	-62I1SU8	J062I366	6266	-62I6778	-62I030J	-62I80LS
. O	L8	-62I83J3	S626666	6266	-62IL8JL	-62I8317	-62IU8J1
N4	U6	-62ILLUS	8320366	6266	-62I16J6	-62I1010	-62I70U6
T)	1J1	-6266370	3323366	6266	-6263JS3	6263J83	-62611SJ
TE	78	62JL68	62L666	1S1266	6267701	-62668U8	62618S1
TN	1J6	-62I0U0S	1L62I666	6266	-6261LS7	-62I1L76	-62I1667
TR	88	037271U01	J66L332J7666	1266	036266U7	00127SS87	0012LJU8
gN	UU	627J771	1J320666	J72L66	62L88L	6266310	6278111
BI-3	J6L	LS0L728666	626666	6266	L0U372JS666	L0L1626666	LUU002L666
v)	J68	62I6611	S132S766	82766	62I638L	62L61L	62I6UU
I k	J6S	-620USL	323366	6266	-62086S	-6203UU	-62086S
Z	J38	-620L63	1323366	6266	-626S61J	-626S613	-620U80
SC-2	0S	L8S8628766	626666	6266	LU31S2J1666	L83082S666	16167726666
GE-1	7J	SJ778027366	626666	6266	SJJU6U2J6666	SJ33732I666	S373702I666
GE-2	7J	1JU1S02I766	626666	6266	1J01162S7666	1JU30L2I8666	1J86602J666
TB-3	1SL	103U802U666	626666	6266	13L3072JS666	10SL8123666	10U6JU26666

Run Name: 1831860E67
I ube Numbea 18
Tample Numbea 9881312

DateV ime: 11M0V618 11:1J:J1
) atd5: 1836L16U3L61A
Class: *****

4nitial P9l: S6Z6

Final P9l: S6Z6

DF: S6Z6

v d9t9d9l: DOD-Z0

N9te: All Analyte values are in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK are in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	SLWSJZ7366	6Z6666	6Z66	U6U0USZS8666	SLJLSUZSS666	S8L3302L666
SC-3	0S	3L036Z1366	6Z6666	6Z66	3L6LJZL666	3LL7S20666	3LJJ3211666
Ak	J7	-S2S03L	03Z3366	6Z66	-S2S3U8	-U2J7J17	-0ZS0LJ
)	11	JJJZUB7J	J07362.3666	JZ766	J1U2U686	JJ3Z68L18	JJ8Z0117
) E	L	-6Z6077	7Z3366	6Z66	-6Z1166	-6Z160J	6Z66711
CR	SJ	6Z03LJ	U36Z3766	1L2J66	6ZS781	6Z00U6J	6ZSJ7LJ
FE	S7	8LJU633S0	118JU72.S366	12J66	8LJ8ZLS33	881L2J3UUU	L636ZU8U
K	3L	0J7LZ78UU	J661UU28766	12J66	0J37Z03JU	0JU3ZSU3J	0338ZU38J
. G	J0	U863Z06633	33J7682J766	6ZL66	U8J1Z70L7J	U7S82.6SL8	U8JLZ0SJL
. N	SS	10SZJ3U3	S178L2JS766	1Z766	100Z73UU	100ZJJ38	108Z57080
NA	J3	78312.637L	8186J0Z1766	1Z66	7833ZL30SJ	77S1218J8U	7L16ZL3LL
I 4	07	-6ZJ01J	6Z6666	6Z66	-6ZJ01J	-6ZJ01J	-6ZJ01J
P	S1	6ZJ3U3S	176Z1666	LZ66	6ZJS8U6	6ZJJS0	6ZJ37LJ
GE-3	7J	116U6J2J766	6Z6666	6Z66	116608Z57666	11J66J2J0666	16L7SS2J7666
CA	00	S0073Z08LL	1JJSLO2.6766	JZ66	S00UZ7U76J	S3130ZS733	SS81UBJJU0
IN-2	11S	1S088JZUB66	6Z6666	6Z66	1S3S67ZS8666	1S3L83Z7666	1S71SUZ0666
IN-3	11S	S1JLS2J766	6Z6666	6Z66	S66872.0666	SJ0J7ZJS666	S137JZL666
AG	167	-6Z100L0	JU2J766	6Z66	-6Z110U6	-6Z1U61L	-6Z1U66J
AT	7S	3Z1L76S	J33Z3366	1S2766	3Z1UU0	3ZUS67	JZ6L00
) A	137	383ZSLLOU	76J7JZ6766	1Z066	388Z67U7	378ZJUSJ	383ZBUJ6
CD	111	-6Z67LJJ	6Z6666	6Z66	-6Z67LJ1	-6Z67LJ1	-6Z67LJ1
CO	SL	6ZJL77	S8UZ7666	1UZ66	6Z1USU	6Z16686	6Z171LU
CZ	U3	-6Z37U8S	1L3Z0366	6Z66	-6Z036J3	-6Z3731L	-6Z3J713
. O	L8	-6Z1L3SS	03Z3366	6Z66	-6ZJLJ3	-6Z1U877	-6Z18JUS
N4	U6	-6Z07078	3UZJ766	6Z66	-6Z57316	-6ZJ7S6	-6ZJ37J
T)	1J1	-6Z16U0	36Z6666	6Z66	-6Z31S1	-6Z11L1	6Z110L
TE	78	6Z076L	1Z3366	1S7Z66	6Z1311S	-6Z68U8	6Z1886
TN	1J6	-6Z1638J	J13Z0366	6Z66	-6Z17JLJ	-6Z68JJ7	-6Z6SU8
TR	88	07JZ7SJ8U	J1SJ8S2S766	1Z66	07LZSJ7LS	0U3ZS1U33	07S2J10JL
gN	UU	6Z77J8S	1JU2J7666	3LZ66	12J7L8	6ZS80U1	6ZL6SLU
BI-3	J6L	L7J3UZS366	6Z6666	6Z66	L7S782L8666	LS8SSZ3666	L8J702.S666
v)	J68	-6ZU67J	J3Z3366	6Z66	-6ZS8U3	-6ZS80S	-6ZU667
I k	J6S	-6Z0UU3	3Z3366	6Z66	-6Z0378	-6Z086S	-6Z086S
Z	J38	-6Z0U87	J6Z6666	6Z66	-6Z06J6	-6ZS617	-6ZS6JS
SC-2	0S	L8WU07366	6Z6666	6Z66	L8177Z63666	L88812U666	L88J12J3666
GE-1	7J	S3LU682J1666	6Z6666	6Z66	S0U8S1Z7S666	S380JLZ08666	S33S002J666
GE-2	7J	1J7S03Z8766	6Z6666	6Z66	1JUJ7JZJ666	1J7086ZS3666	1J807UL.1666
TB-3	1SL	1003J72.8766	6Z6666	6Z66	10J0JZ6666	100833ZS666	10S7JJZ1666

Run Name: 1831860E67
I ube Numbea 1L
Tample Numbea **CCV**

DateV ime: 11M0V618 11:10:36

N9te: All Analyte values aæ in ppb, exdept 4ntenal TtanMadV6, C, v, T anMCK aæ in d9unts peosed9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	S813002L366	626666	6266	S8J8782L666	S7L86L2J0666	S813002LS666
SC-3	0S	378JS2L0366	626666	6266	37U68273666	37SU820666	383662JU666
Ak	J7	J71S2J730	0017J2L7766	6266	J7JJ2038L	J7672S3L17	J71U2L8LU
)	11	3JS2L030	3386L26666	J266	31U281SU	33J2J7117	3J82J3736
) E	L	J72L177	US32L366	J266	J72J0SUS	JU2S366	J8217UU
CR	SJ	J7U2S116	1U81J2L3366	6266	J7S2L07J	J772J57J8	J7U2L6136
FE	S7	JUL82L3331	300172L3366	6266	J71J200J7	JU702L3016	J76L2BJ1SS
K	3L	J76U230L3	1JSJ682J666	12166	J7J62J3U1	J7JU7SJ10	JU762JL6S
. G	J0	J7J82UL6U	1J8J302J366	1266	J7J12UL77	JUL12UW7J	J77J2I70U
. N	SS	J73257JS1	L313U70766	6266	J7327S06	J7S2J0J01	J7127LL73
NA	J3	JSJ62JUU8	JU6U8U2S666	6266	JSJ62JU11U	JSJ02771J1	JS1U2707U7
I 4	07	JL12L0777	0176273766	0266	3672UUUS	J882J3176	J7L2L00U7
P	S1	J7U28773	13U7J726766	1266	J772UUU8	J7L2L636J	J712L30L
GE-3	7J	168J172J766	626666	6266	16UL602S666	16UL602U666	1168032B7666
CA	00	J71121106	U6J12J3366	0266	JSLJ27SJ11	J8312L7S33	J7682B6U7U
IN-2	11S	1S36LL2L7666	626666	6266	10LUS2S1666	1SSS0L2L8666	1S068L27J666
IN-3	11S	S60S82U666	626666	6266	S6U072LU666	0L0UL28666	S1JS72S0666
AG	167	J728S0J	31J7S28666	12166	J72U0LJ	J72S78S3	J821J86
AT	7S	J7L2001L	17L072L666	32166	J732008J	J8L2S7807	J7S206LJ7
) A	137	J7027J168	0LS1J27L766	32166	JU027U306	J812J3SS1	J782LU033
CD	111	J821810L	038U2S666	32166	J72J630U	J82JS7U	J82S1SU
CO	SL	J7L2L6U88	J7S7SU2L8666	6266	J782SSJ1	J8127LL01	J7U2U6J
CZ	U8	J7S2L8LL8	J66U82B3666	J266	J7628J11	J8J27U611	J702BJ776
. O	L8	J72S016	171702L366	1266	JU2L636	J72037S	J727J8JU
N4	U6	J8J27088L	706J82S1766	J266	J782JSJ6	JL62B7L1S	J7820J33
T)	1J1	J826838	1JU7J27366	3266	J82J010U	JL2SSU1	J72J867
TE	78	J723J00	UJ2L366	3266	J7261JS	J2S606	J720SU8
TN	1J6	J72LJJS	1S30J2J766	S266	J72J3UU	J82SUS	JS2783JU
TR	88	J72SU81	1JSJ2S8766	U266	JS2UUSL	JL2SS6S7	J82JS178
gN	UU	J832LSSL	J8LSJ2L8766	J266	J8U273U17	JL62U607	J7027L613
BI-3	J6L	LJ8LL2U866	626666	6266	L1J702J666	L3S862L666	L380J2U666
v)	J68	J72LLSS	811S32L3366	1266	J7208J6	JU2LSJ1	J72SSJ3
I k	J6S	JU2S7J0	SL0862L8366	6266	JU2USS7	JU271SL6	JU2L6JS
Z	J38	JU27L173	7U0382S7366	6266	JU276813	JU281J7	JU28S78
SC-2	0S	LU7162L3766	626666	6266	LSS162L666	LU0LS2L666	L81JU2B666
GE-1	7J	S31S8J2L6666	626666	6266	S31S3L2J666	S311782J3666	S3J6JL2S666
GE-2	7J	1J07LJ2J0666	626666	6266	1JSJ662L666	1J086S2S666	1J037J2L8666
TB-3	1SL	101U8320666	626666	6266	1010J72J3666	10171L26666	101L632L666

Run Name: 1831860E67
 Tube Number: J6
 Sample Number: CCB

Date/Time: 11M0V618 11:1U:06

Note: All Analyte values are in ppb, except for internal standards, C, v, T and MCK are in d9units per 9nM2

Element	. ATT	CONC2. EAN fppbr	Cv T . EAN	%RTD	INTEGRATIONS		
					#1	#J	#3
SC-1	0S	S7U88J28766	626666	62666	S7U67S28S666	S73381287666	S8118L20666
SC-3	0S	38761288366	626666	62666	37687283666	38LSJ20666	066US288666
Ak	J7	-U2IS3L3	3626666	62666	-72JJJ8	-S2SJ7S1	-S2811LL
)	11	7728SJ36	1603328S366	J2166	77216UU	7L21J36	7U2837U
) E	L	-62818U7	0266666	62666	-628J703	-6283U81	628677J
CR	SJ	-6286U07	33U288666	62666	-6280JLJ	-6283S13	62888U0
FE	S7	-82.8378	03283366	62666	-L2110LS	-7273880	-1628L7SU
K	3L	10213S68	111772.3366	1002866	312.U.36	1828033L	-821670S
. G	J0	-U271L80	UU2U766	62666	-U28783U	-U2U8LS	-721JJ6
. N	SS	-628J30L	1626666	62666	-628JJS3	-628LS3L	-628SJS3
NA	J3	-SS2787SJ	UU68280366	62666	-S128U80U	-SS286UU6	-U62887SJ
I 4	07	-628J01J	6266666	62666	-628J01J	-628J01J	-628J01J
P	S1	-628867L	UU2U766	62666	-628L376	-628706U	-62870U1
GE-3	7J	16863J2U766	626666	62666	16U86J28J666	16L616276666	168J8028U666
CA	00	1S21SSU6	8U2U7666	LU266	J1273780	JS281LU	-128L6U7
IN-2	11S	1SJ6LU2.8366	6266666	62666	1S6U8283666	1S680L283666	1S077J28L666
IN-3	11S	S136U28L666	6266666	62666	S1U1328J666	S1J7J280666	S16312.1666
AG	167	-62136SU	03283366	62666	-621S1JL	-6216763	-621333S
AT	7S	-621U6LL	7283366	62666	-6218J18	-6280JL6	-621S7L6
) A	137	-628U7U3	3283366	62666	-6288SLJ	-6288SLJ	-628316S
CD	111	-628786J	62UJ766	62666	-628UUU	-6287LJ1	-6287LJ1
CO	SL	-628JS3L	36286666	62666	-6283SS1	-628JS01	-6281SJ0
CZ	U8	-628UJL7	J63280366	62666	-62861U8	-62808U1	-62838U8
. O	L8	-62163SS	3U2UJ766	62666	-6213618	-621L833	-6218J13
N4	U6	-6283U7	J6286666	62666	-62111US	-621J33U	-6287381
T)	1J1	621LLJU	176286766	302866	6216877	621776J	62111LL
TE	78	628688U	621J366	1L102.66	-62868U8	6281LLS	-62868U8
TN	1J6	-6213LL6	13U2J7666	62666	-6210U76	-621UL1J	-6286388
TR	88	-6288810	16286666	62666	-628UU06	-621666S	-62887L8
gN	UU	-6216111	3U2UJ766	62666	-621U713	621J07S	-621U6LU
BI-3	J6L	L387L27S766	6266666	62666	L1310270666	LSJ83213666	LS601206666
v)	J68	-628S833	36286666	62666	-628U083	-628U1U8	-6280808
I k	J6S	-628J73U	0U2UJ766	62666	-628JL78	-6281701	-628308L
Z	J38	-6280310	36286666	62666	-6280J8S	-6280U7J	-6283L80
SC-2	0S	LS8LS287766	6266666	62666	LS66U2.3666	LSU7L28S666	L766621S666
GE-1	7J	SJ0JJ3207666	6266666	62666	SJU83121U666	SJ17S62U666	SJ068828666
GE-2	7J	1J387S288766	6266666	62666	1J178J2U666	1J33S3207666	1JU0L1273666
TB-3	1SL	10JU1U27J366	6266666	62666	10680127666	10J6L021J666	100L10218666

US EPA Tune Check Report

Operator Name US19_USR_INS27814
Acq/Data Batch D:\Agilent\ICPMH\1\DATA\EPA_Tune.b
Acq. Date-Time 2018-11-13 17:40:13
Report Comment ---
Instrument Name G8403A SG18254097

[No Gas]

Sensitivity

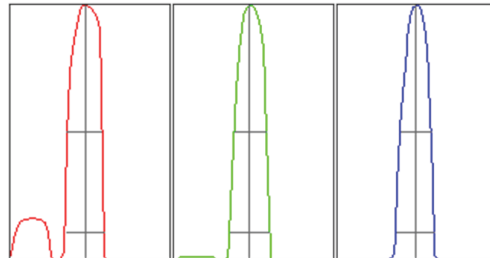
Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
7	10.00	979	9787.37			1.937	5.000
89	10.00	4097	40968.70			1.330	5.000
205	10.00	2229	22291.51			1.131	5.000

Mass	RSD% (Flag)
7	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	1008	988	972	964	962
89	4170	4138	4070	4064	4042
205	2265	2241	2229	2206	2205

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	1537.13	6.95	6.90 - 7.10	
89	6952.08	88.95	88.90 - 89.10	
205	3995.68	205.00	204.90 - 205.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.66	0.734	0.800	
89	0.61	0.762	0.800	
205	0.59	0.727	0.800	

Integration Time [sec] 0.1
 Acquisition Time [sec] 113.7
 Y Axis Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.65 L/min	Dilution Gas	0.45 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	11.6 V	Deflect	16.6 V
Extract 2	-220.0 V	Cell Entrance	-40 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	125	Axis Gain	0.9997	QP Bias	-3.0 V
Mass Offset	124	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	0.2 mm	Torch V	0.0 mm
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EM

Discriminator	4.0 mV	Analog HV	2142 V	Pulse HV	1705 V
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Mercury Data

Metals in Liquid



Mercury Run Data Report

Analyst Employee ID: 354

Data File Name: 1831204.M07

Run Name: 1831202M07

Instrument No.: 17384

Element: Hg

Reviewed By
Damary Valentin

Reviewed Date
11/08/2018 1:37PM

Method Reference Name(s):
SW-846 7470A

Verified By:
Parker D Lindstrom

Verified Date
11/08/2018 8:22PM

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

1		Burn Date/Time: 11/08/2018 05:50			
<u>Sample Number</u>	<u>Class</u>	<u>Initial Vol / Wt</u>	<u>Final Vol</u>	<u>DF</u>	
S0		1	1	1.00	
	<u>AVG (ppb)</u>	<u>Intensity</u>			
	0.0000	204.0			

2		Burn Date/Time: 11/08/2018 05:52			
<u>Sample Number</u>	<u>Class</u>	<u>Initial Vol / Wt</u>	<u>Final Vol</u>	<u>DF</u>	
S0.2		1	1	1.00	
	<u>AVG (ppb)</u>	<u>Intensity</u>			
	0.0000	1712.0			

3		Burn Date/Time: 11/08/2018 05:54			
<u>Sample Number</u>	<u>Class</u>	<u>Initial Vol / Wt</u>	<u>Final Vol</u>	<u>DF</u>	
S0.5		1	1	1.00	
	<u>AVG (ppb)</u>	<u>Intensity</u>			
	0.0000	3849.0			

4		Burn Date/Time: 11/08/2018 05:56			
<u>Sample Number</u>	<u>Class</u>	<u>Initial Vol / Wt</u>	<u>Final Vol</u>	<u>DF</u>	
S1.0		1	1	1.00	
	<u>AVG (ppb)</u>	<u>Intensity</u>			
	0.0000	7130.0			

5		Burn Date/Time: 11/08/2018 05:58			
<u>Sample Number</u>	<u>Class</u>	<u>Initial Vol / Wt</u>	<u>Final Vol</u>	<u>DF</u>	
S2.5		1	1	1.00	
	<u>AVG (ppb)</u>	<u>Intensity</u>			
	0.0000	17092.0			

6		Burn Date/Time: 11/08/2018 06:00			
<u>Sample Number</u>	<u>Class</u>	<u>Initial Vol / Wt</u>	<u>Final Vol</u>	<u>DF</u>	
S5.0		1	1	1.00	
	<u>AVG (ppb)</u>	<u>Intensity</u>			
	0.0000	33996.0			
			CorrelationCoefficient = 1.00000		
			Slope = 6726.9240500000		
			Y-Intercept = 349.2164600000		

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

7

Burn Date/Time: 11/08/2018 06:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00
<u>AVG (ppb)</u>		<u>Intensity</u>		
2.3279		16009.0		

8

Burn Date/Time: 11/08/2018 06:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00
<u>AVG (ppb)</u>		<u>Intensity</u>		
-0.0474		30.0		

9

Burn Date/Time: 11/08/2018 06:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00
<u>AVG (ppb)</u>		<u>Intensity</u>		
0.1686		1483.0		

10

Burn Date/Time: 11/08/2018 06:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00
<u>AVG (ppb)</u>		<u>Intensity</u>		
0.9695		6871.0		

11

Burn Date/Time: 11/08/2018 06:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00
<u>AVG (ppb)</u>		<u>Intensity</u>		
-0.0371		99.0		

12

Burn Date/Time: 11/08/2018 11:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00
<u>AVG (ppb)</u>		<u>Intensity</u>		
0.9325		6622.0		

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

13		Burn Date/Time: 11/08/2018 11:40				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF		
CCB 2		1	1	1.00		
	AVG (ppb)	Intensity				
	-0.0352	112.0				

14		Burn Date/Time: 11/08/2018 11:55				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
PBW	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0138	256.0				

15		Burn Date/Time: 11/08/2018 11:57				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
LCSW	*****	1	1	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	0.8306	5936.0				

16		Burn Date/Time: 11/08/2018 11:59				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882858	U*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0245	184.0				

17		Burn Date/Time: 11/08/2018 12:01				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882861	D*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0178	229.0				

18		Burn Date/Time: 11/08/2018 12:03				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882859	R*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	0.7620	5475.0				

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

19		Burn Date/Time: 11/08/2018 12:05				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882860	M*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	0.7540	5421.0				

20		Burn Date/Time: 11/08/2018 12:07				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9878815	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0378	94.0				

21		Burn Date/Time: 11/08/2018 12:09				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9878817	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0202	213.0				

22		Burn Date/Time: 11/08/2018 12:11				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9878966	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0160	241.0				

23		Burn Date/Time: 11/08/2018 12:13				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9878967	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0156	244.0				

24		Burn Date/Time: 11/08/2018 12:15				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
CCV 3		1	1	1.00		
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	0.9395	6669.0				

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

25		Burn Date/Time: 11/08/2018 12:17			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	
CCB 3		1	1	1.00	
	AVG (ppb)	Intensity			
	-0.0356	109.0			

26		Burn Date/Time: 11/08/2018 12:19			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9878968	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0153	246.0			

27		Burn Date/Time: 11/08/2018 12:21			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9878969	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0175	231.0			

28		Burn Date/Time: 11/08/2018 12:23			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9878970	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0092	287.0			

29		Burn Date/Time: 11/08/2018 12:25			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9878971	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0184	225.0			

30		Burn Date/Time: 11/08/2018 12:27			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9879107	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0163	239.0			

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

31		Burn Date/Time: 11/08/2018 12:29				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882856	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0306	143.0				

32		Burn Date/Time: 11/08/2018 12:31				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882857	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0225	197.0				

33		Burn Date/Time: 11/08/2018 12:34				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882862	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0252	179.0				

34		Burn Date/Time: 11/08/2018 12:36				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882864	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	0.0039	375.0				

35		Burn Date/Time: 11/08/2018 12:38				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
9882865	*****	40	40	1.00	183110571302	
V	AVG (ppb)	Intensity	Re-read	Re-digest		
	-0.0331	126.0				

36		Burn Date/Time: 11/08/2018 12:40				
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number	
CCV 4		1	1	1.00		
AVG (ppb)	Intensity					
0.9004	6406.0					

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

37		Burn Date/Time: 11/08/2018 12:42			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	
CCB 4		1	1	1.00	
	AVG (ppb)	Intensity			
	-0.0315	137.0			

38		Burn Date/Time: 11/08/2018 12:44			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9882866	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity			Re-read
	0.0070	396.0			Re-digest

39		Burn Date/Time: 11/08/2018 12:46			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9882868	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity			Re-read
	-0.0245	184.0			Re-digest

40		Burn Date/Time: 11/08/2018 12:48			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9883783	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity			Re-read
	-0.0211	207.0			Re-digest

41		Burn Date/Time: 11/08/2018 12:50			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9883785	*****	40	40	1.00	183110571302
V	AVG (ppb)	Intensity			Re-read
	-0.0166	237.0			Re-digest

42		Burn Date/Time: 11/08/2018 12:52			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity			Re-read
	-0.0203	212.0			Re-digest

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

43		Burn Date/Time: 11/08/2018 12:54			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	*****	1	1	1.00	183110571303
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	0.8185	5855.0			

44		Burn Date/Time: 11/08/2018 12:56			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881313	U*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0234	191.0			

45		Burn Date/Time: 11/08/2018 12:58			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881313	D*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	-0.0203	212.0			

46		Burn Date/Time: 11/08/2018 13:00			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881313	R*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	0.8317	5944.0			

47		Burn Date/Time: 11/08/2018 13:02			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881313	M*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity	Re-read	Re-digest	
	0.7959	5703.0			

48		Burn Date/Time: 11/08/2018 13:04			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
CCV 5		1	1	1.00	
AVG (ppb)	Intensity				
0.8955	6373.0				

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

49		Burn Date/Time: 11/08/2018 13:06			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	
CCB 5		1	1	1.00	
	AVG (ppb)	Intensity			
	-0.0373	98.0			

50		Burn Date/Time: 11/08/2018 13:08			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881309	*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity			Re-read
	-0.0203	212.0			Re-digest

51		Burn Date/Time: 11/08/2018 13:10			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881310	*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity			Re-read
	-0.0188	222.0			Re-digest

52		Burn Date/Time: 11/08/2018 13:12			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881311	*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity			Re-read
	-0.0206	210.0			Re-digest

53		Burn Date/Time: 11/08/2018 13:14			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881312	*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity			Re-read
	-0.0212	206.0			Re-digest

54		Burn Date/Time: 11/08/2018 13:16			
Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
9881314	*****	40	40	1.00	183110571303
V	AVG (ppb)	Intensity			Re-read
	-0.0203	212.0			Re-digest

LANCASTER LABORATORIES

Run Name: 1831202M07
 Analyst ID: 354.00

Instrument ID: 17384
 CV Element: Hg

55

Burn Date/Time: 11/08/2018 13:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00
AVG (ppb)		Intensity		
0.9092		6465.0		

56

Burn Date/Time: 11/08/2018 13:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00
AVG (ppb)		Intensity		
-0.0350		113.0		

Extraction/Distillation/Digestion Logs

Metals in Liquid

Start Time: 11/26/18 15:50 **End Time:** 11/26/18 19:30 **Hot Block:** 13

Pipette ID: I43551C /1000 JU06758

<u>Spike/Reagent</u>	<u>Lot#</u>	<u>Volume Added(mL)</u>
1:1 HCL	P18-295D	5.00
1:1 HNO3	P18-310D	2.00
ICP Spike 1A	1824912#18	0.50
ICP Spike 1B	1824913#18	0.50
LCS A1	1824912#18	1.00
LCS B1	1824913#18	1.00
Th,W spike	P18-330C	1.00

Method Ref:

<u>SampleID</u>	<u>Date Due</u>	<u>ST</u>	<u>P</u>	<u>H</u>	<u>Method</u>	<u>PH<2</u>	<u>BC</u>	<u>Vessel</u>	<u>Location</u>	<u>Comments</u>
								<u>Lot#</u>	<u>ID</u>	
1) PBW	.							1808349		Add New Spike
2) LCSW	.							1808349		added 1ml of Th,W spike
3) 9881309	11/13/18 10:10	WW	N7		SW-846 6010C		800A	1808349	WMET04/C6	LCS Low Thorium
4) 9881310FD	11/13/18 10:10	WW	N7		SW-846 6010C		800A	1808349	WMET04/F7	LCS Low Thorium
5) 9881311	11/13/18 10:10	WW	N7		SW-846 6010C		800A	1808349	WMET04/B6	LCS Low Thorium
6) 9881312FD	11/13/18 10:10	WW	N7		SW-846 6010C		800A	1808349	WMET04/D6	LCS Low Thorium
7) 9881313	11/13/18 10:10	WW	N7		SW-846 6010C		800A	1808349	WMET40/B4	LCS Low Thorium Limited sample 25/25
8) 9881314U	11/13/18 10:10	WW	N7		SW-846 6010C		800A	1808349	WMET04/E6	LCS Low Thorium Limited sample 25/25
9) 9881314D	11/13/18 10:10	WW	N7		SW-846 6010C		008a	1808349	E01364/	Limited sample 25/25
10) 9881314R	11/13/18 10:10	WW	N7		SW-846 6010C		008a	1808349	E01364/	Limited sample 25/25 added .5ml TH,W spike
11) 9881314M	11/13/18 10:10	WW	N7		SW-846 6010C		008a	1808349	E01364/	Limited sample 25/25 added .5ml TH,W spike



LLENS Batch Chronology and Change Log - SW846 Water

<u>Operation</u>	<u>Instrument</u>	<u>Operation Date</u>	<u>ANALYST</u>
1) Batch Creation		11/26/18 0:00	1364
2) Sample Vol		11/26/18 17:28	1364
3) Final Vol	CLEAR	11/26/18 17:28	1364
4) Trial		11/26/18 17:28	1364
5) Upload Prep	US19PCC0669	11/26/18 20:10	1364

<u>Sample ID</u>	<u>Analysis</u>	<u>D</u>	<u>Operation</u>	<u>Measurement</u>	<u>Original Entry</u>			<u>Data Changed</u>			
					<u>Date/Time</u>	<u>Data</u>	<u>Units</u>	<u>Analyst</u>	<u>Date/Time</u>	<u>Analyst</u>	<u>Reason</u>
9881313	10635	1	Sample Vol	Initial Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Limited sample
9881313	10635	1	Final Vol	Final Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Wrong entry
9881314	10635	1	Sample Vol	Initial Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Limited sample
9881314	10635	1	Final Vol	Final Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Wrong entry
9881314DUP	10635	1	Sample Vol	Initial Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Limited sample
9881314DUP	10635	1	Final Vol	Final Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Wrong entry
9881314MS	10635	1	Sample Vol	Initial Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Limited sample
9881314MS	10635	1	Final Vol	Final Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Wrong entry
9881314MSD	10635	1	Sample Vol	Initial Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Limited sample
9881314MSD	10635	1	Final Vol	Final Volume	11/26/18 17:25	50	(mL)	1364	11/26/18 17:28	1364	Wrong entry

Analysis: 0635 SW846 Water

Batch# 18 330 1063 501

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9881309	11/13/18	N7	15T-2	TID15-02	50.0000	50.0000	2
9881310FD	11/13/18	N7	15T-3	TID15-03FD	50.0000	50.0000	2
9881311	11/13/18	N7	15T-4	TID15-04	50.0000	50.0000	2
9881312FD	11/13/18	N7	15T-5	TID15-05FD	50.0000	50.0000	2
9881313	11/13/18	N7	15T-6	TID15-06	25.0000	25.0000	2
9881314U	11/13/18	N7	15T-7	TID15-07	25.0000	25.0000	2
9881314D	11/13/18	N7	15T-7	TID15-07	25.0000	25.0000	2
9881314R	11/13/18	N7	15T-7	TID15-07	25.0000	25.0000	2
9881314M	11/13/18	N7	15T-7	TID15-07	25.0000	25.0000	2

Start Time: 11/6/18 6:30 **End Time:** 11/6/18 10:32 **Hot Block:** 12

Pipette ID: JU06758 S11/250 1129257/100 037508-F2/25

Reflux Cap Lot#: 18034028253NJ

<u>Spike/Reagent</u>	<u>Lot#</u>	<u>Volume Added(mL)</u>
HNO3	191695	3.00
ICP/MS Spike	1824915#1	0.25
LCS	1824915#1	0.50
U Spike LCD	P18278A	0.25
U Spike MS,MSD	P18278A	0.13
HNO3	191695	3.00
ICP/MS Spike	1824915#1	0.25
LCS	1824915#1	0.50
U Spike LCD	P18278A	0.25
U Spike MS,MSD	P18278A	0.13

Method Ref:

SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel	Location	Comments
								Lot#	ID	
1) PBW	.							1807160		Add U Spike
2) LCSW	.							1807160		
3) 9827173	10/09/18 00:00	WW	N7			Y	008A	1807160	D0722/	
4) 9881309	11/13/18 10:10	WW	N7			Y	802A	1807160	WMET05/A4	
5) 9881310FD	11/13/18 10:10	WW	N7			Y	802A	1807160	WMET05/F5	
6) 9881311U	11/13/18 10:10	WW	N7			Y	802A	1807160	WMET05/B4	25/25 limited sample
7) 9881311D	11/13/18 10:10	WW	N7			Y	008a	1807160	E01184/	25/25 limited sample
8) 9881311R	11/13/18 10:10	WW	N7			Y	008a	1807160	E01184/	25/25 limited sample
9) 9881311M	11/13/18 10:10	WW	N7			Y	008a	1807160	E01184/	25/25 limited sample
10) 9881312FD	11/13/18 10:10	WW	N7			Y	802A	1807160	WMET05/F8	
11) 9881313	11/13/18 10:10	WW	N7			Y	802A	1807160	WMET40/C4	
12) 9881314	11/13/18 10:10	WW	N7			Y	802A	1807160	WMET05/F7	



Batch5 01 pi DQ 0p Di O

LLENS Batch Chronology and Change Log - W0846 S S# 130 # ater

<u>I seration</u>	<u>WArYt ent</u>	<u>I seration mate</u>	<u>) N) L/ S2</u>
Q Batch Creation		00A401 Qp7 D	0013
R SaT sle Fol		000401 07pi	0013
p: Unal Fol	Q 01V	000401 07pi	0013
3: 2rua1		000401 07pi	0013
V: SaT sle Fol		000401 17 P	0013
0: Unal Fol	CLE) 9	000401 17 P	0013
P: Mload 8 res	MSC08 CCI 0PRF000401 Q 7pR		0013

<u>SaT sle W</u>	<u>) nalyAA</u>	<u>m I seration</u>	<u>6 eaAYreT ent</u>	<u>mate-2J e</u>	<u>I riginal Entry</u>	<u>MnuA</u>	<u>) nalyA</u>	<u>mate-2J e</u>	<u>) nalyA 9 eaAon</u>
D11Qp00	Q 0pD	O SaT sle Fol	Witua1 FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp00	Q 0pD	O Unal Fol	Unal FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp00mM8	Q 0pD	O SaT sle Fol	Witua1 FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp00mM8	Q 0pD	O Unal Fol	Unal FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp006 S	Q 0pD	O SaT sle Fol	Witua1 FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp006 S	Q 0pD	O Unal Fol	Unal FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp006 Sm	Q 0pD	O SaT sle Fol	Witua1 FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied
D11Qp006 Sm	Q 0pD	O Unal Fol	Unal FoIYT e	000401 17 0	Vi	(T L:	0013	000401 17 P	0013 iUr tied

Analysis: 0639 ICP/MS SW846 Water

Batch# 18 309 1063 901

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9827173	10/09/18	N7	77911	DOD15-01	50.0000	50.0000	1
9881309	11/13/18	N7	15T-2	TID15-02	50.0000	50.0000	1
9881310FD	11/13/18	N7	15T-3	TID15-03FD	50.0000	50.0000	1
9881311U	11/13/18	N7	15T-4	TID15-04	25.0000	25.0000	1
9881311D	11/13/18	N7	15T-4	TID15-04	25.0000	25.0000	1
9881311R	11/13/18	N7	15T-4	TID15-04	25.0000	25.0000	1
9881311M	11/13/18	N7	15T-4	TID15-04	25.0000	25.0000	1
9881312FD	11/13/18	N7	15T-5	TID15-05FD	50.0000	50.0000	1
9881313	11/13/18	N7	15T-6	TID15-06	50.0000	50.0000	1
9881314	11/13/18	N7	15T-7	TID15-07*	50.0000	50.0000	1

Start Time: 11/8/18 8:25 End Time: 11/8/18 10:25 Hot Block: 11

Pipette ID: W/1000
 Reflux Cap Lot#: 1807160-8Z90DN

<u>Spike/Reagent</u>	<u>Lot#</u>	<u>Volume Added(mL)</u>
5%K2S2O8	P18-309C	6.00
5%KMnO4	P18-289F	3.20
H2SO4	184517	2.00
HNO3	191695	1.00
LCS 40ppb Hg	P18-310A	1.00
NaCl/NH2OH.HCl	P18-308A	2.40
Spike 40ppb Hg	P18-310A	1.00

Method Ref:

SampleID	Date Due	ST	P	H	Method	PH<2	BC	Vessel	Location	Comments
								Lot#	ID	
1) PBW	.									
2) LCSW	.									
3) 9881309	11/13/18 10:10	WW	N7		SW-846 6010C	Y	801A	1807160	WMET20/D4	
4) 9881310FD	11/13/18 10:10	WW	N7		SW-846 6010C	Y	801A	1807160	WMET20/B5	
5) 9881311	11/13/18 10:10	WW	N7		SW-846 6010C	Y	801A	1807160	WMET20/E4	
6) 9881312FD	11/13/18 10:10	WW	N7		SW-846 6010C	Y	801A	1807160	WMET20/D5	
7) 9881313U	11/13/18 10:10	WW	N7		SW-846 6010C	Y	801A	1807160	WMET17/E8	
8) 9881313D	11/13/18 10:10	WW	N7		SW-846 6010C	Y	008a	1807160	E00277/	
9) 9881313R	11/13/18 10:10	WW	N7		SW-846 6010C	Y	008a	1807160	E00277/	
10) 9881313M	11/13/18 10:10	WW	N7		SW-846 6010C	Y	008a	1807160	E00277/	
11) 9881314	11/13/18 10:10	WW	N7		SW-846 6010C	Y	801A	1807160	WMET20/C5	



LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

<u>Operation</u>	<u>Instrument</u>	<u>Operation Date</u>	<u>ANALYST</u>
1) Batch Creation		11/7/18 7:29	277
2) Sample Vol		11/8/18 9:20	277
3) Final Vol	CLEAR	11/8/18 9:20	277
4) Trial		11/8/18 9:20	277
5) Upload Prep	US19PCC0678	11/8/18 11:03	277

<u>Sample ID</u>	<u>Analysis</u>	<u>Operation</u>	<u>Measurement</u>	<u>Date/Time</u>	<u>Original Entry Data</u>	<u>Units</u>	<u>Analyst</u>	<u>Date/Time</u>	<u>Data Changed Analyst Reason</u>

Analysis: 5713 Hg SW846 Digest Water

Batch# 18 311 0571 303

Sample ID	Due Date	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW				40.0000		40.0000	1
LCSW				1.0000		1.0000	1
9881309	11/13/18	N7 15T-2	TID15-02	40.0000		40.0000	1
9881310FD	11/13/18	N7 15T-3	TID15-03FD	40.0000		40.0000	1
9881311	11/13/18	N7 15T-4	TID15-04	40.0000		40.0000	1
9881312FD	11/13/18	N7 15T-5	TID15-05FD	40.0000		40.0000	1
9881313U	11/13/18	N7 15T-6	TID15-06	40.0000		40.0000	1
9881313D	11/13/18	N7 15T-6	TID15-06	40.0000		40.0000	1
9881313R	11/13/18	N7 15T-6	TID15-06	40.0000		40.0000	1
9881313M	11/13/18	N7 15T-6	TID15-06	40.0000		40.0000	1
9881314	11/13/18	N7 15T-7	TID15-07	40.0000		40.0000	1

Standard/Reagent Prepared				Standards/Reagents Used				HNO ₃ Used	
Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
Hg-5700	1CN	Hg-1.0mg/L-Cont	15	10-16-18	H18-283C	0.25ml	1	6	1911695
↓	CCN	Hg-1.0mg/L-Cal	↓	↓	H18-283A	0.20	↓	↓	↓
↓	CEA	Hg-0.1mg/L-Cont	↓	↓	H18-282D	0.20	↓	↓	↓
Hg-1.0mg/L-Taber Cal	H18283A	Hg-1.0mg/L-Cal	15	10-19-18	H18-144A	1.0ml	↓	↓	↓
↓	1.0mg/L-Taber Cal	1.0mg/L-Cal	15	10-17-18	H18-283A	↓	↓	↓	↓
↓	1.0mg/L-Taber Cont	1.0mg/L-Cont	16	4-19-19	W046153372	↓	↓	↓	↓
↓	1.0mg/L-Taber Cont	1.0mg/L-Cont	15	10-17-18	H18-283C	↓	↓	↓	↓
Hg-5701	1CN	↓	↓	↓	↓	0.25ml	↓	↓	↓
↓	CCN	Hg-1.0mg/L-Cal	↓	↓	H18-283A	0.10	↓	↓	↓
↓	CCN	↓	↓	↓	↓	0.10	↓	↓	↓
↓	CCN	↓	↓	↓	↓	0.10	↓	↓	↓
↓	CCN	↓	↓	↓	↓	0.10	↓	↓	↓
↓	CEA	Hg-0.1mg/L-Cont	↓	↓	H18-283D	0.40	↓	↓	↓
↓	CEA	↓	↓	↓	↓	0.80	↓	↓	↓
↓	57A Cal	Hg-0.1mg/L-Cal	↓	↓	H18-283B	0.20	↓	↓	↓
↓	↓	Hg-0.1mg/L-Cal	↓	↓	↓	0.50	↓	↓	↓
↓	↓	↓	↓	↓	H18-283A	0.10	↓	↓	↓
↓	↓	↓	↓	↓	↓	0.25	↓	↓	↓
↓	↓	↓	↓	↓	↓	0.50	↓	↓	↓

- Key - Manufacturer (M•)
- 1 - Aldrich Chemical
 - 2 - Constan Specialty Products
 - 3 - EM Science
 - 4 - Fisher Scientific
 - 5 - High-Purity Standards
 - 6 - J. T. Baker
 - 7 - Johnson Matthey
 - 8 - Leeman Labs
 - 9 - Mallinckrodt
 - 10 - Plasma Pure
 - 11 - Solutions Plus
 - 12 - SPEX Industries
 - 13 - VWR Scientific
 - 14 - EMD
 - 15 - Prepared in house
 - 16 - Inorganic Ventures
 - XX - Other (footnote Manur)

Vol (mL)	M•	Lot #	HCl Used		Other Used		Final Vol (mL)	Final Conc (mg/L)**	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
			Vol (mL*)	M•	Lot #	Vol (mL*)						
2	4	184517	3.2ml for 3.205 low volume		H18-22014 H18-22515	100	2.5mg/L	01354	10-9-18	10-16-18	RT	
3	4	184517				200	1.0					
4			Is volume 15% HNO3		H18-21680	100	0.22					
5						10	1.0				RT	
6							6.1					
7							1.0					
8			Small volume for 3.205 low volume		H18-22014 H18-22515	100	0.1					
9							2.5mg/L					
10							1.0					
11							1.0					
12							1.0					
13							1.0					
14							0.4					
15							0.8					
16							0.2					
17							0.5					
18							1.0					
19							2.5					
20							5.0					
							0.0					

Footnotes

Key (••) - Other Used

A = CaCl₂ (0.053%)
B = CsCl (10%)
C = KCl

D = La₂O₃ (10%)
E = Al (NO₃)₃ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

b



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	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M#	Lot #	Vol (mL*)	M#	Lot #						
1												
2	57	6	181074/4	15ml known		H18-22518	100	2.5mg/L	DL354	10-16-18	10-17-18	RT
3	5	1					740	1:3			10-16-18	
4							100	2.5mg/L				
5								1.0				
6								0.4				
7								6.8				
8								6.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14							10	1.0	DL354	10-11-18	10-18-18	RT
15								0.1				
16								1.0				
17	2ml H ₂ SO ₄	4	1814517	3.2ml H ₂ SO ₄ 6ml known		H18-20067 H18-22518	100	0.1				
18							200	2.5mg/L				
19							100	1.0				
20							100	0.2				

Key (**) - Other Used
 A = CaCl₂ (0.053%)
 B = CsCl (10%)
 C = KCl
 D = La₂O₃ (10%)
 E = Al (NO₃)₃ (40%)
 F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

Standard/Reagent Prepared	Standards/Reagents Used				HNO ₃ Used					
	Name	Lot #	Identification	M.	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M.	Lot #
Hg5700 Stal Cal	H18284F	Hg0.1mg/L Cal	15	10-18-18	H18-284F	0.50 ml	0.20	1	1	1911095
		Hg1.0mg/L Cal					0.25	1	1	
							0.50	1	1	

- 1 - Aldrich Chemical
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- 3 - EM Science
- 4 - Fisher Scientific

- 5 - High-Purity Standards
- 6 - J. T. Baker
- 7 - Johnson Matthey
- 8 - Leeman Labs

- 9 - Mallinckrodt
- 10 - Plasma Pure
- 11 - Solutions Plus
- 12 - SPEX Industries

- 13 - VWR Scientific
- 14 - EMD
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Vol (mL)	M.	Lot #	Other Used		Final Vol (mL)	Final Conc (mg/L)**	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
			Vol (mL*)	M.						
2	2011b504	184517	32 mL K2S2O8 10 mL KMnO4	H18-20671 H18-22515	100	0.5 mg/L	01354	10-11-18	10-18-18	R1
3					200	1.0				
4					100	2.5				
5					200	5.0				
6					100	2.5				
7					200	5.0				
8					100	2.5				
9					200	5.0				
10					100	2.5				
11					200	5.0				
12					100	2.5				
13					200	5.0				
14	2011b504	184517	32 mL K2S2O8 10 mL KMnO4	H18-20671 H18-22515	100	0.1				
15					200	2.5 mg/L				
16					100	1.0				
17					200	2.5				
18					100	1.0				
19					200	2.5				
20					100	1.0				

Footnotes

Key (**) - Other Used

A = CaCl₂ (0.053%)

B = CsCl (10%)

C = KCl

D = La₂O₃ (10%)

E = Al (NO₃)₃ (40%)

F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified

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Standard/Reagent Prepared	Standards/Reagents Used	HNO ₃ Used						
Name	Lot #	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #	
Hg 5000 StA Cal	H18281M							
ICV	N	Hg 100mg/L Cont	15	10-19-18	H18-281C	0.25ml	1	19/1/95
CCV	O	Hg 10mg/L Cal			H18-281A	0.20		
CRN	P	Hg 0.1mg/L Cont			H18-281D	0.20		
Stannous Chloride	H18288A	Soln	4	8-22-19	180818 #8 #8+9	200.06g 200.07g 200.03g		
					#9	200.04g		
					#10	200.04g		
Hg 10mg/L Inter Std	H18289A	Hg 1000mg/L StA	XX	4/2020	17519132	1.0ml	1	19/1/95
Hg 10mg/L Inter Cal	H18289A	Hg 10mg/L Cal	15	4-16-19	H18-289A	1.0ml		
0.1mg/L Inter Cal	B	0.1mg/L Cal	15	10-23-18	H18-289A			
1.0mg/L Inter Cal	C	1.0mg/L Cont	16	4-19-19	make 157327			
0.1mg/L Inter Cont	D	1.0mg/L Cont	15	6-23-18	H18-289C			
Hg 5000 ICV	E					0.25ml	1	19/1/95
CCV	F	Hg 1.0mg/L Cal			H18-289A	0.20		
CRN	G	Hg 0.1mg/L Cont			H18-289D	0.20		
StA Cal	H	Hg 0.1mg/L Cal			H18-289B	0.20		
	I					0.50		
	J	Hg 10mg/L Cal			H18-289A	0.20		
	K					0.25		

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- 16 - Inorganic Ventures
- XX - Other (footnote Manuf)

XX - CFI International
10-16-18 DV354

Vol (mL)	M.	Lot #	HCl Used		Other Used		Final Vol (mL)	Final Conc (mg/L ^{**})	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
			Vol (mL*)	M.	Lot #	Vol (mL)						
200	4	184517	32 mL	H18-200A	H18-225B	100	0.01 mg/L	DL354	10-13-18	10-19-18	RT	
200	4	18107404				2000	16%	DL354	10-15-18	4-15-19	RT	
200	4	184517				100	2.5					
200	4	184517				200	1.0					
200	4	184517				100	6.2					
200	4	184517				2000	16%	DL354	10-15-18	4-15-19	RT	
200	4	184517				100	10 mg/L	DL354	10-16-18	4-16-19	RT	
200	4	184517				100	1.0					
200	4	184517				100	0.1					
200	4	184517				100	0.1					
200	4	184517				100	1.0					
200	4	184517				100	0.2					
200	4	184517				100	0.2					
200	4	184517				100	0.5					
200	4	184517				100	6.2					
200	4	184517				100	0.5					
200	4	184517				100	1.0					
200	4	184517				100	2.5					
200	4	184517				100	0.1					

Key (**) - Other Used
 A = CaCl₂ (0.053%)
 B = CsCl (10%)
 C = KCl
 D = La₂O₃ (10%)
 E = Al (NO₃)₃ (40%)
 F = Element Specific

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Standard/Reagent Prepared	Standards/Reagents Used	HNO ₃ Used							
		Vol (mL)	M•	Lot #					
Hg 5000 Sd Cal	H18289L	Hg 1.0mg/L Cal	15	10-23-18	H18-289A	0.50ml	1	10	191695
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
1CV	N	Hg 1.0mg/L Cal	15	10-23-18	H18-289C	0.25ml	↓	↓	↓
CCV	O	Hg 1.0mg/L Cal	↓	↓	H18-289A	0.20	↓	↓	↓
CEA	P	Hg 0.1mg/L Cal	↓	↓	H18-289D	0.20	↓	↓	↓
CCV	Q	Hg 1.0mg/L Cal	↓	↓	H18-289A	0.20	↓	↓	↓
Hg 1.0mg/L Table Cal	H18290A	Hg 1.0mg/L Cal	15	4-11-19	H18-289AA	1.0ml	↓	↓	↓
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
1.0mg/L Table Cal	B	1.0mg/L Cal	15	10-24-18	H18-290A	↓	↓	↓	↓
1.0mg/L Table Cal	C	1.0mg/L Cal	16	4-19-19	M24615952	↓	↓	↓	↓
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
0.1mg/L Table Cal	D	1.0mg/L Cal	15	10-24-18	H18-290C	↓	↓	↓	↓
Hg 5001 Cal	E	↓	↓	↓	↓	0.25ml	↓	↓	↓
CCV	F	Hg 1.0mg/L Cal	↓	↓	H18-290A	0.10	↓	↓	↓
CCV	G	↓	↓	↓	↓	0.10	↓	↓	↓
CCV	H	↓	↓	↓	↓	0.10	↓	↓	↓
CCV	I	↓	↓	↓	↓	0.10	↓	↓	↓
CEA	J	Hg 0.1mg/L Cal	↓	↓	H18-290D	0.46	↓	↓	↓
CEA	K	↓	↓	↓	↓	0.80	↓	↓	↓
gld Cal	L	Hg 0.1mg/L Cal	↓	↓	H18-290B	0.20	↓	↓	↓
↓	M	↓	↓	↓	↓	0.50	↓	↓	↓
↓	N	Hg 1.0mg/L Cal	↓	↓	H18-290A	0.10	↓	↓	↓

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Key - Manufacturer (M•)



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HCl Used	HCl Used		Other Used		Final Vol (mL)	Final Conc (mg/L)**	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Vol (mL*)	M•						
	2ml H ₂ SO ₄	4	3.2ml 1% CaCl ₂ 3.2ml 1% K ₂ Cr ₂ O ₇		100	5.0ug/L	DL354	10-16-18	10-23-18	RT
		187517			100	2.5				
					200	1.0				
					100	0.2				
					200	1.0				
					10	0.1	DL354	10-17-18	10-24-18	RT
					10	0.1				
					100	2.5ug/L				
					10	1.0				
					10	1.0				
					10	1.0				
					10	1.0				
					10	1.0				
					10	0.2				
					10	0.5				
					10	1.0				

Key (••) - Other Used
 A = CaCl₂ (0.053%)
 B = CsCl (10%)
 C = KCl

D = La₂O₃ (10%)
 E = Al (NO₃)₃ (40%)
 F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
 ** units are mg/L unless otherwise specified

b

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L ^{**})	Init/Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M. #	Lot #	Vol (mL [*])	M. #	Lot #						
1							100	2.5 mg/L	DM354	10-17-18	10-24-18	RT
2							100	5.0				
3							100	2.5 mg/L				
4							100	2.5 mg/L				
5							100	1.0				
6							100	1.0				
7							100	0.1				
8							100	0.1				
9							100	0.1				
10							100	2.5 mg/L				
11							100	1.0				
12							100	0.2				
13							100	0.2				
14							100	0.5				
15							200	1.0				
16							100	2.5				
17							200	5.0				
18							200	0.0				
19							200	2.5				
20							200	1.0				

Footnotes

Key (**) - Other Used
 A = CaCl₂ (0.053%)
 B = CsCl (10%)
 C = KCl
 D = La₂O₃ (10%)
 E = Al (NO₃)₃ (40%)
 F = Element Specific

RT = Room Temperature Storage

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Standard/Reagent Prepared	Lot #	Identification	Standards/Reagents Used			HNO ₃ Used			
			M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
Hg-5700 CFA	H18292P	Hg-0.1mg/L Cont	15	10-26-18	H18-292D	0.20ml	✓	✓	1911/95
Hg-5701 CCV	R	Hg-1.0mg/L Cont	15	✓	H18-292A	0.20ml	✓	✓	✓
CCV	S	✓	✓	✓	0.10	✓	✓	✓	✓
CCV	T	✓	✓	✓	0.10	✓	✓	✓	✓
SHCCal	U	✓	✓	✓	0.10	✓	✓	✓	✓
Mercuric Bromide	V	✓	✓	✓	0.10	✓	✓	✓	✓
Stannous Chloride	W	✓	✓	✓	0.10	✓	✓	✓	✓
Hg-1.0mg/L Cont	B	✓	✓	✓	0.10	✓	✓	✓	✓
Hg-1.0mg/L Cont	C	✓	✓	✓	0.10	✓	✓	✓	✓
Hg-1.0mg/L Cont	D	✓	✓	✓	0.10	✓	✓	✓	✓
Hg-5700 CCV	E	✓	✓	✓	0.25ml	✓	✓	✓	1911/95
CCV	F	✓	✓	✓	0.20	✓	✓	✓	✓
CEA	G	✓	✓	✓	0.20	✓	✓	✓	✓
SA Cal	H	✓	✓	✓	0.20	✓	✓	✓	✓
SA Cal	I	✓	✓	✓	0.50	✓	✓	✓	✓
SA Cal	J	✓	✓	✓	0.20	✓	✓	✓	✓

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 XX - Other (footnote Manuf)

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L ^{**})	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M#	Lot #	Vol (mL*)	M#	Lot #						
1	2ml H2SO4	4		3.2 ml H2SO4 1001Kmm02		H18-2064 H18-2064B	100	0.2 mg/L	D1354	10-19-18	10-21-18	RT
2	↘	↘	↘	↘	↘	↘	200	1.0				
3				5ml Aqua Regia 15ml Kmm04		H18-202-V H18-202-F10	160	1.0				
4								1.0				
5								1.0				
6								1.0				
7								0.0				
8	15	180764					20	1.3			10-19-18	RT
9	200	180764					2000	16.1	D1354	10-22-18	4-22-19	RT
10	↘	↘	↘									
11							10	1.0	D1354	10-23-18	10-31-18	RT
12								0.1				
13								0.1				
14								1.0				
15	2ml H2SO4	4		10-23-18DV354 3.2 ml H2SO4 1001Kmm01		H18-2064 H18-2064B	100	2.5 mg/L				
16	↘	↘	↘				200	1.0				
17	↘	↘	↘				100	0.2				
18								0.2				
19								0.5				
20							200	1.0				

Key (**) - Other Used
A = CaCl2 (0.053%)
B = CsCl (10%)
C = KCl
D = La2O3 (10%)
E = Al (NO3)3 (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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Standard/Reagent Prepared	Standards/Reagents Used	HNO ₃ Used							
Name	Lot #	Identification	M. #	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M. #	Lot #
Hg-5700 Std Cal	H18291A	Hg-1.0mg/L Cal	15	10-30-18	H18-291A	0.25ml	1	16	1911095
ICV	N	Hg-1.0mg/L Cont	15	10-30-18	H18-291A	0.25ml	1	16	1911095
CCV	O	Hg-1.0mg/L Cal	15	10-30-18	H18-291A	0.20	1	16	1911095
CSA	P	Hg-0.1mg/L Cont	15	10-30-18	H18-291A	0.20	1	16	1911095
CCV	Q	Hg-1.0mg/L Cal	15	10-30-18	H18-291A	0.20	1	16	1911095
Hg-1.0mg/L Inter Cal	H18297A	Hg-1.0mg/L Cal	15	4-11-19	H18-297A	1.0ml	1	16	1911095
1.0mg/L Inter Cal	B	1.0mg/L Cal	15	10-31-18	H18-297A	1.0ml	1	16	1911095
1.0mg/L Inter Cont	C	1.0mg/L Cont	16	4-19-19	M2H1815T392	1.0ml	1	16	1911095
0.1mg/L Inter Cont	D	0.1mg/L Cont	15	10-31-18	H18-297C	0.25ml	1	16	1911095
Hg-5701	1CN	0.1mg/L Cal	15	10-31-18	H18-297A	0.16	1	16	1911095
CCV	E	Hg-1.0mg/L Cal	15	10-31-18	H18-297A	0.10	1	16	1911095
CCV	F	Hg-1.0mg/L Cal	15	10-31-18	H18-297A	0.10	1	16	1911095
CCV	G	Hg-1.0mg/L Cal	15	10-31-18	H18-297A	0.10	1	16	1911095
CCV	H	Hg-1.0mg/L Cal	15	10-31-18	H18-297A	0.10	1	16	1911095
CCV	I	Hg-1.0mg/L Cal	15	10-31-18	H18-297A	0.10	1	16	1911095
CCV	J	Hg-1.0mg/L Cont	15	10-31-18	H18-297D	0.40	1	16	1911095
CCV	K	Hg-1.0mg/L Cont	15	10-31-18	H18-297D	0.80	1	16	1911095
Std Cal	L	Hg-1.0mg/L Cal	15	10-31-18	H18-297B	0.20	1	16	1911095
Std Cal	M	Hg-1.0mg/L Cal	15	10-31-18	H18-297B	0.50	1	16	1911095

- Key - Manufacturer (M#)
- 1 - Aldrich Chemical
 - 2 - Conostan Specialty Products
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Vol (mL)	M#	Lot #	HCl Used		Other Used		Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
			Vol (mL*)	M#	Vol (mL*)	M#						
2	2	184517	3.2ml K ₂ S ₂ O ₈		H18-2004		100	2.5ug/L	DL354	10-23-18	10-30-18	RT
4	4	184517	1.5ml KMnO ₄		H18-2004		100	0.2				
10			10.0ml 0.15% H ₂ O ₂		H18-2180		10	1.0	DL354	10-24-18	10-31-18	RT
12			5ml Aqua Regia		H18-2975		100	0.1				
13			1.5ml KMnO ₄		H18-2004		100	2.5ug/L				
14								1.0				
15								1.0				
16								1.0				
17								0.4				
18								0.8				
19								0.2				
20								0.5				

Footnotes

Key (**) - Other Used
 A = CaCl₂ (0.053%)
 B = CsCl (10%)
 C = KCl
 D = La₂O₃ (10%)
 E = Al (NO₃)₃ (40%)
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Effective

1	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	M•	Lot #						
1				5ml Aqua Regia 15ml KMnO4		H18-2975 H18-210-10	100	1.0mg/L	DL354	10-24-18	10-31-18	RT
2								2.5				
3								5.0				
4								0.0				
5								2.5				
6								0.0				
7								1:3				
8								1.0	DL354	10-25-18	11-01-18	RT
9								0.1				
10								1.0				
11								0.1				
12								2.5mg/L				
13								1.0				
14								0.2				
15								0.2				
16								0.5				
17								1.0				
18								2.5				
19								5.0				
20								0.0				

Key (••) - Other Used

A = CaCl₂ (0.053%)
 B = CsCl (10%)
 C = KCl

D = La₂O₃ (10%)
 E = Al (NO₃)₃ (40%)
 F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
 ** units are mg/L unless otherwise specified



Lancaster Laboratories
Environmental

Document Title:
Standard/Reagent Preparation Logbook

Eurofins Document Reference :
T-MET-FRM9079

Revision: 3

Historical Reference:
1-P-QM-FOR-9009818; Form 1105

Effective date : 02 Feb 2017

Effective

Standard/Reagent Prepared			Standards/Reagents Used				HNO ₃ Used		
Name	Lot #	Identification	M•	Expire Date (MM/YY)	16-25-18 DV/354 Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
Hg 5700	CCV	H182980	15	11-01-18	H18-298A2984	0.20 ml	1	6	19/1/85
	CEA				H18-298D	0.20			
	CCV				H18-298A	0.20			
Hg 11992	Hg 1.0 mg/L Cal	H18299A	15	4-16-19	H18-299A4	1.0 ml			
Hg 0.1 mg/L Cal					H18-299A				
1.0 mg/L Cal					M246673972				
0.1 mg/L Cal					H18-299C				
Hg 4992	10N					0.25 ml			
	CCV				H18-299A	0.10			
	CCV					0.10			
	CEA				H18-299D	0.40			
	CEA					0.80			
	Std Cal				H18-299B	0.20			
						0.50			
						0.10			
					H18-299A	0.25			
						0.50			
Hg 1.0 mg/L Standard Cal	H18300A		15	4-16-19	H18-299A	1.0 ml			
Hg 0.1 mg/L Standard Cal									
Hg 0.1 mg/L Cal									

- 1 - Aldrich Chemical
- 2 - Constan Specialty Products
- 3 - EMI Science
- 4 - Fisher Scientific

- 5 - High-Purity Standards
- 6 - J. T. Baker
- 7 - Johnson Matthey
- 8 - Leeman Labs

- Key - Manufacturer (M•)
- 9 - Mallinckrodt
 - 10 - Plasma Pure
 - 11 - Solutions Plus
 - 12 - SPEX Industries

- 13 - VWR Scientific
- 14 - EMD
- 15 - Prepared in house
- 16 - Inorganic Ventures
- XX - Other (footnote Manuf)



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Effective

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L ^{**})	Iniv/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M. #	Lot #	Vol (mL [*])	M. #	Lot #						
1	2 ml H ₂ SO ₄	4	18-1517	3.2 ml K ₂ S ₂ O ₈ 1.0 ml K ₂ Cr ₂ O ₇		H18-2064 H18-2124A	200	1.0 mg/L	11354	10-25-18	11-01-18	R
2	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	10	1.0	11354	10-26-18	11-02-18	R
5	↓	↓	↓	↓	↓	↓	10	0.1	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓	10	1.0	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓	10	0.1	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	100	2.5 mg/L	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	↓	10	1.0	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	10	1.0	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	10	0.4	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	10	0.8	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	10	0.2	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	10	0.5	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	10	1.0	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	10	2.5	↓	↓	↓	↓
17	↓	↓	↓	↓	↓	↓	10	5.0	↓	↓	↓	↓
18	↓	↓	↓	↓	↓	↓	10	0.0	↓	↓	↓	↓
19	↓	↓	↓	↓	↓	↓	10	1.0	11354	10-27-18	11-03-18	R
20	↓	↓	↓	↓	↓	↓	10	0.1	↓	↓	↓	↓

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 E = Al(NO₃)₃ (40%)
 F = Element Specific

RT = Room Temperature Storage
 * units are mL unless otherwise specified
 ** units are mg/L unless otherwise specified

Standard/Reagent Prepared			Standards/Reagents Used				HNO ₃ Used		
Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
Hg 1.0 mg/L Inter Cal	H18300C	Hg 1.0 mg/L Cal	16	4-19-19	M2H18165302	1.0 ml			
Hg 0.1 mg/L Inter Cal	D	Hg 0.1 mg/L Cal	15	11-03-18	H18-300C	1.0 ml			
Hg 5700 ICN	E					0.25 ml	1	6	1911695
ICN	F	Hg 1.0 mg/L Cal			H18-300A	0.20	1		
CRH	G	Hg 0.1 mg/L Cal			H18-300D	0.20	1		
SA Cal	H	Hg 0.1 mg/L Cal			H18-300B	0.20	1		
	I					0.50	1		
	J	Hg 1.0 mg/L Cal			H18-300A	0.20	1		
	K					0.25	1		
	L					0.50	1		
	M								
	N	Hg 1.0 mg/L Cal	15	11-03-18	H18-300C	0.25 ml			
	O	Hg 1.0 mg/L Cal			H18-300A	0.20 ml			
	P	Hg 0.1 mg/L Cal			H18-300D	0.20			
	Q	Hg 1.0 mg/L Cal			H18-300A	0.20			
Hg 1.0 mg/L Inter Cal	H18303A	Hg 1.0 mg/L Cal	15	4-16-19	H18-300A	1.0 ml			
8.1 mg/L Inter Cal	B	1.0 mg/L Cal	15	11-6-18	H18-303A				
1.0 mg/L Inter Cal	C	1.0 mg/L Cal	16	4-19-19	M2H18165302				
X 0.1 mg/L Inter Cal	D	1.0 mg/L Cal	15	11-06-18	H18-300C				
Hg 5700 ICN	E					0.25 ml	1	6	1911695

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Key - Manufacturer (M•)

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- 11 - Solutions Plus
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- 13 - VWR Scientific
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	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Int/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	M•	Lot #						
1							10	0.1	DSB54	10-27-18	11-03-18	RT
2							100	2.5 mg/L				
3	2ml H ₂ SO ₄	4	184517	3.2ml H ₂ SO ₄ 6ml KMnO ₄		H18-2064 H18-2064	100	1.0				
4							200	0.2				
5							100	0.2				
6							200	0.5				
7							100	1.0				
8							200	2.5				
9							100	5.0				
10							200	0.0				
11							200	2.5				
12							100	0.2				
13							200	1.0				
14							100	0.2				
15							200	1.0				
16							10	1.0	DSB54	10-30-18	11-06-18	RT
17							10	0.1				
18							10	1.0				
19							100	0.1				
20	2ml H ₂ SO ₄	4	184517	3.2ml H ₂ SO ₄ 6ml KMnO ₄		H18-2064 H18-2064	100	2.5 mg/L				

Footnotes
Key (••) - Other Used
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C = KCl
D = La₂O₃ (10%)
E = Al (NO₃)₃ (40%)
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Standard/Reagent Prepared	Standards/Reagents Used	Lot #	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M _o	Lot #
Hg 5000 (3) 1000 ¹⁰⁰⁰	Hg 10mg/L Cal	H18303F	11-01-18	H18303A	0.20ml	1	6	1911695
	Hg 0.1mg/L Cert	G		H18303D	0.20ml			
	Hg 0.1mg/L Cert	H		H18303B	0.20			
	Hg 0.1mg/L Cal	I			0.50			
	Hg 1.0mg/L Cal	J		H18303A	0.20			
		K			0.25			
		L			0.50			
		M						
		N	11-06-18	H18303C	0.25ml			
	Hg 1.0mg/L Cal	O		H18303A	0.20			
	Hg 0.1mg/L Cert	P		H18303D	0.20			
	Hg 0.1mg/L Cert	Q		H18303A	0.20			
	Hg 1.0mg/L Cal	R		H18303A #11	200.01g			
	Stannous Chloride	S	10-04-19	180868 #11-12	200.02g			
		T		#12	200.02g			
Hg 1.0mg/L Inhib Cal	Hg 10mg/L Cal	H18303A	4-16-19	H18303A	1.0ml			
Hg 0.1mg/L Inhib Cal	10mg/L Cal	B	11-07-18	H18303C				
1.0mg/L Inhib Cert	10mg/L Cert	C	4-19-19	M2H6165392				
0.1mg/L Inhib Cert	10mg/L Cert	D	11-07-18	H18303C				
Hg 5000 CV		E			0.25ml	1	6	1911695

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Vol (mL)	M*	Lot #	HCl Used		Other Used		Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
			Vol (mL*)	M**	Lot #	Vol (mL)						
20	Zn/16504	4	184517	3.2 ml K552 1 ml KMM04	H18-2067 H18-2070	200	1.0 mg/L	D13554	10-30-18	11-06-18	RT	
19						100	0.2					
18						200	0.2					
17						100	0.5					
16						200	1.0					
15						100	2.5					
14						200	5.0					
13						100	2.5					
12						200	1.0					
11						100	0.2					
10						200	2.5					
9						100	0.2					
8						200	1.0					
7						100	0.2					
6						200	1.0					
5						100	0.5					
4						200	1.0					
3						100	0.2					
2						200	2.5					
1						100	0.2					
20	Zn/16504	4	184517			200	1.0	D13554	10-31-18	11-07-18	RT	
19						100	0.1					
18						200	1.0					
17						100	0.1					
16						200	1.0					
15						100	0.1					
14						200	1.0					
13						100	0.1					
12						200	1.0					
11						100	0.1					
10						200	1.0					
9						100	0.1					
8						200	1.0					
7						100	0.1					
6						200	1.0					
5						100	0.1					
4						200	1.0					
3						100	0.1					
2						200	1.0					
1						100	0.1					

Key (**) - Other Used
 A = CaCl₂ (0.053%)
 B = CsCl (10%)
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b