

GPC #3

2

22		16.265	3418.400	35927.398	0.0083
23		16.665	4674.200	52746.117	0.0122
24		16.765	2182.400	7947.102	0.0018
25	BAN Collect	17.032	3722.600	37164.906	0.0086
26		17.632	1362.500	62916.000	0.0146
27		24.332	1343081.375	429398336.000	99.6956
28		33.498	674.100	20410.400	0.0047
Total			1436631.040	430709490.055	100.000

Ingredient Table

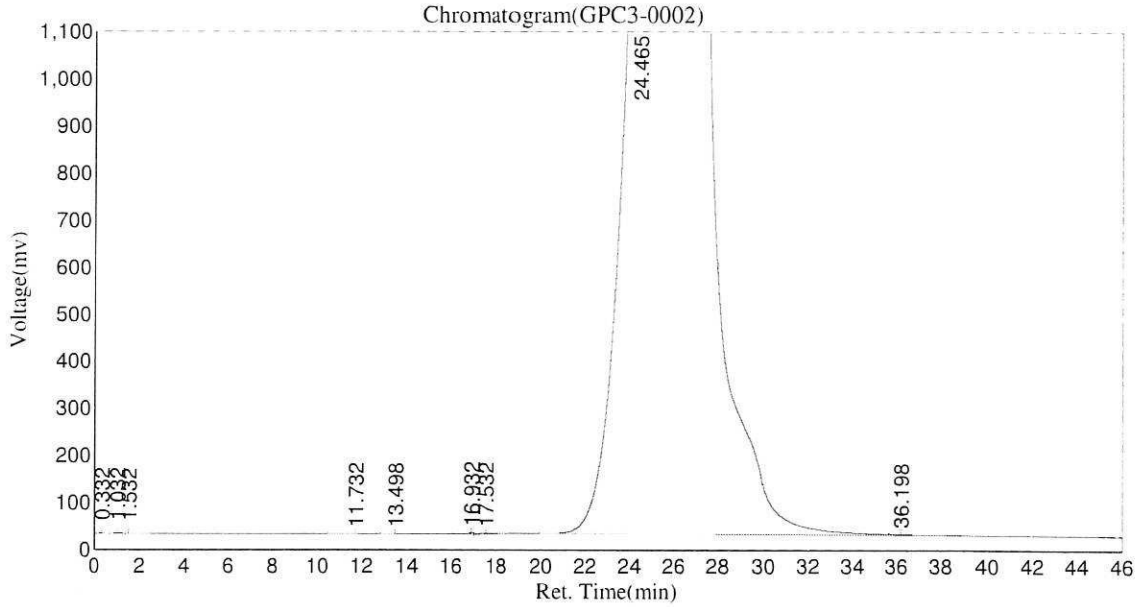
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,1:54:13 PM
 Data File:c:\n2000\data1\110816\GPC3-0002
 Method File:C:\N2000\LL-Tiss.mtd

-BS

Analyst:GM
 Date/Time:2016-11-08,1:54:13 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.332	760.833	10945.400	0.0028
2		1.032	1088.000	27210.100	0.0069
3		1.532	459.576	9431.600	0.0024
4		11.732	41.079	1526.000	0.0004
5		13.498	52.333	2619.300	0.0007
6	BAN Collect	16.932	3715.143	36751.398	0.0093
7		17.532	2508.636	135622.000	0.0343
8		24.465	1345948.750	395239584.000	99.8917
9		36.198	2281.764	204429.219	0.0517
Total			1356856.115	395668119.017	100.000

Ingredient Table

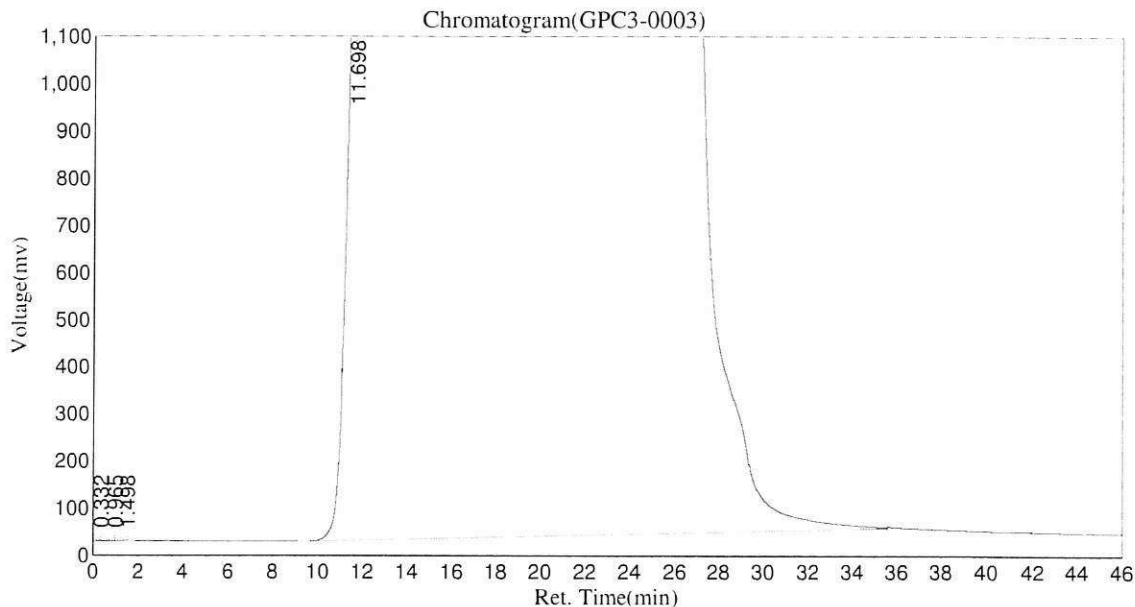
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,2:41:59 PM
 Data File:c:\n2000\data\1\110816\GPC3-0003
 Method File:C:\N2000\LL-Tiss.mtd

— 01

Analyst: GM
 Date/Time: 2016-11-08, 2:41:59 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.332	991.459	19067.391	0.0014
2		0.965	1235.081	33497.895	0.0025
3		1.498	340.750	5532.500	0.0004
4		11.698	1347027.125	1350419584.000	99.9957
Total			1349594.416	1350477681.785	100.000

Ingredient Table

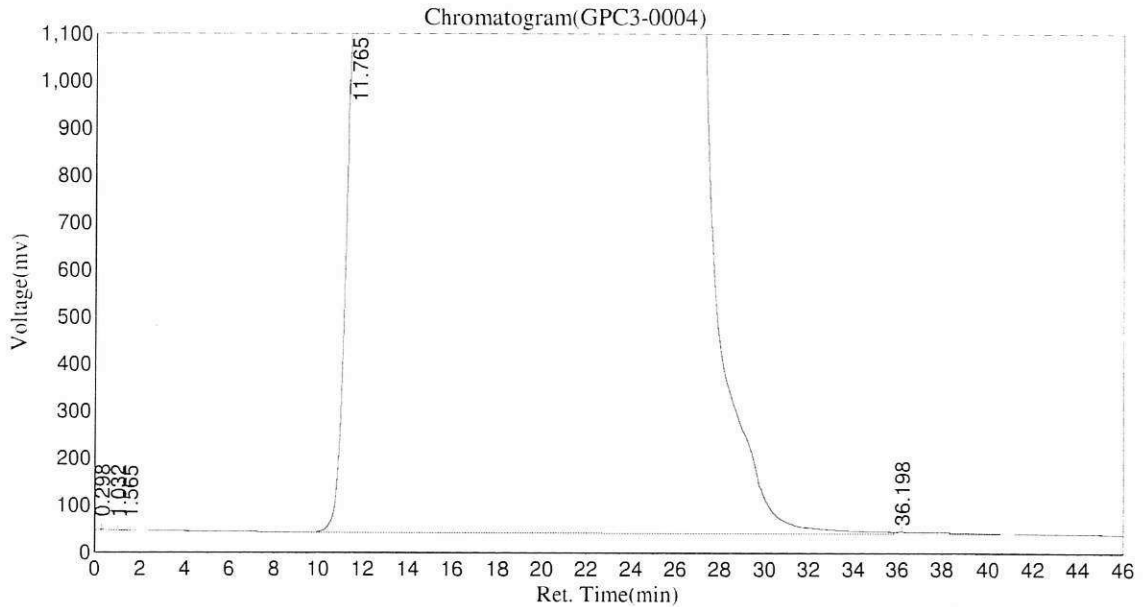
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,3:29:41 PM
 Data File:c:\n2000\data1\110816\GPC3-0004
 Method File:C:\N2000\LL-Tiss.mtd

①

Analyst:GM
 Date/Time:2016-11-08,3:29:41 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.298	929.235	15407.000	0.0011
2		1.032	1333.708	43810.801	0.0032
3		1.565	306.556	6699.000	0.0005
4		11.765	1337819.750	1351132544.000	99.9641
5		36.198	2926.263	419958.813	0.0311
Total			1343315.512	1351618419.613	100.000

Ingredient Table

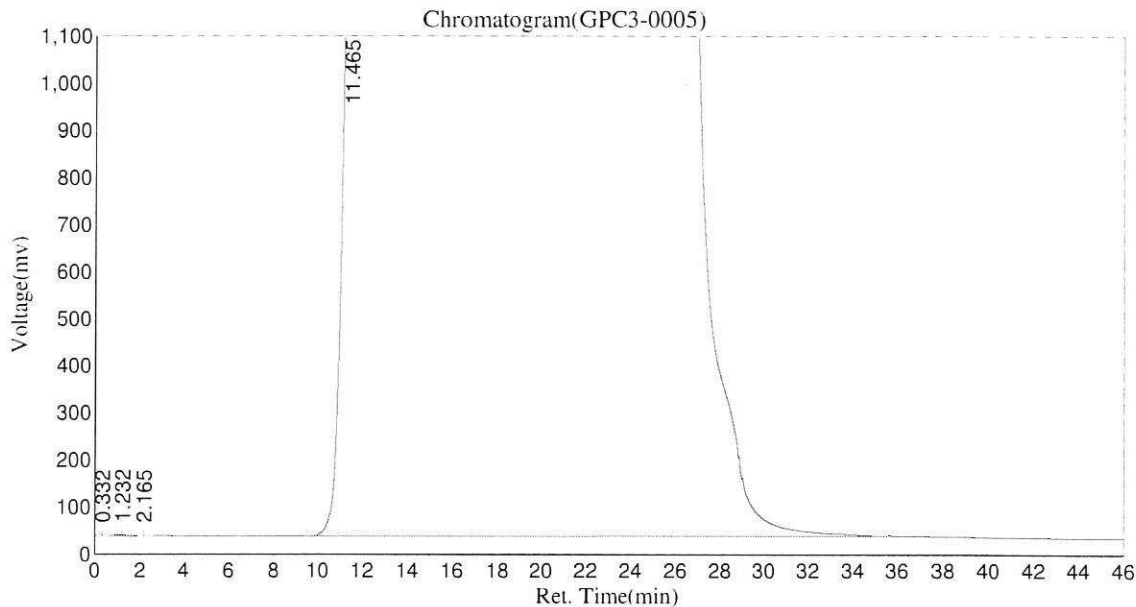
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,4:17:23 PM
 Data File:c:\n2000\data1\110816\GPC3-0005
 Method File:C:\N2000\LL-Tiss.mtd

01

Analyst:GM
 Date/Time:2016-11-08,4:17:23 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.332	784.167	16868.199	0.0013
2		1.232	1670.926	60994.602	0.0045
3		2.165	136.524	2961.900	0.0002
4		11.465	1341885.750	1344128768.000	99.9940
Total			1344477.366	1344209592.701	100.000

Ingredient Table

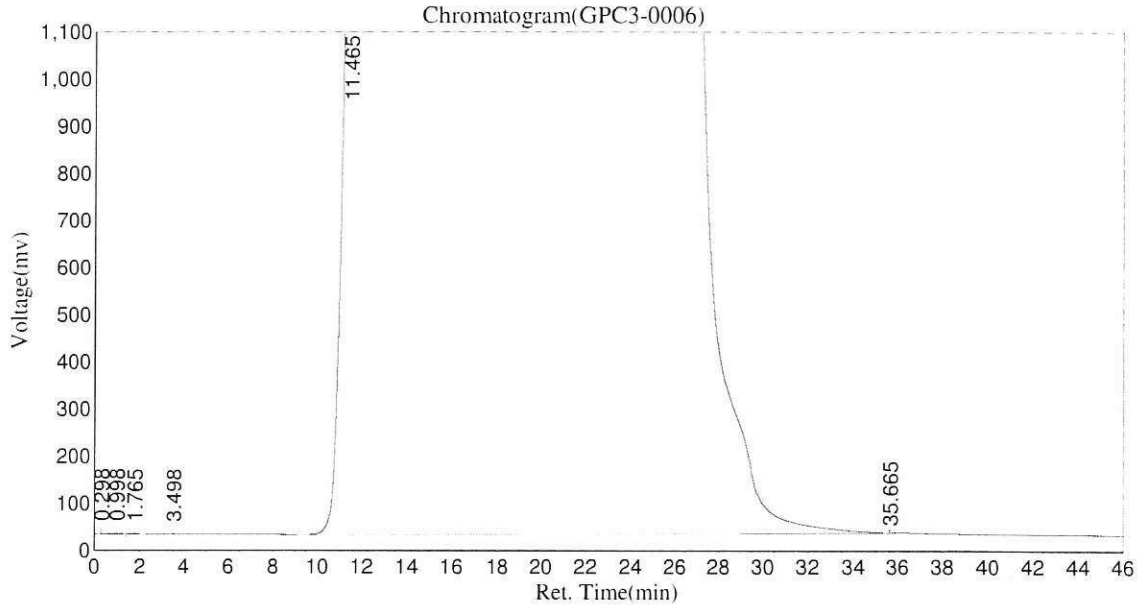
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,5:05:05 PM
 Data File:c:\n2000\data1\110816\GPC3-0006
 Method File:C:\N2000\LL-Tiss.mtd

Analyst:EGM
 Date/Time:2016-11-08,5:05:05 PM

02



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.298	772.765	12120.138	0.0009
2		0.998	998.647	25192.719	0.0018
3		1.765	449.471	12134.110	0.0009
4		3.498	885.000	3395.600	0.0002
5		11.465	1346564.500	1371328000.000	99.9955
6		35.665	1477.167	8740.000	0.0006
Total			1351147.549	1371389582.567	100.000

Ingredient Table

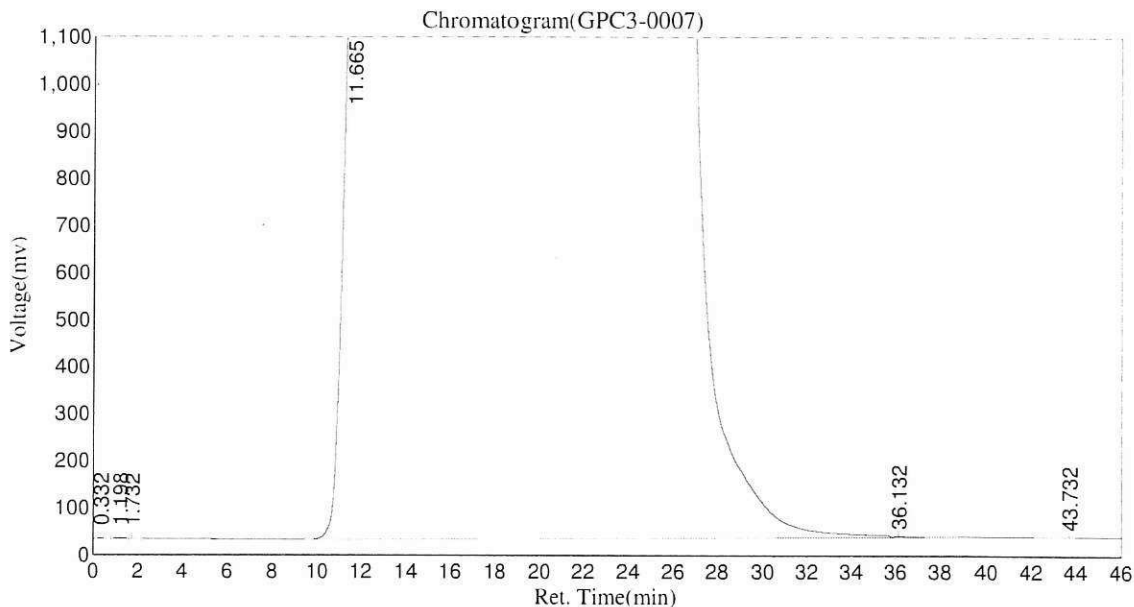
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,5:52:49 PM
 Data File:c:\n2000\data1\110816\GPC3-0007
 Method File:C:\N2000\LL-Tiss.mtd

— 03

Analyst: GM
 Date/Time:2016-11-08,5:52:49 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.332	799.750	14475.600	0.0011
2		1.198	1214.560	40478.602	0.0030
3		1.732	278.474	5619.600	0.0004
4		11.665	1346765.875	1340973056.000	99.9828
5		36.132	1939.000	166891.344	0.0124
6		43.732	39.000	3698.000	0.0003
Total			1351036.659	1341204219.145	100.000

Ingredient Table

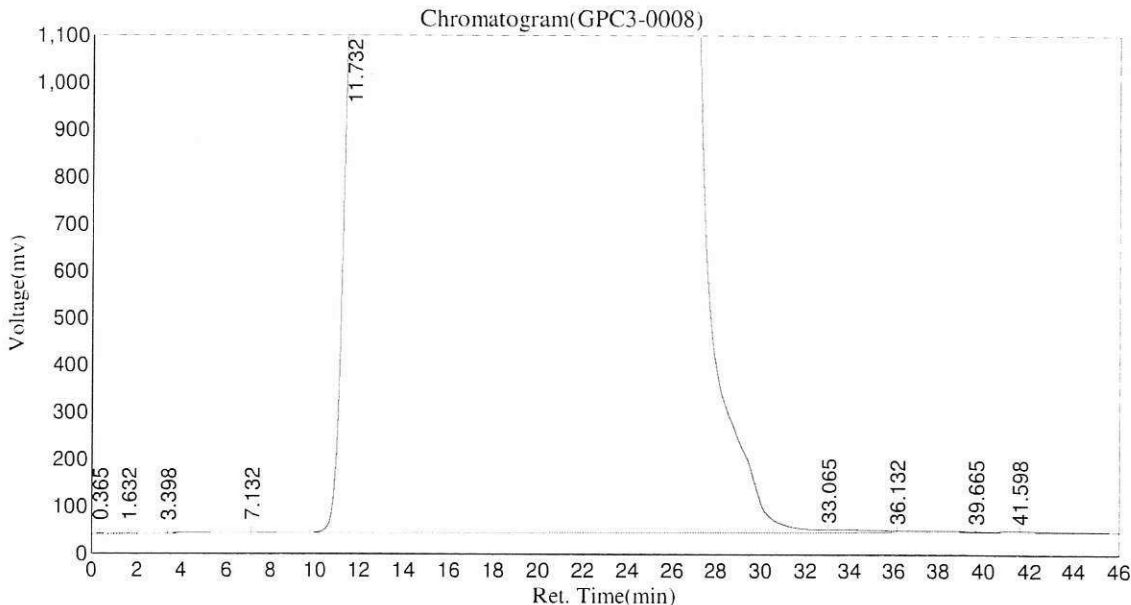
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1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,6:40:32 PM
 Data File:c:\n2000\data\110816\GPC3-0008
 Method File:C:\N2000\LL-Tiss.mtd

Analyst:GM
 Date/Time:2016-11-08,6:40:32 PM

-04



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.365	1076.895	24455.199	0.0018
2		1.632	1272.565	79322.539	0.0059
3		3.398	152.118	35063.703	0.0026
4		7.132	84.441	3416.200	0.0003
5		11.732	1335761.250	1336338560.000	99.8181
6		33.065	7222.320	1136094.875	0.0849
7		36.132	3716.032	610859.313	0.0456
8		39.665	2224.048	153437.766	0.0115
9		41.598	2559.736	393192.625	0.0294
Total			1354069.403	1338774402.219	100.000

Ingredient Table

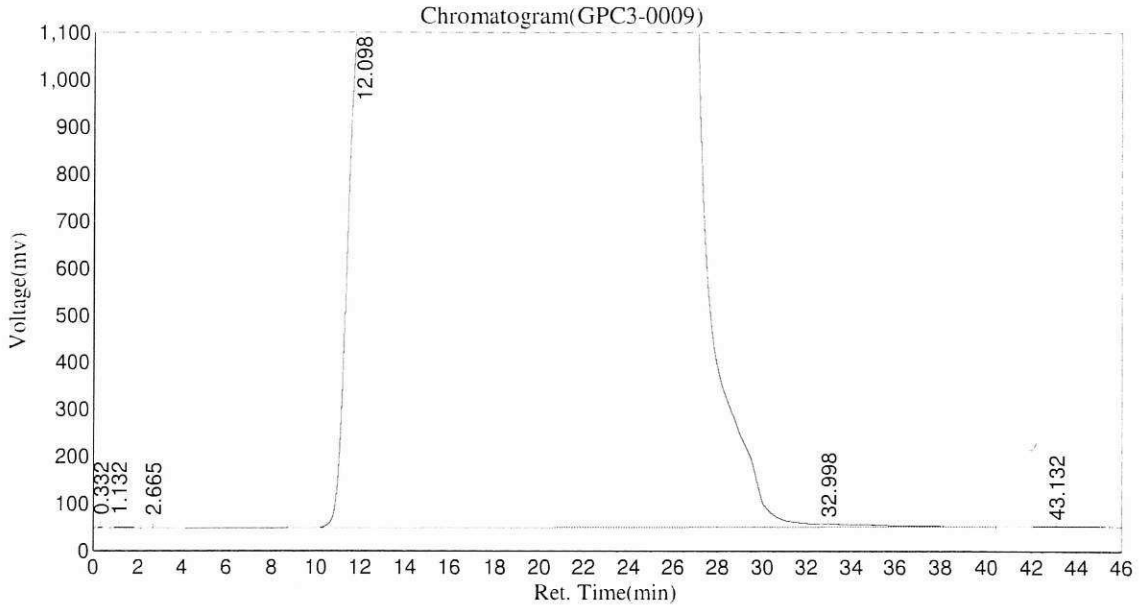
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,7:28:15 PM
 Data File:c:\n2000\data1\110816\GPC3-0009
 Method File:C:\N2000\LL-Tiss.mtd

OS

Analyst:GM
 Date/Time:2016-11-08,7:28:15 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.332	845.400	11318.800	0.0009
2		1.132	1381.195	78569.398	0.0061
3		2.665	263.967	19227.199	0.0015
4		12.098	1135818.625	1283404160.000	99.8769
5		32.998	6804.403	1321358.625	0.1028
6		43.132	916.417	151335.344	0.0118
Total			1146030.007	1284985969.366	100.000

Ingredient Table

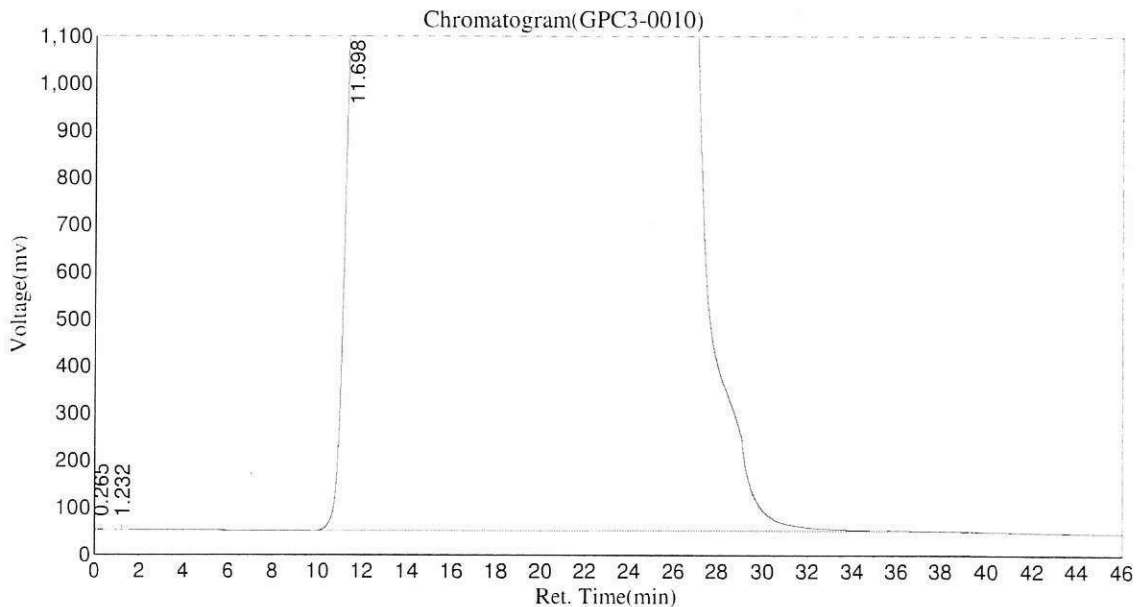
No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000

BEJ0794-16H147;268;J187 LL SIM PNA

Date:2016-11-08,8:15:57 PM
 Data File:c:\n2000\data1\110816\GPC3-0010
 Method File:C:\N2000\LL-Tiss.mtd

06

Analyst:GM
 Date/Time:2016-11-08,8:15:58 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.265	603.793	7828.600	0.0006
2		1.232	166.400	2247.700	0.0002
3		11.698	1329450.375	1326888320.000	99.9992
Total			1330220.568	1326898396.300	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.
1	BAN Collect	17.000	0.100	0.00E+000	0.00E+000	0.0000
2	Pest Collect	21.000	0.100	0.00E+000	0.00E+000	0.0000
3	Pest Dump	35.000	0.100	0.00E+000	0.00E+000	0.0000
4	BAN Dump	36.000	0.100	0.00E+000	0.00E+000	0.0000



CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Cleanup Batch: CEK0059

Cleanup Type: GPC

Cleanup Method: EPA 3640A GPC Cleanup

Analysis: EPA 8270D-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-T0-MUS-COC-160816	16H0147-01	16111005.D	11/08/2016	



CLEANUP BENCH SHEET

CEK0059

Matrix: Tissue

Cleanup using: Organics - EPA 3640A GPC Cleanup

Printed: 11/10/2016 11:52:59AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16J0187-06	A	PG-REF-GP-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16J0187-05	A	PG-REF-WS-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16J0187-04	A	PG-REF-PJ-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16J0187-03	A	PG-SMA-1-3-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16J0187-02	A	PG-SMA-1-2-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16J0187-01	A	PG-SMA-1-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16H0268-01	A	PG-T08-MUS-COC-160829	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
16H0147-01	A	PG-T0-MUS-COC-160816	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/8/2016	GM	
BEJ0794-BS1	-	LCS	-	0.5	0.5	-	11/8/2016	GM	
BEJ0794-BLK1	-	Blank	-	0.5	0.5	-	11/8/2016	GM	



CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Cleanup Batch: CEK0060

Cleanup Type: Silica Gel

Cleanup Method: EPA 3630C Silica Gel Cleanup

Analysis: EPA 8270D-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-T0-MUS-COC-160816	16H0147-01	16111005.D	11/09/2016	



CLEANUP BENCH SHEET

CEK0060

Matrix: Tissue

Cleanup using: Organics - EPA 3630C Silica Gel Cleanup

Printed: 11/10/2016 11:52:36AM

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16J0187-06	A	PG-REF-GP-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16J0187-05	A	PG-REF-WS-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16J0187-04	A	PG-REF-PJ-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16J0187-03	A	PG-SMA-1-3-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16J0187-02	A	PG-SMA-1-2-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16J0187-01	A	PG-SMA-1-1-161011	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16H0268-01	A	PG-T0B-MUS-COC-160829	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
16H0147-01	A	PG-T0-MUS-COC-160816	A 02	0.5	0.5	D-SIM PAH Low (0.01 ug/L - 0.5 u	11/9/2016	GM	
BEJ0794-BS1	-	LCS	-	0.5	0.5	-	11/9/2016	GM	
BEJ0794-BLK1	-	Blank	-	0.5	0.5	-	11/9/2016	GM	



**MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM**

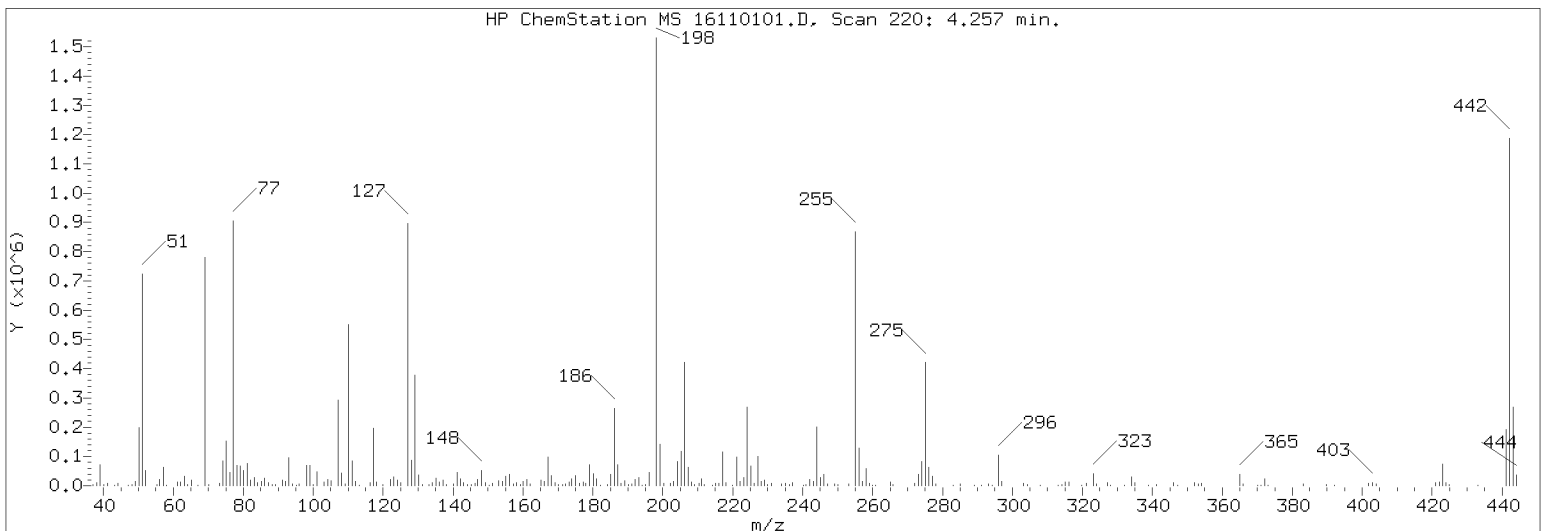
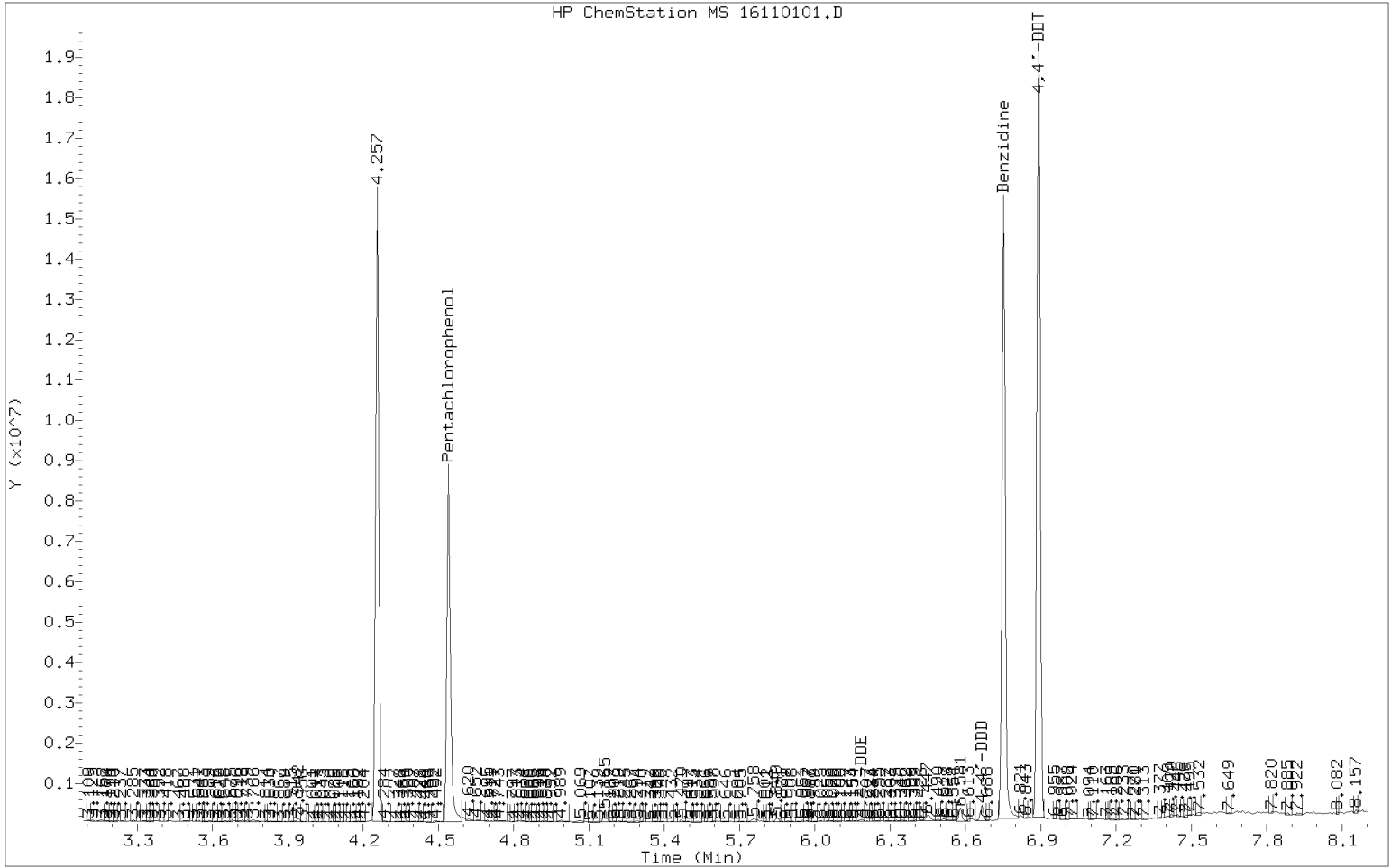
Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16H0147</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Lab File ID:	<u>16110101.D</u>	Injection Date:	<u>11/01/16</u>
Instrument ID:	<u>NT11</u>	Injection Time:	<u>09:16</u>
Sequence:	<u>SEK0004</u>	Lab Sample ID:	<u>SEK0004-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	45.6	PASS
68	Less than 2% of 69	1.37	PASS
69	Less than 100% of 198	50.1	PASS
70	Less than 2% of 69	0.736	PASS
127	10 - 80% of 198	58.3	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.67	PASS
275	10 - 60% of 198	26.7	PASS
365	1 - 100% of 198	2.77	PASS
441	0.1 - 24% of 442	15.3	PASS
442	50 - 200% of 198	78	PASS
443	15 - 24% of 442	21.4	PASS

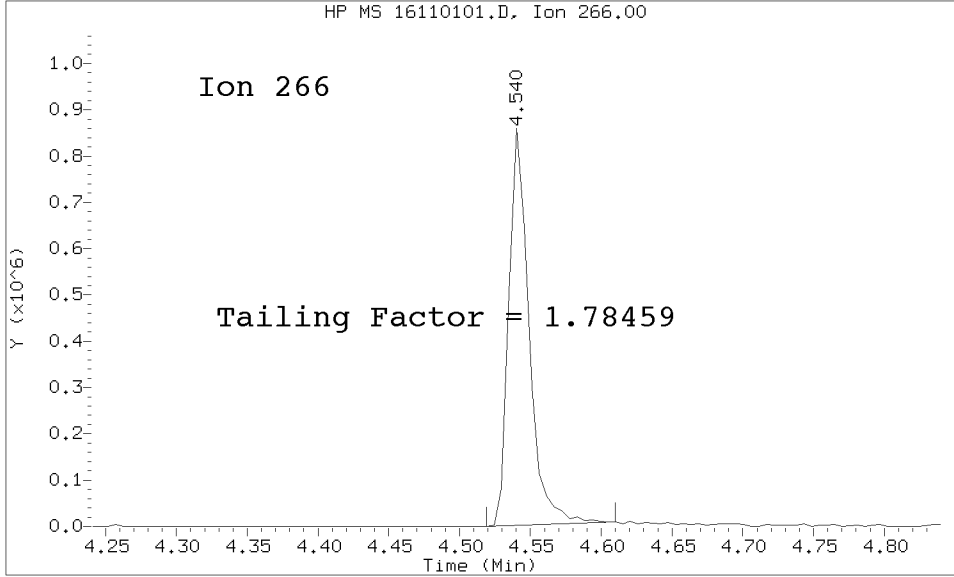
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEK0004-TUN1	16110101.D	11/01/2016	9:16
Cal Standard	SEK0004-CAL4	16110102.D	11/01/2016	9:31
Cal Standard	SEK0004-CAL3	16110103.D	11/01/2016	10:34
Cal Standard	SEK0004-CAL1	16110104.D	11/01/2016	11:04
Cal Standard	SEK0004-CAL5	16110105.D	11/01/2016	11:34
Cal Standard	SEK0004-CAL2	16110106.D	11/01/2016	12:04
Cal Standard	SEK0004-CAL6	16110107.D	11/01/2016	12:34
Secondary Cal Check	SEK0004-SCV1	16110108.D	11/01/2016	13:04
Cleanup Blank	CEJ0249-CBL1	16110109.D	11/01/2016	13:35
GPC Check	CEJ0249-GPC1	16110110.D	11/01/2016	14:05
ZZZZZ	16J0334-01RE1	16110111.D	11/01/2016	14:35
Calibration Check	SEK0004-CCV1	16110112.D	11/01/2016	15:05

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161101.b/16110101.D/16110101.D
Method Used: \20161101.b\DFTPP.m Inst: nt11
Injection Date: 01-NOV-2016 09:16 Operator: JW
Sample Info: SEK0004-TUN1 SEK0004-TUN1
Report Date: 11/01/2016 13:03



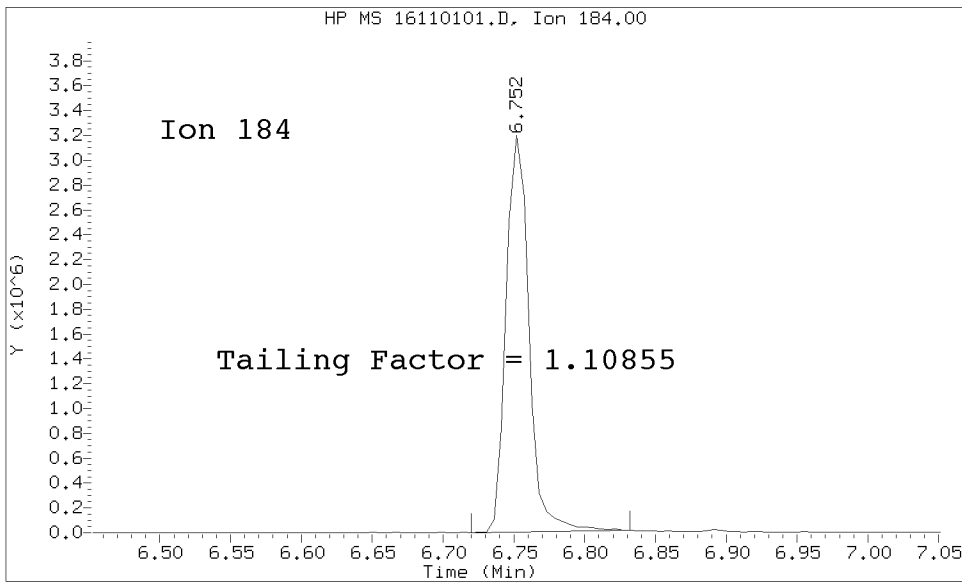
Datafile Analyzed: /20161101.b/16110101.D/16110101.D
Method Used: \20161101.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 01-NOV-2016 09:16 Operator: JW
Sample Info: SEK-TUN1
Report Date: 11/01/2016 13:03



Pentachlorophenol

=====
Exp. RT = 4.540
Found RT = 4.540

Tail Factor = 1.785 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 6.752
Found RT = 6.752

Tail Factor = 1.109 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7845912	2.000	PASS
Benzidine	1.1085450	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2468908			N/A
4,4-DDE	6701	0.3	20.0	PASS
4,4-DDD	61939	2.4	20.0	PASS
4,4-DDD + DDE	68640	2.7	20.0	PASS

Tuning Sample, nt11.i/20161101.b/16110101.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.63
68	Less than 2.00% of mass 69	0.68 (1.37)
69	Mass 69 relative abundance	50.07
70	Less than 2.00% of mass 69	0.37 (0.74)
127	10.00 - 80.00% of mass 198	58.25
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.67
275	10.00 - 60.00% of mass 198	26.66
365	Greater than 1.00% of mass 198	2.77
441	0.01 - 24.00% of mass 442	11.91 (15.27)
442	50.00 - 200.00% of mass 198	78.01
443	15.00 - 24.00% of mass 442	16.68 (21.39)

Data File: 16110101.D
 Spectrum: Avg. Scans 219-221 (4.26), Background Scan 214
 Location of Maximum: 198.00
 Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	2439	117.00	142144	190.00	3295	272.00	3958
38.00	10054	118.00	11135	191.00	5043	273.00	29088
39.00	52424	119.00	1326	192.00	16504	274.00	62184
40.00	1484	120.00	2258	193.00	20256	275.00	320896
41.00	2968	122.00	14299	194.00	2876	276.00	46424
43.00	942	123.00	22568	195.00	1790	277.00	24704
44.00	261	124.00	12333	196.00	39072	278.00	3697
45.00	986	125.00	8981	198.00	1203712	283.00	1761
47.00	301	127.00	701184	199.00	104344	284.00	795
48.00	2103	128.00	65672	200.00	7802	285.00	5578
49.00	6498	129.00	279680	201.00	2678	289.00	733
50.00	153920	130.00	28000	202.00	2807	291.00	1006
51.00	549248	131.00	5248	203.00	13246	292.00	718
52.00	33832	132.00	3755	204.00	58656	293.00	5167
53.00	1477	133.00	1271	205.00	86240	294.00	1582
55.00	2497	134.00	7154	206.00	337600	296.00	82032
56.00	18400	135.00	25880	207.00	48928	297.00	11164
57.00	50824	136.00	8076	208.00	10823	301.00	897
58.00	857	137.00	12135	209.00	5306	303.00	7676
61.00	7732	138.00	2003	210.00	6072	304.00	3601
62.00	9658	140.00	4153	211.00	16840	308.00	3054
63.00	23504	141.00	34288	212.00	1926	313.00	718
64.00	2760	142.00	13870	213.00	764	314.00	4757
65.00	15522	143.00	7332	214.00	803	315.00	9615
66.00	900	144.00	3154	215.00	3686	316.00	7556
67.00	1665	145.00	1184	216.00	6574	320.00	810
68.00	8238	146.00	6683	217.00	86120	321.00	4552
69.00	602688	147.00	18088	218.00	10805	323.00	27784
70.00	4435	148.00	34752	220.00	1933	324.00	5425
71.00	725	149.00	8021	221.00	75664	327.00	5661
73.00	5547	150.00	2157	222.00	10791	328.00	835
74.00	65792	151.00	4860	223.00	21544	332.00	1687
75.00	116448	152.00	1190	224.00	198592	333.00	679
76.00	37944	153.00	11900	225.00	48184	334.00	20432
77.00	717120	154.00	11527	226.00	3876	335.00	5332
78.00	52816	155.00	21120	227.00	77176	336.00	726
79.00	51128	156.00	32280	228.00	9626	339.00	695
80.00	40232	157.00	5390	229.00	17264	341.00	3556
81.00	59872	158.00	6167	230.00	1152	346.00	6837
82.00	13860	159.00	5432	231.00	7848	347.00	744
83.00	14350	160.00	11211	233.00	1487	352.00	8556
85.00	10742	161.00	17920	234.00	4798	353.00	6388
86.00	9822	162.00	4286	235.00	5614	354.00	8814
87.00	8201	163.00	981	236.00	3920	355.00	1145
88.00	2698	164.00	1894	237.00	6914	365.00	33352
89.00	1195	165.00	13021	239.00	1772	366.00	5174
91.00	9817	166.00	11088	240.00	2694	370.00	1569
92.00	11221	167.00	69824	241.00	2458	371.00	2284
93.00	72208	168.00	26120	242.00	14148	372.00	16448

94.00	6228	169.00	6898	243.00	11081	373.00	4492
95.00	3203	170.00	2101	244.00	141248	383.00	4847
96.00	4495	171.00	4453	245.00	18472	390.00	1842
97.00	983	172.00	5198	246.00	27528	391.00	1095
98.00	53088	173.00	9570	247.00	6172	392.00	716
99.00	49984	174.00	16608	248.00	1049	402.00	8126
100.00	4335	175.00	26744	249.00	4559	403.00	10067
101.00	34296	176.00	6478	250.00	1351	404.00	4348
103.00	9842	177.00	13268	251.00	982	421.00	10884
104.00	16920	178.00	5712	252.00	1140	422.00	8822
105.00	15395	179.00	53816	253.00	5055	423.00	59384
106.00	3090	180.00	33408	255.00	666688	424.00	9176
107.00	220416	181.00	19136	256.00	105808	425.00	1513
108.00	35048	182.00	2948	257.00	7977	433.00	865
109.00	4158	184.00	3798	258.00	40352	441.00	143360
110.00	408832	185.00	25312	259.00	6548	442.00	939008
111.00	63728	186.00	200704	260.00	807	443.00	200832
112.00	9489	187.00	55888	261.00	1037	444.00	22432
113.00	2735	188.00	5421	265.00	15759		
116.00	11509	189.00	12329	266.00	1597		



**MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM**

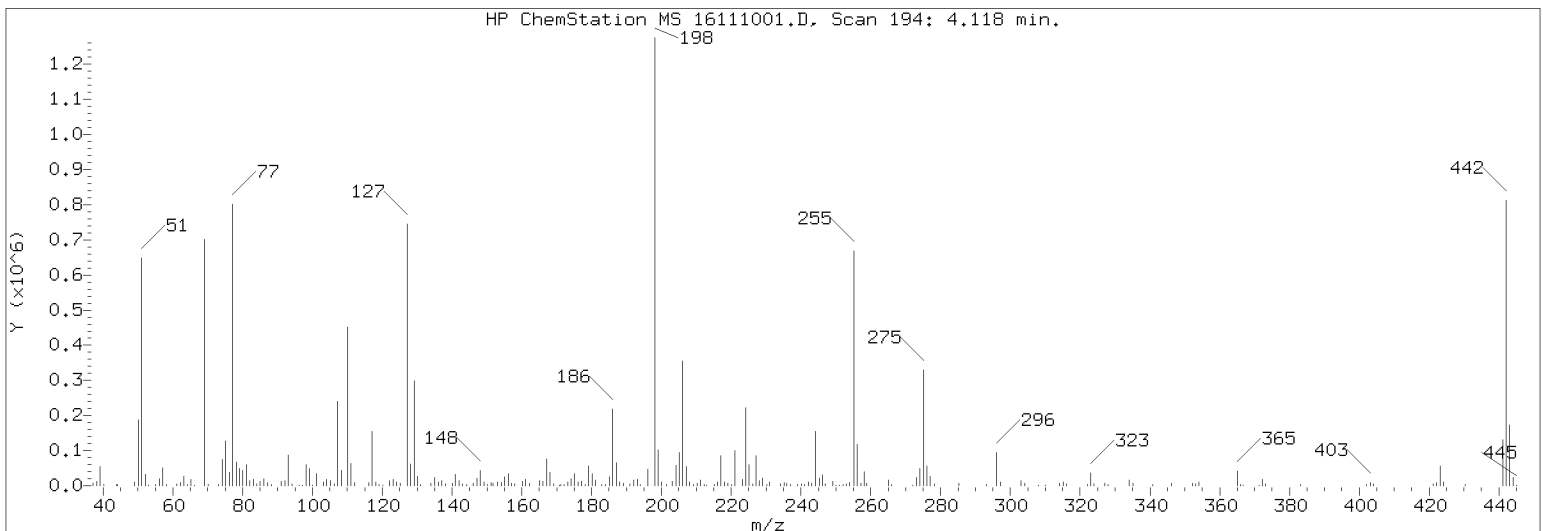
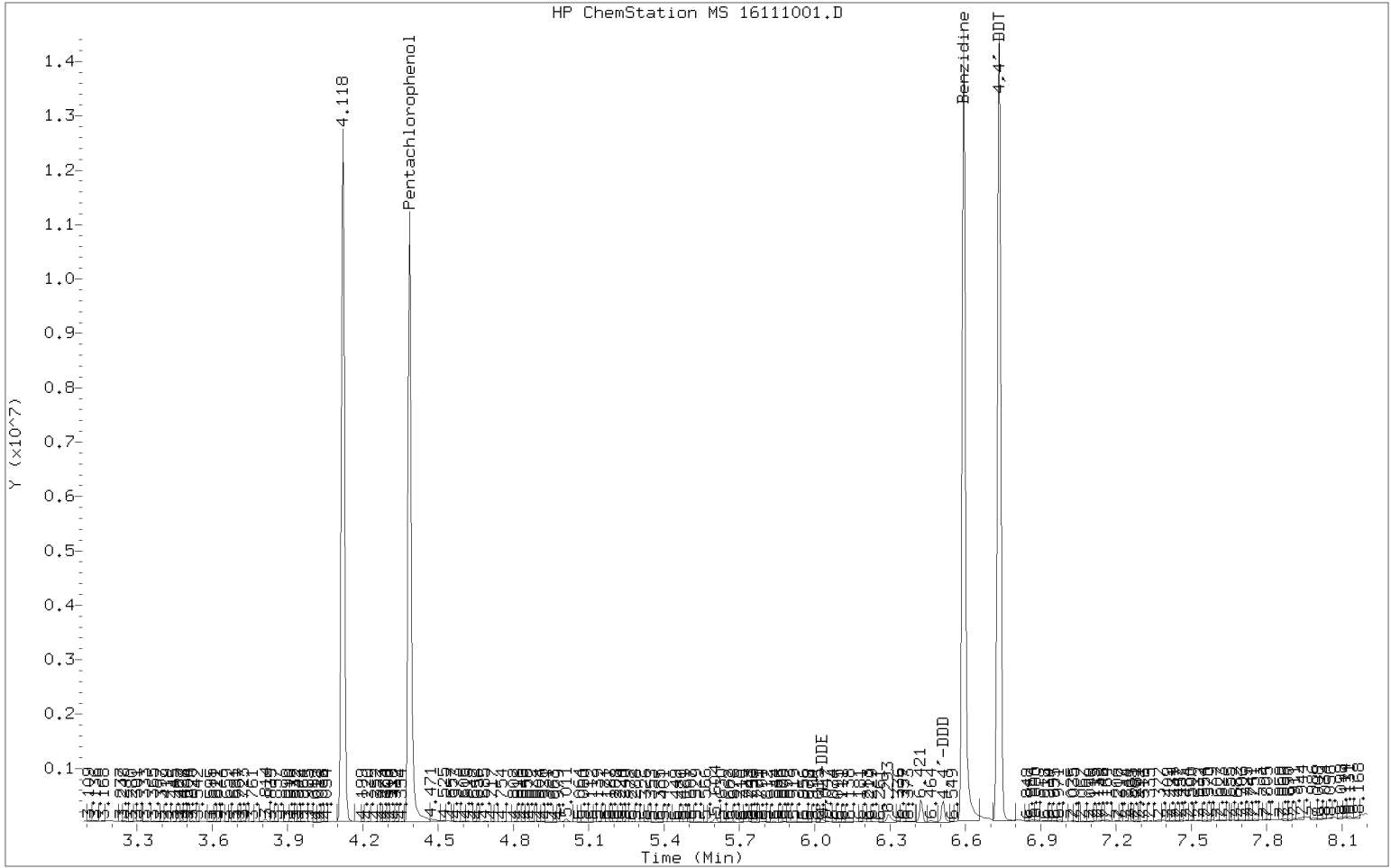
Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16H0147</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Lab File ID:	<u>16111001.D</u>	Injection Date:	<u>11/10/16</u>
Instrument ID:	<u>NT11</u>	Injection Time:	<u>11:23</u>
Sequence:	<u>SEK0151</u>	Lab Sample ID:	<u>SEK0151-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	48.9	PASS
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	51.8	PASS
70	Less than 2% of 69	0.525	PASS
127	10 - 80% of 198	57.6	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.08	PASS
275	10 - 60% of 198	25.4	PASS
365	1 - 100% of 198	3.4	PASS
441	0.1 - 24% of 442	16.4	PASS
442	50 - 200% of 198	71.4	PASS
443	15 - 24% of 442	22.1	PASS

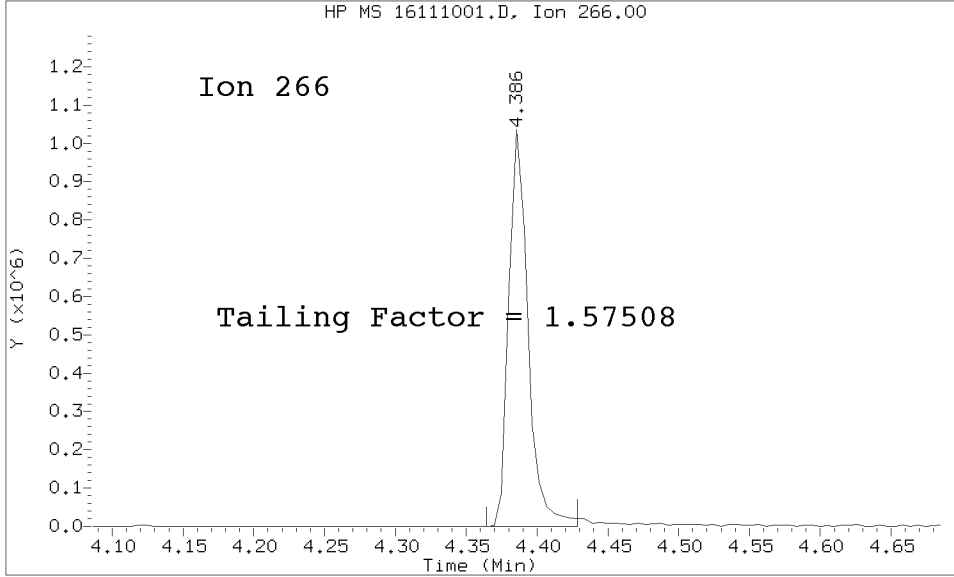
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEK0151-TUN1	16111001.D	11/10/2016	11:23
Initial Cal Check	SEK0151-ICV1	16111002.D	11/10/2016	11:38
Blank	BEJ0794-BLK1	16111003.D	11/10/2016	12:40
LCS	BEJ0794-BS1	16111004.D	11/10/2016	13:09
PG-T0-MUS-COC-160816	16H0147-01	16111005.D	11/10/2016	13:39
ZZZZZ	16H0268-01	16111006.D	11/10/2016	14:10
ZZZZZ	16J0187-01	16111007.D	11/10/2016	14:40
ZZZZZ	16J0187-02	16111008.D	11/10/2016	15:10
ZZZZZ	16J0187-03	16111009.D	11/10/2016	15:40
ZZZZZ	16J0187-04	16111010.D	11/10/2016	16:10
ZZZZZ	16J0187-05	16111011.D	11/10/2016	16:40
ZZZZZ	16J0187-06	16111012.D	11/10/2016	17:10
Calibration Check	SEK0151-CCV1	16111013.D	11/10/2016	17:40

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20161110.b/16111001.D/16111001.D
Method Used: \20161110.b\DFTPP.m Inst: nt11
Injection Date: 10-NOV-2016 11:23 Operator: JW
Sample Info: SEK0151-TUN1 SEK0151-TUN1
Report Date: 11/10/2016 13:01



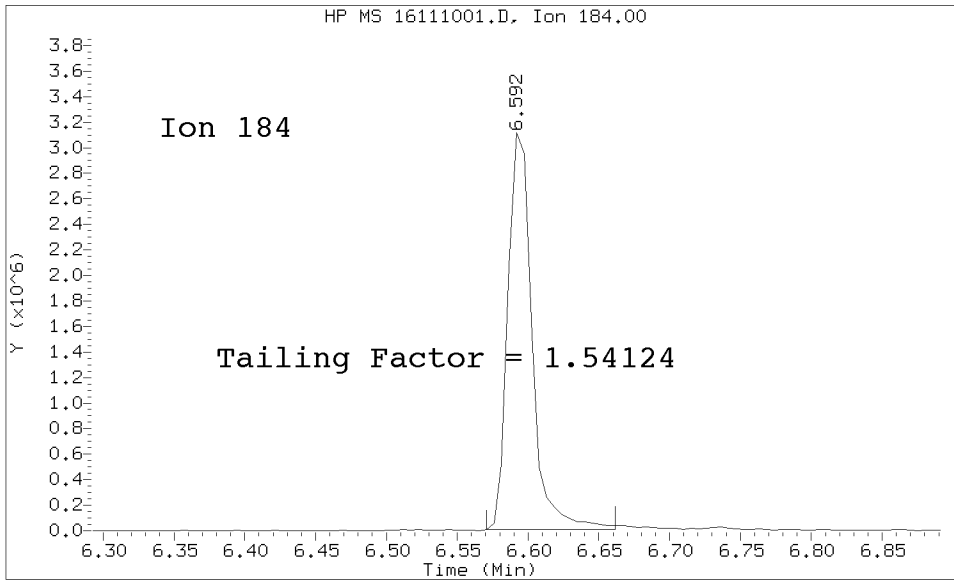
Datafile Analyzed: /20161110.b/16111001.D/16111001.D
Method Used: \20161110.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 10-NOV-2016 11:23 Operator: JW
Sample Info: SEK-TUN1
Report Date: 11/10/2016 13:01



Pentachlorophenol

=====
Exp. RT = 4.418
Found RT = 4.386

Tail Factor = 1.575 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 6.629
Found RT = 6.592

Tail Factor = 1.541 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5750799	2.000	PASS
Benzidine	1.5412371	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2015351			N/A
4,4-DDE	10585	0.5	20.0	PASS
4,4-DDD	64915	3.1	20.0	PASS
4,4-DDD + DDE	75500	3.6	20.0	PASS

Tuning Sample, nt11.i/20161110.b/16111001.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	48.95
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	51.77
70	Less than 2.00% of mass 69	0.27 (0.53)
127	10.00 - 80.00% of mass 198	57.55
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.08
275	10.00 - 60.00% of mass 198	25.39
365	Greater than 1.00% of mass 198	3.40
441	0.01 - 24.00% of mass 442	11.71 (16.40)
442	50.00 - 200.00% of mass 198	71.39
443	15.00 - 24.00% of mass 442	15.75 (22.06)

Data File: 16111001.D
 Spectrum: Avg. Scans 193-195 (4.12), Background Scan 188
 Location of Maximum: 198.00
 Number of points: 263

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	3412	123.00	15945	196.00	34512	274.00	49688
38.00	8085	124.00	6912	198.00	1011648	275.00	256832
39.00	37232	125.00	7074	199.00	81712	276.00	40288
40.00	1801	127.00	582208	200.00	5942	277.00	19648
44.00	5093	128.00	46680	201.00	4760	278.00	5095
49.00	5947	129.00	231424	202.00	1415	283.00	1019
50.00	139136	130.00	20536	203.00	8330	285.00	4258
51.00	495168	131.00	3385	204.00	43192	290.00	769
52.00	26088	134.00	4590	205.00	73328	293.00	4870
53.00	779	135.00	18560	206.00	276736	294.00	2073
55.00	3589	136.00	7259	207.00	41072	296.00	66960
56.00	15473	137.00	10653	208.00	7934	297.00	7871
57.00	36904	138.00	2487	209.00	2218	302.00	837
58.00	1908	139.00	917	210.00	8317	303.00	11057
61.00	6013	140.00	3219	211.00	13349	304.00	2917
62.00	7834	141.00	26600	212.00	966	308.00	1662
63.00	21032	142.00	8919	213.00	876	309.00	894
64.00	2782	143.00	4505	215.00	2642	310.00	755
65.00	10643	144.00	1256	216.00	8334	314.00	4465
66.00	704	145.00	1304	217.00	73296	315.00	7464
69.00	523776	146.00	4770	218.00	8792	316.00	5061
70.00	2751	147.00	15878	219.00	3423	321.00	1157
73.00	4316	148.00	36576	220.00	2356	322.00	1061
74.00	50208	149.00	6021	221.00	67536	323.00	31472
75.00	92320	150.00	2669	222.00	1426	324.00	5398
76.00	31800	151.00	6779	223.00	18960	325.00	1059
77.00	596608	152.00	3994	224.00	160192	327.00	4678
78.00	50512	153.00	7363	225.00	44568	328.00	1453
79.00	37176	154.00	7425	226.00	4928	332.00	1270
80.00	28496	155.00	16848	227.00	64616	333.00	1731
81.00	47368	156.00	24384	228.00	10709	334.00	14241
82.00	12734	157.00	4392	229.00	15654	335.00	5609
83.00	13252	158.00	4693	230.00	2250	341.00	2829
84.00	2682	159.00	3650	231.00	6269	346.00	5123
85.00	8417	160.00	10009	234.00	3764	351.00	770
86.00	11277	161.00	13505	235.00	5347	352.00	7492
87.00	5275	162.00	4744	236.00	5269	353.00	5947
88.00	1395	165.00	11652	237.00	3223	354.00	9165
89.00	735	166.00	9451	238.00	817	355.00	1632
91.00	8742	167.00	57368	239.00	2006	365.00	34376
92.00	10808	168.00	28232	240.00	2595	366.00	2565
93.00	61816	169.00	5452	241.00	3788	367.00	715
94.00	3957	170.00	1767	242.00	8144	371.00	1499
96.00	2506	171.00	2491	243.00	6777	372.00	13198
97.00	723	172.00	4401	244.00	122808	373.00	3308
98.00	48304	173.00	6805	245.00	15149	374.00	760
99.00	37376	174.00	13845	246.00	23616	383.00	3700
100.00	2807	175.00	27128	247.00	3131	385.00	832
101.00	22728	176.00	8779	249.00	6852	390.00	795

102.00	1359	177.00	11102	250.00	768	392.00	750
103.00	7925	178.00	1339	251.00	710	402.00	4412
104.00	14082	179.00	41664	252.00	2495	403.00	8924
105.00	10390	180.00	31312	253.00	4620	404.00	2833
106.00	3188	181.00	13658	254.00	3271	421.00	6230
107.00	178432	183.00	2704	255.00	526464	422.00	6093
108.00	31360	184.00	3981	256.00	91880	423.00	51024
109.00	2095	185.00	19336	257.00	6944	424.00	8204
110.00	340992	186.00	159104	258.00	31400	425.00	689
111.00	48272	187.00	50304	259.00	6598	429.00	756
112.00	5073	188.00	7095	260.00	751	430.00	1710
116.00	9100	189.00	7374	265.00	13234	441.00	118424
117.00	119608	191.00	3349	266.00	2277	442.00	722176
118.00	8955	192.00	12760	270.00	744	443.00	159296
119.00	1365	193.00	13634	271.00	775	444.00	16720
120.00	2667	194.00	2746	272.00	2347	445.00	864
122.00	11135	195.00	2841	273.00	17928		



INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16H0147
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring
Calibration:	ZK00002	Instrument:	NT11
Calibration Date:	11/01/2016 13:18	Column (1):	RXi-17Sil-MS

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	1.165776	14.8			RSD (20)	
2-Methylnaphthalene	0.7575091	7.1			RSD (20)	
Acenaphthylene	1.988976	9.2			RSD (20)	
Acenaphthene	1.306459	10.4			RSD (20)	
Dibenzofuran	1.80153	8.6			RSD (20)	
Fluorene	1.444193	6.0			RSD (20)	
Phenanthrene	1.360389	10.8			RSD (20)	
Anthracene	1.318244	8.9			RSD (20)	
Fluoranthene	1.163114	6.1			RSD (20)	
Pyrene	1.570628	8.7			RSD (20)	
Benzo(a)anthracene	1.335632	6.0			RSD (20)	
Chrysene	1.390622	7.3			RSD (20)	
Benzo(b)fluoranthene	1.011417	4.3			RSD (20)	
Benzo(k)fluoranthene	1.115677	3.8			RSD (20)	
Benzo(j)fluoranthene	0.9859886	3.1			RSD (20)	
Benzo(a)pyrene	0.9593173	2.4			RSD (20)	
Indeno(1,2,3-cd)pyrene	1.055423	4.7			RSD (20)	
Dibenzo(a,h)anthracene	0.8471938	5.3			RSD (20)	
Benzo(g,h,i)perylene	0.9201908	4.2			RSD (20)	
1-Methylnaphthalene	0.6791953	6.6			RSD (20)	
Perylene	0.9940602	4.0			RSD (20)	
Benzo(e)pyrene	0.9952431	3.5			RSD (20)	
2-Methylnaphthalene-d10	0.6039149	5.7			RSD (20)	
Dibenzo[a,h]anthracene-d14	0.6194622	4.1			RSD (20)	
Fluoranthene-d10	0.9473863	4.7			RSD (20)	

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code Comments: ZK00002	YES	JLW	11/01/2016
2	DFTPP Tune met criteria	YES	JLW	11/01/2016
3	DDT breakdown <20%	YES	JLW	11/01/2016
4	Peak Tailing factor <= 2%	YES	JLW	11/01/2016
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	11/01/2016
6	NO ICAL Q Flag applied	YES	JLW	11/01/2016
7	Manual integrations include before/after pictures	YES	JLW	11/01/2016
8	Spectral Library matches updated	NA	JLW	11/01/2016
9	Internal Standard areas within 50-200% from reference	YES	JLW	11/01/2016
10	Minimum response factors met	YES	JLW	11/01/2016
11	All SCV within +/- 20% (DOD)	YES	JLW	11/01/2016
12	All SCV within +/- 30%	YES	JLW	11/01/2016
13	NO Linear or Quadratic fits used	YES	JLW	11/01/2016
14	NO Calibration points dropped	YES	JLW	11/01/2016
15	Additional notes	NA	JLW	11/01/2016
16	Reviewer approval (Reviewer)	YES	BB	11/01/2016

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-NOV-2016 09:31
 End Cal Date : 01-NOV-2016 12:34
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Last Edit : 01-Nov-2016 13:04 nt11.i
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem3\nt11.i\20161101.b\16110104.D
 Level 2: \\target\share\chem3\nt11.i\20161101.b\16110106.D
 Level 3: \\target\share\chem3\nt11.i\20161101.b\16110103.D
 Level 4: \\target\share\chem3\nt11.i\20161101.b\16110102.D
 Level 5: \\target\share\chem3\nt11.i\20161101.b\16110105.D
 Level 6: \\target\share\chem3\nt11.i\20161101.b\16110107.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Naphthalene	1.43646	1.22727	1.22234	1.12030	1.05800	0.93029	1.16578	14.827
4 2-Methylnaphthalene	0.79726	0.74903	0.82063	0.77199	0.73841	0.66774	0.75751	7.052
5 1-Methylnaphthalene	0.71708	0.66958	0.73079	0.68968	0.66244	0.60561	0.67920	6.583
6 Acenaphthylene	2.19435	2.02112	2.15365	1.98633	1.87850	1.69991	1.98898	9.164
8 Acenaphthene	1.53291	1.32033	1.35865	1.26145	1.23236	1.13306	1.30646	10.370
9 Dibenzofuran	1.95290	1.88469	1.91770	1.80595	1.70700	1.54094	1.80153	8.606
11 Fluorene	1.51162	1.44809	1.53642	1.46482	1.40997	1.29423	1.44419	5.969
13 Phenanthrene	1.50906	1.43904	1.46687	1.35963	1.27695	1.11079	1.36039	10.848
15 Anthracene	1.41287	1.30444	1.43521	1.36554	1.27637	1.11452	1.31824	8.865
17 Fluoranthene	1.20350	1.14615	1.23813	1.19785	1.15892	1.03415	1.16311	6.128
18 Pyrene	1.74808	1.57015	1.67119	1.57621	1.50562	1.35252	1.57063	8.703
19 Benzo(a)anthracene	1.39808	1.33013	1.41812	1.37070	1.29776	1.19899	1.33563	5.996
21 Chrysene	1.49649	1.43289	1.46388	1.39531	1.33858	1.21659	1.39062	7.289
22 Benzo(b)fluoranthene	1.07050	1.00709	1.01568	1.02332	1.01772	0.93420	1.01142	4.348
23 Benzo(k)fluoranthene	1.10820	1.09951	1.19484	1.10584	1.11918	1.06649	1.11568	3.826
24 Benzo(j)fluoranthene	0.99147	1.00338	1.02224	0.95427	1.00113	0.94344	0.98599	3.107
26 Benzo(e)pyrene	1.03051	1.00713	1.02239	0.97081	1.00361	0.93694	0.99524	3.535
27 Benzo(a)pyrene	0.96350	0.93500	0.98778	0.95628	0.98138	0.93196	0.95932	2.406
29 Perylene	1.04741	0.99470	1.02429	0.97195	0.99196	0.93404	0.99406	3.988
31 Dibenzo(a,h)anthracene	0.79775	0.79947	0.85097	0.83984	0.90152	0.89362	0.84719	5.252
32 Indeno(1,2,3-cd)pyrene	0.99906	1.00083	1.07038	1.04853	1.11959	1.09415	1.05542	4.651
33 Benzo(g,h,i)perylene	0.98903	0.89213	0.92074	0.87749	0.93088	0.91087	0.92019	4.223
\$ 3 2-Methylnaphthalene-d10	0.63322	0.59470	0.64732	0.60759	0.58971	0.55096	0.60391	5.662
\$ 10 Fluorene-d10	1.17328	1.02878	1.07554	1.03300	0.99740	0.95486	1.04381	7.192
\$ 14 Anthracene-d10	1.13857	0.97318	1.05630	1.01059	0.96443	0.88116	1.00404	8.739
\$ 16 Fluoranthene-d10	0.99459	0.92845	0.98518	0.96224	0.94204	0.87181	0.94739	4.715
\$ 25 Benzo(e)pyrene-d12	1.04045	0.99788	1.02335	0.97095	0.99526	0.93325	0.99352	3.834

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 01-NOV-2016 09:31
 End Cal Date : 01-NOV-2016 12:34
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Last Edit : 01-Nov-2016 13:04 nt11.i
 Curve Type : Average

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
\$ 30 Dibenzo(a,h)anthracene-d14	0.60482	0.57954	0.61973	0.61997	0.64506	0.64766	0.61946	4.122

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161101.b

Page 467 of 79
AR Job No.: SEK0 Method: DFPP.m Instrument: nt11.i Date: 01-NOV-2016

Time filename LabID ClientId DF Manually Integrated Compounds

0916 16110101.D SEK0004-TUN1 1 NO MANUAL INTEGRATION

0931 16110102.D SEK0004-CAL4 1 NO MANUAL INTEGRATION

1034 16110103.D SEK0004-CAL3 1 NO MANUAL INTEGRATION

1104 16110104.D SEK0004-CAL1 1 NO MANUAL INTEGRATION

1134 16110105.D SEK0004-CAL5 1 NO MANUAL INTEGRATION

1204 16110106.D SEK0004-CAL2 1 NO MANUAL INTEGRATION

1234 16110107.D SEK0004-CAL6 1 NO MANUAL INTEGRATION

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161101.b

Pat No	Filename	LabID	ClientID	DF																	
1	0816	16110101.D	SEK0004-TUN1	1	NO ISTDs FOUND																
2	0931	16110102.D	SEK0004-CAL4	1	6.17	609556	9.15	316851	11.80	546133	16.50	417210	19.10	524443							
3	1034	16110103.D	SEK0004-CAL3	1	6.17	605453	9.15	309736	11.80	547216	16.50	410327	19.11	510211							
4	1104	16110104.D	SEK0004-CAL1	1	6.17	607408	9.15	290245	11.80	518986	16.50	393896	19.10	482655							
5	1134	16110105.D	SEK0004-CAL5	1	6.17	614933	9.15	319092	11.80	545127	16.50	422171	19.11	511390							
6	1204	16110106.D	SEK0004-CAL2	1	6.17	611834	9.15	290382	11.80	510239	16.50	387799	19.10	470018							
7	1234	16110107.D	SEK0004-CAL6	1	6.17	617596	9.15	316004	11.80	545628	16.50	421958	19.11	510441							

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20161101.b
Inst ID: nt11.i

ID	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	16110102	16110103	16110104	16110105	16110106	16110107				
INJ DATE:	01-NOV-2016	01-NOV-2016	01-NOV-2016	01-NOV-2016	01-NOV-2016	01-NOV-2016				
INJ TIME:	09 31	10:34	11:04	11:34	12 04	12 34				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 1 Naphthalene-d8	6 166	6 166	6 166	6 166	6 166	6 166	6 166	5.916-6 416	6 166	0 000
2 Naphthalene	6 208	6 208	6 198	6 208	6 208	6 208	6 208	5 958-6 458	6 206	0 004
\$ 3 2-Methylnaphthalene-d1	7 143	7 143	7 143	7 143	7 143	7 143	7 143	6 893-7 393	7 143	0 000
4 2-Methylnaphthalene	7 196	7 196	7 196	7 196	7 196	7 196	7 196	6 946-7 446	7 196	0 000
5 1-Methylnaphthalene	7 448	7 448	7 448	7 448	7 448	7 448	7 448	7 198-7 698	7 448	0 000
6 Acenaphthylene	8 990	8 990	8 990	8 990	8 990	8 990	8 990	8 740-9 240	8 990	0 000
* 7 Acenaphthene-d10	9 145	9 145	9 145	9 145	9 145	9 145	9 145	8 895-9 395	9 145	0 000
8 Acenaphthene	9 201	9 212	9 201	9 201	9 201	9 201	9 201	8 951-9 451	9 203	0 005
9 Dibenzofuran	9 411	9 411	9 411	9 411	9 411	9 411	9 411	9 161-9 661	9 411	0 000
\$ 10 Fluorene-d10	9 972	9 983	9 972	9 972	9 972	9 972	9 972	9 722-10 222	9 974	0 004
11 Fluorene	10 035	10 035	10 035	10 035	10 035	10 035	10 035	9 785-10 285	10 035	0 000
* 12 Phenanthrene-d10	11 798	11 798	11 798	11 798	11 798	11 798	11 798	11 548-12 048	11 798	0 000
13 Phenanthrene	11 837	11 837	11 837	11 837	11 836	11 836	11 837	11 587-12 087	11 836	0 000
\$ 14 Anthracene-d10	11 856	11 865	11 856	11 856	11 856	11 856	11 856	11 606-12 106	11 857	0 004
15 Anthracene	11 894	11 894	11 894	11 894	11 894	11 894	11 894	11 644-12 144	11 894	0 000
\$ 16 Fluoranthene-d10	13 883	13 883	13 873	13 873	13 873	13 882	13 883	13 633-14 133	13 878	0 005
17 Fluoranthene	13 911	13 911	13 911	13 911	13 911	13 911	13 911	13 661-14 161	13 911	0 000

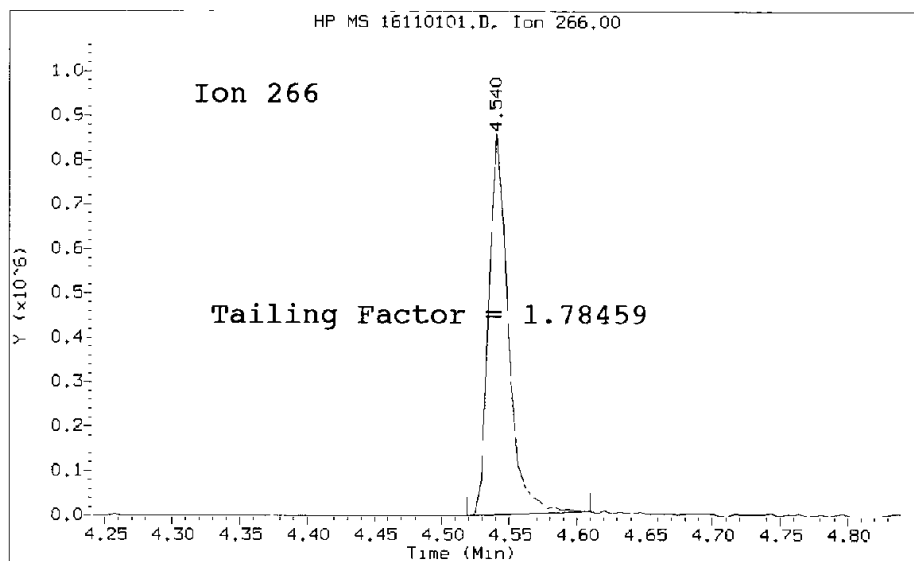
Reviewer 1 _____ Date: 11/1/16
Reviewer 2 _____ Date: _____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Batch File: \\target\share\chem3\nt11.i\20161101.b
 Inse ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 Pyrene	14.401	14.401	14.392	14.392	14.392	14.401	14.401	14.151-14.651	14.397	0.005
19 Benzo(a)anthracene	16.413	16.413	16.413	16.413	16.413	16.413	16.413	16.163-16.663	16.413	0.000
* 20 Chrysene-d12	16.504	16.504	16.504	16.504	16.504	16.504	16.504	16.254-16.754	16.504	0.000
21 Chrysene	16.554	16.554	16.554	16.554	16.554	16.554	16.554	16.304-16.804	16.554	0.000
22 Benzo(b)fluoranthene	18.198	18.198	18.198	18.198	18.198	18.198	18.198	17.948-18.448	18.198	0.000
23 Benzo(k)fluoranthene	18.236	18.236	18.236	18.236	18.236	18.236	18.236	17.986-18.486	18.236	0.000
24 Benzo(j)fluoranthene	18.285	18.294	18.285	18.285	18.284	18.294	18.285	18.035-18.535	18.288	0.005
\$ 25 Benzo(e)pyrene-d12	18.775	18.784	18.775	18.775	18.774	18.774	18.775	18.525-19.025	18.776	0.004
26 Benzo(e)pyrene	18.832	18.832	18.832	18.832	18.832	18.832	18.832	18.582-19.082	18.832	0.000
27 Benzo(a)pyrene	18.928	18.928	18.919	18.928	18.928	18.928	18.928	18.678-19.178	18.927	0.004
* 28 Perylene-d12	19.101	19.111	19.101	19.111	19.101	19.111	19.101	18.851-19.351	19.106	0.005
29 Perylene	19.159	19.159	19.159	19.159	19.159	19.159	19.159	18.909-19.409	19.160	0.004
\$ 30 Dibenzo(a,h)anthracene	21.177	21.177	21.177	21.177	21.177	21.177	21.177	20.927-21.427	21.177	0.000
31 Dibenzo(a,h)anthracene	21.266	21.266	21.266	21.266	21.265	21.265	21.266	21.016-21.516	21.266	0.000
32 Indeno(1,2,3-cd)pyrene	21.266	21.277	21.266	21.266	21.265	21.277	21.266	21.016-21.516	21.269	0.006
33 Benzo(g,h,i)perylene	22.185	22.185	22.174	22.185	22.185	22.185	22.185	21.935-22.435	22.183	0.004

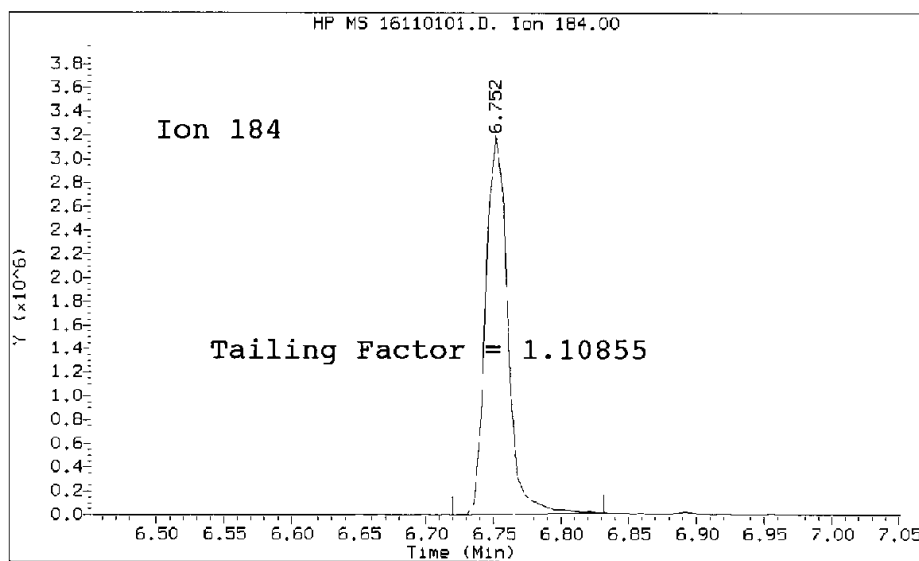
Datafile Analyzed: /20161101.b/16110101.D/16110101.D
Method Used: \20161101.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 01-NOV-2016 09:16 Operator: JW
Sample Info: SEK-TUN1
Report Date: 11/01/2016 13:03



Pentachlorophenol

=====
Exp. RT = 4.540
Found RT = 4.540

Tail Factor = 1.785 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 6.752
Found RT = 6.752

Tail Factor = 1.109 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7845912	2.000	PASS
Benzidine	1.1085450	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2468908			N/A
4,4-DDE	6701	0.3	20.0	PASS
4,4-DDD	61939	2.4	20.0	PASS
4,4-DDD + DDE	68640	2.7	20.0	PASS

Tuning Sample, nt11.i/20161101.b/16110101.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.63
68	Less than 2.00% of mass 69	0.68 (1.37)
69	Mass 69 relative abundance	50.07
70	Less than 2.00% of mass 69	0.37 (0.74)
127	10.00 - 80.00% of mass 198	58.25
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.67
275	10.00 - 60.00% of mass 198	26.66
365	Greater than 1.00% of mass 198	2.77
441	0.01 - 24.00% of mass 442	11.91 (15.27)
442	50.00 - 200.00% of mass 198	78.01
443	15.00 - 24.00% of mass 442	16.68 (21.39)

Data File: 16110101.D
 Spectrum: Avg. Scans 219-221 (4.26), Background Scan 214
 Location of Maximum: 198.00
 Number of points: 274

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	2439	117.00	142144	190.00	3295	272.00	3958
38.00	10054	118.00	11135	191.00	5043	273.00	29088
39.00	52424	119.00	1326	192.00	16504	274.00	62184
40.00	1484	120.00	2258	193.00	20256	275.00	320896
41.00	2968	122.00	14299	194.00	2876	276.00	46424
43.00	942	123.00	22568	195.00	1790	277.00	24704
44.00	261	124.00	12333	196.00	39072	278.00	3697
45.00	986	125.00	8981	198.00	1203712	283.00	1761
47.00	301	127.00	701184	199.00	104344	284.00	795
48.00	2103	128.00	65672	200.00	7802	285.00	5578
49.00	6498	129.00	279680	201.00	2678	289.00	733
50.00	153920	130.00	28000	202.00	2807	291.00	1006
51.00	549248	131.00	5248	203.00	13246	292.00	718
52.00	33832	132.00	3755	204.00	58656	293.00	5167
53.00	1477	133.00	1271	205.00	86240	294.00	1582
55.00	2497	134.00	7154	206.00	337600	296.00	82032
56.00	18400	135.00	25880	207.00	48928	297.00	11164
57.00	50824	136.00	8076	208.00	10823	301.00	897
58.00	857	137.00	12135	209.00	5306	303.00	7676
61.00	7732	138.00	2003	210.00	6072	304.00	3601
62.00	9658	140.00	4153	211.00	16840	308.00	3054
63.00	23504	141.00	34288	212.00	1926	313.00	718
64.00	2760	142.00	13870	213.00	764	314.00	4757
65.00	15522	143.00	7332	214.00	803	315.00	9615
66.00	900	144.00	3154	215.00	3686	316.00	7556
67.00	1665	145.00	1184	216.00	6574	320.00	810
68.00	8238	146.00	6683	217.00	86120	321.00	4552
69.00	602688	147.00	18088	218.00	10805	323.00	27784
70.00	4435	148.00	34752	220.00	1933	324.00	5425
71.00	725	149.00	8021	221.00	75664	327.00	5661
73.00	5547	150.00	2157	222.00	10791	328.00	835
74.00	65792	151.00	4860	223.00	21544	332.00	1687
75.00	116448	152.00	1190	224.00	198592	333.00	679
76.00	37944	153.00	11900	225.00	48184	334.00	20432
77.00	717120	154.00	11527	226.00	3876	335.00	5332
78.00	52816	155.00	21120	227.00	77176	336.00	726
79.00	51128	156.00	32280	228.00	9626	339.00	695
80.00	40232	157.00	5390	229.00	17264	341.00	3556
81.00	59872	158.00	6167	230.00	1152	346.00	6837
82.00	13860	159.00	5432	231.00	7848	347.00	744
83.00	14350	160.00	11211	233.00	1487	352.00	8556
85.00	10742	161.00	17920	234.00	4798	353.00	6388
86.00	9822	162.00	4286	235.00	5614	354.00	8814
87.00	8201	163.00	981	236.00	3920	355.00	1145
88.00	2698	164.00	1894	237.00	6914	365.00	33352
89.00	1195	165.00	13021	239.00	1772	366.00	5174
91.00	9817	166.00	11088	240.00	2694	370.00	1569
92.00	11221	167.00	69824	241.00	2458	371.00	2284
93.00	72208	168.00	26120	242.00	14148	372.00	16448

94.00	6228	169.00	6898	243.00	11081	373.00	4492
95.00	3203	170.00	2101	244.00	141248	383.00	4847
96.00	4495	171.00	4453	245.00	18472	390.00	1842
97.00	983	172.00	5198	246.00	27528	391.00	1095
98.00	53088	173.00	9570	247.00	6172	392.00	716
99.00	49984	174.00	16608	248.00	1049	402.00	8126
100.00	4335	175.00	26744	249.00	4559	403.00	10067
101.00	34296	176.00	6478	250.00	1351	404.00	4348
103.00	9842	177.00	13268	251.00	982	421.00	10884
104.00	16920	178.00	5712	252.00	1140	422.00	8822
105.00	15395	179.00	53816	253.00	5055	423.00	59384
106.00	3090	180.00	33408	255.00	666688	424.00	9176
107.00	220416	181.00	19136	256.00	105808	425.00	1513
108.00	35048	182.00	2948	257.00	7977	433.00	865
109.00	4158	184.00	3798	258.00	40352	441.00	143360
110.00	408832	185.00	25312	259.00	6548	442.00	939008
111.00	63728	186.00	200704	260.00	807	443.00	200832
112.00	9489	187.00	55888	261.00	1037	444.00	22432
113.00	2735	188.00	5421	265.00	15759		
116.00	11509	189.00	12329	266.00	1597		

Data File: \\target\share\chem3\nt11.1\20161101_b\16110102.D

Date: 01-NOV-2016 09:31

Client ID:

Sample Info: SEK0004-CAL4

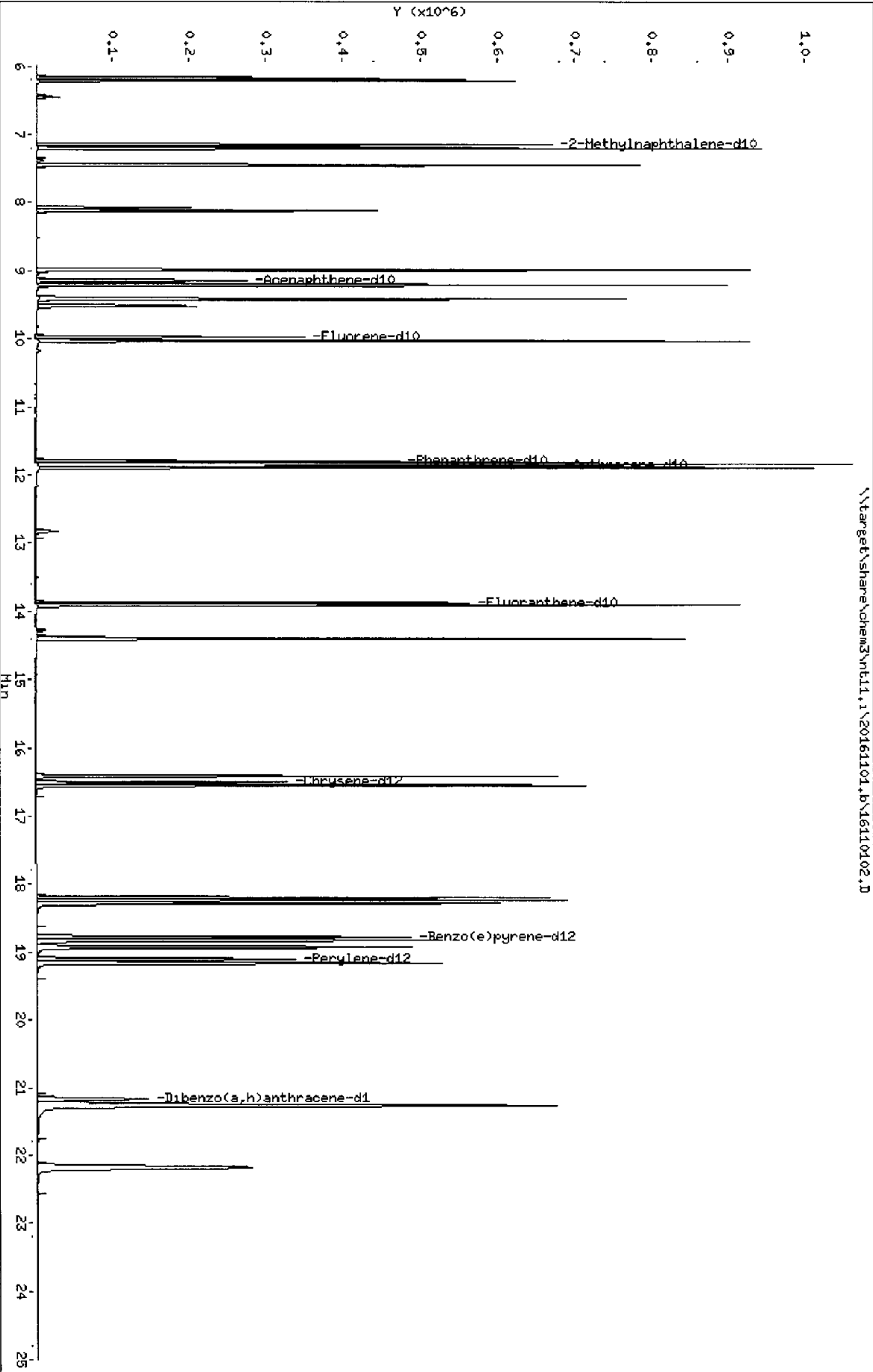
Column phase: Fx1-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

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ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110102.D
 Lab Smp Id: SEK0004-CAL4
 Inj Date : 01-NOV-2016 09:31
 Operator : JW
 Smp Info : SEK0004-CAL4
 Misc Info :
 Comment :
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 Meth Date : 01-Nov-2016 13:04 nt11.i
 Cal Date : 01-NOV-2016 12:34
 Als bottle: 2
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Inst ID: nt11.i

Quant Type: ISTD

Cal File: 16110107.D

Calibration Sample, Level: 4

Compound Sublist: PEMD.sub

Compounds	QUANT SIG	AMOUNTS					ON-COL
		MASS	RT	EXP RT	REL RT	RESPONSE	
* 1 Naphthalene-d8	136	6.166	6.166	(1.000)	50955e	200.000	
2 Naphthalene	128	6.206	6.206	(1.007)	853604	250.000	240
\$ 3 2-Methylnaphthalene-d10	152	7.143	7.143	(1.158)	163949	250.000	252
4 2-Methylnaphthalene	144	7.195	7.195	(1.167)	568211	250.000	255
5 1-Methylnaphthalene	142	7.447	7.447	(1.208)	525496	250.000	254
6 Acenaphthylene	152	8.990	8.990	(0.963)	786712	250.000	250
* 7 Acenaphthene-d10	134	9.145	9.145	(1.000)	316851	200.000	
8 Acenaphthene	153	9.200	9.200	(1.006)	499613	250.000	241
9 Dibenzofuran	166	9.411	9.411	(1.029)	715272	250.000	251 (H)
\$ 10 Fluorene-d10	174	9.972	9.972	(1.090)	409135	250.000	247
11 Fluorene	166	10.035	10.035	(1.097)	580163	250.000	254
* 12 Phenanthrene-d10	138	11.798	11.798	(1.000)	546133	200.000	(H)
13 Phenanthrene	179	11.836	11.836	(0.998)	328175	250.000	250 (H)
\$ 14 Anthracene-d10	188	11.855	11.855	(1.000)	663897	250.000	252
15 Anthracene	179	11.894	11.894	(1.003)	932211	250.000	256
\$ 16 Fluoranthene-d10	212	13.862	13.862	(1.171)	653891	250.000	254
17 Fluoranthene	202	13.911	13.911	(1.173)	317731	250.000	257
18 Pyrene	202	14.401	14.401	(0.873)	822013	250.000	251
19 Benzo(a)anthracene	228	16.412	16.412	(0.994)	714837	250.000	257 (H)
* 20 Chrysene-d12	240	16.504	16.504	(1.000)	417210	200.000	
21 Chrysene	228	16.553	16.553	(1.003)	727671	250.000	251
22 Benzo(b)fluoranthene	252	16.198	16.198	(0.953)	870840	250.000	253 (H)
23 Benzo(k)fluoranthene	252	18.235	18.235	(0.955)	724936	250.000	248 (H)
24 Benzo(j)fluoranthene	252	18.284	18.284	(0.957)	625575	250.000	242
\$ 25 Benzo(a)pyrene-d12	264	18.774	18.774	(0.983)	636512	250.000	244
26 Benzo(a)pyrene	252	18.832	18.832	(0.983)	636420	250.000	244 (H)
27 Benzo(a)pyrene	252	18.928	18.928	(0.991)	626690	250.000	249 (H)
* 28 Perylene-d12	264	19.101	19.101	(1.000)	524443	200.000	
29 Perylene	252	19.158	19.158	(1.003)	637165	250.000	244
\$ 30 D,benzo(a,k)anthracene-d14	292	21.177	21.177	(1.109)	406422	250.000	250
31 D,benzo(a,k)anthracene	278	21.265	21.265	(1.113)	550556	250.000	246
32 Indeno(1,2,3-cd)pyrene	276	21.265	21.265	(1.113)	687325	250.000	246
33 Benzo(g,h,i)perylene	276	22.185	22.185	(1.161)	575245	250.000	236

Data File: \\target\share\chem3\nt11.i\20161101.b\16110102.D
Report Date: 01-Nov-2016 13:04

Page 2

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110102.D
 Lab Smp Id: SEK0004-CAL4
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31

Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	609556	0.00
7 Acenaphthene-d10	316851	158426	633702	316851	0.00
12 Phenanthrene-d10	546133	273067	1092266	546133	0.00
20 Chrysene-d12	417210	208605	834420	417210	0.00
28 Perylene-d12	524443	262222	1048886	524443	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	0.00
28 Perylene-d12	19.10	18.60	19.60	19.10	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110102.D

Lab ID: SEK0004-CAL4

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 09:31

RT	CO-ELUTION COMPOUNDS
21.266	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.266	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

Data File: \\target\share\chem3\nt11.1\20161101.6\16110103.D

Date: 01-NOV-2016 10:34

Client ID:

Sample Info: SEK0004-CAL3

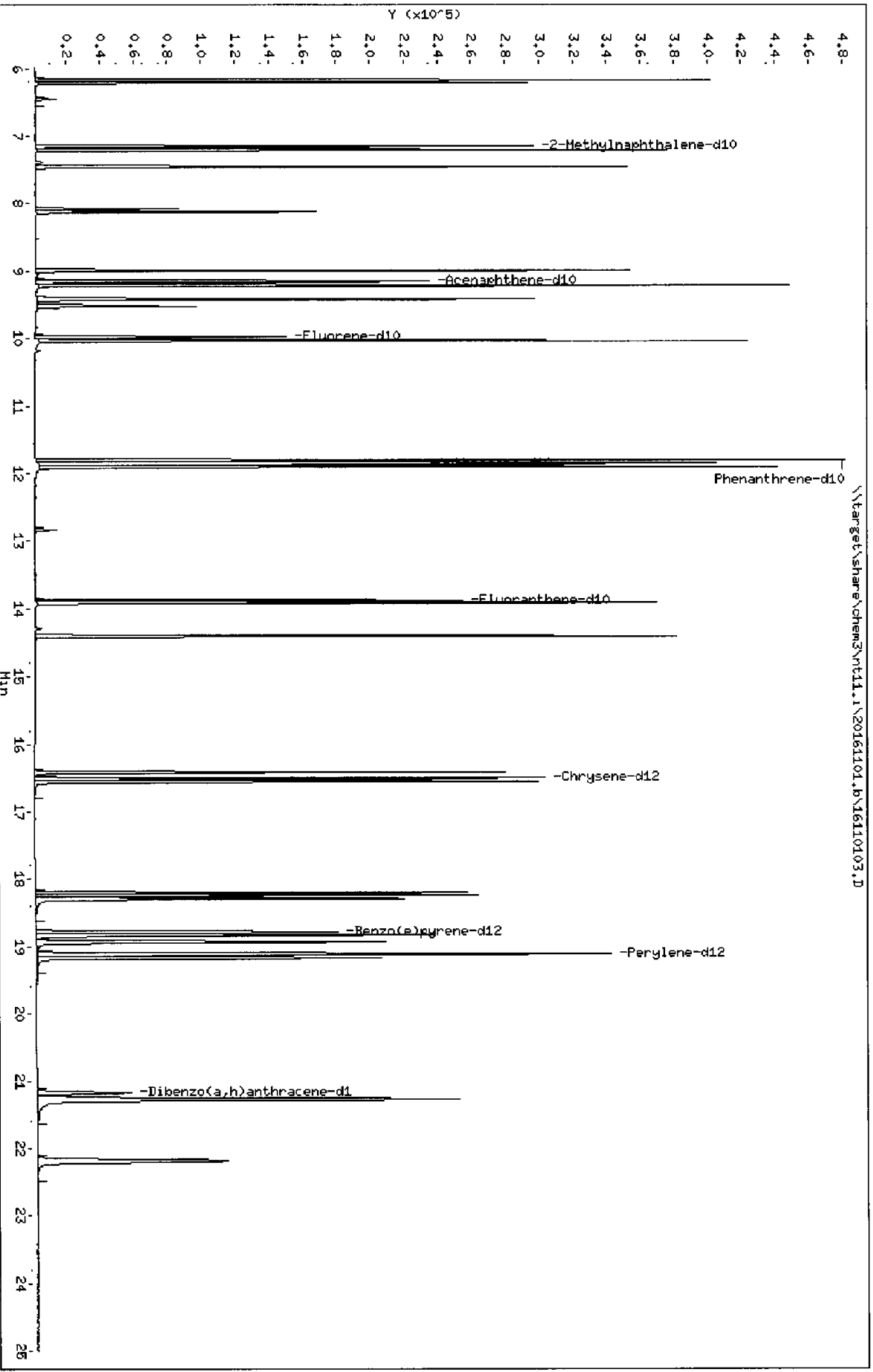
Column phase: Rx1-17511 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

Page 1



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110103.D
 Lab Smp Id: SEK0004-CAL3
 Inj Date : 01-NOV-2016 10:34 MS Autotune Date: 15-JAN-2015 16:59
 Operator : JW Inst ID: nt11.i
 Smp Info : SEK0004-CAL3
 Misc Info :
 Comment :
 Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Meth Date : 01-Nov-2016 13:02 jonathonw Quant Type: ISTD
 Cal Date : 01-NOV-2016 12:34 Cal File: 16110107.D
 Als bottle: 5 Calibration Sample, Level: 3
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: PEMD.sub
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Compounds	QUANT SIG	AMOUNTS					
		MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)
* 1 Naphthalene-d8	136	6.165	6.165	(1.000)	605453	200.000	
2 Naphthalene	128	6.208	6.207	(1.007)	370034	100.000	105
§ 3 2-Methylnaphthalene-d10	152	7.143	7.143	(1.158)	195960	100.000	107
4 2-Methylnaphthalene	140	7.195	7.195	(1.167)	246420	100.000	108
5 1-Methylnaphthalene	140	7.447	7.447	(1.208)	221229	100.000	108
6 Acenaphthylene	152	8.000	8.000	(0.983)	333531	100.000	108
* 7 Acenaphthylene-d10	154	9.145	9.145	(1.000)	309736	200.000	
8 Acenaphthene	152	9.211	9.200	(1.007)	210411	100.000	104
9 Dibenzofuran	168	9.411	9.410	(1.009)	296990	100.000	106
§ 10 Fluorene-d10	174	9.982	9.972	(1.092)	166567	100.000	103
11 Fluorene	166	10.035	10.035	(1.097)	237942	100.000	106
* 12 Phenanthrene-d10	188	11.798	11.797	(1.000)	547216	200.000	
13 Phenanthrene	178	11.836	11.836	(1.003)	401347	100.000	108
§ 14 Anthracene-d10	188	11.865	11.855	(1.005)	253013	100.000	105
15 Anthracene	178	11.894	11.893	(1.008)	392686	100.000	109
§ 16 Fluoranthene-d10	212	13.882	13.882	(1.177)	263554	100.000	104
17 Fluoranthene	202	13.911	13.911	(1.179)	238761	100.000	106
18 Pyrene	202	14.401	14.401	(0.873)	342668	100.000	106
19 Benzo(a)anthracene	228	16.412	16.412	(0.994)	290947	100.000	106
* 20 Chrysene-d12	240	16.504	16.503	(1.000)	410327	200.000	
21 Chrysene	228	16.553	16.553	(1.003)	300334	100.000	105
22 Benzo(b)fluoranthene	252	18.198	18.197	(0.952)	259105	100.000	100
23 Benzo(k)fluoranthene	252	18.235	18.235	(0.954)	304820	100.000	107
24 Benzo(γ)fluoranthene	252	18.294	18.293	(0.957)	260778	100.000	104
§ 25 Benzo(e)pyrene-d12	264	18.784	18.774	(0.933)	261063	100.000	103
26 Benzo(e)pyrene	252	18.832	18.831	(0.935)	200818	100.000	103
27 Benzo(a)pyrene	252	18.926	18.923	(0.990)	251989	100.000	103
* 28 Perylene-d12	264	19.110	19.110	(1.000)	510211	200.000	
29 Perylene	252	19.158	19.158	(1.003)	261303	100.000	103
§ 30 Dibenzo(a,h)anthracene-d14	292	21.177	21.176	(1.108)	158096	100.000	100
31 Dibenzo(a,h)anthracene	278	21.265	21.265	(1.113)	217086	100.000	100
32 Indeno(1,2,3-cd)pyrene	276	21.275	21.276	(1.113)	273060	100.000	101
33 Benzo(g,h,i)perylene	276	21.185	21.184	(1.111)	234867	100.000	100

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: ntl1.i
 Lab File ID: 16110103.D
 Lab Smp Id: SEK0004-CAL3
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\ntl1.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31

Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	605453	-0.67
7 Acenaphthene-d10	316851	158426	633702	309736	-2.25
12 Phenanthrene-d10	546133	273067	1092266	547216	0.20
20 Chrysene-d12	417210	208605	834420	410327	-1.65
28 Perylene-d12	524443	262222	1048886	510211	-2.71

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	0.00
28 Perylene-d12	19.10	18.60	19.60	19.11	0.05

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110103.D

Lab ID: SEK0004-CAL3

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 10:34

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

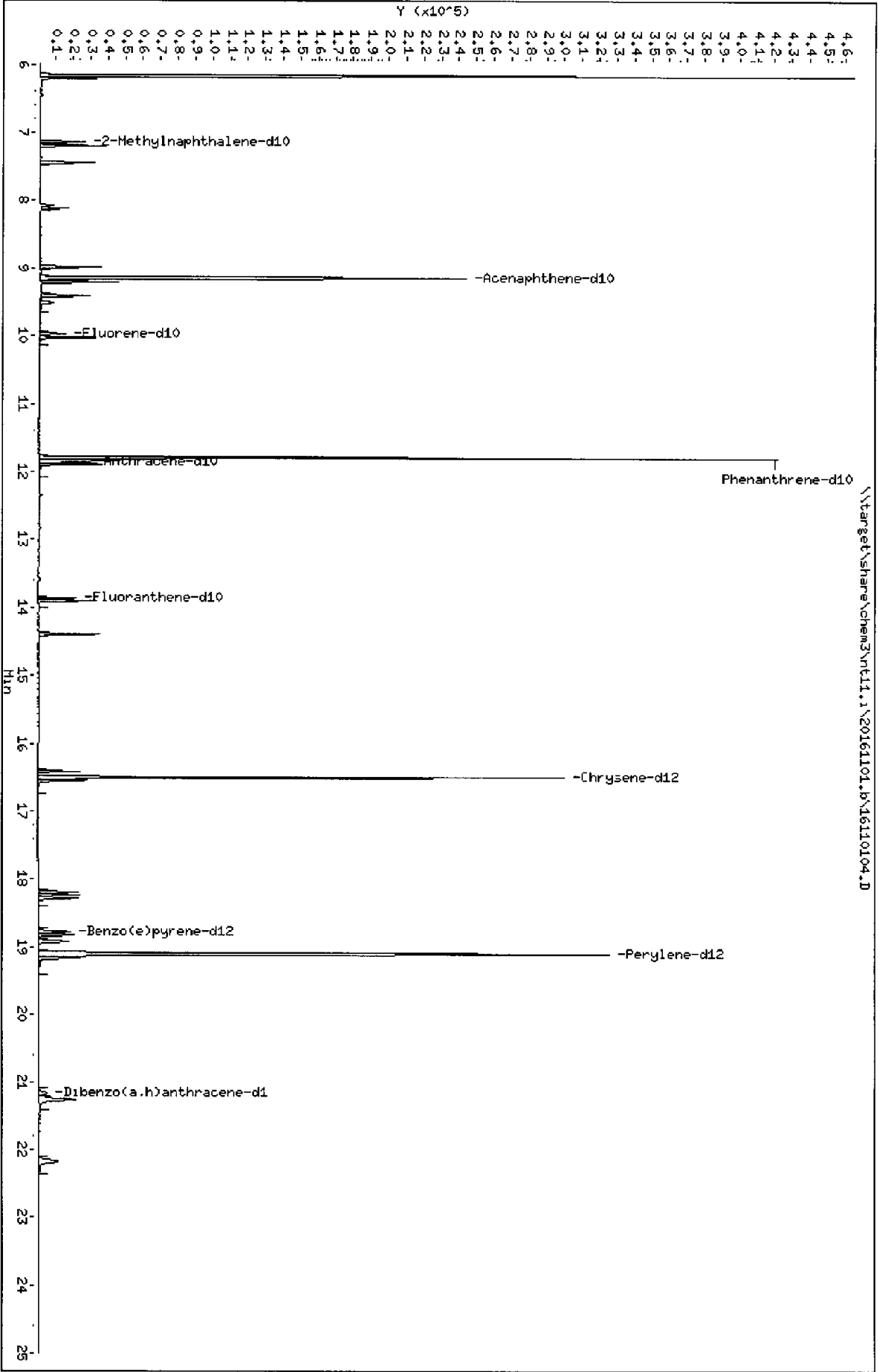
Data File: \\target\share\chem\nt11.1\20161101.b\16110104.D
Date : 01-NOV-2016 11:04

Client ID:
Sample Info: SEK004-CALI

Column phase: Rx1-17S11 HS

Instrument: nt11.1

Operator: JM
Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110104.D
 Lab Smp Id: SEK0004-CAL1
 Inj Date : 01-NOV-2016 11:04 MS Autotune Date: 15-JAN-2015 16:59
 Operator : JW Inst ID: nt11.i
 Smp Info : SEK0004-CAL1
 Misc Info :
 Comment :
 Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Meth Date : 01-Nov-2016 13:02 jonathonw Quant Type: ISTD
 Cal Date : 01-NOV-2016 12:34 Cal File: 16110107.D
 Als bottle: 3 Calibration Sample, Level: 1
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: PEMD.sub
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Compounds	QUANT SIF	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng/mL)	ON-COL (ng/rl)
* 1 Naphthalene-d8		136	6.166	6.166	(1.000)	607408	200.000	
2 Naphthalene		128	6.197	6.207	(1.005)	43626	10.0000	12.3
§ 3 2-Methylnaphtalene-d10		152	7.143	7.142	(1.158)	19231	10.0000	10.5
4 2-Methylnaphtalene		142	7.195	7.195	(1.167)	24213	10.0000	10.5
5 1-Methylnaphtalene		142	7.447	7.447	(1.208)	21776	10.0000	10.6
6 Acenaphthylene		152	8.990	8.990	(0.983)	31645	10.0000	11.0
* 7 Acenaphthene-d10		164	9.145	9.145	(1.000)	290145	200.000	
8 Acenaphthene		153	9.200	9.200	(1.006)	22246	10.0000	11.7
9 Dibenzofuran		166	9.411	9.410	(1.029)	26341	10.0000	10.8
§ 10 Fluorene-d10		174	9.972	9.972	(1.090)	17027	10.0000	11.2
11 Fluorene		166	10.035	10.035	(1.097)	21937	10.0000	10.5
* 12 Phenanthrene-d10		188	11.798	11.797	(1.000)	518986	200.000	
13 Phenanthrene		178	11.836	11.836	(1.003)	39159	10.0000	11.1
§ 14 Anthracene-d10		188	11.855	11.855	(1.005)	29545	10.0000	11.3
15 Anthracene		178	11.894	11.893	(1.008)	36653	10.0000	10.7
§ 16 Fluoranthene-d10		210	13.870	13.882	(1.176)	25809	10.0000	10.5
17 Fluoranthene		202	13.911	13.911	(1.179)	31230	10.0000	10.3
18 Pyrene		202	14.391	14.401	(0.872)	34428	10.0000	11.1
19 Benzo(a)anthracene		228	16.412	16.412	(0.994)	27535	10.0000	10.5
* 20 Chrysene-d10		240	16.504	16.503	(1.000)	393896	200.000	
21 Chrysene		228	16.553	16.553	(1.003)	29473	10.0000	10.8
22 Benzo(l)fluoranthene		252	18.196	18.197	(0.953)	25834	10.0000	10.6
23 Benzo(k)fluoranthene		252	18.236	18.236	(0.955)	26744	10.0000	9.93
24 Benzo(j)fluoranthene		252	18.284	18.283	(0.957)	23927	10.0000	10.1
§ 25 Benzo(e)pyrene-d10		264	18.774	18.774	(0.933)	25109	10.0000	10.5
26 Benzo(e)pyrene		252	18.832	18.831	(0.936)	24869	10.0000	10.4
27 Benzo(a)pyrene		252	18.918	18.928	(0.990)	23052	10.0000	10.0
* 28 Perylene-d10		264	19.101	19.110	(1.000)	430655	200.000	
29 Perylene		252	19.158	19.158	(1.003)	25277	10.0000	10.5
§ 30 Dibenzo(a,h)anthracene-d14		292	21.177	21.176	(1.109)	14596	10.0000	9.76
31 Dibenzo(a,h)anthracene		278	21.265	21.265	(1.113)	19252	10.0000	9.42
32 Indeno(1,2,3-cd)pyrene		276	21.265	21.276	(1.113)	24110	10.0000	9.47
33 Benzo(g,h,i)perylene		276	21.173	21.184	(1.161)	23868	10.0000	10.7

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110104.D
 Lab Smp Id: SEK0004-CAL1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	607408	-0.35
7 Acenaphthene-d10	316851	158426	633702	290245	-8.40
12 Phenanthrene-d10	546133	273067	1092266	518986	-4.97
20 Chrysene-d12	417210	208605	834420	393896	-5.59
28 Perylene-d12	524443	262222	1048886	482655	-7.97

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	-0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	-0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	-0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	-0.00
28 Perylene-d12	19.10	18.60	19.60	19.10	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110104.D

Lab ID: SEK0004-CAL1

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 11:04

RT	CO-ELUTION COMPOUNDS
21.266	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.266	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene <i>ok</i>

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

Data File: \\target\share\chem3\nt11.1\20161101.b\16110105.D

Date: 01-NOV-2016 11:34

Client ID:

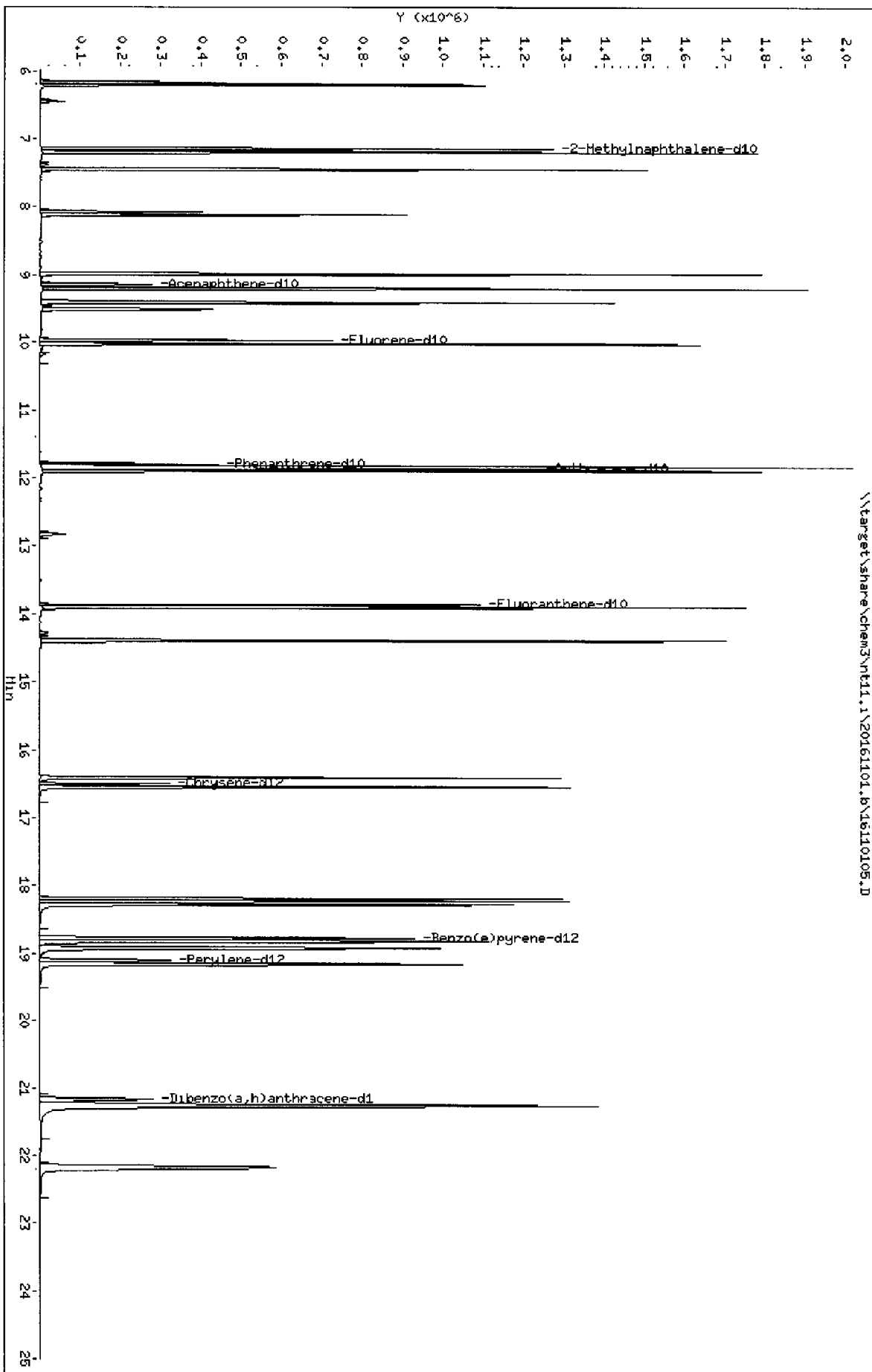
Sample Info: SEK0004-CAL5

Column phase: Rx1-17S11 HS

Instrument: nt11.1

Operator: JH

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110105.D

Lab Smp Id: SEK0004-CAL5

Inj Date : 01-NOV-2016 11:34

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEK0004-CAL5

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m

Meth Date : 01-Nov-2016 13:02 jonathonw

Quant Type: ISTD

Cal Date : 01-NOV-2016 12:34

Cal File: 16110107.D

Als bottle: 6

Calibration Sample, Level: 5

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (ng/mL)	ON-COL (ng/mL)
			MASS	RT	EXP RT	REL RT		
* 1 Naphthalene-d8	136		6.165	6.165	(1.000)	614933	500.000	
2 Naphthalene	128		6.206	6.207	(1.007)	1616428	500.000	454
\$ 3 2-Methylnaphthalene-d10	152		7.143	7.142	(1.158)	906578	500.000	488
4 2-Methylnaphthalene	142		7.195	7.195	(1.167)	1135188	500.000	487
5 1-Methylnaphthalene	142		7.447	7.447	(1.208)	1010302	500.000	488
6 Acenaphthylene	152		8.990	8.990	(0.983)	1498530	500.000	472
* 7 Acenaphthene-d10	154		9.145	9.145	(1.000)	319097	200.000	
8 Acenaphthene	153		9.200	9.200	(1.006)	983094	500.000	472
9 Dibenzofuran	168		9.411	9.410	(1.029)	1361728	500.000	474
\$ 10 Fluorene-d10	174		9.972	9.972	(1.090)	795654	500.000	473
11 Fluorene	156		10.035	10.035	(1.097)	1124779	500.000	488
* 12 Phenanthrene-d10	188		11.798	11.797	(1.000)	545127	200.000	
13 Phenanthrene	178		11.835	11.836	(1.003)	1740247	500.000	469
\$ 14 Antracene-d10	188		11.855	11.855	(1.005)	1314346	500.000	480
15 Antracene	176		11.894	11.893	(1.008)	1740143	500.000	484
\$ 16 Fluoranthene-d10	212		13.872	13.892	(1.176)	1784929	500.000	497
17 Fluoranthene	202		13.911	13.911	(1.179)	1579390	500.000	496
18 Eylene	202		14.391	14.401	(0.872)	1589070	500.000	479
19 Benzo(a)anthracene	228		16.412	16.412	(0.994)	1369690	500.000	486
* 20 Chrysene-d12	240		16.504	16.503	(1.000)	422171	200.000	
21 Chrysene	228		16.553	16.553	(1.003)	1412774	500.000	481
22 Benzo(b)fluoranthene	252		16.198	16.197	(0.952)	1301135	500.000	502
23 Benzo(k)fluoranthene	252		18.235	18.236	(0.954)	1430840	500.000	507
24 Benzo(j)fluoranthene	252		18.284	18.293	(0.957)	1279914	500.000	506
\$ 25 Benzo(e)pyrene-d10	264		18.774	18.774	(0.982)	1272419	500.000	501
26 Benzo(e)pyrene	252		18.832	18.831	(0.985)	1763094	500.000	504
27 Benzo(a)pyrene	252		18.928	18.928	(0.990)	1254065	500.000	511
* 28 Perylene-d12	264		19.110	19.110	(1.000)	511390	200.000	
29 Perylene	252		19.158	19.158	(1.002)	1268201	500.000	499
\$ 30 Dibenz(a,h)anthracene-d14	292		21.177	21.176	(1.108)	824689	500.000	521
31 Dibenz(a,h)anthracene	278		21.265	21.265	(1.113)	1152566	500.000	532
32 Indeno(1,2,3-cd)pyrene	276		21.265	21.266	(1.113)	1431364	500.000	530
33 Benzo(g,h,i)perylene	276		22.185	22.184	(1.161)	1190109	500.000	506

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110105.D
 Lab Smp Id: SEK0004-CAL5
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31

Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	614933	0.88
7 Acenaphthene-d10	316851	158426	633702	319092	0.71
12 Phenanthrene-d10	546133	273067	1092266	545127	-0.18
20 Chrysene-d12	417210	208605	834420	422171	1.19
28 Perylene-d12	524443	262222	1048886	511390	-2.49

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	-0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	0.00
28 Perylene-d12	19.10	18.60	19.60	19.11	0.05

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110105.D

Lab ID: SEK0004-CAL5

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 11:34

RT	CO-ELUTION COMPOUNDS
21.266	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.266	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

Data File: \\target\share\chem3\nt11.1\20161101.B\16110106.D
Date: 01-NOV-2016 12:04

Client ID:

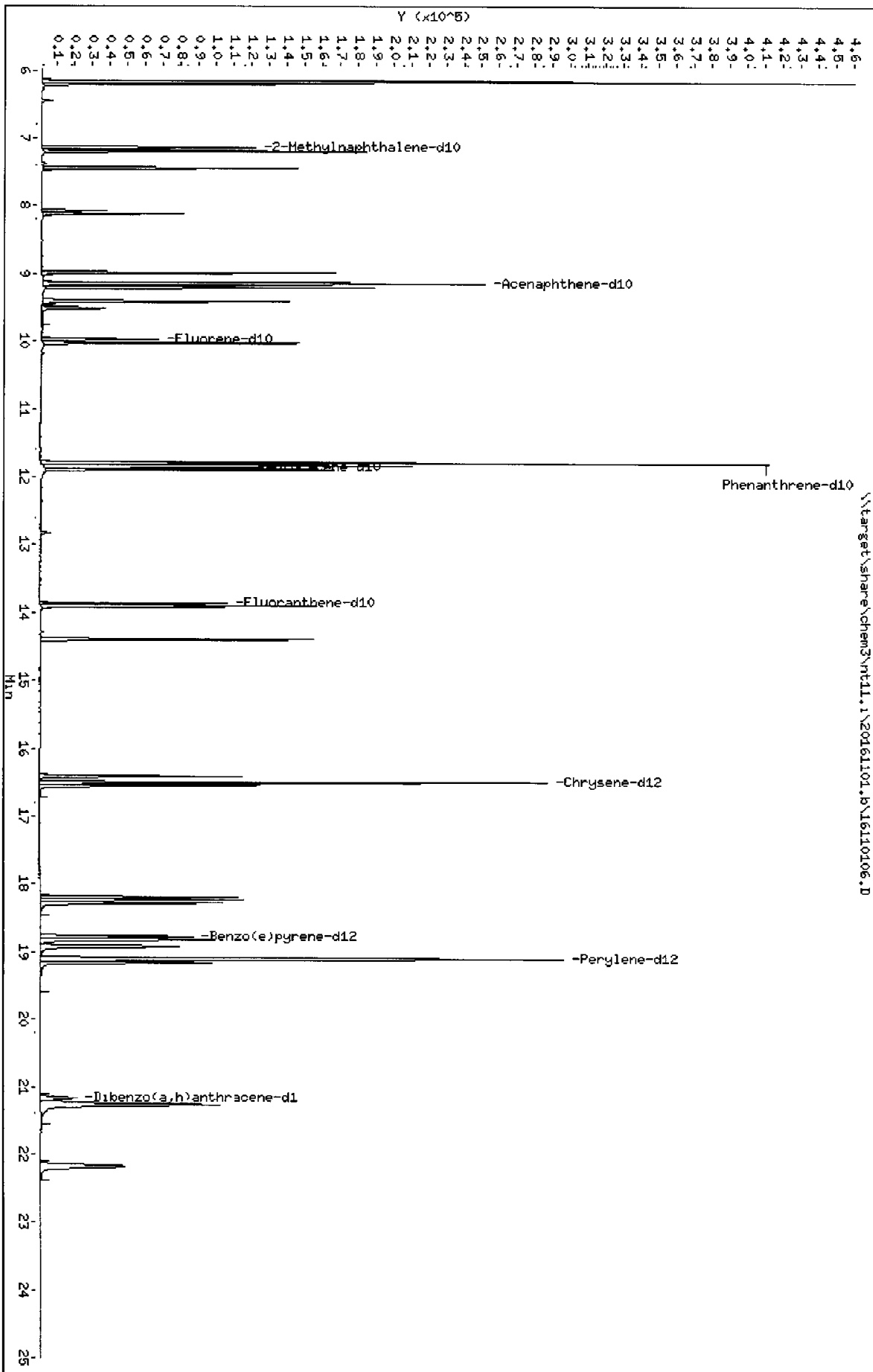
Sample Info: SEK0004-CAL2

Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110106.D

Lab Smp Id: SEK0004-CAL2

Inj Date : 01-NOV-2016 12:04

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEK0004-CAL2

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m

Meth Date : 01-Nov-2016 13:02 jonathonw

Quant Type: ISTD

Cal Date : 01-NOV-2016 12:34

Cal File: 16110107.D

Als bottle: 4

Calibration Sample, Level: 2

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng/mL)	GN-COL (ng/mL)
* 1 Naphthalene-d8		136	6.165	6.165	(1.000)	61.834	200.000	
2 Naphthalene		128	6.203	6.207	(1.007)	1877.21	50.0000	52.6
\$ 3 2-Methylnaphthalene-d10		152	7.143	7.142	(1.158)	90965	50.0000	49.2
4 2-Methylnaphthalene		142	7.195	7.195	(1.167)	114571	50.0000	49.4
5 1-Methylnaphthalene		142	7.447	7.447	(1.208)	102418	50.0000	49.3
6 Acenaphthylene		152	8.990	8.990	(0.983)	1457.24	50.0000	50.8
* 7 Acenaphthene-d10		164	9.145	9.145	(1.000)	290387	200.000	
8 Acenaphthene		153	9.200	9.200	(1.005)	95650	50.0000	50.5
9 Dibenzofuran		168	9.410	9.410	(1.013)	135620	50.0000	52.3
\$ 10 Fluorene-d10		174	9.972	9.972	(1.090)	74685	50.0000	49.3
11 Fluorene		166	10.035	10.035	(1.097)	105125	50.0000	50.1
* 12 Phenanthrene-d10		168	11.797	11.797	(1.000)	510239	200.000	
13 Phenanthrene		178	11.838	11.838	(1.003)	133563	50.0000	52.9
\$ 14 Anthracene-d10		166	11.855	11.855	(1.005)	124136	50.0000	48.5
15 Anthracene		178	11.993	11.993	(1.008)	166394	50.0000	49.5
\$ 16 Fluoranthene-d10		212	13.872	13.862	(1.176)	118433	50.0000	49.0
17 Fluoranthene		202	13.911	13.911	(1.170)	146202	50.0000	49.3
18 Pyrene		202	14.391	14.101	(0.872)	152226	50.0000	50.0
19 Benzo(a)anthracene		228	16.412	16.412	(0.994)	128956	50.0000	49.8
* 20 Chrysene-d12		240	16.503	16.503	(1.000)	337799	200.000	
21 Chrysene		228	16.553	16.553	(1.003)	138918	50.0000	51.5
22 Benzo(b)fluoranthene		252	18.197	18.197	(0.953)	118336	50.0000	49.8
23 Benzo(k)fluoranthene		252	18.236	18.236	(0.955)	129107	50.0000	49.3
24 Benzo(j)fluoranthene		252	18.284	18.293	(0.957)	117901	50.0000	50.9
25 Benzo(e)pyrene-d12		264	18.774	18.774	(0.983)	117255	50.0000	50.2
26 Benzo(e)pyrene		252	18.832	18.831	(0.986)	118349	50.0000	50.6
27 Benzo(a)pyrene		252	18.928	18.928	(0.991)	109827	50.0000	48.7
* 28 Perylene-d12		264	19.101	19.110	(1.000)	4700.8	200.000	
29 Perylene		252	19.158	19.158	(1.003)	116882	50.0000	50.0
\$ 30 Dibenzo(a,h)anthracene-d14		292	21.176	21.176	(1.109)	68098	50.0000	48.8
31 Dibenzo(a,h)anthracene		278	21.265	21.265	(1.113)	93941	50.0000	47.2
32 Indeno(1,2,3-cd)pyrene		276	21.265	21.276	(1.113)	117602	50.0000	47.4
33 Benzo(g,h,i)perylene		276	22.181	22.184	(1.167)	104829	50.0000	48.5

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110106.D
 Lab Smp Id: SEK0004-CAL2
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31

Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	611834	0.37
7 Acenaphthene-d10	316851	158426	633702	290382	-8.35
12 Phenanthrene-d10	546133	273067	1092266	510239	-6.57
20 Chrysene-d12	417210	208605	834420	387799	-7.05
28 Perylene-d12	524443	262222	1048886	470018	-10.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	-0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	-0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	-0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	-0.00
28 Perylene-d12	19.10	18.60	19.60	19.10	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110106.D

Lab ID: SEK0004-CAL2

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 12:04

RT	CO-ELUTION COMPOUNDS
21.265	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.265	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND

NONE				

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

Data File: \\target\share\chem3\nt11.1\20161101.b\16110107.D

Date: 01-NOV-2016 12:34

Client ID:

Sample Info: SEK0004-CAL6

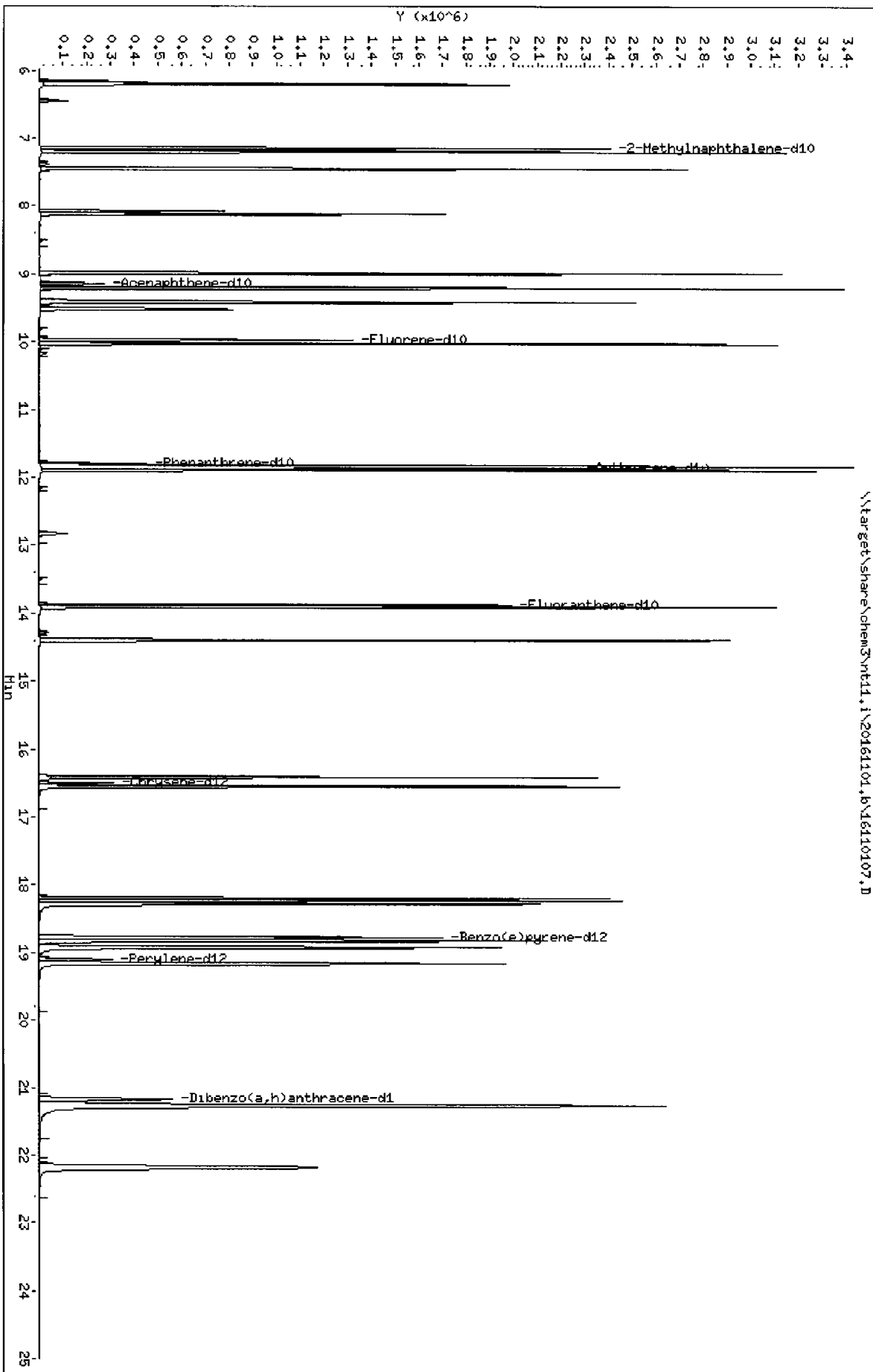
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20161101.b\16110107.D



ARI Labs, Inc.

LOW LEVEL PNAS BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110107.D
 Lab Smp Id: SEK0004-CAL6
 Inj Date : 01-NOV-2016 12:34 MS Autotune Date: 15-JAN-2015 16:59
 Operator : JW Inst ID: nt11.i
 Smp Info : SEK0004-CAL6
 Misc Info :
 Comment :
 Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Meth Date : 01-Nov-2016 13:02 jonathonw Quant Type: ISTD
 Cal Date : 01-NOV-2016 12:34 Cal File: 16110107.D
 Als bottle: 7 Calibration Sample, Level: 6
 Dil Factor: 1.00000
 Integrator: HP RTE Compound Sublist: PEMD.sub
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Compounds	QUANT SIG		AMOUNTS				
	NAME	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/L)
* 1 Naphthalene-d8	130	6.165	6.165	(1.000)	617596	200.000	
2 Naphthalene	123	6.207	6.207	(1.007)	2872718	1000.00	798
\$ 3 2-Methylnaphthalene-d10	152	7.142	7.142	(1.158)	1701346	1000.00	212
4 2-Methylnaphthalene	142	7.195	7.195	(1.167)	2061955	1000.00	881
5 1-Methylnaphthalene	142	7.447	7.447	(1.208)	1870115	1000.00	892
6 Acenaphthylene	152	8.930	8.930	(0.933)	7635884	1000.00	850
7 Acenaphthene-d10	161	9.145	9.145	(1.000)	316004	200.000	
8 Acenaphthene	153	9.200	9.200	(1.006)	1790250	1000.00	867
9 Dibenzofuran	168	9.410	9.410	(1.029)	2434711	1000.00	855
\$ 10 Fluorene-d10	174	9.972	9.972	(1.090)	1508698	1000.00	915
11 Fluorene	166	10.035	10.035	(1.097)	2044921	1000.00	890
* 12 Phenanthrene-d10	188	11.797	11.797	(1.000)	545626	200.000	
13 Phenanthrene	178	11.836	11.836	(1.003)	3030338	1000.00	817
\$ 14 Anthracene-d10	188	11.855	11.855	(1.005)	2403934	1000.00	878
15 Anthracene	178	11.893	11.893	(1.008)	3000570	1000.00	845
\$ 16 Fluoranthene-d10	212	13.882	13.882	(1.177)	2378410	1000.00	920
17 Fluoranthene	202	13.911	13.911	(1.179)	2821306	1000.00	889
18 Pyrene	202	14.401	14.401	(0.873)	2853599	1000.00	861
19 Benzo(a)anthracene	208	16.412	16.412	(0.894)	2529664	1000.00	898
* 20 Chrysene-d12	240	16.503	16.503	(1.000)	421968	200.000	
21 Chrysene	228	16.552	16.553	(1.003)	2566816	1000.00	875
22 Benzo(b)fluoranthene	252	18.197	18.197	(0.952)	2384262	1000.00	924
23 Benzo(k)fluoranthene	252	18.236	18.236	(0.954)	2721895	1000.00	956
24 Benzo(j)fluoranthene	252	18.293	18.293	(0.957)	2407859	1000.00	957
\$ 25 Benzo(e)pyrene-d12	264	18.774	18.774	(0.922)	2381840	1000.00	939
26 Benzo(e)pyrene	252	18.831	18.831	(0.965)	2391075	1000.00	941
27 Benzo(a)pyrene	252	18.928	18.928	(0.990)	2378550	1000.00	971
* 28 Perylene-d12	264	19.110	19.110	(1.000)	510441	200.000	
29 Perylene	252	19.158	19.158	(1.002)	2363853	1000.00	940
\$ 30 Dibenz(a,h)anthracene-d14	288	21.176	21.176	(1.108)	1352973	1000.00	1050
31 Dibenz(a,h)anthracene	276	21.265	21.265	(1.113)	2280708	1000.00	1050
32 Indeno(1,2,3-cd)pyrene	276	21.276	21.276	(1.113)	2792507	1000.00	1040
33 Benzo(c,h,i)perylene	276	22.184	22.184	(1.161)	2304718	1000.00	990

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110107.D
 Lab Smp Id: SEK0004-CAL6
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	617596	1.32
7 Acenaphthene-d10	316851	158426	633702	316004	-0.27
12 Phenanthrene-d10	546133	273067	1092266	545628	-0.09
20 Chrysene-d12	417210	208605	834420	421968	1.14
28 Perylene-d12	524443	262222	1048886	510441	-2.67

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	-0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	-0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	-0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	-0.00
28 Perylene-d12	19.10	18.60	19.60	19.11	0.05

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110107.D

Lab ID: SEK0004-CAL6
nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 12:34

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Calibration: ZK00002

Laboratory ID: SEK0004-SCV1

Sequence: SEK0004

Sequence Name: SIMPNA SCV

Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	229	-8.6	20.00
2-Methylnaphthalene	250.00	215	-14.0	20.00
Acenaphthylene	250.00	230	-8.0	20.00
Acenaphthene	250.00	252	0.9	20.00
Fluorene	250.00	227	-9.2	20.00
Phenanthrene	250.00	238	-5.0	20.00
Anthracene	250.00	233	-7.0	20.00
Fluoranthene	250.00	226	-9.5	20.00
Pyrene	250.00	243	-2.9	20.00
Benzo(a)anthracene	250.00	227	-9.1	20.00
Chrysene	250.00	233	-6.7	20.00
Benzo(b)fluoranthene	250.00	229	-8.3	20.00
Benzo(k)fluoranthene	250.00	235	-6.2	20.00
Benzo(a)pyrene	250.00	237	-5.0	20.00
Indeno(1,2,3-cd)pyrene	250.00	234	-6.6	20.00
Dibenzo(a,h)anthracene	250.00	235	-5.9	20.00
Benzo(g,h,i)perylene	250.00	232	-7.4	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161101_16\16110108.D

Date : 01-NOV-2016 13:04

Client ID:

Sample Info: SEK0004-SCV1

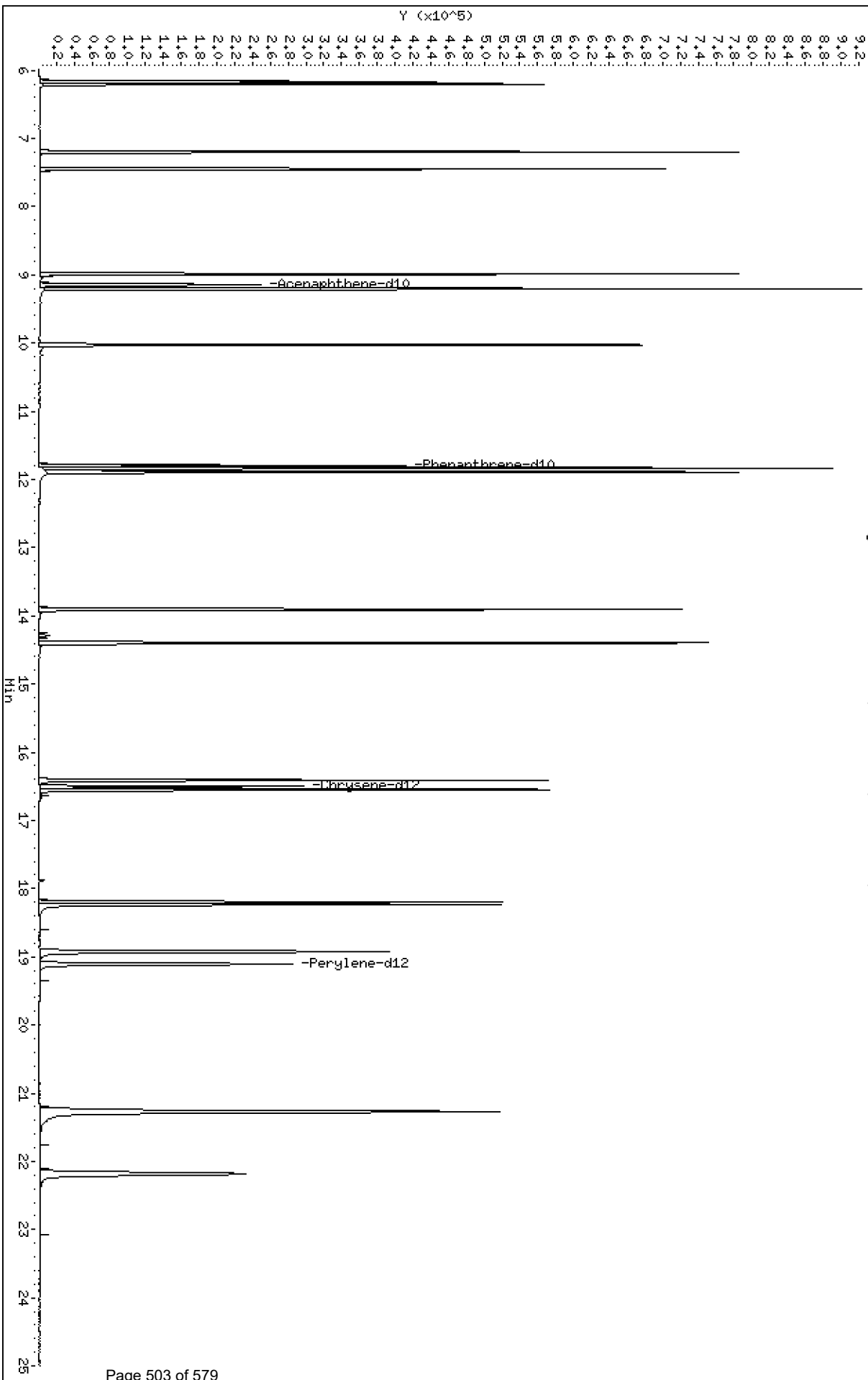
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.i\20161101_16\16110108.D



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

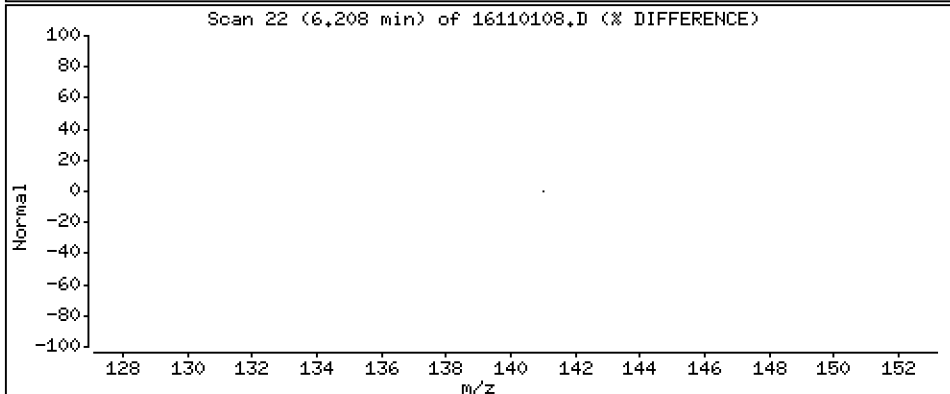
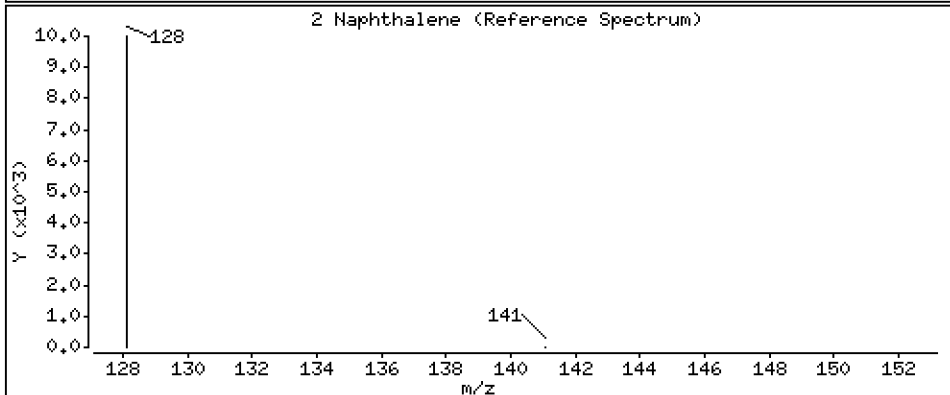
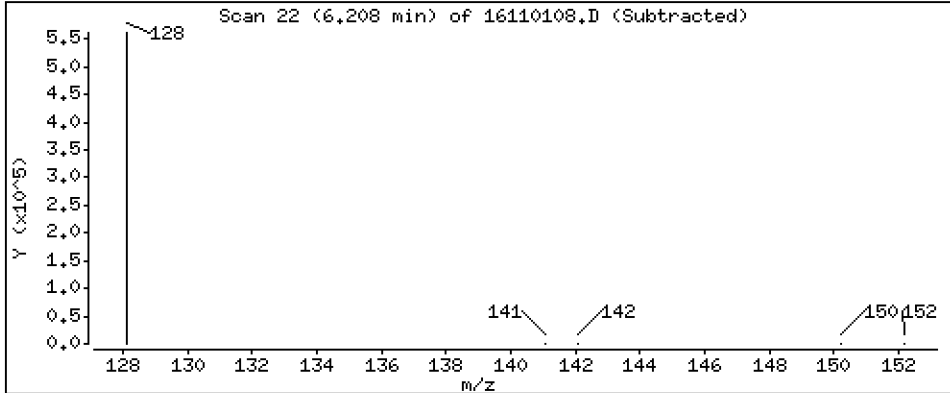
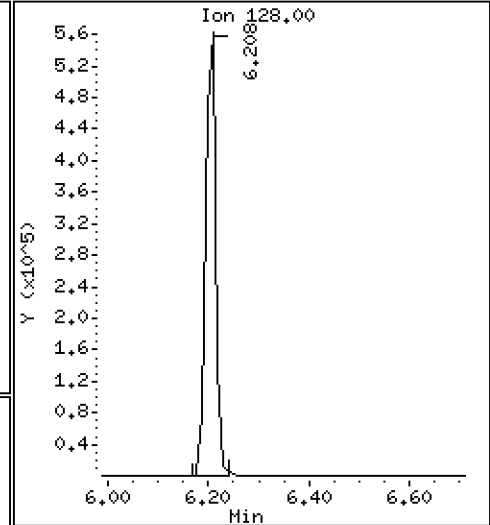
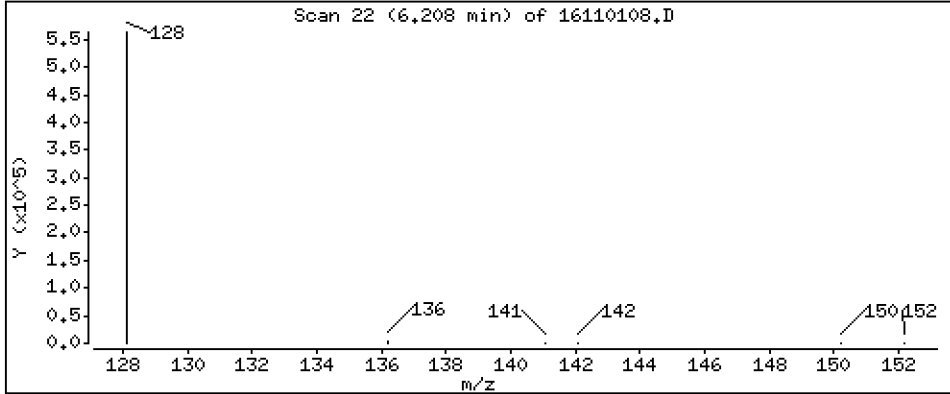
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 229 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

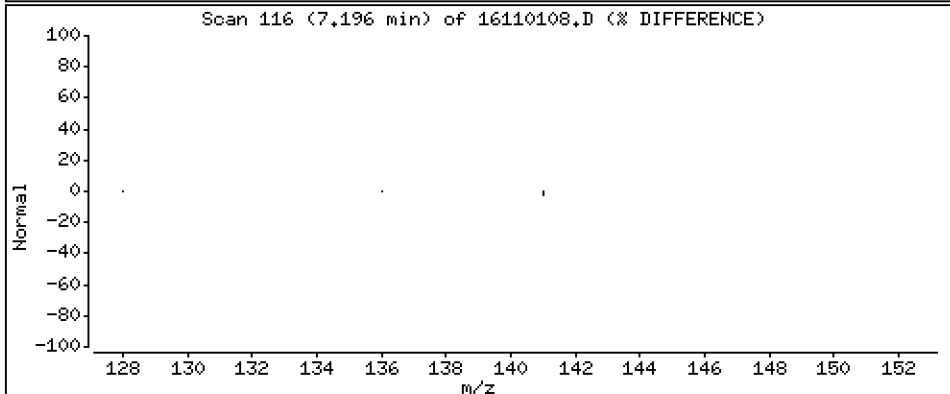
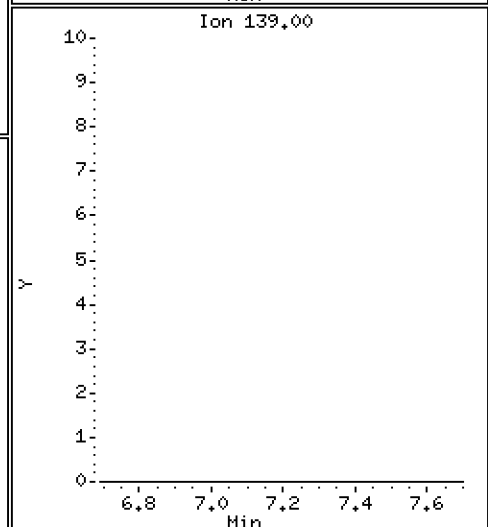
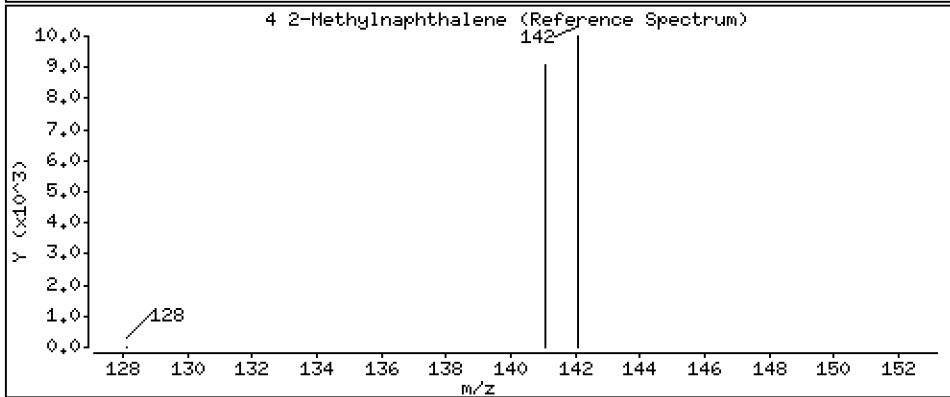
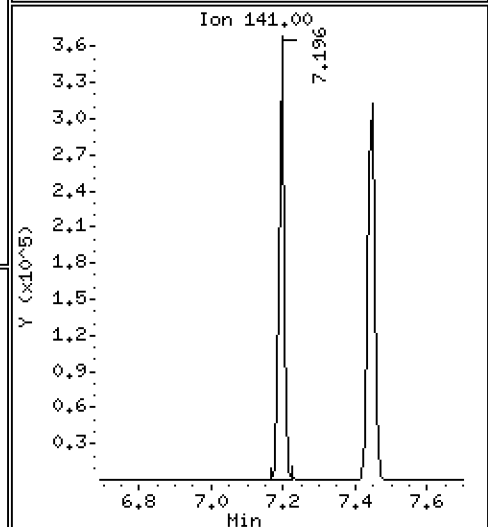
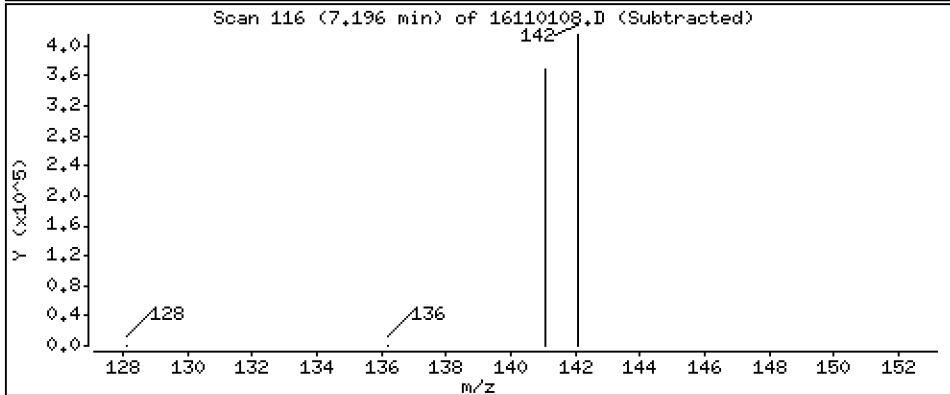
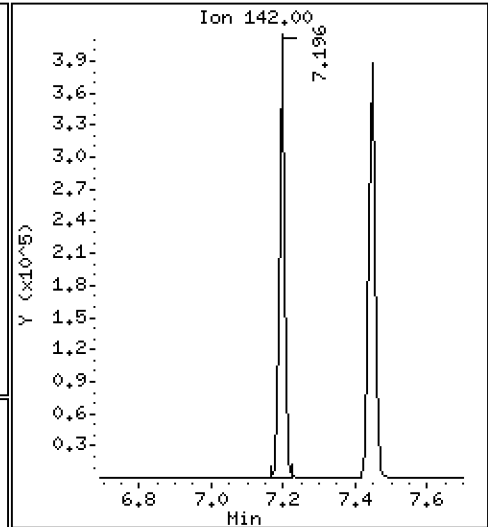
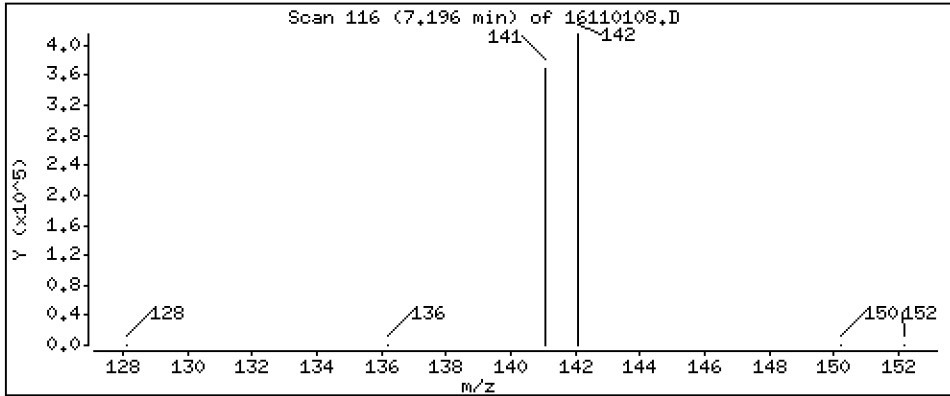
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4-Methylnaphthalene

Concentration: 215 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

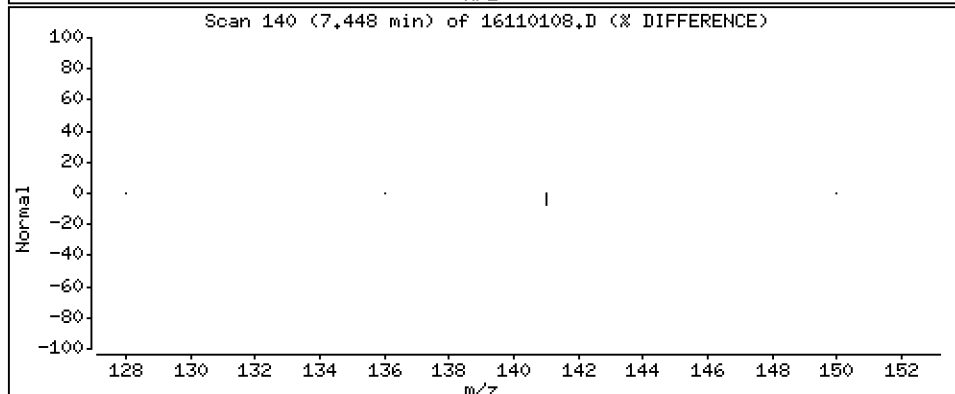
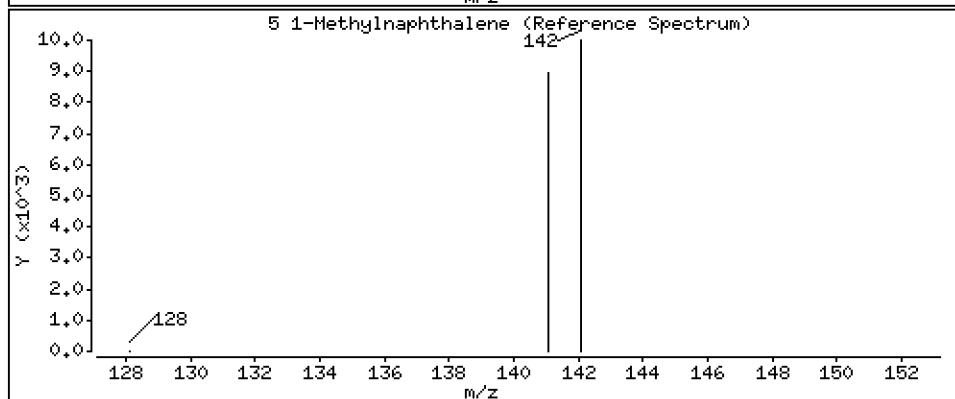
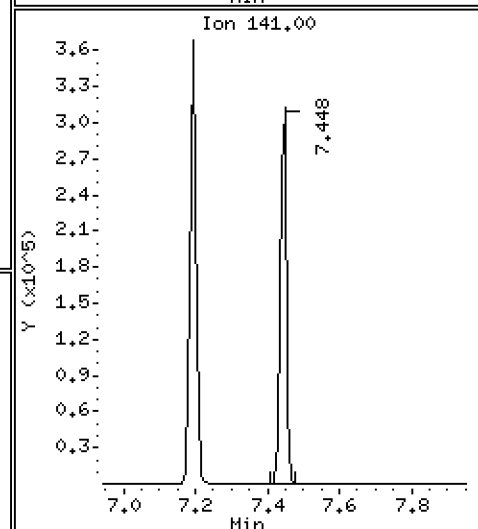
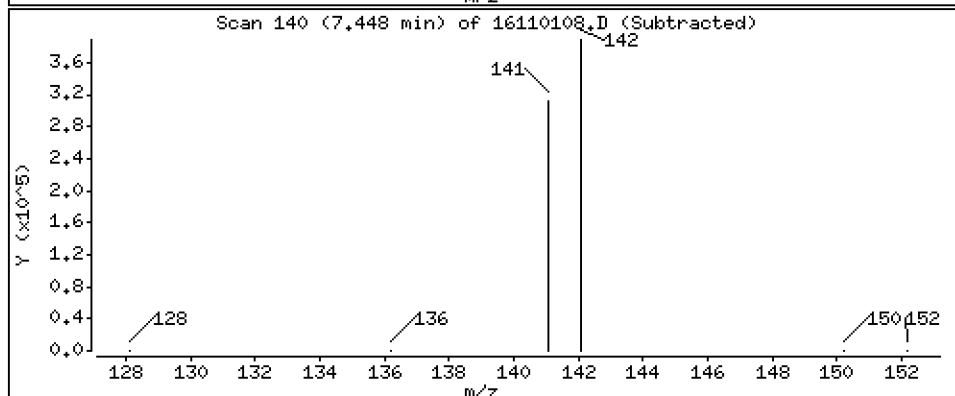
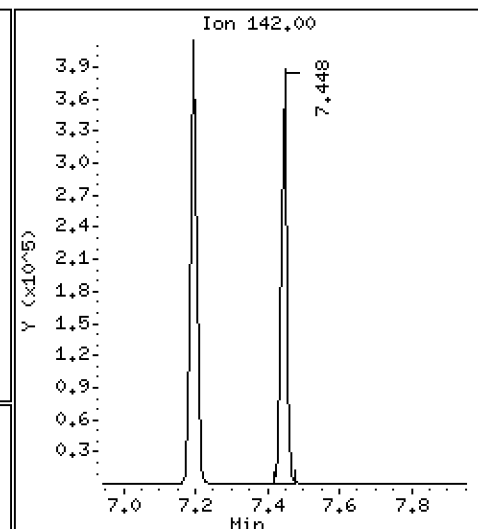
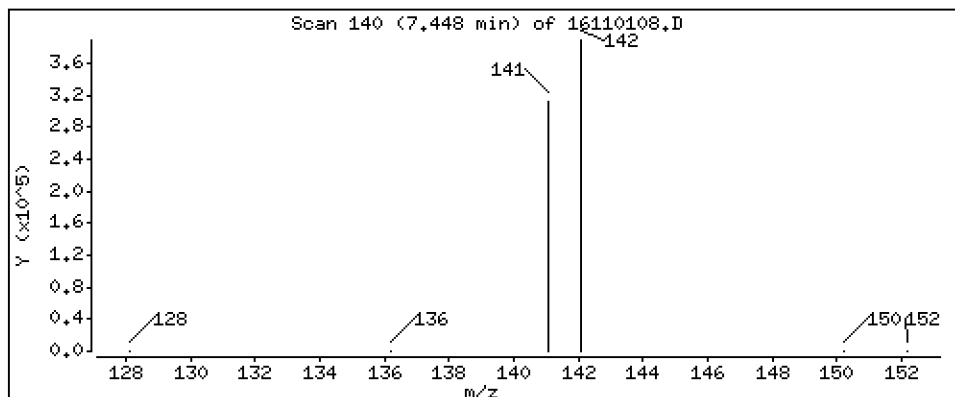
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 234 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

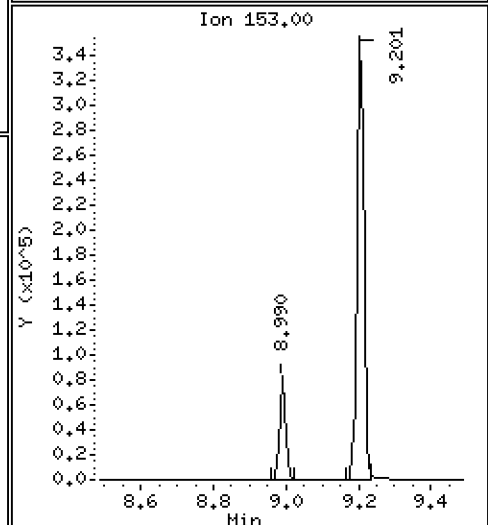
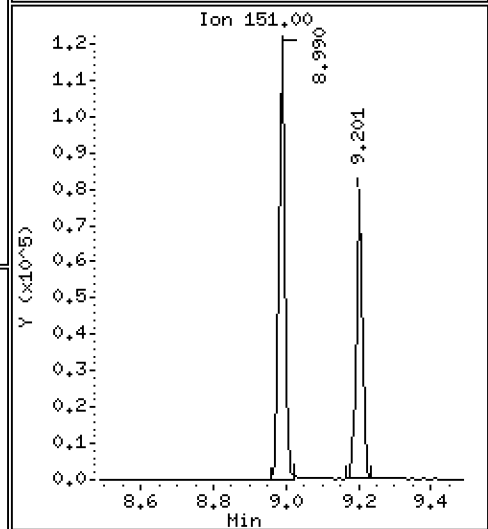
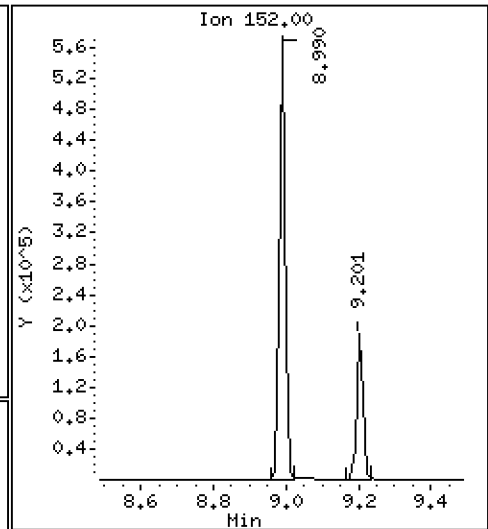
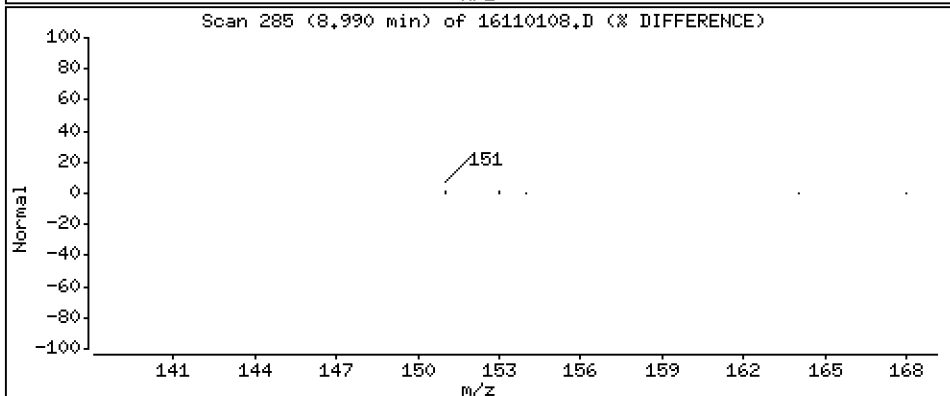
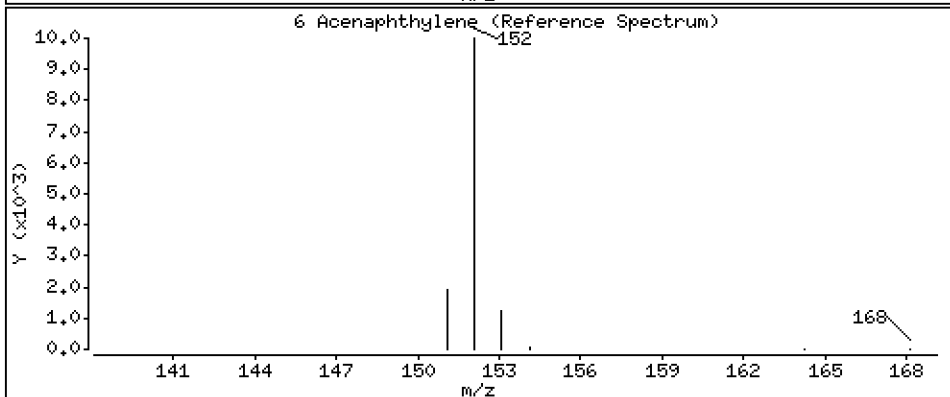
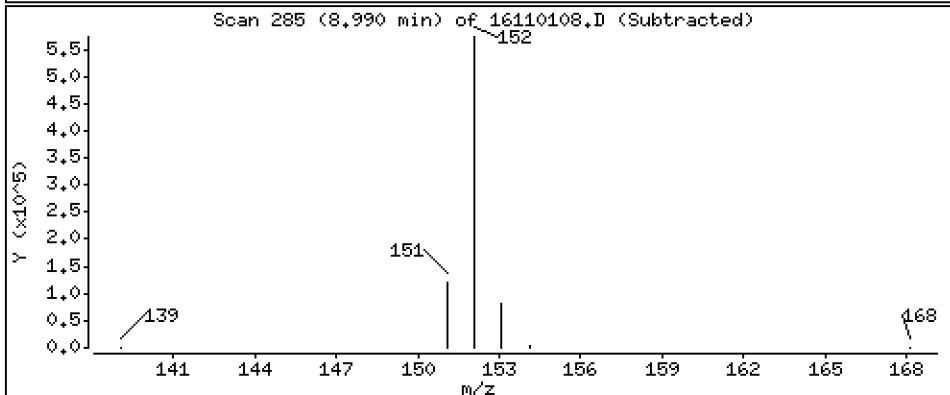
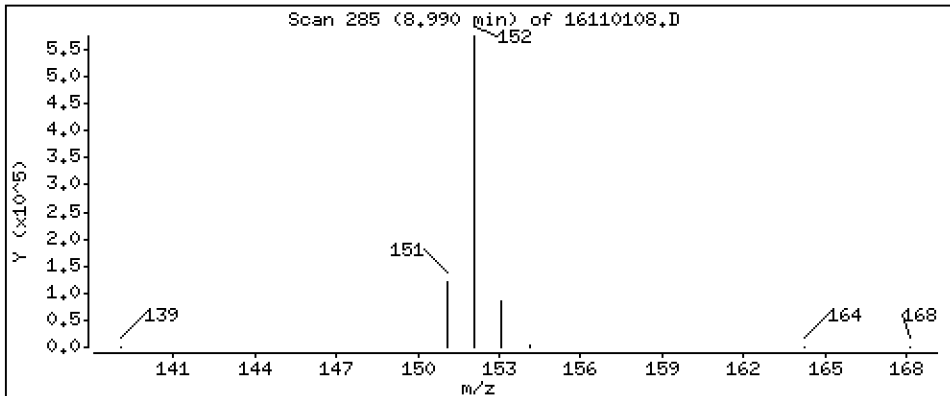
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

6 Acenaphthylene

Concentration: 230 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

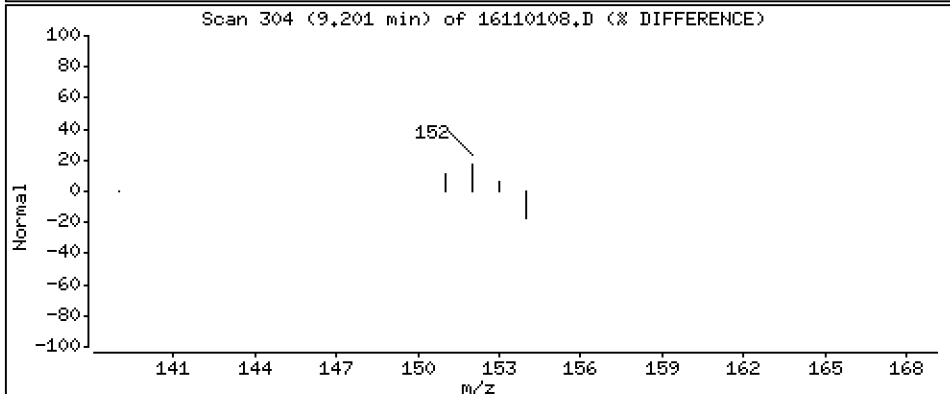
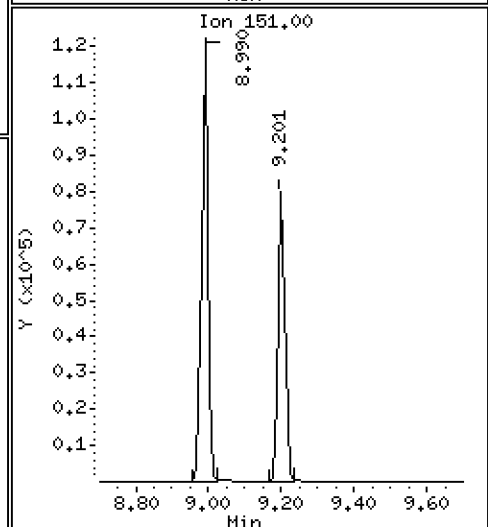
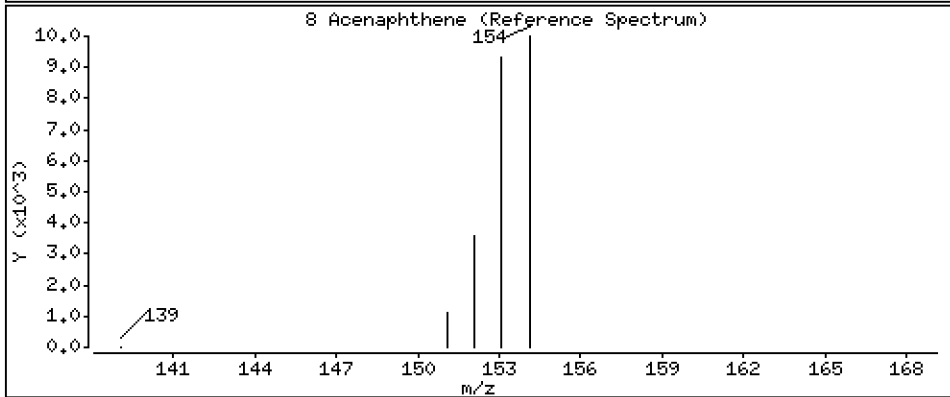
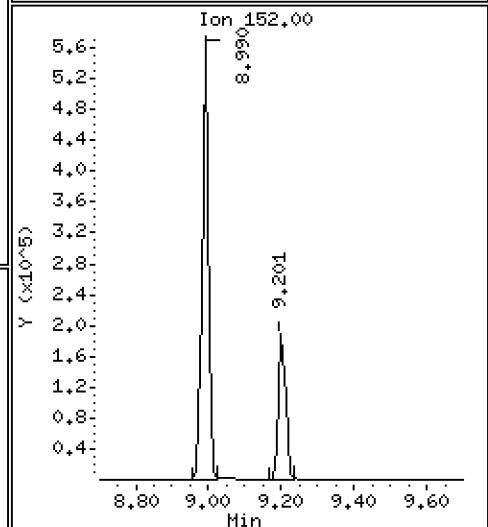
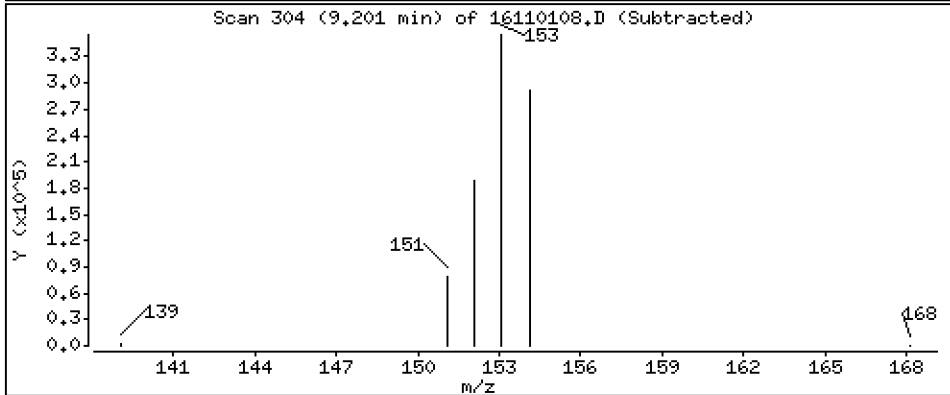
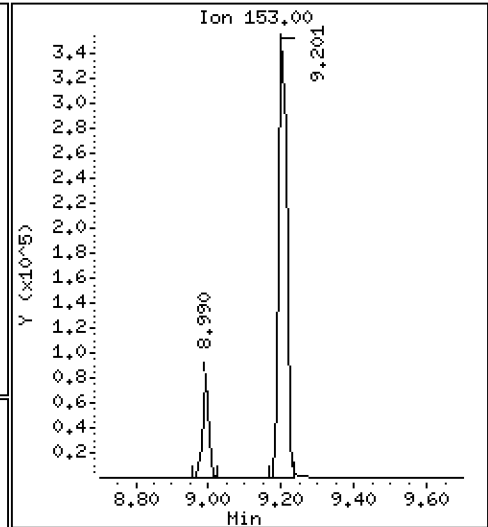
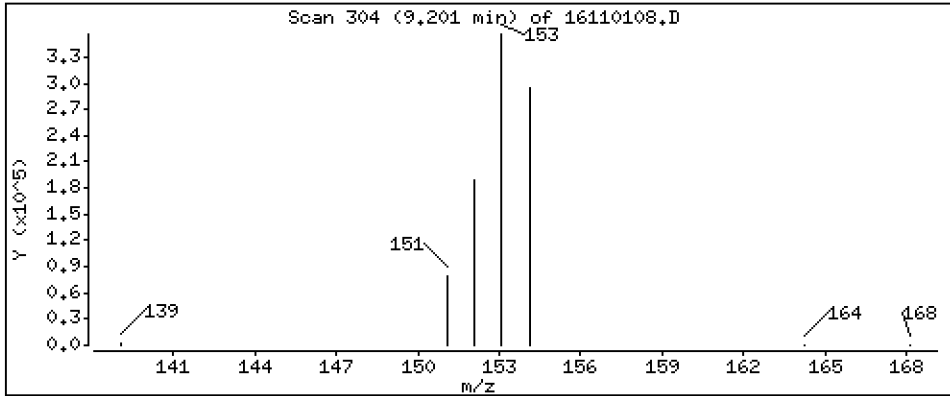
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 252 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

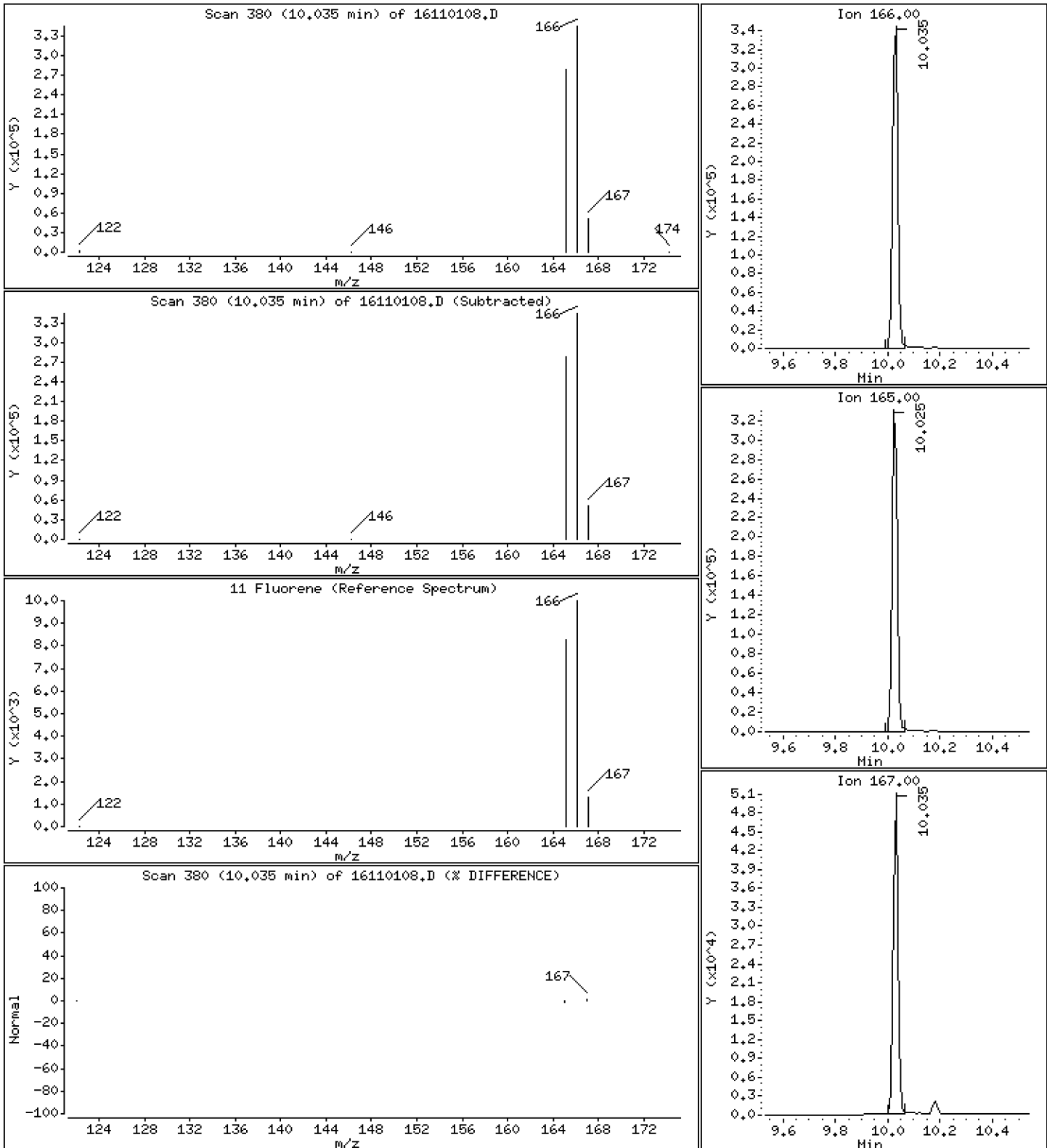
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 227 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

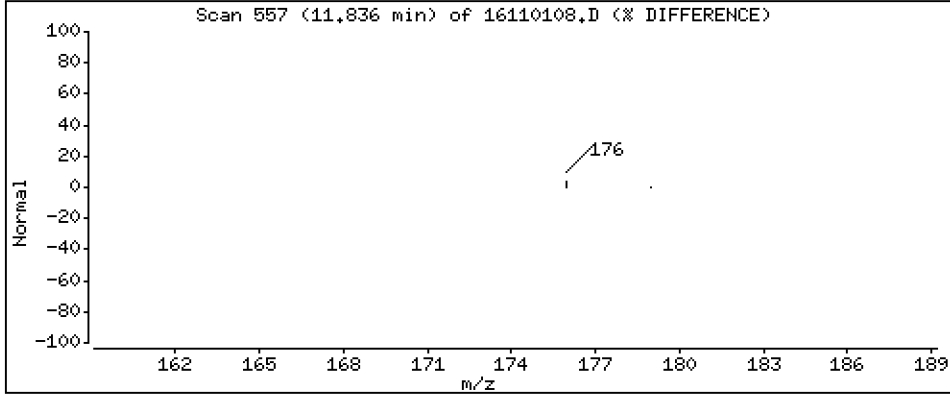
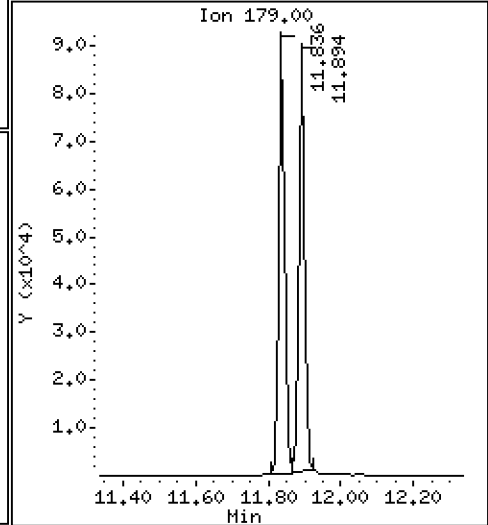
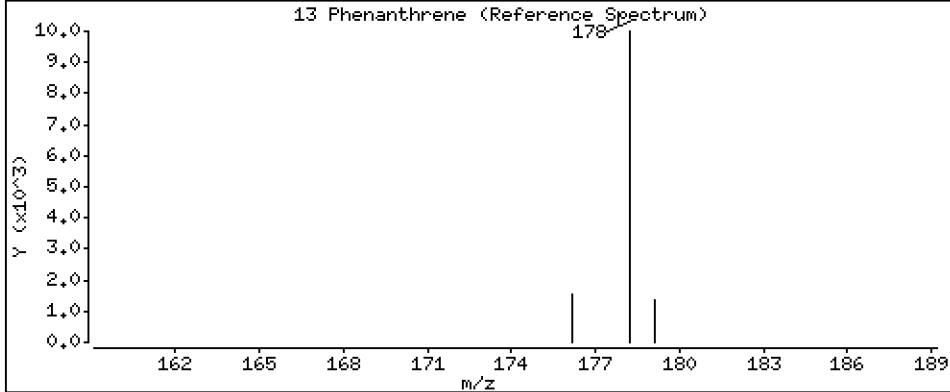
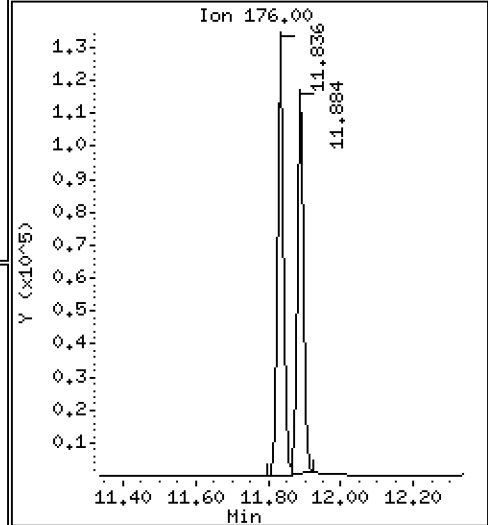
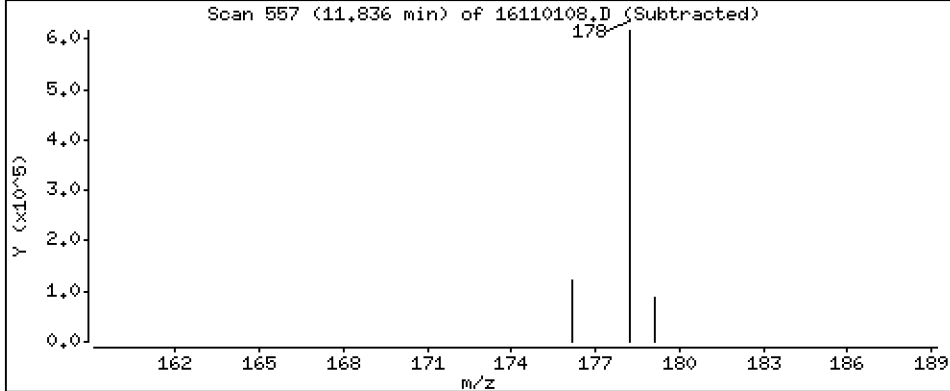
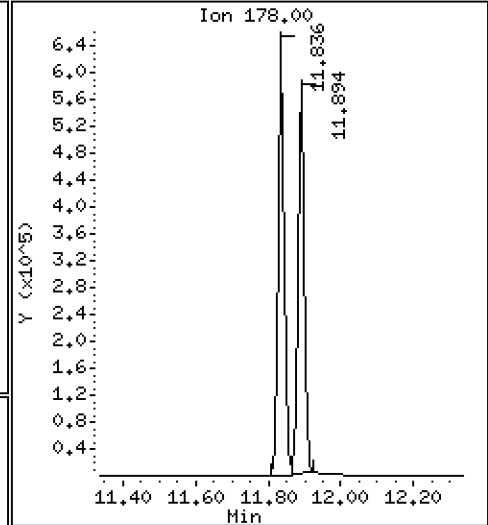
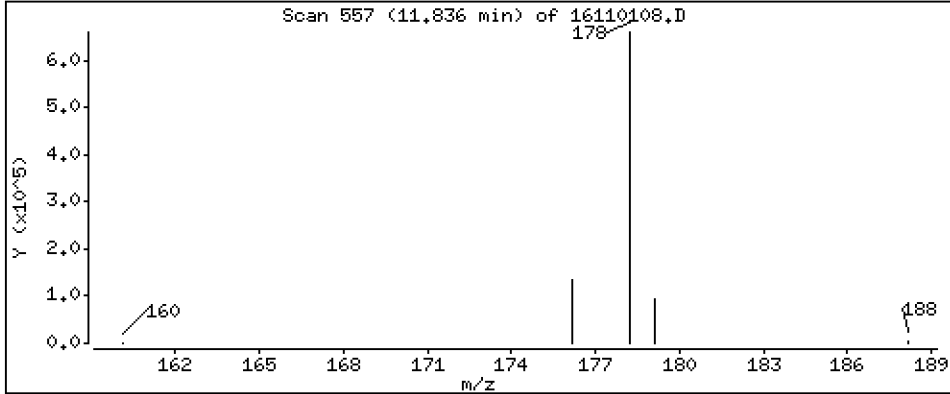
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 238 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

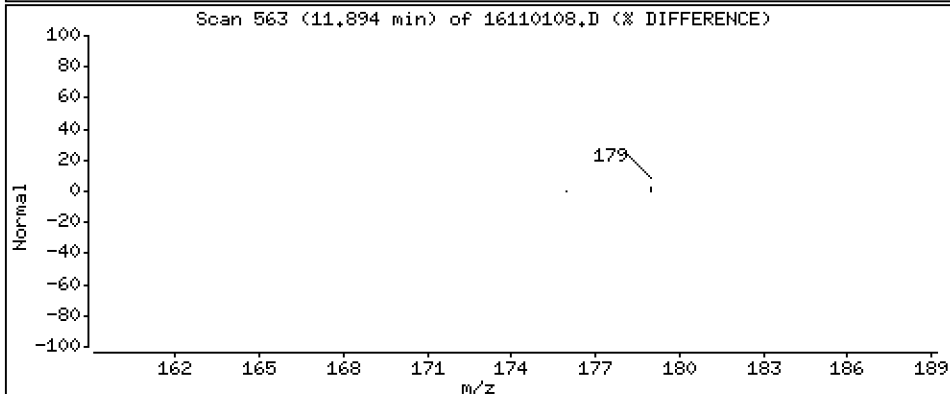
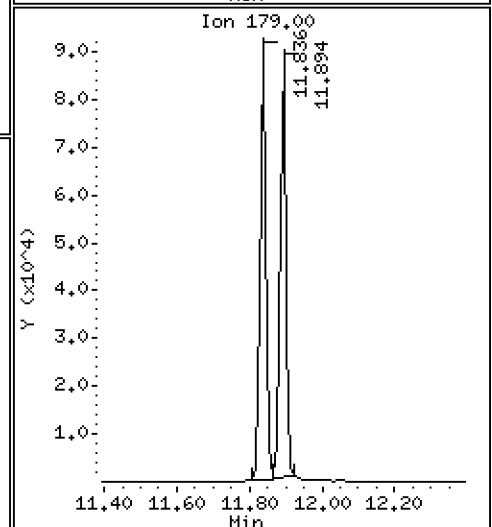
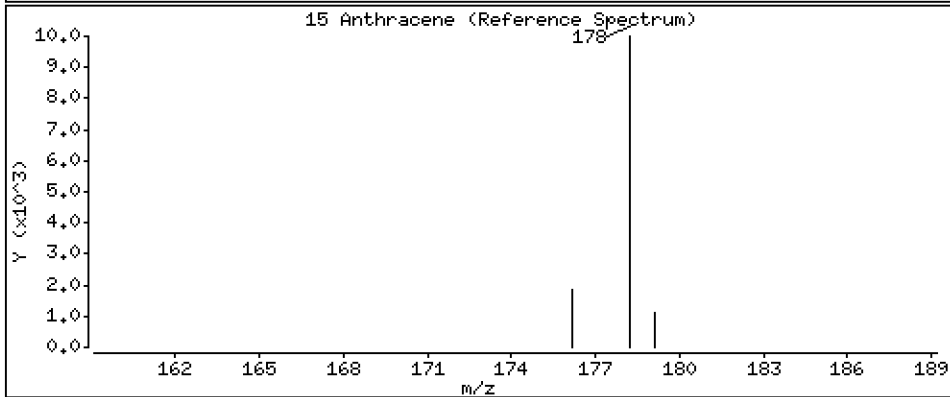
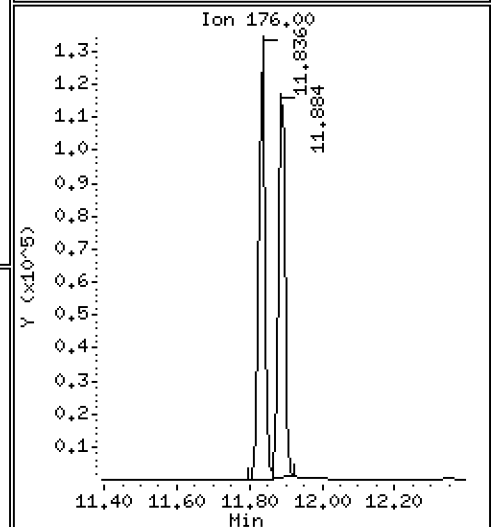
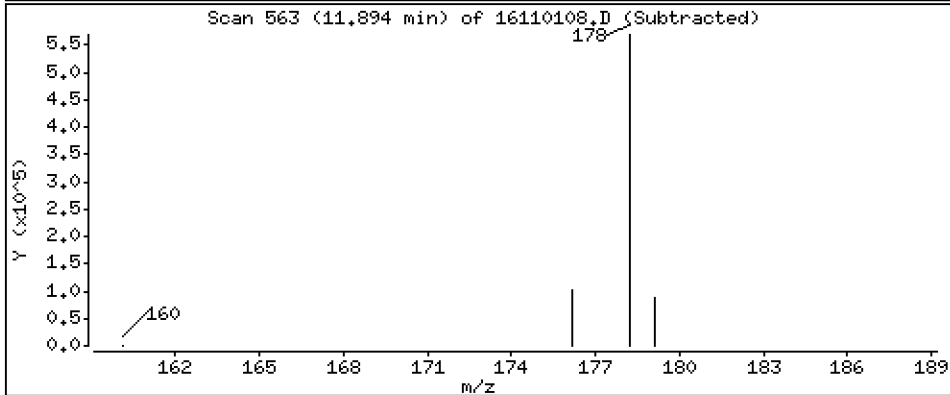
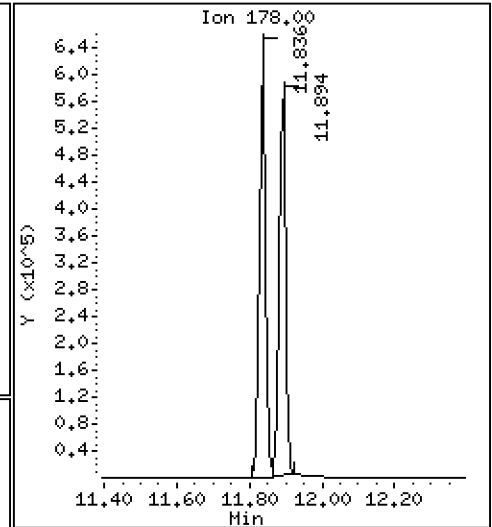
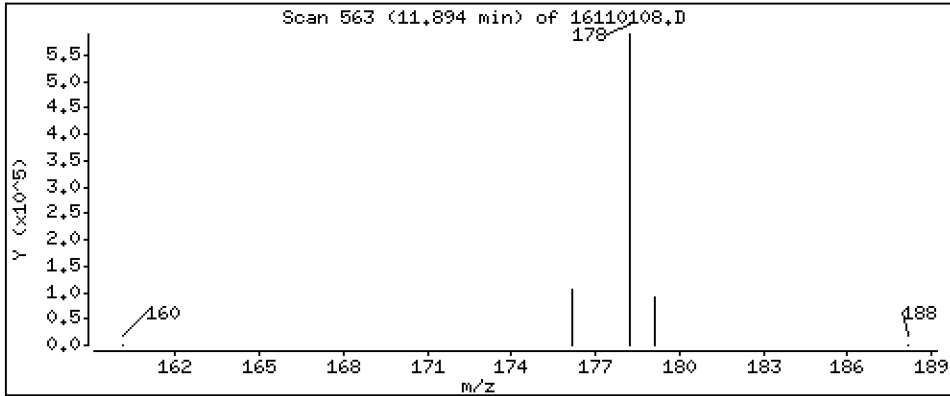
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 233 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

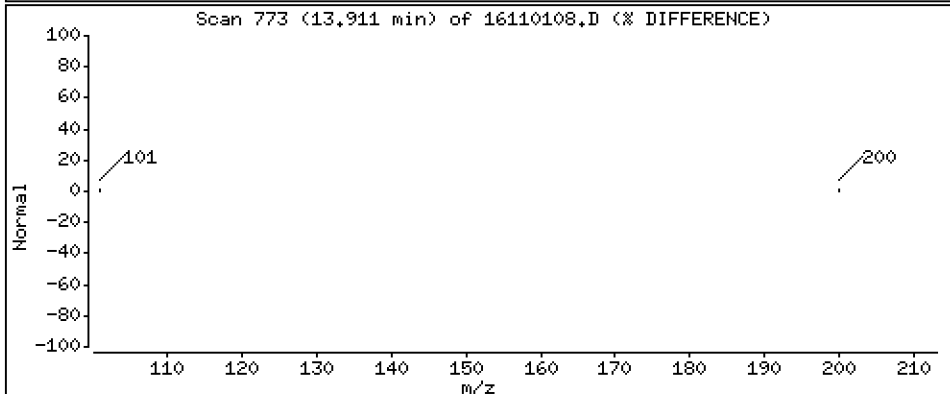
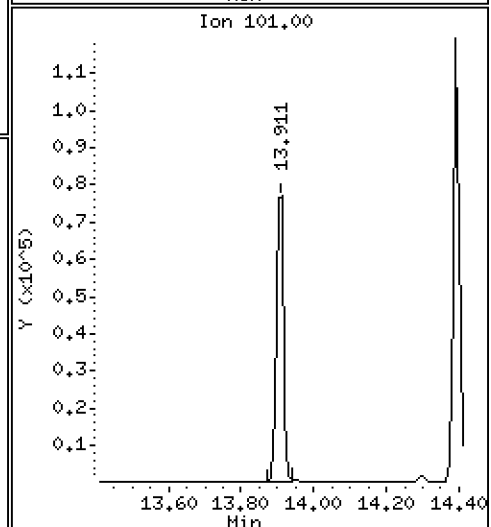
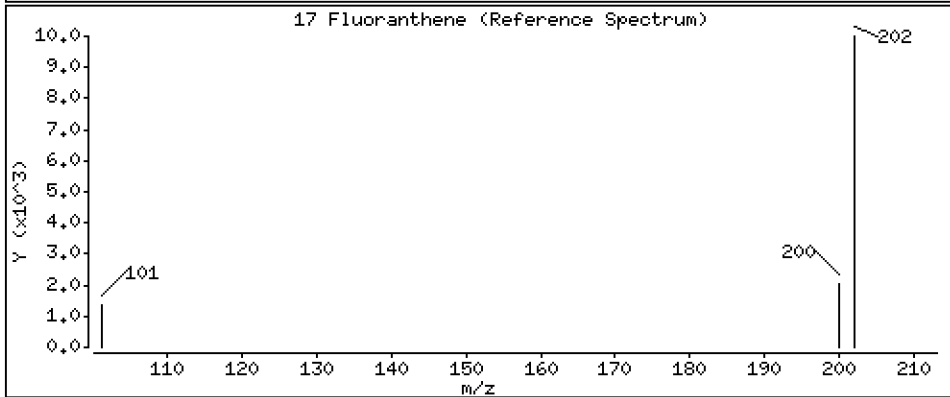
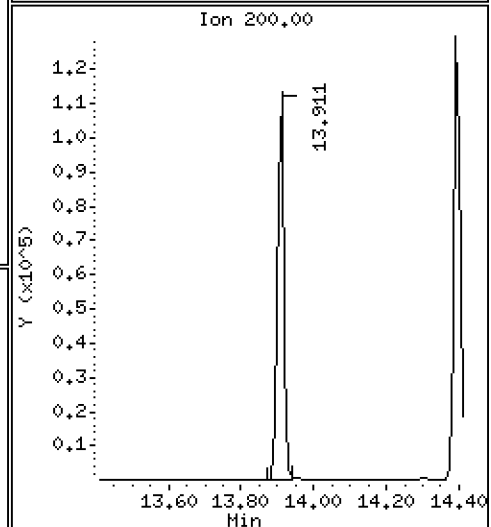
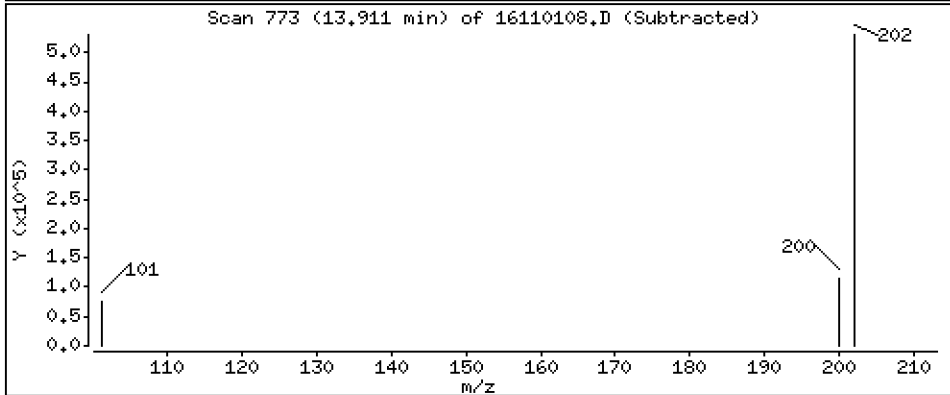
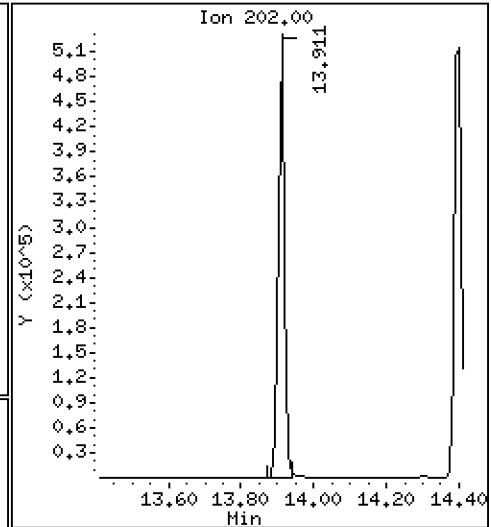
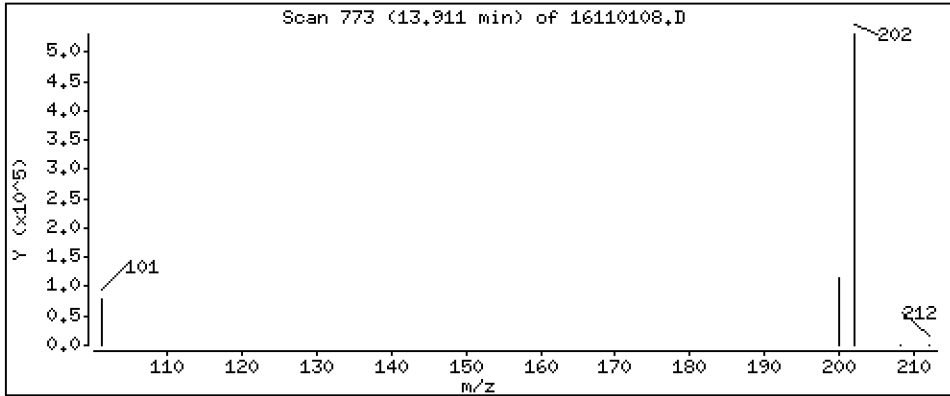
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

17 Fluoranthene

Concentration: 226 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

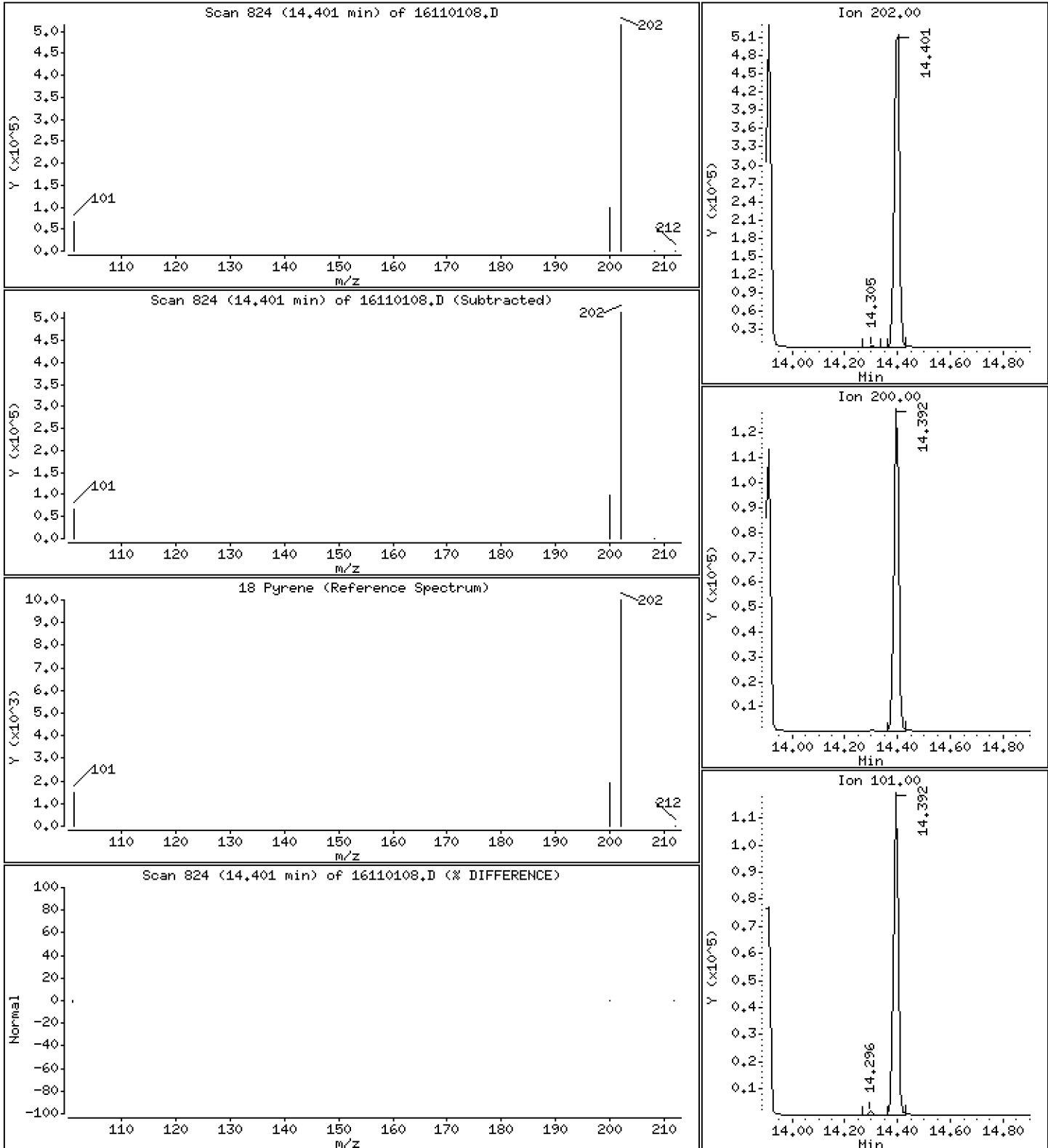
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 243 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

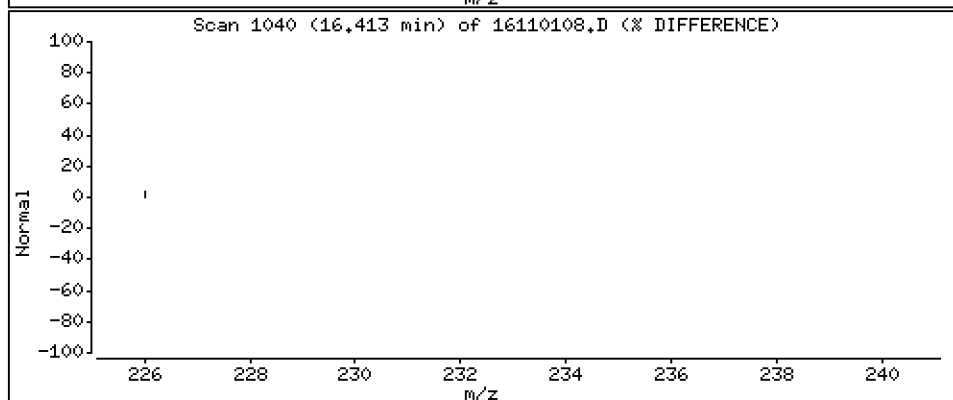
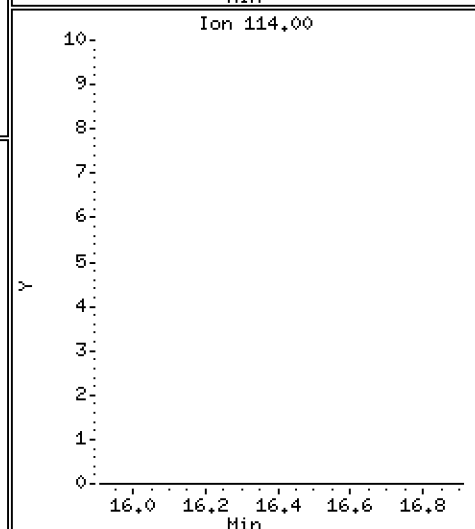
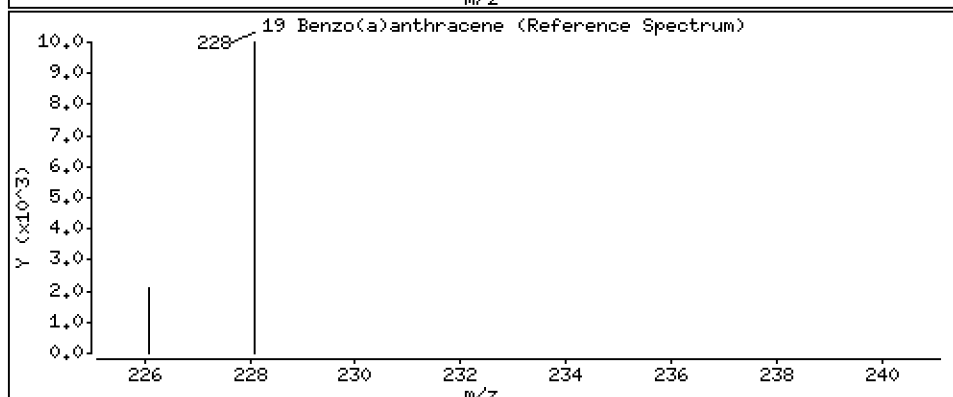
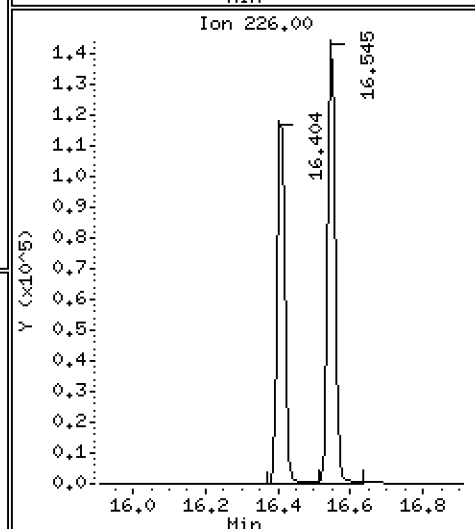
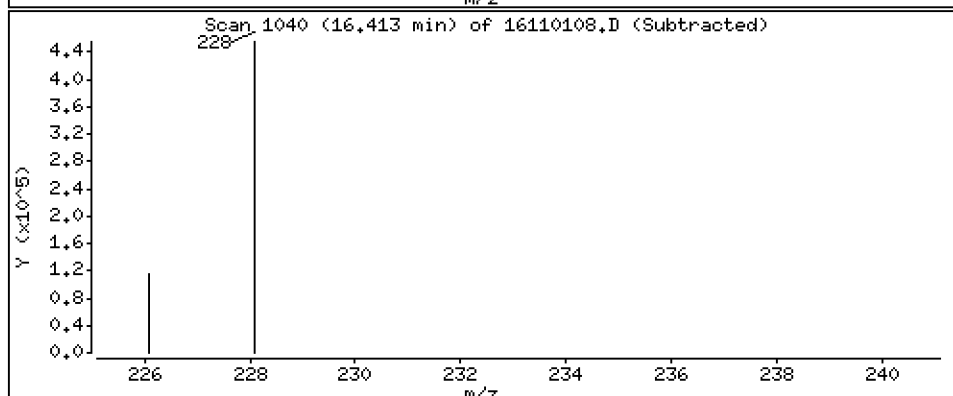
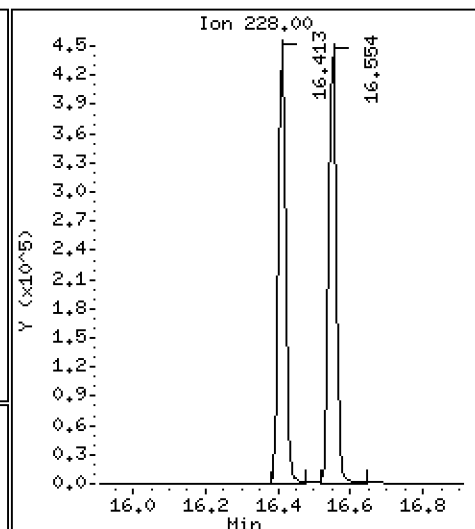
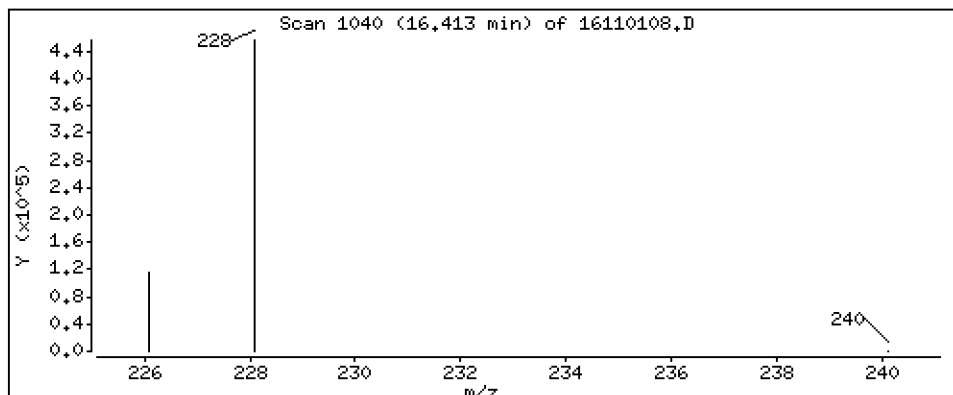
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 227 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

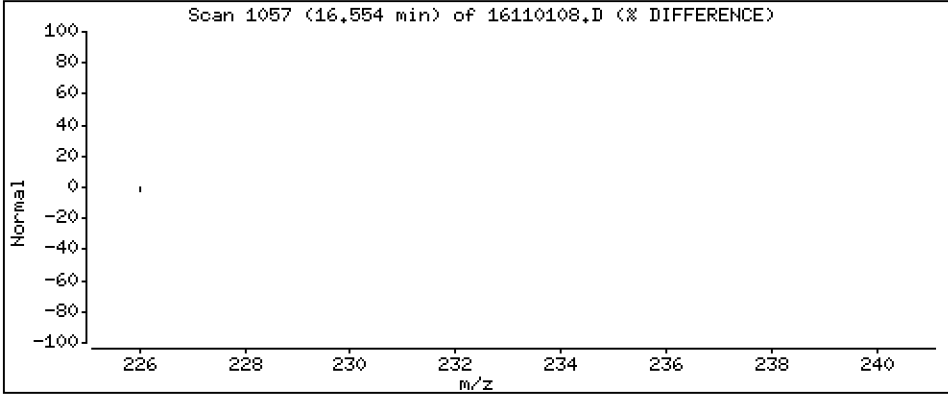
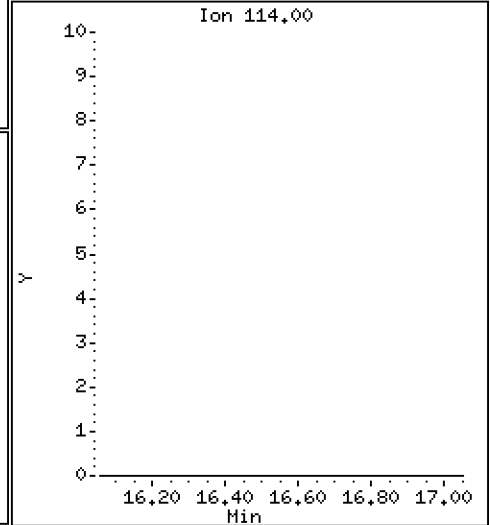
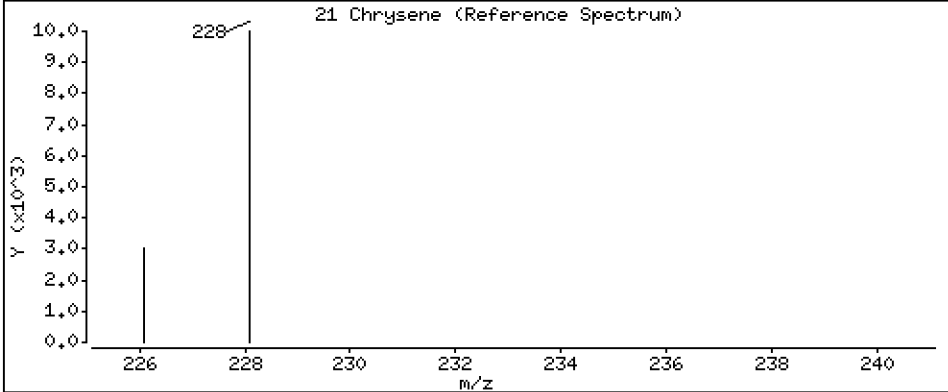
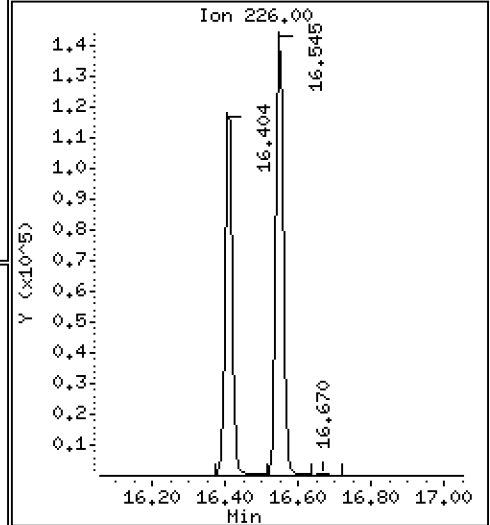
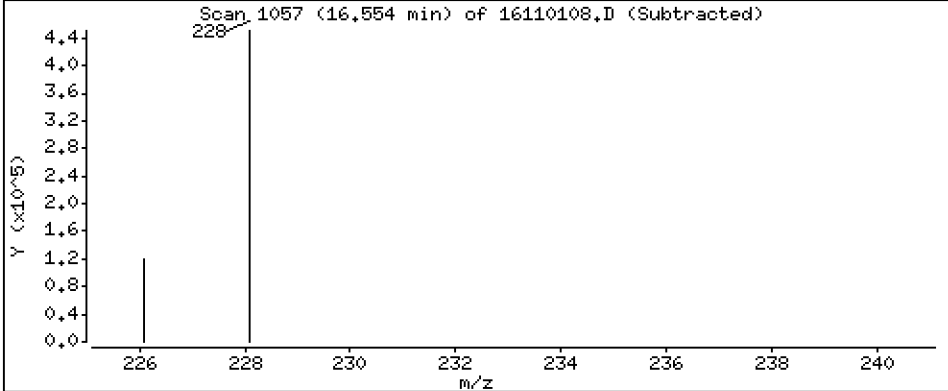
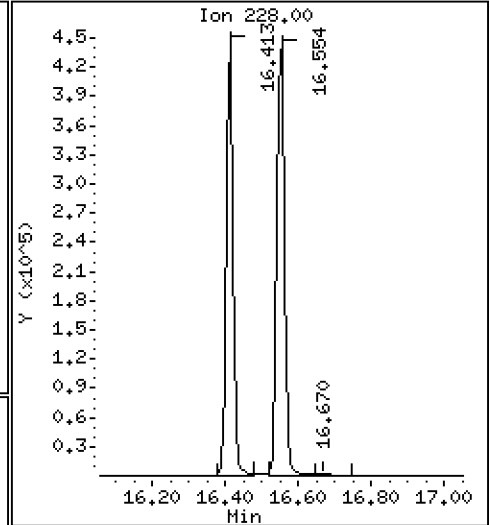
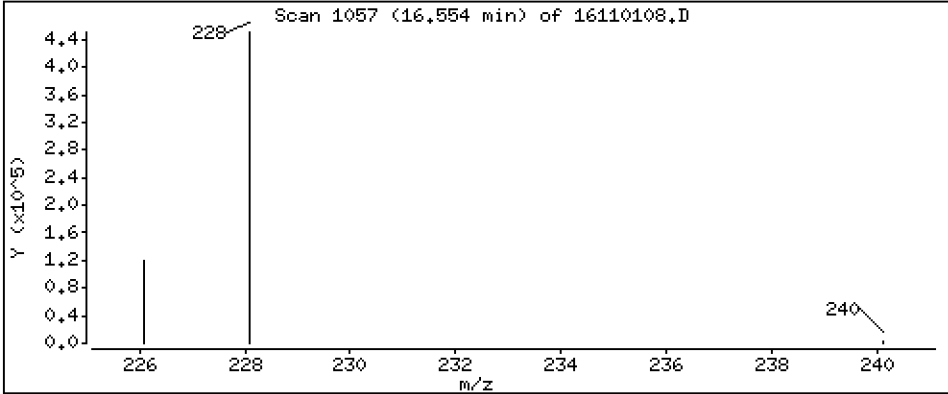
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 233 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

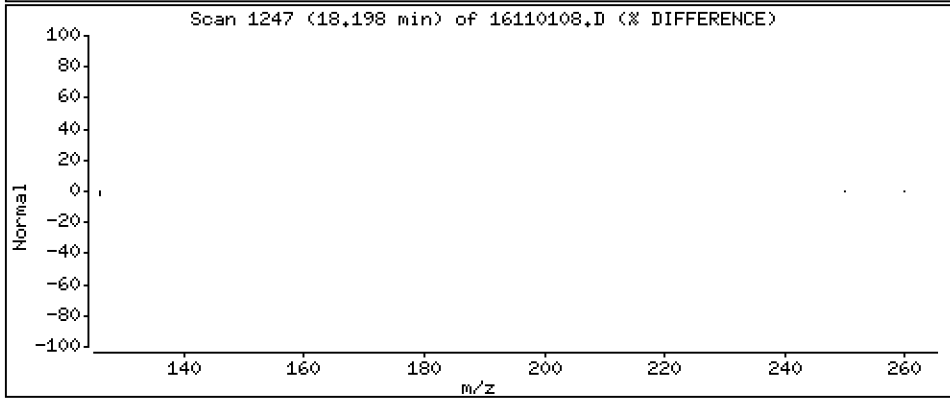
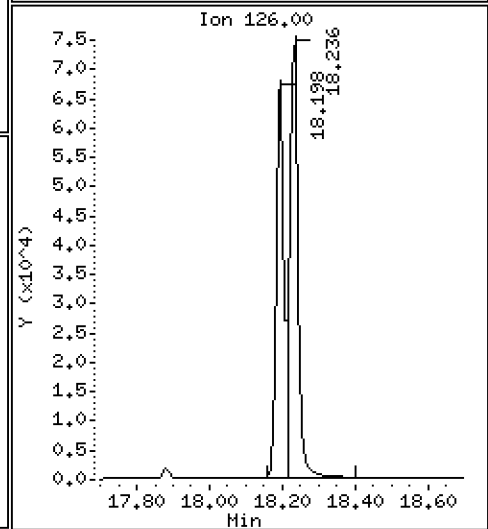
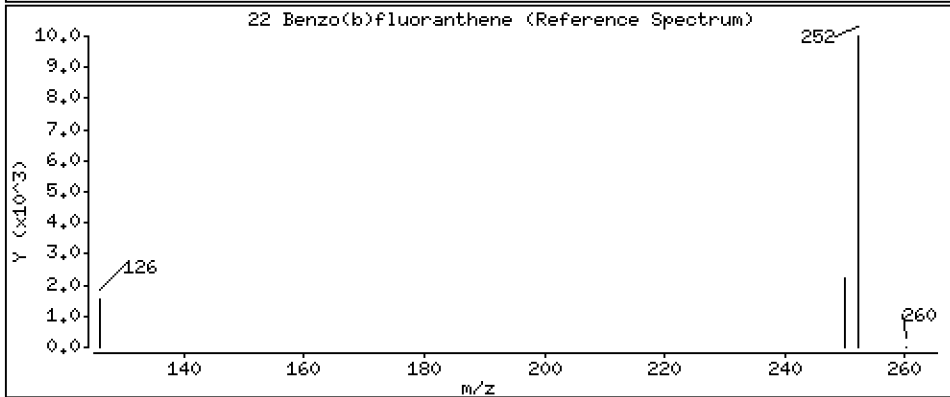
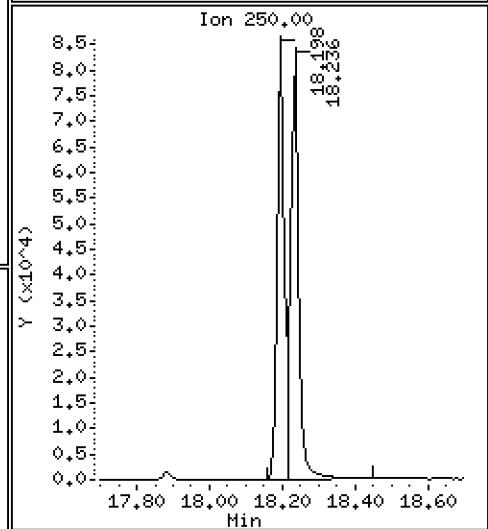
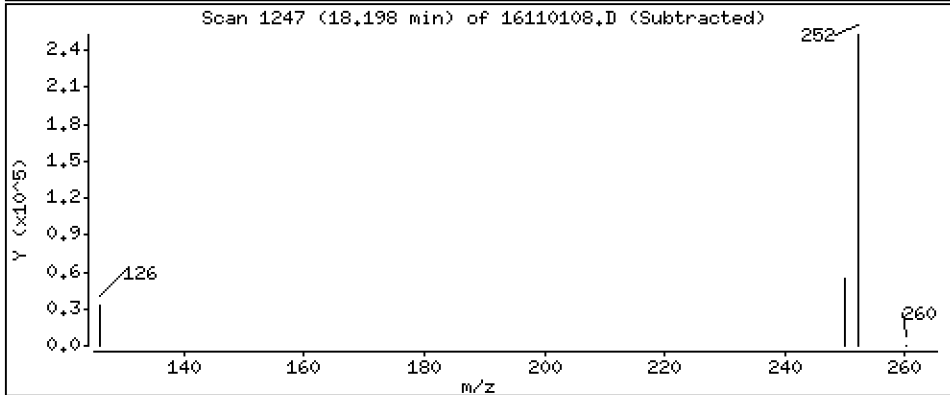
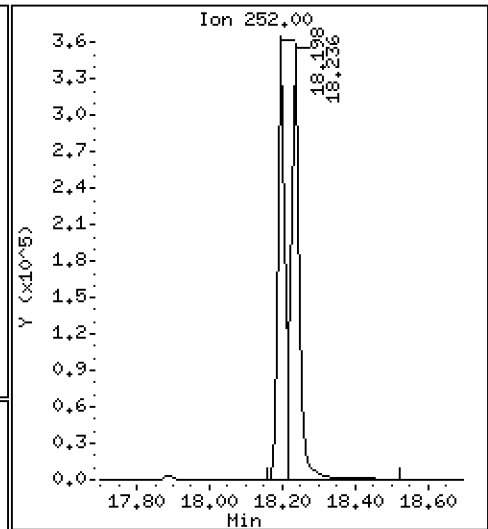
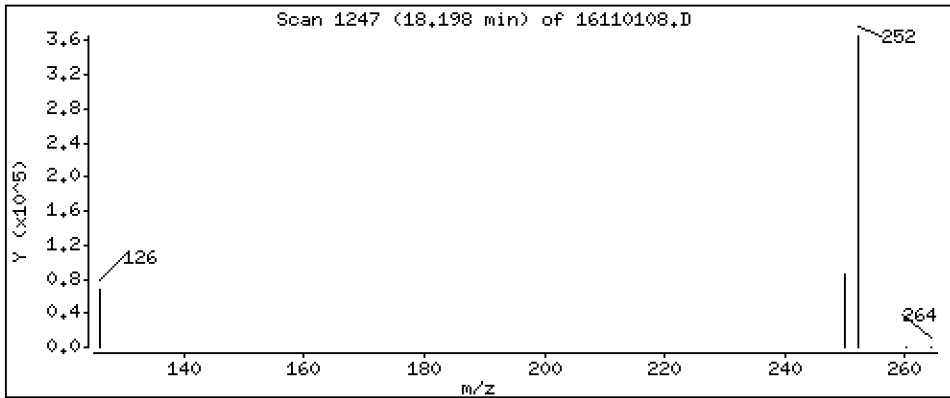
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 229 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

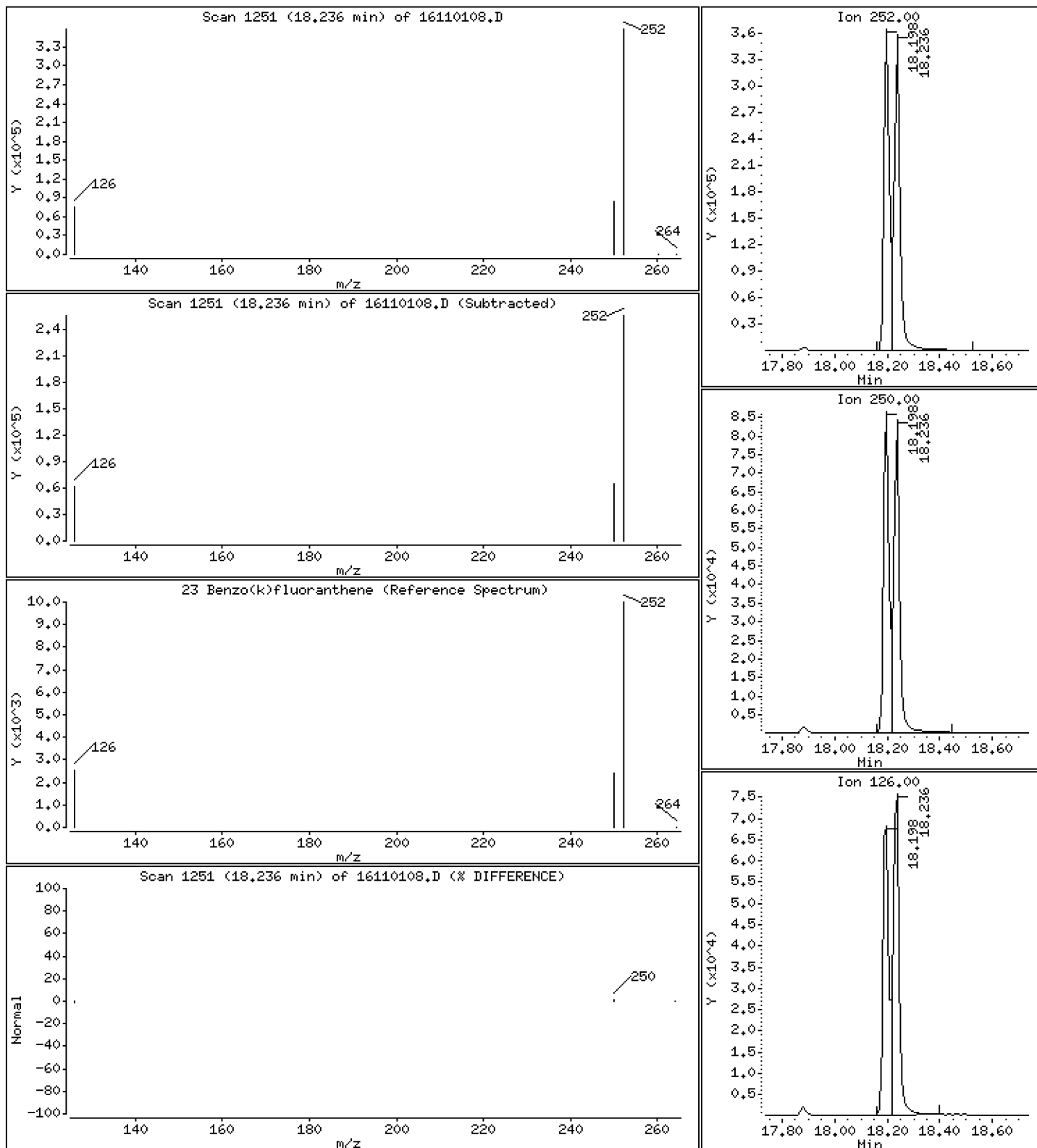
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 235 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

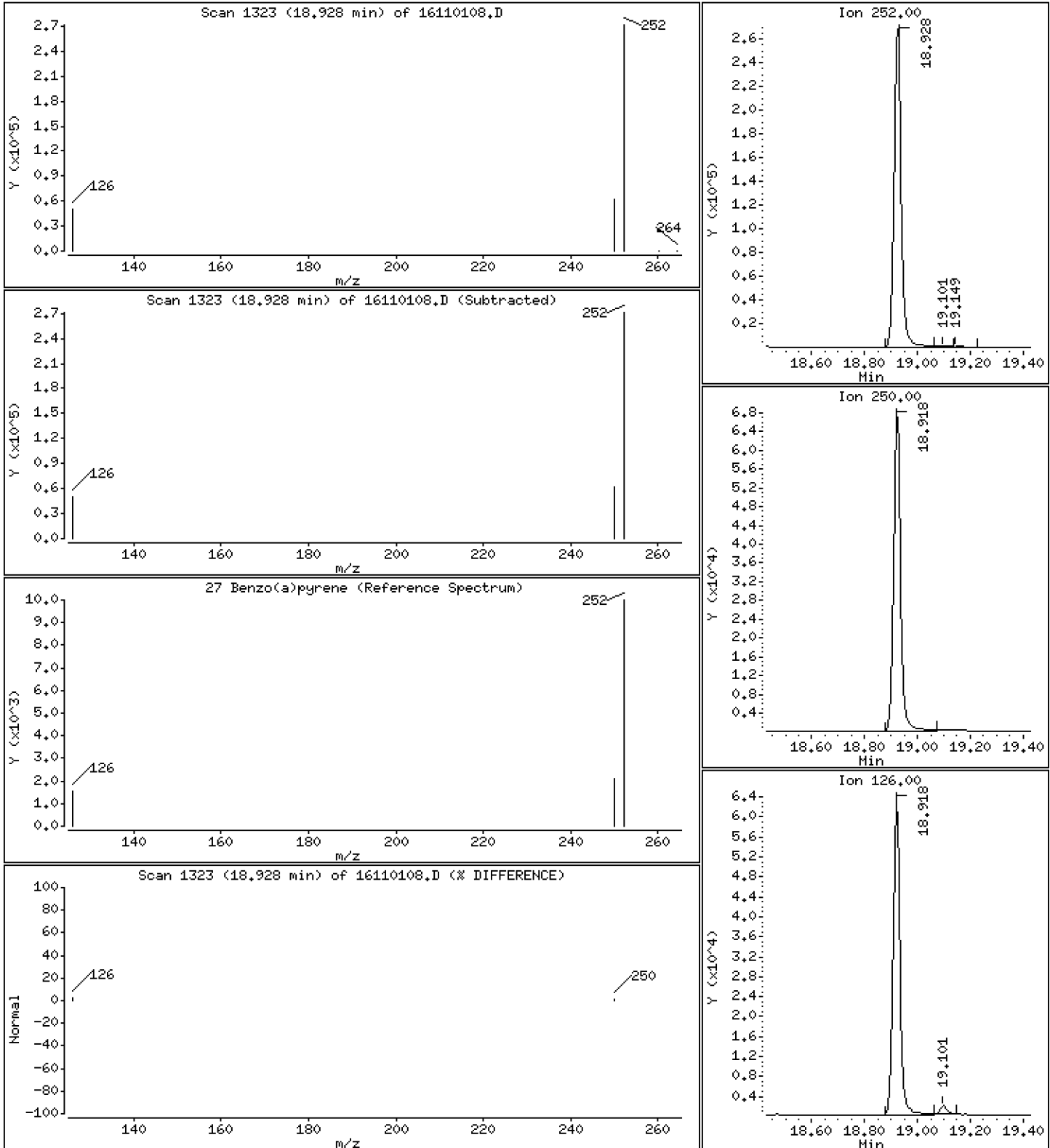
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 237 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

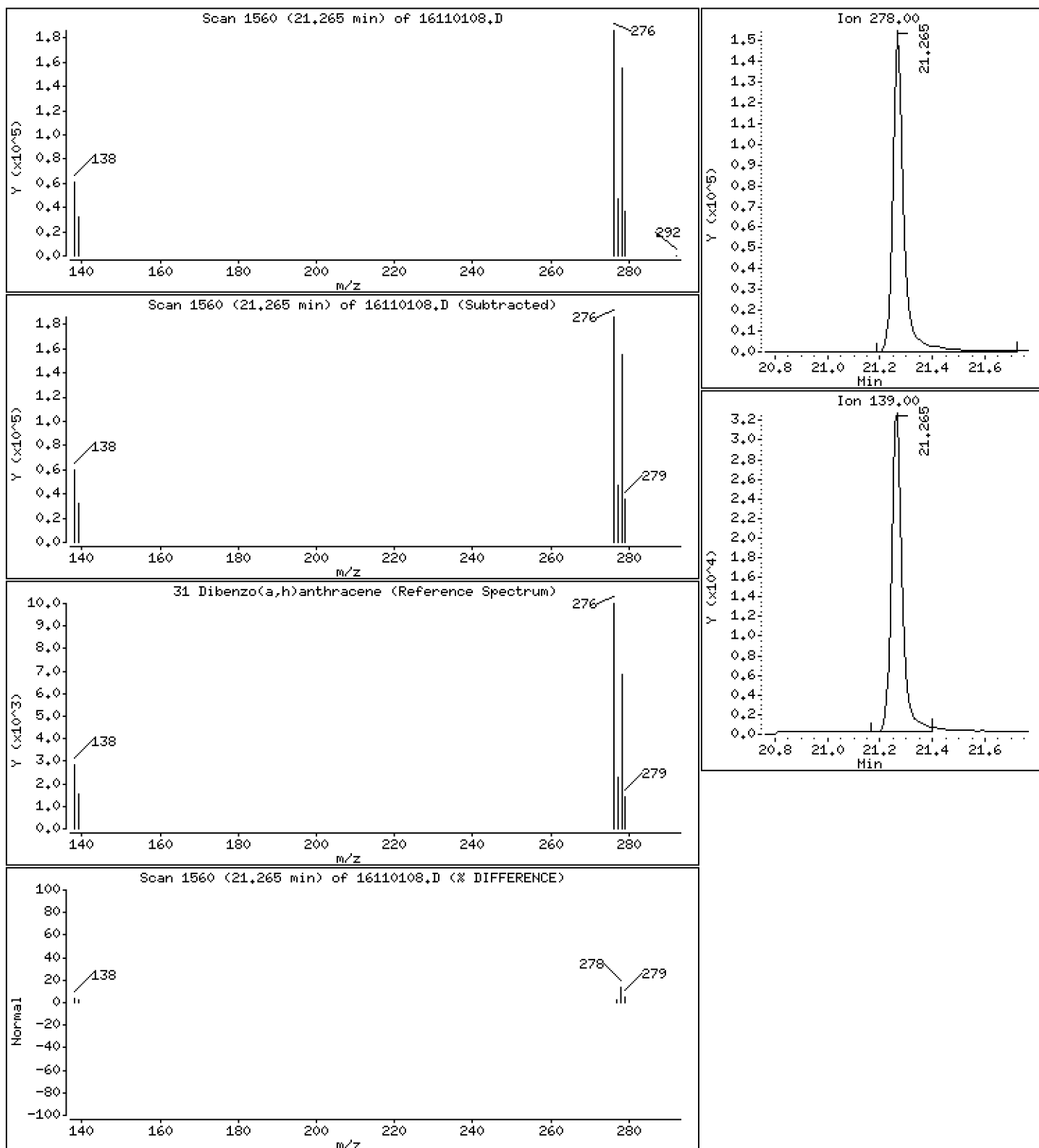
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

31 Dibenzo(a,h)anthracene

Concentration: 235 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

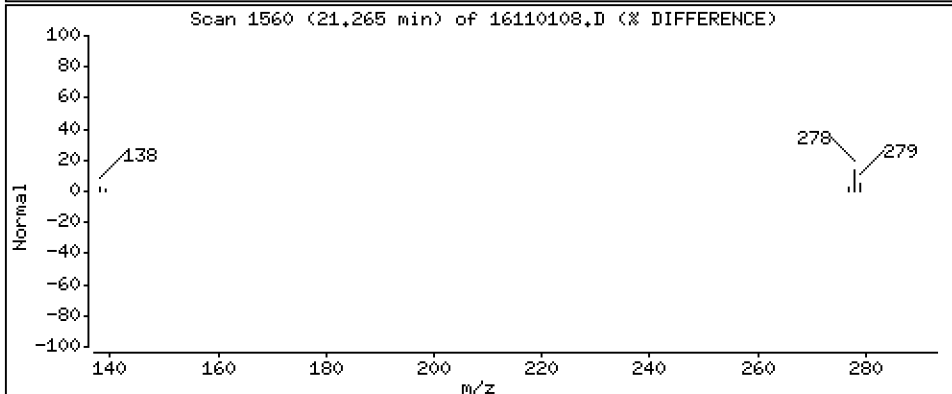
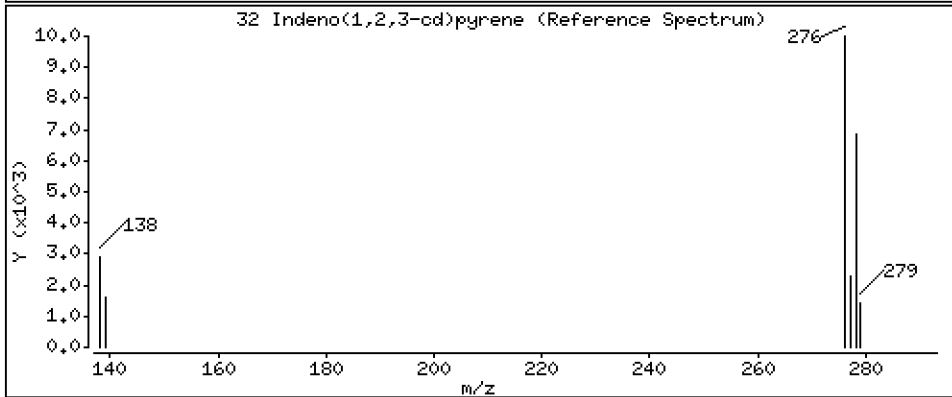
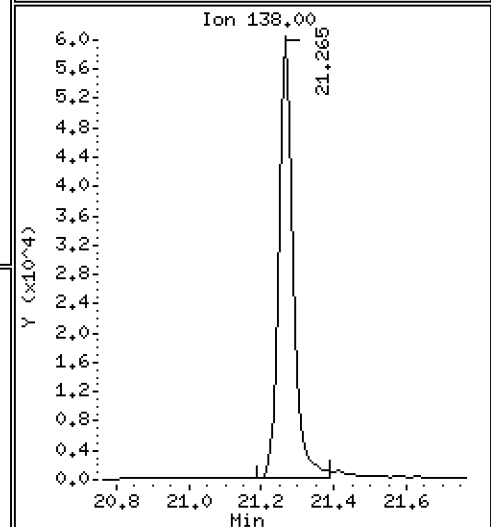
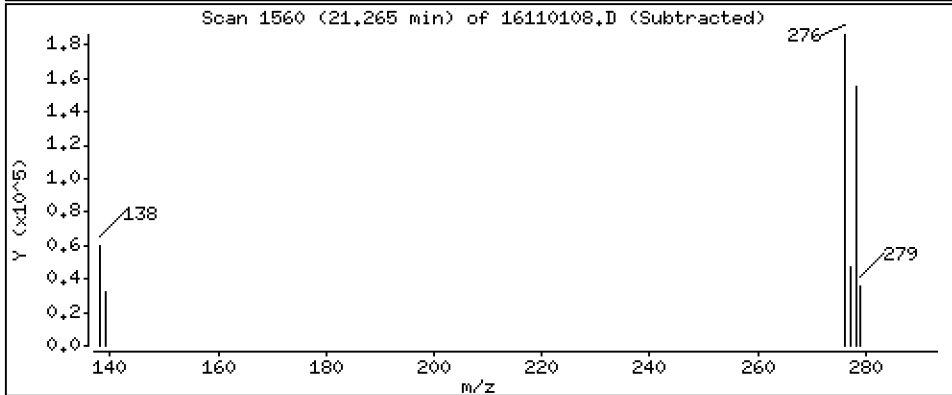
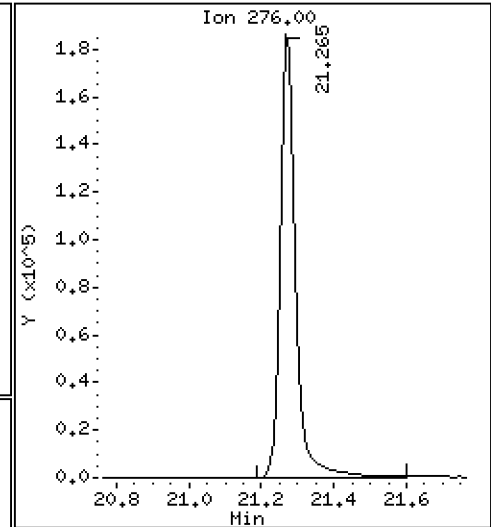
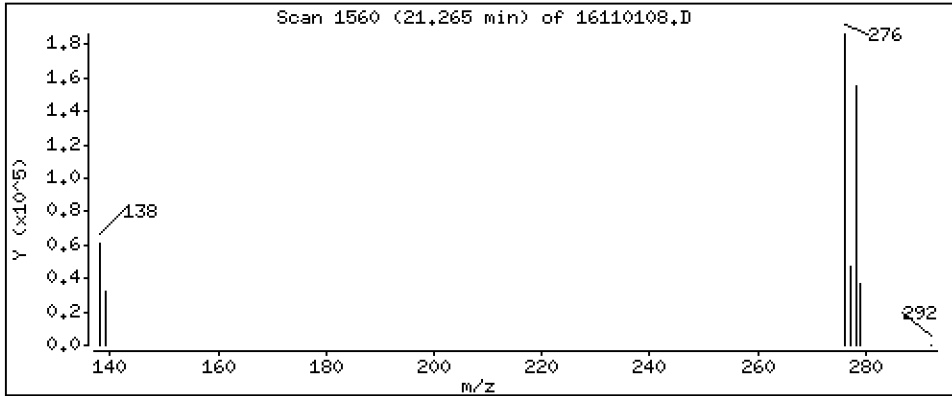
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

32 Indeno(1,2,3-cd)pyrene

Concentration: 234 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

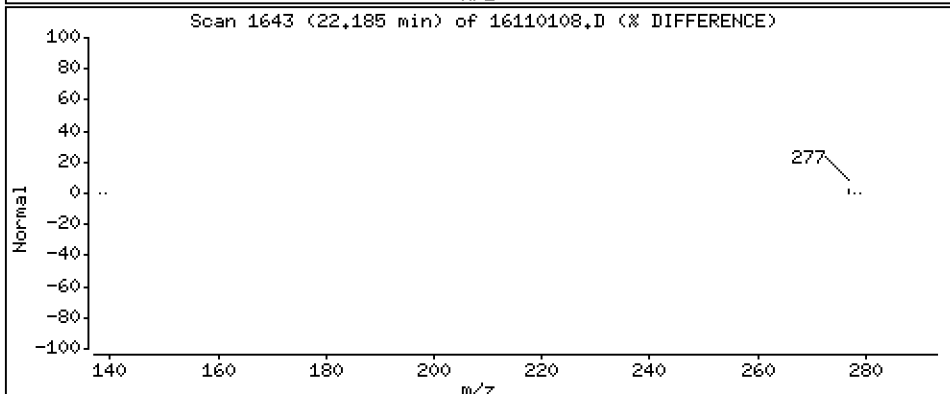
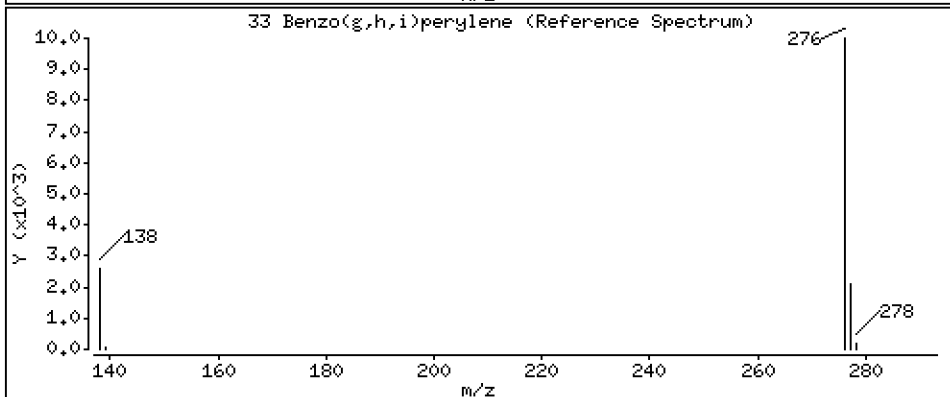
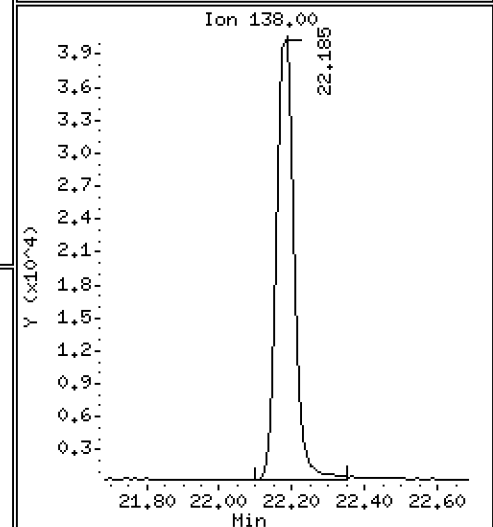
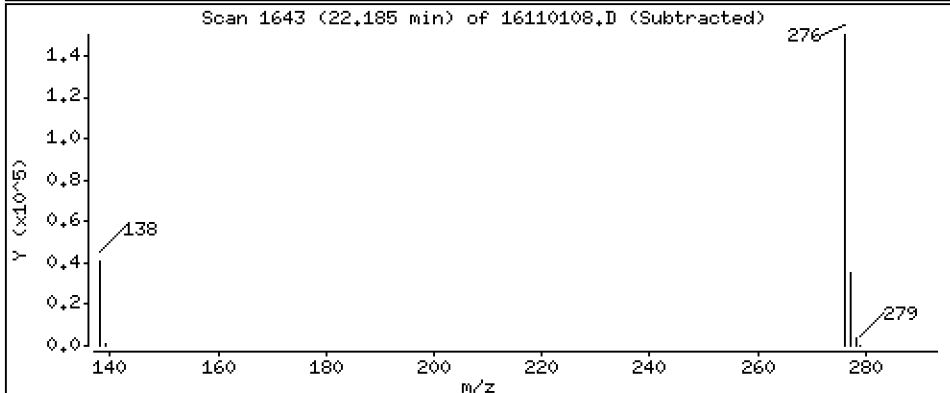
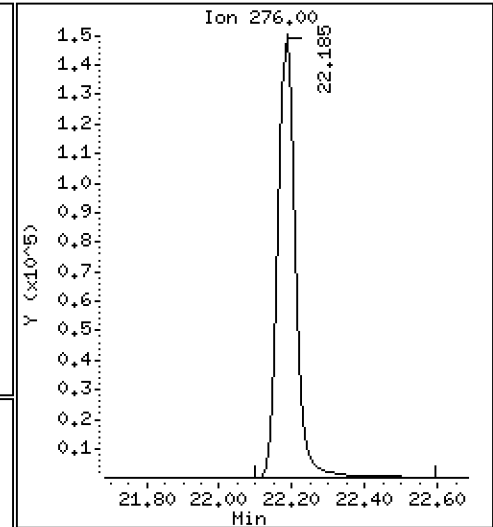
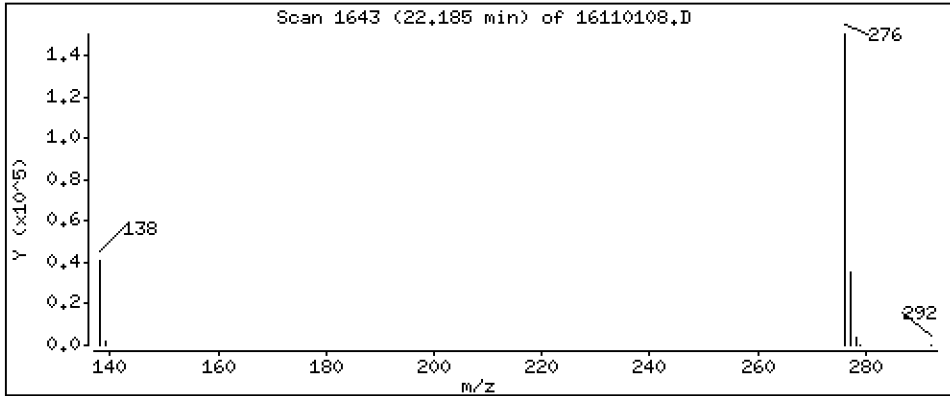
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 232 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110108.D
 Lab Smp Id: SEK0004-SCV1
 Inj Date : 01-NOV-2016 13:04
 Operator : JW
 Smp Info : SEK0004-SCV1
 Misc Info :
 Comment :
 Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Meth Date : 01-Nov-2016 13:10 jonathonw Quant Type: ISTD
 Cal Date : 01-NOV-2016 12:34 Cal File: 16110107.D
 Als bottle: 8
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Inst ID: nt11.i

Compound Sublist: PEMD.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.165	6.166	(1.000)	597012	200.000	
2 Naphthalene	128		6.207	6.208	(1.007)	795334	228.550	229
§ 3 2-Methylnaphthalene-d10	152		Compound Not Detected.					
4 2-Methylnaphthalene	142		7.195	7.195	(1.167)	485886	214.879	215
5 1-Methylnaphthalene	142		7.447	7.447	(1.208)	473636	233.613	234
6 Acenaphthylene	152		8.990	8.990	(0.983)	667001	229.993	230
* 7 Acenaphthene-d10	164		9.145	9.145	(1.000)	291617	200.000	
8 Acenaphthene	153		9.200	9.200	(1.006)	480381	252.178	252
9 Dibenzofuran	168		Compound Not Detected.					
§ 10 Fluorene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.035	10.035	(1.097)	478200	227.092	227
* 12 Phenanthrene-d10	188		11.797	11.798	(1.000)	499409	200.000	
13 Phenanthrene	178		11.836	11.836	(1.003)	807059	237.583	238
§ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		11.893	11.894	(1.008)	765469	232.544	233
§ 16 Fluoranthene-d10	212		Compound Not Detected.					
17 Fluoranthene	202		13.911	13.911	(1.179)	657265	226.304	226
18 Pyrene	202		14.401	14.401	(0.873)	747898	242.848	243
19 Benzo(a)anthracene	228		16.412	16.412	(0.994)	595301	227.308	227
* 20 Chrysene-d12	240		16.503	16.504	(1.000)	392161	200.000	
21 Chrysene	228		16.553	16.553	(1.003)	635792	233.169	233
22 Benzo(b)fluoranthene	252		18.197	18.198	(0.952)	531419	229.167	229
23 Benzo(k)fluoranthene	252		18.236	18.236	(0.954)	599881	234.516	235
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		18.928	18.928	(0.990)	522116	237.384	237
* 28 Perylene-d12	264		19.110	19.101	(1.000)	458547	200.000	
29 Perylene	252		Compound Not Detected.					
§ 30 Dibenzo(a,h)anthracene-d14	292		Compound Not Detected.					
31 Dibenzo(a,h)anthracene	278		21.265	21.265	(1.113)	456758	235.152	235
32 Indeno(1,2,3-cd)pyrene	276		21.265	21.265	(1.113)	565041	233.507	234
33 Benzo(g,h,i)perylene	276		22.184	22.185	(1.161)	488433	231.512	232

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110108.D
 Lab Smp Id: SEK0004-SCV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	597012	-2.06
7 Acenaphthene-d10	316851	158426	633702	291617	-7.96
12 Phenanthrene-d10	546133	273067	1092266	499409	-8.56
20 Chrysene-d12	417210	208605	834420	392161	-6.00
28 Perylene-d12	524443	262222	1048886	458547	-12.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	-0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	-0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	-0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	-0.00
28 Perylene-d12	19.10	18.60	19.60	19.11	0.05

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110108.D

Lab ID: SEK0004-SCV1

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 13:04

RT	CO-ELUTION COMPOUNDS
21.265	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.265	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND

NONE				

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Calibration: ZK00002

Laboratory ID: SEK0004-SCV1

Sequence: SEK0004

Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	229	-8.6	20.00
2-Methylnaphthalene	250.00	215	-14.0	20.00
Acenaphthylene	250.00	230	-8.0	20.00
Acenaphthene	250.00	252	0.9	20.00
Fluorene	250.00	227	-9.2	20.00
Phenanthrene	250.00	238	-5.0	20.00
Anthracene	250.00	233	-7.0	20.00
Fluoranthene	250.00	226	-9.5	20.00
Pyrene	250.00	243	-2.9	20.00
Benzo(a)anthracene	250.00	227	-9.1	20.00
Chrysene	250.00	233	-6.7	20.00
Benzo(b)fluoranthene	250.00	229	-8.3	20.00
Benzo(k)fluoranthene	250.00	235	-6.2	20.00
Benzo(a)pyrene	250.00	237	-5.0	20.00
Indeno(1,2,3-cd)pyrene	250.00	234	-6.6	20.00
Dibenzo(a,h)anthracene	250.00	235	-5.9	20.00
Benzo(g,h,i)perylene	250.00	232	-7.4	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20161101_b\16110108.D

Date : 01-NOV-2016 13:04

Client ID:

Sample Info: SEK0004-SCV1

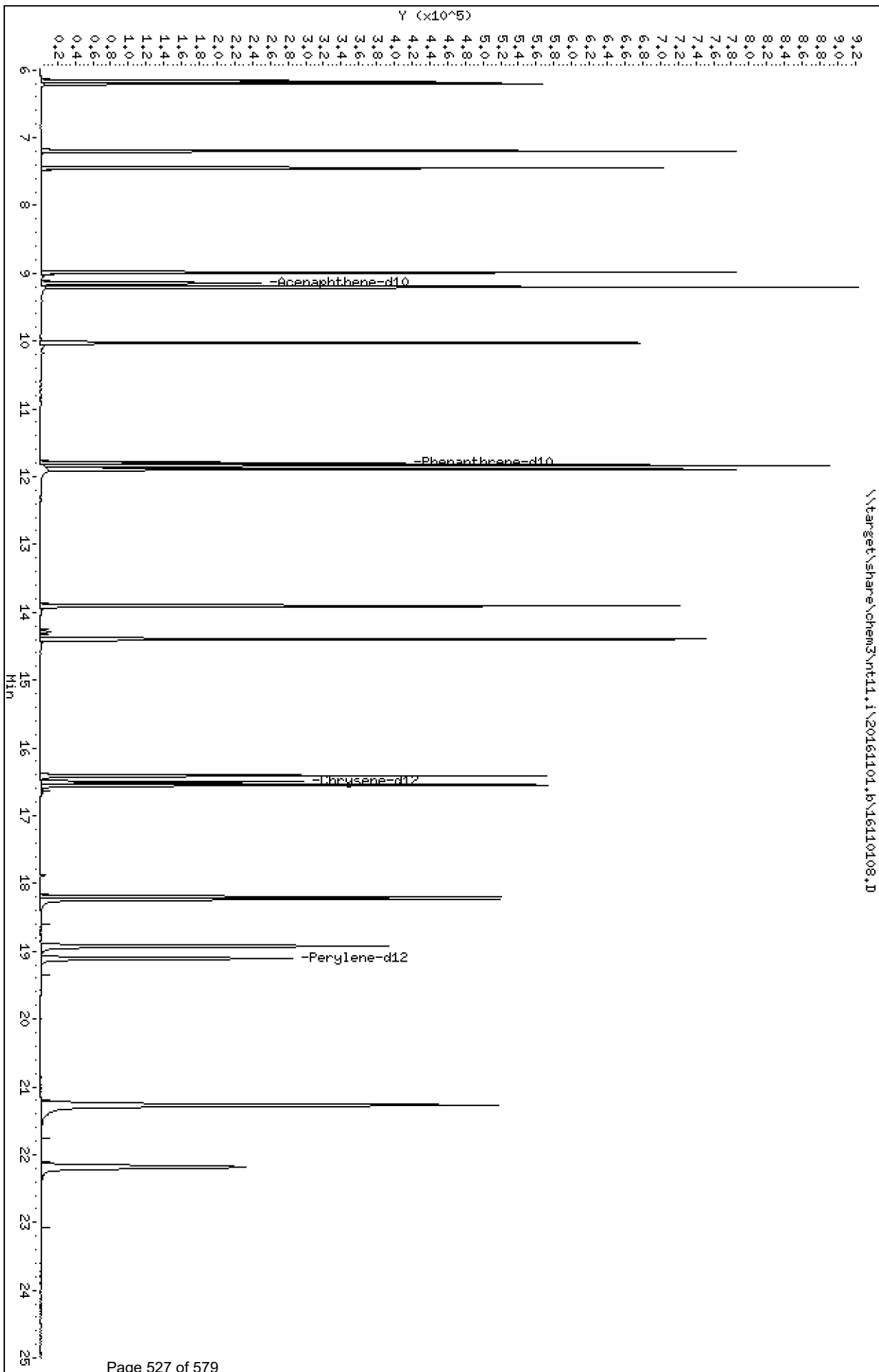
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

Page 1



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

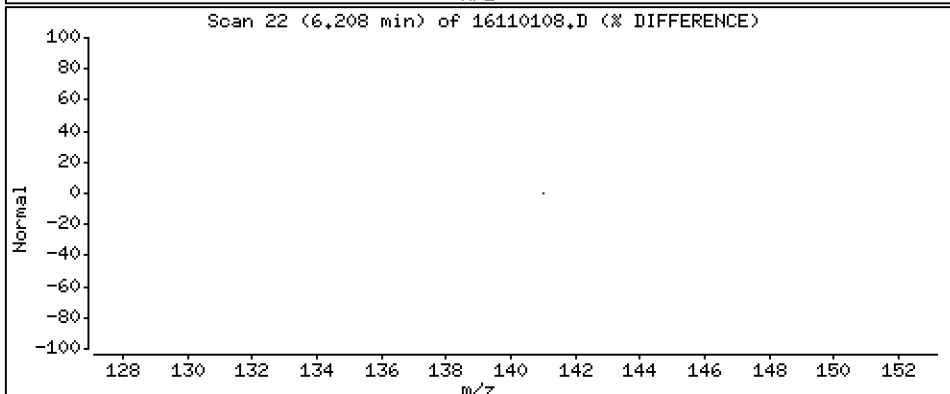
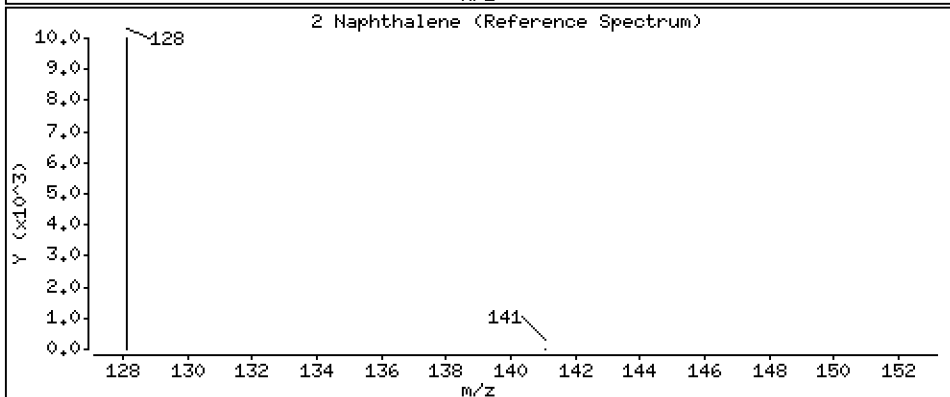
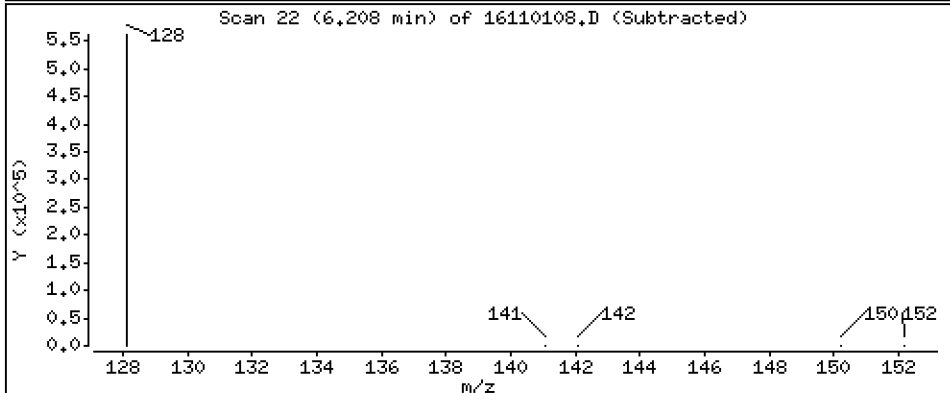
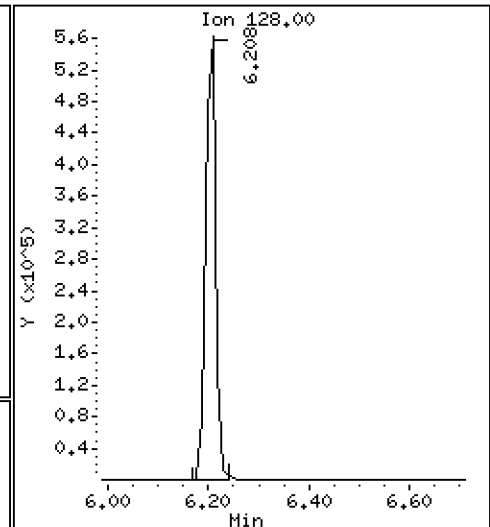
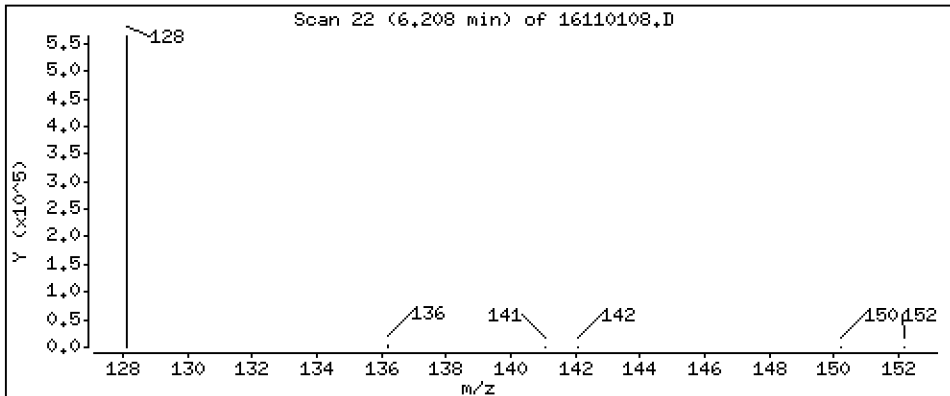
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 229 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

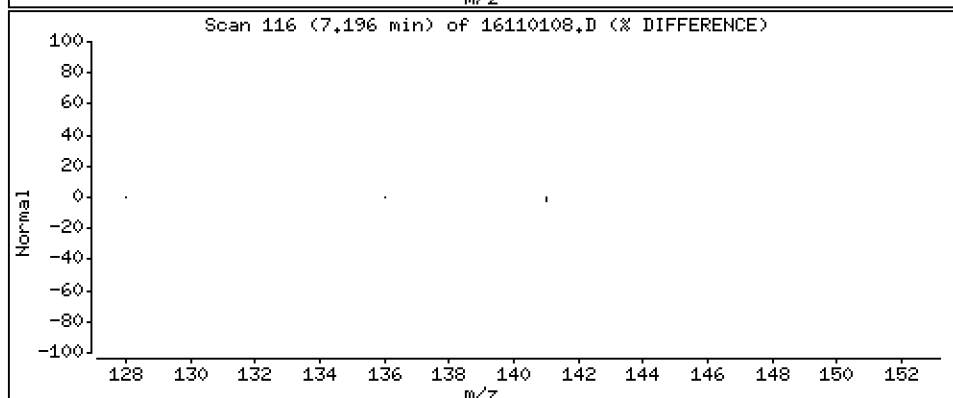
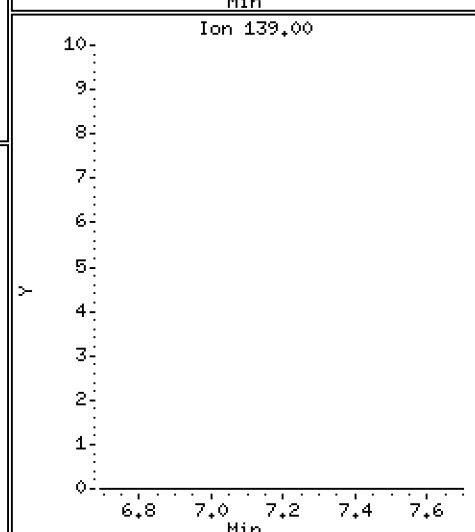
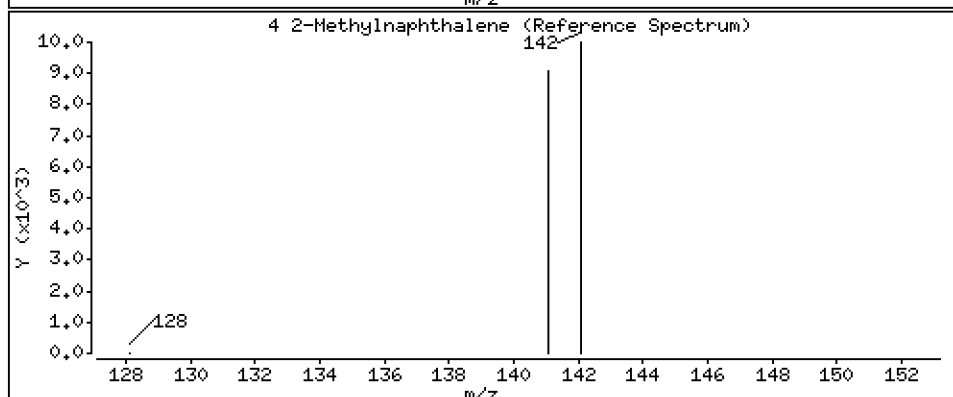
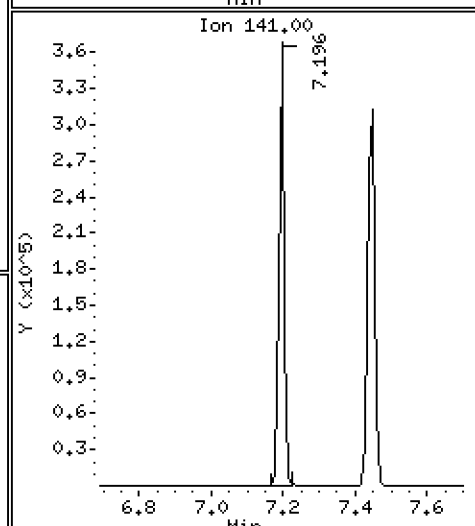
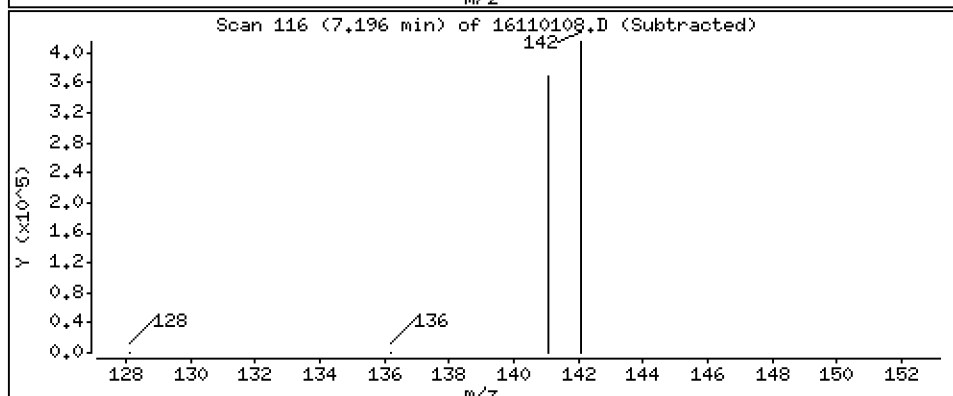
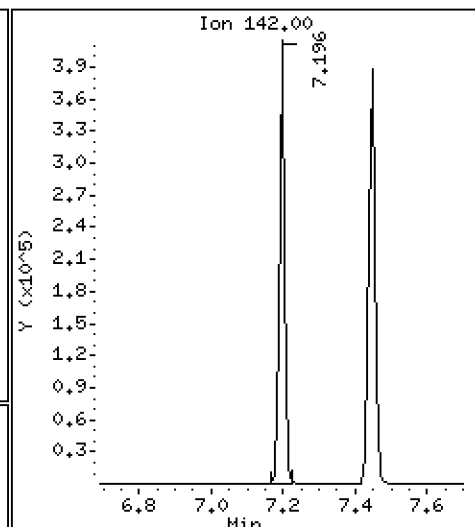
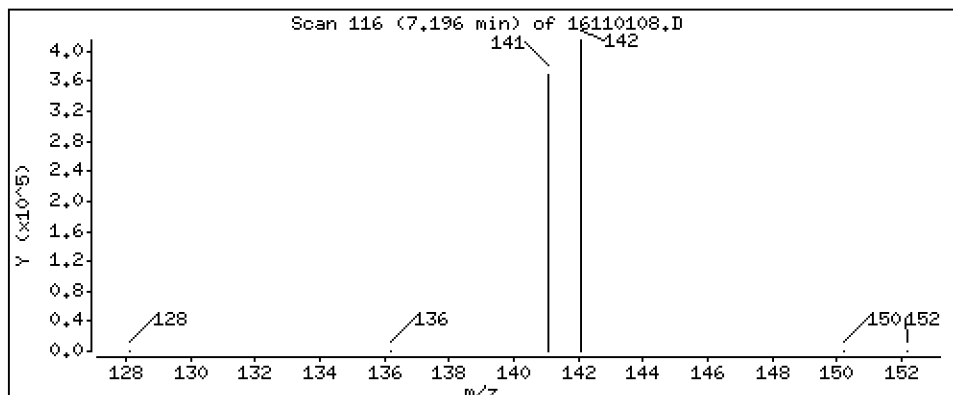
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4-Methylnaphthalene

Concentration: 215 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

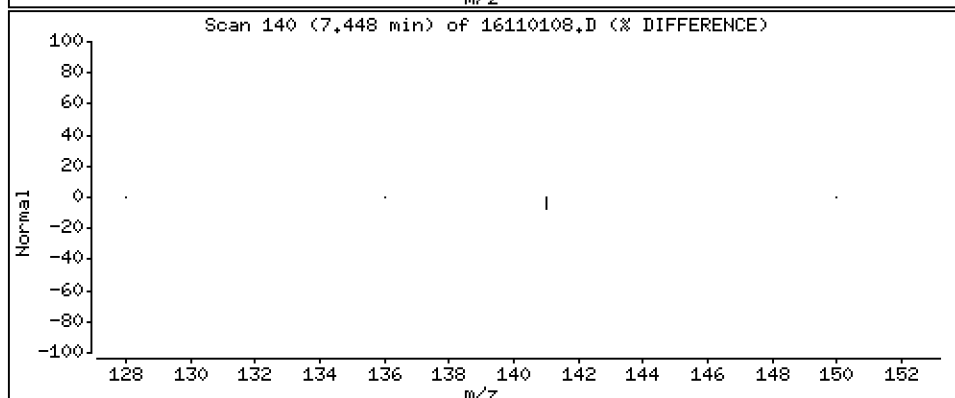
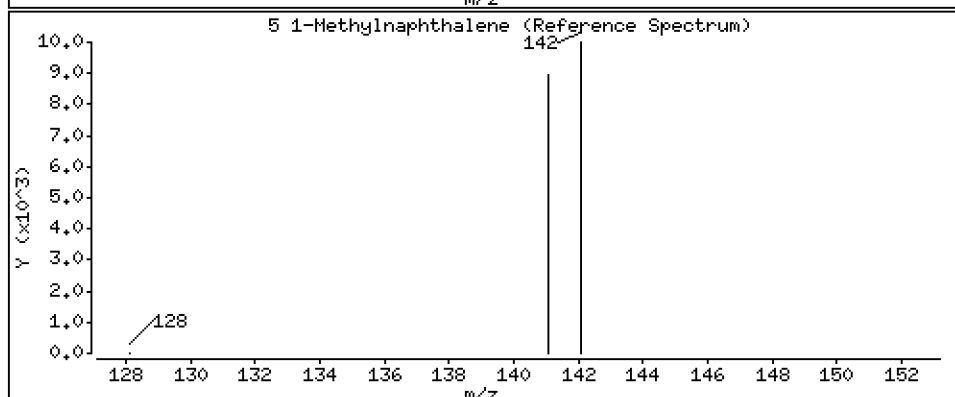
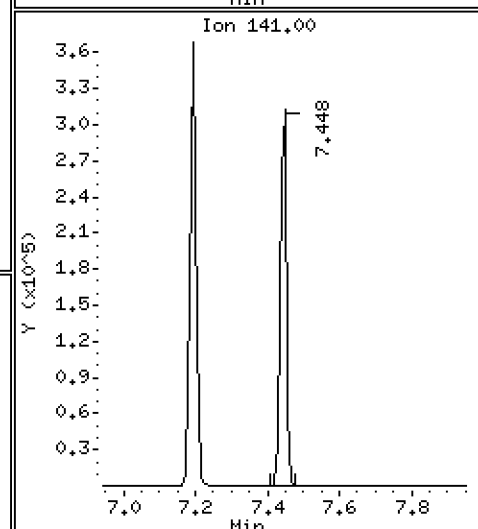
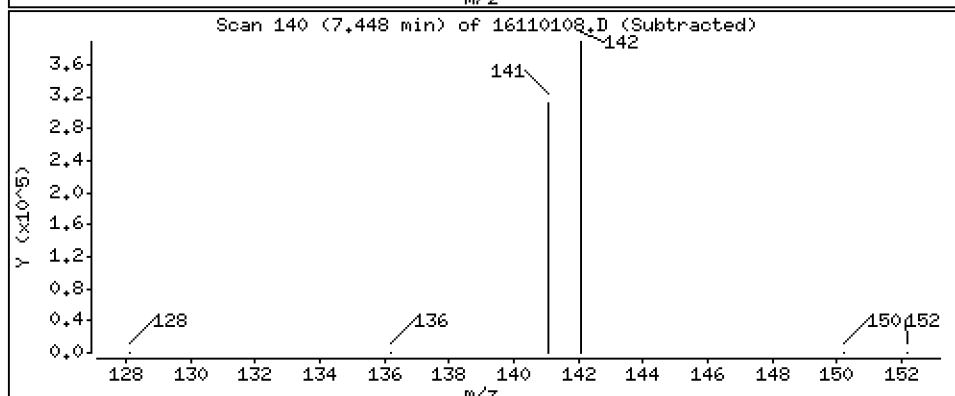
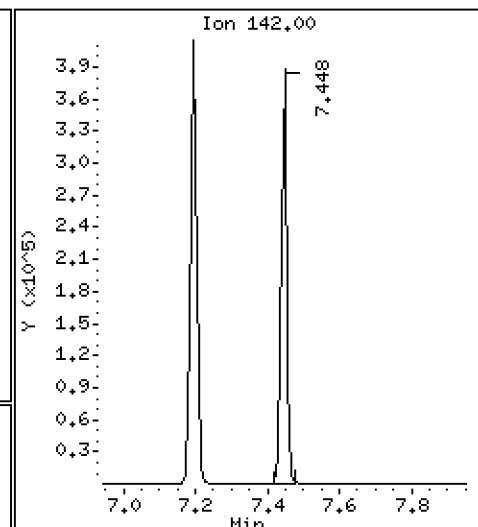
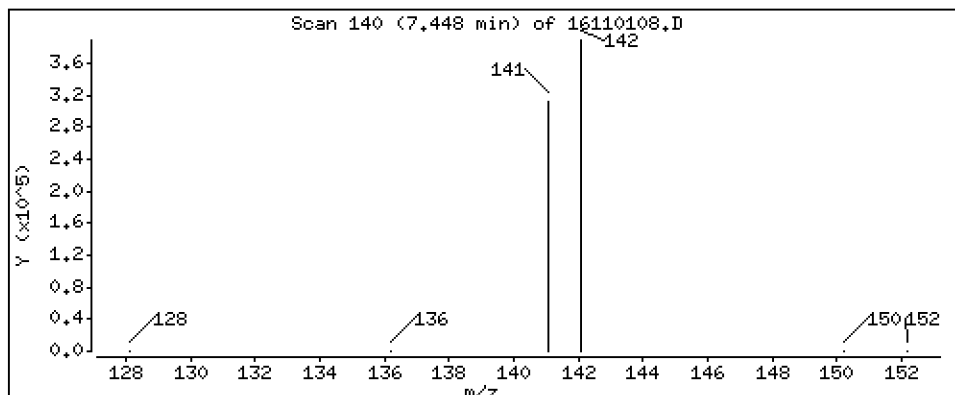
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 234 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

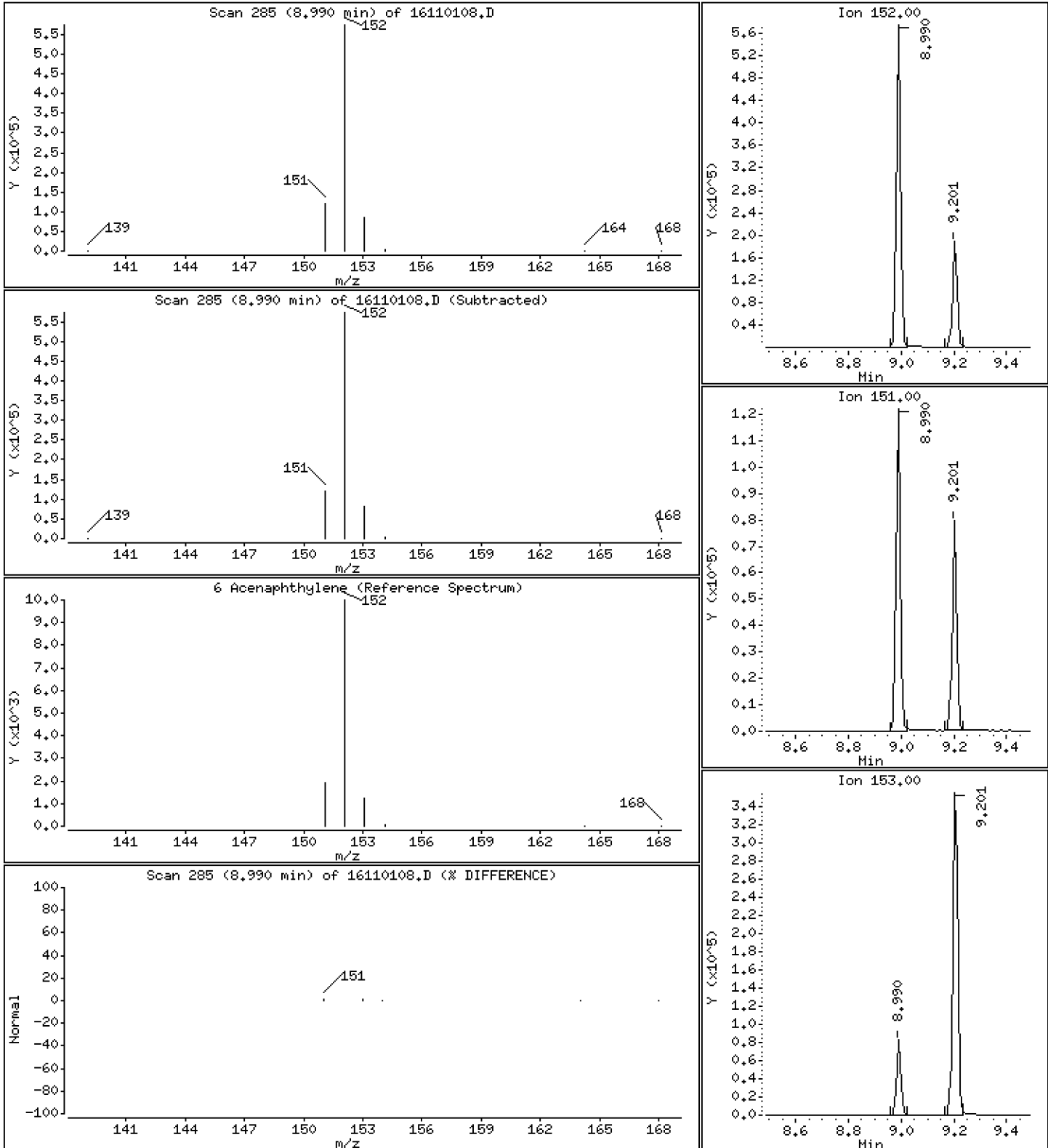
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

6 Acenaphthylene

Concentration: 230 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

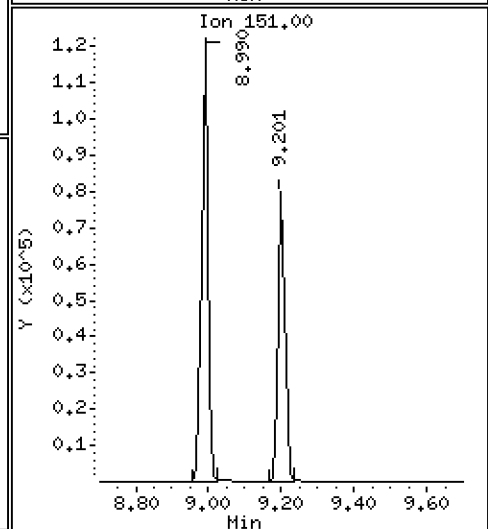
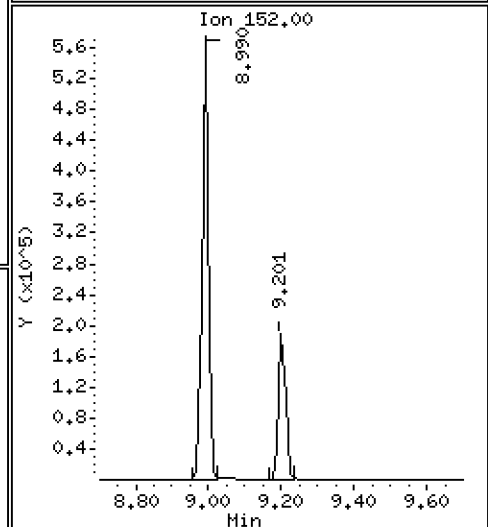
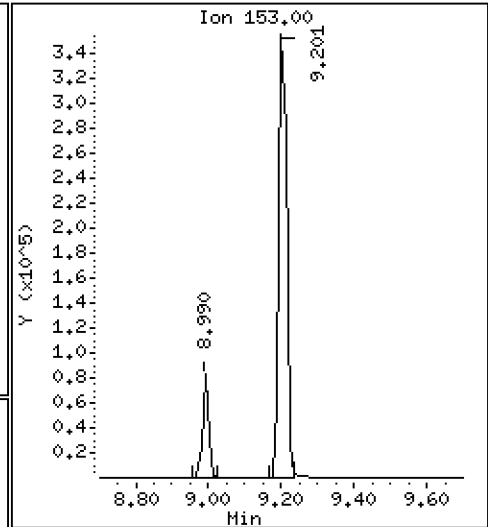
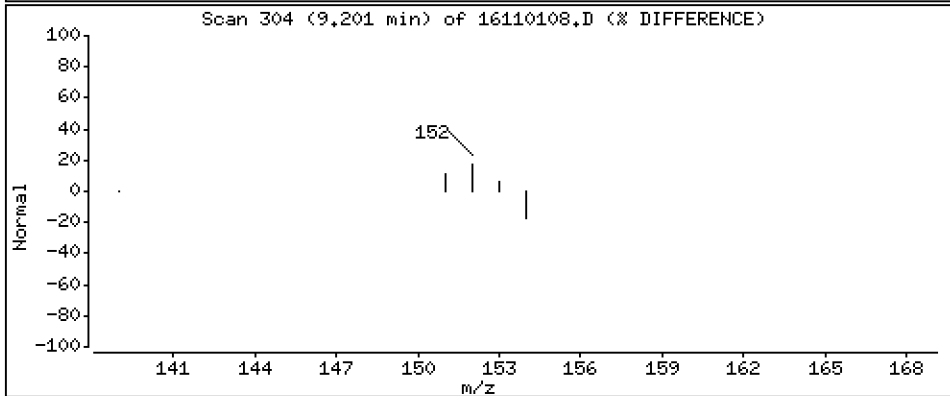
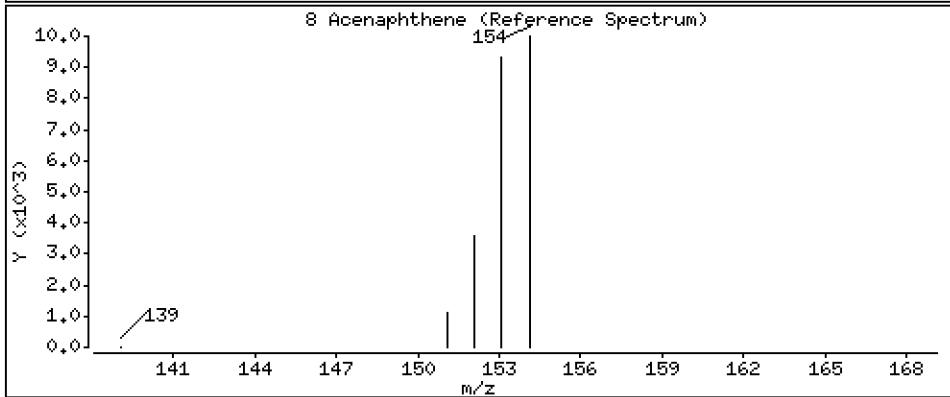
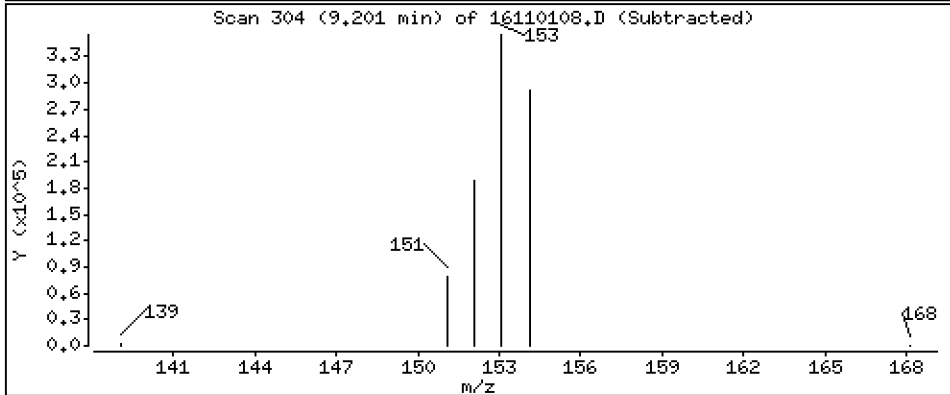
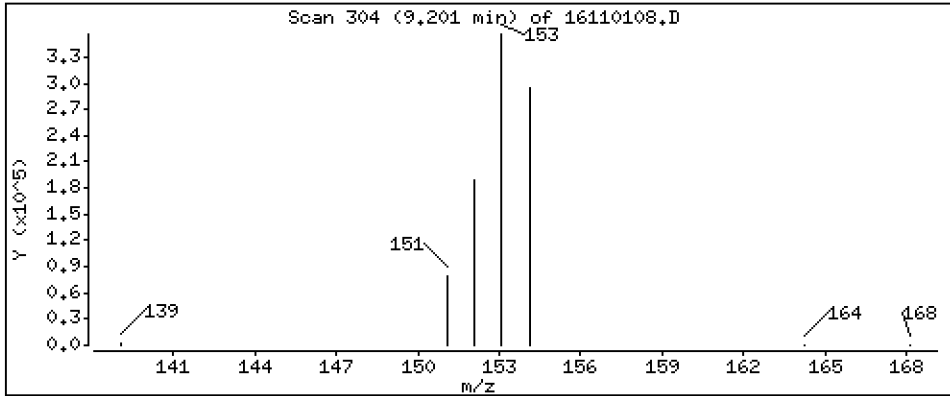
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 252 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

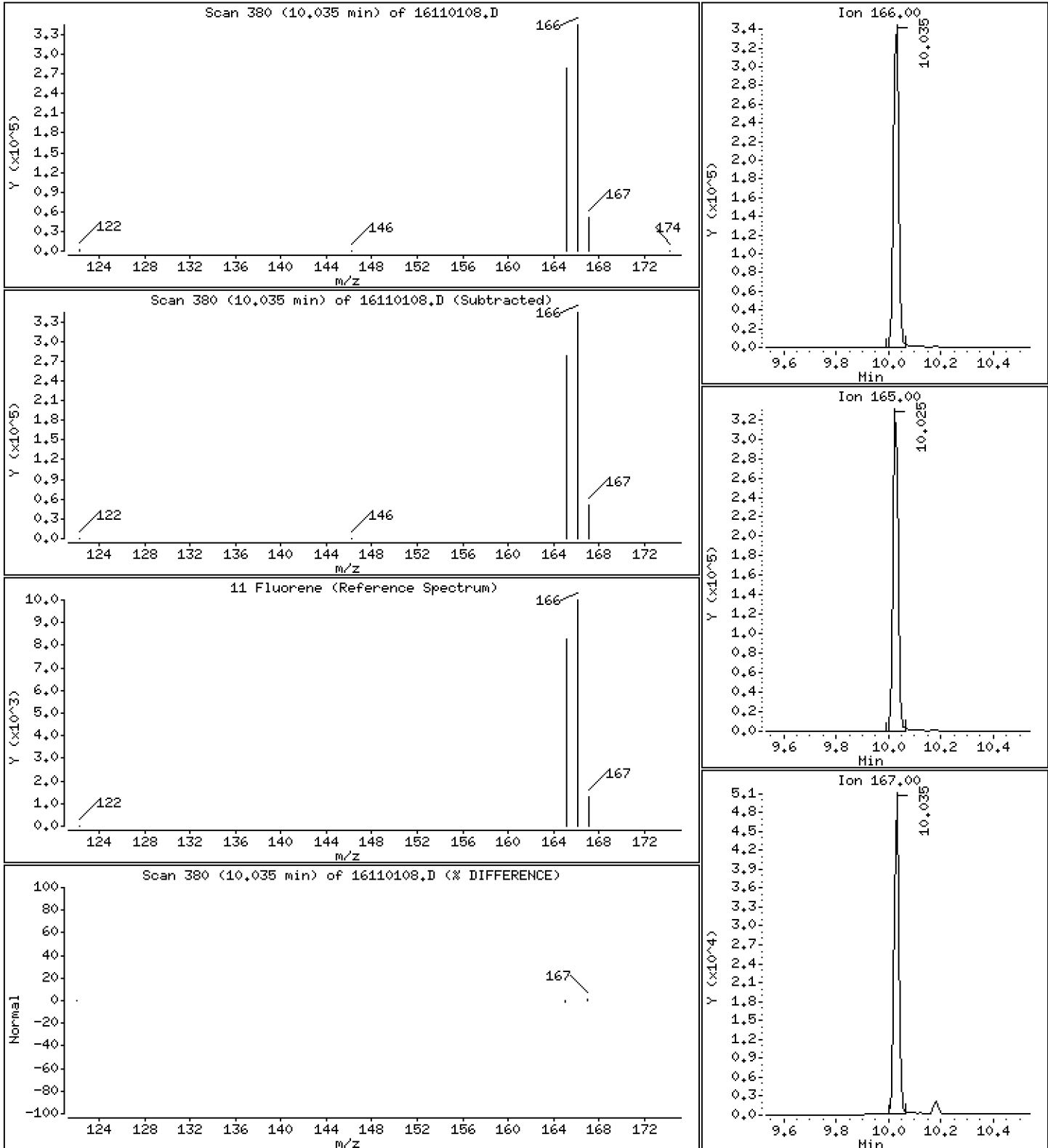
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 227 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

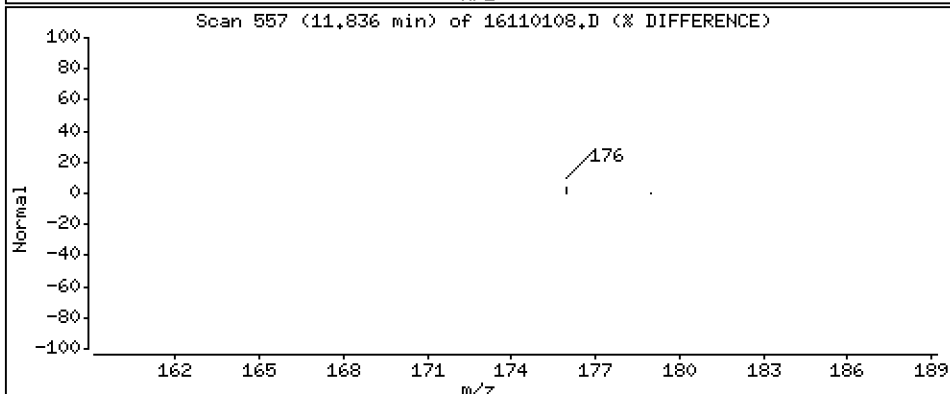
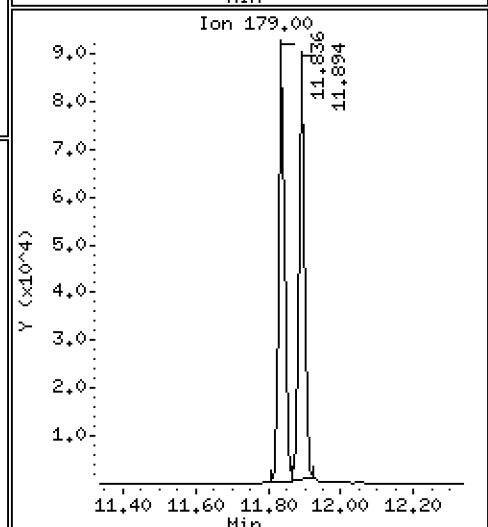
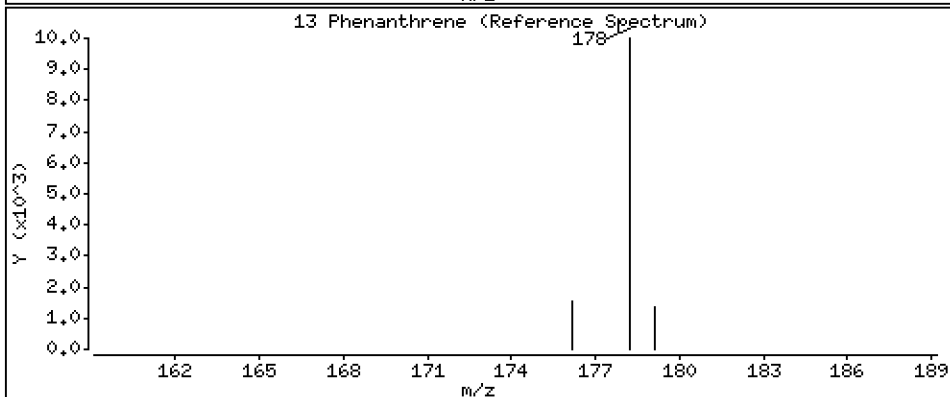
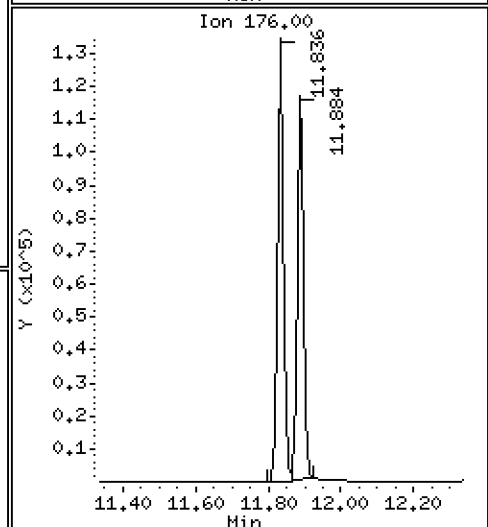
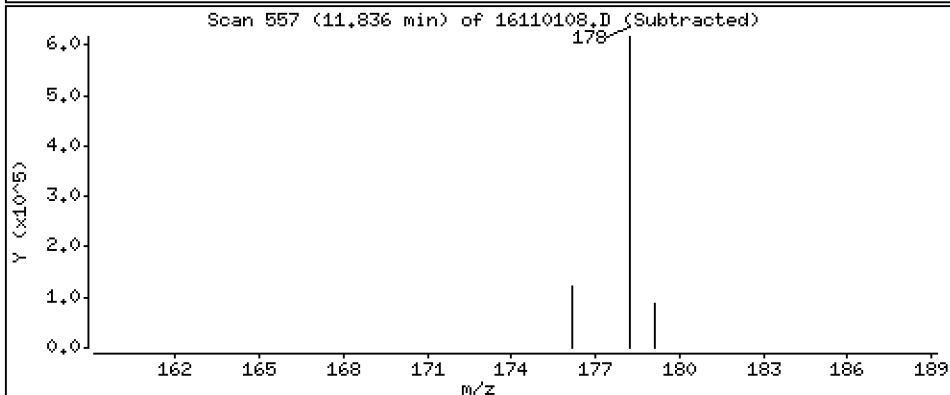
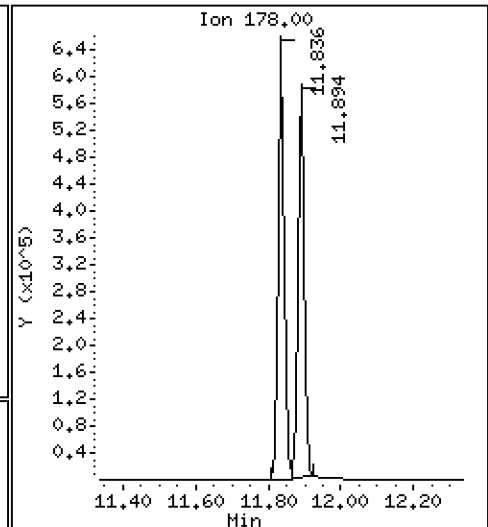
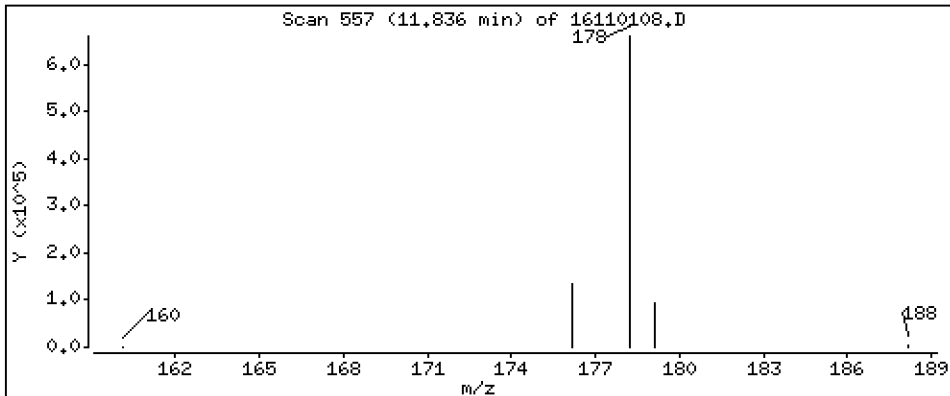
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 238 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

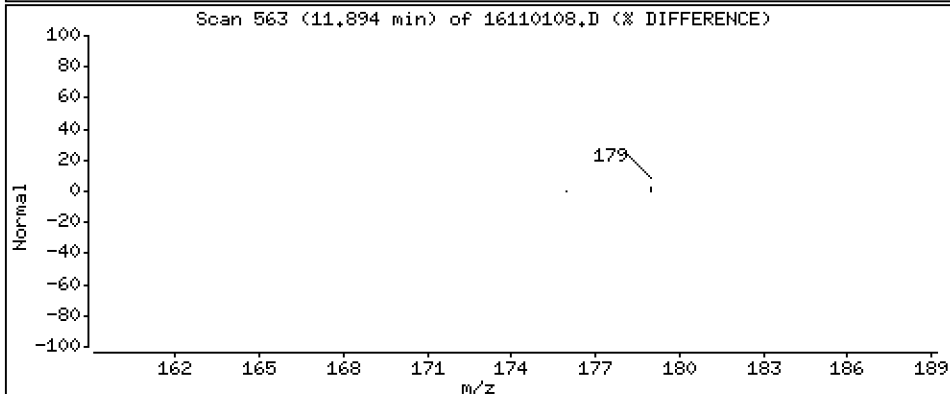
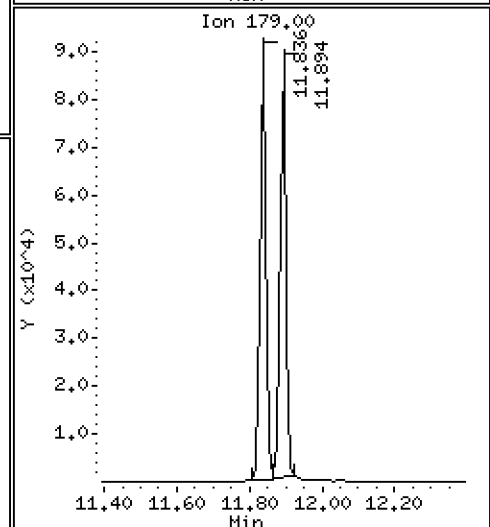
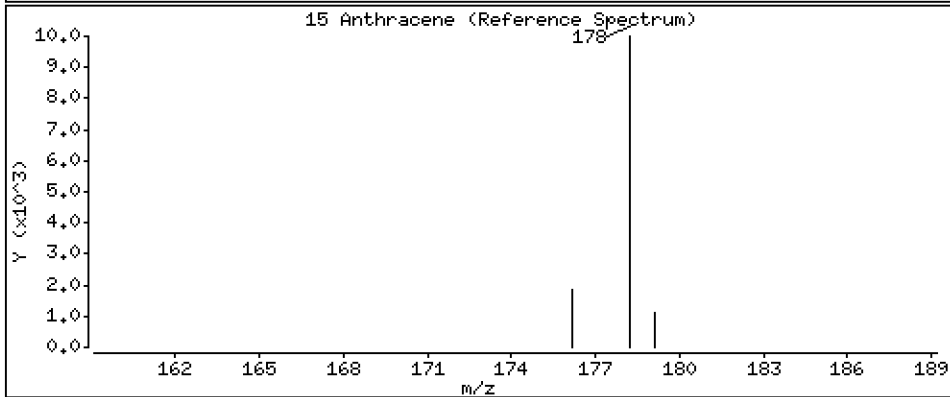
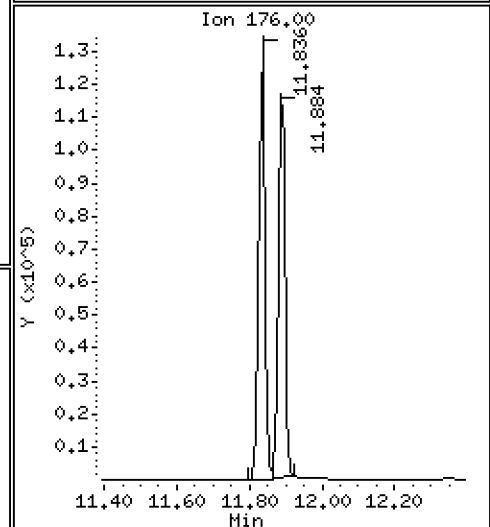
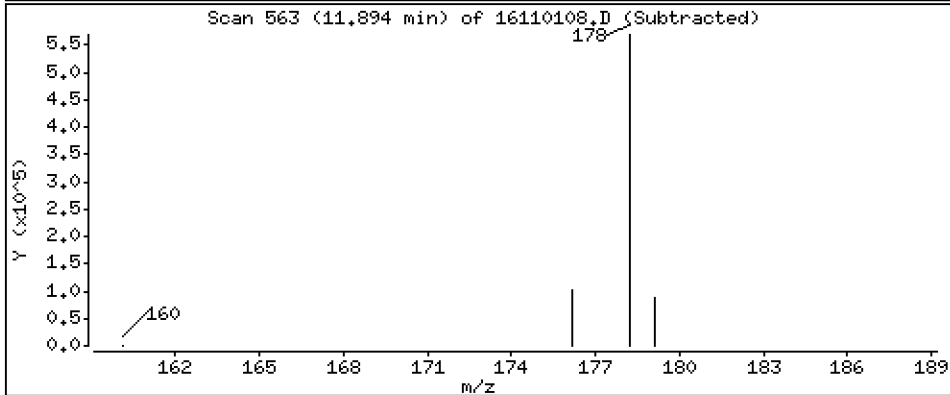
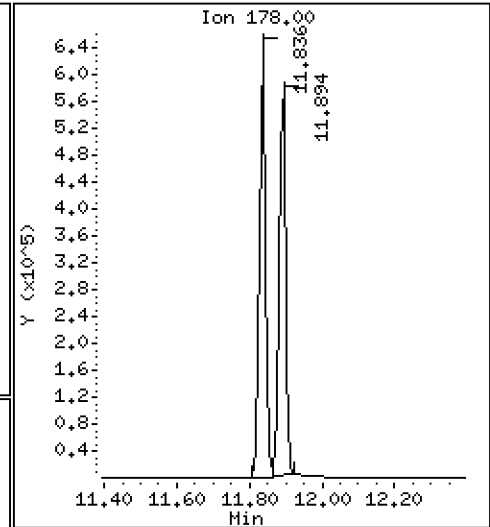
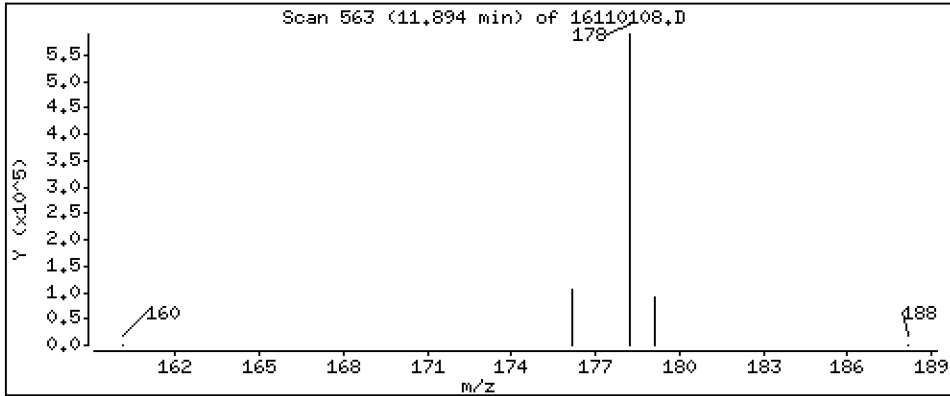
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 233 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

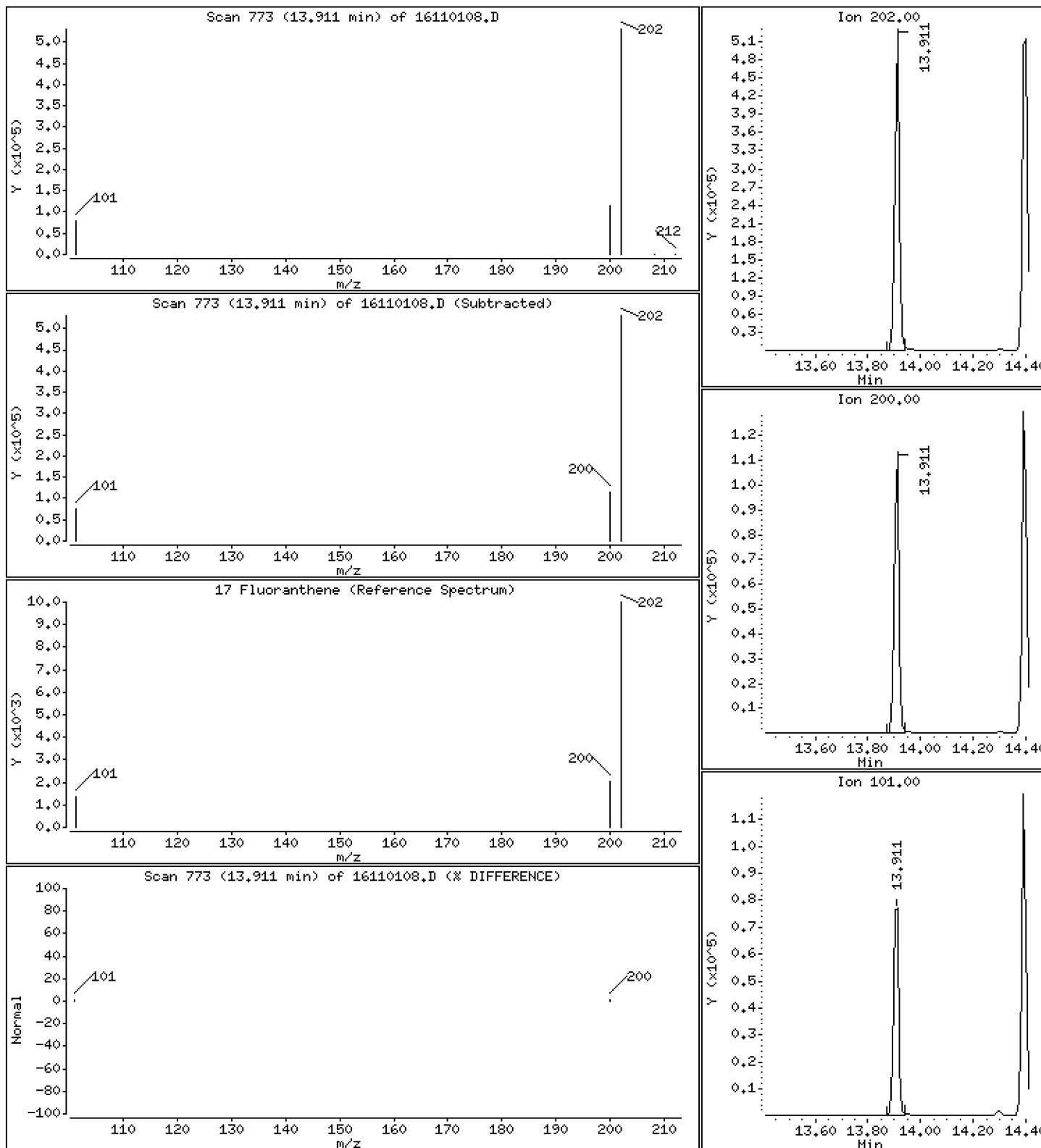
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

17 Fluoranthene

Concentration: 226 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

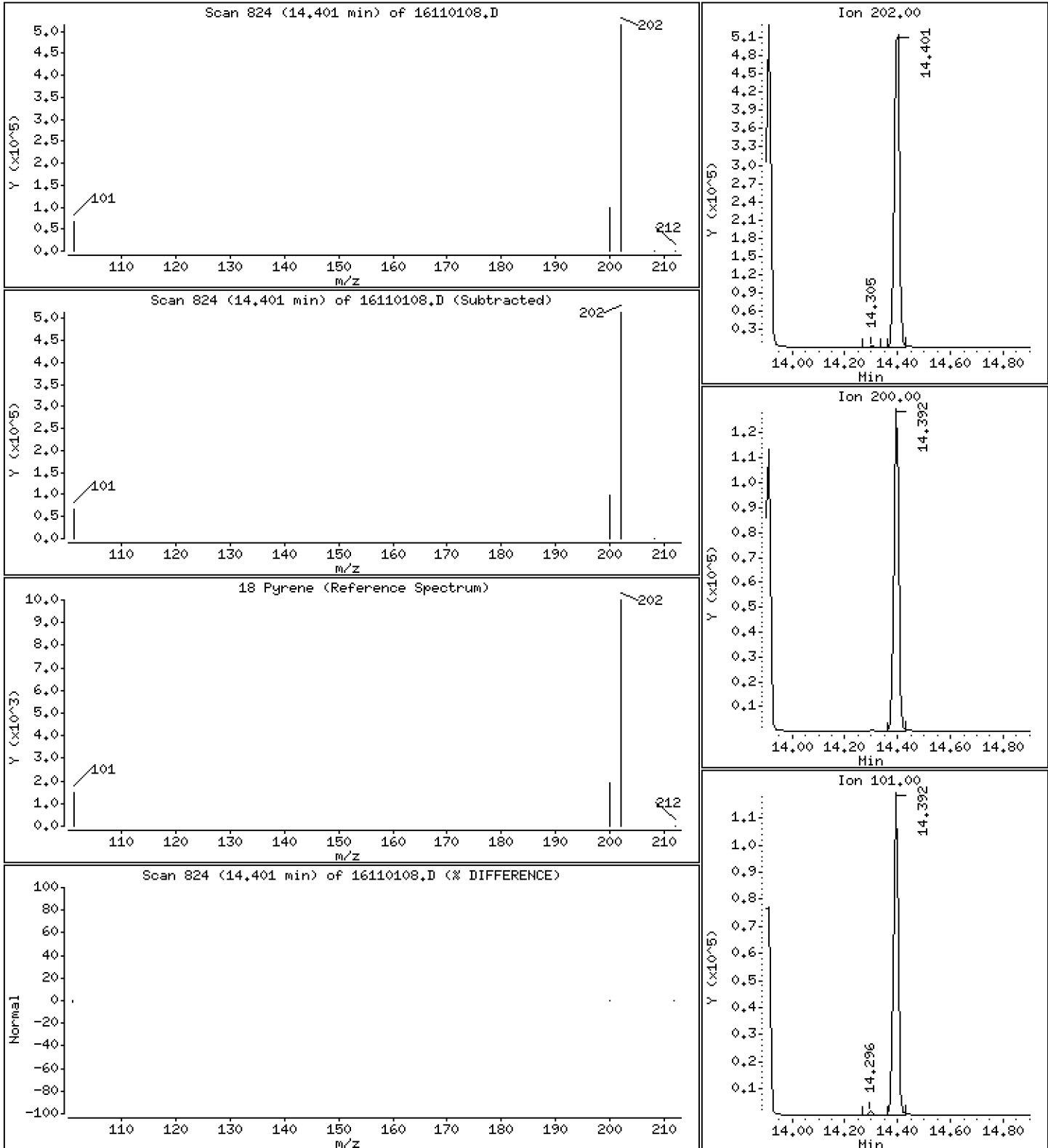
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 243 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

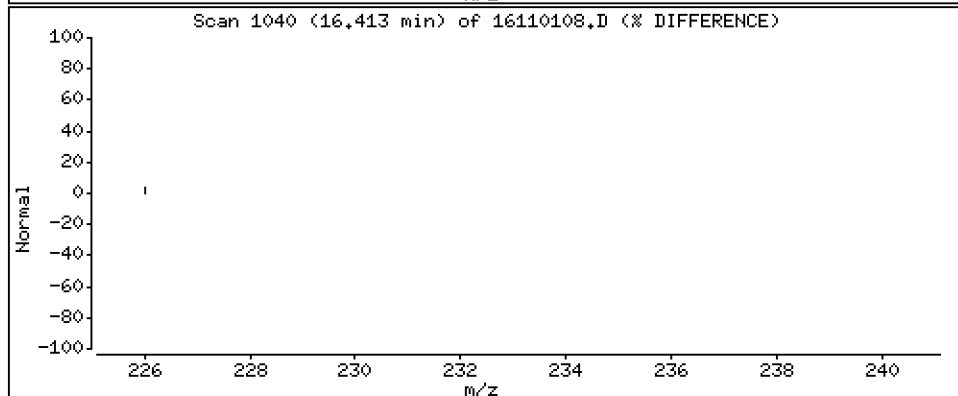
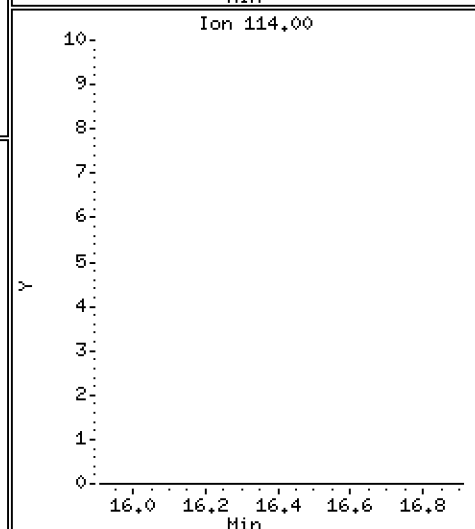
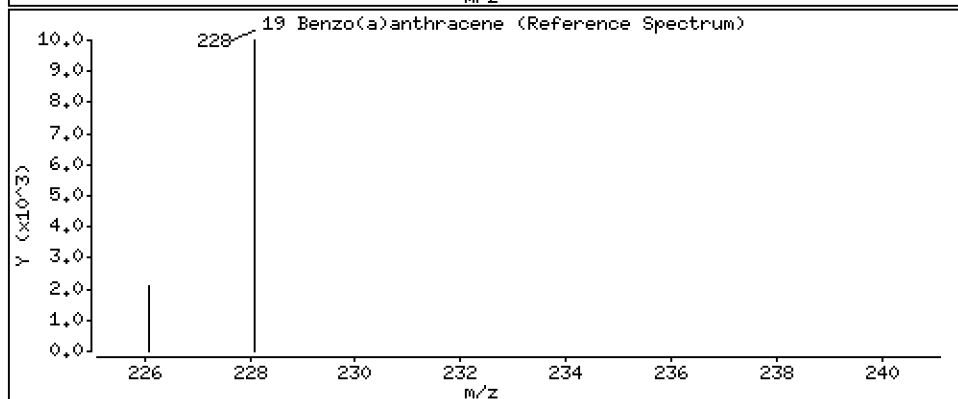
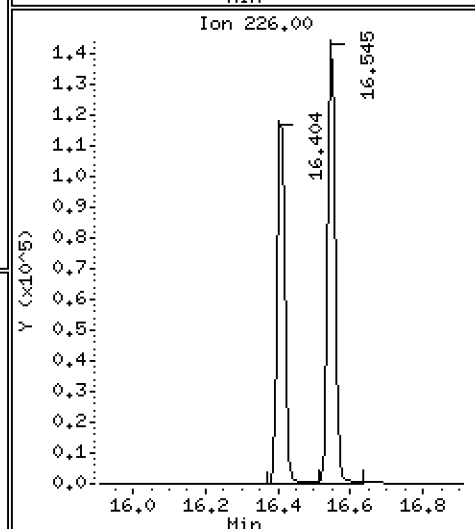
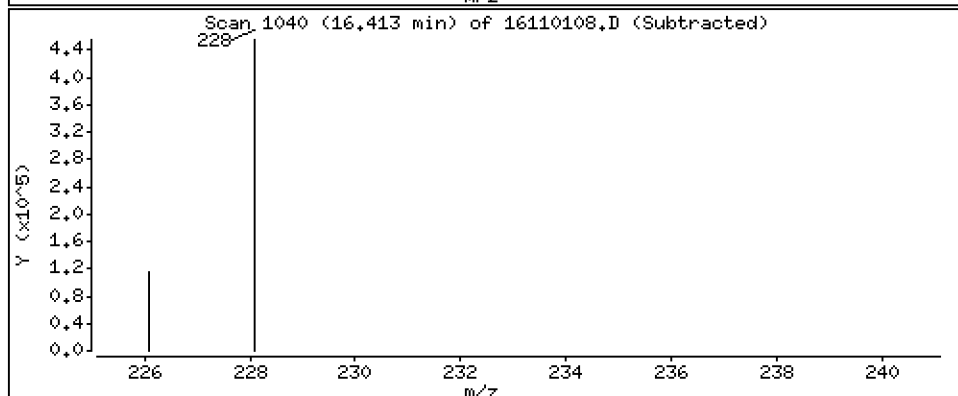
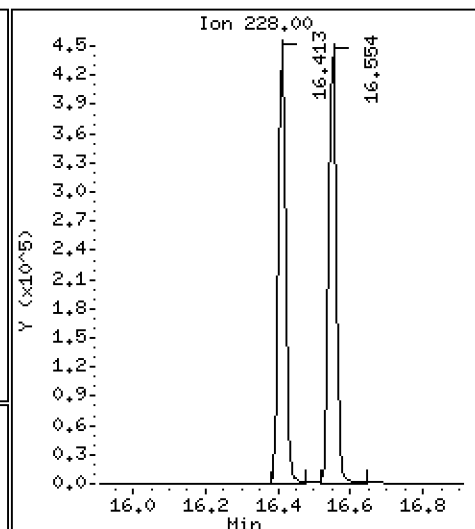
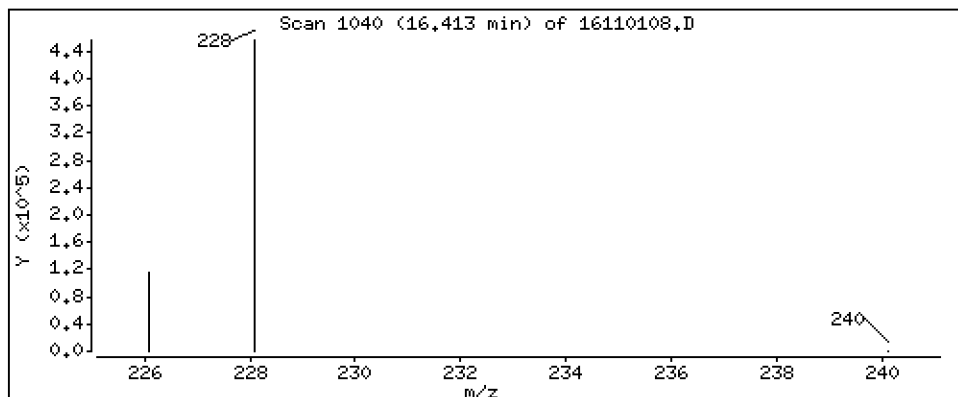
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 227 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

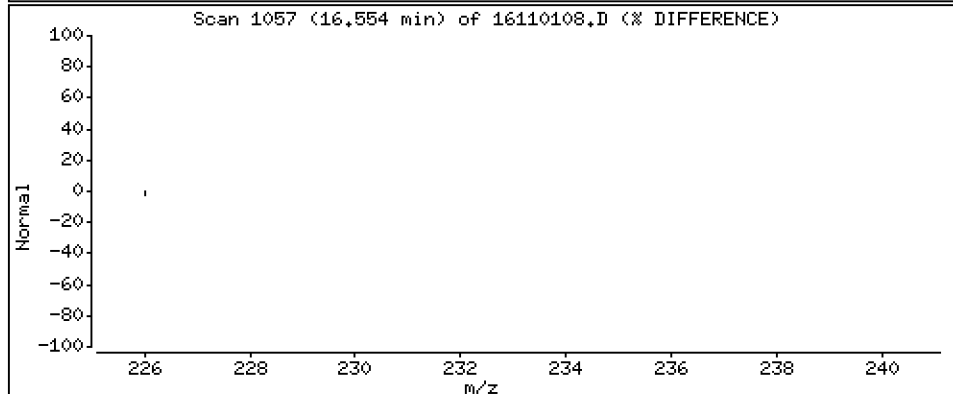
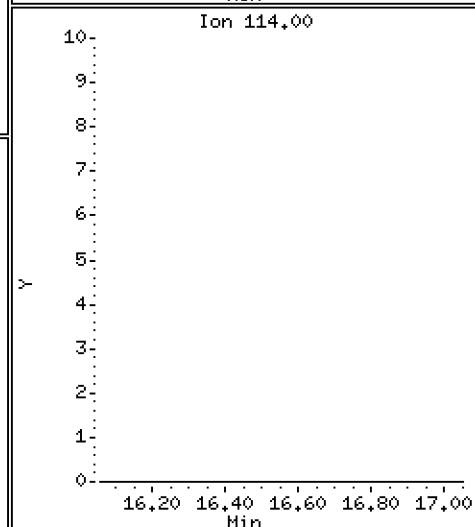
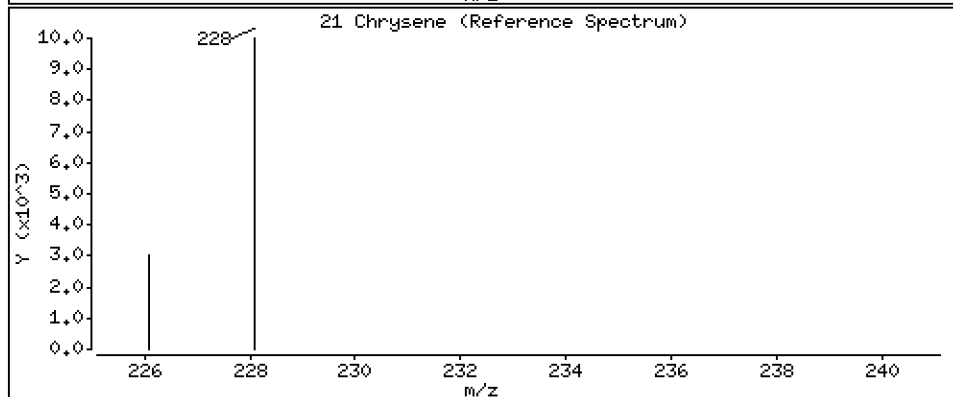
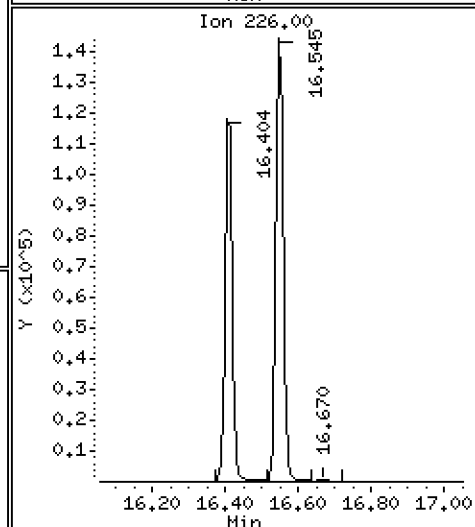
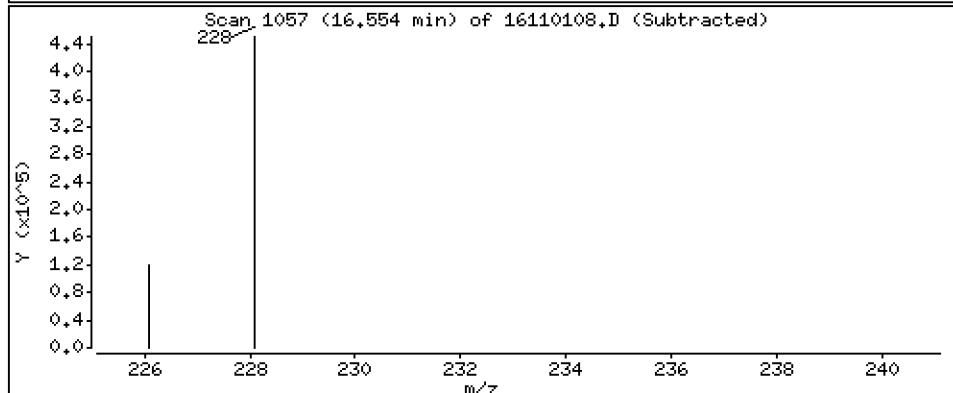
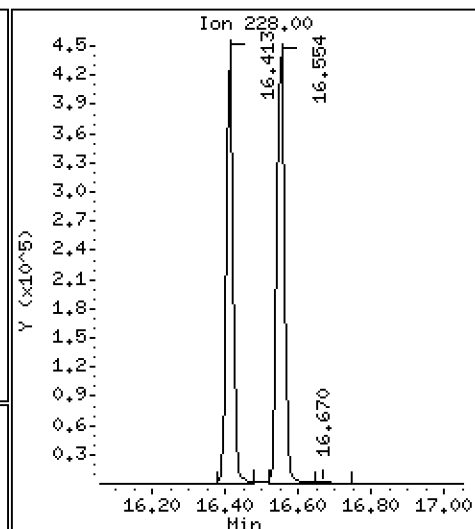
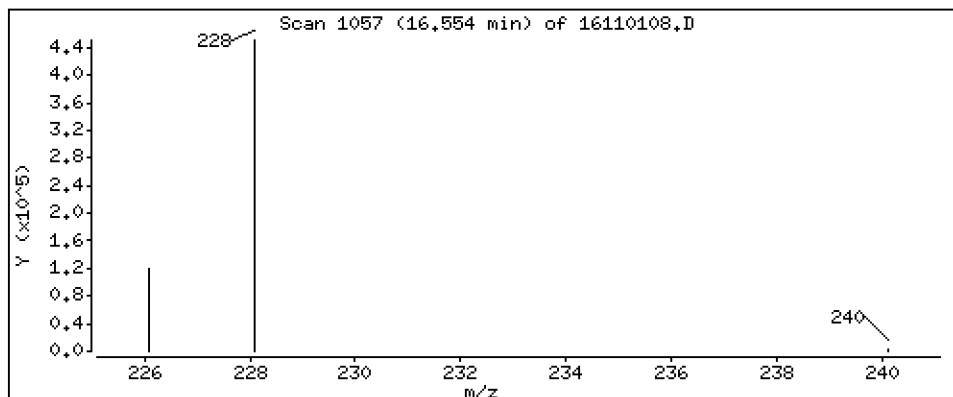
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 233 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

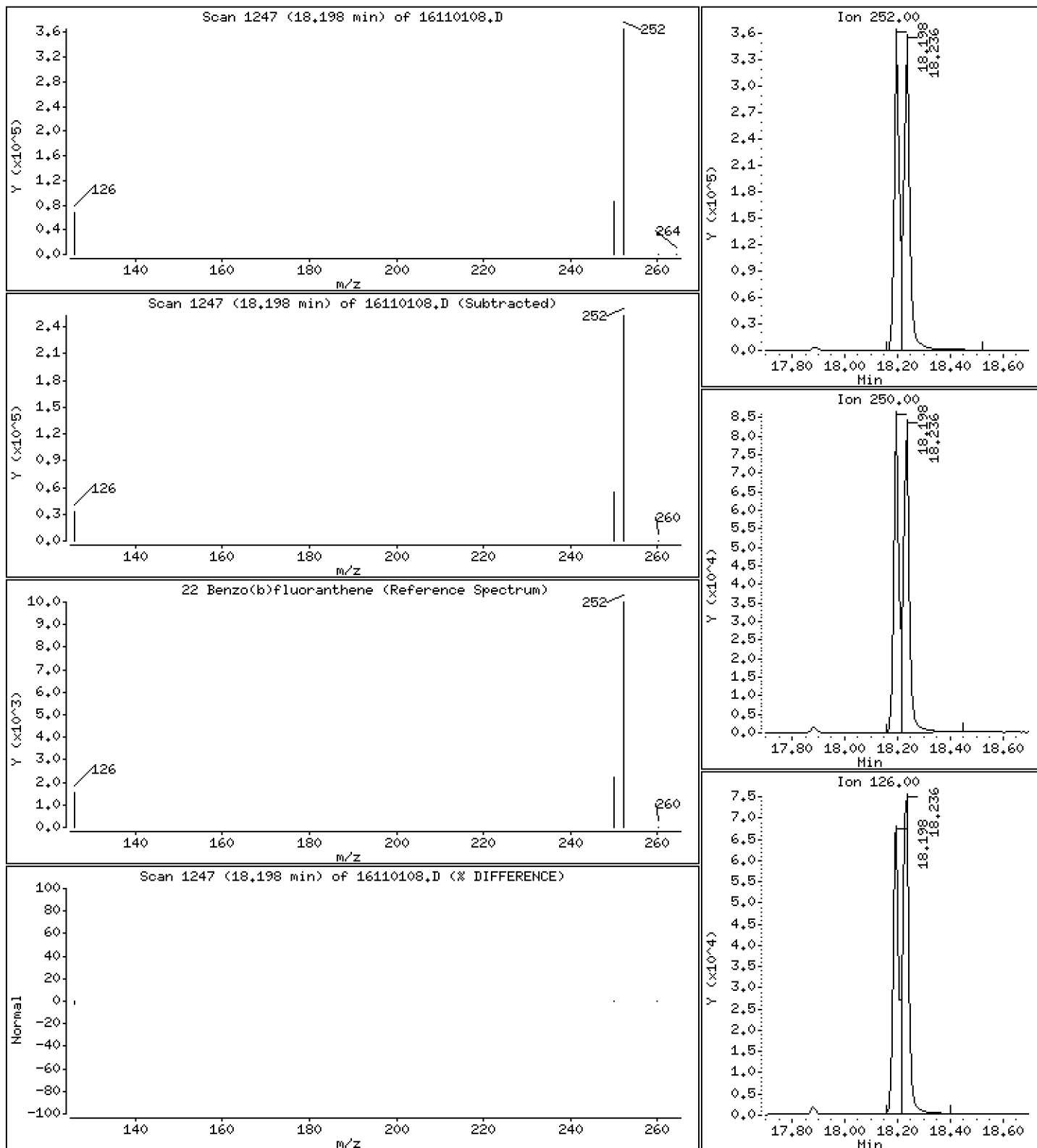
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 229 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

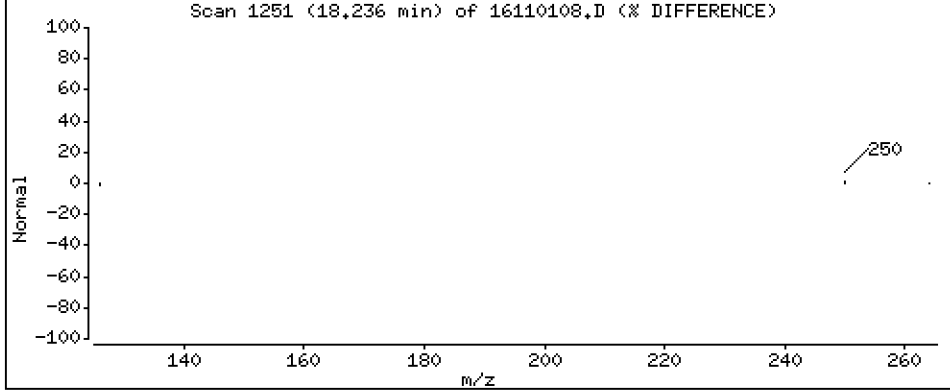
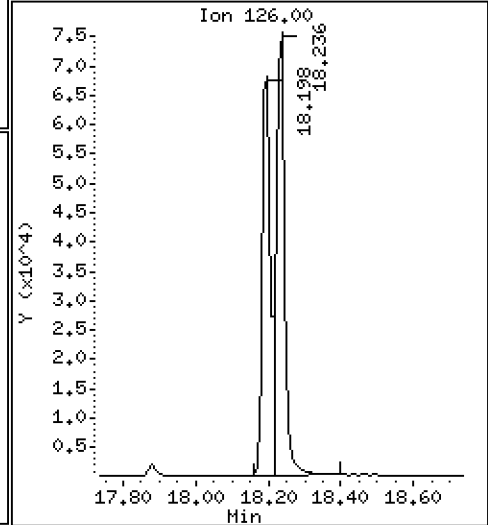
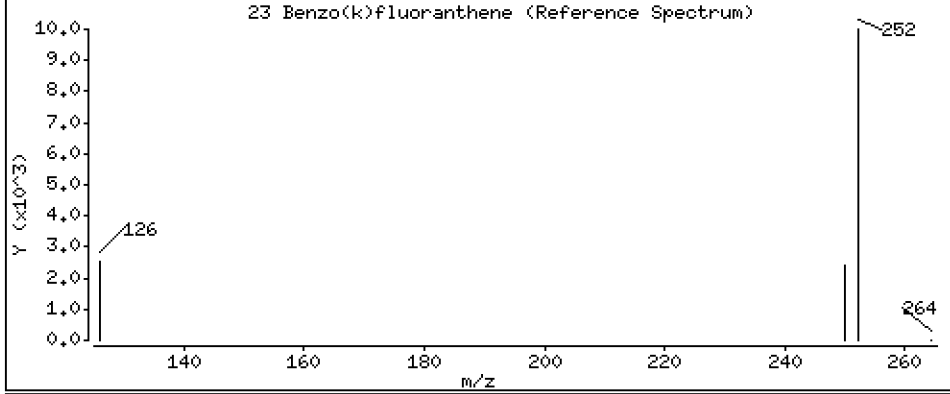
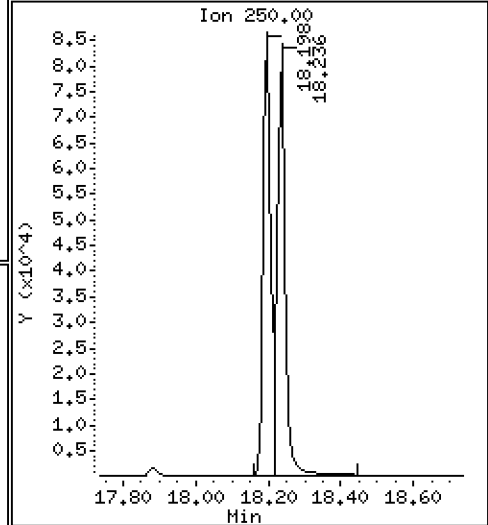
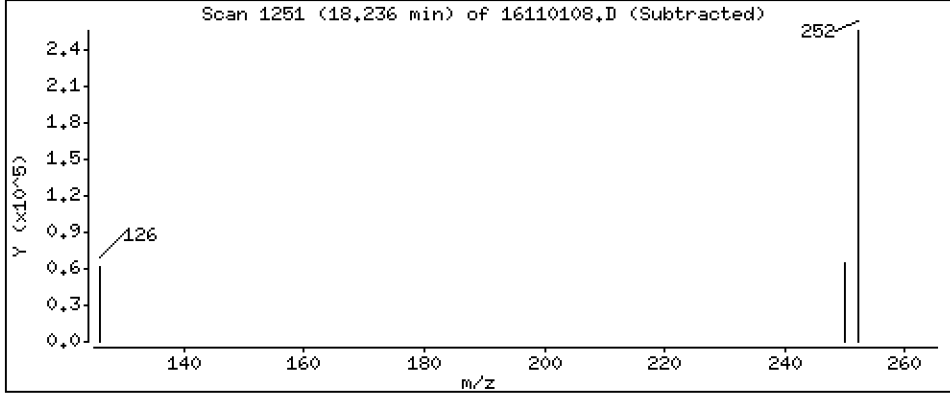
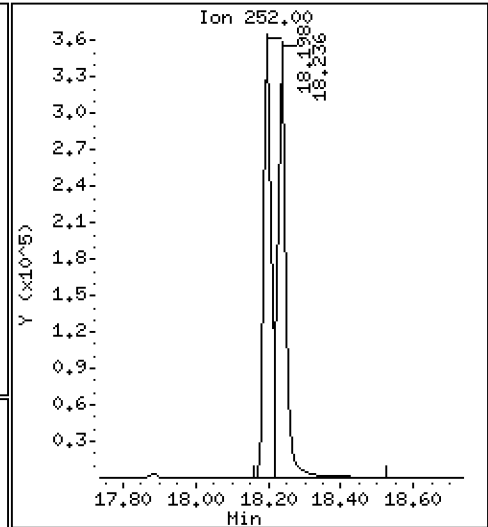
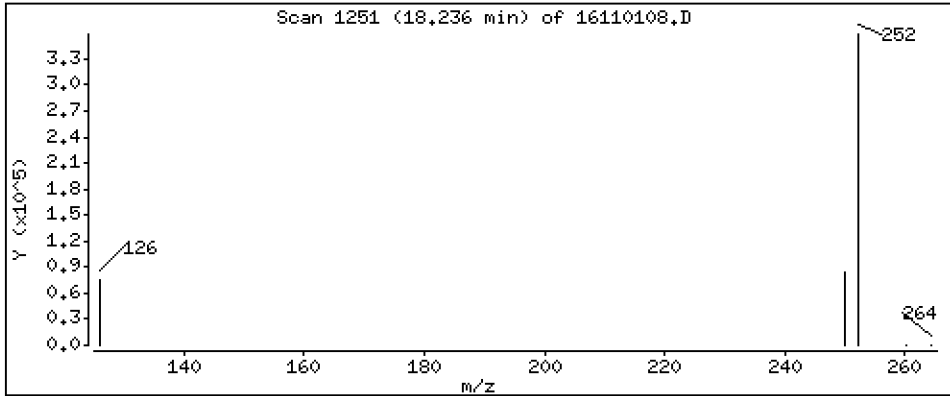
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 235 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

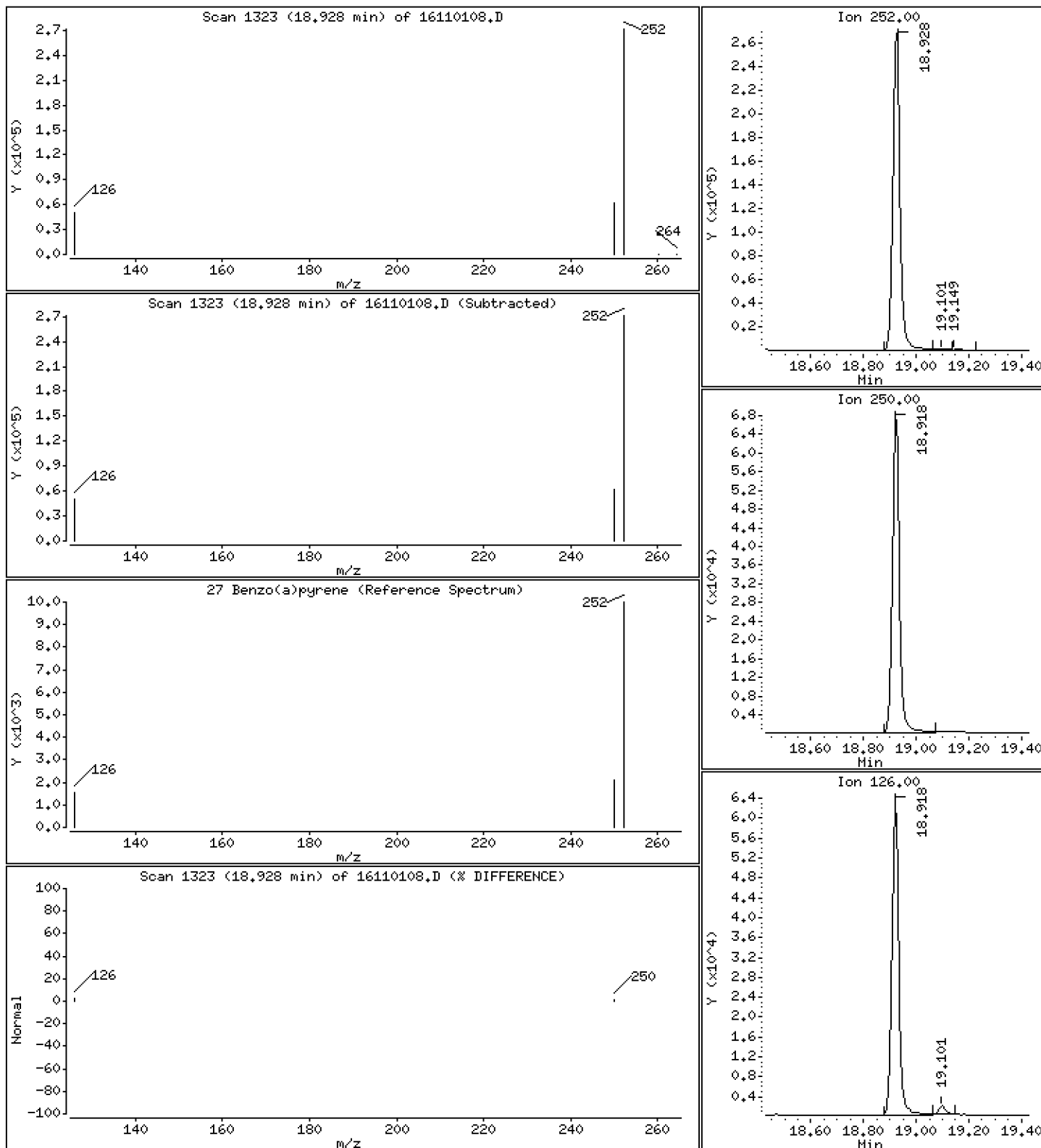
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 237 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

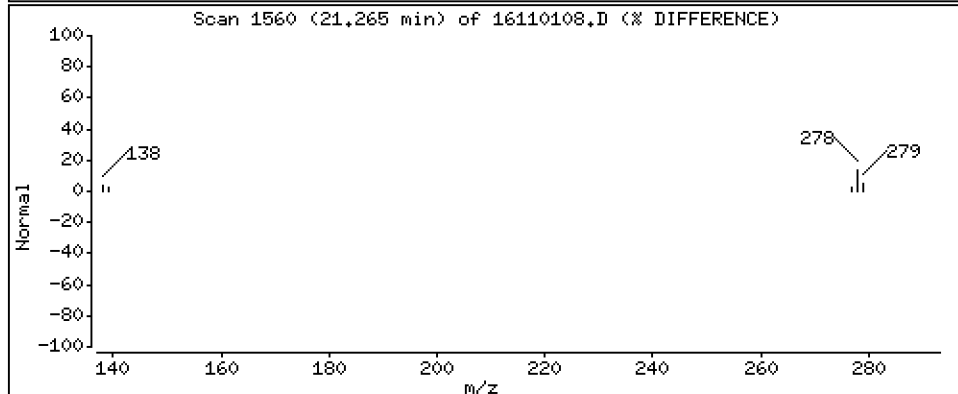
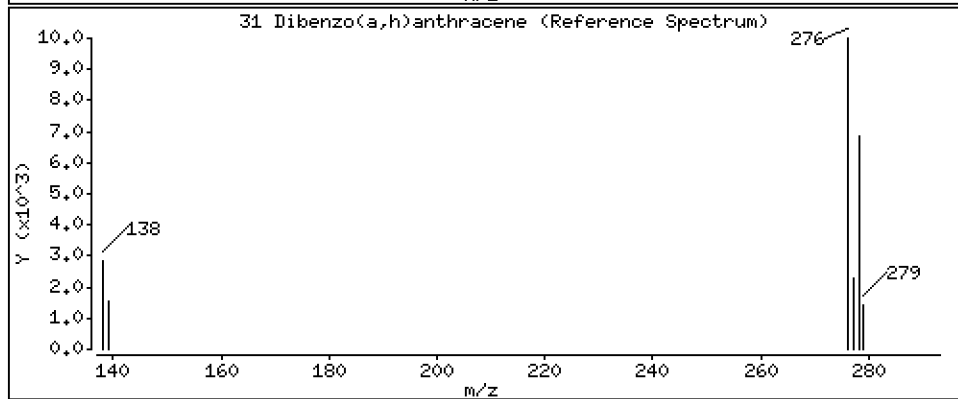
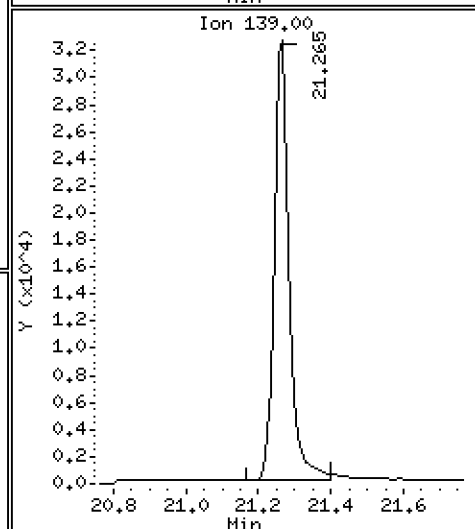
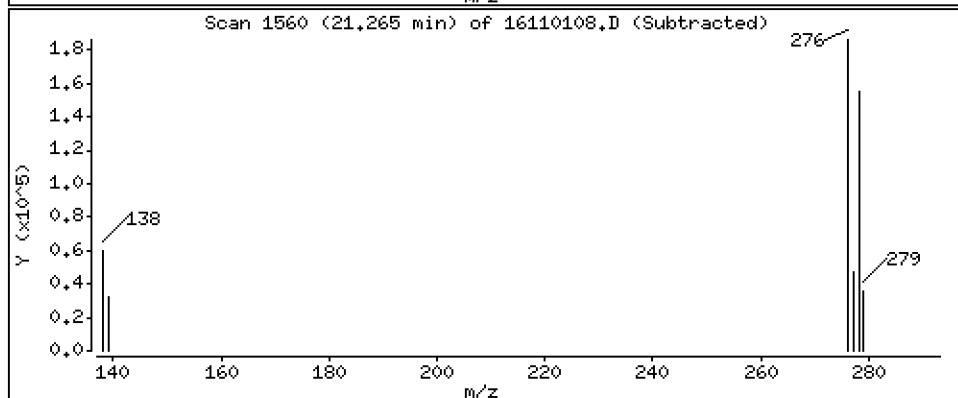
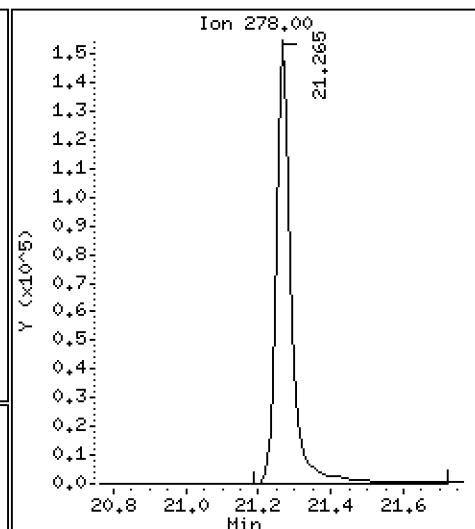
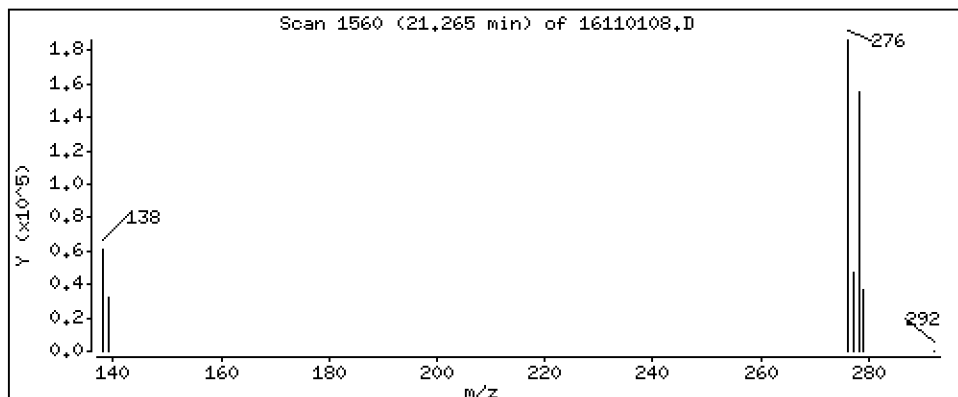
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

31 Dibenzo(a,h)anthracene

Concentration: 235 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

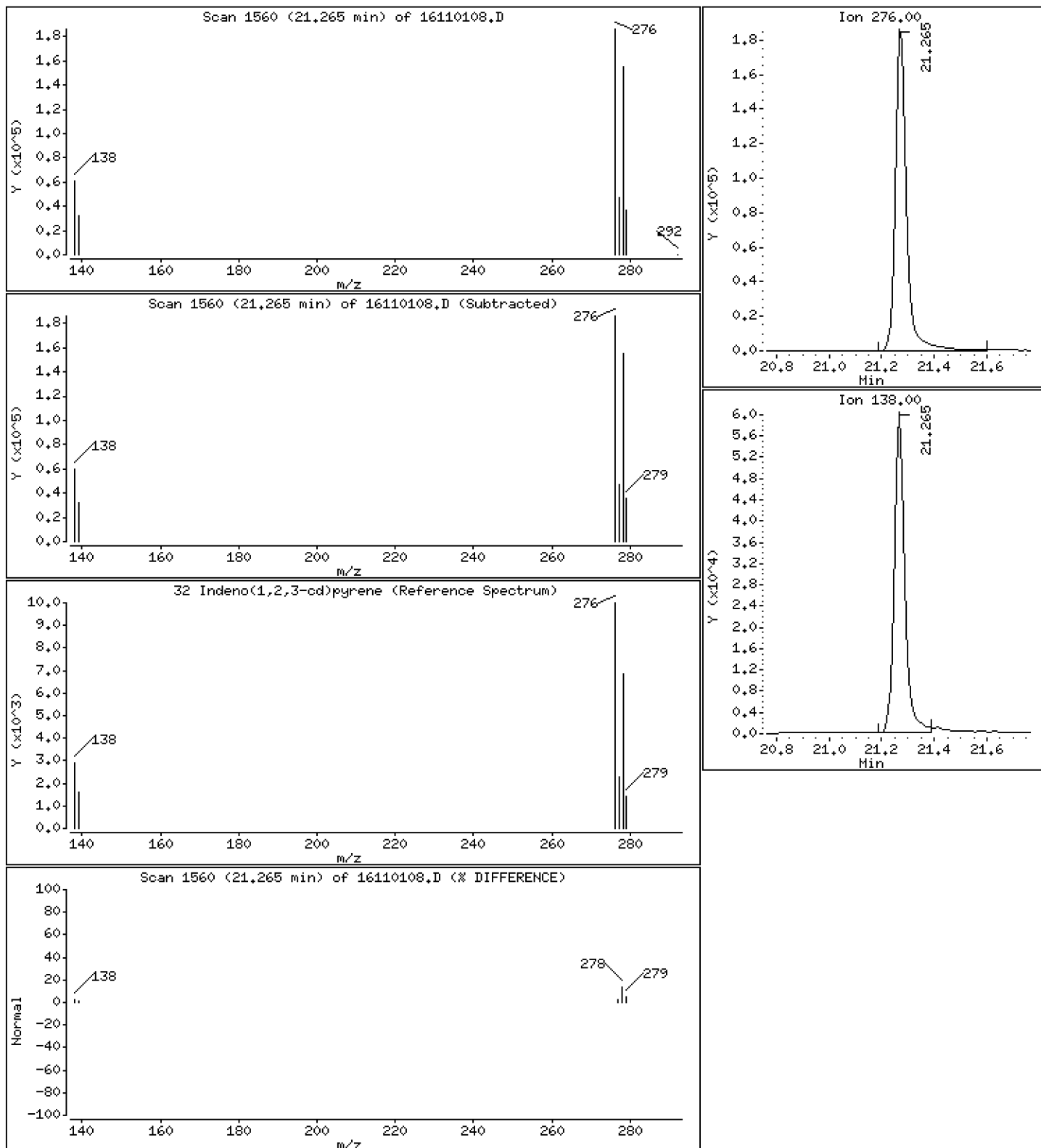
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

32 Indeno(1,2,3-cd)pyrene

Concentration: 234 ng/mL



Date : 01-NOV-2016 13:04

Client ID:

Instrument: nt11.i

Sample Info: SEK0004-SCV1

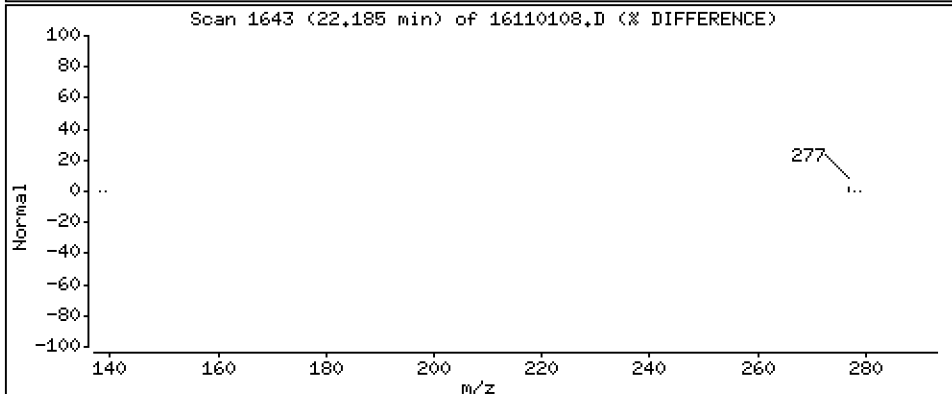
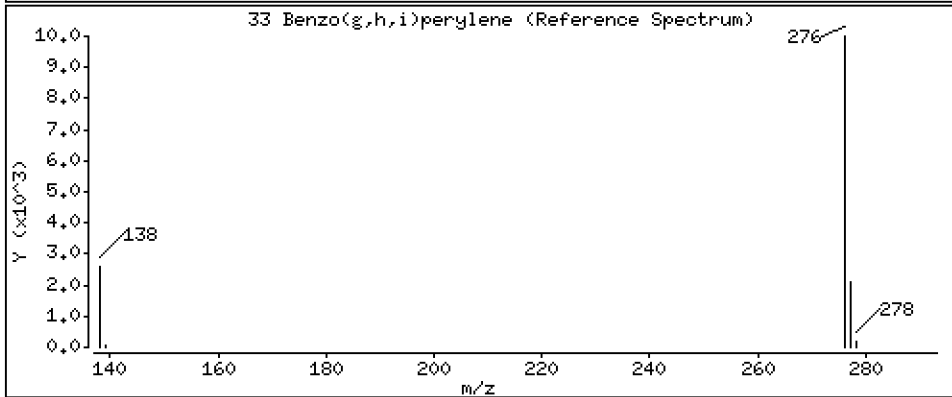
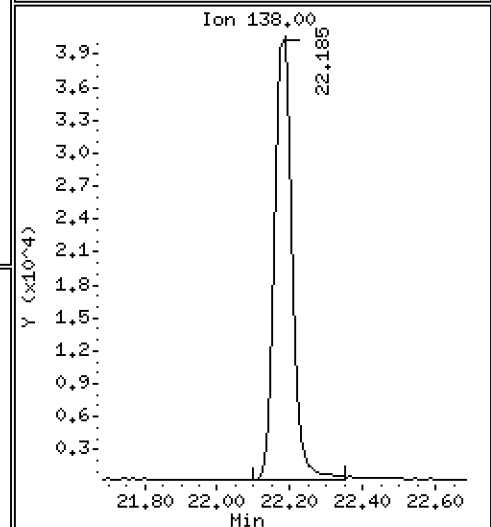
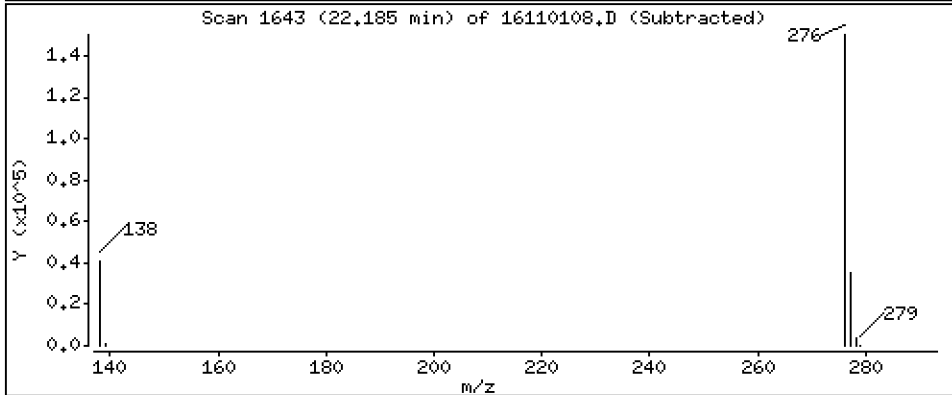
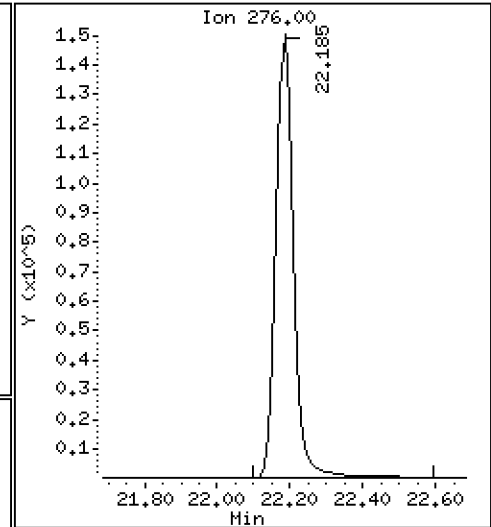
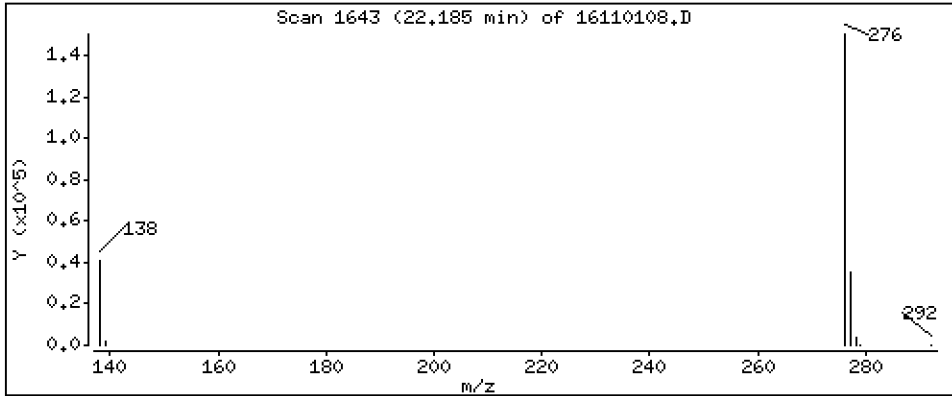
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 232 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161101.b\16110108.D
Lab Smp Id: SEK0004-SCV1
Inj Date : 01-NOV-2016 13:04
Operator : JW
Smp Info : SEK0004-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20161101.b\lowsim.m
Meth Date : 01-Nov-2016 13:10 jonathonw Quant Type: ISTD
Cal Date : 01-NOV-2016 12:34 Cal File: 16110107.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: AUTOSPECDATA02

Inst ID: nt11.i

Compound Sublist: PEMD.sub

Compounds	QUANT	SIG	CONCENTRATIONS					
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)
* 1 Naphthalene-d8	136		6.165	6.166	(1.000)	597012	200.000	
2 Naphthalene	128		6.207	6.208	(1.007)	795334	228.550	229
\$ 3 2-Methylnaphthalene-d10	152		Compound Not Detected.					
4 2-Methylnaphthalene	142		7.195	7.195	(1.167)	485886	214.879	215
5 1-Methylnaphthalene	142		7.447	7.447	(1.208)	473636	233.613	234
6 Acenaphthylene	152		8.990	8.990	(0.983)	667001	229.993	230
* 7 Acenaphthene-d10	164		9.145	9.145	(1.000)	291617	200.000	
8 Acenaphthene	153		9.200	9.200	(1.006)	480381	252.178	252
9 Dibenzofuran	168		Compound Not Detected.					
\$ 10 Fluorene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.035	10.035	(1.097)	478200	227.092	227
* 12 Phenanthrene-d10	188		11.797	11.798	(1.000)	499409	200.000	
13 Phenanthrene	178		11.836	11.836	(1.003)	807059	237.583	238
\$ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		11.893	11.894	(1.008)	765469	232.544	233
\$ 16 Fluoranthene-d10	212		Compound Not Detected.					
17 Fluoranthene	202		13.911	13.911	(1.179)	657265	226.304	226
18 Pyrene	202		14.401	14.401	(0.873)	747898	242.848	243
19 Benzo(a)anthracene	228		16.412	16.412	(0.994)	595301	227.308	227
* 20 Chrysene-d12	240		16.503	16.504	(1.000)	392161	200.000	
21 Chrysene	228		16.553	16.553	(1.003)	635792	233.169	233
22 Benzo(b)fluoranthene	252		18.197	18.198	(0.952)	531419	229.167	229
23 Benzo(k)fluoranthene	252		18.236	18.236	(0.954)	599881	234.516	235
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
\$ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		18.928	18.928	(0.990)	522116	237.384	237
* 28 Perylene-d12	264		19.110	19.101	(1.000)	458547	200.000	
29 Perylene	252		Compound Not Detected.					
\$ 30 Dibenzo(a,h)anthracene-d14	292		Compound Not Detected.					
31 Dibenzo(a,h)anthracene	278		21.265	21.265	(1.113)	456758	235.152	235
32 Indeno(1,2,3-cd)pyrene	276		21.265	21.265	(1.113)	565041	233.507	234
33 Benzo(g,h,i)perylene	276		22.184	22.185	(1.161)	488433	231.512	232

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16110108.D
 Lab Smp Id: SEK0004-SCV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161101.b\lowsim.m
 Misc Info:

Calibration Date: 01-NOV-2016
 Calibration Time: 09:31
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	597012	-2.06
7 Acenaphthene-d10	316851	158426	633702	291617	-7.96
12 Phenanthrene-d10	546133	273067	1092266	499409	-8.56
20 Chrysene-d12	417210	208605	834420	392161	-6.00
28 Perylene-d12	524443	262222	1048886	458547	-12.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.17	5.67	6.67	6.17	-0.00
7 Acenaphthene-d10	9.15	8.65	9.65	9.15	-0.00
12 Phenanthrene-d10	11.80	11.30	12.30	11.80	-0.00
20 Chrysene-d12	16.50	16.00	17.00	16.50	-0.00
28 Perylene-d12	19.10	18.60	19.60	19.11	0.05

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16110108.D

Lab ID: SEK0004-SCV1

nt11.i, 20161101.b\lowsim.m, 01-NOV-2016 13:04

RT	CO-ELUTION COMPOUNDS
21.265	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
21.265	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND

NONE				

On Column LOD for nt11.i, 20161101.b\lowsim.m, PEMD.sub = 0.0000



INITIAL CALIBRATION CHECK EPA 8270D-SIM

Laboratory: <u>Analytical Resources, Inc.</u>	SDG: <u>16H0147</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>Port Gamble Shellfish Monitoring</u>
Instrument ID: <u>NT11</u>	Calibration: <u>ZK00002</u>
Lab File ID: <u>16111002.D</u>	Calibration Date: <u>11/01/16 13:18</u>
Sequence: <u>SEK0151</u>	Injection Date: <u>11/10/16</u>
Lab Sample ID: <u>SEK0151-ICV1</u>	Injection Time: <u>11:38</u>
Sequence Name: <u>SIM PAH 250</u>	

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	237	1.1657760	1.1058160		-5.2	20
2-Methylnaphthalene	A	250.00	238	0.7575091	0.7206889		-4.8	20
Acenaphthylene	A	250.00	233	1.9889760	1.8512080		-6.8	20
Acenaphthene	A	250.00	235	1.3064590	1.2273750		-6.0	20
Fluorene	A	250.00	243	1.4441930	1.4038120		-2.8	20
Phenanthrene	A	250.00	249	1.3603890	1.3552670		-0.4	20
Anthracene	A	250.00	244	1.3182440	1.2867690		-2.4	20
Fluoranthene	A	250.00	245	1.1631140	1.1387370		-2.0	20
Pyrene	A	250.00	248	1.5706280	1.5568440		-0.8	20
Benzo(a)anthracene	A	250.00	240	1.3356320	1.2825600		-4.0	20
Chrysene	A	250.00	249	1.3906220	1.3847870		-0.4	20
Benzo(b)fluoranthene	A	250.00	268	1.0114170	1.0853200		7.2	20
Benzo(k)fluoranthene	A	250.00	237	1.1156770	1.0588810		-5.2	20
Benzo(e)pyrene	A	250.00	253	0.9952431	1.0073820		1.2	20
Benzo(a)pyrene	A	250.00	248	0.9593173	0.9500087		-0.8	20
Indeno(1,2,3-cd)pyrene	A	250.00	244	1.0554230	1.0282130		-2.4	20
Dibenzo(a,h)anthracene	A	250.00	245	0.8471938	0.8302038		-2.0	20
Benzo(g,h,i)perylene	A	250.00	239	0.9201908	0.8796035		-4.4	20
Perylene	A	250.00	245	0.9940602	0.9728220		-2.0	20
2-Methylnaphthalene-d10	A	250.00	236	0.6039149	0.5711895		-5.6	20
Dibenzo[a,h]anthracene-d14	A	250.00	241	0.6194622	0.5979271		-3.6	20
Fluoranthene-d10	A	250.00	233	0.9473863	0.8822190		-6.8	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20161110.16\16111002.D

Date : 10-NOV-2016 11:38

Client ID:

Sample Info: SEK0151-ICW1

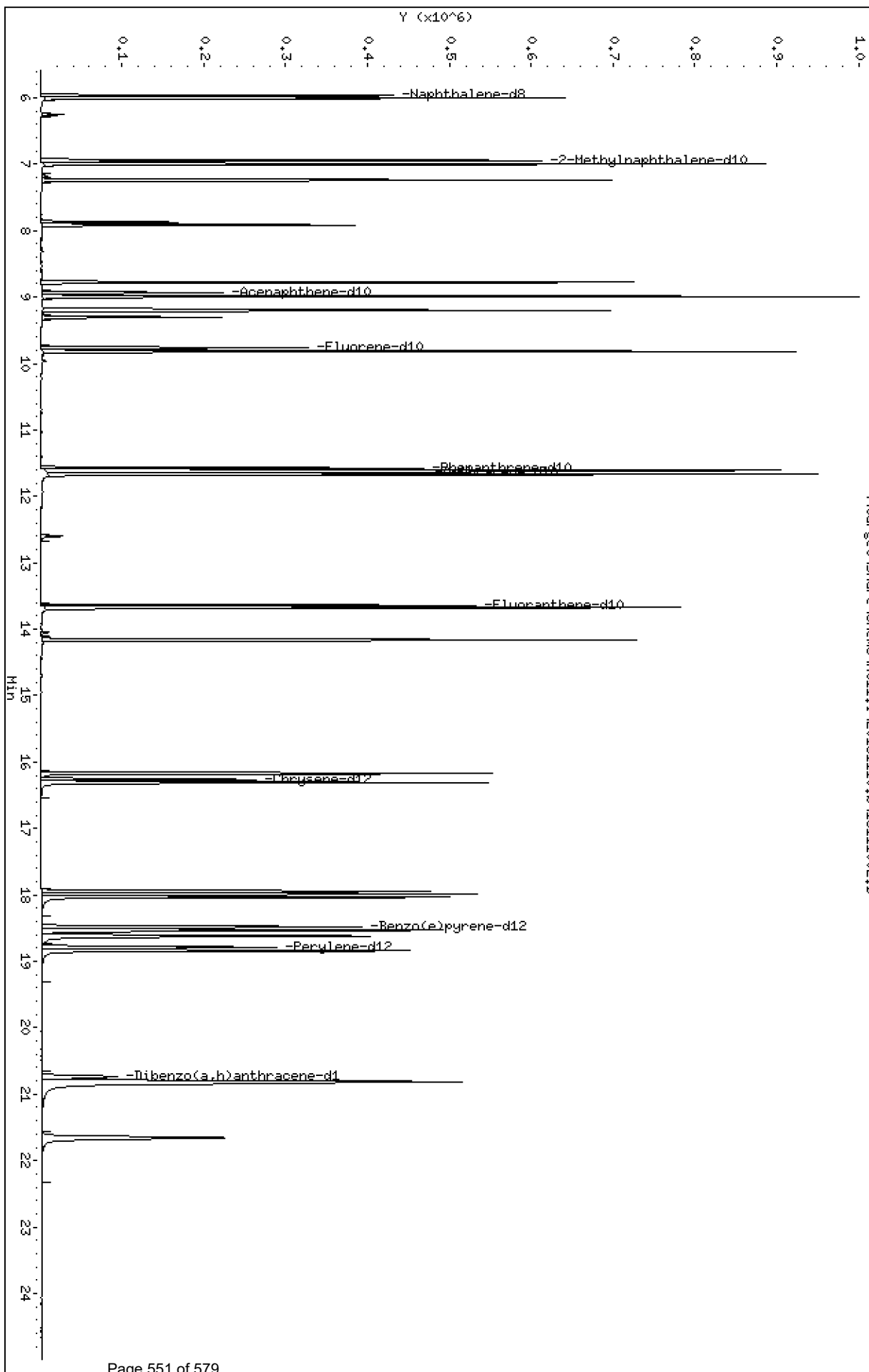
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20161110.16\16111002.D



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20161110.b\16111002.D

Lab Smp Id: SEK0151-ICV1

Inj Date : 10-NOV-2016 11:38

MS Autotune Date: 15-JAN-2015 15:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEK0151-ICV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20161110.b\lowsim.m

Meth Date : 10-Nov-2016 13:00 nt11.i

Quant Type: ISTD

Cal Date : 01-NOV-2016 12:34

Cal File: 16110107.D

Als bottle: 3

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
							CAL-AMT (ng/mL)	ON-COL (ng/mL)
* 1 Naphthalene-d8	136		5.965	5.965	(1.000)	632880	200.000	
2 Naphthalene	128		6.007	6.007	(1.007)	874811	250.000	237
§ 3 2-Methylnaphthalene-d10	152		6.942	6.942	(1.164)	451868	250.000	236
4 2-Methylnaphthalene	142		6.995	6.995	(1.173)	570137	250.000	238
5 1-Methylnaphthalene	142		7.236	7.236	(1.213)	504157	250.000	235
6 Acenaphthylene	152		8.773	8.773	(0.983)	705965	250.000	233
* 7 Acenaphthene-d10	164		8.928	8.928	(1.000)	305083	200.000	
8 Acenaphthene	153		8.995	8.995	(1.007)	468064	250.000	235
9 Dibenzofuran	168		9.194	9.194	(1.030)	694517	250.000	253
§ 10 Fluorene-d10	174		9.764	9.764	(1.094)	375120	250.000	236
11 Fluorene	166		9.817	9.817	(1.100)	535349	250.000	243
* 12 Phenanthrene-d10	188		11.571	11.571	(1.000)	515735	200.000	
13 Phenanthrene	178		11.609	11.609	(1.003)	873698	250.000	249
§ 14 Anthracene-d10	188		11.638	11.638	(1.006)	608658	250.000	235
15 Anthracene	178		11.667	11.667	(1.008)	829540	250.000	244
§ 16 Fluoranthene-d10	212		13.646	13.646	(1.179)	568739	250.000	233
17 Fluoranthene	202		13.675	13.675	(1.182)	734108	250.000	245
18 Pyrene	202		14.165	14.165	(0.871)	723989	250.000	248
19 Benzo(a)anthracene	228		16.173	16.173	(0.994)	596437	250.000	240
* 20 Chrysene-d12	240		16.264	16.264	(1.000)	372029	200.000	
21 Chrysene	228		16.314	16.314	(1.003)	643976	250.000	249
22 Benzo(b)fluoranthene	252		17.952	17.952	(0.956)	586538	250.000	268
23 Benzo(k)fluoranthene	252		17.980	17.980	(0.957)	572250	250.000	237
24 Benzo(j)fluoranthene	252		18.028	18.028	(0.960)	571199	250.000	268
§ 25 Benzo(e)pyrene-d12	264		18.480	18.480	(0.984)	534788	250.000	249
26 Benzo(e)pyrene	252		18.528	18.528	(0.986)	544418	250.000	253
27 Benzo(a)pyrene	252		18.624	18.624	(0.991)	513412	250.000	248
* 28 Perylene-d12	264		18.788	18.788	(1.000)	432343	200.000	
29 Perylene	252		18.836	18.836	(1.003)	525741	250.000	245
§ 30 Dibenzo(a,h)anthracene-d14	292		20.739	20.739	(1.104)	323137	250.000	241
31 Dibenzo(a,h)anthracene	278		20.816	20.816	(1.108)	448666	250.000	245
32 Indeno(1,2,3-cd)pyrene	276		20.816	20.816	(1.108)	555676	250.000	244
33 Benzo(g,h,i)perylene	276		21.658	21.658	(1.153)	475363	250.000	239

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16111002.D
 Lab Smp Id: SEK0151-ICV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20161110.b\lowsim.m
 Misc Info:

Calibration Date: 10-NOV-2016
 Calibration Time: 11:38
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	609556	304778	1219112	632880	3.83
7 Acenaphthene-d10	316851	158426	633702	305083	-3.71
12 Phenanthrene-d10	546133	273067	1092266	515735	-5.57
20 Chrysene-d12	417210	208605	834420	372029	-10.83
28 Perylene-d12	524443	262222	1048886	432343	-17.56

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	5.97	5.47	6.47	5.97	0.00
7 Acenaphthene-d10	8.93	8.43	9.43	8.93	0.00
12 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
20 Chrysene-d12	16.26	15.76	16.76	16.26	0.00
28 Perylene-d12	18.79	18.29	19.29	18.79	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16111002.D

Lab ID: SEK0151-ICV1

nt11.i, 20161110.b\lowsim.m, 10-NOV-2016 11:38

RT	CO-ELUTION COMPOUNDS
20.817	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.817	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Quant Method: ICAL

On Column LOD for nt11.i, 20161110.b\lowsim.m, PEMD.sub = 0.0000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161110.b

Instrument: nt11.i Date: 10-NOV-2016 Method: 20161110.b\lowsim.m

INITIAL CAL: 01-NOV-2016

Compound	%RSD or R ²

NO Q-FLAGS	

ICV CAL: 16111002.D 10-NOV-2016 11:38

Compound	%D

NO Q-FLAGS	



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Sequence: SEK0004

Instrument: NT11

Calibration: ZK00002

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SEK0004-TUN1	16110101.D	Tissue	11/01/16 09:16
Cal Standard	SEK0004-CAL4	16110102.D	Tissue	11/01/16 09:31
Cal Standard	SEK0004-CAL3	16110103.D	Tissue	11/01/16 10:34
Cal Standard	SEK0004-CAL1	16110104.D	Tissue	11/01/16 11:04
Cal Standard	SEK0004-CAL5	16110105.D	Tissue	11/01/16 11:34
Cal Standard	SEK0004-CAL2	16110106.D	Tissue	11/01/16 12:04
Cal Standard	SEK0004-CAL6	16110107.D	Tissue	11/01/16 12:34
Secondary Cal Check	SEK0004-SCV1	16110108.D	Tissue	11/01/16 13:04
ZZZZZ	CEJ0249-CBL1	16110109.D	Solid	11/01/16 13:35
GPC Check	CEJ0249-GPC1	16110110.D	Solid	11/01/16 14:05
ZZZZZ	16J0334-01RE1	16110111.D	Solid	11/01/16 14:35
Calibration Check	SEK0004-CCV1	16110112.D	Tissue	11/01/16 15:05



ANALYSIS SEQUENCE

SEK0004

Instrument: NT11 Element Column ID: D005437
 Calibration ID: ZK00002 Tune File: 160805.U
 EPC Voltage: 2224

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEK0004-TUN1	Tune 10	QC		1	E000099		
SEK0004-CAL4	SIMPNA 250 ppb	QC		2	E004262	E002870	
SEK0004-CAL3	SIMPNA 100 ppb	QC		3	E004261	E002870	
SEK0004-CAL1	SIMPNA 10 ppb	QC		4	E004259	E002870	
SEK0004-CAL5	SIMPNA 500 ppb	QC		5	E004263	E002870	
SEK0004-CAL2	SIMPNA 50 ppb	QC		6	E004260	E002870	
SEK0004-CAL6	SIMPNA 1000 ppb	QC		7	E004264	E002870	
SEK0004-SCV1	SIMPNA SCV	QC		8	D004766	E002870	
CEJ0249-CBL1	GPC3-102315-LLSimPNA BLK	QC		9		E002870	
CEJ0249-GPC1	GPC3-102315-LLSimPNA Ver	QC		10	E005911	E002870	
16J0334-01RE1	201610131130SS	SIM PAH Low (0.01 ug/L - 0.	A 01	11		E002870	Added 11/1/2016 by JLW
SEK0004-CCV1	SIM PAH 250	QC		12	E004262	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161101.b

Time	Filename	LabID	ClientID	DF														
1	916	16110101.D	SEK0004-TUN1	1	NO	ISTDS	FOUND											
2	931	16110102.D	SEK0004-CAL4	1	6.17	609556		9.15	316851		11.80	546133		16.50	417210		19.10	524443
3	1034	16110103.D	SEK0004-CAL3	1	6.17	605453		9.15	309736		11.80	547216		16.50	410327		19.11	510211
4	1104	16110104.D	SEK0004-CAL1	1	6.17	607408		9.15	290245		11.80	518986		16.50	393896		19.10	482655
5	1134	16110105.D	SEK0004-CAL5	1	6.17	614933		9.15	319092		11.80	545127		16.50	422171		19.11	511390
6	1204	16110106.D	SEK0004-CAL2	1	6.17	611834		9.15	290382		11.80	510239		16.50	387799		19.10	470018
7	1234	16110107.D	SEK0004-CAL6	1	6.17	617596		9.15	316004		11.80	545628		16.50	421968		19.11	510441
8	1304	16110108.D	SEK0004-SCV1	1	6.17	597012		9.15	291617		11.80	499409		16.50	392161		19.11	458547
9	1335	16110109.D	CEJ0249-CBL1	1	6.17	614848		9.15	289388		11.80	510545		16.50	368129		19.11	416644
10	1405	16110110.D	CEJ0249-GPC1	1	6.17	603890		9.15	292547		11.80	512033		16.50	377529		19.11	408522
11	1435	16110111.D	16J0334-01RE1	1	6.17	602621		9.15	298378		11.80	519273		16.51	363015		19.12	630268
12	1505	16110112.D	SEK0004-CCV1	1	6.17	535677		9.15	301283		11.80	535083		16.50	418218		19.11	514785

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161101.b

AR Job No.: SEK0 Method: DFPPP.m Instrument: nt11.i Date: 01-NOV-2016

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0916	16110101.D	SEK0004-TUN1		1	NO MANUAL INTEGRATION
0931	16110102.D	SEK0004-CAL4		1	NO MANUAL INTEGRATION
1034	16110103.D	SEK0004-CAL3		1	NO MANUAL INTEGRATION
1104	16110104.D	SEK0004-CAL1		1	NO MANUAL INTEGRATION
1134	16110105.D	SEK0004-CAL5		1	NO MANUAL INTEGRATION
1204	16110106.D	SEK0004-CAL2		1	NO MANUAL INTEGRATION
1234	16110107.D	SEK0004-CAL6		1	NO MANUAL INTEGRATION
1304	16110108.D	SEK0004-SCV1		1	NO MANUAL INTEGRATION
1335	16110109.D	CEJ0249-CBL1		1	NO MANUAL INTEGRATION
1405	16110110.D	CEJ0249-GPC1		1	NO MANUAL INTEGRATION
1435	16110111.D	16J0334-01RE1		1	Fluorene, Dibenzo(a,h)anthracene-d14,
1505	16110112.D	SEK0004-CCV1		1	NO MANUAL INTEGRATION



Extract Dilution Bench Sheet

ARI Job#: N/A Client ID: N/A
 Analyst: JW Date: 10/31/16

ARI Sample ID	Primary Dilution			Secondary Dilution				
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
16J0171-01PE1	50	DEN/E005333	450	10x				
16J0419-01PE1	5	↓	995	100x				
16J0334-01	100	↓	100	3x				
16J0334-01PE1	50	DEN/E005333	450	10x				

11/01/16



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Sequence: SEK0151

Instrument: NT11

Calibration: ZK00002

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SEK0151-TUN1	16111001.D	Tissue	11/10/16 11:23
Initial Cal Check	SEK0151-ICV1	16111002.D	Tissue	11/10/16 11:38
Blank	BEJ0794-BLK1	16111003.D	Tissue	11/10/16 12:40
LCS	BEJ0794-BS1	16111004.D	Tissue	11/10/16 13:09
PG-T0-MUS-COC-160816	16H0147-01	16111005.D	Tissue	11/10/16 13:39
ZZZZZ	16H0268-01	16111006.D	Tissue	11/10/16 14:10
ZZZZZ	16J0187-01	16111007.D	Tissue	11/10/16 14:40
ZZZZZ	16J0187-02	16111008.D	Tissue	11/10/16 15:10
ZZZZZ	16J0187-03	16111009.D	Tissue	11/10/16 15:40
ZZZZZ	16J0187-04	16111010.D	Tissue	11/10/16 16:10
ZZZZZ	16J0187-05	16111011.D	Tissue	11/10/16 16:40
ZZZZZ	16J0187-06	16111012.D	Tissue	11/10/16 17:10
Calibration Check	SEK0151-CCV1	16111013.D	Tissue	11/10/16 17:40

Port Gamble Shellfish Monitoring**16H0147**

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES	JLW	11/11/2016
2	DDT Breakdown <20% and Peak Tailing <=2	YES	JLW	11/11/2016
3	ICV/CCV Meets %D	YES	JLW	11/11/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES	JLW	11/11/2016
5	Internal Standard areas within 50-200%	YES	JLW	11/11/2016
6	Retention times within windows and Coelution summary checked	YES	JLW	11/11/2016
7	Manual integrations include summary and before/after pictures	YES	JLW	11/11/2016
8	Project specific requirements have been met	YES	JLW	11/11/2016
9	Sample dilution factors have been correctly applied	NA	JLW	11/11/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	YES *	JLW	11/11/2016
11	AUTOCHECK: Check blank spike recovery	YES *	JLW	11/11/2016
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA *	JLW	11/11/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES *	JLW	11/11/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA *	JLW	11/11/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA *	JLW	11/11/2016
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA *	JLW	11/11/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA *	JLW	11/11/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA *	JLW	11/11/2016
19	AUTOCHECK: Check Surrogate recoveries	YES *	JLW	11/11/2016
20	AUTOCHECK: Checks Surrogate spike list against Analysis	YES *	JLW	11/11/2016
21	Analyst checklist completed (PEER)	YES	BB	11/11/2016
22	Data is locked and Status is Analyzed (PEER)	YES	BB	11/11/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES	BB	11/11/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES	BB	11/11/2016
25	Qualifiers have been correctly added (PEER)	YES	BB	11/11/2016
26	Checklist completed and status is peer reviewed (REVIEWER)	YES	BB	11/11/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	NA	BB	11/11/2016
28	All requested samples have been reported (REVIEWER)	YES	BB	11/11/2016

Port Gamble Shellfish Monitoring

16H0147

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	BB	11/11/2016
30	List of samples in this sequence that will require additional runs-verify reshot created (ANALYST)	NA	JLW	11/11/2016
31	List of samples in this sequence that are re-analysis or dilutions of samples (ANALYST)	NA	JLW	11/11/2016
32	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	BB	11/11/2016

Comments:

Special GPC column needed for Tissue . (10 day lag for set up & calibration and rushes)



ANALYSIS SEQUENCE

SEK0151

Instrument: NT11 Element Column ID: D005437
 Calibration ID: ZK00002 Tune File: 160805.U
 ENU Voltage: 2224

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Comments
SEK0151-TUN1	Tune 10	QC		1	E000099		
SEK0151-ICV1	SIM PAH 250	QC		2	E004262	E002870	
BEJ0794-BLK1	Blank	QC		3		E002870	
BEJ0794-BS1	LCS	QC		4		E002870	
16H0147-01	PG-T0-MUS-COC-160816	SIM PAH Low (0.01 ug/L - 0.	A 02	5		E002870	
16H0268-01	PG-T0B-MUS-COC-160829	SIM PAH Low (0.01 ug/L - 0.	A 02	6		E002870	
16J0187-01	PG-SMA-1-1-161011	SIM PAH Low (0.01 ug/L - 0.	A 02	7		E002870	
16J0187-02	PG-SMA-1-2-161011	SIM PAH Low (0.01 ug/L - 0.	A 02	8		E002870	
16J0187-03	PG-SMA-1-3-161011	SIM PAH Low (0.01 ug/L - 0.	A 02	9		E002870	
16J0187-04	PG-REF-PJ-1-161011	SIM PAH Low (0.01 ug/L - 0.	A 02	10		E002870	
16J0187-05	PG-REF-WS-1-161011	SIM PAH Low (0.01 ug/L - 0.	A 02	11		E002870	
16J0187-06	PG-REF-GP-1-161011	SIM PAH Low (0.01 ug/L - 0.	A 02	12		E002870	
SEK0151-CCV1	SIM PAH 250	QC		13	E004262	E002870	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161110.b

Time	Filename	LabID	ClientId	DF	1	INO	ISTDS	FOUND	1	INO	ISTDS	FOUND	1	INO	ISTDS	FOUND
1	123	16111001.D	SEK0151-TUN1		1	5.97	632880	8.93	305083	11.57	515735	16.26	372029	18.79	432343	
2	138	16111002.D	SEK0151-ICV1		1	5.97	622424	8.94	294676	11.57	522842	16.26	352800	18.80	416680	
3	140	16111003.D	BEJ0794-BLK1		1	5.97	622901	8.93	305537	11.57	532614	16.26	378849	18.79	442667	
4	139	16111004.D	BEJ0794-BS1		1	5.96	614914	8.93	288971	11.57	489101	16.26	315458	18.79	442359	
5	133	16111005.D	16H0147-01		1	5.96	608197	8.93	302104	11.57	499363	16.26	329608	18.79	511935	
6	140	16111006.D	16H0268-01		1	5.97	593102	8.93	299230	11.57	518256	16.26	350799	18.79	459966	
7	140	16111007.D	16J0187-01		1	5.96	584381	8.93	295258	11.57	498327	16.26	320622	18.79	431086	
8	150	16111008.D	16J0187-02		1	5.97	583069	8.93	297549	11.57	514668	16.26	354350	18.79	462754	
9	150	16111009.D	16J0187-03		1	5.97	596285	8.93	303646	11.57	516573	16.26	342456	18.79	470835	
10	160	16111010.D	16J0187-04		1	5.97	578688	8.93	299595	11.57	527262	16.26	370771	18.79	479814	
11	160	16111011.D	16J0187-05		1	5.97	587361	8.93	299483	11.57	512054	16.26	339465	18.79	449995	
12	170	16111012.D	16J0187-06		1	5.97	573338	8.93	309681	11.57	541613	16.26	400675	18.79	478346	
13	170	16111013.D	SEK0151-CCV1		1	5.97	573338	8.93	309681	11.57	541613	16.26	400675	18.79	478346	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20161110.b

ARF Job No.: SEK0 Method: DFPPP.m Instrument: nt11.i Date: 10-NOV-2016

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1123	16111001.D	SEK0151-TUN1		1	NO MANUAL INTEGRATION
1138	16111002.D	SEK0151-ICV1		1	NO MANUAL INTEGRATION
1240	16111003.D	BEJ0794-BLK1		1	NO MANUAL INTEGRATION
1309	16111004.D	BEJ0794-BS1		1	NO MANUAL INTEGRATION
1339	16111005.D	16H0147-01		1	NO MANUAL INTEGRATION
1410	16111006.D	16H0268-01		1	NO MANUAL INTEGRATION
1440	16111007.D	16J0187-01		1	NO MANUAL INTEGRATION
1510	16111008.D	16J0187-02		1	NO MANUAL INTEGRATION
1540	16111009.D	16J0187-03		1	NO MANUAL INTEGRATION
1610	16111010.D	16J0187-04		1	NO MANUAL INTEGRATION
1640	16111011.D	16J0187-05		1	NO MANUAL INTEGRATION
1710	16111012.D	16J0187-06		1	NO MANUAL INTEGRATION
1740	16111013.D	SEK0151-CCV1		1	NO MANUAL INTEGRATION



SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG/WO:	<u>16H0147</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Sequence:	<u>SEK0004</u>	Instrument:	<u>NT11</u>
Calibration:	<u>ZK00002</u>	Calibration Date:	<u>11/01/2016</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
CEJ0249-GPC1 (Solid)		Lab File ID: 16110110.D			Analyzed: 11/01/16 14:05			
2-Methylnaphthalene-d10	150.00	91.5	80 - 110	7.143	7.142833	0.0002	N/A	
Dibenzo[a,h]anthracene-d14	150.00	105	80 - 110	21.177	21.17667	0.0003	N/A	
Fluoranthene-d10	150.00	95.6	80 - 110	13.872	13.877	-0.0050	N/A	



SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory: <u>Analytical Resources, Inc.</u>	SDG/WO: <u>16H0147</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>Port Gamble Shellfish Monitoring</u>
Sequence: <u>SEK0151</u>	Instrument: <u>NT11</u>
Calibration: <u>ZK00002</u>	Calibration Date: <u>11/01/2016</u>

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEK0151-ICV1 (Tissue)								
				Lab File ID: 16111002.D		Analyzed: 11/10/16 11:38		
2-Methylnaphthalene-d10	250.00	94.4	80 - 120	6.942	7.142833	-0.2008	N/A	
Dibenzo[a,h]anthracene-d14	250.00	96.4	80 - 120	20.739	21.17667	-0.4377	N/A	
Fluoranthene-d10	250.00	93.2	80 - 120	13.646	13.877	-0.2310	N/A	
BEJ0794-BLK1 (Tissue)								
				Lab File ID: 16111003.D		Analyzed: 11/10/16 12:40		
2-Methylnaphthalene-d10	15.000	51.4	30 - 160	6.942	7.142833	-0.2008	N/A	
Dibenzo[a,h]anthracene-d14	15.000	81.4	30 - 160	20.739	21.17667	-0.4377	N/A	
Fluoranthene-d10	15.000	74.8	30 - 160	13.646	13.877	-0.2310	N/A	
BEJ0794-BS1 (Tissue)								
				Lab File ID: 16111004.D		Analyzed: 11/10/16 13:09		
2-Methylnaphthalene-d10	15.000	47.6	30 - 160	6.932	7.142833	-0.2108	N/A	
Dibenzo[a,h]anthracene-d14	15.000	71.9	30 - 160	20.728	21.17667	-0.4487	N/A	
Fluoranthene-d10	15.000	70.7	30 - 160	13.646	13.877	-0.2310	N/A	
16H0147-01 (Tissue)								
				Lab File ID: 16111005.D		Analyzed: 11/10/16 13:39		
2-Methylnaphthalene-d10	14.896	59.9	30 - 160	6.932	7.142833	-0.2108	N/A	
Dibenzo[a,h]anthracene-d14	14.896	82.5	30 - 160	20.728	21.17667	-0.4487	N/A	
Fluoranthene-d10	14.896	76.1	30 - 160	13.646	13.877	-0.2310	N/A	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Sequence: SEK0004

Instrument: NT11

Calibration: ZK00002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SEK0004-SCV1)		(Tissue)	Lab File ID: 16110108.D			Analyzed: 11/01/16 13:04			
Naphthalene-d8	597012	6.165	609556	6.166	98	50 - 200	0.0010	+/-0.50	
Acenaphthene-d10	291617	9.145	316851	9.145	92	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	499409	11.797	546133	11.798	91	50 - 200	0.0010	+/-0.50	
Chrysene-d12	392161	16.503	417210	16.504	94	50 - 200	0.0010	+/-0.50	
Perylene-d12	458547	19.11	524443	19.101	87	50 - 200	-0.0090	+/-0.50	
GPC Check (CEJ0249-GPC1)		(Solid)	Lab File ID: 16110110.D			Analyzed: 11/01/16 14:05			
Naphthalene-d8	603890	6.166	609556	6.166	99	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	292547	9.145	316851	9.145	92	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	512033	11.798	546133	11.798	94	50 - 200	0.0000	+/-0.50	
Chrysene-d12	377529	16.504	417210	16.504	90	50 - 200	0.0000	+/-0.50	
Perylene-d12	408522	19.11	524443	19.101	78	50 - 200	-0.0090	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Sequence: SEK0151

Instrument: NT11

Calibration: ZK00002

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEK0151-ICV1)		(Tissue)	Lab File ID: 16111002.D			Analyzed: 11/10/16 11:38			
Naphthalene-d8	632880	5.965	609556	6.166	104	50 - 200	0.2010	+/-0.50	
Acenaphthene-d10	305083	8.928	316851	9.145	96	50 - 200	0.2170	+/-0.50	
Phenanthrene-d10	515735	11.571	546133	11.798	94	50 - 200	0.2270	+/-0.50	
Chrysene-d12	372029	16.264	417210	16.504	89	50 - 200	0.2400	+/-0.50	
Perylene-d12	432343	18.788	524443	19.101	82	50 - 200	0.3130	+/-0.50	
Blank (BEJ0794-BLK1)		(Tissue)	Lab File ID: 16111003.D			Analyzed: 11/10/16 12:40			
Naphthalene-d8	622424	5.965	609556	6.166	102	50 - 200	0.2010	+/-0.50	
Acenaphthene-d10	294676	8.939	316851	9.145	93	50 - 200	0.2060	+/-0.50	
Phenanthrene-d10	522842	11.571	546133	11.798	96	50 - 200	0.2270	+/-0.50	
Chrysene-d12	352800	16.264	417210	16.504	85	50 - 200	0.2400	+/-0.50	
Perylene-d12	416680	18.797	524443	19.101	79	50 - 200	0.3040	+/-0.50	
LCS (BEJ0794-BS1)		(Tissue)	Lab File ID: 16111004.D			Analyzed: 11/10/16 13:09			
Naphthalene-d8	622901	5.965	609556	6.166	102	50 - 200	0.2010	+/-0.50	
Acenaphthene-d10	305537	8.928	316851	9.145	96	50 - 200	0.2170	+/-0.50	
Phenanthrene-d10	532614	11.571	546133	11.798	98	50 - 200	0.2270	+/-0.50	
Chrysene-d12	378849	16.264	417210	16.504	91	50 - 200	0.2400	+/-0.50	
Perylene-d12	442667	18.787	524443	19.101	84	50 - 200	0.3140	+/-0.50	
PG-T0-MUS-COC-160816 (16H0147-01)		(Tissue)	Lab File ID: 16111005.D			Analyzed: 11/10/16 13:39			
Naphthalene-d8	614914	5.955	609556	6.166	101	50 - 200	0.2110	+/-0.50	
Acenaphthene-d10	288971	8.928	316851	9.145	91	50 - 200	0.2170	+/-0.50	
Phenanthrene-d10	489101	11.571	546133	11.798	90	50 - 200	0.2270	+/-0.50	
Chrysene-d12	315458	16.264	417210	16.504	76	50 - 200	0.2400	+/-0.50	
Perylene-d12	442359	18.788	524443	19.101	84	50 - 200	0.3130	+/-0.50	



HOLDING TIME SUMMARY

Analysis: EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PG-T0-MUS-COC-160816 16H0147-01	08/16/16 08:00	08/17/16 08:30	10/26/16 15:10	71	365	11/10/16 13:39	15	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Matrix: Tissue

Instrument: NT11

Analyte	MDL	RL	Units
Naphthalene	0.50	0.60	ug/kg
2-Methylnaphthalene	0.50	0.50	ug/kg
Acenaphthylene	0.50	0.50	ug/kg
Acenaphthene	0.50	0.50	ug/kg
Fluorene	0.50	0.50	ug/kg
Phenanthrene	0.50	0.50	ug/kg
Anthracene	0.50	0.50	ug/kg
Fluoranthene	0.50	0.50	ug/kg
Pyrene	0.50	0.50	ug/kg
Benzo(a)anthracene	0.50	0.50	ug/kg
Chrysene	0.50	0.50	ug/kg
Benzo(b)fluoranthene	0.50	0.50	ug/kg
Benzo(k)fluoranthene	0.50	0.50	ug/kg
Benzo(e)pyrene	0.50	0.50	ug/kg
Benzo(a)pyrene	0.50	0.50	ug/kg
Indeno(1,2,3-cd)pyrene	0.50	0.50	ug/kg
Dibenzo(a,h)anthracene	0.50	0.50	ug/kg
Benzo(g,h,i)perylene	0.50	0.50	ug/kg
Perylene	0.50	0.50	ug/kg



Form I
INORGANIC ANALYSIS DATA SHEET

PG-T0-MUS-COC-160816

SM 2540 G-97
TotalAnalytes

Laboratory: Analytical Resources, Inc.

Project: Port Gamble Shellfish Monitoring

Client: Anchor QEA, LLC

SDG: 16H0147

Matrix: Tissue

Laboratory ID: 16H0147-01

File ID:

Sampled: 08/16/16 08:00

Prepared: 10/26/16 14:16

Analyzed: 10/26/16 15:52

Solids (wt%): 0.00

Preparation: No Prep Extractions

Initial/Final: 1 g / 1 g

Batch: BEJ0801

Sequence:

Calibration:

Instrument: NA

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	18.6	1		0.0400	

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986
(dry at 103-105 C)

Instrumentation

Batch:	BEJ0801
Date:	10/26/2016 15:52
Analyst:	YI
Drying Oven:	15
Analytical Balance:	B139298002

Batch drying time	
record times as mm/dd/yy hh:mm	
date/time in oven:	10/26/2016 14:25
date/time out:	10/27/2016 7:45
elapsed hrs:	17.3

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/(sample & dish -dish tare)

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
16H0147-01	1.1700	12.1300	3.2100	2.04	18.61%	No
16H0268-01	1.1600	11.4300	3.3100	2.15	20.93%	No
16J0187-01	1.1700	11.7000	2.9900	1.82	17.28%	No
16J0187-02	1.1600	11.2700	2.8200	1.66	16.42%	No
16J0187-03	1.1700	11.1200	2.7500	1.58	15.88%	No
16J0187-04	1.1600	11.1100	2.7200	1.56	15.68%	No
16J0187-05	1.1600	11.5600	2.9400	1.78	17.12%	No
16J0187-06	1.1700	11.0400	3.0300	1.86	18.84%	No

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986
(dry at 103-105 C)

Batch: BEJ0801
Date: 10/26/2016 15:52
Analyst: *YL*
Drying Oven: *015*
Analytical Balance: *8139258402*

Instrumentation

Batch drying time
record times as mm/dd/yy hh:mm
date/time in oven: *10/26/16 14:25 100^o*
date/time out: *10/27/16 07:45 102^o*
elapsed hrs: *0.0*

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/(sample & dish -dish tare)

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
16H0147-01	1.17	17.13	3.21			No
16H0268-01	1.16	11.43	3.31			No
16J0187-01	1.17	11.74	2.99			No
16J0187-02	1.16	11.27	2.82			No
16J0187-03	1.17	11.12	2.75			No
16J0187-04	1.16	11.11	2.72			No
16J0187-05	1.16	11.56	2.94			No
16J0187-06	1.17	11.44	3.43			No

*IN Dessicator @ 0745
10/27/16 SP*

*out of dessicator @ 0855
10/27/16 SP*



HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PG-T0-MUS-COC-160816 16H0147-01	08/16/16 08:00	08/17/16 08:30	10/26/16 14:16	71	365	10/26/16 15:52	71	365	

* Indicates hold time exceedance.



Analytical Resources, Incorporated

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, Inc.

SDG: 16H0147

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Matrix: Tissue

Instrument:

Analyte	MDL	RL	Units
Total Solids		0.0400	%



05 October 2016

Nathan Soccorsy
Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Port Gamble Shellfish Monitoring (PEMD)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

<u>Associated Work Order(s)</u>	<u>Associated SDG ID(s)</u>
16I0160	N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

Cheronne Oreiro, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



1650160

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: _____

Date: September 9, 2016

Project Name: Port Gamble Bay Shellfish Monitoring

Project Number: 160388-01.01

Project Manager: Nathan Socorsy

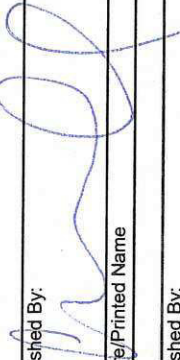
Phone Number: 206.287.9130

Shipment Method: _____



Line	Field Sample ID	Collection Date/Time	Matrix	Containers		Comments/Preservation
				PAHS	Archive	
1	PG-SMA1-1-PEMD-160909-A	9/9/2016 1001 H 2200	PEMD	1	x	
2	PG-SMA1-1-PEMD-160909-B	9/9/2016 1001 H 2200	PEMD	1	x	Extract and archive
3	PG-SMA1-2-PEMD-160909-A	9/9/2016 10 20	PEMD	1	x	
4	PG-SMA1-102-PEMD-160909-A	9/9/2016 10 20	PEMD	1	x	
5	PG-SMA1-3-PEMD-160909-A	9/9/2016 10 50	PEMD	1	x	
6	PG-SMA1-3-PEMD-160909-B	9/9/2016 10 50	PEMD	1	x	Extract and archive
7	PG-PJ-1-PEMD-160909-A	9/9/2016 12 20	PEMD	1	x	
8	PG-PJ-1-PEMD-160909-B	9/9/2016 12 20	PEMD	1	x	Extract and archive
9	PG-GP-1-PEMD-160909-A	9/9/2016 11 51	PEMD	1	x	
10	PG-GP-1-PEMD-160909-B	9/9/2016 11 51	PEMD	1	x	Extract and archive
11	PG-WS-1-PEMD-160909-A	9/9/2016 11 22	PEMD	1	x	
12	PG-WS-1-PEMD-160909-B	9/9/2016 11 22	PEMD	1	x	Extract and archive
13	PG-FB-PEMD-160909	9/9/2016 10 55	PEMD	1	x	
14	PG-TB-PEMD-160909	9/9/2016 13 05	PEMD	1	x	Extract and archive
15						


Notes: All "B" samples to be extracted then archived

Relinquished By:  Company: Anchor QEA, LLC

Signature/Printed Name: _____ Date/Time: 9/9/16 1514

Relinquished By: _____ Company: _____

Signature/Printed Name: _____ Date/Time: _____

Received By:  Company: ARL

Signature/Printed Name: _____ Date/Time: 9-9-16 1514

Received By: _____ Company: _____

Signature/Printed Name: _____ Date/Time: _____



Cooler Receipt Form

ARI Client: Ancher

Project Name: Port Gamble Shellfish Monitoring

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 16I0160

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? _____

YES NO

Were custody papers included with the cooler? _____

YES NO

Were custody papers properly filled out (ink, signed, etc.) _____

YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: _____

5.3

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 0005276

Cooler Accepted by: SM

Date: 9-9-16

Time: 1514

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? _____

YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? _____

NA YES NO

Were all bottles sealed in individual plastic bags? _____

YES NO

Did all bottles arrive in good condition (unbroken)? _____

YES NO

Were all bottle labels complete and legible? _____

YES NO

Did the number of containers listed on COC match with the number of containers received? _____

YES NO

Did all bottle labels and tags agree with custody papers? _____

YES NO

Were all bottles used correct for the requested analyses? _____

YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...

NA YES NO

Were all VOC vials free of air bubbles? _____

NA YES NO

Was sufficient amount of sample sent in each bottle? _____

YES NO

Date VOC Trip Blank was made at ARI _____

NA

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TR Date: 9-9-16 Time: 1630

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)



Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle WA, 98101

Project: Port Gamble Shellfish Monitoring (PEMD)
Project Number: 160388-01.01
Project Manager: Nathan Soccorso

Reported:
05-Oct-2016 14:09

Case Narrative

Sample receipt

Fourteen PEMD samples were received September 9, 2016 under ARI workorder 16I0160. For details regarding sample receipt, please refer to the Cooler Receipt Form.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270D-SIM

Select samples were extracted within recommended holding times and then archived.

Select samples were extracted and analyzed within the recommended holding times.

Initial calibrations and initial calibration verifications were within method requirements.

Internal standard areas were within limits.

The field surrogate percent recoveries of Fluorene-d10 and Anthracene-d10 fell outside the control limits low for samplesurrogate percent recoveries were within control limits.

Naphthalene and 2-Methylnaphthalene were present in the method blank at levels greater than the reporting limit. All detected results for these compounds have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS percent recoveries were within control limits.



Anchor QEA, LLC

720 Olive Way, Suite 1900

Seattle, WA 98101

Project: Port Gamble Shellfish Monitoring (PEMD)

Project Number: 160388-01.01

Project Manager: Nathan Soccorsy

Reported:

10/05/2016 14:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PG-FB-PEMD-160909	16I0160-13	Tissue	09/09/16 10:55	09/09/16 15:14
PG-GP-1-PEMD-160909-A	16I0160-09	Tissue	09/09/16 11:51	09/09/16 15:14
PG-GP-1-PEMD-160909-B	16I0160-10	Tissue	09/09/16 11:51	09/09/16 15:14
PG-PJ-1-PEMD-160909-A	16I0160-07	Tissue	09/09/16 12:20	09/09/16 15:14
PG-PJ-1-PEMD-160909-B	16I0160-08	Tissue	09/09/16 12:20	09/09/16 15:14
PG-SMA1-102-PEMD-160909-A	16I0160-04	Tissue	09/09/16 10:20	09/09/16 15:14
PG-SMA1-1-PEMD-160909-A	16I0160-01	Tissue	09/09/16 10:01	09/09/16 15:14
PG-SMA1-1-PEMD-160909-B	16I0160-02	Tissue	09/09/16 10:01	09/09/16 15:14
PG-SMA1-2-PEMD-160909-A	16I0160-03	Tissue	09/09/16 10:20	09/09/16 15:14
PG-SMA1-3-PEMD-160909-A	16I0160-05	Tissue	09/09/16 10:50	09/09/16 15:14
PG-SMA1-3-PEMD-160909-B	16I0160-06	Tissue	09/09/16 10:50	09/09/16 15:14
PG-TB-PEMD-160909	16I0160-14	Tissue	09/09/16 13:05	09/09/16 15:14
PG-WS-1-PEMD-160909-A	16I0160-11	Tissue	09/09/16 11:22	09/09/16 15:14
PG-WS-1-PEMD-160909-B	16I0160-12	Tissue	09/09/16 11:22	09/09/16 15:14

Internal Chain of Custody

Client: Anchor QEA, LLC	Received: 09-Sep-2016 15:14
Project: Port Gamble Shellfish Monitoring (PEMD)	Received By: Justin Meyer
Number: 160388-01.01	Temp (°C): 5.30

16I0160-01 (PG-SMA1-1-PEMD-160909-A) Sampled 09/09/2016 10:01

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-01 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:36 by TER	***START***	09/09/2016 16:36 by TER	

16I0160-03 (PG-SMA1-2-PEMD-160909-A) Sampled 09/09/2016 10:20

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-03 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:37 by TER	***START***	09/09/2016 16:37 by TER	

16I0160-04 (PG-SMA1-102-PEMD-160909-A) Sampled 09/09/2016 10:20

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-04 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:38 by TER	***START***	09/09/2016 16:38 by TER	

16I0160-05 (PG-SMA1-3-PEMD-160909-A) Sampled 09/09/2016 10:50

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-05 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:38 by TER	***START***	09/09/2016 16:38 by TER	

16I0160-07 (PG-PJ-1-PEMD-160909-A) Sampled 09/09/2016 12:20

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-07 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:39 by TER	***START***	09/09/2016 16:39 by TER	

16I0160-09 (PG-GP-1-PEMD-160909-A) Sampled 09/09/2016 11:51

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-09 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:39 by TER	***START***	09/09/2016 16:39 by TER	

16I0160-11 (PG-WS-1-PEMD-160909-A) Sampled 09/09/2016 11:22

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-11 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:40 by TER	***START***	09/09/2016 16:40 by TER	
	09/09/2016 16:48 by TER	R-05 M02 Ext	09/09/2016 16:48 by TER	

16I0160-13 (PG-FB-PEMD-160909) Sampled 09/09/2016 10:55

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-13 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:41 by TER	***START***	09/09/2016 16:41 by TER	
	09/09/2016 16:48 by TER	R-05 M02 Ext	09/09/2016 16:48 by TER	

16I0160-14 (PG-TB-PEMD-160909) Sampled 09/09/2016 13:05

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>	<i>Hazard Info:</i>
<i>16I0160-14 A [Miscellaneous Container]</i>				
Sample Receiving	09/09/2016 16:41 by TER	***START***	09/09/2016 16:41 by TER	
	09/09/2016 16:48 by TER	R-05 M02 Ext	09/09/2016 16:48 by TER	

Data File: \\target\share\chem3\nt11.i\20160923_b\16092308.D

Date: 23-SEP-2016 11:31

Client ID:

Sample Info: 1610160-03

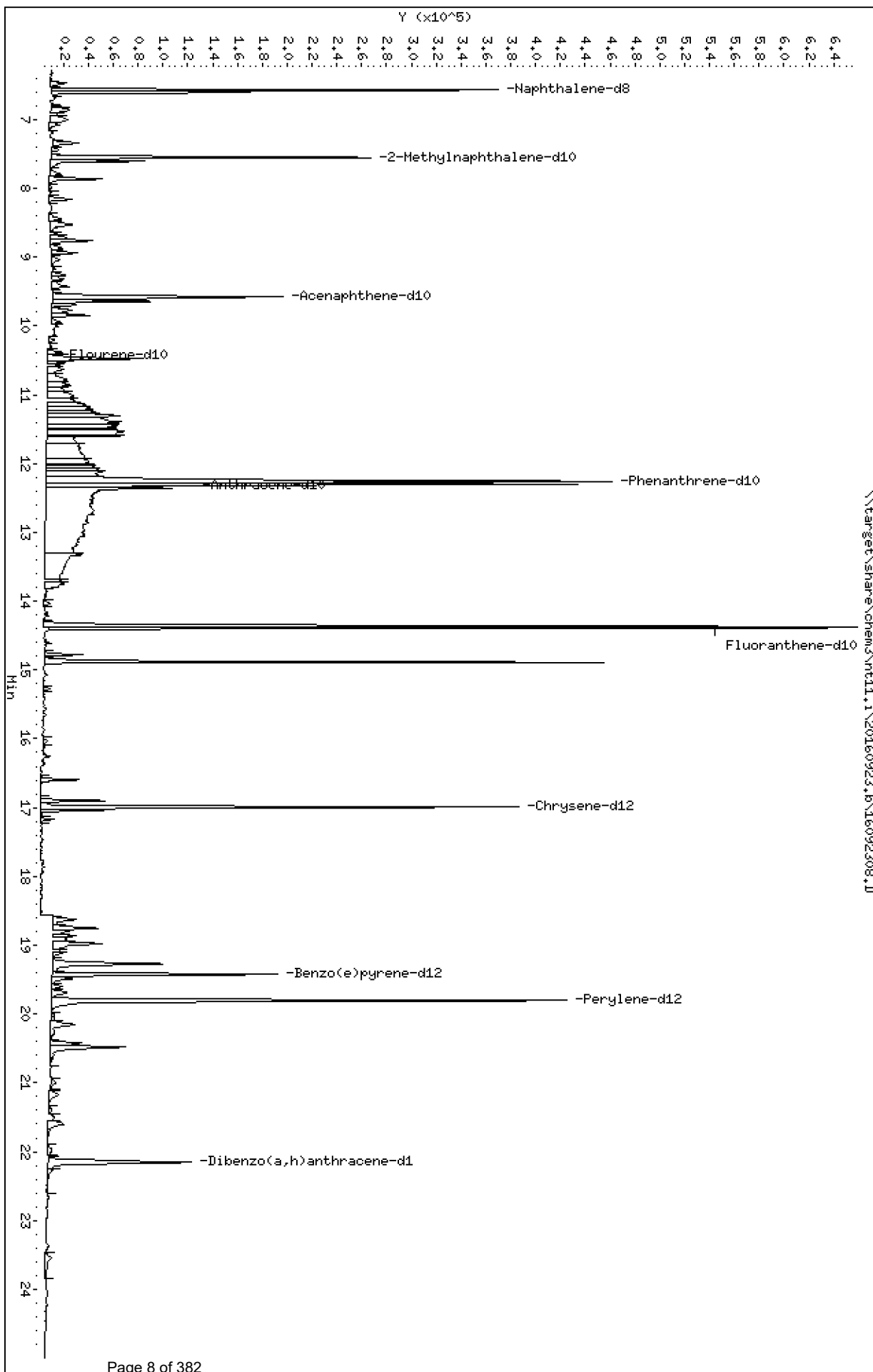
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Instrument: nt11.i

Operator: JM

Column diameter: 0.25

Page 1



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

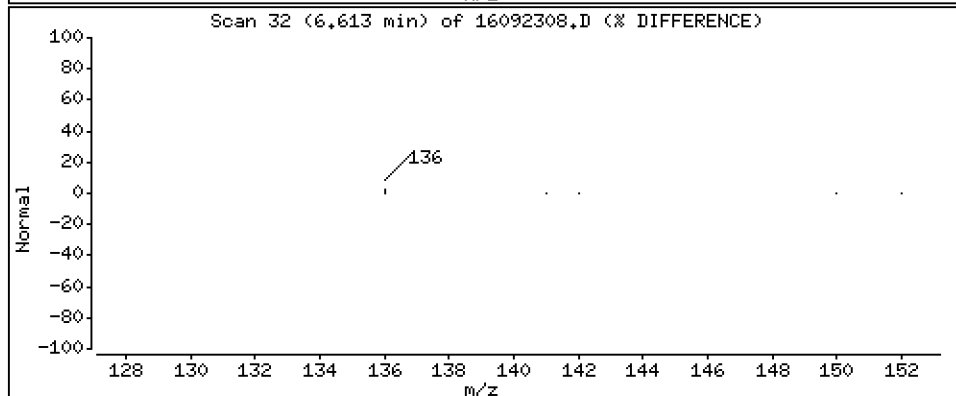
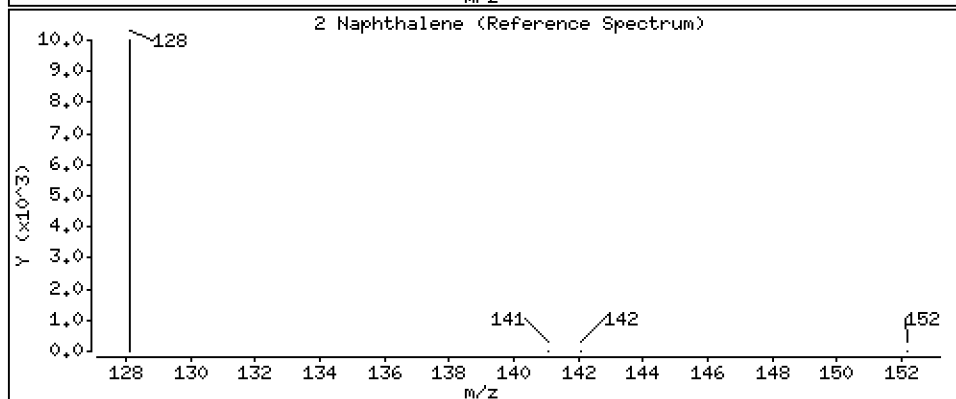
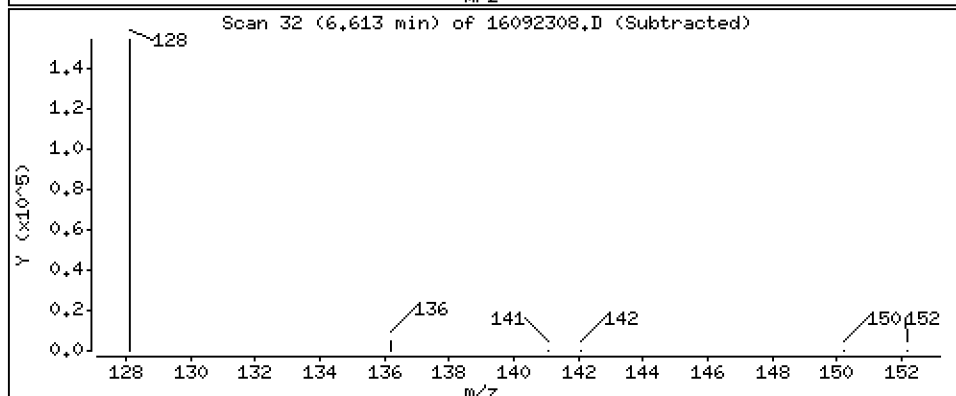
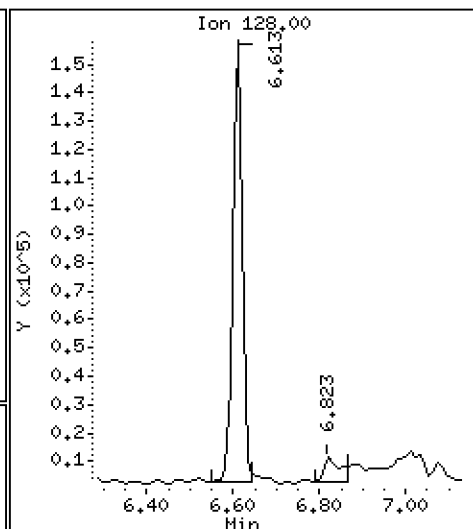
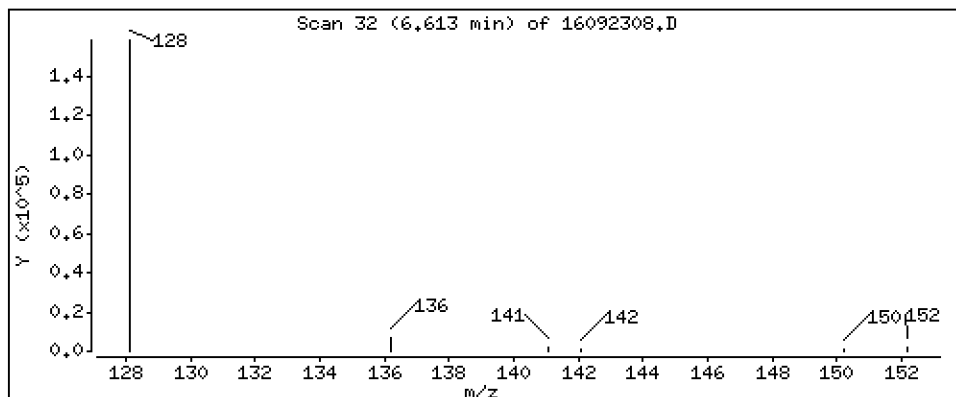
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 73,0 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

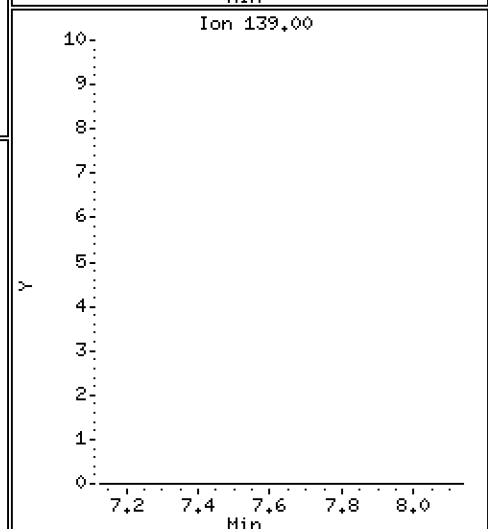
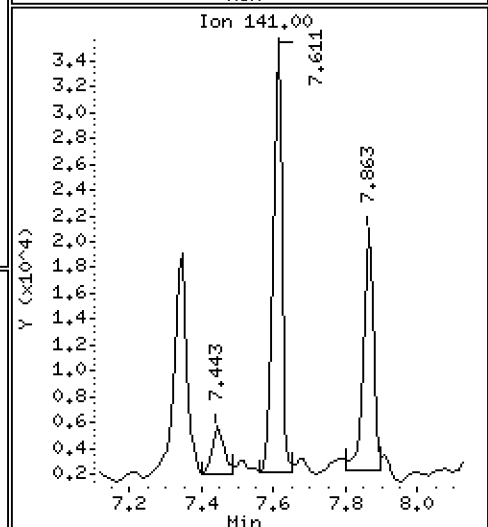
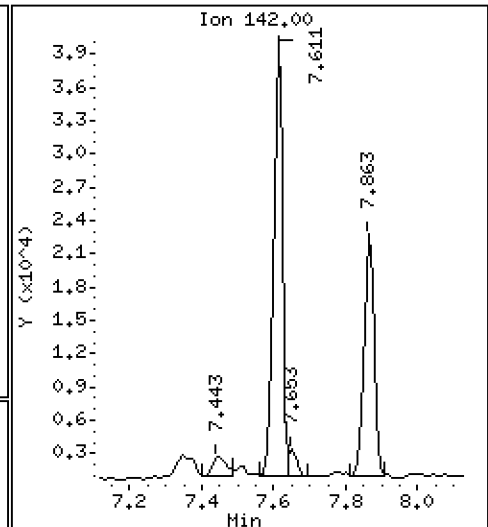
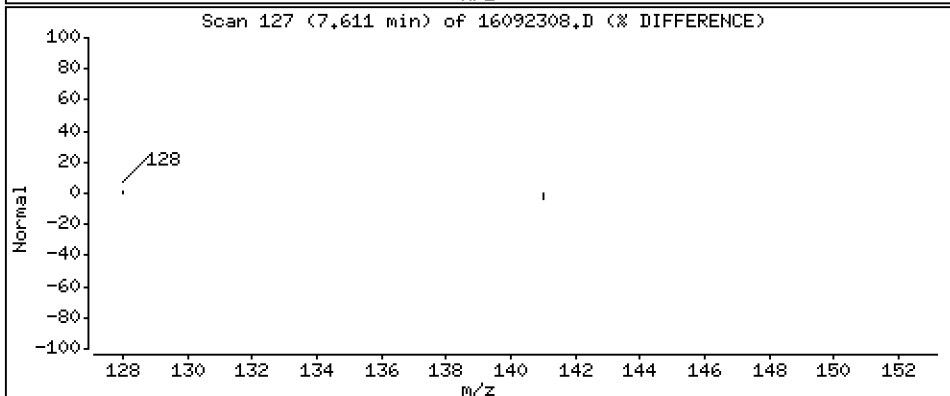
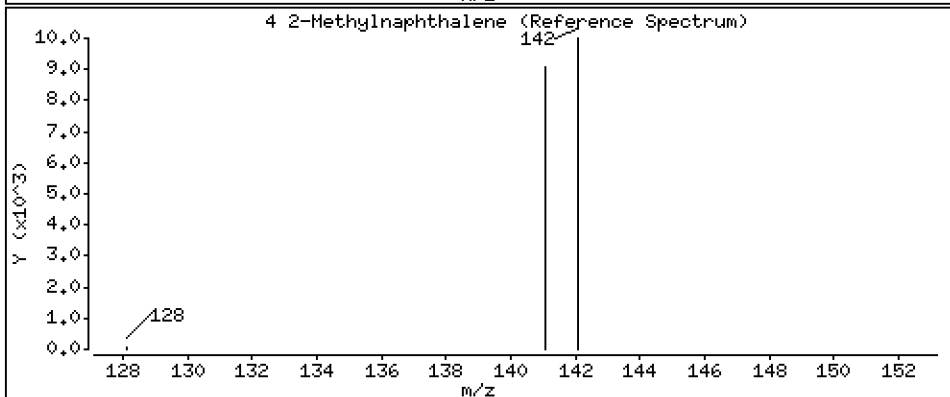
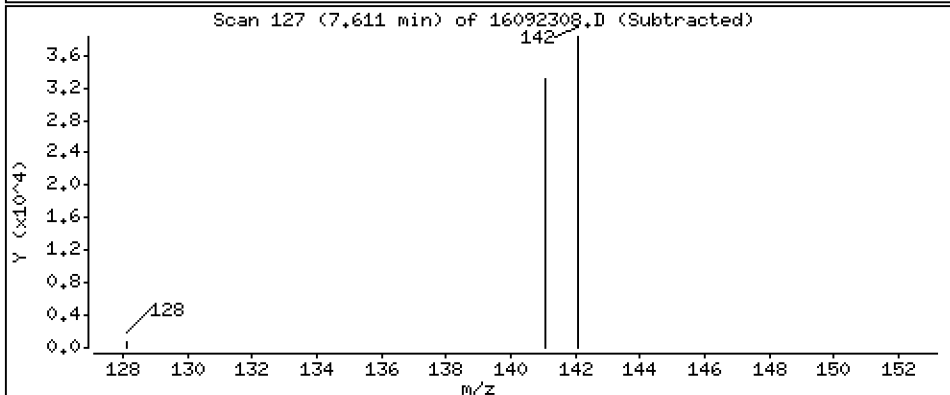
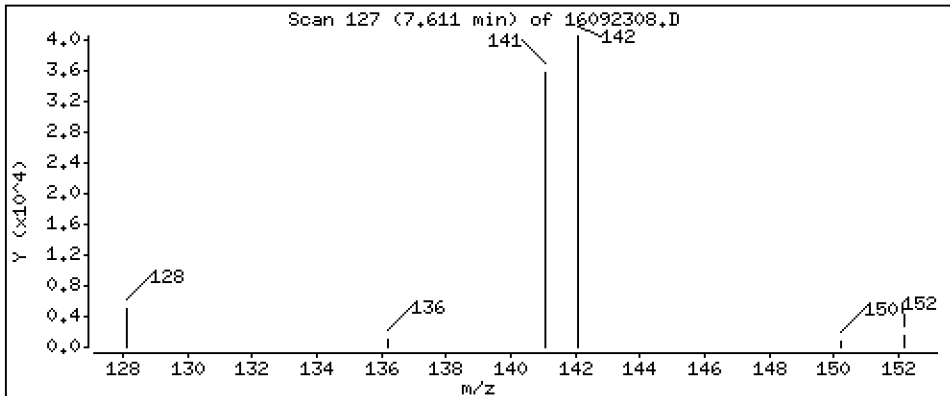
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4-Methylnaphthalene

Concentration: 31.9 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

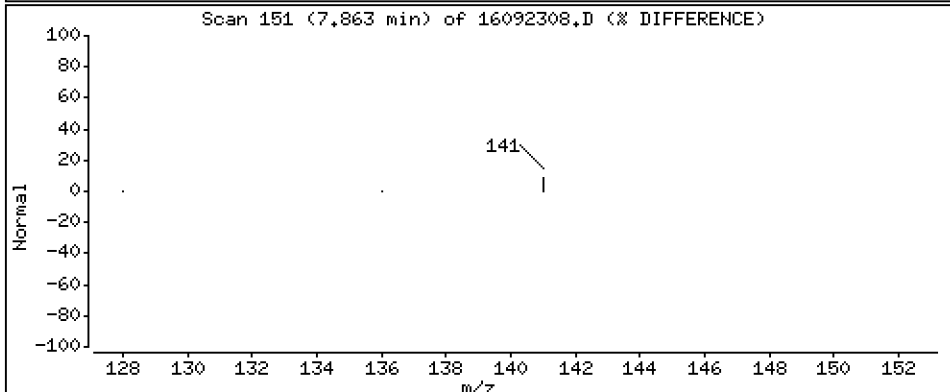
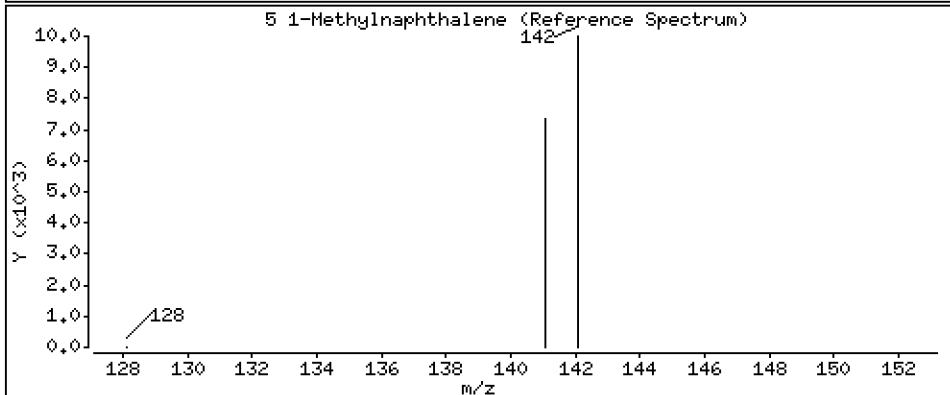
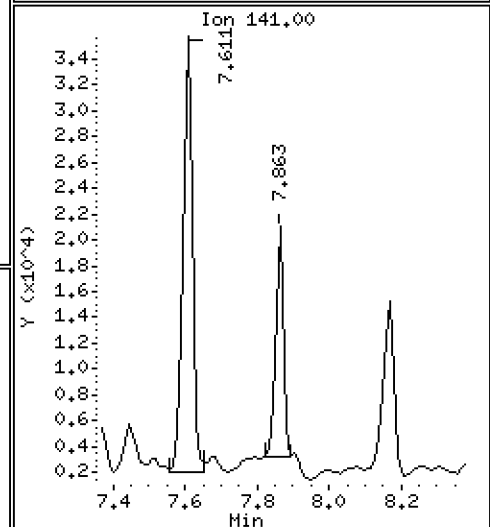
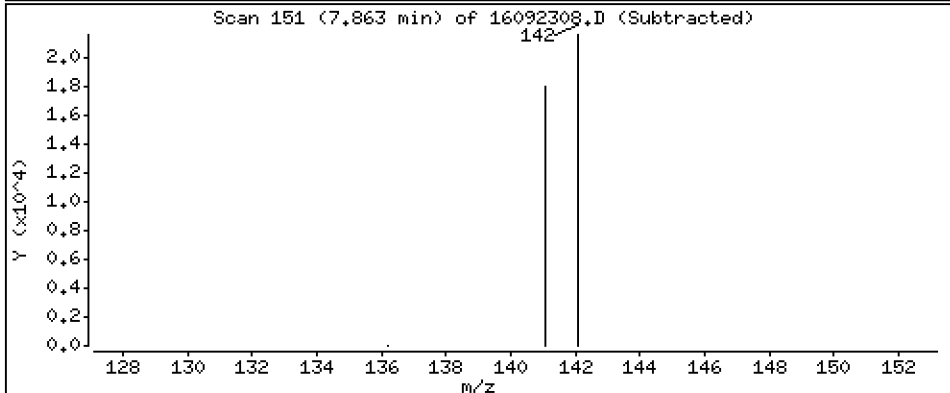
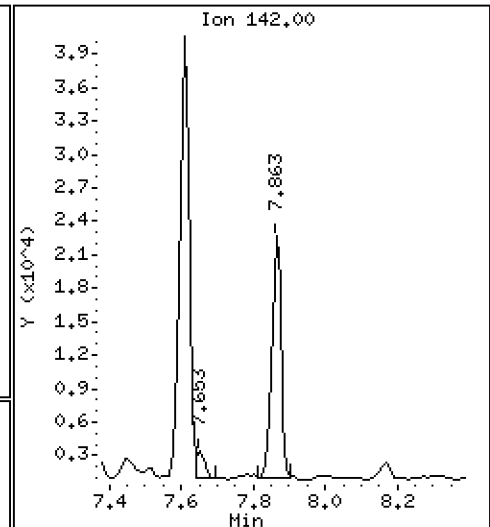
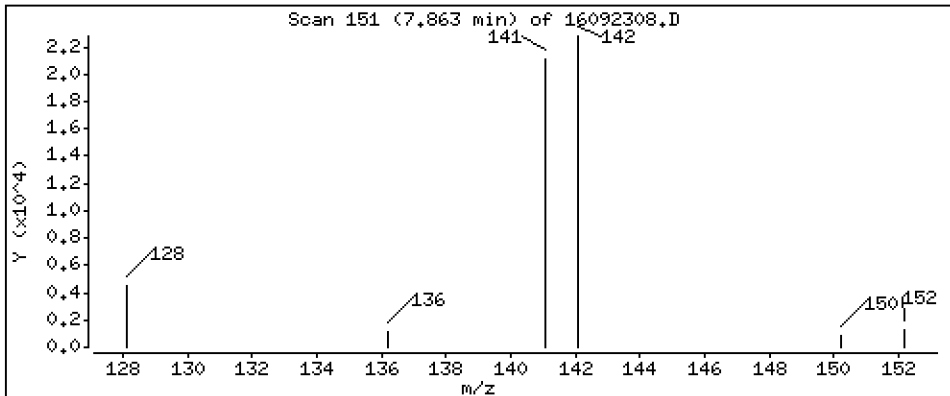
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 20,1 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

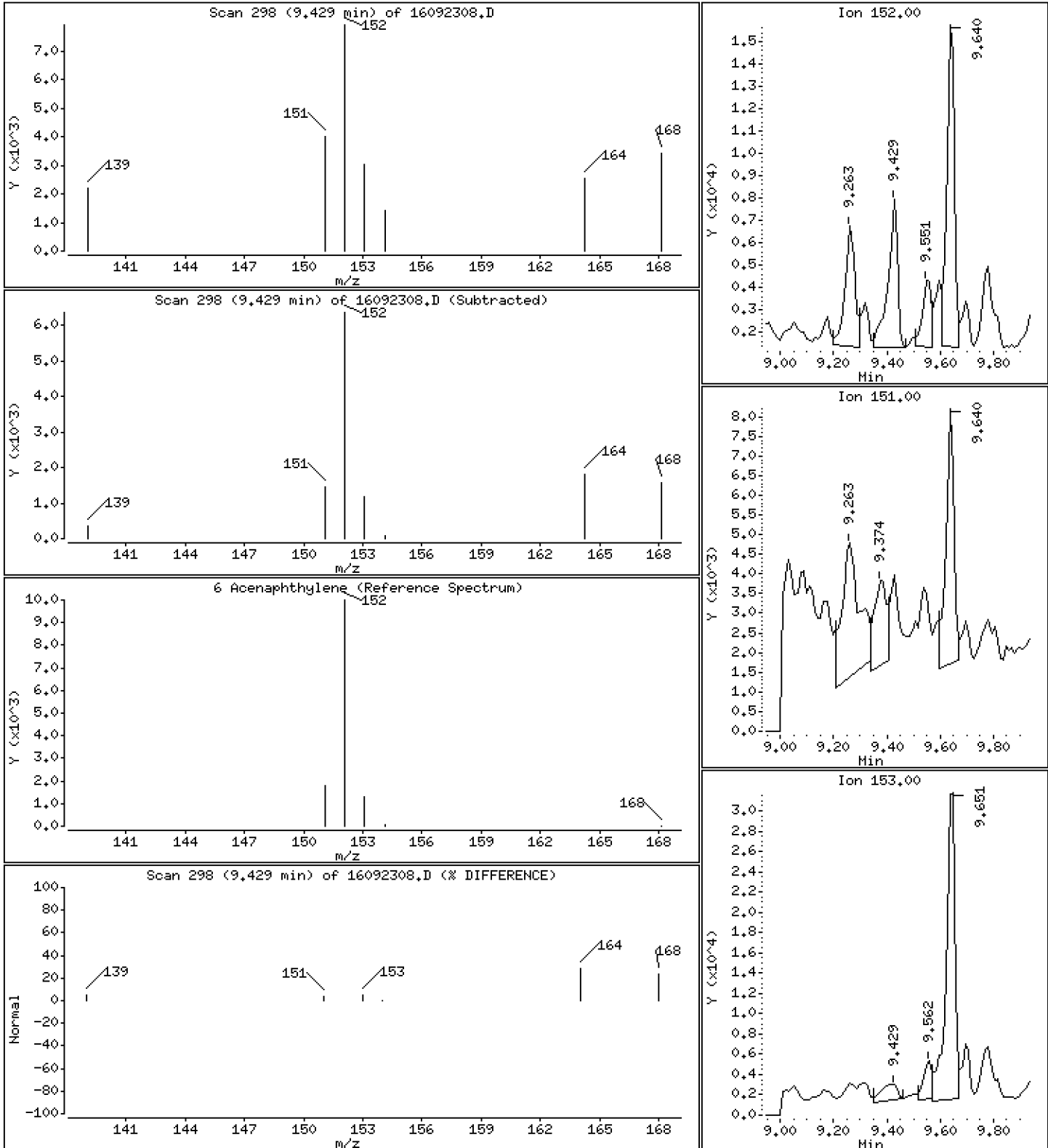
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 5.15 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

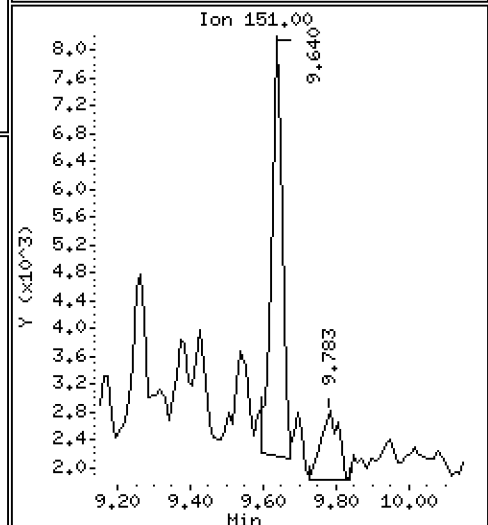
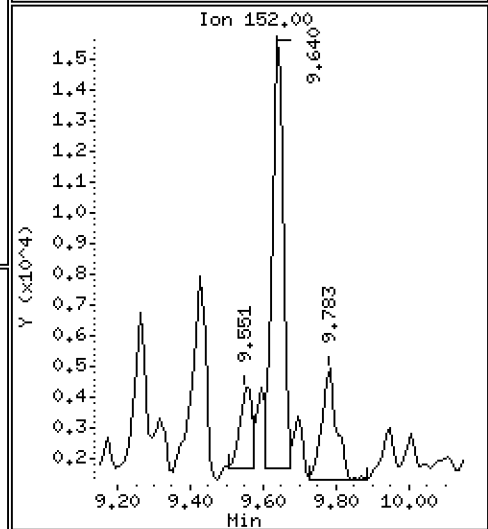
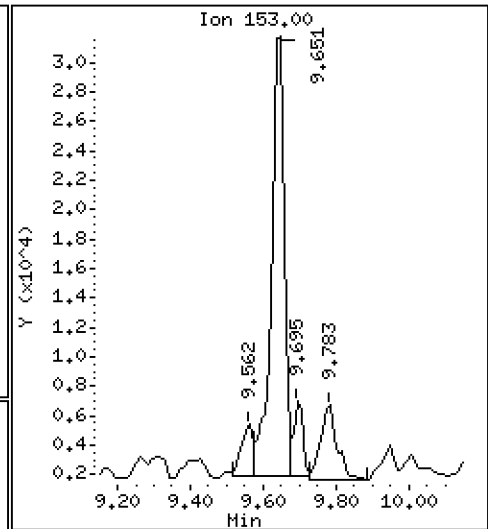
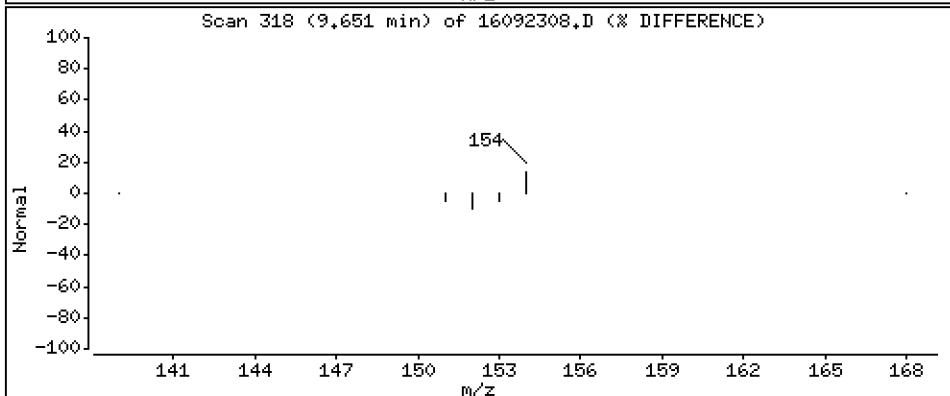
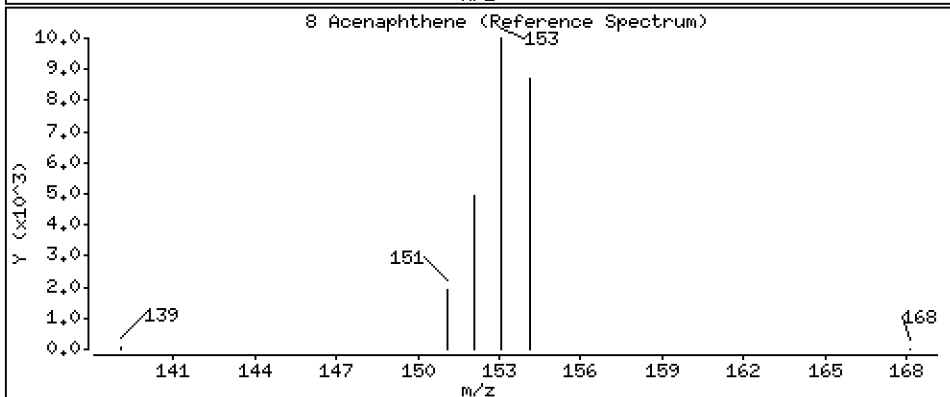
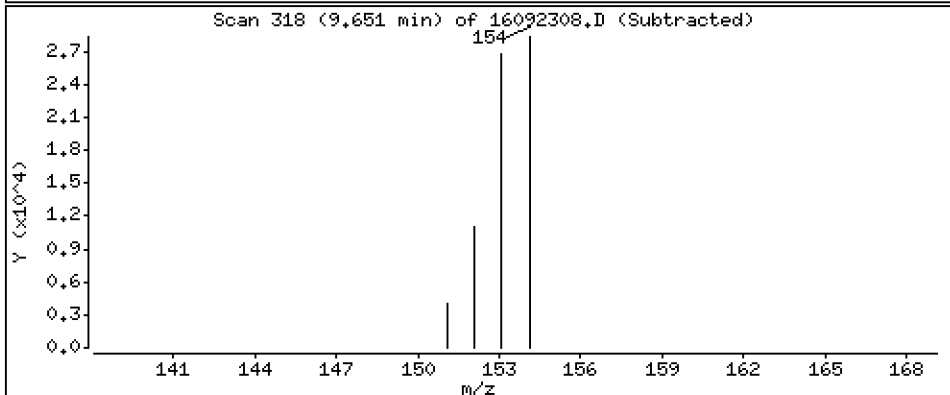
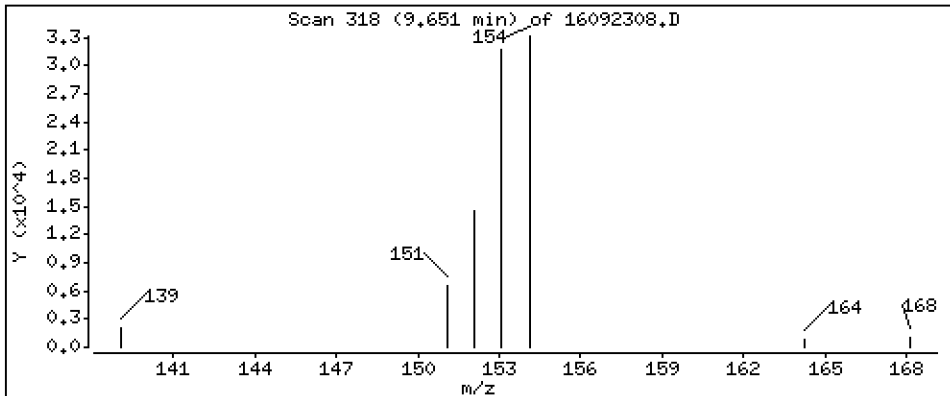
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 33,5 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

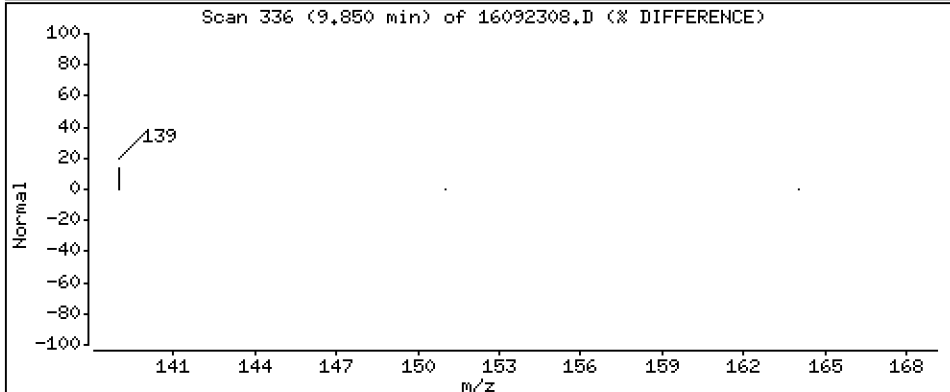
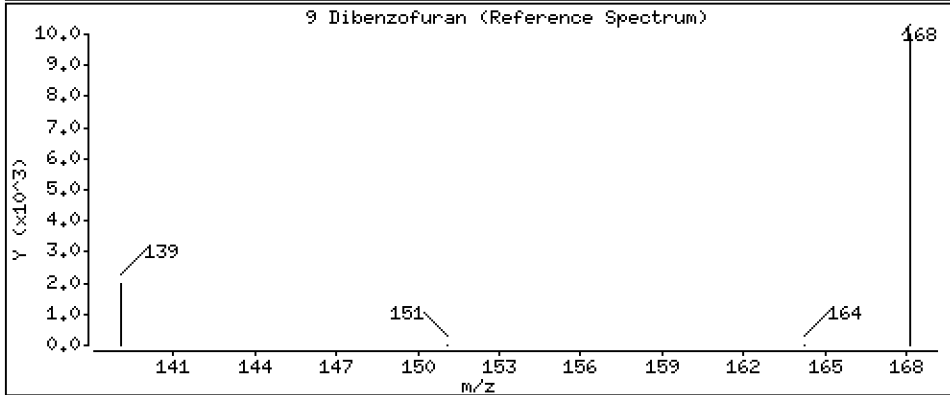
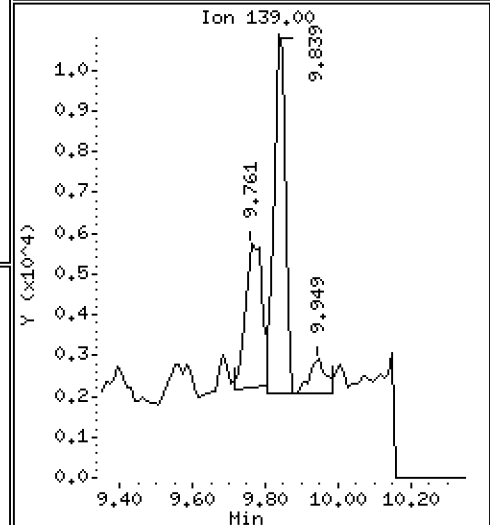
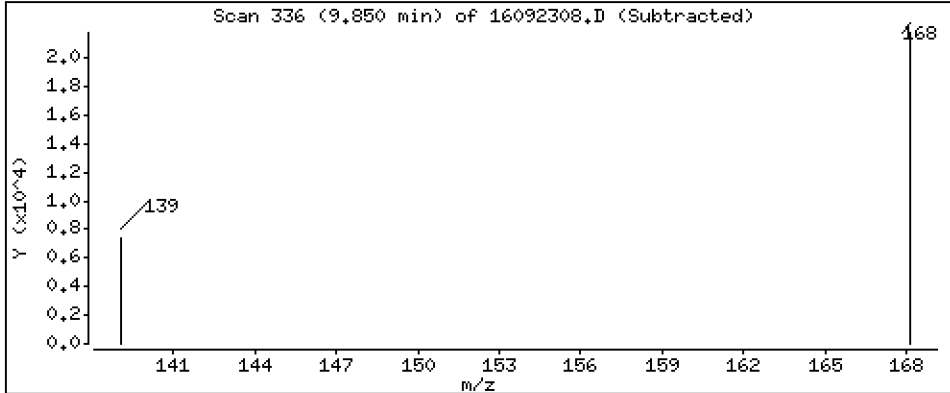
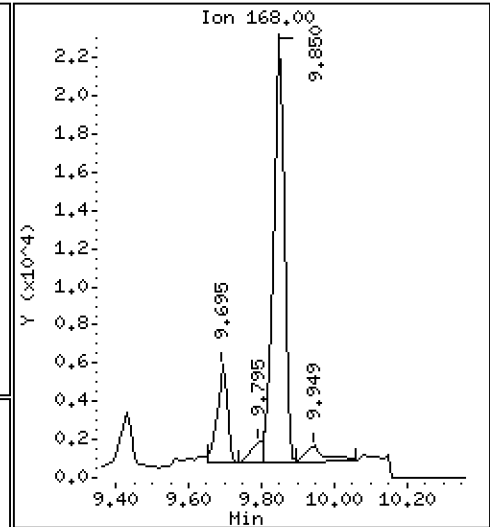
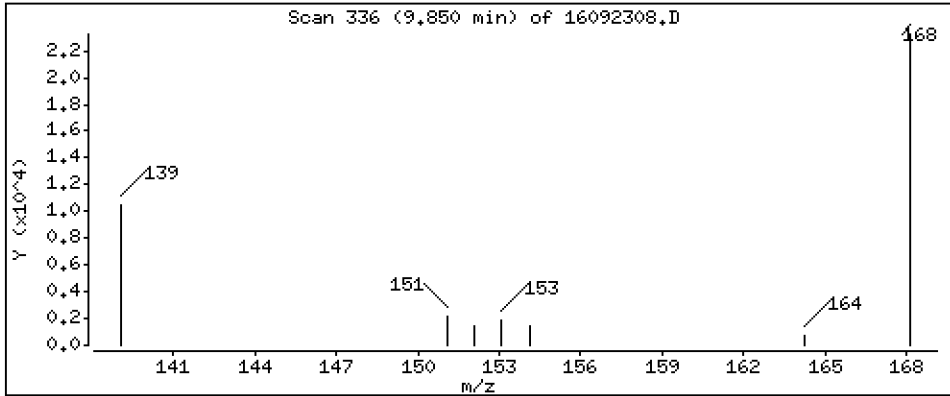
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 14,5 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

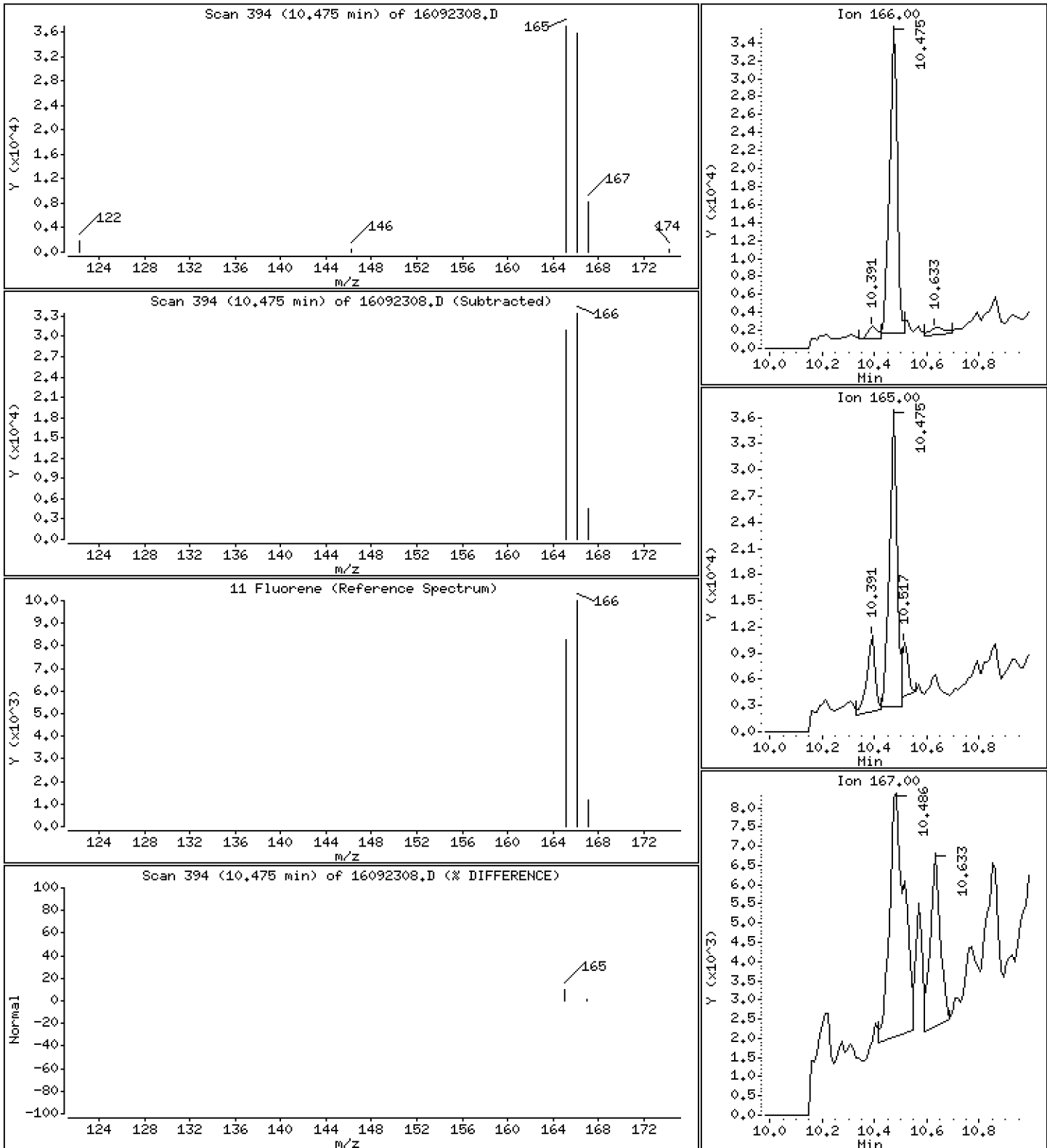
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 27,6 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

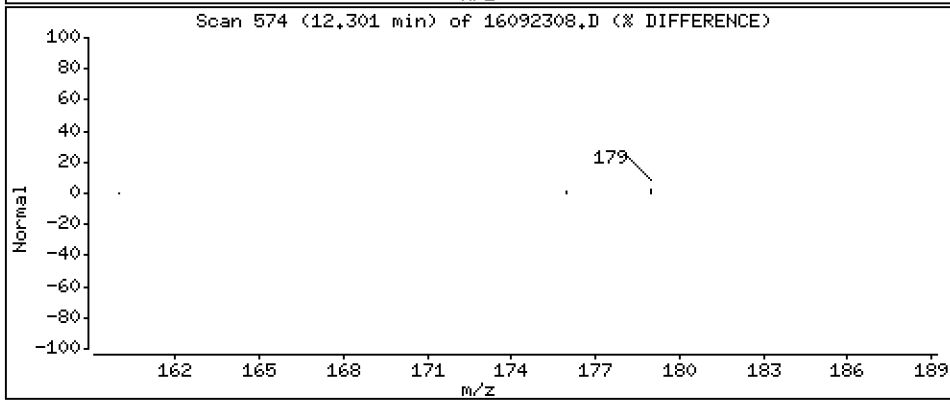
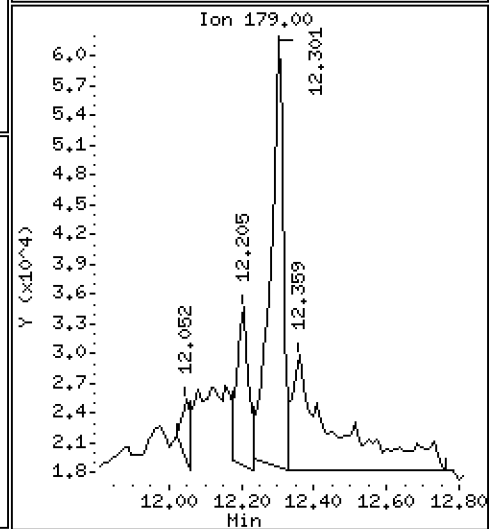
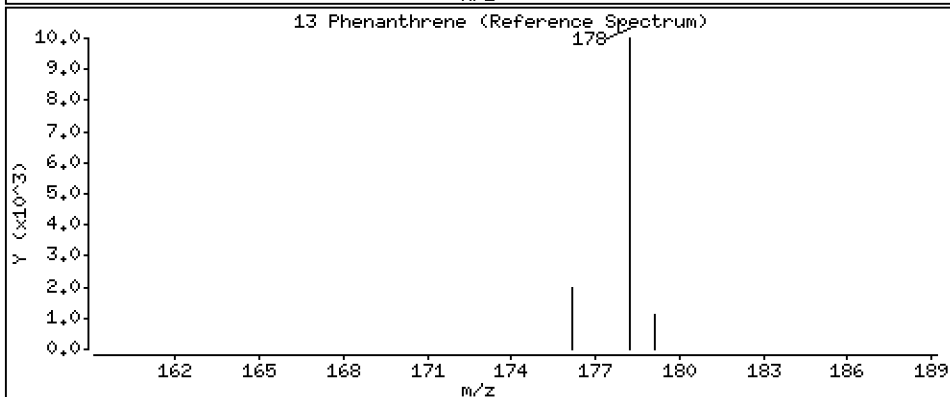
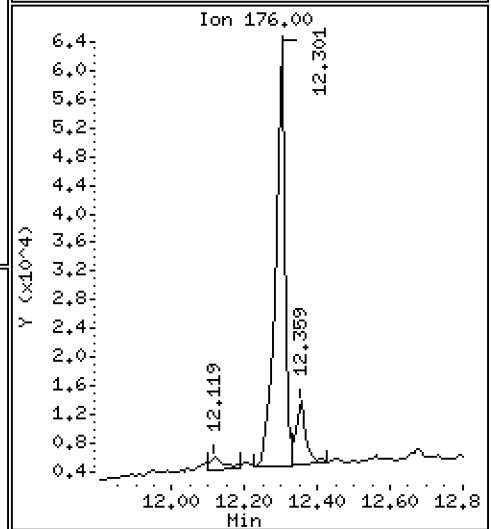
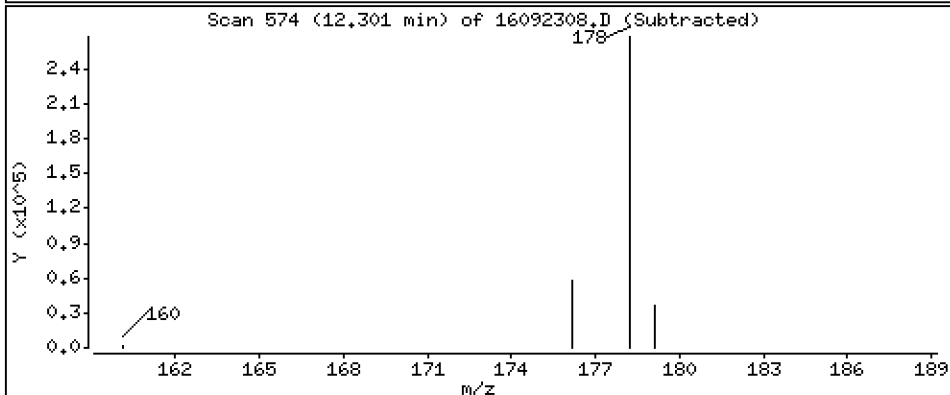
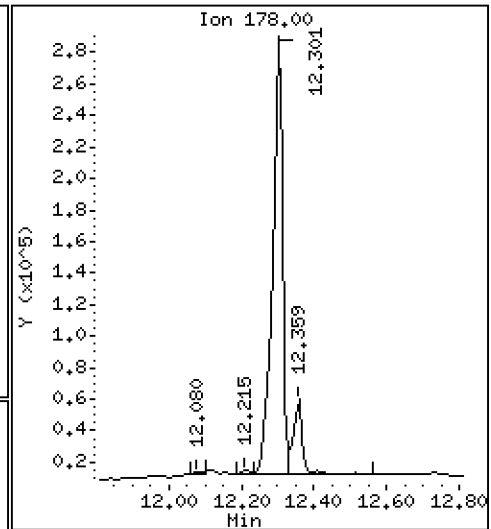
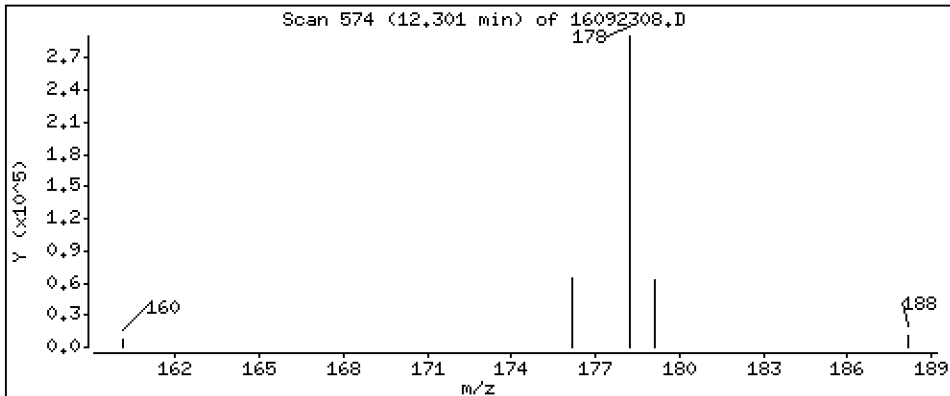
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 123 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

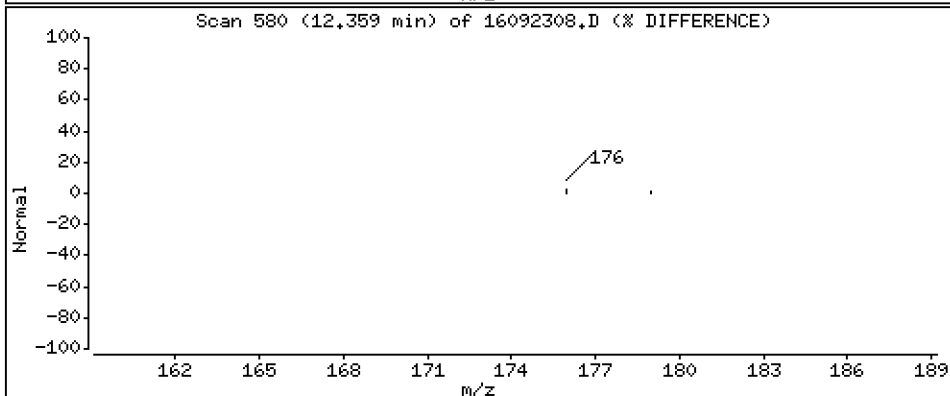
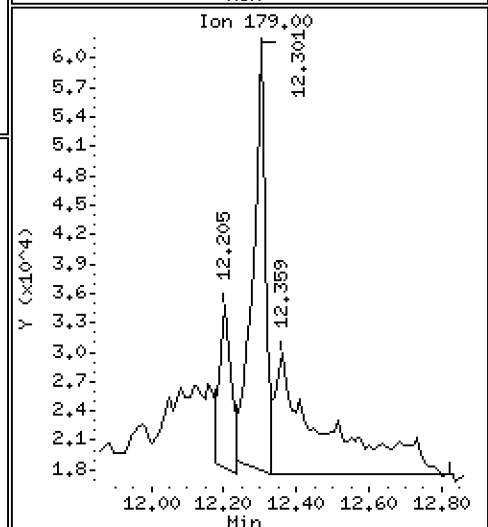
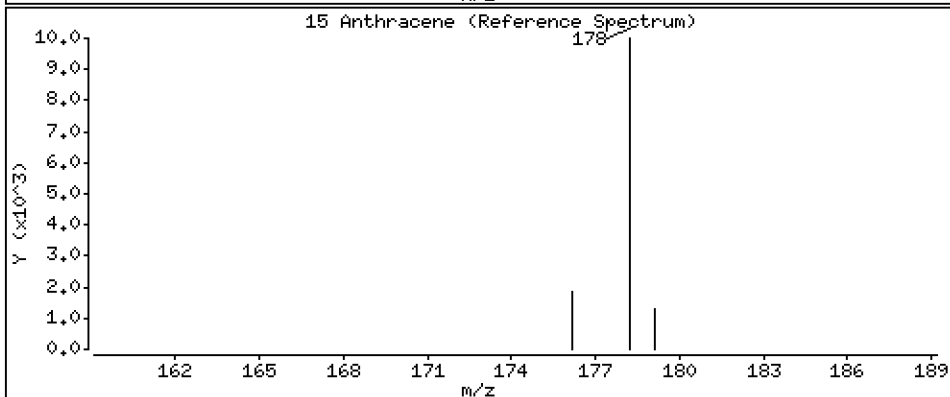
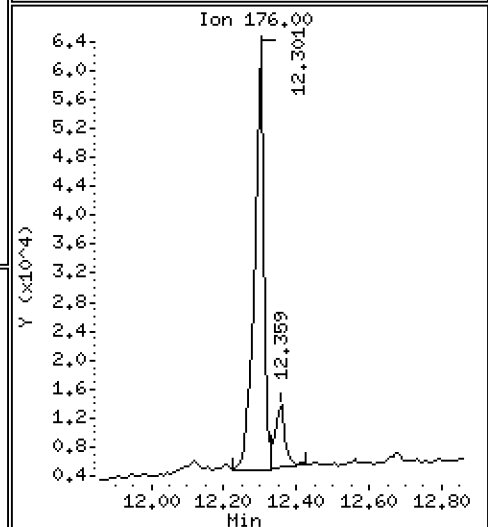
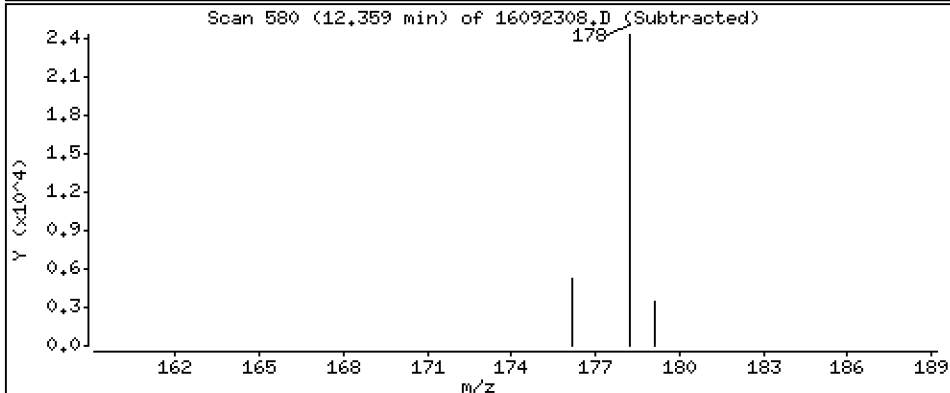
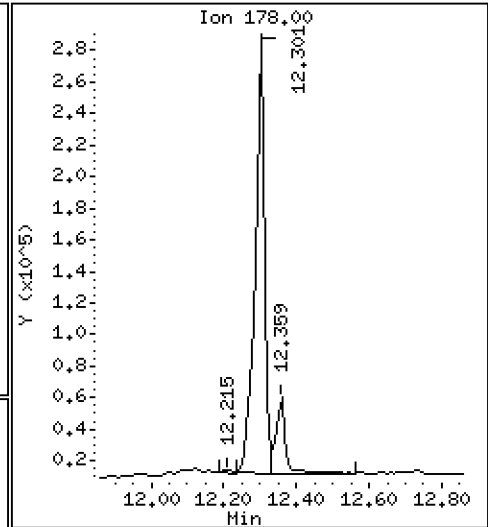
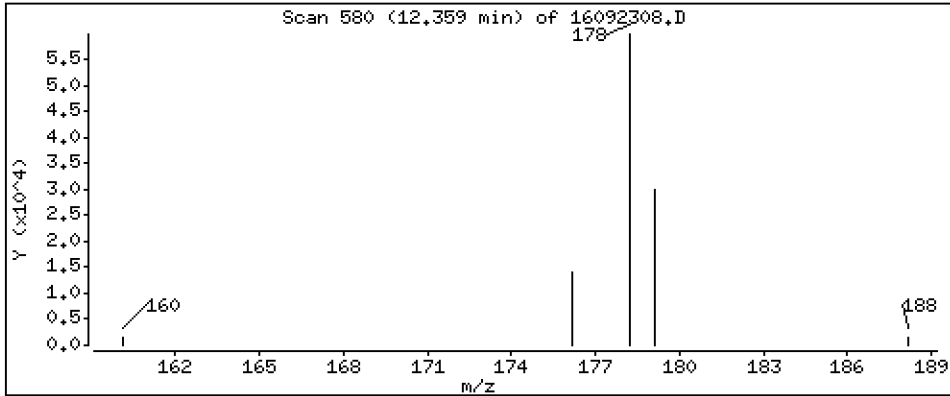
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 22.4 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

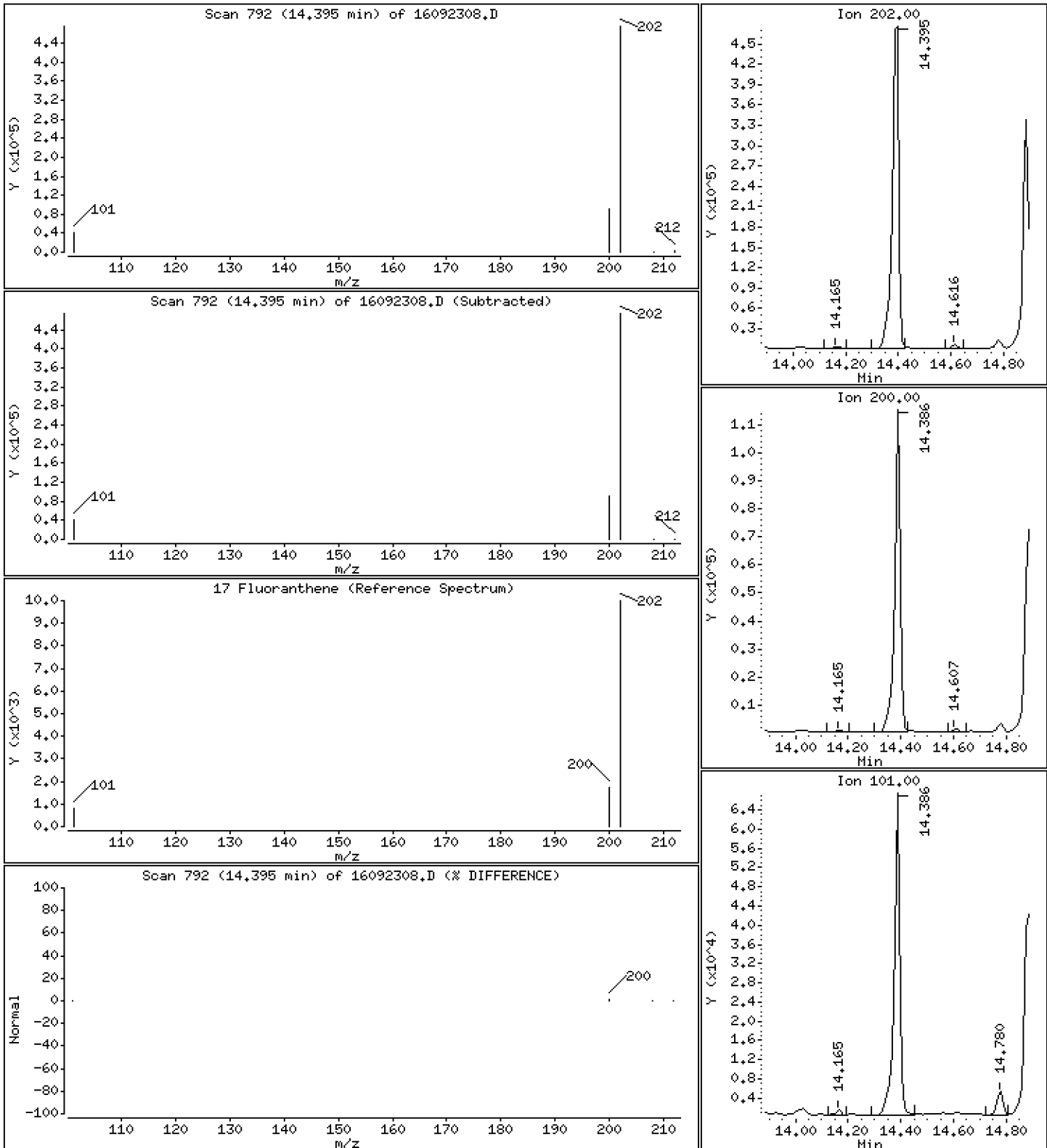
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 224 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

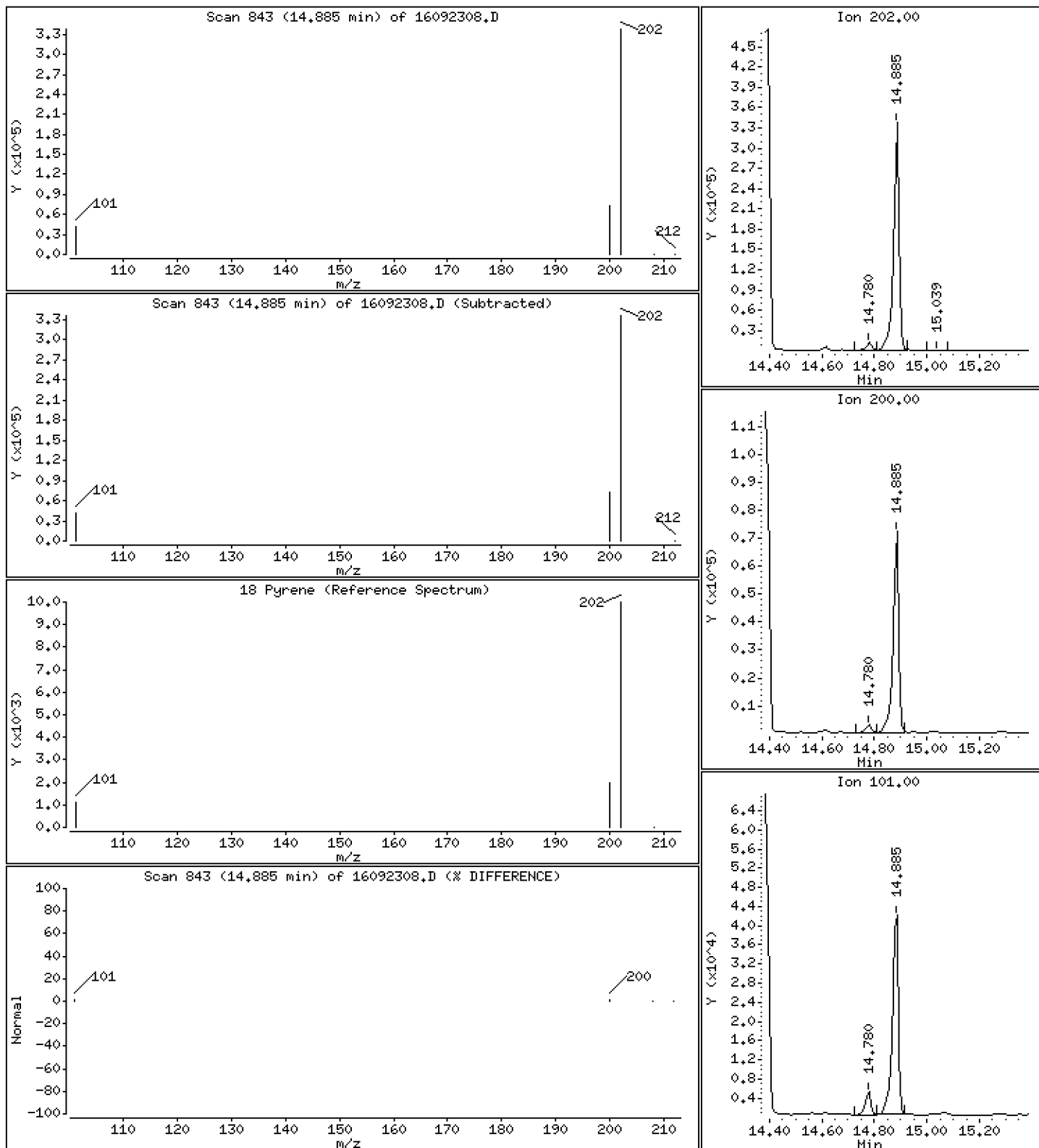
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 125 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

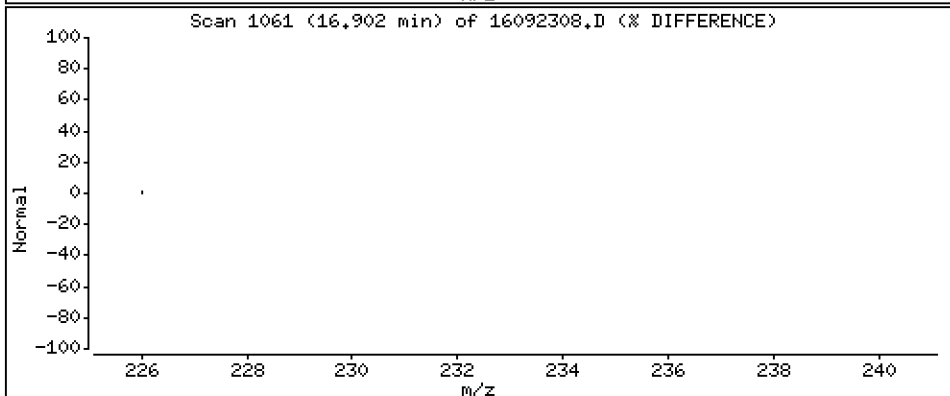
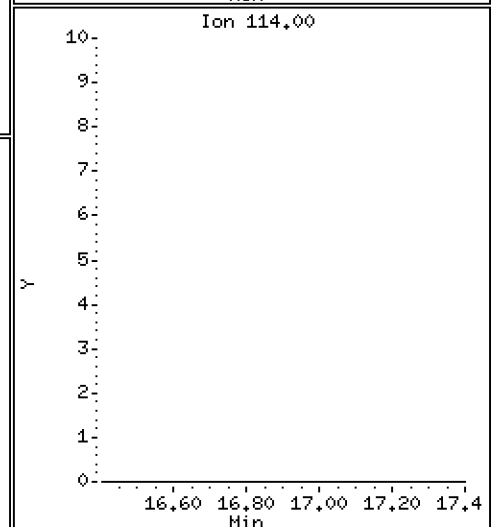
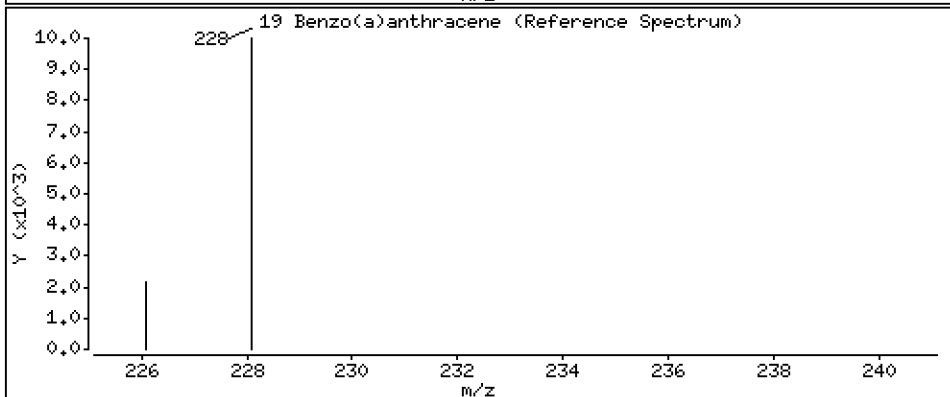
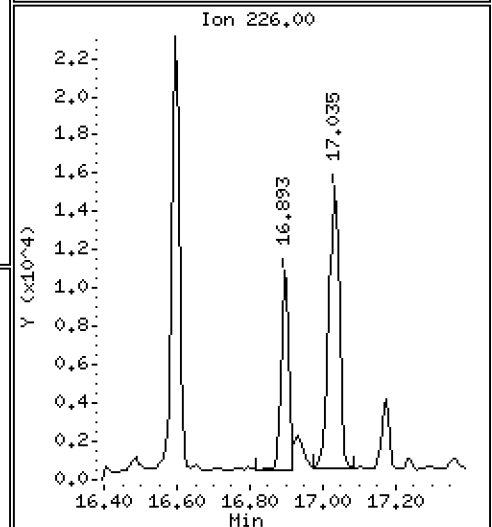
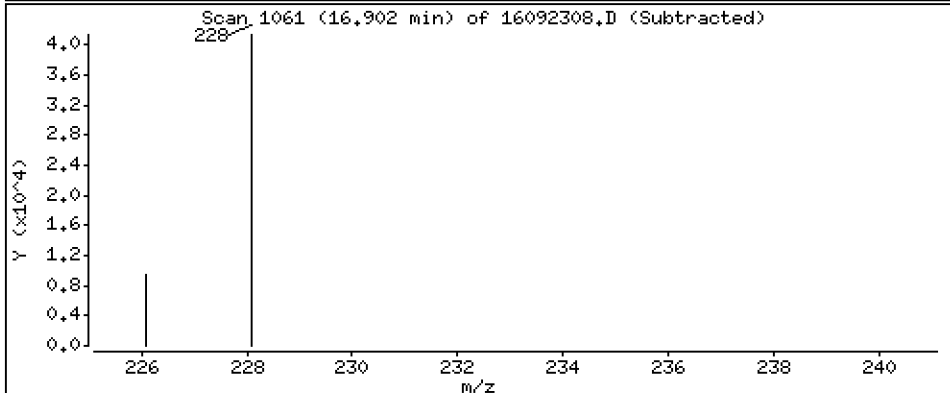
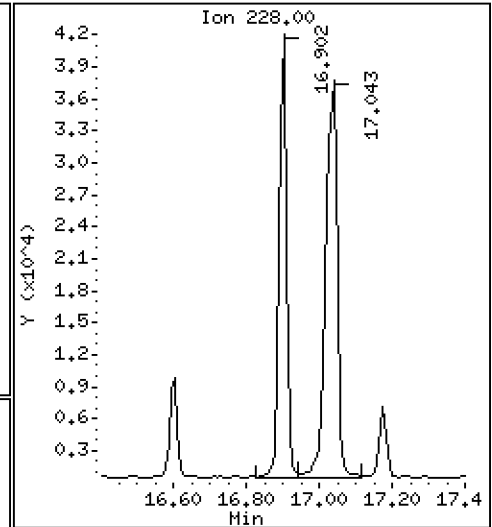
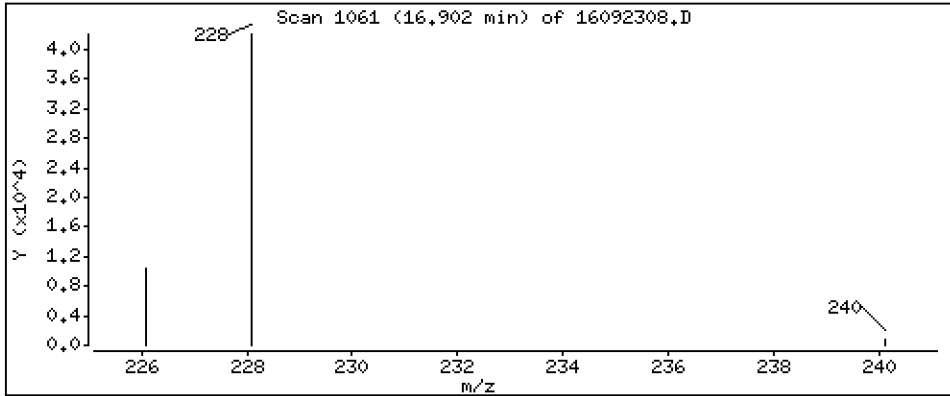
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 16,7 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

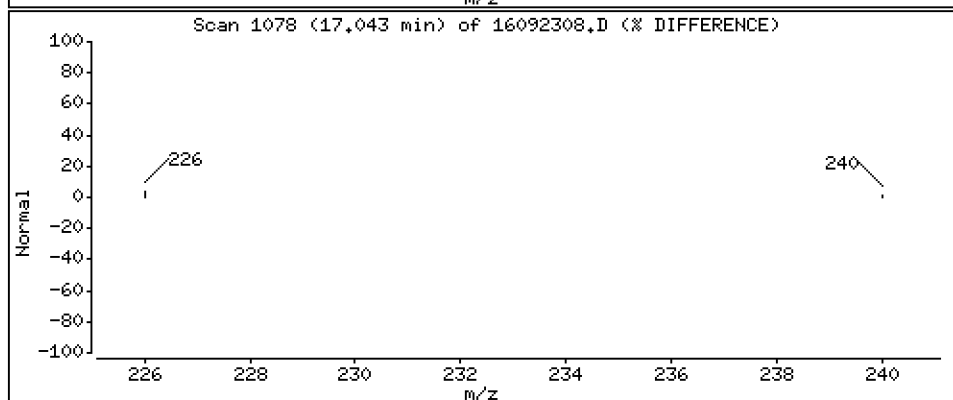
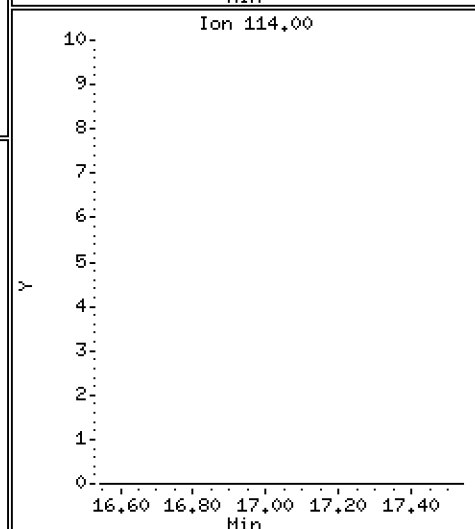
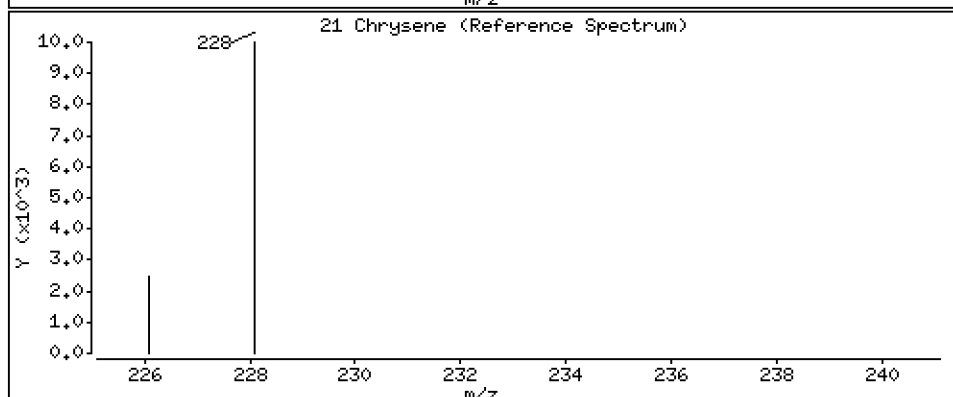
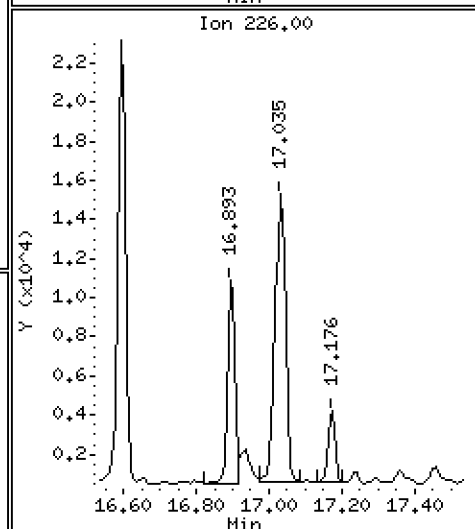
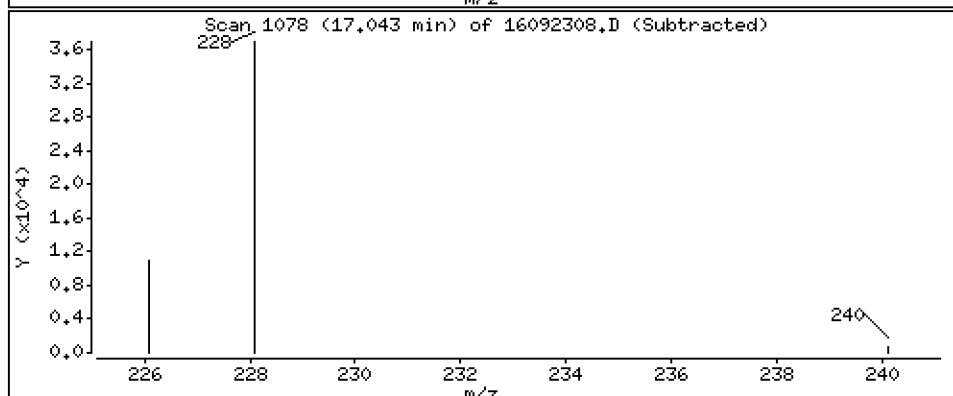
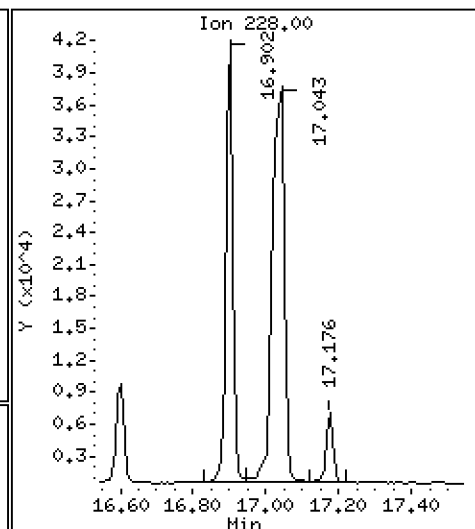
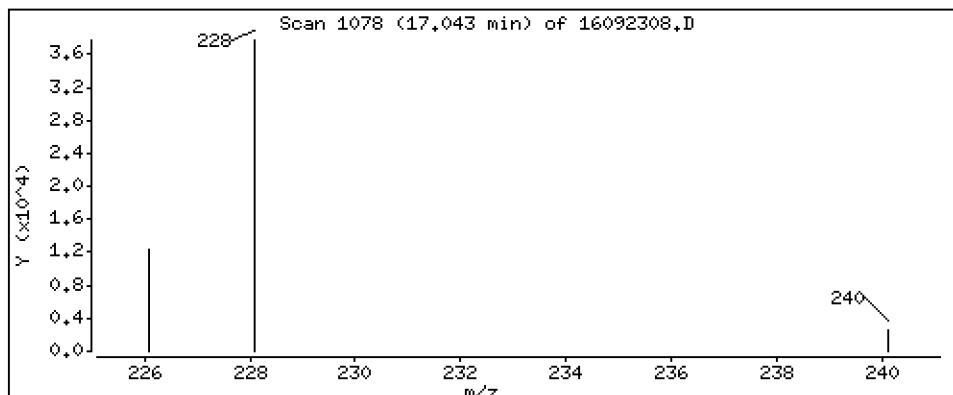
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 24,0 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

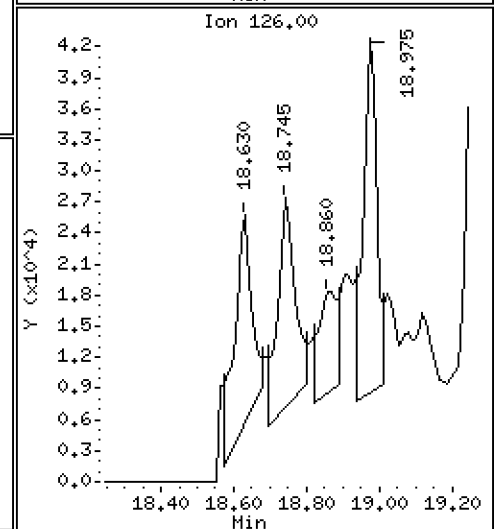
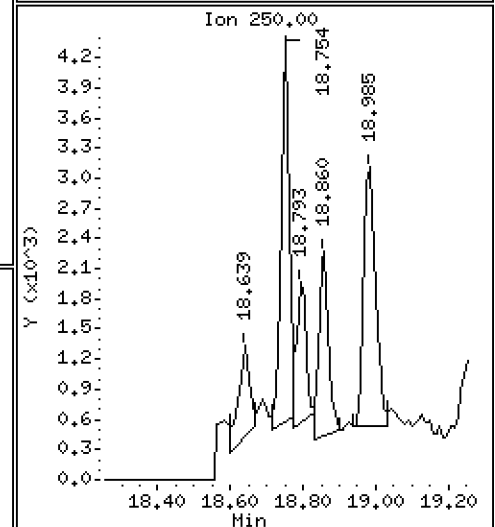
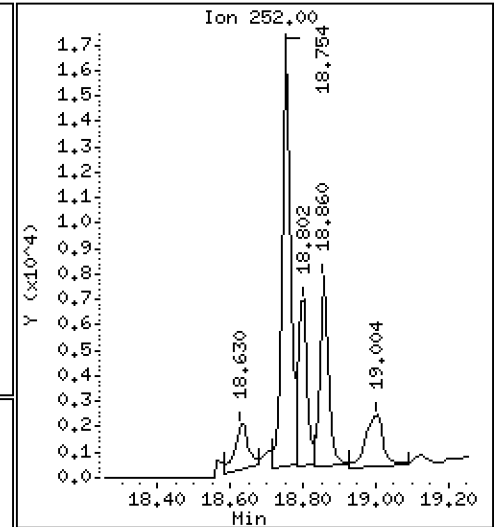
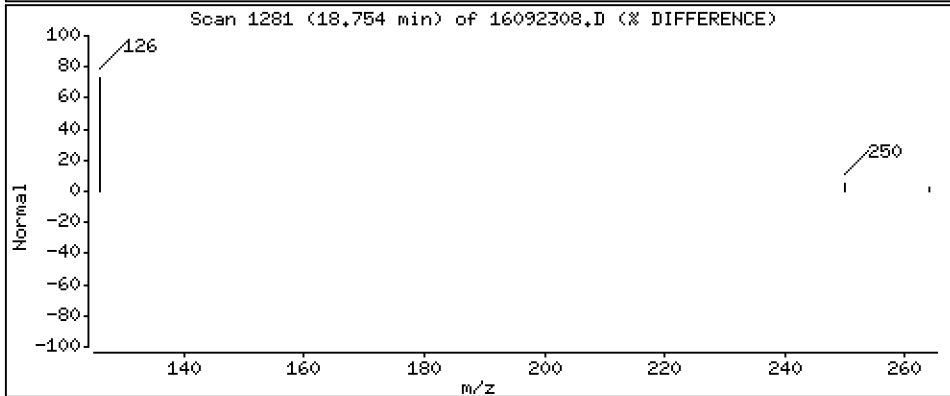
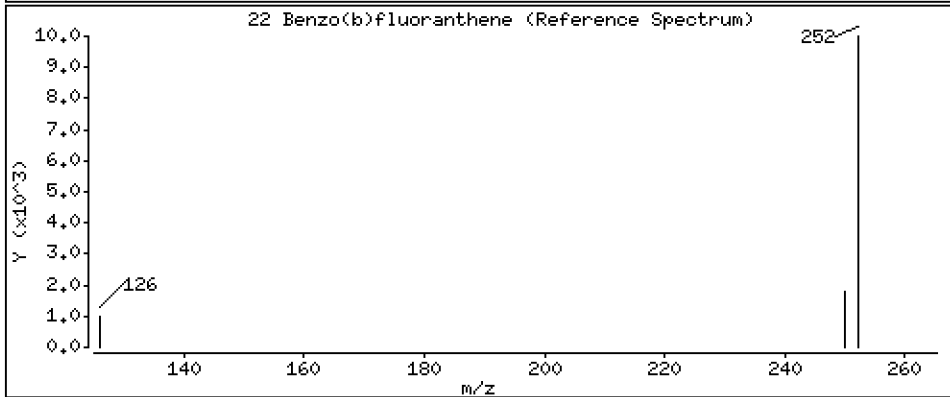
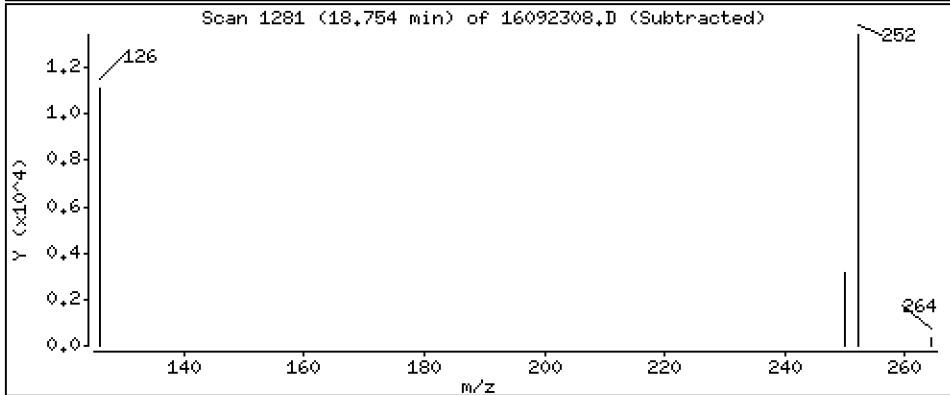
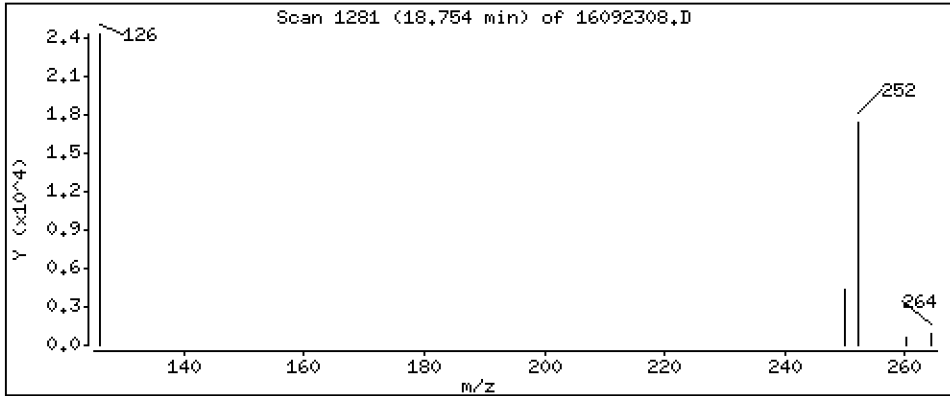
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Benzo(b)fluoranthene

Concentration: 8.39 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

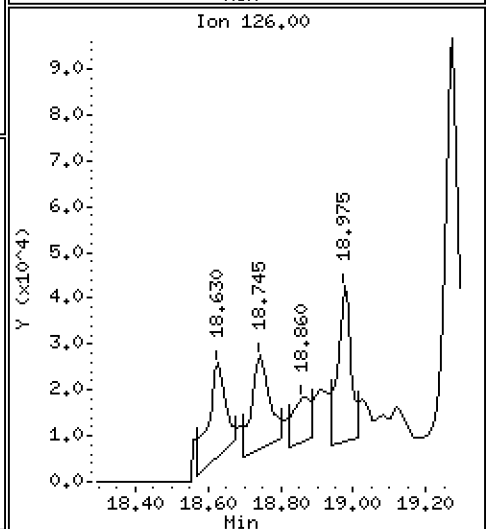
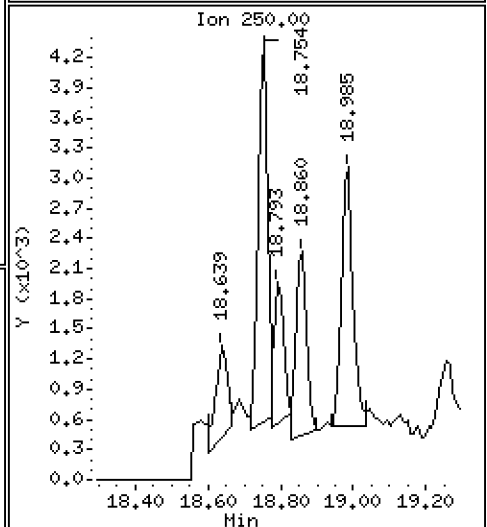
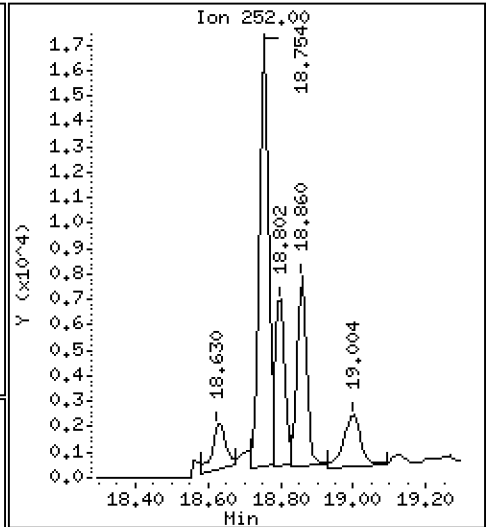
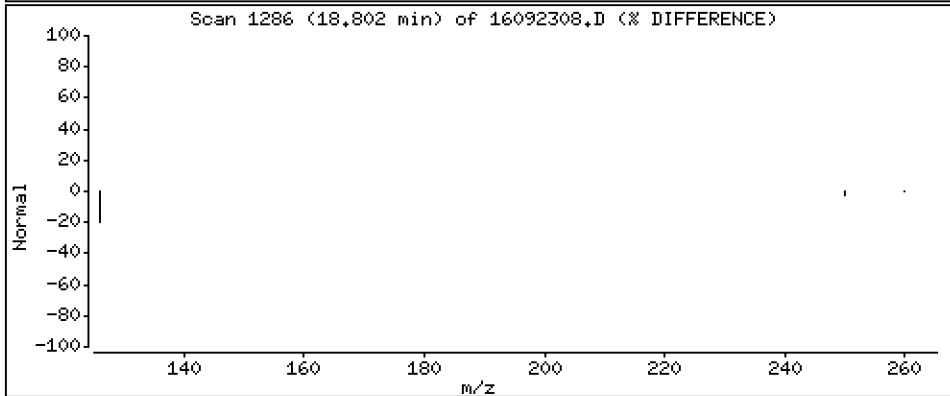
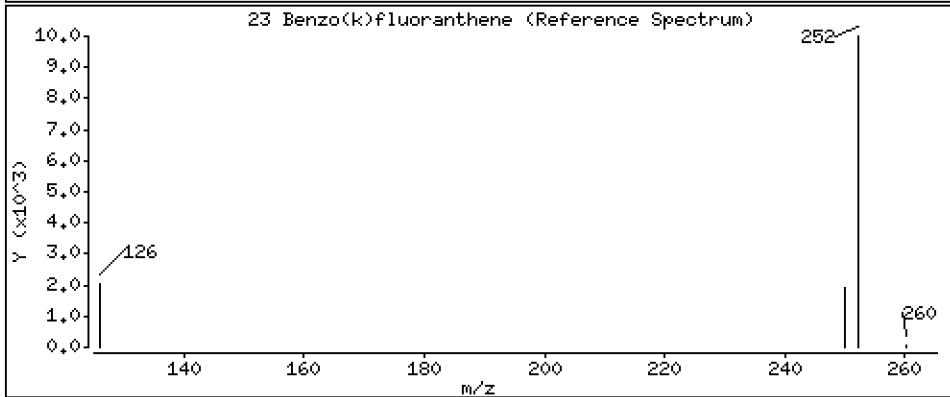
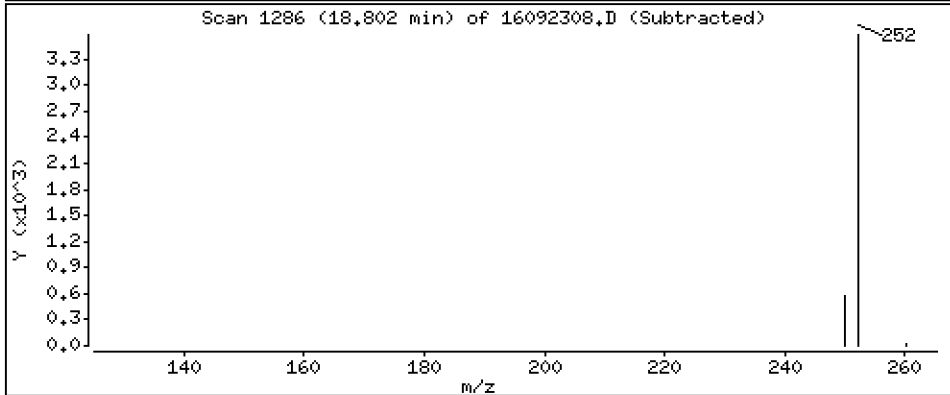
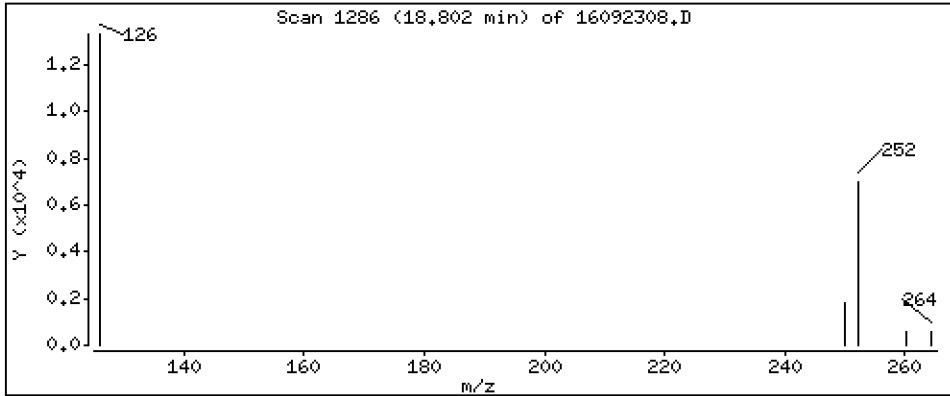
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 3,14 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

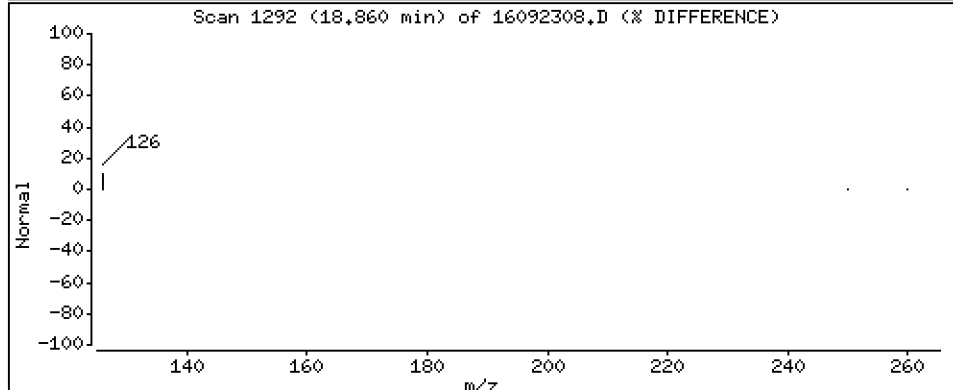
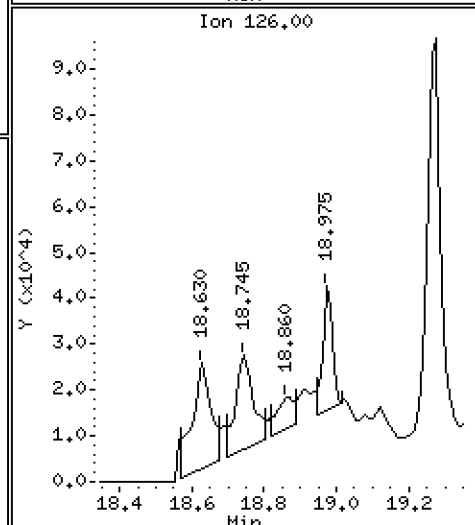
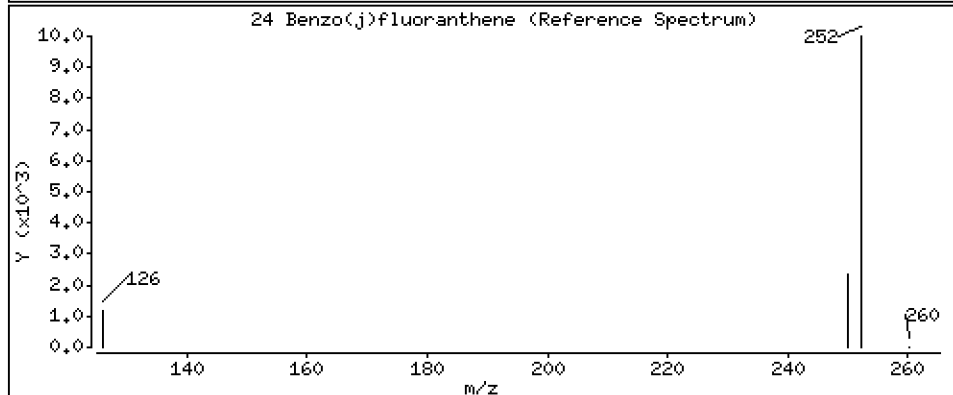
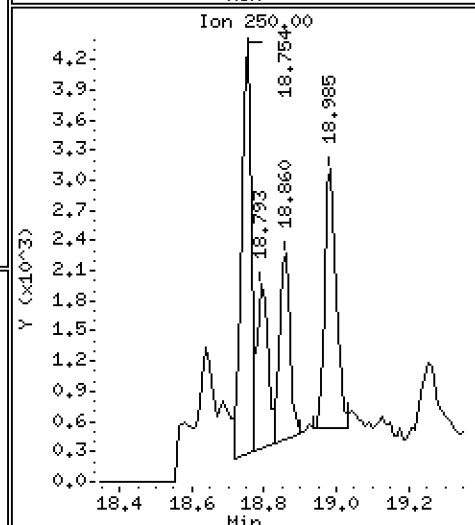
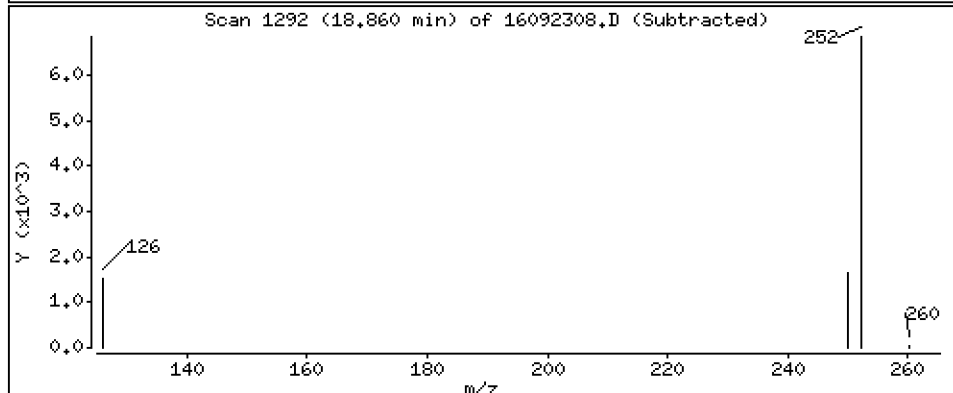
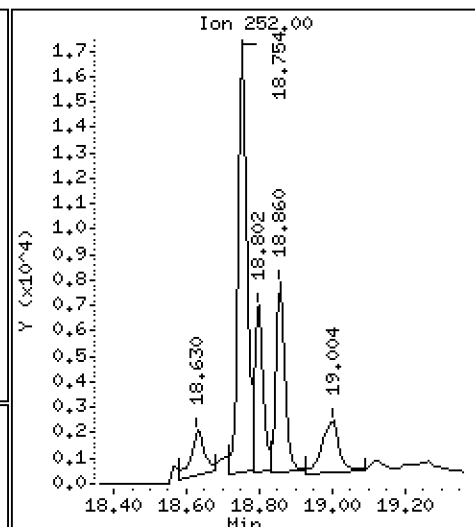
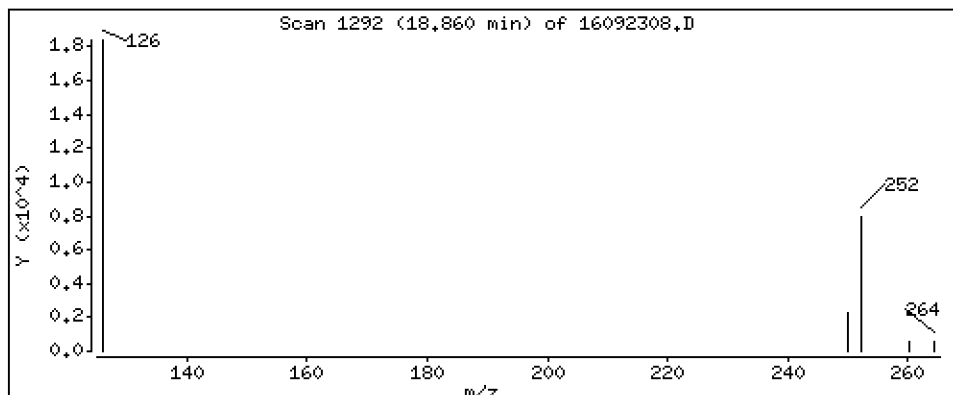
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 3,85 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

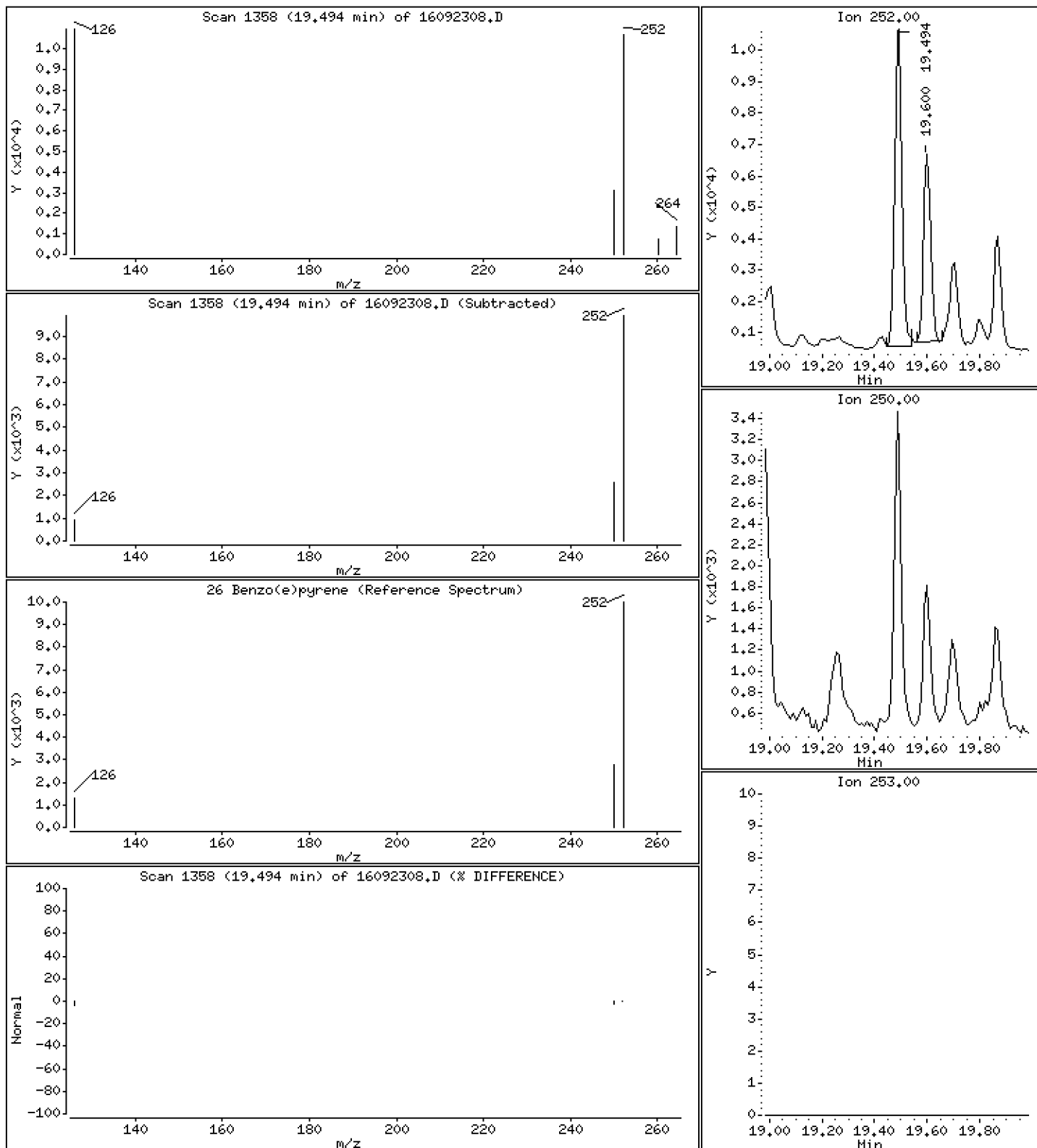
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 6,08 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 1610160-03

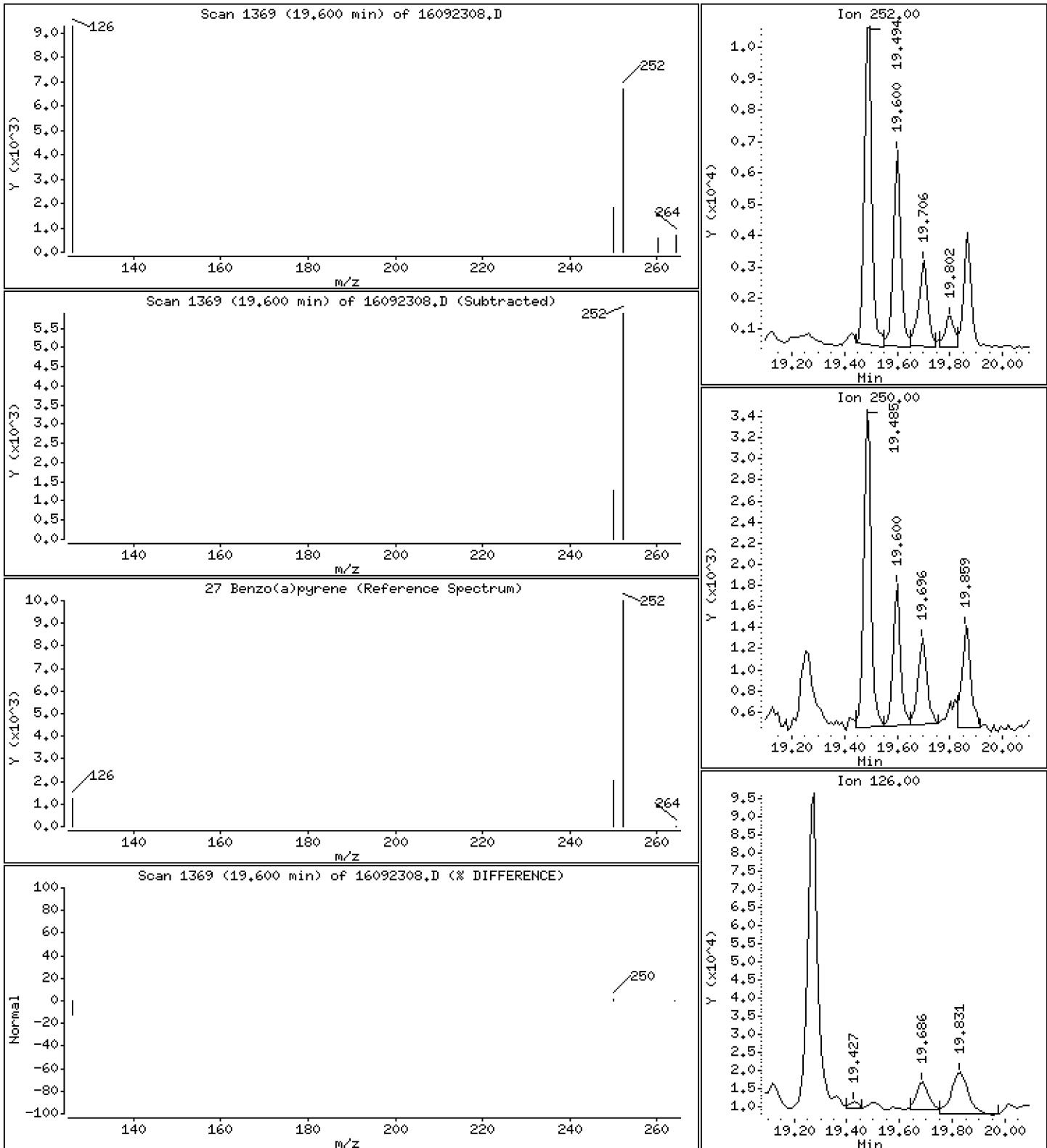
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

27 Benzo(a)pyrene

Concentration: 4.06 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

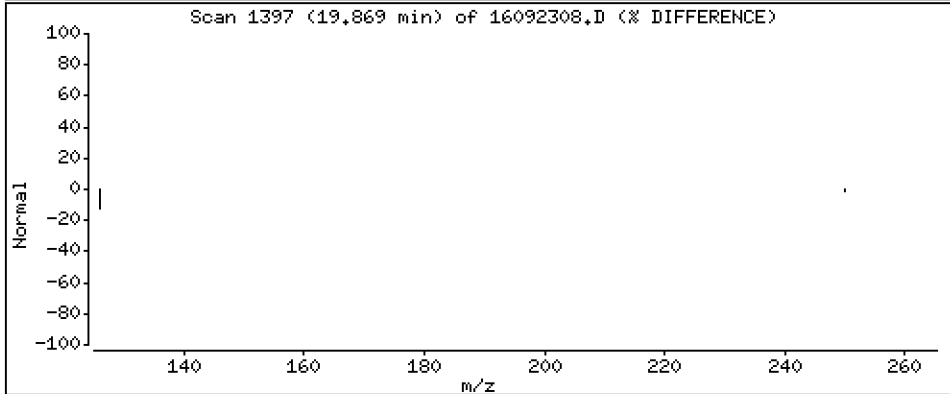
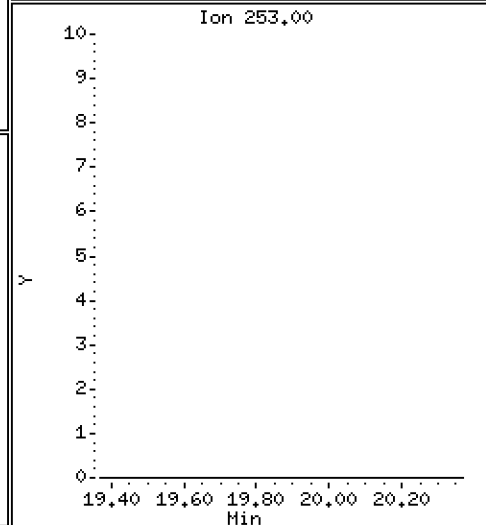
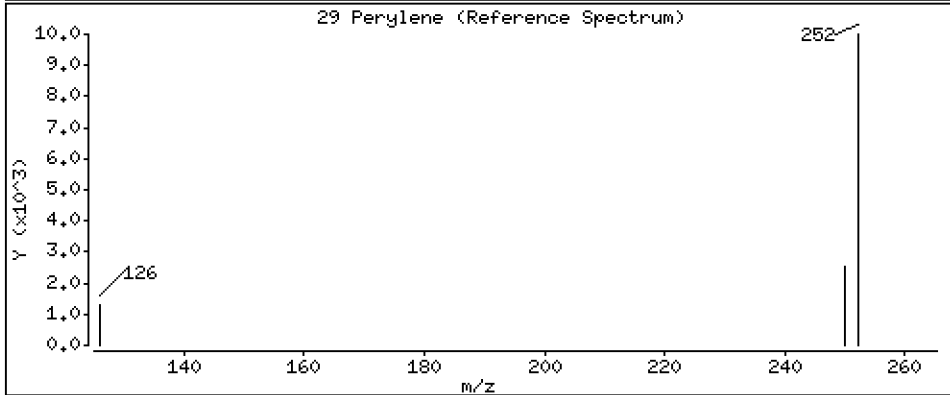
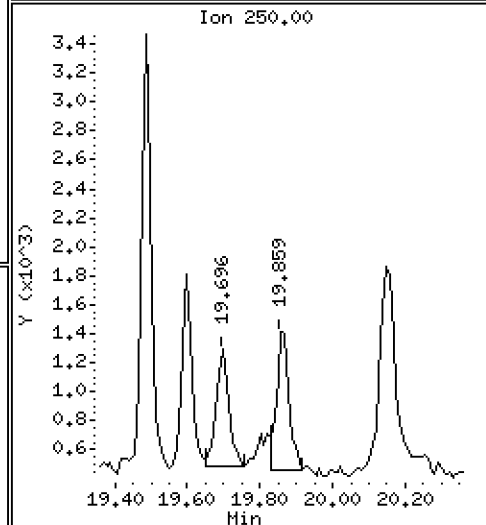
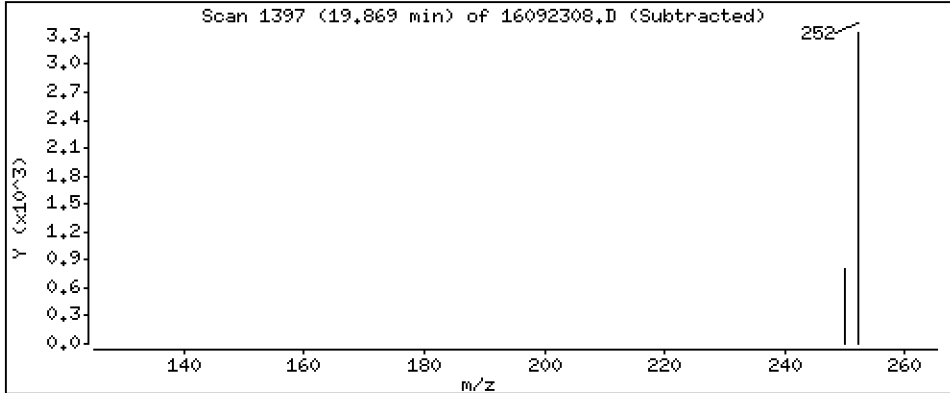
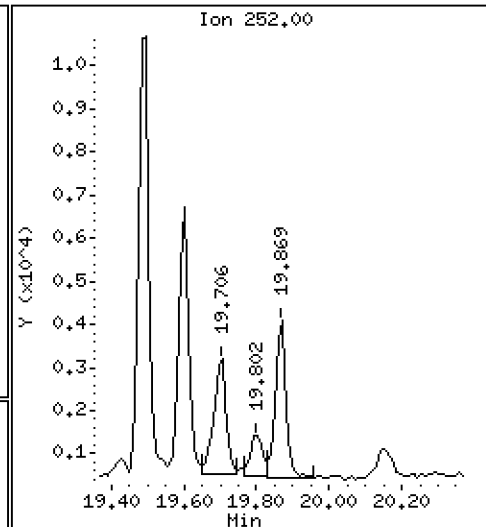
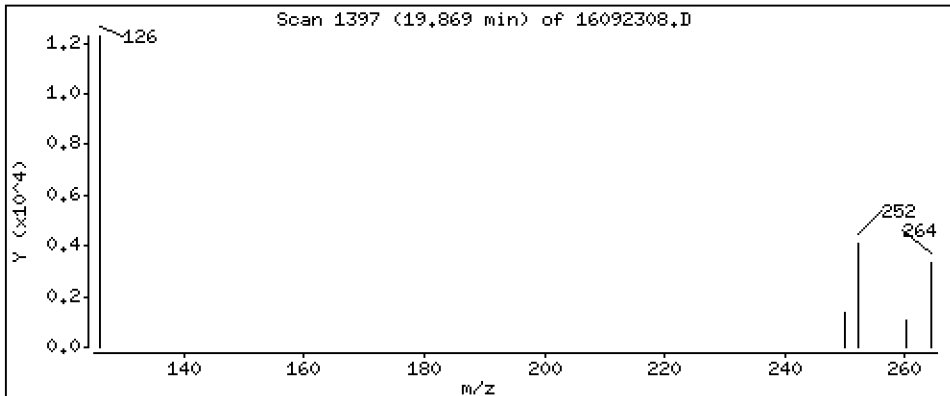
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 2,32 ng/mL

29 Perylene



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

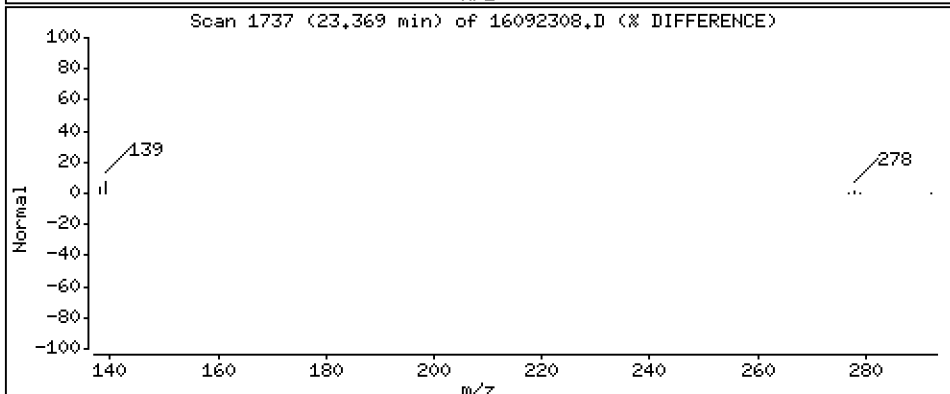
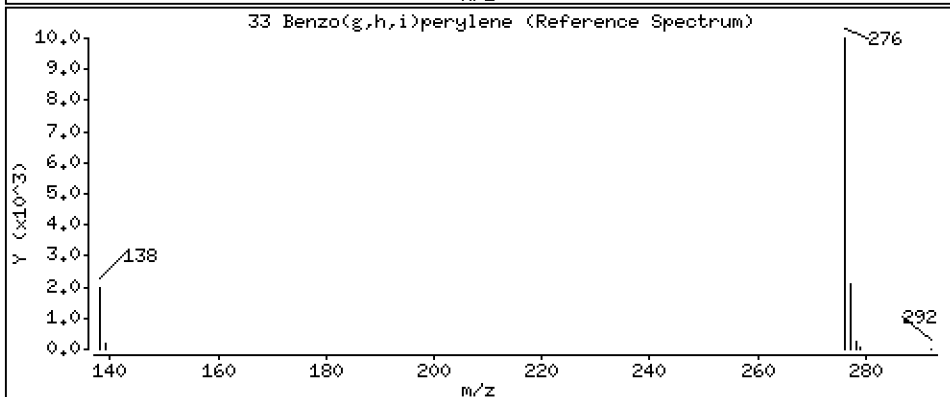
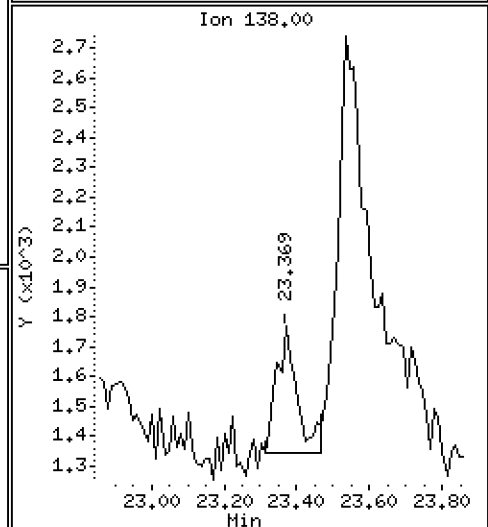
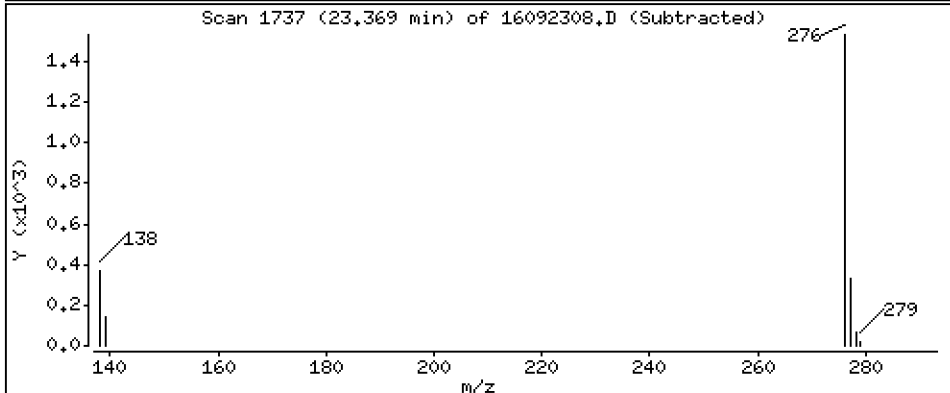
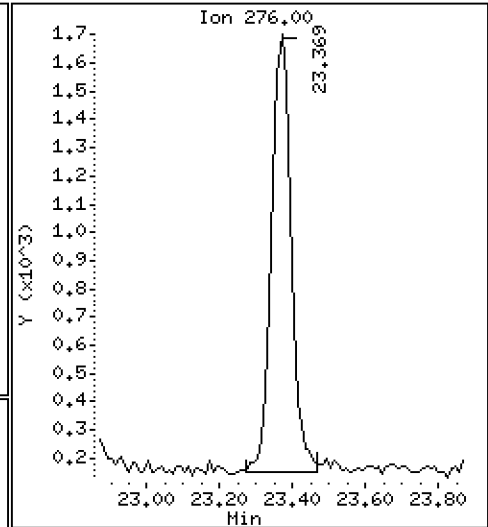
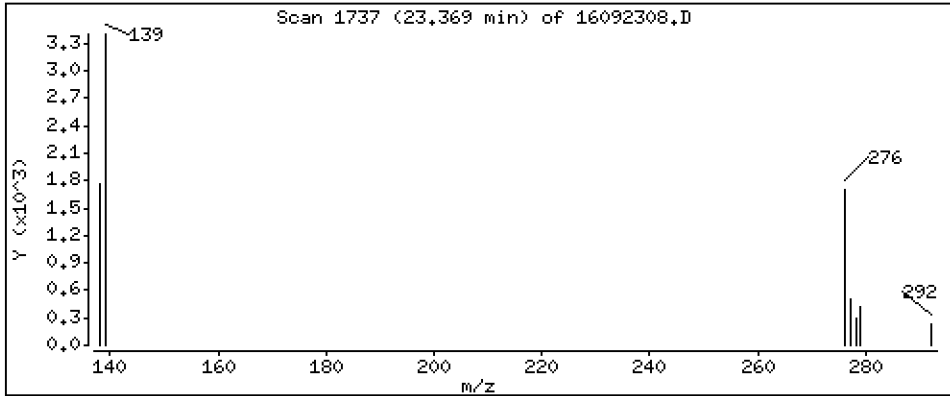
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 1,87 ng/mL

33 Benzo(g,h,i)perylene



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092308.D
Lab Smp Id: 16I0160-03
Inj Date : 23-SEP-2016 11:31
Operator : JW
Smp Info : 16I0160-03
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m
Meth Date : 26-Sep-2016 07:53 nt11.i
Cal Date : 22-SEP-2016 11:45
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 4.14
Processing Host: AUTOSPECDATA02

Inst ID: nt11.i

Compound Sublist: PEMDNF.sub

Compounds	QUANT	SIG	CONCENTRATIONS					
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	572871	200.000	
2 Naphthalene	128		6.613	6.623	(1.006)	239867	72.9680	73.0
\$ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	272325	149.740	150
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	72240	31.9307	31.9
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	41324	20.0669	20.1
6 Acenaphthylene	152		9.429	9.440	(0.984)	16810	5.15056	5.15
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	351011	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	72806	33.4932	33.5
9 Dibenzofuran	168		9.849	9.860	(1.028)	45653	14.4922	14.5
\$ 10 Fluorene-d10	174		10.422	10.432	(1.087)	2004	1.12704	1.13 (M)
11 Fluorene	166		10.475	10.485	(1.093)	69317	27.5760	27.6
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	631287	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	522653	123.246	123
\$ 14 Anthracene-d10	188		12.320	12.330	(1.005)	38872	11.4014	11.4
15 Anthracene	178		12.359	12.358	(1.008)	92511	22.3627	22.4
\$ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	620062	202.046	202
17 Fluoranthene	202		14.395	14.395	(1.174)	839909	223.692	224
18 Pyrene	202		14.885	14.885	(0.876)	509834	124.617	125
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	57352	16.7318	16.7
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	528076	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	86330	23.9764	24.0
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	29175	8.39188	8.39
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	12160	3.13980	3.14
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	13093	3.85344	3.85
\$ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	269944	80.8504	80.9
26 Benzo(e)pyrene	252		19.494	19.484	(0.984)	20280	6.07751	6.08
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	12917	4.05766	4.06
* 28 Perylene-d12	264		19.801	19.801	(1.000)	651539	200.000	
29 Perylene	252		19.869	19.868	(1.003)	7572	2.32272	2.32
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	350705	163.757	164
31 Dibenzo(a,h)anthracene	278					Compound Not Detected.		
32 Indeno(1,2,3-cd)pyrene	276					Compound Not Detected.		
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	5688	1.86654	1.87

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092308.D
 Lab Smp Id: 16I0160-03
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	572871	8.63
7 Acenaphthene-d10	297518	148759	595036	351011	17.98
12 Phenanthrene-d10	522042	261021	1044084	631287	20.93
20 Chrysene-d12	389499	194750	778998	528076	35.58
28 Perylene-d12	430626	215313	861252	651539	51.30

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092308.D

Lab ID: 16I0160-03

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 11:31

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

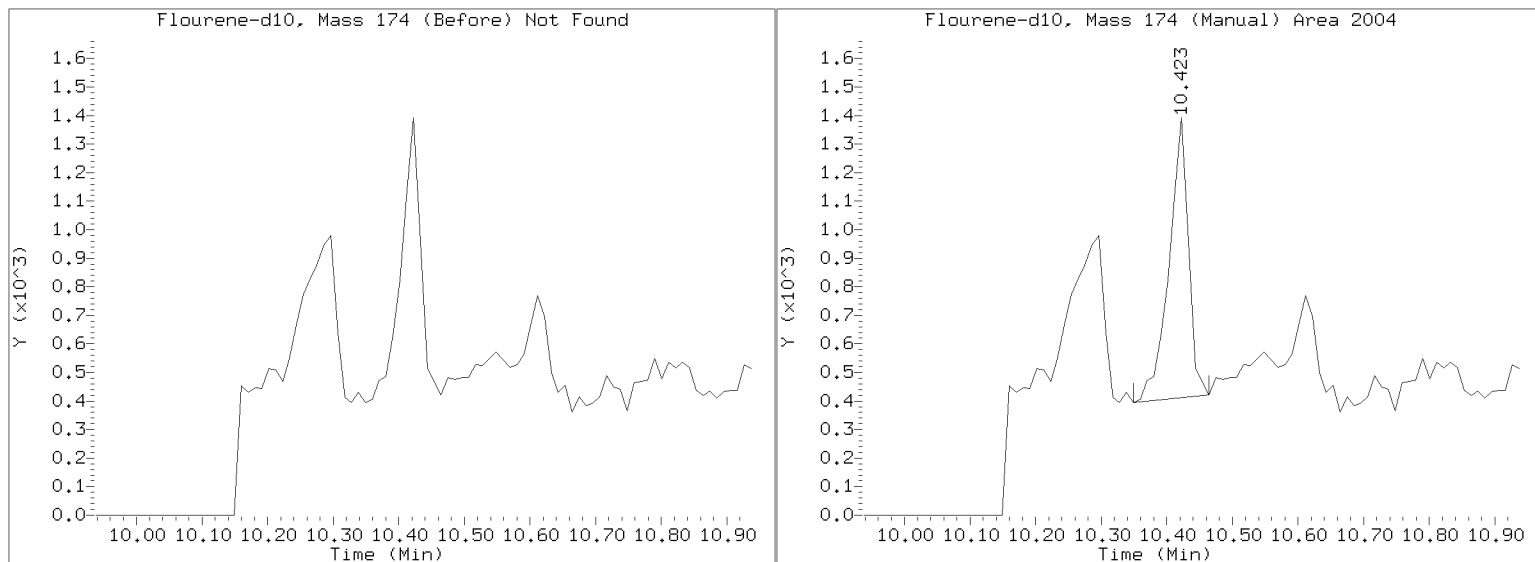
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092308.D

Injection Date: 23-SEP-2016 11:31

Lab ID:16I0160-03 Client ID:

Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>1610160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Matrix:	<u>Tissue</u>	Laboratory ID:	<u>1610160-01</u>
Sampled:	<u>09/09/16 10:01</u>	Prepared:	<u>09/10/16 11:10</u>
Solids:		Preparation:	<u>EPA 3550C (Ultrasonic)</u>
Batch:	<u>BEI0260</u>	Sequence:	<u>SEI0321</u>
Instrument:	<u>NT11</u>	Column:	<u>RXi-17Sil-MS</u>
		File ID:	<u>16092307.D</u>
		Analyzed:	<u>09/23/16 11:01</u>
		Initial/Final:	<u>0.886 g / 0.1 mL</u>
		Calibration:	<u>ZI00066</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	3.80	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	2.42	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	3.54		1.13	1.13
86-73-7	Fluorene	1	3.34		1.13	1.13
85-01-8	Phenanthrene	1	13.9		1.13	1.13
120-12-7	Anthracene	1	2.16		1.13	1.13
206-44-0	Fluoranthene	1	18.1		1.13	1.13
129-00-0	Pyrene	1	10.4		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.31		1.13	1.13
218-01-9	Chrysene	1	1.78		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzofluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	12.8	37.7	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	14.6	43.2	30 - 160	
Fluoranthene-d10	33.860	17.1	50.6	30 - 160	
Fluorene-d10	21.163	0.118	0.556	30 - 160	*
Anthracene-d10	21.163	1.50	7.08	30 - 160	*
Benzo(e)pyrene-d12	21.163	8.91	42.1	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092307.D

Date : 23-SEP-2016 11:01

Client ID:

Sample Info: 1610160-01

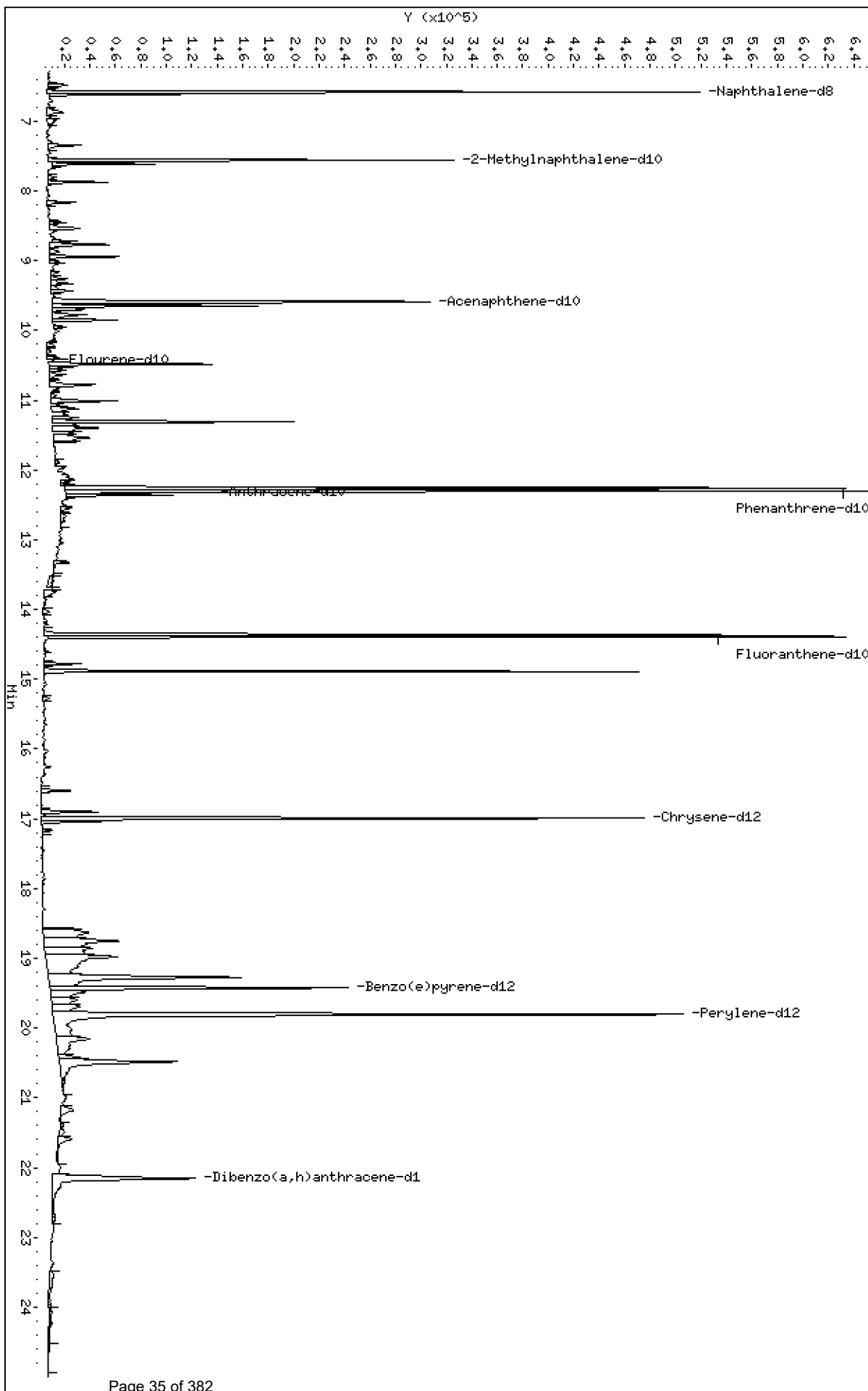
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160923.16\16092307.D



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

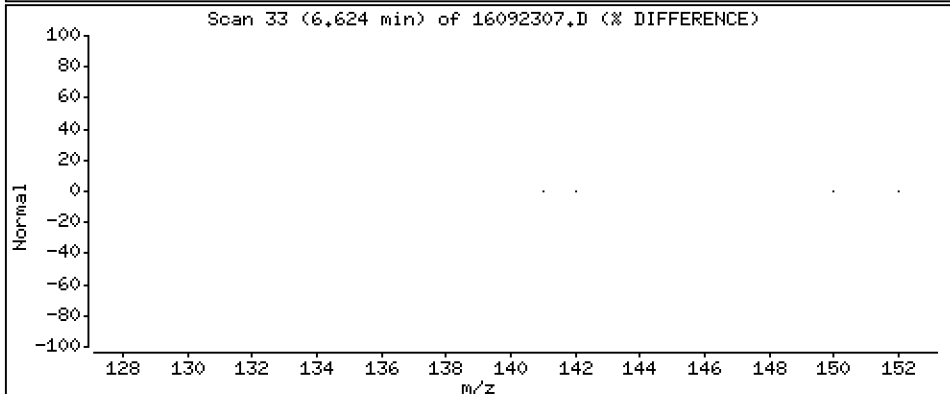
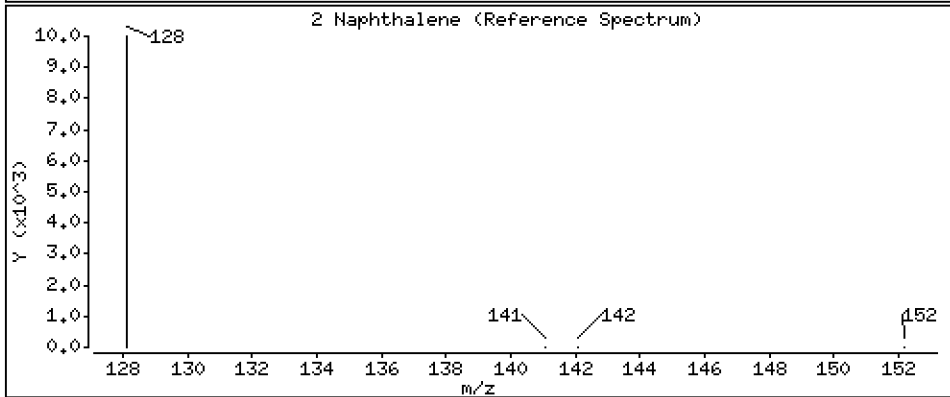
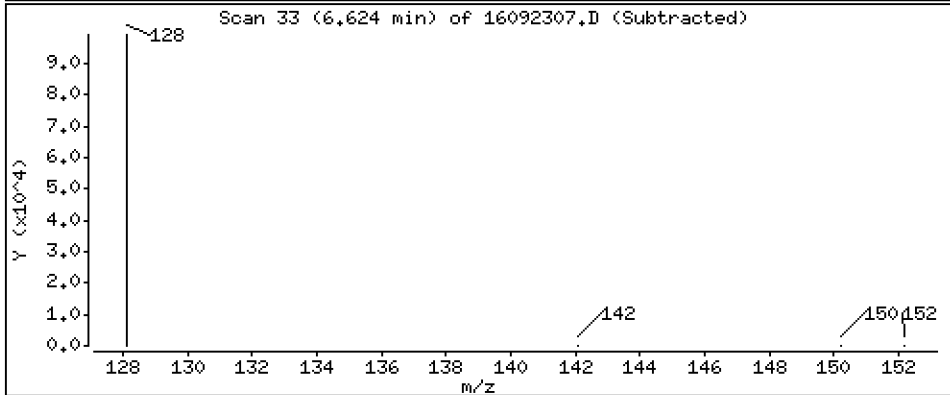
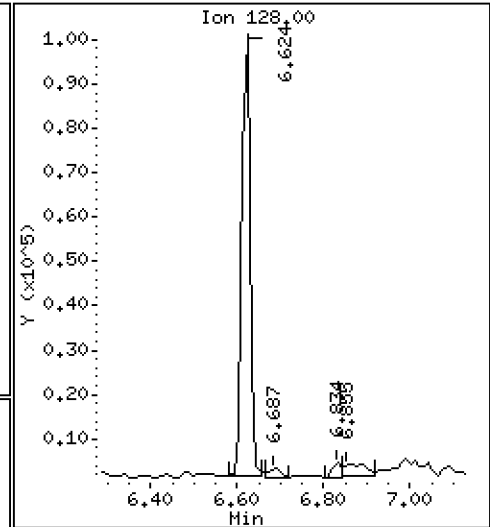
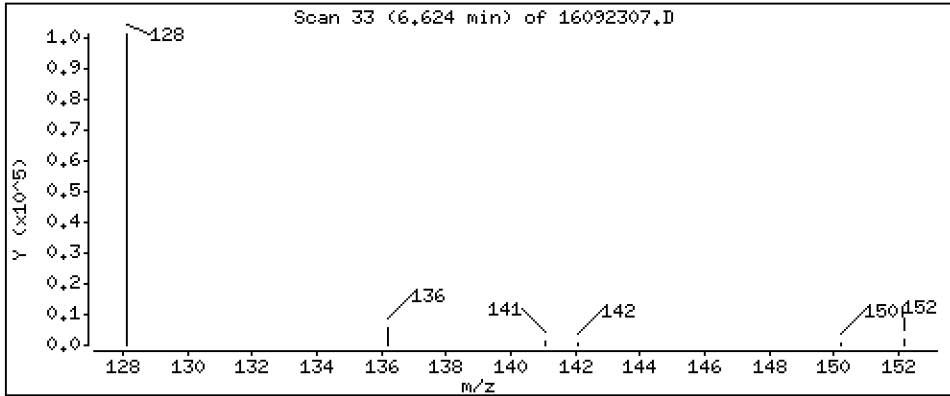
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 33,6 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

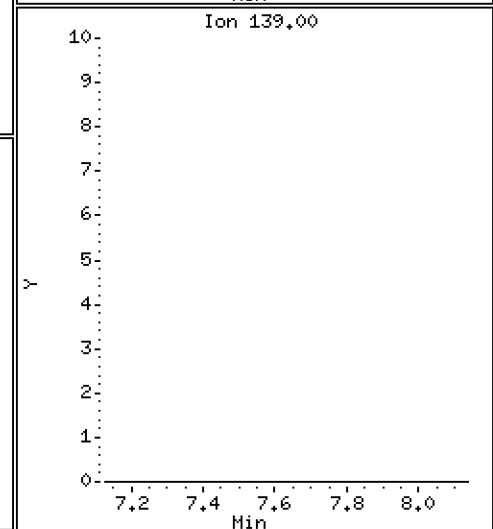
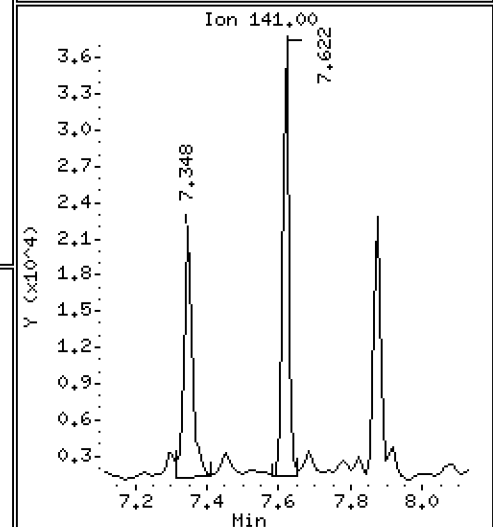
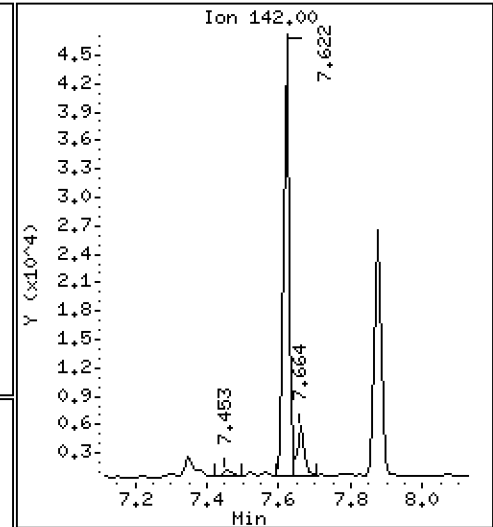
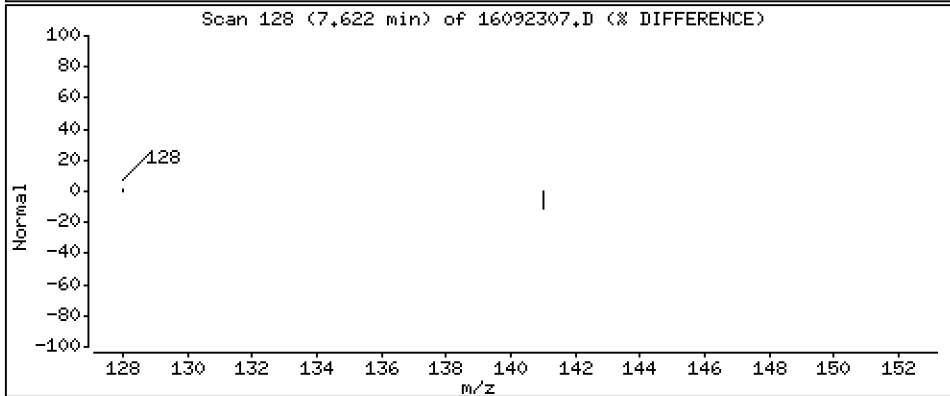
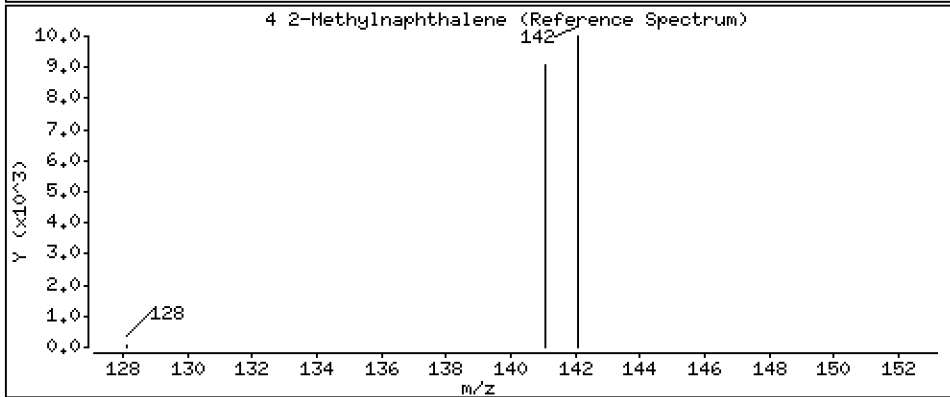
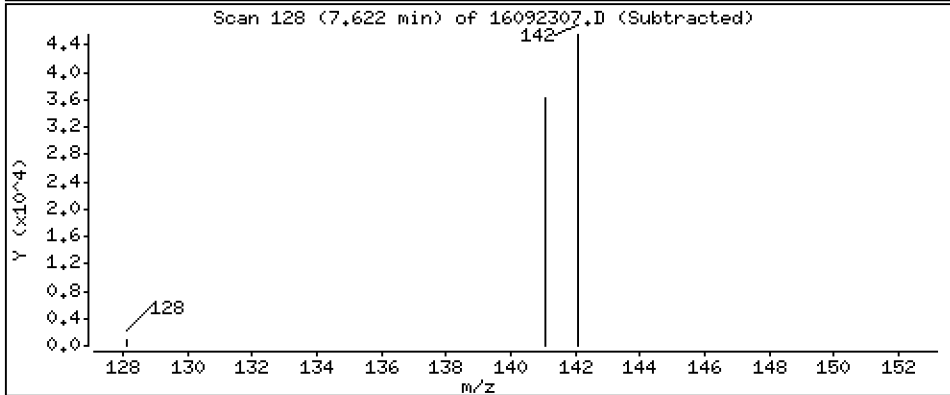
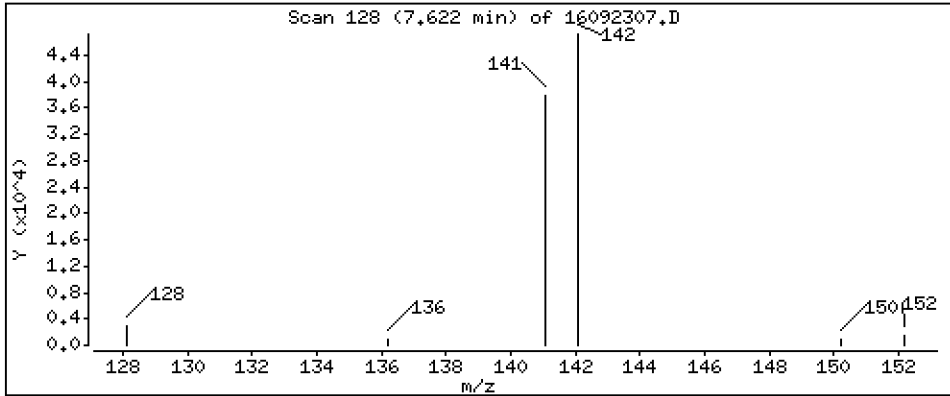
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4-Methylnaphthalene

Concentration: 21,4 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

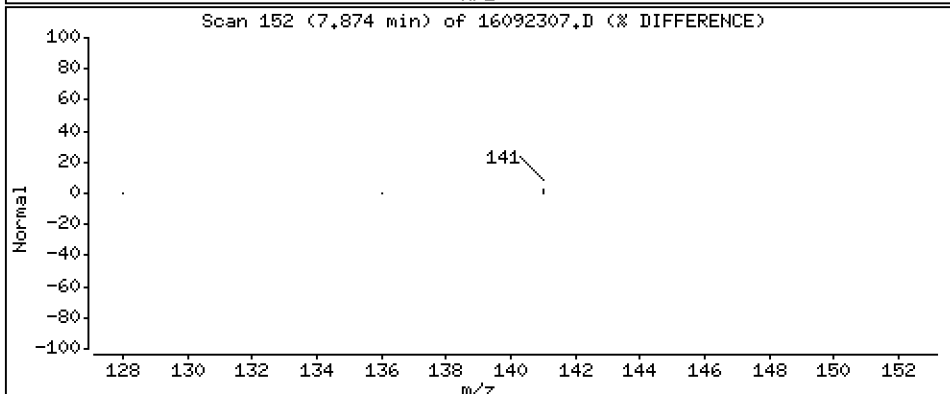
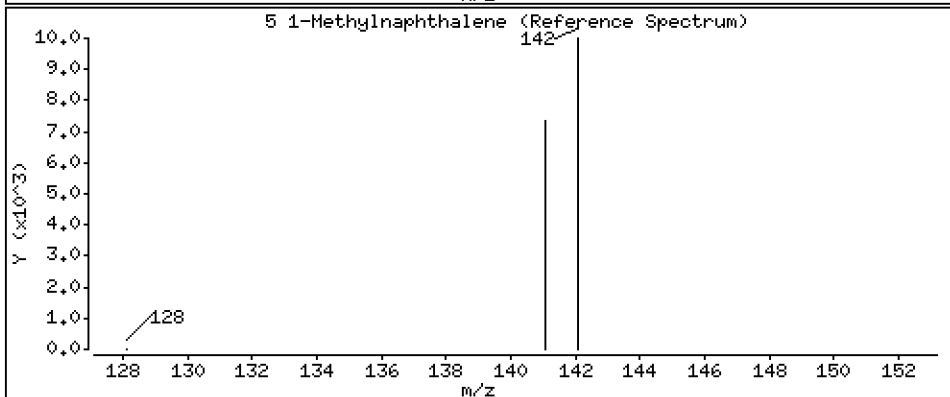
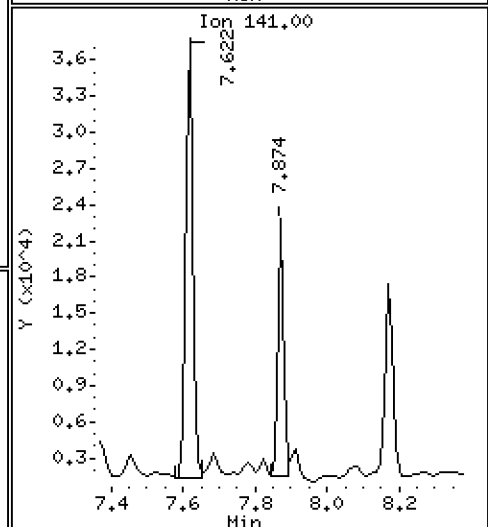
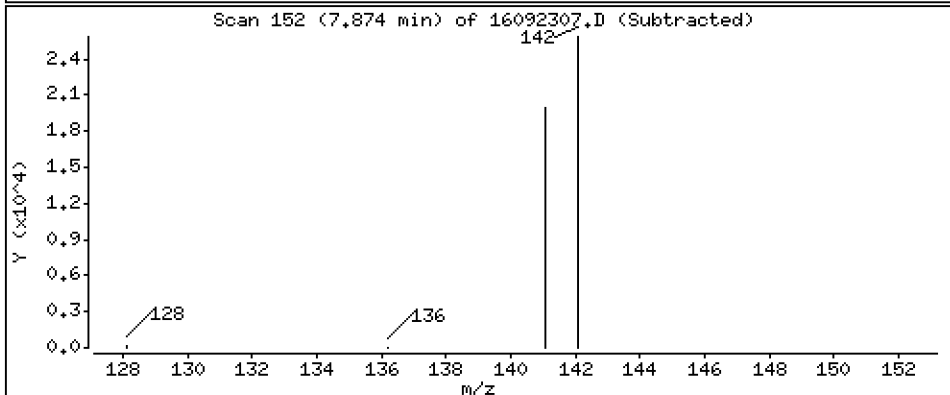
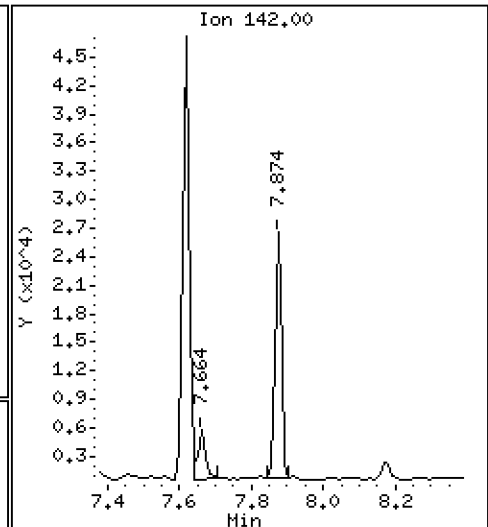
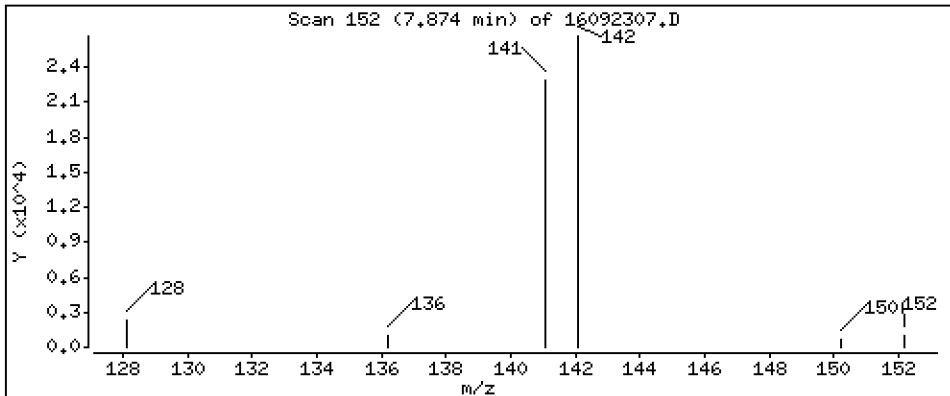
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

5 1-Methylnaphthalene

Concentration: 13.7 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

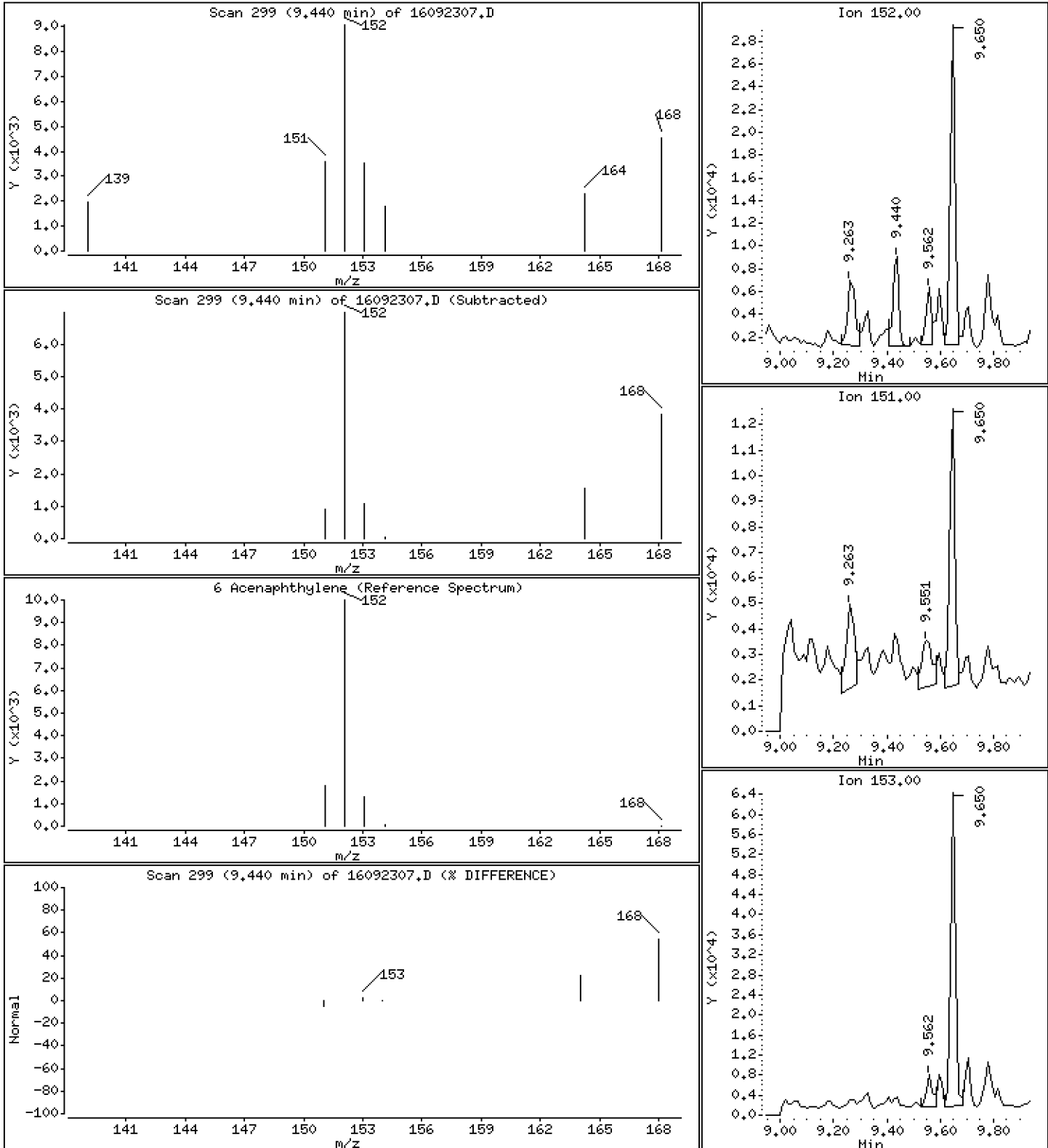
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 3.30 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

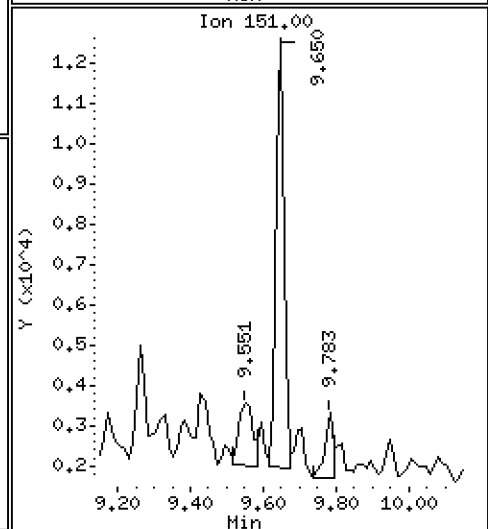
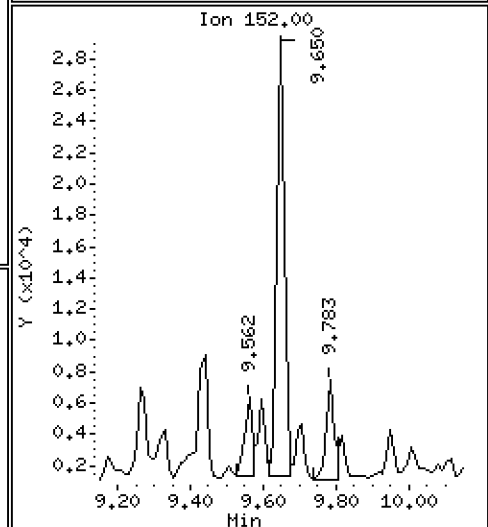
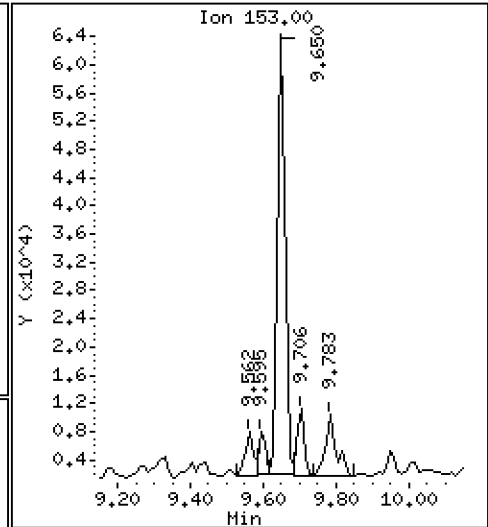
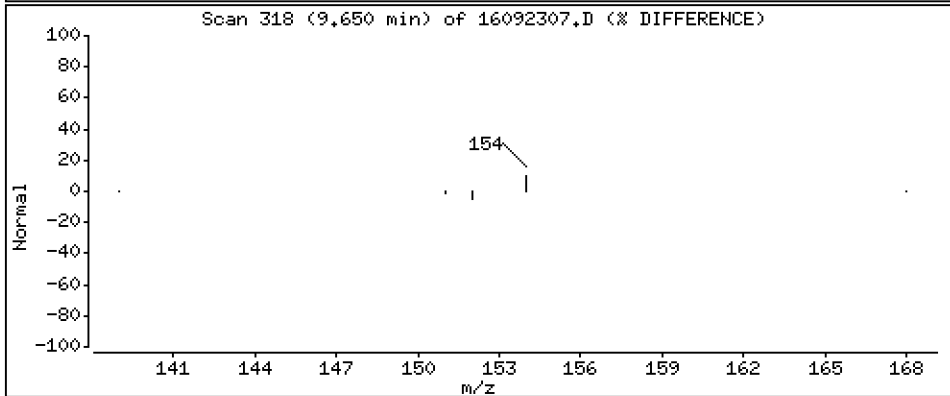
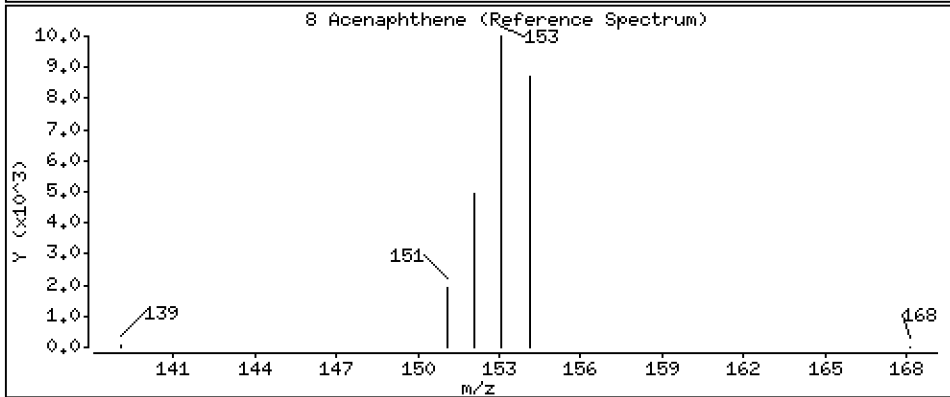
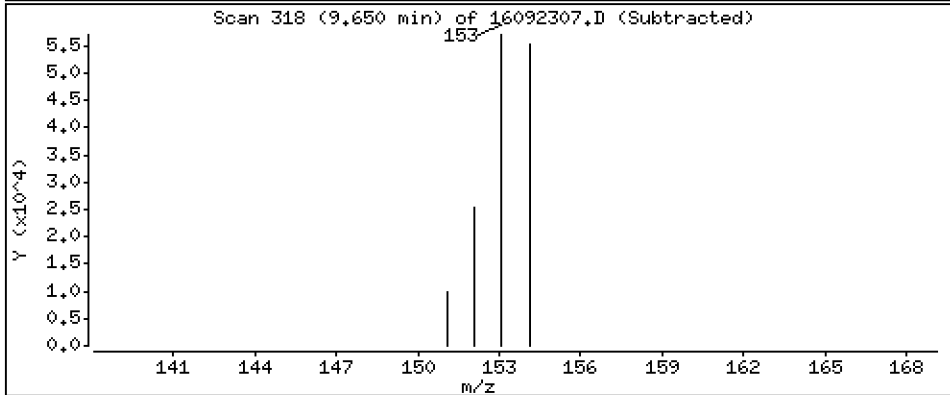
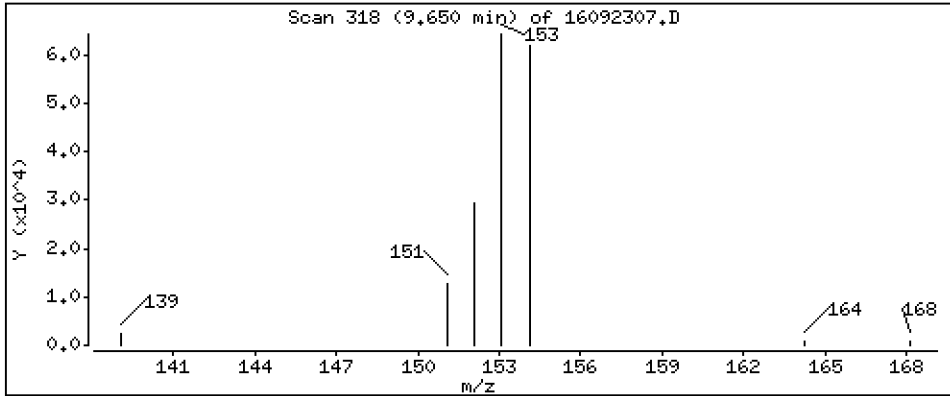
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 31.4 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

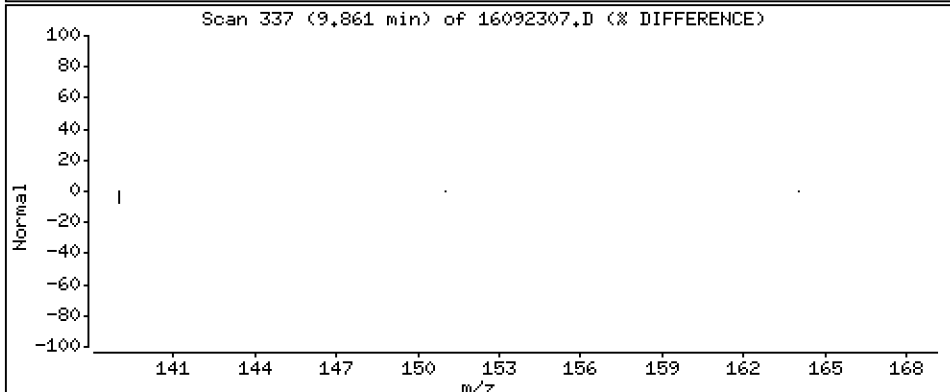
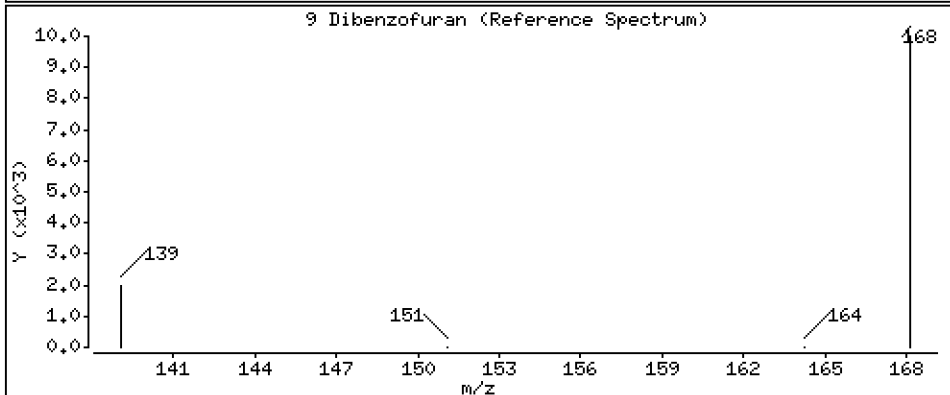
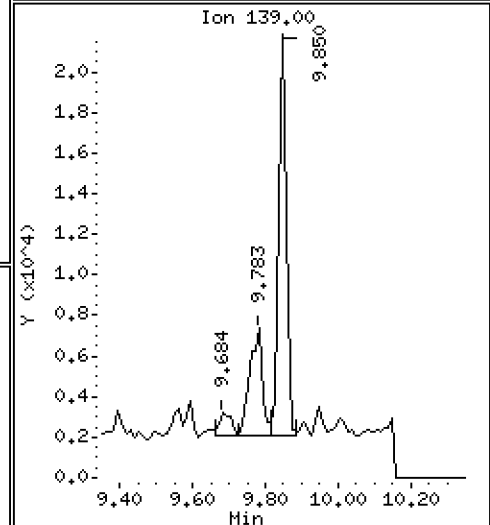
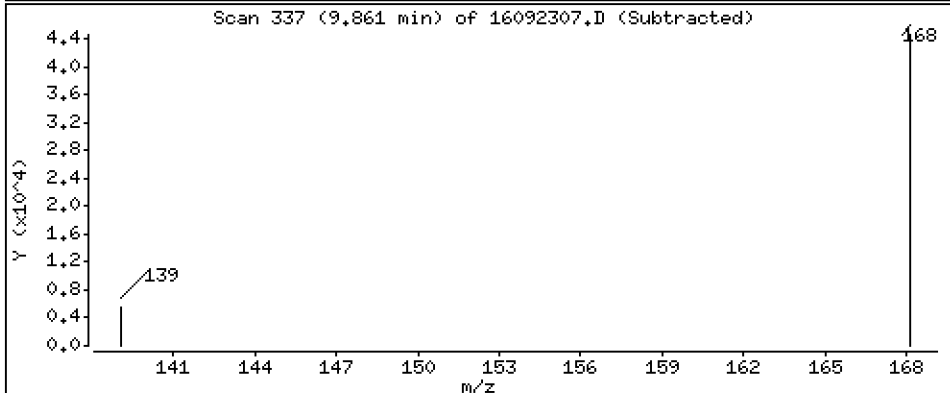
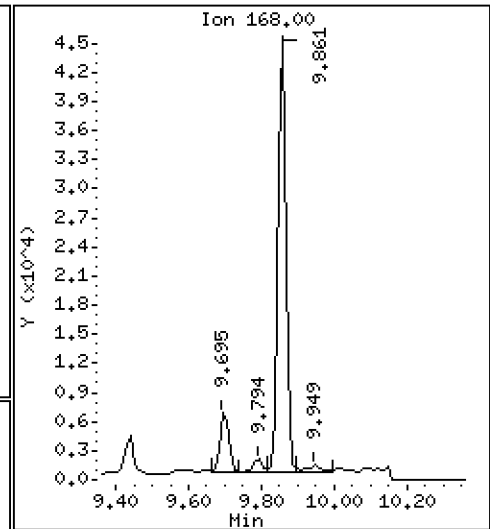
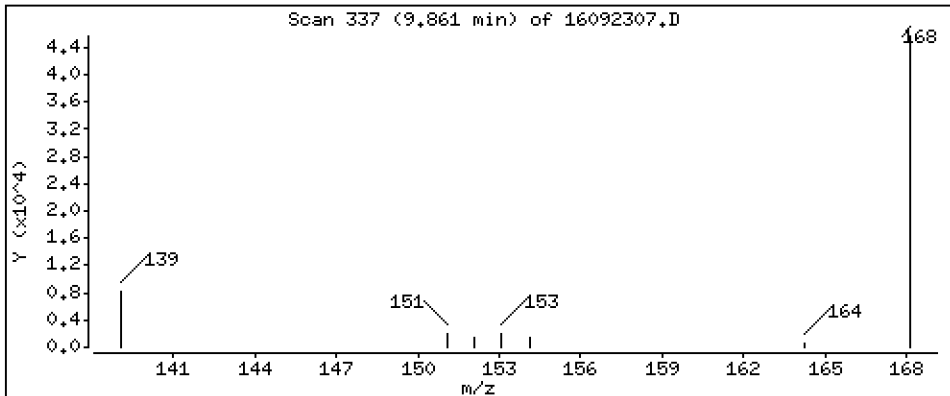
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 16,5 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

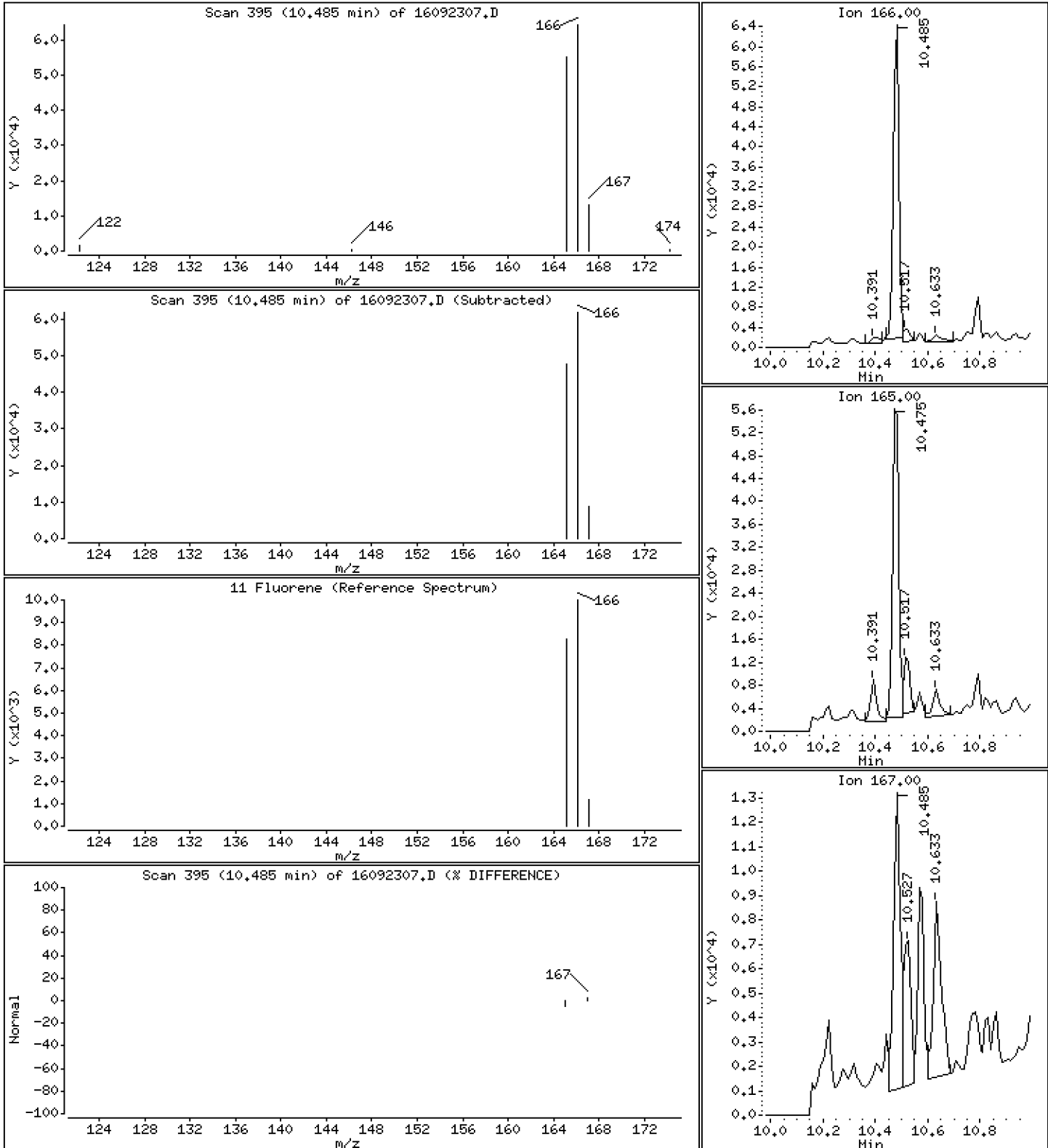
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 29,6 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

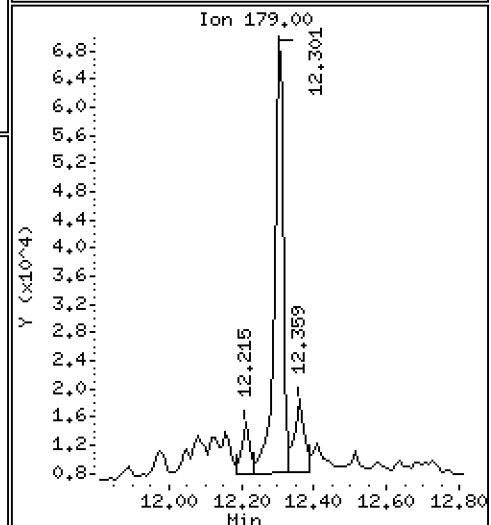
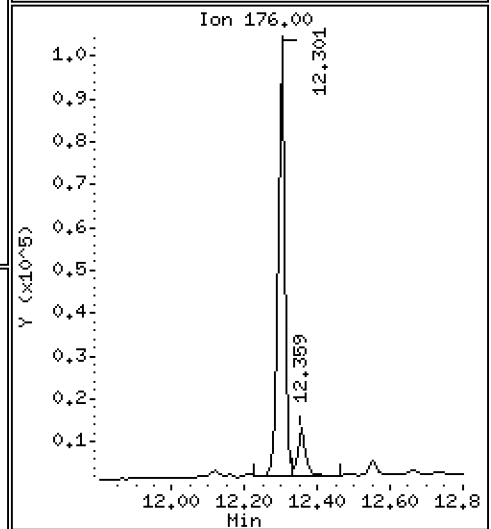
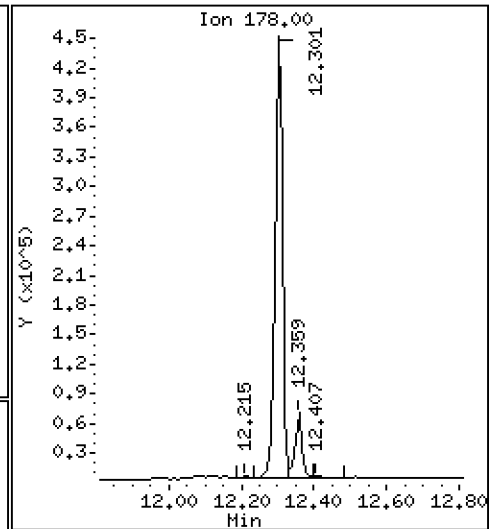
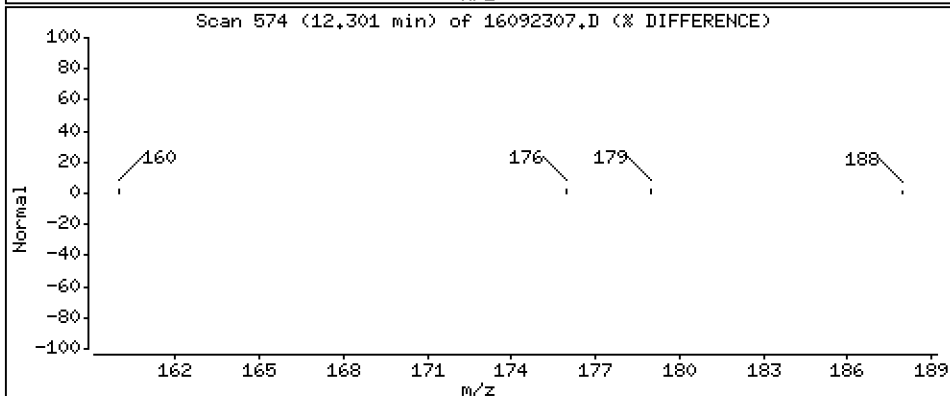
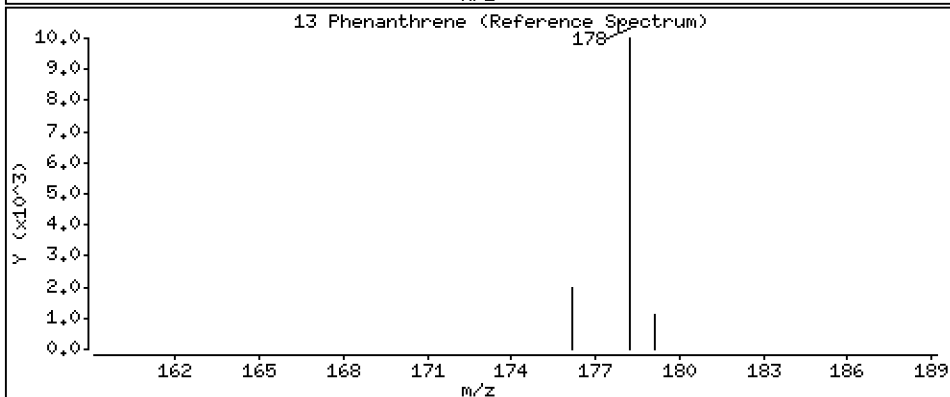
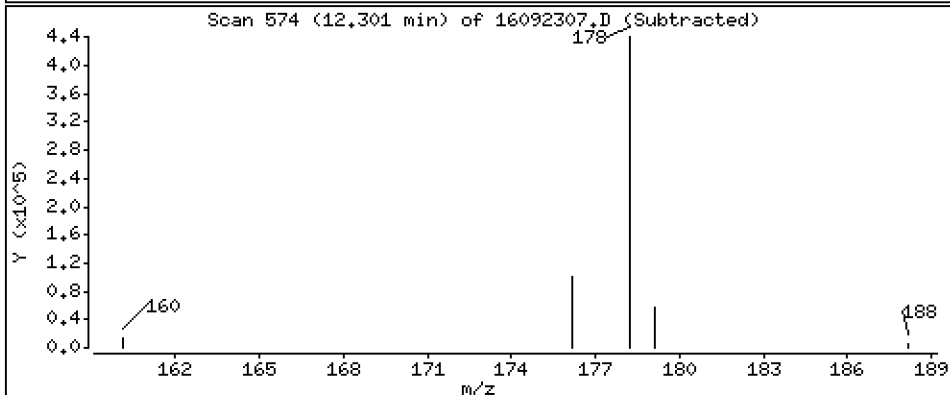
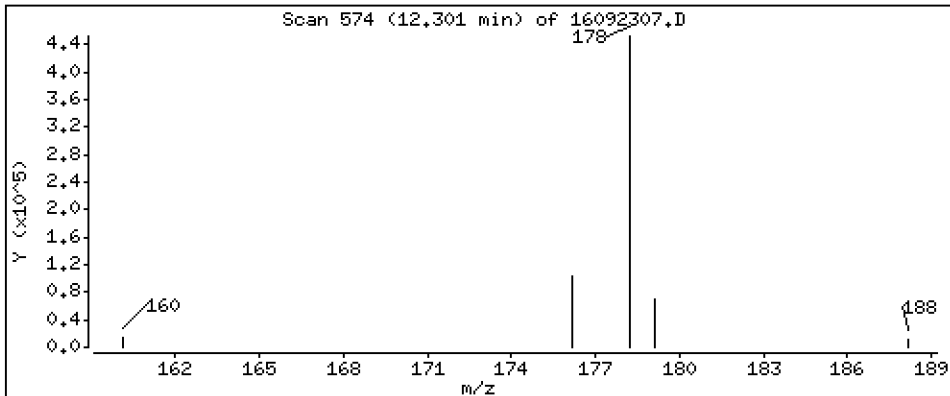
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 123 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

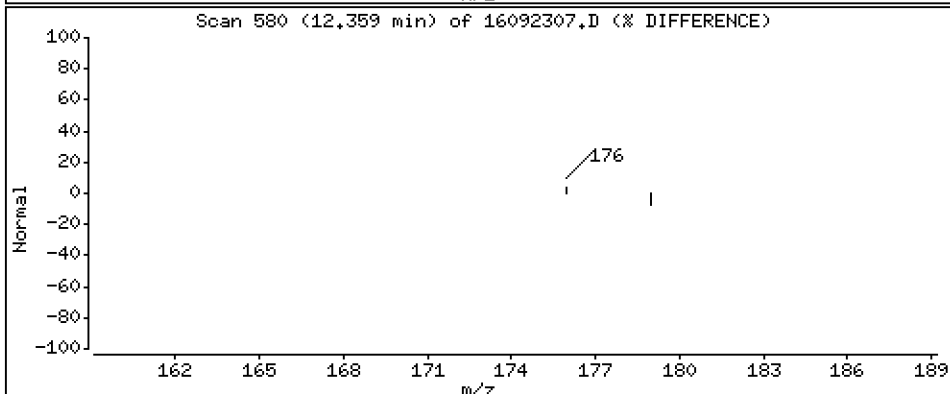
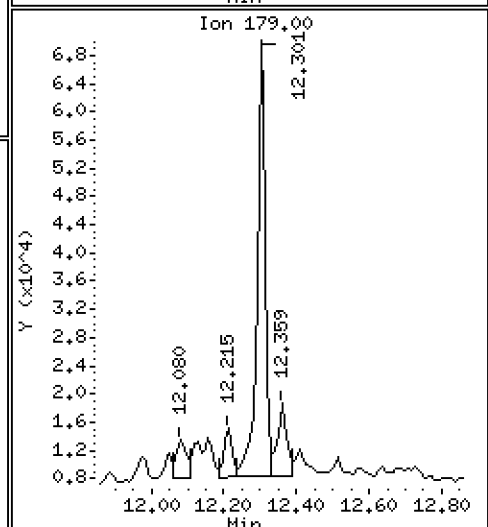
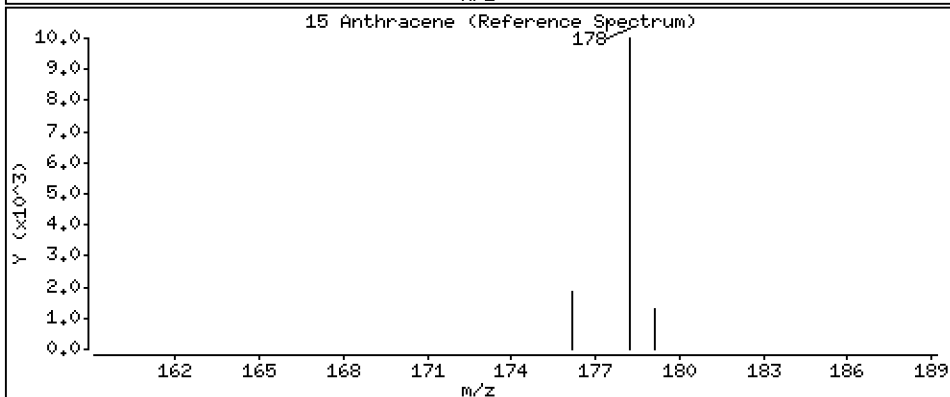
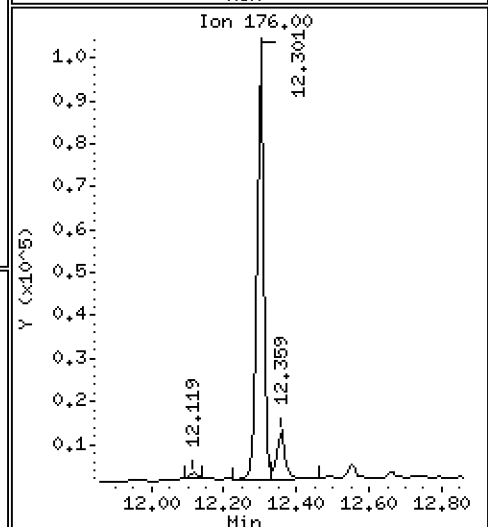
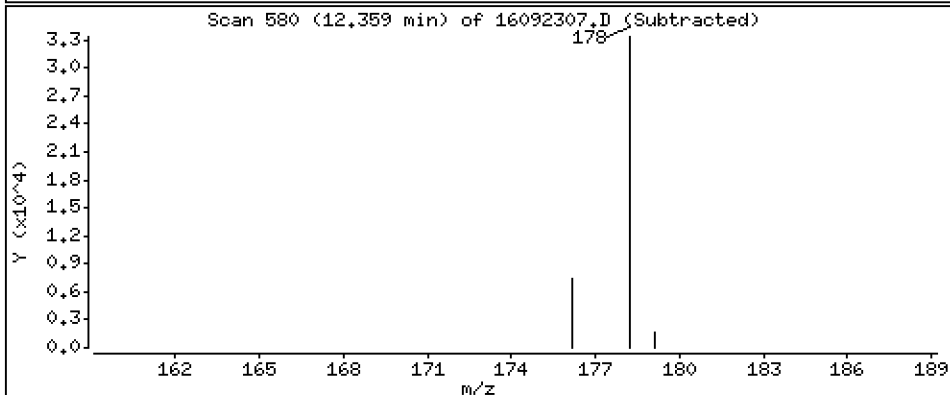
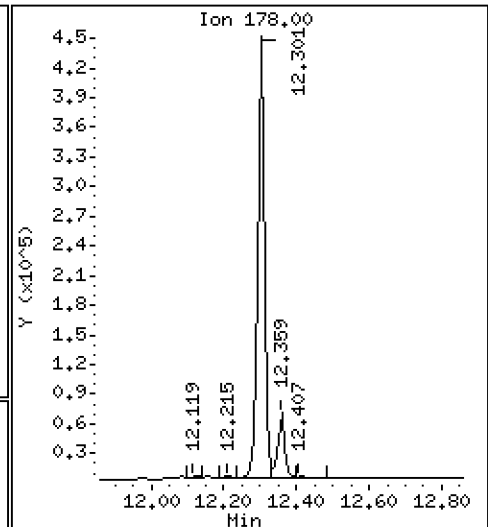
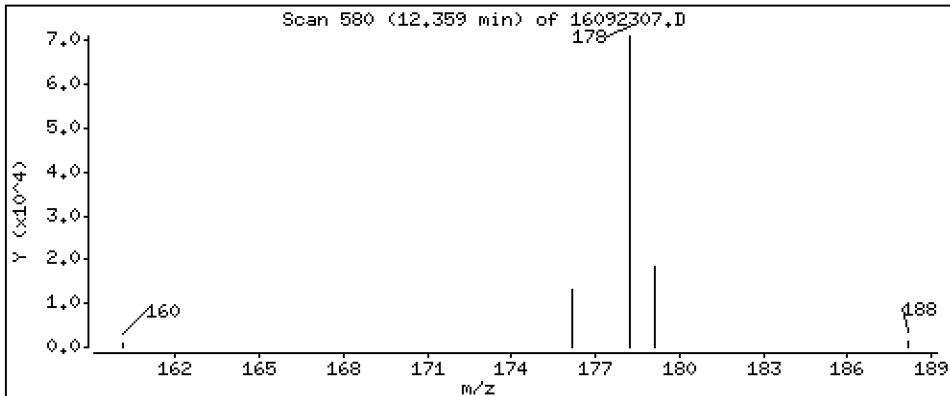
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

15 Anthracene

Concentration: 19,2 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

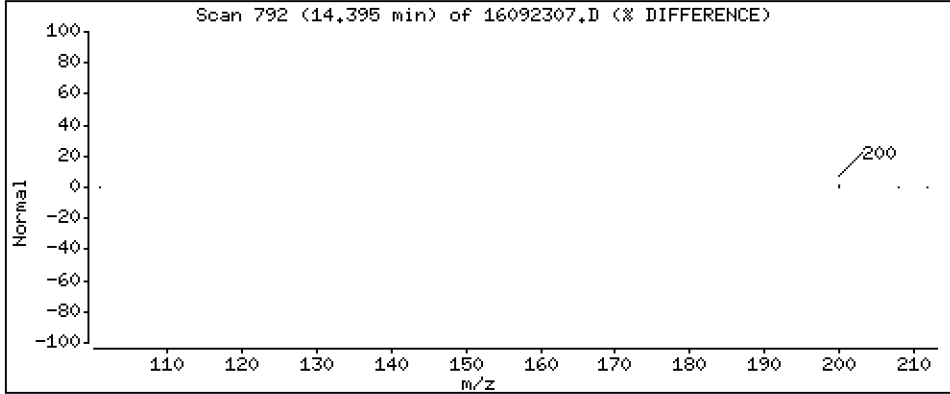
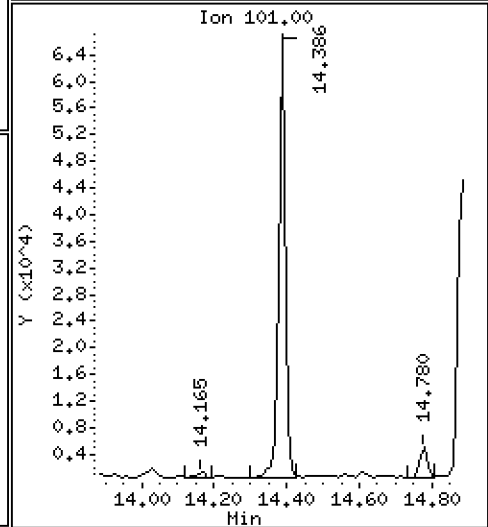
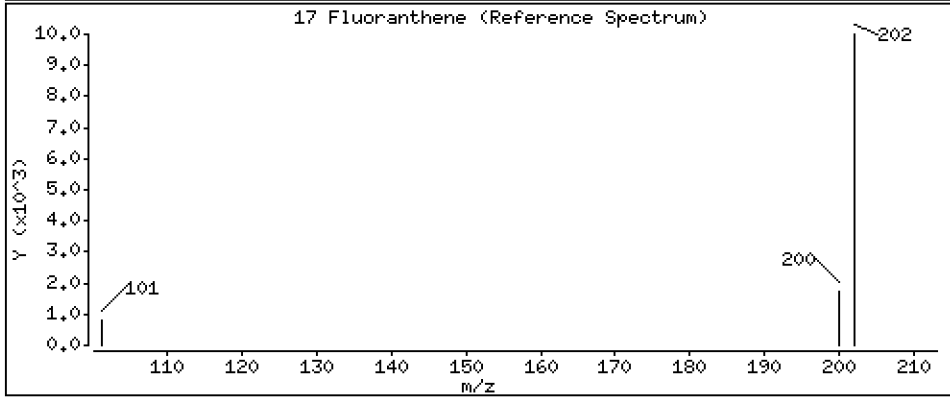
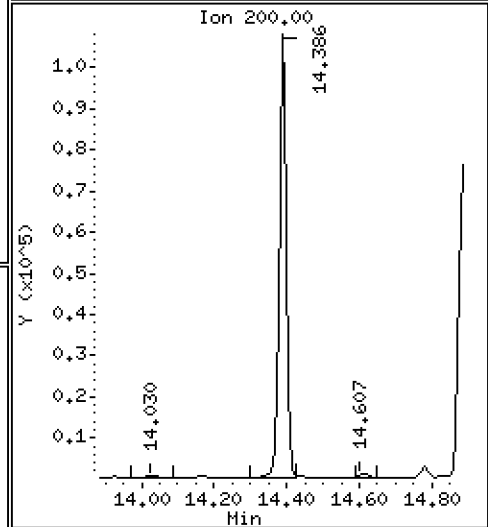
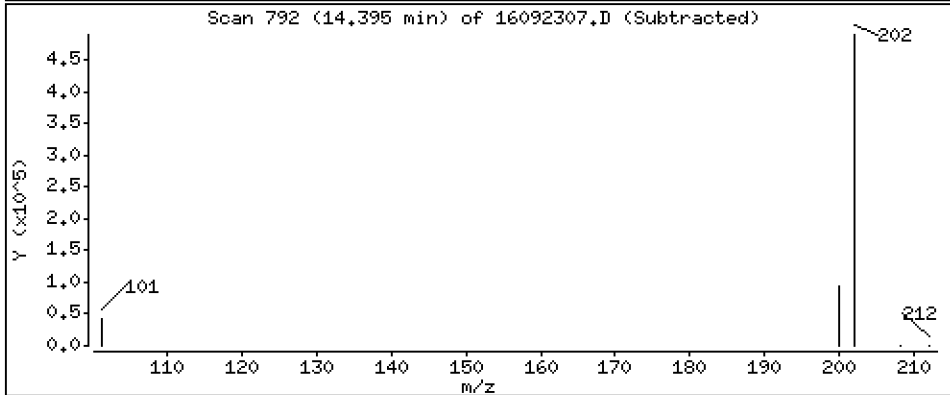
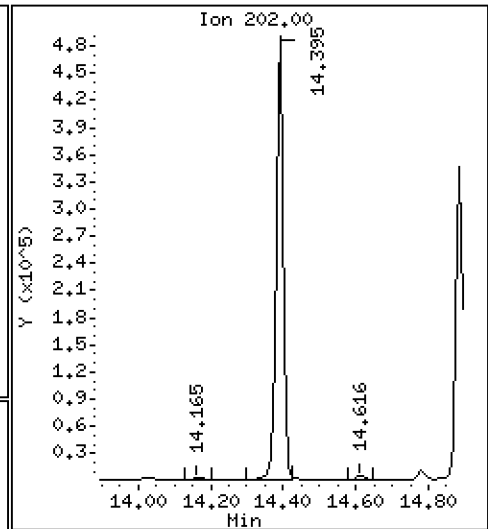
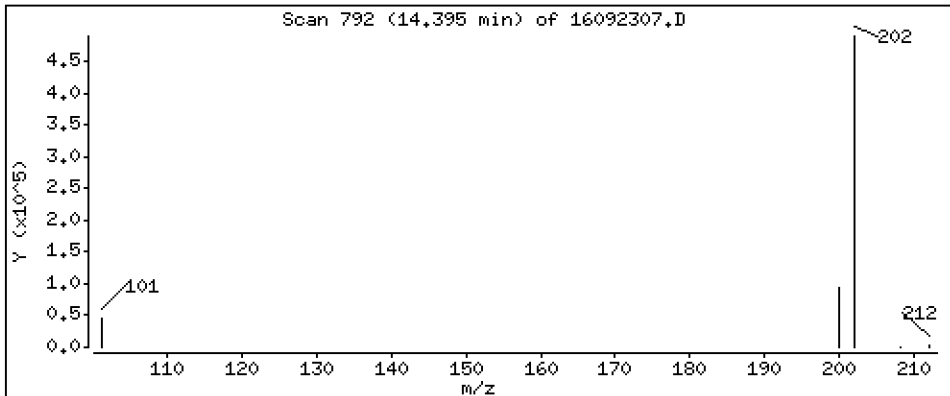
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 160 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

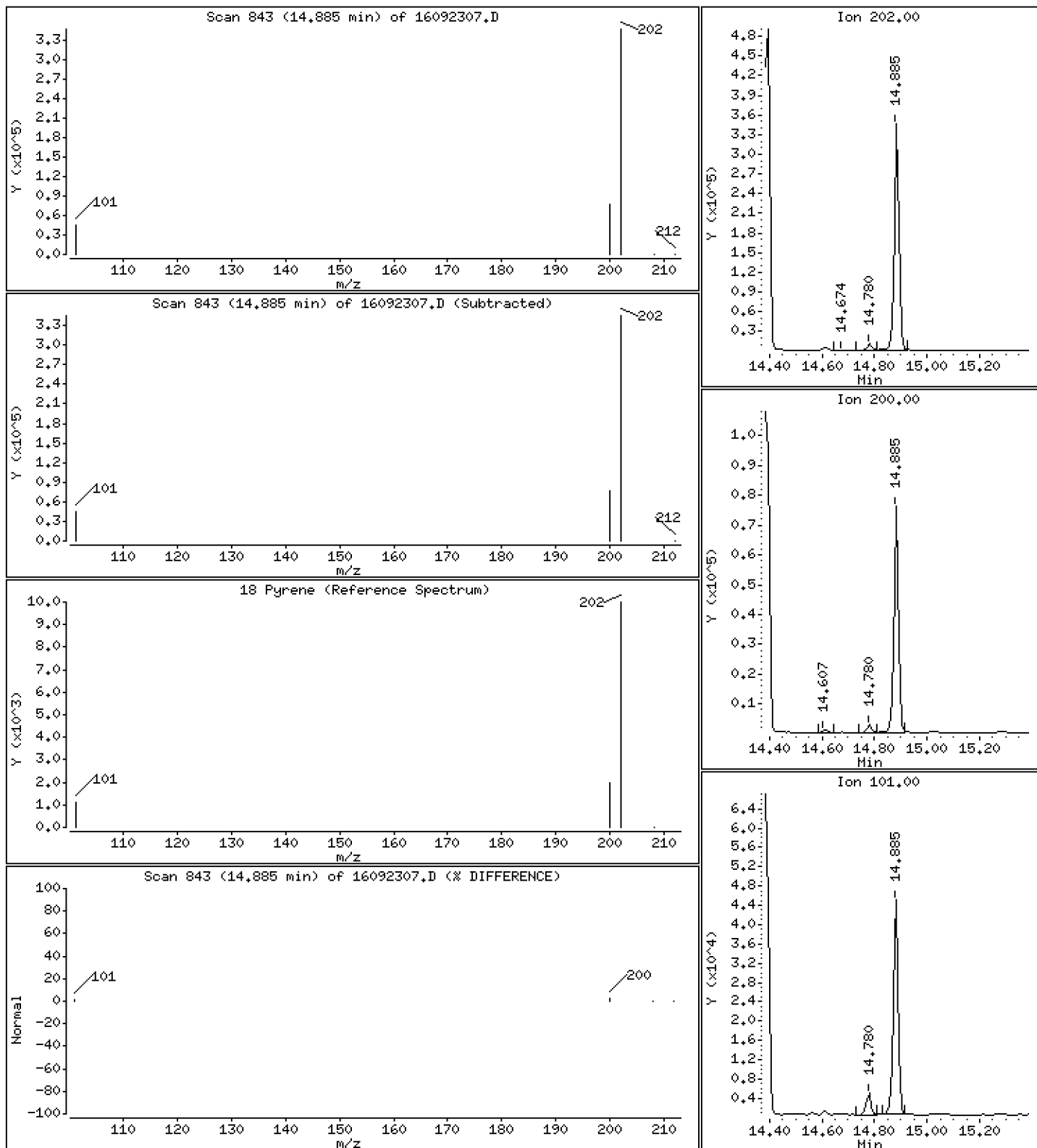
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

18 Pyrene

Concentration: 92,4 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

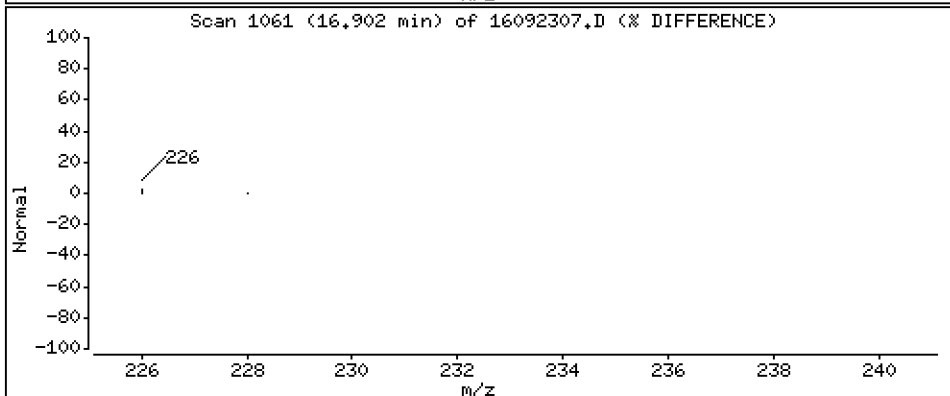
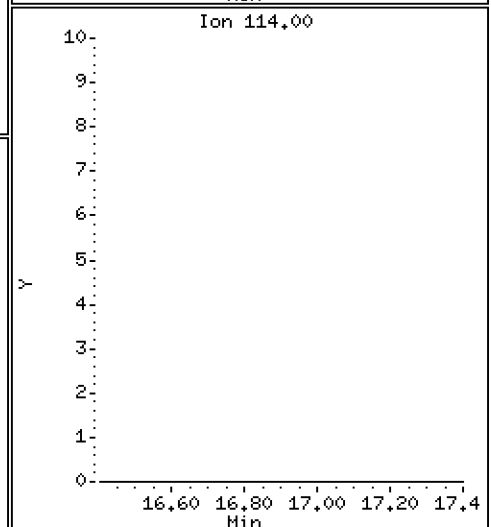
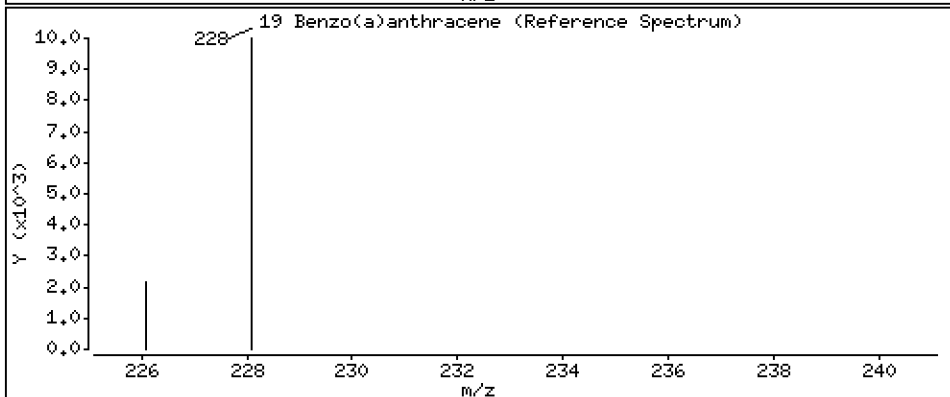
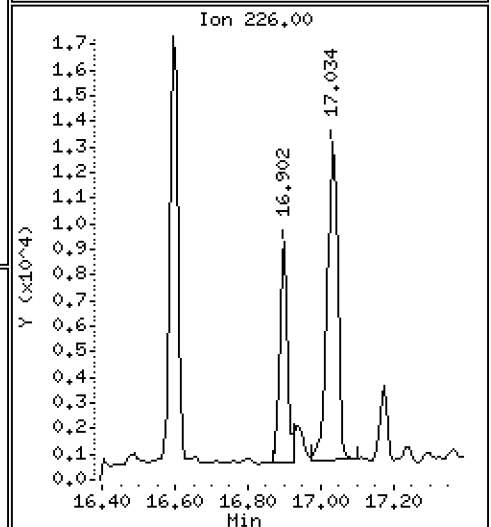
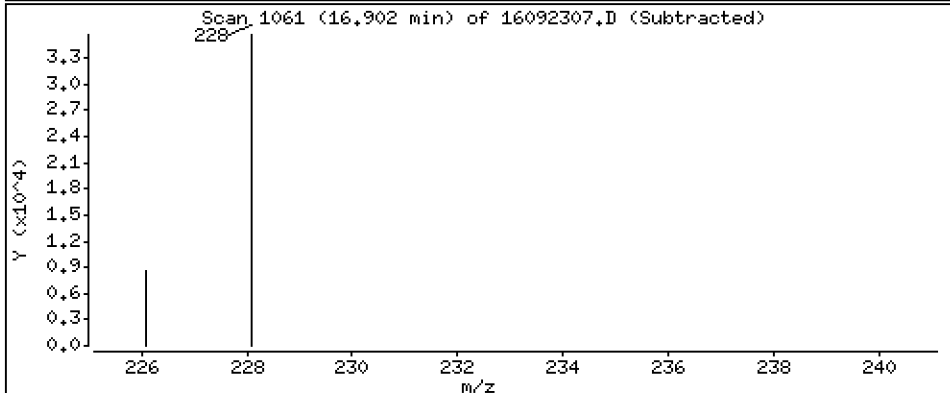
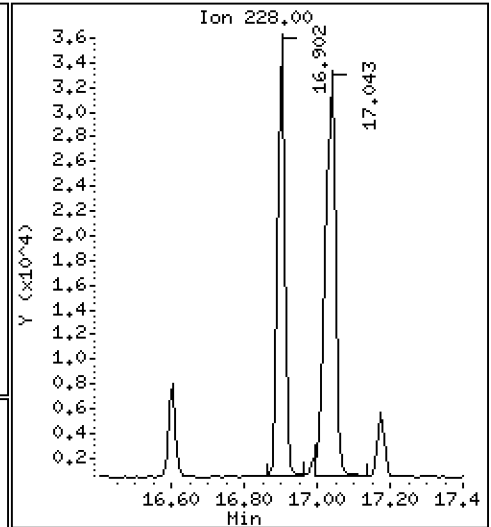
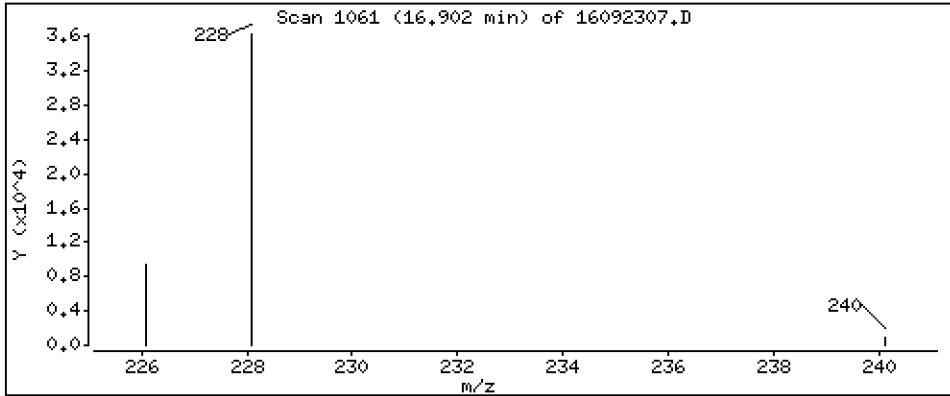
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 11,6 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

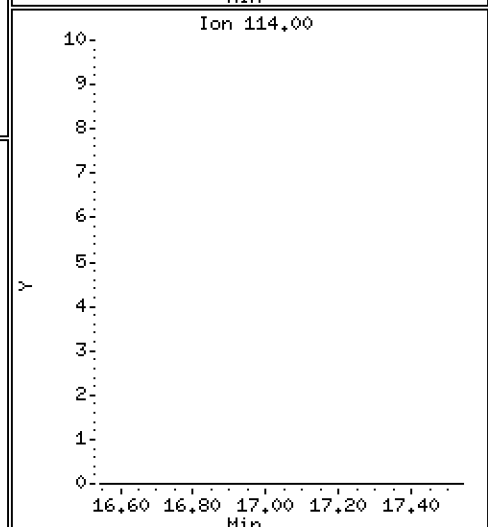
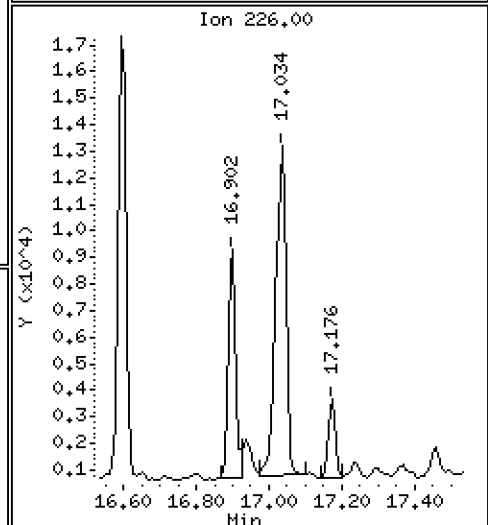
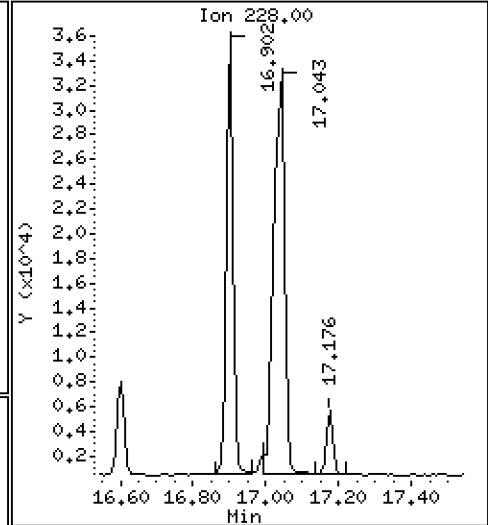
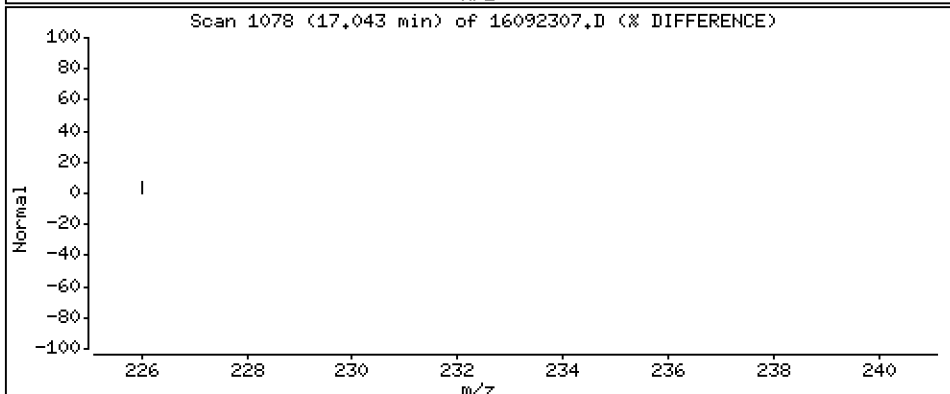
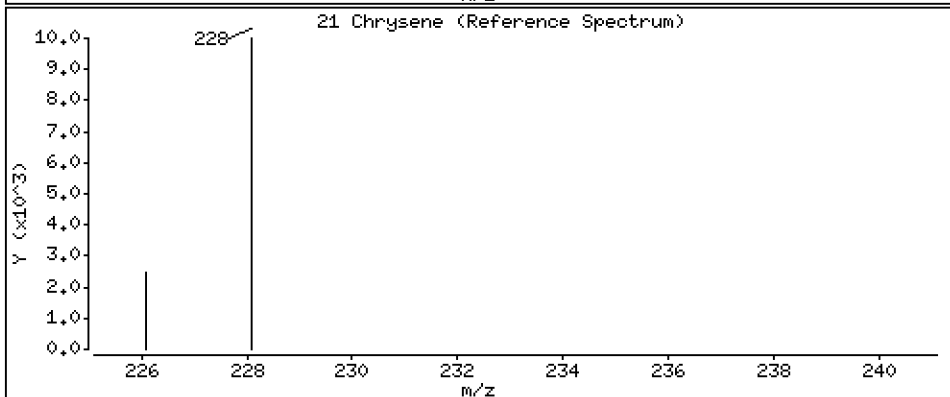
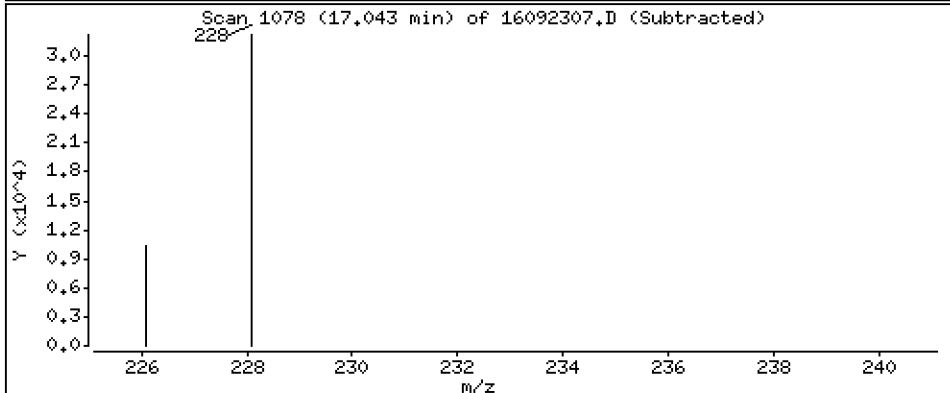
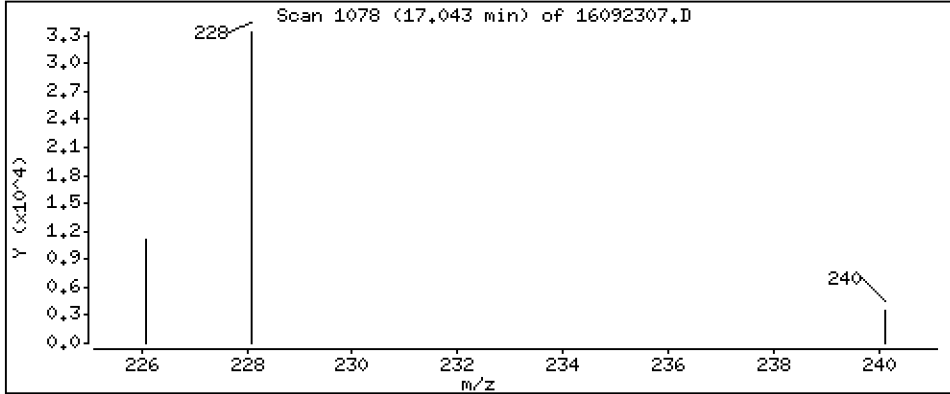
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 15,7 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

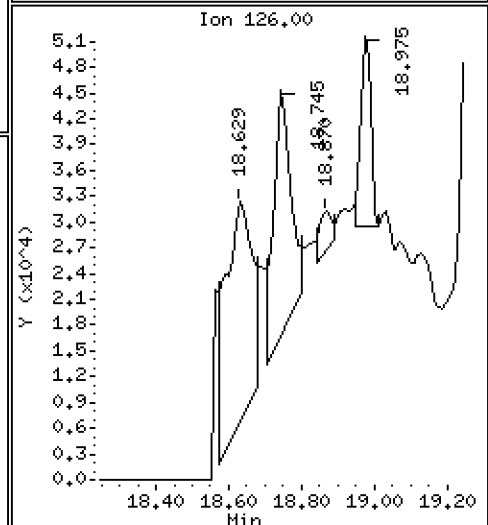
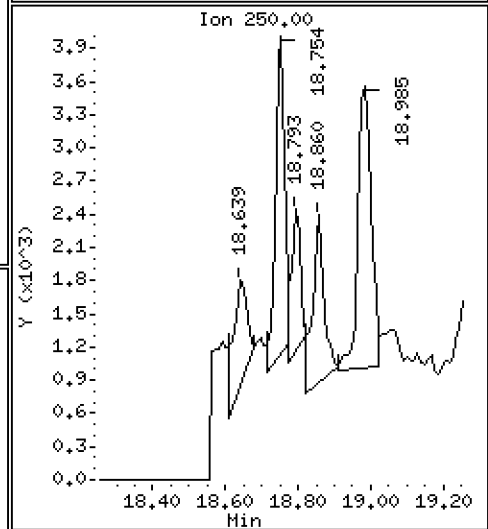
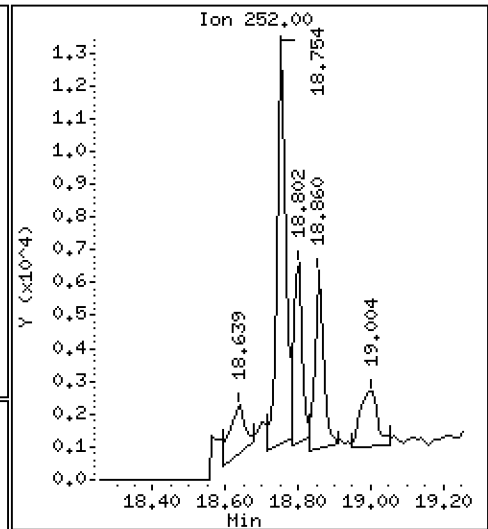
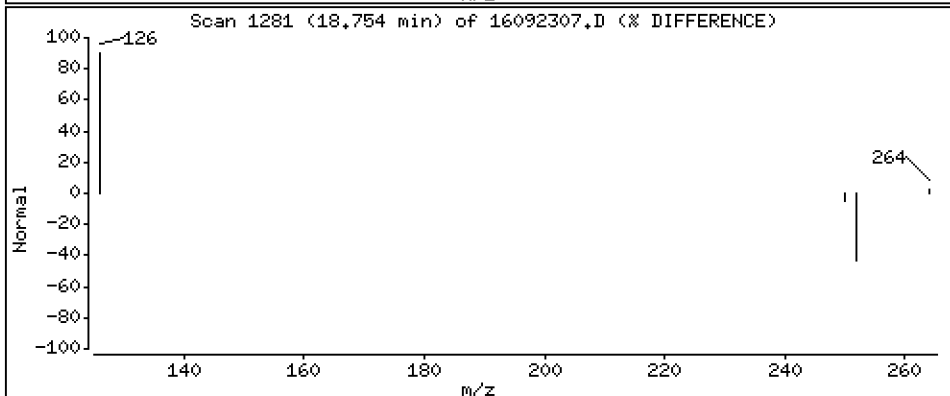
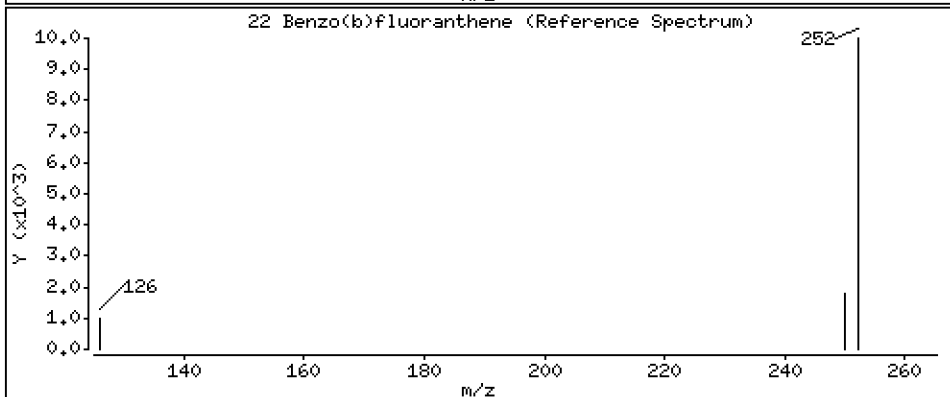
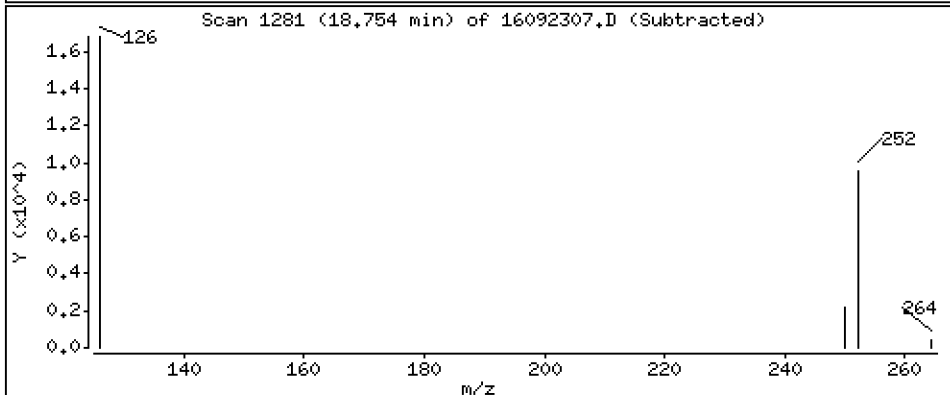
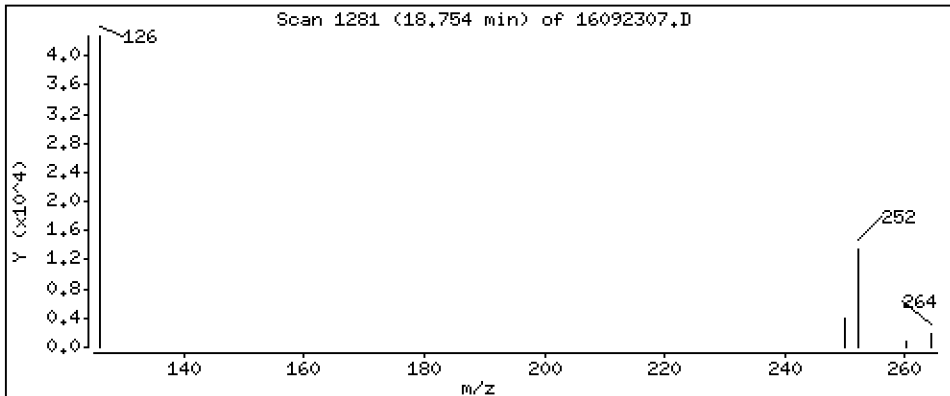
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Benzo(b)fluoranthene

Concentration: 5.19 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

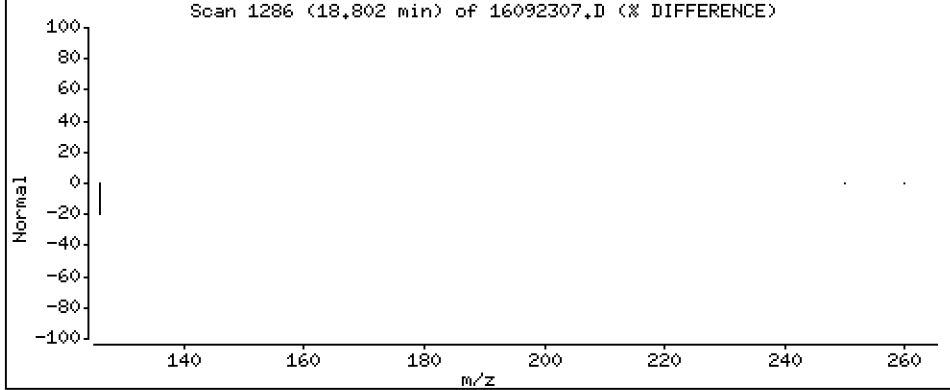
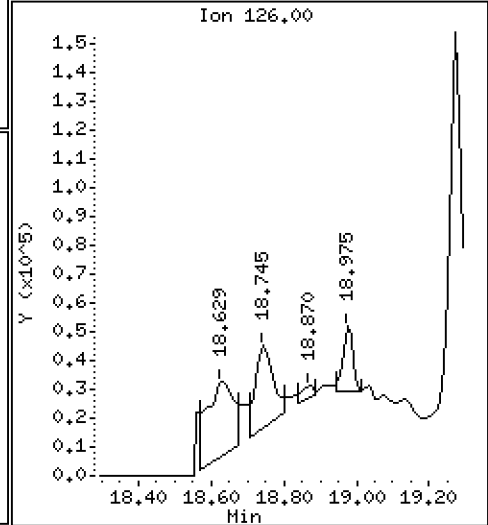
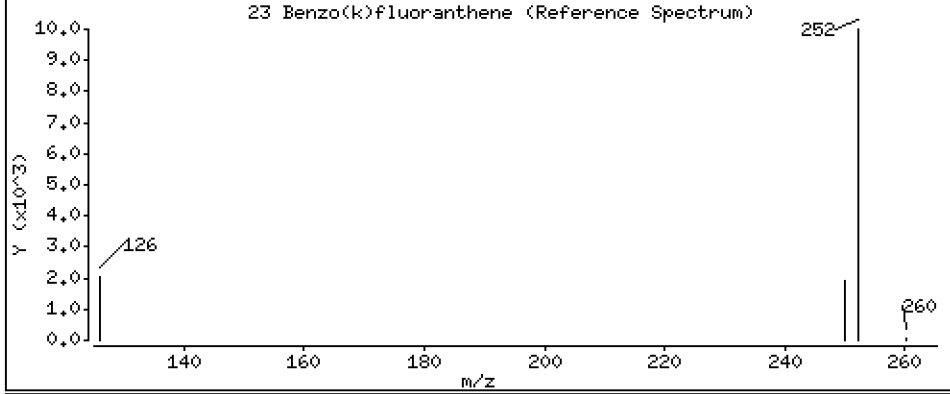
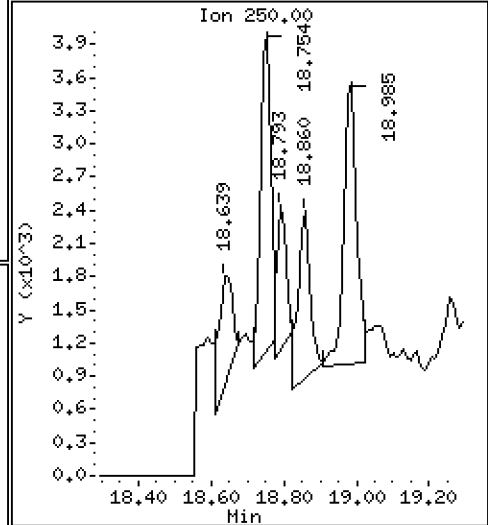
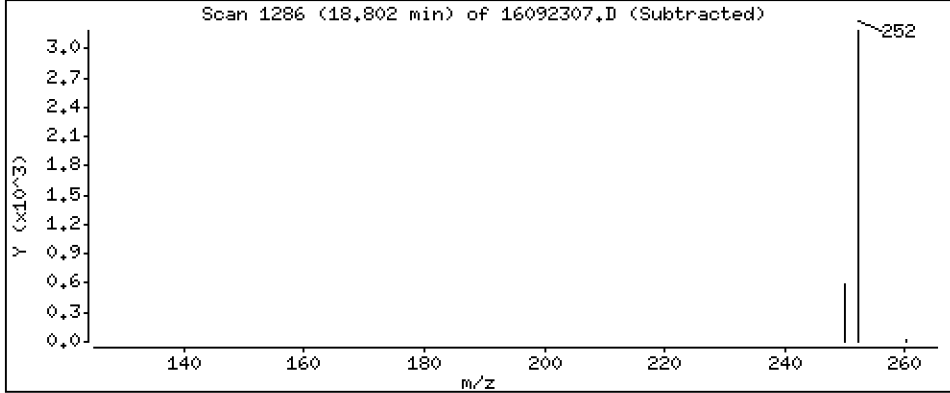
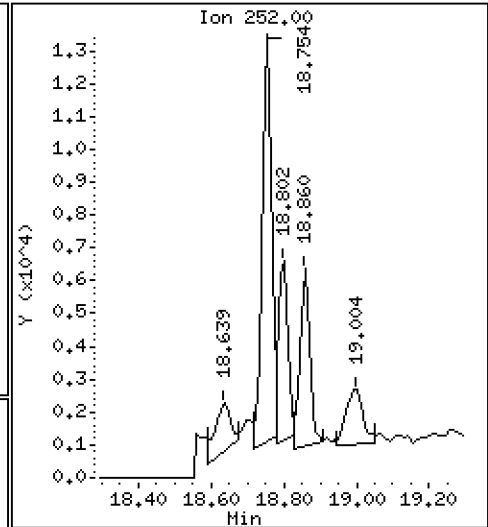
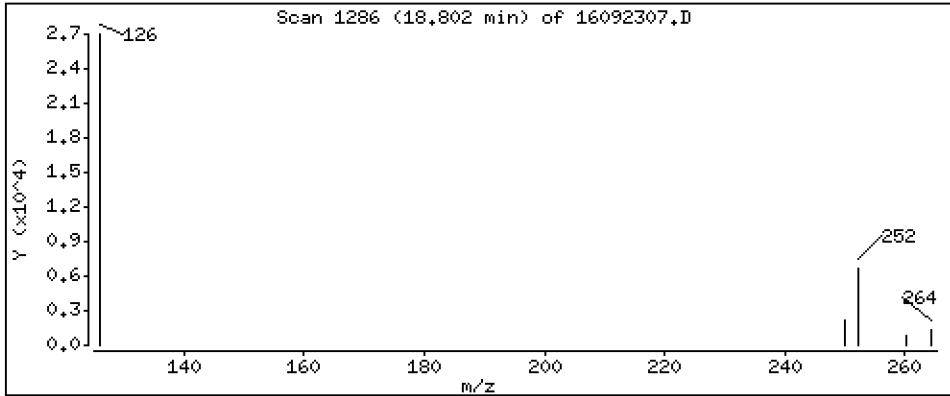
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 2,07 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

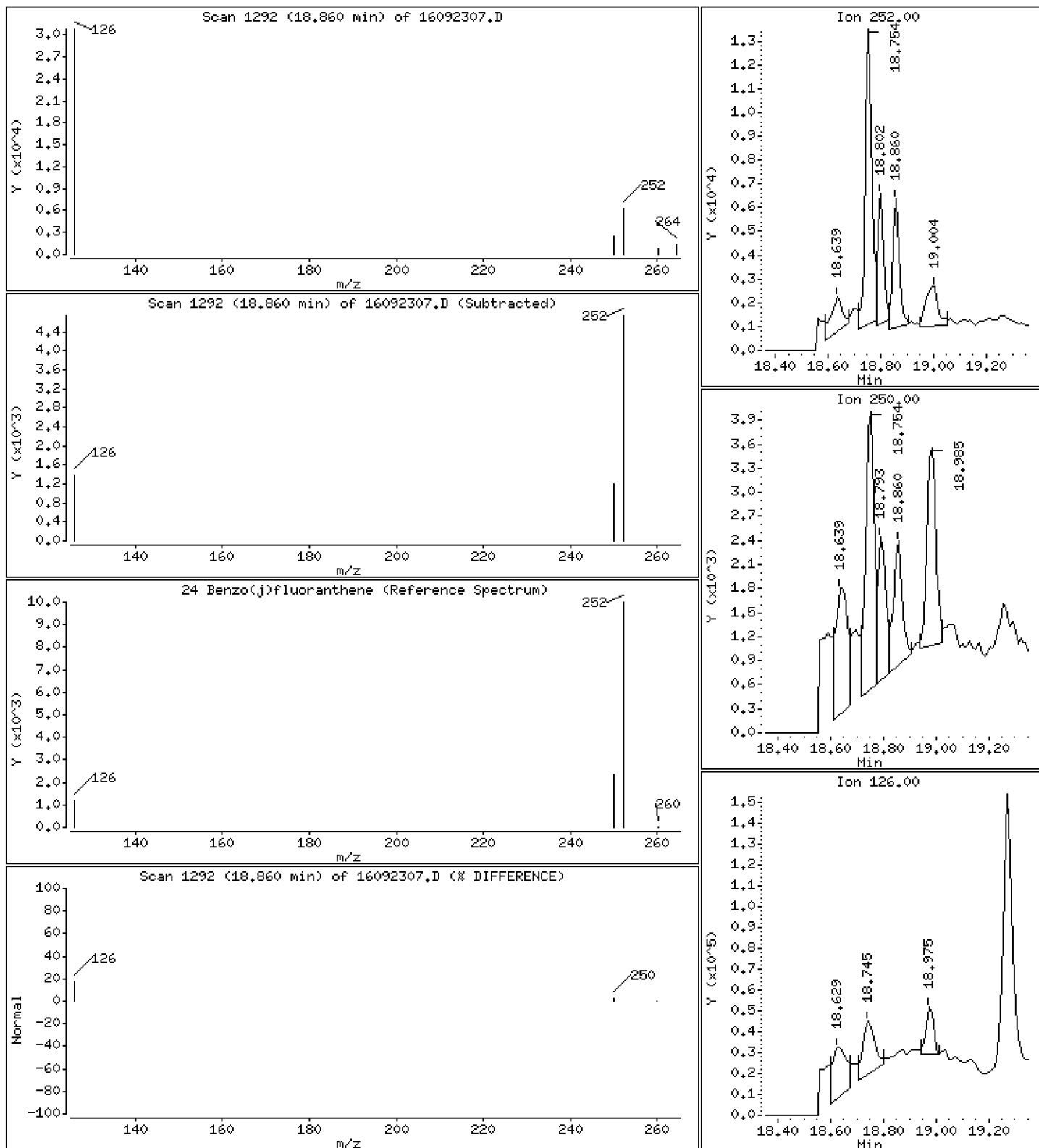
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 2,30 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

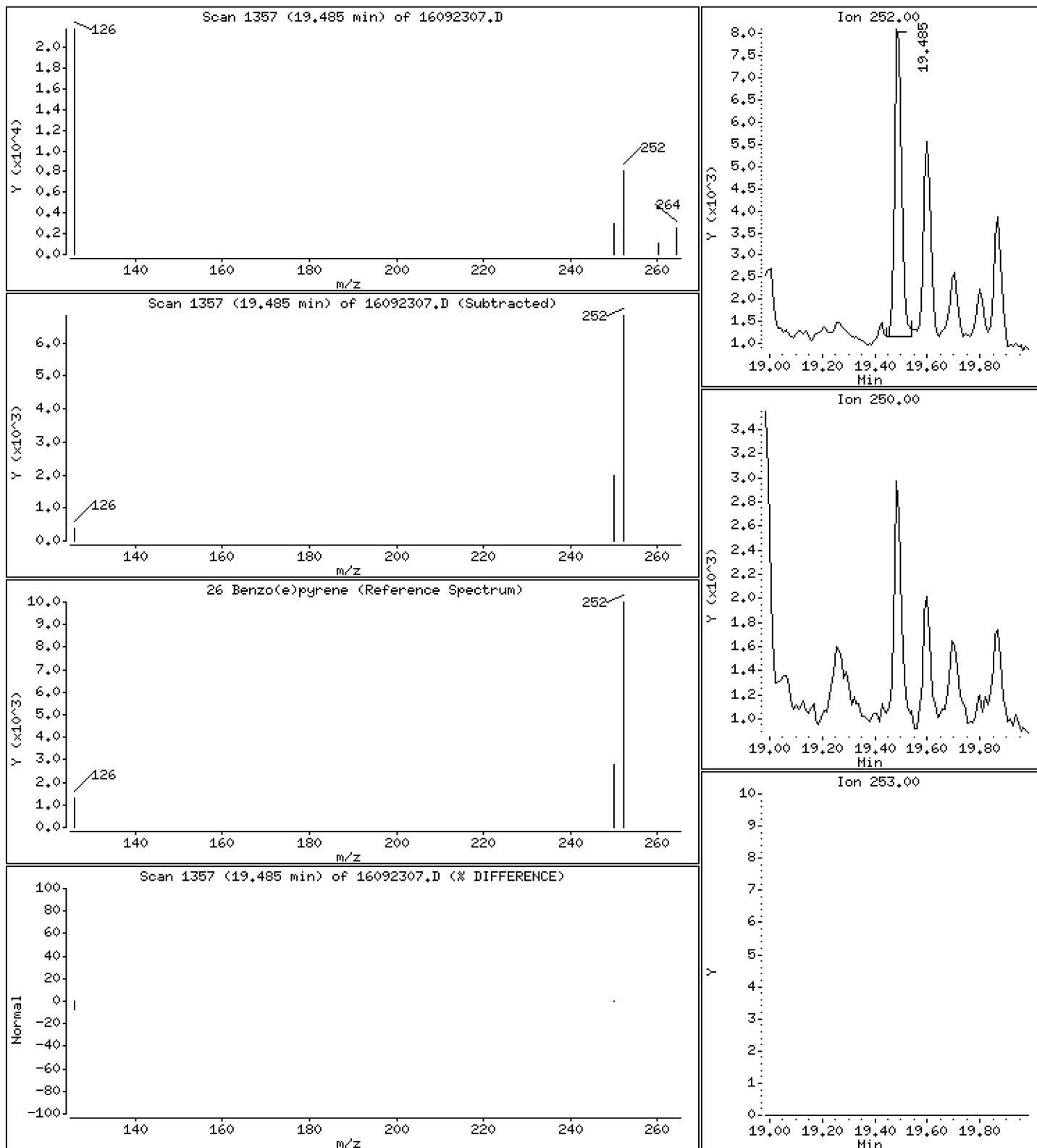
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 3,27 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

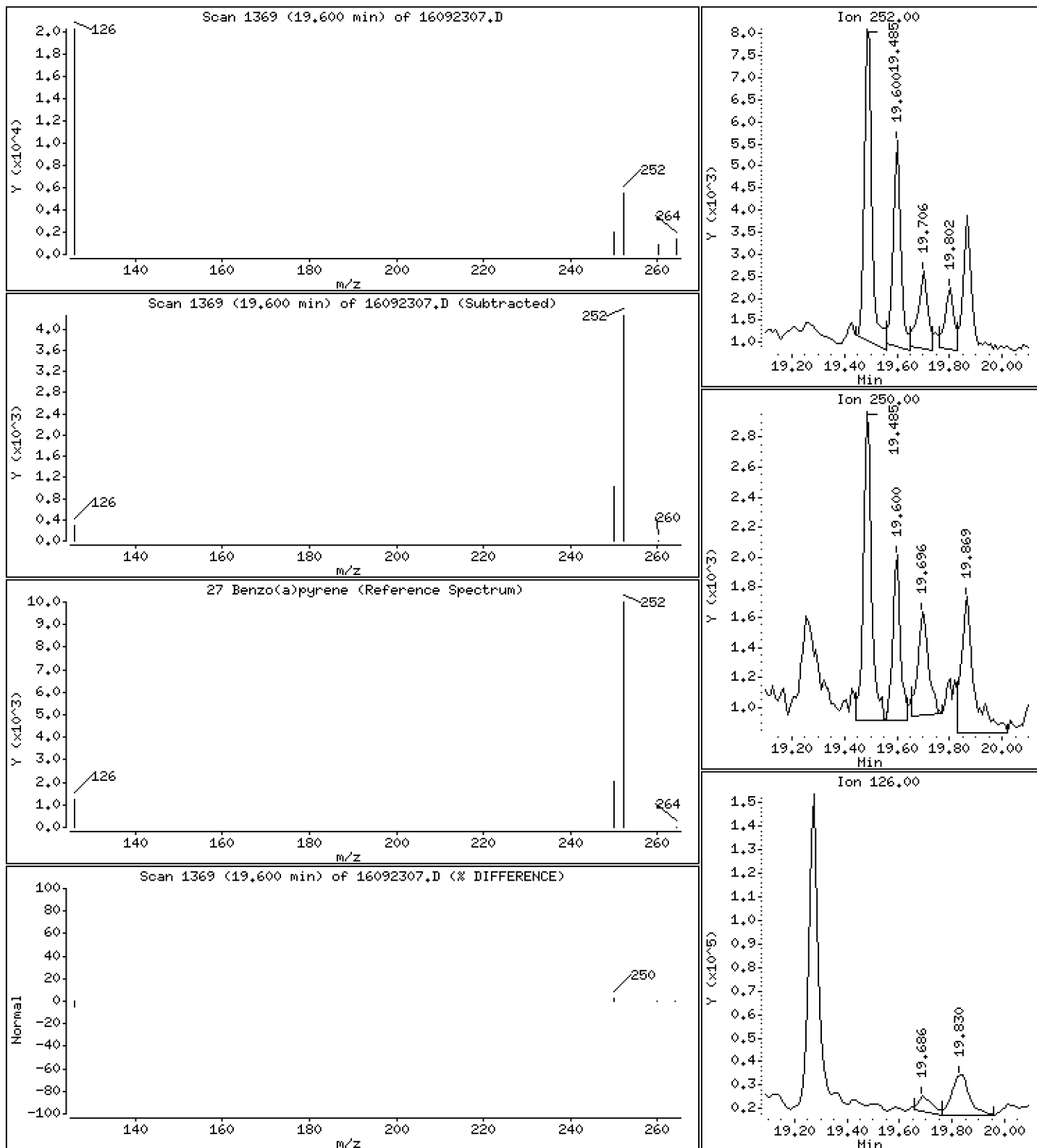
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 2,55 ng/mL



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

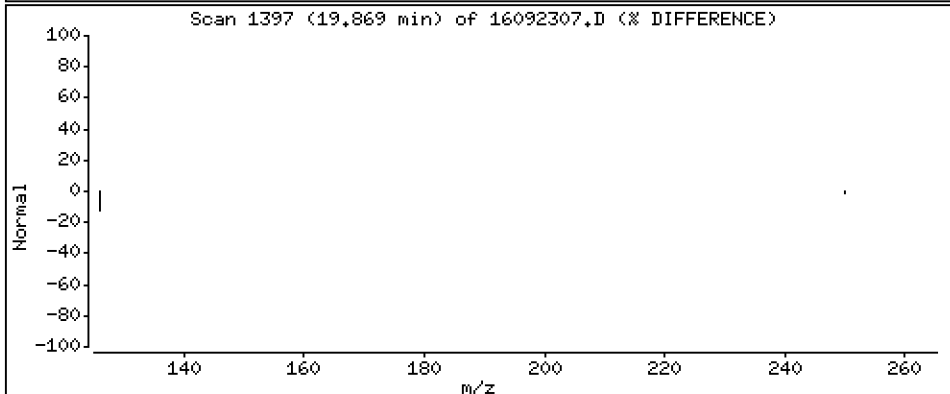
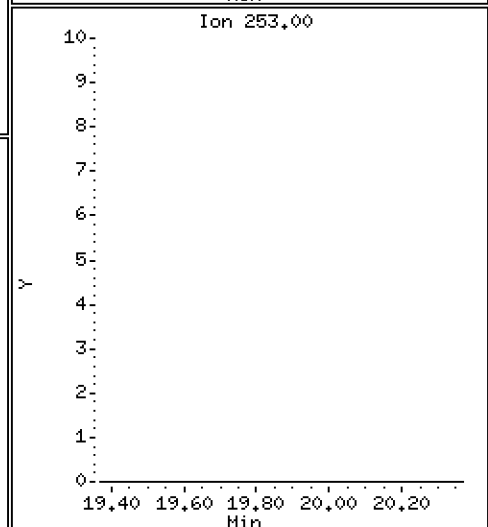
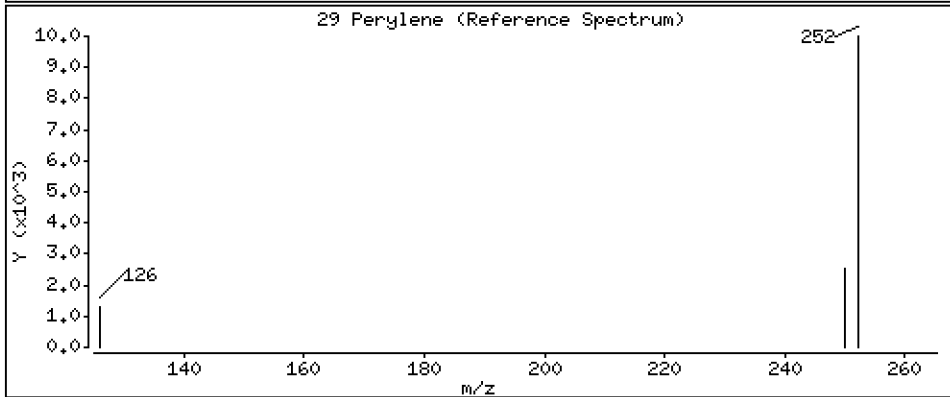
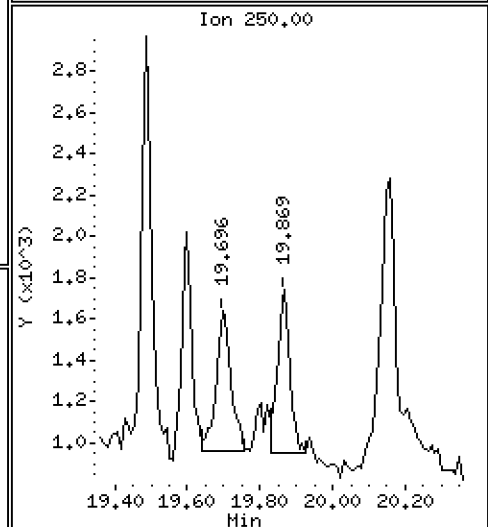
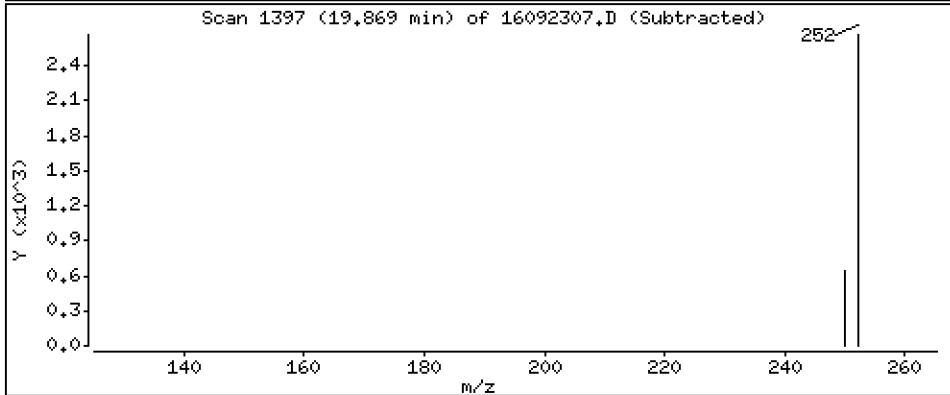
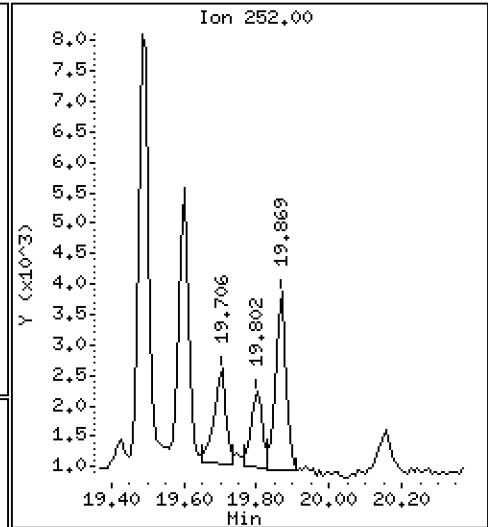
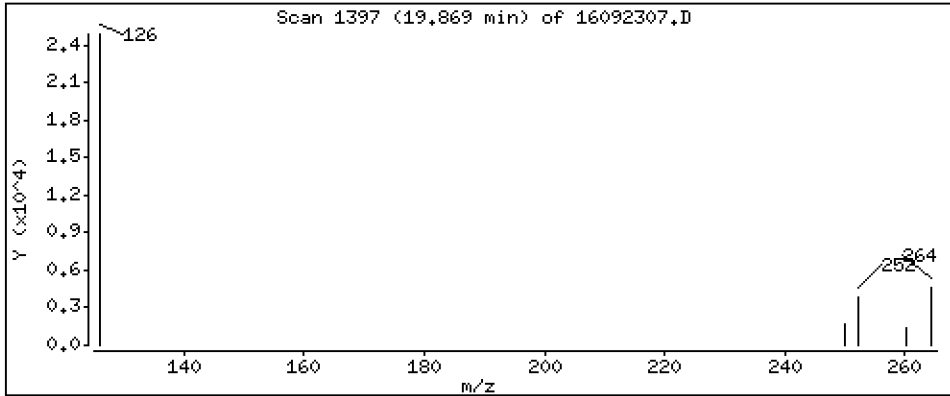
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 1,51 ng/mL

29 Perylene



Date : 23-SEP-2016 11:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-01

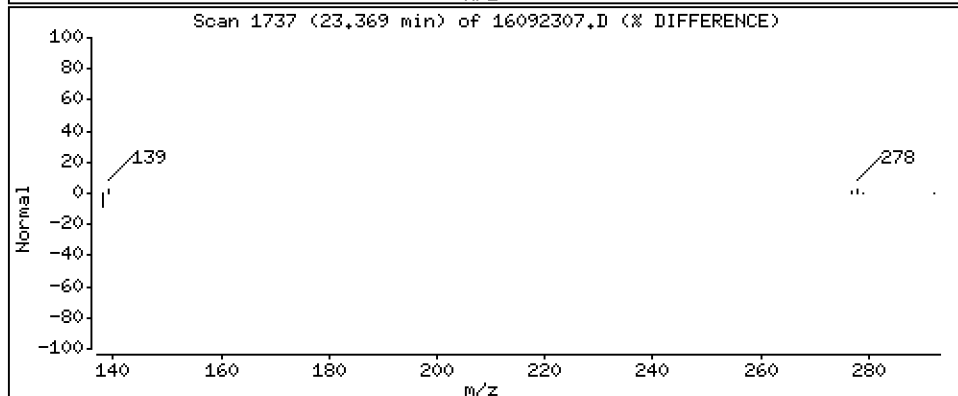
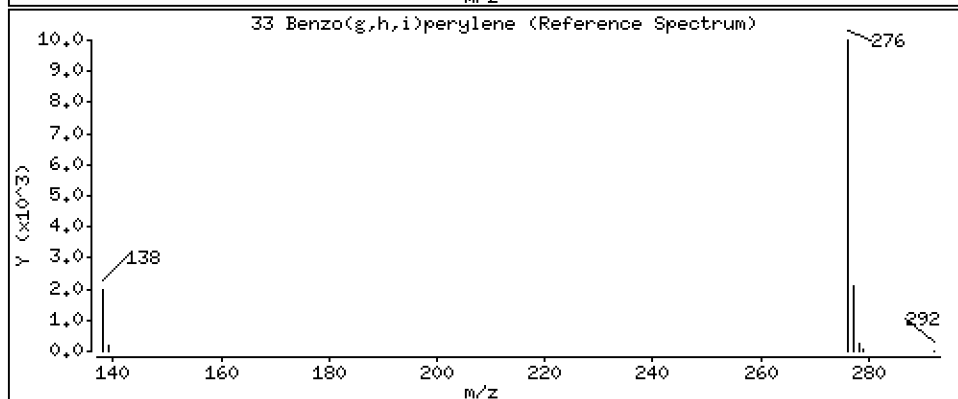
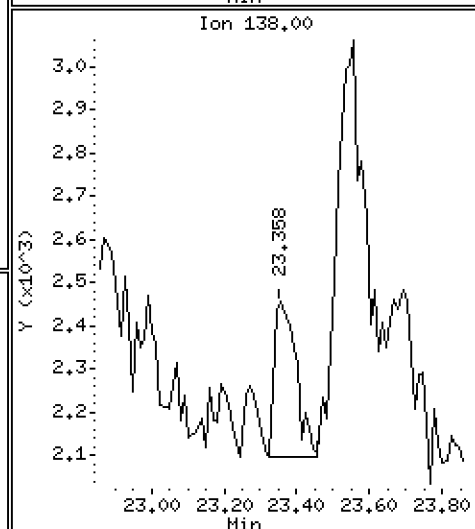
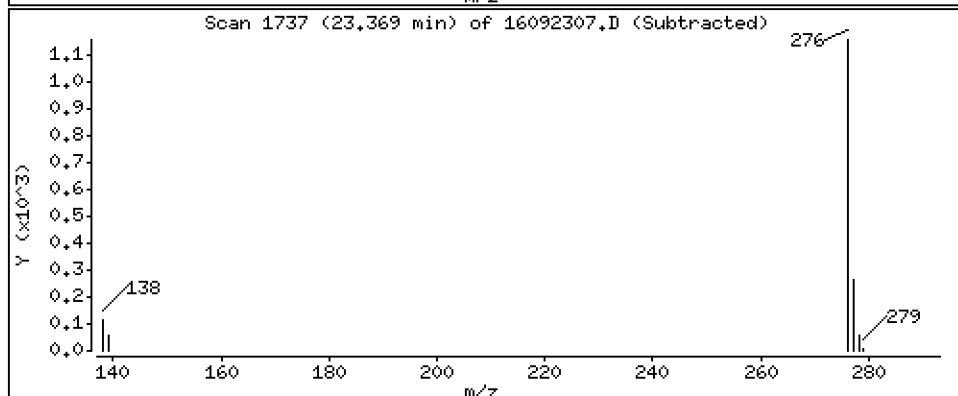
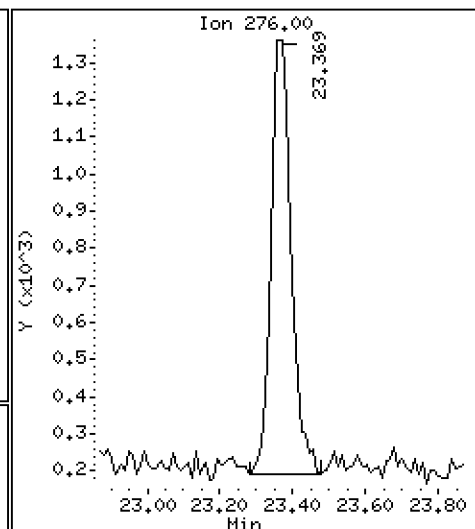
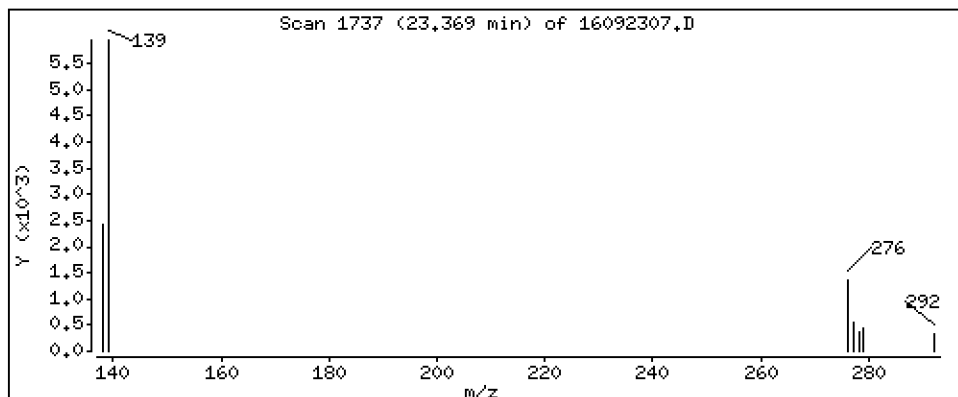
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 1,16 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092307.D

Lab Smp Id: 16I0160-01

Inj Date : 23-SEP-2016 11:01

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-01

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 10

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.581	6.592	(1.000)	690769	200.000	
2 Naphthalene	128		6.623	6.623	(1.006)	133280	33.6241	33.6
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.148)	247799	112.999	113
4 2-Methylnaphthalene	142		7.621	7.621	(1.158)	58491	21.4409	21.4
5 1-Methylnaphthalene	142		7.873	7.884	(1.196)	33940	13.6682	13.7
6 Acenaphthylene	152		9.440	9.440	(0.984)	13030	3.29619	3.30
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	425147	200.000	
8 Acenaphthene	153		9.650	9.650	(1.006)	82662	31.3962	31.4
9 Dibenzofuran	168		9.860	9.860	(1.028)	62984	16.5074	16.5
§ 10 Fluorene-d10	174		10.422	10.432	(1.086)	2246	1.04288	1.04 (M)
11 Fluorene	166		10.485	10.485	(1.093)	90071	29.5841	29.6
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	763118	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	629599	122.817	123
§ 14 Anthracene-d10	188		12.320	12.330	(1.005)	54711	13.2749	13.3
15 Anthracene	178		12.358	12.358	(1.008)	95767	19.1506	19.2
§ 16 Fluoranthene-d10	212		14.356	14.356	(1.171)	563635	151.932	152
17 Fluoranthene	202		14.395	14.395	(1.174)	727255	160.229	160
18 Pyrene	202		14.885	14.885	(0.876)	452864	92.4313	92.4
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	47465	11.5630	11.6
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	632402	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	67912	15.7497	15.7
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	22146	5.18686	5.19
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	9830	2.06673	2.07
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	9578	2.29533	2.30
§ 25 Benzo(e)pyrene-d12	264		19.426	19.426	(0.981)	323689	78.9400	78.9
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	13409	3.27201	3.27
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	9979	2.55248	2.55
* 28 Perylene-d12	264		19.801	19.801	(1.000)	800165	200.000	
29 Perylene	252		19.868	19.868	(1.003)	6061	1.51388	1.51
§ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	340525	129.470	129
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	4360	1.16500	1.16

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092307.D
 Lab Smp Id: 16I0160-01
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	690769	30.98
7 Acenaphthene-d10	297518	148759	595036	425147	42.90
12 Phenanthrene-d10	522042	261021	1044084	763118	46.18
20 Chrysene-d12	389499	194750	778998	632402	62.36
28 Perylene-d12	430626	215313	861252	800165	85.81

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.58	-0.16
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	-0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	-0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092307.D

Lab ID: 16I0160-01
nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 11:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

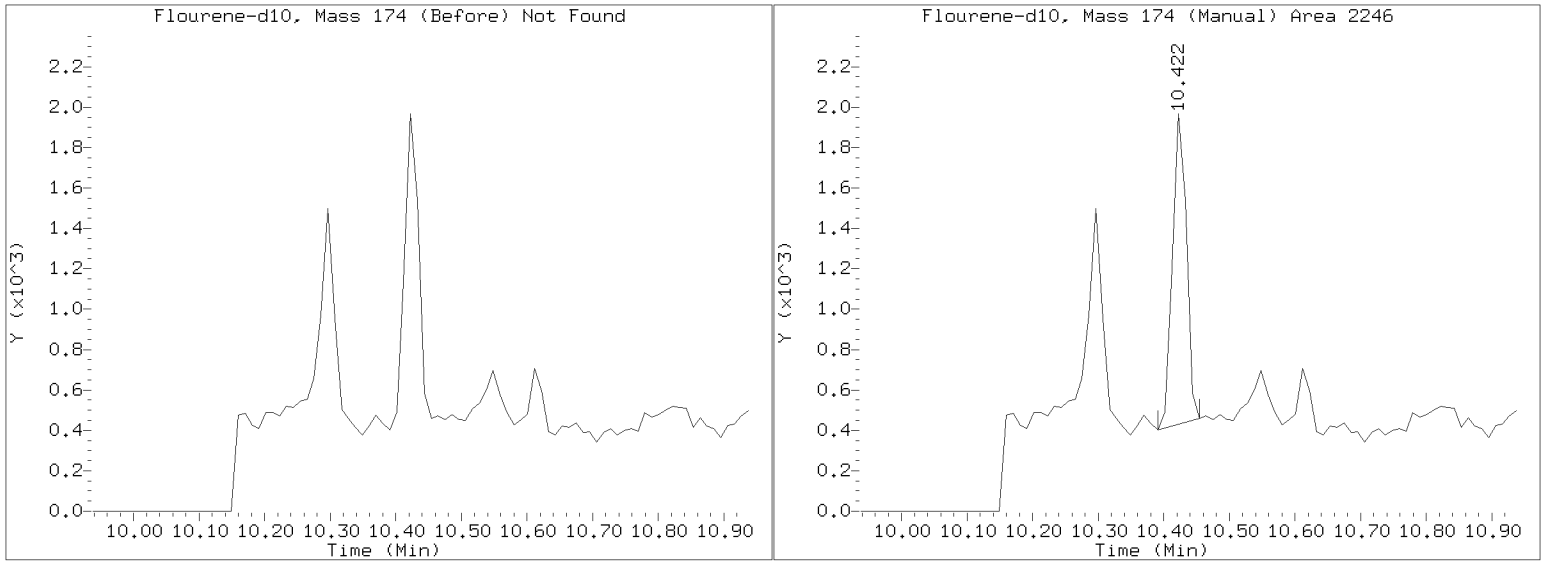
RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092307.D
Injection Date: 23-SEP-2016 11:01
Lab ID:16I0160-01 Client ID:
Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>1610160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Matrix:	<u>Tissue</u>	Laboratory ID:	<u>1610160-03</u>
Sampled:	<u>09/09/16 10:20</u>	Prepared:	<u>09/10/16 11:10</u>
Solids:		Preparation:	<u>EPA 3550C (Ultrasonic)</u>
Batch:	<u>BEI0260</u>	Sequence:	<u>SEI0321</u>
Instrument:	<u>NT11</u>	Column:	<u>RXi-17Sil-MS</u>
		File ID:	<u>16092308.D</u>
		Analyzed:	<u>09/23/16 11:31</u>
		Initial/Final:	<u>0.886 g / 0.1 mL</u>
		Calibration:	<u>ZI00066</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	8.24	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	3.60	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	3.78		1.13	1.13
86-73-7	Fluorene	1	3.11		1.13	1.13
85-01-8	Phenanthrene	1	13.9		1.13	1.13
120-12-7	Anthracene	1	2.52		1.13	1.13
206-44-0	Fluoranthene	1	25.2		1.13	1.13
129-00-0	Pyrene	1	14.1		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.89		1.13	1.13
218-01-9	Chrysene	1	2.71		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzo(a)fluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	16.9	49.9	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	18.5	54.6	30 - 160	
Fluoranthene-d10	33.860	22.8	67.3	30 - 160	
Fluorene-d10	21.163	0.127	0.601	30 - 160	*
Anthracene-d10	21.163	1.29	6.08	30 - 160	*
Benzo(e)pyrene-d12	21.163	9.13	43.1	30 - 160	

Data File: \\target\share\chem3\nt11.i\20160923_b\16092308.D

Date: 23-SEP-2016 11:31

Client ID:

Sample Info: 1610160-03

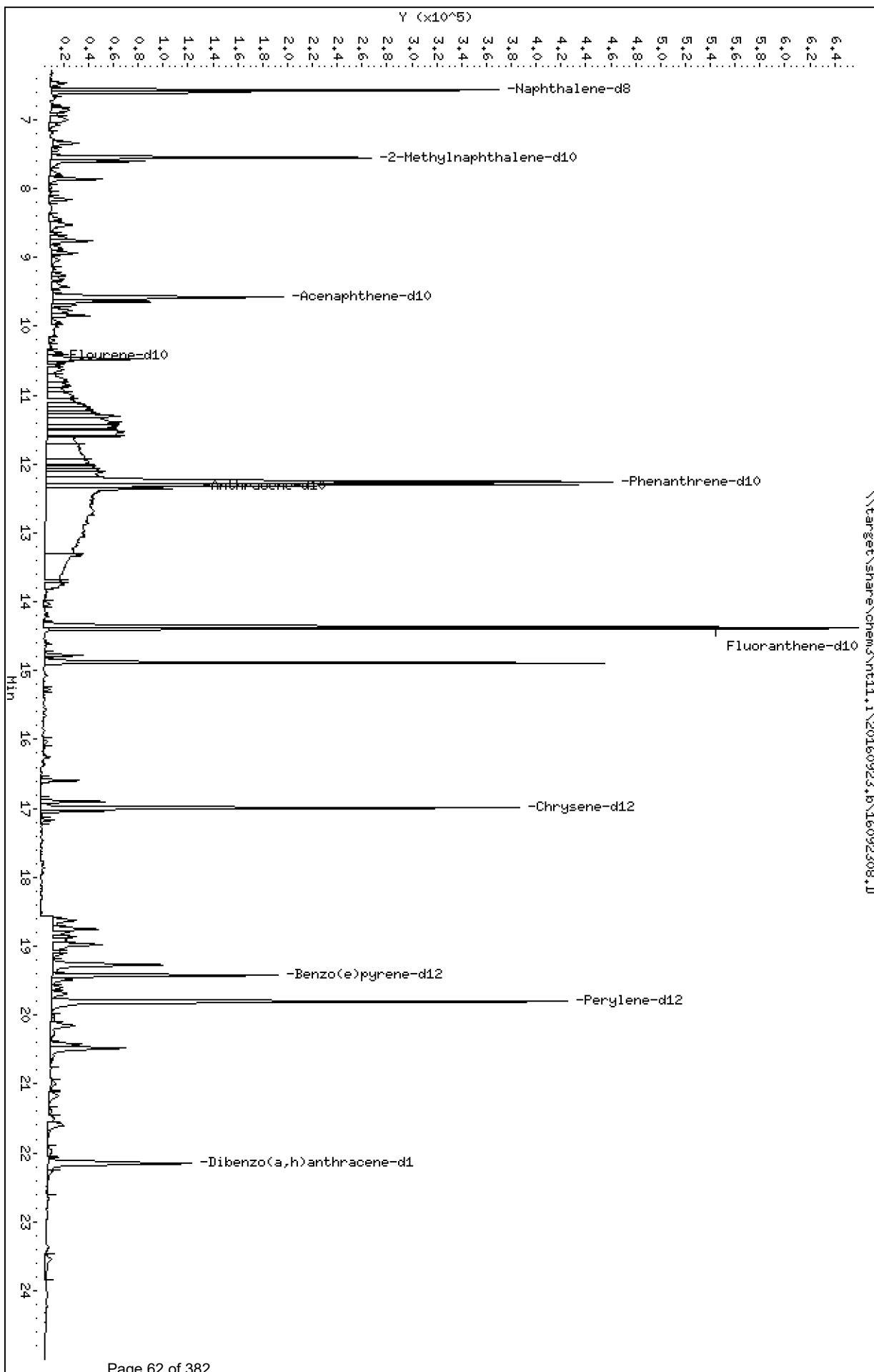
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.i\20160923_b\16092308.D



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

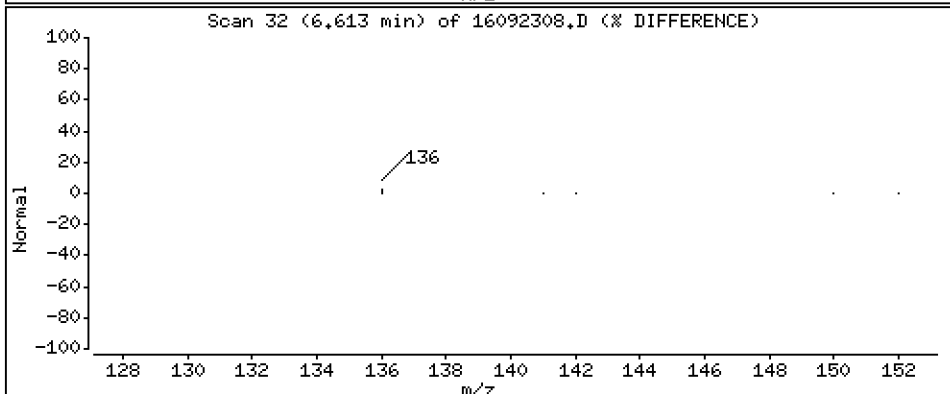
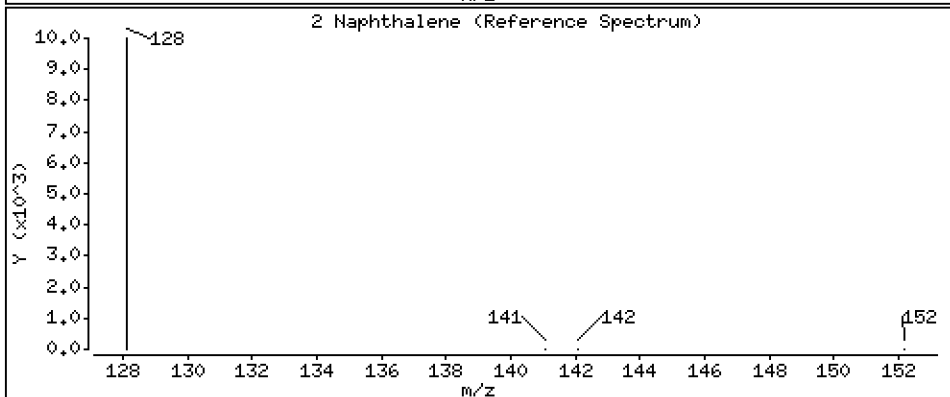
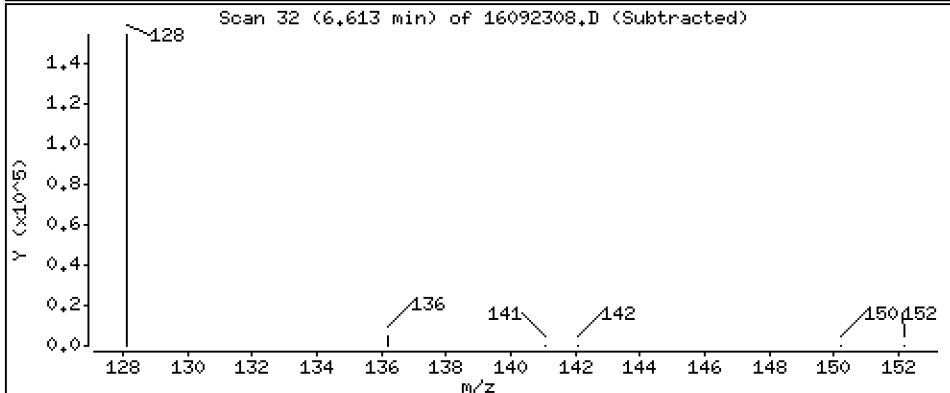
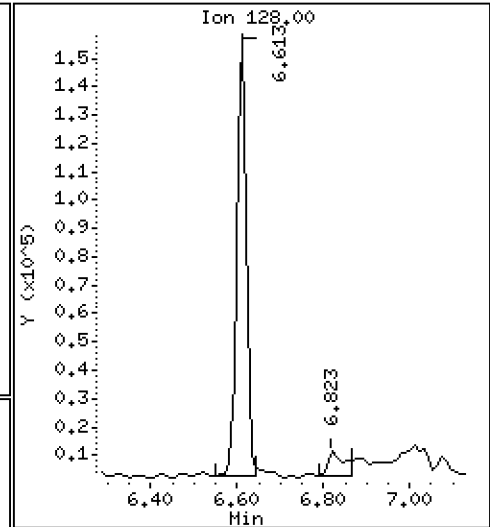
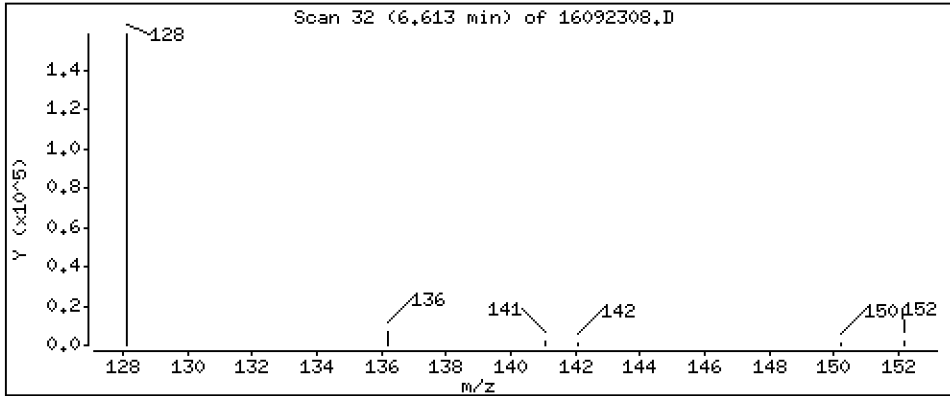
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 73,0 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

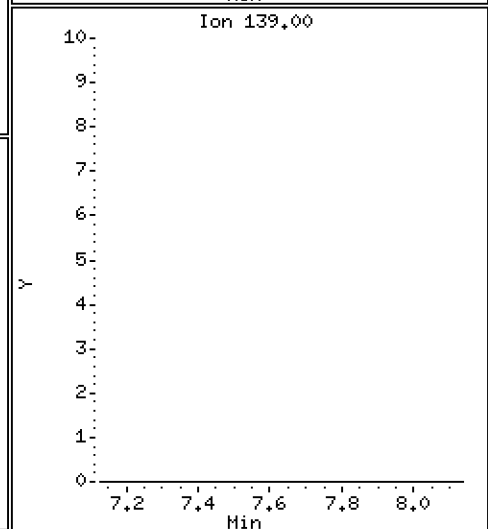
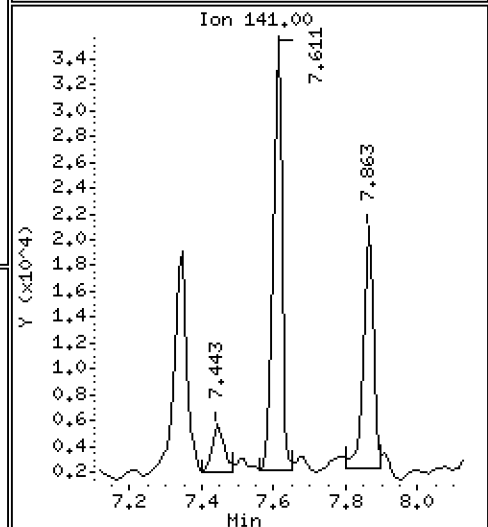
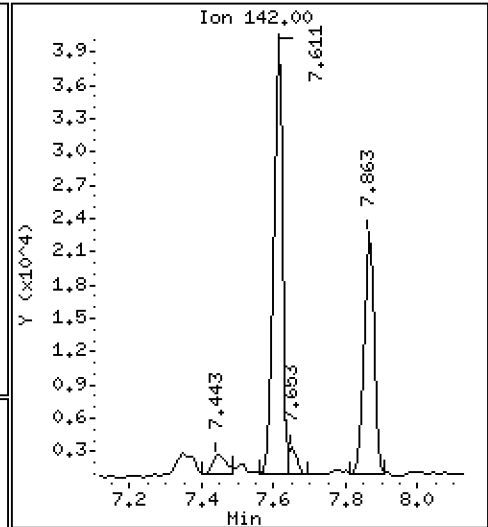
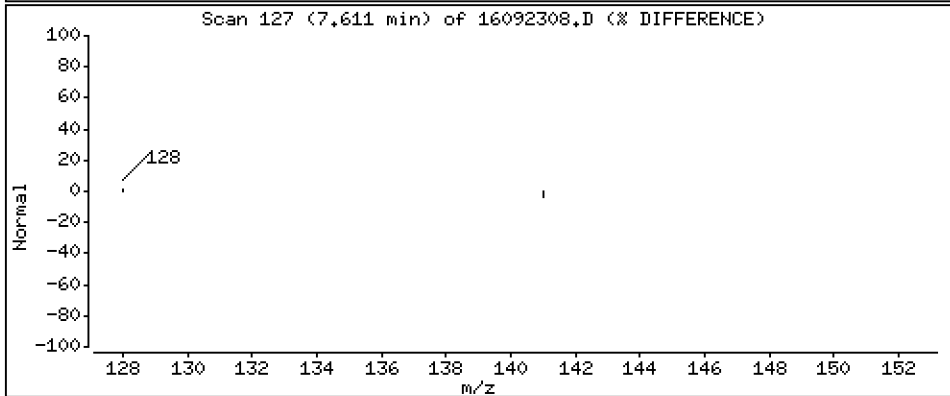
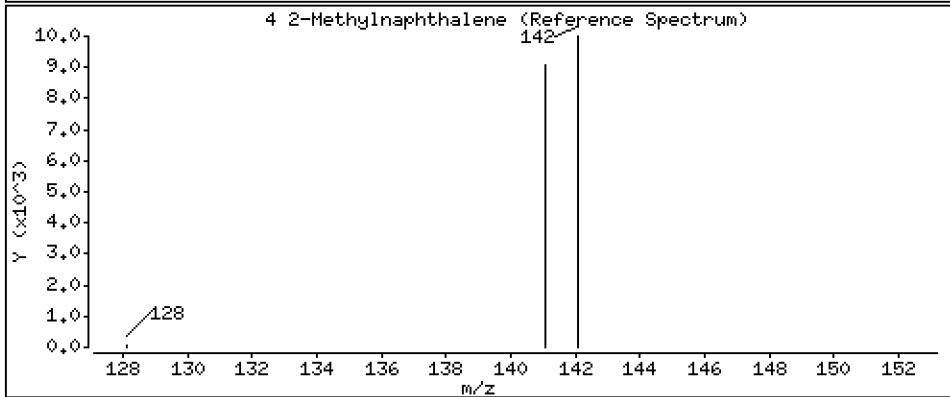
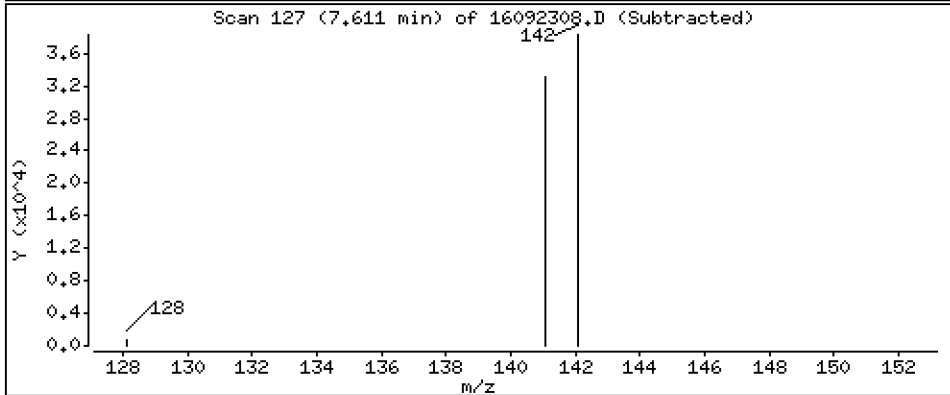
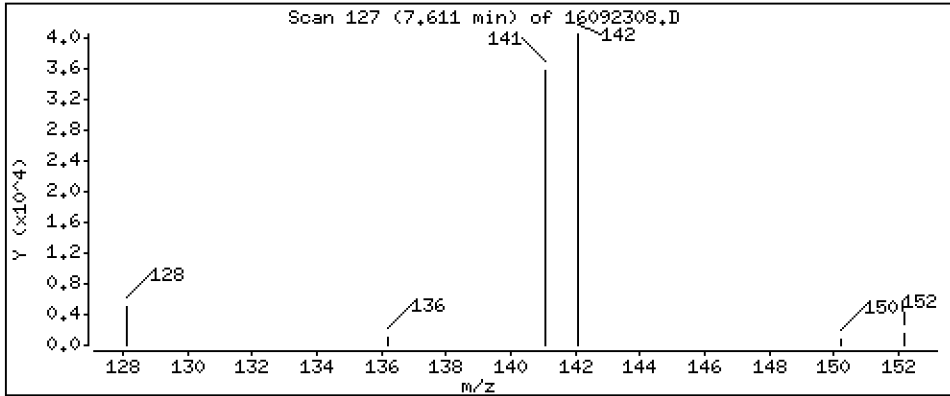
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4-Methylnaphthalene

Concentration: 31.9 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

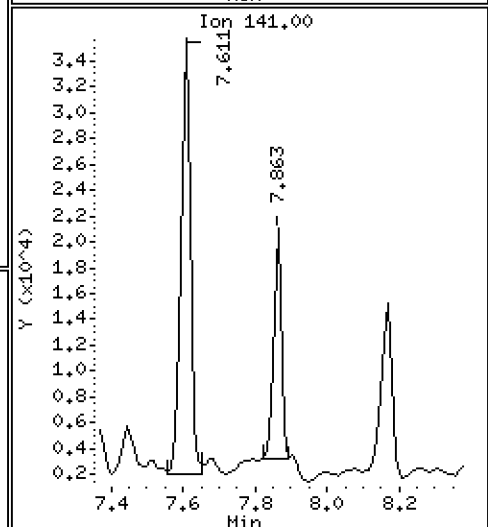
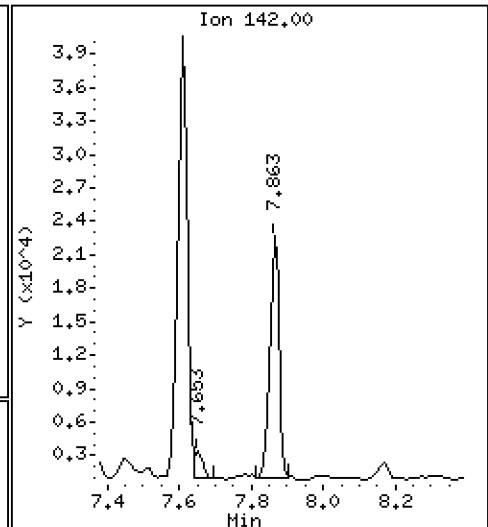
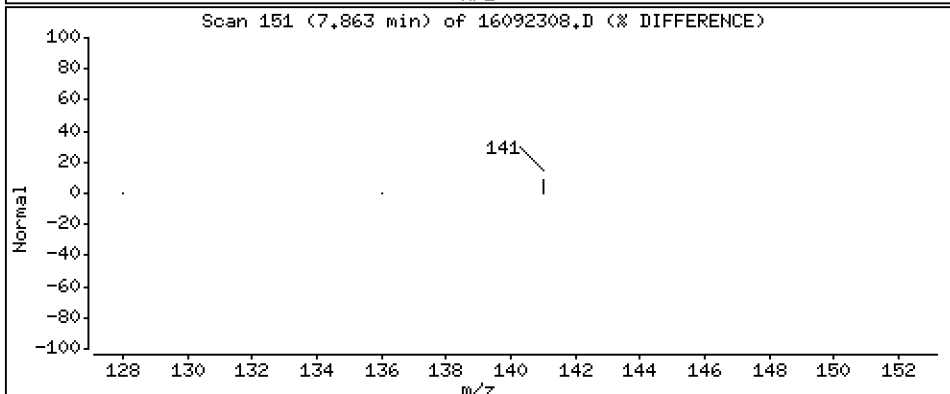
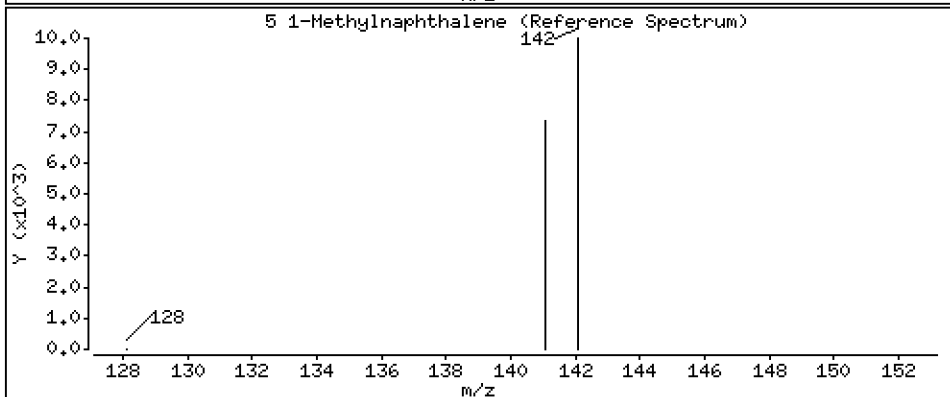
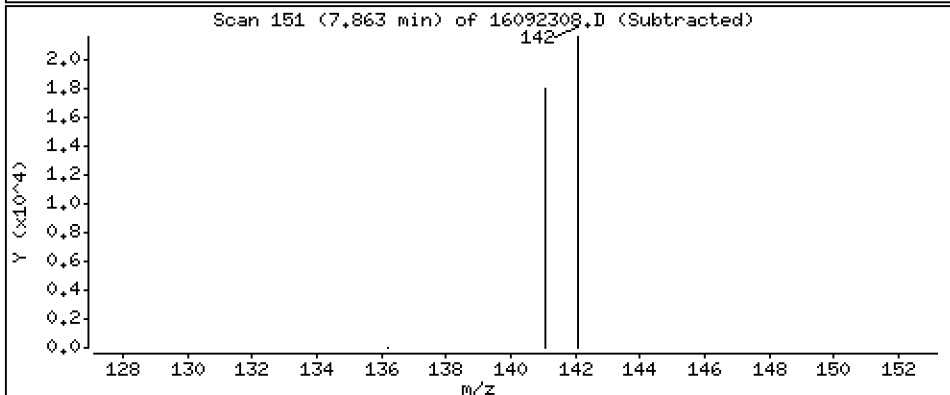
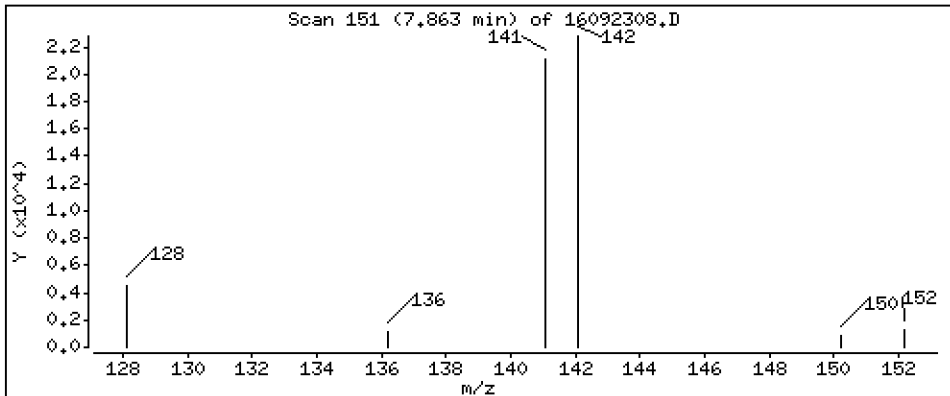
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 20,1 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

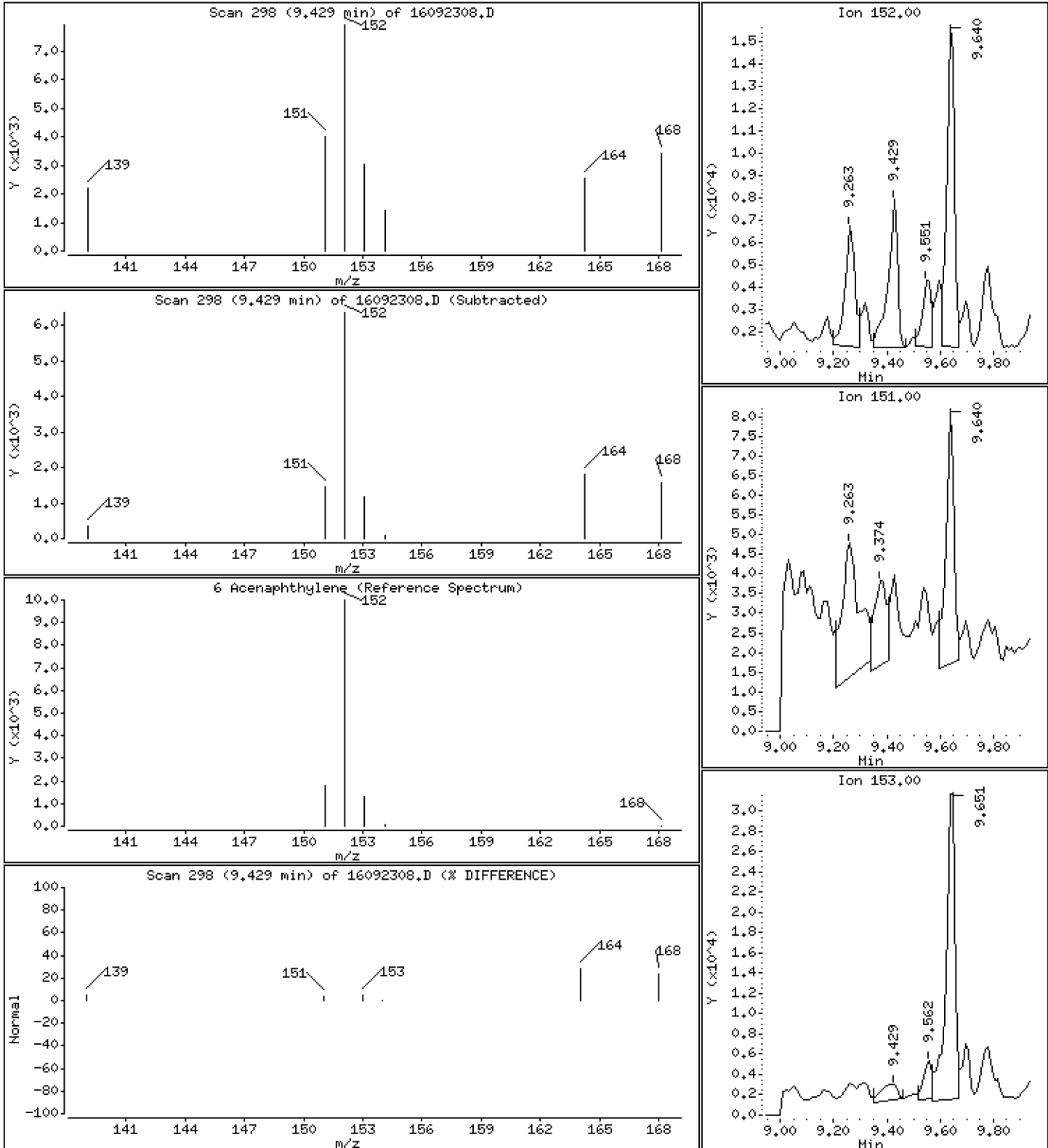
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 5.15 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

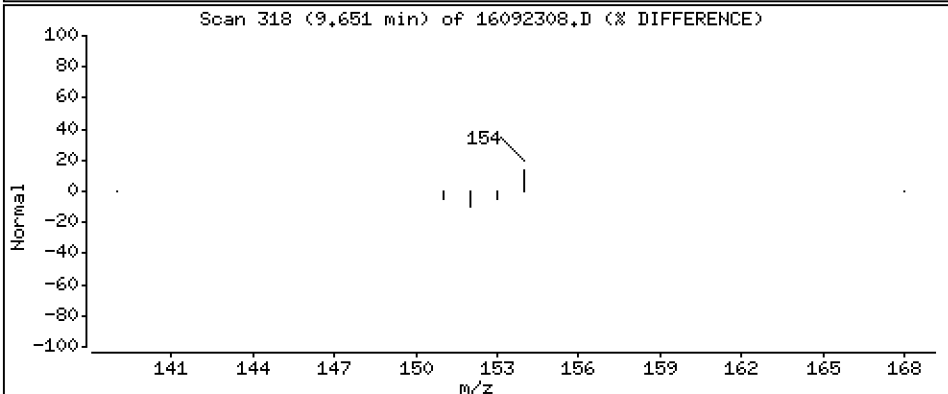
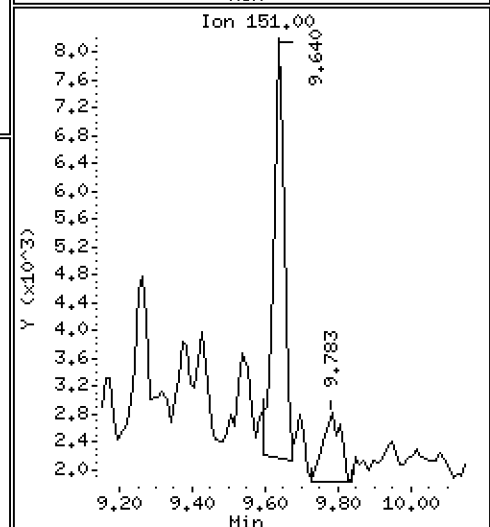
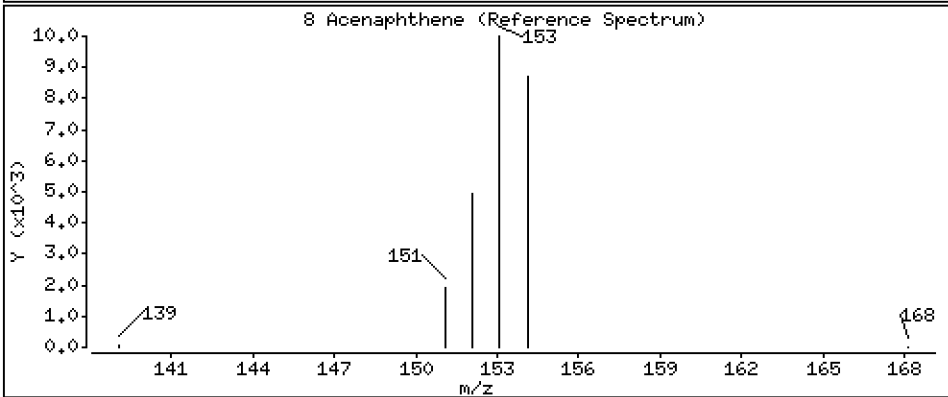
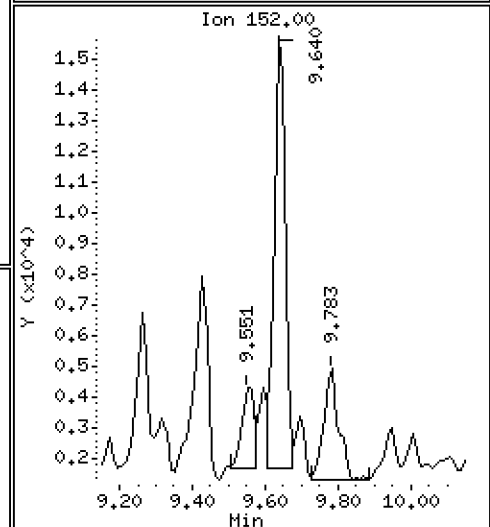
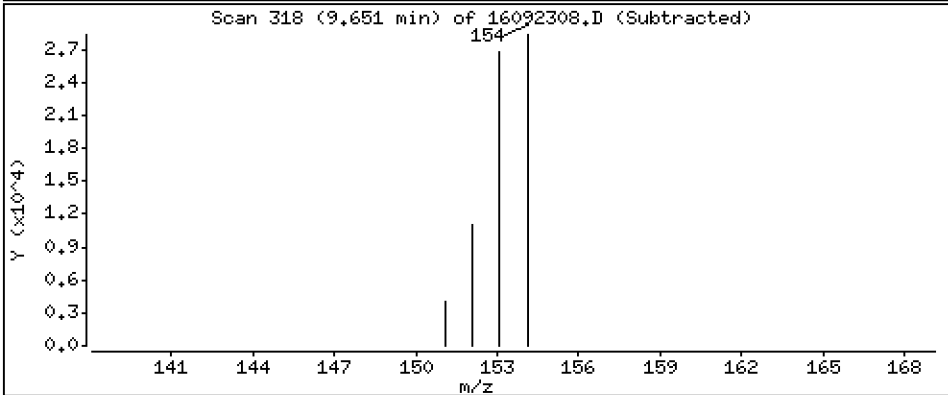
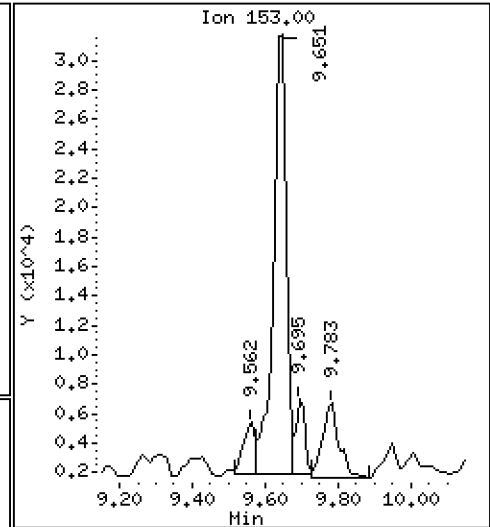
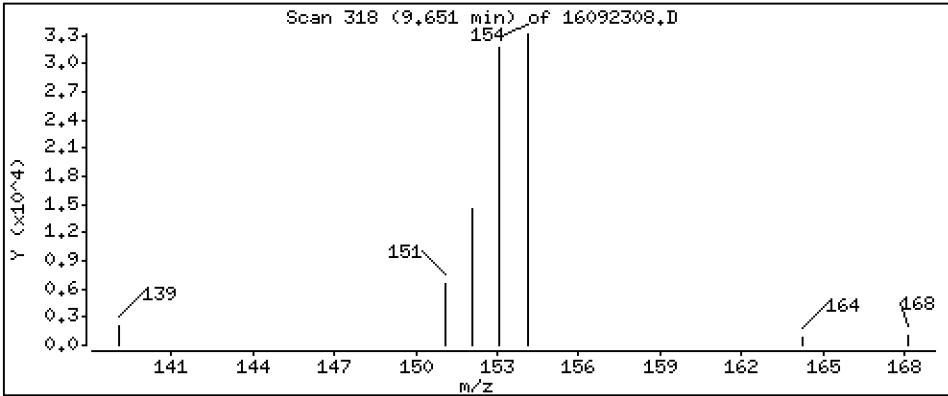
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 33,5 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

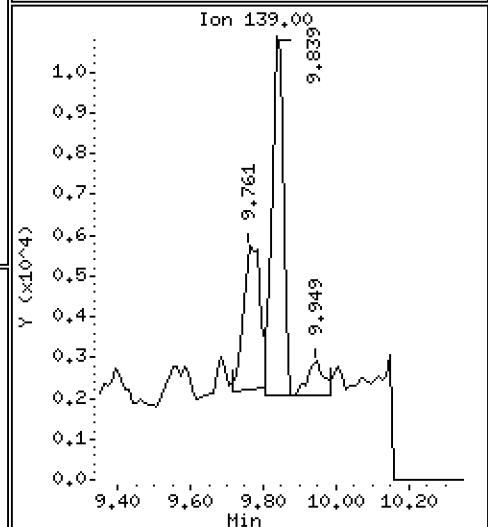
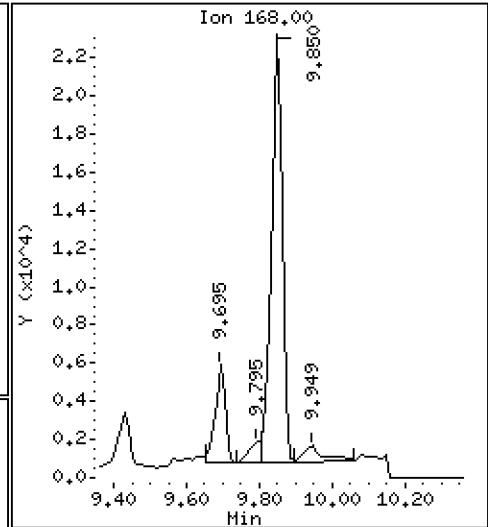
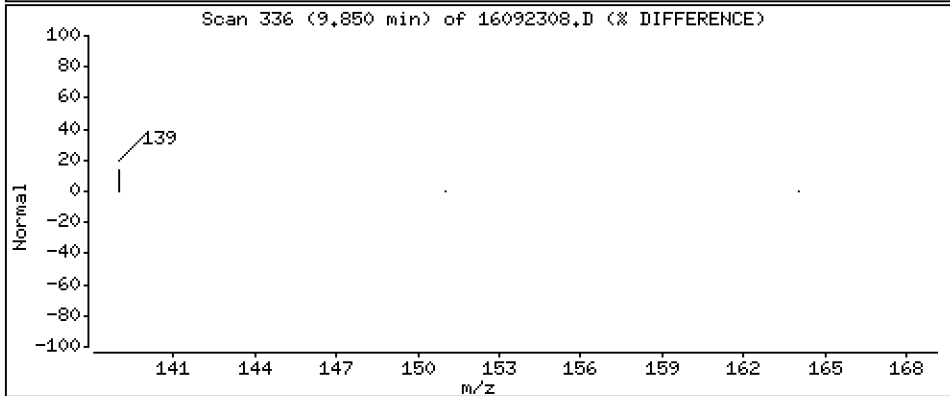
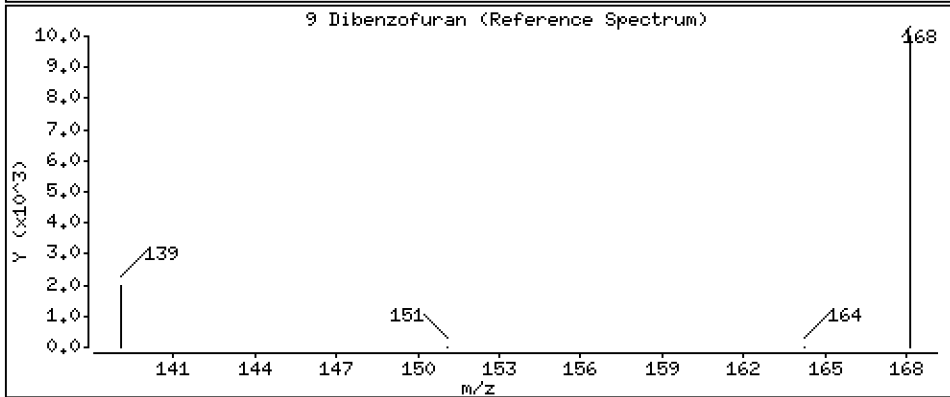
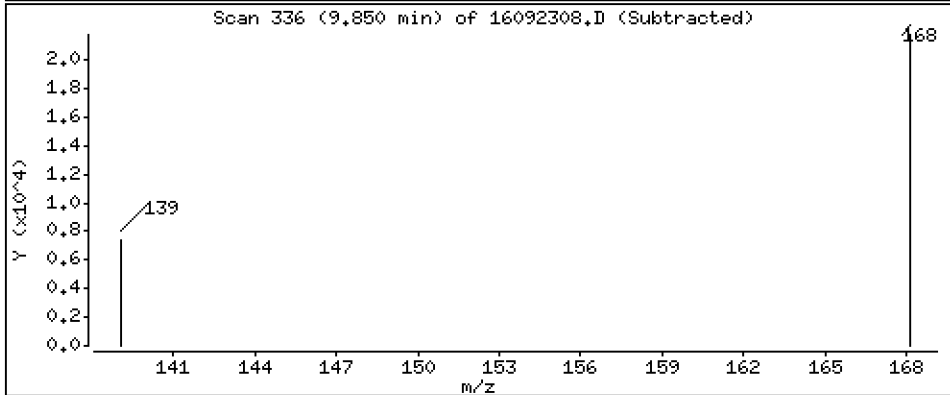
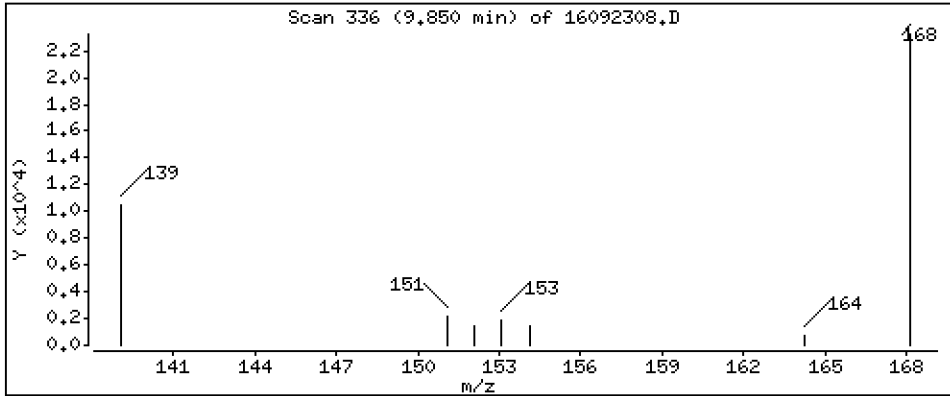
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 14,5 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

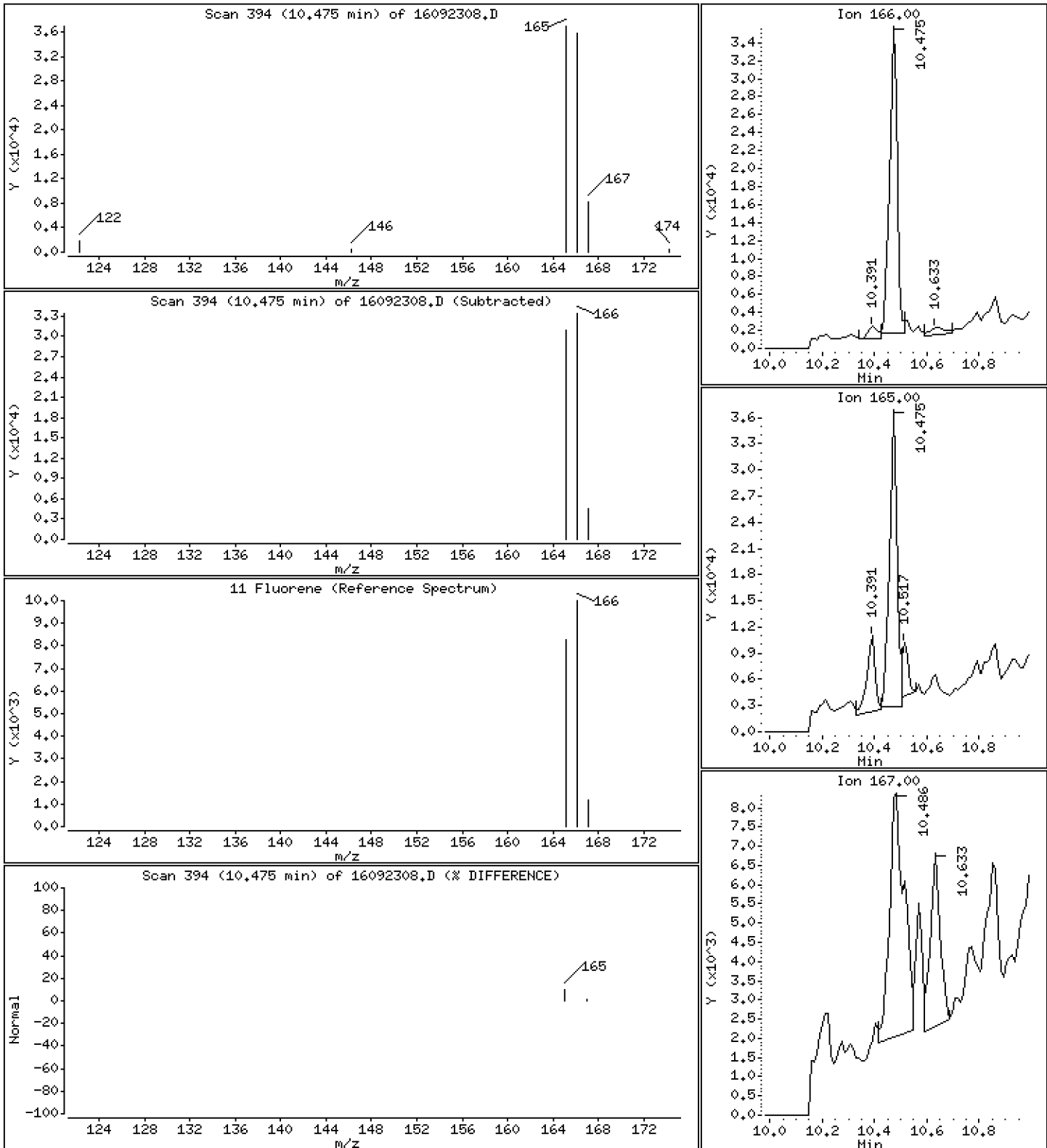
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 27,6 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

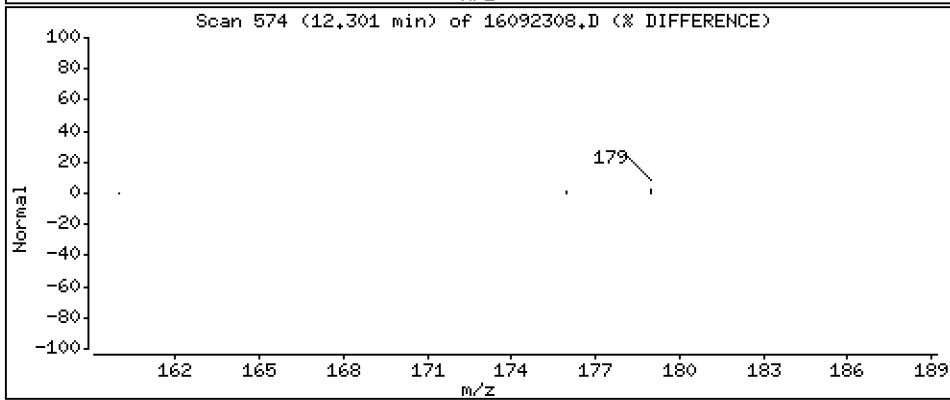
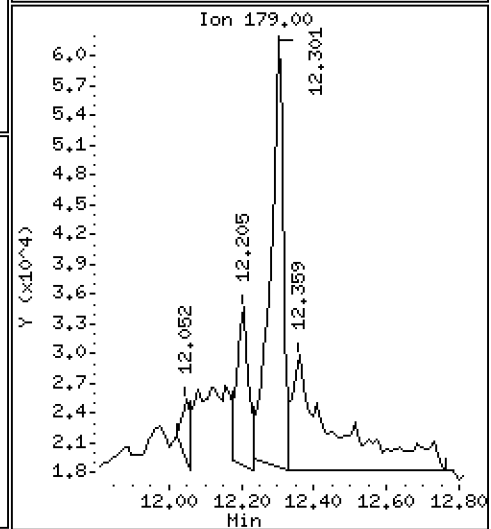
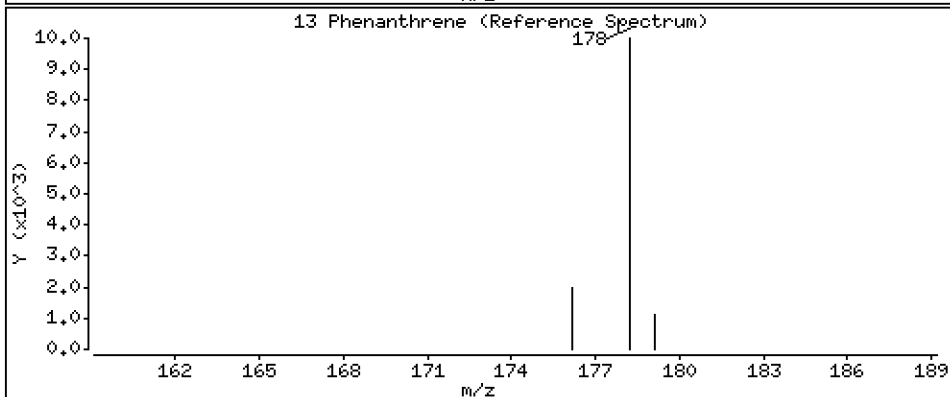
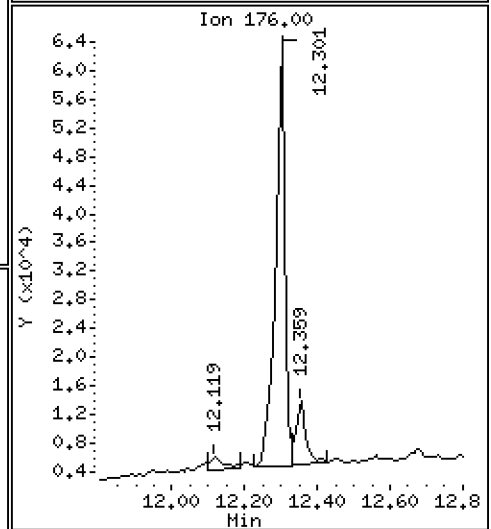
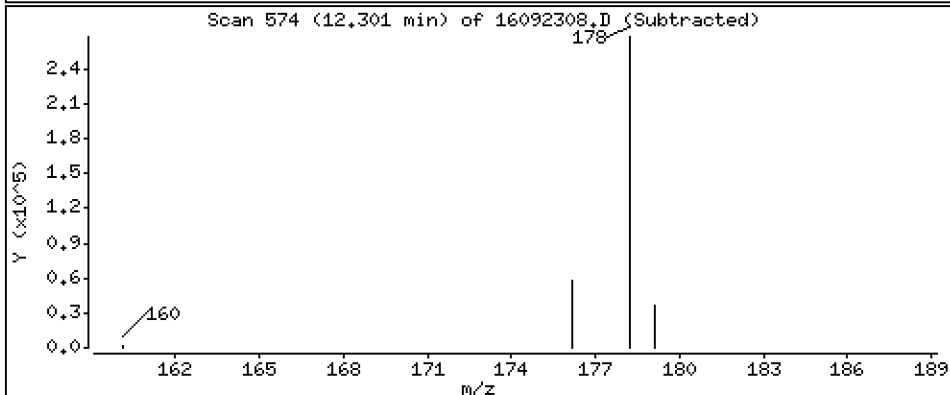
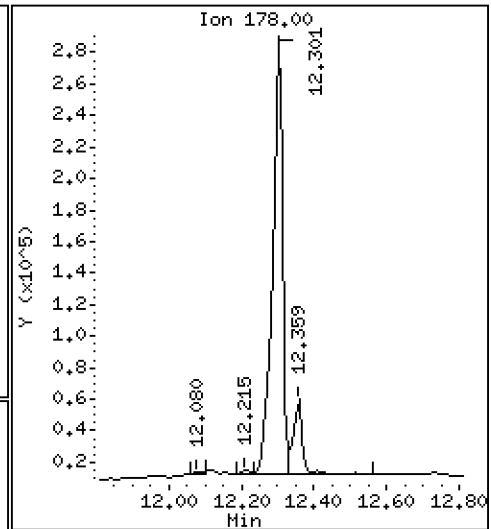
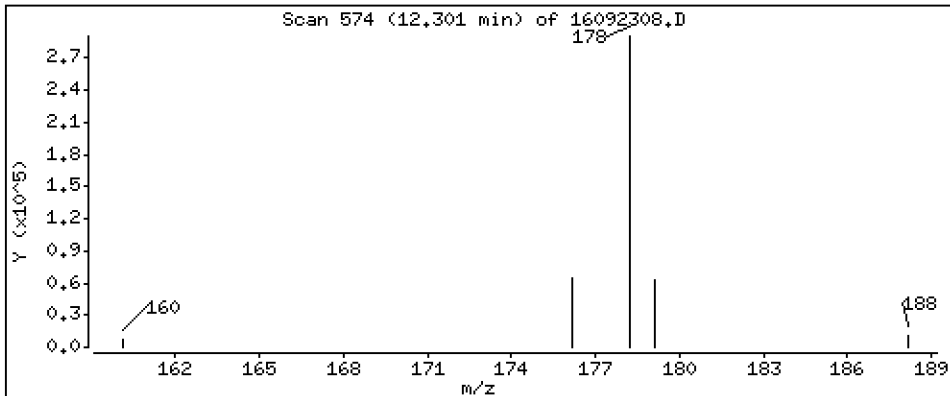
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 123 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

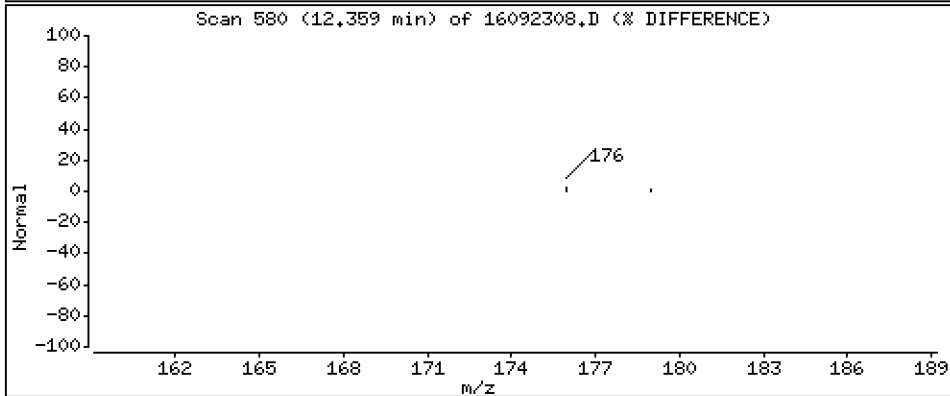
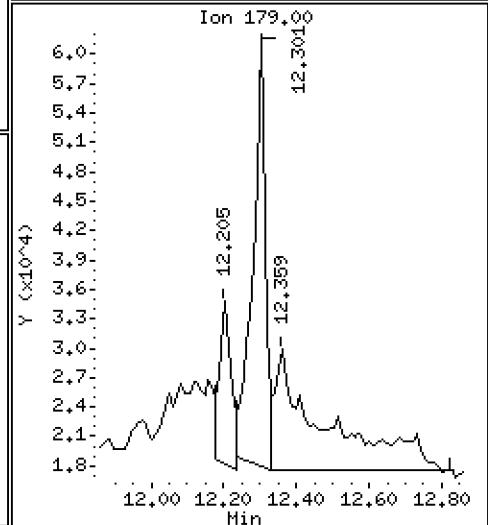
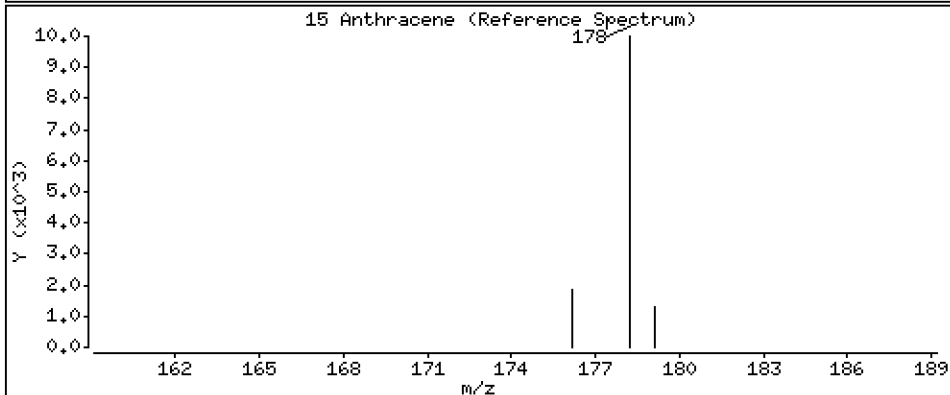
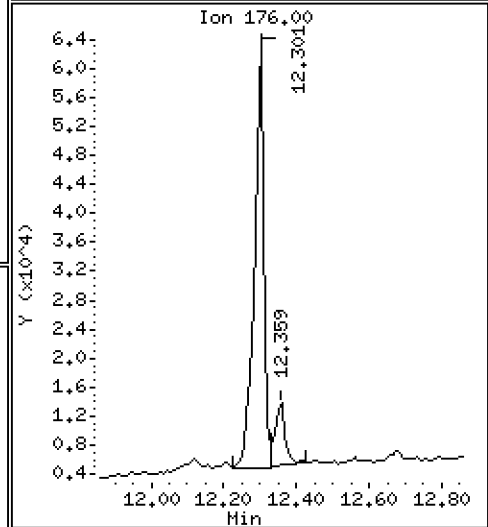
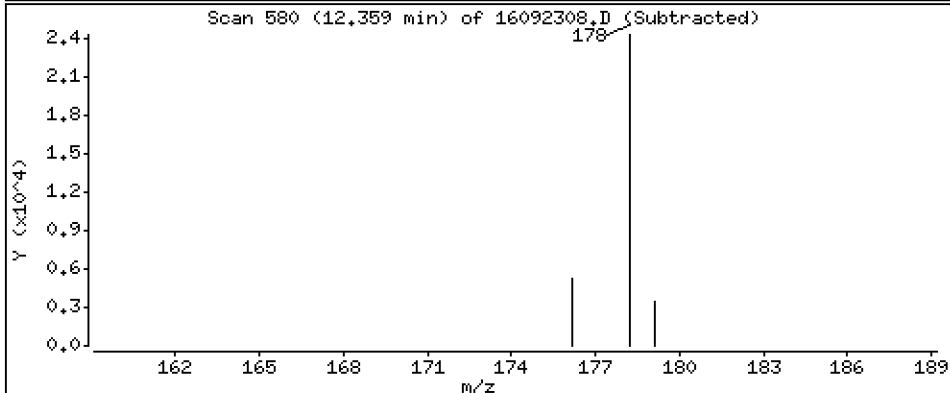
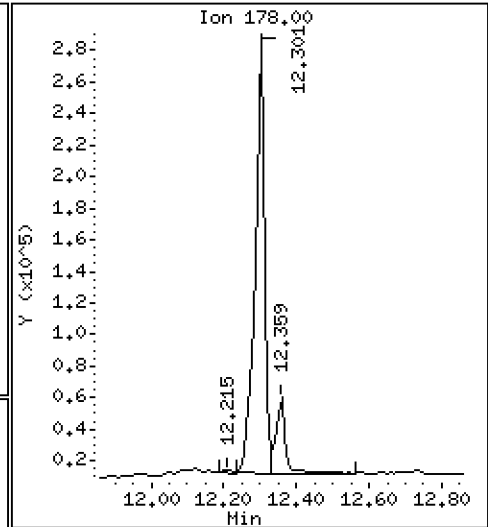
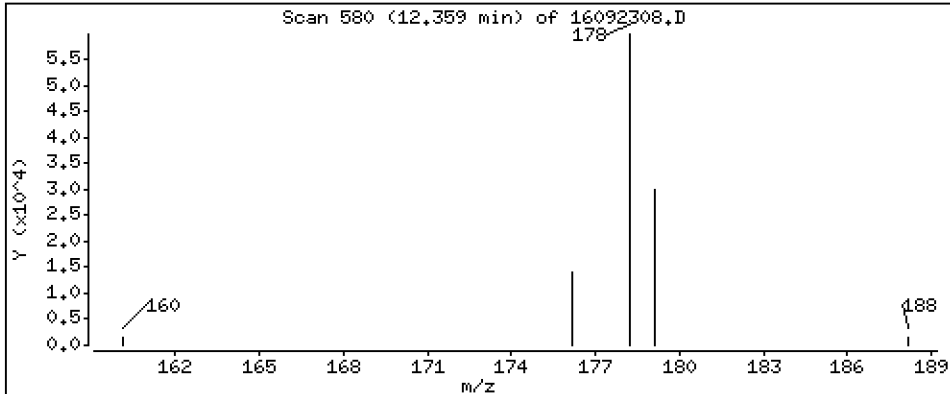
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 22.4 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

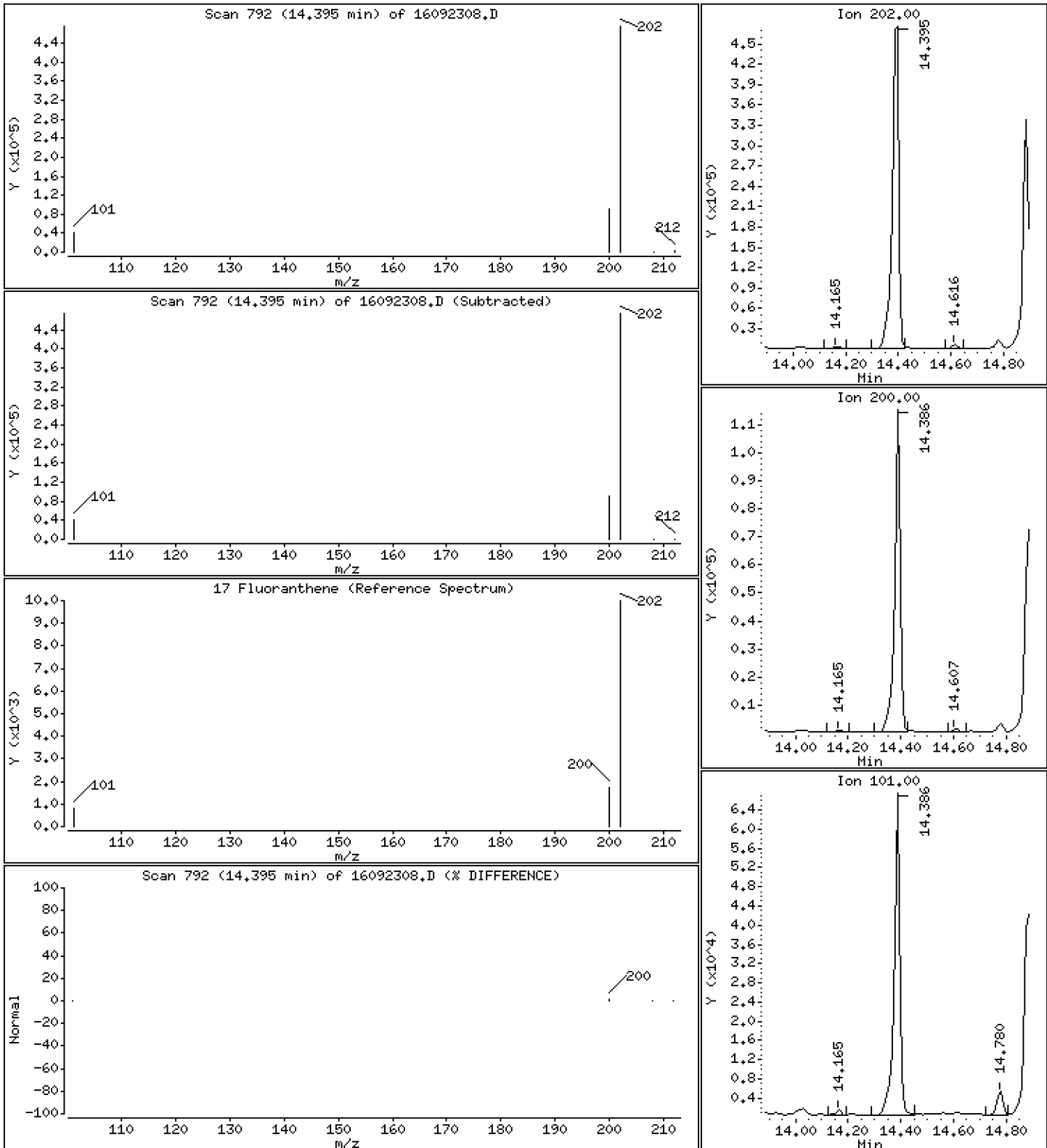
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 224 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

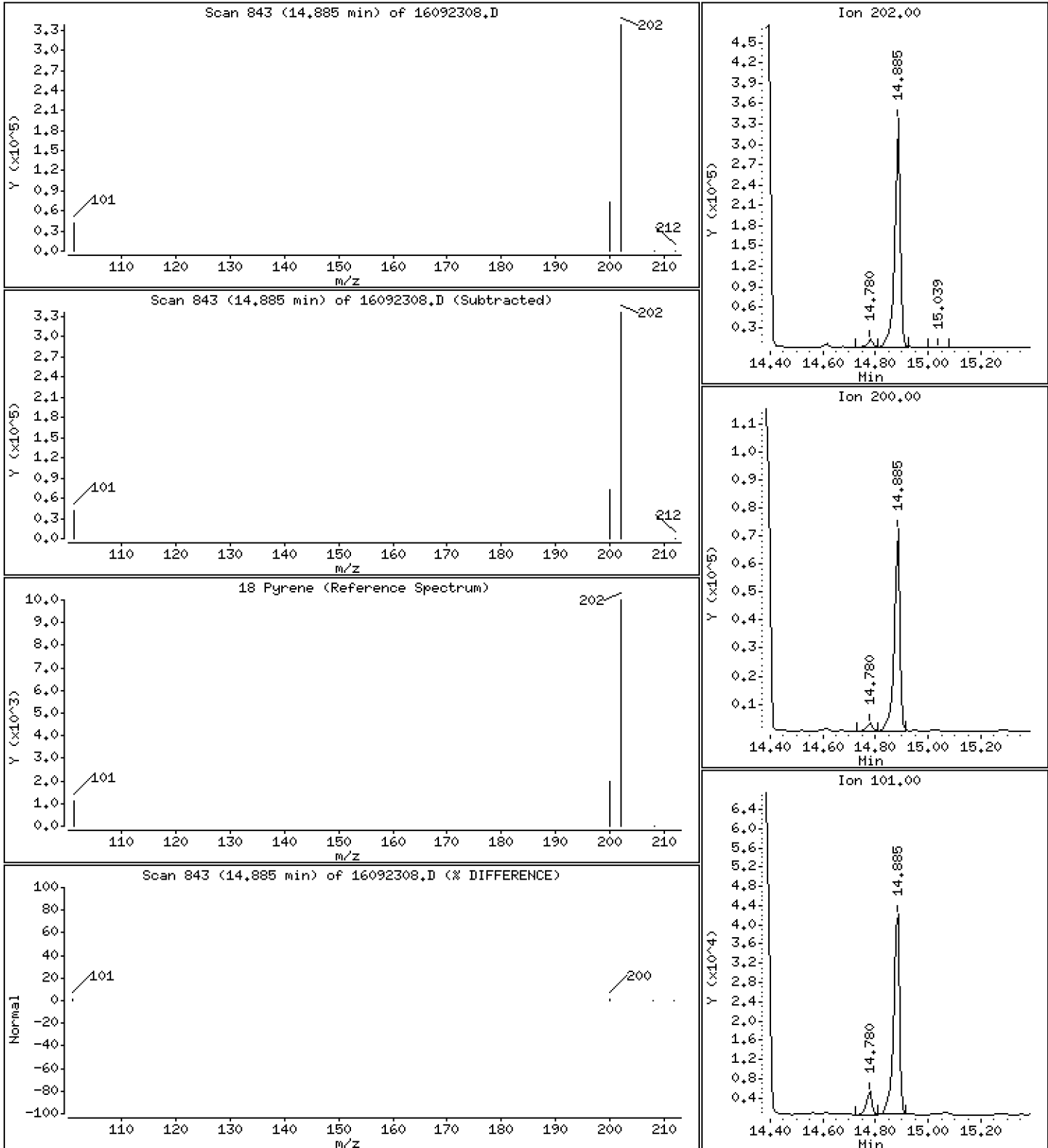
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 125 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

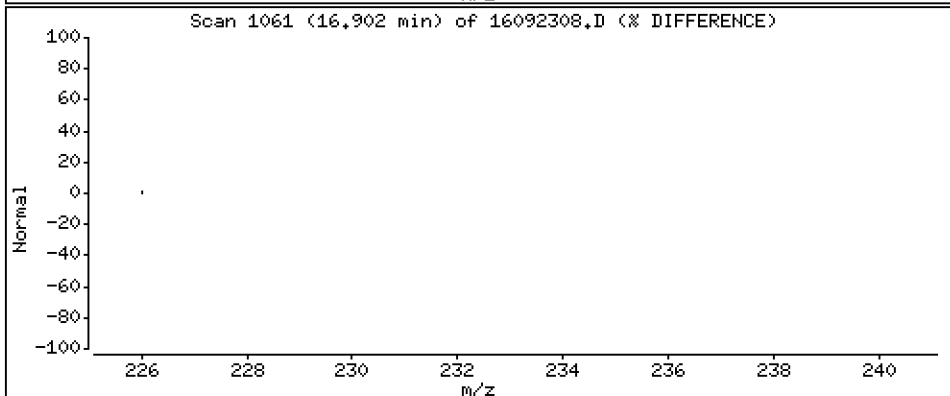
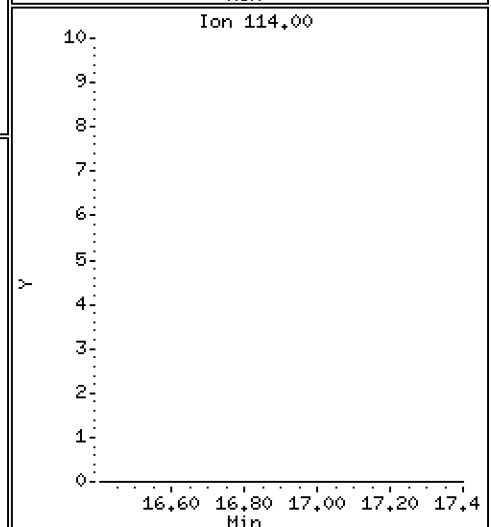
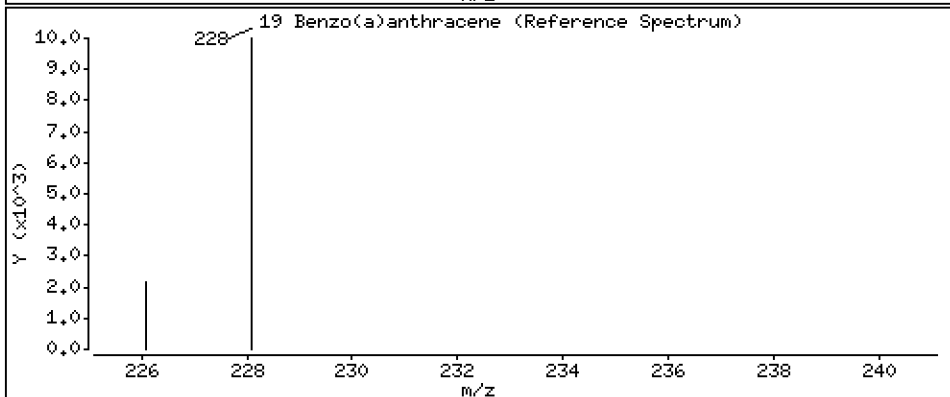
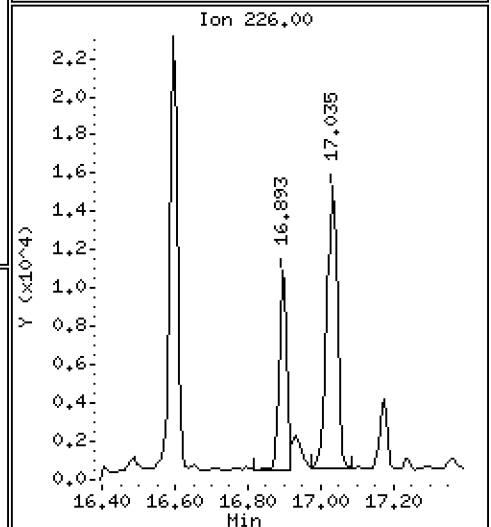
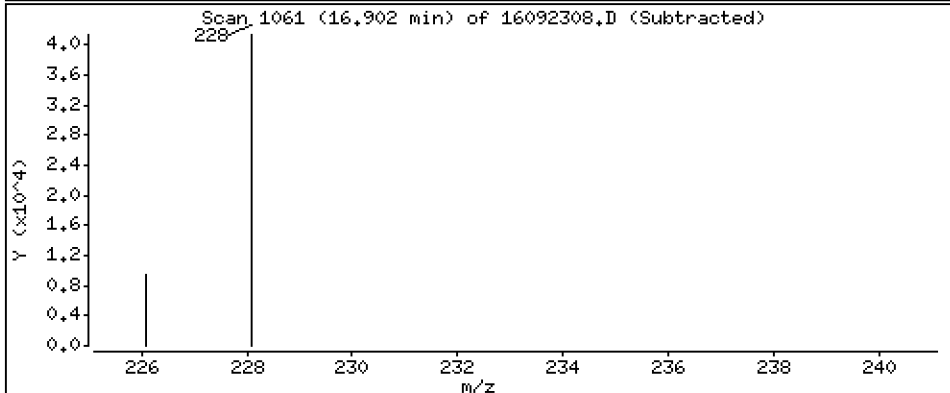
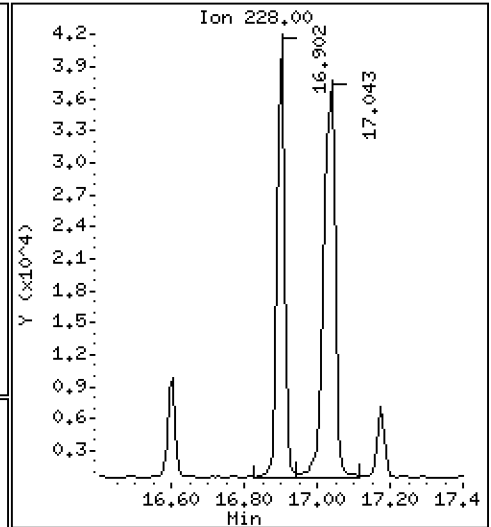
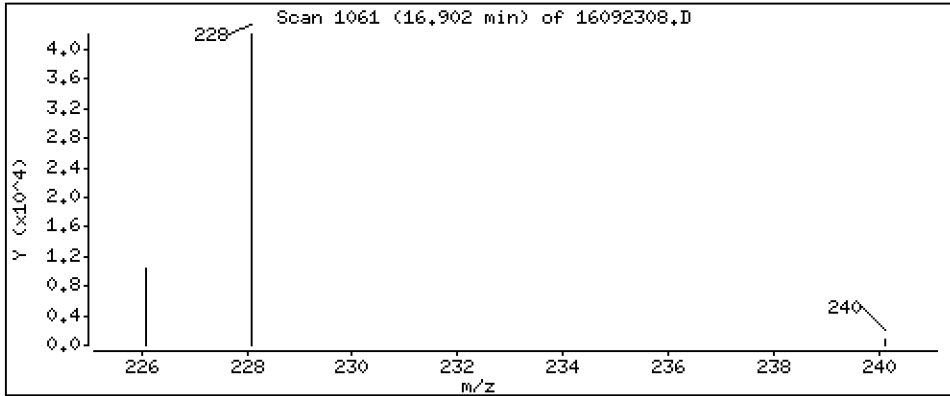
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 16,7 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

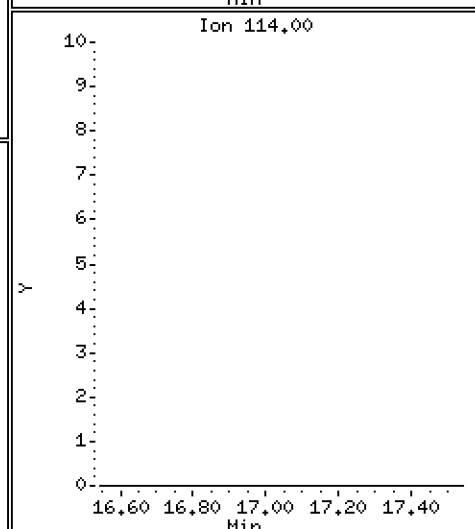
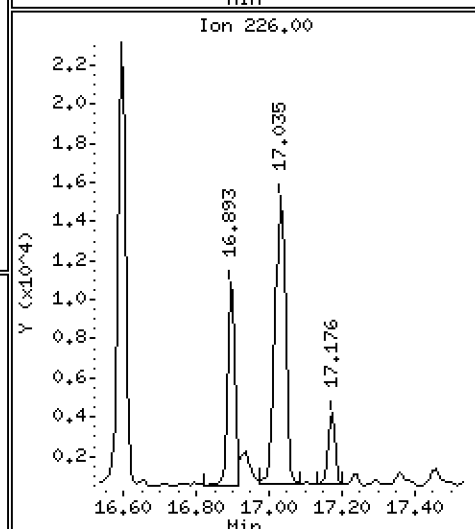
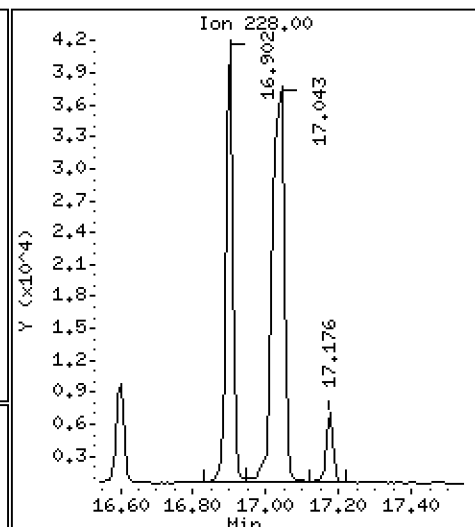
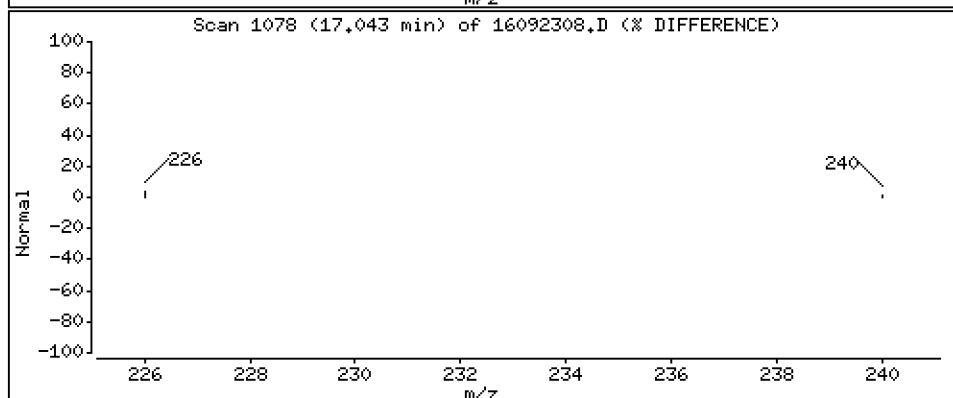
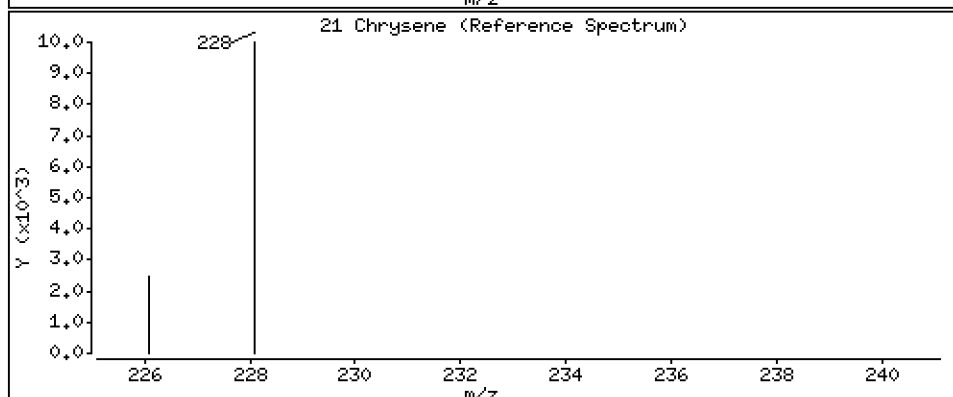
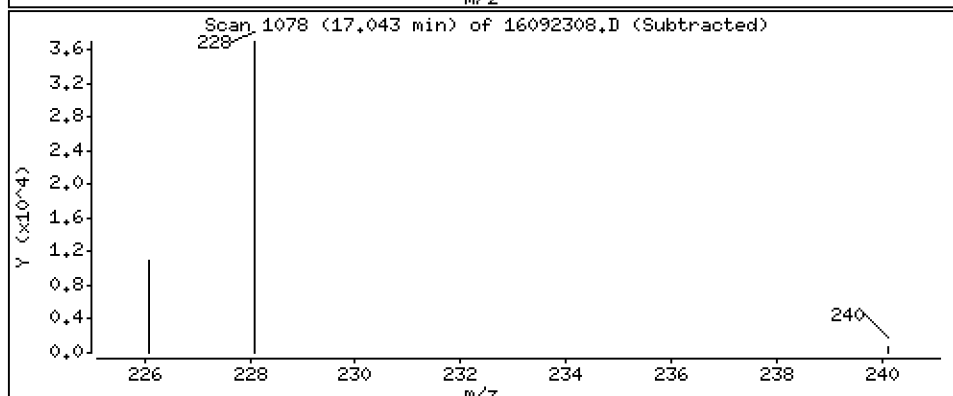
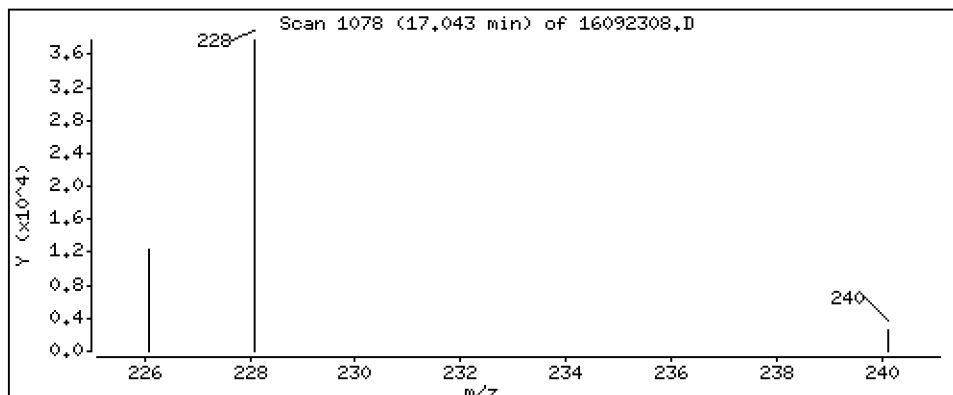
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 24,0 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

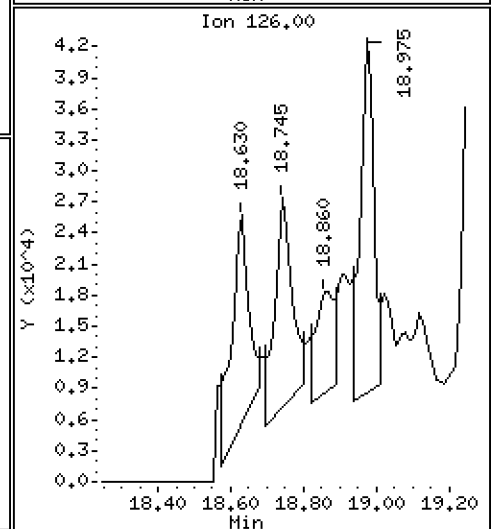
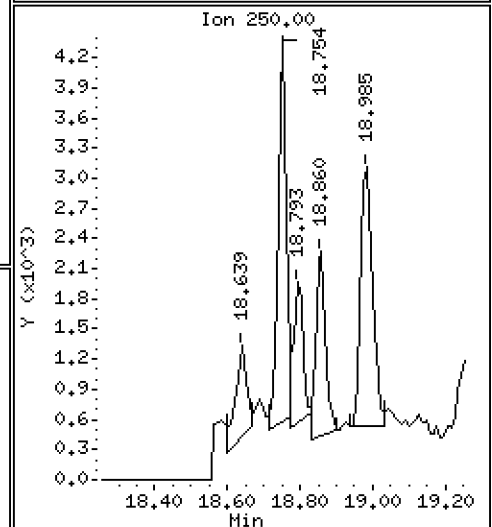
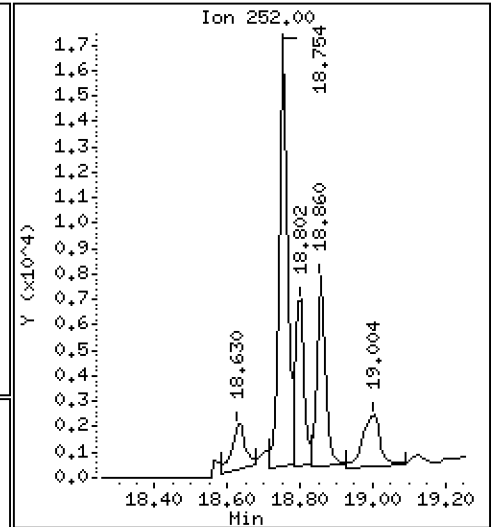
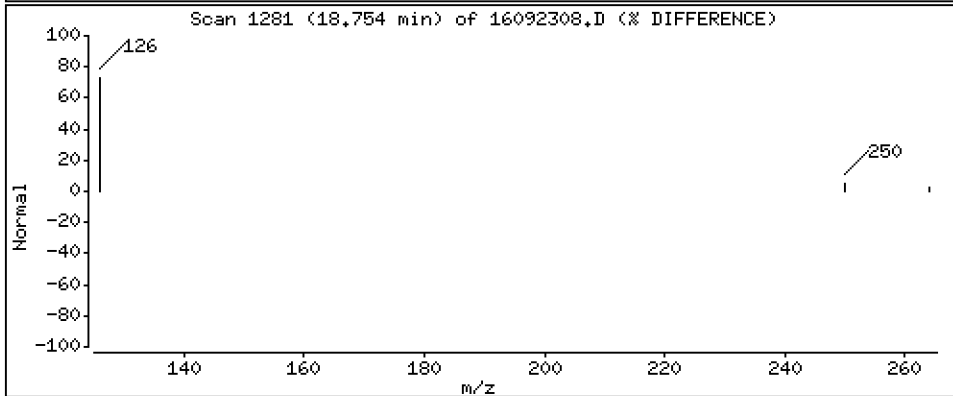
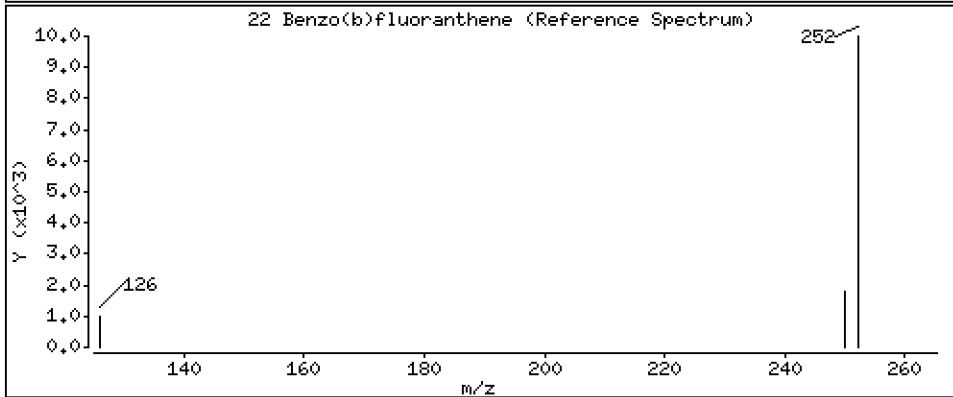
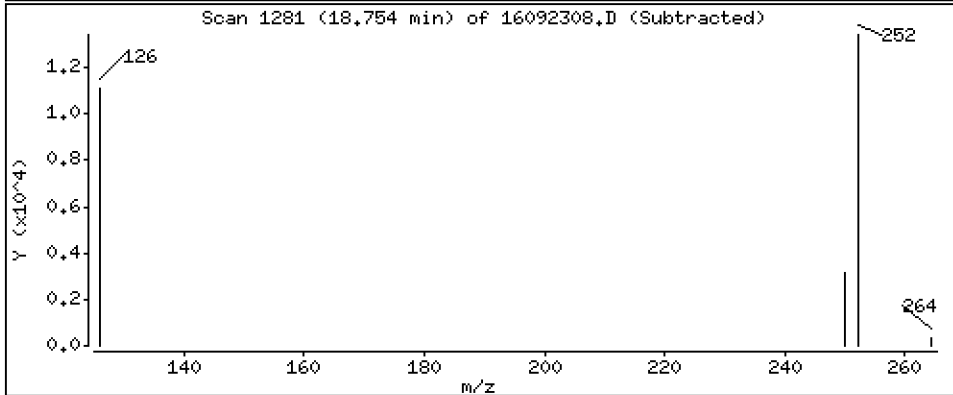
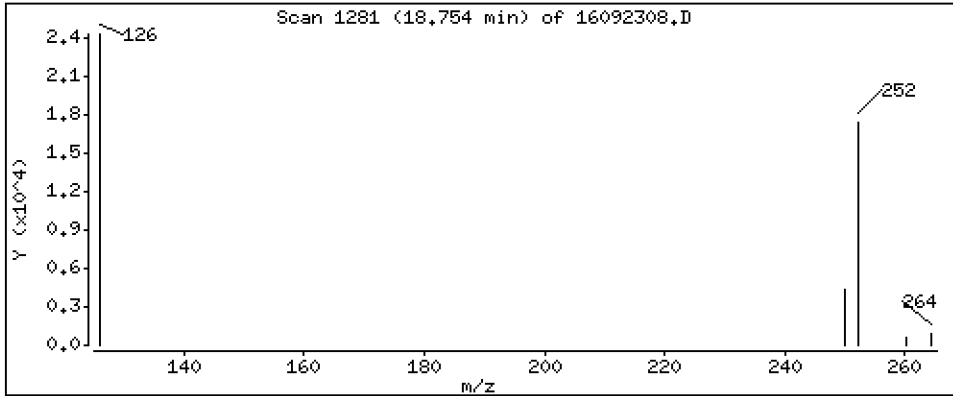
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

22 Benzo(b)fluoranthene

Concentration: 8.39 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

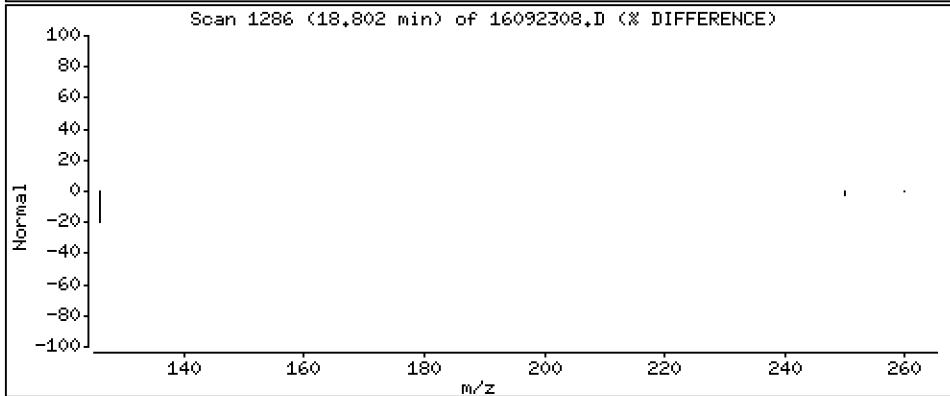
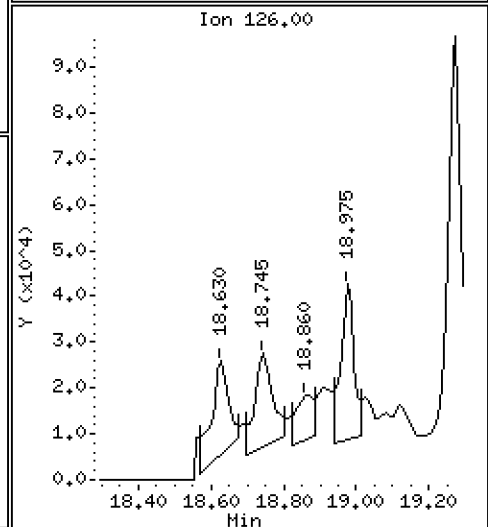
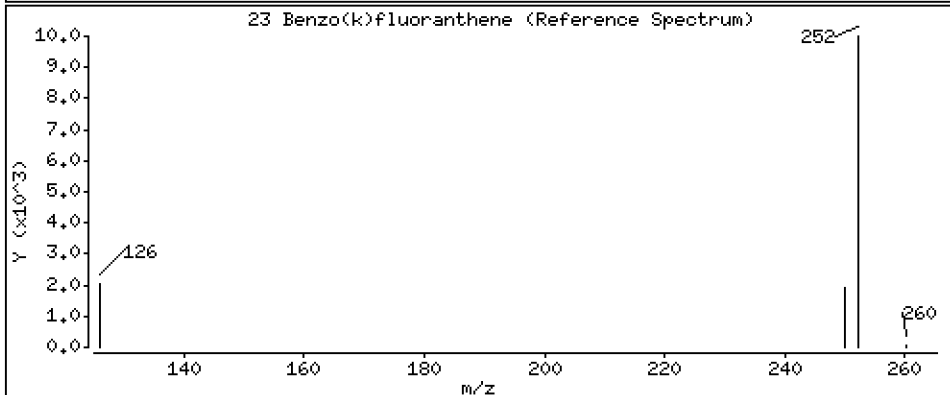
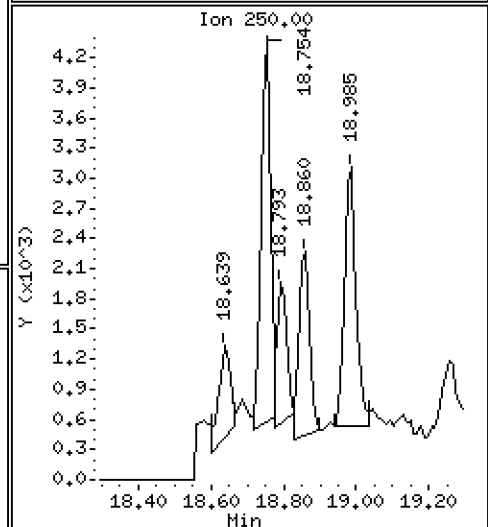
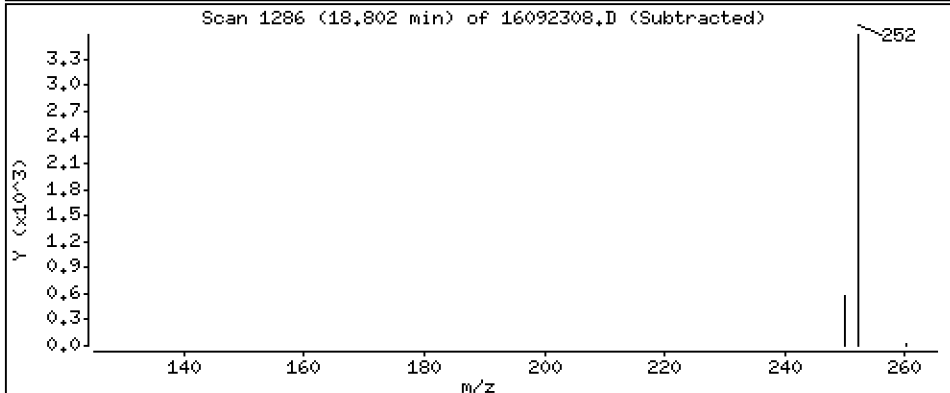
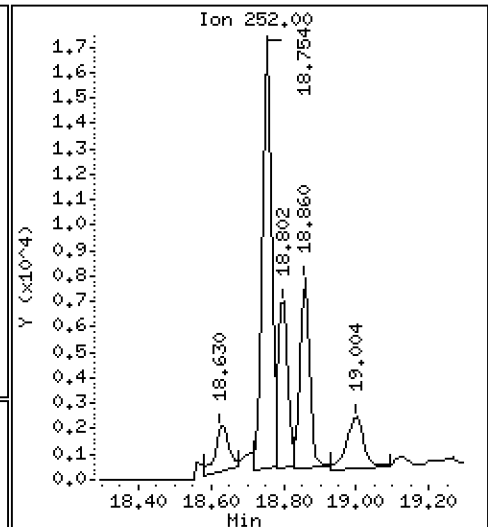
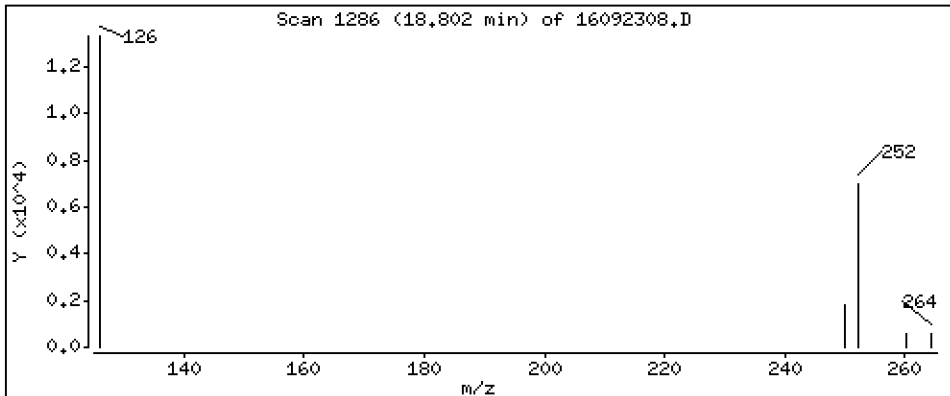
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 3,14 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

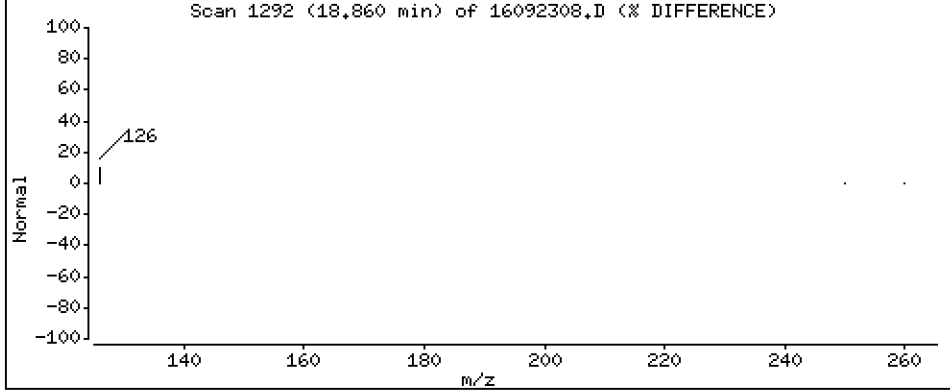
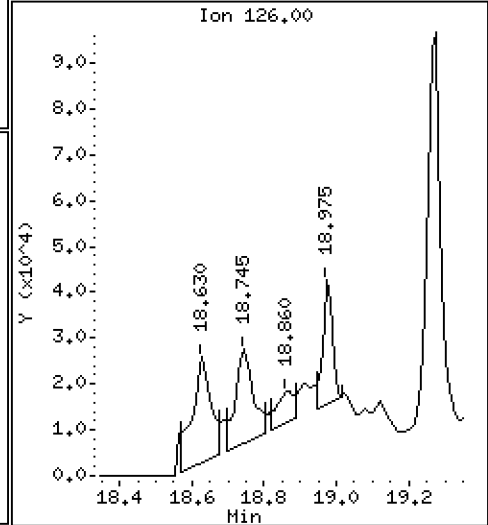
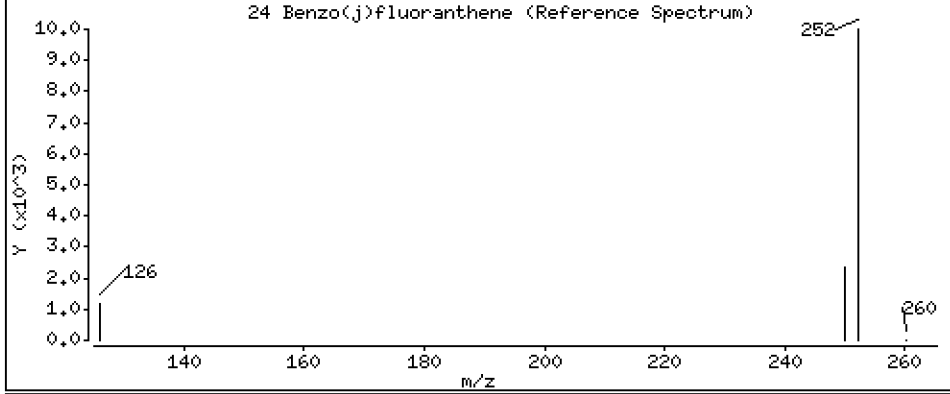
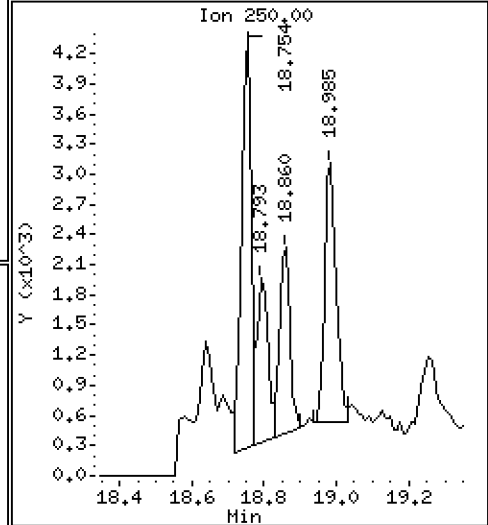
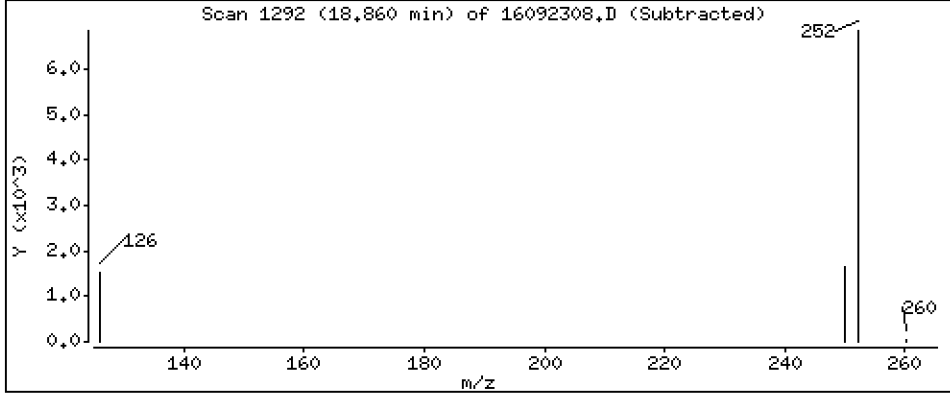
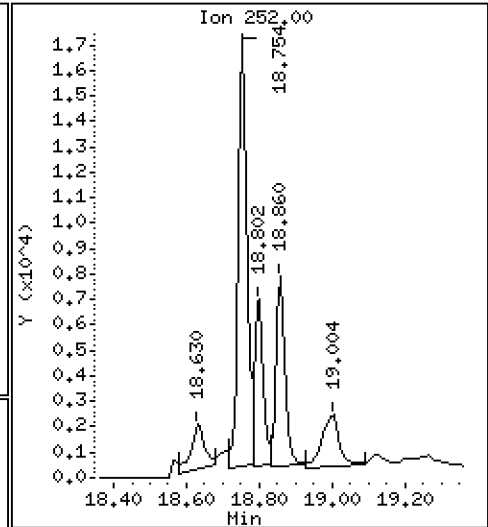
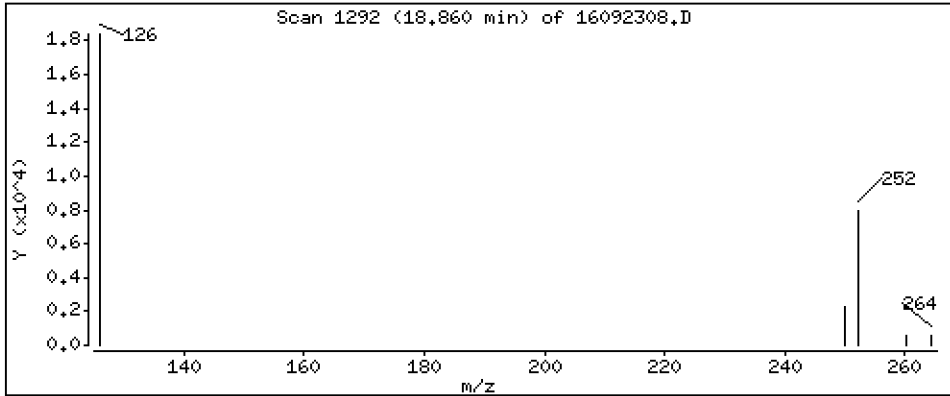
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 3,85 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

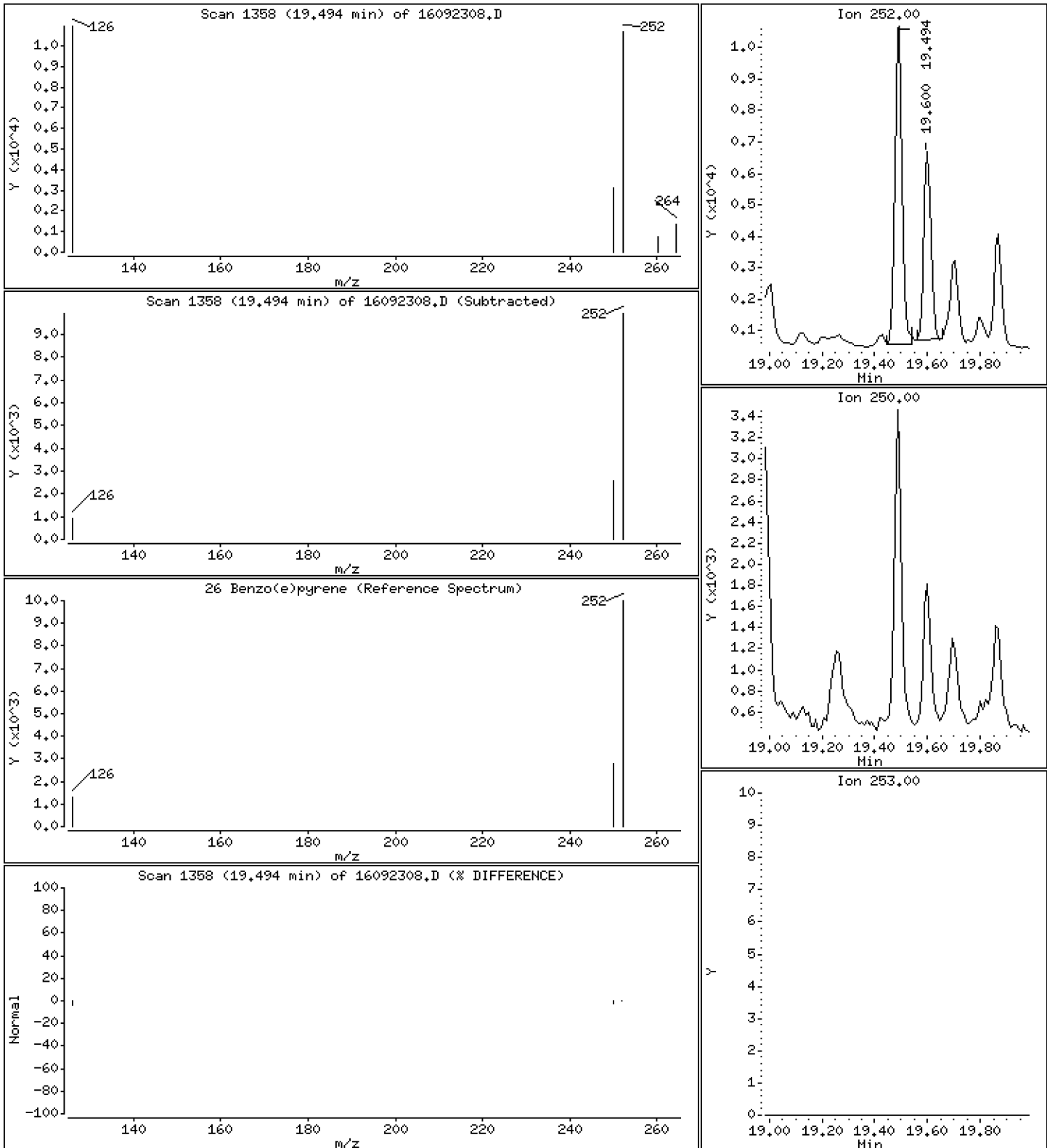
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 6,08 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

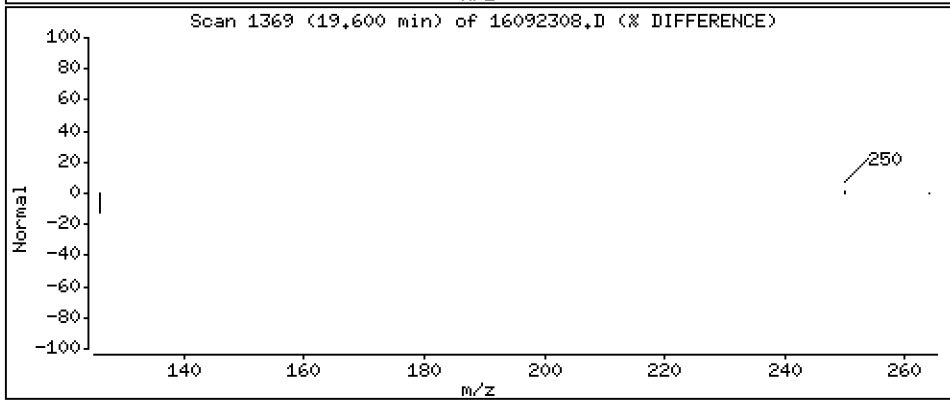
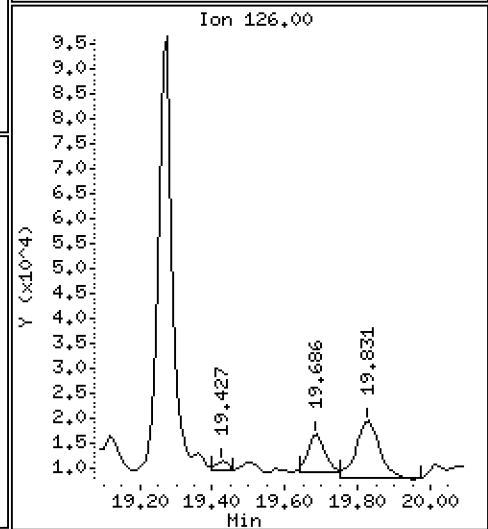
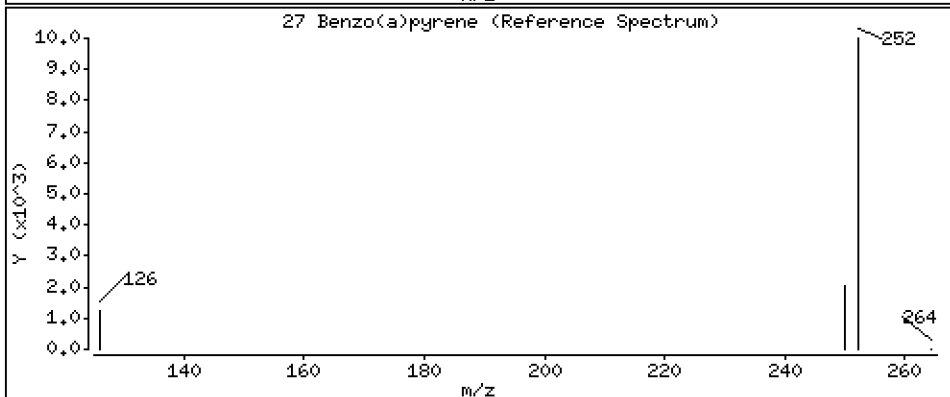
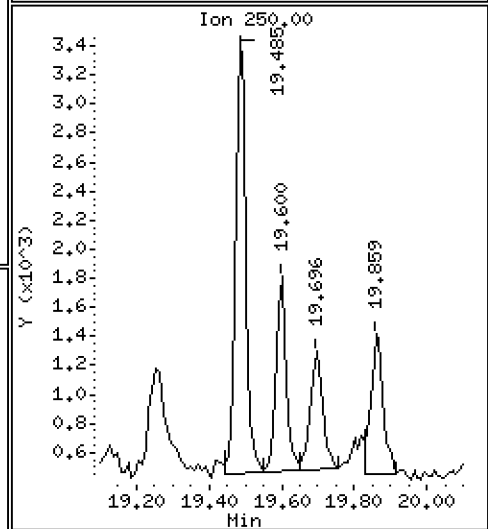
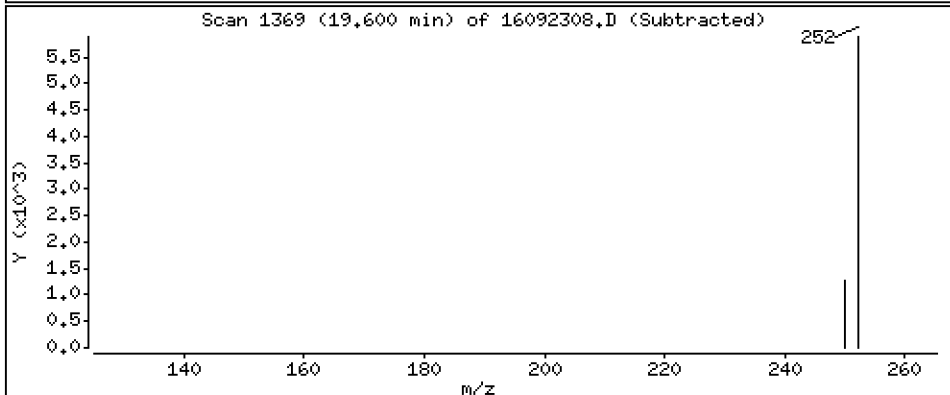
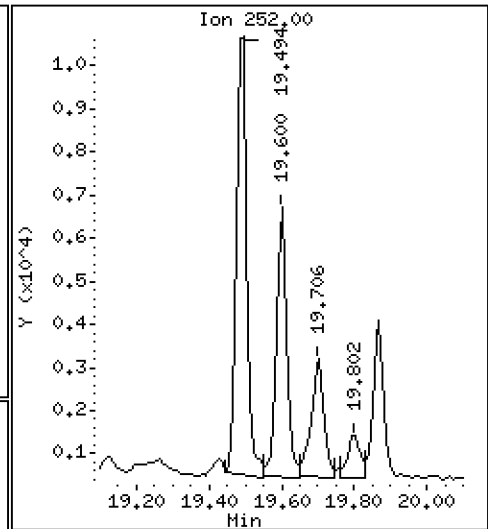
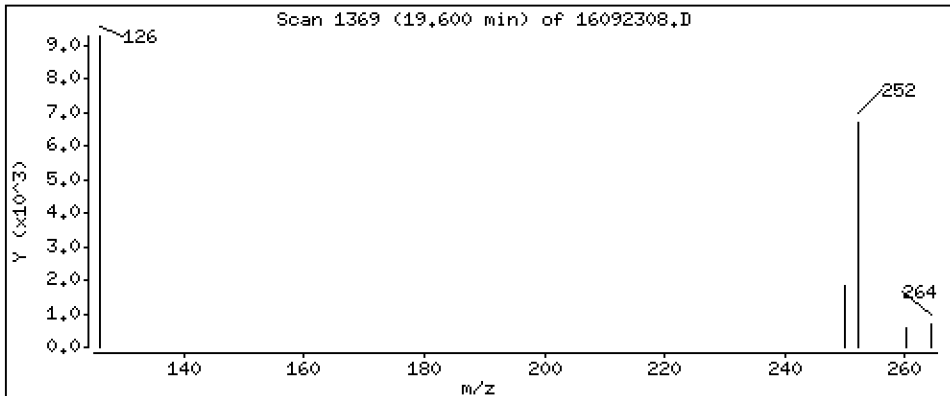
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 4,06 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

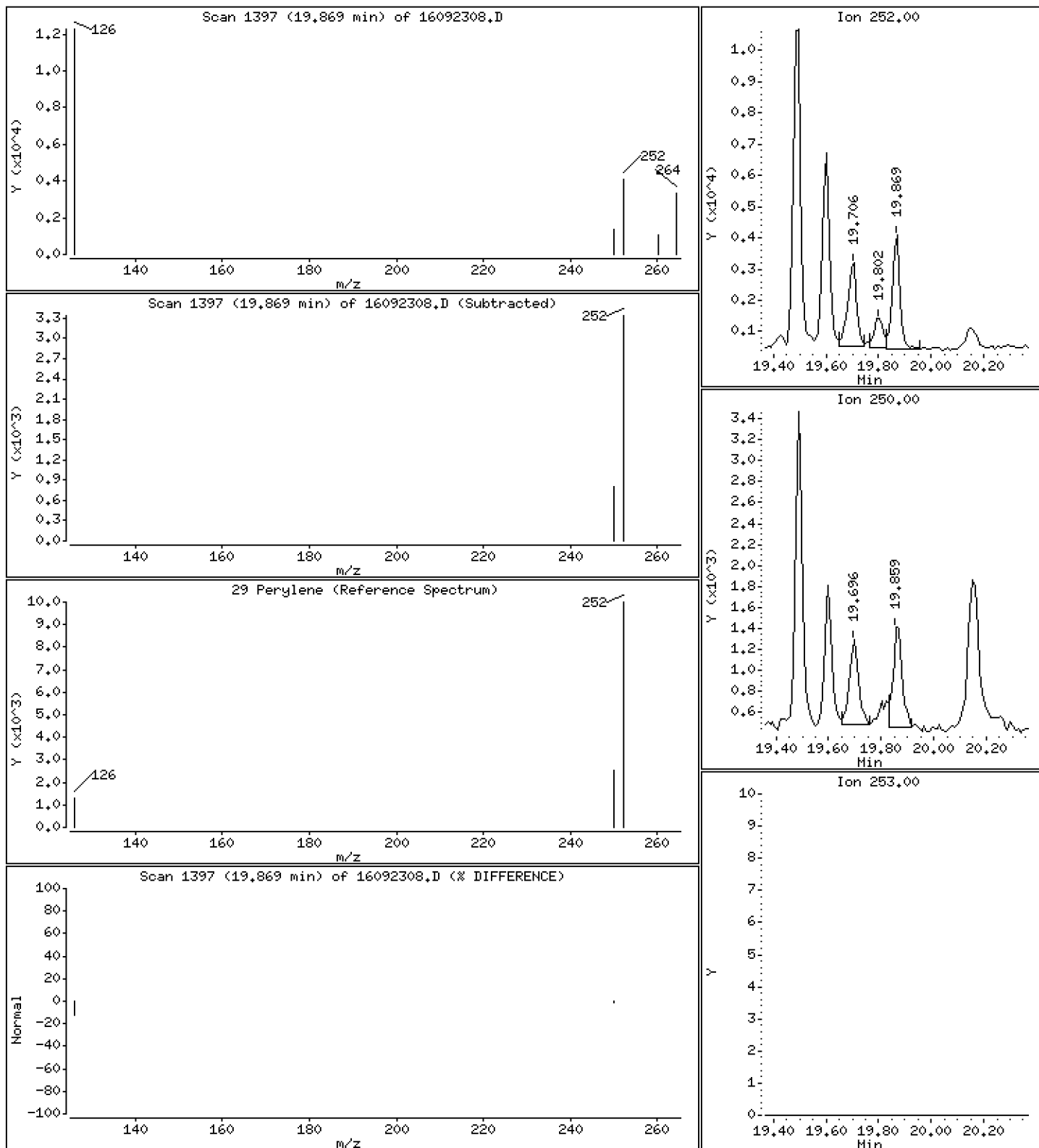
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

29 Perylene

Concentration: 2,32 ng/mL



Date : 23-SEP-2016 11:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-03

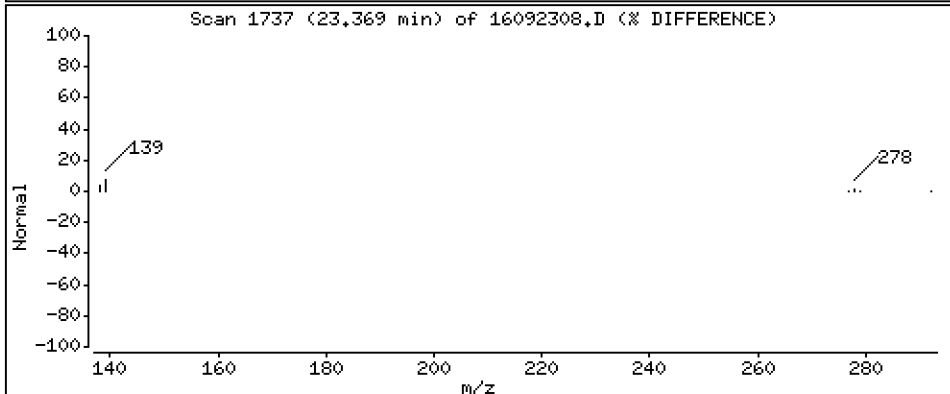
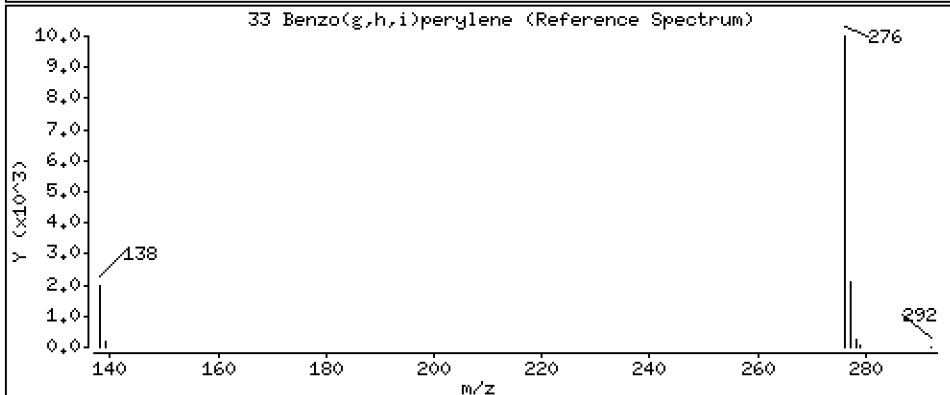
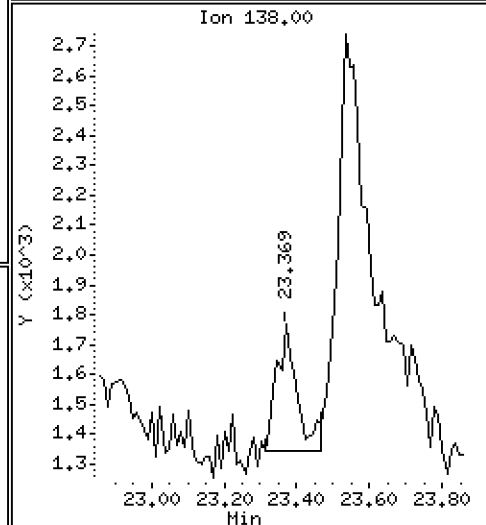
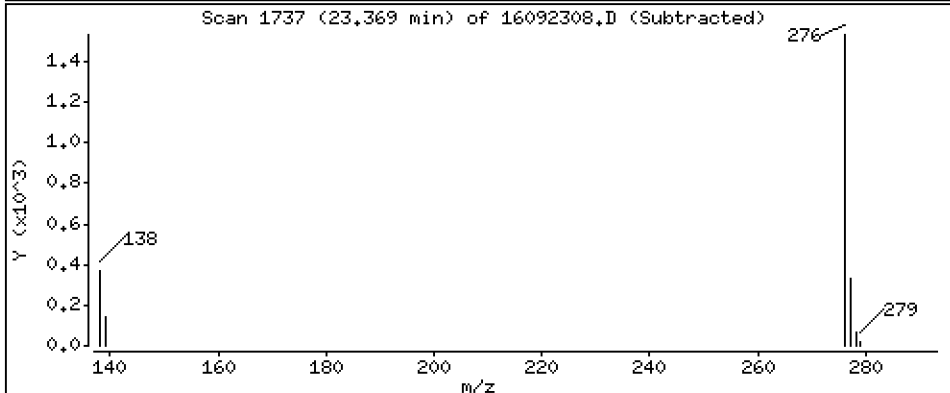
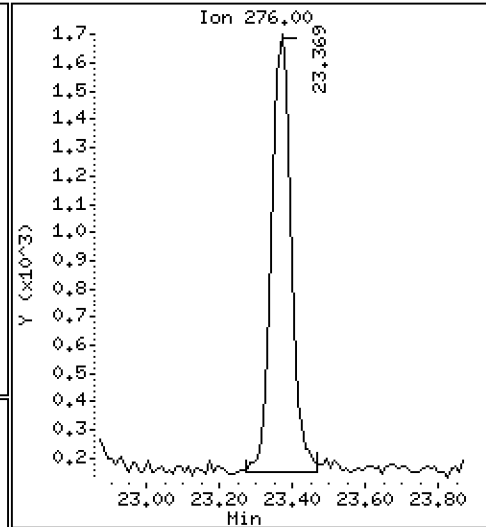
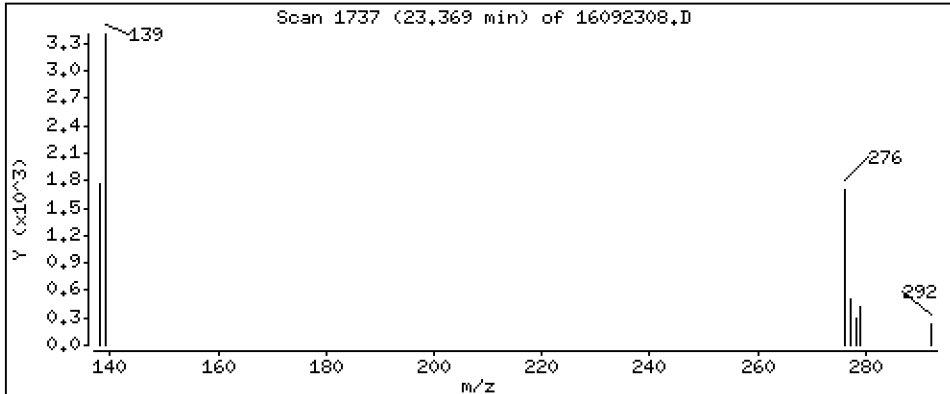
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 1,87 ng/mL

33 Benzo(g,h,i)perylene



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092308.D
 Lab Smp Id: 16I0160-03
 Inj Date : 23-SEP-2016 11:31
 Operator : JW
 Smp Info : 16I0160-03
 Misc Info :
 Comment :
 Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Meth Date : 26-Sep-2016 07:53 nt11.i
 Cal Date : 22-SEP-2016 11:45
 Als bottle: 11
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Inst ID: nt11.i

Compound Sublist: PEMDNF.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	572871	200.000	
2 Naphthalene	128		6.613	6.623	(1.006)	239867	72.9680	73.0
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	272325	149.740	150
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	72240	31.9307	31.9
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	41324	20.0669	20.1
6 Acenaphthylene	152		9.429	9.440	(0.984)	16810	5.15056	5.15
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	351011	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	72806	33.4932	33.5
9 Dibenzofuran	168		9.849	9.860	(1.028)	45653	14.4922	14.5
§ 10 Fluorene-d10	174		10.422	10.432	(1.087)	2004	1.12704	1.13 (M)
11 Fluorene	166		10.475	10.485	(1.093)	69317	27.5760	27.6
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	631287	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	522653	123.246	123
§ 14 Anthracene-d10	188		12.320	12.330	(1.005)	38872	11.4014	11.4
15 Anthracene	178		12.359	12.358	(1.008)	92511	22.3627	22.4
§ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	620062	202.046	202
17 Fluoranthene	202		14.395	14.395	(1.174)	839909	223.692	224
18 Pyrene	202		14.885	14.885	(0.876)	509834	124.617	125
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	57352	16.7318	16.7
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	528076	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	86330	23.9764	24.0
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	29175	8.39188	8.39
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	12160	3.13980	3.14
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	13093	3.85344	3.85
§ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	269944	80.8504	80.9
26 Benzo(e)pyrene	252		19.494	19.484	(0.984)	20280	6.07751	6.08
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	12917	4.05766	4.06
* 28 Perylene-d12	264		19.801	19.801	(1.000)	651539	200.000	
29 Perylene	252		19.869	19.868	(1.003)	7572	2.32272	2.32
§ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	350705	163.757	164
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	5688	1.86654	1.87

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16092308.D
Lab Smp Id: 16I0160-03
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
Misc Info:

Calibration Date: 23-SEP-2016
Calibration Time: 08:10
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	572871	8.63
7 Acenaphthene-d10	297518	148759	595036	351011	17.98
12 Phenanthrene-d10	522042	261021	1044084	631287	20.93
20 Chrysene-d12	389499	194750	778998	528076	35.58
28 Perylene-d12	430626	215313	861252	651539	51.30

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092308.D

Lab ID: 16I0160-03

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 11:31

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

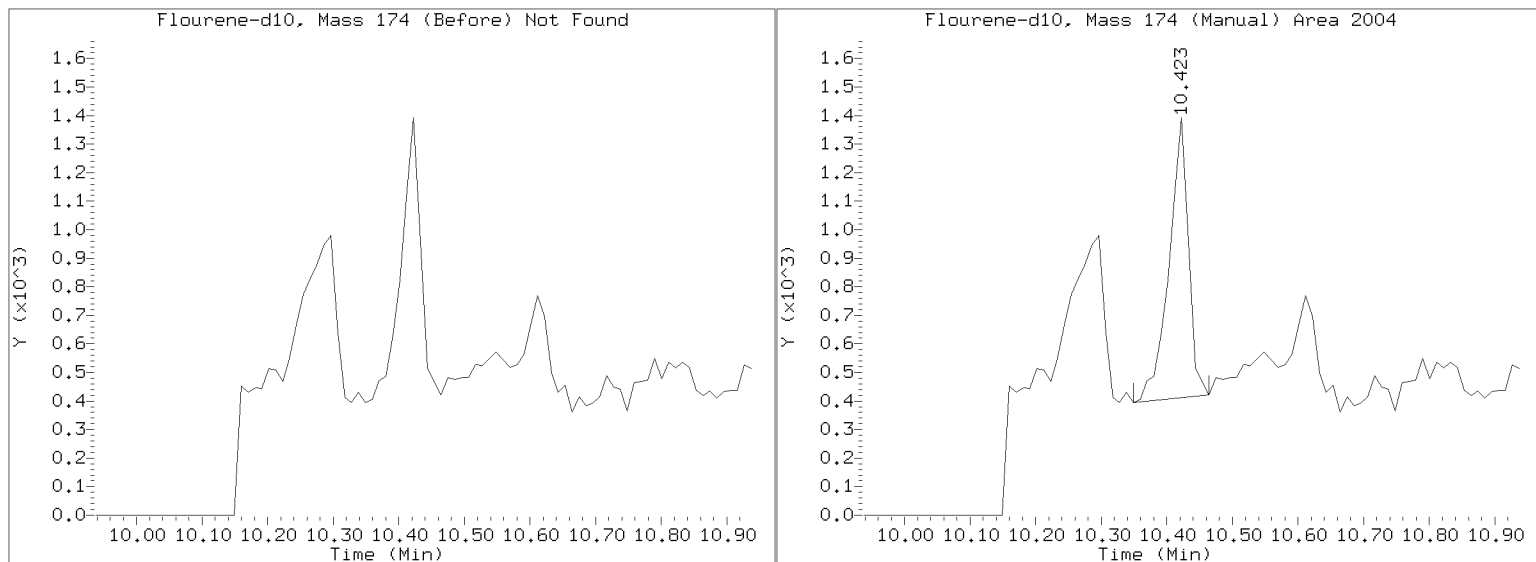
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092308.D

Injection Date: 23-SEP-2016 11:31

Lab ID:16I0160-03 Client ID:

Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>1610160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Matrix:	<u>Tissue</u>	Laboratory ID:	<u>1610160-04</u>
Sampled:	<u>09/09/16 10:20</u>	Prepared:	<u>09/10/16 11:10</u>
Solids:		Preparation:	<u>EPA 3550C (Ultrasonic)</u>
Batch:	<u>BEI0260</u>	Sequence:	<u>SEI0321</u>
Instrument:	<u>NT11</u>	Column:	<u>RXi-17Sil-MS</u>
		File ID:	<u>16092309.D</u>
		Analyzed:	<u>09/23/16 12:01</u>
		Initial/Final:	<u>0.886 g / 0.1 mL</u>
		Calibration:	<u>ZI00066</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	7.90	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	3.83	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	3.96		1.13	1.13
86-73-7	Fluorene	1	3.08		1.13	1.13
85-01-8	Phenanthrene	1	14.2		1.13	1.13
120-12-7	Anthracene	1	2.03		1.13	1.13
206-44-0	Fluoranthene	1	27.1		1.13	1.13
129-00-0	Pyrene	1	14.6		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.61		1.13	1.13
218-01-9	Chrysene	1	2.59		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzofluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	18.4	54.5	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	24.0	70.9	30 - 160	
Fluoranthene-d10	33.860	26.0	76.9	30 - 160	
Fluorene-d10	21.163	0.136	0.642	30 - 160	*
Anthracene-d10	21.163	0.776	3.67	30 - 160	*
Benzo(e)pyrene-d12	21.163	12.6	59.7	30 - 160	

Data File: \\target\share\chem3\nt11.i\20160923.B\16092309.D

Date : 23-SEP-2016 12:01

Client ID:

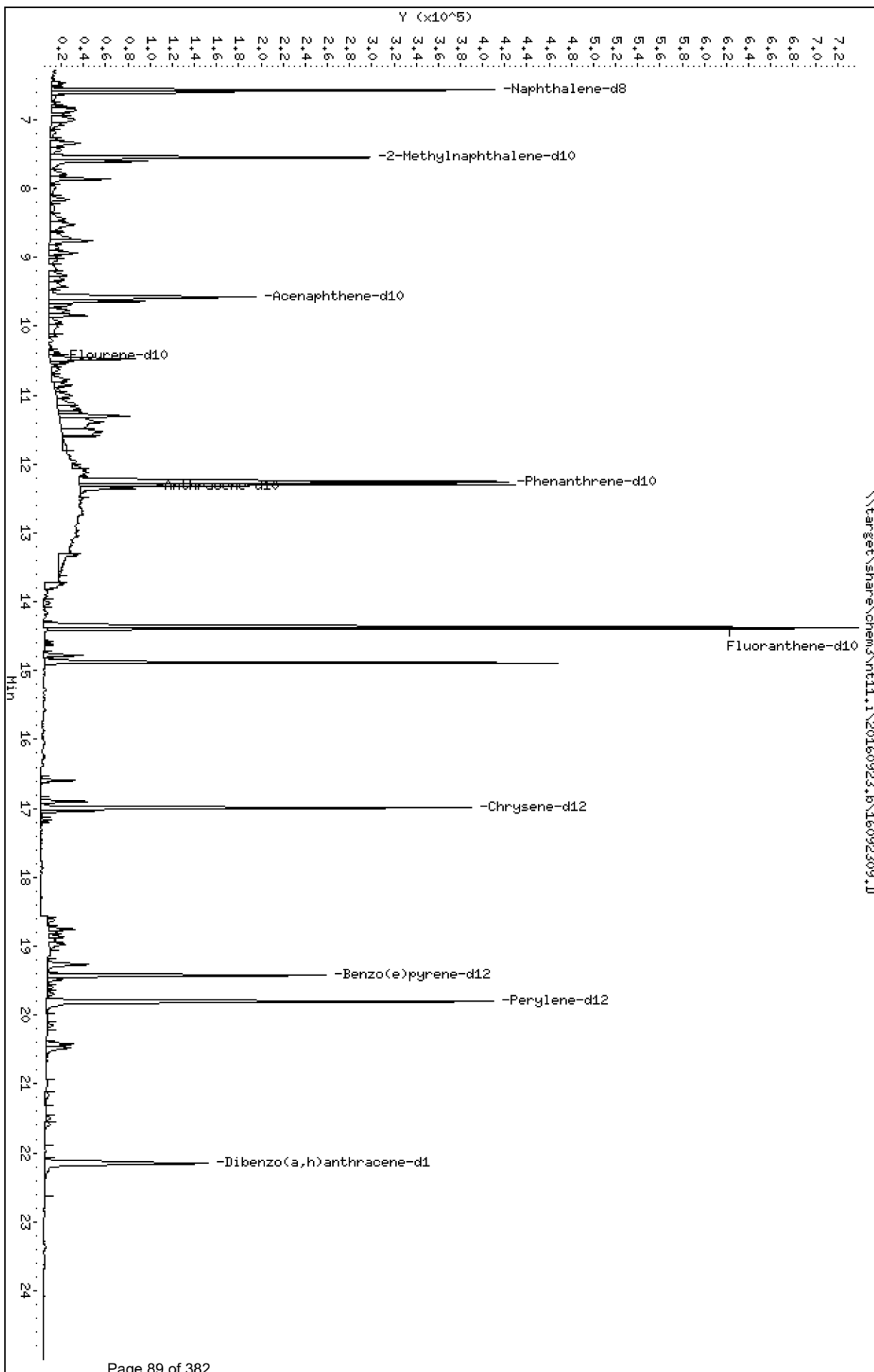
Sample Info: 1610160-04

Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

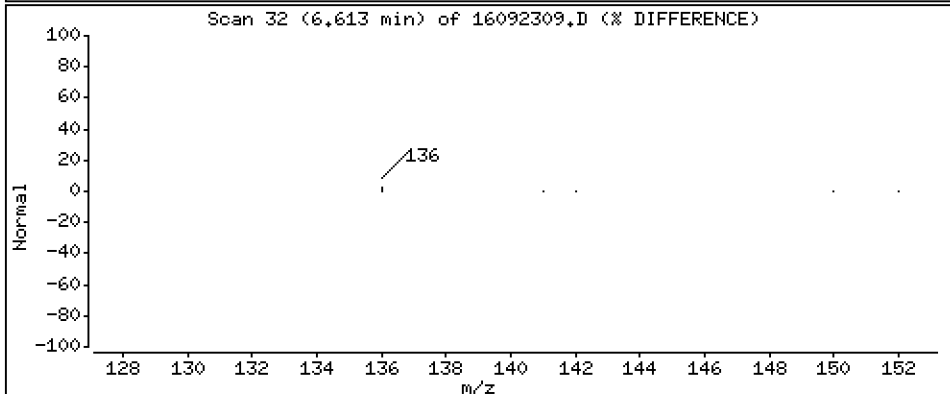
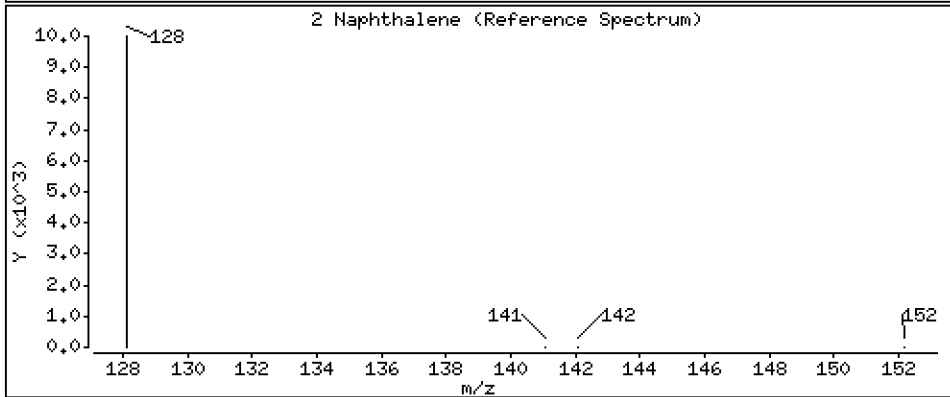
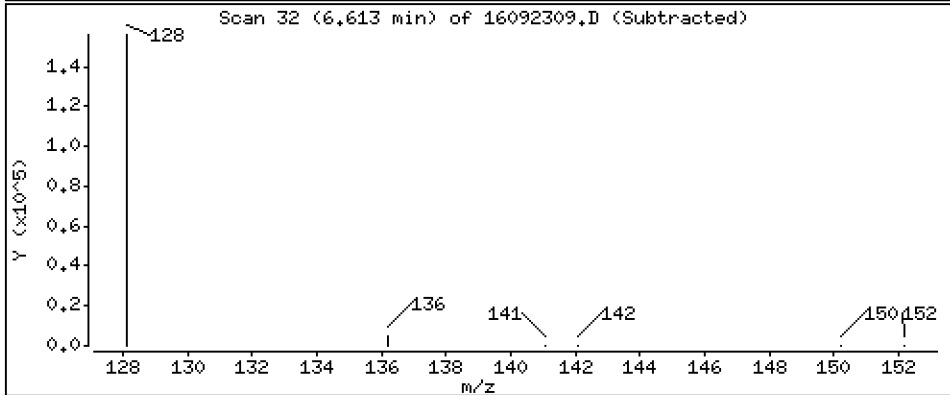
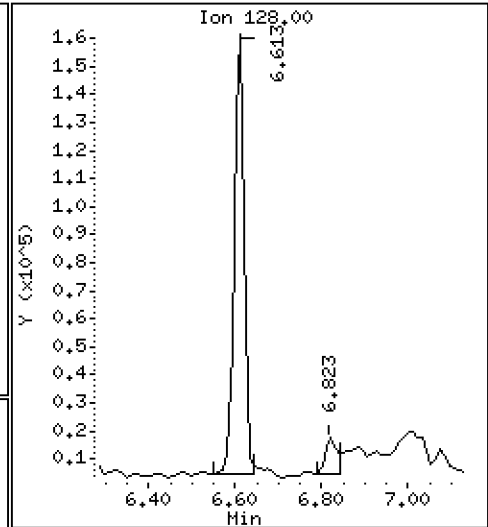
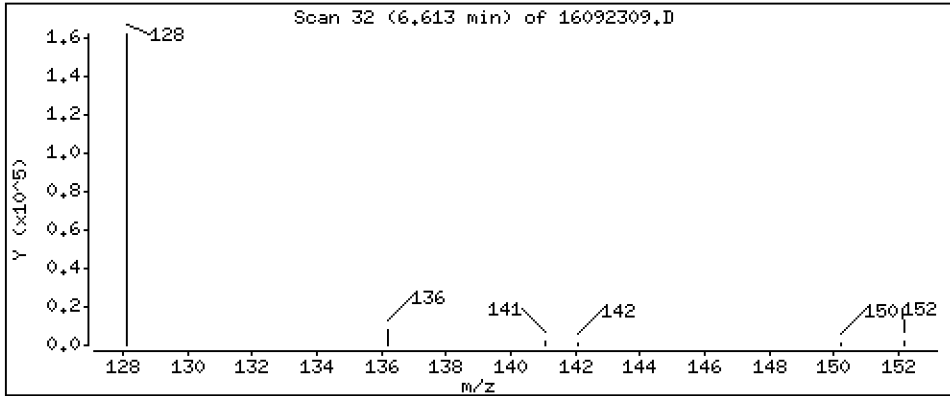
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 70,0 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

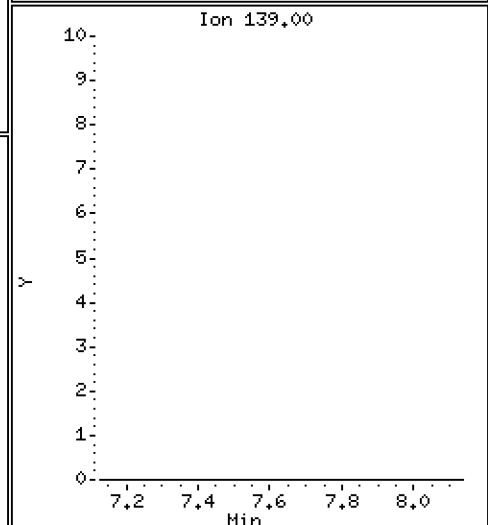
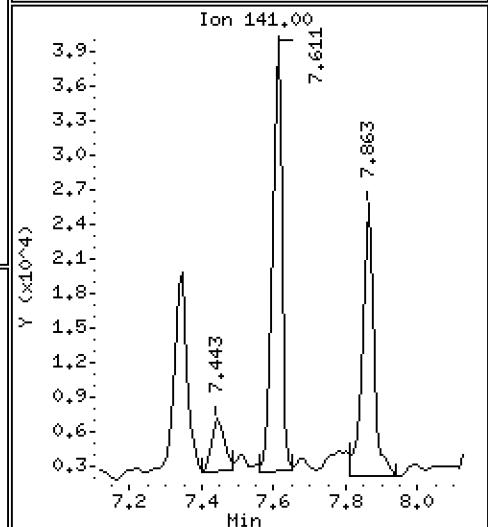
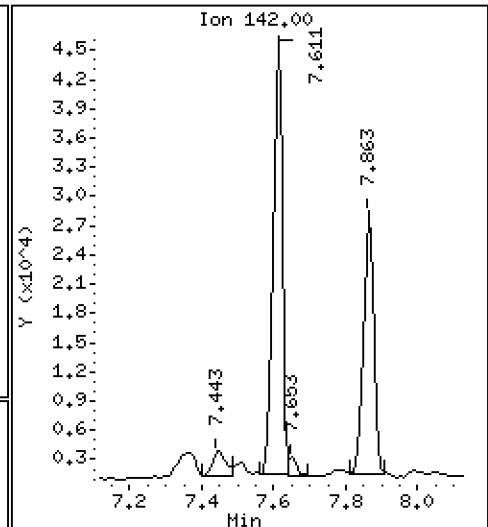
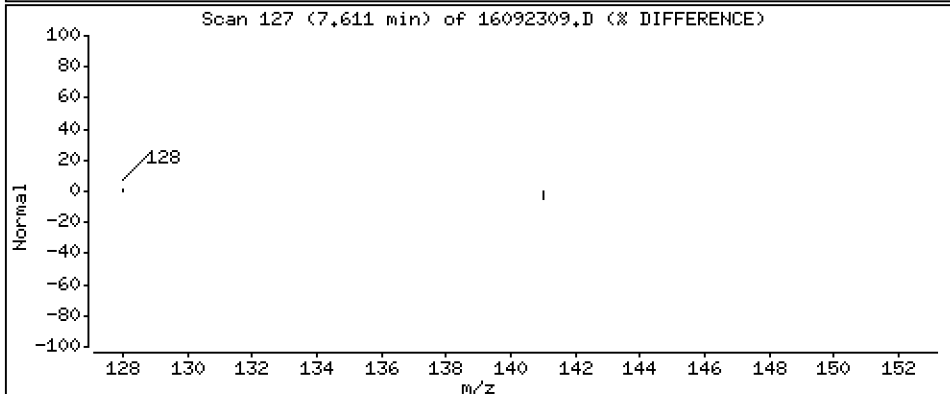
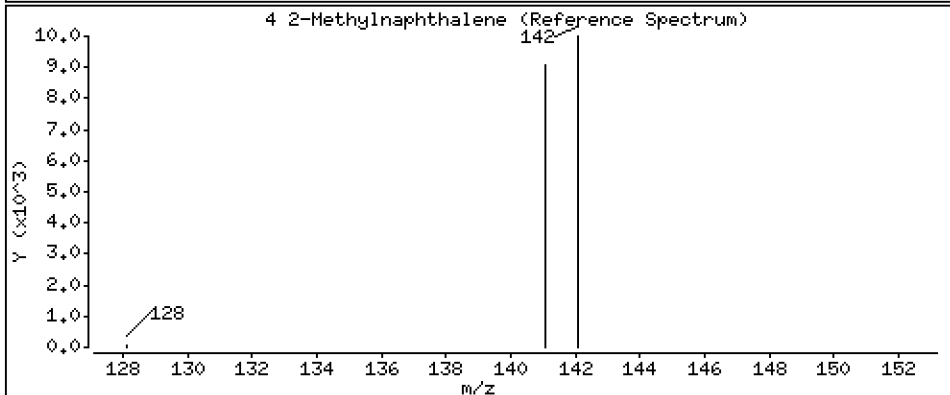
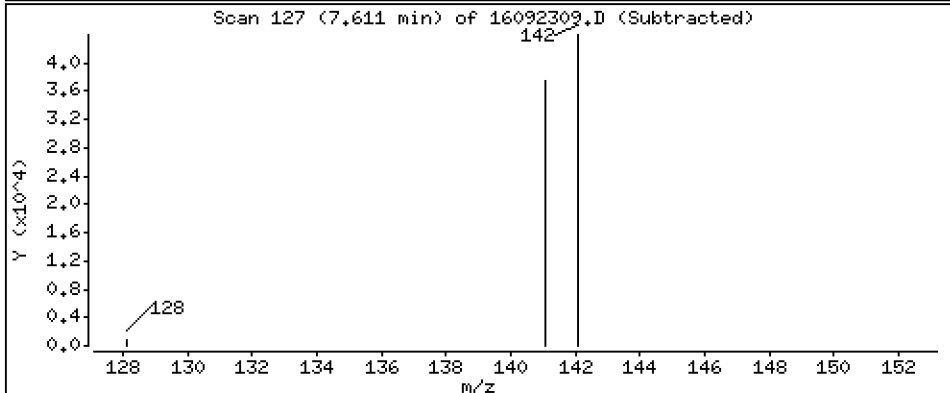
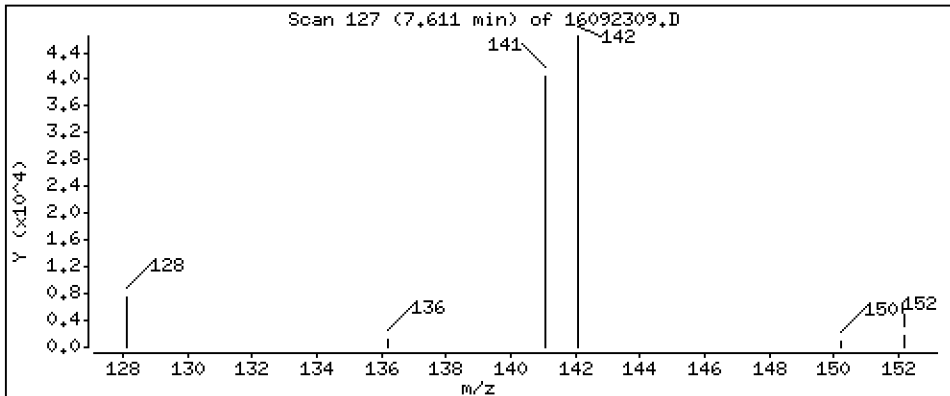
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4 2-Methylnaphthalene

Concentration: 33,9 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

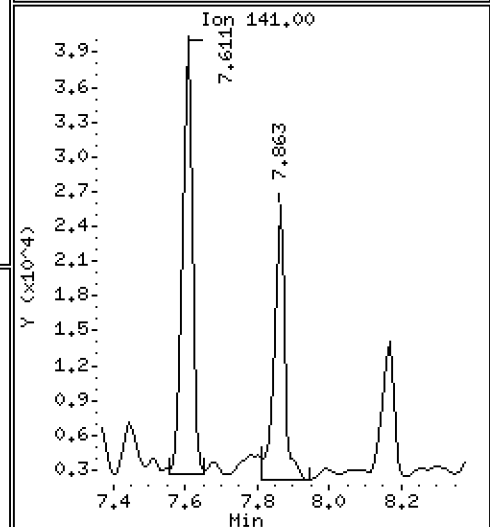
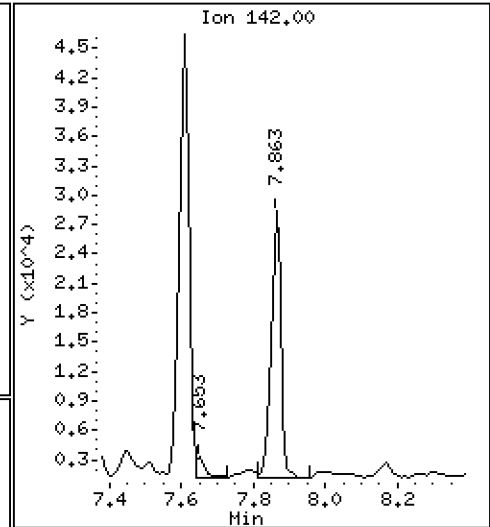
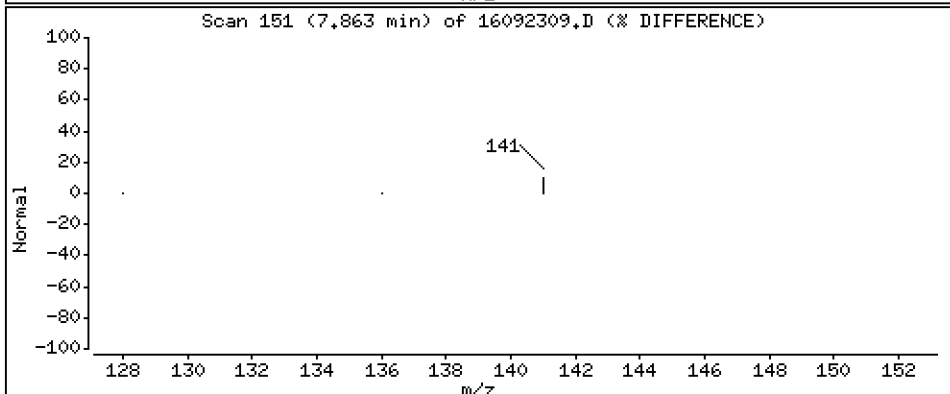
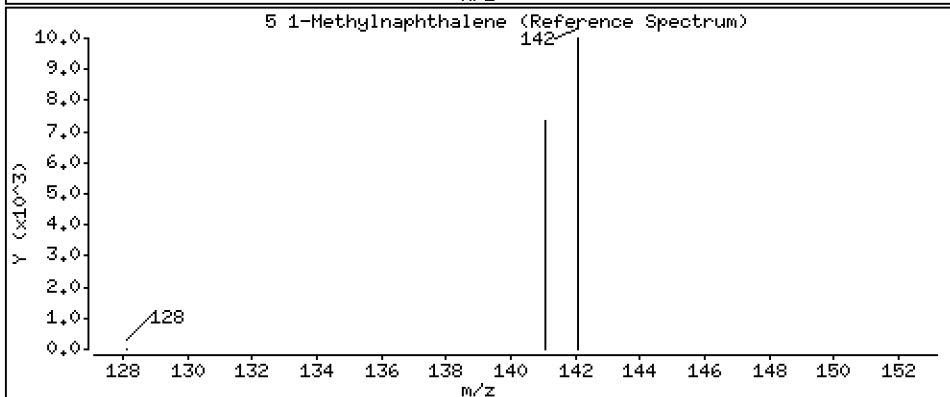
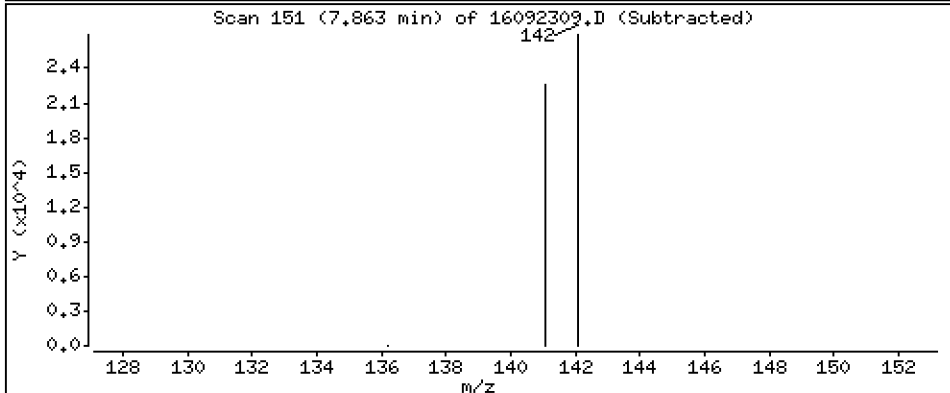
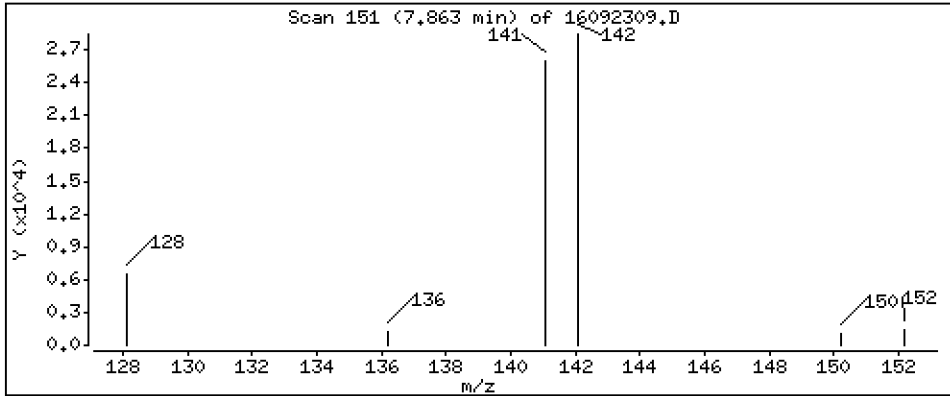
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 23,9 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

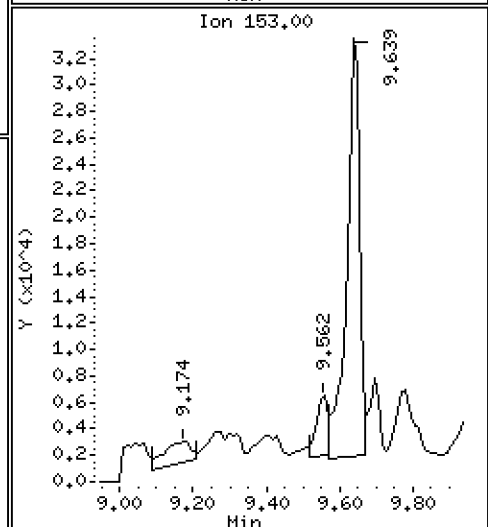
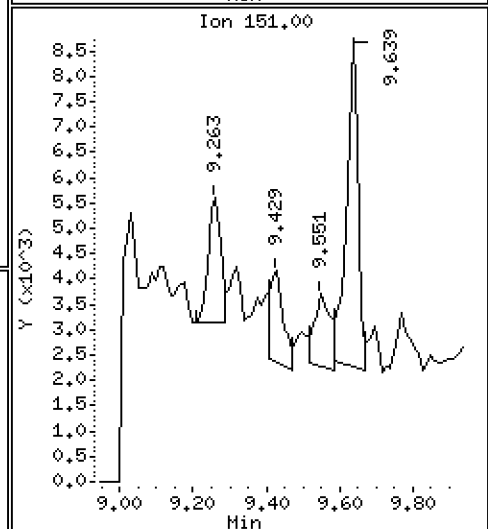
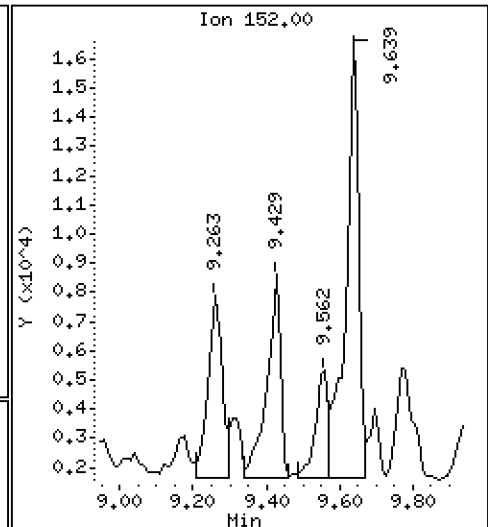
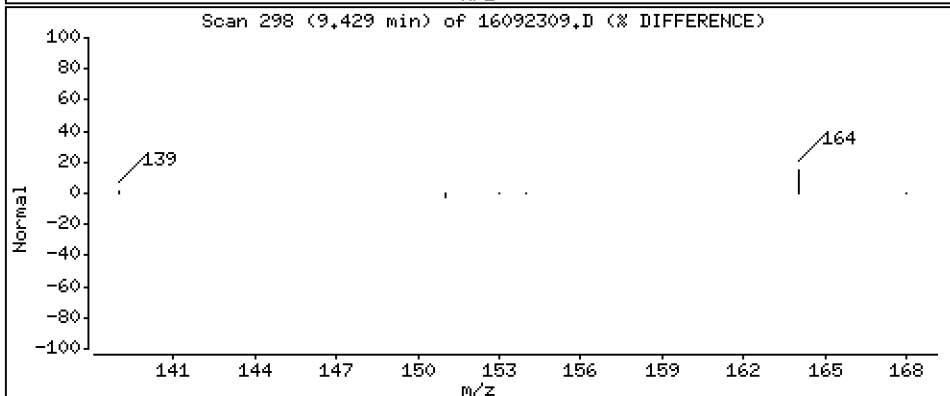
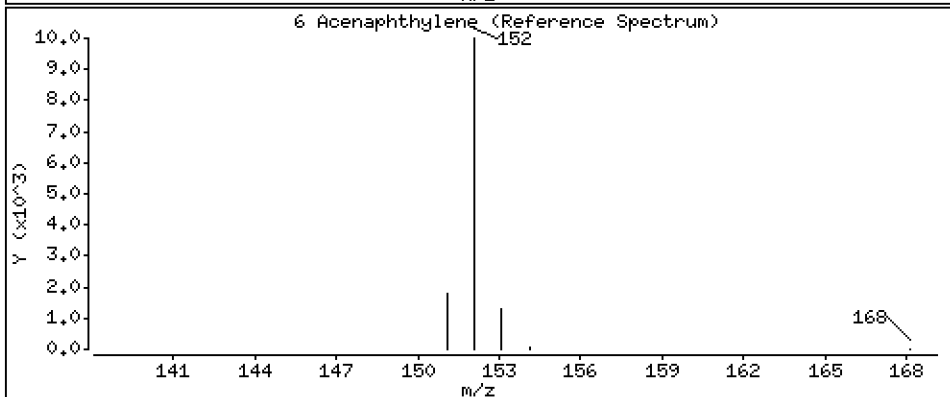
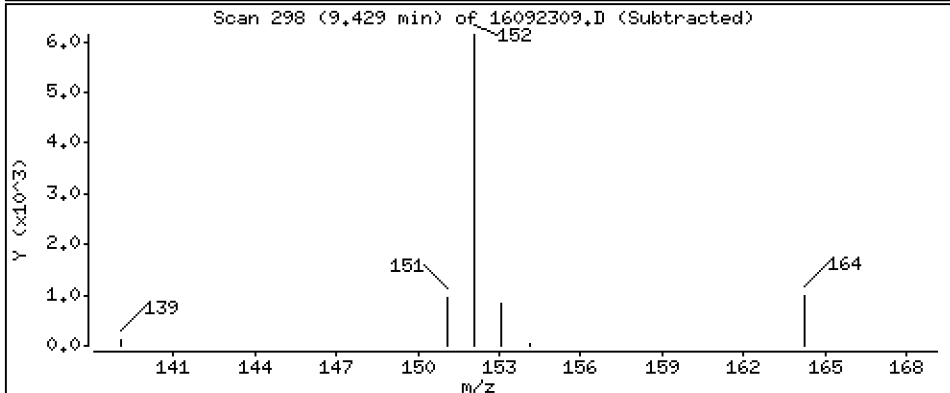
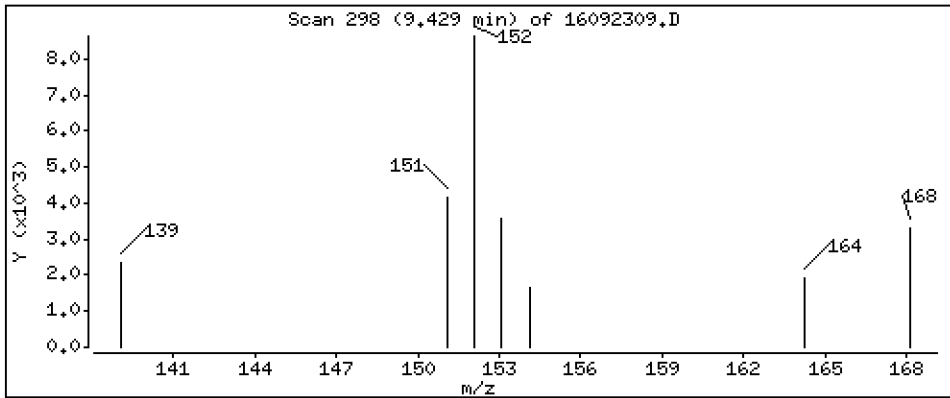
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 5.48 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

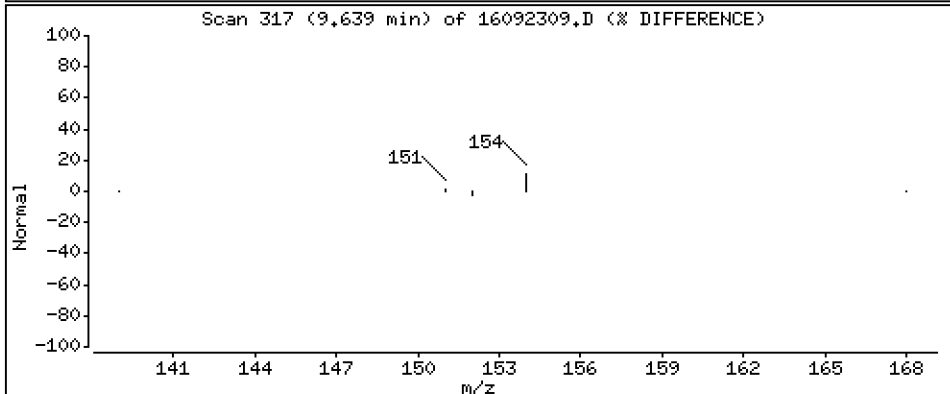
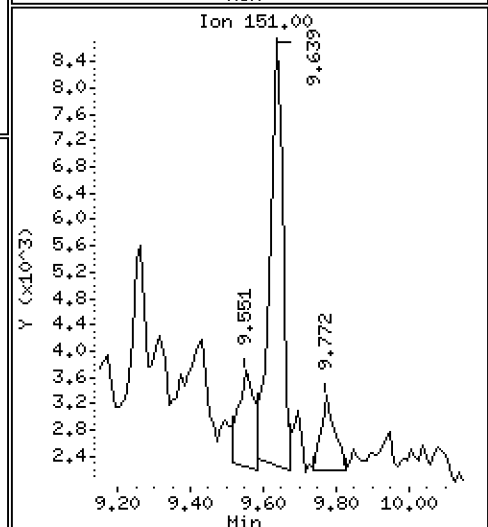
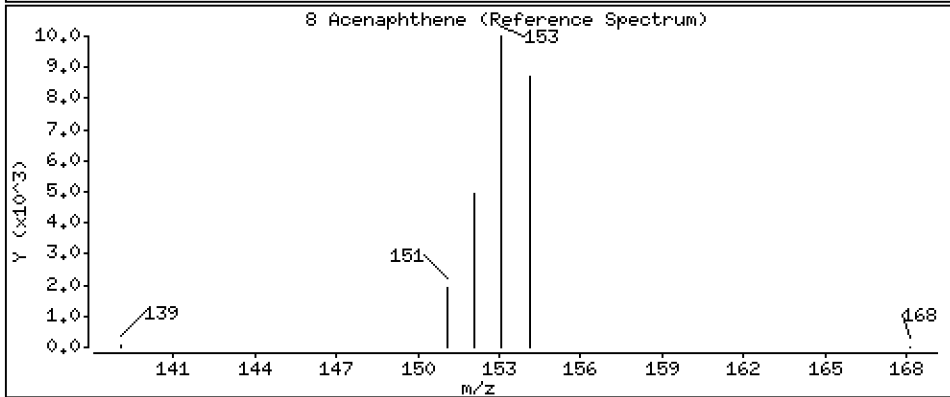
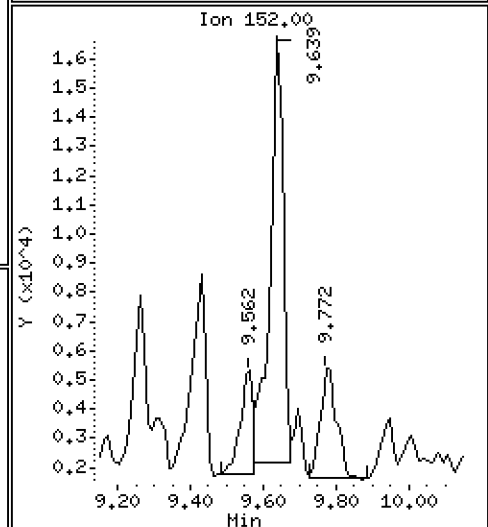
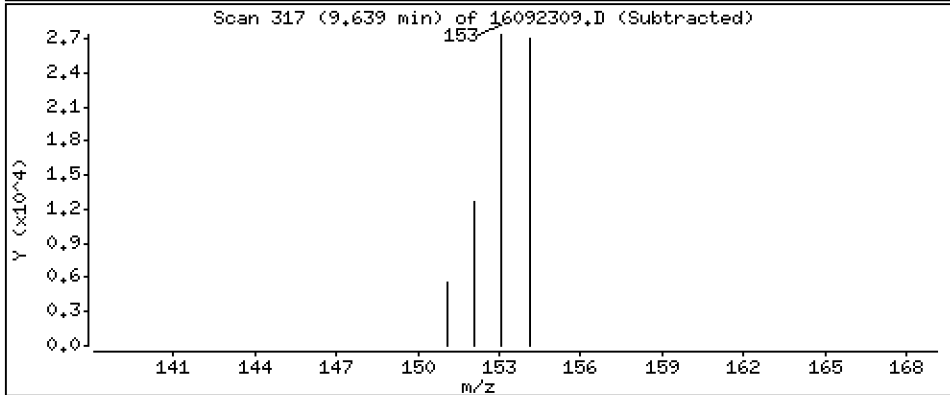
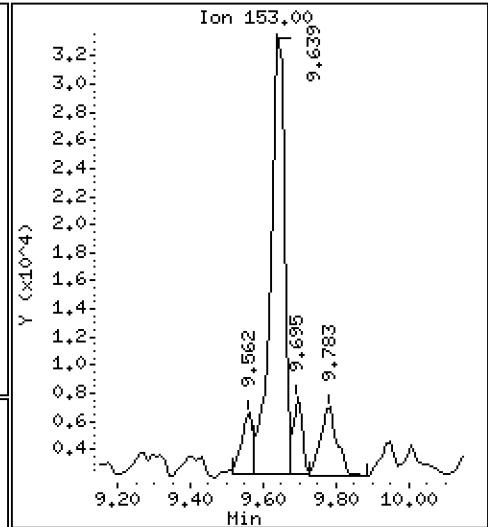
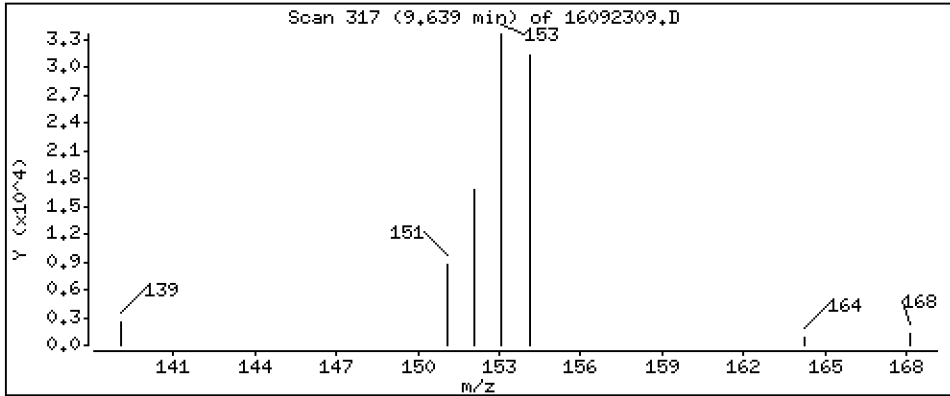
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 35.1 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

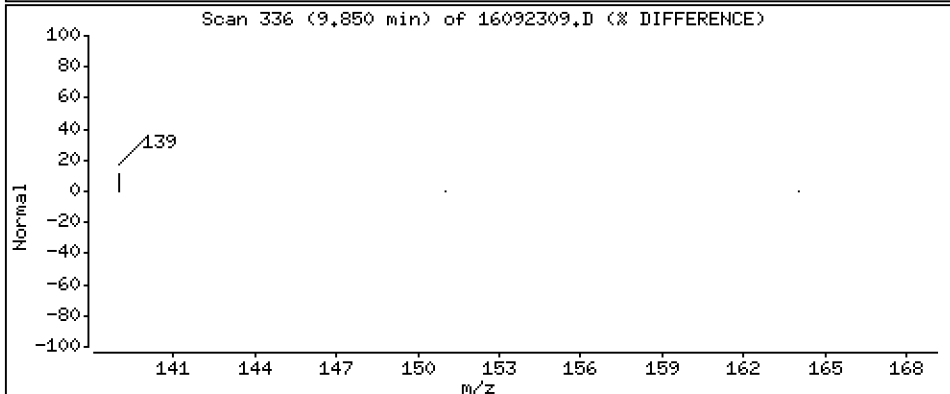
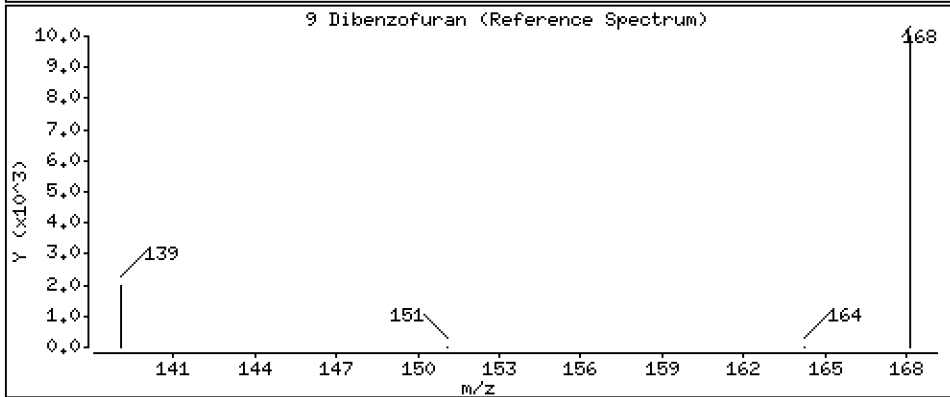
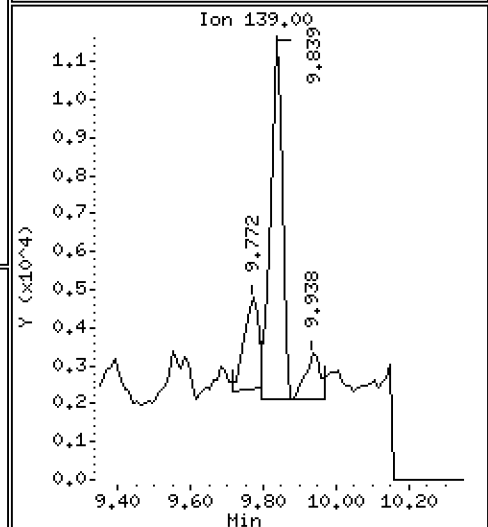
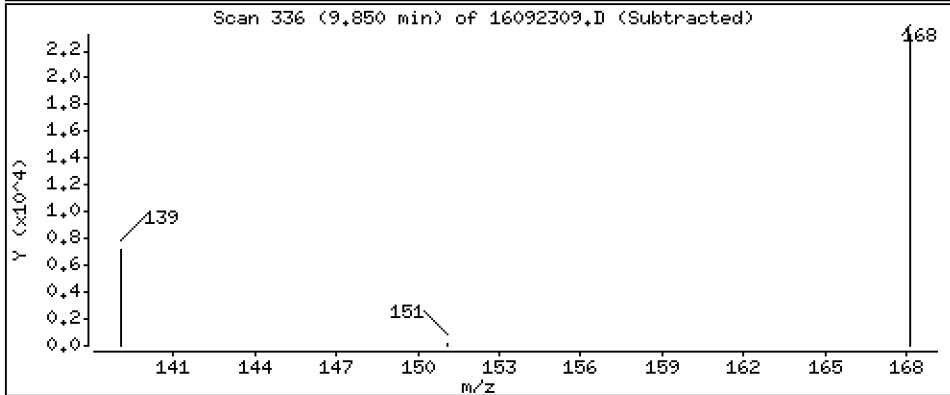
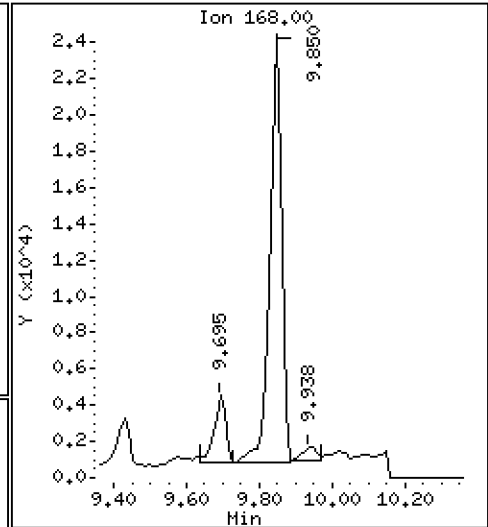
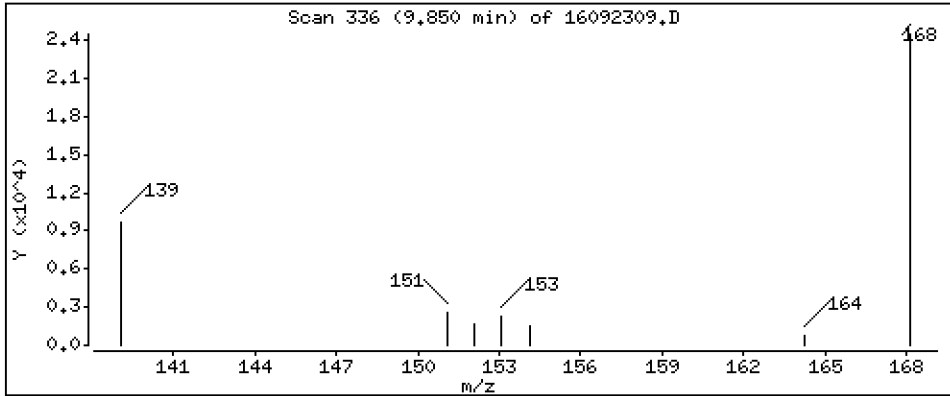
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 15,9 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

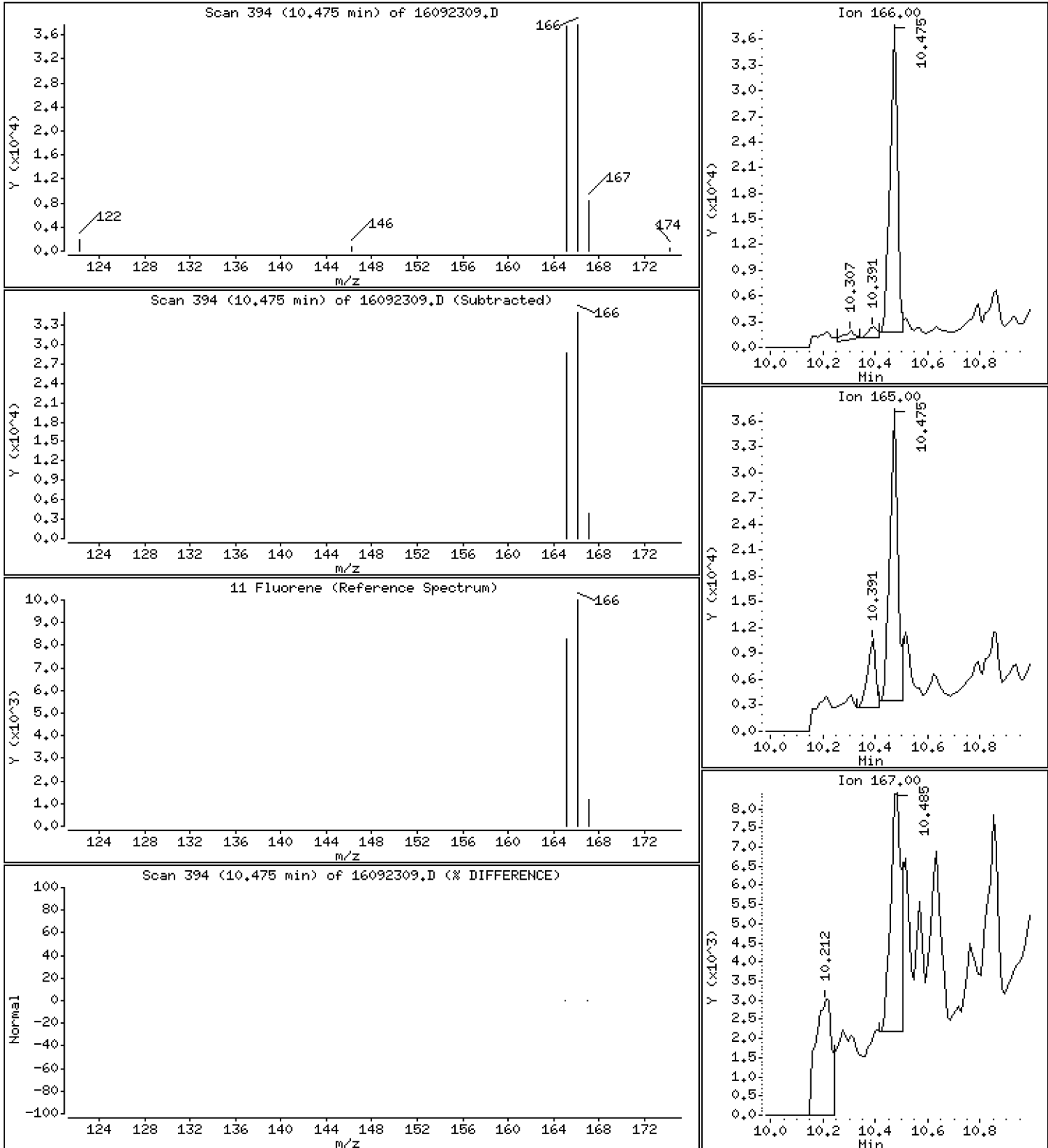
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 27,3 ng/mL

11 Fluorene



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

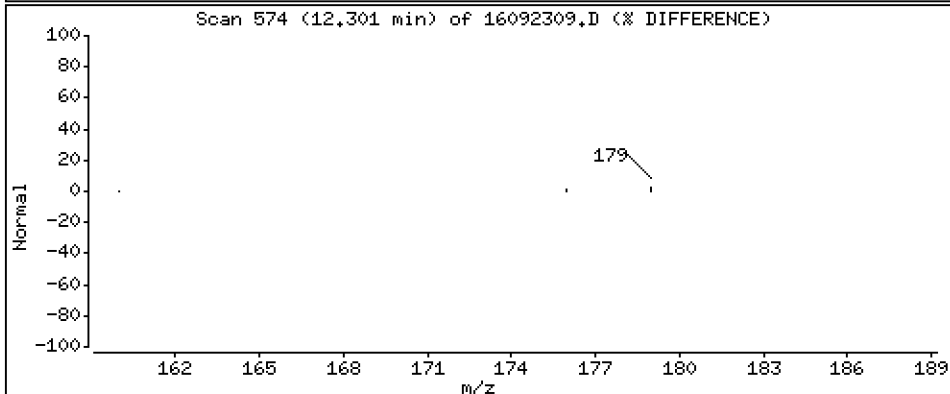
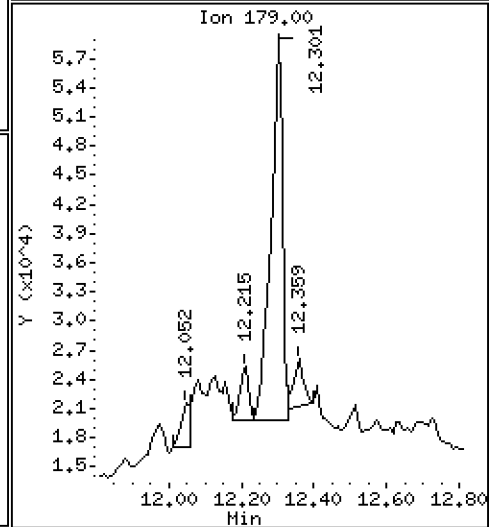
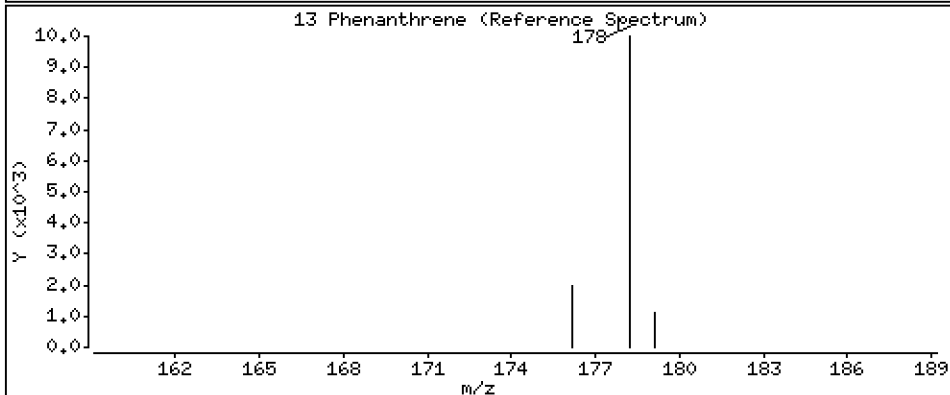
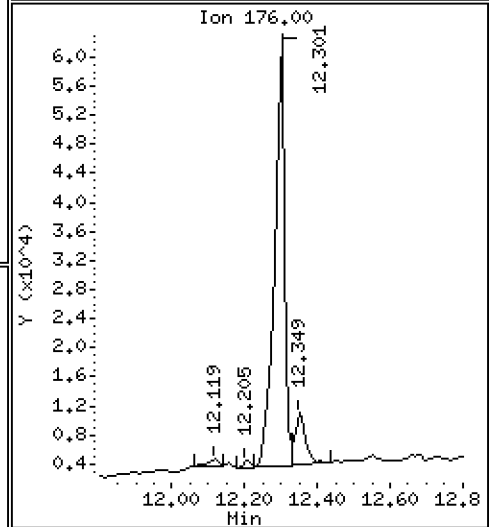
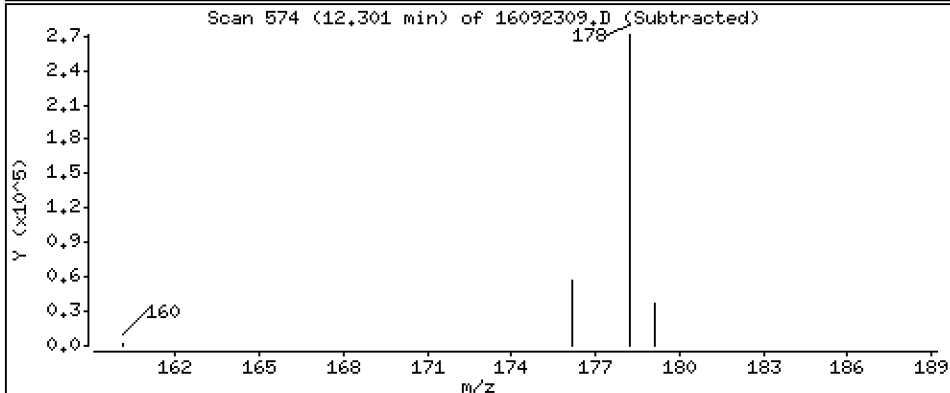
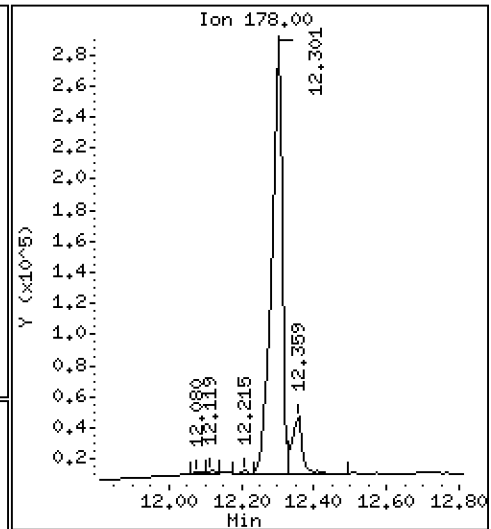
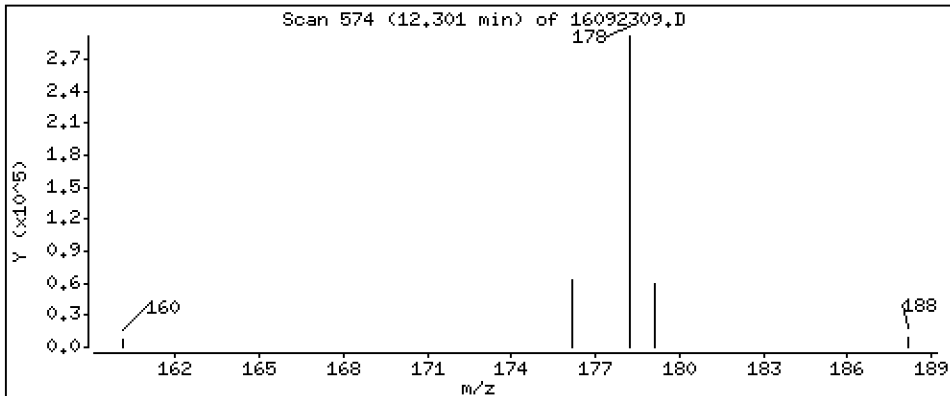
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 126 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

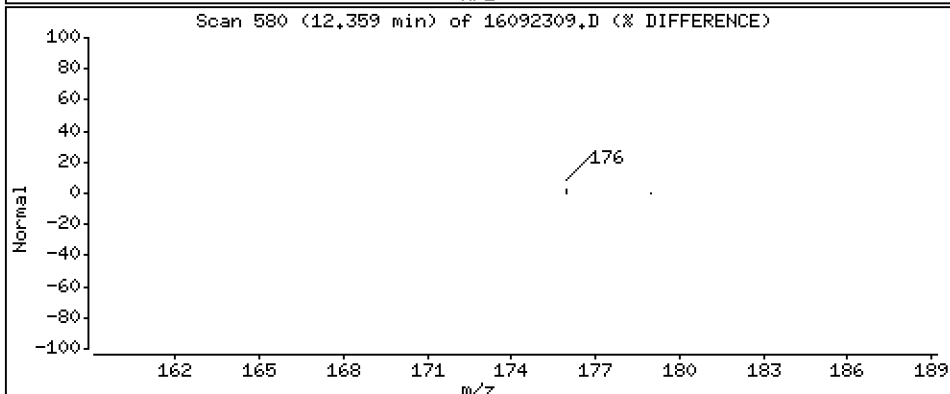
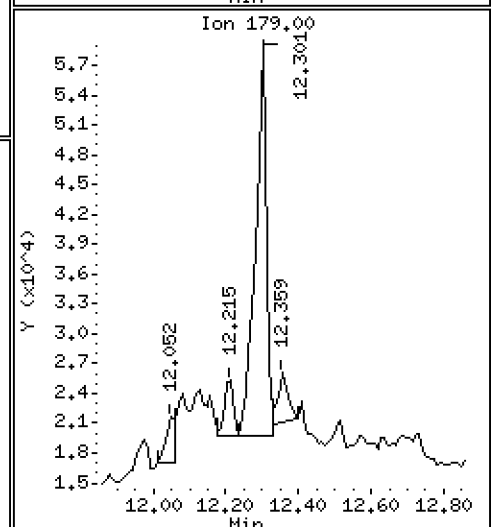
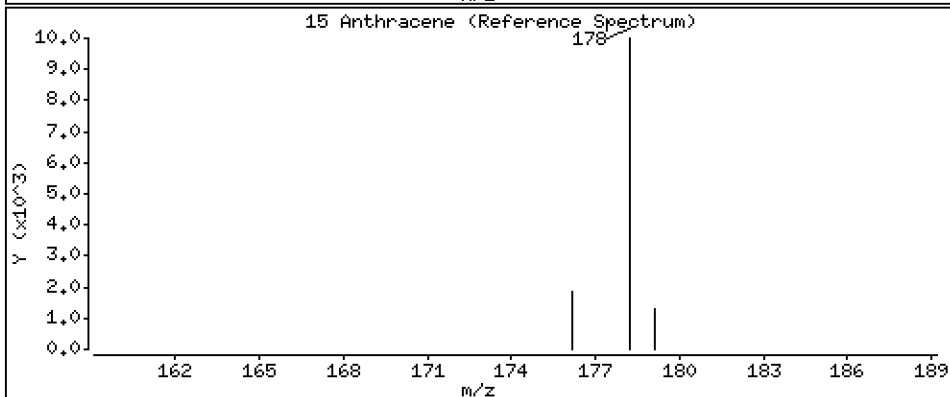
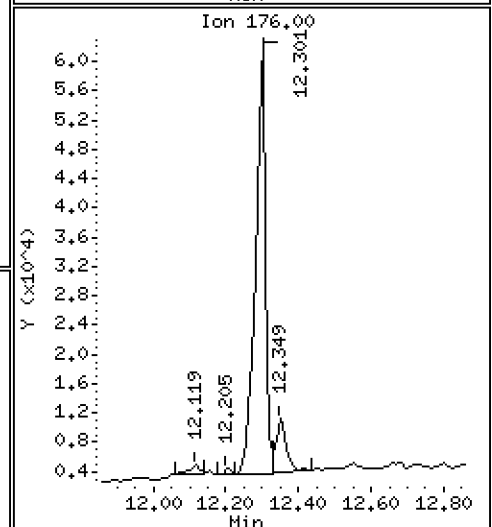
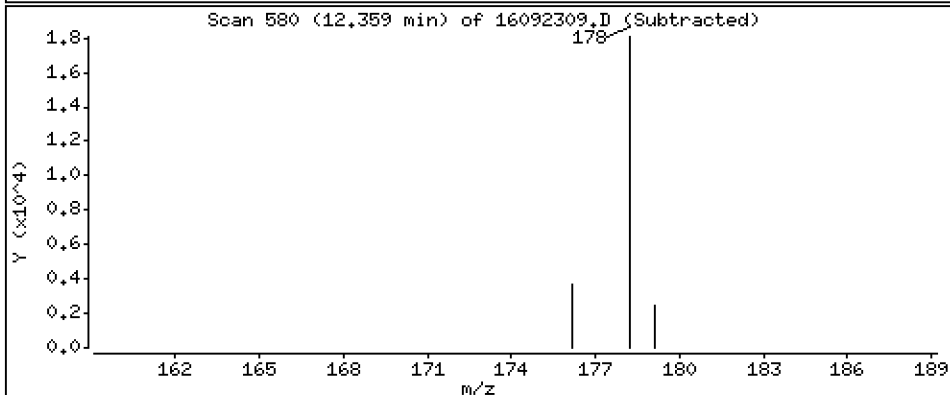
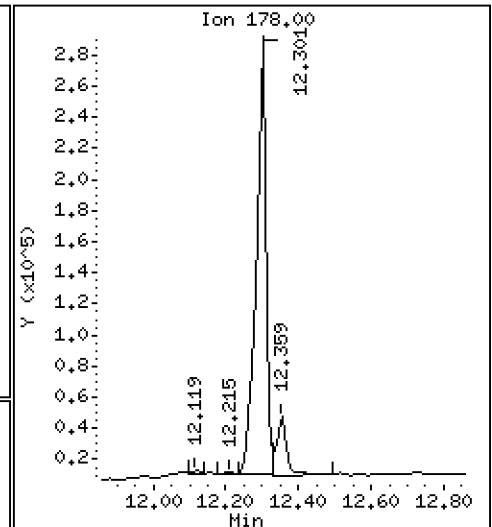
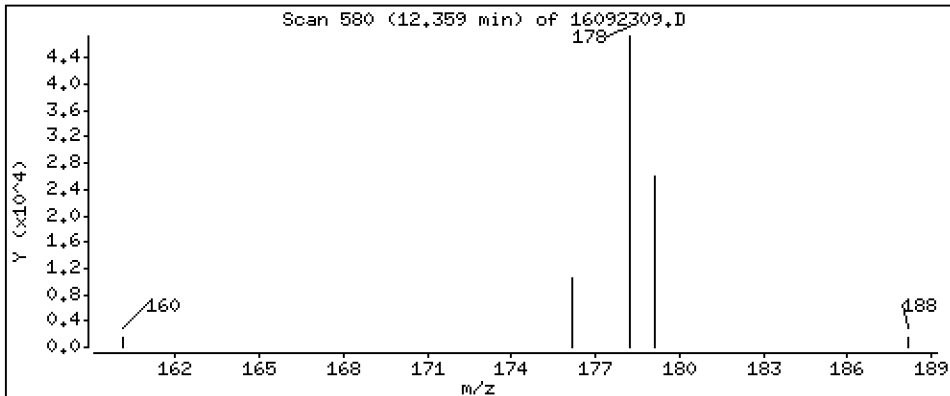
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 18.0 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

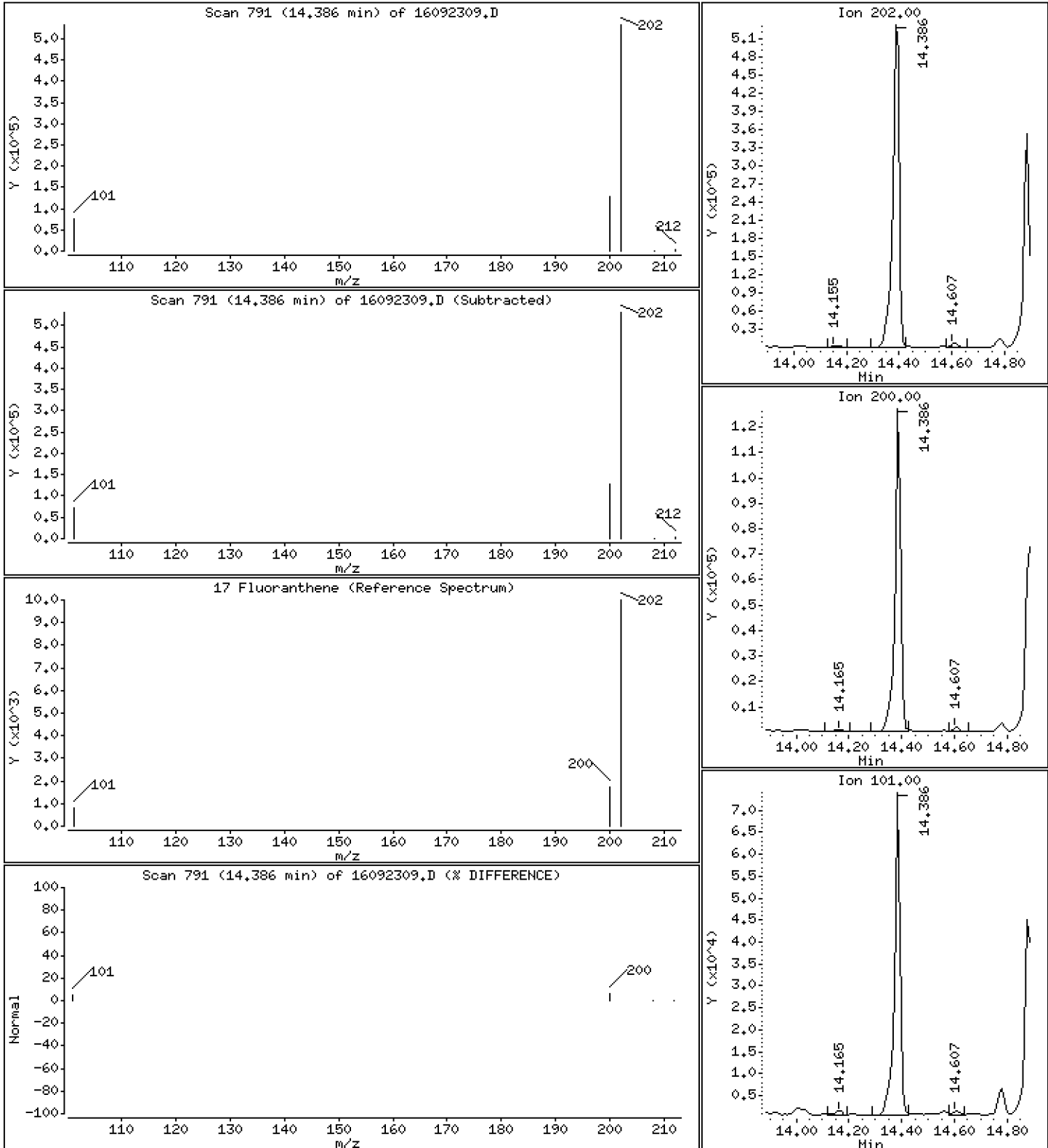
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 240 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

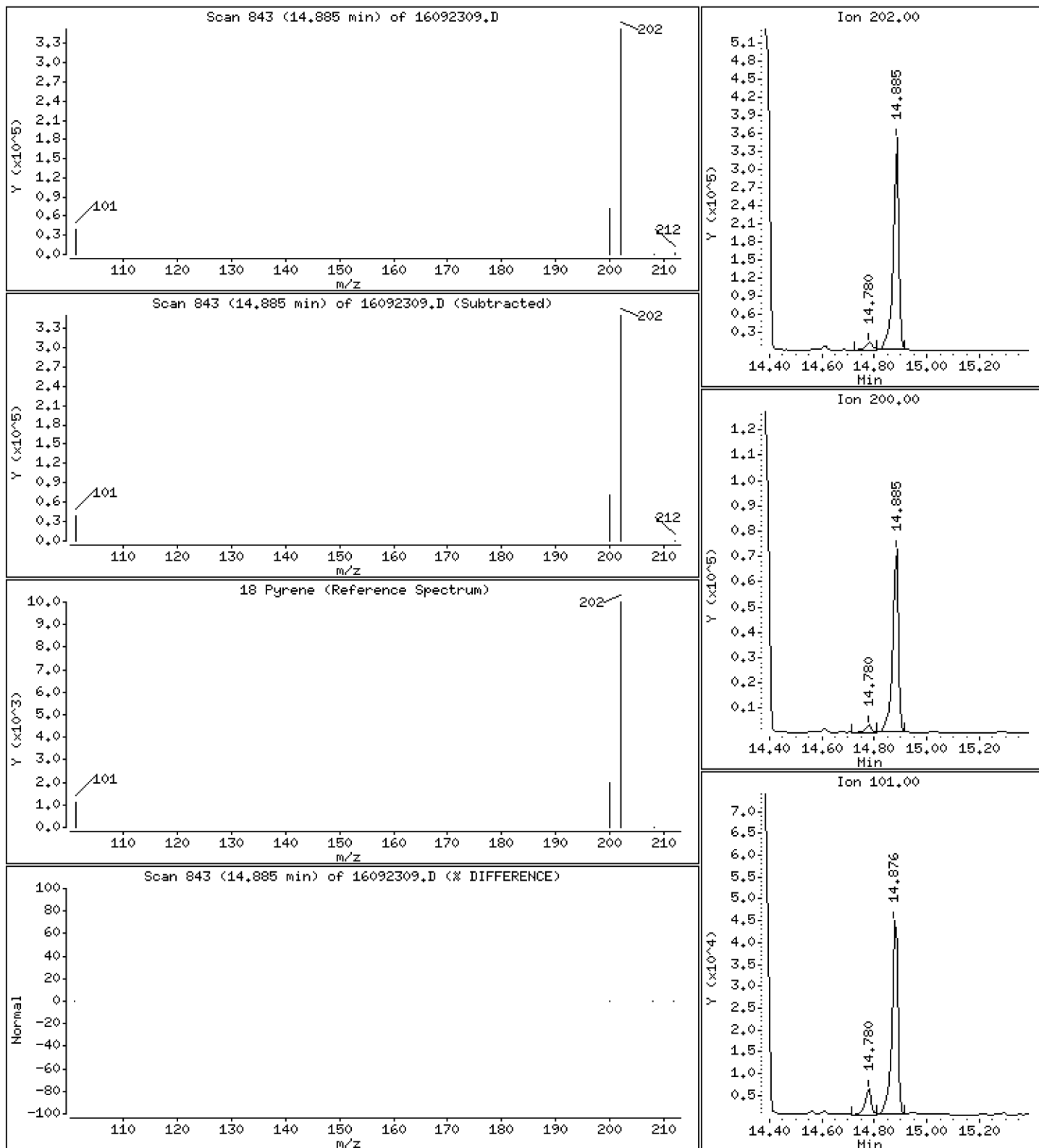
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 130 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

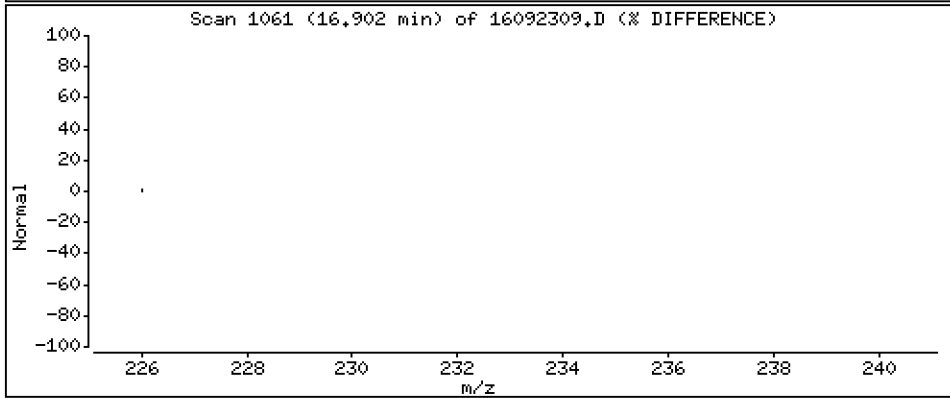
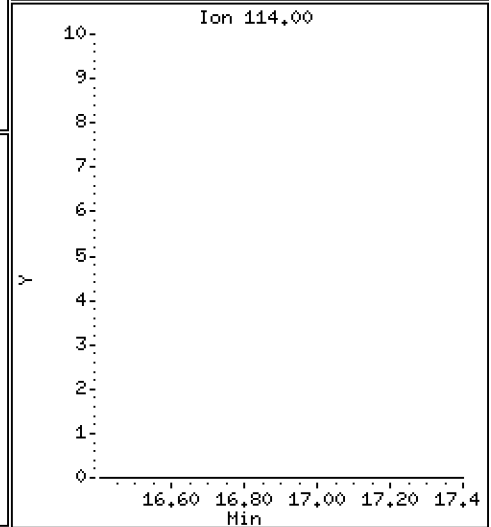
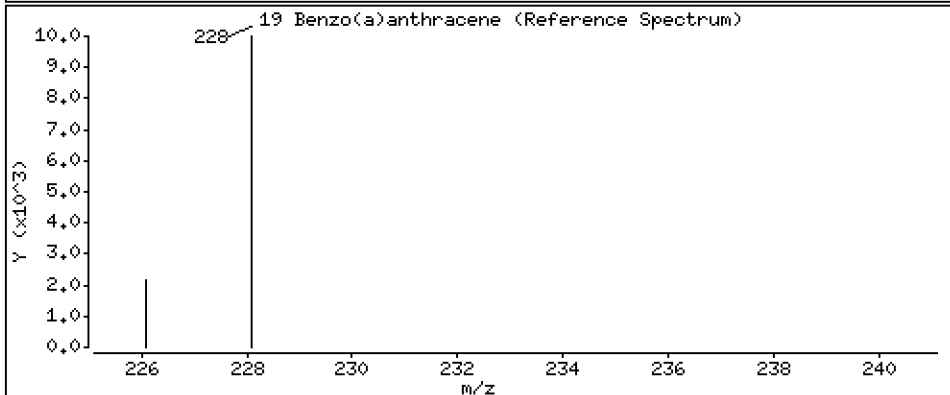
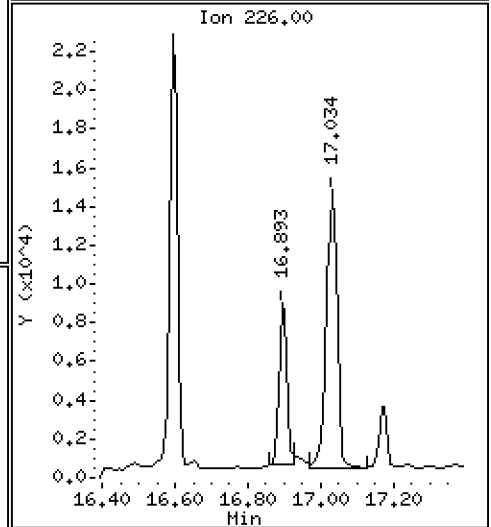
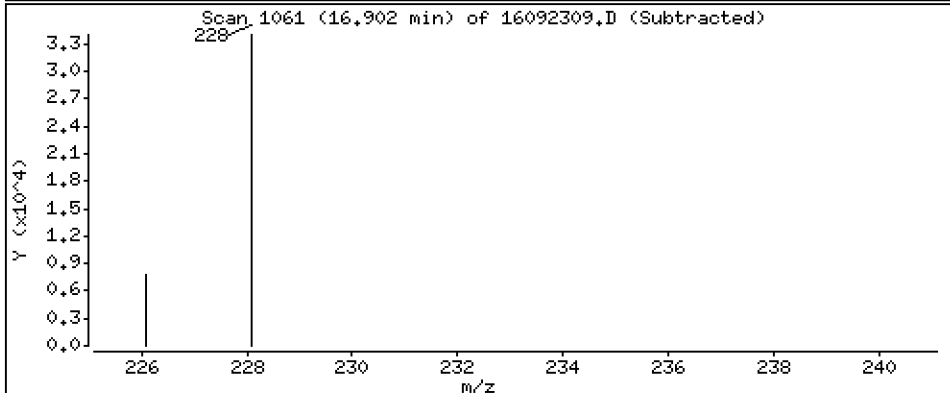
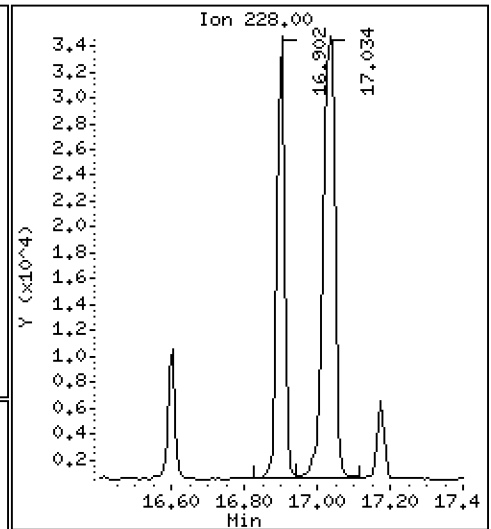
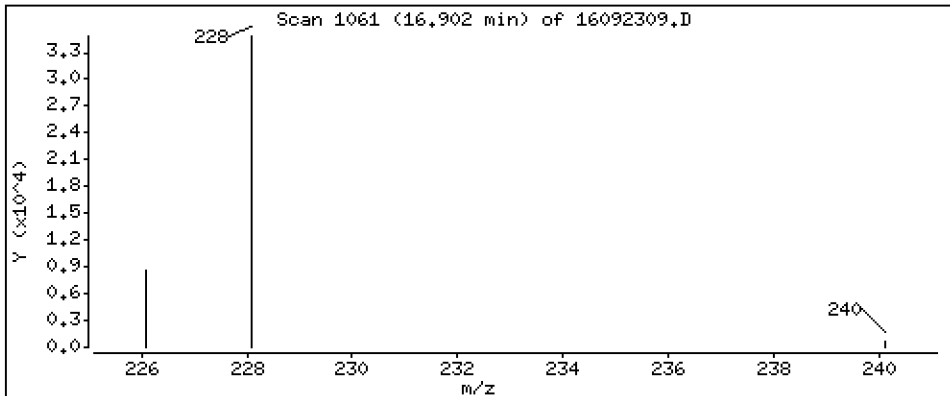
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 14,3 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

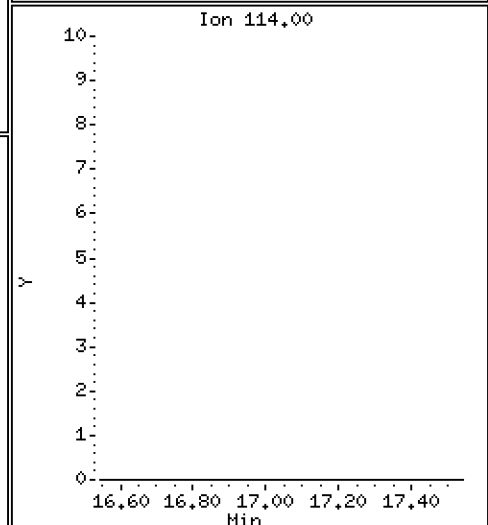
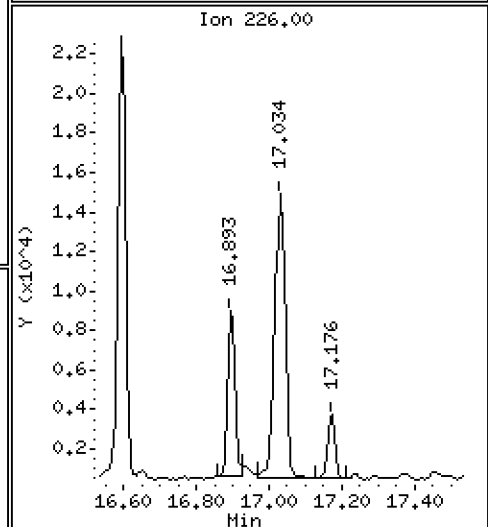
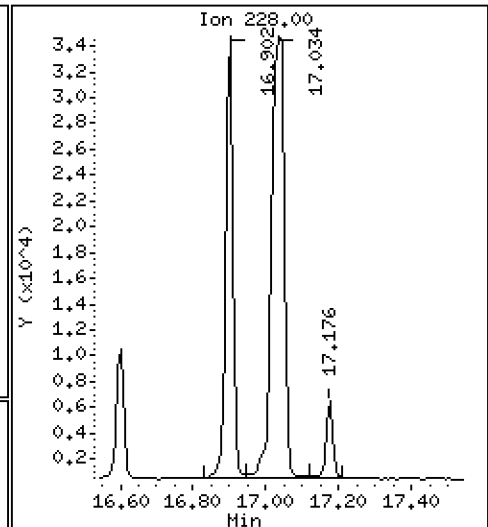
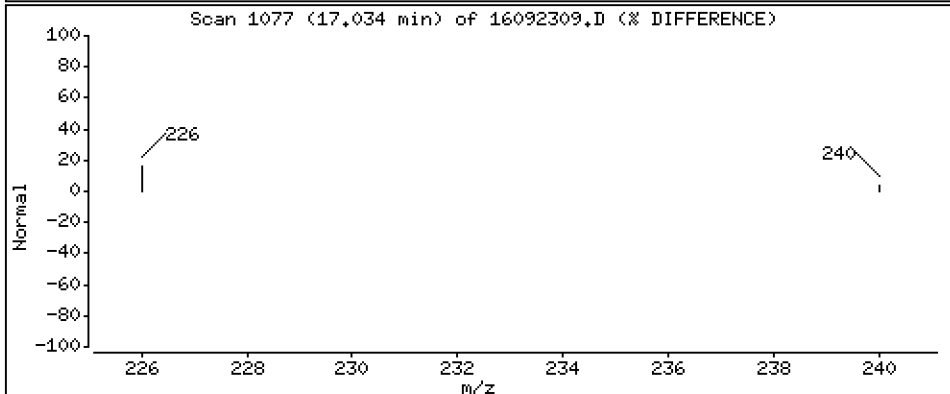
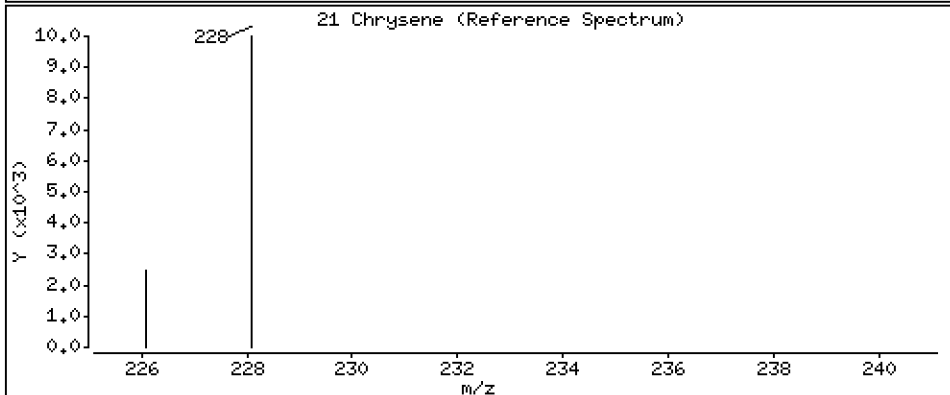
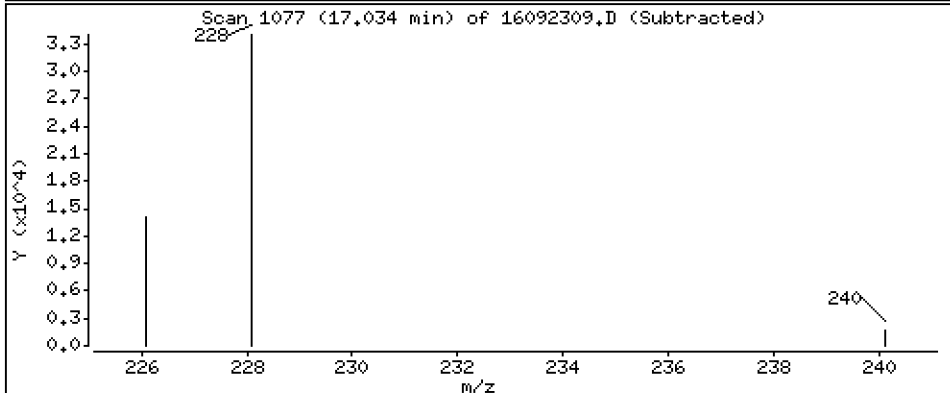
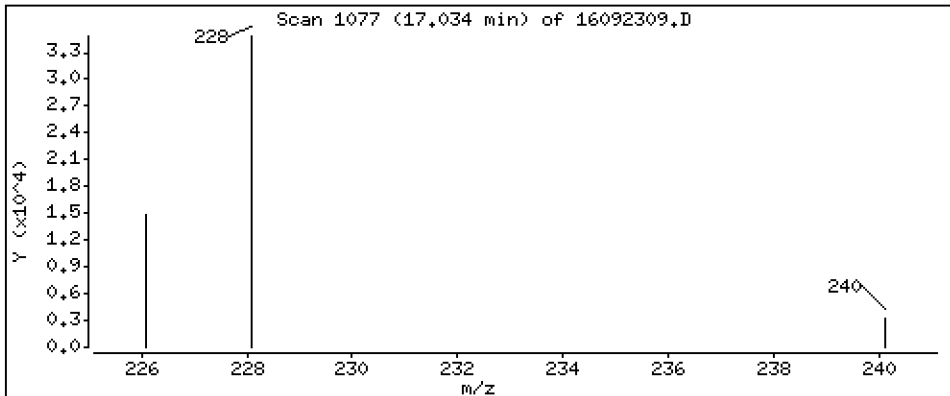
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 23,0 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

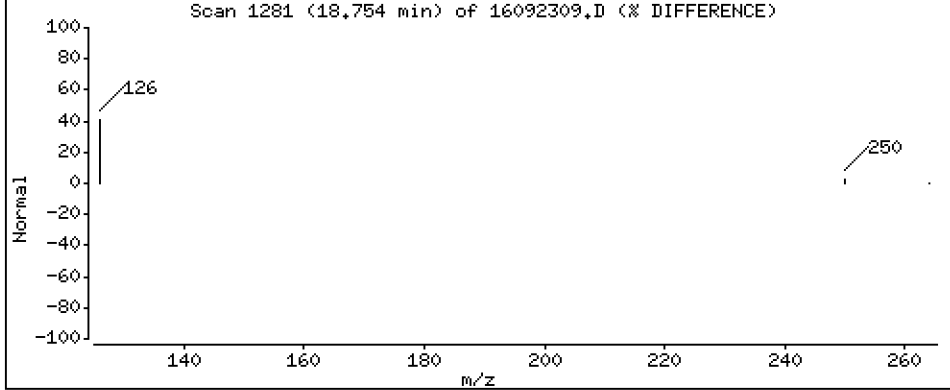
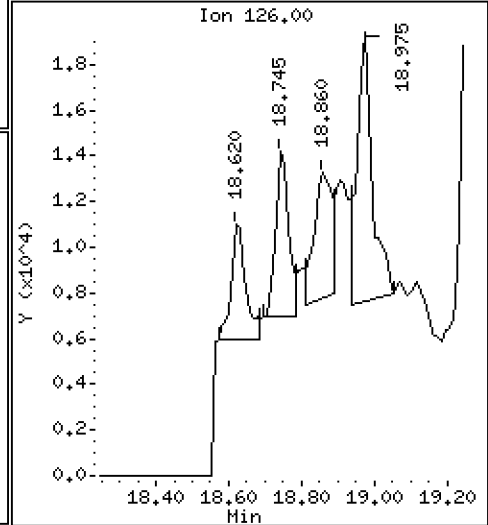
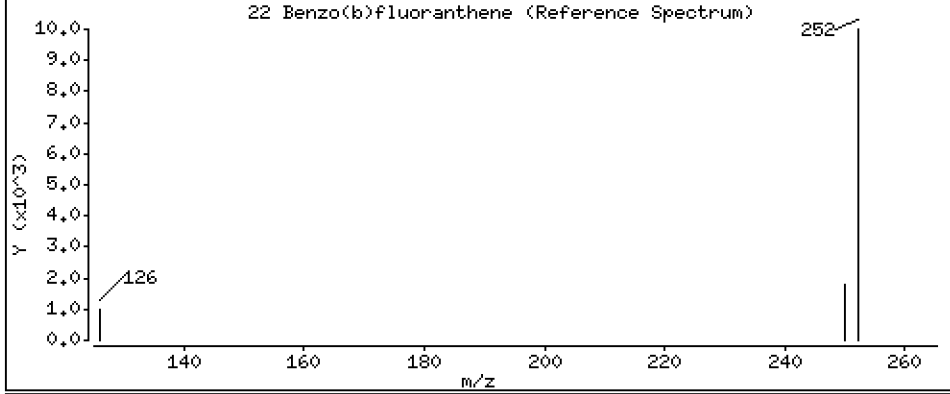
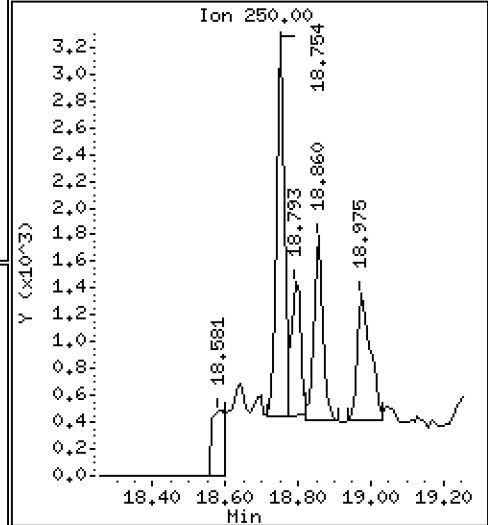
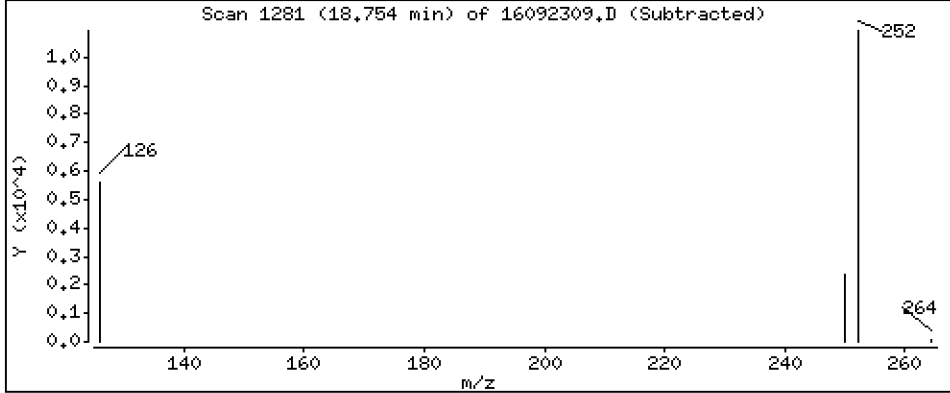
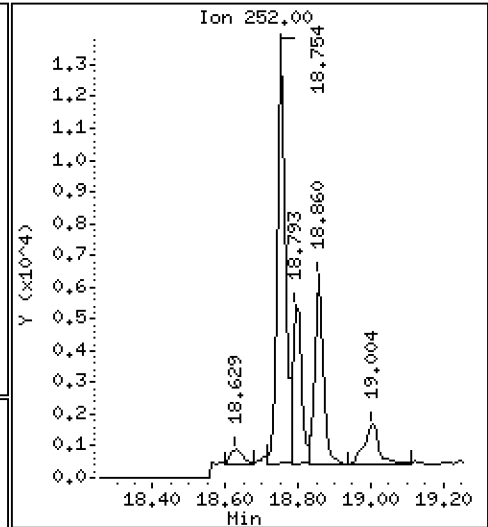
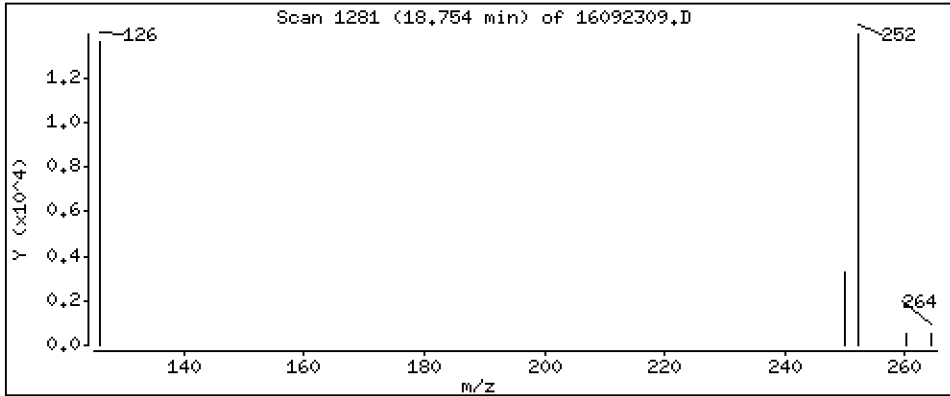
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 6,56 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

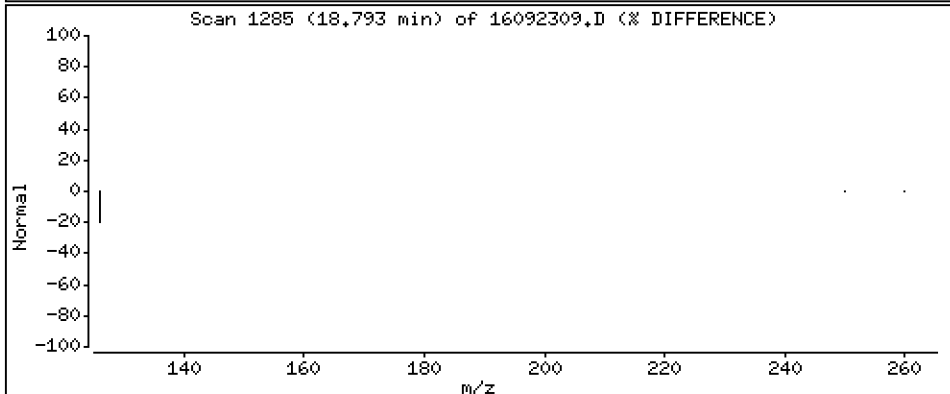
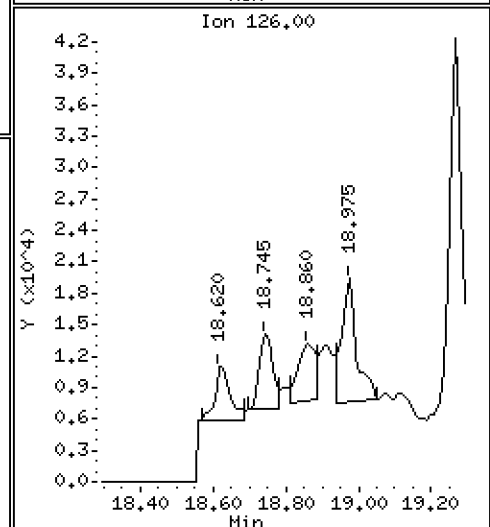
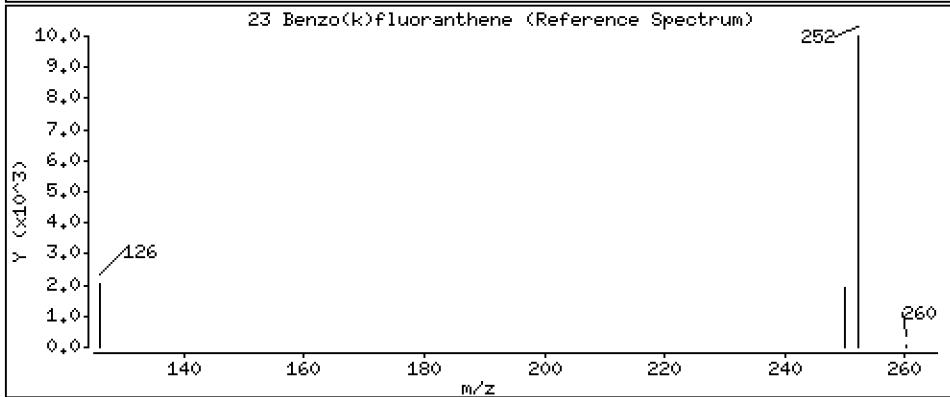
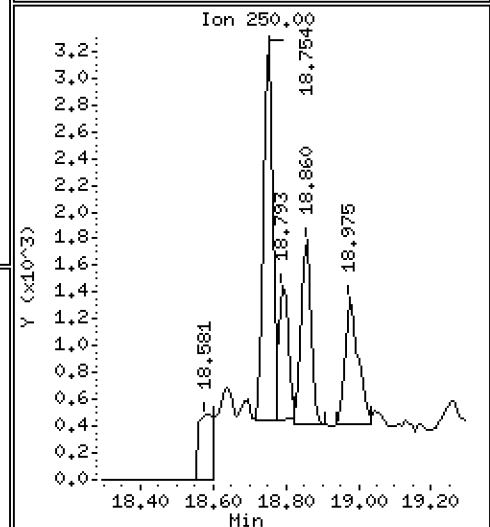
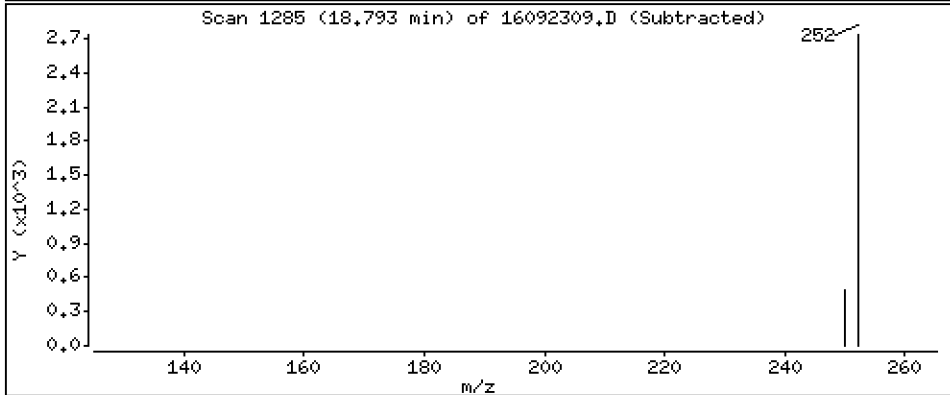
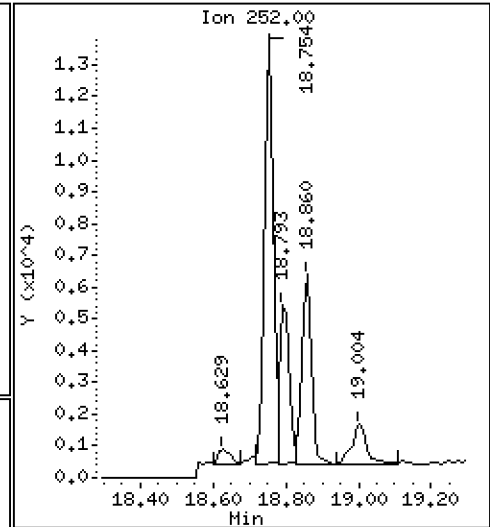
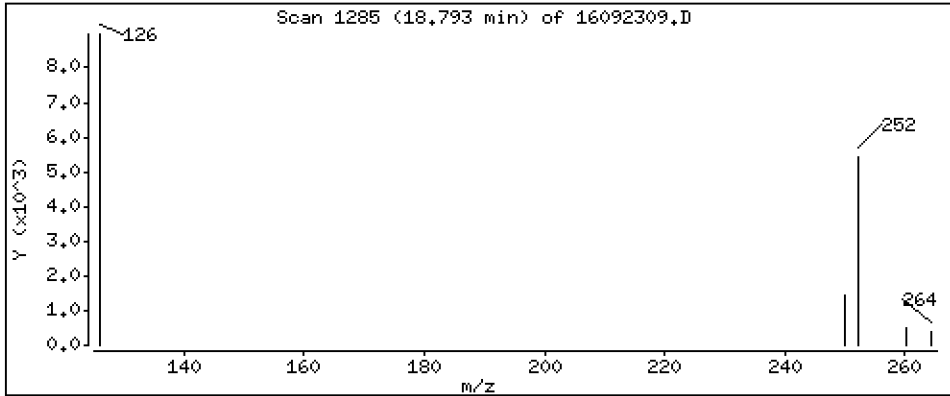
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Benzo(k)fluoranthene

Concentration: 2.35 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

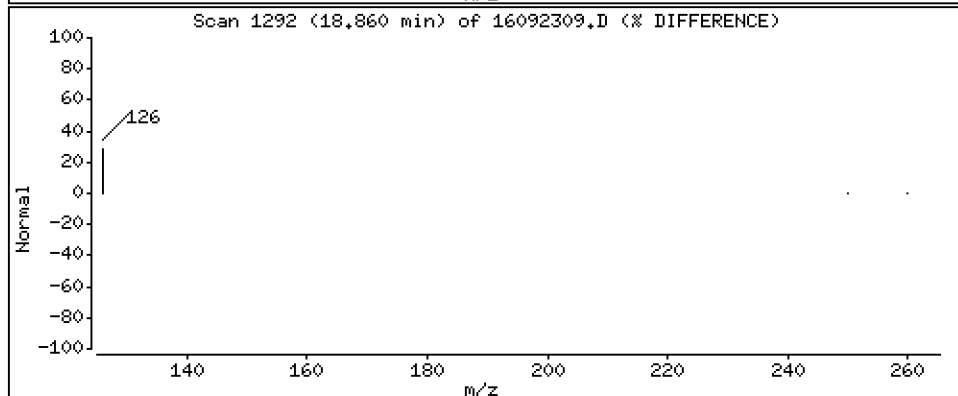
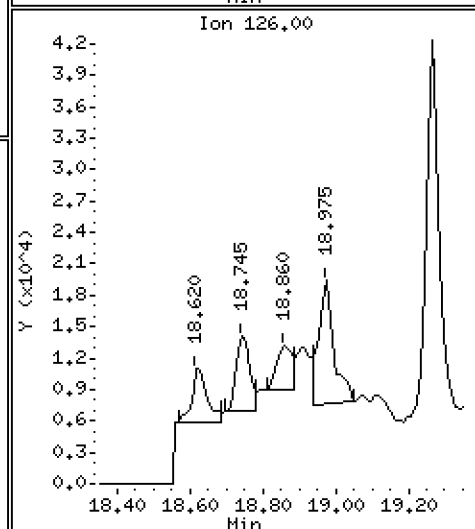
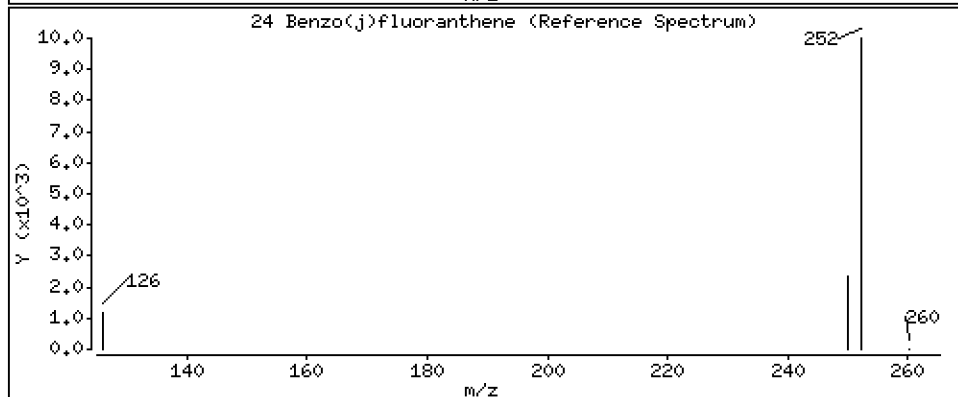
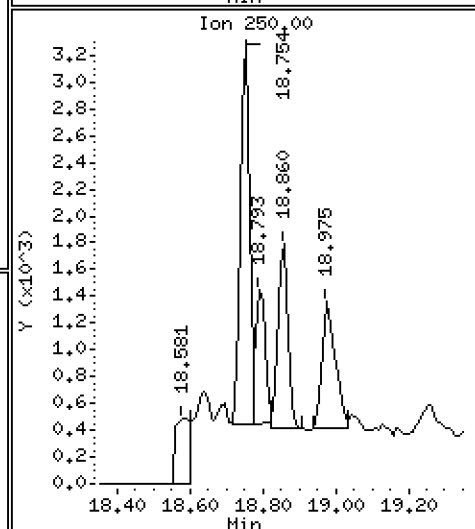
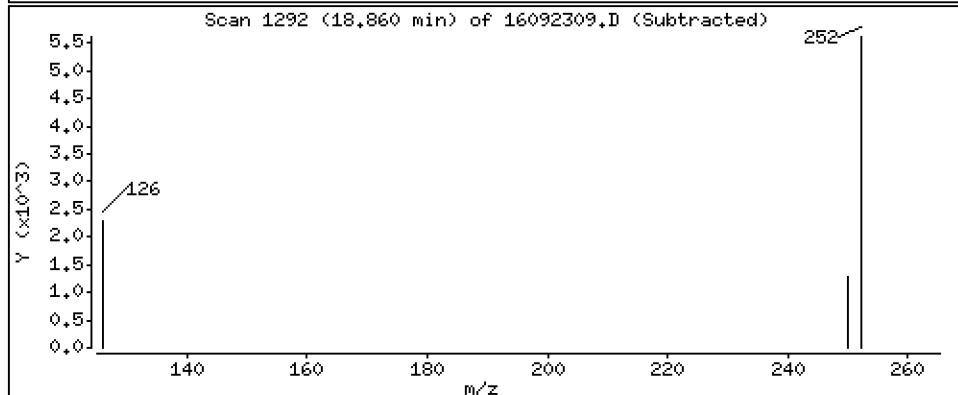
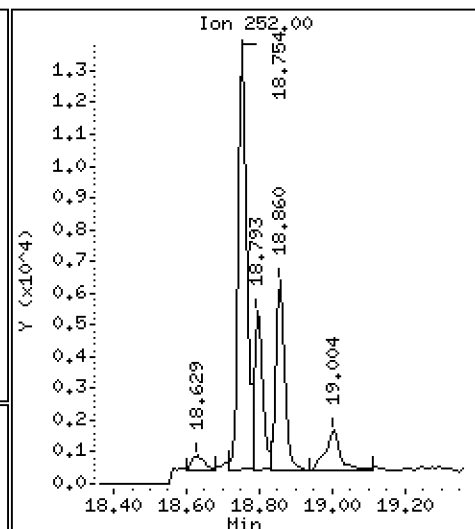
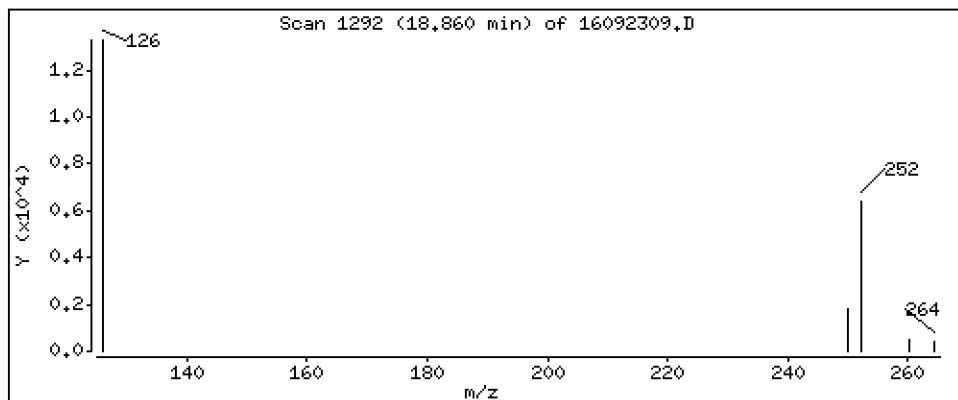
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 3,10 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

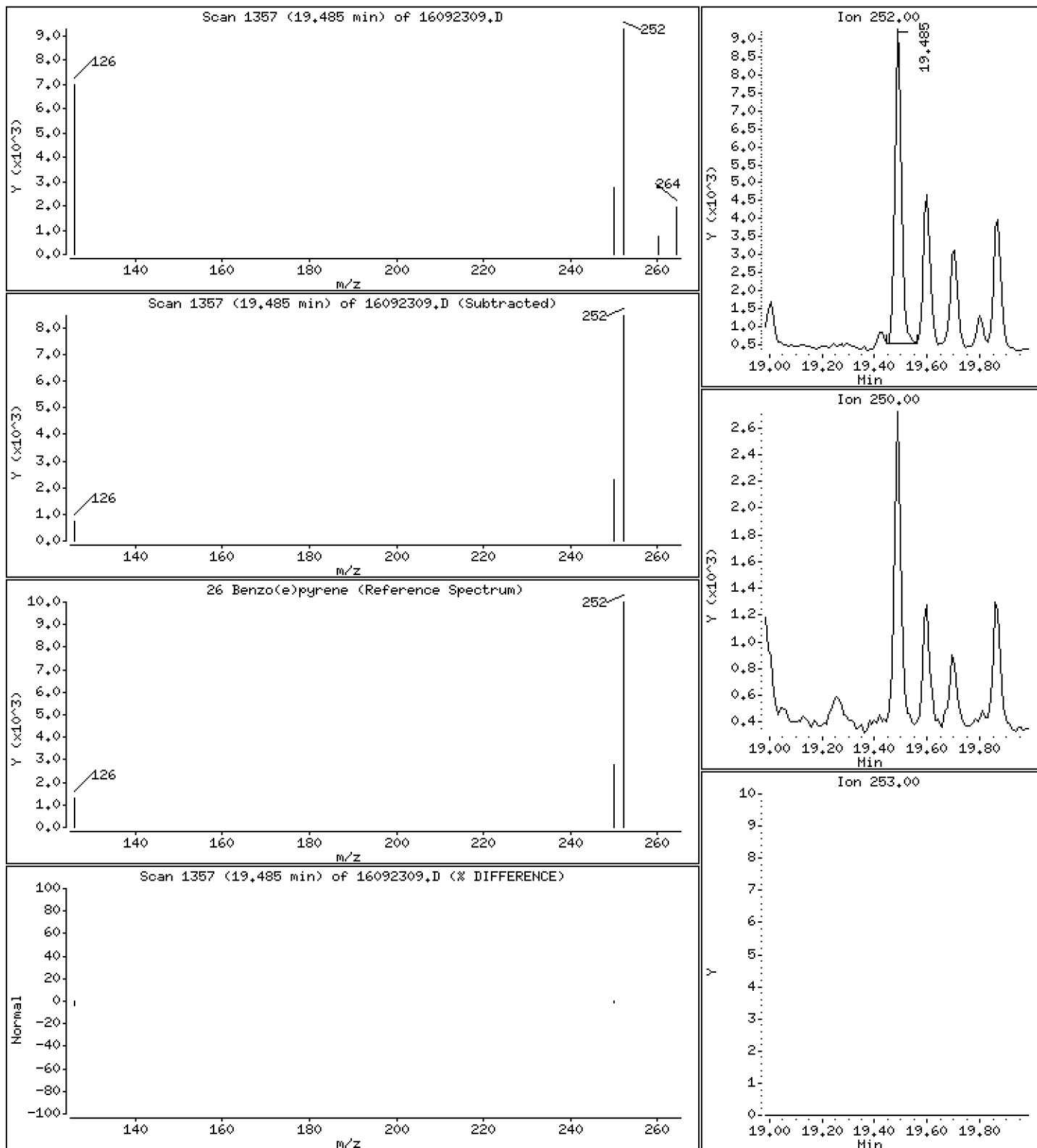
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 4,96 ng/mL



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

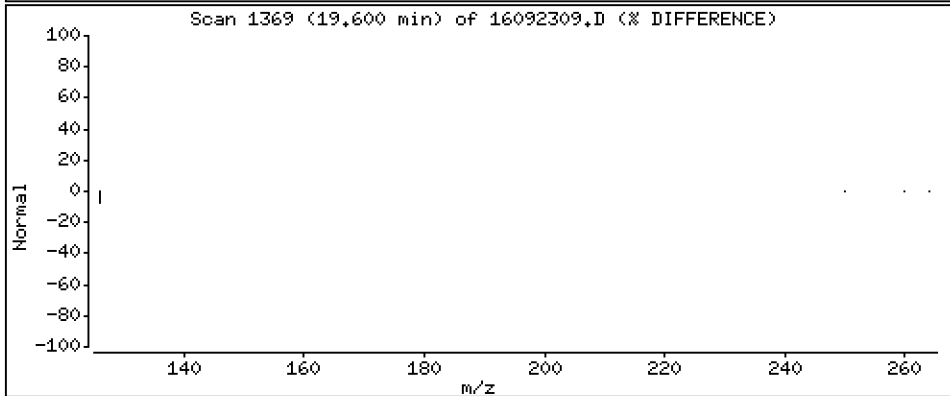
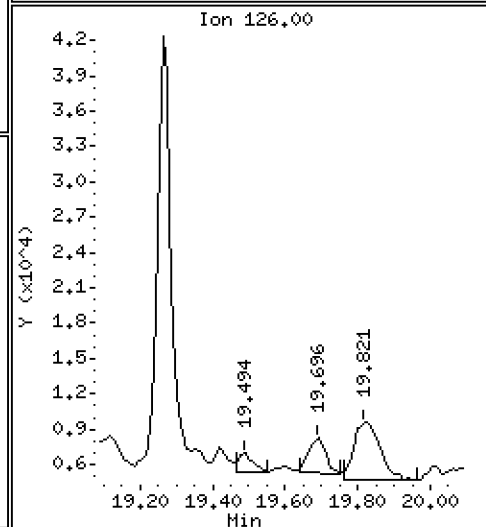
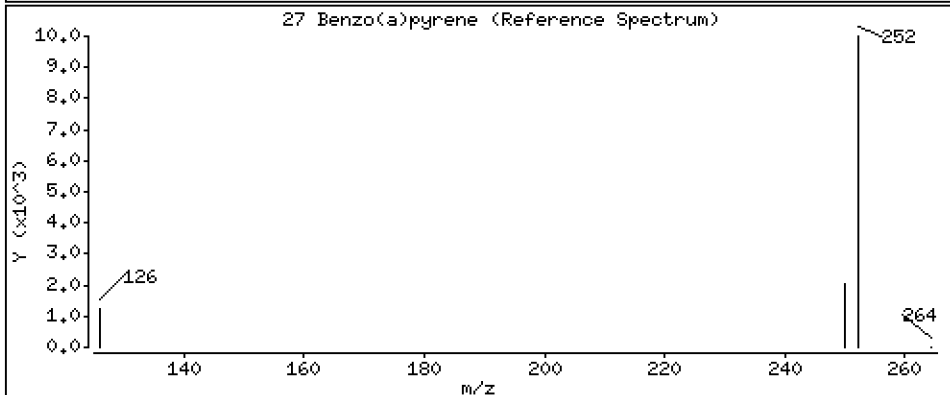
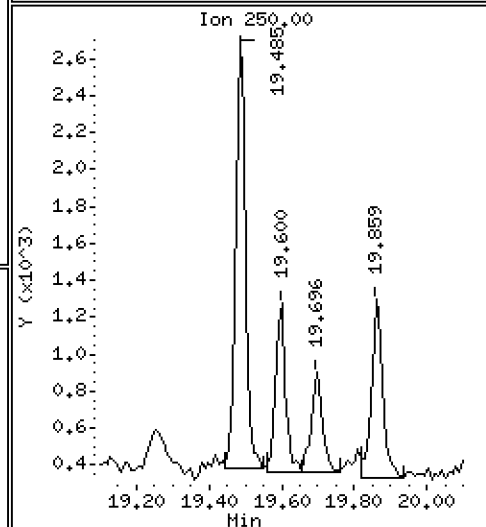
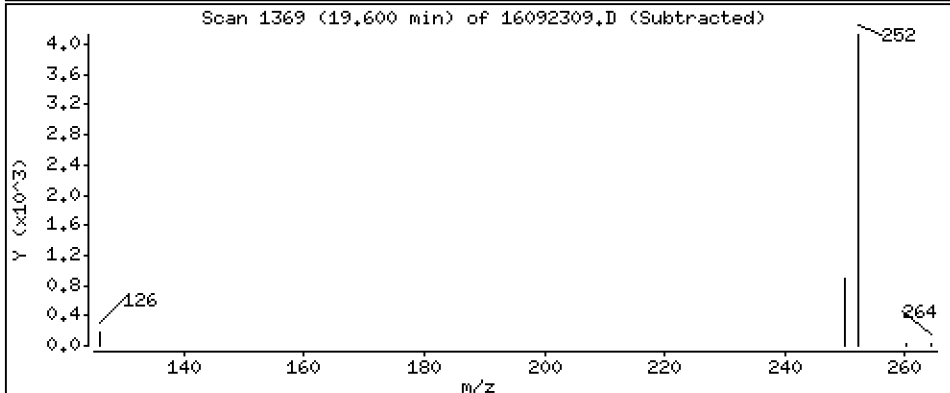
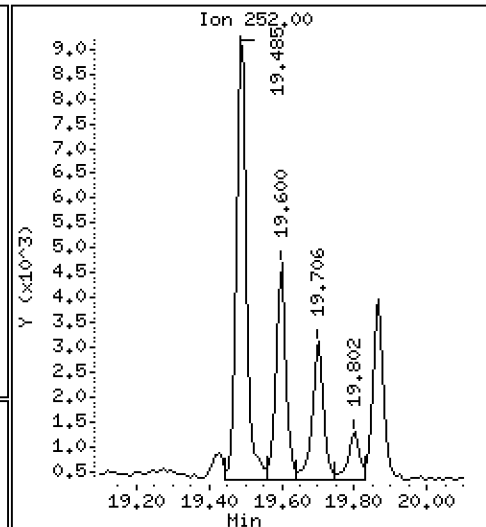
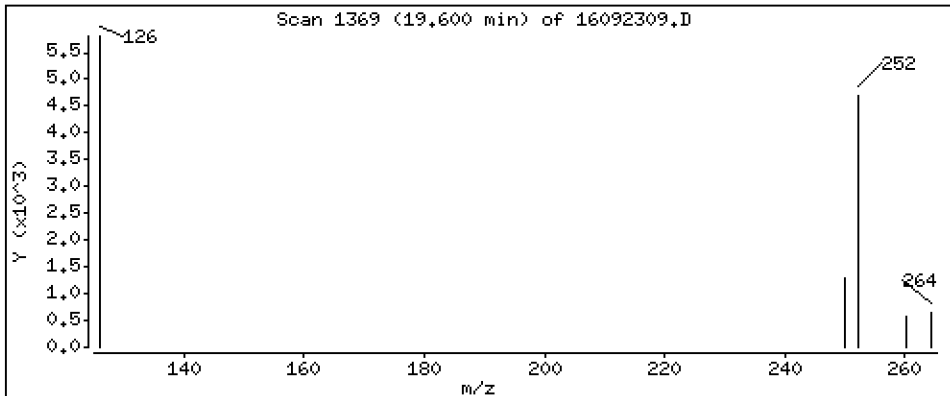
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 2,72 ng/mL

27 Benzo(a)pyrene



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

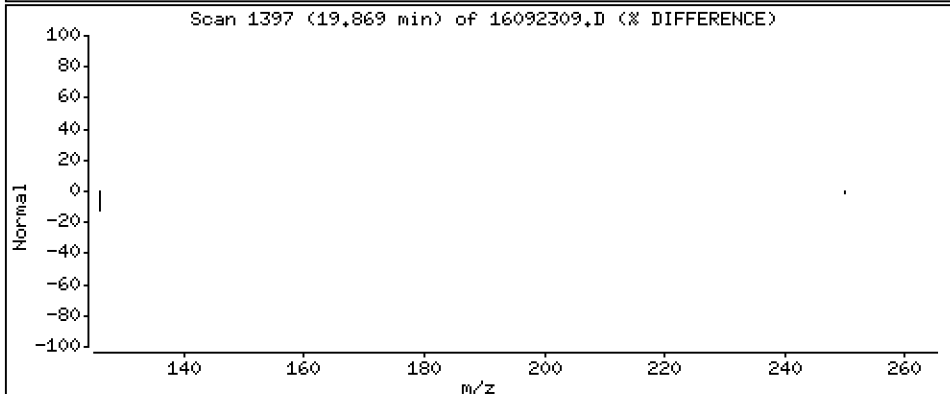
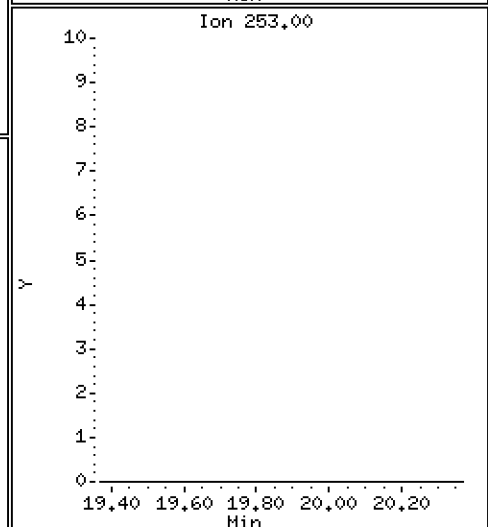
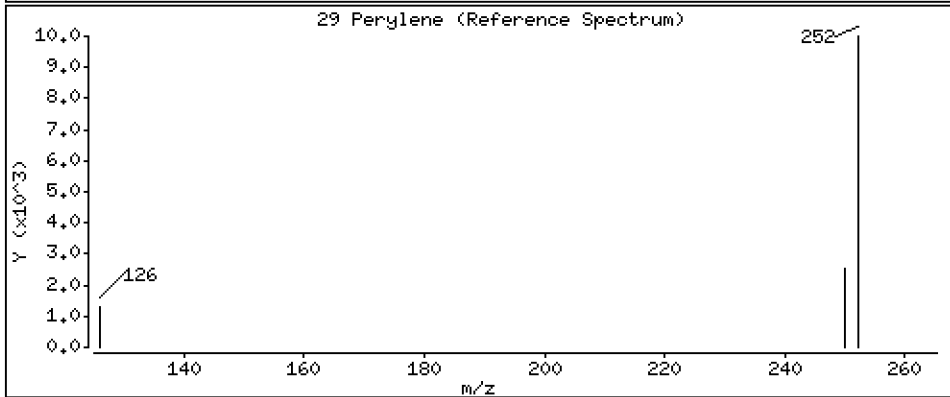
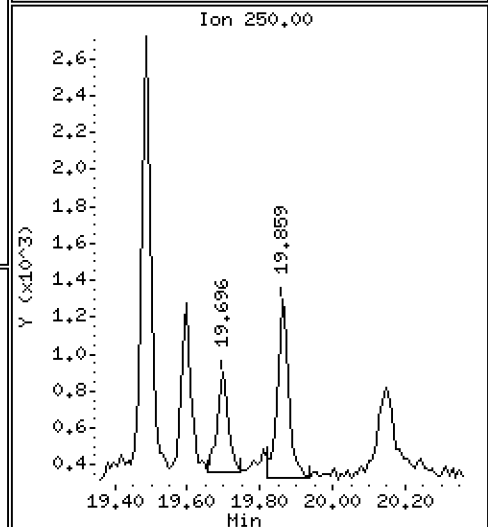
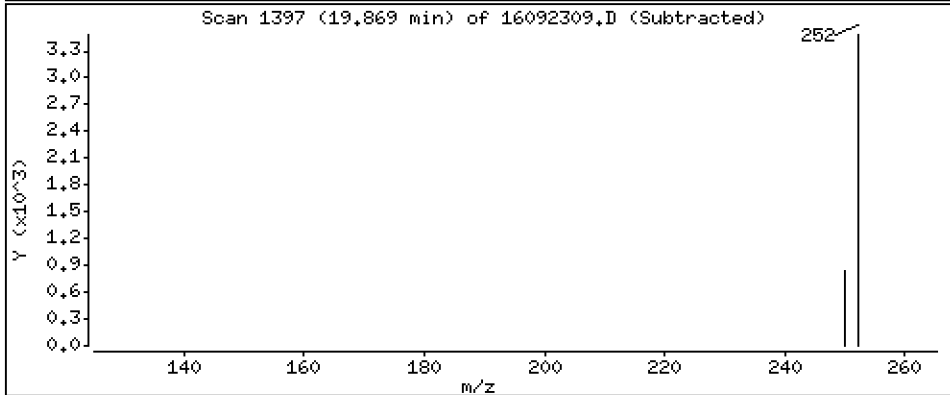
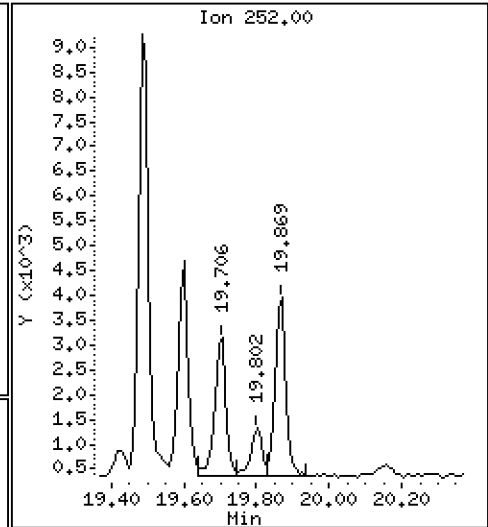
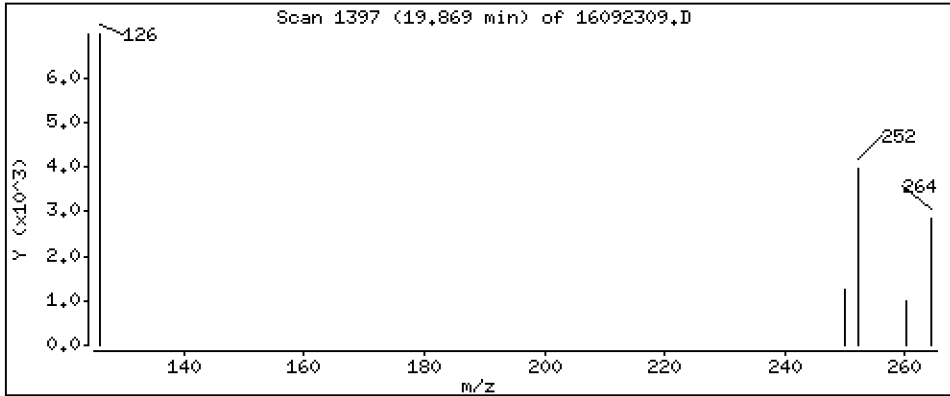
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 2,39 ng/mL

29 Perylene



Date : 23-SEP-2016 12:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-04

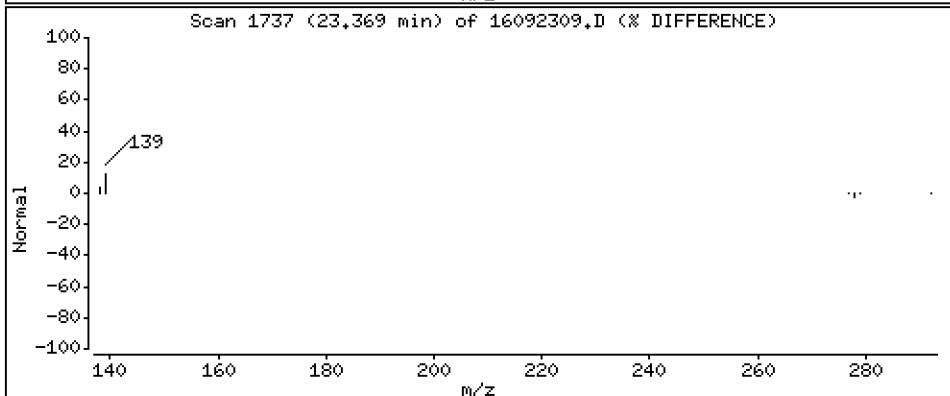
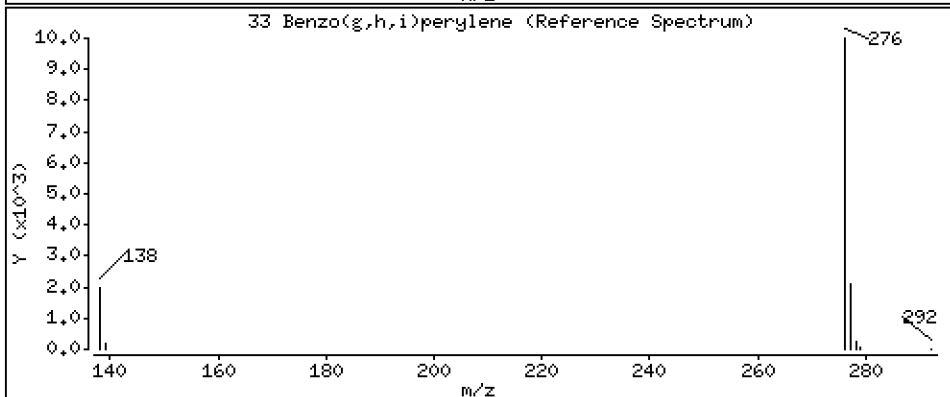
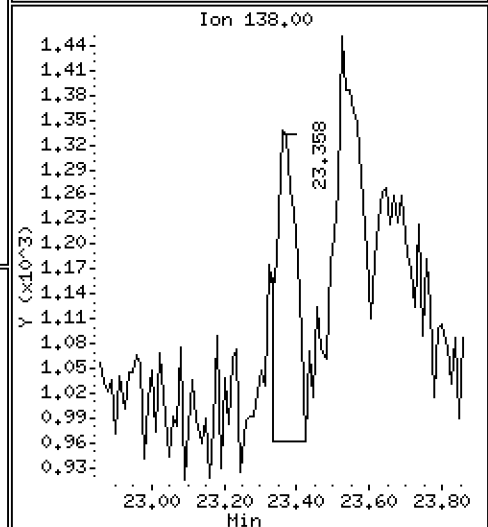
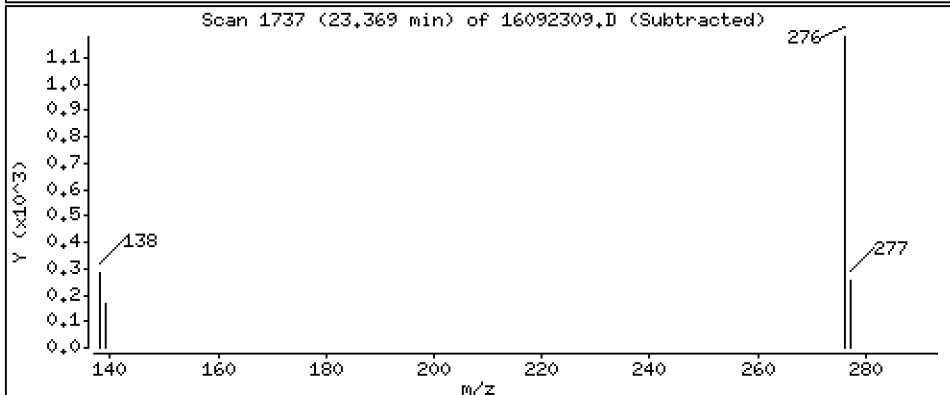
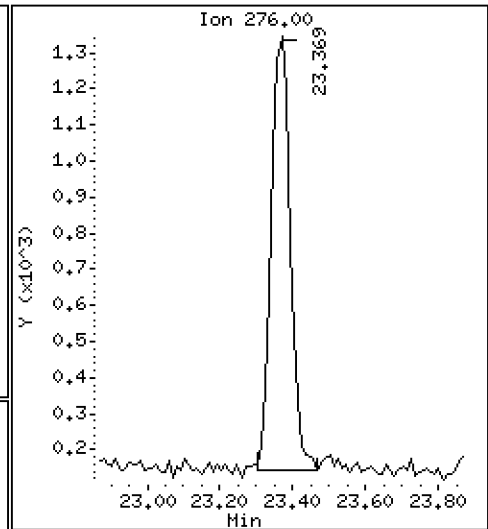
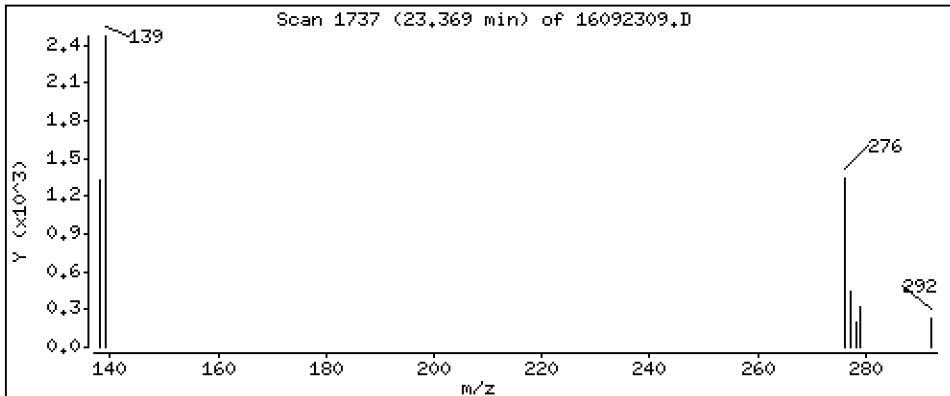
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 1.42 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092309.D

Lab Smp Id: 16I0160-04

Inj Date : 23-SEP-2016 12:01

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-04

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 12

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	631882	200.000	
2 Naphthalene	128		6.613	6.623	(1.006)	253882	70.0188	70.0
\$ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	327726	163.374	163
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	84579	33.8933	33.9
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	54240	23.8791	23.9
6 Acenaphthylene	152		9.429	9.440	(0.984)	18646	5.48422	5.48
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	365661	200.000	
8 Acenaphthene	153		9.639	9.650	(1.006)	79374	35.0517	35.1
9 Dibenzofuran	168		9.849	9.860	(1.028)	52202	15.9072	15.9
\$ 10 Fluorene-d10	174		10.422	10.432	(1.087)	2231	1.20444	1.20 (M)
11 Fluorene	166		10.474	10.485	(1.093)	71422	27.2751	27.3
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	649559	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	550506	126.163	126
\$ 14 Anthracene-d10	188		12.320	12.330	(1.005)	24116	6.87439	6.87
15 Anthracene	178		12.358	12.358	(1.008)	76593	17.9940	18.0
\$ 16 Fluoranthene-d10	212		14.356	14.356	(1.171)	728632	230.745	231
17 Fluoranthene	202		14.385	14.395	(1.173)	928109	240.229	240
18 Pyrene	202		14.885	14.885	(0.876)	533326	129.730	130
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	49198	14.2837	14.3
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	530634	200.000	
21 Chrysene	228		17.034	17.042	(1.002)	83106	22.9698	23.0
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	22551	6.56152	6.56
23 Benzo(k)fluoranthene	252		18.792	18.792	(0.949)	9005	2.35203	2.35
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	10427	3.10427	3.10
\$ 25 Benzo(e)pyrene-d12	264		19.426	19.426	(0.981)	369674	112.000	112
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	16354	4.95761	4.96
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	8574	2.72451	2.72
* 28 Perylene-d12	264		19.801	19.801	(1.000)	644095	200.000	
29 Perylene	252		19.868	19.868	(1.003)	7687	2.38525	2.39
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	450567	212.818	213
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	4267	1.41642	1.42

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092309.D
 Lab Smp Id: 16I0160-04
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	631882	19.82
7 Acenaphthene-d10	297518	148759	595036	365661	22.90
12 Phenanthrene-d10	522042	261021	1044084	649559	24.43
20 Chrysene-d12	389499	194750	778998	530634	36.24
28 Perylene-d12	430626	215313	861252	644095	49.57

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.12
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	-0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	-0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092309.D

Lab ID: 16I0160-04

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 12:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

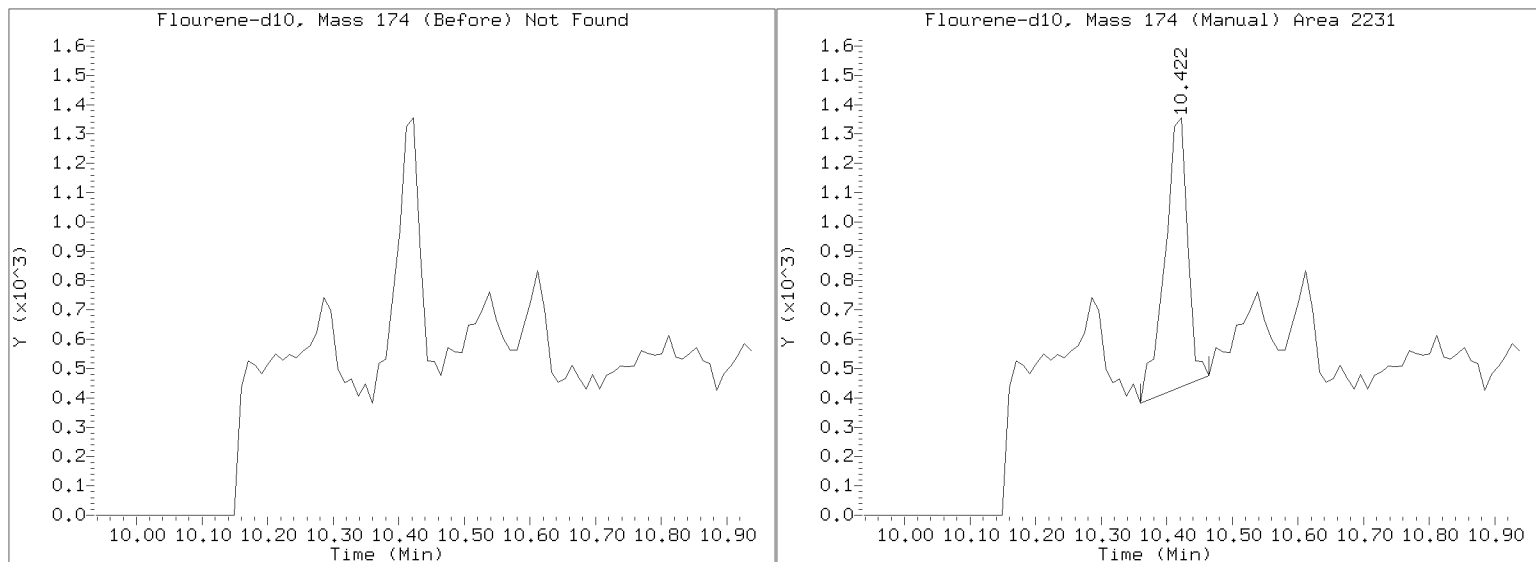
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092309.D

Injection Date: 23-SEP-2016 12:01

Lab ID:16I0160-04 Client ID:

Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>1610160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Matrix:	<u>Tissue</u>	Laboratory ID:	<u>1610160-05</u>
Sampled:	<u>09/09/16 10:50</u>	Prepared:	<u>09/10/16 11:10</u>
Solids:		Preparation:	<u>EPA 3550C (Ultrasonic)</u>
Batch:	<u>BEI0260</u>	Sequence:	<u>SEI0321</u>
Instrument:	<u>NT11</u>	Column:	<u>RXi-17Sil-MS</u>
		File ID:	<u>16092310.D</u>
		Analyzed:	<u>09/23/16 12:31</u>
		Initial/Final:	<u>0.886 g / 0.1 mL</u>
		Calibration:	<u>ZI00066</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	9.43	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	4.32	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	3.72		1.13	1.13
86-73-7	Fluorene	1	2.94		1.13	1.13
85-01-8	Phenanthrene	1	11.8		1.13	1.13
120-12-7	Anthracene	1	1.53		1.13	1.13
206-44-0	Fluoranthene	1	23.7		1.13	1.13
129-00-0	Pyrene	1	11.9		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.16		1.13	1.13
218-01-9	Chrysene	1	2.06		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzofluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	21.4	63.3	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	24.3	71.7	30 - 160	
Fluoranthene-d10	33.860	28.3	83.7	30 - 160	
Fluorene-d10	21.163	0.126	0.597	30 - 160	*
Anthracene-d10	21.163	0.660	3.12	30 - 160	*
Benzo(e)pyrene-d12	21.163	12.9	61.0	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092310.D

Date: 23-SEP-2016 12:31

Client ID:

Sample Info: 1610160-05

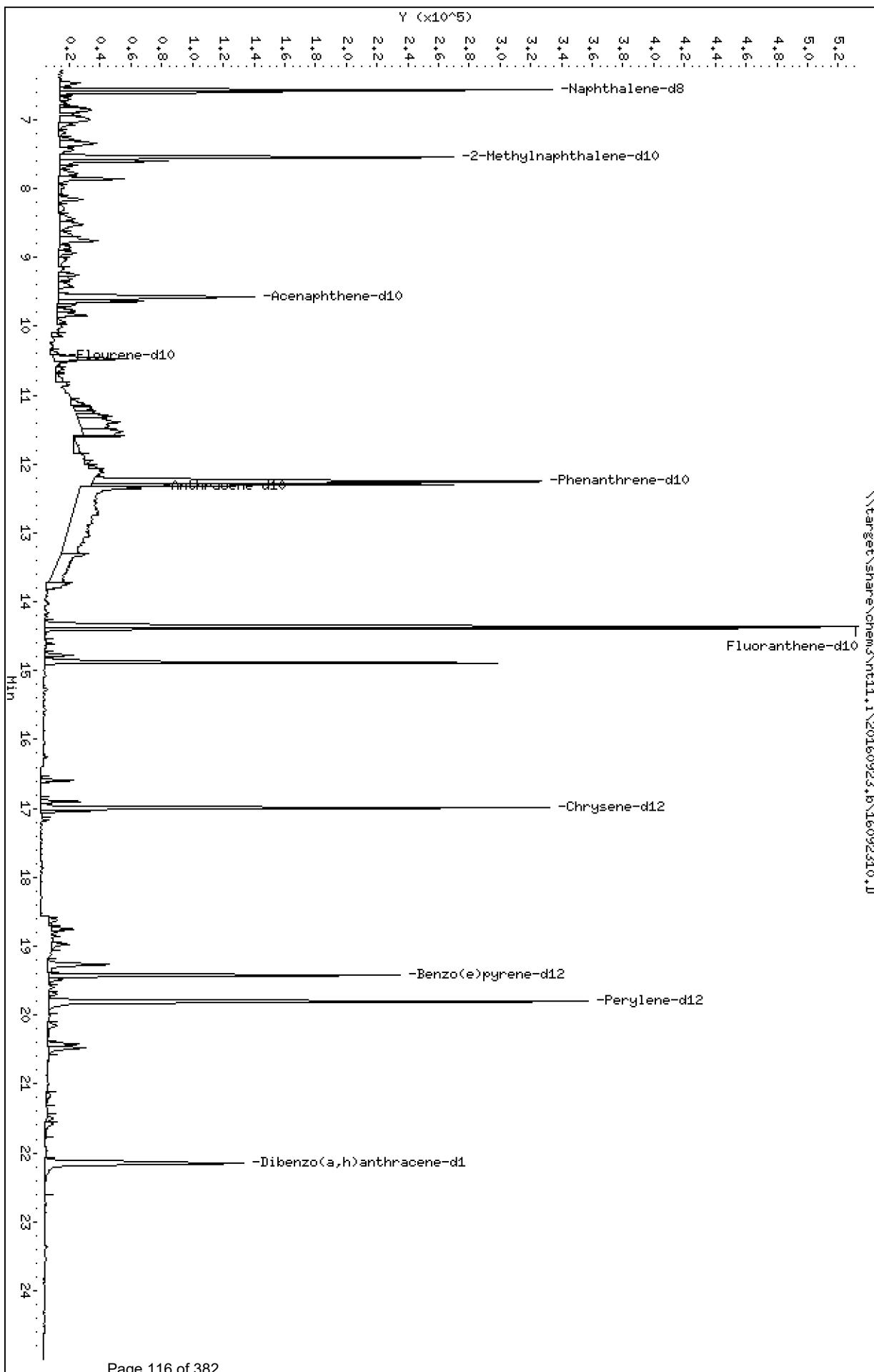
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160923.16\16092310.D



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

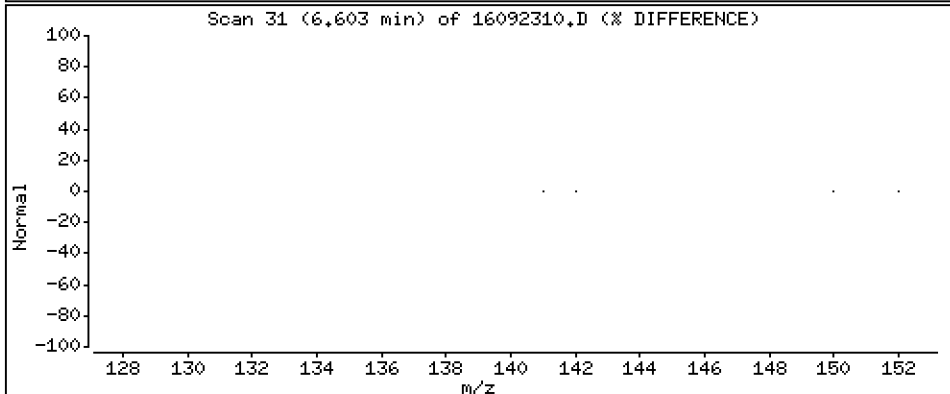
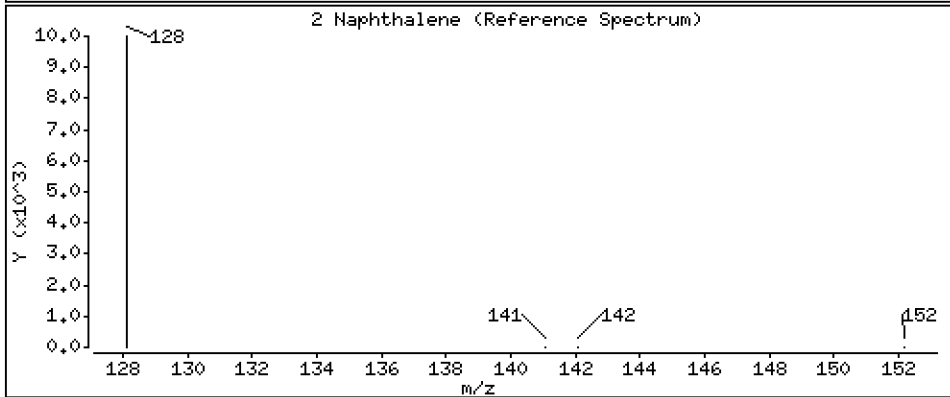
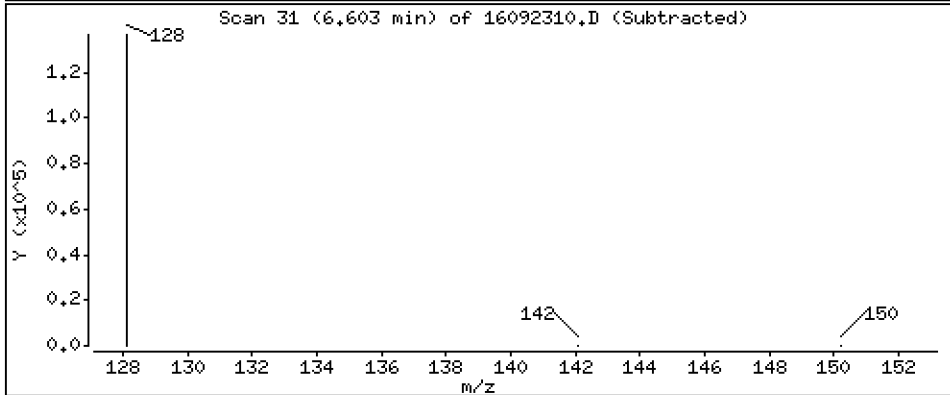
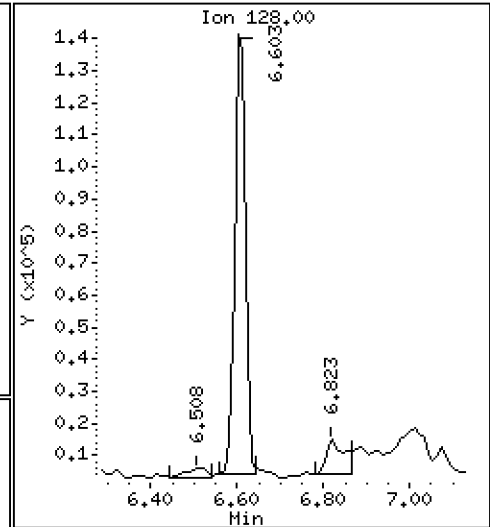
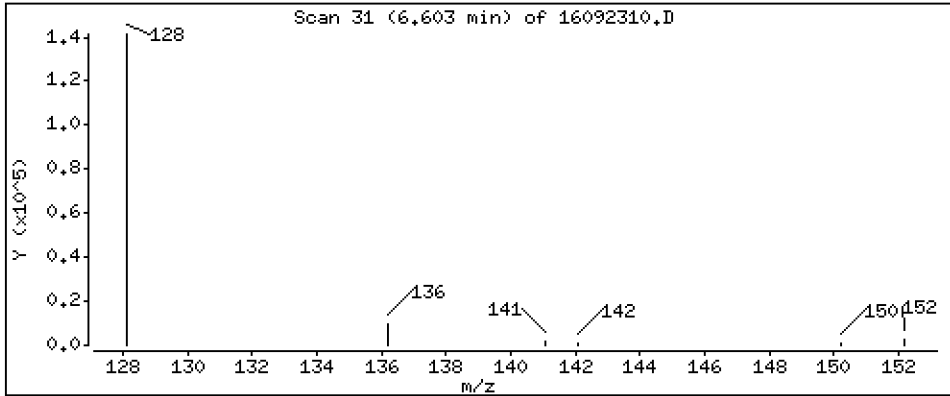
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 83,6 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

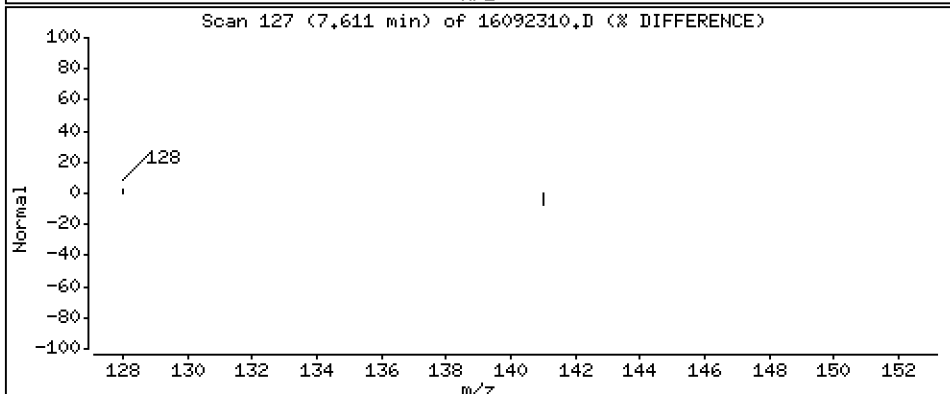
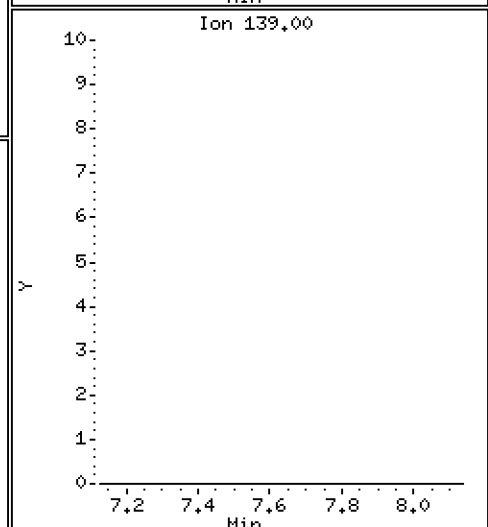
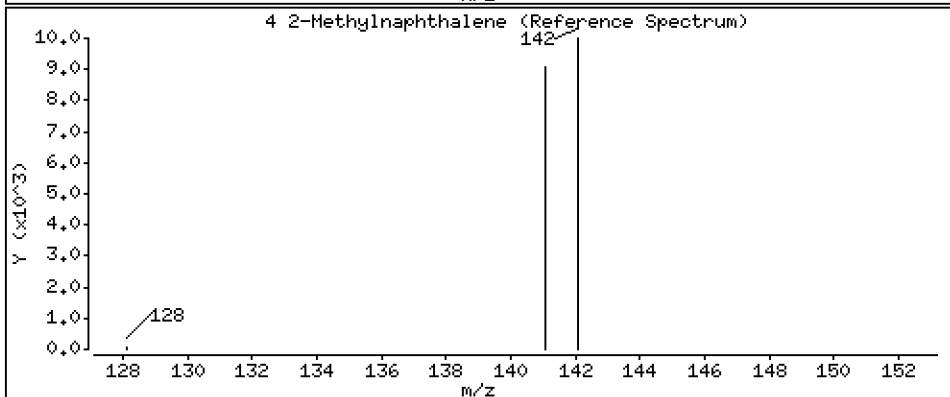
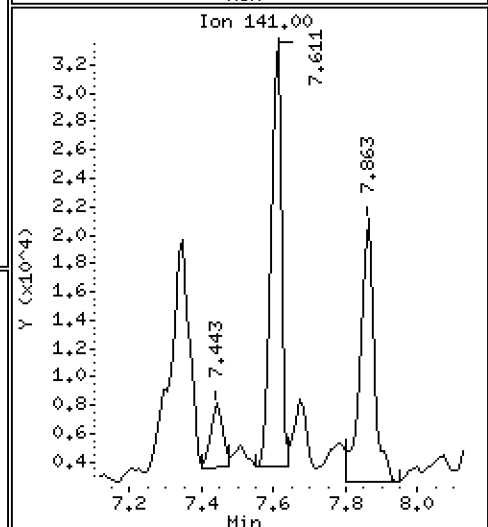
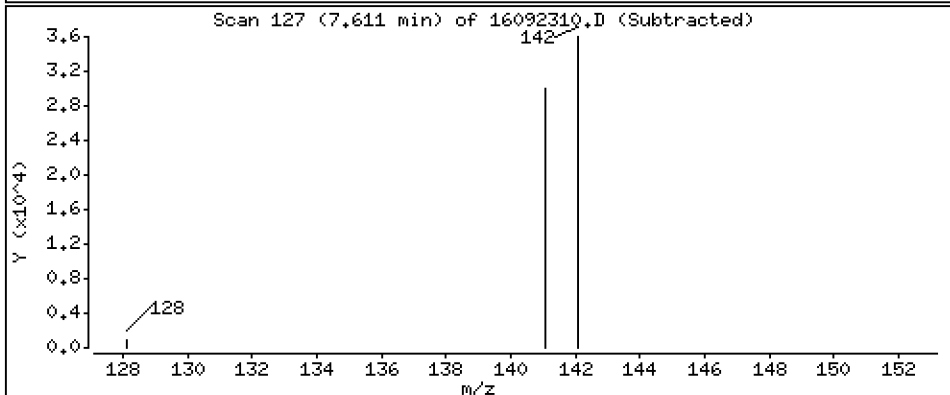
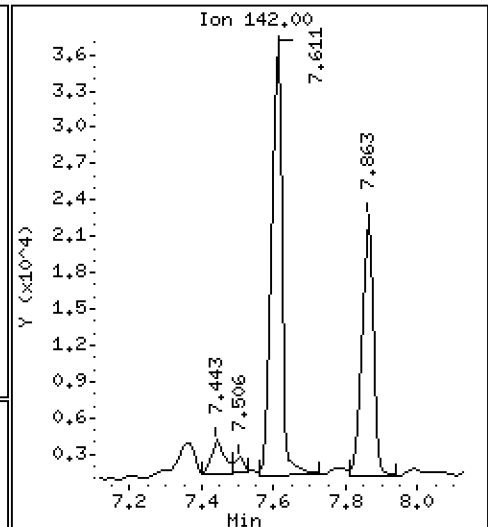
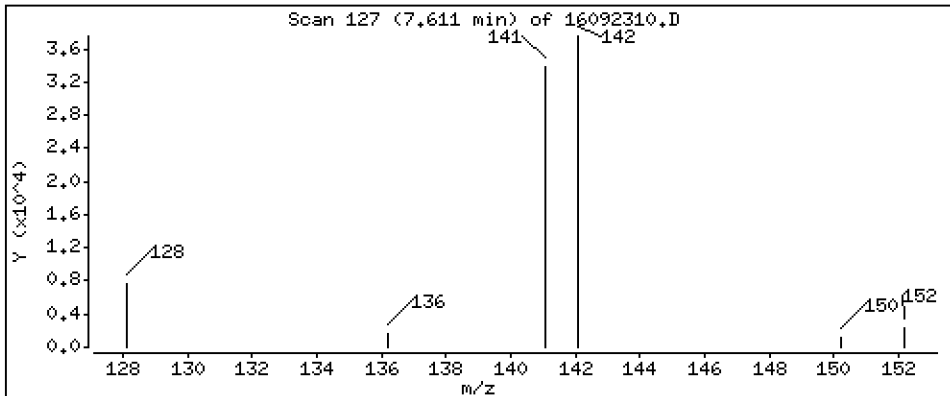
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4 2-Methylnaphthalene

Concentration: 38,3 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

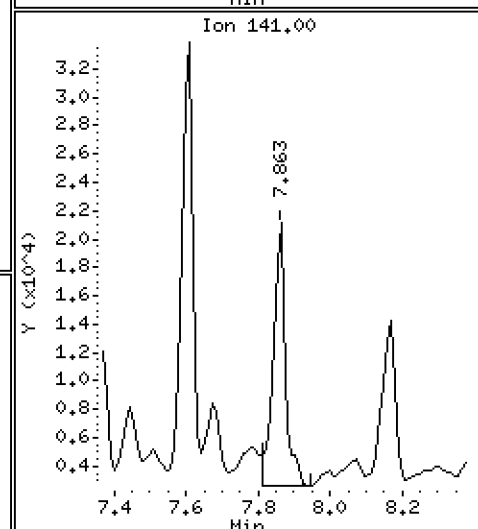
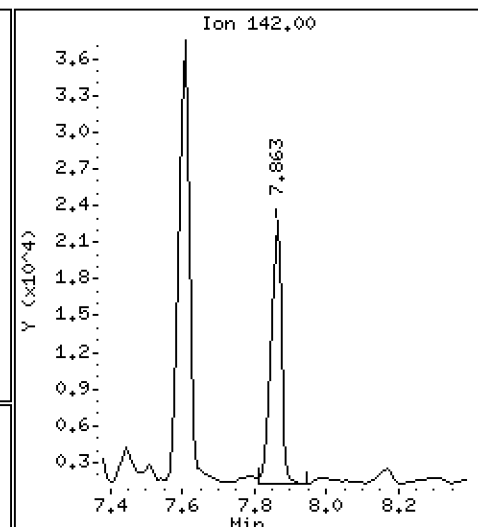
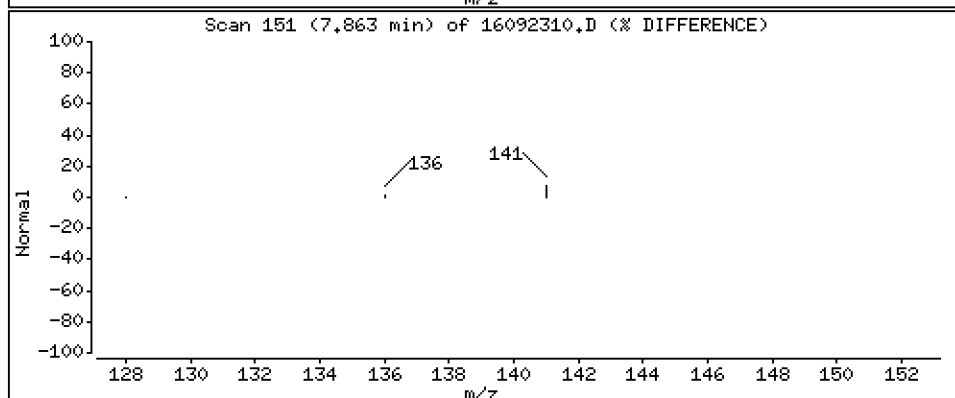
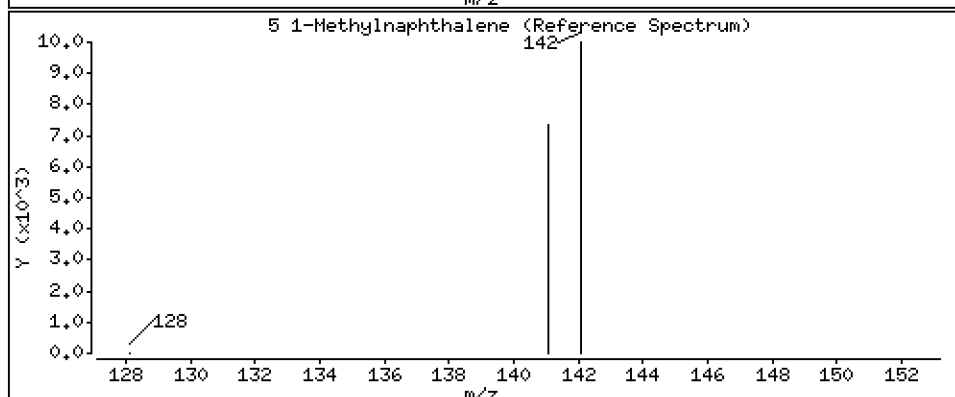
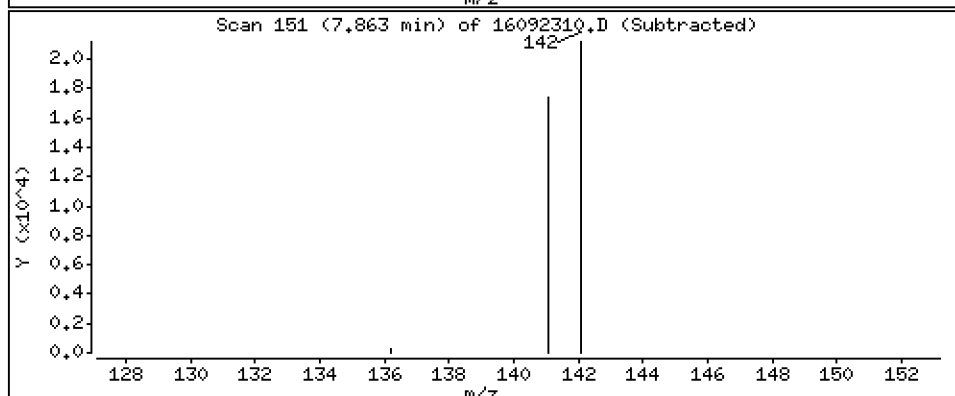
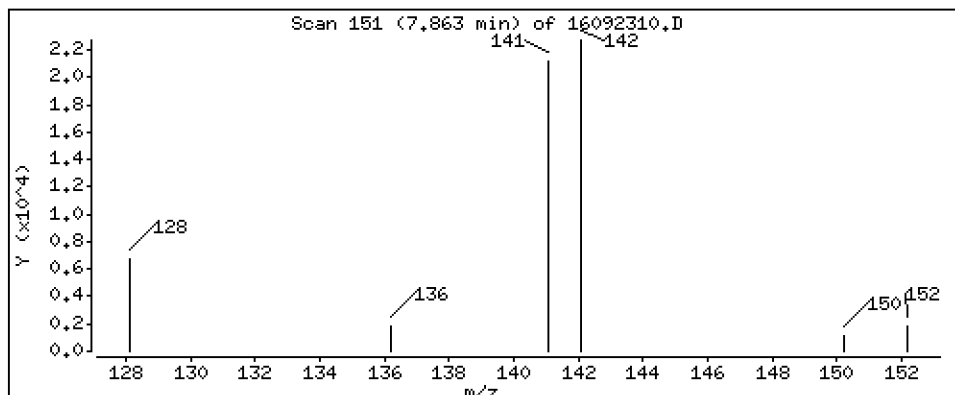
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 25,5 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

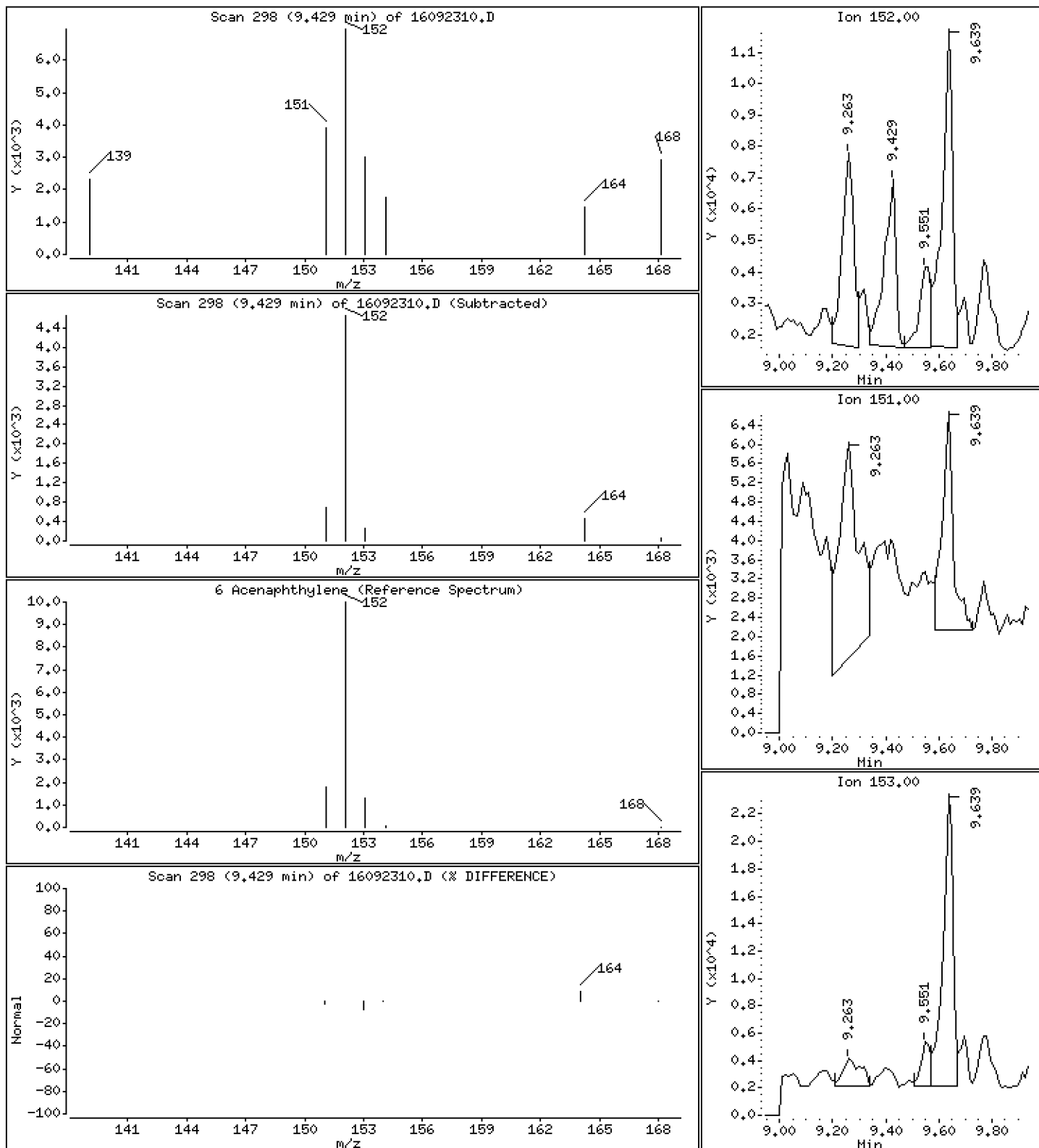
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 6.15 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

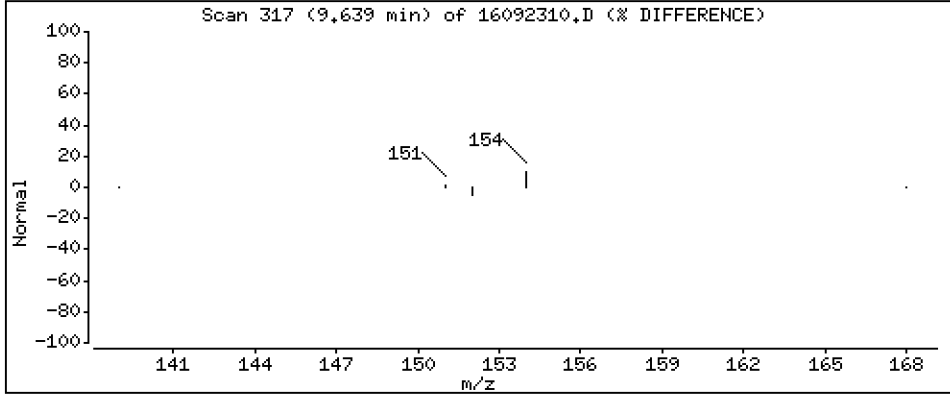
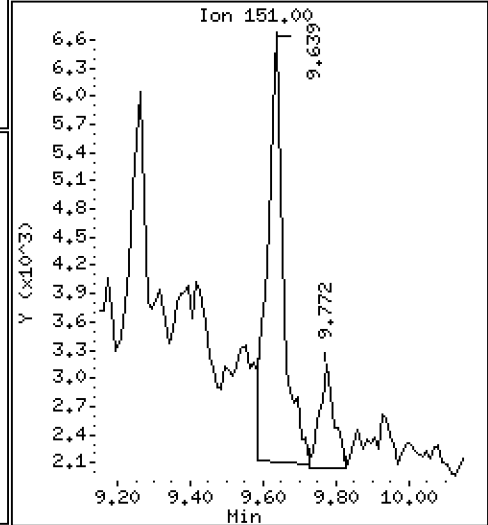
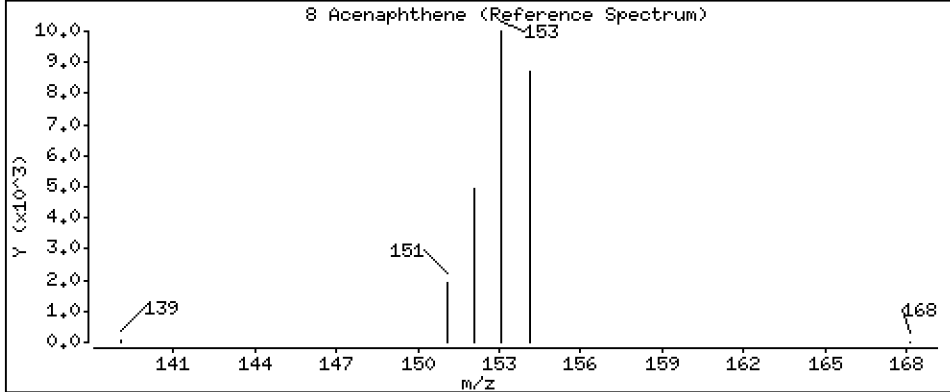
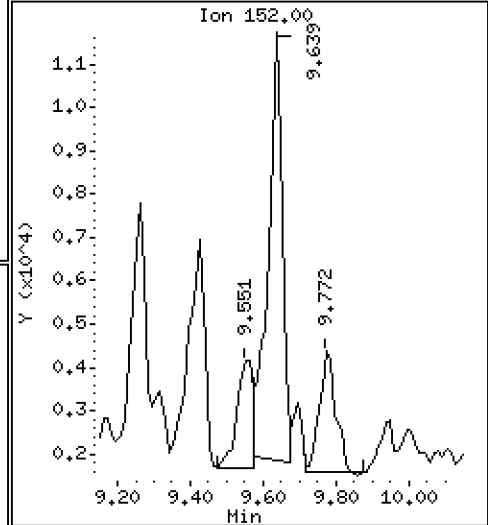
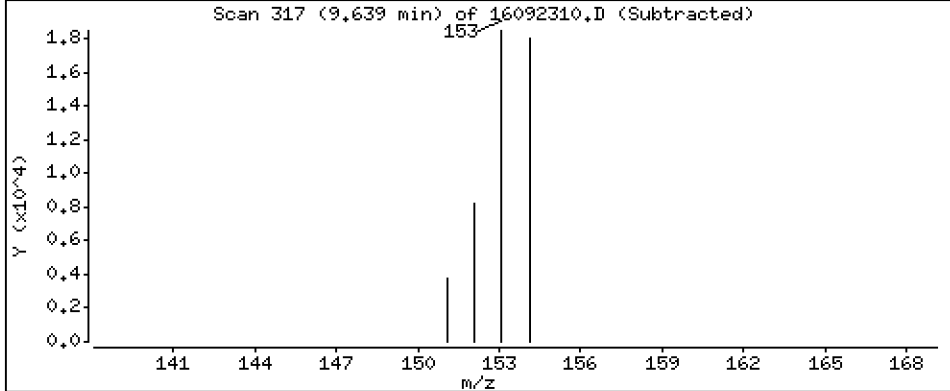
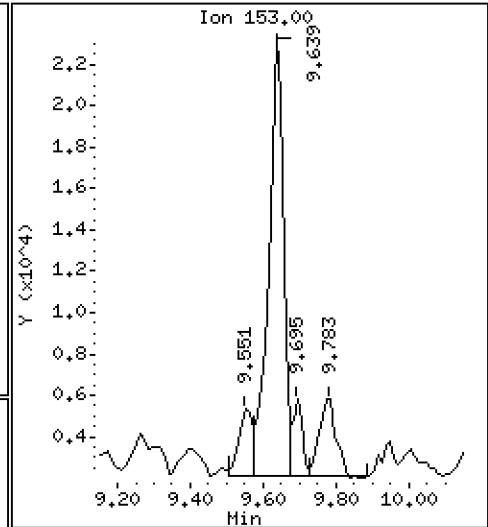
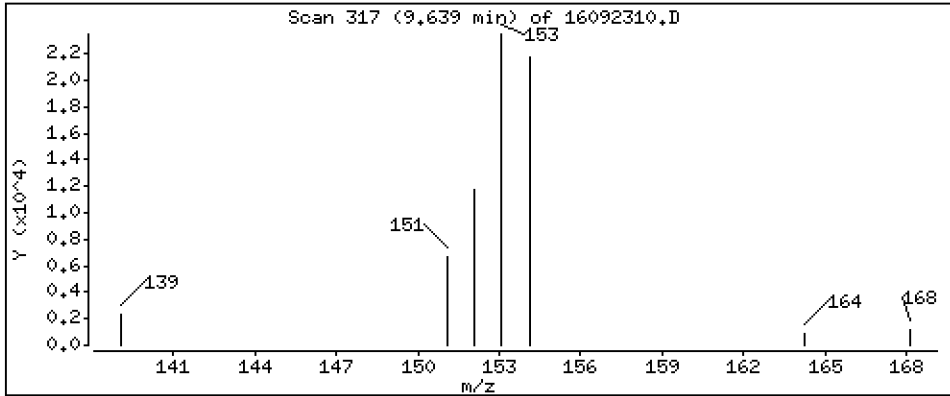
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 32.9 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

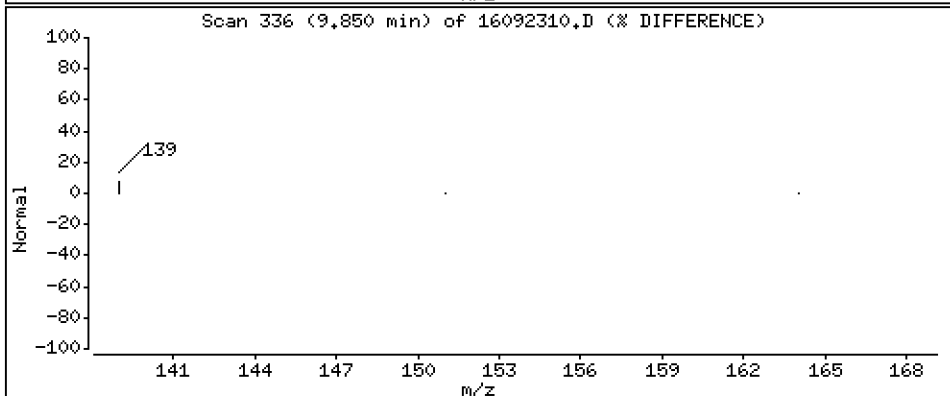
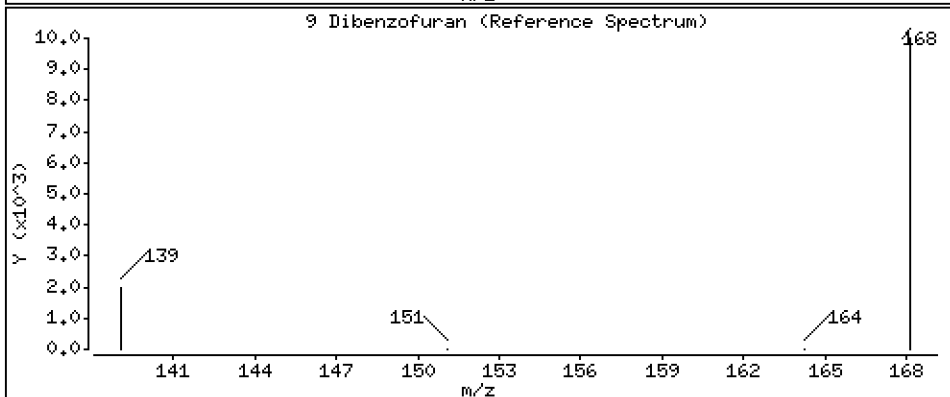
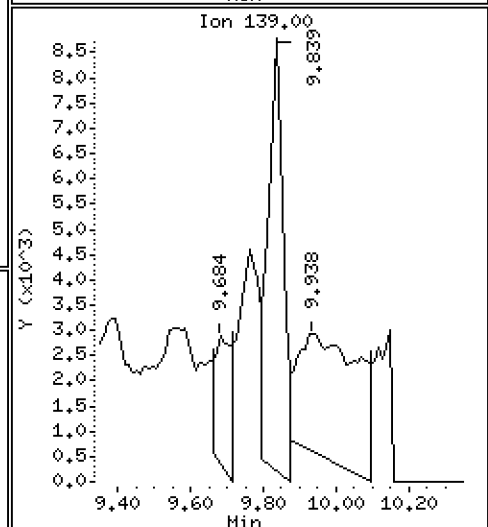
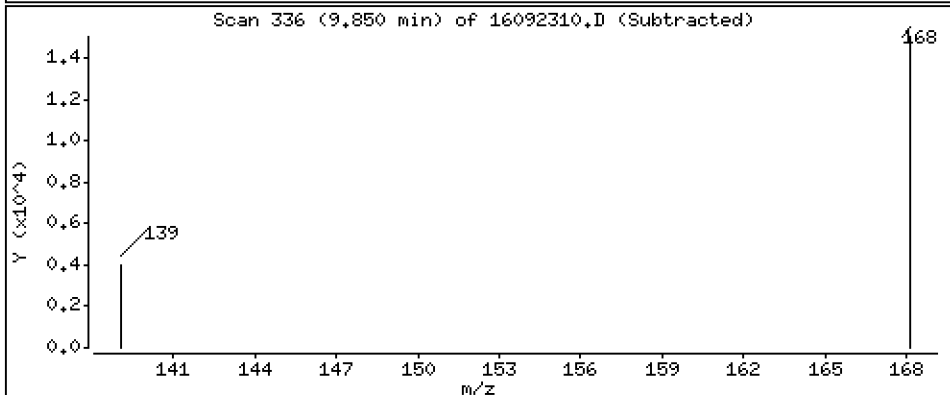
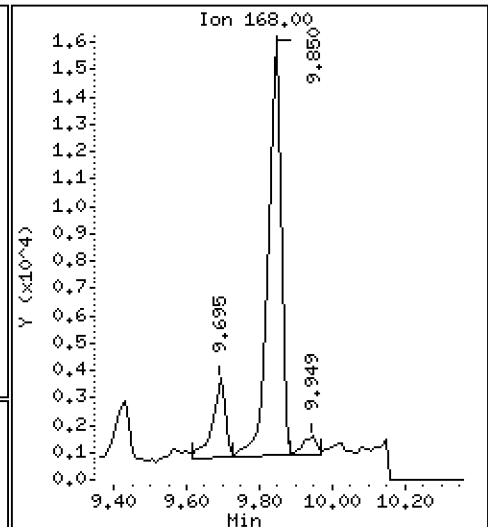
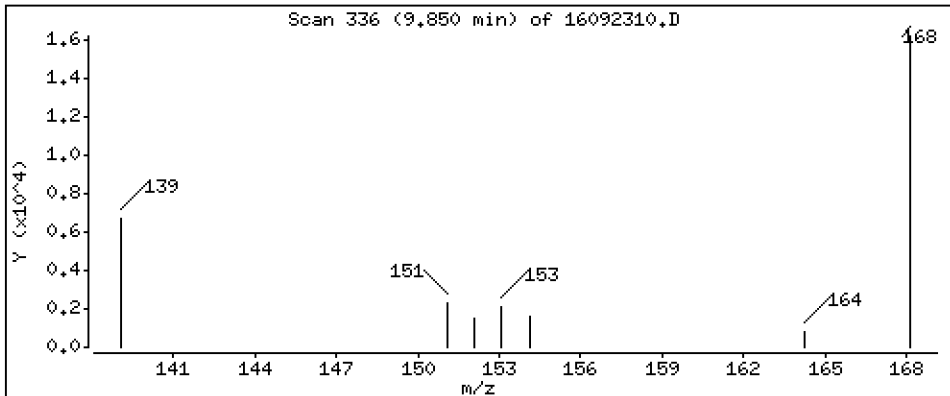
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 14,4 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

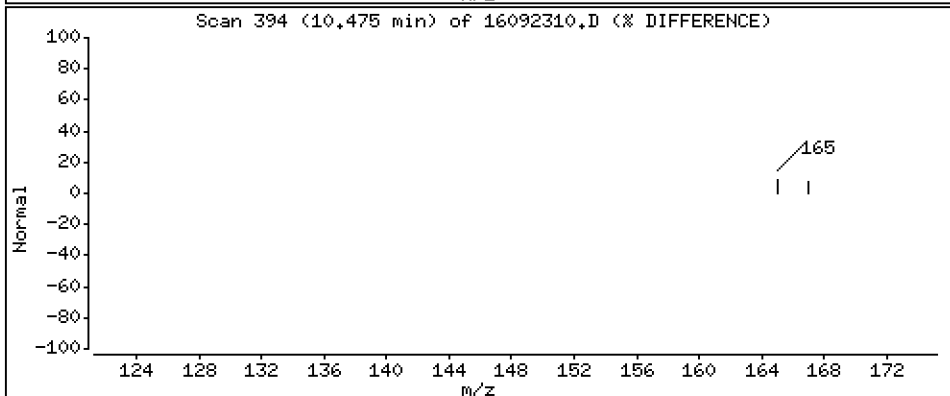
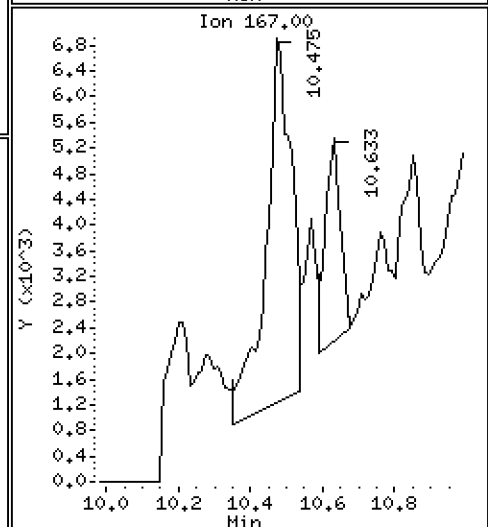
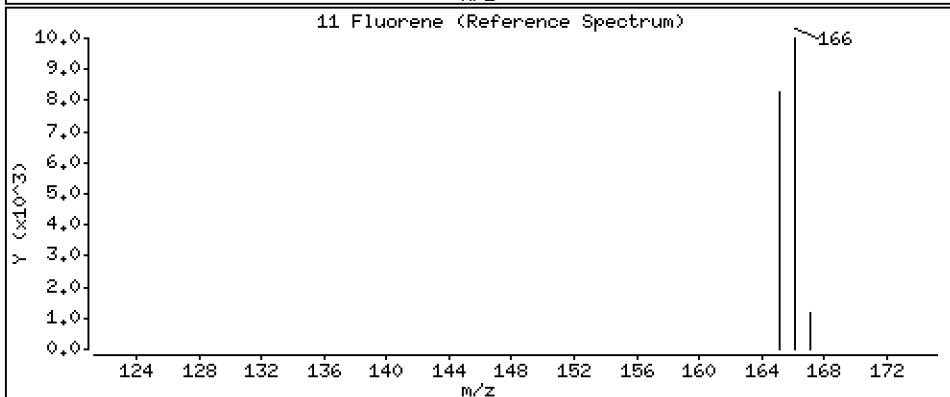
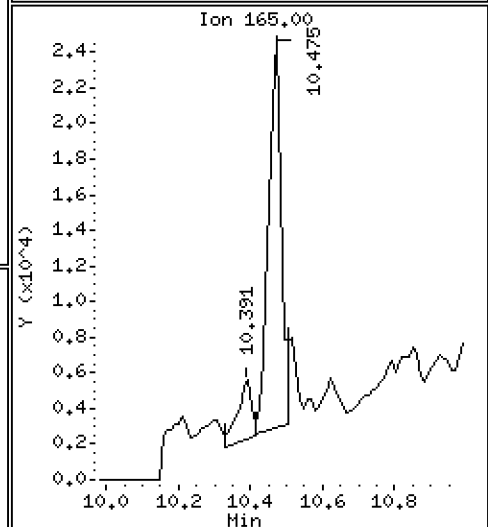
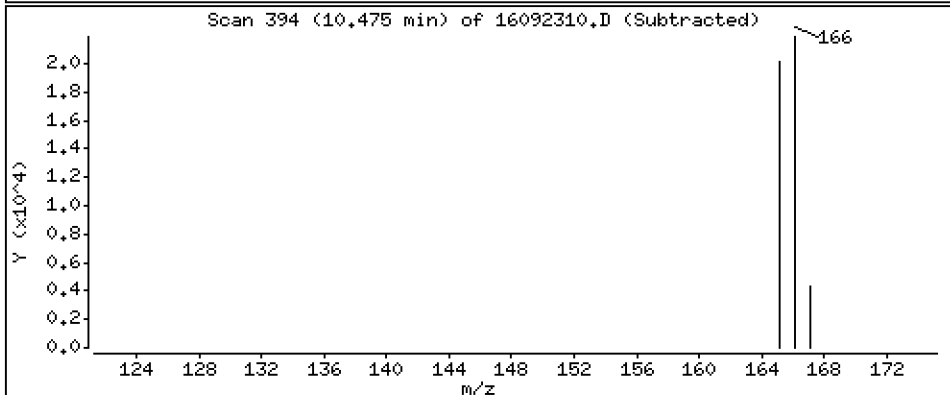
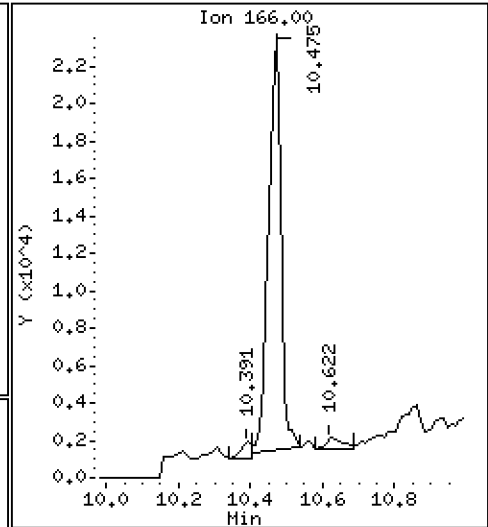
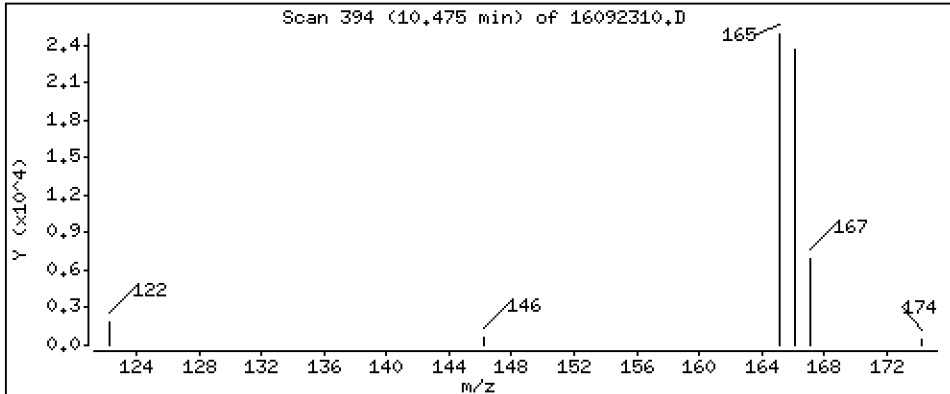
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

11 Fluorene

Concentration: 26.1 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

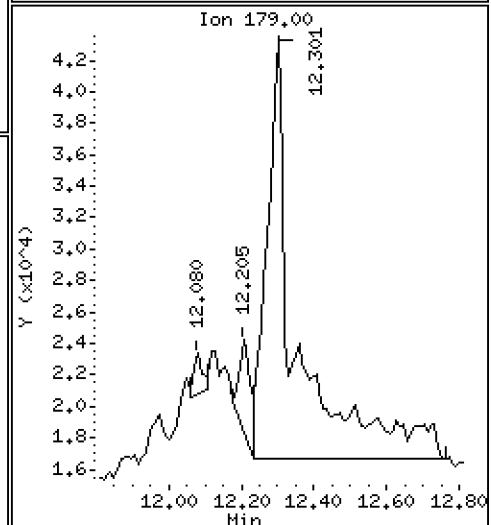
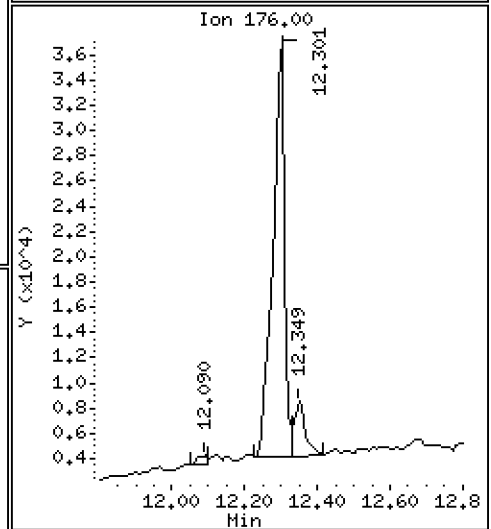
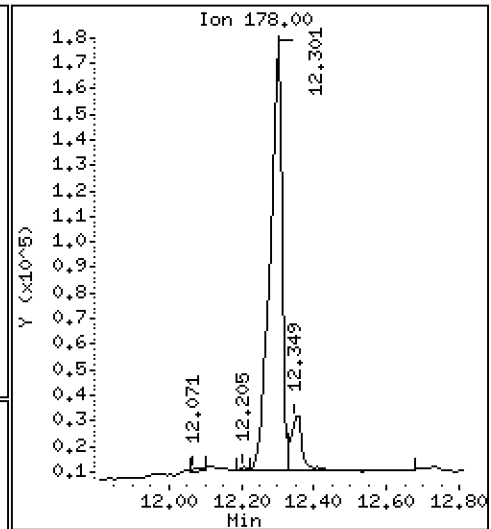
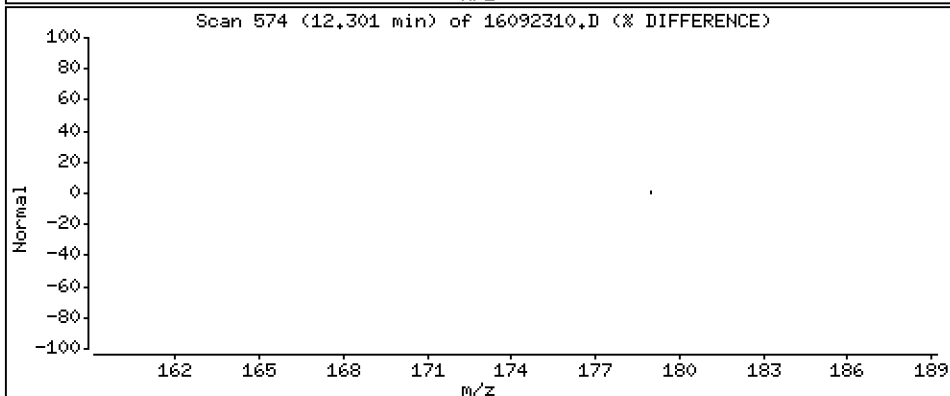
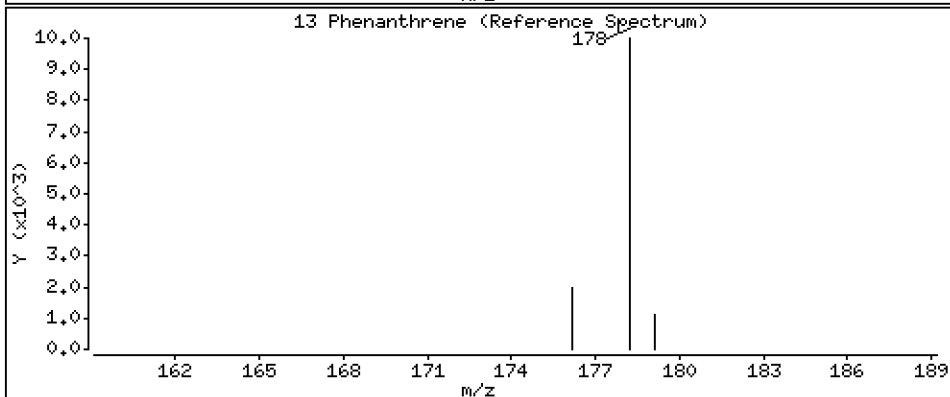
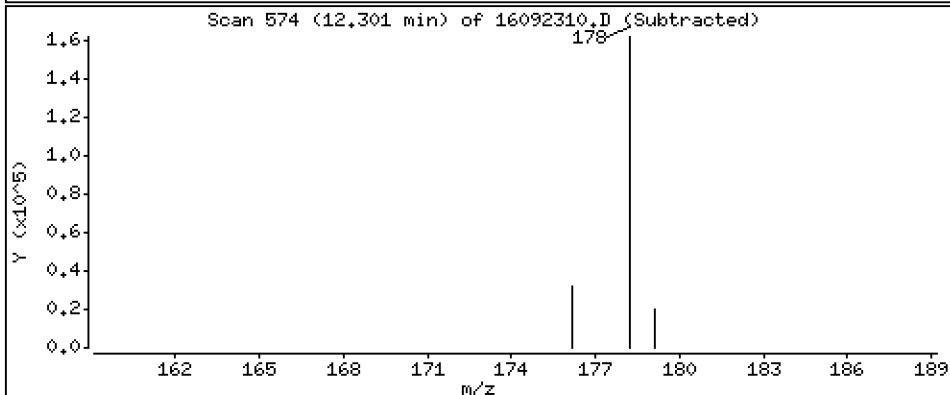
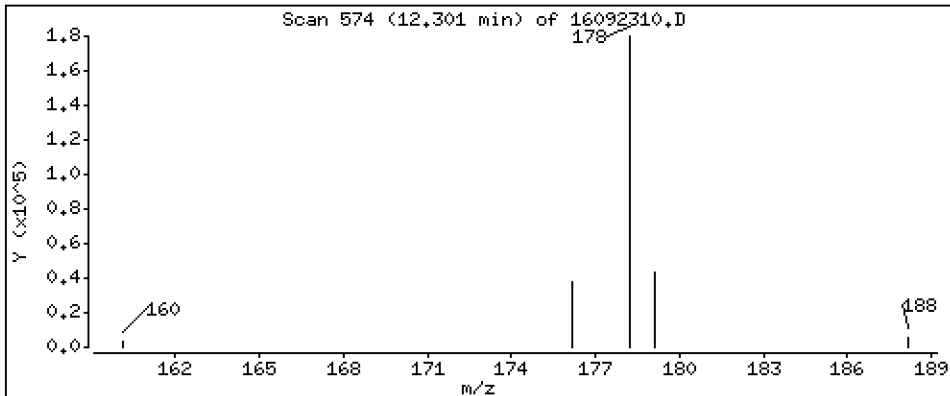
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 104 ng/mL



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Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

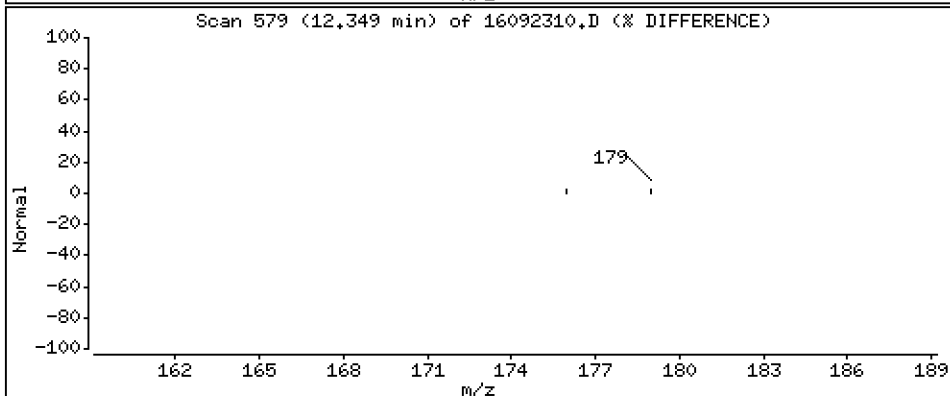
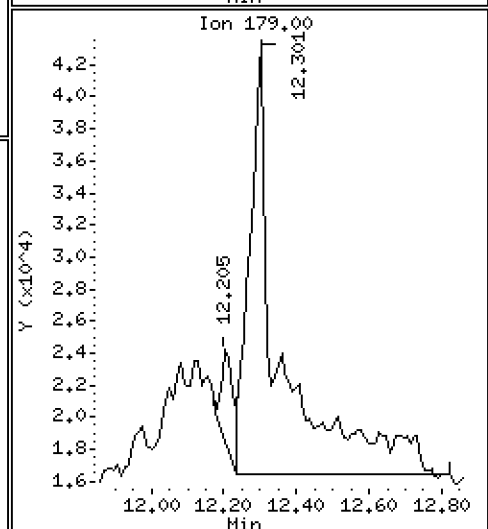
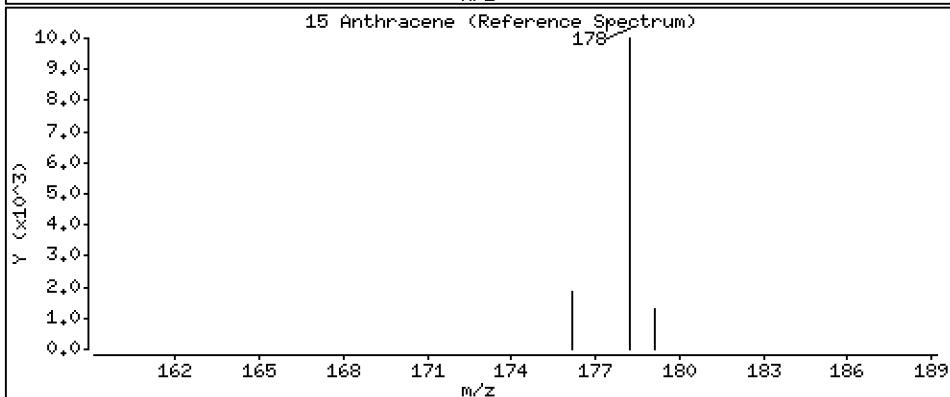
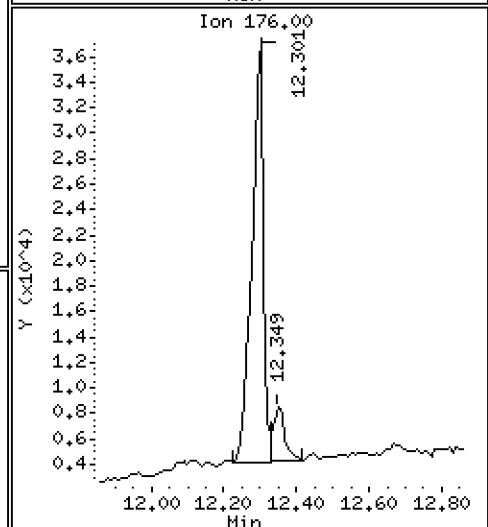
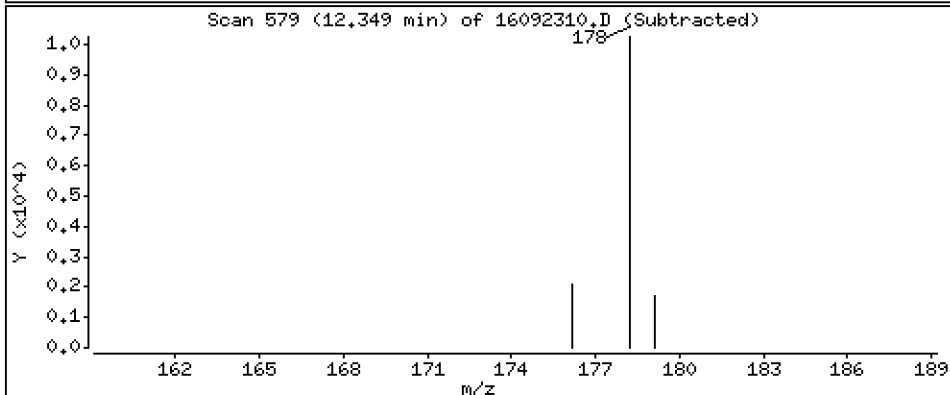
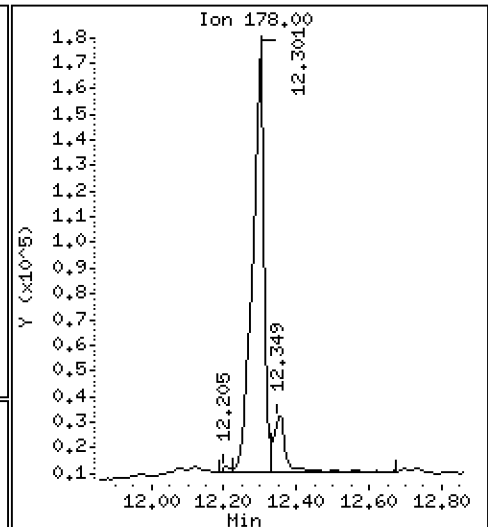
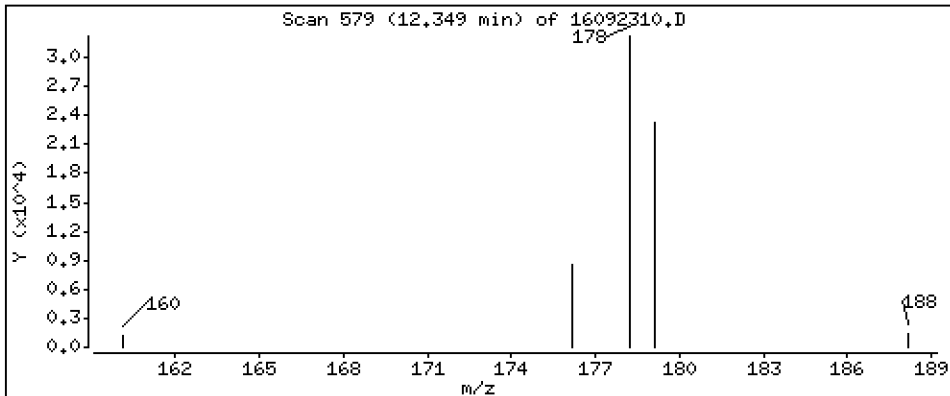
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

15 Anthracene

Concentration: 13,5 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

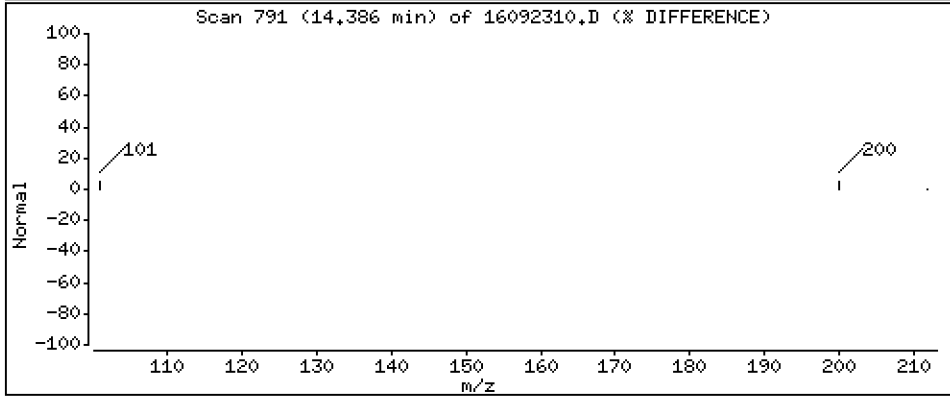
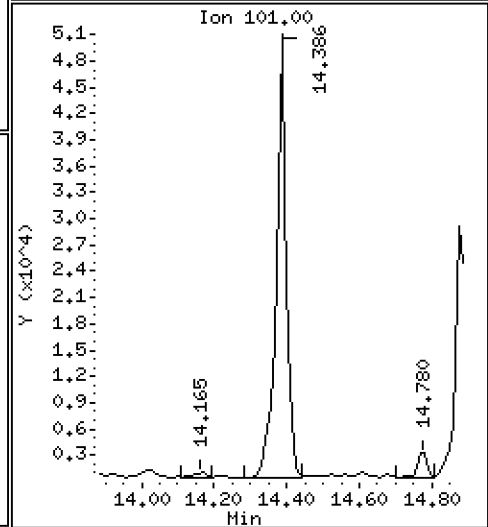
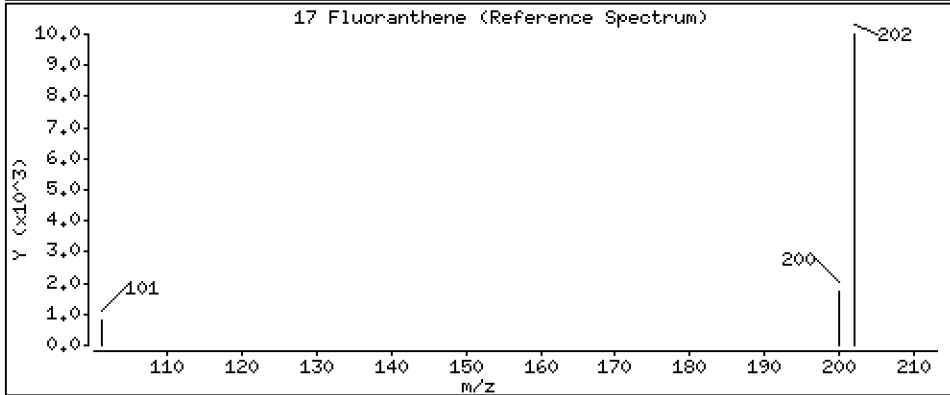
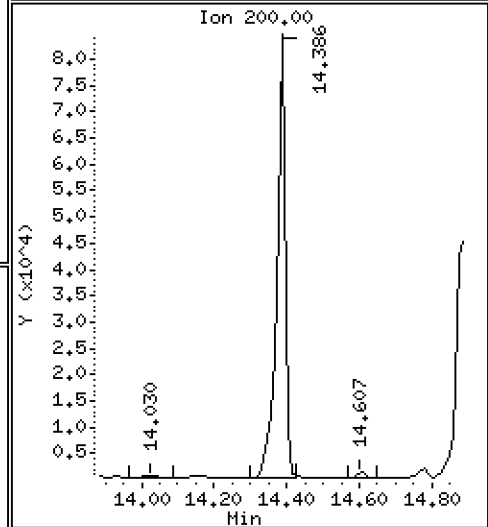
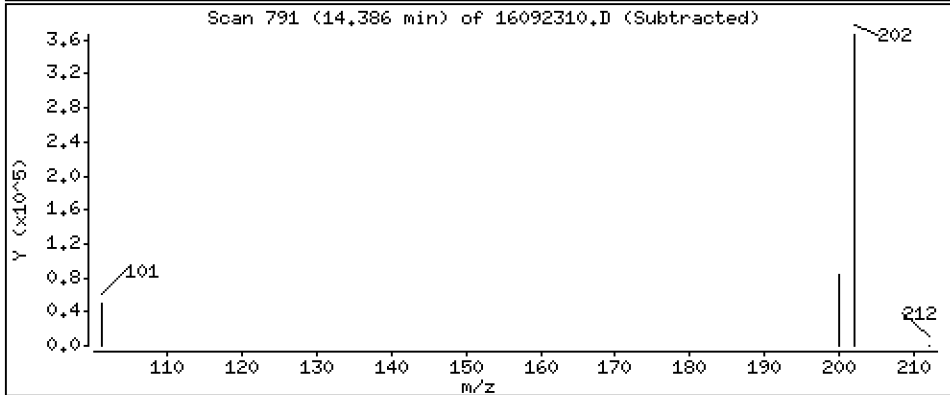
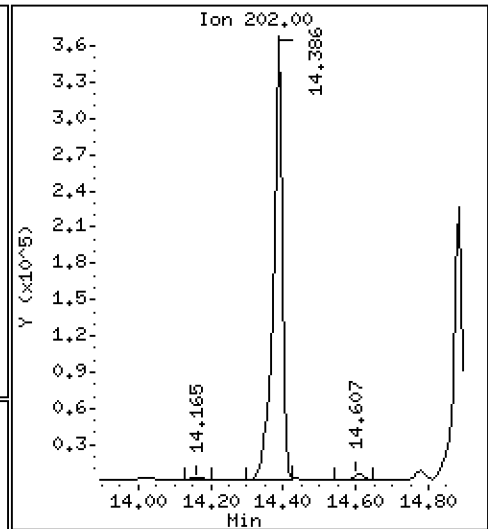
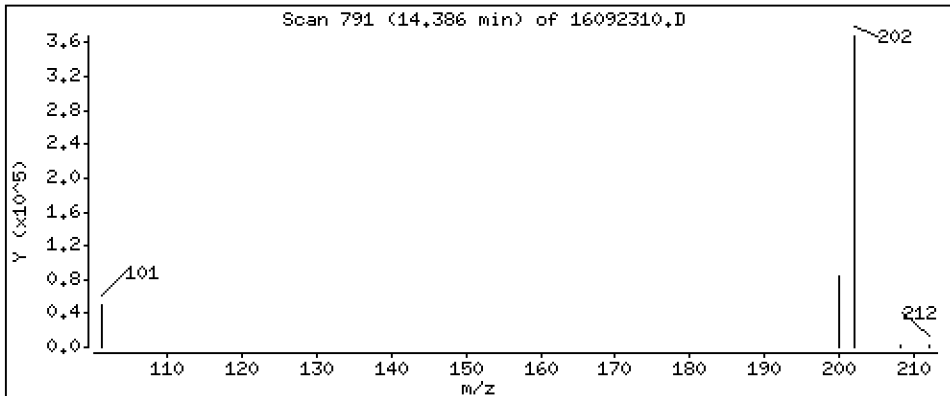
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 210 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

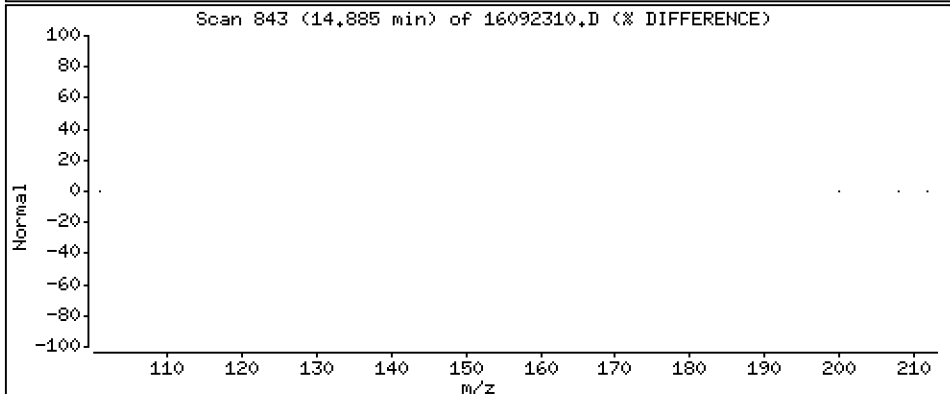
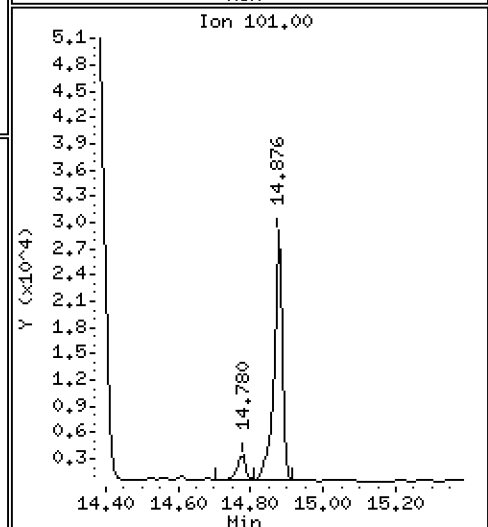
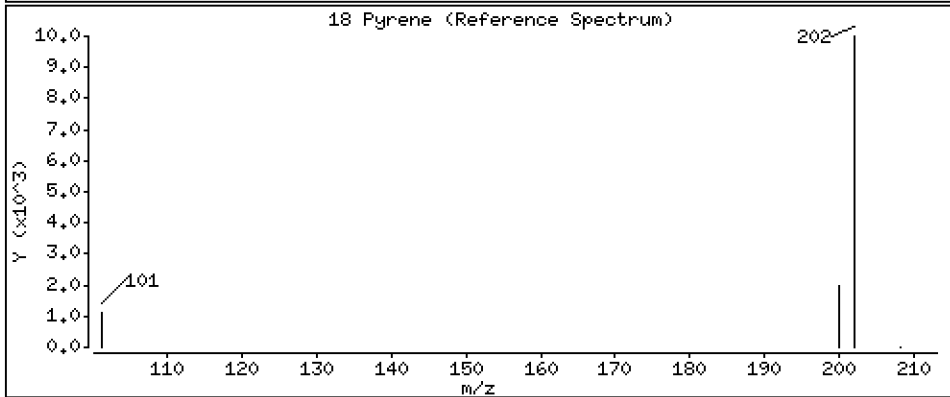
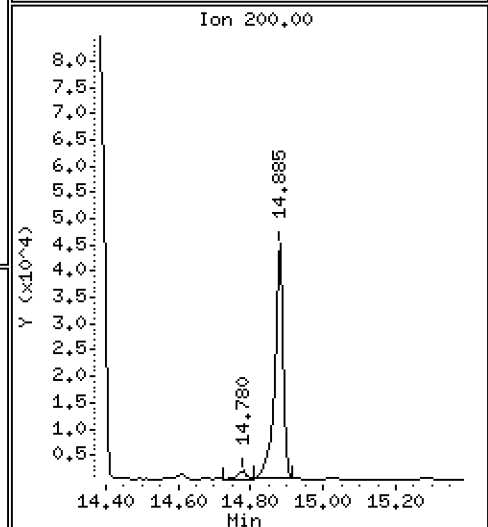
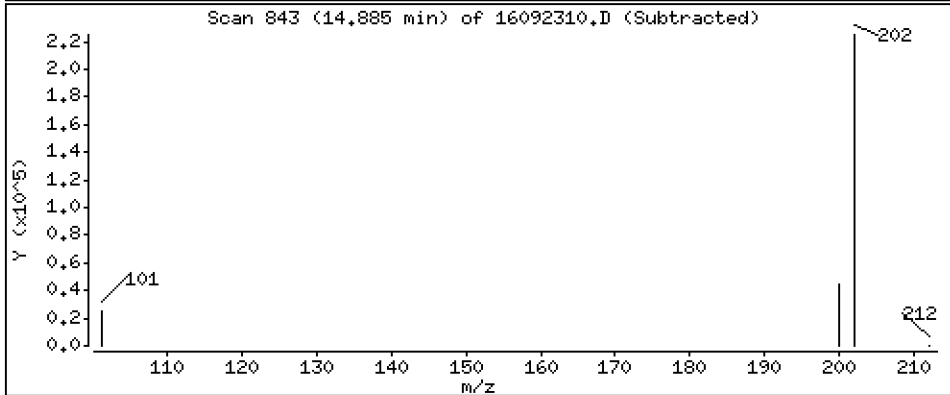
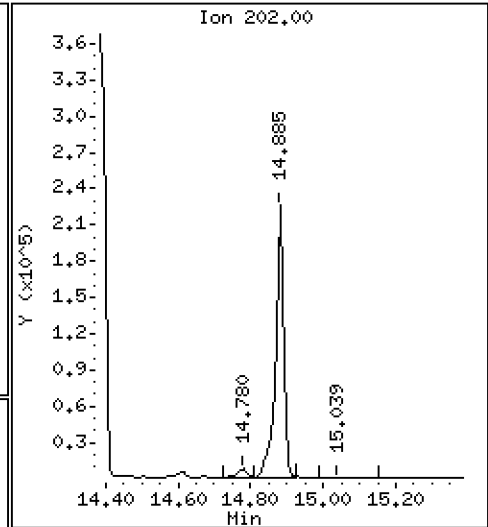
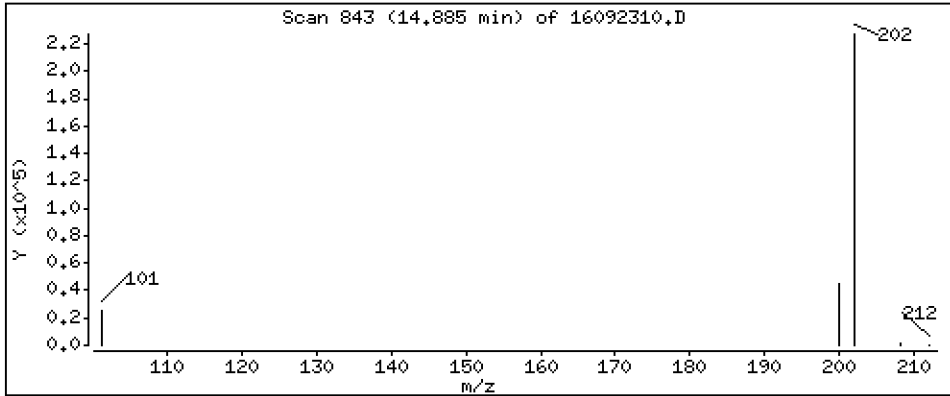
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 105 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

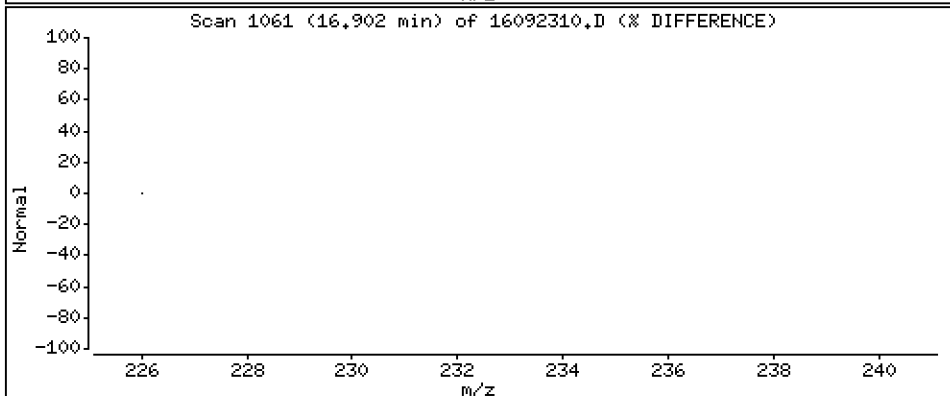
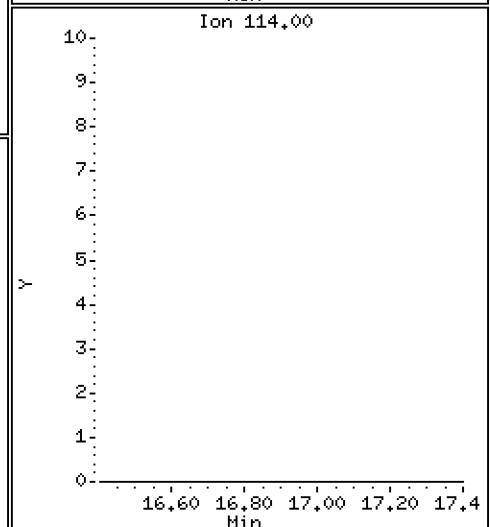
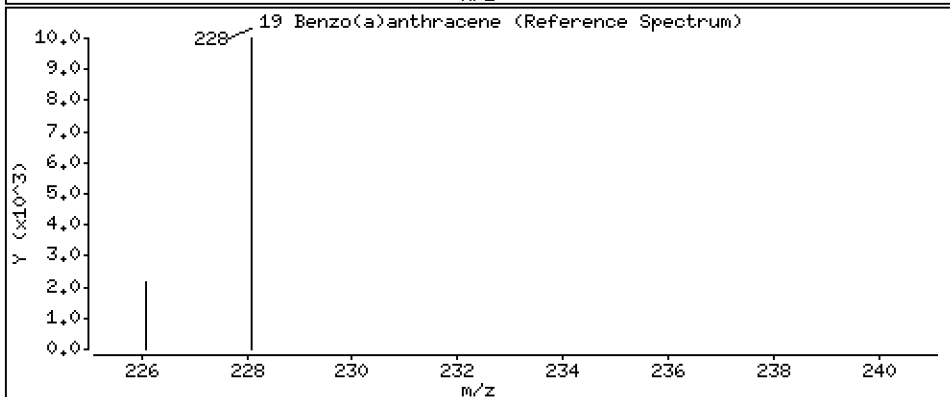
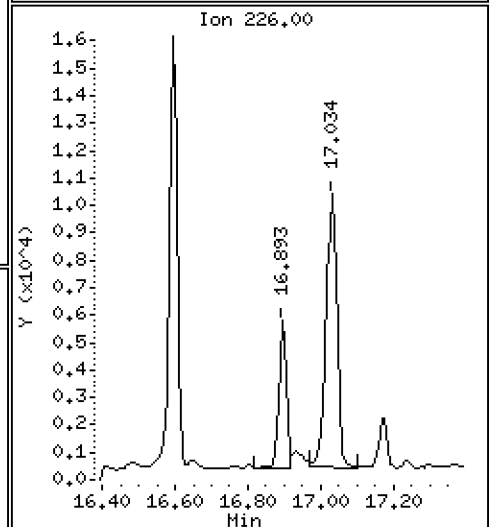
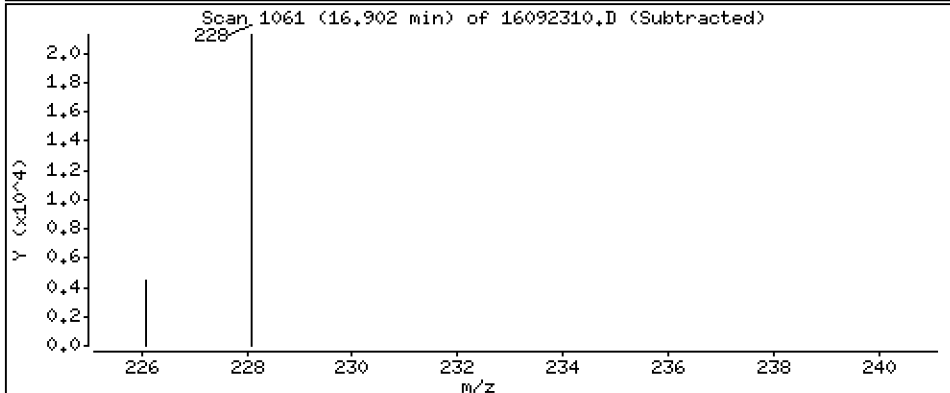
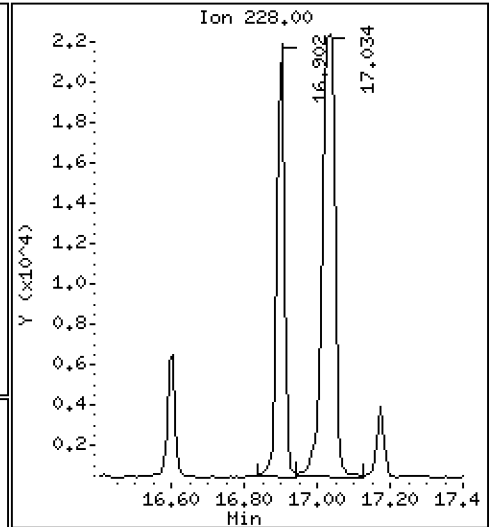
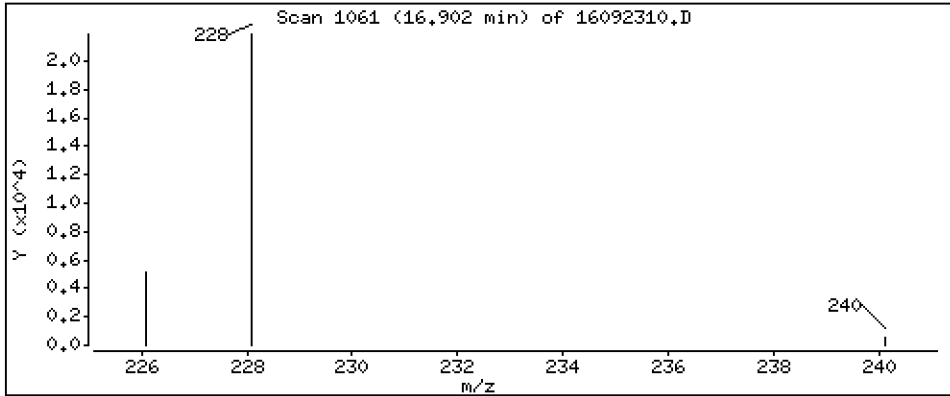
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 10,3 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

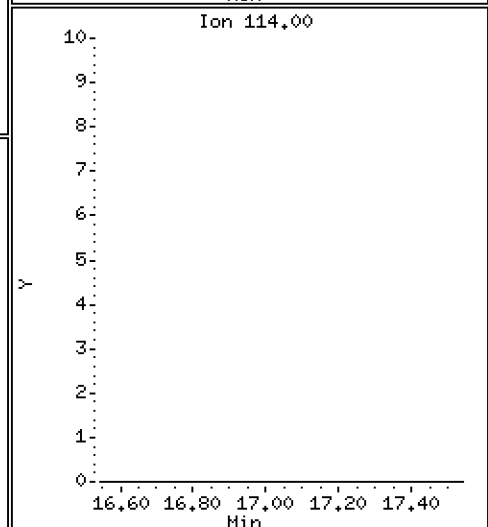
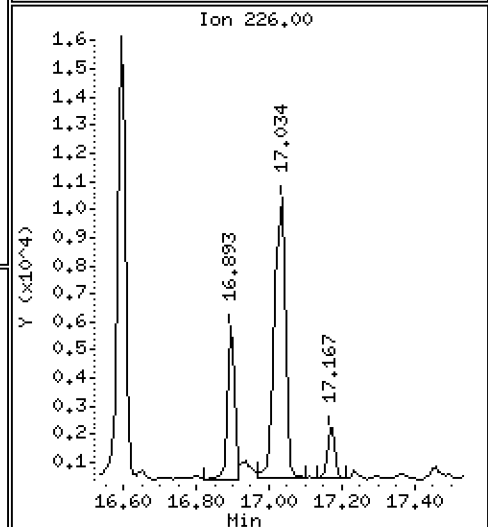
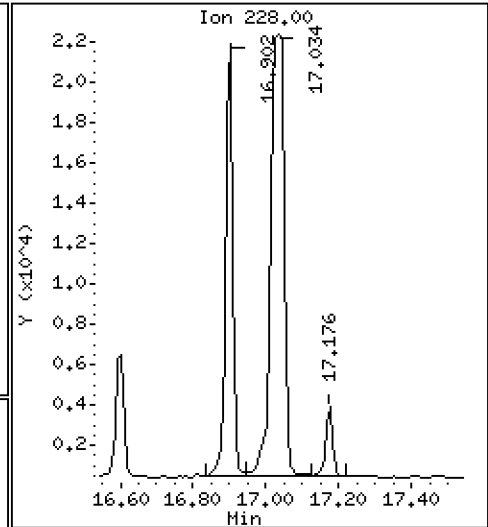
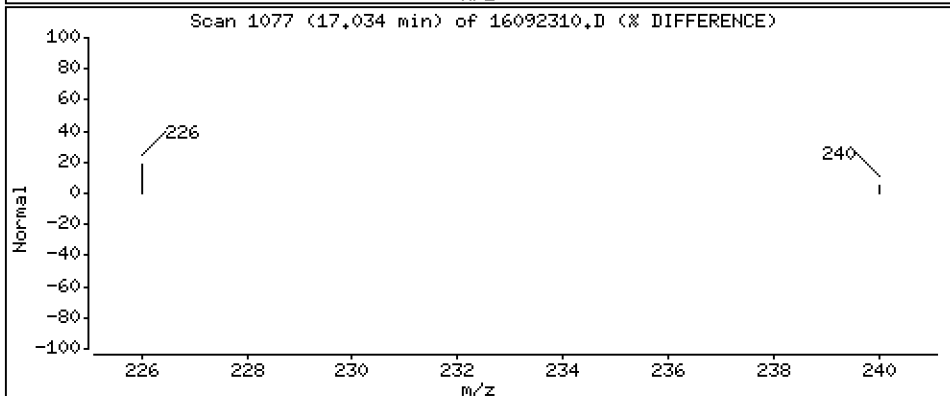
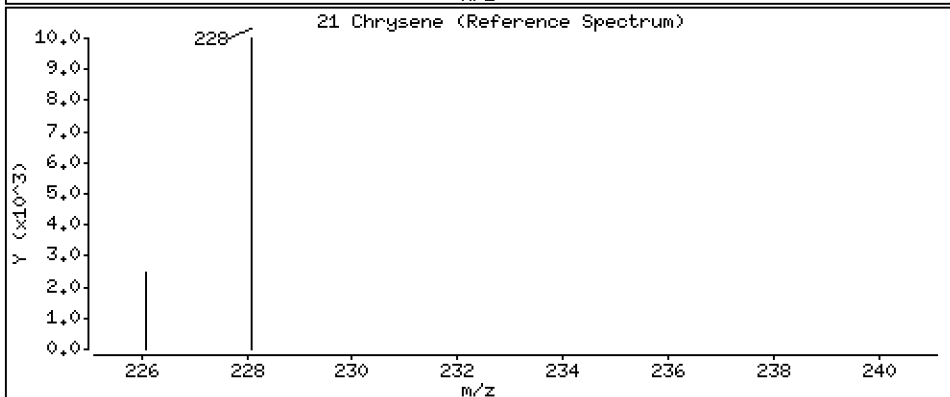
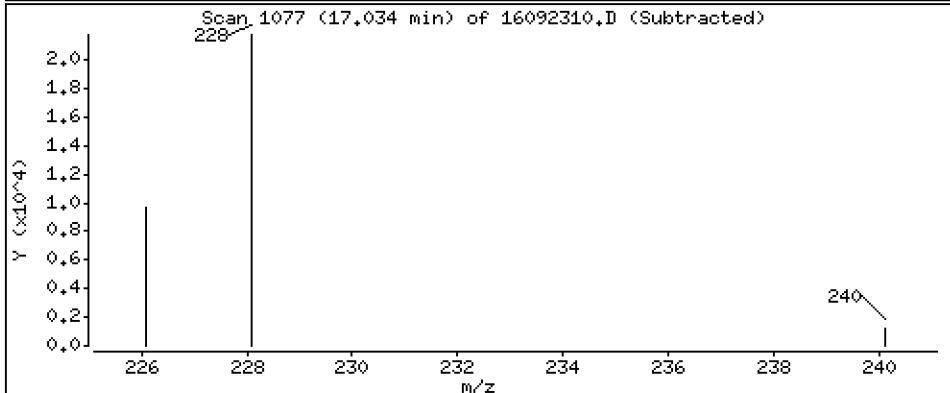
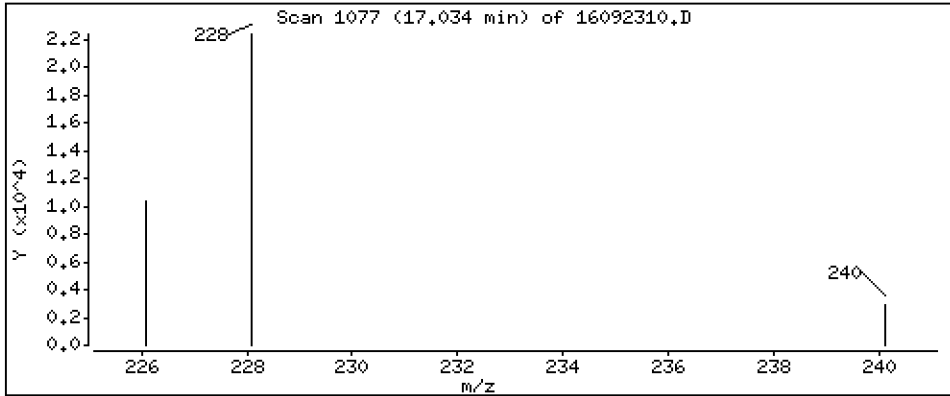
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 18,3 ng/mL

21 Chrysene



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

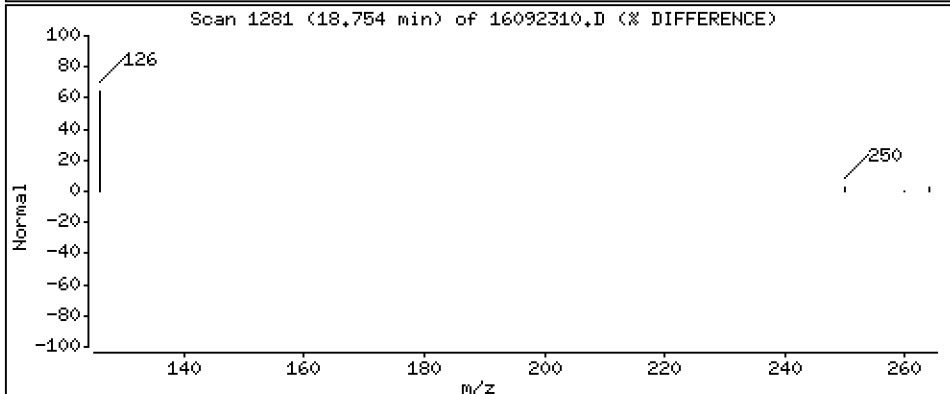
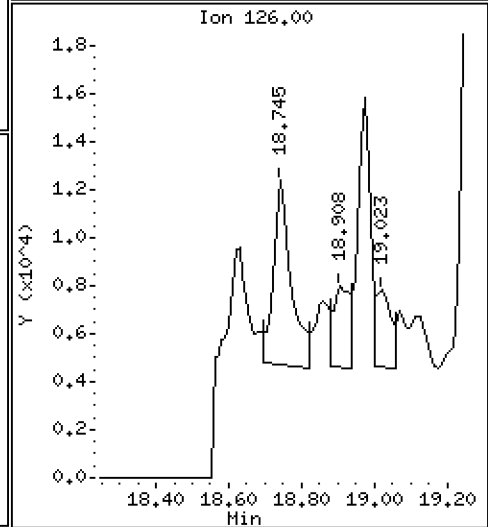
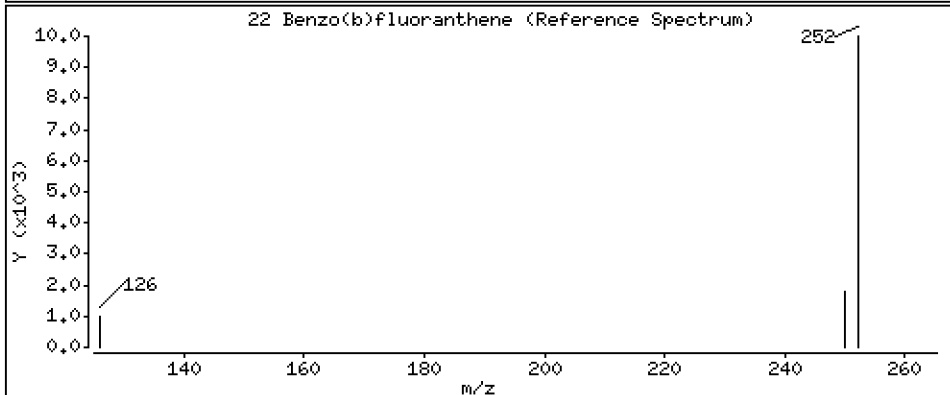
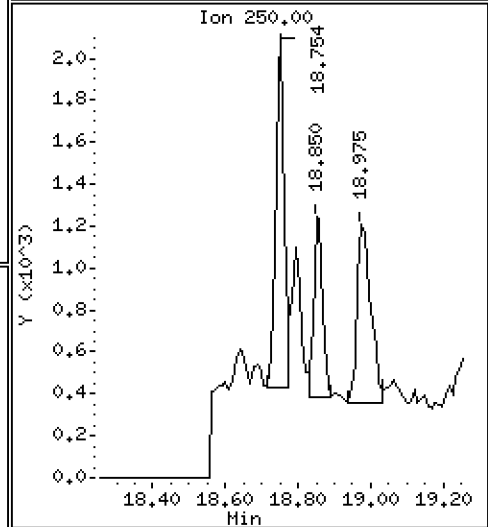
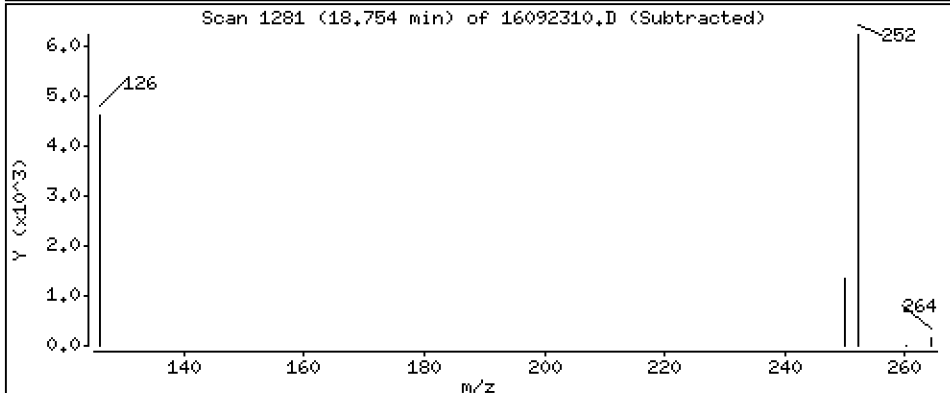
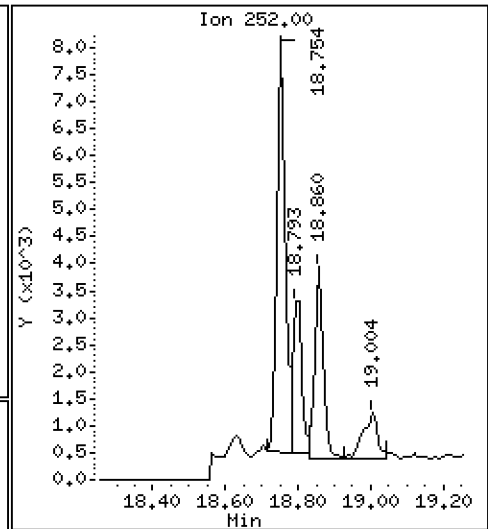
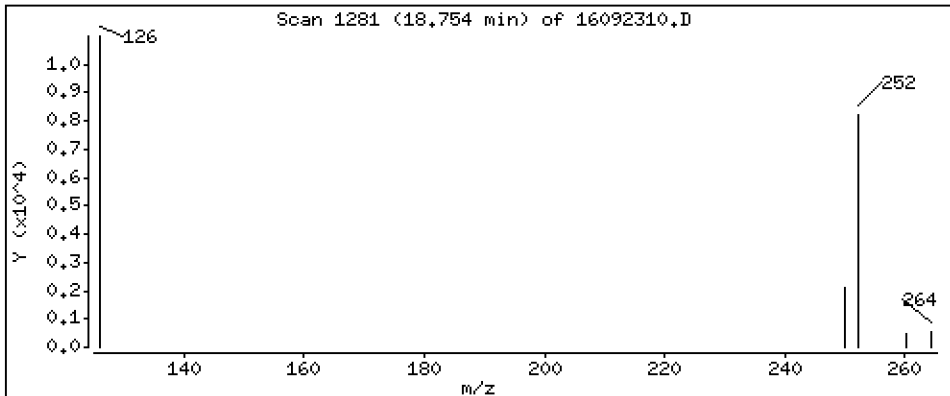
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 4,52 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

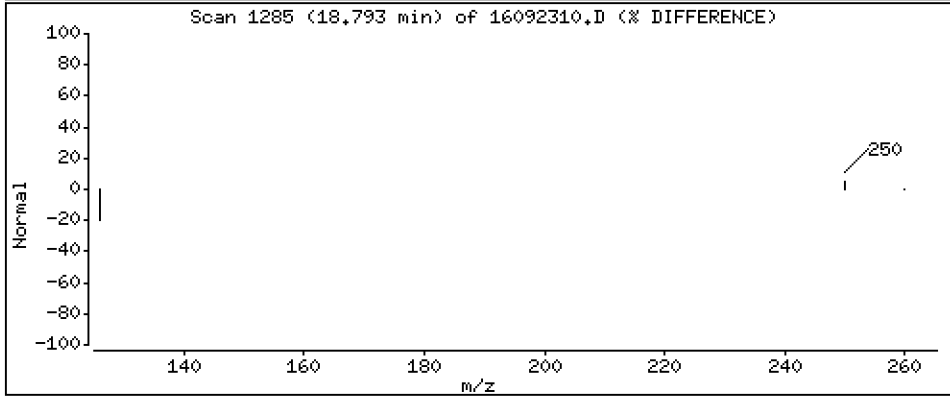
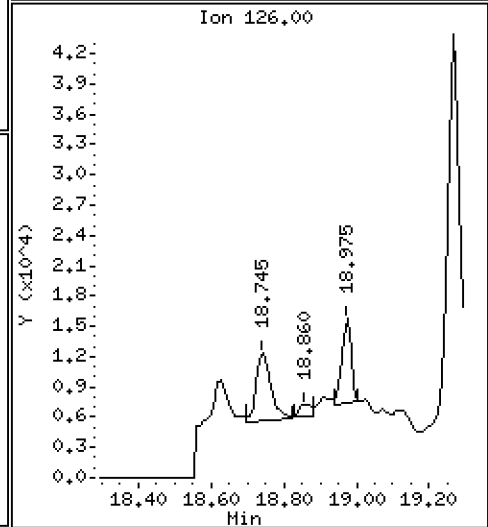
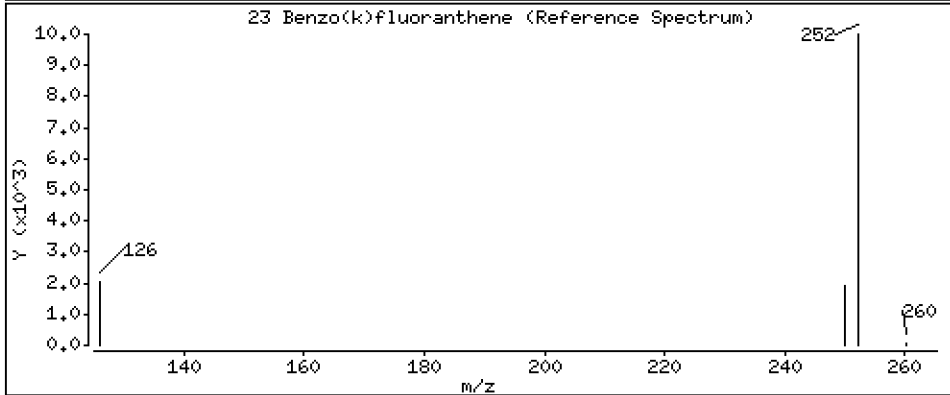
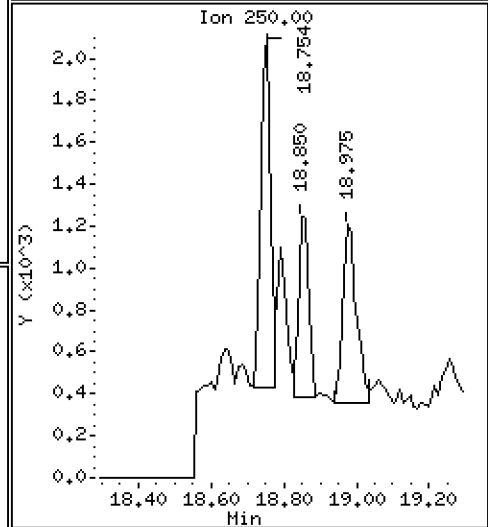
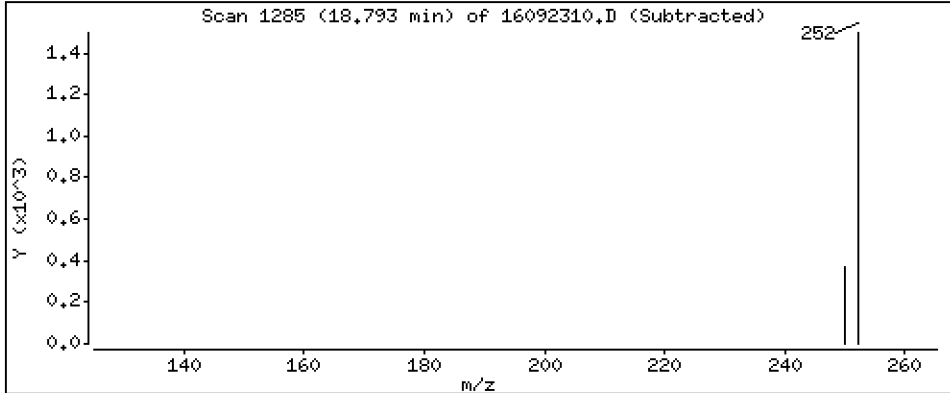
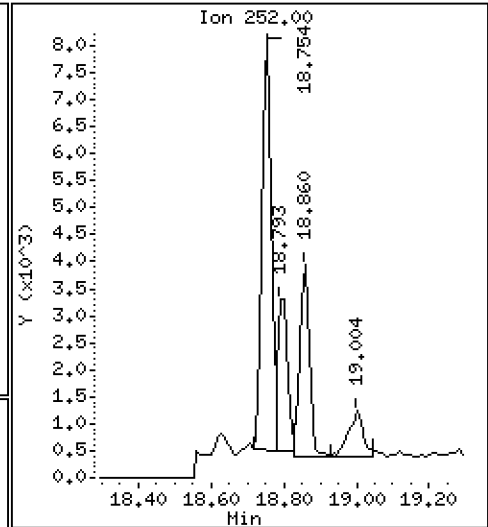
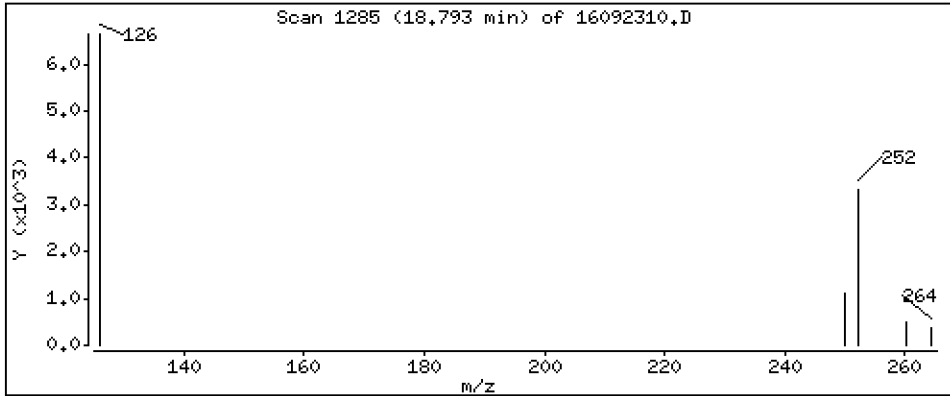
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 1,57 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

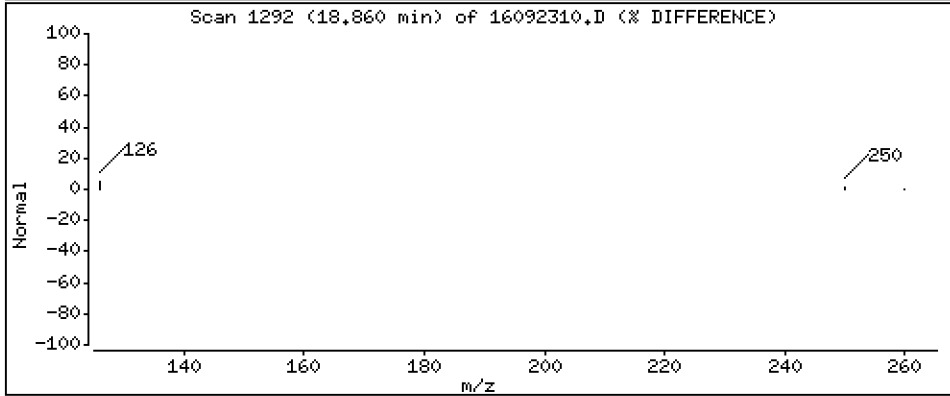
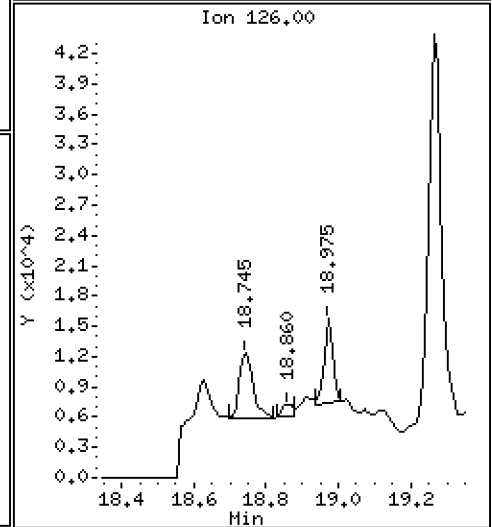
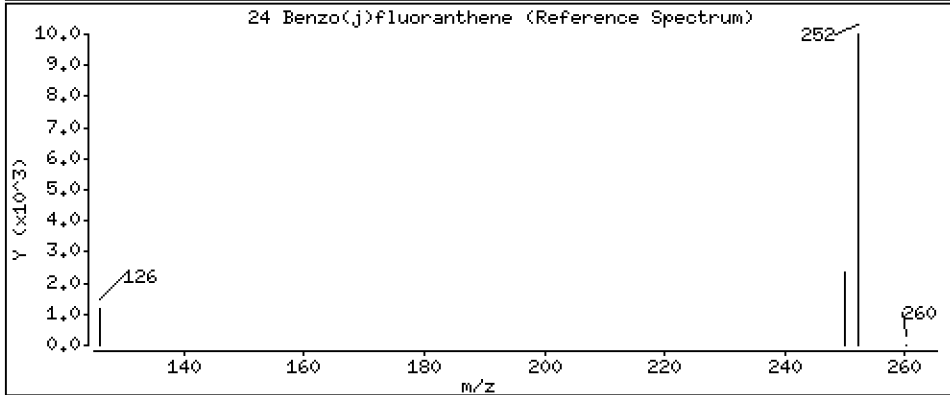
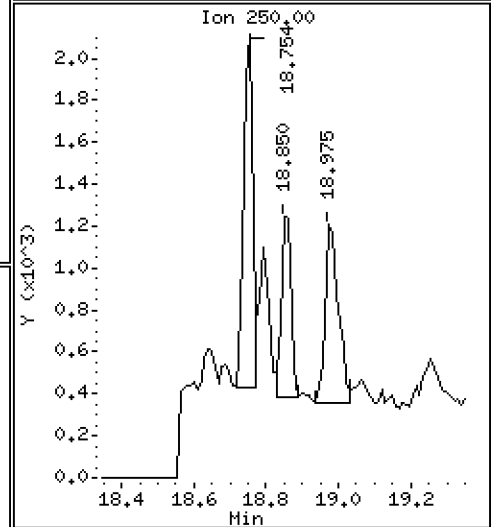
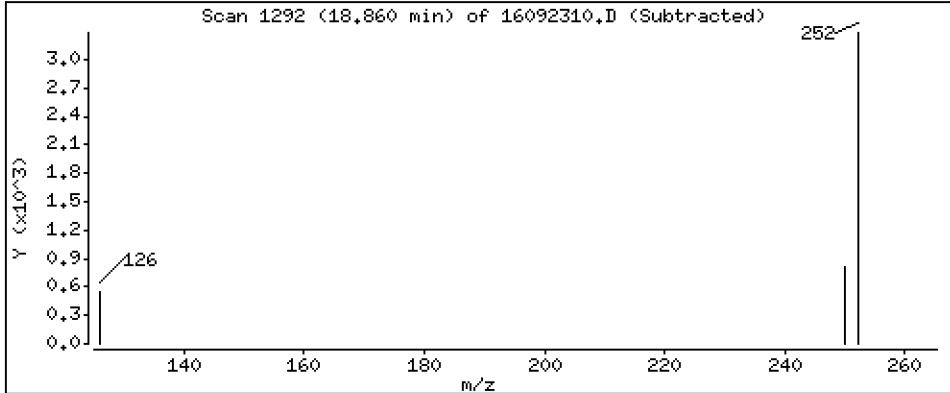
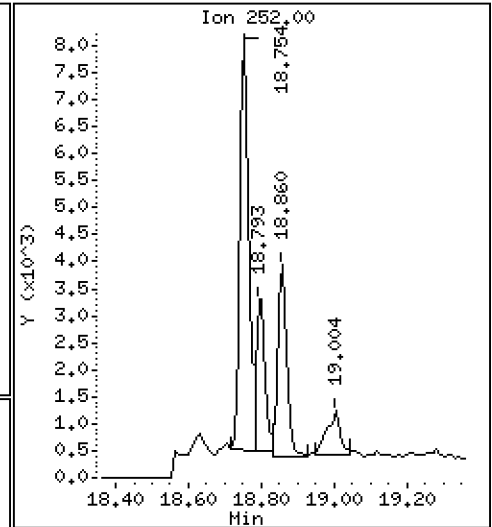
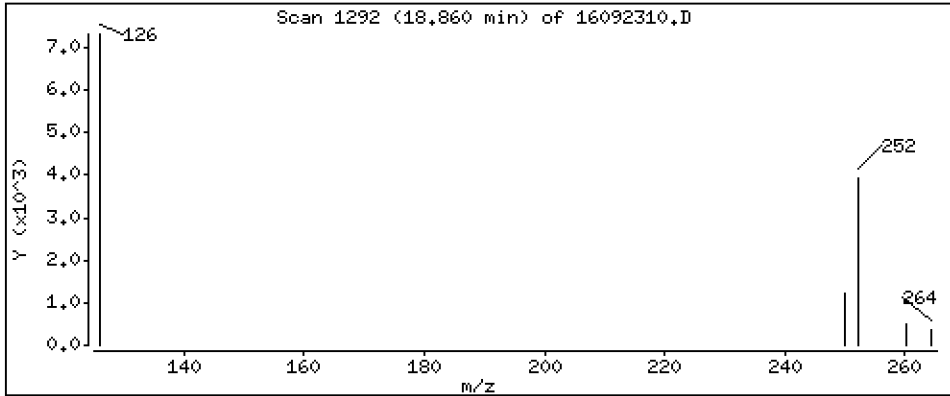
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 2,13 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

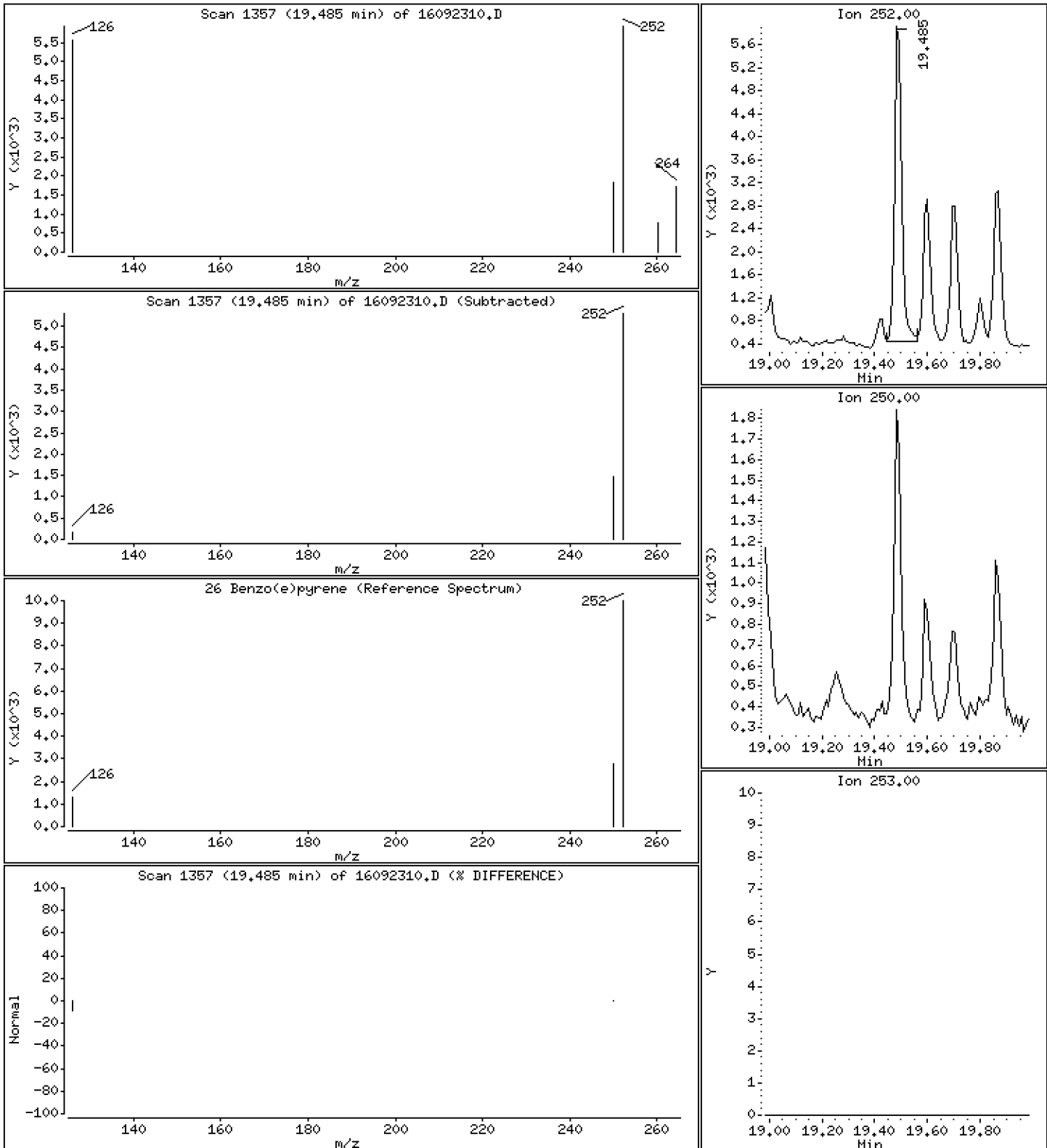
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 3,69 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

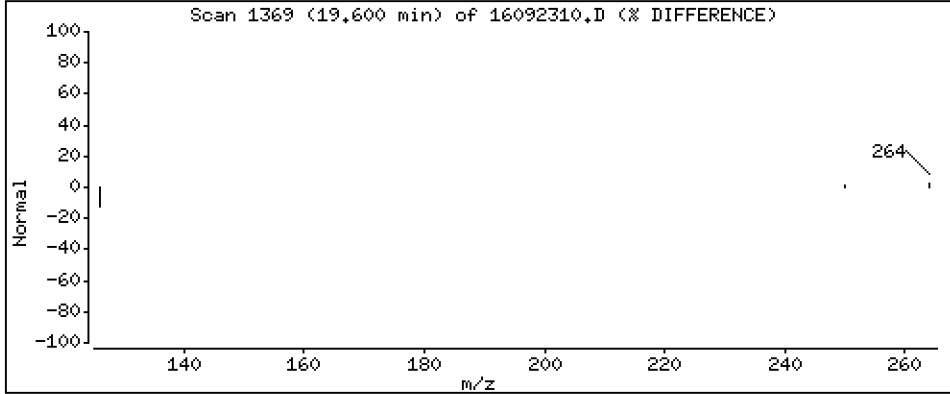
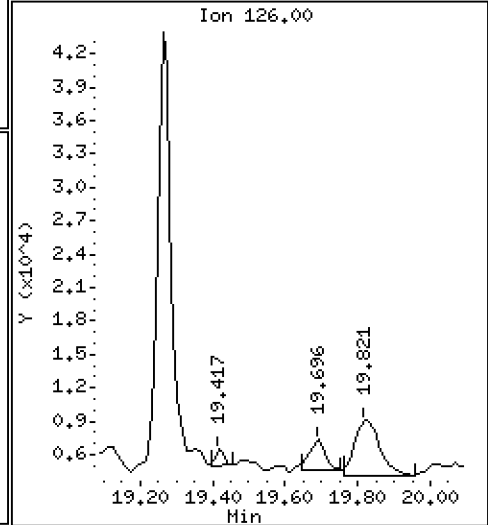
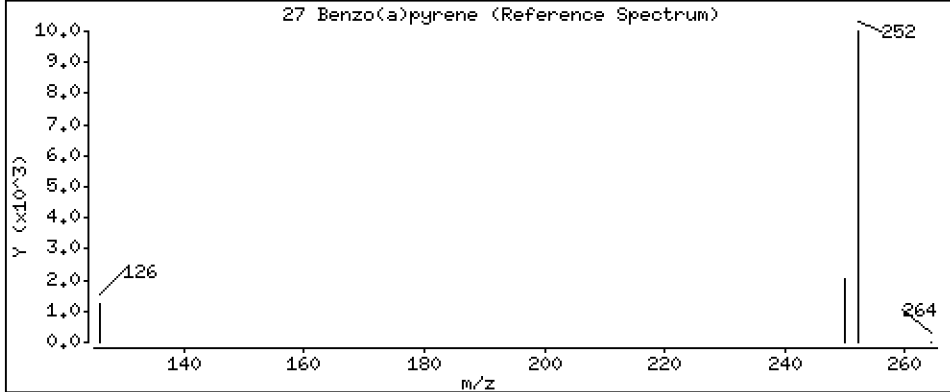
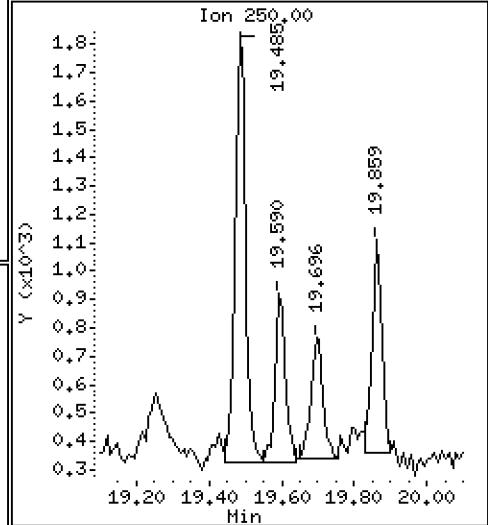
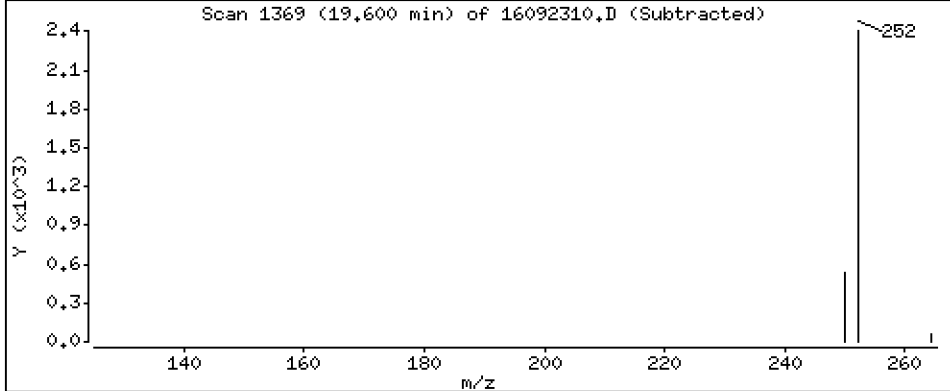
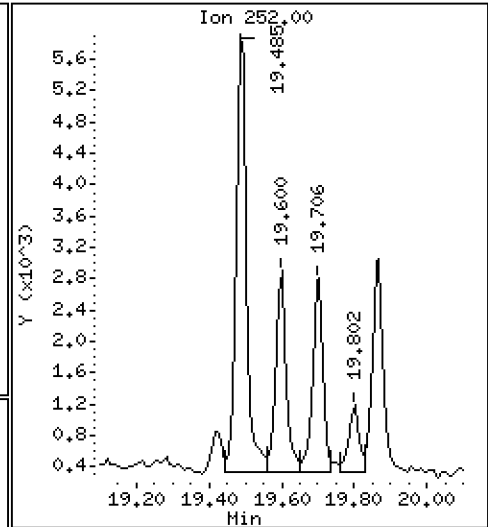
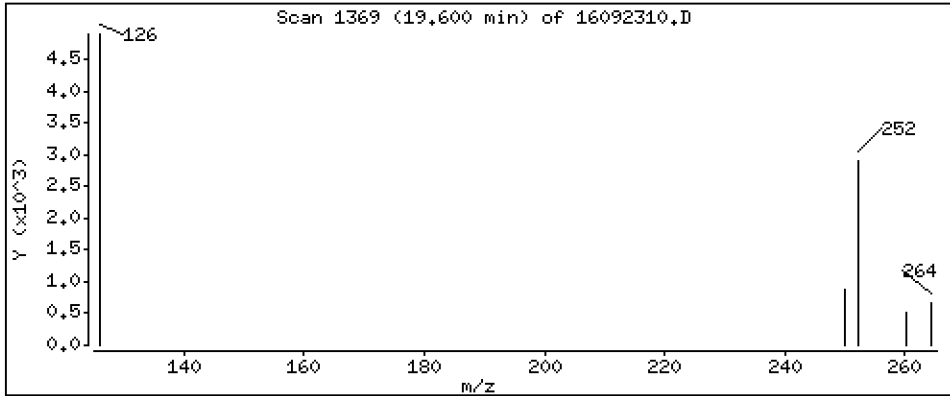
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 1,95 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

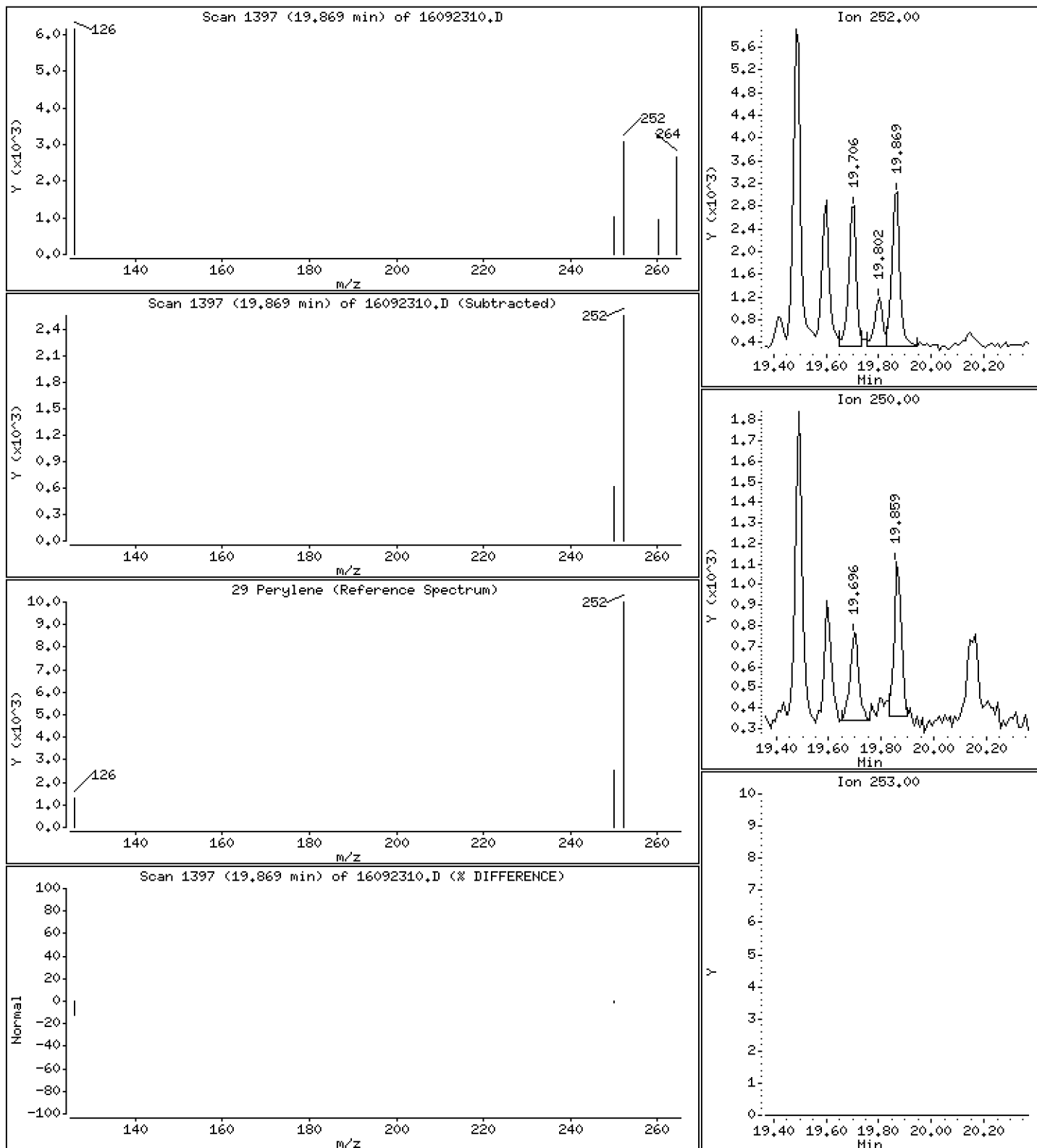
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

29 Perylene

Concentration: 2,09 ng/mL



Date : 23-SEP-2016 12:31

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-05

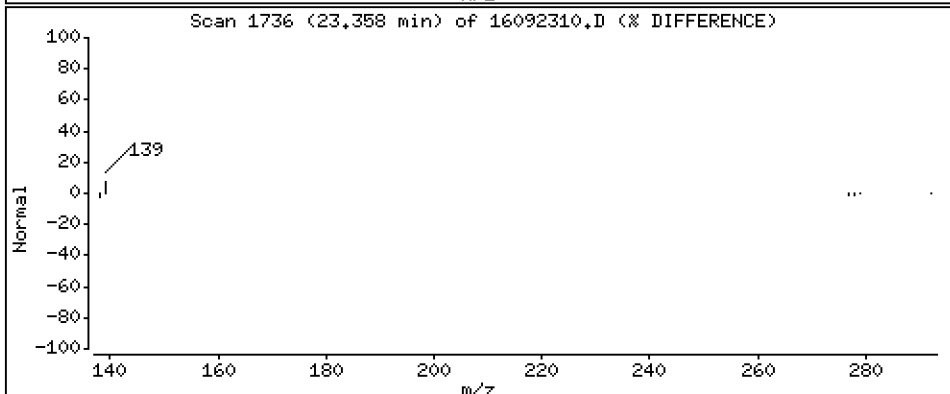
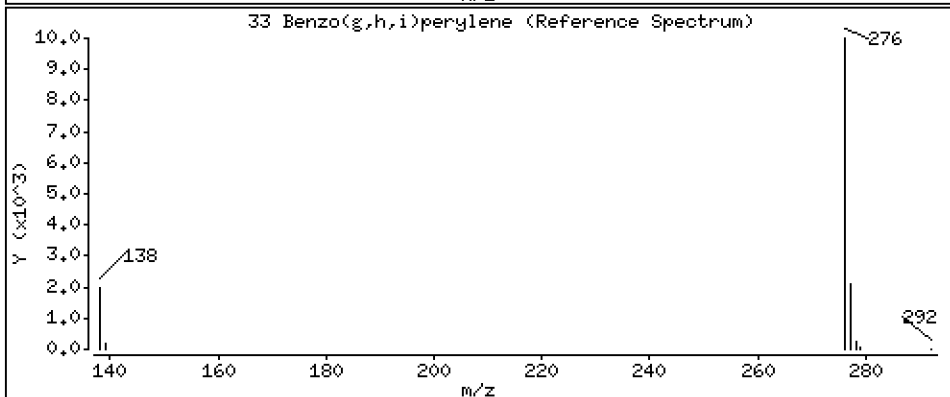
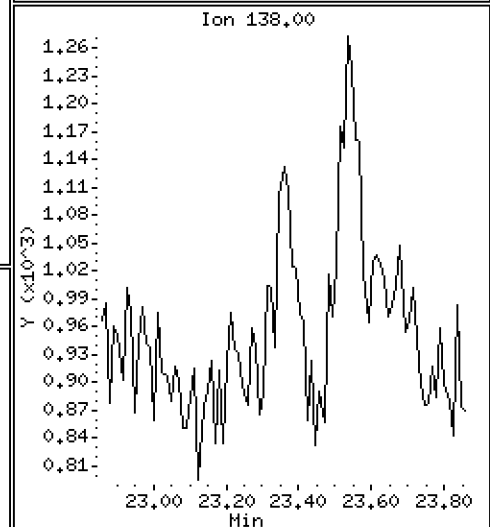
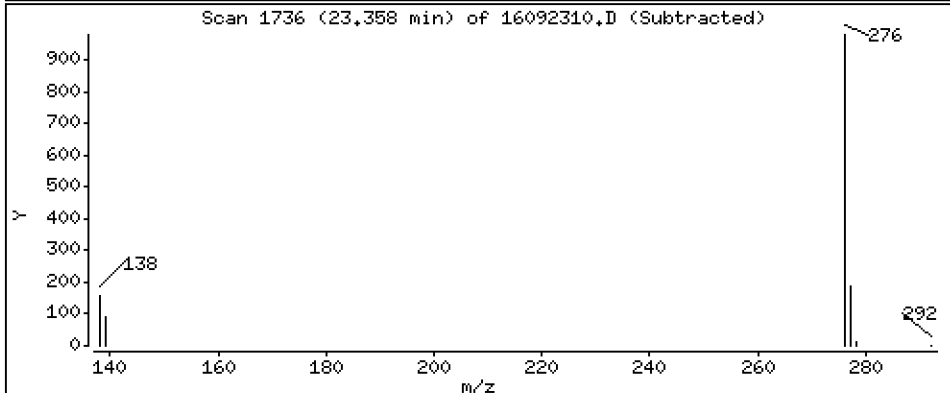
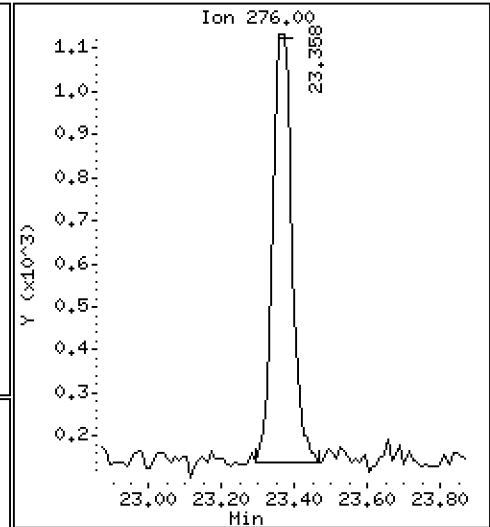
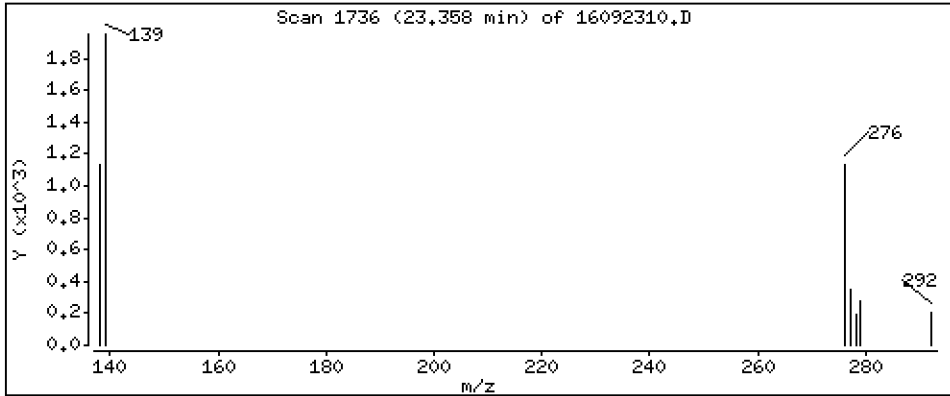
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 1,36 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092310.D

Lab Smp Id: 16I0160-05

Inj Date : 23-SEP-2016 12:31

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-05

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 13

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	503582	200.000	
2 Naphthalene	128		6.602	6.623	(1.005)	241443	83.5533	83.6
§ 3 2-Methylnaphthalene-d10	152		7.548	7.569	(1.149)	303586	189.897	190
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	76121	38.2755	38.3
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	46153	25.4955	25.5
6 Acenaphthylene	152		9.429	9.440	(0.984)	16753	6.14675	6.15
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	293126	200.000	
8 Acenaphthene	153		9.639	9.650	(1.006)	59762	32.9216	32.9
9 Dibenzofuran	168		9.849	9.860	(1.028)	37850	14.3879	14.4
§ 10 Fluorene-d10	174		10.422	10.432	(1.087)	1662	1.11928	1.12 (M)
11 Fluorene	166		10.475	10.485	(1.093)	54701	26.0587	26.1
* 12 Phenanthrene-d10	188		12.253	12.262	(1.000)	534194	200.000	
13 Phenanthrene	178		12.301	12.310	(1.004)	374396	104.332	104
§ 14 Anthracene-d10	188		12.320	12.330	(1.005)	16881	5.85122	5.85
15 Anthracene	178		12.349	12.358	(1.008)	47408	13.5429	13.5
§ 16 Fluoranthene-d10	212		14.356	14.356	(1.172)	651904	251.031	251
17 Fluoranthene	202		14.385	14.395	(1.174)	668530	210.411	210
18 Pyrene	202		14.885	14.885	(0.876)	368473	105.140	105
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	30138	10.2642	10.3
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	452356	200.000	
21 Chrysene	228		17.034	17.042	(1.002)	56314	18.2581	18.3
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	13503	4.51629	4.52
23 Benzo(k)fluoranthene	252		18.792	18.792	(0.949)	5232	1.57087	1.57
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	6234	2.13344	2.13
§ 25 Benzo(e)pyrene-d12	264		19.426	19.426	(0.981)	328609	114.444	114
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	10579	3.68643	3.69
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	5343	1.95165	1.95
* 28 Perylene-d12	264		19.801	19.801	(1.000)	560321	200.000	
29 Perylene	252		19.868	19.868	(1.003)	5850	2.08663	2.09
§ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	396032	215.027	215
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.358	23.369	(1.180)	3574	1.36375	1.36

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092310.D
 Lab Smp Id: 16I0160-05
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	503582	-4.51
7 Acenaphthene-d10	297518	148759	595036	293126	-1.48
12 Phenanthrene-d10	522042	261021	1044084	534194	2.33
20 Chrysene-d12	389499	194750	778998	452356	16.14
28 Perylene-d12	430626	215313	861252	560321	30.12

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.12
12 Phenanthrene-d10	12.26	11.76	12.76	12.25	-0.08
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092310.D

Lab ID: 16I0160-05

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 12:31

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

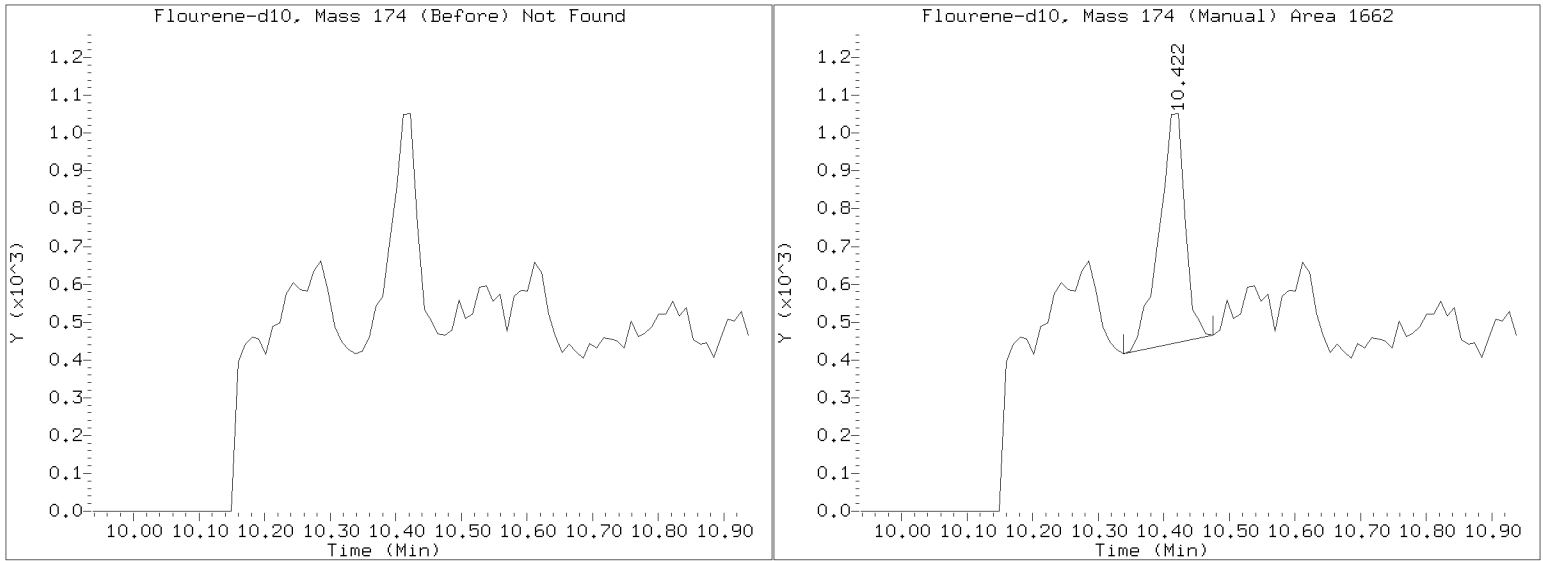
RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092310.D
Injection Date: 23-SEP-2016 12:31
Lab ID:16I0160-05 Client ID:
Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory: Analytical Resources, Inc. SDG: 1610160
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 1610160-07 File ID: 16092311.D
 Sampled: 09/09/16 12:20 Prepared: 09/10/16 11:10 Analyzed: 09/23/16 13:01
 Solids: Preparation: EPA 3550C (Ultrasonic) Initial/Final: 0.886 g / 0.1 mL
 Batch: BEI0260 Sequence: SEI0321 Calibration: ZI00066
 Instrument: NT11 Column: RXi-17Sil-MS

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	8.95	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	6.03	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	6.85		1.13	1.13
86-73-7	Fluorene	1	6.63		1.13	1.13
85-01-8	Phenanthrene	1	19.9		1.13	1.13
120-12-7	Anthracene	1	1.95		1.13	1.13
206-44-0	Fluoranthene	1	19.7		1.13	1.13
129-00-0	Pyrene	1	10.3		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.36		1.13	1.13
218-01-9	Chrysene	1	2.06		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzofluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	20.8	61.6	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	23.6	69.8	30 - 160	
Fluoranthene-d10	33.860	28.2	83.4	30 - 160	
Fluorene-d10	21.163	0.721	3.41	30 - 160	*
Anthracene-d10	21.163	4.95	23.4	30 - 160	*
Benzo(e)pyrene-d12	21.163	13.5	63.8	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092311.D

Date: 23-SEP-2016 13:01

Client ID:

Sample Info: 1610160-07

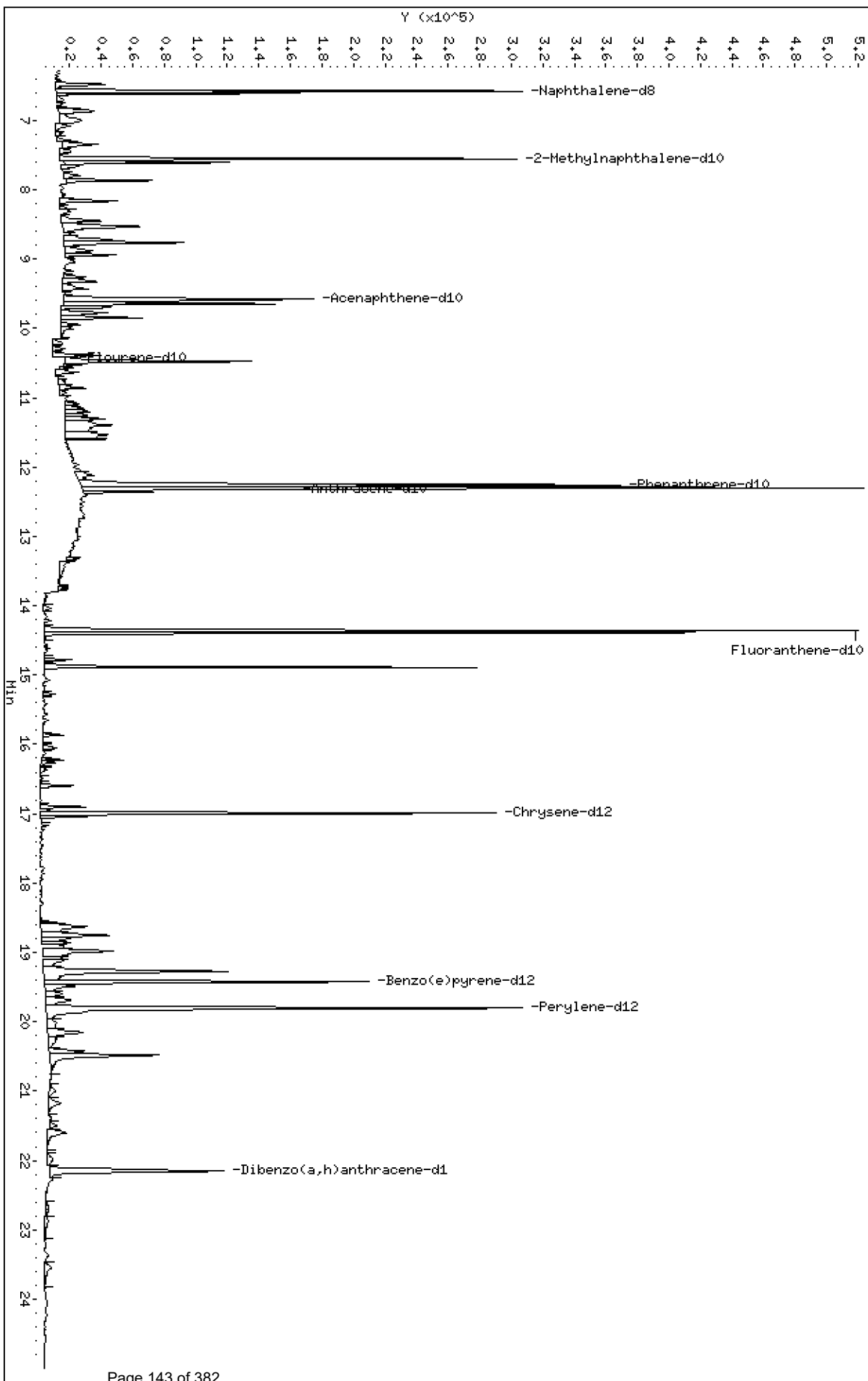
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160923.16\16092311.D



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

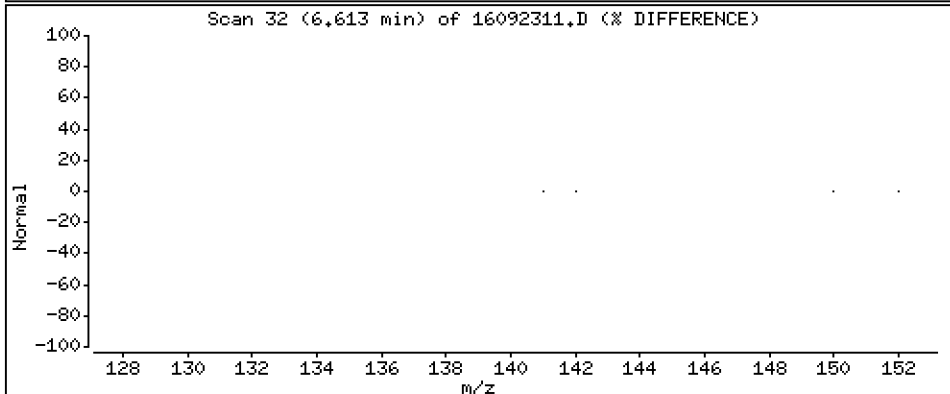
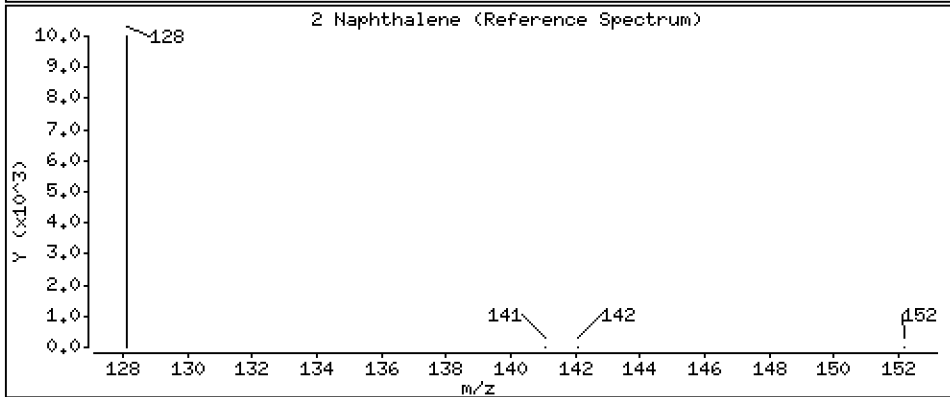
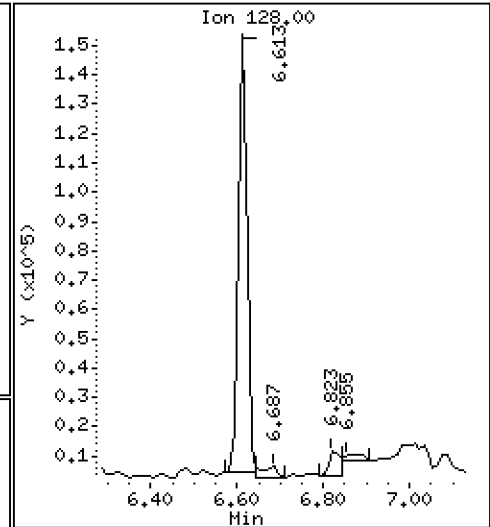
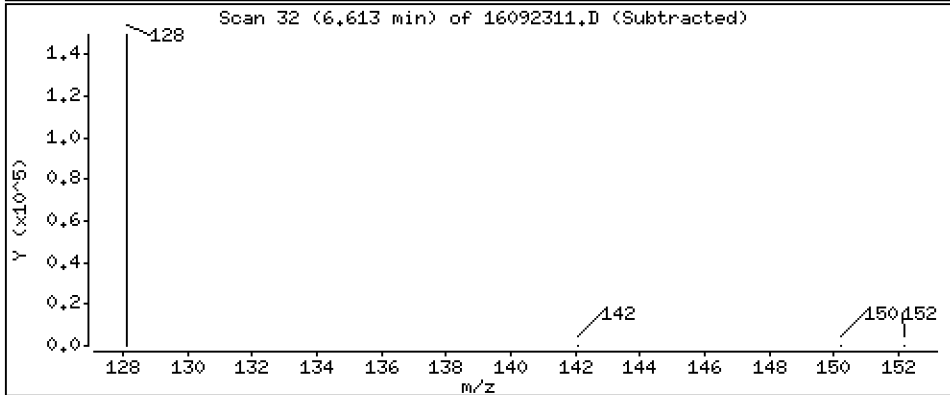
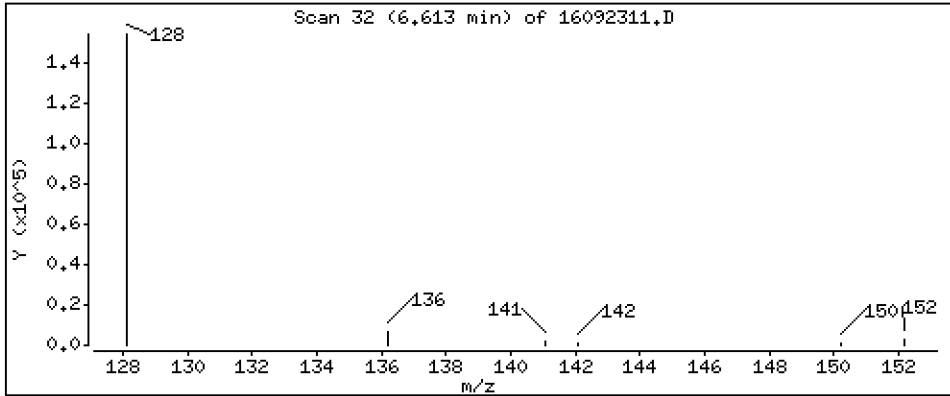
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 79,3 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

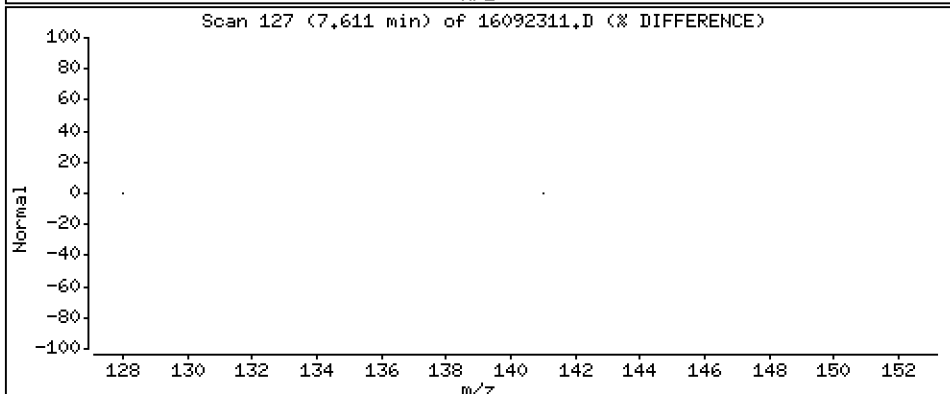
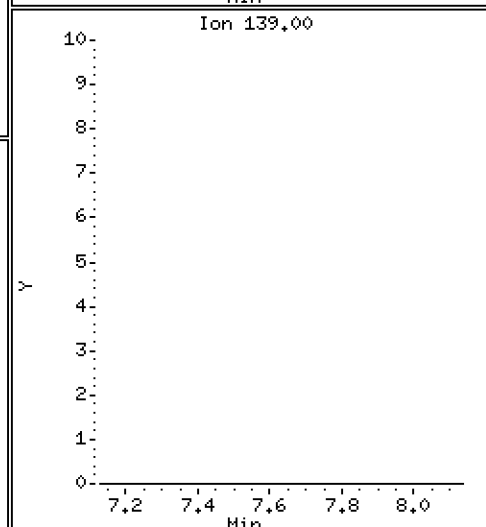
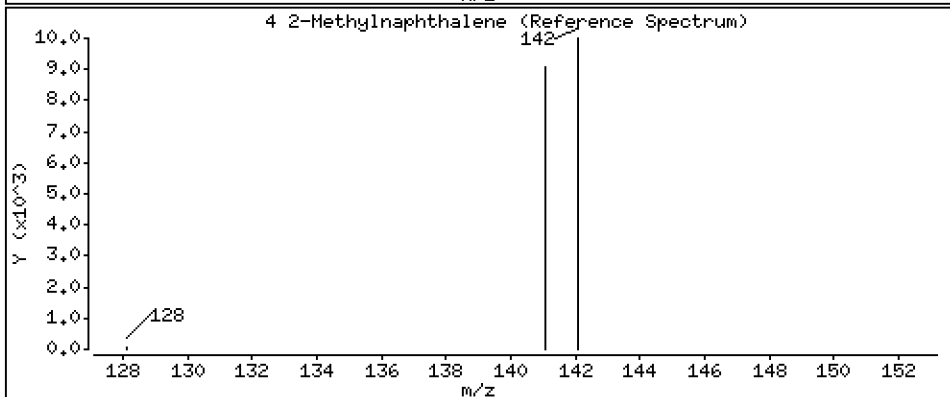
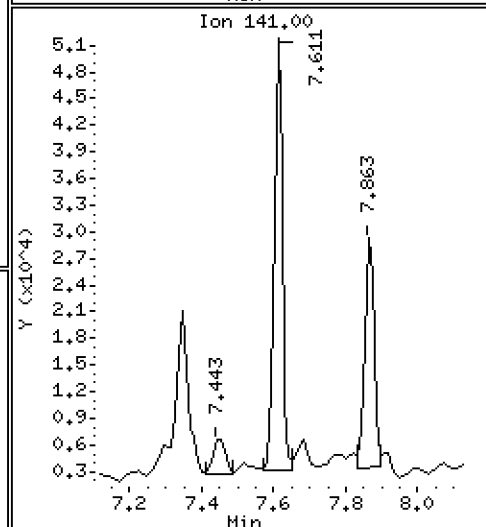
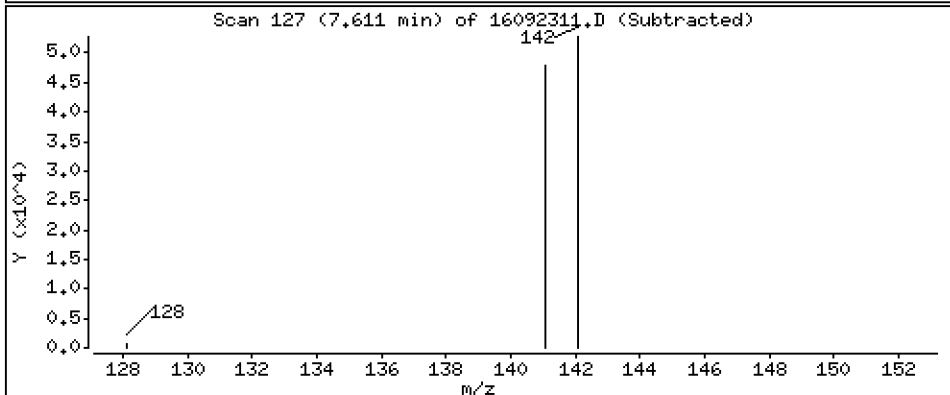
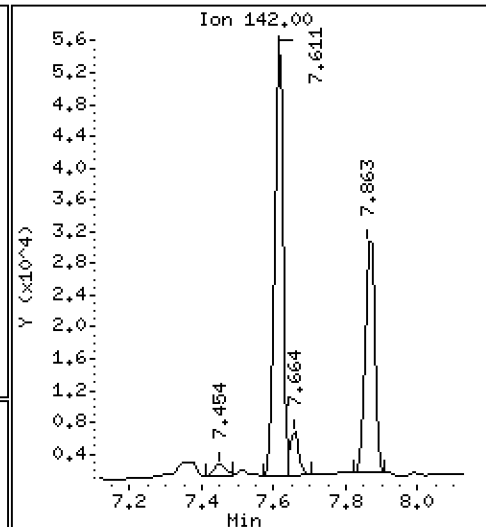
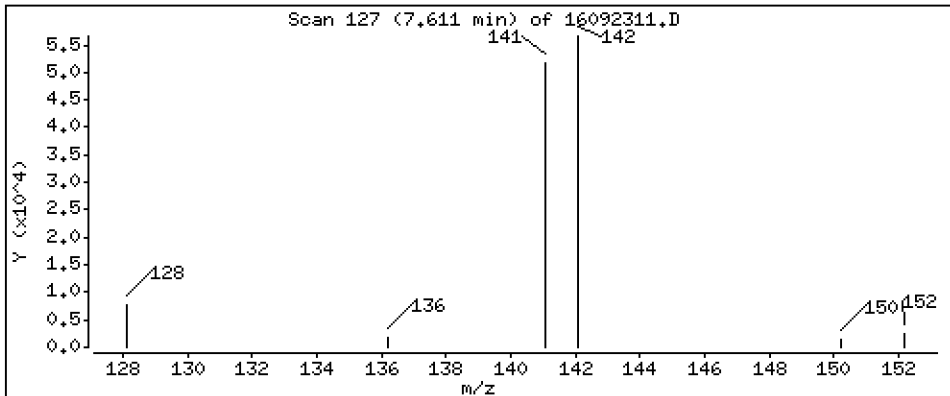
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4-Methylnaphthalene

Concentration: 53,4 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

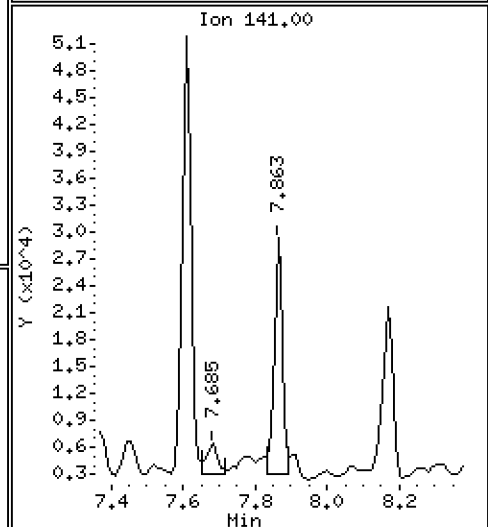
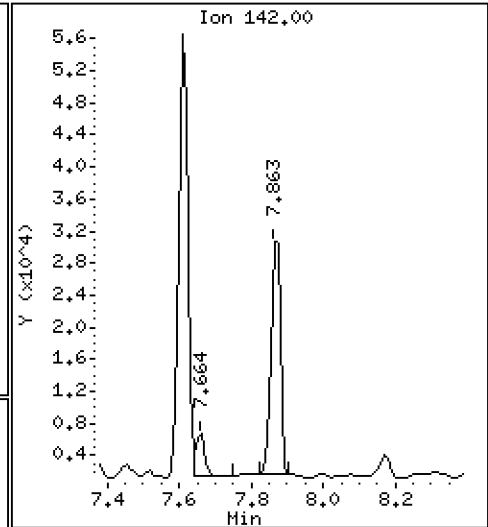
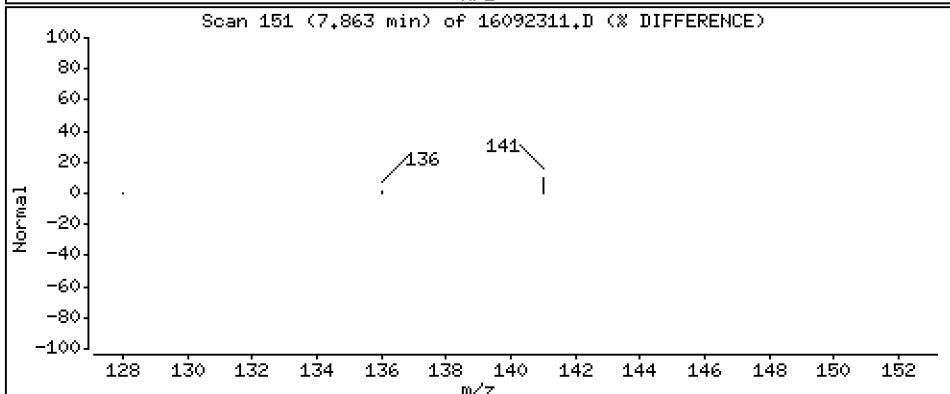
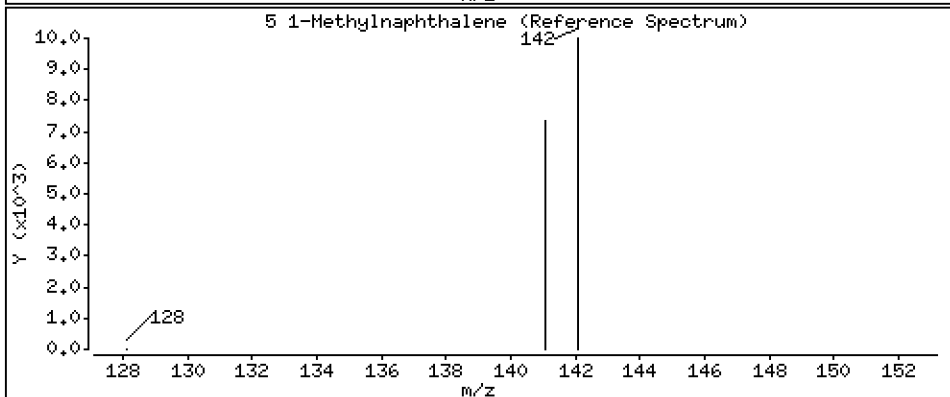
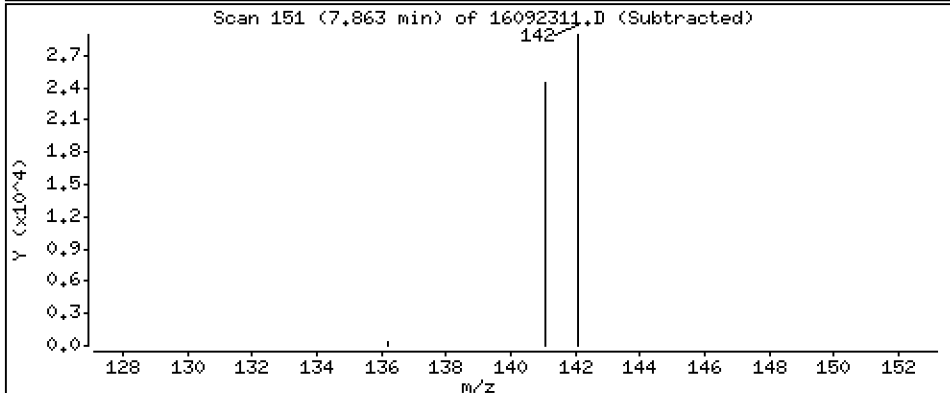
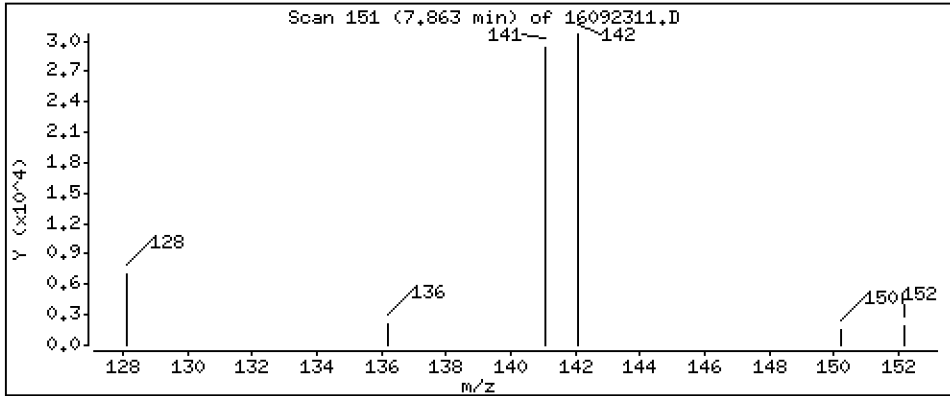
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 32,9 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

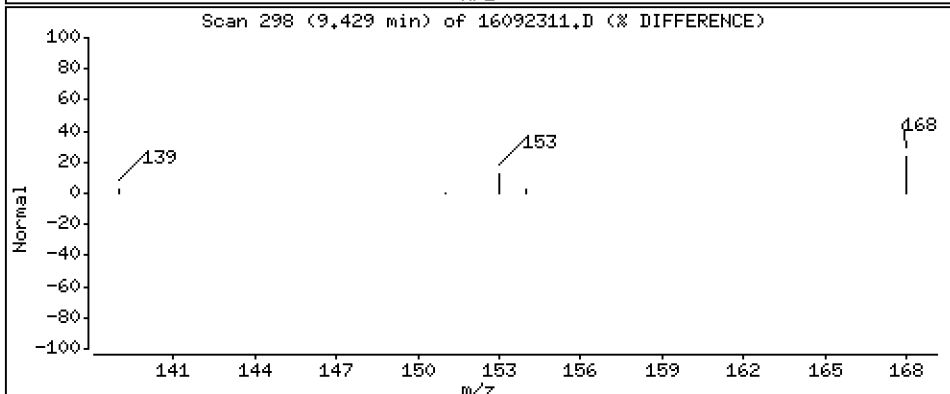
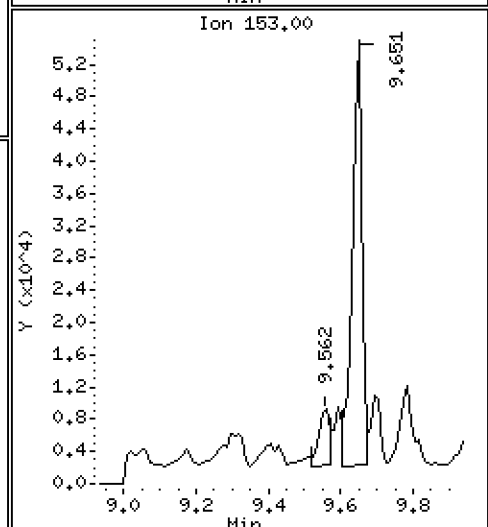
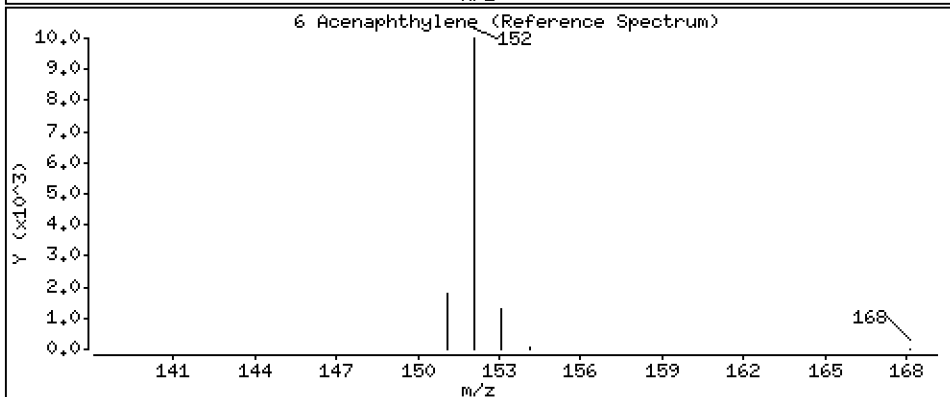
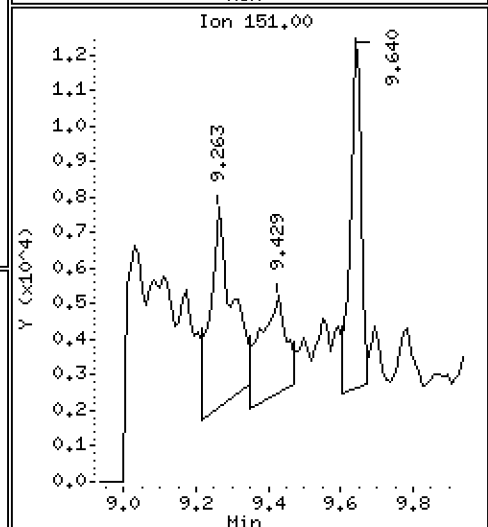
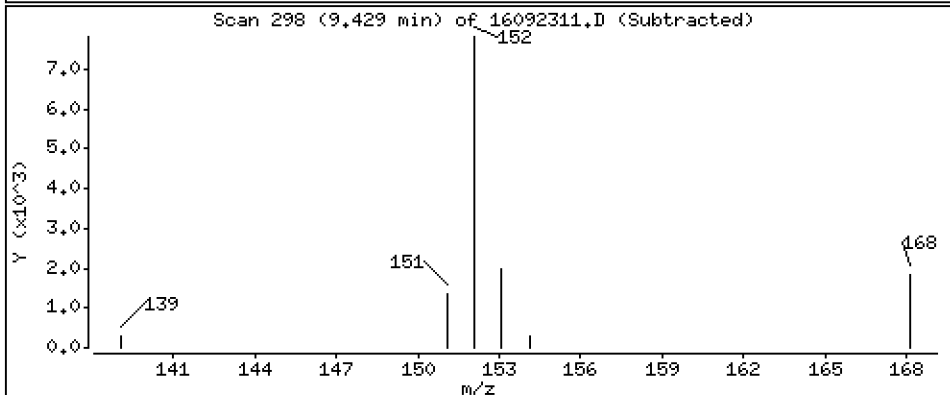
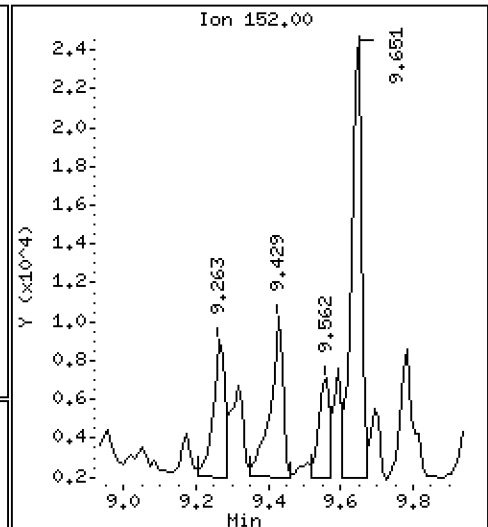
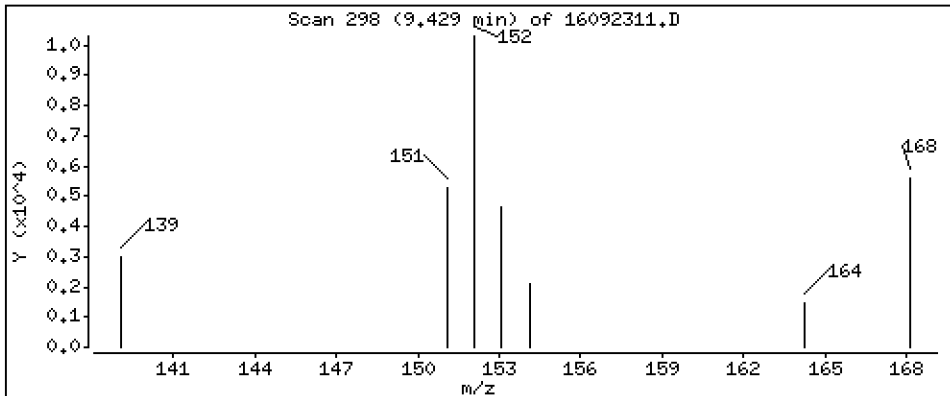
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 8.32 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

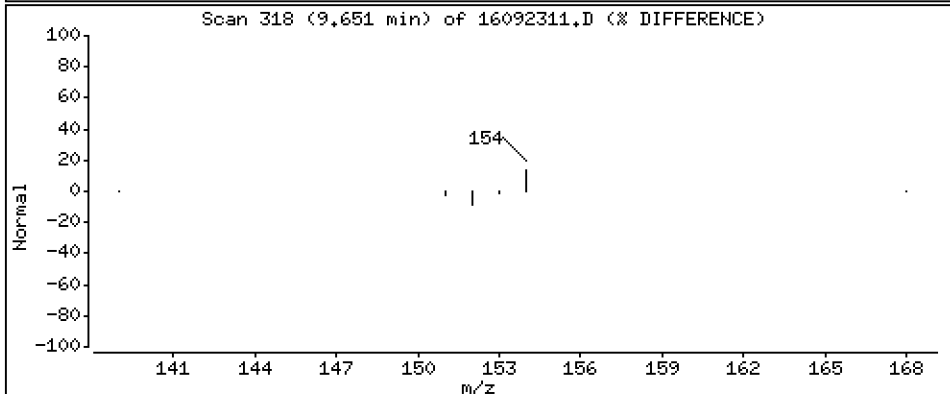
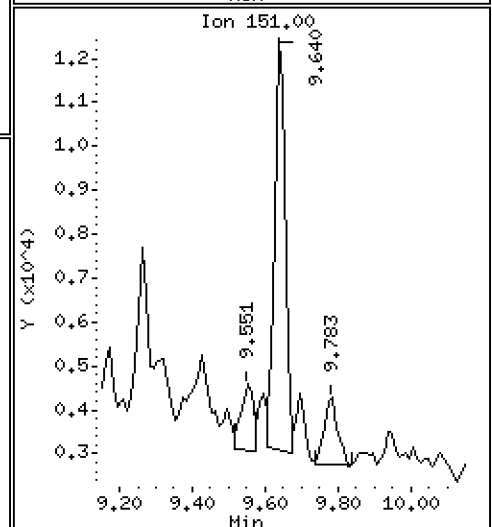
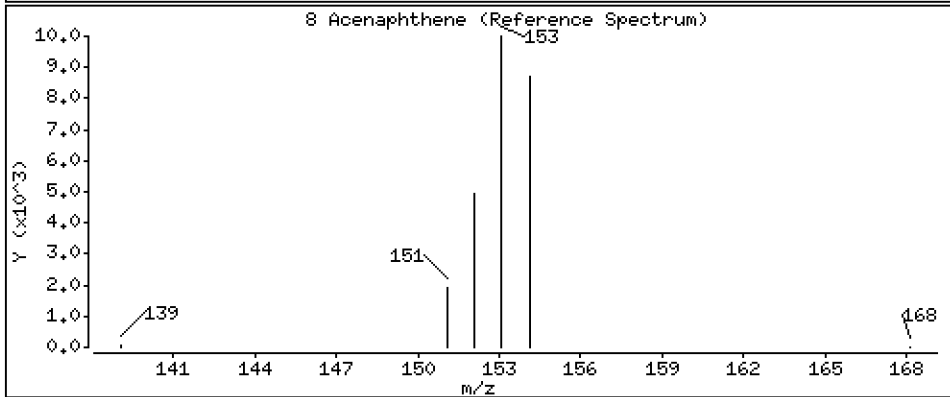
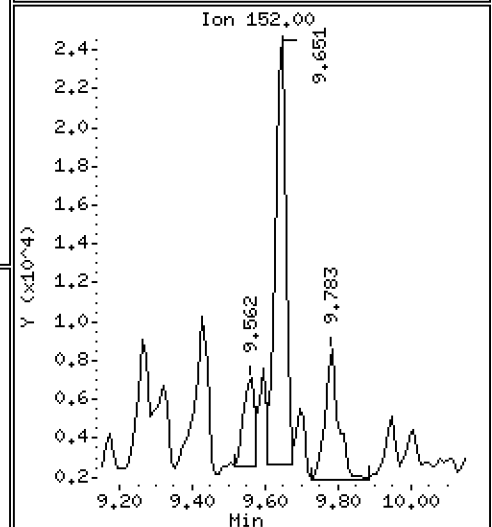
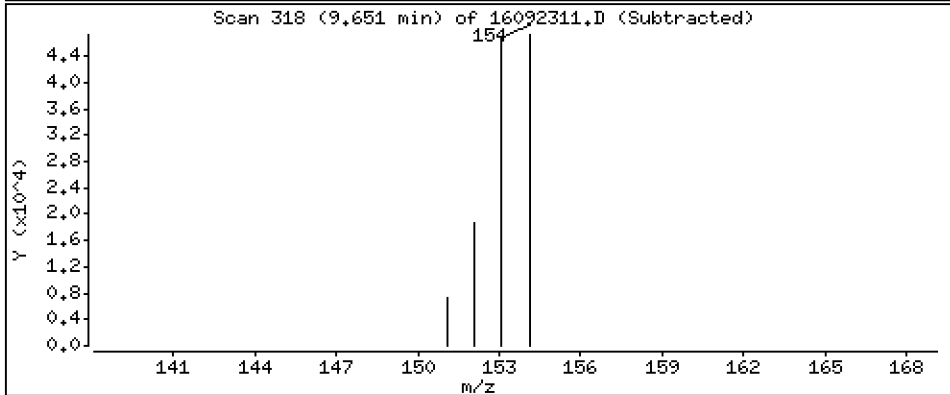
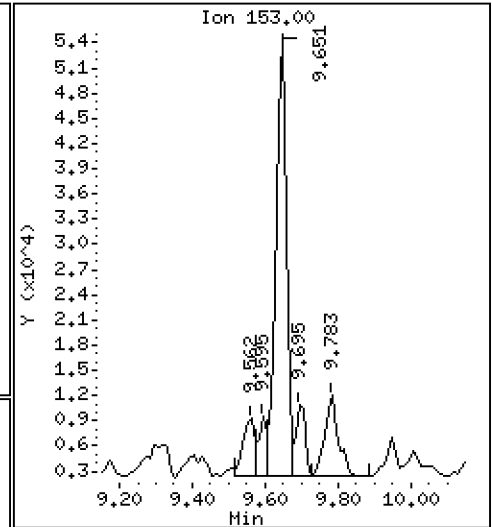
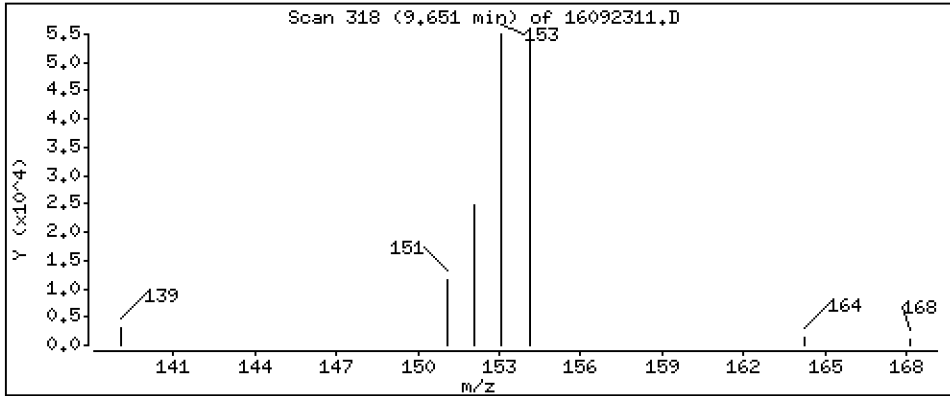
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 60.7 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

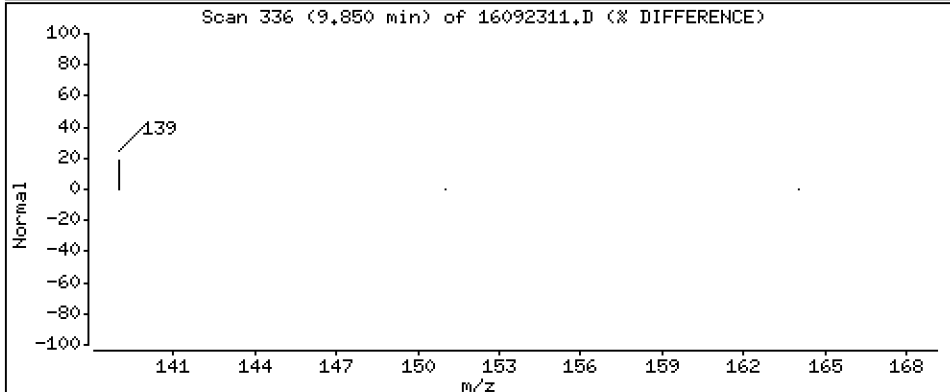
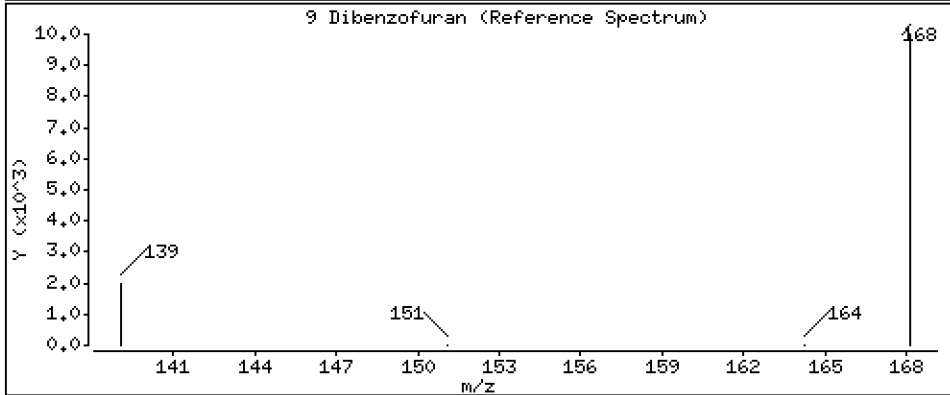
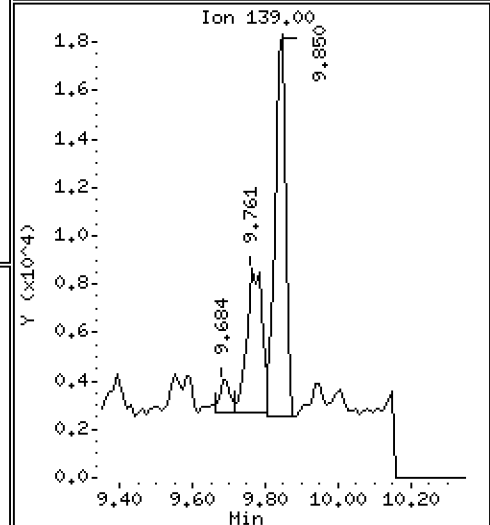
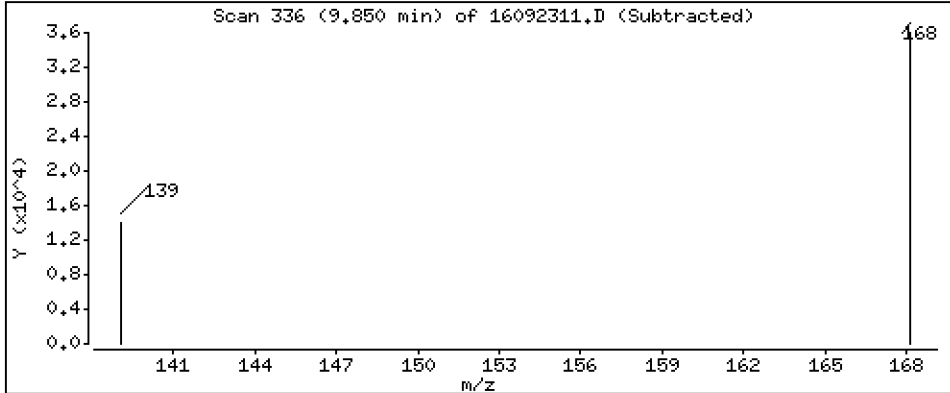
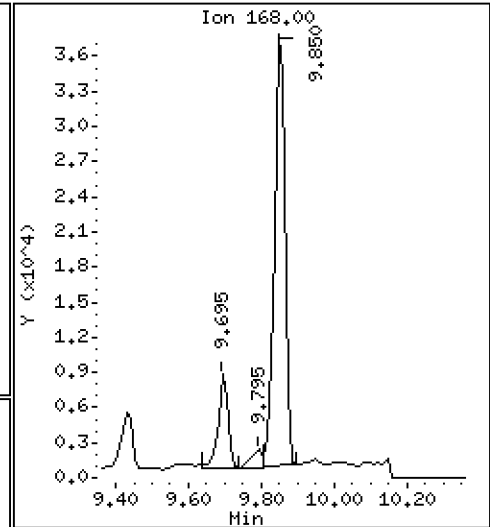
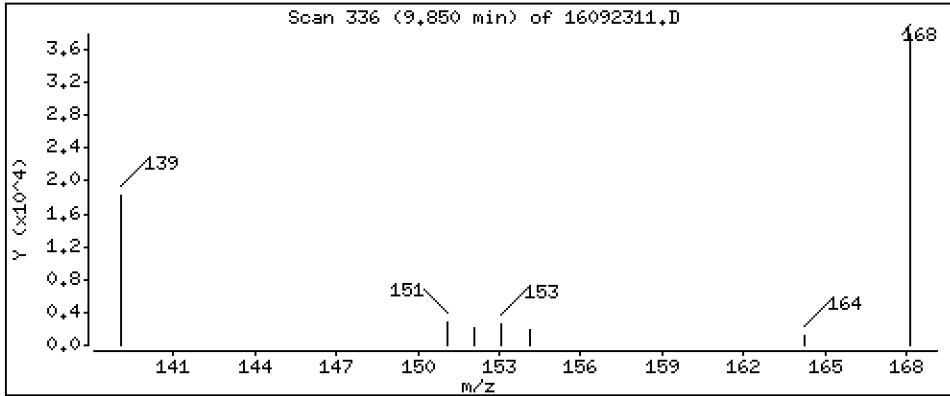
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 29,4 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

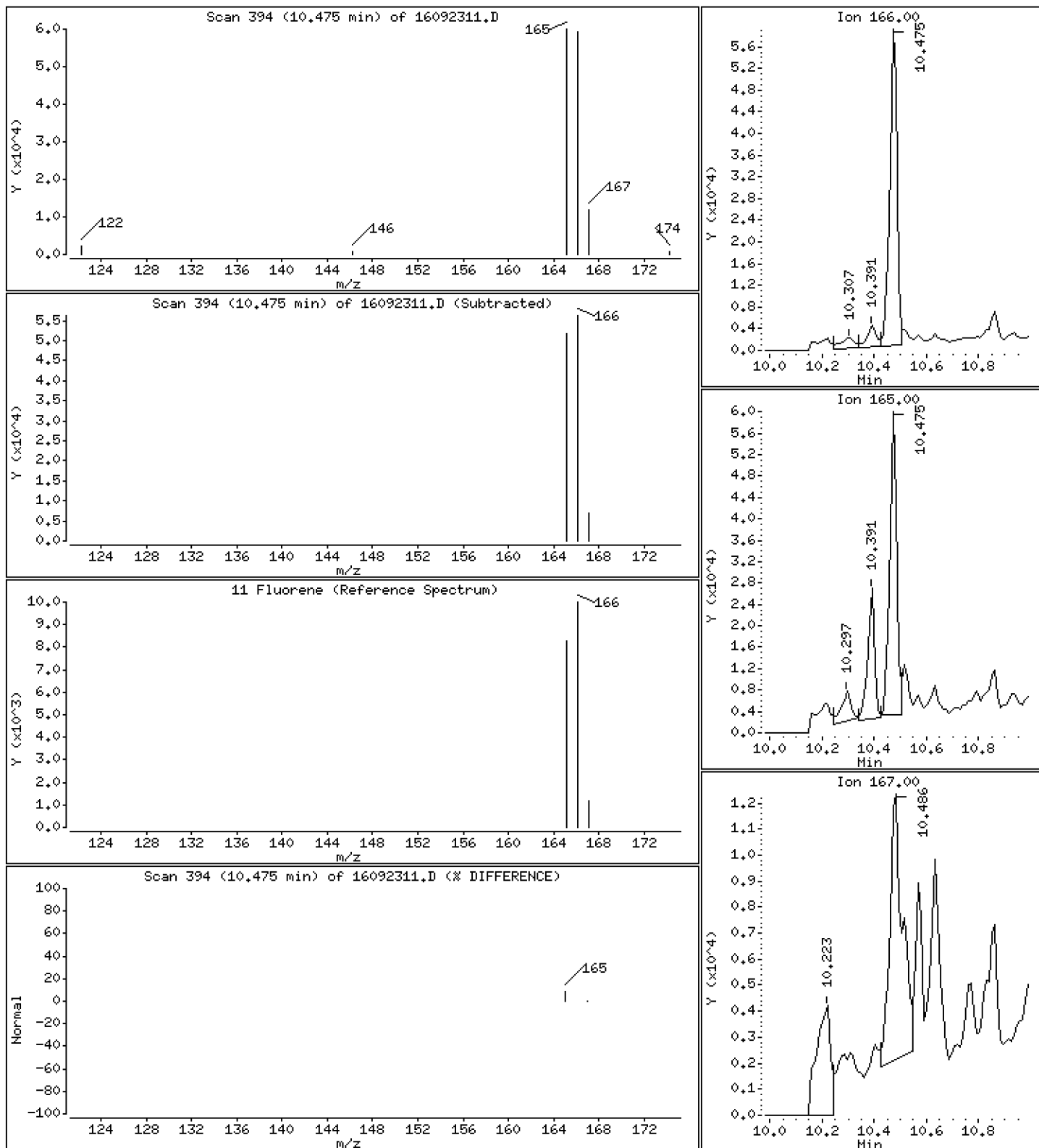
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 58,7 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

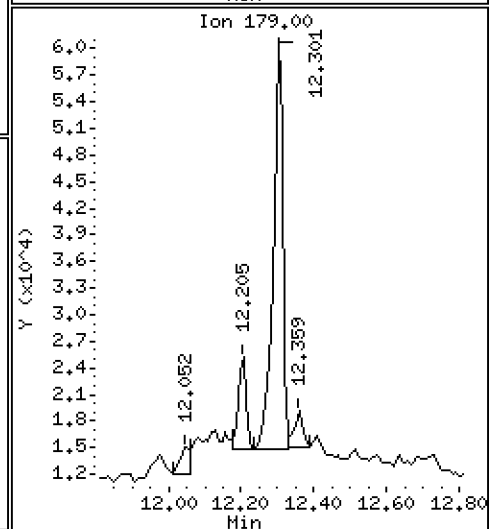
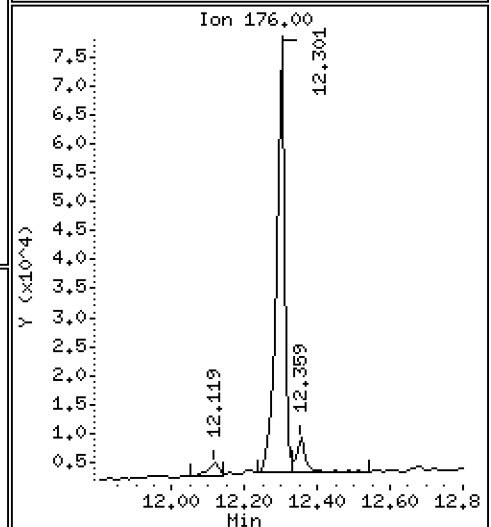
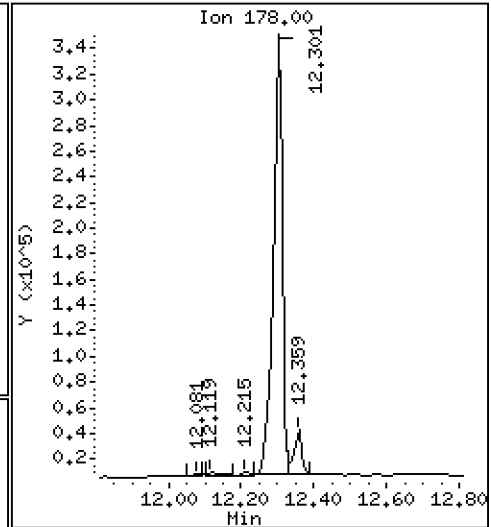
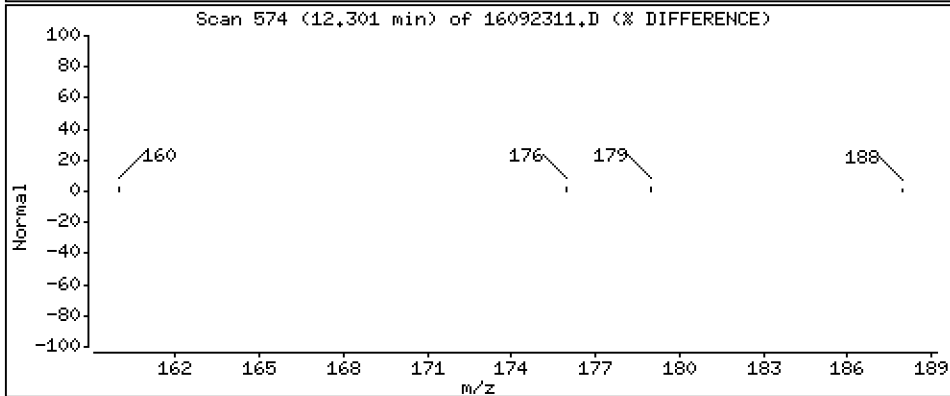
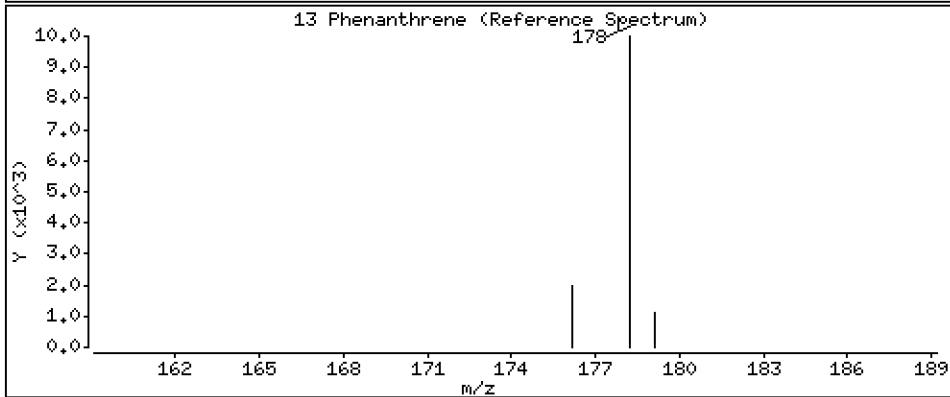
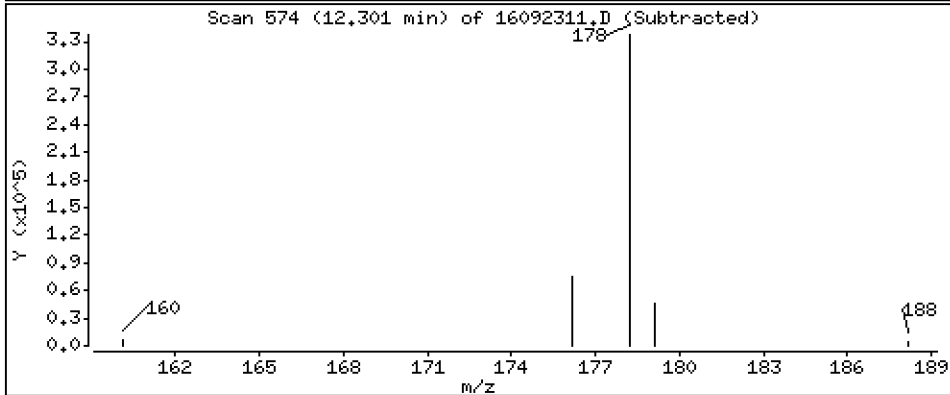
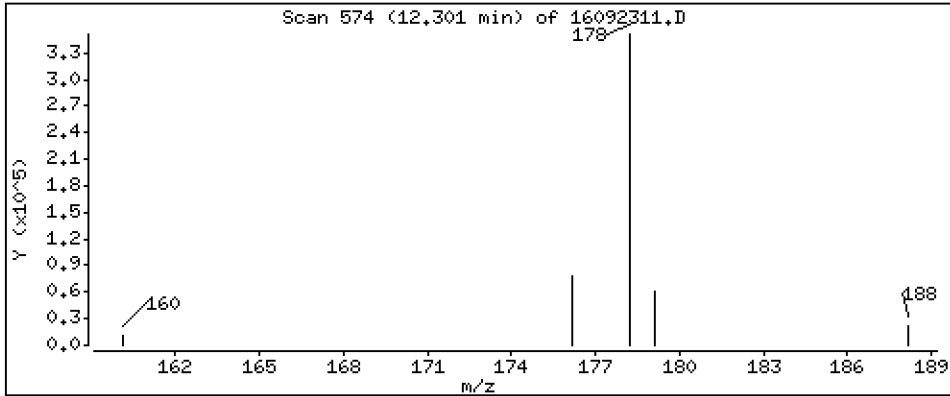
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 177 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

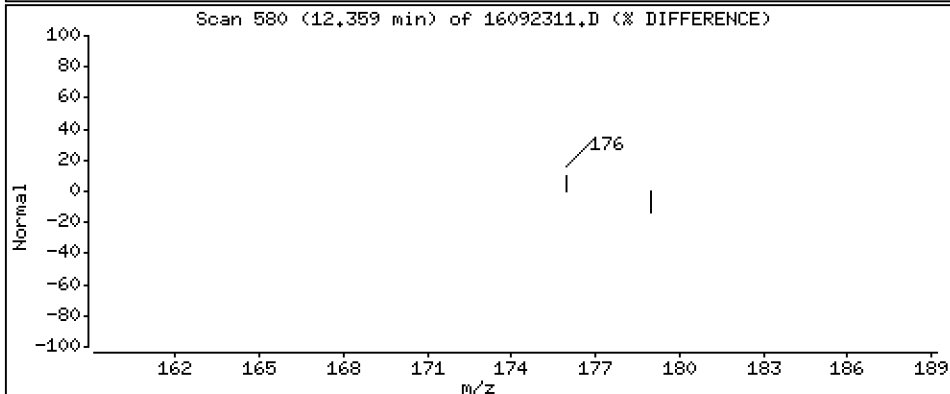
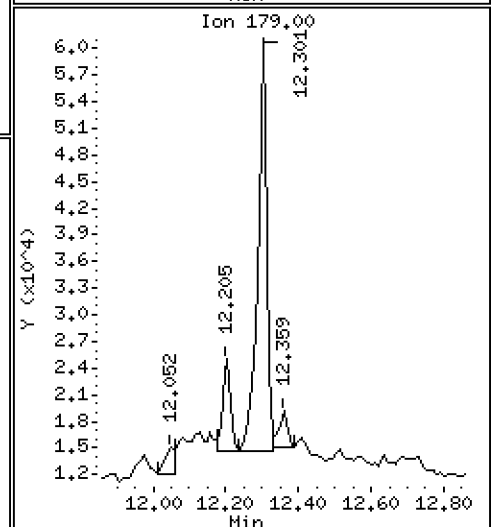
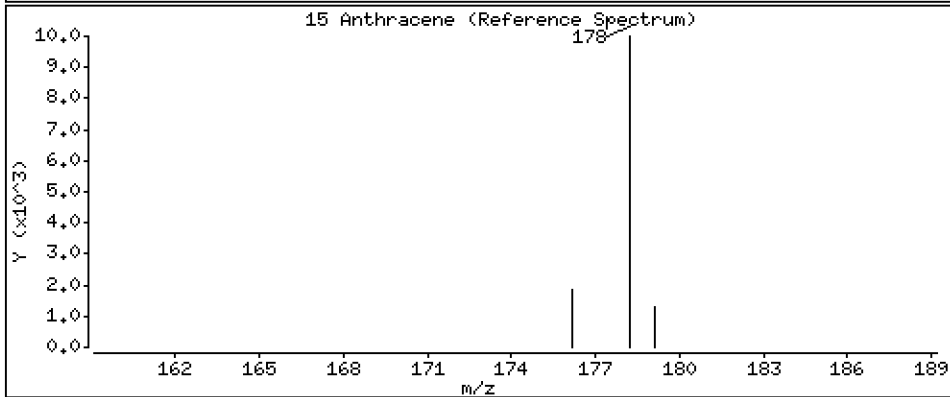
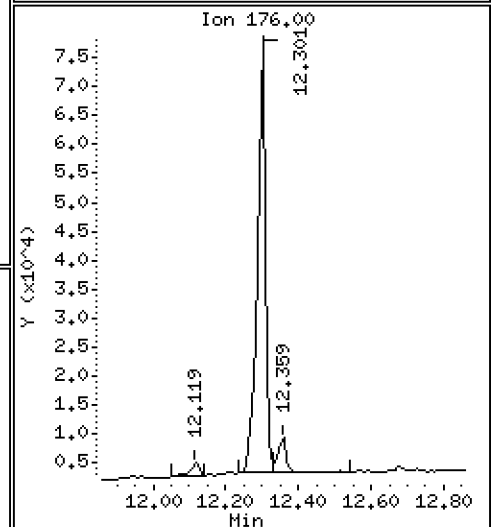
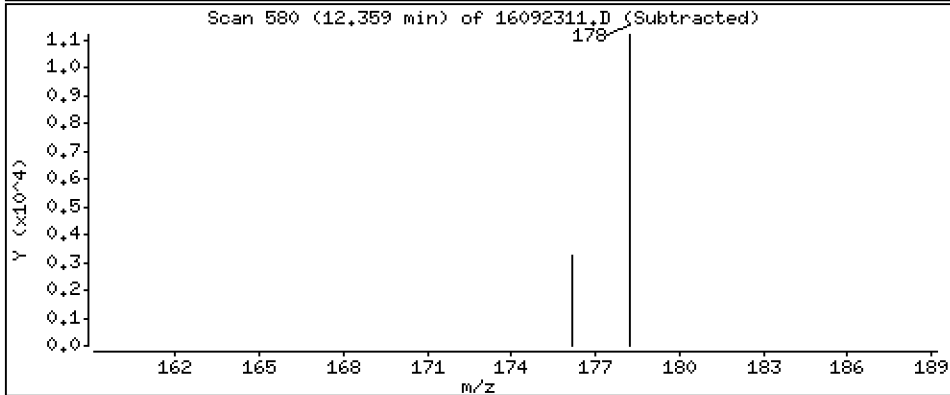
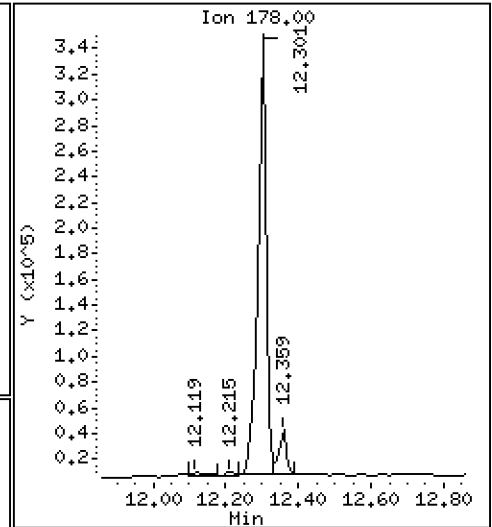
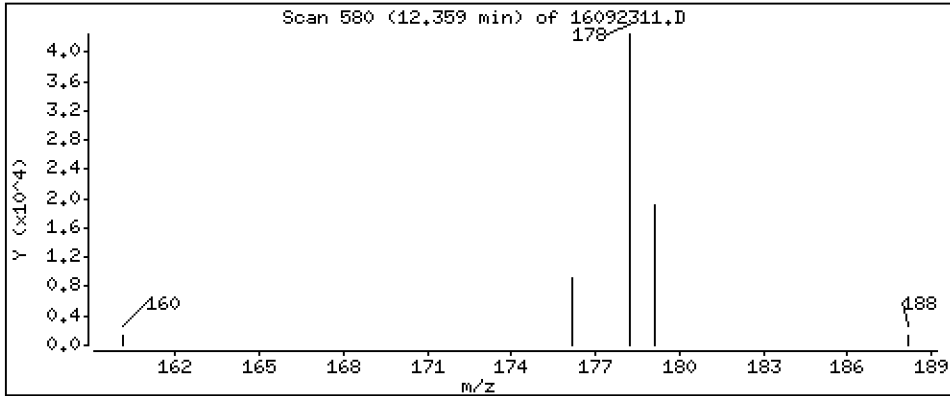
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

15 Anthracene

Concentration: 17,3 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

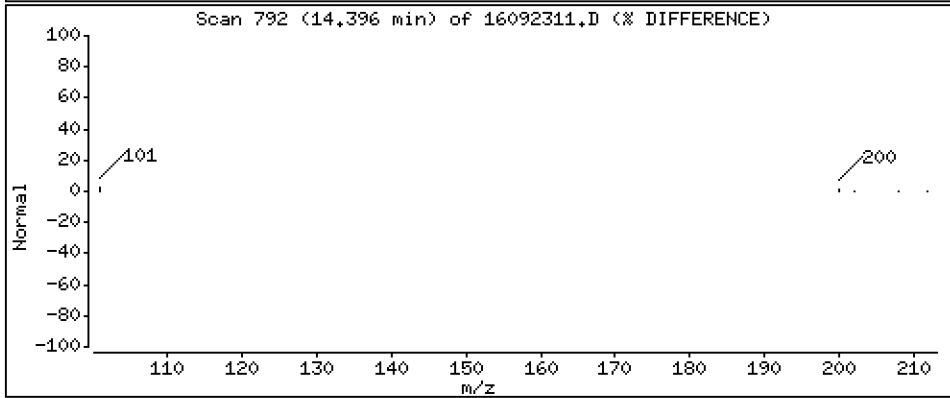
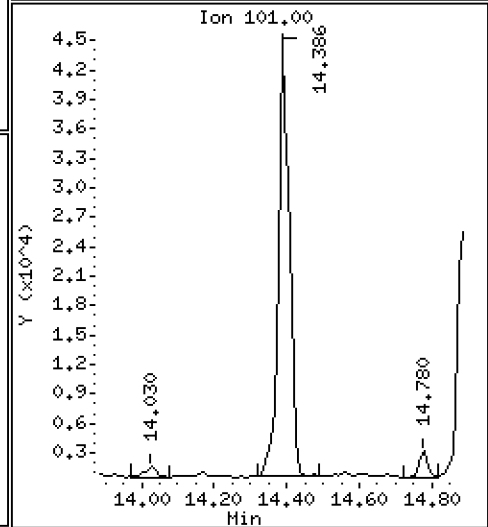
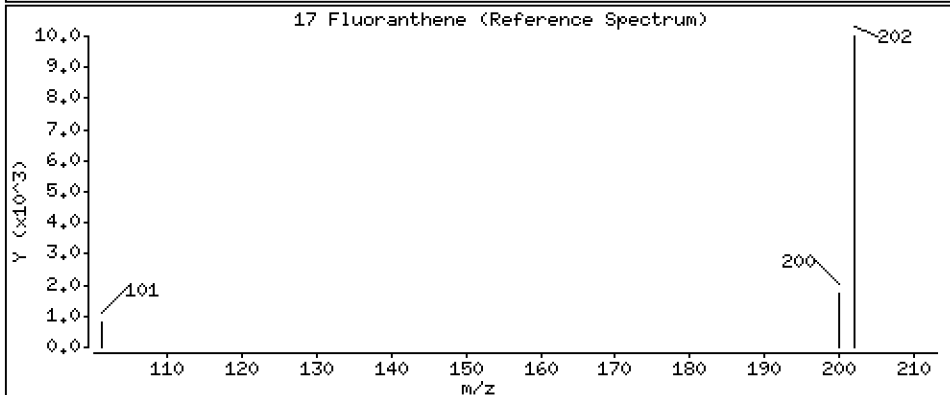
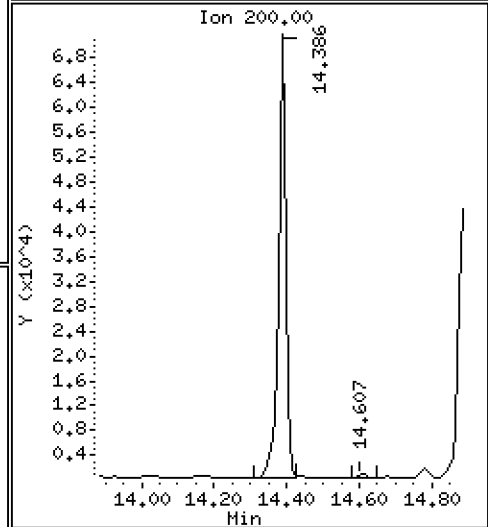
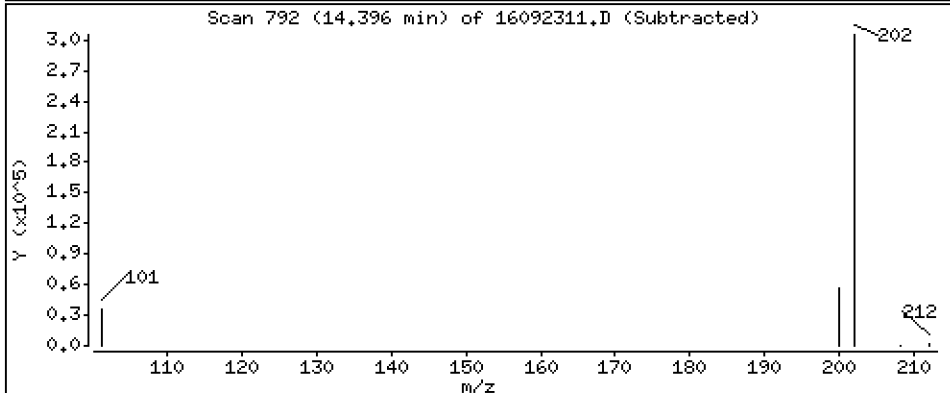
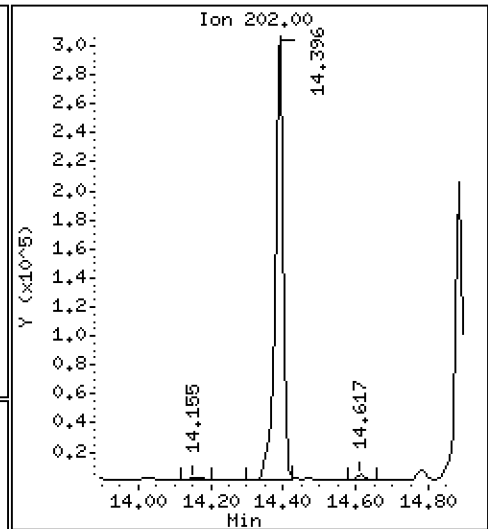
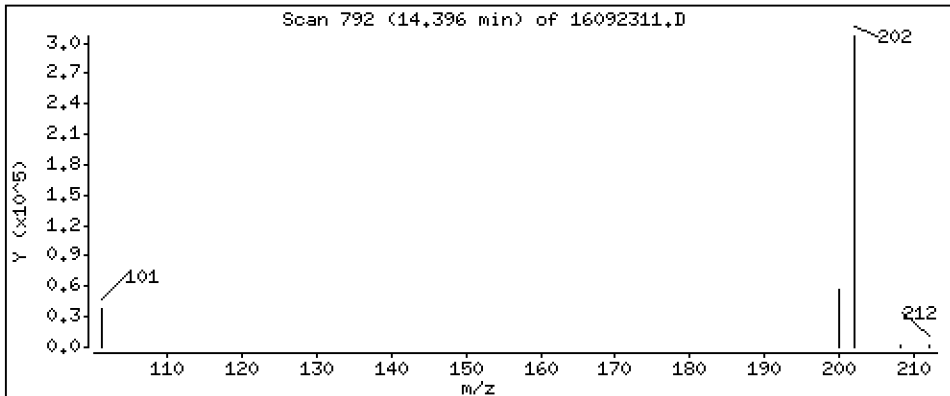
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 175 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

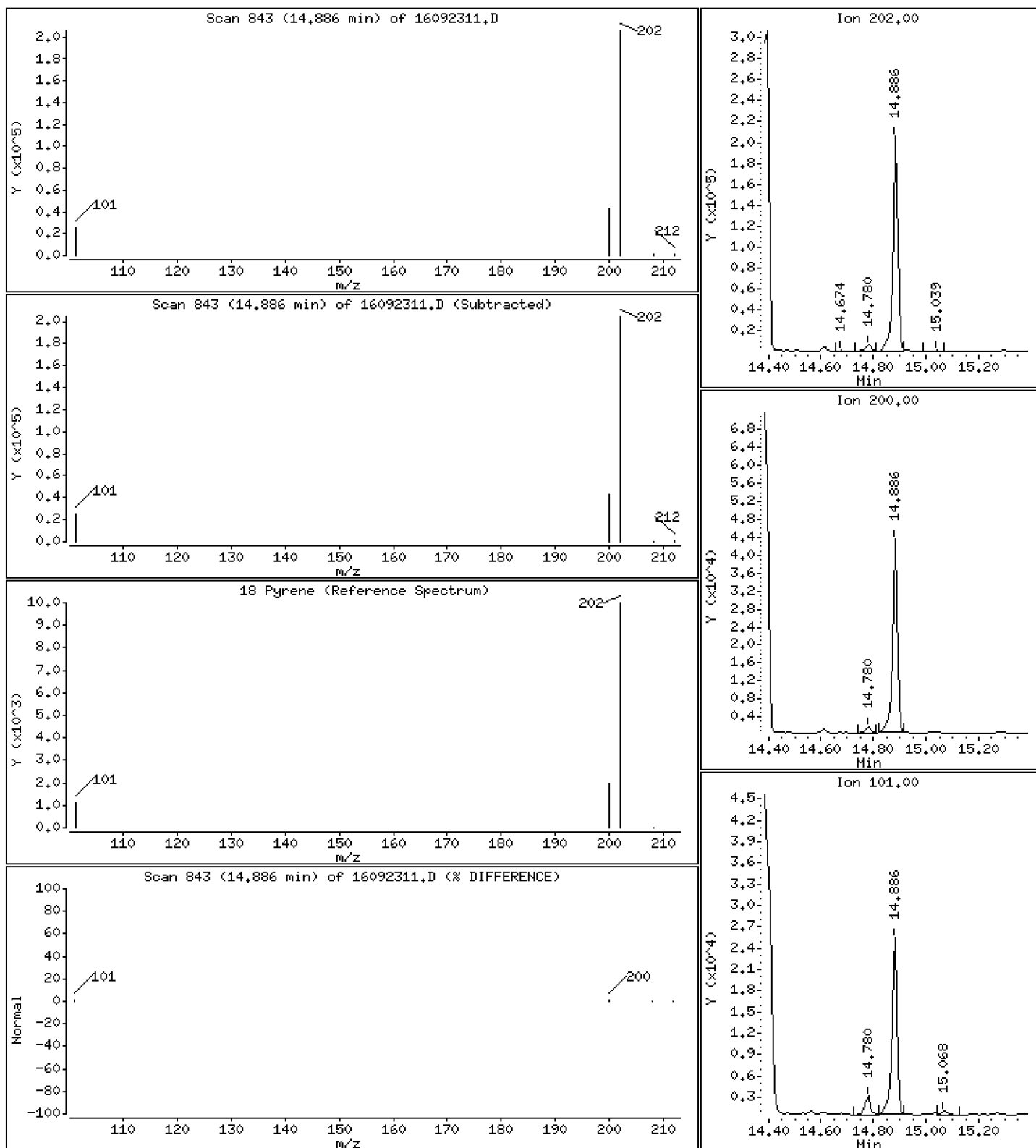
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

18 Pyrene

Concentration: 91,4 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

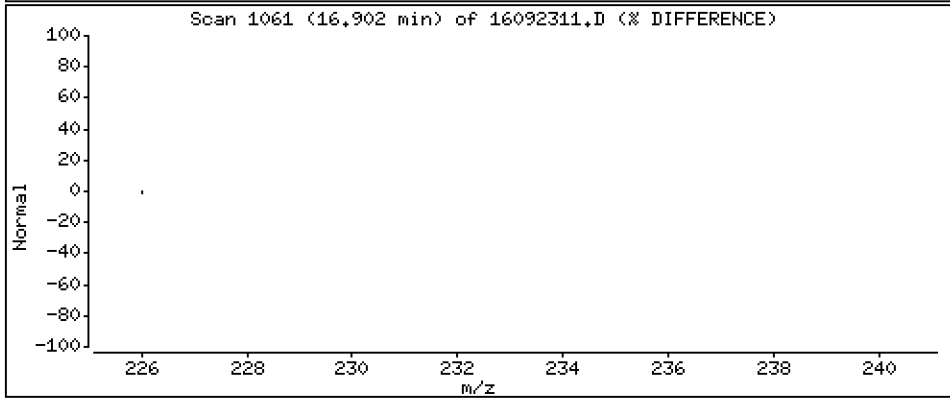
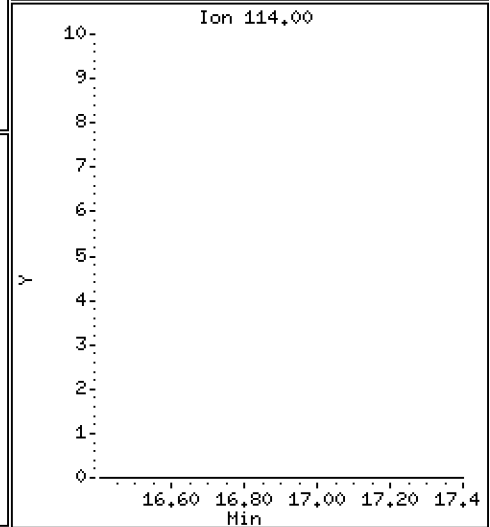
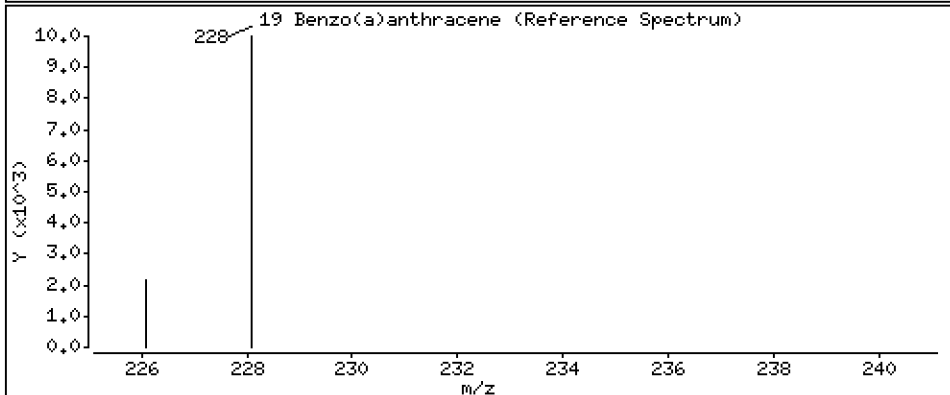
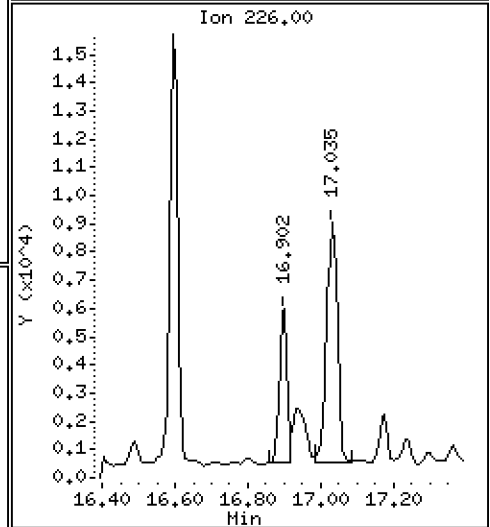
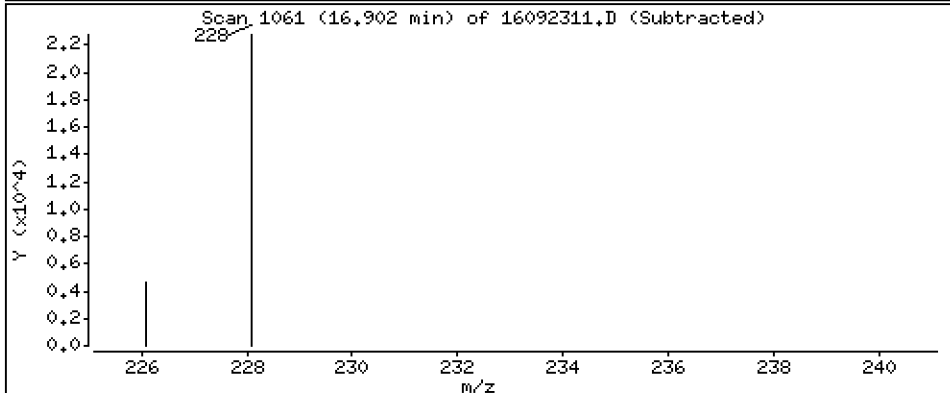
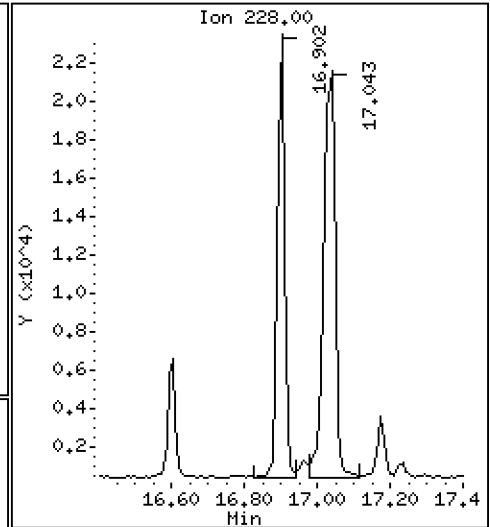
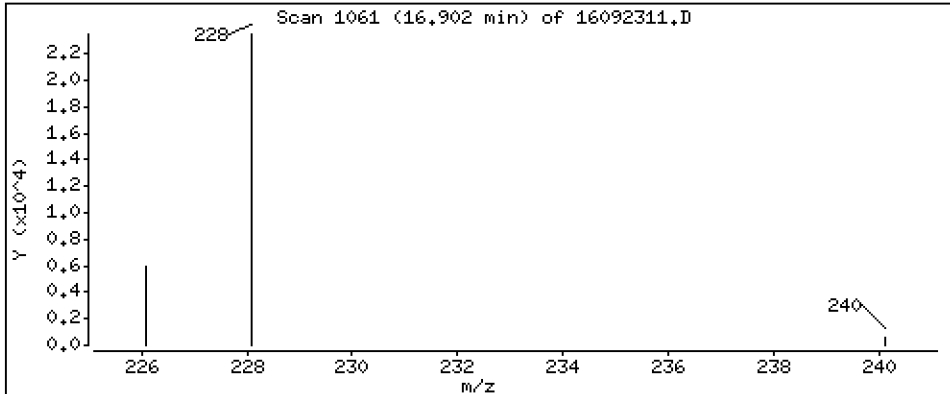
Operator: JW

Column phase: Rxi-17Si11 MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 12,0 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

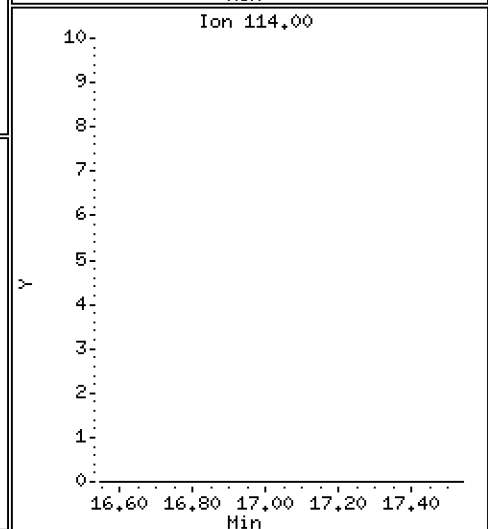
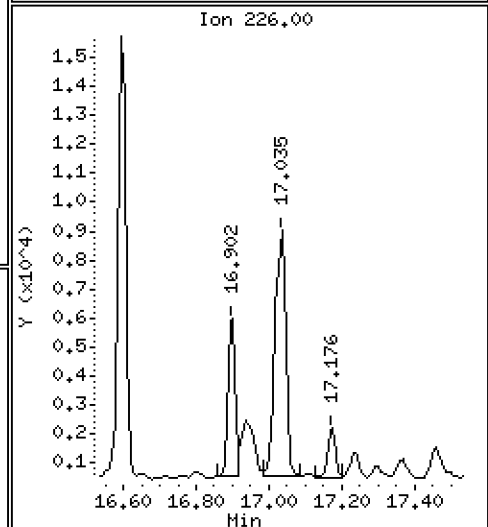
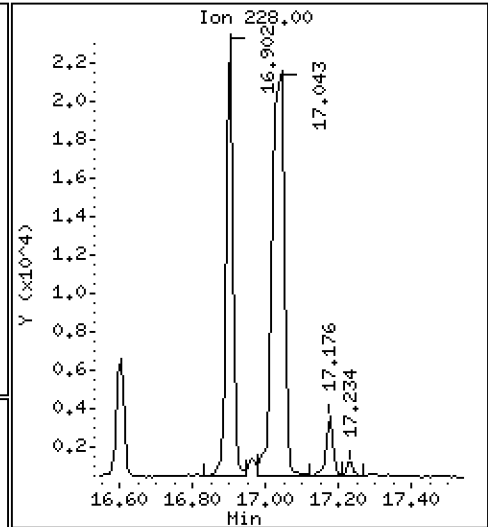
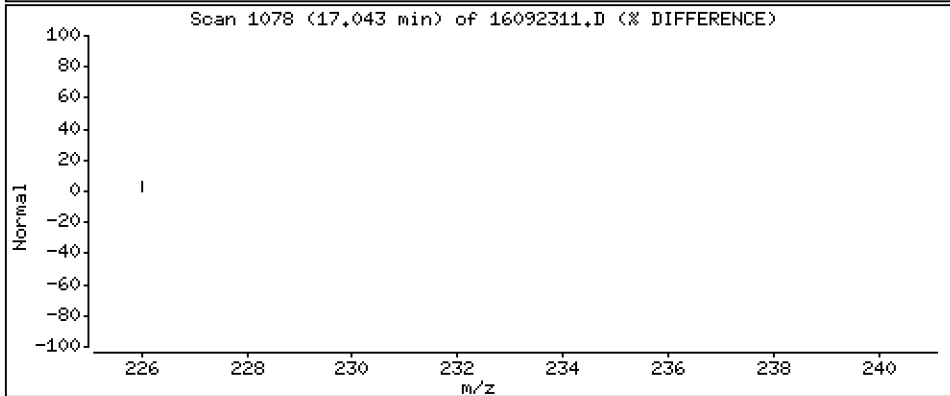
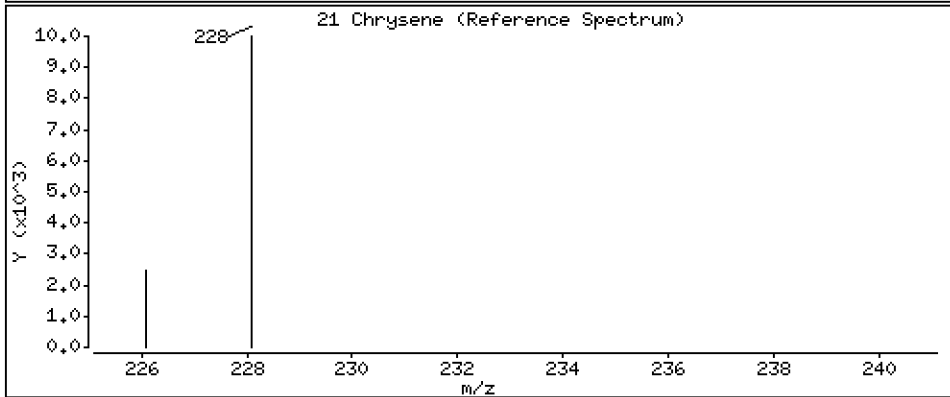
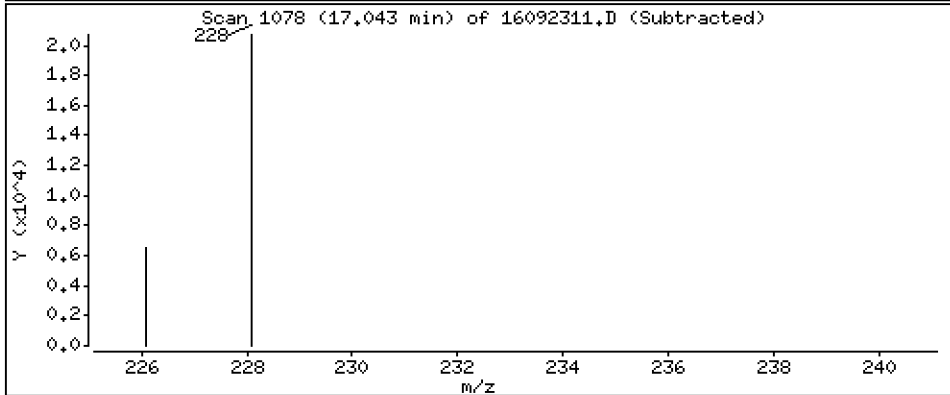
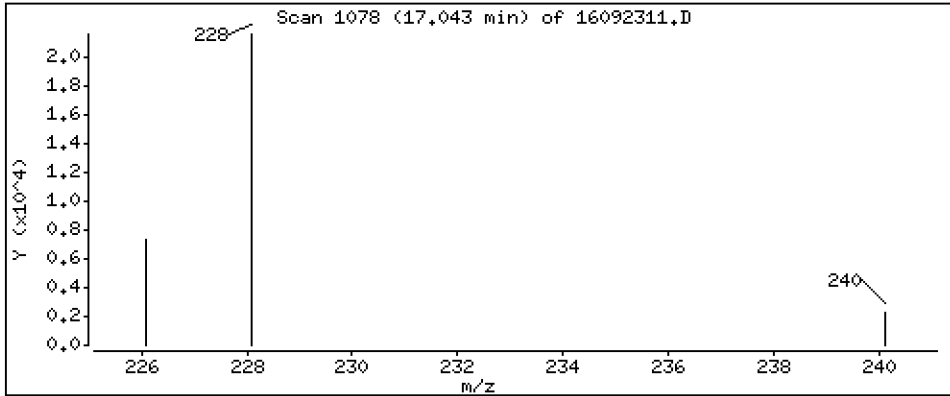
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 18,2 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

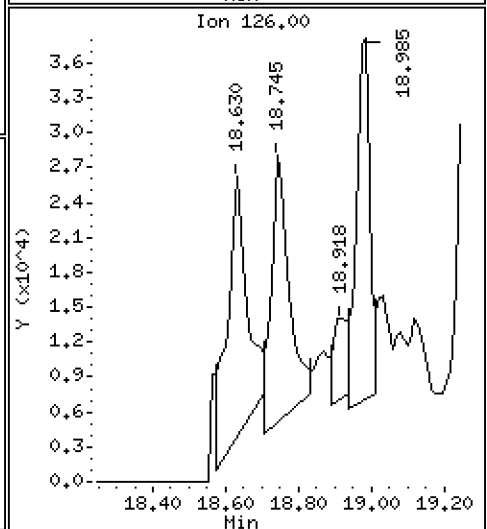
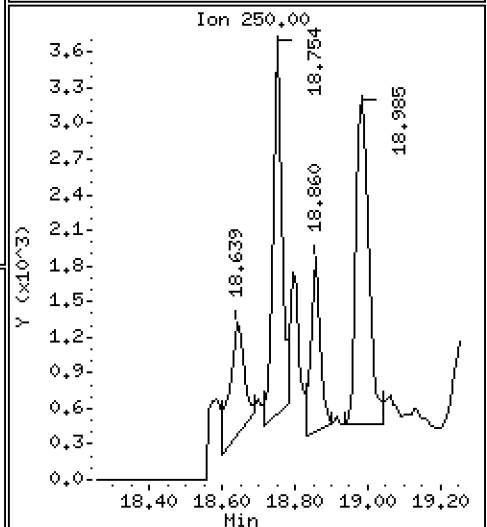
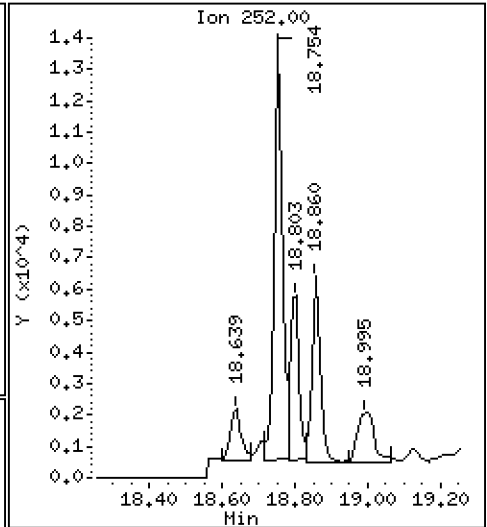
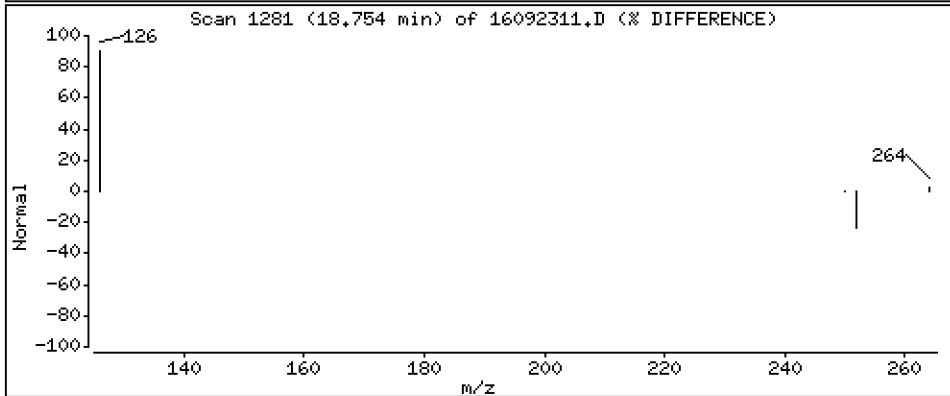
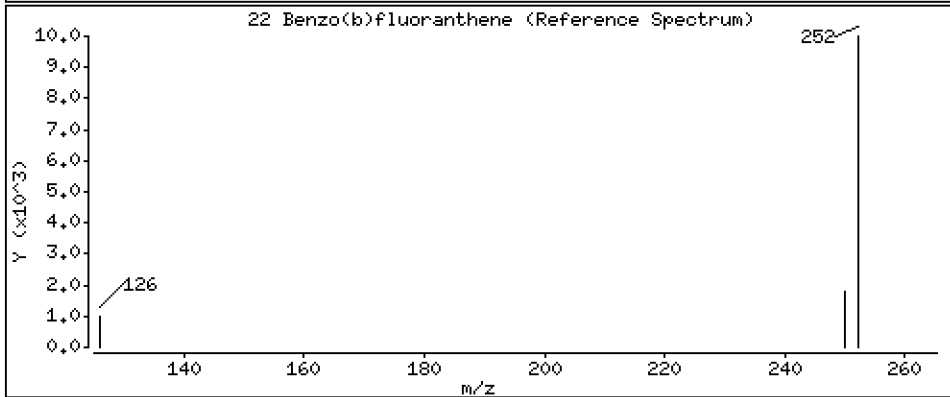
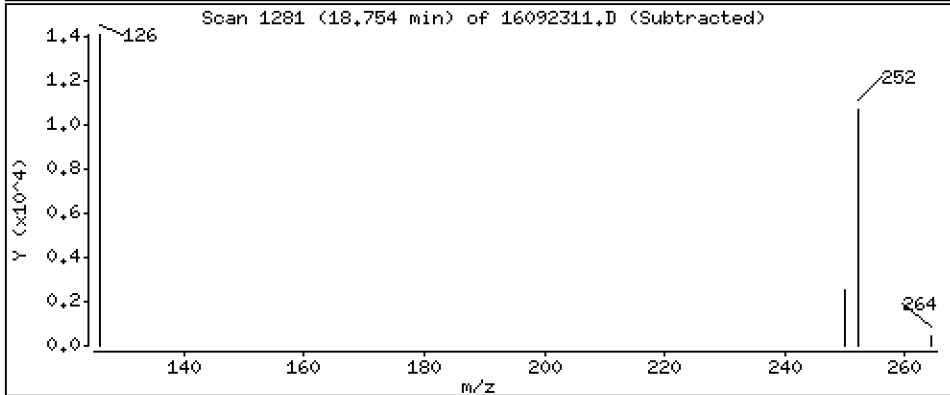
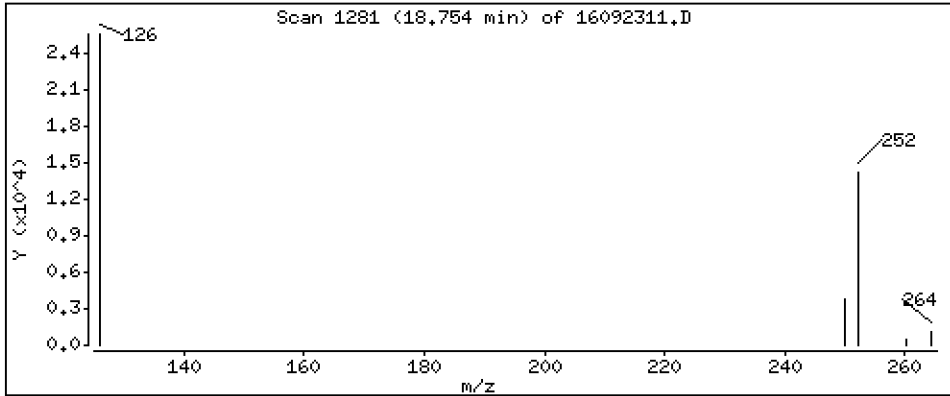
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 8,90 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

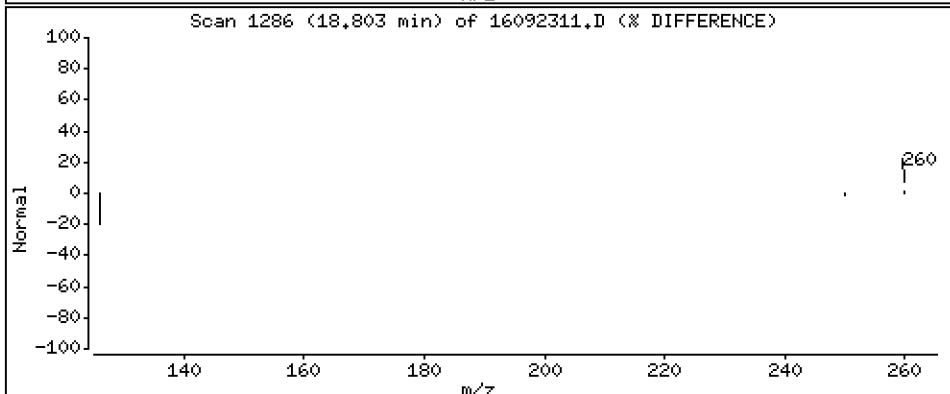
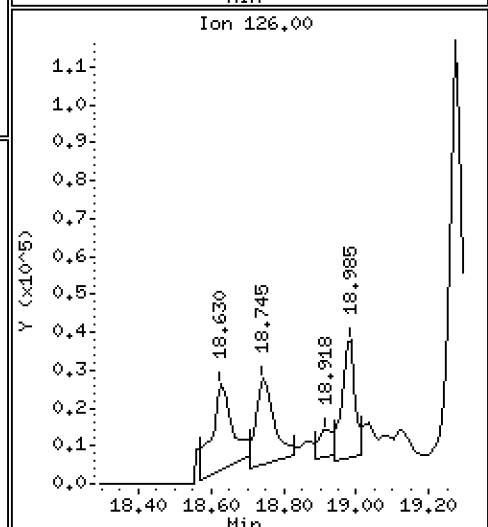
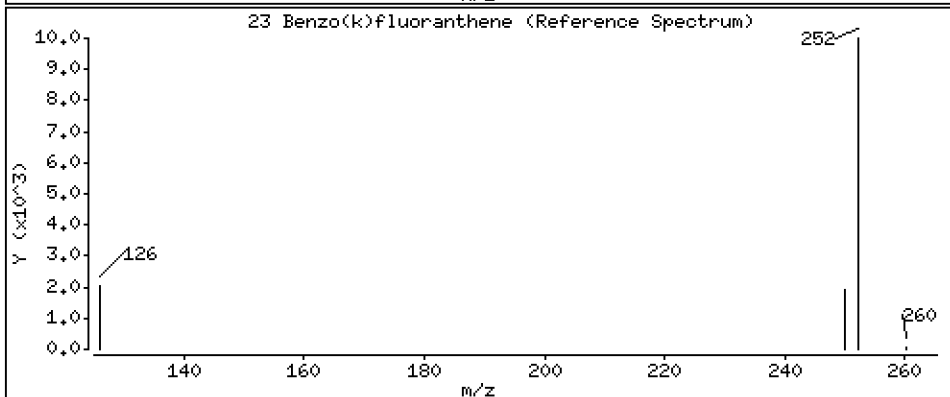
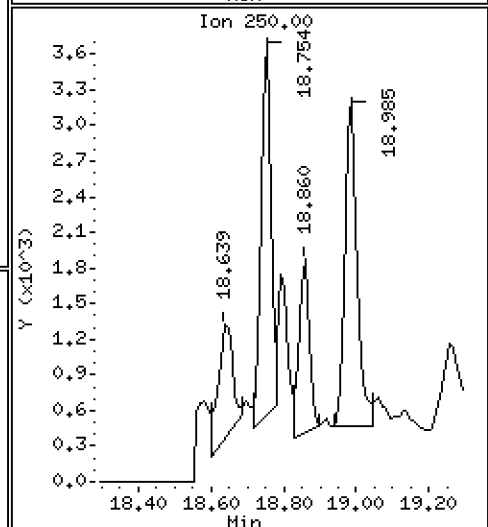
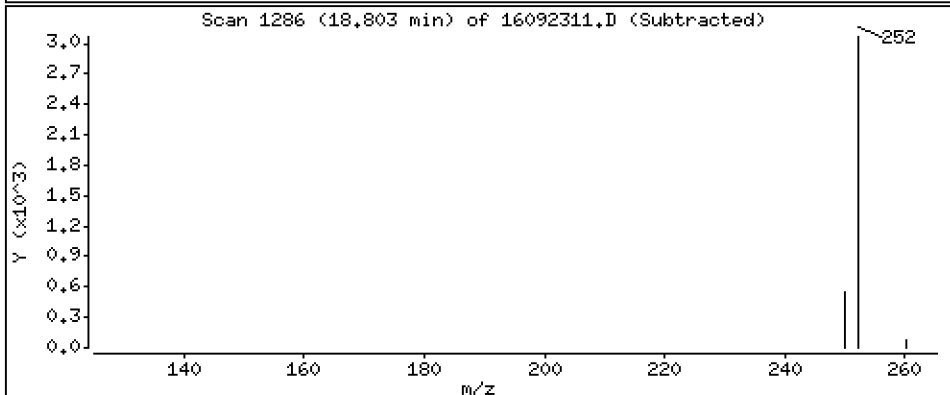
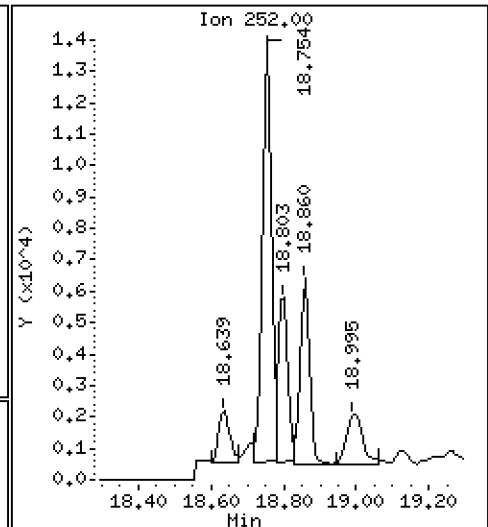
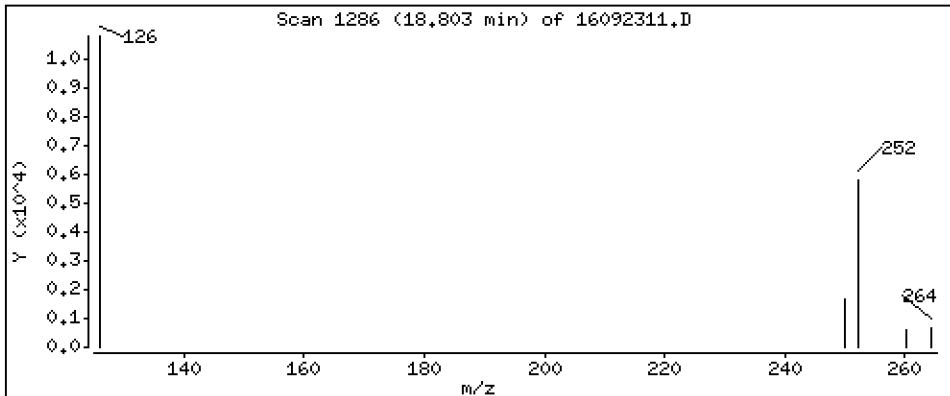
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 3,30 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

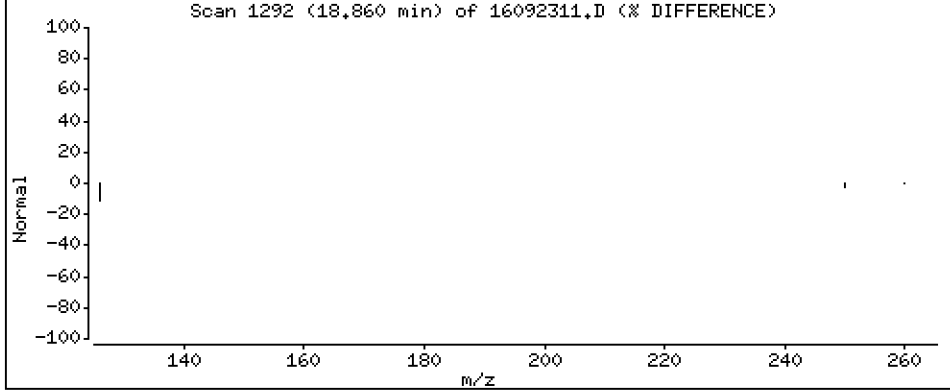
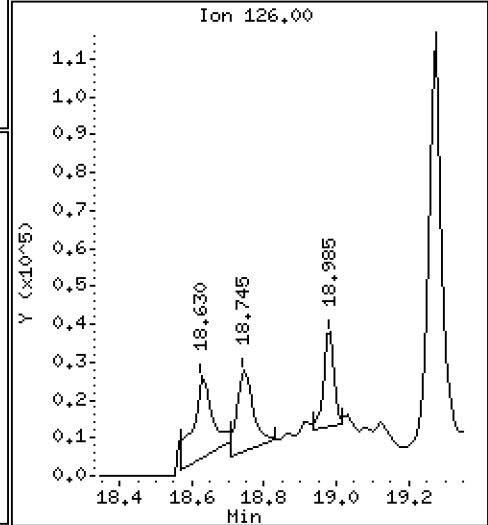
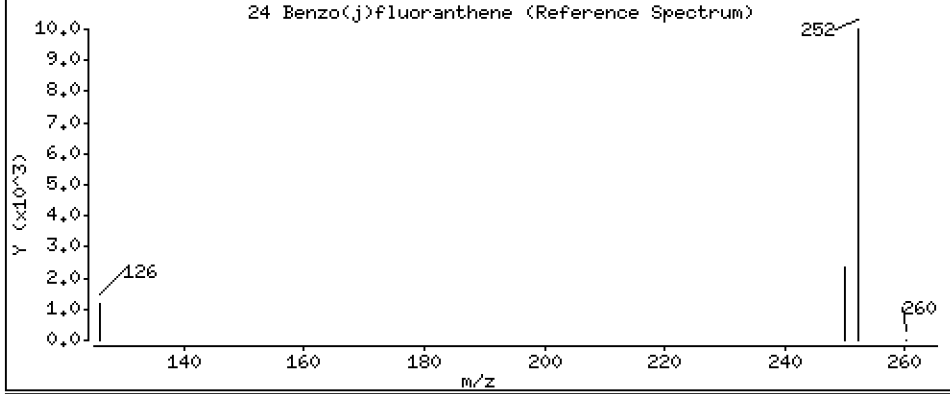
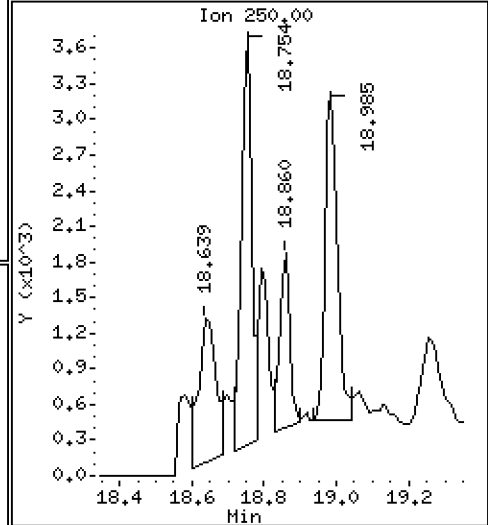
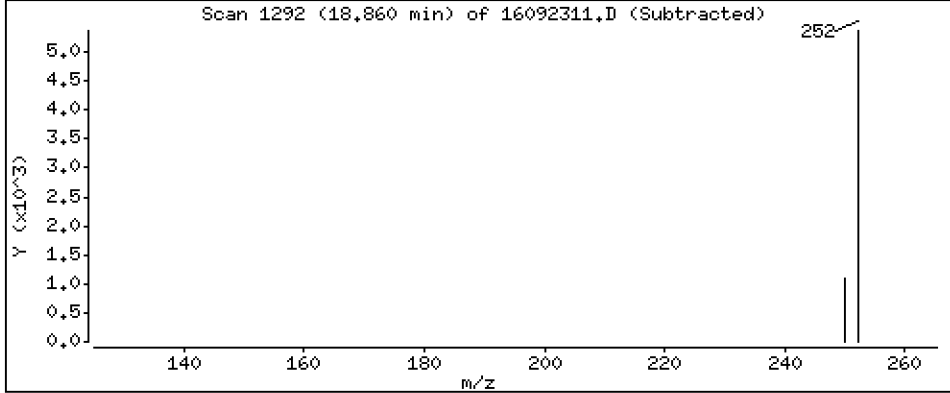
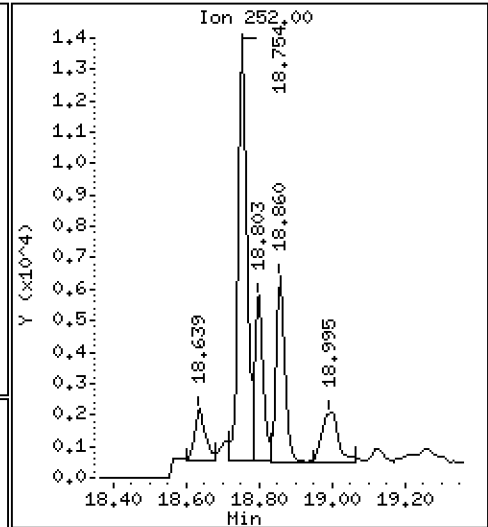
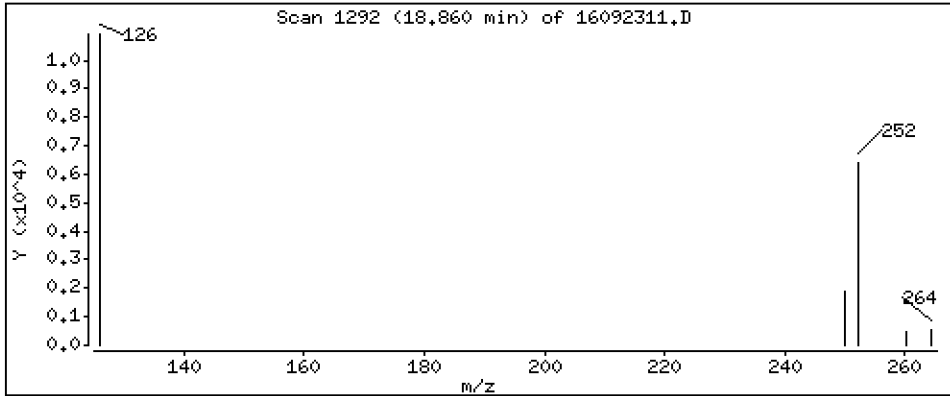
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 3,94 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

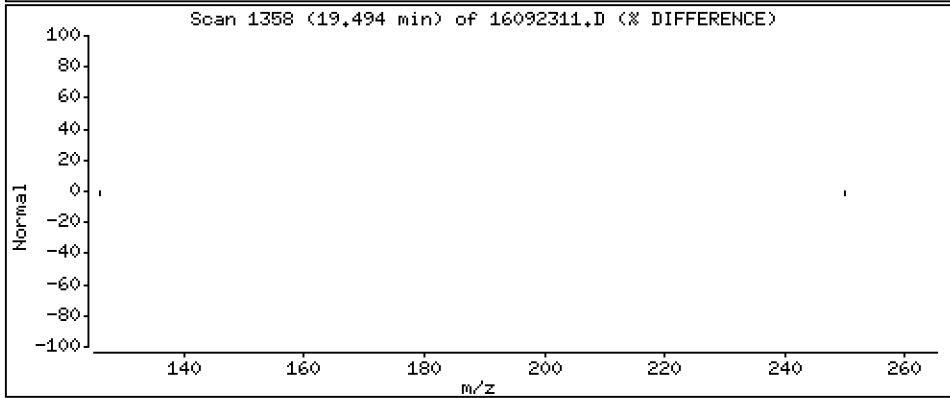
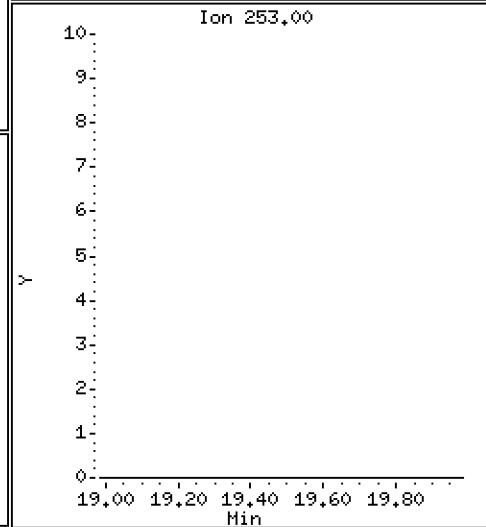
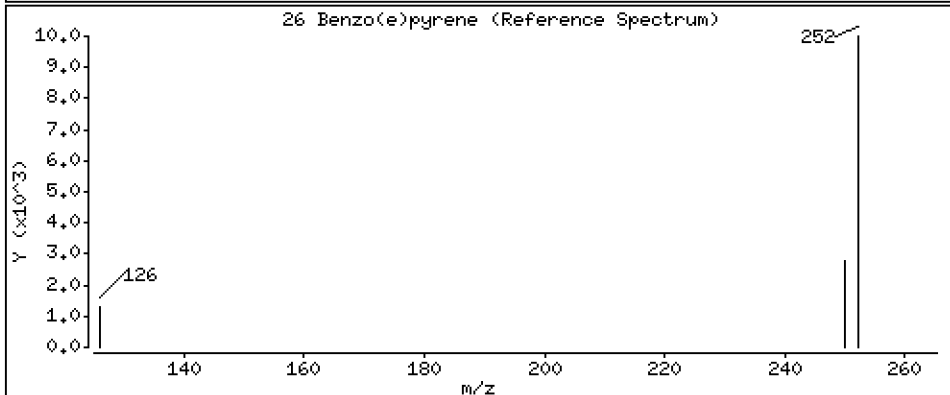
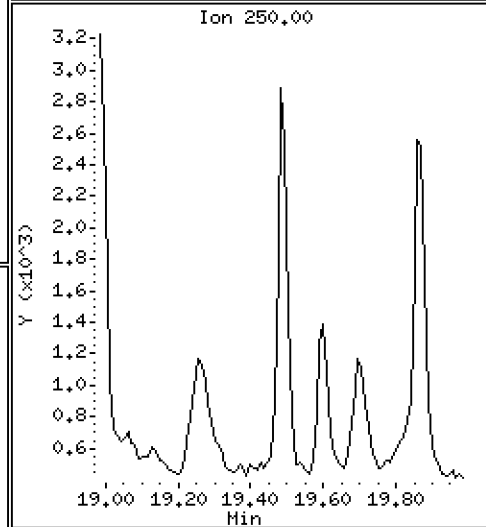
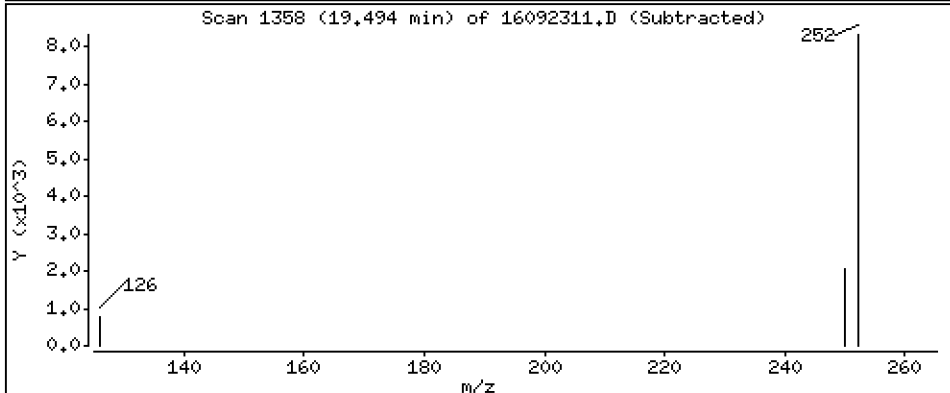
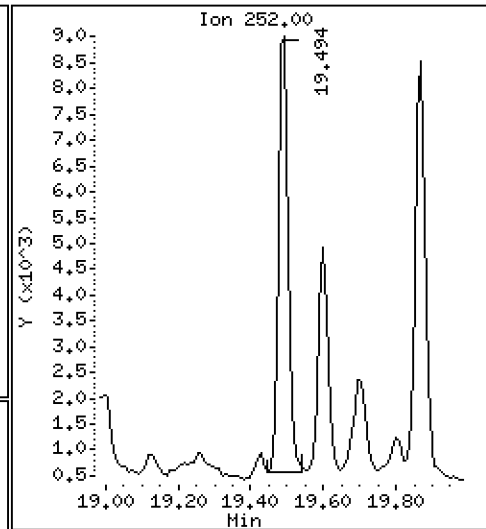
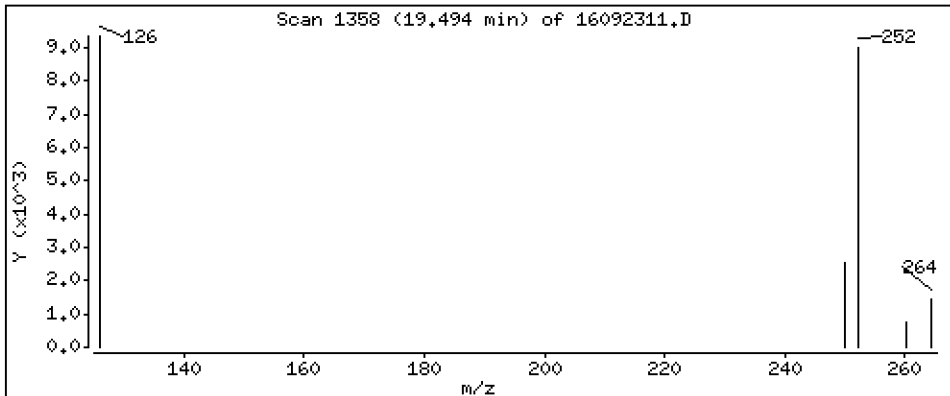
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 6,54 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

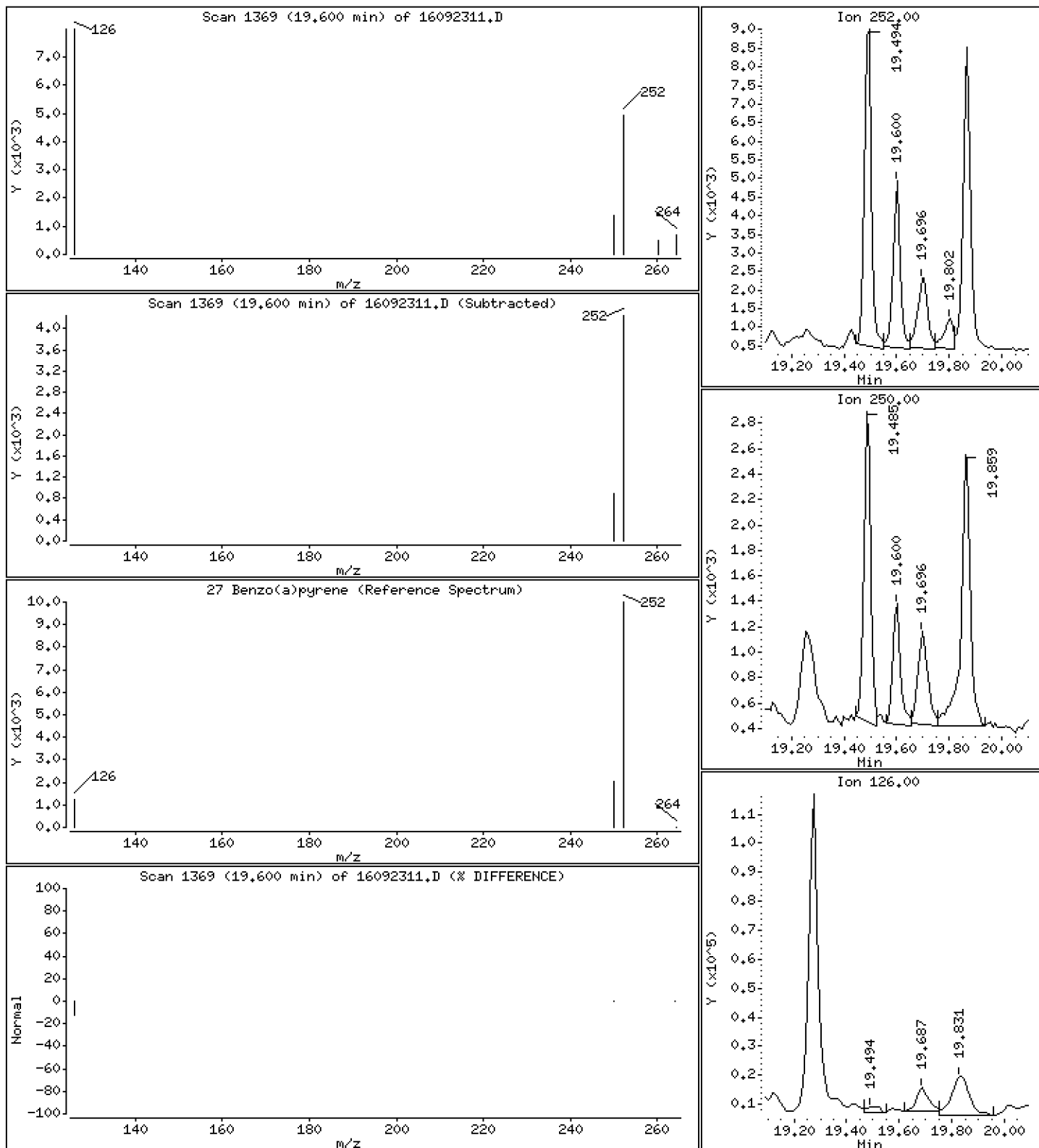
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 3,76 ng/mL



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

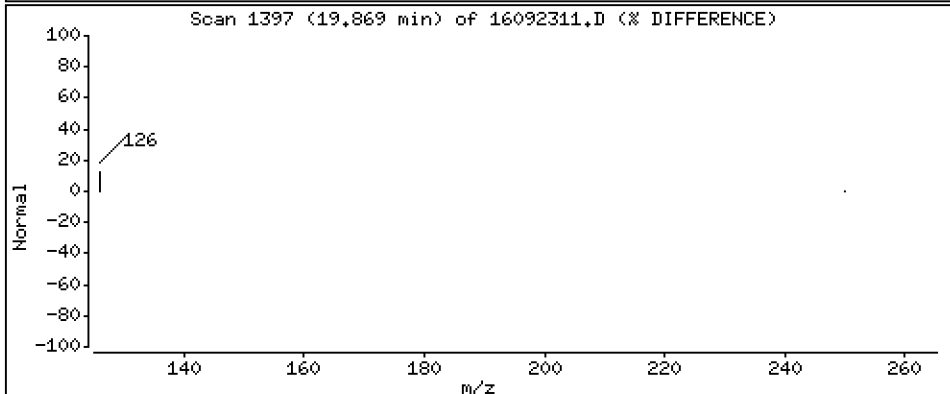
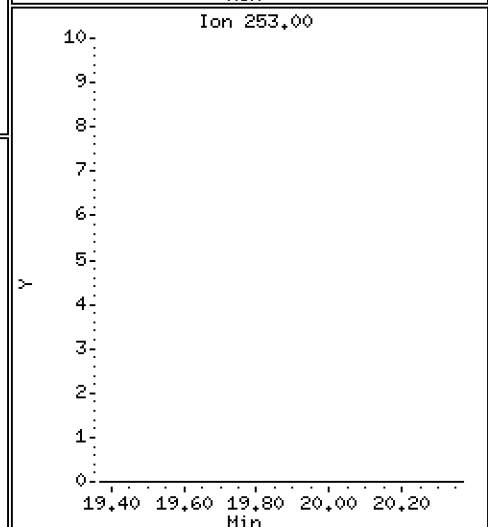
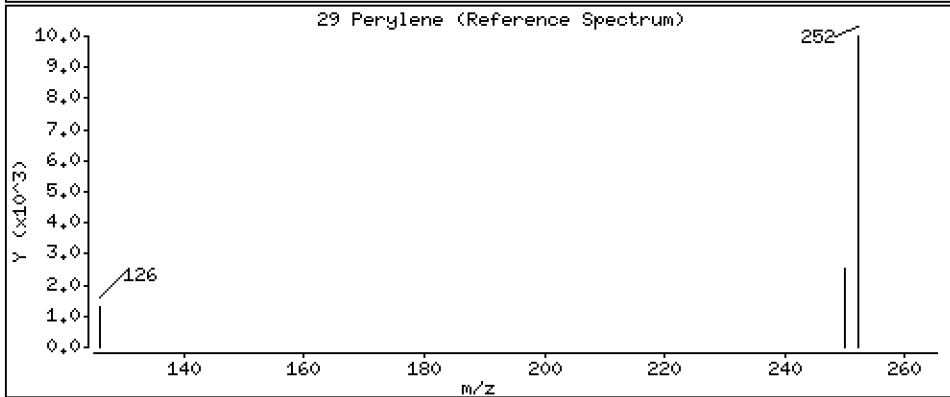
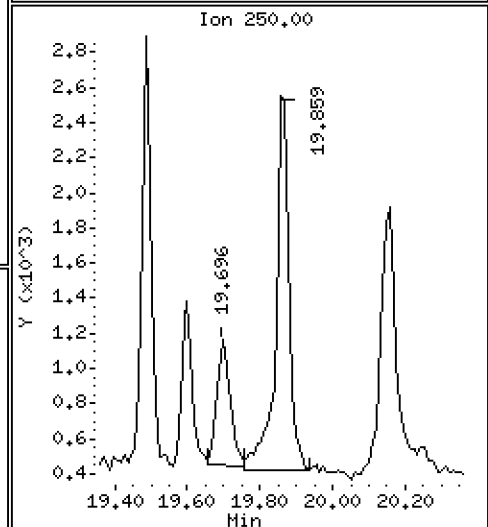
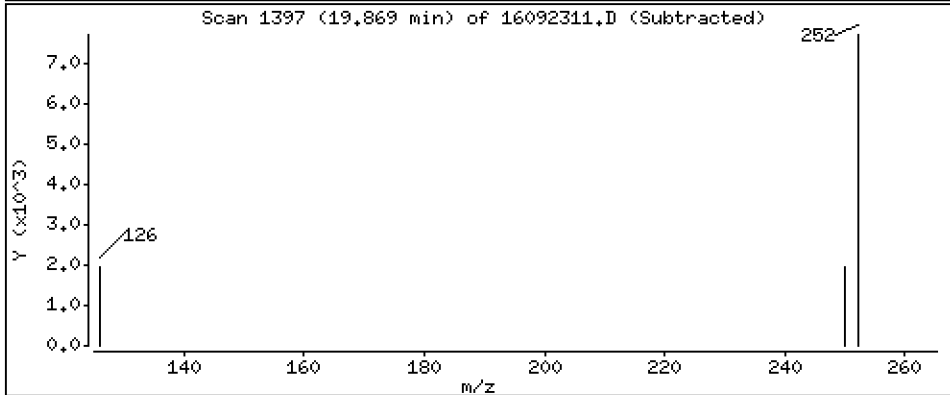
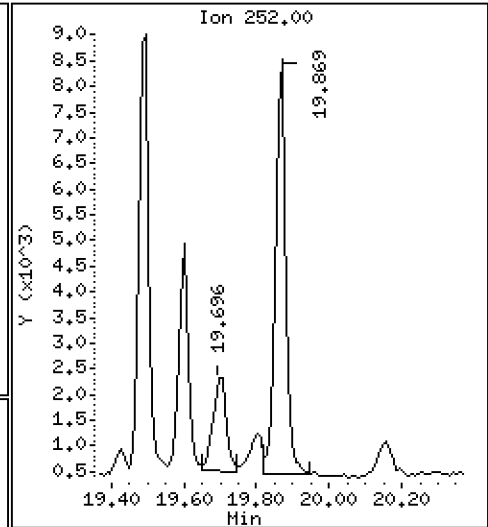
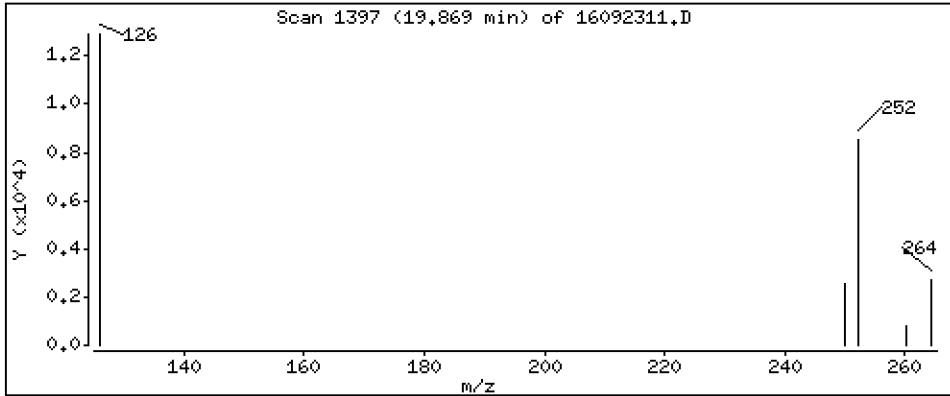
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 6,74 ng/mL

29 Perylene



Date : 23-SEP-2016 13:01

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-07

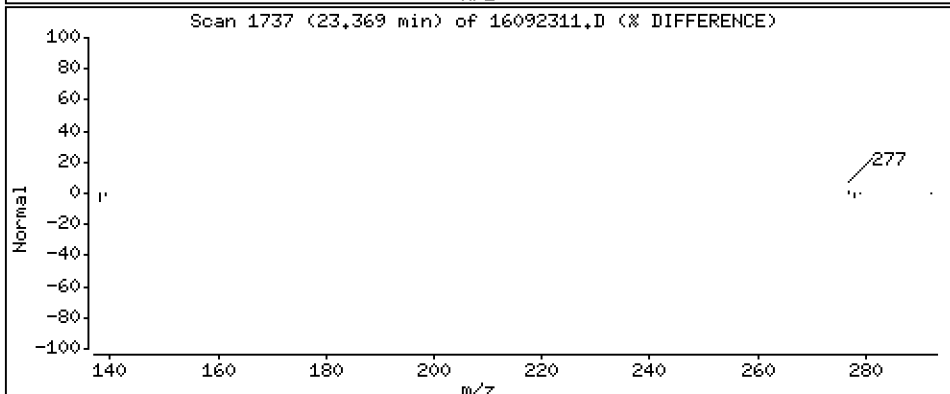
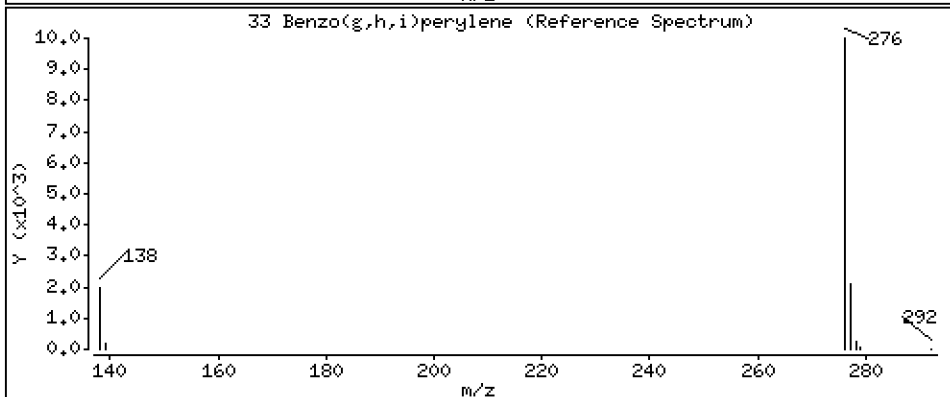
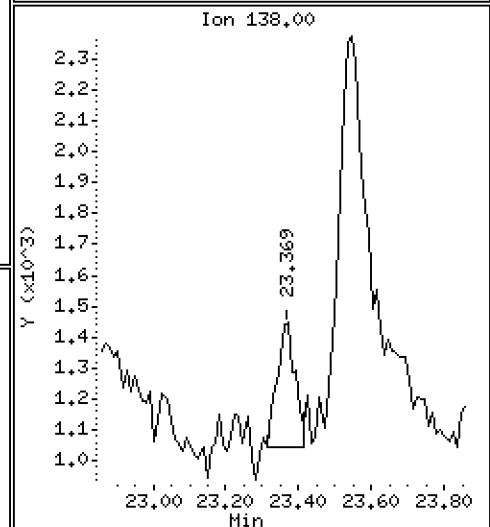
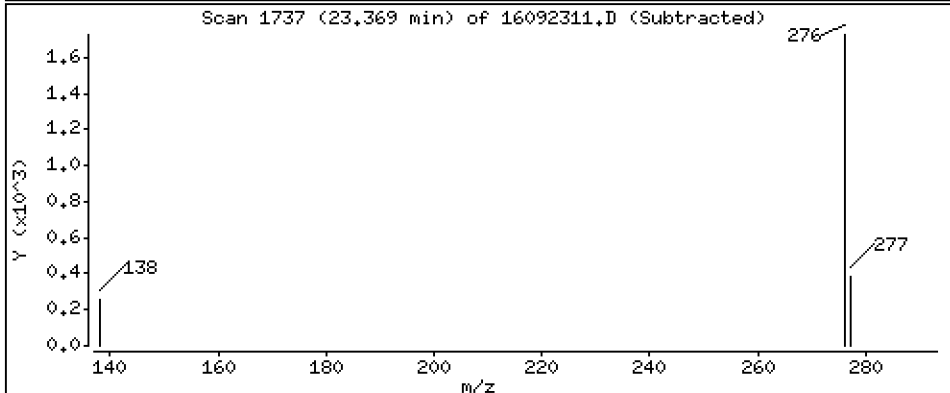
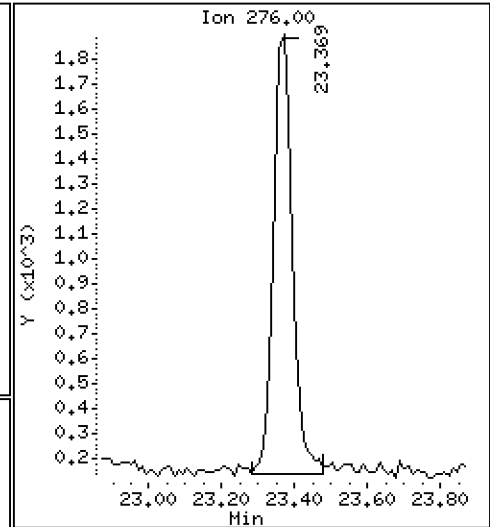
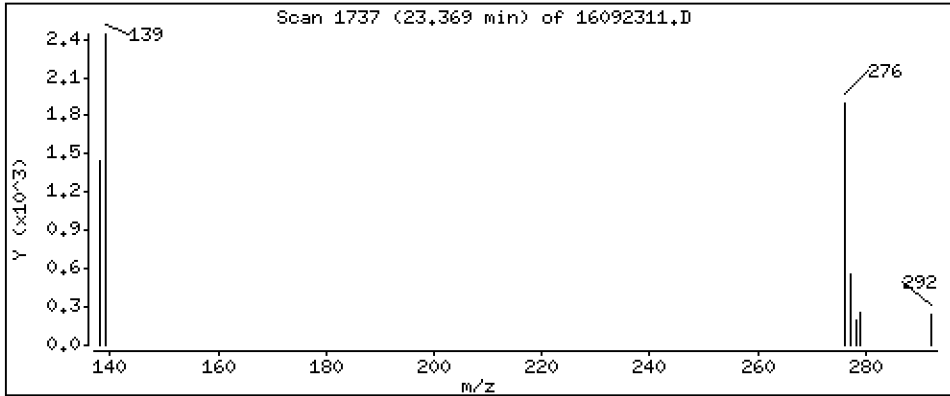
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 2,72 ng/mL

33 Benzo(g,h,i)perylene



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092311.D

Lab Smp Id: 16I0160-07

Inj Date : 23-SEP-2016 13:01

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-07

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 14

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.581	6.592	(1.000)	461726	200.000	
2 Naphthalene	128		6.613	6.623	(1.005)	210205	79.3373	79.3
\$ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.148)	270728	184.695	185
4 2-Methylnaphthalene	142		7.611	7.621	(1.156)	97427	53.4296	53.4
5 1-Methylnaphthalene	142		7.863	7.884	(1.195)	54679	32.9435	32.9
6 Acenaphthylene	152		9.429	9.440	(0.984)	20920	8.32069	8.32
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	270402	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	101658	60.7074	60.7
9 Dibenzofuran	168		9.849	9.860	(1.028)	71366	29.4082	29.4
\$ 10 Flourene-d10	174		10.422	10.432	(1.087)	8748	6.38649	6.39 (M)
11 Fluorene	166		10.475	10.485	(1.093)	113725	58.7298	58.7
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	488728	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	579982	176.659	177
\$ 14 Anthracene-d10	188		12.320	12.330	(1.005)	115659	43.8187	43.8
15 Anthracene	178		12.359	12.358	(1.008)	55328	17.2757	17.3
\$ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	594176	250.086	250
17 Fluoranthene	202		14.395	14.395	(1.174)	508418	174.904	175
18 Pyrene	202		14.885	14.885	(0.876)	281539	91.3771	91.4
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	31099	12.0473	12.0
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	397691	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	49408	18.2209	18.2
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	23056	8.90434	8.90
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	9530	3.30393	3.30
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	9968	3.93901	3.94
\$ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	297679	119.709	120
26 Benzo(e)pyrene	252		19.494	19.484	(0.984)	16247	6.53733	6.54
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	8914	3.75973	3.76
* 28 Perylene-d12	264		19.801	19.801	(1.000)	485256	200.000	
29 Perylene	252		19.869	19.868	(1.003)	16354	6.73565	6.74
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	334219	209.536	210
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	6165	2.71632	2.72

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092311.D
 Lab Smp Id: 16I0160-07
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	461726	-12.45
7 Acenaphthene-d10	297518	148759	595036	270402	-9.11
12 Phenanthrene-d10	522042	261021	1044084	488728	-6.38
20 Chrysene-d12	389499	194750	778998	397691	2.10
28 Perylene-d12	430626	215313	861252	485256	12.69

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.58	-0.16
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092311.D

Lab ID: 16I0160-07

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 13:01

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

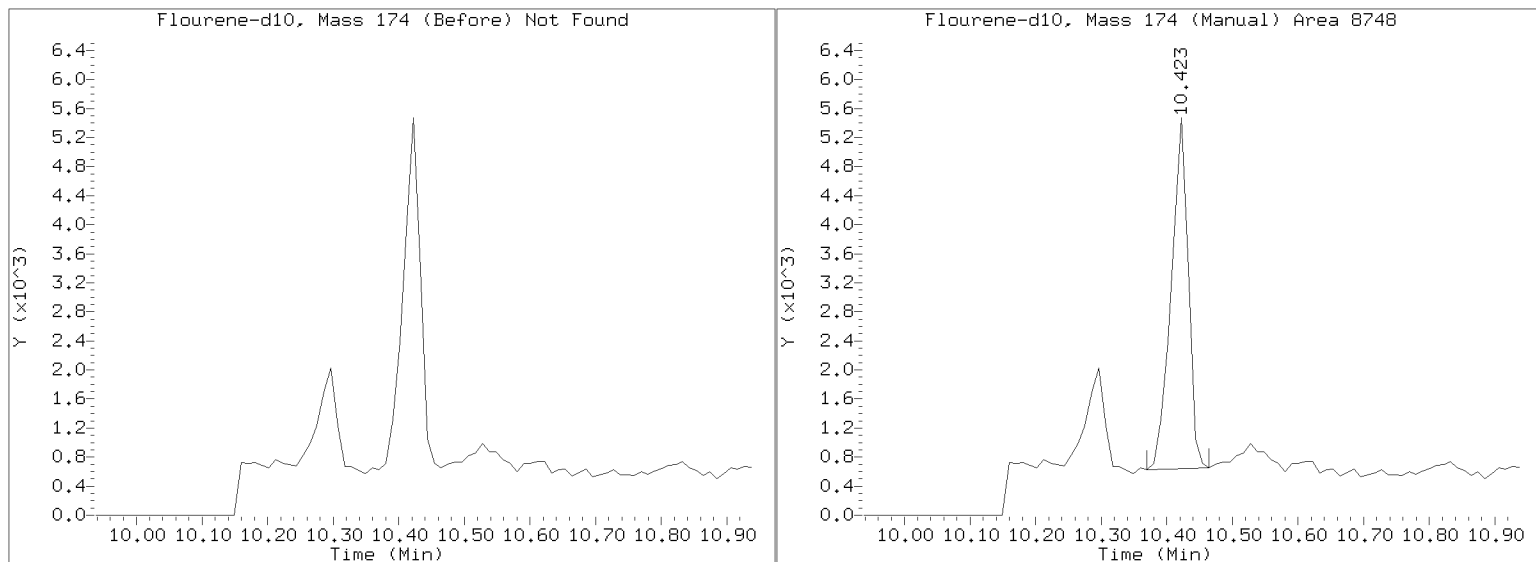
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092311.D

Injection Date: 23-SEP-2016 13:01

Lab ID:16I0160-07 Client ID:

Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory: Analytical Resources, Inc. SDG: 1610160
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 1610160-09 File ID: 16092312.D
 Sampled: 09/09/16 11:51 Prepared: 09/10/16 11:10 Analyzed: 09/23/16 13:32
 Solids: Preparation: EPA 3550C (Ultrasonic) Initial/Final: 0.886 g / 0.1 mL
 Batch: BEI0260 Sequence: SEI0321 Calibration: ZI00066
 Instrument: NT11 Column: RXi-17Sil-MS

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	6.72	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	5.39	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	5.45		1.13	1.13
86-73-7	Fluorene	1	5.25		1.13	1.13
85-01-8	Phenanthrene	1	18.6		1.13	1.13
120-12-7	Anthracene	1	2.05		1.13	1.13
206-44-0	Fluoranthene	1	18.4		1.13	1.13
129-00-0	Pyrene	1	8.93		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.59		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzo(a)fluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	19.4	57.3	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	23.6	69.6	30 - 160	
Fluoranthene-d10	33.860	27.0	79.9	30 - 160	
Fluorene-d10	21.163	0.288	1.36	30 - 160	*
Anthracene-d10	21.163	3.72	17.6	30 - 160	*
Benzo(e)pyrene-d12	21.163	12.5	59.0	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092312.D

Date: 23-SEP-2016 13:32

Client ID:

Sample Info: 1610160-09

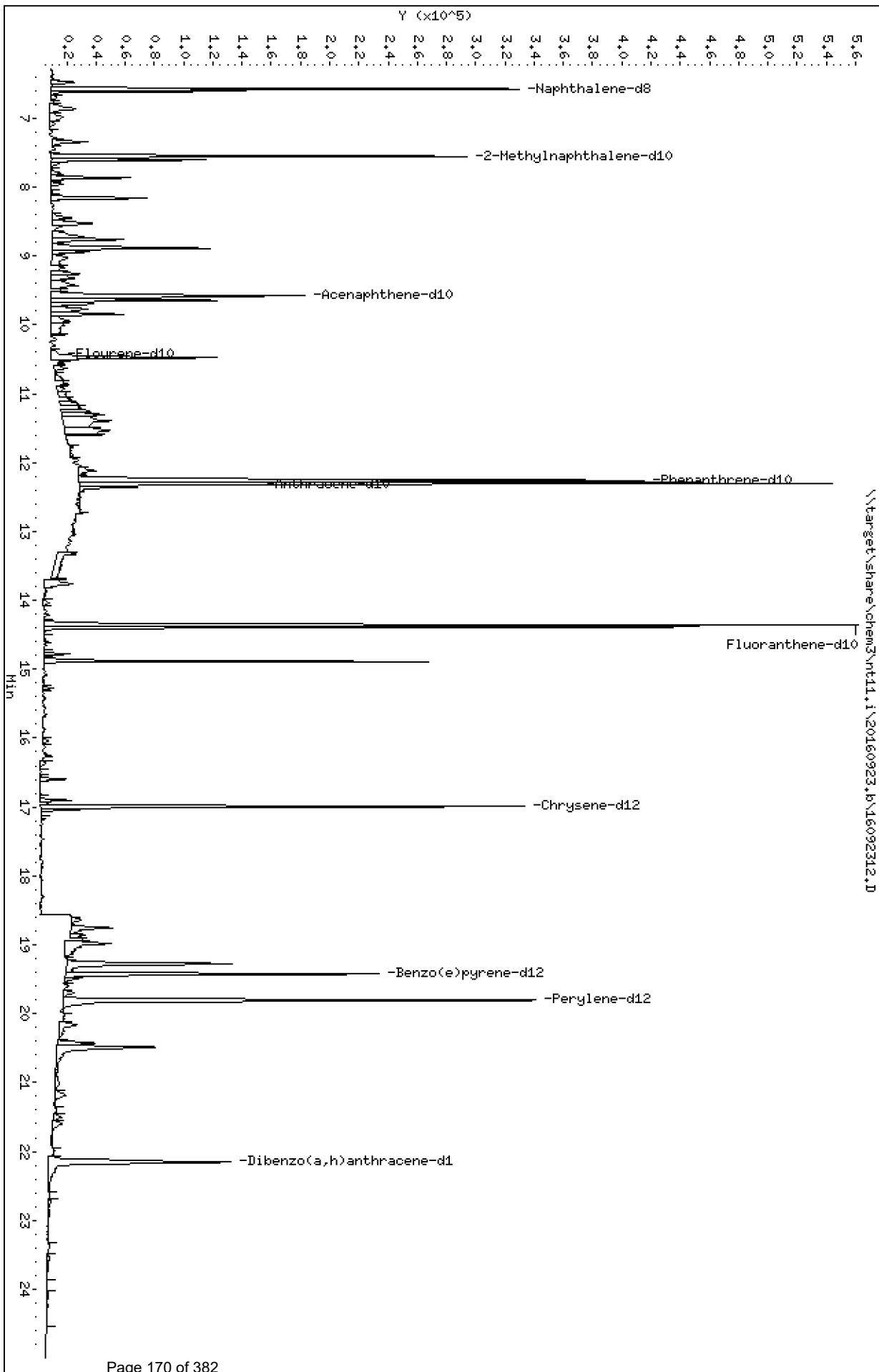
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160923.16\16092312.D



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

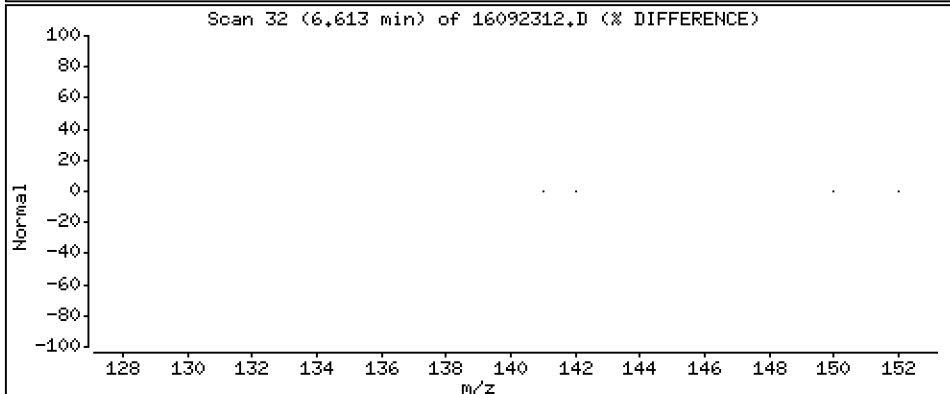
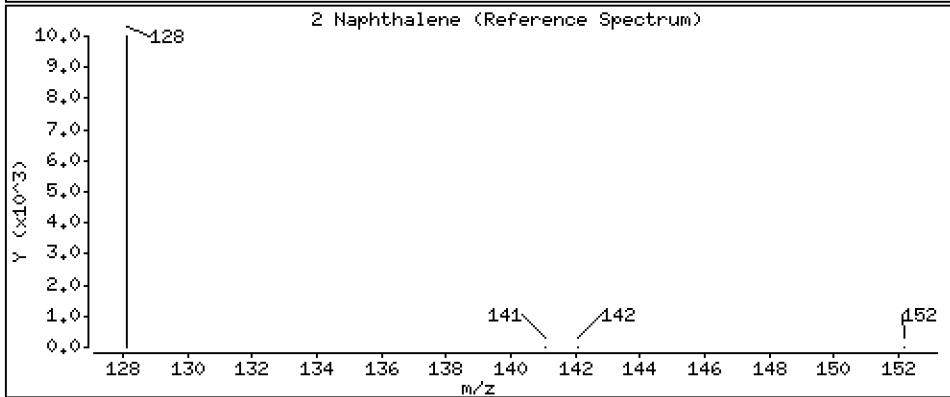
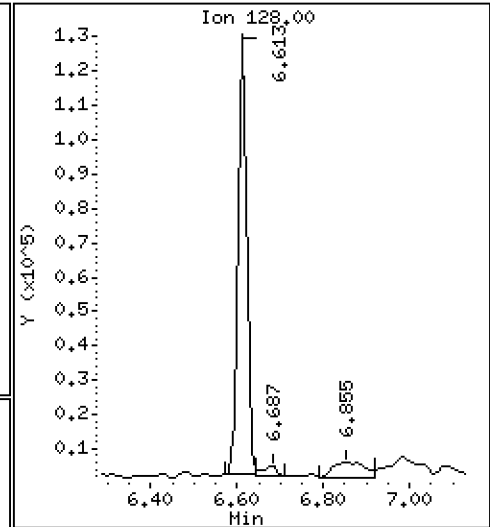
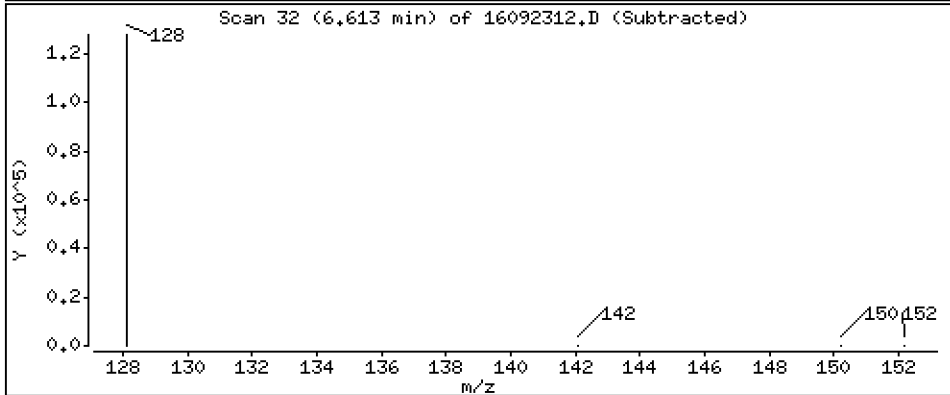
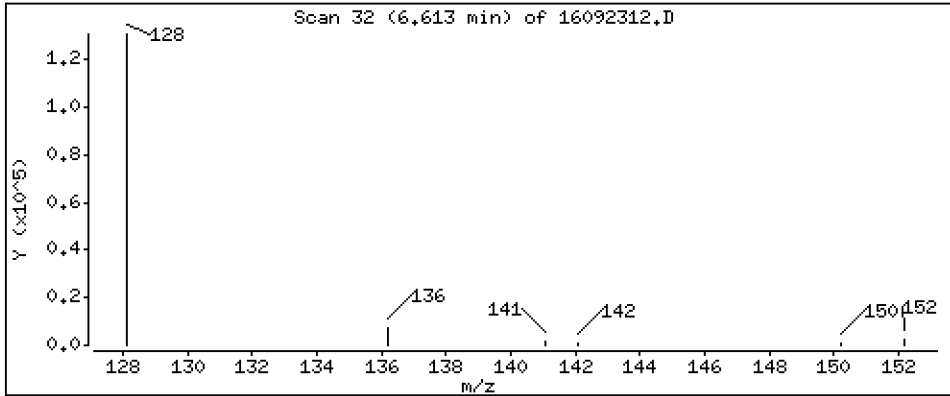
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 59,6 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

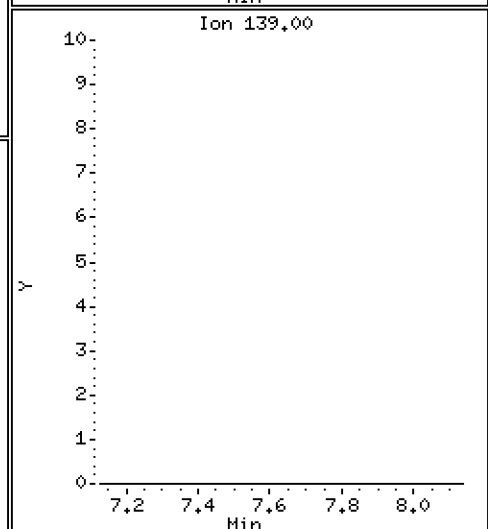
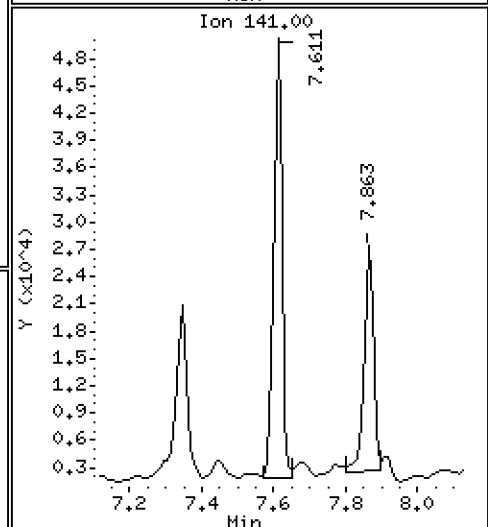
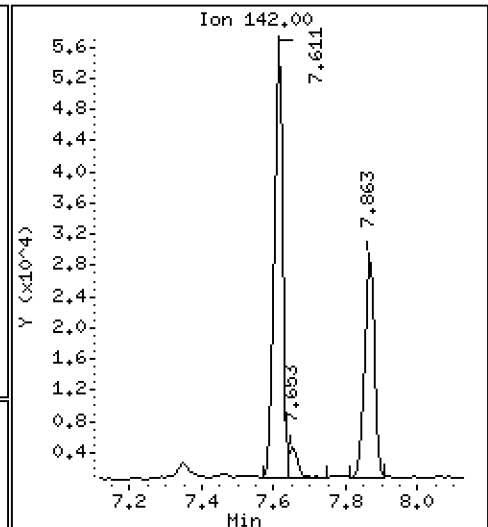
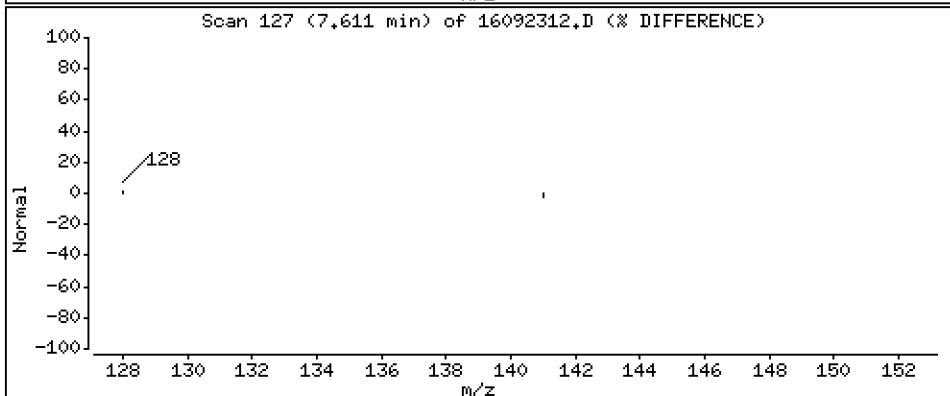
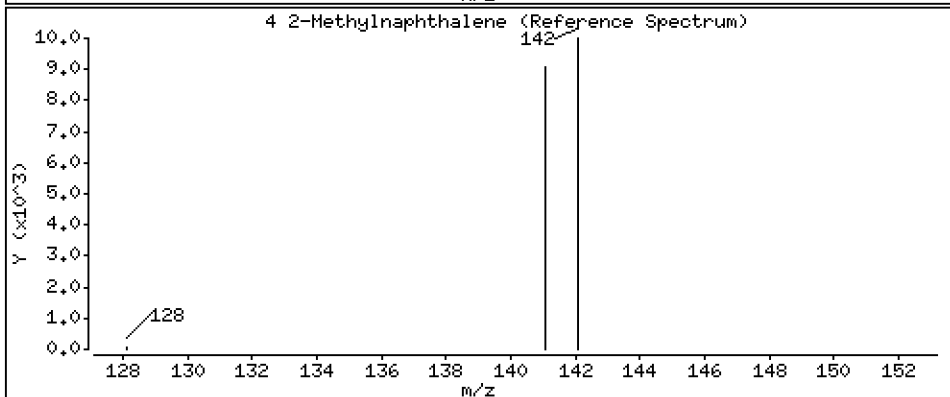
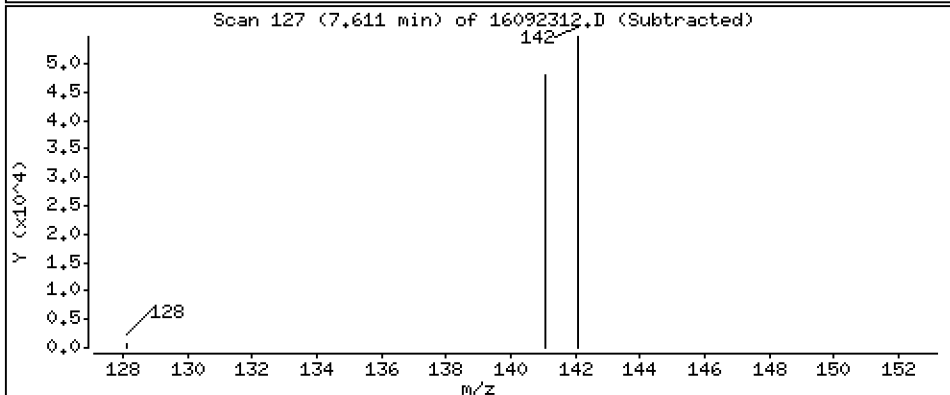
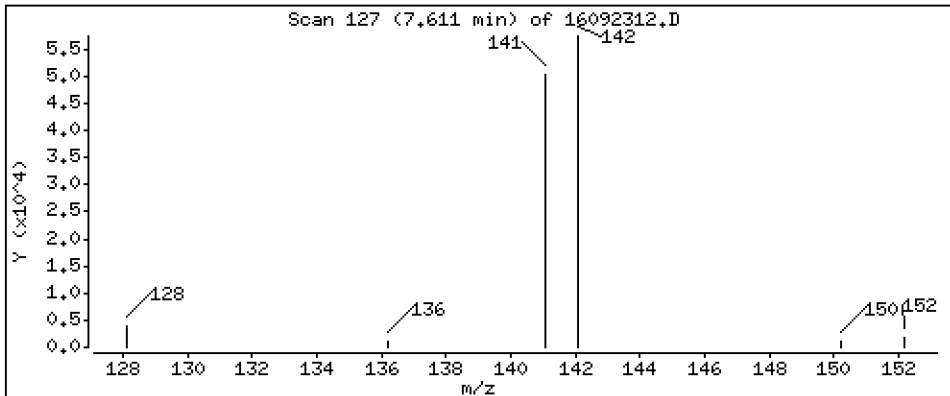
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4 2-Methylnaphthalene

Concentration: 47,7 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

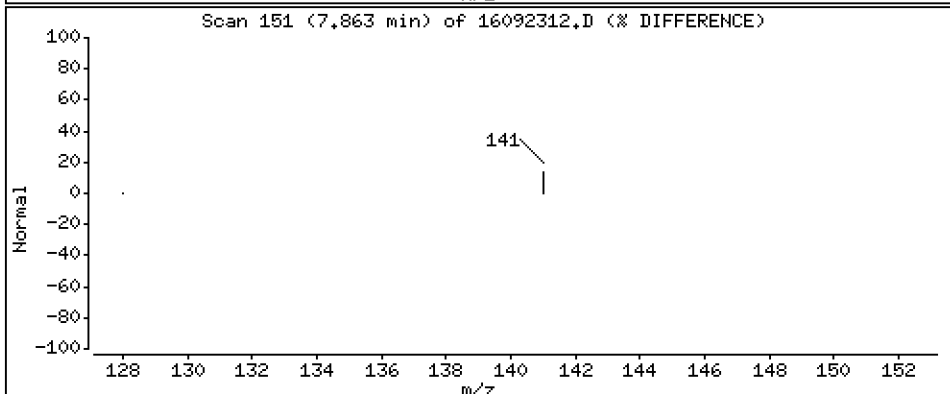
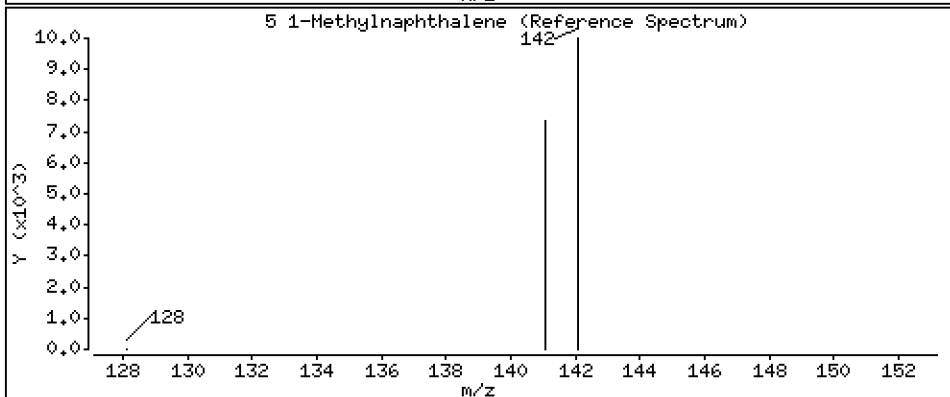
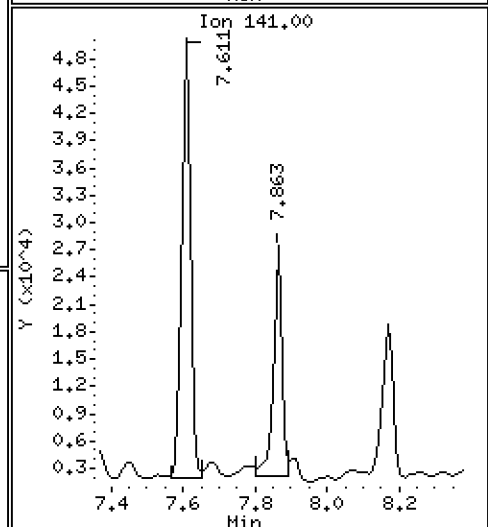
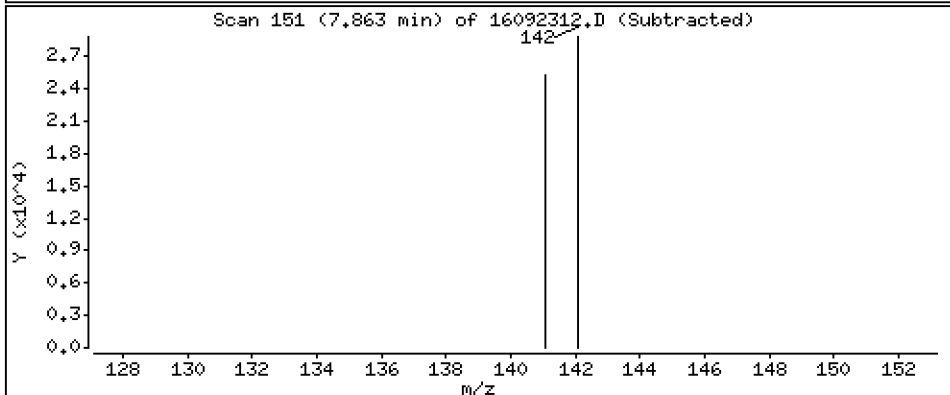
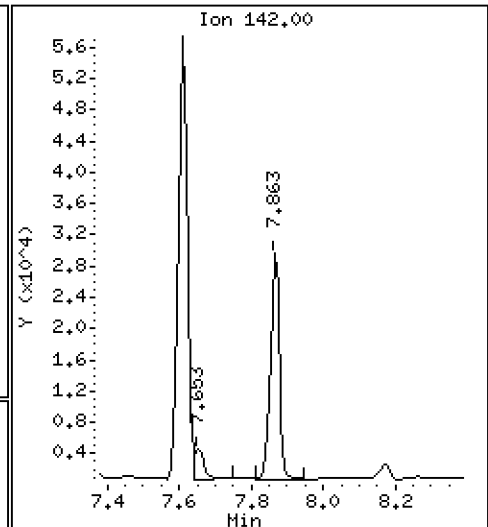
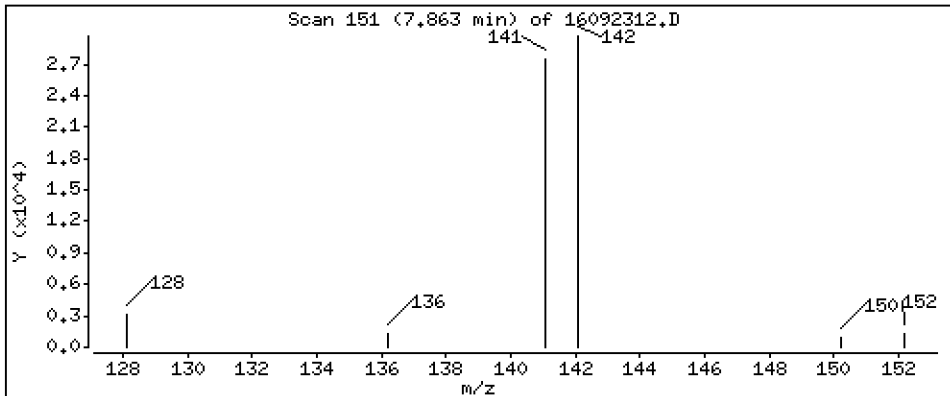
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 28,9 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

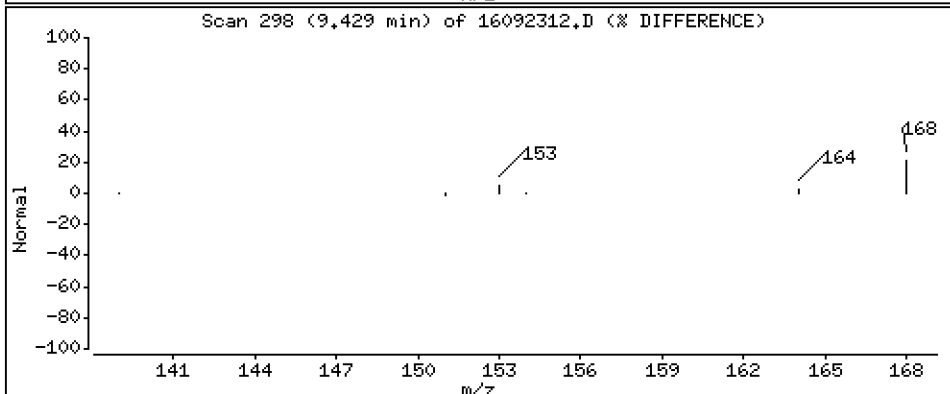
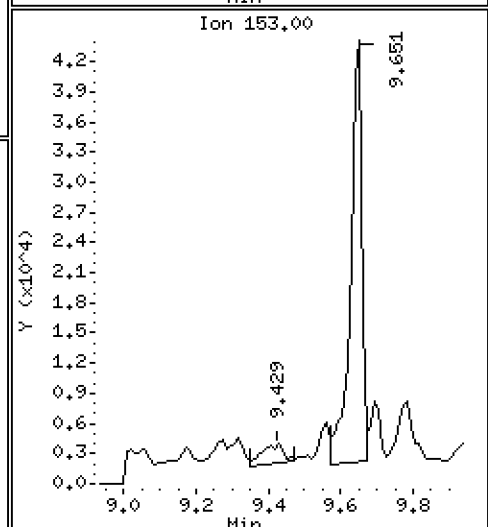
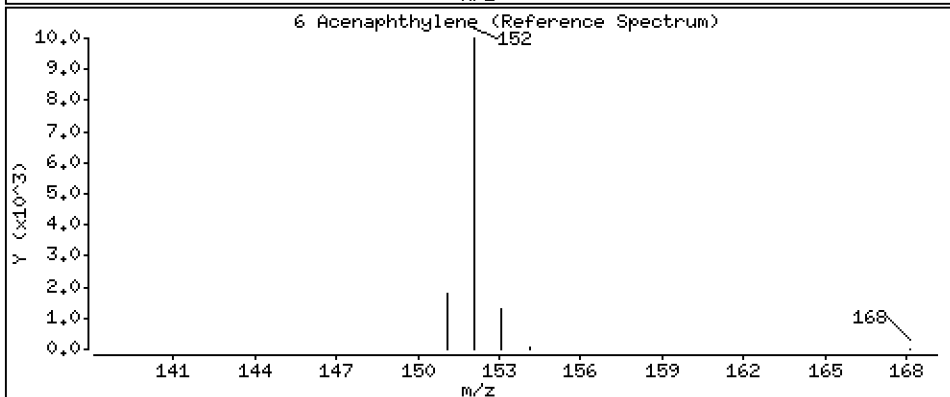
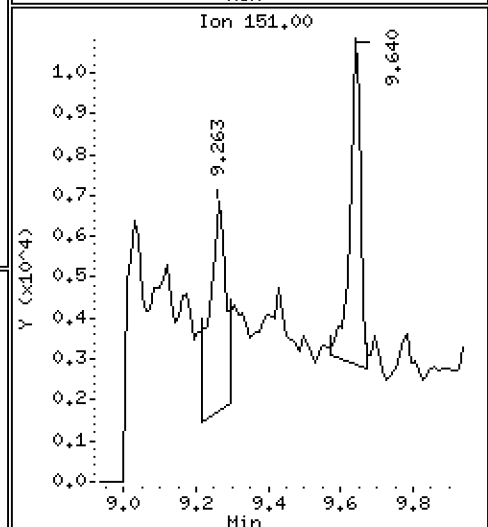
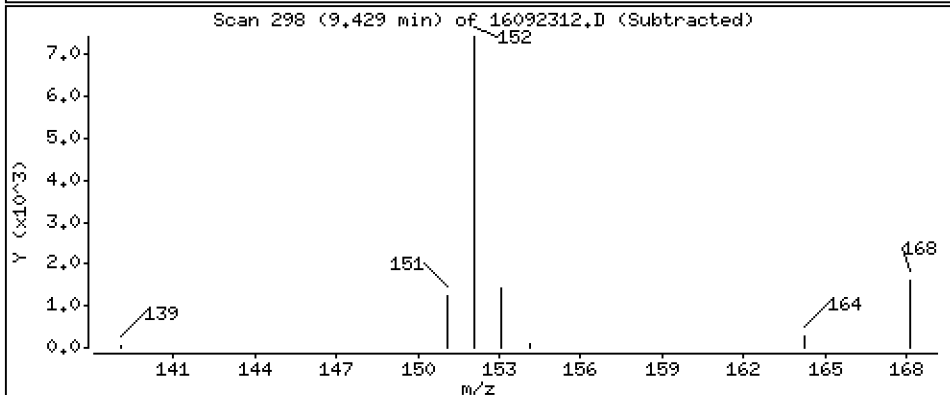
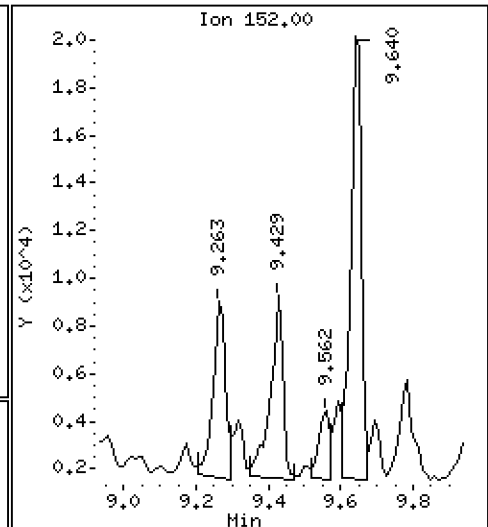
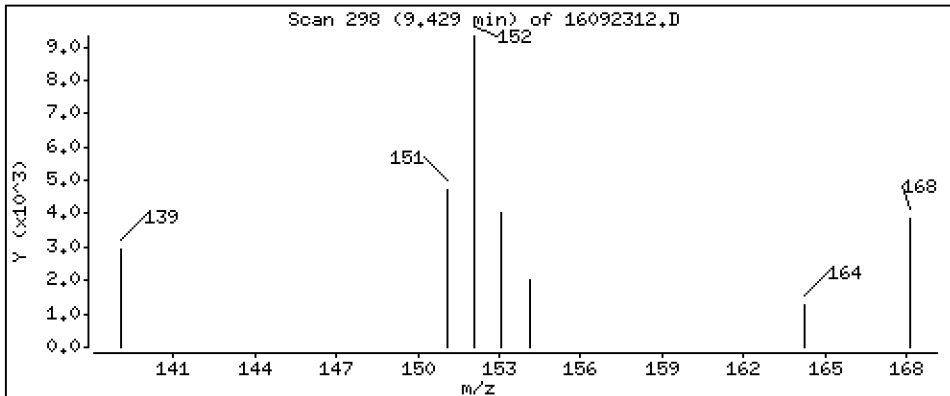
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 6.78 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

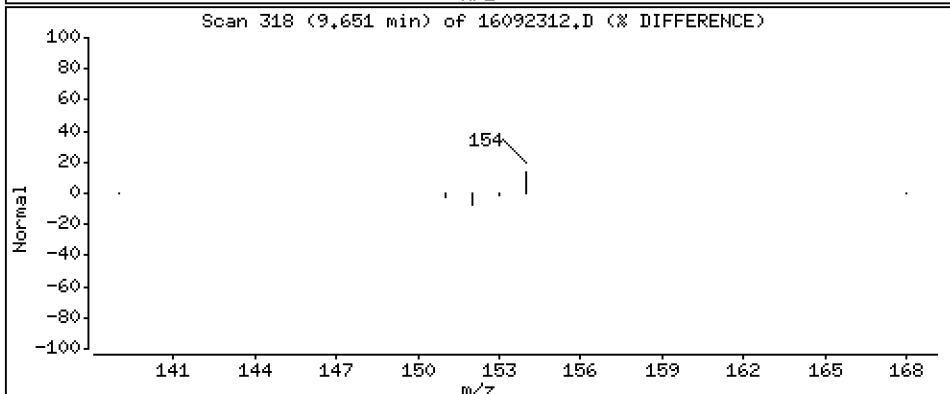
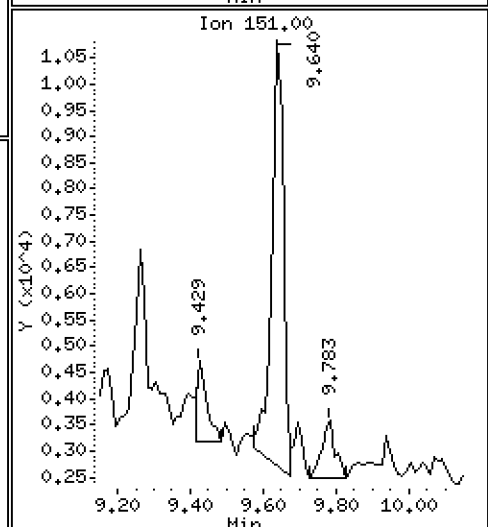
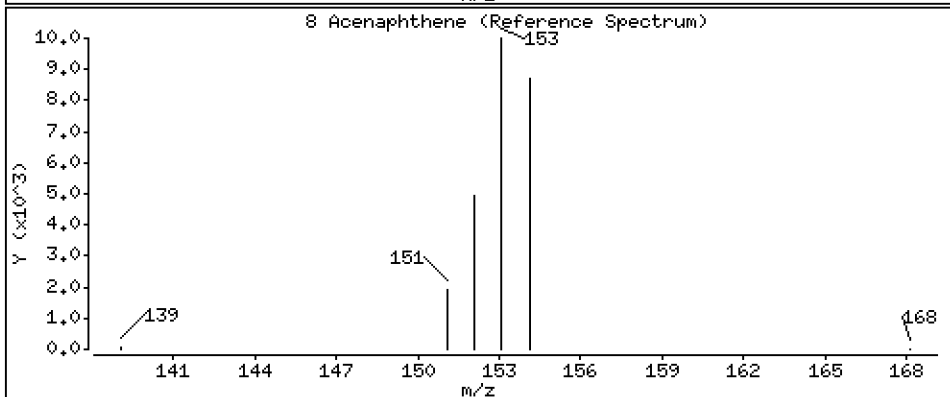
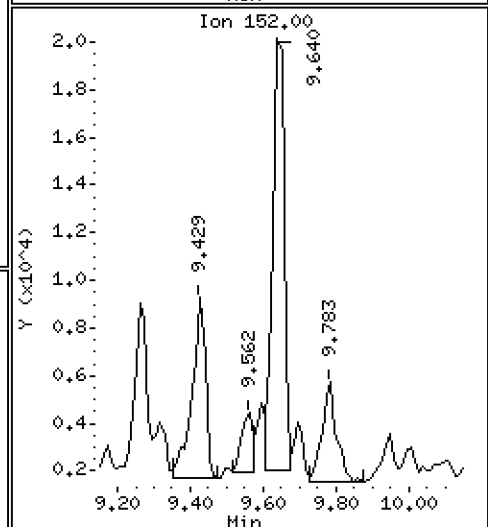
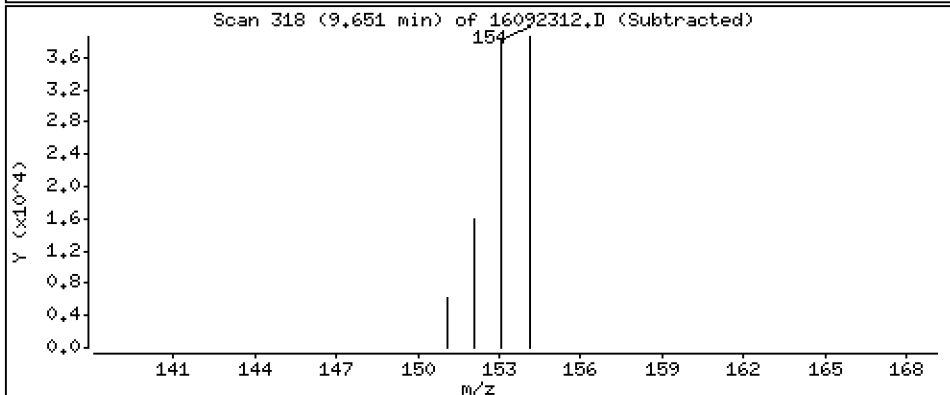
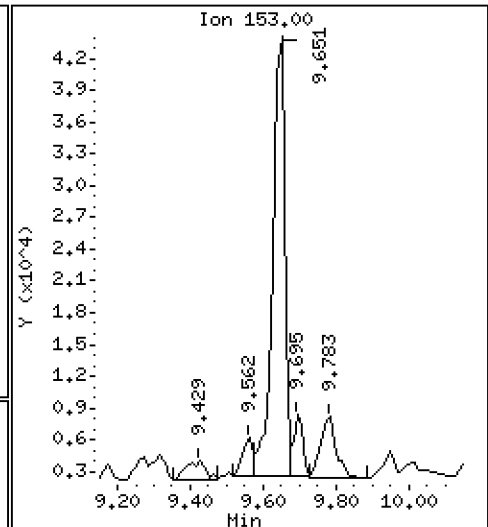
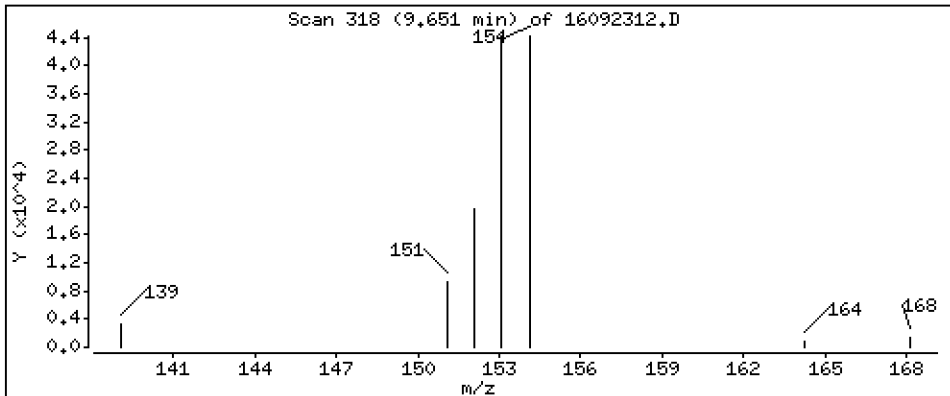
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

8 Acenaphthene

Concentration: 48,3 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

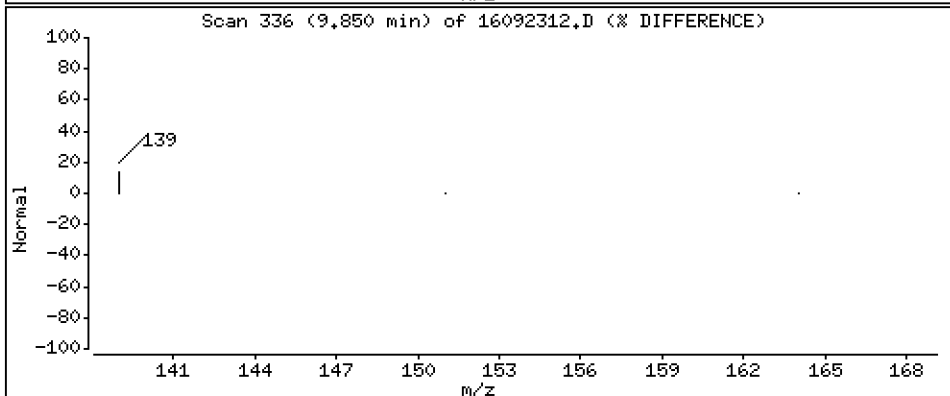
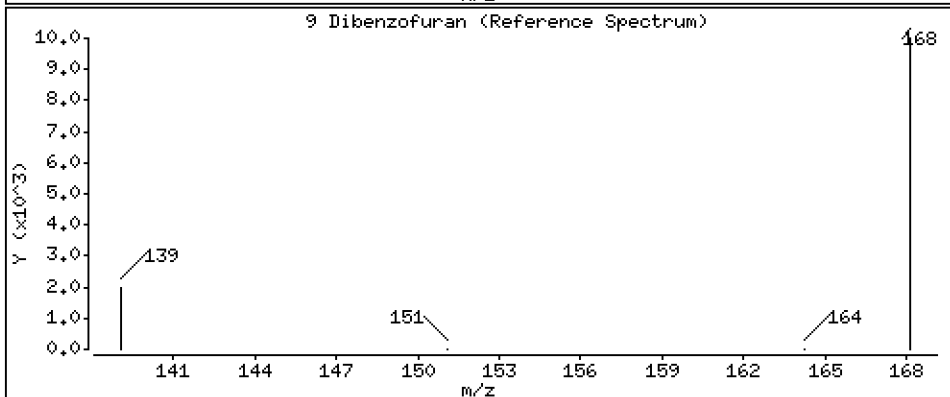
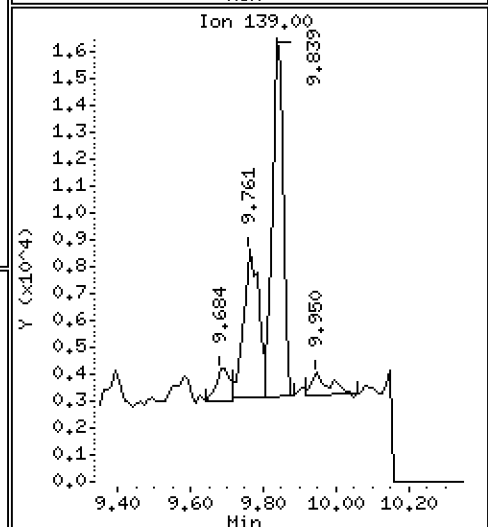
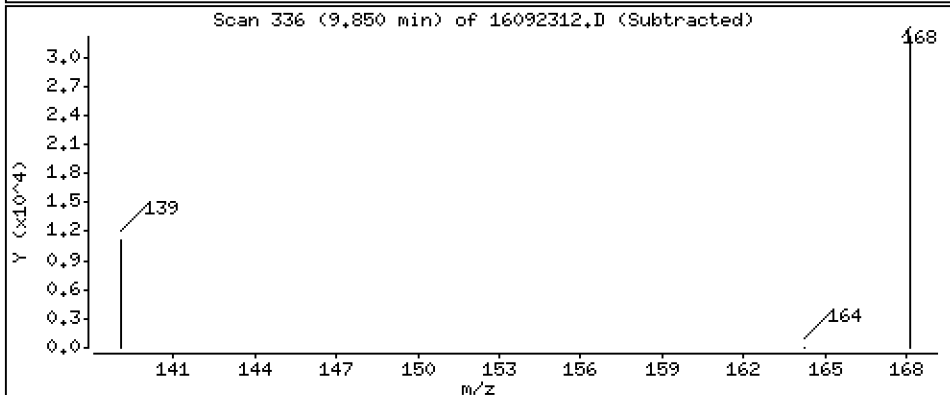
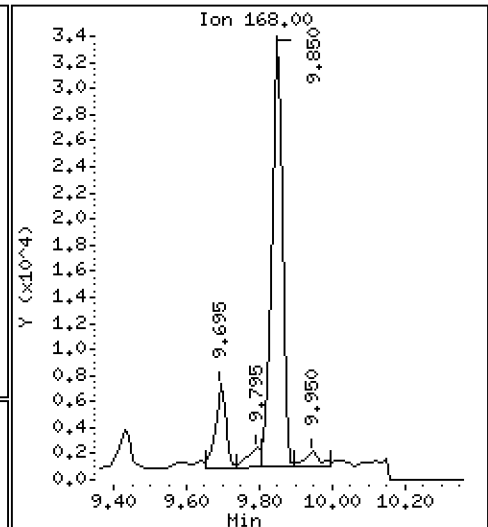
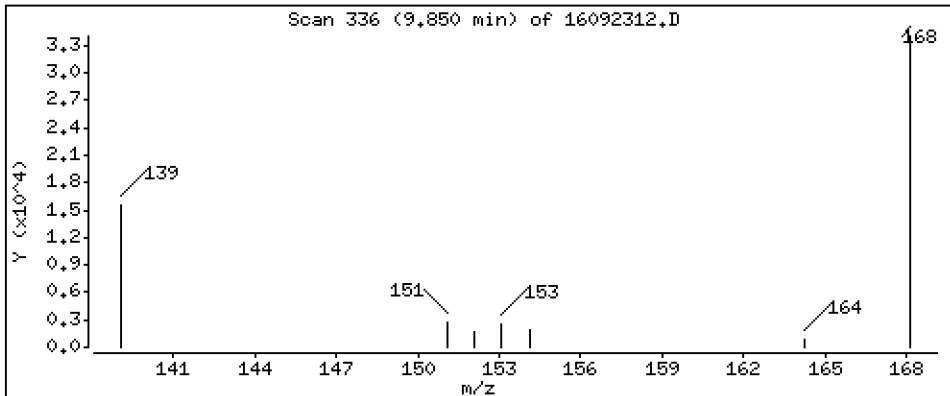
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 24,1 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

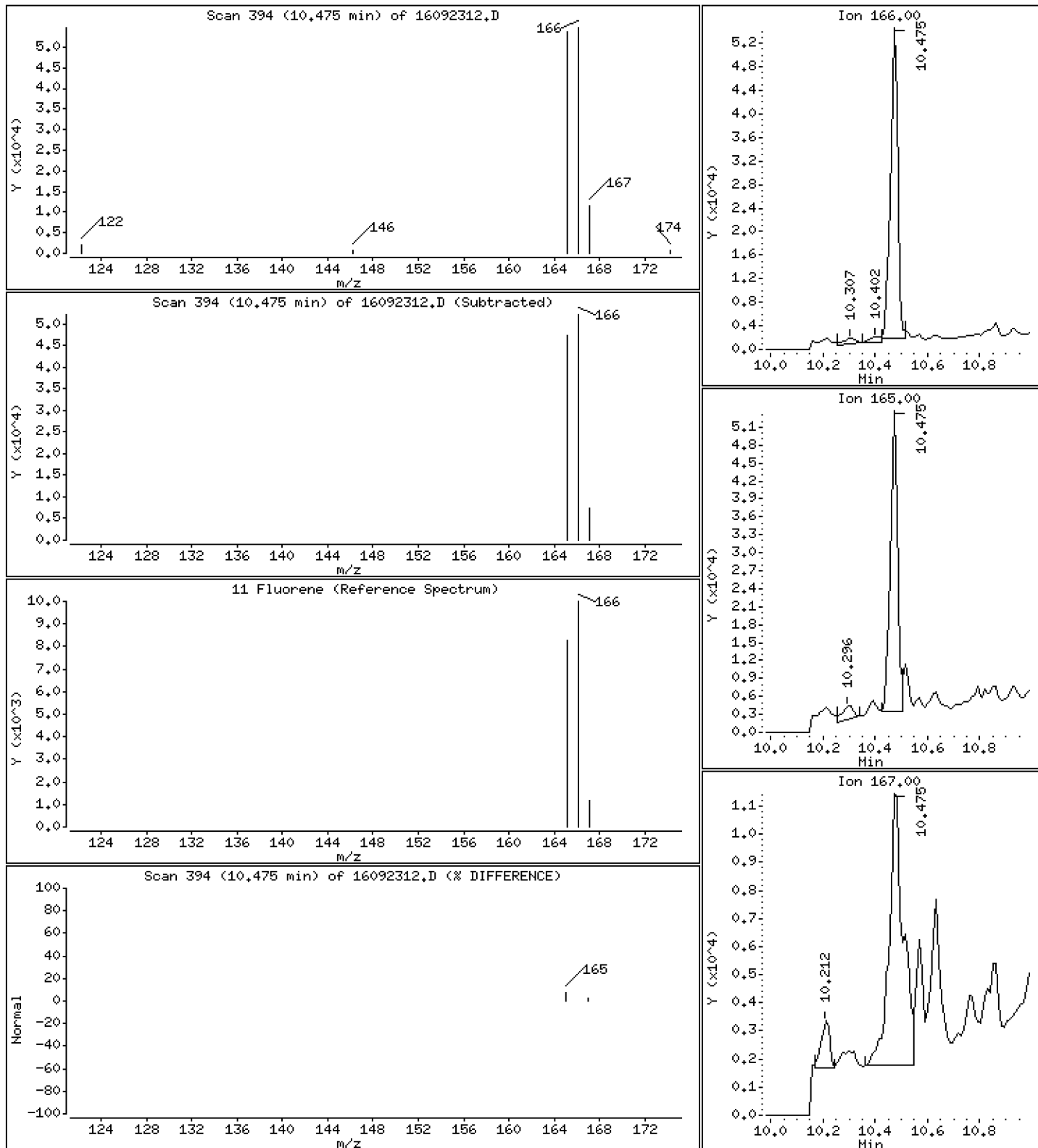
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 46,5 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

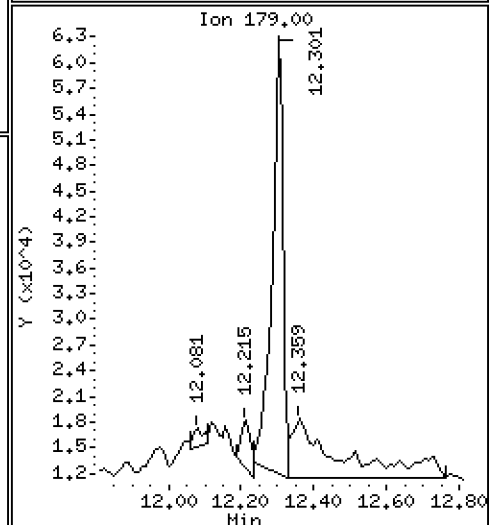
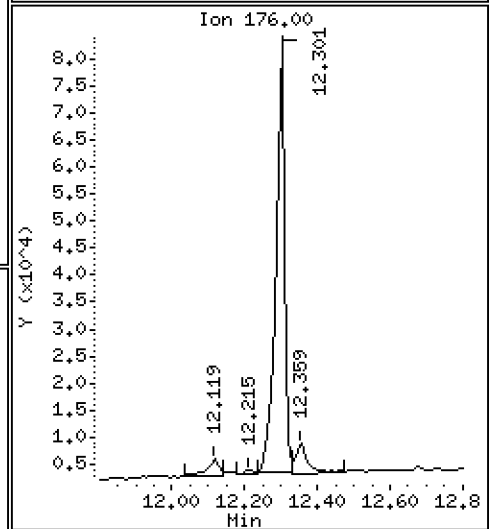
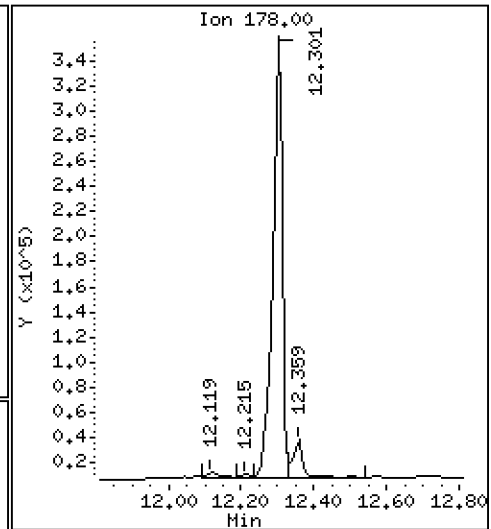
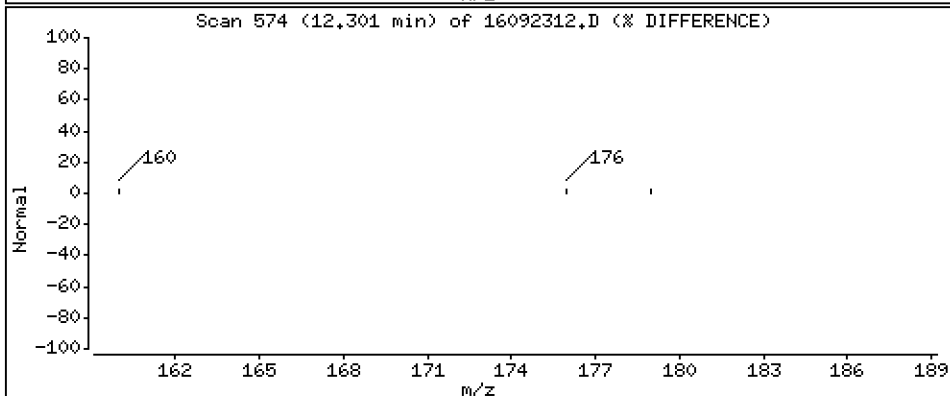
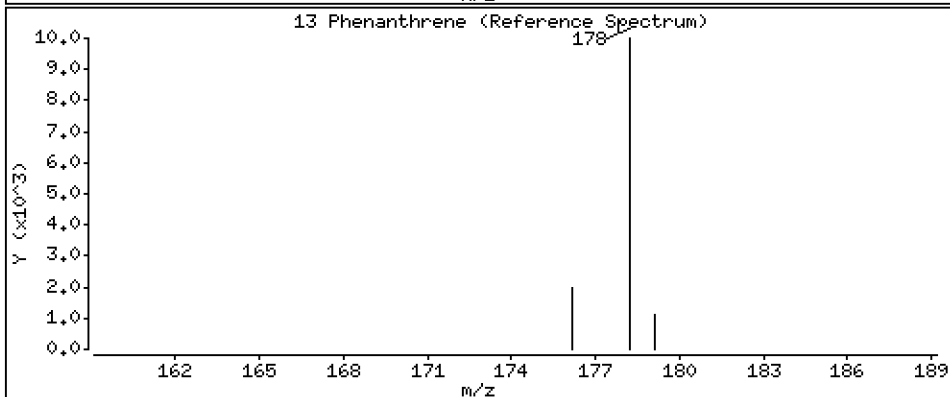
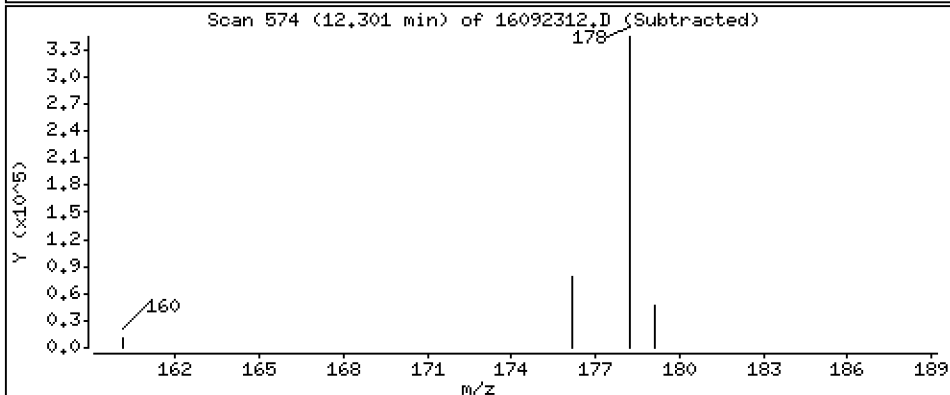
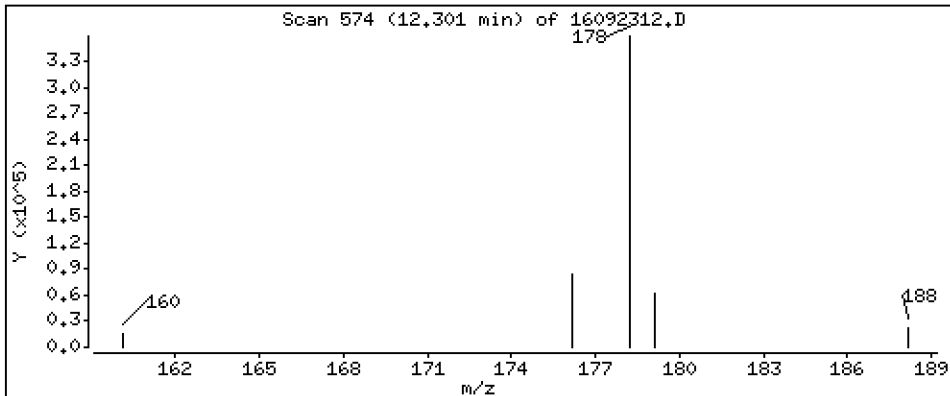
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 165 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

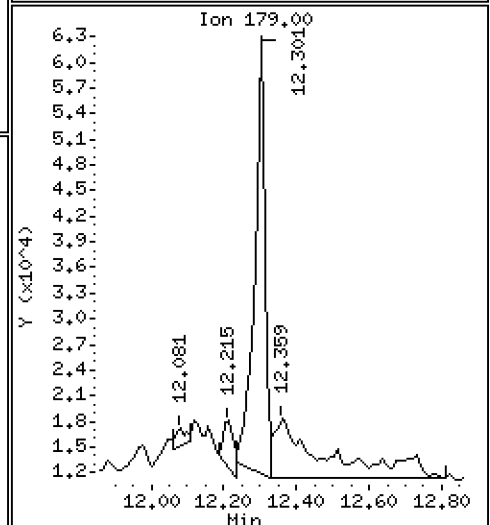
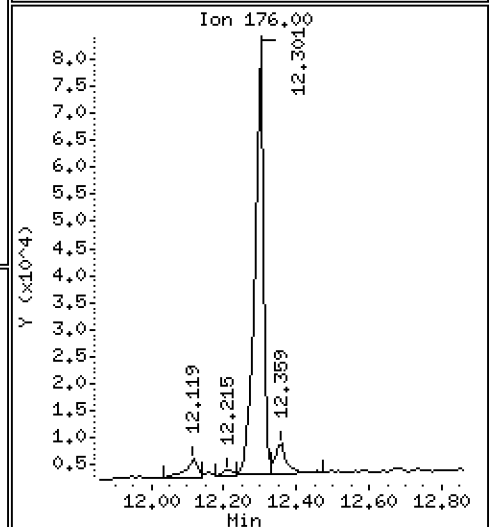
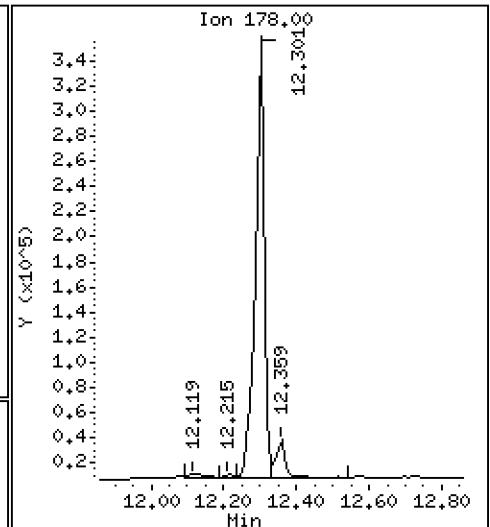
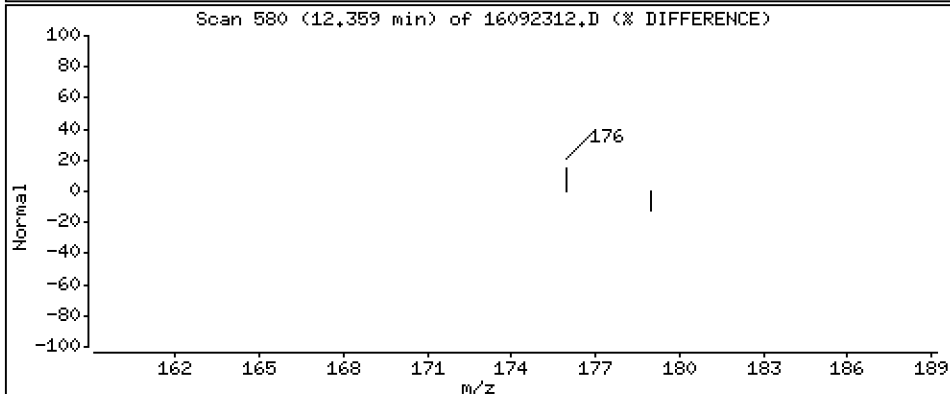
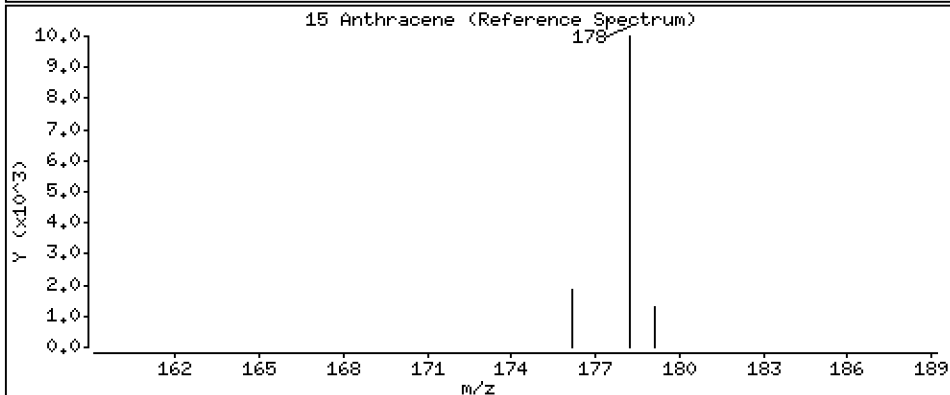
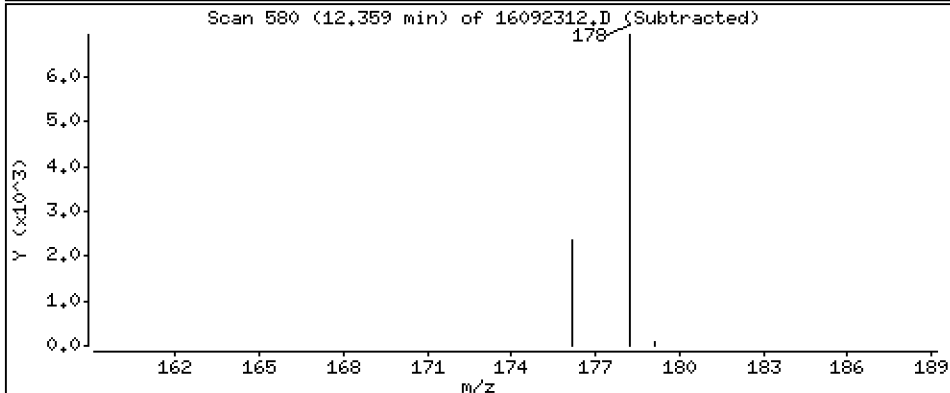
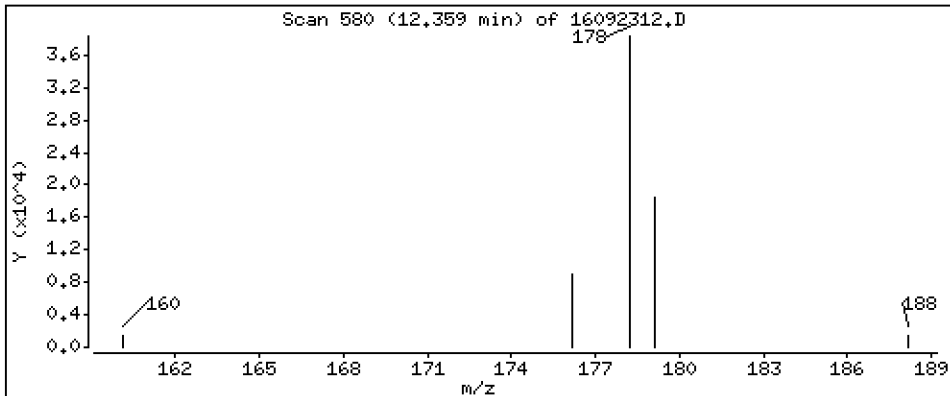
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

15 Anthracene

Concentration: 18,2 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

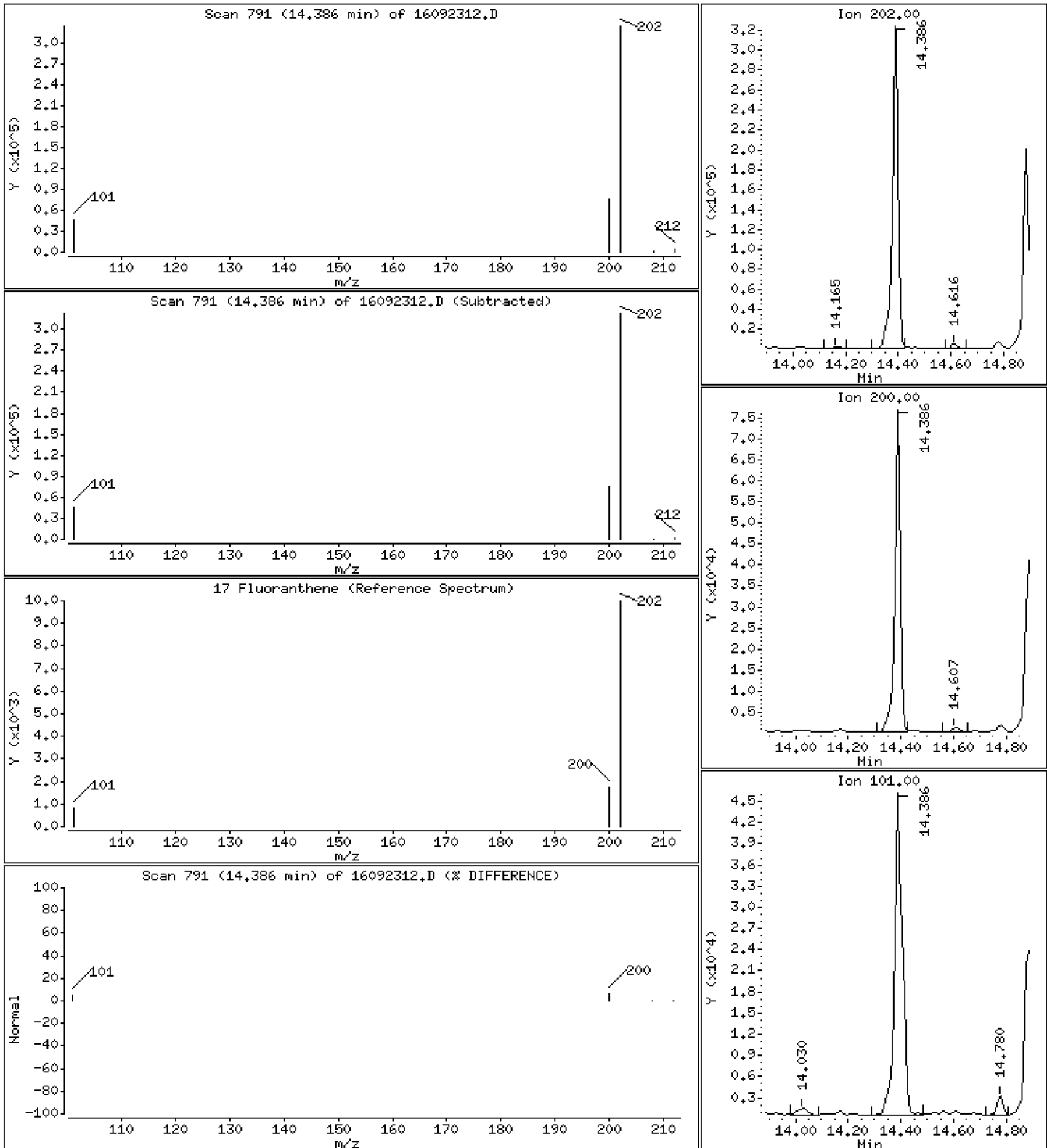
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 163 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

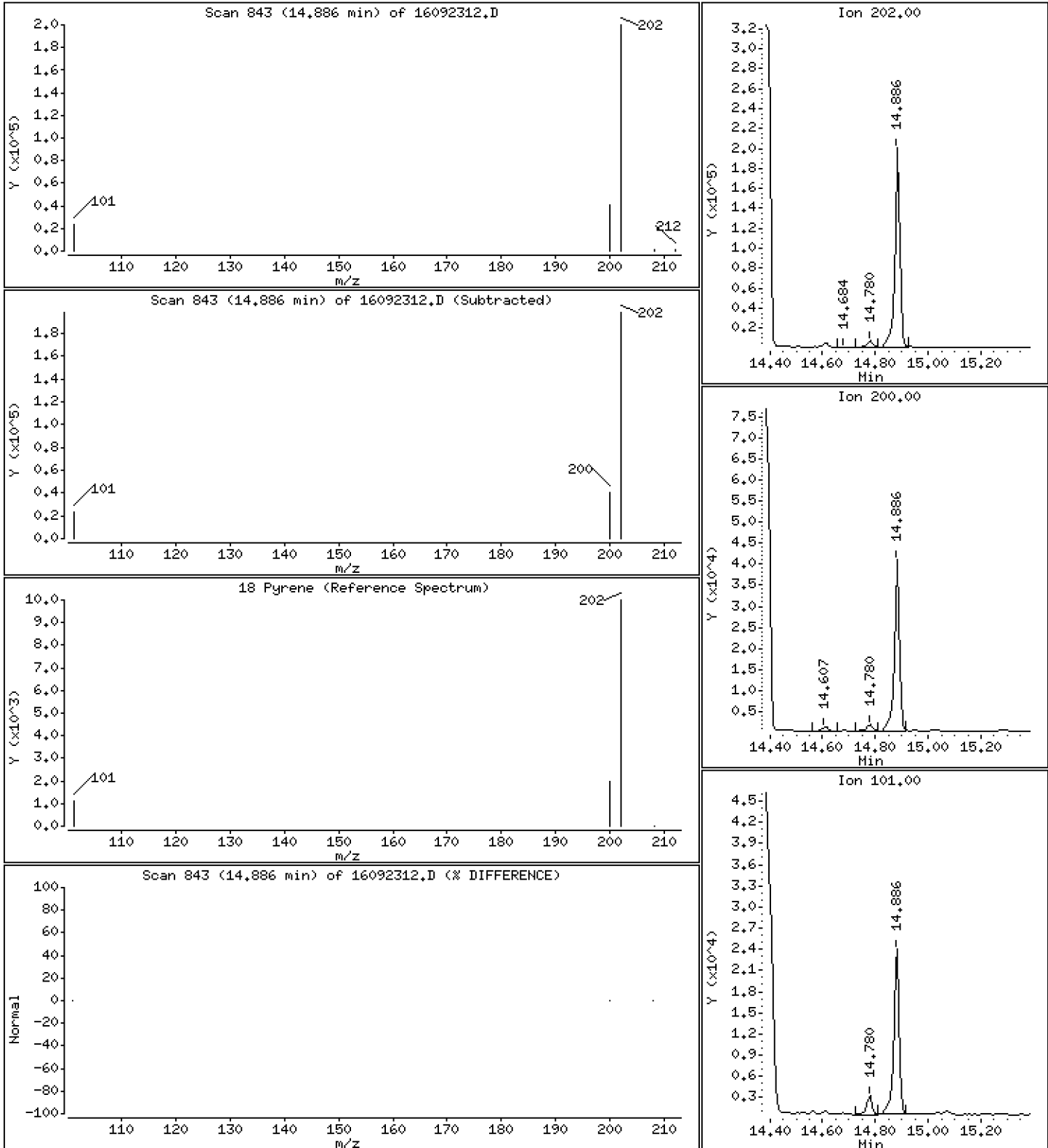
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 79,1 ng/mL

18 Pyrene



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

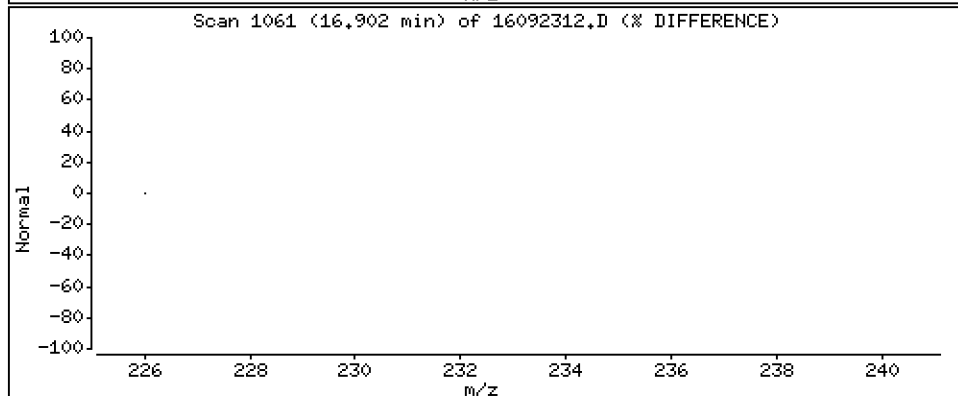
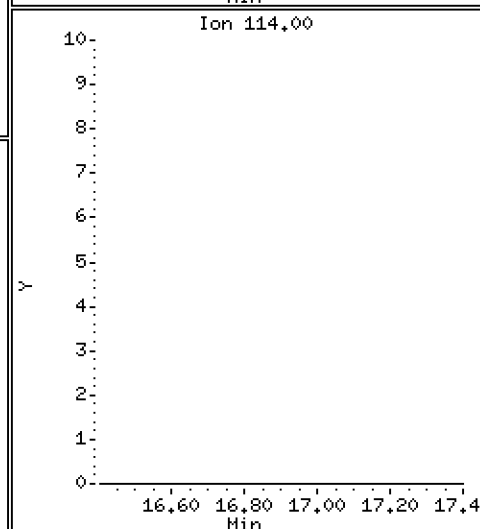
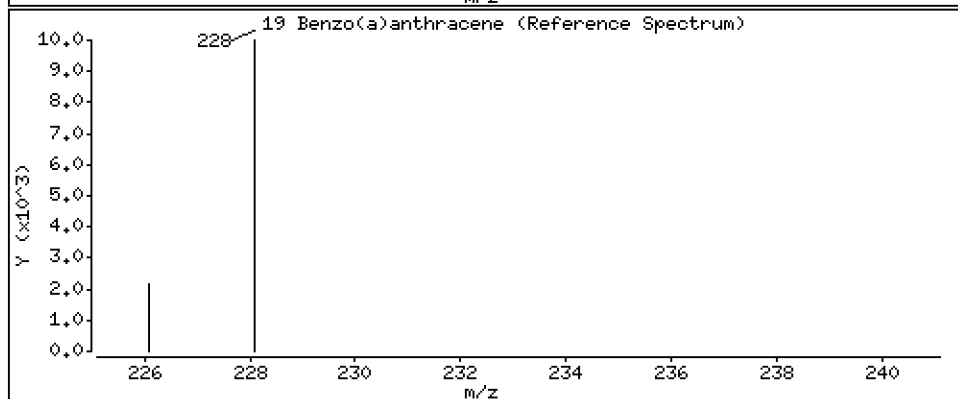
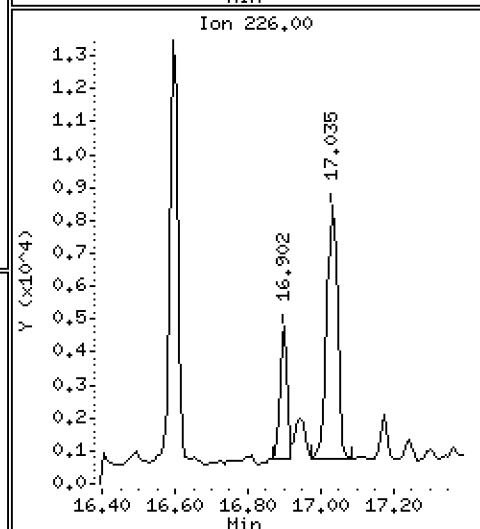
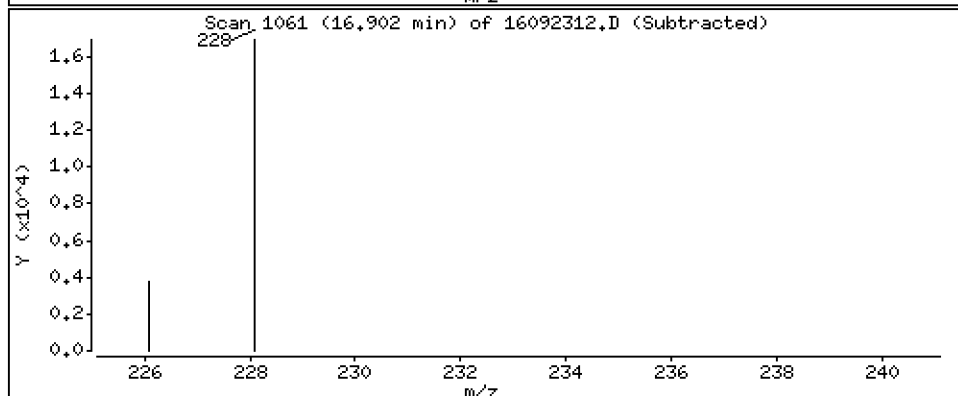
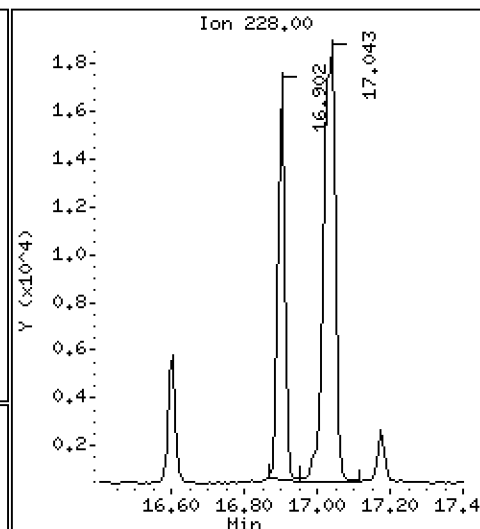
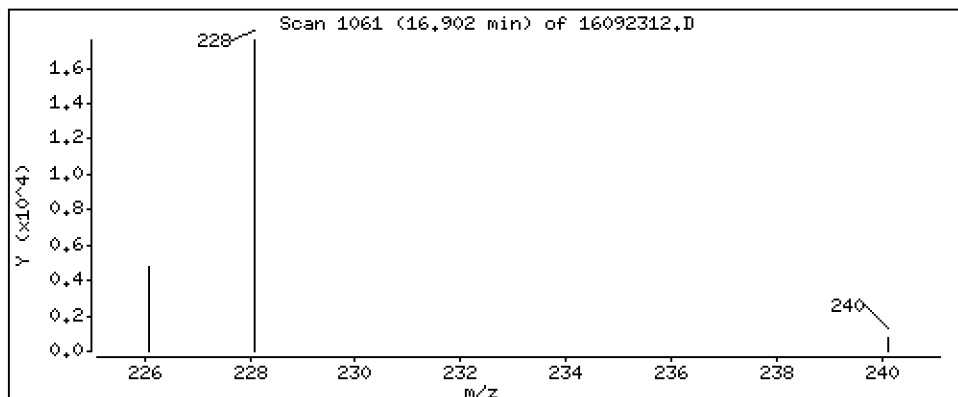
Operator: JW

Column phase: Rxi-17S11 MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 7,42 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

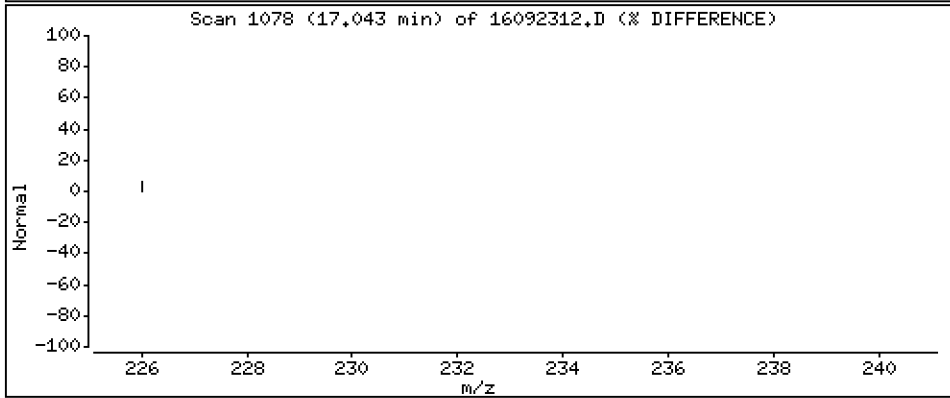
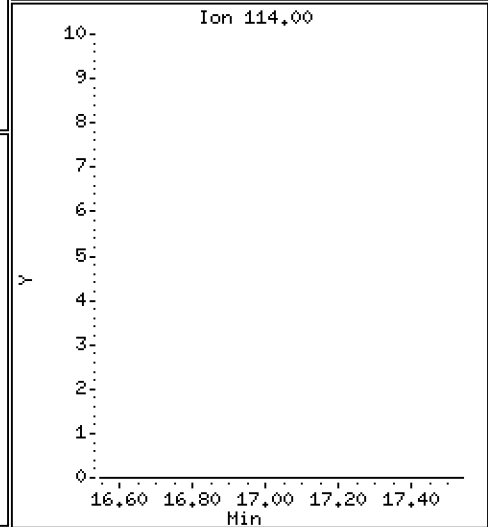
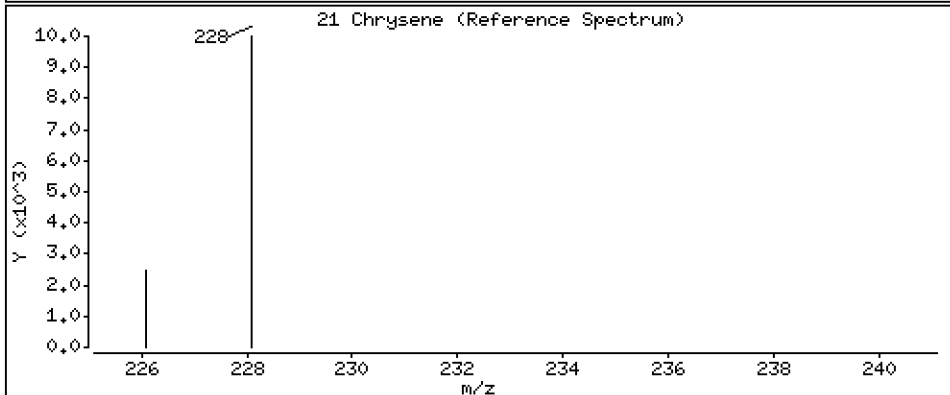
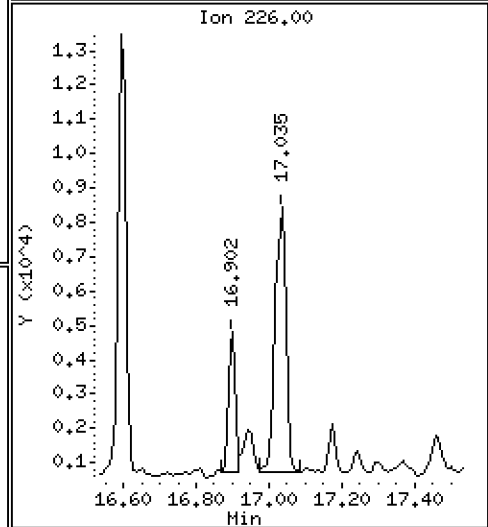
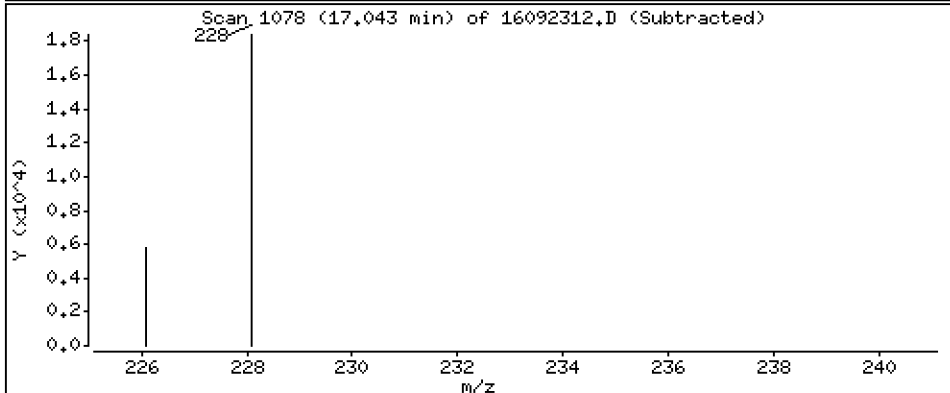
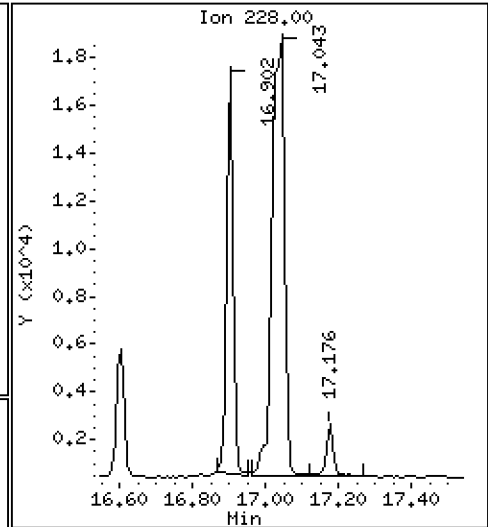
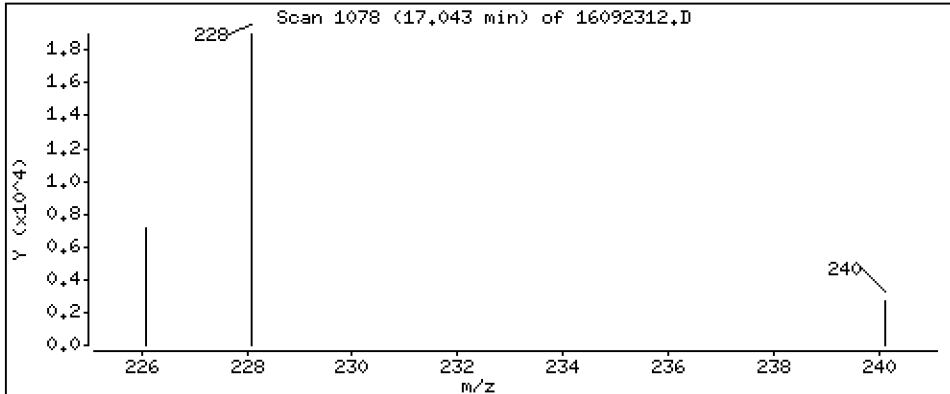
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 14,1 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

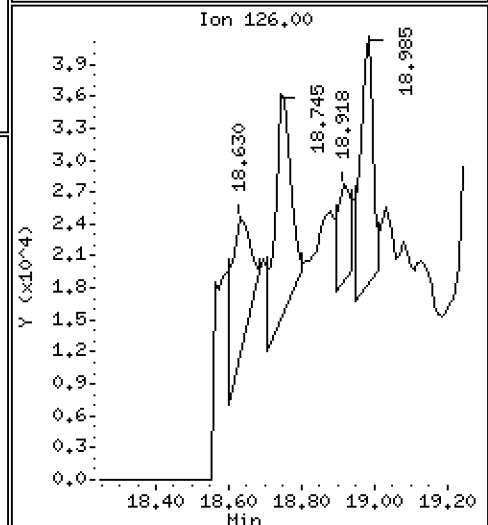
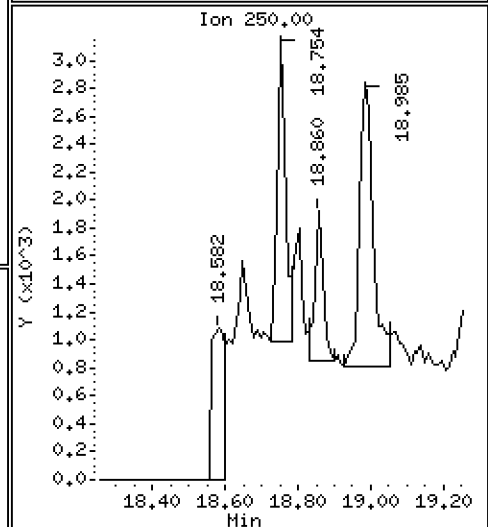
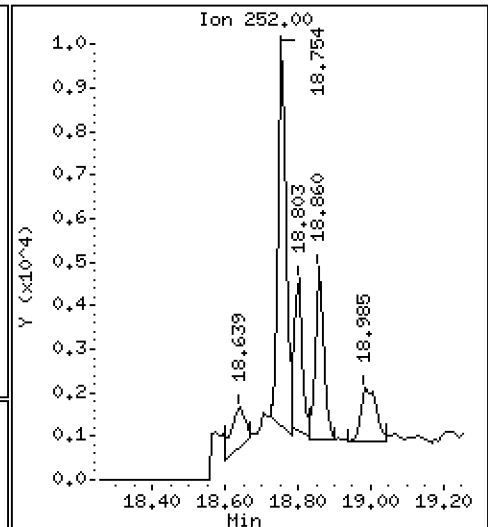
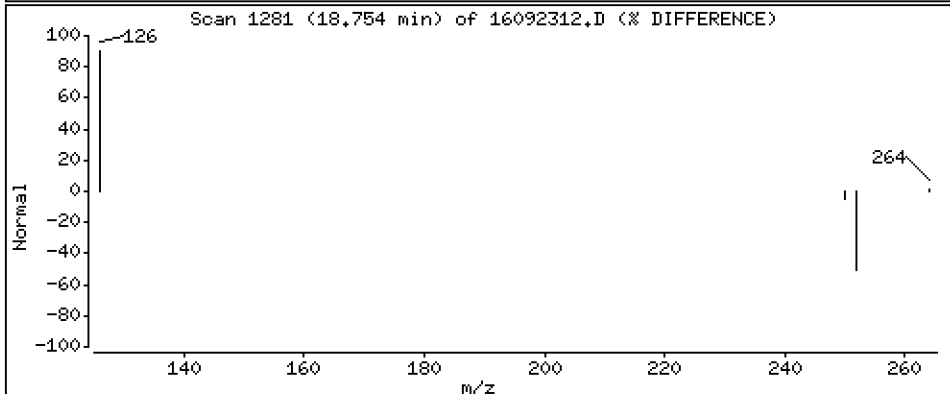
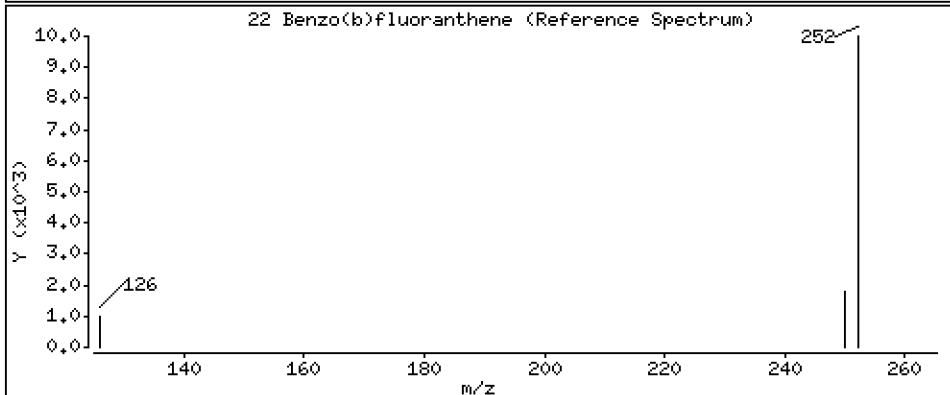
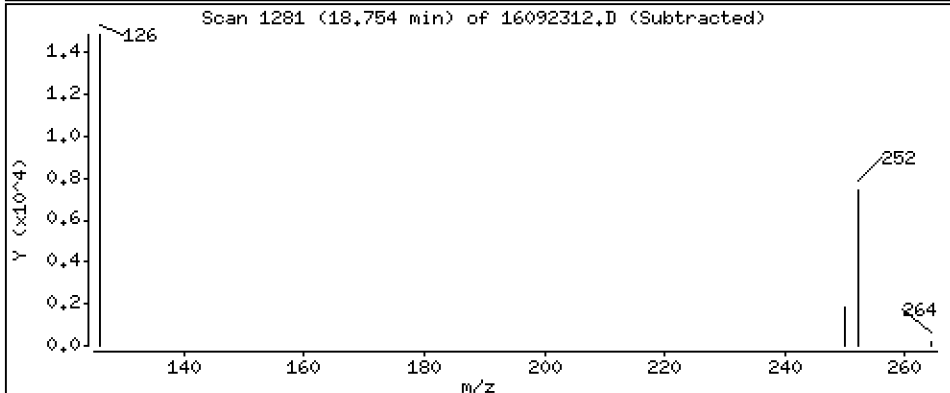
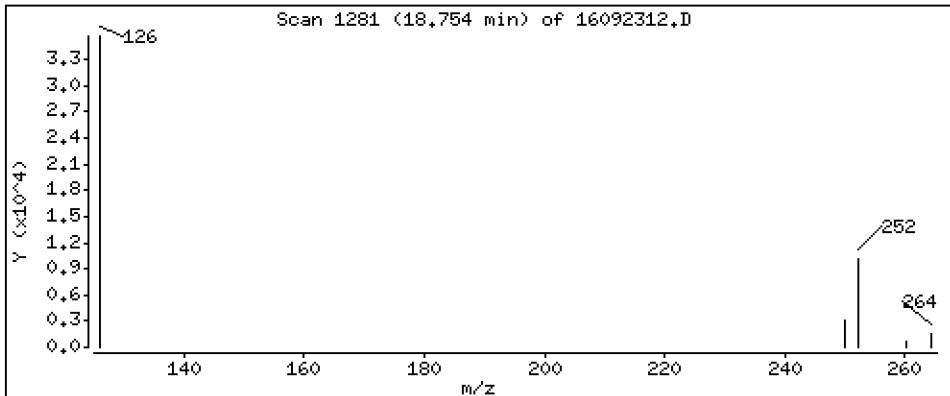
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 5,03 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

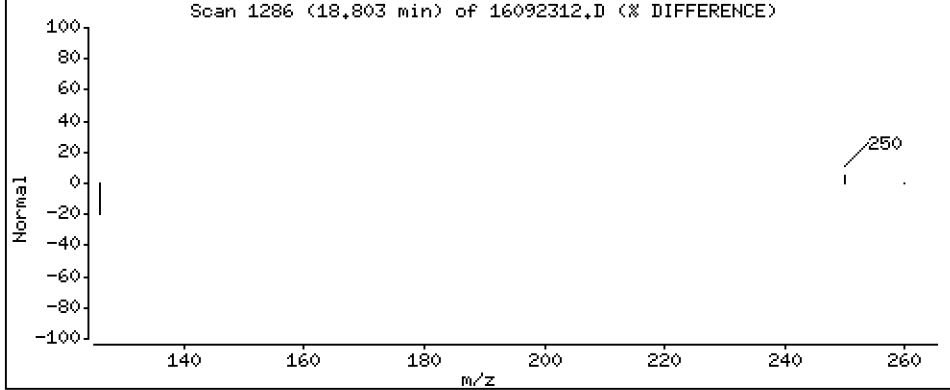
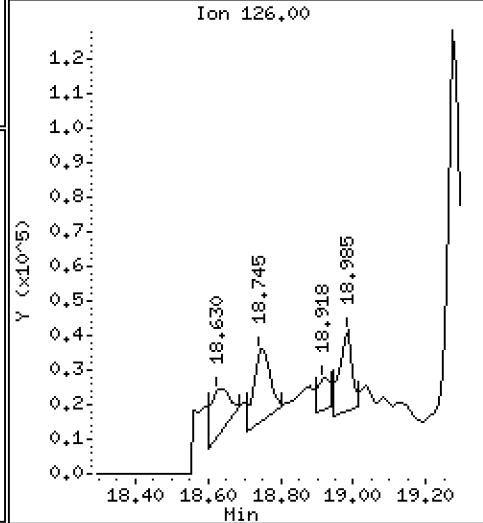
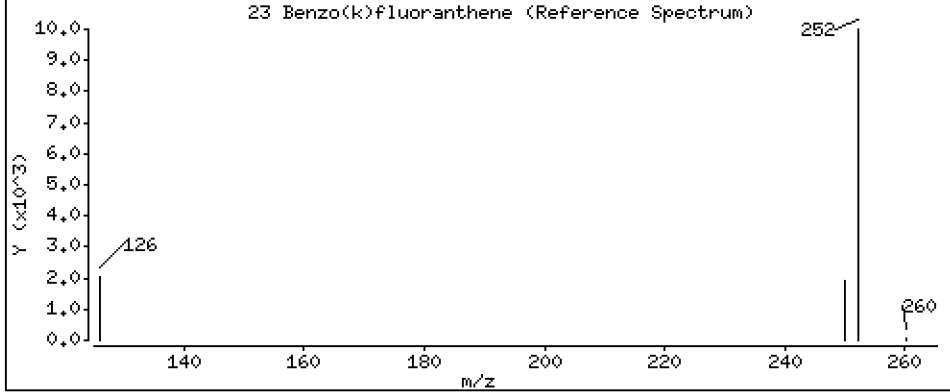
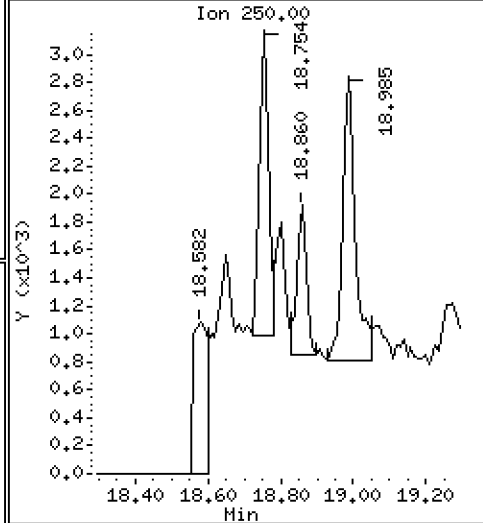
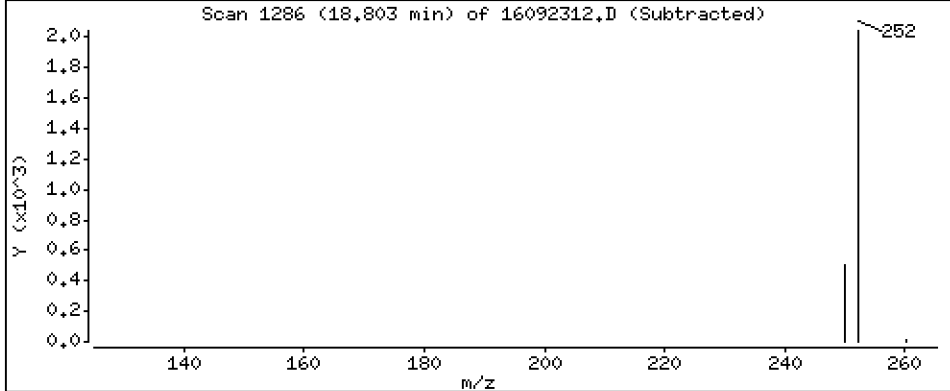
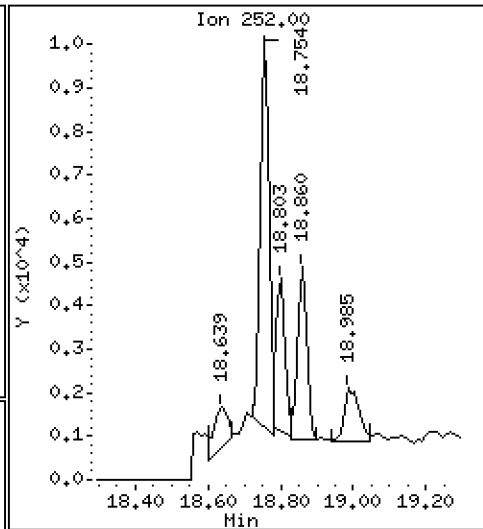
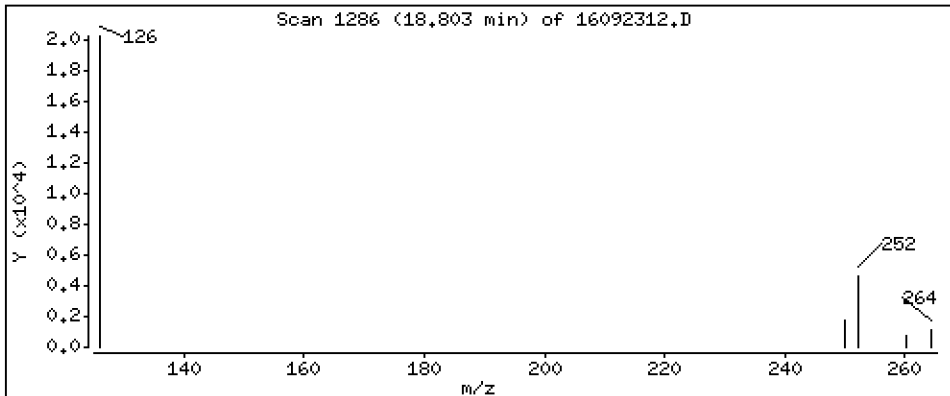
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

23 Benzo(k)fluoranthene

Concentration: 1.83 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

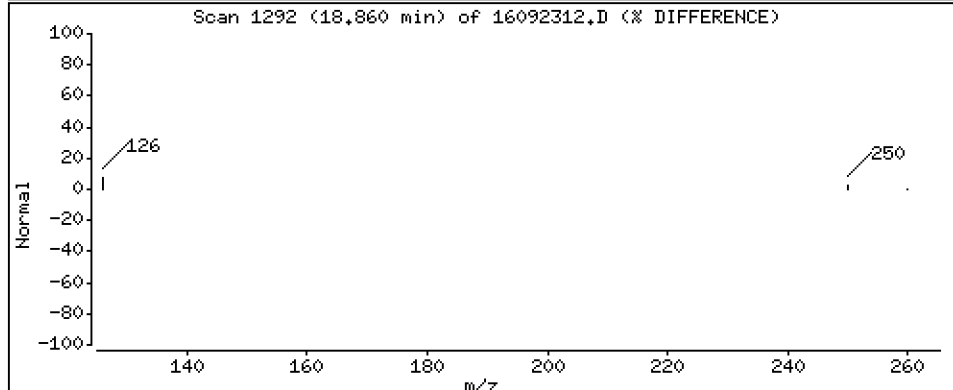
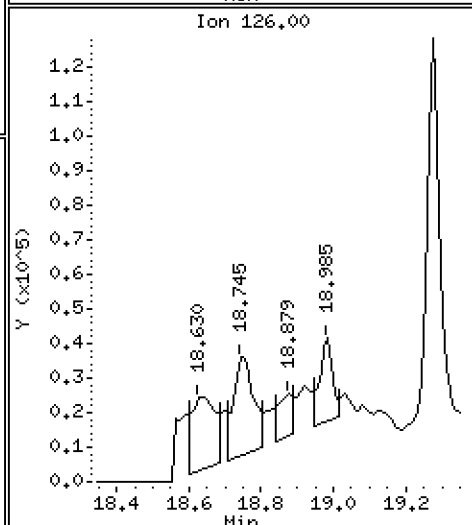
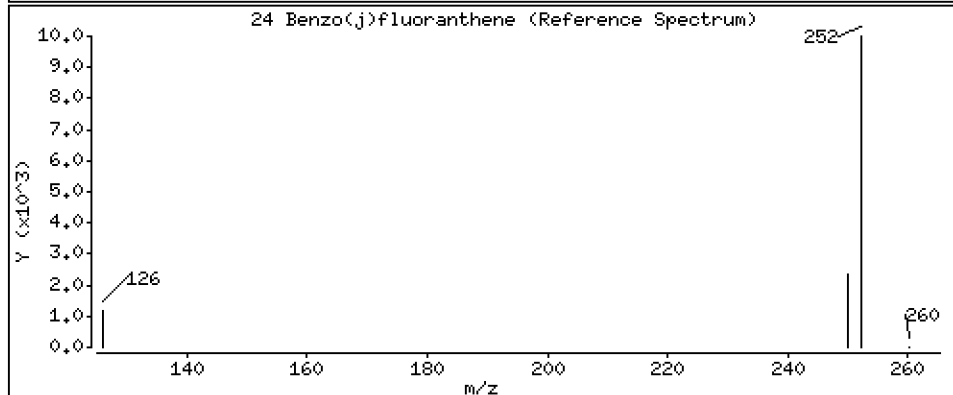
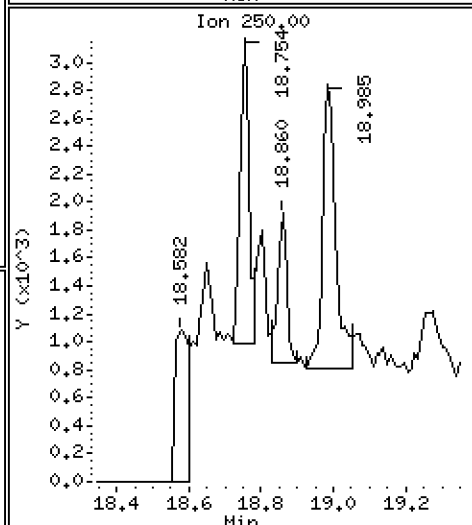
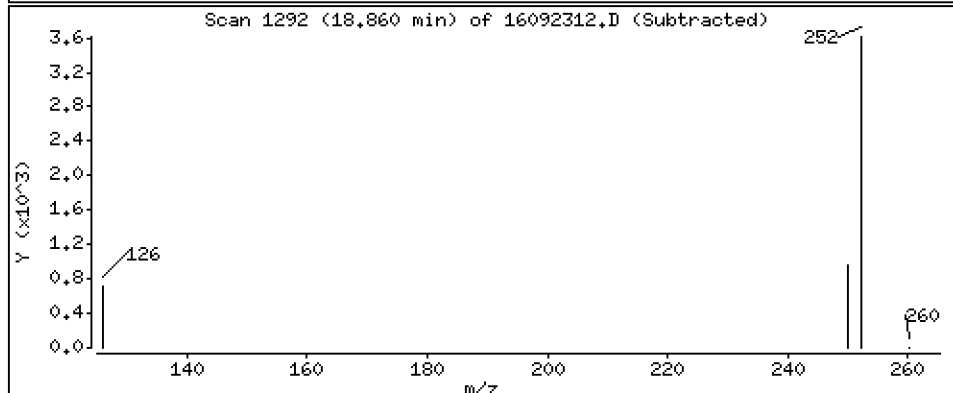
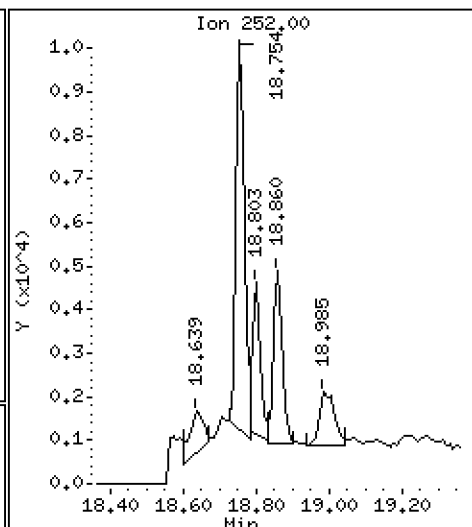
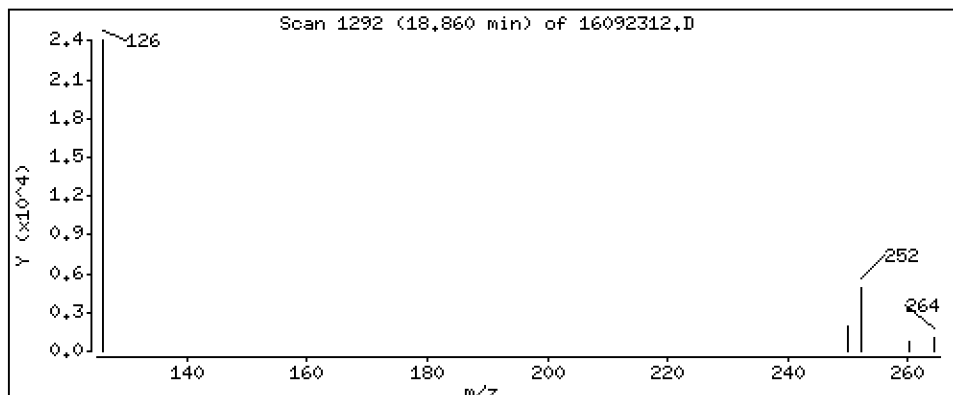
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 2,37 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

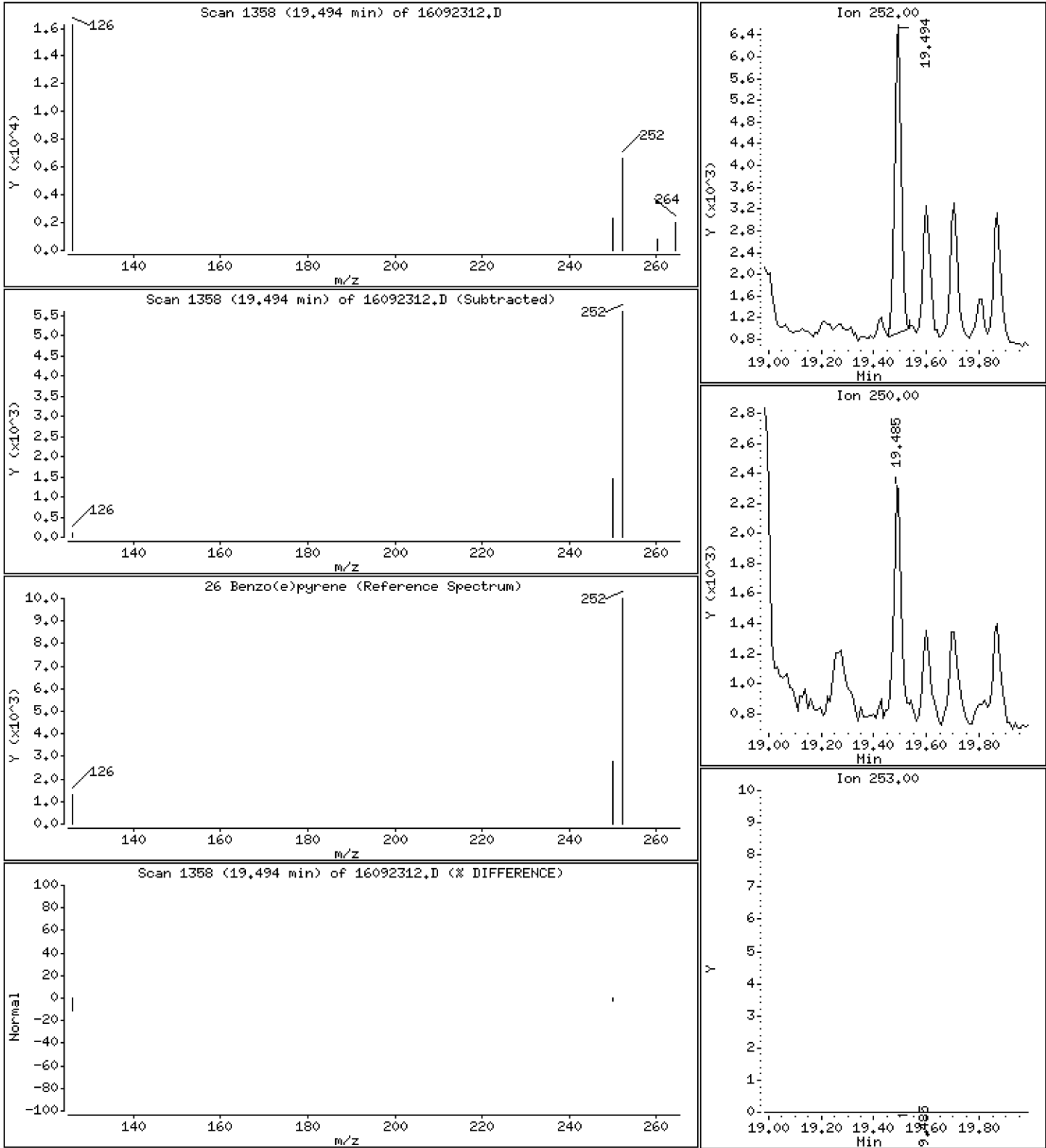
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 3,71 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

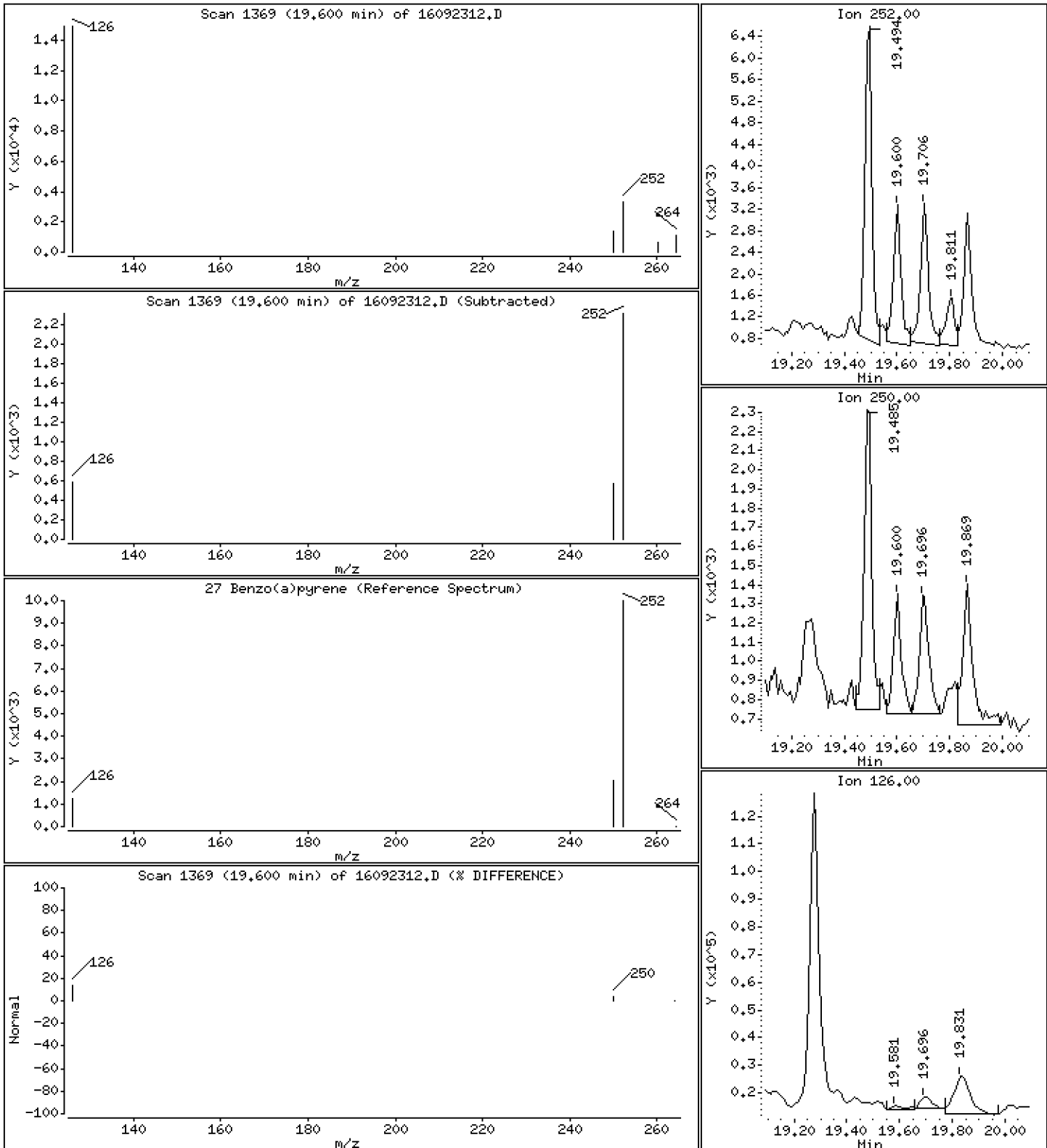
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 2,01 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

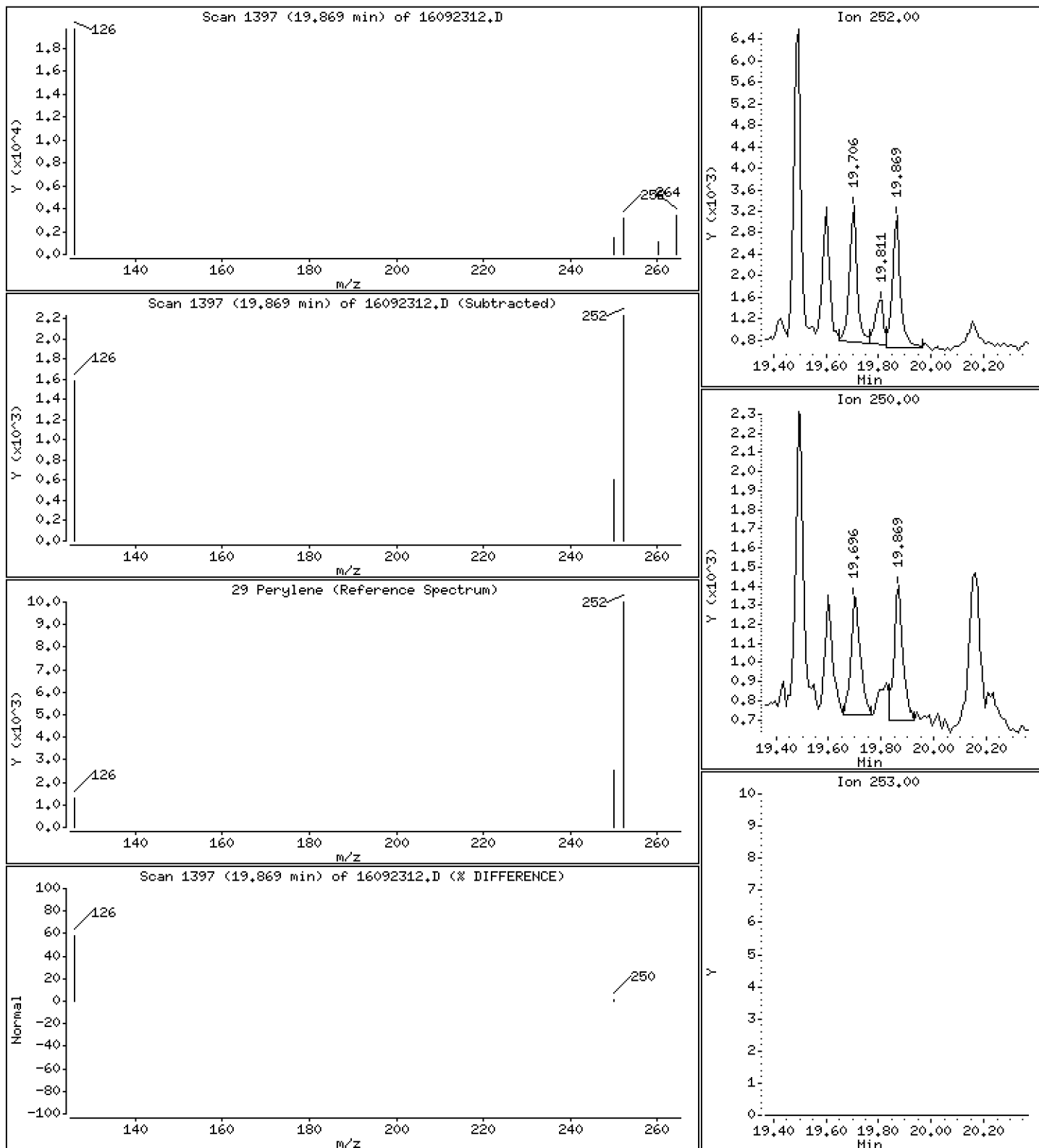
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

29 Perylene

Concentration: 1,94 ng/mL



Date : 23-SEP-2016 13:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-09

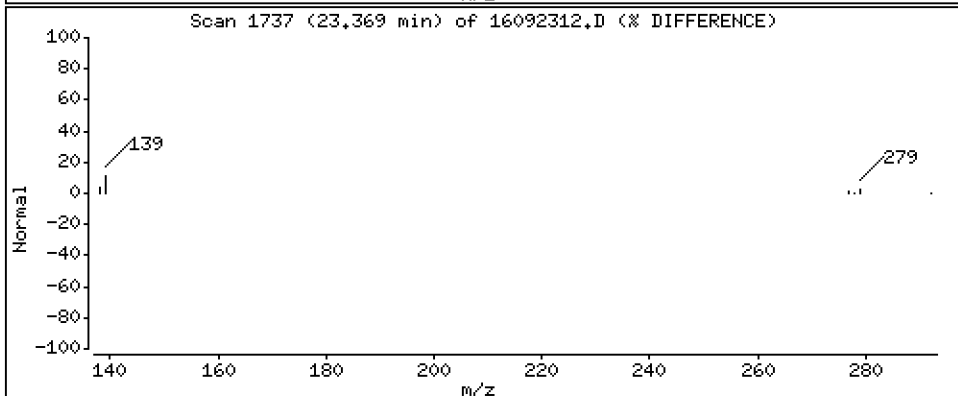
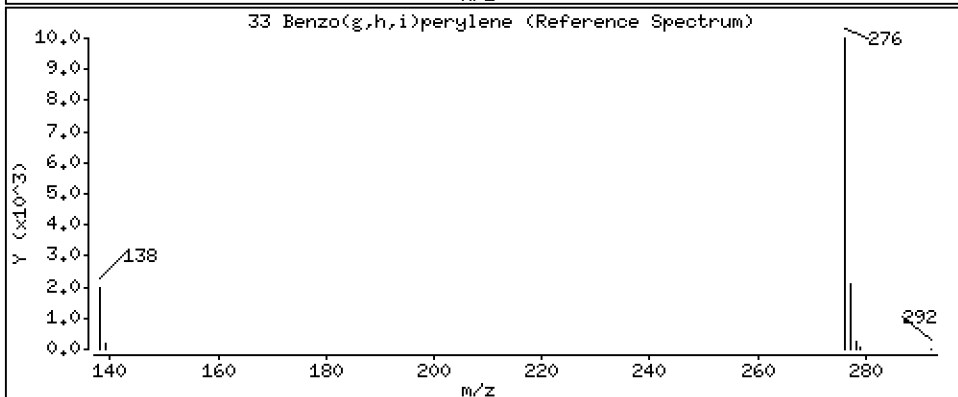
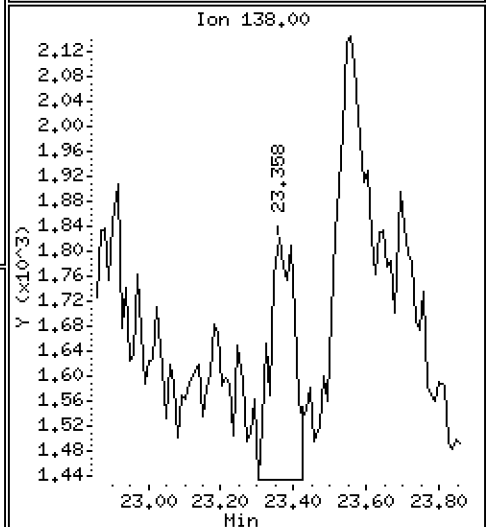
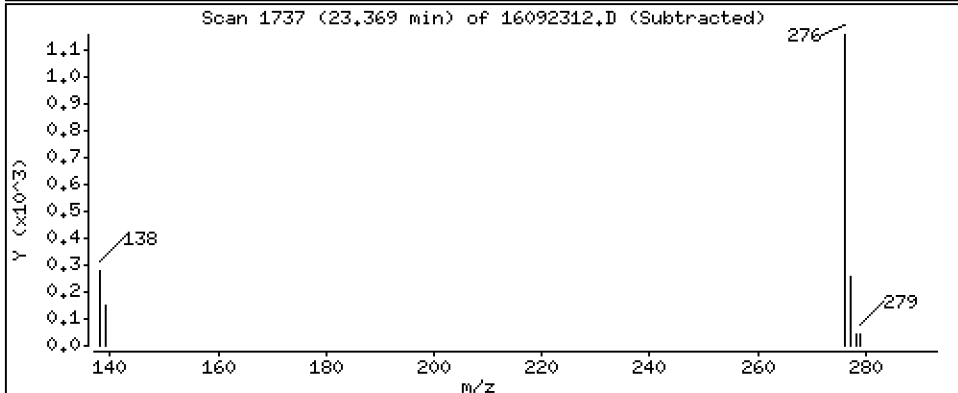
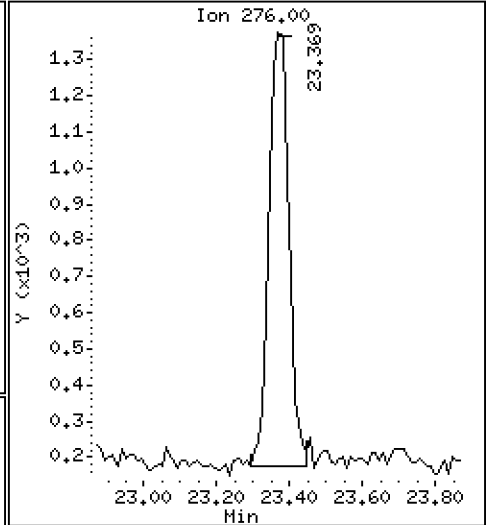
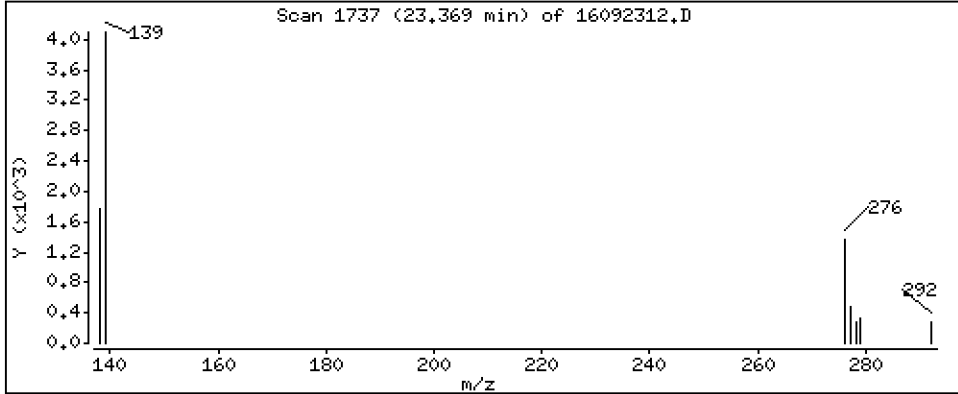
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 1,72 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092312.D

Lab Smp Id: 16I0160-09

Inj Date : 23-SEP-2016 13:32

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-09

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 15

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.581	6.592	(1.000)	525522	200.000	
2 Naphthalene	128		6.613	6.623	(1.005)	179580	59.5506	59.6
\$ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.148)	286589	171.781	172
4 2-Methylnaphthalene	142		7.611	7.621	(1.156)	99095	47.7472	47.7
5 1-Methylnaphthalene	142		7.863	7.884	(1.195)	54603	28.9041	28.9
6 Acenaphthylene	152		9.429	9.440	(0.984)	19190	6.77634	6.78
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	304570	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	91032	48.2633	48.3
9 Dibenzofuran	168		9.849	9.860	(1.028)	65819	24.0797	24.1
\$ 10 Fluorene-d10	174		10.422	10.432	(1.087)	3940	2.55372	2.55 (M)
11 Fluorene	166		10.475	10.485	(1.093)	101524	46.5472	46.5
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	568990	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	630167	164.869	165
\$ 14 Anthracene-d10	188		12.320	12.330	(1.005)	101396	32.9962	33.0
15 Anthracene	178		12.359	12.358	(1.008)	67842	18.1950	18.2
\$ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	662696	239.581	240
17 Fluoranthene	202		14.385	14.395	(1.173)	550221	162.584	163
18 Pyrene	202		14.885	14.885	(0.876)	278415	79.0851	79.1
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	21877	7.41711	7.42
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	454404	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	43672	14.0955	14.1
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	14773	5.02972	5.03
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	5982	1.82828	1.83
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	6813	2.37342	2.37
\$ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	312020	110.616	111
26 Benzo(e)pyrene	252		19.494	19.484	(0.984)	10457	3.70929	3.71 (M)
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	5418	2.01456	2.01
* 28 Perylene-d12	264		19.801	19.801	(1.000)	550445	200.000	
29 Perylene	252		19.869	19.868	(1.003)	5344	1.94034	1.94
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	377777	208.795	209
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	4432	1.72149	1.72

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092312.D
 Lab Smp Id: 16I0160-09
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	525522	-0.35
7 Acenaphthene-d10	297518	148759	595036	304570	2.37
12 Phenanthrene-d10	522042	261021	1044084	568990	8.99
20 Chrysene-d12	389499	194750	778998	454404	16.66
28 Perylene-d12	430626	215313	861252	550445	27.82

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.58	-0.16
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092312.D

Lab ID: 16I0160-09

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 13:32

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

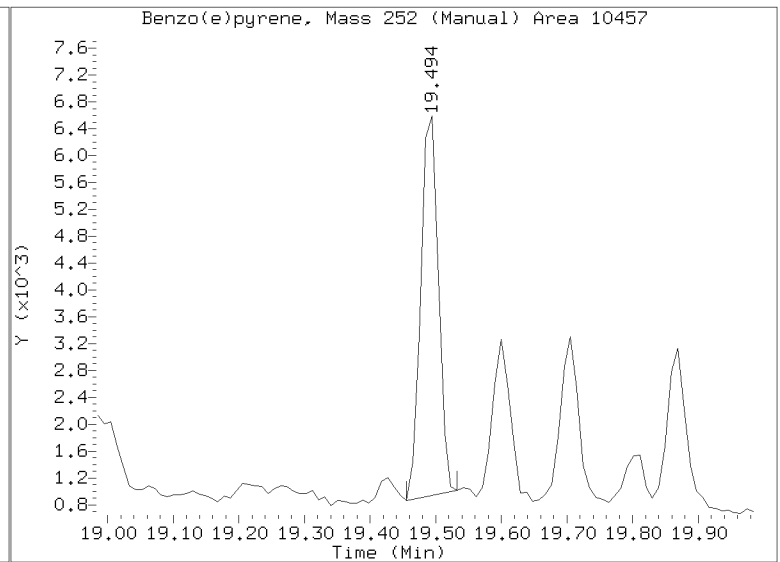
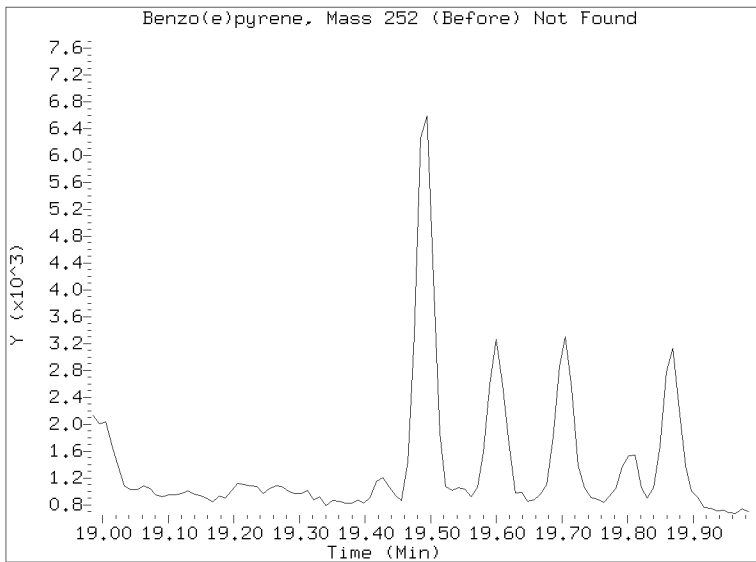
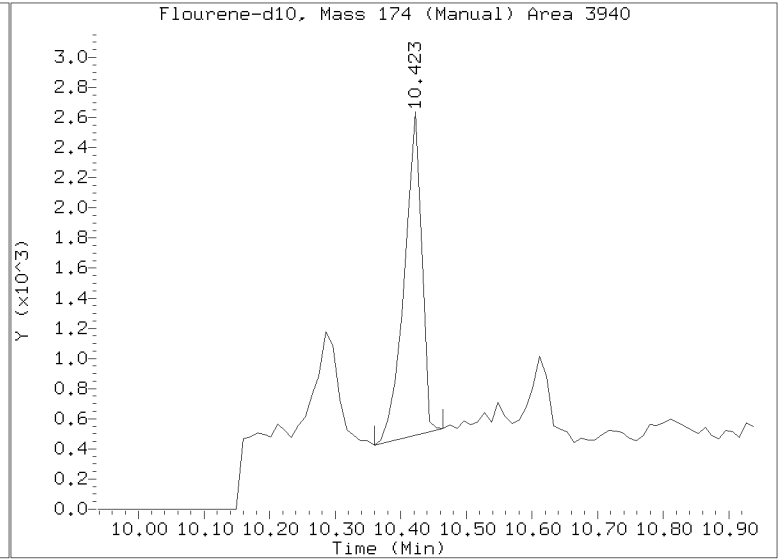
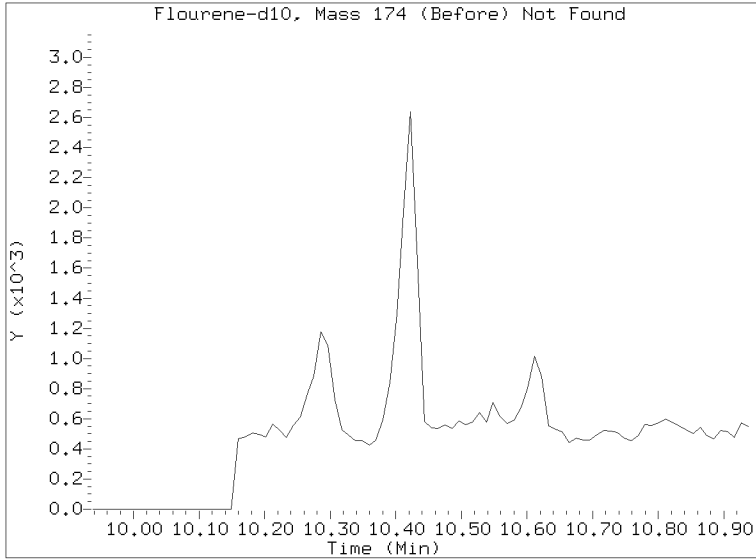
RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092312.D
Injection Date: 23-SEP-2016 13:32
Lab ID:16I0160-09 Client ID:
Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory: Analytical Resources, Inc. SDG: 1610160
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 1610160-11 File ID: 16092313.D
 Sampled: 09/09/16 11:22 Prepared: 09/10/16 11:10 Analyzed: 09/23/16 14:02
 Solids: Preparation: EPA 3550C (Ultrasonic) Initial/Final: 0.886 g / 0.1 mL
 Batch: BEI0260 Sequence: SEI0321 Calibration: ZI00066
 Instrument: NT11 Column: RXi-17Sil-MS

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	8.65	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	5.25	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	8.49		1.13	1.13
86-73-7	Fluorene	1	7.79		1.13	1.13
85-01-8	Phenanthrene	1	34.1		1.13	1.13
120-12-7	Anthracene	1	3.39		1.13	1.13
206-44-0	Fluoranthene	1	42.9		1.13	1.13
129-00-0	Pyrene	1	25.3		1.13	1.13
56-55-3	Benzo(a)anthracene	1	2.98		1.13	1.13
218-01-9	Chrysene	1	4.71		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.59		1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzofluoranthenes, Total	1	2.90		2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	19.2	56.6	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	22.5	66.5	30 - 160	
Fluoranthene-d10	33.860	24.4	72.0	30 - 160	
Fluorene-d10	21.163	0.586	2.77	30 - 160	*
Anthracene-d10	21.163	4.54	21.4	30 - 160	*
Benzo(e)pyrene-d12	21.163	12.8	60.6	30 - 160	

Data File: \\target\share\chem3\nt11.i\20160923.16\16092313.D

Date : 23-SEP-2016 14:02

Client ID:

Sample Info: 1610160-11

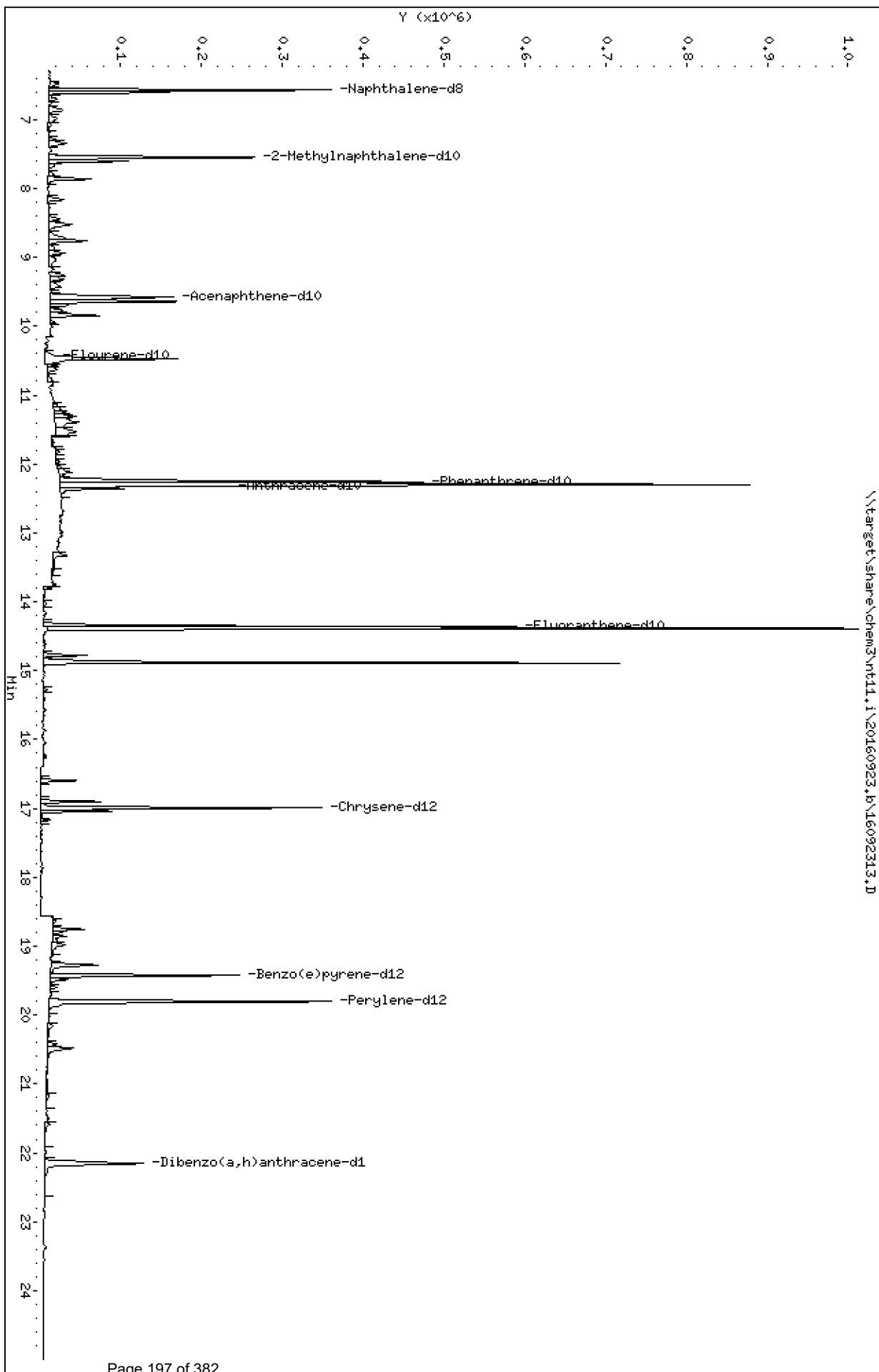
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.i\20160923.16\16092313.D



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

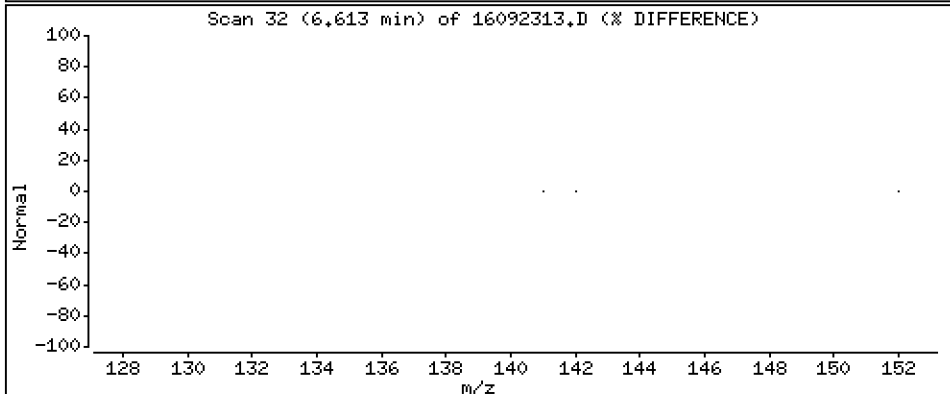
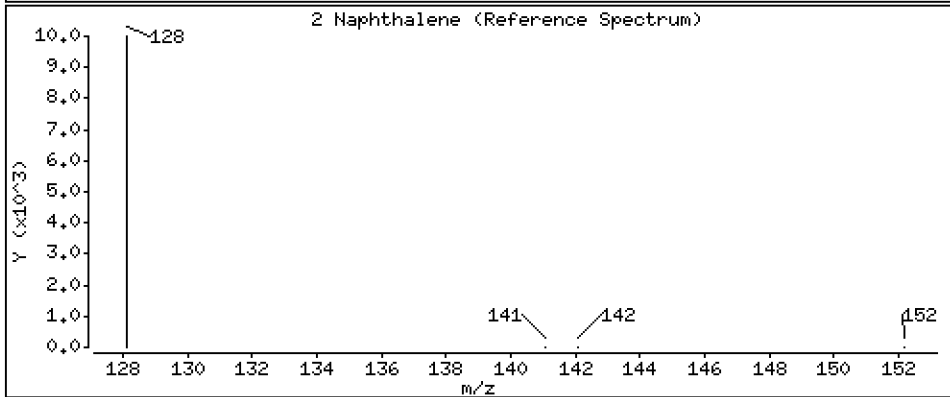
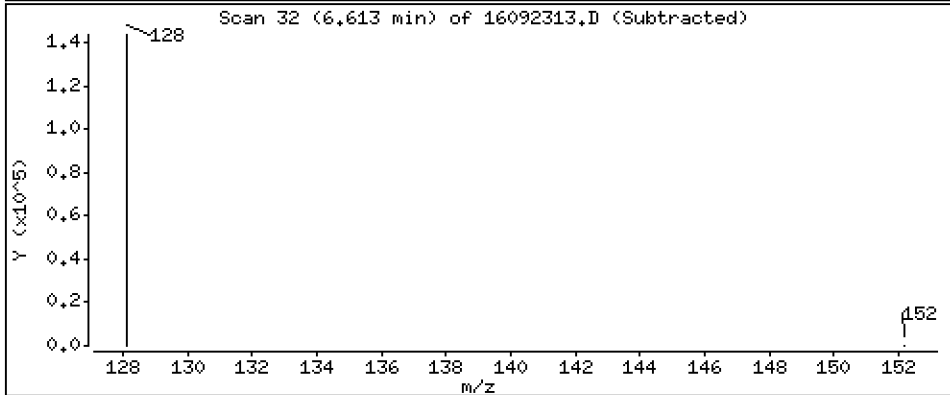
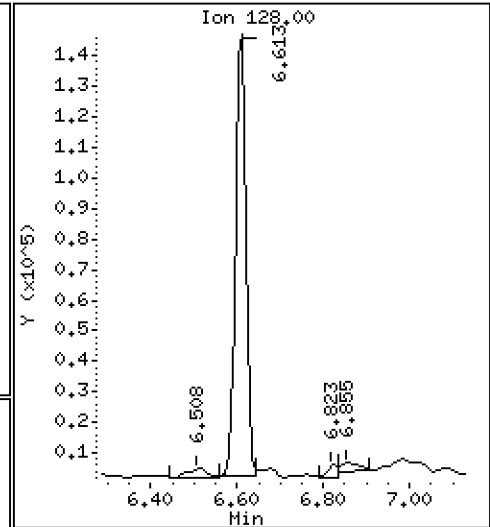
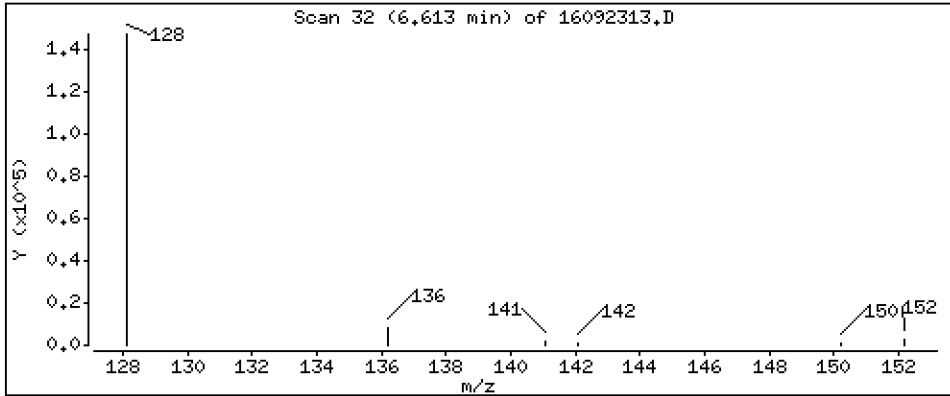
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 76,7 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

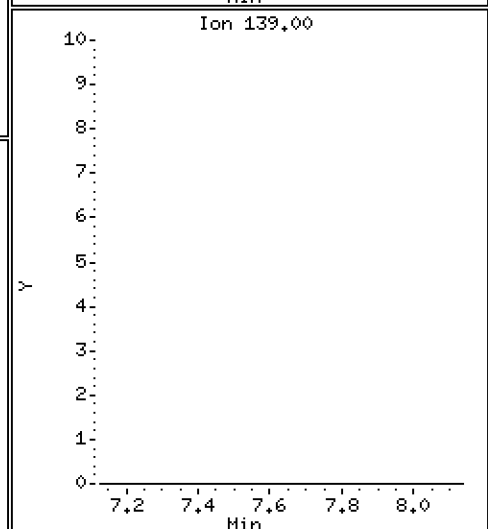
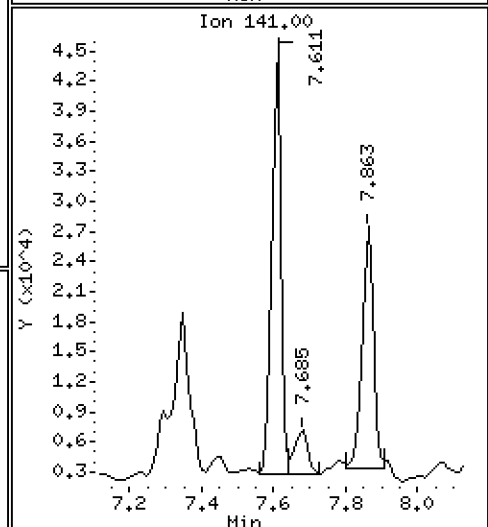
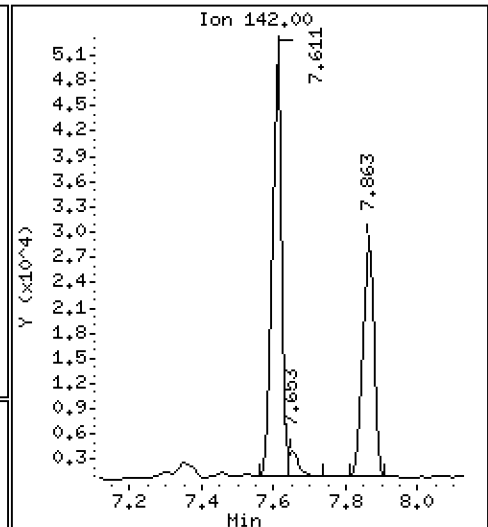
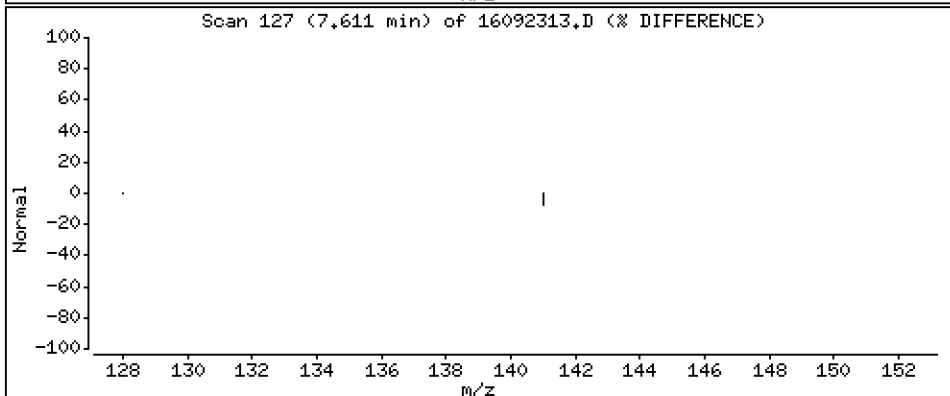
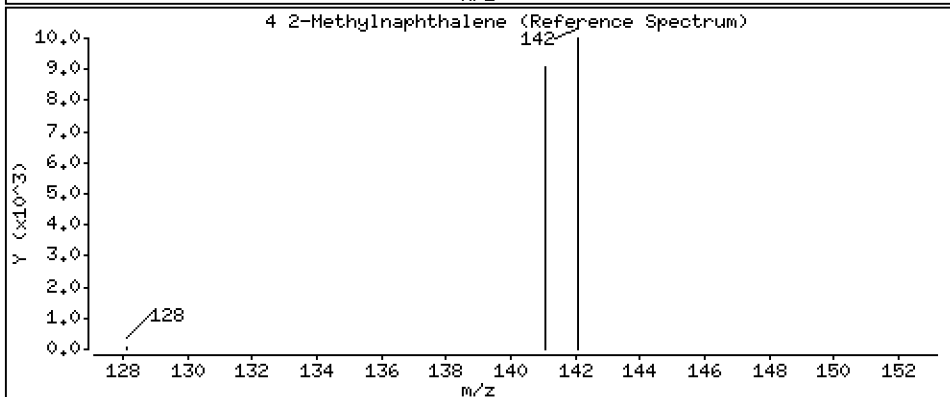
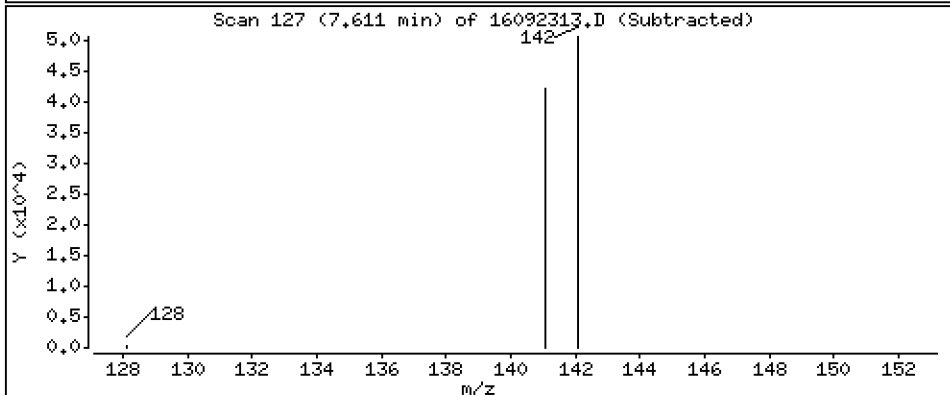
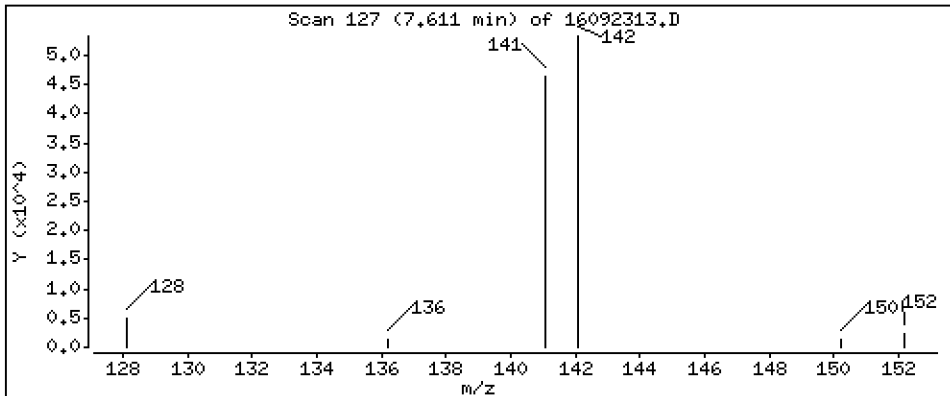
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

4-Methylnaphthalene

Concentration: 46,5 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

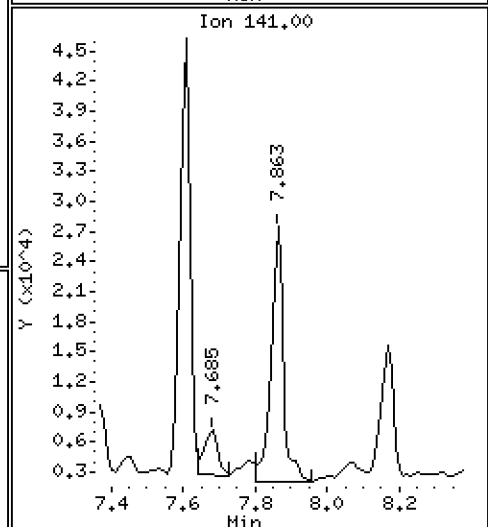
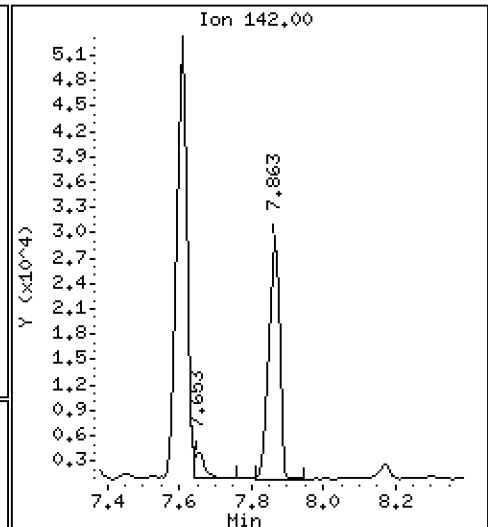
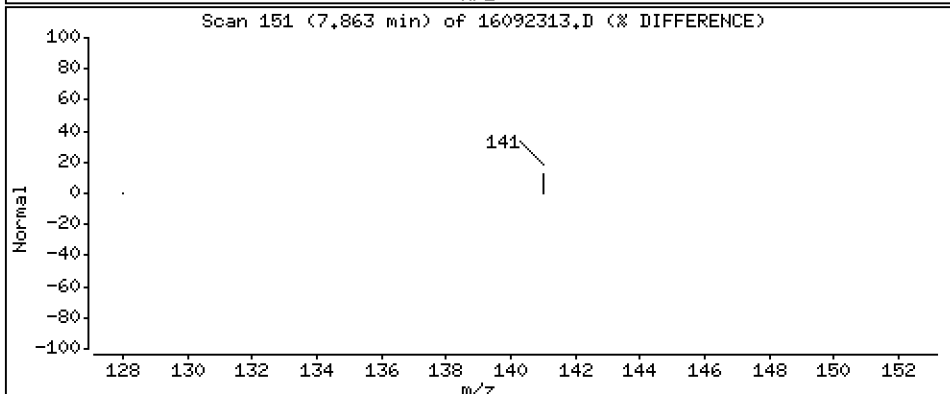
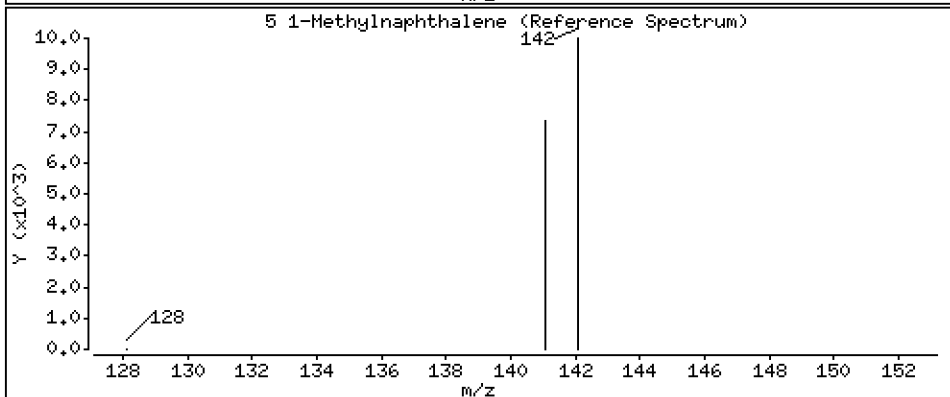
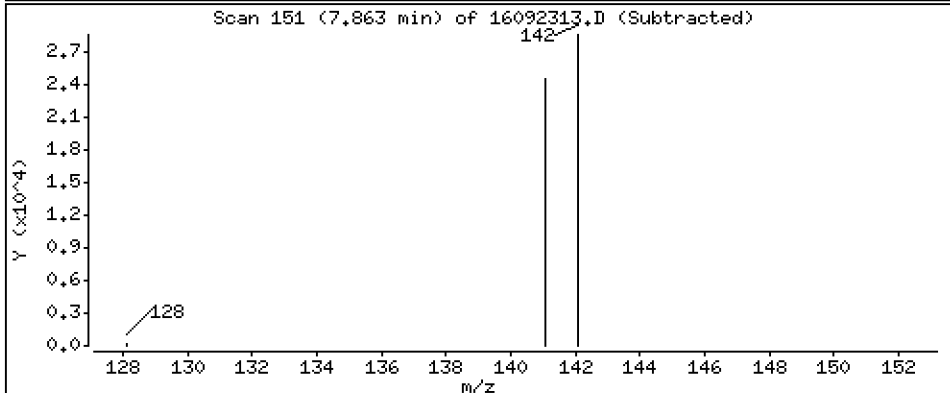
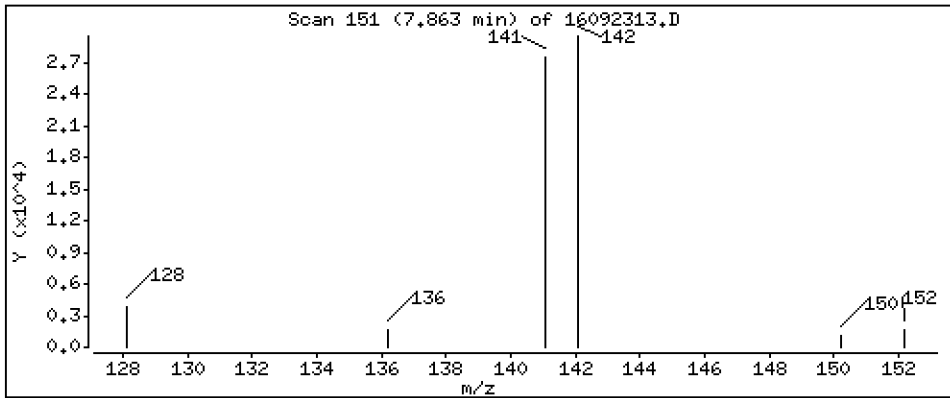
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 30,6 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

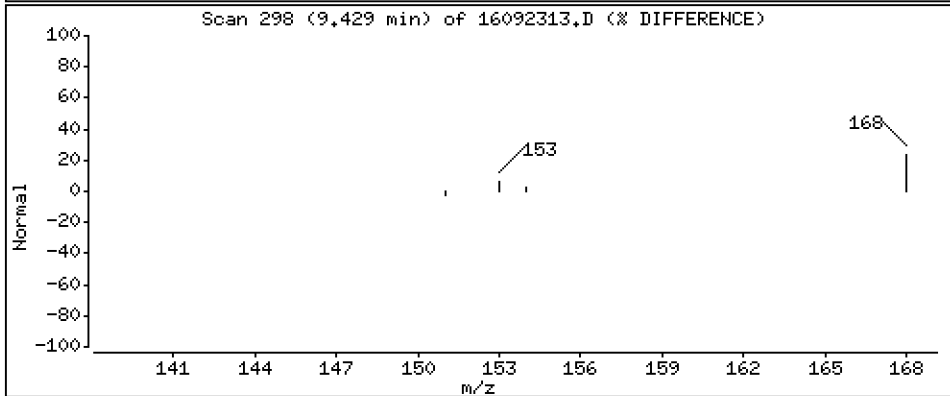
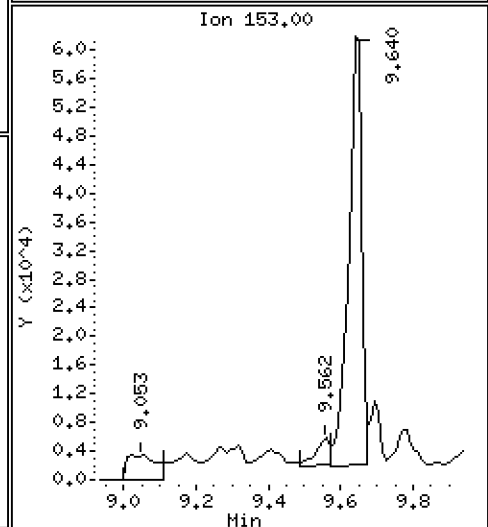
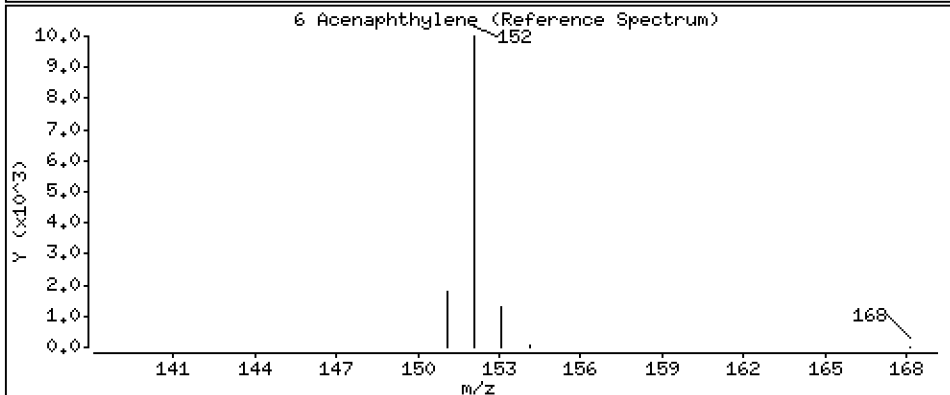
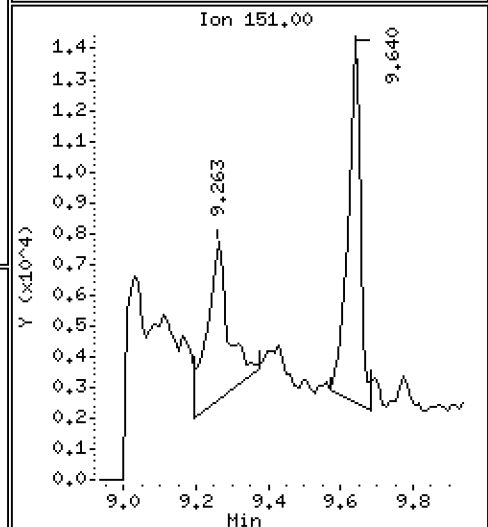
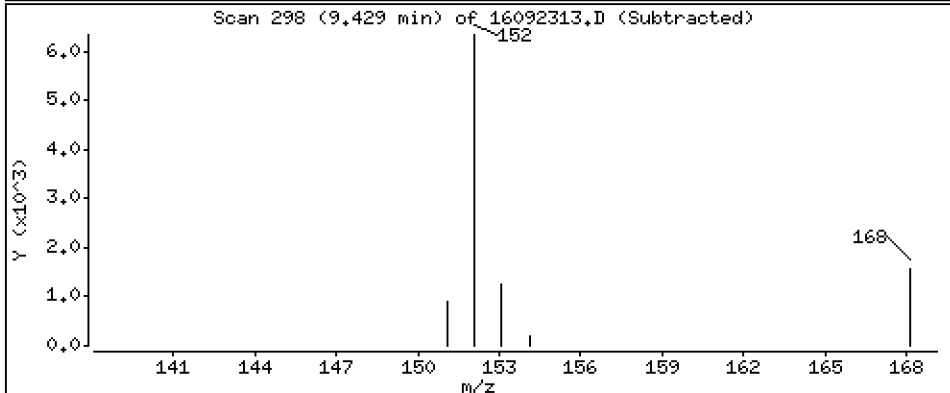
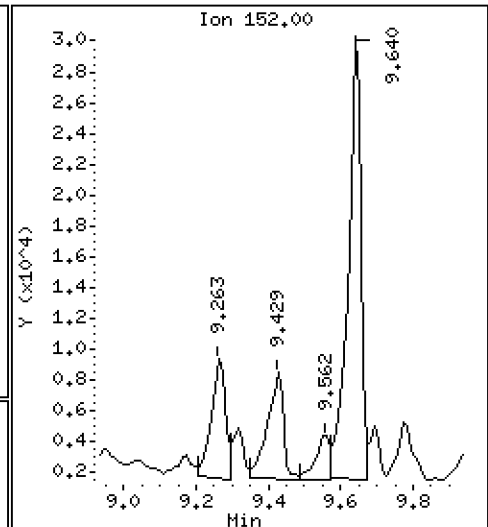
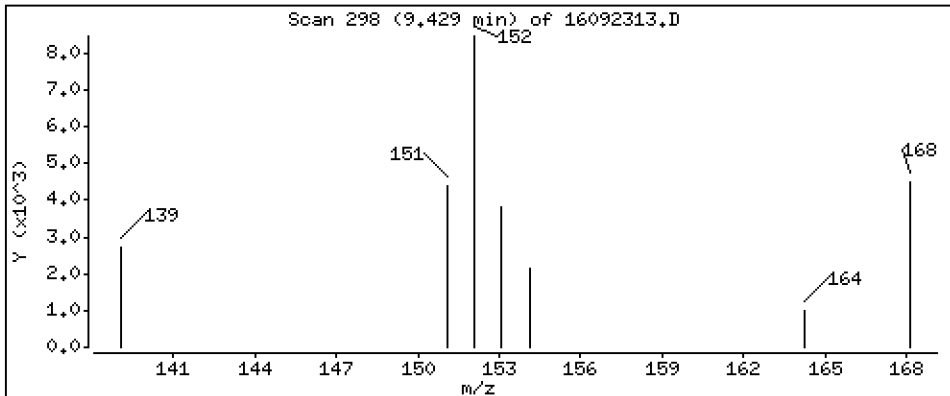
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 7.25 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

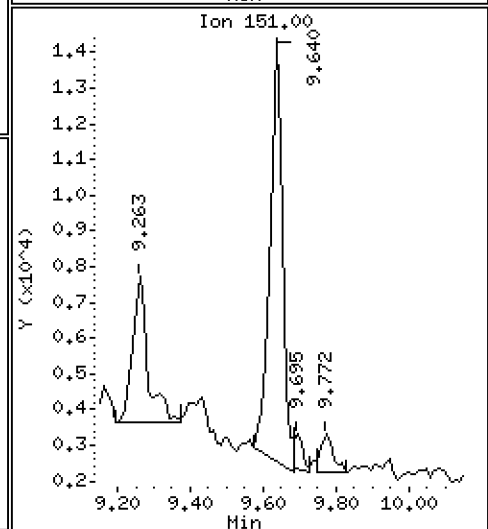
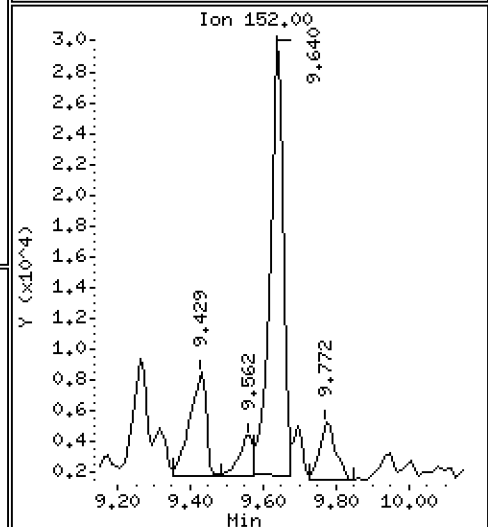
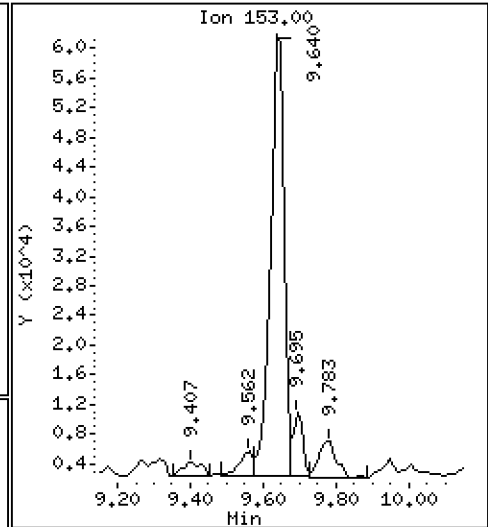
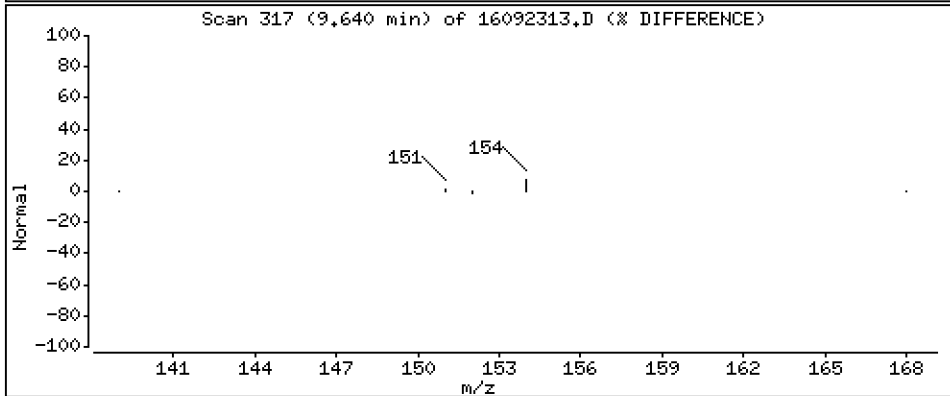
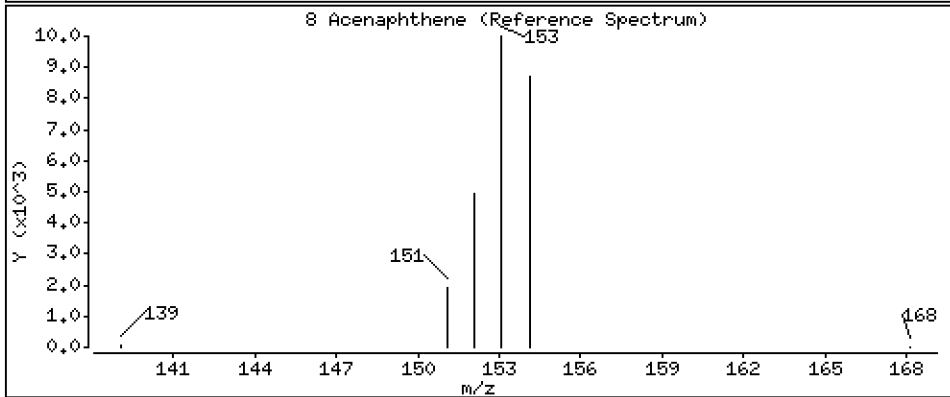
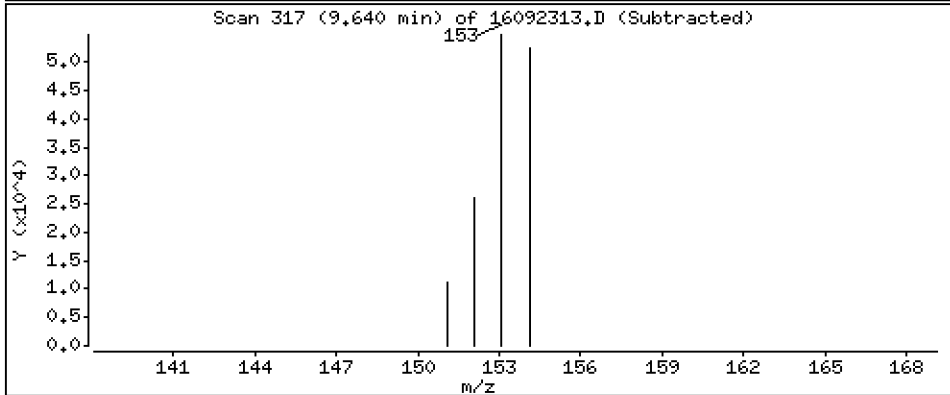
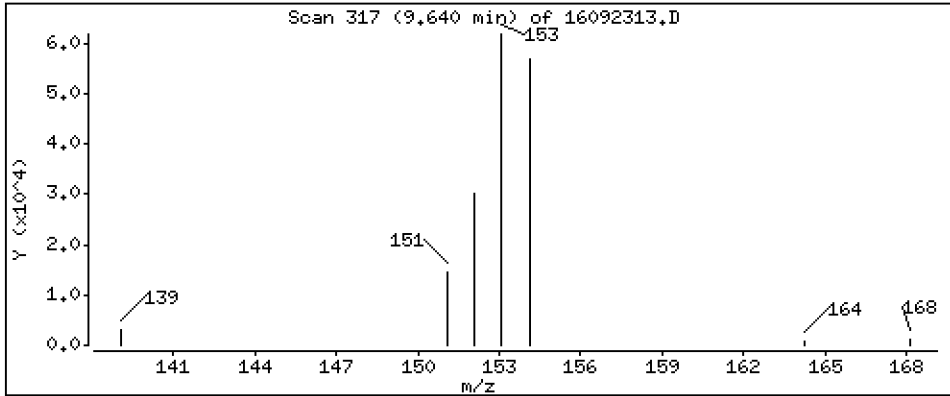
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 75.2 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

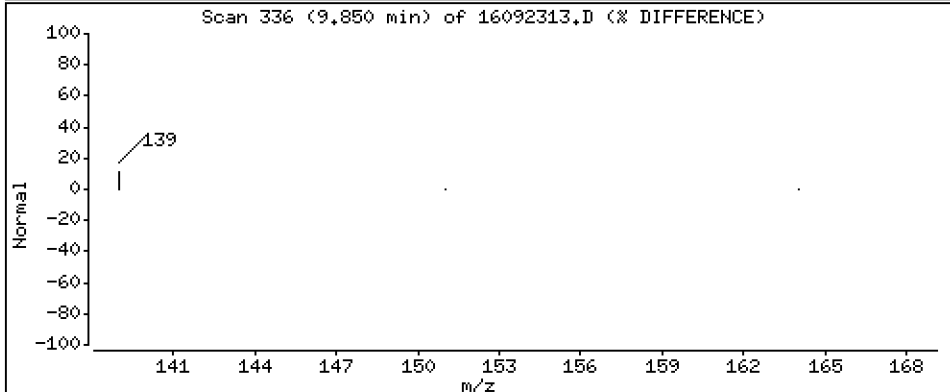
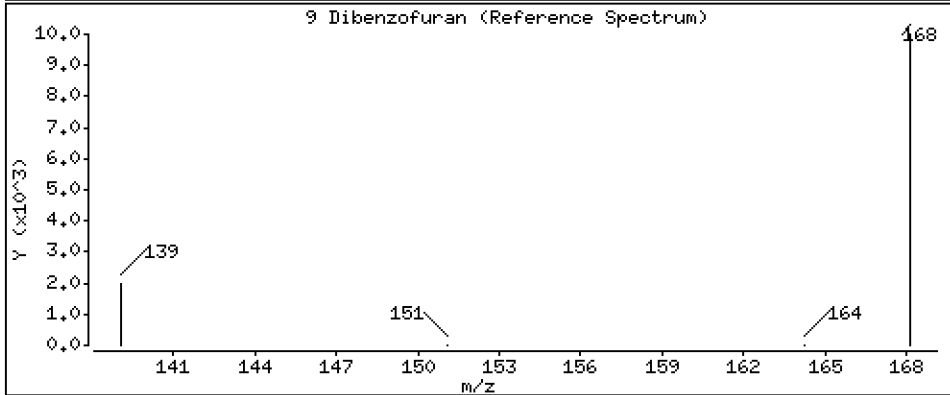
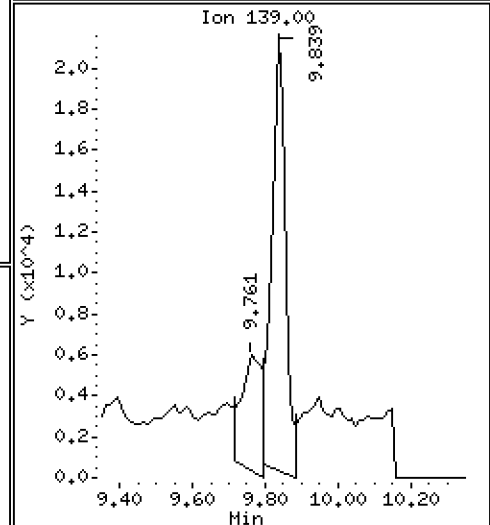
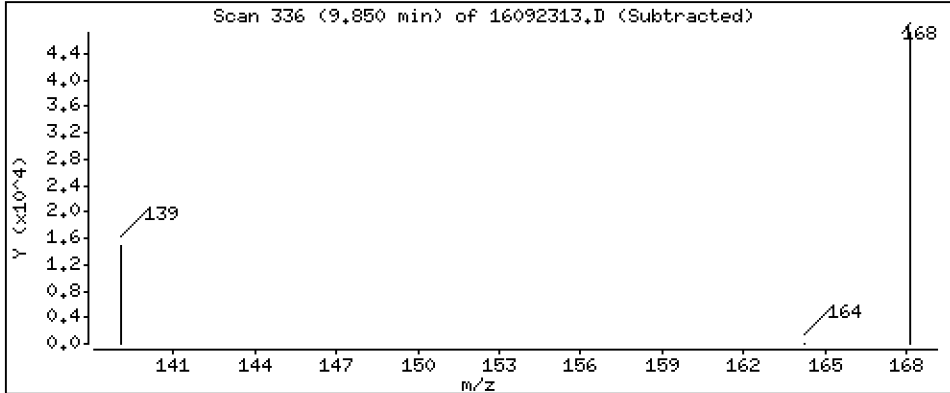
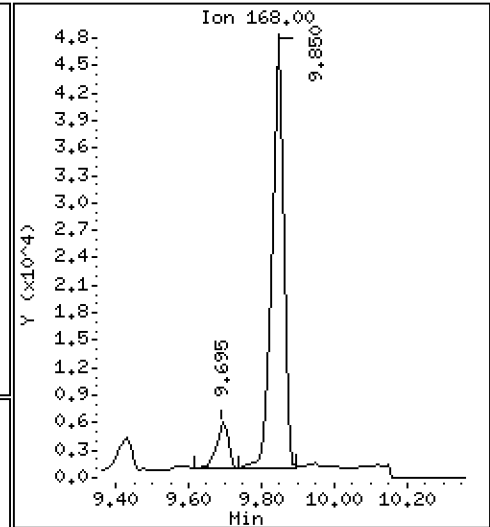
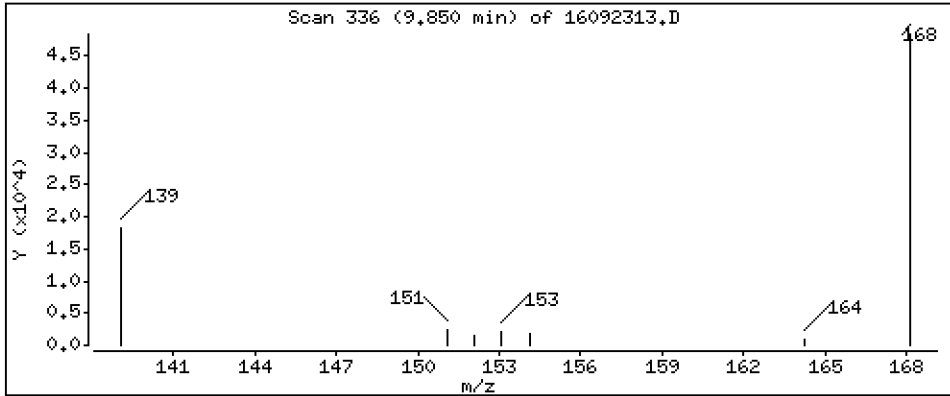
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 35,7 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

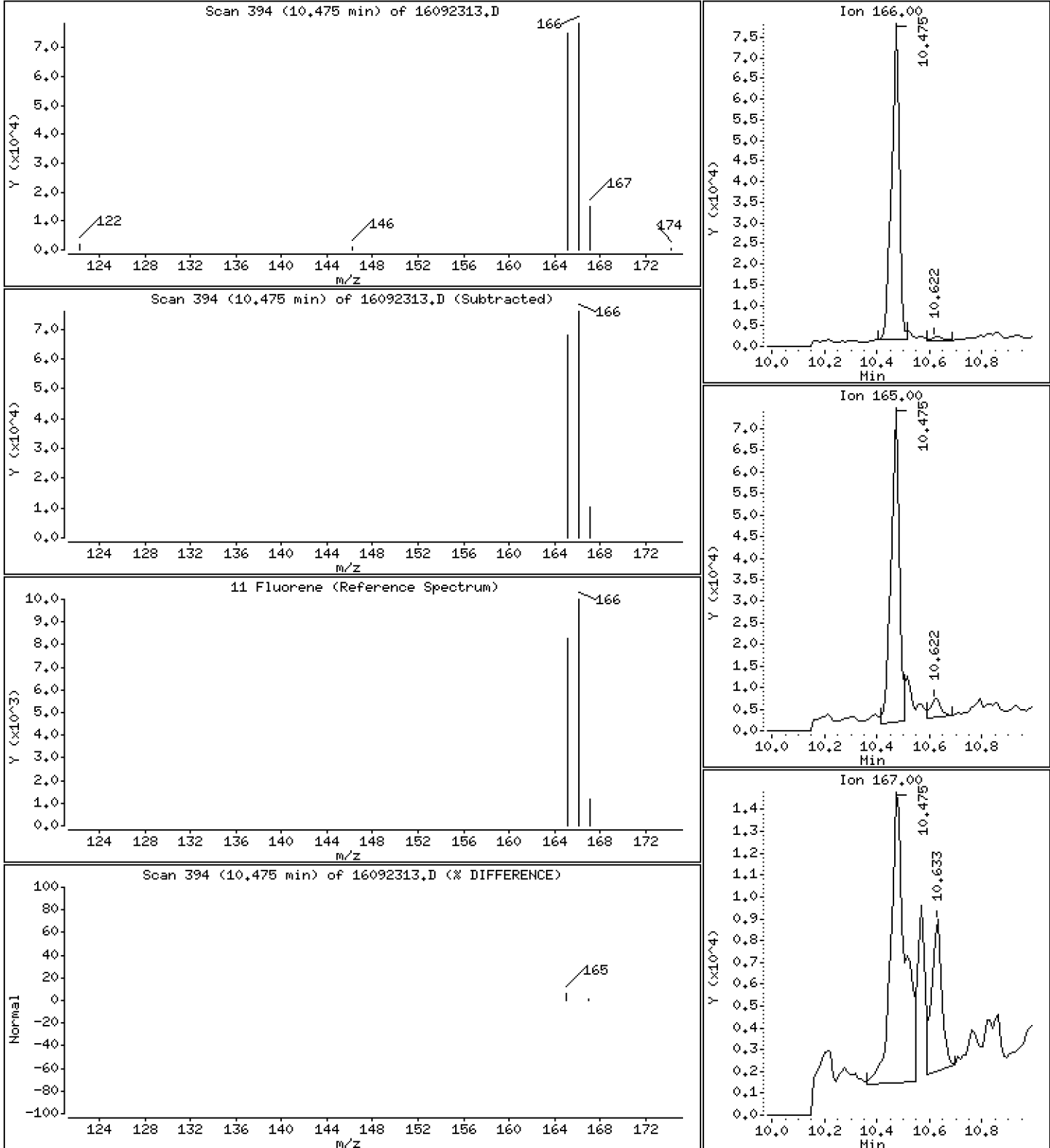
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 69,0 ng/mL

11 Fluorene



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

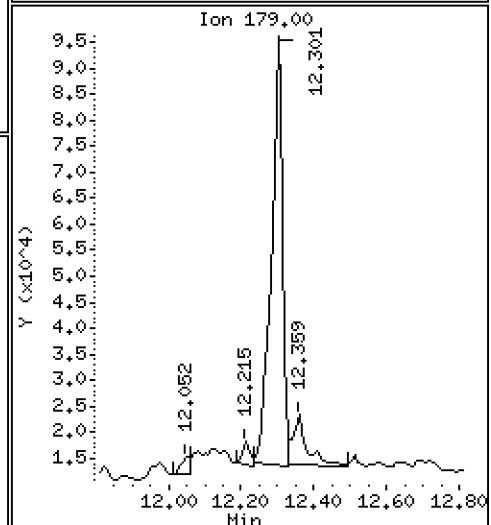
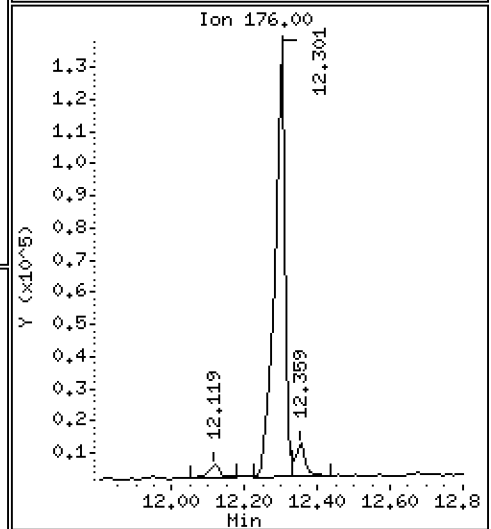
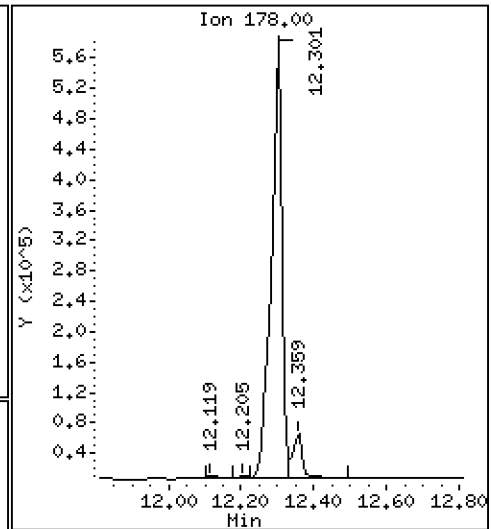
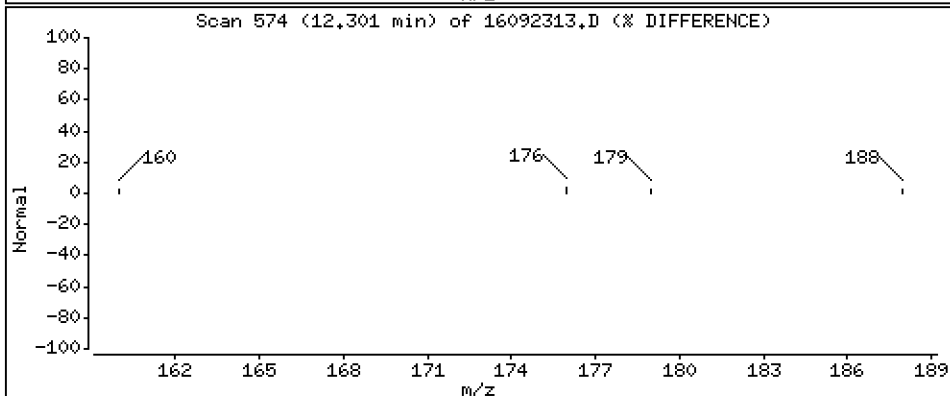
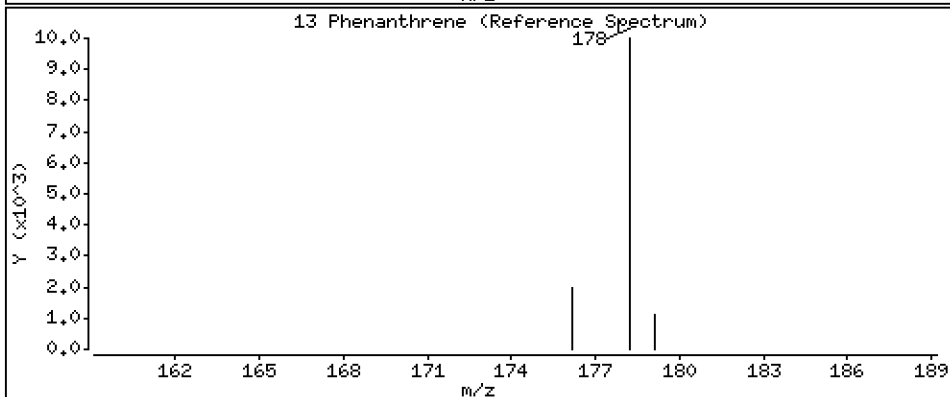
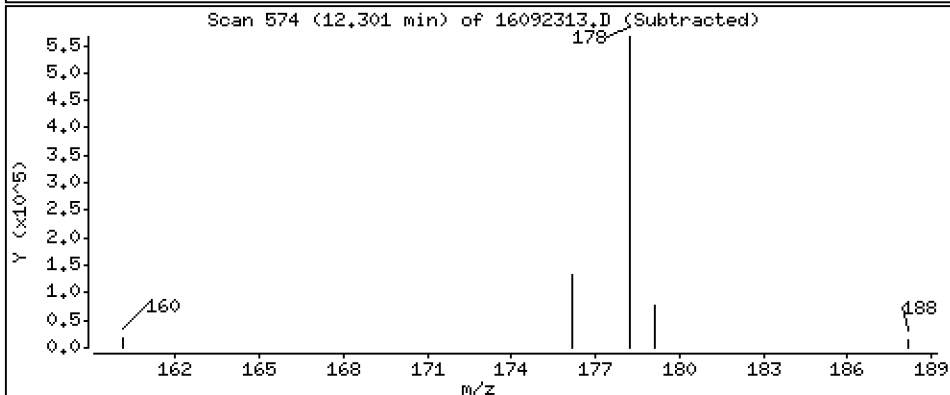
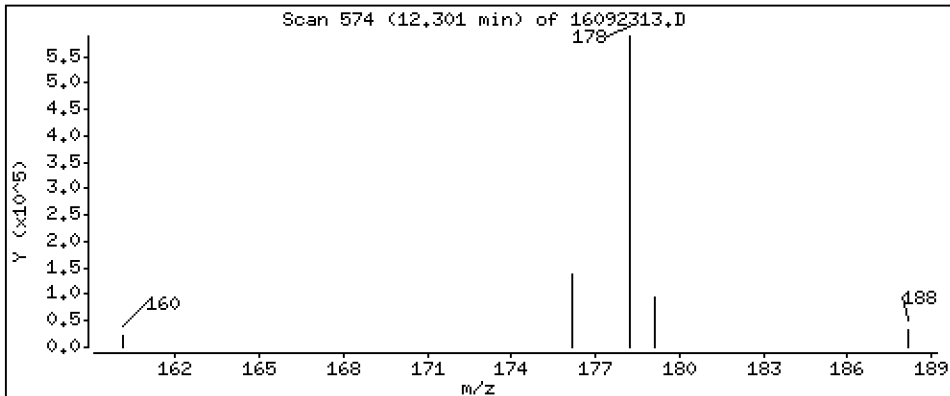
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 302 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

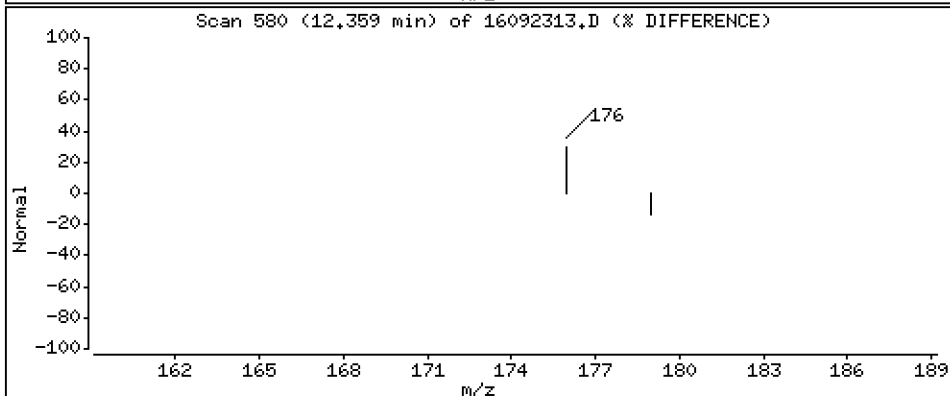
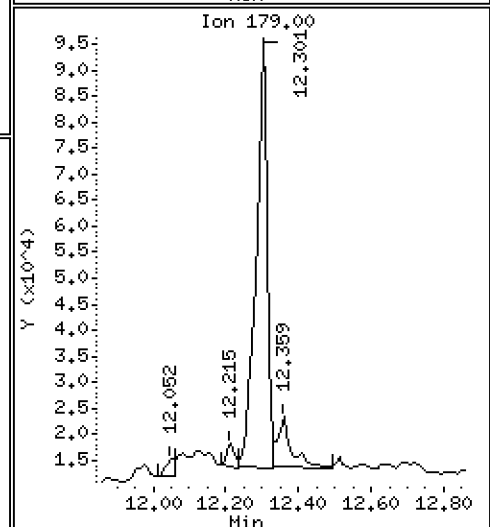
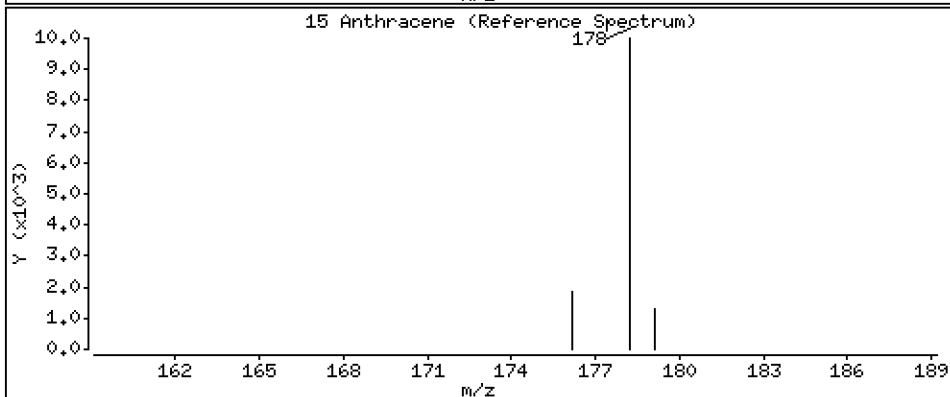
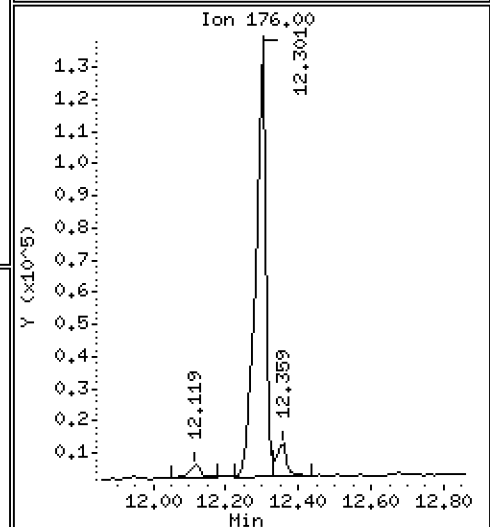
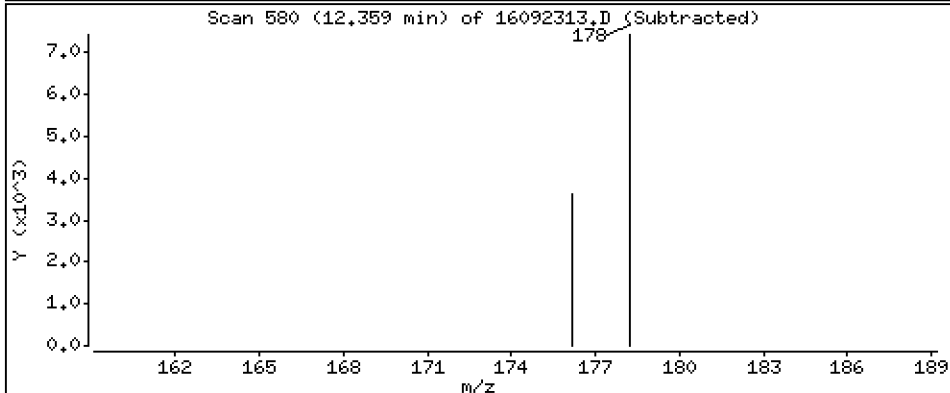
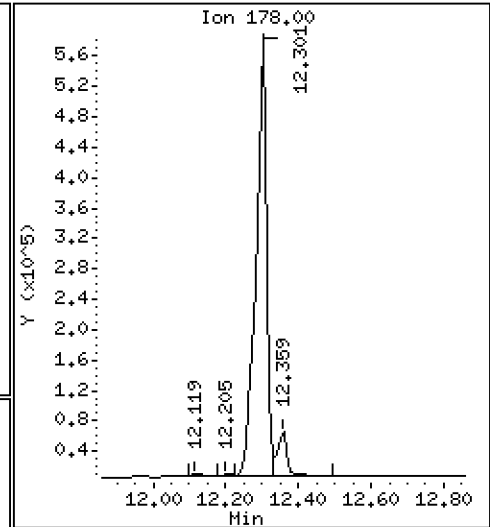
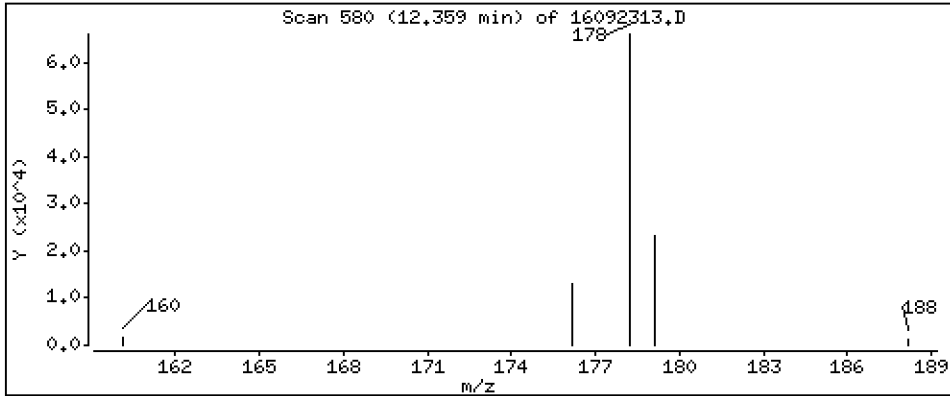
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

15 Anthracene

Concentration: 30,0 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

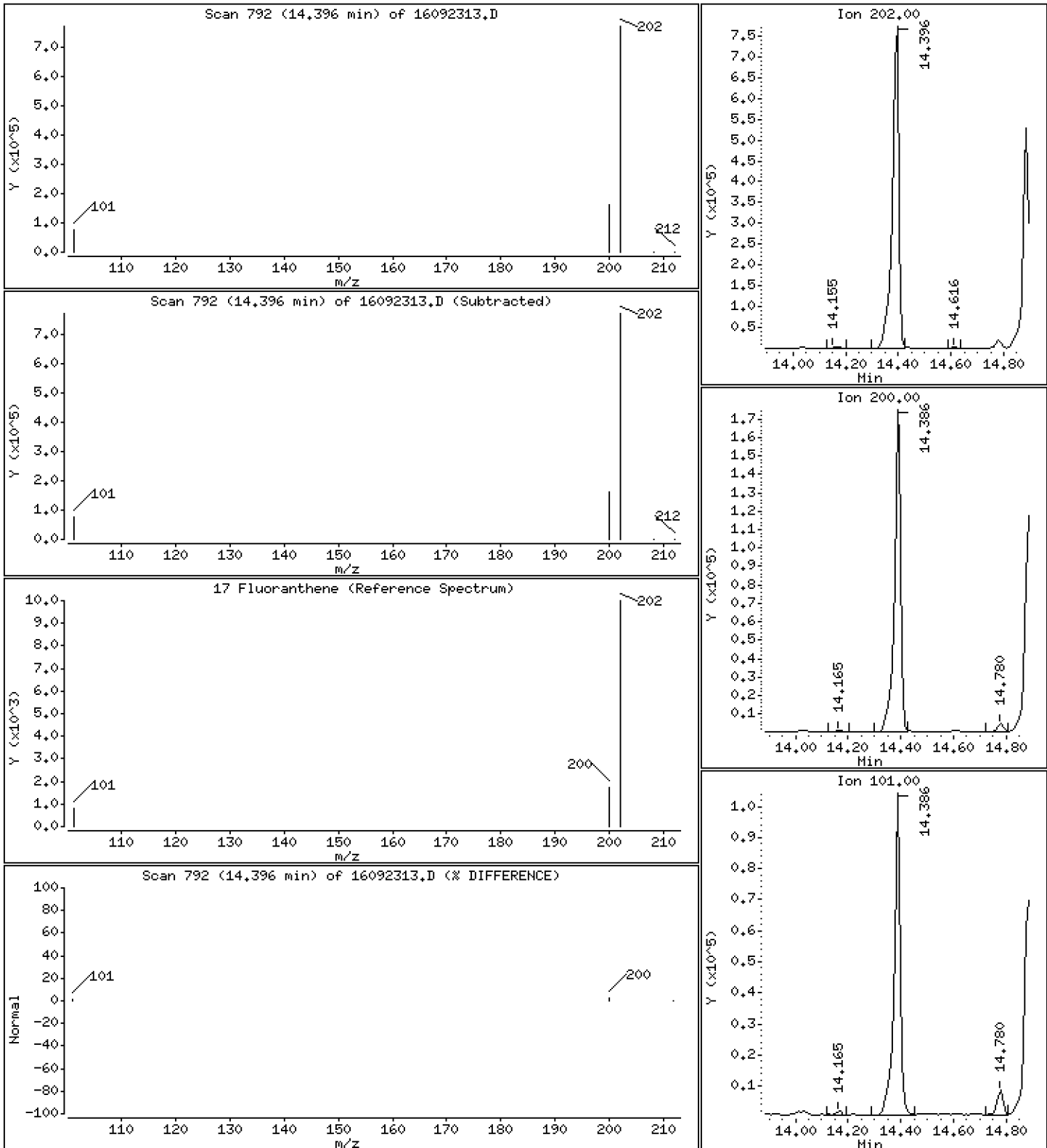
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 380 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

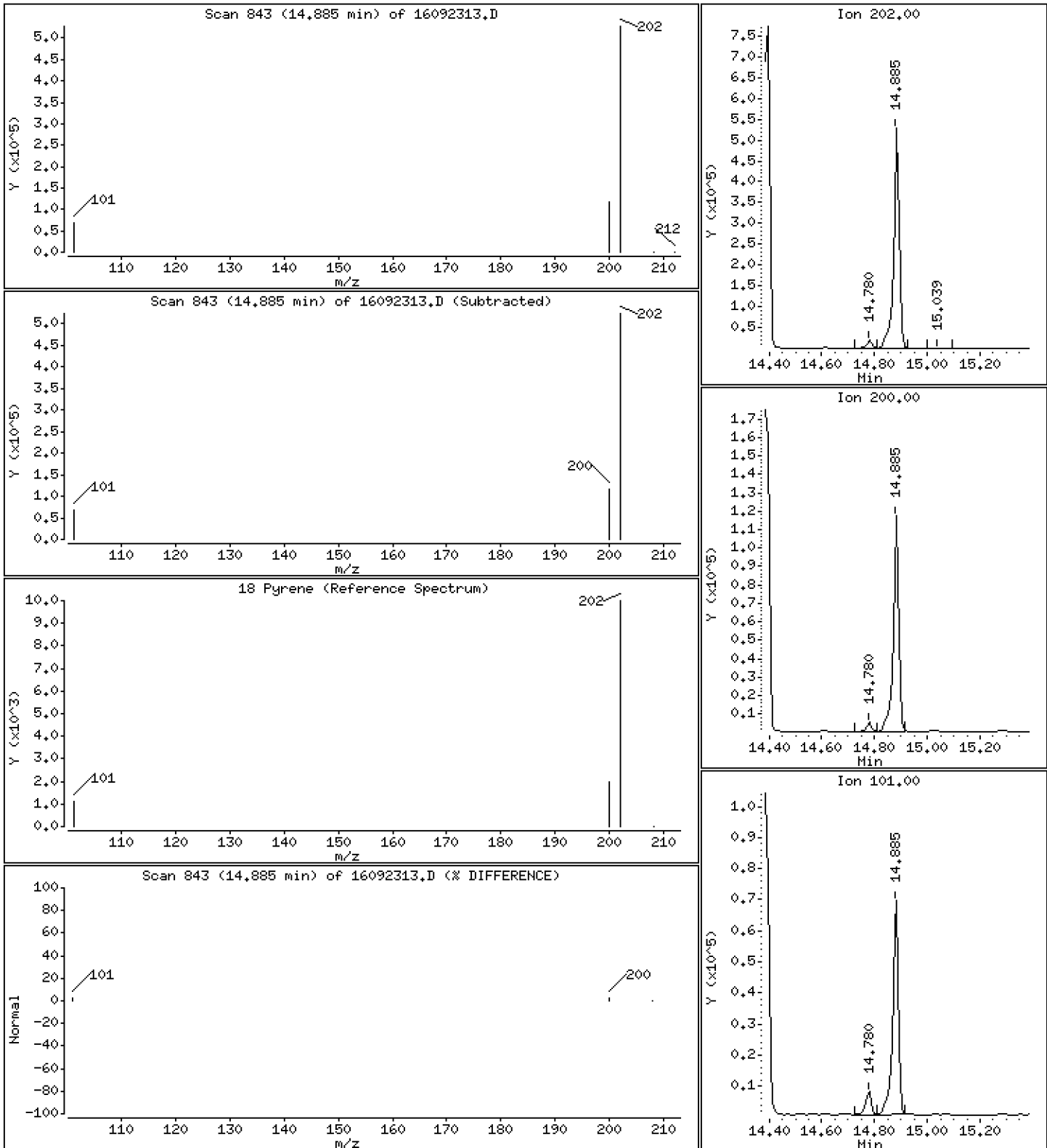
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 224 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

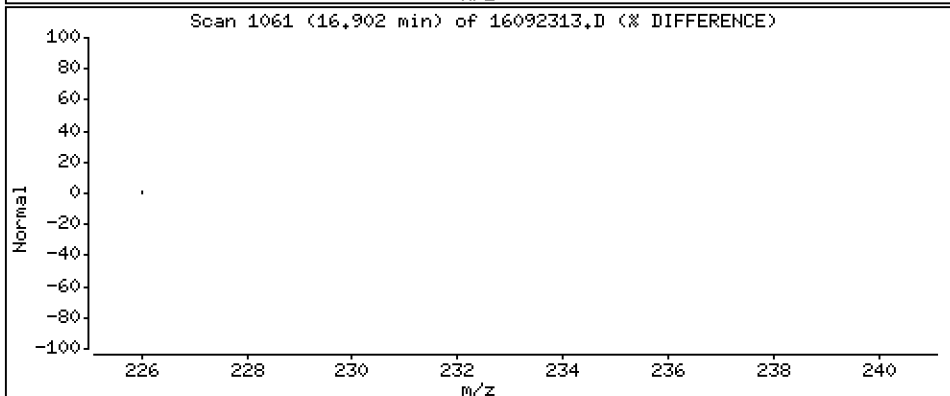
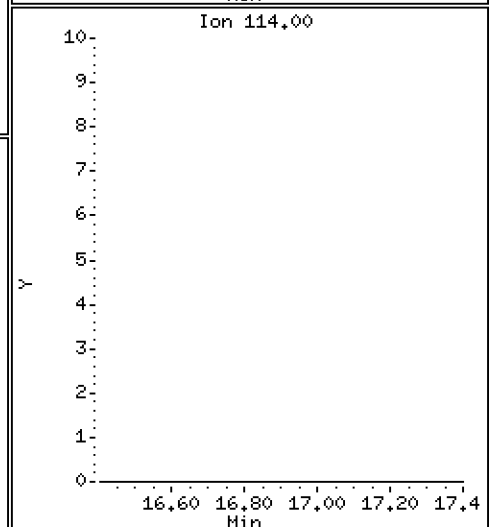
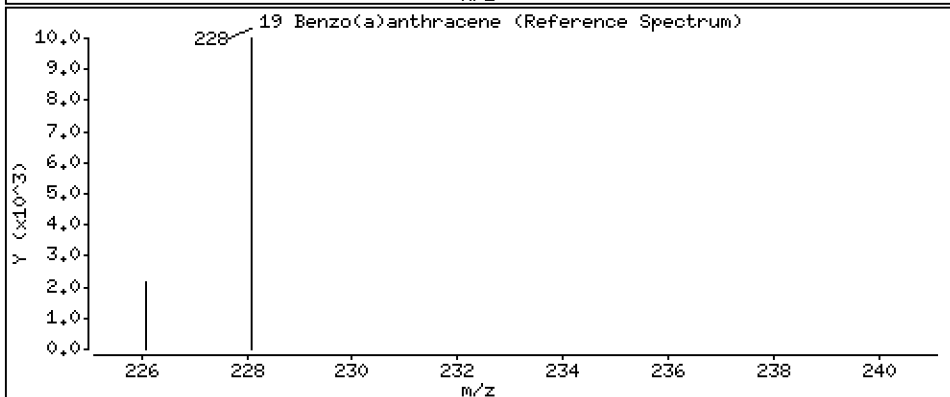
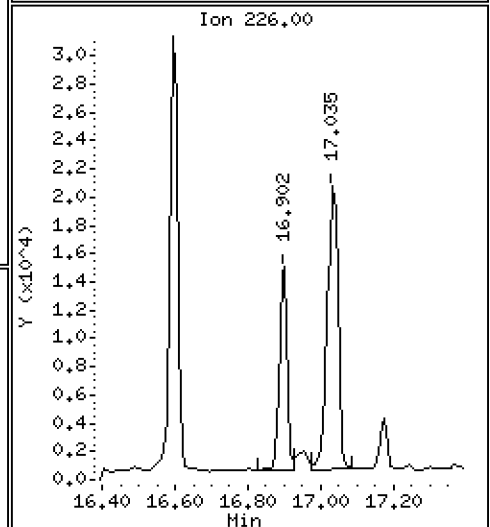
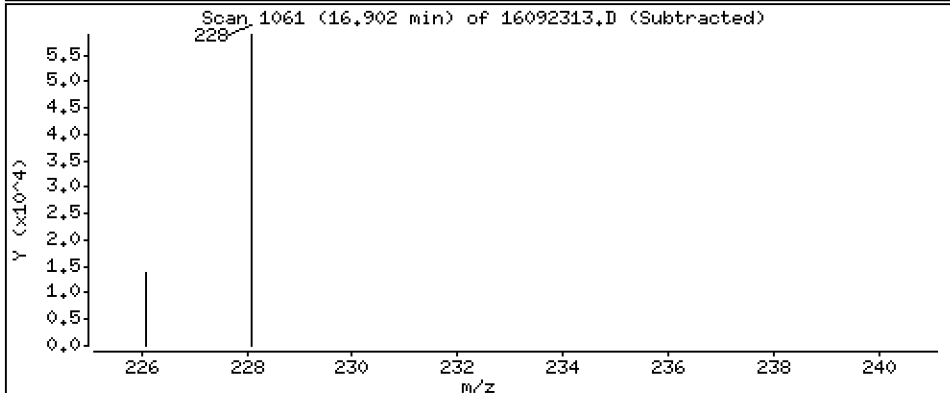
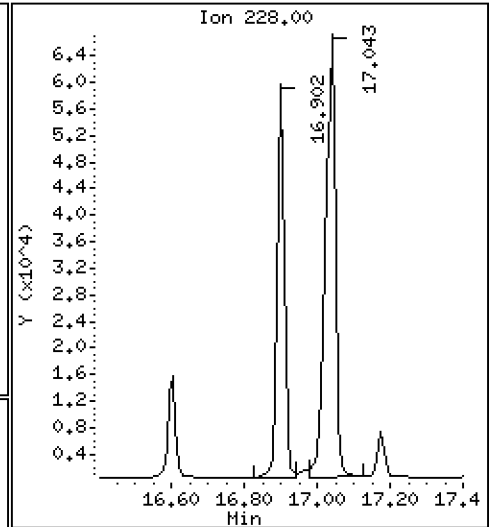
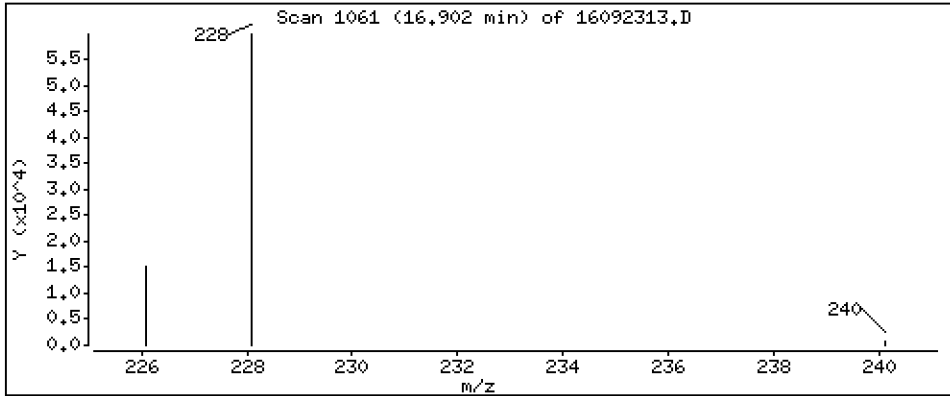
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 26,4 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

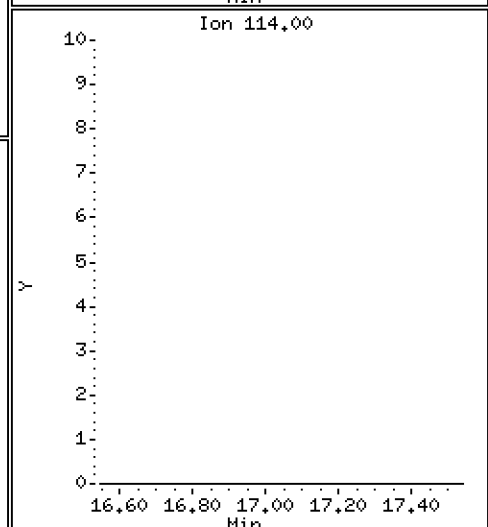
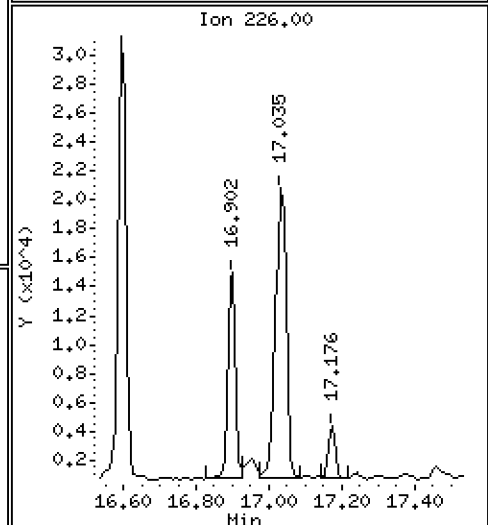
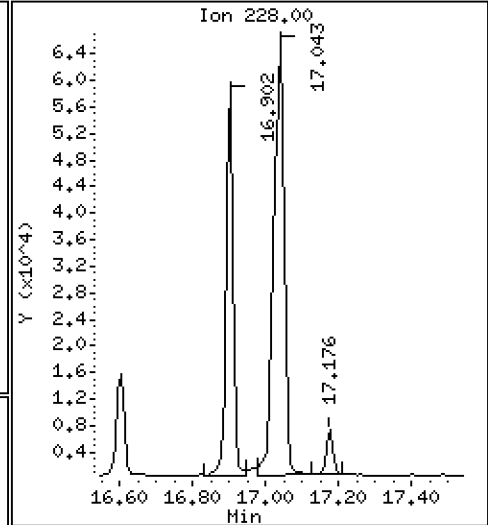
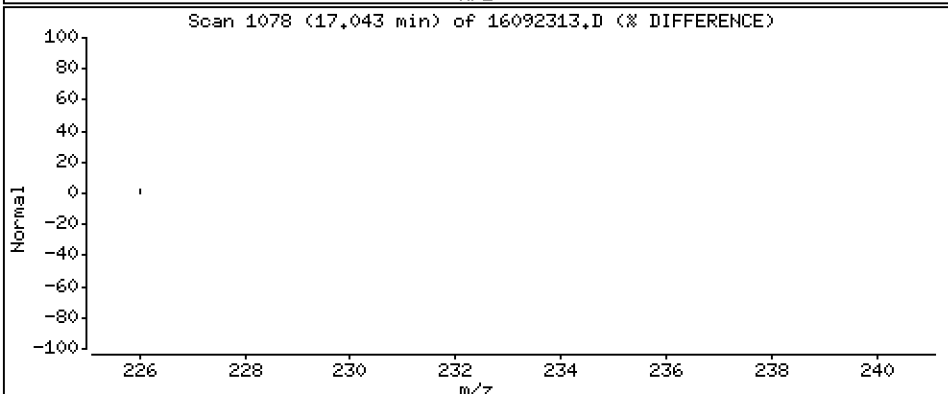
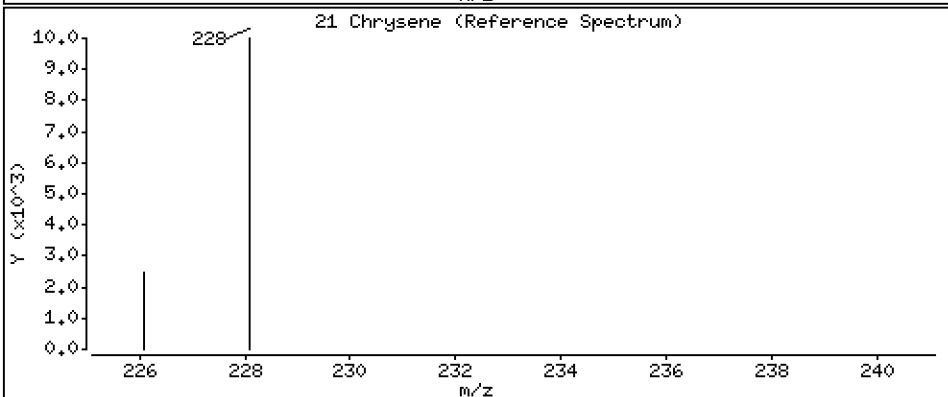
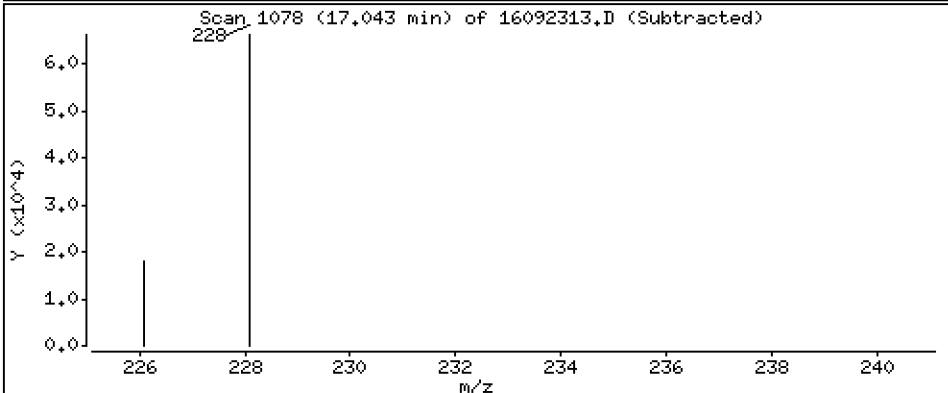
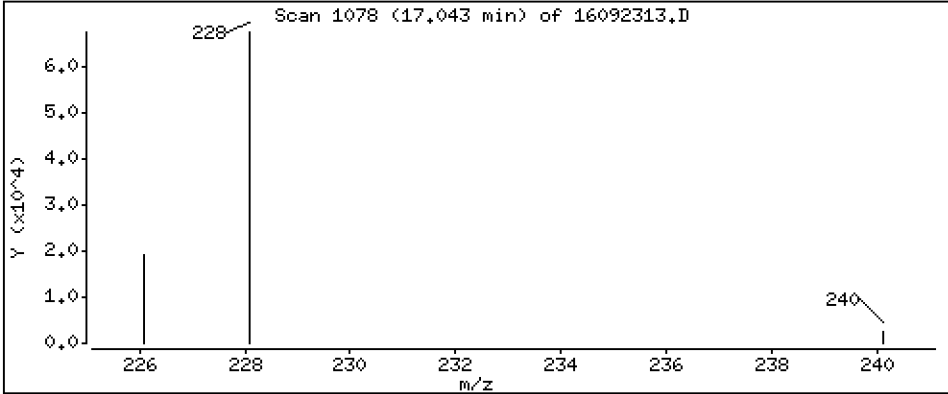
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 41,7 ng/mL

21 Chrysene



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

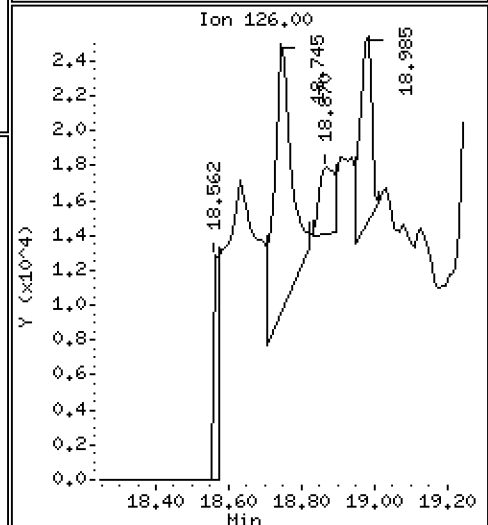
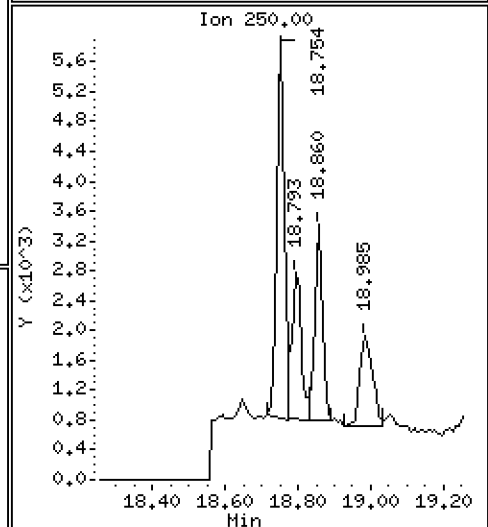
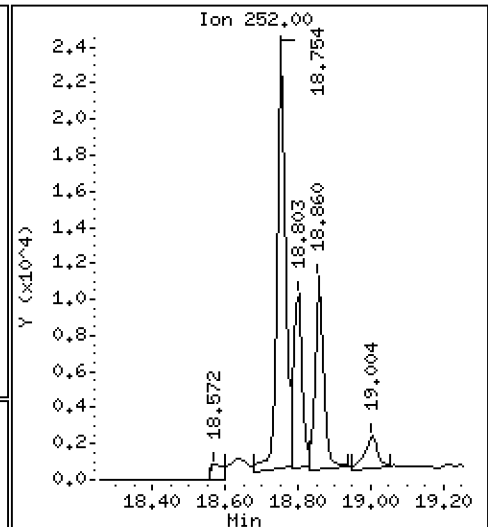
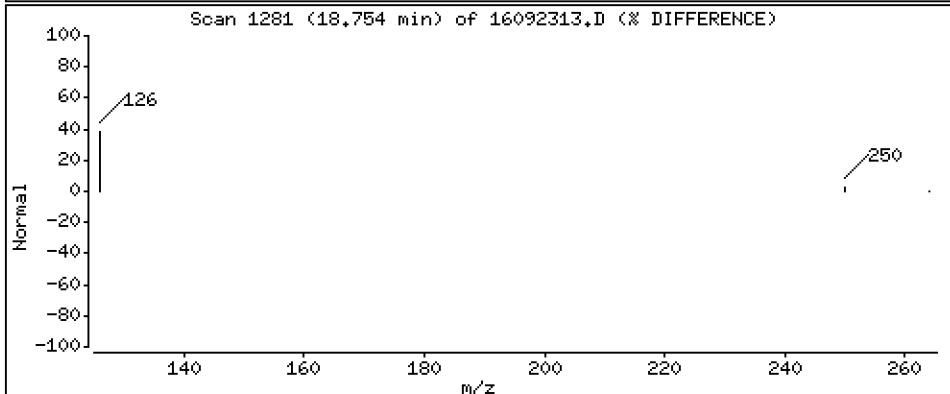
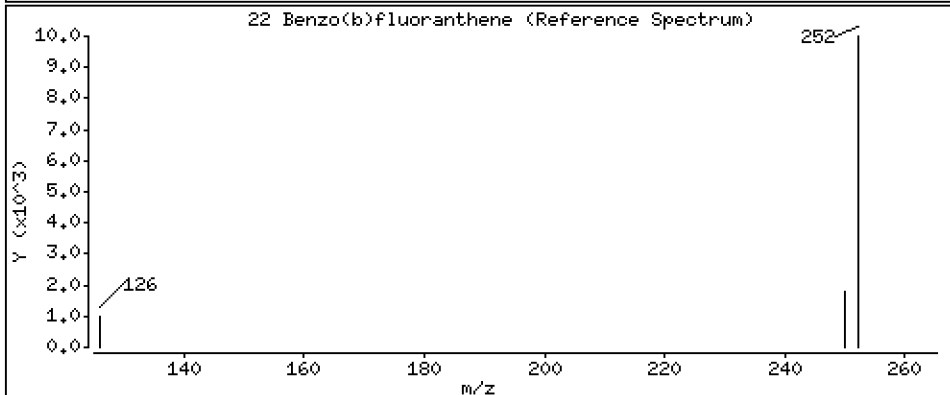
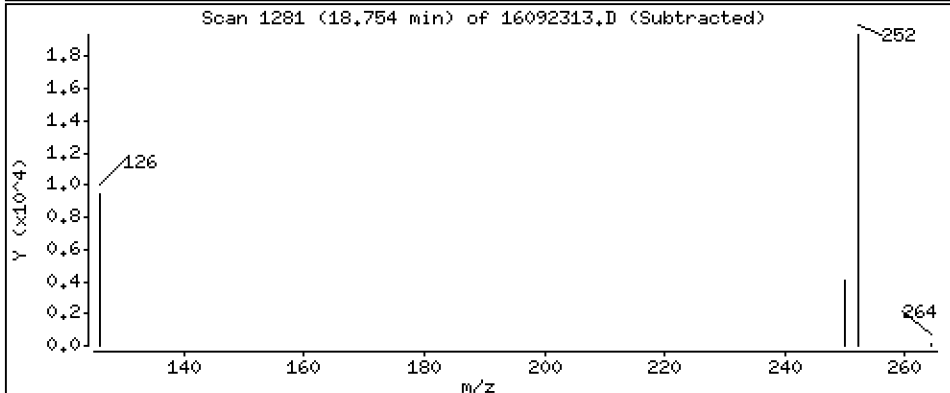
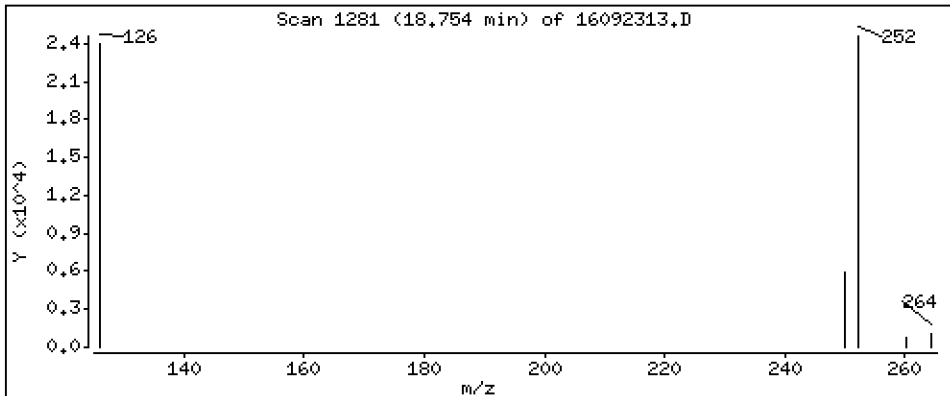
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 14,1 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

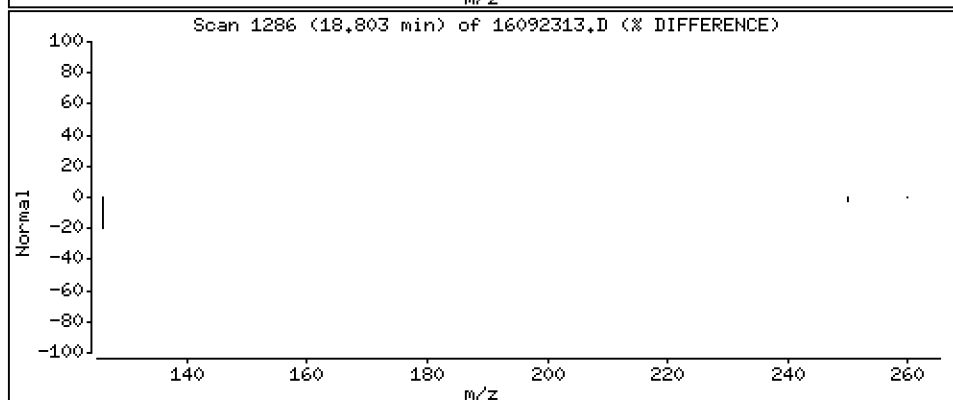
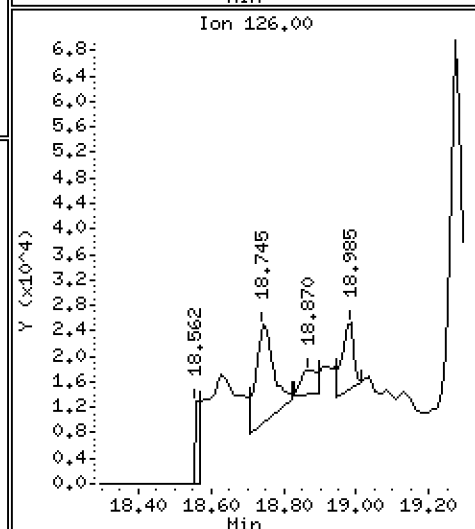
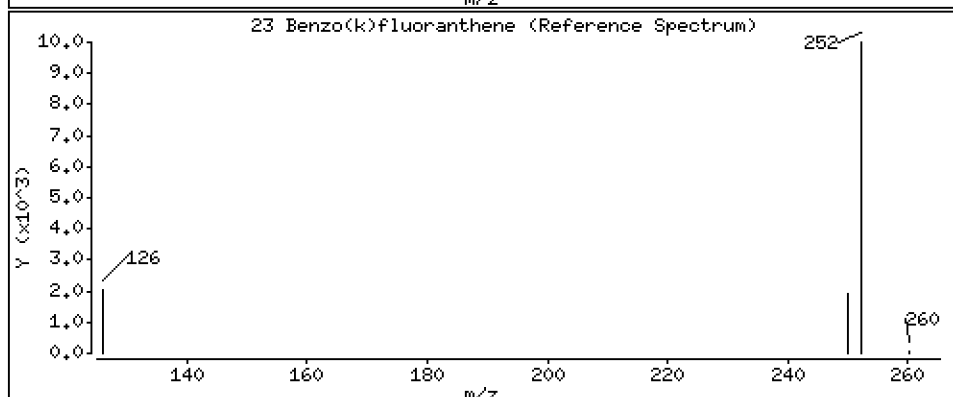
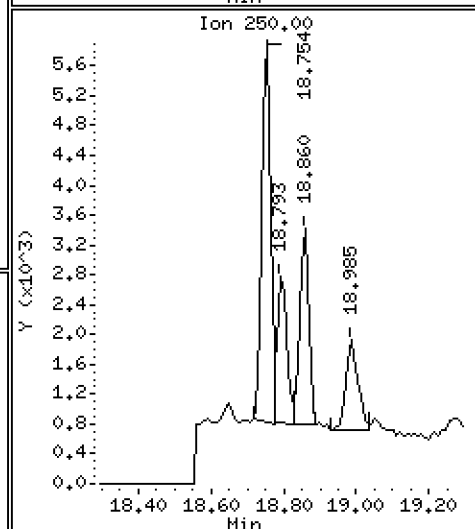
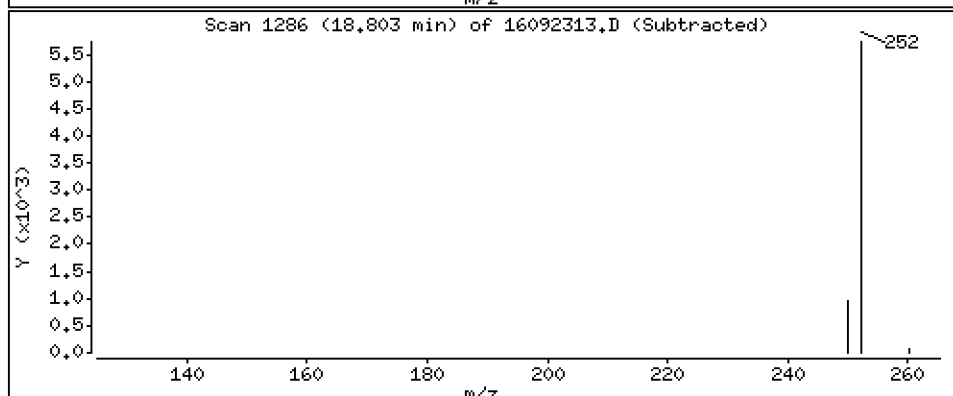
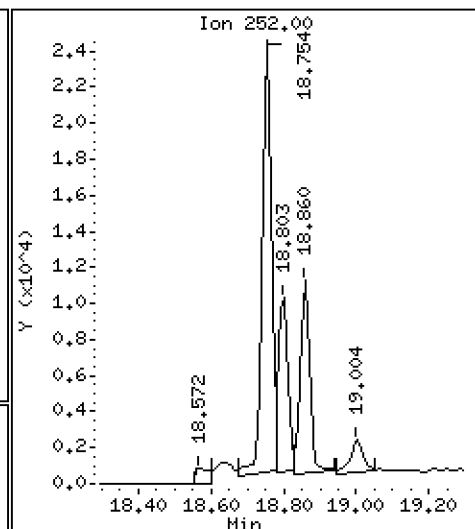
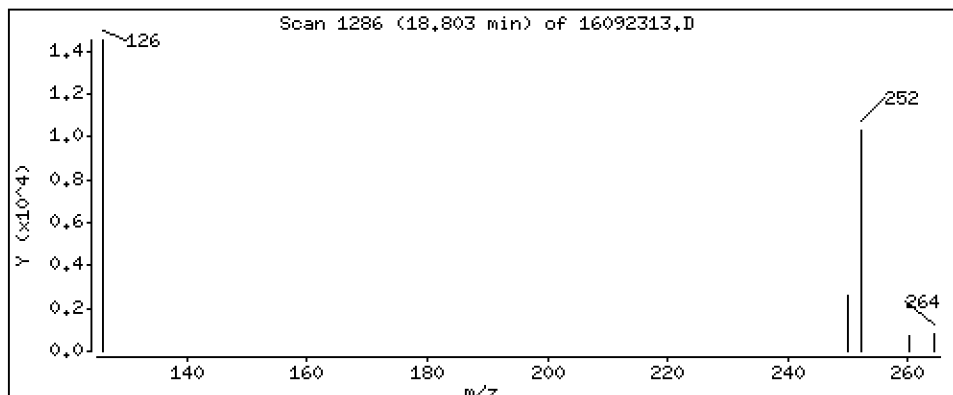
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 5,31 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

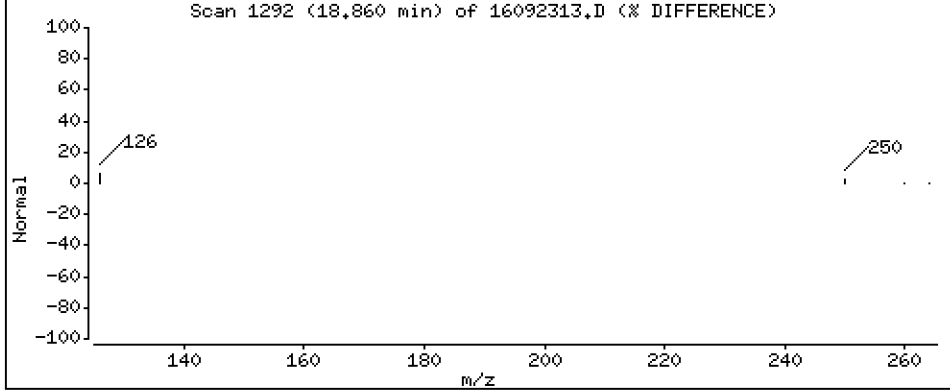
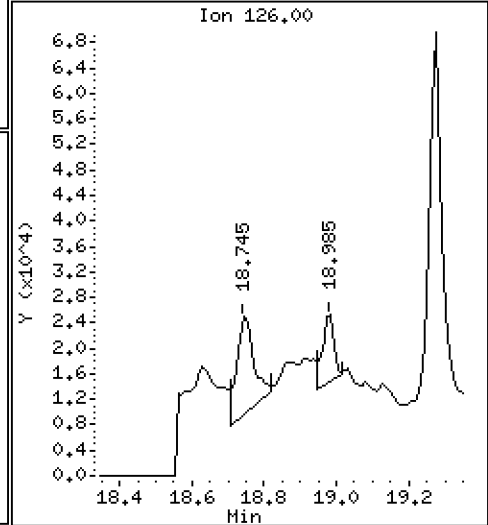
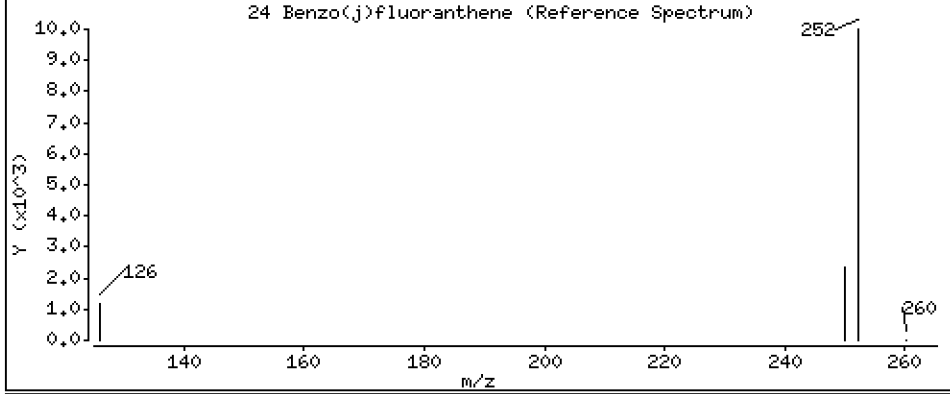
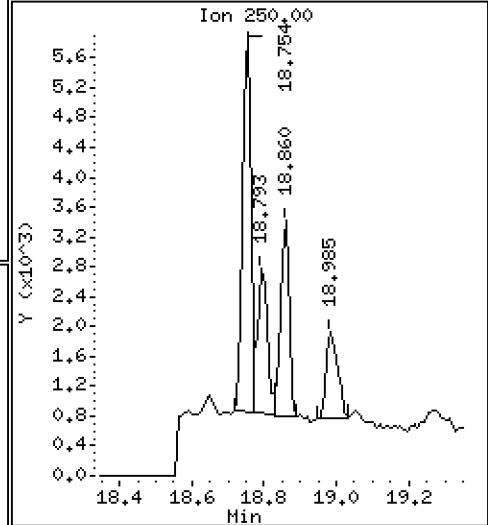
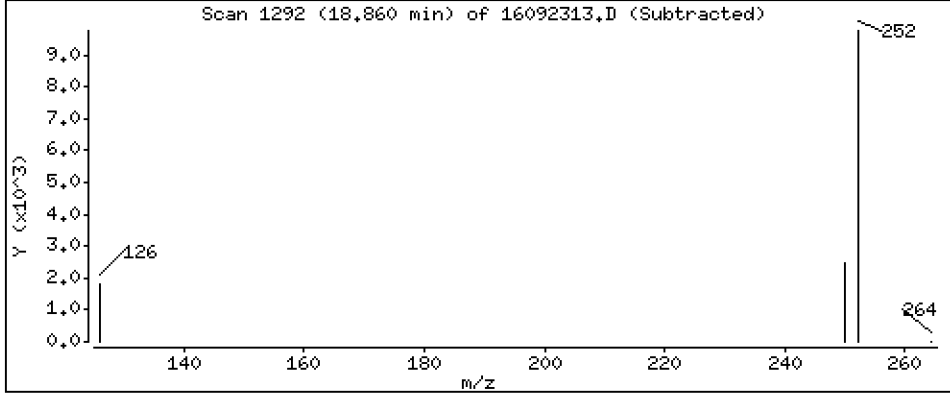
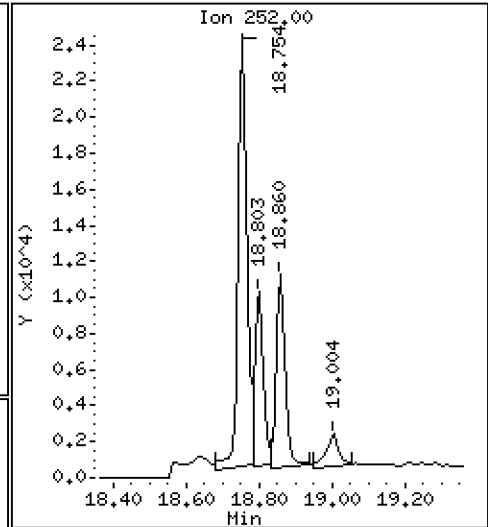
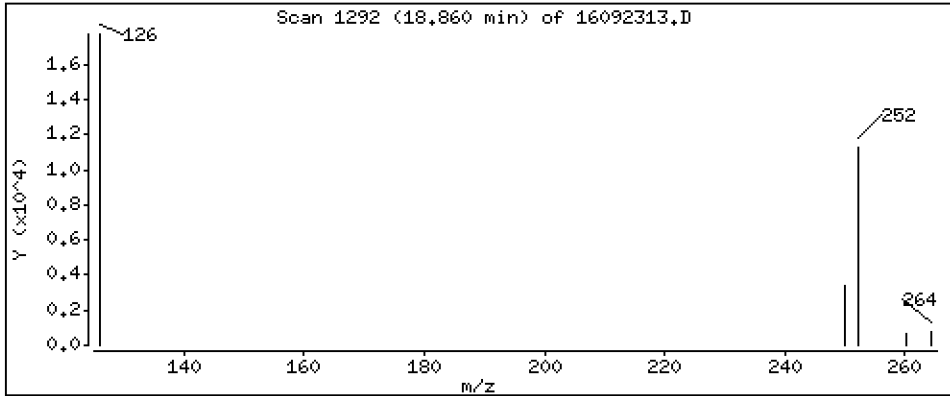
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 6,33 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

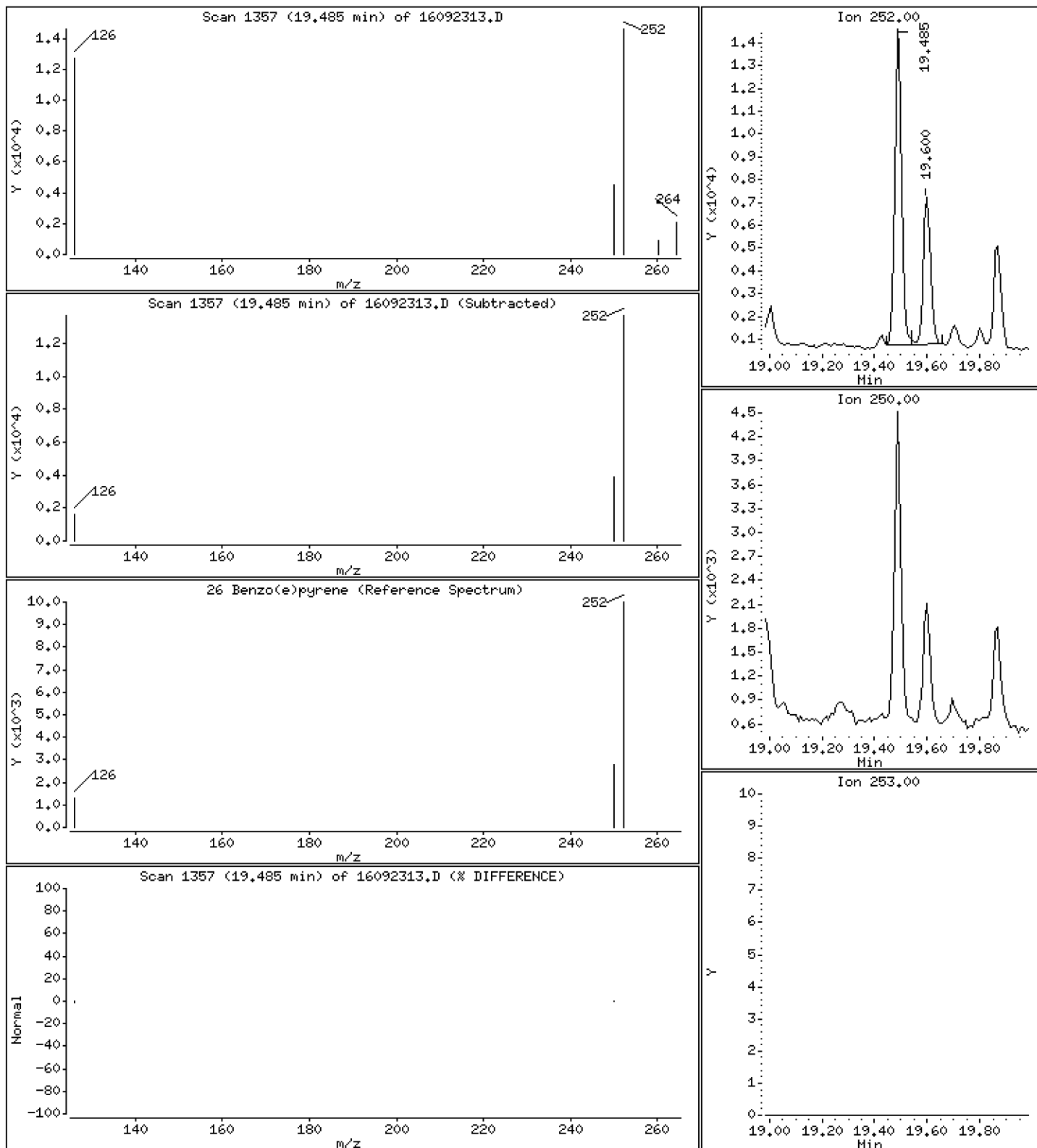
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 9,21 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

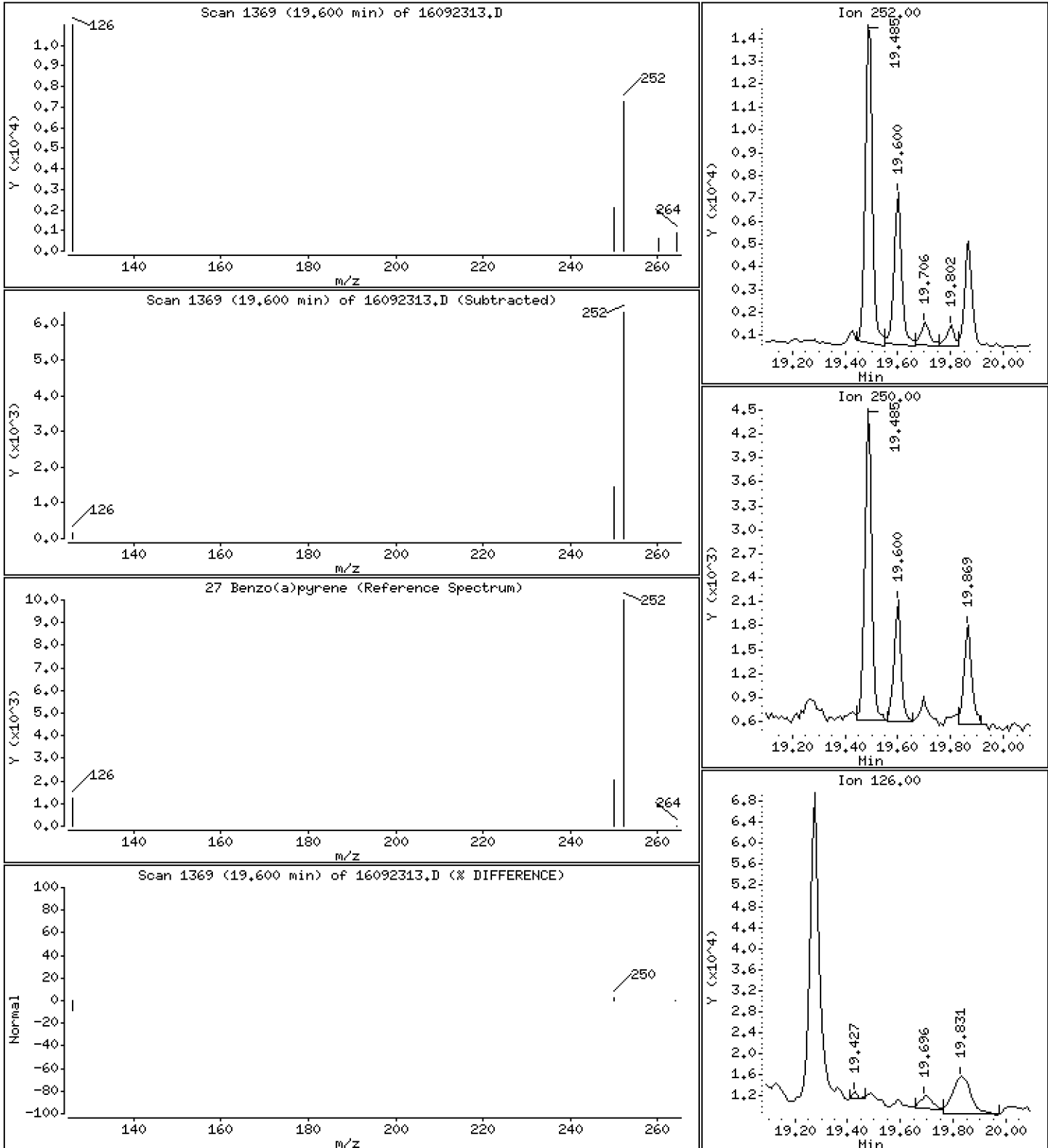
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 5,19 ng/mL



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

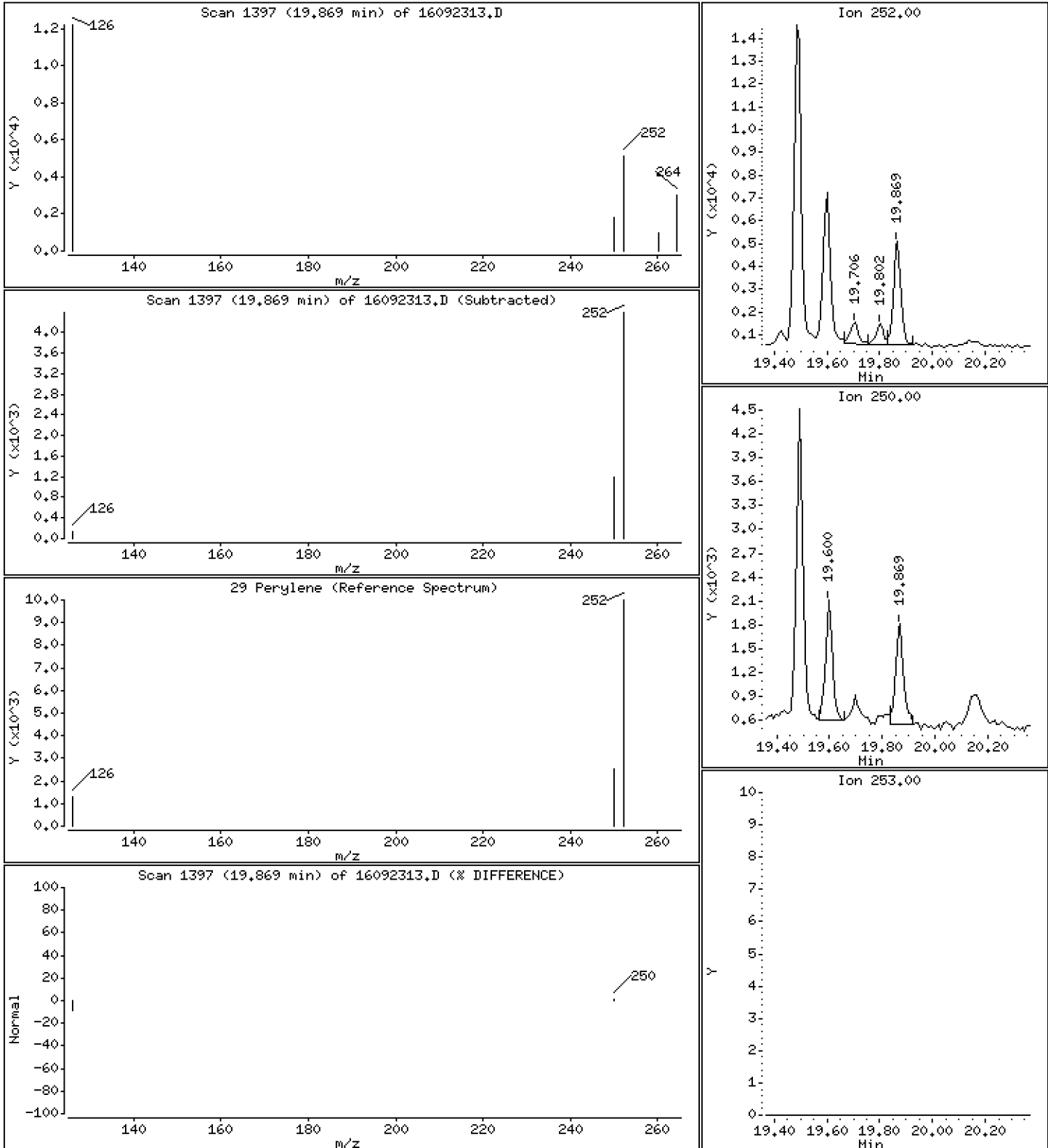
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 3,26 ng/mL

29 Perylene



Date : 23-SEP-2016 14:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-11

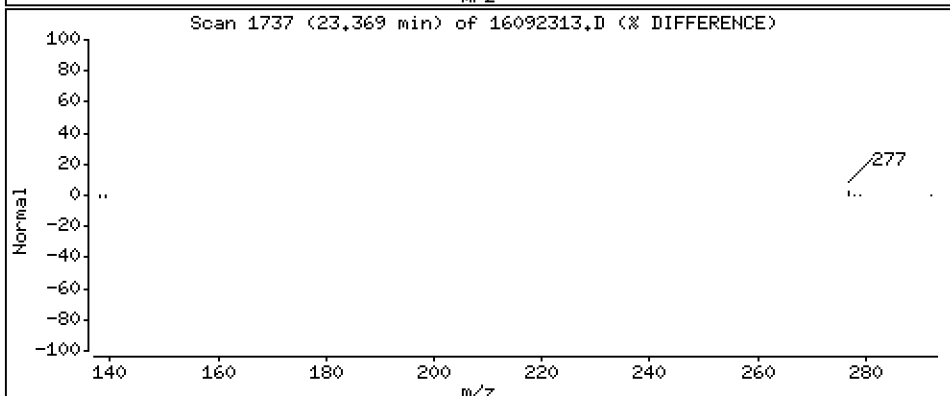
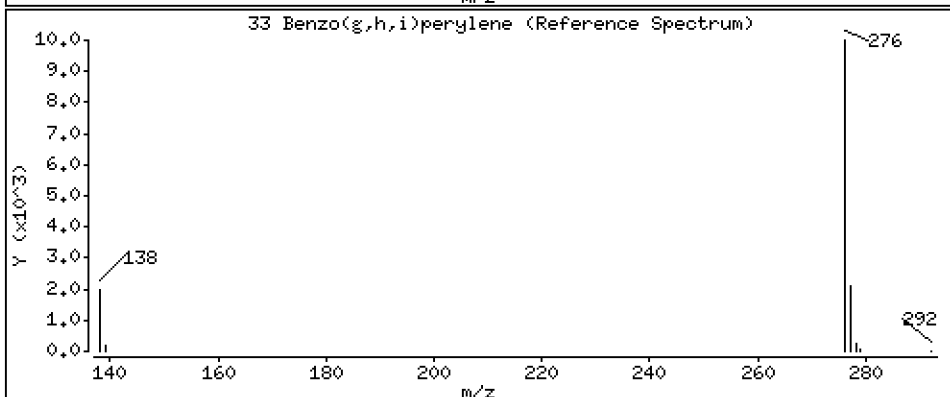
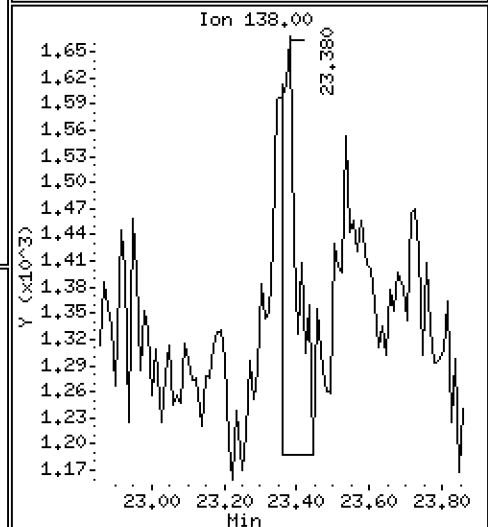
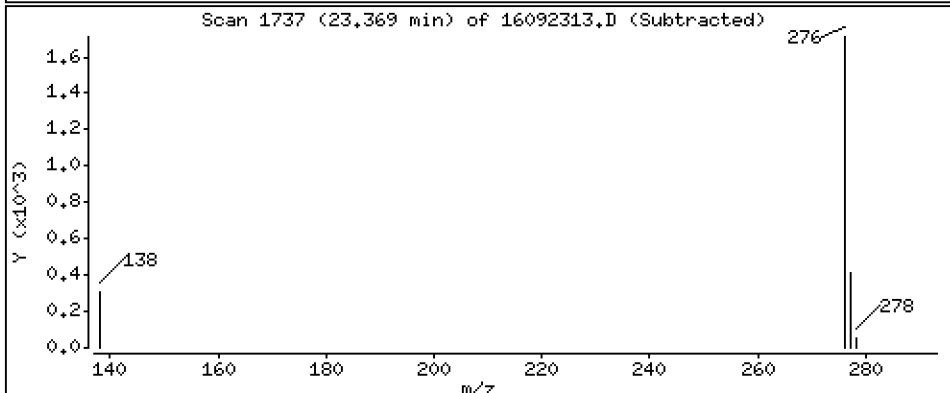
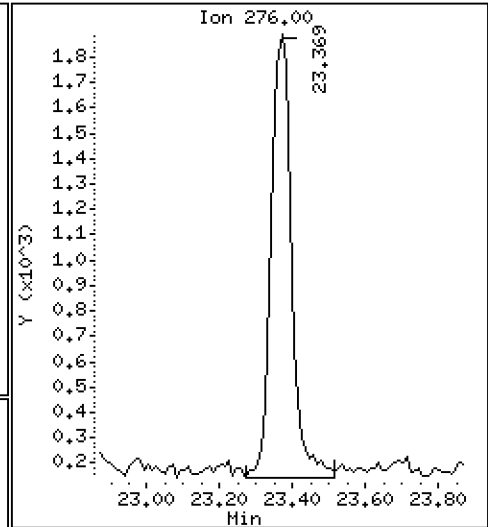
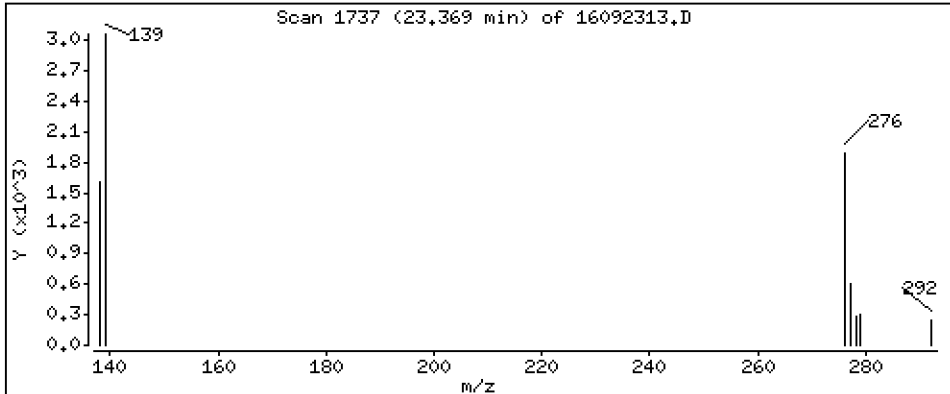
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 2,55 ng/mL

33 Benzo(g,h,i)perylene



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092313.D

Lab Smp Id: 16I0160-11

Inj Date : 23-SEP-2016 14:02

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-11

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 16

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	560457	200.000	
2 Naphthalene	128		6.613	6.623	(1.006)	246575	76.6700	76.7
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	302158	169.824	170
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	102985	46.5285	46.5
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	61576	30.5635	30.6
6 Acenaphthylene	152		9.429	9.440	(0.984)	21868	7.24837	7.25
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	324471	200.000	
8 Acenaphthene	153		9.639	9.650	(1.006)	151146	75.2196	75.2
9 Dibenzofuran	168		9.849	9.860	(1.028)	103906	35.6822	35.7
§ 10 Fluorene-d10	174		10.422	10.432	(1.087)	8535	5.19267	5.19 (M)
11 Fluorene	166		10.475	10.485	(1.093)	160358	69.0124	69.0
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	604422	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	1226414	302.054	302
§ 14 Anthracene-d10	188		12.320	12.330	(1.005)	131241	40.2047	40.2
15 Anthracene	178		12.359	12.358	(1.008)	118810	29.9965	30.0
§ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	634579	215.967	216
17 Fluoranthene	202		14.395	14.395	(1.174)	1366798	380.198	380
18 Pyrene	202		14.885	14.885	(0.876)	816459	223.892	224
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	80703	26.4143	26.4
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	470696	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	133977	41.7454	41.7
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	41836	14.0568	14.1
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	17593	5.30636	5.31
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	18420	6.33268	6.33
§ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	324764	113.623	114
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	26323	9.21471	9.21
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	14141	5.18899	5.19
* 28 Perylene-d12	264		19.801	19.801	(1.000)	557766	200.000	
29 Perylene	252		19.869	19.868	(1.003)	9104	3.26217	3.26
§ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	365748	199.493	199
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	6651	2.54949	2.55

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092313.D
 Lab Smp Id: 16I0160-11
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	560457	6.27
7 Acenaphthene-d10	297518	148759	595036	324471	9.06
12 Phenanthrene-d10	522042	261021	1044084	604422	15.78
20 Chrysene-d12	389499	194750	778998	470696	20.85
28 Perylene-d12	430626	215313	861252	557766	29.52

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092313.D

Lab ID: 16I0160-11
nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 14:02

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

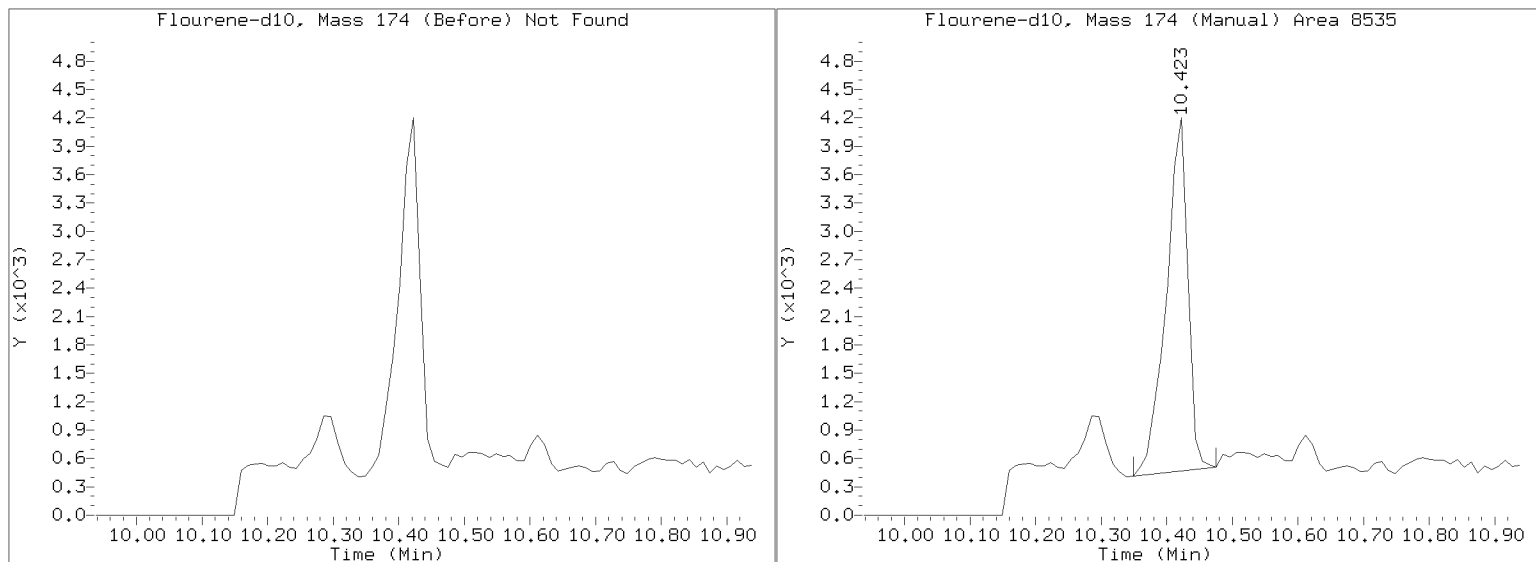
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092313.D

Injection Date: 23-SEP-2016 14:02

Lab ID:16I0160-11 Client ID:

Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory: Analytical Resources, Inc. SDG: 1610160
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 1610160-13 File ID: 16092314.D
 Sampled: 09/09/16 10:55 Prepared: 09/10/16 11:10 Analyzed: 09/23/16 14:32
 Solids: Preparation: EPA 3550C (Ultrasonic) Initial/Final: 0.886 g / 0.1 mL
 Batch: BEI0260 Sequence: SEI0321 Calibration: ZI00066
 Instrument: NT11 Column: RXi-17Sil-MS

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	17.4	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	24.4	B	1.13	1.13
208-96-8	Acenaphthylene	1	2.09		1.13	1.13
83-32-9	Acenaphthene	1	44.4		1.13	1.13
86-73-7	Fluorene	1	30.0		1.13	1.13
85-01-8	Phenanthrene	1	43.1		1.13	1.13
120-12-7	Anthracene	1	5.60		1.13	1.13
206-44-0	Fluoranthene	1	18.5		1.13	1.13
129-00-0	Pyrene	1	10.9		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.19		1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzo(a)fluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	21.1	62.3	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	22.4	66.2	30 - 160	
Fluoranthene-d10	33.860	25.9	76.6	30 - 160	
Fluorene-d10	21.163	8.70	41.1	30 - 160	
Anthracene-d10	21.163	10.2	48.0	30 - 160	
Benzo(e)pyrene-d12	21.163	13.8	65.3	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092314.D

Date: 23-SEP-2016 14:32

Client ID:

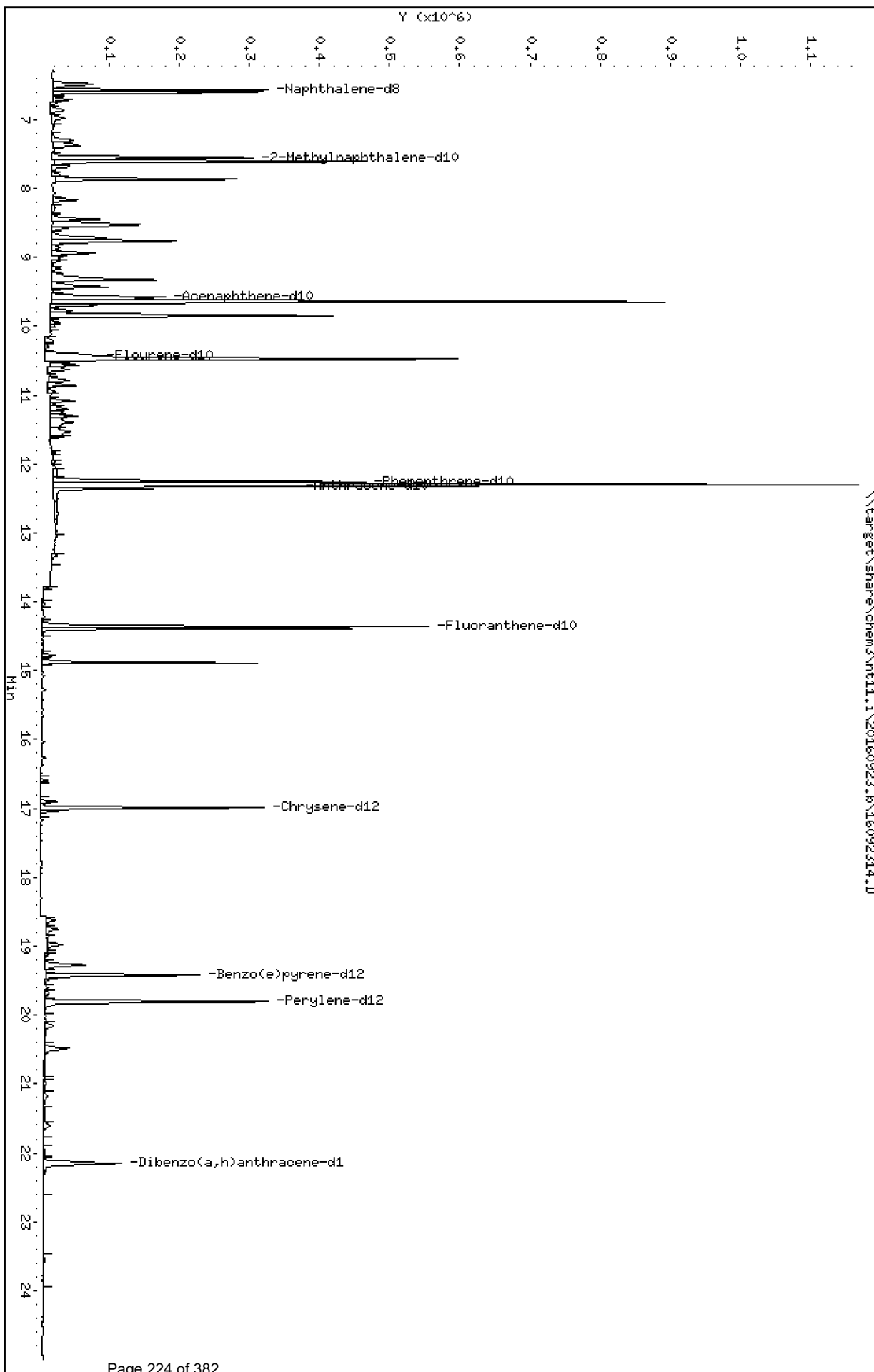
Sample Info: 1610160-13

Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

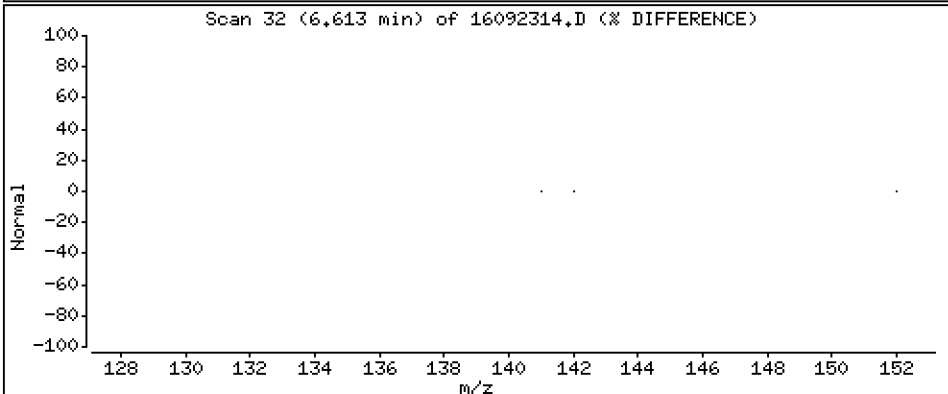
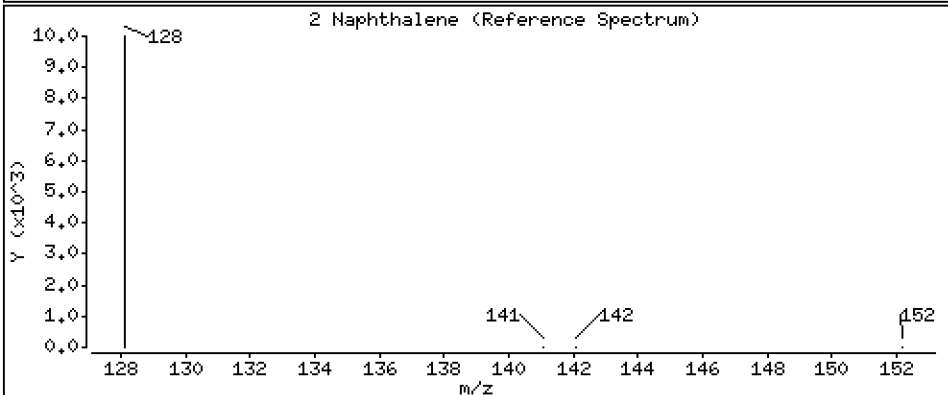
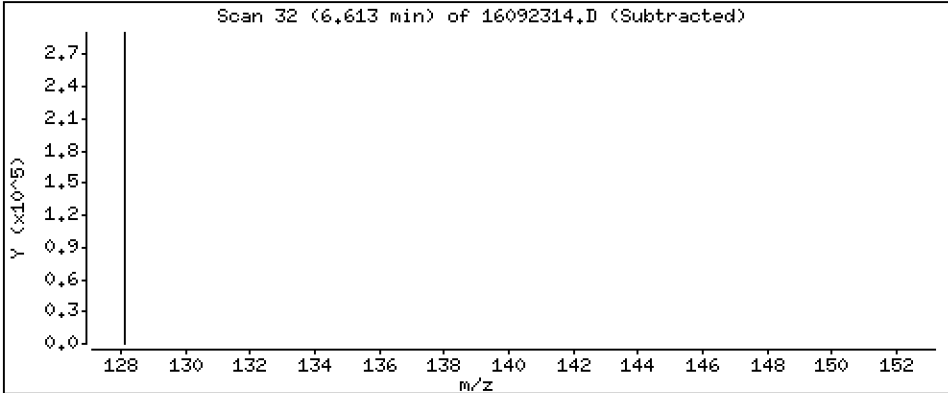
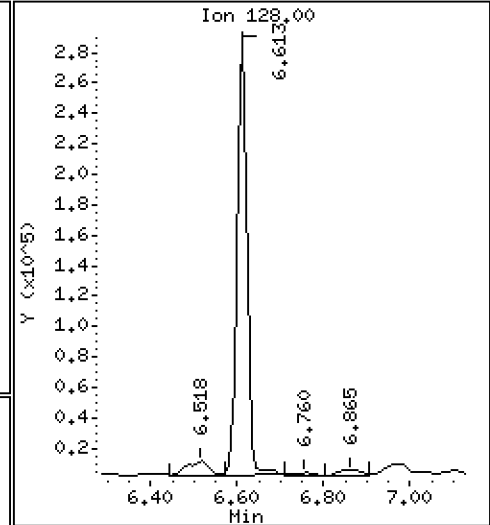
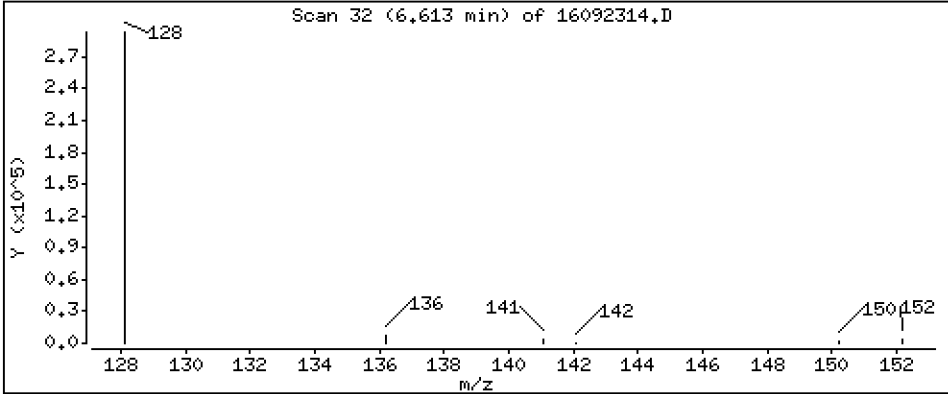
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 154 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

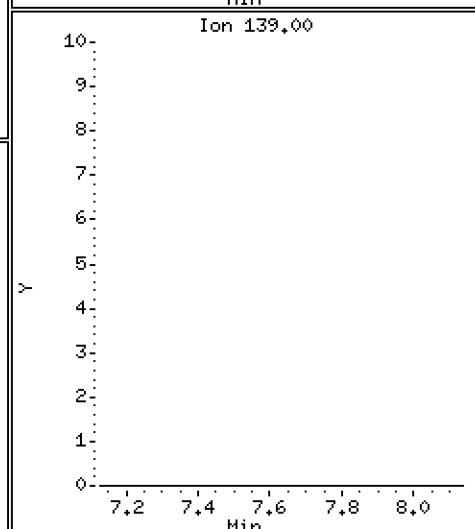
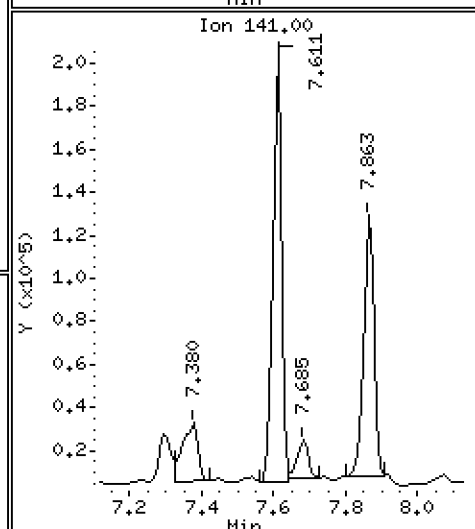
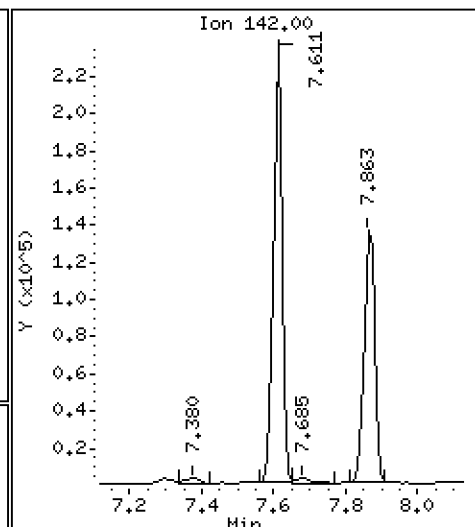
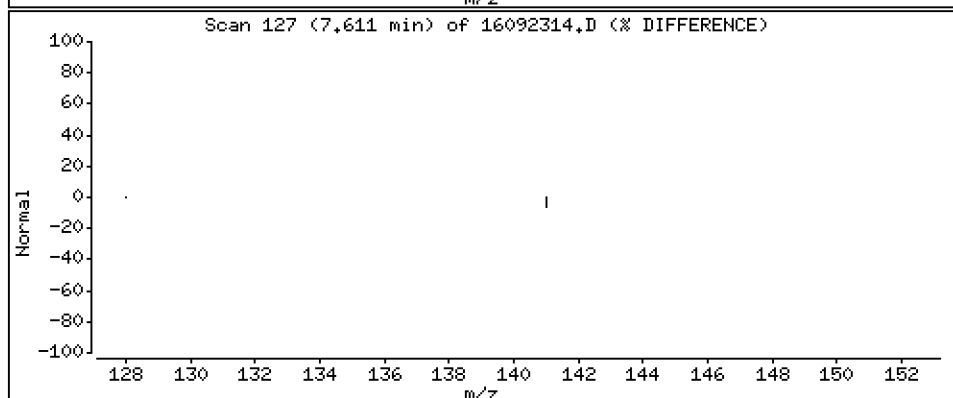
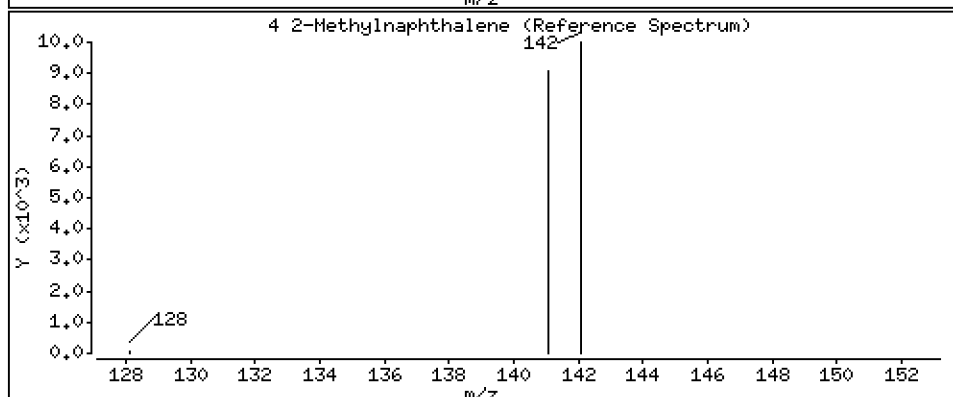
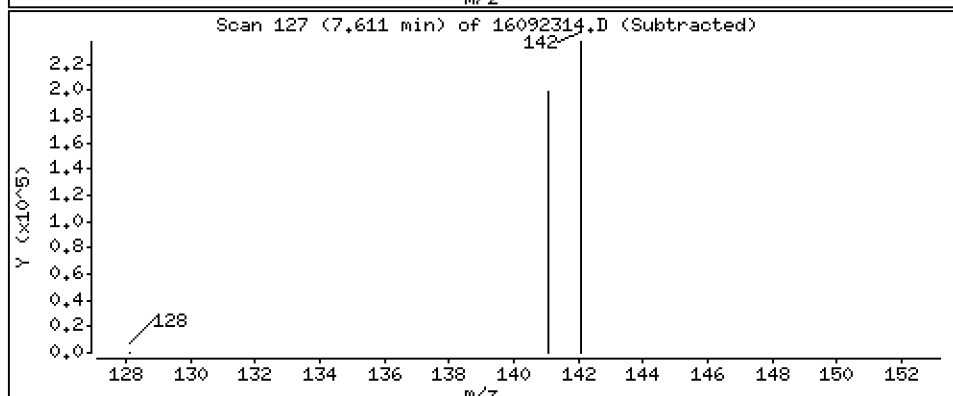
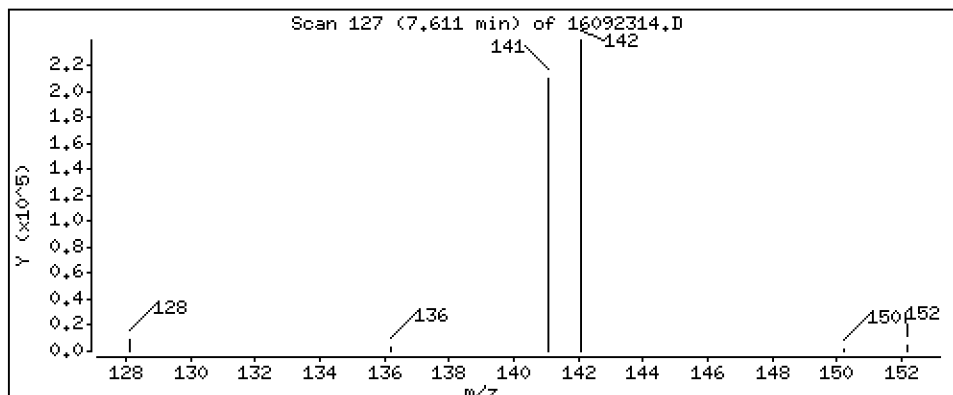
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4-Methylnaphthalene

Concentration: 216 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

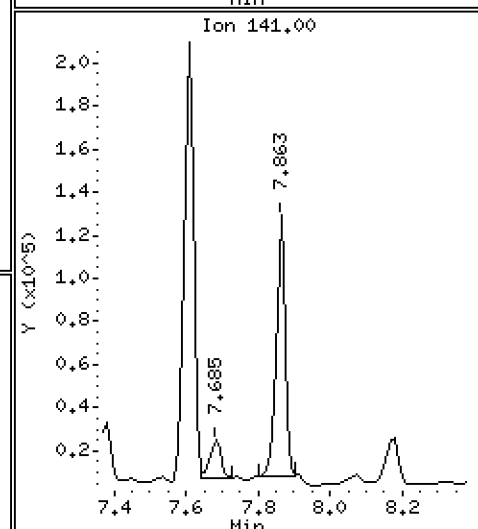
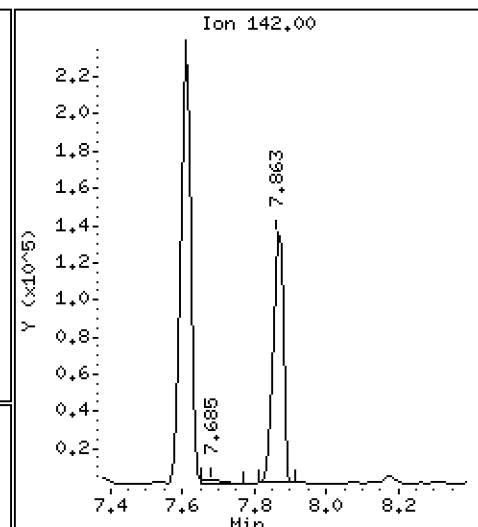
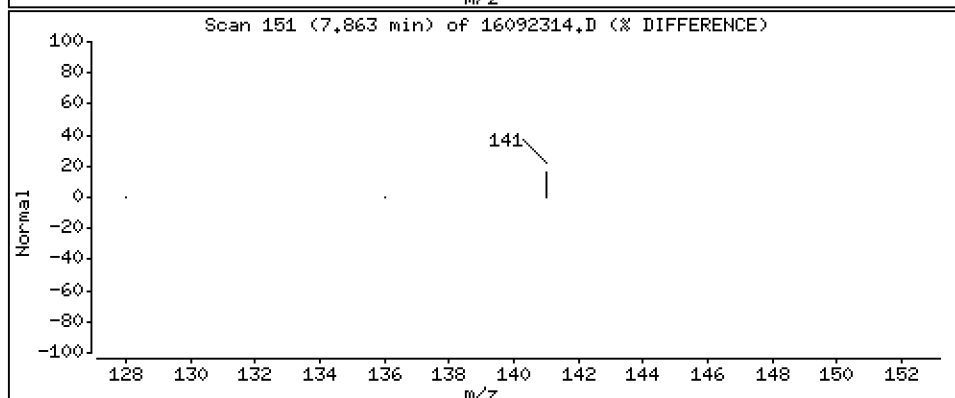
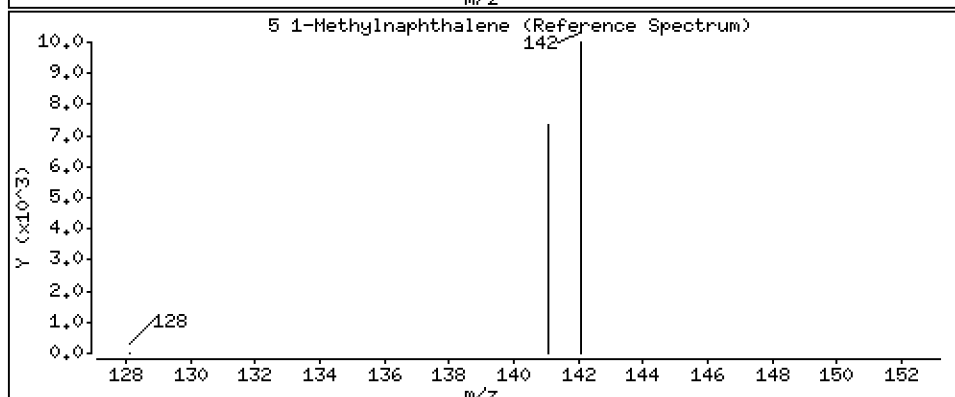
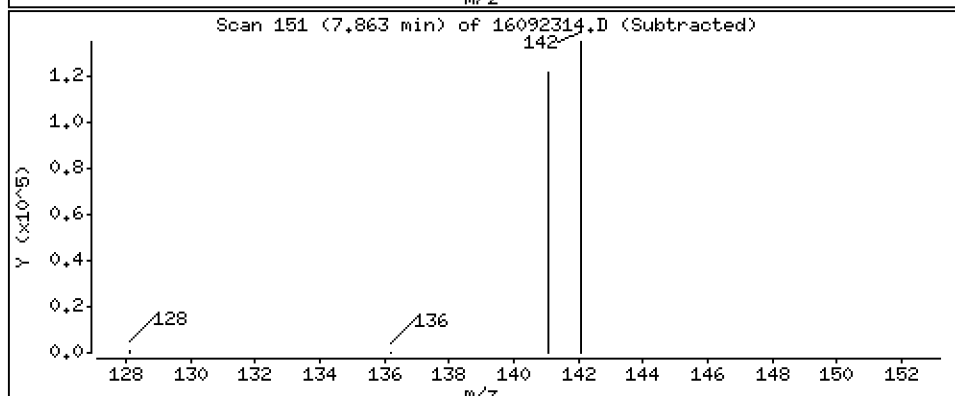
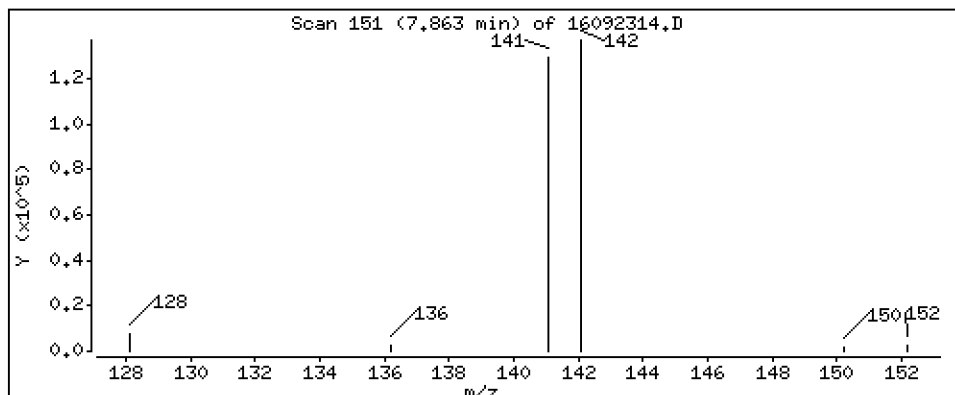
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 145 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

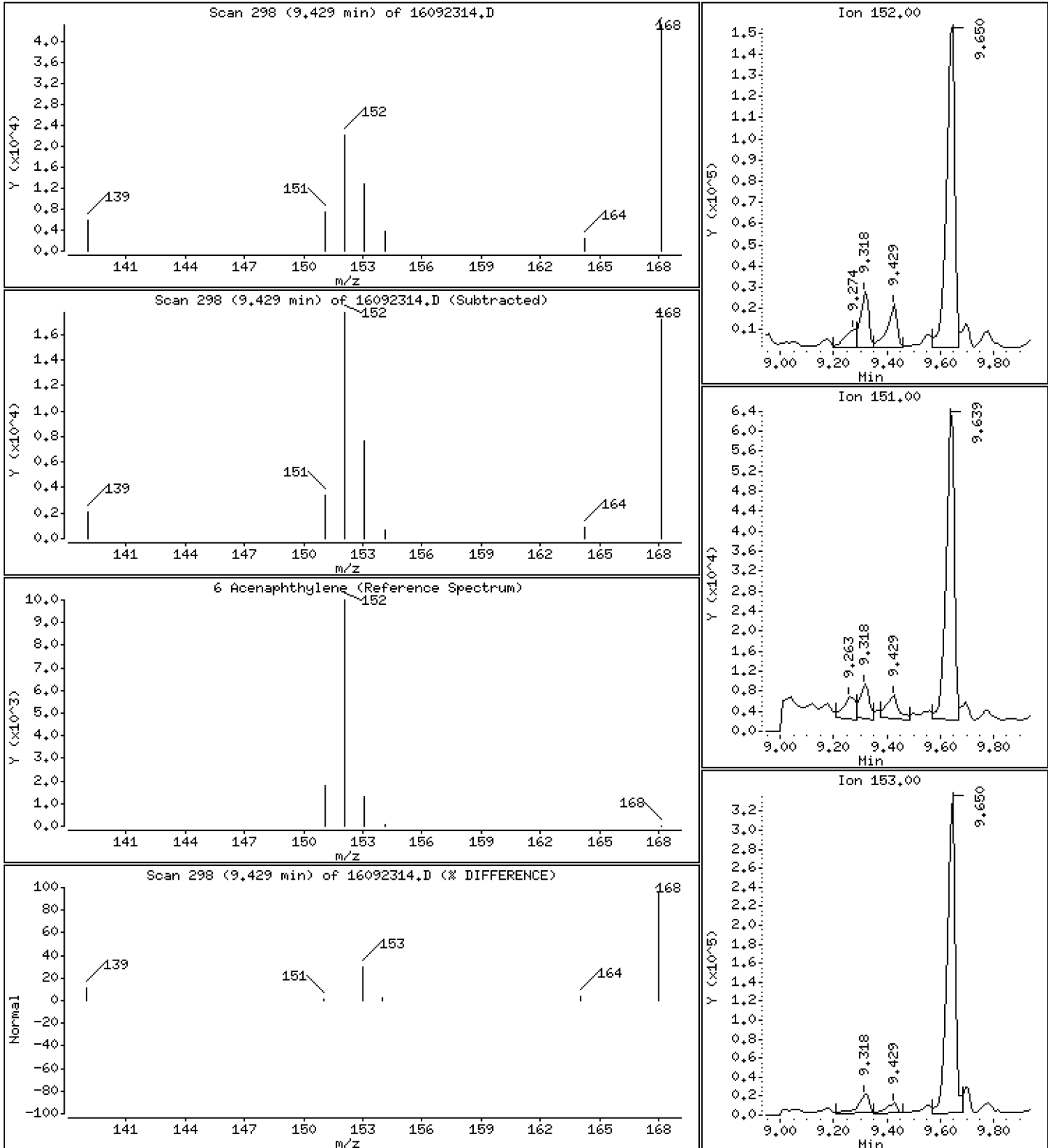
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

6 Acenaphthylene

Concentration: 18,5 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

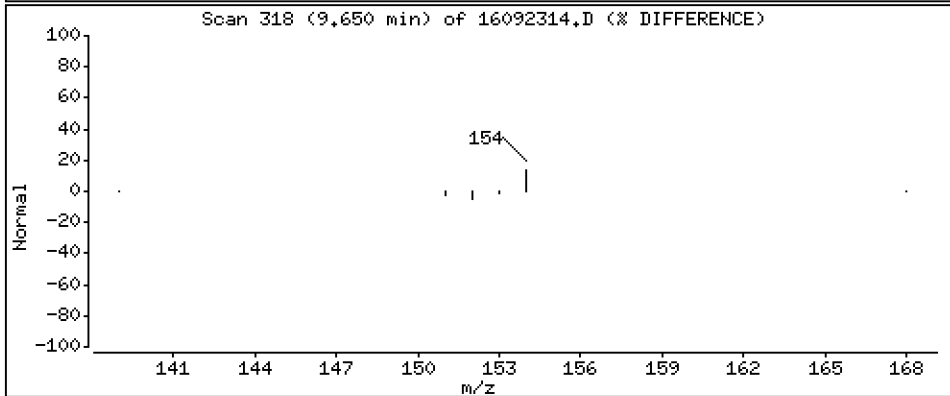
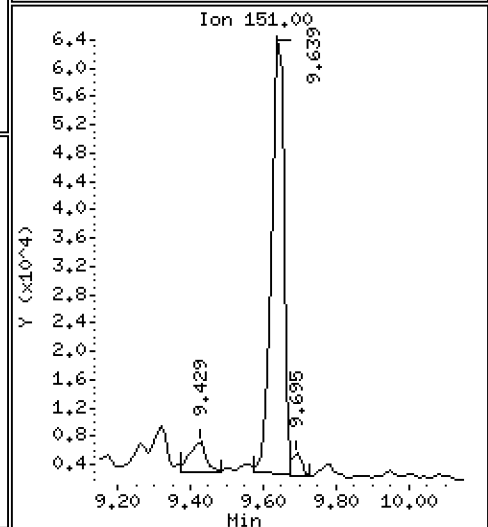
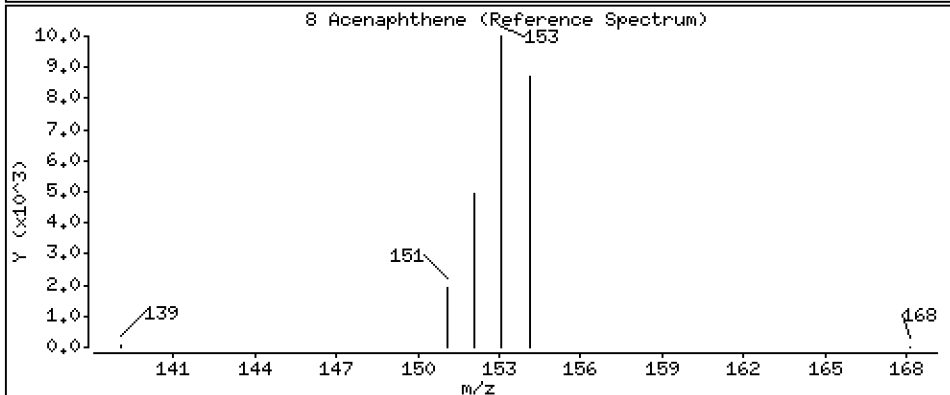
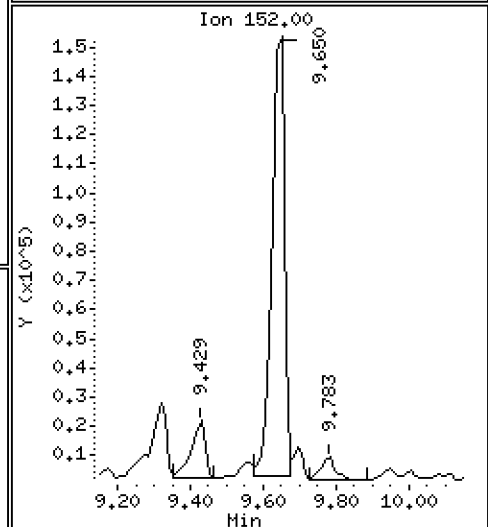
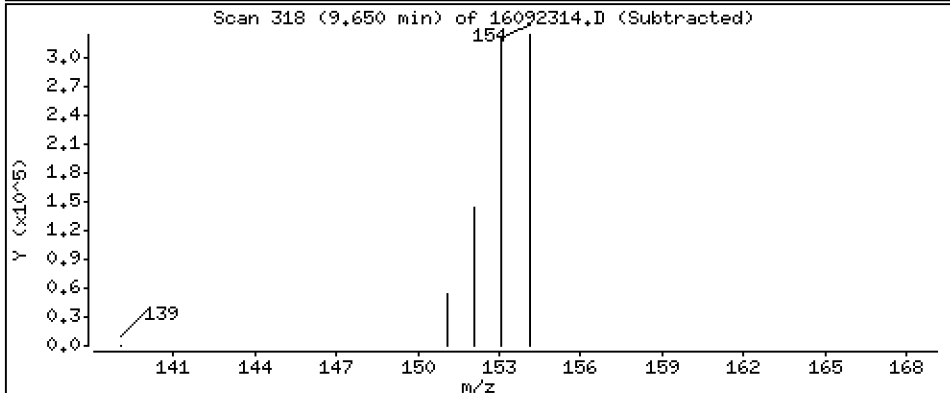
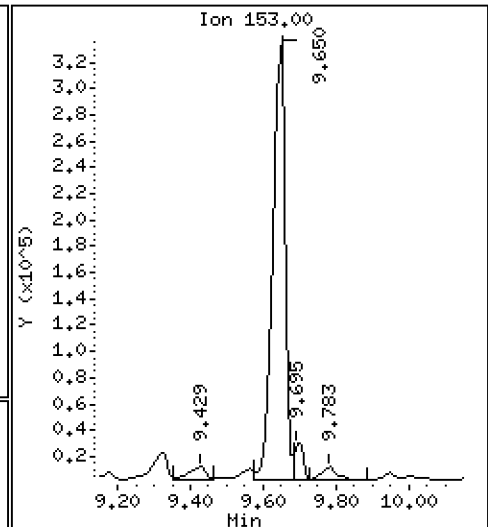
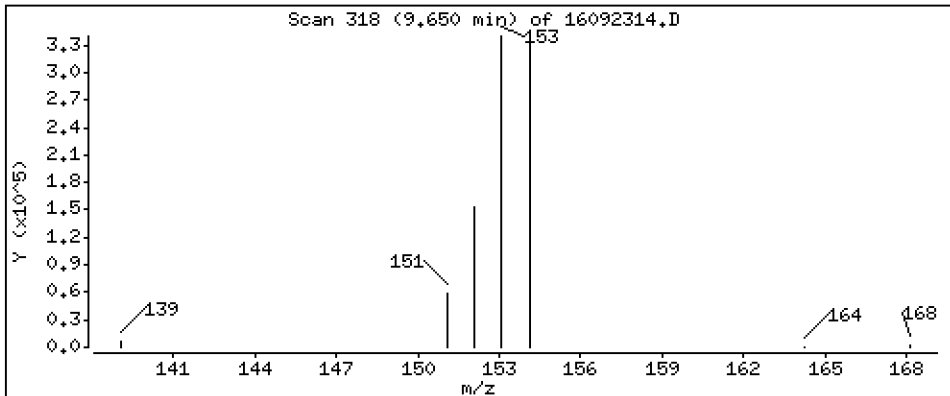
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 393 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

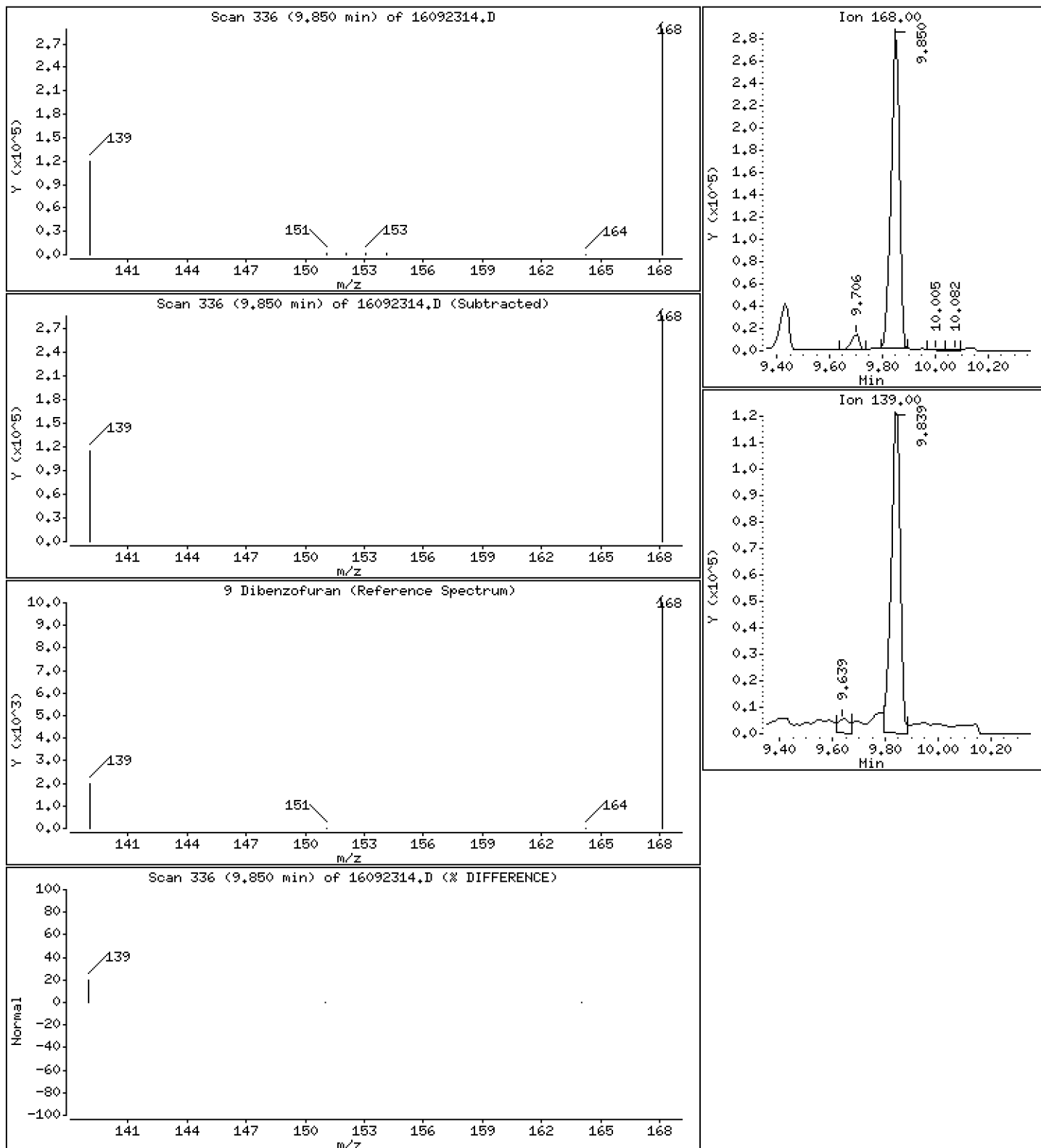
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

9 Dibenzofuran

Concentration: 224 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

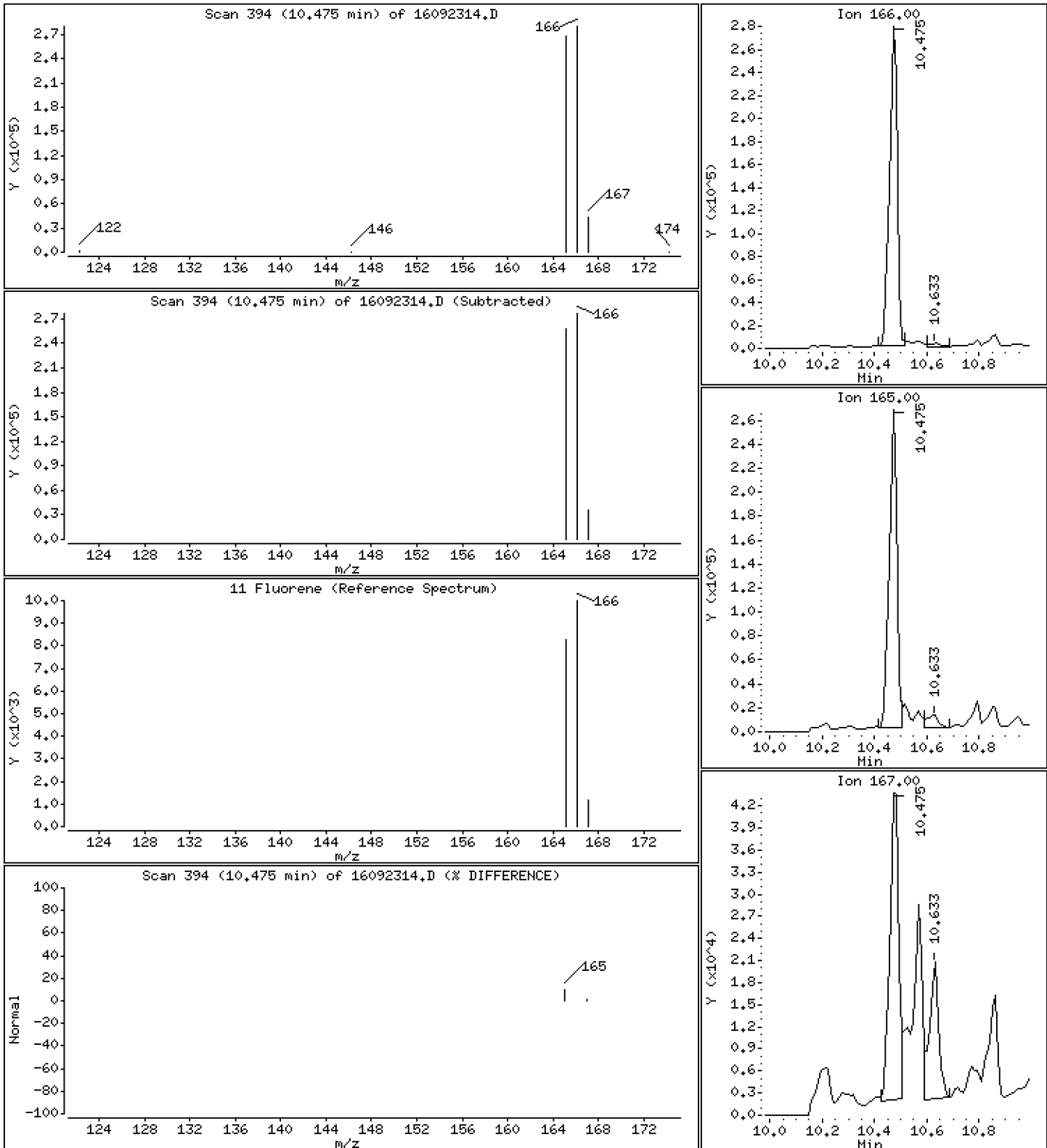
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

11 Fluorene

Concentration: 266 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

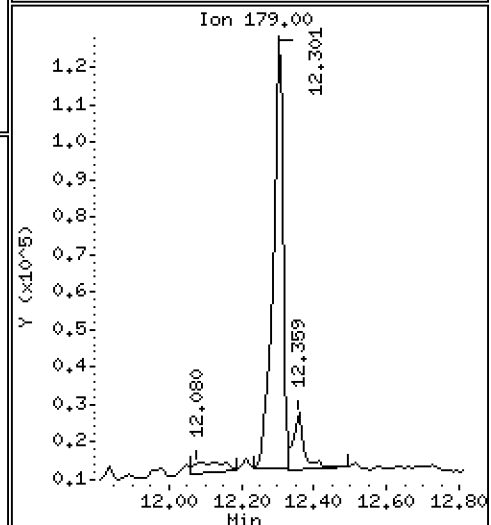
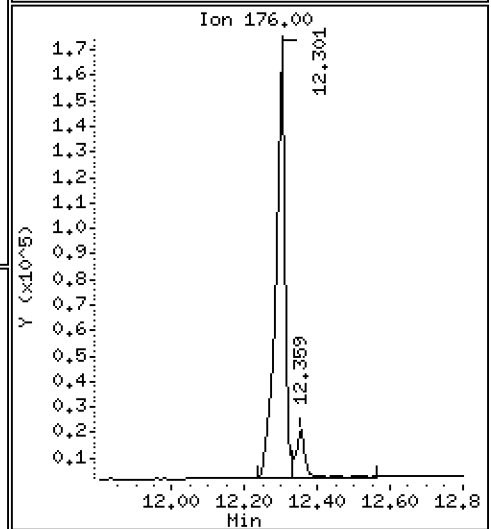
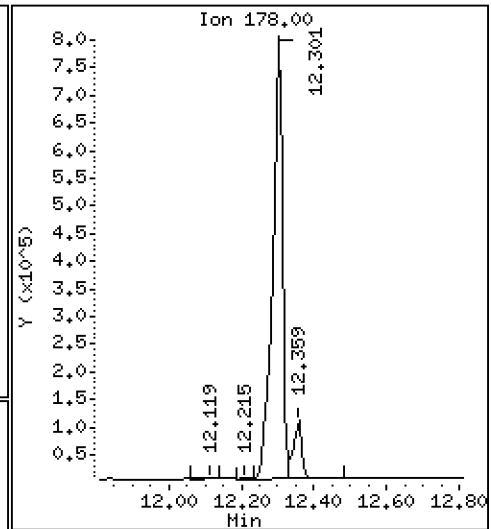
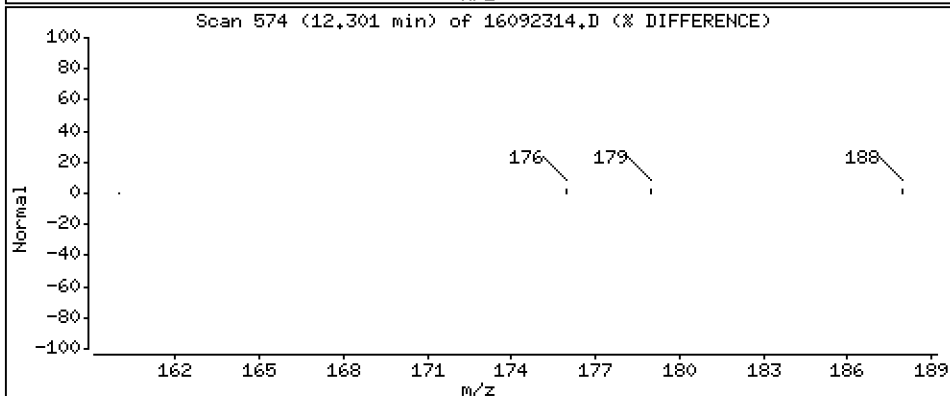
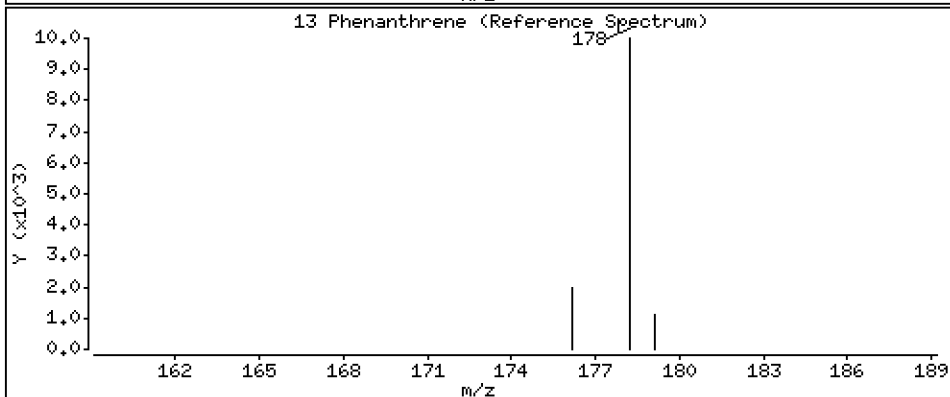
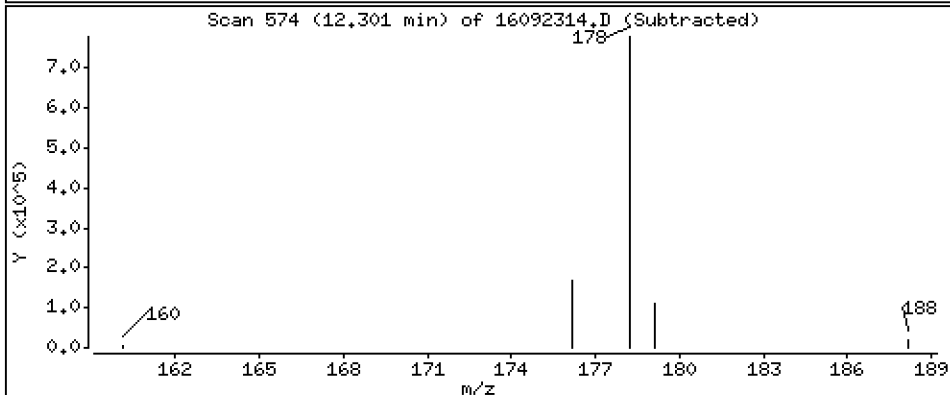
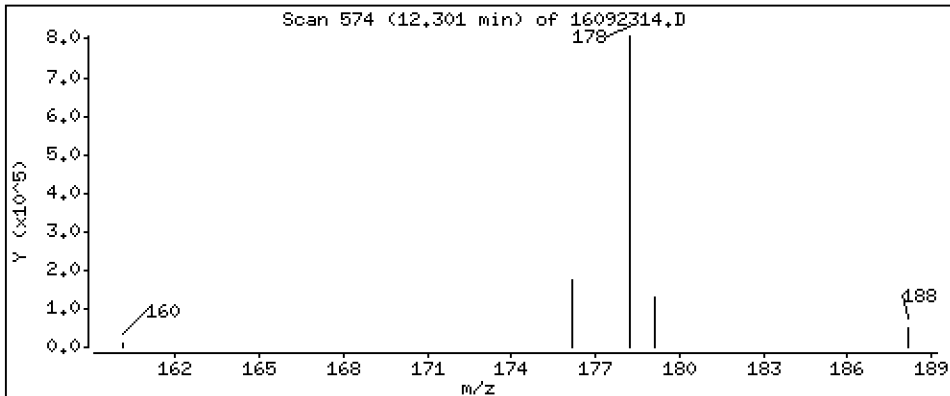
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 382 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

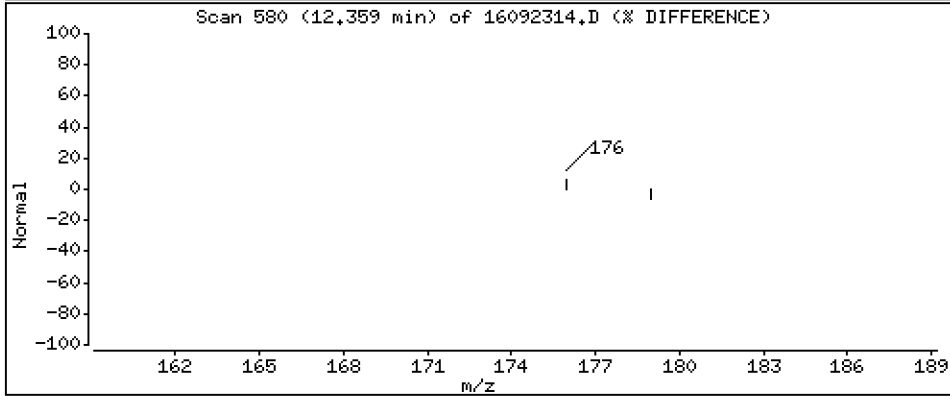
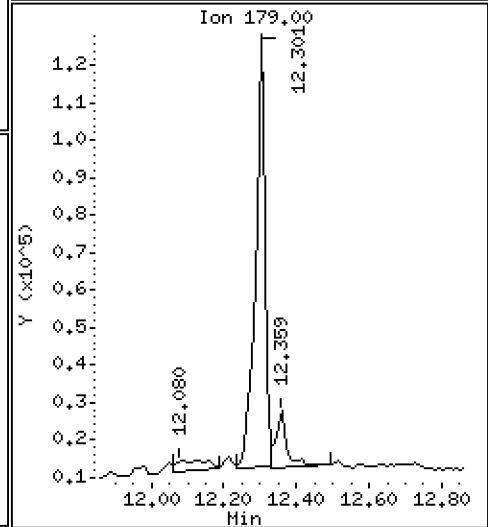
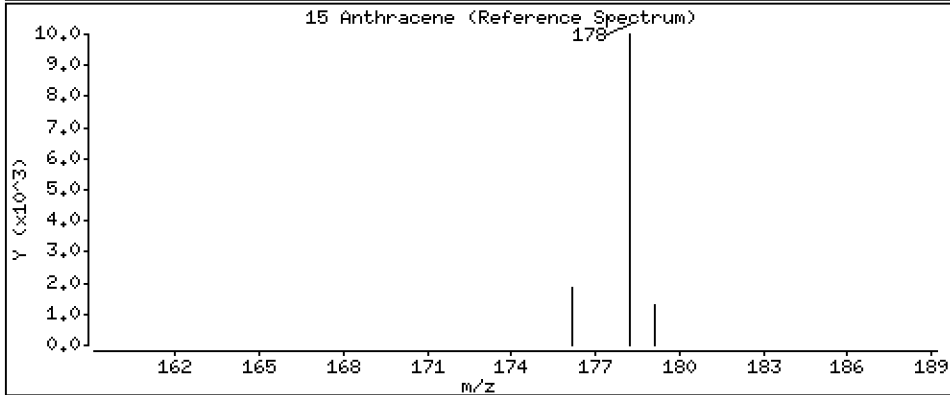
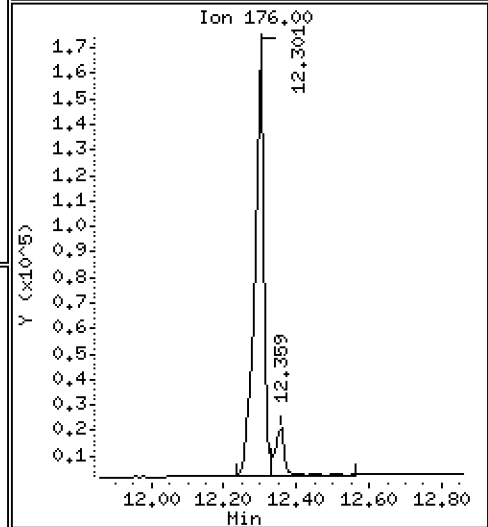
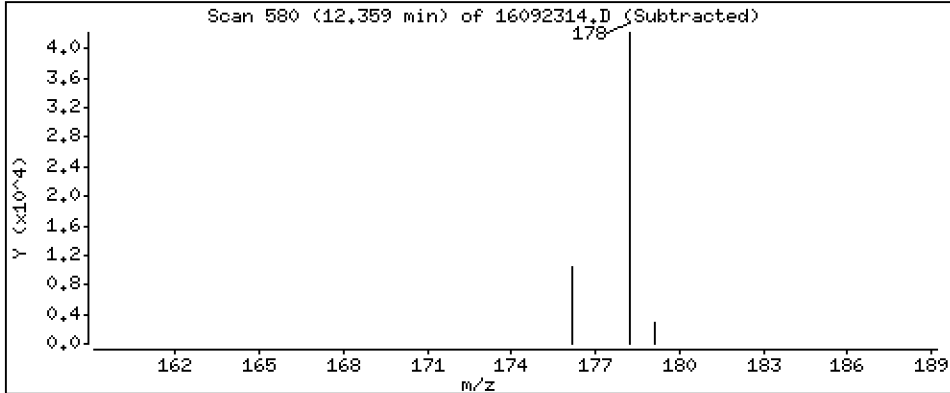
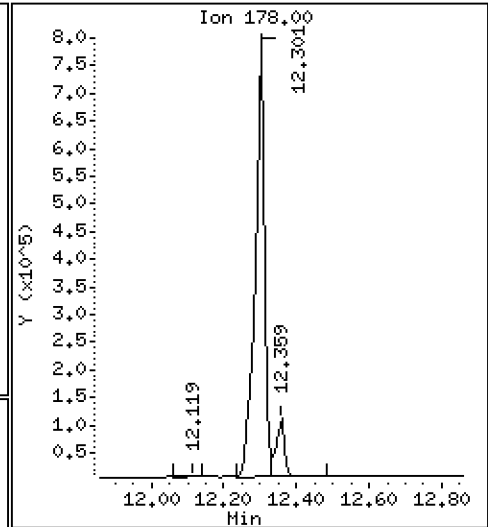
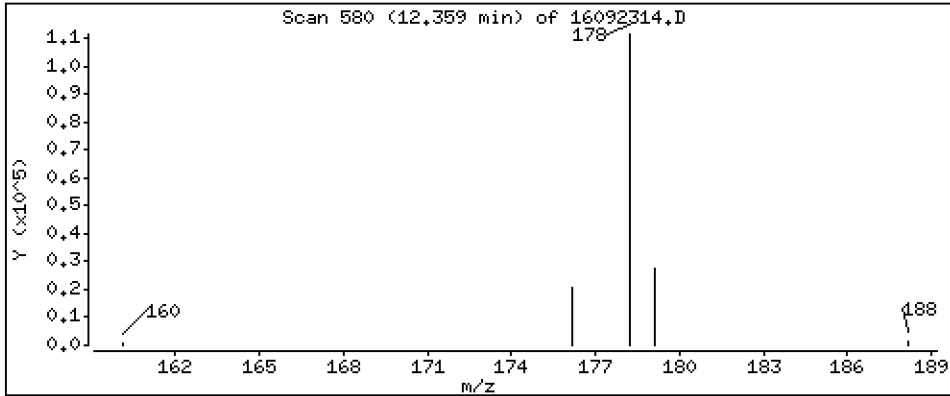
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

15 Anthracene

Concentration: 49,6 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

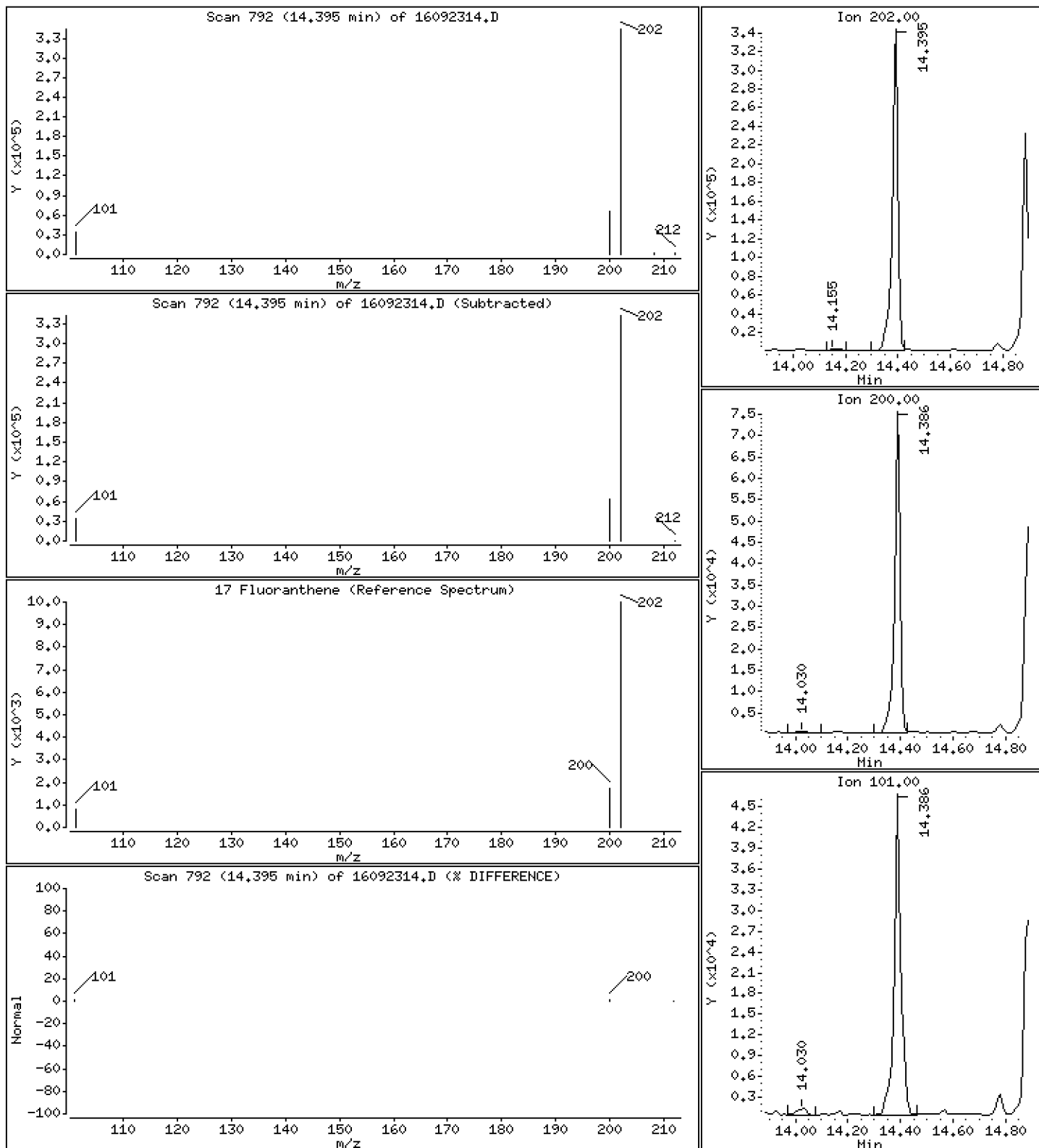
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 164 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

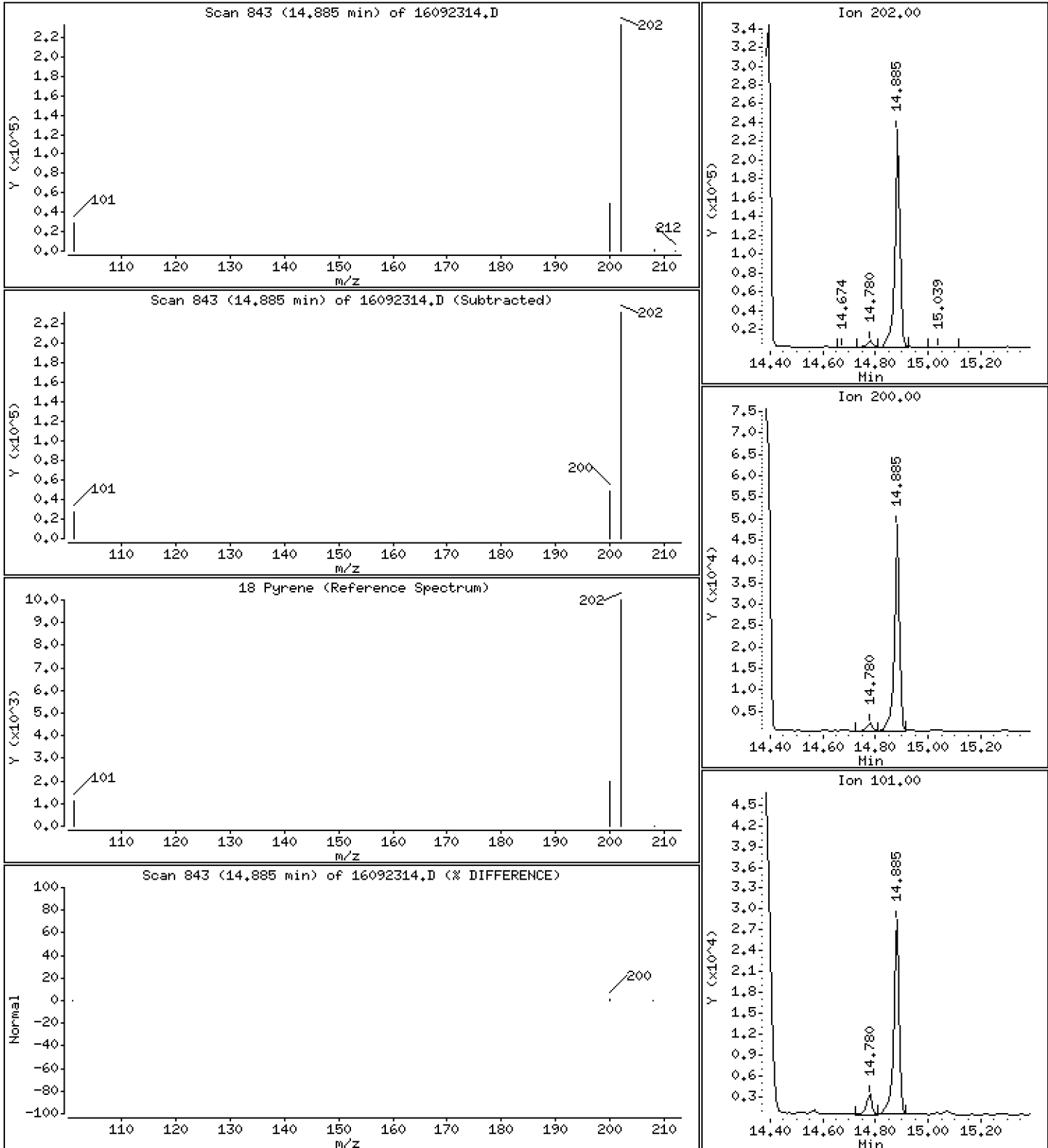
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 96,7 ng/mL

18 Pyrene



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

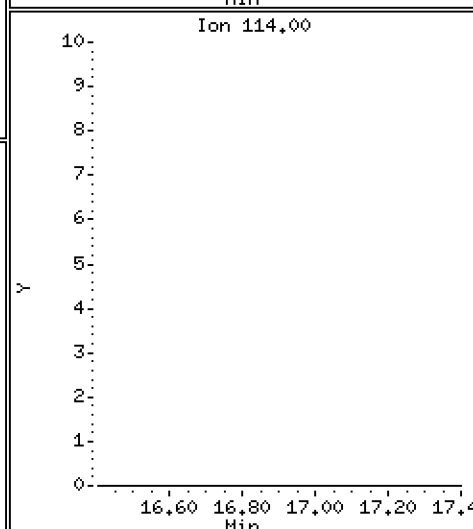
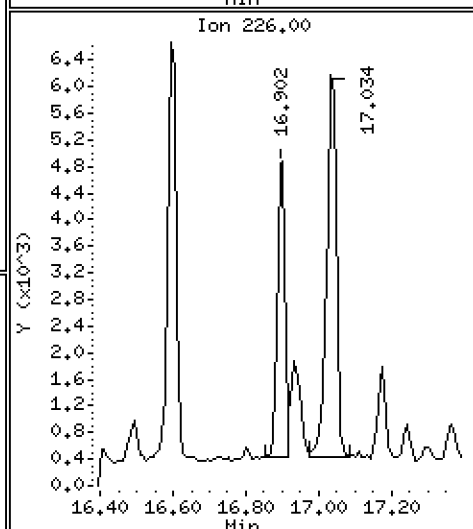
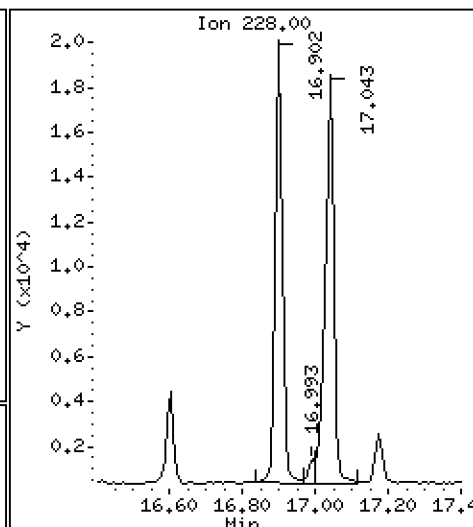
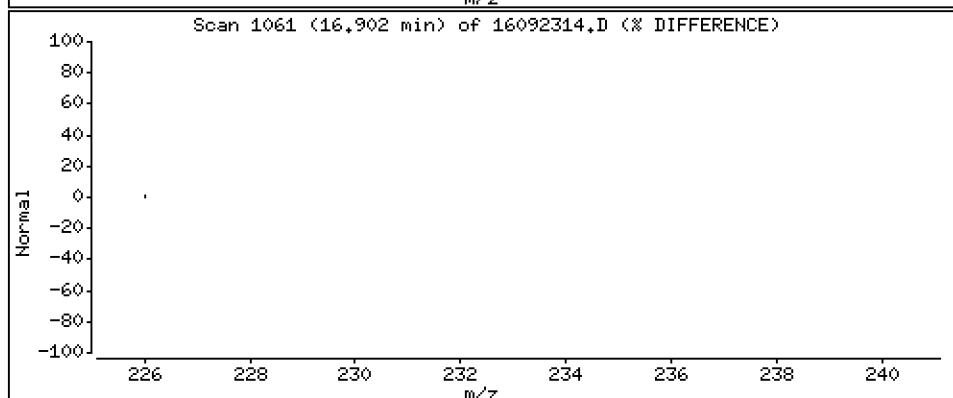
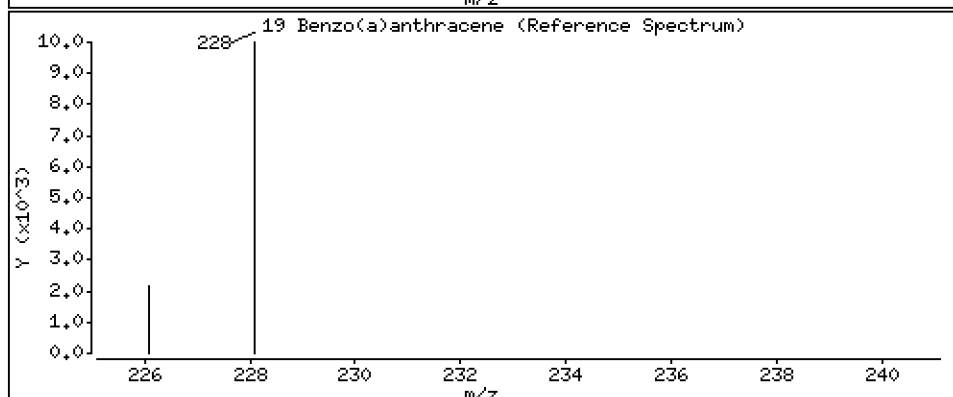
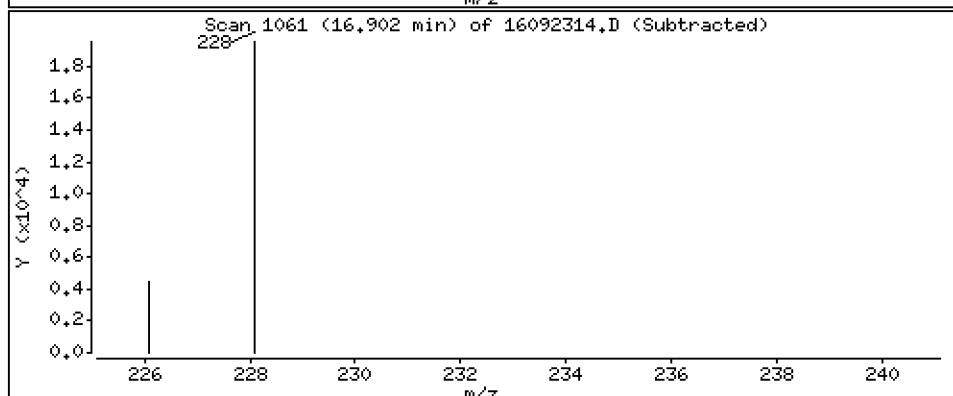
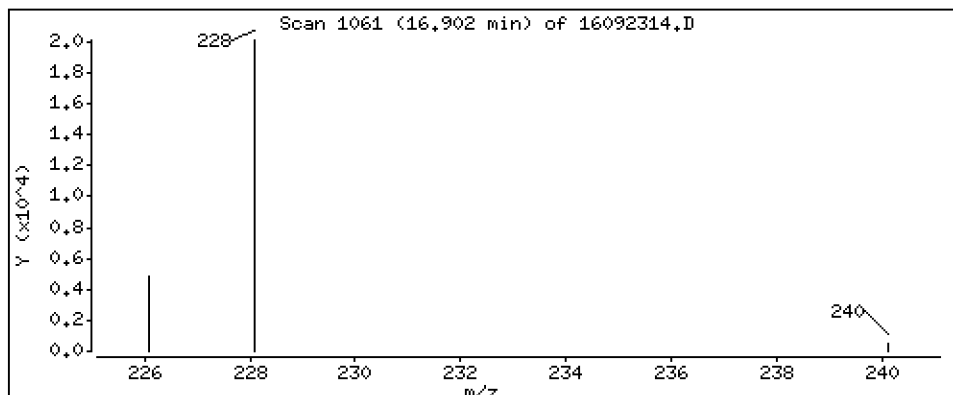
Operator: JW

Column phase: Rxi-17Si11 MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 9,47 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

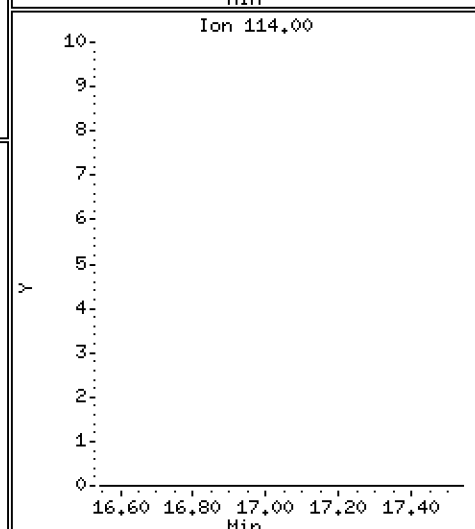
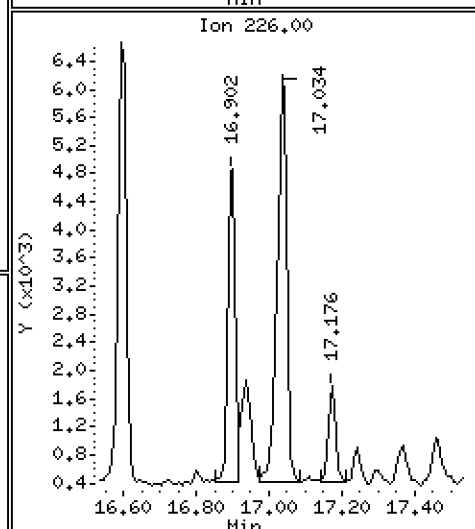
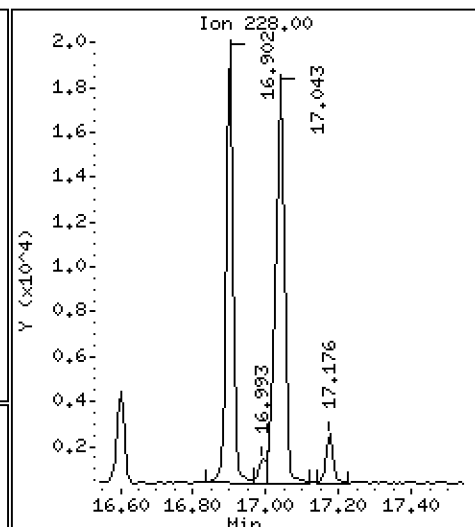
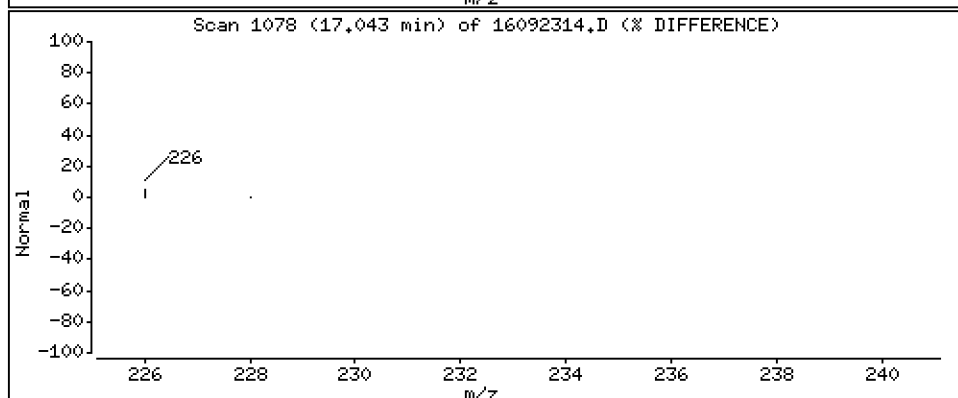
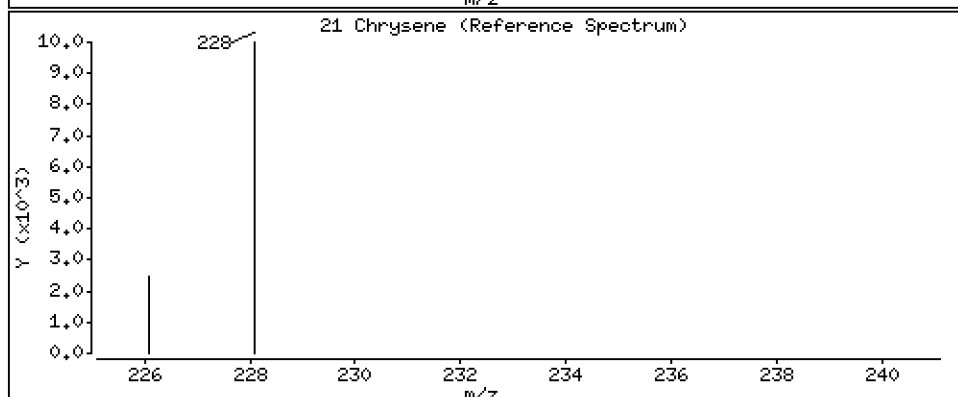
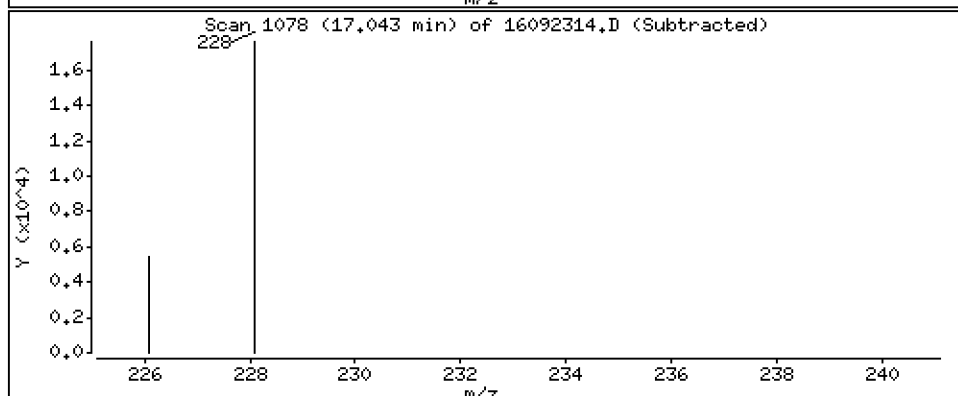
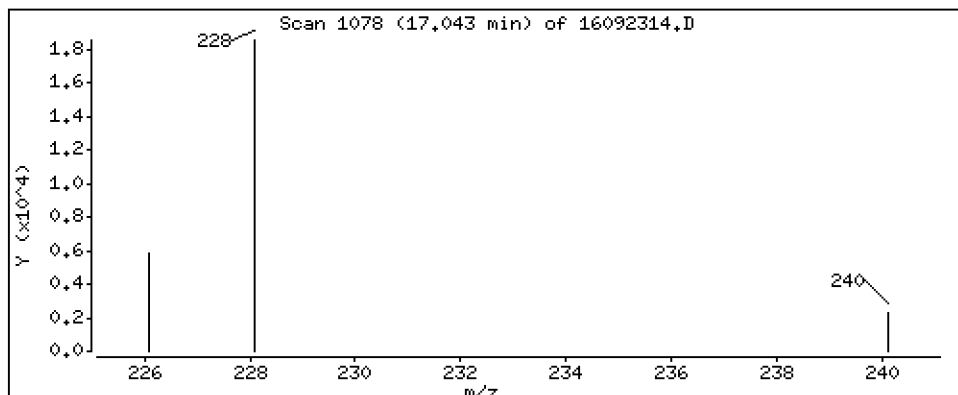
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 10,5 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

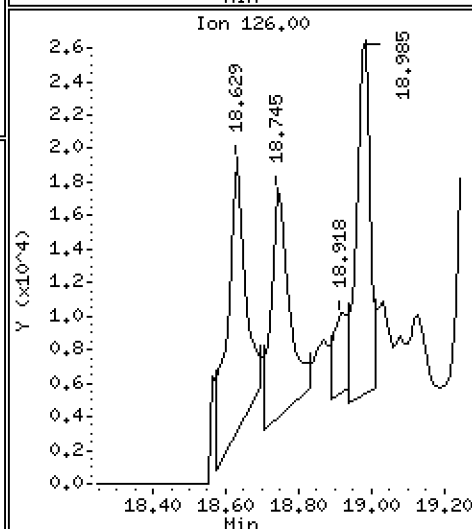
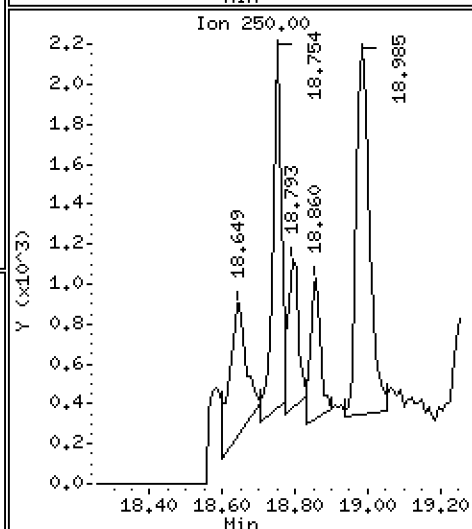
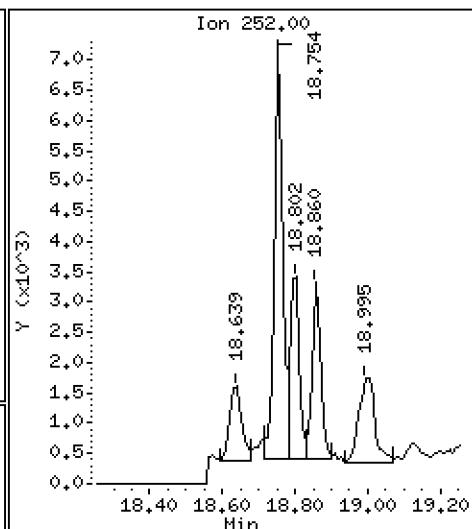
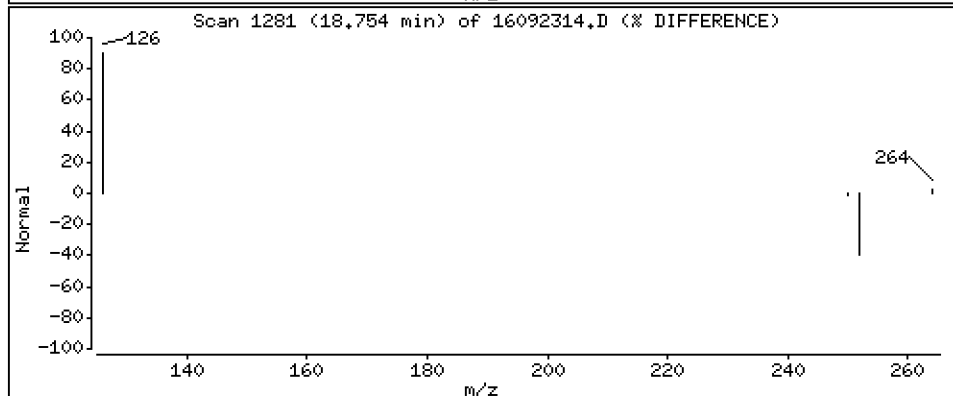
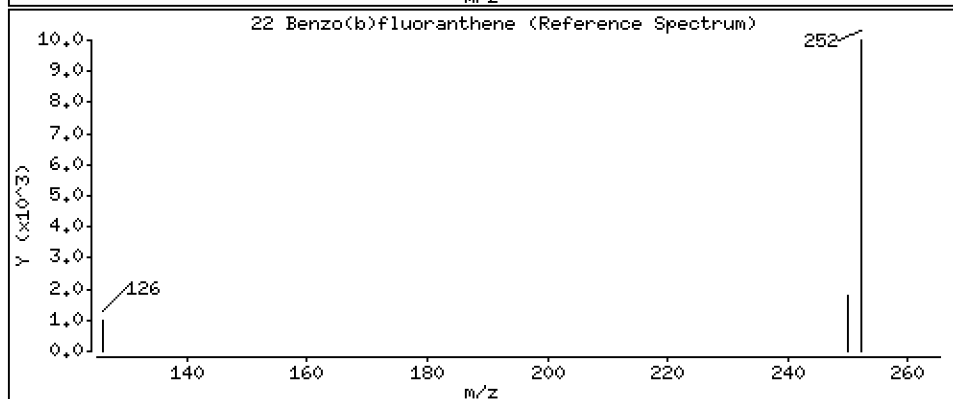
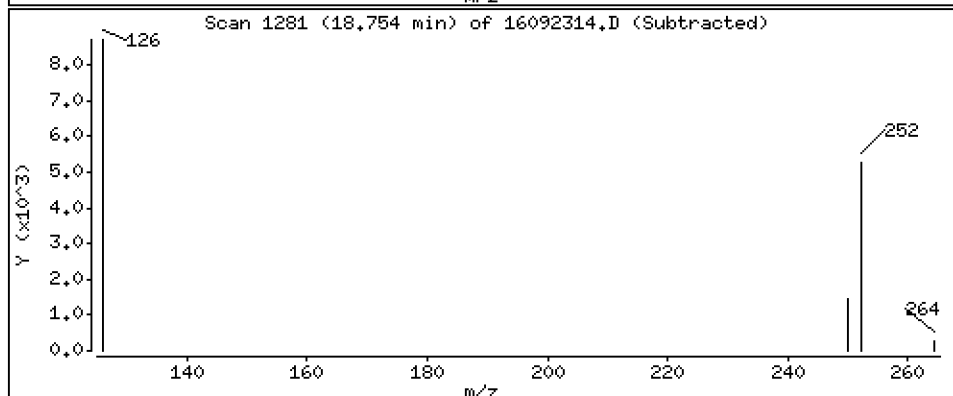
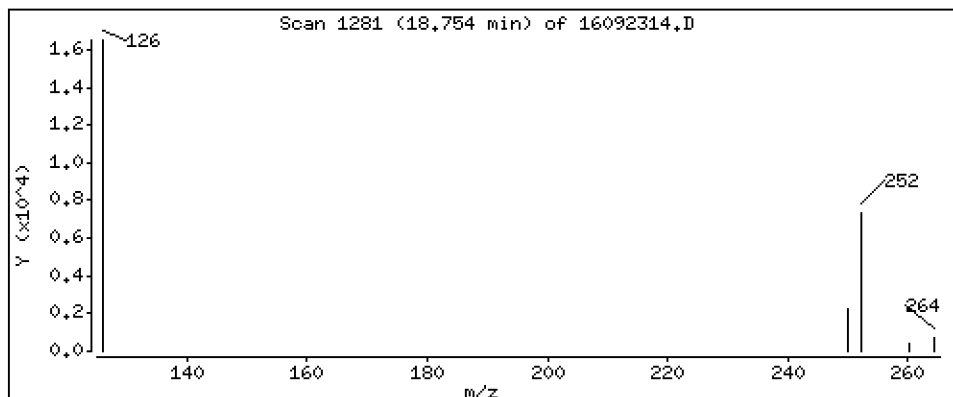
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 4,37 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

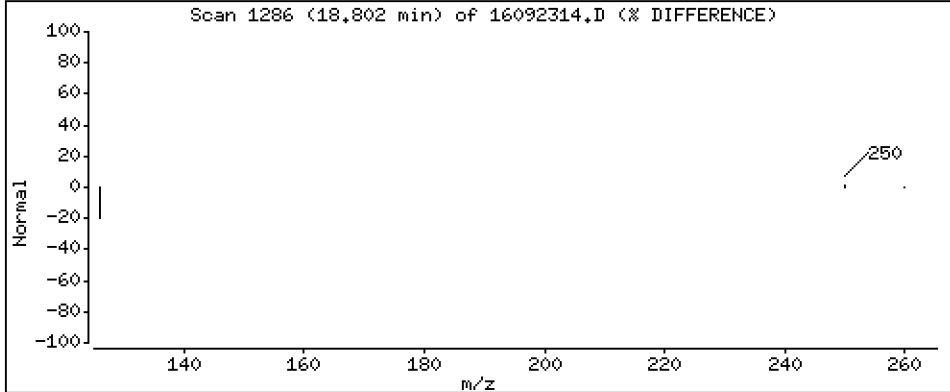
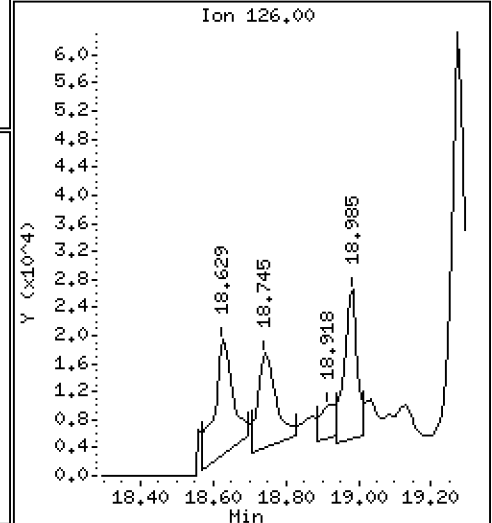
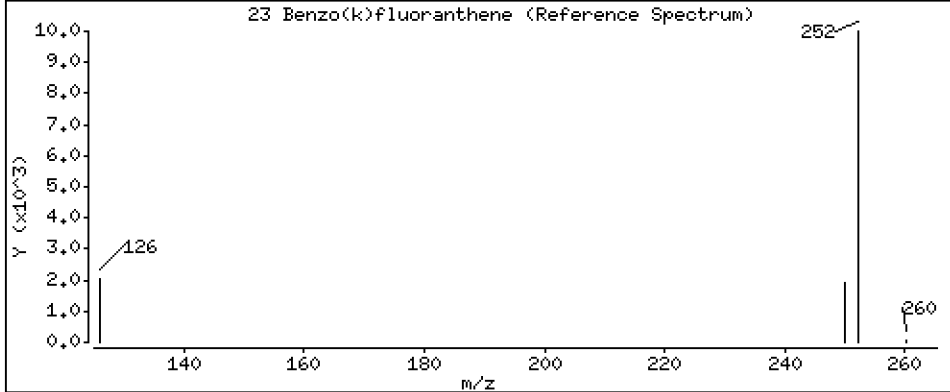
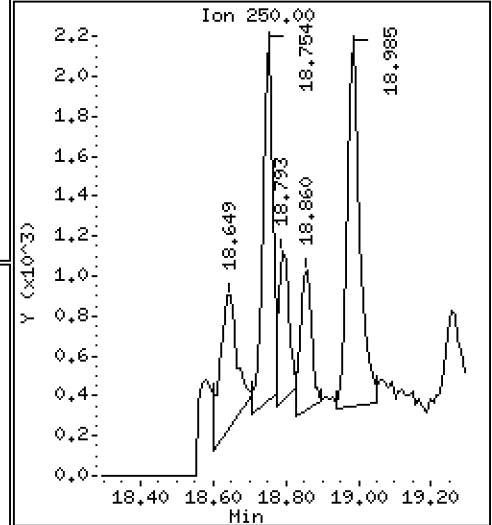
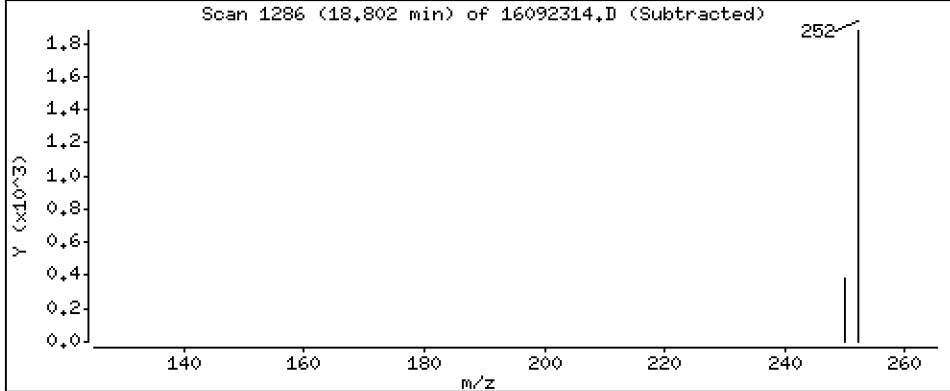
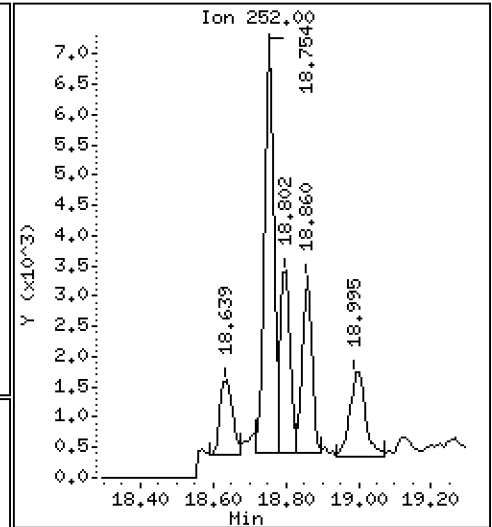
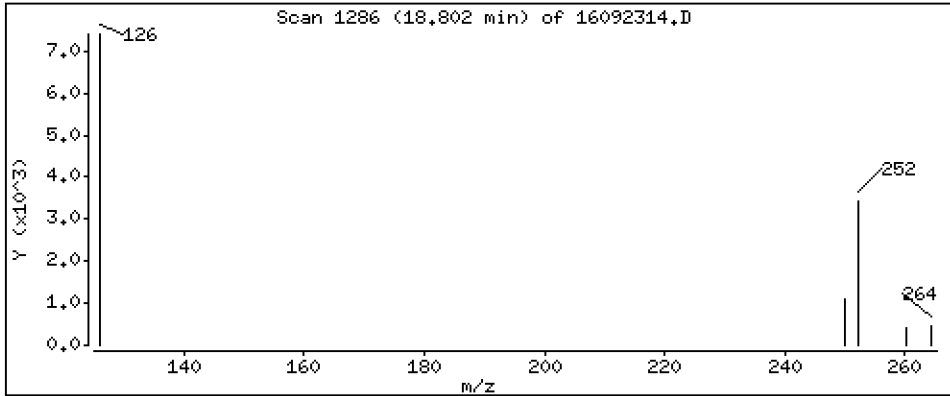
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 1,86 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

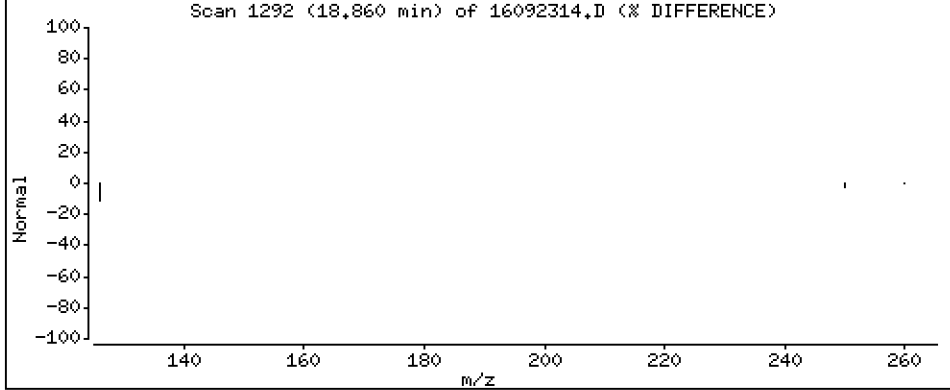
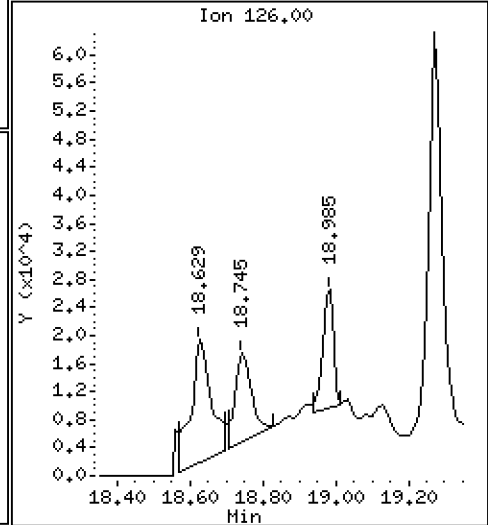
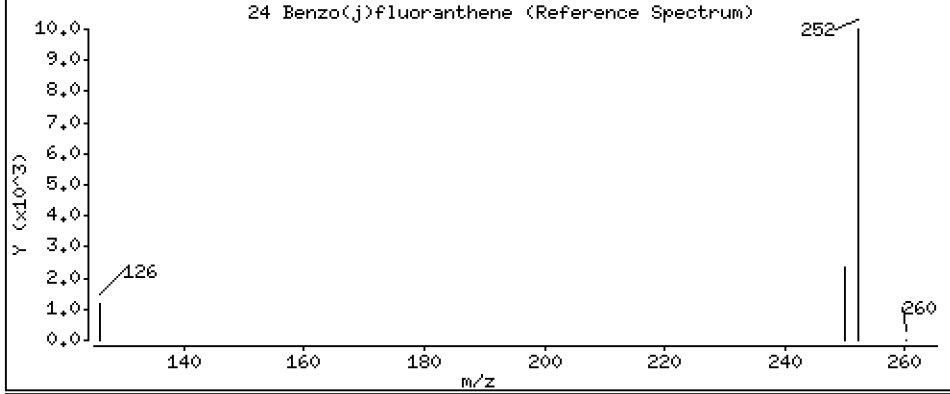
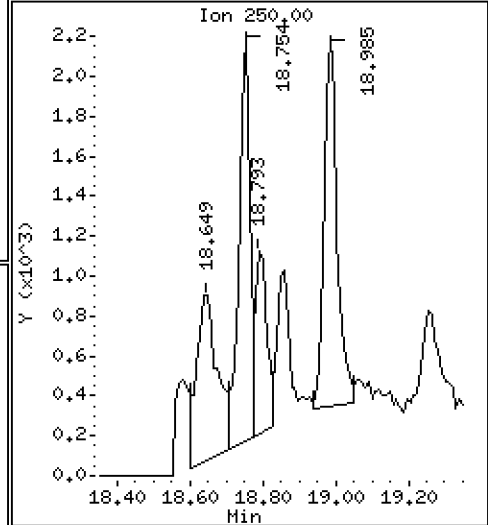
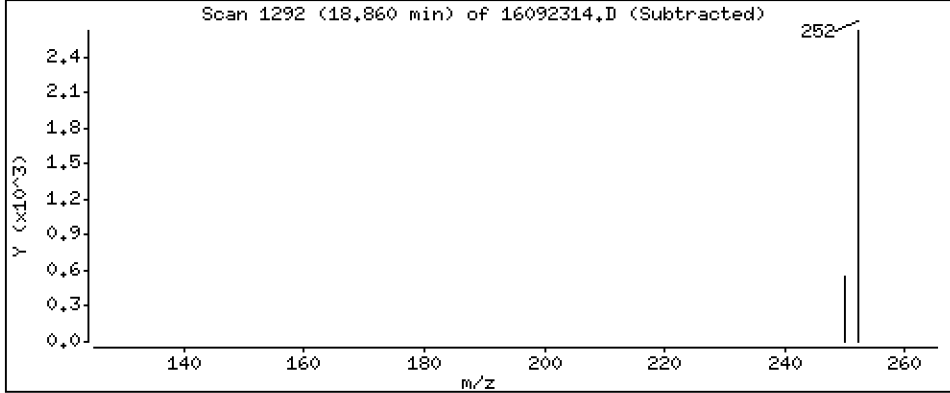
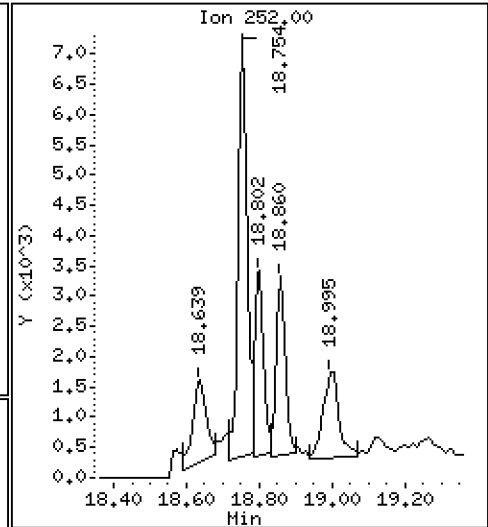
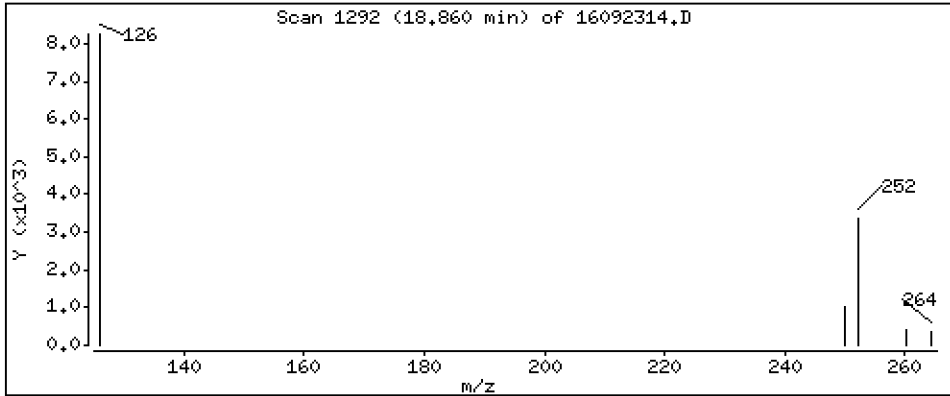
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 1,94 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

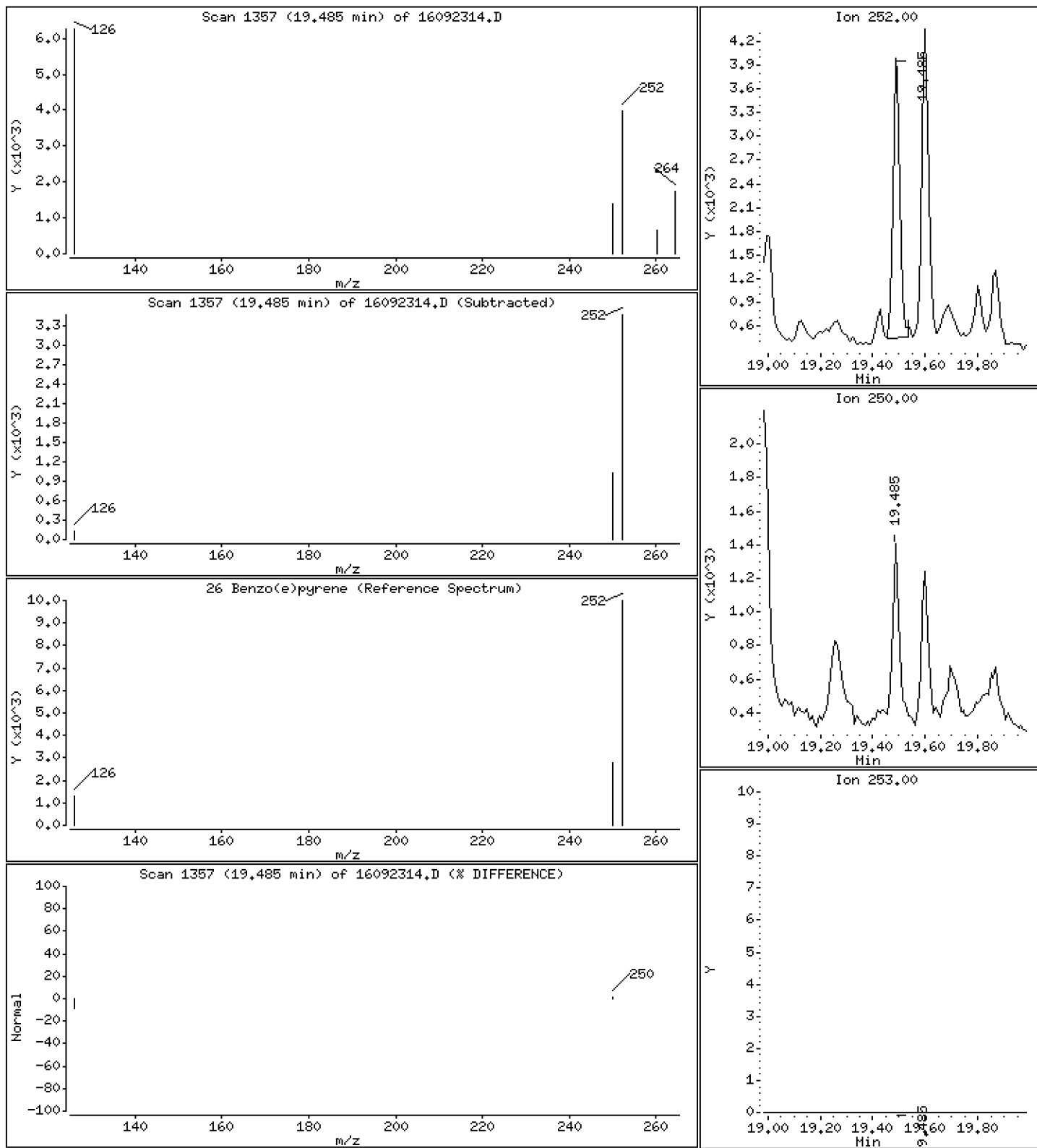
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 2,53 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

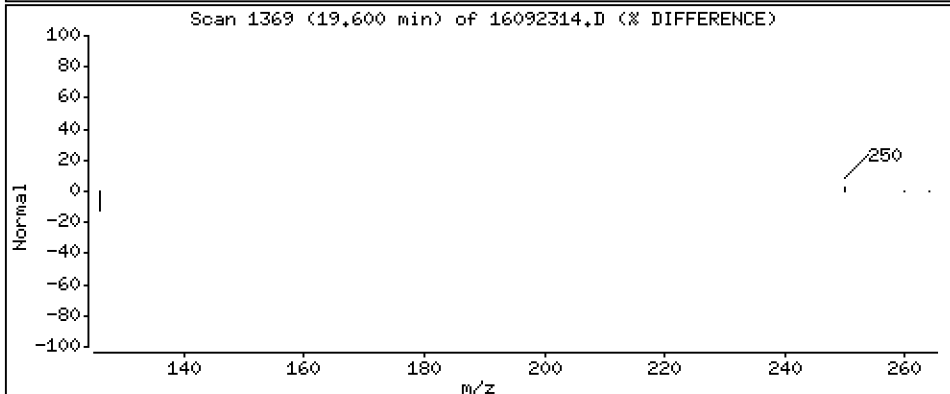
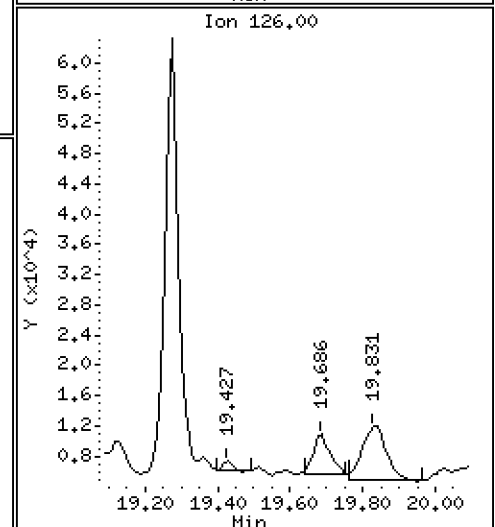
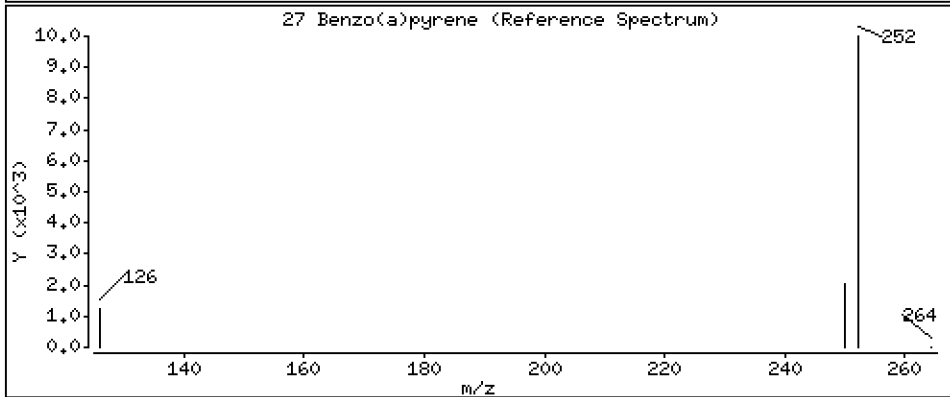
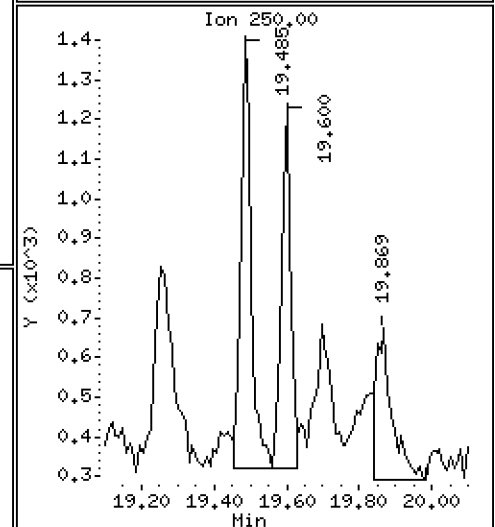
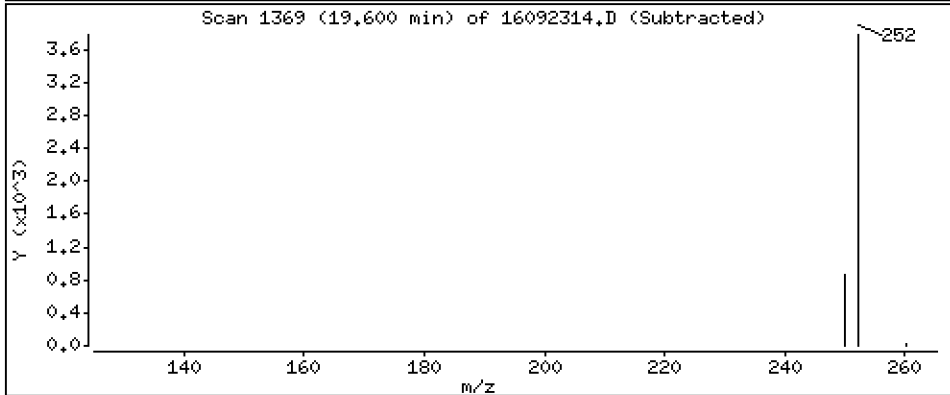
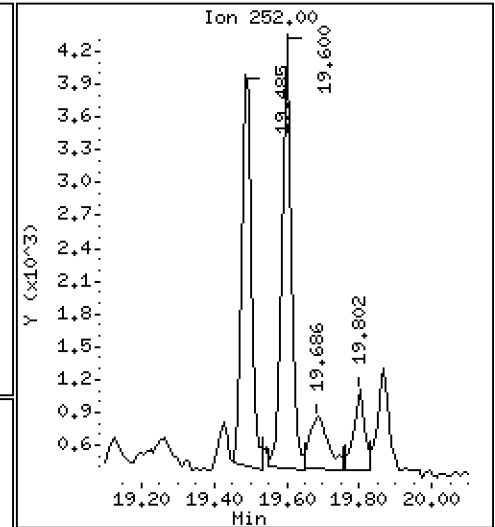
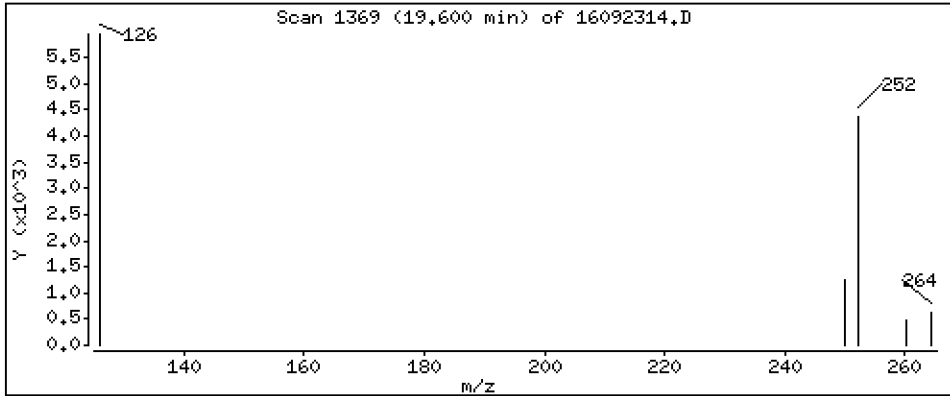
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 2,94 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

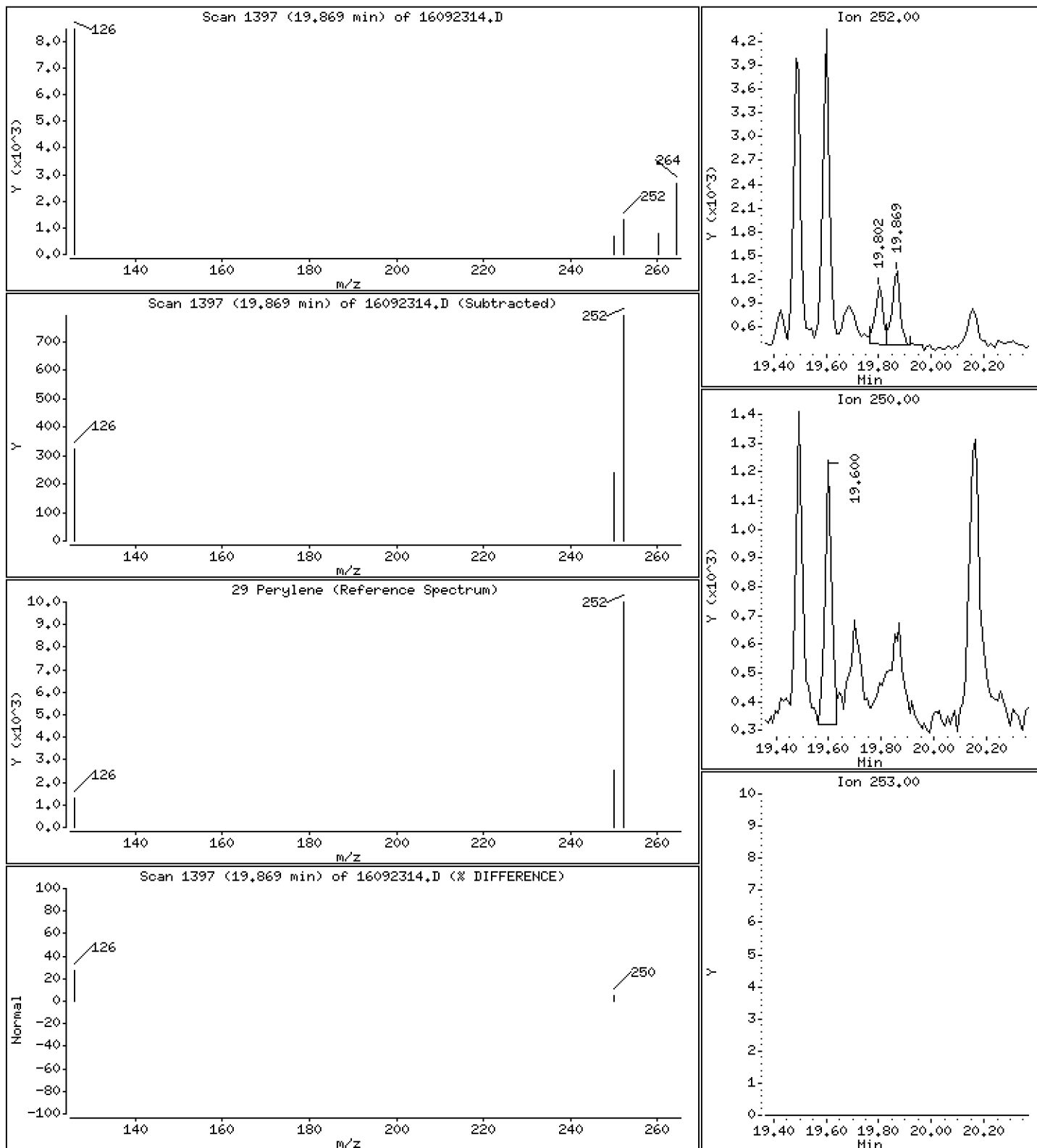
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

29 Perylene

Concentration: 0,813 ng/mL



Date : 23-SEP-2016 14:32

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-13

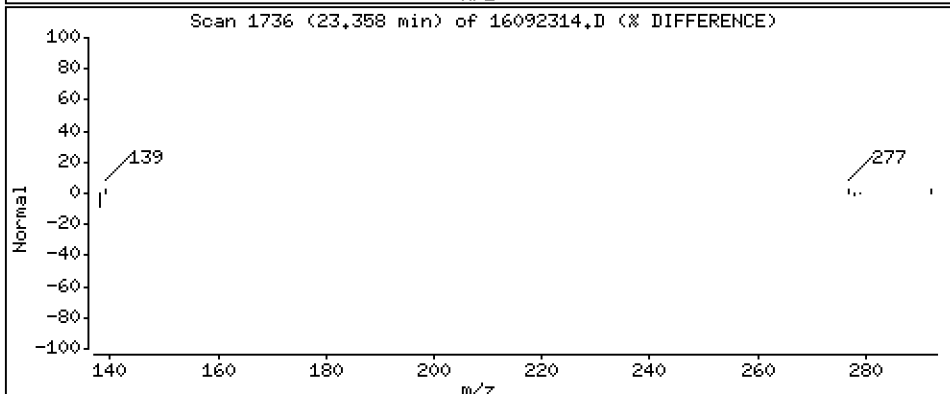
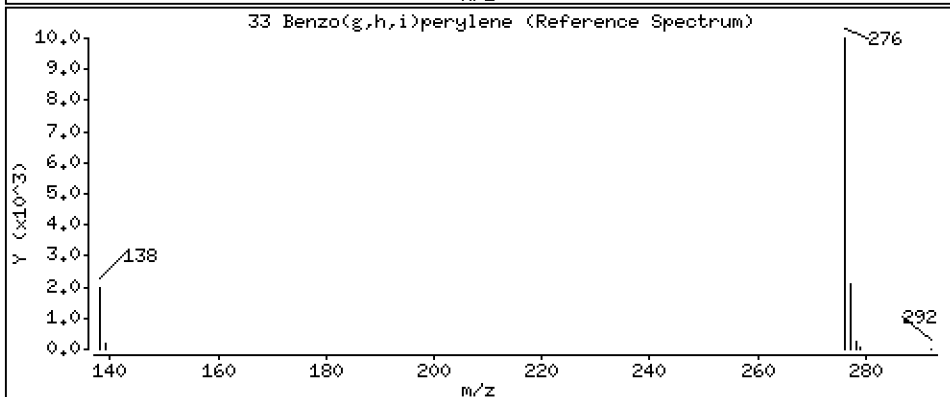
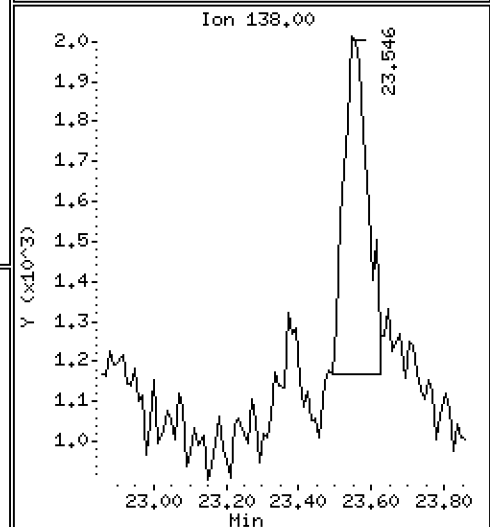
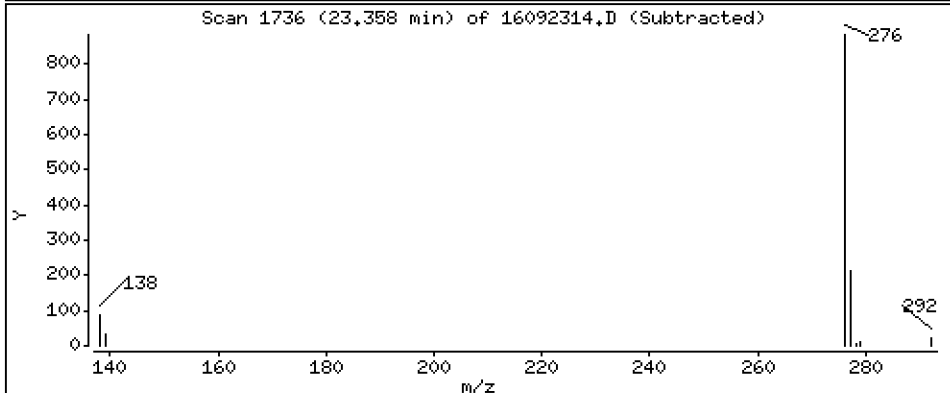
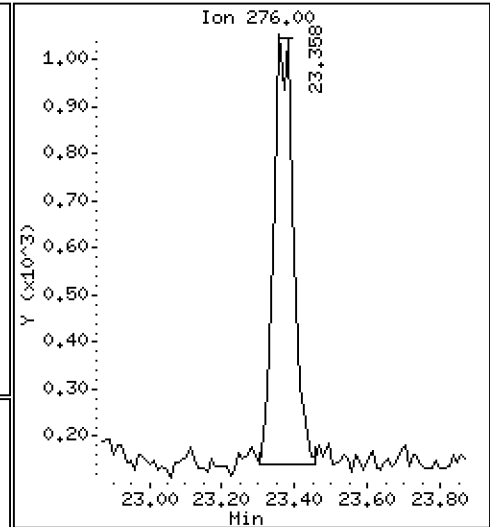
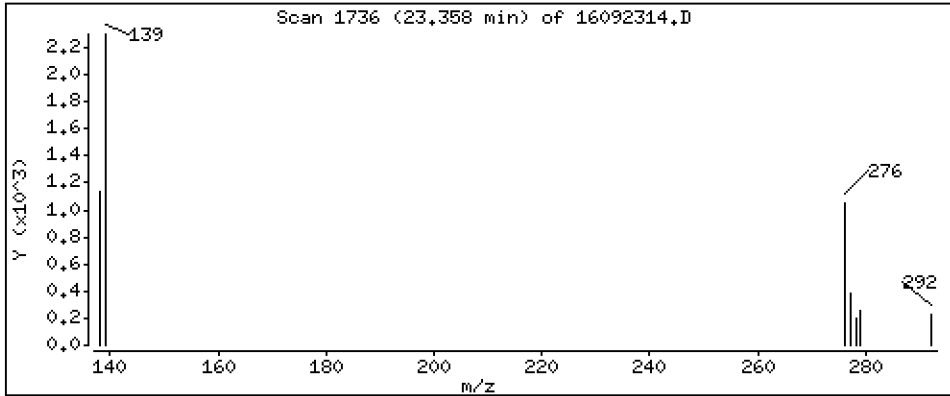
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 1,38 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092314.D

Lab Smp Id: 16I0160-13

Inj Date : 23-SEP-2016 14:32

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-13

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 17

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	527500	200.000	
2 Naphthalene	128		6.613	6.623	(1.006)	466230	154.027	154
\$ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	312924	186.863	187
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	450787	216.389	216
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	274792	144.916	145
6 Acenaphthylene	152		9.429	9.440	(0.984)	52406	18.4877	18.5
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	304864	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	742294	393.170	393
9 Dibenzofuran	168		9.849	9.860	(1.028)	611889	223.642	224
\$ 10 Fluorene-d10	174		10.422	10.432	(1.087)	119103	77.1223	77.1
11 Fluorene	166		10.474	10.485	(1.093)	579691	265.523	266
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	576748	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	1481135	382.293	382
\$ 14 Anthracene-d10	188		12.320	12.330	(1.005)	280423	90.0274	90.0
15 Anthracene	178		12.358	12.358	(1.008)	187632	49.6454	49.6
\$ 16 Fluoranthene-d10	212		14.356	14.356	(1.171)	644362	229.819	230
17 Fluoranthene	202		14.395	14.395	(1.174)	562848	164.078	164
18 Pyrene	202		14.885	14.885	(0.876)	327580	96.6822	96.7
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	26879	9.46863	9.47
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	437336	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	31456	10.5489	10.5
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	12116	4.37128	4.37
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	5729	1.85545	1.86
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	5251	1.93844	1.94
\$ 25 Benzo(e)pyrene-d12	264		19.426	19.426	(0.981)	325681	122.349	122
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	6728	2.52898	2.53 (M)
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	7464	2.94094	2.94
* 28 Perylene-d12	264		19.801	19.801	(1.000)	519445	200.000	
29 Perylene	252		19.868	19.868	(1.003)	2113	0.81299	0.813
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	339054	198.577	199
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		23.358	23.369	(1.180)	3346	1.37722	1.38

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092314.D
 Lab Smp Id: 16I0160-13
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	527500	0.02
7 Acenaphthene-d10	297518	148759	595036	304864	2.47
12 Phenanthrene-d10	522042	261021	1044084	576748	10.48
20 Chrysene-d12	389499	194750	778998	437336	12.28
28 Perylene-d12	430626	215313	861252	519445	20.63

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.12
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	-0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	-0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092314.D

Lab ID: 16I0160-13

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 14:32

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

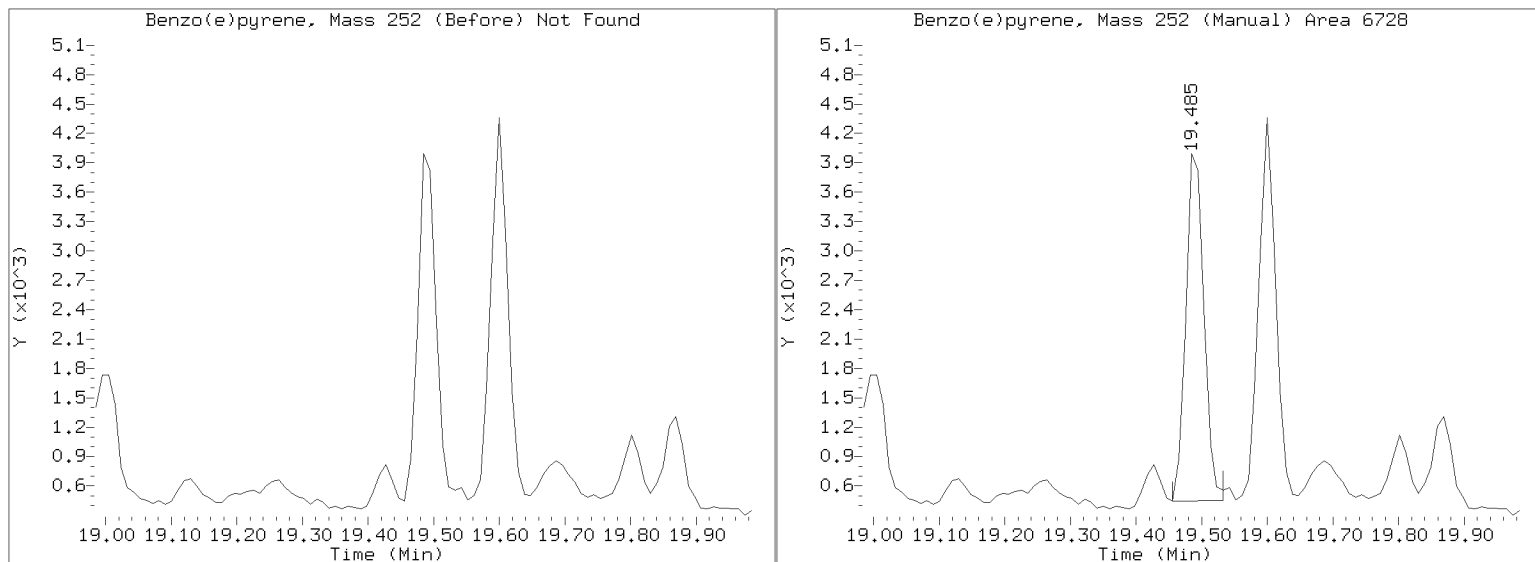
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092314.D

Injection Date: 23-SEP-2016 14:32

Lab ID:16I0160-13 Client ID:

Report Date: 09/26/2016 07:54





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory: Analytical Resources, Inc. SDG: 1610160
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 1610160-14 File ID: 16092315.D
 Sampled: 09/09/16 13:05 Prepared: 09/10/16 11:10 Analyzed: 09/23/16 15:02
 Solids: Preparation: EPA 3550C (Ultrasonic) Initial/Final: 0.886 g / 0.1 mL
 Batch: BEI0260 Sequence: SEI0321 Calibration: ZI00066
 Instrument: NT11 Column: RXi-17Sil-MS

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	14.4	B	1.13	1.35
91-57-6	2-Methylnaphthalene	1	12.8	B	1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	4.07		1.13	1.13
86-73-7	Fluorene	1	2.17		1.13	1.13
85-01-8	Phenanthrene	1	3.20		1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	1.86		1.13	1.13
129-00-0	Pyrene	1	1.70		1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzo(a)fluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	21.7	64.2	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	22.8	67.4	30 - 160	
Fluoranthene-d10	33.860	27.3	80.6	30 - 160	
Fluorene-d10	21.163	11.8	55.9	30 - 160	
Anthracene-d10	21.163	11.3	53.3	30 - 160	
Benzo(e)pyrene-d12	21.163	14.2	66.9	30 - 160	

Data File: \\target\share\chem3\nt11.i\20160923.16\16092315.D

Date : 23-SEP-2016 15:02

Client ID:

Sample Info: 1610160-14

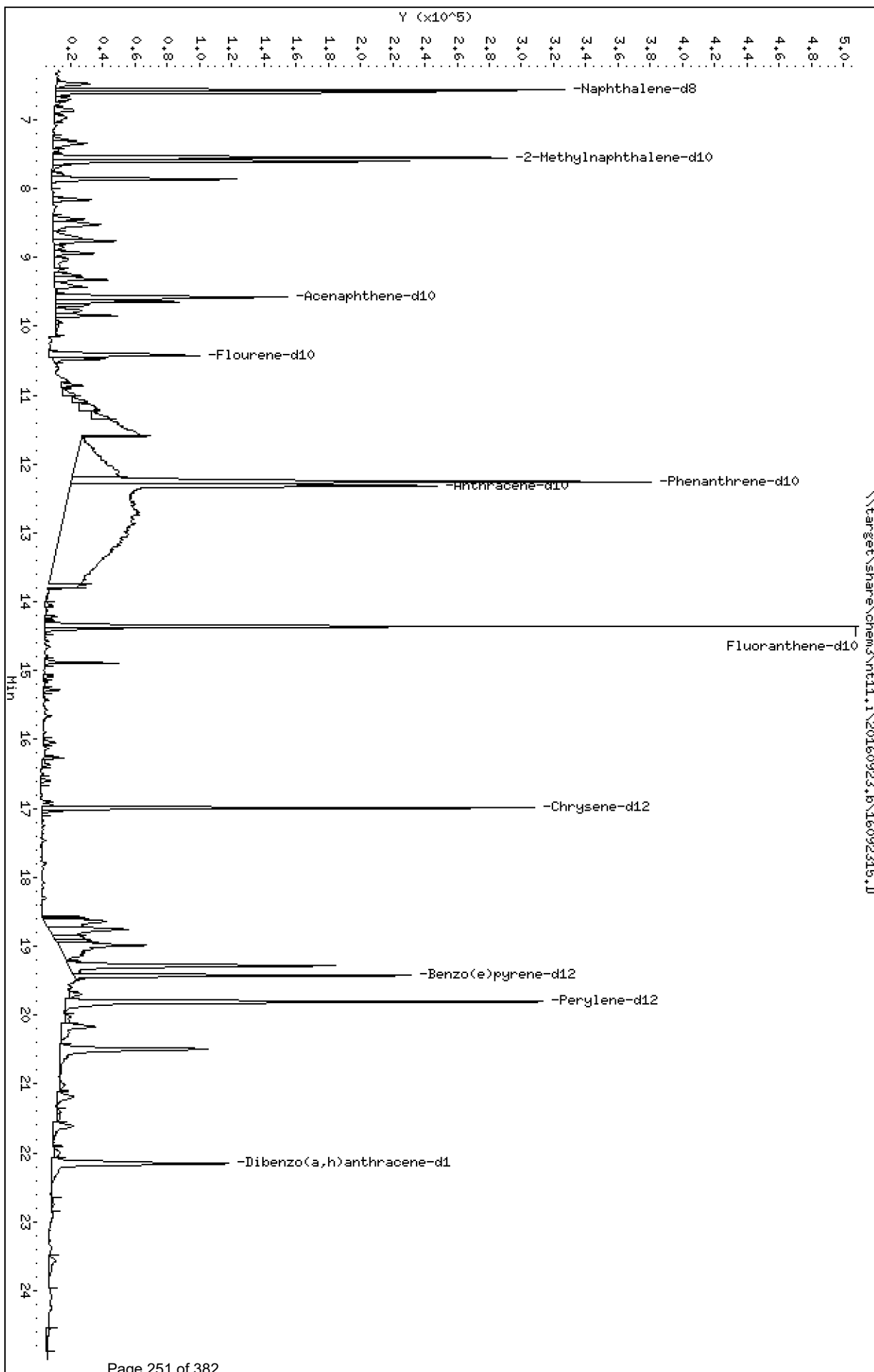
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.i\20160923.16\16092315.D



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

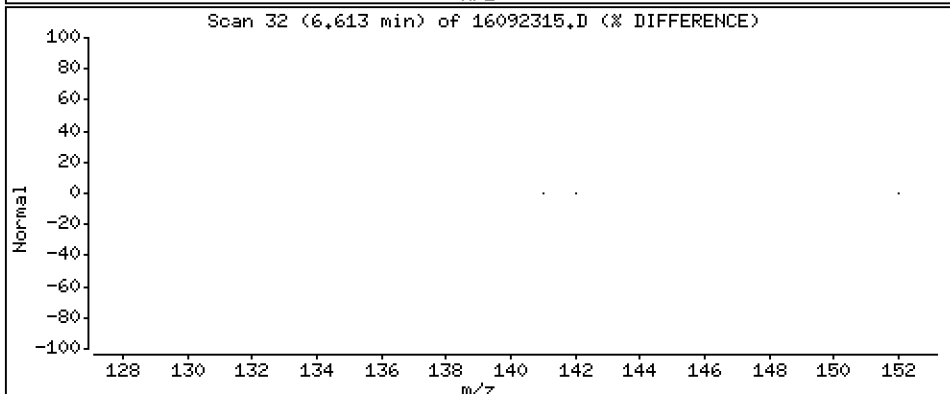
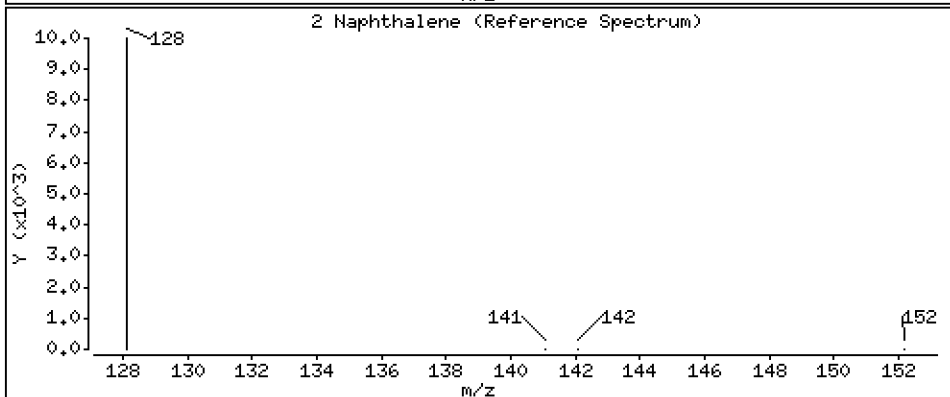
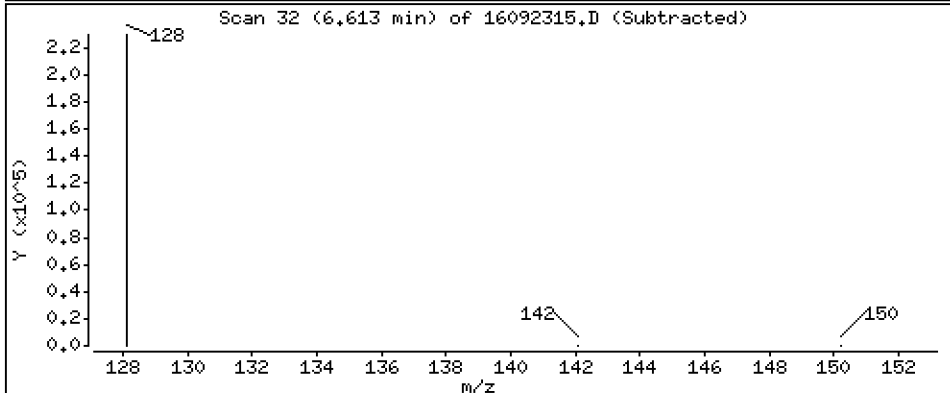
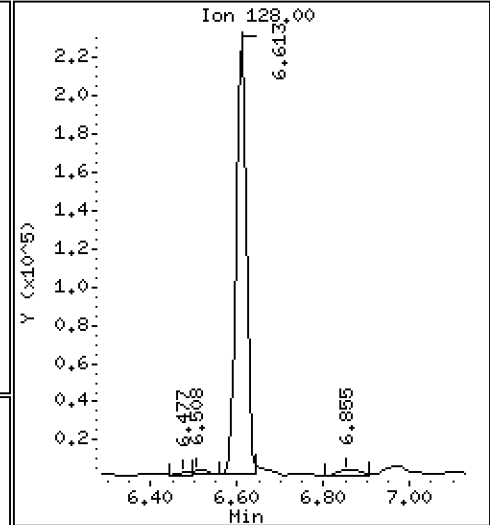
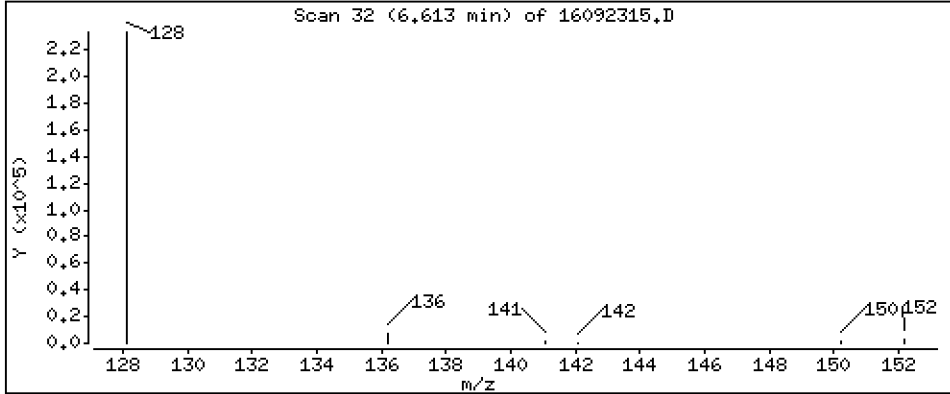
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 128 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

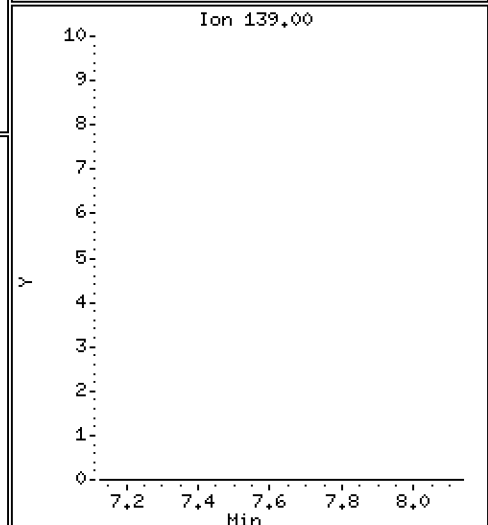
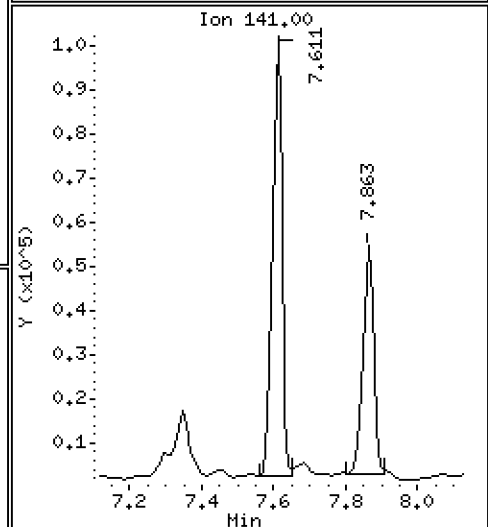
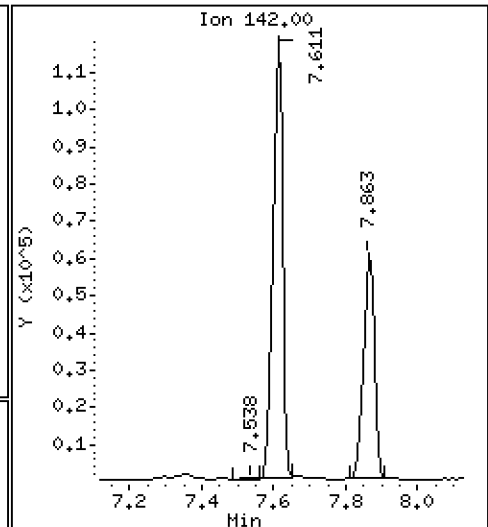
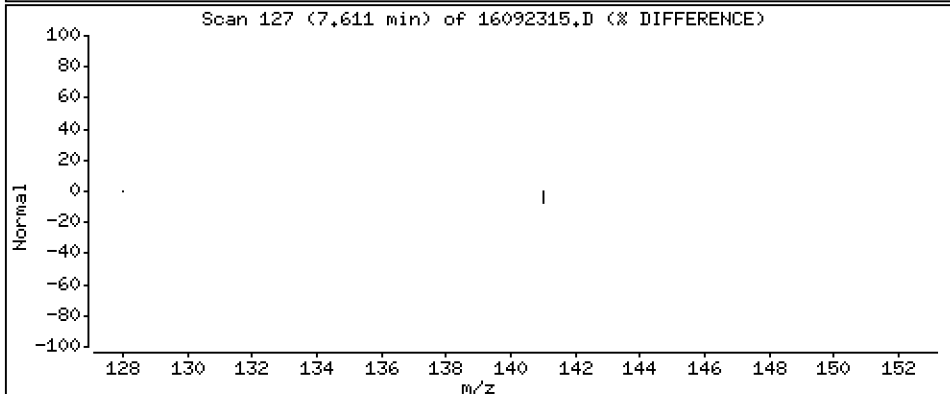
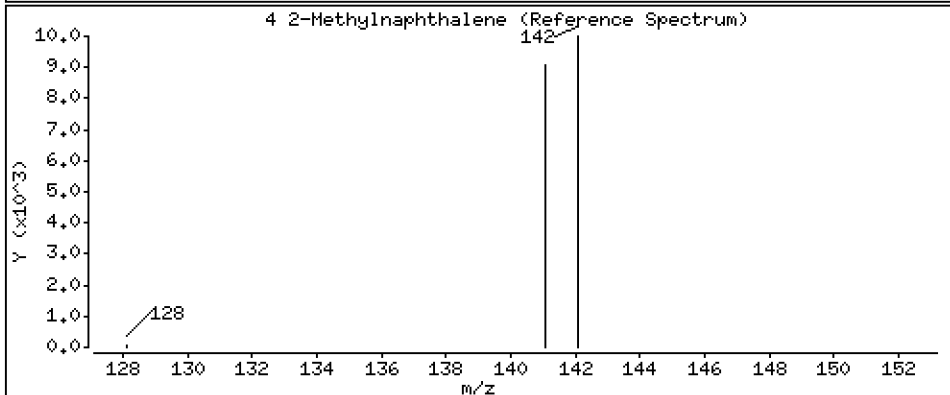
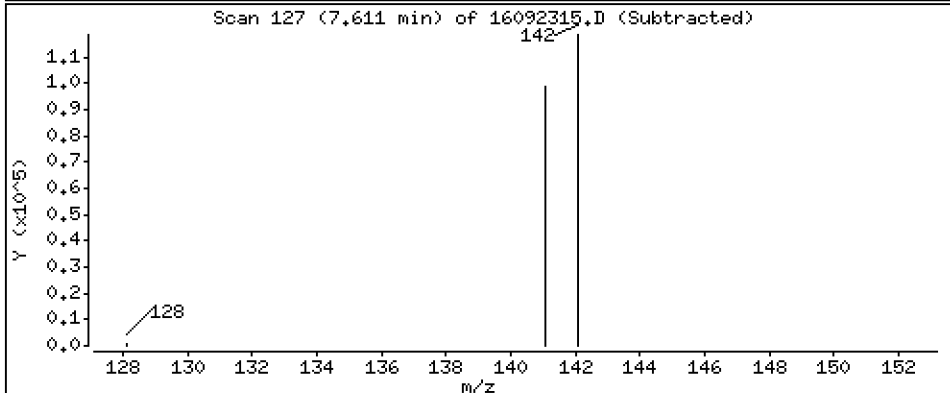
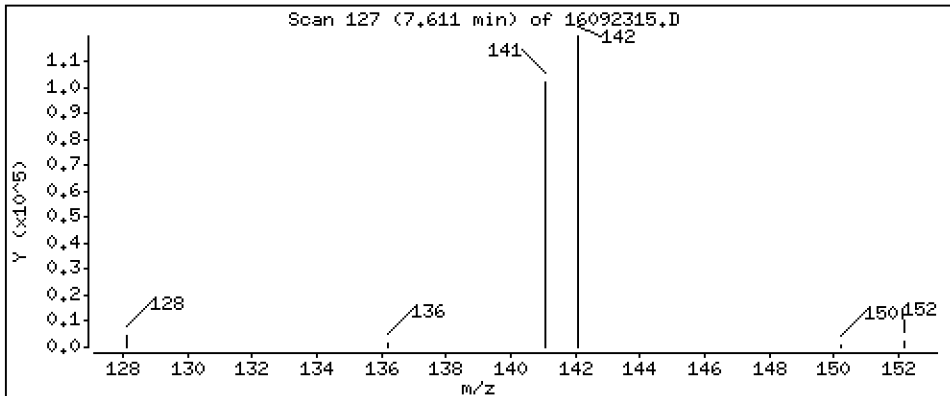
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4-Methylnaphthalene

Concentration: 113 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

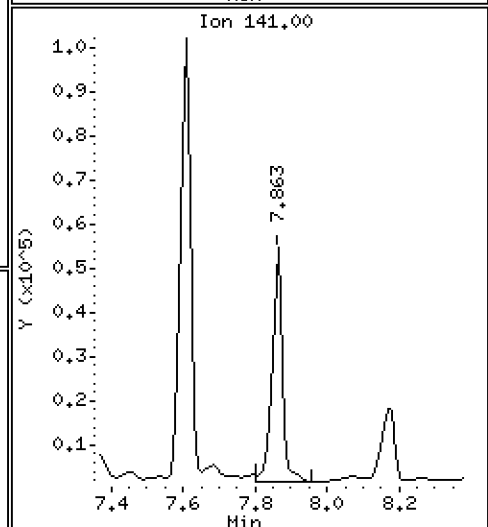
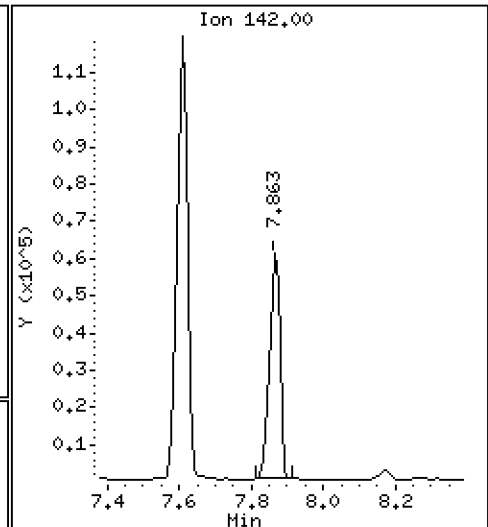
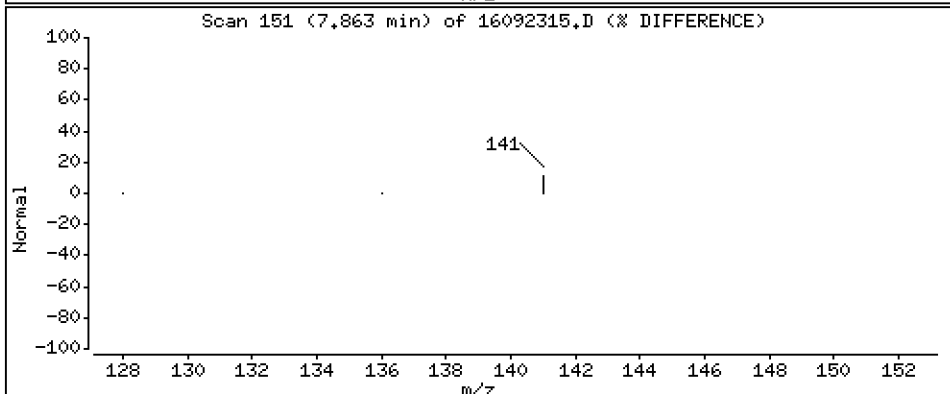
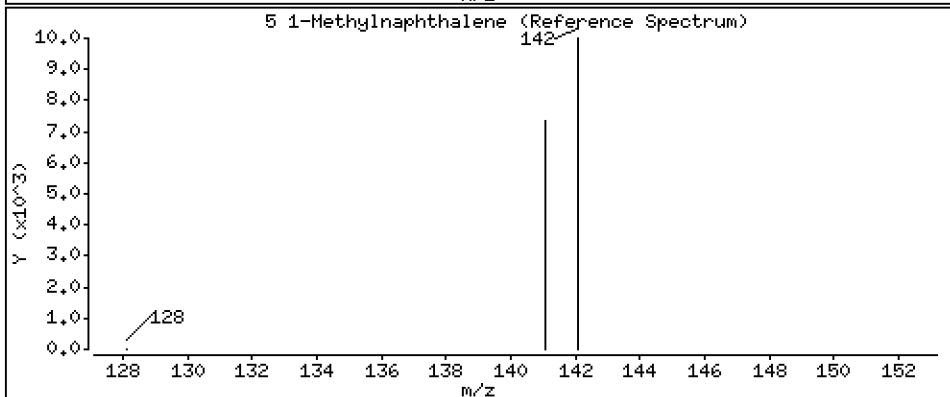
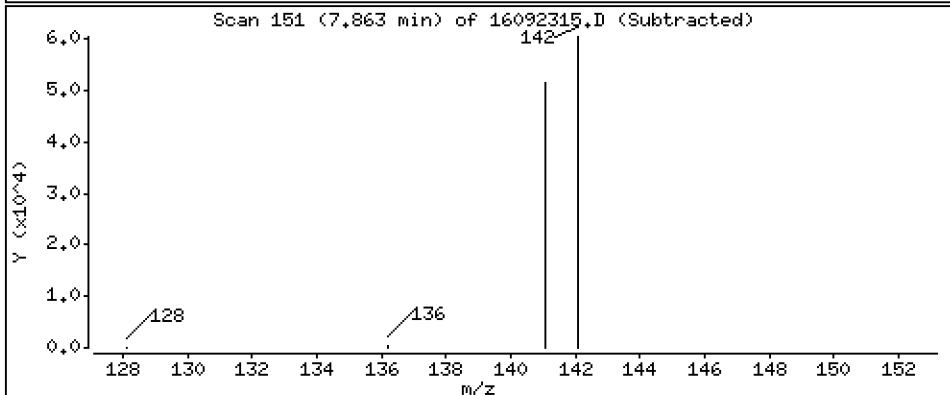
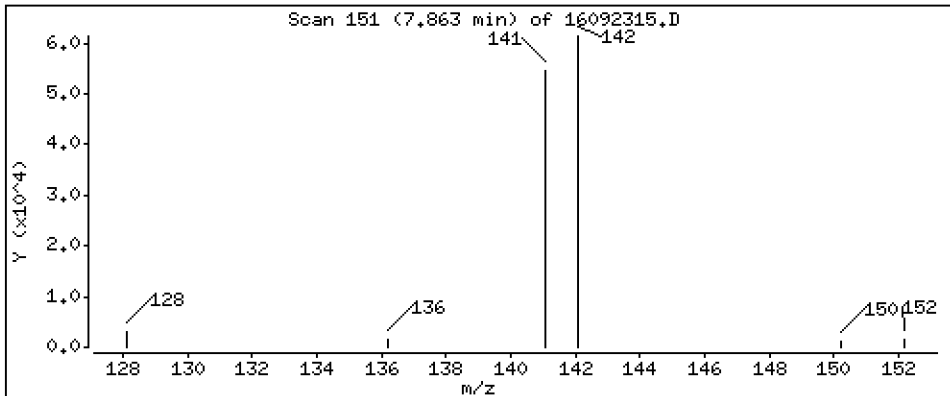
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

5 1-Methylnaphthalene

Concentration: 65,8 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

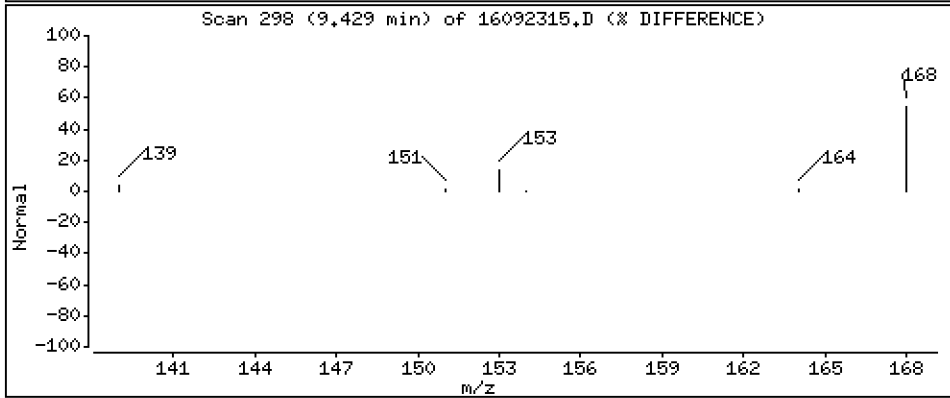
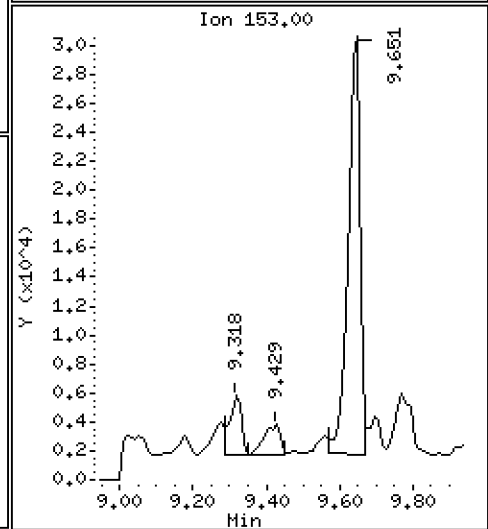
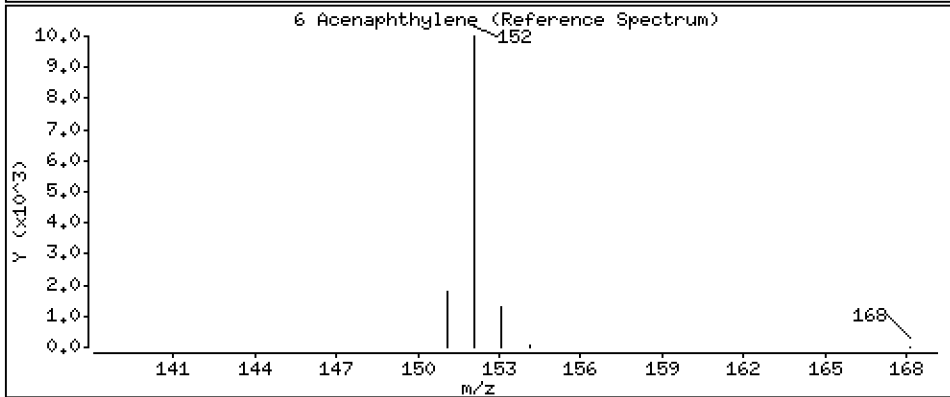
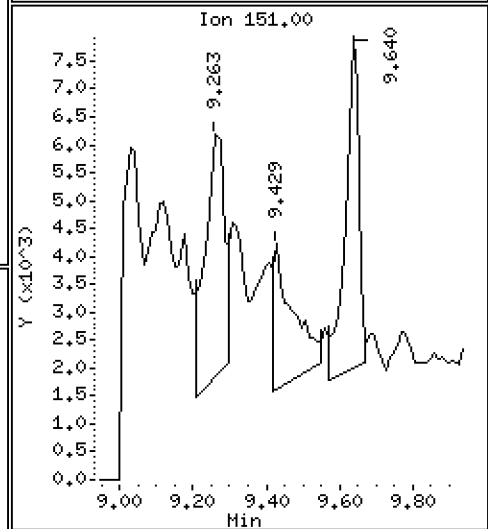
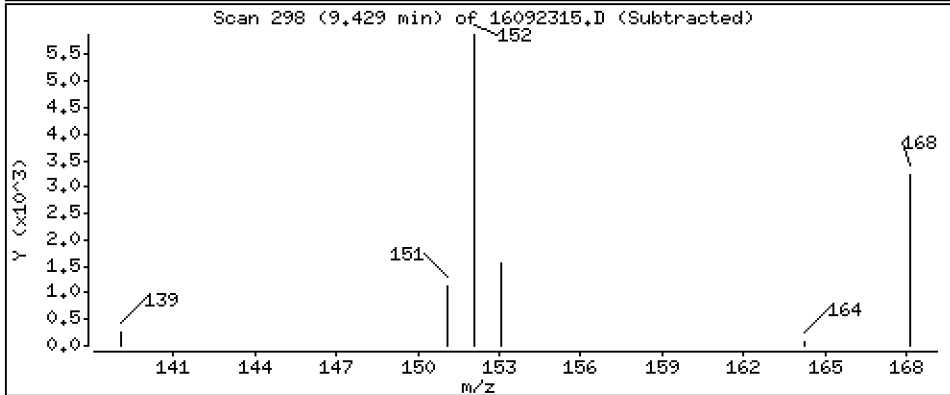
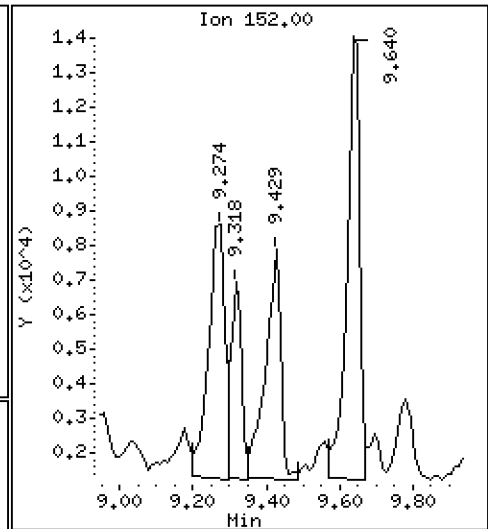
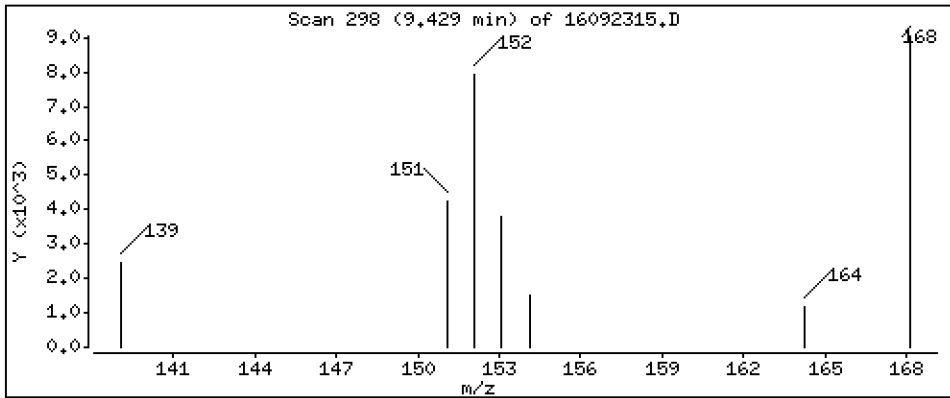
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 7.13 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

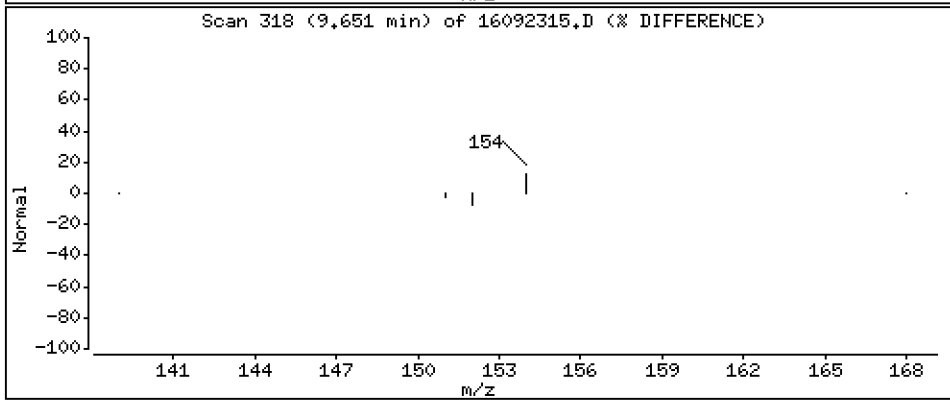
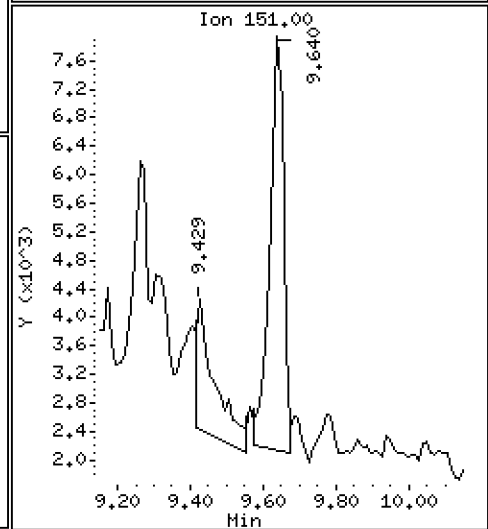
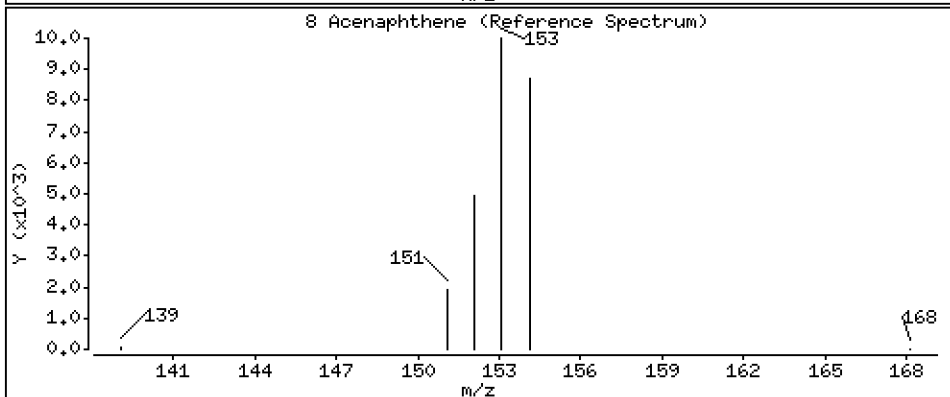
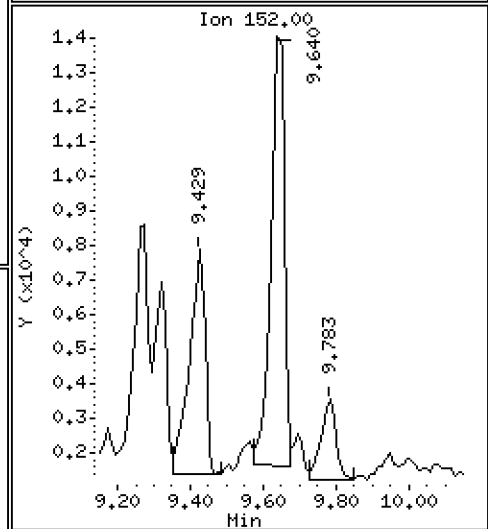
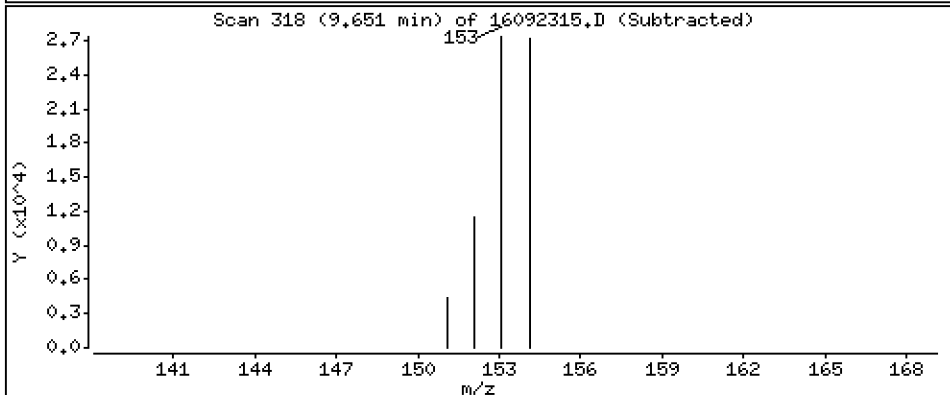
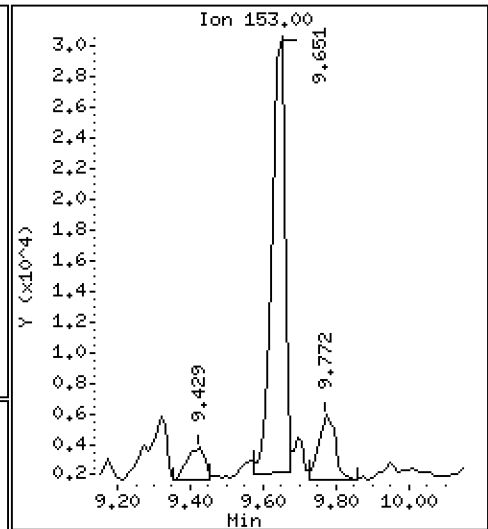
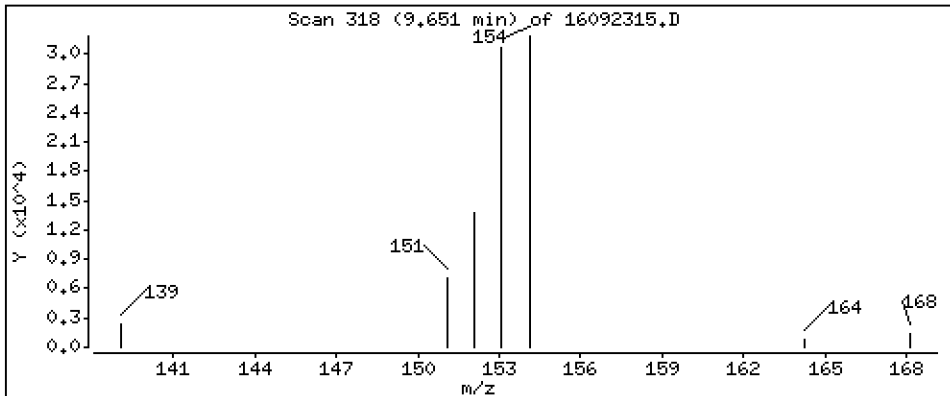
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

8 Acenaphthene

Concentration: 36.0 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

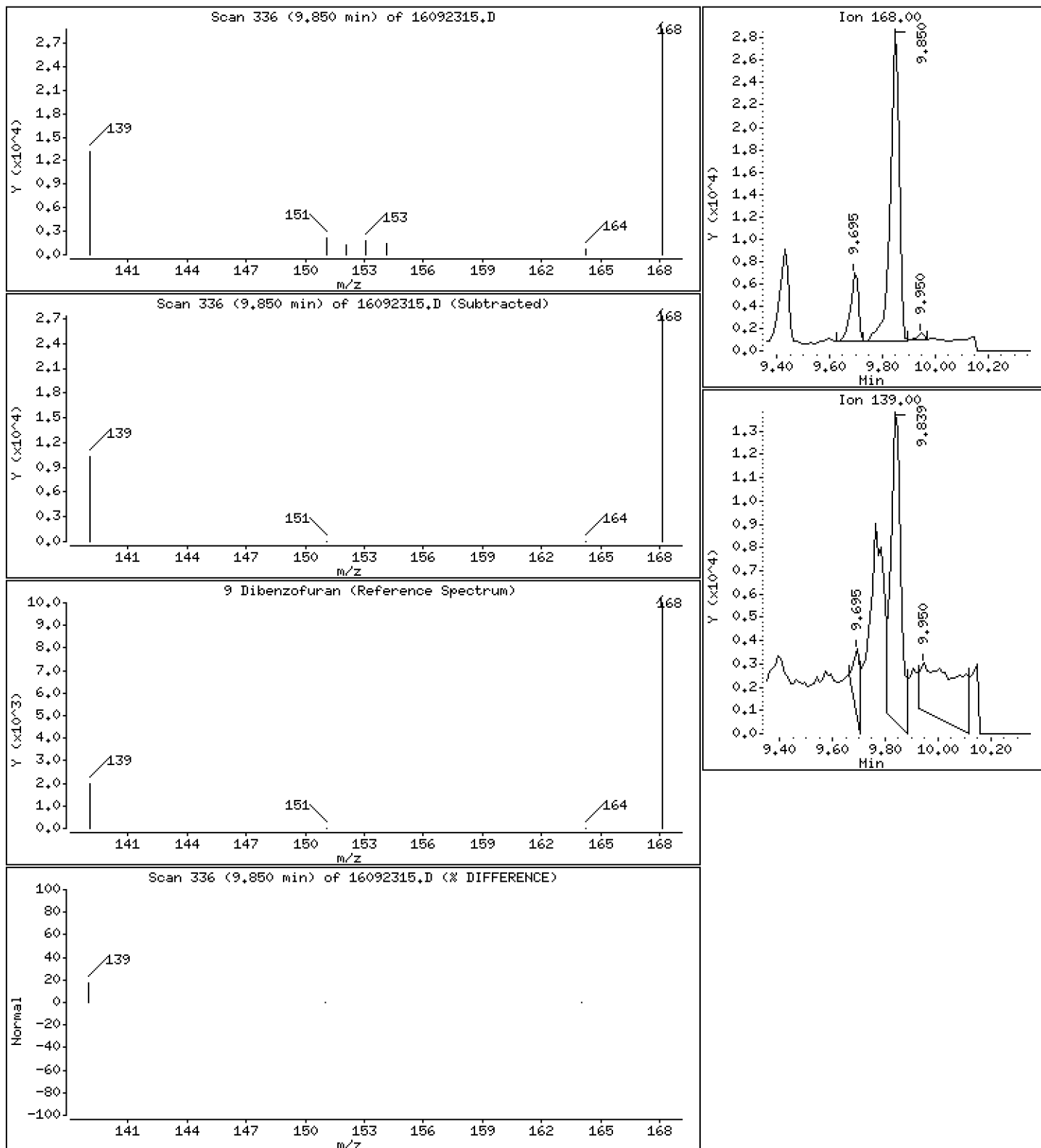
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

9 Dibenzofuran

Concentration: 23,6 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

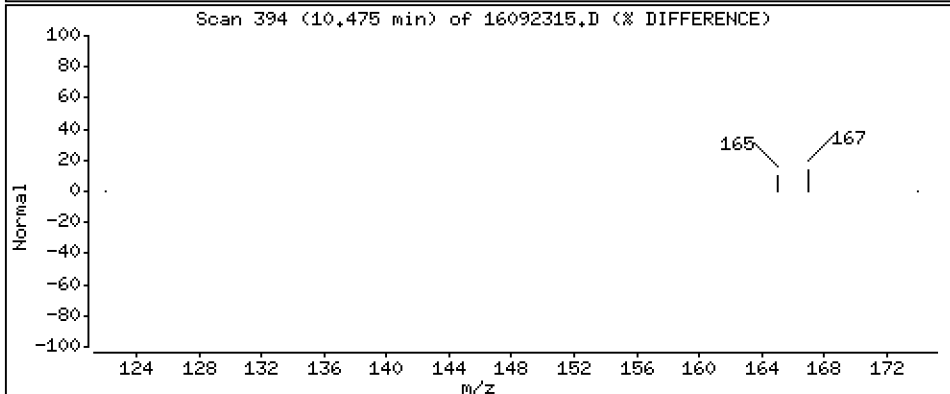
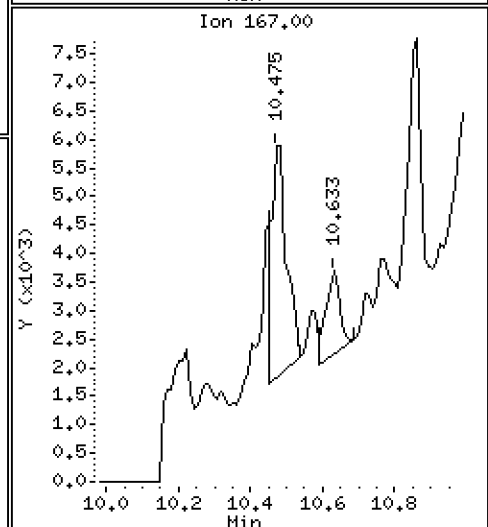
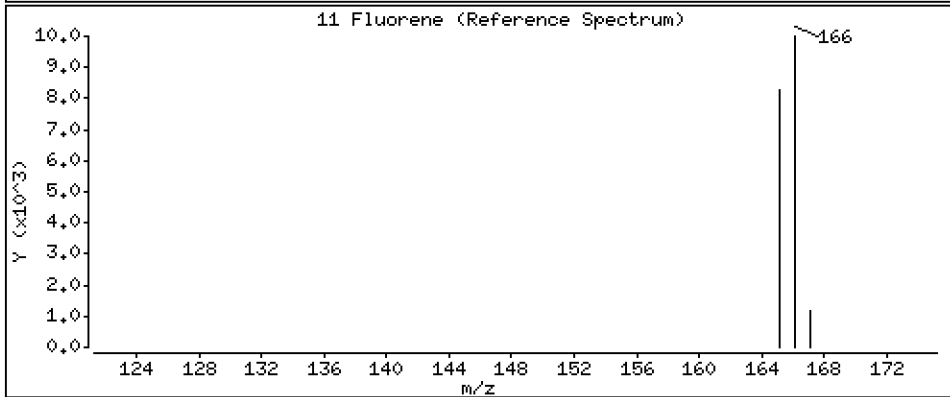
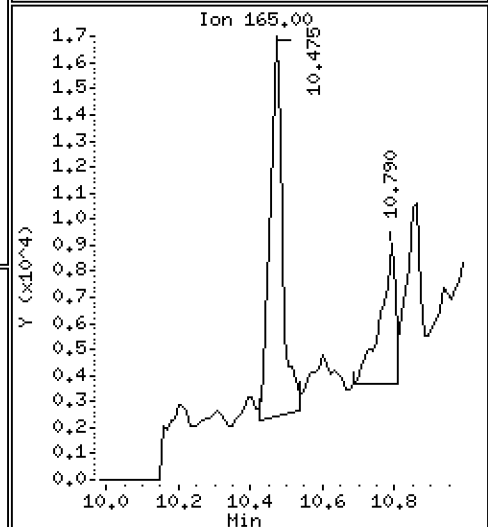
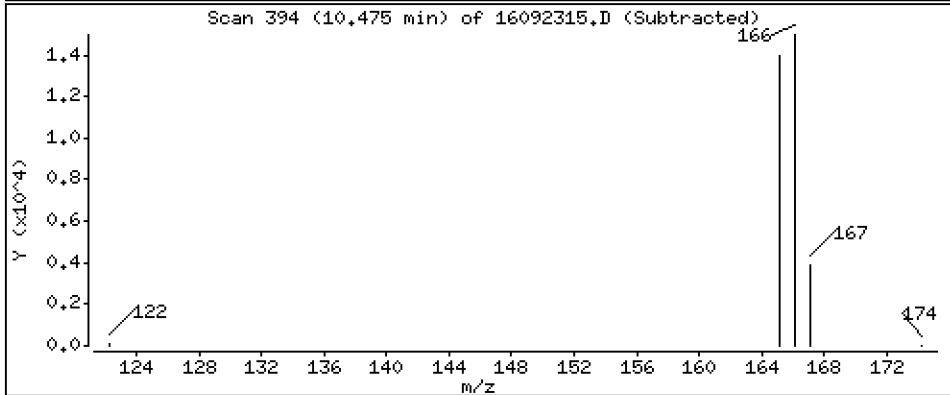
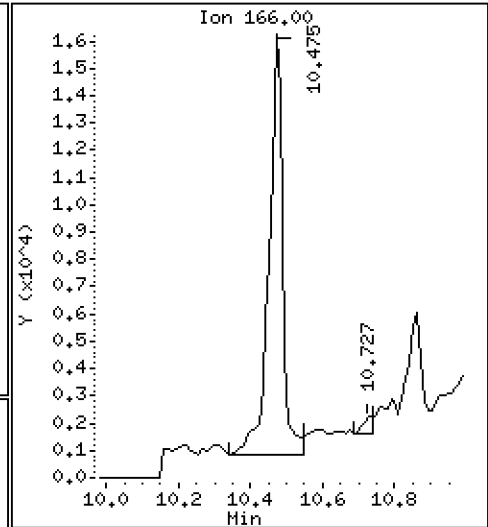
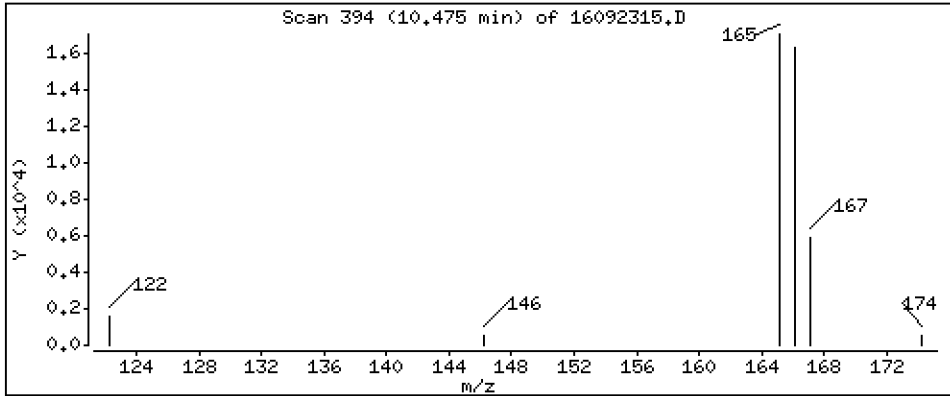
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 19,3 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

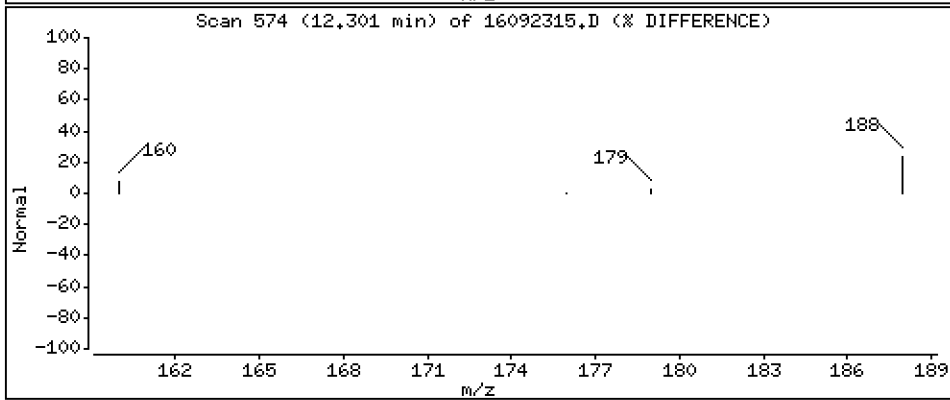
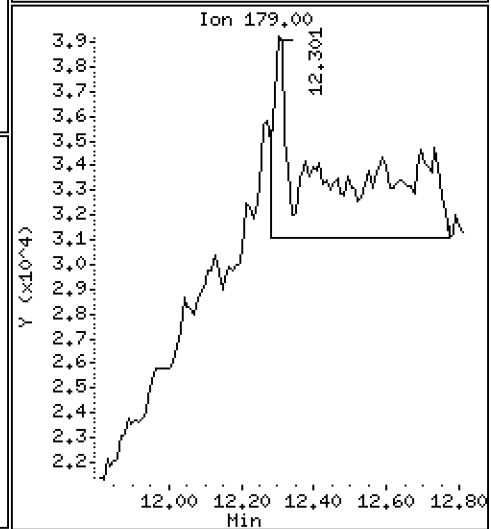
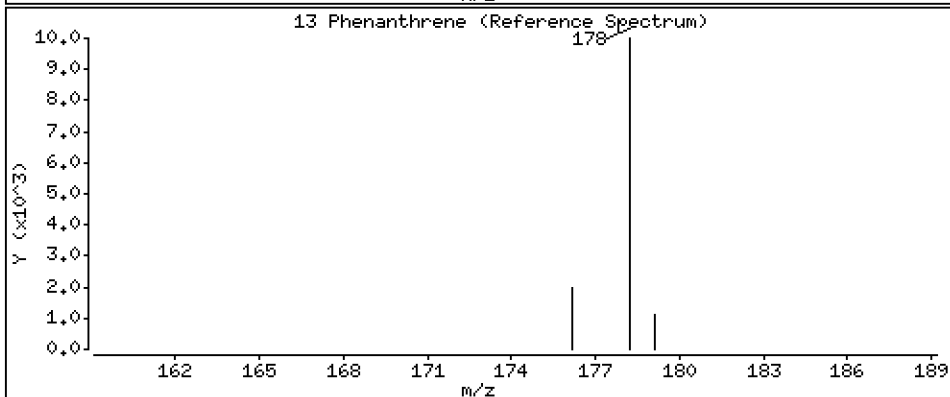
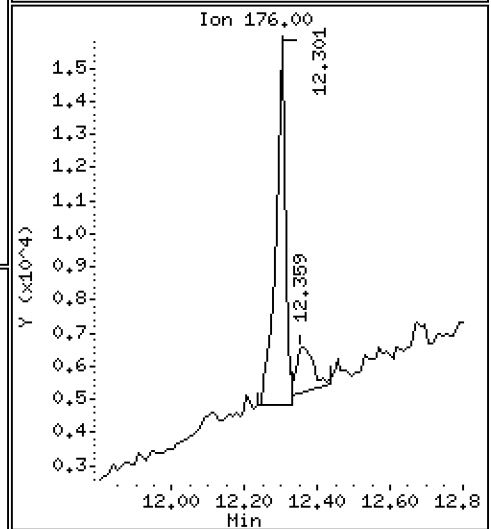
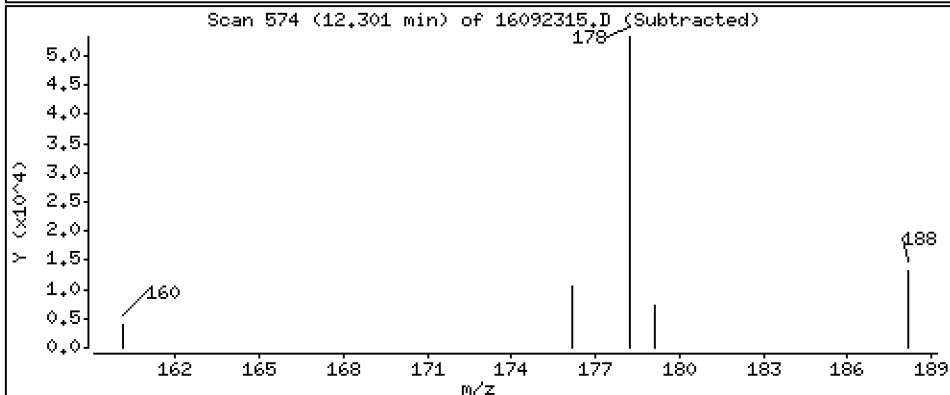
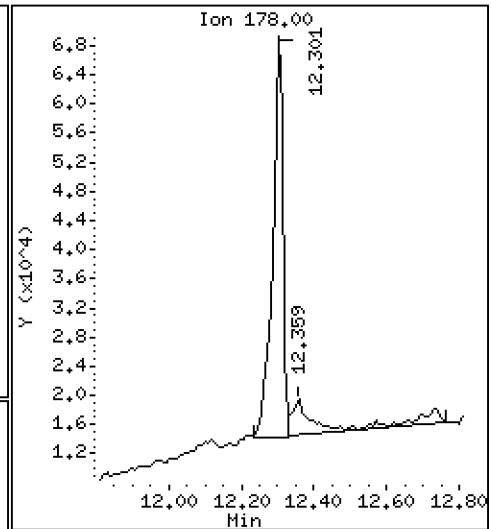
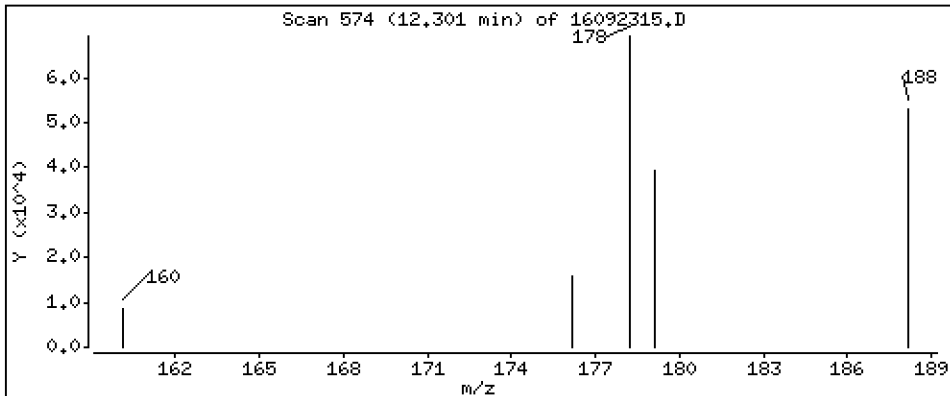
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

13 Phenanthrene

Concentration: 28,3 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

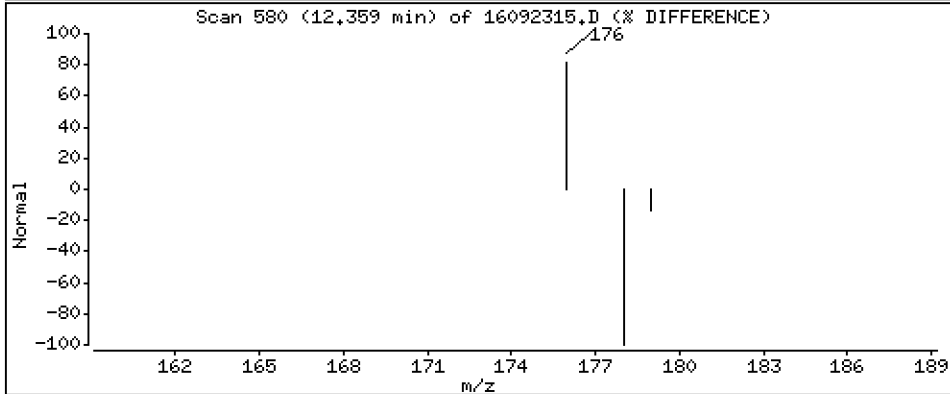
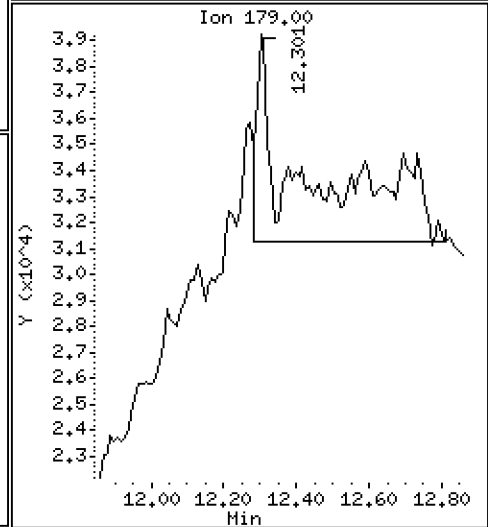
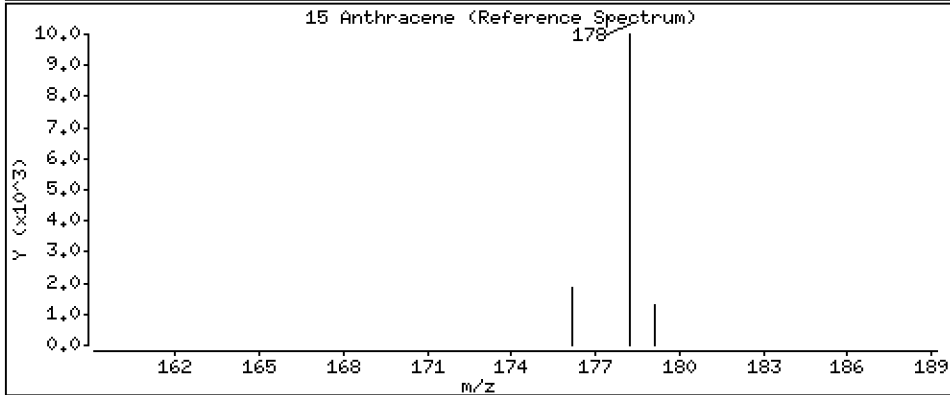
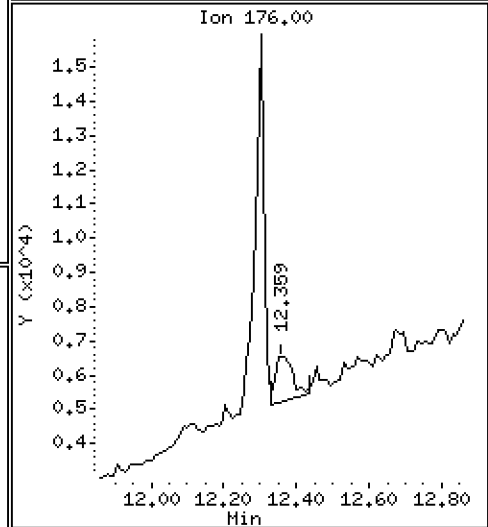
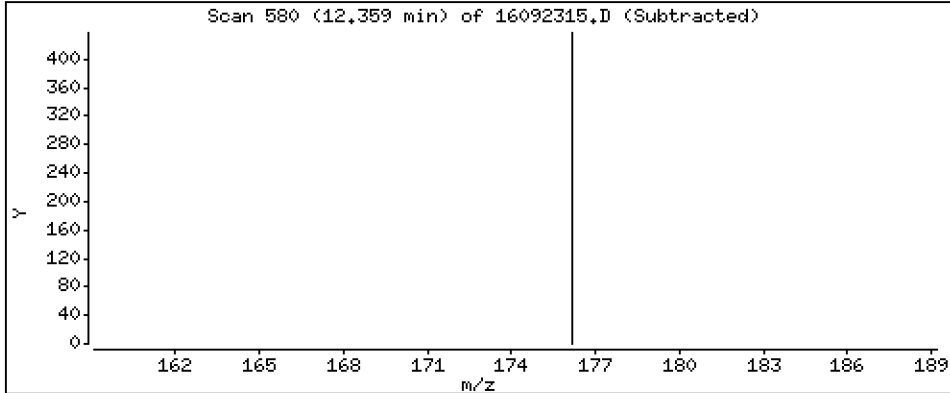
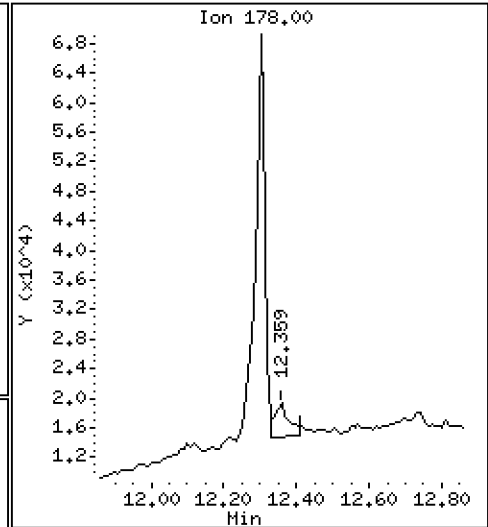
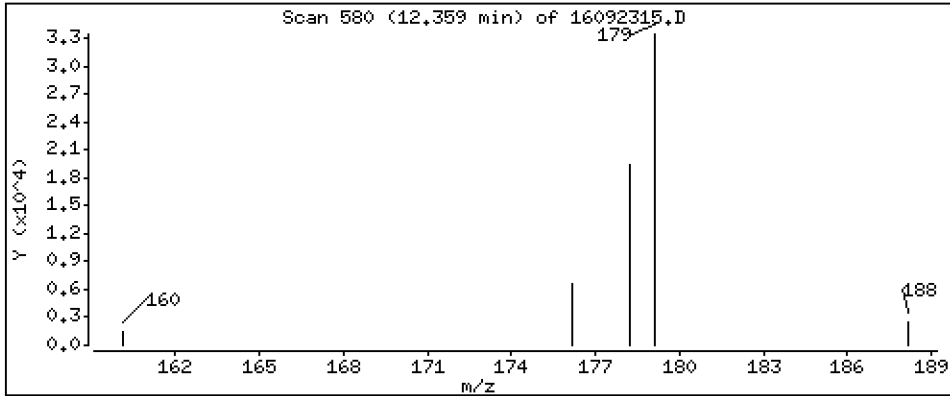
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 3.72 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

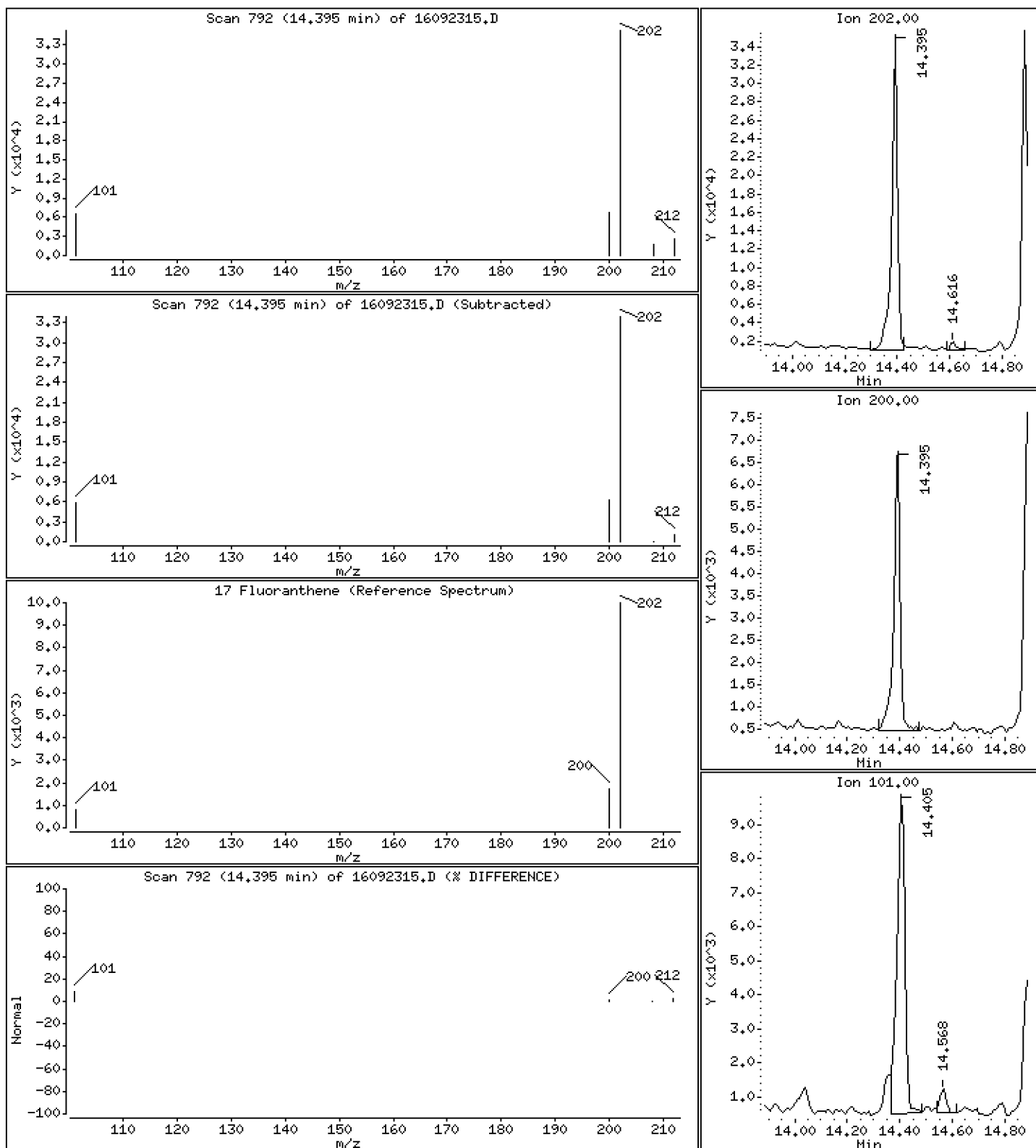
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

17 Fluoranthene

Concentration: 16,5 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

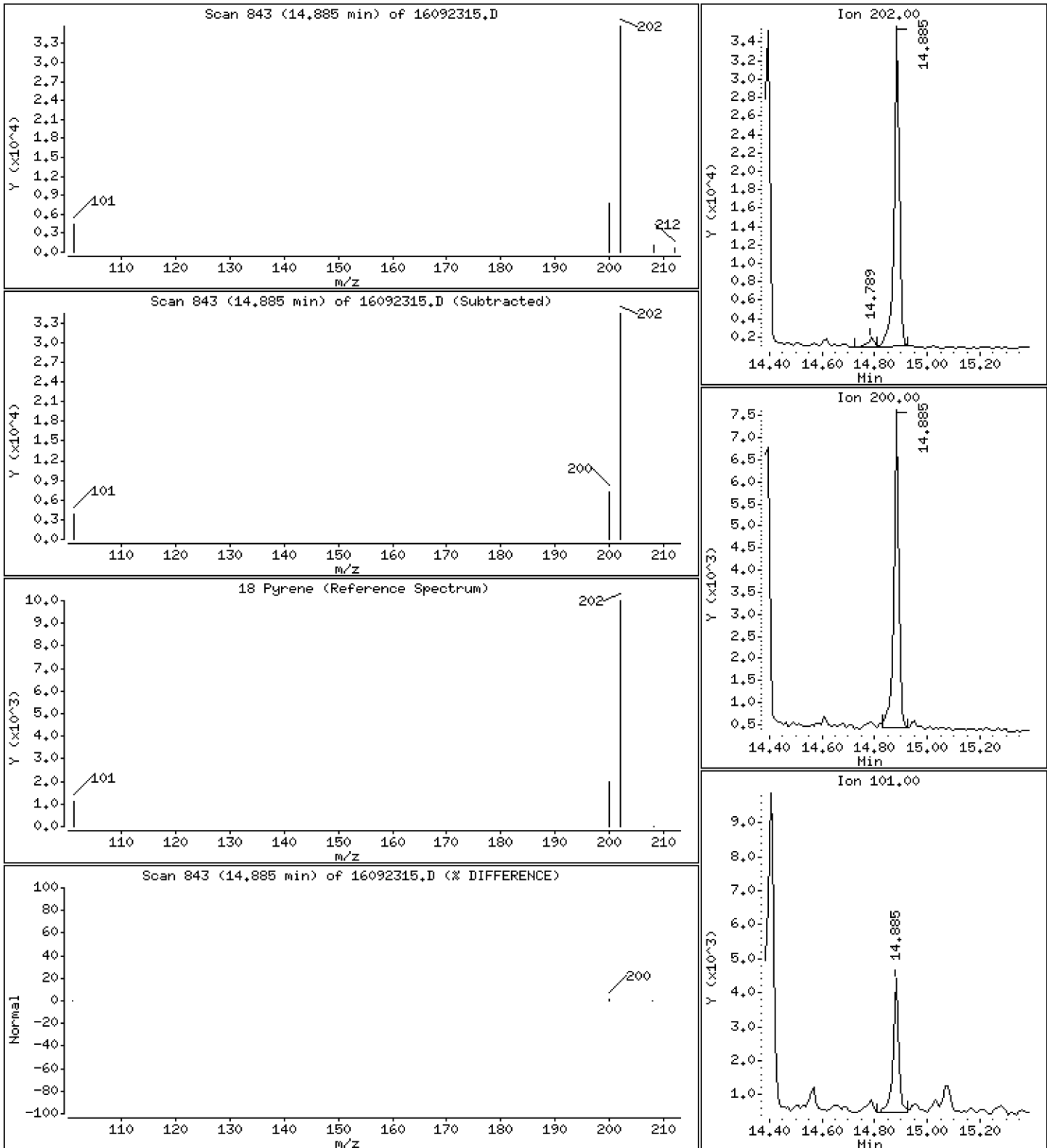
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 15,1 ng/mL

18 Pyrene



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

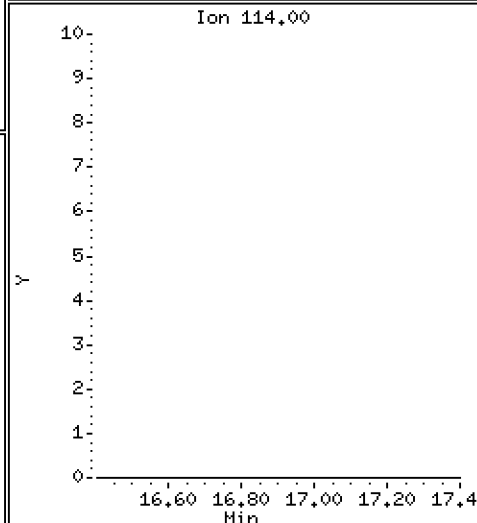
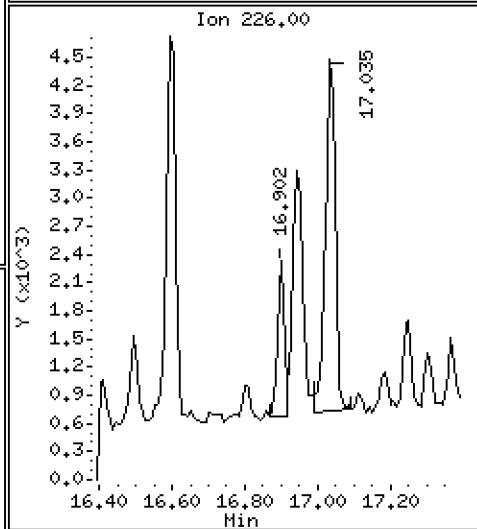
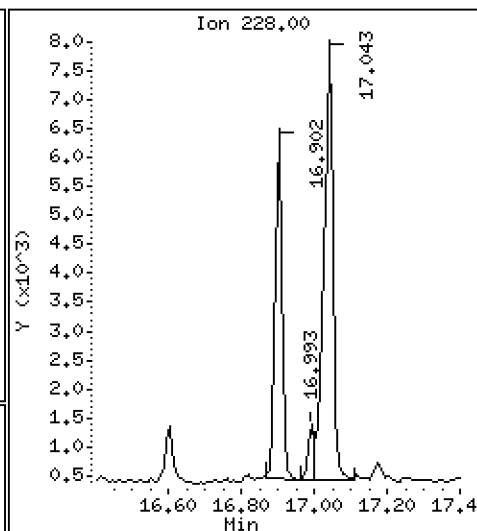
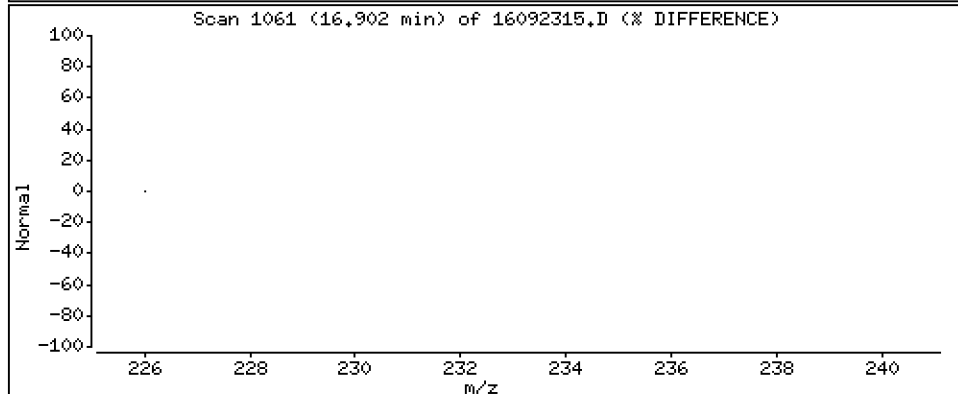
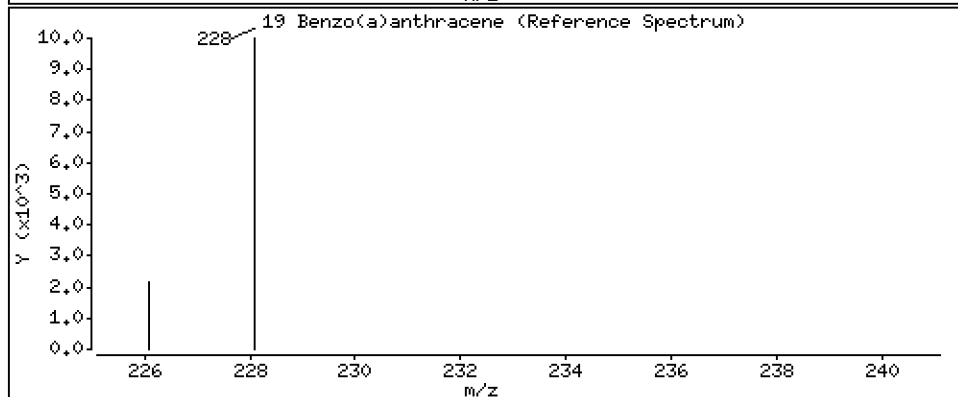
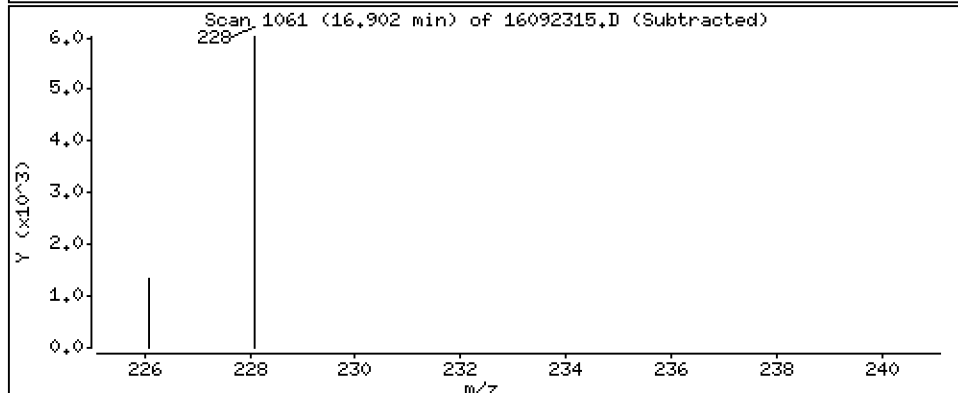
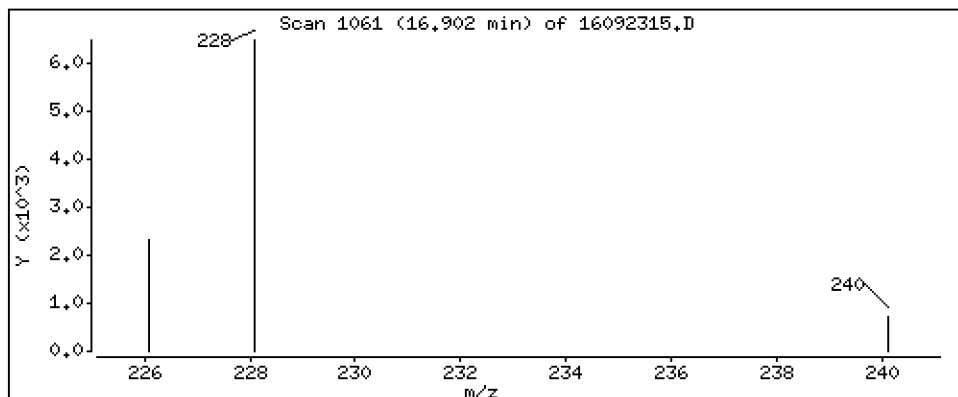
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 2,77 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

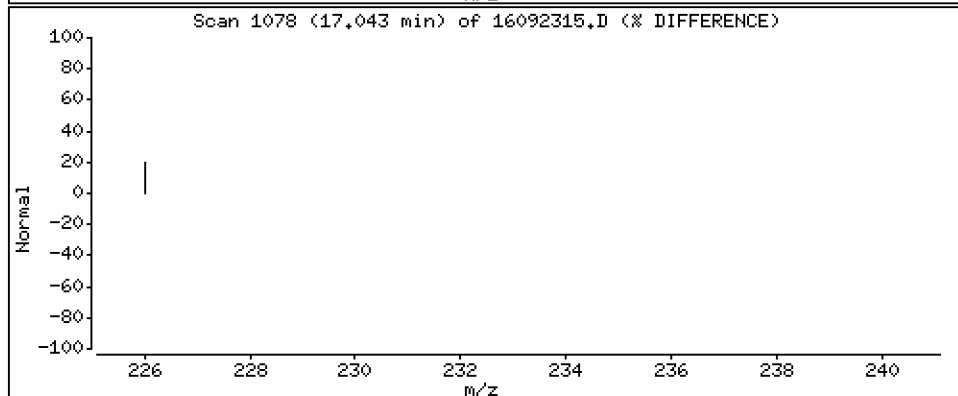
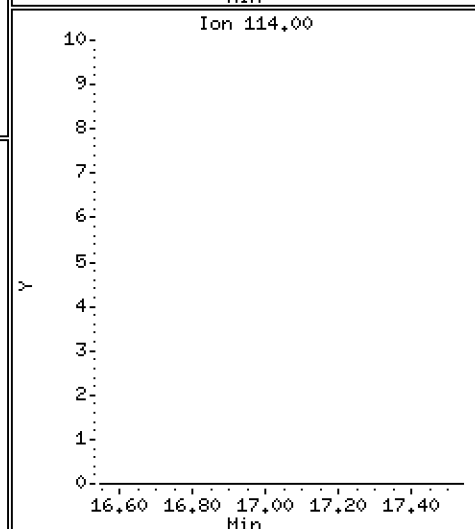
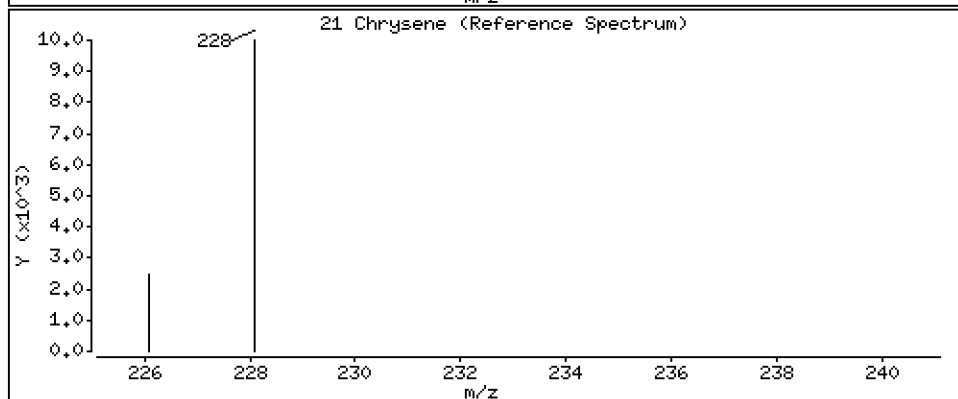
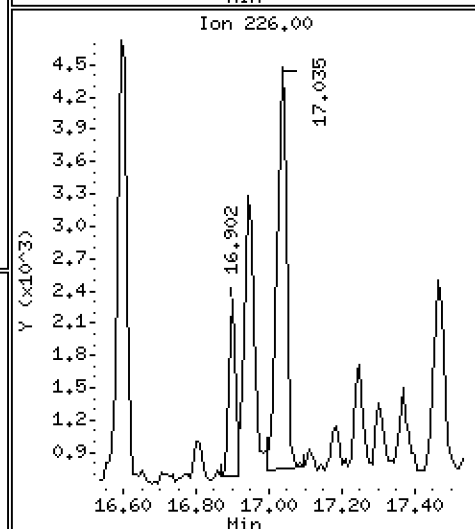
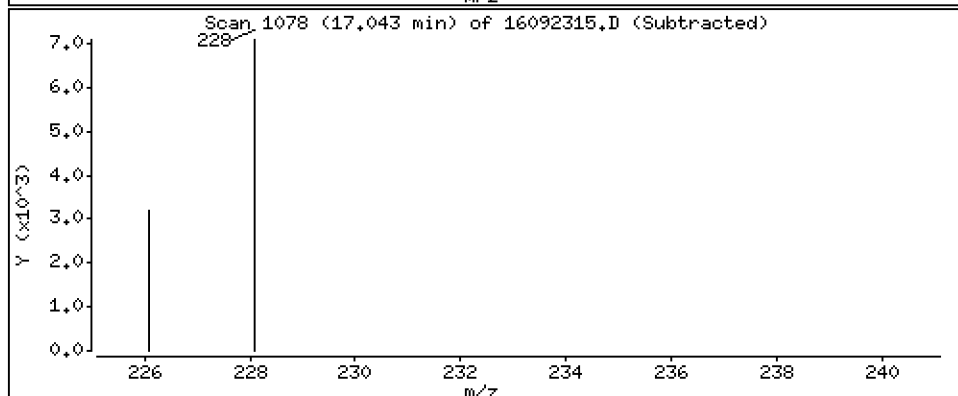
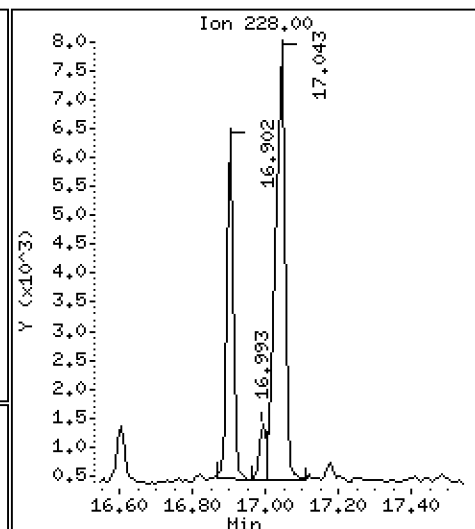
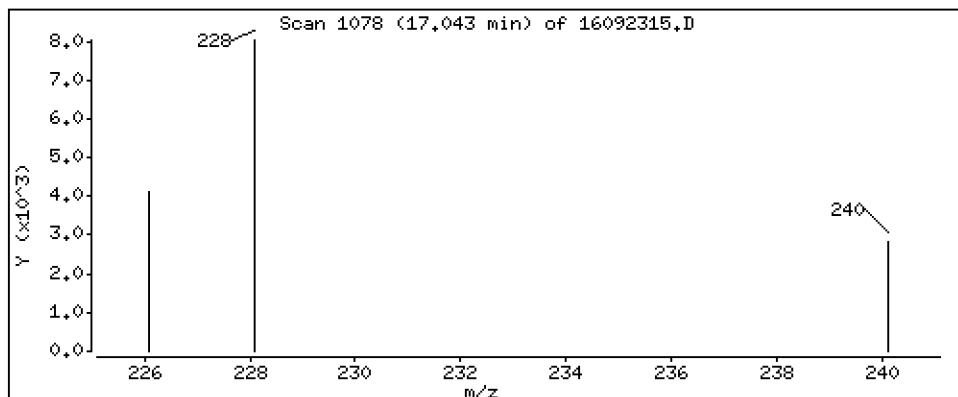
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

21 Chrysene

Concentration: 4,66 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

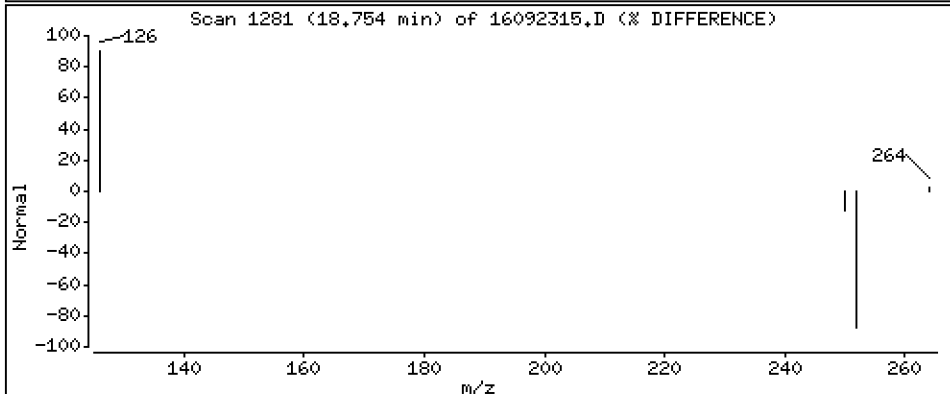
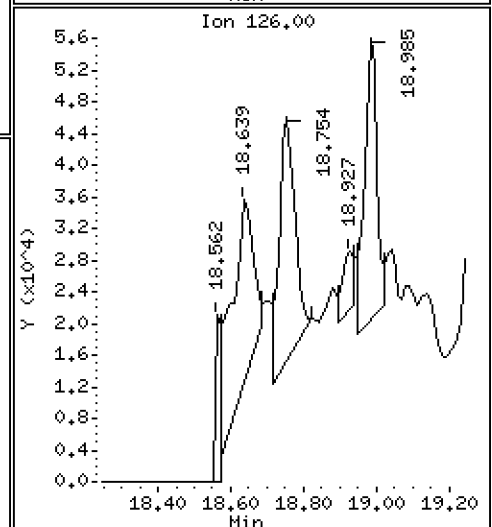
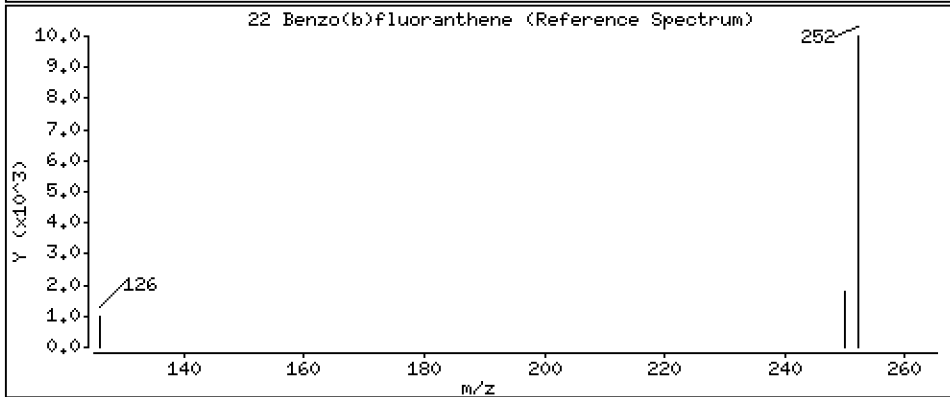
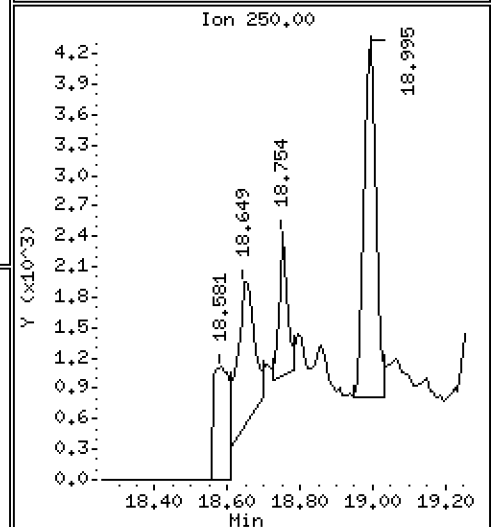
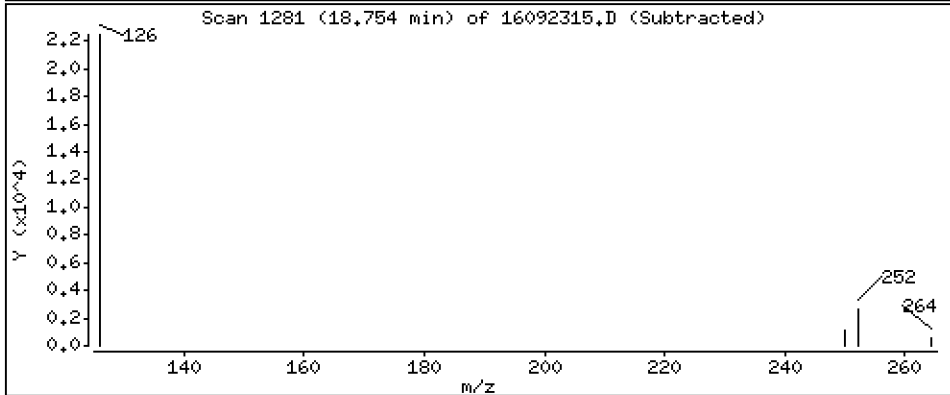
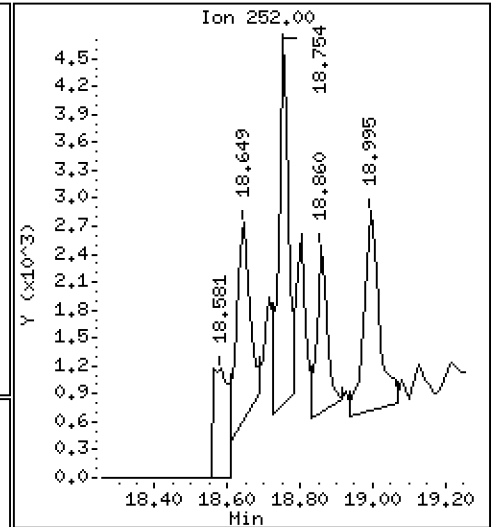
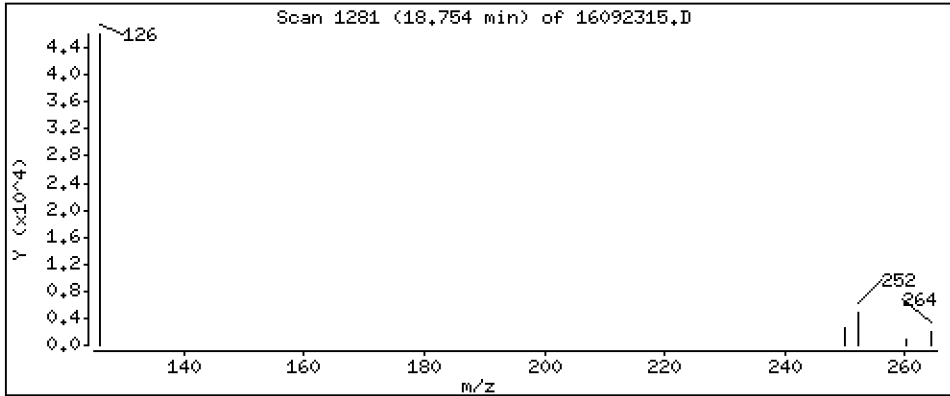
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

22 Benzo(b)fluoranthene

Concentration: 2,92 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

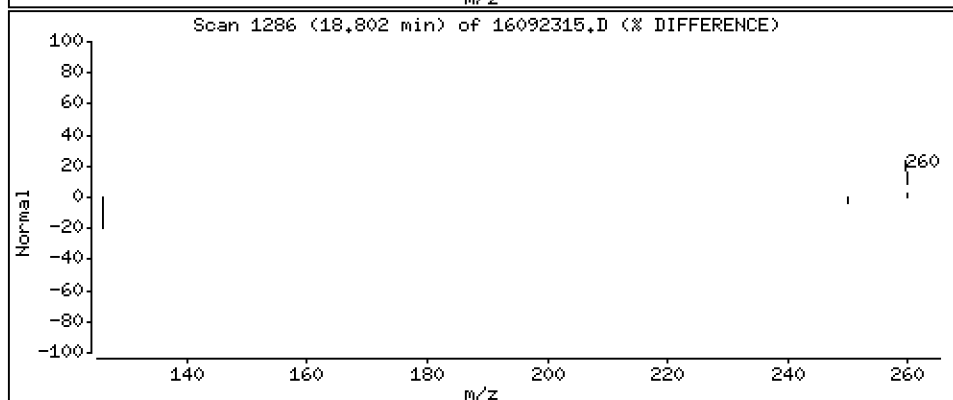
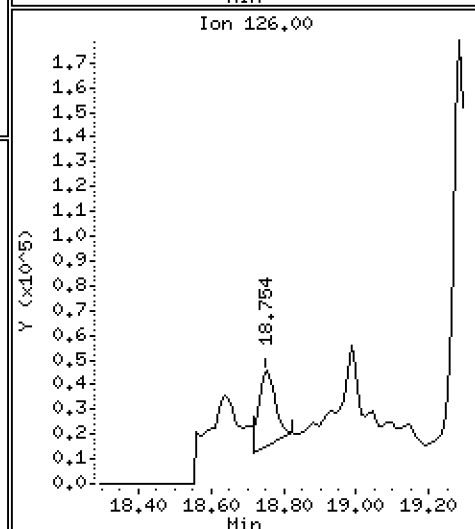
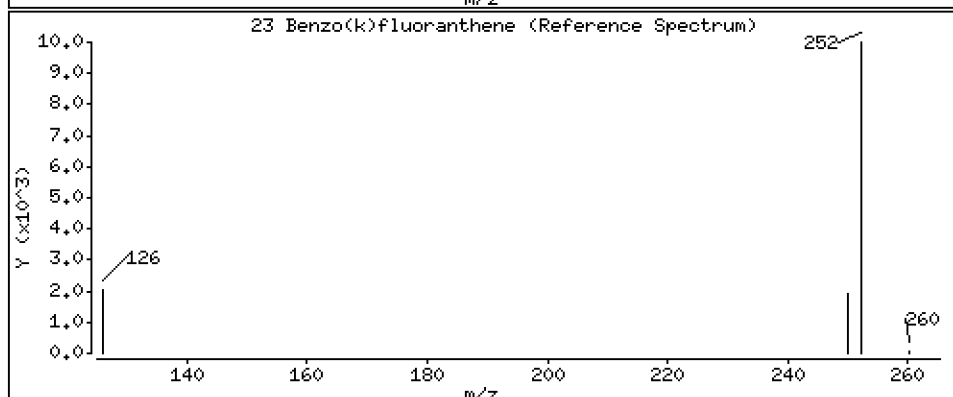
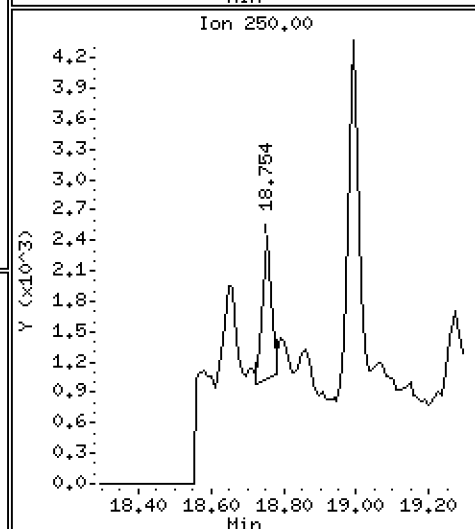
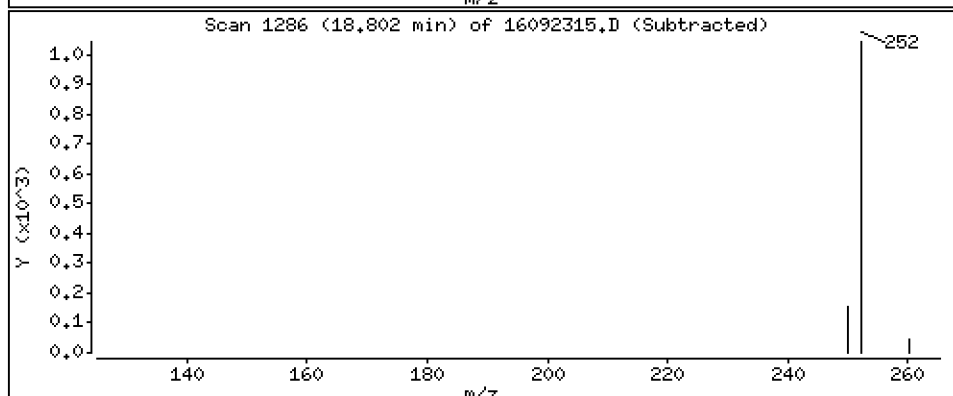
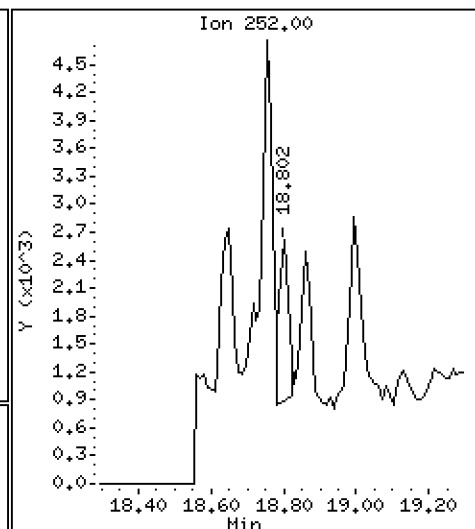
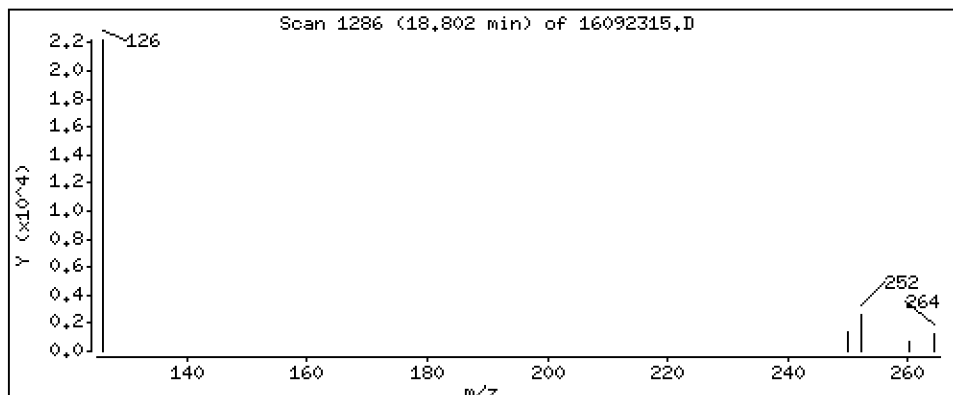
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

23 Benzo(k)fluoranthene

Concentration: 1,03 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

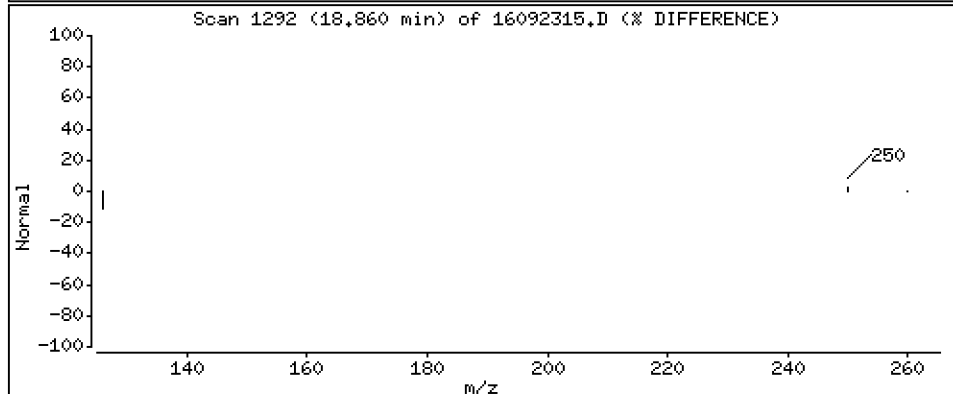
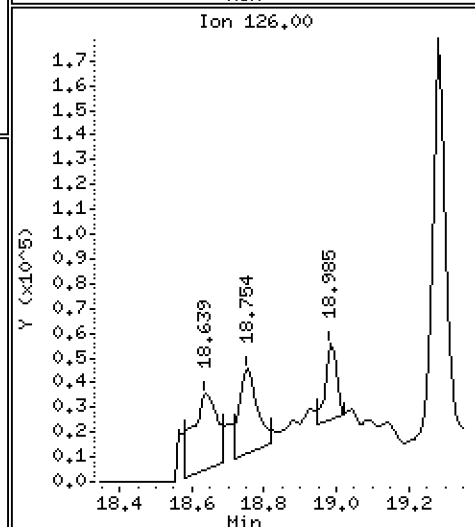
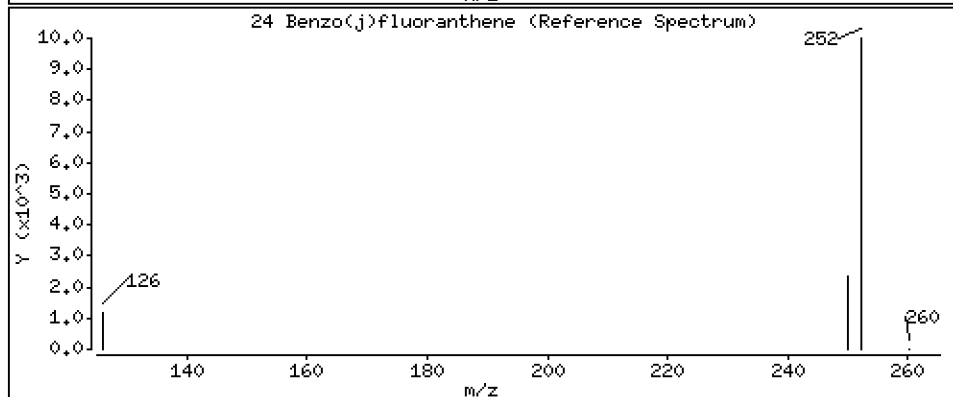
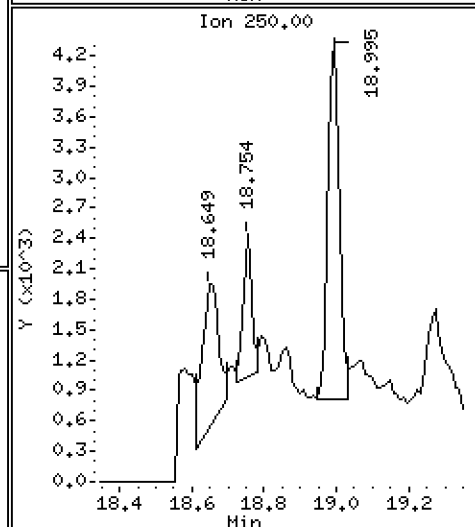
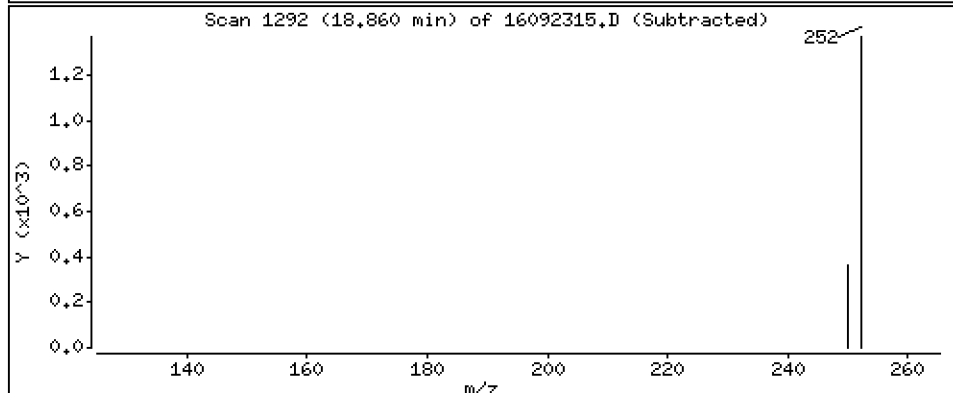
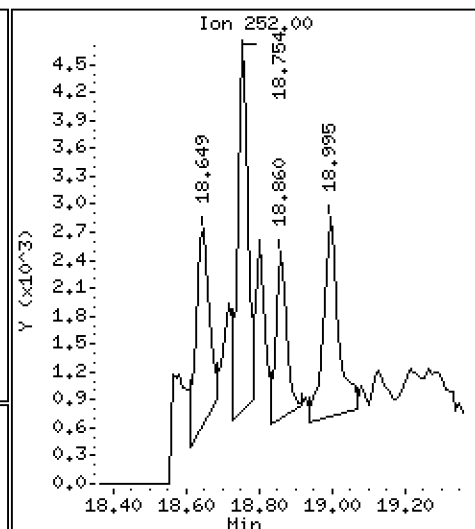
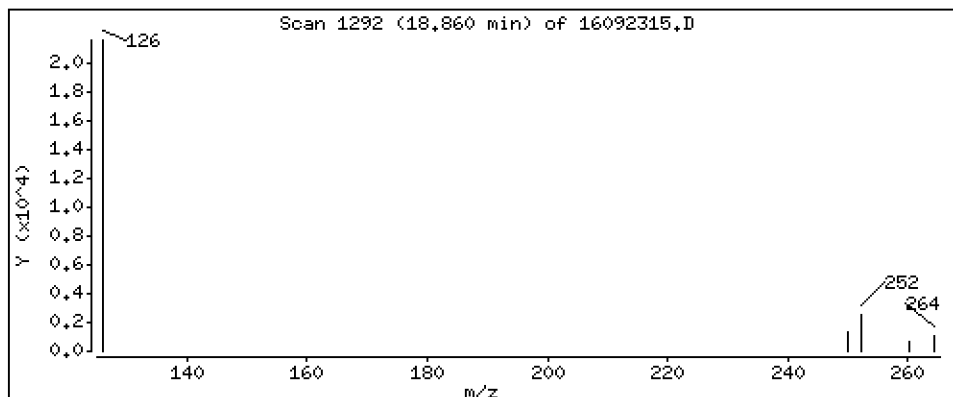
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

24 Benzo(j)fluoranthene

Concentration: 1,39 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

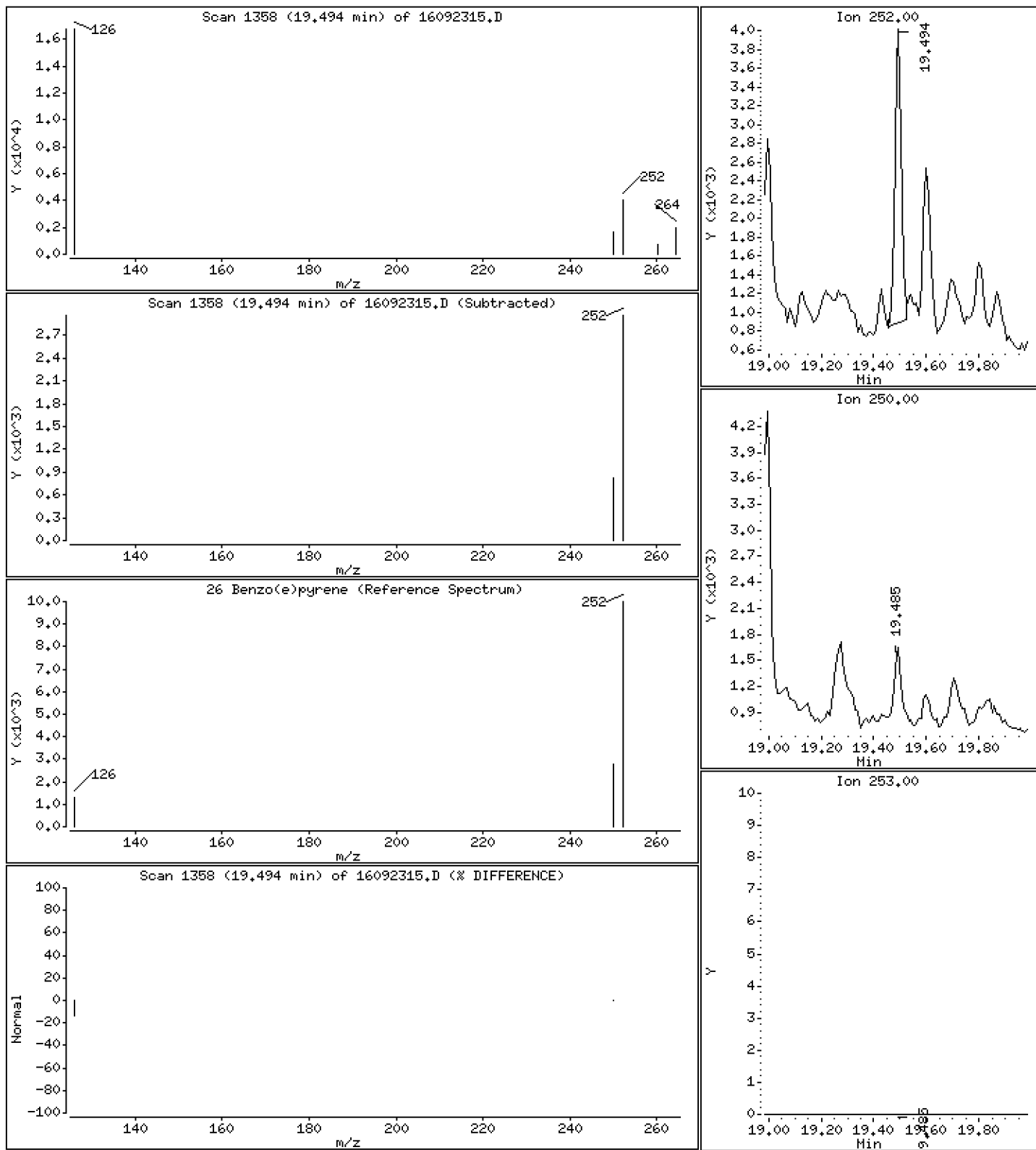
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

26 Benzo(e)pyrene

Concentration: 2,17 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

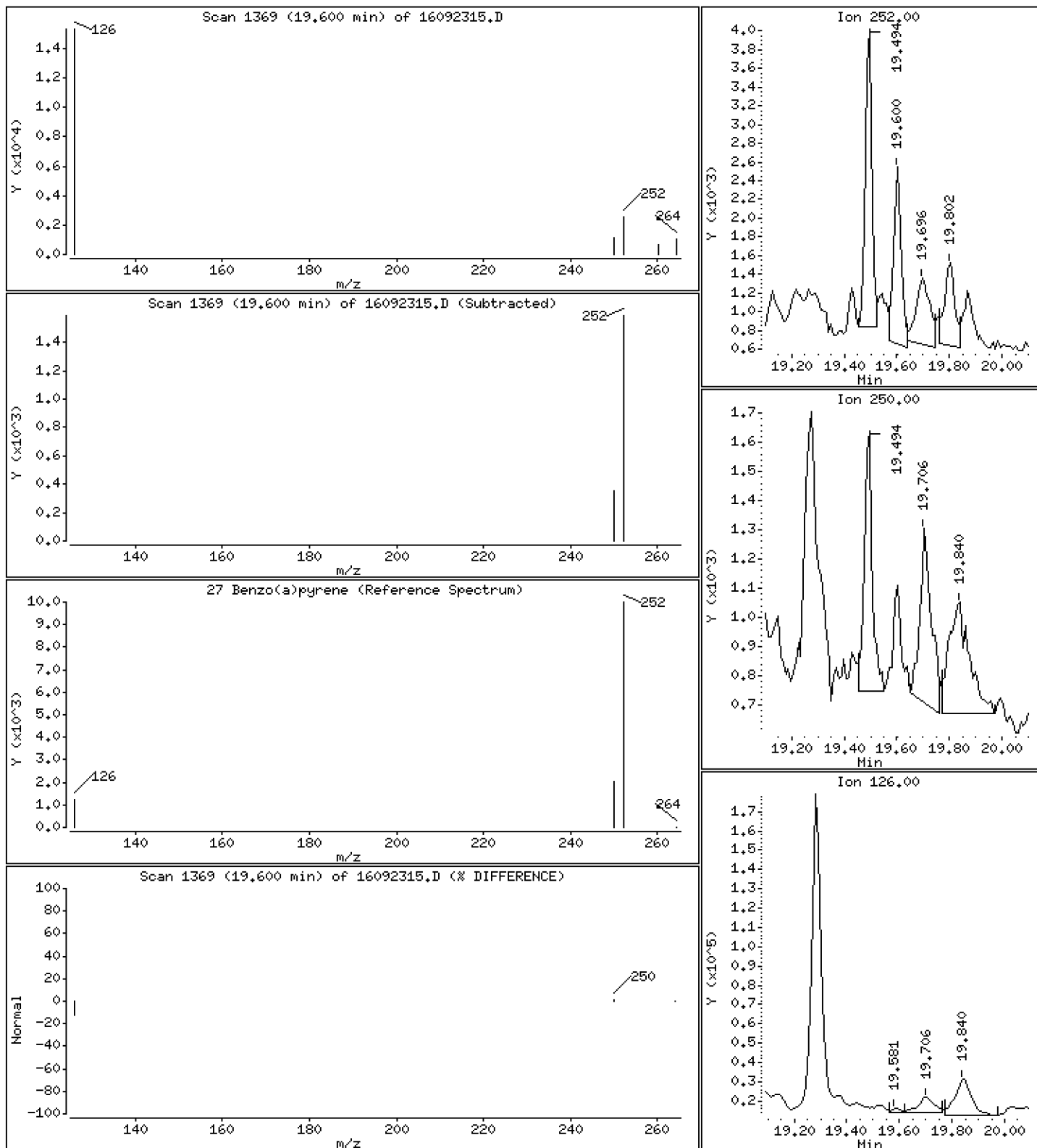
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 1,65 ng/mL



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

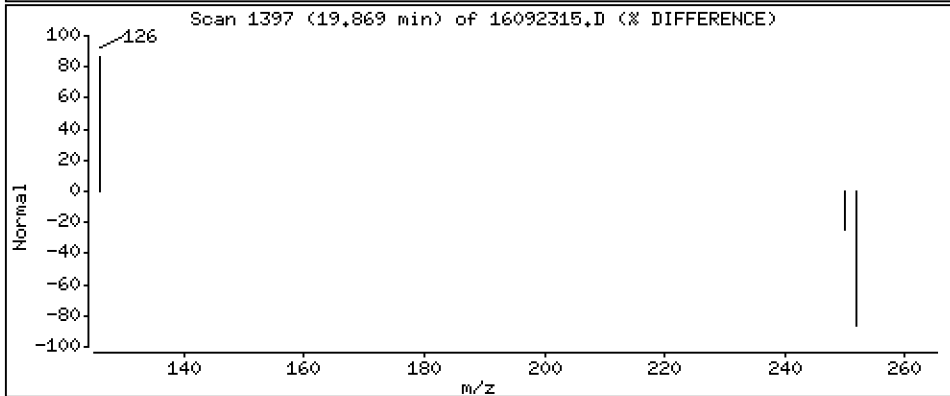
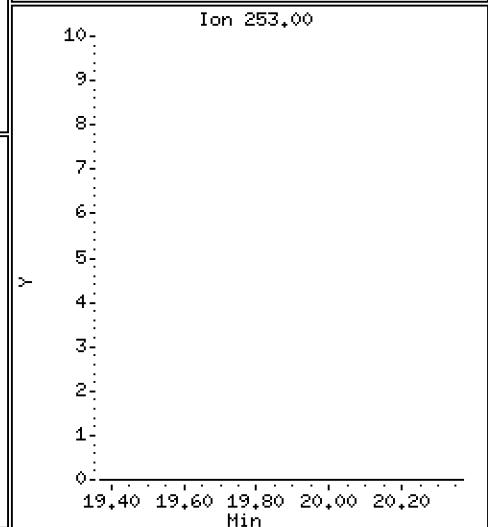
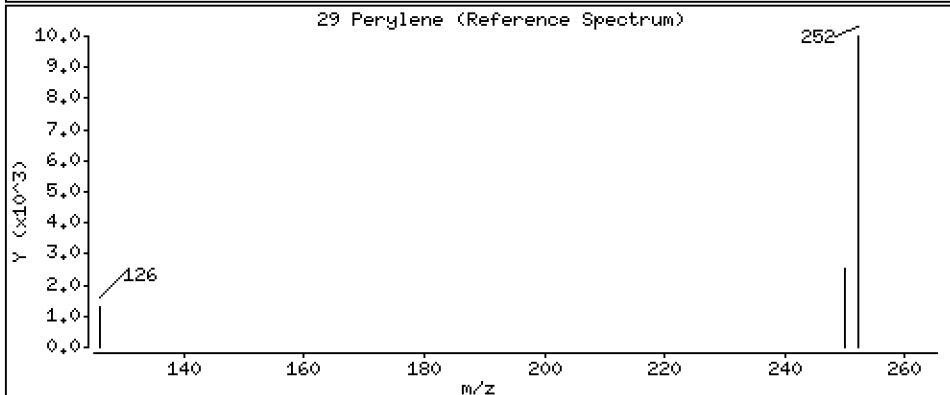
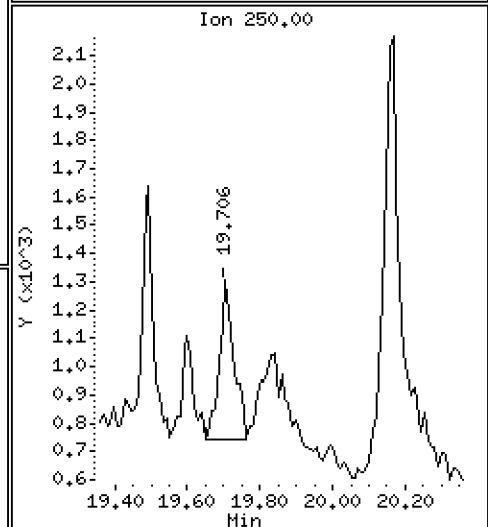
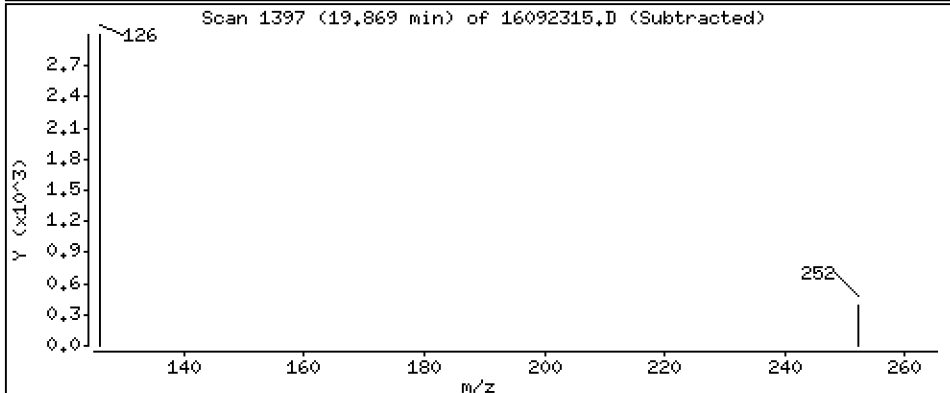
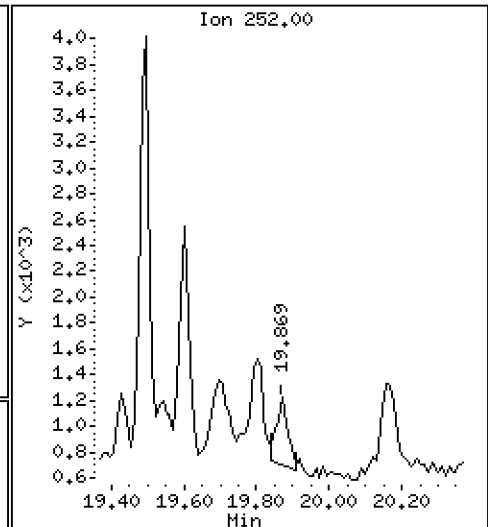
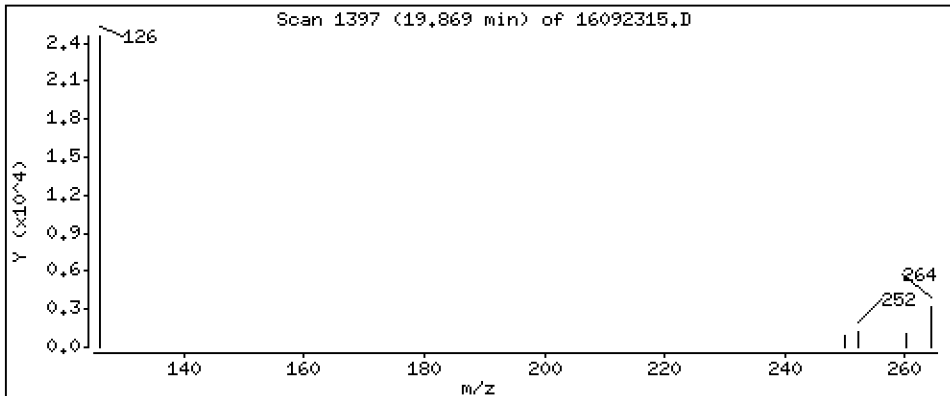
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 0,472 ng/mL

29 Perylene



Date : 23-SEP-2016 15:02

Client ID:

Instrument: nt11.i

Sample Info: 16I0160-14

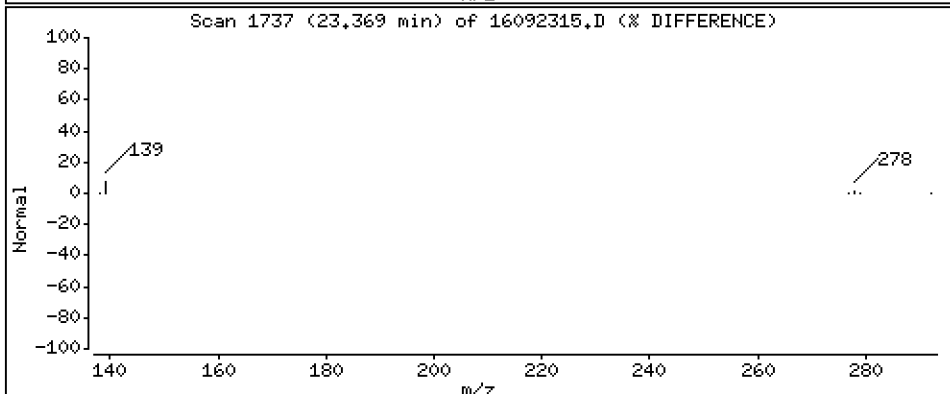
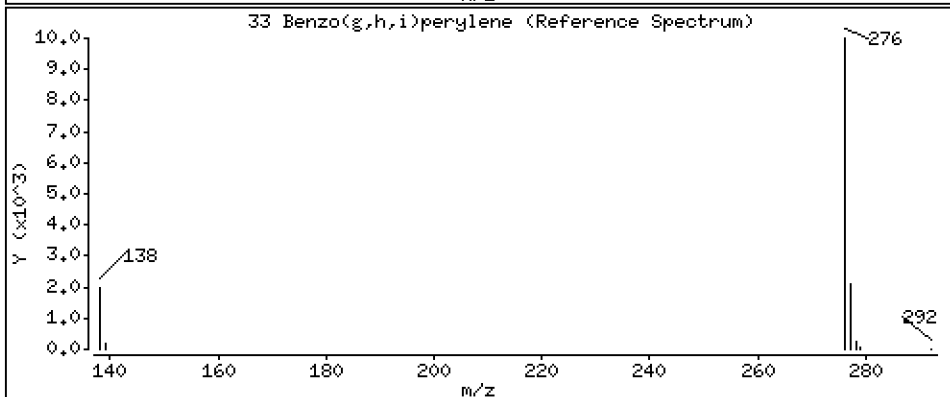
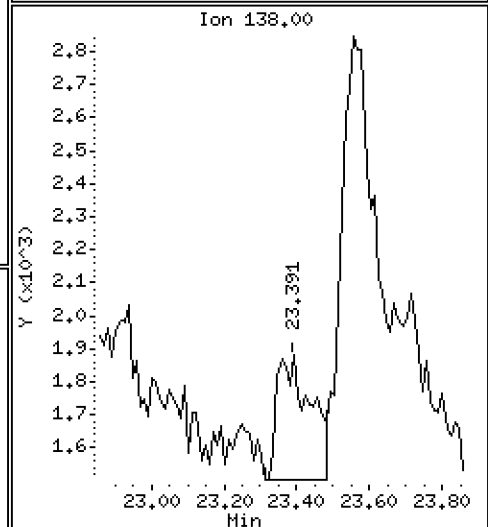
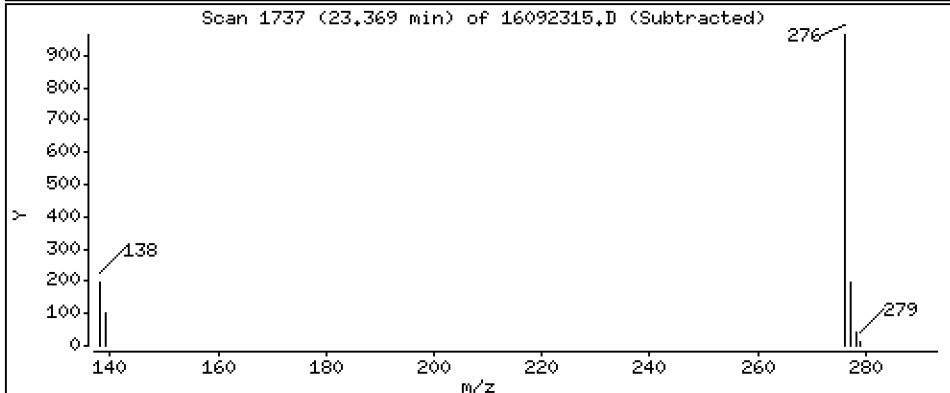
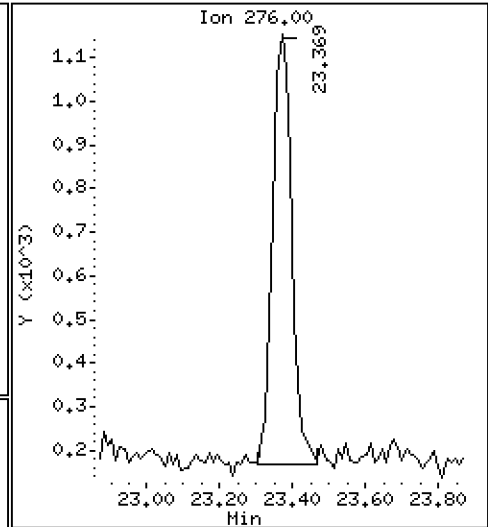
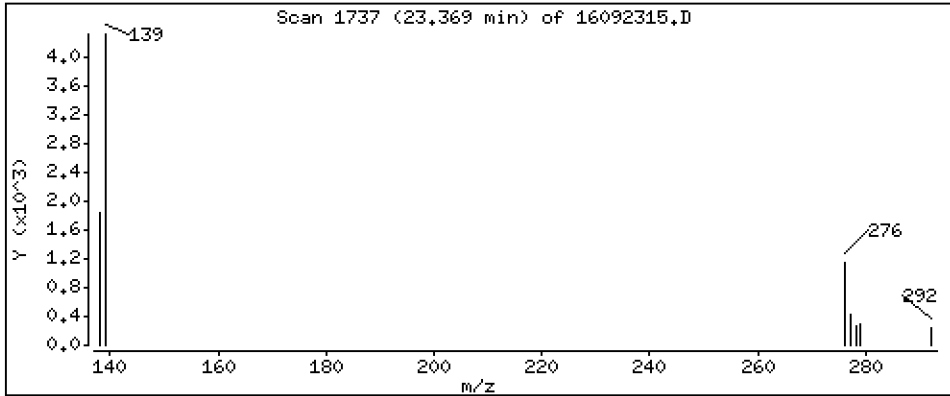
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

33 Benzo(g,h,i)perylene

Concentration: 1.48 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092315.D

Lab Smp Id: 16I0160-14

Inj Date : 23-SEP-2016 15:02

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0160-14

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 18

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	525727	200.000	
2 Naphthalene	128		6.613	6.623	(1.006)	385266	127.708	128
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	321233	192.472	192
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	234843	113.111	113
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	124330	65.7884	65.8
6 Acenaphthylene	152		9.429	9.440	(0.984)	20014	7.12679	7.13
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	302028	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	67368	36.0177	36.0
9 Dibenzofuran	168		9.849	9.860	(1.028)	63970	23.6002	23.6
§ 10 Fluorene-d10	174		10.422	10.432	(1.087)	160277	104.758	105
11 Fluorene	166		10.475	10.485	(1.093)	41644	19.2538	19.3
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	564762	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	107415	28.3131	28.3
§ 14 Anthracene-d10	188		12.320	12.330	(1.005)	305106	100.031	100
15 Anthracene	178		12.359	12.358	(1.008)	13753	3.71613	3.72 (M)
§ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	663504	241.669	242
17 Fluoranthene	202		14.395	14.395	(1.174)	55395	16.4912	16.5
18 Pyrene	202		14.885	14.885	(0.876)	50300	15.0523	15.1
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	7744	2.76595	2.77
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	431331	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	13701	4.65866	4.66
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	7868	2.92154	2.92
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	3086	1.02864	1.03 (M)
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	3666	1.39284	1.39
§ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	324311	125.392	125
26 Benzo(e)pyrene	252		19.494	19.484	(0.984)	5619	2.17378	2.17 (M)
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	4077	1.65331	1.65
* 28 Perylene-d12	264		19.801	19.801	(1.000)	504710	200.000	
29 Perylene	252		19.869	19.868	(1.003)	1193	0.47242	0.472 (M)
§ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	335361	202.148	202
31 Dibenzo(a,h)anthracene	278					Compound Not Detected.		
32 Indeno(1,2,3-cd)pyrene	276					Compound Not Detected.		
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	3488	1.47759	1.48

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092315.D
 Lab Smp Id: 16I0160-14
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	525727	-0.31
7 Acenaphthene-d10	297518	148759	595036	302028	1.52
12 Phenanthrene-d10	522042	261021	1044084	564762	8.18
20 Chrysene-d12	389499	194750	778998	431331	10.74
28 Perylene-d12	430626	215313	861252	504710	17.20

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092315.D

Lab ID: 16I0160-14

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 15:02

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

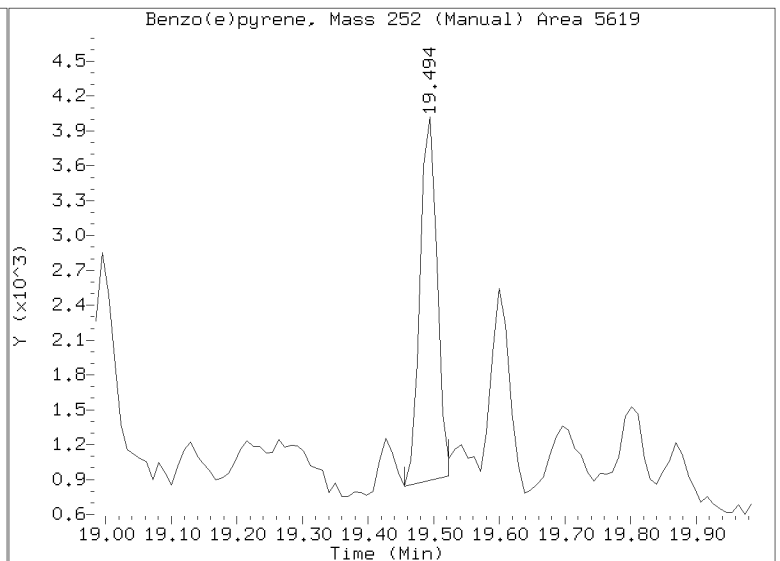
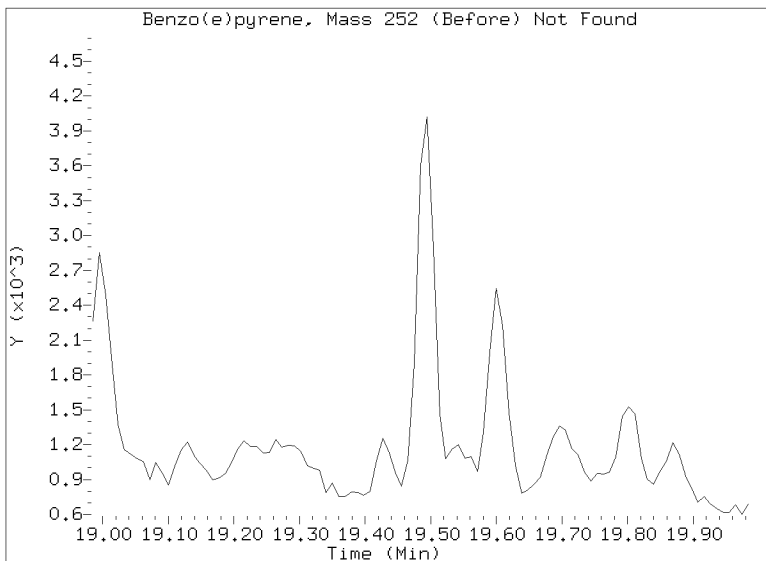
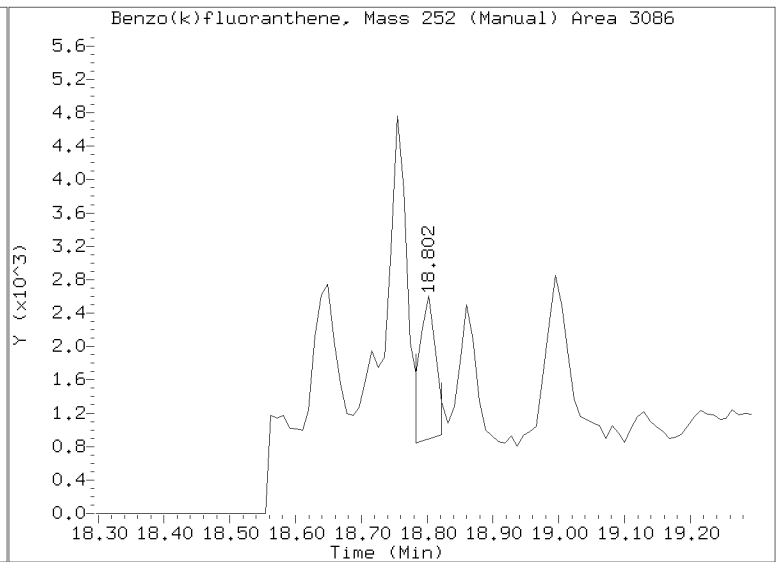
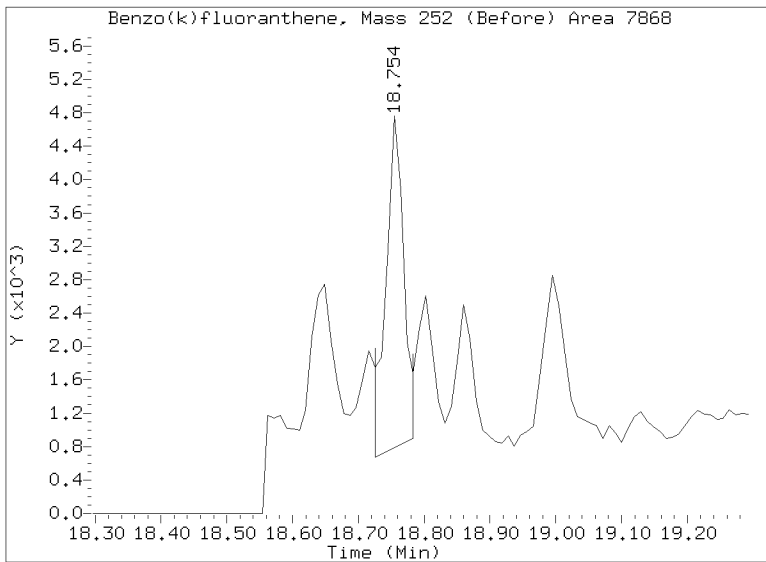
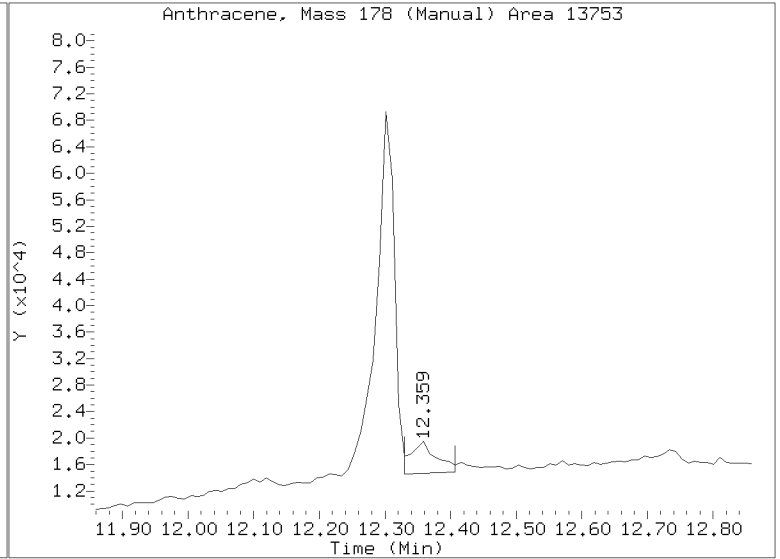
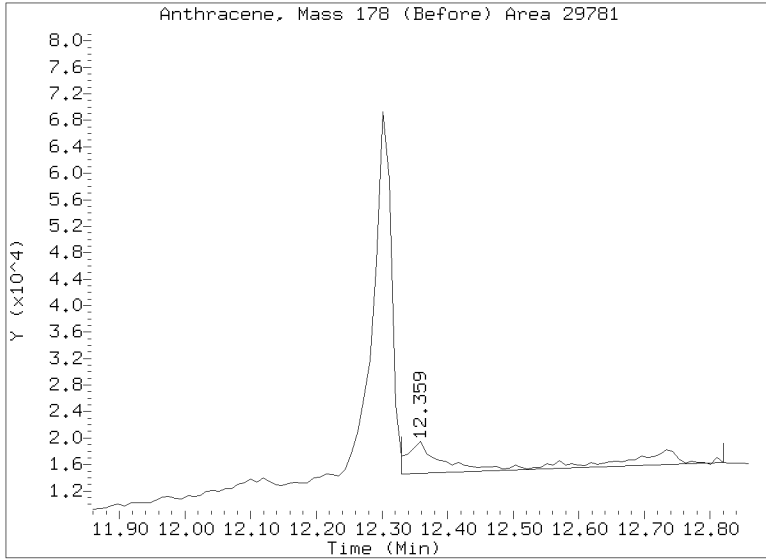
RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

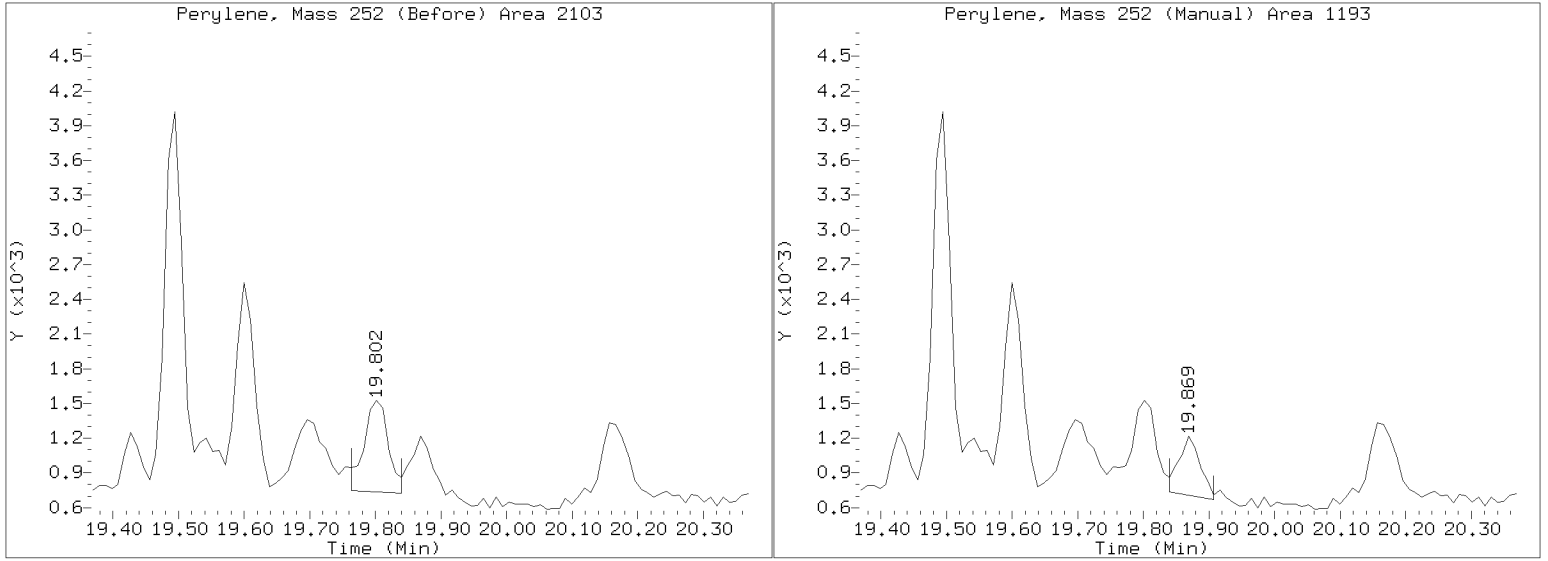
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092315.D
Injection Date: 23-SEP-2016 15:02
Lab ID:16I0160-14 Client ID:
Report Date: 09/26/2016 07:54



Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092315.D
Injection Date: 23-SEP-2016 15:02
Lab ID:16I0160-14 Client ID:
Report Date: 09/26/2016 07:54



Form I
METHOD BLANK DATA SHEET
EPA 8270D-SIM

Blank

Laboratory: <u>Analytical Resources, Inc.</u>	SDG: <u>16I0160</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>Port Gamble Shellfish Monitoring</u>
Matrix: <u>Tissue</u>	Laboratory ID: <u>BEI0260-BLK1</u>
Sampled: <u>N/A</u>	File ID: <u>16092305.D</u>
Solids:	Prepared: <u>09/10/16 11:10</u>
Batch: <u>BEI0260</u>	Analyzed: <u>09/23/16 10:00</u>
Instrument: <u>NT11</u>	Preparation: <u>EPA 3550C (Ultrasonic)</u>
	Initial/Final: <u>0.886 g / 0.1 mL</u>
	Sequence: <u>SEI0321</u>
	Calibration: <u>ZI00066</u>
	Column: <u>RXi-17Sil-MS</u>

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	2.20		1.13	1.35
91-57-6	2-Methylnaphthalene	1	1.13		1.13	1.13
208-96-8	Acenaphthylene	1	1.13	U	1.13	1.13
83-32-9	Acenaphthene	1	1.13	U	1.13	1.13
86-73-7	Fluorene	1	1.13	U	1.13	1.13
85-01-8	Phenanthrene	1	1.13	U	1.13	1.13
120-12-7	Anthracene	1	1.13	U	1.13	1.13
206-44-0	Fluoranthene	1	1.13	U	1.13	1.13
129-00-0	Pyrene	1	1.13	U	1.13	1.13
56-55-3	Benzo(a)anthracene	1	1.13	U	1.13	1.13
218-01-9	Chrysene	1	1.13	U	1.13	1.13
205-99-2	Benzo(b)fluoranthene	1	1.13	U	1.13	1.13
207-08-9	Benzo(k)fluoranthene	1	1.13	U	1.13	1.13
50-32-8	Benzo(a)pyrene	1	1.13	U	1.13	1.13
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.13	U	1.13	1.13
53-70-3	Dibenzo(a,h)anthracene	1	1.13	U	1.13	1.13
191-24-2	Benzo(g,h,i)perylene	1	1.13	U	1.13	1.13
1985-5-0	Perylene	1	1.13	U	1.13	1.13
197-97-2	Benzo(e)pyrene	1	1.13	U	1.13	1.13
	Benzofluoranthenes, Total	1	2.26	U	2.26	2.26

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	33.860	13.2	39.0	30 - 160	
Dibenzo[a,h]anthracene-d14	33.860	15.2	45.0	30 - 160	
Fluoranthene-d10	33.860	16.6	49.0	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092305.D

Date : 23-SEP-2016 10:00

Client ID:

Sample Info: BE10260-BLK1

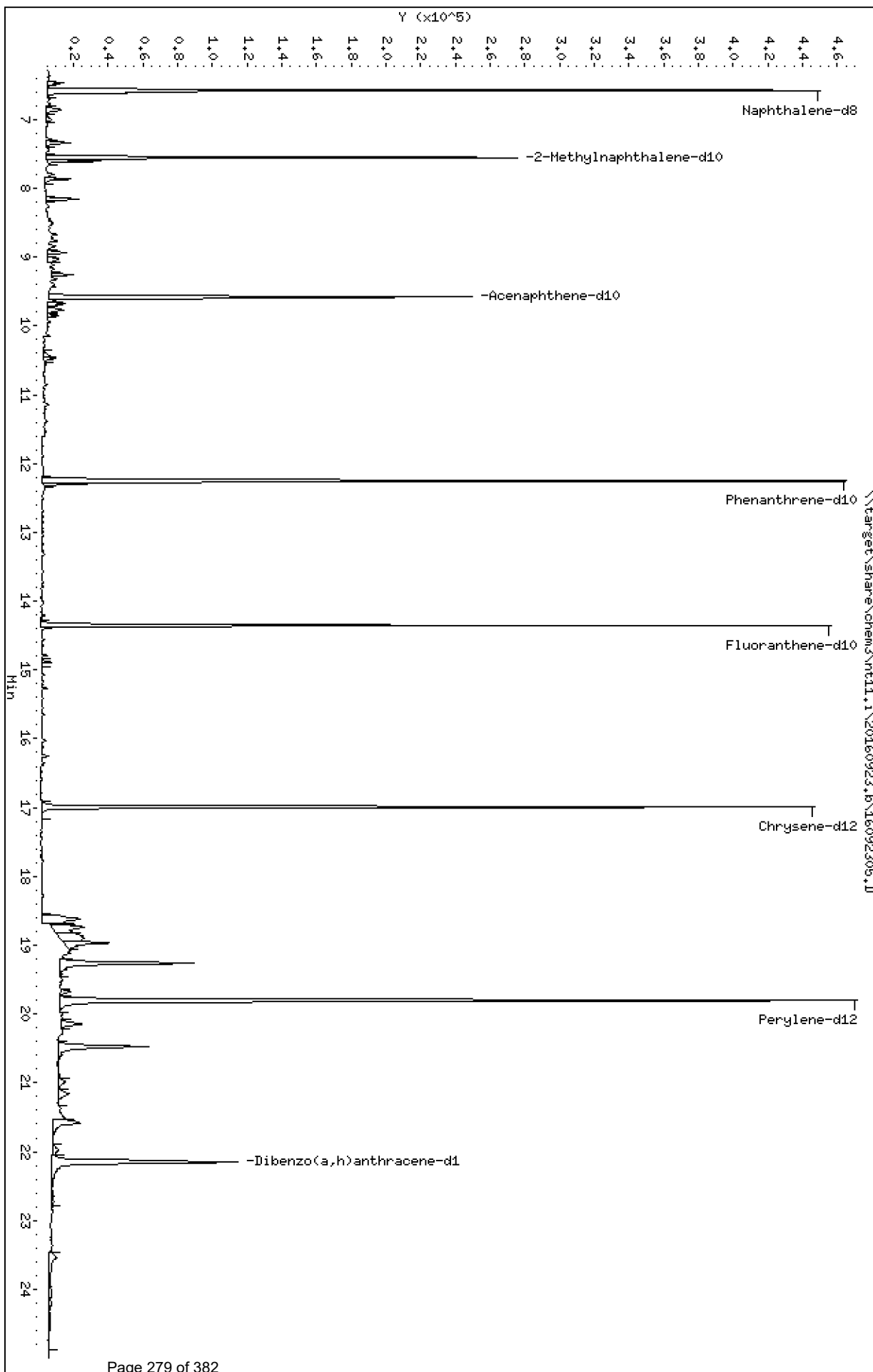
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

Page 1



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

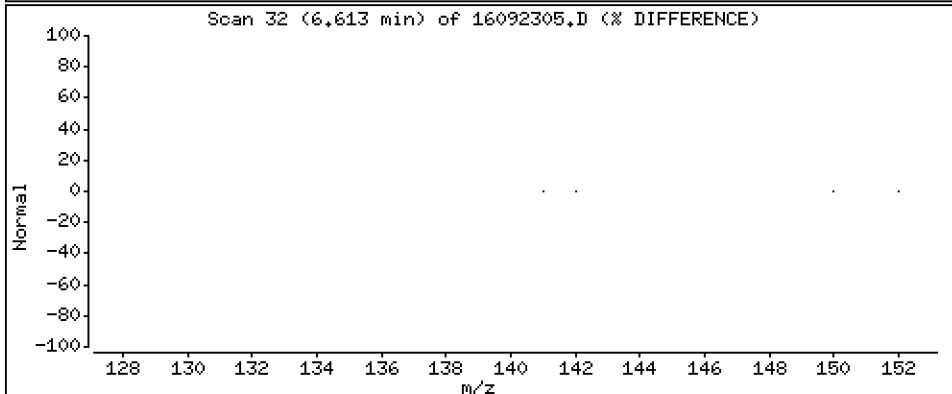
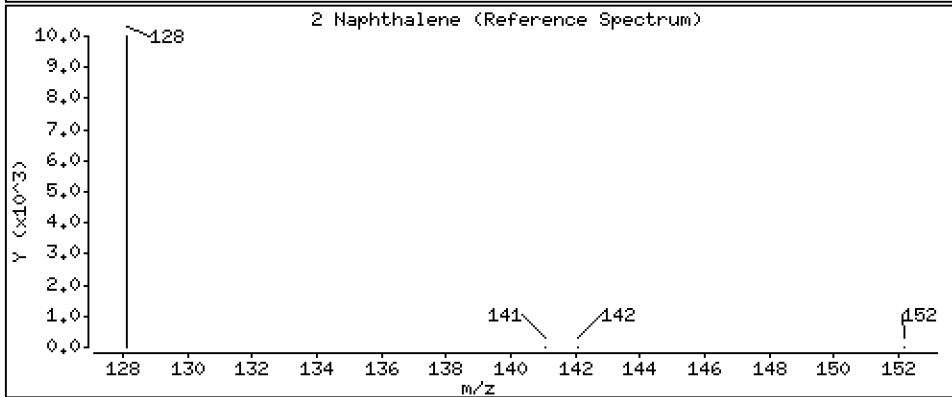
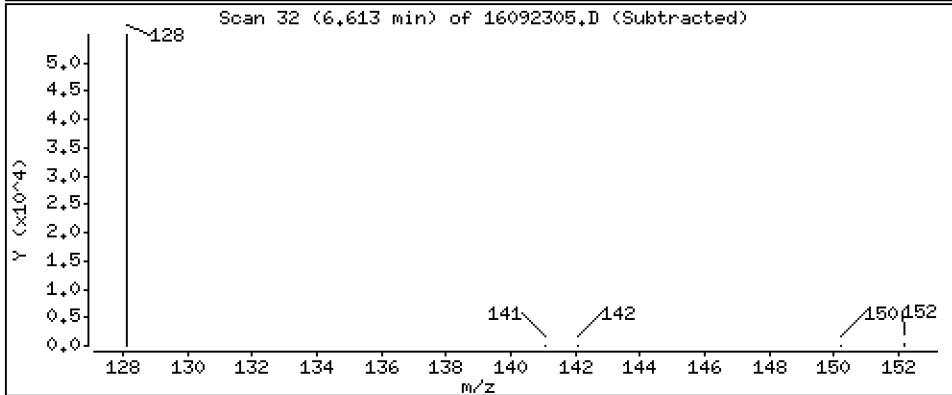
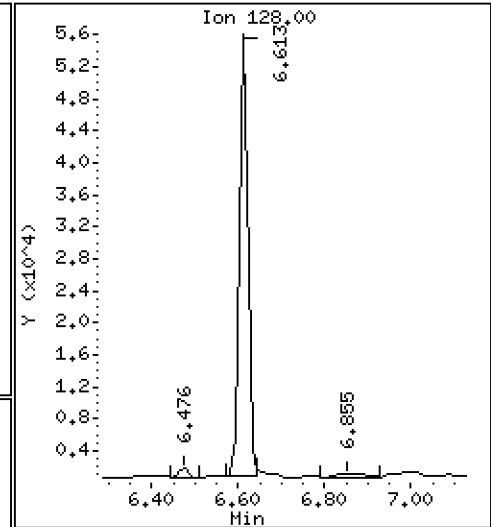
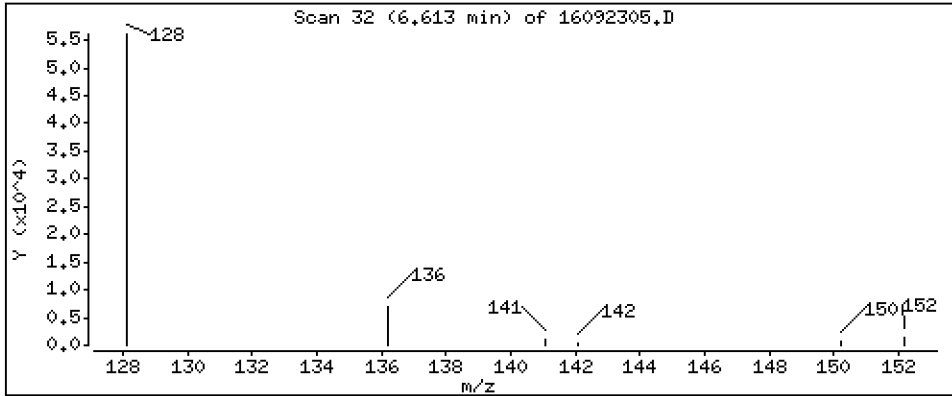
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 19,5 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

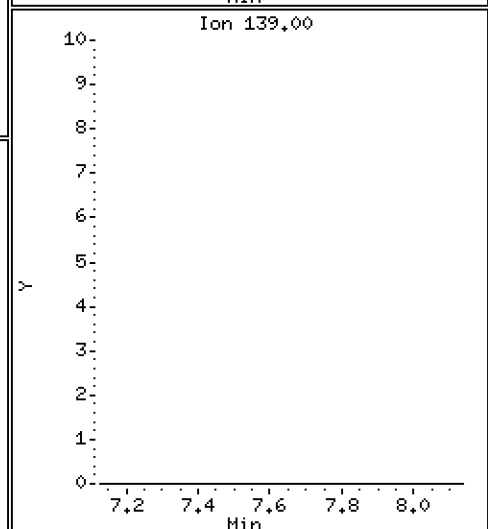
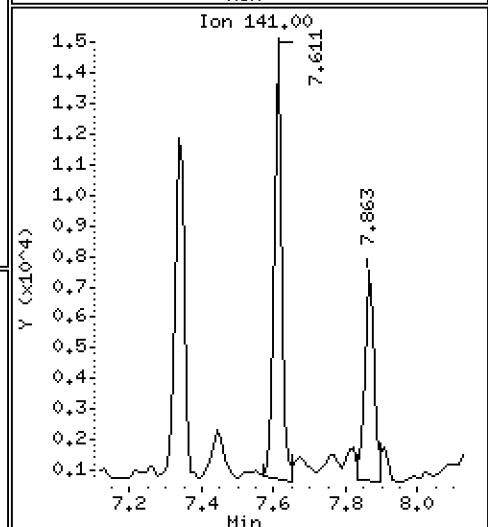
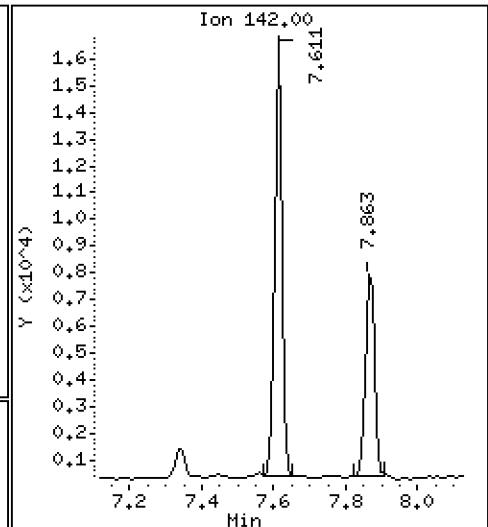
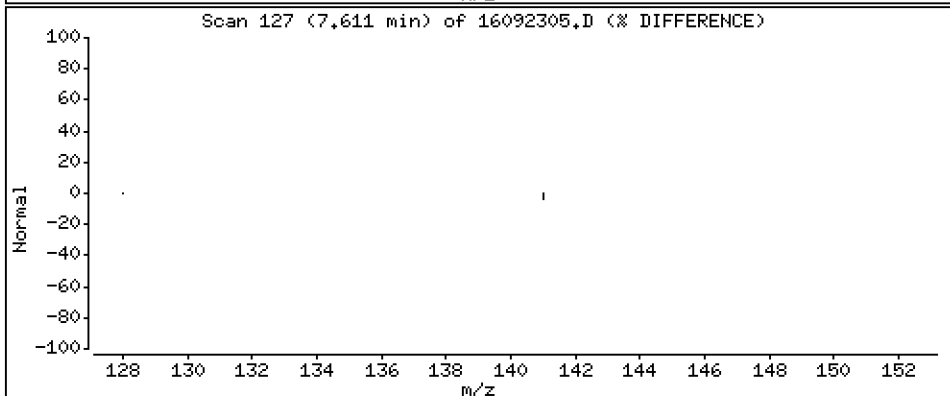
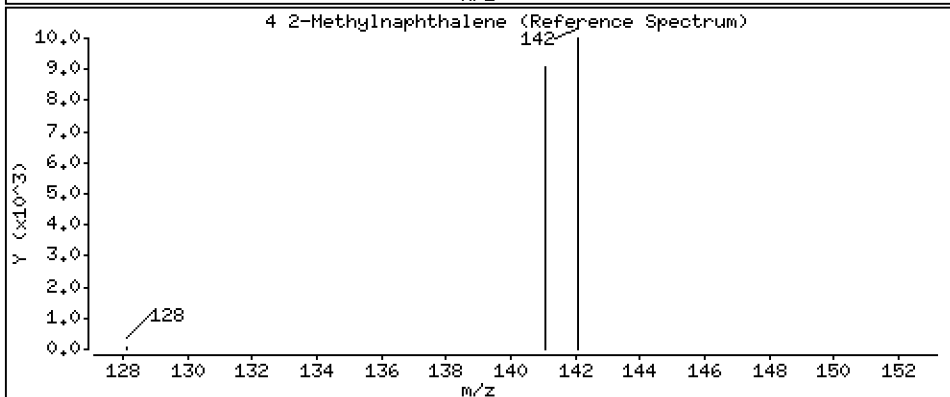
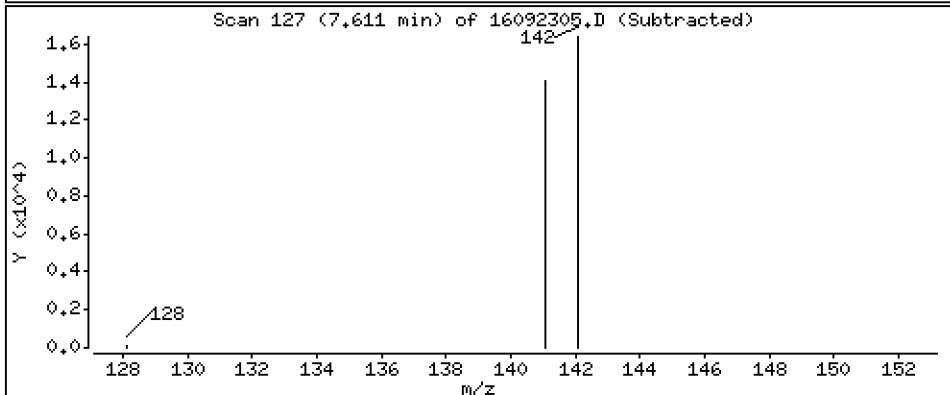
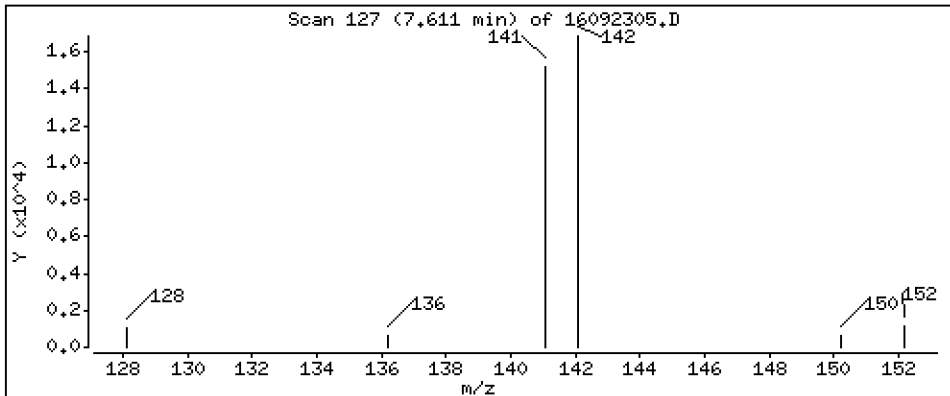
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4 2-Methylnaphthalene

Concentration: 10.0 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

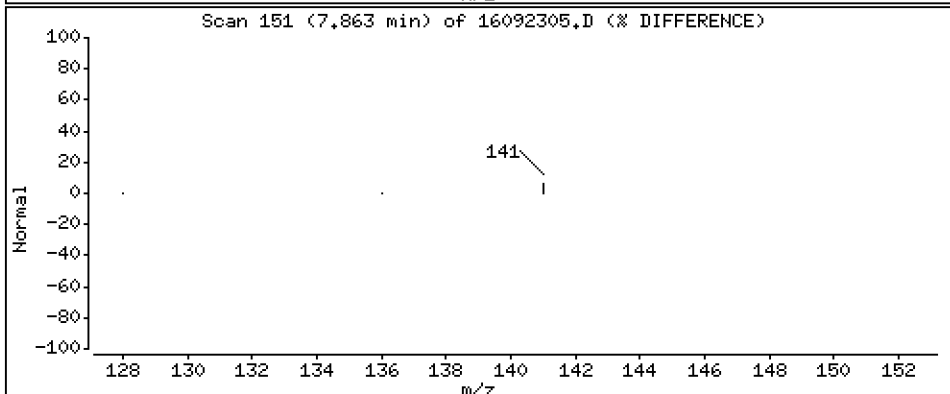
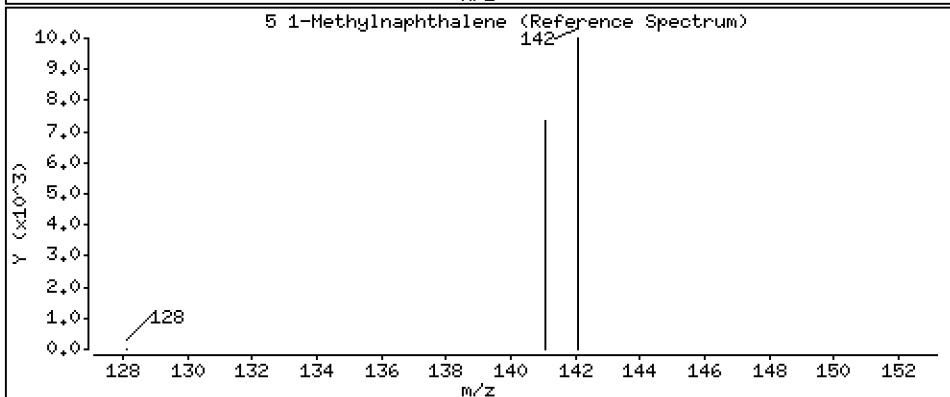
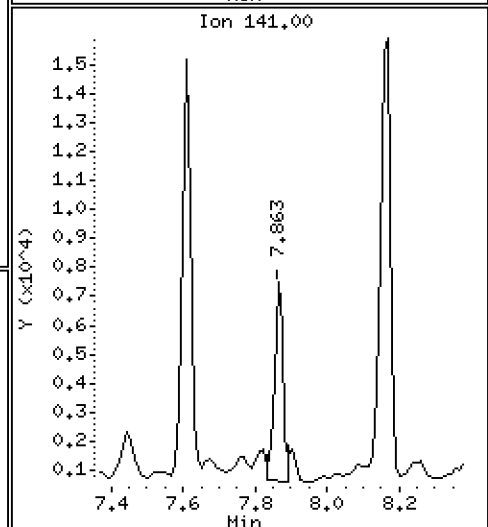
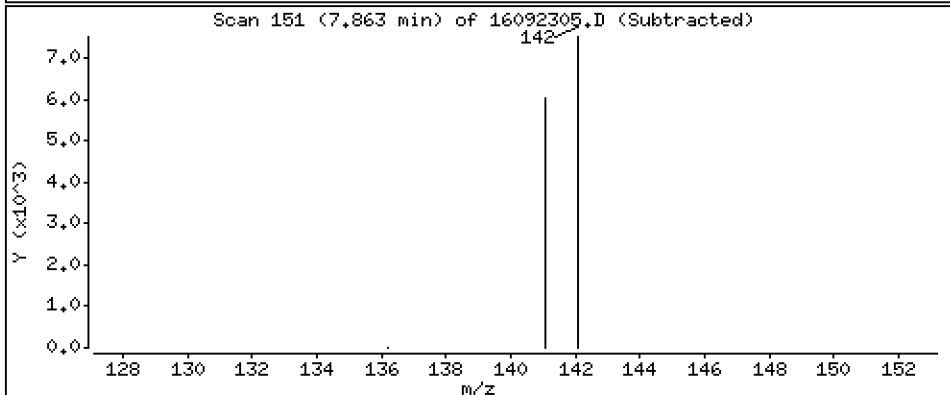
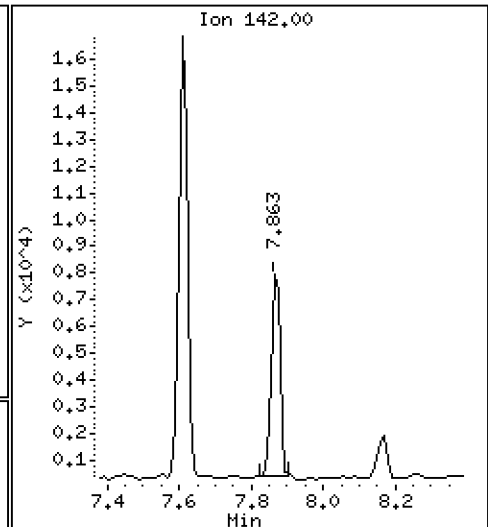
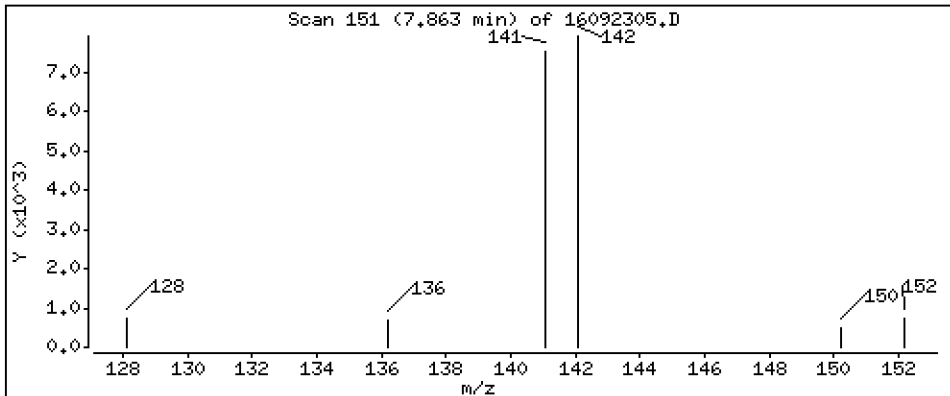
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

5 1-Methylnaphthalene

Concentration: 5.39 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

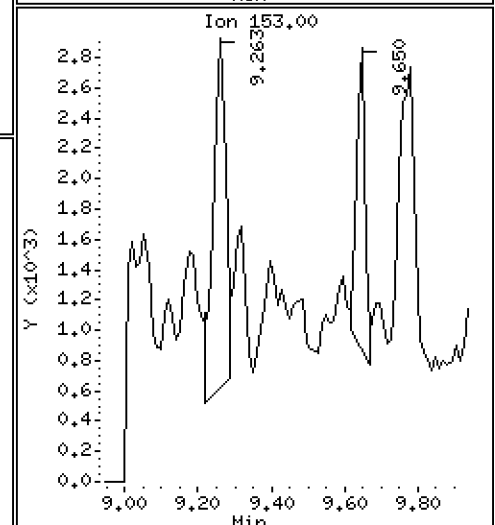
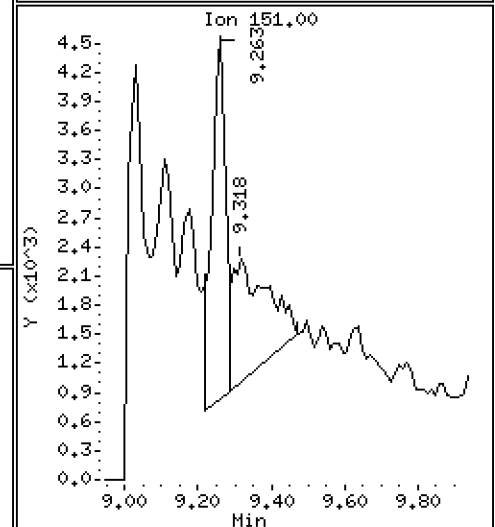
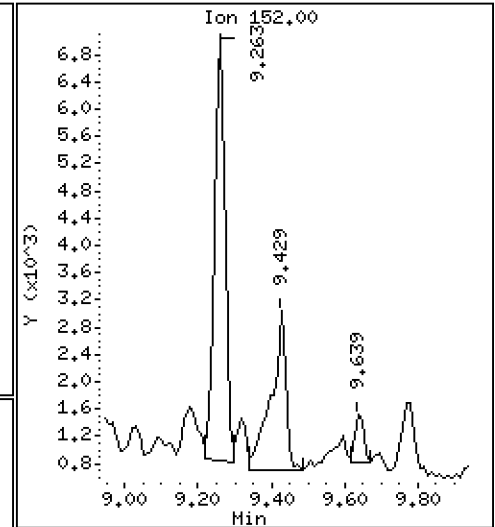
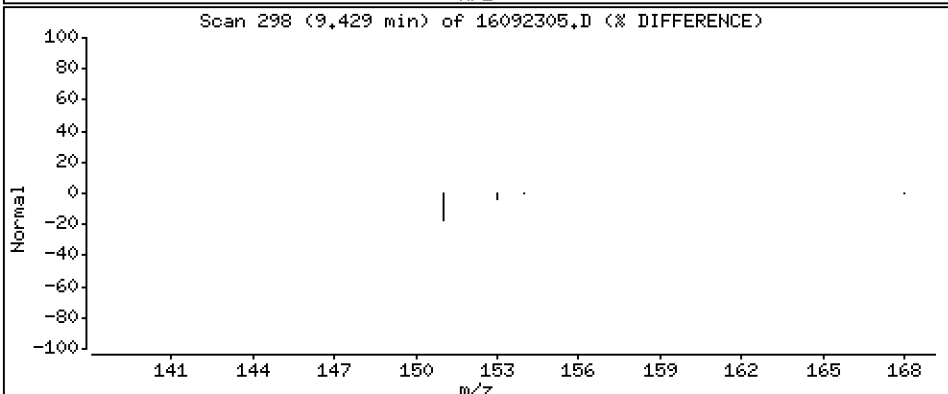
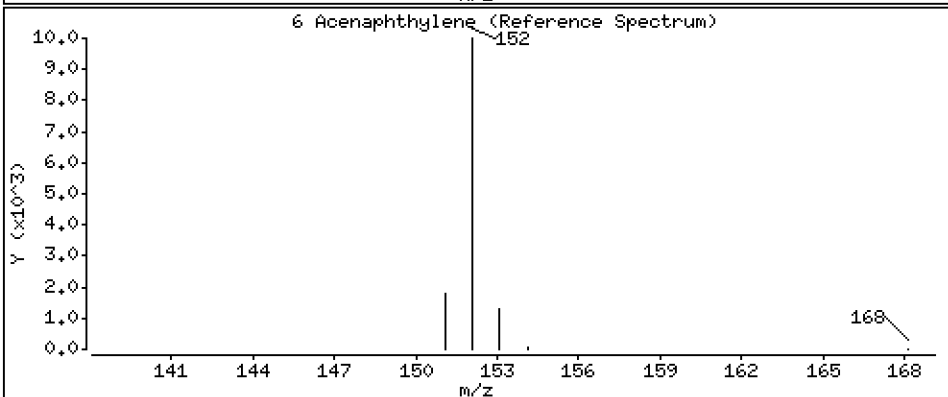
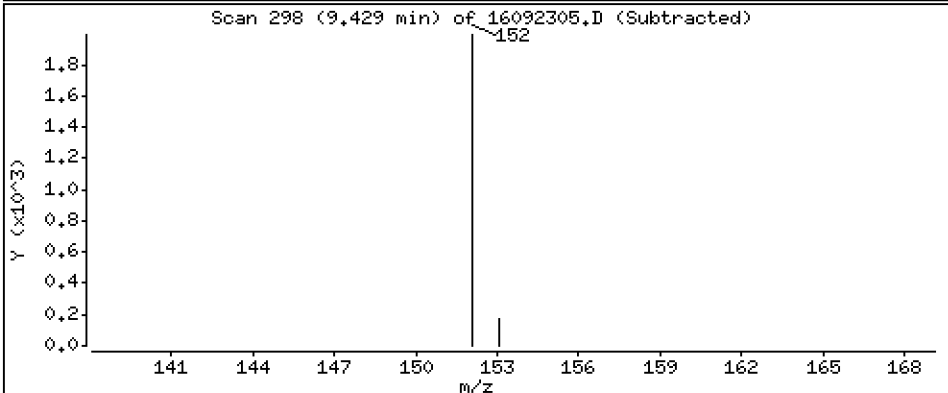
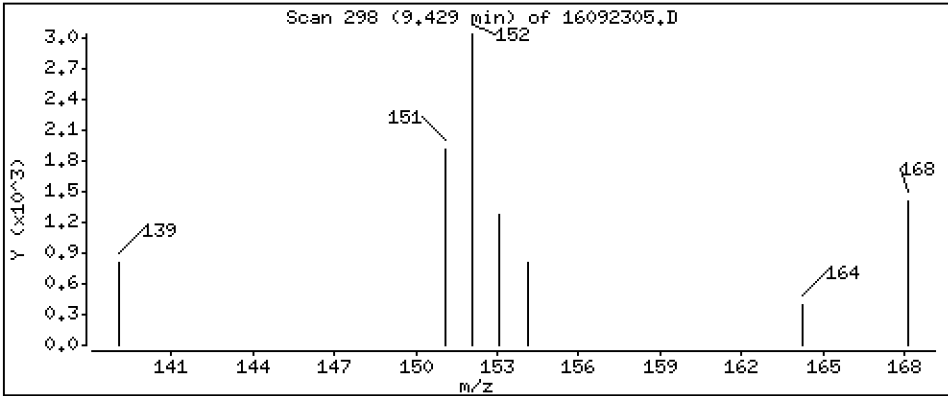
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 1.72 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

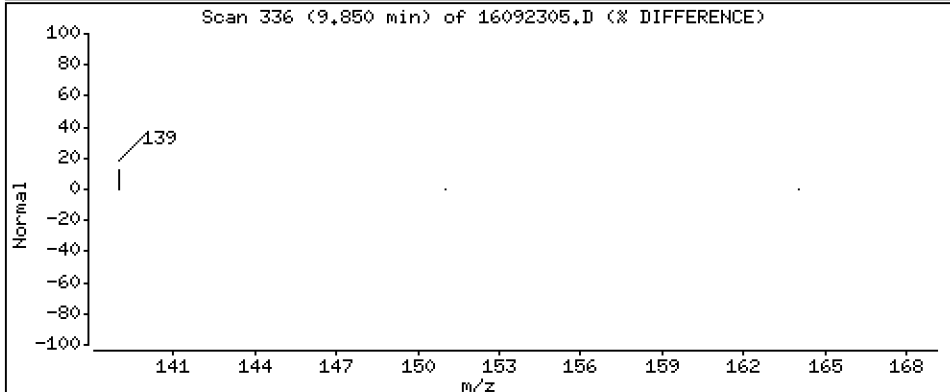
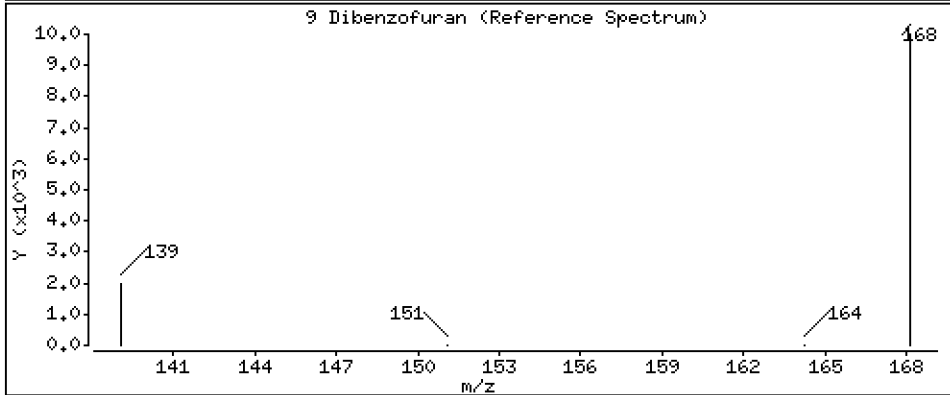
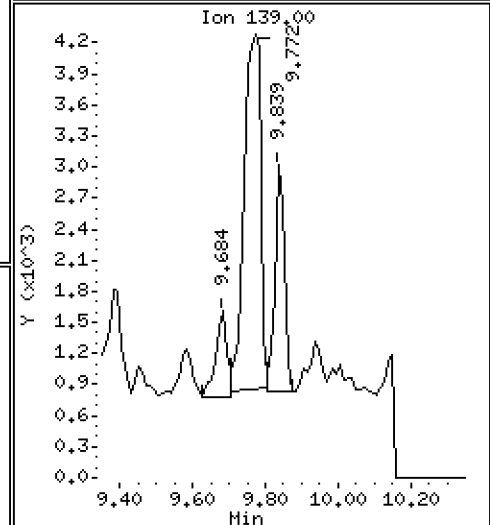
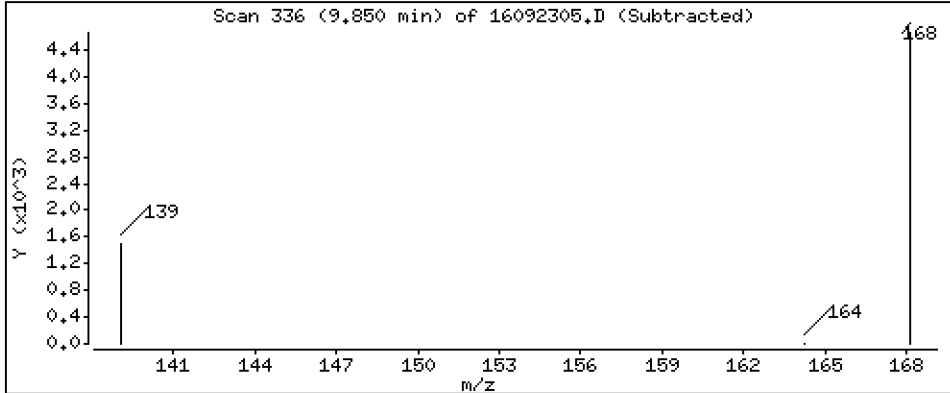
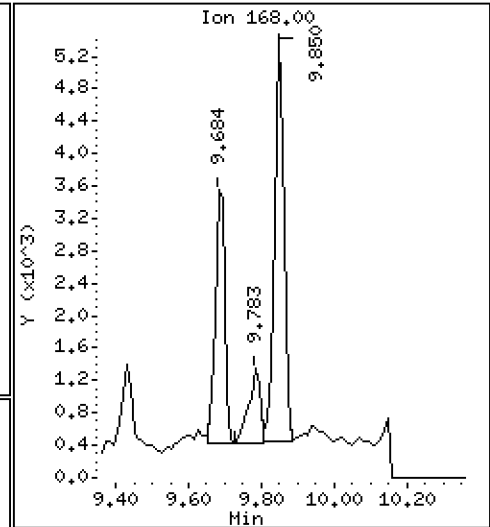
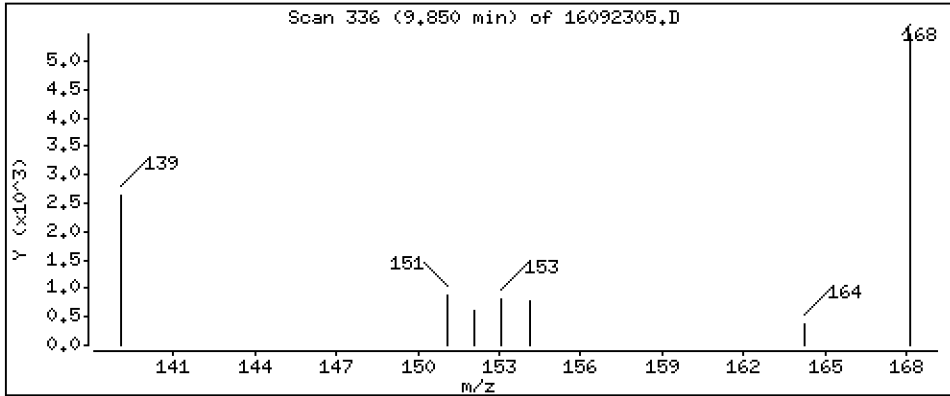
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

9 Dibenzofuran

Concentration: 2.31 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

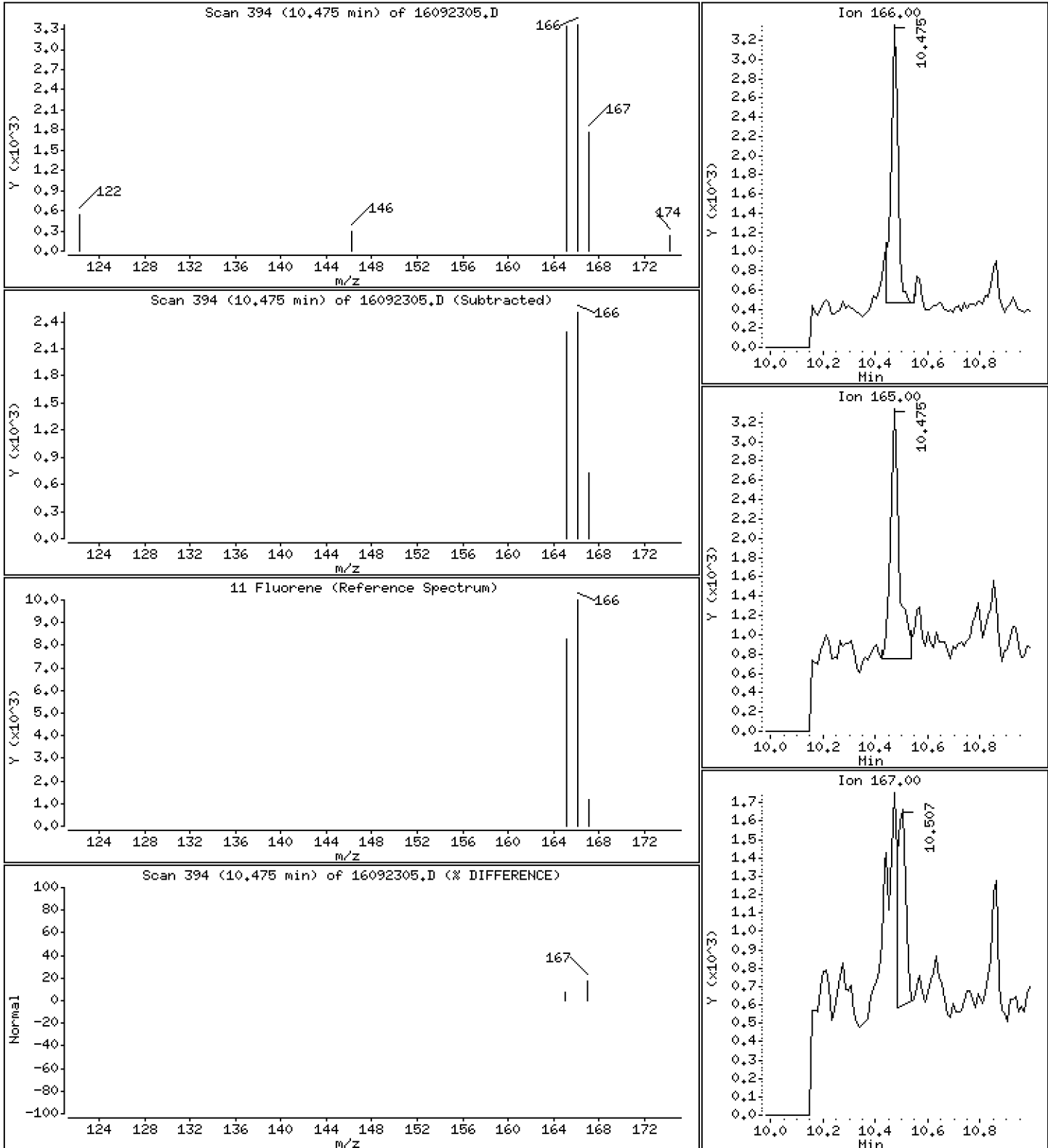
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

11 Fluorene

Concentration: 1.76 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

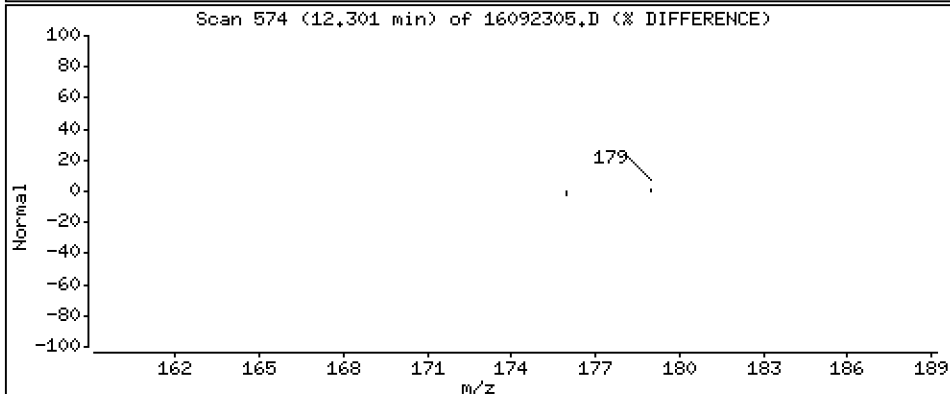
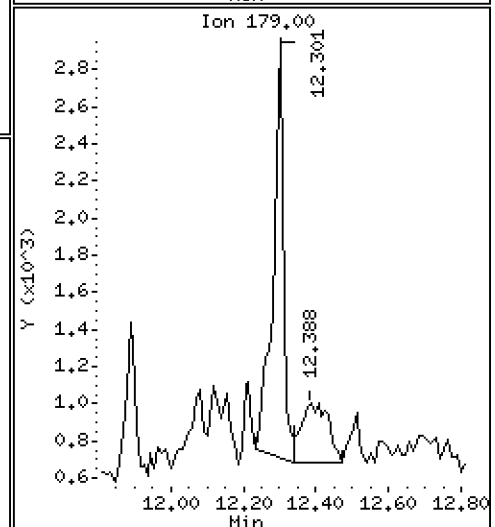
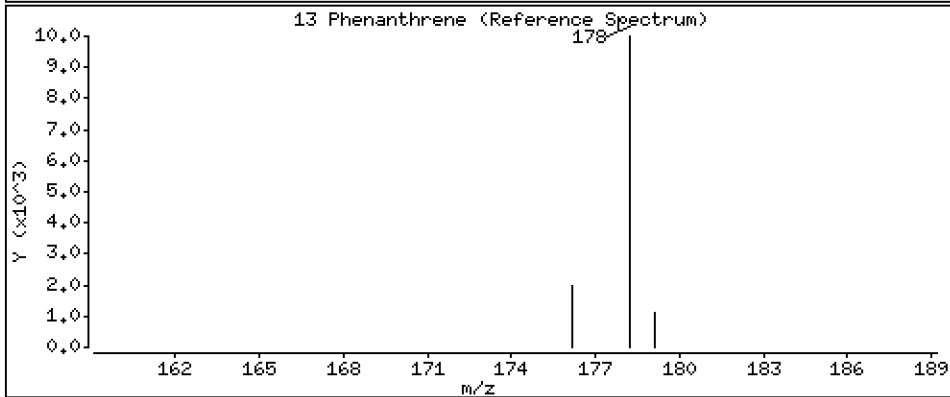
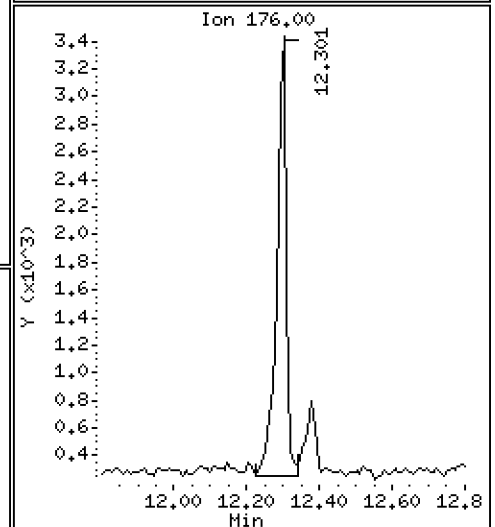
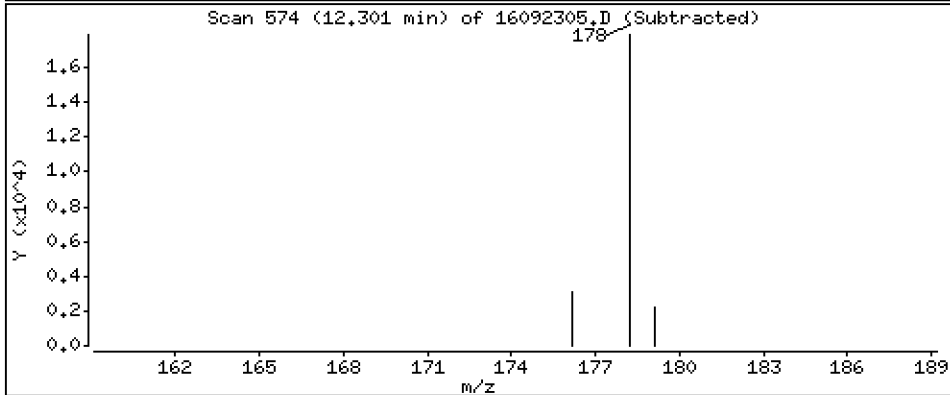
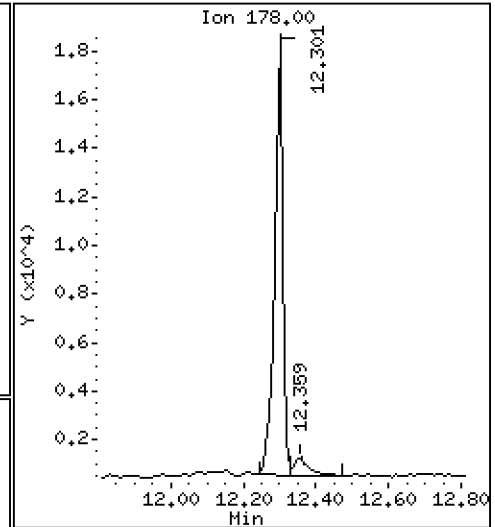
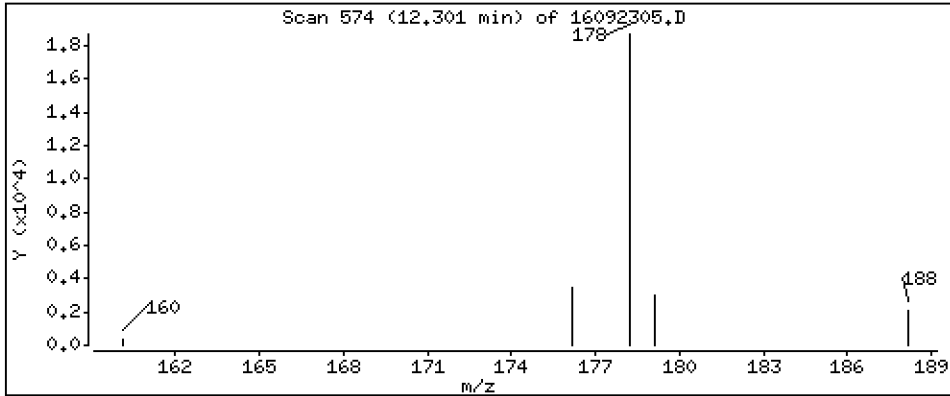
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

13 Phenanthrene

Concentration: 5.60 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

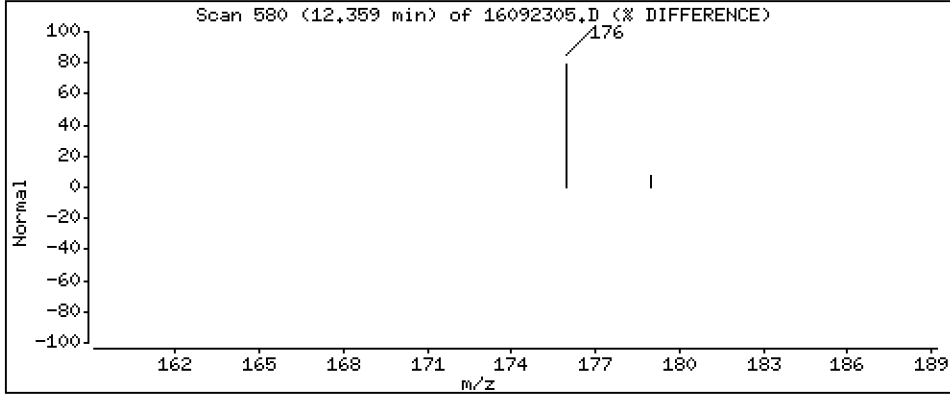
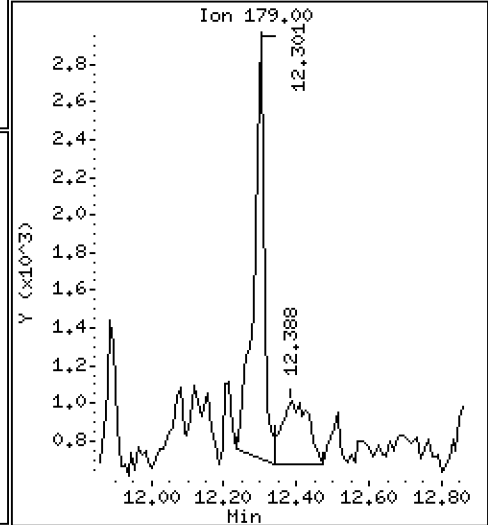
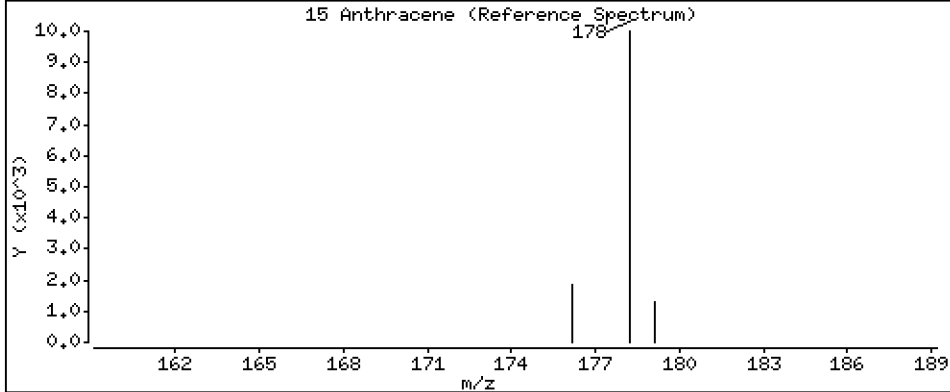
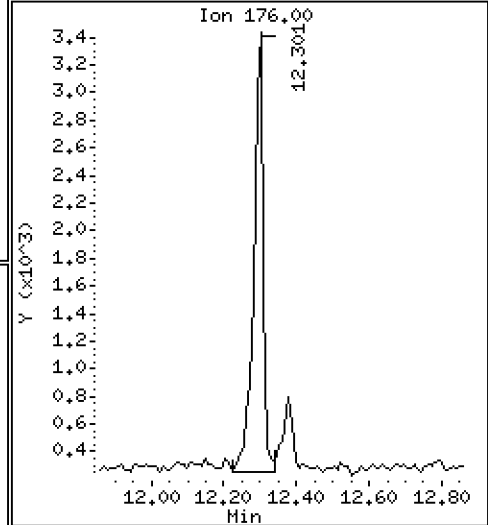
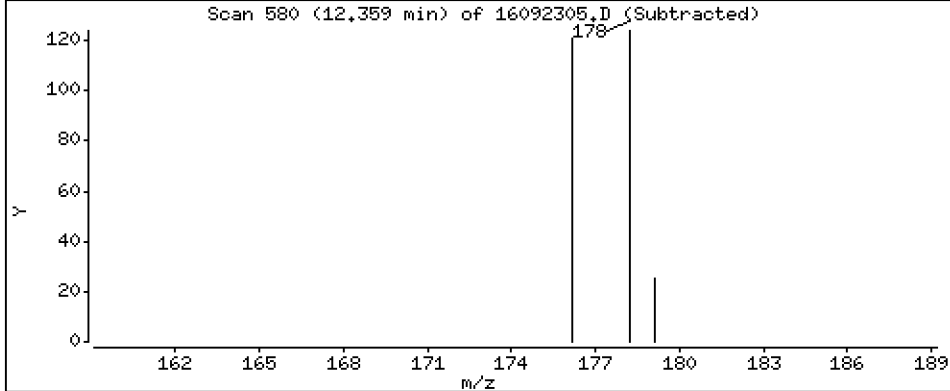
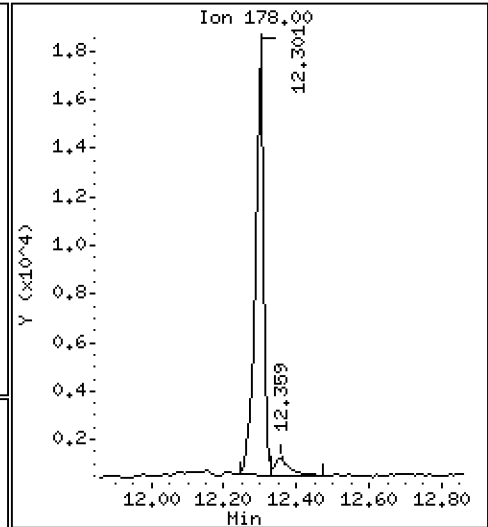
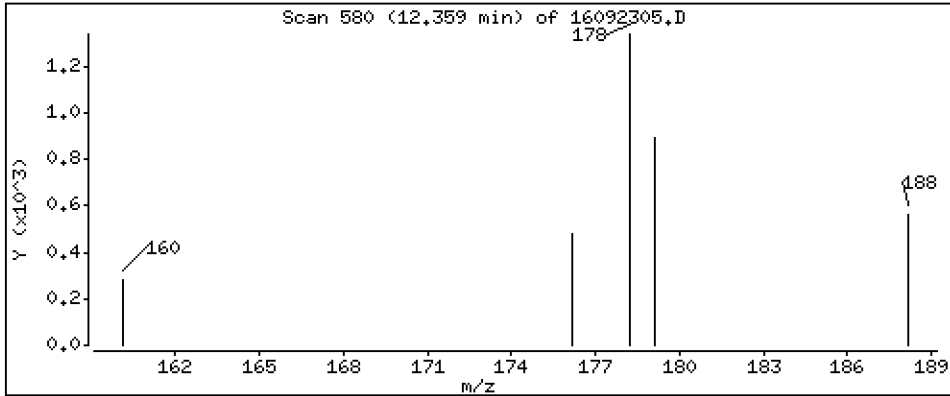
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 0.479 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

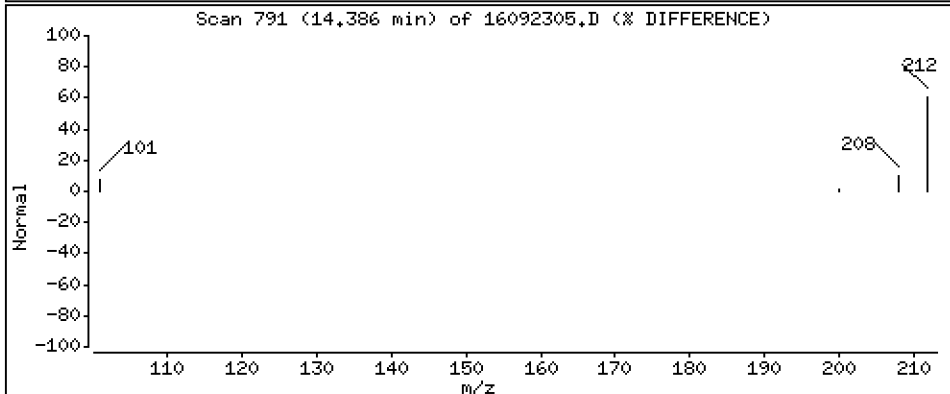
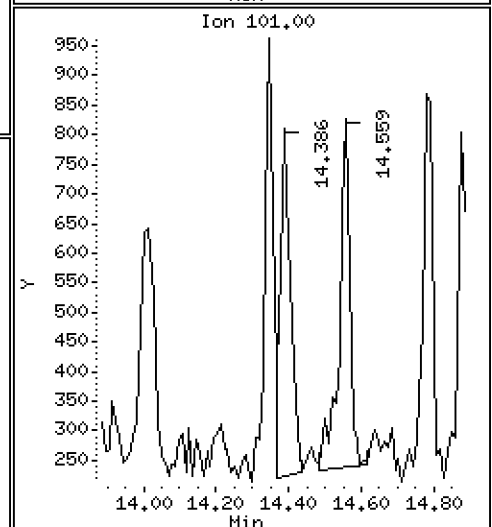
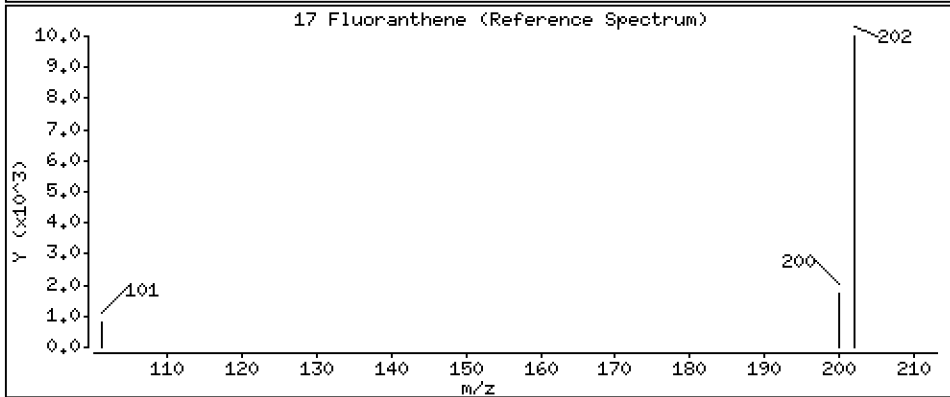
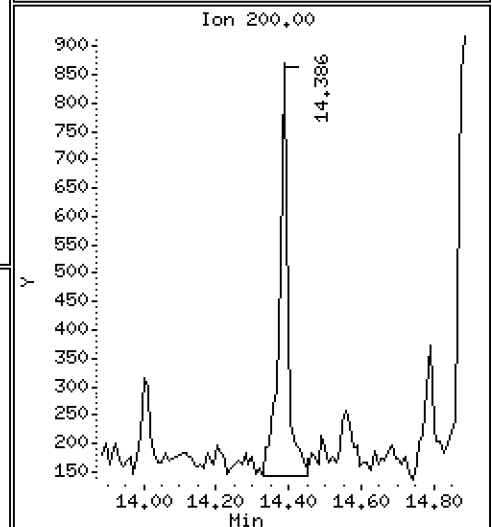
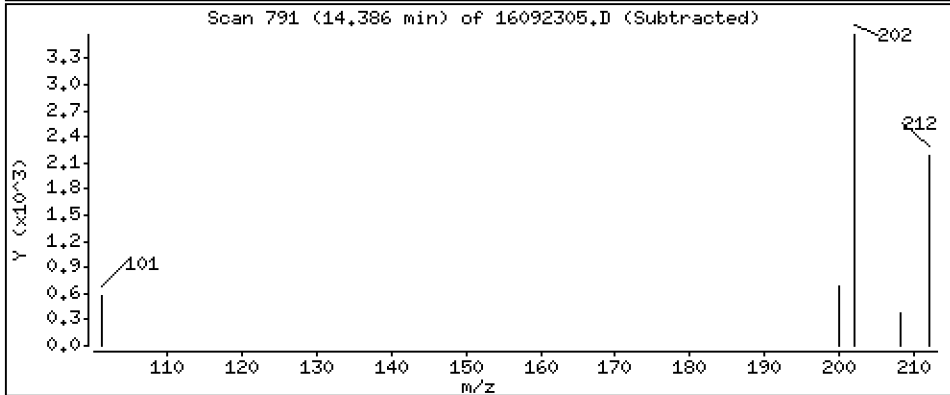
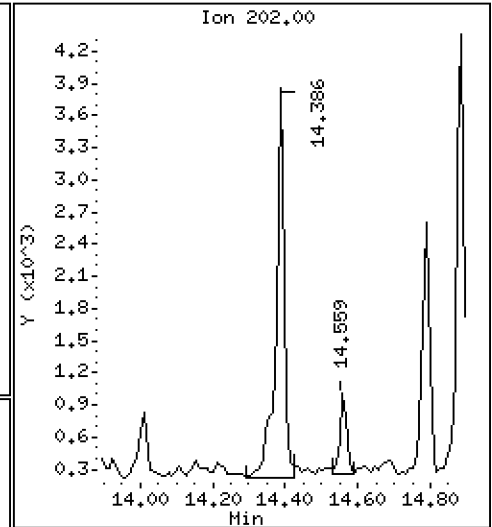
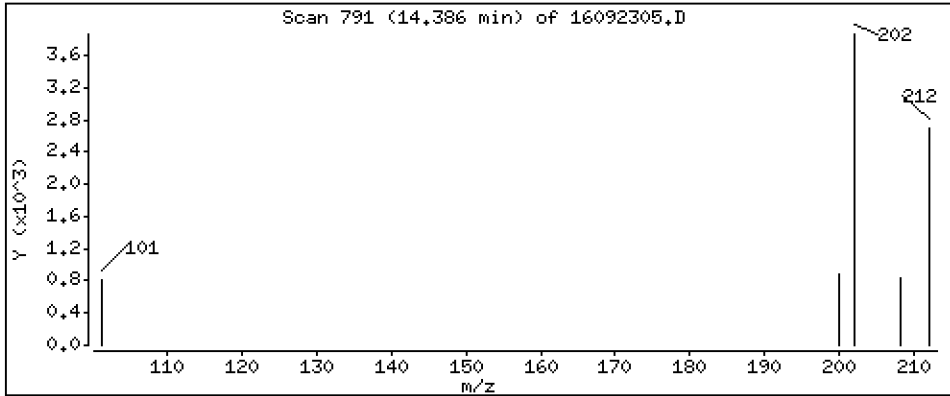
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

17 Fluoranthene

Concentration: 1.36 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

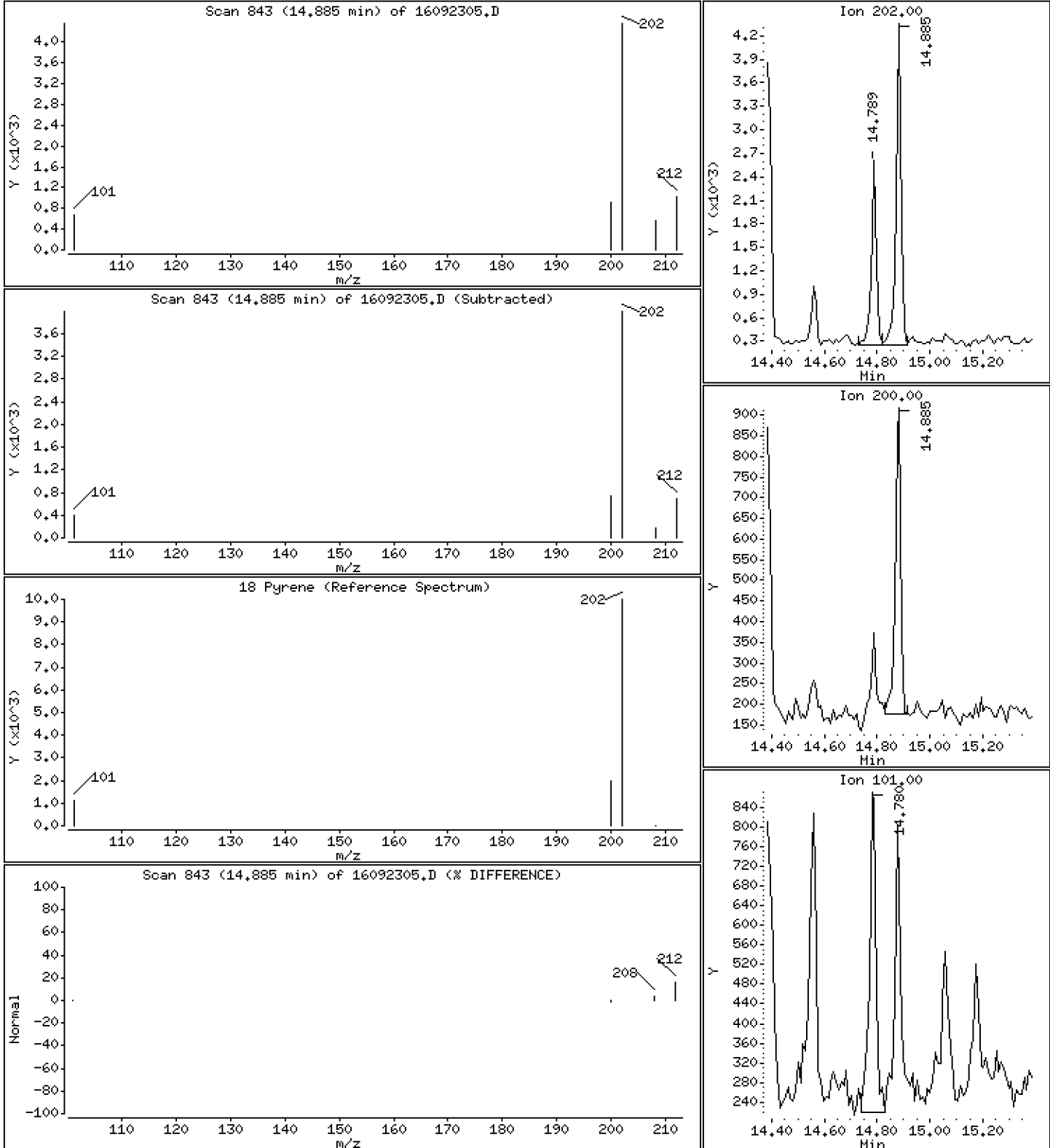
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

18 Pyrene

Concentration: 1.27 ng/mL



Date : 23-SEP-2016 10:00

Client ID:

Instrument: nt11.i

Sample Info: BEI0260-BLK1

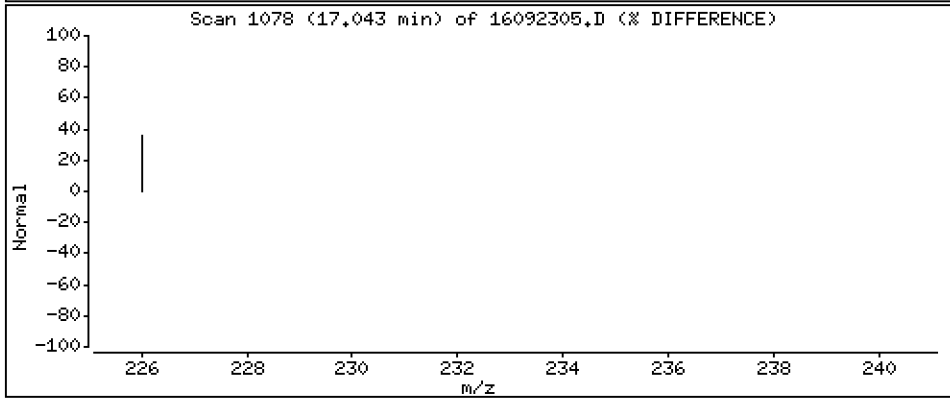
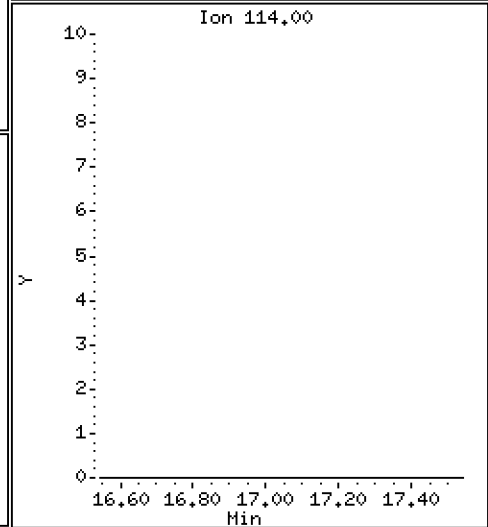
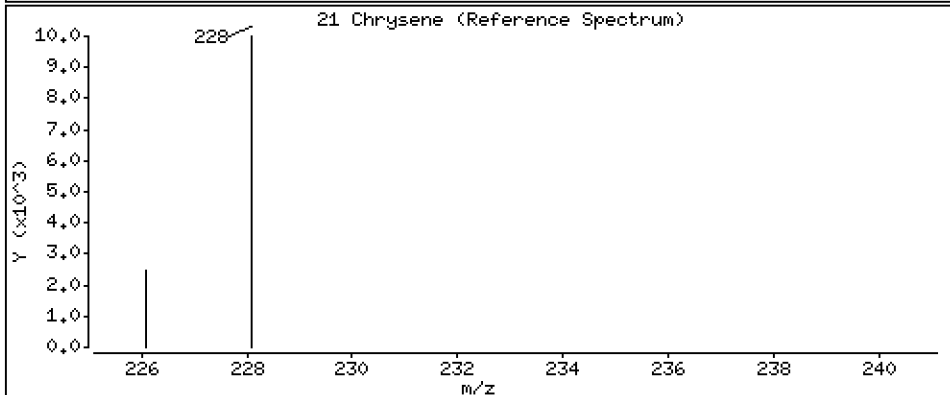
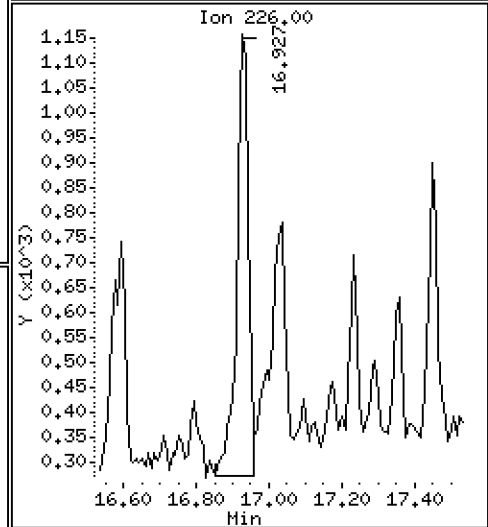
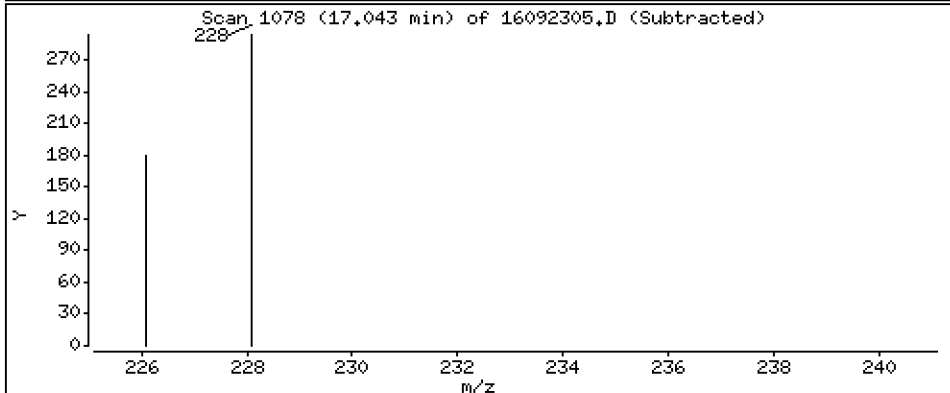
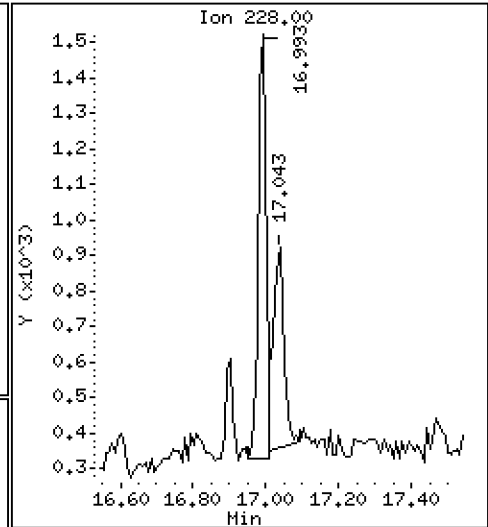
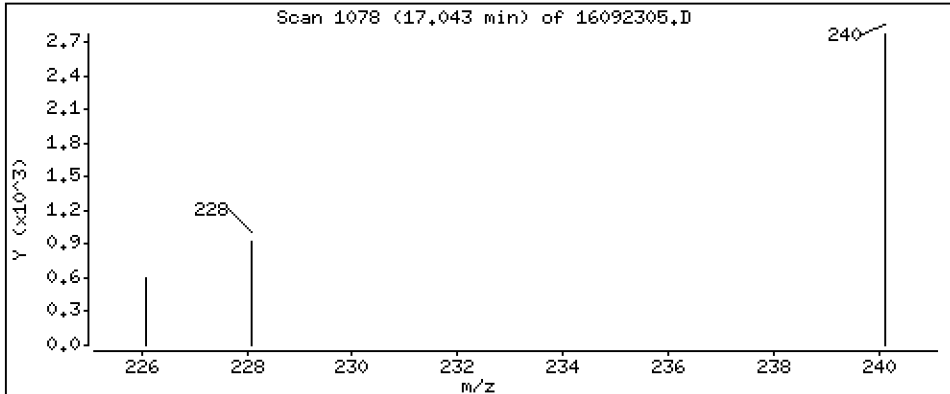
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 0,307 ng/mL

21 Chrysene



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092305.D
 Lab Smp Id: BEI0260-BLK1
 Inj Date : 23-SEP-2016 10:00
 Operator : JW
 Smp Info : BEI0260-BLK1
 Misc Info :
 Comment :
 Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Meth Date : 26-Sep-2016 07:53 nt11.i
 Cal Date : 22-SEP-2016 11:45
 Als bottle: 8
 Dil Factor: 1.00000
 Integrator: HP RTE
 Target Version: 4.14
 Processing Host: AUTOSPECDATA02

Inst ID: nt11.i

Compound Sublist: PEMDNF.sub

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.581	6.592	(1.000)	681602	200.000	
2 Naphthalene	128		6.613	6.623	(1.005)	76306	19.5095	19.5
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.148)	252946	116.897	117
4 2-Methylnaphthalene	142		7.611	7.621	(1.156)	27037	10.0442	10.0
5 1-Methylnaphthalene	142		7.863	7.884	(1.195)	13206	5.38982	5.39
6 Acenaphthylene	152		9.429	9.440	(0.984)	6782	1.72024	1.72
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	424011	200.000	
8 Acenaphthene	153		Compound Not Detected.					
9 Dibenzofuran	168		9.849	9.860	(1.028)	8779	2.30704	2.31
§ 10 Flourene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.474	10.485	(1.093)	5342	1.75930	1.76
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	776722	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	29198	5.59596	5.60
§ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		12.358	12.358	(1.008)	2436	0.47860	0.479
§ 16 Fluoranthene-d10	212		14.356	14.356	(1.171)	554995	146.982	147
17 Fluoranthene	202		14.385	14.395	(1.173)	6265	1.35613	1.36
18 Pyrene	202		14.885	14.885	(0.876)	5886	1.27254	1.27
19 Benzo(a)anthracene	228		Compound Not Detected.					
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	597025	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	1248	0.30658	0.307
22 Benzo(b)fluoranthene	252		Compound Not Detected.					
23 Benzo(k)fluoranthene	252		Compound Not Detected.					
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		Compound Not Detected.					
* 28 Perylene-d12	264		19.801	19.801	(1.000)	741485	200.000	
29 Perylene	252		Compound Not Detected.					
§ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	328887	134.941	135
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		Compound Not Detected.					

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
	MASS					ON-COLUMN	FINAL
=====	=====	=====	=====	=====	=====	=====	

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092305.D
 Lab Smp Id: BEI0260-BLK1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	681602	29.24
7 Acenaphthene-d10	297518	148759	595036	424011	42.52
12 Phenanthrene-d10	522042	261021	1044084	776722	48.79
20 Chrysene-d12	389499	194750	778998	597025	53.28
28 Perylene-d12	430626	215313	861252	741485	72.19

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.58	-0.16
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.12
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	-0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	-0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	-0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092305.D

Lab ID: BEI0260-BLK1
nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 10:00

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000



LCS / LCS DUPLICATE RECOVERY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc. SDG: 1610160
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring (PEMD)
 Matrix: Tissue Analyzed: 09/23/16 10:30
 Batch: BEI0260 Laboratory ID: BEI0260-BS1
 Preparation: EPA 3550C (Ultrasonic) Sequence Name: LCS
 Initial/Final: 0.886 g / 0.1 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. #	QC LIMITS REC.
Naphthalene	33.9	21.2	62.5	30 - 160
2-Methylnaphthalene	33.9	21.7	64.1	30 - 160
Acenaphthylene	33.9	21.6	63.7	30 - 160
Acenaphthene	33.9	21.6	63.9	30 - 160
Fluorene	33.9	21.5	63.5	30 - 160
Phenanthrene	33.9	23.9	70.5	30 - 160
Anthracene	33.9	22.6	66.7	30 - 160
Fluoranthene	33.9	23.6	69.8	30 - 160
Pyrene	33.9	23.0	68.1	30 - 160
Benzo(a)anthracene	33.9	23.8	70.4	30 - 160
Chrysene	33.9	22.6	66.7	30 - 160
Benzo(b)fluoranthene	33.9	21.0	62.1	30 - 160
Benzo(k)fluoranthene	33.9	20.8	61.4	30 - 160
Benzo(a)pyrene	33.9	21.2	62.6	30 - 160
Indeno(1,2,3-cd)pyrene	33.9	21.7	64.0	30 - 160
Dibenzo(a,h)anthracene	33.9	21.5	63.5	30 - 160
Benzo(g,h,i)perylene	33.9	21.1	62.4	30 - 160
Perylene	33.9	19.5	57.6	30 - 160
Benzo(e)pyrene	33.9	20.8	61.5	30 - 160
Benzo(a)fluoranthenes, Total	102	62.2	61.2	46 - 120

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20160923.16\16092306.D

Date : 23-SEP-2016 10:30

Client ID:

Sample Info: BE10260-BS1

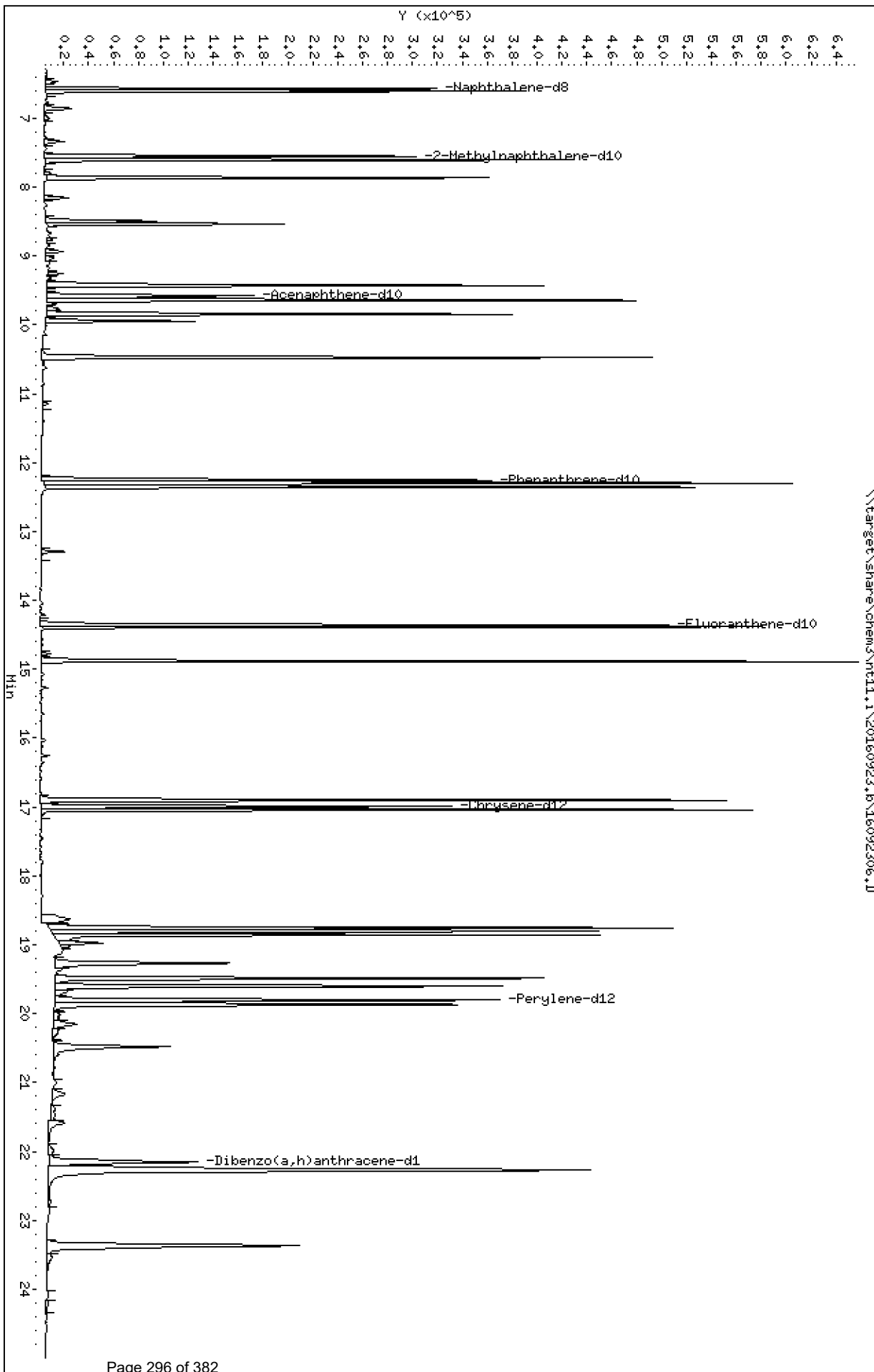
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160923.16\16092306.D



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092306.D

Lab Smp Id: BEI0260-BS1

Inj Date : 23-SEP-2016 10:30

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : BEI0260-BS1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 9

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ng/mL)	FINAL (ng/mL)	
* 1 Naphthalene-d8	136		6.571	6.592	(1.000)	516337	200.000		
2 Naphthalene	128		6.613	6.623	(1.006)	555681	187.547	188	
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.150)	299519	182.725	183	
4 2-Methylnaphthalene	142		7.611	7.621	(1.158)	391962	192.220	192	
5 1-Methylnaphthalene	142		7.863	7.884	(1.197)	348040	187.512	188	
6 Acenaphthylene	152		9.429	9.440	(0.984)	555030	191.124	191	
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	312326	200.000		
8 Acenaphthene	153		9.650	9.650	(1.007)	370839	191.729	192	
9 Dibenzofuran	168		9.850	9.860	(1.028)	507005	180.880	181	
§ 10 Fluorene-d10	174		Compound Not Detected.						
11 Fluorene	166		10.475	10.485	(1.093)	426139	190.527	191	
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	557721	200.000		
13 Phenanthrene	178		12.301	12.310	(1.003)	791930	211.377	211	
§ 14 Anthracene-d10	188		Compound Not Detected.						
15 Anthracene	178		12.359	12.358	(1.008)	731726	200.212	200	
§ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	586710	216.396	216	
17 Fluoranthene	202		14.386	14.395	(1.173)	694293	209.301	209	
18 Pyrene	202		14.885	14.885	(0.876)	715761	204.157	204	
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	620682	211.306	211	
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	452530	200.000		
21 Chrysene	228		17.042	17.042	(1.003)	617707	200.195	200	
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	549325	186.152	186	
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.950)	605124	184.078	184	
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	520481	180.469	180	
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.						
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	522281	184.396	184	
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	507373	187.772	188	
* 28 Perylene-d12	264		19.801	19.801	(1.000)	553033	200.000		
29 Perylene	252		19.869	19.868	(1.003)	478342	172.868	173	
§ 30 Dibenzo(a,h)anthracene-d14	292		22.151	22.150	(1.119)	365487	201.057	201	
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	472711	190.586	191	
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.272	(1.125)	574221	192.037	192	
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	484303	187.234	187	

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092306.D
 Lab Smp Id: BEI0260-BS1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	516337	-2.09
7 Acenaphthene-d10	297518	148759	595036	312326	4.98
12 Phenanthrene-d10	522042	261021	1044084	557721	6.83
20 Chrysene-d12	389499	194750	778998	452530	16.18
28 Perylene-d12	430626	215313	861252	553033	28.43

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.57	-0.32
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092306.D

Lab ID: BEI0260-BS1
nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 10:30

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000



Preparation Test Low Level SIM PNA PEMD # 10

Lab Number(s) 16IΦ1EΦ

Page 1 of 2

Low Level (0.5ppb)

Batch ID BEIΦ2EΦ

Batch set up by: SA

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	<u>BEIΦ2EΦ</u> BLK	1 Each	#3	(1:1)	0.1mL	0.1mL		<u>24 9/10/16</u> Analyst/Date
	<u>↓</u> BS	1 Each	#4	(1:1)	0.1mL	0.1mL		
	BSDup.	1 Each		(1:1)	0.1mL	0.1mL		
A	<u>16IΦ1EΦ - Φ1</u>	1 each	#5	(1:1)	0.1mL	0.1mL		KD 80°C Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6 <u>RMH</u> <u>9/16/16</u> Analyst/Date TurboVap 1 2 3 4 5 Pre-Cleanups <u>SE 9/22/16</u> Analyst/Date TurboVap 1 2 3 4 5 Post Cleanups <u>SW 9/23/16</u> Analyst/Date
A	<u>-Φ2</u>	1 each	#6	(1:1)	0.1mL	0.1mL		
A	<u>-Φ3</u>	1 each	#9	(1:1)	0.1mL	0.1mL		
A	<u>-Φ4</u>	1 each	#10	(1:1)	0.1mL	0.1mL		
A	<u>-Φ5</u>	1 each	#3	(1:1)	0.1mL	0.1mL		
A	<u>-Φ6</u>	1 each	#4	(1:1)	0.1mL	0.1mL		
A	<u>-Φ7</u>	1 each	#5	(1:1)	0.1mL	0.1mL		
A	<u>-Φ8</u>	1 each	#6	(1:1)	0.1mL	0.1mL		
A	<u>-Φ9</u>	1 each	#9	(1:1)	0.1mL	0.1mL		
A	<u>-1Φ</u>	1 each	#10	(1:1)	0.1mL	0.1mL		
A	<u>-11</u>	1 each	#3	(1:1)	0.1mL	0.1mL		
A	<u>-12</u>	1 each	#4	(1:1)	0.1mL	0.1mL		
Analyst/Date <u>RMH 9/16/16</u> →								Reviewed by/Date <u>SW 9/23/16</u>

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	<u>1 (DΦΦ5238)</u>	3/15µg/mL	20µL	<u>11/1/16</u>	<u>RMH</u>	<u>SA</u>
Spike	<u>18 (EΦΦ319Φ)</u>	1.5µg/mL	20µL	<u>11/1/16</u>	<u>RMH</u>	<u>SA</u>
Extraction Time: <u>11:51Φ</u>				Balance ID:		

SPECIAL INSTRUCTIONS: Follow SOP 3323S for assembly and disassembly of PEMD(s).

- Place each LPDE strip into a 600mL beaker.
- Add 1:1 Low Level DCM/Pentane to the beaker.
- Add surr/spike.
- Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each.
- Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate).
- After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask.
- KD: (using Low Level DCM) to 5mL at 80°C.
- Exchange to Hexane (2X with 20mL) at 100°C.
- TurboVap to 2mL.
- Silica Clean-up =REQ. Extract ~2mL in Hexane (Collect EPH Aromatic fraction only).
- TurboVap to 0.5mL.
- Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM.
- IN DIOXIN LAB: TurboVap and exchange to Iso-Octane.
- Vial 0.1mL in Iso-Octane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSDup).



Preparation Test Low Level SIM PNA PEMD # 10

Lab Number(s) 16IΦ16Φ
Batch ID BEIΦ26Φ

Page 2 of 2

Low Level (0.5ppb)
Batch set up by: SM

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	BLK	1 Each		(1:1)	0.1mL	0.1mL		PH 9/10/16 Analyst/Date
	BS	1 Each		(1:1)	0.1mL	0.1mL		
	BSDup.	1 Each		(1:1)	0.1mL	0.1mL		
A	16IΦ16Φ-13	1 each	#5	(1:1)	0.1mL	0.1mL		KD 80°C Hexane Exchange (2X 20mL) 100°C 1 2 3 4 5 6 RMH 9/16/16 Analyst/Date TurboVap 1 2 3 4 5 Pre-Cleanups 29/2/16 Analyst/Date TurboVap 1 2 3 4 5 Post Cleanups SM 9/23/16 Analyst/Date
A	↓ -14	1 each	#6	(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
				(1:1)	0.1mL	0.1mL		
Analyst/Date				29/2/16	SM 9/23/16		Reviewed by/Date	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	1 (DΦΦ5238)	3/15µg/mL	20µL	11/1/16	RMH	SM
Spike	18 ()	1.5µg/mL	20µL			
Extraction Time:				Balance ID:		

SPECIAL INSTRUCTIONS: Follow SOP 3323S for assembly and disassembly of PEMD(s).

- Place each LPDE strip into a 600mL beaker.
- Add 1:1 Low Level DCM/Pentane to the beaker.
- Add surr/spike.
- Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each.
- Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate).
- After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask.
- KD: (using Low Level DCM) to 5mL at 80°C.
- Exchange to Hexane (2X with 20mL) at 100 °C.
- TurboVap to 2mL.
- Silica Clean-up =REQ. Extract ~2mL in Hexane (Collect EPH Aromatic fraction only).
- TurboVap to 0.5mL.
- Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM.
- IN DIOXIN LAB: TurboVap and exchange to Iso-Octane.
- Vial 0.1mL in Iso-Octane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSDup).



ARI Job No.: 16IΦ16Φ

Client ID: Anchor QEA, LLC

Batch ID: BEIΦ26Φ

Parameter: SIM PNA LOW Lvl (PEMD)

Client Project: Port Gamble shellfish Monitoring (PEMD)

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)=	
<input type="checkbox"/> Standing Water Decanted (Not shared)=	
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input type="checkbox"/> Rocks (%+size)?	
<input type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Received in 32oz jar(s)=Homogenized in Pyrex dish=	
<input type="checkbox"/> Other (Details)=	
Aqueous:	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Received in 1.0L Bottle(s)=No Bottle Rinse=	
<input type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions).	
<input type="checkbox"/> Share Samples Y / N	
<input type="checkbox"/> Multiple Jars Y / N	
<input type="checkbox"/> Sample Pre-Screens indicate analyte activity=	
<input type="checkbox"/> Sample weights/volumes reduced based on Pre-Screen=	



**MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM**

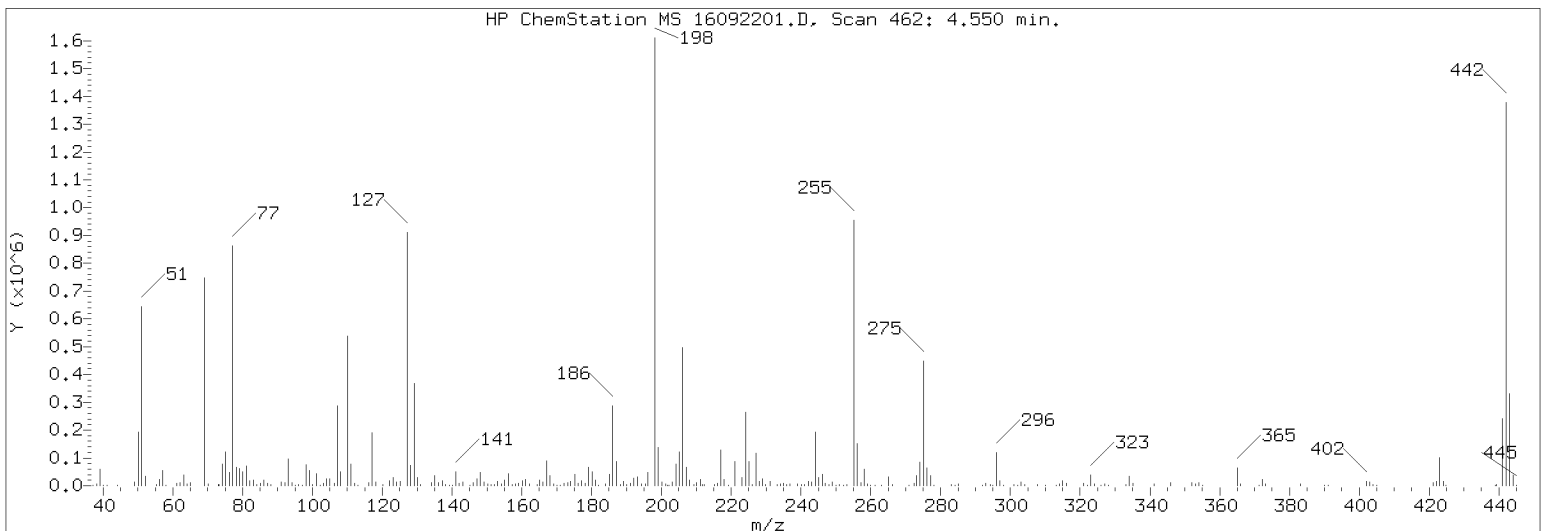
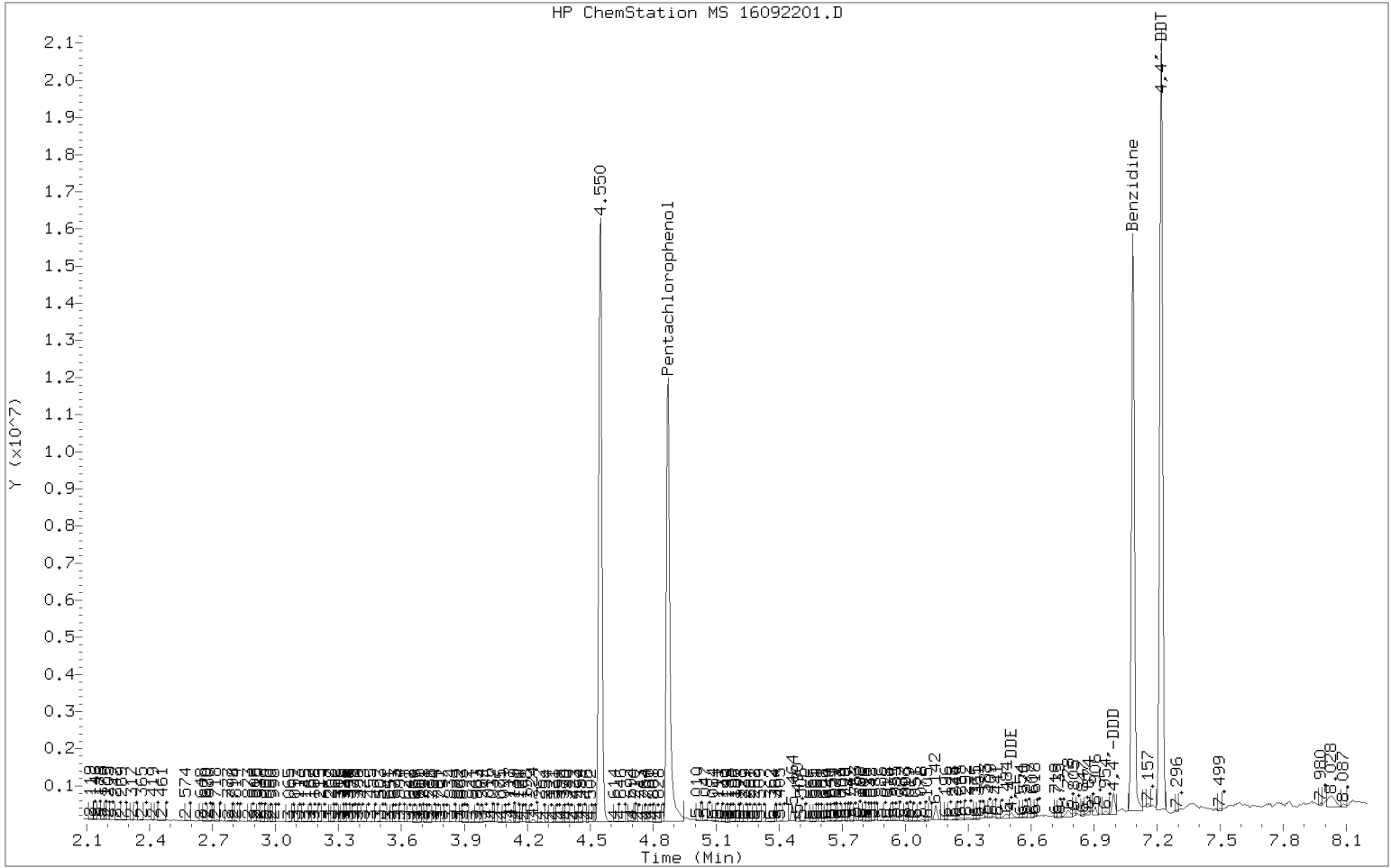
Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16I0160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring (PEMD)</u>
Lab File ID:	<u>16092201.D</u>	Injection Date:	<u>09/22/16</u>
Instrument ID:	<u>NT11</u>	Injection Time:	<u>08:56</u>
Sequence:	<u>SEI0302</u>	Lab Sample ID:	<u>SEI0302-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	41.8	PASS
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	46.5	PASS
70	Less than 2% of 69	0.636	PASS
127	10 - 80% of 198	55.6	PASS
197	Less than 2% of 198	0.593	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.45	PASS
275	10 - 60% of 198	27.6	PASS
365	1 - 100% of 198	3.38	PASS
441	0.1 - 24% of 442	16.2	PASS
442	50 - 200% of 198	84.7	PASS
443	15 - 24% of 442	22.8	PASS

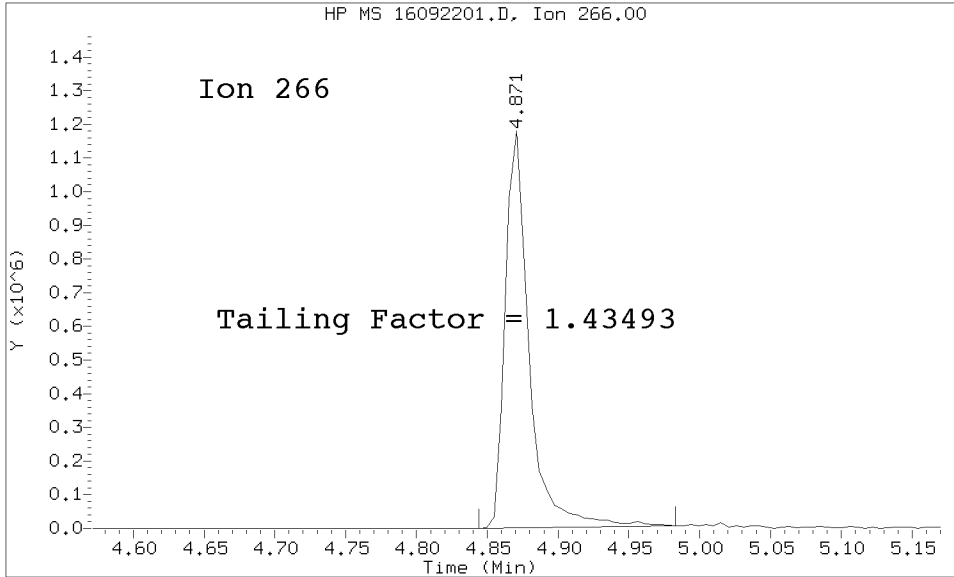
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEI0302-TUN1	16092201.D	09/22/2016	8:56
Cal Standard	SEI0302-CAL4	16092202.D	09/22/2016	9:14
Cal Standard	SEI0302-CAL1	16092203.D	09/22/2016	9:44
Cal Standard	SEI0302-CAL5	16092204.D	09/22/2016	10:14
Cal Standard	SEI0302-CAL2	16092205.D	09/22/2016	10:44
Cal Standard	SEI0302-CAL3	16092206.D	09/22/2016	11:14
Cal Standard	SEI0302-CAL6	16092207.D	09/22/2016	11:45
Secondary Cal Check	SEI0302-SCV1	16092208.D	09/22/2016	12:15

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160922.b/16092201.D/16092201.D
Method Used: \20160922.b\DFTPP.m Inst: nt11
Injection Date: 22-SEP-2016 08:56 Operator: JW
Sample Info: SEI0302-TUN1 SEI0302-TUN1
Report Date: 09/22/2016 09:09



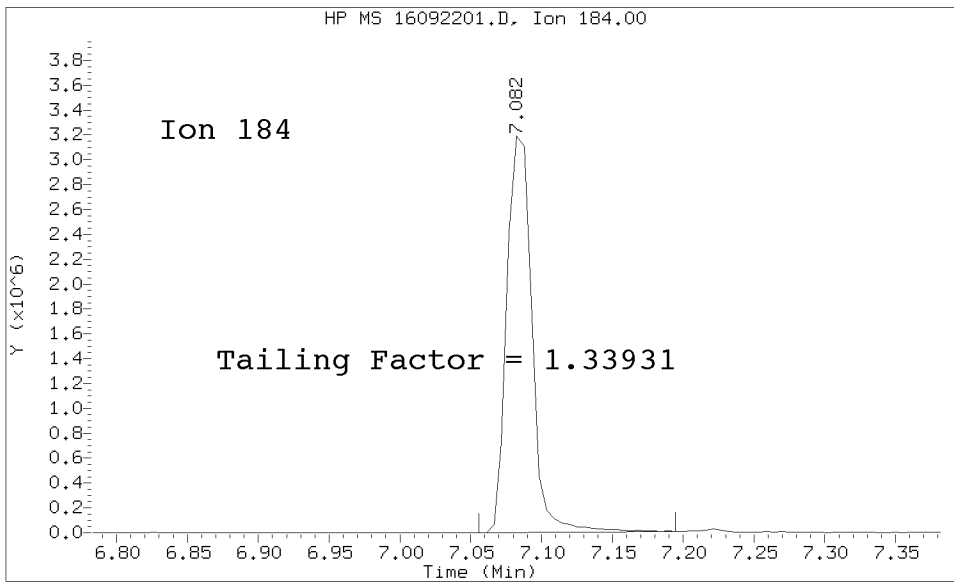
Datafile Analyzed: /20160922.b/16092201.D/16092201.D
Method Used: \20160922.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 22-SEP-2016 08:56 Operator: JW
Sample Info: SEI0302-TUN1
Report Date: 09/22/2016 09:09



Pentachlorophenol

=====
Exp. RT = 4.871
Found RT = 4.871

Tail Factor = 1.435 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 7.082
Found RT = 7.082

Tail Factor = 1.339 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4349315	2.000	PASS
Benzidine	1.3393070	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2680503			N/A
4,4-DDE	15586	0.6	20.0	PASS
4,4-DDD	79914	2.9	20.0	PASS
4,4-DDD + DDE	95500	3.4	20.0	PASS

Tuning Sample, nt11.i/20160922.b/16092201.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	41.81
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.52
70	Less than 2.00% of mass 69	0.30 (0.64)
127	10.00 - 80.00% of mass 198	55.59
197	Less than 2.00% of mass 198	0.59
199	5.00 - 9.00% of mass 198	8.45
275	10.00 - 60.00% of mass 198	27.59
365	Greater than 1.00% of mass 198	3.38
441	0.01 - 24.00% of mass 442	13.70 (16.18)
442	50.00 - 200.00% of mass 198	84.72
443	15.00 - 24.00% of mass 442	19.35 (22.84)

Data File: 16092201.D
 Spectrum: Avg. Scans 461-463 (4.55), Background Scan 456
 Location of Maximum: 198.00
 Number of points: 277

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1643	124.00	11633	197.00	7946	276.00	51144
38.00	6122	125.00	11634	198.00	1339904	277.00	26736
39.00	47680	126.00	921	199.00	113208	278.00	3681
40.00	2157	127.00	744896	200.00	10036	283.00	2900
41.00	4831	128.00	68416	201.00	5533	284.00	1452
43.00	874	129.00	321472	202.00	5513	285.00	6894
48.00	779	130.00	24976	203.00	11918	292.00	2459
49.00	6448	131.00	5576	204.00	59968	293.00	8531
50.00	157952	132.00	2096	205.00	100312	294.00	2560
51.00	560256	134.00	12139	206.00	397888	295.00	1643
52.00	32928	135.00	28512	207.00	52880	296.00	98944
53.00	911	136.00	10688	208.00	14645	297.00	14292
55.00	4855	137.00	13694	209.00	3144	298.00	1063
56.00	22672	138.00	4481	210.00	8485	301.00	1379
57.00	43368	139.00	671	211.00	19144	302.00	2144
58.00	1941	140.00	4472	212.00	3568	303.00	11114
61.00	7289	141.00	40472	213.00	687	304.00	2662
62.00	11256	142.00	10343	215.00	3321	308.00	1507
63.00	32896	143.00	10260	216.00	6894	309.00	1240
64.00	3993	144.00	810	217.00	106272	310.00	1422
65.00	14051	145.00	1788	218.00	18592	313.00	683
69.00	623296	146.00	9028	219.00	1150	314.00	5021
70.00	3962	147.00	19944	220.00	1482	315.00	9927
71.00	683	148.00	38088	221.00	72144	316.00	6214
73.00	2528	149.00	9071	222.00	3308	321.00	4345
74.00	69920	150.00	3511	223.00	25408	322.00	1772
75.00	108456	151.00	7126	224.00	226304	323.00	33416
76.00	41088	152.00	4572	225.00	62192	324.00	6179
77.00	724864	153.00	12888	226.00	5277	326.00	899
78.00	56088	154.00	10300	227.00	98184	327.00	8033
79.00	58152	155.00	22120	228.00	12865	328.00	3670
80.00	41552	156.00	36544	229.00	19896	332.00	1688
81.00	63880	157.00	6654	230.00	4526	333.00	4124
82.00	15575	158.00	6502	231.00	11219	334.00	22600
83.00	14088	159.00	5409	232.00	919	335.00	6073
85.00	11463	160.00	14009	233.00	1281	341.00	5390
86.00	12912	161.00	21856	234.00	5328	342.00	836
87.00	7162	162.00	4798	235.00	8657	346.00	7718
88.00	3845	164.00	3705	236.00	3133	352.00	9600
91.00	13200	165.00	16304	237.00	5866	353.00	6928
92.00	12443	166.00	13682	239.00	3908	354.00	10745
93.00	77608	167.00	73112	240.00	2274	355.00	1984
94.00	7328	168.00	34768	241.00	5254	365.00	45296
95.00	3157	169.00	5123	242.00	12334	366.00	4832
96.00	5997	170.00	762	243.00	11998	371.00	2978
97.00	753	171.00	3828	244.00	159040	372.00	18392
98.00	62656	172.00	6576	245.00	23616	373.00	5166
99.00	54184	173.00	10428	246.00	30728	380.00	679
100.00	4527	174.00	14714	247.00	7577	383.00	5458

101.00	36912	175.00	32888	248.00	1659	384.00	802
102.00	1614	176.00	7072	249.00	8756	390.00	1699
103.00	7565	177.00	15002	250.00	851	391.00	2140
104.00	21288	178.00	5864	251.00	2030	402.00	9603
105.00	19936	179.00	55712	252.00	2422	403.00	11771
106.00	8037	180.00	40376	253.00	5211	404.00	5020
107.00	240768	181.00	19600	255.00	787200	405.00	915
108.00	37544	182.00	2654	256.00	126720	421.00	10726
109.00	2982	184.00	4526	257.00	10036	422.00	10394
110.00	453760	185.00	30696	258.00	50912	423.00	80384
111.00	63864	186.00	236032	259.00	6774	424.00	12691
112.00	8539	187.00	64296	260.00	1519	425.00	1049
113.00	2362	188.00	6834	261.00	948	439.00	1049
115.00	1703	189.00	11771	263.00	948	441.00	183616
116.00	13144	190.00	2771	265.00	20424	442.00	1135104
117.00	149504	191.00	10908	266.00	2379	443.00	259264
118.00	12026	192.00	17160	271.00	2830	444.00	28616
119.00	1496	193.00	23616	272.00	3593	445.00	1049
120.00	2495	194.00	4696	273.00	32160		
122.00	15313	195.00	3238	274.00	67360		
123.00	24552	196.00	40184	275.00	369664		



**MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM**

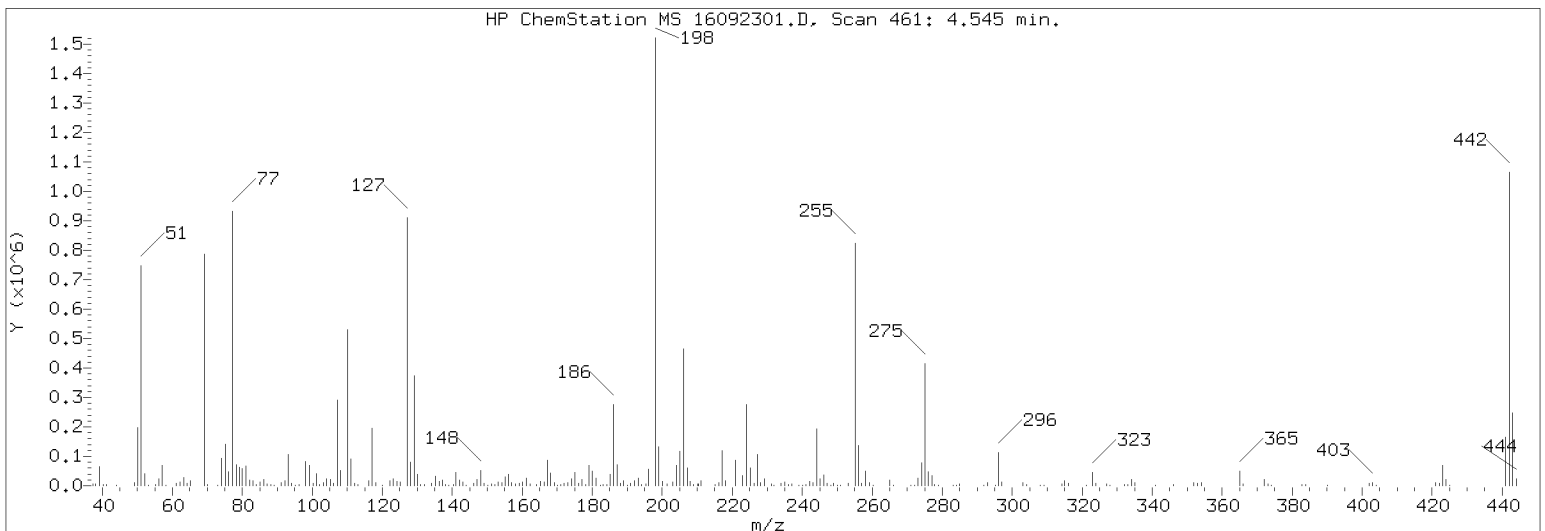
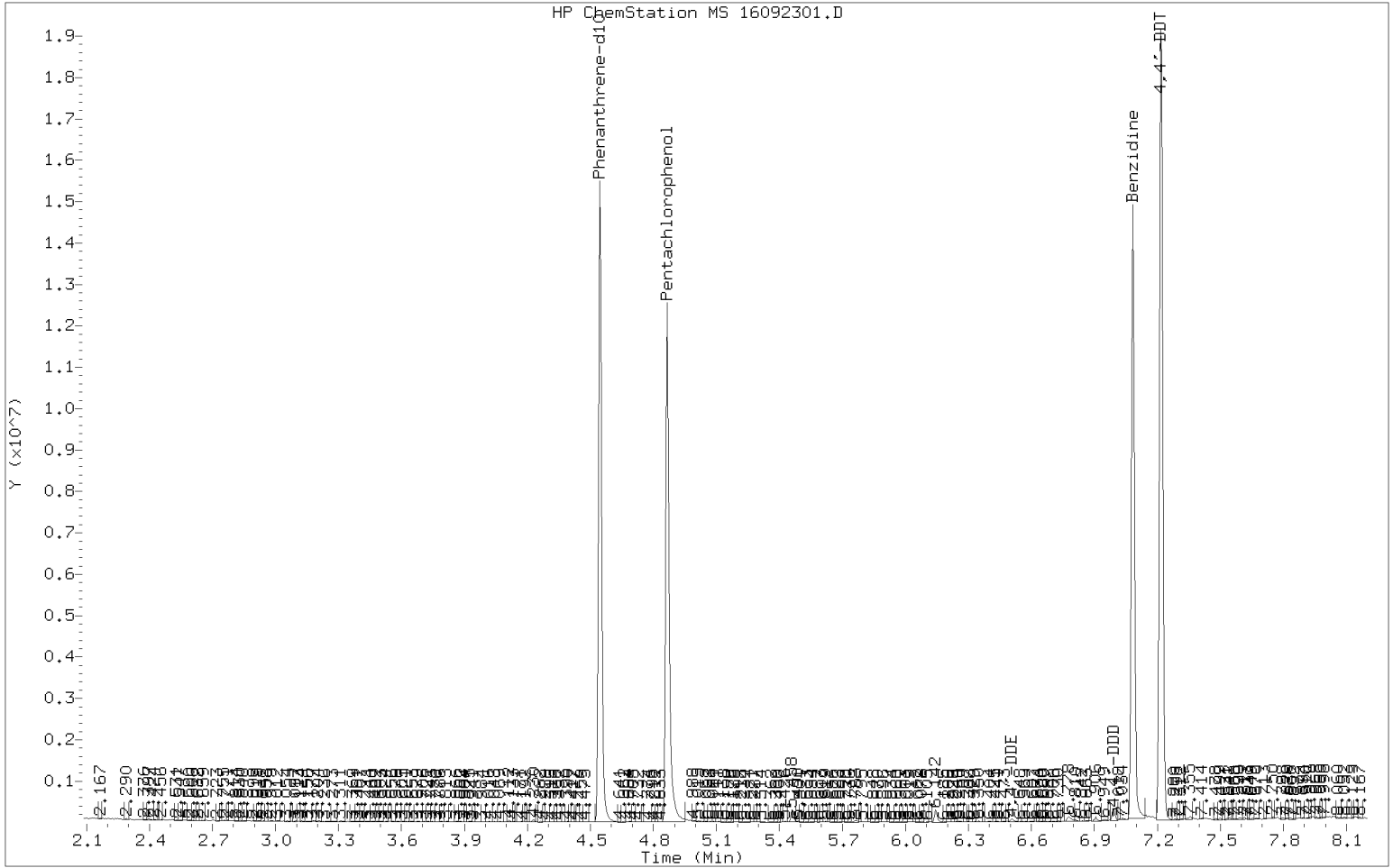
Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16I0160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring (PEMD)</u>
Lab File ID:	<u>16092301.D</u>	Injection Date:	<u>09/23/16</u>
Instrument ID:	<u>NT11</u>	Injection Time:	<u>07:53</u>
Sequence:	<u>SEI0321</u>	Lab Sample ID:	<u>SEI0321-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	45.8	PASS
68	Less than 2% of 69	0.398	PASS
69	Less than 100% of 198	49	PASS
70	Less than 2% of 69	0.701	PASS
127	10 - 80% of 198	57.4	PASS
197	Less than 2% of 198	0.223	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.31	PASS
275	10 - 60% of 198	26.6	PASS
365	1 - 100% of 198	3.17	PASS
441	0.1 - 24% of 442	16.2	PASS
442	50 - 200% of 198	73.8	PASS
443	15 - 24% of 442	23.2	PASS

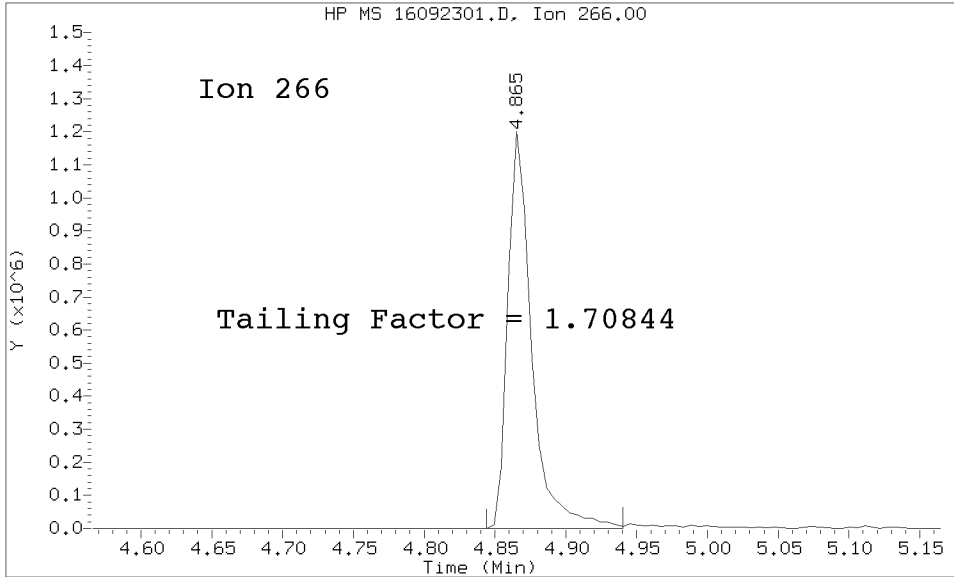
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEI0321-TUN1	16092301.D	09/23/2016	7:53
Initial Cal Check	SEI0321-ICV1	16092302.D	09/23/2016	8:10
Blank	BEI0260-BLK1	16092305.D	09/23/2016	10:00
LCS	BEI0260-BS1	16092306.D	09/23/2016	10:30
G-SMA1-1-PEMD-160909-	16I0160-01	16092307.D	09/23/2016	11:01
G-SMA1-2-PEMD-160909-	16I0160-03	16092308.D	09/23/2016	11:31
-SMA1-102-PEMD-160909-	16I0160-04	16092309.D	09/23/2016	12:01
G-SMA1-3-PEMD-160909-	16I0160-05	16092310.D	09/23/2016	12:31
PG-PJ-1-PEMD-160909-A	16I0160-07	16092311.D	09/23/2016	13:01
PG-GP-1-PEMD-160909-A	16I0160-09	16092312.D	09/23/2016	13:32
PG-WS-1-PEMD-160909-A	16I0160-11	16092313.D	09/23/2016	14:02
PG-FB-PEMD-160909	16I0160-13	16092314.D	09/23/2016	14:32
PG-TB-PEMD-160909	16I0160-14	16092315.D	09/23/2016	15:02
Calibration Check	SEI0321-CCV1	16092316.D	09/23/2016	15:32

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160923.b/16092301.D/16092301.D
Method Used: \20160923.b\DFTPP.m Inst: nt11
Injection Date: 23-SEP-2016 07:53 Operator: JW
Sample Info: SEI0321-TUN1 SEI0321-TUN1
Report Date: 09/26/2016 07:53



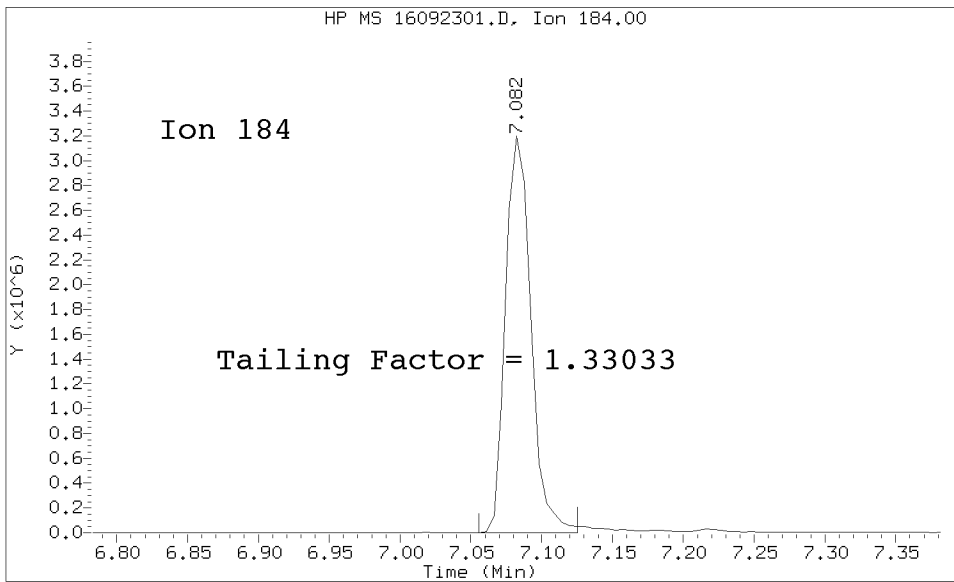
Datafile Analyzed: /20160923.b/16092301.D/16092301.D
Method Used: \20160923.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 23-SEP-2016 07:53 Operator: JW
Sample Info: SEI-TUN1
Report Date: 09/26/2016 07:53



Pentachlorophenol

=====
Exp. RT = 4.865
Found RT = 4.865

Tail Factor = 1.708 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 7.082
Found RT = 7.082

Tail Factor = 1.330 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7084433	2.000	PASS
Benzidine	1.3303269	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2902280			N/A
4,4-DDE	12018	0.4	20.0	PASS
4,4-DDD	58140	2.0	20.0	PASS
4,4-DDD + DDE	70158	2.4	20.0	PASS

Tuning Sample, nt11.i/20160923.b/16092301.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.82
68	Less than 2.00% of mass 69	0.20 (0.40)
69	Mass 69 relative abundance	49.00
70	Less than 2.00% of mass 69	0.34 (0.70)
127	10.00 - 80.00% of mass 198	57.43
197	Less than 2.00% of mass 198	0.22
199	5.00 - 9.00% of mass 198	8.31
275	10.00 - 60.00% of mass 198	26.57
365	Greater than 1.00% of mass 198	3.17
441	0.01 - 24.00% of mass 442	11.94 (16.18)
442	50.00 - 200.00% of mass 198	73.77
443	15.00 - 24.00% of mass 442	17.08 (23.15)

Data File: 16092301.D

Spectrum: Avg. Scans 460-462 (4.54), Background Scan 454

Location of Maximum: 198.00

Number of points: 271

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	3681	120.00	897	190.00	1746	272.00	1001
38.00	6687	121.00	816	191.00	6484	273.00	23512
39.00	48112	122.00	13947	192.00	14084	274.00	65520
40.00	2373	123.00	18352	193.00	20384	275.00	329344
41.00	2027	124.00	10220	194.00	3481	276.00	41112
44.00	3009	125.00	10601	195.00	3578	277.00	28176
45.00	683	127.00	711936	196.00	38976	278.00	3839
49.00	3051	128.00	64992	197.00	2761	279.00	1027
50.00	147968	129.00	302912	198.00	1239552	283.00	3014
51.00	567936	130.00	27056	199.00	103000	284.00	1753
52.00	32488	131.00	6186	200.00	9490	285.00	4745
53.00	1008	132.00	1521	201.00	5269	286.00	898
55.00	2716	134.00	7937	203.00	8612	292.00	1740
56.00	19264	135.00	26312	204.00	55312	293.00	7467
57.00	47704	136.00	10535	205.00	93080	294.00	1001
58.00	887	137.00	15151	206.00	362752	295.00	2654
61.00	8933	138.00	2412	207.00	48576	296.00	84792
62.00	9437	139.00	922	208.00	12978	297.00	12887
63.00	27784	140.00	4283	209.00	2918	302.00	1049
64.00	4681	141.00	36248	210.00	7023	303.00	9381
65.00	13173	142.00	12563	211.00	14767	304.00	2229
67.00	1413	143.00	9505	212.00	2612	308.00	1485
68.00	2420	144.00	1780	215.00	4527	309.00	889
69.00	607424	145.00	1900	216.00	9521	314.00	4620
70.00	4257	146.00	6287	217.00	94800	315.00	13605
73.00	3998	147.00	17584	218.00	13557	316.00	6650
74.00	68048	148.00	40976	219.00	1580	321.00	1747
75.00	108280	149.00	8362	221.00	68520	322.00	1683
76.00	38744	150.00	3572	222.00	7805	323.00	31696
77.00	724736	151.00	5119	223.00	23248	324.00	6570
78.00	55264	152.00	2327	224.00	211968	327.00	4427
79.00	47224	153.00	12268	225.00	48960	328.00	2607
80.00	46344	154.00	9476	226.00	5881	332.00	1760
81.00	53544	155.00	21144	227.00	78152	333.00	2918
82.00	12241	156.00	33392	228.00	11607	334.00	19488
83.00	11834	157.00	6776	229.00	19240	335.00	4497
84.00	203	158.00	4268	231.00	6543	341.00	2363
85.00	10070	159.00	5986	232.00	1948	342.00	971
86.00	12119	160.00	12747	234.00	5884	346.00	4871
87.00	6270	161.00	21104	235.00	7557	352.00	7185
88.00	1974	162.00	6300	236.00	2837	353.00	4841
89.00	751	163.00	1039	237.00	6567	354.00	12571
91.00	9750	164.00	1254	239.00	1971	355.00	769
92.00	14421	165.00	14274	240.00	2357	361.00	687
93.00	78776	166.00	11705	241.00	4551	365.00	39232
94.00	6888	167.00	65072	242.00	9937	366.00	5648
95.00	882	168.00	38208	243.00	9720	367.00	666
96.00	2072	169.00	8293	244.00	155008	371.00	906
98.00	59640	170.00	2187	245.00	20336	372.00	16992

99.00	51864	171.00	3974	246.00	32248	373.00	3918
100.00	4904	172.00	6074	247.00	7285	374.00	850
101.00	29976	173.00	9563	248.00	694	383.00	4493
102.00	1781	174.00	17736	249.00	5325	384.00	1229
103.00	7154	175.00	31544	250.00	1669	390.00	2321
104.00	18784	176.00	7743	251.00	807	391.00	1046
105.00	14948	177.00	17128	252.00	1248	402.00	8213
106.00	5425	178.00	4533	253.00	6425	403.00	7680
107.00	227904	179.00	51848	255.00	675712	404.00	2404
108.00	39344	180.00	40128	256.00	102928	421.00	9787
109.00	4023	181.00	19304	257.00	9572	422.00	6801
110.00	415168	182.00	2328	258.00	38480	423.00	57744
111.00	64272	183.00	1097	259.00	6567	424.00	16816
112.00	7568	184.00	3227	260.00	866	425.00	981
113.00	3992	185.00	28152	264.00	696	441.00	147968
116.00	13069	186.00	205184	265.00	17056	442.00	914432
117.00	149120	187.00	57288	266.00	2730	443.00	211712
118.00	12426	188.00	4874	270.00	722	444.00	20704
119.00	1381	189.00	11207	271.00	674		



INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16I0160
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZI00066	Instrument:	NT11
Calibration Date:	09/22/2016 8:00	Column (1):	RXi-17Sil-MS

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
		RF		RF		RF		RF		RF		RF
Naphthalene	10	1.29511	50	1.193041	100	1.210705	250	1.122908	500	1.079374	1000	0.9847868
2-Methylnaphthalene	10	0.8048939	50	0.7919772	100	0.8136387	250	0.8016353	500	0.7925865	1000	0.7343507
Acenaphthylene	10	2.034291	50	1.867638	100	1.877304	250	1.897421	500	1.810096	1000	1.670928
Acenaphthene	10	1.32248	50	1.252975	100	1.274279	250	1.234878	500	1.215354	1000	1.131444
Fluorene	10	1.512334	50	1.436251	100	1.459781	250	1.461639	500	1.419435	1000	1.304036
Phenanthrene	10	1.472566	50	1.404252	100	1.433042	250	1.351618	500	1.276855	1000	1.122757
Anthracene	10	1.362351	50	1.330274	100	1.38847	250	1.360027	500	1.28909	1000	1.133415
Fluoranthene	10	1.23601	50	1.209242	100	1.249942	250	1.210808	500	1.174507	1000	1.056813
Pyrene	10	1.717473	50	1.562485	100	1.57116	250	1.634617	500	1.492505	1000	1.318632
Benzo(a)anthracene	10	1.392999	50	1.294906	100	1.327936	250	1.327956	500	1.271728	1000	1.173658
Chrysene	10	1.549293	50	1.399601	100	1.417152	250	1.34005	500	1.298818	1000	1.177139
Benzo(b)fluoranthene	10	1.135156	50	1.060139	100	1.108449	250	1.007248	500	1.062387	1000	1.029755
Benzo(k)fluoranthene	10	1.234496	50	1.183885	100	1.242565	250	1.157645	500	1.181906	1000	1.132502
Benzo(a)pyrene	10	0.9728617	50	0.9681539	100	1.006559	250	0.9728423	500	0.9914621	1000	0.9512103
Indeno(1,2,3-cd)pyrene	10	1.055076	50	1.035701	100	1.085907	250	1.088354	500	1.118832	1000	1.104322
Dibenzo(a,h)anthracene	10	0.8867098	50	0.8436344	100	0.9088026	250	0.89618	500	0.9257446	1000	0.920818
Benzo(g,h,i)perylene	10	0.9534585	50	0.9086207	100	0.9238082	250	0.9274628	500	0.9519496	1000	0.9472856
Perylene	10	1.036954	50	0.9986528	100	1.034451	250	0.9829727	500	0.9965566	1000	0.9546094
Benzo(e)pyrene	10	1.061528	50	1.031924	100	1.078479	250	0.9878084	500	1.01586	1000	0.9702667
2-Methylnaphthalene-d10	10	0.6576138	50	0.6341362	100	0.6434274	250	0.6347323	500	0.6372275	1000	0.6024198
Dibenzo[a,h]anthracene-d14	10	0.6245063	50	0.6252323	100	0.6554	250	0.6575135	500	0.6833084	1000	0.6984542
Fluoranthene-d10	10	1.039611	50	0.9760936	100	0.9878133	250	0.9808866	500	0.9603826	1000	0.8888468
Fluorene-d10	10	1.123726	50	1.000373	100	1.016226	250	1.003529	500	0.9948449	1000	0.9400999
Anthracene-d10	10	1.45515	50	1.060228	100	1.068843	250	1.02115	500	0.9833731	1000	0.8921359
Benzo(e)pyrene-d12	10	1.072914	50	1.025753	100	1.052914	250	0.9953751	500	1.02136	1000	0.9810774



INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16I0160
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZI00066	Instrument:	NT11
Calibration Date:	09/22/2016 8:00	Column (1):	RXi-17Sil-MS

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	1.147654	9.5			RSD (20)	
2-Methylnaphthalene	0.7898471	3.6			RSD (20)	
Acenaphthylene	1.859613	6.4			RSD (20)	
Acenaphthene	1.238568	5.2			RSD (20)	
Fluorene	1.432246	4.9			RSD (20)	
Phenanthrene	1.343515	9.5			RSD (20)	
Anthracene	1.310604	7.1			RSD (20)	
Fluoranthene	1.189554	5.9			RSD (20)	
Pyrene	1.549479	8.8			RSD (20)	
Benzo(a)anthracene	1.298197	5.7			RSD (20)	
Chrysene	1.363676	9.2			RSD (20)	
Benzo(b)fluoranthene	1.067189	4.5			RSD (20)	
Benzo(k)fluoranthene	1.188833	3.6			RSD (20)	
Benzo(a)pyrene	0.9771816	2.0			RSD (20)	
Indeno(1,2,3-cd)pyrene	1.081365	2.9			RSD (20)	
Dibenzo(a,h)anthracene	0.8969816	3.3			RSD (20)	
Benzo(g,h,i)perylene	0.9354309	1.9			RSD (20)	
Perylene	1.000699	3.1			RSD (20)	
Benzo(e)pyrene	1.024311	4.1			RSD (20)	
2-Methylnaphthalene-d10	0.6349262	2.9			RSD (20)	
Dibenzo[a,h]anthracene-d14	0.6574024	4.6			RSD (20)	
Fluoranthene-d10	0.9722723	5.0			RSD (20)	
Fluorene-d10	1.013133	5.9			RSD (20)	
Anthracene-d10	1.080147	18.0			RSD (20)	
Benzo(e)pyrene-d12	1.024899	3.4			RSD (20)	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-SEP-2016 09:14
 End Cal Date : 22-SEP-2016 11:45
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Last Edit : 22-Sep-2016 13:42 nt11.i
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem3\nt11.i\20160922.b\16092203.D
 Level 2: \\target\share\chem3\nt11.i\20160922.b\16092205.D
 Level 3: \\target\share\chem3\nt11.i\20160922.b\16092206.D
 Level 4: \\target\share\chem3\nt11.i\20160922.b\16092202.D
 Level 5: \\target\share\chem3\nt11.i\20160922.b\16092204.D
 Level 6: \\target\share\chem3\nt11.i\20160922.b\16092207.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Naphthalene	1.29511	1.19304	1.21071	1.12291	1.07937	0.98479	1.14765	9.512
4 2-Methylnaphthalene	0.80489	0.79198	0.81364	0.80164	0.79259	0.73435	0.78985	3.591
5 1-Methylnaphthalene	0.75127	0.71572	0.74280	0.71807	0.71476	0.67105	0.71895	3.903
6 Acenaphthylene	2.03429	1.86764	1.87730	1.89742	1.81010	1.67093	1.85961	6.380
8 Acenaphthene	1.32248	1.25297	1.27428	1.23488	1.21535	1.13144	1.23857	5.176
9 Dibenzofuran	1.91669	1.85057	1.89003	1.80303	1.72999	1.57917	1.79491	6.950
11 Fluorene	1.51233	1.43625	1.45978	1.46164	1.41944	1.30404	1.43225	4.903
13 Phenanthrene	1.47257	1.40425	1.43304	1.35162	1.27685	1.12276	1.34352	9.509
15 Anthracene	1.36235	1.33027	1.38847	1.36003	1.28909	1.13342	1.31060	7.111
17 Fluoranthene	1.23601	1.20924	1.24994	1.21081	1.17451	1.05681	1.18955	5.883
18 Pyrene	1.71747	1.56248	1.57116	1.63462	1.49251	1.31863	1.54948	8.785
19 Benzo(a)anthracene	1.39300	1.29491	1.32794	1.32796	1.27173	1.17366	1.29820	5.658
21 Chrysene	1.54929	1.39960	1.41715	1.34005	1.29882	1.17714	1.36368	9.169
22 Benzo(b)fluoranthene	1.13516	1.06014	1.10845	1.00725	1.06239	1.02976	1.06719	4.472
23 Benzo(k)fluoranthene	1.23450	1.18388	1.24256	1.15764	1.18191	1.13250	1.18883	3.606
24 Benzo(j)fluoranthene	1.09872	1.05382	1.10645	0.99579	1.02578	0.97738	1.04299	5.088
26 Benzo(e)pyrene	1.06153	1.03192	1.07848	0.98781	1.01586	0.97027	1.02431	4.073
27 Benzo(a)pyrene	0.97286	0.96815	1.00656	0.97284	0.99146	0.95121	0.97718	1.974
29 Perylene	1.03695	0.99865	1.03445	0.98297	0.99656	0.95461	1.00070	3.133
31 Dibenzo(a,h)anthracene	0.88671	0.84363	0.90880	0.89618	0.92574	0.92082	0.89698	3.340
32 Indeno(1,2,3-cd)pyrene	1.05508	1.03570	1.08591	1.08835	1.11883	1.10432	1.08137	2.858
33 Benzo(g,h,i)perylene	0.95346	0.90862	0.92381	0.92746	0.95195	0.94729	0.93543	1.945
\$ 3 2-Methylnaphthalene-d10	0.65761	0.63414	0.64343	0.63473	0.63723	0.60242	0.63493	2.861
\$ 10 Fluorene-d10	1.12373	1.00037	1.01623	1.00353	0.99484	0.94010	1.01313	5.949
\$ 14 Anthracene-d10	1.45515	1.06023	1.06884	1.02115	0.98337	0.89214	1.08015	18.016
\$ 16 Fluoranthene-d10	1.03961	0.97609	0.98781	0.98089	0.96038	0.88885	0.97227	5.032
\$ 25 Benzo(e)pyrene-d12	1.07291	1.02575	1.05291	0.99538	1.02136	0.98108	1.02490	3.350

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-SEP-2016 09:14
 End Cal Date : 22-SEP-2016 11:45
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Last Edit : 22-Sep-2016 13:42 nt11.i
 Curve Type : Average

Compound	10.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
\$ 30 Dibenzo(a,h)anthracene-d14	0.62451	0.62523	0.65540	0.65751	0.68331	0.69845	0.65740	4.552



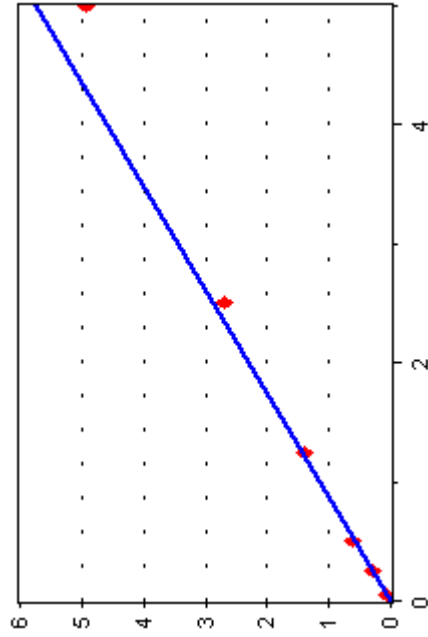
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

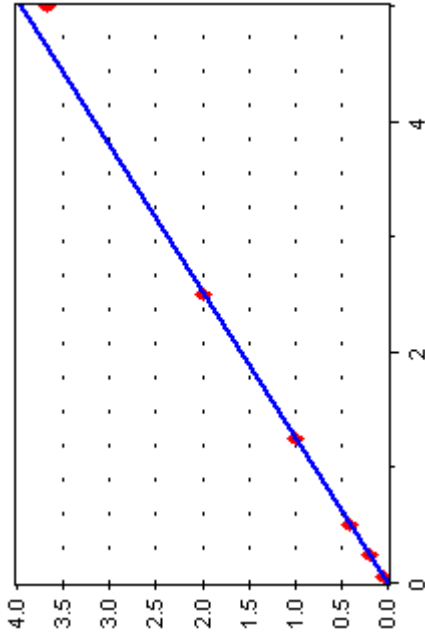
Naphthalene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Naphthalene



2-Methylnaphthalene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2-Methylnaphthalene





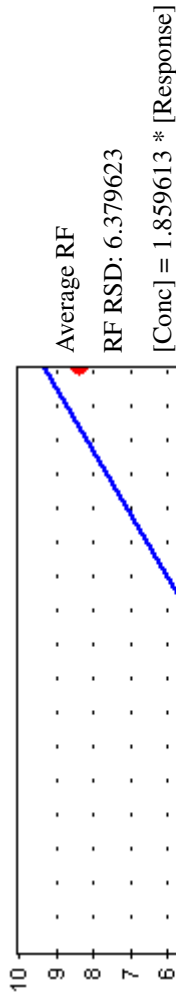
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

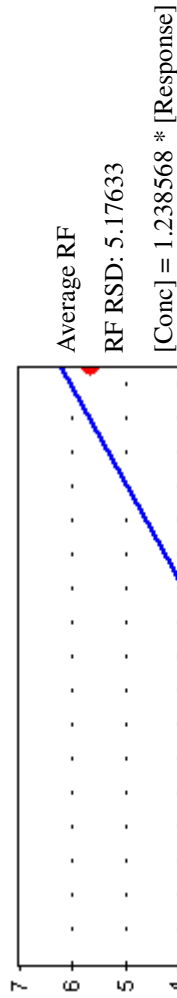
Acenaphthylene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Acenaphthylene



Acenaphthene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Acenaphthene





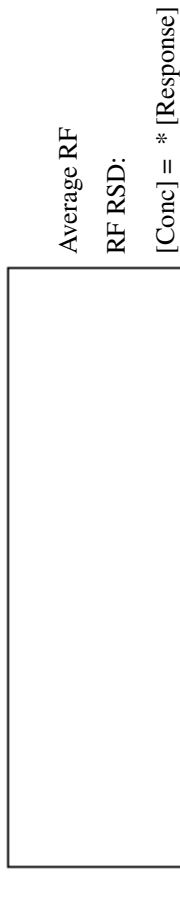
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

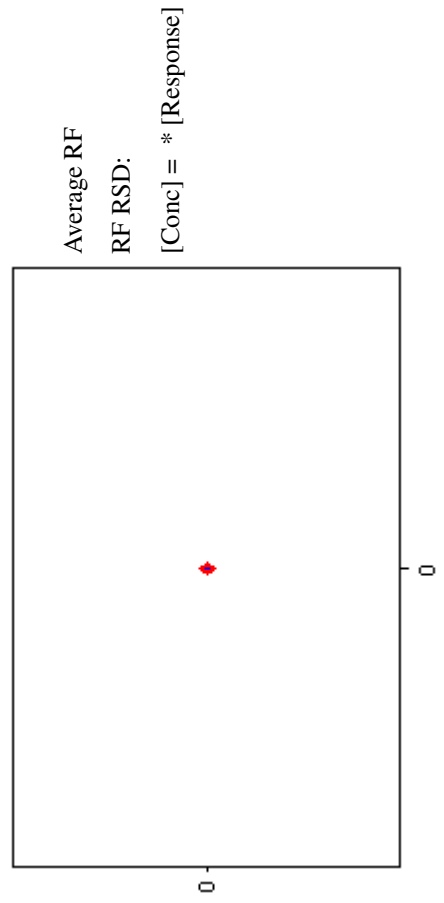
Biphenyl

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Biphenyl



2,6-Dimethylnaphthalene

3270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2,6-Dimethylnaphthal





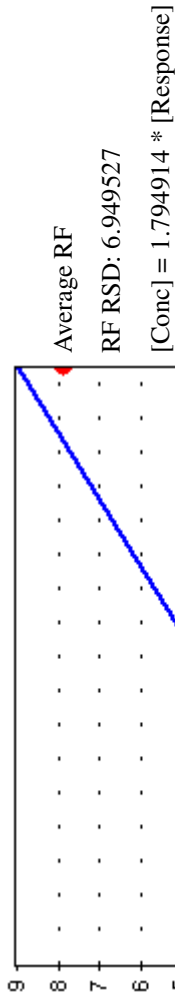
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

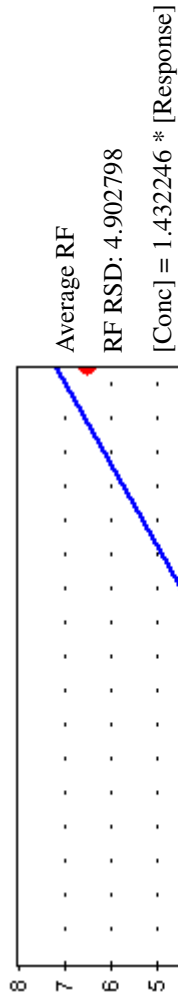
Dibenzofuran

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzofuran



Fluorene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluorene





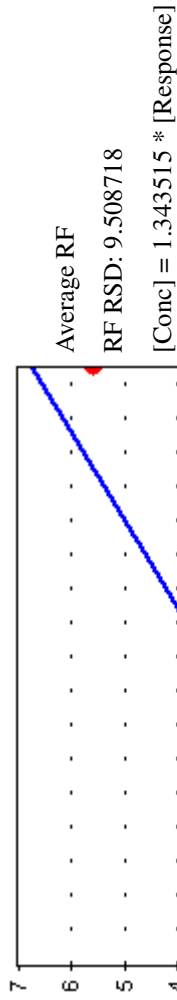
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

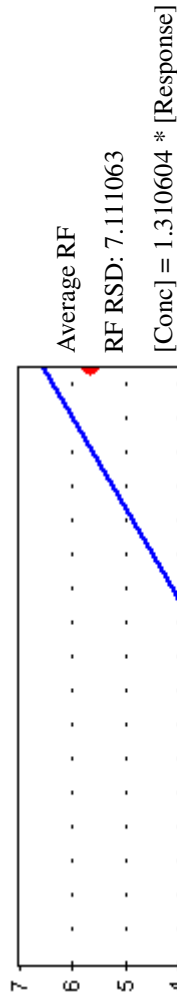
Phenanthrene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Phenanthrene



Anthracene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Anthracene



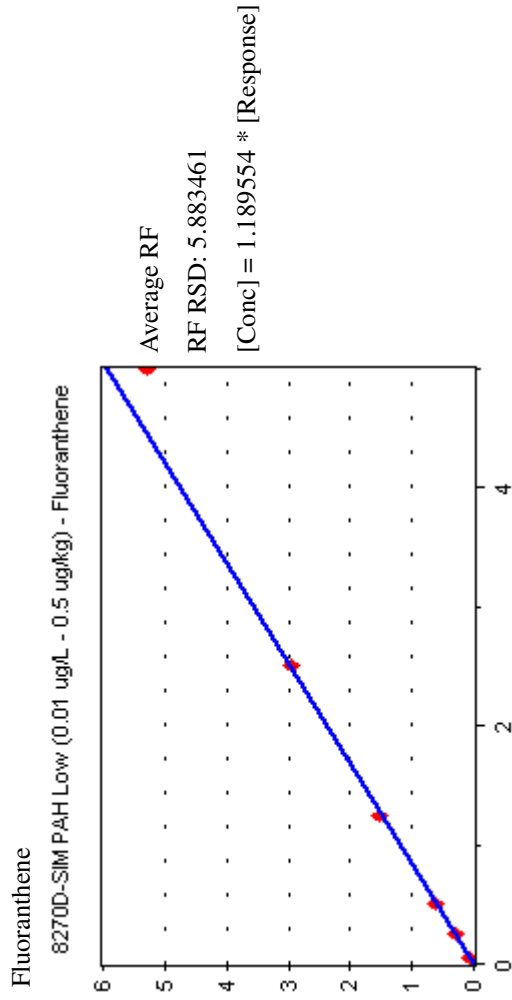
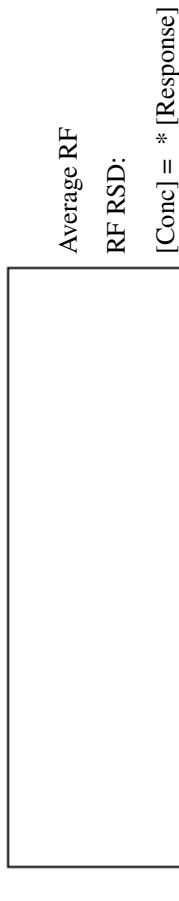


Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

2,3,5-Trimethylnaphthalene
270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2,3,5-Trimethylnaphthe





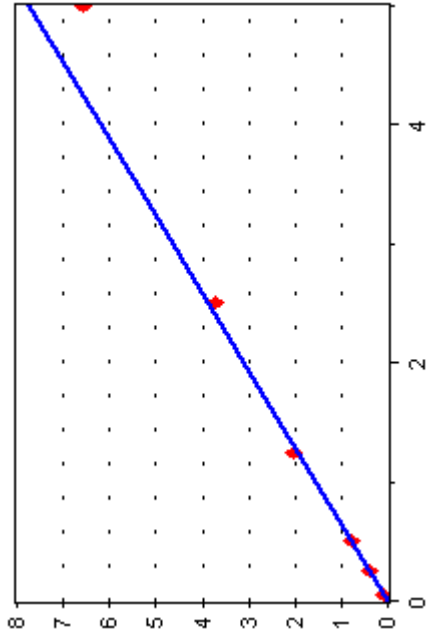
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

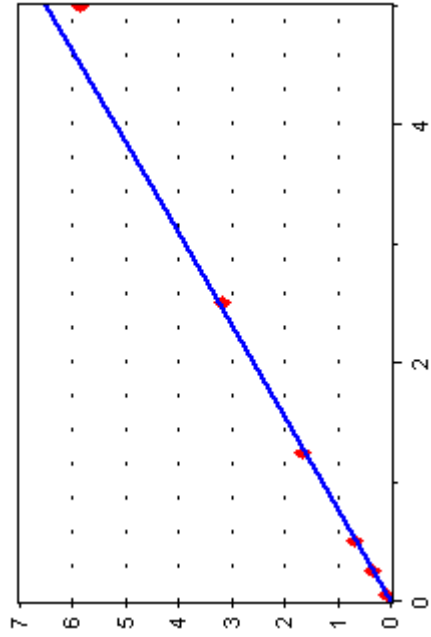
Pyrene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Pyrene



Benzo(a)anthracene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(a)anthracene





Calibration Report

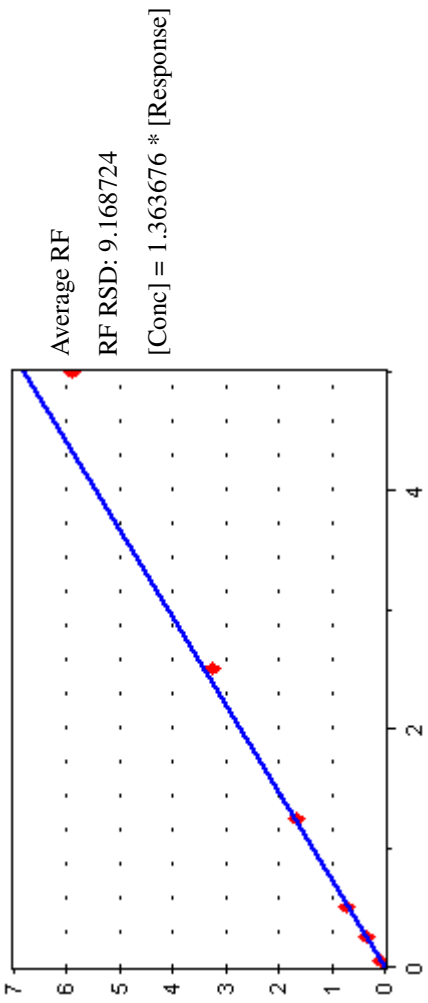
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Dibenzothiophene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzothiophene



Chrysene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Chrysene



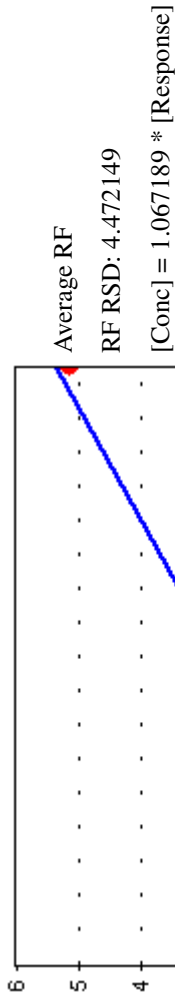


Calibration Report

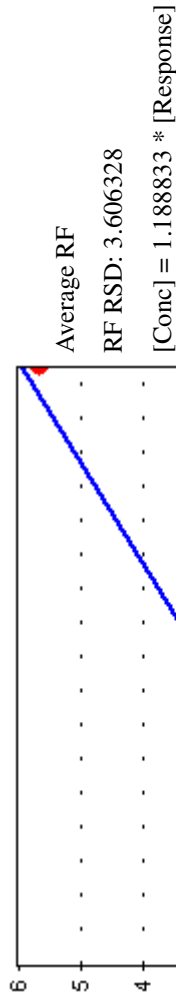
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Benzo(b)fluoranthene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(b)fluoranthene



Benzo(k)fluoranthene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(k)fluoranthene





Calibration Report

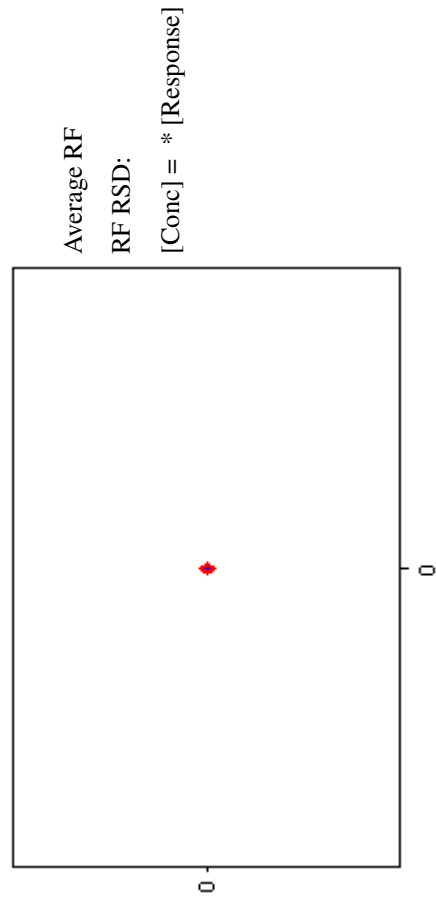
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Carbazole
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Carbazole



1-Methylphenanthrene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 1-Methylphenanthrene



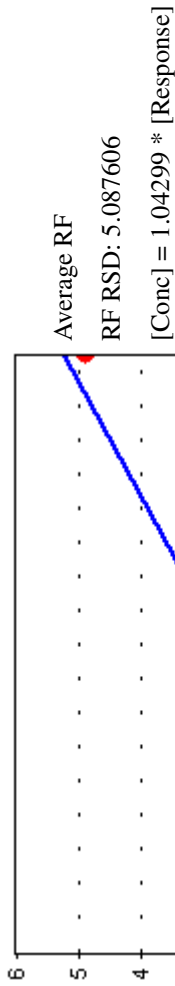


Calibration Report

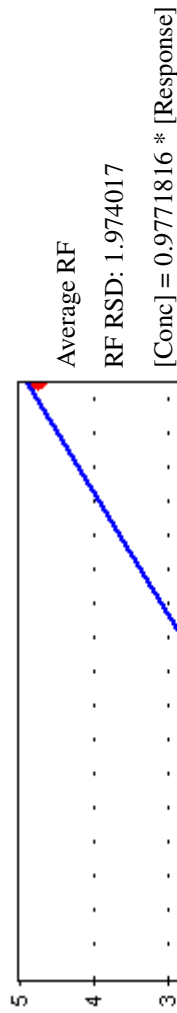
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Benzo(j)fluoranthene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(j)fluoranthene



Benzo(a)pyrene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(a)pyrene



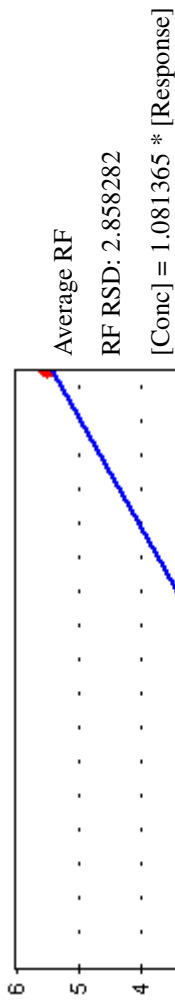


Calibration Report

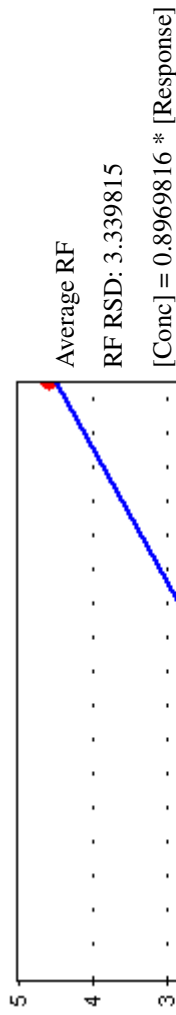
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Indeno(1,2,3-cd)pyrene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Indeno(1,2,3-cd)pyre



Dibenzo(a,h)anthracene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzo(a,h)anthrace



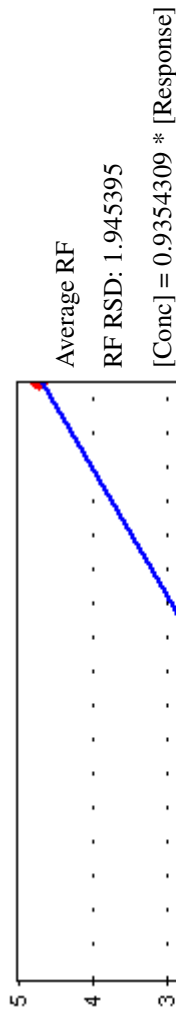


Calibration Report

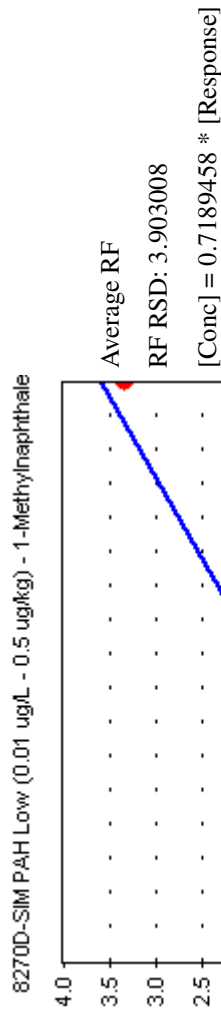
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Benzo(g,h,i)perylene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(g,h,i)perylene



1-Methylnaphthalene





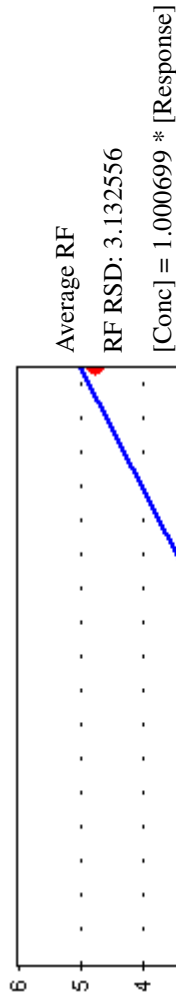
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

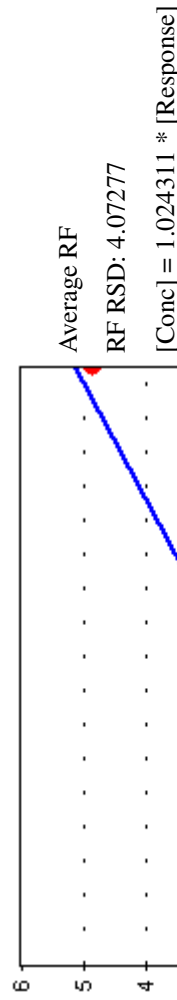
Perylene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Perylene



Benzo(e)pyrene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(e)pyrene



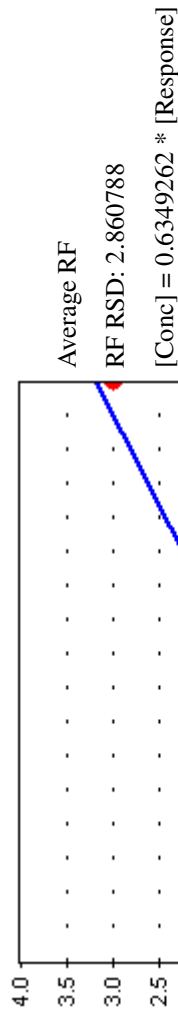


Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

2-Methylnaphthalene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2-Methylnaphthalene



Dibenzo[a,h]anthracene-d14
270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzo[a,h]anthracene



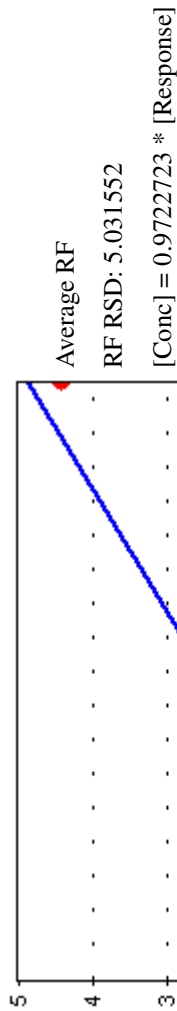


Calibration Report

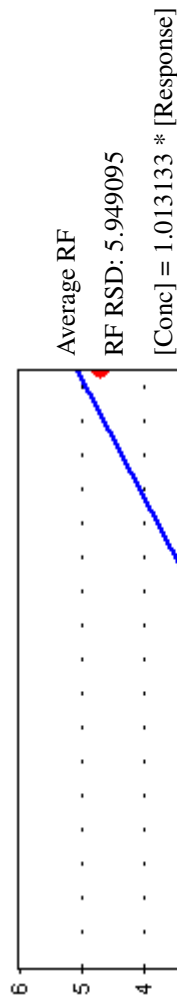
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Calibration ID: Z100066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Fluoranthene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluoranthene-d10



Fluorene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluorene-d10





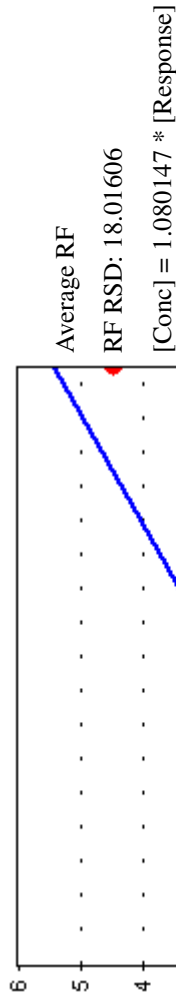
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

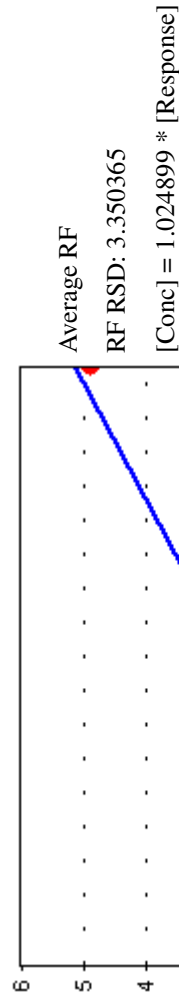
Anthracene-d10

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Anthracene-d10



Benzo(e)pyrene-d12

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(e)pyrene-d12



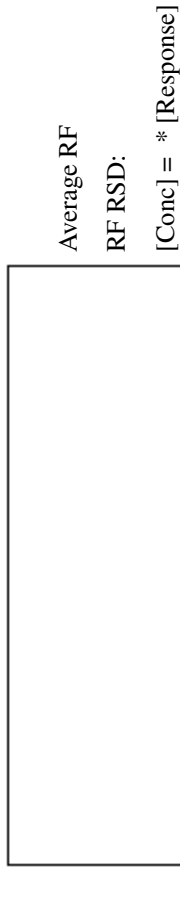


Calibration Report

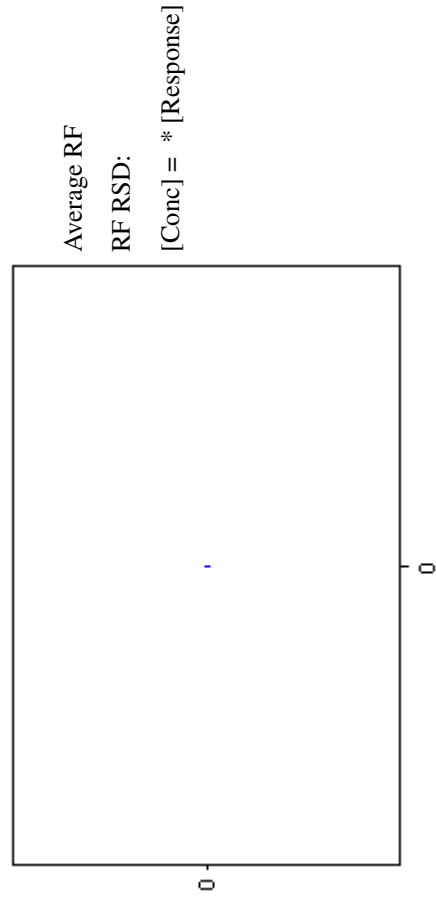
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Naphthalene-d8
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Naphthalene-d8



Acenaphthene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Acenaphthene-d10



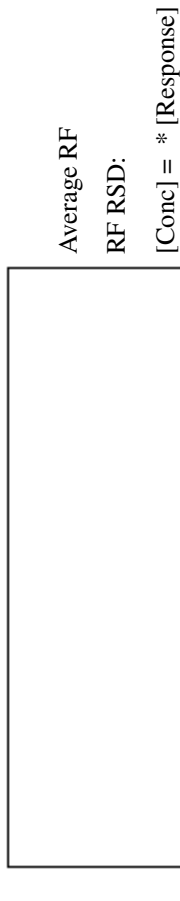


Calibration Report

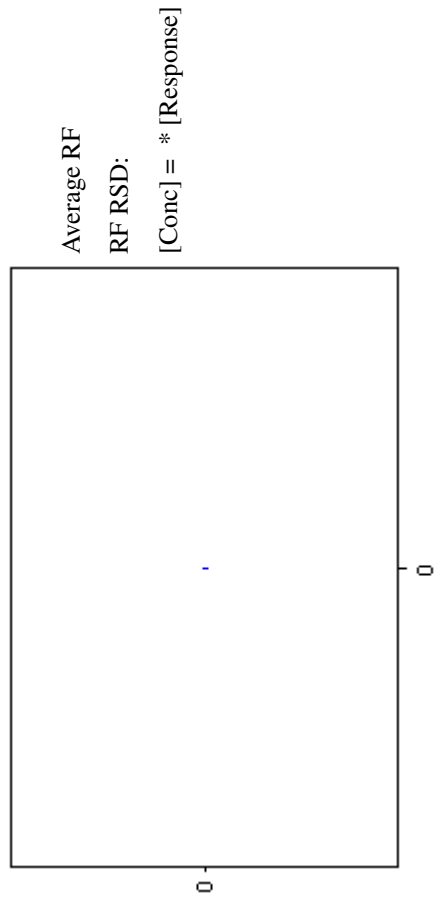
Instrument: NT11
Calibration ID: ZI00066
22-Sep-2016 08:00 By JLW
22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Phenanthrene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Phenanthrene-d10



Chrysene-d12
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Chrysene-d12





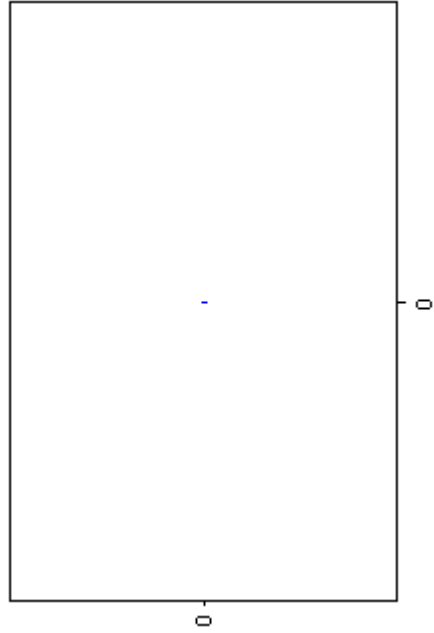
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Perylene-d12

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Perylene-d12



ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Batch File: \\target\share\chem3\nt11.i\20160922.b
 Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	16092202	16092203	16092204	16092205	16092206	16092207	16092207				
INJ. DATE:	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016				
INJ. TIME:	09:14	09:44	10:14	10:44	11:14	11:45	11:45				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV	
* 1 Naphthalene-d8	6.592	6.592	6.592	6.592	6.592	6.592	6.592	6.342-6.842	6.592	0.000	
2 Naphthalene	6.634	6.624	6.624	6.624	6.624	6.624	6.634	6.384-6.884	6.625	0.004	
3 2-Methylnaphthalene-d1	7.569	7.569	7.569	7.569	7.569	7.569	7.569	7.319-7.819	7.569	0.000	
4 2-Methylnaphthalene	7.632	7.622	7.622	7.622	7.622	7.622	7.632	7.382-7.882	7.623	0.004	
5 1-Methylnaphthalene	7.884	7.884	7.884	7.874	7.874	7.874	7.884	7.634-8.134	7.879	0.006	
6 Acenaphthylene	9.440	9.440	9.440	9.440	9.440	9.440	9.440	9.190-9.690	9.440	0.000	
* 7 Acenaphthene-d10	9.595	9.595	9.595	9.595	9.595	9.595	9.595	9.345-9.845	9.595	0.000	
8 Acenaphthene	9.662	9.651	9.651	9.651	9.651	9.651	9.662	9.412-9.912	9.652	0.005	
9 Dibenzofuran	9.861	9.861	9.861	9.861	9.861	9.861	9.861	9.611-10.111	9.861	0.000	
10 Fluorene-d10	10.433	10.433	10.433	10.433	10.423	10.423	10.433	10.183-10.683	10.430	0.005	
11 Fluorene	10.486	10.486	10.486	10.486	10.486	10.486	10.486	10.236-10.736	10.486	0.000	
* 12 Phenanthrene-d10	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.013-12.513	12.263	0.000	
13 Phenanthrene	12.311	12.301	12.301	12.301	12.301	12.301	12.311	12.061-12.561	12.303	0.004	
14 Anthracene-d10	12.330	12.321	12.321	12.321	12.321	12.321	12.330	12.080-12.580	12.322	0.004	
15 Anthracene	12.359	12.359	12.359	12.359	12.359	12.359	12.359	12.109-12.609	12.359	0.000	
16 Fluoranthene-d10	14.357	14.357	14.357	14.357	14.357	14.357	14.357	14.107-14.607	14.357	0.000	
17 Fluoranthene	14.395	14.395	14.395	14.395	14.386	14.386	14.395	14.145-14.645	14.392	0.005	

Reviewer 1
Reviewer 2

Date: _____
Date: _____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Page 34

Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Batch File: \\target\share\chem3\nt11.i\20160922.b
 Inpt ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT1	RT WINDOW	AVG RT	STD DEV1
18 Pyrene	14.885	14.885	14.885	14.885	14.885	14.886	14.885	14.635-15.135	14.885	0.000
19 Benzo(a)anthracene	16.902	16.902	16.902	16.902	16.902	16.902	16.902	16.652-17.152	16.902	0.000
* 20 Chrysene-d12	16.993	16.993	16.993	16.993	16.993	16.993	16.993	16.743-17.243	16.993	0.000
21 Chrysene	17.043	17.043	17.043	17.043	17.043	17.043	17.043	16.793-17.293	17.043	0.000
22 Benzo(b)fluoranthene	18.754	18.754	18.754	18.754	18.754	18.754	18.754	18.504-19.004	18.754	0.000
23 Benzo(k)fluoranthene	18.802	18.793	18.802	18.793	18.793	18.793	18.802	18.552-19.052	18.796	0.005
24 Benzo(j)fluoranthene	18.860	18.860	18.860	18.860	18.860	18.860	18.860	18.610-19.110	18.860	0.000
§ 25 Benzo(e)pyrene-d12	19.427	19.427	19.427	19.427	19.427	19.427	19.427	19.177-19.677	19.427	0.000
26 Benzo(e)pyrene	19.494	19.485	19.485	19.485	19.485	19.485	19.494	19.244-19.744	19.486	0.004
27 Benzo(a)pyrene	19.600	19.600	19.600	19.600	19.600	19.600	19.600	19.350-19.850	19.600	0.000
* 28 Perylene-d12	19.802	19.802	19.802	19.802	19.802	19.802	19.802	19.552-20.052	19.802	0.000
29 Perylene	19.869	19.869	19.869	19.859	19.859	19.859	19.869	19.619-20.119	19.864	0.005
§ 30 Dibenzo(a,h)anthracene	22.151	22.151	22.151	22.151	22.151	22.151	22.151	21.901-22.401	22.151	0.000
31 Dibenzo(a,h)anthracene	22.262	22.262	22.262	22.262	22.262	22.262	22.262	22.012-22.512	22.262	0.000
32 Indeno(1,2,3-cd)pyrene	22.284	22.273	22.273	22.273	22.273	22.273	22.284	22.034-22.534	22.275	0.005
33 Benzo(g,h,i)perylene	23.369	23.358	23.369	23.358	23.358	23.369	23.369	23.119-23.619	23.364	0.006

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code Comments: <i>Z100066</i>	YES	JLW	09/22/2016
2	DFTPP Tune met criteria	YES	JLW	09/22/2016
3	DDT breakdown <20%	YES	JLW	09/22/2016
4	Peak Tailing factor <= 2%	YES	JLW	09/22/2016
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	09/22/2016
6	NO ICAL Q Flag applied	YES	JLW	09/22/2016
7	Manual integrations include before/after pictures	YES	JLW	09/22/2016
8	Spectral Library matches updated	YES	JLW	09/22/2016
9	Internal Standard areas within 50-200% from reference	YES	JLW	09/22/2016
10	Minimum response factors met	YES	JLW	09/22/2016
11	All SCV within +/- 20% (DOD)	YES	JLW	09/22/2016
12	All SCV within +/- 30%	YES	JLW	09/22/2016
13	NO Linear or Quadratic fits used	YES	JLW	09/22/2016
14	NO Calibration points dropped	YES	JLW	09/22/2016
15	Additional notes	NA	JLW	09/22/2016
16	Reviewer approval (Reviewer) Comments: <i>Z100066 ICAL</i>	YES	BB	09/22/2016

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Calibration: ZI00066

Laboratory ID: SEI0302-SCV1

Sequence: SEI0302

Sequence Name: SIMPNA SCV
Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	242	-3.2	20.00
2-Methylnaphthalene	250.00	228	-9.0	20.00
Acenaphthylene	250.00	239	-4.6	20.00
Acenaphthene	250.00	264	5.6	20.00
Fluorene	250.00	234	-6.6	20.00
Phenanthrene	250.00	243	-3.0	20.00
Anthracene	250.00	246	-1.6	20.00
Fluoranthene	250.00	237	-5.4	20.00
Pyrene	250.00	243	-2.8	20.00
Benzo(a)anthracene	250.00	234	-6.3	20.00
Chrysene	250.00	234	-6.3	20.00
Benzo(b)fluoranthene	250.00	232	-7.1	20.00
Benzo(k)fluoranthene	250.00	231	-7.8	20.00
Benzo(a)pyrene	250.00	246	-1.7	20.00
Indeno(1,2,3-cd)pyrene	250.00	237	-5.3	20.00
Dibenzo(a,h)anthracene	250.00	234	-6.5	20.00
Benzo(g,h,i)perylene	250.00	235	-6.1	20.00
Benzo(a)fluoranthene, Total	500.00	463	-7.4	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20160922.16\16092208.D

Date : 22-SEP-2016 12:15

Client ID:

Sample Info: SEI0302-SCW1

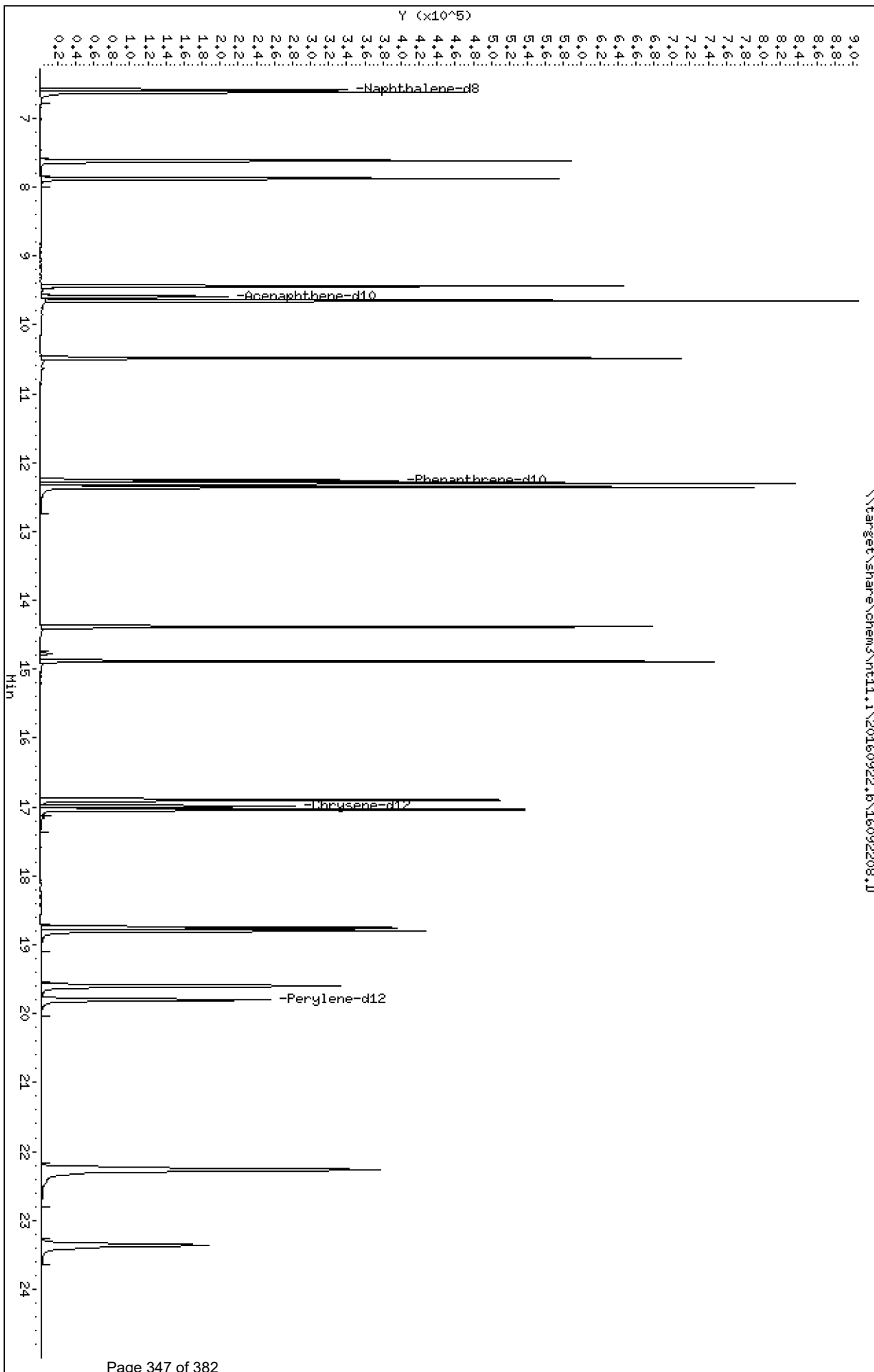
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

Page 1



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160922.b\16092208.D

Lab Smp Id: SEI0302-SCV1

Inj Date : 22-SEP-2016 12:15

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEI0302-SCV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160922.b\lowsim.m

Meth Date : 22-Sep-2016 13:43 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 8

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.592	6.592	(1.000)	487352	200.000	
2 Naphthalene	128		6.623	6.634	(1.005)	677115	242.124	242
§ 3 2-Methylnaphthalene-d10	152		Compound Not Detected.					
4 2-Methylnaphthalene	142		7.621	7.632	(1.156)	437980	227.561	228
5 1-Methylnaphthalene	142		7.873	7.884	(1.194)	428474	244.577	245
6 Acenaphthylene	152		9.440	9.440	(0.984)	599623	238.514	239
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	270378	200.000	
8 Acenaphthene	153		9.650	9.661	(1.006)	442003	263.976	264
9 Dibenzofuran	168		Compound Not Detected.					
§ 10 Fluorene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.485	10.485	(1.093)	452287	233.590	234
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	473421	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	771373	242.552	243
§ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		12.359	12.359	(1.008)	762983	245.938	246
§ 16 Fluoranthene-d10	212		Compound Not Detected.					
17 Fluoranthene	202		14.386	14.395	(1.173)	665983	236.517	237
18 Pyrene	202		14.885	14.885	(0.876)	749421	242.996	243
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	605079	234.170	234
* 20 Chrysene-d12	240		16.993	16.993	(1.000)	398080	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	635603	234.172	234
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	530181	232.366	232
23 Benzo(k)fluoranthene	252		18.793	18.802	(0.949)	586006	230.553	231
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	513346	245.711	246
* 28 Perylene-d12	264		19.801	19.801	(1.000)	427603	200.000	
29 Perylene	252		Compound Not Detected.					
§ 30 Dibenzo(a,h)anthracene-d14	292		Compound Not Detected.					
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	448303	233.764	234
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.283	(1.125)	547471	236.798	237
33 Benzo(g,h,i)perylene	276		23.358	23.369	(1.180)	469293	234.651	235

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092208.D
 Lab Smp Id: SEI0302-SCV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Misc Info:

Calibration Date: 22-SEP-2016
 Calibration Time: 09:14
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	487352	-7.59
7 Acenaphthene-d10	297518	148759	595036	270378	-9.12
12 Phenanthrene-d10	522042	261021	1044084	473421	-9.31
20 Chrysene-d12	389499	194750	778998	398080	2.20
28 Perylene-d12	430626	215313	861252	427603	-0.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.59	0.00
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092208.D

Lab ID: SEI0302-SCV1

nt11.i, 20160922.b\lowsim.m, 22-SEP-2016 12:15

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160922.b\lowsim.m, PEMD.sub = 0.0000



SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Calibration: ZI00066

Laboratory ID: SEI0302-SCV1

Sequence: SEI0302

Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	242	-3.2	20.00
2-Methylnaphthalene	250.00	228	-9.0	20.00
Acenaphthylene	250.00	239	-4.6	20.00
Acenaphthene	250.00	264	5.6	20.00
Fluorene	250.00	234	-6.6	20.00
Phenanthrene	250.00	243	-3.0	20.00
Anthracene	250.00	246	-1.6	20.00
Fluoranthene	250.00	237	-5.4	20.00
Pyrene	250.00	243	-2.8	20.00
Benzo(a)anthracene	250.00	234	-6.3	20.00
Chrysene	250.00	234	-6.3	20.00
Benzo(b)fluoranthene	250.00	232	-7.1	20.00
Benzo(k)fluoranthene	250.00	231	-7.8	20.00
Benzo(a)pyrene	250.00	246	-1.7	20.00
Indeno(1,2,3-cd)pyrene	250.00	237	-5.3	20.00
Dibenzo(a,h)anthracene	250.00	234	-6.5	20.00
Benzo(g,h,i)perylene	250.00	235	-6.1	20.00
Benzofluoranthenes, Total	500.00	463	-7.4	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20160922.16\16092208.D

Date : 22-SEP-2016 12:15

Client ID:

Sample Info: SEI0302-SCW1

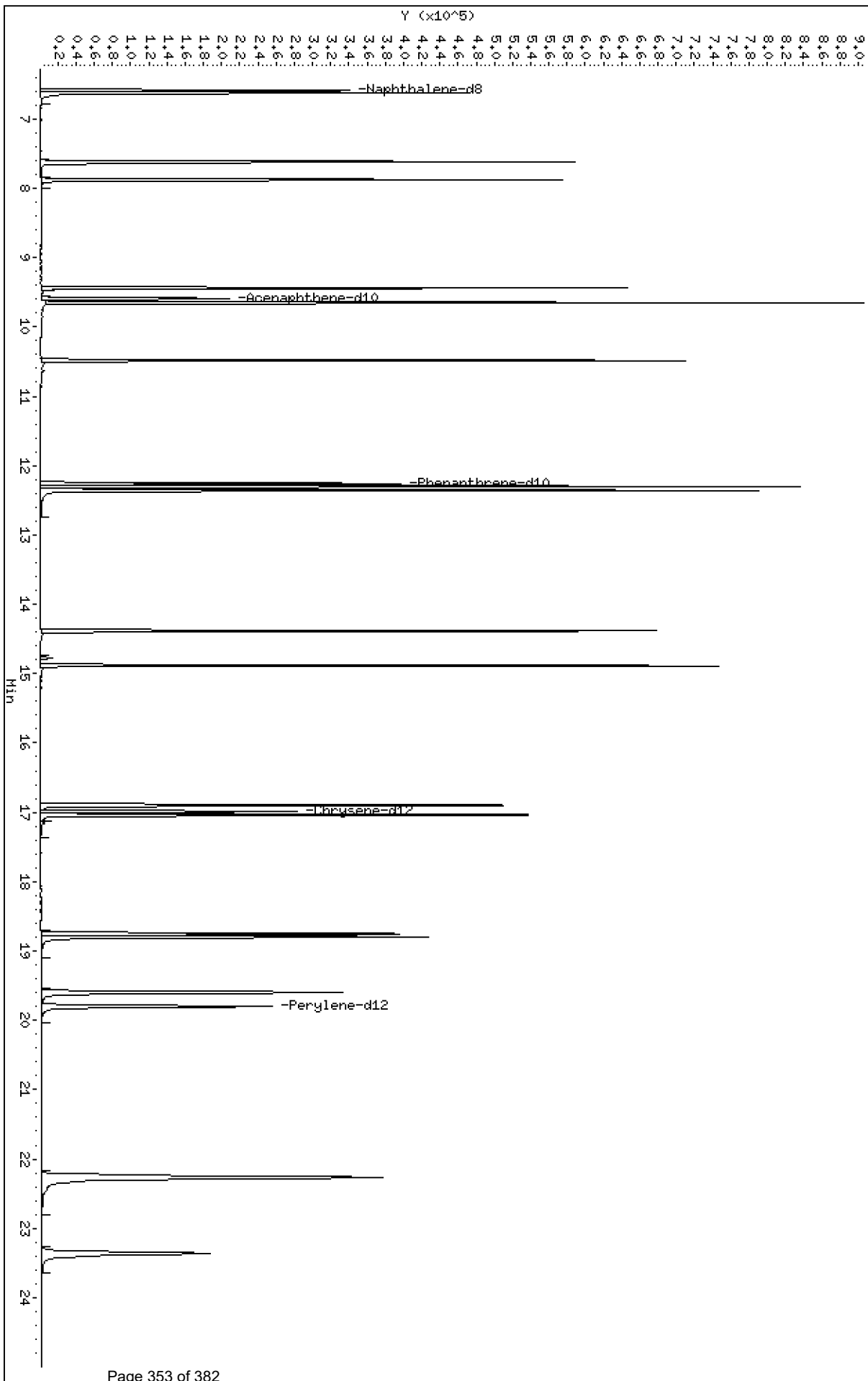
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160922.16\16092208.D



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160922.b\16092208.D

Lab Smp Id: SEI0302-SCV1

Inj Date : 22-SEP-2016 12:15

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEI0302-SCV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160922.b\lowsim.m

Meth Date : 22-Sep-2016 13:43 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 8

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	CONCENTRATIONS					
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)
* 1 Naphthalene-d8	136		6.592	6.592	(1.000)	487352	200.000	
2 Naphthalene	128		6.623	6.634	(1.005)	677115	242.124	242
§ 3 2-Methylnaphthalene-d10	152		Compound Not Detected.					
4 2-Methylnaphthalene	142		7.621	7.632	(1.156)	437980	227.561	228
5 1-Methylnaphthalene	142		7.873	7.884	(1.194)	428474	244.577	245
6 Acenaphthylene	152		9.440	9.440	(0.984)	599623	238.514	239
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	270378	200.000	
8 Acenaphthene	153		9.650	9.661	(1.006)	442003	263.976	264
9 Dibenzofuran	168		Compound Not Detected.					
§ 10 Flourene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.485	10.485	(1.093)	452287	233.590	234
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	473421	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	771373	242.552	243
§ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		12.359	12.359	(1.008)	762983	245.938	246
§ 16 Fluoranthene-d10	212		Compound Not Detected.					
17 Fluoranthene	202		14.386	14.395	(1.173)	665983	236.517	237
18 Pyrene	202		14.885	14.885	(0.876)	749421	242.996	243
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	605079	234.170	234
* 20 Chrysene-d12	240		16.993	16.993	(1.000)	398080	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	635603	234.172	234
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	530181	232.366	232
23 Benzo(k)fluoranthene	252		18.793	18.802	(0.949)	586006	230.553	231
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	513346	245.711	246
* 28 Perylene-d12	264		19.801	19.801	(1.000)	427603	200.000	
29 Perylene	252		Compound Not Detected.					
§ 30 Dibenzo(a,h)anthracene-d14	292		Compound Not Detected.					
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	448303	233.764	234
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.283	(1.125)	547471	236.798	237
33 Benzo(g,h,i)perylene	276		23.358	23.369	(1.180)	469293	234.651	235

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092208.D
 Lab Smp Id: SEI0302-SCV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Misc Info:

Calibration Date: 22-SEP-2016
 Calibration Time: 09:14
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	487352	-7.59
7 Acenaphthene-d10	297518	148759	595036	270378	-9.12
12 Phenanthrene-d10	522042	261021	1044084	473421	-9.31
20 Chrysene-d12	389499	194750	778998	398080	2.20
28 Perylene-d12	430626	215313	861252	427603	-0.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.59	0.00
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092208.D

Lab ID: SEI0302-SCV1

nt11.i, 20160922.b\lowsim.m, 22-SEP-2016 12:15

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160922.b\lowsim.m, PEMD.sub = 0.0000



INITIAL CALIBRATION CHECK

EPA 8270D-SIM

Laboratory: <u>Analytical Resources, Inc.</u>	SDG: <u>16I0160</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>Port Gamble Shellfish Monitoring (PEMD)</u>
Instrument ID: <u>NT11</u>	Calibration: <u>ZI00066</u>
Lab File ID: <u>16092302.D</u>	Calibration Date: <u>09/22/16 08:00</u>
Sequence: <u>SEI0321</u>	Injection Date: <u>09/23/16</u>
Lab Sample ID: <u>SEI0321-ICV1</u>	Injection Time: <u>08:10</u>
Sequence Name: <u>SIM PAH 250</u>	

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	250	1.1476540	1.1461860		0.0	20
2-Methylnaphthalene	A	250.00	247	0.7898471	0.7794142		-1.2	20
Acenaphthylene	A	250.00	245	1.8596130	1.8231180		-2.0	20
Acenaphthene	A	250.00	250	1.2385680	1.2404810		0.0	20
Fluorene	A	250.00	251	1.4322460	1.4365200		0.4	20
Phenanthrene	A	250.00	256	1.3435150	1.3735310		2.4	20
Anthracene	A	250.00	262	1.3106040	1.3721040		4.8	20
Fluoranthene	A	250.00	257	1.1895540	1.2229920		2.8	20
Pyrene	A	250.00	235	1.5494790	1.4587530		-6.0	20
Benzo(a)anthracene	A	250.00	245	1.2981970	1.2742910		-2.0	20
Chrysene	A	250.00	246	1.3636760	1.3418910		-1.6	20
Benzo(b)fluoranthene	A	250.00	254	1.0671890	1.0822750		1.6	20
Benzo(k)fluoranthene	A	250.00	258	1.1888330	1.2277120		3.2	20
Benzo(e)pyrene	A	250.00	256	1.0243110	1.0504680		2.4	20
Benzo(a)pyrene	A	250.00	256	0.9771816	0.9996617		2.4	20
Indeno(1,2,3-cd)pyrene	A	250.00	252	1.0813650	1.0921200		0.8	20
Dibenzo(a,h)anthracene	A	250.00	251	0.8969816	0.9012189		0.4	20
Benzo(g,h,i)perylene	A	250.00	247	0.9354309	0.9228115		-1.2	20
Perylene	A	250.00	254	1.0006990	1.0147400		1.6	20
2-Methylnaphthalene-d10	A	250.00	241	0.6349262	0.6130551		-3.6	20
Dibenzo[a,h]anthracene-d14	A	250.00	250	0.6574024	0.6574774		0.0	20
Fluoranthene-d10	A	250.00	243	0.9722723	0.9456705		-2.8	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20160923_b\16092302.D

Date : 23-SEP-2016 08:10

Client ID:

Sample Info: SEI0321-ICW1

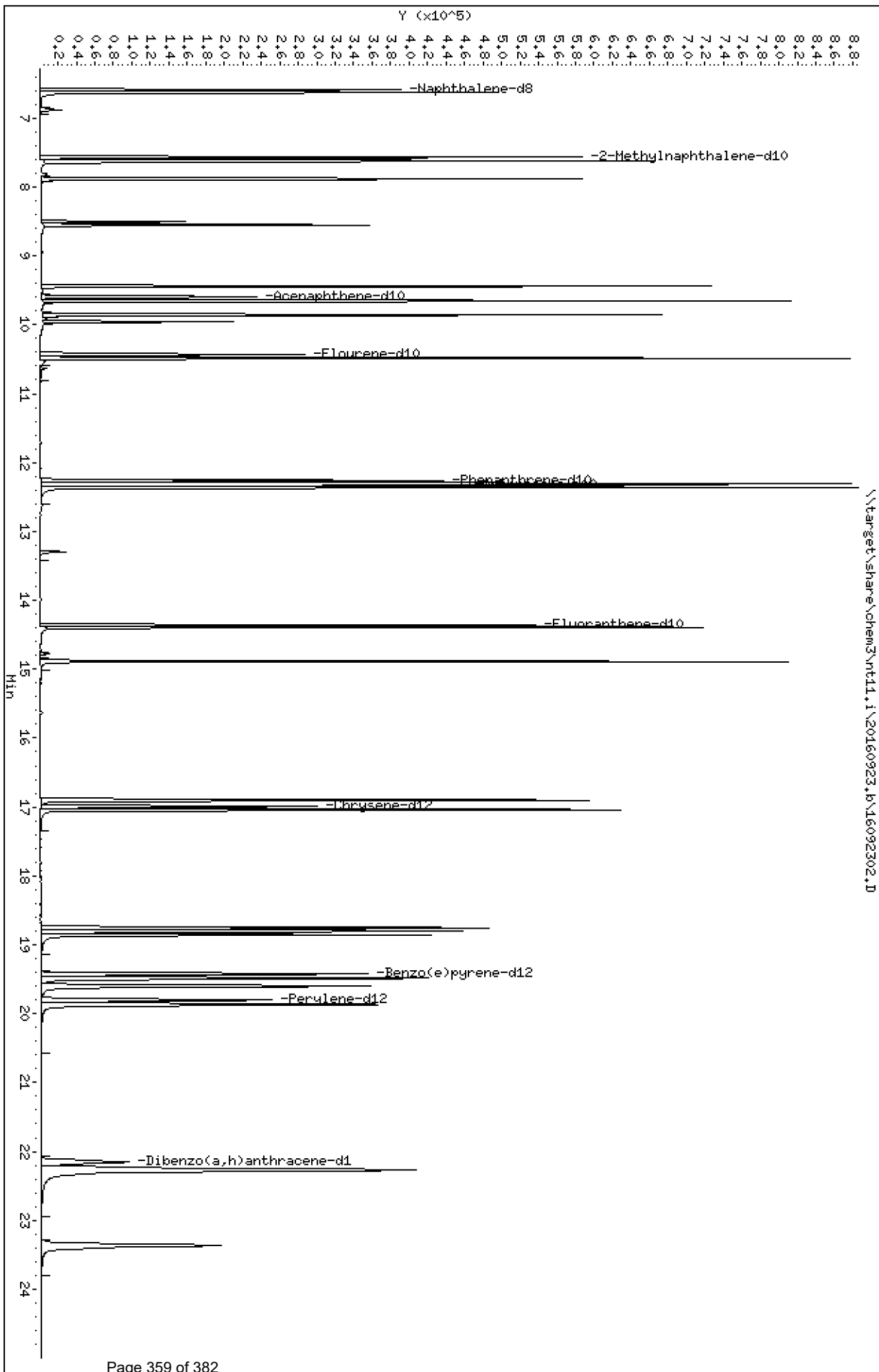
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

Page 1



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092302.D

Lab Smp Id: SEI0321-ICV1

Inj Date : 23-SEP-2016 08:10

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEI0321-ICV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 2

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	AMOUNTS					
			MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)
* 1 Naphthalene-d8	136		6.592	6.592	(1.000)	531746	200.000	
2 Naphthalene	128		6.623	6.623	(1.005)	761850	250.000	250
\$ 3 2-Methylnaphthalene-d10	152		7.569	7.569	(1.148)	407487	250.000	241
4 2-Methylnaphthalene	142		7.621	7.621	(1.156)	518063	250.000	247
5 1-Methylnaphthalene	142		7.884	7.884	(1.196)	467186	250.000	244
6 Acenaphthylene	152		9.440	9.440	(0.984)	643677	250.000	245
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	282451	200.000	
8 Acenaphthene	153		9.650	9.650	(1.006)	437969	250.000	250
9 Dibenzofuran	168		9.860	9.860	(1.028)	642294	250.000	253
\$ 10 Flourene-d10	174		10.432	10.432	(1.087)	348478	250.000	244
11 Fluorene	166		10.485	10.485	(1.093)	507183	250.000	251
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	489933	200.000	
13 Phenanthrene	178		12.310	12.310	(1.004)	841173	250.000	256
\$ 14 Anthracene-d10	188		12.330	12.330	(1.005)	576859	250.000	218
15 Anthracene	178		12.358	12.358	(1.008)	840299	250.000	262
\$ 16 Fluoranthene-d10	212		14.356	14.356	(1.171)	579144	250.000	243
17 Fluoranthene	202		14.395	14.395	(1.174)	748980	250.000	257
18 Pyrene	202		14.885	14.885	(0.876)	736517	250.000	235
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	643383	250.000	245
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	403916	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	677514	250.000	246
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	575808	250.000	254
23 Benzo(k)fluoranthene	252		18.792	18.792	(0.949)	653186	250.000	258
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	575846	250.000	259
\$ 25 Benzo(e)pyrene-d12	264		19.426	19.426	(0.981)	548243	250.000	251
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	558886	250.000	256
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	531855	250.000	256
* 28 Perylene-d12	264		19.801	19.801	(1.000)	425628	200.000	
29 Perylene	252		19.868	19.868	(1.003)	539877	250.000	254
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	349801	250.000	250
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	479480	250.000	251
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.272	(1.125)	581046	250.000	252
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	490968	250.000	247

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092302.D
 Lab Smp Id: SEI0321-ICV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 15:32
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	531746	0.83
7 Acenaphthene-d10	297518	148759	595036	282451	-5.06
12 Phenanthrene-d10	522042	261021	1044084	489933	-6.15
20 Chrysene-d12	389499	194750	778998	403916	3.70
28 Perylene-d12	430626	215313	861252	425628	-1.16

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.59	0.00
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092302.D

Lab ID: SEI0321-ICV1

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 08:10

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160923.b

Instrument: nt11.i Date: 23-SEP-2016 Method: 20160923.b\lowsim.m

INITIAL CAL: 22-SEP-2016

Compound	%RSD or R ²

NO Q-FLAGS	

ICV CAL: 16092302.D 23-SEP-2016 08:10

Compound	%D

NO Q-FLAGS	



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0302

Instrument: NT11

Calibration: ZI00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SEI0302-TUN1	16092201.D	Tissue	09/22/16 08:56
Cal Standard	SEI0302-CAL4	16092202.D	Tissue	09/22/16 09:14
Cal Standard	SEI0302-CAL1	16092203.D	Tissue	09/22/16 09:44
Cal Standard	SEI0302-CAL5	16092204.D	Tissue	09/22/16 10:14
Cal Standard	SEI0302-CAL2	16092205.D	Tissue	09/22/16 10:44
Cal Standard	SEI0302-CAL3	16092206.D	Tissue	09/22/16 11:14
Cal Standard	SEI0302-CAL6	16092207.D	Tissue	09/22/16 11:45
Secondary Cal Check	SEI0302-SCV1	16092208.D	Tissue	09/22/16 12:15

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160922.b

Time	Filename	LabID	ClientID	DF										
1 1856	16092201.D	SEI0302-TUN1		1	NO	ISTDS	FOUND							
2 0914	16092202.D	SEI0302-CAL4		1	6.59	527377	9.60	297518	12.26	522042	16.99	389499	19.80	430626
3 0944	16092203.D	SEI0302-CAL1		1	6.59	510999	9.60	283165	12.26	510999	16.99	388629	19.80	421581
4 1014	16092204.D	SEI0302-CAL5		1	6.59	517112	9.60	295511	12.26	517969	16.99	410409	19.80	441886
5 1044	16092205.D	SEI0302-CAL2		1	6.59	510742	9.60	281455	12.26	506476	16.99	401586	19.80	434245
6 1114	16092206.D	SEI0302-CAL3		1	6.59	513068	9.60	284181	12.26	506454	16.99	412821	19.80	440769
7 1145	16092207.D	SEI0302-CAL6		1	6.59	524176	9.60	293896	12.26	517277	16.99	421915	19.80	451292
8 1215	16092208.D	SEI0302-SCV1		1	6.59	487352	9.60	270378	12.26	473421	16.99	398080	19.80	427603

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160922.b

AR Job No.: SEI0 Method: DFTPP.m Instrument: nt11.i Date: 22-SEP-2016

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0856	16092201.D	SEI0302-TUN1		1	NO MANUAL INTEGRATION
0914	16092202.D	SEI0302-CAL4		1	Anthracene, Anthracene-d10,
0944	16092203.D	SEI0302-CAL1		1	Anthracene-d10,
1014	16092204.D	SEI0302-CAL5		1	Anthracene, Anthracene-d10,
1044	16092205.D	SEI0302-CAL2		1	Anthracene-d10,
1114	16092206.D	SEI0302-CAL3		1	Anthracene-d10,
1145	16092207.D	SEI0302-CAL6		1	Anthracene, Anthracene-d10,
1215	16092208.D	SEI0302-SCV1		1	NO MANUAL INTEGRATION



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: Z100066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SEI0321-TUN1	16092301.D	Tissue	09/23/16 07:53
Initial Cal Check	SEI0321-ICV1	16092302.D	Tissue	09/23/16 08:10
Blank	BEI0260-BLK1	16092305.D	Tissue	09/23/16 10:00
LCS	BEI0260-BS1	16092306.D	Tissue	09/23/16 10:30
PG-SMA1-1-PEMD-160909-A	16I0160-01	16092307.D	Tissue	09/23/16 11:01
PG-SMA1-2-PEMD-160909-A	16I0160-03	16092308.D	Tissue	09/23/16 11:31
PG-SMA1-102-PEMD-160909-A	16I0160-04	16092309.D	Tissue	09/23/16 12:01
PG-SMA1-3-PEMD-160909-A	16I0160-05	16092310.D	Tissue	09/23/16 12:31
PG-PJ-1-PEMD-160909-A	16I0160-07	16092311.D	Tissue	09/23/16 13:01
PG-GP-1-PEMD-160909-A	16I0160-09	16092312.D	Tissue	09/23/16 13:32
PG-WS-1-PEMD-160909-A	16I0160-11	16092313.D	Tissue	09/23/16 14:02
PG-FB-PEMD-160909	16I0160-13	16092314.D	Tissue	09/23/16 14:32
PG-TB-PEMD-160909	16I0160-14	16092315.D	Tissue	09/23/16 15:02
Calibration Check	SEI0321-CCV1	16092316.D	Tissue	09/23/16 15:32

Port Gamble Shellfish Monitoring (PEMD)**16I0160**

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES	JLW	09/26/2016
2	DDT Breakdown <20% and Peak Tailing <=2	YES	JLW	09/26/2016
3	ICV/CCV Meets %D	YES	JLW	09/26/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES	JLW	09/26/2016
5	Internal Standard areas within 50-200%	NO	JLW	09/26/2016
	Comments: <i>16I0393-01 (PEMD BLK) IS high due, no further sample to remake and re-inject.</i>			
6	Retention times within windows and Coelution summary checked	YES	JLW	09/26/2016
7	Manual integrations include summary and before/after pictures	YES	JLW	09/26/2016
8	Project specific requirements have been met	YES	JLW	09/26/2016
9	Sample dilution factors have been correctly applied	NA	JLW	09/26/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	NO *	JLW	09/26/2016
	Comments: <i>QC Sample BEI0260-BLK1 failed criteria for 2-Methylnaphthalene in 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg). MDL = 1.13 ug/kg MRL = 1.13 ug/kg Result = 1.13 ug/kg Criterion = 1 x MRL - Flagged value is not within established control limits.</i>			
	<i>QC Sample BEI0260-BLK1 failed criteria for Naphthalene in 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg). MDL = 1.13 ug/kg MRL = 1.35 ug/kg Result = 2.20 ug/kg Criterion = 1 x MRL - Flagged value is not within established control limits.</i>			
11	AUTOCHECK: Check blank spike recovery	YES *	JLW	09/26/2016
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA *	JLW	09/26/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES *	JLW	09/26/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA *	JLW	09/26/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA *	JLW	09/26/2016
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA *	JLW	09/26/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA *	JLW	09/26/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA *	JLW	09/26/2016

Port Gamble Shellfish Monitoring (PEMD)**16I0160****Analysis****Matrix****Method****8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)****Tissue****EPA 8270D-SIM****Checklist: Analyst Checklist-SVOA**

#	Checklist Item	Response	Analyst Initials	Date
19	AUTOCHECK: Check Surrogate recoveries	NO *	JLW	09/26/2016

Comments:

Reviewer: Field surrogate spiked into PEMD strip before use.

Surrogate Recovery for Anthracene-d10 (7.08%) was outside acceptance limits (30-160) in 16I0160-01 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (0.556%) was outside acceptance limits (30-160) in 16I0160-01 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (6.08%) was outside acceptance limits (30-160) in 16I0160-03 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (0.601%) was outside acceptance limits (30-160) in 16I0160-03 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (3.67%) was outside acceptance limits (30-160) in 16I0160-04 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (0.642%) was outside acceptance limits (30-160) in 16I0160-04 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (3.12%) was outside acceptance limits (30-160) in 16I0160-05 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (0.597%) was outside acceptance limits (30-160) in 16I0160-05 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (23.4%) was outside acceptance limits (30-160) in 16I0160-07 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (3.41%) was outside acceptance limits (30-160) in 16I0160-07 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Anthracene-d10 (17.6%) was outside acceptance limits (30-160) in 16I0160-09 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)

- Flagged value is not within established control limits.

Surrogate Recovery for Fluorene-d10 (1.36%) was outside acceptance limits (30-160) in 16I0160-09 for 8270D-SIM

Port Gamble Shellfish Monitoring (PEMD)**16I0160****Analysis****Matrix****Method****8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)****Tissue****EPA 8270D-SIM****Checklist: Analyst Checklist-SVOA**

#	Checklist Item	Response	Analyst Initials	Date
	<i>PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
	<i>Surrogate Recovery for Anthracene-d10 (21.4%) was outside acceptance limits (30-160) in 16I0160-11 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
	<i>Surrogate Recovery for Fluorene-d10 (2.77%) was outside acceptance limits (30-160) in 16I0160-11 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
	<i>Surrogate Recovery for 2-Methylnaphthalene-d10 (29.7%) was outside acceptance limits (30-160) in 16I0393-01 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
20	AUTOCHECK: Checks Surrogate spike list against Analysis	YES *	JLW	09/26/2016
21	Analyst checklist completed (PEER)	YES	VTS	09/27/2016
22	Data is locked and Status is Analyzed (PEER)	YES	VTS	09/27/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES	VTS	09/27/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES	VTS	09/27/2016
25	Qualifiers have been correctly added (PEER)	YES	VTS	09/27/2016
26	Checklist completed and status is peer reviewed (REVIEWER)	YES	VTS	09/27/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	YES	VTS	09/27/2016
28	All requested samples have been reported (REVIEWER)	YES	VTS	09/27/2016
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	VTS	09/27/2016
30	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	JLW	09/26/2016

Comments:

16I0393-01 (PEMD BLK) IS high due, no further sample to remake and re-inject.

16I0160 Field Surr corrected for the 32cm strip becoming 20cm

BEI0260 Inhouse Surr and Inhouse spike, field surrs marked as non-reportable since compounds were not added

16I0393 Field Surr and Inhouse Surr corrected for the 32cm strip becoming 20cm

BEI0706 Field Surr, Inhouse Surr, and spike corrected for the 32cm strip becoming 20cm

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160923.b

Time	Filename	LabID	ClientId	DF	1	INO	ISTDS	FOUND	1	INO	ISTDS	FOUND		
1	753	16092301.D	SEI0321-TUN1	1	6.59	531746	9.60	282451	12.26	489933	16.99	403916	19.80	425628
2	810	16092302.D	SEI0321-ICV1	1	6.58	719747	9.58	387130	12.26	707948	16.99	541016	19.81	668004
3	0900	16092303.D	BEI0706-BS1	1	6.58	1006700	9.58	608435	12.26	1093670	16.99	836424	19.80	1037253
4	0930	16092304.D	BEI0260-BLK1	1	6.57	516337	9.58	312326	12.26	557721	16.99	452530	19.80	553033
5	1000	16092305.D	BEI0260-BLK1	1	6.58	681602	9.58	424011	12.26	776722	16.99	597025	19.80	741485
6	1030	16092306.D	BEI0260-BS1	1	6.58	690769	9.60	425147	12.26	763118	16.99	632402	19.80	800165
7	1101	16092307.D	BEI0160-01	1	6.57	572871	9.58	351011	12.26	631287	16.99	528076	19.80	651539
8	1131	16092308.D	BEI0160-03	1	6.57	631882	9.58	365661	12.26	649559	16.99	530634	19.80	644095
9	1201	16092309.D	BEI0160-04	1	6.57	503582	9.58	293126	12.25	534194	16.99	452356	19.80	560321
10	1231	16092310.D	BEI0160-05	1	6.58	461726	9.58	270402	12.26	488728	16.99	397691	19.80	485256
11	1301	16092311.D	BEI0160-07	1	6.58	525522	9.58	304570	12.26	568990	16.99	454404	19.80	550445
12	1332	16092312.D	BEI0160-09	1	6.57	560457	9.58	324471	12.26	604422	16.99	470696	19.80	557766
13	1402	16092313.D	BEI0160-11	1	6.57	527500	9.58	304864	12.26	576748	16.99	437336	19.80	519445
14	1432	16092314.D	BEI0160-13	1	6.57	525727	9.58	302028	12.26	564762	16.99	431331	19.80	504710
15	1502	16092315.D	BEI0321-CCV1	1	6.59	473648	9.60	304406	12.26	550198	16.99	463926	19.80	482464
16	1532	16092316.D	SEI0321-CCV1	1	6.59	473648	9.60	304406	12.26	550198	16.99	463926	19.80	482464

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160923.b

ARF Job No.: SEI0 Method: DFPPP.m Instrument: nt11.i Date: 23-SEP-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0753	16092301.D	SEI0321-TUN1		1	NO MANUAL INTEGRATION
0810	16092302.D	SEI0321-ICV1		1	NO MANUAL INTEGRATION
0900	16092303.D	BEI0706-BS1		1	NO MANUAL INTEGRATION
0930	16092304.D	16I0393-01		1	Acenaphthylene,
1000	16092305.D	BEI0260-BLK1		1	NO MANUAL INTEGRATION
1030	16092306.D	BEI0260-BS1		1	NO MANUAL INTEGRATION
1101	16092307.D	16I0160-01		1	Flourene-d10,
1131	16092308.D	16I0160-03		1	Flourene-d10,
1201	16092309.D	16I0160-04		1	Flourene-d10,
1231	16092310.D	16I0160-05		1	Flourene-d10,
1301	16092311.D	16I0160-07		1	Flourene-d10,
1332	16092312.D	16I0160-09		1	Benzo(e)pyrene, Flourene-d10,
1402	16092313.D	16I0160-11		1	Flourene-d10,
1432	16092314.D	16I0160-13		1	Benzo(e)pyrene,
1502	16092315.D	16I0160-14		1	Anthracene, Benzo(k)fluoranthene, Perylene, Benzo(e)pyrene,
1532	16092316.D	SEI0321-CCV1		1	NO MANUAL INTEGRATION



SURROGATE RECOVERY AND RT SUMMARY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Sequence: SEI0321
Calibration: ZI00066

SDG/WO: 16I0160
Project: Port Gamble Shellfish Monitoring (PEMD)
Instrument: NT11
Calibration Date: 09/22/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEI0321-ICV1 (Tissue) Lab File ID: 16092302.D Analyzed: 09/23/16 08:10								
2-Methylnaphthalene-d10	250.00	96.4	80 - 120	7.569	7.569	0.0000	N/A	
Dibenzo[a,h]anthracene-d14	250.00	100	80 - 120	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	250.00	97.2	80 - 120	14.356	14.357	-0.0010	N/A	
BEI0260-BLK1 (Tissue) Lab File ID: 16092305.D Analyzed: 09/23/16 10:00								
2-Methylnaphthalene-d10	33.860	39.0	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	45.0	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	49.0	30 - 160	14.356	14.357	-0.0010	N/A	
Fluorene-d10			30 - 160		10.42933	-10.4293	N/A	
Anthracene-d10			30 - 160		12.32167	-12.3217	N/A	
Benzo(e)pyrene-d12			30 - 160		19.427	-19.4270	N/A	
BEI0260-BS1 (Tissue) Lab File ID: 16092306.D Analyzed: 09/23/16 10:30								
2-Methylnaphthalene-d10	33.860	60.9	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	67.0	30 - 160	22.151	22.15	0.0010	N/A	
Fluoranthene-d10	33.860	72.1	30 - 160	14.357	14.357	0.0000	N/A	
16I0160-01 (Tissue) Lab File ID: 16092307.D Analyzed: 09/23/16 11:01								
2-Methylnaphthalene-d10	33.860	37.7	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	43.2	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	50.6	30 - 160	14.356	14.357	-0.0010	N/A	
Fluorene-d10	21.163	0.556	30 - 160	10.422	10.42933	-0.0073	N/A	*
Anthracene-d10	21.163	7.08	30 - 160	12.32	12.32167	-0.0017	N/A	*
Benzo(e)pyrene-d12	21.163	42.1	30 - 160	19.426	19.427	-0.0010	N/A	
16I0160-03 (Tissue) Lab File ID: 16092308.D Analyzed: 09/23/16 11:31								
2-Methylnaphthalene-d10	33.860	49.9	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	54.6	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	67.3	30 - 160	14.357	14.357	0.0000	N/A	
Fluorene-d10	21.163	0.601	30 - 160	10.422	10.42933	-0.0073	N/A	*
Anthracene-d10	21.163	6.08	30 - 160	12.32	12.32167	-0.0017	N/A	*
Benzo(e)pyrene-d12	21.163	43.1	30 - 160	19.427	19.427	0.0000	N/A	



SURROGATE RECOVERY AND RT SUMMARY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.
Client: Anchor QEA, LLC
Sequence: SEI0321
Calibration: ZI00066

SDG/WO: 16I0160
Project: Port Gamble Shellfish Monitoring (PEMD)
Instrument: NT11
Calibration Date: 09/22/2016

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
16I0160-04 (Tissue)			Lab File ID: 16092309.D			Analyzed: 09/23/16 12:01		
2-Methylnaphthalene-d10	33.860	54.5	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	70.9	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	76.9	30 - 160	14.356	14.357	-0.0010	N/A	
Fluorene-d10	21.163	0.642	30 - 160	10.422	10.42933	-0.0073	N/A	*
Anthracene-d10	21.163	3.67	30 - 160	12.32	12.32167	-0.0017	N/A	*
Benzo(e)pyrene-d12	21.163	59.7	30 - 160	19.426	19.427	-0.0010	N/A	
16I0160-05 (Tissue)			Lab File ID: 16092310.D			Analyzed: 09/23/16 12:31		
2-Methylnaphthalene-d10	33.860	63.3	30 - 160	7.548	7.569	-0.0210	N/A	
Dibenzo[a,h]anthracene-d14	33.860	71.7	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	83.7	30 - 160	14.356	14.357	-0.0010	N/A	
Fluorene-d10	21.163	0.597	30 - 160	10.422	10.42933	-0.0073	N/A	*
Anthracene-d10	21.163	3.12	30 - 160	12.32	12.32167	-0.0017	N/A	*
Benzo(e)pyrene-d12	21.163	61.0	30 - 160	19.426	19.427	-0.0010	N/A	
16I0160-07 (Tissue)			Lab File ID: 16092311.D			Analyzed: 09/23/16 13:01		
2-Methylnaphthalene-d10	33.860	61.6	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	69.8	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	83.4	30 - 160	14.357	14.357	0.0000	N/A	
Fluorene-d10	21.163	3.41	30 - 160	10.422	10.42933	-0.0073	N/A	*
Anthracene-d10	21.163	23.4	30 - 160	12.32	12.32167	-0.0017	N/A	*
Benzo(e)pyrene-d12	21.163	63.8	30 - 160	19.427	19.427	0.0000	N/A	
16I0160-09 (Tissue)			Lab File ID: 16092312.D			Analyzed: 09/23/16 13:32		
2-Methylnaphthalene-d10	33.860	57.3	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	33.860	69.6	30 - 160	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	33.860	79.9	30 - 160	14.357	14.357	0.0000	N/A	
Fluorene-d10	21.163	1.36	30 - 160	10.422	10.42933	-0.0073	N/A	*
Anthracene-d10	21.163	17.6	30 - 160	12.32	12.32167	-0.0017	N/A	*
Benzo(e)pyrene-d12	21.163	59.0	30 - 160	19.427	19.427	0.0000	N/A	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D-SIM

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16I0160</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring (PEMD)</u>
Sequence:	<u>SEI0302</u>	Instrument:	<u>NT11</u>
		Calibration:	<u>ZI00066</u>

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SEI0302-SCV1)		(Tissue)	Lab File ID: 16092208.D			Analyzed: 09/22/16 12:15			
Naphthalene-d8	487352	6.592	527377	6.592	92	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	270378	9.595	297518	9.595	91	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	473421	12.263	522042	12.262	91	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	398080	16.993	389499	16.993	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	427603	19.801	430626	19.801	99	50 - 200	0.0000	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: ZI00066

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEI0321-ICV1)		(Tissue)	Lab File ID: 16092302.D			Analyzed: 09/23/16 08:10			
Naphthalene-d8	531746	6.592	527377	6.592	101	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	282451	9.595	297518	9.595	95	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	489933	12.262	522042	12.262	94	50 - 200	0.0000	+/-0.50	
Chrysene-d12	403916	16.992	389499	16.993	104	50 - 200	0.0010	+/-0.50	
Perylene-d12	425628	19.801	430626	19.801	99	50 - 200	0.0000	+/-0.50	
Blank (BEI0260-BLK1)		(Tissue)	Lab File ID: 16092305.D			Analyzed: 09/23/16 10:00			
Naphthalene-d8	681602	6.581	527377	6.592	129	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	424011	9.584	297518	9.595	143	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	776722	12.262	522042	12.262	149	50 - 200	0.0000	+/-0.50	
Chrysene-d12	597025	16.992	389499	16.993	153	50 - 200	0.0010	+/-0.50	
Perylene-d12	741485	19.801	430626	19.801	172	50 - 200	0.0000	+/-0.50	
LCS (BEI0260-BS1)		(Tissue)	Lab File ID: 16092306.D			Analyzed: 09/23/16 10:30			
Naphthalene-d8	516337	6.571	527377	6.592	98	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	312326	9.584	297518	9.595	105	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	557721	12.263	522042	12.262	107	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	452530	16.993	389499	16.993	116	50 - 200	0.0000	+/-0.50	
Perylene-d12	553033	19.801	430626	19.801	128	50 - 200	0.0000	+/-0.50	
PG-SMA1-1-PEMD-160909-A (16I0160-01)		(Tissue)	Lab File ID: 16092307.D			Analyzed: 09/23/16 11:01			
Naphthalene-d8	690769	6.581	527377	6.592	131	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	425147	9.595	297518	9.595	143	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	763118	12.262	522042	12.262	146	50 - 200	0.0000	+/-0.50	
Chrysene-d12	632402	16.992	389499	16.993	162	50 - 200	0.0010	+/-0.50	
Perylene-d12	800165	19.801	430626	19.801	186	50 - 200	0.0000	+/-0.50	
PG-SMA1-2-PEMD-160909-A (16I0160-03)		(Tissue)	Lab File ID: 16092308.D			Analyzed: 09/23/16 11:31			
Naphthalene-d8	572871	6.571	527377	6.592	109	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	351011	9.584	297518	9.595	118	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	631287	12.262	522042	12.262	121	50 - 200	0.0000	+/-0.50	
Chrysene-d12	528076	16.993	389499	16.993	136	50 - 200	0.0000	+/-0.50	
Perylene-d12	651539	19.801	430626	19.801	151	50 - 200	0.0000	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: ZI00066

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-SMA1-102-PEMD-160909-A (16I0160-04)		(Tissue)	Lab File ID: 16092309.D			Analyzed: 09/23/16 12:01			
Naphthalene-d8	631882	6.571	527377	6.592	120	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	365661	9.584	297518	9.595	123	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	649559	12.262	522042	12.262	124	50 - 200	0.0000	+/-0.50	
Chrysene-d12	530634	16.992	389499	16.993	136	50 - 200	0.0010	+/-0.50	
Perylene-d12	644095	19.801	430626	19.801	150	50 - 200	0.0000	+/-0.50	
PG-SMA1-3-PEMD-160909-A (16I0160-05)		(Tissue)	Lab File ID: 16092310.D			Analyzed: 09/23/16 12:31			
Naphthalene-d8	503582	6.571	527377	6.592	95	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	293126	9.584	297518	9.595	99	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	534194	12.253	522042	12.262	102	50 - 200	0.0090	+/-0.50	
Chrysene-d12	452356	16.992	389499	16.993	116	50 - 200	0.0010	+/-0.50	
Perylene-d12	560321	19.801	430626	19.801	130	50 - 200	0.0000	+/-0.50	
PG-PJ-1-PEMD-160909-A (16I0160-07)		(Tissue)	Lab File ID: 16092311.D			Analyzed: 09/23/16 13:01			
Naphthalene-d8	461726	6.581	527377	6.592	88	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	270402	9.584	297518	9.595	91	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	488728	12.263	522042	12.262	94	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	397691	16.993	389499	16.993	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	485256	19.801	430626	19.801	113	50 - 200	0.0000	+/-0.50	
PG-GP-1-PEMD-160909-A (16I0160-09)		(Tissue)	Lab File ID: 16092312.D			Analyzed: 09/23/16 13:32			
Naphthalene-d8	525522	6.581	527377	6.592	100	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	304570	9.584	297518	9.595	102	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	568990	12.263	522042	12.262	109	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	454404	16.993	389499	16.993	117	50 - 200	0.0000	+/-0.50	
Perylene-d12	550445	19.801	430626	19.801	128	50 - 200	0.0000	+/-0.50	
PG-WS-1-PEMD-160909-A (16I0160-11)		(Tissue)	Lab File ID: 16092313.D			Analyzed: 09/23/16 14:02			
Naphthalene-d8	560457	6.571	527377	6.592	106	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	324471	9.584	297518	9.595	109	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	604422	12.262	522042	12.262	116	50 - 200	0.0000	+/-0.50	
Chrysene-d12	470696	16.993	389499	16.993	121	50 - 200	0.0000	+/-0.50	
Perylene-d12	557766	19.801	430626	19.801	130	50 - 200	0.0000	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: ZI00066

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
PG-FB-PEMD-160909 (16I0160-13)		(Tissue)	Lab File ID: 16092314.D			Analyzed: 09/23/16 14:32			
Naphthalene-d8	527500	6.571	527377	6.592	100	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	304864	9.584	297518	9.595	102	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	576748	12.262	522042	12.262	110	50 - 200	0.0000	+/-0.50	
Chrysene-d12	437336	16.992	389499	16.993	112	50 - 200	0.0010	+/-0.50	
Perylene-d12	519445	19.801	430626	19.801	121	50 - 200	0.0000	+/-0.50	
PG-TB-PEMD-160909 (16I0160-14)		(Tissue)	Lab File ID: 16092315.D			Analyzed: 09/23/16 15:02			
Naphthalene-d8	525727	6.571	527377	6.592	100	50 - 200	0.0210	+/-0.50	
Acenaphthene-d10	302028	9.584	297518	9.595	102	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	564762	12.262	522042	12.262	108	50 - 200	0.0000	+/-0.50	
Chrysene-d12	431331	16.993	389499	16.993	111	50 - 200	0.0000	+/-0.50	
Perylene-d12	504710	19.801	430626	19.801	117	50 - 200	0.0000	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PG-SMA1-1-PEMD-160909-A 16I0160-01	09/09/16 10:01	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 11:01	13	40	
PG-SMA1-2-PEMD-160909-A 16I0160-03	09/09/16 10:20	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 11:31	13	40	
PG-SMA1-102-PEMD-160909-A 16I0160-04	09/09/16 10:20	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 12:01	13	40	
PG-SMA1-3-PEMD-160909-A 16I0160-05	09/09/16 10:50	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 12:31	13	40	
PG-PJ-1-PEMD-160909-A 16I0160-07	09/09/16 12:20	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 13:01	13	40	
PG-GP-1-PEMD-160909-A 16I0160-09	09/09/16 11:51	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 13:32	13	40	
PG-WS-1-PEMD-160909-A 16I0160-11	09/09/16 11:22	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 14:02	13	40	
PG-FB-PEMD-160909 16I0160-13	09/09/16 10:55	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 14:32	13	40	
PG-TB-PEMD-160909 16I0160-14	09/09/16 13:05	09/09/16 15:14	09/10/16 11:10	1	14	09/23/16 15:02	13	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0160

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMI)

Matrix: Tissue

Instrument: NT11

Analyte	MDL	RL	Units
Naphthalene	0.50	0.60	ug/kg
2-Methylnaphthalene	0.50	0.50	ug/kg
Acenaphthylene	0.50	0.50	ug/kg
Acenaphthene	0.50	0.50	ug/kg
Fluorene	0.50	0.50	ug/kg
Phenanthrene	0.50	0.50	ug/kg
Anthracene	0.50	0.50	ug/kg
Fluoranthene	0.50	0.50	ug/kg
Pyrene	0.50	0.50	ug/kg
Benzo(a)anthracene	0.50	0.50	ug/kg
Chrysene	0.50	0.50	ug/kg
Benzo(b)fluoranthene	0.50	0.50	ug/kg
Benzo(k)fluoranthene	0.50	0.50	ug/kg
Benzo(e)pyrene	0.50	0.50	ug/kg
Benzo(a)pyrene	0.50	0.50	ug/kg
Indeno(1,2,3-cd)pyrene	0.50	0.50	ug/kg
Dibenzo(a,h)anthracene	0.50	0.50	ug/kg
Benzo(g,h,i)perylene	0.50	0.50	ug/kg
Perylene	0.50	0.50	ug/kg
Benzofluoranthenes, Total	1.00	1.00	ug/kg



10 October 2016

Nathan Soccorsy
Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Port Gamble Shellfish Monitoring (PEMD)

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
16I0393

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

Cheronne Oreiro, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Preparation Test Low Level SIM PNA PEMD # 10

Lab Number(s) PEMD Blanks
Batch ID _____

Page 1 of 1

Low Level (0.5ppb)
Batch set up by: JH

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	PEMD Blanks BLK	1 Each	#3	(1:1)	0.1mL	0.1mL		RH 9/22/16
	BS	1 Each	#4	(1:1)	0.1mL	0.1mL		Analyst/Date
	BSDup	1 Each		(1:1)	0.1mL	0.1mL		KD 80°C
				(1:1)	0.1mL	0.1mL		Hexane Exchange (2X 20mL) 100°C ①23456
				(1:1)	0.1mL	0.1mL		RH 9/22/16
				(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		TurboVap ①2345 Pre-Cleanups
				(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
				(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		Analyst/Date
Analyst/Date				WW 9/22/16	SW 9/23/16		Reviewed by/Date	Analyst/Date

Tumble start: 9/13/16 15:34
Tumble stop: 9/16/16 8:24

Field Surrogate	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Standard	5443769	1.5µg/mL	20µL	2/4/17	RH	JH
Surrogate	1 (Dpp5238)	3/15µg/mL	20µL	11/1/16	RH	JH
Spike	18 (E443196)	1.5µg/mL	20µL	11/1/16	RH	JH

Extraction Time: _____ Balance ID: _____

SPECIAL INSTRUCTIONS: Follow SOP 3323S for assembly and disassembly of PEMD(s).

- Place each LPDE strip into a 600mL beaker.
- Add 1:1 Low Level DCM/Pentane to the beaker.
- Add surr/spike.
- Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each.
- Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate).
- After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask.
- KD: (using Low Level DCM) to 5mL at 80°C.
- Exchange to Hexane (2X with 20mL) at 100 °C.
- TurboVap to 2mL.
- Silica Clean-up =REQ. Extract ~2mL in Hexane (Collect EPH Aromatic fraction only).
- TurboVap to 0.5mL.
- Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM.
- IN DIOXIN LAB: TurboVap and exchange to Iso-Octane.
- Vial 0.1mL in Iso-Octane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSDup).



Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle WA, 98101

Project: Port Gamble Shellfish Monitoring (PEMD)
Project Number: [none]
Project Manager: Nathan Soccorso

Reported:
10-Oct-2016 10:21

Case Narrative

Sample receipt

Two blank PEMDs were pre-cleaned per ARI SOP and tumbled beginning September 13, 2016. Both samples were spiked with the prepared field surrogate prior to tumbling. Samples were removed from tumbler on September 16, 2016. Both blank PEMD strips were extracted for SIM PAHs. One PEMD was analyzed as a blank sample. The second PEMD was spiked during extraction and analyzed as an LCS.

PAHs - EPA Method 8270D-SIM

The samples were extracted and analyzed within method recommended holding times.

Initial calibration and initial calibration verifications were within method requirements.

The internal standard area of Acenaphthene-d10, Phenanthrene-d10, Chrysene-d12, and Pyrene-d12 were outside the control limits high for sample **PG-PEMD-BLK-20160913** likely due to laboratory error. No corrective action was taken.

The surrogate percent recovery of 2-Methylnaphthalene fell outside the control limit for sample **PG-PEMD-BLK-20160913**.

The LCS percent recoveries were within control limits.



Anchor QEA, LLC

720 Olive Way, Suite 1900

Seattle, WA 98101

Project: Port Gamble Shellfish Monitoring (PEMD)

Project Number: [none]

Project Manager: Nathan Soccorsy

Reported:

10/10/2016 10:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PG-PEMD-BLK-20160913	16I0393-01	Tissue	09/13/16 15:00	09/13/16 15:00

Internal Chain of Custody

Client:	Anchor QEA, LLC	Received:	13-Sep-2016 15:00
Project:	Port Gamble Shellfish Monitoring (PEMD)	Received By:	Tyler Rankin
Number:	[none]	Temp (°C):	10.00

16I0393-01 (PG-PEMD-BLK-20160913) Sampled 09/13/2016 15:00

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16I0393-01 A [Miscellaneous Container]</i>			
Sample Receiving	09/26/2016 11:29 by TER	***START***	<i>Hazard Info:</i> 09/26/2016 11:29 by TER

QUALIFIERS AND NOTES

<u>Qualifier</u>	<u>Definition</u>
U	This analyte is not detected above the applicable reporting or detection limit.
J	Estimated concentration value detected below the reporting limit.
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



Form I
ORGANIC ANALYSIS DATA SHEET
EPA 8270D-SIM
8270D-SIM PAH (0.01 ug/L)

Laboratory: Analytical Resources, Inc. SDG: 1610393
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 1610393-01 File ID: 16092304.D
 Sampled: 09/13/16 15:00 Prepared: 09/13/16 15:00 Analyzed: 09/23/16 09:30
 Solids: Preparation: EPA 3550C (Ultrasonic) Initial/Final: 0.866 g / 0.1 mL
 Batch: BEI0706 Sequence: SEI0321 Calibration: ZI00066
 Instrument: NT11 Column: RXi-17Sil-MS

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q	DL	RL
91-20-3	Naphthalene	1	1.28	J	1.15	1.39
91-57-6	2-Methylnaphthalene	1	1.15	U	1.15	1.15
208-96-8	Acenaphthylene	1	1.15	U	1.15	1.15
83-32-9	Acenaphthene	1	1.15	U	1.15	1.15
86-73-7	Fluorene	1	1.15	U	1.15	1.15
85-01-8	Phenanthrene	1	1.15	U	1.15	1.15
120-12-7	Anthracene	1	1.15	U	1.15	1.15
206-44-0	Fluoranthene	1	1.15	U	1.15	1.15
129-00-0	Pyrene	1	1.15	U	1.15	1.15
56-55-3	Benzo(a)anthracene	1	1.15	U	1.15	1.15
218-01-9	Chrysene	1	1.15	U	1.15	1.15
205-99-2	Benzo(b)fluoranthene	1	1.15	U	1.15	1.15
207-08-9	Benzo(k)fluoranthene	1	1.15	U	1.15	1.15
50-32-8	Benzo(a)pyrene	1	1.15	U	1.15	1.15
193-39-5	Indeno(1,2,3-cd)pyrene	1	1.15	U	1.15	1.15
53-70-3	Dibenzo(a,h)anthracene	1	1.15	U	1.15	1.15
191-24-2	Benzo(g,h,i)perylene	1	1.15	U	1.15	1.15
1985-5-0	Perylene	1	1.15	U	1.15	1.15
197-97-2	Benzo(e)pyrene	1	1.15	U	1.15	1.15
	Benzo(a)fluoranthenes, Total	1	2.31	U	2.31	2.31

SURROGATES	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
2-Methylnaphthalene-d10	21.651	6.42	29.7	30 - 160	*
Dibenzo[a,h]anthracene-d14	21.651	7.63	35.2	30 - 160	
Fluoranthene-d10	21.651	9.55	44.1	30 - 160	
Fluorene-d10	21.651	7.27	33.6	30 - 160	
Anthracene-d10	21.651	7.26	33.5	30 - 160	
Benzo(e)pyrene-d12	21.651	7.42	34.3	30 - 160	

Data File: \\target\share\chem3\nt11.1\20160923.16\16092304.D

Date: 23-SEP-2016 09:30

Client ID:

Sample Info: 1610393-01

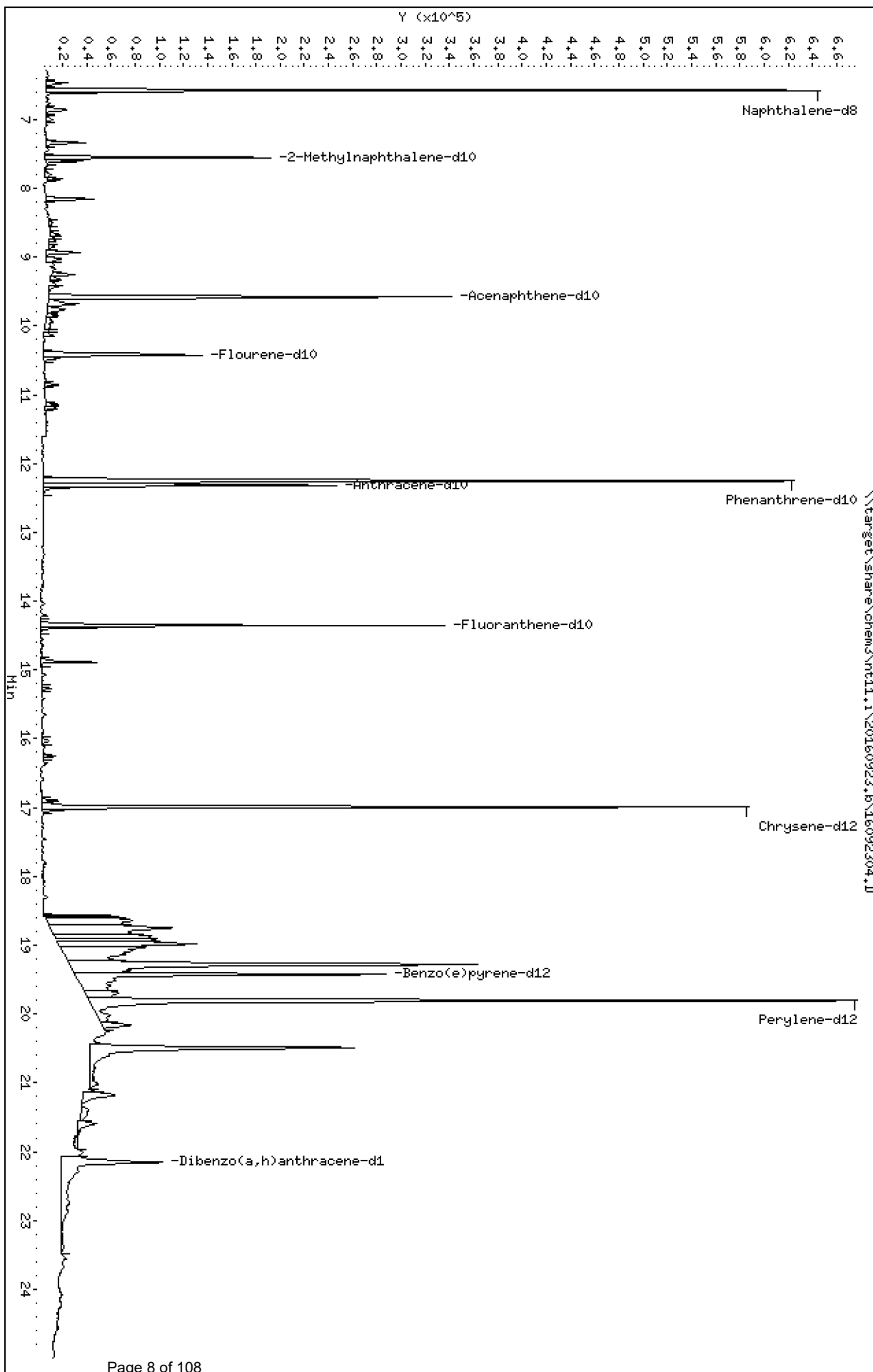
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

Page 1



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

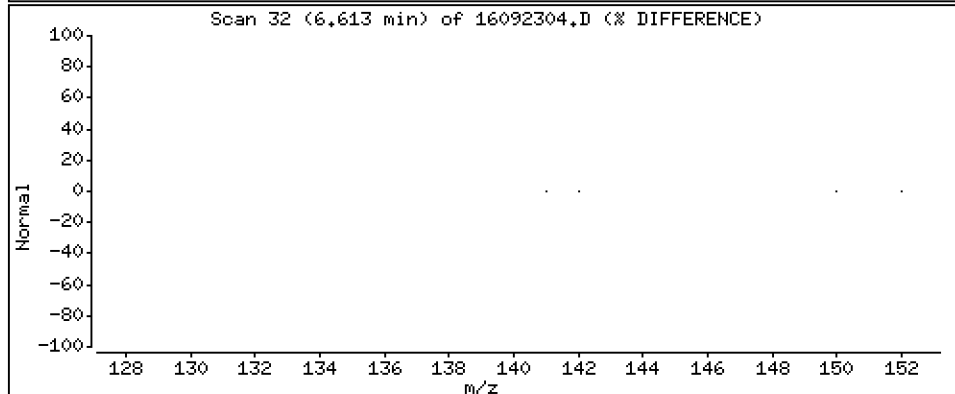
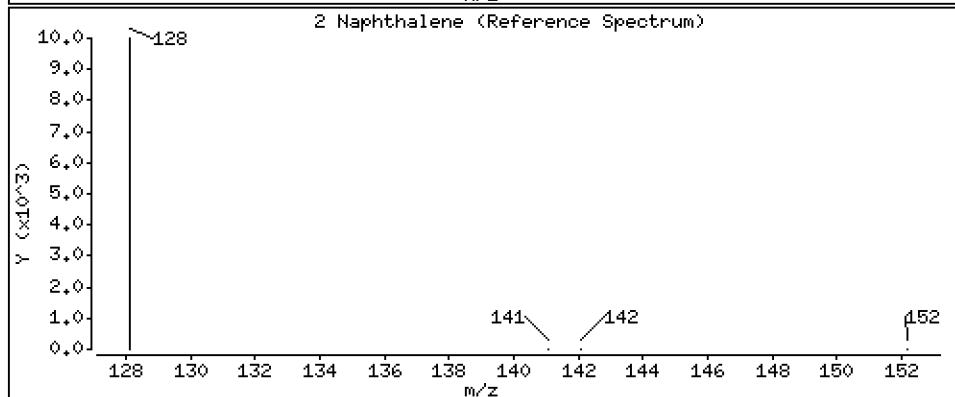
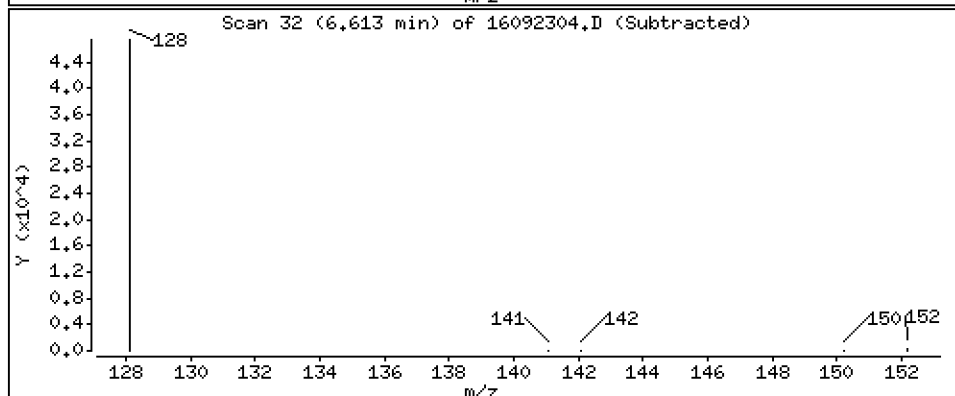
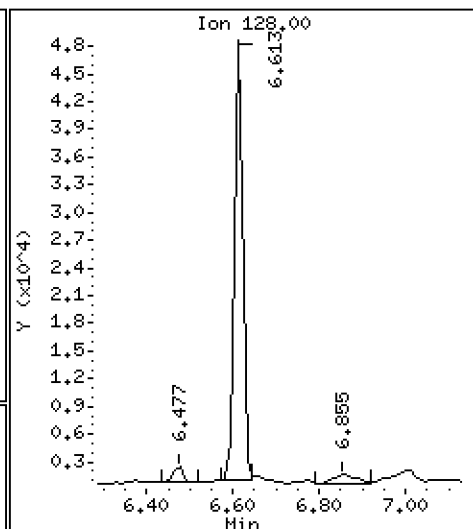
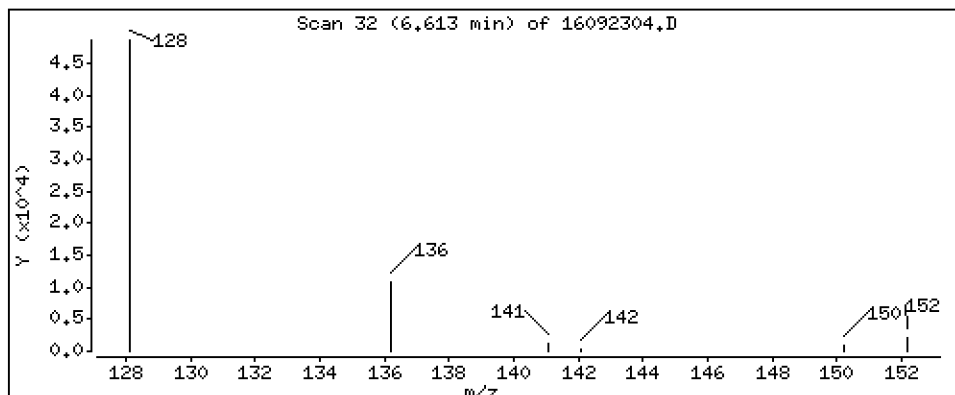
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

2 Naphthalene

Concentration: 11,1 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

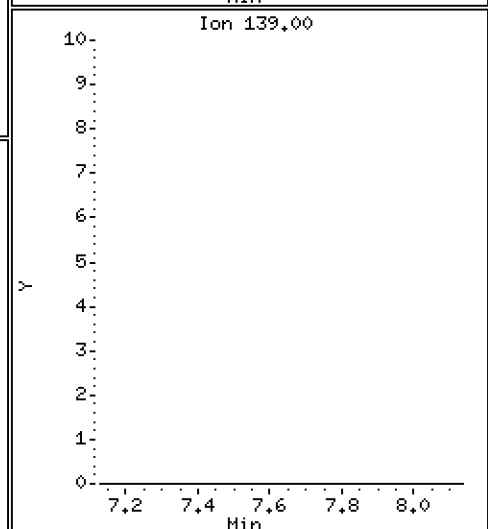
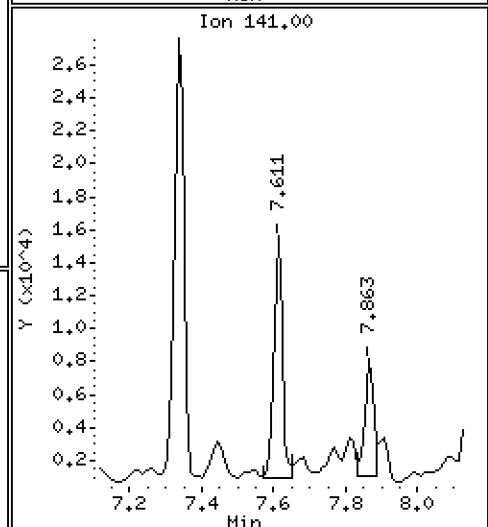
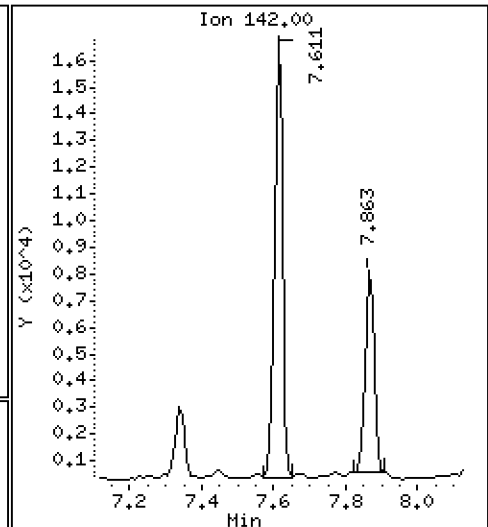
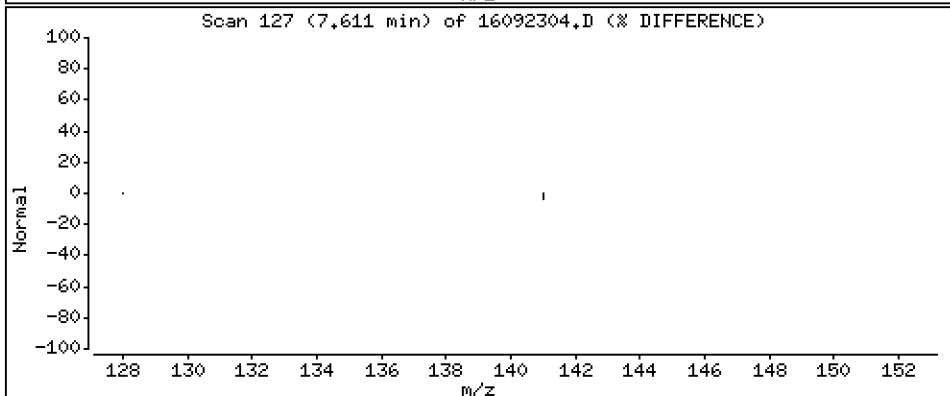
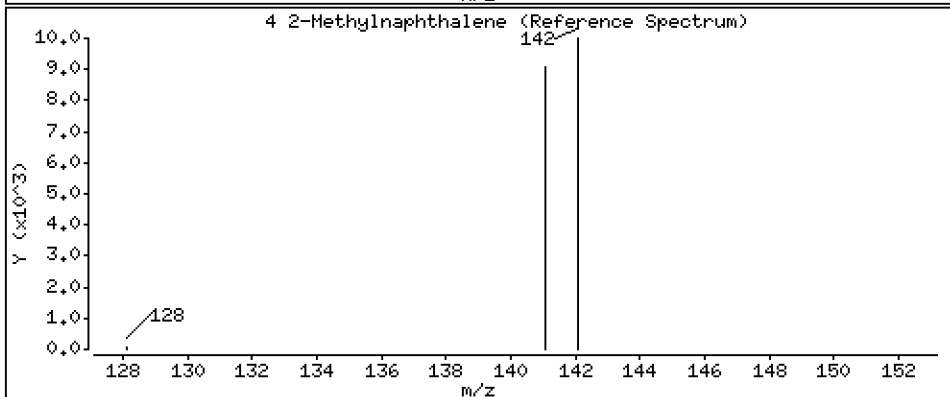
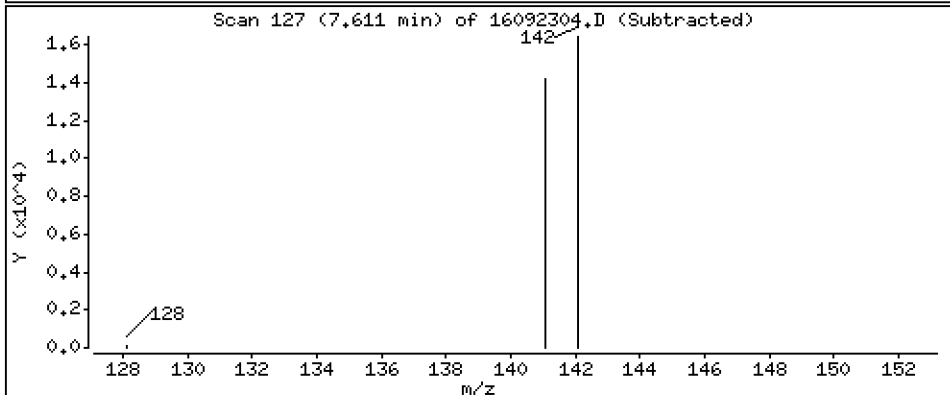
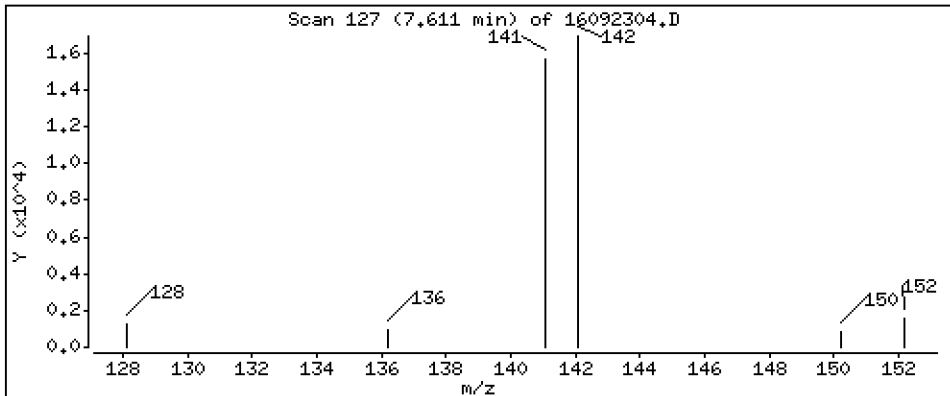
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

4-Methylnaphthalene

Concentration: 6.96 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 1610393-01

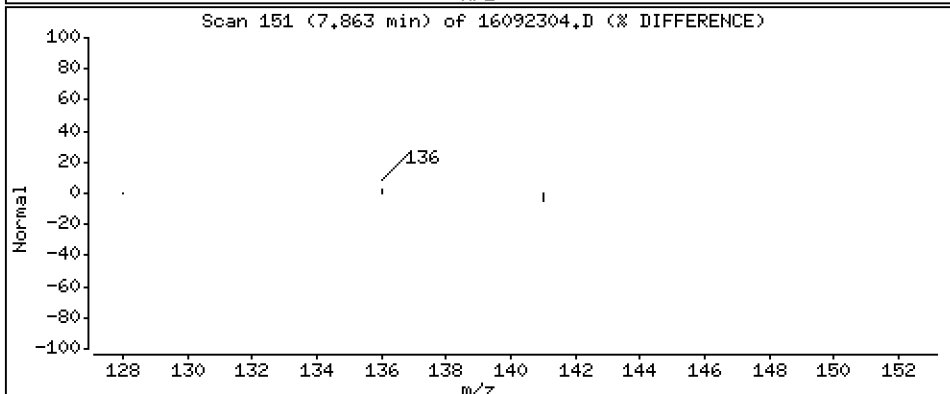
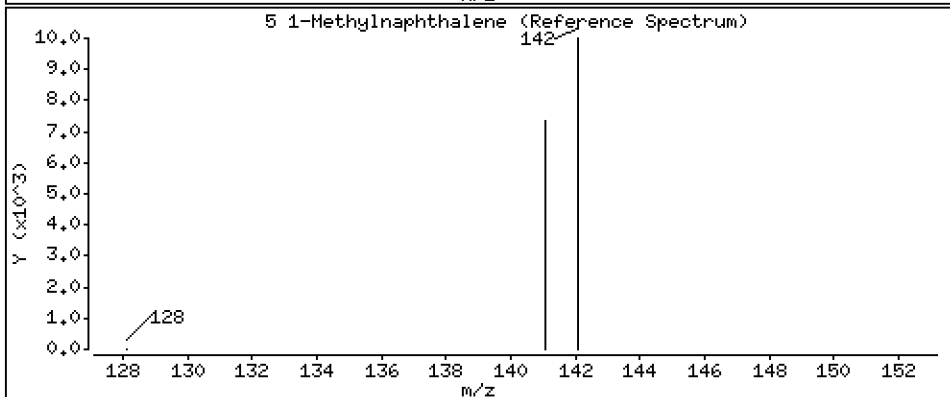
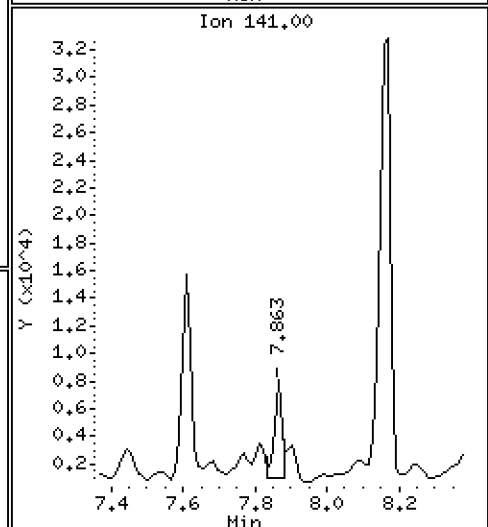
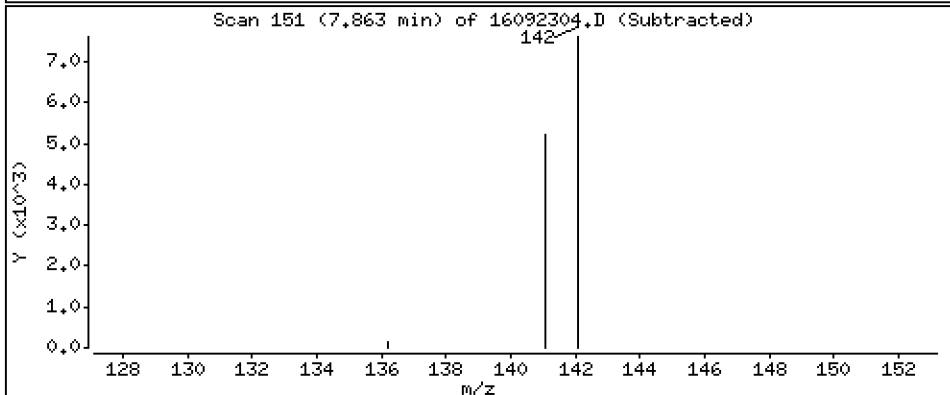
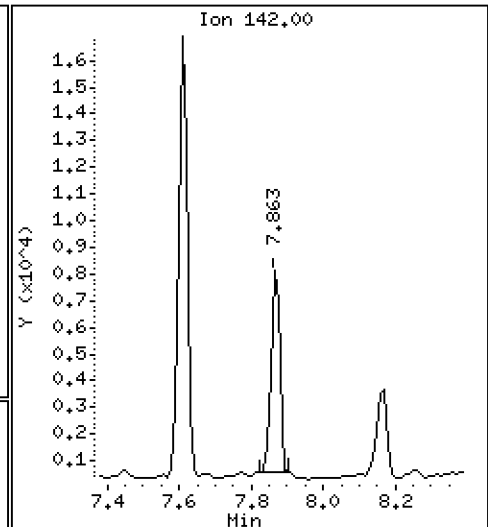
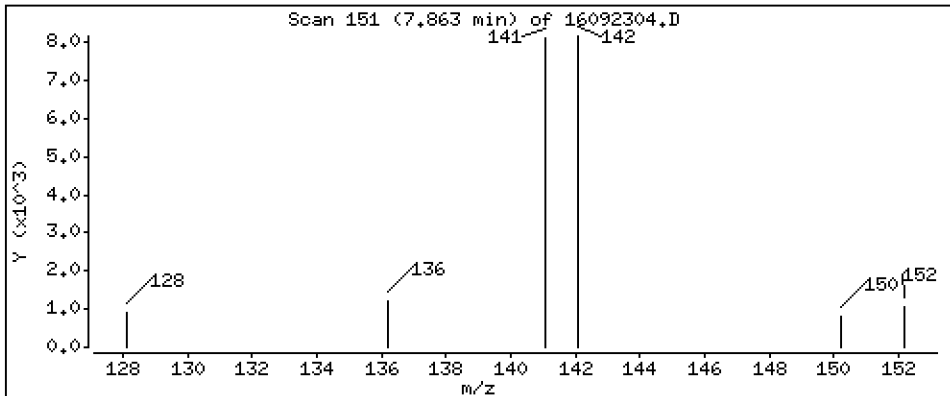
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

5 1-Methylnaphthalene

Concentration: 3.54 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

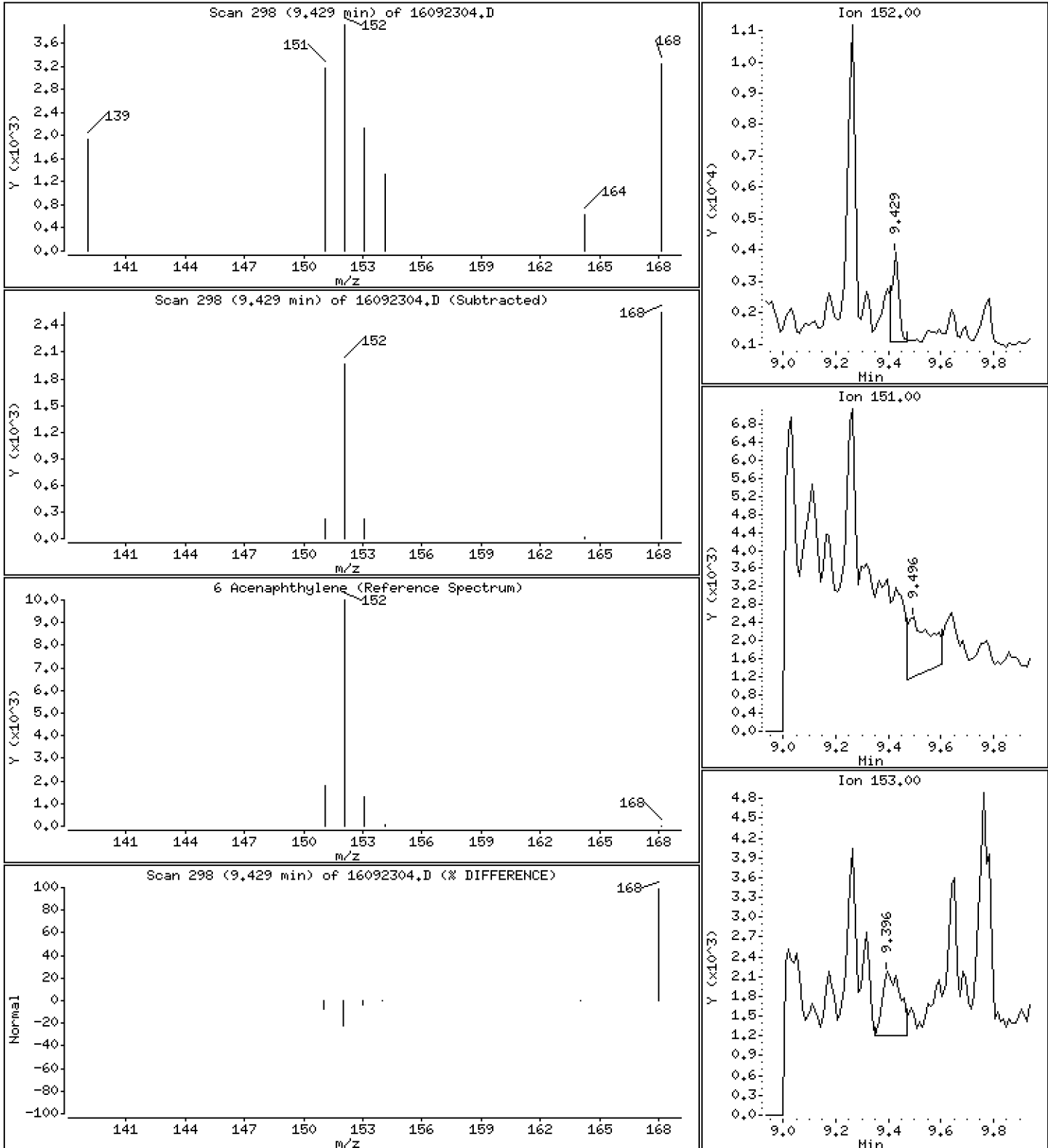
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

6 Acenaphthylene

Concentration: 0.993 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 1610393-01

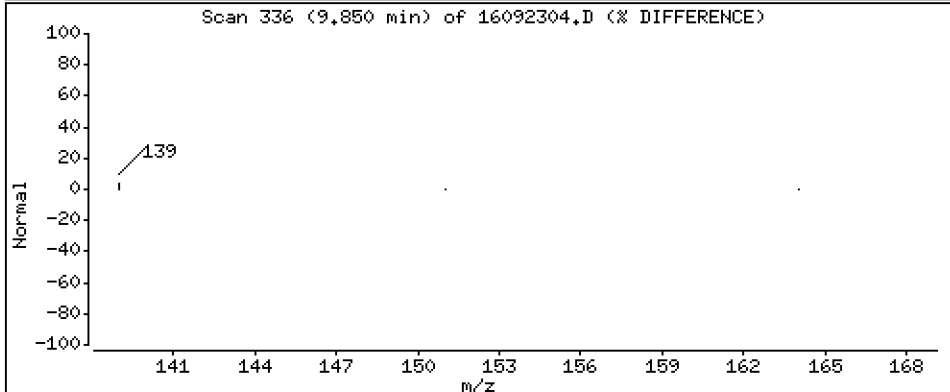
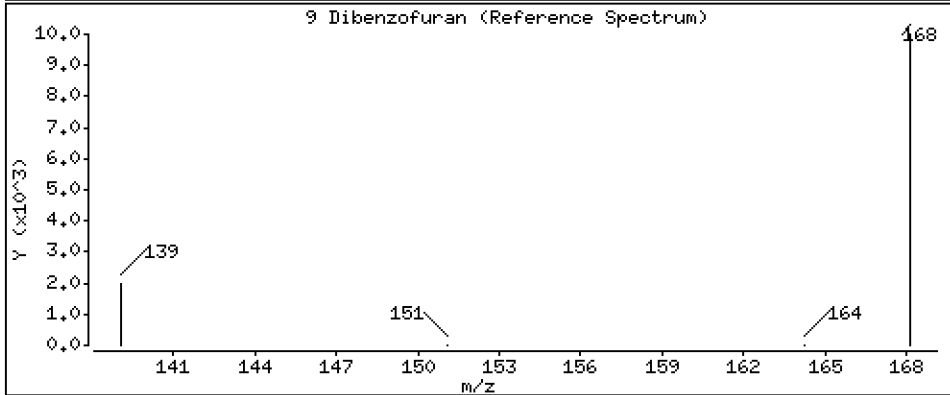
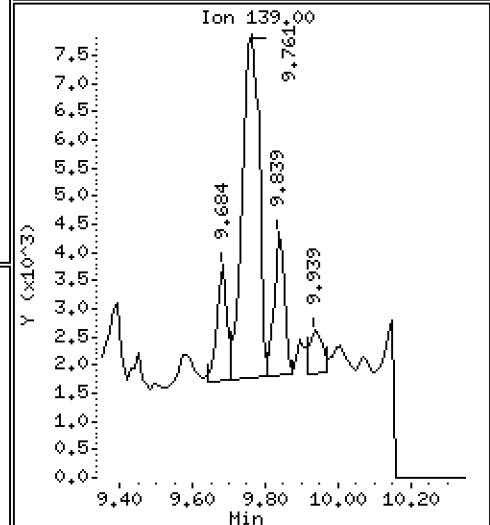
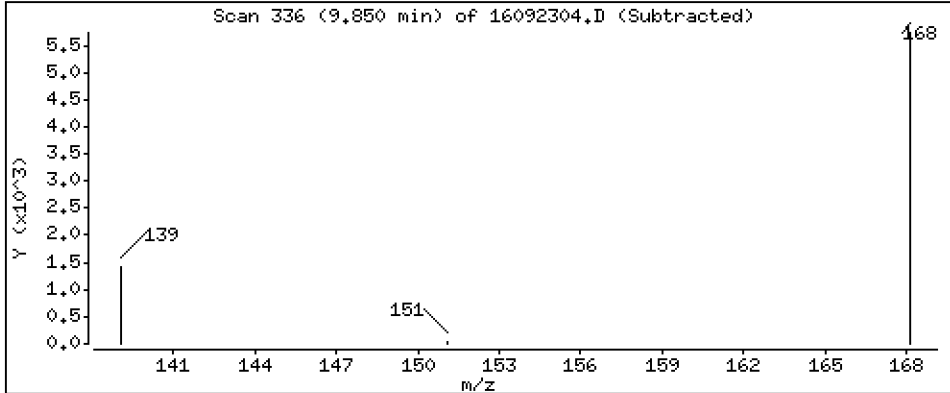
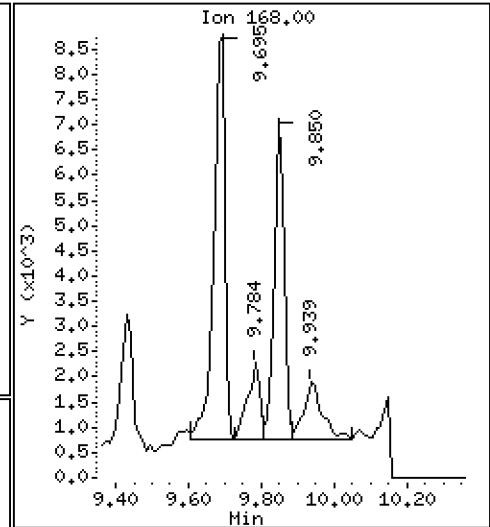
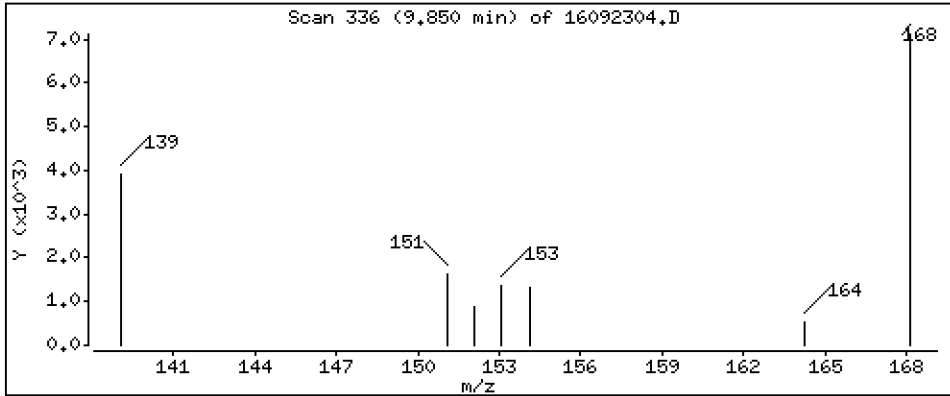
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

9 Dibenzofuran

Concentration: 2.15 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

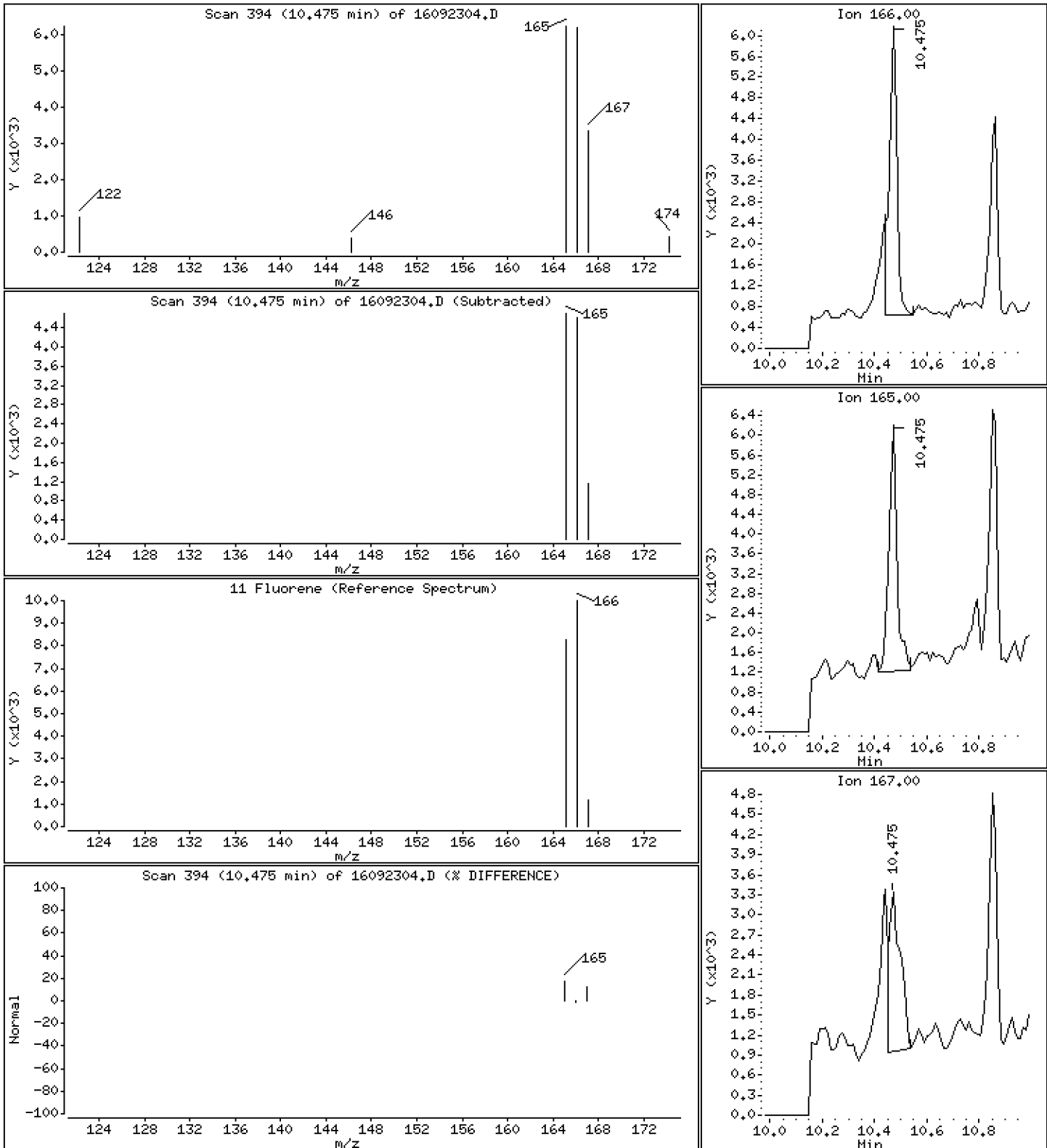
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

11 Fluorene

Concentration: 2,64 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

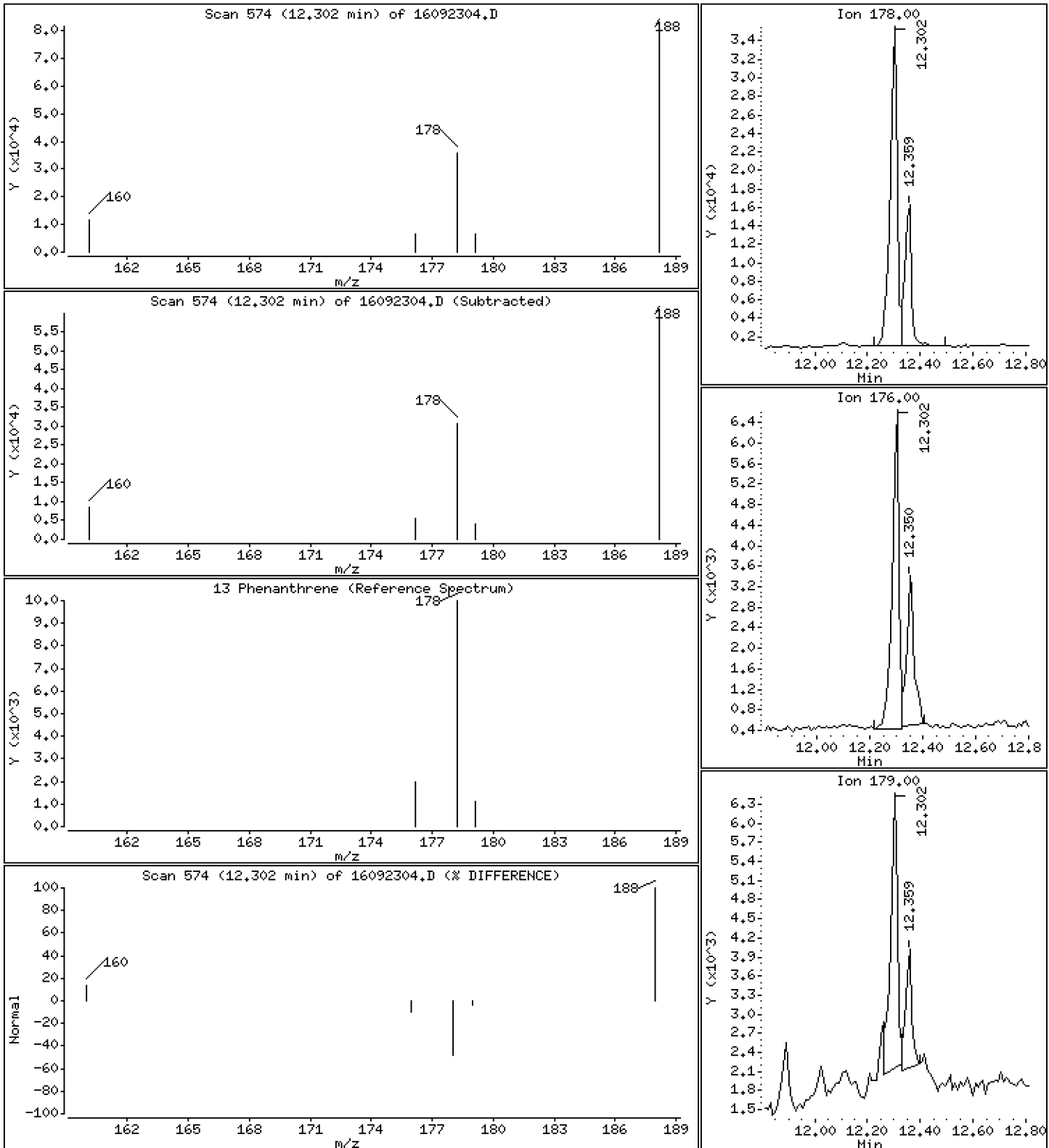
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

13 Phenanthrene

Concentration: 8,64 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 1610393-01

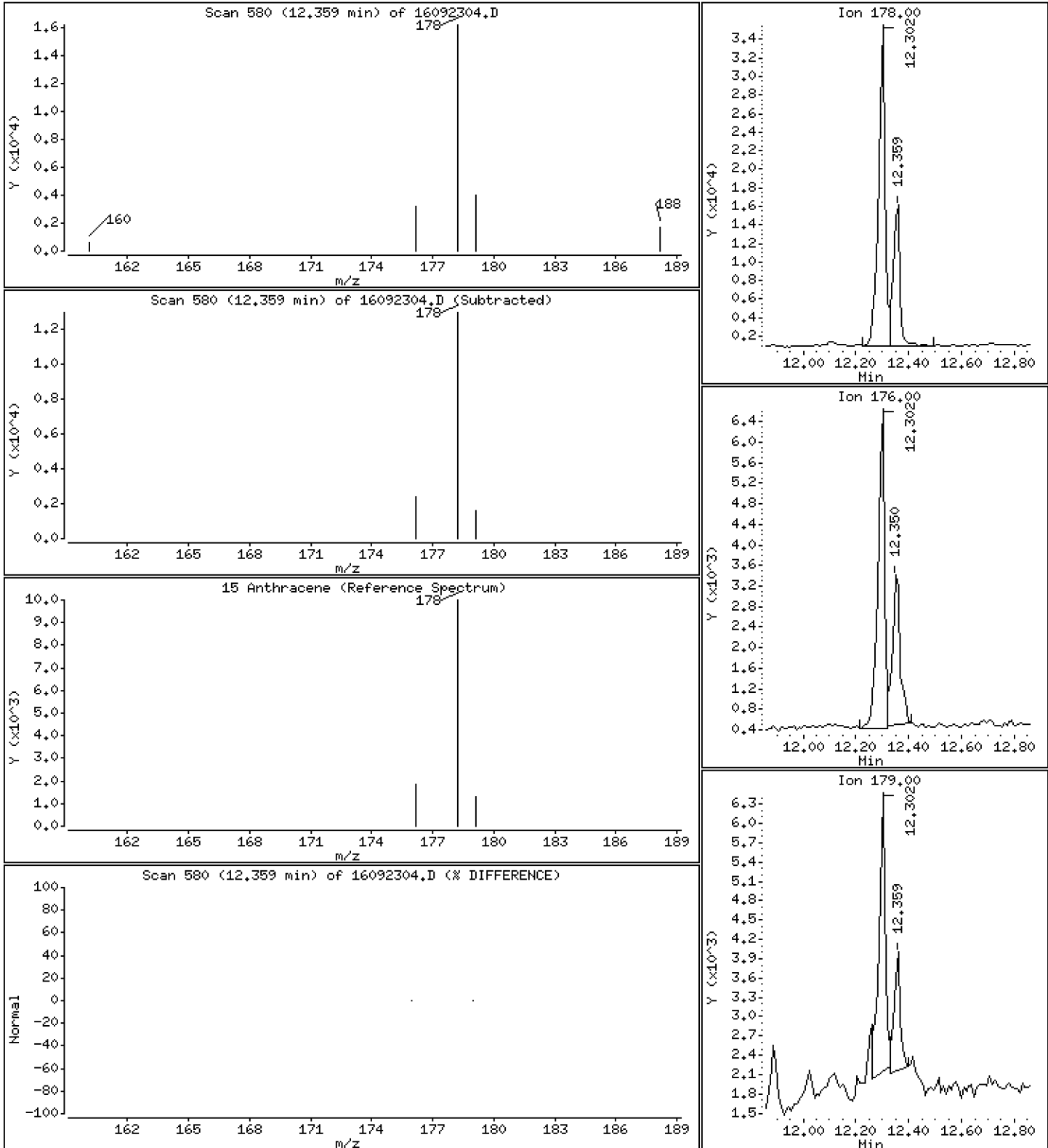
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0.25

15 Anthracene

Concentration: 3.94 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

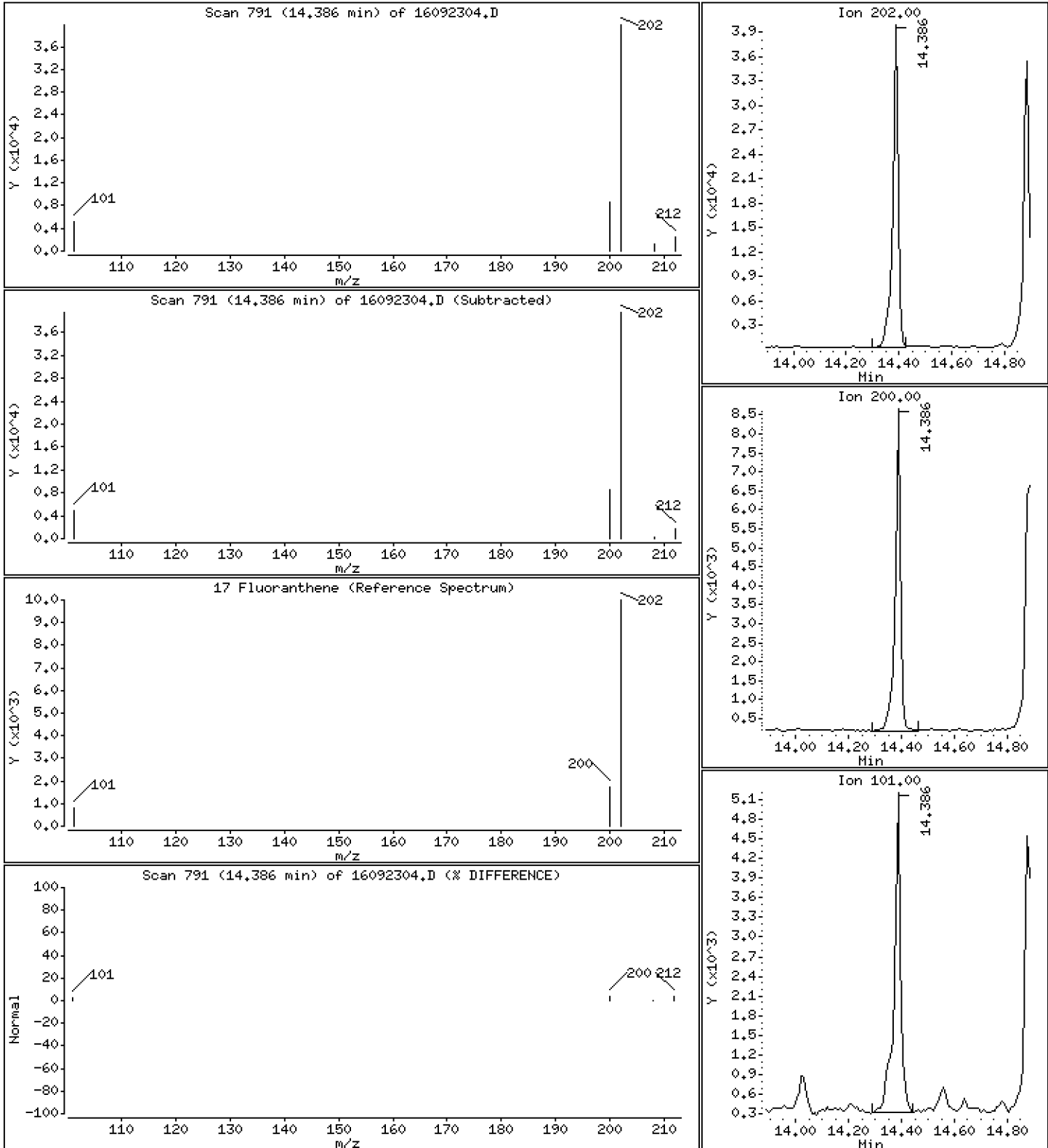
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

17 Fluoranthene

Concentration: 9,55 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

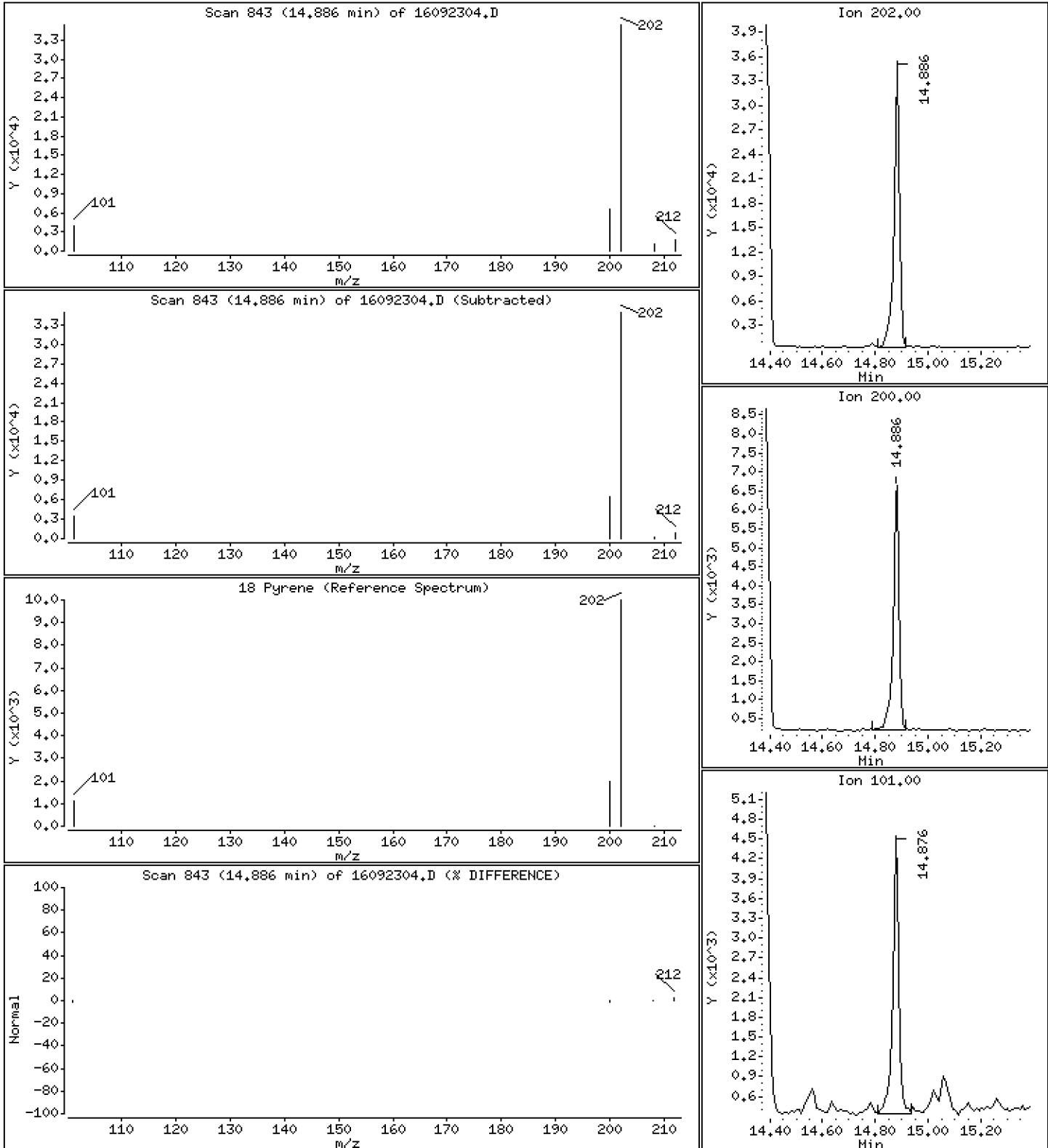
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

18 Pyrene

Concentration: 8,33 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

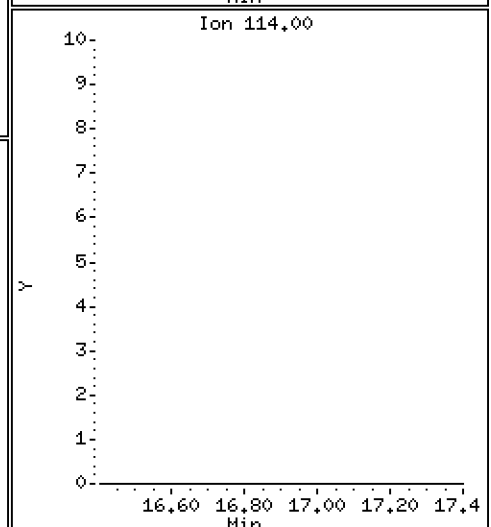
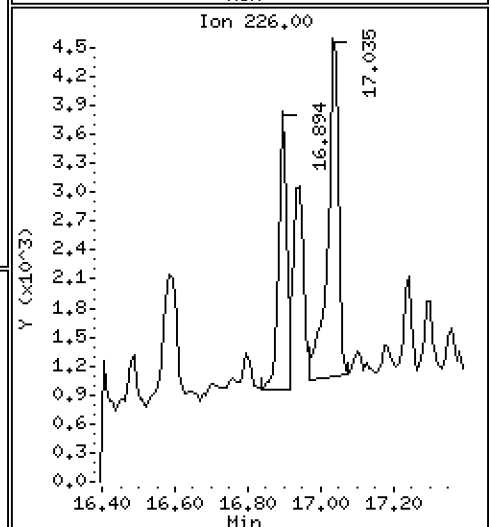
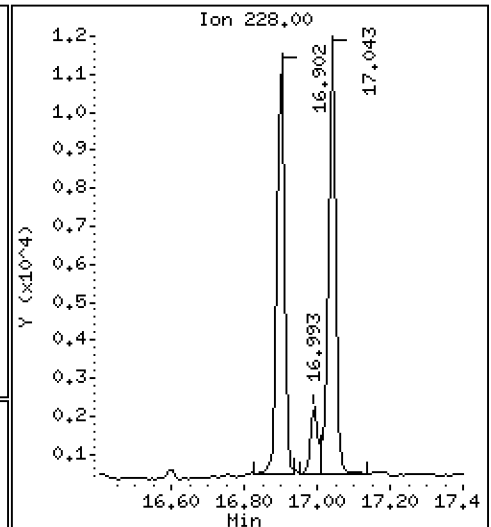
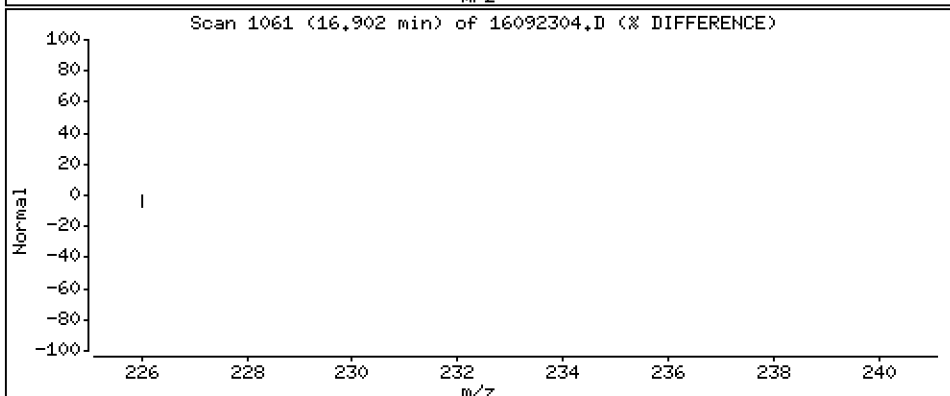
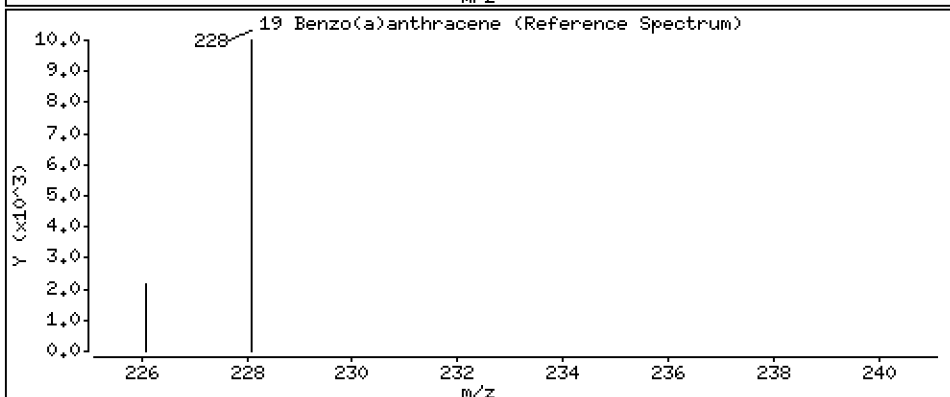
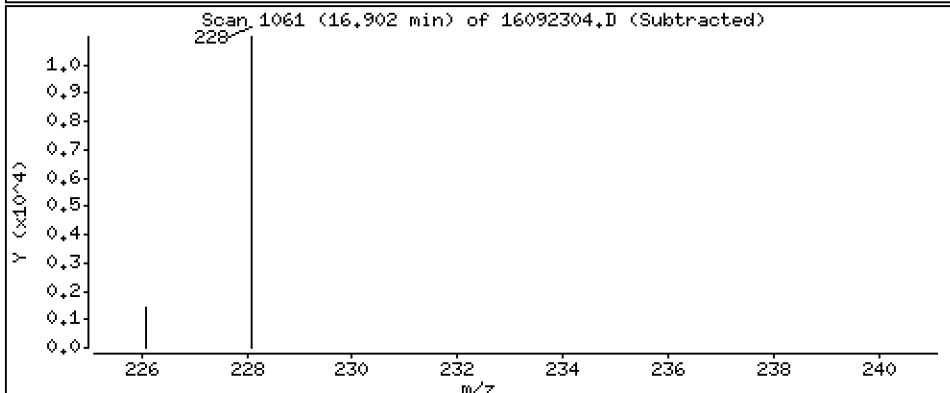
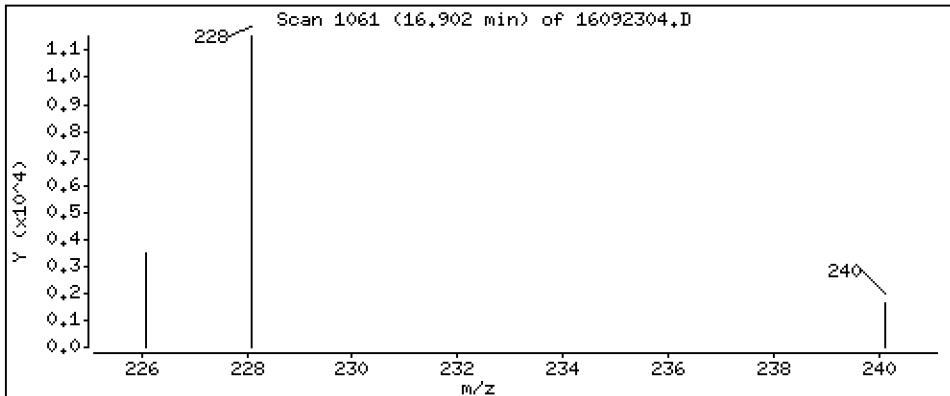
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

19 Benzo(a)anthracene

Concentration: 2,83 ng/mL



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

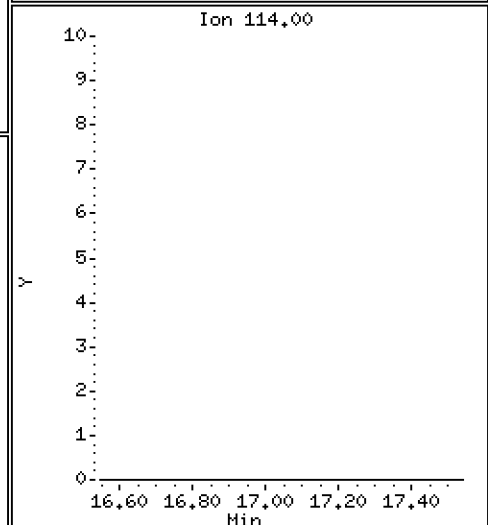
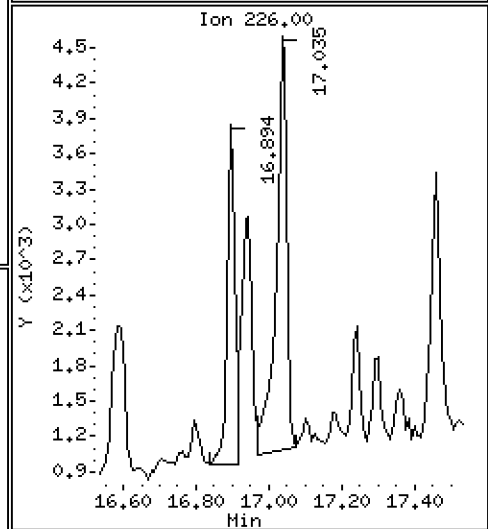
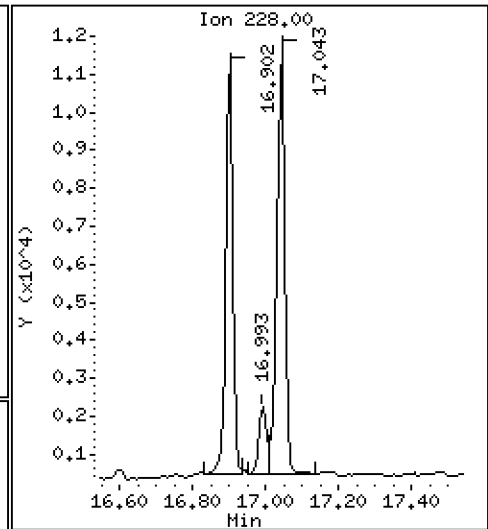
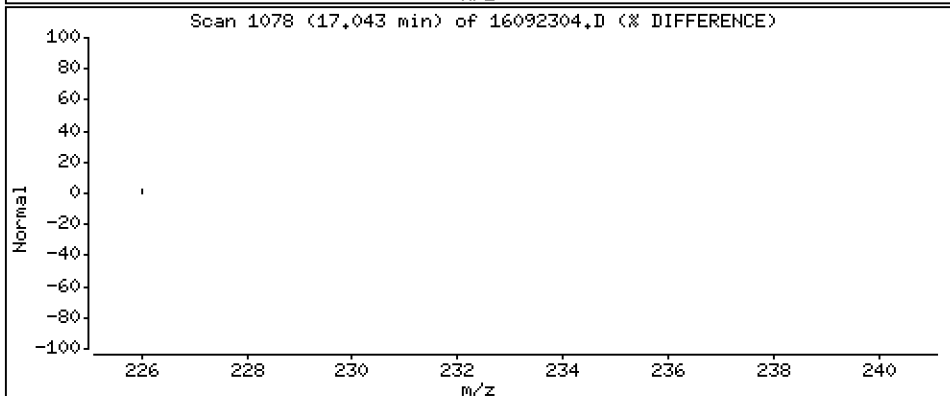
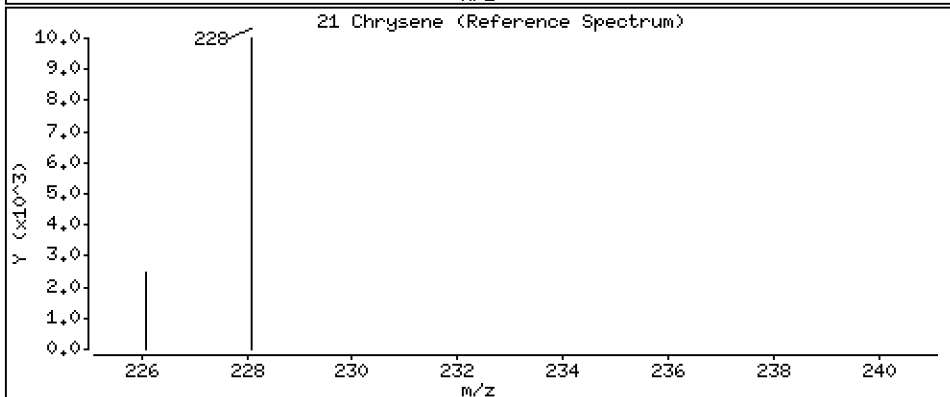
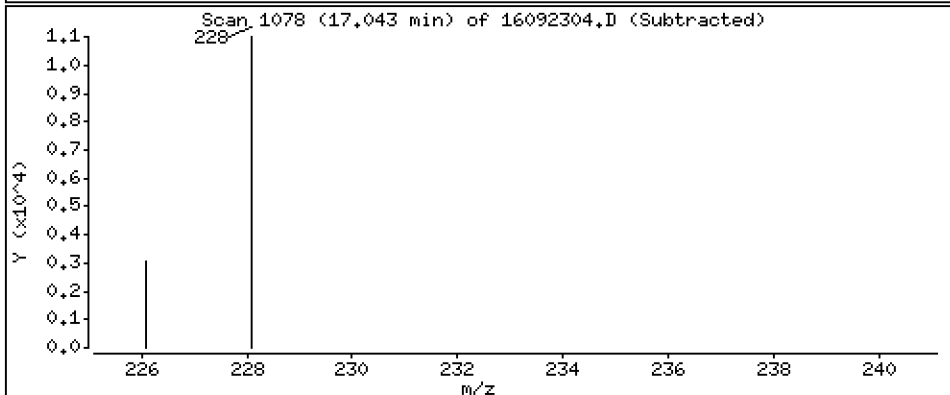
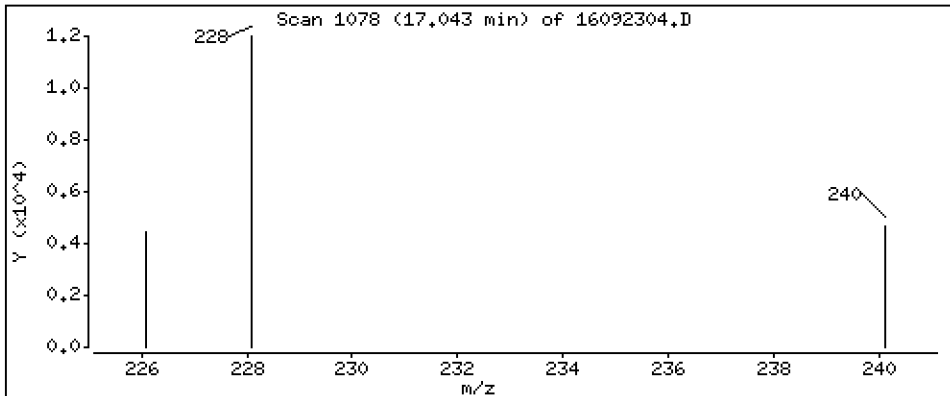
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

Concentration: 2,94 ng/mL

21 Chrysene



Date : 23-SEP-2016 09:30

Client ID:

Instrument: nt11.i

Sample Info: 16I0393-01

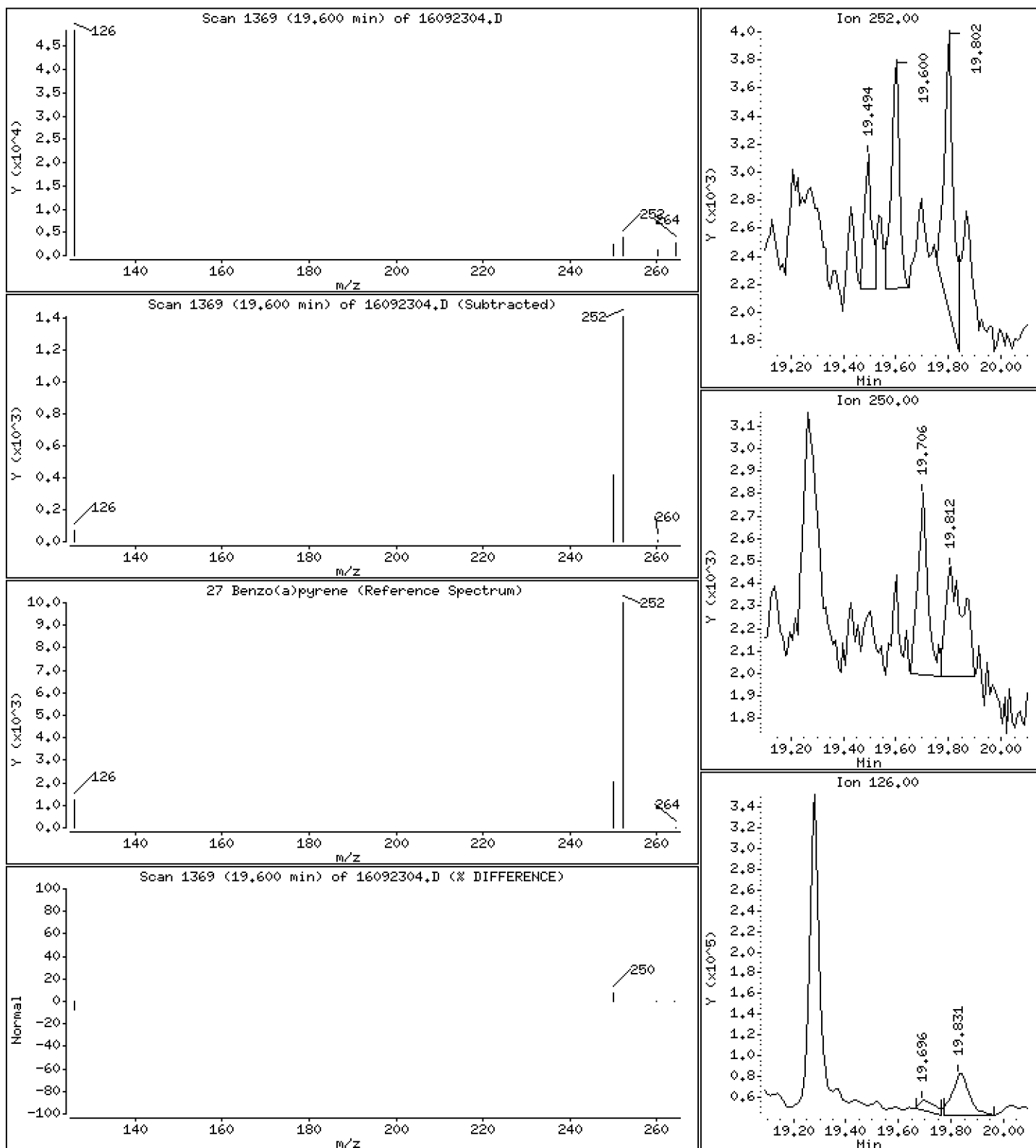
Operator: JW

Column phase: Rxi-17Sil MS

Column diameter: 0,25

27 Benzo(a)pyrene

Concentration: 0,718 ng/mL



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092304.D

Lab Smp Id: 16I0393-01

Inj Date : 23-SEP-2016 09:30

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : 16I0393-01

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 12:27 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 7

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.581	6.592	(1.000)	1006700	200.000	
2 Naphthalene	128		6.613	6.623	(1.005)	64225	11.1179	11.1
\$ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.148)	177674	55.5943	55.6
4 2-Methylnaphthalene	142		7.611	7.621	(1.156)	27664	6.95828	6.96
5 1-Methylnaphthalene	142		7.863	7.884	(1.195)	12819	3.54232	3.54
6 Acenaphthylene	152		9.429	9.440	(0.984)	5618	0.99306	0.993 (M)
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	608435	200.000	
8 Acenaphthene	153		Compound Not Detected.					
9 Dibenzofuran	168		9.850	9.860	(1.028)	11743	2.15056	2.15
\$ 10 Fluorene-d10	174		10.422	10.432	(1.087)	193930	62.9208	62.9
11 Fluorene	166		10.475	10.485	(1.093)	11495	2.63820	2.64
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	1093670	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	63446	8.63586	8.64
\$ 14 Anthracene-d10	188		12.320	12.330	(1.005)	371407	62.8798	62.9
15 Anthracene	178		12.359	12.358	(1.008)	28210	3.93618	3.94
\$ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	439847	82.7289	82.7
17 Fluoranthene	202		14.386	14.395	(1.173)	62129	9.55111	9.55
18 Pyrene	202		14.885	14.885	(0.876)	53972	8.32888	8.33
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	15384	2.83356	2.83
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	836424	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	16783	2.94281	2.94
22 Benzo(b)fluoranthene	252		Compound Not Detected.					
23 Benzo(k)fluoranthene	252		Compound Not Detected.					
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
\$ 25 Benzo(e)pyrene-d12	264		19.427	19.426	(0.981)	341397	64.2279	64.2
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	3637	0.71765	0.718
* 28 Perylene-d12	264		19.801	19.801	(1.000)	1037253	200.000	
29 Perylene	252		Compound Not Detected.					
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.151	22.150	(1.119)	225274	66.0732	66.1
31 Dibenzo(a,h)anthracene	278		Compound Not Detected.					
32 Indeno(1,2,3-cd)pyrene	276		Compound Not Detected.					
33 Benzo(g,h,i)perylene	276		Compound Not Detected.					

Compounds =====	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
	MASS					ON-COLUMN	FINAL
	=====	=====	=====	=====	(ng/mL)	(ng/mL)	

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092304.D
 Lab Smp Id: 16I0393-01
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	1006700	90.89
7 Acenaphthene-d10	297518	148759	595036	608435	104.50 <-
12 Phenanthrene-d10	522042	261021	1044084	1093670	109.50 <-
20 Chrysene-d12	389499	194750	778998	836424	114.74 <-
28 Perylene-d12	430626	215313	861252	1037253	140.87 <-

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.58	-0.16
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092304.D

Lab ID: 16I0393-01

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 09:30

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

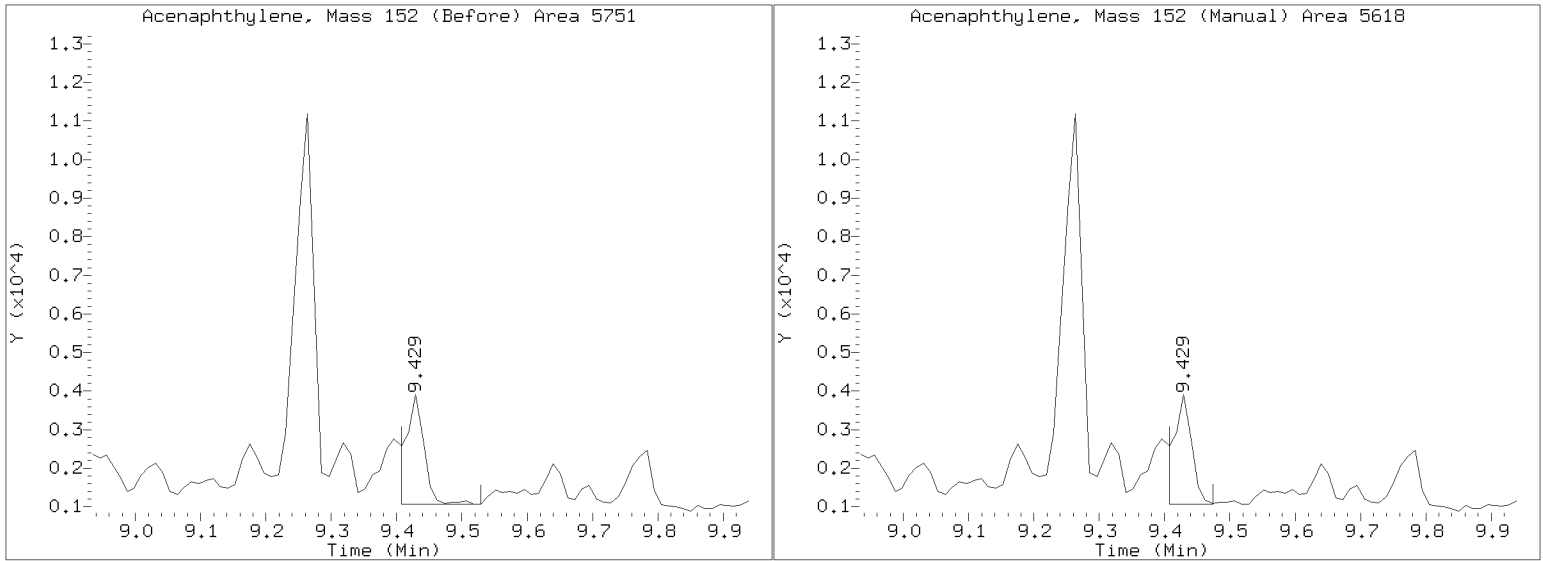
RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt11.i/20160923.b/16092304.D
Injection Date: 23-SEP-2016 09:30
Lab ID:16I0393-01 Client ID:
Report Date: 09/26/2016 12:49





LCS / LCS DUPLICATE RECOVERY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 1610393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Matrix: Tissue

Analyzed: 09/23/16 09:00

Batch: BEI0706

Laboratory ID: BEI0706-BS1

Preparation: EPA 3550C (Ultrasonic)

Sequence Name: PEMD LCS

Initial/Final: 0.886 g / 0.1 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. #	QC LIMITS REC.
Naphthalene	21.2	8.60	40.7	30 - 160
2-Methylnaphthalene	21.2	9.08	42.9	30 - 160
Acenaphthylene	21.2	9.24	43.7	30 - 160
Acenaphthene	21.2	9.76	46.1	30 - 160
Fluorene	21.2	10.1	47.6	30 - 160
Phenanthrene	21.2	12.4	58.7	30 - 160
Anthracene	21.2	9.83	46.4	30 - 160
Fluoranthene	21.2	11.4	53.7	30 - 160
Pyrene	21.2	11.7	55.5	30 - 160
Benzo(a)anthracene	21.2	11.9	56.0	30 - 160
Chrysene	21.2	11.4	53.7	30 - 160
Benzo(b)fluoranthene	21.2	11.4	53.7	30 - 160
Benzo(k)fluoranthene	21.2	9.90	46.8	30 - 160
Benzo(a)pyrene	21.2	10.2	48.2	30 - 160
Indeno(1,2,3-cd)pyrene	21.2	11.0	51.9	30 - 160
Dibenzo(a,h)anthracene	21.2	10.8	51.1	30 - 160
Benzo(g,h,i)perylene	21.2	10.9	51.5	30 - 160
Perylene	21.2	10.2	48.1	30 - 160
Benzo(e)pyrene	21.2	10.4	49.0	30 - 160
Benzo(a)fluoranthenes, Total	63.5	31.7	49.9	46 - 120

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20160923.16\16092303.D

Date : 23-SEP-2016 09:00

Client ID:

Sample Info: BE10706-BS1

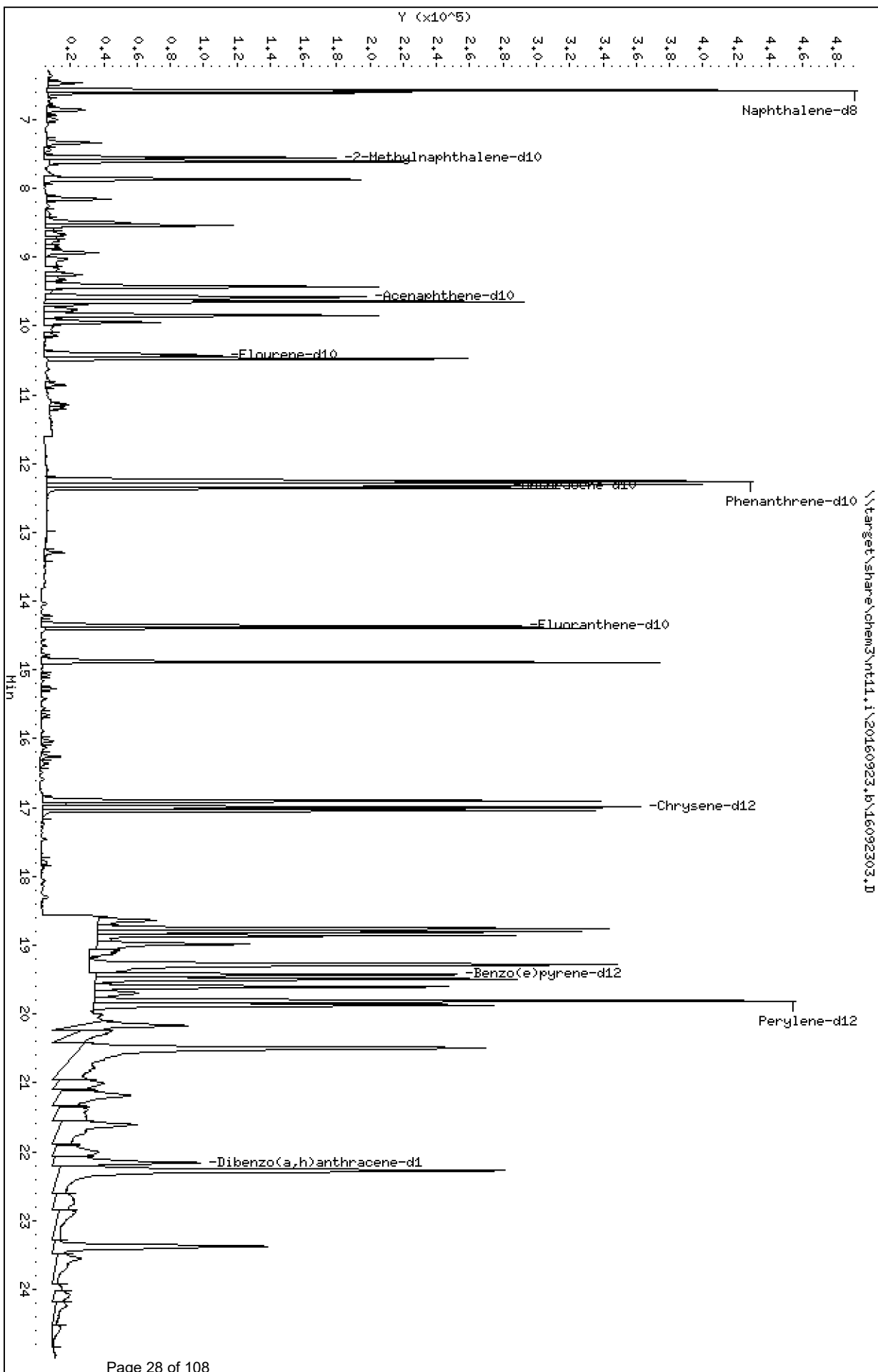
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

\\target\share\chem3\nt11.1\20160923.16\16092303.D



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092303.D

Lab Smp Id: BEI0706-BS1

Inj Date : 23-SEP-2016 09:00

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : BEI0706-BS1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 12:27 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 6

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	CONCENTRATIONS					
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)
* 1 Naphthalene-d8	136		6.581	6.592	(1.000)	719747	200.000	
2 Naphthalene	128		6.613	6.623	(1.005)	314814	76.2242	76.2
§ 3 2-Methylnaphthalene-d10	152		7.558	7.569	(1.148)	168311	73.6613	73.7
4 2-Methylnaphthalene	142		7.621	7.621	(1.158)	228763	80.4809	80.5
5 1-Methylnaphthalene	142		7.873	7.884	(1.196)	197646	76.3910	76.4
6 Acenaphthylene	152		9.429	9.440	(0.984)	294637	81.8536	81.9
* 7 Acenaphthene-d10	164		9.584	9.595	(1.000)	387130	200.000	
8 Acenaphthene	153		9.650	9.650	(1.007)	207267	86.4537	86.5
9 Dibenzofuran	168		9.849	9.860	(1.028)	294659	84.8104	84.8
§ 10 Fluorene-d10	174		10.422	10.432	(1.087)	164903	84.0882	84.1
11 Fluorene	166		10.475	10.485	(1.093)	247358	89.2240	89.2
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	707948	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	523562	110.092	110
§ 14 Anthracene-d10	188		12.320	12.330	(1.005)	306838	80.2518	80.3
15 Anthracene	178		12.359	12.358	(1.008)	403923	87.0674	87.1
§ 16 Fluoranthene-d10	212		14.357	14.356	(1.171)	359089	104.338	104
17 Fluoranthene	202		14.395	14.395	(1.174)	424325	100.773	101
18 Pyrene	202		14.885	14.885	(0.876)	435998	104.020	104
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	369004	105.078	105
* 20 Chrysene-d12	240		16.993	16.992	(1.000)	541016	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	371091	100.598	101
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	358779	100.655	101
23 Benzo(k)fluoranthene	252		18.802	18.792	(0.949)	348139	87.6764	87.7
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	321556	92.3055	92.3
§ 25 Benzo(e)pyrene-d12	264		19.436	19.426	(0.981)	330595	96.5753	96.6
26 Benzo(e)pyrene	252		19.494	19.484	(0.984)	314087	91.8056	91.8
27 Benzo(a)pyrene	252		19.599	19.599	(0.989)	295204	90.4478	90.4
* 28 Perylene-d12	264		19.811	19.801	(1.000)	668004	200.000	
29 Perylene	252		19.869	19.868	(1.003)	301261	90.1343	90.1
§ 30 Dibenzo(a,h)anthracene-d14	292		22.161	22.150	(1.119)	237464	108.148	108
31 Dibenzo(a,h)anthracene	278		22.272	22.261	(1.124)	287049	95.8128	95.8
32 Indeno(1,2,3-cd)pyrene	276		22.283	22.272	(1.125)	351606	97.3497	97.3
33 Benzo(g,h,i)perylene	276		23.380	23.369	(1.180)	301479	96.4931	96.5

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092303.D
 Lab Smp Id: BEI0706-BS1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 08:10
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	719747	36.48
7 Acenaphthene-d10	297518	148759	595036	387130	30.12
12 Phenanthrene-d10	522042	261021	1044084	707948	35.61
20 Chrysene-d12	389499	194750	778998	541016	38.90
28 Perylene-d12	430626	215313	861252	668004	55.12

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.58	-0.16
7 Acenaphthene-d10	9.60	9.10	10.10	9.58	-0.11
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.81	0.05

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092303.D

Lab ID: BEI0706-BS1
nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 09:00

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
-----	-----	-----	-------	----------

NONE

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000



Preparation Test Low Level SIM PNA PEMD # 10

Lab Number(s) PEMD Blanks

Page 1 of 1

Low Level (0.5ppb)

Batch set up by: JH

Batch ID _____

JAR ID	Extraction Requirements	Weight Extracted (1 Each) (0.886g)	Sonic Horn ID + Check	(REQ) Silica Gel Clean (1:1) EPH Aromatic	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	<u>PEMD Blanks</u> BLK	1 Each	#3	(1:1)	0.1mL	0.1mL		RH 9/22/16
	BS	1 Each	#4	(1:1)	0.1mL	0.1mL		Analyst/Date
	BSDup	1 Each		(1:1)	0.1mL	0.1mL		KD 80°C
				(1:1)	0.1mL	0.1mL		Hexane Exchange (2X 20mL) 100°C
				(1:1)	0.1mL	0.1mL		① 2 3 4 5 6
				(1:1)	0.1mL	0.1mL		RH 9/22/16
				(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		TurboVap ① 2 3 4 5 Pre-Cleanups
				(1:1)	0.1mL	0.1mL		WW 9/22/16
				(1:1)	0.1mL	0.1mL		Analyst/Date
				(1:1)	0.1mL	0.1mL		TurboVap 1 2 3 4 5 Post Cleanups
				(1:1)	0.1mL	0.1mL		JW 9/23/16
Analyst/Date							Reviewed by/Date	Analyst/Date
Field Surrogate	Eφφ 3769	1.5µg/mL	20µL	2/8/17			RH	JH
Standard	Standard ID	Concentration	Volume	Expiration Date			Analyst	Witness
Surrogate	1 (Dφφ 5238)	3/15µg/mL	20µL	11/11/16			RH	JH
Spike	18 (Eφφ 319φ)	1.5µg/mL	20µL	11/11/16			RH	JH
Extraction Time:				Balance ID:				

SPECIAL INSTRUCTIONS: Follow SOP 3323S for assembly and disassembly of PEMD(s).

- Place each LPDE strip into a 600mL beaker.
- Add 1:1 Low Level DCM/Pentane to the beaker.
- Add surr/spike.
- Sonicate 2X with 1:1 Low Level DCM/Pentane for 5 minutes each.
- Decant 1:1 Low Level DCM/Pentane into labeled 500mL Erlenmeyer flask with a funnel (No glasswool or Sodium Sulfate).
- After the last sonication, rinse the LPDE strip with Low Level DCM and add rinsate to the E-Flask.
- KD: (using Low Level DCM) to 5mL at 80°C.
- Exchange to Hexane (2X with 20mL) at 100°C.
- TurboVap to 2mL.
- Silica Clean-up =REQ. Extract ~2mL in Hexane (Collect EPH Aromatic fraction only).
- TurboVap to 0.5mL.
- Vial in a 1.5mL amber vial at 0.5mL using Low Level DCM.
- IN DIOXIN LAB: TurboVap and exchange to Iso-Octane.
- Vial 0.1mL in Iso-Octane for analysis.

NOTE: (An average weight of 20cm X 5cm pre-cleaned PEMD LPDE strips was determined to be 0.886g for BLK, BS, BSDup).



**MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM**

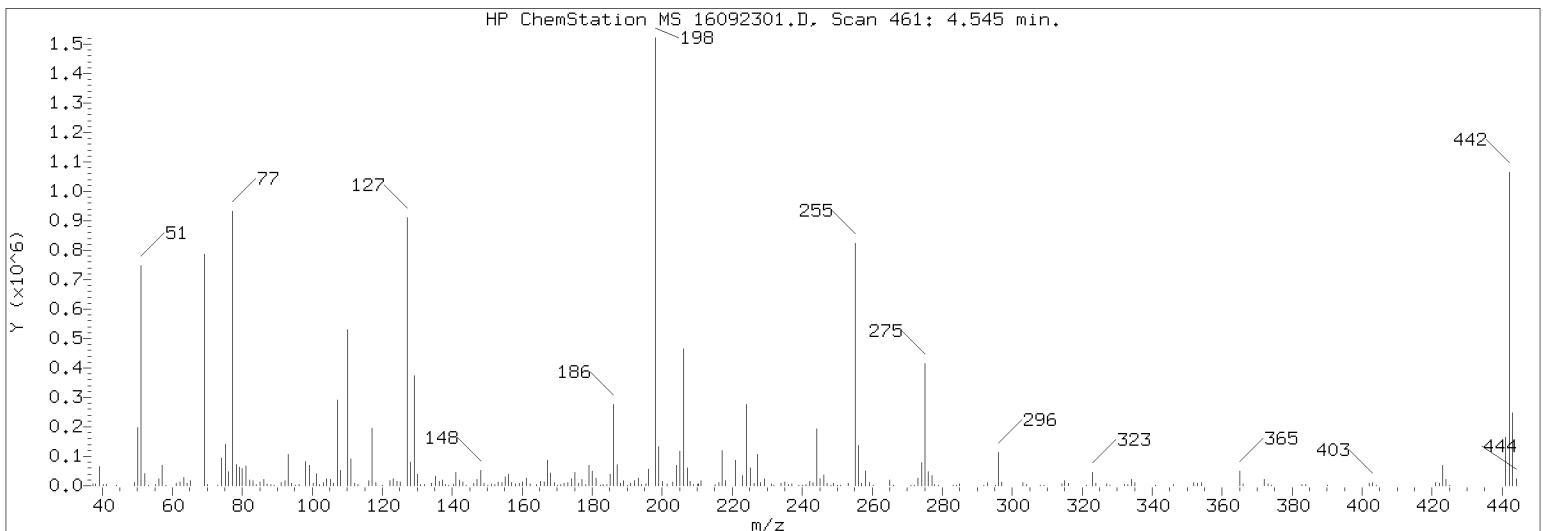
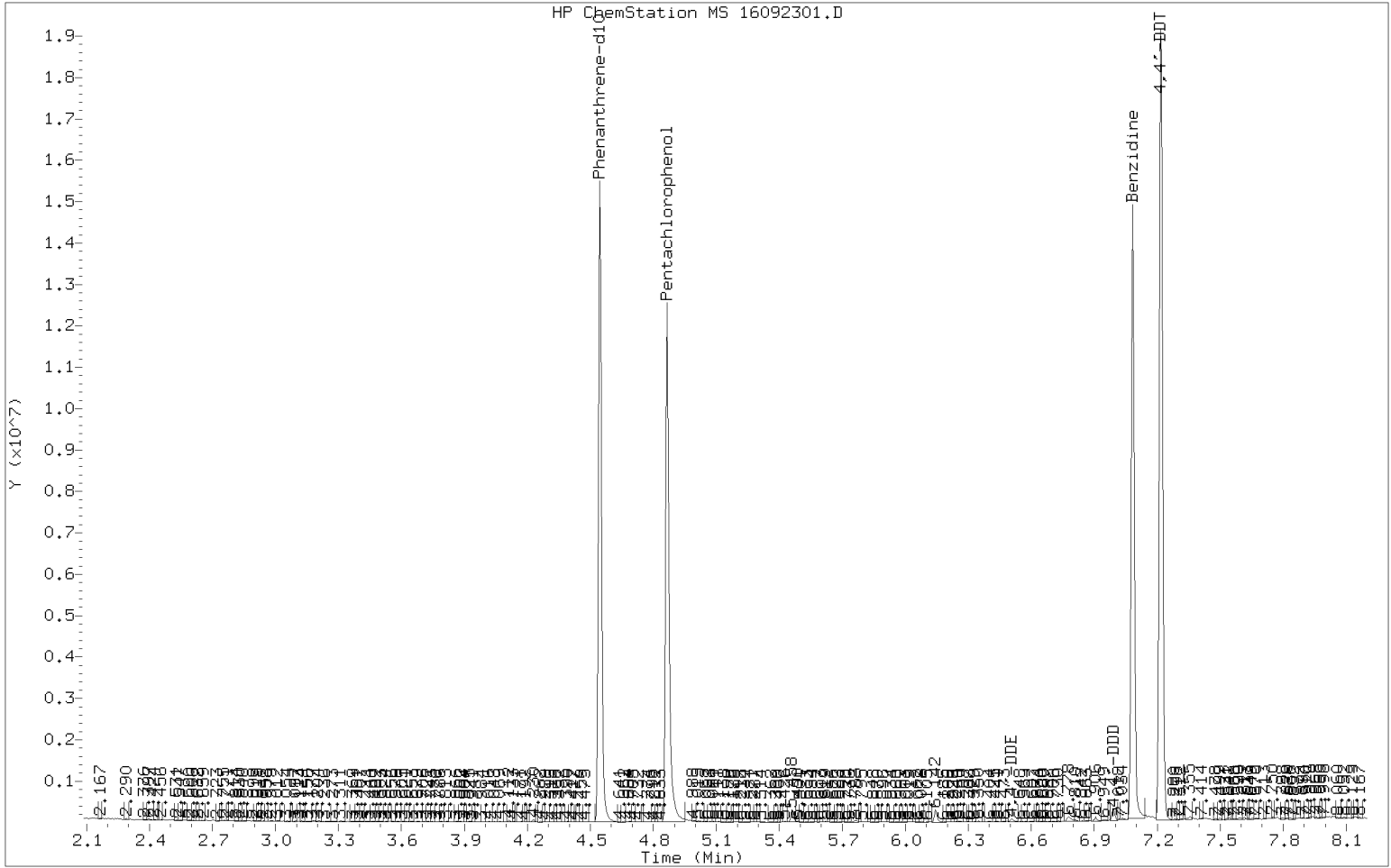
Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16I0393</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring (PEMD)</u>
Lab File ID:	<u>16092301.D</u>	Injection Date:	<u>09/23/16</u>
Instrument ID:	<u>NT11</u>	Injection Time:	<u>07:53</u>
Sequence:	<u>SEI0321</u>	Lab Sample ID:	<u>SEI0321-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	45.8	PASS
68	Less than 2% of 69	0.398	PASS
69	Less than 100% of 198	49	PASS
70	Less than 2% of 69	0.701	PASS
127	10 - 80% of 198	57.4	PASS
197	Less than 2% of 198	0.223	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.31	PASS
275	10 - 60% of 198	26.6	PASS
365	1 - 100% of 198	3.17	PASS
441	0.1 - 24% of 442	16.2	PASS
442	50 - 200% of 198	73.8	PASS
443	15 - 24% of 442	23.2	PASS

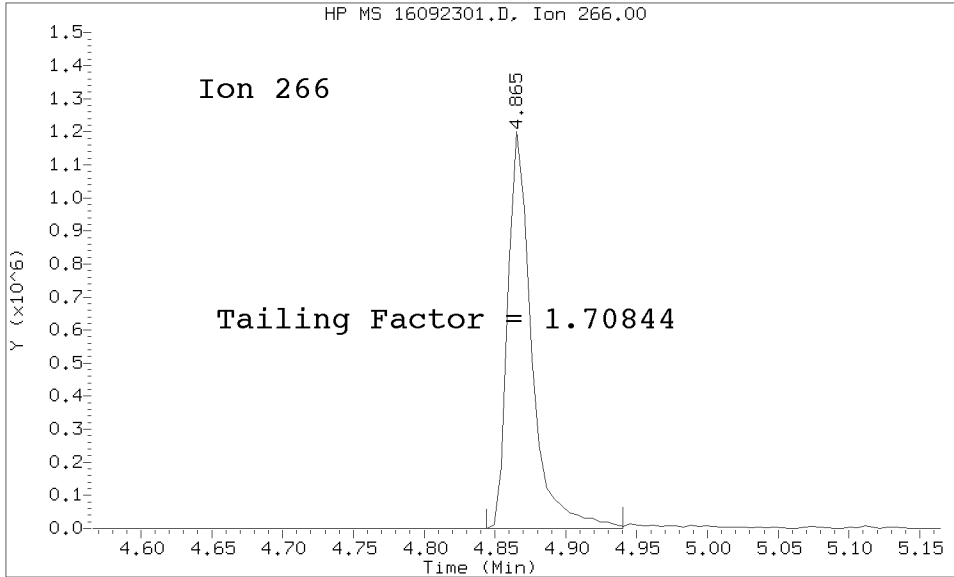
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEI0321-TUN1	16092301.D	09/23/2016	7:53
Initial Cal Check	SEI0321-ICV1	16092302.D	09/23/2016	8:10
LCS	BEI0706-BS1	16092303.D	09/23/2016	9:00
PG-PEMD-BLK-20160913	16I0393-01	16092304.D	09/23/2016	9:30
Calibration Check	SEI0321-CCV1	16092316.D	09/23/2016	15:32

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160923.b/16092301.D/16092301.D
Method Used: \20160923.b\DFTPP.m Inst: nt11
Injection Date: 23-SEP-2016 07:53 Operator: JW
Sample Info: SEI0321-TUN1 SEI0321-TUN1
Report Date: 09/26/2016 07:53



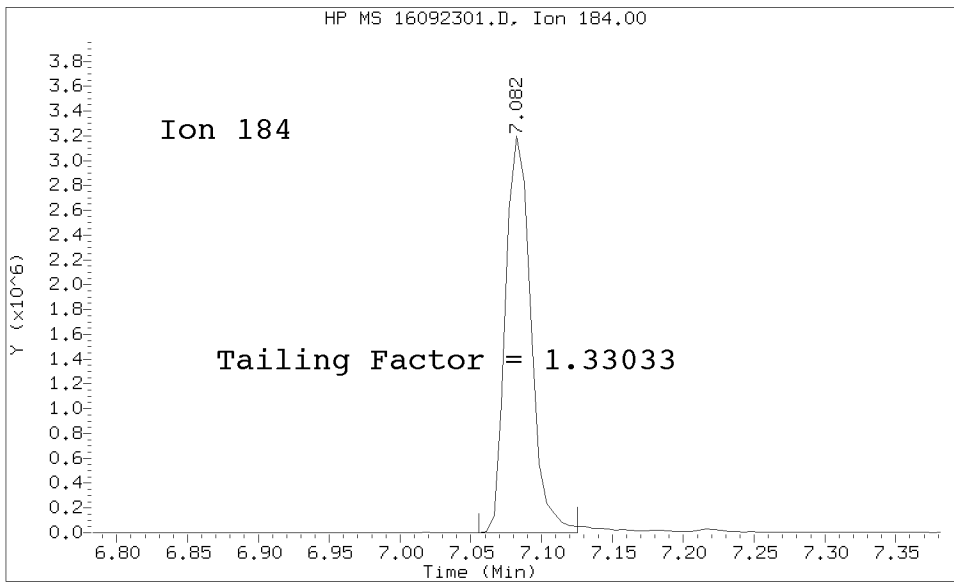
Datafile Analyzed: /20160923.b/16092301.D/16092301.D
Method Used: \20160923.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 23-SEP-2016 07:53 Operator: JW
Sample Info: SEI-TUN1
Report Date: 09/26/2016 07:53



Pentachlorophenol

=====
Exp. RT = 4.865
Found RT = 4.865

Tail Factor = 1.708 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 7.082
Found RT = 7.082

Tail Factor = 1.330 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7084433	2.000	PASS
Benzidine	1.3303269	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2902280			N/A
4,4-DDE	12018	0.4	20.0	PASS
4,4-DDD	58140	2.0	20.0	PASS
4,4-DDD + DDE	70158	2.4	20.0	PASS

Tuning Sample, nt11.i/20160923.b/16092301.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.82
68	Less than 2.00% of mass 69	0.20 (0.40)
69	Mass 69 relative abundance	49.00
70	Less than 2.00% of mass 69	0.34 (0.70)
127	10.00 - 80.00% of mass 198	57.43
197	Less than 2.00% of mass 198	0.22
199	5.00 - 9.00% of mass 198	8.31
275	10.00 - 60.00% of mass 198	26.57
365	Greater than 1.00% of mass 198	3.17
441	0.01 - 24.00% of mass 442	11.94 (16.18)
442	50.00 - 200.00% of mass 198	73.77
443	15.00 - 24.00% of mass 442	17.08 (23.15)

Data File: 16092301.D

Spectrum: Avg. Scans 460-462 (4.54), Background Scan 454

Location of Maximum: 198.00

Number of points: 271

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	3681	120.00	897	190.00	1746	272.00	1001
38.00	6687	121.00	816	191.00	6484	273.00	23512
39.00	48112	122.00	13947	192.00	14084	274.00	65520
40.00	2373	123.00	18352	193.00	20384	275.00	329344
41.00	2027	124.00	10220	194.00	3481	276.00	41112
44.00	3009	125.00	10601	195.00	3578	277.00	28176
45.00	683	127.00	711936	196.00	38976	278.00	3839
49.00	3051	128.00	64992	197.00	2761	279.00	1027
50.00	147968	129.00	302912	198.00	1239552	283.00	3014
51.00	567936	130.00	27056	199.00	103000	284.00	1753
52.00	32488	131.00	6186	200.00	9490	285.00	4745
53.00	1008	132.00	1521	201.00	5269	286.00	898
55.00	2716	134.00	7937	203.00	8612	292.00	1740
56.00	19264	135.00	26312	204.00	55312	293.00	7467
57.00	47704	136.00	10535	205.00	93080	294.00	1001
58.00	887	137.00	15151	206.00	362752	295.00	2654
61.00	8933	138.00	2412	207.00	48576	296.00	84792
62.00	9437	139.00	922	208.00	12978	297.00	12887
63.00	27784	140.00	4283	209.00	2918	302.00	1049
64.00	4681	141.00	36248	210.00	7023	303.00	9381
65.00	13173	142.00	12563	211.00	14767	304.00	2229
67.00	1413	143.00	9505	212.00	2612	308.00	1485
68.00	2420	144.00	1780	215.00	4527	309.00	889
69.00	607424	145.00	1900	216.00	9521	314.00	4620
70.00	4257	146.00	6287	217.00	94800	315.00	13605
73.00	3998	147.00	17584	218.00	13557	316.00	6650
74.00	68048	148.00	40976	219.00	1580	321.00	1747
75.00	108280	149.00	8362	221.00	68520	322.00	1683
76.00	38744	150.00	3572	222.00	7805	323.00	31696
77.00	724736	151.00	5119	223.00	23248	324.00	6570
78.00	55264	152.00	2327	224.00	211968	327.00	4427
79.00	47224	153.00	12268	225.00	48960	328.00	2607
80.00	46344	154.00	9476	226.00	5881	332.00	1760
81.00	53544	155.00	21144	227.00	78152	333.00	2918
82.00	12241	156.00	33392	228.00	11607	334.00	19488
83.00	11834	157.00	6776	229.00	19240	335.00	4497
84.00	203	158.00	4268	231.00	6543	341.00	2363
85.00	10070	159.00	5986	232.00	1948	342.00	971
86.00	12119	160.00	12747	234.00	5884	346.00	4871
87.00	6270	161.00	21104	235.00	7557	352.00	7185
88.00	1974	162.00	6300	236.00	2837	353.00	4841
89.00	751	163.00	1039	237.00	6567	354.00	12571
91.00	9750	164.00	1254	239.00	1971	355.00	769
92.00	14421	165.00	14274	240.00	2357	361.00	687
93.00	78776	166.00	11705	241.00	4551	365.00	39232
94.00	6888	167.00	65072	242.00	9937	366.00	5648
95.00	882	168.00	38208	243.00	9720	367.00	666
96.00	2072	169.00	8293	244.00	155008	371.00	906
98.00	59640	170.00	2187	245.00	20336	372.00	16992

99.00	51864	171.00	3974	246.00	32248	373.00	3918
100.00	4904	172.00	6074	247.00	7285	374.00	850
101.00	29976	173.00	9563	248.00	694	383.00	4493
102.00	1781	174.00	17736	249.00	5325	384.00	1229
103.00	7154	175.00	31544	250.00	1669	390.00	2321
104.00	18784	176.00	7743	251.00	807	391.00	1046
105.00	14948	177.00	17128	252.00	1248	402.00	8213
106.00	5425	178.00	4533	253.00	6425	403.00	7680
107.00	227904	179.00	51848	255.00	675712	404.00	2404
108.00	39344	180.00	40128	256.00	102928	421.00	9787
109.00	4023	181.00	19304	257.00	9572	422.00	6801
110.00	415168	182.00	2328	258.00	38480	423.00	57744
111.00	64272	183.00	1097	259.00	6567	424.00	16816
112.00	7568	184.00	3227	260.00	866	425.00	981
113.00	3992	185.00	28152	264.00	696	441.00	147968
116.00	13069	186.00	205184	265.00	17056	442.00	914432
117.00	149120	187.00	57288	266.00	2730	443.00	211712
118.00	12426	188.00	4874	270.00	722	444.00	20704
119.00	1381	189.00	11207	271.00	674		



**MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270D-SIM**

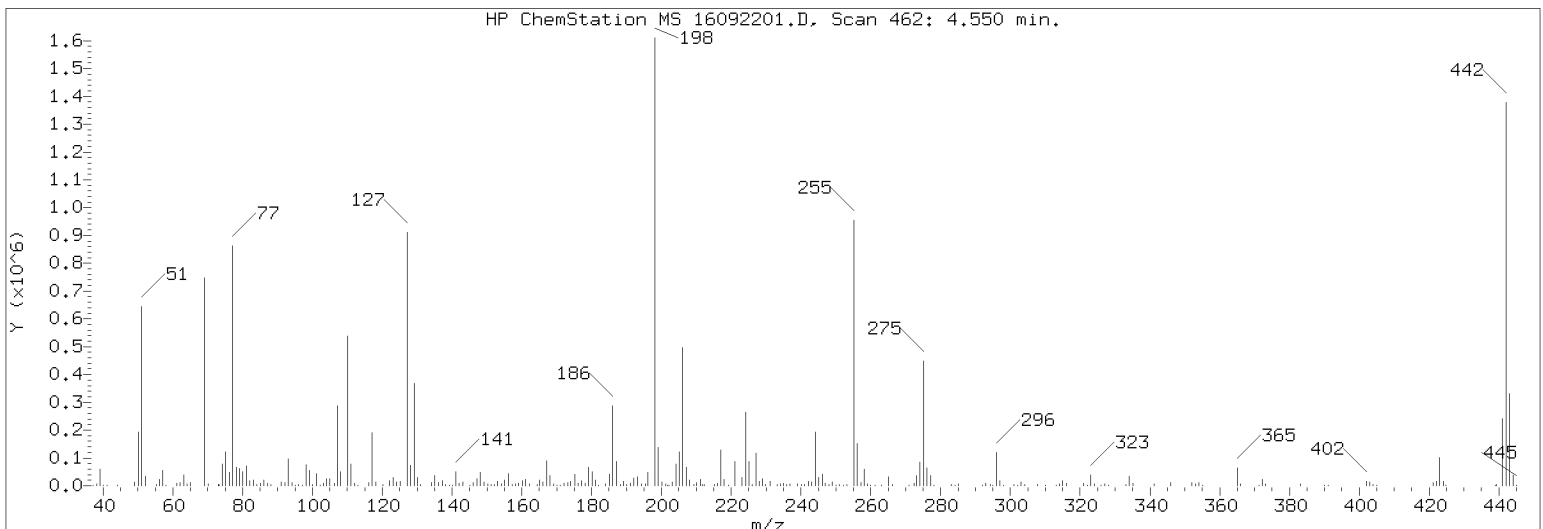
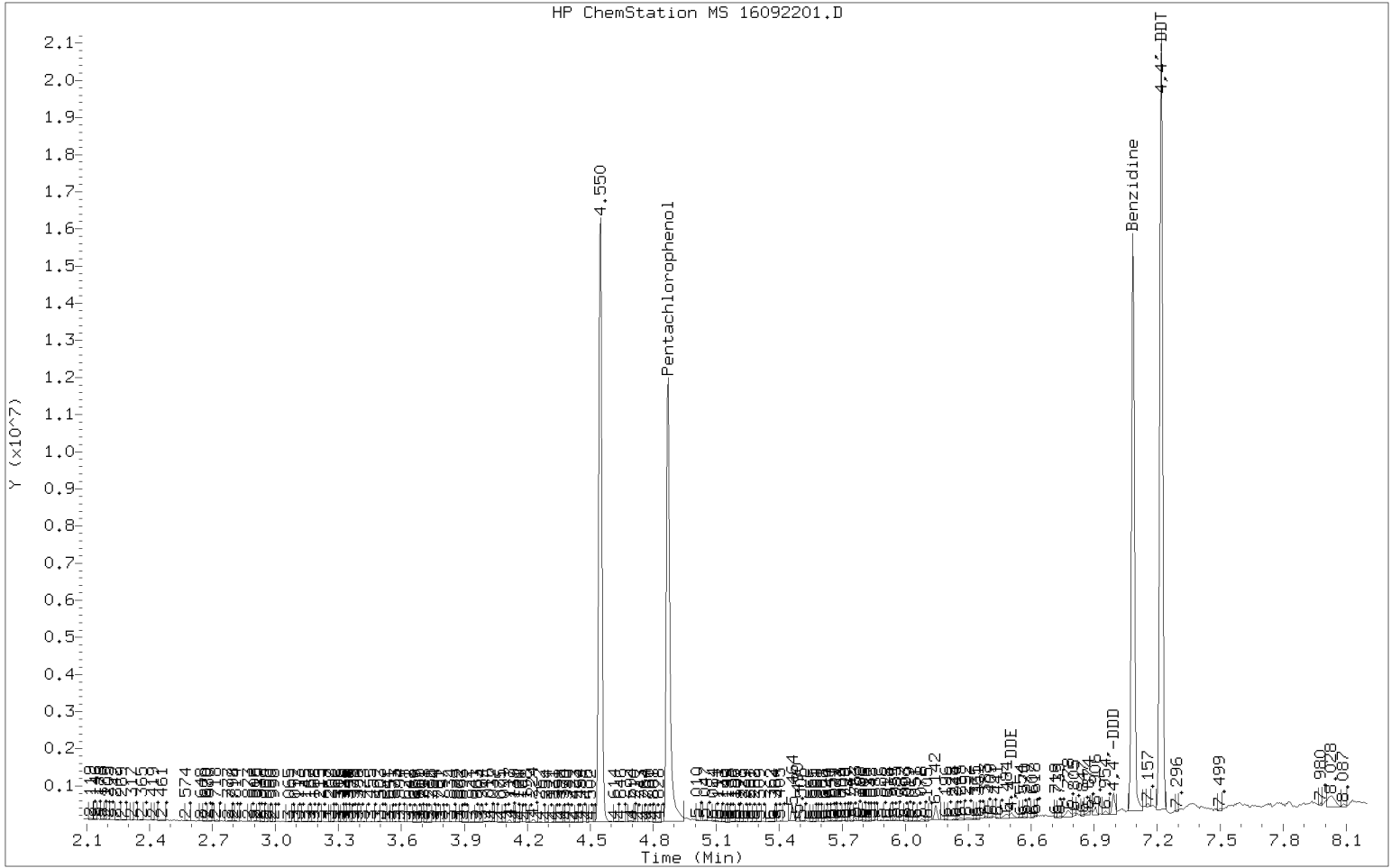
Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16I0393</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring (PEMD)</u>
Lab File ID:	<u>16092201.D</u>	Injection Date:	<u>09/22/16</u>
Instrument ID:	<u>NT11</u>	Injection Time:	<u>08:56</u>
Sequence:	<u>SEI0302</u>	Lab Sample ID:	<u>SEI0302-TUN1</u>

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	10 - 80% of 198	41.8	PASS
68	Less than 2% of 69	0	PASS
69	Less than 100% of 198	46.5	PASS
70	Less than 2% of 69	0.636	PASS
127	10 - 80% of 198	55.6	PASS
197	Less than 2% of 198	0.593	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	8.45	PASS
275	10 - 60% of 198	27.6	PASS
365	1 - 100% of 198	3.38	PASS
441	0.1 - 24% of 442	16.2	PASS
442	50 - 200% of 198	84.7	PASS
443	15 - 24% of 442	22.8	PASS

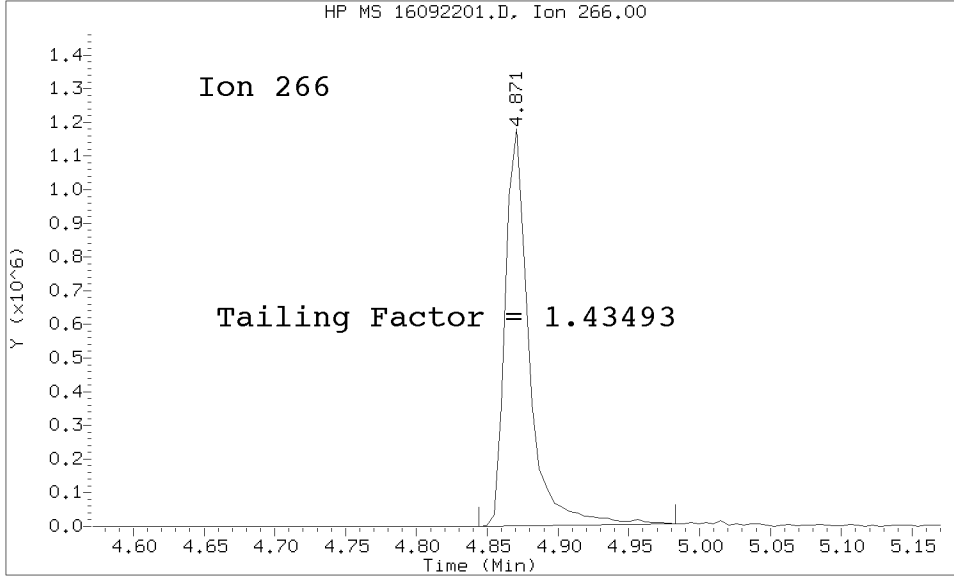
Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SEI0302-TUN1	16092201.D	09/22/2016	8:56
Cal Standard	SEI0302-CAL4	16092202.D	09/22/2016	9:14
Cal Standard	SEI0302-CAL1	16092203.D	09/22/2016	9:44
Cal Standard	SEI0302-CAL5	16092204.D	09/22/2016	10:14
Cal Standard	SEI0302-CAL2	16092205.D	09/22/2016	10:44
Cal Standard	SEI0302-CAL3	16092206.D	09/22/2016	11:14
Cal Standard	SEI0302-CAL6	16092207.D	09/22/2016	11:45
Secondary Cal Check	SEI0302-SCV1	16092208.D	09/22/2016	12:15

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160922.b/16092201.D/16092201.D
Method Used: \20160922.b\DFTPP.m Inst: nt11
Injection Date: 22-SEP-2016 08:56 Operator: JW
Sample Info: SEI0302-TUN1 SEI0302-TUN1
Report Date: 09/22/2016 09:09



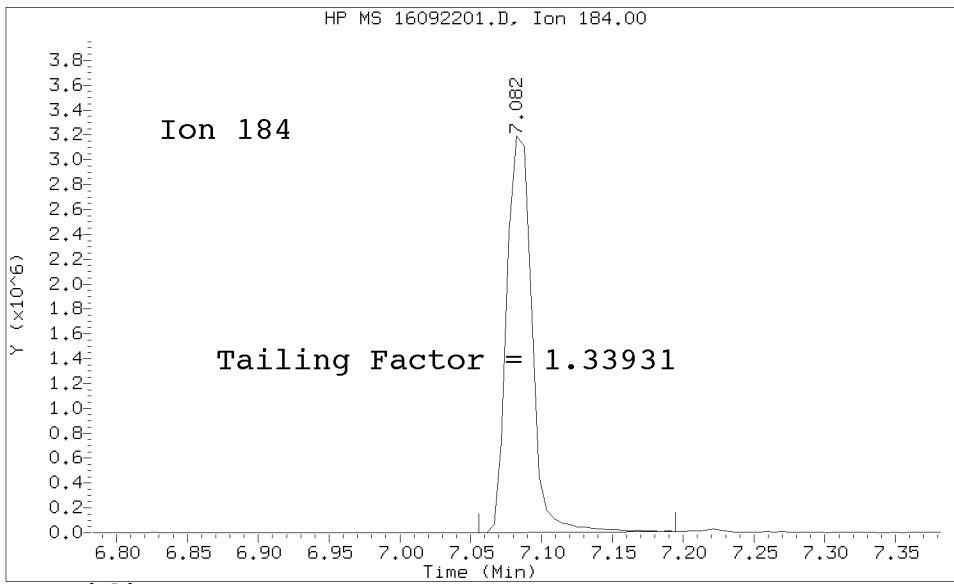
Datafile Analyzed: /20160922.b/16092201.D/16092201.D
Method Used: \20160922.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 22-SEP-2016 08:56 Operator: JW
Sample Info: SEI0302-TUN1
Report Date: 09/22/2016 09:09



Pentachlorophenol

=====
Exp. RT = 4.871
Found RT = 4.871

Tail Factor = 1.435 Maximum Allowed = 2.0



Benzidine

=====
Exp. RT = 7.082
Found RT = 7.082

Tail Factor = 1.339 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4349315	2.000	PASS
Benzidine	1.3393070	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2680503			N/A
4,4-DDE	15586	0.6	20.0	PASS
4,4-DDD	79914	2.9	20.0	PASS
4,4-DDD + DDE	95500	3.4	20.0	PASS

Tuning Sample, nt11.i/20160922.b/16092201.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	41.81
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.52
70	Less than 2.00% of mass 69	0.30 (0.64)
127	10.00 - 80.00% of mass 198	55.59
197	Less than 2.00% of mass 198	0.59
199	5.00 - 9.00% of mass 198	8.45
275	10.00 - 60.00% of mass 198	27.59
365	Greater than 1.00% of mass 198	3.38
441	0.01 - 24.00% of mass 442	13.70 (16.18)
442	50.00 - 200.00% of mass 198	84.72
443	15.00 - 24.00% of mass 442	19.35 (22.84)

Data File: 16092201.D
 Spectrum: Avg. Scans 461-463 (4.55), Background Scan 456
 Location of Maximum: 198.00
 Number of points: 277

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	1643	124.00	11633	197.00	7946	276.00	51144
38.00	6122	125.00	11634	198.00	1339904	277.00	26736
39.00	47680	126.00	921	199.00	113208	278.00	3681
40.00	2157	127.00	744896	200.00	10036	283.00	2900
41.00	4831	128.00	68416	201.00	5533	284.00	1452
43.00	874	129.00	321472	202.00	5513	285.00	6894
48.00	779	130.00	24976	203.00	11918	292.00	2459
49.00	6448	131.00	5576	204.00	59968	293.00	8531
50.00	157952	132.00	2096	205.00	100312	294.00	2560
51.00	560256	134.00	12139	206.00	397888	295.00	1643
52.00	32928	135.00	28512	207.00	52880	296.00	98944
53.00	911	136.00	10688	208.00	14645	297.00	14292
55.00	4855	137.00	13694	209.00	3144	298.00	1063
56.00	22672	138.00	4481	210.00	8485	301.00	1379
57.00	43368	139.00	671	211.00	19144	302.00	2144
58.00	1941	140.00	4472	212.00	3568	303.00	11114
61.00	7289	141.00	40472	213.00	687	304.00	2662
62.00	11256	142.00	10343	215.00	3321	308.00	1507
63.00	32896	143.00	10260	216.00	6894	309.00	1240
64.00	3993	144.00	810	217.00	106272	310.00	1422
65.00	14051	145.00	1788	218.00	18592	313.00	683
69.00	623296	146.00	9028	219.00	1150	314.00	5021
70.00	3962	147.00	19944	220.00	1482	315.00	9927
71.00	683	148.00	38088	221.00	72144	316.00	6214
73.00	2528	149.00	9071	222.00	3308	321.00	4345
74.00	69920	150.00	3511	223.00	25408	322.00	1772
75.00	108456	151.00	7126	224.00	226304	323.00	33416
76.00	41088	152.00	4572	225.00	62192	324.00	6179
77.00	724864	153.00	12888	226.00	5277	326.00	899
78.00	56088	154.00	10300	227.00	98184	327.00	8033
79.00	58152	155.00	22120	228.00	12865	328.00	3670
80.00	41552	156.00	36544	229.00	19896	332.00	1688
81.00	63880	157.00	6654	230.00	4526	333.00	4124
82.00	15575	158.00	6502	231.00	11219	334.00	22600
83.00	14088	159.00	5409	232.00	919	335.00	6073
85.00	11463	160.00	14009	233.00	1281	341.00	5390
86.00	12912	161.00	21856	234.00	5328	342.00	836
87.00	7162	162.00	4798	235.00	8657	346.00	7718
88.00	3845	164.00	3705	236.00	3133	352.00	9600
91.00	13200	165.00	16304	237.00	5866	353.00	6928
92.00	12443	166.00	13682	239.00	3908	354.00	10745
93.00	77608	167.00	73112	240.00	2274	355.00	1984
94.00	7328	168.00	34768	241.00	5254	365.00	45296
95.00	3157	169.00	5123	242.00	12334	366.00	4832
96.00	5997	170.00	762	243.00	11998	371.00	2978
97.00	753	171.00	3828	244.00	159040	372.00	18392
98.00	62656	172.00	6576	245.00	23616	373.00	5166
99.00	54184	173.00	10428	246.00	30728	380.00	679
100.00	4527	174.00	14714	247.00	7577	383.00	5458

101.00	36912	175.00	32888	248.00	1659	384.00	802
102.00	1614	176.00	7072	249.00	8756	390.00	1699
103.00	7565	177.00	15002	250.00	851	391.00	2140
104.00	21288	178.00	5864	251.00	2030	402.00	9603
105.00	19936	179.00	55712	252.00	2422	403.00	11771
106.00	8037	180.00	40376	253.00	5211	404.00	5020
107.00	240768	181.00	19600	255.00	787200	405.00	915
108.00	37544	182.00	2654	256.00	126720	421.00	10726
109.00	2982	184.00	4526	257.00	10036	422.00	10394
110.00	453760	185.00	30696	258.00	50912	423.00	80384
111.00	63864	186.00	236032	259.00	6774	424.00	12691
112.00	8539	187.00	64296	260.00	1519	425.00	1049
113.00	2362	188.00	6834	261.00	948	439.00	1049
115.00	1703	189.00	11771	263.00	948	441.00	183616
116.00	13144	190.00	2771	265.00	20424	442.00	1135104
117.00	149504	191.00	10908	266.00	2379	443.00	259264
118.00	12026	192.00	17160	271.00	2830	444.00	28616
119.00	1496	193.00	23616	272.00	3593	445.00	1049
120.00	2495	194.00	4696	273.00	32160		
122.00	15313	195.00	3238	274.00	67360		
123.00	24552	196.00	40184	275.00	369664		



INITIAL CALIBRATION DATA

EPA 8270D-SIM

Laboratory:	Analytical Resources, Inc.	SDG:	16I0393
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring (PEMD)
Calibration:	ZI00066	Instrument:	NT11
Calibration Date:	09/22/2016 8:00	Column (1):	RXi-17Sil-MS

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Naphthalene	1.147654	9.5			RSD (20)	
2-Methylnaphthalene	0.7898471	3.6			RSD (20)	
Acenaphthylene	1.859613	6.4			RSD (20)	
Acenaphthene	1.238568	5.2			RSD (20)	
Fluorene	1.432246	4.9			RSD (20)	
Phenanthrene	1.343515	9.5			RSD (20)	
Anthracene	1.310604	7.1			RSD (20)	
Fluoranthene	1.189554	5.9			RSD (20)	
Pyrene	1.549479	8.8			RSD (20)	
Benzo(a)anthracene	1.298197	5.7			RSD (20)	
Chrysene	1.363676	9.2			RSD (20)	
Benzo(b)fluoranthene	1.067189	4.5			RSD (20)	
Benzo(k)fluoranthene	1.188833	3.6			RSD (20)	
Benzo(a)pyrene	0.9771816	2.0			RSD (20)	
Indeno(1,2,3-cd)pyrene	1.081365	2.9			RSD (20)	
Dibenzo(a,h)anthracene	0.8969816	3.3			RSD (20)	
Benzo(g,h,i)perylene	0.9354309	1.9			RSD (20)	
Perylene	1.000699	3.1			RSD (20)	
Benzo(e)pyrene	1.024311	4.1			RSD (20)	
2-Methylnaphthalene-d10	0.6349262	2.9			RSD (20)	
Dibenzo[a,h]anthracene-d14	0.6574024	4.6			RSD (20)	
Fluoranthene-d10	0.9722723	5.0			RSD (20)	
Fluorene-d10	1.013133	5.9			RSD (20)	
Anthracene-d10	1.080147	18.0			RSD (20)	
Benzo(e)pyrene-d12	1.024899	3.4			RSD (20)	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-SEP-2016 09:14
 End Cal Date : 22-SEP-2016 11:45
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Last Edit : 22-Sep-2016 13:42 nt11.i
 Curve Type : Average

Calibration File Names:

Level 1: \\target\share\chem3\nt11.i\20160922.b\16092203.D
 Level 2: \\target\share\chem3\nt11.i\20160922.b\16092205.D
 Level 3: \\target\share\chem3\nt11.i\20160922.b\16092206.D
 Level 4: \\target\share\chem3\nt11.i\20160922.b\16092202.D
 Level 5: \\target\share\chem3\nt11.i\20160922.b\16092204.D
 Level 6: \\target\share\chem3\nt11.i\20160922.b\16092207.D

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
2 Naphthalene	1.29511	1.19304	1.21071	1.12291	1.07937	0.98479	1.14765	9.512
4 2-Methylnaphthalene	0.80489	0.79198	0.81364	0.80164	0.79259	0.73435	0.78985	3.591
5 1-Methylnaphthalene	0.75127	0.71572	0.74280	0.71807	0.71476	0.67105	0.71895	3.903
6 Acenaphthylene	2.03429	1.86764	1.87730	1.89742	1.81010	1.67093	1.85961	6.380
8 Acenaphthene	1.32248	1.25297	1.27428	1.23488	1.21535	1.13144	1.23857	5.176
9 Dibenzofuran	1.91669	1.85057	1.89003	1.80303	1.72999	1.57917	1.79491	6.950
11 Fluorene	1.51233	1.43625	1.45978	1.46164	1.41944	1.30404	1.43225	4.903
13 Phenanthrene	1.47257	1.40425	1.43304	1.35162	1.27685	1.12276	1.34352	9.509
15 Anthracene	1.36235	1.33027	1.38847	1.36003	1.28909	1.13342	1.31060	7.111
17 Fluoranthene	1.23601	1.20924	1.24994	1.21081	1.17451	1.05681	1.18955	5.883
18 Pyrene	1.71747	1.56248	1.57116	1.63462	1.49251	1.31863	1.54948	8.785
19 Benzo(a)anthracene	1.39300	1.29491	1.32794	1.32796	1.27173	1.17366	1.29820	5.658
21 Chrysene	1.54929	1.39960	1.41715	1.34005	1.29882	1.17714	1.36368	9.169
22 Benzo(b)fluoranthene	1.13516	1.06014	1.10845	1.00725	1.06239	1.02976	1.06719	4.472
23 Benzo(k)fluoranthene	1.23450	1.18388	1.24256	1.15764	1.18191	1.13250	1.18883	3.606
24 Benzo(j)fluoranthene	1.09872	1.05382	1.10645	0.99579	1.02578	0.97738	1.04299	5.088
26 Benzo(e)pyrene	1.06153	1.03192	1.07848	0.98781	1.01586	0.97027	1.02431	4.073
27 Benzo(a)pyrene	0.97286	0.96815	1.00656	0.97284	0.99146	0.95121	0.97718	1.974
29 Perylene	1.03695	0.99865	1.03445	0.98297	0.99656	0.95461	1.00070	3.133
31 Dibenzo(a,h)anthracene	0.88671	0.84363	0.90880	0.89618	0.92574	0.92082	0.89698	3.340
32 Indeno(1,2,3-cd)pyrene	1.05508	1.03570	1.08591	1.08835	1.11883	1.10432	1.08137	2.858
33 Benzo(g,h,i)perylene	0.95346	0.90862	0.92381	0.92746	0.95195	0.94729	0.93543	1.945
\$ 3 2-Methylnaphthalene-d10	0.65761	0.63414	0.64343	0.63473	0.63723	0.60242	0.63493	2.861
\$ 10 Fluorene-d10	1.12373	1.00037	1.01623	1.00353	0.99484	0.94010	1.01313	5.949
\$ 14 Anthracene-d10	1.45515	1.06023	1.06884	1.02115	0.98337	0.89214	1.08015	18.016
\$ 16 Fluoranthene-d10	1.03961	0.97609	0.98781	0.98089	0.96038	0.88885	0.97227	5.032
\$ 25 Benzo(e)pyrene-d12	1.07291	1.02575	1.05291	0.99538	1.02136	0.98108	1.02490	3.350

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-SEP-2016 09:14
 End Cal Date : 22-SEP-2016 11:45
 Quant Method : ISTD
 Origin : Disabled
 Target Version : 4.14
 Integrator : HP RTE
 Method file : \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Last Edit : 22-Sep-2016 13:42 nt11.i
 Curve Type : Average

Compound	10.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
\$ 30 Dibenzo(a,h)anthracene-d14	0.62451	0.62523	0.65540	0.65751	0.68331	0.69845	0.65740	4.552



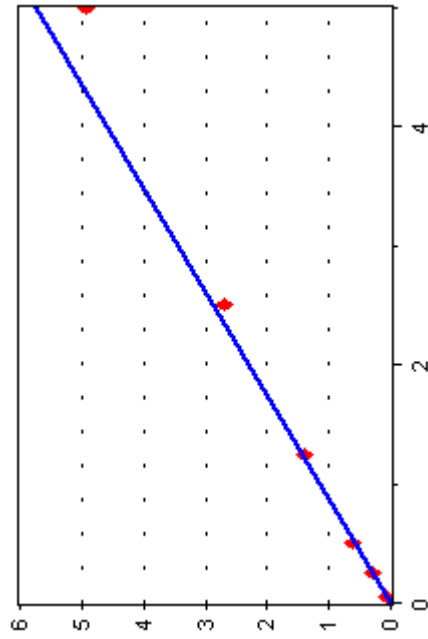
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

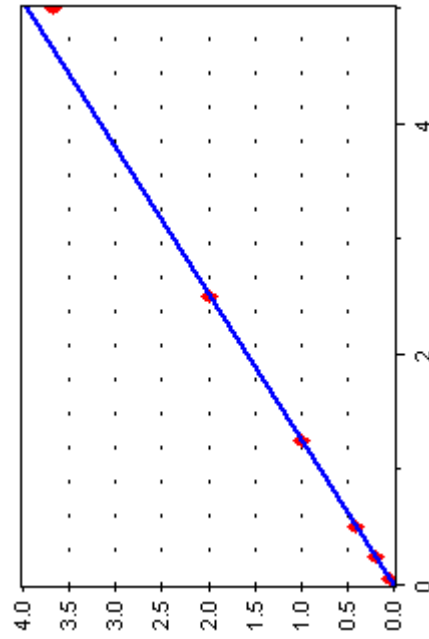
Naphthalene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Naphthalene



2-Methylnaphthalene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2-Methylnaphthalene

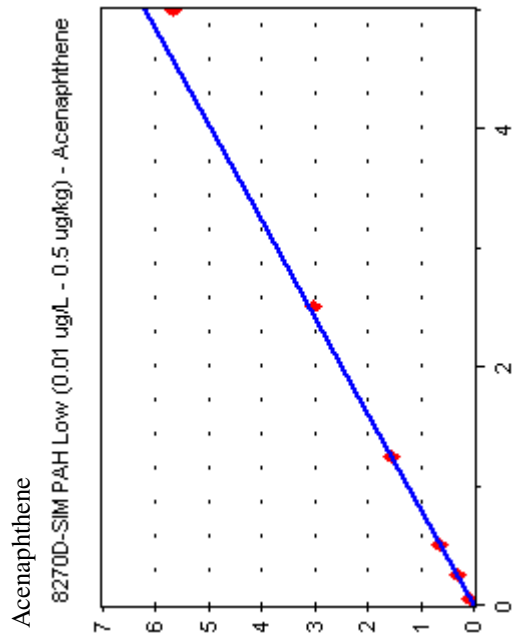
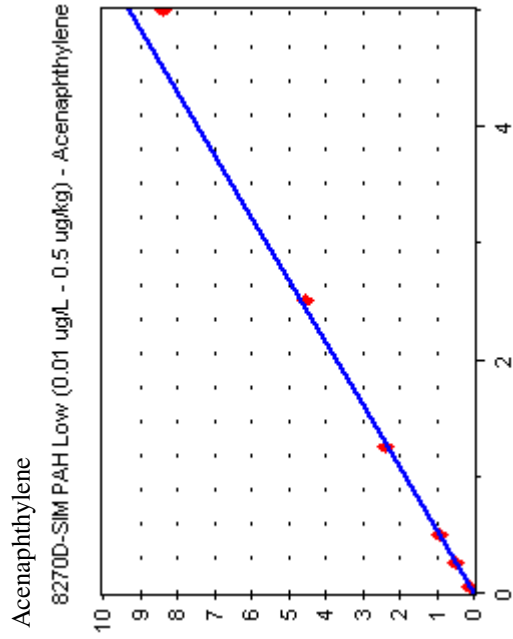




Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)





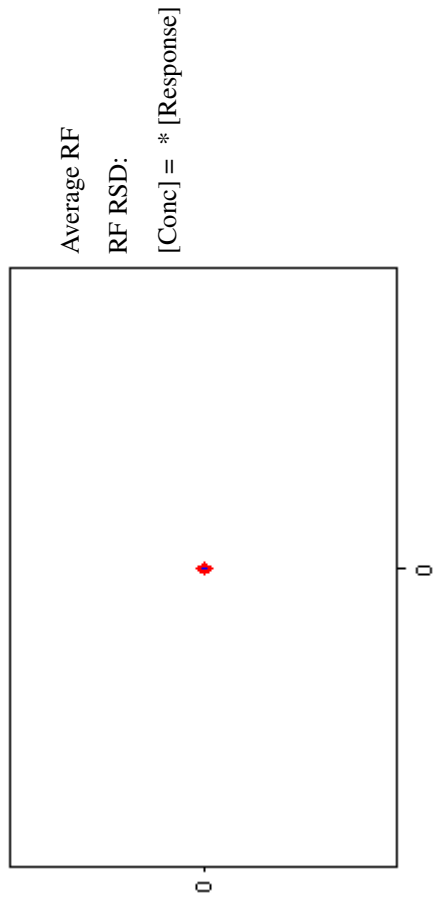
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

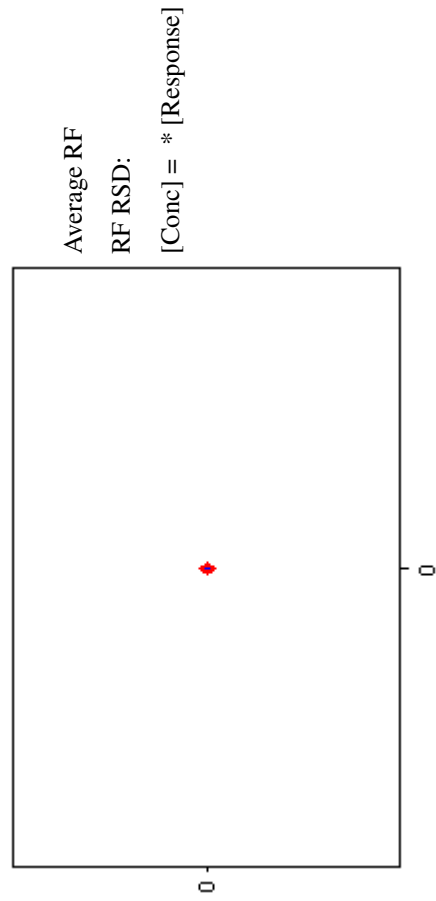
Biphenyl

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Biphenyl



2,6-Dimethylnaphthalene

3270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2,6-Dimethylnaphthal





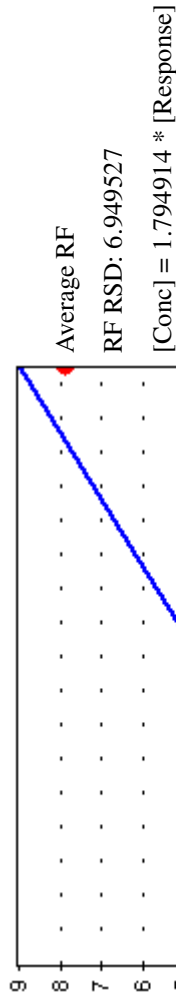
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

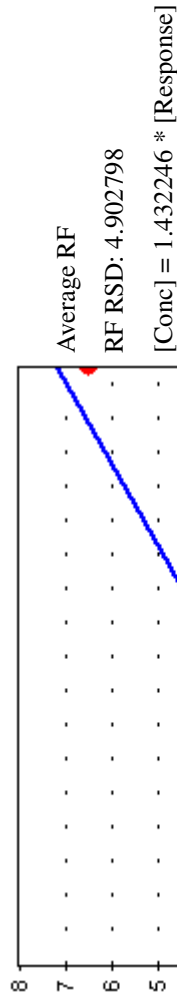
Dibenzofuran

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzofuran



Fluorene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluorene





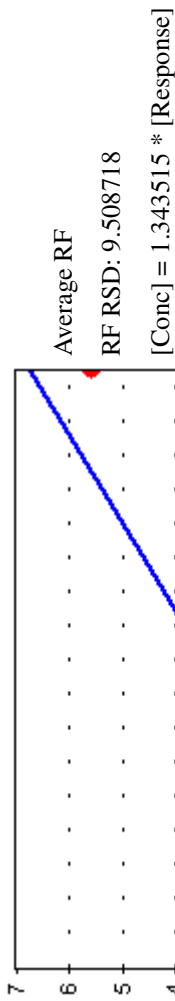
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

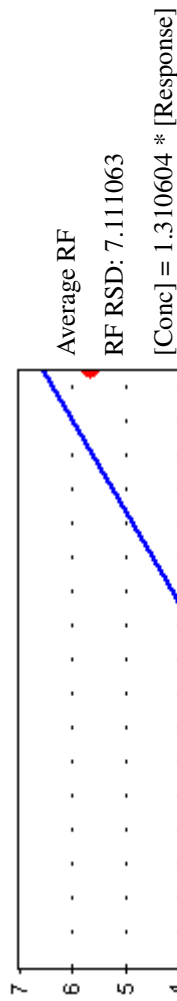
Phenanthrene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Phenanthrene



Anthracene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Anthracene



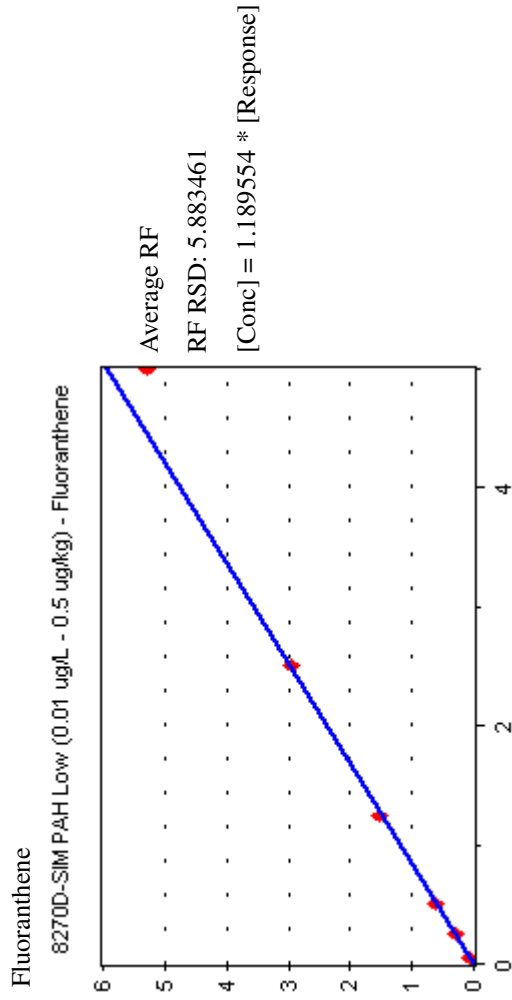
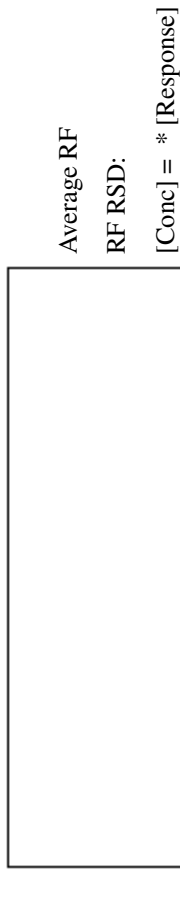


Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

2,3,5-Trimethylnaphthalene
270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2,3,5-Trimethylnaphthe





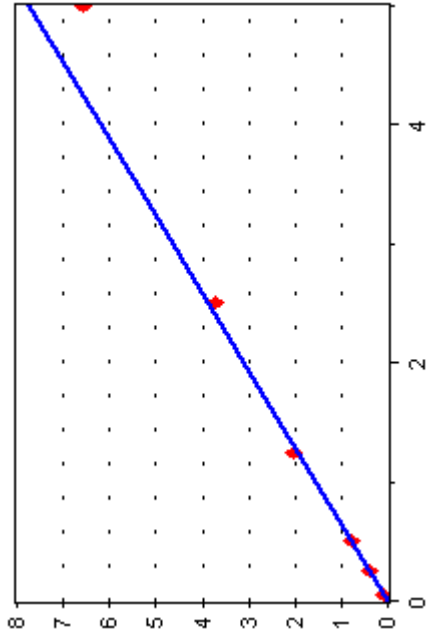
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

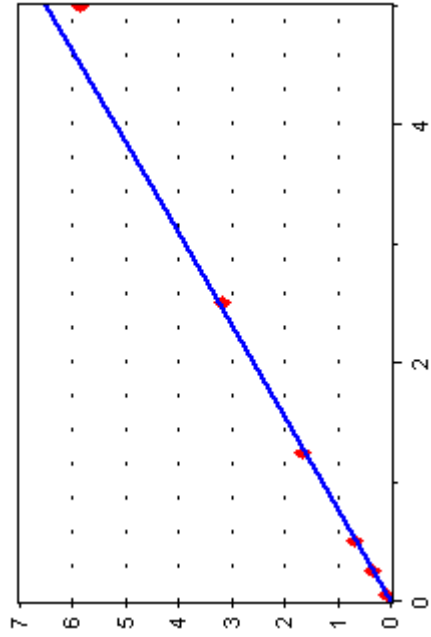
Pyrene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Pyrene



Benzo(a)anthracene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(a)anthracene





Calibration Report

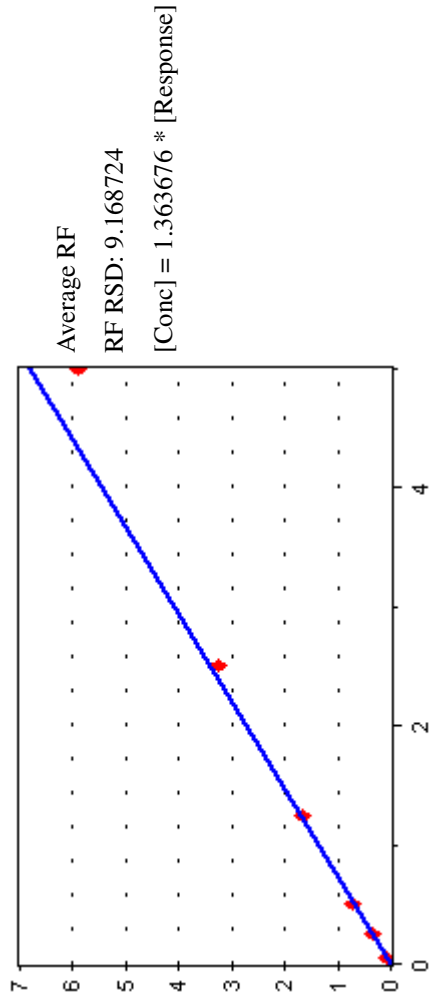
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Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Dibenzothiophene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzothiophene



Chrysene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Chrysene



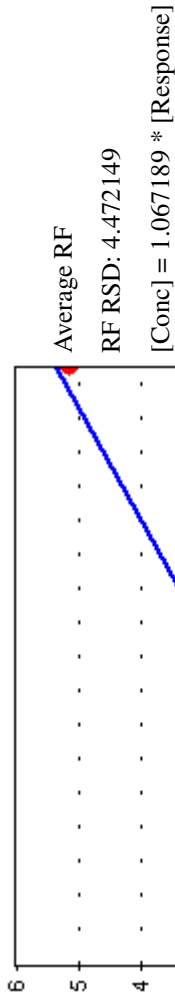


Calibration Report

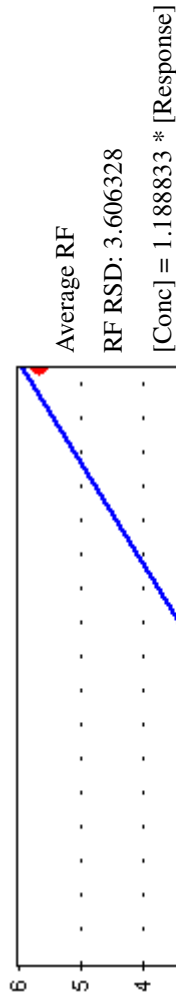
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Benzo(b)fluoranthene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(b)fluoranthene



Benzo(k)fluoranthene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(k)fluoranthene





Calibration Report

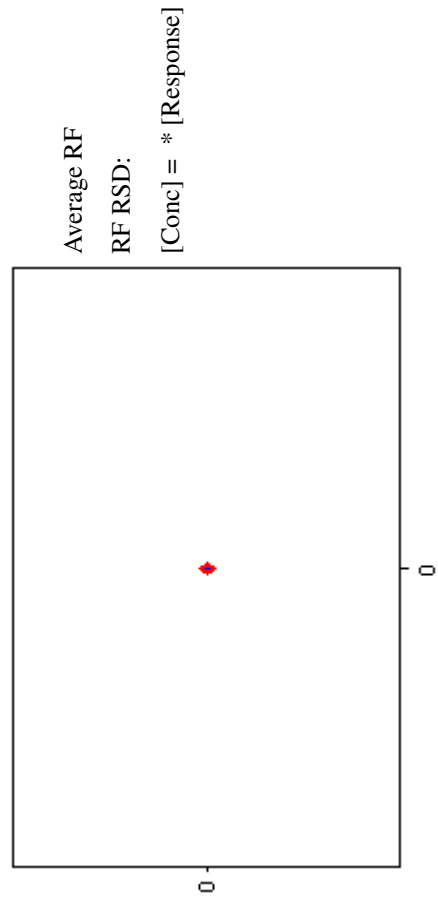
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Carbazole
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Carbazole



1-Methylphenanthrene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 1-Methylphenanthrene



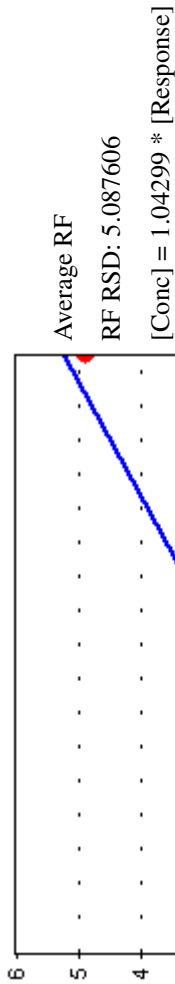


Calibration Report

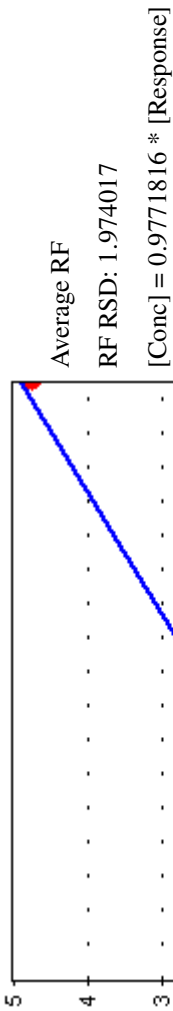
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Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Benzo(j)fluoranthene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(j)fluoranthene



Benzo(a)pyrene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(a)pyrene



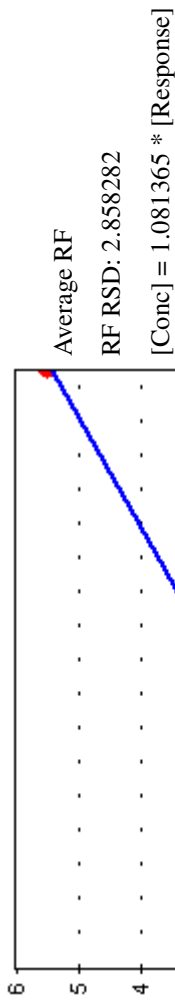


Calibration Report

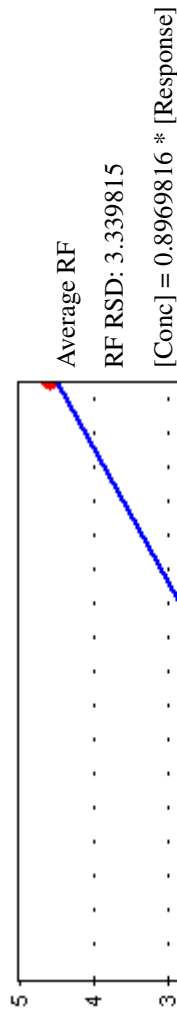
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Indeno(1,2,3-cd)pyrene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Indeno(1,2,3-cd)pyre



Dibenzo(a,h)anthracene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzo(a,h)anthrace



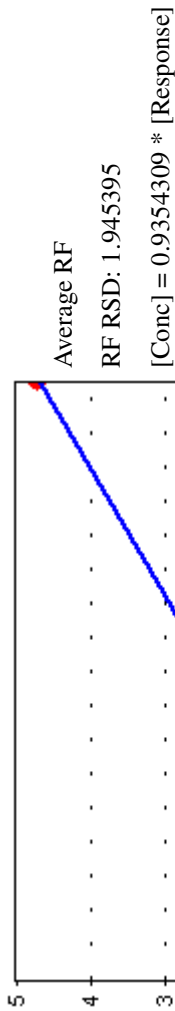


Calibration Report

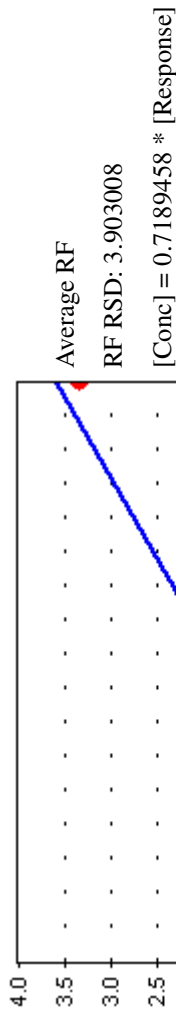
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Benzo(g,h,i)perylene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(g,h,i)perylene



1-Methylnaphthalene
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 1-Methylnaphthalene





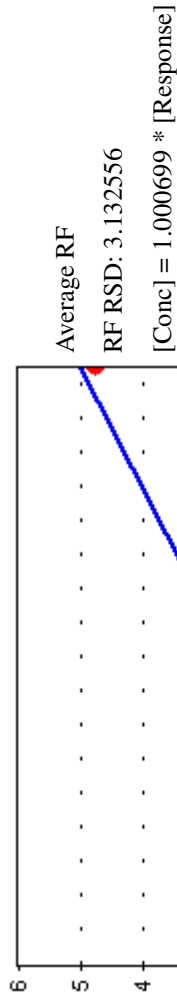
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Perylene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Perylene



Benzo(e)pyrene

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(e)pyrene



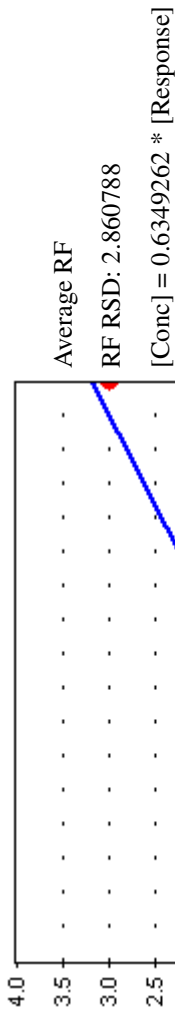


Calibration Report

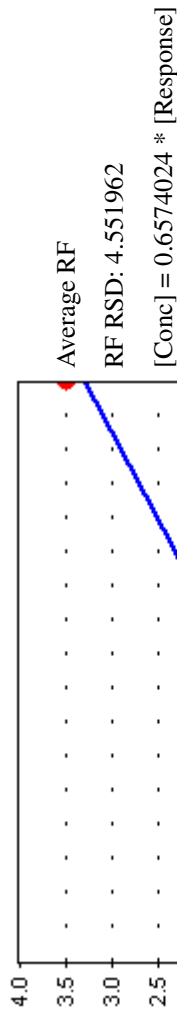
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Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

2-Methylnaphthalene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - 2-Methylnaphthalene



Dibenzo[a,h]anthracene-d14
270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Dibenzo[a,h]anthracene



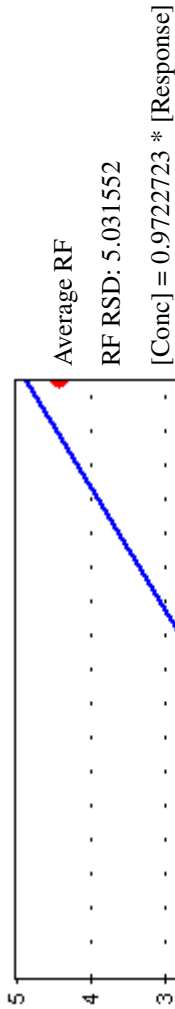


Calibration Report

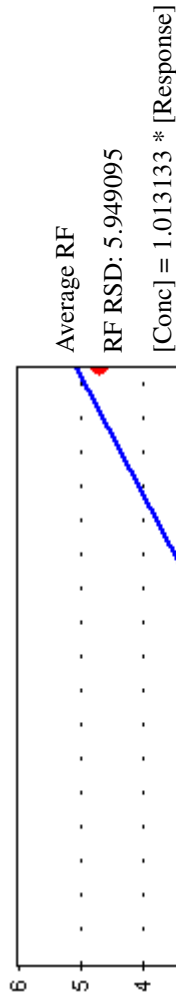
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Calibration ID: Z100066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0

Fluoranthene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluoranthene-d10



Fluorene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Fluorene-d10



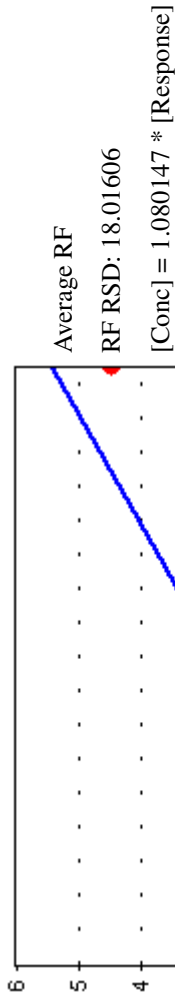


Calibration Report

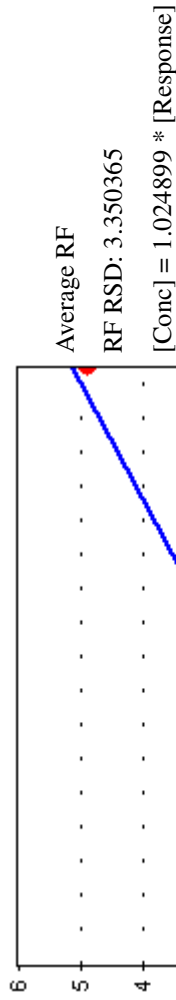
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Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Anthracene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Anthracene-d10



Benzo(e)pyrene-d12
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Benzo(e)pyrene-d12





Calibration Report

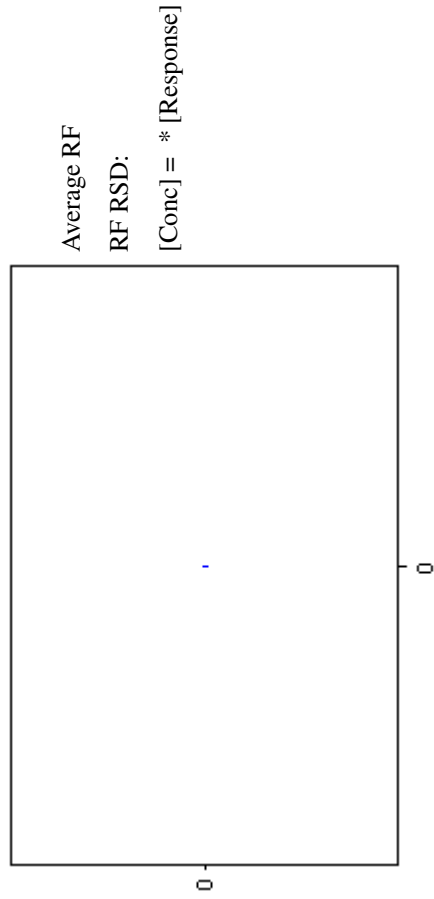
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Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Naphthalene-d8
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Naphthalene-d8



Acenaphthene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Acenaphthene-d10



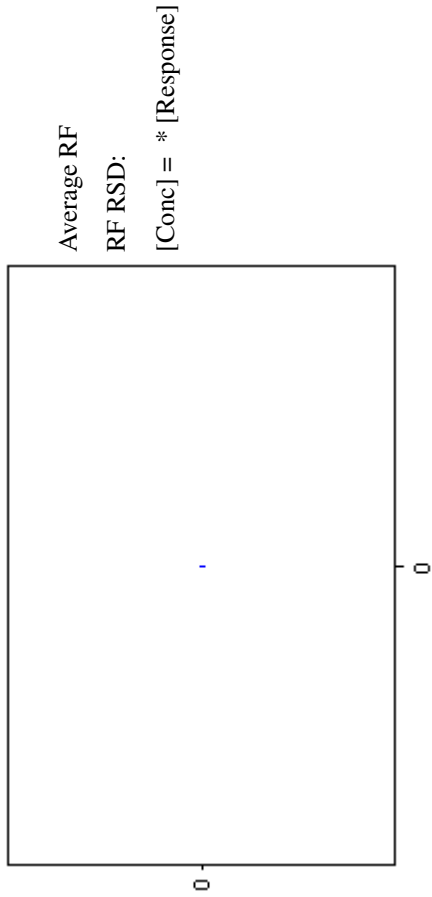


Calibration Report

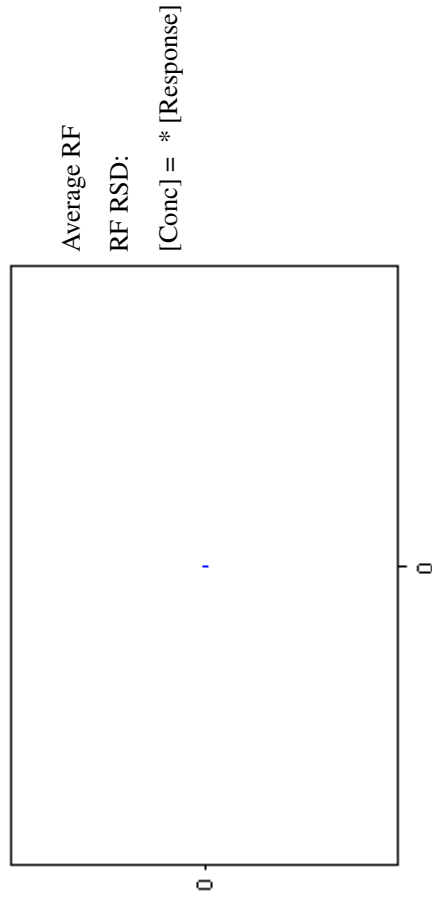
Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Phenanthrene-d10
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Phenanthrene-d10



Chrysene-d12
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Chrysene-d12





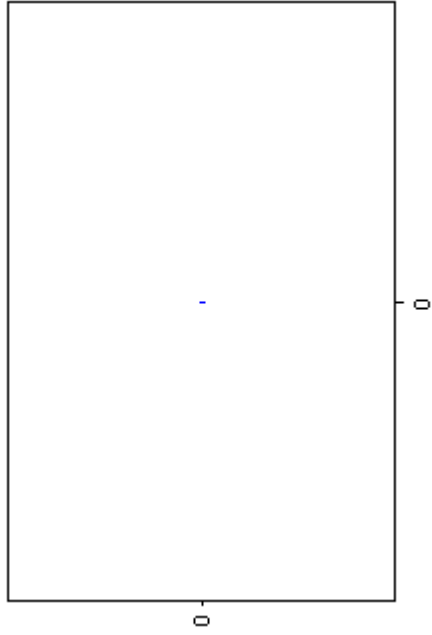
Calibration Report

Instrument: NT11
Calibration ID: ZI00066
Calibration Date: 22-Sep-2016 08:00 By JLW
Last Edit Date: 22-Sep-2016 13:49 By JLW

8270D-SIM PAH Low (0.0)

Perylene-d12

8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg) - Perylene-d12



ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Batch File: \\target\share\chem3\nt11.i\20160922.b
 Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT05	RT06	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	16092202	16092203	16092204	16092205	16092206	16092207	16092205	16092206	16092205	16092207				
INJ. DATE:	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016	22-SEP-2016				
INJ. TIME:	09:14	09:44	10:14	10:44	11:14	11:45	10:44	11:14	11:14	11:45				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV				
* 1 Naphthalene-d8	6.592	6.592	6.592	6.592	6.592	6.592	6.592	6.342-6.842	6.592	0.000				
2 Naphthalene	6.634	6.624	6.624	6.624	6.624	6.624	6.634	6.384-6.884	6.625	0.004				
3 2-Methylnaphthalene-d1	7.569	7.569	7.569	7.569	7.569	7.569	7.569	7.319-7.819	7.569	0.000				
4 2-Methylnaphthalene	7.632	7.622	7.622	7.622	7.622	7.622	7.632	7.382-7.882	7.623	0.004				
5 1-Methylnaphthalene	7.884	7.884	7.884	7.874	7.874	7.874	7.884	7.634-8.134	7.879	0.006				
6 Acenaphthylene	9.440	9.440	9.440	9.440	9.440	9.440	9.440	9.190-9.690	9.440	0.000				
* 7 Acenaphthene-d10	9.595	9.595	9.595	9.595	9.595	9.595	9.595	9.345-9.845	9.595	0.000				
8 Acenaphthene	9.662	9.651	9.651	9.651	9.651	9.651	9.662	9.412-9.912	9.652	0.005				
9 Dibenzofuran	9.861	9.861	9.861	9.861	9.861	9.861	9.861	9.611-10.111	9.861	0.000				
10 Fluorene-d10	10.433	10.433	10.433	10.433	10.423	10.423	10.433	10.183-10.683	10.430	0.005				
11 Fluorene	10.486	10.486	10.486	10.486	10.486	10.486	10.486	10.236-10.736	10.486	0.000				
* 12 Phenanthrene-d10	12.263	12.263	12.263	12.263	12.263	12.263	12.263	12.013-12.513	12.263	0.000				
13 Phenanthrene	12.311	12.301	12.301	12.301	12.301	12.301	12.311	12.061-12.561	12.303	0.004				
14 Anthracene-d10	12.330	12.321	12.321	12.321	12.321	12.321	12.330	12.080-12.580	12.322	0.004				
15 Anthracene	12.359	12.359	12.359	12.359	12.359	12.359	12.359	12.109-12.609	12.359	0.000				
16 Fluoranthene-d10	14.357	14.357	14.357	14.357	14.357	14.357	14.357	14.107-14.607	14.357	0.000				
17 Fluoranthene	14.395	14.395	14.395	14.395	14.386	14.386	14.395	14.145-14.645	14.392	0.005				

Reviewer 1
Reviewer 2

Date: _____
Date: _____

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Page 7

Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Batch File: \\target\share\chem3\nt11.i\20160922.b
 Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT1	RT WINDOW	AVG RT	STD DEV1
18 Pyrene	14.885	14.885	14.885	14.885	14.885	14.886	14.885	14.635-15.135	14.885	0.000
19 Benzo(a)anthracene	16.902	16.902	16.902	16.902	16.902	16.902	16.902	16.652-17.152	16.902	0.000
* 20 Chrysene-d12	16.993	16.993	16.993	16.993	16.993	16.993	16.993	16.743-17.243	16.993	0.000
21 Chrysene	17.043	17.043	17.043	17.043	17.043	17.043	17.043	16.793-17.293	17.043	0.000
22 Benzo(b)fluoranthene	18.754	18.754	18.754	18.754	18.754	18.754	18.754	18.504-19.004	18.754	0.000
23 Benzo(k)fluoranthene	18.802	18.793	18.802	18.793	18.793	18.793	18.802	18.552-19.052	18.796	0.005
24 Benzo(j)fluoranthene	18.860	18.860	18.860	18.860	18.860	18.860	18.860	18.610-19.110	18.860	0.000
25 Benzo(e)pyrene-d12	19.427	19.427	19.427	19.427	19.427	19.427	19.427	19.177-19.677	19.427	0.000
26 Benzo(e)pyrene	19.494	19.485	19.485	19.485	19.485	19.485	19.494	19.244-19.744	19.486	0.004
27 Benzo(a)pyrene	19.600	19.600	19.600	19.600	19.600	19.600	19.600	19.350-19.850	19.600	0.000
* 28 Perylene-d12	19.802	19.802	19.802	19.802	19.802	19.802	19.802	19.552-20.052	19.802	0.000
29 Perylene	19.869	19.869	19.869	19.859	19.859	19.859	19.869	19.619-20.119	19.864	0.005
30 Dibenzo(a,h)anthracene	22.151	22.151	22.151	22.151	22.151	22.151	22.151	21.901-22.401	22.151	0.000
31 Dibenzo(a,h)anthracene	22.262	22.262	22.262	22.262	22.262	22.262	22.262	22.012-22.512	22.262	0.000
32 Indeno(1,2,3-cd)pyrene	22.284	22.273	22.273	22.273	22.273	22.273	22.284	22.034-22.534	22.275	0.005
33 Benzo(g,h,i)perylene	23.369	23.358	23.369	23.358	23.358	23.369	23.369	23.119-23.619	23.364	0.006

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code Comments: <i>Z100066</i>	YES	JLW	09/22/2016
2	DFTPP Tune met criteria	YES	JLW	09/22/2016
3	DDT breakdown <20%	YES	JLW	09/22/2016
4	Peak Tailing factor <= 2%	YES	JLW	09/22/2016
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	09/22/2016
6	NO ICAL Q Flag applied	YES	JLW	09/22/2016
7	Manual integrations include before/after pictures	YES	JLW	09/22/2016
8	Spectral Library matches updated	YES	JLW	09/22/2016
9	Internal Standard areas within 50-200% from reference	YES	JLW	09/22/2016
10	Minimum response factors met	YES	JLW	09/22/2016
11	All SCV within +/- 20% (DOD)	YES	JLW	09/22/2016
12	All SCV within +/- 30%	YES	JLW	09/22/2016
13	NO Linear or Quadratic fits used	YES	JLW	09/22/2016
14	NO Calibration points dropped	YES	JLW	09/22/2016
15	Additional notes	NA	JLW	09/22/2016
16	Reviewer approval (Reviewer) Comments: <i>Z100066 ICAL</i>	YES	BB	09/22/2016

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Calibration: ZI00066

Laboratory ID: SEI0302-SCV1

Sequence: SEI0302

Sequence Name: SIMPNA SCV
Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	242	-3.2	20.00
2-Methylnaphthalene	250.00	228	-9.0	20.00
Acenaphthylene	250.00	239	-4.6	20.00
Acenaphthene	250.00	264	5.6	20.00
Fluorene	250.00	234	-6.6	20.00
Phenanthrene	250.00	243	-3.0	20.00
Anthracene	250.00	246	-1.6	20.00
Fluoranthene	250.00	237	-5.4	20.00
Pyrene	250.00	243	-2.8	20.00
Benzo(a)anthracene	250.00	234	-6.3	20.00
Chrysene	250.00	234	-6.3	20.00
Benzo(b)fluoranthene	250.00	232	-7.1	20.00
Benzo(k)fluoranthene	250.00	231	-7.8	20.00
Benzo(a)pyrene	250.00	246	-1.7	20.00
Indeno(1,2,3-cd)pyrene	250.00	237	-5.3	20.00
Dibenzo(a,h)anthracene	250.00	234	-6.5	20.00
Benzo(g,h,i)perylene	250.00	235	-6.1	20.00
Benzofluoranthenes, Total	500.00	463	-7.4	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20160922.16\16092208.D

Date : 22-SEP-2016 12:15

Client ID:

Sample Info: SEI0302-SCW1

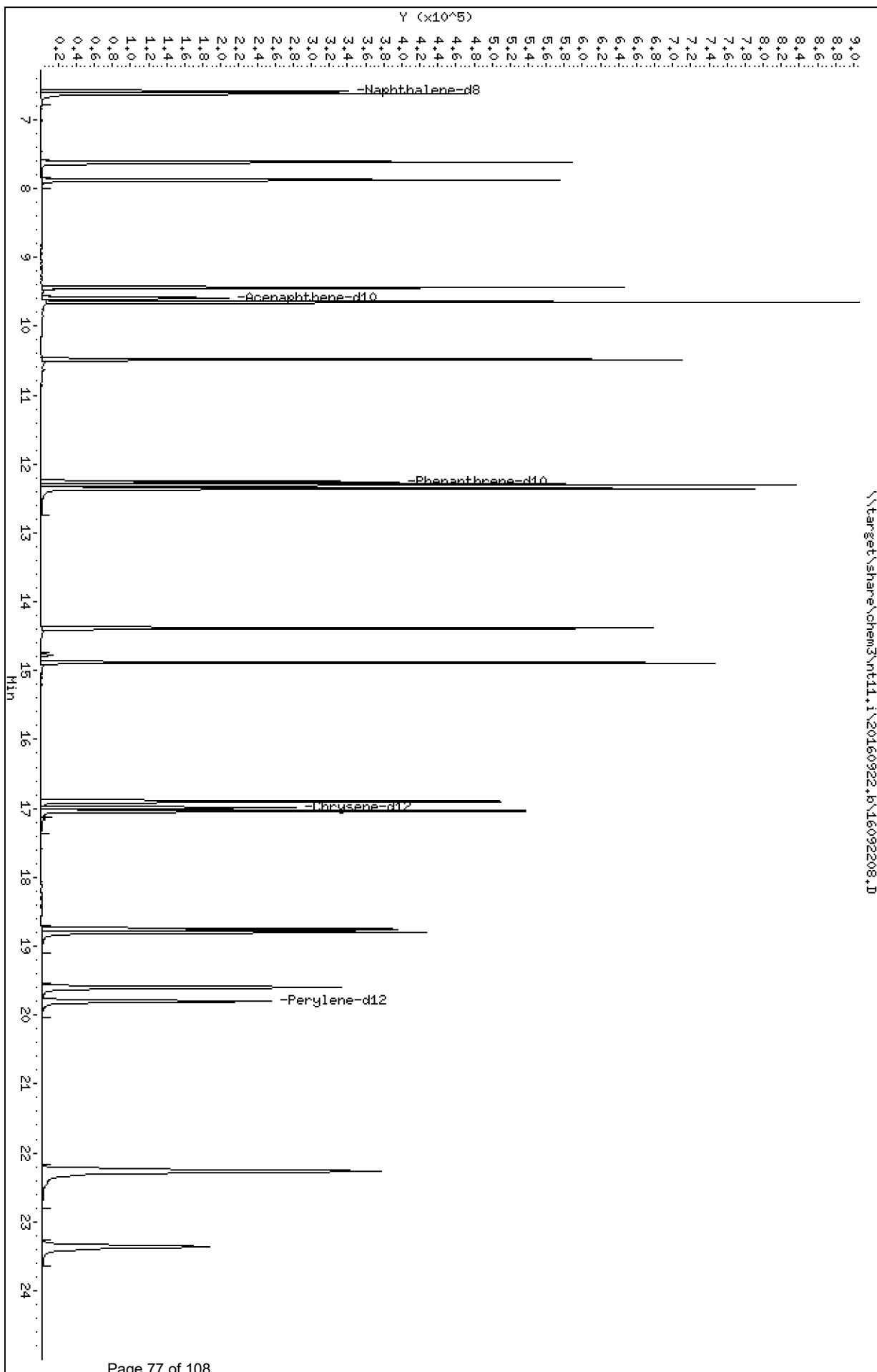
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

Page 1



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160922.b\16092208.D

Lab Smp Id: SEI0302-SCV1

Inj Date : 22-SEP-2016 12:15

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEI0302-SCV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160922.b\lowsim.m

Meth Date : 22-Sep-2016 13:43 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 8

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	CONCENTRATIONS					
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ng/mL)
* 1 Naphthalene-d8	136		6.592	6.592	(1.000)	487352	200.000	
2 Naphthalene	128		6.623	6.634	(1.005)	677115	242.124	242
§ 3 2-Methylnaphthalene-d10	152		Compound Not Detected.					
4 2-Methylnaphthalene	142		7.621	7.632	(1.156)	437980	227.561	228
5 1-Methylnaphthalene	142		7.873	7.884	(1.194)	428474	244.577	245
6 Acenaphthylene	152		9.440	9.440	(0.984)	599623	238.514	239
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	270378	200.000	
8 Acenaphthene	153		9.650	9.661	(1.006)	442003	263.976	264
9 Dibenzofuran	168		Compound Not Detected.					
§ 10 Flourene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.485	10.485	(1.093)	452287	233.590	234
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	473421	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	771373	242.552	243
§ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		12.359	12.359	(1.008)	762983	245.938	246
§ 16 Fluoranthene-d10	212		Compound Not Detected.					
17 Fluoranthene	202		14.386	14.395	(1.173)	665983	236.517	237
18 Pyrene	202		14.885	14.885	(0.876)	749421	242.996	243
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	605079	234.170	234
* 20 Chrysene-d12	240		16.993	16.993	(1.000)	398080	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	635603	234.172	234
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	530181	232.366	232
23 Benzo(k)fluoranthene	252		18.793	18.802	(0.949)	586006	230.553	231
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	513346	245.711	246
* 28 Perylene-d12	264		19.801	19.801	(1.000)	427603	200.000	
29 Perylene	252		Compound Not Detected.					
§ 30 Dibenzo(a,h)anthracene-d14	292		Compound Not Detected.					
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	448303	233.764	234
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.283	(1.125)	547471	236.798	237
33 Benzo(g,h,i)perylene	276		23.358	23.369	(1.180)	469293	234.651	235

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092208.D
 Lab Smp Id: SEI0302-SCV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Misc Info:

Calibration Date: 22-SEP-2016
 Calibration Time: 09:14
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	487352	-7.59
7 Acenaphthene-d10	297518	148759	595036	270378	-9.12
12 Phenanthrene-d10	522042	261021	1044084	473421	-9.31
20 Chrysene-d12	389499	194750	778998	398080	2.20
28 Perylene-d12	430626	215313	861252	427603	-0.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.59	0.00
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092208.D

Lab ID: SEI0302-SCV1

nt11.i, 20160922.b\lowsim.m, 22-SEP-2016 12:15

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT CCV RRT DELTA COMPOUND

NONE

On Column LOD for nt11.i, 20160922.b\lowsim.m, PEMD.sub = 0.0000



SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Calibration: ZI00066

Laboratory ID: SEI0302-SCV1

Sequence: SEI0302

Standard ID: D004766

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Naphthalene	250.00	242	-3.2	20.00
2-Methylnaphthalene	250.00	228	-9.0	20.00
Acenaphthylene	250.00	239	-4.6	20.00
Acenaphthene	250.00	264	5.6	20.00
Fluorene	250.00	234	-6.6	20.00
Phenanthrene	250.00	243	-3.0	20.00
Anthracene	250.00	246	-1.6	20.00
Fluoranthene	250.00	237	-5.4	20.00
Pyrene	250.00	243	-2.8	20.00
Benzo(a)anthracene	250.00	234	-6.3	20.00
Chrysene	250.00	234	-6.3	20.00
Benzo(b)fluoranthene	250.00	232	-7.1	20.00
Benzo(k)fluoranthene	250.00	231	-7.8	20.00
Benzo(a)pyrene	250.00	246	-1.7	20.00
Indeno(1,2,3-cd)pyrene	250.00	237	-5.3	20.00
Dibenzo(a,h)anthracene	250.00	234	-6.5	20.00
Benzo(g,h,i)perylene	250.00	235	-6.1	20.00
Benzofluoranthenes, Total	500.00	463	-7.4	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.1\20160922.16\16092208.D

Date : 22-SEP-2016 12:15

Client ID:

Sample Info: SEI0302-SCW1

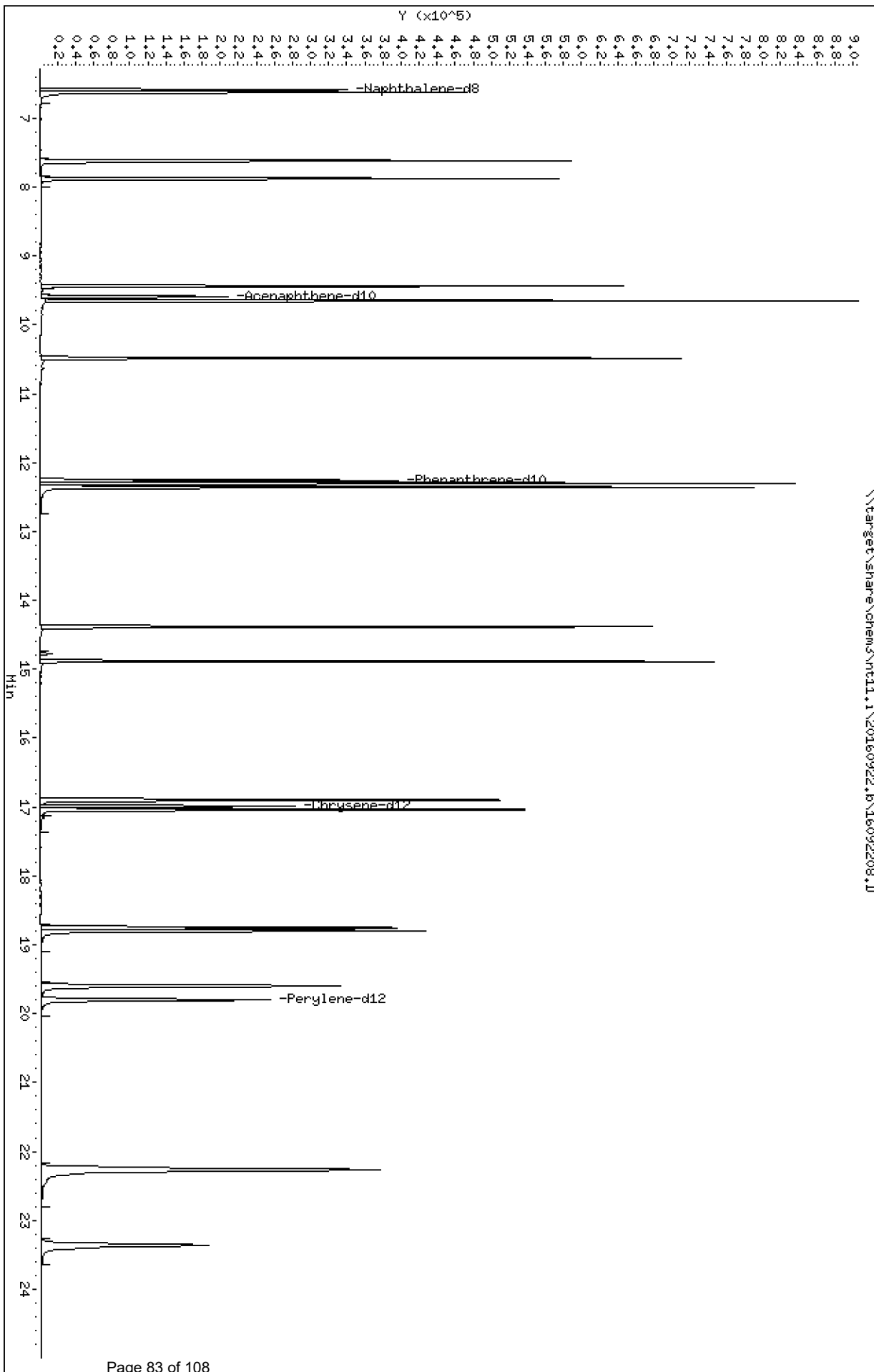
Column phase: Rxi-17S11 MS

Instrument: nt11.1

Operator: JM

Column diameter: 0.25

Page 1



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160922.b\16092208.D

Lab Smp Id: SEI0302-SCV1

Inj Date : 22-SEP-2016 12:15

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEI0302-SCV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160922.b\lowsim.m

Meth Date : 22-Sep-2016 13:43 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 8

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMD.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ng/mL)	FINAL (ng/mL)
* 1 Naphthalene-d8	136		6.592	6.592	(1.000)	487352	200.000	
2 Naphthalene	128		6.623	6.634	(1.005)	677115	242.124	242
§ 3 2-Methylnaphthalene-d10	152		Compound Not Detected.					
4 2-Methylnaphthalene	142		7.621	7.632	(1.156)	437980	227.561	228
5 1-Methylnaphthalene	142		7.873	7.884	(1.194)	428474	244.577	245
6 Acenaphthylene	152		9.440	9.440	(0.984)	599623	238.514	239
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	270378	200.000	
8 Acenaphthene	153		9.650	9.661	(1.006)	442003	263.976	264
9 Dibenzofuran	168		Compound Not Detected.					
§ 10 Flourene-d10	174		Compound Not Detected.					
11 Fluorene	166		10.485	10.485	(1.093)	452287	233.590	234
* 12 Phenanthrene-d10	188		12.263	12.262	(1.000)	473421	200.000	
13 Phenanthrene	178		12.301	12.310	(1.003)	771373	242.552	243
§ 14 Anthracene-d10	188		Compound Not Detected.					
15 Anthracene	178		12.359	12.359	(1.008)	762983	245.938	246
§ 16 Fluoranthene-d10	212		Compound Not Detected.					
17 Fluoranthene	202		14.386	14.395	(1.173)	665983	236.517	237
18 Pyrene	202		14.885	14.885	(0.876)	749421	242.996	243
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	605079	234.170	234
* 20 Chrysene-d12	240		16.993	16.993	(1.000)	398080	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	635603	234.172	234
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	530181	232.366	232
23 Benzo(k)fluoranthene	252		18.793	18.802	(0.949)	586006	230.553	231
24 Benzo(j)fluoranthene	252		Compound Not Detected.					
§ 25 Benzo(e)pyrene-d12	264		Compound Not Detected.					
26 Benzo(e)pyrene	252		Compound Not Detected.					
27 Benzo(a)pyrene	252		19.600	19.599	(0.990)	513346	245.711	246
* 28 Perylene-d12	264		19.801	19.801	(1.000)	427603	200.000	
29 Perylene	252		Compound Not Detected.					
§ 30 Dibenzo(a,h)anthracene-d14	292		Compound Not Detected.					
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	448303	233.764	234
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.283	(1.125)	547471	236.798	237
33 Benzo(g,h,i)perylene	276		23.358	23.369	(1.180)	469293	234.651	235

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092208.D
 Lab Smp Id: SEI0302-SCV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160922.b\lowsim.m
 Misc Info:

Calibration Date: 22-SEP-2016
 Calibration Time: 09:14
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	487352	-7.59
7 Acenaphthene-d10	297518	148759	595036	270378	-9.12
12 Phenanthrene-d10	522042	261021	1044084	473421	-9.31
20 Chrysene-d12	389499	194750	778998	398080	2.20
28 Perylene-d12	430626	215313	861252	427603	-0.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.59	0.00
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092208.D

Lab ID: SEI0302-SCV1

nt11.i, 20160922.b\lowsim.m, 22-SEP-2016 12:15

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV	RRT	DELTA	COMPOUND
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NONE

On Column LOD for nt11.i, 20160922.b\lowsim.m, PEMD.sub = 0.0000



INITIAL CALIBRATION CHECK EPA 8270D-SIM

Laboratory: <u>Analytical Resources, Inc.</u>	SDG: <u>16I0393</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>Port Gamble Shellfish Monitoring (PEMD)</u>
Instrument ID: <u>NT11</u>	Calibration: <u>ZI00066</u>
Lab File ID: <u>16092302.D</u>	Calibration Date: <u>09/22/16 08:00</u>
Sequence: <u>SEI0321</u>	Injection Date: <u>09/23/16</u>
Lab Sample ID: <u>SEI0321-ICV1</u>	Injection Time: <u>08:10</u>
Sequence Name: <u>SIM PAH 250</u>	

COMPOUND	TYPE	CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
		STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Naphthalene	A	250.00	250	1.1476540	1.1461860		0.0	20
2-Methylnaphthalene	A	250.00	247	0.7898471	0.7794142		-1.2	20
Acenaphthylene	A	250.00	245	1.8596130	1.8231180		-2.0	20
Acenaphthene	A	250.00	250	1.2385680	1.2404810		0.0	20
Fluorene	A	250.00	251	1.4322460	1.4365200		0.4	20
Phenanthrene	A	250.00	256	1.3435150	1.3735310		2.4	20
Anthracene	A	250.00	262	1.3106040	1.3721040		4.8	20
Fluoranthene	A	250.00	257	1.1895540	1.2229920		2.8	20
Pyrene	A	250.00	235	1.5494790	1.4587530		-6.0	20
Benzo(a)anthracene	A	250.00	245	1.2981970	1.2742910		-2.0	20
Chrysene	A	250.00	246	1.3636760	1.3418910		-1.6	20
Benzo(b)fluoranthene	A	250.00	254	1.0671890	1.0822750		1.6	20
Benzo(k)fluoranthene	A	250.00	258	1.1888330	1.2277120		3.2	20
Benzo(e)pyrene	A	250.00	256	1.0243110	1.0504680		2.4	20
Benzo(a)pyrene	A	250.00	256	0.9771816	0.9996617		2.4	20
Indeno(1,2,3-cd)pyrene	A	250.00	252	1.0813650	1.0921200		0.8	20
Dibenzo(a,h)anthracene	A	250.00	251	0.8969816	0.9012189		0.4	20
Benzo(g,h,i)perylene	A	250.00	247	0.9354309	0.9228115		-1.2	20
Perylene	A	250.00	254	1.0006990	1.0147400		1.6	20
2-Methylnaphthalene-d10	A	250.00	241	0.6349262	0.6130551		-3.6	20
Dibenzo[a,h]anthracene-d14	A	250.00	250	0.6574024	0.6574774		0.0	20
Fluoranthene-d10	A	250.00	243	0.9722723	0.9456705		-2.8	20
Fluorene-d10	A	250.00	244	1.0131330	0.9870116		-2.4	20
Anthracene-d10	A	250.00	218	1.0801470	0.9419394		-12.8	20
Benzo(e)pyrene-d12	A	250.00	251	1.0248990	1.0304640		0.4	20

* Values outside of QC limits

Data File: \\target\share\chem3\nt11.i\20160923_16\16092302.D

Date : 23-SEP-2016 08:10

Client ID:

Sample Info: SEI0321-ICW1

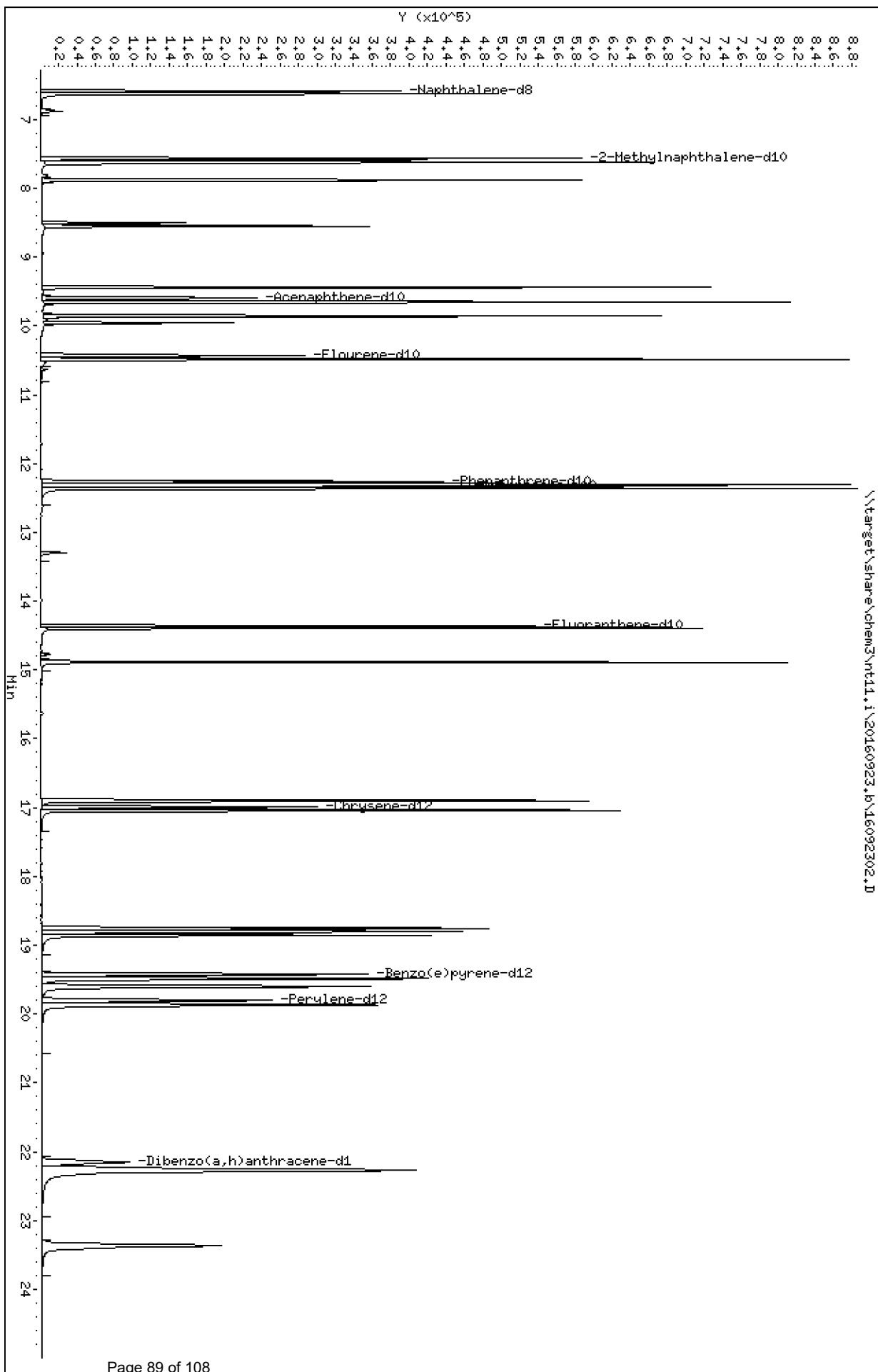
Column phase: Rxi-17S11 MS

Instrument: nt11.i

Operator: JM

Column diameter: 0.25

Page 1



ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160923.b\16092302.D

Lab Smp Id: SEI0321-ICV1

Inj Date : 23-SEP-2016 08:10

MS Autotune Date: 15-JAN-2015 16:59

Operator : JW

Inst ID: nt11.i

Smp Info : SEI0321-ICV1

Misc Info :

Comment :

Method : \\target\share\chem3\nt11.i\20160923.b\lowsim.m

Meth Date : 26-Sep-2016 07:53 nt11.i

Quant Type: ISTD

Cal Date : 22-SEP-2016 11:45

Cal File: 16092207.D

Als bottle: 2

Continuing Calibration Sample

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PEMDNF.sub

Target Version: 4.14

Processing Host: AUTOSPECDATA02

Compounds	QUANT	SIG	AMOUNTS				CAL-AMT (ng/mL)	ON-COL (ng/mL)
			MASS	RT	EXP RT	REL RT		
* 1 Naphthalene-d8	136		6.592	6.592	(1.000)	531746	200.000	
2 Naphthalene	128		6.623	6.623	(1.005)	761850	250.000	250
\$ 3 2-Methylnaphthalene-d10	152		7.569	7.569	(1.148)	407487	250.000	241
4 2-Methylnaphthalene	142		7.621	7.621	(1.156)	518063	250.000	247
5 1-Methylnaphthalene	142		7.884	7.884	(1.196)	467186	250.000	244
6 Acenaphthylene	152		9.440	9.440	(0.984)	643677	250.000	245
* 7 Acenaphthene-d10	164		9.595	9.595	(1.000)	282451	200.000	
8 Acenaphthene	153		9.650	9.650	(1.006)	437969	250.000	250
9 Dibenzofuran	168		9.860	9.860	(1.028)	642294	250.000	253
\$ 10 Fluorene-d10	174		10.432	10.432	(1.087)	348478	250.000	244
11 Fluorene	166		10.485	10.485	(1.093)	507183	250.000	251
* 12 Phenanthrene-d10	188		12.262	12.262	(1.000)	489933	200.000	
13 Phenanthrene	178		12.310	12.310	(1.004)	841173	250.000	256
\$ 14 Anthracene-d10	188		12.330	12.330	(1.005)	576859	250.000	218
15 Anthracene	178		12.358	12.358	(1.008)	840299	250.000	262
\$ 16 Fluoranthene-d10	212		14.356	14.356	(1.171)	579144	250.000	243
17 Fluoranthene	202		14.395	14.395	(1.174)	748980	250.000	257
18 Pyrene	202		14.885	14.885	(0.876)	736517	250.000	235
19 Benzo(a)anthracene	228		16.901	16.901	(0.995)	643383	250.000	245
* 20 Chrysene-d12	240		16.992	16.992	(1.000)	403916	200.000	
21 Chrysene	228		17.042	17.042	(1.003)	677514	250.000	246
22 Benzo(b)fluoranthene	252		18.754	18.754	(0.947)	575808	250.000	254
23 Benzo(k)fluoranthene	252		18.792	18.792	(0.949)	653186	250.000	258
24 Benzo(j)fluoranthene	252		18.860	18.860	(0.952)	575846	250.000	259
\$ 25 Benzo(e)pyrene-d12	264		19.426	19.426	(0.981)	548243	250.000	251
26 Benzo(e)pyrene	252		19.484	19.484	(0.984)	558886	250.000	256
27 Benzo(a)pyrene	252		19.599	19.599	(0.990)	531855	250.000	256
* 28 Perylene-d12	264		19.801	19.801	(1.000)	425628	200.000	
29 Perylene	252		19.868	19.868	(1.003)	539877	250.000	254
\$ 30 Dibenzo(a,h)anthracene-d14	292		22.150	22.150	(1.119)	349801	250.000	250
31 Dibenzo(a,h)anthracene	278		22.261	22.261	(1.124)	479480	250.000	251
32 Indeno(1,2,3-cd)pyrene	276		22.272	22.272	(1.125)	581046	250.000	252
33 Benzo(g,h,i)perylene	276		23.369	23.369	(1.180)	490968	250.000	247

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
 AREA AND RT SUMMARY

Instrument ID: nt11.i
 Lab File ID: 16092302.D
 Lab Smp Id: SEI0321-ICV1
 Analysis Type: SV
 Quant Type: ISTD
 Operator: JW
 Method File: \\target\share\chem3\nt11.i\20160923.b\lowsim.m
 Misc Info:

Calibration Date: 23-SEP-2016
 Calibration Time: 15:32
 Level:
 Sample Type:

Test Mode:
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	527377	263689	1054754	531746	0.83
7 Acenaphthene-d10	297518	148759	595036	282451	-5.06
12 Phenanthrene-d10	522042	261021	1044084	489933	-6.15
20 Chrysene-d12	389499	194750	778998	403916	3.70
28 Perylene-d12	430626	215313	861252	425628	-1.16

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
1 Naphthalene-d8	6.59	6.09	7.09	6.59	0.00
7 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
12 Phenanthrene-d10	12.26	11.76	12.76	12.26	0.00
20 Chrysene-d12	16.99	16.49	17.49	16.99	0.00
28 Perylene-d12	19.80	19.30	20.30	19.80	0.00

AREA UPPER LIMIT = +100% of internal standard area.
 AREA LOWER LIMIT = - 50% of internal standard area.
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

REVIEW SUMMARY FOR FILE - 16092302.D

Lab ID: SEI0321-ICV1

nt11.i, 20160923.b\lowsim.m, 23-SEP-2016 08:10

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i, 20160923.b\lowsim.m, PEMDNF.sub = 0.0000

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160923.b

Instrument: nt11.i Date: 23-SEP-2016 Method: 20160923.b\lowsim.m

INITIAL CAL: 22-SEP-2016

Compound	%RSD or R ²

NO Q-FLAGS	

ICV CAL: 16092302.D 23-SEP-2016 08:10

Compound	%D

NO Q-FLAGS	



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0302

Instrument: NT11

Calibration: ZI00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SEI0302-TUN1	16092201.D	Tissue	09/22/16 08:56
Cal Standard	SEI0302-CAL4	16092202.D	Tissue	09/22/16 09:14
Cal Standard	SEI0302-CAL1	16092203.D	Tissue	09/22/16 09:44
Cal Standard	SEI0302-CAL5	16092204.D	Tissue	09/22/16 10:14
Cal Standard	SEI0302-CAL2	16092205.D	Tissue	09/22/16 10:44
Cal Standard	SEI0302-CAL3	16092206.D	Tissue	09/22/16 11:14
Cal Standard	SEI0302-CAL6	16092207.D	Tissue	09/22/16 11:45
Secondary Cal Check	SEI0302-SCV1	16092208.D	Tissue	09/22/16 12:15

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160922.b

Time	Filename	LabID	ClientID	DF										
1	1856	16092201.D	SEI0302-TUN1	1	NO	ISTDS	FOUND							
2	0914	16092202.D	SEI0302-CAL4	1	6.59	527377	9.60	297518	12.26	522042	16.99	389499	19.80	430626
3	0944	16092203.D	SEI0302-CAL1	1	6.59	510999	9.60	283165	12.26	510999	16.99	388629	19.80	421581
4	1014	16092204.D	SEI0302-CAL5	1	6.59	517112	9.60	295511	12.26	517969	16.99	410409	19.80	441886
5	1044	16092205.D	SEI0302-CAL2	1	6.59	510742	9.60	281455	12.26	506476	16.99	401586	19.80	434245
6	1114	16092206.D	SEI0302-CAL3	1	6.59	513068	9.60	284181	12.26	506454	16.99	412821	19.80	440769
7	1145	16092207.D	SEI0302-CAL6	1	6.59	524176	9.60	293896	12.26	517277	16.99	421915	19.80	451292
8	1215	16092208.D	SEI0302-SCV1	1	6.59	487352	9.60	270378	12.26	473421	16.99	398080	19.80	427603

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160922.b

AR Job No.: SEI0 Method: DFTPP.m Instrument: nt11.i Date: 22-SEP-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0856	16092201.D	SEI0302-TUN1		1	NO MANUAL INTEGRATION
0914	16092202.D	SEI0302-CAL4		1	Anthracene, Anthracene-d10,
0944	16092203.D	SEI0302-CAL1		1	Anthracene-d10,
1014	16092204.D	SEI0302-CAL5		1	Anthracene, Anthracene-d10,
1044	16092205.D	SEI0302-CAL2		1	Anthracene-d10,
1114	16092206.D	SEI0302-CAL3		1	Anthracene-d10,
1145	16092207.D	SEI0302-CAL6		1	Anthracene, Anthracene-d10,
1215	16092208.D	SEI0302-SCV1		1	NO MANUAL INTEGRATION



ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: ZI00066

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SEI0321-TUN1	16092301.D	Tissue	09/23/16 07:53
Initial Cal Check	SEI0321-ICV1	16092302.D	Tissue	09/23/16 08:10
LCS	BEI0706-BS1	16092303.D	Tissue	09/23/16 09:00
PG-PEMD-BLK-20160913	16I0393-01	16092304.D	Tissue	09/23/16 09:30
Calibration Check	SEI0321-CCV1	16092316.D	Tissue	09/23/16 15:32

Port Gamble Shellfish Monitoring (PEMD)**16I0393**

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	DFTPP abundance and time criteria met	YES	JLW	09/26/2016
2	DDT Breakdown <20% and Peak Tailing <=2	YES	JLW	09/26/2016
3	ICV/CCV Meets %D	YES	JLW	09/26/2016
4	ICAL/ICV/CCV Q Flag - NONE required	YES	JLW	09/26/2016
5	Internal Standard areas within 50-200%	NO	JLW	09/26/2016
	Comments: <i>16I0393-01 (PEMD BLK) IS high due, no further sample to remake and re-inject.</i>			
6	Retention times within windows and Coelution summary checked	YES	JLW	09/26/2016
7	Manual integrations include summary and before/after pictures	YES	JLW	09/26/2016
8	Project specific requirements have been met	YES	JLW	09/26/2016
9	Sample dilution factors have been correctly applied	NA	JLW	09/26/2016
10	AUTOCHECK: Blank checked for exceedence of criteria	NO *	JLW	09/26/2016
	Comments: <i>QC Sample BEI0260-BLK1 failed criteria for 2-Methylnaphthalene in 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg). MDL = 1.13 ug/kg MRL = 1.13 ug/kg Result = 1.13 ug/kg Criterion = 1 x MRL - Flagged value is not within established control limits.</i>			
	<i>QC Sample BEI0260-BLK1 failed criteria for Naphthalene in 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg). MDL = 1.13 ug/kg MRL = 1.35 ug/kg Result = 2.20 ug/kg Criterion = 1 x MRL - Flagged value is not within established control limits.</i>			
11	AUTOCHECK: Check blank spike recovery	YES *	JLW	09/26/2016
12	AUTOCHECK: Check blank spike/blank spike duplicate RPD. If exceeded include outliers in exception report.	NA *	JLW	09/26/2016
13	AUTOCHECK: Compounds in method designated as blank spike compounds are present	YES *	JLW	09/26/2016
14	AUTOCHECK: Check %RPD between sample and sample duplicate	NA *	JLW	09/26/2016
15	AUTOCHECK: Matrix spike recoveries within limits	NA *	JLW	09/26/2016
16	AUTOCHECK: Matrix spike/matrix spike duplicate RPD within limits	NA *	JLW	09/26/2016
17	AUTOCHECK: List of compounds listed as spiked are present	NA *	JLW	09/26/2016
18	AUTOCHECK: Check SRM limits for exceedance	NA *	JLW	09/26/2016

Port Gamble Shellfish Monitoring (PEMD)

16I0393

<u>Analysis</u>	<u>Matrix</u>	<u>Method</u>
8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)	Tissue	EPA 8270D-SIM

Checklist: Analyst Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
19	AUTOCHECK: Check Surrogate recoveries	NO *	JLW	09/26/2016
	<p>Comments:</p> <p>Reviewer: Field surrogate spiked into PEMD strip before use.</p> <p>Surrogate Recovery for Anthracene-d10 (7.08%) was outside acceptance limits (30-160) in 16I0160-01 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Fluorene-d10 (0.556%) was outside acceptance limits (30-160) in 16I0160-01 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Anthracene-d10 (6.08%) was outside acceptance limits (30-160) in 16I0160-03 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Fluorene-d10 (0.601%) was outside acceptance limits (30-160) in 16I0160-03 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Anthracene-d10 (3.67%) was outside acceptance limits (30-160) in 16I0160-04 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Fluorene-d10 (0.642%) was outside acceptance limits (30-160) in 16I0160-04 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Anthracene-d10 (3.12%) was outside acceptance limits (30-160) in 16I0160-05 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Fluorene-d10 (0.597%) was outside acceptance limits (30-160) in 16I0160-05 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Anthracene-d10 (23.4%) was outside acceptance limits (30-160) in 16I0160-07 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Fluorene-d10 (3.41%) was outside acceptance limits (30-160) in 16I0160-07 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Anthracene-d10 (17.6%) was outside acceptance limits (30-160) in 16I0160-09 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</p> <p>- Flagged value is not within established control limits.</p> <p>Surrogate Recovery for Fluorene-d10 (1.36%) was outside acceptance limits (30-160) in 16I0160-09 for 8270D-SIM</p>			

Port Gamble Shellfish Monitoring (PEMD)**16I0393****Analysis****Matrix****Method****8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)****Tissue****EPA 8270D-SIM****Checklist: Analyst Checklist-SVOA**

#	Checklist Item	Response	Analyst Initials	Date
	<i>PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
	<i>Surrogate Recovery for Anthracene-d10 (21.4%) was outside acceptance limits (30-160) in 16I0160-11 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
	<i>Surrogate Recovery for Fluorene-d10 (2.77%) was outside acceptance limits (30-160) in 16I0160-11 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
	<i>Surrogate Recovery for 2-Methylnaphthalene-d10 (29.7%) was outside acceptance limits (30-160) in 16I0393-01 for 8270D-SIM PAH Low (0.01 ug/L - 0.5 ug/kg)</i> <i>- Flagged value is not within established control limits.</i>			
20	AUTOCHECK: Checks Surrogate spike list against Analysis	YES *	JLW	09/26/2016
21	Analyst checklist completed (PEER)	YES	VTS	09/27/2016
22	Data is locked and Status is Analyzed (PEER)	YES	VTS	09/27/2016
23	Data file, Calibration, Sequence, Batch, and Cleanup PDF's are attached (PEER)	YES	VTS	09/27/2016
24	Color warnings have been addressed and (or) qualified (PEER)	YES	VTS	09/27/2016
25	Qualifiers have been correctly added (PEER)	YES	VTS	09/27/2016
26	Checklist completed and status is peer reviewed (REVIEWER)	YES	VTS	09/27/2016
27	Dilutions are linear (50-200%) and appropriate (REVIEWER)	YES	VTS	09/27/2016
28	All requested samples have been reported (REVIEWER)	YES	VTS	09/27/2016
29	Color warnings have been addressed, narrated and (or) qualified (REVIEWER)	YES	VTS	09/27/2016
30	Additional Notes (ANALYST, PEER, and REVIEWER)	YES	JLW	09/26/2016

Comments:

16I0393-01 (PEMD BLK) IS high due, no further sample to remake and re-inject.

16I0160 Field Surr corrected for the 32cm strip becoming 20cm

BEI0260 Inhouse Surr and Inhouse spike, field surrs marked as non-reportable since compounds were not added

16I0393 Field Surr and Inhouse Surr corrected for the 32cm strip becoming 20cm

BEI0706 Field Surr, Inhouse Surr, and spike corrected for the 32cm strip becoming 20cm

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160923.b

Time	Filename	LabID	ClientID	DF	1	INO	ISTDS	FOUND	1	INO	ISTDS	FOUND		
1	753	16092301.D	SEI0321-TUN1	1	6.59	531746	9.60	282451	12.26	489933	16.99	403916	19.80	425628
2	810	16092302.D	SEI0321-ICV1	1	6.58	719747	9.58	387130	12.26	707948	16.99	541016	19.81	668004
3	0900	16092303.D	BEI0706-BS1	1	6.58	1006700	9.58	608435	12.26	1093670	16.99	836424	19.80	1037253
4	0930	16092304.D	BEI0260-BLK1	1	6.58	681602	9.58	424011	12.26	776722	16.99	597025	19.80	741485
5	1000	16092305.D	BEI0260-BS1	1	6.57	516337	9.58	312326	12.26	557721	16.99	452530	19.80	553033
6	1030	16092306.D	16I0160-01	1	6.58	690769	9.60	425147	12.26	763118	16.99	632402	19.80	800165
7	1101	16092307.D	16I0160-03	1	6.57	572871	9.58	351011	12.26	631287	16.99	528076	19.80	651539
8	1131	16092308.D	16I0160-04	1	6.57	631882	9.58	365661	12.26	649559	16.99	530634	19.80	644095
9	1201	16092309.D	16I0160-05	1	6.57	503582	9.58	293126	12.25	534194	16.99	452356	19.80	560321
10	1231	16092310.D	16I0160-07	1	6.58	461726	9.58	270402	12.26	488728	16.99	397691	19.80	485256
11	1301	16092311.D	16I0160-09	1	6.58	525522	9.58	304570	12.26	568990	16.99	454404	19.80	550445
12	1332	16092312.D	16I0160-11	1	6.57	560457	9.58	324471	12.26	604422	16.99	470696	19.80	557766
13	1402	16092313.D	16I0160-13	1	6.57	527500	9.58	304864	12.26	576748	16.99	437336	19.80	519445
14	1432	16092314.D	16I0160-14	1	6.57	525727	9.58	302028	12.26	564762	16.99	431331	19.80	504710
15	1502	16092315.D	SEI0321-CCV1	1	6.59	473648	9.60	304406	12.26	550198	16.99	463926	19.80	482464

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160923.b

ARF Job No.: SEI0 Method: DFPPP.m Instrument: nt11.i Date: 23-SEP-2016

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0753	16092301.D	SEI0321-TUN1		1	NO MANUAL INTEGRATION
0810	16092302.D	SEI0321-ICV1		1	NO MANUAL INTEGRATION
0900	16092303.D	BEI0706-BS1		1	NO MANUAL INTEGRATION
0930	16092304.D	16I0393-01		1	Acenaphthylene,
1000	16092305.D	BEI0260-BLK1		1	NO MANUAL INTEGRATION
1030	16092306.D	BEI0260-BS1		1	NO MANUAL INTEGRATION
1101	16092307.D	16I0160-01		1	Flourene-d10,
1131	16092308.D	16I0160-03		1	Flourene-d10,
1201	16092309.D	16I0160-04		1	Flourene-d10,
1231	16092310.D	16I0160-05		1	Flourene-d10,
1301	16092311.D	16I0160-07		1	Flourene-d10,
1332	16092312.D	16I0160-09		1	Benzo(e)pyrene, Flourene-d10,
1402	16092313.D	16I0160-11		1	Flourene-d10,
1432	16092314.D	16I0160-13		1	Benzo(e)pyrene,
1502	16092315.D	16I0160-14		1	Anthracene, Benzo(k)fluoranthene, Perylene, Benzo(e)pyrene,
1532	16092316.D	SEI0321-CCV1		1	NO MANUAL INTEGRATION



SURROGATE RECOVERY AND RT SUMMARY

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG/WO: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: ZI00066

Calibration Date: 09/22/2016

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SEI0321-ICV1 (Tissue)			Lab File ID: 16092302.D			Analyzed: 09/23/16 08:10		
2-Methylnaphthalene-d10	250.00	96.4	80 - 120	7.569	7.569	0.0000	N/A	
Dibenzo[a,h]anthracene-d14	250.00	100	80 - 120	22.15	22.15	0.0000	N/A	
Fluoranthene-d10	250.00	97.2	80 - 120	14.356	14.357	-0.0010	N/A	
Fluorene-d10	250.00	97.6	80 - 120	10.432	10.42933	0.0027	N/A	
Anthracene-d10	250.00	87.2	80 - 120	12.33	12.32167	0.0083	N/A	
Benzo(e)pyrene-d12	250.00	100	80 - 120	19.426	19.427	-0.0010	N/A	
BEI0706-BS1 (Tissue)			Lab File ID: 16092303.D			Analyzed: 09/23/16 09:00		
2-Methylnaphthalene-d10	21.163	39.3	30 - 160	7.558	7.569	-0.0110	N/A	
Dibenzo[a,h]anthracene-d14	21.163	57.7	30 - 160	22.161	22.15	0.0110	N/A	
Fluoranthene-d10	21.163	55.6	30 - 160	14.357	14.357	0.0000	N/A	
Fluorene-d10	21.163	44.8	30 - 160	10.422	10.42933	-0.0073	N/A	
Anthracene-d10	21.163	42.8	30 - 160	12.32	12.32167	-0.0017	N/A	
Benzo(e)pyrene-d12	21.163	51.5	30 - 160	19.436	19.427	0.0090	N/A	
16I0393-01 (Tissue)			Lab File ID: 16092304.D			Analyzed: 09/23/16 09:30		
2-Methylnaphthalene-d10	21.651	29.7	30 - 160	7.558	7.569	-0.0110	N/A	*
Dibenzo[a,h]anthracene-d14	21.651	35.2	30 - 160	22.151	22.15	0.0010	N/A	
Fluoranthene-d10	21.651	44.1	30 - 160	14.357	14.357	0.0000	N/A	
Fluorene-d10	21.651	33.6	30 - 160	10.422	10.42933	-0.0073	N/A	
Anthracene-d10	21.651	33.5	30 - 160	12.32	12.32167	-0.0017	N/A	
Benzo(e)pyrene-d12	21.651	34.3	30 - 160	19.427	19.427	0.0000	N/A	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D-SIM

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16I0393</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring (PEMD)</u>
Sequence:	<u>SEI0302</u>	Instrument:	<u>NT11</u>
		Calibration:	<u>ZI00066</u>

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SEI0302-SCV1)		(Tissue)	Lab File ID: 16092208.D			Analyzed: 09/22/16 12:15			
Naphthalene-d8	487352	6.592	527377	6.592	92	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	270378	9.595	297518	9.595	91	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	473421	12.263	522042	12.262	91	50 - 200	-0.0010	+/-0.50	
Chrysene-d12	398080	16.993	389499	16.993	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	427603	19.801	430626	19.801	99	50 - 200	0.0000	+/-0.50	



INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sequence: SEI0321

Instrument: NT11

Calibration: ZI00066

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SEI0321-ICV1)		(Tissue)	Lab File ID: 16092302.D			Analyzed: 09/23/16 08:10			
Naphthalene-d8	531746	6.592	527377	6.592	101	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10	282451	9.595	297518	9.595	95	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10	489933	12.262	522042	12.262	94	50 - 200	0.0000	+/-0.50	
Chrysene-d12	403916	16.992	389499	16.993	104	50 - 200	0.0010	+/-0.50	
Perylene-d12	425628	19.801	430626	19.801	99	50 - 200	0.0000	+/-0.50	
LCS (BEI0706-BS1)		(Tissue)	Lab File ID: 16092303.D			Analyzed: 09/23/16 09:00			
Naphthalene-d8	719747	6.581	527377	6.592	136	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	387130	9.584	297518	9.595	130	50 - 200	0.0110	+/-0.50	
Phenanthrene-d10	707948	12.262	522042	12.262	136	50 - 200	0.0000	+/-0.50	
Chrysene-d12	541016	16.993	389499	16.993	139	50 - 200	0.0000	+/-0.50	
Perylene-d12	668004	19.811	430626	19.801	155	50 - 200	-0.0100	+/-0.50	
PG-PEMD-BLK-20160913 (16I0393-01)		(Tissue)	Lab File ID: 16092304.D			Analyzed: 09/23/16 09:30			
Naphthalene-d8	1006700	6.581	527377	6.592	191	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10	608435	9.584	297518	9.595	205	50 - 200	0.0110	+/-0.50	*
Phenanthrene-d10	1093670	12.263	522042	12.262	209	50 - 200	-0.0010	+/-0.50	*
Chrysene-d12	836424	16.993	389499	16.993	215	50 - 200	0.0000	+/-0.50	*
Perylene-d12	1037253	19.801	430626	19.801	241	50 - 200	0.0000	+/-0.50	*



HOLDING TIME SUMMARY

Analysis: EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMD)

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PG-PEMD-BLK-20160913 16I0393-01	09/13/16 15:00	09/13/16 15:00	09/13/16 15:00	0	14	09/23/16 09:30	10	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D-SIM

Laboratory: Analytical Resources, Inc.

SDG: 16I0393

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring (PEMI)

Matrix: Tissue

Instrument: NT11

Analyte	MDL	RL	Units
Naphthalene	0.50	0.60	ug/kg
2-Methylnaphthalene	0.50	0.50	ug/kg
Acenaphthylene	0.50	0.50	ug/kg
Acenaphthene	0.50	0.50	ug/kg
Fluorene	0.50	0.50	ug/kg
Phenanthrene	0.50	0.50	ug/kg
Anthracene	0.50	0.50	ug/kg
Fluoranthene	0.50	0.50	ug/kg
Pyrene	0.50	0.50	ug/kg
Benzo(a)anthracene	0.50	0.50	ug/kg
Chrysene	0.50	0.50	ug/kg
Benzo(b)fluoranthene	0.50	0.50	ug/kg
Benzo(k)fluoranthene	0.50	0.50	ug/kg
Benzo(e)pyrene	0.50	0.50	ug/kg
Benzo(a)pyrene	0.50	0.50	ug/kg
Indeno(1,2,3-cd)pyrene	0.50	0.50	ug/kg
Dibenzo(a,h)anthracene	0.50	0.50	ug/kg
Benzo(g,h,i)perylene	0.50	0.50	ug/kg
Perylene	0.50	0.50	ug/kg
Benzofluoranthenes, Total	1.00	1.00	ug/kg



16 November 2016

Nathan Soccorsy
Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Port Gamble Shellfish Monitoring

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)
16J0187

Associated SDG ID(s)
N/A

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclose Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

Cheronne Oreiro, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.





Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle WA, 98101

Project: Port Gamble Shellfish Monitoring
Project Number: [none]
Project Manager: Nathan Soccorso

Reported:
16-Nov-2016 09:35

Case Narrative

Sample receipt

Six tissue samples were received October 12, 2016 under ARI workorder 16J0187. The samples were frozen upon receipt. For details regarding sample receipt, please refer to the Cooler Receipt Form.

The samples were removed from frozen archive, prepared, and homogenized with tissue samples under workorders 16H0147 and 16H0268.

Dioxin/Furans - EPA Method 1613

The samples were extracted and analyzed within the recommended holding times for samples stored frozen.

Analysis was performed using an application specific column recently developed by Restek. The RTX-Dioxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

Initial calibrations, initial calibration verifications, and continuing calibration verifications were within method requirements.

The cleanup surrogate percent recoveries were within control limits.

The method blank contained reportable responses for several compounds. "B" qualifiers were applied to detected sample results associated with this method blank. No further corrective action was taken.

The OPR (Ongoing Precision and Recovery) standard percent recoveries were within control limits.

Cadmium - EPA Method SW6010C

The samples and associated laboratory QC were digested and analyzed within recommended holding times.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

The matrix spike percent recovery and duplicate RPD were within control limits.

Lipids – Method Bligh & Dyer (Mod)

The samples were analyzed within recommended holding times.

The method blank had a result that was greater than the reporting limit. No corrective action was taken.

Polynuclear Aromatic Hydrocarbons (PAH) - EPA Method SW8270D-SIM

The samples were extracted and analyzed within the recommended holding times.

Initial calibrations and initial calibration verifications were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS percent recoveries were within control limits.

Total Solids – SM 2540 G-97

The samples were prepared and analyzed within recommended holding times.



Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle WA, 98101

Project: Port Gamble Shellfish Monitoring
Project Number: [none]
Project Manager: Nathan Soccorsy

Reported:
16-Nov-2016 09:35

Case Narrative

1650147

Chain of Custody Record & Laboratory Analysis Request

Laboratory Number: AR 101116
 Date: 10/11/16
 Project Name: Port Gamble Bay Shellfish Monitoring
 Project Number: 160388-01.01
 Project Manager: Nathan Soccorsy
 Phone Number: 206-287-9130
 Shipment Method: DELIVER



Line	Field Sample ID	Collection Date/Time	Matrix
1	PG-SMA-1-1-14011	10/11/16 1108	TIS
2	PG-SMA-1-2-16011	1105	
3	PG-SMA-1-3-16011	1110	
4	PG-SMA-1-4-16011		
5	PG-REF-1-1-14011	1237	
6	PG-REF-1-2-16011	1215	
7	PG-REF-1-3-16011	1250	
8			
9			
10			
11			
12			
13			
14			
15			

LEAD
 CADMIUM
 D/F
 PCBs
 BHS

SP

Notes: PLEASE SEE PORT GAMBLE ~~SEAWATER~~ SHELLFISH MONITORING PLAN OF CONJNT
 ALEX SAMPSON / CINDY FIELDS FOR DETAIL

Relinquished By: Jason McKinney Company: Anchor OEA, LLC
 Signature/Printed Name Date/Time 0712 / 10/12/16

Received By: Justin Meyer Company: ARX
 Signature/Printed Name Date/Time 0712 10/12/16

Relinquished By: _____ Company: _____
 Signature/Printed Name Date/Time

Received By: _____ Company: _____
 Signature/Printed Name Date/Time



Cooler Receipt Form

ARI Client: Anchor

Project Name: Port Gamble Bay Shellfish Monitoring

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 16J01967

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
Time: 0.2

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: D005276

Cooler Accepted by: SM Date: 10-12-16 Time: 0712

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: SM Date: 10-12-16 Time: 0732

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)



Anchor QEA, LLC

720 Olive Way, Suite 1900

Seattle, WA 98101

Project: Port Gamble Shellfish Monitoring

Project Number: [none]

Project Manager: Nathan Soccorsy

Reported:

11/16/2016 09:35

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PG-REF-GP-1-161011	16J0187-06	Tissue	10/11/16 12:50	10/12/16 07:12
PG-REF-PJ-1-161011	16J0187-04	Tissue	10/11/16 12:37	10/12/16 07:12
PG-REF-WS-1-161011	16J0187-05	Tissue	10/11/16 12:15	10/12/16 07:12
PG-SMA-1-1-161011	16J0187-01	Tissue	10/11/16 11:08	10/12/16 07:12
PG-SMA-1-2-161011	16J0187-02	Tissue	10/11/16 11:05	10/12/16 07:12
PG-SMA-1-3-161011	16J0187-03	Tissue	10/11/16 11:10	10/12/16 07:12

Internal Chain of Custody

Client: Anchor QEA, LLC
 Project: Port Gamble Shellfish Monitoring
 Number: [none]

Received: 12-Oct-2016 07:12
 Received By: Justin Meyer
 Temp (°C): 0.20

16J0187-01 (PG-SMA-1-1-161011) Sampled 10/11/2016 11:08

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-01 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.233%]</i>
Sample Receiving	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
Metals	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
Metals	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL

16J0187-02 (PG-SMA-1-2-161011) Sampled 10/11/2016 11:05

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-02 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.06%]</i>
Sample Receiving	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
Metals	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL

Internal Chain of Custody

Client: Anchor QEA, LLC
 Project: Port Gamble Shellfish Monitoring
 Number: [none]

Received: 12-Oct-2016 07:12
 Received By: Justin Meyer
 Temp (°C): 0.20

16J0187-02 (PG-SMA-1-2-161011) Sampled 10/11/2016 11:05

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-02 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.06%]</i>
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
Metals	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL

16J0187-03 (PG-SMA-1-3-161011) Sampled 10/11/2016 11:10

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-03 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.21%]</i>
Sample Receiving	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
	10/12/2016 07:36 by JEM	***START***	10/12/2016 07:36 by JEM
Metals	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
Metals	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL

Internal Chain of Custody

Client: Anchor QEA, LLC
 Project: Port Gamble Shellfish Monitoring
 Number: [none]

Received: 12-Oct-2016 07:12
 Received By: Justin Meyer
 Temp (°C): 0.20

16J0187-03 (PG-SMA-1-3-161011) Sampled 10/11/2016 11:10

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-03 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.21%]</i>
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL

16J0187-04 (PG-REF-PJ-1-161011) Sampled 10/11/2016 12:37

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-04 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.195%]</i>
Sample Receiving	10/12/2016 07:38 by JEM	***START***	10/12/2016 07:38 by JEM
	10/12/2016 07:38 by JEM	***START***	10/12/2016 07:38 by JEM
	10/12/2016 07:38 by JEM	***START***	10/12/2016 07:38 by JEM
	10/12/2016 07:38 by JEM	***START***	10/12/2016 07:38 by JEM
	10/12/2016 07:38 by JEM	***START***	10/12/2016 07:38 by JEM
Metals	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
Metals	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL

16J0187-05 (PG-REF-WS-1-161011) Sampled 10/11/2016 12:15

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
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Internal Chain of Custody

Client: Anchor QEA, LLC
 Project: Port Gamble Shellfish Monitoring
 Number: [none]

Received: 12-Oct-2016 07:12
 Received By: Justin Meyer
 Temp (°C): 0.20

16J0187-05 (PG-REF-WS-1-161011) Sampled 10/11/2016 12:15

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-05 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.209%]</i>
Sample Receiving	10/12/2016 07:39 by JEM	***START***	10/12/2016 07:39 by JEM
	10/12/2016 07:39 by JEM	***START***	10/12/2016 07:39 by JEM
	10/12/2016 07:39 by JEM	***START***	10/12/2016 07:39 by JEM
	10/12/2016 07:39 by JEM	***START***	10/12/2016 07:39 by JEM
	10/12/2016 07:39 by JEM	***START***	10/12/2016 07:39 by JEM
Metals	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
Metals	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL

16J0187-06 (PG-REF-GP-1-161011) Sampled 10/11/2016 12:50

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-06 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.274%]</i>
Sample Receiving	10/12/2016 07:48 by JEM	***START***	10/12/2016 07:48 by JEM
	10/12/2016 07:48 by JEM	***START***	10/12/2016 07:48 by JEM
	10/12/2016 07:48 by JEM	***START***	10/12/2016 07:48 by JEM
	10/12/2016 07:48 by JEM	***START***	10/12/2016 07:48 by JEM
	10/12/2016 07:48 by JEM	***START***	10/12/2016 07:48 by JEM
Metals	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
	10/25/2016 17:11 by MCB	Metals Prep Lab	10/26/2016 06:56 by NPL
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL

Internal Chain of Custody

Client: Anchor QEA, LLC
 Project: Port Gamble Shellfish Monitoring
 Number: [none]

Received: 12-Oct-2016 07:12
 Received By: Justin Meyer
 Temp (°C): 0.20

16J0187-06 (PG-REF-GP-1-161011) Sampled 10/11/2016 12:50

<i>Current Status</i>	<i>Out</i>	<i>Location</i>	<i>In</i>
<i>16J0187-06 A [Miscellaneous Container]</i>			<i>Hazard Info: Percent Lipids [1.274%]</i>
Extractions	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
	10/26/2016 06:56 by NPL	Dioxin Lab	10/26/2016 07:16 by NPL
Metals	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
	10/26/2016 10:33 by AR	R-36	10/26/2016 12:32 by YQL
Extractions	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 12:32 by YQL	R-36	10/26/2016 17:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
	10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL
10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL	
10/26/2016 17:03 by YQL	F-05 07	11/01/2016 09:03 by YQL	

QUALIFIERS AND NOTES

Qualifier	Definition
U	This analyte is not detected above the applicable reporting or detection limit.
Text1	No surr added
J	Estimated concentration value detected below the reporting limit.
EMPC	Estimated Maximum Possible Concentration qualifier for HRGCMS Dioxin
D	The reported value is from a dilution
B	This analyte was detected in the method blank.
*	Flagged value is not within established control limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference



Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-01 File ID: 16110108
 Sampled: 10/11/16 11:08 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 15:54
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.02 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.513	0.655-0.886		0.998	0.084	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.035	0.998	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.035	4.99	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.033	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.052	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.029	4.99	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.029	4.99	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.03	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.271	1.054-1.426		4.99	0.055	ng/kg	J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.049	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.049	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.052	4.99	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.307	0.893-1.208		4.99	0.031	ng/kg	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.501	0.893-1.208		4.99	0.017	ng/kg	EMPC, J
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.246	0.893-1.208		4.99	0.349	ng/kg	EMPC, J, B
39001-02-0	OCDF	1	0.640	0.757-1.024		9.98	0.132	ng/kg	EMPC, J, B
3268-87-9	OCDD	1	0.912	0.757-1.024		9.98	2.81	ng/kg	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.998	0.263	ng/kg	
41903-57-5	Total TCDD	1	0.000			0.998	0.221	ng/kg	
30402-15-4	Total PeCDF	1	0.000			0.998	0.279	ng/kg	
36088-22-9	Total PeCDD	1	0.000			0.998	0.053	ng/kg	
55684-94-1	Total HxCDF	1	0.000			0.998	0.070	ng/kg	
34465-46-8	Total HxCDD	1	0.000			0.998	0.182	ng/kg	
38998-75-3	Total HpCDF	1	0.000			0.998	0.100	ng/kg	
37871-00-4	Total HpCDD	1	0.000			0.998	2.18	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.019
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.019



Form I
ORGANIC ANALYSIS DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-01 File ID: 16110108
 Sampled: 10/11/16 11:08 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 15:54
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.02 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.784	0.655-0.886		96.4	24 - 169 %	
13C12-2,3,7,8-TCDD		0.797	0.655-0.886		99.5	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.583	1.318-1.783		101	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.575	1.318-1.783		108	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.584	1.318-1.783		108	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.521	0.434-0.587		87.0	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.525	0.434-0.587		82.0	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.521	0.434-0.587		87.4	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.518	0.434-0.587		90.9	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.276	1.054-1.426		97.0	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.261	1.054-1.426		95.5	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.467	0.374-0.506		83.6	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.443	0.374-0.506		95.1	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.077	0.893-1.208		97.5	23 - 140 %	
13C12-OCDD		0.910	0.757-1.024		83.0	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			106	35 - 197 %	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:15 Pacific Daylight Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16R0187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.570	1.001	5.08e2	9.91e2	0.935	0.513	0.770	1425	2004	8.45e3	1.36e4	5.9	YES	0.042
12378-PeCDF				0.952			1.550	987	1627					
23478-PeCDF				0.963			1.550	987	1627					
123478-HxCDF				1.137			1.240	1056	1072					
234678-HxCDF				1.164			1.240	1056	1072					
123678-HxCDF				1.099			1.240	1056	1072					
123789-HxCDF	36.952	1.000	3.97e2	3.13e2	1.101	1.271	1.240	1056	1072	8.64e3	6.02e3	8.2	NO	0.027
1234678-HpCDF	39.035	1.001	2.49e2	1.90e2	1.303	1.307	1.050	760	580	4.77e3	4.42e3	6.3	YES	0.016
1234789-HpCDF	41.611	1.000	1.23e2	8.22e1	1.317	1.501	1.050	760	580	2.82e3	2.25e3	3.7	YES	0.009
OCDF	46.756	1.006	4.47e2	6.98e2	1.166	0.640	0.890	697	1631	4.17e3	7.62e3	6.0	YES	0.066
2378-TCDD				1.134			0.770	1304	916					
12378-PeCDD				0.975			1.550	1787	793					
123478-HxCDD				1.031			1.240	1448	1322					
123678-HxCDD				0.971			1.240	1448	1322					
123789-HxCDD				0.947			1.240	1448	1322					
1234678-HpCDD	40.789	1.001	1.93e3	1.55e3	1.028	1.246	1.050	909	1002	2.86e4	2.32e4	31.4	YES	0.175
OCDD	46.496	1.001	1.10e4	1.21e4	1.107	0.912	0.890	917	2167	1.19e5	1.31e5	129.5	NO	1.406
13C-2378-TCDF	25.555	1.007	1.67e6	2.14e6	1.567	0.784	0.770	10253	5342	2.39e7	3.02e7	2328.2	NO	96.423
13C-12378-PeCDF	29.674	1.169	1.98e6	1.25e6	1.274	1.583	1.550	4097	5636	2.91e7	1.84e7	7115.1	NO	100.750
13C-23478-PeCDF	31.023	1.223	2.06e6	1.31e6	1.235	1.575	1.550	4097	5636	3.03e7	1.92e7	7396.0	NO	108.205
13C-123478-HxCDF	34.695	0.951	8.98e5	1.72e6	1.381	0.521	0.510	4886	6604	1.33e7	2.53e7	2727.1	NO	86.958
13C-123678-HxCDF	34.848	0.955	9.66e5	1.84e6	1.569	0.525	0.510	4886	6604	1.39e7	2.66e7	2841.6	NO	81.964
13C-234678-HxCDF	35.801	0.981	8.79e5	1.69e6	1.345	0.521	0.510	4886	6604	1.24e7	2.39e7	2546.3	NO	87.387
13C-123789-HxCDF	36.941	1.012	8.01e5	1.55e6	1.183	0.518	0.510	4886	6604	1.15e7	2.21e7	2356.9	NO	90.866
13C-1234678-HpCDF	39.013	1.069	6.85e5	1.47e6	1.178	0.467	0.440	2863	4301	9.83e6	2.14e7	3432.3	NO	83.648
13C-1234789-HpCDF	41.621	1.141	5.59e5	1.26e6	0.878	0.443	0.440	2863	4301	7.05e6	1.60e7	2460.6	NO	95.091
13C-1234-TCDD	25.376	0.000	1.11e6	1.41e6	1.000	0.790	0.770	4326	1782	1.67e7	2.12e7	3865.0	NO	100.000
13C-2378-TCDD	26.183	1.032	1.01e6	1.27e6	0.908	0.797	0.770	4326	1782	1.46e7	1.85e7	3386.2	NO	99.488
13C-12378-PeCDD	31.275	1.232	1.26e6	7.95e5	0.756	1.584	1.550	2579	1711	1.87e7	1.18e7	7242.1	NO	107.877
13C-123478-HxCDD	35.933	0.985	1.25e6	9.82e5	1.056	1.276	1.240	2470	3028	1.83e7	1.45e7	7408.2	NO	96.983
13C-123678-HxCDD	36.065	0.988	1.35e6	1.07e6	1.163	1.261	1.240	2470	3028	1.93e7	1.53e7	7821.9	NO	95.451
13C-1234678-HpCDD	40.767	1.117	1.00e6	9.31e5	0.909	1.077	1.050	3399	2889	1.34e7	1.27e7	3932.9	NO	97.464
13C-OCDD	46.469	1.273	1.41e6	1.55e6	0.820	0.910	0.890	2168	2385	1.47e7	1.61e7	6771.6	NO	165.949
13C-123789-HxCDD	36.492	0.000	1.21e6	9.68e5	1.000	1.255	1.240	2470	3028	1.76e7	1.40e7	7122.5	NO	100.000
Total-tetrafurans			1.91e3	0.935				1425		2.72e4				0.132

Quantify Sample Summary Report

MassLynx MassLynx V4.1 SCN909
 Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			2.96e2					718		4.86e3				0.016
Total-pentafurans			1.65e3		0.957			987		2.43e4				0.124
Total-hexafurans			5.11e2		1.125			1056		1.23e4				0.035
Total-heptafurans			6.94e2		1.310			760		1.40e4				0.050
Total-Furans			5.58e3		1.114			1425		8.80e4				0.427
Total-tetradioxins			1.84e3		1.134			1304		2.80e4				0.111
Total-pentadioxins			3.74e2		0.975			1787		7.64e3				0.026
Total-hexadioxins			9.19e2		0.983			1448		1.63e4				0.091
Total-heptadioxins			1.12e4		1.028			909		1.57e5				1.094
Total-Dioxins			2.54e4		1.028			1304		3.28e5				2.728
Total-TEQ			3.10e4					1304		4.16e5				3.155
37CL-2378-TCDD	26.198	1.032	1.14e6		1.067			2161		1.63e7		7547.1		42.424
FUNCTION1 PFK			3.70e7					571903		9.79e6				
FUNCTION2 PFK			1.65e5					183533		5.02e6				0.000
FUNCTION3 PFK			1.01e6					599059		7.43e6				0.000
FUNCTION4 PFK			9.64e5					440320		2.33e7				
FUNCTION5 PFK			4.50e5					281424		1.34e7				
FUNCTION1 HXCD...			5.74e4					1121		7.30e5				0.000
FUNCTION1 HPCD...			3.62e3					1186		5.57e4				0.000
FUNCTION2 HPCD...			7.37e2					1371		1.92e4				0.000
FUNCTION3 OCDPE			1.03e2					849		2.94e3				0.000
FUNCTION4 NCDPE			5.20e2					663		8.48e3				0.000
FUNCTION5 DCDPE			0.00e0					454		0.00e0				0.000

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16H0187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	24.51	907.530	0.935	0.025		1.17	0.77	YES	3.6
2	35 Total-tetrafurans	303.9016	22.93	1078.541	0.935	0.030		0.60	0.77	YES	5.2
3	35 Total-tetrafurans	303.9016	25.79	1207.181	0.935	0.034		0.73	0.77	NO	4.3
4	1 2378-TCDF	303.9016	25.57	1498.539	0.935	0.042	0.033	0.51	0.77	YES	5.9

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36 Total-penta1	339.8597	26.97	478.679		0.016		1.62	1.55	NO	6.8

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37 Total-pentafurans	339.8597	28.56	3405.875	0.957	0.108		0.72	1.55	YES	19.7
2	37 Total-pentafurans	339.8597	28.32	515.579	0.957	0.016		0.79	1.55	YES	4.9

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38 Total-hexafurans	373.8208	33.20	225.440	1.125	0.008		1.01	1.24	YES	3.4
2	7 123789-HxCDF	373.8208	36.95	709.991	1.101	0.027	0.027	1.27	1.24	NO	8.2

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9 1234789-HpCDF	407.7818	41.61	205.550	1.317	0.009	0.007	1.50	1.05	YES	3.7
2	39 Total-heptafurans	407.7818	39.82	669.176	1.310	0.026		0.92	1.05	NO	8.5
3	8 1234678-HpCDF	407.7818	39.03	438.965	1.303	0.016	0.014	1.31	1.05	YES	6.3

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	24.51	907.530	0.935	0.025		1.17	0.77	YES	3.6
2	35 Total-tetrafurans	303.9016	22.93	1078.541	0.935	0.030		0.60	0.77	YES	5.2
3	40 Total-Furans	303.9016	27.50	175.857	1.114	0.004		0.76	0.77	NO	0.9
4	35 Total-tetrafurans	303.9016	25.79	1207.181	0.935	0.034		0.73	0.77	NO	4.3
5	1 2378-TCDF	303.9016	25.57	1498.539	0.935	0.042	0.033	0.51	0.77	YES	5.9
6	37 Total-pentafurans	339.8597	28.56	3405.875	0.957	0.108		0.72	1.55	YES	19.7
7	37 Total-pentafurans	339.8597	28.32	515.579	0.957	0.016		0.79	1.55	YES	4.9
8	38 Total-hexafurans	373.8208	33.20	225.440	1.125	0.008		1.01	1.24	YES	3.4
9	7 123789-HxCDF	373.8208	36.95	709.991	1.101	0.027	0.027	1.27	1.24	NO	8.2
10	9 1234789-HpCDF	407.7818	41.61	205.550	1.317	0.009	0.007	1.50	1.05	YES	3.7
11	39 Total-heptafurans	407.7818	39.82	669.176	1.310	0.026		0.92	1.05	NO	8.5
12	8 1234678-HpCDF	407.7818	39.03	438.965	1.303	0.016	0.014	1.31	1.05	YES	6.3
13	10 OCDF	441.7428	46.76	1145.474	1.166	0.066	0.055	0.64	0.89	YES	6.0
14	36 Total-penta1	339.8597	26.97	478.679		0.016		1.62	1.55	NO	6.8

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TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	23.63	550.647	1.134	0.021		2.07	0.77	YES	4.3
2	41 Total-tetradoxins	319.8965	23.37	1536.678	1.134	0.060		1.55	0.77	YES	10.4
3	41 Total-tetradoxins	319.8965	25.85	772.797	1.134	0.030		2.29	0.77	YES	6.8

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42 Total-pentadoxins	355.8546	29.70	529.774	0.975	0.026		2.41	1.55	YES	4.3

HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43 Total-hexadoxins	389.8157	34.99	863.449	0.983	0.038		0.87	1.24	YES	4.8
2	43 Total-hexadoxins	389.8157	33.80	1220.243	0.983	0.053		0.73	1.24	YES	6.5

HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.79	3472.015	1.028	0.175	0.159	1.25	1.05	YES	31.4
2	44 Total-heptadoxins	423.7766	39.56	18266.908	1.028	0.919		1.03	1.05	NO	141.5

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	23.63	550.647	1.134	0.021		2.07	0.77	YES	4.3
2	41 Total-tetradoxins	319.8965	23.37	1536.678	1.134	0.060		1.55	0.77	YES	10.4
3	41 Total-tetradoxins	319.8965	25.85	772.797	1.134	0.030		2.29	0.77	YES	6.8
4	42 Total-pentadoxins	355.8546	29.70	529.774	0.975	0.026		2.41	1.55	YES	4.3
5	43 Total-hexadoxins	389.8157	34.99	863.449	0.983	0.038		0.87	1.24	YES	4.8
6	43 Total-hexadoxins	389.8157	33.80	1220.243	0.983	0.053		0.73	1.24	YES	6.5
7	16 1234678-HpCDD	423.7766	40.79	3472.015	1.028	0.175	0.159	1.25	1.05	YES	31.4
8	44 Total-heptadoxins	423.7766	39.56	18266.908	1.028	0.919		1.03	1.05	NO	141.5
9	17 OCDD	457.7377	46.50	23099.805	1.107	1.406	1.406	0.91	0.89	NO	129.5

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TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	24.51	907.530	0.935	0.025		1.17	0.77	YES	3.6
2	35 Total-tetrafurans	303.9016	22.93	1078.541	0.935	0.030		0.60	0.77	YES	5.2
3	40 Total-Furans	303.9016	27.50	175.857	1.114	0.004		0.76	0.77	NO	0.9
4	35 Total-tetrafurans	303.9016	25.79	1207.181	0.935	0.034		0.73	0.77	NO	4.3
5	1 2378-TCDF	303.9016	25.57	1498.539	0.935	0.042	0.033	0.51	0.77	YES	5.9
6	37 Total-pentafurans	339.8597	28.56	3405.875	0.957	0.108		0.72	1.55	YES	19.7
7	37 Total-pentafurans	339.8597	28.32	515.579	0.957	0.016		0.79	1.55	YES	4.9
8	38 Total-hexafurans	373.8208	33.20	225.440	1.125	0.008		1.01	1.24	YES	3.4
9	7 123789-HxCDF	373.8208	36.95	709.991	1.101	0.027	0.027	1.27	1.24	NO	8.2
10	9 1234789-HpCDF	407.7818	41.61	205.550	1.317	0.009	0.007	1.50	1.05	YES	3.7
11	39 Total-heptafurans	407.7818	39.82	669.176	1.310	0.026		0.92	1.05	NO	8.5
12	8 1234678-HpCDF	407.7818	39.03	438.965	1.303	0.016	0.014	1.31	1.05	YES	6.3
13	10 OCDF	441.7428	46.76	1145.474	1.166	0.066	0.055	0.64	0.89	YES	6.0
14	36 Total-penta1	339.8597	26.97	478.679		0.016		1.62	1.55	NO	6.8
15	41 Total-tetradioxins	319.8965	23.63	550.647	1.134	0.021		2.07	0.77	YES	4.3
16	41 Total-tetradioxins	319.8965	23.37	1536.678	1.134	0.060		1.55	0.77	YES	10.4
17	41 Total-tetradioxins	319.8965	25.85	772.797	1.134	0.030		2.29	0.77	YES	6.8
18	42 Total-pentadioxins	355.8546	29.70	529.774	0.975	0.026		2.41	1.55	YES	4.3
19	43 Total-hexadioxins	389.8157	34.99	863.449	0.983	0.038		0.87	1.24	YES	4.8
20	43 Total-hexadioxins	389.8157	33.80	1220.243	0.983	0.053		0.73	1.24	YES	6.5
21	16 1234678-HpCDD	423.7766	40.79	3472.015	1.028	0.175	0.159	1.25	1.05	YES	31.4
22	44 Total-heptadioxins	423.7766	39.56	18266.908	1.028	0.919		1.03	1.05	NO	141.5
23	17 OCDD	457.7377	46.50	23099.805	1.107	1.406	1.406	0.91	0.89	NO	129.5

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	26.91	0.000							5.1
2	48 FUNCTION1 PFK	330.9792	21.89	0.000							12.1

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PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366.9792	28.03	0.000		0.000					1.4
2	49 FUNCTION2 PFK	366.9792	27.99	0.000		0.000					0.6
3	49 FUNCTION2 PFK	366.9792	31.53	0.000		0.000					1.3
4	49 FUNCTION2 PFK	366.9792	31.46	0.000		0.000					1.2
5	49 FUNCTION2 PFK	366.9792	31.41	0.000		0.000					1.2
6	49 FUNCTION2 PFK	366.9792	31.36	0.000		0.000					1.5
7	49 FUNCTION2 PFK	366.9792	31.17	0.000		0.000					1.0
8	49 FUNCTION2 PFK	366.9792	31.03	0.000		0.000					0.5
9	49 FUNCTION2 PFK	366.9792	30.64	0.000		0.000					1.4
10	49 FUNCTION2 PFK	366.9792	29.82	0.000		0.000					0.6
11	49 FUNCTION2 PFK	366.9792	29.61	0.000		0.000					1.1
12	49 FUNCTION2 PFK	366.9792	29.30	0.000		0.000					1.4
13	49 FUNCTION2 PFK	366.9792	29.06	0.000		0.000					0.8
14	49 FUNCTION2 PFK	366.9792	28.86	0.000		0.000					1.0
15	49 FUNCTION2 PFK	366.9792	28.74	0.000		0.000					1.9
16	49 FUNCTION2 PFK	366.9792	28.42	0.000		0.000					2.0
17	49 FUNCTION2 PFK	366.9792	28.30	0.000		0.000					1.2
18	49 FUNCTION2 PFK	366.9792	28.15	0.000		0.000					0.7
19	49 FUNCTION2 PFK	366.9792	32.37	0.000		0.000					1.2
20	49 FUNCTION2 PFK	366.9792	32.33	0.000		0.000					0.7
21	49 FUNCTION2 PFK	366.9792	32.26	0.000		0.000					1.7
22	49 FUNCTION2 PFK	366.9792	31.92	0.000		0.000					0.8
23	49 FUNCTION2 PFK	366.9792	31.78	0.000		0.000					1.3
24	49 FUNCTION2 PFK	366.9792	31.66	0.000		0.000					0.9

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	36.00	0.000		0.000					3.3
2	50 FUNCTION3 PFK	380.9760	35.88	0.000		0.000					6.4
3	50 FUNCTION3 PFK	380.9760	33.52	0.000		0.000					2.7

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PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	39.17	0.000							2.1
2	51 FUNCTION4 PFK	430.9728	39.11	0.000							1.9
3	51 FUNCTION4 PFK	430.9728	38.98	0.000							1.8
4	51 FUNCTION4 PFK	430.9728	38.41	0.000							1.4
5	51 FUNCTION4 PFK	430.9728	38.38	0.000							1.1
6	51 FUNCTION4 PFK	430.9728	42.31	0.000							1.3
7	51 FUNCTION4 PFK	430.9728	42.04	0.000							1.7
8	51 FUNCTION4 PFK	430.9728	41.71	0.000							1.6
9	51 FUNCTION4 PFK	430.9728	41.67	0.000							2.2
10	51 FUNCTION4 PFK	430.9728	41.62	0.000							1.4
11	51 FUNCTION4 PFK	430.9728	41.26	0.000							0.6
12	51 FUNCTION4 PFK	430.9728	41.15	0.000							1.1
13	51 FUNCTION4 PFK	430.9728	40.89	0.000							0.9
14	51 FUNCTION4 PFK	430.9728	40.67	0.000							0.8
15	51 FUNCTION4 PFK	430.9728	40.60	0.000							1.5
16	51 FUNCTION4 PFK	430.9728	40.20	0.000							1.4
17	51 FUNCTION4 PFK	430.9728	40.14	0.000							1.3
18	51 FUNCTION4 PFK	430.9728	39.60	0.000							0.8
19	51 FUNCTION4 PFK	430.9728	39.52	0.000							1.0
20	51 FUNCTION4 PFK	430.9728	39.36	0.000							1.4
21	51 FUNCTION4 PFK	430.9728	39.27	0.000							0.6
22	51 FUNCTION4 PFK	430.9728	44.47	0.000							1.6
23	51 FUNCTION4 PFK	430.9728	43.88	0.000							1.2
24	51 FUNCTION4 PFK	430.9728	43.84	0.000							2.2
25	51 FUNCTION4 PFK	430.9728	43.80	0.000							3.1
26	51 FUNCTION4 PFK	430.9728	43.73	0.000							3.2
27	51 FUNCTION4 PFK	430.9728	43.66	0.000							3.3
28	51 FUNCTION4 PFK	430.9728	43.27	0.000							1.4
29	51 FUNCTION4 PFK	430.9728	43.18	0.000							1.0
30	51 FUNCTION4 PFK	430.9728	42.85	0.000							0.8
31	51 FUNCTION4 PFK	430.9728	42.81	0.000							1.9
32	51 FUNCTION4 PFK	430.9728	42.76	0.000							1.8
33	51 FUNCTION4 PFK	430.9728	42.53	0.000							1.5
34	51 FUNCTION4 PFK	430.9728	42.39	0.000							1.8

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:15 Pacific Daylight Time

ID: 16H0187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52 FUNCTION5 PFK	480.9696	44.63	0.000							3.5
2	52 FUNCTION5 PFK	480.9696	44.56	0.000							5.1
3	52 FUNCTION5 PFK	480.9696	47.63	0.000							1.3
4	52 FUNCTION5 PFK	480.9696	47.59	0.000							0.8
5	52 FUNCTION5 PFK	480.9696	47.53	0.000							1.1
6	52 FUNCTION5 PFK	480.9696	47.33	0.000							1.2
7	52 FUNCTION5 PFK	480.9696	47.29	0.000							0.6
8	52 FUNCTION5 PFK	480.9696	47.12	0.000							0.9
9	52 FUNCTION5 PFK	480.9696	46.75	0.000							1.6
10	52 FUNCTION5 PFK	480.9696	45.93	0.000							1.3
11	52 FUNCTION5 PFK	480.9696	45.72	0.000							1.5
12	52 FUNCTION5 PFK	480.9696	45.56	0.000							1.1
13	52 FUNCTION5 PFK	480.9696	45.51	0.000							1.5
14	52 FUNCTION5 PFK	480.9696	45.35	0.000							1.1
15	52 FUNCTION5 PFK	480.9696	45.03	0.000							1.5
16	52 FUNCTION5 PFK	480.9696	44.96	0.000							1.8
17	52 FUNCTION5 PFK	480.9696	44.89	0.000							1.0
18	52 FUNCTION5 PFK	480.9696	44.79	0.000							1.1
19	52 FUNCTION5 PFK	480.9696	49.47	0.000							1.0
20	52 FUNCTION5 PFK	480.9696	49.41	0.000							2.1
21	52 FUNCTION5 PFK	480.9696	49.29	0.000							1.3
22	52 FUNCTION5 PFK	480.9696	49.21	0.000							0.6
23	52 FUNCTION5 PFK	480.9696	49.17	0.000							1.4
24	52 FUNCTION5 PFK	480.9696	49.10	0.000							2.3
25	52 FUNCTION5 PFK	480.9696	48.82	0.000							1.7
26	52 FUNCTION5 PFK	480.9696	48.47	0.000							0.7
27	52 FUNCTION5 PFK	480.9696	48.40	0.000							1.8
28	52 FUNCTION5 PFK	480.9696	48.29	0.000							1.2
29	52 FUNCTION5 PFK	480.9696	48.16	0.000							1.4
30	52 FUNCTION5 PFK	480.9696	48.13	0.000							1.4
31	52 FUNCTION5 PFK	480.9696	48.04	0.000							1.3
32	52 FUNCTION5 PFK	480.9696	47.96	0.000							0.8
33	52 FUNCTION5 PFK	480.9696	47.66	0.000							0.8

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	27.48	0.000		0.000					2.1
2	53 FUNCTION1 HXCD...	375.8364	26.39	0.000		0.000					2.8
3	53 FUNCTION1 HXCD...	375.8364	26.27	0.000		0.000					2.3
4	53 FUNCTION1 HXCD...	375.8364	26.02	0.000		0.000					2.6
5	53 FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					509.7
6	53 FUNCTION1 HXCD...	375.8364	25.36	0.000		0.000					126.7
7	53 FUNCTION1 HXCD...	375.8364	23.18	0.000		0.000					1.9
8	53 FUNCTION1 HXCD...	375.8364	21.63	0.000		0.000					3.2

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ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	27.54	0.000		0.000					2.4
2	54 FUNCTION1 HPCD...	409.7974	24.57	0.000		0.000					2.8
3	54 FUNCTION1 HPCD...	409.7974	24.26	0.000		0.000					2.1
4	54 FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					39.8

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	29.05	0.000		0.000					1.5
2	55 FUNCTION2 HPCD...	409.7974	28.16	0.000		0.000					1.2
3	55 FUNCTION2 HPCD...	409.7974	31.35	0.000		0.000					4.4
4	55 FUNCTION2 HPCD...	409.7974	31.09	0.000		0.000					1.1
5	55 FUNCTION2 HPCD...	409.7974	30.11	0.000		0.000					2.0
6	55 FUNCTION2 HPCD...	409.7974	29.70	0.000		0.000					2.3
7	55 FUNCTION2 HPCD...	409.7974	29.62	0.000		0.000					1.6

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445.7555	37.23	0.000		0.000					3.5

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	43.75	0.000		0.000					1.6
2	57 FUNCTION4 NCDPE	479.7165	39.75	0.000		0.000					2.6
3	57 FUNCTION4 NCDPE	479.7165	38.62	0.000		0.000					8.6

ETHERS6

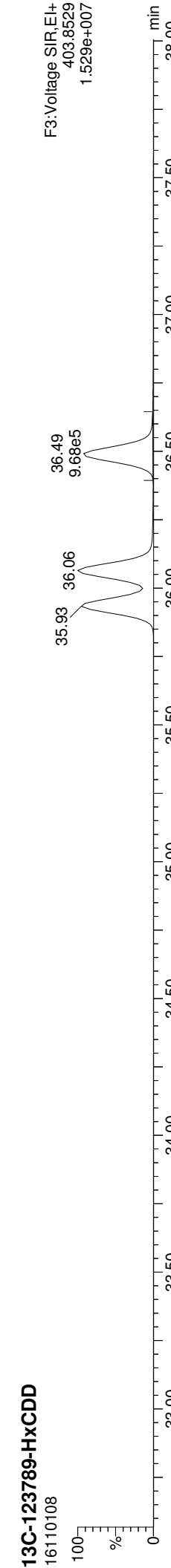
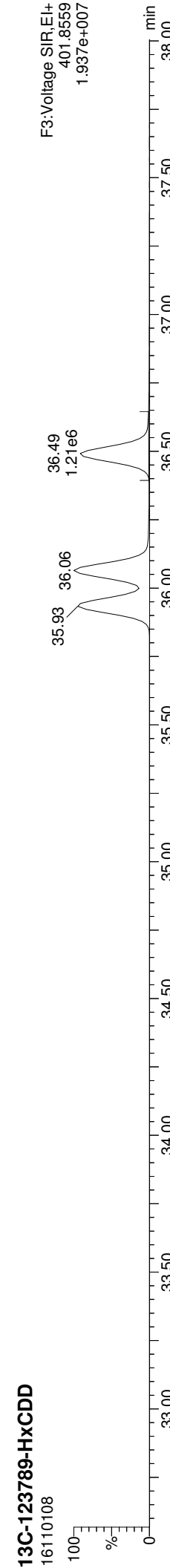
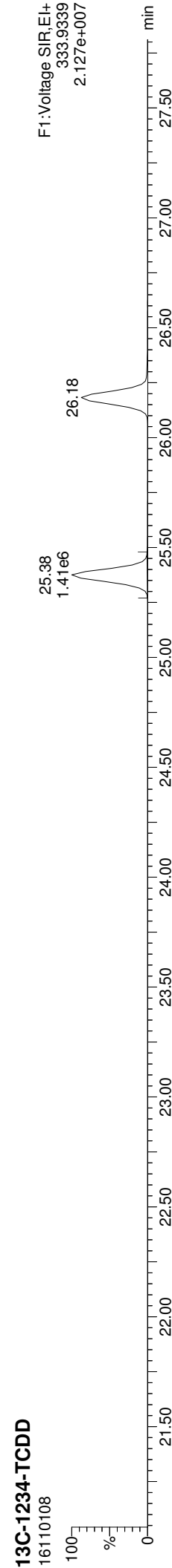
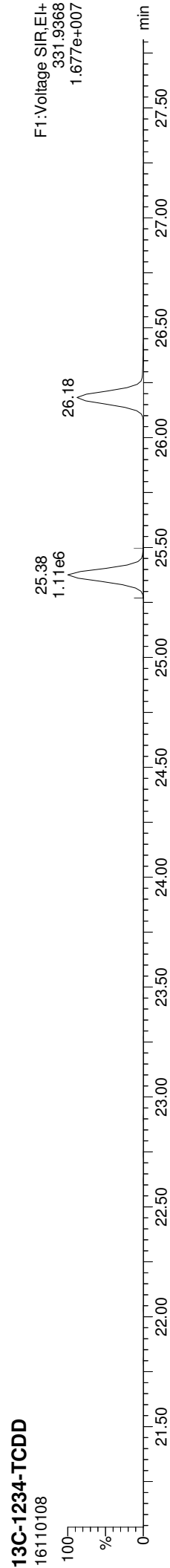
	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
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Quantify Sample Report MassLynx MassLynx V4.1 SCN909

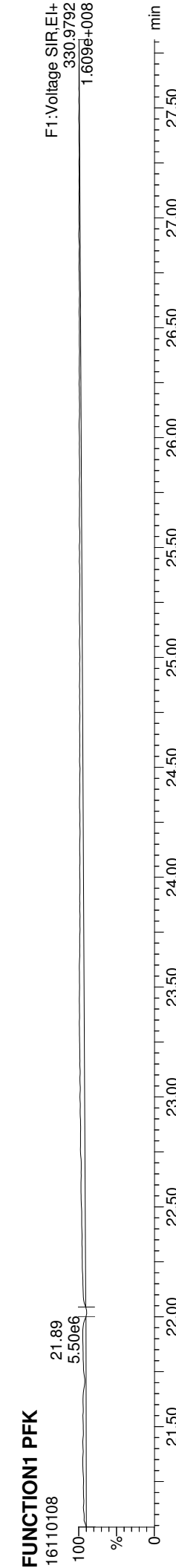
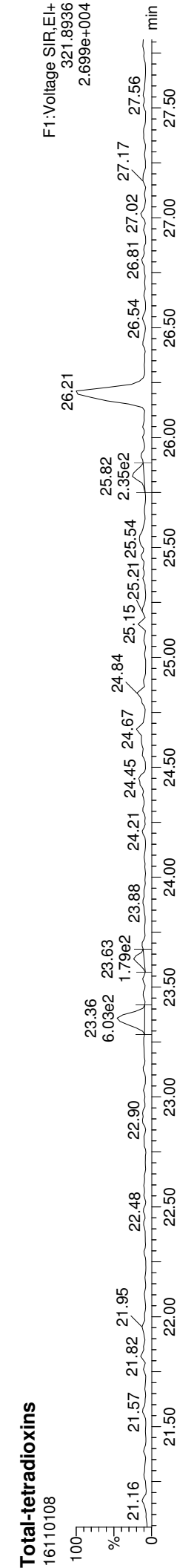
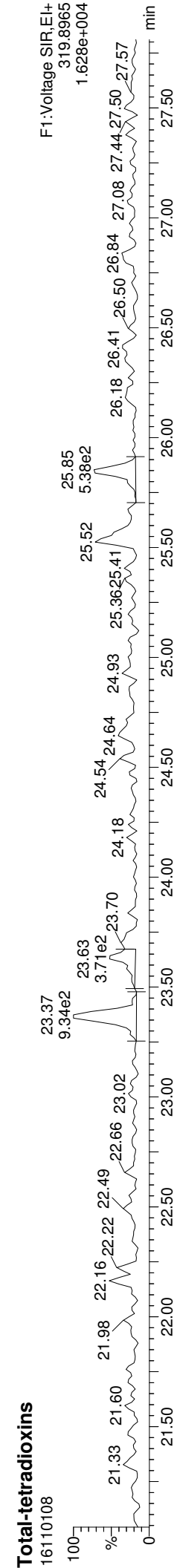
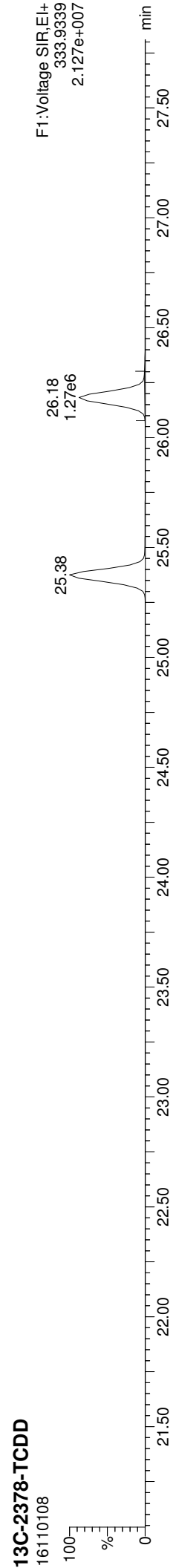
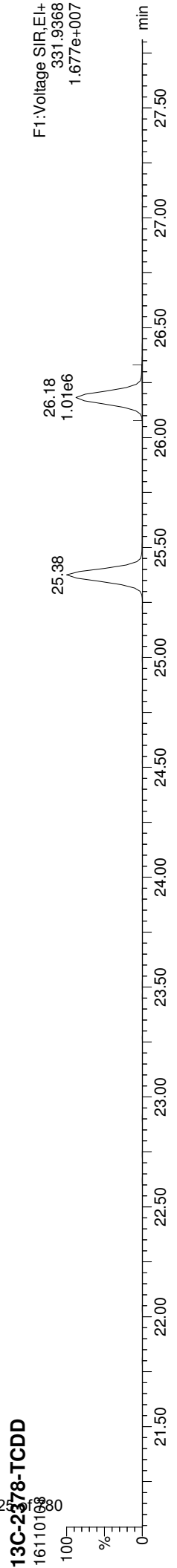
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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ID: 16110187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

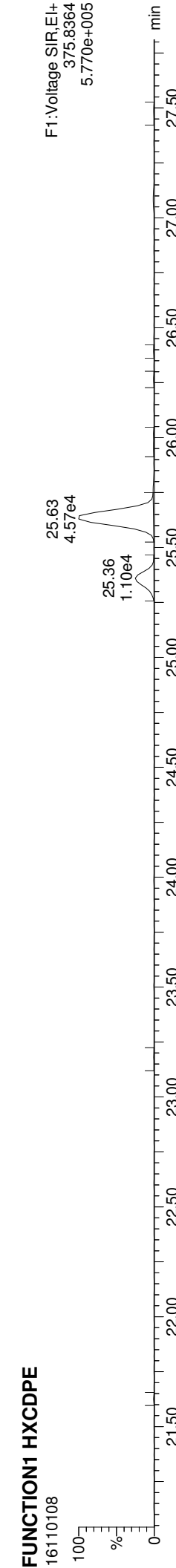
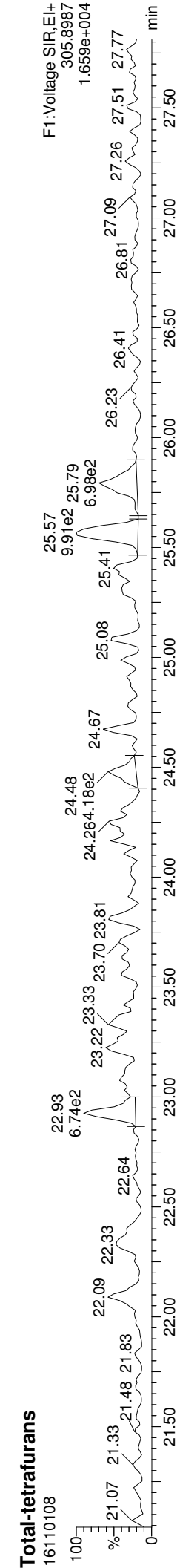
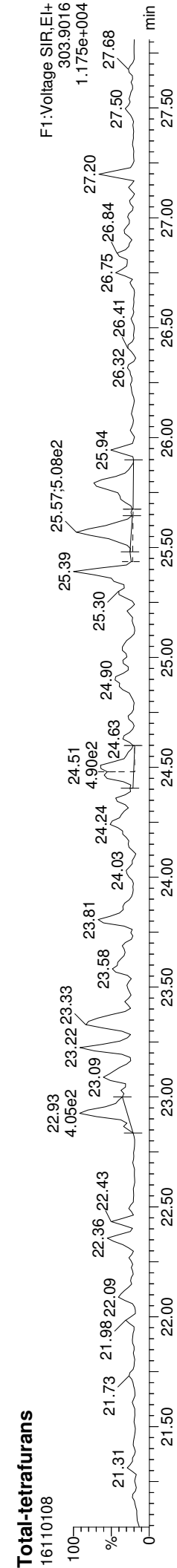
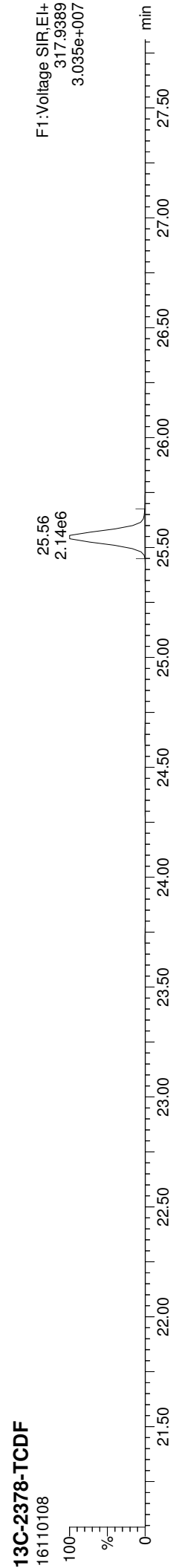
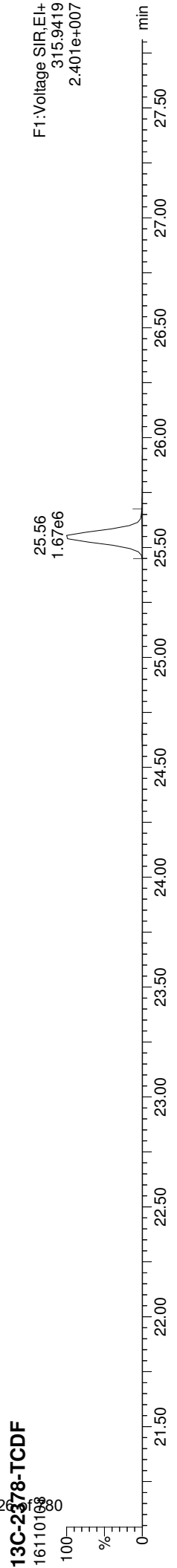


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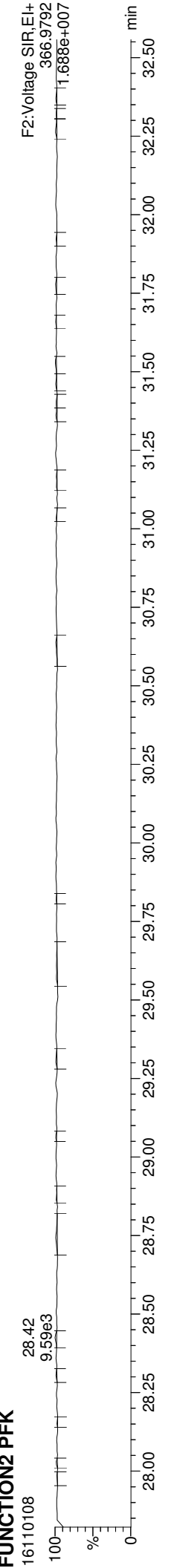
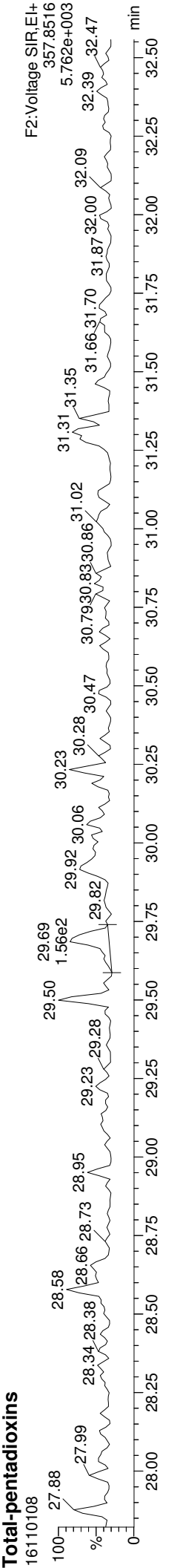
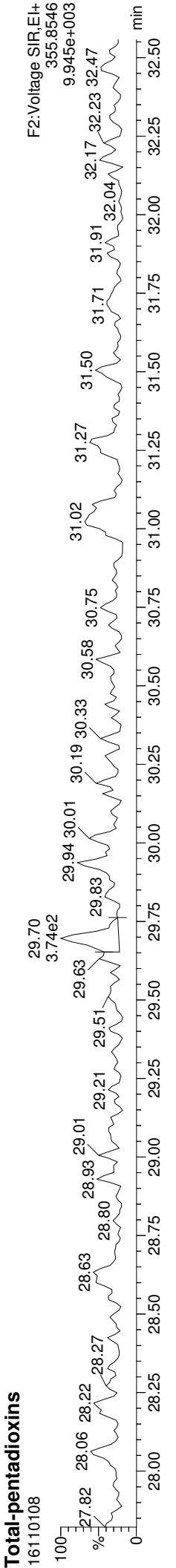
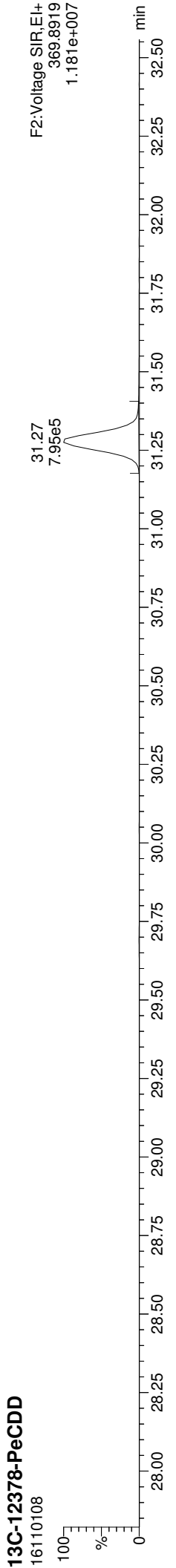
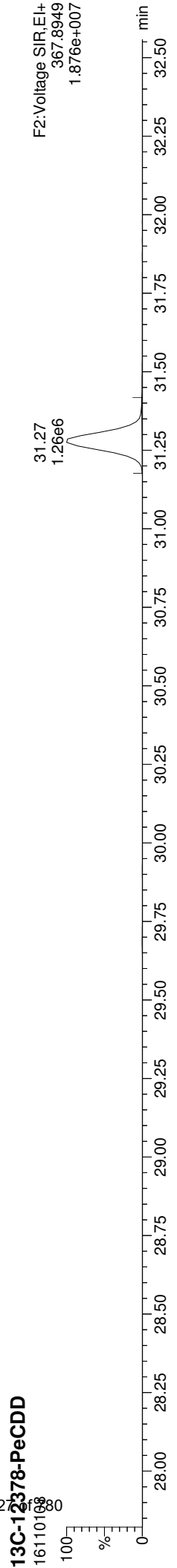
MassLynx MassLynx V4.1 SCN909
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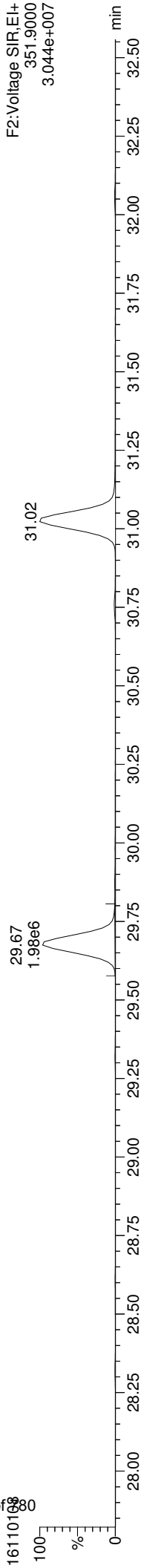
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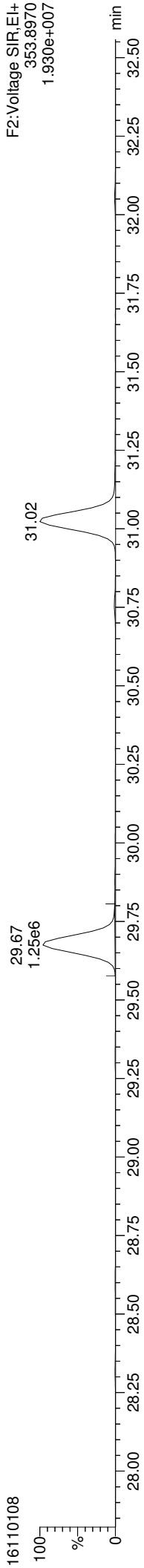
Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
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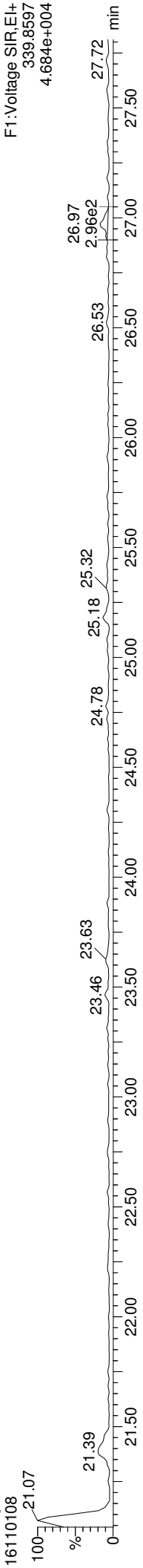
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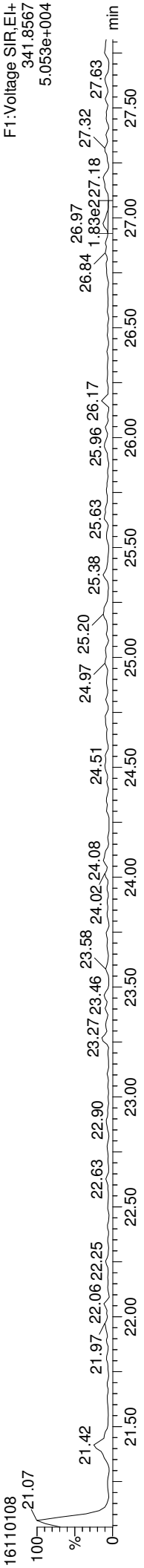
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Total-penta1



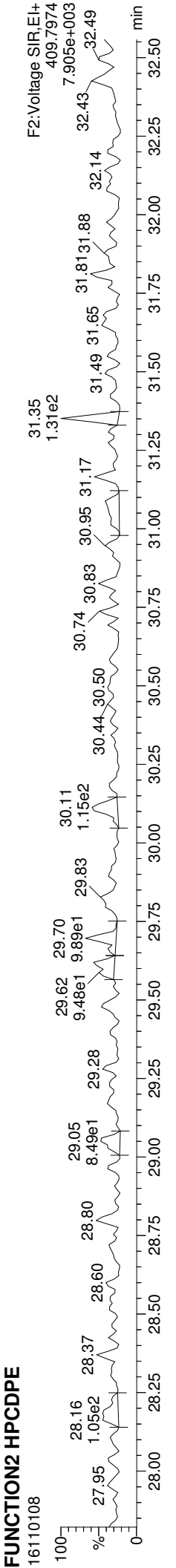
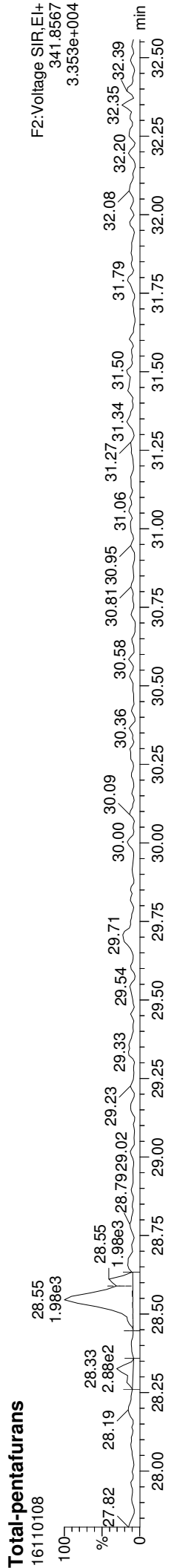
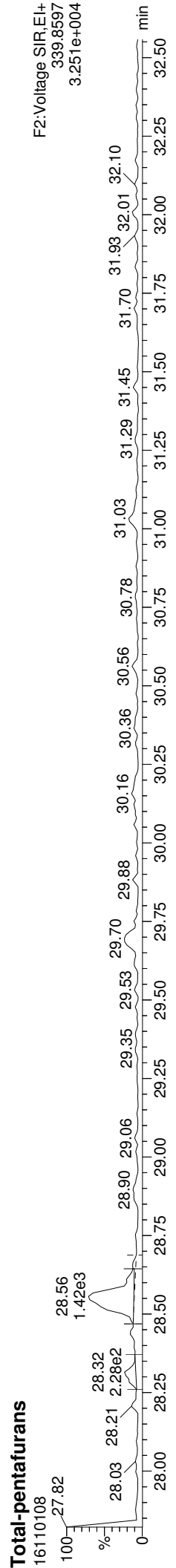
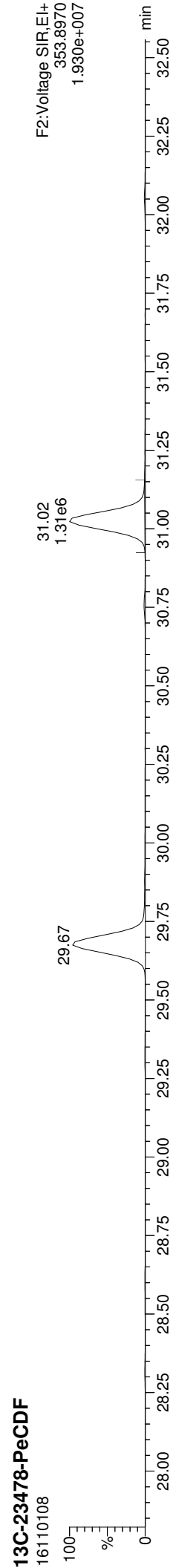
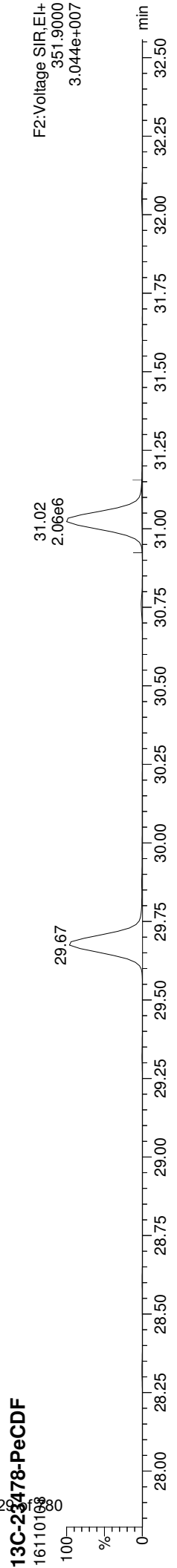
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FUNCTION1 HPCDPE



ID: 16110187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

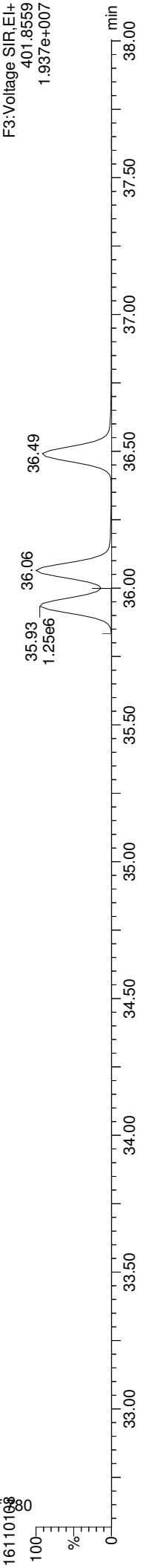


Quantify Sample Report MassLynx MassLynx V4.1 SCN909

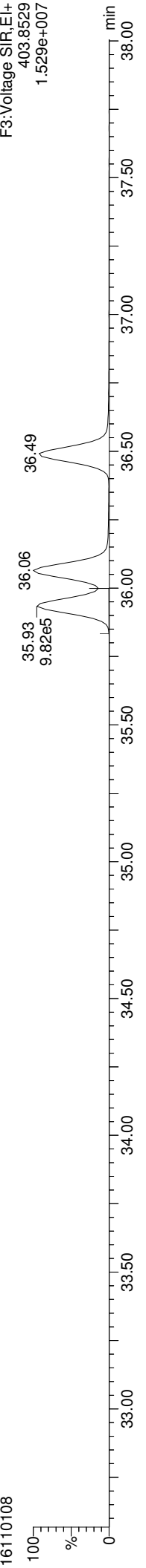
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ID: 16110187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

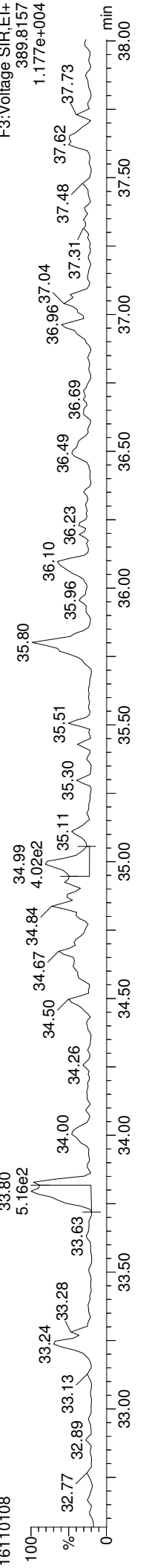
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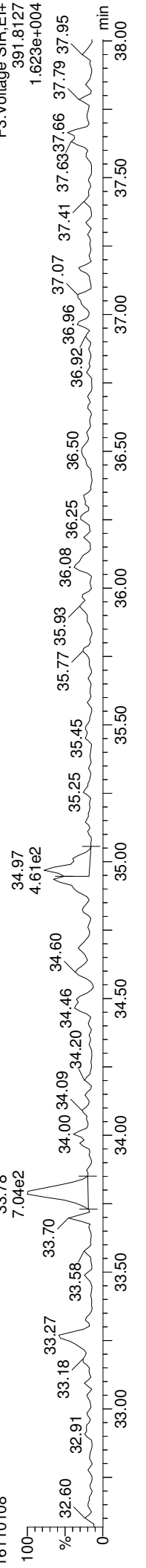
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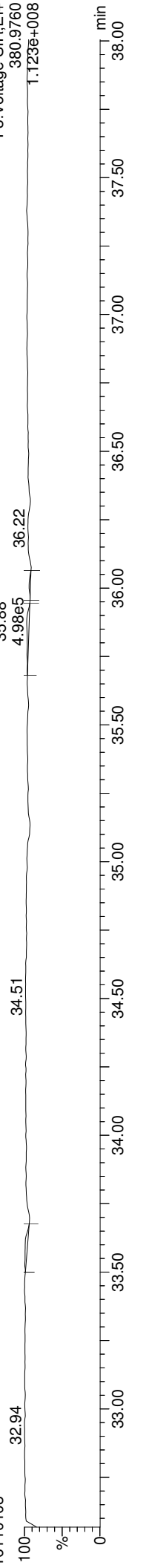
Total-hexadioxins



Total-hexadioxins



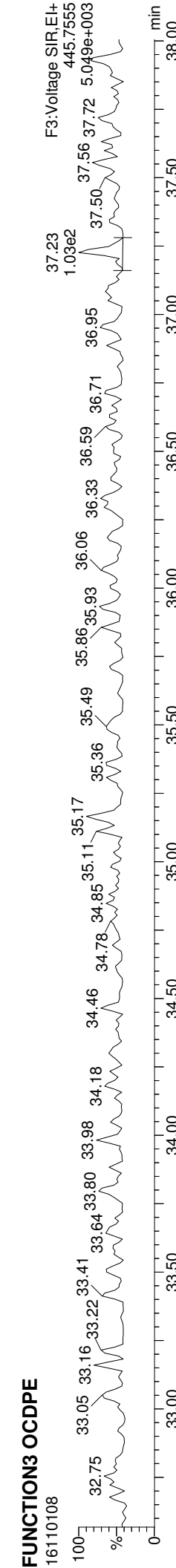
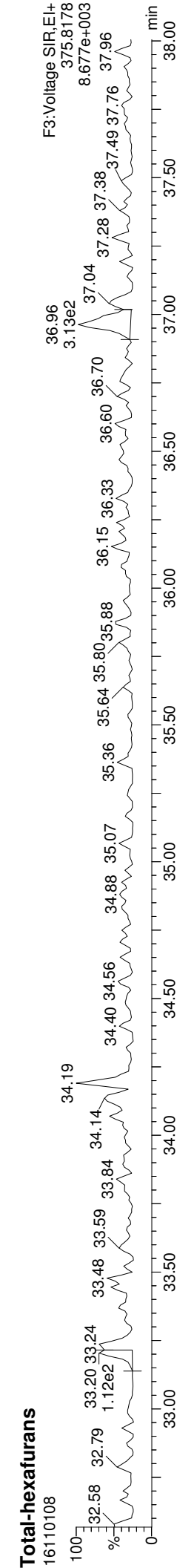
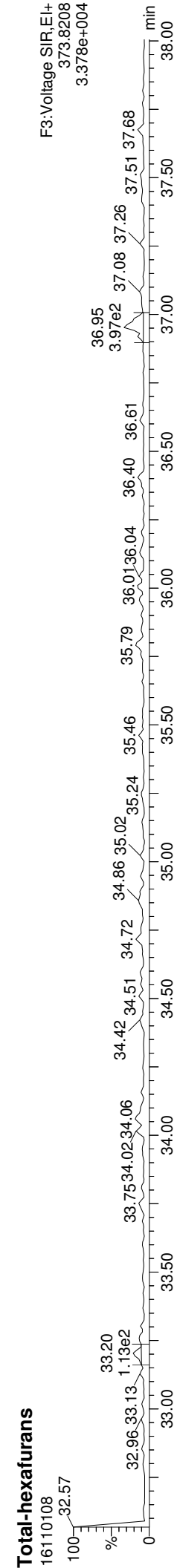
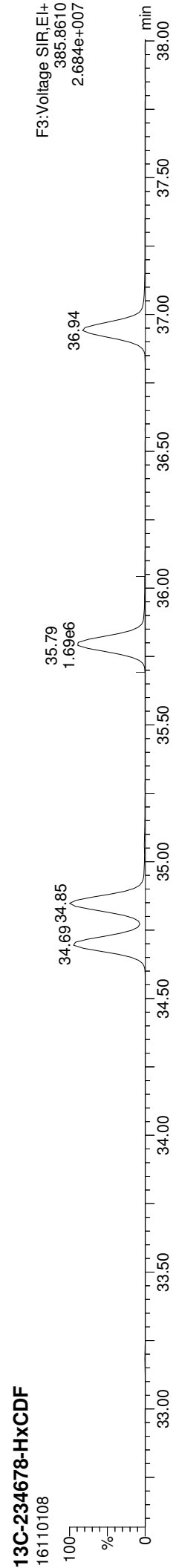
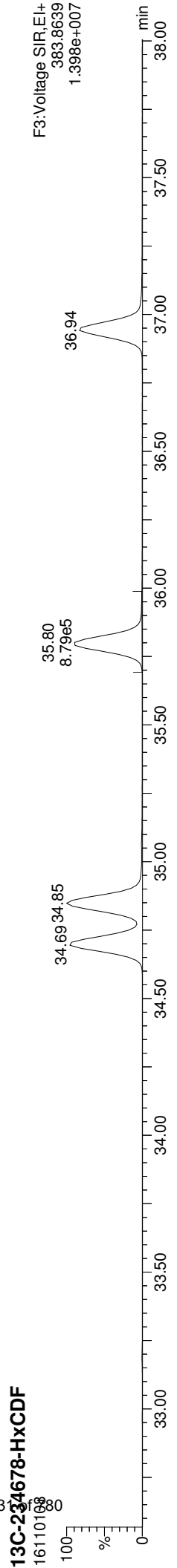
FUNCTION3 PFK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
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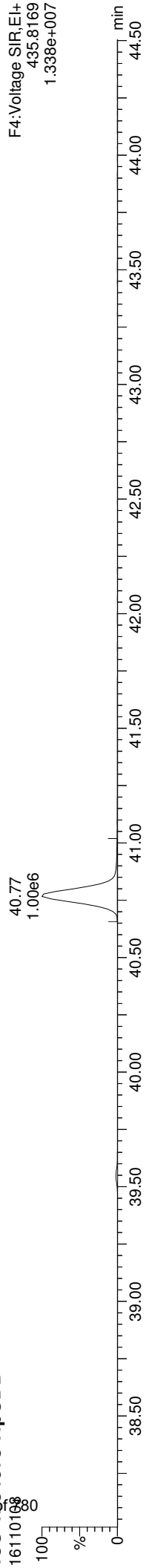


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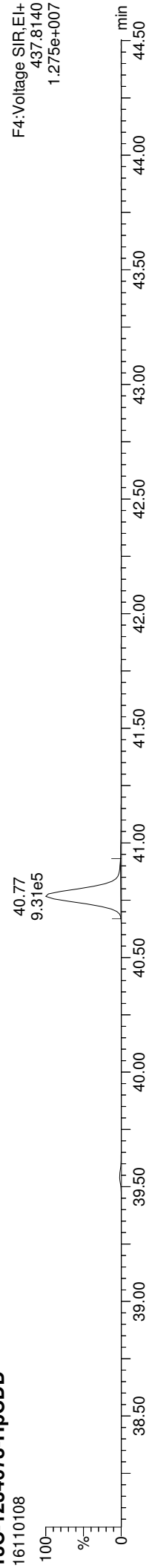
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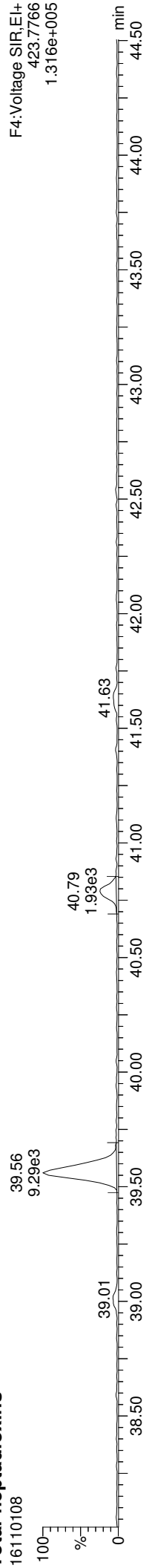
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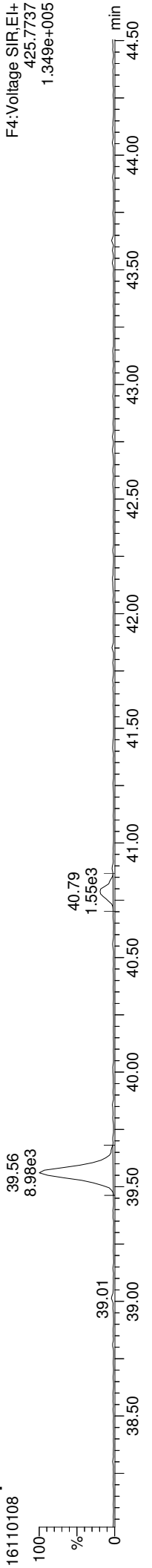
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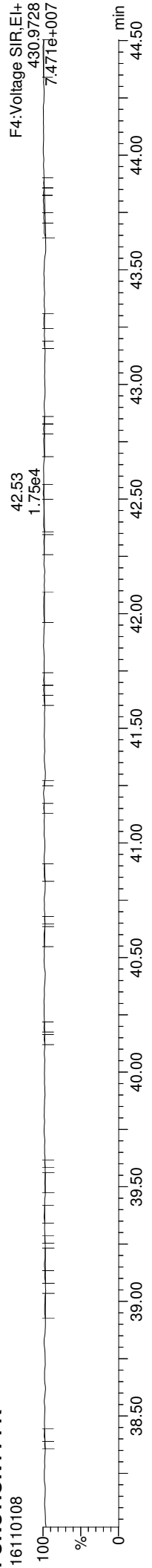
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



F4: Voltage SIR, EI+
435.8169
1.338e+007

F4: Voltage SIR, EI+
437.8140
1.275e+007

F4: Voltage SIR, EI+
423.7766
1.316e+005

F4: Voltage SIR, EI+
425.7737
1.349e+005

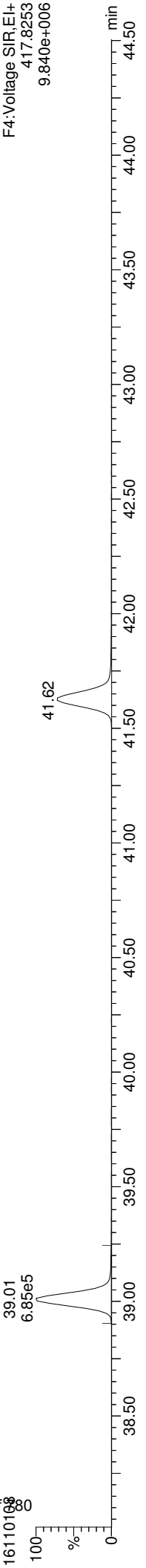
F4: Voltage SIR, EI+
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7.471e+007

Quantify Sample Report

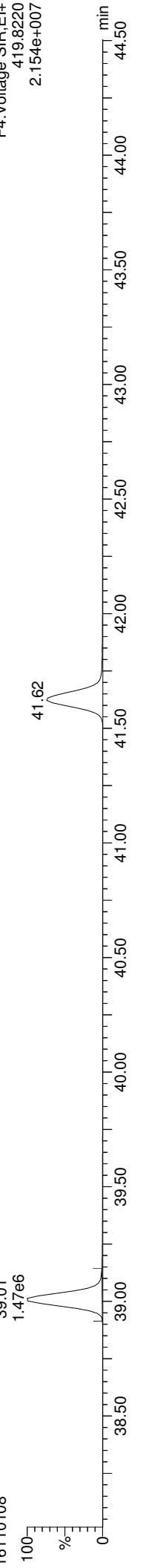
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ID: 16110187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

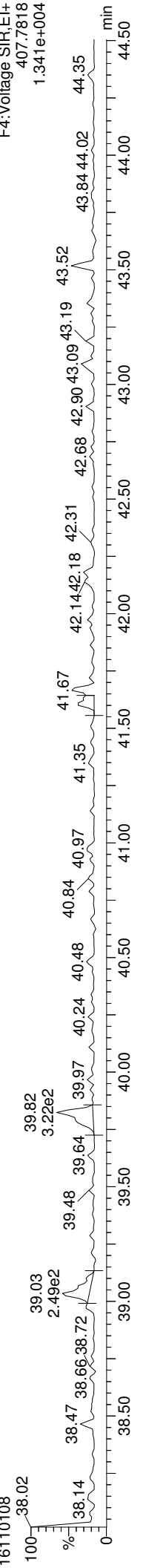
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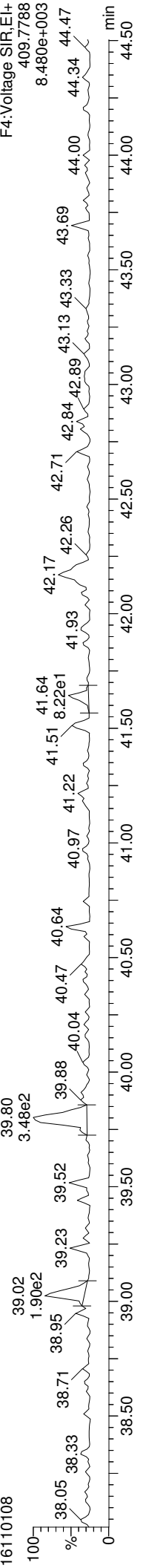
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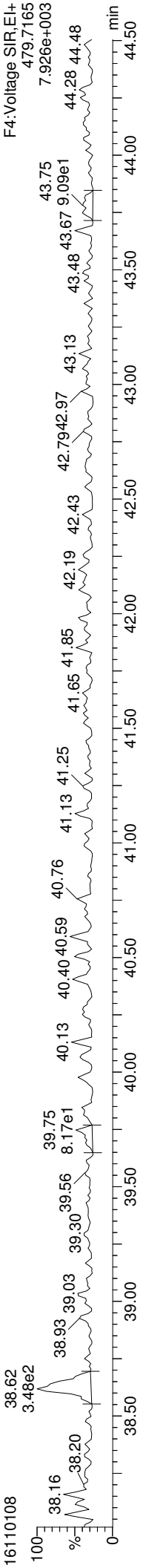
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Total-heptafurans



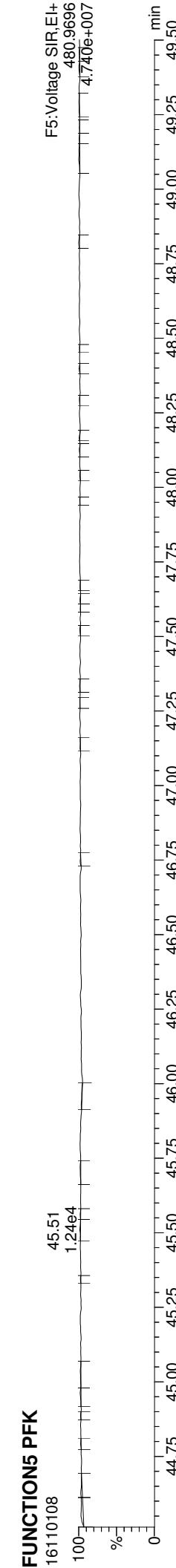
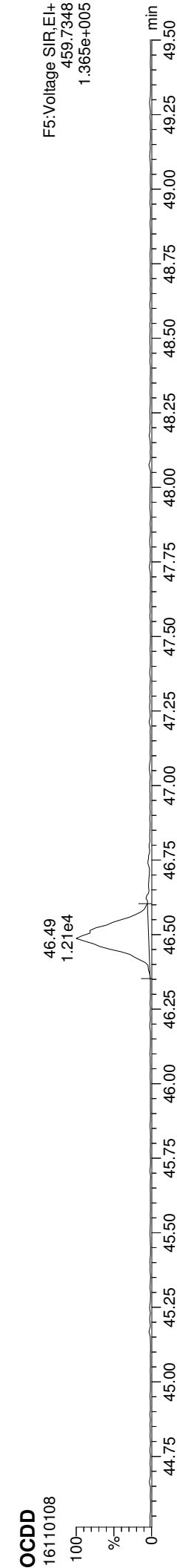
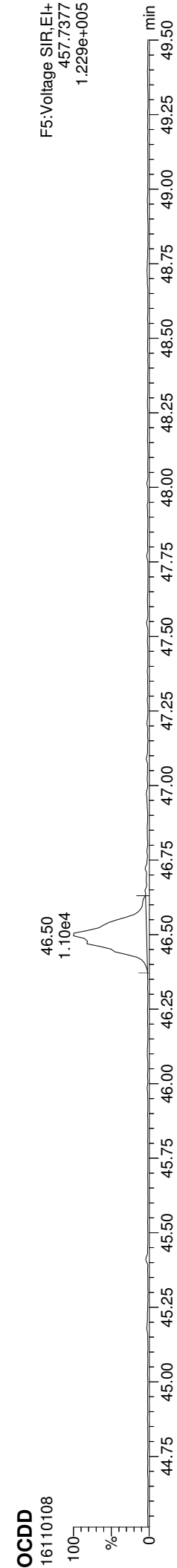
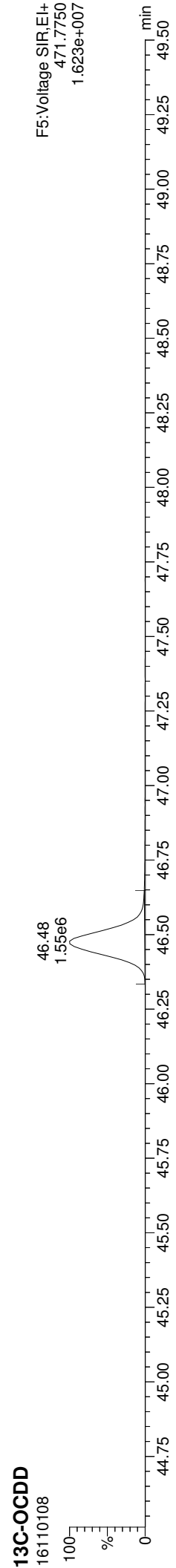
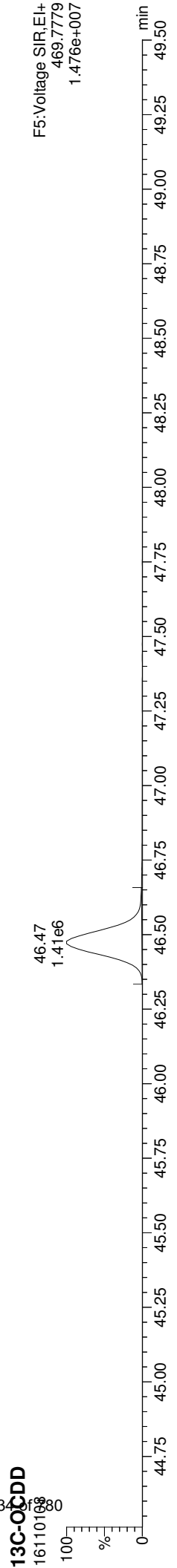
FUNCTION4 NCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101\DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:15 Pacific Daylight Time

ID: 16110187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK



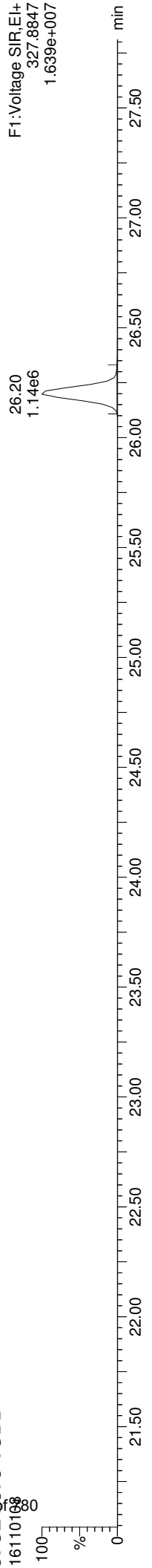
Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
 Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:15 Pacific Daylight Time

ID: 16110187-01, Name: 16110108, Date: 01-Nov-2016, Time: 15:54:45, Conditions: AUTOSPEC01, User: PK

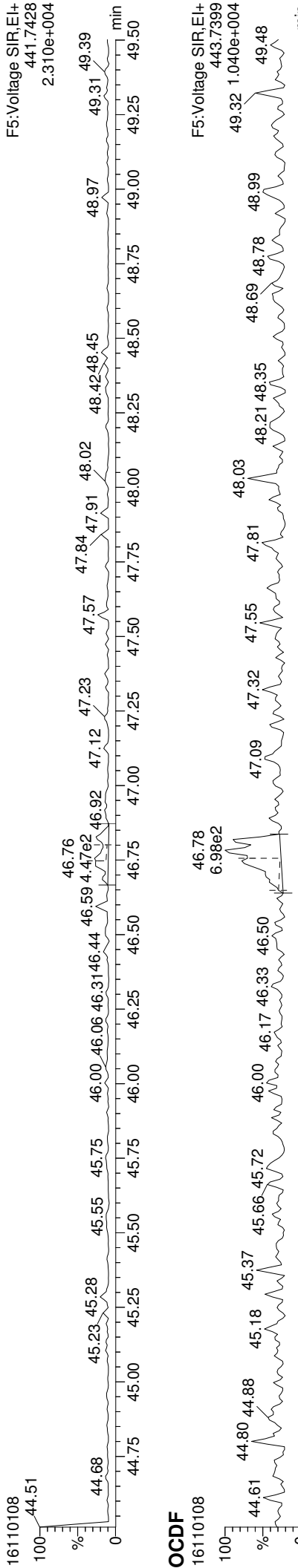
37CL-2378-TCDD

16110108
1.639e+007



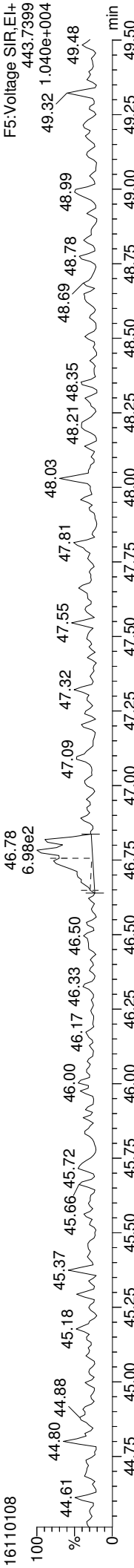
OCDF

16110108
2.310e+004



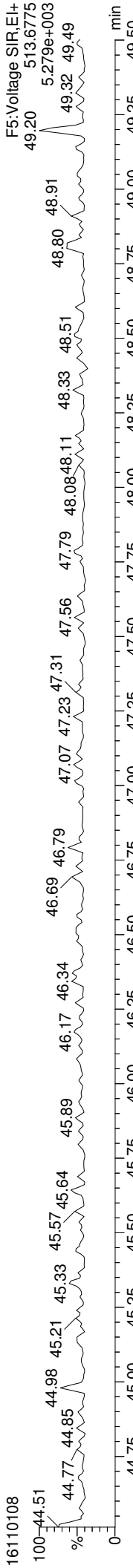
OCDF

16110108
6.98e2



FUNCTION5 DCDPE

16110108
5.279e+003





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-02 File ID: 16110109
 Sampled: 10/11/16 11:05 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 16:47
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.04 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.512	0.655-0.886		0.996	0.085	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.039	0.996	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.04	4.98	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.038	4.98	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.049	4.98	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.029	4.98	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.029	4.98	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.03	4.98	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.248	1.054-1.426		4.98	0.045	ng/kg	J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.048	4.98	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.746	1.054-1.426		4.98	0.045	ng/kg	EMPC, J
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.051	4.98	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.352	0.893-1.208		4.98	0.048	ng/kg	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.025	4.98	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.216	0.893-1.208		4.98	0.269	ng/kg	EMPC, J, B
39001-02-0	OCDF	1	0.773	0.757-1.024		9.96	0.091	ng/kg	J, B
3268-87-9	OCDD	1	0.866	0.757-1.024		9.96	3.03	ng/kg	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.996	0.210	ng/kg
41903-57-5	Total TCDD	1	0.000			0.996	0.157	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.996	0.219	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.996	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.996	0.045	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.996	0.207	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.996	0.074	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.996	1.81	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.022
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.022

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16R0187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.555	1.001	4.88e2	9.52e2	0.935	0.512	0.770	1294	2385	5.96e3	1.26e4	4.6	YES	0.043
12378-PeCDF				0.952			1.550	1105	1704					
23478-PeCDF				0.963			1.550	1105	1704					
123478-HxCDF				1.137			1.240	1142	880					
234678-HxCDF				1.164			1.240	1142	880					
123678-HxCDF				1.099			1.240	1142	880					
123789-HxCDF	36.953	1.001	3.07e2	2.46e2	1.101	1.248	1.240	1142	880	4.71e3	4.41e3	4.1	NO	0.023
1234678-HpCDF	39.025	1.001	3.68e2	2.72e2	1.303	1.352	1.050	530	675	5.67e3	6.80e3	10.7	YES	0.024
1234789-HpCDF				1.317			1.050	530	675					
OCDF	46.766	1.007	3.28e2	4.24e2	1.166	0.773	0.890	739	1024	6.33e3	6.45e3	8.6	NO	0.046
2378-TCDD				1.134			0.770	1314	991					
12378-PeCDD				0.975			1.550	1491	845					
123478-HxCDD				1.031			1.240	1187	1367					
123678-HxCDD	36.054	1.000	2.16e2	2.90e2	0.971	0.746	1.240	1187	1367	4.41e3	4.10e3	3.7	YES	0.023
123789-HxCDD				0.947			1.240	1187	1367					
1234678-HpCDD	40.767	1.000	1.36e3	1.12e3	1.028	1.216	1.050	930	752	2.00e4	1.64e4	21.5	YES	0.135
OCDD	46.479	1.000	1.10e4	1.27e4	1.107	0.866	0.890	565	1544	1.08e5	1.27e5	190.4	NO	1.524
13C-2378-TCDF	25.540	1.007	1.58e6	2.04e6	1.567	0.774	0.770	7702	4581	2.35e7	3.00e7	3048.6	NO	92.769
13C-12378-PeCDF	29.664	1.170	1.86e6	1.20e6	1.274	1.554	1.550	5489	2739	2.69e7	1.72e7	4899.0	NO	96.303
13C-23478-PeCDF	31.012	1.223	1.93e6	1.23e6	1.235	1.573	1.550	5489	2739	2.84e7	1.84e7	5172.2	NO	102.857
13C-123478-HxCDF	34.695	0.951	8.43e5	1.64e6	1.381	0.515	0.510	3824	4527	1.24e7	2.40e7	3248.1	NO	83.453
13C-123678-HxCDF	34.837	0.955	9.22e5	1.73e6	1.569	0.533	0.510	3824	4527	1.31e7	2.49e7	3426.2	NO	78.532
13C-234678-HxCDF	35.780	0.981	8.19e5	1.59e6	1.345	0.515	0.510	3824	4527	1.18e7	2.31e7	3098.2	NO	83.184
13C-123789-HxCDF	36.931	1.012	7.53e5	1.45e6	1.183	0.519	0.510	3824	4527	1.09e7	2.11e7	2848.1	NO	86.584
13C-1234678-HpCDF	38.992	1.069	6.31e5	1.40e6	1.178	0.450	0.440	2334	3158	9.23e6	2.06e7	3956.3	NO	80.125
13C-1234789-HpCDF	41.611	1.141	5.24e5	1.19e6	0.878	0.442	0.440	2334	3158	6.78e6	1.49e7	2906.3	NO	90.438
13C-1234-TCDD	25.361	0.000	1.10e6	1.39e6	1.000	0.796	0.770	3462	1789	1.65e7	2.07e7	4758.4	NO	100.000
13C-2378-TCDD	26.168	1.032	9.40e5	1.20e6	0.908	0.783	0.770	3462	1789	1.37e7	1.73e7	3962.9	NO	94.582
13C-12378-PeCDD	31.264	1.233	1.20e6	7.60e5	0.756	1.576	1.550	2386	1610	1.78e7	1.11e7	7440.5	NO	103.873
13C-123478-HxCDD	35.923	0.985	1.18e6	9.24e5	1.056	1.272	1.240	2974	1792	1.73e7	1.37e7	5817.8	NO	92.361
13C-123678-HxCDD	36.054	0.988	1.27e6	1.02e6	1.163	1.235	1.240	2974	1792	1.81e7	1.46e7	6096.5	NO	91.497
13C-1234678-HpCDD	40.756	1.117	9.16e5	8.75e5	0.909	1.046	1.050	2702	2310	1.25e7	1.20e7	4622.2	NO	91.505
13C-OCDD	46.461	1.274	1.33e6	1.49e6	0.820	0.895	0.890	4265	2344	1.36e7	1.52e7	3178.1	NO	159.762
13C-123789-HxCDD	36.481	0.000	1.20e6	9.50e5	1.000	1.267	1.240	2974	1792	1.75e7	1.38e7	5892.6	NO	100.000
Total-tetrafurans			1.34e3	0.935				1294		1.91e4				0.105

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					1099		0.00e0				
Total-pentafurans			1.67e3		0.957			1105		2.34e4				0.110
Total-hexatfurans			3.07e2		1.125			1142		4.71e3				0.023
Total-heptafurans			5.05e2		1.310			530		1.07e4				0.037
Total-Furans			4.16e3		1.114			1294		6.43e4				0.321
Total-tetradioxins			8.88e2		1.134			1314		1.51e4				0.079
Total-pentadioxins			0.00e0		0.975			1491		0.00e0				
Total-hexadioxins			1.02e3		0.983			1187		1.86e4				0.104
Total-heptadioxins			8.93e3		1.028			930		1.25e5				0.908
Total-Dioxins			2.19e4		1.028			1314		2.66e5				2.614
Total-TEQ			2.60e4					1314		3.30e5				2.935
37CL-2378-TCDD	26.198	1.033	1.05e6		1.067			1520		1.50e7		9866.8		39.479
FUNCTION1 PFK			5.68e7					464072		1.58e7				
FUNCTION2 PFK			0.00e0					182209		0.00e0				
FUNCTION3 PFK			5.62e5					494319		5.82e6				0.000
FUNCTION4 PFK			1.61e6					437321		3.88e7				
FUNCTION5 PFK			0.00e0					282413		0.00e0				
FUNCTION1 HXCD...			5.21e4					747		6.93e5				0.000
FUNCTION1 HPCD...			3.44e3					1048		5.15e4				0.000
FUNCTION2 HPCD...			3.40e2					1077		8.36e3				0.000
FUNCTION3 OCDPE			1.58e2					706		4.69e3				0.000
FUNCTION4 NCDPE			5.72e2					1348		1.91e4				0.000
FUNCTION5 DCDPE			8.03e1					645		4.34e3				0.000

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16H0187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	25.78	1171.467	0.935	0.035		0.54	0.77	YES	5.1
2	1 2378-TCDF	303.9016	25.56	1440.325	0.935	0.043	0.033	0.51	0.77	YES	4.6
3	35 Total-tetrafurans	303.9016	24.45	960.804	0.935	0.028		0.85	0.77	NO	5.1

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37 Total-pentafurans	339.8597	28.56	2934.086	0.957	0.098		1.11	1.55	YES	18.0
2	37 Total-pentafurans	339.8597	28.40	342.409	0.957	0.011		0.60	1.55	YES	3.2

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7 123789-HxCDF	373.8208	36.95	553.546	1.101	0.023	0.023	1.25	1.24	NO	4.1

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39 Total-heptafurans	407.7818	39.78	317.616	1.310	0.013		0.77	1.05	YES	9.5
2	8 1234678-HpCDF	407.7818	39.02	639.439	1.303	0.024	0.021	1.35	1.05	YES	10.7

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	25.78	1171.467	0.935	0.035		0.54	0.77	YES	5.1
2	1 2378-TCDF	303.9016	25.56	1440.325	0.935	0.043	0.033	0.51	0.77	YES	4.6
3	35 Total-tetrafurans	303.9016	24.45	960.804	0.935	0.028		0.85	0.77	NO	5.1
4	37 Total-pentafurans	339.8597	28.56	2934.086	0.957	0.098		1.11	1.55	YES	18.0
5	37 Total-pentafurans	339.8597	28.40	342.409	0.957	0.011		0.60	1.55	YES	3.2
6	7 123789-HxCDF	373.8208	36.95	553.546	1.101	0.023	0.023	1.25	1.24	NO	4.1
7	39 Total-heptafurans	407.7818	39.78	317.616	1.310	0.013		0.77	1.05	YES	9.5
8	8 1234678-HpCDF	407.7818	39.02	639.439	1.303	0.024	0.021	1.35	1.05	YES	10.7
9	10 OCDF	441.7428	46.77	752.045	1.166	0.046	0.046	0.77	0.89	NO	8.6

TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradioxins	319.8965	23.61	473.149	1.134	0.019		0.92	0.77	YES	3.5
2	41 Total-tetradioxins	319.8965	23.34	1435.602	1.134	0.059		0.86	0.77	NO	8.0

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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ID: 16H0187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43 Total-hexadioxins	389.8157	33.77	1048.038	0.983	0.049		1.00	1.24	YES	7.3
2	14 123678-HxCDD	389.8157	36.05	505.555	0.971	0.023	0.018	0.75	1.24	YES	3.7
3	43 Total-hexadioxins	389.8157	34.99	703.927	0.983	0.033		0.65	1.24	YES	4.6

HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.77	2486.838	1.028	0.135	0.125	1.22	1.05	YES	21.5
2	44 Total-heptadioxins	423.7766	39.55	14234.624	1.028	0.773		1.14	1.05	NO	112.5

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradioxins	319.8965	23.61	473.149	1.134	0.019		0.92	0.77	YES	3.5
2	41 Total-tetradioxins	319.8965	23.34	1435.602	1.134	0.059		0.86	0.77	NO	8.0
3	43 Total-hexadioxins	389.8157	33.77	1048.038	0.983	0.049		1.00	1.24	YES	7.3
4	14 123678-HxCDD	389.8157	36.05	505.555	0.971	0.023	0.018	0.75	1.24	YES	3.7
5	43 Total-hexadioxins	389.8157	34.99	703.927	0.983	0.033		0.65	1.24	YES	4.6
6	16 1234678-HpCDD	423.7766	40.77	2486.838	1.028	0.135	0.125	1.22	1.05	YES	21.5
7	44 Total-heptadioxins	423.7766	39.55	14234.624	1.028	0.773		1.14	1.05	NO	112.5
8	17 OCDD	457.7377	46.48	23770.265	1.107	1.524	1.524	0.87	0.89	NO	190.4

TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	25.78	1171.467	0.935	0.035		0.54	0.77	YES	5.1
2	1 2378-TCDF	303.9016	25.56	1440.325	0.935	0.043	0.033	0.51	0.77	YES	4.6
3	35 Total-tetrafurans	303.9016	24.45	960.804	0.935	0.028		0.85	0.77	NO	5.1
4	37 Total-pentafurans	339.8597	28.56	2934.086	0.957	0.098		1.11	1.55	YES	18.0
5	37 Total-pentafurans	339.8597	28.40	342.409	0.957	0.011		0.60	1.55	YES	3.2
6	7 123789-HxCDF	373.8208	36.95	553.546	1.101	0.023	0.023	1.25	1.24	NO	4.1
7	39 Total-heptafurans	407.7818	39.78	317.616	1.310	0.013		0.77	1.05	YES	9.5
8	8 1234678-HpCDF	407.7818	39.02	639.439	1.303	0.024	0.021	1.35	1.05	YES	10.7
9	10 OCDF	441.7428	46.77	752.045	1.166	0.046	0.046	0.77	0.89	NO	8.6
10	41 Total-tetradioxins	319.8965	23.61	473.149	1.134	0.019		0.92	0.77	YES	3.5
11	41 Total-tetradioxins	319.8965	23.34	1435.602	1.134	0.059		0.86	0.77	NO	8.0
12	43 Total-hexadioxins	389.8157	33.77	1048.038	0.983	0.049		1.00	1.24	YES	7.3
13	14 123678-HxCDD	389.8157	36.05	505.555	0.971	0.023	0.018	0.75	1.24	YES	3.7
14	43 Total-hexadioxins	389.8157	34.99	703.927	0.983	0.033		0.65	1.24	YES	4.6
15	16 1234678-HpCDD	423.7766	40.77	2486.838	1.028	0.135	0.125	1.22	1.05	YES	21.5
16	44 Total-heptadioxins	423.7766	39.55	14234.624	1.028	0.773		1.14	1.05	NO	112.5
17	17 OCDD	457.7377	46.48	23770.265	1.107	1.524	1.524	0.87	0.89	NO	190.4

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	27.62	0.000							2.9
2	48 FUNCTION1 PFK	330.9792	21.40	0.000							31.1

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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ID: 16H0187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	36.01	0.000		0.000					5.1
2	50 FUNCTION3 PFK	380.9760	35.02	0.000		0.000					3.6
3	50 FUNCTION3 PFK	380.9760	36.46	0.000		0.000					3.1

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	39.13	0.000							0.5
2	51 FUNCTION4 PFK	430.9728	39.01	0.000							1.5
3	51 FUNCTION4 PFK	430.9728	38.97	0.000							1.7
4	51 FUNCTION4 PFK	430.9728	38.94	0.000							1.5
5	51 FUNCTION4 PFK	430.9728	38.70	0.000							2.2
6	51 FUNCTION4 PFK	430.9728	38.66	0.000							2.3
7	51 FUNCTION4 PFK	430.9728	38.54	0.000							1.8
8	51 FUNCTION4 PFK	430.9728	38.48	0.000							2.3
9	51 FUNCTION4 PFK	430.9728	38.43	0.000							1.9
10	51 FUNCTION4 PFK	430.9728	38.40	0.000							1.6
11	51 FUNCTION4 PFK	430.9728	38.36	0.000							1.3
12	51 FUNCTION4 PFK	430.9728	38.28	0.000							1.8
13	51 FUNCTION4 PFK	430.9728	38.09	0.000							0.8
14	51 FUNCTION4 PFK	430.9728	38.06	0.000							0.7
15	51 FUNCTION4 PFK	430.9728	40.41	0.000							0.3
16	51 FUNCTION4 PFK	430.9728	40.30	0.000							1.1
17	51 FUNCTION4 PFK	430.9728	40.20	0.000							0.8
18	51 FUNCTION4 PFK	430.9728	40.15	0.000							1.6
19	51 FUNCTION4 PFK	430.9728	40.07	0.000							1.9
20	51 FUNCTION4 PFK	430.9728	39.99	0.000							0.4
21	51 FUNCTION4 PFK	430.9728	39.93	0.000							1.0
22	51 FUNCTION4 PFK	430.9728	39.88	0.000							0.8
23	51 FUNCTION4 PFK	430.9728	39.81	0.000							1.8
24	51 FUNCTION4 PFK	430.9728	39.74	0.000							1.6
25	51 FUNCTION4 PFK	430.9728	39.55	0.000							1.1
26	51 FUNCTION4 PFK	430.9728	39.50	0.000							1.2
27	51 FUNCTION4 PFK	430.9728	39.44	0.000							0.6
28	51 FUNCTION4 PFK	430.9728	39.41	0.000							0.9
29	51 FUNCTION4 PFK	430.9728	39.28	0.000							0.8
30	51 FUNCTION4 PFK	430.9728	39.21	0.000							0.4
31	51 FUNCTION4 PFK	430.9728	42.27	0.000							1.1
32	51 FUNCTION4 PFK	430.9728	42.20	0.000							1.2
33	51 FUNCTION4 PFK	430.9728	41.98	0.000							0.6
34	51 FUNCTION4 PFK	430.9728	41.72	0.000							0.7
35	51 FUNCTION4 PFK	430.9728	41.65	0.000							1.6
36	51 FUNCTION4 PFK	430.9728	41.59	0.000							0.4
37	51 FUNCTION4 PFK	430.9728	41.52	0.000							1.2
38	51 FUNCTION4 PFK	430.9728	41.47	0.000							1.0
39	51 FUNCTION4 PFK	430.9728	41.15	0.000							0.8
40	51 FUNCTION4 PFK	430.9728	41.10	0.000							0.5
41	51 FUNCTION4 PFK	430.9728	40.98	0.000							0.8
42	51 FUNCTION4 PFK	430.9728	40.92	0.000							1.7
43	51 FUNCTION4 PFK	430.9728	40.87	0.000							2.0
44	51 FUNCTION4 PFK	430.9728	40.83	0.000							1.7
45	51 FUNCTION4 PFK	430.9728	40.71	0.000							1.1
46	51 FUNCTION4 PFK	430.9728	40.66	0.000							0.4
47	51 FUNCTION4 PFK	430.9728	43.98	0.000							1.0
48	51 FUNCTION4 PFK	430.9728	43.80	0.000							0.9
49	51 FUNCTION4 PFK	430.9728	43.62	0.000							0.5
50	51 FUNCTION4 PFK	430.9728	43.53	0.000							4.2
51	51 FUNCTION4 PFK	430.9728	43.50	0.000							5.5

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ID: 16H0187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
52	51 FUNCTION4 PFK	430.9728	43.38	0.000							4.0
53	51 FUNCTION4 PFK	430.9728	43.32	0.000							3.3
54	51 FUNCTION4 PFK	430.9728	43.22	0.000							2.9
55	51 FUNCTION4 PFK	430.9728	43.04	0.000							1.4
56	51 FUNCTION4 PFK	430.9728	42.95	0.000							0.8
57	51 FUNCTION4 PFK	430.9728	42.83	0.000							0.7
58	51 FUNCTION4 PFK	430.9728	42.67	0.000							0.6
59	51 FUNCTION4 PFK	430.9728	42.58	0.000							1.7
60	51 FUNCTION4 PFK	430.9728	42.47	0.000							1.1
61	51 FUNCTION4 PFK	430.9728	42.38	0.000							1.1
62	51 FUNCTION4 PFK	430.9728	42.32	0.000							0.8
63	51 FUNCTION4 PFK	430.9728	44.33	0.000							2.5
64	51 FUNCTION4 PFK	430.9728	44.13	0.000							0.7

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					727.8
2	53 FUNCTION1 HXCD...	375.8364	25.35	0.000		0.000					200.1

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	26.48	0.000		0.000					2.2
2	54 FUNCTION1 HPCD...	409.7974	24.84	0.000		0.000					2.0
3	54 FUNCTION1 HPCD...	409.7974	24.58	0.000		0.000					2.5
4	54 FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					42.4

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	31.87	0.000		0.000					2.2
2	55 FUNCTION2 HPCD...	409.7974	31.76	0.000		0.000					1.9
3	55 FUNCTION2 HPCD...	409.7974	29.55	0.000		0.000					3.7

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445.7555	35.86	0.000		0.000					3.0
2	56 FUNCTION3 OCDPE	445.7555	35.18	0.000		0.000					3.6

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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ID: 16H0187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	43.61	0.000		0.000					3.0
2	57 FUNCTION4 NCDPE	479.7165	41.89	0.000		0.000					1.5
3	57 FUNCTION4 NCDPE	479.7165	38.64	0.000		0.000					4.0
4	57 FUNCTION4 NCDPE	479.7165	38.61	0.000		0.000					5.7

ETHERS6

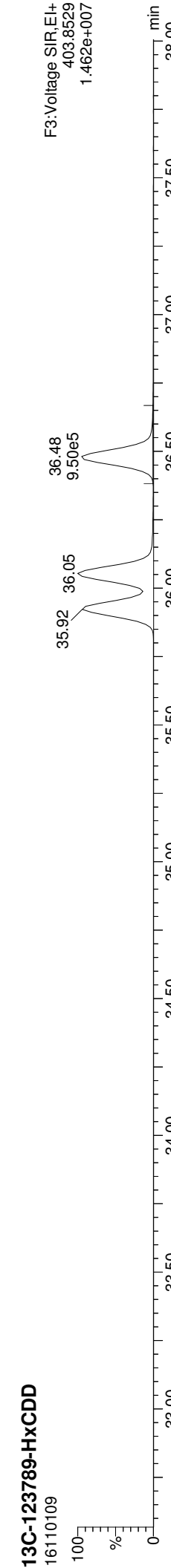
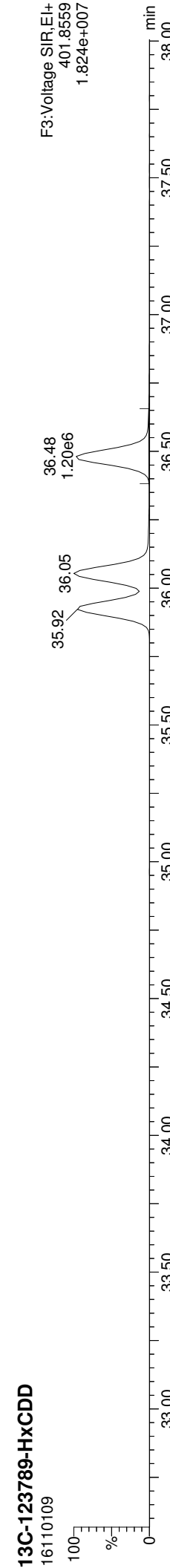
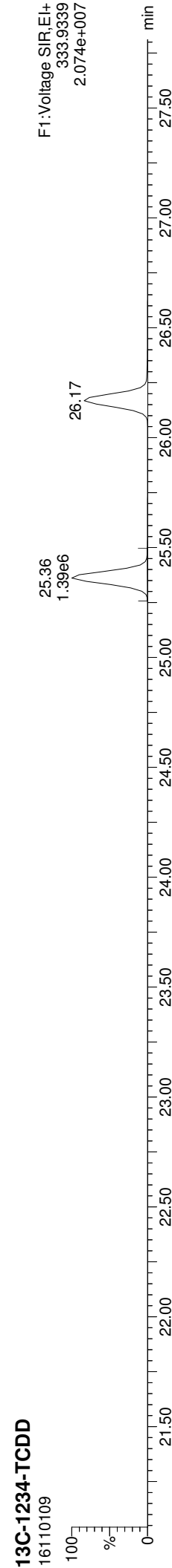
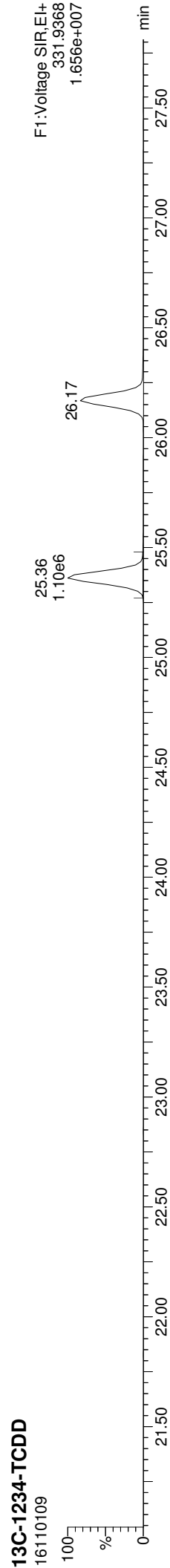
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1	58 FUNCTION5 DCDPE	513.6775	45.27	0.000		0.000					6.7

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

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Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

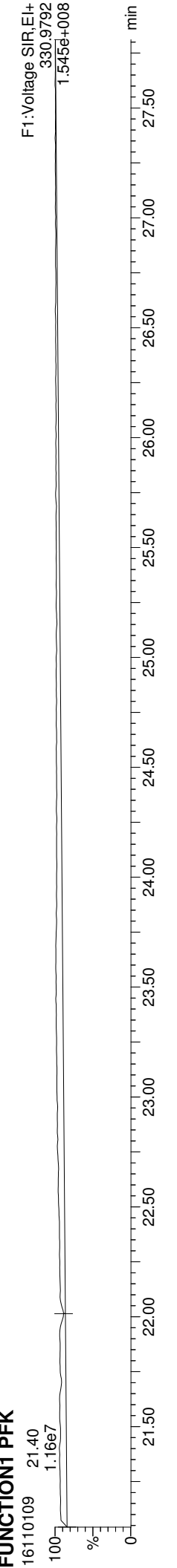
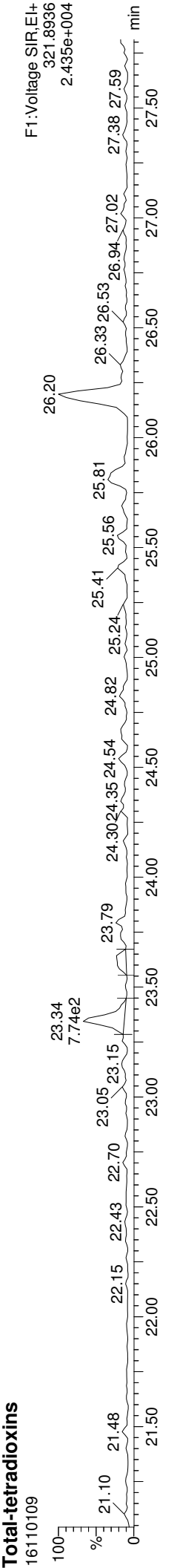
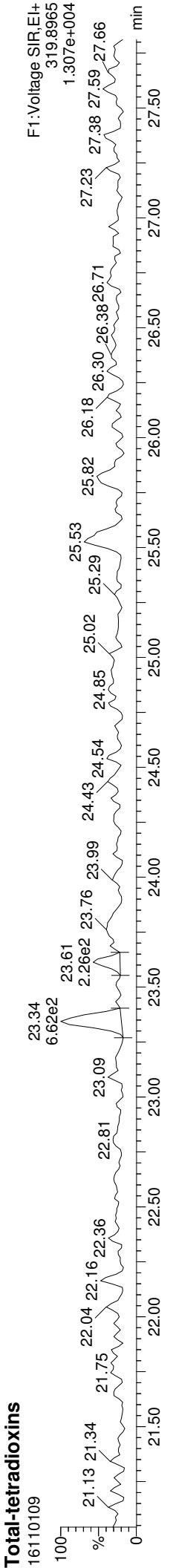
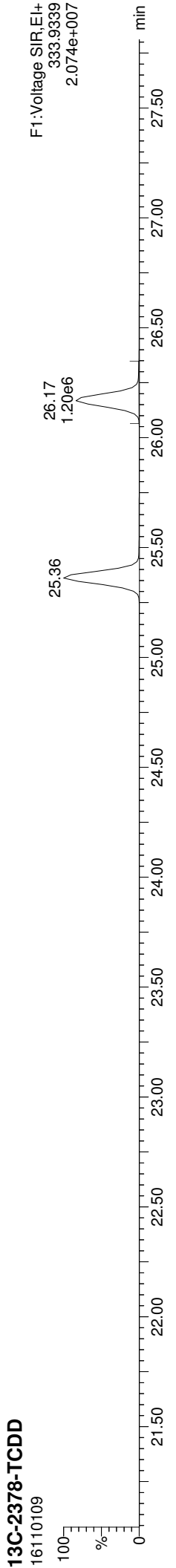
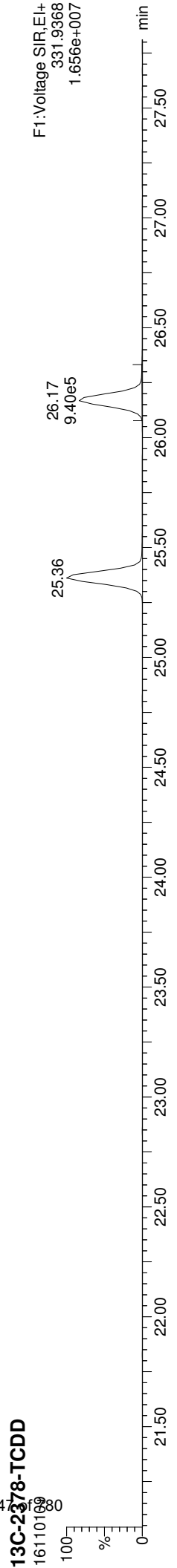
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Quantify Sample Report

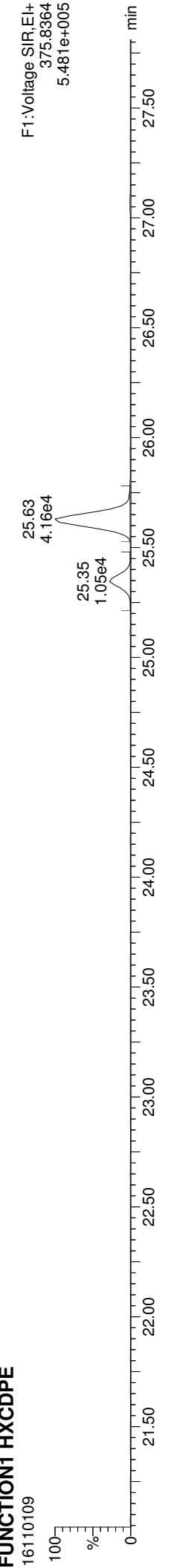
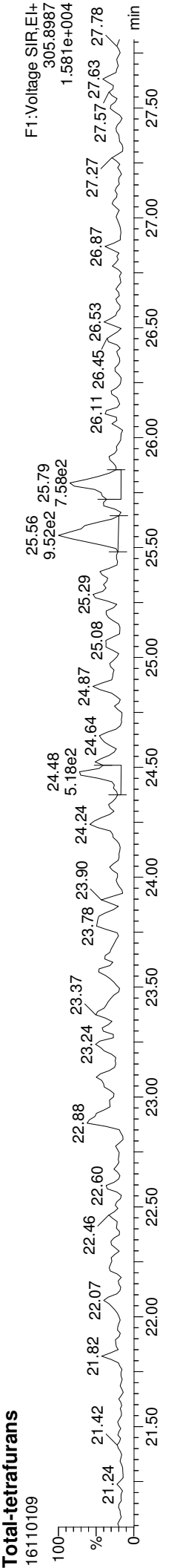
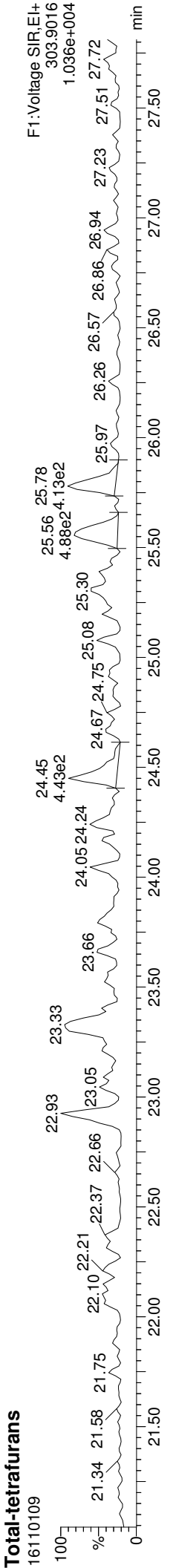
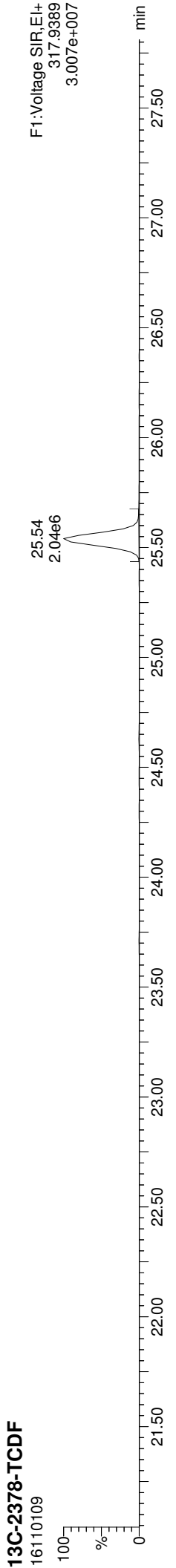
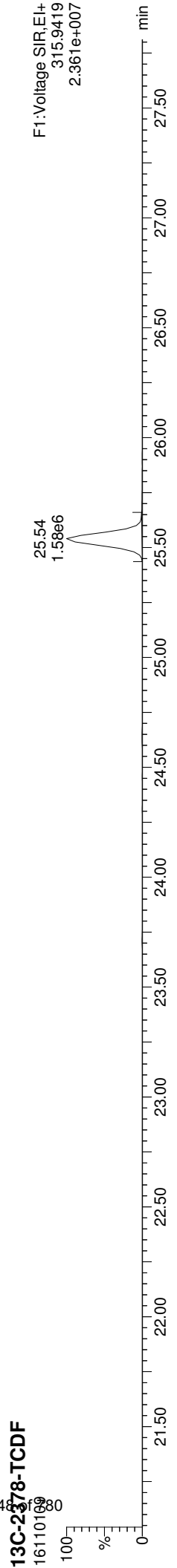
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Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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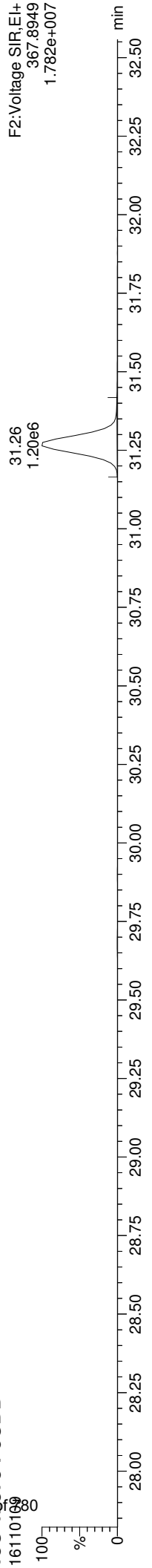


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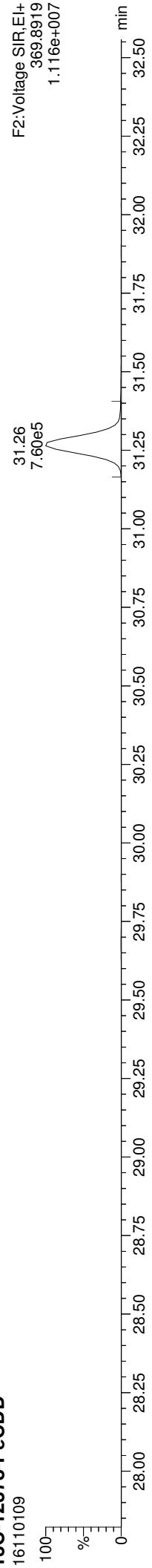
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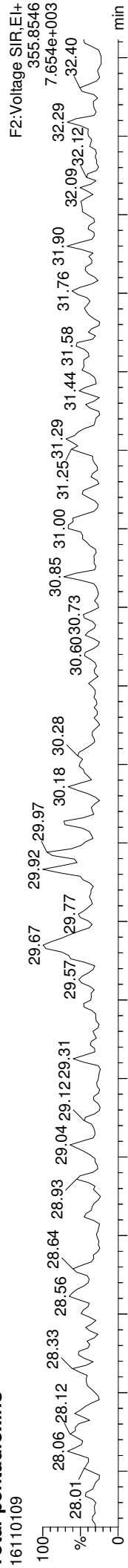
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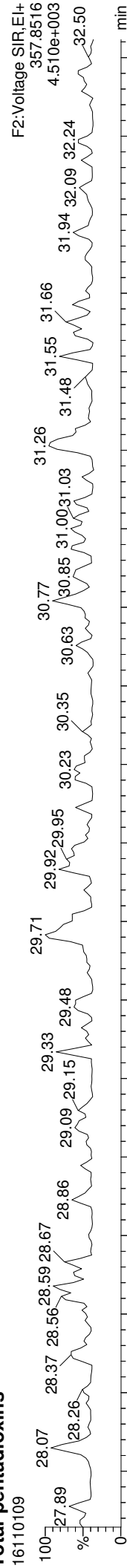
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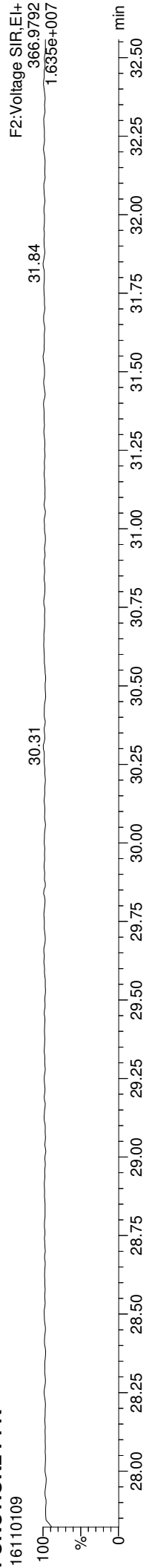
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK

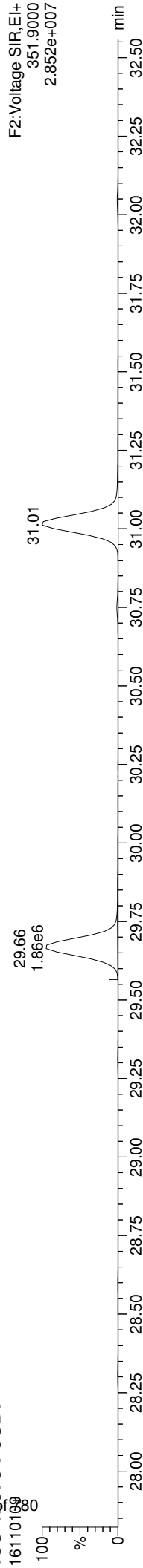


Quantify Sample Report

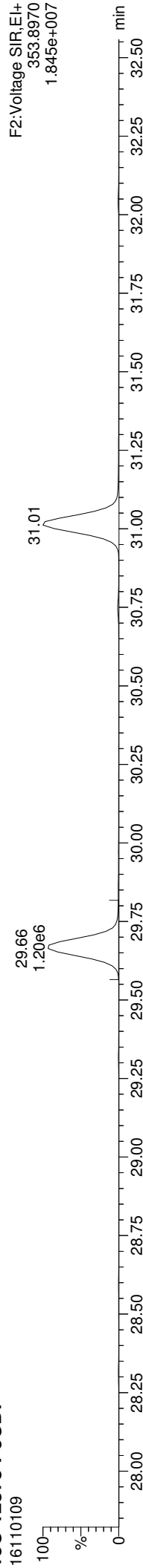
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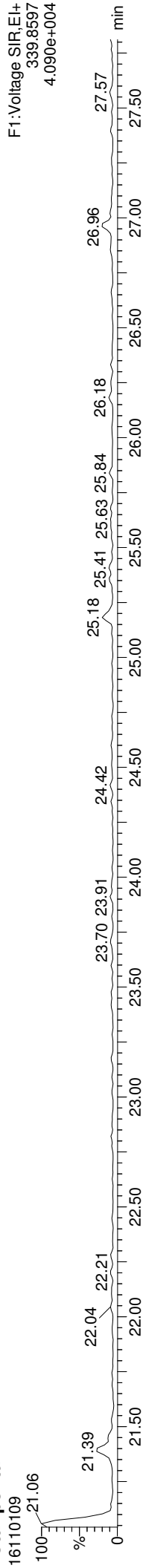
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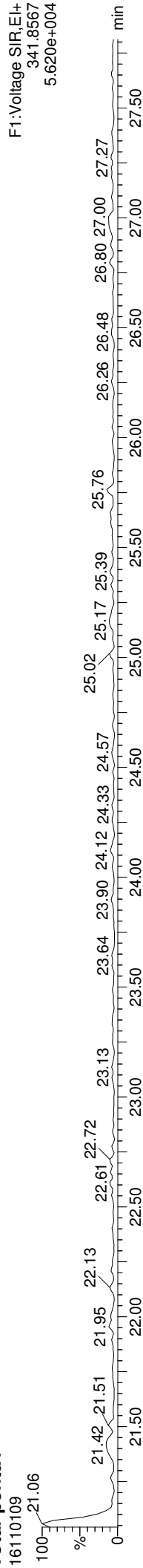
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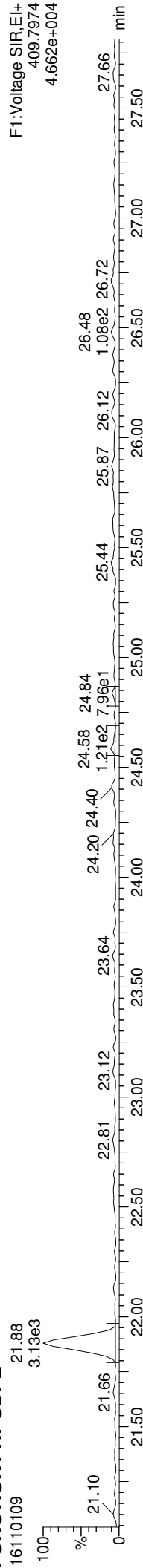
Total-penta1



Total-penta1



FUNCTION1 HPCDPE

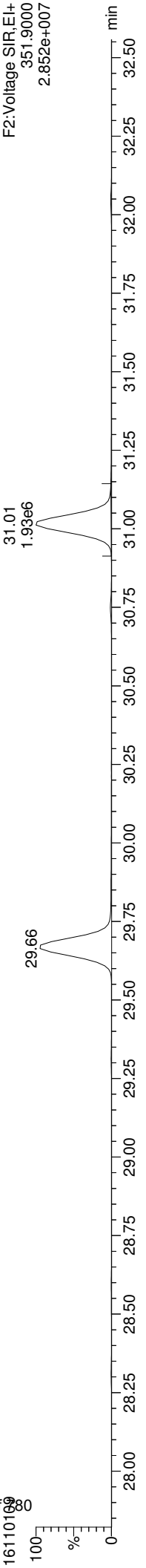


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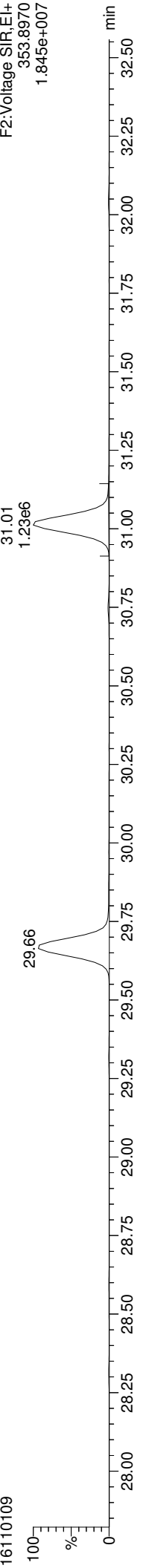
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ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

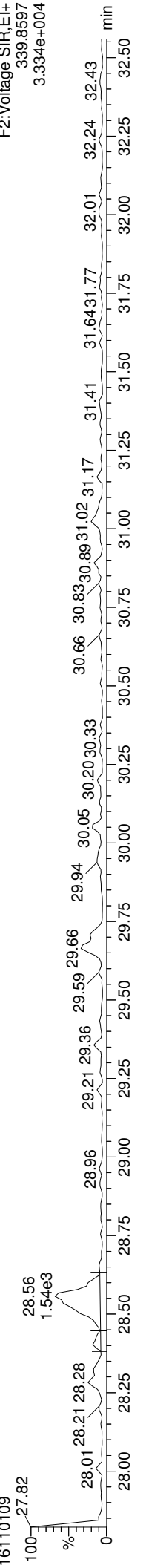
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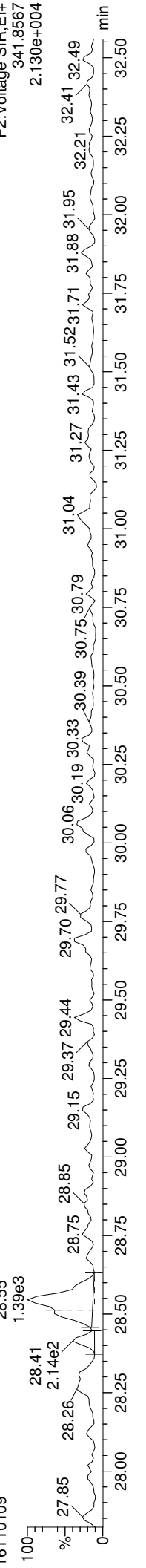
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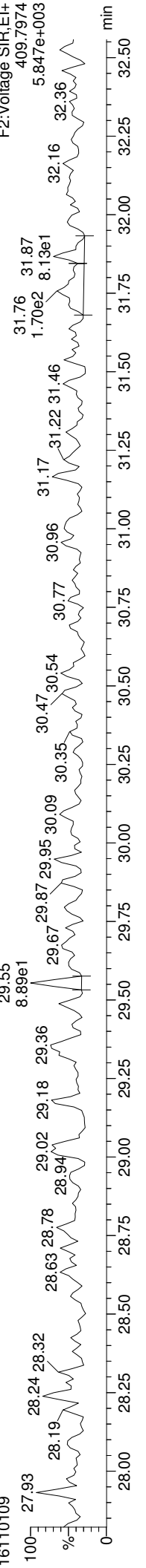
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

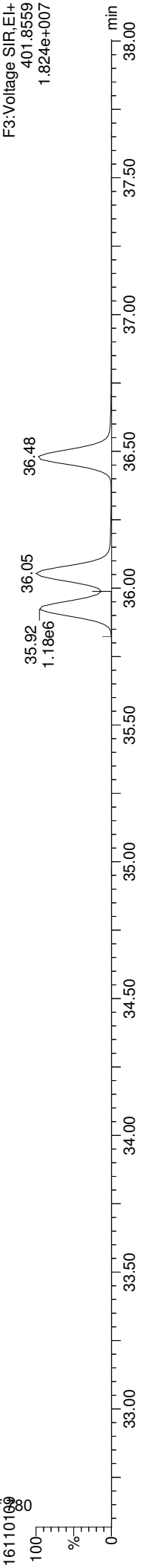


Quantify Sample Report MassLynx MassLynx V4.1 SCN909

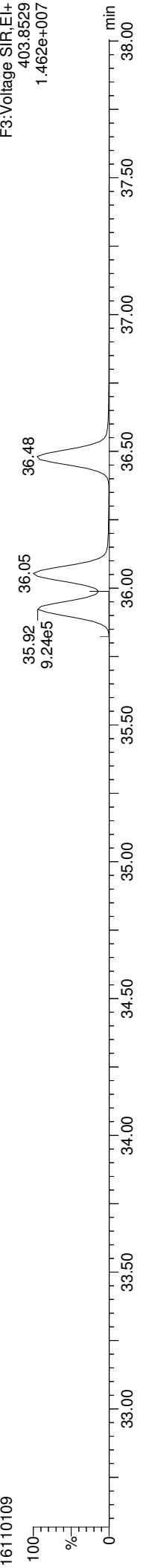
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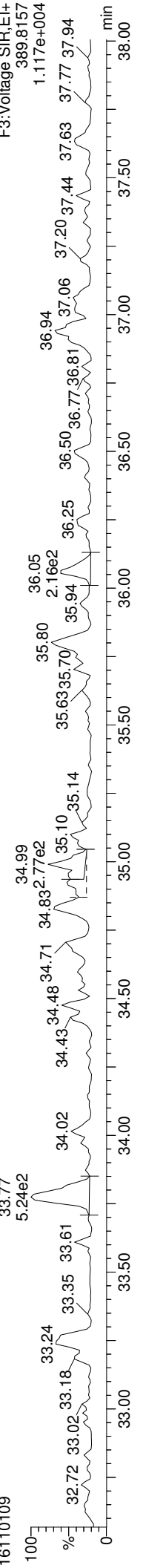
13C-123478-HxCDD



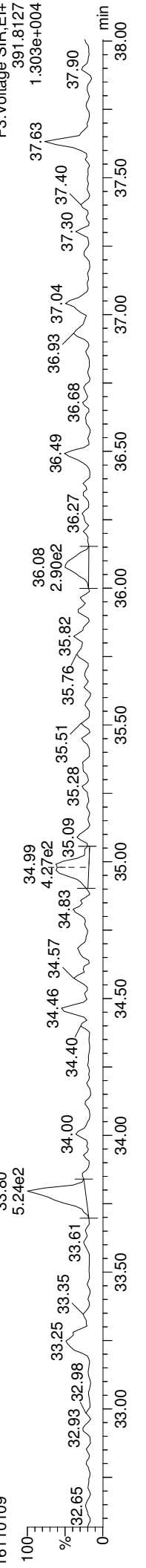
13C-123478-HxCDD



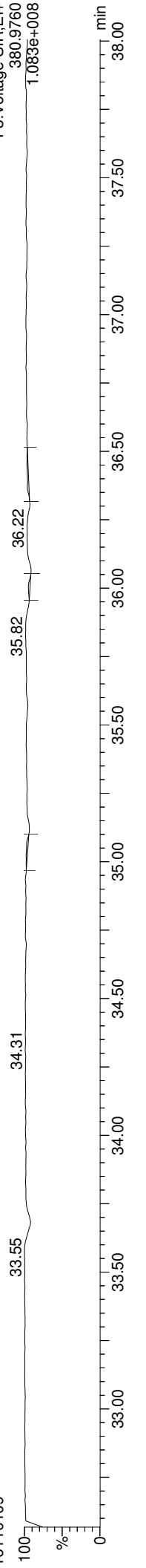
Total-hexadioxins



Total-hexadioxins



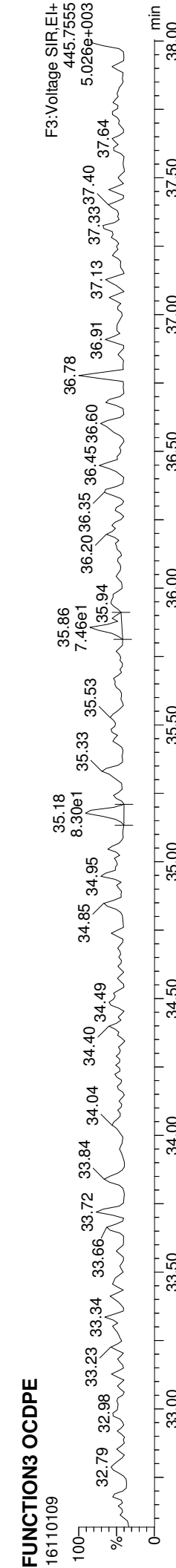
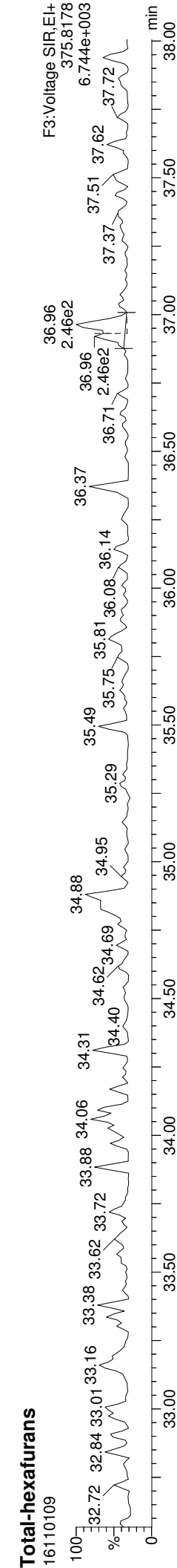
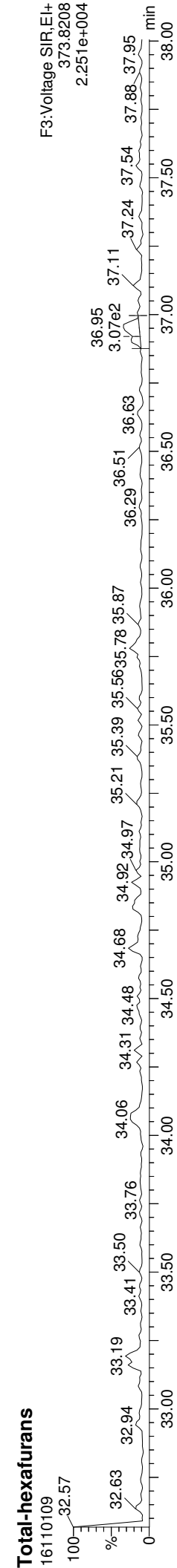
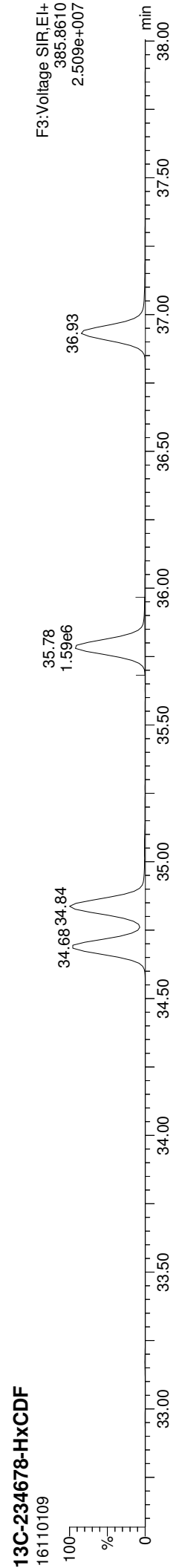
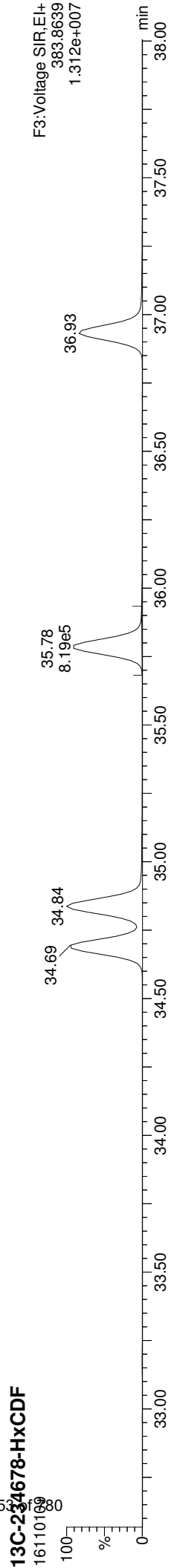
FUNCTION3 PFK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909

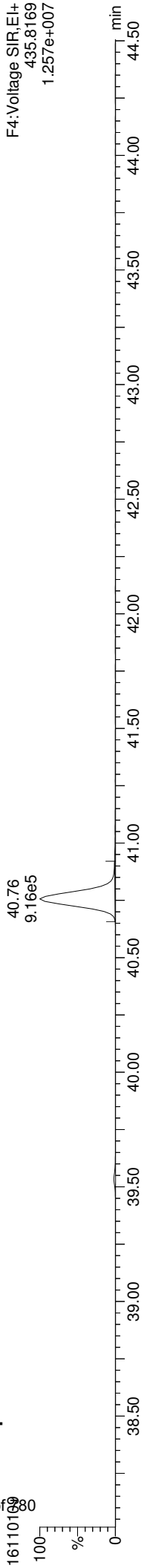
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time

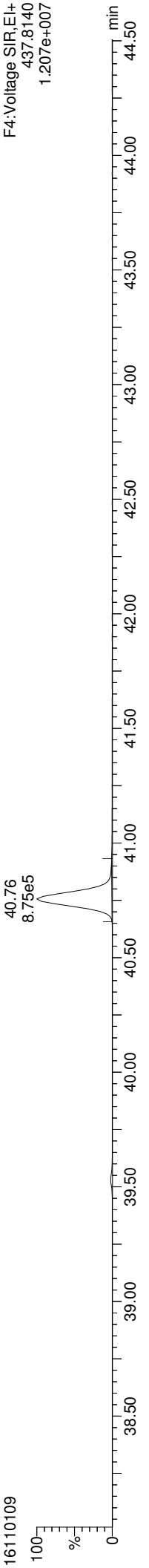
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ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

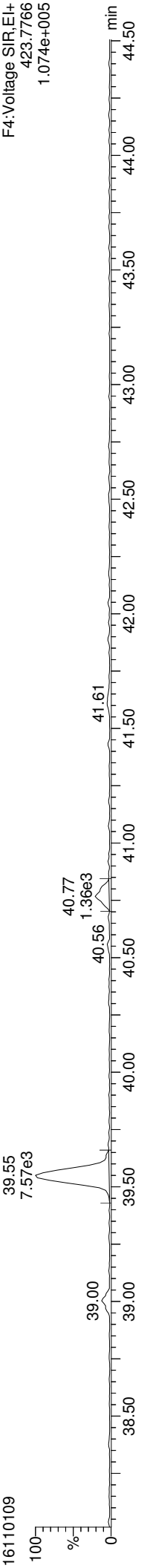
13C-1234678-HpCDD



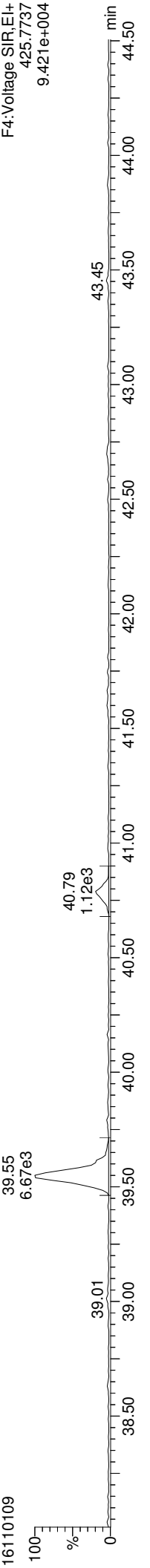
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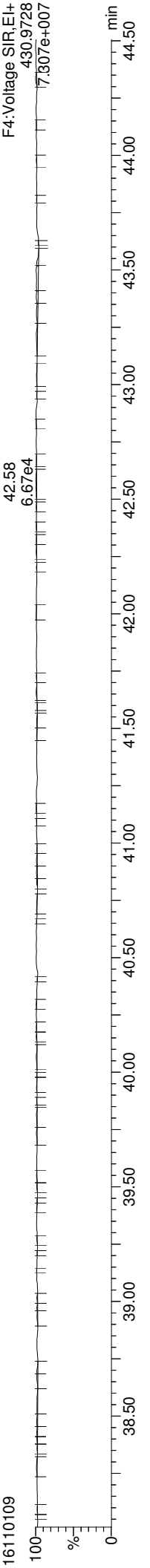
Total-heptadioxins



Total-heptadioxins



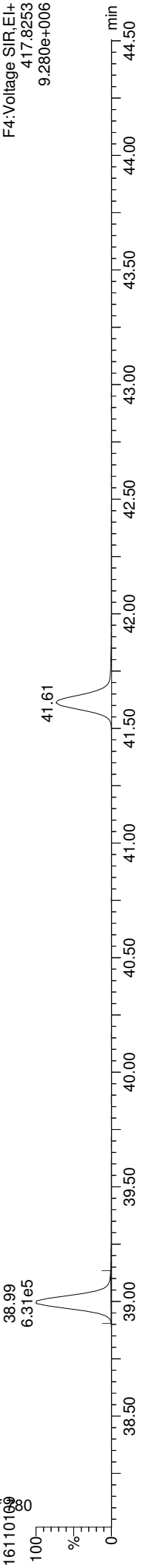
FUNCTION4 PFK



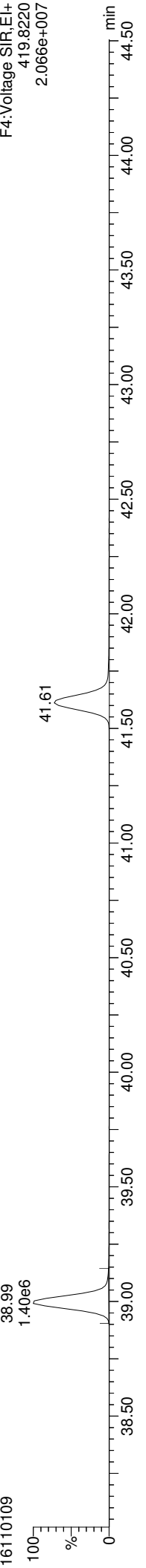
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

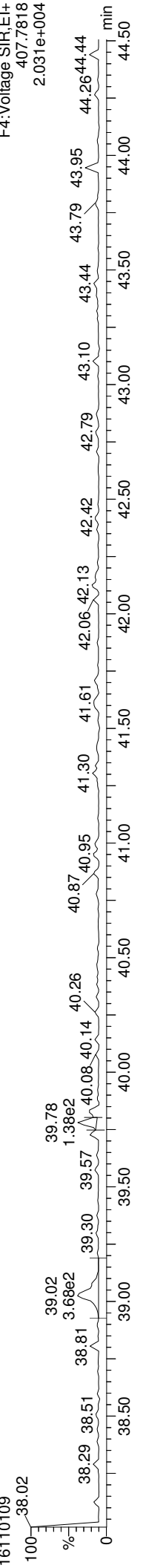
13C-1234678-HpCDF



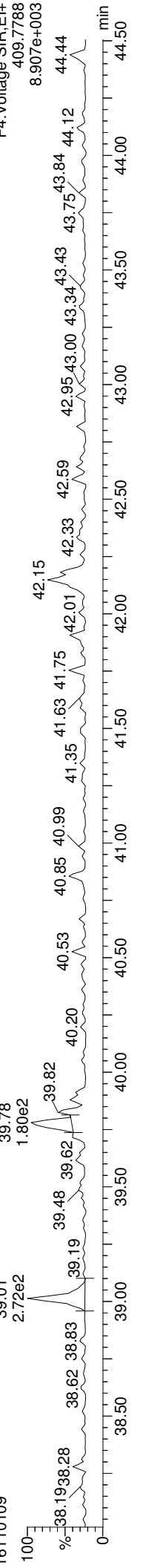
13C-1234678-HpCDF



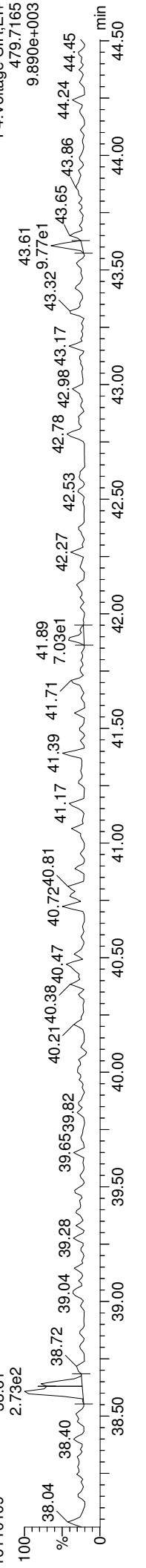
Total-heptafurans



Total-heptafurans



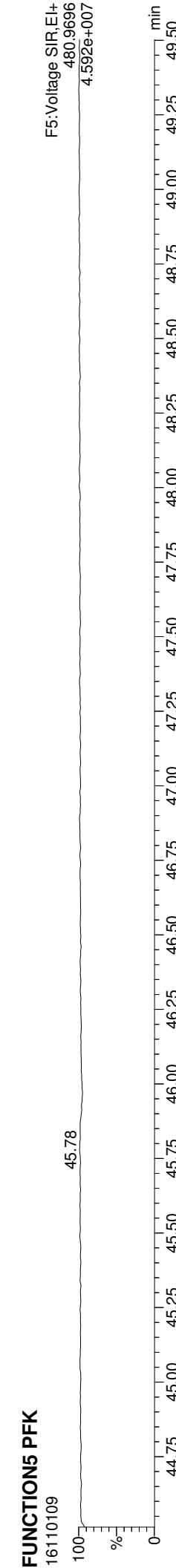
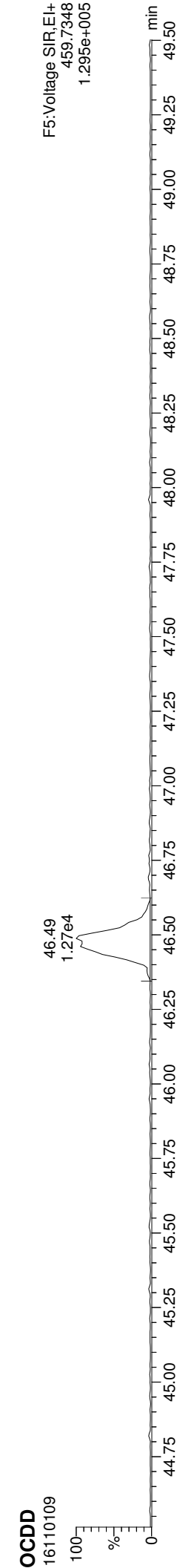
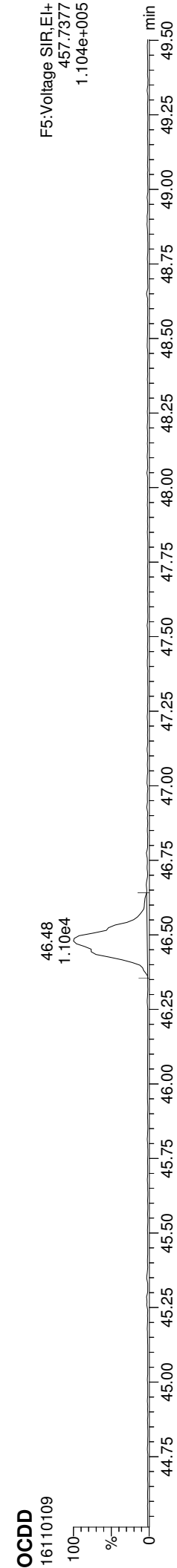
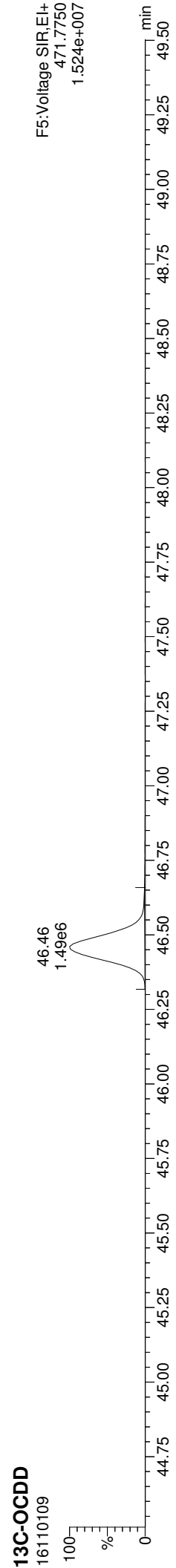
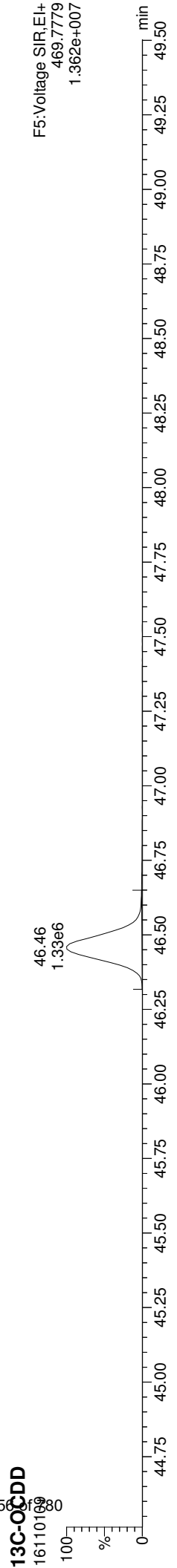
FUNCTION4 NCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101\DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

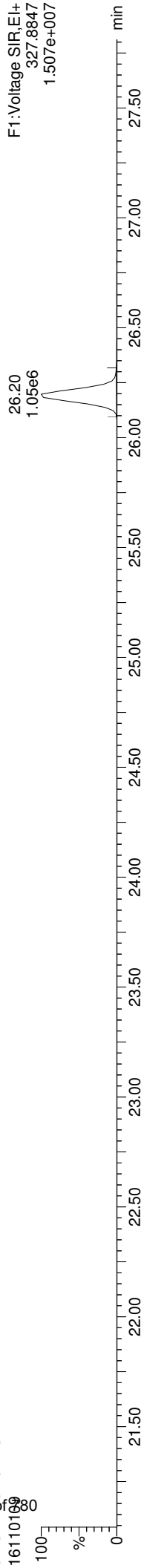


Quantify Sample Report

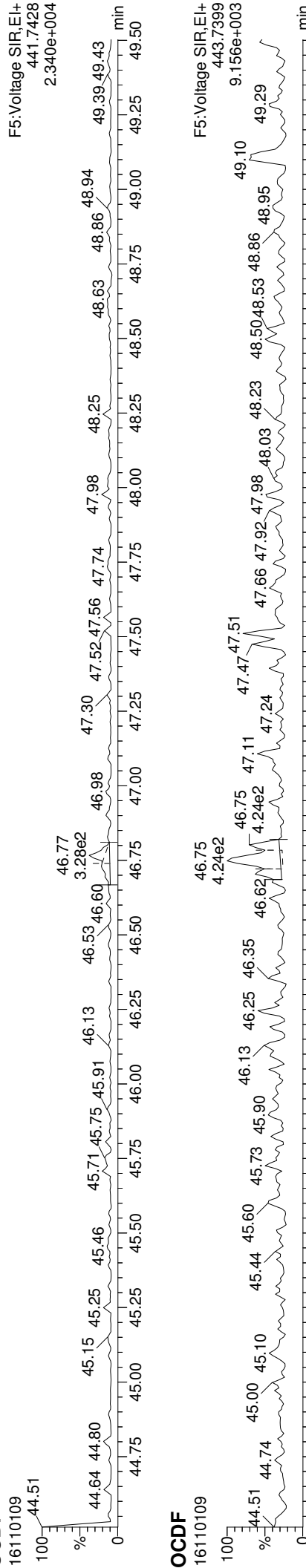
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:20 Pacific Daylight Time

ID: 16110187-02, Name: 16110109, Date: 01-Nov-2016, Time: 16:47:55, Conditions: AUTOSPEC01, User: PK

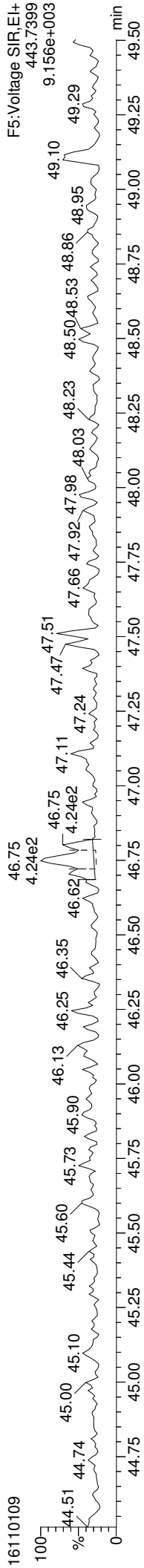
37CL-2378-TCDD



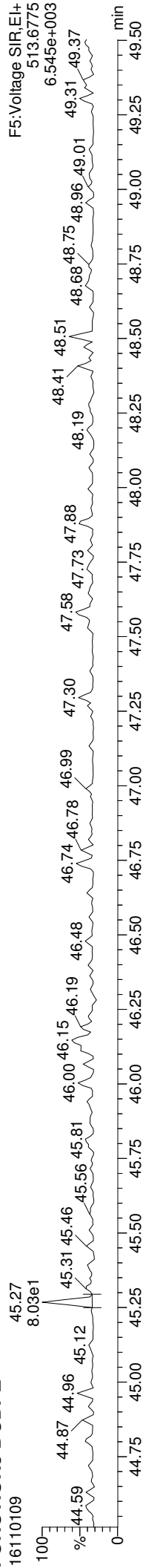
OCDF



OCDF



FUNCTION5 DCDPE





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-03 File ID: 16110110
 Sampled: 10/11/16 11:10 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 17:41
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.02 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.936	0.655-0.886		0.998	0.081	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.06	0.998	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	1.385	1.318-1.783		4.99	0.027	ng/kg	J, B
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.058	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.083	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.046	4.99	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	3.280	1.054-1.426		4.99	0.050	ng/kg	EMPC, J
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.046	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.227	1.054-1.426		4.99	0.089	ng/kg	J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.072	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.073	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	2.037	1.054-1.426		4.99	0.053	ng/kg	EMPC, J
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.076	0.893-1.208		4.99	0.146	ng/kg	J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.673	0.893-1.208		4.99	0.029	ng/kg	EMPC, J
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.073	0.893-1.208		4.99	0.670	ng/kg	J, B
39001-02-0	OCDF	1	0.922	0.757-1.024		9.98	1.16	ng/kg	J, B
3268-87-9	OCDD	1	0.869	0.757-1.024		9.98	11.3	ng/kg	B

Homologue Groups

5722-27-5	Total TCDF	1	0.000			0.998	0.343	ng/kg
41903-57-5	Total TCDD	1	0.000			0.998	0.264	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.998	0.165	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.998	0.053	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.998	0.169	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.998	0.169	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.998	0.578	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.998	2.06	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.040
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.040



Form I
ORGANIC ANALYSIS DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-03 File ID: 16110110
 Sampled: 10/11/16 11:10 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 17:41
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.02 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.775	0.655-0.886		93.9	24 - 169 %	
13C12-2,3,7,8-TCDD		0.776	0.655-0.886		97.1	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.587	1.318-1.783		94.9	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.556	1.318-1.783		101	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.571	1.318-1.783		102	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.511	0.434-0.587		87.1	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.509	0.434-0.587		83.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.522	0.434-0.587		86.0	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.522	0.434-0.587		88.4	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.295	1.054-1.426		92.9	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.260	1.054-1.426		91.5	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.452	0.374-0.506		80.0	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.454	0.374-0.506		85.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.065	0.893-1.208		93.3	23 - 140 %	
13C12-OCDD		0.882	0.757-1.024		78.3	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			101	35 - 197 %	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16R0187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.555	1.001	4.52e2	4.83e2	0.935	0.936	0.770	1120	1582	8.22e3	1.02e4	7.3	YES	0.040
12378-PeCDF	29.686	1.000	1.53e2	1.11e2	0.952	1.385	1.550	1142	1778	3.73e3	4.07e3	3.3	NO	0.014
23478-PeCDF				0.963			1.550	1142	1778					
123478-HxCDF				1.137			1.240	1278	704					
234678-HxCDF				1.164			1.240	1278	704					
123678-HxCDF	34.849	1.000	3.53e2	1.08e2	1.099	3.280	1.240	1278	704	7.78e3	2.72e3	6.1	YES	0.025
123789-HxCDF	36.931	1.000	3.65e2	2.97e2	1.101	1.227	1.240	1278	704	5.71e3	4.47e3	4.5	NO	0.045
1234678-HpCDF	39.025	1.001	6.00e2	5.58e2	1.303	1.076	1.050	565	586	1.01e4	9.29e3	17.9	NO	0.073
1234789-HpCDF	41.667	1.001	7.52e1	1.12e2	1.317	0.673	1.050	565	586	1.90e3	4.08e3	3.4	YES	0.015
OCDF	46.730	1.006	2.68e3	2.91e3	1.166	0.922	0.890	1817	1015	2.99e4	3.59e4	16.4	NO	0.580
2378-TCDD				1.134			0.770	1276	1097					
12378-PeCDD				0.975			1.550	1516	1082					
123478-HxCDD				1.031			1.240	1253	1068					
123678-HxCDD				0.971			1.240	1253	1068					
123789-HxCDD	36.504	1.012	2.22e2	1.09e2	0.947	2.037	1.240	1253	1068	6.45e3	4.62e3	5.1	YES	0.026
1234678-HpCDD	40.779	1.000	1.95e3	1.82e3	1.028	1.073	1.050	631	681	2.72e4	2.41e4	43.0	NO	0.336
OCDD	46.488	1.000	2.40e4	2.77e4	1.107	0.869	0.890	1015	938	2.54e5	3.03e5	249.8	NO	5.649
13C-2378-TCDF	25.540	1.007	1.08e6	1.40e6	1.567	0.775	0.770	7365	4632	1.60e7	2.07e7	2176.2	NO	93.856
13C-12378-PeCDF	29.675	1.170	1.25e6	7.88e5	1.274	1.587	1.550	4517	4171	1.87e7	1.18e7	4147.5	NO	94.938
13C-23478-PeCDF	31.023	1.223	1.28e6	8.22e5	1.235	1.556	1.550	4517	4171	1.91e7	1.23e7	4220.2	NO	101.014
13C-123478-HxCDF	34.695	0.951	5.24e5	1.02e6	1.381	0.511	0.510	2842	4041	7.72e6	1.50e7	2715.8	NO	87.057
13C-123678-HxCDF	34.838	0.955	5.69e5	1.12e6	1.569	0.509	0.510	2842	4041	8.26e6	1.59e7	2907.9	NO	83.459
13C-234678-HxCDF	35.792	0.981	5.11e5	9.79e5	1.345	0.522	0.510	2842	4041	7.54e6	1.44e7	2654.1	NO	86.010
13C-123789-HxCDF	36.942	1.013	4.62e5	8.85e5	1.183	0.522	0.510	2842	4041	6.59e6	1.26e7	2319.7	NO	88.412
13C-1234678-HpCDF	39.003	1.069	3.78e5	8.36e5	1.178	0.452	0.440	2323	3269	5.58e6	1.24e7	2402.1	NO	80.023
13C-1234789-HpCDF	41.623	1.141	3.02e5	6.65e5	0.878	0.454	0.440	2323	3269	3.89e6	8.61e6	1675.0	NO	85.467
13C-1234-TCDD	25.361	0.000	7.41e5	9.45e5	1.000	0.784	0.770	3033	1590	1.09e7	1.38e7	3596.1	NO	100.000
13C-2378-TCDD	26.183	1.032	6.50e5	8.37e5	0.908	0.776	0.770	3033	1590	9.12e6	1.18e7	3006.2	NO	97.145
13C-12378-PeCDD	31.275	1.233	7.93e5	5.05e5	0.756	1.571	1.550	2372	1975	1.18e7	7.38e6	4972.4	NO	101.843
13C-123478-HxCDD	35.934	0.985	7.13e5	5.51e5	1.056	1.295	1.240	3293	2977	1.06e7	8.22e6	3226.7	NO	92.947
13C-123678-HxCDD	36.055	0.988	7.64e5	6.06e5	1.163	1.260	1.240	3293	2977	1.09e7	8.79e6	3320.8	NO	91.453
13C-1234678-HpCDD	40.768	1.117	5.63e5	5.29e5	0.909	1.065	1.050	2558	1855	7.56e6	7.05e6	2954.5	NO	93.291
13C-OCDD	46.470	1.274	7.75e5	8.79e5	0.820	0.882	0.890	2346	2265	7.98e6	8.96e6	3402.4	NO	156.641
13C-123789-HxCDD	36.482	0.000	7.20e5	5.68e5	1.000	1.269	1.240	3293	2977	1.02e7	8.16e6	3088.6	NO	100.000
Total-tetrafurans			1.64e3		0.935			1120		2.69e4				0.172

Quantify Sample Summary Report

MassLynx MassLynx V4.1 SCN909
 Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					752		0.00e0				
Total-pentafurans			8.84e2		0.957			1142		1.91e4				0.083
Total-hexatfurans			9.09e2		1.125			1278		2.04e4				0.085
Total-heptafurans			2.30e3		1.310			565		3.68e4				0.290
Total-Furans			8.41e3		1.114			1120		1.33e5				1.209
Total-tetradioxins			1.29e3		1.134			1276		1.98e4				0.132
Total-pentadioxins			2.18e2		0.975			1516		6.72e3				0.027
Total-hexadioxins			7.37e2		0.983			1253		1.50e4				0.085
Total-heptadioxins			6.01e3		1.028			631		8.77e4				1.031
Total-Dioxins			3.23e4		1.028			1276		3.83e5				6.924
Total-TEQ			4.07e4					1276		5.16e5				8.133
37CL-2378-TCDD	26.198	1.033	7.27e5		1.067			1488		1.07e7		7170.7		40.425
FUNCTION1 PFK			1.01e7					557580		3.99e7				
FUNCTION2 PFK			1.89e5					151767		4.92e6				0.000
FUNCTION3 PFK			8.41e5					437981		5.28e6				0.000
FUNCTION4 PFK			1.89e6					400244		3.36e7				
FUNCTION5 PFK			5.22e5					248190		2.79e6				
FUNCTION1 HXCD...			3.86e4					528		5.15e5				0.000
FUNCTION1 HPCD...			2.94e3					965		4.69e4				0.000
FUNCTION2 HPCD...			5.90e2					963		1.54e4				0.000
FUNCTION3 OCDPE			0.00e0					720		0.00e0				
FUNCTION4 NCDPE			1.78e2					737		4.67e3				0.000
FUNCTION5 DCDPE			0.00e0					526		0.00e0				

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

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TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	22.94	983.847	0.935	0.042		0.60	0.77	YES	5.7
2	35 Total-tetrafurans	303.9016	25.82	1063.765	0.935	0.046		0.85	0.77	NO	5.8
3	1 2378-TCDF	303.9016	25.56	935.432	0.935	0.040	0.037	0.94	0.77	YES	7.3
4	35 Total-tetrafurans	303.9016	24.48	995.883	0.935	0.043		0.50	0.77	YES	5.2

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37 Total-pentafurans	339.8597	28.59	427.176	0.957	0.022		0.95	1.55	YES	4.9
2	37 Total-pentafurans	339.8597	28.53	945.392	0.957	0.048		1.24	1.55	YES	8.6
3	2 12378-PeCDF	339.8597	29.69	263.610	0.952	0.014	0.014	1.39	1.55	NO	3.3

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6 123678-HxCDF	373.8208	34.85	460.117	1.099	0.025	0.013	3.28	1.24	YES	6.1
2	38 Total-hexafurans	373.8208	34.05	262.964	1.125	0.015		2.66	1.24	YES	5.4
3	7 123789-HxCDF	373.8208	36.93	662.433	1.101	0.045	0.045	1.23	1.24	NO	4.5

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9 1234789-HpCDF	407.7818	41.67	186.834	1.317	0.015	0.012	0.67	1.05	YES	3.4
2	39 Total-heptafurans	407.7818	39.79	2884.949	1.310	0.202		1.28	1.05	YES	43.9
3	8 1234678-HpCDF	407.7818	39.02	1158.297	1.303	0.073	0.073	1.08	1.05	NO	17.9

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	22.94	983.847	0.935	0.042		0.60	0.77	YES	5.7
2	35 Total-tetrafurans	303.9016	25.82	1063.765	0.935	0.046		0.85	0.77	NO	5.8
3	1 2378-TCDF	303.9016	25.56	935.432	0.935	0.040	0.037	0.94	0.77	YES	7.3
4	35 Total-tetrafurans	303.9016	24.48	995.883	0.935	0.043		0.50	0.77	YES	5.2
5	37 Total-pentafurans	339.8597	28.59	427.176	0.957	0.022		0.95	1.55	YES	4.9
6	37 Total-pentafurans	339.8597	28.53	945.392	0.957	0.048		1.24	1.55	YES	8.6
7	2 12378-PeCDF	339.8597	29.69	263.610	0.952	0.014	0.014	1.39	1.55	NO	3.3
8	6 123678-HxCDF	373.8208	34.85	460.117	1.099	0.025	0.013	3.28	1.24	YES	6.1
9	38 Total-hexafurans	373.8208	34.05	262.964	1.125	0.015		2.66	1.24	YES	5.4
10	7 123789-HxCDF	373.8208	36.93	662.433	1.101	0.045	0.045	1.23	1.24	NO	4.5
11	10 OCDF	441.7428	46.73	5591.174	1.166	0.580	0.580	0.92	0.89	NO	16.4
12	9 1234789-HpCDF	407.7818	41.67	186.834	1.317	0.015	0.012	0.67	1.05	YES	3.4
13	39 Total-heptafurans	407.7818	39.79	2884.949	1.310	0.202		1.28	1.05	YES	43.9
14	8 1234678-HpCDF	407.7818	39.02	1158.297	1.303	0.073	0.073	1.08	1.05	NO	17.9

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TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	23.36	834.503	1.134	0.050		0.93	0.77	YES	6.3
2	41 Total-tetradoxins	319.8965	25.84	818.978	1.134	0.049		1.35	0.77	YES	4.3
3	41 Total-tetradoxins	319.8965	25.54	576.421	1.134	0.034		2.73	0.77	YES	5.0

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42 Total-pentadoxins	355.8546	29.71	338.429	0.975	0.027		1.81	1.55	YES	4.4

HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15 123789-HxCDD	389.8157	36.50	330.368	0.947	0.026	0.020	2.04	1.24	YES	5.1
2	43 Total-hexadoxins	389.8157	33.79	754.629	0.983	0.058		2.16	1.24	YES	6.8

HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.78	3772.400	1.028	0.336	0.336	1.07	1.05	NO	43.0
2	44 Total-heptadoxins	423.7766	39.55	7807.367	1.028	0.695		1.08	1.05	NO	95.8

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	23.36	834.503	1.134	0.050		0.93	0.77	YES	6.3
2	41 Total-tetradoxins	319.8965	25.84	818.978	1.134	0.049		1.35	0.77	YES	4.3
3	41 Total-tetradoxins	319.8965	25.54	576.421	1.134	0.034		2.73	0.77	YES	5.0
4	42 Total-pentadoxins	355.8546	29.71	338.429	0.975	0.027		1.81	1.55	YES	4.4
5	15 123789-HxCDD	389.8157	36.50	330.368	0.947	0.026	0.020	2.04	1.24	YES	5.1
6	43 Total-hexadoxins	389.8157	33.79	754.629	0.983	0.058		2.16	1.24	YES	6.8
7	17 OCDD	457.7377	46.49	51710.349	1.107	5.649	5.649	0.87	0.89	NO	249.8
8	16 1234678-HpCDD	423.7766	40.78	3772.400	1.028	0.336	0.336	1.07	1.05	NO	43.0
9	44 Total-heptadoxins	423.7766	39.55	7807.367	1.028	0.695		1.08	1.05	NO	95.8

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TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	22.94	983.847	0.935	0.042		0.60	0.77	YES	5.7
2	35 Total-tetrafurans	303.9016	25.82	1063.765	0.935	0.046		0.85	0.77	NO	5.8
3	1 2378-TCDF	303.9016	25.56	935.432	0.935	0.040	0.037	0.94	0.77	YES	7.3
4	35 Total-tetrafurans	303.9016	24.48	995.883	0.935	0.043		0.50	0.77	YES	5.2
5	37 Total-pentafurans	339.8597	28.59	427.176	0.957	0.022		0.95	1.55	YES	4.9
6	37 Total-pentafurans	339.8597	28.53	945.392	0.957	0.048		1.24	1.55	YES	8.6
7	2 12378-PeCDF	339.8597	29.69	263.610	0.952	0.014	0.014	1.39	1.55	NO	3.3
8	6 123678-HxCDF	373.8208	34.85	460.117	1.099	0.025	0.013	3.28	1.24	YES	6.1
9	38 Total-hexafurans	373.8208	34.05	262.964	1.125	0.015		2.66	1.24	YES	5.4
10	7 123789-HxCDF	373.8208	36.93	662.433	1.101	0.045	0.045	1.23	1.24	NO	4.5
11	10 OCDF	441.7428	46.73	5591.174	1.166	0.580	0.580	0.92	0.89	NO	16.4
12	9 1234789-HpCDF	407.7818	41.67	186.834	1.317	0.015	0.012	0.67	1.05	YES	3.4
13	39 Total-heptafurans	407.7818	39.79	2884.949	1.310	0.202		1.28	1.05	YES	43.9
14	8 1234678-HpCDF	407.7818	39.02	1158.297	1.303	0.073	0.073	1.08	1.05	NO	17.9
15	41 Total-tetradioxins	319.8965	23.36	834.503	1.134	0.050		0.93	0.77	YES	6.3
16	41 Total-tetradioxins	319.8965	25.84	818.978	1.134	0.049		1.35	0.77	YES	4.3
17	41 Total-tetradioxins	319.8965	25.54	576.421	1.134	0.034		2.73	0.77	YES	5.0
18	42 Total-pentadioxins	355.8546	29.71	338.429	0.975	0.027		1.81	1.55	YES	4.4
19	15 123789-HxCDD	389.8157	36.50	330.368	0.947	0.026	0.020	2.04	1.24	YES	5.1
20	43 Total-hexadioxins	389.8157	33.79	754.629	0.983	0.058		2.16	1.24	YES	6.8
21	17 OCDD	457.7377	46.49	51710.349	1.107	5.649	5.649	0.87	0.89	NO	249.8
22	16 1234678-HpCDD	423.7766	40.78	3772.400	1.028	0.336	0.336	1.07	1.05	NO	43.0
23	44 Total-heptadioxins	423.7766	39.55	7807.367	1.028	0.695		1.08	1.05	NO	95.8

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	24.94	0.000							1.5
2	48 FUNCTION1 PFK	330.9792	24.21	0.000							0.6
3	48 FUNCTION1 PFK	330.9792	24.15	0.000							1.2
4	48 FUNCTION1 PFK	330.9792	23.67	0.000							1.3
5	48 FUNCTION1 PFK	330.9792	23.57	0.000							1.6
6	48 FUNCTION1 PFK	330.9792	23.36	0.000							0.8
7	48 FUNCTION1 PFK	330.9792	23.30	0.000							0.5
8	48 FUNCTION1 PFK	330.9792	22.85	0.000							7.9
9	48 FUNCTION1 PFK	330.9792	22.15	0.000							16.2
10	48 FUNCTION1 PFK	330.9792	22.09	0.000							14.6
11	48 FUNCTION1 PFK	330.9792	21.92	0.000							17.1
12	48 FUNCTION1 PFK	330.9792	21.42	0.000							4.4
13	48 FUNCTION1 PFK	330.9792	21.39	0.000							4.0

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PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366.9792	28.28	0.000		0.000					1.3
2	49 FUNCTION2 PFK	366.9792	27.91	0.000		0.000					0.6
3	49 FUNCTION2 PFK	366.9792	30.46	0.000		0.000					0.9
4	49 FUNCTION2 PFK	366.9792	30.19	0.000		0.000					2.1
5	49 FUNCTION2 PFK	366.9792	29.99	0.000		0.000					1.3
6	49 FUNCTION2 PFK	366.9792	29.94	0.000		0.000					1.0
7	49 FUNCTION2 PFK	366.9792	29.88	0.000		0.000					2.0
8	49 FUNCTION2 PFK	366.9792	29.83	0.000		0.000					1.0
9	49 FUNCTION2 PFK	366.9792	29.66	0.000		0.000					0.4
10	49 FUNCTION2 PFK	366.9792	29.53	0.000		0.000					1.1
11	49 FUNCTION2 PFK	366.9792	29.47	0.000		0.000					2.1
12	49 FUNCTION2 PFK	366.9792	29.40	0.000		0.000					1.8
13	49 FUNCTION2 PFK	366.9792	29.28	0.000		0.000					1.4
14	49 FUNCTION2 PFK	366.9792	28.81	0.000		0.000					1.6
15	49 FUNCTION2 PFK	366.9792	28.72	0.000		0.000					1.7
16	49 FUNCTION2 PFK	366.9792	28.62	0.000		0.000					0.8
17	49 FUNCTION2 PFK	366.9792	28.57	0.000		0.000					0.8
18	49 FUNCTION2 PFK	366.9792	28.35	0.000		0.000					2.4
19	49 FUNCTION2 PFK	366.9792	32.26	0.000		0.000					1.3
20	49 FUNCTION2 PFK	366.9792	32.15	0.000		0.000					1.5
21	49 FUNCTION2 PFK	366.9792	31.14	0.000		0.000					1.8
22	49 FUNCTION2 PFK	366.9792	31.07	0.000		0.000					0.7
23	49 FUNCTION2 PFK	366.9792	31.01	0.000		0.000					0.7
24	49 FUNCTION2 PFK	366.9792	30.69	0.000		0.000					0.9
25	49 FUNCTION2 PFK	366.9792	30.52	0.000		0.000					1.1

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	36.24	0.000		0.000					12.1

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PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	39.00	0.000							3.7
2	51 FUNCTION4 PFK	430.9728	38.97	0.000							3.8
3	51 FUNCTION4 PFK	430.9728	38.81	0.000							2.9
4	51 FUNCTION4 PFK	430.9728	38.49	0.000							2.1
5	51 FUNCTION4 PFK	430.9728	38.37	0.000							0.3
6	51 FUNCTION4 PFK	430.9728	38.26	0.000							0.6
7	51 FUNCTION4 PFK	430.9728	40.95	0.000							1.4
8	51 FUNCTION4 PFK	430.9728	40.90	0.000							2.3
9	51 FUNCTION4 PFK	430.9728	40.86	0.000							2.2
10	51 FUNCTION4 PFK	430.9728	40.73	0.000							4.2
11	51 FUNCTION4 PFK	430.9728	40.61	0.000							2.9
12	51 FUNCTION4 PFK	430.9728	40.54	0.000							4.5
13	51 FUNCTION4 PFK	430.9728	40.33	0.000							1.9
14	51 FUNCTION4 PFK	430.9728	40.14	0.000							1.3
15	51 FUNCTION4 PFK	430.9728	40.07	0.000							0.9
16	51 FUNCTION4 PFK	430.9728	39.93	0.000							1.0
17	51 FUNCTION4 PFK	430.9728	39.86	0.000							0.4
18	51 FUNCTION4 PFK	430.9728	39.73	0.000							1.2
19	51 FUNCTION4 PFK	430.9728	39.61	0.000							1.8
20	51 FUNCTION4 PFK	430.9728	39.31	0.000							1.1
21	51 FUNCTION4 PFK	430.9728	39.21	0.000							1.6
22	51 FUNCTION4 PFK	430.9728	39.12	0.000							3.1
23	51 FUNCTION4 PFK	430.9728	43.09	0.000							1.8
24	51 FUNCTION4 PFK	430.9728	43.05	0.000							2.3
25	51 FUNCTION4 PFK	430.9728	42.89	0.000							4.0
26	51 FUNCTION4 PFK	430.9728	42.85	0.000							3.2
27	51 FUNCTION4 PFK	430.9728	42.78	0.000							2.9
28	51 FUNCTION4 PFK	430.9728	42.58	0.000							1.5
29	51 FUNCTION4 PFK	430.9728	42.30	0.000							1.1
30	51 FUNCTION4 PFK	430.9728	42.21	0.000							1.4
31	51 FUNCTION4 PFK	430.9728	42.09	0.000							1.4
32	51 FUNCTION4 PFK	430.9728	42.02	0.000							2.0
33	51 FUNCTION4 PFK	430.9728	41.89	0.000							1.5
34	51 FUNCTION4 PFK	430.9728	41.75	0.000							0.4
35	51 FUNCTION4 PFK	430.9728	41.67	0.000							1.7
36	51 FUNCTION4 PFK	430.9728	41.25	0.000							2.4
37	51 FUNCTION4 PFK	430.9728	41.21	0.000							2.9
38	51 FUNCTION4 PFK	430.9728	41.11	0.000							0.7
39	51 FUNCTION4 PFK	430.9728	44.46	0.000							1.4
40	51 FUNCTION4 PFK	430.9728	43.95	0.000							0.9
41	51 FUNCTION4 PFK	430.9728	43.79	0.000							1.6
42	51 FUNCTION4 PFK	430.9728	43.50	0.000							1.4
43	51 FUNCTION4 PFK	430.9728	43.35	0.000							0.4
44	51 FUNCTION4 PFK	430.9728	43.31	0.000							1.2
45	51 FUNCTION4 PFK	430.9728	43.22	0.000							0.7

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52 FUNCTION5 PFK	480.9696	46.24	0.000							3.4
2	52 FUNCTION5 PFK	480.9696	44.53	0.000							7.9

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ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					722.7
2	53 FUNCTION1 HXCD...	375.8364	25.50	0.000		0.000					3.2
3	53 FUNCTION1 HXCD...	375.8364	25.36	0.000		0.000					214.1
4	53 FUNCTION1 HXCD...	375.8364	25.08	0.000		0.000					6.8
5	53 FUNCTION1 HXCD...	375.8364	22.22	0.000		0.000					3.2
6	53 FUNCTION1 HXCD...	375.8364	27.05	0.000		0.000					4.9
7	53 FUNCTION1 HXCD...	375.8364	26.05	0.000		0.000					7.4
8	53 FUNCTION1 HXCD...	375.8364	25.88	0.000		0.000					3.4
9	53 FUNCTION1 HXCD...	375.8364	25.79	0.000		0.000					10.3

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	27.71	0.000		0.000					3.2
2	54 FUNCTION1 HPCD...	409.7974	26.56	0.000		0.000					2.5
3	54 FUNCTION1 HPCD...	409.7974	24.99	0.000		0.000					1.9
4	54 FUNCTION1 HPCD...	409.7974	24.84	0.000		0.000					2.1
5	54 FUNCTION1 HPCD...	409.7974	24.60	0.000		0.000					1.7
6	54 FUNCTION1 HPCD...	409.7974	24.29	0.000		0.000					2.4
7	54 FUNCTION1 HPCD...	409.7974	23.12	0.000		0.000					2.6
8	54 FUNCTION1 HPCD...	409.7974	22.81	0.000		0.000					1.9
9	54 FUNCTION1 HPCD...	409.7974	22.12	0.000		0.000					3.5
10	54 FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					26.9

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	31.41	0.000		0.000					1.9
2	55 FUNCTION2 HPCD...	409.7974	30.96	0.000		0.000					3.0
3	55 FUNCTION2 HPCD...	409.7974	30.78	0.000		0.000					2.8
4	55 FUNCTION2 HPCD...	409.7974	29.67	0.000		0.000					2.1
5	55 FUNCTION2 HPCD...	409.7974	28.96	0.000		0.000					2.4
6	55 FUNCTION2 HPCD...	409.7974	28.47	0.000		0.000					1.5
7	55 FUNCTION2 HPCD...	409.7974	28.19	0.000		0.000					2.3

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	38.63	0.000		0.000					6.3

ETHERS6

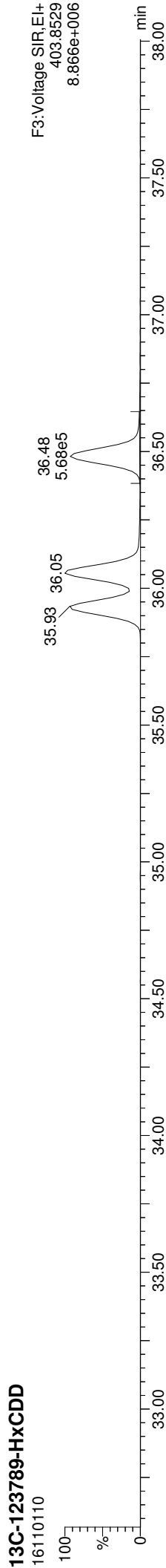
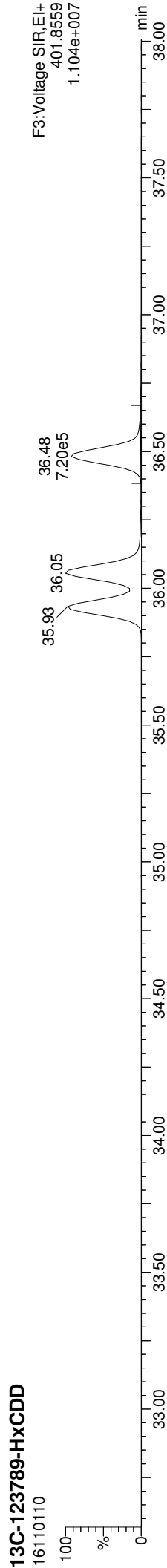
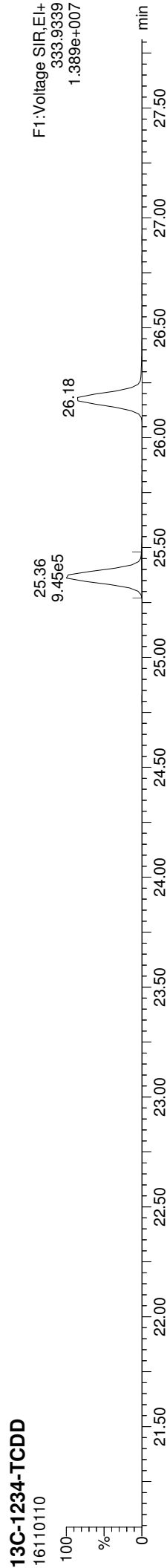
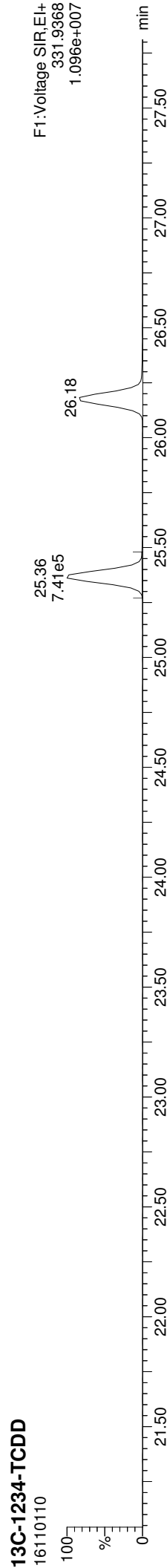
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Quantify Sample Report MassLynx MassLynx V4.1 SCN909

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Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

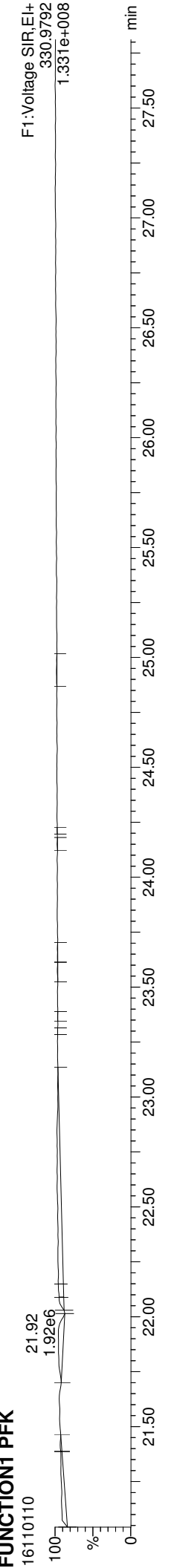
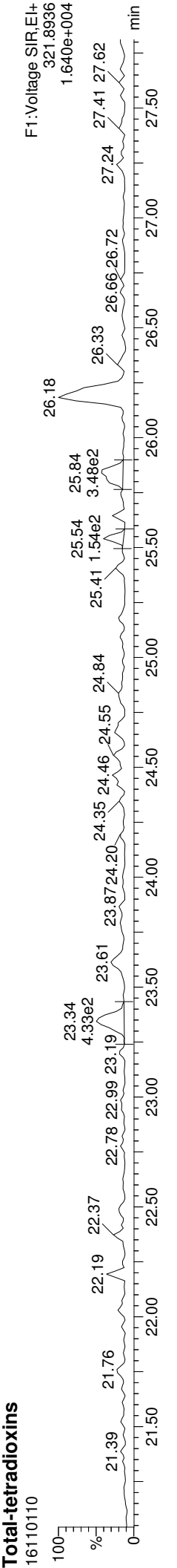
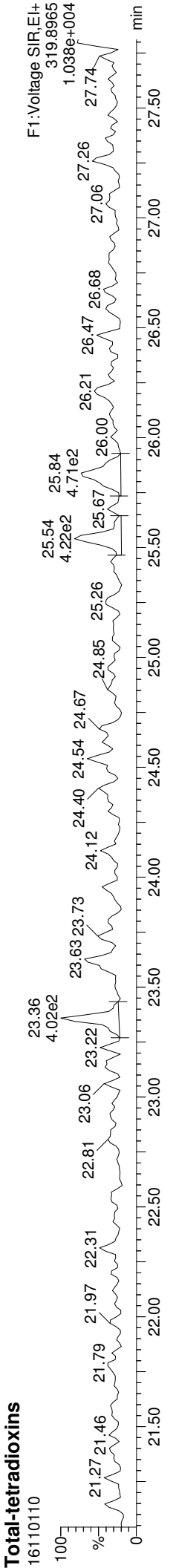
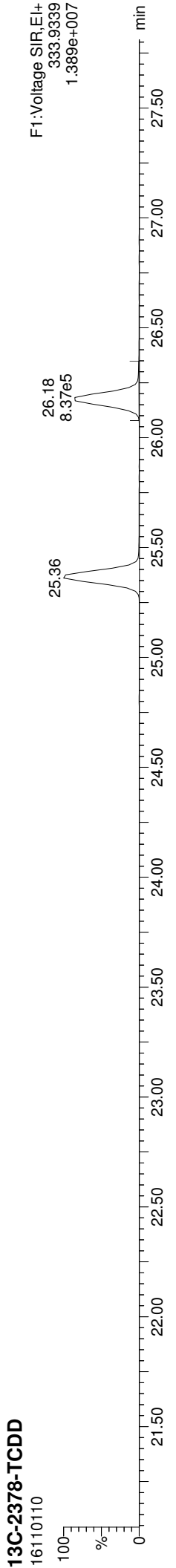
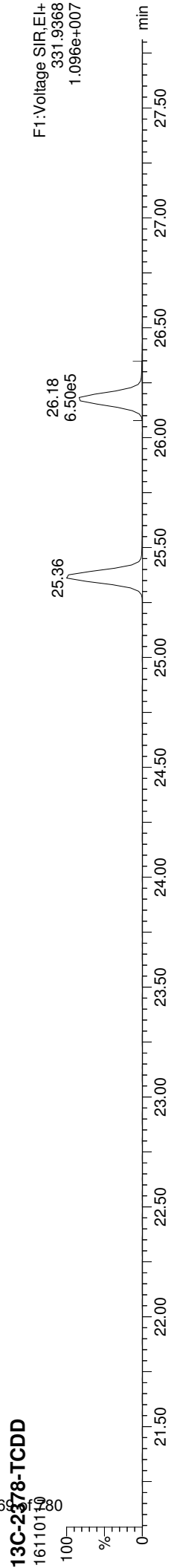
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Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 1610187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK



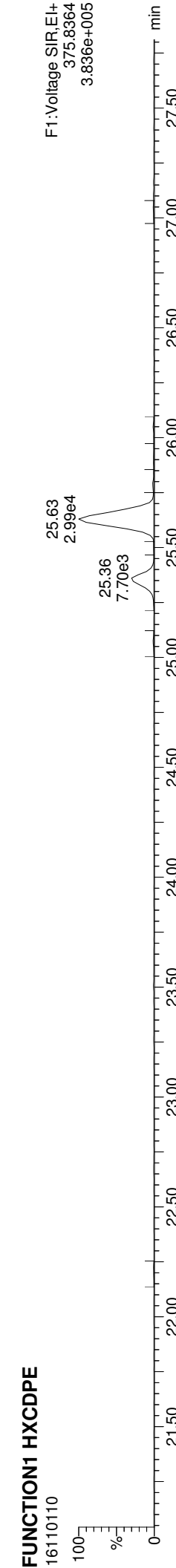
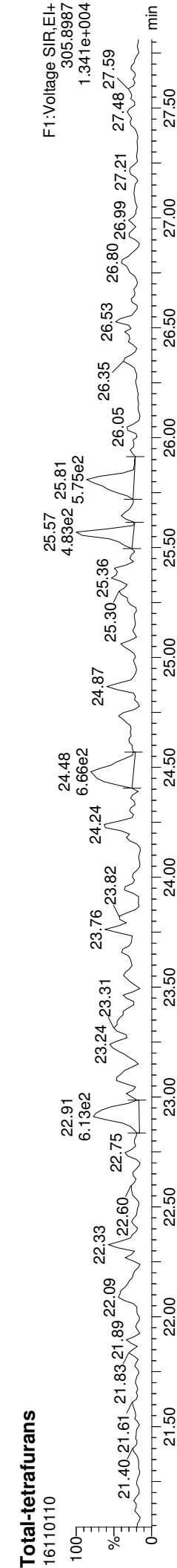
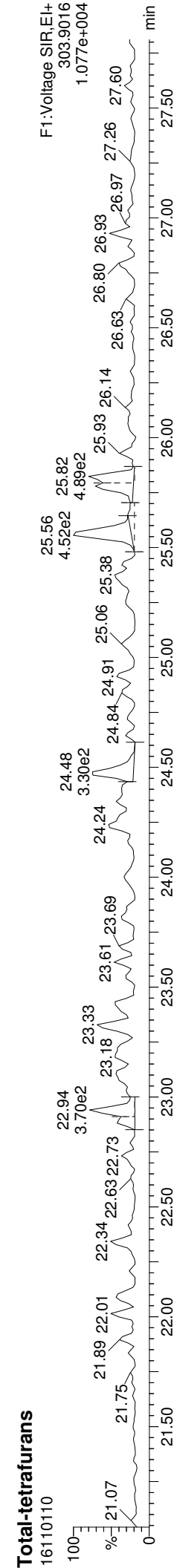
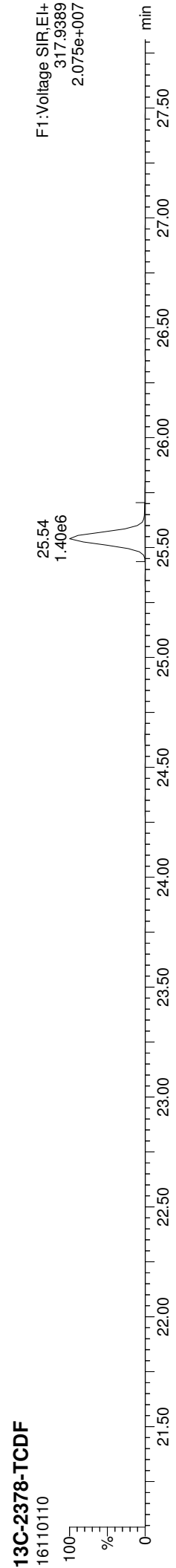
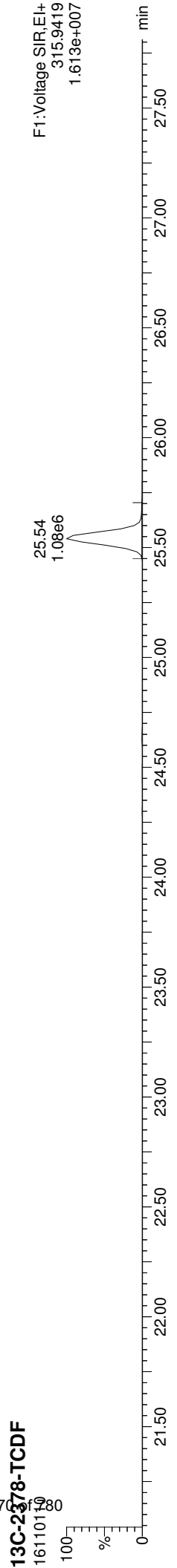
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Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK



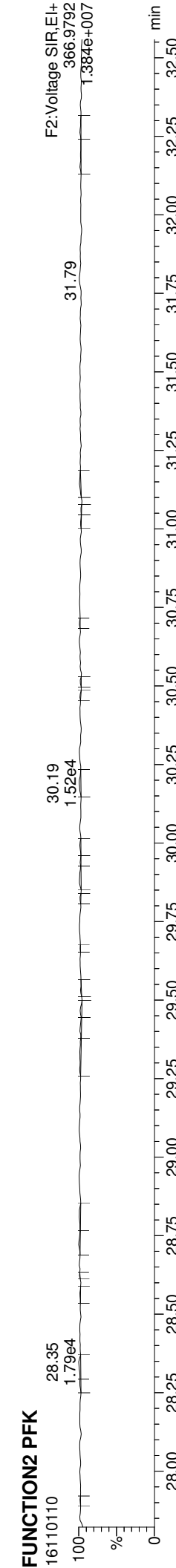
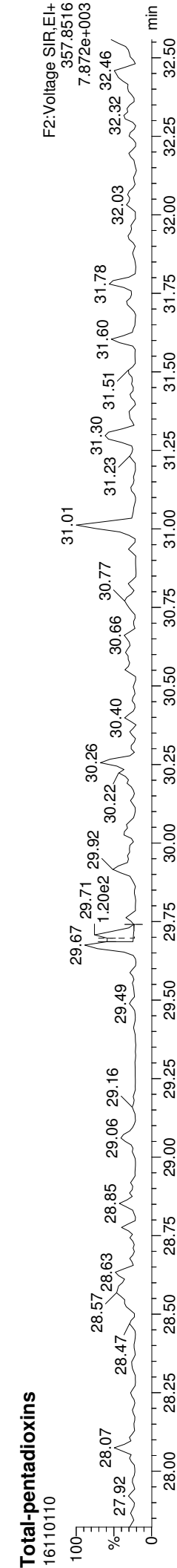
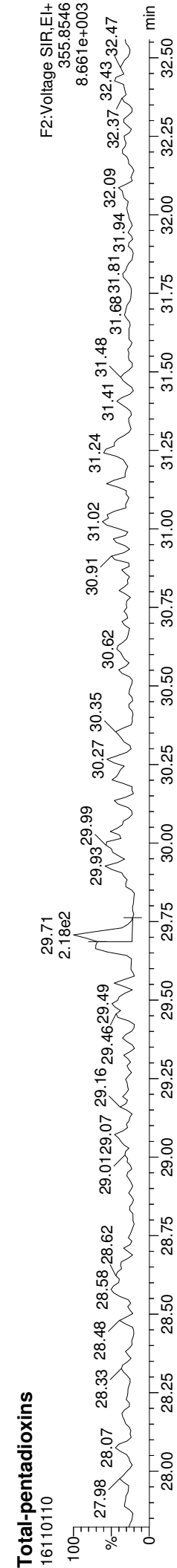
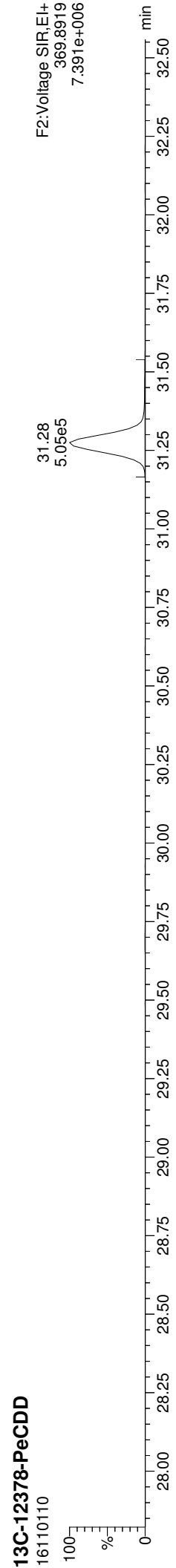
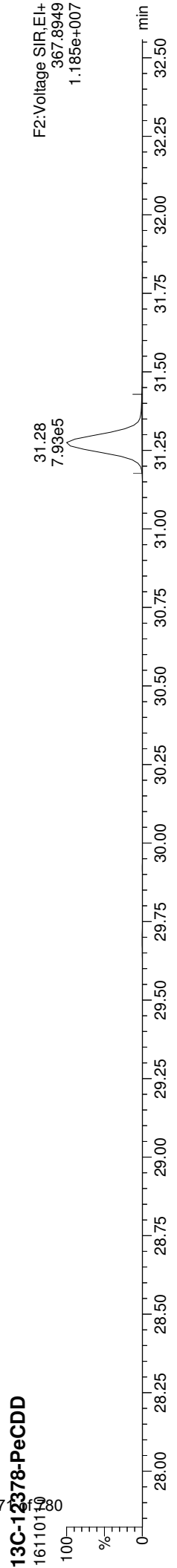
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ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK



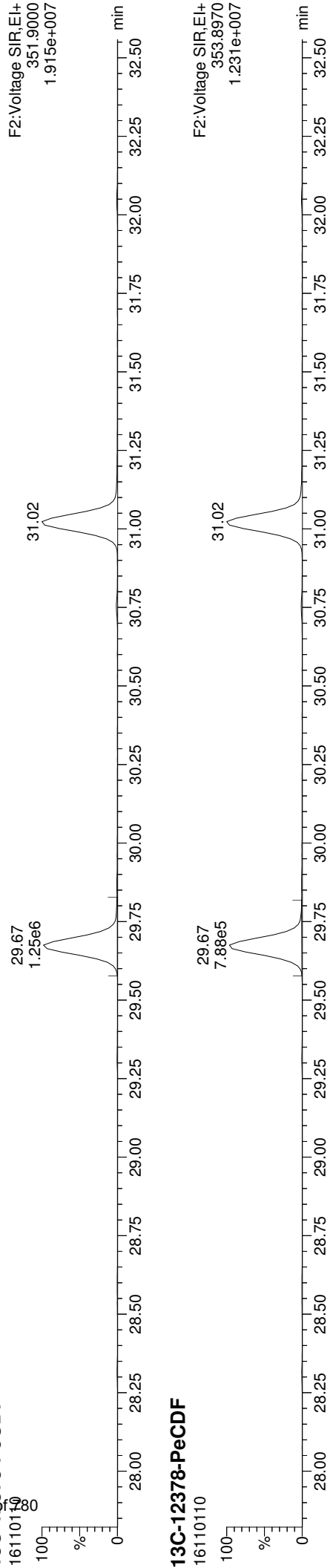
Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK

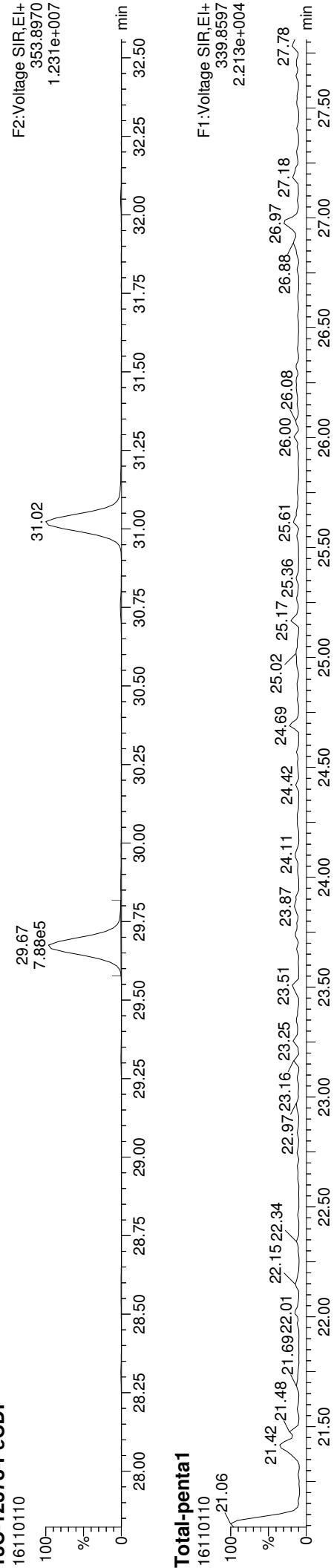


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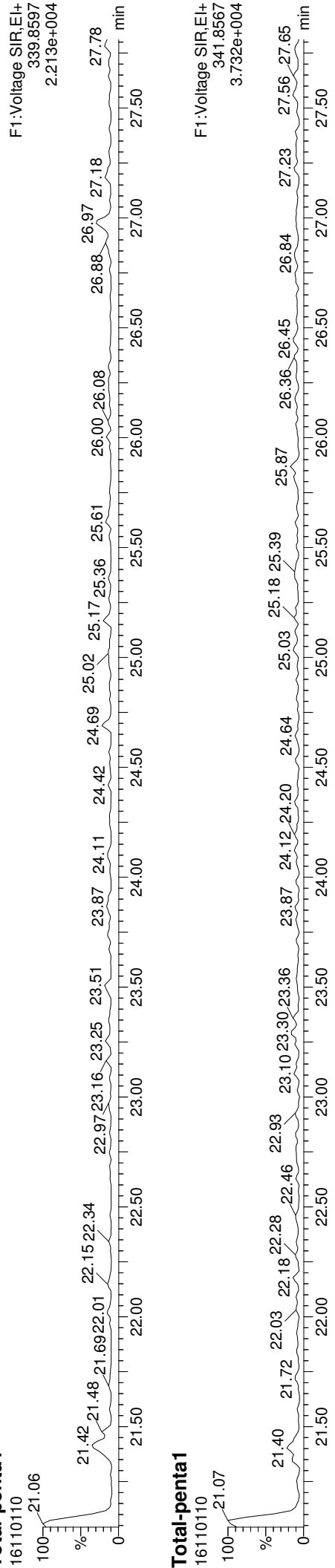
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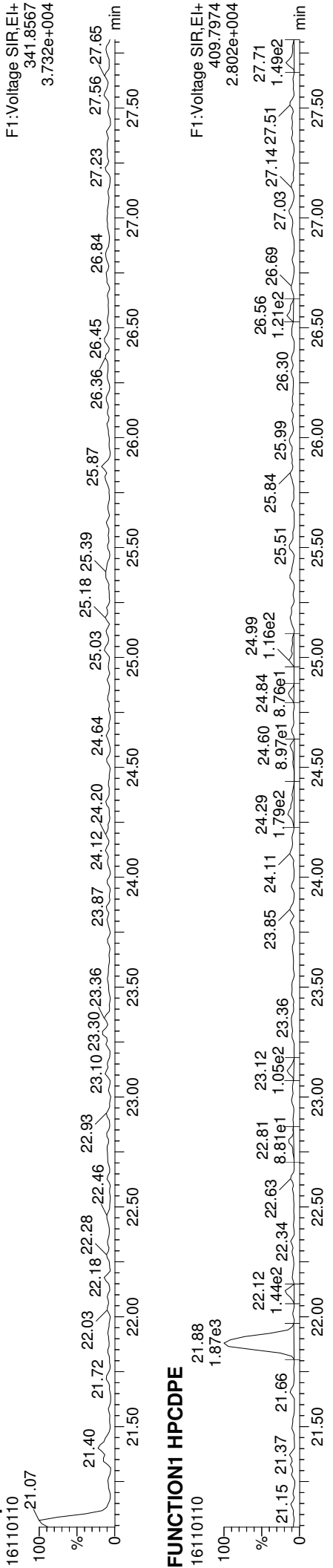
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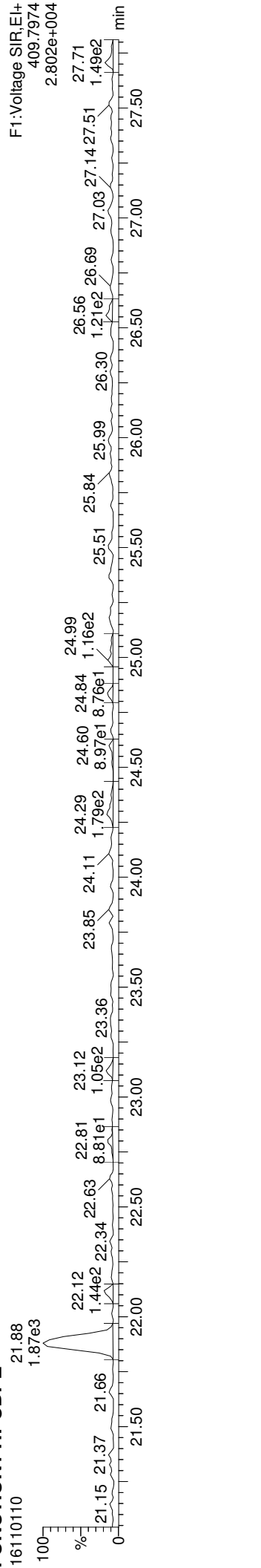
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Total-penta1



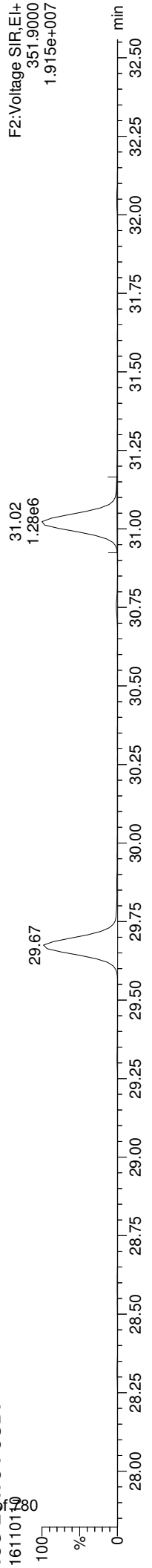
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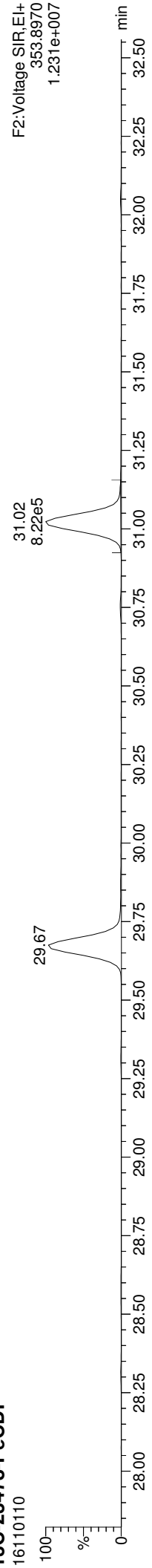
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ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK

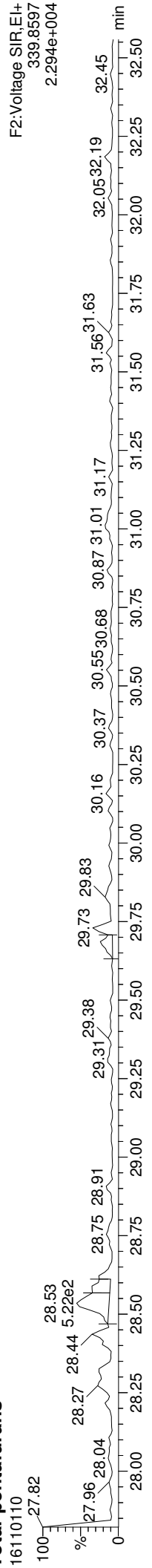
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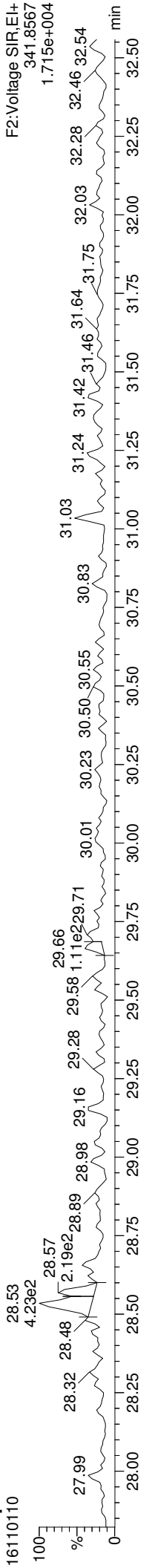
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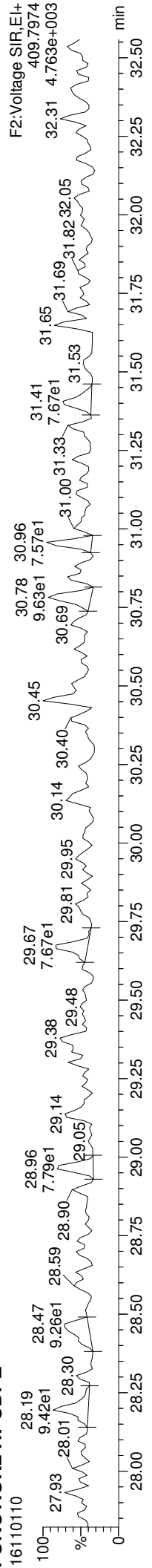
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Total-pentafurans



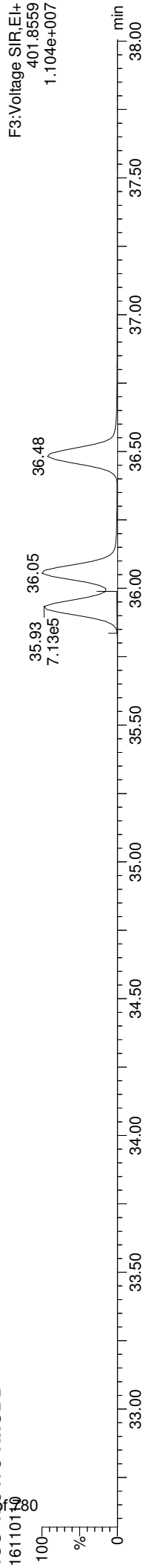
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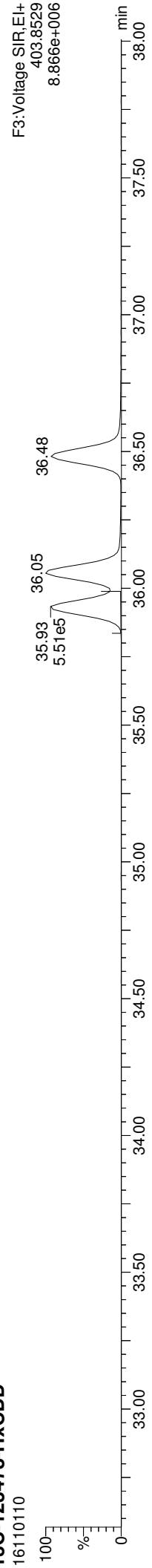
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Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK

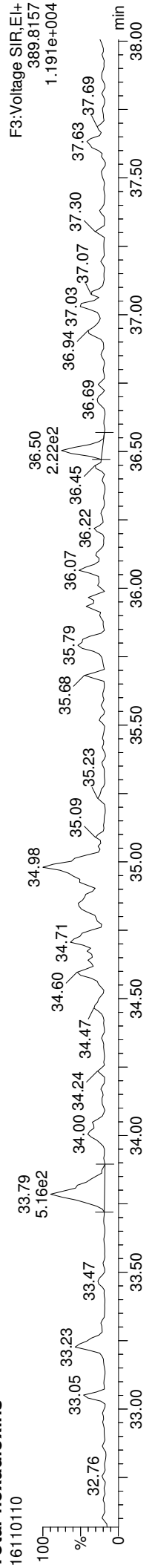
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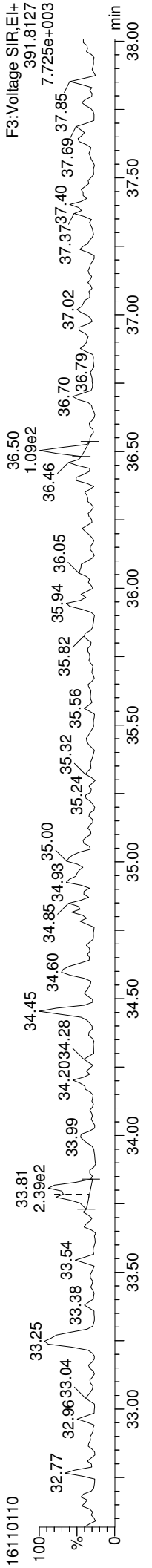
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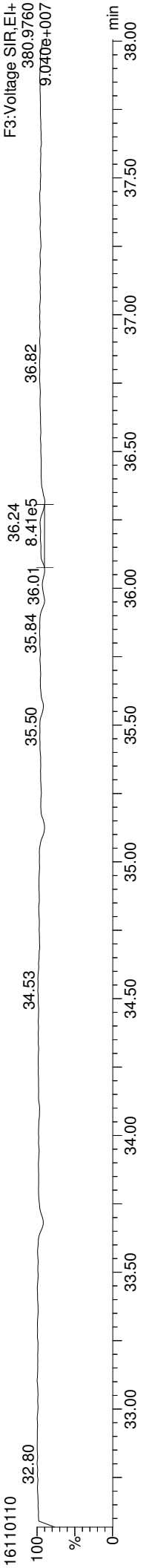
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

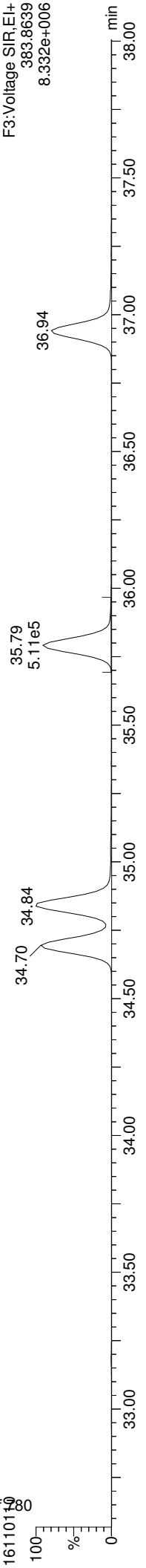


Quantify Sample Report

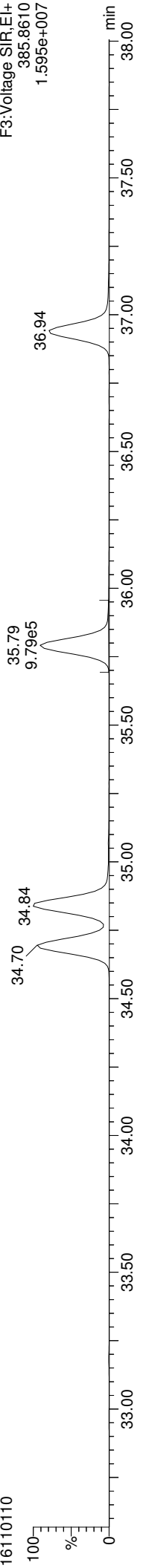
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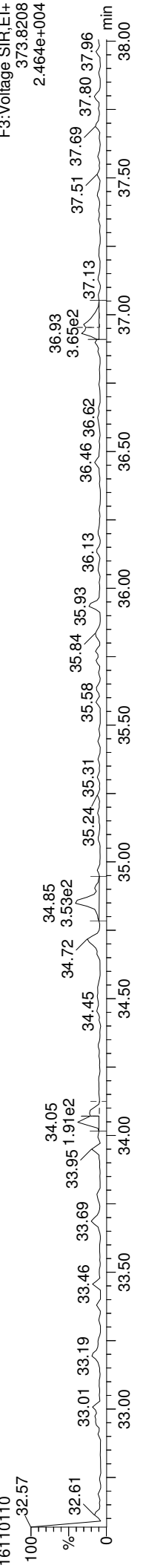
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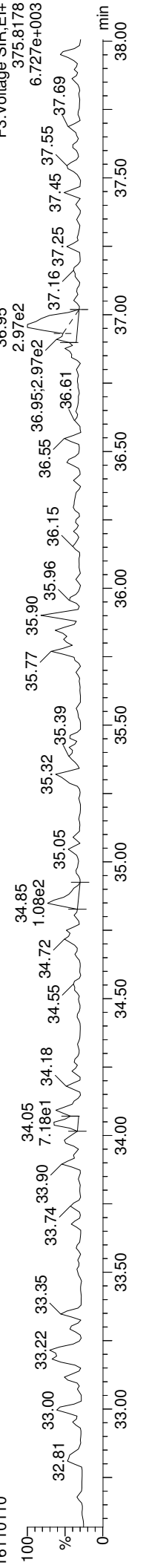
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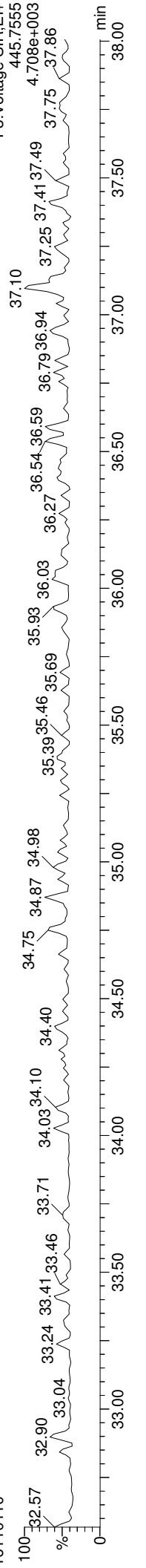
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE

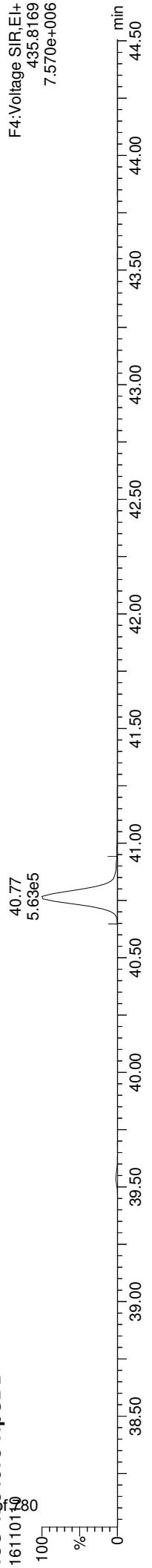


Quantify Sample Report

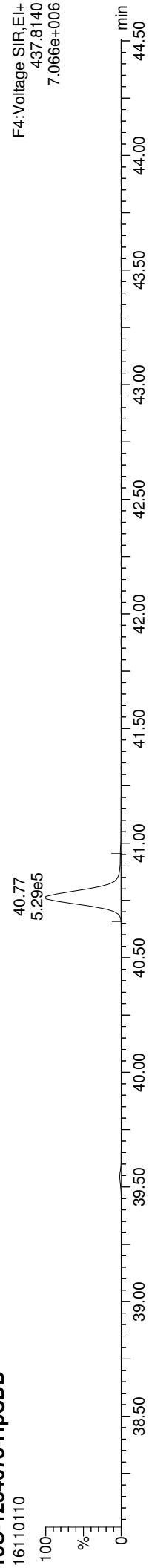
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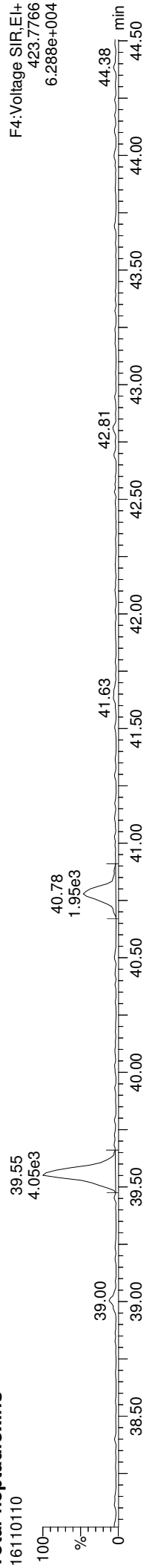
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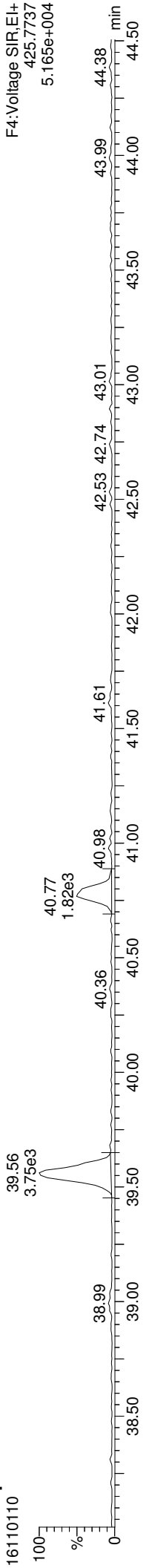
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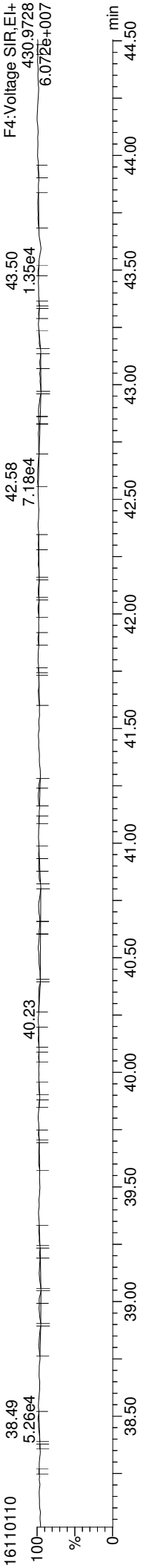
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Total-heptadioxins

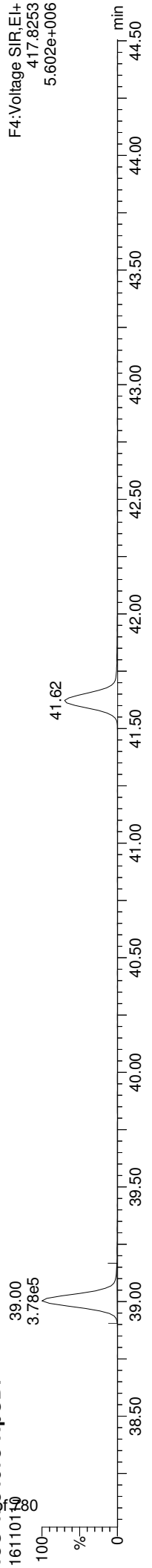


FUNCTION4 PFK

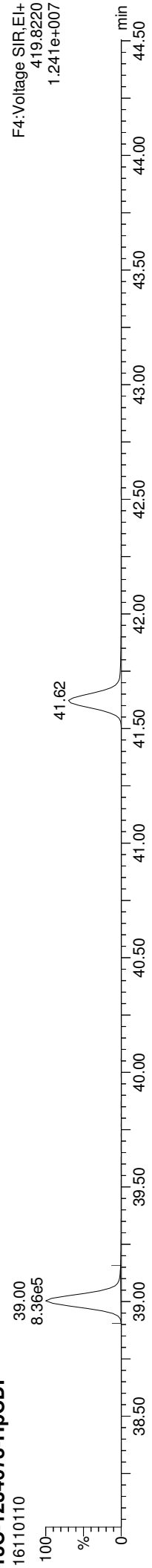


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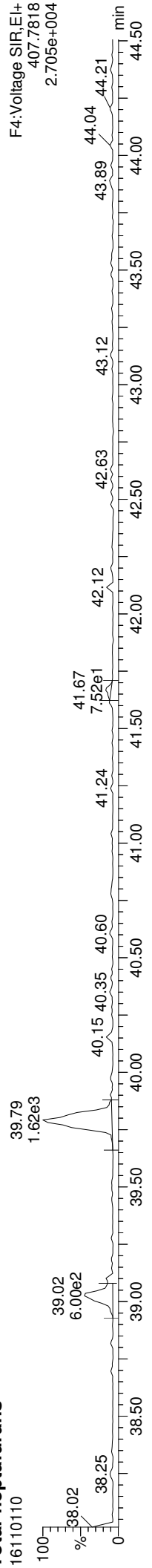
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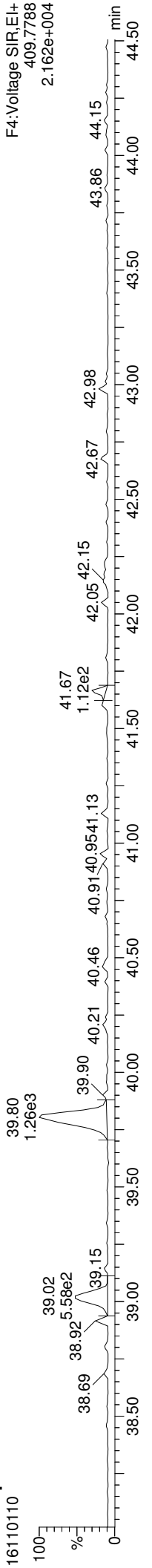
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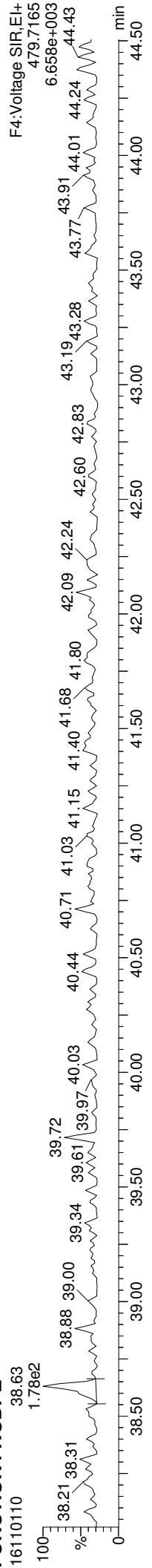
Total-heptafurans



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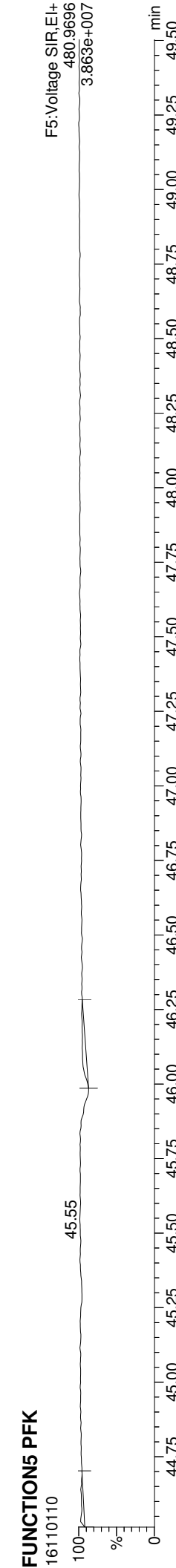
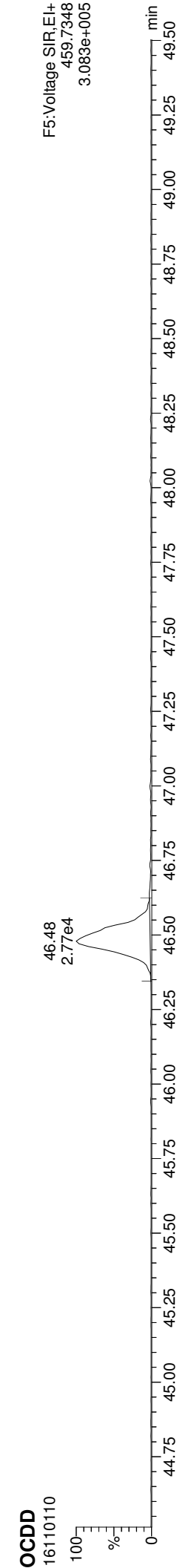
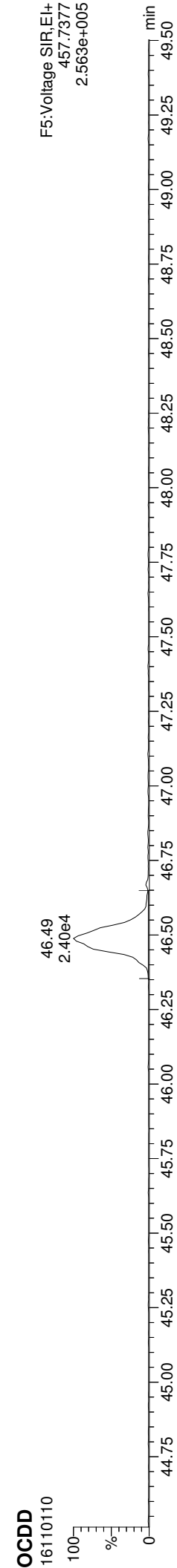
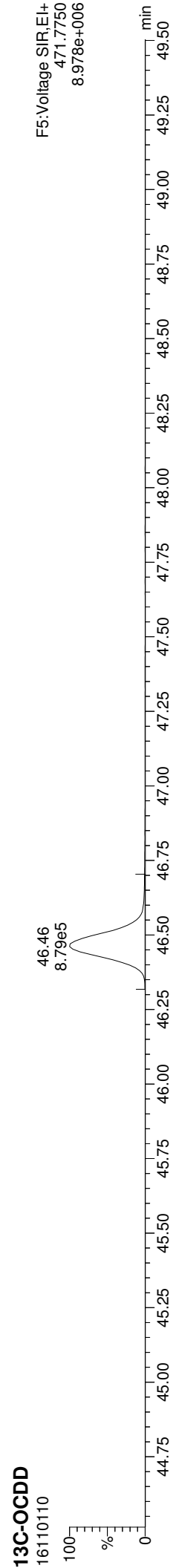
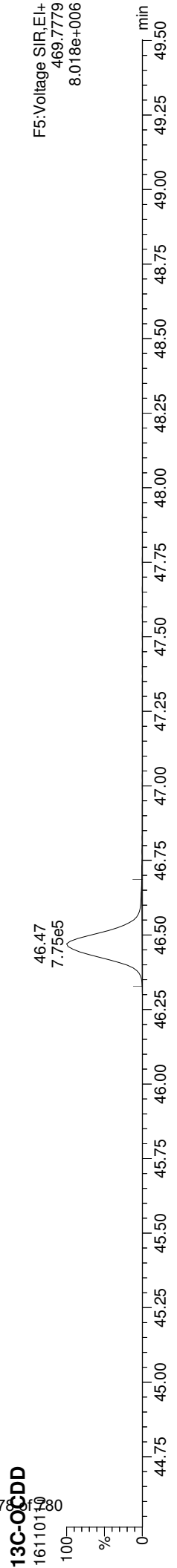


FUNCTION4 NCDPE



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Printed: Wednesday, November 02, 2016 11:35:24 Pacific Daylight Time

ID: 16110187-03, Name: 16110110, Date: 01-Nov-2016, Time: 17:41:04, Conditions: AUTOSPEC01, User: PK

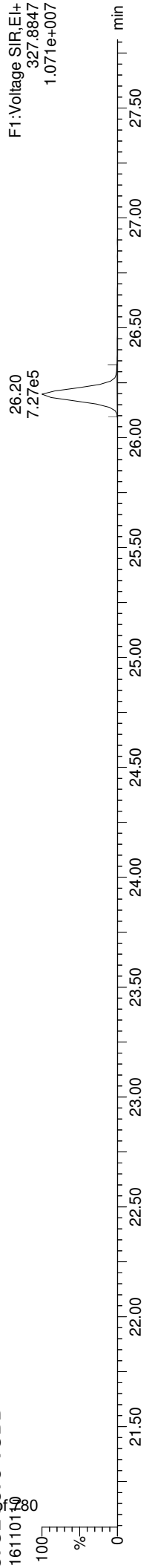


Quantify Sample Report

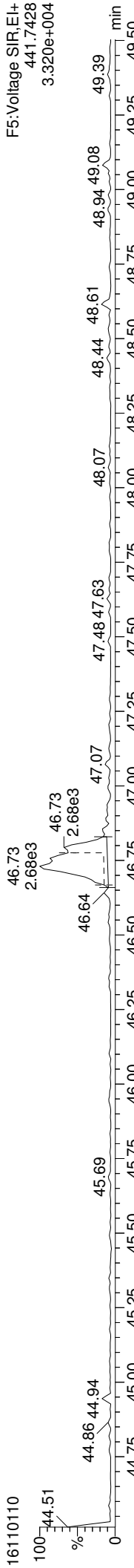
MassLynx MassLynx V4.1 SCN909
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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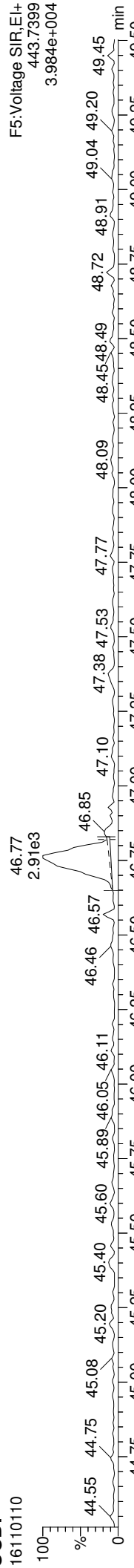
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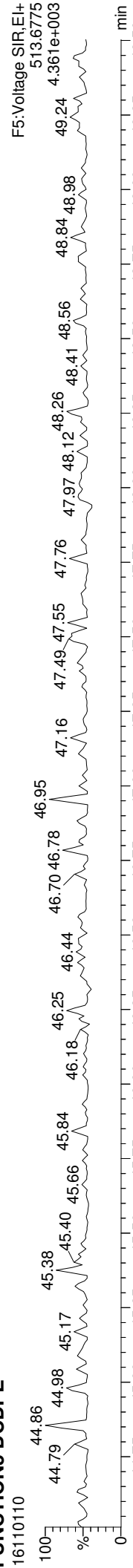
OCDF



OCDF



FUNCTION5 DCDPE





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-04 File ID: 16110111
 Sampled: 10/11/16 12:37 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 18:34
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.04 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.457	0.655-0.886		0.996	0.057	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.056	0.996	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.066	4.98	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.065	4.98	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.098	4.98	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.046	4.98	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.046	4.98	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.048	4.98	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.292	1.054-1.426		4.98	0.068	ng/kg	J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.079	4.98	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.082	4.98	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.085	4.98	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	1.222	0.893-1.208		4.98	0.071	ng/kg	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.085	4.98	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.843	0.893-1.208		4.98	0.531	ng/kg	EMPC, J, B
39001-02-0	OCDF	1	0.799	0.757-1.024		9.96	1.01	ng/kg	J, B
3268-87-9	OCDD	1	0.868	0.757-1.024		9.96	11.5	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.996	0.285	ng/kg
41903-57-5	Total TCDD	1	0.000			0.996	0.246	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.996	0.261	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.996	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.996	0.124	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.996	0.159	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.996	0.433	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.996	1.78	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.022
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.022



Form I
ORGANIC ANALYSIS DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-04 File ID: 16110111
 Sampled: 10/11/16 12:37 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 18:34
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.04 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.781	0.655-0.886		86.4	24 - 169 %	
13C12-2,3,7,8-TCDD		0.791	0.655-0.886		87.3	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.590	1.318-1.783		78.9	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.567	1.318-1.783		81.2	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.597	1.318-1.783		81.9	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.518	0.434-0.587		87.2	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.513	0.434-0.587		80.6	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.525	0.434-0.587		84.0	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.530	0.434-0.587		81.1	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.277	1.054-1.426		93.6	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.286	1.054-1.426		90.7	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.448	0.374-0.506		72.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.450	0.374-0.506		73.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.043	0.893-1.208		79.6	23 - 140 %	
13C12-OCDD		0.901	0.757-1.024		65.0	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			91.0	35 - 197 %	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16R0187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.555	1.001	1.84e2	4.02e2	0.935	0.457	0.770	776	1283	3.36e3	7.44e3	4.3	YES	0.029
12378-PeCDF				0.952			1.550	1205	1426					
23478-PeCDF				0.963			1.550	1205	1426					
123478-HxCDF				1.137			1.240	792	685					
234678-HxCDF				1.164			1.240	792	685					
123678-HxCDF				1.099			1.240	792	685					
123789-HxCDF	36.942	1.000	1.89e2	1.46e2	1.101	1.292	1.240	792	685	5.09e3	3.55e3	6.4	NO	0.034
1234678-HpCDF	39.035	1.001	2.02e2	1.65e2	1.303	1.222	1.050	884	571	4.64e3	4.57e3	5.3	YES	0.035
1234789-HpCDF				1.317			1.050	884	571					
OCDF	46.757	1.006	1.30e3	1.63e3	1.166	0.799	0.890	606	994	1.77e4	1.85e4	29.2	NO	0.509
2378-TCDD				1.134			0.770	1338	730					
12378-PeCDD				0.975			1.550	1360	1099					
123478-HxCDD				1.031			1.240	1105	787					
123678-HxCDD				0.971			1.240	1105	787					
123789-HxCDD				0.947			1.240	1105	787					
1234678-HpCDD	40.778	1.001	8.44e2	1.00e3	1.028	0.843	1.050	640	803	1.15e4	1.19e4	18.0	YES	0.267
OCDD	46.487	1.001	1.48e4	1.70e4	1.107	0.868	0.890	653	1038	1.55e5	1.97e5	237.4	NO	5.797
13C-2378-TCDF	25.540	1.006	9.59e5	1.23e6	1.567	0.781	0.770	7978	4035	1.47e7	1.88e7	1837.7	NO	86.375
13C-12378-PeCDF	29.675	1.169	9.97e5	6.27e5	1.274	1.590	1.550	3557	3877	1.54e7	9.74e6	4328.8	NO	78.912
13C-23478-PeCDF	31.023	1.223	9.88e5	6.31e5	1.235	1.567	1.550	3557	3877	1.54e7	9.89e6	4318.0	NO	81.212
13C-123478-HxCDF	34.695	0.951	3.82e5	7.38e5	1.381	0.518	0.510	3918	7192	5.74e6	1.10e7	1464.1	NO	87.192
13C-123678-HxCDF	34.837	0.955	3.98e5	7.77e5	1.569	0.513	0.510	3918	7192	5.89e6	1.16e7	1501.8	NO	80.550
13C-234678-HxCDF	35.791	0.981	3.62e5	6.89e5	1.345	0.525	0.510	3918	7192	5.40e6	1.03e7	1378.7	NO	83.956
13C-123789-HxCDF	36.931	1.012	3.09e5	5.83e5	1.183	0.530	0.510	3918	7192	4.33e6	8.36e6	1103.9	NO	81.127
13C-1234678-HpCDF	39.002	1.069	2.46e5	5.48e5	1.178	0.448	0.440	2786	2653	3.65e6	8.12e6	1311.6	NO	72.477
13C-1234789-HpCDF	41.611	1.141	1.86e5	4.14e5	0.878	0.450	0.440	2786	2653	2.40e6	5.41e6	863.1	NO	73.477
13C-1234-TCDD	25.376	0.000	7.12e5	9.02e5	1.000	0.789	0.770	3803	2208	1.12e7	1.39e7	2939.4	NO	100.000
13C-2378-TCDD	26.183	1.032	5.65e5	7.14e5	0.908	0.791	0.770	3803	2208	8.55e6	1.10e7	2249.3	NO	87.295
13C-12378-PeCDD	31.275	1.232	6.14e5	3.85e5	0.756	1.597	1.550	1519	1658	9.44e6	5.92e6	6210.8	NO	81.880
13C-123478-HxCDD	35.922	0.985	5.16e5	4.04e5	1.056	1.277	1.240	2067	1655	7.80e6	6.12e6	3775.4	NO	93.620
13C-123678-HxCDD	36.054	0.988	5.52e5	4.29e5	1.163	1.286	1.240	2067	1655	7.99e6	6.29e6	3868.1	NO	90.720
13C-1234678-HpCDD	40.756	1.117	3.44e5	3.29e5	0.909	1.043	1.050	2343	2084	4.66e6	4.56e6	1988.7	NO	79.588
13C-OCDD	46.460	1.274	4.69e5	5.21e5	0.820	0.901	0.890	1709	1532	4.74e6	5.38e6	2775.2	NO	129.921
13C-123789-HxCDD	36.481	0.000	5.19e5	4.11e5	1.000	1.263	1.240	2067	1655	7.67e6	6.00e6	3710.1	NO	100.000
Total-tetrafurans			1.47e3		0.935			776		2.35e4				0.143

Quantify Sample Summary Report MassLynx MassLynx V4.1 SCN909

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					921		0.00e0				
Total-pentafurans			9.87e2		0.957			1205		1.73e4				0.131
Total-hexafurans			3.71e2		1.125			792		1.13e4				0.062
Total-heptafurans			1.01e3		1.310			884		1.78e4				0.217
Total-Furans			5.15e3		1.114			776		8.76e4				1.062
Total-tetradioxins			9.61e2		1.134			1338		1.29e4				0.124
Total-pentadioxins			0.00e0		0.975			1360		0.00e0				0.080
Total-hexadioxins			4.00e2		0.983			1105		7.24e3				0.892
Total-heptadioxins			2.88e3		1.028			640		4.02e4				6.892
Total-Dioxins			1.90e4		1.028			1338		2.15e5				7.954
Total-TEQ			2.41e4					1338		3.03e5		5935.2		36.413
37CL-2378-TCDD	26.198	1.032	6.27e5		1.067			1627		9.66e6				
FUNCTION1 PFK			5.50e6					544770		6.08e7				0.000
FUNCTION2 PFK			1.12e5					145557		3.45e6				0.000
FUNCTION3 PFK			3.84e6					559020		2.08e7				
FUNCTION4 PFK			6.73e5					353416		1.74e7				
FUNCTION5 PFK			2.91e5					295476		1.12e7				
FUNCTION1 HXCD...			2.52e4					548		3.51e5				0.000
FUNCTION1 HPCD...			2.67e3					1074		4.66e4				0.000
FUNCTION2 HPCD...			5.53e2					957		1.50e4				0.000
FUNCTION3 OCDPE			9.50e1					465		4.05e3				0.000
FUNCTION4 NCDPE			8.72e2					777		1.56e4				0.000
FUNCTION5 DCDPE			0.00e0					411		0.00e0				

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16H0187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	25.79	611.471	0.935	0.030		1.24	0.77	YES	6.3
2	1 2378-TCDF	303.9016	25.56	586.138	0.935	0.029	0.021	0.46	0.77	YES	4.3
3	35 Total-tetrafurans	303.9016	24.46	713.821	0.935	0.035		1.05	0.77	YES	5.6
4	35 Total-tetrafurans	303.9016	23.24	305.829	0.935	0.015		1.00	0.77	YES	4.2
5	35 Total-tetrafurans	303.9016	22.93	705.155	0.935	0.035		1.59	0.77	YES	9.9

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37 Total-pentafurans	339.8597	28.55	1475.483	0.957	0.095		0.73	1.55	YES	9.6
2	37 Total-pentafurans	339.8597	28.30	555.828	0.957	0.036		1.92	1.55	YES	4.8

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7 123789-HxCDF	373.8208	36.94	334.524	1.101	0.034	0.034	1.29	1.24	NO	6.4
2	38 Total-hexafurans	373.8208	34.08	338.894	1.125	0.028		1.16	1.24	NO	7.8

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39 Total-heptafurans	407.7818	39.79	1234.598	1.310	0.135		0.89	1.05	YES	9.1
2	8 1234678-HpCDF	407.7818	39.03	367.288	1.303	0.035	0.033	1.22	1.05	YES	5.3
3	39 Total-heptafurans	407.7818	39.00	424.947	1.310	0.047		1.16	1.05	NO	5.7

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	25.79	611.471	0.935	0.030		1.24	0.77	YES	6.3
2	1 2378-TCDF	303.9016	25.56	586.138	0.935	0.029	0.021	0.46	0.77	YES	4.3
3	35 Total-tetrafurans	303.9016	24.46	713.821	0.935	0.035		1.05	0.77	YES	5.6
4	35 Total-tetrafurans	303.9016	23.24	305.829	0.935	0.015		1.00	0.77	YES	4.2
5	35 Total-tetrafurans	303.9016	22.93	705.155	0.935	0.035		1.59	0.77	YES	9.9
6	37 Total-pentafurans	339.8597	28.55	1475.483	0.957	0.095		0.73	1.55	YES	9.6
7	37 Total-pentafurans	339.8597	28.30	555.828	0.957	0.036		1.92	1.55	YES	4.8
8	7 123789-HxCDF	373.8208	36.94	334.524	1.101	0.034	0.034	1.29	1.24	NO	6.4
9	38 Total-hexafurans	373.8208	34.08	338.894	1.125	0.028		1.16	1.24	NO	7.8
10	39 Total-heptafurans	407.7818	39.79	1234.598	1.310	0.135		0.89	1.05	YES	9.1
11	8 1234678-HpCDF	407.7818	39.03	367.288	1.303	0.035	0.033	1.22	1.05	YES	5.3
12	39 Total-heptafurans	407.7818	39.00	424.947	1.310	0.047		1.16	1.05	NO	5.7
13	10 OCDF	441.7428	46.76	2936.818	1.166	0.509	0.509	0.80	0.89	NO	29.2

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16H0187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	25.56	509.495	1.134	0.035		2.44	0.77	YES	3.4
2	41 Total-tetradoxins	319.8965	23.37	1282.955	1.134	0.088		0.88	0.77	NO	6.2

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43 Total-hexadioxins	389.8157	33.78	743.477	0.983	0.080		1.16	1.24	NO	6.5

HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.78	1845.427	1.028	0.267	0.238	0.84	1.05	YES	18.0
2	44 Total-heptadioxins	423.7766	39.55	4326.682	1.028	0.625		0.88	1.05	YES	44.8

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	25.56	509.495	1.134	0.035		2.44	0.77	YES	3.4
2	41 Total-tetradoxins	319.8965	23.37	1282.955	1.134	0.088		0.88	0.77	NO	6.2
3	43 Total-hexadioxins	389.8157	33.78	743.477	0.983	0.080		1.16	1.24	NO	6.5
4	16 1234678-HpCDD	423.7766	40.78	1845.427	1.028	0.267	0.238	0.84	1.05	YES	18.0
5	44 Total-heptadioxins	423.7766	39.55	4326.682	1.028	0.625		0.88	1.05	YES	44.8
6	17 OCDD	457.7377	46.49	31773.429	1.107	5.797	5.797	0.87	0.89	NO	237.4

TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	25.79	611.471	0.935	0.030		1.24	0.77	YES	6.3
2	1 2378-TCDF	303.9016	25.56	586.138	0.935	0.029	0.021	0.46	0.77	YES	4.3
3	35 Total-tetrafurans	303.9016	24.46	713.821	0.935	0.035		1.05	0.77	YES	5.6
4	35 Total-tetrafurans	303.9016	23.24	305.829	0.935	0.015		1.00	0.77	YES	4.2
5	35 Total-tetrafurans	303.9016	22.93	705.155	0.935	0.035		1.59	0.77	YES	9.9
6	37 Total-pentafurans	339.8597	28.55	1475.483	0.957	0.095		0.73	1.55	YES	9.6
7	37 Total-pentafurans	339.8597	28.30	555.828	0.957	0.036		1.92	1.55	YES	4.8
8	7 123789-HxCDF	373.8208	36.94	334.524	1.101	0.034	0.034	1.29	1.24	NO	6.4
9	38 Total-hexafurans	373.8208	34.08	338.894	1.125	0.028		1.16	1.24	NO	7.8
10	39 Total-heptafurans	407.7818	39.79	1234.598	1.310	0.135		0.89	1.05	YES	9.1
11	8 1234678-HpCDF	407.7818	39.03	367.288	1.303	0.035	0.033	1.22	1.05	YES	5.3
12	39 Total-heptafurans	407.7818	39.00	424.947	1.310	0.047		1.16	1.05	NO	5.7
13	10 OCDF	441.7428	46.76	2936.818	1.166	0.509	0.509	0.80	0.89	NO	29.2
14	41 Total-tetradoxins	319.8965	25.56	509.495	1.134	0.035		2.44	0.77	YES	3.4
15	41 Total-tetradoxins	319.8965	23.37	1282.955	1.134	0.088		0.88	0.77	NO	6.2
16	43 Total-hexadioxins	389.8157	33.78	743.477	0.983	0.080		1.16	1.24	NO	6.5
17	16 1234678-HpCDD	423.7766	40.78	1845.427	1.028	0.267	0.238	0.84	1.05	YES	18.0
18	44 Total-heptadioxins	423.7766	39.55	4326.682	1.028	0.625		0.88	1.05	YES	44.8
19	17 OCDD	457.7377	46.49	31773.429	1.107	5.797	5.797	0.87	0.89	NO	237.4

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ID: 16H0187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	21.33	0.000							1.5
2	48 FUNCTION1 PFK	330.9792	21.31	0.000							1.8
3	48 FUNCTION1 PFK	330.9792	21.15	0.000							1.6
4	48 FUNCTION1 PFK	330.9792	24.64	0.000							0.4
5	48 FUNCTION1 PFK	330.9792	24.58	0.000							1.5
6	48 FUNCTION1 PFK	330.9792	24.46	0.000							1.6
7	48 FUNCTION1 PFK	330.9792	24.26	0.000							2.1
8	48 FUNCTION1 PFK	330.9792	24.17	0.000							2.3
9	48 FUNCTION1 PFK	330.9792	24.08	0.000							1.4
10	48 FUNCTION1 PFK	330.9792	22.66	0.000							2.2
11	48 FUNCTION1 PFK	330.9792	22.52	0.000							4.9
12	48 FUNCTION1 PFK	330.9792	22.43	0.000							5.5
13	48 FUNCTION1 PFK	330.9792	22.33	0.000							6.6
14	48 FUNCTION1 PFK	330.9792	22.15	0.000							9.5
15	48 FUNCTION1 PFK	330.9792	22.12	0.000							8.9
16	48 FUNCTION1 PFK	330.9792	21.92	0.000							12.3
17	48 FUNCTION1 PFK	330.9792	21.79	0.000							9.1
18	48 FUNCTION1 PFK	330.9792	21.64	0.000							7.2
19	48 FUNCTION1 PFK	330.9792	21.61	0.000							7.7
20	48 FUNCTION1 PFK	330.9792	27.56	0.000							1.4
21	48 FUNCTION1 PFK	330.9792	27.24	0.000							0.8
22	48 FUNCTION1 PFK	330.9792	27.00	0.000							1.0
23	48 FUNCTION1 PFK	330.9792	26.91	0.000							1.5
24	48 FUNCTION1 PFK	330.9792	26.85	0.000							1.6
25	48 FUNCTION1 PFK	330.9792	26.74	0.000							0.9
26	48 FUNCTION1 PFK	330.9792	26.18	0.000							1.3
27	48 FUNCTION1 PFK	330.9792	26.06	0.000							1.2
28	48 FUNCTION1 PFK	330.9792	25.87	0.000							1.5
29	48 FUNCTION1 PFK	330.9792	25.66	0.000							0.8
30	48 FUNCTION1 PFK	330.9792	25.56	0.000							1.0
31	48 FUNCTION1 PFK	330.9792	25.42	0.000							1.3
32	48 FUNCTION1 PFK	330.9792	25.18	0.000							1.1
33	48 FUNCTION1 PFK	330.9792	25.00	0.000							1.9
34	48 FUNCTION1 PFK	330.9792	24.93	0.000							1.8
35	48 FUNCTION1 PFK	330.9792	24.70	0.000							0.5
36	48 FUNCTION1 PFK	330.9792	27.75	0.000							1.6
37	48 FUNCTION1 PFK	330.9792	27.62	0.000							2.2

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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ID: 16H0187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366.9792	31.74	0.000		0.000					1.5
2	49 FUNCTION2 PFK	366.9792	31.56	0.000		0.000					1.2
3	49 FUNCTION2 PFK	366.9792	31.41	0.000		0.000					1.0
4	49 FUNCTION2 PFK	366.9792	31.34	0.000		0.000					0.6
5	49 FUNCTION2 PFK	366.9792	31.23	0.000		0.000					2.0
6	49 FUNCTION2 PFK	366.9792	31.12	0.000		0.000					2.5
7	49 FUNCTION2 PFK	366.9792	30.85	0.000		0.000					0.6
8	49 FUNCTION2 PFK	366.9792	30.70	0.000		0.000					1.5
9	49 FUNCTION2 PFK	366.9792	30.63	0.000		0.000					1.6
10	49 FUNCTION2 PFK	366.9792	30.22	0.000		0.000					1.6
11	49 FUNCTION2 PFK	366.9792	29.58	0.000		0.000					1.9
12	49 FUNCTION2 PFK	366.9792	29.15	0.000		0.000					0.7
13	49 FUNCTION2 PFK	366.9792	29.06	0.000		0.000					1.9
14	49 FUNCTION2 PFK	366.9792	32.39	0.000		0.000					1.8
15	49 FUNCTION2 PFK	366.9792	32.33	0.000		0.000					1.3
16	49 FUNCTION2 PFK	366.9792	31.94	0.000		0.000					0.9
17	49 FUNCTION2 PFK	366.9792	31.78	0.000		0.000					1.0

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	36.24	0.000		0.000					8.4
2	50 FUNCTION3 PFK	380.9760	36.21	0.000		0.000					9.1
3	50 FUNCTION3 PFK	380.9760	36.00	0.000		0.000					6.6
4	50 FUNCTION3 PFK	380.9760	33.80	0.000		0.000					9.2
5	50 FUNCTION3 PFK	380.9760	33.29	0.000		0.000					3.9

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PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	38.48	0.000							1.9
2	51 FUNCTION4 PFK	430.9728	38.43	0.000							1.6
3	51 FUNCTION4 PFK	430.9728	38.19	0.000							1.3
4	51 FUNCTION4 PFK	430.9728	38.11	0.000							4.0
5	51 FUNCTION4 PFK	430.9728	38.07	0.000							4.3
6	51 FUNCTION4 PFK	430.9728	41.00	0.000							0.9
7	51 FUNCTION4 PFK	430.9728	40.82	0.000							0.4
8	51 FUNCTION4 PFK	430.9728	40.77	0.000							1.9
9	51 FUNCTION4 PFK	430.9728	40.42	0.000							1.3
10	51 FUNCTION4 PFK	430.9728	40.31	0.000							1.4
11	51 FUNCTION4 PFK	430.9728	40.05	0.000							0.9
12	51 FUNCTION4 PFK	430.9728	40.01	0.000							1.1
13	51 FUNCTION4 PFK	430.9728	39.62	0.000							1.4
14	51 FUNCTION4 PFK	430.9728	39.57	0.000							0.9
15	51 FUNCTION4 PFK	430.9728	39.52	0.000							1.1
16	51 FUNCTION4 PFK	430.9728	39.47	0.000							0.5
17	51 FUNCTION4 PFK	430.9728	39.40	0.000							0.7
18	51 FUNCTION4 PFK	430.9728	39.16	0.000							1.1
19	51 FUNCTION4 PFK	430.9728	38.86	0.000							1.6
20	51 FUNCTION4 PFK	430.9728	38.63	0.000							0.8
21	51 FUNCTION4 PFK	430.9728	38.52	0.000							1.9
22	51 FUNCTION4 PFK	430.9728	44.43	0.000							1.5
23	51 FUNCTION4 PFK	430.9728	43.97	0.000							0.8
24	51 FUNCTION4 PFK	430.9728	43.64	0.000							1.1
25	51 FUNCTION4 PFK	430.9728	43.24	0.000							1.3
26	51 FUNCTION4 PFK	430.9728	43.20	0.000							1.6
27	51 FUNCTION4 PFK	430.9728	43.00	0.000							1.1
28	51 FUNCTION4 PFK	430.9728	42.90	0.000							1.7
29	51 FUNCTION4 PFK	430.9728	42.59	0.000							1.9
30	51 FUNCTION4 PFK	430.9728	42.30	0.000							0.8
31	51 FUNCTION4 PFK	430.9728	41.92	0.000							1.3
32	51 FUNCTION4 PFK	430.9728	41.86	0.000							1.5
33	51 FUNCTION4 PFK	430.9728	41.82	0.000							1.2
34	51 FUNCTION4 PFK	430.9728	41.49	0.000							1.4
35	51 FUNCTION4 PFK	430.9728	41.17	0.000							1.1

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PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52 FUNCTION5 PFK	480.9696	44.72	0.000							1.2
2	52 FUNCTION5 PFK	480.9696	46.66	0.000							1.1
3	52 FUNCTION5 PFK	480.9696	46.58	0.000							1.4
4	52 FUNCTION5 PFK	480.9696	46.46	0.000							0.4
5	52 FUNCTION5 PFK	480.9696	46.13	0.000							1.0
6	52 FUNCTION5 PFK	480.9696	45.85	0.000							1.5
7	52 FUNCTION5 PFK	480.9696	45.81	0.000							1.2
8	52 FUNCTION5 PFK	480.9696	45.66	0.000							1.0
9	52 FUNCTION5 PFK	480.9696	45.58	0.000							1.6
10	52 FUNCTION5 PFK	480.9696	45.41	0.000							1.5
11	52 FUNCTION5 PFK	480.9696	45.37	0.000							1.4
12	52 FUNCTION5 PFK	480.9696	45.21	0.000							0.4
13	52 FUNCTION5 PFK	480.9696	45.19	0.000							0.8
14	52 FUNCTION5 PFK	480.9696	45.01	0.000							0.5
15	52 FUNCTION5 PFK	480.9696	44.97	0.000							0.8
16	52 FUNCTION5 PFK	480.9696	44.92	0.000							1.7
17	52 FUNCTION5 PFK	480.9696	44.89	0.000							0.8
18	52 FUNCTION5 PFK	480.9696	49.29	0.000							1.5
19	52 FUNCTION5 PFK	480.9696	49.18	0.000							0.7
20	52 FUNCTION5 PFK	480.9696	49.08	0.000							0.7
21	52 FUNCTION5 PFK	480.9696	48.82	0.000							0.7
22	52 FUNCTION5 PFK	480.9696	48.63	0.000							0.4
23	52 FUNCTION5 PFK	480.9696	48.41	0.000							1.3
24	52 FUNCTION5 PFK	480.9696	48.12	0.000							0.4
25	52 FUNCTION5 PFK	480.9696	47.49	0.000							1.0
26	52 FUNCTION5 PFK	480.9696	47.45	0.000							1.7
27	52 FUNCTION5 PFK	480.9696	47.38	0.000							0.8
28	52 FUNCTION5 PFK	480.9696	47.24	0.000							0.9
29	52 FUNCTION5 PFK	480.9696	47.21	0.000							0.7
30	52 FUNCTION5 PFK	480.9696	47.16	0.000							0.6
31	52 FUNCTION5 PFK	480.9696	47.01	0.000							1.4
32	52 FUNCTION5 PFK	480.9696	46.80	0.000							1.0
33	52 FUNCTION5 PFK	480.9696	46.73	0.000							1.6
34	52 FUNCTION5 PFK	480.9696	49.47	0.000							1.6
35	52 FUNCTION5 PFK	480.9696	49.45	0.000							1.0
36	52 FUNCTION5 PFK	480.9696	49.39	0.000							1.9

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	27.20	0.000		0.000					4.1
2	53 FUNCTION1 HXCD...	375.8364	27.06	0.000		0.000					4.1
3	53 FUNCTION1 HXCD...	375.8364	26.21	0.000		0.000					8.4
4	53 FUNCTION1 HXCD...	375.8364	25.78	0.000		0.000					5.6
5	53 FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					492.6
6	53 FUNCTION1 HXCD...	375.8364	25.35	0.000		0.000					122.2
7	53 FUNCTION1 HXCD...	375.8364	23.22	0.000		0.000					3.1

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ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	23.87	0.000		0.000					2.9
2	54 FUNCTION1 HPCD...	409.7974	22.85	0.000		0.000					1.9
3	54 FUNCTION1 HPCD...	409.7974	22.31	0.000		0.000					1.8
4	54 FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					36.7

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	32.50	0.000		0.000					2.4
2	55 FUNCTION2 HPCD...	409.7974	31.70	0.000		0.000					2.4
3	55 FUNCTION2 HPCD...	409.7974	31.11	0.000		0.000					2.4
4	55 FUNCTION2 HPCD...	409.7974	30.50	0.000		0.000					3.5
5	55 FUNCTION2 HPCD...	409.7974	28.41	0.000		0.000					2.4
6	55 FUNCTION2 HPCD...	409.7974	27.90	0.000		0.000					2.5

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445.7555	34.29	0.000		0.000					8.7

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	40.41	0.000		0.000					4.7
2	57 FUNCTION4 NCDPE	479.7165	38.62	0.000		0.000					15.4

ETHERS6

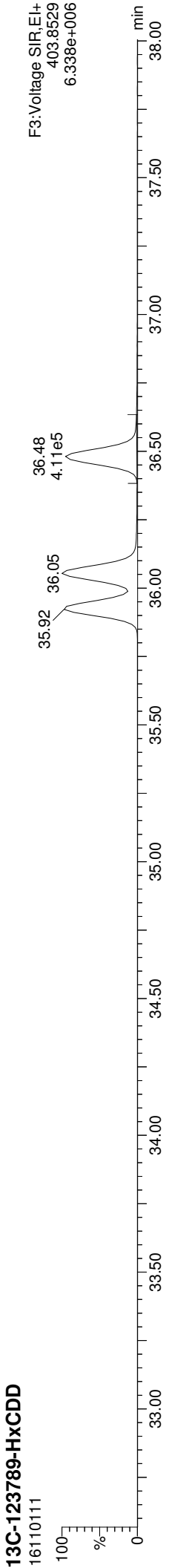
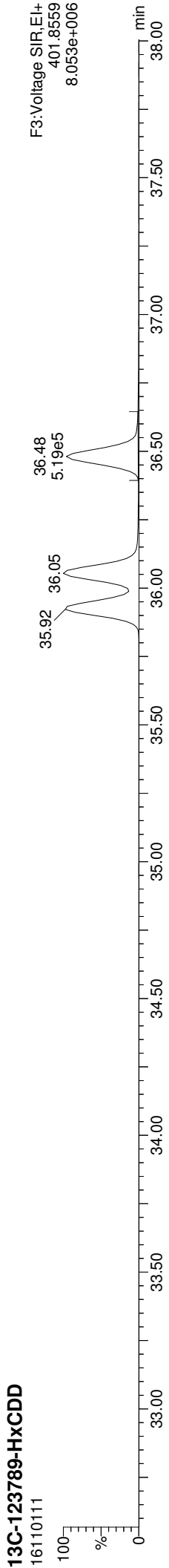
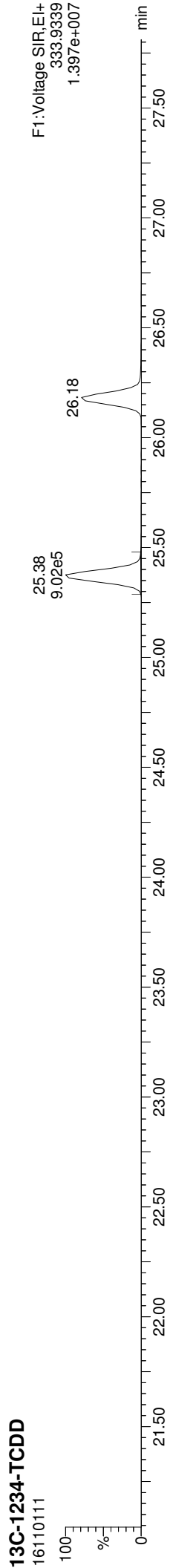
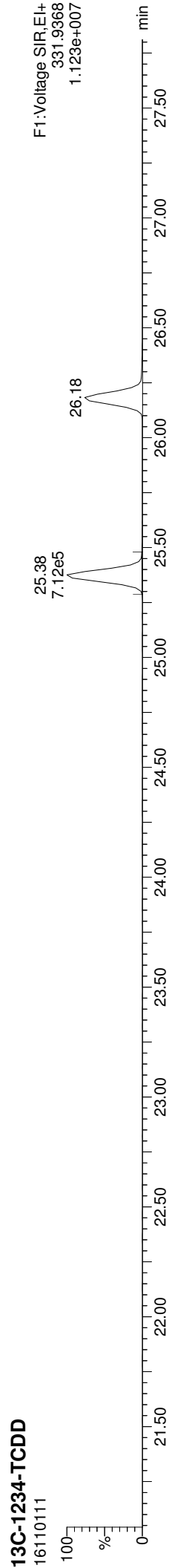
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Quantify Sample Report MassLynx MassLynx V4.1 SCN909

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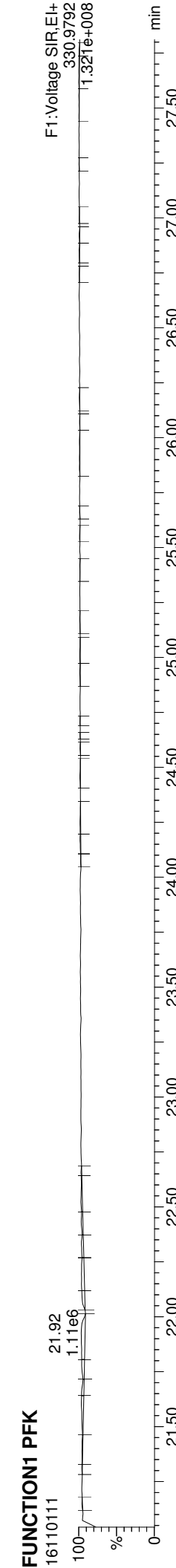
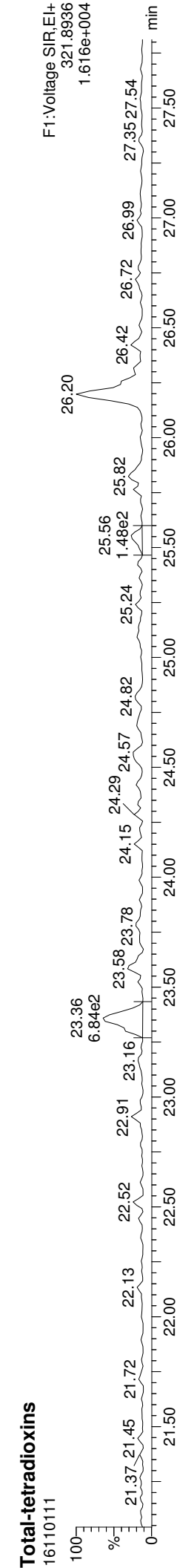
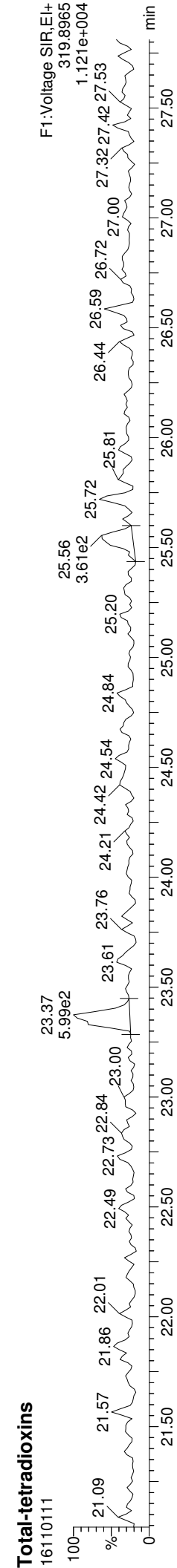
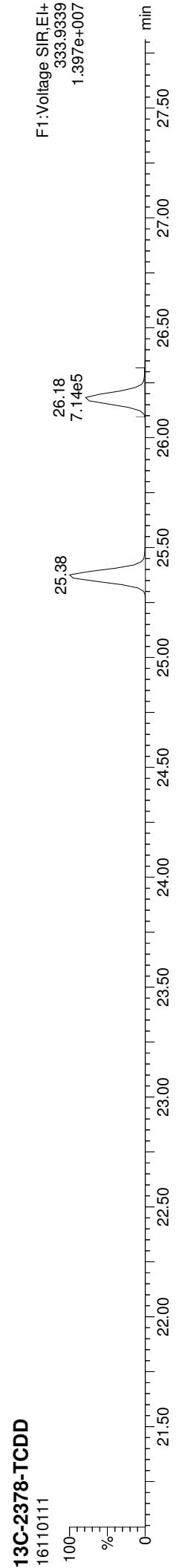
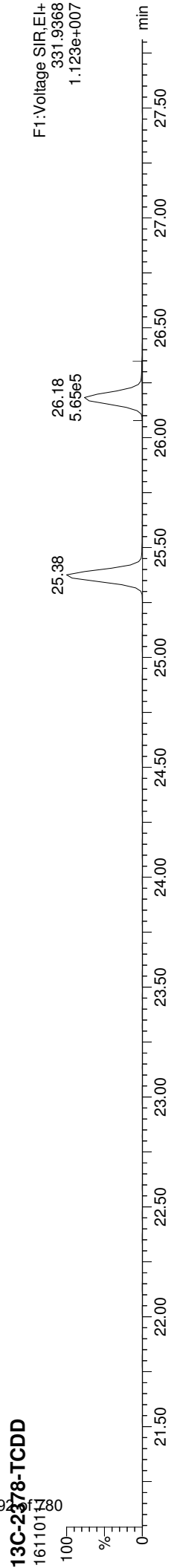
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ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK



Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
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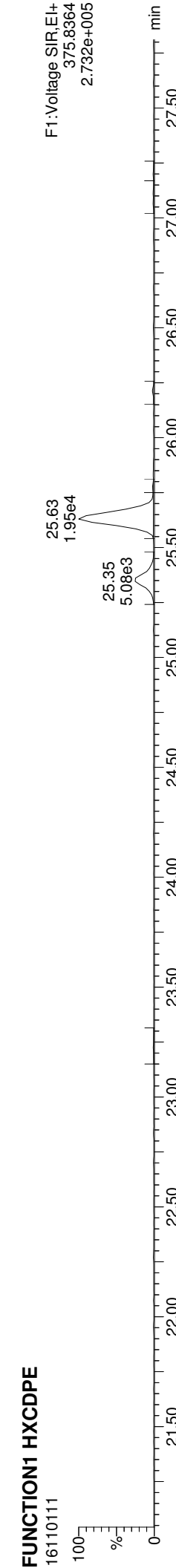
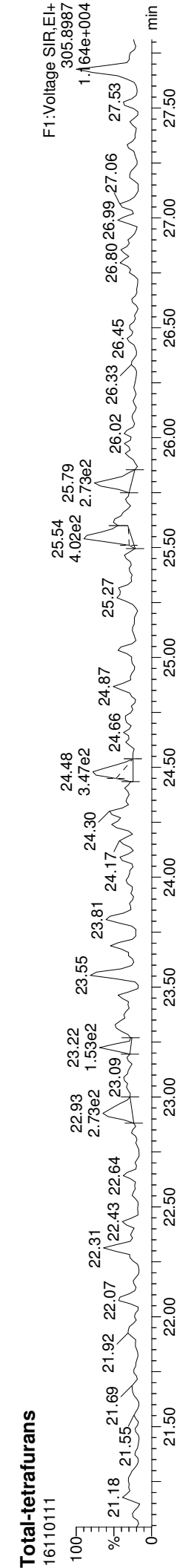
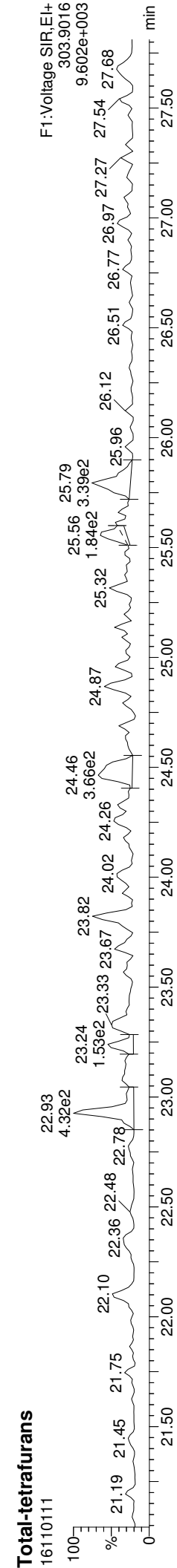
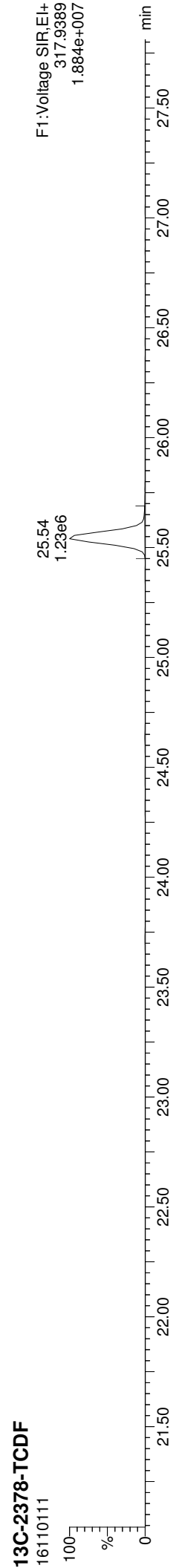
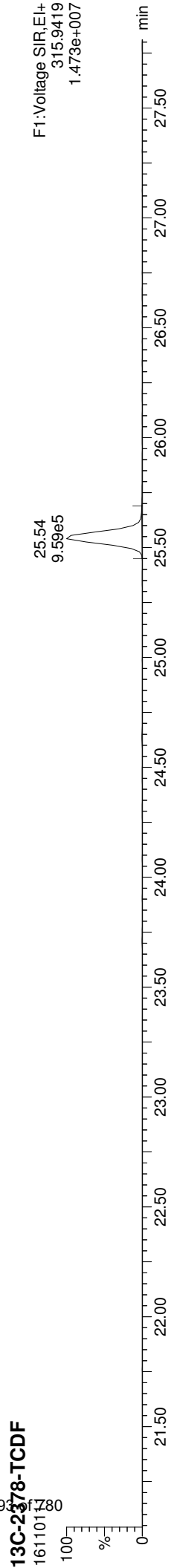
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Quantify Sample Report

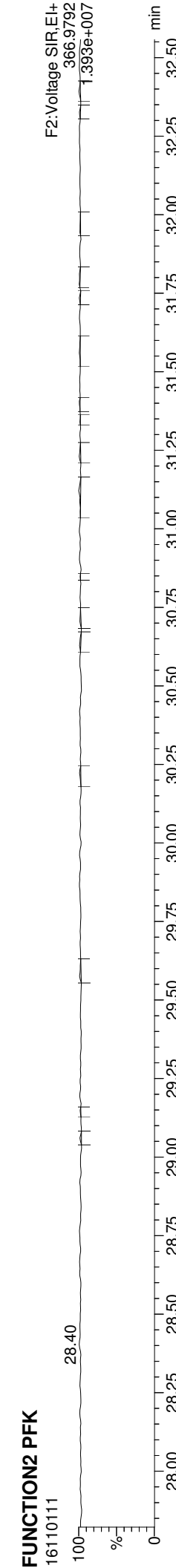
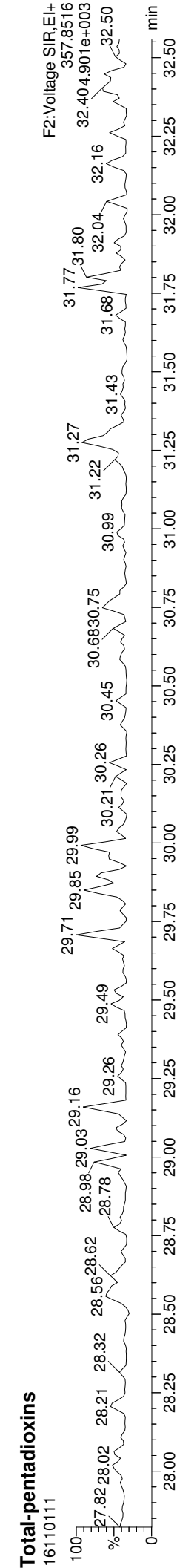
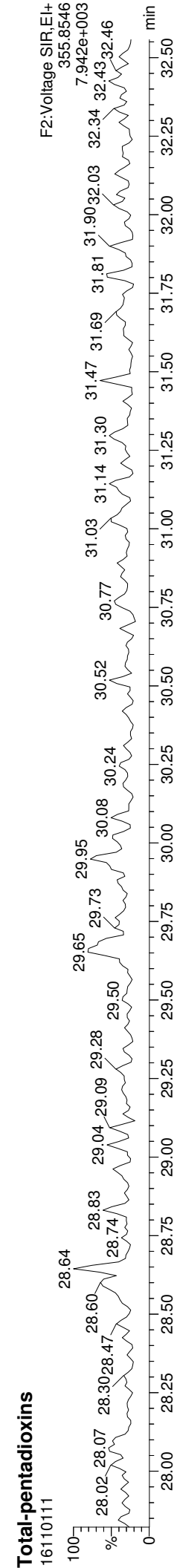
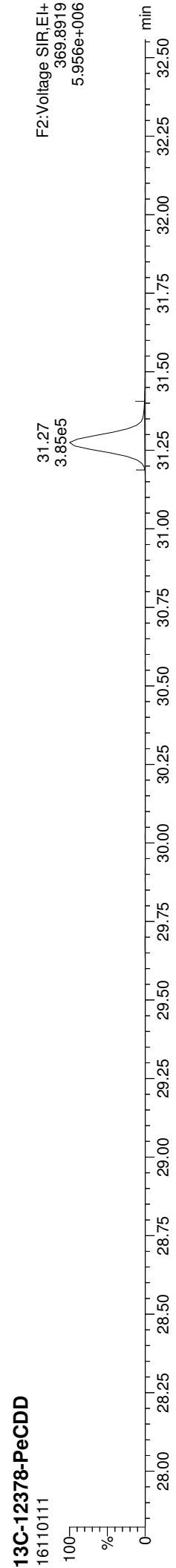
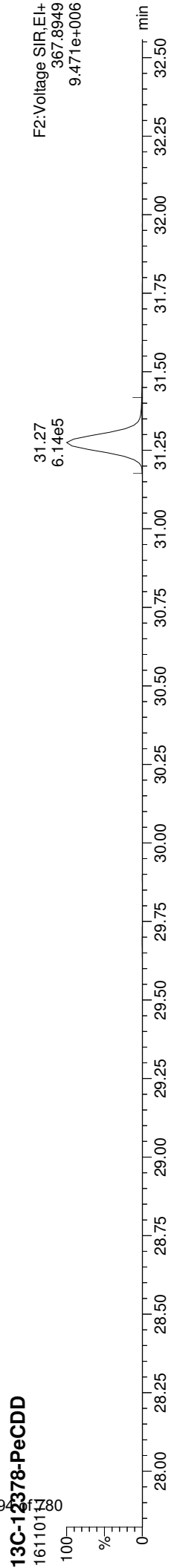
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK



Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909

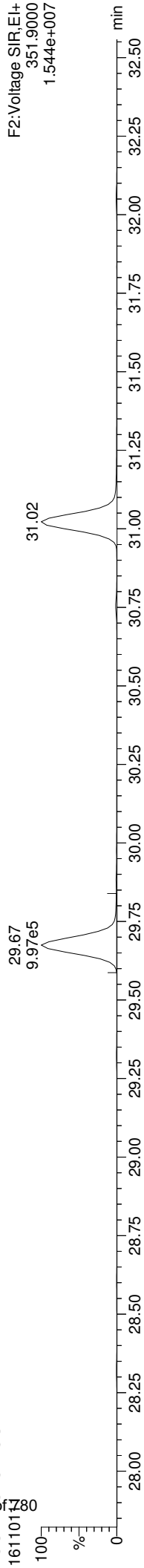
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time

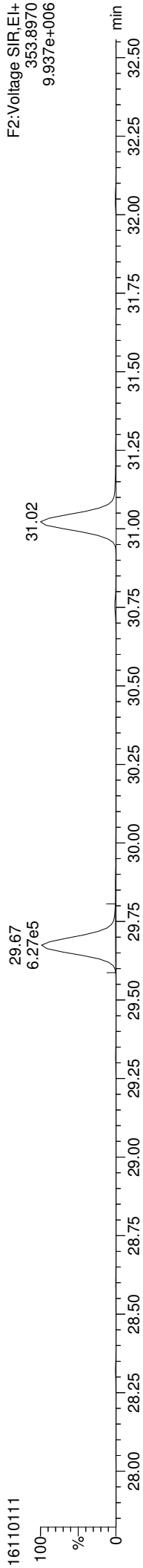
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

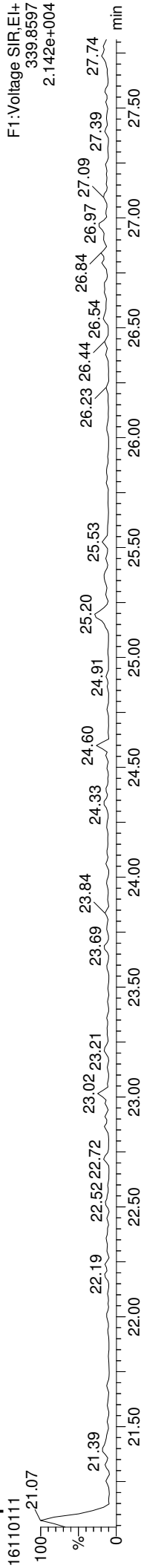
13C-12378-PeCDF



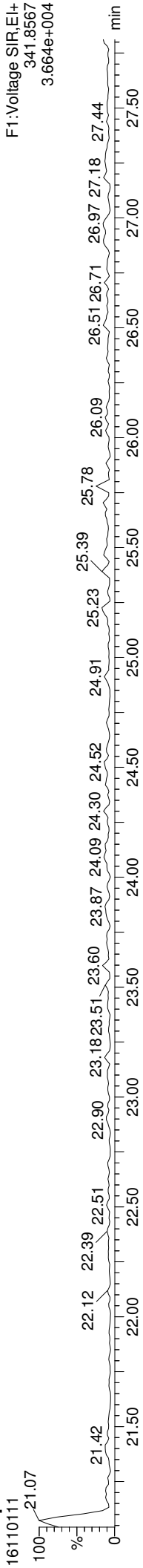
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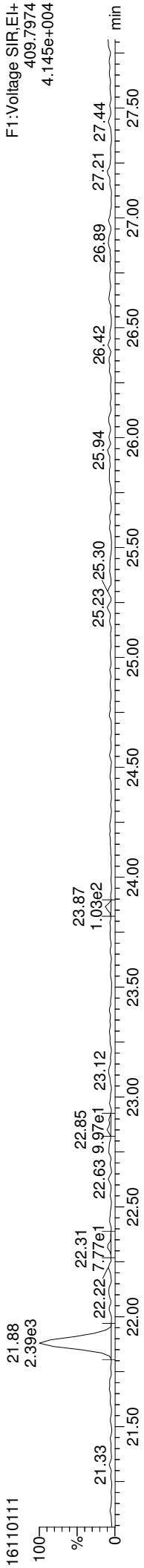
Total-penta1



Total-penta1



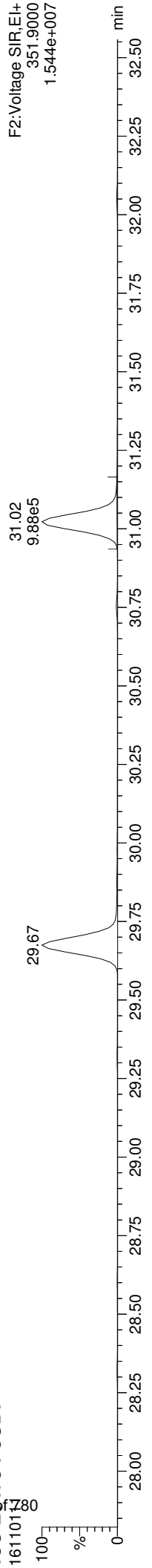
FUNCTION1 HPCDPE



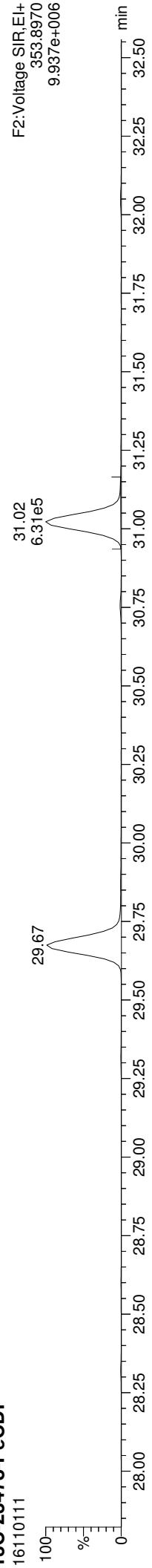
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

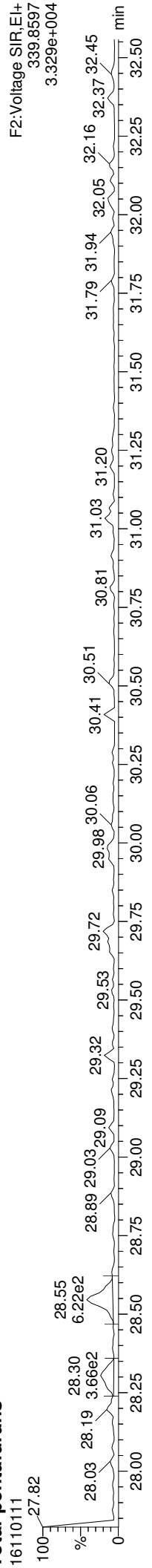
13C-23478-PeCDF



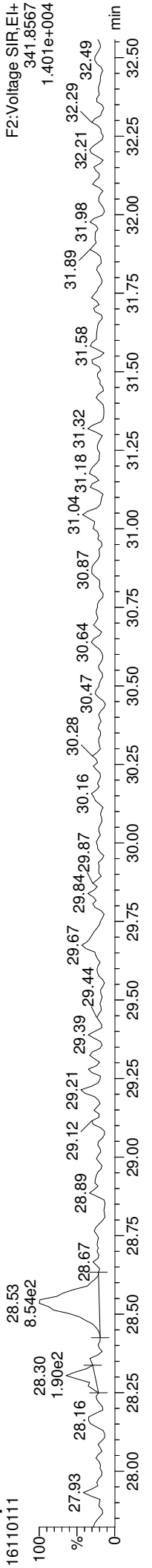
13C-23478-PeCDF



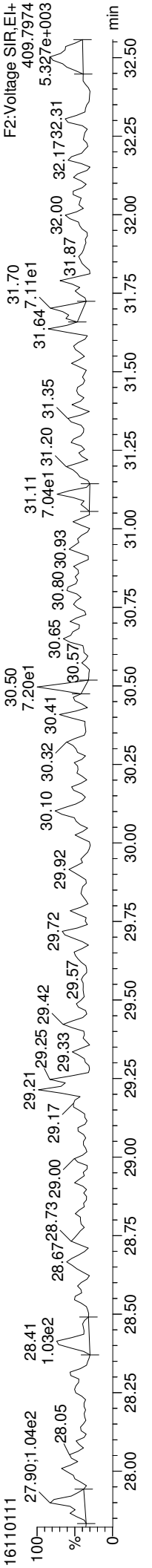
Total-pentafurans



Total-pentafurans

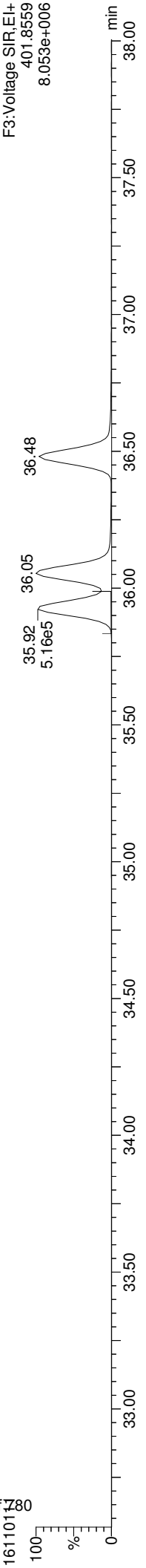


FUNCTION2 HPCDPE

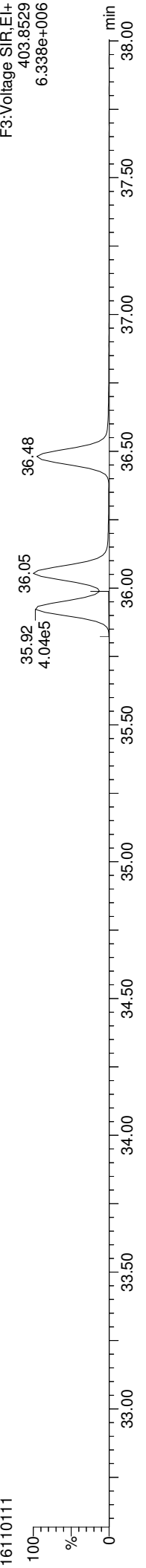


ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

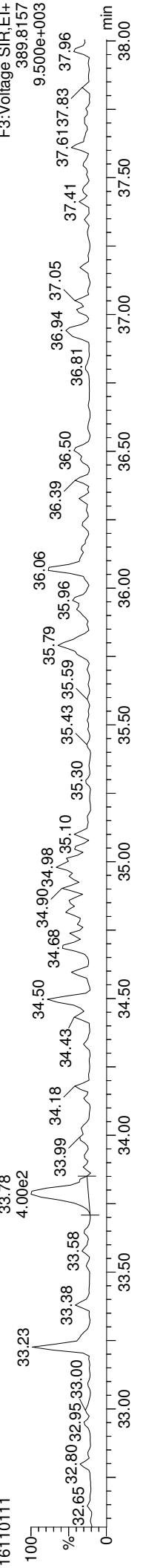
13C-123478-HxCDD



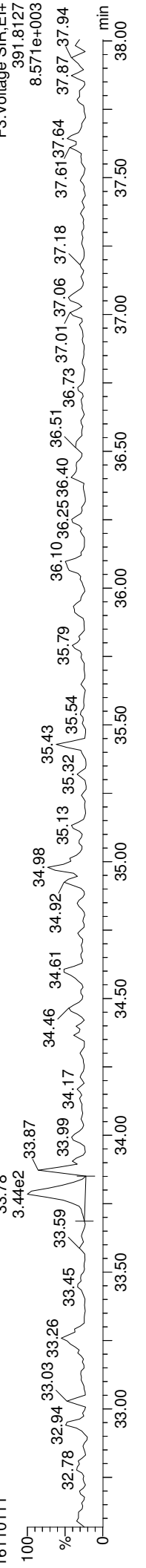
13C-123478-HxCDD



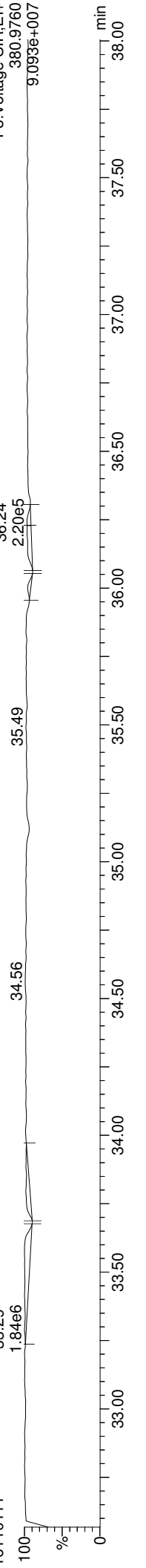
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

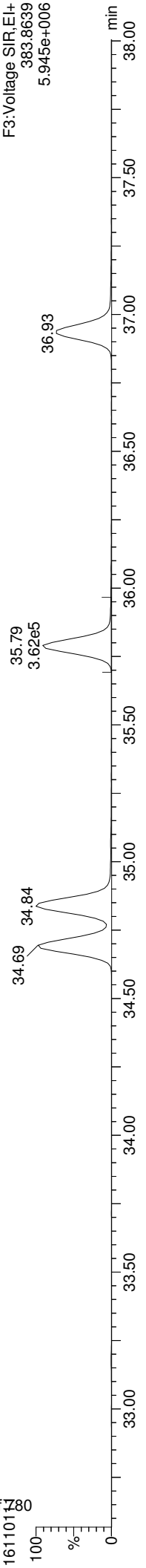


Quantify Sample Report

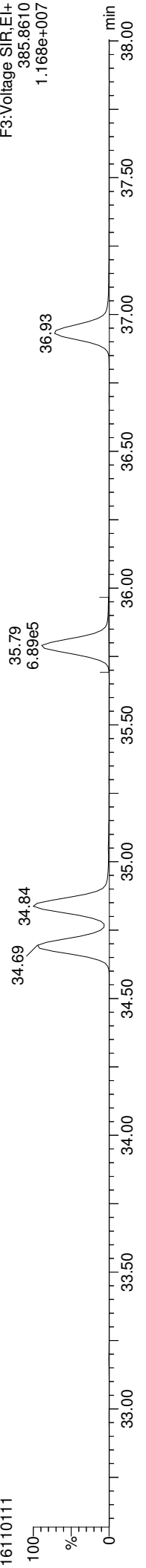
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

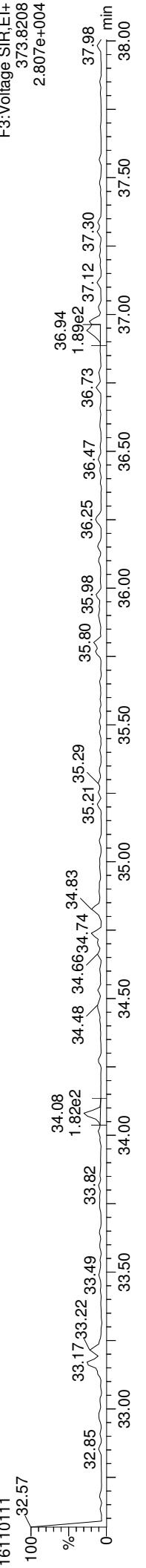
13C-234678-HxCDF



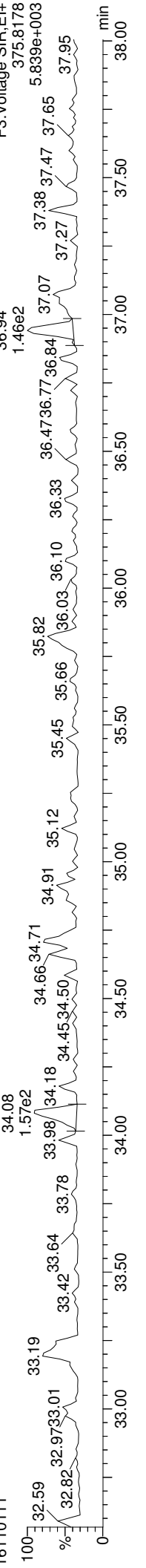
13C-234678-HxCDF



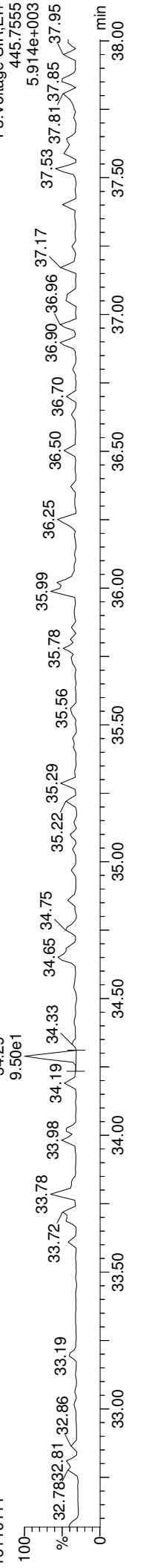
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE

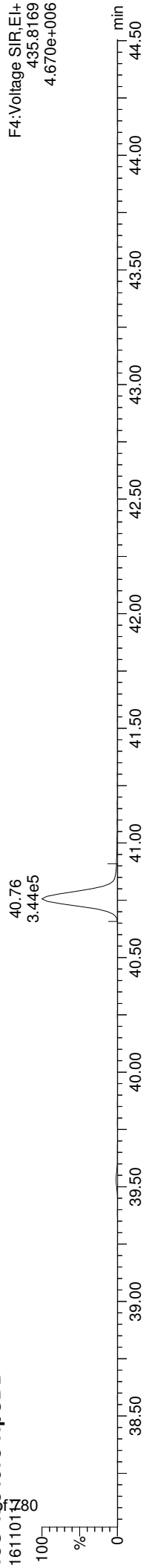


Quantify Sample Report

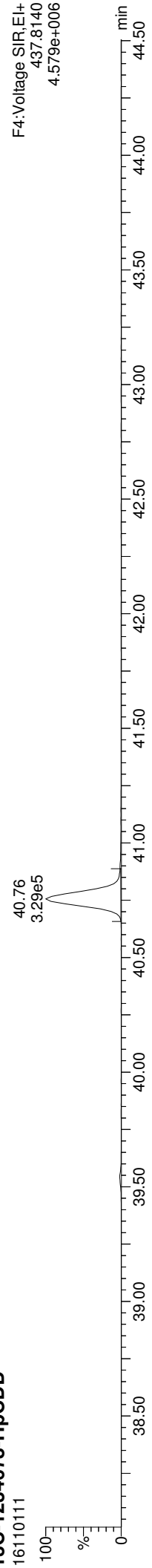
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

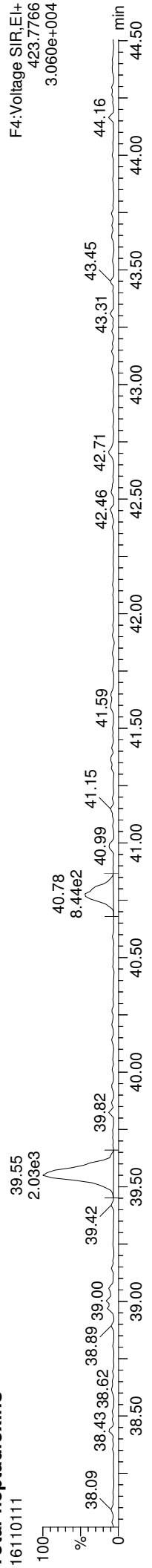
13C-1234678-HpCDD



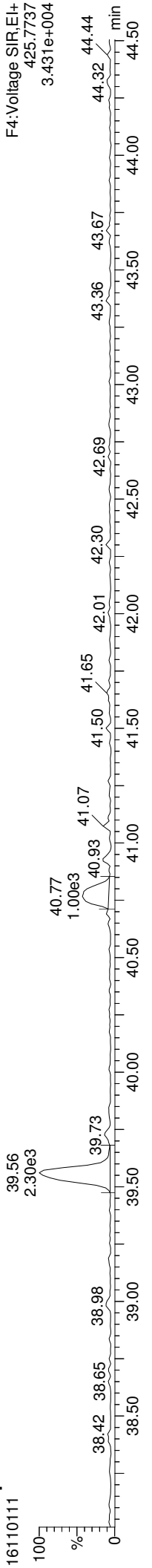
13C-1234678-HpCDD



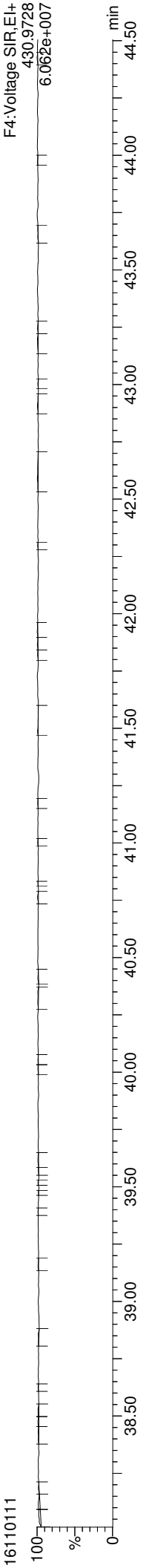
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK

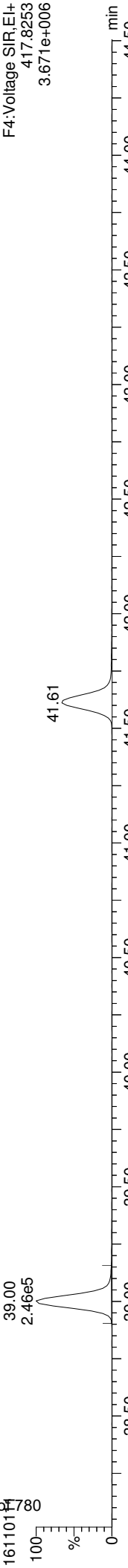


Quantify Sample Report

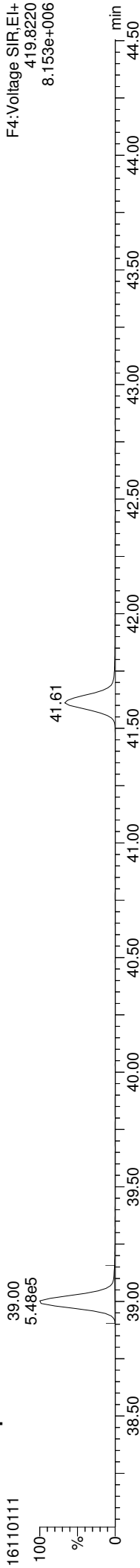
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

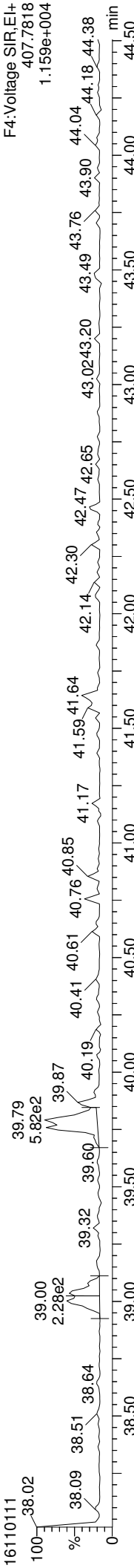
13C-1234678-HpCDF



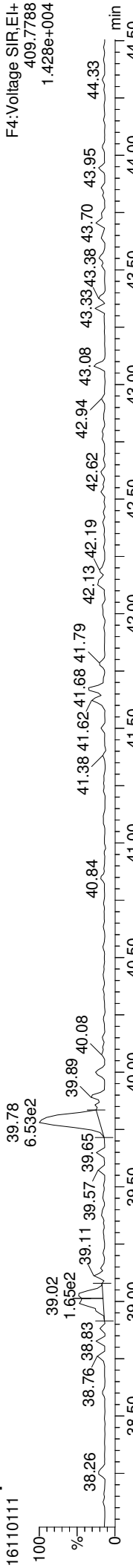
13C-1234678-HpCDF



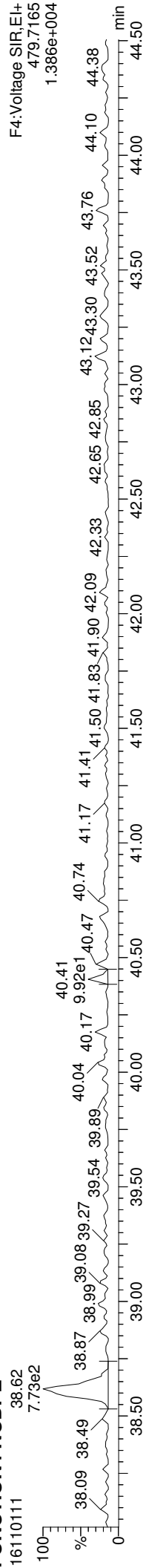
Total-heptafurans



Total-heptafurans



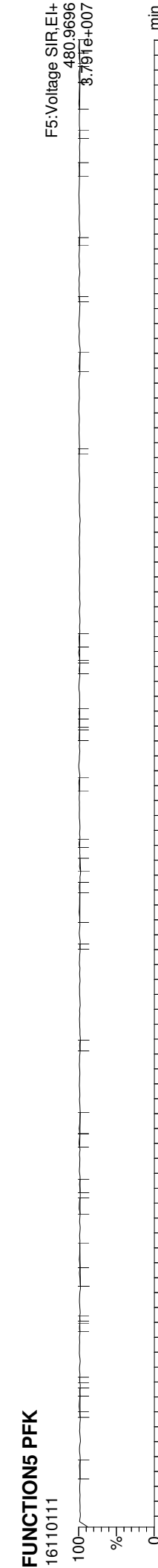
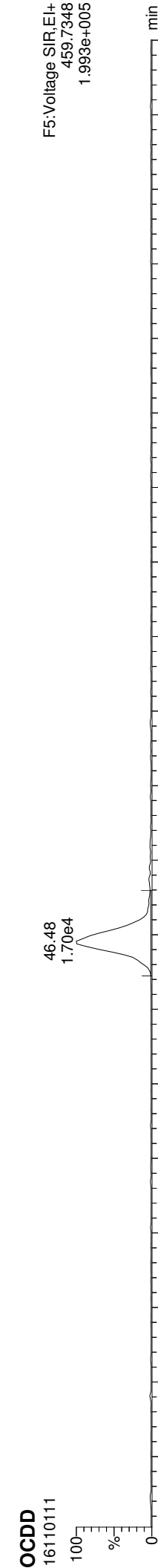
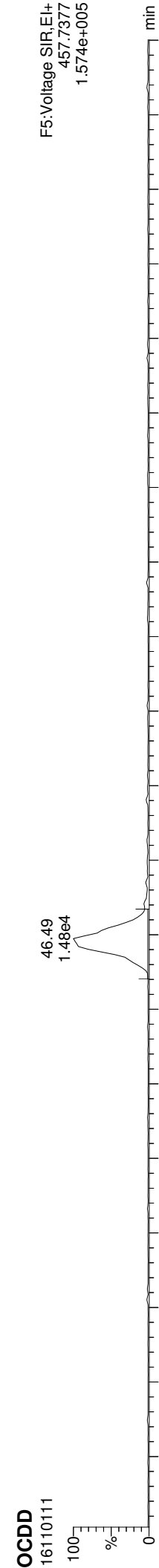
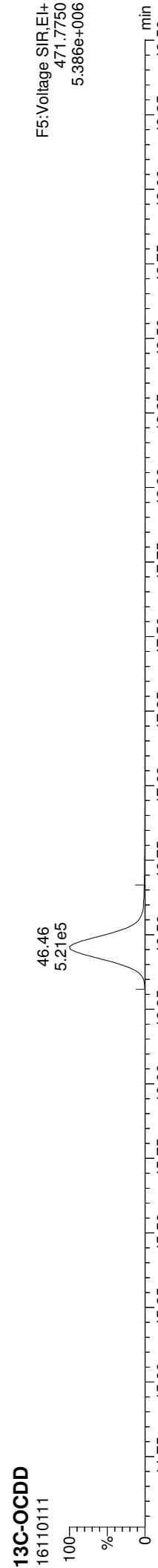
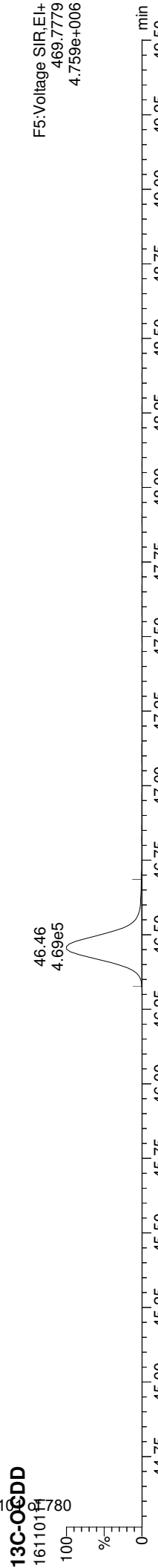
FUNCTION4 NCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

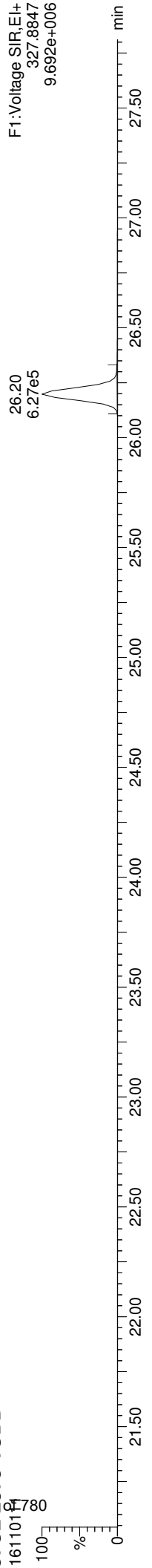


Quantify Sample Report

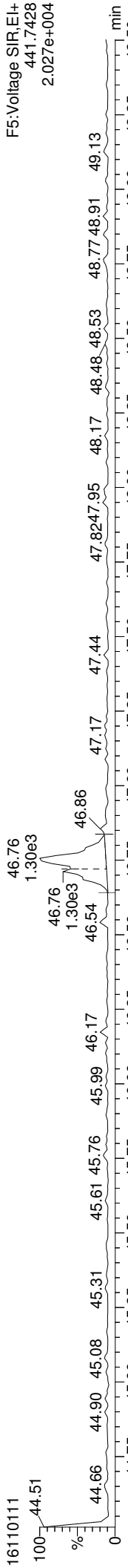
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:28 Pacific Daylight Time

ID: 16110187-04, Name: 16110111, Date: 01-Nov-2016, Time: 18:34:13, Conditions: AUTOSPEC01, User: PK

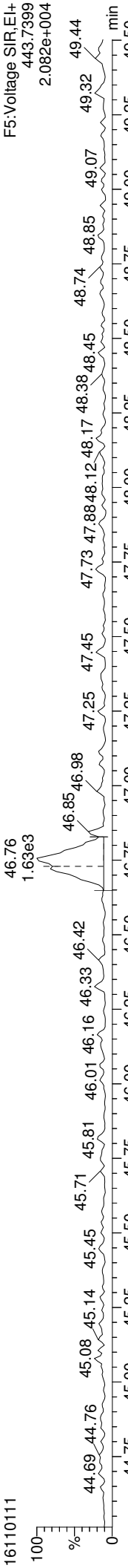
37CL-8378-TCDD



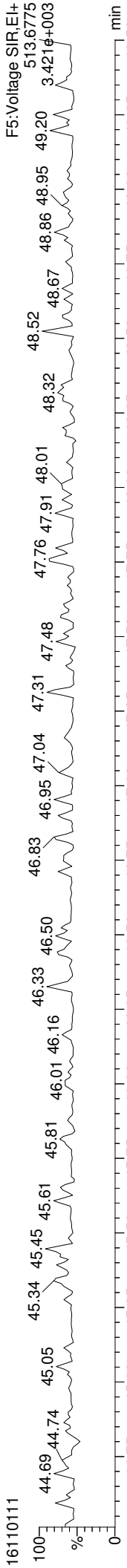
OCDF



OCDF



FUNCTION5 DCDPE





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-05 File ID: 16110112
 Sampled: 10/11/16 12:15 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 19:27
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.03 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.904	0.655-0.886		0.997	0.084	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.038	0.997	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.792	1.318-1.783		4.99	0.058	ng/kg	EMPC, J, B
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.045	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.062	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.415	1.054-1.426		4.99	0.021	ng/kg	J
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.806	1.054-1.426		4.99	0.021	ng/kg	EMPC, J
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.034	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.042	4.99	ND	ng/kg	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.043	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.049	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.383	1.054-1.426		4.99	0.058	ng/kg	J
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.979	0.893-1.208		4.99	0.162	ng/kg	J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.107	0.893-1.208		4.99	0.018	ng/kg	J
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.148	0.893-1.208		4.99	0.709	ng/kg	J, B
39001-02-0	OCDF	1	0.834	0.757-1.024		9.97	0.799	ng/kg	J, B
3268-87-9	OCDD	1	0.892	0.757-1.024		9.97	11.2	ng/kg	B

Homologue Groups

5722-27-5	Total TCDF	1	0.000			0.997	0.392	ng/kg
41903-57-5	Total TCDD	1	0.000			0.997	0.339	ng/kg
30402-15-4	Total PeCDF	1	0.000			0.997	0.234	ng/kg
36088-22-9	Total PeCDD	1	0.000			0.997	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			0.997	0.083	ng/kg
34465-46-8	Total HxCDD	1	0.000			0.997	0.282	ng/kg
38998-75-3	Total HpCDF	1	0.000			0.997	0.488	ng/kg
37871-00-4	Total HpCDD	1	0.000			0.997	2.46	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.033
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.033



Form I
ORGANIC ANALYSIS DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-05 File ID: 16110112
 Sampled: 10/11/16 12:15 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 19:27
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.03 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.775	0.655-0.886		94.3	24 - 169 %	
13C12-2,3,7,8-TCDD		0.777	0.655-0.886		95.9	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.570	1.318-1.783		97.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.572	1.318-1.783		106	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.597	1.318-1.783		106	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.520	0.434-0.587		85.1	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.515	0.434-0.587		80.7	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.522	0.434-0.587		85.5	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.526	0.434-0.587		89.2	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.286	1.054-1.426		93.5	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.273	1.054-1.426		85.5	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.454	0.374-0.506		79.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.455	0.374-0.506		89.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.024	0.893-1.208		93.1	23 - 140 %	
13C12-OCDD		0.912	0.757-1.024		82.5	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			101	35 - 197 %	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16B0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.540	1.000	6.27e2	6.94e2	0.935	0.904	0.770	943	1559	7.41e3	1.10e4	7.9	YES	0.042
12378-PeCDF	29.697	1.001	3.47e2	4.38e2	0.952	0.792	1.550	986	2264	6.79e3	8.45e3	6.9	YES	0.029
23478-PeCDF				0.963			1.550	986	2264					
123478-HxCDF	34.739	1.001	1.53e2	1.08e2	1.137	1.415	1.240	1090	1079	3.29e3	3.91e3	3.0	NO	0.010
234678-HxCDF				1.164			1.240	1090	1079					
123678-HxCDF	34.882	1.001	1.26e2	1.56e2	1.099	0.806	1.240	1090	1079	3.75e3	3.83e3	3.4	YES	0.011
123789-HxCDF				1.101			1.240	1090	1079					
1234678-HpCDF	39.036	1.001	9.38e2	9.58e2	1.303	0.979	1.050	686	535	1.48e4	1.12e4	21.6	NO	0.081
1234789-HpCDF	41.612	1.000	9.54e1	8.62e1	1.317	1.107	1.050	686	535	2.75e3	2.51e3	4.0	NO	0.009
OCDF	46.740	1.006	2.73e3	3.28e3	1.166	0.834	0.890	899	855	2.90e4	3.42e4	32.2	NO	0.401
2378-TCDD				1.134			0.770	1414	705					
12378-PeCDD				0.975			1.550	1549	1220					
123478-HxCDD				1.031			1.240	1113	1007					
123678-HxCDD				0.971			1.240	1113	1007					
123789-HxCDD	36.482	1.012	3.04e2	2.19e2	0.947	1.383	1.240	1113	1007	5.86e3	3.63e3	5.3	NO	0.029
1234678-HpCDD	40.779	1.001	3.15e3	2.74e3	1.028	1.148	1.050	773	931	4.11e4	3.56e4	53.2	NO	0.356
OCDD	46.488	1.001	3.78e4	4.24e4	1.107	0.892	0.890	743	1038	4.13e5	4.51e5	556.3	NO	5.628
13C-2378-TCDF	25.540	1.007	1.46e6	1.89e6	1.567	0.775	0.770	8351	3471	2.24e7	2.89e7	2679.1	NO	94.349
13C-12378-PeCDF	29.694	1.170	1.72e6	1.10e6	1.274	1.570	1.550	4555	4982	2.61e7	1.68e7	5726.2	NO	97.679
13C-23478-PeCDF	31.012	1.223	1.81e6	1.15e6	1.235	1.572	1.550	4555	4982	2.75e7	1.76e7	6028.9	NO	105.594
13C-123478-HxCDF	34.695	0.951	7.65e5	1.47e6	1.381	0.520	0.510	3831	5916	1.14e7	2.19e7	2985.5	NO	85.074
13C-123678-HxCDF	34.838	0.955	8.20e5	1.59e6	1.569	0.515	0.510	3831	5916	1.20e7	2.31e7	3141.3	NO	80.691
13C-234678-HxCDF	35.791	0.981	7.51e5	1.44e6	1.345	0.522	0.510	3831	5916	1.11e7	2.13e7	2897.6	NO	85.461
13C-123789-HxCDF	36.942	1.013	6.92e5	1.32e6	1.183	0.526	0.510	3831	5916	9.72e6	1.87e7	2537.1	NO	89.191
13C-1234678-HpCDF	39.003	1.069	5.59e5	1.23e6	1.178	0.454	0.440	2460	3668	8.43e6	1.86e7	3424.7	NO	79.831
13C-1234789-HpCDF	41.623	1.141	4.66e5	1.03e6	0.878	0.455	0.440	2460	3668	6.05e6	1.34e7	2459.9	NO	89.281
13C-1234-TCDD	25.361	0.000	1.00e6	1.26e6	1.000	0.793	0.770	3586	2853	1.54e7	1.95e7	4296.3	NO	100.000
13C-2378-TCDD	26.168	1.032	8.63e5	1.11e6	0.908	0.777	0.770	3586	2853	1.29e7	1.66e7	3606.5	NO	95.943
13C-12378-PeCDD	31.264	1.233	1.11e6	6.97e5	0.756	1.597	1.550	2382	1955	1.70e7	1.08e7	7126.9	NO	105.676
13C-123478-HxCDD	35.923	0.985	1.06e6	8.22e5	1.056	1.286	1.240	3748	3703	1.59e7	1.25e7	4253.4	NO	93.486
13C-123678-HxCDD	36.054	0.988	1.06e6	8.33e5	1.163	1.273	1.240	3748	3703	1.48e7	1.17e7	3951.6	NO	85.475
13C-1234678-HpCDD	40.757	1.117	8.16e5	7.96e5	0.909	1.024	1.050	2337	2958	1.11e7	1.09e7	4734.4	NO	93.134
13C-OCDD	46.462	1.274	1.23e6	1.35e6	0.820	0.912	0.890	2288	2630	1.26e7	1.39e7	5491.8	NO	164.997
13C-123789-HxCDD	36.482	0.000	1.06e6	8.42e5	1.000	1.261	1.240	3748	3703	1.54e7	1.25e7	4121.8	NO	100.000
Total-tetrafurans			3.02e3	0.935				943		4.27e4				0.196

Quantify Sample Summary Report

MassLynx MassLynx V4.1 SCN909
 Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					830		0.00e0				
Total-pentafurans			1.66e3		0.957			986		2.70e4				0.118
Total-hexafurans			4.71e2		1.125			1090		1.08e4				0.041
Total-heptafurans			2.66e3		1.310			686		4.28e4				0.245
Total-Furans			1.05e4		1.114			943		1.52e5				1.001
Total-tetradioxins			2.00e3		1.134			1414		3.28e4				0.170
Total-pentadioxins			0.00e0		0.975			1549		0.00e0				
Total-hexadioxins			1.40e3		0.983			1113		3.20e4				0.142
Total-heptadioxins			1.02e4		1.028			773		1.50e5				1.234
Total-Dioxins			5.14e4		1.028			1414		6.28e5				7.174
Total-TEQ			6.20e4					1414		7.80e5				8.175
37CL-2378-TCDD	26.198	1.033	9.74e5		1.067			1669		1.44e7		8650.5		40.273
FUNCTION1 PFK			2.26e7					662259		1.84e8				
FUNCTION2 PFK			1.34e5					166215		3.23e6				0.000
FUNCTION3 PFK			1.78e7					441981		5.85e7				0.000
FUNCTION4 PFK			2.03e5					361251		4.61e6				
FUNCTION5 PFK			0.00e0					277284		0.00e0				
FUNCTION1 HXCD...			4.29e4					720		5.64e5				0.000
FUNCTION1 HPCD...			3.02e3					810		5.75e4				0.000
FUNCTION2 HPCD...			2.08e2					866		4.50e3				0.000
FUNCTION3 OCDPE			0.00e0					387		0.00e0				
FUNCTION4 NCDPE			8.38e2					795		1.34e4				0.000
FUNCTION5 DCDPE			0.00e0					312		0.00e0				

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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16H0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	24.48	797.504	0.935	0.025		0.64	0.77	YES	5.8
2	35 Total-tetrafurans	303.9016	23.81	826.815	0.935	0.026		1.08	0.77	YES	5.0
3	35 Total-tetrafurans	303.9016	23.31	695.903	0.935	0.022		2.21	0.77	YES	8.1
4	35 Total-tetrafurans	303.9016	22.93	1381.252	0.935	0.044		0.85	0.77	NO	9.3
5	35 Total-tetrafurans	303.9016	25.78	1133.324	0.935	0.036		0.91	0.77	YES	9.3
6	1 2378-TCDF	303.9016	25.54	1321.204	0.935	0.042	0.039	0.90	0.77	YES	7.9

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	2 12378-PeCDF	339.8597	29.70	784.425	0.952	0.029	0.021	0.79	1.55	YES	6.9
2	37 Total-pentafurans	339.8597	28.53	2443.466	0.957	0.088		1.16	1.55	YES	20.5

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6 123678-HxCDF	373.8208	34.88	281.295	1.099	0.011	0.009	0.81	1.24	YES	3.4
2	4 123478-HxCDF	373.8208	34.74	261.931	1.137	0.010	0.010	1.41	1.24	NO	3.0
3	38 Total-hexafurans	373.8208	33.22	511.472	1.125	0.021		0.60	1.24	YES	3.5

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9 1234789-HpCDF	407.7818	41.61	181.666	1.317	0.009	0.009	1.11	1.05	NO	4.0
2	39 Total-heptafurans	407.7818	39.79	3314.641	1.310	0.154		0.96	1.05	NO	36.8
3	8 1234678-HpCDF	407.7818	39.04	1896.433	1.303	0.081	0.081	0.98	1.05	NO	21.6

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ID: 16H0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	24.48	797.504	0.935	0.025		0.64	0.77	YES	5.8
2	35 Total-tetrafurans	303.9016	23.81	826.815	0.935	0.026		1.08	0.77	YES	5.0
3	35 Total-tetrafurans	303.9016	23.31	695.903	0.935	0.022		2.21	0.77	YES	8.1
4	35 Total-tetrafurans	303.9016	22.93	1381.252	0.935	0.044		0.85	0.77	NO	9.3
5	35 Total-tetrafurans	303.9016	25.78	1133.324	0.935	0.036		0.91	0.77	YES	9.3
6	1 2378-TCDF	303.9016	25.54	1321.204	0.935	0.042	0.039	0.90	0.77	YES	7.9
7	2 12378-PeCDF	339.8597	29.70	784.425	0.952	0.029	0.021	0.79	1.55	YES	6.9
8	37 Total-pentafurans	339.8597	28.53	2443.466	0.957	0.088		1.16	1.55	YES	20.5
9	6 123678-HxCDF	373.8208	34.88	281.295	1.099	0.011	0.009	0.81	1.24	YES	3.4
10	4 123478-HxCDF	373.8208	34.74	261.931	1.137	0.010	0.010	1.41	1.24	NO	3.0
11	38 Total-hexafurans	373.8208	33.22	511.472	1.125	0.021		0.60	1.24	YES	3.5
12	9 1234789-HpCDF	407.7818	41.61	181.666	1.317	0.009	0.009	1.11	1.05	NO	4.0
13	39 Total-heptafurans	407.7818	39.79	3314.641	1.310	0.154		0.96	1.05	NO	36.8
14	8 1234678-HpCDF	407.7818	39.04	1896.433	1.303	0.081	0.081	0.98	1.05	NO	21.6
15	10 OCDF	441.7428	46.74	6014.199	1.166	0.401	0.401	0.83	0.89	NO	32.2

TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradioxins	319.8965	23.63	592.157	1.134	0.026		1.16	0.77	YES	5.0
2	41 Total-tetradioxins	319.8965	23.34	2718.455	1.134	0.121		1.04	0.77	YES	14.6
3	41 Total-tetradioxins	319.8965	25.56	496.236	1.134	0.022		1.48	0.77	YES	3.5

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	15 123789-HxCDD	389.8157	36.48	522.950	0.947	0.029	0.029	1.38	1.24	NO	5.3
2	43 Total-hexadioxins	389.8157	35.01	497.295	0.983	0.027		0.83	1.24	YES	6.7
3	43 Total-hexadioxins	389.8157	34.97	486.720	0.983	0.026		1.38	1.24	NO	5.3
4	43 Total-hexadioxins	389.8157	33.77	1096.327	0.983	0.059		1.18	1.24	NO	11.4

HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.78	5895.561	1.028	0.356	0.356	1.15	1.05	NO	53.2
2	44 Total-heptadioxins	423.7766	39.55	14548.199	1.028	0.878		0.94	1.05	NO	141.1

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ID: 16H0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradiioxins	319.8965	23.63	592.157	1.134	0.026		1.16	0.77	YES	5.0
2	41 Total-tetradiioxins	319.8965	23.34	2718.455	1.134	0.121		1.04	0.77	YES	14.6
3	41 Total-tetradiioxins	319.8965	25.56	496.236	1.134	0.022		1.48	0.77	YES	3.5
4	15 123789-HxCDD	389.8157	36.48	522.950	0.947	0.029	0.029	1.38	1.24	NO	5.3
5	43 Total-hexadiioxins	389.8157	35.01	497.295	0.983	0.027		0.83	1.24	YES	6.7
6	43 Total-hexadiioxins	389.8157	34.97	486.720	0.983	0.026		1.38	1.24	NO	5.3
7	43 Total-hexadiioxins	389.8157	33.77	1096.327	0.983	0.059		1.18	1.24	NO	11.4
8	16 1234678-HpCDD	423.7766	40.78	5895.561	1.028	0.356	0.356	1.15	1.05	NO	53.2
9	44 Total-heptadiioxins	423.7766	39.55	14548.199	1.028	0.878		0.94	1.05	NO	141.1
10	17 OCDD	457.7377	46.49	80198.563	1.107	5.628	5.628	0.89	0.89	NO	556.3

TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	24.48	797.504	0.935	0.025		0.64	0.77	YES	5.8
2	35 Total-tetrafurans	303.9016	23.81	826.815	0.935	0.026		1.08	0.77	YES	5.0
3	35 Total-tetrafurans	303.9016	23.31	695.903	0.935	0.022		2.21	0.77	YES	8.1
4	35 Total-tetrafurans	303.9016	22.93	1381.252	0.935	0.044		0.85	0.77	NO	9.3
5	35 Total-tetrafurans	303.9016	25.78	1133.324	0.935	0.036		0.91	0.77	YES	9.3
6	1 2378-TCDF	303.9016	25.54	1321.204	0.935	0.042	0.039	0.90	0.77	YES	7.9
7	2 12378-PeCDF	339.8597	29.70	784.425	0.952	0.029	0.021	0.79	1.55	YES	6.9
8	37 Total-pentafurans	339.8597	28.53	2443.466	0.957	0.088		1.16	1.55	YES	20.5
9	6 123678-HxCDF	373.8208	34.88	281.295	1.099	0.011	0.009	0.81	1.24	YES	3.4
10	4 123478-HxCDF	373.8208	34.74	261.931	1.137	0.010	0.010	1.41	1.24	NO	3.0
11	38 Total-hexafurans	373.8208	33.22	511.472	1.125	0.021		0.60	1.24	YES	3.5
12	9 1234789-HpCDF	407.7818	41.61	181.666	1.317	0.009	0.009	1.11	1.05	NO	4.0
13	39 Total-heptafurans	407.7818	39.79	3314.641	1.310	0.154		0.96	1.05	NO	36.8
14	8 1234678-HpCDF	407.7818	39.04	1896.433	1.303	0.081	0.081	0.98	1.05	NO	21.6
15	10 OCDF	441.7428	46.74	6014.199	1.166	0.401	0.401	0.83	0.89	NO	32.2
16	41 Total-tetradiioxins	319.8965	23.63	592.157	1.134	0.026		1.16	0.77	YES	5.0
17	41 Total-tetradiioxins	319.8965	23.34	2718.455	1.134	0.121		1.04	0.77	YES	14.6
18	41 Total-tetradiioxins	319.8965	25.56	496.236	1.134	0.022		1.48	0.77	YES	3.5
19	15 123789-HxCDD	389.8157	36.48	522.950	0.947	0.029	0.029	1.38	1.24	NO	5.3
20	43 Total-hexadiioxins	389.8157	35.01	497.295	0.983	0.027		0.83	1.24	YES	6.7
21	43 Total-hexadiioxins	389.8157	34.97	486.720	0.983	0.026		1.38	1.24	NO	5.3
22	43 Total-hexadiioxins	389.8157	33.77	1096.327	0.983	0.059		1.18	1.24	NO	11.4
23	16 1234678-HpCDD	423.7766	40.78	5895.561	1.028	0.356	0.356	1.15	1.05	NO	53.2
24	44 Total-heptadiioxins	423.7766	39.55	14548.199	1.028	0.878		0.94	1.05	NO	141.1
25	17 OCDD	457.7377	46.49	80198.563	1.107	5.628	5.628	0.89	0.89	NO	556.3

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PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	22.58	0.000							5.5
2	48 FUNCTION1 PFK	330.9792	22.42	0.000							9.0
3	48 FUNCTION1 PFK	330.9792	22.30	0.000							14.2
4	48 FUNCTION1 PFK	330.9792	22.16	0.000							18.5
5	48 FUNCTION1 PFK	330.9792	21.91	0.000							28.9
6	48 FUNCTION1 PFK	330.9792	21.85	0.000							29.5
7	48 FUNCTION1 PFK	330.9792	21.78	0.000							27.8
8	48 FUNCTION1 PFK	330.9792	21.60	0.000							31.3
9	48 FUNCTION1 PFK	330.9792	21.51	0.000							30.6
10	48 FUNCTION1 PFK	330.9792	21.42	0.000							31.7
11	48 FUNCTION1 PFK	330.9792	21.27	0.000							30.0
12	48 FUNCTION1 PFK	330.9792	27.42	0.000							0.8
13	48 FUNCTION1 PFK	330.9792	27.30	0.000							1.1
14	48 FUNCTION1 PFK	330.9792	27.24	0.000							0.5
15	48 FUNCTION1 PFK	330.9792	26.77	0.000							0.7
16	48 FUNCTION1 PFK	330.9792	26.62	0.000							1.1
17	48 FUNCTION1 PFK	330.9792	26.17	0.000							1.3
18	48 FUNCTION1 PFK	330.9792	25.88	0.000							0.9
19	48 FUNCTION1 PFK	330.9792	25.03	0.000							1.2
20	48 FUNCTION1 PFK	330.9792	24.88	0.000							0.9
21	48 FUNCTION1 PFK	330.9792	24.39	0.000							0.5
22	48 FUNCTION1 PFK	330.9792	24.26	0.000							0.9
23	48 FUNCTION1 PFK	330.9792	24.20	0.000							0.5
24	48 FUNCTION1 PFK	330.9792	23.49	0.000							0.5
25	48 FUNCTION1 PFK	330.9792	23.43	0.000							1.0
26	48 FUNCTION1 PFK	330.9792	22.88	0.000							2.0
27	48 FUNCTION1 PFK	330.9792	22.63	0.000							4.3
28	48 FUNCTION1 PFK	330.9792	27.65	0.000							1.1
29	48 FUNCTION1 PFK	330.9792	27.53	0.000							1.3

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366.9792	32.11	0.000		0.000					2.1
2	49 FUNCTION2 PFK	366.9792	31.84	0.000		0.000					2.0
3	49 FUNCTION2 PFK	366.9792	31.77	0.000		0.000					1.4
4	49 FUNCTION2 PFK	366.9792	31.60	0.000		0.000					1.1
5	49 FUNCTION2 PFK	366.9792	31.51	0.000		0.000					1.3
6	49 FUNCTION2 PFK	366.9792	30.94	0.000		0.000					1.1
7	49 FUNCTION2 PFK	366.9792	30.84	0.000		0.000					1.2
8	49 FUNCTION2 PFK	366.9792	29.59	0.000		0.000					2.0
9	49 FUNCTION2 PFK	366.9792	29.29	0.000		0.000					2.1
10	49 FUNCTION2 PFK	366.9792	29.09	0.000		0.000					0.6
11	49 FUNCTION2 PFK	366.9792	28.63	0.000		0.000					1.1
12	49 FUNCTION2 PFK	366.9792	28.56	0.000		0.000					0.9
13	49 FUNCTION2 PFK	366.9792	28.04	0.000		0.000					1.1
14	49 FUNCTION2 PFK	366.9792	32.37	0.000		0.000					1.6

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16H0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	36.21	0.000		0.000					24.5
2	50 FUNCTION3 PFK	380.9760	36.00	0.000		0.000					14.5
3	50 FUNCTION3 PFK	380.9760	35.20	0.000		0.000					8.0
4	50 FUNCTION3 PFK	380.9760	34.94	0.000		0.000					9.3
5	50 FUNCTION3 PFK	380.9760	33.80	0.000		0.000					39.1
6	50 FUNCTION3 PFK	380.9760	33.48	0.000		0.000					37.1

PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	43.97	0.000							0.6
2	51 FUNCTION4 PFK	430.9728	43.74	0.000							1.3
3	51 FUNCTION4 PFK	430.9728	43.52	0.000							2.1
4	51 FUNCTION4 PFK	430.9728	41.58	0.000							0.7
5	51 FUNCTION4 PFK	430.9728	40.47	0.000							2.4
6	51 FUNCTION4 PFK	430.9728	39.67	0.000							1.5
7	51 FUNCTION4 PFK	430.9728	38.81	0.000							4.0

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	25.91	0.000		0.000					4.6
2	53 FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					601.7
3	53 FUNCTION1 HXCD...	375.8364	25.35	0.000		0.000					168.6
4	53 FUNCTION1 HXCD...	375.8364	23.60	0.000		0.000					5.1
5	53 FUNCTION1 HXCD...	375.8364	22.18	0.000		0.000					3.7

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	26.72	0.000		0.000					2.6
2	54 FUNCTION1 HPCD...	409.7974	23.55	0.000		0.000					2.4
3	54 FUNCTION1 HPCD...	409.7974	23.28	0.000		0.000					2.9
4	54 FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					63.2

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	30.19	0.000		0.000					2.8
2	55 FUNCTION2 HPCD...	409.7974	29.69	0.000		0.000					2.4

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16H0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	42.14	0.000		0.000					2.7
2	57 FUNCTION4 NCDPE	479.7165	38.62	0.000		0.000					14.1

ETHERS6

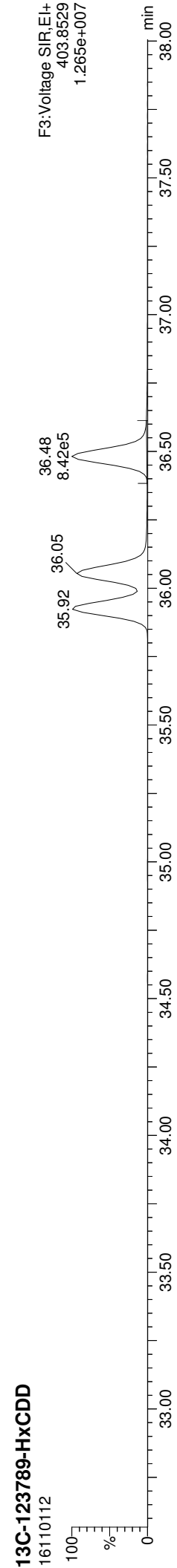
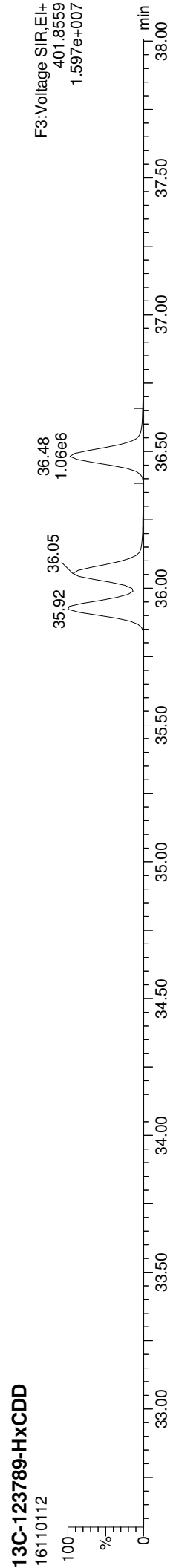
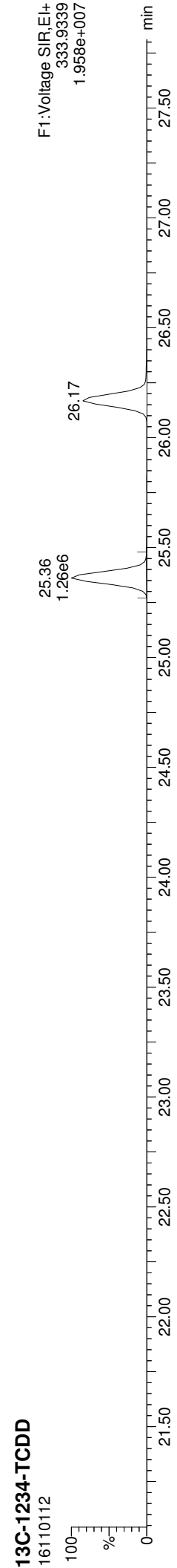
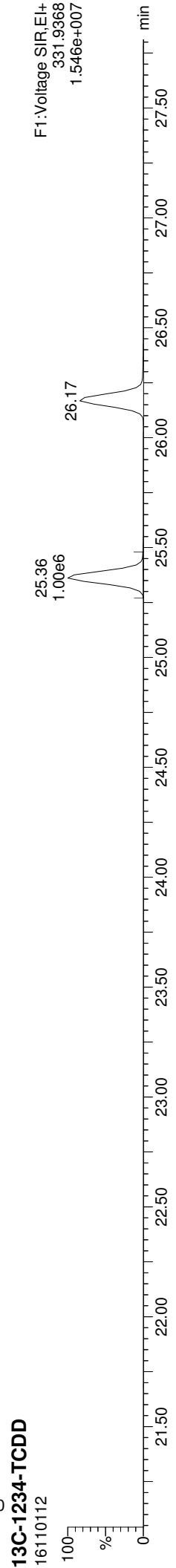
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1											

Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

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Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

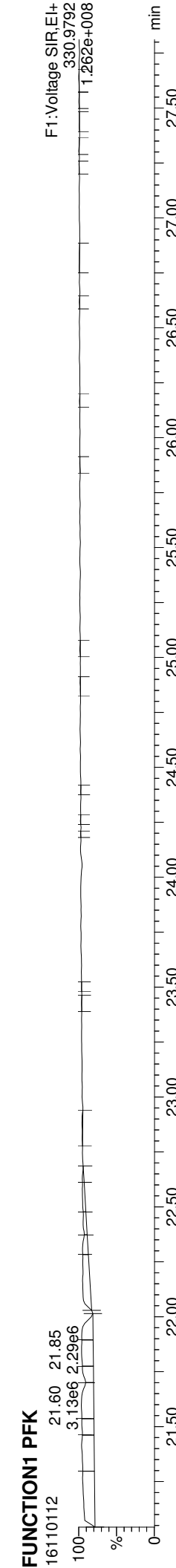
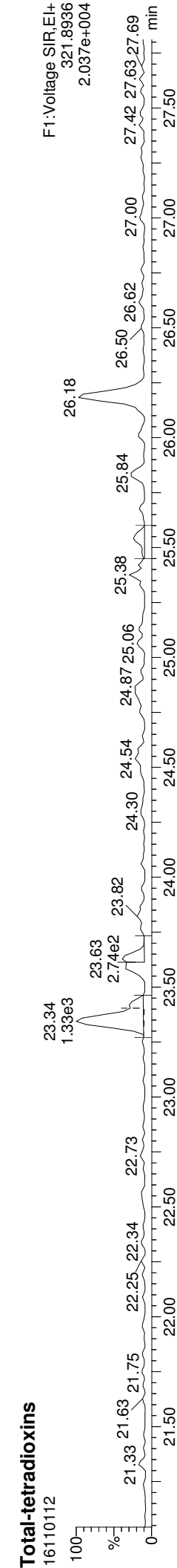
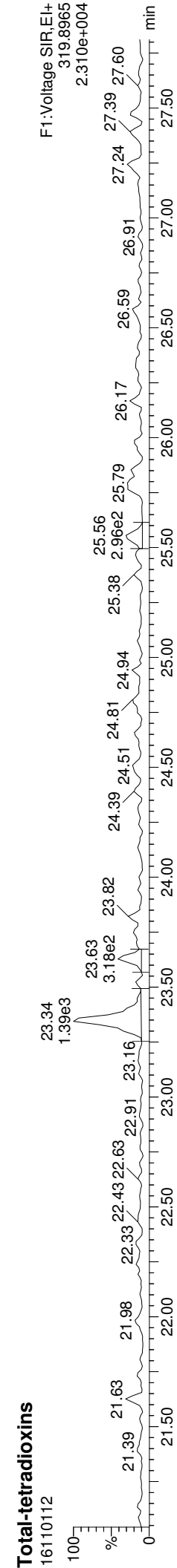
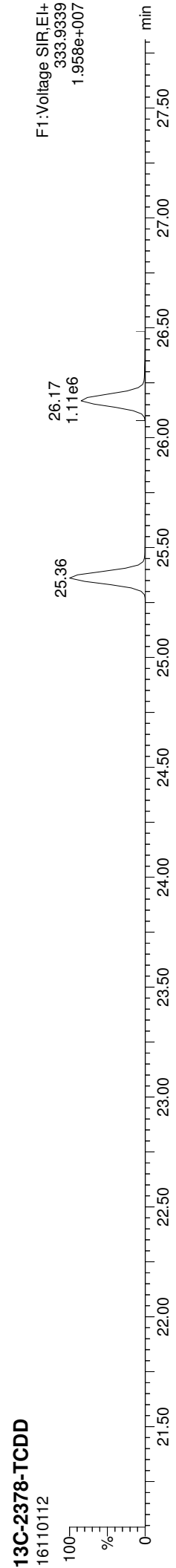
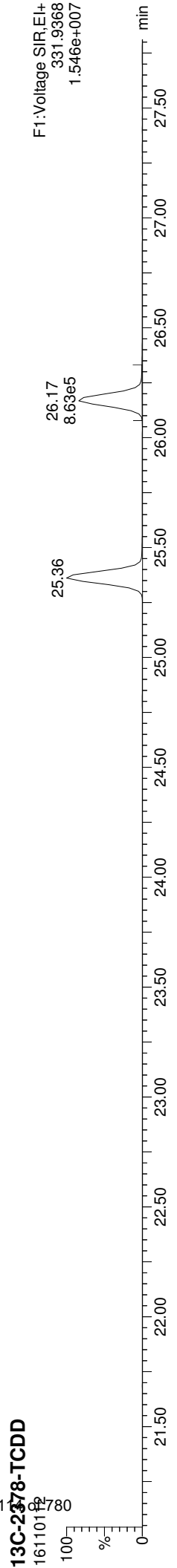
ID: 16R0187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK



Quantify Sample Report

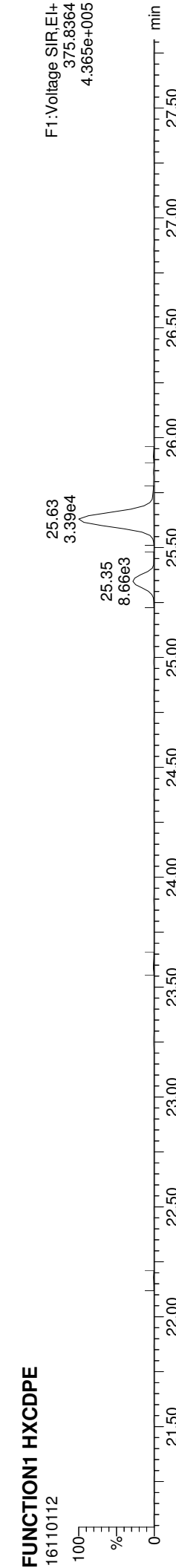
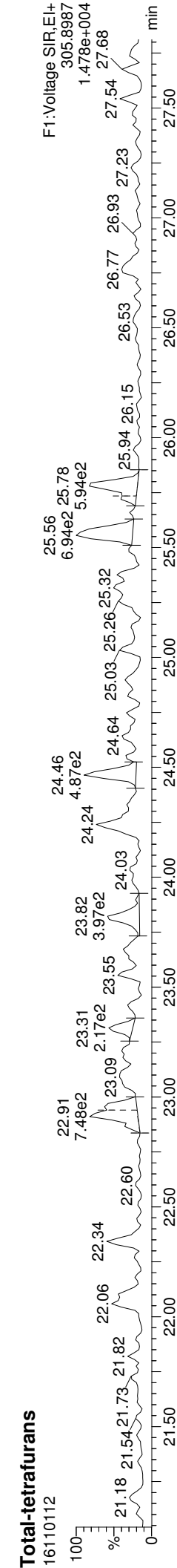
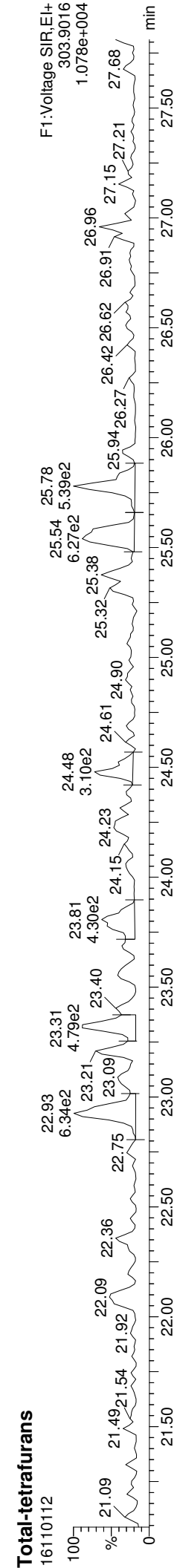
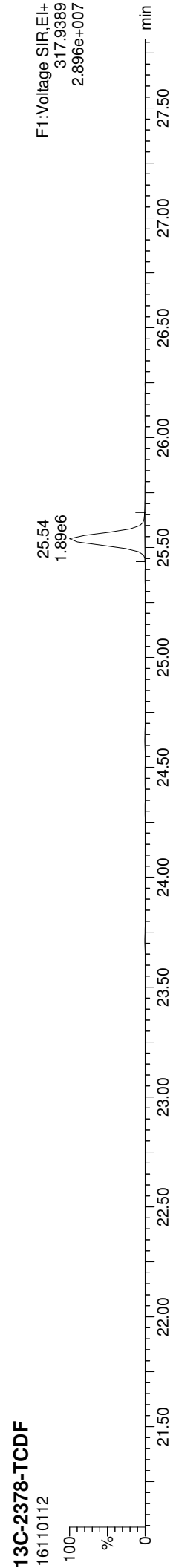
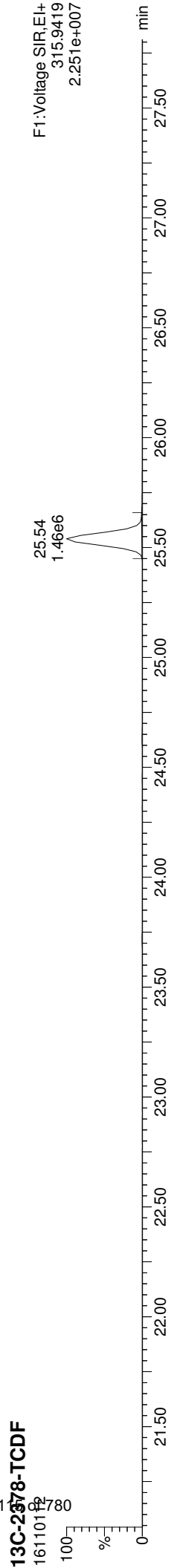
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK



MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

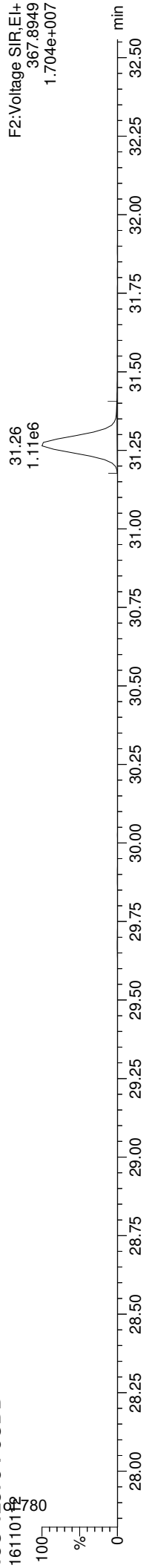
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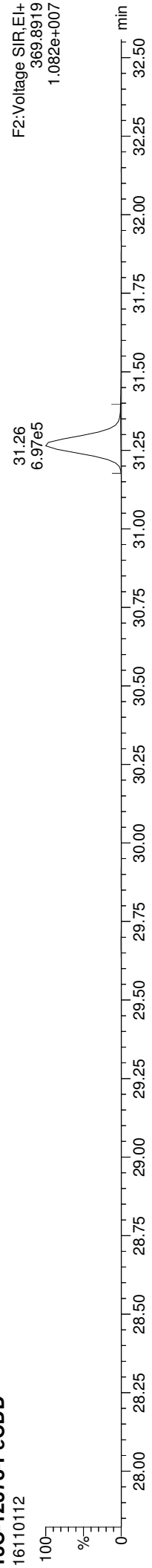
Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

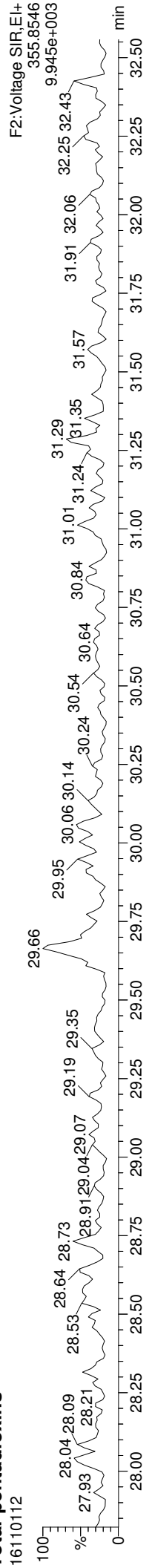
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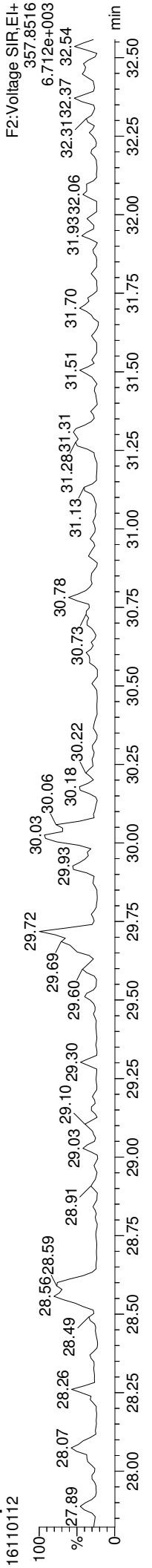
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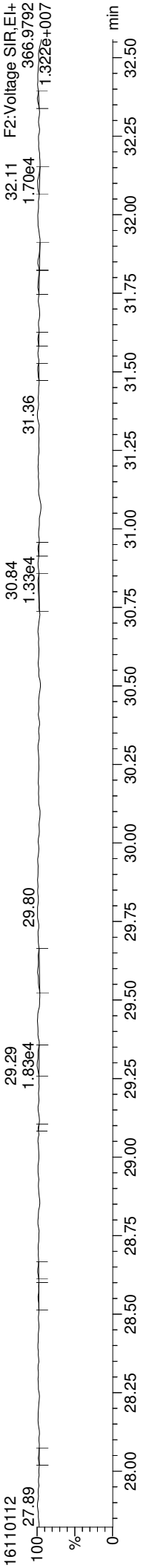
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK

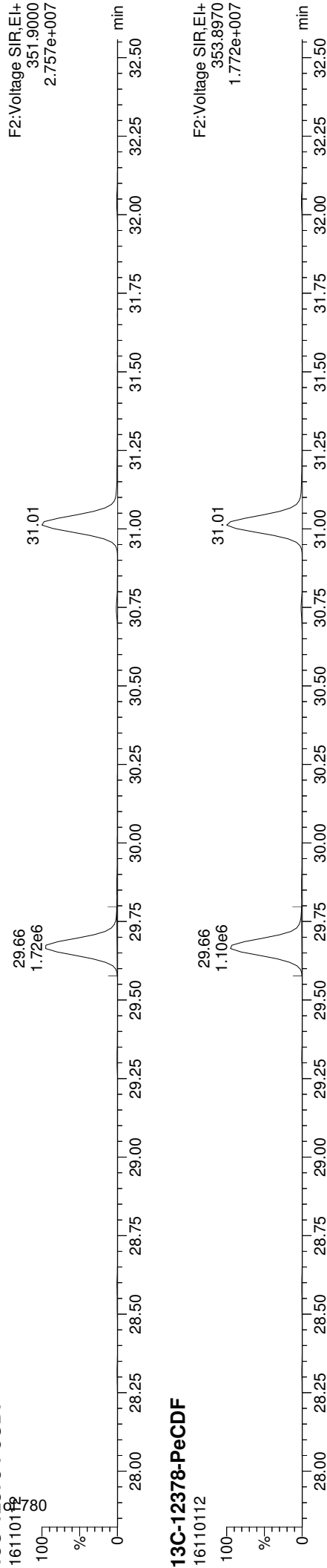


Quantify Sample Report MassLynx MassLynx V4.1 SCN909

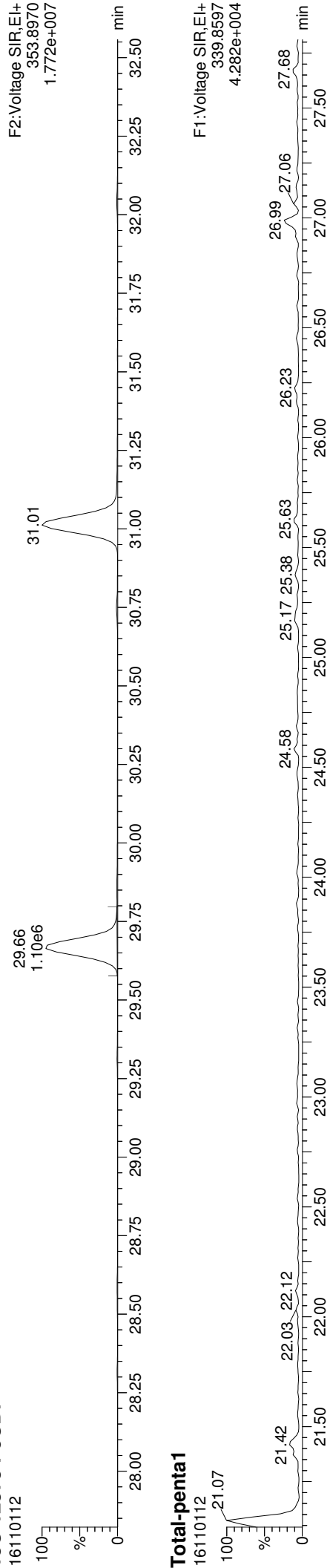
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

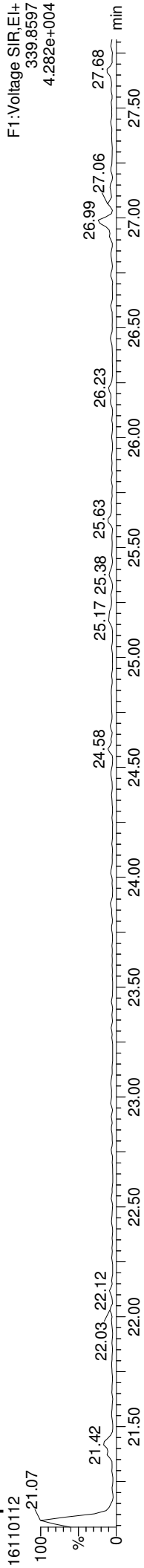
13C-12378-PeCDF



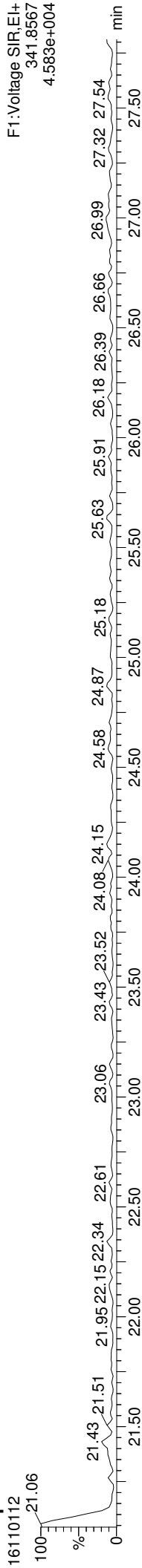
13C-12378-PeCDF



Total-penta1



Total-penta1



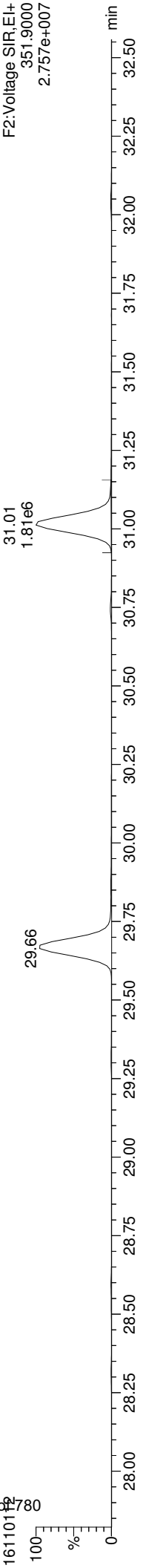
FUNCTION1 HPCDPE



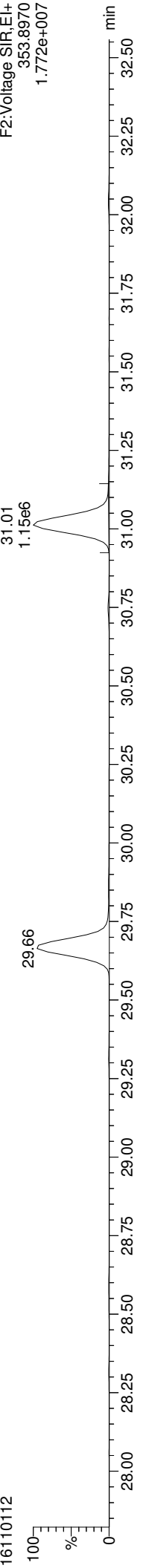
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Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

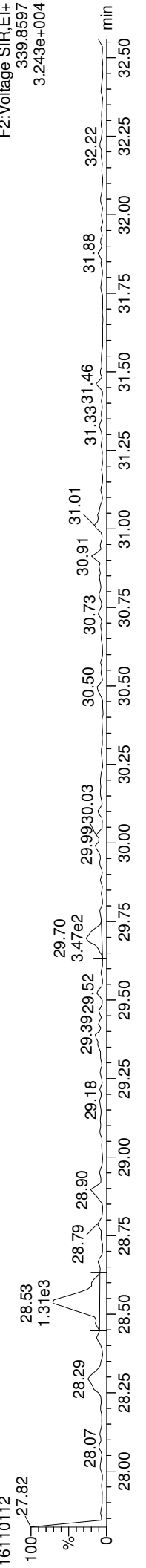
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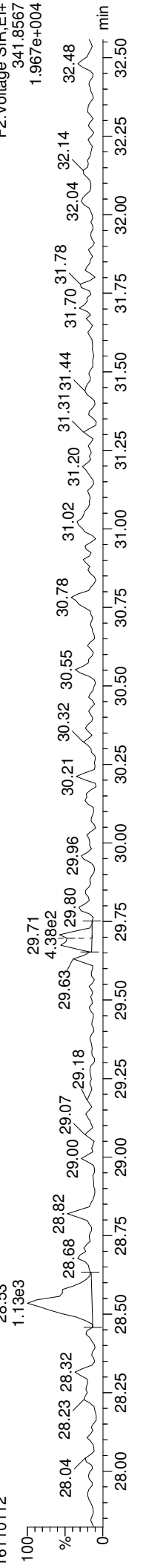
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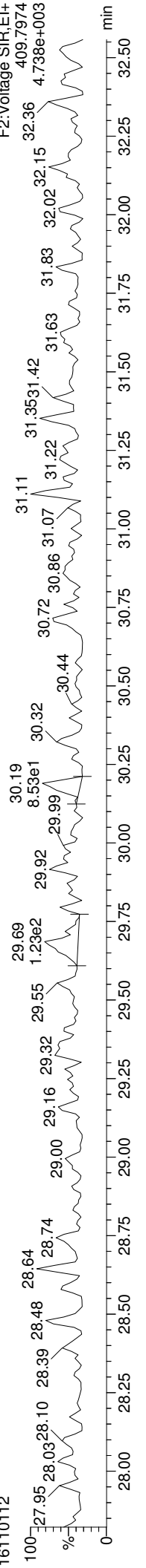
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909

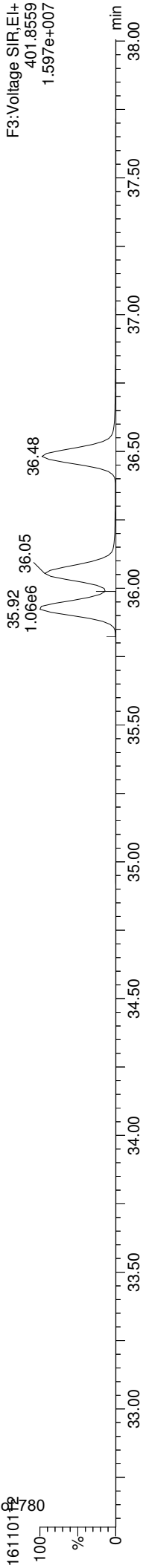
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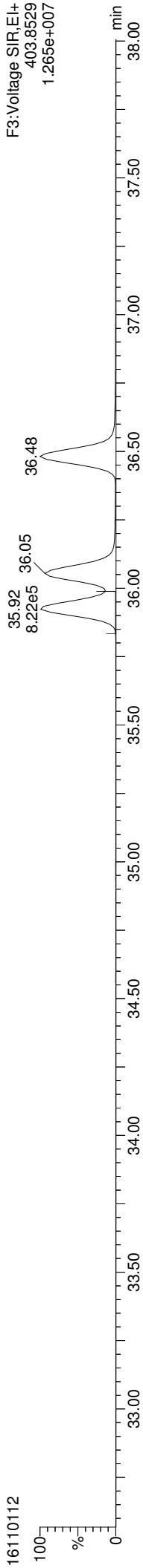
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ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

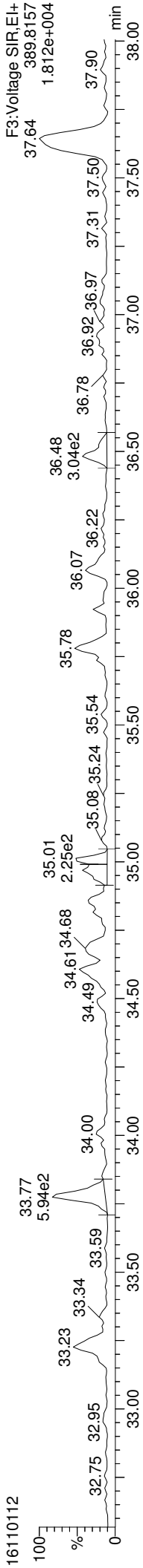
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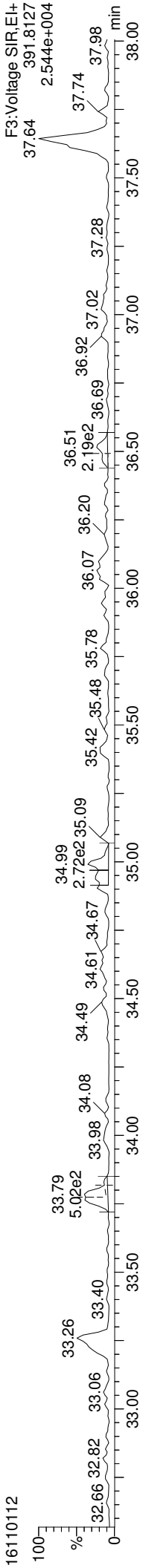
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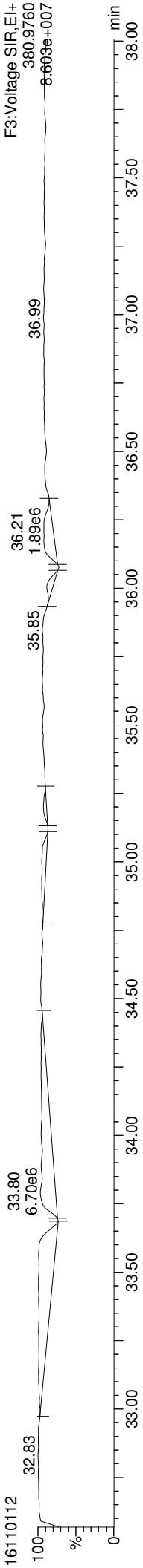
Total-hexadioxins



Total-hexadioxins

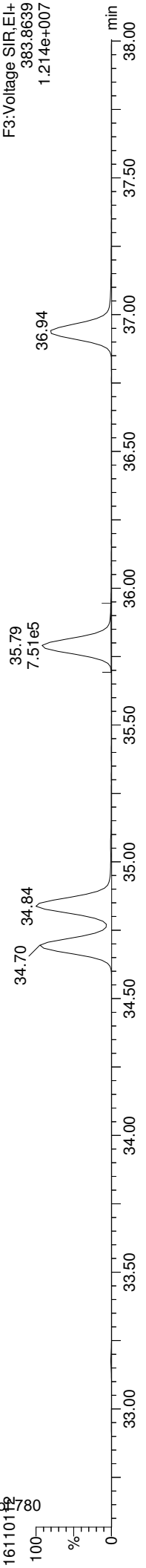


FUNCTION3 PFK

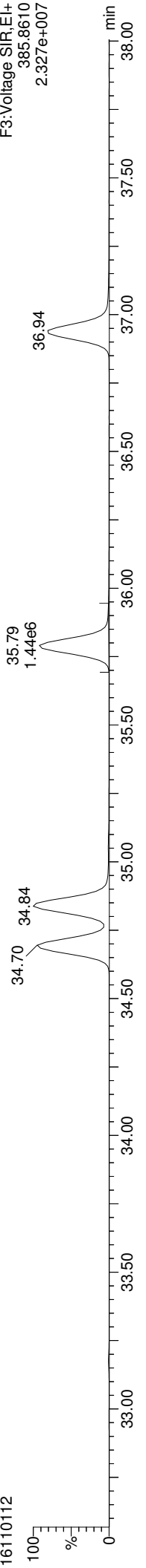


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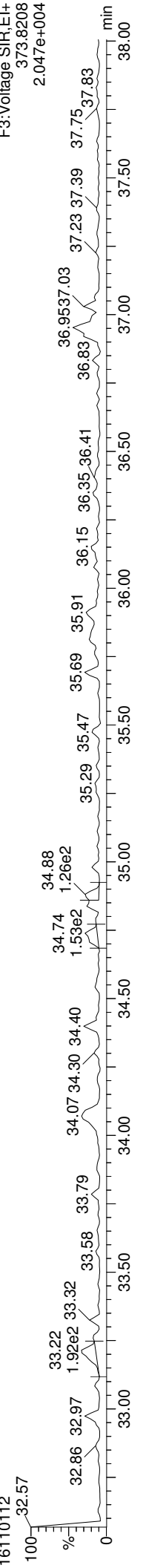
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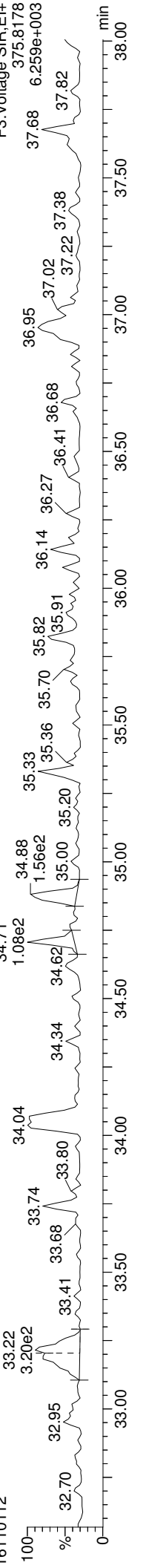
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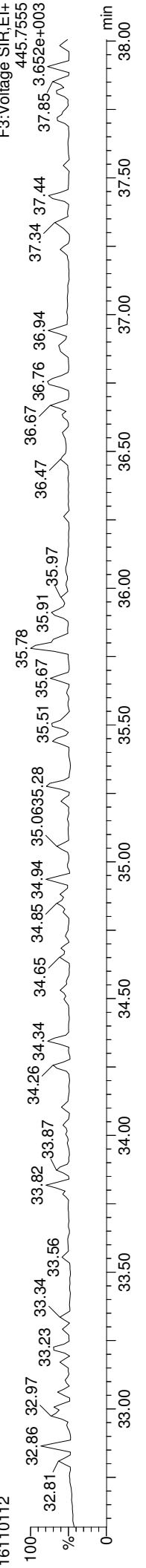
Total-hexafurans



Total-hexafurans



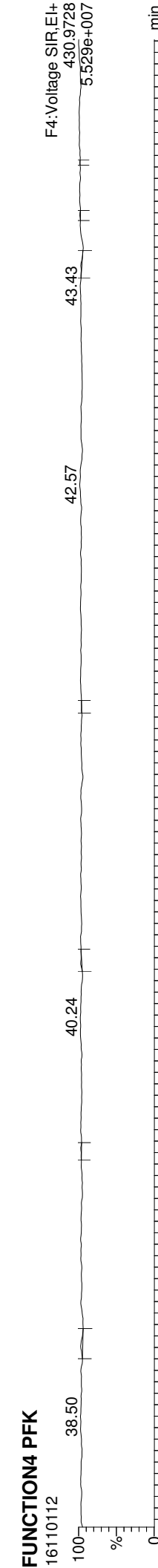
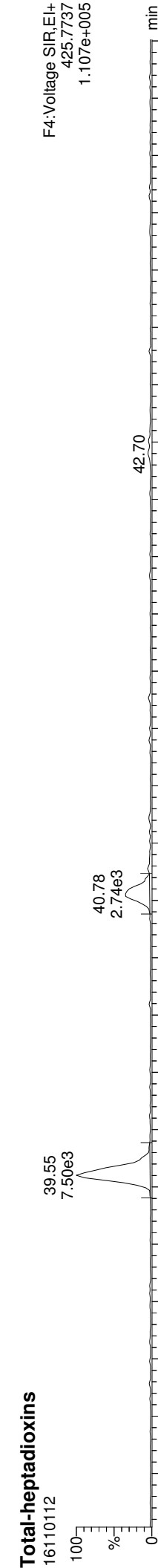
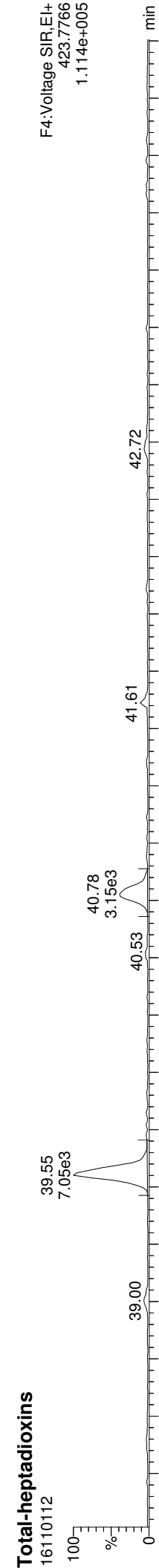
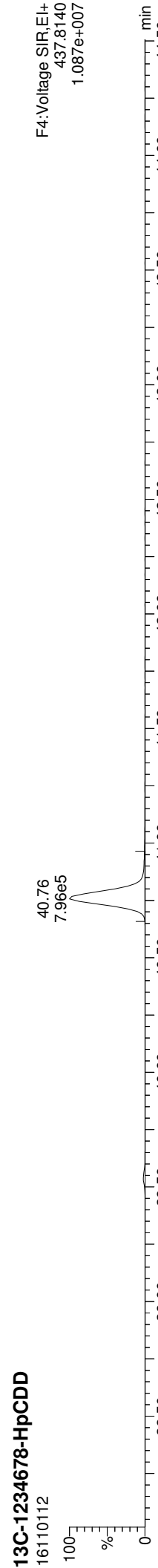
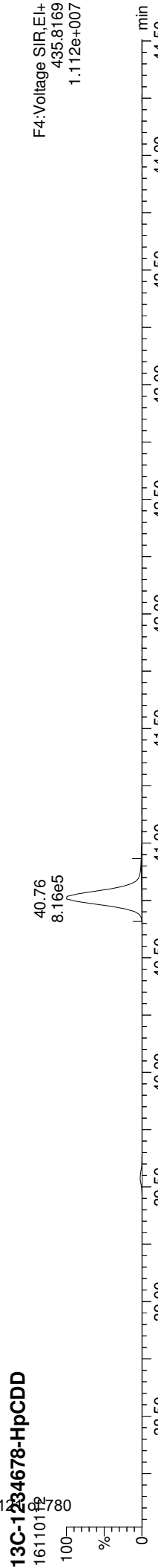
FUNCTION3 OCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

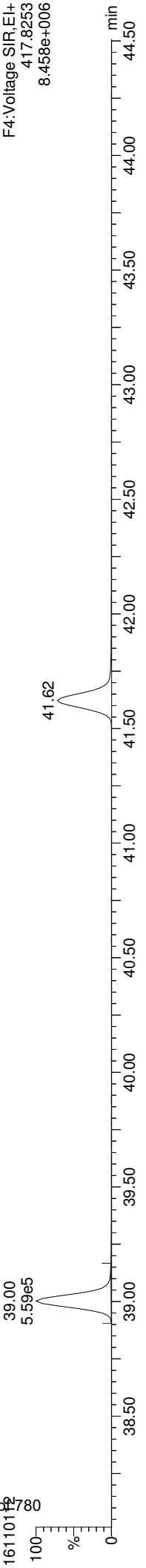


Quantify Sample Report

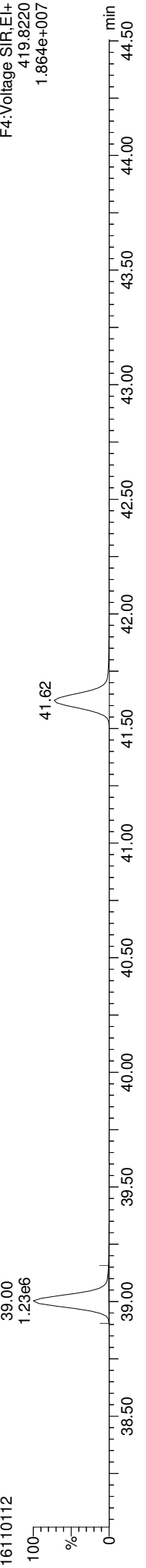
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ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

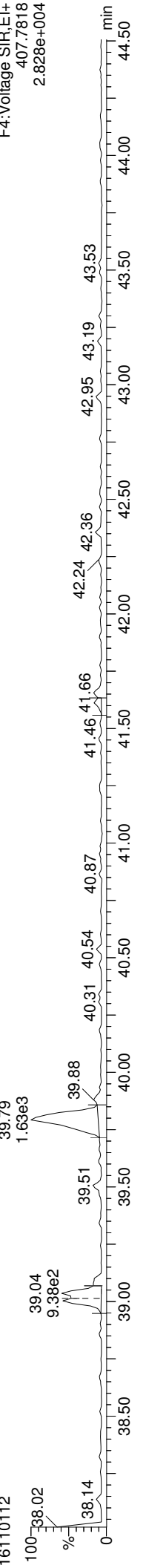
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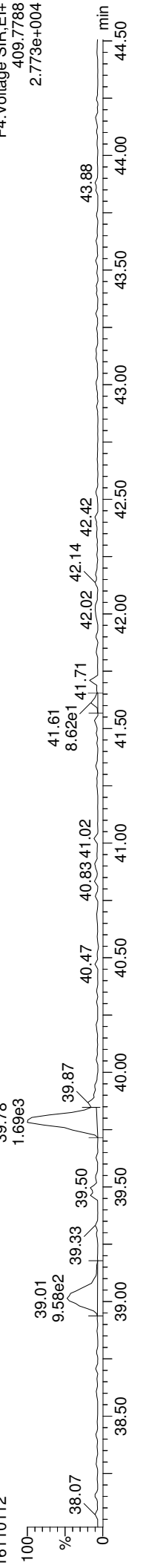
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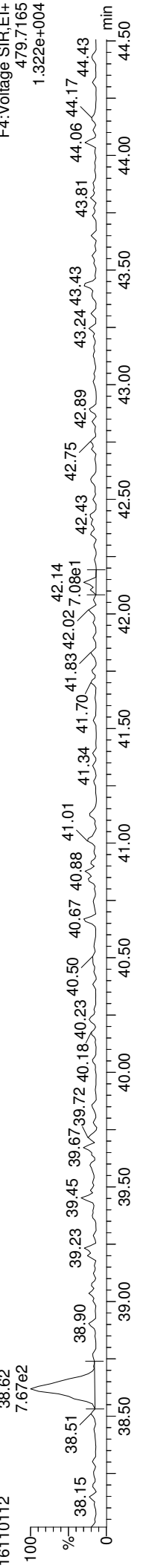
Total-heptafurans



Total-heptafurans



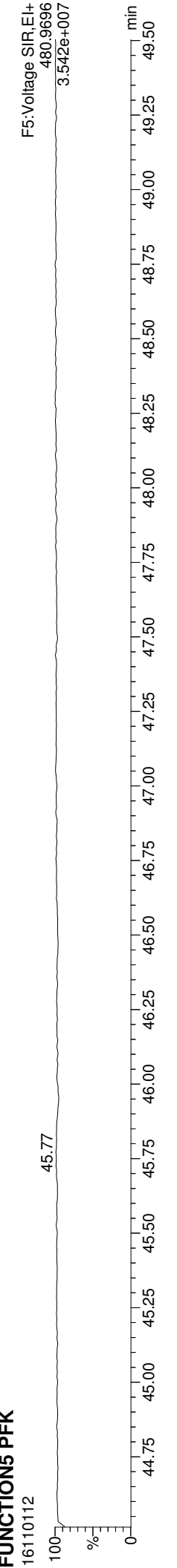
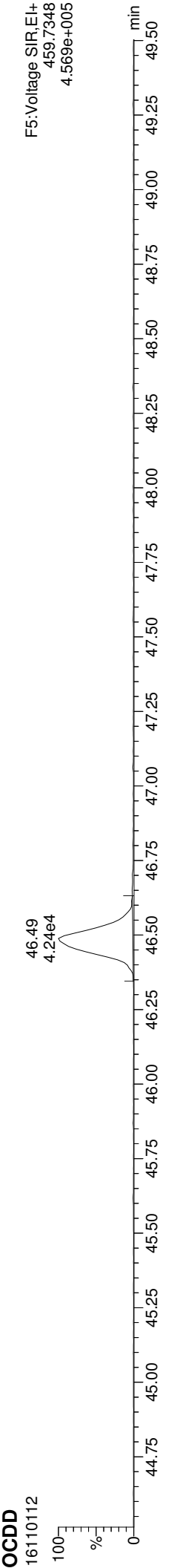
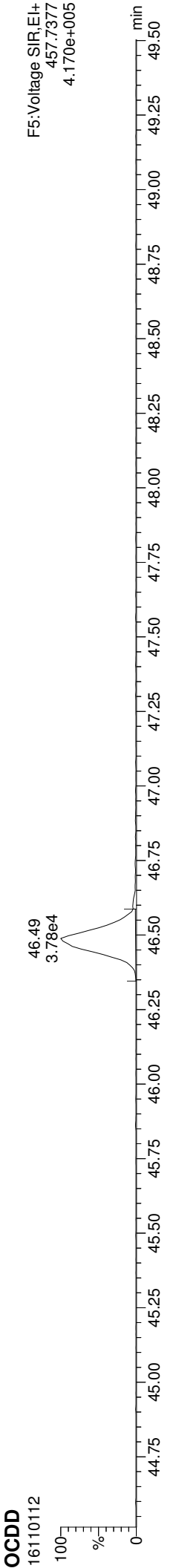
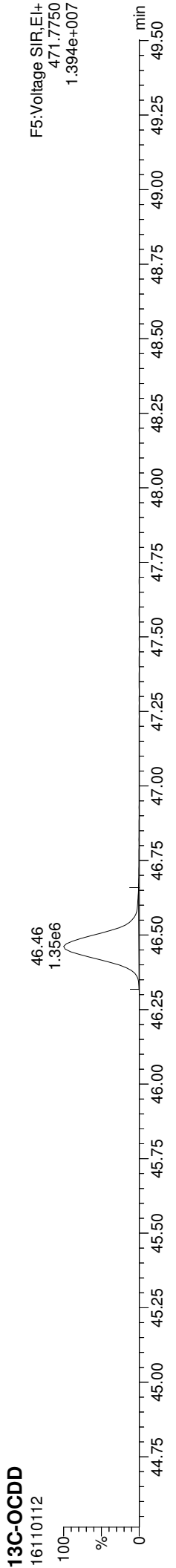
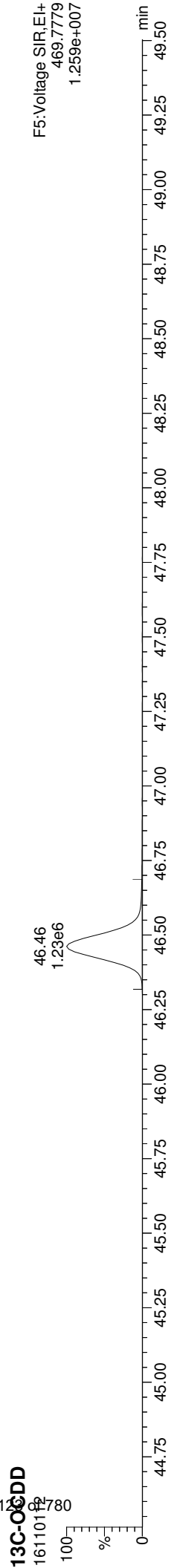
FUNCTION4 NCDPE



F4: Voltage SIR, EI+ 417.8253 8.458e+006
F4: Voltage SIR, EI+ 419.8220 1.864e+007
F4: Voltage SIR, EI+ 407.7818 2.828e+004
F4: Voltage SIR, EI+ 409.7788 2.773e+004
F4: Voltage SIR, EI+ 479.7165 1.322e+004

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 161101112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

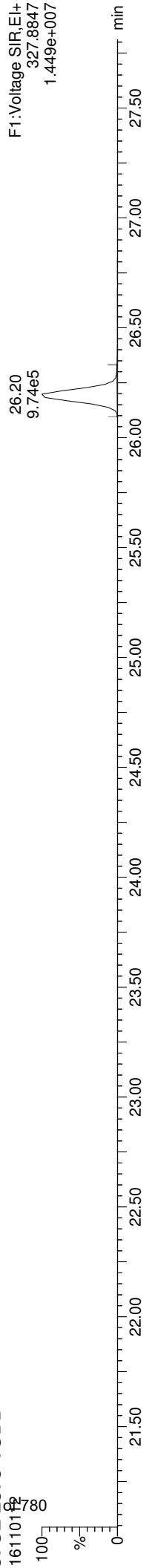


Quantify Sample Report

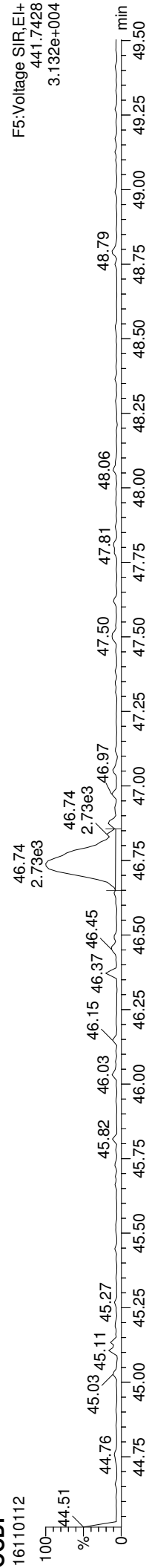
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:32 Pacific Daylight Time

ID: 16110187-05, Name: 16110112, Date: 01-Nov-2016, Time: 19:27:32, Conditions: AUTOSPEC01, User: PK

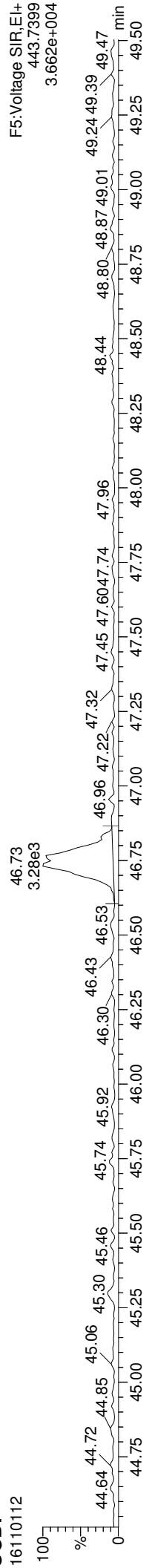
37CL-2378-TCDD



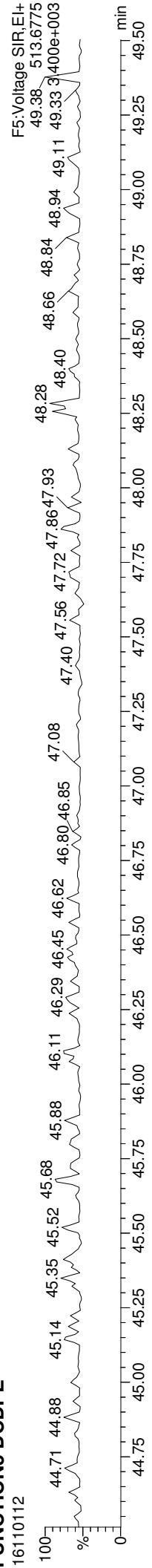
OCDF



OCDF



FUNCTION5 DCDPE



OCDF





Form I
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-06 File ID: 16110113
 Sampled: 10/11/16 12:50 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 20:20
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.02 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.569	0.655-0.886		0.998	0.060	ng/kg	EMPC, J
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.081	0.998	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.105	4.99	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.102	4.99	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.106	4.99	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.630	1.054-1.426		4.99	0.037	ng/kg	EMPC, J
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.045	4.99	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.048	4.99	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	2.807	1.054-1.426		4.99	0.075	ng/kg	EMPC, J, B
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.084	4.99	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.086	4.99	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.09	4.99	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	2.159	0.893-1.208		4.99	0.049	ng/kg	EMPC, J
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.076	4.99	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.086	0.893-1.208		4.99	0.404	ng/kg	J, B
39001-02-0	OCDF	1	0.777	0.757-1.024		9.98	0.302	ng/kg	J, B
3268-87-9	OCDD	1	0.811	0.757-1.024		9.98	4.11	ng/kg	J, B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			0.998	0.108	ng/kg	
41903-57-5	Total TCDD	1	0.000			0.998	0.119	ng/kg	
30402-15-4	Total PeCDF	1	0.000			0.998	0.210	ng/kg	
36088-22-9	Total PeCDD	1	0.000			0.998	ND	ng/kg	
55684-94-1	Total HxCDF	1	0.000			0.998	0.112	ng/kg	
34465-46-8	Total HxCDD	1	0.000			0.998	ND	ng/kg	
38998-75-3	Total HpCDF	1	0.000			0.998	0.173	ng/kg	
37871-00-4	Total HpCDD	1	0.000			0.998	1.82	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.023
 Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.023



Form I
ORGANIC ANALYSIS DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
 Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
 Matrix: Tissue Laboratory ID: 16J0187-06 File ID: 16110113
 Sampled: 10/11/16 12:50 Prepared: 10/26/16 09:20 Analyzed: 11/01/16 20:20
 Solids Wt%: Preparation: EPA 1613 Initial/Final: 10.02 g / 20 uL
 Result Basis: Dry Sequence: SEJ0462 Calibration: ZE00016
 Batch: BEJ0775 Instrument: AUTOSPEC01 Column: RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.771	0.655-0.886		86.1	24 - 169 %	
13C12-2,3,7,8-TCDD		0.790	0.655-0.886		86.7	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.590	1.318-1.783		84.8	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.594	1.318-1.783		91.4	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.601	1.318-1.783		89.9	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.520	0.434-0.587		83.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.515	0.434-0.587		79.2	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.525	0.434-0.587		81.8	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.528	0.434-0.587		82.7	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.290	1.054-1.426		91.9	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.247	1.054-1.426		87.9	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.445	0.374-0.506		75.5	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.442	0.374-0.506		83.0	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.064	0.893-1.208		85.7	23 - 140 %	
13C12-OCDD		0.882	0.757-1.024		75.6	17 - 157 %	
37C14-2,3,7,8-TCDD		328.000			91.8	35 - 197 %	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

Page 2 of 7

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16B0187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.555	1.001	1.80e2	3.16e2	0.935	0.569	0.770	1033	1214	3.33e3	5.93e3	3.2	YES	0.030
12378-PeCDF				0.952			1.550	1447	2185					
23478-PeCDF				0.963			1.550	1447	2185					
123478-HxCDF	34.683	1.000	8.48e1	1.35e2	1.137	0.630	1.240	817	595	3.38e3	3.71e3	4.1	YES	0.018
234678-HxCDF				1.164			1.240	817	595					
123678-HxCDF				1.099			1.240	817	595					
123789-HxCDF	36.952	1.001	2.74e2	9.75e1	1.101	2.807	1.240	817	595	4.83e3	2.97e3	5.9	YES	0.038
1234678-HpCDF	39.002	1.000	1.78e2	8.23e1	1.303	2.159	1.050	764	686	5.26e3	2.91e3	6.9	YES	0.025
1234789-HpCDF				1.317			1.050	764	686					
OCDF	46.720	1.006	4.35e2	5.60e2	1.166	0.777	0.890	799	1209	4.10e3	7.46e3	5.1	NO	0.151
2378-TCDD				1.134			0.770	1357	1004					
12378-PeCDD				0.975			1.550	1384	949					
123478-HxCDD				1.031			1.240	1099	816					
123678-HxCDD				0.971			1.240	1099	816					
123789-HxCDD				0.947			1.240	1099	816					
1234678-HpCDD	40.777	1.001	7.68e2	7.08e2	1.028	1.086	1.050	820	1094	9.61e3	1.24e4	11.7	NO	0.202
OCDD	46.487	1.001	5.77e3	7.11e3	1.107	0.811	0.890	661	524	6.79e4	8.64e4	102.7	NO	2.061
13C-2378-TCDF	25.540	1.007	7.65e5	9.91e5	1.567	0.771	0.770	6493	3516	1.18e7	1.53e7	1819.8	NO	86.092
13C-12378-PeCDF	29.663	1.170	8.63e5	5.43e5	1.274	1.590	1.550	4115	3186	1.33e7	8.37e6	3237.8	NO	84.768
13C-23478-PeCDF	31.011	1.223	9.02e5	5.66e5	1.235	1.594	1.550	4115	3186	1.36e7	8.69e6	3311.9	NO	91.406
13C-123478-HxCDF	34.683	0.951	3.60e5	6.92e5	1.381	0.520	0.510	4595	4769	5.46e6	1.06e7	1189.0	NO	83.623
13C-123678-HxCDF	34.837	0.955	3.85e5	7.47e5	1.569	0.515	0.510	4595	4769	5.76e6	1.11e7	1252.8	NO	79.151
13C-234678-HxCDF	35.779	0.981	3.45e5	6.58e5	1.345	0.525	0.510	4595	4769	5.17e6	9.82e6	1124.9	NO	81.812
13C-123789-HxCDF	36.930	1.013	3.08e5	5.84e5	1.183	0.528	0.510	4595	4769	4.45e6	8.39e6	968.7	NO	82.717
13C-1234678-HpCDF	38.991	1.069	2.50e5	5.61e5	1.178	0.445	0.440	1843	2710	3.74e6	8.33e6	2029.0	NO	75.474
13C-1234789-HpCDF	41.611	1.141	2.03e5	4.60e5	0.878	0.442	0.440	1843	2710	2.66e6	5.92e6	1442.4	NO	82.985
13C-1234-TCDD	25.361	0.000	5.75e5	7.26e5	1.000	0.793	0.770	3112	1585	9.07e6	1.15e7	2913.1	NO	100.000
13C-2378-TCDD	26.168	1.032	4.52e5	5.72e5	0.908	0.790	0.770	3112	1585	6.80e6	8.62e6	2185.4	NO	86.679
13C-12378-PeCDD	31.264	1.233	5.44e5	3.40e5	0.756	1.601	1.550	1519	1628	8.33e6	5.22e6	5485.7	NO	89.926
13C-123478-HxCDD	35.922	0.985	4.98e5	3.86e5	1.056	1.290	1.240	2731	3317	7.50e6	5.77e6	2746.8	NO	91.869
13C-123678-HxCDD	36.053	0.989	5.17e5	4.15e5	1.163	1.247	1.240	2731	3317	7.61e6	6.03e6	2785.4	NO	87.933
13C-1234678-HpCDD	40.756	1.118	3.66e5	3.44e5	0.909	1.064	1.050	1678	2165	5.02e6	4.72e6	2991.1	NO	85.686
13C-OCDD	46.451	1.274	5.29e5	6.00e5	0.820	0.882	0.890	1939	2042	5.42e6	6.09e6	2796.5	NO	151.198
13C-123789-HxCDD	36.470	0.000	5.12e5	3.99e5	1.000	1.283	1.240	2731	3317	7.49e6	5.81e6	2740.7	NO	100.000
Total-tetrafurans			3.12e2	0.935				1033		6.45e3				0.054

Quantify Sample Summary Report

MassLynx MassLynx V4.1 SCN909
 Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 161101113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					873		0.00e0				
Total-pentafurans			8.34e2		0.957			1447		8.41e3				0.105
Total-hexatfurans			3.58e2		1.125			817		8.21e3				0.056
Total-heptafurans			4.33e2		1.310			764		1.12e4				0.087
Total-Furans			2.37e3		1.114			1033		3.83e4				0.453
Total-tetradioxins			4.01e2		1.134			1357		6.66e3				0.060
Total-pentadioxins			0.00e0		0.975			1384		0.00e0				
Total-hexadioxins			0.00e0		0.983			1099		0.00e0				
Total-heptadioxins			3.61e3		1.028			820		4.98e4				0.911
Total-Dioxins			9.78e3		1.028			1357		1.24e5				3.031
Total-TEQ			1.22e4					1357		1.63e5				3.485
37CL-2378-TCDD	26.198	1.033	5.10e5		1.067			1445		7.78e6		5383.2		36.720
FUNCTION1 PFK			6.06e6					479594		6.50e7				
FUNCTION2 PFK			9.21e4					166975		2.91e6				0.000
FUNCTION3 PFK			5.98e5					468825		9.55e6				0.000
FUNCTION4 PFK			7.37e5					344650		1.76e7				
FUNCTION5 PFK			0.00e0					248004		0.00e0				
FUNCTION1 HXCD...			2.35e4					872		3.43e5				0.000
FUNCTION1 HPCD...			1.86e3					732		3.19e4				0.000
FUNCTION2 HPCD...			1.97e2					909		5.07e3				0.000
FUNCTION3 OCDPE			0.00e0					548		0.00e0				
FUNCTION4 NCDPE			2.06e2					943		4.96e3				0.000
FUNCTION5 DCDPE			0.00e0					438		0.00e0				

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: 16H0187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1 2378-TCDF	303.9016	25.56	496.104	0.935	0.030	0.025	0.57	0.77	YES	3.2
2	35 Total-tetrafurans	303.9016	25.78	393.382	0.935	0.024		0.51	0.77	YES	3.0

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37 Total-pentafurans	339.8597	28.53	1447.257	0.957	0.105		1.36	1.55	NO	5.8

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7 123789-HxCDF	373.8208	36.95	371.072	1.101	0.038	0.022	2.81	1.24	YES	5.9
2	4 123478-HxCDF	373.8208	34.68	219.272	1.137	0.018	0.013	0.63	1.24	YES	4.1

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	39 Total-heptafurans	407.7818	39.78	598.927	1.310	0.062		0.74	1.05	YES	7.7
2	8 1234678-HpCDF	407.7818	39.00	259.891	1.303	0.025	0.016	2.16	1.05	YES	6.9

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1 2378-TCDF	303.9016	25.56	496.104	0.935	0.030	0.025	0.57	0.77	YES	3.2
2	35 Total-tetrafurans	303.9016	25.78	393.382	0.935	0.024		0.51	0.77	YES	3.0
3	37 Total-pentafurans	339.8597	28.53	1447.257	0.957	0.105		1.36	1.55	NO	5.8
4	7 123789-HxCDF	373.8208	36.95	371.072	1.101	0.038	0.022	2.81	1.24	YES	5.9
5	4 123478-HxCDF	373.8208	34.68	219.272	1.137	0.018	0.013	0.63	1.24	YES	4.1
6	39 Total-heptafurans	407.7818	39.78	598.927	1.310	0.062		0.74	1.05	YES	7.7
7	8 1234678-HpCDF	407.7818	39.00	259.891	1.303	0.025	0.016	2.16	1.05	YES	6.9
8	10 OCDF	441.7428	46.72	995.749	1.166	0.151	0.151	0.78	0.89	NO	5.1

TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradioxins	319.8965	23.34	690.895	1.134	0.060		1.39	0.77	YES	4.9

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
 Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
 Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16H0187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

HD

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

HPD

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.78	1475.904	1.028	0.202	0.202	1.09	1.05	NO	11.7
2	44 Total-heptadioxins	423.7766	39.55	5169.713	1.028	0.708		1.22	1.05	YES	49.0

Dioxins,TD,PD,HD,HPD,OD

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	41 Total-tetradoxins	319.8965	23.34	690.895	1.134	0.060		1.39	0.77	YES	4.9
2	17 OCDD	457.7377	46.49	12882.871	1.107	2.061	2.061	0.81	0.89	NO	102.7
3	16 1234678-HpCDD	423.7766	40.78	1475.904	1.028	0.202	0.202	1.09	1.05	NO	11.7
4	44 Total-heptadioxins	423.7766	39.55	5169.713	1.028	0.708		1.22	1.05	YES	49.0

TotalTEQ,Furans,Dioxins

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1 2378-TCDF	303.9016	25.56	496.104	0.935	0.030	0.025	0.57	0.77	YES	3.2
2	35 Total-tetrafurans	303.9016	25.78	393.382	0.935	0.024		0.51	0.77	YES	3.0
3	37 Total-pentafurans	339.8597	28.53	1447.257	0.957	0.105		1.36	1.55	NO	5.8
4	7 123789-HxCDF	373.8208	36.95	371.072	1.101	0.038	0.022	2.81	1.24	YES	5.9
5	4 123478-HxCDF	373.8208	34.68	219.272	1.137	0.018	0.013	0.63	1.24	YES	4.1
6	39 Total-heptafurans	407.7818	39.78	598.927	1.310	0.062		0.74	1.05	YES	7.7
7	8 1234678-HpCDF	407.7818	39.00	259.891	1.303	0.025	0.016	2.16	1.05	YES	6.9
8	10 OCDF	441.7428	46.72	995.749	1.166	0.151	0.151	0.78	0.89	NO	5.1
9	41 Total-tetradoxins	319.8965	23.34	690.895	1.134	0.060		1.39	0.77	YES	4.9
10	17 OCDD	457.7377	46.49	12882.871	1.107	2.061	2.061	0.81	0.89	NO	102.7
11	16 1234678-HpCDD	423.7766	40.78	1475.904	1.028	0.202	0.202	1.09	1.05	NO	11.7
12	44 Total-heptadioxins	423.7766	39.55	5169.713	1.028	0.708		1.22	1.05	YES	49.0

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ID: 16H0187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	21.52	0.000							7.7
2	48 FUNCTION1 PFK	330.9792	21.43	0.000							6.4
3	48 FUNCTION1 PFK	330.9792	21.31	0.000							4.3
4	48 FUNCTION1 PFK	330.9792	23.48	0.000							1.9
5	48 FUNCTION1 PFK	330.9792	23.40	0.000							1.0
6	48 FUNCTION1 PFK	330.9792	23.27	0.000							0.3
7	48 FUNCTION1 PFK	330.9792	23.19	0.000							0.7
8	48 FUNCTION1 PFK	330.9792	23.13	0.000							1.0
9	48 FUNCTION1 PFK	330.9792	23.09	0.000							0.9
10	48 FUNCTION1 PFK	330.9792	22.99	0.000							1.4
11	48 FUNCTION1 PFK	330.9792	22.93	0.000							0.7
12	48 FUNCTION1 PFK	330.9792	22.67	0.000							2.2
13	48 FUNCTION1 PFK	330.9792	22.52	0.000							5.5
14	48 FUNCTION1 PFK	330.9792	22.43	0.000							5.6
15	48 FUNCTION1 PFK	330.9792	22.31	0.000							8.4
16	48 FUNCTION1 PFK	330.9792	21.92	0.000							14.2
17	48 FUNCTION1 PFK	330.9792	21.89	0.000							14.6
18	48 FUNCTION1 PFK	330.9792	21.76	0.000							10.5
19	48 FUNCTION1 PFK	330.9792	21.61	0.000							9.7
20	48 FUNCTION1 PFK	330.9792	25.45	0.000							0.9
21	48 FUNCTION1 PFK	330.9792	25.38	0.000							1.3
22	48 FUNCTION1 PFK	330.9792	25.30	0.000							0.9
23	48 FUNCTION1 PFK	330.9792	25.23	0.000							1.0
24	48 FUNCTION1 PFK	330.9792	25.17	0.000							1.3
25	48 FUNCTION1 PFK	330.9792	25.11	0.000							0.4
26	48 FUNCTION1 PFK	330.9792	24.94	0.000							1.3
27	48 FUNCTION1 PFK	330.9792	24.73	0.000							0.6
28	48 FUNCTION1 PFK	330.9792	24.69	0.000							0.9
29	48 FUNCTION1 PFK	330.9792	24.51	0.000							1.8
30	48 FUNCTION1 PFK	330.9792	24.45	0.000							2.0
31	48 FUNCTION1 PFK	330.9792	24.30	0.000							0.7
32	48 FUNCTION1 PFK	330.9792	24.23	0.000							0.6
33	48 FUNCTION1 PFK	330.9792	24.11	0.000							1.5
34	48 FUNCTION1 PFK	330.9792	23.94	0.000							1.7
35	48 FUNCTION1 PFK	330.9792	23.75	0.000							0.6
36	48 FUNCTION1 PFK	330.9792	27.63	0.000							1.3
37	48 FUNCTION1 PFK	330.9792	27.56	0.000							2.6
38	48 FUNCTION1 PFK	330.9792	27.48	0.000							1.5
39	48 FUNCTION1 PFK	330.9792	27.42	0.000							1.2
40	48 FUNCTION1 PFK	330.9792	27.30	0.000							1.4
41	48 FUNCTION1 PFK	330.9792	27.20	0.000							0.6
42	48 FUNCTION1 PFK	330.9792	26.93	0.000							0.7
43	48 FUNCTION1 PFK	330.9792	26.75	0.000							1.2
44	48 FUNCTION1 PFK	330.9792	26.69	0.000							1.7
45	48 FUNCTION1 PFK	330.9792	26.62	0.000							1.9
46	48 FUNCTION1 PFK	330.9792	26.48	0.000							1.2
47	48 FUNCTION1 PFK	330.9792	26.35	0.000							0.8
48	48 FUNCTION1 PFK	330.9792	26.26	0.000							0.7
49	48 FUNCTION1 PFK	330.9792	26.11	0.000							0.5
50	48 FUNCTION1 PFK	330.9792	25.85	0.000							1.7
51	48 FUNCTION1 PFK	330.9792	25.73	0.000							1.0

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PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
52	48 FUNCTION1 PFK	330.9792	27.74	0.000							1.3

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366.9792	32.47	0.000		0.000					1.0
2	49 FUNCTION2 PFK	366.9792	32.26	0.000		0.000					1.3
3	49 FUNCTION2 PFK	366.9792	31.94	0.000		0.000					1.1
4	49 FUNCTION2 PFK	366.9792	31.75	0.000		0.000					1.5
5	49 FUNCTION2 PFK	366.9792	31.50	0.000		0.000					1.5
6	49 FUNCTION2 PFK	366.9792	31.40	0.000		0.000					1.6
7	49 FUNCTION2 PFK	366.9792	31.33	0.000		0.000					0.9
8	49 FUNCTION2 PFK	366.9792	30.80	0.000		0.000					0.9
9	49 FUNCTION2 PFK	366.9792	30.18	0.000		0.000					1.7
10	49 FUNCTION2 PFK	366.9792	30.09	0.000		0.000					1.5
11	49 FUNCTION2 PFK	366.9792	29.37	0.000		0.000					1.1
12	49 FUNCTION2 PFK	366.9792	29.04	0.000		0.000					0.9
13	49 FUNCTION2 PFK	366.9792	28.98	0.000		0.000					1.6
14	49 FUNCTION2 PFK	366.9792	28.06	0.000		0.000					0.8

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	35.99	0.000		0.000					5.4
2	50 FUNCTION3 PFK	380.9760	35.87	0.000		0.000					6.1
3	50 FUNCTION3 PFK	380.9760	35.06	0.000		0.000					4.2
4	50 FUNCTION3 PFK	380.9760	35.03	0.000		0.000					4.6

Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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ID: 16H0187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	40.05	0.000							1.2
2	51 FUNCTION4 PFK	430.9728	39.73	0.000							1.3
3	51 FUNCTION4 PFK	430.9728	39.60	0.000							1.7
4	51 FUNCTION4 PFK	430.9728	39.41	0.000							1.6
5	51 FUNCTION4 PFK	430.9728	39.30	0.000							0.9
6	51 FUNCTION4 PFK	430.9728	38.98	0.000							1.9
7	51 FUNCTION4 PFK	430.9728	38.80	0.000							0.8
8	51 FUNCTION4 PFK	430.9728	38.38	0.000							1.7
9	51 FUNCTION4 PFK	430.9728	38.17	0.000							0.5
10	51 FUNCTION4 PFK	430.9728	38.10	0.000							0.7
11	51 FUNCTION4 PFK	430.9728	43.69	0.000							2.6
12	51 FUNCTION4 PFK	430.9728	43.21	0.000							1.8
13	51 FUNCTION4 PFK	430.9728	42.51	0.000							1.7
14	51 FUNCTION4 PFK	430.9728	42.15	0.000							1.9
15	51 FUNCTION4 PFK	430.9728	41.96	0.000							1.2
16	51 FUNCTION4 PFK	430.9728	41.84	0.000							0.8
17	51 FUNCTION4 PFK	430.9728	41.81	0.000							0.7
18	51 FUNCTION4 PFK	430.9728	41.76	0.000							1.6
19	51 FUNCTION4 PFK	430.9728	41.46	0.000							0.6
20	51 FUNCTION4 PFK	430.9728	41.18	0.000							2.3
21	51 FUNCTION4 PFK	430.9728	41.11	0.000							0.4
22	51 FUNCTION4 PFK	430.9728	40.73	0.000							2.8
23	51 FUNCTION4 PFK	430.9728	40.69	0.000							1.2
24	51 FUNCTION4 PFK	430.9728	40.59	0.000							1.3
25	51 FUNCTION4 PFK	430.9728	40.34	0.000							2.5
26	51 FUNCTION4 PFK	430.9728	40.27	0.000							2.2
27	51 FUNCTION4 PFK	430.9728	44.37	0.000							0.7
28	51 FUNCTION4 PFK	430.9728	44.34	0.000							1.5
29	51 FUNCTION4 PFK	430.9728	44.15	0.000							1.2
30	51 FUNCTION4 PFK	430.9728	44.02	0.000							1.3
31	51 FUNCTION4 PFK	430.9728	43.84	0.000							2.4
32	51 FUNCTION4 PFK	430.9728	43.77	0.000							2.8
33	51 FUNCTION4 PFK	430.9728	43.74	0.000							3.2

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	27.11	0.000		0.000					4.0
2	53 FUNCTION1 HXCD...	375.8364	26.17	0.000		0.000					2.1
3	53 FUNCTION1 HXCD...	375.8364	25.93	0.000		0.000					2.8
4	53 FUNCTION1 HXCD...	375.8364	25.63	0.000		0.000					304.3
5	53 FUNCTION1 HXCD...	375.8364	25.35	0.000		0.000					76.1
6	53 FUNCTION1 HXCD...	375.8364	25.08	0.000		0.000					2.6
7	53 FUNCTION1 HXCD...	375.8364	24.72	0.000		0.000					1.7

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ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	27.41	0.000		0.000					2.0
2	54 FUNCTION1 HPCD...	409.7974	26.94	0.000		0.000					1.9
3	54 FUNCTION1 HPCD...	409.7974	26.57	0.000		0.000					2.4
4	54 FUNCTION1 HPCD...	409.7974	24.67	0.000		0.000					1.8
5	54 FUNCTION1 HPCD...	409.7974	24.15	0.000		0.000					1.4
6	54 FUNCTION1 HPCD...	409.7974	21.88	0.000		0.000					25.1
7	54 FUNCTION1 HPCD...	409.7974	21.33	0.000		0.000					8.8

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	31.59	0.000		0.000					3.8
2	55 FUNCTION2 HPCD...	409.7974	29.25	0.000		0.000					1.8

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	41.13	0.000		0.000					2.0
2	57 FUNCTION4 NCDPE	479.7165	38.61	0.000		0.000					3.2

ETHERS6

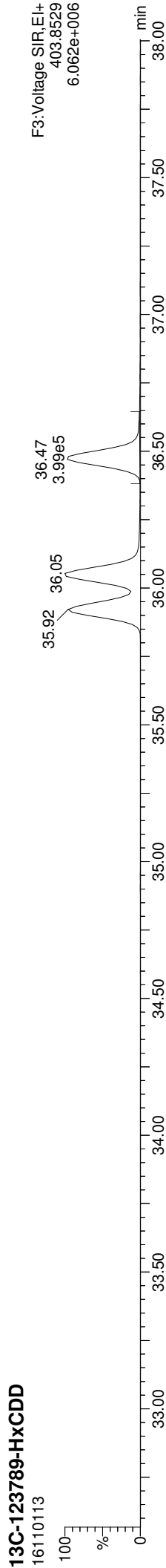
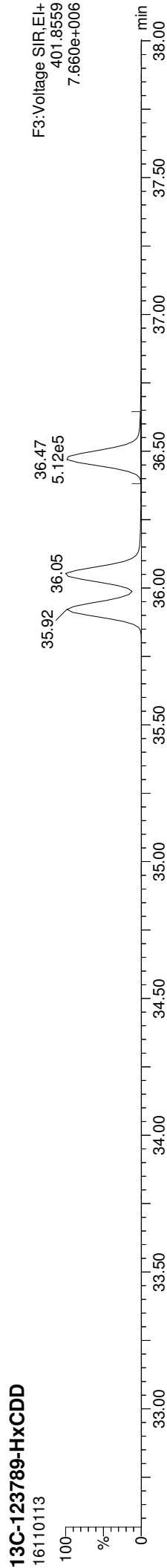
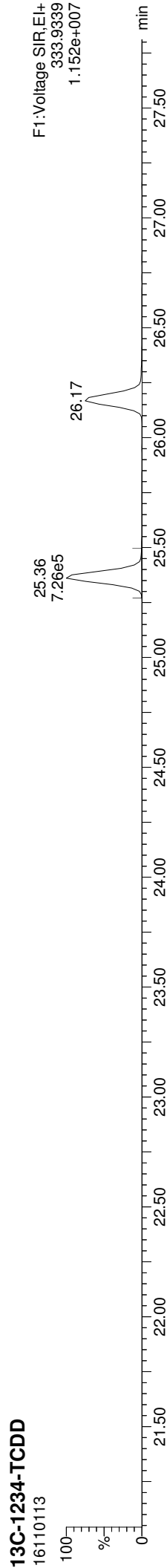
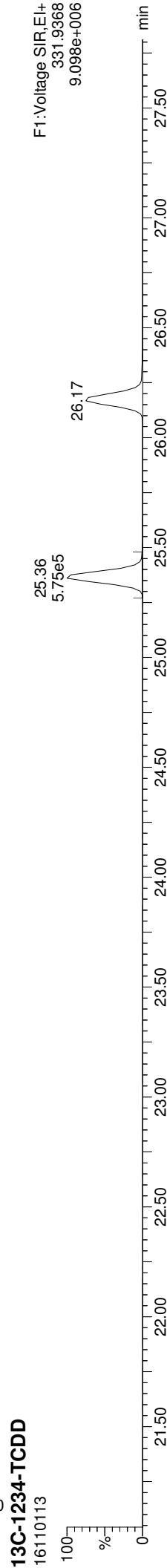
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Quantify Sample Report MassLynx MassLynx V4.1 SCN909

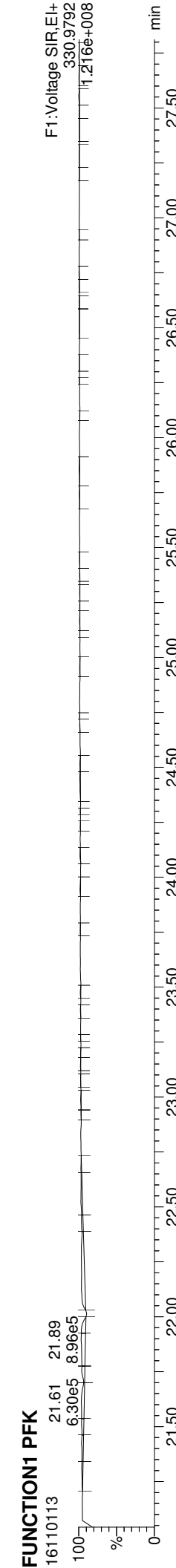
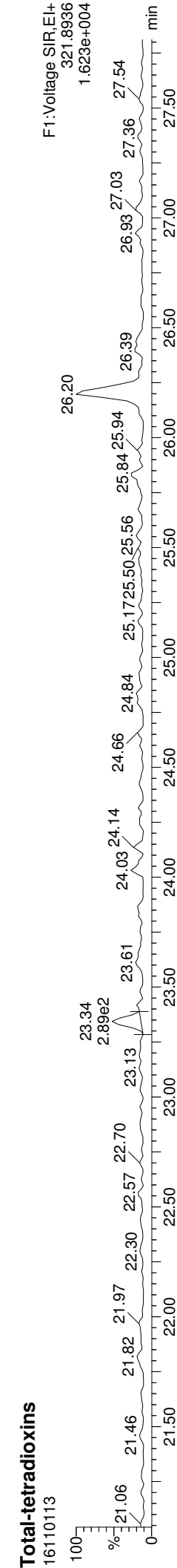
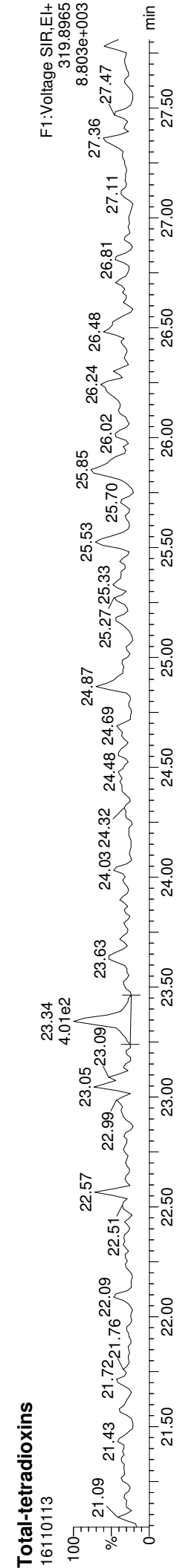
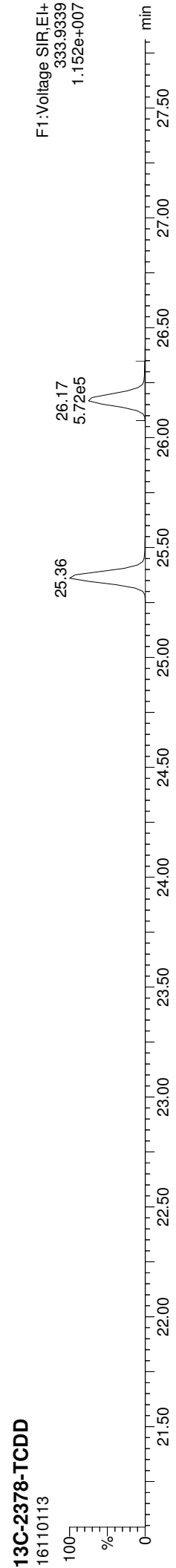
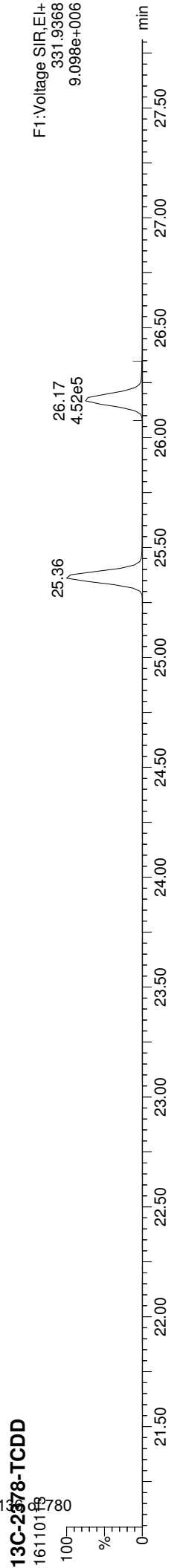
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

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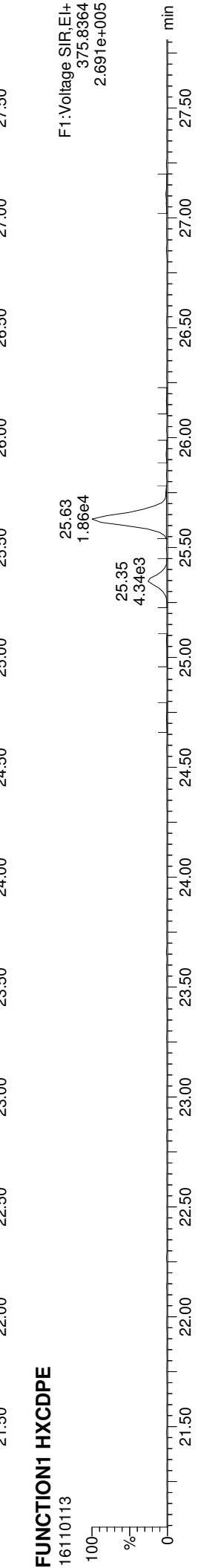
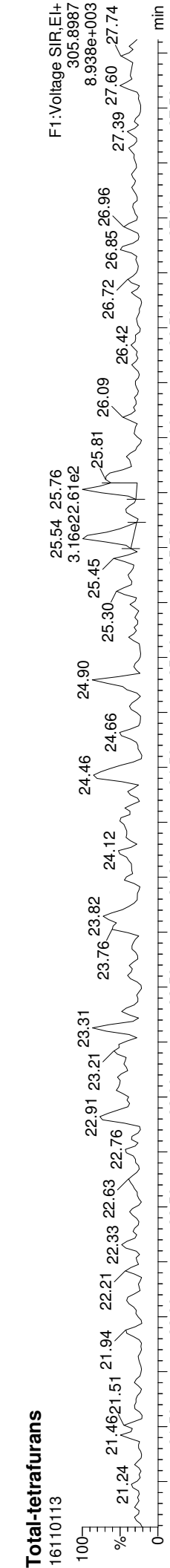
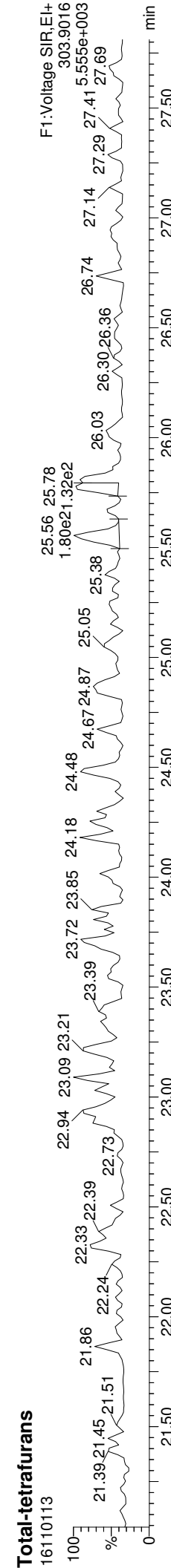
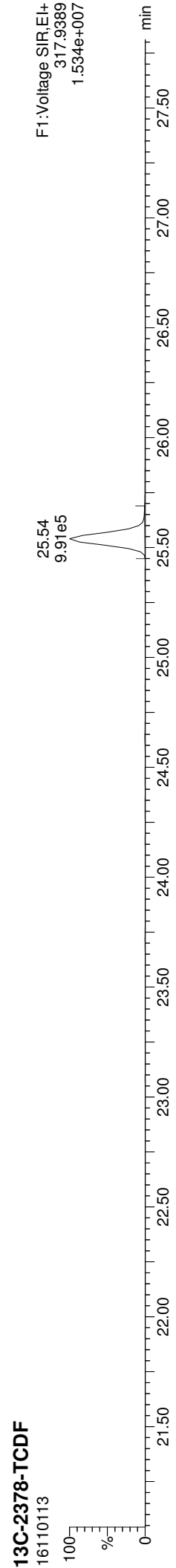
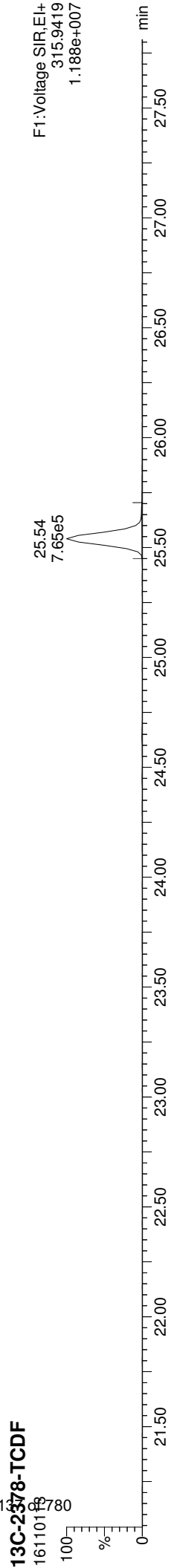


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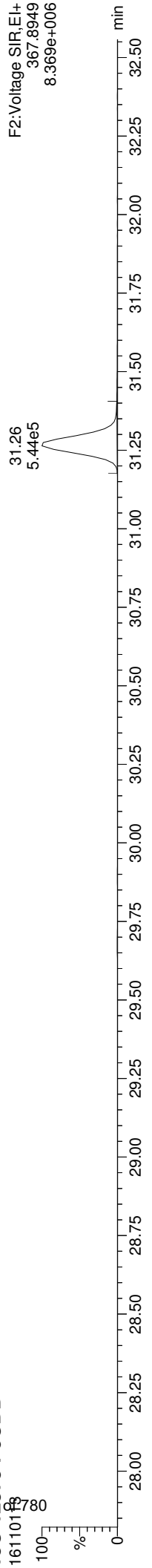
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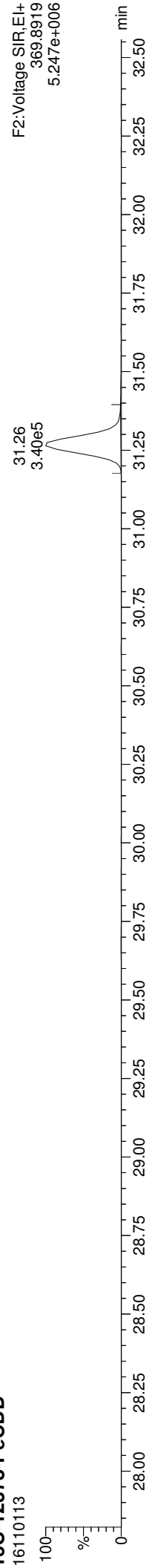
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Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 161101113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

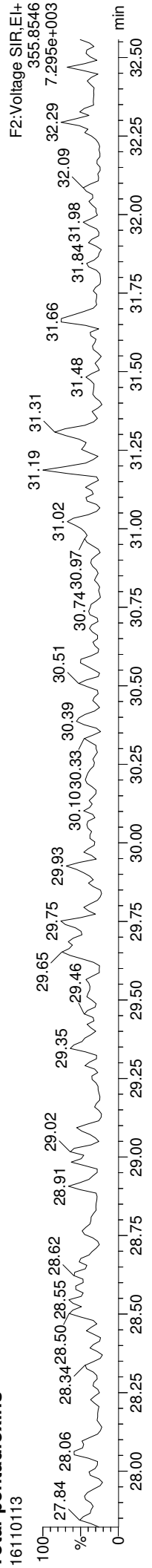
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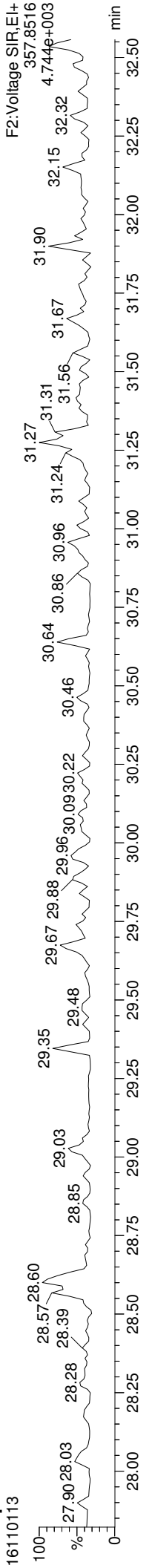
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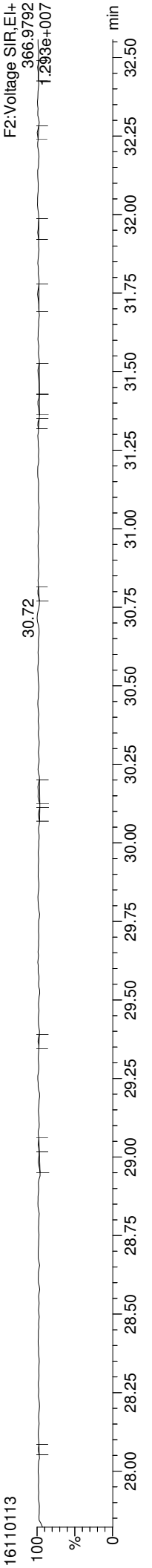
Total-pentadioxins



Total-pentadioxins

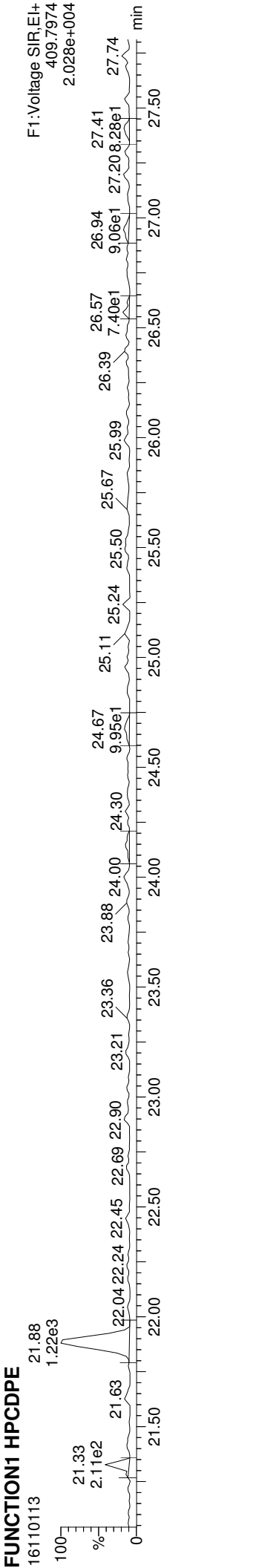
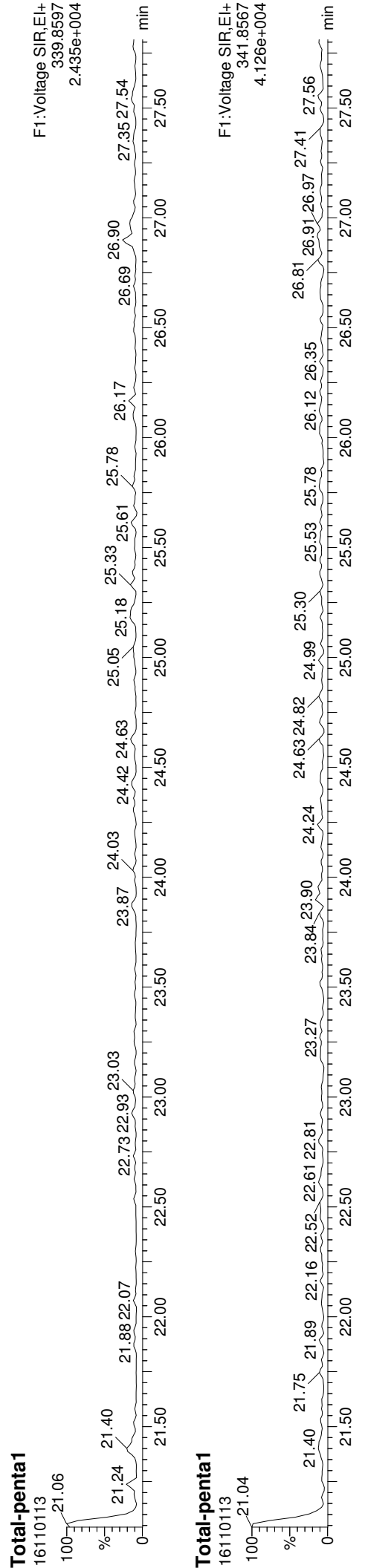
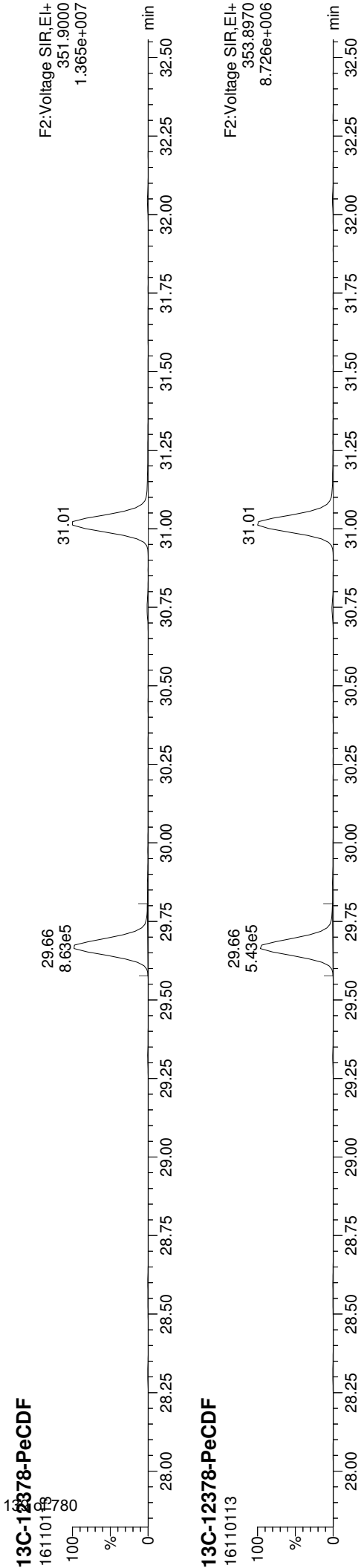


FUNCTION2 PFK



Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
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ID: 16110187-06, Name: 161101113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

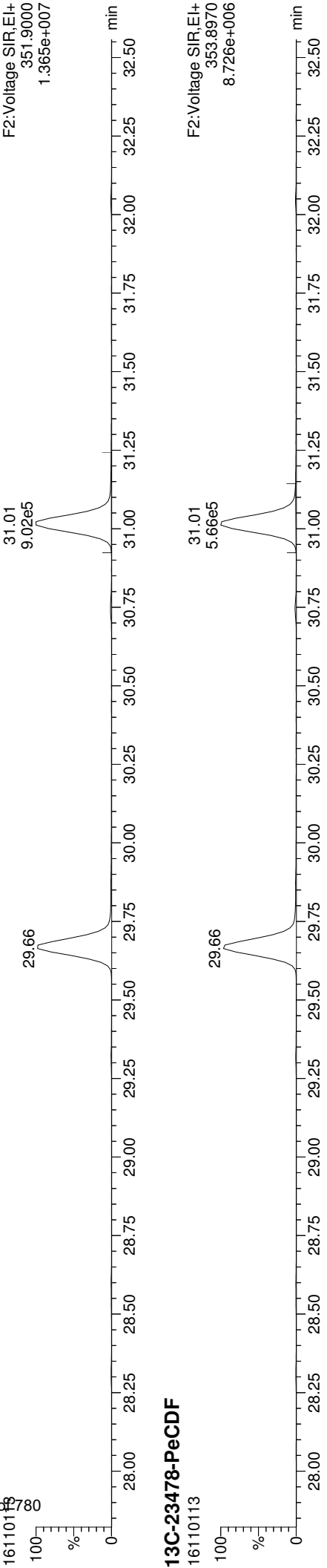


Quantify Sample Report

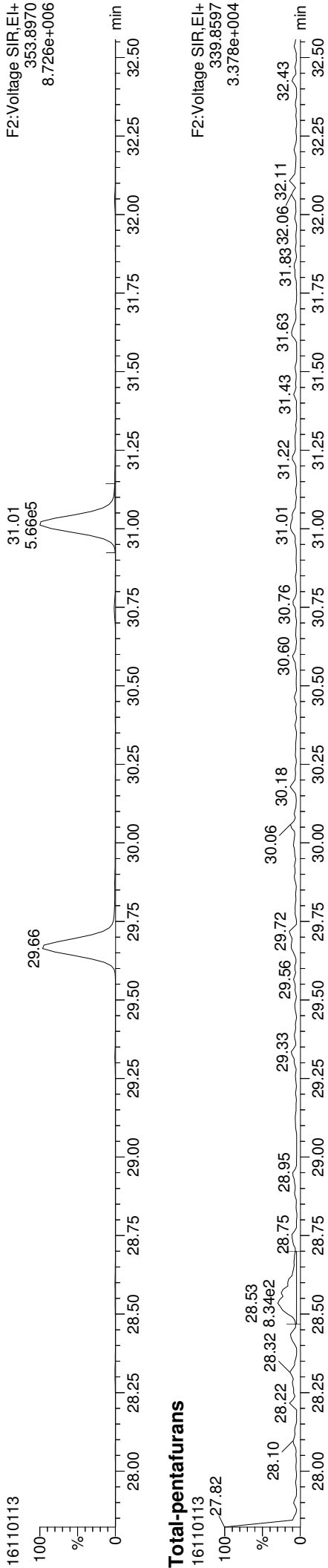
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 161101113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

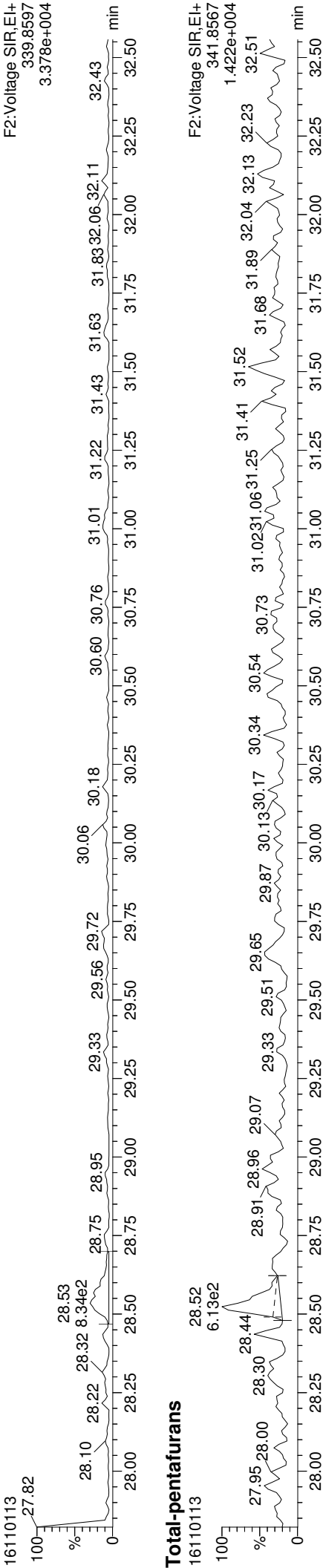
13C-23478-PeCDF



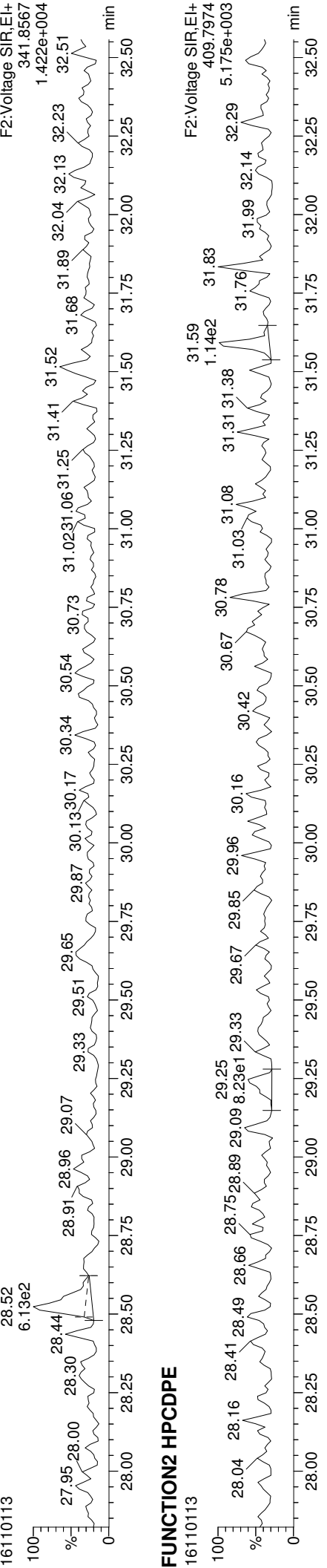
13C-23478-PeCDF



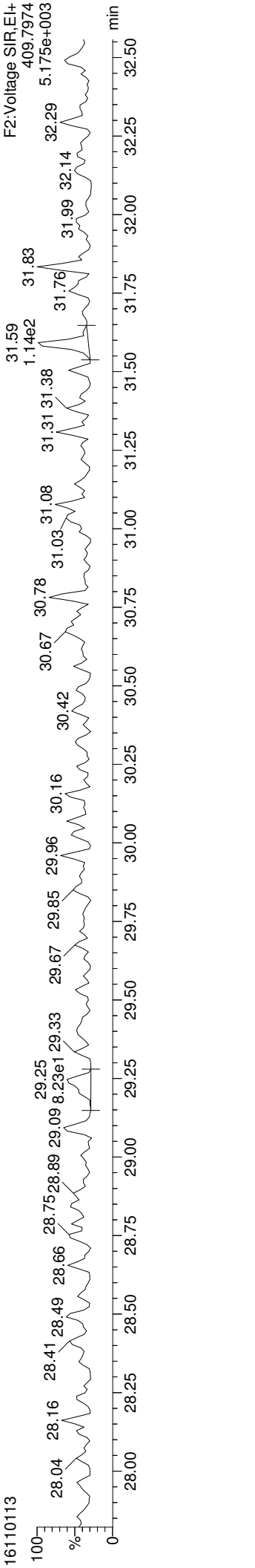
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

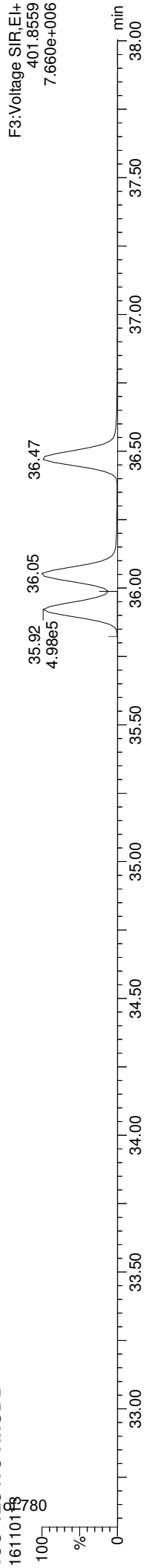


Quantify Sample Report

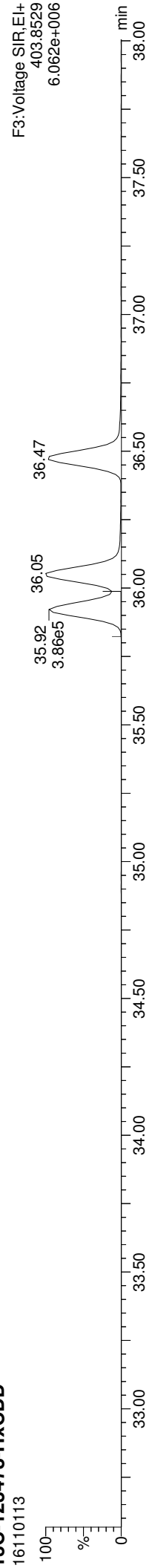
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

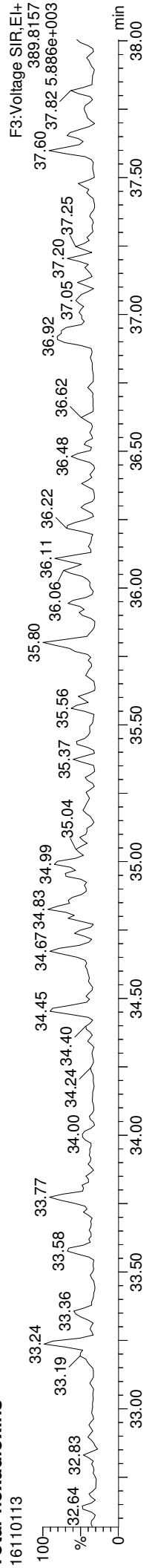
13C-123478-HxCDD



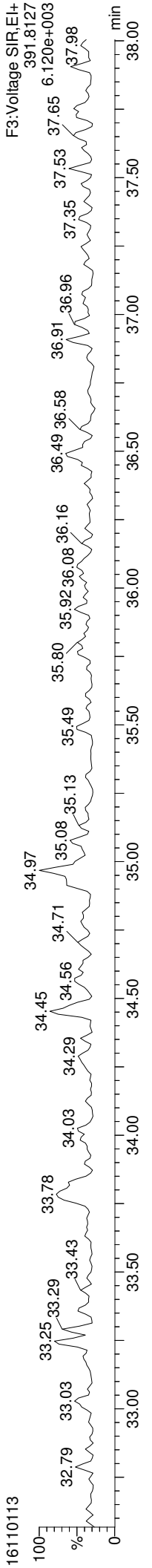
13C-123478-HxCDD



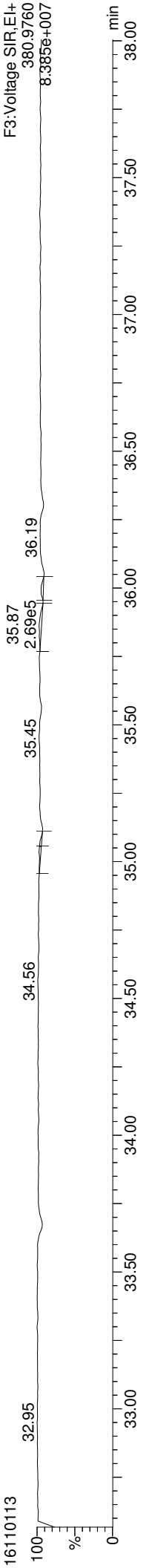
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

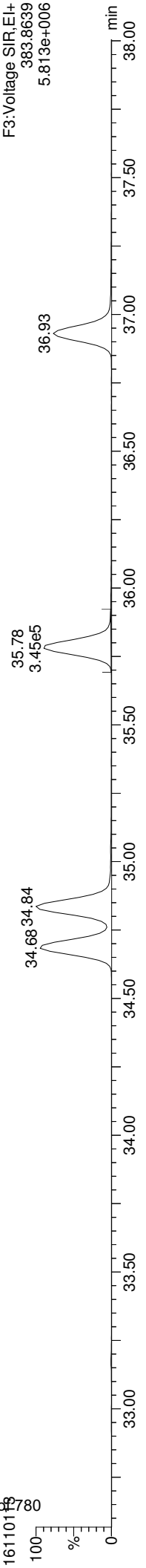


Quantify Sample Report

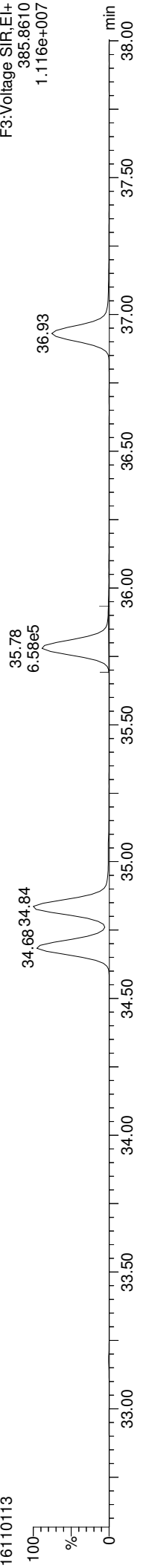
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

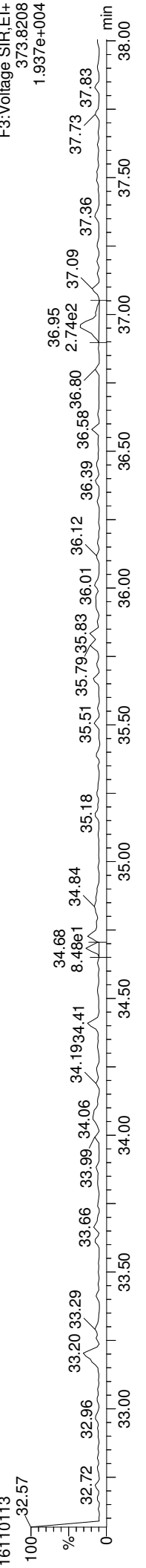
13C-234678-HxCDF



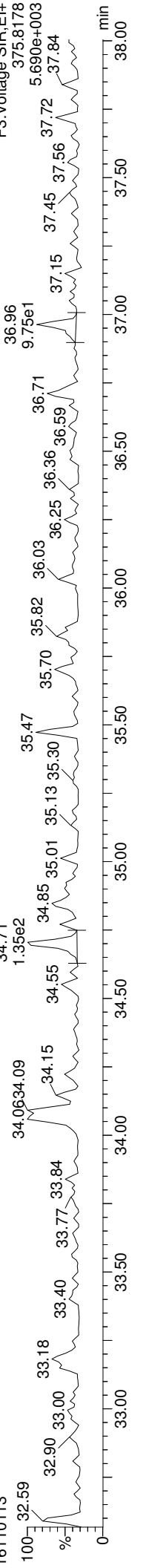
13C-234678-HxCDF



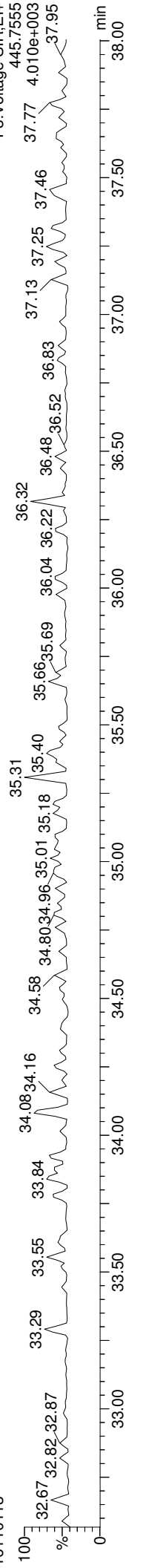
Total-hexafurans



Total-hexafurans



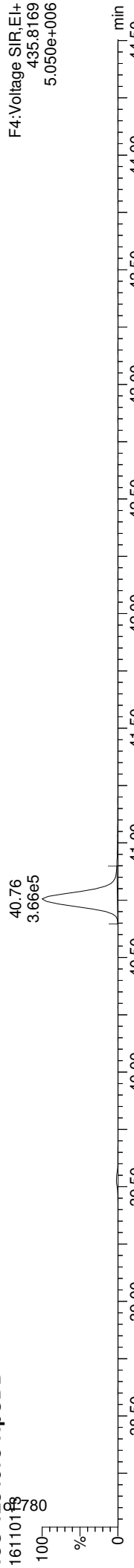
FUNCTION3 OCDPE



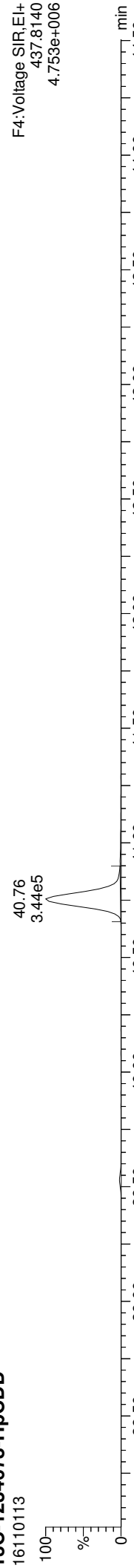
Quantify Sample Report
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

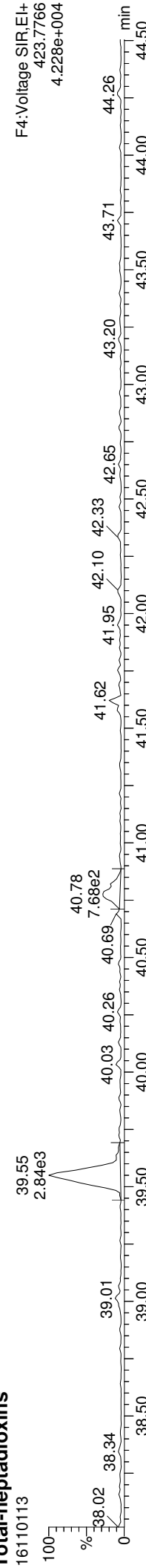
13C-1234678-HpCDD



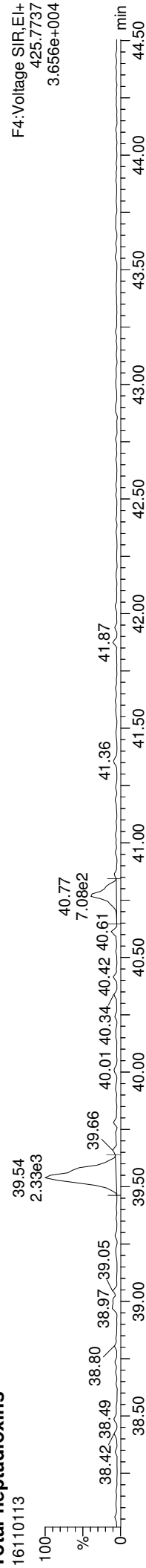
13C-1234678-HpCDD



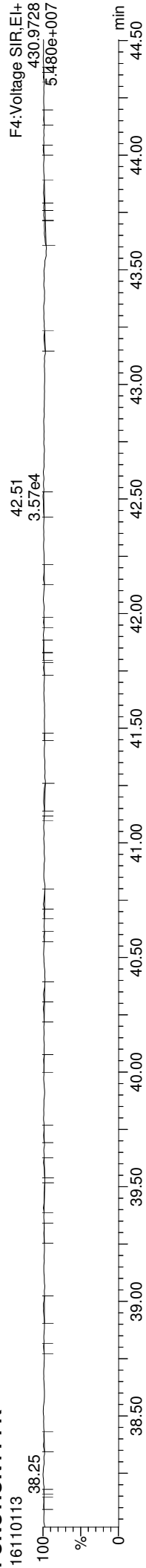
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



F4:Voltage SIR,EI+
435.8169
5.050e+006

F4:Voltage SIR,EI+
437.8140
4.753e+006

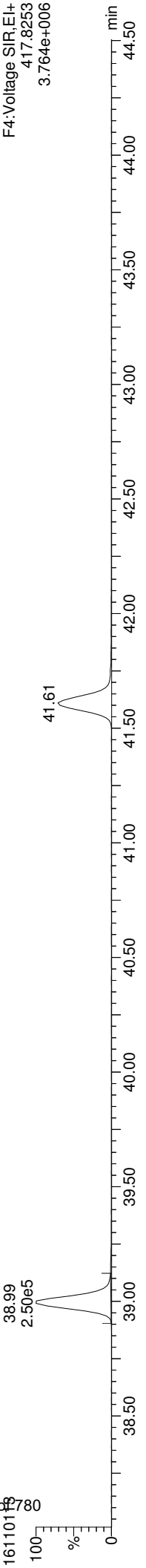
F4:Voltage SIR,EI+
423.7766
4.228e+004

F4:Voltage SIR,EI+
425.7737
3.656e+004

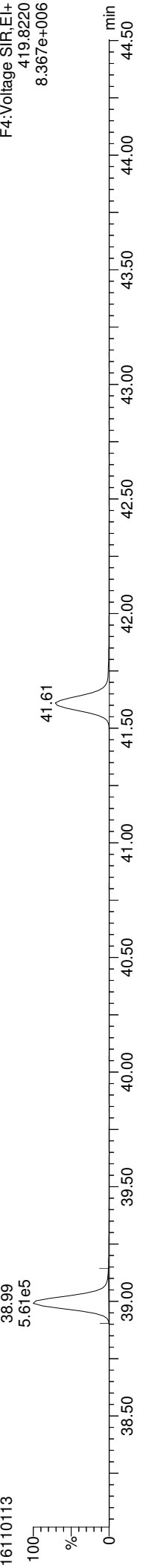
F4:Voltage SIR,EI+
430.9728
5.480e+007

ID: 16110187-06, Name: 161101113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

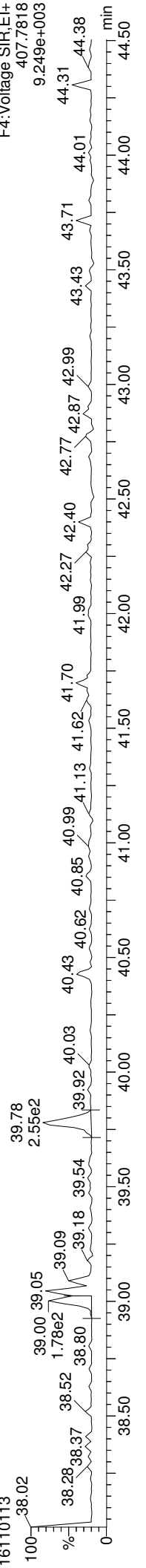
13C-1234678-HpCDF



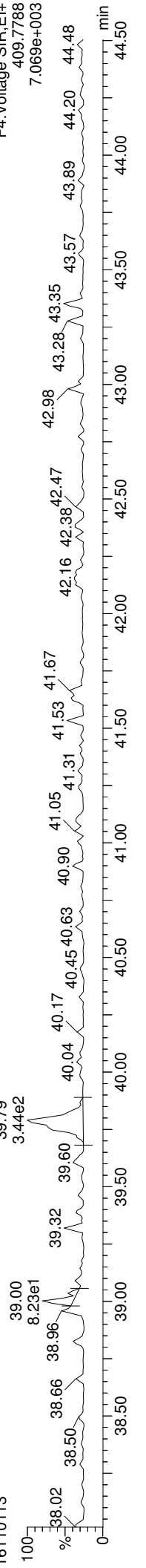
13C-1234678-HpCDF



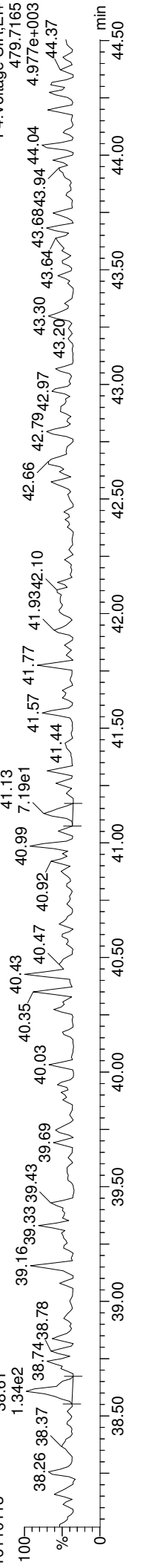
Total-heptafurans



Total-heptafurans



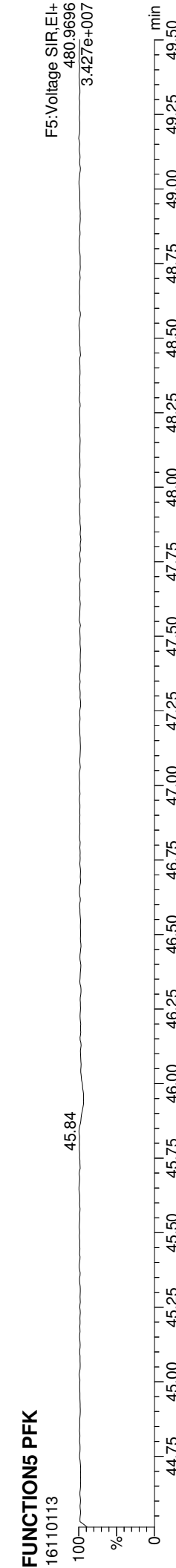
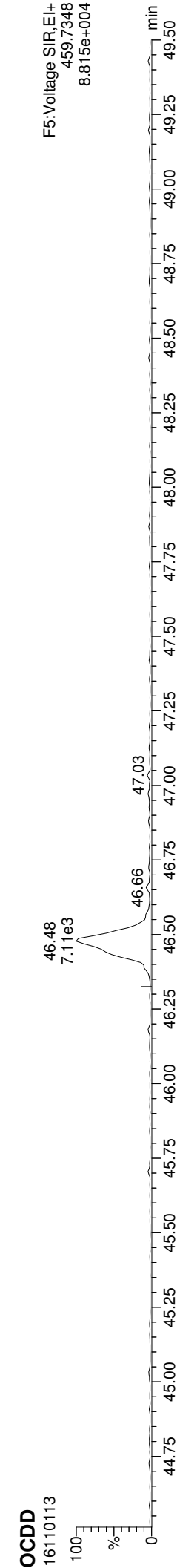
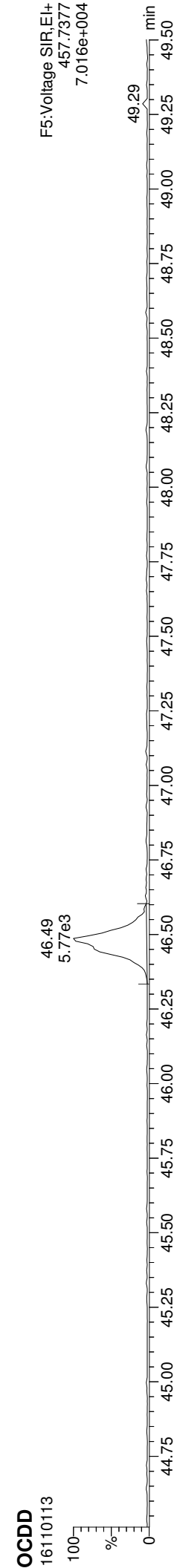
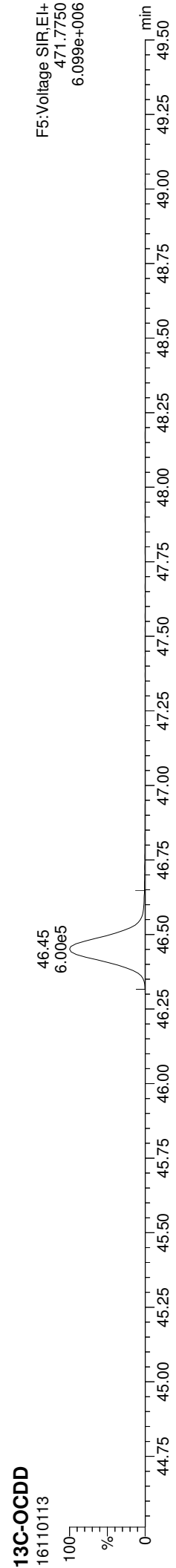
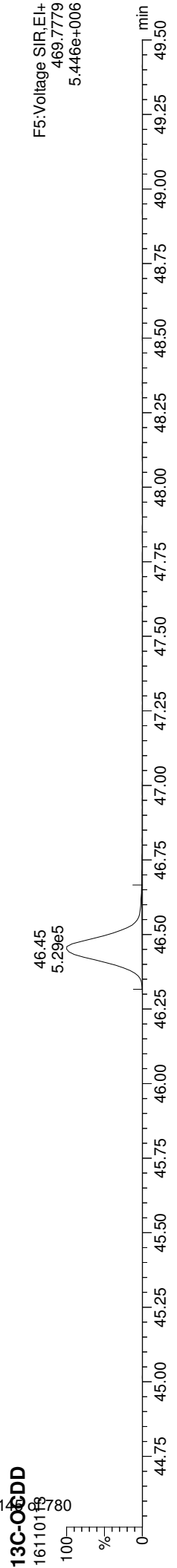
FUNCTION4 NCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 16110113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

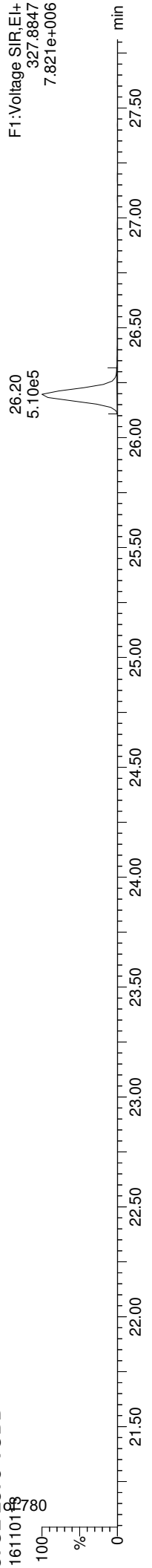


Quantify Sample Report

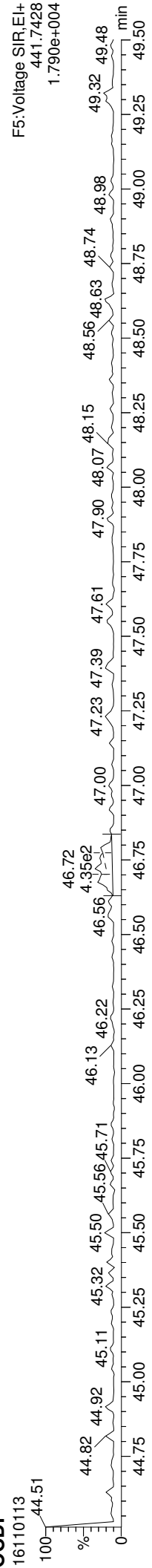
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA2.qld
Last Altered: Wednesday, November 02, 2016 11:00:34 Pacific Daylight Time
Printed: Wednesday, November 02, 2016 11:35:36 Pacific Daylight Time

ID: 16110187-06, Name: 161101113, Date: 01-Nov-2016, Time: 20:20:40, Conditions: AUTOSPEC01, User: PK

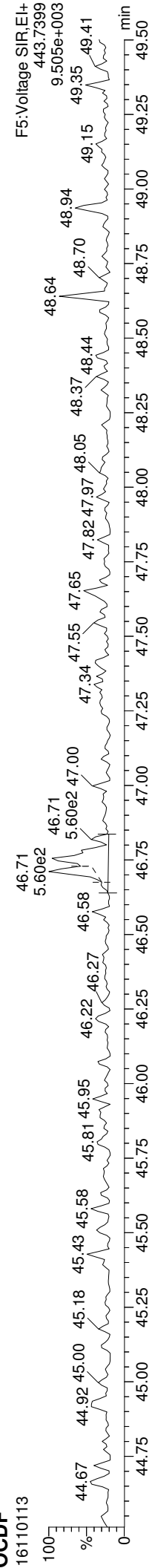
37CL-2378-TCDD



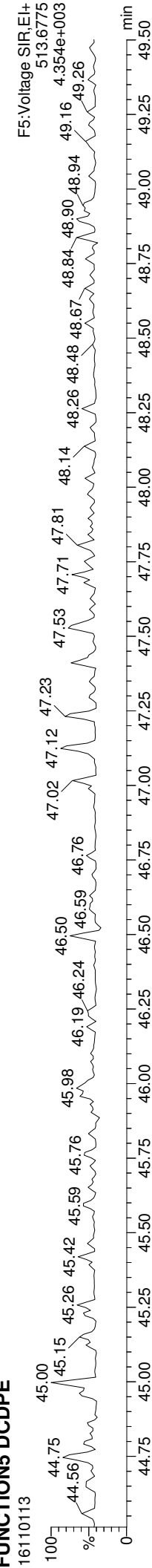
OCDF



OCDF



FUNCTION5 DCDPE





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Form I
METHOD BLANK DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory: <u>Analytical Resources, Inc.</u>	SDG: <u>16J0187</u>
Client: <u>Anchor QEA, LLC</u>	Project: <u>Port Gamble Shellfish Monitoring</u>
Matrix: <u>Tissue</u>	Laboratory ID: <u>BEJ0775-BLK1</u>
Sampled: <u>N/A</u>	File ID: <u>16110104</u>
Solids Wt%:	Prepared: <u>10/26/16 09:20</u>
Result Basis: <u>Dry</u>	Analyzed: <u>11/01/16 12:23</u>
Batch: <u>BEJ0775</u>	Preparation: <u>EPA 1613</u>
	Initial/Final: <u>10 g / 20 uL</u>
	Sequence: <u>SEJ0462</u>
	Calibration: <u>ZE00016</u>
	Column: <u>RTX-Dioxin2</u>
	Instrument: <u>AUTOSPEC01</u>

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	0.024	1.00	ND	ng/kg	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.043	1.00	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.597	1.318-1.783		5.00	0.0396	ng/kg	EMPC, J
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.03	5.00	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.036	5.00	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.032	5.00	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.03	5.00	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.027	5.00	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.370	1.054-1.426		5.00	0.0899	ng/kg	J
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.034	5.00	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.047	5.00	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.042	5.00	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	0.039	5.00	ND	ng/kg	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.055	5.00	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.969	0.893-1.208		5.00	0.0625	ng/kg	J
39001-02-0	OCDF	1	0.629	0.757-1.024		10.0	0.0923	ng/kg	EMPC, J
3268-87-9	OCDD	1	0.728	0.757-1.024		10.0	0.933	ng/kg	EMPC, J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	0.0344	ng/kg	
41903-57-5	Total TCDD	1	0.000			1.00	ND	ng/kg	
30402-15-4	Total PeCDF	1	0.000			1.00	0.0396	ng/kg	
36088-22-9	Total PeCDD	1	0.000			1.00	ND	ng/kg	
55684-94-1	Total HxCDF	1	0.000			1.00	0.0899	ng/kg	
34465-46-8	Total HxCDD	1	0.000			1.00	ND	ng/kg	
38998-75-3	Total HpCDF	1	0.000			1.00	ND	ng/kg	
37871-00-4	Total HpCDD	1	0.000			1.00	0.170	ng/kg	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.011
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.123



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Form I
METHOD BLANK DATA SHEET

EPA 1613B
Dioxin 1613B

Laboratory:	<u>Analytical Resources, Inc.</u>	SDG:	<u>16J0187</u>
Client:	<u>Anchor QEA, LLC</u>	Project:	<u>Port Gamble Shellfish Monitoring</u>
Matrix:	Tissue	Laboratory ID:	<u>BEJ0775-BLK1</u>
Sampled:	<u>N/A</u>	Prepared:	<u>10/26/16 09:20</u>
Solids Wt%:		Preparation:	<u>EPA 1613</u>
Result Basis:	<u>Dry</u>	Sequence:	<u>SEJ0462</u>
Batch:	<u>BEJ0775</u>	Instrument:	<u>AUTOSPEC01</u>
		File ID:	<u>16110104</u>
		Analyzed:	<u>11/01/16 12:23</u>
		Initial/Final:	<u>10 g / 20 uL</u>
		Calibration:	<u>ZE00016</u>
		Column:	<u>RTX-Dioxin2</u>

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.781	0.655-0.886		93.3	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.793	0.655-0.886		91.4	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.553	1.318-1.783		95.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.569	1.318-1.783		101	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.578	1.318-1.783		99.0	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.521	0.434-0.587		77.6	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.520	0.434-0.587		72.1	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF	1	0.525	0.434-0.587		76.5	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.525	0.434-0.587		80.1	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.283	1.054-1.426		83.8	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.260	1.054-1.426		59.4	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF	1	0.453	0.374-0.506		75.8	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF	1	0.459	0.374-0.506		83.3	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.040	0.893-1.208		86.6	23 - 140 %	
13C12-OCDD	1	0.897	0.757-1.024		68.8	17 - 157 %	
37C14-2,3,7,8-TCDD	1	328.000			109	35 - 197 %	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
 Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
 Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

Page 4 of 7

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: BE30775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF					0.935		0.770	737	1667					
12378-PeCDF	29.719	1.001	2.55e2	4.27e2	0.952	0.597	1.550	1381	1236	6.55e3	5.19e3	4.7	YES	0.020
23478-PeCDF					0.963		1.550	1381	1236					
123478-HxCDF					1.137		1.240	905	1141					
234678-HxCDF					1.164		1.240	905	1141					
123678-HxCDF					1.099		1.240	905	1141					
123789-HxCDF	37.007	1.001	6.79e2	4.96e2	1.101	1.370	1.240	905	1141	1.09e4	6.81e3	12.0	NO	0.045
1234678-HpCDF					1.303		1.050	1540	1278					
1234789-HpCDF					1.317		1.050	1540	1278					
OCDF	46.810	1.007	2.93e2	4.66e2	1.166	0.629	0.890	1182	1318	4.17e3	6.66e3	3.5	YES	0.046
2378-TCDD					1.134		0.770	1834	1043					
12378-PeCDD					0.975		1.550	1292	574					
123478-HxCDD					1.031		1.240	754	1195					
123678-HxCDD					0.971		1.240	754	1195					
123789-HxCDD					0.947		1.240	754	1195					
1234678-HpCDD	40.822	1.001	3.12e2	3.22e2	1.028	0.969	1.050	1176	813	9.53e3	6.07e3	8.1	NO	0.031
OCDD	46.532	1.001	3.07e3	4.22e3	1.107	0.728	0.890	1426	598	3.72e4	4.78e4	26.1	YES	0.467
13C-2378-TCDF	25.570	1.007	1.90e6	2.44e6	1.567	0.781	0.770	9328	5489	2.86e7	3.65e7	3064.8	NO	93.303
13C-12378-PeCDF	29.697	1.170	2.20e6	1.42e6	1.274	1.553	1.550	4353	3161	3.32e7	2.11e7	7618.2	NO	95.668
13C-23478-PeCDF	31.045	1.223	2.27e6	1.45e6	1.235	1.569	1.550	4353	3161	3.33e7	2.12e7	7646.7	NO	101.350
13C-123478-HxCDF	34.749	0.951	9.20e5	1.77e6	1.381	0.521	0.510	4131	7751	1.16e7	2.24e7	2808.2	NO	77.603
13C-123678-HxCDF	34.892	0.955	9.70e5	1.86e6	1.569	0.520	0.510	4131	7751	1.29e7	2.48e7	3094.1	NO	72.079
13C-234678-HxCDF	35.824	0.981	8.88e5	1.69e6	1.345	0.525	0.510	4131	7751	1.34e7	2.54e7	3243.8	NO	76.530
13C-123789-HxCDF	36.974	1.012	8.17e5	1.56e6	1.183	0.525	0.510	4131	7751	1.12e7	2.15e7	2710.2	NO	80.071
13C-1234678-HpCDF	39.035	1.069	6.98e5	1.54e6	1.178	0.453	0.440	3029	3417	1.04e7	2.27e7	3439.9	NO	75.805
13C-1234789-HpCDF	41.655	1.140	5.76e5	1.26e6	0.878	0.459	0.440	3029	3417	7.35e6	1.64e7	2427.4	NO	83.303
13C-1234-TCDD	25.391	0.000	1.32e6	1.65e6	1.000	0.796	0.770	4288	3195	1.97e7	2.50e7	4585.6	NO	100.000
13C-2378-TCDD	26.198	1.032	1.09e6	1.37e6	0.908	0.793	0.770	4288	3195	1.57e7	2.01e7	3668.4	NO	91.407
13C-12378-PeCDD	31.297	1.233	1.36e6	8.62e5	0.756	1.578	1.550	2396	2448	1.96e7	1.24e7	8192.7	NO	99.005
13C-123478-HxCDD	35.955	0.984	1.25e6	9.71e5	1.056	1.283	1.240	2458	2280	1.86e7	1.48e7	7555.7	NO	83.771
13C-123678-HxCDD	36.076	0.988	9.66e5	7.66e5	1.163	1.260	1.240	2458	2280	1.43e7	1.14e7	5810.2	NO	59.429
13C-1234678-HpCDD	40.800	1.117	1.01e6	9.68e5	0.909	1.040	1.050	3124	2744	1.38e7	1.32e7	4411.5	NO	86.645
13C-OCDD	46.505	1.273	1.34e6	1.49e6	0.820	0.897	0.890	2337	2209	1.37e7	1.56e7	5881.7	NO	137.546
13C-123789-HxCDD	36.525	0.000	1.40e6	1.11e6	1.000	1.266	1.240	2458	2280	1.96e7	1.54e7	7975.5	NO	100.000
Total-tetrafurans			1.26e2		0.935			737		2.33e3				0.017

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
 Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
 Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					505		0.00e0				
Total-pentafurans			2.55e2		0.957			1381		6.55e3				0.020
Total-hexafurans			6.79e2		1.125			905		1.09e4				0.045
Total-heptafurans			0.00e0		1.310			1540		0.00e0				
Total-Furans			1.35e3		1.114			737		2.39e4				0.128
Total-tetradioxins			0.00e0		1.134			1834		0.00e0				
Total-pentadioxins			0.00e0		0.975			1292		0.00e0				
Total-hexadioxins			0.00e0		0.983			754		0.00e0				
Total-heptadioxins			7.91e2		1.028			1176		2.46e4				0.085
Total-Dioxins			4.04e3		1.028			1834		6.60e4				0.568
Total-TEQ			5.39e3					1834		8.99e4				0.696
37CL-2378-TCDD	26.228	1.033	1.38e6		1.067			1555		2.00e7		12872.1		43.744
FUNCTION1 PFK			1.91e8					610782		1.74e8				0.000
FUNCTION2 PFK			3.70e6					227016		1.84e7				0.000
FUNCTION3 PFK			3.37e8					484399		5.12e8				0.000
FUNCTION4 PFK			8.13e5					501656		2.06e7				
FUNCTION5 PFK			3.49e5					325313		1.27e7				
FUNCTION1 HXCD...			2.23e2					495		6.22e3				0.000
FUNCTION1 HPCD...			7.32e1					523		1.90e3				0.000
FUNCTION2 HPCD...			2.61e2					425		7.53e3				0.000
FUNCTION3 OCDPE			0.00e0					236		0.00e0				0.000
FUNCTION4 NCDPE			2.34e2					835		3.93e3				0.000
FUNCTION5 DCDPE			7.62e1					506		3.45e3				0.000

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: BEJ0775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	27.06	698.238	0.935	0.017		0.22	0.77	YES	3.2

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	2 12378-PeCDF	339.8597	29.72	682.455	0.952	0.020	0.012	0.60	1.55	YES	4.7

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7 123789-HxCDF	373.8208	37.01	1174.824	1.101	0.045	0.045	1.37	1.24	NO	12.0

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	27.06	698.238	0.935	0.017		0.22	0.77	YES	3.2
2	2 12378-PeCDF	339.8597	29.72	682.455	0.952	0.020	0.012	0.60	1.55	YES	4.7
3	7 123789-HxCDF	373.8208	37.01	1174.824	1.101	0.045	0.045	1.37	1.24	NO	12.0
4	10 OCDF	441.7428	46.81	759.680	1.166	0.046	0.038	0.63	0.89	YES	3.5

TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

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HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.82	634.491	1.028	0.031	0.031	0.97	1.05	NO	8.1
2	44 Total-heptadioxins	423.7766	40.79	301.633	1.028	0.015		1.34	1.05	YES	7.0
3	44 Total-heptadioxins	423.7766	39.59	792.367	1.028	0.039		0.63	1.05	YES	5.9

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	45 Total-Dioxins	319.8965	22.45	181.431	1.028	0.007		0.63	0.77	YES	0.7
2	45 Total-Dioxins	319.8965	27.39	230.828	1.028	0.009		0.83	0.77	NO	1.5
3	16 1234678-HpCDD	423.7766	40.82	634.491	1.028	0.031	0.031	0.97	1.05	NO	8.1
4	44 Total-heptadioxins	423.7766	40.79	301.633	1.028	0.015		1.34	1.05	YES	7.0
5	44 Total-heptadioxins	423.7766	39.59	792.367	1.028	0.039		0.63	1.05	YES	5.9
6	17 OCDD	457.7377	46.53	7296.223	1.107	0.467	0.418	0.73	0.89	YES	26.1

TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	35 Total-tetrafurans	303.9016	27.06	698.238	0.935	0.017		0.22	0.77	YES	3.2
2	2 12378-PeCDF	339.8597	29.72	682.455	0.952	0.020	0.012	0.60	1.55	YES	4.7
3	7 123789-HxCDF	373.8208	37.01	1174.824	1.101	0.045	0.045	1.37	1.24	NO	12.0
4	10 OCDF	441.7428	46.81	759.680	1.166	0.046	0.038	0.63	0.89	YES	3.5
5	45 Total-Dioxins	319.8965	22.45	181.431	1.028	0.007		0.63	0.77	YES	0.7
6	45 Total-Dioxins	319.8965	27.39	230.828	1.028	0.009		0.83	0.77	NO	1.5
7	16 1234678-HpCDD	423.7766	40.82	634.491	1.028	0.031	0.031	0.97	1.05	NO	8.1
8	44 Total-heptadioxins	423.7766	40.79	301.633	1.028	0.015		1.34	1.05	YES	7.0
9	44 Total-heptadioxins	423.7766	39.59	792.367	1.028	0.039		0.63	1.05	YES	5.9
10	17 OCDD	457.7377	46.53	7296.223	1.107	0.467	0.418	0.73	0.89	YES	26.1

PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	24.58	0.000							7.5
2	48 FUNCTION1 PFK	330.9792	21.97	0.000							159.4
3	48 FUNCTION1 PFK	330.9792	21.67	0.000							118.7

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49 FUNCTION2 PFK	366.9792	31.82	0.000		0.000					8.5
2	49 FUNCTION2 PFK	366.9792	31.32	0.000		0.000					14.0
3	49 FUNCTION2 PFK	366.9792	30.87	0.000		0.000					18.3
4	49 FUNCTION2 PFK	366.9792	30.64	0.000		0.000					14.5
5	49 FUNCTION2 PFK	366.9792	30.45	0.000		0.000					7.7
6	49 FUNCTION2 PFK	366.9792	32.13	0.000		0.000					8.8
7	49 FUNCTION2 PFK	366.9792	32.03	0.000		0.000					9.1

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PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	37.18	0.000		0.000					86.9
2	50 FUNCTION3 PFK	380.9760	36.28	0.000		0.000					171.9
3	50 FUNCTION3 PFK	380.9760	35.98	0.000		0.000					187.6
4	50 FUNCTION3 PFK	380.9760	35.05	0.000		0.000					191.6
5	50 FUNCTION3 PFK	380.9760	33.88	0.000		0.000					179.1
6	50 FUNCTION3 PFK	380.9760	33.55	0.000		0.000					164.3
7	50 FUNCTION3 PFK	380.9760	32.79	0.000		0.000					76.2

PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	39.10	0.000							2.4
2	51 FUNCTION4 PFK	430.9728	39.06	0.000							2.0
3	51 FUNCTION4 PFK	430.9728	39.00	0.000							1.7
4	51 FUNCTION4 PFK	430.9728	38.44	0.000							0.8
5	51 FUNCTION4 PFK	430.9728	38.07	0.000							2.0
6	51 FUNCTION4 PFK	430.9728	41.74	0.000							0.6
7	51 FUNCTION4 PFK	430.9728	41.61	0.000							0.4
8	51 FUNCTION4 PFK	430.9728	41.57	0.000							0.5
9	51 FUNCTION4 PFK	430.9728	41.49	0.000							0.9
10	51 FUNCTION4 PFK	430.9728	41.37	0.000							1.3
11	51 FUNCTION4 PFK	430.9728	41.17	0.000							1.5
12	51 FUNCTION4 PFK	430.9728	40.85	0.000							1.2
13	51 FUNCTION4 PFK	430.9728	40.73	0.000							1.3
14	51 FUNCTION4 PFK	430.9728	40.66	0.000							1.4
15	51 FUNCTION4 PFK	430.9728	40.53	0.000							0.7
16	51 FUNCTION4 PFK	430.9728	40.30	0.000							1.2
17	51 FUNCTION4 PFK	430.9728	40.26	0.000							1.1
18	51 FUNCTION4 PFK	430.9728	40.20	0.000							1.1
19	51 FUNCTION4 PFK	430.9728	39.51	0.000							1.3
20	51 FUNCTION4 PFK	430.9728	39.36	0.000							1.5
21	51 FUNCTION4 PFK	430.9728	39.27	0.000							2.5
22	51 FUNCTION4 PFK	430.9728	44.16	0.000							1.1
23	51 FUNCTION4 PFK	430.9728	44.01	0.000							1.1
24	51 FUNCTION4 PFK	430.9728	43.96	0.000							1.3
25	51 FUNCTION4 PFK	430.9728	43.66	0.000							1.2
26	51 FUNCTION4 PFK	430.9728	43.55	0.000							1.2
27	51 FUNCTION4 PFK	430.9728	43.07	0.000							1.4
28	51 FUNCTION4 PFK	430.9728	43.01	0.000							1.1
29	51 FUNCTION4 PFK	430.9728	42.89	0.000							0.5
30	51 FUNCTION4 PFK	430.9728	42.71	0.000							1.4
31	51 FUNCTION4 PFK	430.9728	42.55	0.000							0.4
32	51 FUNCTION4 PFK	430.9728	42.36	0.000							0.9
33	51 FUNCTION4 PFK	430.9728	41.97	0.000							0.8
34	51 FUNCTION4 PFK	430.9728	41.92	0.000							1.1

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PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52 FUNCTION5 PFK	480.9696	44.94	0.000							0.8
2	52 FUNCTION5 PFK	480.9696	44.68	0.000							1.4
3	52 FUNCTION5 PFK	480.9696	46.70	0.000							1.6
4	52 FUNCTION5 PFK	480.9696	46.61	0.000							0.8
5	52 FUNCTION5 PFK	480.9696	46.29	0.000							1.0
6	52 FUNCTION5 PFK	480.9696	46.24	0.000							1.6
7	52 FUNCTION5 PFK	480.9696	46.14	0.000							2.2
8	52 FUNCTION5 PFK	480.9696	46.11	0.000							1.6
9	52 FUNCTION5 PFK	480.9696	45.91	0.000							1.8
10	52 FUNCTION5 PFK	480.9696	45.81	0.000							0.5
11	52 FUNCTION5 PFK	480.9696	45.65	0.000							1.5
12	52 FUNCTION5 PFK	480.9696	45.62	0.000							1.2
13	52 FUNCTION5 PFK	480.9696	45.59	0.000							0.9
14	52 FUNCTION5 PFK	480.9696	45.51	0.000							1.8
15	52 FUNCTION5 PFK	480.9696	45.45	0.000							0.7
16	52 FUNCTION5 PFK	480.9696	45.33	0.000							2.0
17	52 FUNCTION5 PFK	480.9696	45.11	0.000							1.0
18	52 FUNCTION5 PFK	480.9696	45.06	0.000							0.8
19	52 FUNCTION5 PFK	480.9696	49.18	0.000							0.8
20	52 FUNCTION5 PFK	480.9696	49.17	0.000							0.8
21	52 FUNCTION5 PFK	480.9696	49.13	0.000							1.0
22	52 FUNCTION5 PFK	480.9696	48.83	0.000							1.1
23	52 FUNCTION5 PFK	480.9696	48.47	0.000							0.7
24	52 FUNCTION5 PFK	480.9696	48.05	0.000							2.1
25	52 FUNCTION5 PFK	480.9696	47.98	0.000							1.3
26	52 FUNCTION5 PFK	480.9696	47.83	0.000							0.8
27	52 FUNCTION5 PFK	480.9696	47.69	0.000							1.2
28	52 FUNCTION5 PFK	480.9696	47.63	0.000							0.4
29	52 FUNCTION5 PFK	480.9696	47.07	0.000							1.0
30	52 FUNCTION5 PFK	480.9696	46.94	0.000							1.7
31	52 FUNCTION5 PFK	480.9696	46.89	0.000							0.7
32	52 FUNCTION5 PFK	480.9696	46.86	0.000							1.1
33	52 FUNCTION5 PFK	480.9696	46.79	0.000							1.2

ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	27.47	0.000		0.000					4.4
2	53 FUNCTION1 HXCD...	375.8364	26.94	0.000		0.000					8.1

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	21.95	0.000		0.000					3.6

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	32.35	0.000		0.000					6.3
2	55 FUNCTION2 HPCD...	409.7974	31.03	0.000		0.000					5.2
3	55 FUNCTION2 HPCD...	409.7974	27.85	0.000		0.000					6.2

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ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	40.89	0.000		0.000					3.6
2	57 FUNCTION4 NCDPE	479.7165	38.73	0.000		0.000					1.1

ETHERS6

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	58 FUNCTION5 DCDPE	513.6775	47.40	0.000		0.000					6.8

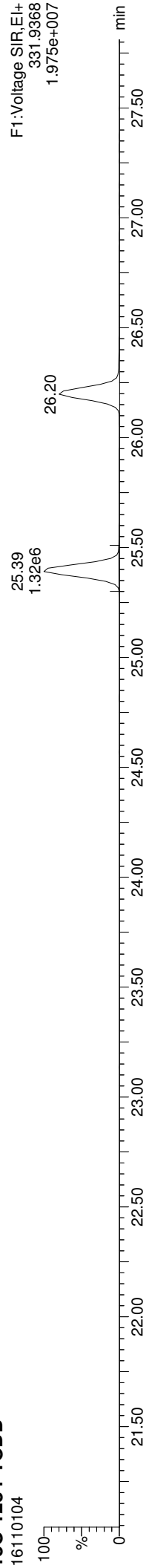
Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
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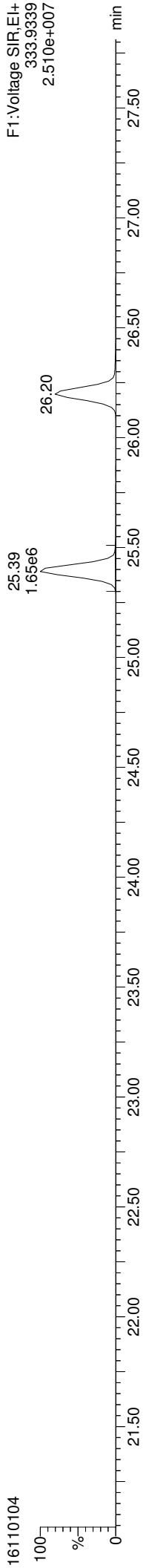
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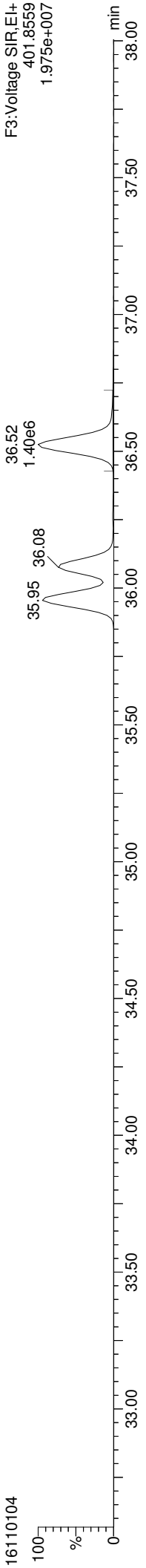
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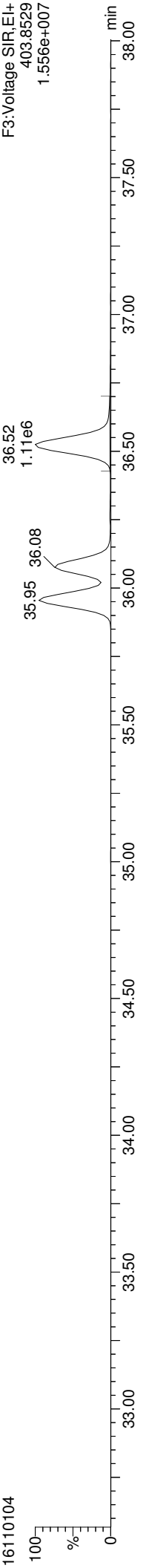
13C-1234-TCDD



13C-123789-HxCDD



13C-123789-HxCDD

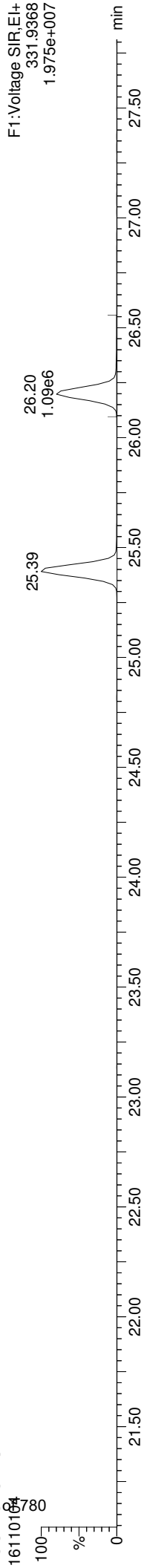


Quantify Sample Report

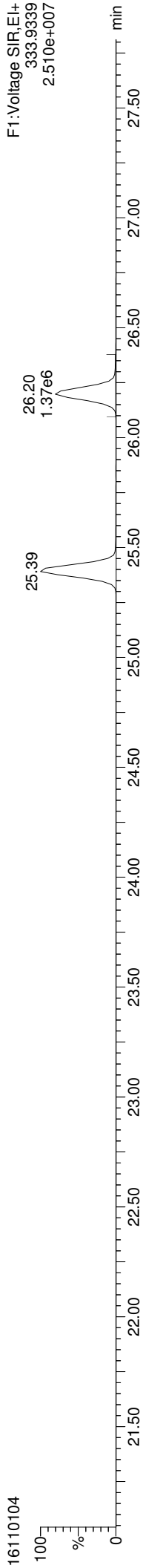
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

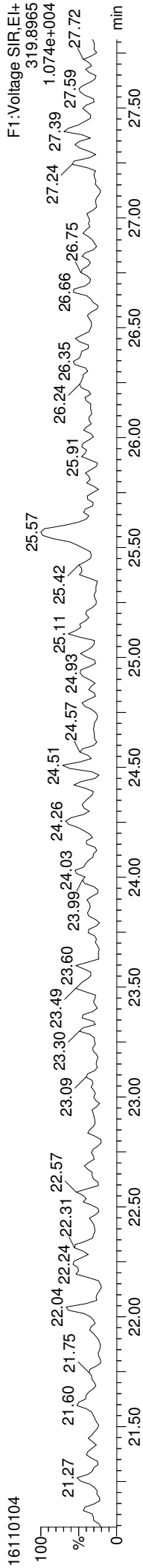
13C-2378-TCDD



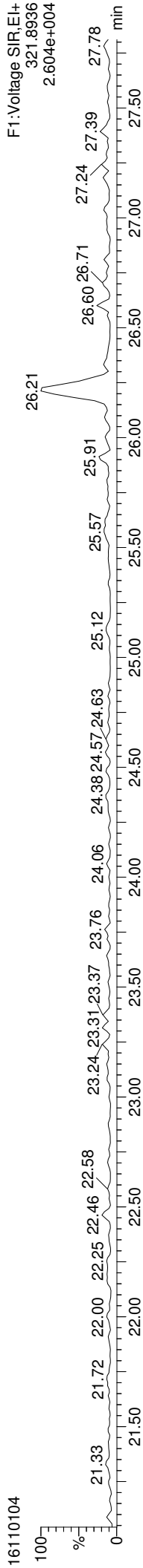
13C-2378-TCDD



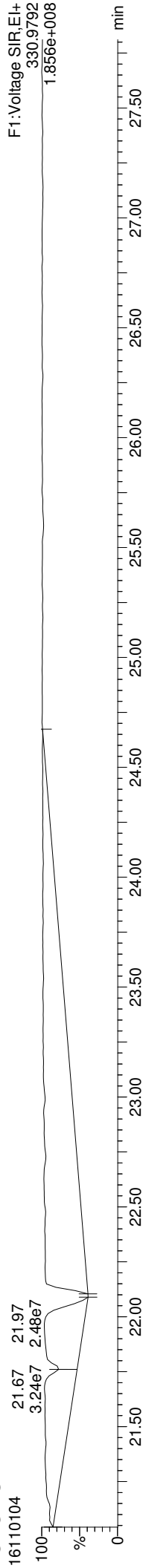
Total-tetradoxins



Total-tetradoxins



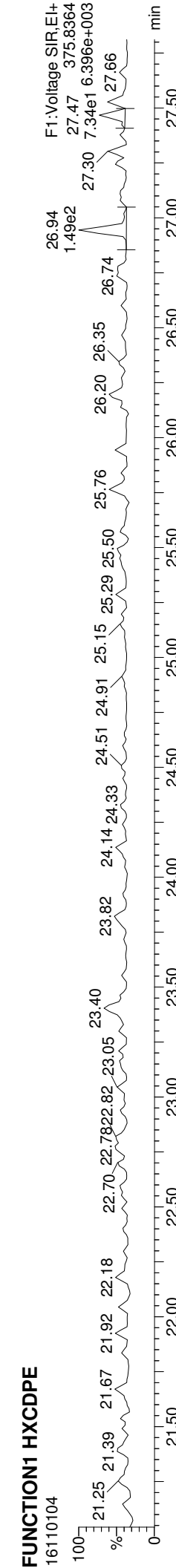
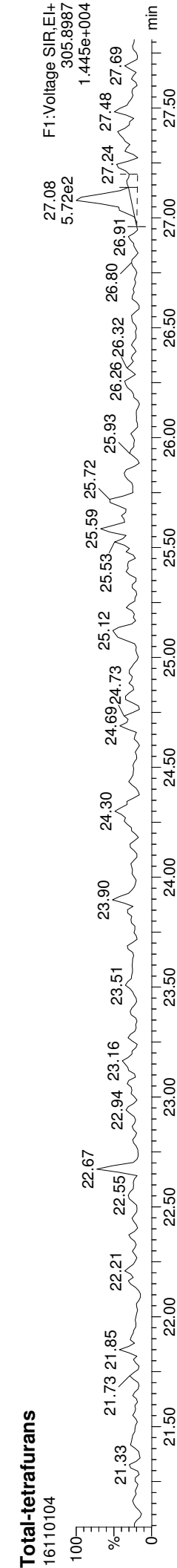
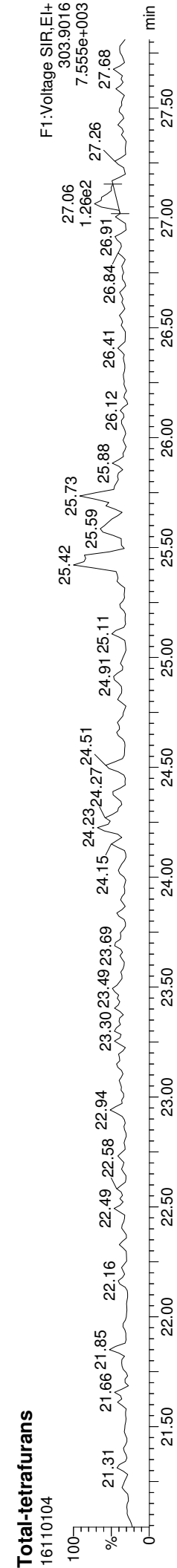
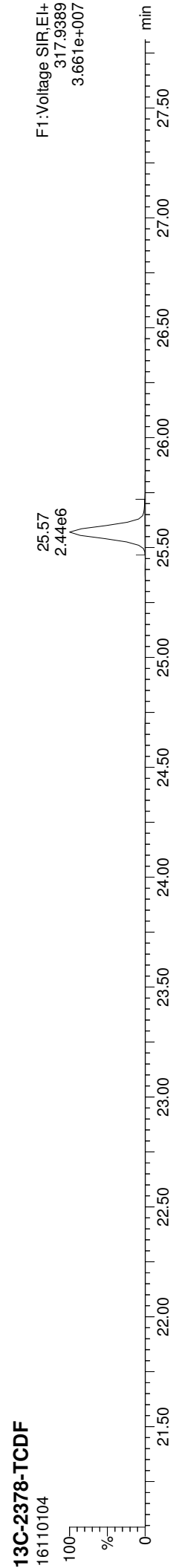
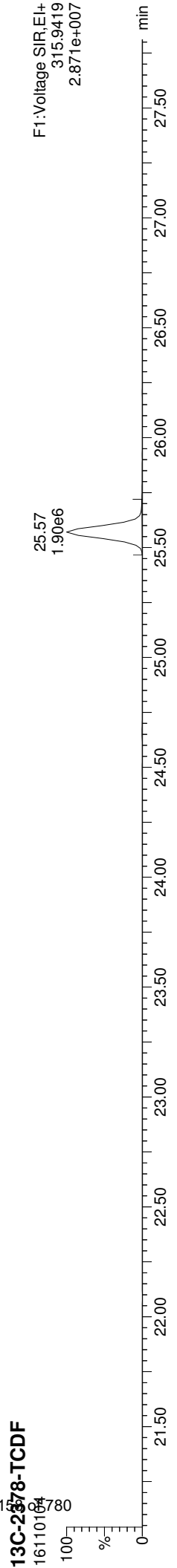
FUNCTION1 PFK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

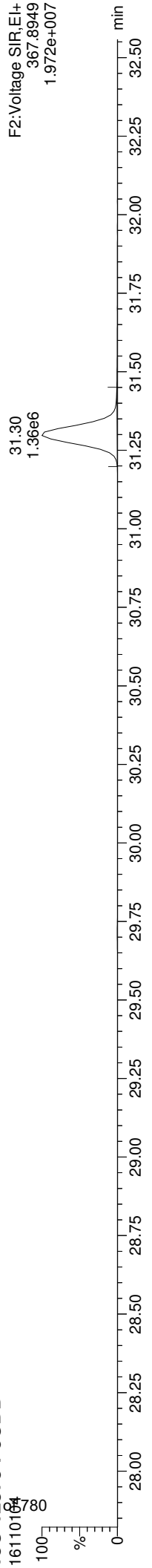


Quantify Sample Report

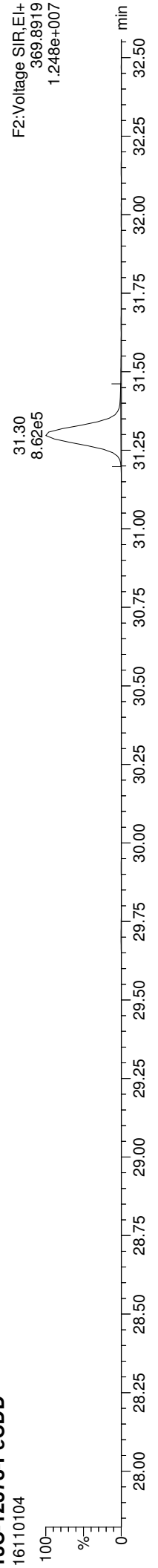
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

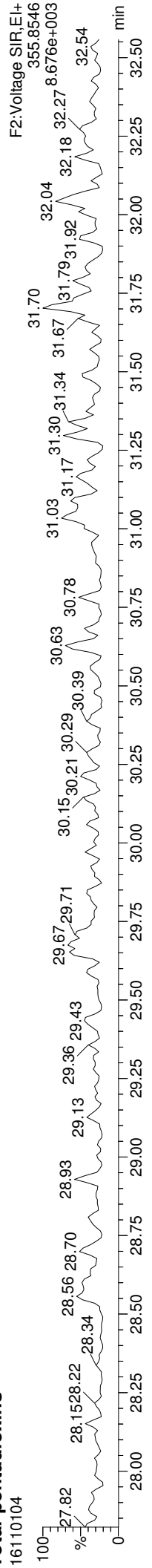
13C-12378-PeCDD



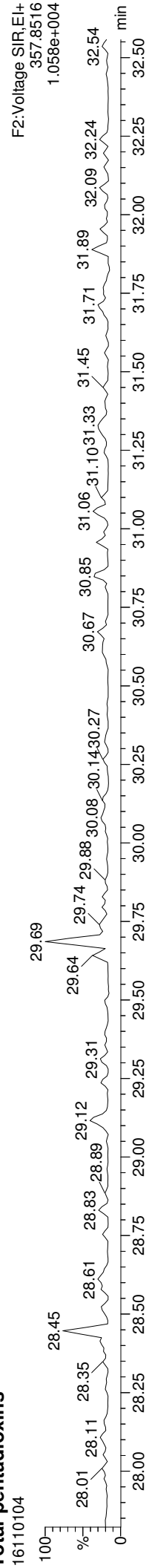
13C-12378-PeCDD



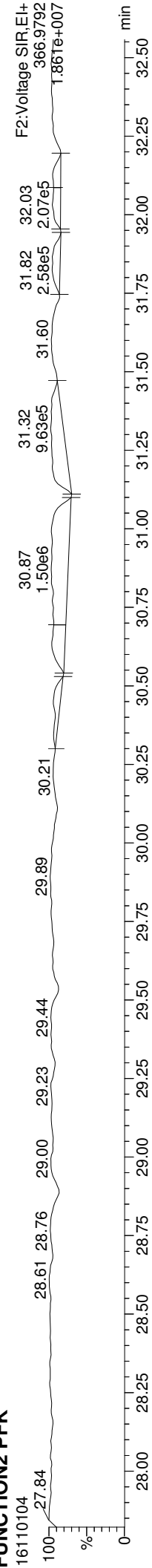
Total-pentadioxins



Total-pentadioxins



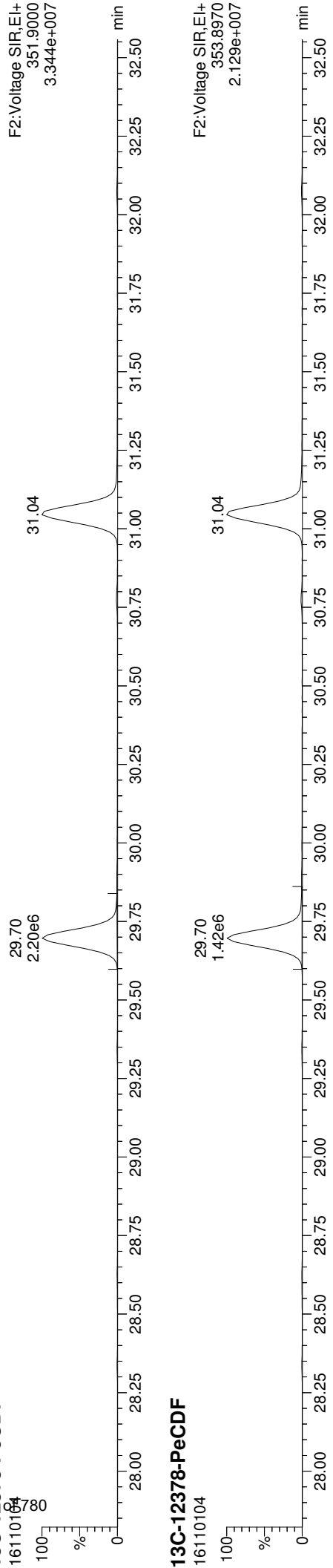
FUNCTION2 PFK



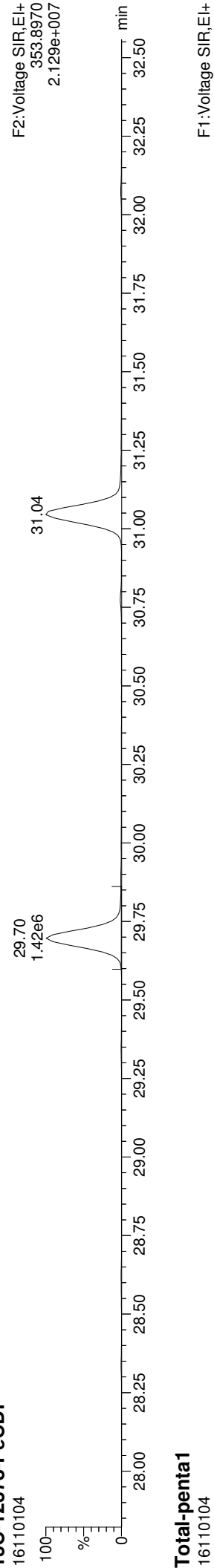
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Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 161110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

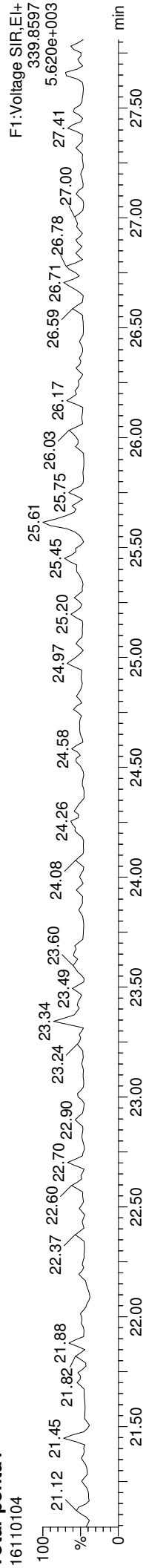
13C-12378-PeCDF



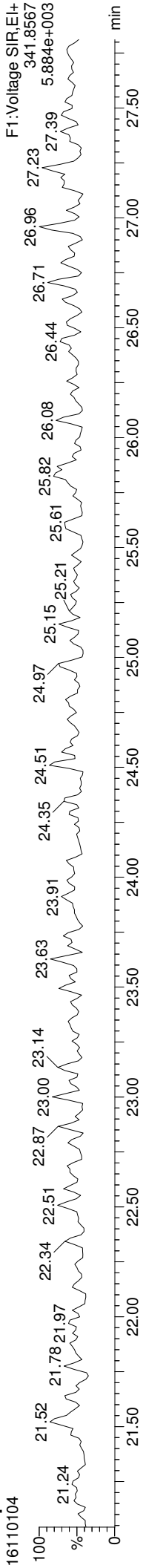
13C-12378-PeCDF



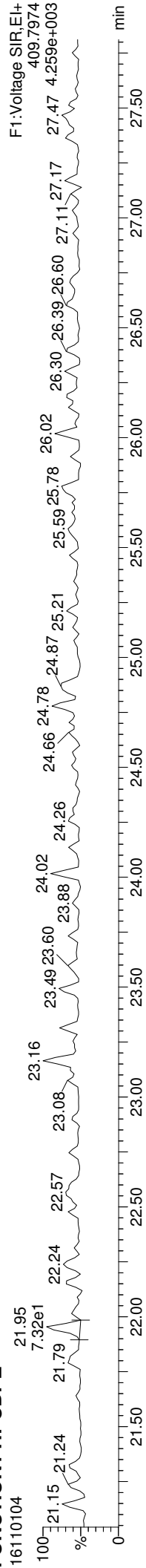
Total-penta1



Total-penta1



FUNCTION1 HPCDPE

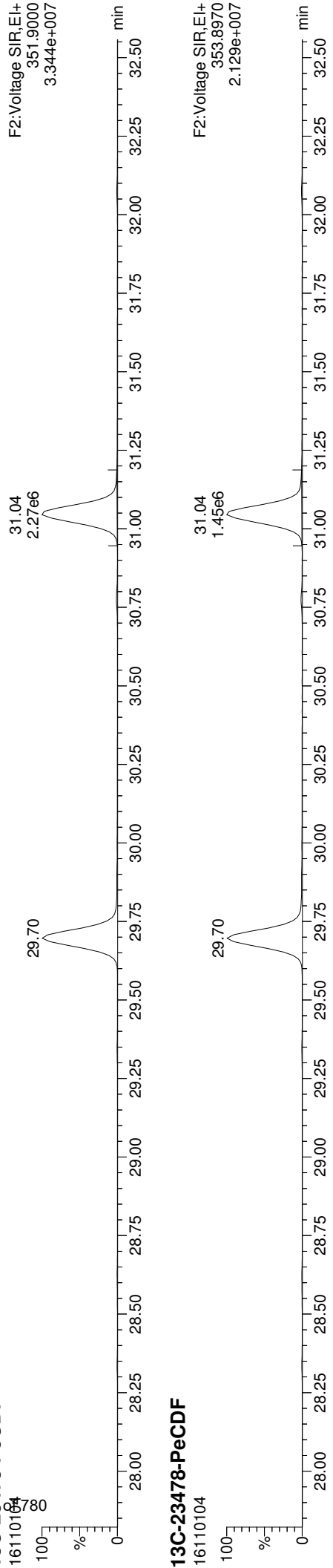


Quantify Sample Report

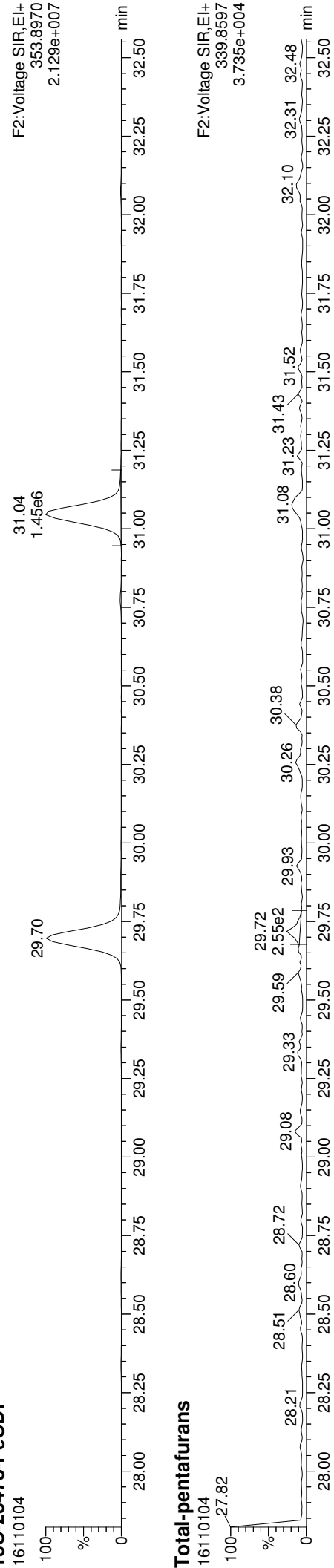
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

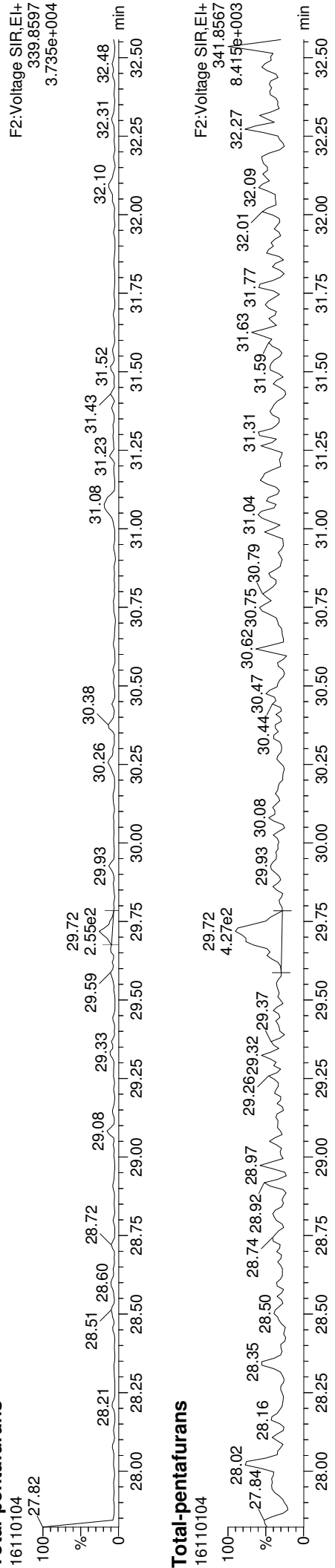
13C-23478-PeCDF



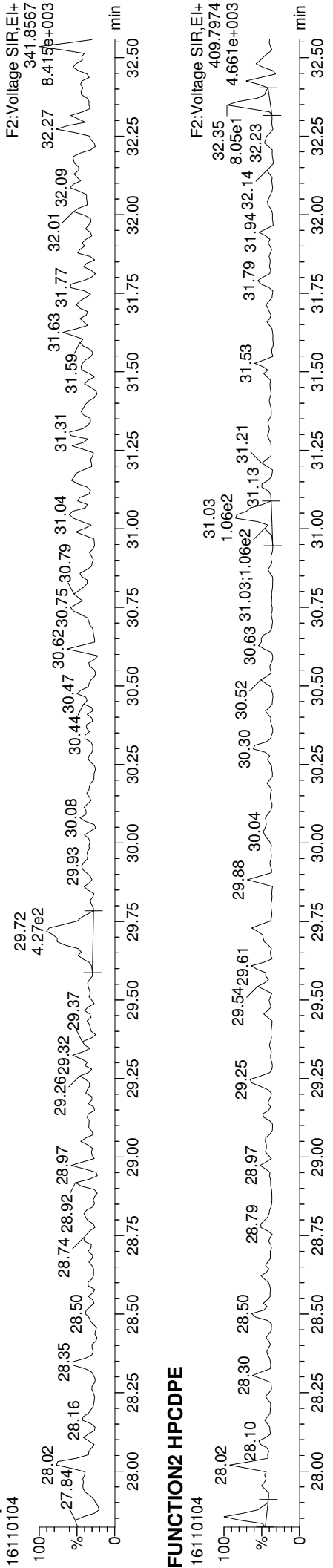
13C-23478-PeCDF



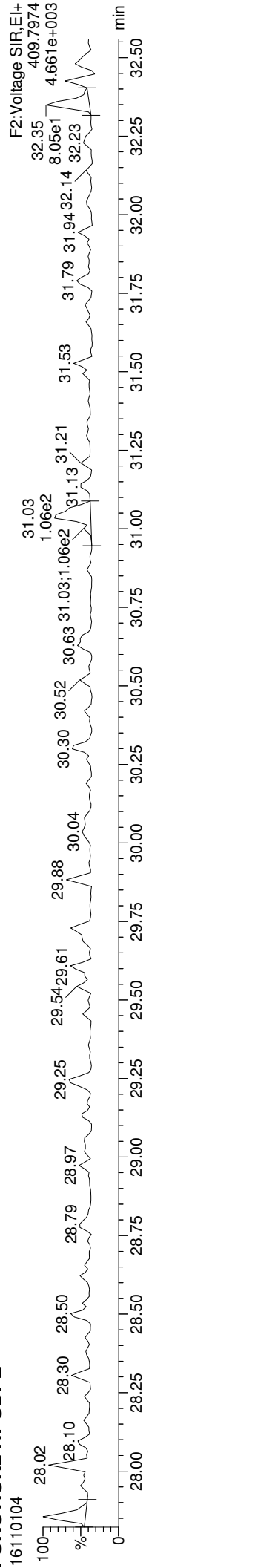
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDFE

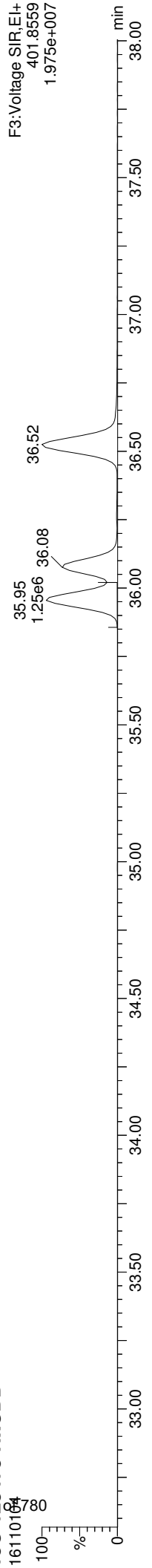


Quantify Sample Report

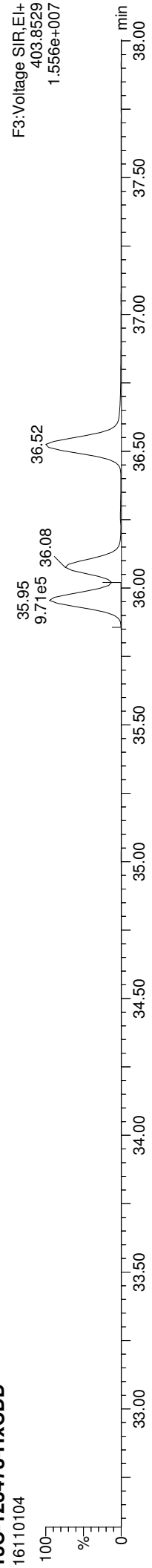
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

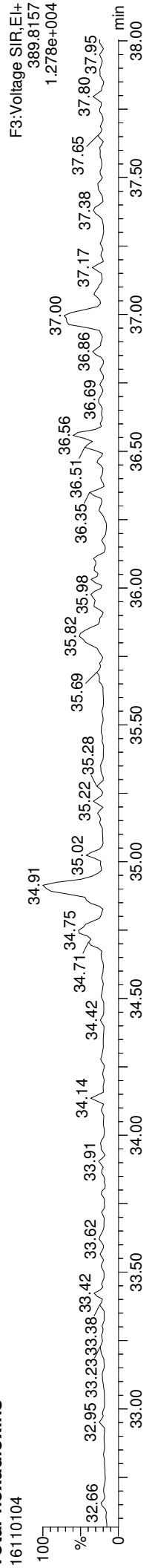
13C-123478-HxCDD



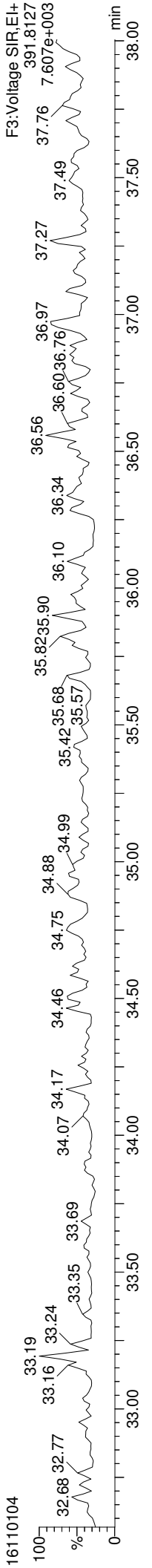
13C-123478-HxCDD



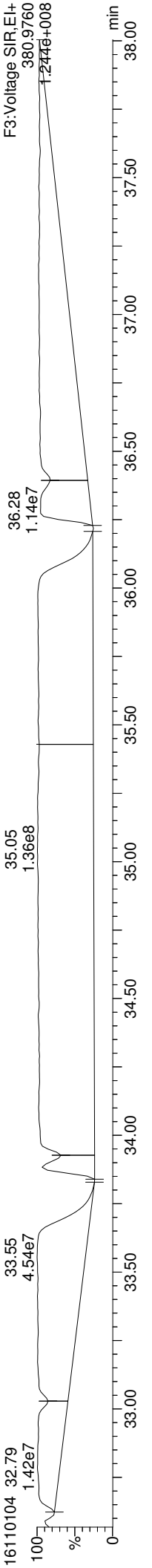
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

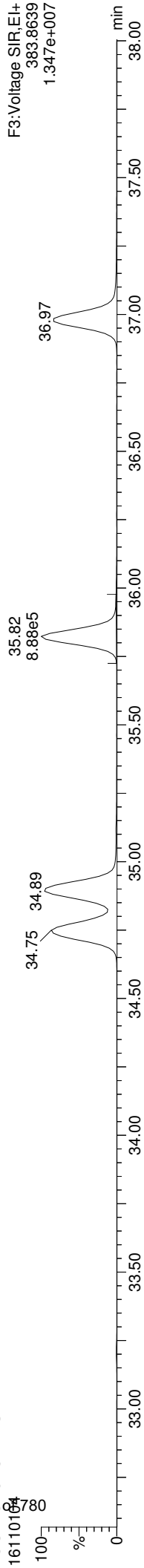


Quantify Sample Report

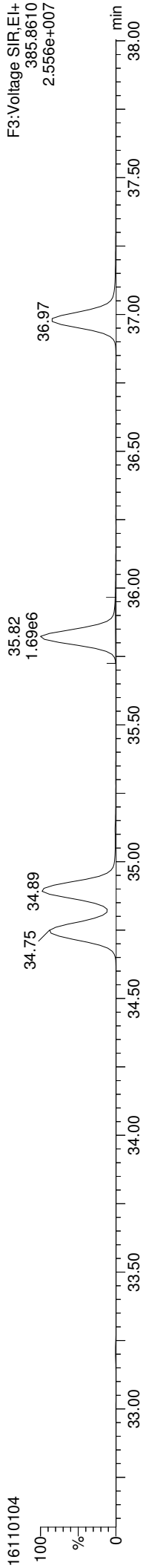
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

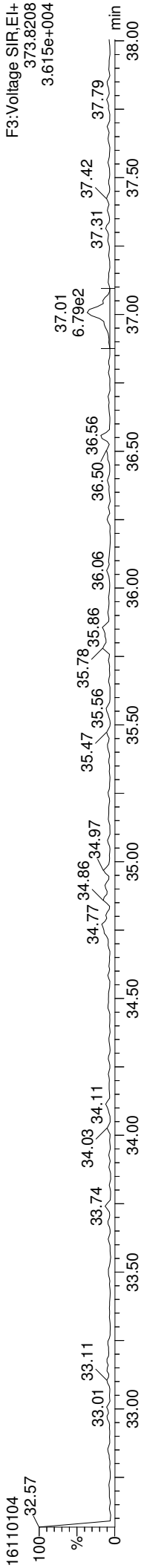
13C-234678-HxCDF



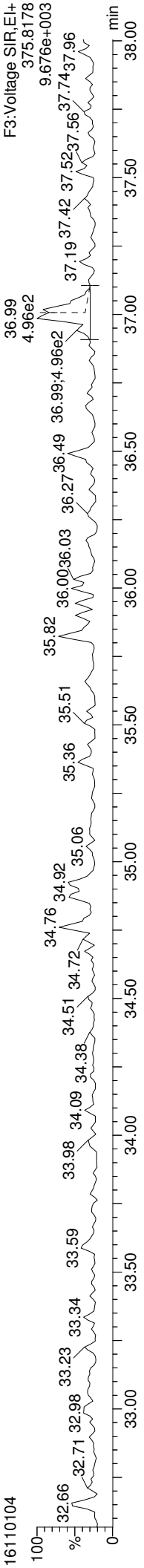
13C-234678-HxCDF



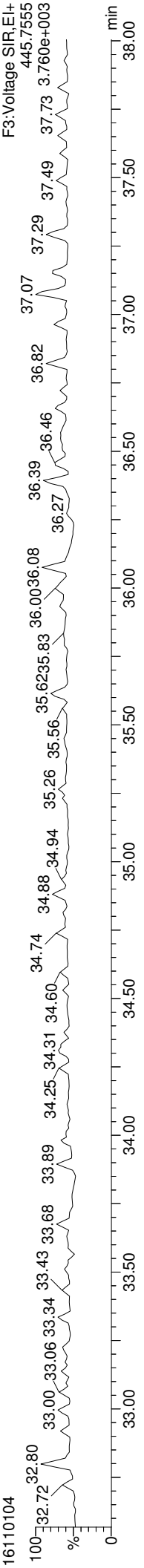
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE

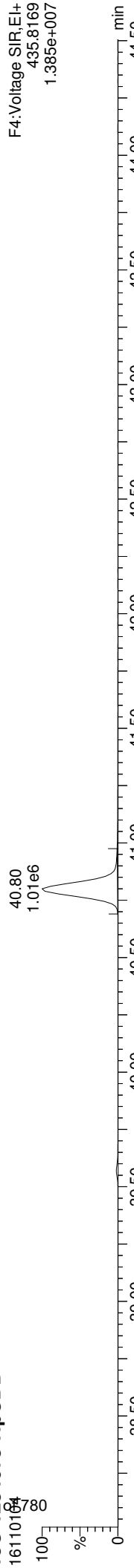


Quantify Sample Report

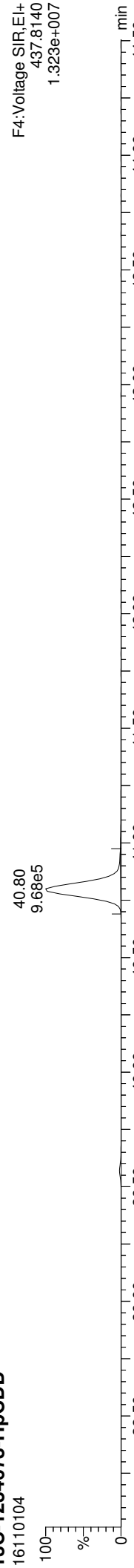
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

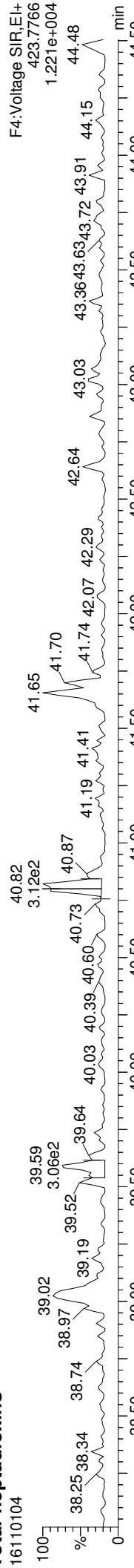
13C-1234678-HpCDD



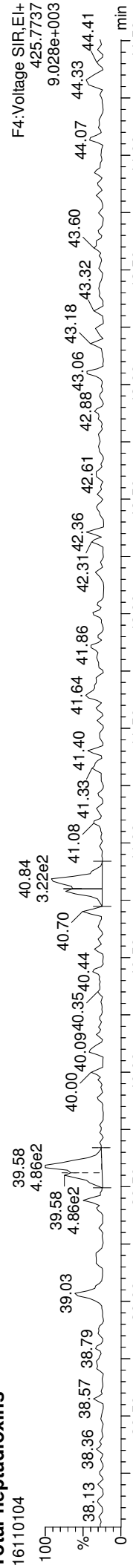
13C-1234678-HpCDD



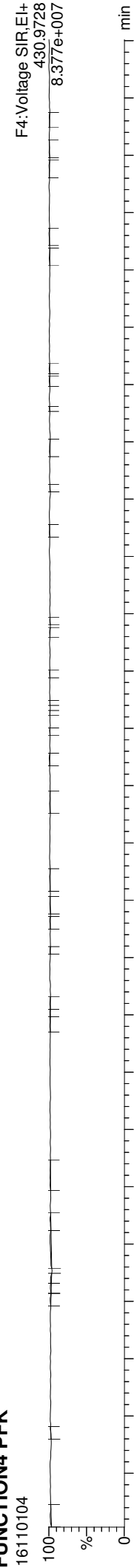
Total-heptadioxins



Total-heptadioxins



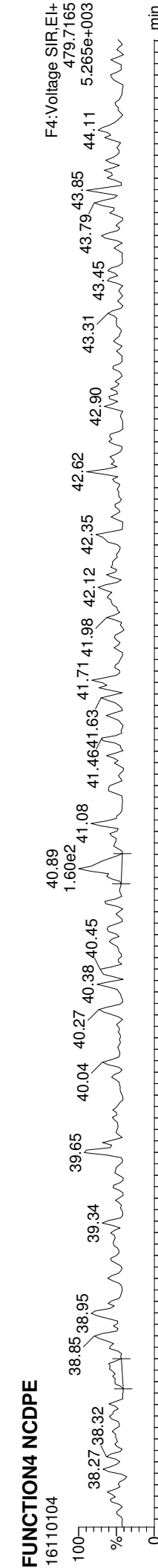
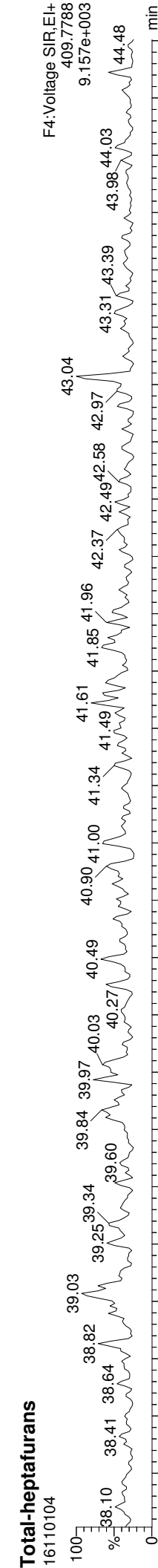
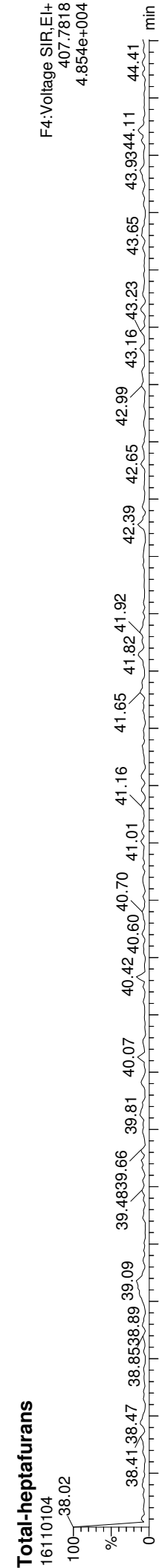
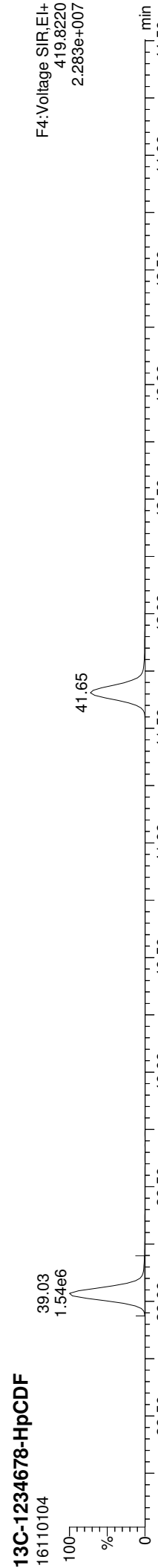
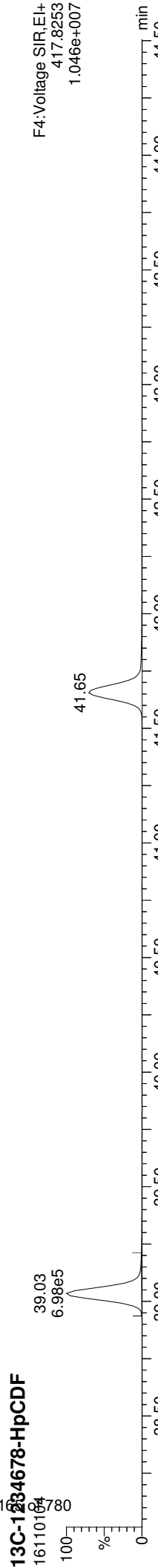
FUNCTION4 PFK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

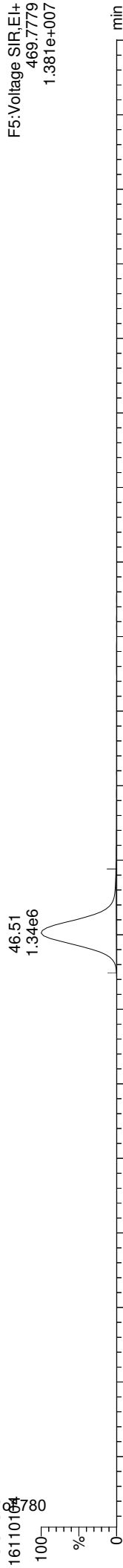


Quantify Sample Report

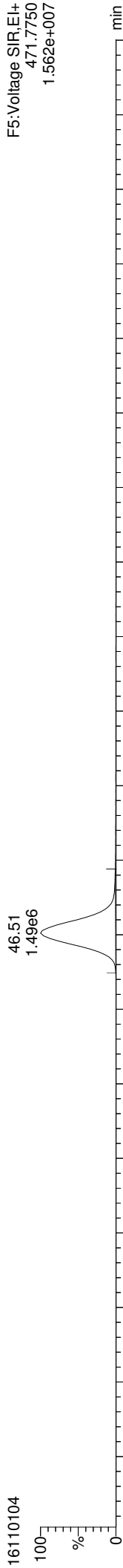
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

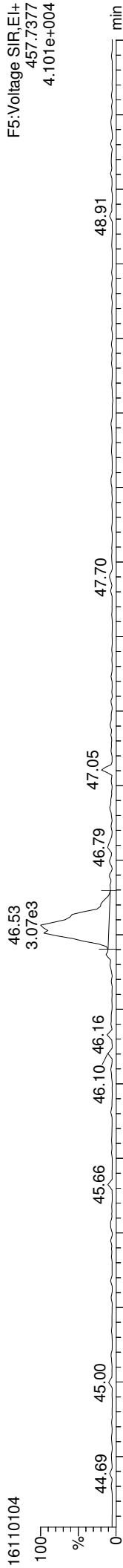
13C-OCDD



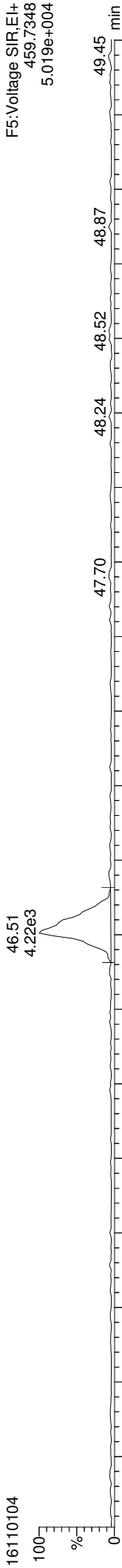
13C-OCDD



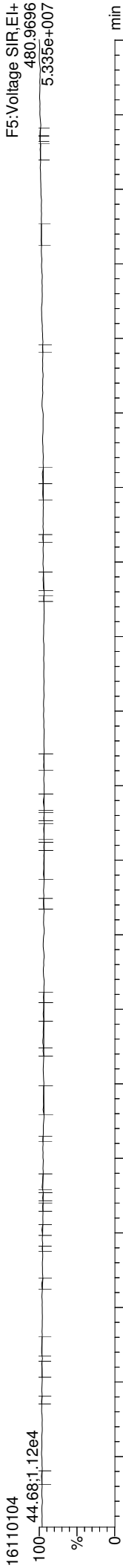
OCDD



OCDD



FUNCTION5 PFK

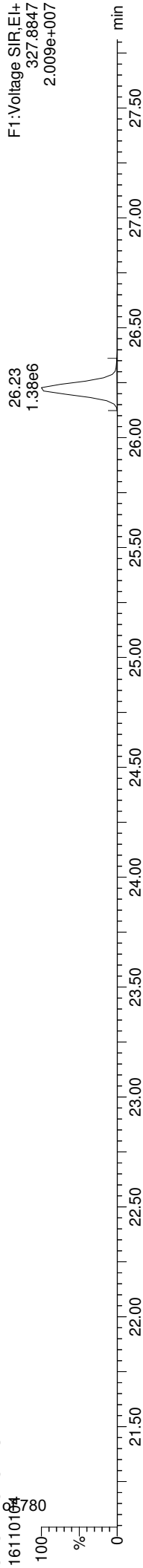


Quantify Sample Report

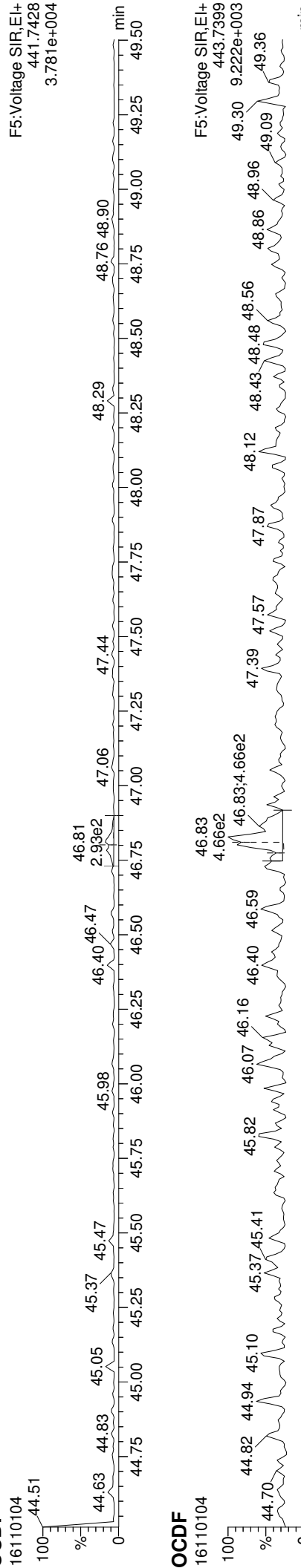
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:51 Pacific Daylight Time

ID: BE00775-BLK1, Name: 16110104, Date: 01-Nov-2016, Time: 12:23:38, Conditions: AUTOSPEC01, User: PK

37CL-2378-TCDD



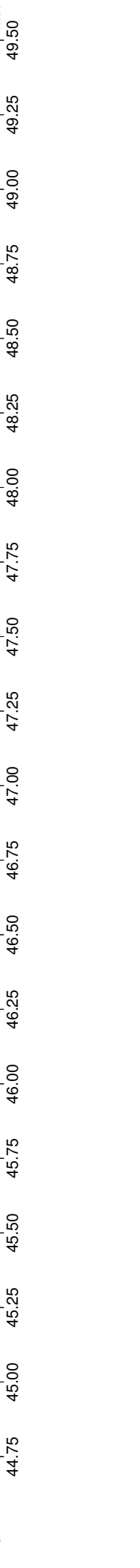
OCDF



OCDF



FUNCTION5 DCDPE





LCS / LCS DUPLICATE RECOVERY
EPA 1613B

Laboratory: Analytical Resources, Inc.

SDG: 16J0187

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Matrix: Tissue

Analyzed: 11/01/16 13:15

Batch: BEJ0775

Laboratory ID: BEJ0775-BS1

Preparation: EPA 1613

Initial/Final: 10 g / 20 uL

COMPOUND	SPIKE ADDED (ng/kg)	LCS CONCENTRATION (ng/kg)	LCS % REC.	QC LIMITS REC.	Q
2,3,7,8-TCDF	20.0	20.8	104	75 - 158	
2,3,7,8-TCDD	20.0	20.8	104	67 - 158	
1,2,3,7,8-PeCDF	100	101	101	80 - 134	
2,3,4,7,8-PeCDF	100	98.9	98.9	68 - 160	
1,2,3,7,8-PeCDD	100	103	103	70 - 142	
1,2,3,4,7,8-HxCDF	100	100	100	72 - 134	
1,2,3,6,7,8-HxCDF	100	99.5	99.5	84 - 130	
2,3,4,6,7,8-HxCDF	100	99.9	99.9	70 - 156	
1,2,3,7,8,9-HxCDF	100	99.4	99.4	78 - 130	
1,2,3,4,7,8-HxCDD	100	99.9	99.9	70 - 164	
1,2,3,6,7,8-HxCDD	100	94.2	94.2	76 - 134	
1,2,3,7,8,9-HxCDD	100	114	114	64 - 162	
1,2,3,4,6,7,8-HpCDF	100	103	103	82 - 122	
1,2,3,4,7,8,9-HpCDF	100	98.4	98.4	78 - 138	
1,2,3,4,6,7,8-HpCDD	100	102	102	70 - 140	
OCDF	200	202	101	63 - 170	
OCDD	200	198	98.9	78 - 144	
13C12-2,3,7,8-TCDF	200	162	80.9	24 - 169	

Labels

13C12-2,3,7,8-TCDD	200	157	78.3	25 - 164	
13C12-1,2,3,7,8-PeCDF	200	166	82.8	24 - 185	
13C12-2,3,4,7,8-PeCDF	200	176	87.9	21 - 178	
13C12-1,2,3,7,8-PeCDD	200	176	88.1	25 - 181	
13C12-1,2,3,4,7,8-HxCDF	200	139	69.3	26 - 152	
13C12-1,2,3,6,7,8-HxCDF	200	134	67.1	26 - 123	
13C12-2,3,4,6,7,8-HxCDF	200	138	69.1	28 - 136	
13C12-1,2,3,7,8,9-HxCDF	200	144	72.0	29 - 147	
13C12-1,2,3,4,7,8-HxCDD	200	154	77.0	32 - 141	
13C12-1,2,3,6,7,8-HxCDD	200	122	61.0	28 - 130	
13C12-1,2,3,4,6,7,8-HpCDF	200	134	66.8	28 - 143	
13C12-1,2,3,4,7,8,9-HpCDF	200	146	72.8	26 - 138	
13C12-1,2,3,4,6,7,8-HpCDD	200	155	77.7	23 - 140	
13C12-OCDD	400	267	66.7	17 - 157	
37C14-2,3,7,8-TCDD	80.0	69.9	87.4	35 - 197	

* Values outside of QC limits

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
 Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
 Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

Page 6 of 7

Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: BE30775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
2378-TCDF	25.585	1.001	1.96e5	2.54e5	0.935	0.774	0.770	1091	1641	3.09e6	4.04e6	2832.5	NO	10.391
12378-PeCDF	29.708	1.000	1.14e6	7.14e5	0.952	1.594	1.550	3546	4118	1.75e7	1.10e7	4928.3	NO	50.435
23478-PeCDF	31.056	1.000	1.15e6	7.42e5	0.963	1.549	1.550	3546	4118	1.79e7	1.15e7	5035.0	NO	49.444
123478-HxCDF	34.738	1.001	8.93e5	7.25e5	1.137	1.232	1.240	4029	4493	1.34e7	1.09e7	3319.2	NO	50.085
234678-HxCDF	35.824	1.000	8.90e5	7.14e5	1.164	1.246	1.240	4029	4493	1.35e7	1.10e7	3355.2	NO	49.973
123678-HxCDF	34.881	1.000	9.51e5	7.58e5	1.099	1.255	1.240	4029	4493	1.37e7	1.09e7	3390.5	NO	49.754
123789-HxCDF	36.974	1.000	7.62e5	6.21e5	1.101	1.228	1.240	4029	4493	1.12e7	9.01e6	2785.0	NO	49.680
1234678-HpCDF	39.046	1.000	7.97e5	7.76e5	1.303	1.028	1.050	3649	3754	1.17e7	1.13e7	3201.6	NO	51.655
1234789-HpCDF	41.677	1.000	6.27e5	6.03e5	1.317	1.040	1.050	3649	3754	8.32e6	8.00e6	2278.7	NO	49.212
OCDF	46.801	1.006	9.13e5	9.95e5	1.166	0.917	0.890	3396	2286	9.35e6	1.03e7	2752.9	NO	100.757
2378-TCDD	26.228	1.001	1.34e5	1.73e5	1.134	0.779	0.770	1702	960	2.04e6	2.60e6	1199.6	NO	10.406
12378-PeCDD	31.319	1.001	7.41e5	4.83e5	0.975	1.536	1.550	2439	1774	1.13e7	7.26e6	4619.6	NO	51.471
123478-HxCDD	35.966	1.001	6.93e5	5.50e5	1.031	1.260	1.240	2259	2166	1.06e7	8.35e6	4711.2	NO	49.926
123678-HxCDD	36.087	1.001	5.36e5	4.28e5	0.971	1.251	1.240	2259	2166	7.62e6	6.05e6	3374.5	NO	47.099
123789-HxCDD	36.525	1.013	6.75e5	5.45e5	0.947	1.238	1.240	2259	2166	9.84e6	7.83e6	4355.3	NO	56.990
1234678-HpCDD	40.822	1.001	5.57e5	5.41e5	1.028	1.030	1.050	2061	2400	7.45e6	7.18e6	3615.0	NO	50.866
OCDD	46.541	1.001	8.39e5	9.39e5	1.107	0.894	0.890	2286	2822	8.59e6	9.67e6	3758.4	NO	98.883
13C-2378-TCDF	25.570	1.007	2.03e6	2.61e6	1.567	0.779	0.770	8339	5030	3.17e7	4.07e7	3803.8	NO	80.859
13C-12378-PeCDF	29.697	1.170	2.36e6	1.50e6	1.274	1.572	1.550	5252	4831	3.67e7	2.32e7	6993.5	NO	82.791
13C-23478-PeCDF	31.045	1.223	2.42e6	1.55e6	1.235	1.567	1.550	5252	4831	3.73e7	2.37e7	7100.6	NO	87.880
13C-123478-HxCDF	34.717	0.951	9.64e5	1.88e6	1.381	0.513	0.510	4987	5931	1.45e7	2.85e7	2906.0	NO	69.326
13C-123678-HxCDF	34.870	0.955	1.06e6	2.07e6	1.569	0.513	0.510	4987	5931	1.54e7	2.99e7	3097.6	NO	67.087
13C-234678-HxCDF	35.813	0.981	9.49e5	1.81e6	1.345	0.525	0.510	4987	5931	1.44e7	2.70e7	2880.0	NO	69.067
13C-123789-HxCDF	36.964	1.013	8.60e5	1.67e6	1.183	0.515	0.510	4987	5931	1.24e7	2.40e7	2491.4	NO	72.010
13C-1234678-HpCDF	39.035	1.069	7.26e5	1.61e6	1.178	0.451	0.440	2369	3487	1.07e7	2.35e7	4533.2	NO	66.810
13C-1234789-HpCDF	41.666	1.141	5.94e5	1.30e6	0.878	0.455	0.440	2369	3487	7.69e6	1.69e7	3246.2	NO	72.815
13C-1234-TCDD	25.391	0.000	1.62e6	2.04e6	1.000	0.790	0.770	4336	2060	2.58e7	3.26e7	5959.9	NO	100.000
13C-2378-TCDD	26.198	1.032	1.14e6	1.46e6	0.908	0.777	0.770	4336	2060	1.79e7	2.30e7	4129.7	NO	78.304
13C-12378-PeCDD	31.297	1.233	1.50e6	9.42e5	0.756	1.587	1.550	2590	1862	2.30e7	1.44e7	8861.2	NO	88.146
13C-123478-HxCDD	35.944	0.985	1.36e6	1.06e6	1.056	1.282	1.240	3484	2934	2.11e7	1.64e7	6054.5	NO	76.972
13C-123678-HxCDD	36.065	0.988	1.18e6	9.26e5	1.163	1.274	1.240	3484	2934	1.74e7	1.37e7	4980.9	NO	60.994
13C-1234678-HpCDD	40.800	1.118	1.09e6	1.01e6	0.909	1.074	1.050	2715	2200	1.44e7	1.37e7	5290.0	NO	77.725
13C-OCDD	46.514	1.274	1.52e6	1.73e6	0.820	0.883	0.890	2781	2375	1.59e7	1.79e7	5720.4	NO	133.489
13C-123789-HxCDD	36.503	0.000	1.65e6	1.32e6	1.000	1.254	1.240	3484	2934	2.45e7	1.94e7	7022.4	NO	100.000
Total-tetrafurans			2.02e5		0.935			1091		3.18e6				10.712

Quantify Sample Summary Report MassLynx MassLynx V4.1 SCN909

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
 Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
 Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	pg
Total-penta1			0.00e0					575		0.00e0				
Total-pentafurans			2.34e6		0.957			3546		3.61e7				102.161
Total-hexafurans			3.50e6		1.125			4029		5.19e7				199.916
Total-heptafurans			1.44e6		1.310			3649		2.02e7				101.642
Total-Furans			8.40e6		1.114			1091		1.21e8				515.188
Total-tetradioxins			1.38e5		1.134			1702		2.10e6				10.709
Total-pentadioxins			7.47e5		0.975			2439		1.14e7				51.843
Total-hexadioxins			1.91e6		0.983			2259		2.81e7				154.172
Total-heptadioxins			5.64e5		1.028			2061		7.57e6				51.579
Total-Dioxins			4.19e6		1.028			1702		5.78e7				367.185
Total-TEQ			1.26e7					1702		1.78e8				882.373
37CL-2378-TCDD	26.212	1.032	1.36e6		1.067			1969		2.05e7		10387.8		34.973
FUNCTION1 PFK			1.43e8					714802		2.99e8				
FUNCTION2 PFK			0.00e0					161848		0.00e0				0.000
FUNCTION3 PFK			1.98e8					650209		2.65e8				
FUNCTION4 PFK			3.95e6					444662		6.89e7				
FUNCTION5 PFK			2.53e5					305939		9.47e6				
FUNCTION1 HXCD...			3.30e2					708		6.46e3				0.000
FUNCTION1 HPCD...			7.07e2					631		1.73e4				0.000
FUNCTION2 HPCD...			4.01e2					988		1.39e4				0.000
FUNCTION3 OCDPE			1.76e2					558		4.25e3				0.000
FUNCTION4 NCDPE			2.51e2					1037		6.40e3				0.000
FUNCTION5 DCDPE			0.00e0					551		0.00e0				0.000

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
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Method: C:\MassLynx\Dioxin.pro\MethDB\Dioxin161007.mdb 07 Oct 2016 14:10:52
 Calibration: C:\MassLynx\Dioxin.pro\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

ID: BEJ0775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

TF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1 2378-TCDF	303.9016	25.59	450493.860	0.935	10.391	10.391	0.77	0.77	NO	2832.5
2	35 Total-tetrafurans	303.9016	25.42	1181.338	0.935	0.027		0.81	0.77	NO	6.9
3	35 Total-tetrafurans	303.9016	24.67	3434.226	0.935	0.079		0.71	0.77	NO	19.0
4	35 Total-tetrafurans	303.9016	24.49	4573.135	0.935	0.105		0.74	0.77	NO	27.5
5	35 Total-tetrafurans	303.9016	24.36	4717.675	0.935	0.109		0.72	0.77	NO	30.3

PP

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	37 Total-pentafurans	339.8597	29.90	46914.905	0.957	1.252		2.66	1.55	YES	126.0
2	2 12378-PeCDF	339.8597	29.71	1853107.063	0.952	50.435	50.435	1.59	1.55	NO	4928.3
3	37 Total-pentafurans	339.8597	29.35	6933.070	0.957	0.185		1.03	1.55	YES	13.2
4	37 Total-pentafurans	339.8597	28.64	14405.231	0.957	0.384		1.66	1.55	NO	35.9
5	37 Total-pentafurans	339.8597	28.57	2908.311	0.957	0.078		1.15	1.55	YES	12.2
6	37 Total-pentafurans	339.8597	32.09	14374.555	0.957	0.383		1.64	1.55	NO	41.0
7	3 23478-PeCDF	339.8597	31.06	1890193.750	0.963	49.444	49.444	1.55	1.55	NO	5035.0

HF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	7 123789-HxCDF	373.8208	36.97	1383299.250	1.101	49.680	49.680	1.23	1.24	NO	2785.0
2	5 234678-HxCDF	373.8208	35.82	1604283.375	1.164	49.973	49.973	1.25	1.24	NO	3355.2
3	6 123678-HxCDF	373.8208	34.88	1709191.563	1.099	49.754	49.754	1.26	1.24	NO	3390.5
4	4 123478-HxCDF	373.8208	34.74	1618214.376	1.137	50.085	50.085	1.23	1.24	NO	3319.2
5	38 Total-hexafurans	373.8208	33.23	9546.445	1.125	0.302		1.23	1.24	NO	20.7
6	38 Total-hexafurans	373.8208	33.01	3866.345	1.125	0.122		1.42	1.24	NO	9.6

HPF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9 1234789-HpCDF	407.7818	41.68	1230468.125	1.317	49.212	49.212	1.04	1.05	NO	2278.7
2	39 Total-heptafurans	407.7818	39.82	19593.275	1.310	0.706		1.10	1.05	NO	38.4
3	39 Total-heptafurans	407.7818	39.53	1908.446	1.310	0.069		5.40	1.05	YES	5.4
4	8 1234678-HpCDF	407.7818	39.05	1573187.500	1.303	51.655	51.655	1.03	1.05	NO	3201.6

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
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ID: BEJ0775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

Furans,TF,PP,PF,HF,HPF,OF

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1 2378-TCDF	303.9016	25.59	450493.860	0.935	10.391	10.391	0.77	0.77	NO	2832.5
2	35 Total-tetrafurans	303.9016	25.42	1181.338	0.935	0.027		0.81	0.77	NO	6.9
3	35 Total-tetrafurans	303.9016	24.67	3434.226	0.935	0.079		0.71	0.77	NO	19.0
4	35 Total-tetrafurans	303.9016	24.49	4573.135	0.935	0.105		0.74	0.77	NO	27.5
5	35 Total-tetrafurans	303.9016	24.36	4717.675	0.935	0.109		0.72	0.77	NO	30.3
6	37 Total-pentafurans	339.8597	29.90	46914.905	0.957	1.252		2.66	1.55	YES	126.0
7	2 12378-PeCDF	339.8597	29.71	1853107.063	0.952	50.435	50.435	1.59	1.55	NO	4928.3
8	37 Total-pentafurans	339.8597	29.35	6933.070	0.957	0.185		1.03	1.55	YES	13.2
9	37 Total-pentafurans	339.8597	28.64	14405.231	0.957	0.384		1.66	1.55	NO	35.9
10	37 Total-pentafurans	339.8597	28.57	2908.311	0.957	0.078		1.15	1.55	YES	12.2
11	37 Total-pentafurans	339.8597	32.09	14374.555	0.957	0.383		1.64	1.55	NO	41.0
12	3 23478-PeCDF	339.8597	31.06	1890193.750	0.963	49.444	49.444	1.55	1.55	NO	5035.0
13	7 123789-HxCDF	373.8208	36.97	1383299.250	1.101	49.680	49.680	1.23	1.24	NO	2785.0
14	5 234678-HxCDF	373.8208	35.82	1604283.375	1.164	49.973	49.973	1.25	1.24	NO	3355.2
15	6 123678-HxCDF	373.8208	34.88	1709191.563	1.099	49.754	49.754	1.26	1.24	NO	3390.5
16	4 123478-HxCDF	373.8208	34.74	1618214.376	1.137	50.085	50.085	1.23	1.24	NO	3319.2
17	38 Total-hexafurans	373.8208	33.23	9546.445	1.125	0.302		1.23	1.24	NO	20.7
18	38 Total-hexafurans	373.8208	33.01	3866.345	1.125	0.122		1.42	1.24	NO	9.6
19	9 1234789-HpCDF	407.7818	41.68	1230468.125	1.317	49.212	49.212	1.04	1.05	NO	2278.7
20	39 Total-heptafurans	407.7818	39.82	19593.275	1.310	0.706		1.10	1.05	NO	38.4
21	39 Total-heptafurans	407.7818	39.53	1908.446	1.310	0.069		5.40	1.05	YES	5.4
22	8 1234678-HpCDF	407.7818	39.05	1573187.500	1.303	51.655	51.655	1.03	1.05	NO	3201.6
23	10 OCDF	441.7428	46.80	1908005.313	1.166	100.757	100....	0.92	0.89	NO	2752.9

TD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11 2378-TCDD	319.8965	26.23	306906.656	1.134	10.406	10.406	0.78	0.77	NO	1199.6
2	41 Total-tetradioxins	319.8965	25.84	7905.609	1.134	0.268		0.83	0.77	NO	29.6
3	41 Total-tetradioxins	319.8965	24.85	1032.179	1.134	0.035		0.77	0.77	NO	3.5

PD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	42 Total-pentadioxins	355.8546	30.08	1394.676	0.975	0.059		0.94	1.55	YES	5.2
2	42 Total-pentadioxins	355.8546	29.94	1212.033	0.975	0.051		1.66	1.55	NO	4.8
3	42 Total-pentadioxins	355.8546	29.73	1849.151	0.975	0.078		2.01	1.55	YES	8.8
4	42 Total-pentadioxins	355.8546	31.74	963.343	0.975	0.041		1.50	1.55	NO	6.7
5	42 Total-pentadioxins	355.8546	31.68	910.316	0.975	0.038		2.24	1.55	YES	5.6
6	12 12378-PeCDD	355.8546	31.32	1223796.376	0.975	51.471	51.471	1.54	1.55	NO	4619.6
7	42 Total-pentadioxins	355.8546	30.64	2513.758	0.975	0.106		1.66	1.55	NO	8.5

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HD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	13 123478-HxCDD	389.8157	35.97	1242484.375	1.031	49.926	49.926	1.26	1.24	NO	4711.2
2	43 Total-hexadioxins	389.8157	35.81	292.975	0.983	0.013		3.06	1.24	YES	1.9
3	43 Total-hexadioxins	389.8157	34.98	891.676	0.983	0.040		4.34	1.24	YES	4.2
4	43 Total-hexadioxins	389.8157	34.63	1502.733	0.983	0.068		1.16	1.24	NO	4.9
5	43 Total-hexadioxins	389.8157	33.80	792.708	0.983	0.036		1.31	1.24	NO	2.7
6	15 123789-HxCDD	389.8157	36.53	1219348.938	0.947	56.990	56.990	1.24	1.24	NO	4355.3
7	14 123678-HxCDD	389.8157	36.09	963782.251	0.971	47.099	47.099	1.25	1.24	NO	3374.5

HPD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	40.82	1097186.063	1.028	50.866	50.866	1.03	1.05	NO	3615.0
2	44 Total-heptadioxins	423.7766	39.59	15364.174	1.028	0.712		1.06	1.05	NO	55.3

Dioxins,TD,PD,HD,HPD,OD

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11 2378-TCDD	319.8965	26.23	306906.656	1.134	10.406	10.406	0.78	0.77	NO	1199.6
2	41 Total-tetradioxins	319.8965	25.84	7905.609	1.134	0.268		0.83	0.77	NO	29.6
3	41 Total-tetradioxins	319.8965	24.85	1032.179	1.134	0.035		0.77	0.77	NO	3.5
4	42 Total-pentadioxins	355.8546	30.08	1394.676	0.975	0.059		0.94	1.55	YES	5.2
5	42 Total-pentadioxins	355.8546	29.94	1212.033	0.975	0.051		1.66	1.55	NO	4.8
6	42 Total-pentadioxins	355.8546	29.73	1849.151	0.975	0.078		2.01	1.55	YES	8.8
7	42 Total-pentadioxins	355.8546	31.74	963.343	0.975	0.041		1.50	1.55	NO	6.7
8	42 Total-pentadioxins	355.8546	31.68	910.316	0.975	0.038		2.24	1.55	YES	5.6
9	12 12378-PeCDD	355.8546	31.32	1223796.376	0.975	51.471	51.471	1.54	1.55	NO	4619.6
10	42 Total-pentadioxins	355.8546	30.64	2513.758	0.975	0.106		1.66	1.55	NO	8.5
11	13 123478-HxCDD	389.8157	35.97	1242484.375	1.031	49.926	49.926	1.26	1.24	NO	4711.2
12	43 Total-hexadioxins	389.8157	35.81	292.975	0.983	0.013		3.06	1.24	YES	1.9
13	43 Total-hexadioxins	389.8157	34.98	891.676	0.983	0.040		4.34	1.24	YES	4.2
14	43 Total-hexadioxins	389.8157	34.63	1502.733	0.983	0.068		1.16	1.24	NO	4.9
15	43 Total-hexadioxins	389.8157	33.80	792.708	0.983	0.036		1.31	1.24	NO	2.7
16	15 123789-HxCDD	389.8157	36.53	1219348.938	0.947	56.990	56.990	1.24	1.24	NO	4355.3
17	14 123678-HxCDD	389.8157	36.09	963782.251	0.971	47.099	47.099	1.25	1.24	NO	3374.5
18	16 1234678-HpCDD	423.7766	40.82	1097186.063	1.028	50.866	50.866	1.03	1.05	NO	3615.0
19	44 Total-heptadioxins	423.7766	39.59	15364.174	1.028	0.712		1.06	1.05	NO	55.3
20	17 OCDD	457.7377	46.54	1778106.625	1.107	98.883	98.883	0.89	0.89	NO	3758.4

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TotalTEQ,Furans,Dioxins

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	1 2378-TCDF	303.9016	25.59	450493.860	0.935	10.391	10.391	0.77	0.77	NO	2832.5
2	35 Total-tetrafurans	303.9016	25.42	1181.338	0.935	0.027		0.81	0.77	NO	6.9
3	35 Total-tetrafurans	303.9016	24.67	3434.226	0.935	0.079		0.71	0.77	NO	19.0
4	35 Total-tetrafurans	303.9016	24.49	4573.135	0.935	0.105		0.74	0.77	NO	27.5
5	35 Total-tetrafurans	303.9016	24.36	4717.675	0.935	0.109		0.72	0.77	NO	30.3
6	37 Total-pentafurans	339.8597	29.90	46914.905	0.957	1.252		2.66	1.55	YES	126.0
7	2 12378-PeCDF	339.8597	29.71	1853107.063	0.952	50.435	50.435	1.59	1.55	NO	4928.3
8	37 Total-pentafurans	339.8597	29.35	6933.070	0.957	0.185		1.03	1.55	YES	13.2
9	37 Total-pentafurans	339.8597	28.64	14405.231	0.957	0.384		1.66	1.55	NO	35.9
10	37 Total-pentafurans	339.8597	28.57	2908.311	0.957	0.078		1.15	1.55	YES	12.2
11	37 Total-pentafurans	339.8597	32.09	14374.555	0.957	0.383		1.64	1.55	NO	41.0
12	3 23478-PeCDF	339.8597	31.06	1890193.750	0.963	49.444	49.444	1.55	1.55	NO	5035.0
13	7 123789-HxCDF	373.8208	36.97	1383299.250	1.101	49.680	49.680	1.23	1.24	NO	2785.0
14	5 234678-HxCDF	373.8208	35.82	1604283.375	1.164	49.973	49.973	1.25	1.24	NO	3355.2
15	6 123678-HxCDF	373.8208	34.88	1709191.563	1.099	49.754	49.754	1.26	1.24	NO	3390.5
16	4 123478-HxCDF	373.8208	34.74	1618214.376	1.137	50.085	50.085	1.23	1.24	NO	3319.2
17	38 Total-hexafurans	373.8208	33.23	9546.445	1.125	0.302		1.23	1.24	NO	20.7
18	38 Total-hexafurans	373.8208	33.01	3866.345	1.125	0.122		1.42	1.24	NO	9.6
19	9 1234789-HpCDF	407.7818	41.68	1230468.125	1.317	49.212	49.212	1.04	1.05	NO	2278.7
20	39 Total-heptafurans	407.7818	39.82	19593.275	1.310	0.706		1.10	1.05	NO	38.4
21	39 Total-heptafurans	407.7818	39.53	1908.446	1.310	0.069		5.40	1.05	YES	5.4
22	8 1234678-HpCDF	407.7818	39.05	1573187.500	1.303	51.655	51.655	1.03	1.05	NO	3201.6
23	10 OCDF	441.7428	46.80	1908005.313	1.166	100.757	100....	0.92	0.89	NO	2752.9
24	11 2378-TCDD	319.8965	26.23	306906.656	1.134	10.406	10.406	0.78	0.77	NO	1199.6
25	41 Total-tetradioxins	319.8965	25.84	7905.609	1.134	0.268		0.83	0.77	NO	29.6
26	41 Total-tetradioxins	319.8965	24.85	1032.179	1.134	0.035		0.77	0.77	NO	3.5
27	42 Total-pentadioxins	355.8546	30.08	1394.676	0.975	0.059		0.94	1.55	YES	5.2
28	42 Total-pentadioxins	355.8546	29.94	1212.033	0.975	0.051		1.66	1.55	NO	4.8
29	42 Total-pentadioxins	355.8546	29.73	1849.151	0.975	0.078		2.01	1.55	YES	8.8
30	42 Total-pentadioxins	355.8546	31.74	963.343	0.975	0.041		1.50	1.55	NO	6.7
31	42 Total-pentadioxins	355.8546	31.68	910.316	0.975	0.038		2.24	1.55	YES	5.6
32	12 12378-PeCDD	355.8546	31.32	1223796.376	0.975	51.471	51.471	1.54	1.55	NO	4619.6
33	42 Total-pentadioxins	355.8546	30.64	2513.758	0.975	0.106		1.66	1.55	NO	8.5
34	13 123478-HxCDD	389.8157	35.97	1242484.375	1.031	49.926	49.926	1.26	1.24	NO	4711.2
35	43 Total-hexadioxins	389.8157	35.81	292.975	0.983	0.013		3.06	1.24	YES	1.9
36	43 Total-hexadioxins	389.8157	34.98	891.676	0.983	0.040		4.34	1.24	YES	4.2
37	43 Total-hexadioxins	389.8157	34.63	1502.733	0.983	0.068		1.16	1.24	NO	4.9
38	43 Total-hexadioxins	389.8157	33.80	792.708	0.983	0.036		1.31	1.24	NO	2.7
39	15 123789-HxCDD	389.8157	36.53	1219348.938	0.947	56.990	56.990	1.24	1.24	NO	4355.3
40	14 123678-HxCDD	389.8157	36.09	963782.251	0.971	47.099	47.099	1.25	1.24	NO	3374.5
41	16 1234678-HpCDD	423.7766	40.82	1097186.063	1.028	50.866	50.866	1.03	1.05	NO	3615.0
42	44 Total-heptadioxins	423.7766	39.59	15364.174	1.028	0.712		1.06	1.05	NO	55.3
43	17 OCDD	457.7377	46.54	1778106.625	1.107	98.883	98.883	0.89	0.89	NO	3758.4

Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
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PFK1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48 FUNCTION1 PFK	330.9792	25.85	0.000							2.3
2	48 FUNCTION1 PFK	330.9792	25.50	0.000							8.5
3	48 FUNCTION1 PFK	330.9792	24.33	0.000							4.3
4	48 FUNCTION1 PFK	330.9792	22.37	0.000							109.0
5	48 FUNCTION1 PFK	330.9792	22.18	0.000							119.2
6	48 FUNCTION1 PFK	330.9792	21.95	0.000							108.8
7	48 FUNCTION1 PFK	330.9792	21.57	0.000							66.1

PFK2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	37.49	0.000		0.000					8.7
2	50 FUNCTION3 PFK	380.9760	36.91	0.000		0.000					39.1
3	50 FUNCTION3 PFK	380.9760	36.23	0.000		0.000					69.8
4	50 FUNCTION3 PFK	380.9760	36.03	0.000		0.000					75.5
5	50 FUNCTION3 PFK	380.9760	34.41	0.000		0.000					88.1
6	50 FUNCTION3 PFK	380.9760	33.61	0.000		0.000					85.3
7	50 FUNCTION3 PFK	380.9760	32.97	0.000		0.000					40.4

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ID: BEJ0775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51 FUNCTION4 PFK	430.9728	39.52	0.000							3.9
2	51 FUNCTION4 PFK	430.9728	39.41	0.000							5.4
3	51 FUNCTION4 PFK	430.9728	39.29	0.000							6.5
4	51 FUNCTION4 PFK	430.9728	39.21	0.000							7.0
5	51 FUNCTION4 PFK	430.9728	39.06	0.000							7.7
6	51 FUNCTION4 PFK	430.9728	38.96	0.000							6.9
7	51 FUNCTION4 PFK	430.9728	38.90	0.000							7.5
8	51 FUNCTION4 PFK	430.9728	38.87	0.000							7.3
9	51 FUNCTION4 PFK	430.9728	38.72	0.000							7.6
10	51 FUNCTION4 PFK	430.9728	38.63	0.000							7.1
11	51 FUNCTION4 PFK	430.9728	38.50	0.000							5.8
12	51 FUNCTION4 PFK	430.9728	38.43	0.000							4.9
13	51 FUNCTION4 PFK	430.9728	38.24	0.000							1.6
14	51 FUNCTION4 PFK	430.9728	38.18	0.000							2.6
15	51 FUNCTION4 PFK	430.9728	38.06	0.000							5.8
16	51 FUNCTION4 PFK	430.9728	40.93	0.000							1.8
17	51 FUNCTION4 PFK	430.9728	40.81	0.000							1.0
18	51 FUNCTION4 PFK	430.9728	40.71	0.000							1.2
19	51 FUNCTION4 PFK	430.9728	40.61	0.000							1.5
20	51 FUNCTION4 PFK	430.9728	40.55	0.000							1.6
21	51 FUNCTION4 PFK	430.9728	40.50	0.000							0.5
22	51 FUNCTION4 PFK	430.9728	40.47	0.000							0.8
23	51 FUNCTION4 PFK	430.9728	40.43	0.000							1.6
24	51 FUNCTION4 PFK	430.9728	40.27	0.000							1.2
25	51 FUNCTION4 PFK	430.9728	40.22	0.000							2.2
26	51 FUNCTION4 PFK	430.9728	40.16	0.000							0.6
27	51 FUNCTION4 PFK	430.9728	40.04	0.000							1.9
28	51 FUNCTION4 PFK	430.9728	39.97	0.000							1.8
29	51 FUNCTION4 PFK	430.9728	39.86	0.000							1.6
30	51 FUNCTION4 PFK	430.9728	39.62	0.000							1.8
31	51 FUNCTION4 PFK	430.9728	39.57	0.000							3.2
32	51 FUNCTION4 PFK	430.9728	42.36	0.000							0.9
33	51 FUNCTION4 PFK	430.9728	42.29	0.000							1.3
34	51 FUNCTION4 PFK	430.9728	42.26	0.000							1.7
35	51 FUNCTION4 PFK	430.9728	42.22	0.000							1.9
36	51 FUNCTION4 PFK	430.9728	42.17	0.000							1.2
37	51 FUNCTION4 PFK	430.9728	42.12	0.000							1.6
38	51 FUNCTION4 PFK	430.9728	42.01	0.000							1.3
39	51 FUNCTION4 PFK	430.9728	41.96	0.000							0.8
40	51 FUNCTION4 PFK	430.9728	41.91	0.000							1.4
41	51 FUNCTION4 PFK	430.9728	41.86	0.000							1.2
42	51 FUNCTION4 PFK	430.9728	41.79	0.000							0.8
43	51 FUNCTION4 PFK	430.9728	41.72	0.000							0.4
44	51 FUNCTION4 PFK	430.9728	41.38	0.000							0.6
45	51 FUNCTION4 PFK	430.9728	41.30	0.000							1.0
46	51 FUNCTION4 PFK	430.9728	41.15	0.000							1.7
47	51 FUNCTION4 PFK	430.9728	40.99	0.000							1.0
48	51 FUNCTION4 PFK	430.9728	43.56	0.000							0.7
49	51 FUNCTION4 PFK	430.9728	43.50	0.000							0.7
50	51 FUNCTION4 PFK	430.9728	43.45	0.000							0.7
51	51 FUNCTION4 PFK	430.9728	43.41	0.000							1.0

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PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
52	51 FUNCTION4 PFK	430.9728	43.38	0.000							1.3
53	51 FUNCTION4 PFK	430.9728	43.34	0.000							1.2
54	51 FUNCTION4 PFK	430.9728	43.28	0.000							0.4
55	51 FUNCTION4 PFK	430.9728	43.08	0.000							1.2
56	51 FUNCTION4 PFK	430.9728	43.01	0.000							1.0
57	51 FUNCTION4 PFK	430.9728	42.95	0.000							1.2
58	51 FUNCTION4 PFK	430.9728	42.84	0.000							1.5
59	51 FUNCTION4 PFK	430.9728	42.74	0.000							1.4
60	51 FUNCTION4 PFK	430.9728	42.71	0.000							1.6
61	51 FUNCTION4 PFK	430.9728	42.65	0.000							1.1
62	51 FUNCTION4 PFK	430.9728	42.47	0.000							0.9
63	51 FUNCTION4 PFK	430.9728	42.39	0.000							1.5
64	51 FUNCTION4 PFK	430.9728	44.44	0.000							0.4
65	51 FUNCTION4 PFK	430.9728	44.23	0.000							1.0
66	51 FUNCTION4 PFK	430.9728	44.19	0.000							1.0
67	51 FUNCTION4 PFK	430.9728	44.12	0.000							1.2
68	51 FUNCTION4 PFK	430.9728	43.85	0.000							1.2
69	51 FUNCTION4 PFK	430.9728	43.76	0.000							0.9
70	51 FUNCTION4 PFK	430.9728	43.64	0.000							1.3

PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	52 FUNCTION5 PFK	480.9696	46.26	0.000							0.6
2	52 FUNCTION5 PFK	480.9696	45.51	0.000							1.6
3	52 FUNCTION5 PFK	480.9696	45.45	0.000							0.8
4	52 FUNCTION5 PFK	480.9696	45.37	0.000							0.9
5	52 FUNCTION5 PFK	480.9696	45.20	0.000							1.3
6	52 FUNCTION5 PFK	480.9696	45.08	0.000							0.7
7	52 FUNCTION5 PFK	480.9696	44.91	0.000							1.2
8	52 FUNCTION5 PFK	480.9696	44.66	0.000							1.6
9	52 FUNCTION5 PFK	480.9696	49.13	0.000							1.1
10	52 FUNCTION5 PFK	480.9696	48.97	0.000							0.7
11	52 FUNCTION5 PFK	480.9696	48.95	0.000							0.8
12	52 FUNCTION5 PFK	480.9696	48.78	0.000							1.2
13	52 FUNCTION5 PFK	480.9696	48.61	0.000							1.0
14	52 FUNCTION5 PFK	480.9696	48.29	0.000							1.1
15	52 FUNCTION5 PFK	480.9696	48.24	0.000							2.4
16	52 FUNCTION5 PFK	480.9696	48.10	0.000							0.5
17	52 FUNCTION5 PFK	480.9696	48.08	0.000							0.8
18	52 FUNCTION5 PFK	480.9696	47.47	0.000							1.8
19	52 FUNCTION5 PFK	480.9696	47.42	0.000							1.3
20	52 FUNCTION5 PFK	480.9696	47.25	0.000							1.0
21	52 FUNCTION5 PFK	480.9696	47.09	0.000							1.4
22	52 FUNCTION5 PFK	480.9696	46.80	0.000							1.7
23	52 FUNCTION5 PFK	480.9696	46.47	0.000							1.2
24	52 FUNCTION5 PFK	480.9696	46.43	0.000							1.1
25	52 FUNCTION5 PFK	480.9696	49.48	0.000							1.2
26	52 FUNCTION5 PFK	480.9696	49.20	0.000							2.0

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ETHERS1

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	53 FUNCTION1 HXCD...	375.8364	23.30	0.000		0.000					2.3
2	53 FUNCTION1 HXCD...	375.8364	22.45	0.000		0.000					4.4
3	53 FUNCTION1 HXCD...	375.8364	21.82	0.000		0.000					2.4

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	25.70	0.000		0.000					4.4
2	54 FUNCTION1 HPCD...	409.7974	23.94	0.000		0.000					2.4
3	54 FUNCTION1 HPCD...	409.7974	23.84	0.000		0.000					3.9
4	54 FUNCTION1 HPCD...	409.7974	23.25	0.000		0.000					3.2
5	54 FUNCTION1 HPCD...	409.7974	23.18	0.000		0.000					5.1
6	54 FUNCTION1 HPCD...	409.7974	22.49	0.000		0.000					3.7
7	54 FUNCTION1 HPCD...	409.7974	21.98	0.000		0.000					4.6

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	29.83	0.000		0.000					3.2
2	55 FUNCTION2 HPCD...	409.7974	31.94	0.000		0.000					2.0
3	55 FUNCTION2 HPCD...	409.7974	31.58	0.000		0.000					2.5
4	55 FUNCTION2 HPCD...	409.7974	31.00	0.000		0.000					3.1
5	55 FUNCTION2 HPCD...	409.7974	30.85	0.000		0.000					3.3

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445.7555	36.51	0.000		0.000					4.5
2	56 FUNCTION3 OCDPE	445.7555	35.51	0.000		0.000					3.1

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	43.06	0.000		0.000					2.2
2	57 FUNCTION4 NCDPE	479.7165	42.86	0.000		0.000					2.1
3	57 FUNCTION4 NCDPE	479.7165	40.58	0.000		0.000					2.0

ETHERS6

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

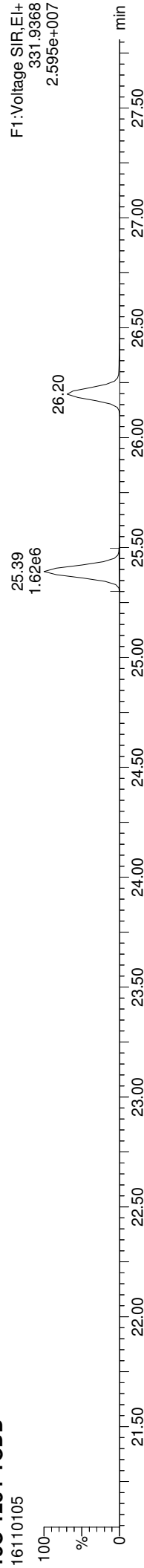
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Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
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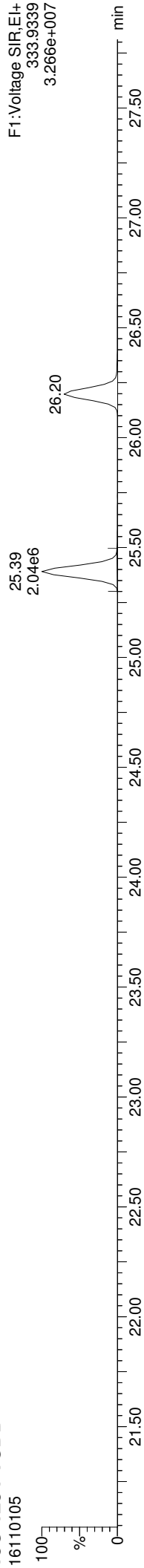
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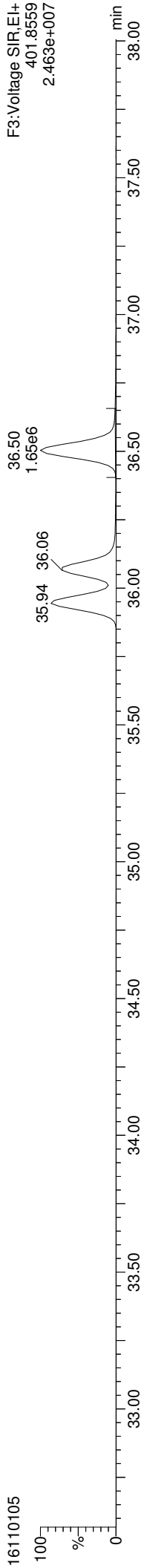
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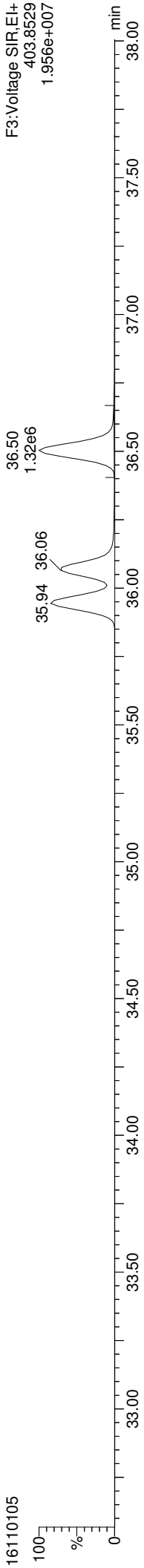
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13C-123789-HxCDD



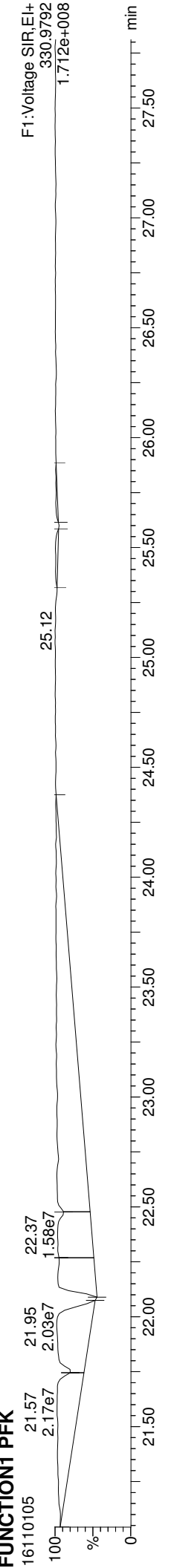
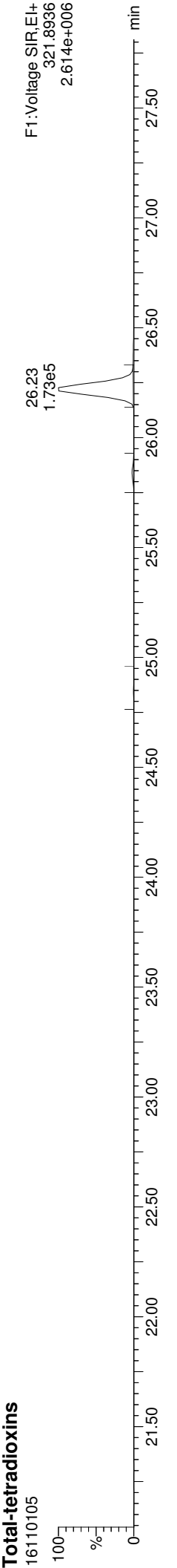
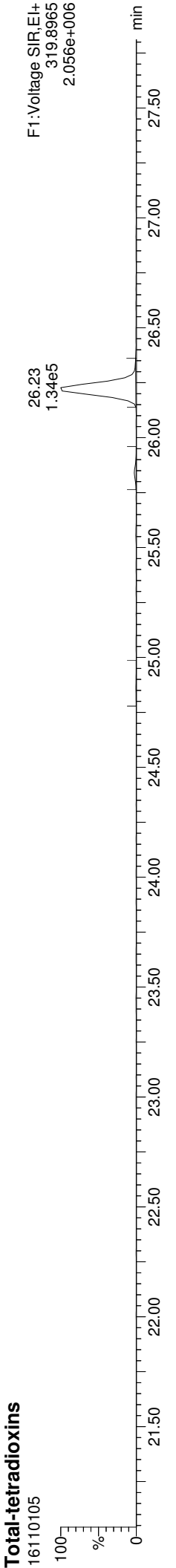
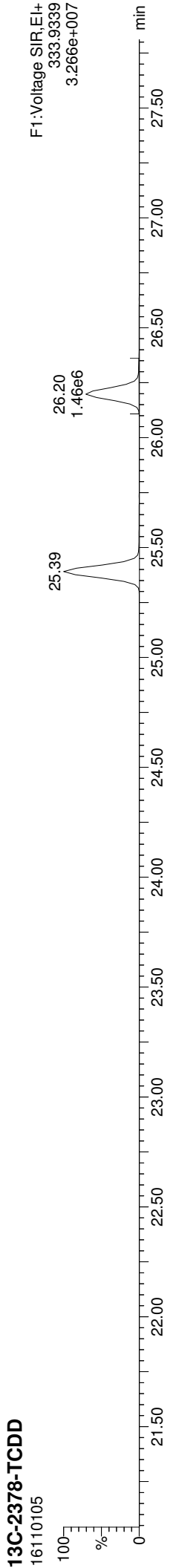
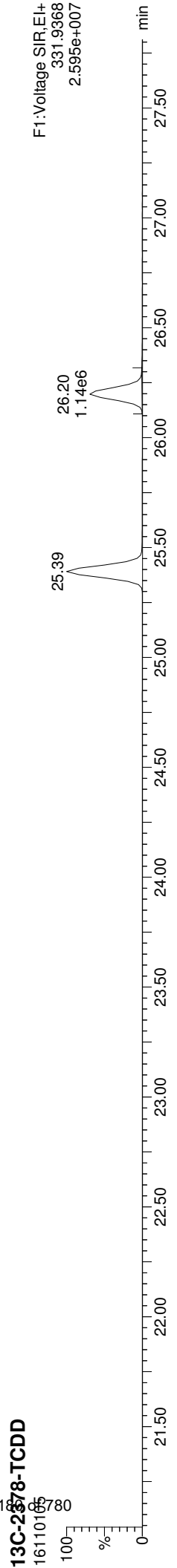
13C-123789-HxCDD



Quantify Sample Report

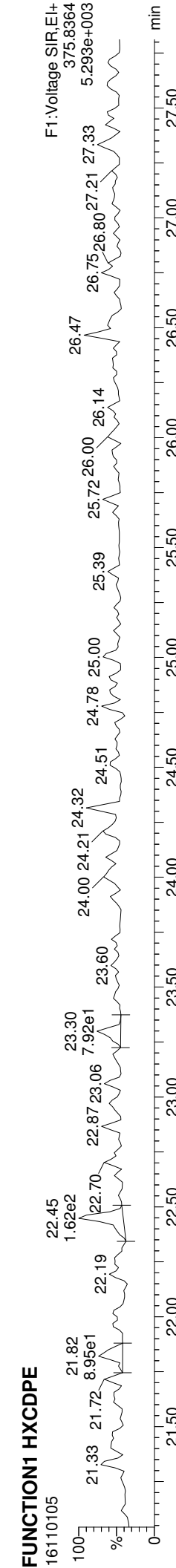
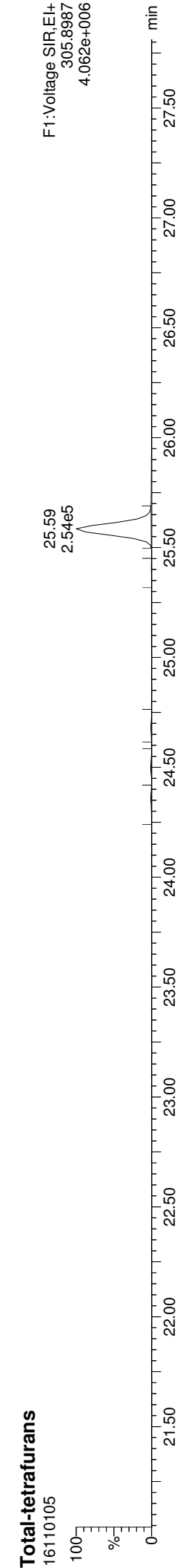
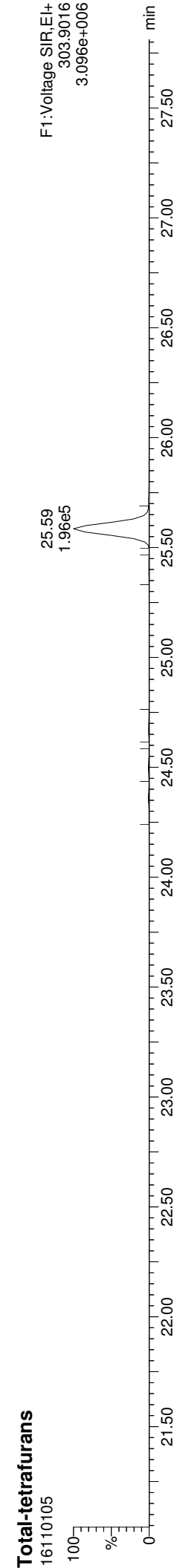
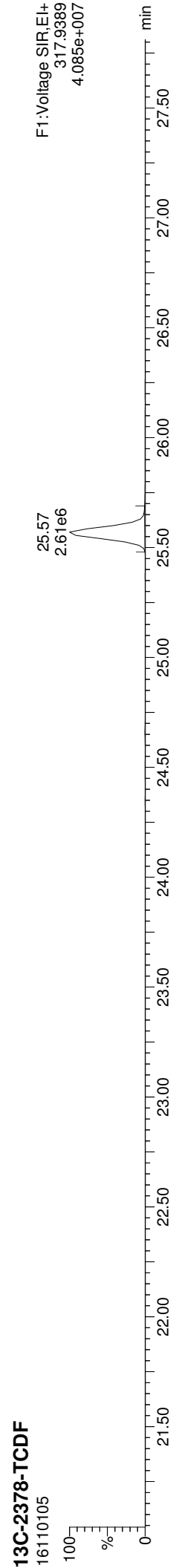
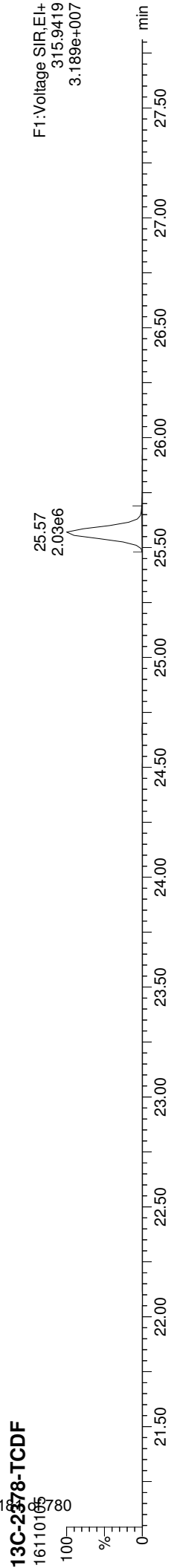
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 161110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK



Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

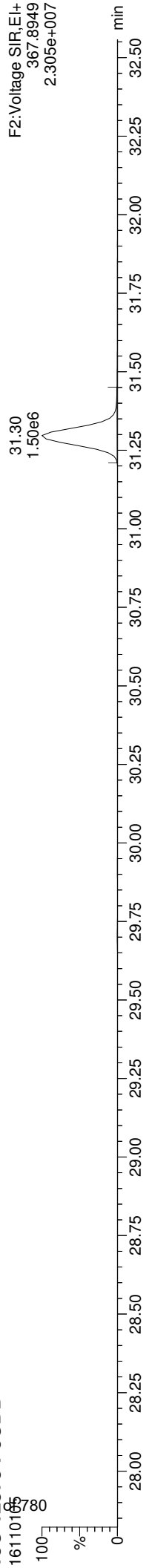


Quantify Sample Report

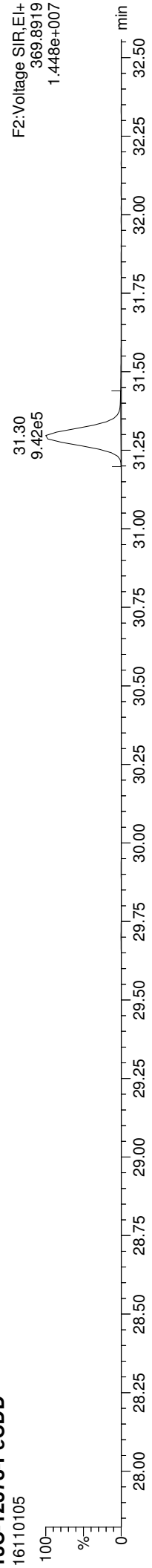
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

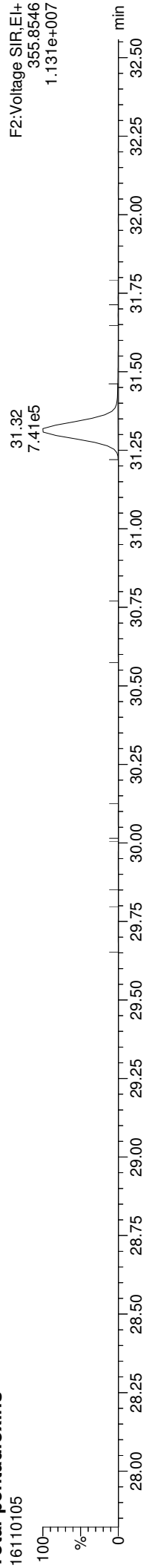
13C-12378-PeCDD



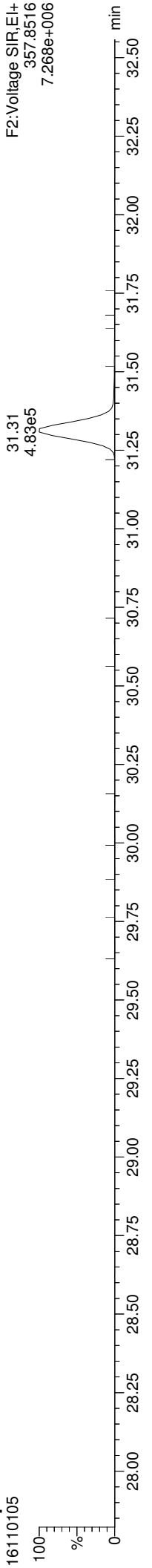
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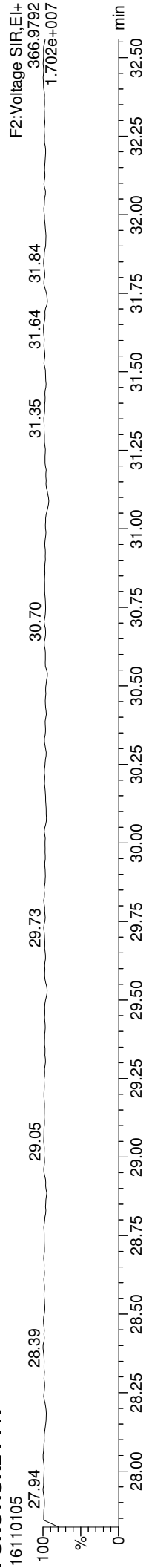
Total-pentadioxins



Total-pentadioxins



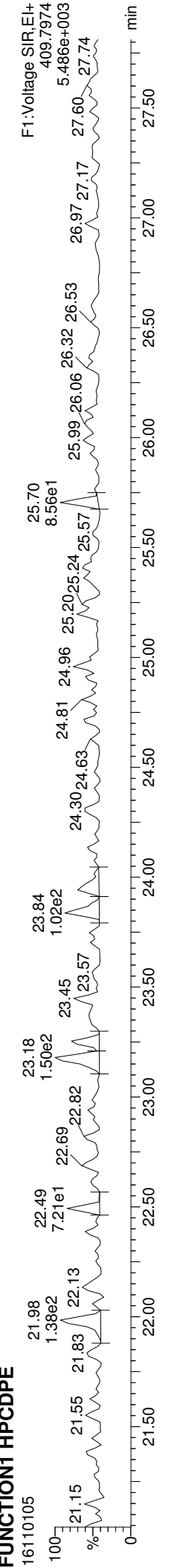
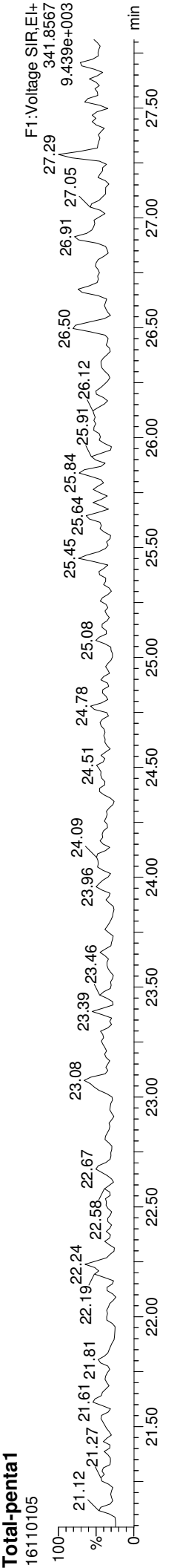
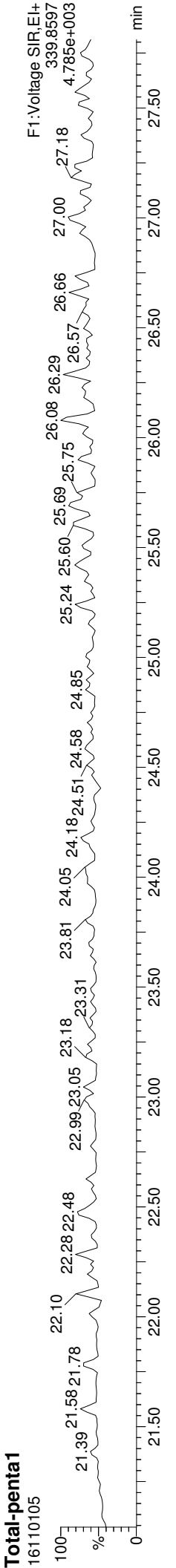
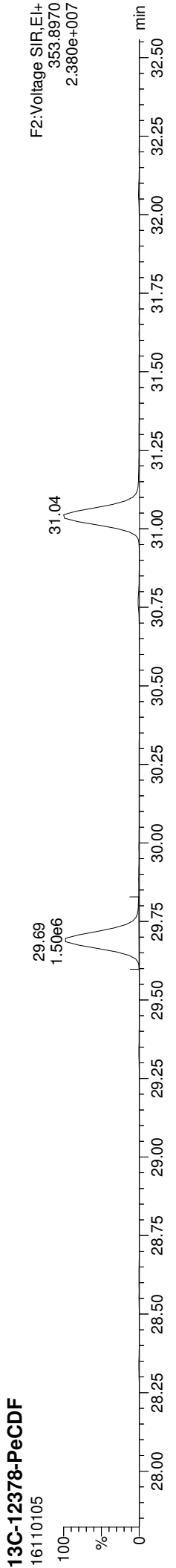
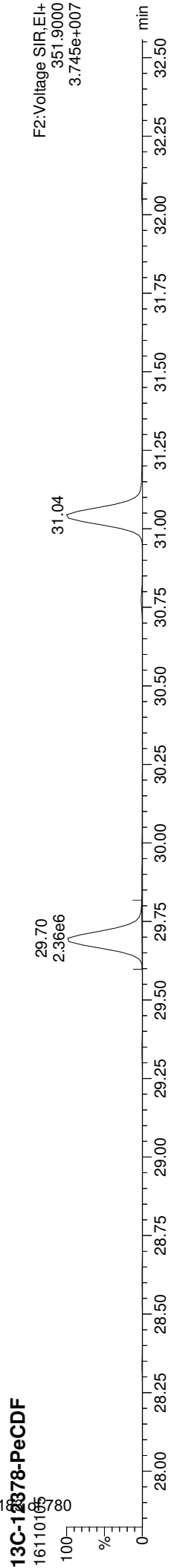
FUNCTION2 PFK



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 161110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

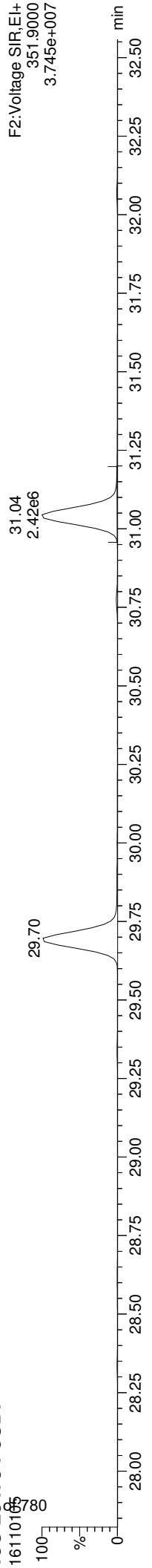


Quantify Sample Report

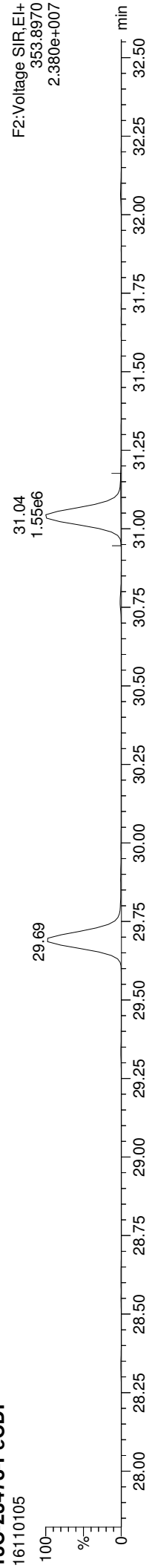
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 161110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

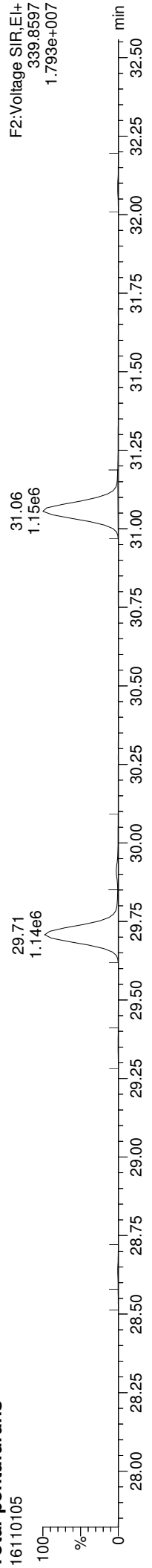
13C-23478-PeCDF



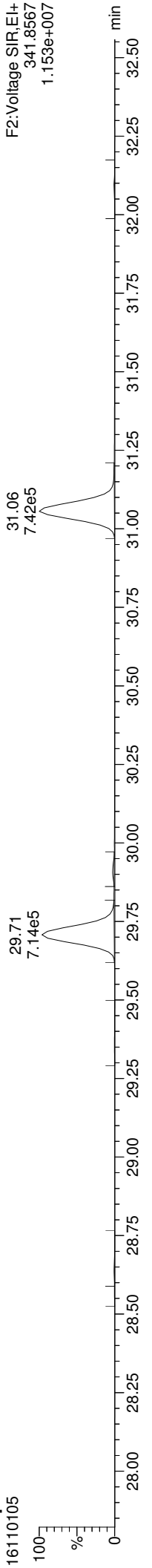
13C-23478-PeCDF



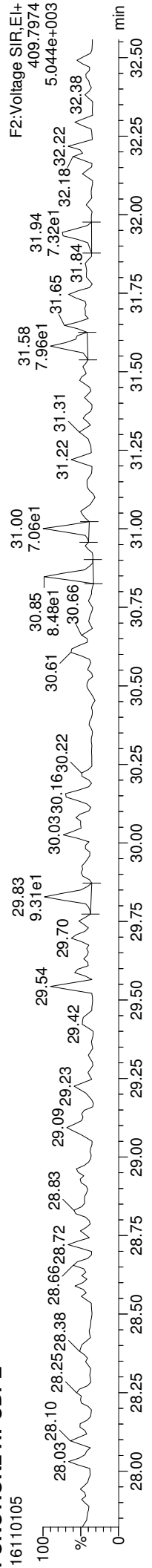
Total-pentafurans



Total-pentafurans



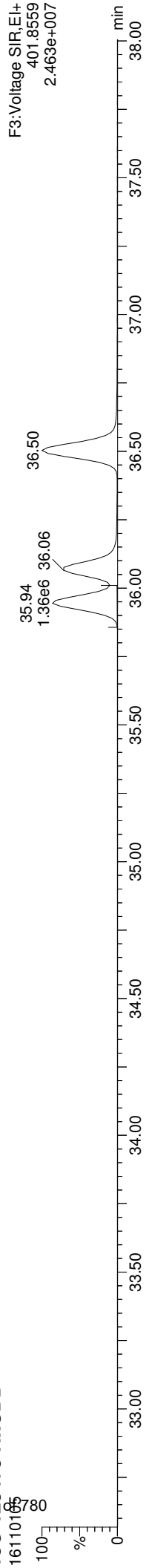
FUNCTION2 HPCDPE



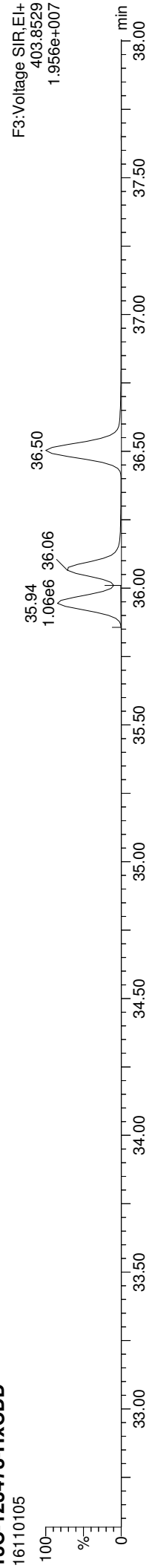
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 161110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

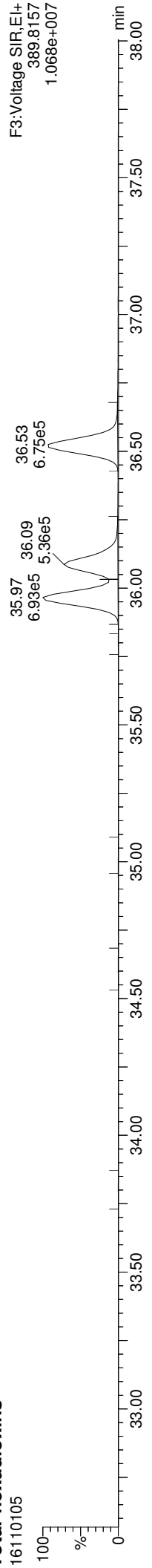
13C-123478-HxCDD



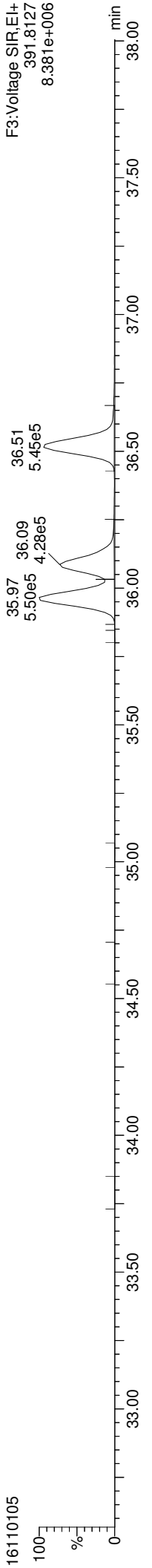
13C-123478-HxCDD



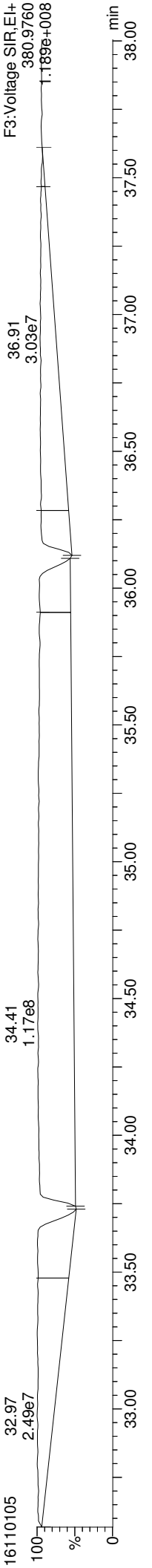
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

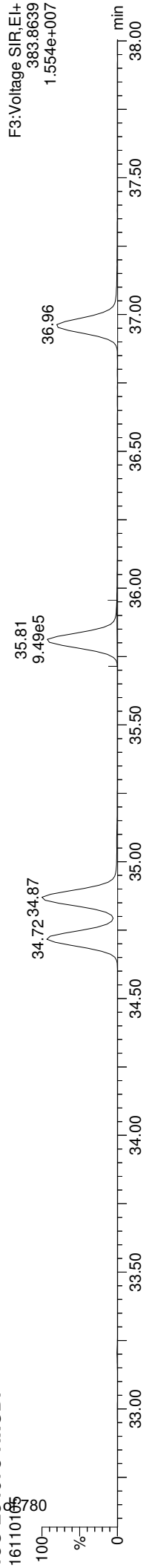


Quantify Sample Report

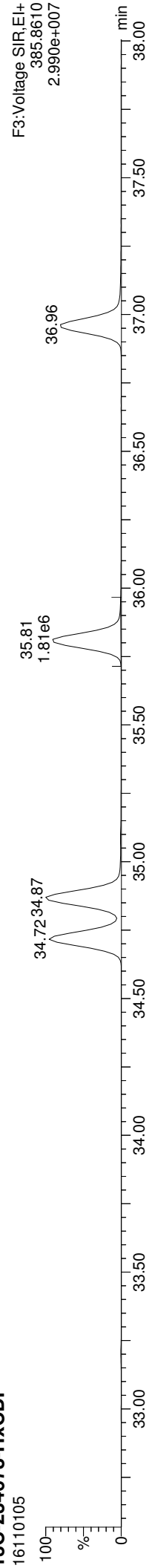
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

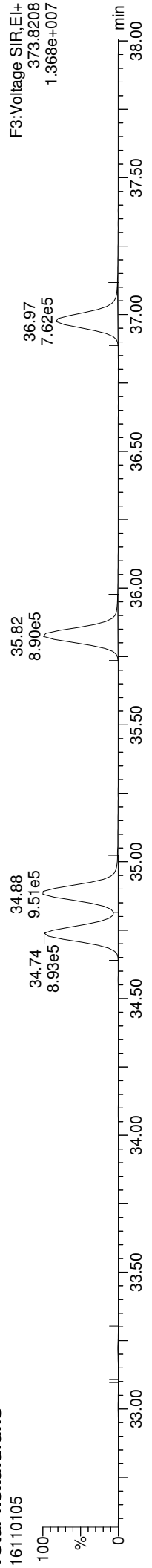
13C-234678-HxCDF



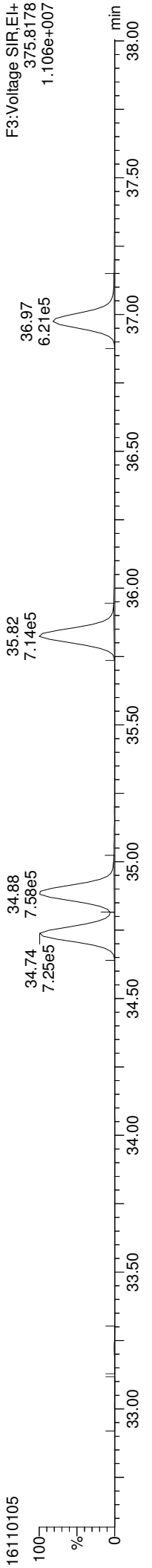
13C-234678-HxCDF



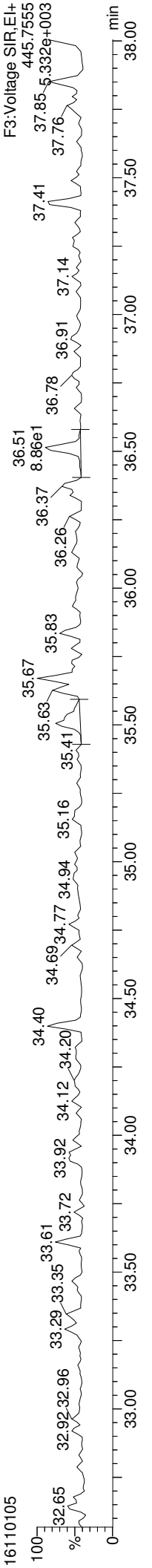
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE

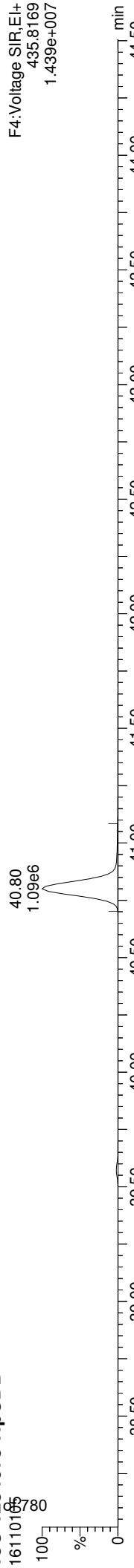


Quantify Sample Report

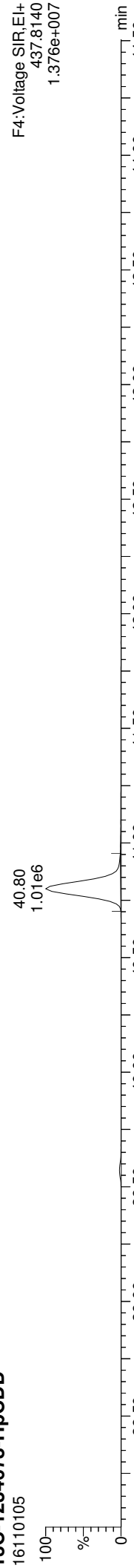
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

13C-1234678-HpCDD



13C-1234678-HpCDD



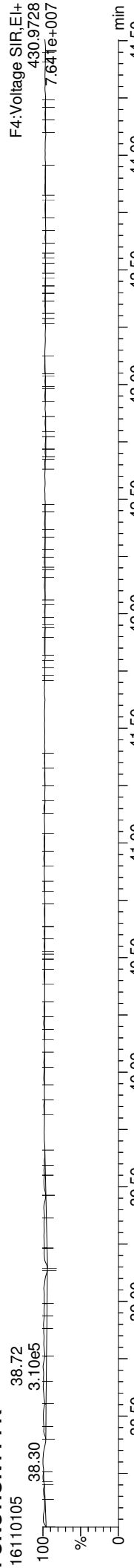
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



F4: Voltage SIR, EI+
435.8169
1.439e+007

F4: Voltage SIR, EI+
437.8140
1.376e+007

F4: Voltage SIR, EI+
423.7766
7.479e+006

F4: Voltage SIR, EI+
425.7737
7.192e+006

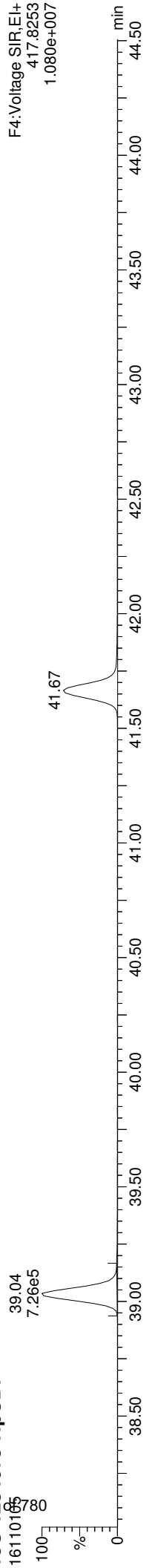
F4: Voltage SIR, EI+
430.9728
7.641e+007

Quantify Sample Report

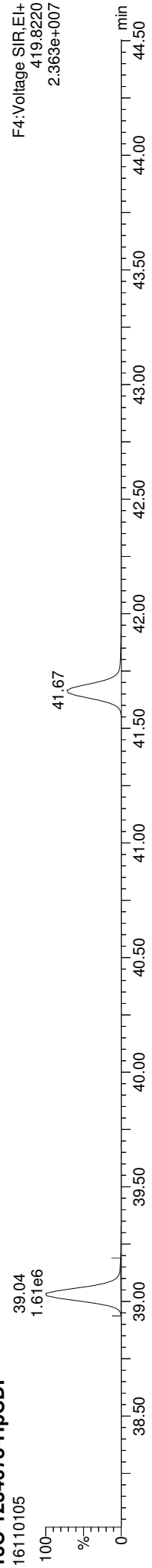
MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 161110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

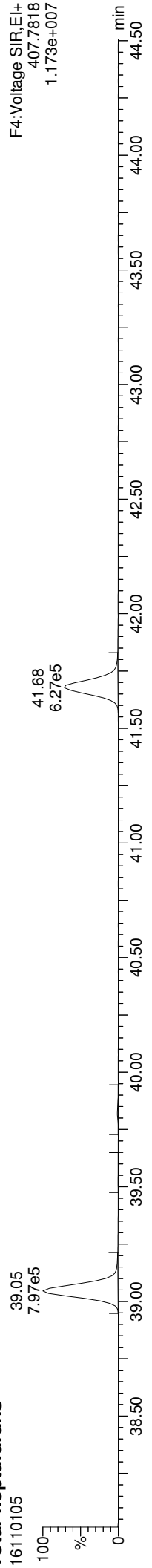
13C-1234678-HpCDF



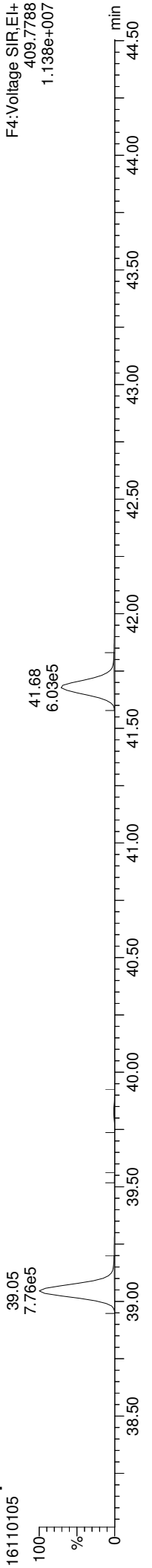
13C-1234678-HpCDF



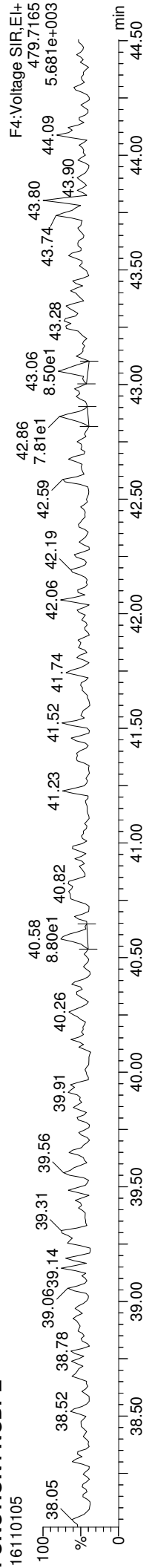
Total-heptafurans



Total-heptafurans



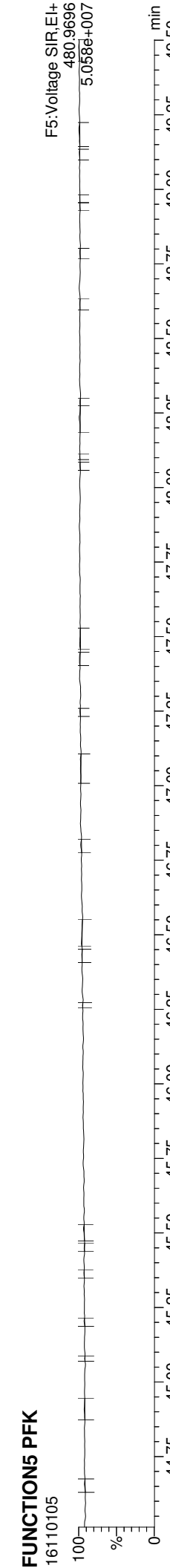
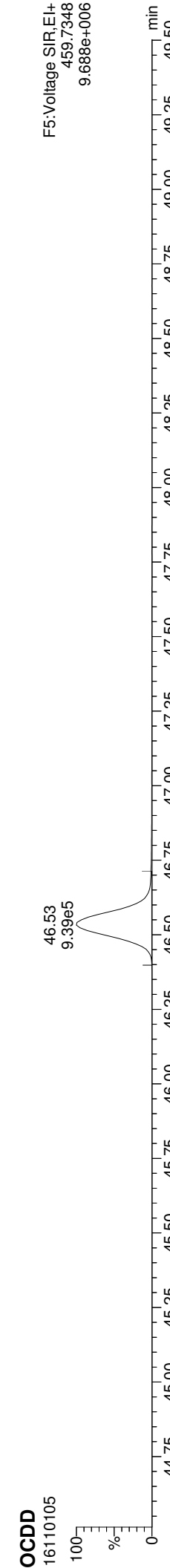
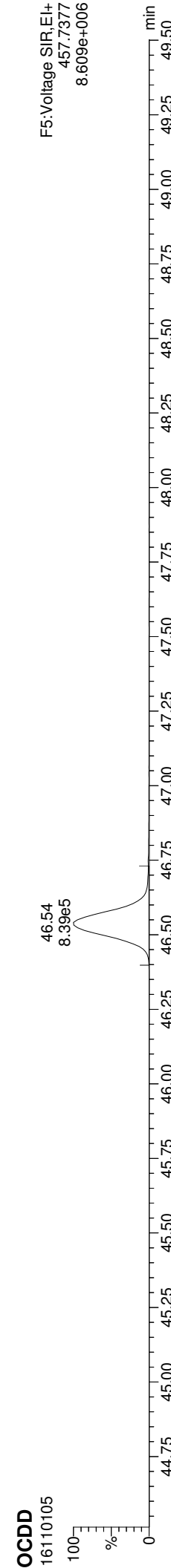
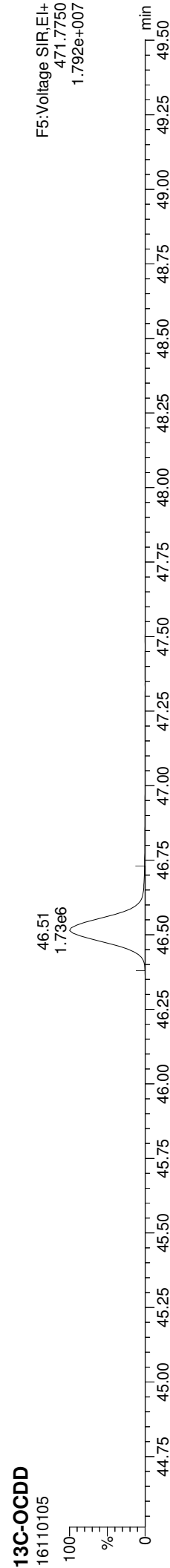
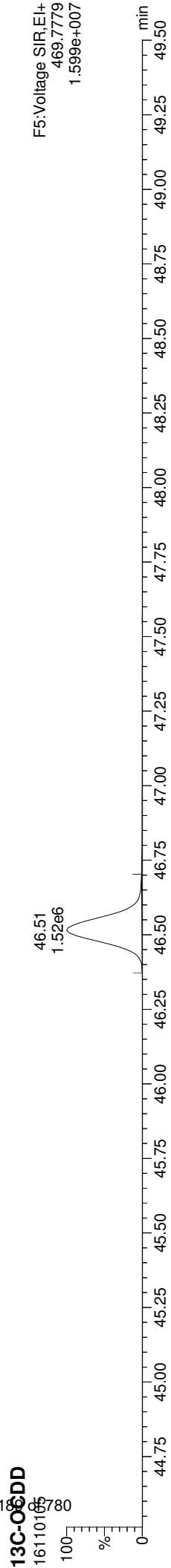
FUNCTION4 NCDPE



Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

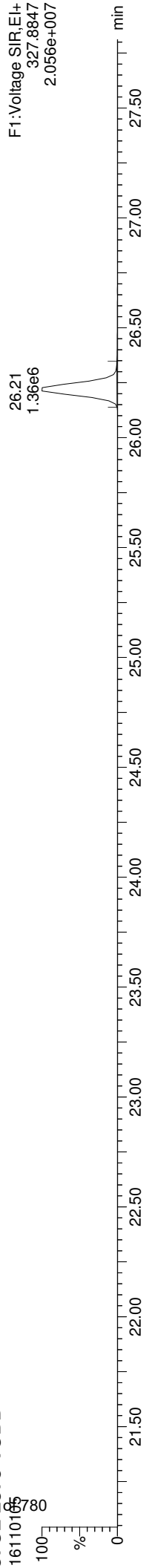


Quantify Sample Report

MassLynx MassLynx V4.1 SCN909
Dataset: C:\MassLynx\Dioxin.pro\161101DATA1.qld
Last Altered: Tuesday, November 01, 2016 14:19:48 Pacific Daylight Time
Printed: Tuesday, November 01, 2016 14:26:54 Pacific Daylight Time

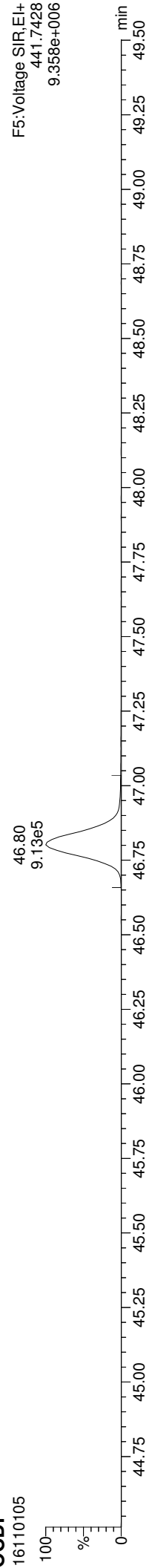
ID: BE00775-BS1, Name: 16110105, Date: 01-Nov-2016, Time: 13:15:02, Conditions: AUTOSPEC01, User: PK

37CL-2378-TCDD



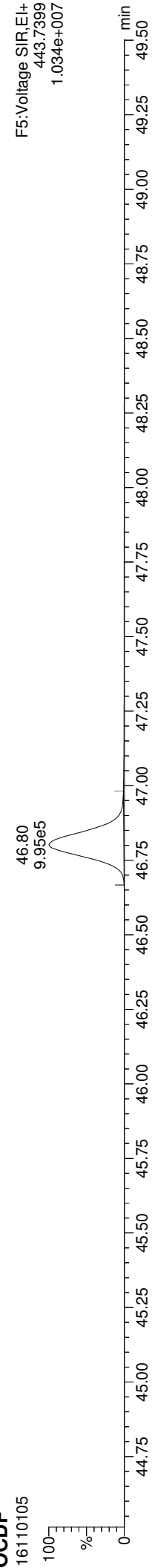
F1: Voltage SIR, EI+
327.8847
2.056e+007

OCDF



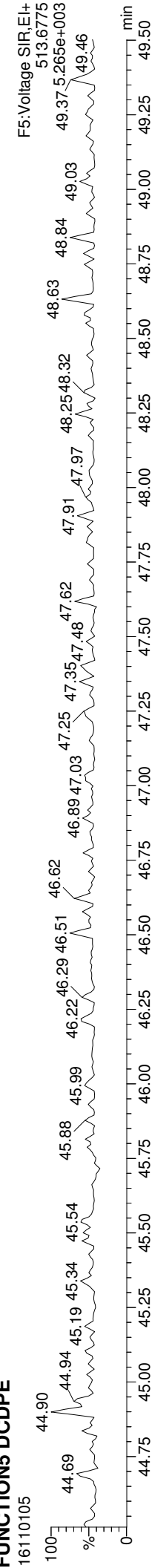
F5: Voltage SIR, EI+
441.7428
9.358e+006

OCDF



F5: Voltage SIR, EI+
443.7399
1.034e+007

FUNCTION5 DCDPE



F5: Voltage SIR, EI+
513.6775
49.37 5.265e+003



CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, Inc.

SDG: 16J0187

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Cleanup Batch: CEJ0268

Cleanup Type: Sulfuric Acid

Cleanup Method: EPA 3665A Sulfuric Acid Cleanup

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-REF-GP-1-161011	16J0187-06	16110113	10/29/2016	
PG-SMA-1-3-161011	16J0187-03	16110110	10/29/2016	
PG-SMA-1-2-161011	16J0187-02	16110109	10/29/2016	
PG-SMA-1-1-161011	16J0187-01	16110108	10/29/2016	
PG-REF-WS-1-161011	16J0187-05	16110112	10/29/2016	
PG-REF-PJ-1-161011	16J0187-04	16110111	10/29/2016	



CLEANUP BENCH SHEET

CEJ0268

Matrix: Tissue Cleanup using: HRCGMS - EPA 3665A Sulfuric Acid Cleanup

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16H0147-01	A	PG-T0-MUS-COC-160816	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16H0268-01	A	PG-T0B-MUS-COC-160829	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-01	A	PG-SMA-1-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-02	A	PG-SMA-1-2-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-03	A	PG-SMA-1-3-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-04	A	PG-REF-PJ-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-05	A	PG-REF-WS-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-06	A	PG-REF-GP-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
BEJ0775-BLK1	-	Blank	-	20	20	-	10/29/2016	NPL	
BEJ0775-BS1	-	LCS	-	20	20	-	10/29/2016	NPL	



CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, Inc.

SDG: 16J0187

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Cleanup Batch: CEJ0269

Cleanup Type: Florisil

Cleanup Method: EPA 3620B Florisil Cleanup

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-SMA-1-3-161011	16J0187-03	16110110	10/29/2016	
PG-REF-GP-1-161011	16J0187-06	16110113	10/29/2016	
PG-REF-PJ-1-161011	16J0187-04	16110111	10/29/2016	
PG-REF-WS-1-161011	16J0187-05	16110112	10/29/2016	
PG-SMA-1-2-161011	16J0187-02	16110109	10/29/2016	
PG-SMA-1-1-161011	16J0187-01	16110108	10/29/2016	



CLEANUP BENCH SHEET

CEJ0269

Matrix: Tissue Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16H0147-01	A	PG-T0-MUS-COC-160816	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16H0268-01	A	PG-T0B-MUS-COC-160829	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-01	A	PG-SMA-1-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-02	A	PG-SMA-1-2-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-03	A	PG-SMA-1-3-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-04	A	PG-REF-PJ-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-05	A	PG-REF-WS-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-06	A	PG-REF-GP-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
BEJ0775-BLK1	-	Blank	-	20	20	-	10/29/2016	NPL	
BEJ0775-BS1	-	LCS	-	20	20	-	10/29/2016	NPL	



CLEANUP BATCH SUMMARY

Laboratory: Analytical Resources, Inc.

SDG: 16J0187

Client: Anchor QEA, LLC

Project: Port Gamble Shellfish Monitoring

Cleanup Batch: CEJ0270

Cleanup Type: Silica Gel

Cleanup Method: EPA 3630C Silica Gel Cleanup

Analysis: EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARE	OBSERVATIONS
PG-SMA-1-3-161011	16J0187-03	16110110	10/29/2016	
PG-SMA-1-2-161011	16J0187-02	16110109	10/29/2016	
PG-SMA-1-1-161011	16J0187-01	16110108	10/29/2016	
PG-REF-WS-1-161011	16J0187-05	16110112	10/29/2016	
PG-REF-PJ-1-161011	16J0187-04	16110111	10/29/2016	
PG-REF-GP-1-161011	16J0187-06	16110113	10/29/2016	



CLEANUP BENCH SHEET

CEJ0270

Matrix: Tissue Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup

Lab Number	Sample Container	Sample Name	Extract Container	Initial (mL)	Final (mL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
16H0147-01	A	PG-T0-MUS-COC-160816	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16H0268-01	A	PG-T0B-MUS-COC-160829	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-01	A	PG-SMA-1-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-02	A	PG-SMA-1-2-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-03	A	PG-SMA-1-3-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-04	A	PG-REF-PJ-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-05	A	PG-REF-WS-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
16J0187-06	A	PG-REF-GP-1-161011	A 05	20	20	1613B Dioxin	10/29/2016	NPL	
BEJ0775-BLK1	-	Blank	-	20	20	-	10/29/2016	NPL	
BEJ0775-BS1	-	LCS	-	20	20	-	10/29/2016	NPL	



PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory: Analytical Resources, Inc. SDG: 16J0187
Client: Anchor QEA, LLC Project: Port Gamble Shellfish Monitoring
Batch: BEJ0775 Batch Matrix: Tissue Preparation: EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
PG-SMA-1-1-161011	16J0187-01	16110108	10/26/16 09:20	
PG-SMA-1-2-161011	16J0187-02	16110109	10/26/16 09:20	
PG-SMA-1-3-161011	16J0187-03	16110110	10/26/16 09:20	
PG-REF-PJ-1-161011	16J0187-04	16110111	10/26/16 09:20	
PG-REF-WS-1-161011	16J0187-05	16110112	10/26/16 09:20	
PG-REF-GP-1-161011	16J0187-06	16110113	10/26/16 09:20	
Blank	BEJ0775-BLK1	16110104	10/26/16 09:20	
LCS	BEJ0775-BS1	16110105	10/26/16 09:20	



Analytical Resources, Incorporated
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A & 1613B

Batch: BEJ0775

Tissue Samples

ARI Work Orders: 16H0147, 16H0268, 16J0187

Matrix (circle one)	Soil	Sediment	Oil	Tissue
Extraction Method	Start Date/Time: 10/26/16 0920	End Date/Time: 10/27/16 0605		
Soxhlet SepF Shake out				

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Balance		24650344	NL	10/26/16
Purified Sand				
Toluene		E003116	NL	10/26/16
Hexane		E004227	NL	10/27/16
CH2Cl2		E004228	NL	10/29/16
H2SO4		E002416	NL	10/28/16
Na2SO4		E005298	NL	10/26/16
Glasswool		E001046	NL	10/28/16
(98:2) Hex/DCM		E005071	NL	10/29/16
Basic Silica		E002485	NL	10/29/16
Acid Silica		E005289	NL	10/29/16
0% Silica		E003001	NL	10/26/16
Activated Florisil		E001666	NL	10/29/16
Nonane		E000869	NL	10/29/16
Other (Cov'n oil)		E005442	NL	10/26/16

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date
Recovery Standard	1.0 mL	E005003	2.4 ng/mL	3/29/17
OPR	20 uL	F004560	10/50/100 ng/mL	3/20/17
QLS Standard	10 uL		0.5/2.5/5 ng/mL	
Clean-up Standard	1.0 mL	E005591	0.8 ng/mL	4/16/17

Lab Number & Container	Sample Name	Sample Vol (mL)	Sample Vol (Target)/Actual	RotoVap	Water Trap Vol (mL)	Final Vol (uL)
16H0147-01 A	PG-TBAIUS-COC-160	10.00	10.02	45 °C	8.1	20
16H0268-01 A	PG-TBAIUS-COC-1	10.00	10.05	45 °C	8.0	20
16J0187-01 A	PG-SMA-1-1-161011	10.00	10.02	45 °C	8.4	20
16J0187-02 A	PG-SMA-1-2-161011	10.00	10.04	45 °C	8.0	20
16J0187-03 A	PG-SMA-1-3-161011	10.00	10.04	45 °C	8.6	20
16J0187-04 A	PG-REF-PLI-161011	10.00	10.03	45 °C	8.5	20
16J0187-05 A	PG-REF-NIS-1-161011	10.00	10.02	45 °C	8.4	20
16J0187-06 A	PG-REF-GR-1-161011	10.00	10.02	45 °C	8.4	20
Prep Analyst / Date:						
Lab Number	Sample Name	Sample Vol (mL) <td>Sample Vol (Target)/Actual <td>RotoVap <td>Water Trap Vol (mL) <td>Final Vol (uL) </td></td></td></td>	Sample Vol (Target)/Actual <td>RotoVap <td>Water Trap Vol (mL) <td>Final Vol (uL) </td></td></td>	RotoVap <td>Water Trap Vol (mL) <td>Final Vol (uL) </td></td>	Water Trap Vol (mL) <td>Final Vol (uL) </td>	Final Vol (uL)
BEJ0775-BLK1	Blank	10.00		45 °C	0.1	20
BEJ0775-BS1	LCS	10.00		45 °C	0.1	20
Prep Analyst / Date:						

Analyst	Witness	Date
NL	MX2	10/26/16
NL	MX2	10/26/16
NL	MX2	10/29/16

Analyst / Date:	Verify Client ID
NL 10/26/16	Acid Clean
NL 10/28/16	0/N
NL 10/29/16	Silica-Florisil Clean

Supervisor Review By: Date: 10/31/16



ARI Job No.: 16H0147, 16H0268, 16J0187

Client ID: _____

Batch ID: BEJ0775

Parameter:

Client Project:

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)=	
<input type="checkbox"/> Standing Water Decanted (Not shared)=	
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input type="checkbox"/> Rocks (%+size)?	
<input type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Received in 32oz jar(s)=Homogenized in Pyrex dish=	
<input type="checkbox"/> Other (Details)=	
Aqueous:	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Received in 1.0L Bottle(s)=No Bottle Rinse=	
<input checked="" type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions).	
16H0147 - BIK, BS, 01 & 16H0268 - 01 = After water wash samples appear to have emulsion, samples centrifuged.	ML 10/28/16
BEJ0775 - BIK1 - while pour sample back into RB flask after acid wash - accidentally splash out, lost ~ 5% of solvent.	ML 10/28/16
<input type="checkbox"/> Share Samples Y/N All extracts taken through double acid columns	Cleaned ML 10/29/16
<input type="checkbox"/> Multiple Jars Y/N	
<input type="checkbox"/> Sample Pre-Screens indicate analyte activity=	
<input type="checkbox"/> Sample weights/volumes reduced based on Pre-Screen=	



INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, Inc.	SDG:	16J0187
Client:	Anchor QEA, LLC	Project:	Port Gamble Shellfish Monitoring
Calibration:	ZE00016	Instrument:	AUTOSPEC01
Calibration Date:	05/10/2016 15:20	Column (1):	RTX-Dioxin2

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.9347915	3.6			RSD ()	
2,3,7,8-TCDD	1.133965	2.2			RSD ()	
1,2,3,7,8-PeCDF	0.9519161	3.5			RSD ()	
2,3,4,7,8-PeCDF	0.9629117	3.4			RSD ()	
1,2,3,7,8-PeCDD	0.9753974	3.6			RSD ()	
1,2,3,4,7,8-HxCDF	1.136547	1.2			RSD ()	
1,2,3,6,7,8-HxCDF	1.098742	2.3			RSD ()	
2,3,4,6,7,8-HxCDF	1.163504	3.0			RSD ()	
1,2,3,7,8,9-HxCDF	1.100821	2.8			RSD ()	
1,2,3,4,7,8-HxCDD	1.031167	2.6			RSD ()	
1,2,3,6,7,8-HxCDD	0.9714371	2.3			RSD ()	
1,2,3,7,8,9-HxCDD	0.9950452	3.8			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.302789	2.4			RSD ()	
1,2,3,4,7,8,9-HpCDF	1.317361	3.7			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.028016	2.0			RSD ()	
OCDF	1.165807	4.6			RSD ()	
OCDD	1.107021	18.6			RSD ()	
37C14-2,3,7,8-TCDD	1.066558	7.0			RSD ()	



Dioxin Curve 5/10/16

HR-GC/MS Analyst Notes / Data Review Checklist

ELEMENT/NWA: _____

Client ID: _____

Element Calibration Code: ZE00016

METHOD: 1613B (Dioxins) 8290A (Dioxins)

Instrument: **AutoSpec01**

Analysis Start Date: HRSM01.2
5/10/16

Resolution Check > 10,000ppm REVIEW 1/REVIEW 2
Y/N/ _____

Signal / Noise ≥ 3.0 ? REVIEW 1/REVIEW 2
Y/N/ _____

TCDD /TCDF Resolution $\leq 25\%$ Y/N/ _____

Extraction STD Limits Met? Y/N/ _____

PCDF Windows Verified Y/N/ _____

Cleanup STD Limits Met? Y/N/ _____

ICV/CCV %D limits met? Y/N/ _____

Method Blank in Control? Y/N/ _____

ICV/CCV Ratios limits met? Y/N/ _____

OPR Recovery Limits Met? Y/N/ _____

ICV/CCV RRT limits met? Y/N/ _____

Values Exceeding Curve Range? Y/N/ _____

Manual Integrations? Y(N) _____

Samples Diluted? Y/N/ _____

VDP Completed? NA Y/N/ _____

Duplicate Sample RPD $\leq 25\%$? NA/ _____

EPA Case # NA/ _____

Technical Review? / _____

Detail problems, corrective actions and/or other pertinent information below:

- TCDD/TCDF are 5 point curves : CSI - CSS
- All others are 6 points = CSL - CSS
- All cpuds $< 20\%$ RSD. All avg.
- Seq. SER0076

(Review 1)Analyst: Phepler Date: 5/12/16

(Review 2)Peer: _____ Date: _____

(Final Review)Reviewer: _____ Date: _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.: GC=CN10921030, MS=P764

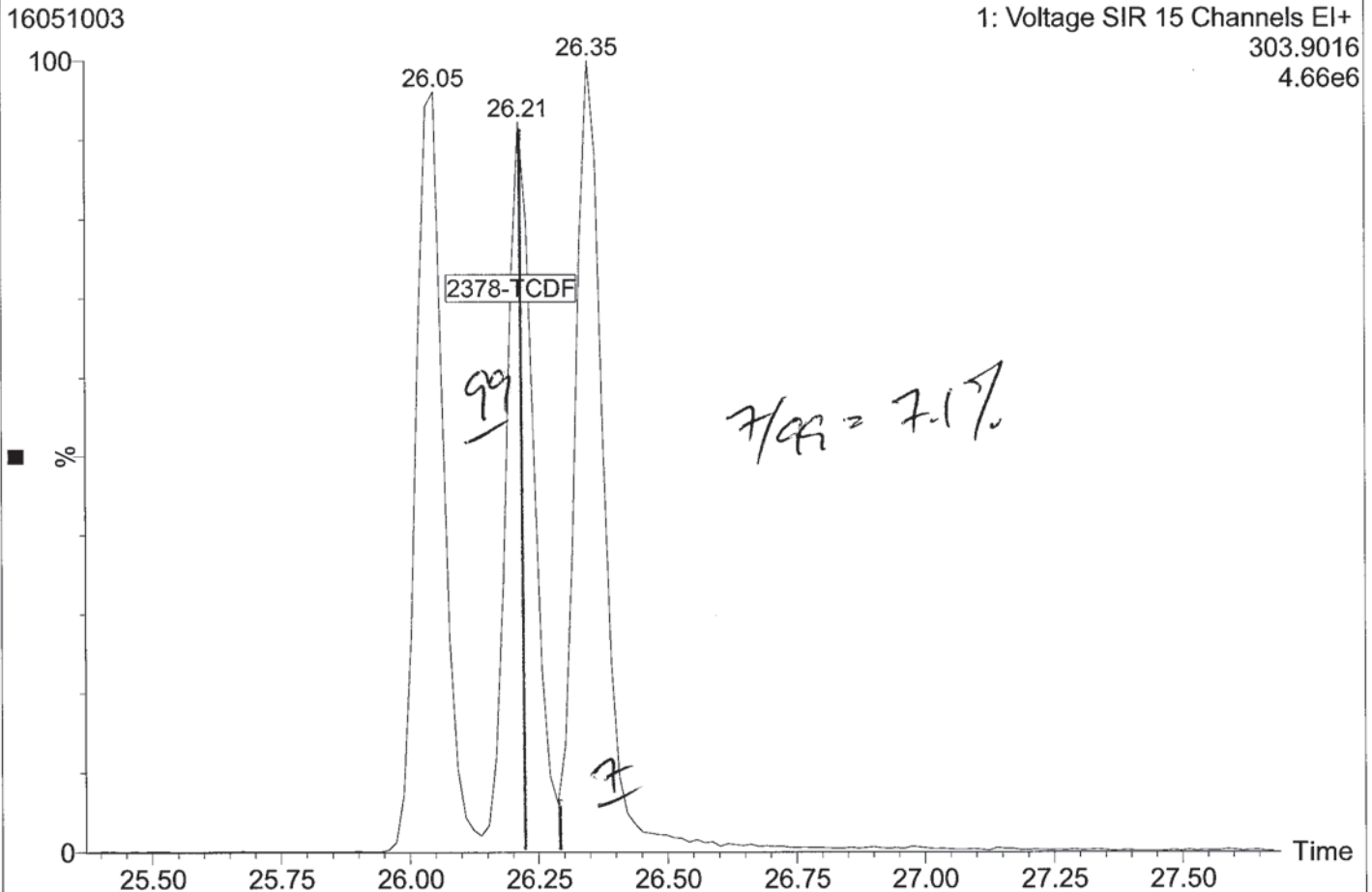
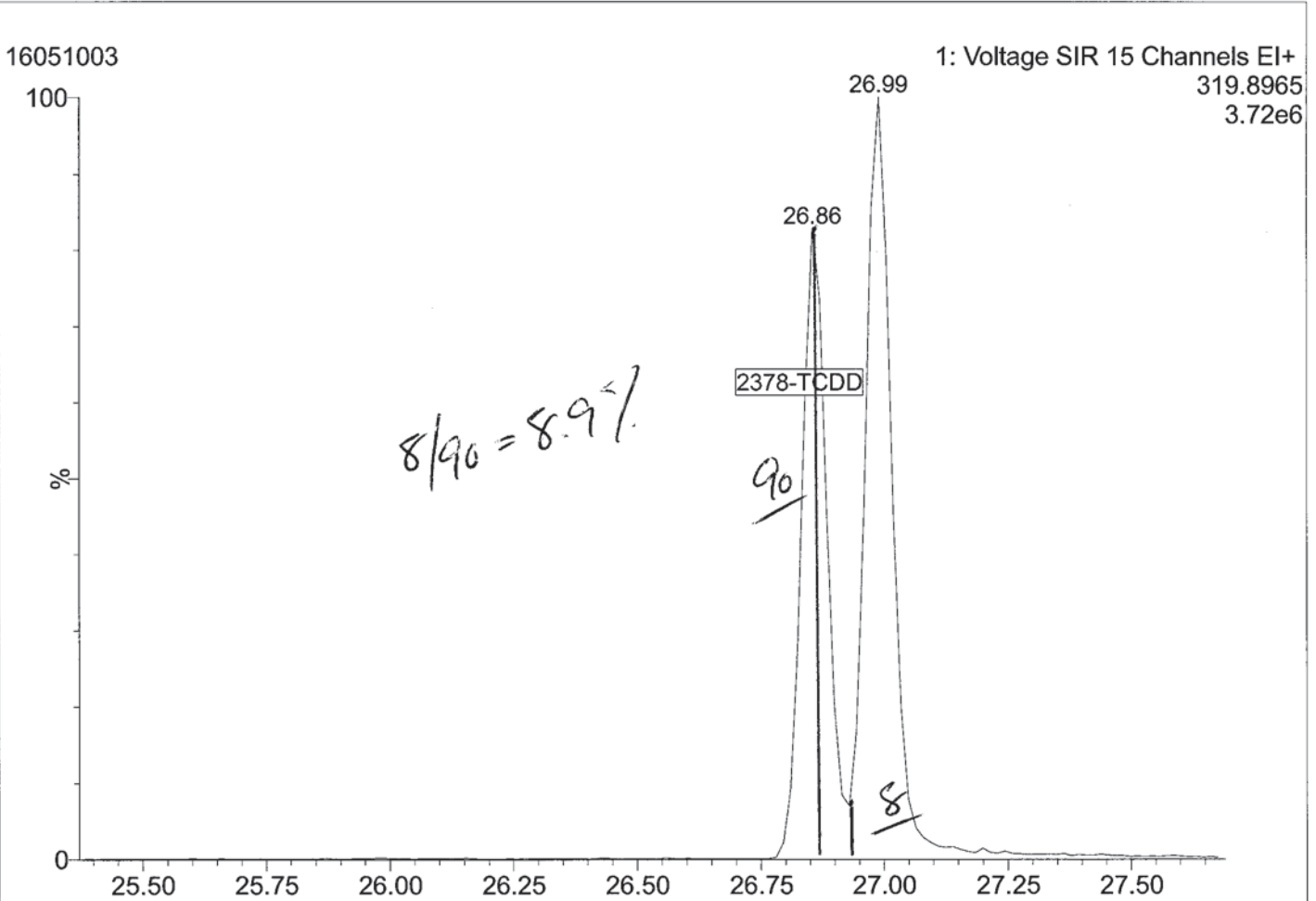
Date: 5/10/16 Analysis: Dioxins Analyst: Mu
 GC Program: 8290 D Column No: E764 Column Type: MTX Dioxin 2
 Inj Vol: 1ul Instrument Tune (IPR): May 04 16 1-5 Detector Voltage: 340
 Resolution Check Files: 10:38, 20:54 Curve Date: 5/10/16

IS/SS	Ical/Ccal	LCS/ICV
	D623 E2001	
	D621 B002	C2712
	D620 C4244 Mu 5/12/16	
	D622 E114b	

#	Acq.Date	Acq.Time	File	ID	Comments
1	10-May-16	10:52:12	16051002	CS3WD	
2	10-May-16	11:43:55	16051003	ISC01A	
3	10-May-16	13:36:21	16051004	CS1 CS1AA	
4	10-May-16	14:27:42	16051005	CS1 CS2AA	
5	10-May-16	15:30:50	16051006	CS2 CS3AA	
6	10-May-16	16:22:15	16051007	CS3 CS4AA	
7	10-May-16	17:15:41	16051008	CS4 CS5AA	
8	10-May-16	18:09:09	16051009	CS5 CS6AA	
9	10-May-16	19:02:32	16051010	ICV	
10	10-May-16	19:56:06	16051011	ISC02	06/30/16 AD

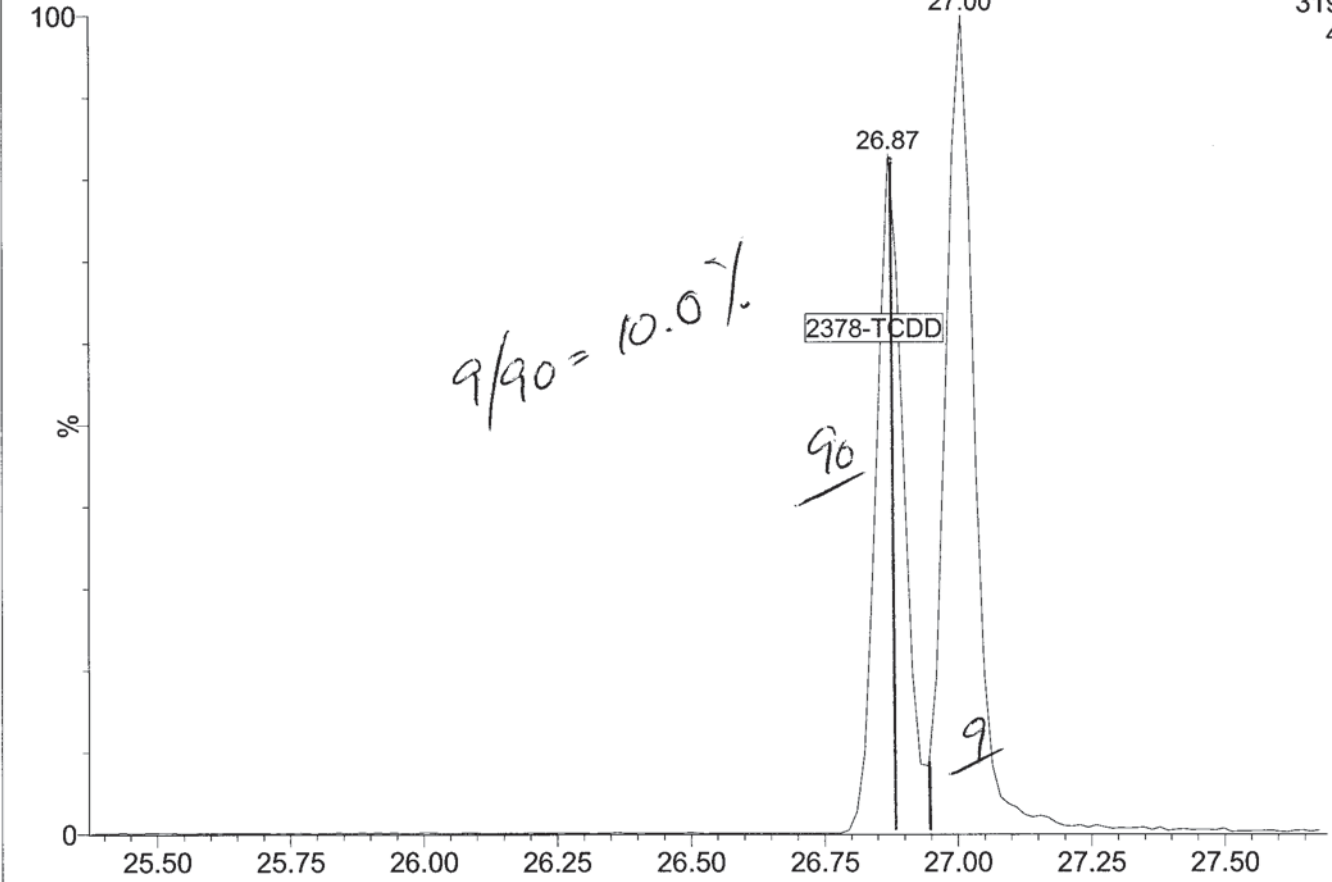
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Every line must contain information or be lined out. Make all entries legible.
 Start a new page for each QC period. Document All Maintenance Tasks In Element LIMS



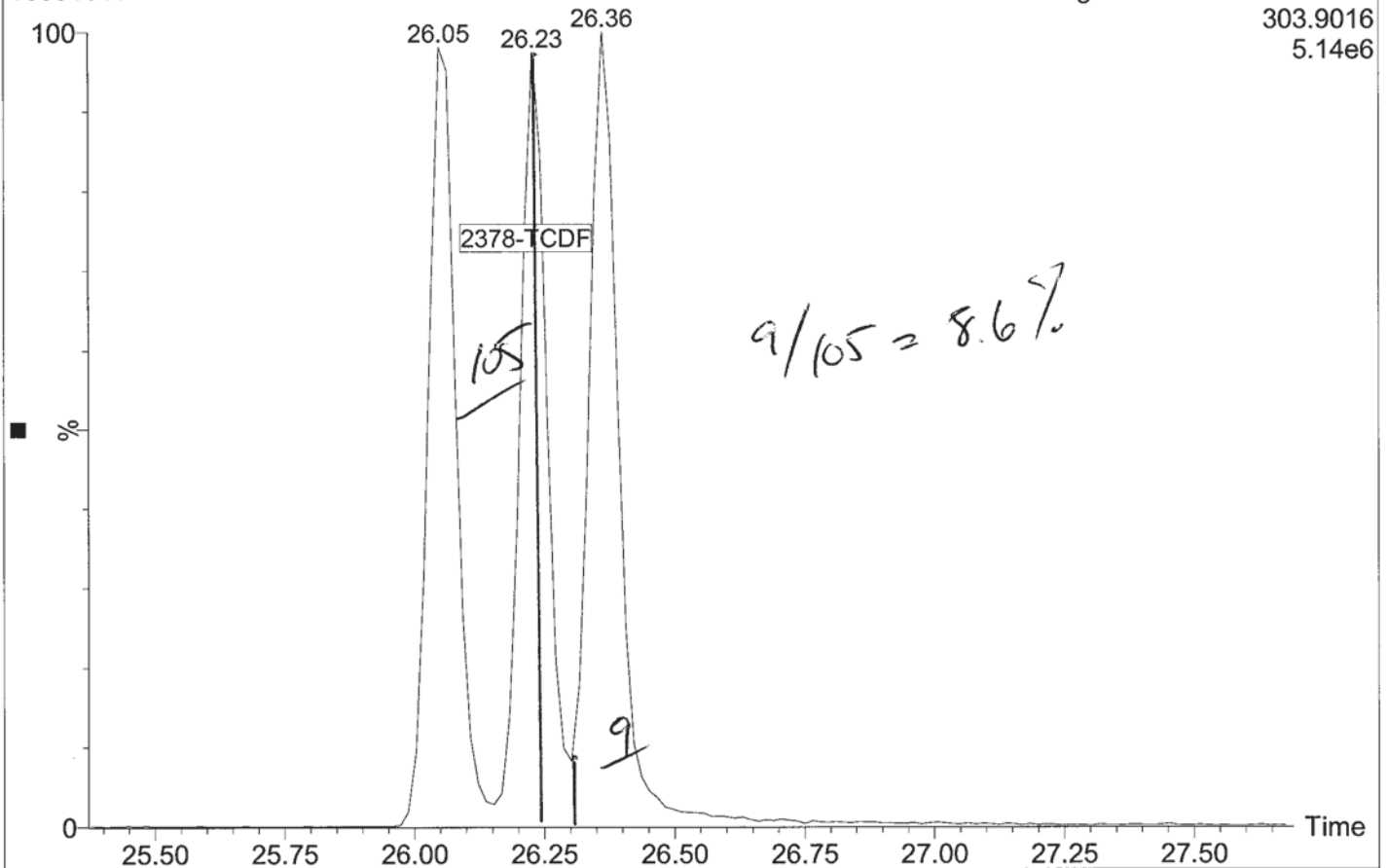
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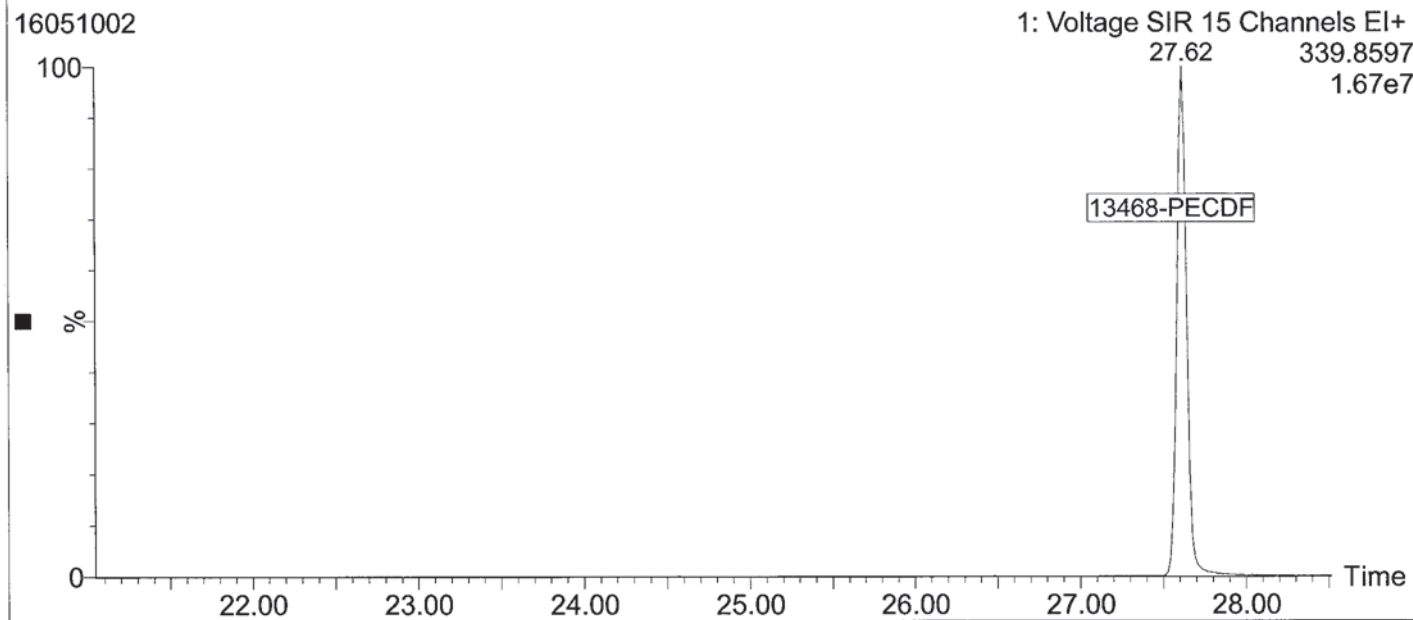
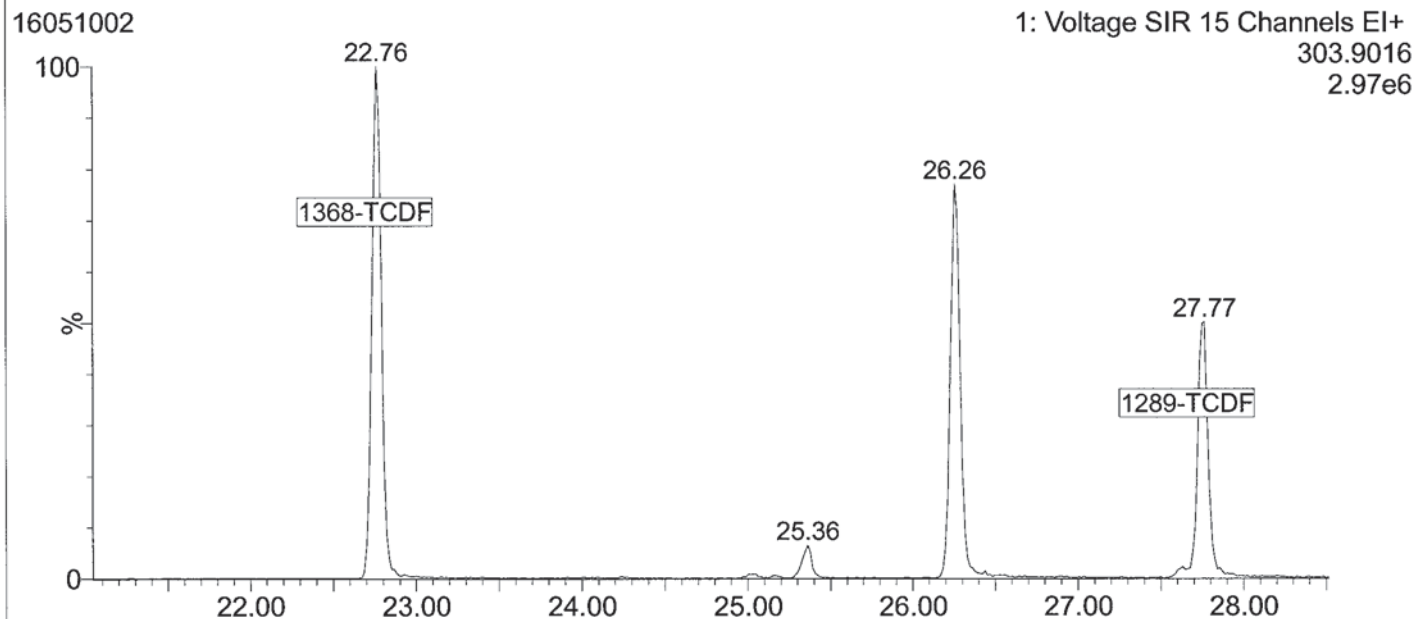
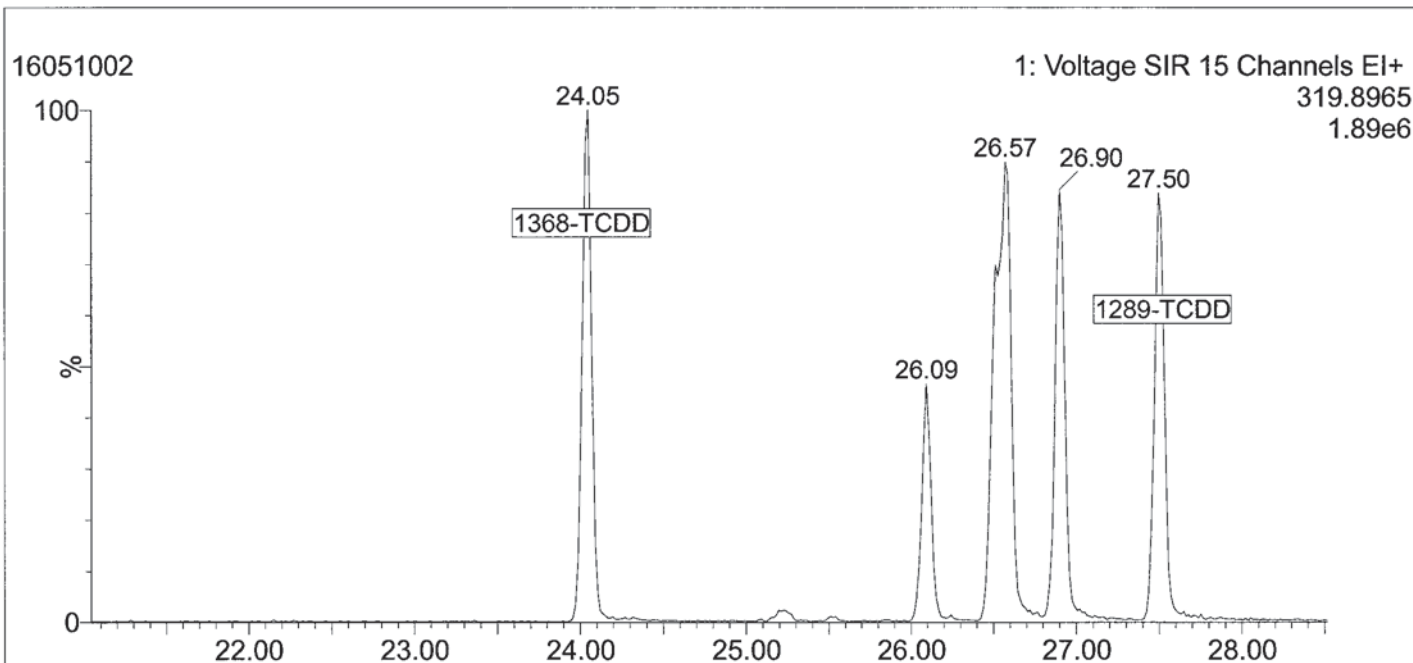
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319.8965
4.31e6



16051011

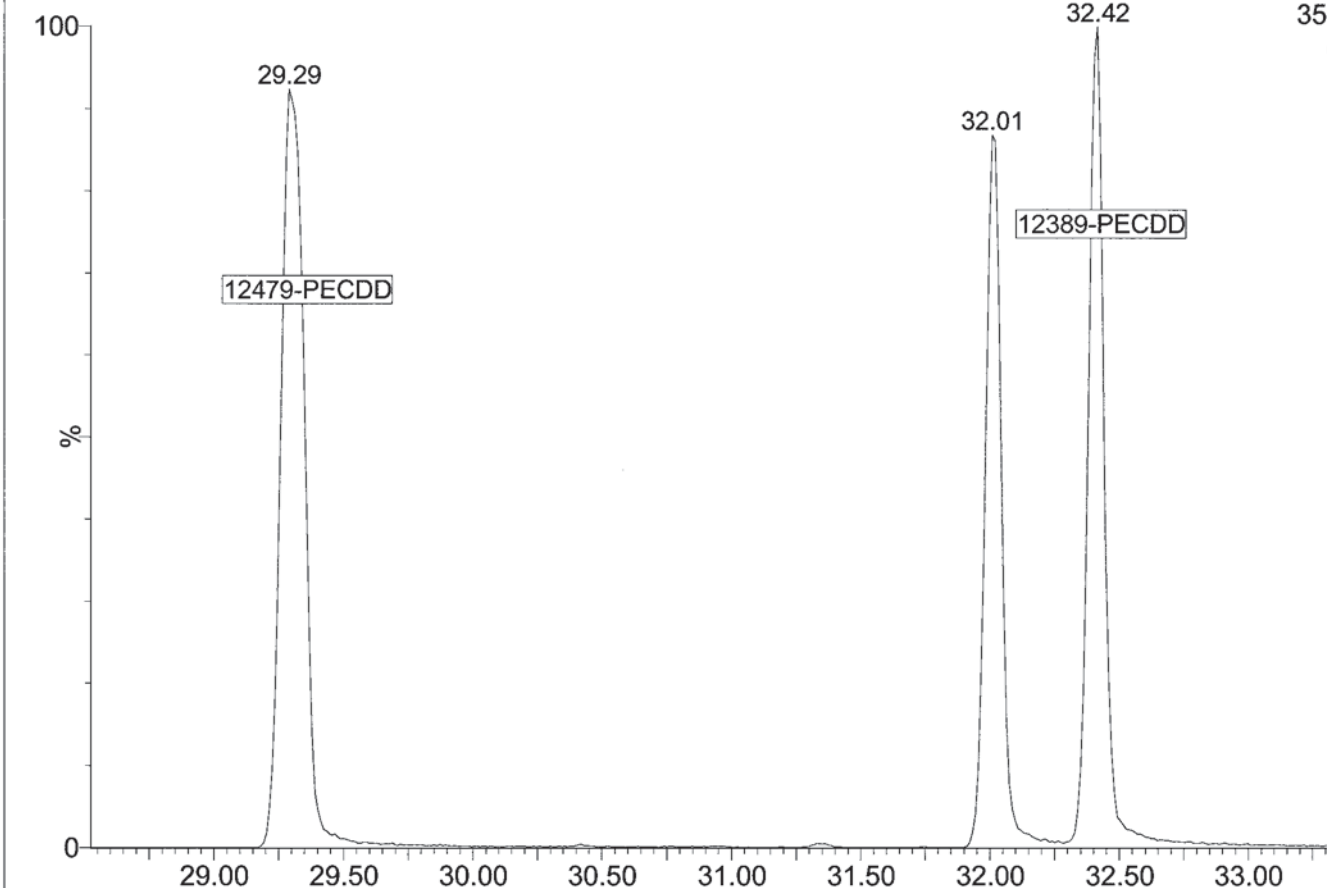
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303.9016
5.14e6





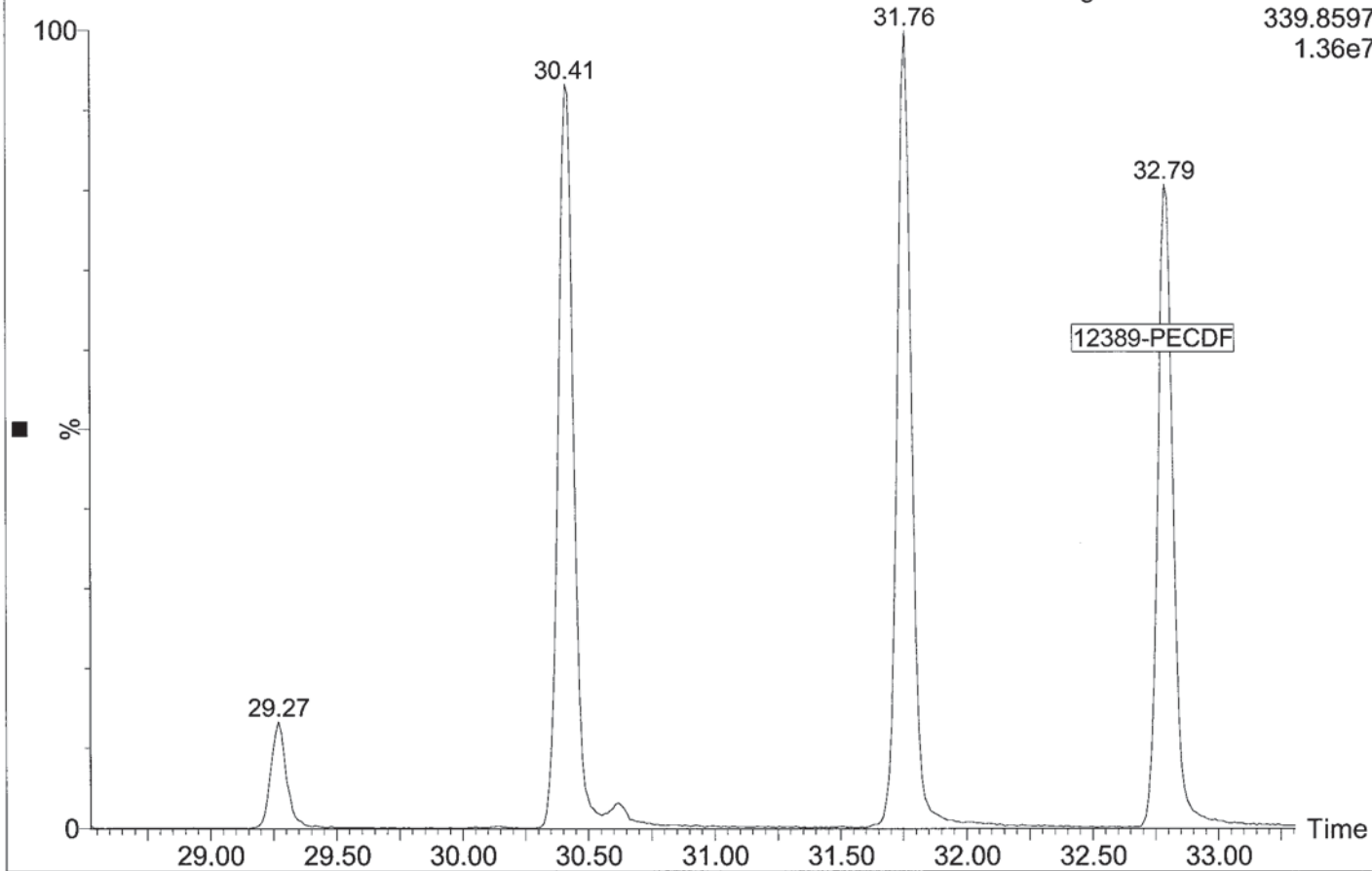
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2: Voltage SIR 11 Channels EI+
355.8546
8.92e6



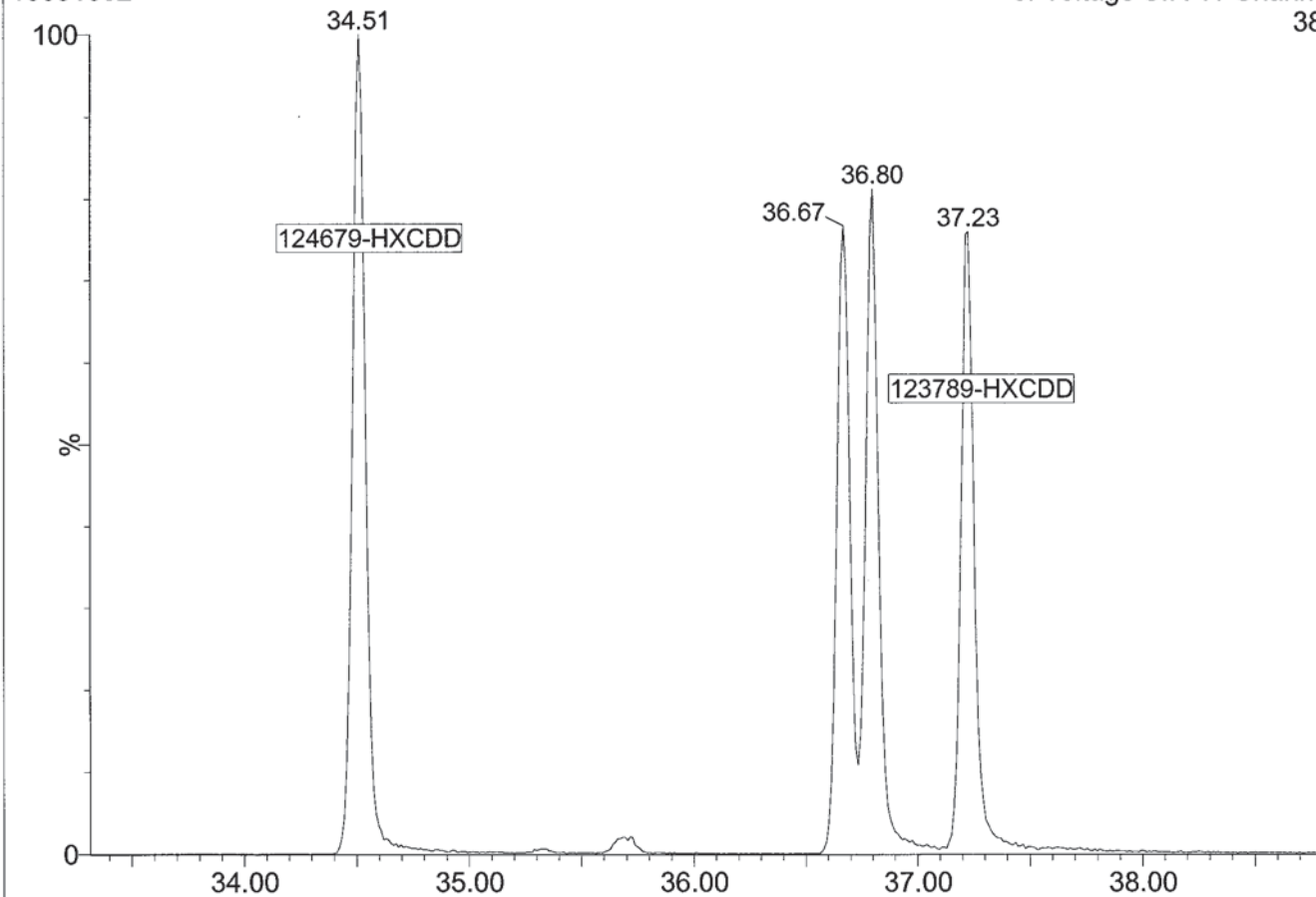
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339.8597
1.36e7



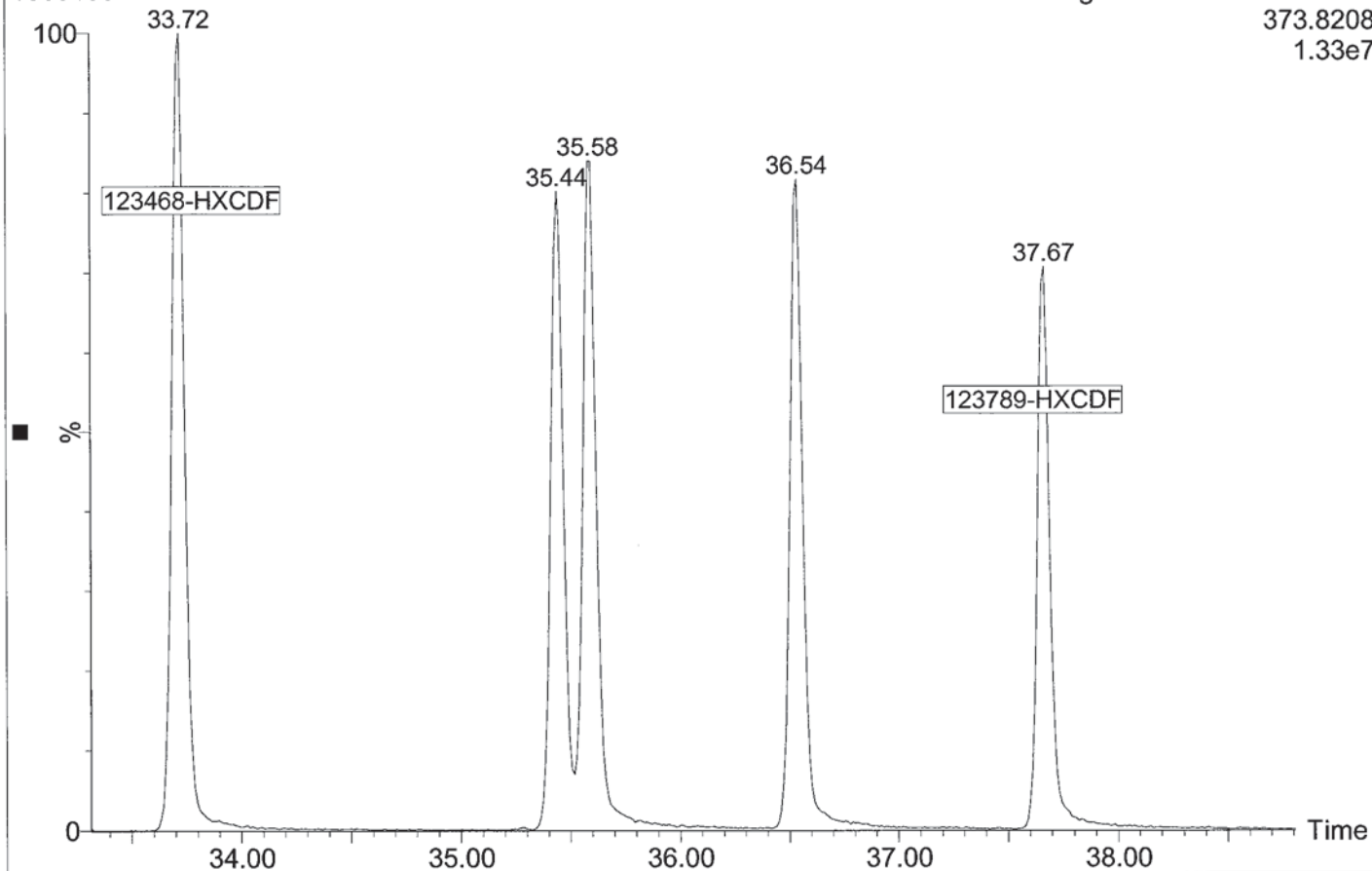
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389.8157
9.68e6



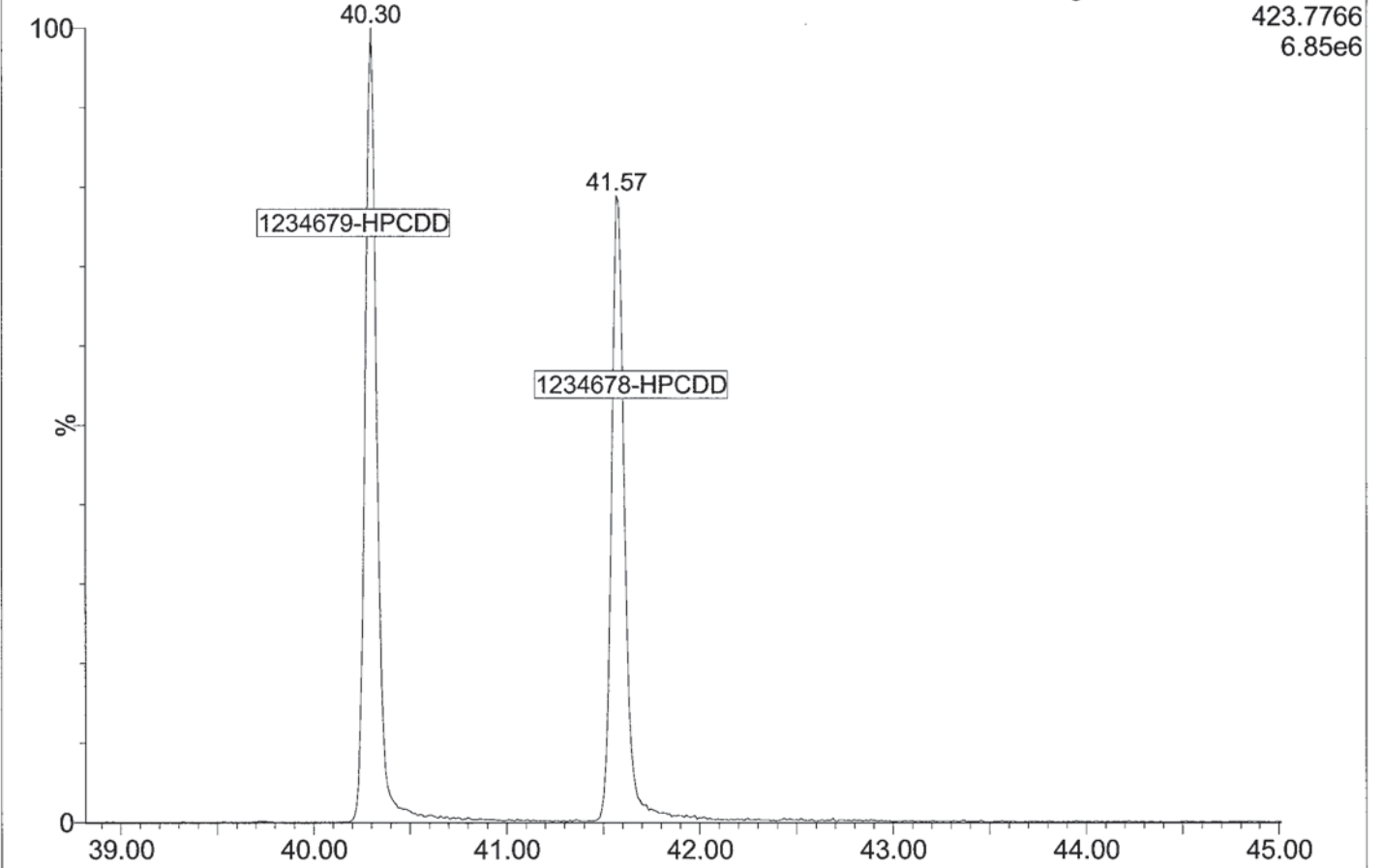
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1.33e7



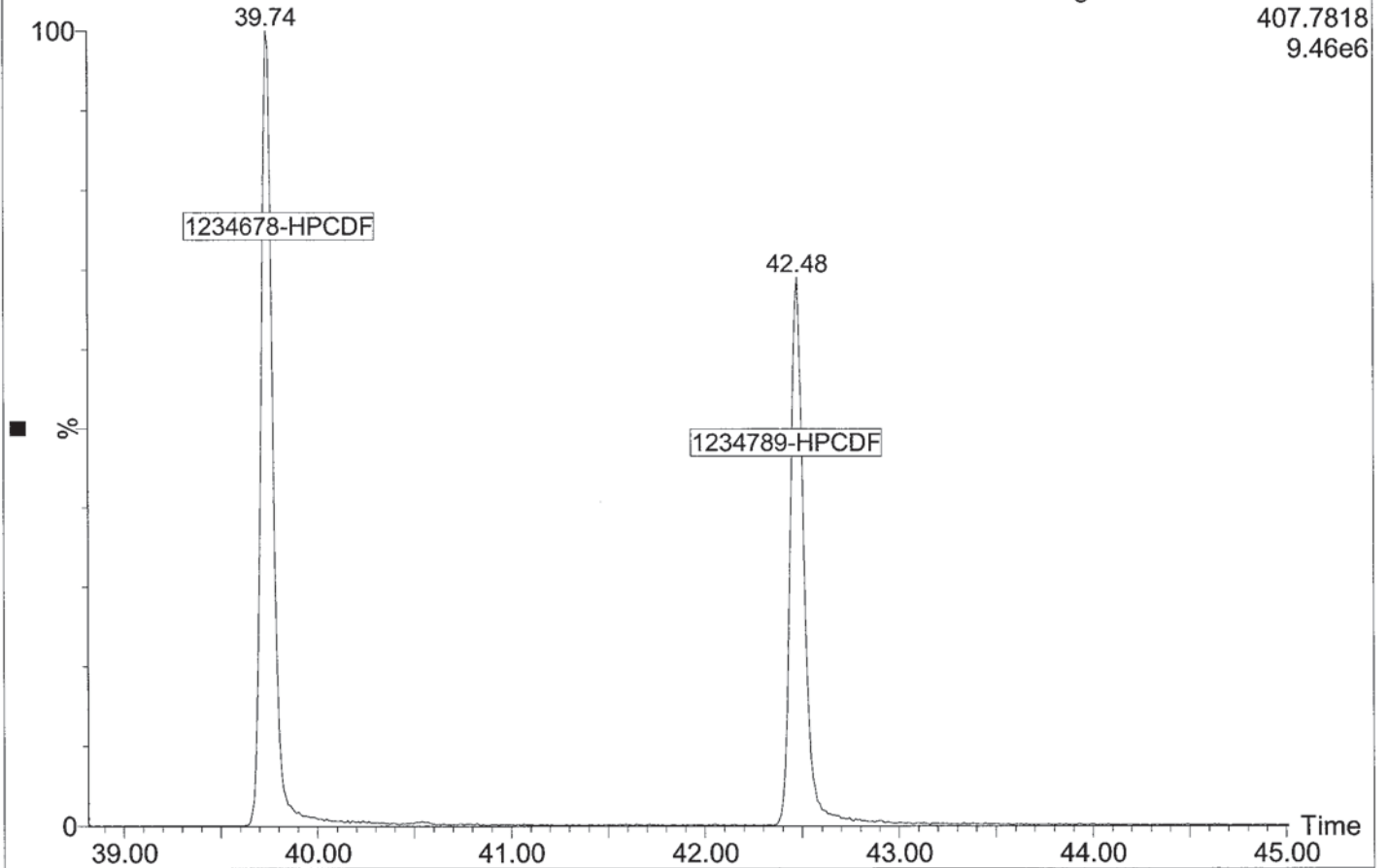
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6.85e6



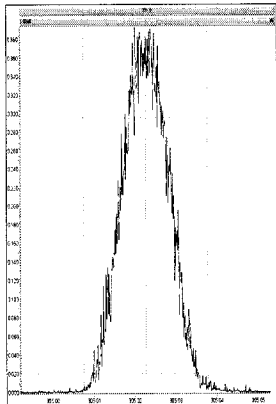
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407.7818
9.46e6

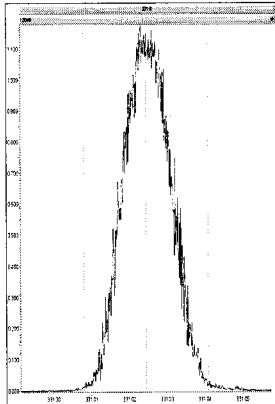


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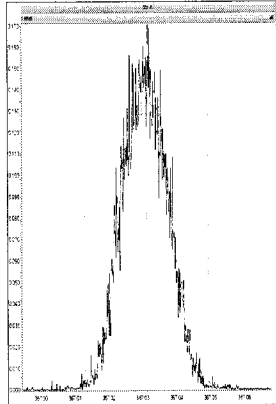
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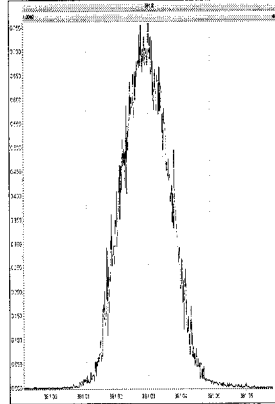
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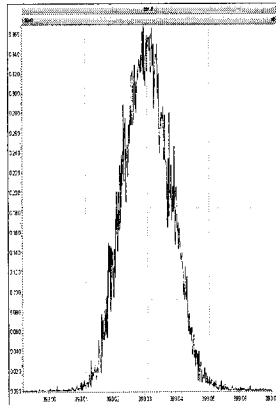
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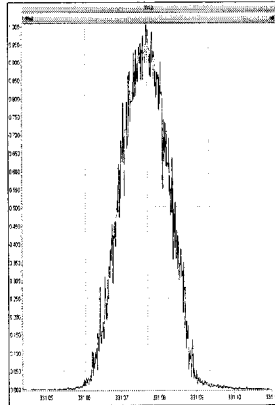
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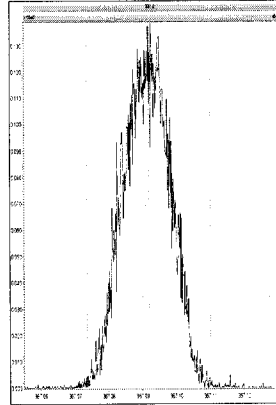
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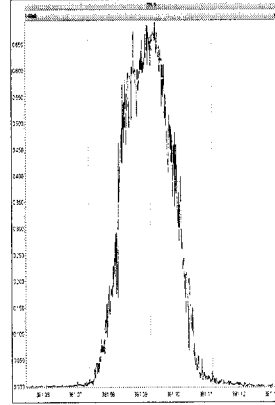
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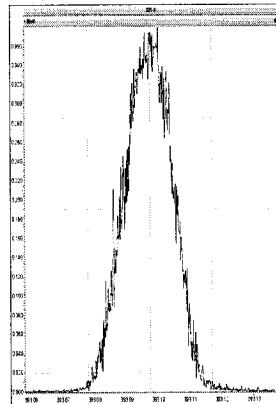
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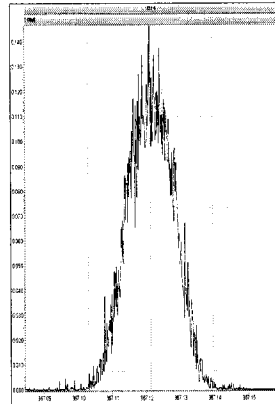
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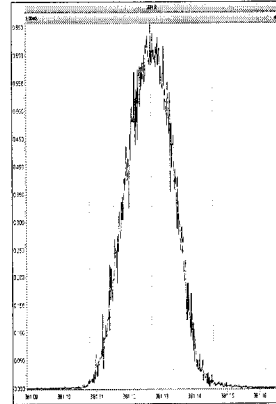
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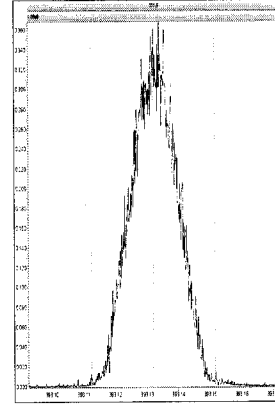
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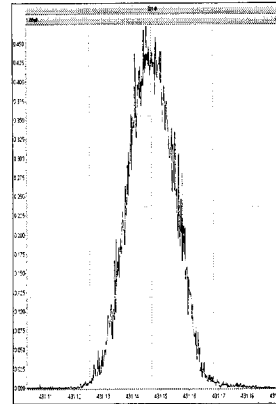
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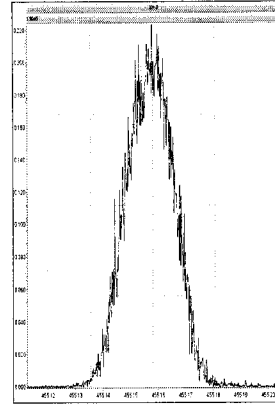
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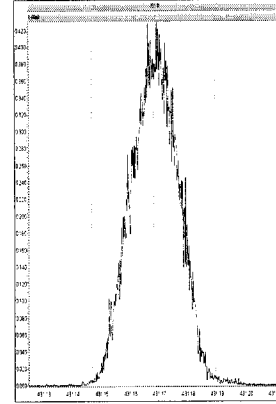
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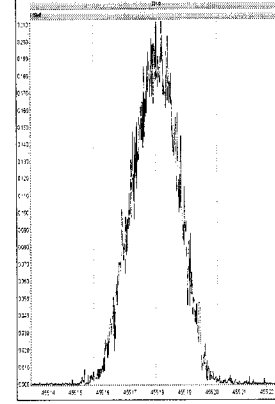
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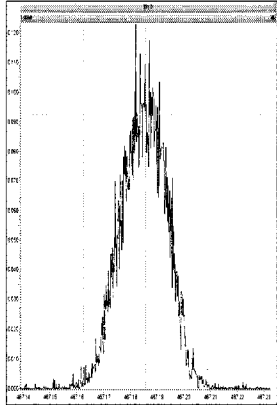


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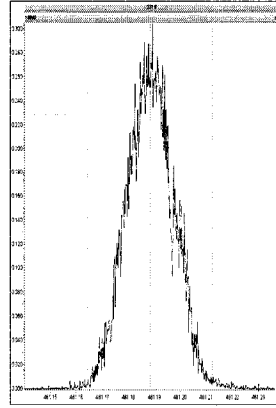


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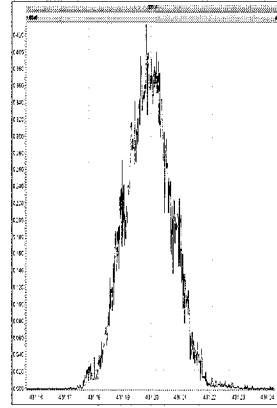
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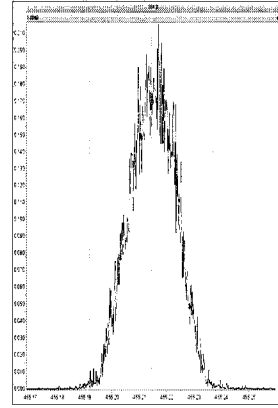
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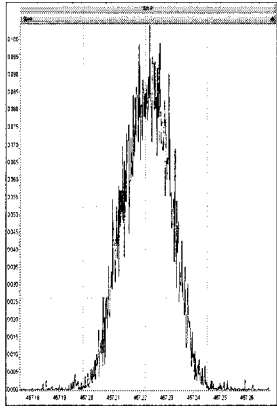
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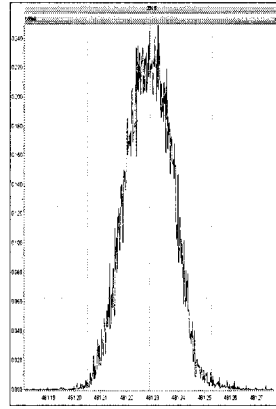
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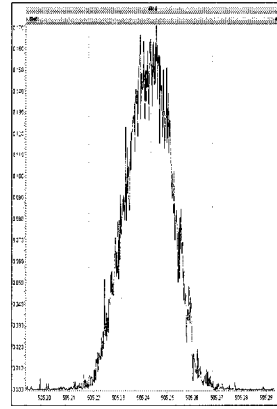
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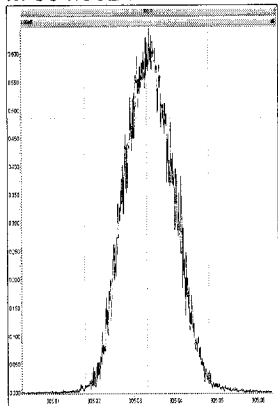


M 504.9696 R 12691

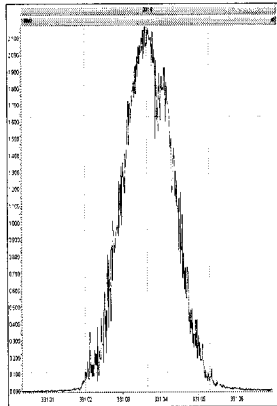


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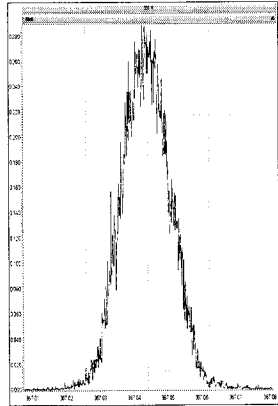
M 304.9824 R 12019



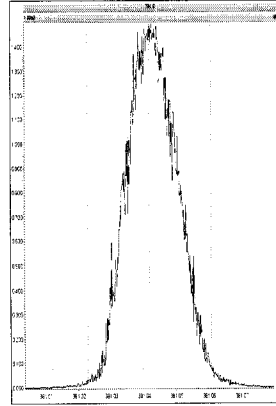
M 330.9792 R 12053



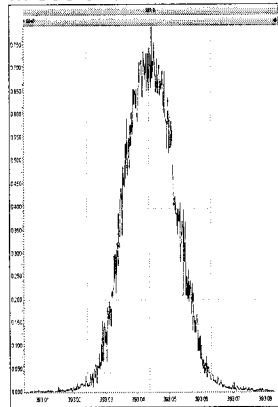
M 366.9792 R 11993



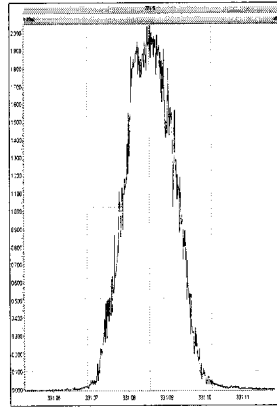
M 380.9760 R 11580



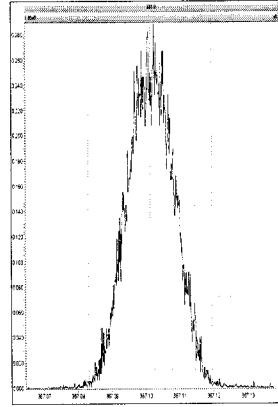
M 392.9760 R 11577



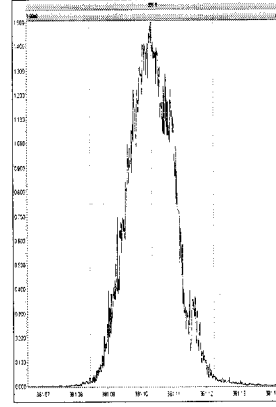
M 330.9792 R 12284



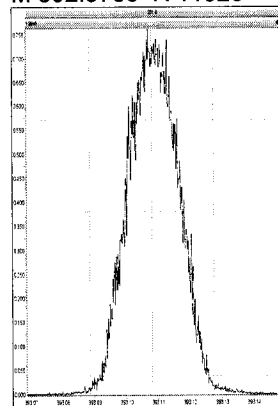
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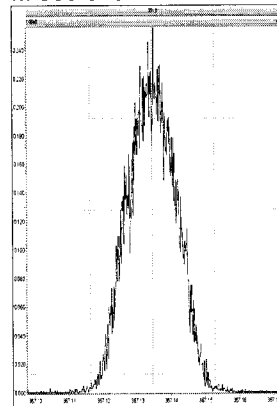
M 380.9760 R 12087



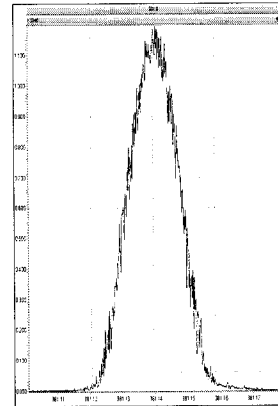
M 392.9760 R 11820



M 366.9792 R 12510



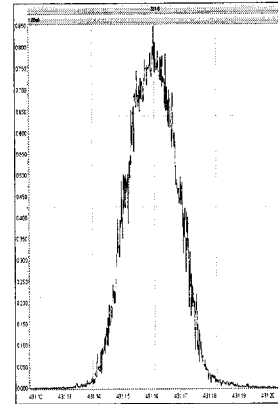
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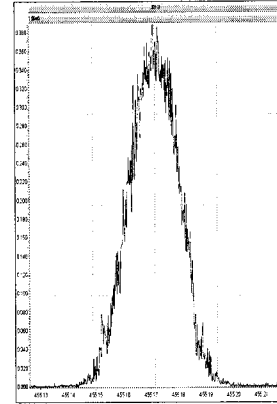
M 392.9760 R 12317



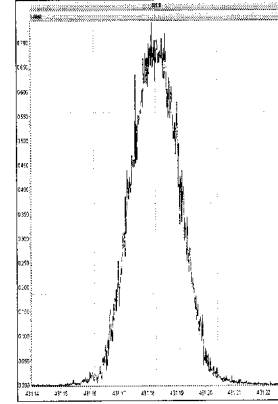
M 430.9728 R 11792



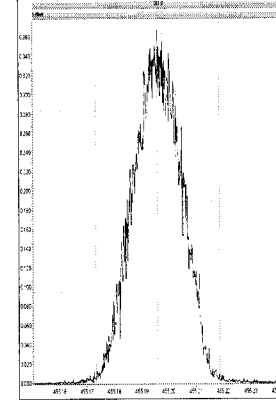
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M 430.9728 R 12077

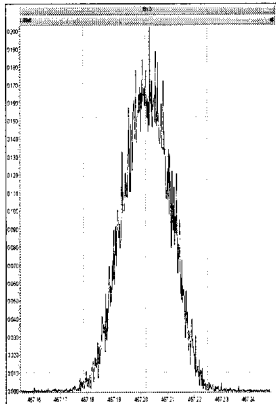


M 454.9728 R 11794

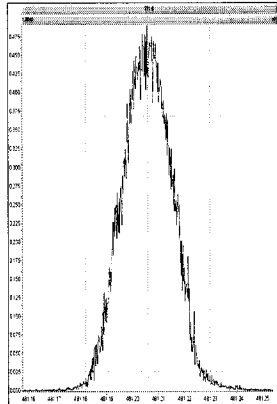


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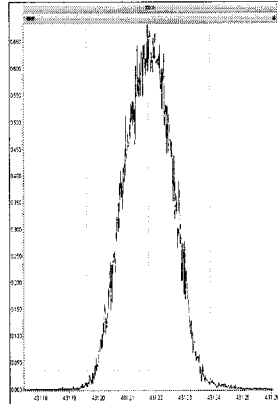
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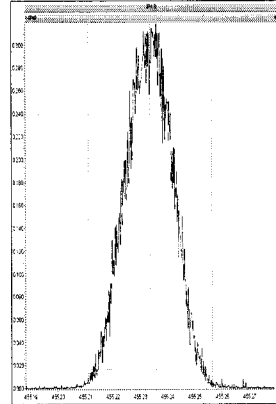
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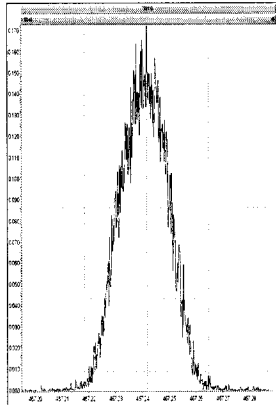
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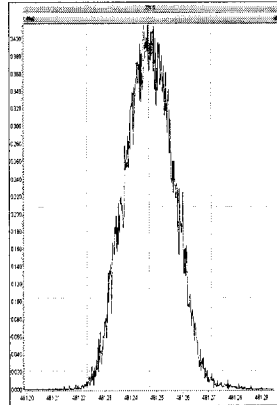
M 454.9728 R 12354



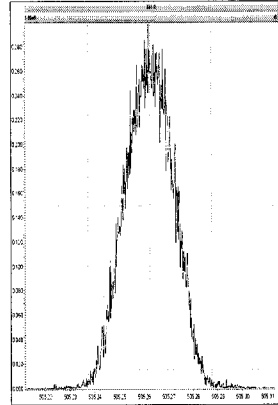
M 466.9728 R 12019



M 480.9696 R 11857



M 504.9696 R 12051



Quantify Sample Summary Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\1605101C.qld
 Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
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Method: P:\DIOXIN8290.pro\MethDB\DiDioxin1604143SN.mdb 14 Apr 2016 14:40:15
 Calibration: P:\DIOXIN8290.PRO\CurveDB\1605101CAL.cdb 11 May 2016 09:28:40

CSIAA 4/3/16

ID: 6SE, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	SN	EMPC?	EMPC	pg
2378-TCDF					0.935		0.770	1158	1257						
12378-PeCDF	30.377	1.000	9.40e3	6.05e3	0.952	1.554	1.550	1150	1400	1.36e5	8.43e4	118.5	NO	0.498	0.498
23478-PeCDF	31.725	1.001	8.50e3	5.93e3	0.963	1.433	1.550	1150	1400	1.29e5	8.06e4	111.8	NO	0.469	0.469
123478-HxCDF	35.408	1.000	7.47e3	6.36e3	1.137	1.175	1.240	1179	964	1.17e5	9.25e4	99.2	NO	0.491	0.491
234678-HxCDF	36.504	1.001	7.88e3	6.35e3	1.164	1.241	1.240	1179	964	1.16e5	8.25e4	98.0	NO	0.491	0.491
123678-HxCDF	35.550	1.000	8.80e3	6.46e3	1.099	1.363	1.240	1179	964	1.22e5	8.29e4	103.4	NO	0.484	0.484
123789-HxCDF	37.633	1.000	6.90e3	5.32e3	1.101	1.297	1.240	1179	964	1.01e5	8.85e4	85.9	NO	0.511	0.511
1234678-HpCDF	39.715	1.000	6.67e3	7.22e3	1.303	0.924	1.050	665	709	9.07e4	9.69e4	136.3	NO	0.484	0.484
1234789-HpCDF	42.445	1.000	5.57e3	5.41e3	1.317	1.031	1.050	665	709	6.54e4	6.71e4	98.2	NO	0.489	0.489
OCDF	47.818	1.006	7.95e3	9.45e3	1.166	0.842	0.890	827	869	8.30e4	9.35e4	100.3	NO	0.940	0.940
2378-TCDD					1.134		0.770	801	851						
12378-PeCDD	31.966	1.000	5.27e3	3.65e3	0.975	1.445	1.550	992	530	6.70e4	4.68e4	67.5	NO	0.473	0.473
123478-HxCDD	36.636	1.000	5.65e3	4.29e3	1.031	1.318	1.240	1131	992	8.35e4	6.23e4	73.8	NO	0.506	0.506
123678-HxCDD	36.767	1.001	5.54e3	4.15e3	0.971	1.334	1.240	1131	992	7.63e4	6.16e4	67.5	NO	0.480	0.480
123789-HxCDD	37.194	1.012	5.41e3	3.81e3	0.947	1.421	1.240	1131	992	8.16e4	5.76e4	72.2	NO	0.489	0.489
1234678-HpCDD	41.557	1.000	4.34e3	4.24e3	1.028	1.023	1.050	668	1442	5.65e4	5.13e4	84.6	NO	0.485	0.485
OCDD	47.549	1.000	7.89e3	8.56e3	1.107	0.922	0.890	708	454	8.02e4	7.96e4	113.3	NO	0.936	0.936
13C-2378-TCDF	26.198	1.006	1.80e6	2.29e6	1.567	0.783	0.770	7362	4176	2.43e7	3.10e7	3307.1	NO	102.580	102.580
13C-12378-PeCDF	30.366	1.166	2.00e6	1.26e6	1.274	1.584	1.550	6743	4292	2.70e7	1.71e7	3999.1	NO	100.515	100.515
13C-23478-PeCDF	31.703	1.218	1.96e6	1.24e6	1.235	1.582	1.550	6743	4292	2.69e7	1.72e7	3987.2	NO	101.689	101.689
13C-123478-HxCDF	35.397	0.952	8.48e5	1.63e6	1.381	0.521	0.510	6454	7352	1.18e7	2.28e7	1831.1	NO	98.726	98.726
13C-123678-HxCDF	35.540	0.956	9.42e5	1.93e6	1.569	0.489	0.510	6454	7352	1.29e7	2.49e7	1996.1	NO	100.638	100.638
13C-234678-HxCDF	36.482	0.981	8.63e5	1.63e6	1.345	0.530	0.510	6454	7352	1.17e7	2.25e7	1813.3	NO	102.060	102.060
13C-123789-HxCDF	37.622	1.012	7.45e5	1.43e6	1.183	0.522	0.510	6454	7352	1.08e7	2.08e7	1678.3	NO	101.203	101.203
13C-1234678-HpCDF	39.704	1.068	6.81e5	1.52e6	1.178	0.448	0.440	4413	6414	9.34e6	2.07e7	2115.7	NO	102.846	102.846
13C-1234789-HpCDF	42.434	1.141	5.19e5	1.18e6	0.878	0.438	0.440	4413	6414	6.27e6	1.40e7	1420.1	NO	106.839	106.839
13C-1234-TCDD	26.033	0.000	1.12e6	1.42e6	1.000	0.791	0.770	3612	2200	1.53e7	1.93e7	4234.7	NO	100.000	100.000
13C-2378-TCDD	26.840	1.031	1.02e6	1.30e6	0.908	0.783	0.770	3612	2200	1.36e7	1.74e7	3754.2	NO	100.396	100.396
13C-12378-PeCDD	31.955	1.227	1.19e6	7.50e5	0.756	1.579	1.550	3912	2865	1.64e7	1.04e7	4180.8	NO	100.697	100.697
13C-123478-HxCDD	36.625	0.985	1.08e6	8.24e5	1.056	1.313	1.240	2885	3824	1.54e7	1.20e7	5329.2	NO	99.411	99.411
13C-123678-HxCDD	36.745	0.988	1.15e6	9.28e5	1.163	1.241	1.240	2885	3824	1.56e7	1.23e7	5405.2	NO	98.477	98.477
13C-1234678-HpCDD	41.535	1.117	9.01e5	8.19e5	0.909	1.100	1.050	3510	2889	1.08e7	1.02e7	3069.6	NO	104.227	104.227
13C-OCDD	47.531	1.278	1.51e6	1.67e6	0.820	0.906	0.890	3005	4316	1.44e7	1.60e7	4783.3	NO	213.449	213.449

Quantify Sample Summary Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\1605101C.qld

Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time

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MSHA 05/13/16

ID: 66E, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	Pg
13C-123789-HxCDD	37.183	0.000	1.01e6	8.04e5	1.000	1.259	1.240	2885	3824	1.41e7	1.12e7	4884.2	NO		100.000
Total-tetrafurans			0.00e0		0.935			1158		0.00e0					
Total-penta1			0.00e0					703		0.00e0					0.967
Total-pentafurans			1.79e4		0.957			1150		2.65e5					1.987
Total-hexafurans			3.12e4		1.125			1179		4.62e5					0.974
Total-heptafurans			1.22e4		1.310			665		1.56e5					4.868
Total-Furans			6.93e4		1.114			1158		9.66e5					0.010
Total-tetradiioxins			1.33e2		1.134			801		2.99e3					0.473
Total-pentadiioxins			5.27e3		0.975			992		6.70e4					1.474
Total-hexadiioxins			1.66e4		0.983			1131		2.41e5					0.485
Total-heptadiioxins			4.34e3		1.028			668		5.65e4					3.378
Total-Dioxins			3.42e4		1.028			801		4.48e5					8.246
Total-TEQ			1.04e5					801		1.41e6		37.5			0.102
37CL-2378-TCDD	26.855	1.032	2.76e3		1.067			1034		3.88e4					
FUNCTION1 PFK			1.17e7					906583		1.33e8					0.000
FUNCTION2 PFK			2.60e5					203778		7.31e6					
FUNCTION3 PFK			0.00e0					647647		0.00e0					
FUNCTION4 PFK			3.60e5					383565		1.10e7					
FUNCTION5 PFK			2.56e5					330213		1.04e7					
FUNCTION1 HXCDPE			3.54e2					448		6.74e3					0.000
FUNCTION1 HPCDPE			6.67e2					768		1.35e4					0.000
FUNCTION2 HPCDPE			7.30e1					786		2.39e3					0.000
FUNCTION3 OCDPE			0.00e0					482		0.00e0					
FUNCTION4 NCDPE			1.83e2					519		5.82e3					0.000
FUNCTION5 DCDPE			0.00e0					433		0.00e0					

Quantify Sample Report MassLynx MassLynx V4.1 SCN909

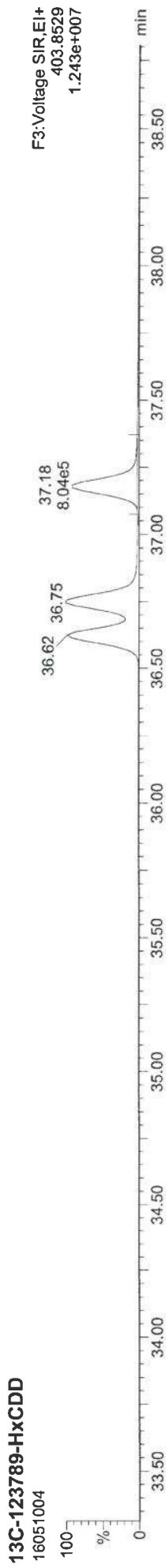
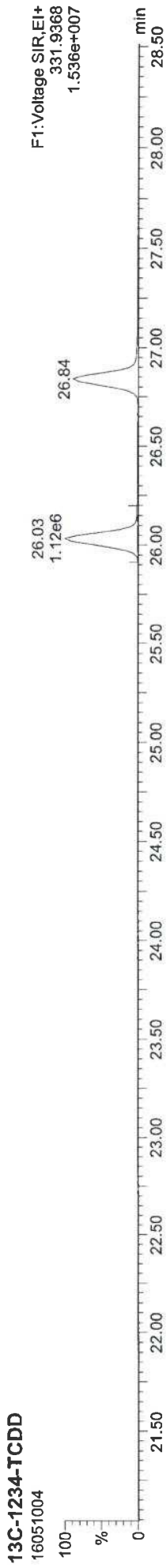
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Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

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Calibration: P:\DIOXIN8290.PRO\CurveDB\1605101CAL.cdb 11 May 2016 09:28:40

CS/A 06/30/16

ID: ~~EST~~, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

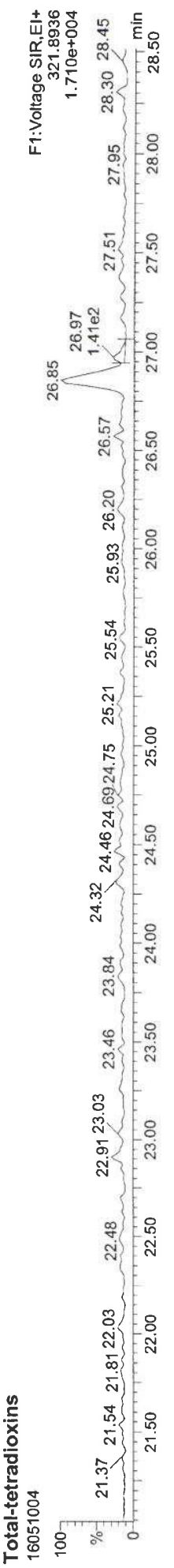
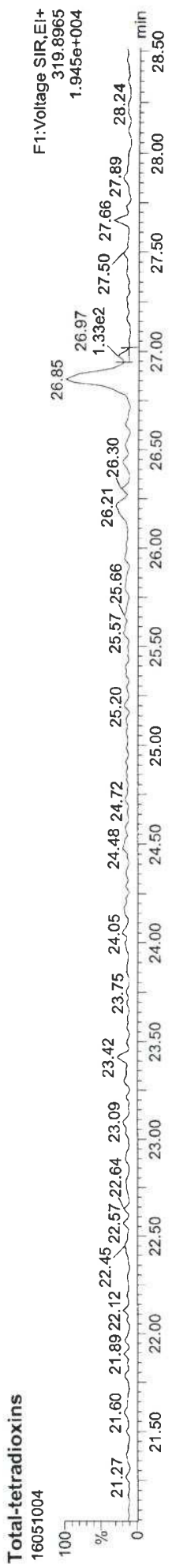


Quantify Sample Report MassLynx MassLynx V4.1 SCN909

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Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

CSIAA 06/30/16 8

16051004, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx MassLynx V4.1 SCN909

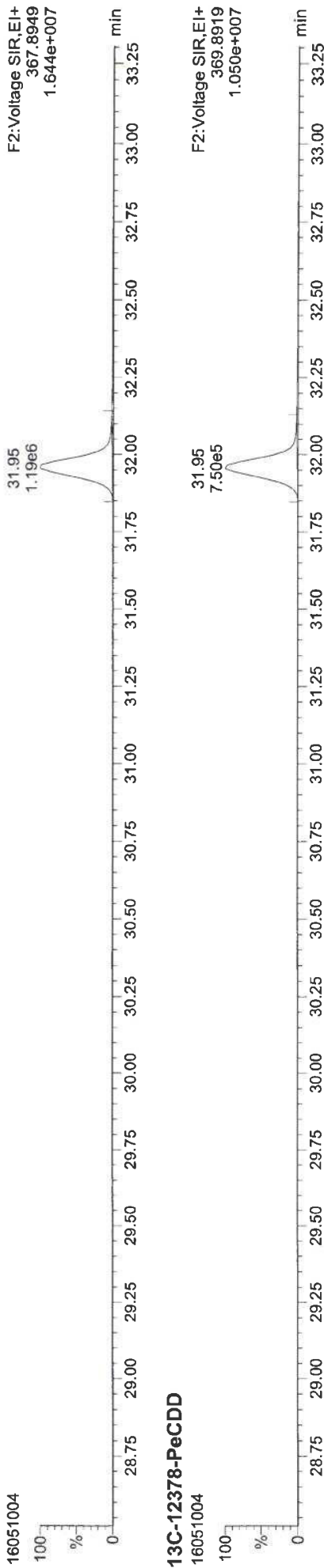
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Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

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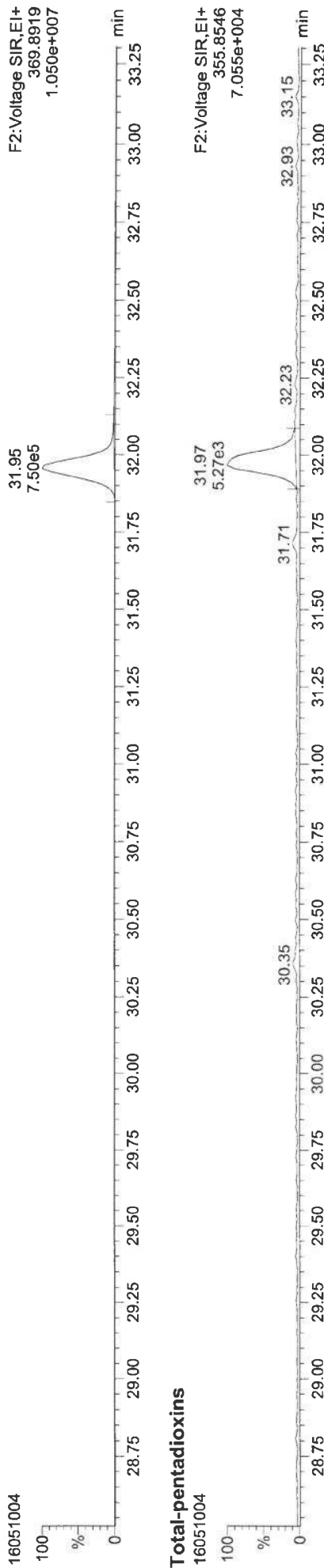
CSI AA 06/30/16

IDENT: Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

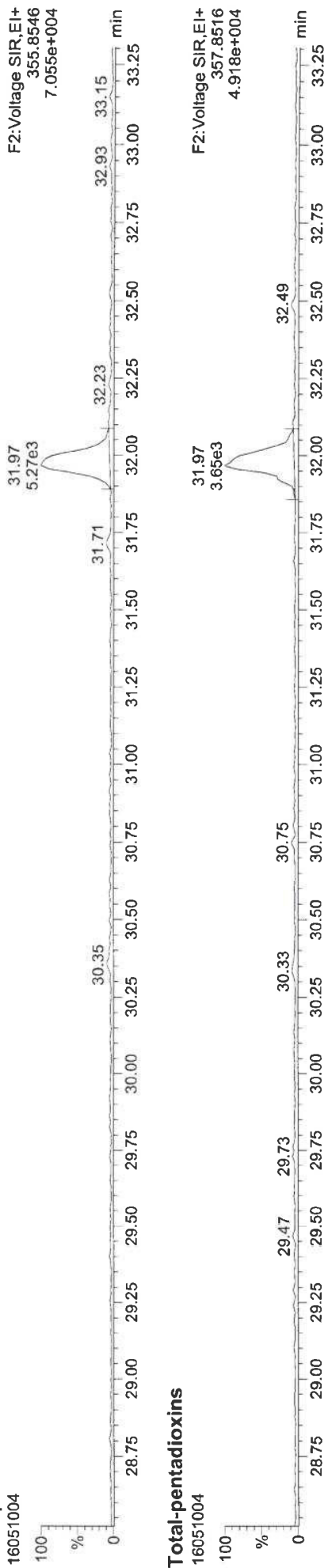
13C-12378-PeCDD
16051004



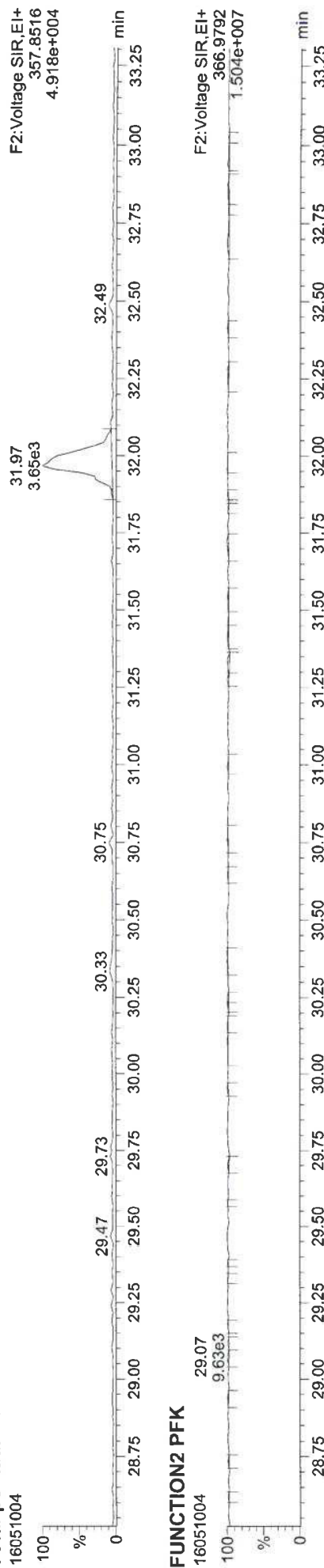
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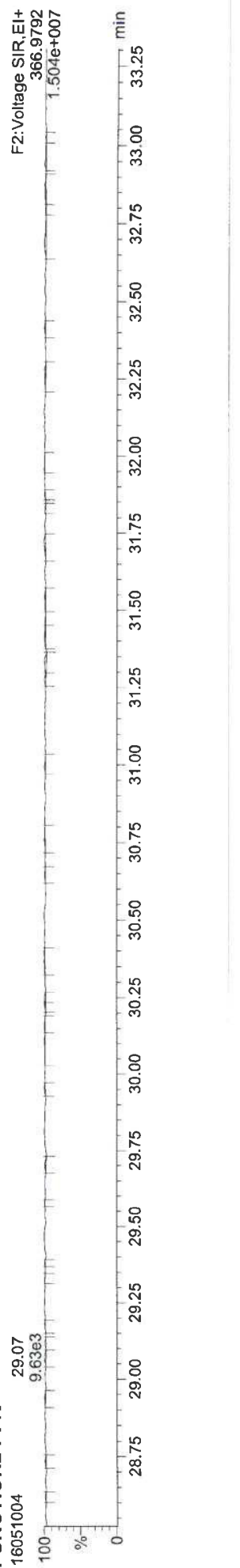
Total-pentadioxins
16051004



Total-pentadioxins
16051004



FUNCTION2 PFK
16051004



Quantify Sample Report MassLynx V4.1 SCN909

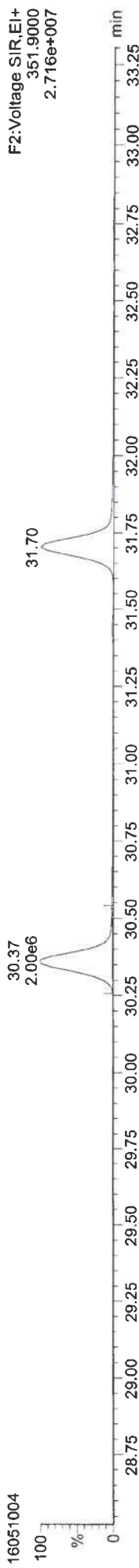
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Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
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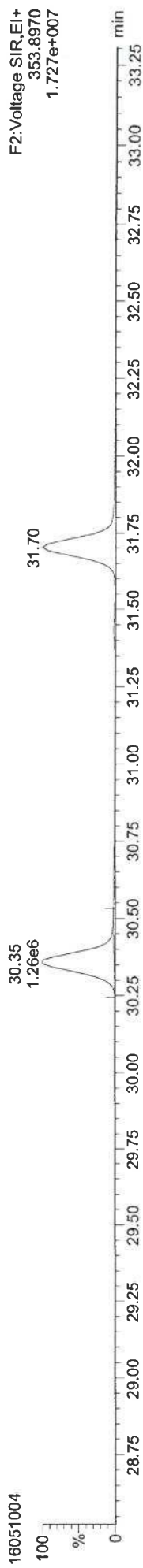
RSIAA 06/30/16

ID: 16051004, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

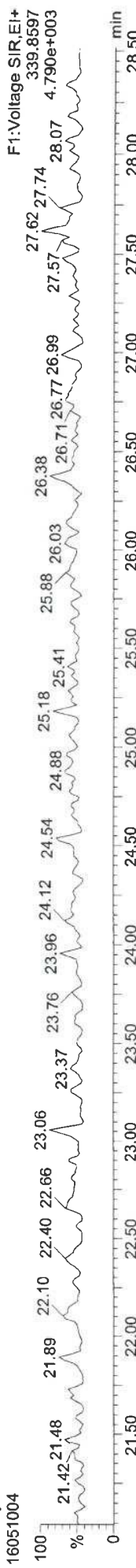
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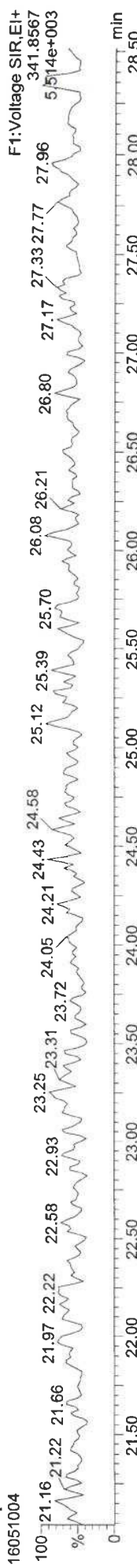
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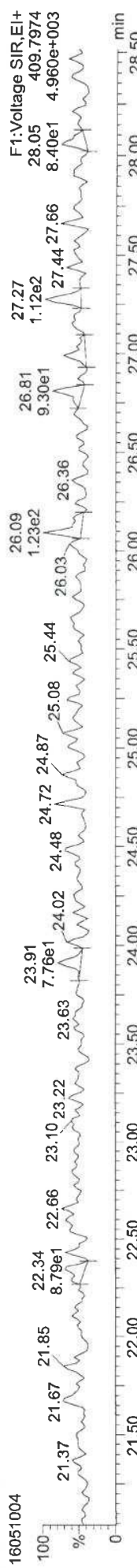
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report MassLynx MassLynx V4.1 SCN909

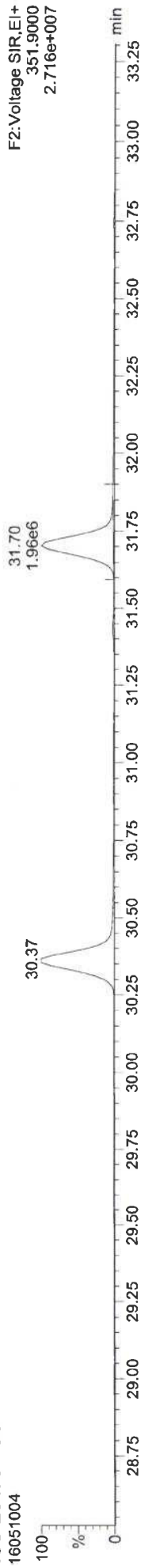
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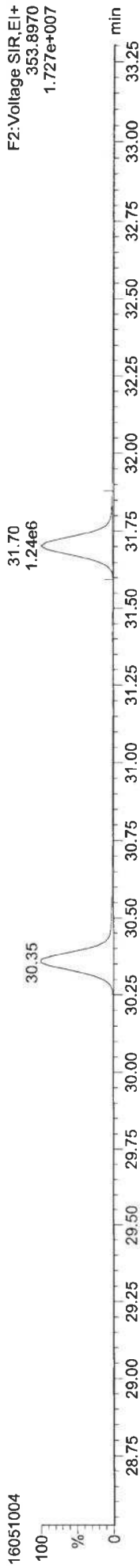
CSIAA 06/30/16

16051004, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

15C-23478-PeCDF



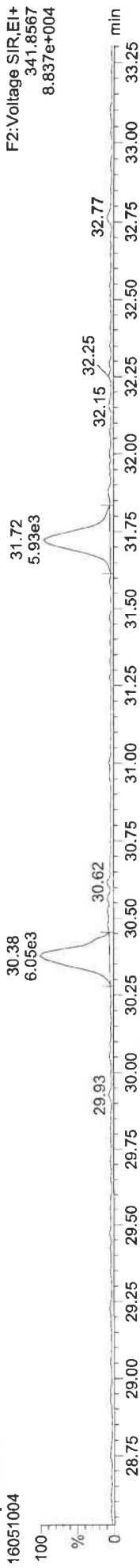
13C-23478-PeCDF



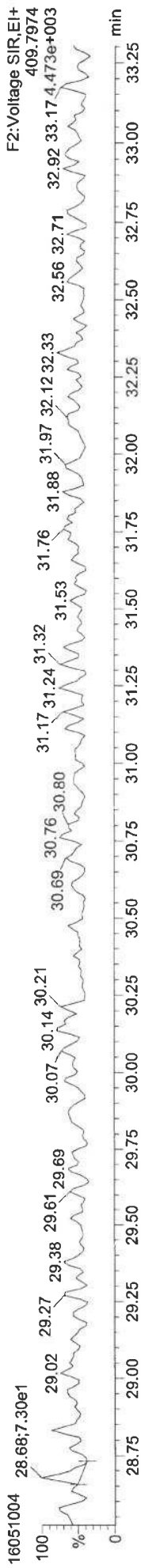
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\1605101C.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

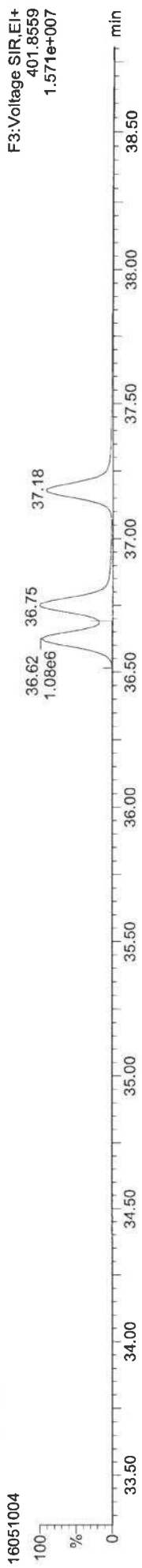
Page 223 of 78

CS1-AA 06/30/16

IGSL, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

19C-123478-HxCDD

16051004



13C-123478-HxCDD

16051004



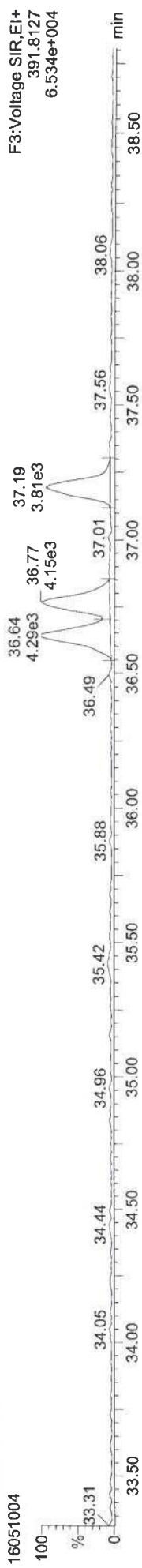
Total-hexadioxins

16051004



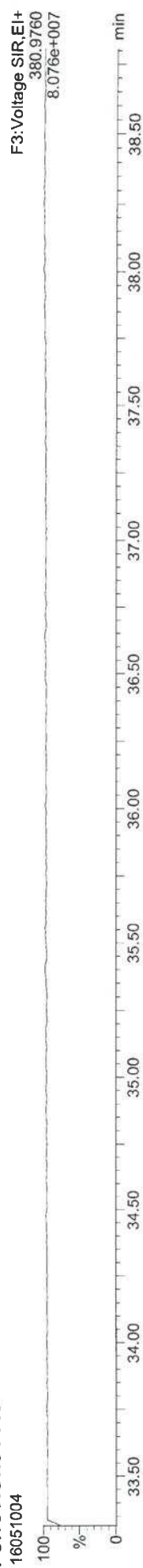
Total-hexadioxins

16051004



FUNCTION3 PFK

16051004



Quantify Sample Report MassLynx MassLynx V4.1 SCN909

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Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

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CS/AA 04/30/16

ID: 69L, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

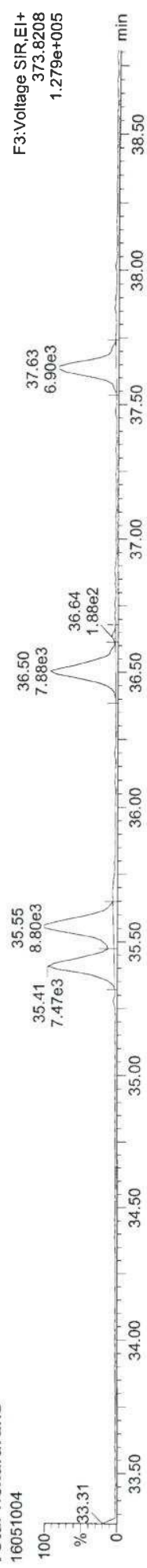
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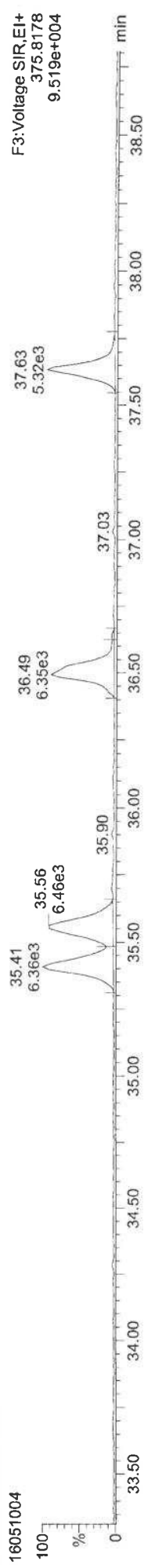
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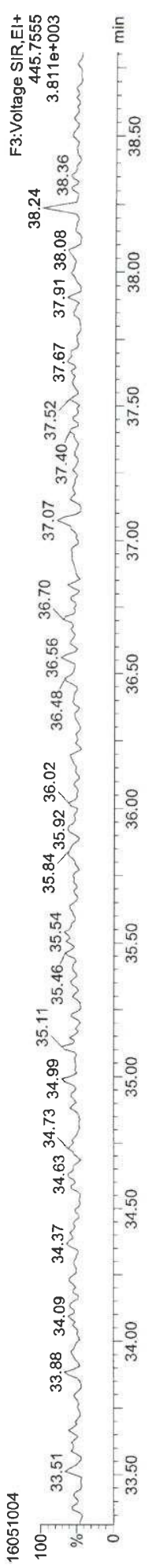
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



Quantify Sample Report MassLynx MassLynx V4.1 SCN909

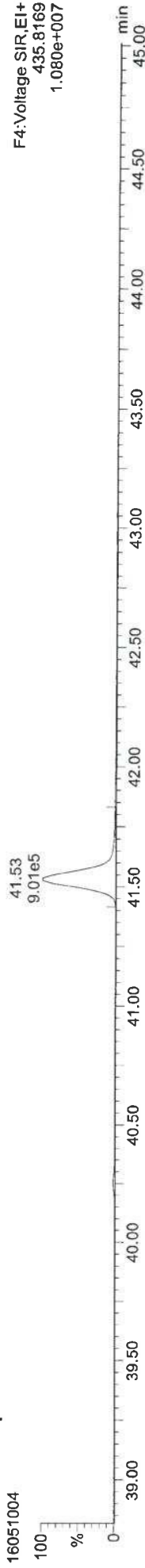
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Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

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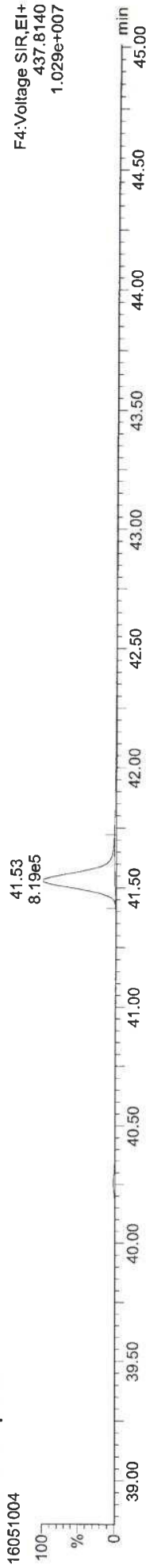
CSIAA 04/30/16

IN-CSE, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

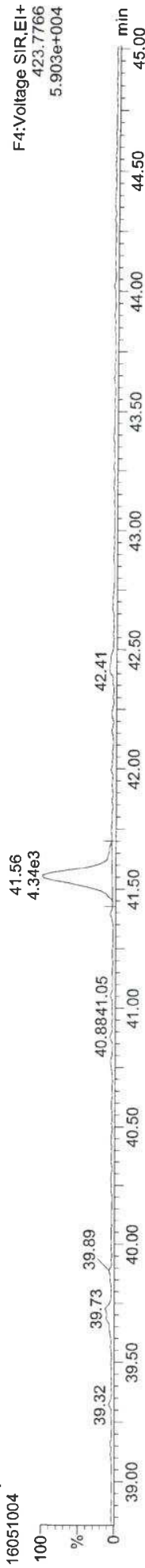
19C-1234678-HpCDD



13C-1234678-HpCDD



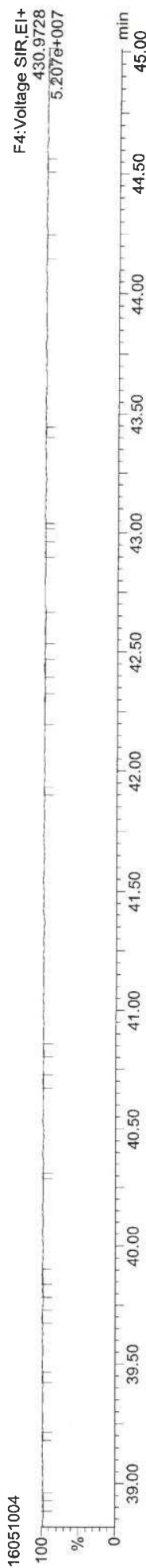
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK

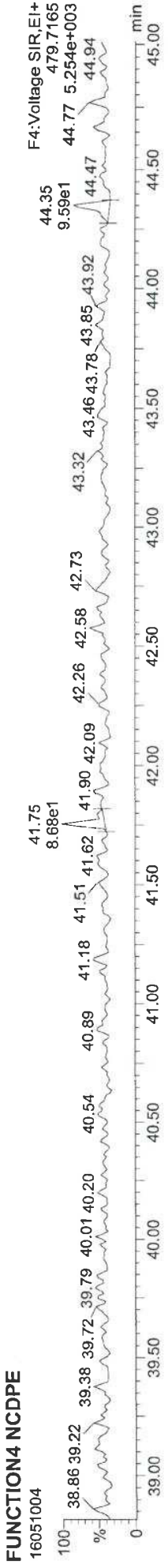
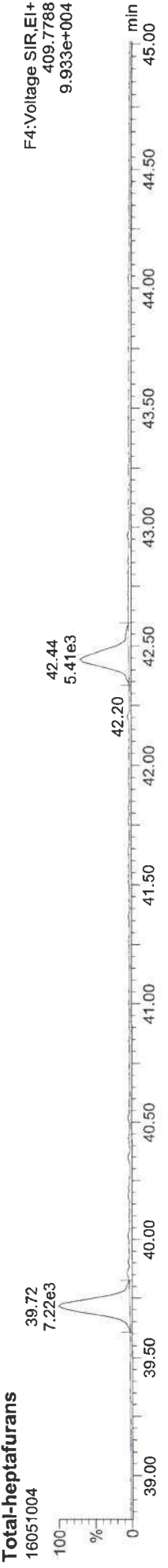
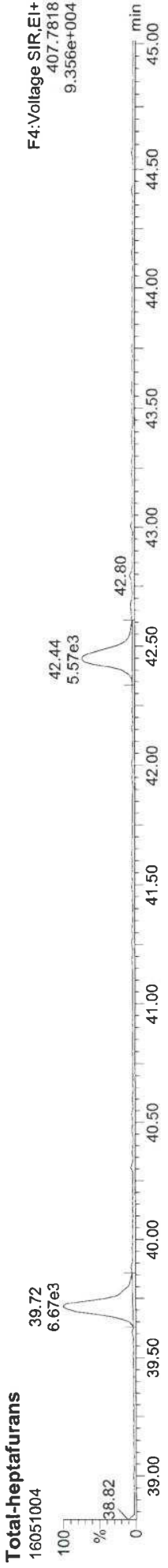
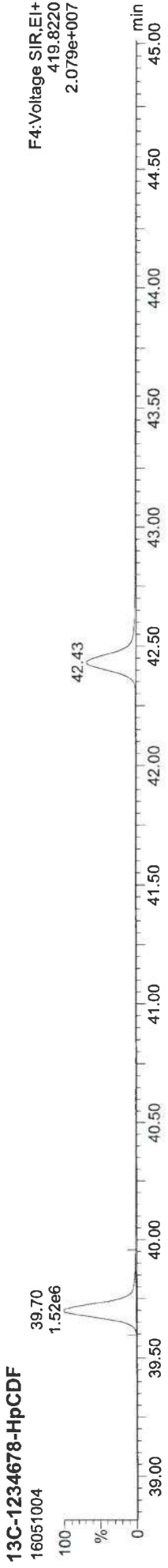
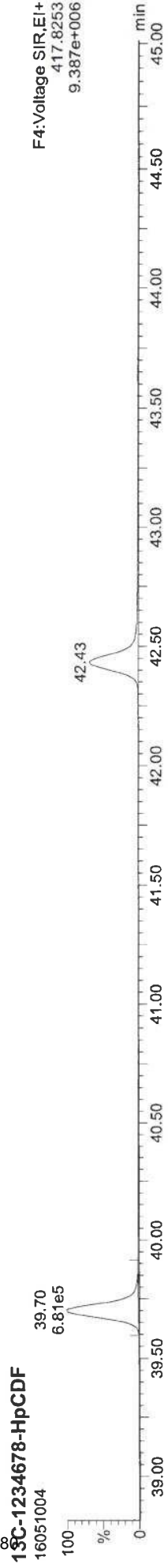


Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\1605101C.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

CSIAA 06/30/16 SP

16051004, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

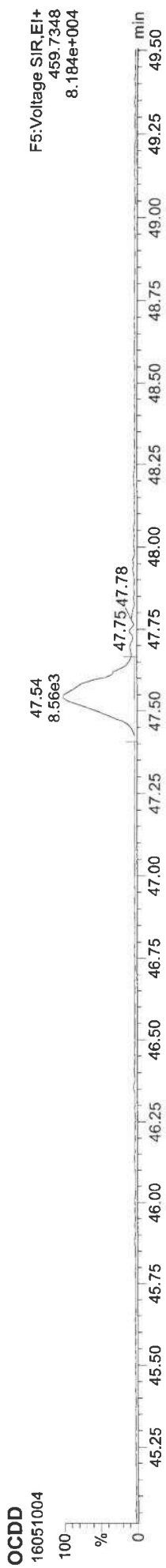
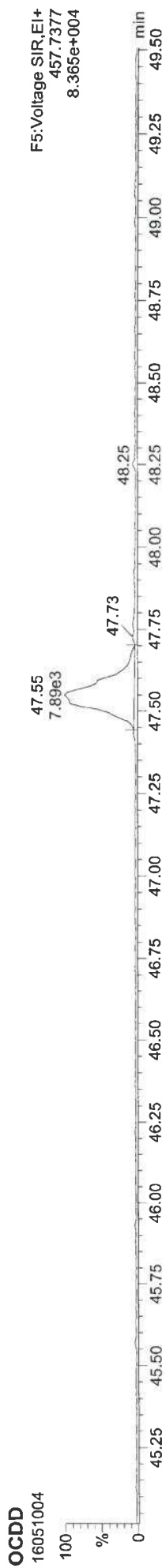
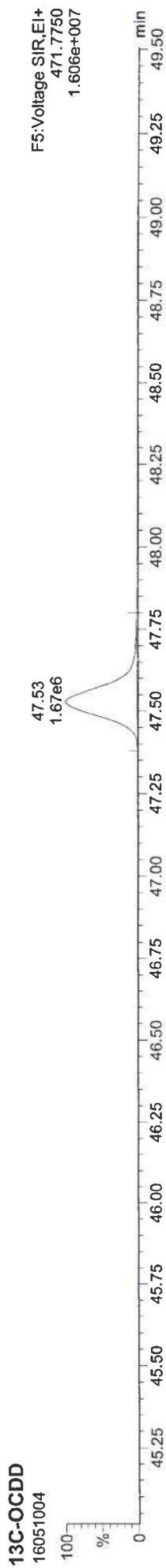
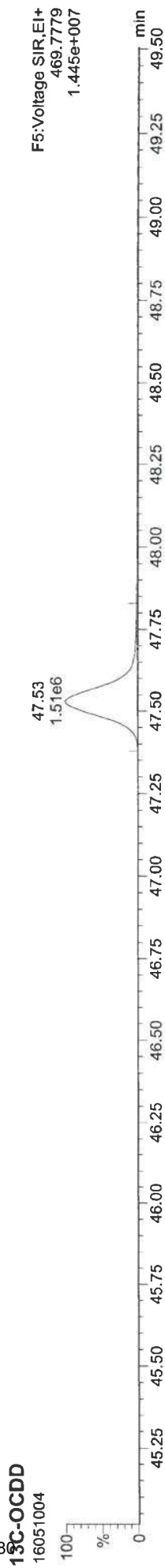


Quantify Sample Report
Dataset: P:\DIOXIN8290.PRO\1605101C.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

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C5IAA 06/30/16

EST, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk



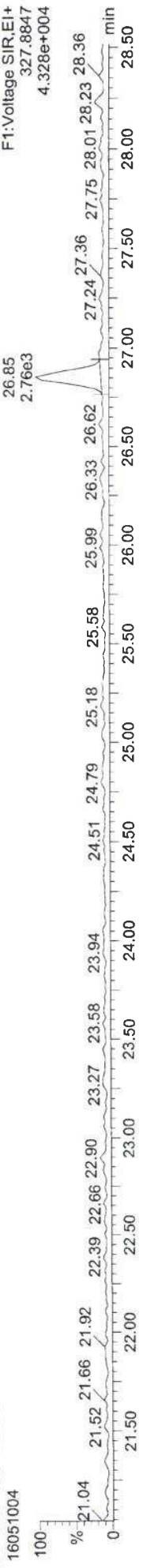
Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\160510IC.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:55 Pacific Daylight Time

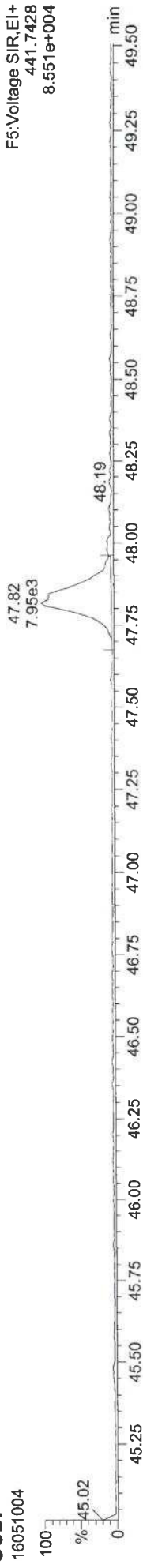
CSIAA 06/30/16

ID: 695, Name: 16051004, Date: 10-May-2016, Time: 13:36:21, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



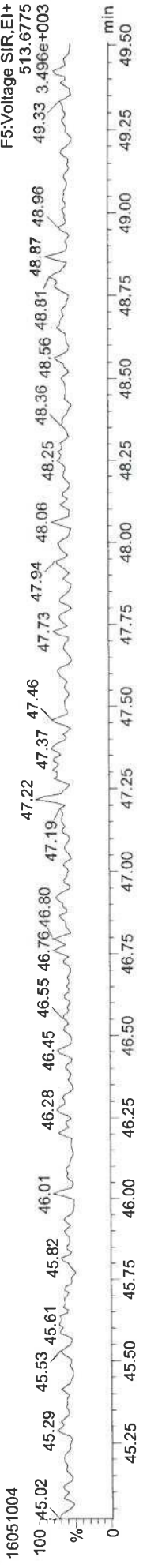
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\160510IC.qld
 Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
 Printed: Thursday, May 12, 2016 14:36:56 Pacific Daylight Time

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Method: P:\DIOXIN8290.pro\MethDB\Dioxin1604143SN.mdb 14 Apr 2016 14:40:15
 Calibration: P:\DIOXIN8290.PRO\CurveDB\160510ICAL.cdb 11 May 2016 09:28:40

052AA
 04/30/16

ID: 691, Name: 16051005, Date: 10-May-2016, Time: 14:27:42, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
2378-TCDF	26.213	1.001	6.68e3	8.57e3	0.935	0.780	0.770	624	1162	9.01e4	1.18e5	144.4	NO	0.471	0.471
12378-PeCDF	30.377	1.001	4.02e4	2.30e4	0.952	1.747	1.550	1915	1646	5.44e5	3.26e5	283.8	NO	2.419	2.419
23478-PeCDF	31.725	1.001	3.89e4	2.42e4	0.963	1.603	1.550	1915	1646	5.39e5	3.25e5	281.3	NO	2.486	2.486
123478-HxCDF	35.408	1.001	3.12e4	2.48e4	1.137	1.258	1.240	2315	1569	4.64e5	3.57e5	200.5	NO	2.475	2.475
234678-HxCDF	36.504	1.001	2.91e4	2.36e4	1.164	1.235	1.240	2315	1569	4.12e5	3.29e5	178.1	NO	2.389	2.389
123678-HxCDF	35.561	1.001	3.46e4	2.62e4	1.099	1.320	1.240	2315	1569	4.48e5	3.57e5	193.6	NO	2.432	2.432
123789-HxCDF	37.633	1.000	2.37e4	2.03e4	1.101	1.168	1.240	2315	1569	3.32e5	2.86e5	143.3	NO	2.440	2.440
1234678-HpCDF	39.715	1.000	2.74e4	2.65e4	1.303	1.033	1.050	937	1508	3.63e5	3.66e5	387.6	NO	2.488	2.488
1234789-HpCDF	42.456	1.000	1.92e4	1.86e4	1.317	1.036	1.050	937	1508	2.15e5	2.22e5	229.9	NO	2.432	2.432
OCDF	47.836	1.006	2.72e4	3.13e4	1.166	0.869	0.890	1813	1195	2.65e5	3.03e5	146.3	NO	4.753	4.753
2378-TCDD	26.855	1.001	5.15e3	5.98e3	1.134	0.861	0.770	873	738	6.94e4	7.89e4	79.5	NO	0.492	0.492
12378-PeCDD	31.977	1.001	2.31e4	1.49e4	0.975	1.545	1.550	1483	751	3.38e5	2.05e5	228.0	NO	2.455	2.455
123478-HxCDD	36.646	1.001	2.03e4	1.68e4	1.031	1.209	1.240	1210	1058	2.99e5	2.35e5	247.4	NO	2.378	2.378
123678-HxCDD	36.767	1.001	2.13e4	1.81e4	0.971	1.180	1.240	1210	1058	3.00e5	2.49e5	248.4	NO	2.508	2.508
123789-HxCDD	37.194	1.012	1.95e4	1.58e4	0.947	1.233	1.240	1210	1058	2.85e5	2.15e5	235.5	NO	2.381	2.381
1234678-HpCDD	41.557	1.000	1.61e4	1.64e4	1.028	0.984	1.050	880	817	2.07e5	2.05e5	234.6	NO	2.523	2.523
OCDD	47.549	1.000	3.81e4	4.26e4	1.107	0.895	0.890	912	966	3.66e5	4.09e5	401.3	NO	6.901	6.901
13C-2378-TCDF	26.198	1.006	1.52e6	1.95e6	1.567	0.781	0.770	7213	3636	2.06e7	2.61e7	2854.5	NO	97.056	97.056
13C-12378-PeCDF	30.355	1.166	1.65e6	1.09e6	1.274	1.519	1.550	4968	6965	2.31e7	1.47e7	4658.0	NO	94.412	94.412
13C-23478-PeCDF	31.703	1.218	1.61e6	1.02e6	1.235	1.575	1.550	4968	6965	2.26e7	1.44e7	4558.9	NO	93.672	93.672
13C-123478-HxCDF	35.386	0.952	6.75e5	1.31e6	1.381	0.515	0.510	5229	9078	9.42e6	1.84e7	1800.8	NO	103.223	103.223
13C-123678-HxCDF	35.539	0.956	7.84e5	1.49e6	1.569	0.526	0.510	5229	9078	1.04e7	1.98e7	1981.5	NO	103.869	103.869
13C-234678-HxCDF	36.482	0.981	6.51e5	1.24e6	1.345	0.524	0.510	5229	9078	9.09e6	1.73e7	1738.2	NO	100.995	100.995
13C-123789-HxCDF	37.622	1.012	5.63e5	1.08e6	1.183	0.523	0.510	5229	9078	7.97e6	1.53e7	1523.3	NO	99.391	99.391
13C-1234678-HpCDF	39.704	1.068	5.18e5	1.15e6	1.178	0.452	0.440	3357	3824	7.02e6	1.57e7	2089.7	NO	101.292	101.292
13C-1234789-HpCDF	42.434	1.141	3.63e5	8.15e5	0.878	0.445	0.440	3357	3824	4.24e6	9.62e6	1263.8	NO	96.293	96.293
13C-1234-TCDD	26.034	0.000	9.87e5	1.29e6	1.000	0.764	0.770	3203	3485	1.32e7	1.69e7	4111.4	NO	100.000	100.000
13C-2378-TCDD	26.840	1.031	8.78e5	1.12e6	0.908	0.786	0.770	3203	3485	1.17e7	1.47e7	3638.7	NO	96.425	96.425
13C-12378-PeCDD	31.955	1.227	9.73e5	6.16e5	0.756	1.580	1.550	2714	2965	1.32e7	8.37e6	4859.3	NO	92.208	92.208
13C-123478-HxCDD	36.625	0.985	8.50e5	6.65e5	1.056	1.279	1.240	4926	3042	1.20e7	9.45e6	2437.9	NO	102.903	102.903
13C-123678-HxCDD	36.745	0.988	8.97e5	7.21e5	1.163	1.244	1.240	4926	3042	1.23e7	9.91e6	2506.2	NO	99.774	99.774
13C-1234678-HpCDD	41.535	1.117	6.58e5	5.97e5	0.909	1.103	1.050	2482	3099	7.94e6	7.53e6	3199.3	NO	98.957	98.957
13C-OCDD	47.531	1.278	9.94e5	1.12e6	0.820	0.888	0.890	5478	3657	9.18e6	1.01e7	1676.4	NO	184.791	184.791

Quantify Sample Summary Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\1605101C.qld

Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time

Printed: Thursday, May 12, 2016 14:36:56 Pacific Daylight Time

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CS2AA 06/30/16

IB: EST, Name: 16051005, Date: 10-May-2016, Time: 14:27:42, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	37.183	0.000	7.78e5	6.17e5	1.000	1.261	1.240	4926	3042	1.07e7	8.38e6	2166.0	NO		100.000
Total-tetrafurans			6.89e3		0.935			624		9.48e4					0.480
Total-penta1			0.00e0					685		0.00e0					
Total-pentafurans			8.07e4		0.957			1915		1.11e6					4.986
Total-hexafurans			1.19e5		1.125			2315		1.68e6					9.815
Total-heptafurans			4.78e4		1.310			937		5.96e5					5.033
Total-Furans			2.82e5		1.114			624		3.74e6					25.066
Total-tetra-dioxins			5.15e3		1.134			873		6.94e4					0.492
Total-penta-dioxins			2.33e4		0.975			1483		3.46e5					2.481
Total-hexa-dioxins			6.12e4		0.983			1210		8.85e5					7.267
Total-hepta-dioxins			1.74e4		1.028			880		2.29e5					2.716
Total-Dioxins			1.45e5		1.028			873		1.90e6					19.856
Total-TEQ			4.27e5					873		5.64e6		122.7			44.922
37CL-2378-TCDD	26.855	1.032	1.11e4		1.067			1295		1.59e5					0.455
FUNCTION1 PFK			1.86e6					839683		3.45e7					
FUNCTION2 PFK			1.48e5					170069		4.43e6					0.000
FUNCTION3 PFK			0.00e0					617332		0.00e0					
FUNCTION4 PFK			3.08e5					401956		9.69e6					
FUNCTION5 PFK			2.68e5					309329		1.04e7					
FUNCTION1 HXCDPE			3.06e2					522		6.37e3					0.000
FUNCTION1 HPCDPE			8.95e2					980		1.98e4					0.000
FUNCTION2 HPCDPE			1.50e2					689		5.22e3					0.000
FUNCTION3 OCDPE			0.00e0					469		0.00e0					
FUNCTION4 NCDPE			0.00e0					652		0.00e0					
FUNCTION5 DCDPE			0.00e0					485		0.00e0					

Quantify Sample Report MassLynx MassLynx V4.1 SCN909

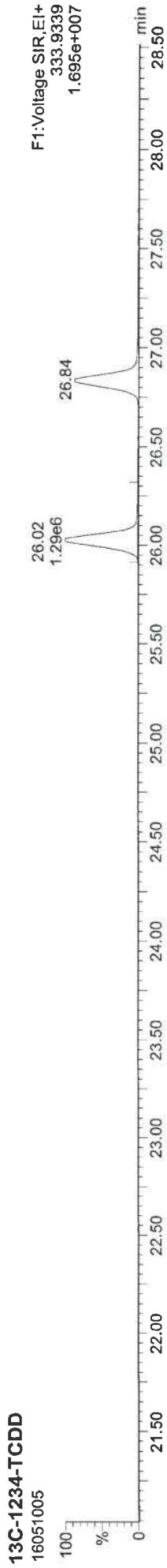
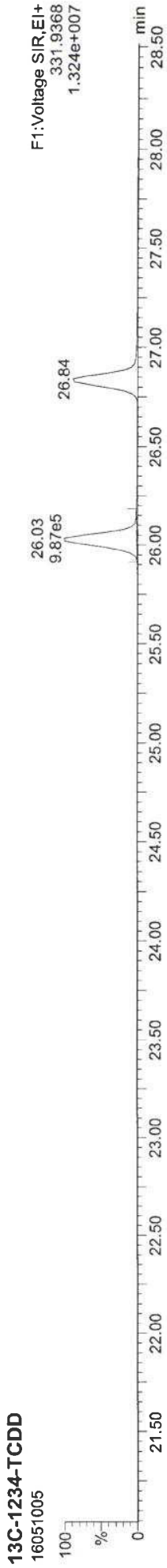
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Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:56 Pacific Daylight Time

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Method: P:\DIOXIN8290.pro\MethDB\Dioxin1604143SN.mdb 14 Apr 2016 14:40:15
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CS2A 06/20/16

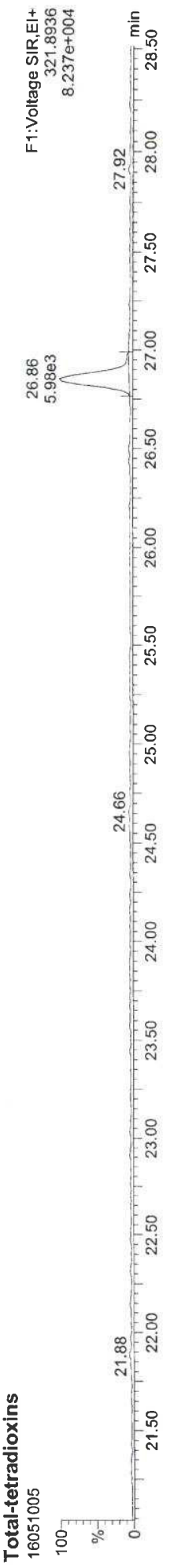
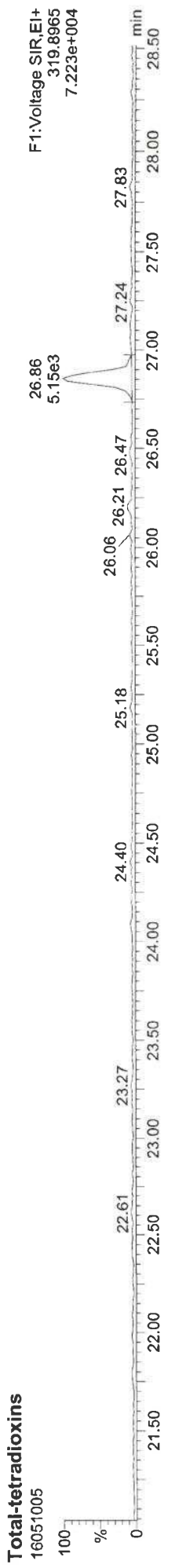
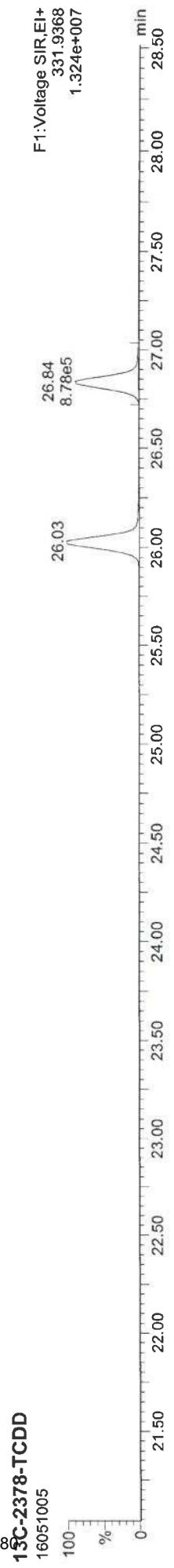
ID: 691, Name: 16051005, Date: 10-May-2016, Time: 14:27:42, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report
Dataset: P:\DIOXIN8290.PRO\1605101C.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:56 Pacific Daylight Time

CS2AA 04/30/16

16051005, Date: 10-May-2016, Time: 14:27:42, Conditions: AUTOSPEC01, User: pk

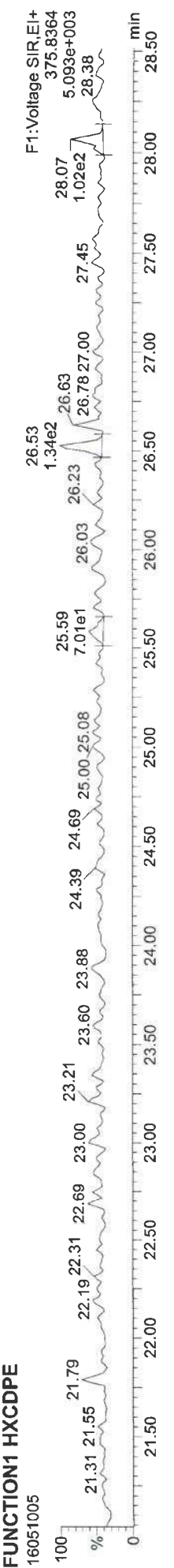
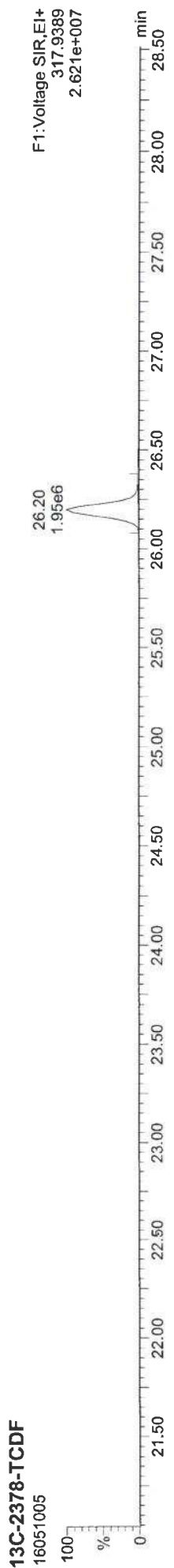


Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\1605101C.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:56 Pacific Daylight Time

CS2AA 05/30/16

16051005, Name: 16051005, Date: 10-May-2016, Time: 14:27:42, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report
Dataset: P:\DIOXIN8290.PRO\1605101C.qld
Last Altered: Wednesday, May 11, 2016 09:28:40 Pacific Daylight Time
Printed: Thursday, May 12, 2016 14:36:56 Pacific Daylight Time

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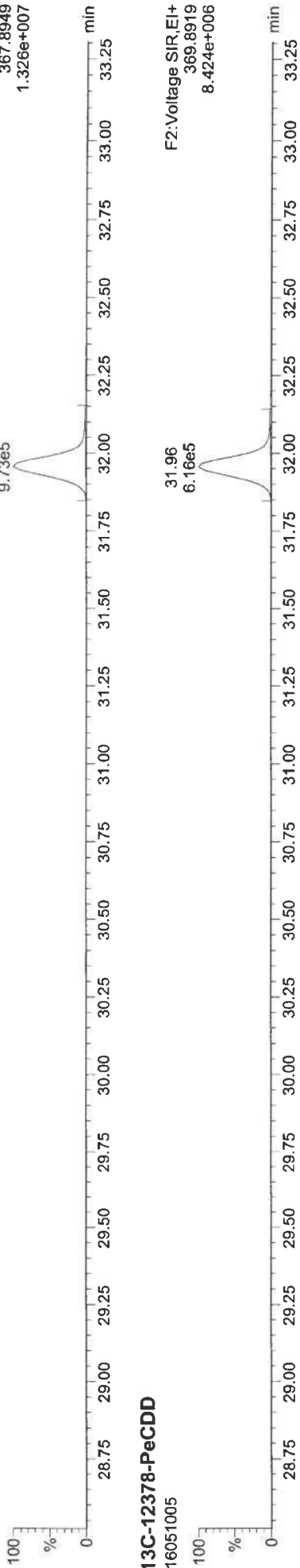
052AA 06/30/16

16051005, Name: 16051005, Date: 10-May-2016, Time: 14:27:42, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD

16051005

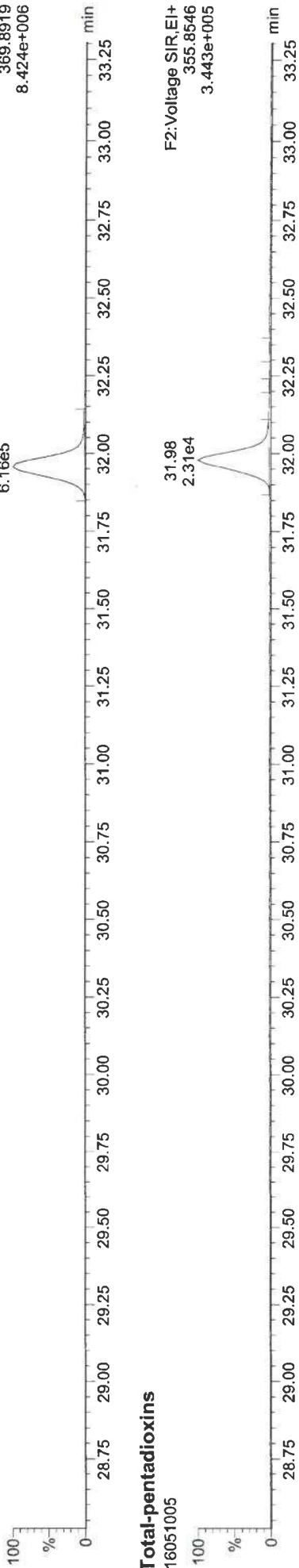
F2:Voltage SIR,EI+
367.8949
1.326e+007



13C-12378-PeCDD

16051005

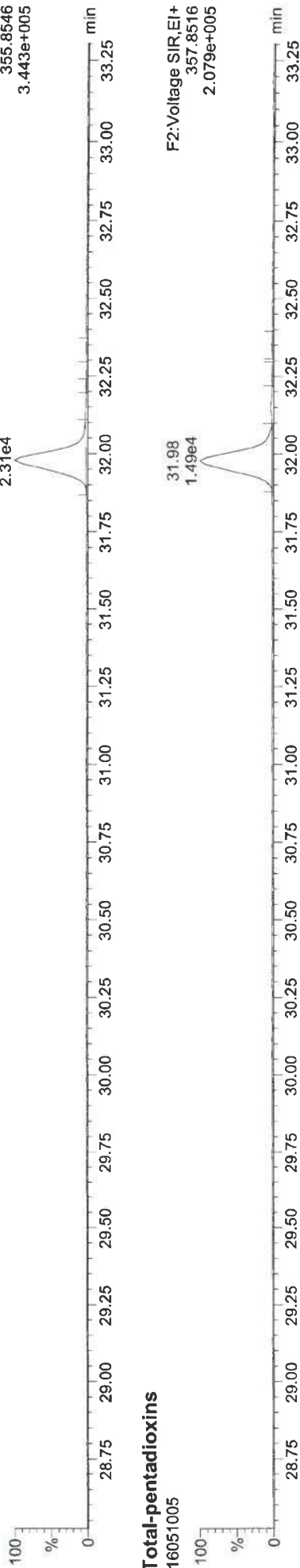
F2:Voltage SIR,EI+
369.8919
8.424e+006



Total-pentadioxins

16051005

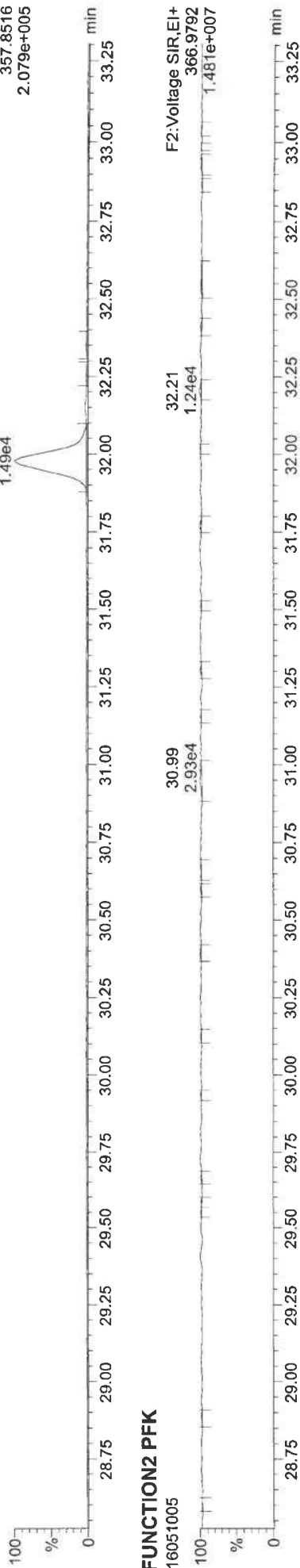
F2:Voltage SIR,EI+
355.8546
3.443e+005



Total-pentadioxins

16051005

F2:Voltage SIR,EI+
357.8516
2.079e+005



FUNCTION2 PFK

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F2:Voltage SIR,EI+
366.9792
1.481e+007

