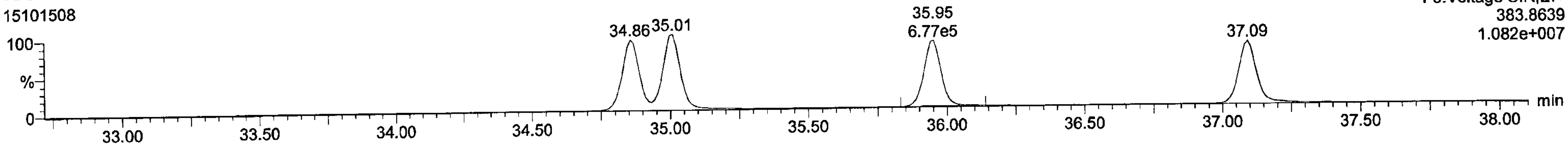
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

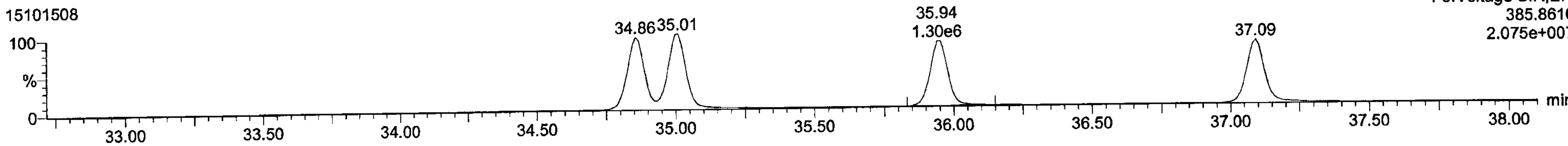
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

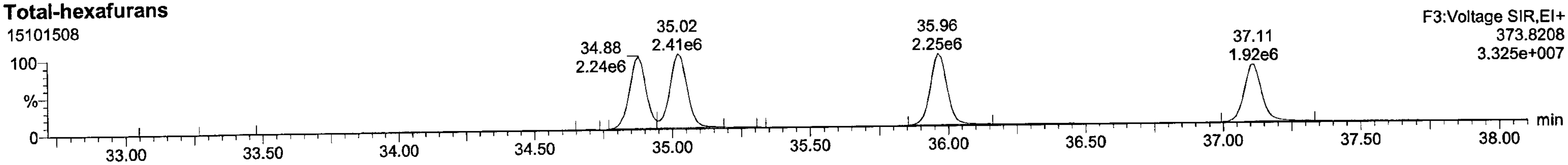
13C-234678-HxCDF



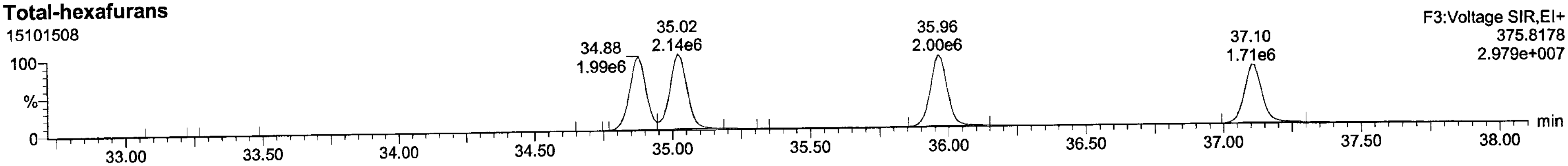
13C-234678-HxCDF



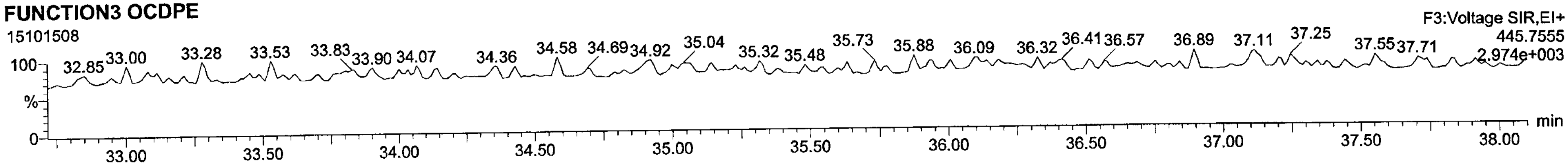
Total-hexafurans



Total-hexafurans



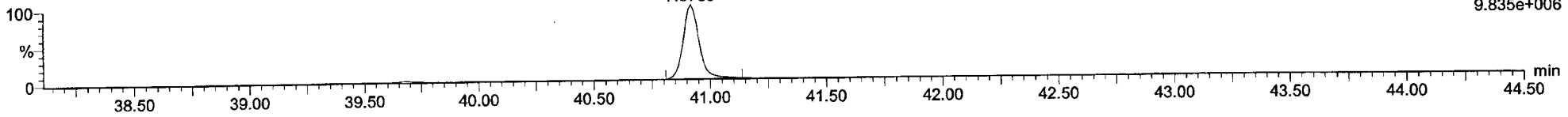
FUNCTION3 OCDPE



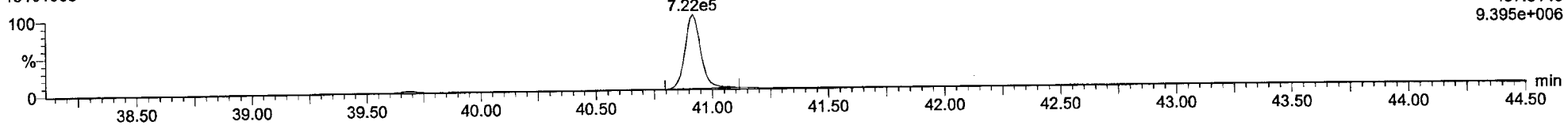
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

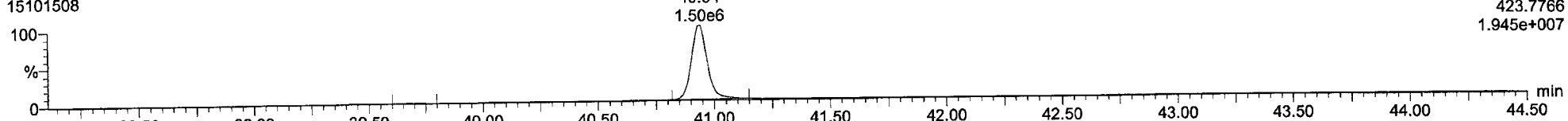
13C-1234678-HpCDD
15101508
40.92
7.57e5
F4:Voltage SIR,EI+
435.8169
9.835e+006



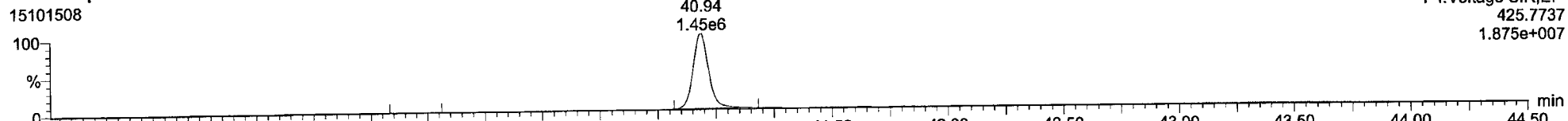
13C-1234678-HpCDD
15101508
40.92
7.22e5
F4:Voltage SIR,EI+
437.8140
9.395e+006



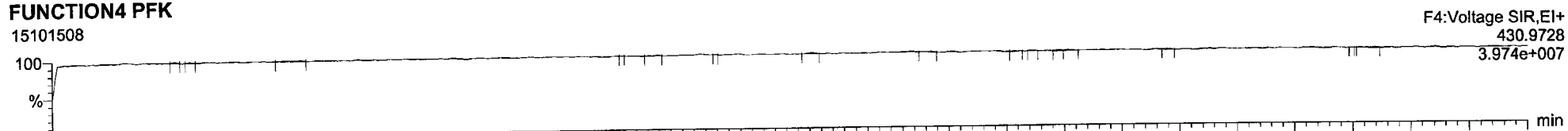
Total-heptadioxins
15101508
40.94
1.50e6
F4:Voltage SIR,EI+
423.7766
1.945e+007



Total-heptadioxins
15101508
40.94
1.45e6
F4:Voltage SIR,EI+
425.7737
1.875e+007



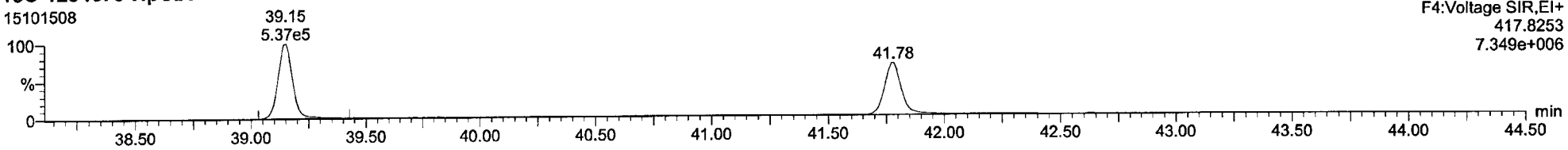
FUNCTION4 PFK
15101508
F4:Voltage SIR,EI+
430.9728
3.974e+007



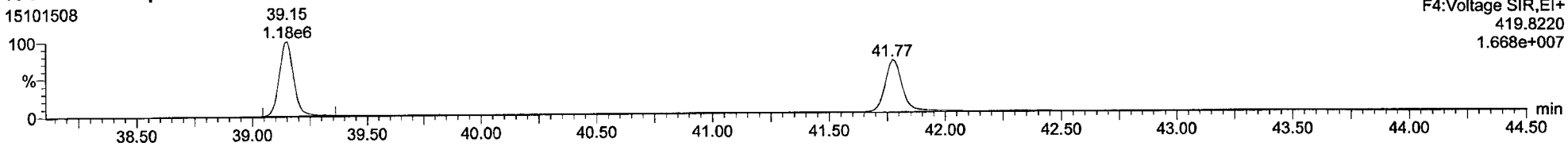
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

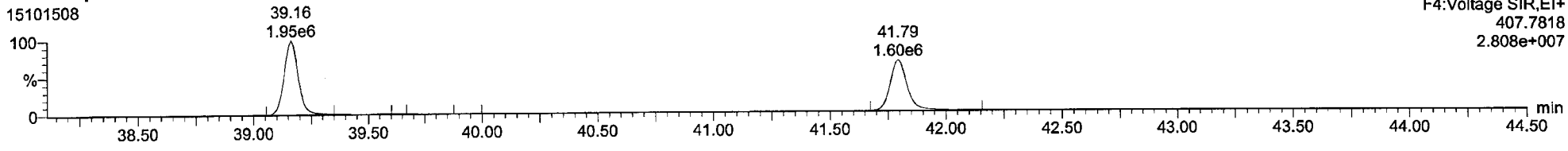
13C-1234678-HpCDF



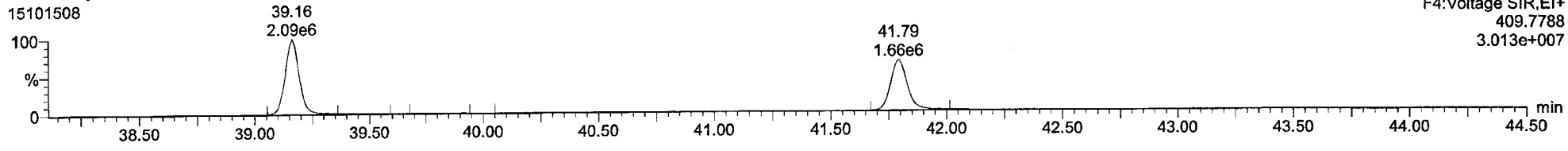
13C-1234678-HpCDF



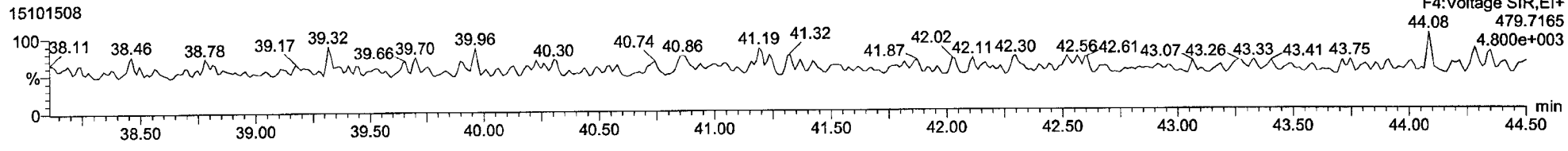
Total-heptafurans



Total-heptafurans



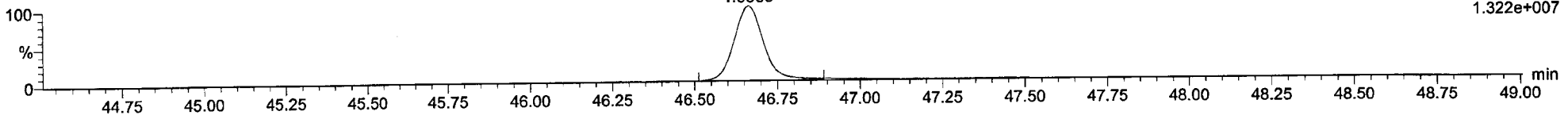
FUNCTION4 NCDPE



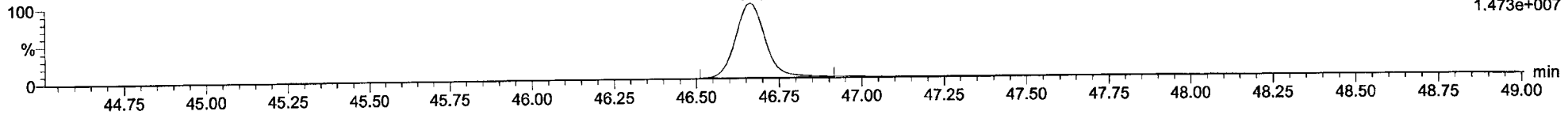
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

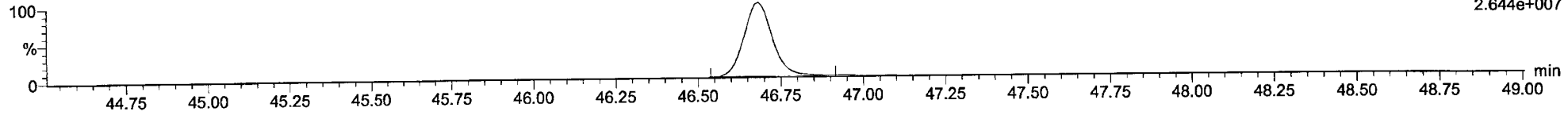
13C-OCDD
15101508
46.66
1.35e6
F5:Voltage SIR,EI+
469.7779
1.322e+007



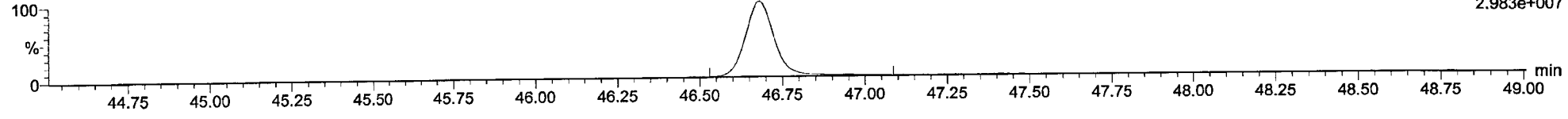
13C-OCDD
15101508
46.66
1.52e6
F5:Voltage SIR,EI+
471.7750
1.473e+007



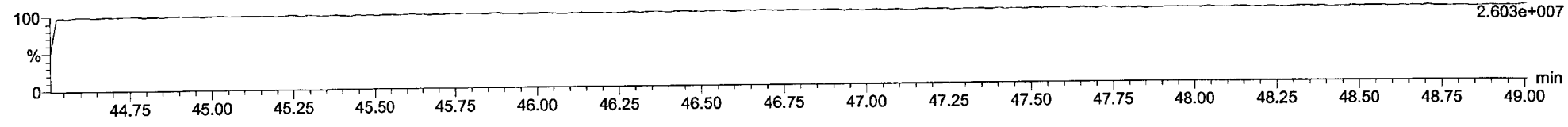
OCDD
15101508
46.68
2.59e6
F5:Voltage SIR,EI+
457.7377
2.644e+007



OCDD
15101508
46.68
3.02e6
F5:Voltage SIR,EI+
459.7348
2.983e+007



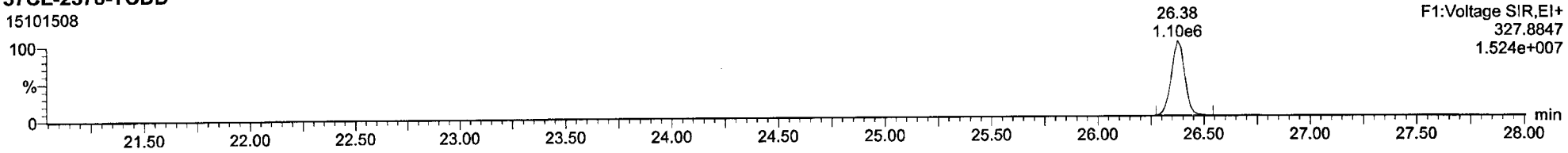
FUNCTION5 PFK
15101508
F5:Voltage SIR,EI+
480.9696
2.603e+007



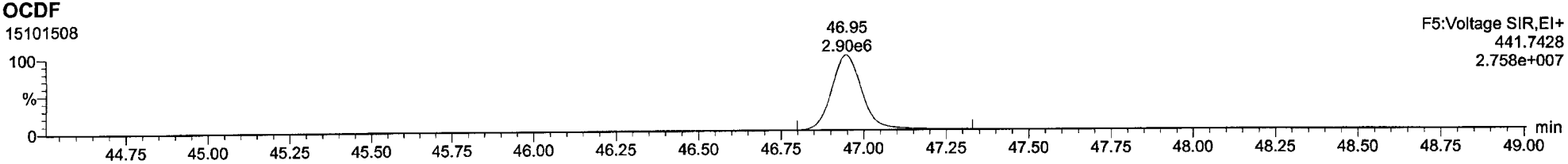
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

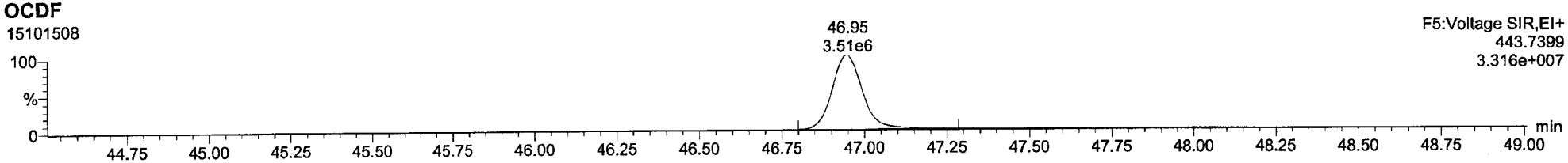
37CL-2378-TCDD



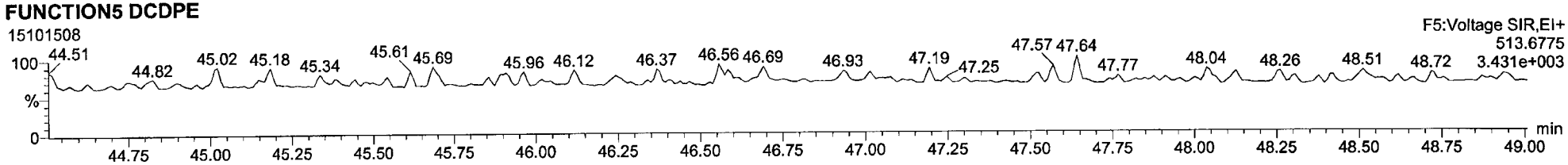
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, 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	25.735	1.001	2.34e6	3.45e6	0.827	0.677	0.770	2243	2134	3.35e7	4.99e7	14955.2	NO	207.161	207.161
12378-PeCDF	29.869	1.001	1.51e7	1.07e7	0.824	1.420	1.550	5698	9562	2.23e8	1.56e8	39215.1	NO	1063.525	1063.525
23478-PeCDF	31.206	1.000	1.53e7	1.08e7	0.850	1.413	1.550	5698	9562	2.26e8	1.60e8	39723.3	NO	1048.477	1048.477
123478-HxCDF	34.878	1.001	1.21e7	1.07e7	0.973	1.128	1.240	7790	3755	1.79e8	1.59e8	22958.8	NO	1049.849	1049.849
234678-HxCDF	35.963	1.000	1.21e7	1.08e7	1.025	1.121	1.240	7790	3755	1.83e8	1.63e8	23495.2	NO	1062.833	1062.833
123678-HxCDF	35.021	1.000	1.29e7	1.14e7	0.953	1.127	1.240	7790	3755	1.86e8	1.66e8	23887.8	NO	1033.225	1033.225
123789-HxCDF	37.114	1.001	1.06e7	9.30e6	0.956	1.140	1.240	7790	3755	1.50e8	1.32e8	19229.1	NO	1056.182	1056.182
1234678-HpCDF	39.164	1.000	1.05e7	1.11e7	1.153	0.945	1.050	6039	6934	1.58e8	1.67e8	26196.8	NO	1050.487	1050.487
1234789-HpCDF	41.794	1.000	8.63e6	9.10e6	1.131	0.948	1.050	6039	6934	1.11e8	1.18e8	18418.3	NO	1076.291	1076.291
OCDF	46.960	1.006	1.55e7	1.86e7	1.023	0.832	0.890	3422	5931	1.62e8	1.94e8	47403.0	NO	2163.404	2163.404
2378-TCDD	26.377	1.001	2.14e6	2.75e6	1.023	0.776	0.770	1319	1882	3.08e7	3.95e7	23376.7	NO	218.215	218.215
12378-PeCDD	31.469	1.001	1.16e7	7.48e6	0.939	1.553	1.550	2231	1973	1.73e8	1.11e8	77524.3	NO	1025.445	1025.445
123478-HxCDD	36.105	1.001	1.05e7	8.44e6	0.963	1.246	1.240	3761	4440	1.56e8	1.25e8	41392.7	NO	1051.354	1051.354
123678-HxCDD	36.237	1.001	1.03e7	8.31e6	0.894	1.245	1.240	3761	4440	1.53e8	1.22e8	40697.3	NO	1038.659	1038.659
123789-HxCDD	36.653	1.012	1.02e7	8.21e6	0.900	1.239	1.240	3761	4440	1.51e8	1.22e8	40138.9	NO	1052.621	1052.621
1234678-HpCDD	40.939	1.000	8.12e6	7.81e6	0.964	1.040	1.050	5466	5139	1.08e8	1.04e8	19841.7	NO	1047.702	1047.702
OCDD	46.691	1.000	1.48e7	1.69e7	0.969	0.877	0.890	4932	3988	1.56e8	1.75e8	31604.8	NO	2118.899	2118.899
13C-2378-TCDF	25.720	1.006	1.48e6	1.90e6	1.502	0.777	0.770	3887	2445	2.13e7	2.75e7	5485.7	NO		101.519
13C-12378-PeCDF	29.847	1.168	1.80e6	1.14e6	1.215	1.573	1.550	3157	2186	2.59e7	1.65e7	8213.2	NO		109.232
13C-23478-PeCDF	31.195	1.221	1.79e6	1.14e6	1.181	1.575	1.550	3157	2186	2.58e7	1.65e7	8174.2	NO		111.780
13C-123478-HxCDF	34.856	0.951	7.53e5	1.47e6	1.246	0.512	0.510	4180	2958	1.10e7	2.16e7	2623.8	NO		99.809
13C-123678-HxCDF	35.009	0.955	8.39e5	1.63e6	1.375	0.516	0.510	4180	2958	1.20e7	2.32e7	2875.4	NO		100.213
13C-234678-HxCDF	35.952	0.981	7.27e5	1.38e6	1.186	0.525	0.510	4180	2958	1.05e7	2.04e7	2515.2	NO		99.339
13C-123789-HxCDF	37.092	1.012	6.66e5	1.30e6	1.135	0.511	0.510	4180	2958	9.52e6	1.86e7	2277.2	NO		96.996
13C-1234678-HpCDF	39.153	1.069	5.51e5	1.24e6	1.020	0.446	0.440	1334	2750	8.00e6	1.80e7	5995.9	NO		97.800
13C-1234789-HpCDF	41.783	1.140	4.50e5	1.01e6	0.824	0.447	0.440	1334	2750	5.56e6	1.25e7	4165.1	NO		98.741
13C-1234-TCDD	25.555	0.000	9.73e5	1.24e6	1.000	0.783	0.770	2688	2047	1.45e7	1.84e7	5390.8	NO		100.000
13C-2378-TCDD	26.362	1.032	9.58e5	1.23e6	0.983	0.778	0.770	2688	2047	1.36e7	1.76e7	5075.7	NO		100.616
13C-12378-PeCDD	31.447	1.231	1.21e6	7.71e5	0.787	1.570	1.550	1261	1057	1.79e7	1.15e7	14210.5	NO		113.657
13C-123478-HxCDD	36.084	0.985	1.05e6	8.26e5	1.031	1.267	1.240	2835	1283	1.53e7	1.22e7	5400.8	NO		101.416
13C-123678-HxCDD	36.215	0.988	1.13e6	8.83e5	1.137	1.275	1.240	2835	1283	1.58e7	1.28e7	5586.5	NO		98.763
13C-1234678-HpCDD	40.917	1.117	8.05e5	7.72e5	0.892	1.042	1.050	1981	1661	1.08e7	1.02e7	5432.1	NO		98.733
13C-OCDD	46.673	1.274	1.46e6	1.63e6	0.852	0.894	0.890	3038	1938	1.51e7	1.70e7	4979.7	NO		202.484

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ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

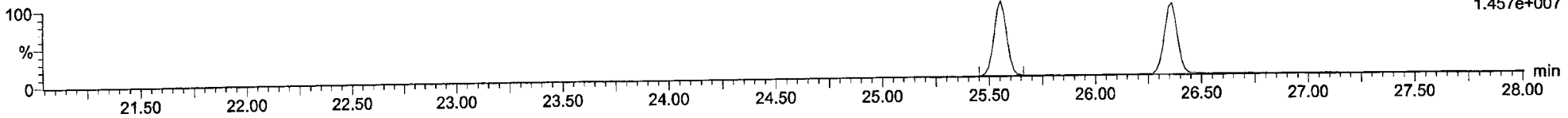
Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	36.643	0.000	9.94e5	7.97e5	1.000	1.247	1.240	2835	1283	1.45e7	1.16e7	5110.4	NO		100.000
Total-tetrafurans			2.38e6		0.827			2243		3.42e7					210.902
Total-penta1			0.00e0					524		0.00e0					
Total-pentafurans			3.11e7		0.837			5698		4.58e8					2158.480
Total-hexafurans			4.77e7		0.977			7790		6.99e8					4208.001
Total-heptafurans			1.92e7		1.142			6039		2.70e8					2129.112
Total-Furans			1.16e8		0.971			2243		1.62e9					10869.899
Total-tetradioxins			2.19e6		1.023			1319		3.15e7					223.650
Total-pentadioxins			1.16e7		0.939			2231		1.73e8					1027.656
Total-hexadioxins			3.10e7		0.919			3761		4.60e8					3142.816
Total-heptadioxins			8.15e6		0.964			5466		1.09e8					1051.375
Total-Dioxins			6.78e7		0.950			1319		9.29e8					7564.447
Total-TEQ			1.84e8					1319		2.55e9					18434.346
37CL-2378-TCDD	26.377	1.032	5.33e6		1.091			1799		7.72e7		42947.9			220.293
FUNCTION1 PFK			1.67e6					475628		3.10e7					
FUNCTION2 PFK			4.61e4					102875		1.29e6					0.000
FUNCTION3 PFK			2.91e7					404520		1.85e8					0.000
FUNCTION4 PFK			9.49e5					304670		2.31e7					
FUNCTION5 PFK			1.44e5					302561		5.12e6					
FUNCTION1 HXCDPE			7.68e1					494		1.71e3					0.000
FUNCTION1 HPCDPE			2.54e2					764		4.06e3					0.000
FUNCTION2 HPCDPE			2.36e4					742		3.56e5					0.000
FUNCTION3 OCDPE			0.00e0					257		0.00e0					
FUNCTION4 NCDPE			0.00e0					582		0.00e0					
FUNCTION5 DCDPE			0.00e0					313		0.00e0					

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

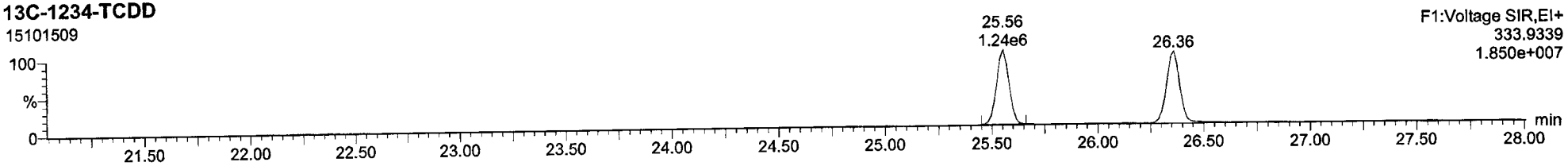
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

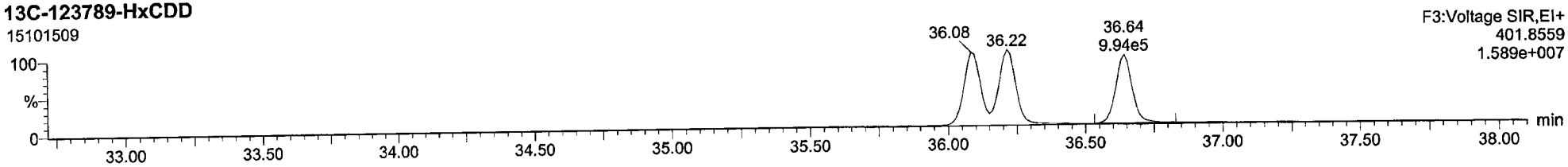
13C-1234-TCDD
15101509



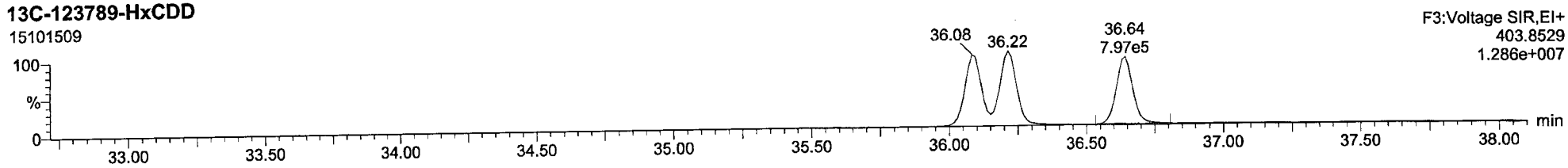
13C-1234-TCDD
15101509



13C-123789-HxCDD
15101509



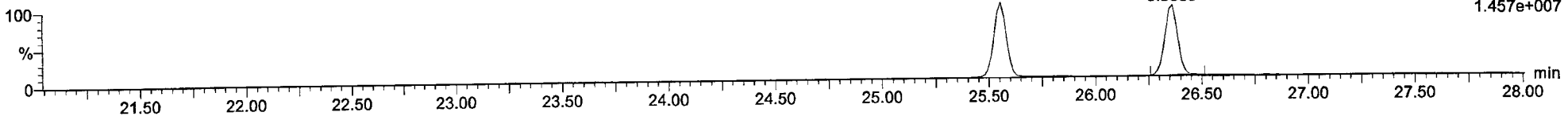
13C-123789-HxCDD
15101509



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

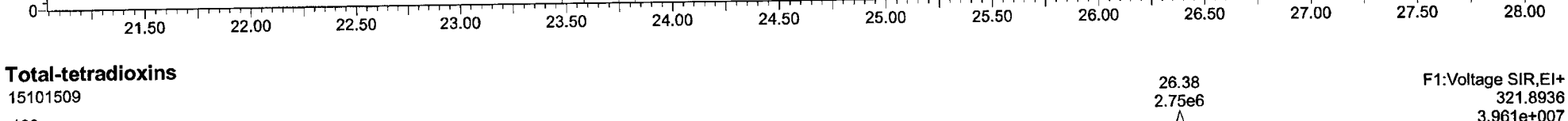
13C-2378-TCDD
15101509



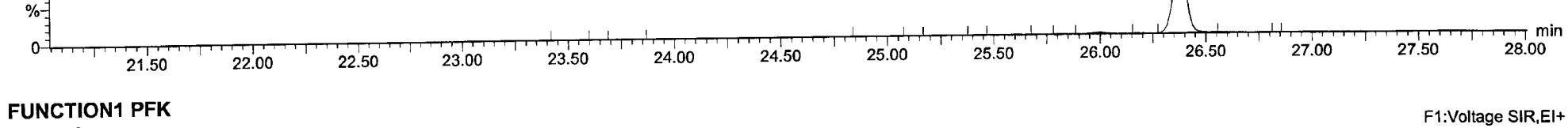
13C-2378-TCDD
15101509

Total-tetradioxins
15101509

Total-tetradioxins
15101509



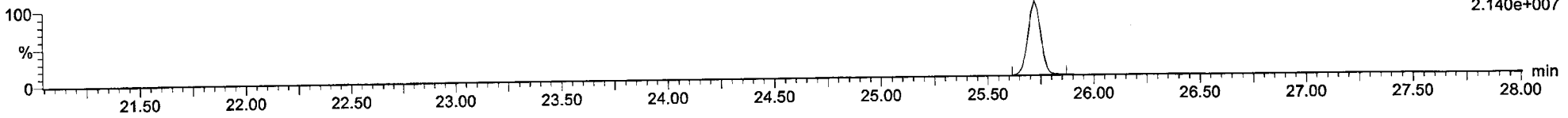
FUNCTION1 PFK
15101509



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

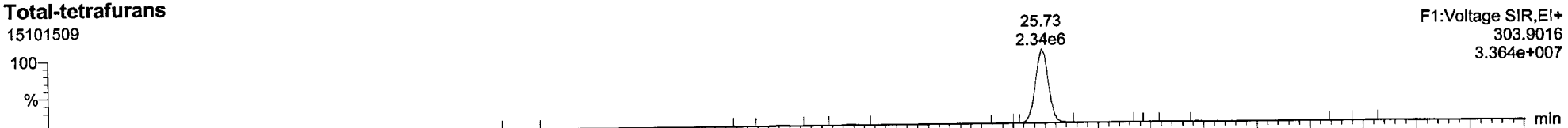
ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
15101509



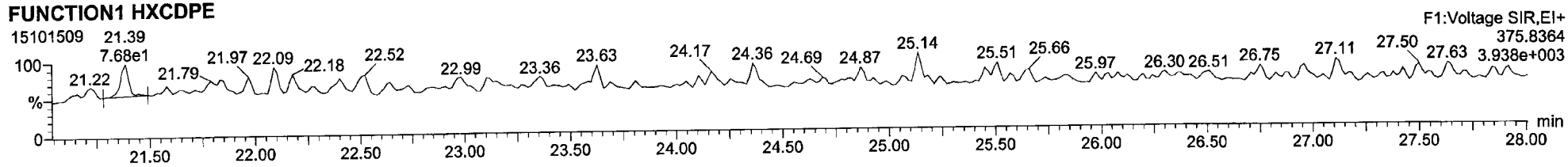
13C-2378-TCDF
15101509

Total-tetrafurans
15101509



Total-tetrafurans
15101509

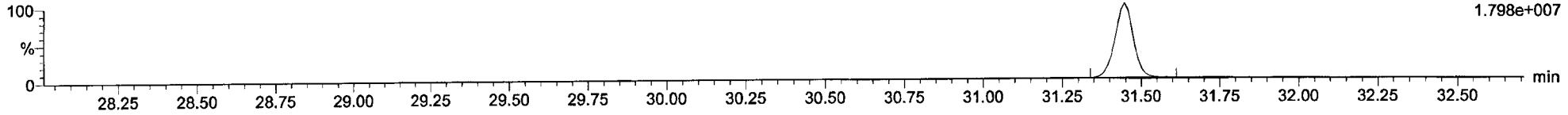
FUNCTION1 HXCDPE
15101509



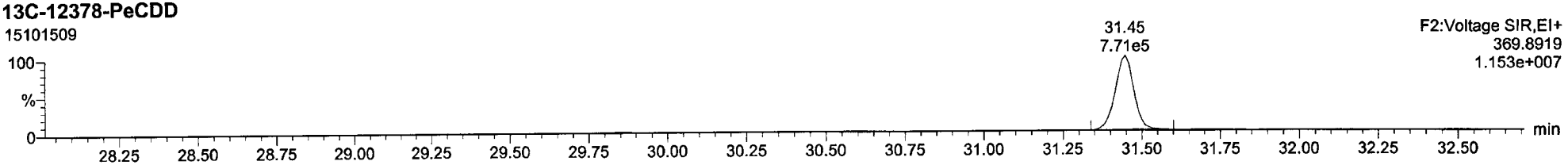
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

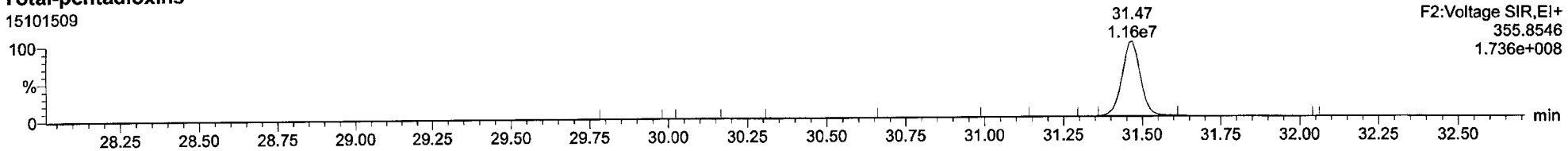
13C-12378-PeCDD
15101509



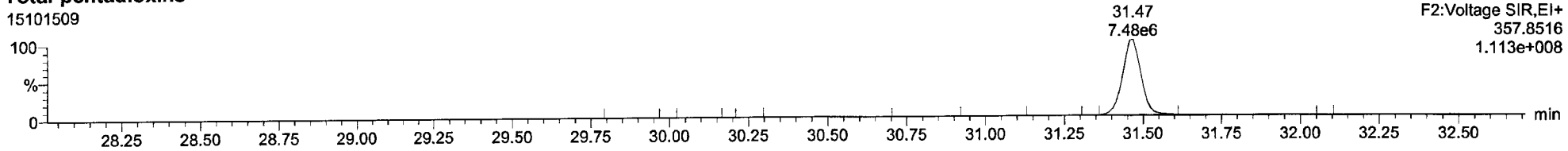
13C-12378-PeCDD
15101509



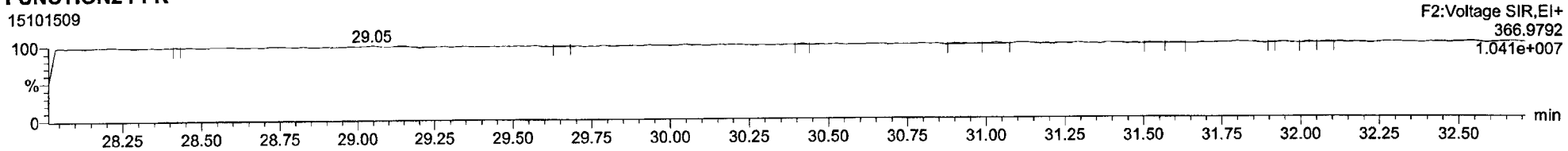
Total-pentadioxins
15101509



Total-pentadioxins
15101509



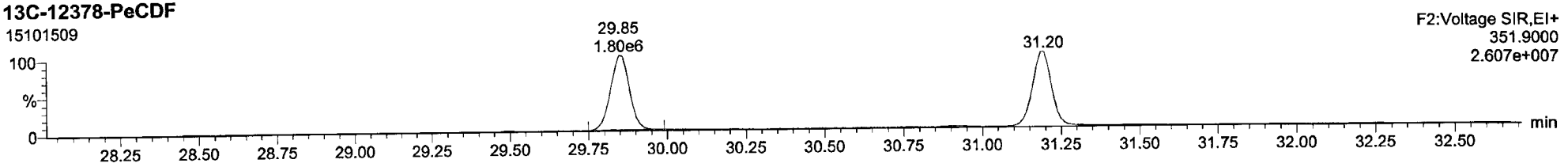
FUNCTION2 PFK
15101509



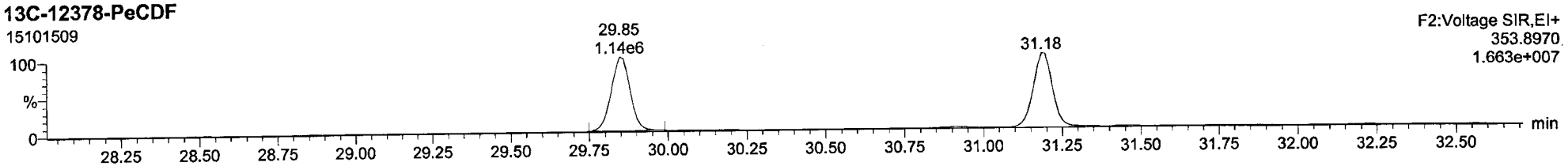
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

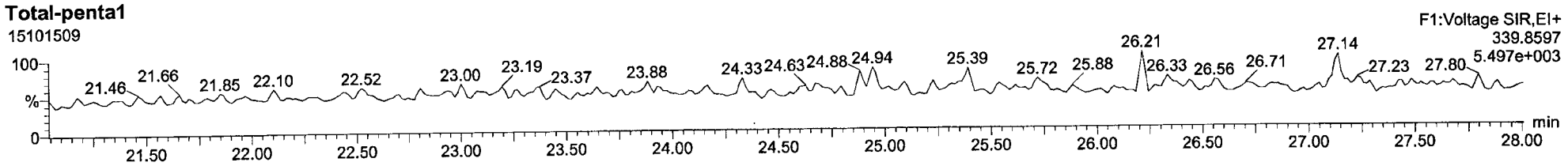
13C-12378-PeCDF



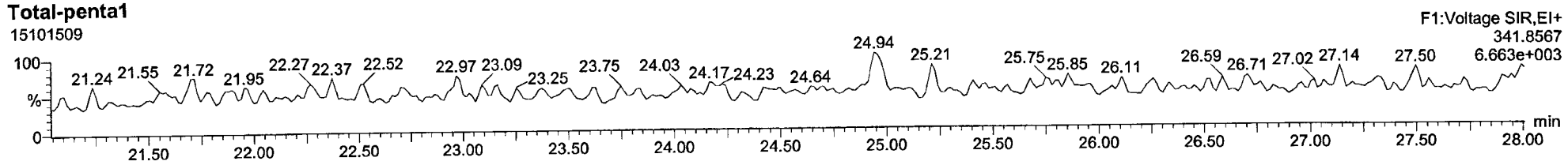
13C-12378-PeCDF



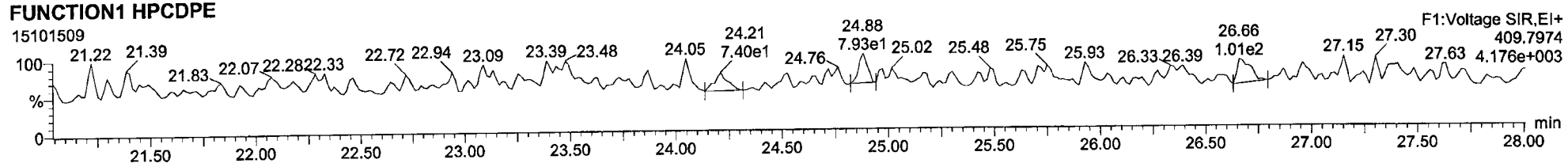
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

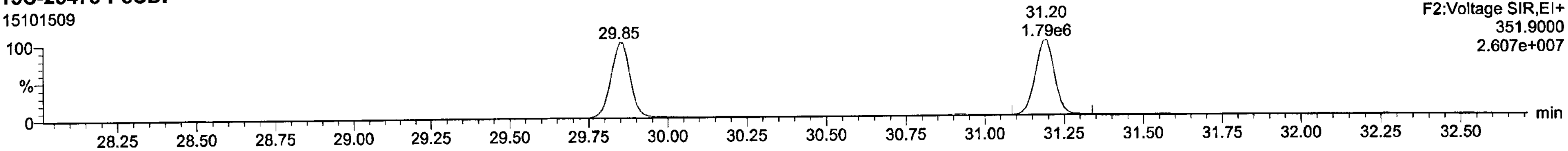
Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

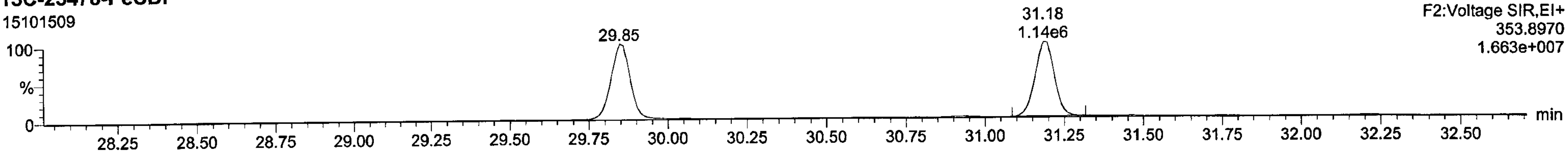
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

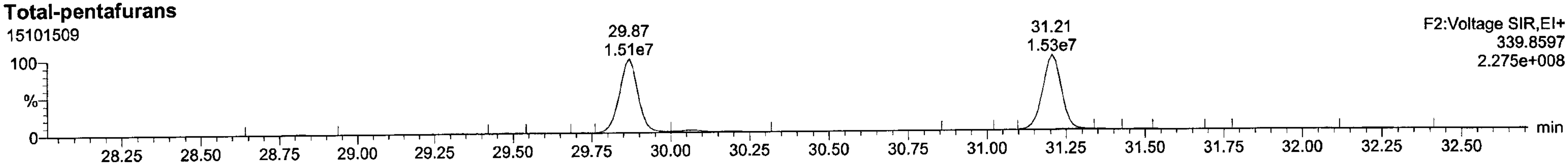
13C-23478-PeCDF



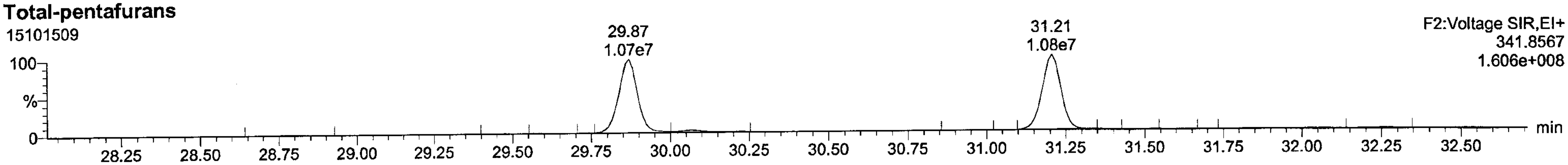
13C-23478-PeCDF



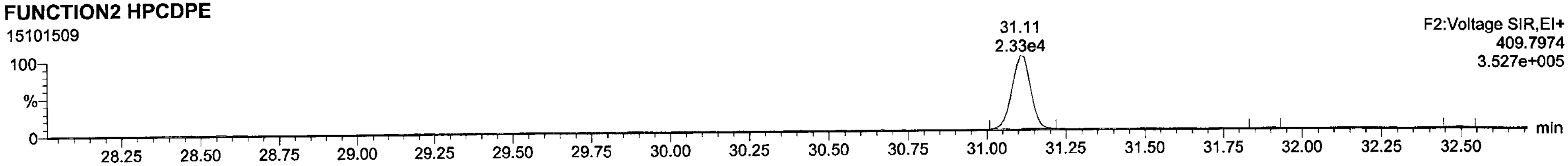
Total-pentafurans



Total-pentafurans



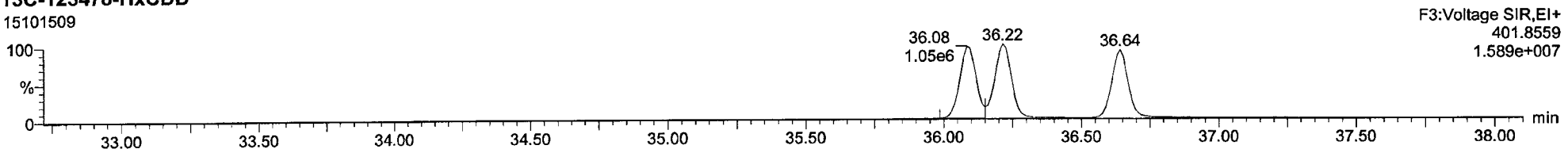
FUNCTION2 HPCDPE



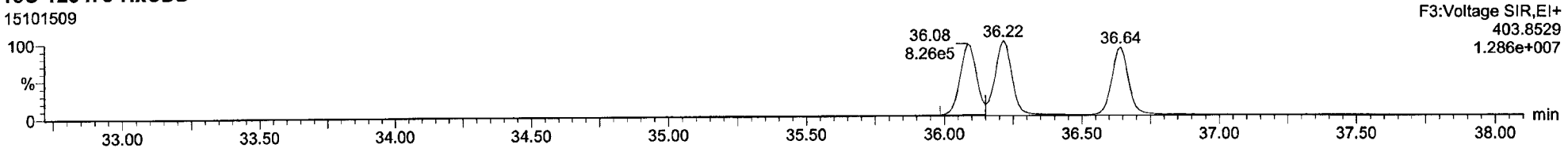
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

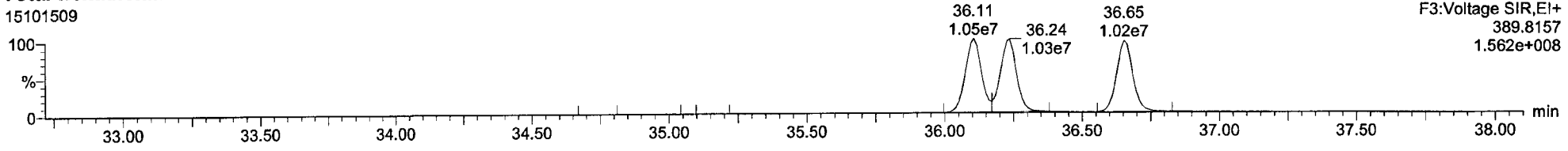
13C-123478-HxCDD



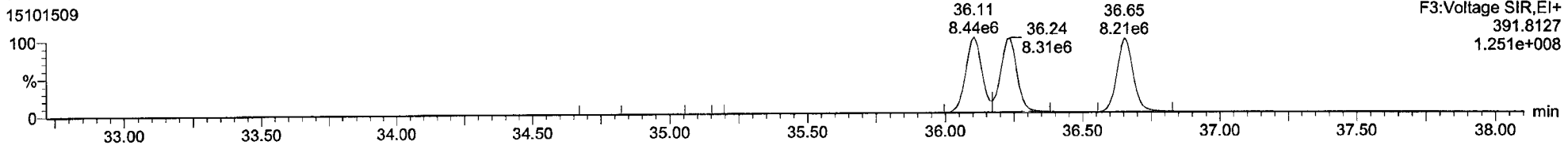
13C-123478-HxCDD



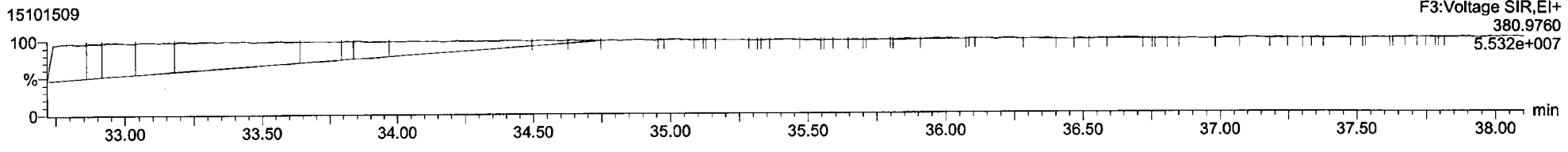
Total-hexadioxins



Total-hexadioxins



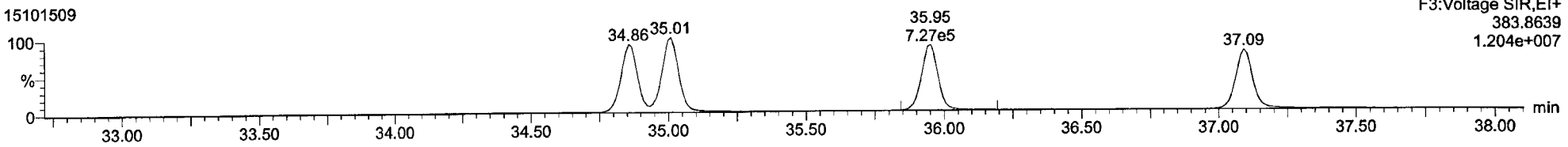
FUNCTION3 PFK



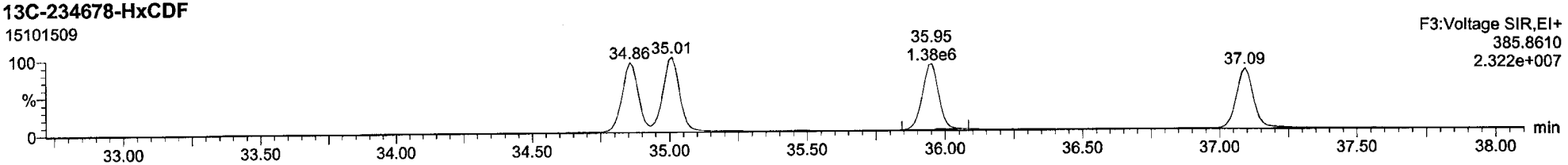
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

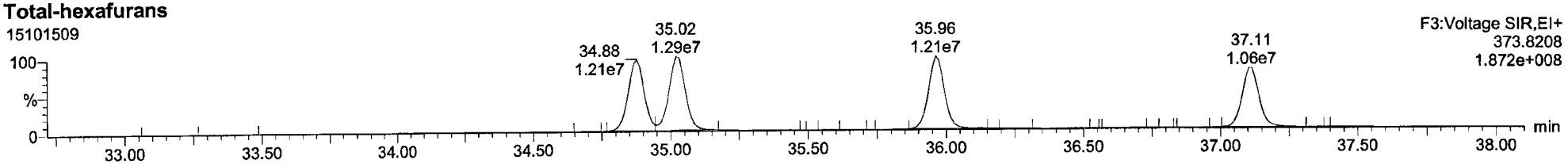
13C-234678-HxCDF



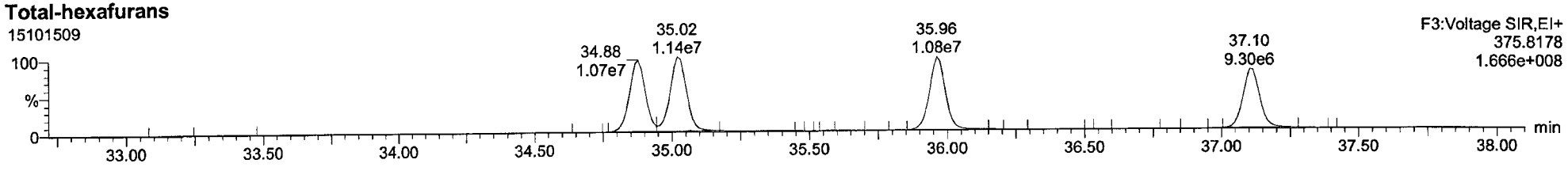
13C-234678-HxCDF



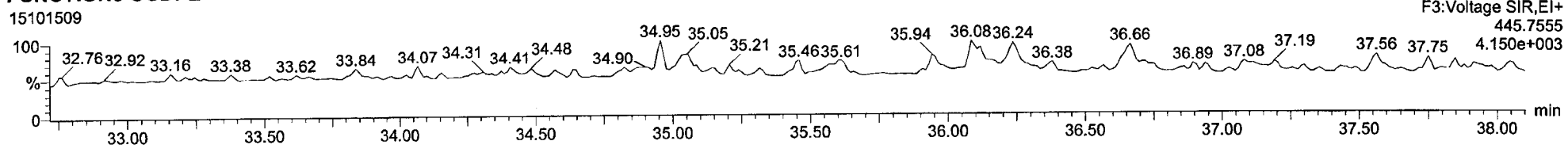
Total-hexafurans



Total-hexafurans



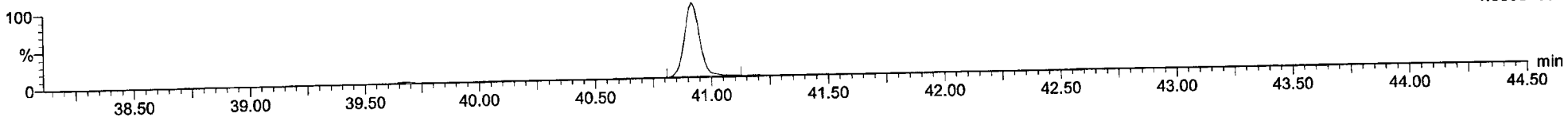
FUNCTION3 OCDPE



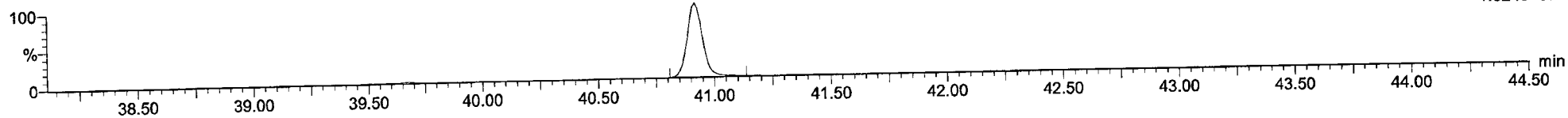
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

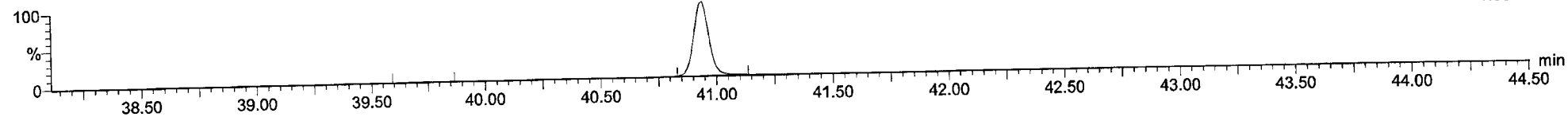
13C-1234678-HpCDD
15101509
40.92
8.05e5
F4:Voltage SIR,EI+
435.8169
1.080e+007



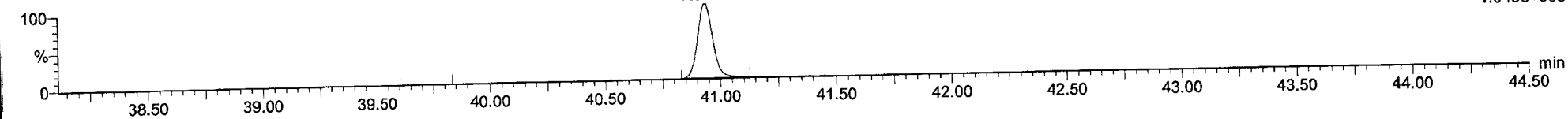
13C-1234678-HpCDD
15101509
40.92
7.72e5
F4:Voltage SIR,EI+
437.8140
1.024e+007



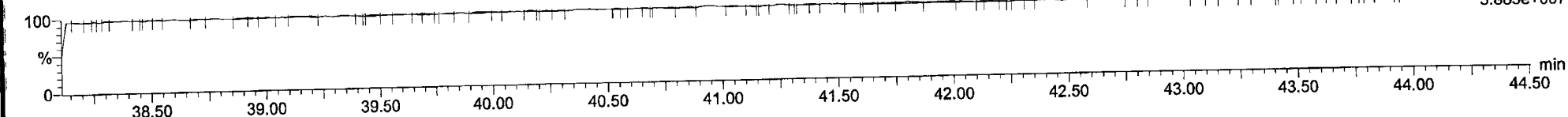
Total-heptadioxins
15101509
40.94
8.12e6
F4:Voltage SIR,EI+
423.7766
1.089e+008



Total-heptadioxins
15101509
40.94
7.81e6
F4:Voltage SIR,EI+
425.7737
1.045e+008



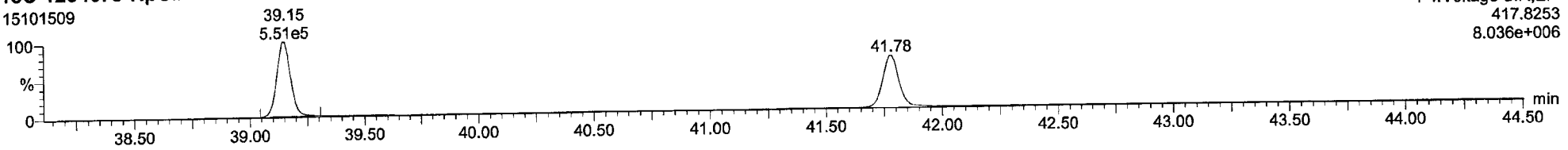
FUNCTION4 PFK
15101509
F4:Voltage SIR,EI+
430.9728
3.883e+007



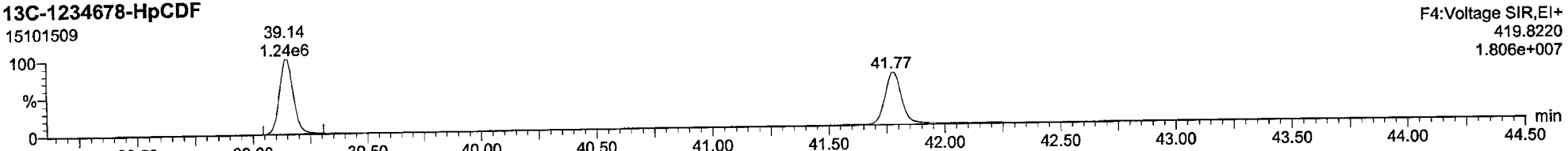
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

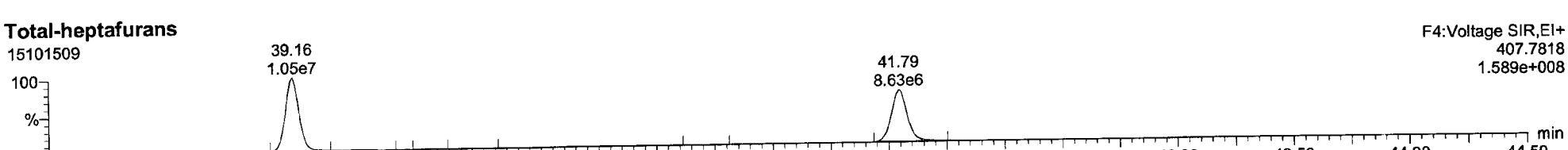
13C-1234678-HpCDF
15101509
F4:Voltage SIR,EI+
417.8253
8.036e+006



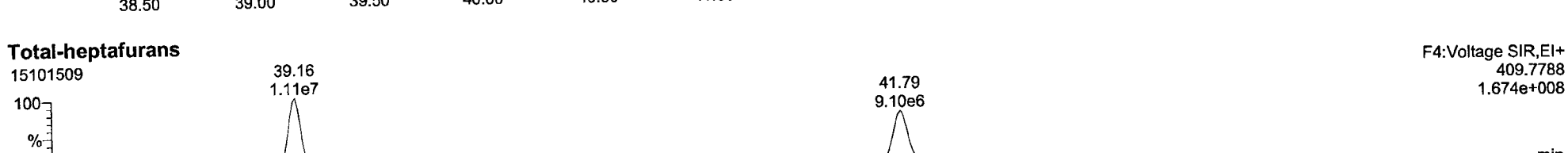
13C-1234678-HpCDF
15101509
F4:Voltage SIR,EI+
419.8220
1.806e+007



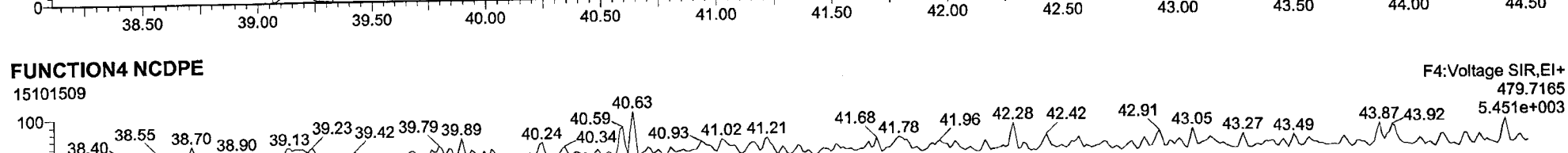
Total-heptafurans
15101509
F4:Voltage SIR,EI+
407.7818
1.589e+008



Total-heptafurans
15101509
F4:Voltage SIR,EI+
409.7788
1.674e+008



FUNCTION4 NCDPE
15101509
F4:Voltage SIR,EI+
479.7165
5.451e+003



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
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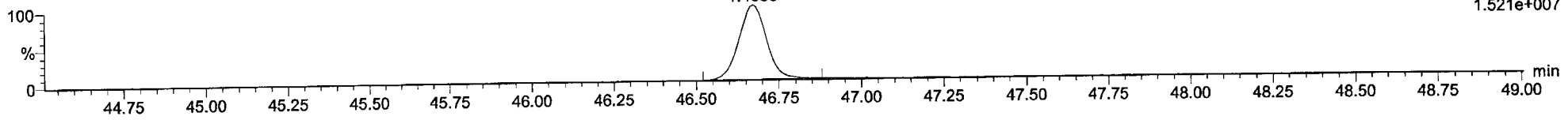
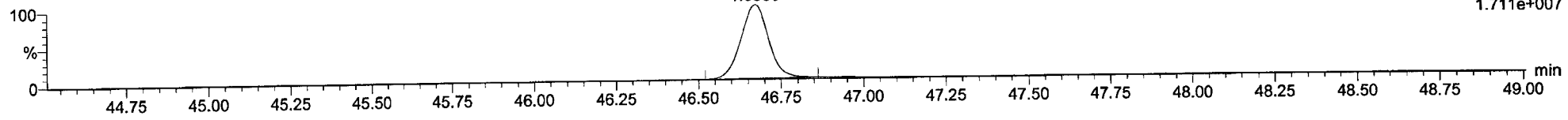
ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

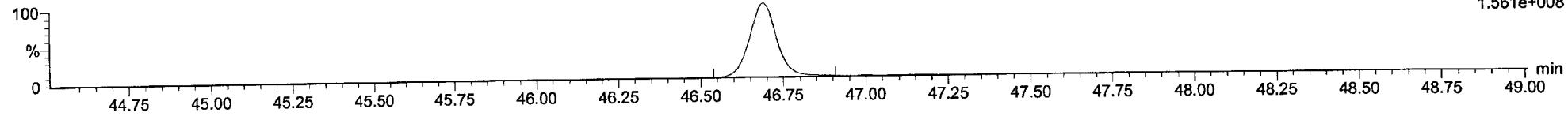
13C-OCDD
15101509
46.67
1.46e6
F5:Voltage SIR,EI+
469.7779
1.521e+007



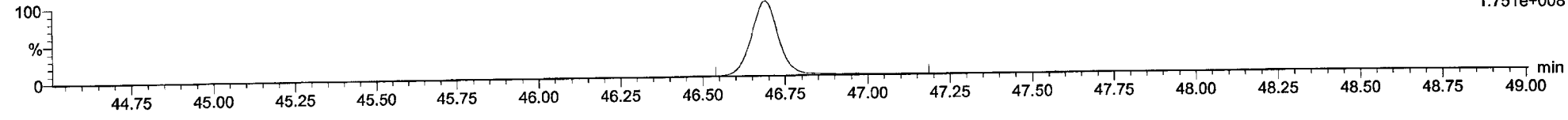
13C-OCDD
15101509
46.67
1.63e6
F5:Voltage SIR,EI+
471.7750
1.711e+007



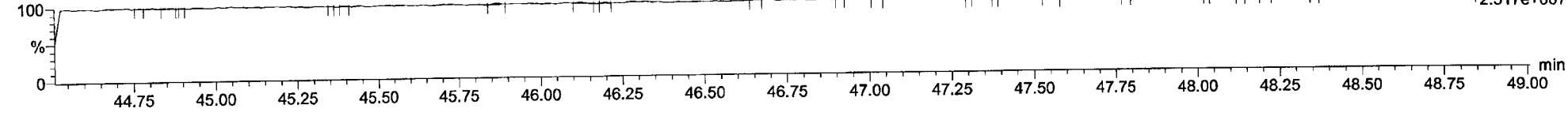
OCDD
15101509
46.69
1.48e7
F5:Voltage SIR,EI+
457.7377
1.561e+008



OCDD
15101509
46.69
1.69e7
F5:Voltage SIR,EI+
459.7348
1.751e+008



FUNCTION5 PFK
15101509
46.97
1.93e4
F5:Voltage SIR,EI+
480.9696
2.517e+007



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

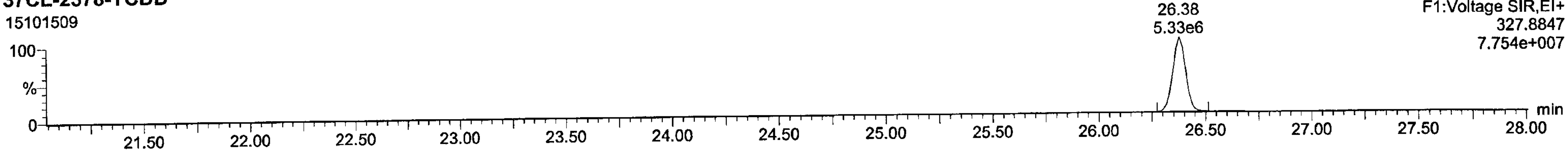
Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

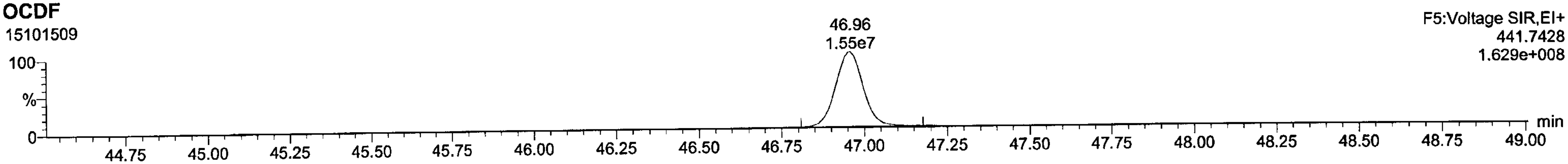
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

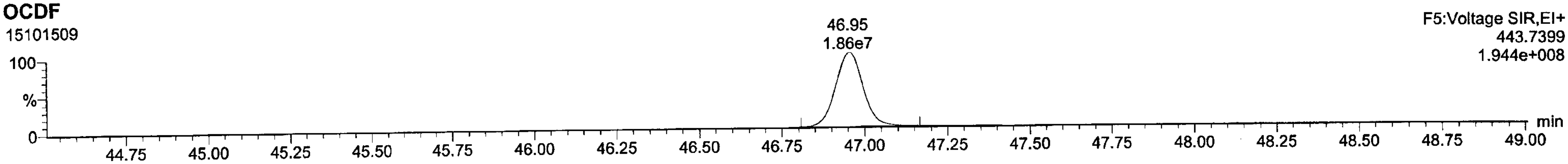
37CL-2378-TCDD



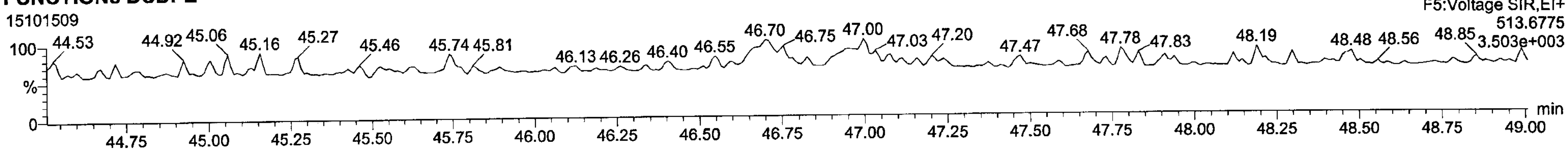
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, 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	25.750	1.001	1.00e5	1.53e5	0.827	0.655	0.770	818	1443	1.39e6	2.02e6	1694.2	NO	9.964	9.964
12378-PeCDF	29.869	1.000	6.34e5	4.64e5	0.824	1.366	1.550	2331	2631	8.96e6	6.44e6	3843.4	NO	54.863	54.863
23478-PeCDF	31.206	1.000	5.97e5	4.30e5	0.850	1.388	1.550	2331	2631	8.65e6	6.18e6	3709.7	NO	50.512	50.512
123478-HxCDF	34.879	1.000	5.06e5	4.51e5	0.973	1.123	1.240	2256	2827	7.39e6	6.55e6	3276.5	NO	56.905	56.905
234678-HxCDF	35.975	1.001	4.92e5	4.35e5	1.025	1.130	1.240	2256	2827	6.80e6	6.01e6	3012.1	NO	49.539	49.539
123678-HxCDF	35.032	1.001	5.36e5	4.85e5	0.953	1.106	1.240	2256	2827	7.39e6	6.65e6	3276.1	NO	53.673	53.673
123789-HxCDF	37.115	1.001	4.39e5	4.07e5	0.956	1.078	1.240	2256	2827	5.96e6	5.42e6	2642.6	NO	54.716	54.716
1234678-HpCDF	39.165	1.000	4.26e5	4.48e5	1.153	0.952	1.050	2326	2451	6.06e6	6.30e6	2606.3	NO	53.731	53.731
1234789-HpCDF	41.795	1.000	3.55e5	3.75e5	1.131	0.946	1.050	2326	2451	4.19e6	4.55e6	1802.9	NO	52.870	52.870
OCDF	46.952	1.006	6.28e5	7.64e5	1.023	0.822	0.890	2321	1656	6.03e6	7.32e6	2596.2	NO	118.266	118.266
2378-TCDD	26.377	1.001	9.73e4	1.26e5	1.023	0.771	0.770	1023	899	1.30e6	1.71e6	1273.8	NO	9.557	9.557
12378-PeCDD	31.469	1.001	4.96e5	3.14e5	0.939	1.579	1.550	1564	1282	6.92e6	4.42e6	4425.2	NO	49.161	49.161
123478-HxCDD	36.106	1.000	4.16e5	3.36e5	0.963	1.238	1.240	1390	2057	6.01e6	4.85e6	4322.4	NO	52.507	52.507
123678-HxCDD	36.238	1.001	4.25e5	3.44e5	0.894	1.235	1.240	1390	2057	5.94e6	4.83e6	4274.1	NO	57.661	57.661
123789-HxCDD	36.665	1.012	4.38e5	3.45e5	0.900	1.268	1.240	1390	2057	5.77e6	4.65e6	4153.0	NO	58.354	58.354
1234678-HpCDD	40.940	1.001	3.56e5	3.37e5	0.964	1.059	1.050	1688	1451	4.47e6	4.29e6	2648.7	NO	51.401	51.401
OCDD	46.683	1.000	5.93e5	6.76e5	0.969	0.877	0.890	1832	1783	5.77e6	6.48e6	3150.6	NO	113.957	113.957
13C-2378-TCDF	25.720	1.006	1.35e6	1.72e6	1.502	0.783	0.770	4199	2458	1.80e7	2.32e7	4296.9	NO		87.674
13C-12378-PeCDF	29.858	1.168	1.49e6	9.43e5	1.215	1.578	1.550	2271	3028	2.07e7	1.30e7	9114.0	NO		85.808
13C-23478-PeCDF	31.195	1.221	1.46e6	9.33e5	1.181	1.566	1.550	2271	3028	2.09e7	1.34e7	9225.0	NO		86.925
13C-123478-HxCDF	34.868	0.952	5.88e5	1.14e6	1.246	0.516	0.510	3699	2919	8.33e6	1.62e7	2253.3	NO		87.686
13C-123678-HxCDF	35.010	0.955	6.80e5	1.32e6	1.375	0.517	0.510	3699	2919	9.28e6	1.79e7	2507.7	NO		91.690
13C-234678-HxCDF	35.953	0.981	6.21e5	1.20e6	1.186	0.516	0.510	3699	2919	8.67e6	1.67e7	2343.2	NO		97.205
13C-123789-HxCDF	37.093	1.012	5.59e5	1.06e6	1.135	0.528	0.510	3699	2919	7.27e6	1.41e7	1965.7	NO		90.057
13C-1234678-HpCDF	39.154	1.069	4.31e5	9.80e5	1.020	0.440	0.440	2425	3140	6.10e6	1.39e7	2516.2	NO		87.352
13C-1234789-HpCDF	41.784	1.140	3.75e5	8.46e5	0.824	0.443	0.440	2425	3140	4.52e6	1.02e7	1862.1	NO		93.705
13C-1234-TCDD	25.555	0.000	1.03e6	1.30e6	1.000	0.788	0.770	2352	1818	1.45e7	1.83e7	6152.4	NO		100.000
13C-2378-TCDD	26.362	1.032	1.01e6	1.27e6	0.983	0.794	0.770	2352	1818	1.40e7	1.77e7	5959.9	NO		99.802
13C-12378-PeCDD	31.448	1.231	1.07e6	6.85e5	0.787	1.558	1.550	1882	1902	1.51e7	9.64e6	8020.8	NO		95.563
13C-123478-HxCDD	36.095	0.985	8.41e5	6.46e5	1.031	1.301	1.240	2297	3286	1.18e7	9.20e6	5146.9	NO		91.158
13C-123678-HxCDD	36.216	0.988	8.18e5	6.76e5	1.137	1.210	1.240	2297	3286	1.12e7	8.92e6	4888.1	NO		83.041
13C-1234678-HpCDD	40.918	1.117	7.19e5	6.79e5	0.892	1.060	1.050	1762	2253	8.99e6	8.59e6	5098.5	NO		99.053
13C-OCDD	46.665	1.273	1.09e6	1.21e6	0.852	0.901	0.890	2463	1702	1.04e7	1.16e7	4203.5	NO		170.666

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

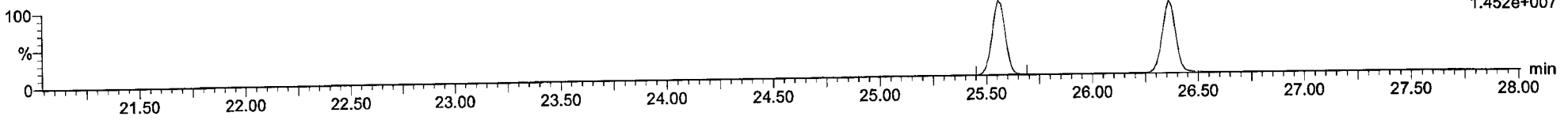
Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	36.643	0.000	8.82e5	7.00e5	1.000	1.259	1.240	2297	3286	1.20e7	9.48e6	5206.4	NO		100.000
Total-tetrafurans			1.01e5		0.827			818		1.40e6					10.057
Total-penta1			0.00e0					818		0.00e0					
Total-pentafurans			1.24e6		0.837			2331		1.78e7					106.636
Total-hexafurans			1.97e6		0.977			2256		2.76e7					215.027
Total-heptafurans			7.83e5		1.142			2326		1.03e7					106.992
Total-Furans			4.73e6		0.971			818		6.31e7					556.978
Total-tetradioxins			9.73e4		1.023			1023		1.30e6					9.557
Total-pentadioxins			4.96e5		0.939			1564		6.94e6					49.226
Total-hexadioxins			1.28e6		0.919			1390		1.78e7					168.671
Total-heptadioxins			3.57e5		0.964			1688		4.49e6					51.536
Total-Dioxins			2.83e6		0.950			1023		3.63e7					392.946
Total-TEQ			7.55e6					1023		9.93e7					949.924
37CL-2378-TCDD	26.377	1.032	2.41e5		1.091			1632		3.26e6		1996.6			9.463
FUNCTION1 PFK			1.09e6					600562		2.10e7					
FUNCTION2 PFK			2.65e6					123856		8.85e6					0.000
FUNCTION3 PFK			5.41e4					287251		1.50e6					0.000
FUNCTION4 PFK			1.28e7					267086		8.41e7					
FUNCTION5 PFK			1.56e5					226615		6.68e6					
FUNCTION1 HXCDPE			7.04e1					458		1.49e3					0.000
FUNCTION1 HPCDPE			7.64e2					687		1.43e4					0.000
FUNCTION2 HPCDPE			0.00e0					752		0.00e0					
FUNCTION3 OCDPE			0.00e0					442		0.00e0					
FUNCTION4 NCDPE			7.23e1					581		2.72e3					0.000
FUNCTION5 DCDPE			0.00e0					326		0.00e0					

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
15101510



13C-1234-TCDD
15101510

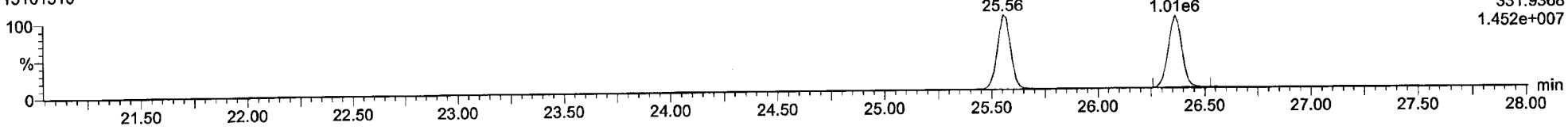
13C-123789-HxCDD
15101510

13C-123789-HxCDD
15101510

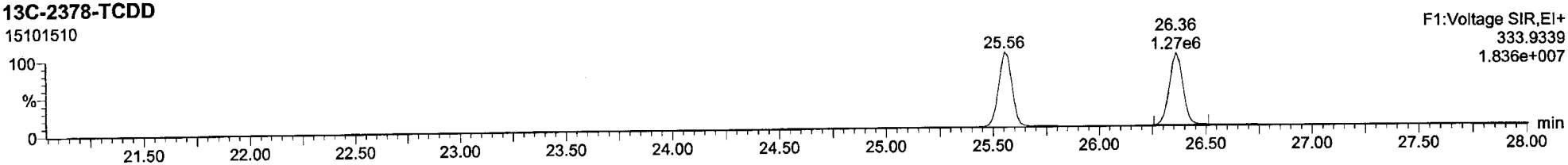
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

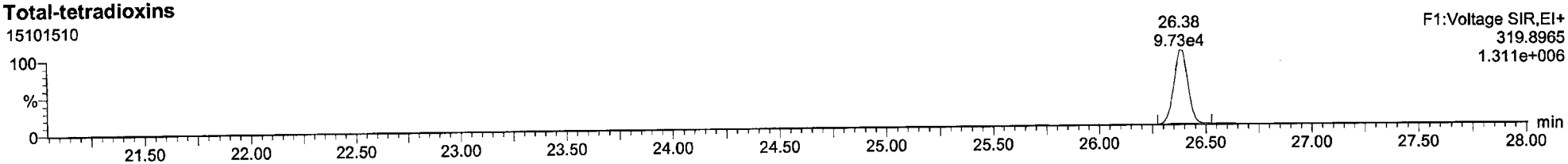
13C-2378-TCDD
15101510



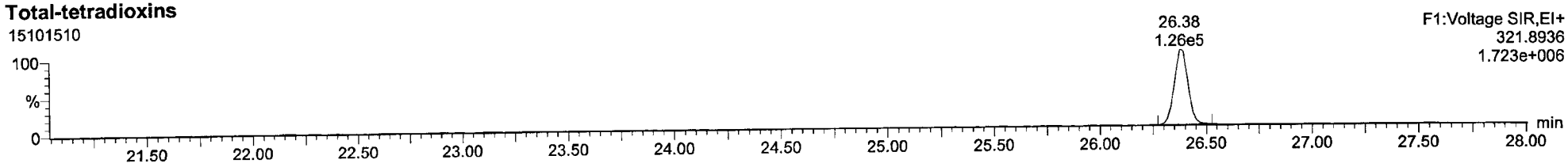
13C-2378-TCDD
15101510



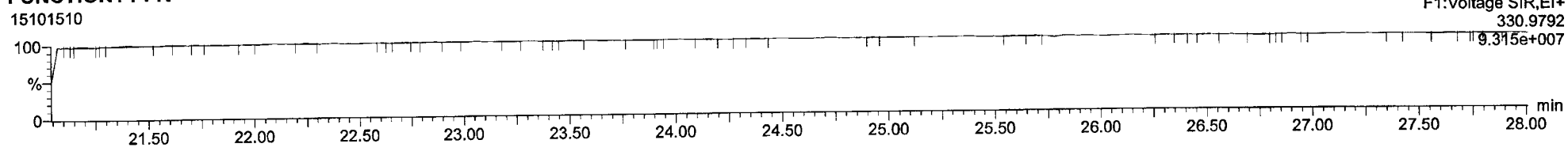
Total-tetradioxins
15101510



Total-tetradioxins
15101510



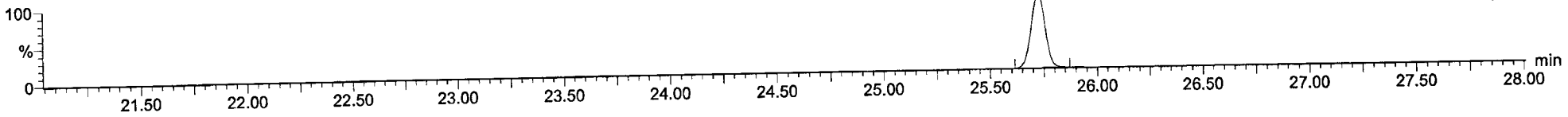
FUNCTION1 PFK
15101510



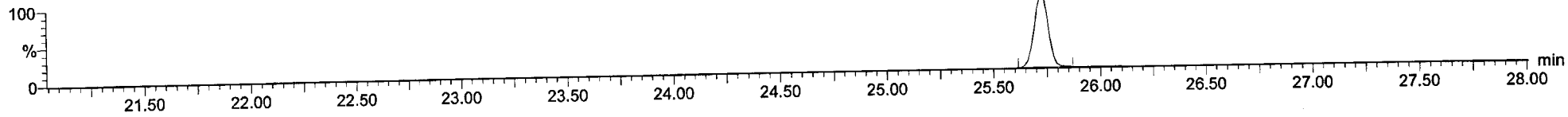
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

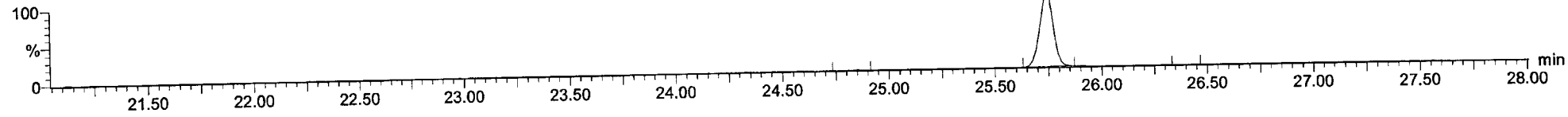
13C-2378-TCDF
15101510
25.72
1.35e6
F1:Voltage SIR,EI+
315.9419
1.812e+007



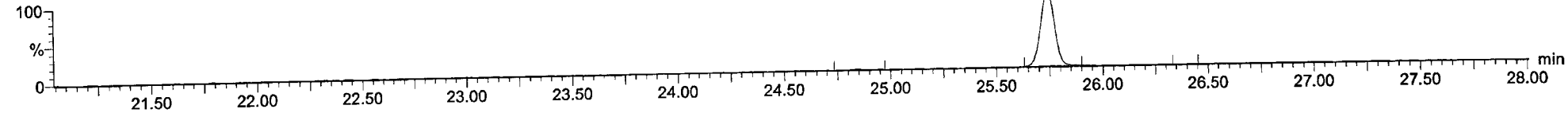
13C-2378-TCDF
15101510
25.72
1.72e6
F1:Voltage SIR,EI+
317.9389
2.327e+007



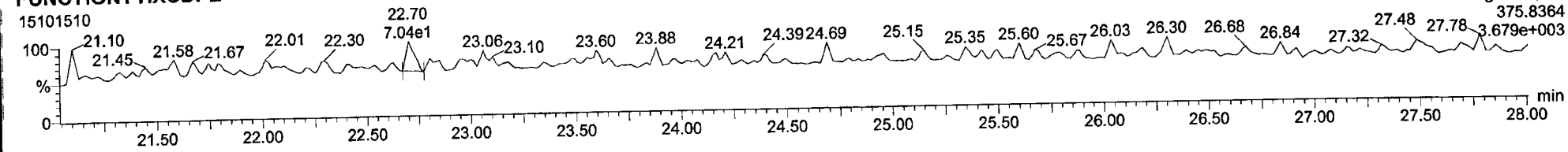
Total-tetrafurans
15101510
25.75
1.00e5
F1:Voltage SIR,EI+
303.9016
1.396e+006



Total-tetrafurans
15101510
25.73
1.53e5
F1:Voltage SIR,EI+
305.8987
2.035e+006



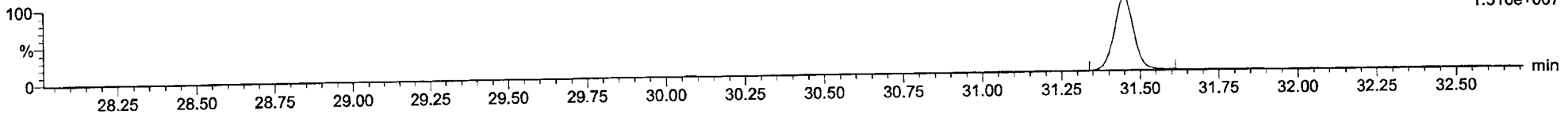
FUNCTION1 HXCDPE
15101510
F1:Voltage SIR,EI+
375.8364
3.679e+003



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD
15101510

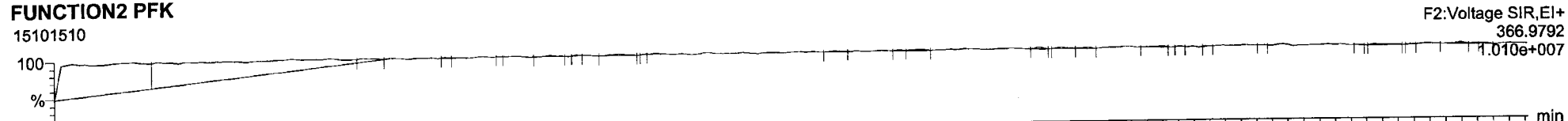


13C-12378-PeCDD
15101510

Total-pentadioxins
15101510

Total-pentadioxins
15101510

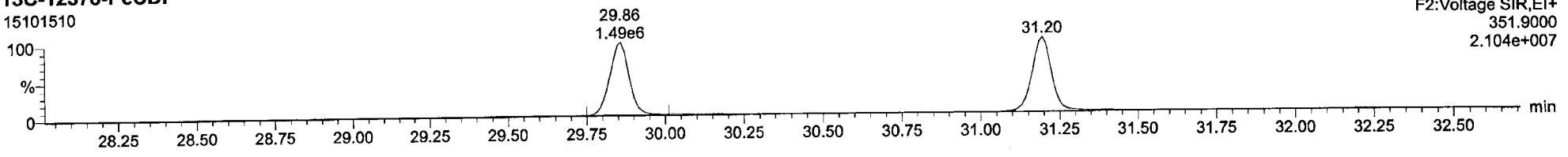
FUNCTION2 PFK
15101510



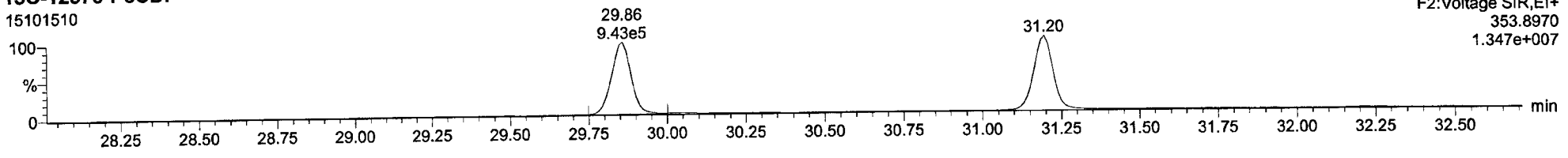
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

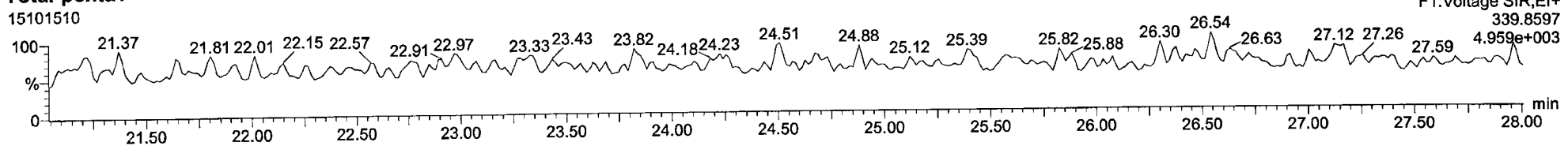
13C-12378-PeCDF
15101510
F2:Voltage SIR,EI+
351.9000
2.104e+007



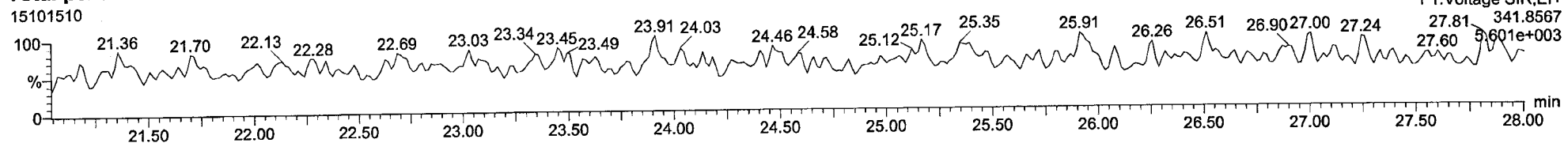
13C-12378-PeCDF
15101510
F2:Voltage SIR,EI+
353.8970
1.347e+007



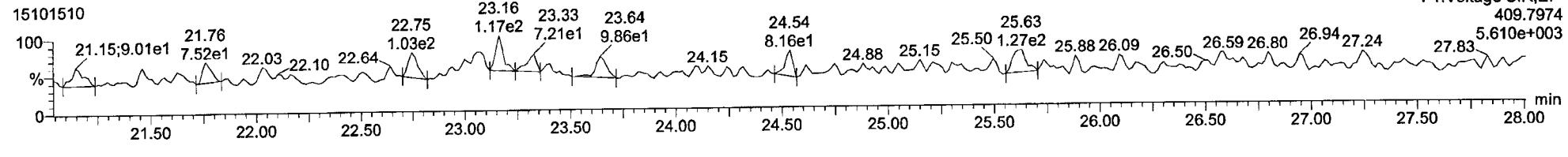
Total-penta1
15101510
F1:Voltage SIR,EI+
339.8597
4.959e+003



Total-penta1
15101510
F1:Voltage SIR,EI+
341.8567
5.601e+003



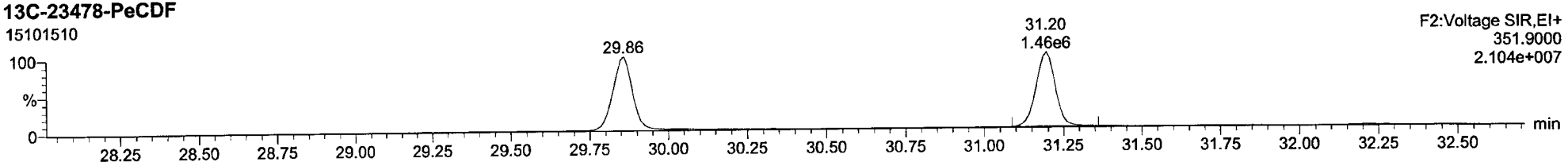
FUNCTION1 HPCDPE
15101510
F1:Voltage SIR,EI+
409.7974
5.610e+003



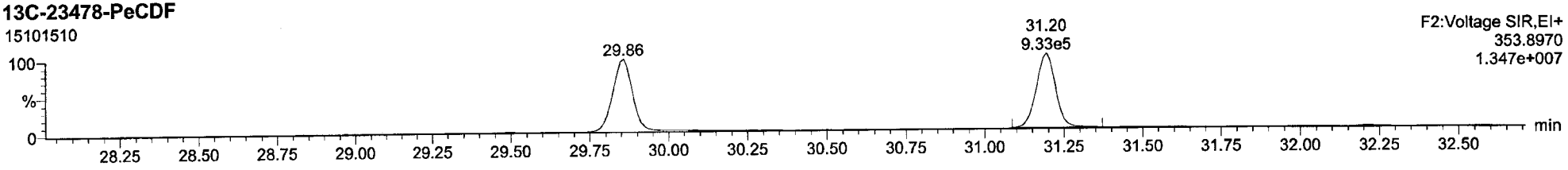
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

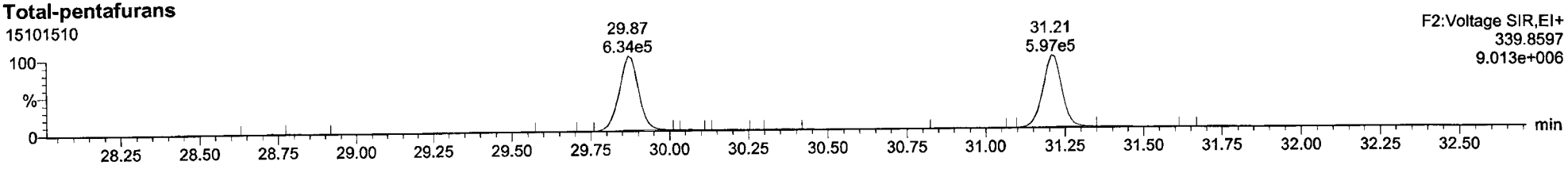
13C-23478-PeCDF
15101510



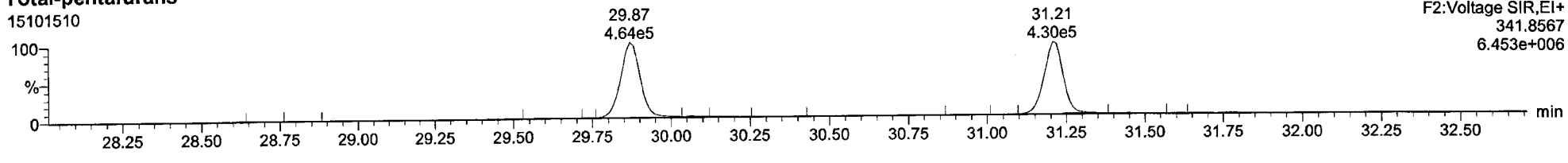
13C-23478-PeCDF
15101510



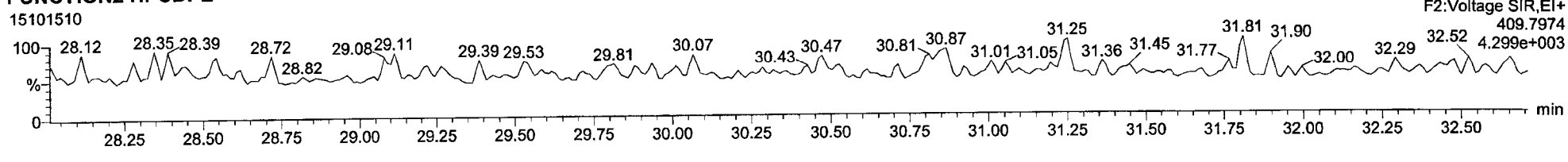
Total-pentafurans
15101510



Total-pentafurans
15101510



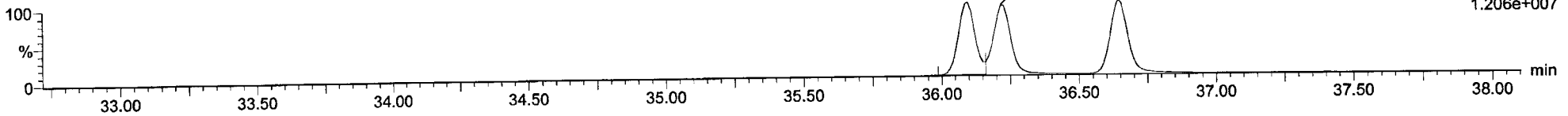
FUNCTION2 HPCDPE
15101510



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

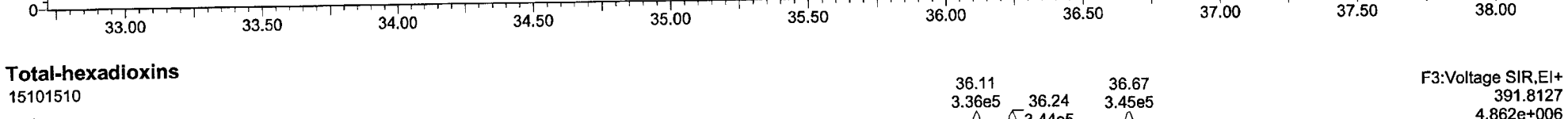
13C-123478-HxCDD
15101510
F3:Voltage SIR,EI+
401.8559
1.206e+007



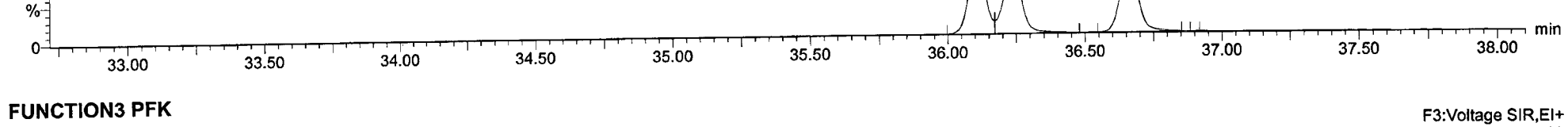
13C-123478-HxCDD
15101510
F3:Voltage SIR,EI+
403.8529
9.564e+006

Total-hexadioxins
15101510
F3:Voltage SIR,EI+
389.8157
6.026e+006

Total-hexadioxins
15101510
F3:Voltage SIR,EI+
391.8127
4.862e+006



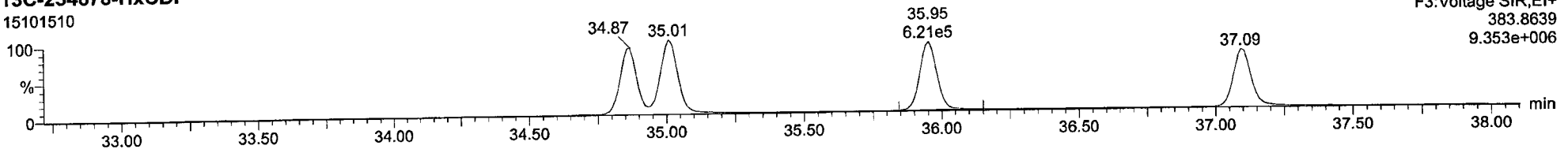
FUNCTION3 PFK
15101510
F3:Voltage SIR,EI+
380.9760
5.273e+007



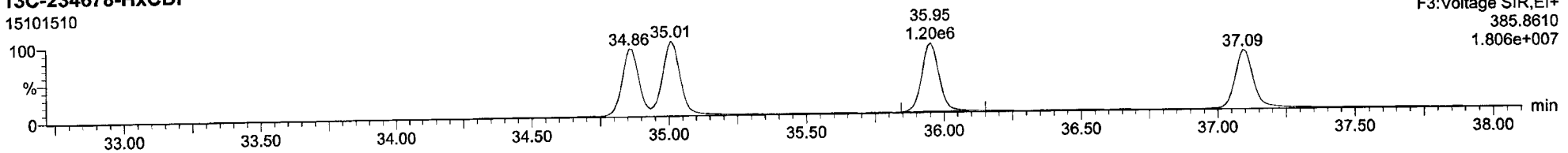
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

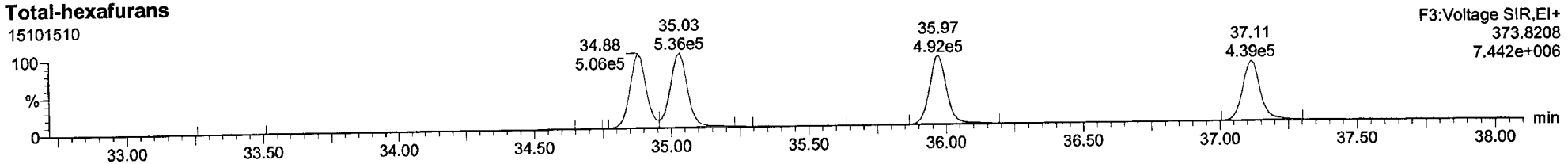
13C-234678-HxCDF
15101510
F3:Voltage SIR,EI+
383.8639
9.353e+006



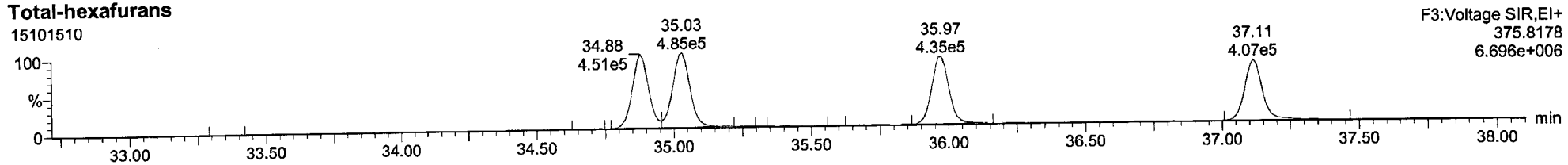
13C-234678-HxCDF
15101510
F3:Voltage SIR,EI+
385.8610
1.806e+007



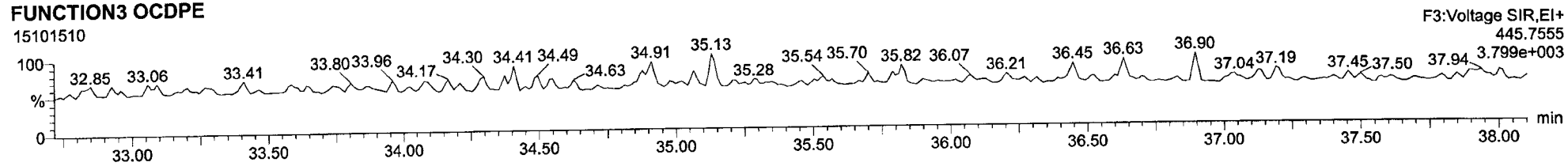
Total-hexafurans
15101510
F3:Voltage SIR,EI+
373.8208
7.442e+006



Total-hexafurans
15101510
F3:Voltage SIR,EI+
375.8178
6.696e+006



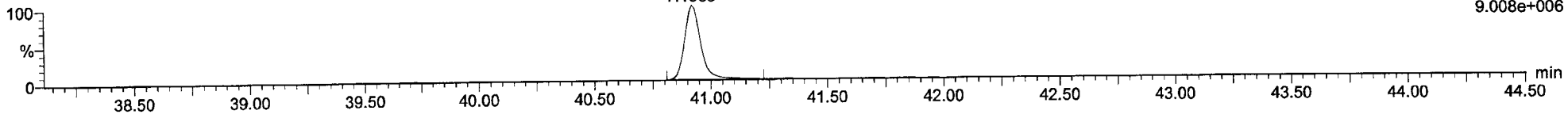
FUNCTION3 OCDPE
15101510
F3:Voltage SIR,EI+
445.7555
3.799e+003



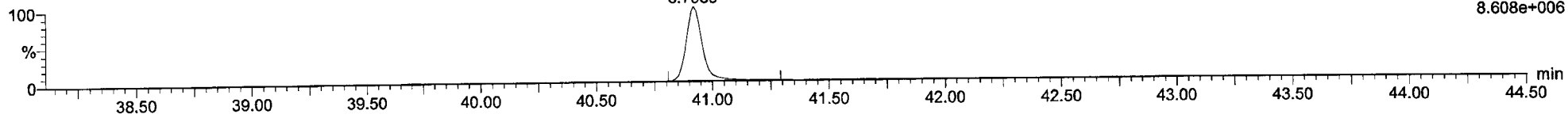
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

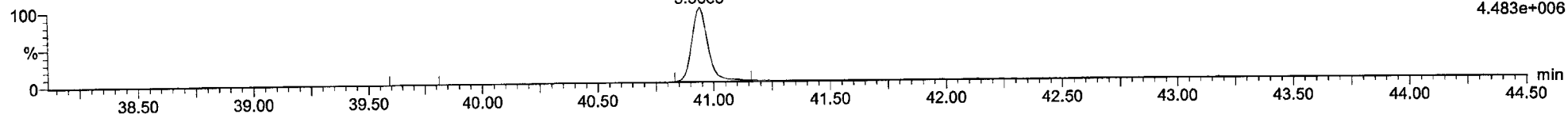
13C-1234678-HpCDD
15101510
40.92
7.19e5
F4:Voltage SIR,EI+
435.8169
9.008e+006



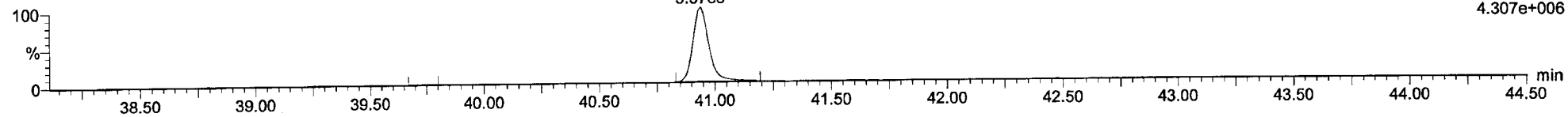
13C-1234678-HpCDD
15101510
40.92
6.79e5
F4:Voltage SIR,EI+
437.8140
8.608e+006



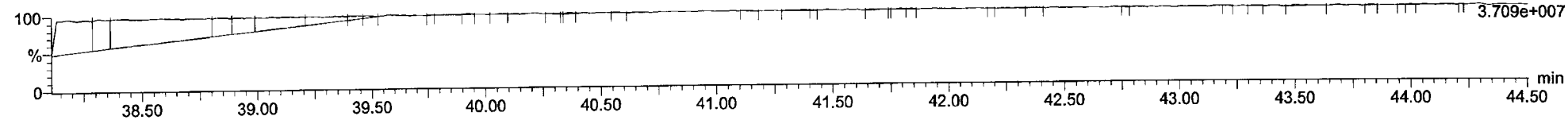
Total-heptadioxins
15101510
40.94
3.56e5
F4:Voltage SIR,EI+
423.7766
4.483e+006



Total-heptadioxins
15101510
40.94
3.37e5
F4:Voltage SIR,EI+
425.7737
4.307e+006



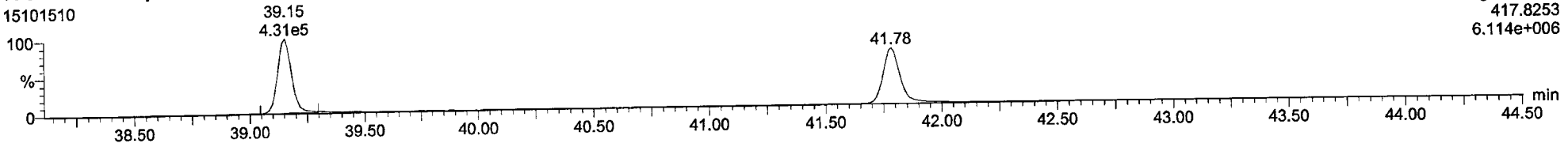
FUNCTION4 PFK
15101510
F4:Voltage SIR,EI+
430.9728
3.709e+007



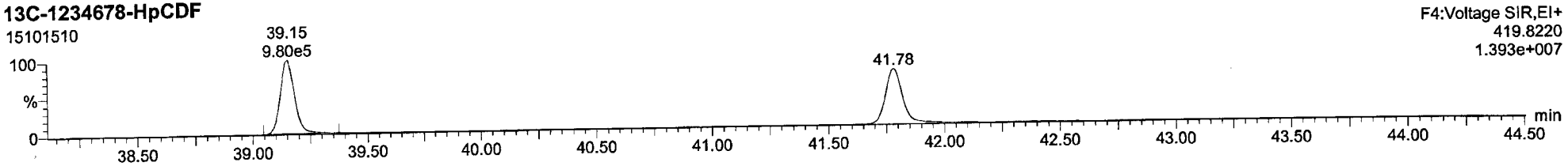
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

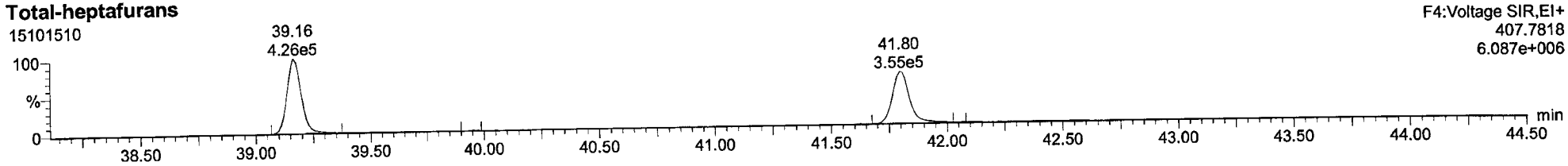
13C-1234678-HpCDF



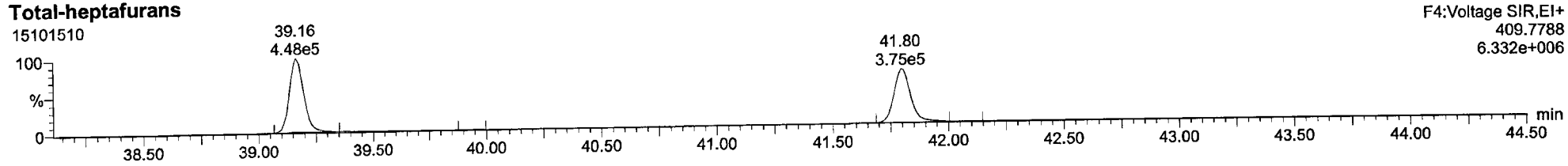
13C-1234678-HpCDF



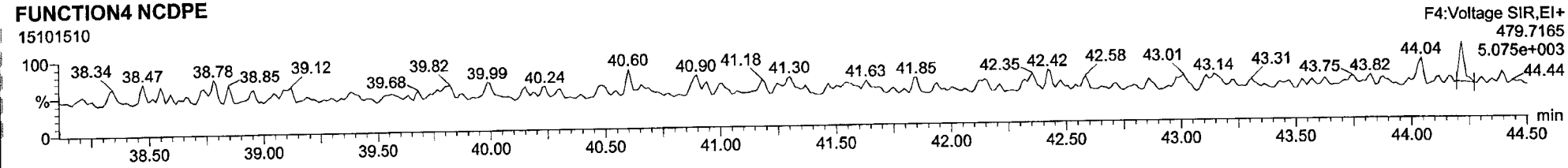
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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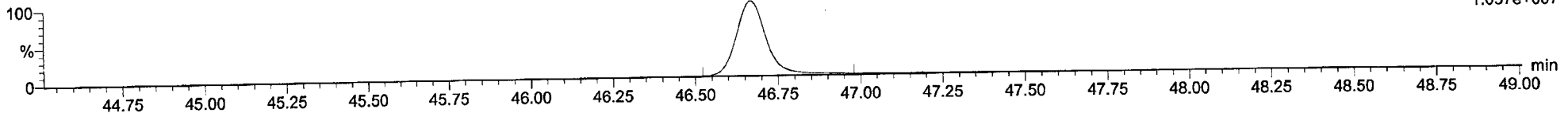
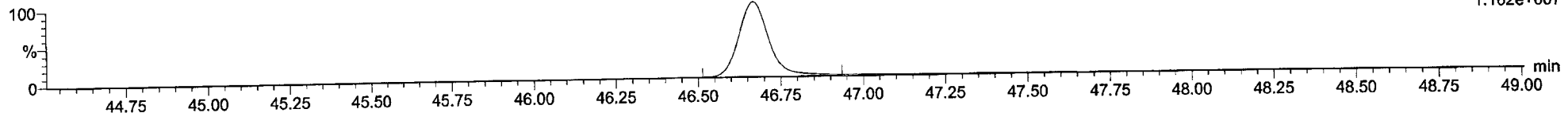
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

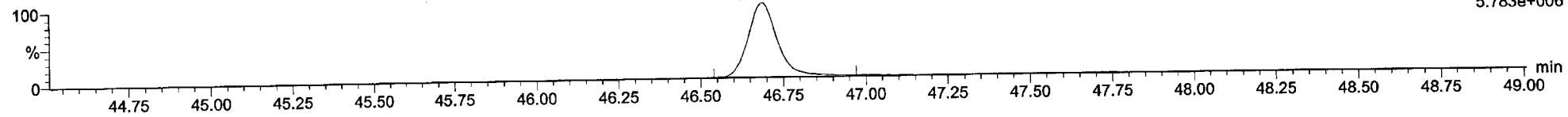
13C-OCDD
15101510
46.67
1.09e6
F5:Voltage SIR,EI+
469.7779
1.037e+007



13C-OCDD
15101510
46.67
1.21e6
F5:Voltage SIR,EI+
471.7750
1.162e+007



OCDD
15101510
46.68
5.93e5
F5:Voltage SIR,EI+
457.7377
5.783e+006



OCDD
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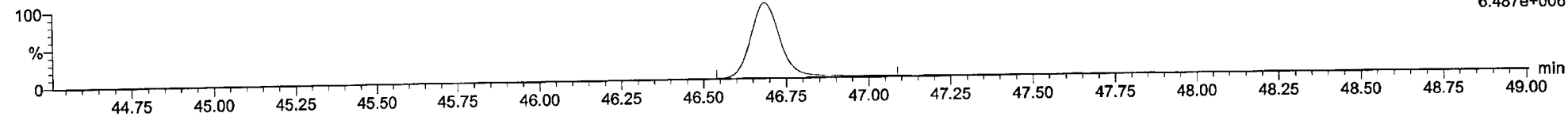
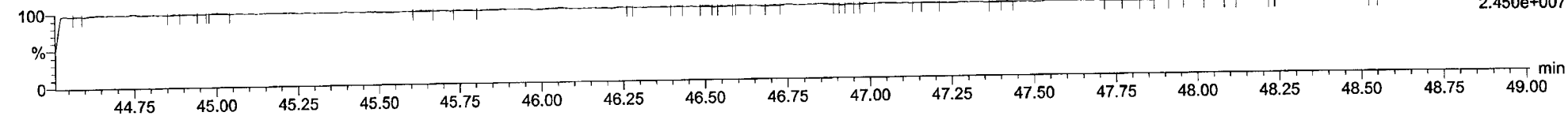
46.68
6.76e5
F5:Voltage SIR,EI+
459.7348
6.487e+006



FUNCTION5 PFK
15101510
F5:Voltage SIR,EI+
480.9696
2.450e+007



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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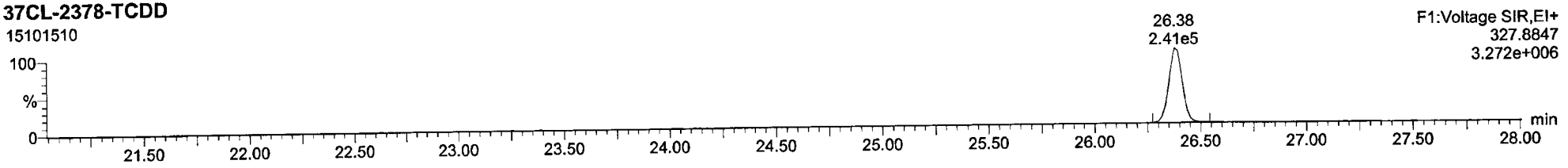
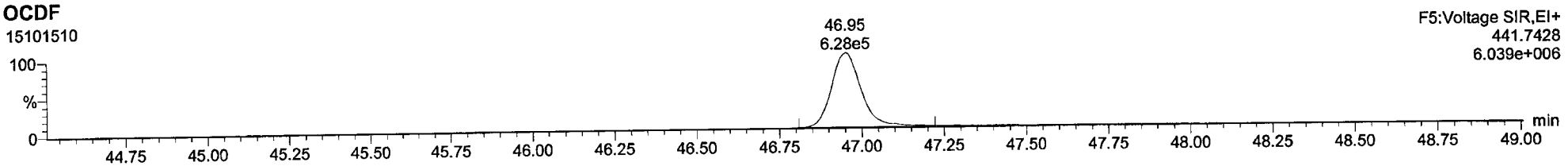
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

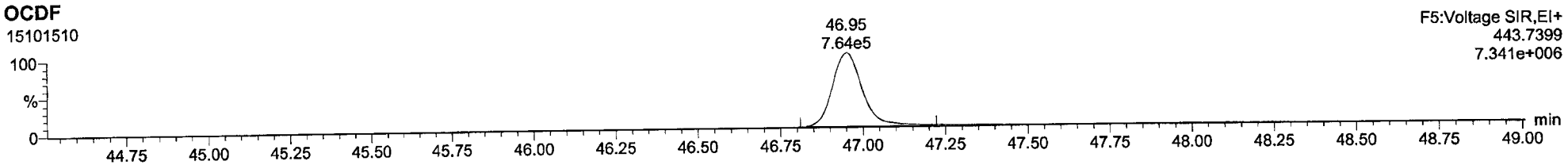
37CL-2378-TCDD
15101510



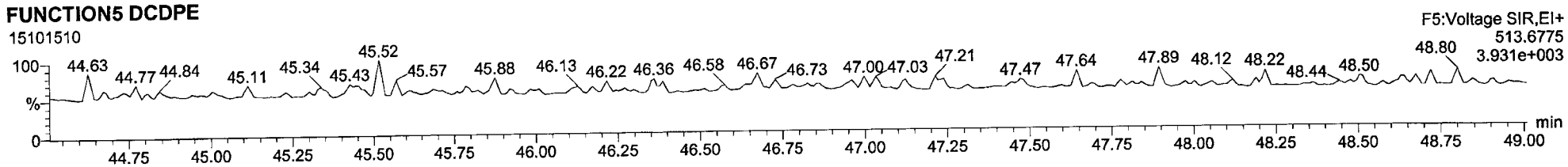
OCDF
15101510



OCDF
15101510



FUNCTION5 DCDPE
15101510



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: APR4

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ELEMENT/NWA: ATSO

Client ID: Archer

Element Calibration Code: YJ0017

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Analysis ~~Start~~ Date: 1/29/16

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / ✓	Signal / Noise ≥ 3.0?	(Y) / N / ✓
TCDD /TCDF Resolution ≤ 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 ≤ 25%?	NA /
EPA Case #	NA/	Technical Review?	/

Detail problems, corrective actions and/or other pertinent information below:

Ok

(Review 1)Analyst: [signature] Date: 2/1/16

(Review 2)Peer: Date:

(Final Review)Reviewer: [signature] Date: 2/2

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 1/29/16 Analysis: Dioxins Analyst: JL

GC Program: 8290D Column No: D1322 Column Type: DX-Dioxin 2

Inj Vol: 1ul Instrument Tune (IPR): Dandelb 1-5 Detector Voltage: 340

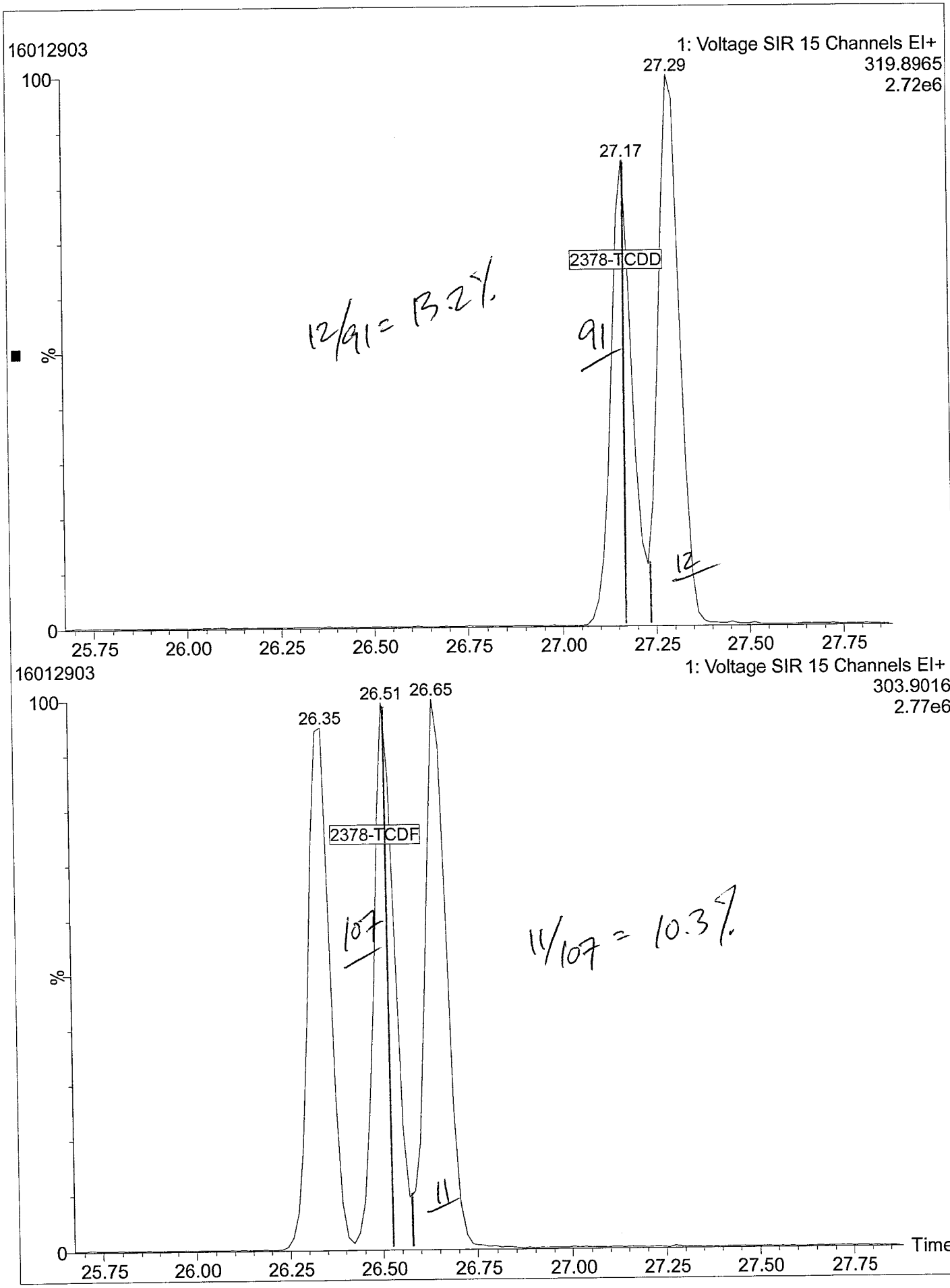
Resolution Check Files: 10:55, 23:28 Curve Date: 10/15/15

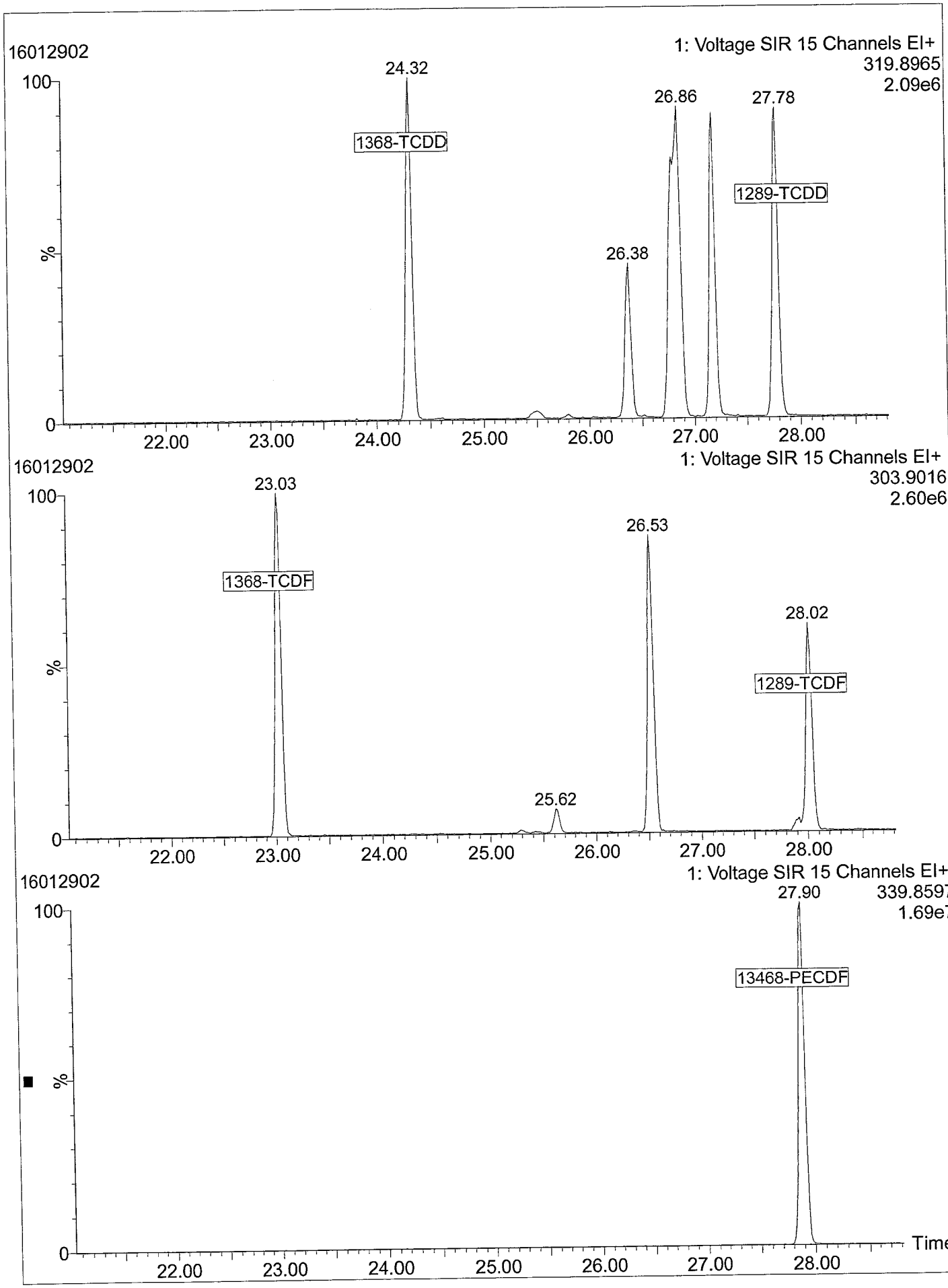
IS/SS	Ical/Ccal	LCS/ICV
D4376	C125	
	C4214	

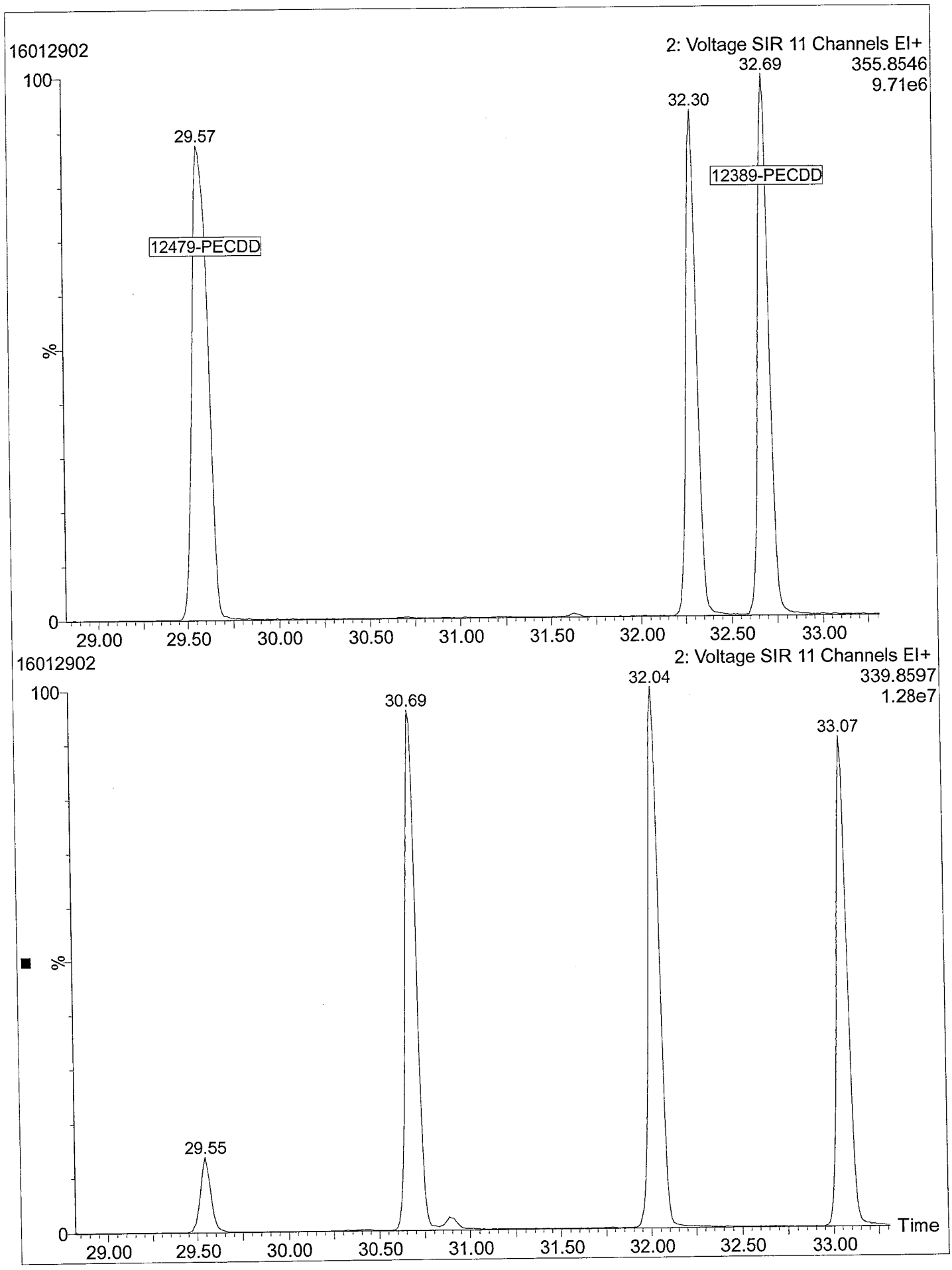
#	Acq.Date	Acq.Time	File	ID	Comments
1	29-Jan-16	10:58:17	16012902	CS3	
2	29-Jan-16	11:49:44	16012903	ISC01	
3	29-Jan-16	14:28:15	16012904	AT50MBT	
4	29-Jan-16	15:20:03	16012905	AT50OPR	
5	29-Jan-16	16:13:47	16012906	APR4A	
6	29-Jan-16	17:07:35	16012907	AT50A	
7	29-Jan-16	18:01:18	16012908	AT50B	
8	29-Jan-16	18:55:08	16012909	AT50C	
9	29-Jan-16	19:48:42	16012910	AT50D	
10	29-Jan-16	20:42:23	16012911	AT50E	
11	29-Jan-16	21:36:00	16012912	AT50F	
12	29-Jan-16	22:29:47	16012913	CS3	
13	29-Jan-16	23:28:05	16012914	TOL E0285	

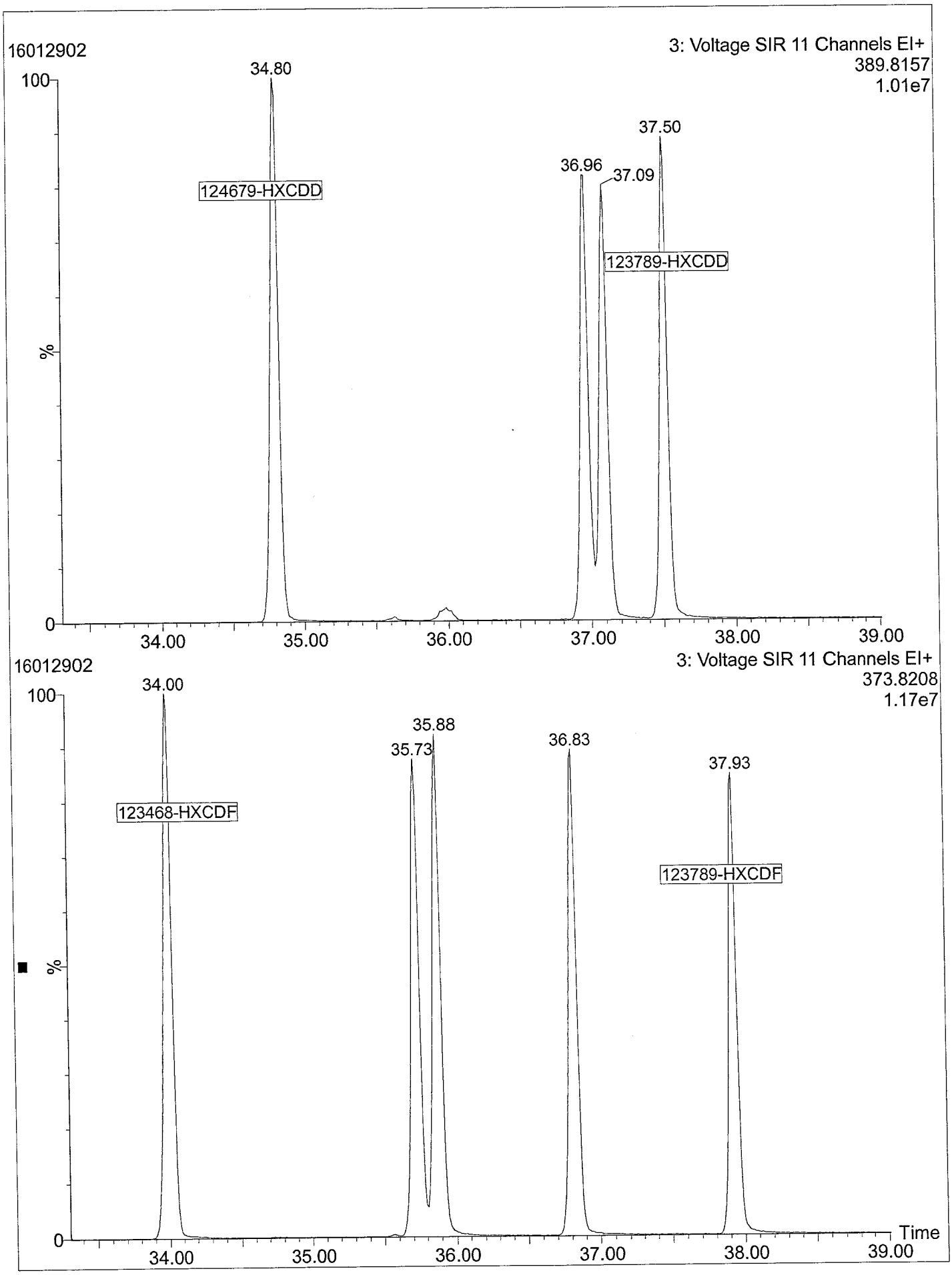
JL 2/1/16

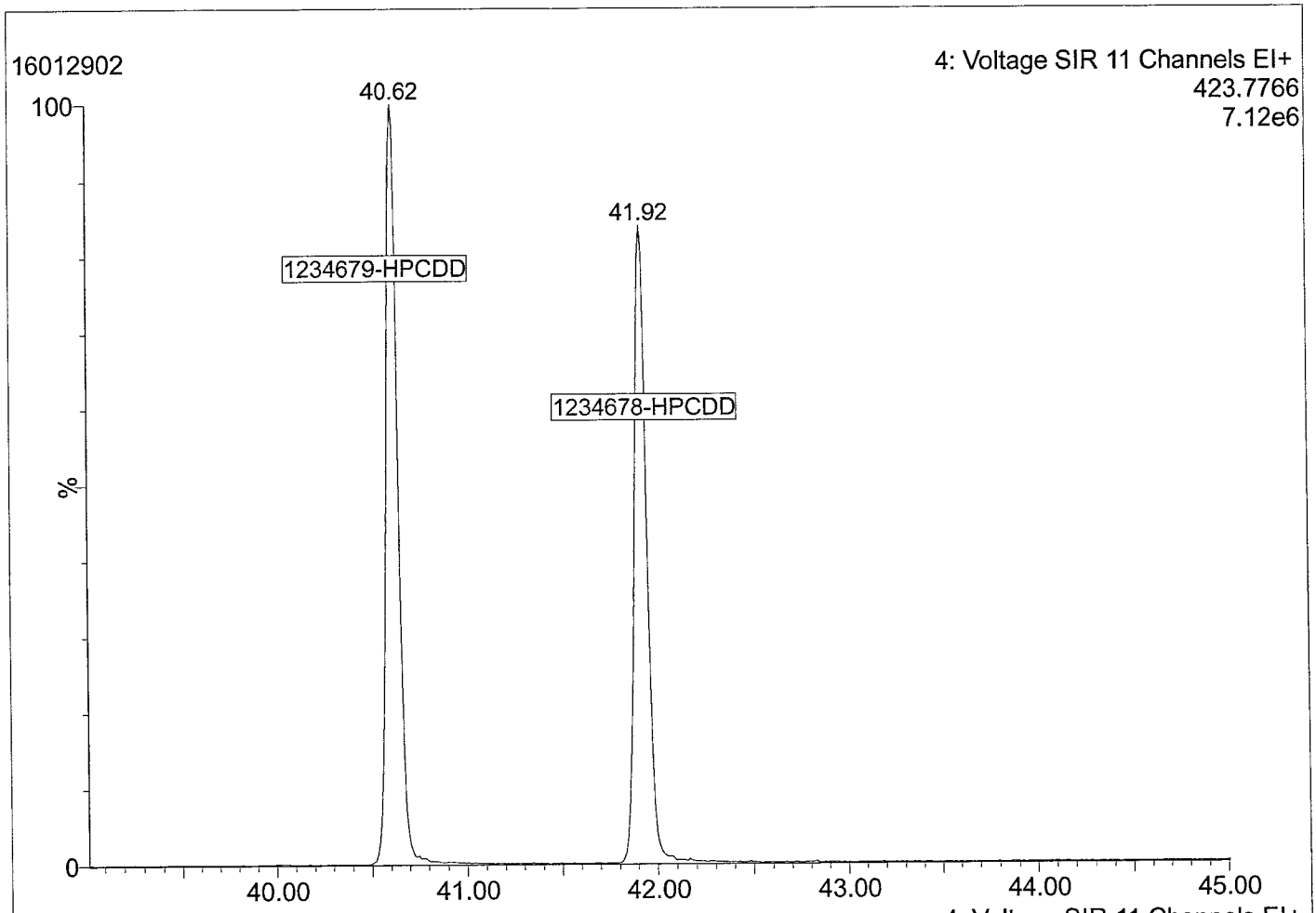
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element LIMS

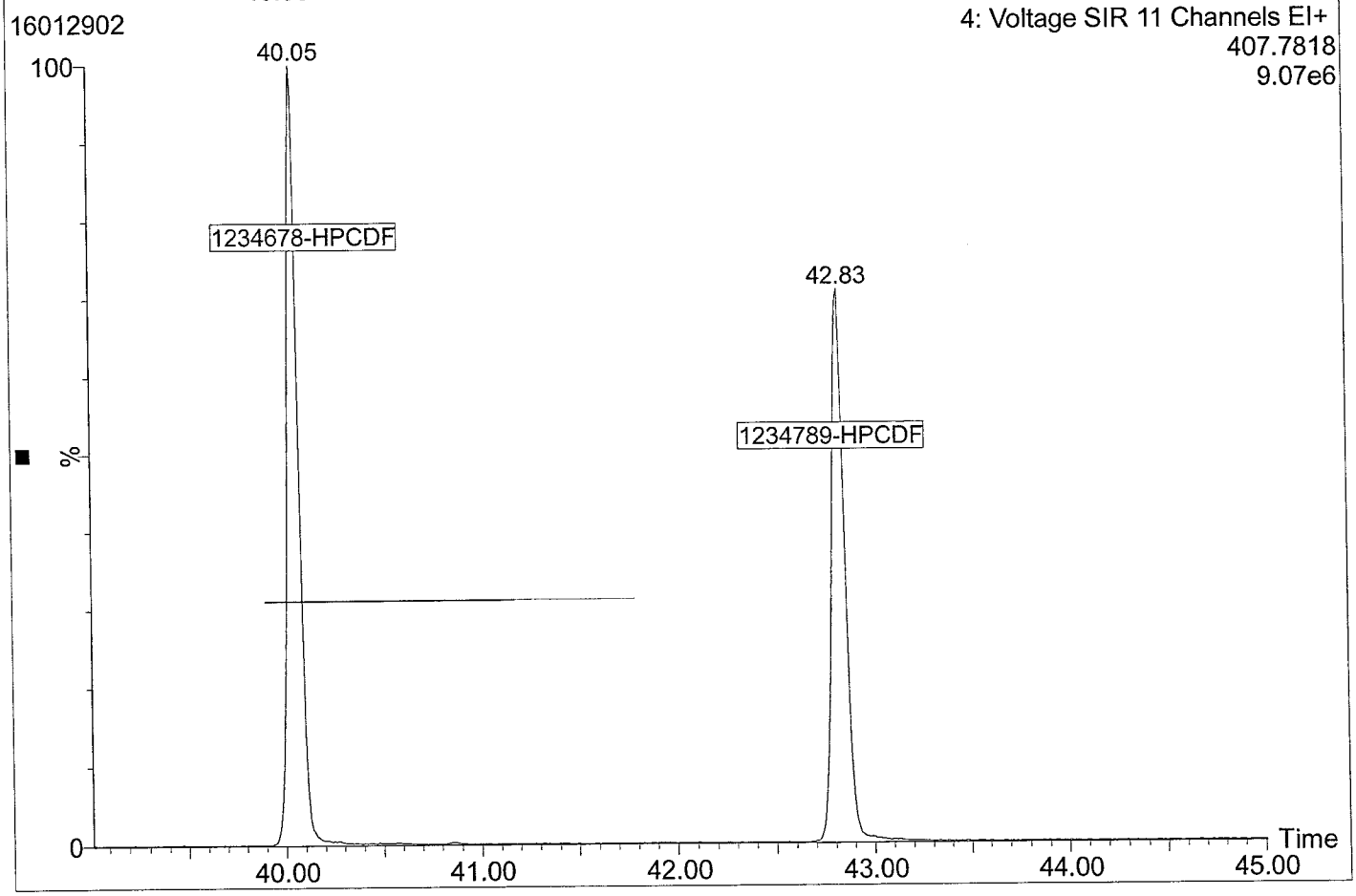

16012903
1: Voltage SIR 15 Channels EI+
319.8965
2.72e6
27.29
27.17
2378-TCDD
12/91 = 13.2%
91
12
100
%
0
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75
16012903
1: Voltage SIR 15 Channels EI+
303.9016
2.77e6
26.51
26.65
26.35
2378-TCDF
107
11/107 = 10.3%
11
100
%
0
Time
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75


16012902
1: Voltage SIR 15 Channels EI+
319.8965
2.09e6
100
%
0
24.32
1368-TCDD
26.86
27.78
1289-TCDD
26.38
22.00
23.00
24.00
25.00
26.00
27.00
28.00
16012902
1: Voltage SIR 15 Channels EI+
303.9016
2.60e6
100
%
0
23.03
1368-TCDF
26.53
28.02
1289-TCDF
25.62
22.00
23.00
24.00
25.00
26.00
27.00
28.00
16012902
1: Voltage SIR 15 Channels EI+
339.8597
1.69e7
100
%
0
27.90
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


16012902
2: Voltage SIR 11 Channels EI+
355.8546
9.71e6
32.69
32.30
29.57
12389-PECDD
12479-PECDD
100
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
16012902
2: Voltage SIR 11 Channels EI+
339.8597
1.28e7
32.04
30.69
33.07
29.55
Time


16012902
3: Voltage SIR 11 Channels EI+
389.8157
1.01e7
34.80
37.50
36.96
37.09
124679-HXCDD
123789-HXCDD
100
%
0
34.00
35.00
36.00
37.00
38.00
39.00
16012902
3: Voltage SIR 11 Channels EI+
373.8208
1.17e7
34.00
35.88
35.73
36.83
37.93
123468-HXCDF
123789-HXCDF
100
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00


16012902
4: Voltage SIR 11 Channels EI+
423.7766
7.12e6
40.62
41.92
1234679-HPCDD
1234678-HPCDD
100
%
0
40.00
41.00
42.00
43.00
44.00
45.00


16012902
4: Voltage SIR 11 Channels EI+
407.7818
9.07e6
40.05
1234678-HPCDF
42.83
1234789-HPCDF
100
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

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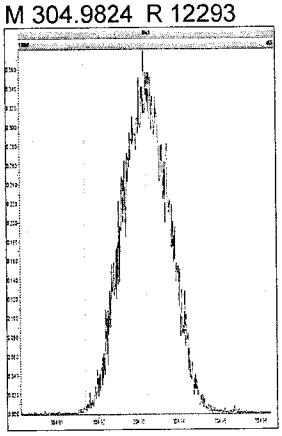
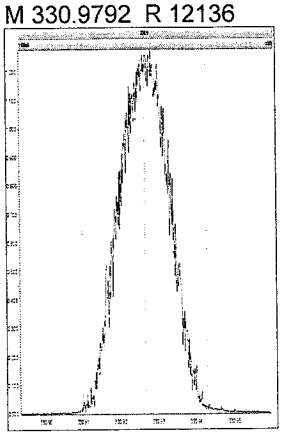
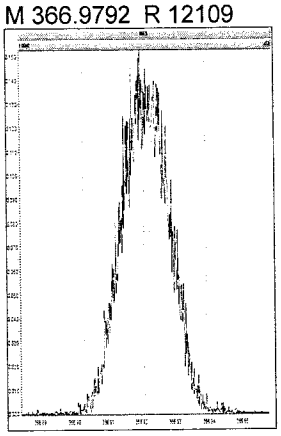
M 304.9824 R 12293



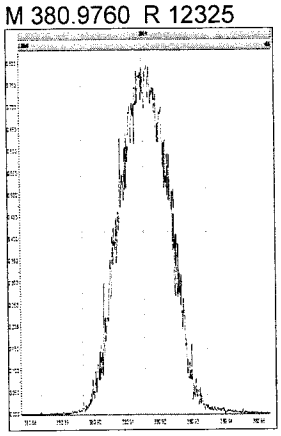
M 330.9792 R 12136



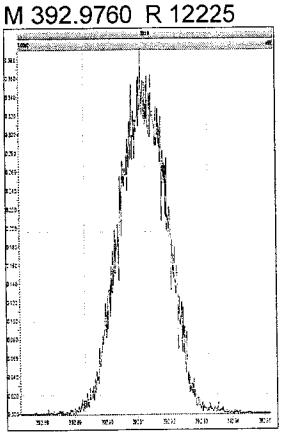
M 366.9792 R 12109



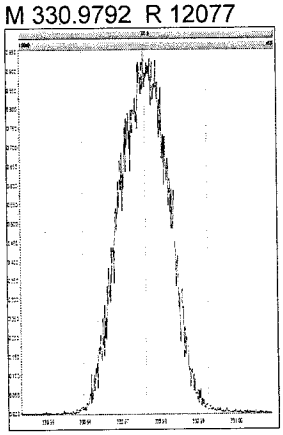
M 380.9760 R 12325



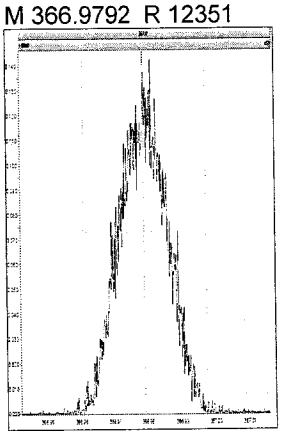
M 392.9760 R 12225



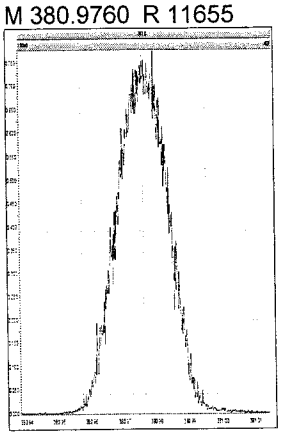
M 330.9792 R 12077



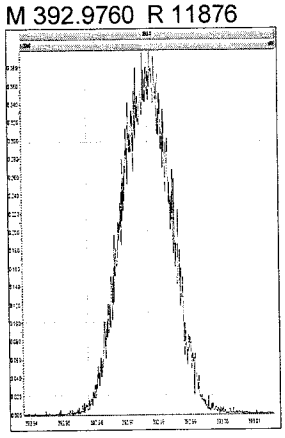
M 366.9792 R 12351



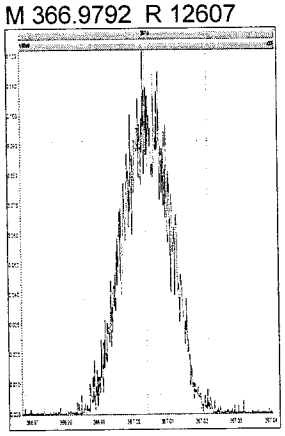
M 380.9760 R 11655



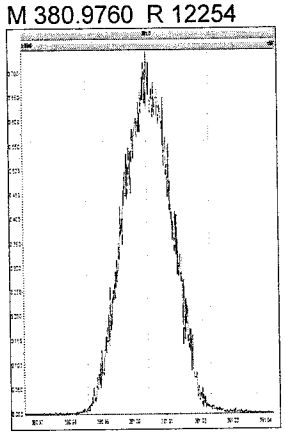
M 392.9760 R 11876



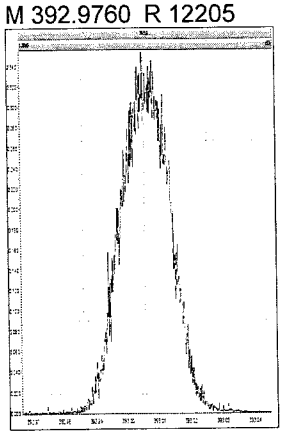
M 366.9792 R 12607



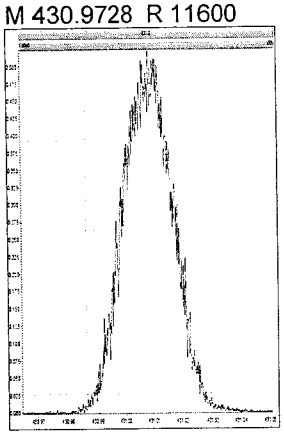
M 380.9760 R 12254



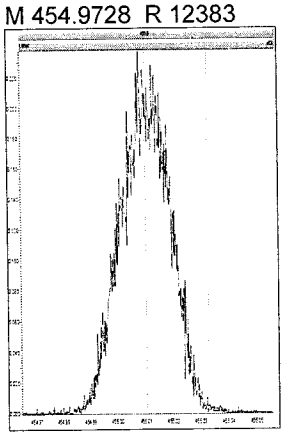
M 392.9760 R 12205



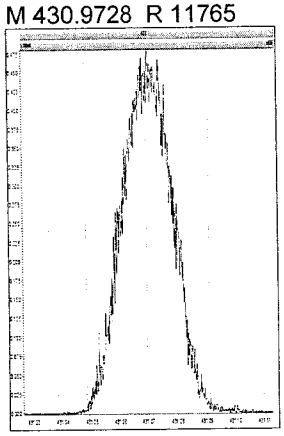
M 430.9728 R 11600



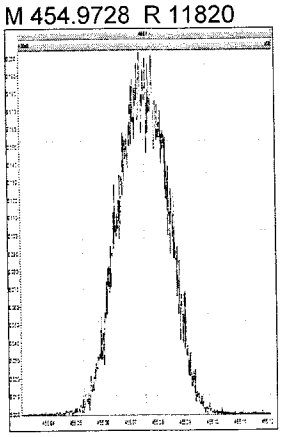
M 454.9728 R 12383



M 430.9728 R 11765



M 454.9728 R 11820



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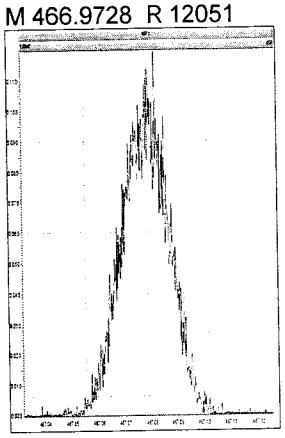
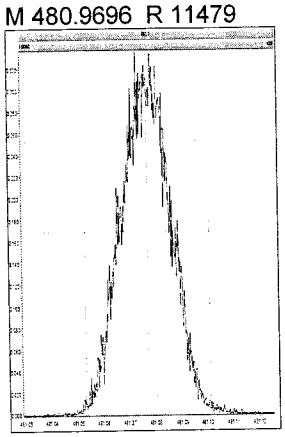
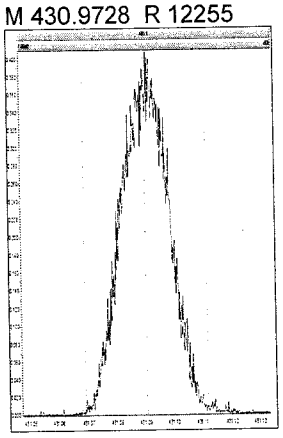
M 466.9728 R 12051



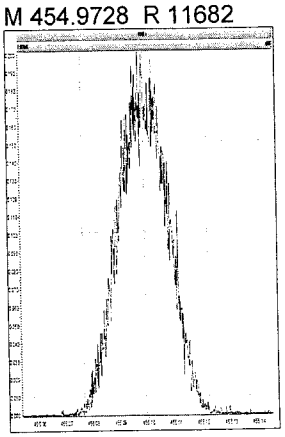
M 480.9696 R 11479



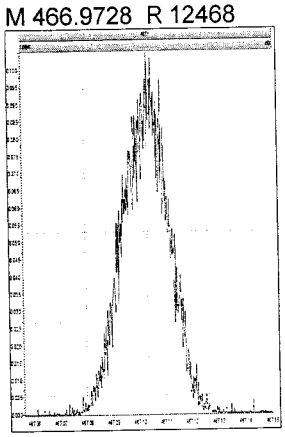
M 430.9728 R 12255



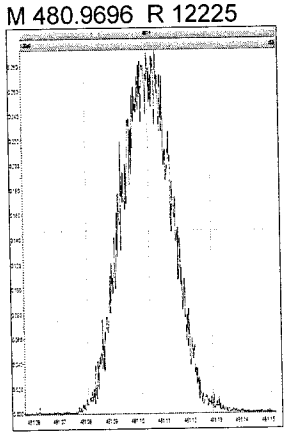
M 454.9728 R 11682



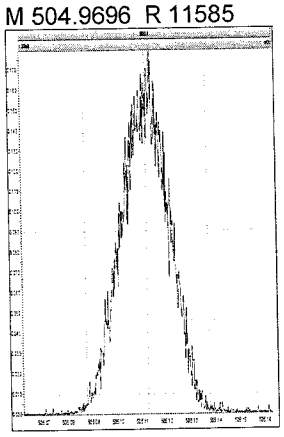
M 466.9728 R 12468



M 480.9696 R 12225



M 504.9696 R 11585



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, 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	26.527	1.001	1.46e5	2.10e5	0.827	0.694	0.770	953	1927	2.07e6	2.95e6	2167.7	NO	10.385	10.385
12378-PeCDF	30.687	1.000	8.28e5	5.74e5	0.824	1.442	1.550	3099	2347	1.16e7	8.14e6	3747.1	NO	51.360	51.360
23478-PeCDF	32.035	1.001	8.42e5	5.77e5	0.850	1.460	1.550	3099	2347	1.22e7	8.35e6	3946.4	NO	52.160	52.160
123478-HxCDF	35.729	1.001	6.76e5	5.82e5	0.973	1.161	1.240	2567	2779	9.81e6	8.40e6	3821.9	NO	52.118	52.118
234678-HxCDF	36.825	1.001	6.77e5	5.88e5	1.025	1.152	1.240	2567	2779	9.81e6	8.48e6	3823.1	NO	52.701	52.701
123678-HxCDF	35.883	1.001	6.89e5	5.94e5	0.953	1.161	1.240	2567	2779	1.01e7	8.51e6	3917.7	NO	52.293	52.293
123789-HxCDF	37.932	1.001	6.00e5	5.26e5	0.956	1.140	1.240	2567	2779	9.30e6	7.91e6	3624.8	NO	49.178	49.178
1234678-HpCDF	40.048	1.000	5.93e5	6.25e5	1.153	0.950	1.050	2442	2199	8.60e6	8.90e6	3522.5	NO	51.766	51.766
1234789-HpCDF	42.832	1.000	4.91e5	5.07e5	1.131	0.968	1.050	2442	2199	6.12e6	6.16e6	2506.1	NO	52.504	52.504
OCDF	48.322	1.006	8.02e5	9.44e5	1.023	0.850	0.890	1681	1576	7.74e6	9.24e6	4603.5	NO	105.708	105.708
2378-TCDD	27.184	1.001	1.21e5	1.58e5	1.023	0.769	0.770	1250	816	1.70e6	2.18e6	1359.8	NO	10.120	10.120
12378-PeCDD	32.298	1.001	6.03e5	3.88e5	0.939	1.556	1.550	2565	2051	8.65e6	5.54e6	3372.0	NO	51.736	51.736
123478-HxCDD	36.957	1.000	5.47e5	4.44e5	0.963	1.233	1.240	2365	1819	7.96e6	6.48e6	3365.5	NO	51.015	51.015
123678-HxCDD	37.089	1.000	5.32e5	4.31e5	0.894	1.235	1.240	2365	1819	7.66e6	6.20e6	3241.1	NO	50.748	50.748
123789-HxCDD	37.505	1.012	5.48e5	4.42e5	0.900	1.239	1.240	2365	1819	8.39e6	6.84e6	3549.7	NO	53.141	53.141
1234678-HpCDD	41.922	1.000	4.53e5	4.38e5	0.964	1.035	1.050	1702	1618	5.82e6	5.62e6	3421.9	NO	52.134	52.134
OCDD	48.044	1.000	7.57e5	8.45e5	0.969	0.896	0.890	1707	1285	7.57e6	8.49e6	4432.7	NO	102.398	102.398
13C-2378-TCDF	26.511	1.006	1.80e6	2.33e6	1.502	0.774	0.770	5956	3218	2.56e7	3.30e7	4294.3	NO		105.550
13C-12378-PeCDF	30.676	1.164	2.02e6	1.29e6	1.215	1.572	1.550	2736	2032	2.88e7	1.84e7	10530.8	NO		104.449
13C-23478-PeCDF	32.013	1.215	1.95e6	1.25e6	1.181	1.569	1.550	2736	2032	2.79e7	1.79e7	10183.4	NO		103.829
13C-123478-HxCDF	35.707	0.952	8.43e5	1.64e6	1.246	0.515	0.510	2966	2995	1.20e7	2.36e7	4043.6	NO		102.315
13C-123678-HxCDF	35.861	0.956	8.78e5	1.70e6	1.375	0.517	0.510	2966	2995	1.27e7	2.46e7	4282.9	NO		96.197
13C-234678-HxCDF	36.804	0.982	8.00e5	1.54e6	1.186	0.518	0.510	2966	2995	1.18e7	2.27e7	3983.7	NO		101.471
13C-123789-HxCDF	37.910	1.011	8.17e5	1.58e6	1.135	0.518	0.510	2966	2995	1.27e7	2.43e7	4280.2	NO		108.446
13C-1234678-HpCDF	40.037	1.068	6.29e5	1.41e6	1.020	0.446	0.440	1817	2176	9.08e6	2.02e7	4996.5	NO		102.691
13C-1234789-HpCDF	42.810	1.142	5.25e5	1.16e6	0.824	0.453	0.440	1817	2176	6.43e6	1.41e7	3537.7	NO		104.888
13C-1234-TCDD	26.347	0.000	1.15e6	1.46e6	1.000	0.789	0.770	4132	1668	1.62e7	2.06e7	3931.5	NO		100.000
13C-2378-TCDD	27.154	1.031	1.19e6	1.51e6	0.983	0.789	0.770	4132	1668	1.65e7	2.10e7	4002.2	NO		105.023
13C-12378-PeCDD	32.276	1.225	1.25e6	7.90e5	0.787	1.583	1.550	1324	1008	1.80e7	1.14e7	13622.5	NO		99.312
13C-123478-HxCDD	36.946	0.985	1.14e6	8.76e5	1.031	1.301	1.240	2247	2489	1.65e7	1.29e7	7341.4	NO		100.512
13C-123678-HxCDD	37.077	0.989	1.17e6	9.51e5	1.137	1.232	1.240	2247	2489	1.68e7	1.33e7	7473.2	NO		95.992
13C-1234678-HpCDD	41.900	1.117	9.14e5	8.58e5	0.892	1.065	1.050	1840	2247	1.17e7	1.11e7	6383.2	NO		102.058
13C-OCDD	48.026	1.281	1.51e6	1.72e6	0.852	0.881	0.890	3075	2124	1.50e7	1.70e7	4885.5	NO		194.819

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, 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	37.494	0.000	1.08e6	8.65e5	1.000	1.249	1.240	2247	2489	1.66e7	1.34e7	7401.1	NO		100.000
Total-tetrafurans			4.40e5		0.827			953		6.23e6					31.583
Total-penta1			1.13e6					825		1.55e7					62.515
Total-pentafurans			2.55e6		0.837			3099		3.66e7					158.262
Total-hexafurans			3.41e6		0.977			2567		5.02e7					266.283
Total-heptafurans			1.09e6		1.142			2442		1.48e7					104.433
Total-Furans			9.43e6		0.971			953		1.31e8					728.799
Total-tetradioxins			6.66e5		1.023			1250		8.02e6					55.158
Total-pentadioxins			2.14e6		0.939			2565		2.64e7					182.852
Total-hexadioxins			2.33e6		0.919			2365		3.40e7					221.093
Total-heptadioxins			9.71e5		0.964			1702		1.28e7					111.554
Total-Dioxins			6.87e6		0.950			1250		8.87e7					673.055
Total-TEQ			1.63e7					1250		2.20e8					1401.854
37CL-2378-TCDD	27.184	1.032	2.94e5		1.091			1489		4.05e6		2722.1			10.335
FUNCTION1 PFK			1.26e6					1025556		2.04e7					
FUNCTION2 PFK			3.60e4					154702		9.23e5					0.000
FUNCTION3 PFK			2.86e4					686724		1.12e6					0.000
FUNCTION4 PFK			2.63e4					466120		1.11e6					
FUNCTION5 PFK			3.35e5					300885		1.33e7					
FUNCTION1 HXCDPE			6.64e2					746		1.46e4					0.000
FUNCTION1 HPCDPE			1.79e2					811		4.06e3					0.000
FUNCTION2 HPCDPE			1.32e3					930		2.17e4					0.000
FUNCTION3 OCDPE			0.00e0					449		0.00e0					
FUNCTION4 NCDPE			0.00e0					815		0.00e0					
FUNCTION5 DCDPE			0.00e0					514		0.00e0					

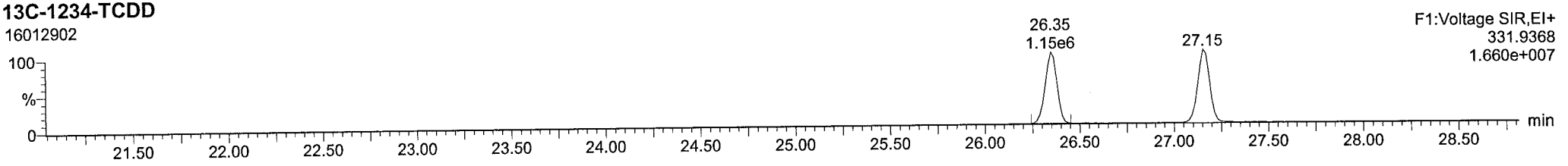
ARP4 : 00377

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

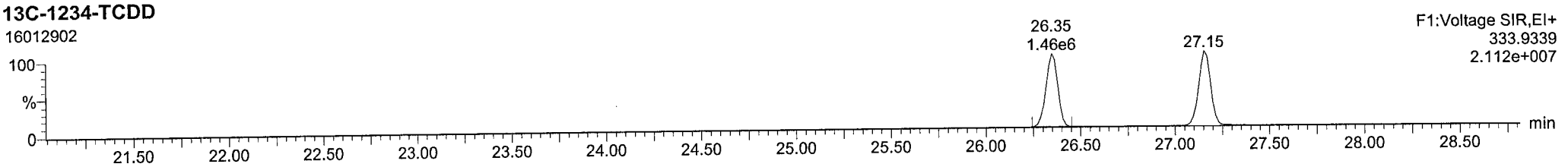
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

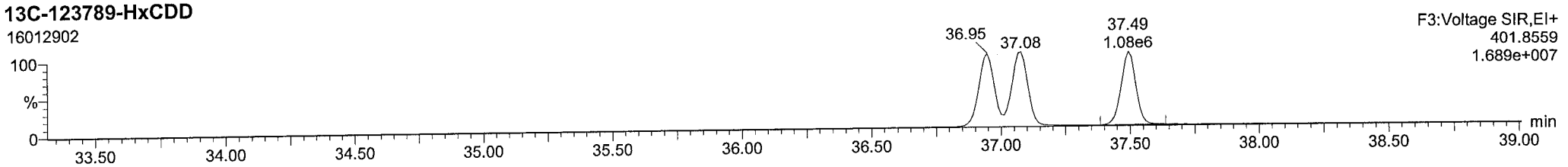
13C-1234-TCDD



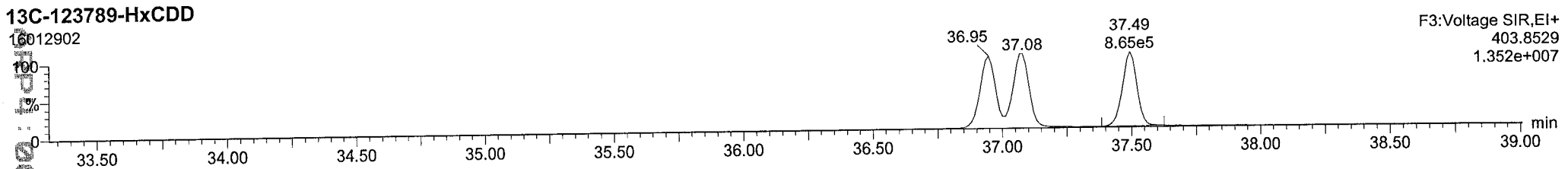
13C-1234-TCDD



13C-123789-HxCDD



13C-123789-HxCDD



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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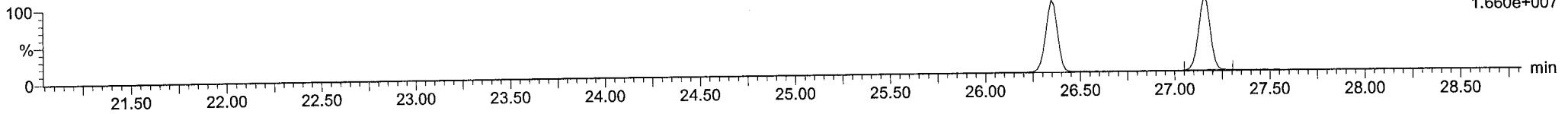
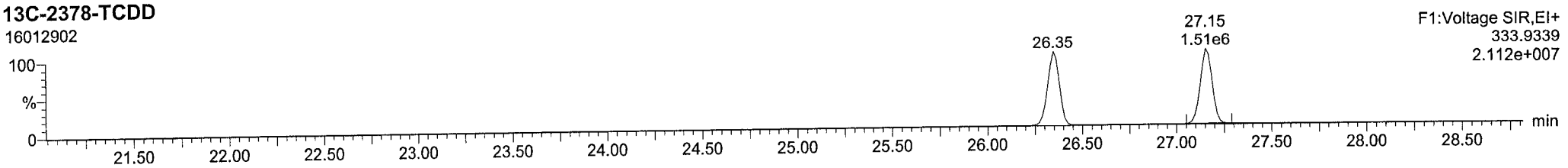
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

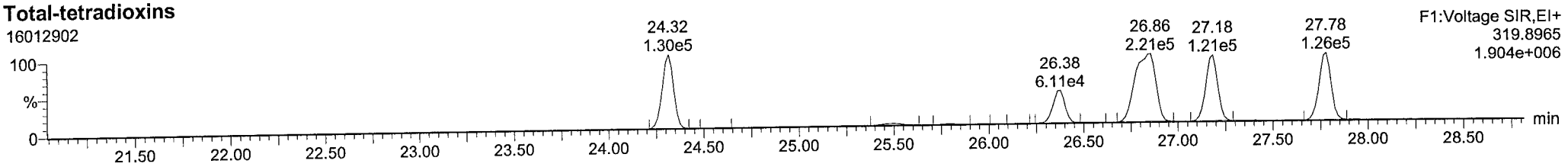
13C-2378-TCDD
16012902



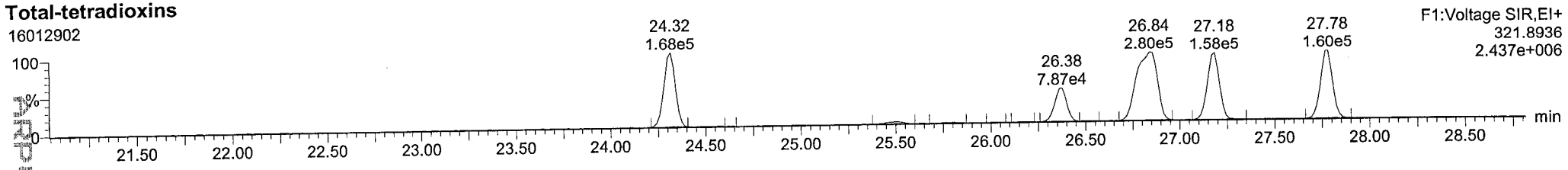
13C-2378-TCDD
16012902



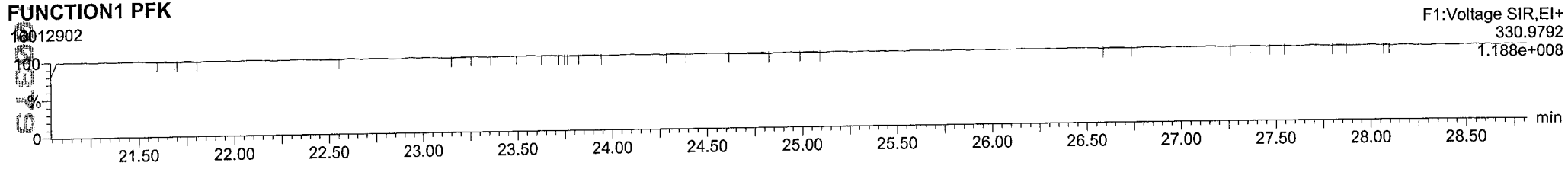
Total-tetradioxins
16012902



Total-tetradioxins
16012902



FUNCTION1 PFK
16012902



Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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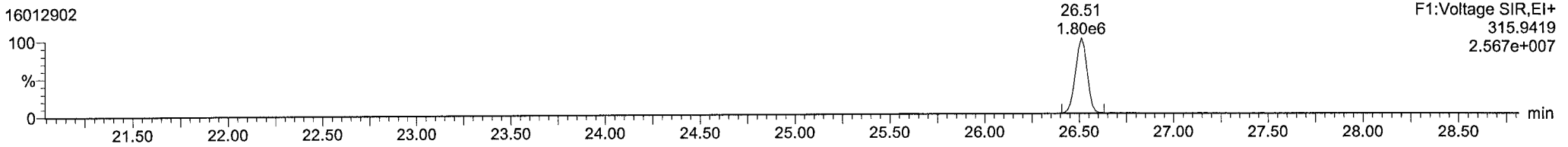
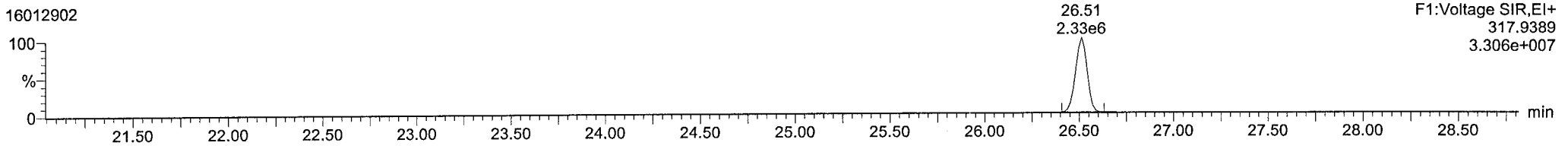
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

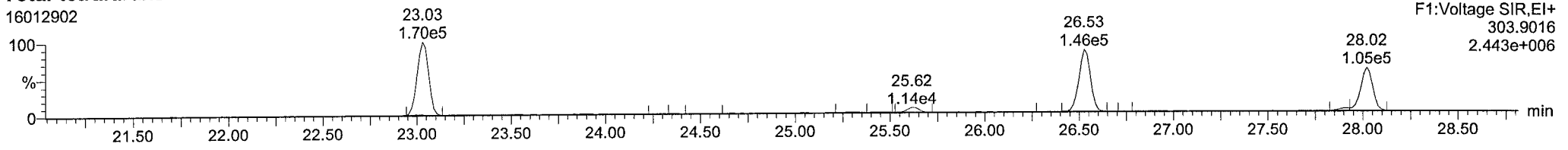
13C-2378-TCDF



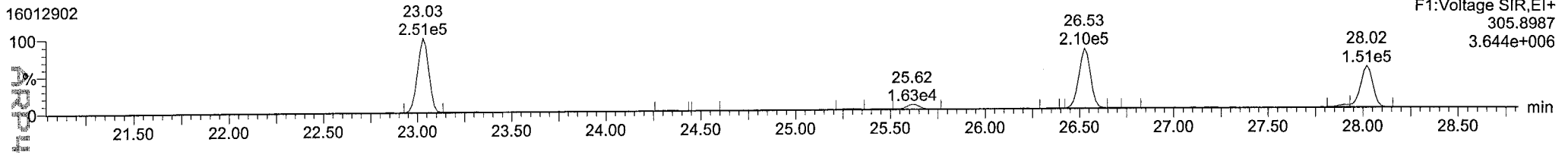
13C-2378-TCDF



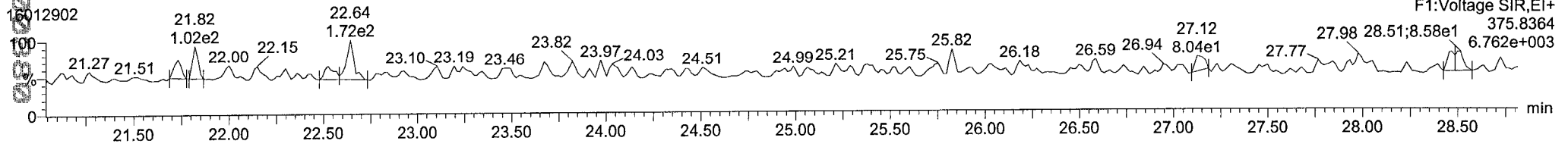
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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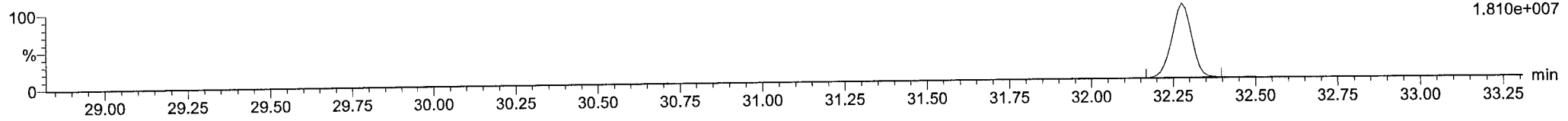
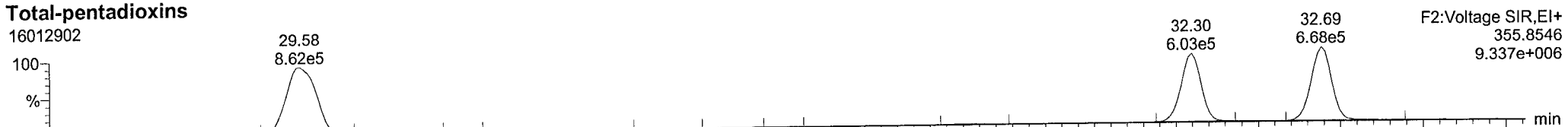
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD
16012902

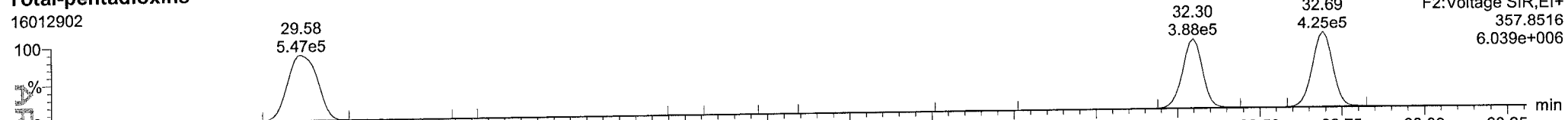


13C-12378-PeCDD
16012902

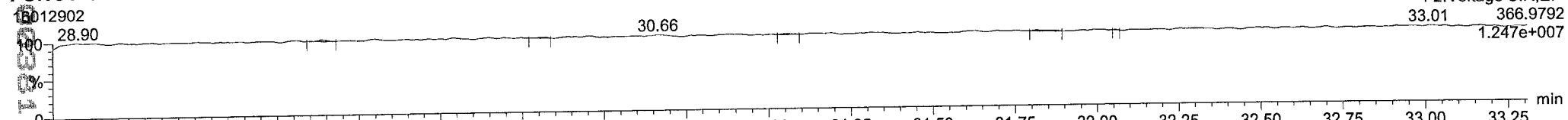
Total-pentadioxins
16012902



Total-pentadioxins
16012902



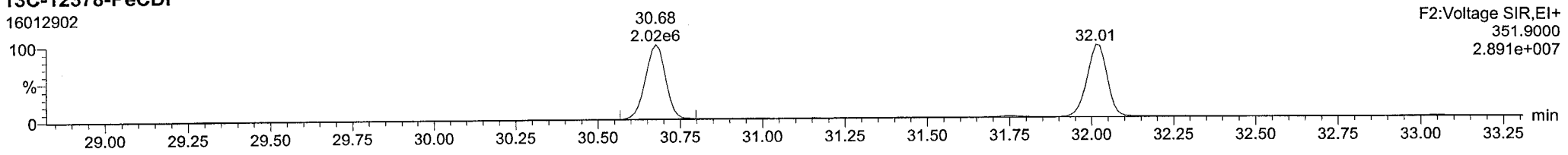
FUNCTION2 PFK
16012902



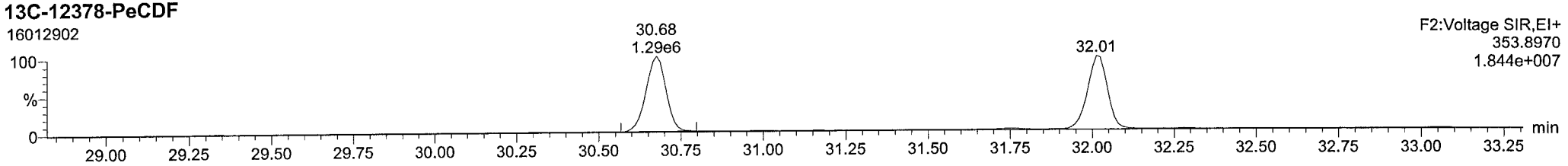
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

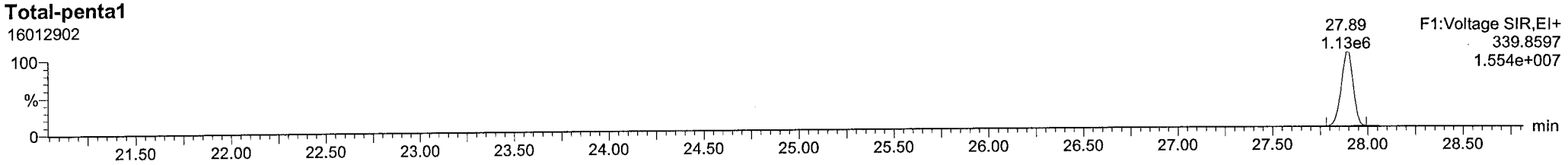
13C-12378-PeCDF



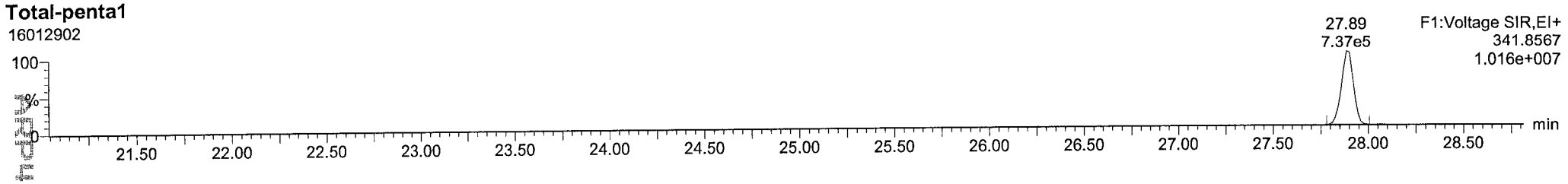
13C-12378-PeCDF



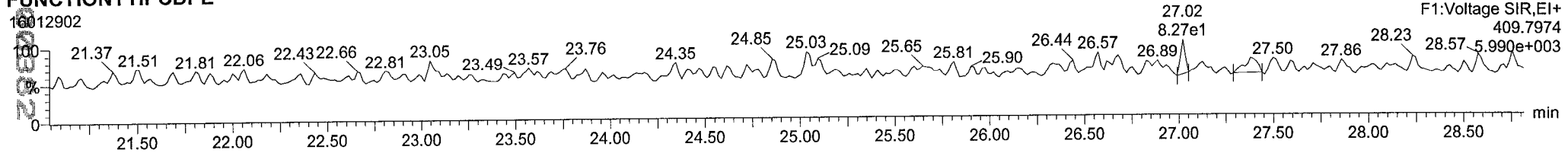
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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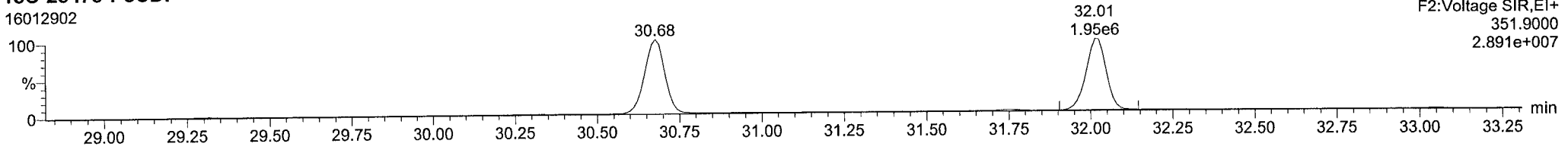
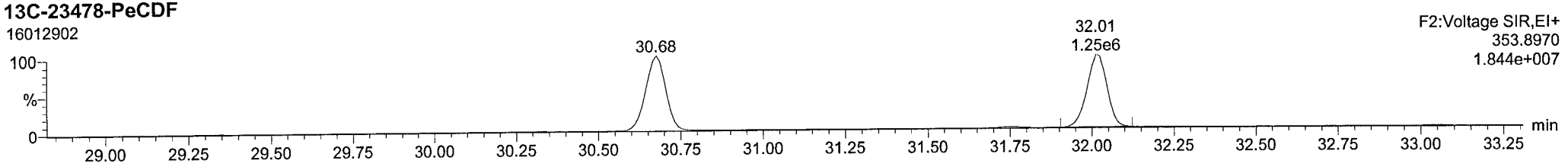
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

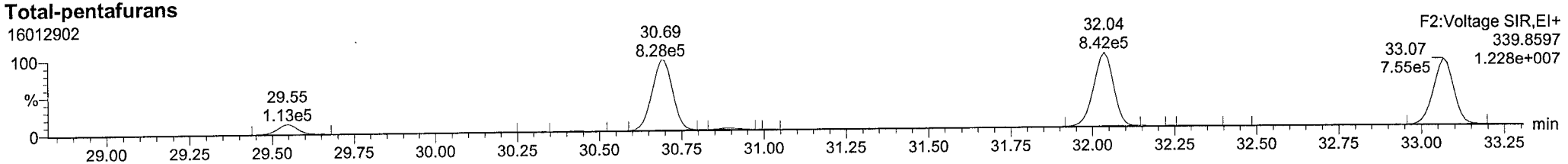
13C-23478-PeCDF



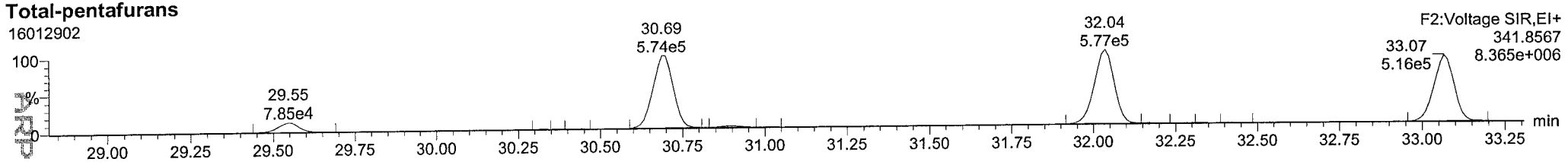
13C-23478-PeCDF



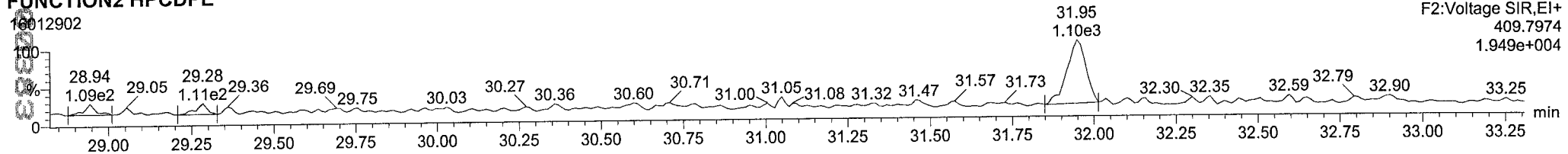
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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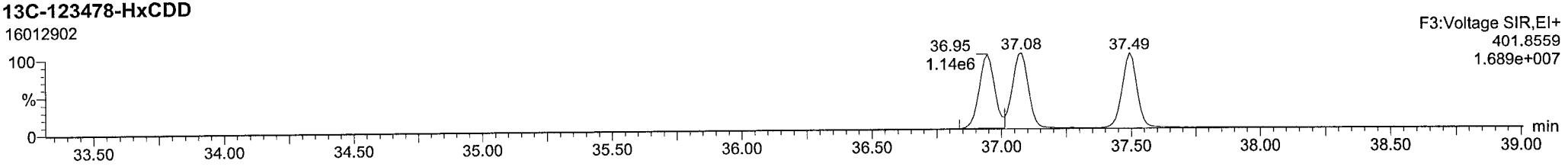
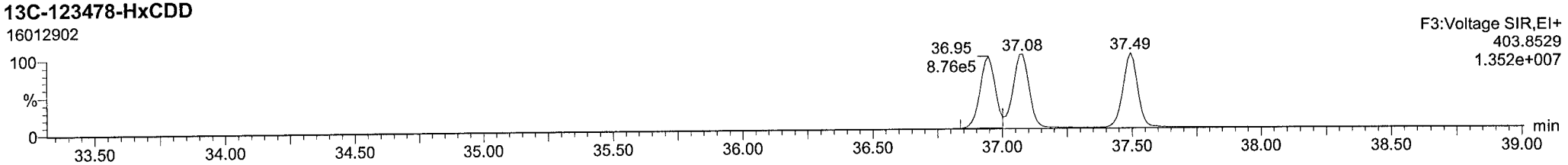
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

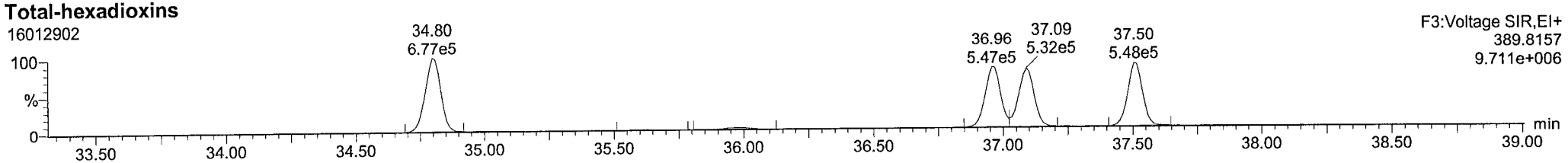
13C-123478-HxCDD



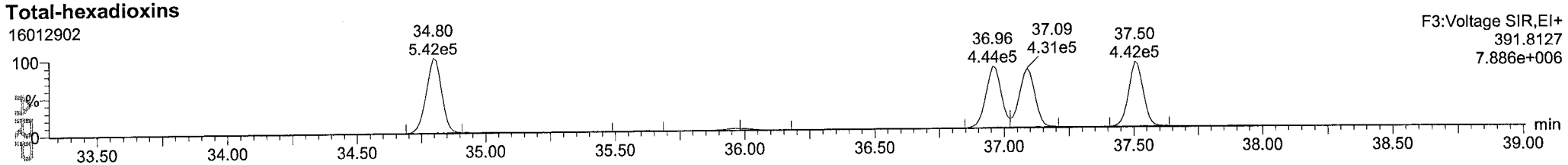
13C-123478-HxCDD



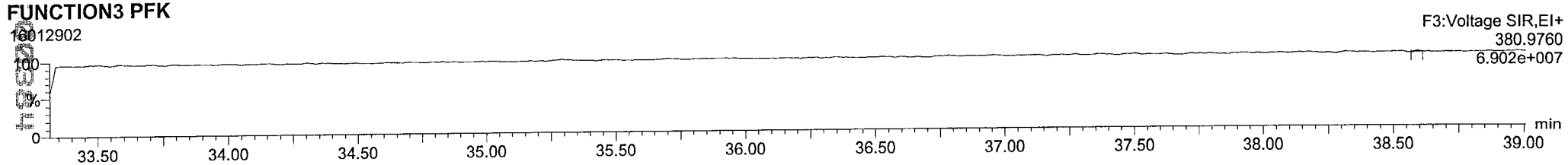
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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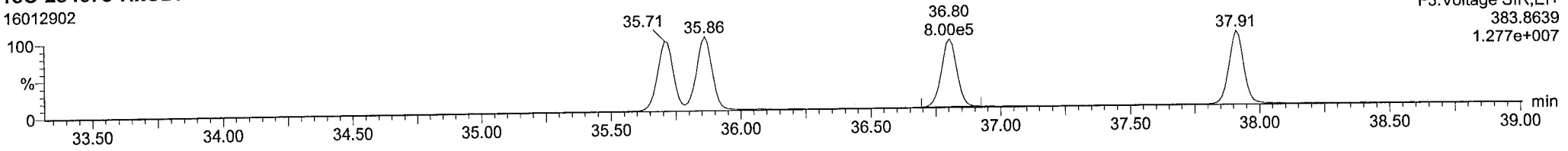
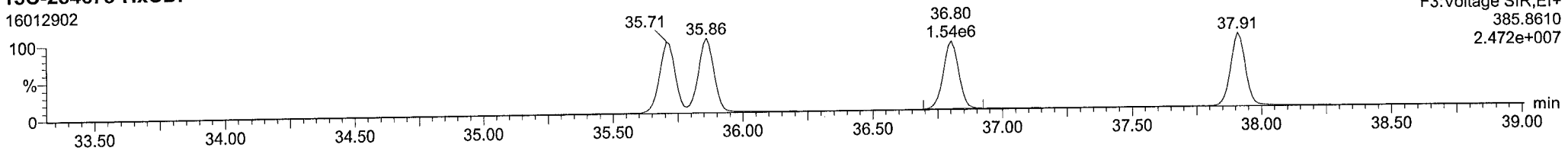
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

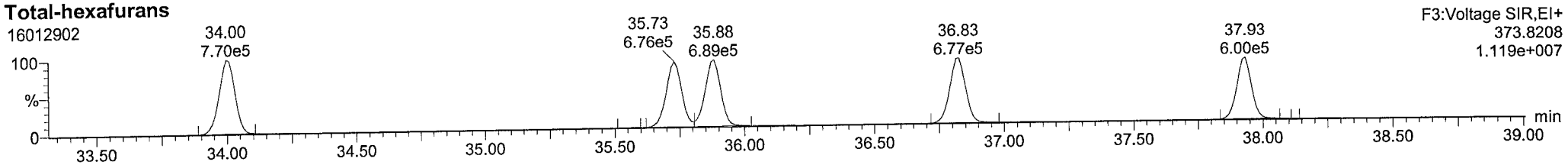
13C-234678-HxCDF
16012902
F3:Voltage SIR,EI+
383.8639
1.277e+007



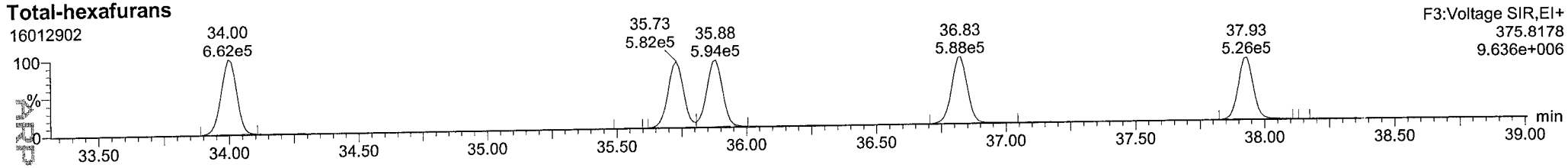
13C-234678-HxCDF
16012902
F3:Voltage SIR,EI+
385.8610
2.472e+007



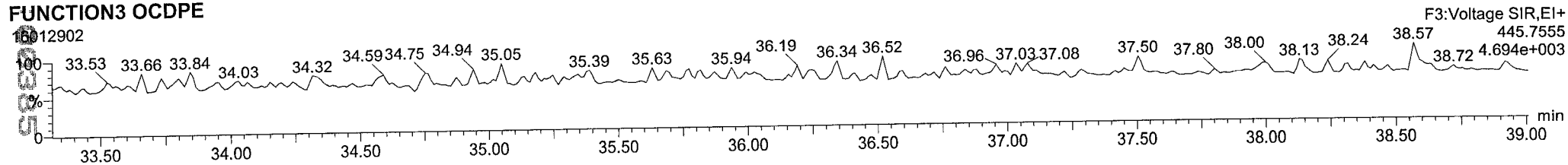
Total-hexafurans
16012902
F3:Voltage SIR,EI+
373.8208
1.119e+007



Total-hexafurans
16012902
F3:Voltage SIR,EI+
375.8178
9.636e+006



FUNCTION3 OCDPE
16012902
F3:Voltage SIR,EI+
445.7555
4.694e+003



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
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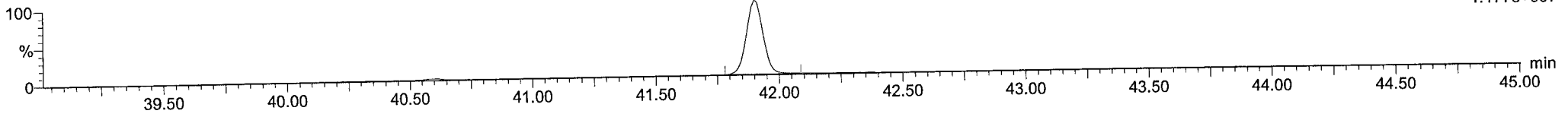
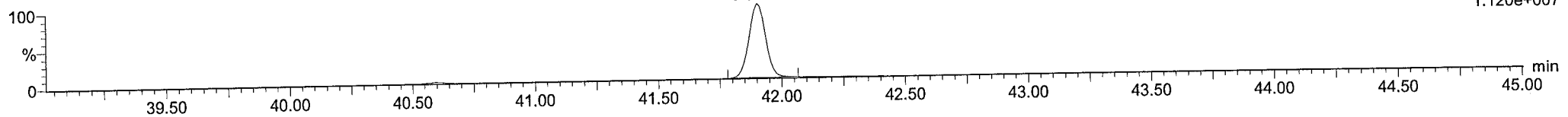
ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

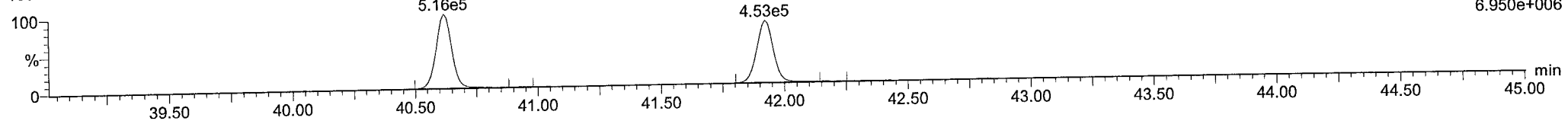
13C-1234678-HpCDD
16012902
41.90
9.14e5
F4:Voltage SIR,EI+
435.8169
1.177e+007



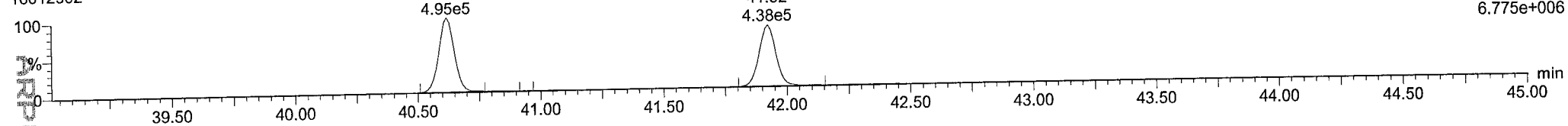
13C-1234678-HpCDD
16012902
41.90
8.58e5
F4:Voltage SIR,EI+
437.8140
1.120e+007



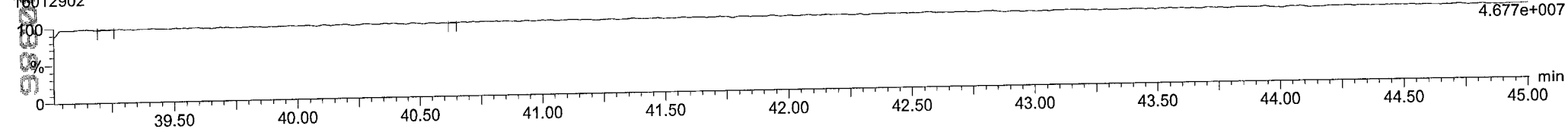
Total-heptadioxins
16012902
40.62
5.16e5
41.92
4.53e5
F4:Voltage SIR,EI+
423.7766
6.950e+006



Total-heptadioxins
16012902
40.62
4.95e5
41.92
4.38e5
F4:Voltage SIR,EI+
425.7737
6.775e+006



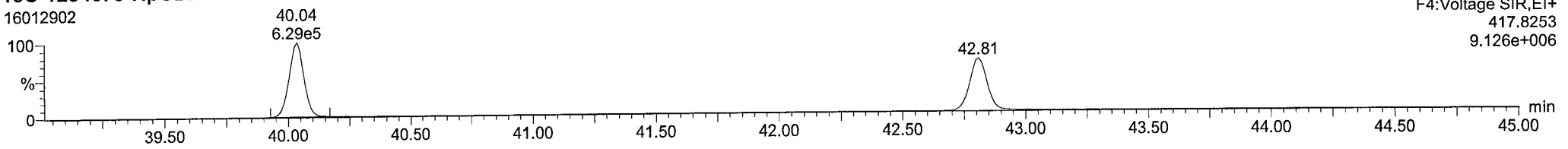
FUNCTION4 PFK
16012902
F4:Voltage SIR,EI+
430.9728
4.677e+007



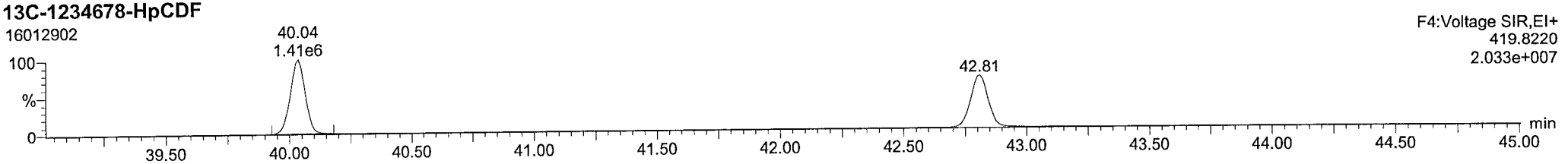
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

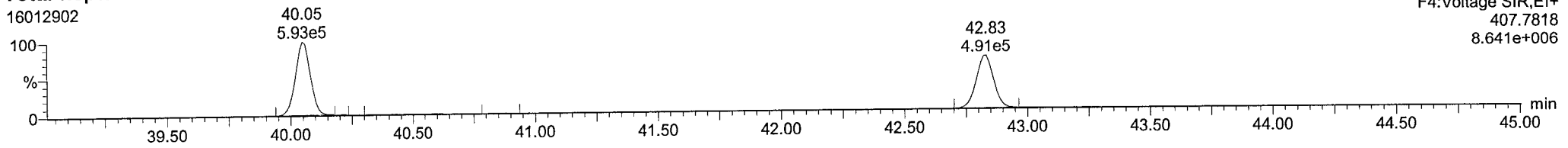
13C-1234678-HpCDF



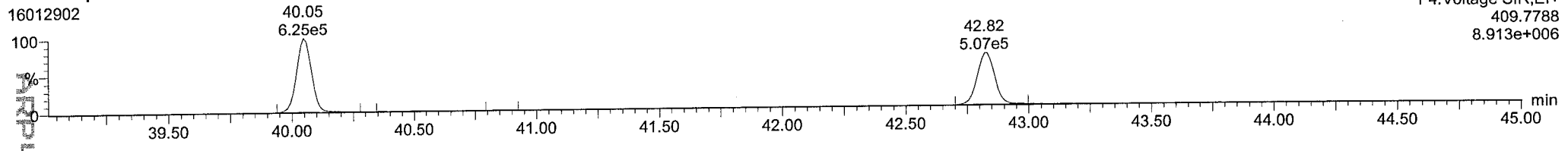
13C-1234678-HpCDF



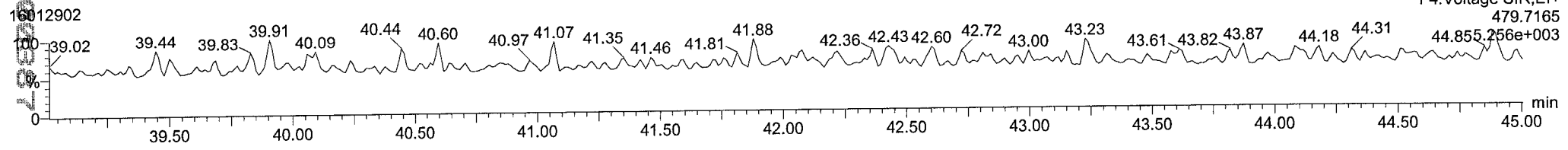
Total-heptafurans



Total-heptafurans



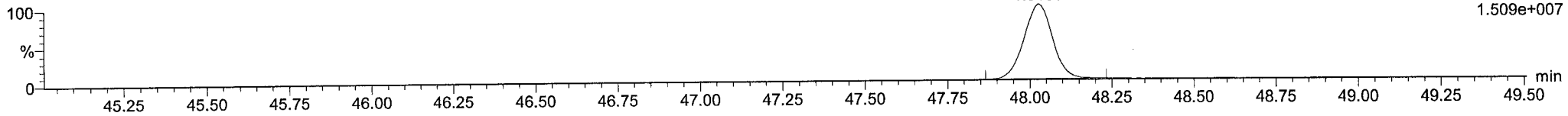
FUNCTION4 NCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

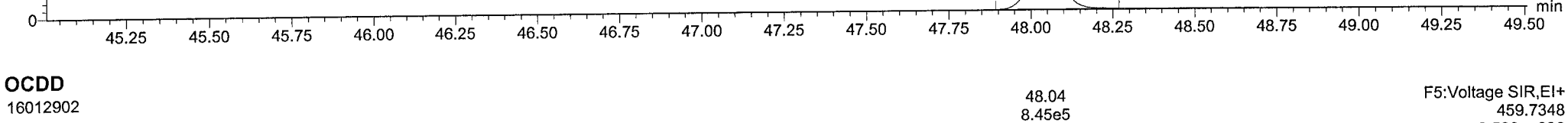
13C-OCDD
16012902



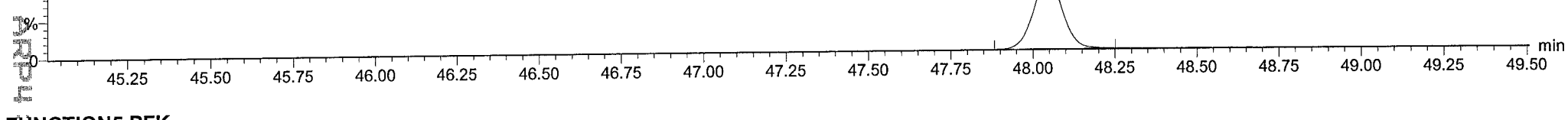
13C-OCDD
16012902

OCDD
16012902

OCDD
16012902



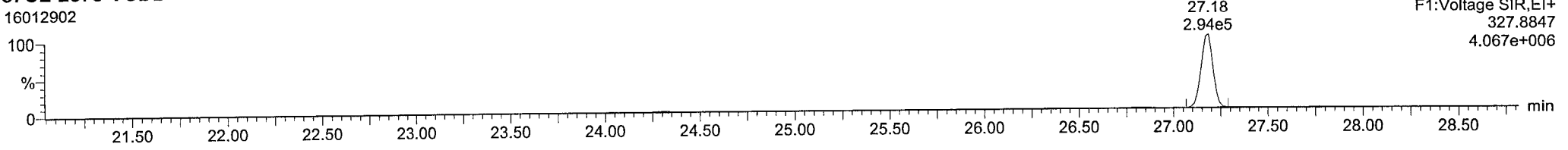
FUNCTION5 PFK
16012902



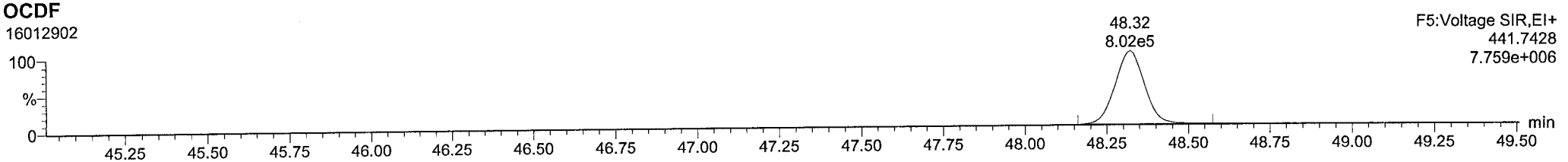
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

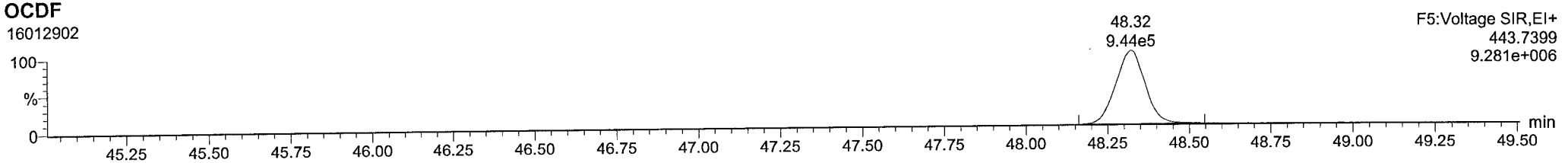
37CL-2378-TCDD



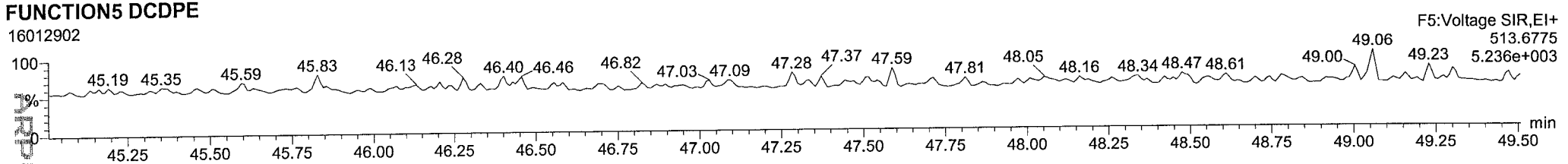
OCDF



OCDF



FUNCTION5 DCDPE



ANALYTICAL RESOURCES
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: AT50MBT
Lab.File ID: 16012904
Date Analysed: 29-Jan-16

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	0.00			0.019
12378-PeCDD	356/358	0.00			0.022
123478-HxCDD	390/392	0.00			0.024
123678-HxCDD	390/392	0.00			0.025
123789-HxCDD	390/392	0.00			0.025
1234678-HpCDD	424/426	41.96	0.187		
OCDD	458/460	48.10	3.08		
2378-TCDF	304/306	0.00			0.016
12378-PeCDF	340/342	30.70	0.0250	0.0160	
23478-PeCDF	340/342	0.00			0.017
123478-HxCDF	374/376	0.00			0.018
234678-HxCDF	374/376	0.00			0.018
123678-HxCDF	374/376	0.00			0.017
123789-HxCDF	374/376	0.00			0.020
1234678-HpCDF	408/410	40.07	0.0711	0.0530	
1234789-HpCDF	408/410	0.00			0.037
OCDF	442/444	48.36	0.270		

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, 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					0.827		0.770	1090	1376						
12378-PeCDF	30.698	1.000	2.73e2	4.22e2	0.824	0.647	1.550	885	1420	5.66e3	5.03e3	6.4	YES	0.016	0.025
23478-PeCDF					0.850		1.550	885	1420						
123478-HxCDF					0.973		1.240	1053	1057						
234678-HxCDF					1.025		1.240	1053	1057						
123678-HxCDF					0.953		1.240	1053	1057						
123789-HxCDF					0.956		1.240	1053	1057						
1234678-HpCDF	40.070	1.000	6.70e2	1.08e3	1.153	0.623	1.050	1299	1456	1.11e4	1.47e4	8.6	YES	0.053	0.071
1234789-HpCDF					1.131		1.050	1299	1456						
OCDF	48.358	1.006	1.85e3	2.41e3	1.023	0.768	0.890	927	1272	1.77e4	2.30e4	19.1	NO	0.270	0.270
2378-TCDD					1.023		0.770	1316	841						
12378-PeCDD					0.939		1.550	1550	493						
123478-HxCDD					0.963		1.240	1113	1166						
123678-HxCDD					0.894		1.240	1113	1166						
123789-HxCDD					0.900		1.240	1113	1166						
1234678-HpCDD	41.955	1.001	1.77e3	1.56e3	0.964	1.130	1.050	913	849	2.57e4	1.98e4	28.1	NO	0.187	0.187
OCDD	48.098	1.000	2.22e4	2.38e4	0.969	0.930	0.890	863	712	2.28e5	2.46e5	264.4	NO	3.081	3.081
13C-2378-TCDF	26.526	1.006	1.69e6	2.17e6	1.502	0.779	0.770	6823	3687	2.43e7	3.11e7	3554.4	NO		95.958
13C-12378-PeCDF	30.698	1.164	2.06e6	1.31e6	1.215	1.575	1.550	3137	2927	2.95e7	1.87e7	9390.7	NO		103.456
13C-23478-PeCDF	32.035	1.215	2.01e6	1.27e6	1.181	1.583	1.550	3137	2927	2.92e7	1.85e7	9309.4	NO		103.519
13C-123478-HxCDF	35.729	0.953	8.54e5	1.65e6	1.246	0.518	0.510	3447	4688	1.25e7	2.42e7	3632.5	NO		87.885
13C-123678-HxCDF	35.882	0.957	9.20e5	1.81e6	1.375	0.509	0.510	3447	4688	1.31e7	2.51e7	3804.7	NO		86.696
13C-234678-HxCDF	36.814	0.982	8.34e5	1.59e6	1.186	0.524	0.510	3447	4688	1.20e7	2.33e7	3492.2	NO		89.406
13C-123789-HxCDF	37.932	1.011	7.71e5	1.48e6	1.135	0.522	0.510	3447	4688	1.13e7	2.16e7	3280.1	NO		86.636
13C-1234678-HpCDF	40.059	1.068	6.50e5	1.48e6	1.020	0.440	0.440	2963	2830	8.90e6	1.99e7	3004.2	NO		91.232
13C-1234789-HpCDF	42.843	1.142	5.28e5	1.17e6	0.824	0.452	0.440	2963	2830	6.14e6	1.39e7	2072.5	NO		89.935
13C-1234-TCDD	26.362	0.000	1.18e6	1.50e6	1.000	0.788	0.770	4547	2110	1.71e7	2.16e7	3755.5	NO		100.000
13C-2378-TCDD	27.169	1.031	1.07e6	1.35e6	0.983	0.794	0.770	4547	2110	1.50e7	1.90e7	3297.7	NO		92.103
13C-12378-PeCDD	32.298	1.225	1.29e6	8.25e5	0.787	1.567	1.550	1138	2022	1.84e7	1.17e7	16162.3	NO		100.320
13C-123478-HxCDD	36.957	0.985	1.14e6	8.93e5	1.031	1.281	1.240	2219	1975	1.69e7	1.32e7	7606.7	NO		86.434
13C-123678-HxCDD	37.088	0.989	1.23e6	9.58e5	1.137	1.280	1.240	2219	1975	1.74e7	1.38e7	7831.6	NO		84.003
13C-1234678-HpCDD	41.933	1.118	9.57e5	8.90e5	0.892	1.075	1.050	2521	1794	1.19e7	1.13e7	4711.6	NO		90.547
13C-OCDD	48.080	1.282	1.45e6	1.63e6	0.852	0.888	0.890	1433	2144	1.40e7	1.58e7	9755.8	NO		158.122

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, 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	37.505	0.000	1.26e6	1.02e6	1.000	1.236	1.240	2219	1975	1.85e7	1.49e7	8329.2	NO		100.000
Total-tetrafurans			0.00e0		0.827			1090		0.00e0					
Total-penta1			0.00e0					651		0.00e0					
Total-pentafurans			2.73e2		0.837			885		5.66e3					0.025
Total-hexafurans			0.00e0		0.977			1053		0.00e0					
Total-heptafurans			1.48e3		1.142			1299		2.13e4					0.143
Total-Furans			3.60e3		0.971			1090		4.47e4					0.439
Total-tetradioxins			0.00e0		1.023			1316		0.00e0					
Total-pentadioxins			2.56e2		0.939			1550		6.28e3					0.019
Total-hexadioxins			8.22e2		0.919			1113		1.65e4					0.062
Total-heptadioxins			3.44e3		0.964			913		4.89e4					0.371
Total-Dioxins			2.68e4		0.950			1316		3.03e5					3.542
Total-TEQ			3.04e4					1316		3.47e5					3.980
37CL-2378-TCDD	27.198	1.032	1.36e6		1.091			1521		1.92e7		12587.0			46.597
FUNCTION1 PFK			1.31e8					806942		4.59e8					
FUNCTION2 PFK			4.12e5					175386		4.40e6					0.000
FUNCTION3 PFK			1.76e8					564778		1.83e8					0.000
FUNCTION4 PFK			1.98e5					470636		1.97e6					
FUNCTION5 PFK			0.00e0					300577		0.00e0					
FUNCTION1 HXCDPE			3.34e2					660		5.36e3					0.000
FUNCTION1 HPCDPE			4.54e2					693		9.01e3					0.000
FUNCTION2 HPCDPE			1.01e2					715		1.75e3					0.000
FUNCTION3 OCDPE			7.55e1					555		1.85e3					0.000
FUNCTION4 NCDPE			1.62e2					741		4.20e3					0.000
FUNCTION5 DCDPE			0.00e0					465		0.00e0					

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

TF

	# Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
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	2 12378-PeCDF	339.8597	30.70	694.582	0.824		0.025	0.016	0.65	1.55	YES	6.4

HF

	# Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
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	40.88	1571.533	1.142		0.072		1.07	1.05	NO	7.8
2	8 1234678-HpCDF	407.7818	40.07	1745.998	1.153		0.071	0.053	0.62	1.05	YES	8.6

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	2 12378-PeCDF	339.8597	30.70	694.582	0.824		0.025	0.016	0.65	1.55	YES	6.4
2	39 Total-heptafurans	407.7818	40.88	1571.533	1.142		0.072		1.07	1.05	NO	7.8
3	8 1234678-HpCDF	407.7818	40.07	1745.998	1.153		0.071	0.053	0.62	1.05	YES	8.6
4	10 OCDF	441.7428	48.36	4262.023	1.023		0.270	0.270	0.77	0.89	NO	19.1

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	42 Total-pentadioxins	355.8546	30.68	376.494	0.939		0.019		2.12	1.55	YES	4.0

HD

	# Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43 Total-hexadioxins	389.8157	35.87	676.676	0.919		0.035		2.52	1.24	YES	8.9
2	43 Total-hexadioxins	389.8157	35.72	528.014	0.919		0.027		1.77	1.24	YES	5.9

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

HPD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16	1234678-HpCDD	423.7766	41.96	3331.913	0.964		0.187	0.187	1.13	1.05	NO	28.1
2	44	Total-heptadioxins	423.7766	40.64	3283.356	0.964		0.184		1.04	1.05	NO	25.5

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	45	Total-Dioxins	319.8965	22.00	179.321	0.950		0.008		1.08	0.77	YES	2.1
2	43	Total-hexadioxins	389.8157	35.87	676.676	0.919		0.035		2.52	1.24	YES	8.9
3	43	Total-hexadioxins	389.8157	35.72	528.014	0.919		0.027		1.77	1.24	YES	5.9
4	42	Total-pentadioxins	355.8546	30.68	376.494	0.939		0.019		2.12	1.55	YES	4.0
5	16	1234678-HpCDD	423.7766	41.96	3331.913	0.964		0.187	0.187	1.13	1.05	NO	28.1
6	44	Total-heptadioxins	423.7766	40.64	3283.356	0.964		0.184		1.04	1.05	NO	25.5
7	17	OCDD	457.7377	48.10	45982.412	0.969		3.081	3.081	0.93	0.89	NO	264.4

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	2	12378-PeCDF	339.8597	30.70	694.582	0.824		0.025	0.016	0.65	1.55	YES	6.4
2	39	Total-heptafurans	407.7818	40.88	1571.533	1.142		0.072		1.07	1.05	NO	7.8
3	8	1234678-HpCDF	407.7818	40.07	1745.998	1.153		0.071	0.053	0.62	1.05	YES	8.6
4	10	OCDF	441.7428	48.36	4262.023	1.023		0.270	0.270	0.77	0.89	NO	19.1
5	45	Total-Dioxins	319.8965	22.00	179.321	0.950		0.008		1.08	0.77	YES	2.1
6	43	Total-hexadioxins	389.8157	35.87	676.676	0.919		0.035		2.52	1.24	YES	8.9
7	43	Total-hexadioxins	389.8157	35.72	528.014	0.919		0.027		1.77	1.24	YES	5.9
8	42	Total-pentadioxins	355.8546	30.68	376.494	0.939		0.019		2.12	1.55	YES	4.0
9	16	1234678-HpCDD	423.7766	41.96	3331.913	0.964		0.187	0.187	1.13	1.05	NO	28.1
10	44	Total-heptadioxins	423.7766	40.64	3283.356	0.964		0.184		1.04	1.05	NO	25.5
11	17	OCDD	457.7377	48.10	45982.412	0.969		3.081	3.081	0.93	0.89	NO	264.4

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	23.64	0.000								10.9
2	48	FUNCTION1 PFK	330.9792	23.24	0.000								36.4
3	48	FUNCTION1 PFK	330.9792	22.91	0.000								65.1
4	48	FUNCTION1 PFK	330.9792	22.84	0.000								65.9
5	48	FUNCTION1 PFK	330.9792	22.64	0.000								76.3
6	48	FUNCTION1 PFK	330.9792	22.43	0.000								84.3
7	48	FUNCTION1 PFK	330.9792	22.33	0.000								89.0
8	48	FUNCTION1 PFK	330.9792	21.46	0.000								101.4
9	48	FUNCTION1 PFK	330.9792	21.16	0.000								40.2

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, 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	28.86	0.000		0.000					1.0
2	49	FUNCTION2 PFK	366.9792	33.26	0.000		0.000					1.0
3	49	FUNCTION2 PFK	366.9792	33.11	0.000		0.000					2.2
4	49	FUNCTION2 PFK	366.9792	31.96	0.000		0.000					5.1
5	49	FUNCTION2 PFK	366.9792	31.90	0.000		0.000					3.7
6	49	FUNCTION2 PFK	366.9792	31.75	0.000		0.000					0.0
7	49	FUNCTION2 PFK	366.9792	31.40	0.000		0.000					1.8
8	49	FUNCTION2 PFK	366.9792	30.92	0.000		0.000					0.4
9	49	FUNCTION2 PFK	366.9792	30.79	0.000		0.000					1.0
10	49	FUNCTION2 PFK	366.9792	30.34	0.000		0.000					4.3
11	49	FUNCTION2 PFK	366.9792	29.82	0.000		0.000					0.9
12	49	FUNCTION2 PFK	366.9792	29.46	0.000		0.000					1.5
13	49	FUNCTION2 PFK	366.9792	29.39	0.000		0.000					0.8
14	49	FUNCTION2 PFK	366.9792	29.02	0.000		0.000					0.9
15	49	FUNCTION2 PFK	366.9792	28.99	0.000		0.000					0.5

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	34.34	0.000		0.000					39.7
2	50	FUNCTION3 PFK	380.9760	38.16	0.000		0.000					45.2
3	50	FUNCTION3 PFK	380.9760	36.78	0.000		0.000					97.7
4	50	FUNCTION3 PFK	380.9760	35.10	0.000		0.000					73.5
5	50	FUNCTION3 PFK	380.9760	34.91	0.000		0.000					68.3

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	39.62	0.000							4.2

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	28.68	0.000		0.000					1.4
2	53	FUNCTION1 HXCD...	375.8364	26.05	0.000		0.000					3.7
3	53	FUNCTION1 HXCD...	375.8364	23.64	0.000		0.000					1.6
4	53	FUNCTION1 HXCD...	375.8364	23.43	0.000		0.000					1.4

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	21.76	0.000		0.000					2.5
2	54	FUNCTION1 HPCD...	409.7974	21.40	0.000		0.000					1.3
3	54	FUNCTION1 HPCD...	409.7974	21.15	0.000		0.000					2.8
4	54	FUNCTION1 HPCD...	409.7974	27.89	0.000		0.000					3.2
5	54	FUNCTION1 HPCD...	409.7974	25.39	0.000		0.000					3.2

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55	FUNCTION2 HPCD...	409.7974	29.91	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	56	FUNCTION3 OCDPE	445.7555	38.41	0.000		0.000					3.3

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57	FUNCTION4 NCDPE	479.7165	44.39	0.000		0.000					3.8
2	57	FUNCTION4 NCDPE	479.7165	40.94	0.000		0.000					1.8

ETHERS6

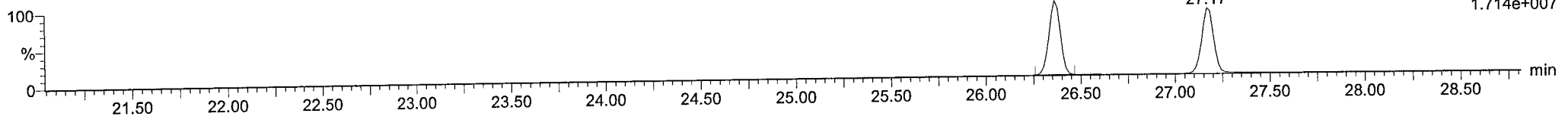
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

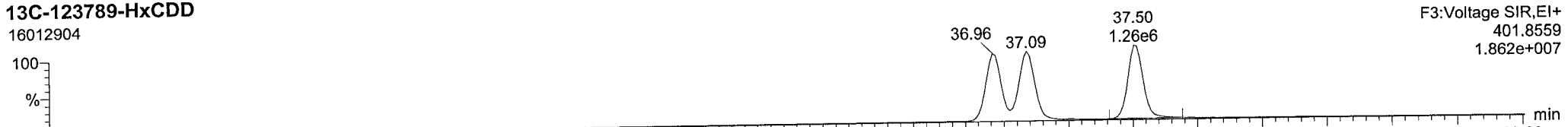
ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
16012904



13C-1234-TCDD
16012904

13C-123789-HxCDD
16012904

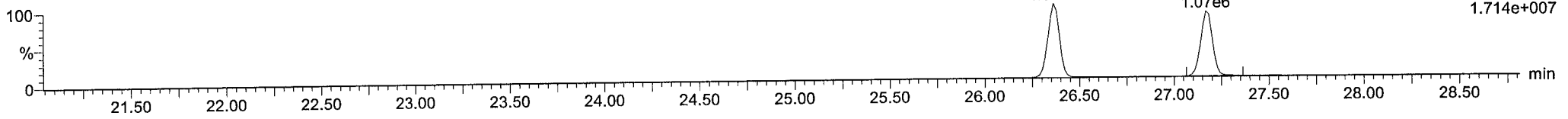


13C-123789-HxCDD
16012904

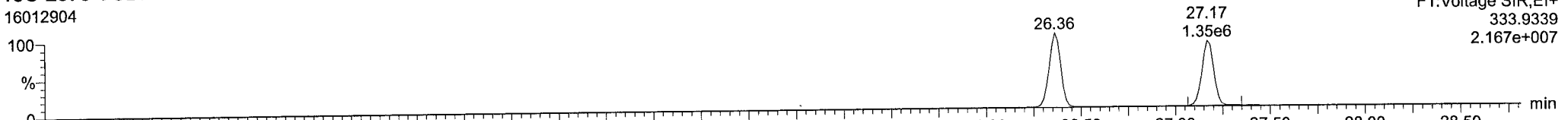
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

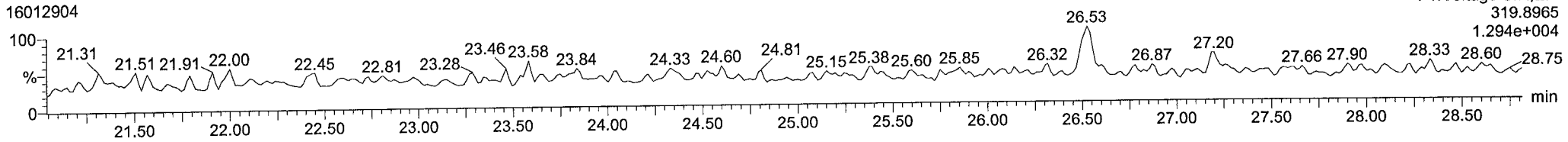
13C-2378-TCDD
16012904
F1:Voltage SIR,EI+
331.9368
1.714e+007



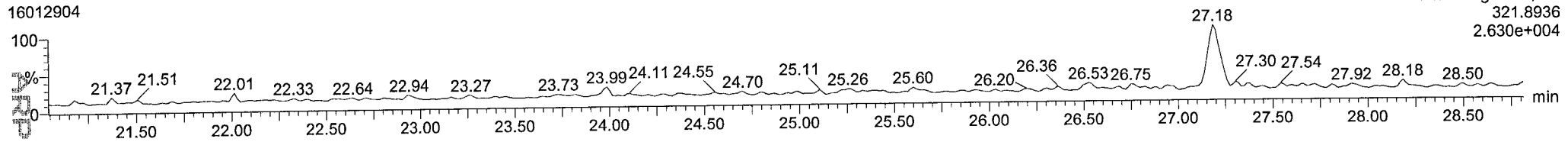
13C-2378-TCDD
16012904
F1:Voltage SIR,EI+
333.9339
2.167e+007



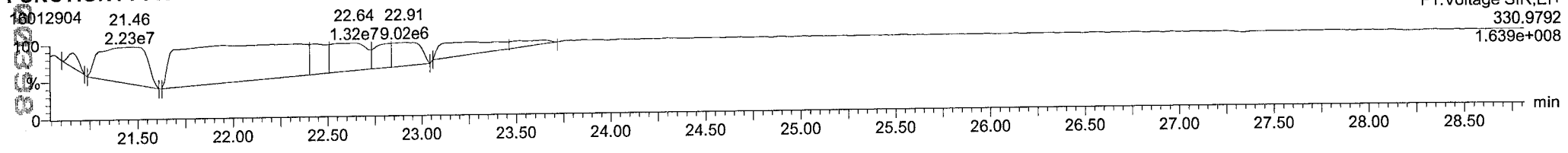
Total-tetradioxins
16012904
F1:Voltage SIR,EI+
319.8965
1.294e+004



Total-tetradioxins
16012904
F1:Voltage SIR,EI+
321.8936
2.630e+004



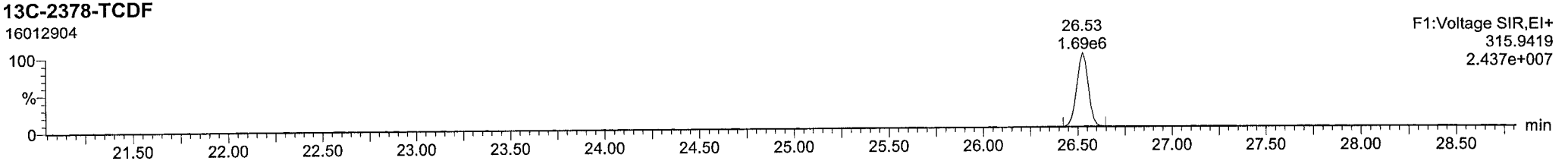
FUNCTION1 PFK
16012904
F1:Voltage SIR,EI+
330.9792
1.639e+008



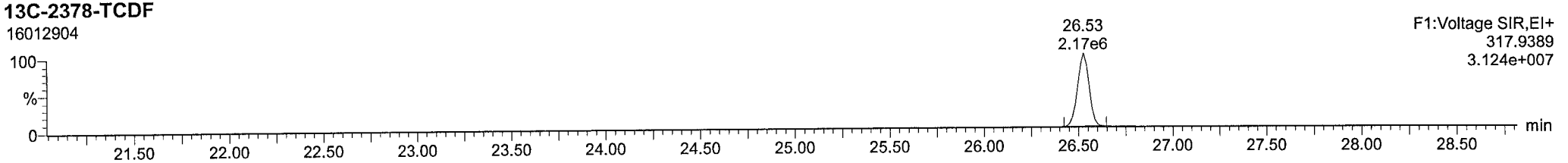
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

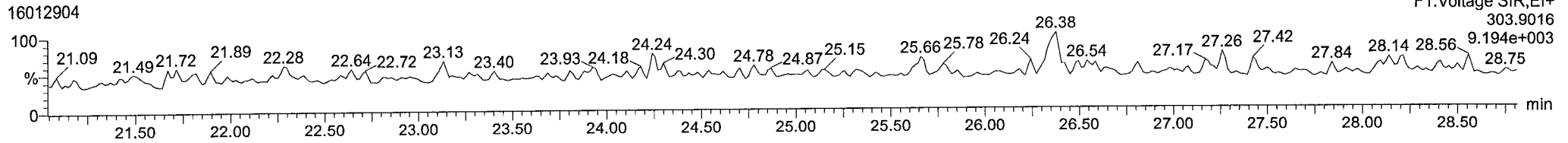
13C-2378-TCDF
16012904
F1:Voltage SIR,EI+
315.9419
2.437e+007



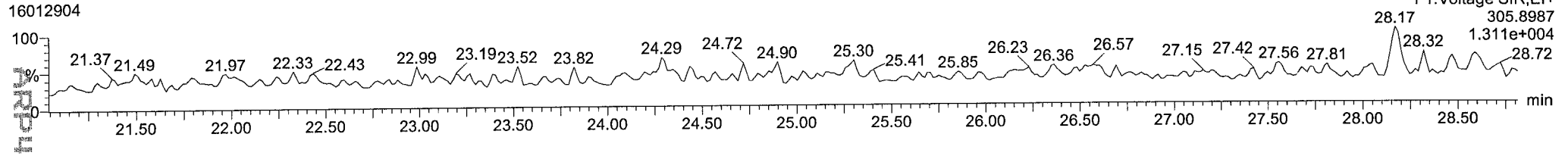
13C-2378-TCDF
16012904
F1:Voltage SIR,EI+
317.9389
3.124e+007



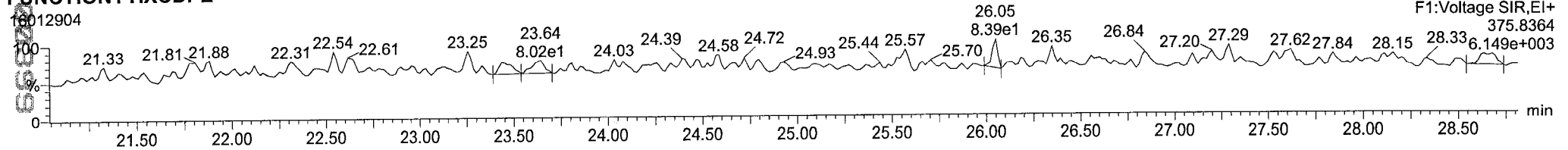
Total-tetrafurans
16012904
F1:Voltage SIR,EI+
303.9016
9.194e+003



Total-tetrafurans
16012904
F1:Voltage SIR,EI+
305.8987
1.311e+004



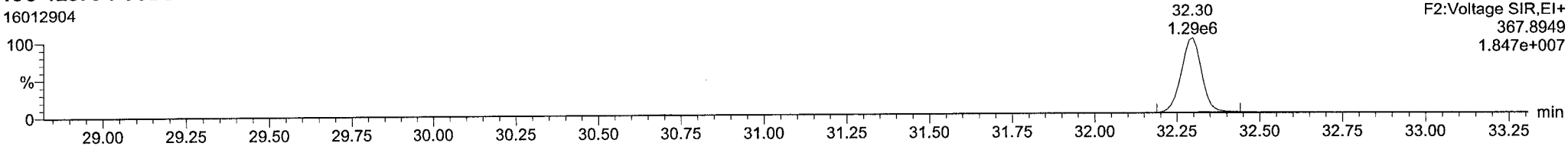
FUNCTION1 HXCDPE
16012904
F1:Voltage SIR,EI+
375.8364
6.149e+003



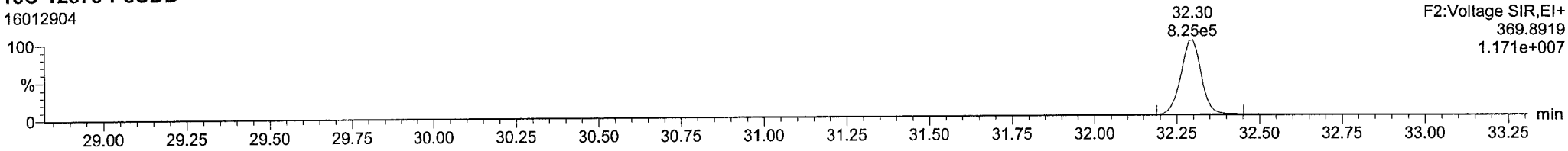
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

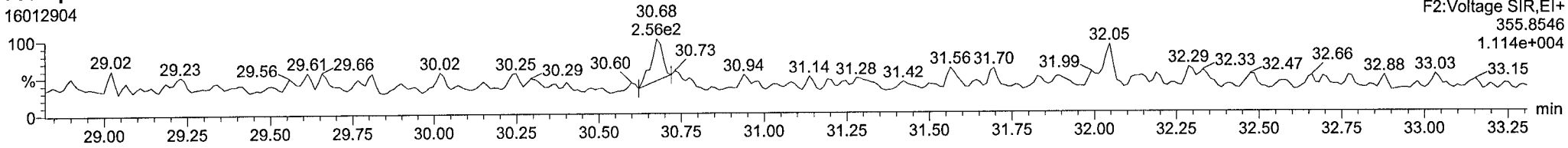
13C-12378-PeCDD



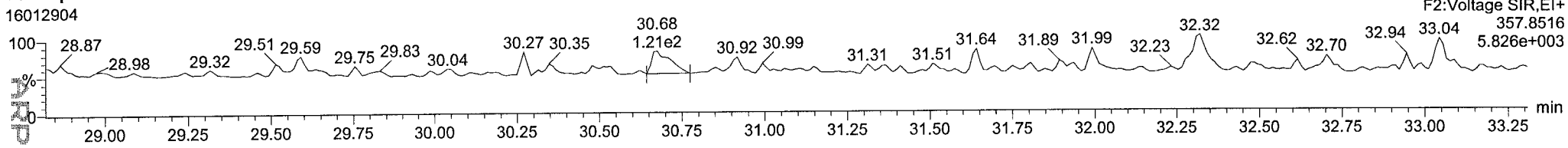
13C-12378-PeCDD



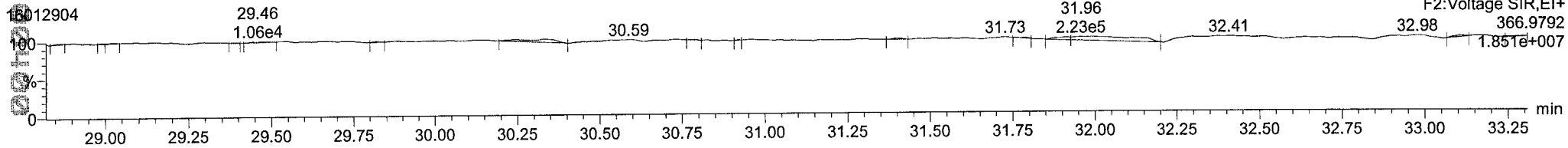
Total-pentadioxins



Total-pentadioxins

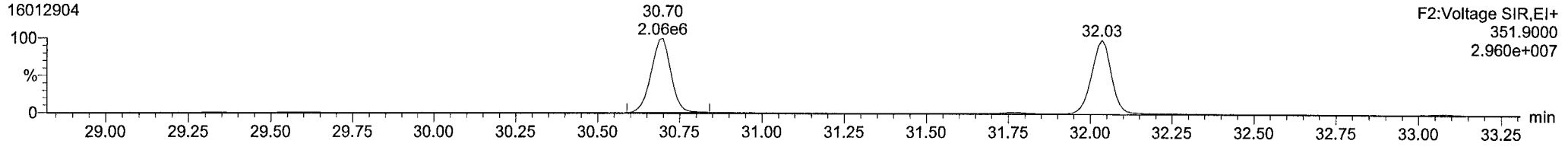


FUNCTION2 PFK

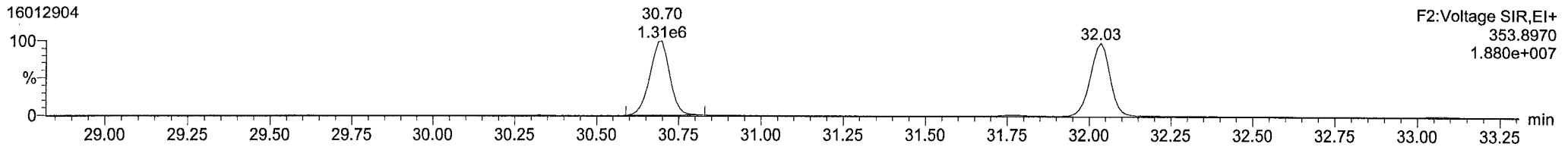


ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

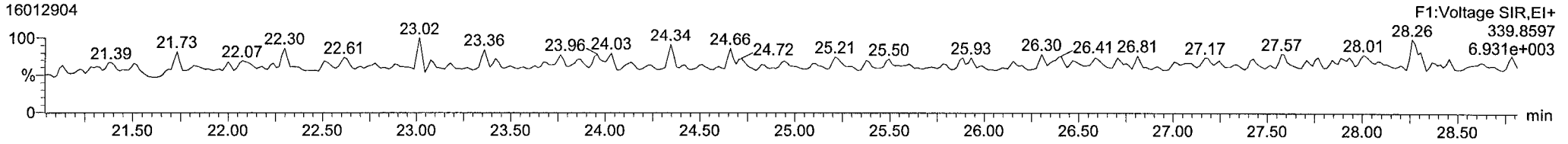
13C-12378-PeCDF



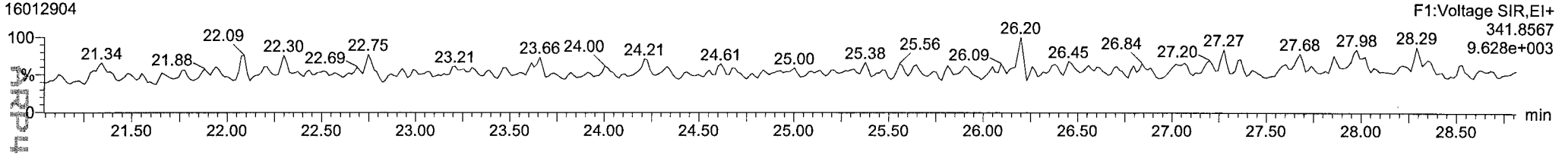
13C-12378-PeCDF



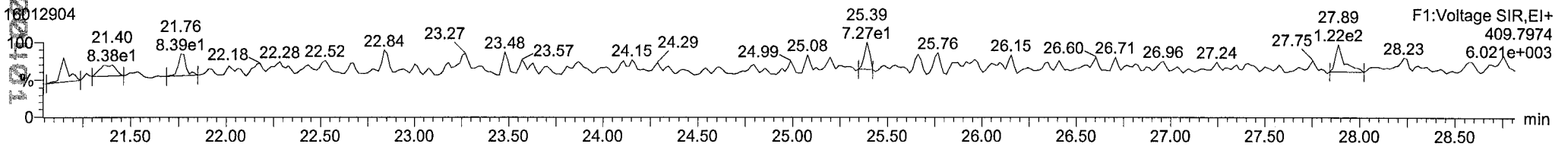
Total-penta1



Total-penta1



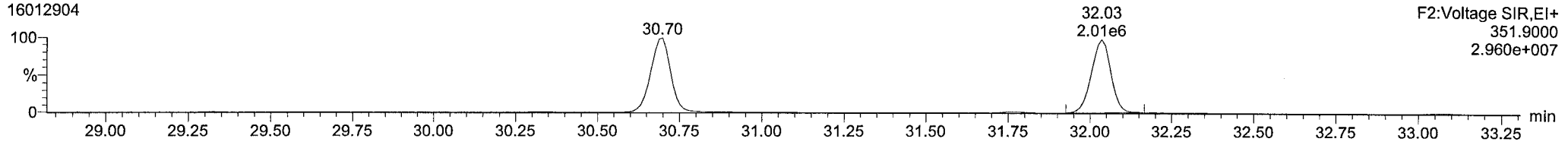
FUNCTION1 HPCDPE



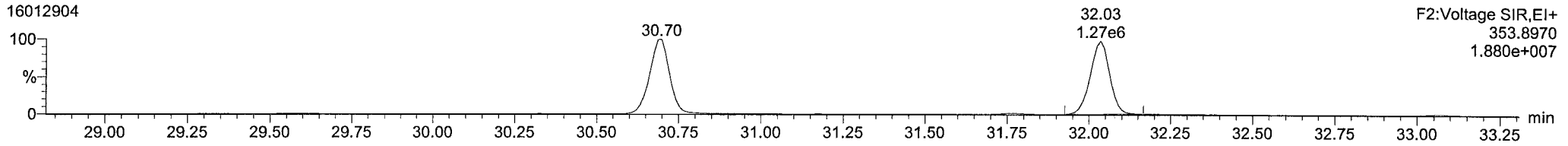
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

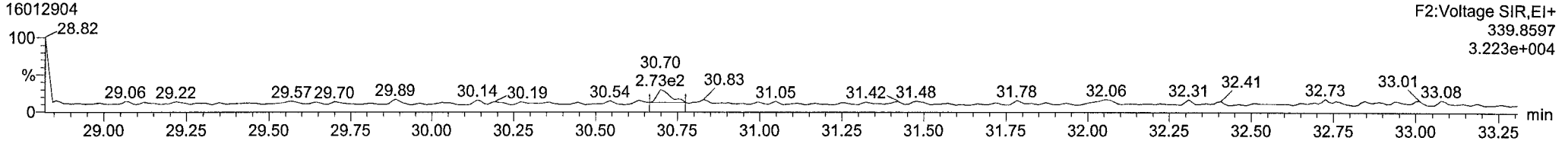
13C-23478-PeCDF



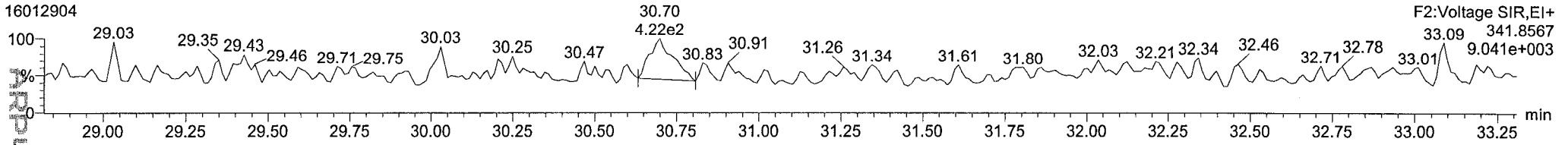
13C-23478-PeCDF



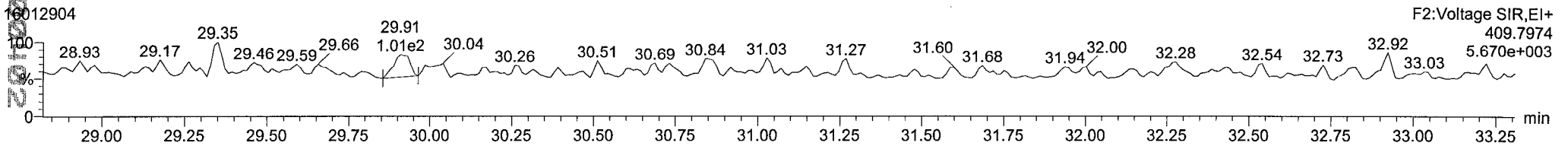
Total-pentafurans



Total-pentafurans



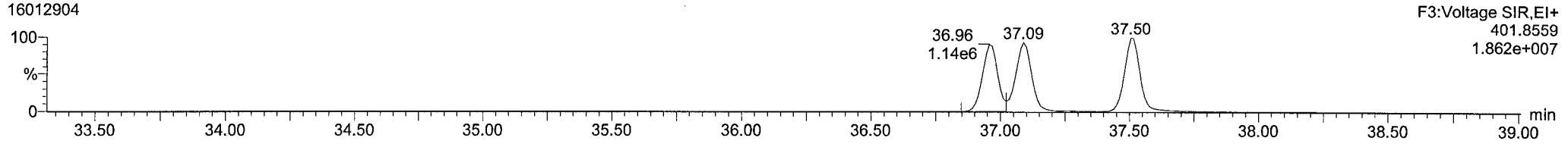
FUNCTION2 HPCDPE



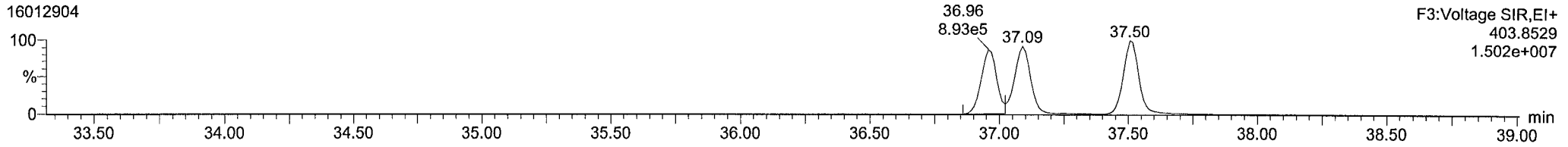
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

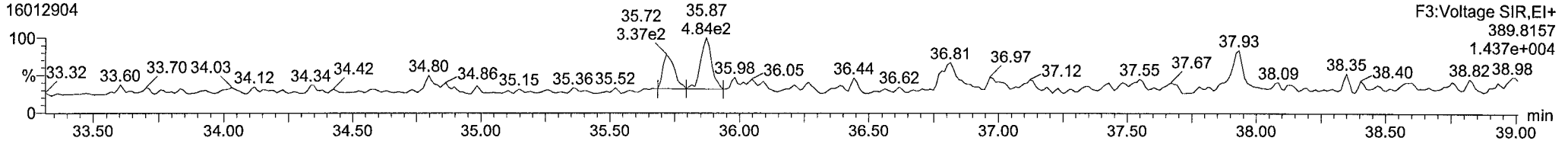
13C-123478-HxCDD



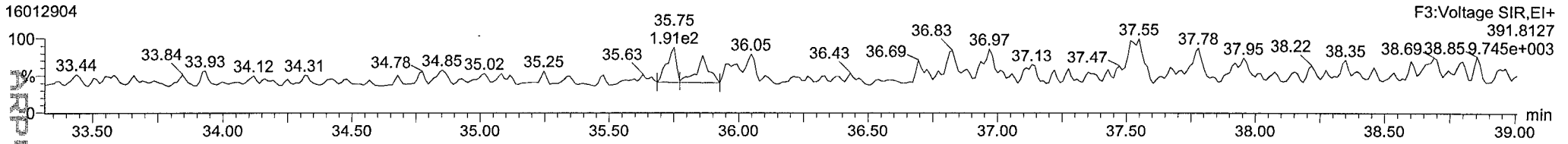
13C-123478-HxCDD



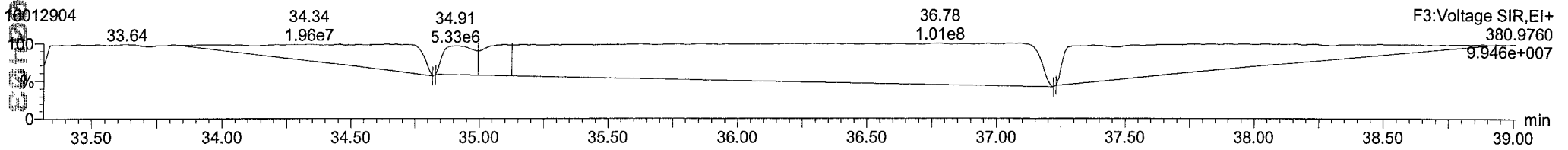
Total-hexadioxins



Total-hexadioxins



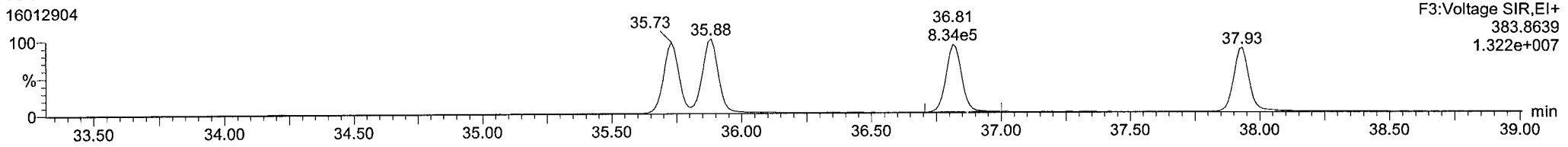
FUNCTION3 PFK



Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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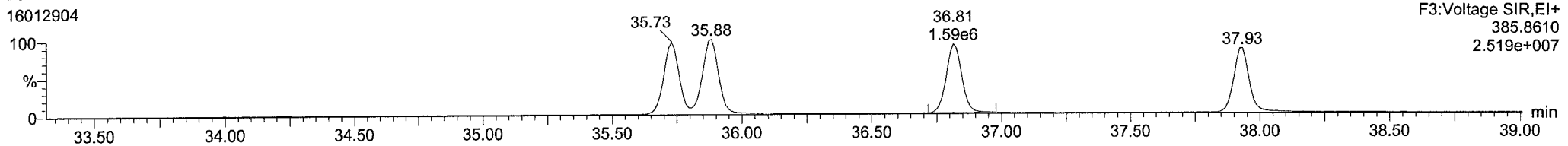
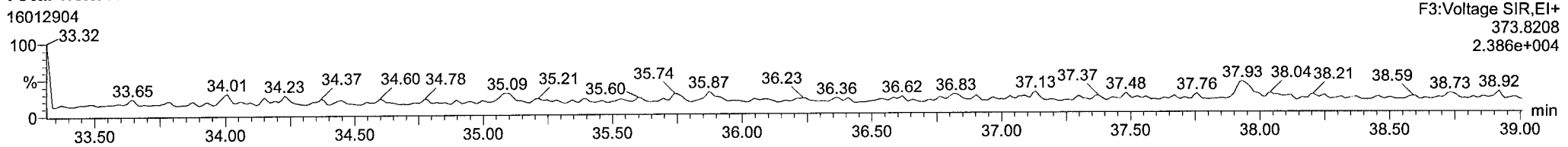
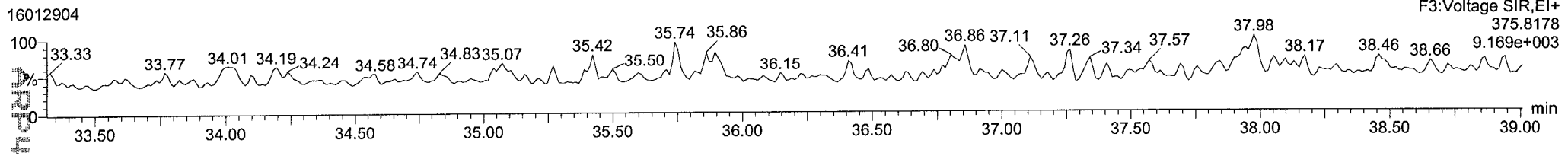


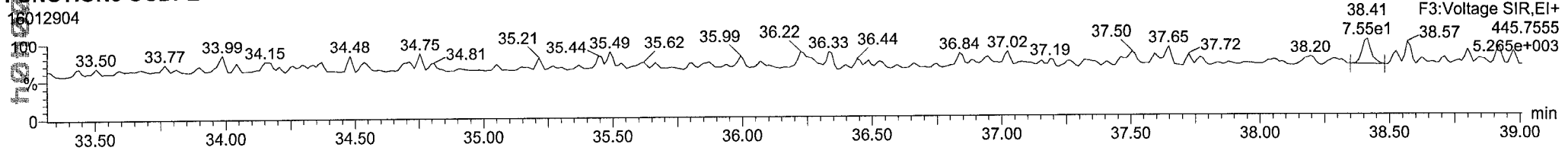
Total-hexafurans



Total-hexafurans



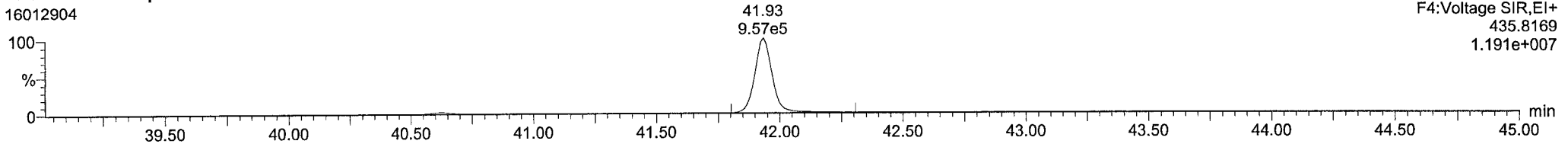
FUNCTION3 OCDPE



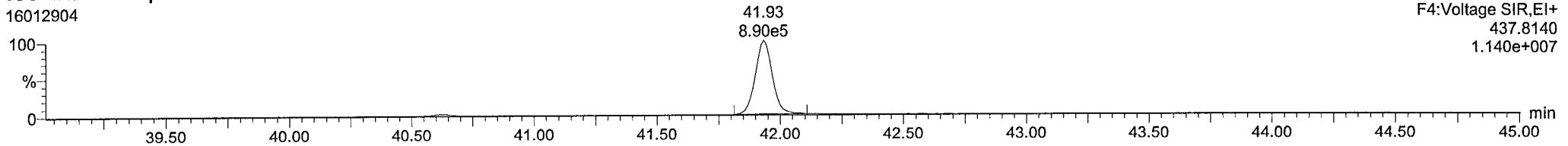
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

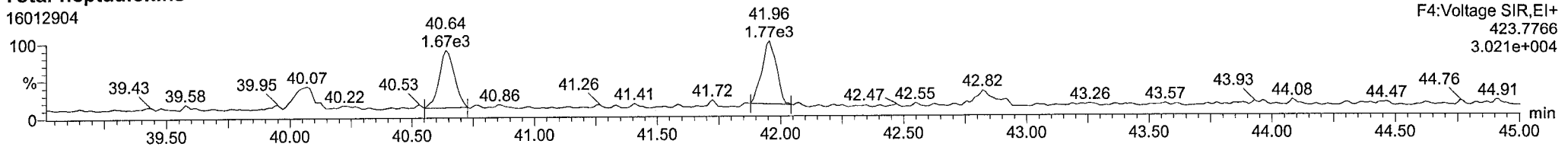
13C-1234678-HpCDD



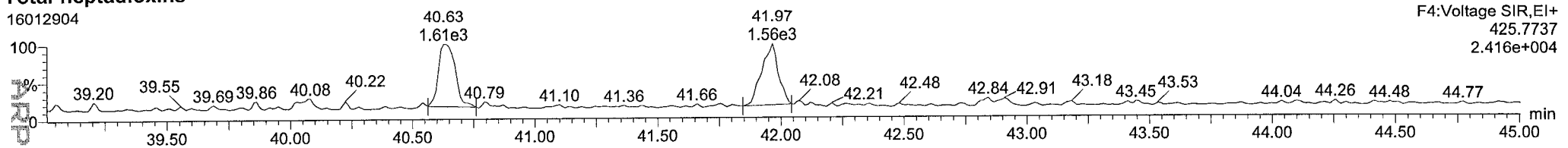
13C-1234678-HpCDD



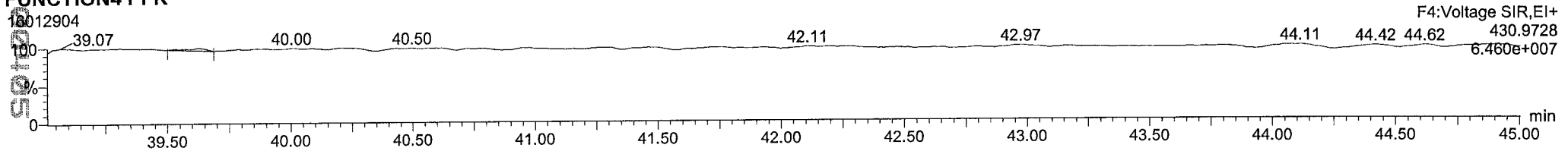
Total-heptadioxins



Total-heptadioxins



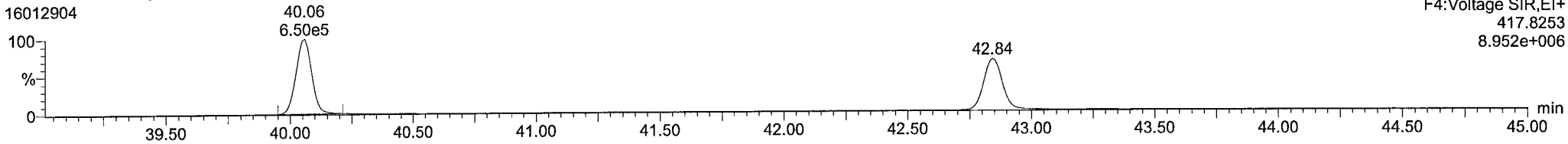
FUNCTION4 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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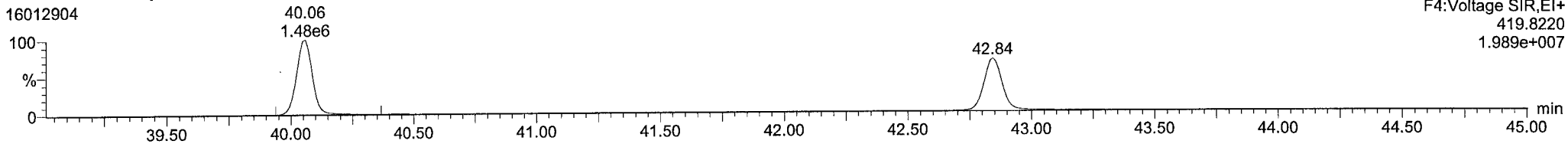
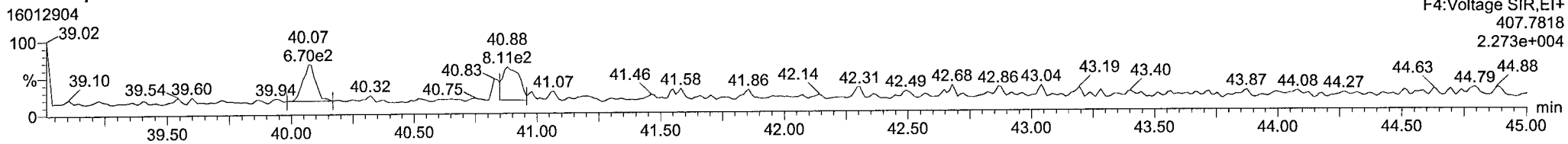
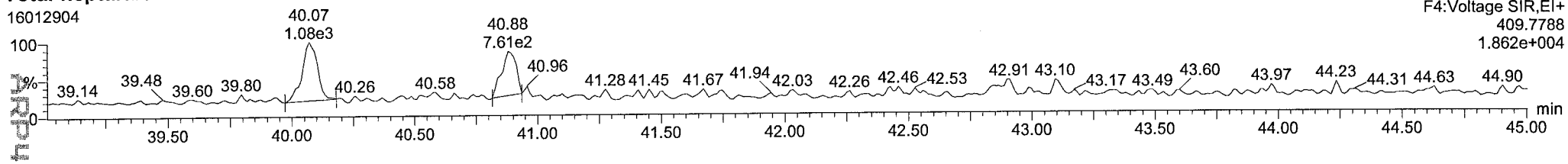


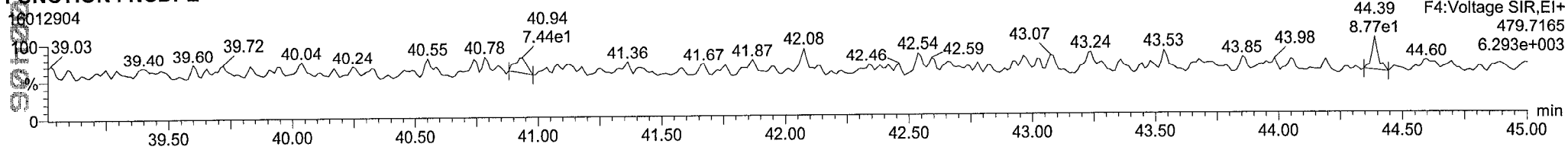
Total-heptafurans



Total-heptafurans



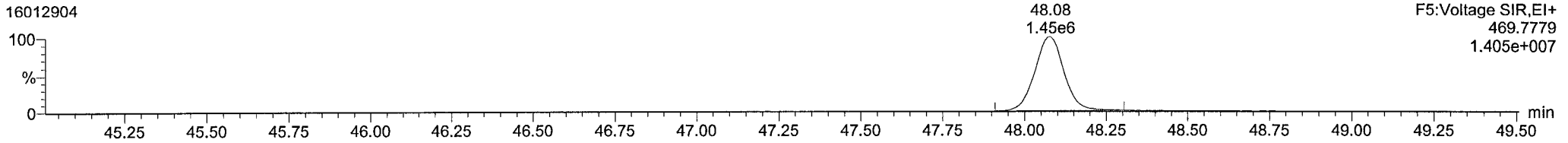
FUNCTION4 NCDPE



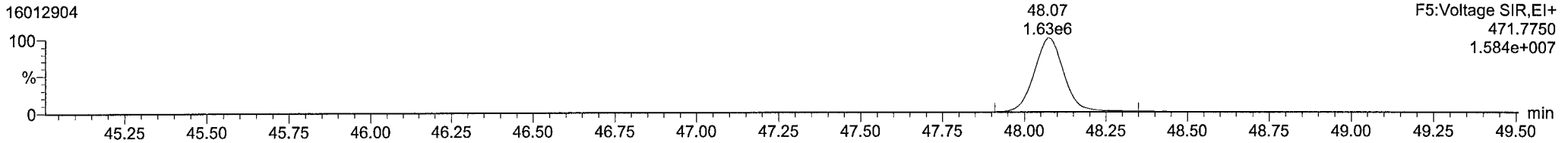
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

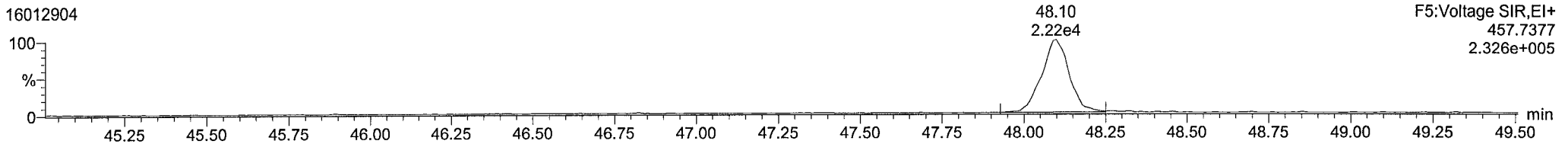
13C-OCDD



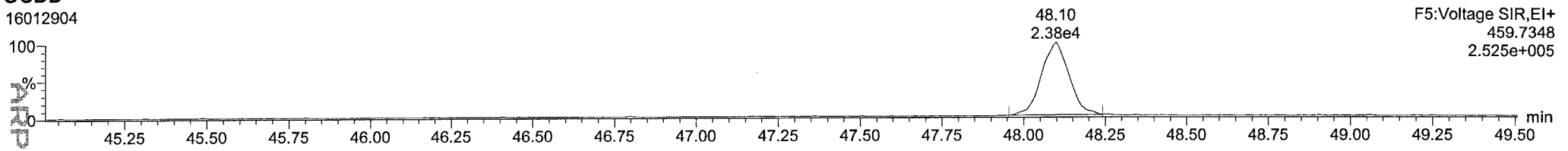
13C-OCDD



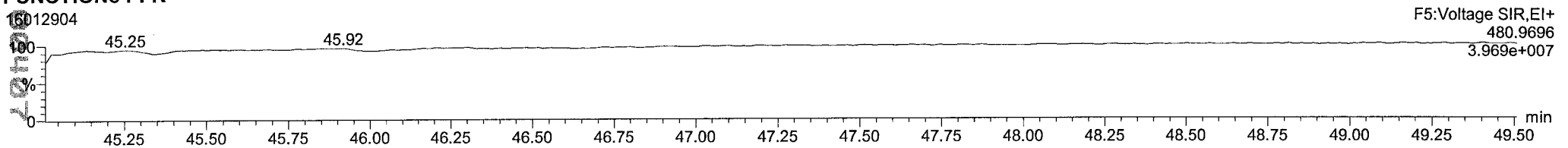
OCDD



OCDD



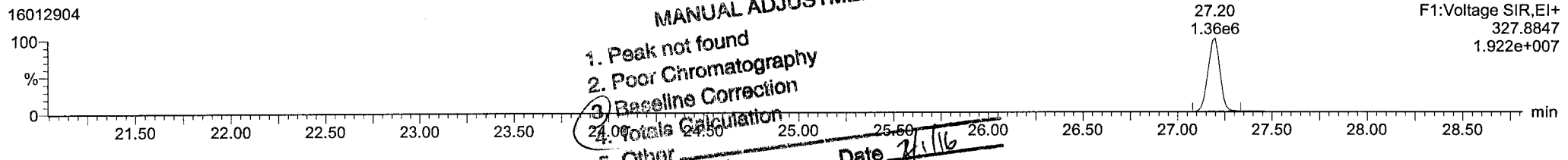
FUNCTION5 PFK



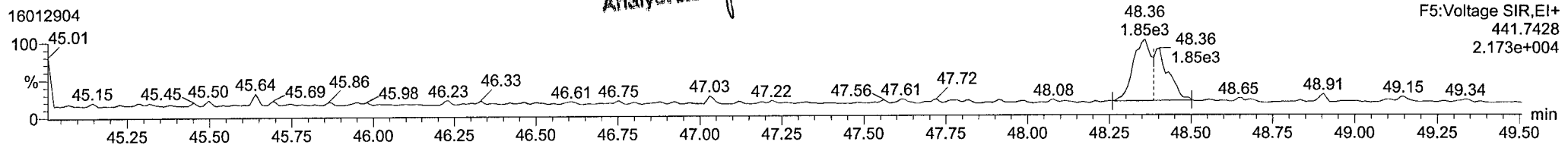
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, Conditions: AUTOSPEC01, User: pk

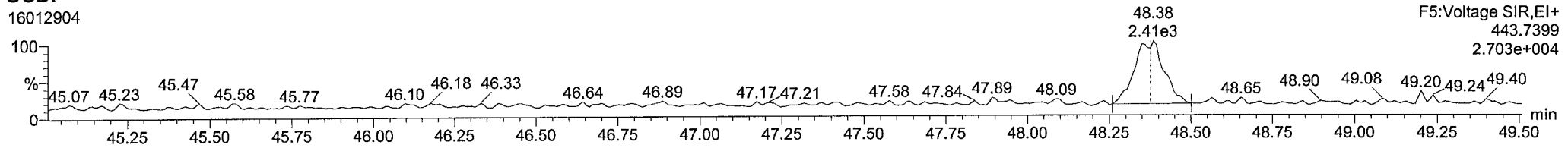
37CL-2378-TCDD



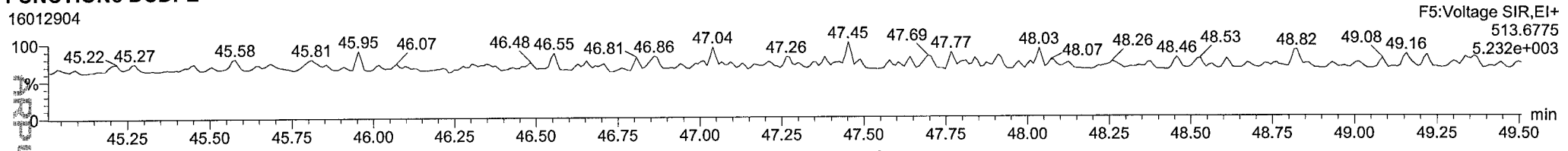
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, 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	26.511	1.001	1.56e5	2.19e5	0.827	0.710	0.770	993	1710	2.30e6	3.21e6	2321.2	NO	11.567	11.567
12378-PeCDF	30.687	1.001	9.53e5	6.49e5	0.824	1.468	1.550	2255	4427	1.39e7	9.37e6	6185.9	NO	58.443	58.443
23478-PeCDF	32.024	1.000	9.37e5	6.40e5	0.850	1.464	1.550	2255	4427	1.42e7	9.60e6	6287.8	NO	57.320	57.320
123478-HxCDF	35.729	1.001	7.50e5	6.53e5	0.973	1.149	1.240	3086	3316	1.12e7	9.75e6	3637.8	NO	57.816	57.816
234678-HxCDF	36.814	1.000	7.82e5	6.65e5	1.025	1.177	1.240	3086	3316	1.14e7	9.76e6	3682.9	NO	57.952	57.952
123678-HxCDF	35.882	1.001	7.82e5	6.77e5	0.953	1.155	1.240	3086	3316	1.13e7	9.59e6	3671.5	NO	57.407	57.407
123789-HxCDF	37.932	1.001	6.57e5	5.60e5	0.956	1.174	1.240	3086	3316	9.82e6	8.44e6	3182.0	NO	57.106	57.106
1234678-HpCDF	40.059	1.001	6.45e5	6.63e5	1.153	0.974	1.050	3514	2886	9.03e6	9.30e6	2571.1	NO	58.415	58.415
1234789-HpCDF	42.854	1.001	5.01e5	5.19e5	1.131	0.966	1.050	3514	2886	6.10e6	6.25e6	1735.8	NO	57.286	57.286
OCDF	48.367	1.006	7.42e5	8.88e5	1.023	0.835	0.890	1927	2476	7.11e6	8.38e6	3687.4	NO	108.416	108.416
2378-TCDD	27.169	1.001	1.32e5	1.66e5	1.023	0.796	0.770	1520	1020	1.92e6	2.42e6	1263.4	NO	11.818	11.818
12378-PeCDD	32.287	1.001	6.70e5	4.30e5	0.939	1.556	1.550	1697	1125	1.01e7	6.37e6	5943.6	NO	55.871	55.871
123478-HxCDD	36.957	1.000	6.18e5	4.97e5	0.963	1.245	1.240	2629	1659	9.46e6	7.54e6	3599.8	NO	56.550	56.550
123678-HxCDD	37.088	1.001	6.19e5	4.98e5	0.894	1.245	1.240	2629	1659	9.04e6	7.26e6	3436.8	NO	57.790	57.790
123789-HxCDD	37.505	1.012	6.08e5	4.85e5	0.900	1.254	1.240	2629	1659	9.32e6	7.45e6	3543.8	NO	57.703	57.703
1234678-HpCDD	41.944	1.001	4.78e5	4.68e5	0.964	1.022	1.050	1801	2063	6.06e6	5.82e6	3365.9	NO	57.406	57.406
OCDD	48.089	1.000	7.55e5	8.41e5	0.969	0.898	0.890	1599	2132	7.42e6	8.18e6	4642.2	NO	112.132	112.132
13C-2378-TCDF	26.497	1.006	1.71e6	2.20e6	1.502	0.777	0.770	8120	3814	2.50e7	3.20e7	3080.7	NO		90.426
13C-12378-PeCDF	30.665	1.165	2.03e6	1.29e6	1.215	1.571	1.550	4988	3662	2.99e7	1.90e7	5992.2	NO		94.885
13C-23478-PeCDF	32.013	1.216	1.99e6	1.25e6	1.181	1.587	1.550	4988	3662	2.99e7	1.89e7	5993.5	NO		95.007
13C-123478-HxCDF	35.707	0.952	8.48e5	1.65e6	1.246	0.515	0.510	3685	3567	1.27e7	2.46e7	3448.2	NO		87.122
13C-123678-HxCDF	35.861	0.956	9.14e5	1.75e6	1.375	0.522	0.510	3685	3567	1.35e7	2.57e7	3664.1	NO		84.366
13C-234678-HxCDF	36.803	0.982	8.39e5	1.60e6	1.186	0.525	0.510	3685	3567	1.22e7	2.33e7	3303.5	NO		89.339
13C-123789-HxCDF	37.910	1.011	7.64e5	1.46e6	1.135	0.522	0.510	3685	3567	1.17e7	2.25e7	3174.0	NO		85.439
13C-1234678-HpCDF	40.037	1.068	6.03e5	1.34e6	1.020	0.450	0.440	1571	2599	8.45e6	1.88e7	5379.3	NO		82.786
13C-1234789-HpCDF	42.832	1.142	4.86e5	1.09e6	0.824	0.446	0.440	1571	2599	5.94e6	1.32e7	3783.6	NO		83.192
13C-1234-TCDD	26.332	0.000	1.28e6	1.60e6	1.000	0.801	0.770	3701	1553	1.87e7	2.34e7	5057.2	NO		100.000
13C-2378-TCDD	27.139	1.031	1.08e6	1.39e6	0.983	0.775	0.770	3701	1553	1.50e7	1.91e7	4046.4	NO		86.953
13C-12378-PeCDD	32.265	1.225	1.28e6	8.11e5	0.787	1.584	1.550	1436	1143	1.87e7	1.19e7	13021.2	NO		92.320
13C-123478-HxCDD	36.946	0.985	1.14e6	9.07e5	1.031	1.259	1.240	2468	2260	1.70e7	1.35e7	6878.7	NO		86.453
13C-123678-HxCDD	37.066	0.989	1.21e6	9.55e5	1.137	1.265	1.240	2468	2260	1.75e7	1.40e7	7109.0	NO		82.790
13C-1234678-HpCDD	41.922	1.118	8.81e5	8.27e5	0.892	1.066	1.050	2926	2266	1.13e7	1.05e7	3872.0	NO		83.317
13C-OCDD	48.071	1.282	1.39e6	1.55e6	0.852	0.896	0.890	2514	2292	1.37e7	1.50e7	5434.0	NO		150.103

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, 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	37.494	0.000	1.28e6	1.02e6	1.000	1.251	1.240	2468	2260	1.95e7	1.56e7	7889.8	NO		100.000
Total-tetrafurans			1.61e5		0.827			993		2.38e6					11.930
Total-penta1			0.00e0					788		0.00e0					
Total-pentafurans			1.94e6		0.837			2255		2.88e7					118.765
Total-hexafurans			2.98e6		0.977			3086		4.38e7					230.731
Total-heptafurans			1.15e6		1.142			3514		1.52e7					116.138
Total-Furans			6.97e6		0.971			993		9.73e7					585.980
Total-tetradioxins			1.35e5		1.023			1520		1.97e6					12.108
Total-pentadioxins			6.71e5		0.939			1697		1.01e7					55.954
Total-hexadioxins			1.85e6		0.919			2629		2.79e7					172.629
Total-heptadioxins			4.82e5		0.964			1801		6.11e6					57.871
Total-Dioxins			3.90e6		0.950			1520		5.35e7					410.692
Total-TEQ			1.09e7					1520		1.51e8					996.673
37CL-2378-TCDD	27.169	1.032	1.29e6		1.091			1477		1.87e7		12638.7			40.966
FUNCTION1 PFK			1.32e8					717439		5.10e8					
FUNCTION2 PFK			4.86e5					205260		7.15e6					0.000
FUNCTION3 PFK			1.92e8					822657		2.83e8					0.000
FUNCTION4 PFK			3.16e6					454329		2.48e7					
FUNCTION5 PFK			0.00e0					337407		0.00e0					
FUNCTION1 HXCDPE			7.25e2					945		1.33e4					0.000
FUNCTION1 HPCDPE			2.86e2					646		5.08e3					0.000
FUNCTION2 HPCDPE			0.00e0					963		0.00e0					
FUNCTION3 OCDPE			7.07e1					588		1.54e3					0.000
FUNCTION4 NCDPE			4.59e2					920		1.16e4					0.000
FUNCTION5 DCDPE			0.00e0					605		0.00e0					

ARP4 : 00410

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, 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	26.51	374731.687	0.827		11.567	11.567	0.71	0.77	NO	2321.2
2	35	Total-tetrafurans	303.9016	26.33	931.379	0.827		0.029		0.76	0.77	NO	7.2
3	35	Total-tetrafurans	303.9016	25.61	3547.229	0.827		0.109		0.75	0.77	NO	22.9
4	35	Total-tetrafurans	303.9016	25.42	3212.926	0.827		0.099		0.76	0.77	NO	19.3
5	35	Total-tetrafurans	303.9016	25.29	4076.664	0.827		0.126		0.80	0.77	NO	25.3

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	30.33	4384.219	0.837		0.160		2.31	1.55	YES	19.5
2	37	Total-pentafurans	339.8597	29.60	15301.809	0.837		0.557		1.36	1.55	NO	49.4
3	37	Total-pentafurans	339.8597	33.07	12447.652	0.837		0.453		1.62	1.55	NO	50.4
4	3	23478-PeCDF	339.8597	32.02	1577154.563	0.850		57.320	57.320	1.46	1.55	NO	6287.8
5	37	Total-pentafurans	339.8597	31.75	1878.906	0.837		0.068		1.10	1.55	YES	7.7
6	37	Total-pentafurans	339.8597	30.98	3669.564	0.837		0.134		5.12	1.55	YES	20.3
7	37	Total-pentafurans	339.8597	30.88	44800.906	0.837		1.631		1.36	1.55	NO	153.8
8	2	12378-PeCDF	339.8597	30.69	1601987.063	0.824		58.443	58.443	1.47	1.55	NO	6185.9

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	6	123678-HxCDF	373.8208	35.88	1458657.501	0.953		57.407	57.407	1.16	1.24	NO	3671.5
2	4	123478-HxCDF	373.8208	35.73	1403044.188	0.973		57.816	57.816	1.15	1.24	NO	3637.8
3	38	Total-hexafurans	373.8208	35.55	1865.030	0.977		0.078		1.40	1.24	NO	6.1
4	38	Total-hexafurans	373.8208	34.21	8939.039	0.977		0.373		1.15	1.24	NO	23.7
5	7	123789-HxCDF	373.8208	37.93	1216809.375	0.956		57.106	57.106	1.17	1.24	NO	3182.0
6	5	234678-HxCDF	373.8208	36.81	1446857.813	1.025		57.952	57.952	1.18	1.24	NO	3682.9

HPF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42.85	1020349.313	1.131		57.286	57.286	0.97	1.05	NO	1735.8
2	39	Total-heptafurans	407.7818	40.87	6410.204	1.142		0.319		0.95	1.05	NO	11.5
3	39	Total-heptafurans	407.7818	40.27	2359.065	1.142		0.117		0.66	1.05	YES	5.4
4	8	1234678-HpCDF	407.7818	40.06	1308144.250	1.153		58.415	58.415	0.97	1.05	NO	2571.1

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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	26.51	374731.687	0.827		11.567	11.567	0.71	0.77	NO	2321.2
2	35	Total-tetrafurans	303.9016	26.33	931.379	0.827		0.029		0.76	0.77	NO	7.2
3	35	Total-tetrafurans	303.9016	25.61	3547.229	0.827		0.109		0.75	0.77	NO	22.9
4	35	Total-tetrafurans	303.9016	25.42	3212.926	0.827		0.099		0.76	0.77	NO	19.3
5	35	Total-tetrafurans	303.9016	25.29	4076.664	0.827		0.126		0.80	0.77	NO	25.3
6	37	Total-pentafurans	339.8597	30.33	4384.219	0.837		0.160		2.31	1.55	YES	19.5
7	37	Total-pentafurans	339.8597	29.60	15301.809	0.837		0.557		1.36	1.55	NO	49.4
8	37	Total-pentafurans	339.8597	33.07	12447.652	0.837		0.453		1.62	1.55	NO	50.4
9	3	23478-PeCDF	339.8597	32.02	1577154.563	0.850		57.320	57.320	1.46	1.55	NO	6287.8
10	37	Total-pentafurans	339.8597	31.75	1878.906	0.837		0.068		1.10	1.55	YES	7.7
11	37	Total-pentafurans	339.8597	30.98	3669.564	0.837		0.134		5.12	1.55	YES	20.3
12	37	Total-pentafurans	339.8597	30.88	44800.906	0.837		1.631		1.36	1.55	NO	153.8
13	2	12378-PeCDF	339.8597	30.69	1601987.063	0.824		58.443	58.443	1.47	1.55	NO	6185.9
14	6	123678-HxCDF	373.8208	35.88	1458657.501	0.953		57.407	57.407	1.16	1.24	NO	3671.5
15	4	123478-HxCDF	373.8208	35.73	1403044.188	0.973		57.816	57.816	1.15	1.24	NO	3637.8
16	38	Total-hexafurans	373.8208	35.55	1865.030	0.977		0.078		1.40	1.24	NO	6.1
17	38	Total-hexafurans	373.8208	34.21	8939.039	0.977		0.373		1.15	1.24	NO	23.7
18	7	123789-HxCDF	373.8208	37.93	1216809.375	0.956		57.106	57.106	1.17	1.24	NO	3182.0
19	5	234678-HxCDF	373.8208	36.81	1446857.813	1.025		57.952	57.952	1.18	1.24	NO	3682.9
20	9	1234789-HpCDF	407.7818	42.85	1020349.313	1.131		57.286	57.286	0.97	1.05	NO	1735.8
21	39	Total-heptafurans	407.7818	40.87	6410.204	1.142		0.319		0.95	1.05	NO	11.5
22	39	Total-heptafurans	407.7818	40.27	2359.065	1.142		0.117		0.66	1.05	YES	5.4
23	8	1234678-HpCDF	407.7818	40.06	1308144.250	1.153		58.415	58.415	0.97	1.05	NO	2571.1
24	10	OCDF	441.7428	48.37	1629383.001	1.023		108.416	108....	0.84	0.89	NO	3687.4

TD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	27.17	298198.719	1.023		11.818	11.818	0.80	0.77	NO	1263.4
2	41	Total-tetradioxins	319.8965	26.78	7297.220	1.023		0.289		0.85	0.77	NO	29.6

PD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	12	12378-PeCDD	355.8546	32.29	1100223.656	0.939		55.871	55.871	1.56	1.55	NO	5943.6
2	42	Total-pentadioxins	355.8546	31.63	1621.593	0.939		0.082		1.79	1.55	YES	9.4

HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	13	123478-HxCDD	389.8157	36.96	1115151.438	0.963		56.550	56.550	1.24	1.24	NO	3599.8
2	43	Total-hexadioxins	389.8157	36.78	286.923	0.919		0.015		1.91	1.24	YES	1.6
3	43	Total-hexadioxins	389.8157	37.89	1038.980	0.919		0.054					3.6
4	15	123789-HxCDD	389.8157	37.50	1093366.063	0.900		57.703	57.703	1.25	1.24	NO	3543.8
5	43	Total-hexadioxins	389.8157	37.23	9998.313	0.919		0.517		1.02	1.24	YES	25.6
6	14	123678-HxCDD	389.8157	37.09	1116973.407	0.894		57.790	57.790	1.24	1.24	NO	3436.8

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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	41.94	945215.594	0.964		57.406	57.406	1.02	1.05	NO	3365.9
2	44	Total-heptadioxins	423.7766	40.63	7644.681	0.964		0.464		1.06	1.05	NO	28.9

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	11	2378-TCDD	319.8965	27.17	298198.719	1.023		11.818	11.818	0.80	0.77	NO	1263.4
2	41	Total-tetradioxins	319.8965	26.78	7297.220	1.023		0.289		0.85	0.77	NO	29.6
3	13	123478-HxCDD	389.8157	36.96	1115151.438	0.963		56.550	56.550	1.24	1.24	NO	3599.8
4	43	Total-hexadioxins	389.8157	36.78	286.923	0.919		0.015		1.91	1.24	YES	1.6
5	12	12378-PeCDD	355.8546	32.29	1100223.656	0.939		55.871	55.871	1.56	1.55	NO	5943.6
6	42	Total-pentadioxins	355.8546	31.63	1621.593	0.939		0.082		1.79	1.55	YES	9.4
7	43	Total-hexadioxins	389.8157	37.89	1038.980	0.919		0.054					3.6
8	15	123789-HxCDD	389.8157	37.50	1093366.063	0.900		57.703	57.703	1.25	1.24	NO	3543.8
9	43	Total-hexadioxins	389.8157	37.23	9998.313	0.919		0.517		1.02	1.24	YES	25.6
10	14	123678-HxCDD	389.8157	37.09	1116973.407	0.894		57.790	57.790	1.24	1.24	NO	3436.8
11	16	1234678-HpCDD	423.7766	41.94	945215.594	0.964		57.406	57.406	1.02	1.05	NO	3365.9
12	44	Total-heptadioxins	423.7766	40.63	7644.681	0.964		0.464		1.06	1.05	NO	28.9
13	17	OCDD	457.7377	48.09	1595999.063	0.969		112.132	112....	0.90	0.89	NO	4642.2

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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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	26.51	374731.687	0.827		11.567	11.567	0.71	0.77	NO	2321.2
2	35	Total-tetrafurans	303.9016	26.33	931.379	0.827		0.029		0.76	0.77	NO	7.2
3	35	Total-tetrafurans	303.9016	25.61	3547.229	0.827		0.109		0.75	0.77	NO	22.9
4	35	Total-tetrafurans	303.9016	25.42	3212.926	0.827		0.099		0.76	0.77	NO	19.3
5	35	Total-tetrafurans	303.9016	25.29	4076.664	0.827		0.126		0.80	0.77	NO	25.3
6	37	Total-pentafurans	339.8597	30.33	4384.219	0.837		0.160		2.31	1.55	YES	19.5
7	37	Total-pentafurans	339.8597	29.60	15301.809	0.837		0.557		1.36	1.55	NO	49.4
8	37	Total-pentafurans	339.8597	33.07	12447.652	0.837		0.453		1.62	1.55	NO	50.4
9	3	23478-PeCDF	339.8597	32.02	1577154.563	0.850		57.320	57.320	1.46	1.55	NO	6287.8
10	37	Total-pentafurans	339.8597	31.75	1878.906	0.837		0.068		1.10	1.55	YES	7.7
11	37	Total-pentafurans	339.8597	30.98	3669.564	0.837		0.134		5.12	1.55	YES	20.3
12	37	Total-pentafurans	339.8597	30.88	44800.906	0.837		1.631		1.36	1.55	NO	153.8
13	2	12378-PeCDF	339.8597	30.69	1601987.063	0.824		58.443	58.443	1.47	1.55	NO	6185.9
14	6	123678-HxCDF	373.8208	35.88	1458657.501	0.953		57.407	57.407	1.16	1.24	NO	3671.5
15	4	123478-HxCDF	373.8208	35.73	1403044.188	0.973		57.816	57.816	1.15	1.24	NO	3637.8
16	38	Total-hexafurans	373.8208	35.55	1865.030	0.977		0.078		1.40	1.24	NO	6.1
17	38	Total-hexafurans	373.8208	34.21	8939.039	0.977		0.373		1.15	1.24	NO	23.7
18	7	123789-HxCDF	373.8208	37.93	1216809.375	0.956		57.106	57.106	1.17	1.24	NO	3182.0
19	5	234678-HxCDF	373.8208	36.81	1446857.813	1.025		57.952	57.952	1.18	1.24	NO	3682.9
20	9	1234789-HpCDF	407.7818	42.85	1020349.313	1.131		57.286	57.286	0.97	1.05	NO	1735.8
21	39	Total-heptafurans	407.7818	40.87	6410.204	1.142		0.319		0.95	1.05	NO	11.5
22	39	Total-heptafurans	407.7818	40.27	2359.065	1.142		0.117		0.66	1.05	YES	5.4
23	8	1234678-HpCDF	407.7818	40.06	1308144.250	1.153		58.415	58.415	0.97	1.05	NO	2571.1
24	10	OCDF	441.7428	48.37	1629383.001	1.023		108.416	108....	0.84	0.89	NO	3687.4
25	11	2378-TCDD	319.8965	27.17	298198.719	1.023		11.818	11.818	0.80	0.77	NO	1263.4
26	41	Total-tetradioxins	319.8965	26.78	7297.220	1.023		0.289		0.85	0.77	NO	29.6
27	13	123478-HxCDD	389.8157	36.96	1115151.438	0.963		56.550	56.550	1.24	1.24	NO	3599.8
28	43	Total-hexadioxins	389.8157	36.78	286.923	0.919		0.015		1.91	1.24	YES	1.6
29	12	12378-PeCDD	355.8546	32.29	1100223.656	0.939		55.871	55.871	1.56	1.55	NO	5943.6
30	42	Total-pentadioxins	355.8546	31.63	1621.593	0.939		0.082		1.79	1.55	YES	9.4
31	43	Total-hexadioxins	389.8157	37.89	1038.980	0.919		0.054					3.6
32	15	123789-HxCDD	389.8157	37.50	1093366.063	0.900		57.703	57.703	1.25	1.24	NO	3543.8
33	43	Total-hexadioxins	389.8157	37.23	9998.313	0.919		0.517		1.02	1.24	YES	25.6
34	14	123678-HxCDD	389.8157	37.09	1116973.407	0.894		57.790	57.790	1.24	1.24	NO	3436.8
35	16	1234678-HpCDD	423.7766	41.94	945215.594	0.964		57.406	57.406	1.02	1.05	NO	3365.9
36	44	Total-heptadioxins	423.7766	40.63	7644.681	0.964		0.464		1.06	1.05	NO	28.9
37	17	OCDD	457.7377	48.09	1595999.063	0.969		112.132	112....	0.90	0.89	NO	4642.2

Dataset: P:\DIOXIN8290.PRO\160129DATA.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	22.87	0.000							87.1
2	48	FUNCTION1 PFK	330.9792	22.60	0.000							96.6
3	48	FUNCTION1 PFK	330.9792	22.21	0.000							113.2
4	48	FUNCTION1 PFK	330.9792	22.07	0.000							118.2
5	48	FUNCTION1 PFK	330.9792	21.48	0.000							121.0
6	48	FUNCTION1 PFK	330.9792	21.13	0.000							55.1
7	48	FUNCTION1 PFK	330.9792	25.26	0.000							1.9
8	48	FUNCTION1 PFK	330.9792	23.21	0.000							29.8
9	48	FUNCTION1 PFK	330.9792	22.90	0.000							87.4

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	49	FUNCTION2 PFK	366.9792	31.98	0.000		0.000					1.9
2	49	FUNCTION2 PFK	366.9792	31.49	0.000		0.000					1.9
3	49	FUNCTION2 PFK	366.9792	31.44	0.000		0.000					0.6
4	49	FUNCTION2 PFK	366.9792	30.87	0.000		0.000					2.0
5	49	FUNCTION2 PFK	366.9792	30.83	0.000		0.000					1.3
6	49	FUNCTION2 PFK	366.9792	30.52	0.000		0.000					0.9
7	49	FUNCTION2 PFK	366.9792	30.06	0.000		0.000					1.3
8	49	FUNCTION2 PFK	366.9792	29.94	0.000		0.000					1.2
9	49	FUNCTION2 PFK	366.9792	29.51	0.000		0.000					1.4
10	49	FUNCTION2 PFK	366.9792	29.20	0.000		0.000					0.4
11	49	FUNCTION2 PFK	366.9792	28.97	0.000		0.000					1.2
12	49	FUNCTION2 PFK	366.9792	28.87	0.000		0.000					2.6
13	49	FUNCTION2 PFK	366.9792	32.94	0.000		0.000					4.1
14	49	FUNCTION2 PFK	366.9792	32.89	0.000		0.000					4.9
15	49	FUNCTION2 PFK	366.9792	32.64	0.000		0.000					3.3
16	49	FUNCTION2 PFK	366.9792	32.60	0.000		0.000					2.7
17	49	FUNCTION2 PFK	366.9792	32.50	0.000		0.000					1.7
18	49	FUNCTION2 PFK	366.9792	32.41	0.000		0.000					1.6

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	38.69	0.000		0.000					1.7
2	50	FUNCTION3 PFK	380.9760	37.93	0.000		0.000					26.2
3	50	FUNCTION3 PFK	380.9760	37.30	0.000		0.000					55.8
4	50	FUNCTION3 PFK	380.9760	35.76	0.000		0.000					58.2
5	50	FUNCTION3 PFK	380.9760	35.15	0.000		0.000					55.2
6	50	FUNCTION3 PFK	380.9760	34.88	0.000		0.000					51.9
7	50	FUNCTION3 PFK	380.9760	34.68	0.000		0.000					54.4
8	50	FUNCTION3 PFK	380.9760	33.43	0.000		0.000					40.0

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, 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	44.62	0.000							5.4
2	51	FUNCTION4 PFK	430.9728	44.41	0.000							7.5
3	51	FUNCTION4 PFK	430.9728	41.90	0.000							3.3
4	51	FUNCTION4 PFK	430.9728	41.44	0.000							7.8
5	51	FUNCTION4 PFK	430.9728	41.26	0.000							5.5
6	51	FUNCTION4 PFK	430.9728	40.95	0.000							5.8
7	51	FUNCTION4 PFK	430.9728	40.48	0.000							6.8
8	51	FUNCTION4 PFK	430.9728	40.20	0.000							6.9
9	51	FUNCTION4 PFK	430.9728	39.60	0.000							5.6

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	26.54	0.000		0.000					2.4
2	53	FUNCTION1 HXCD...	375.8364	26.30	0.000		0.000					2.2
3	53	FUNCTION1 HXCD...	375.8364	24.51	0.000		0.000					2.8
4	53	FUNCTION1 HXCD...	375.8364	22.81	0.000		0.000					2.1
5	53	FUNCTION1 HXCD...	375.8364	21.37	0.000		0.000					1.0
6	53	FUNCTION1 HXCD...	375.8364	28.20	0.000		0.000					1.7
7	53	FUNCTION1 HXCD...	375.8364	27.90	0.000		0.000					1.8

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54	FUNCTION1 HPCD...	409.7974	27.63	0.000		0.000					3.3
2	54	FUNCTION1 HPCD...	409.7974	26.44	0.000		0.000					2.0
3	54	FUNCTION1 HPCD...	409.7974	22.82	0.000		0.000					2.5

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56	FUNCTION3 OCDPE	445.7555	36.39	0.000		0.000					2.6

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, 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	44.37	0.000		0.000					3.8
2	57	FUNCTION4 NCDPE	479.7165	44.10	0.000		0.000					1.9
3	57	FUNCTION4 NCDPE	479.7165	42.94	0.000		0.000					1.7
4	57	FUNCTION4 NCDPE	479.7165	42.29	0.000		0.000					2.0
5	57	FUNCTION4 NCDPE	479.7165	39.66	0.000		0.000					3.3

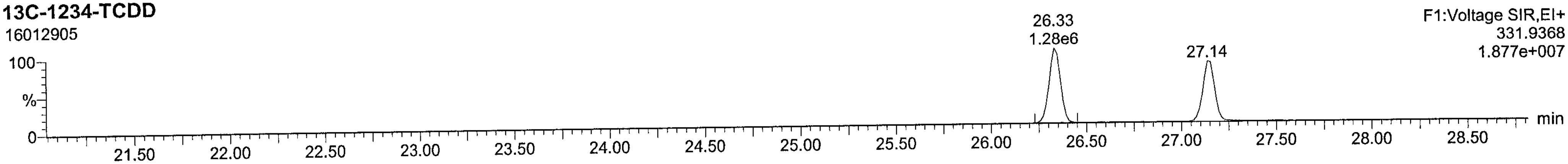
ETHERS6

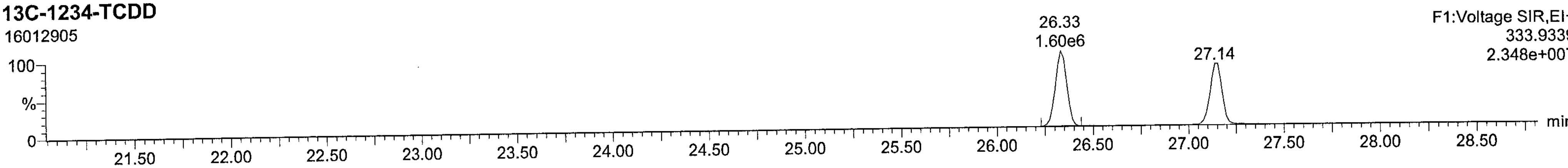
	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1												

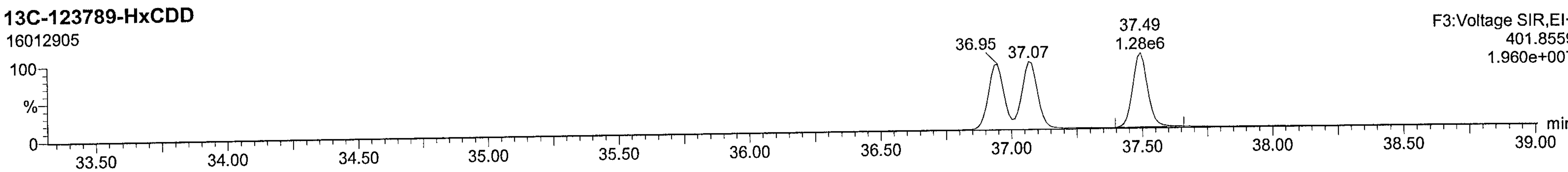
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

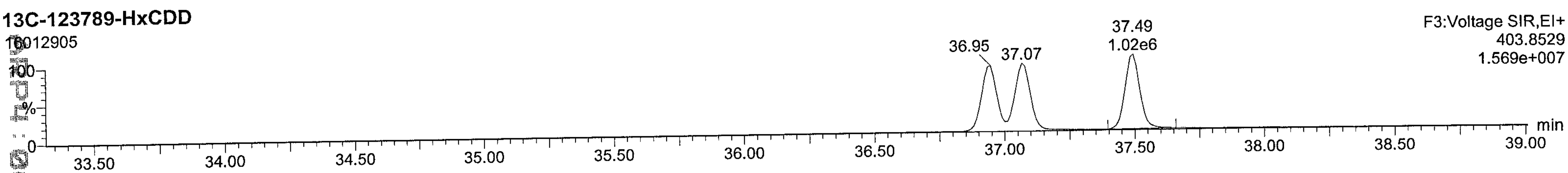
Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk





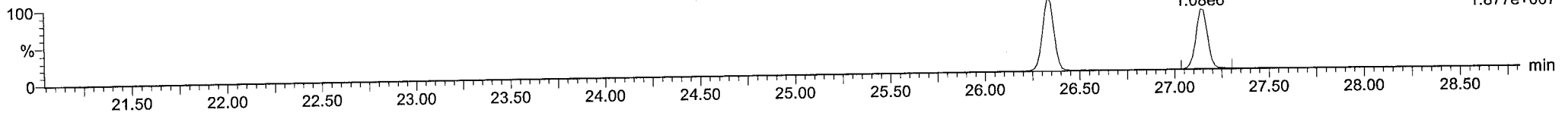




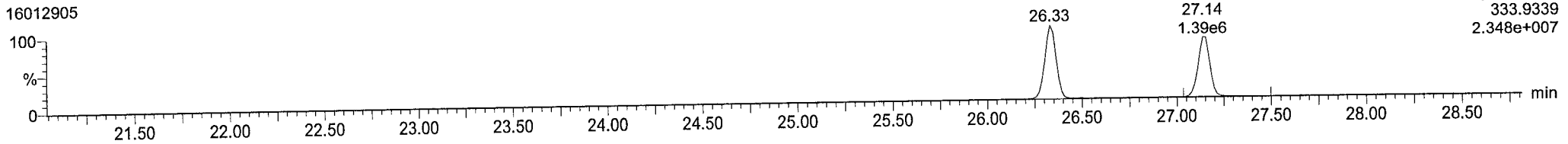
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

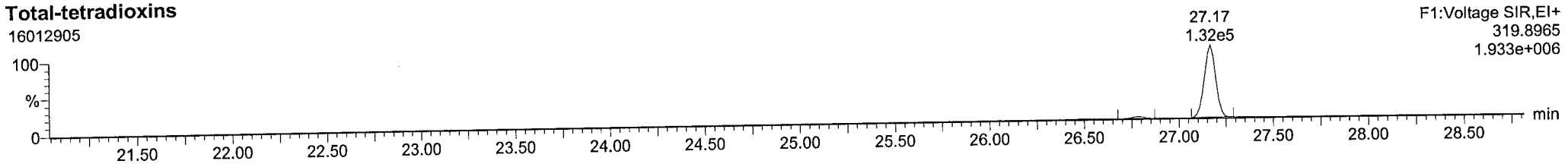
13C-2378-TCDD
16012905
F1:Voltage SIR,EI+
331.9368
1.877e+007



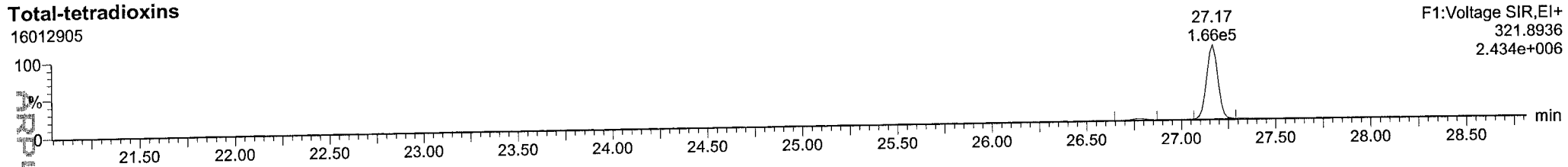
13C-2378-TCDD
16012905
F1:Voltage SIR,EI+
333.9339
2.348e+007



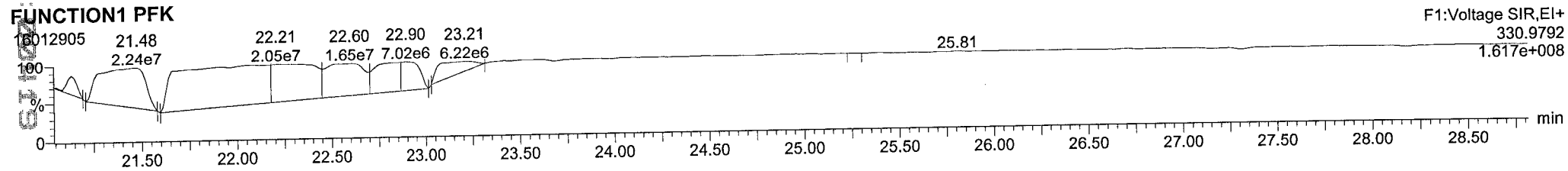
Total-tetradioxins
16012905
F1:Voltage SIR,EI+
319.8965
1.933e+006



Total-tetradioxins
16012905
F1:Voltage SIR,EI+
321.8936
2.434e+006



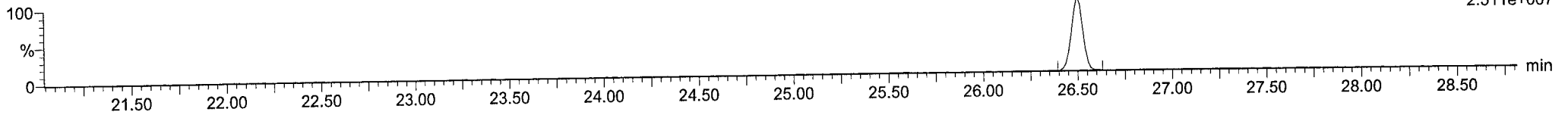
FUNCTION1 PFK
16012905
F1:Voltage SIR,EI+
330.9792
1.617e+008



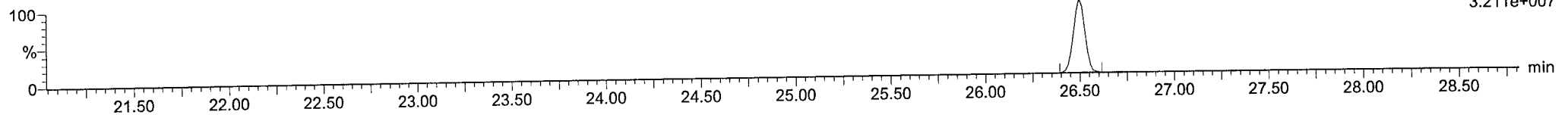
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

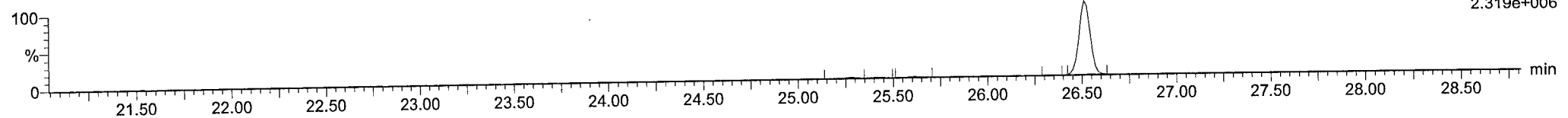
13C-2378-TCDF
16012905
26.50
1.71e6
F1:Voltage SIR,EI+
315.9419
2.511e+007



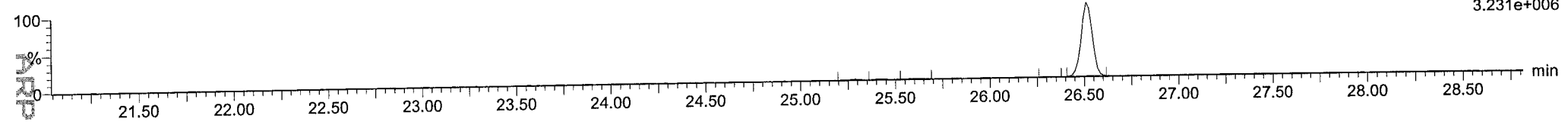
13C-2378-TCDF
16012905
26.50
2.20e6
F1:Voltage SIR,EI+
317.9389
3.211e+007



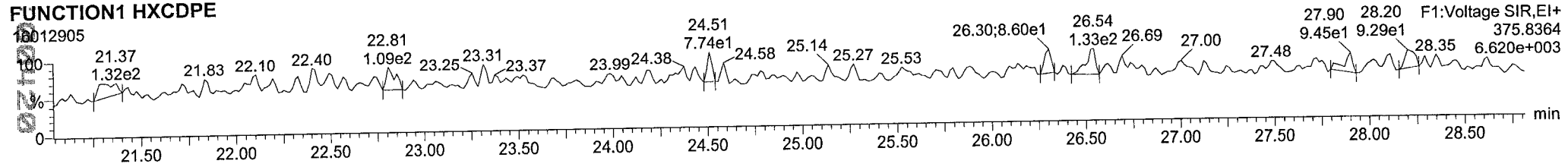
Total-tetrafurans
16012905
26.51
1.56e5
F1:Voltage SIR,EI+
303.9016
2.319e+006



Total-tetrafurans
16012905
26.51
2.19e5
F1:Voltage SIR,EI+
305.8987
3.231e+006



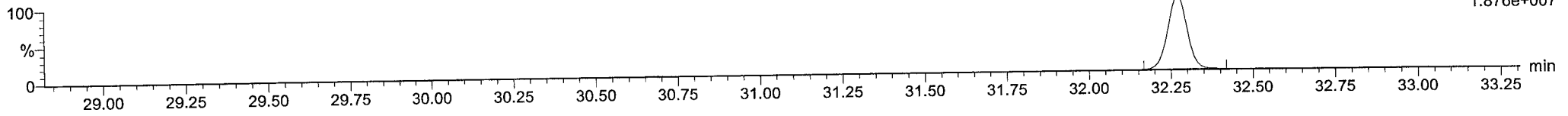
FUNCTION1 HXCDPE
16012905
21.37
1.32e2
22.81
1.09e2
24.51
7.74e1
26.30;8.60e1
26.54
1.33e2
27.90
9.45e1
28.20
9.29e1
F1:Voltage SIR,EI+
375.8364
6.620e+003



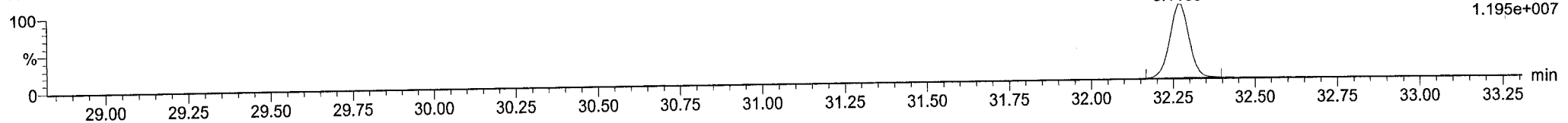
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

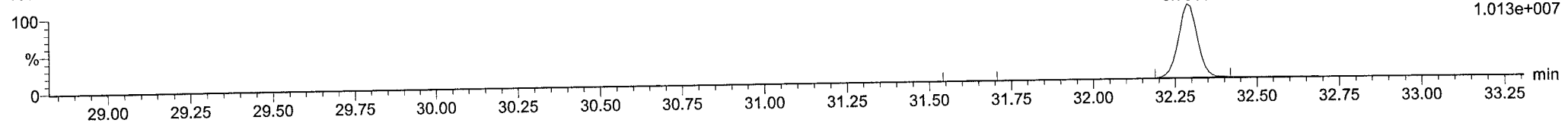
13C-12378-PeCDD
16012905
32.27
1.28e6
F2:Voltage SIR,EI+
367.8949
1.876e+007



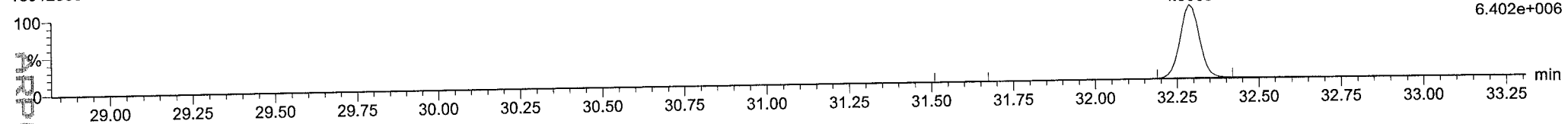
13C-12378-PeCDD
16012905
32.27
8.11e5
F2:Voltage SIR,EI+
369.8919
1.195e+007



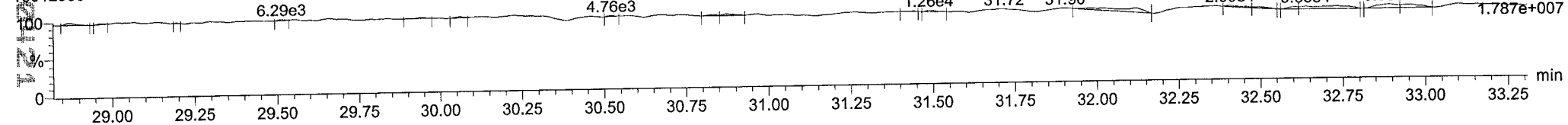
Total-pentadioxins
16012905
32.29
6.70e5
F2:Voltage SIR,EI+
355.8546
1.013e+007



Total-pentadioxins
16012905
32.29
4.30e5
F2:Voltage SIR,EI+
357.8516
6.402e+006



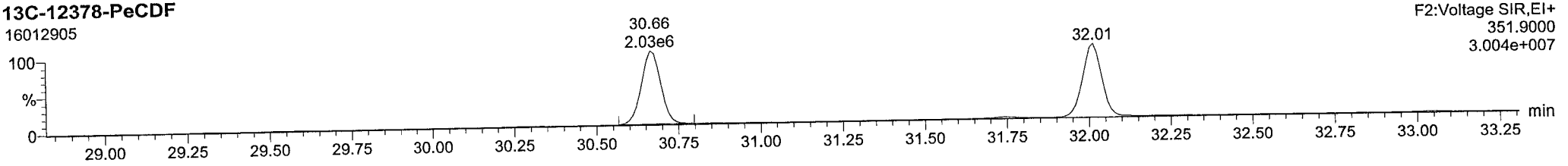
FUNCTION2 PFK
16012905
29.51
6.29e3
30.52
4.76e3
31.49
1.26e4
31.72
31.90
32.41
2.00e4
32.64
9.66e4
32.89
6.95e4
F2:Voltage SIR,EI+
366.9792
1.787e+007



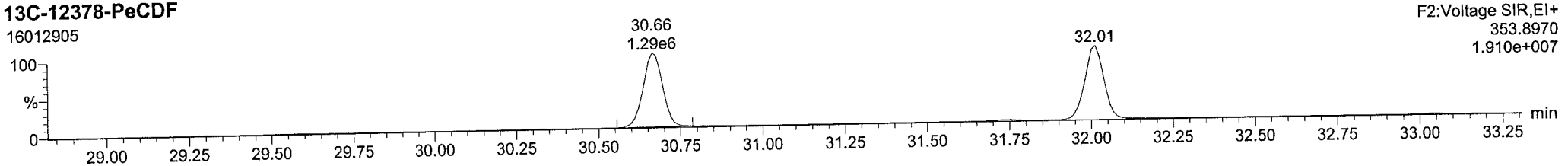
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

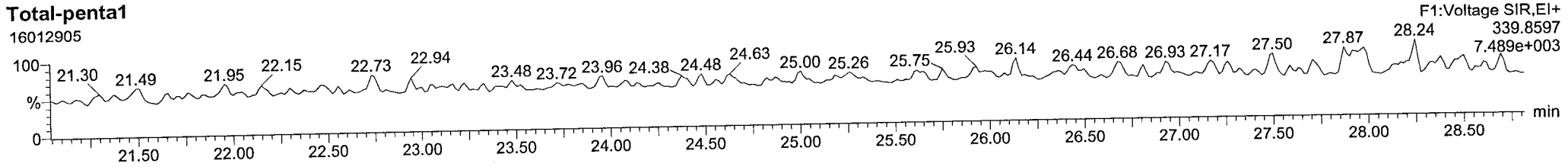
13C-12378-PeCDF
16012905
F2:Voltage SIR,EI+
351.9000
3.004e+007



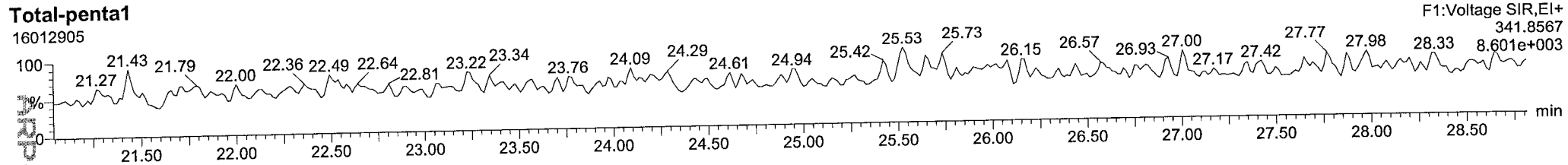
13C-12378-PeCDF
16012905
F2:Voltage SIR,EI+
353.8970
1.910e+007



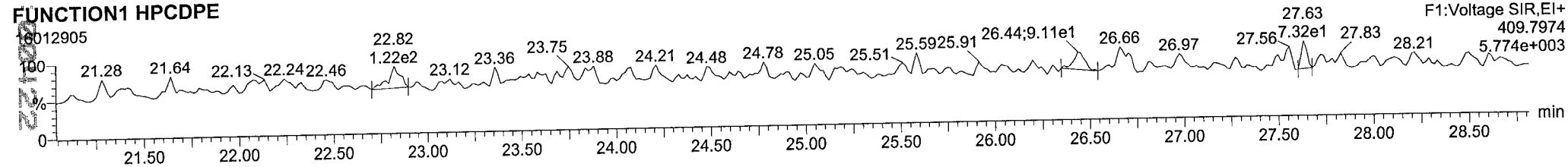
Total-penta1
16012905
F1:Voltage SIR,EI+
339.8597
7.489e+003



Total-penta1
16012905
F1:Voltage SIR,EI+
341.8567
8.601e+003



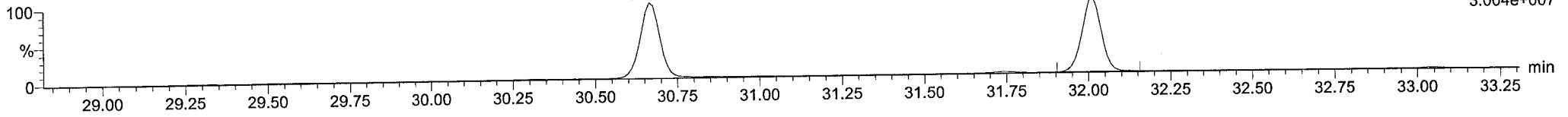
FUNCTION1 HPCDPE
16012905
F1:Voltage SIR,EI+
409.7974
5.774e+003



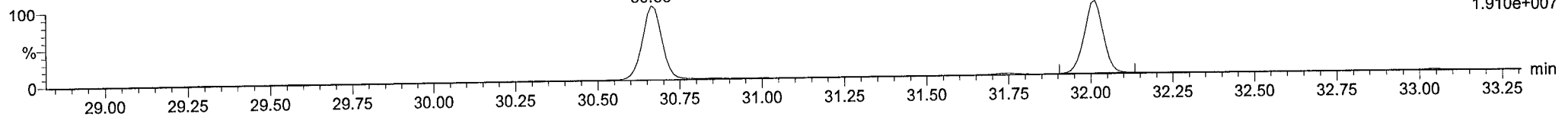
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

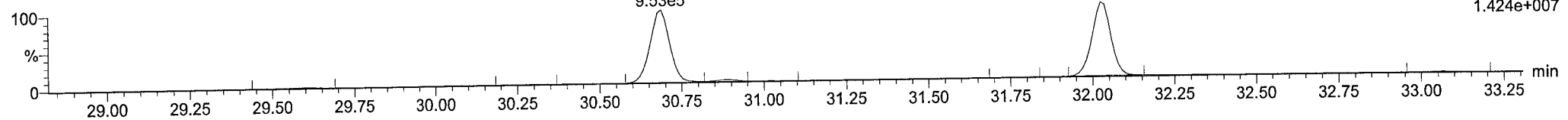
13C-23478-PeCDF
16012905
F2:Voltage SIR,EI+
351.9000
3.004e+007
30.66
32.01
1.99e6



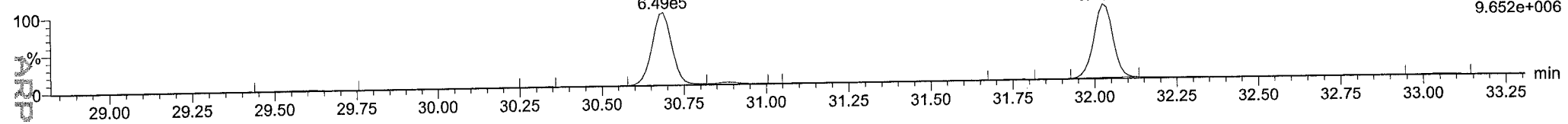
13C-23478-PeCDF
16012905
F2:Voltage SIR,EI+
353.8970
1.910e+007
30.66
32.01
1.25e6



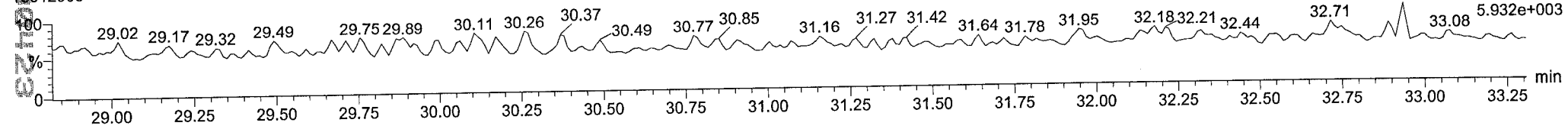
Total-pentafurans
16012905
F2:Voltage SIR,EI+
339.8597
1.424e+007
30.69
9.53e5
32.02
9.37e5



Total-pentafurans
16012905
F2:Voltage SIR,EI+
341.8567
9.652e+006
30.69
6.49e5
32.02
6.40e5



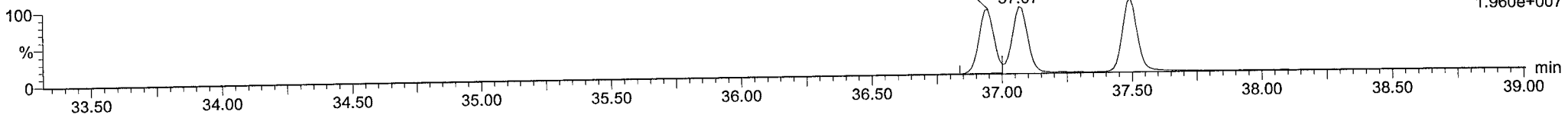
FUNCTION2 HPCDPE
16012905
F2:Voltage SIR,EI+
409.7974
5.932e+003
29.02 29.17 29.32 29.49 29.75 29.89 30.11 30.26 30.37 30.49 30.77 30.85 31.16 31.27 31.42 31.64 31.78 31.95 32.18 32.21 32.44 32.71 32.93 33.08



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

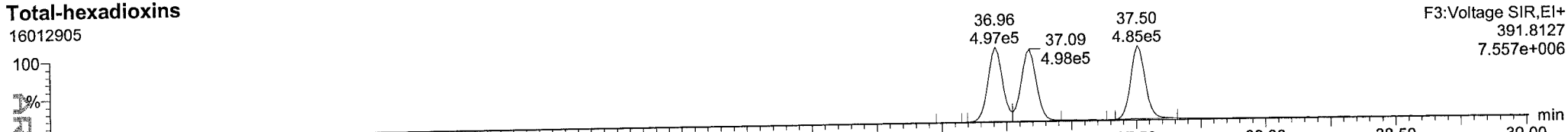
13C-123478-HxCDD
16012905



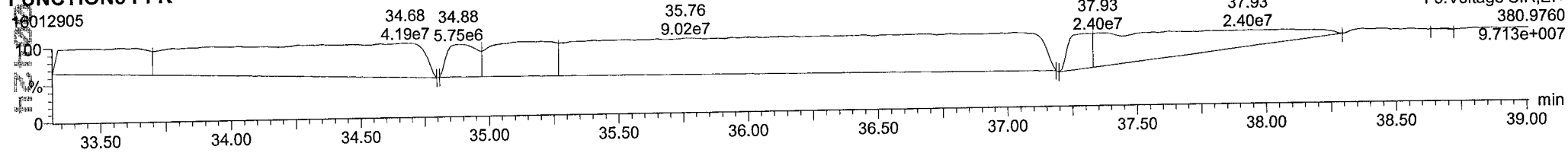
13C-123478-HxCDD
16012905

Total-hexadioxins
16012905

Total-hexadioxins
16012905



FUNCTION3 PFK
16012905



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
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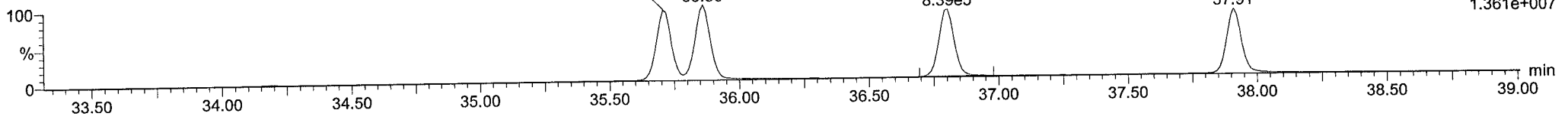
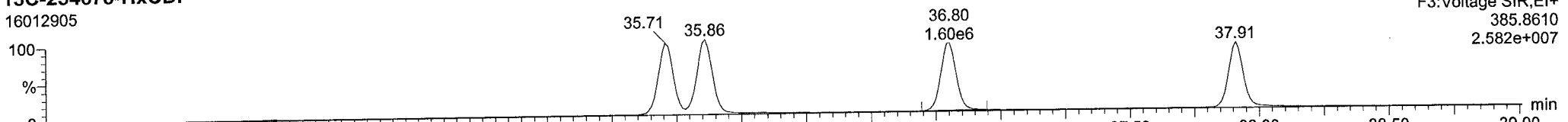
ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

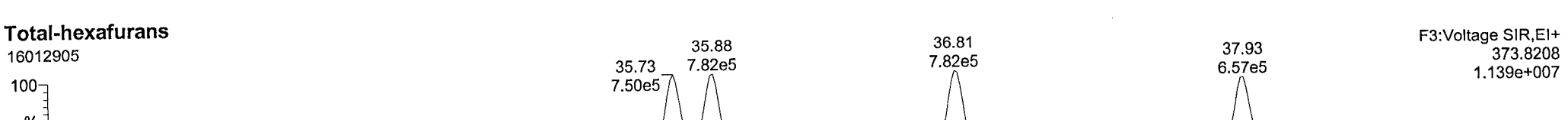
13C-234678-HxCDF
16012905
F3:Voltage SIR,EI+
383.8639
1.361e+007



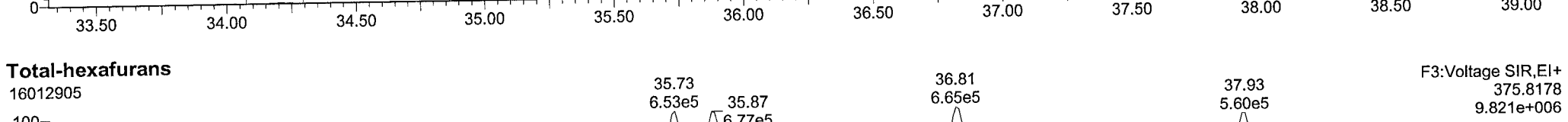
13C-234678-HxCDF
16012905
F3:Voltage SIR,EI+
385.8610
2.582e+007



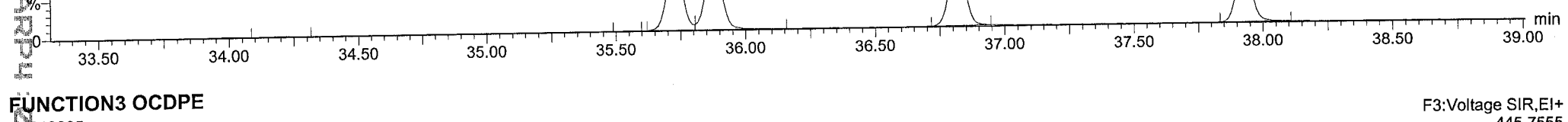
Total-hexafurans
16012905
F3:Voltage SIR,EI+
373.8208
1.139e+007



Total-hexafurans
16012905
F3:Voltage SIR,EI+
375.8178
9.821e+006



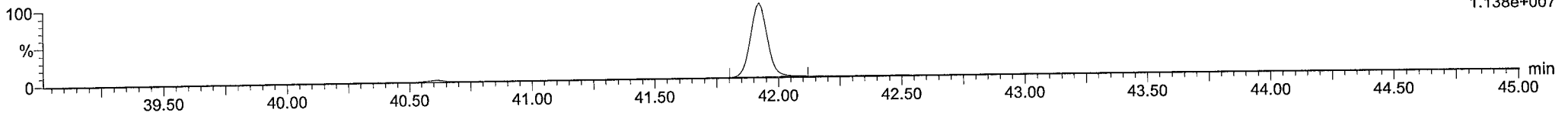
FUNCTION3 OCDPE
16012905
F3:Voltage SIR,EI+
445.7555
6.238e+003



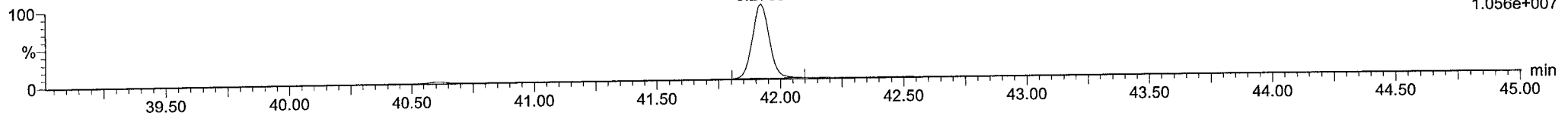
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

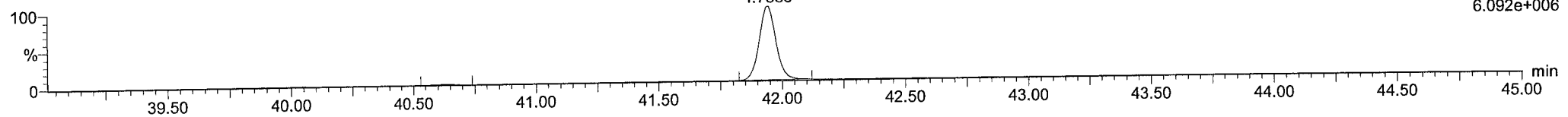
13C-1234678-HpCDD
16012905
41.92
8.81e5
F4:Voltage SIR,EI+
435.8169
1.138e+007



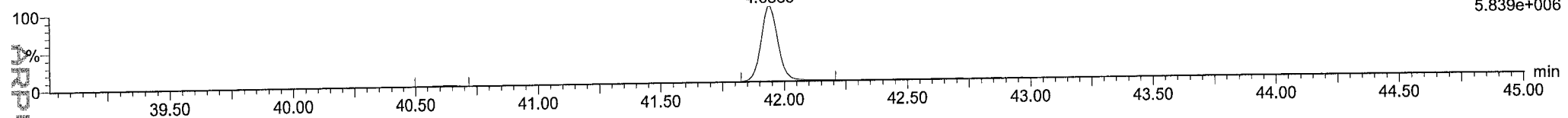
13C-1234678-HpCDD
16012905
41.92
8.27e5
F4:Voltage SIR,EI+
437.8140
1.056e+007



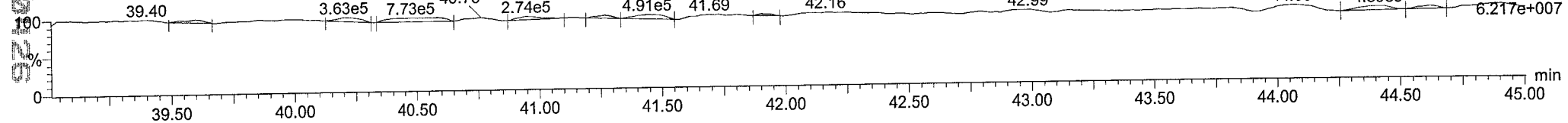
Total-heptadioxins
16012905
41.94
4.78e5
F4:Voltage SIR,EI+
423.7766
6.092e+006



Total-heptadioxins
16012905
41.94
4.68e5
F4:Voltage SIR,EI+
425.7737
5.839e+006



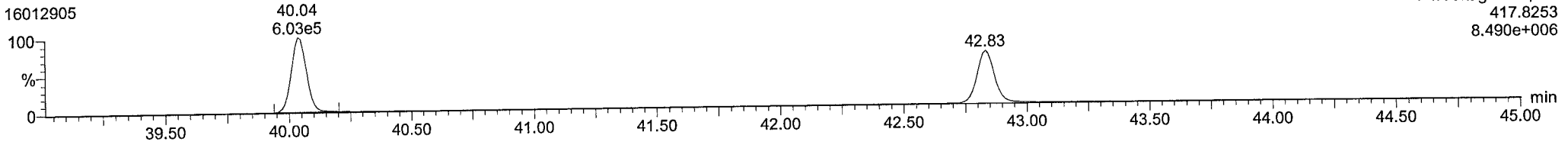
FUNCTION4 PFK
16012905
39.40
40.20
3.63e5
40.48
7.73e5
40.76
40.95
2.74e5
41.44
4.91e5
41.69
42.16
42.99
44.06
44.41
4.89e5
F4:Voltage SIR,EI+
430.9728
6.217e+007



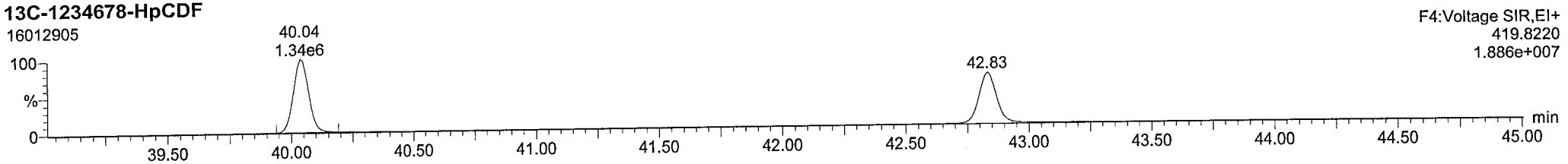
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

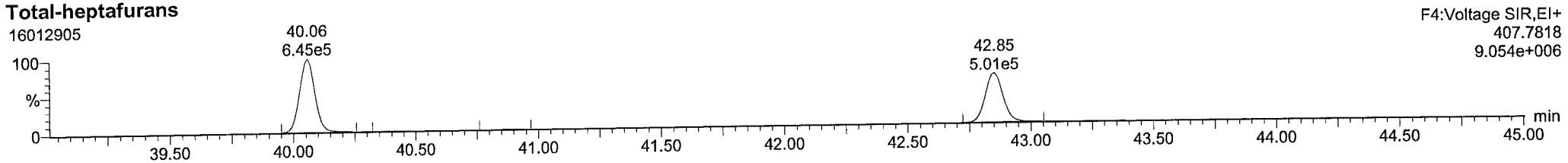
13C-1234678-HpCDF



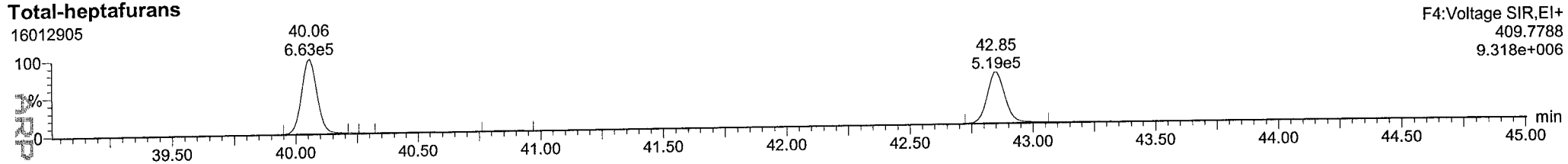
13C-1234678-HpCDF



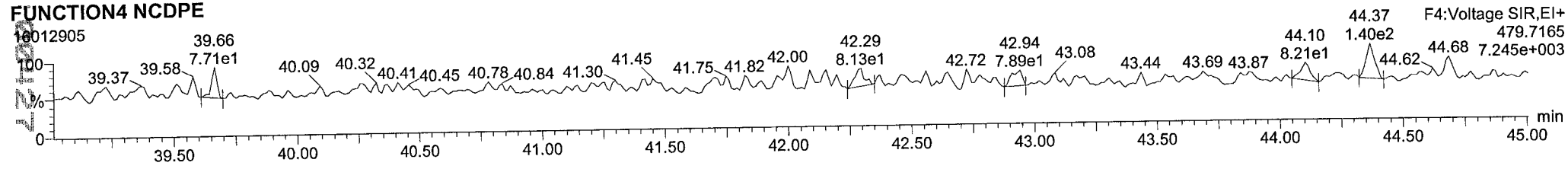
Total-heptafurans



Total-heptafurans



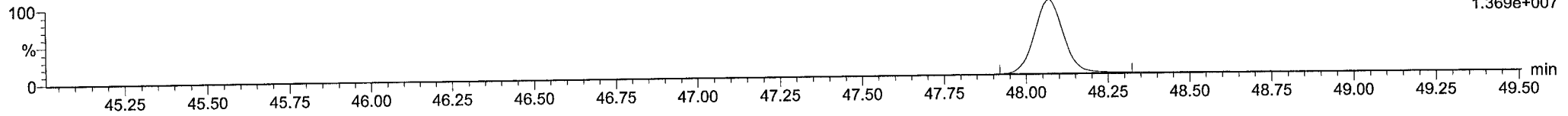
FUNCTION4 NCDPE



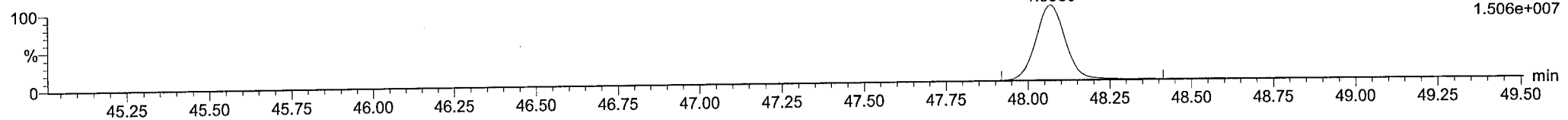
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

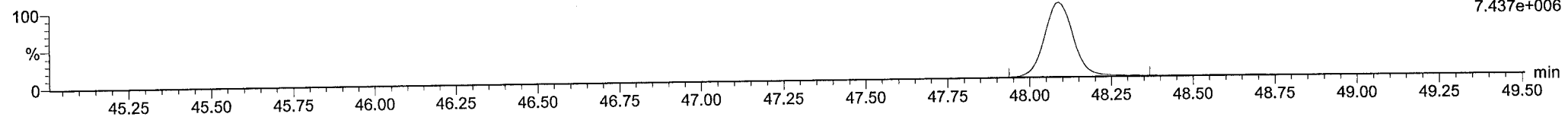
13C-OCDD
16012905
48.07
1.39e6
F5:Voltage SIR,EI+
469.7779
1.369e+007



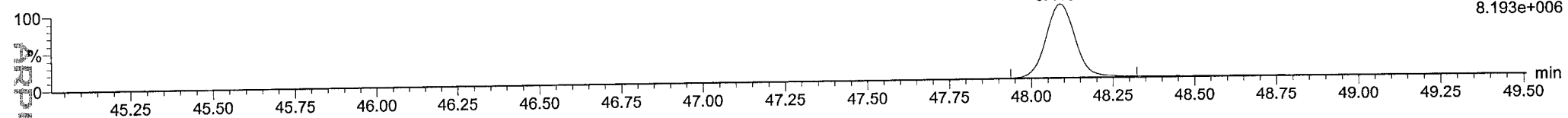
13C-OCDD
16012905
48.07
1.55e6
F5:Voltage SIR,EI+
471.7750
1.506e+007



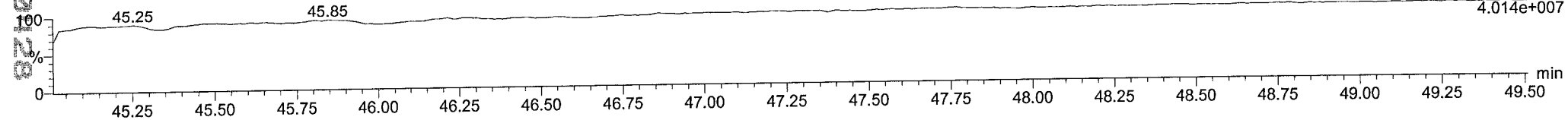
OCDD
16012905
48.09
7.55e5
F5:Voltage SIR,EI+
457.7377
7.437e+006



OCDD
16012905
48.09
8.41e5
F5:Voltage SIR,EI+
459.7348
8.193e+006



FUNCTION5 PFK
16012905
45.25
45.85
F5:Voltage SIR,EI+
480.9696
4.014e+007



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

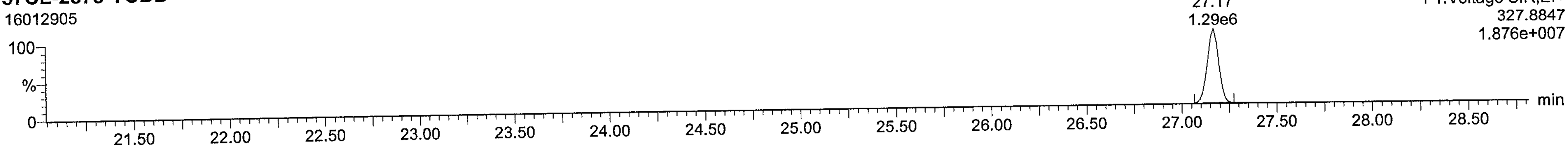
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld

Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time

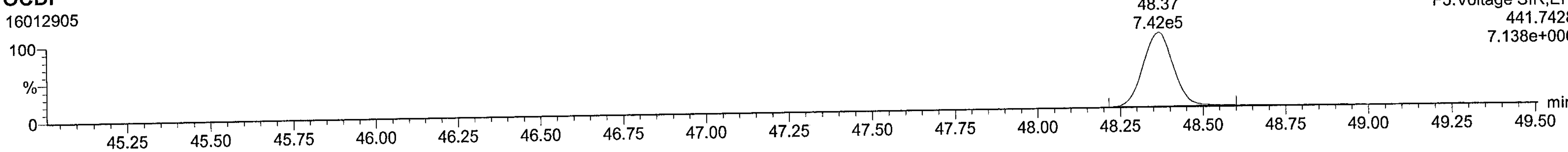
Printed: Monday, February 01, 2016 12:08:26 Pacific Standard Time

ID: AT50OPR, Name: 16012905, Date: 29-Jan-2016, Time: 15:20:03, Conditions: AUTOSPEC01, User: pk

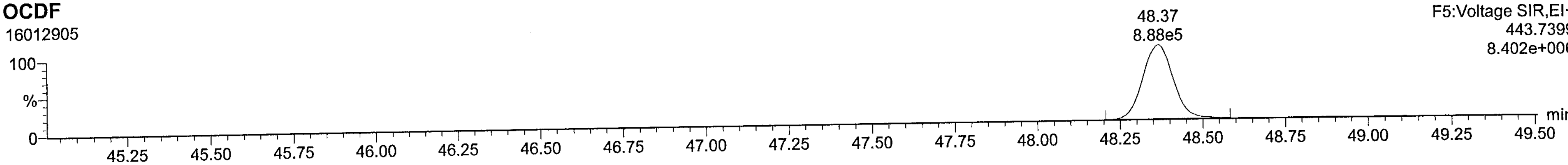
37CL-2378-TCDD



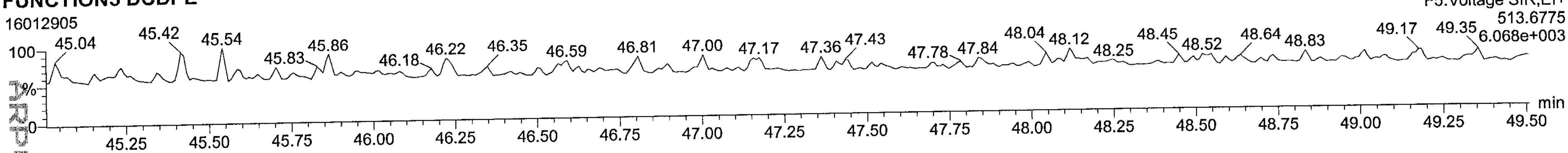
OCDF



OCDF



FUNCTION5 DCDPE



ANALYTICAL RESOURCES
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: APR4A
Lab.File ID: 16012906
Date Analysed: 29-Jan-16

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	0.00			0.020
12378-PeCDD	356/358	32.29	0.0238	0.0160	
123478-HxCDD	390/392	0.00			0.031
123678-HxCDD	390/392	0.00			0.031
123789-HxCDD	390/392	37.48	0.0418	0.0360	
1234678-HpCDD	424/426	41.92	0.389		
OCDD	458/460	48.05	3.74		
2378-TCDF	304/306	26.51	0.0230		
12378-PeCDF	340/342	30.69	0.0257	0.0100	
23478-PeCDF	340/342	0.00			0.019
123478-HxCDF	374/376	0.00			0.028
234678-HxCDF	374/376	0.00			0.027
123678-HxCDF	374/376	0.00			0.027
123789-HxCDF	374/376	37.93	0.0333	0.0240	
1234678-HpCDF	408/410	40.05	0.0950		
1234789-HpCDF	408/410	42.83	0.0216		
OCDF	442/444	48.29	0.252		

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, 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	26.511	1.001	3.32e2	3.76e2	0.827	0.885	0.770	1270	1691	4.54e3	6.47e3	3.6	NO	0.023	0.023	
12378-PeCDF	30.687	1.001	5.40e2	1.00e2	0.824	5.394	1.550	1067	1252	8.06e3	3.69e3	7.6	YES	0.010	0.026	B
23478-PeCDF					0.850		1.550	1067	1252							
123478-HxCDF					0.973		1.240	1413	1685							
234678-HxCDF					1.025		1.240	1413	1685							
123678-HxCDF					0.953		1.240	1413	1685							
123789-HxCDF	37.932	1.001	2.74e2	4.01e2	0.956	0.685	1.240	1413	1685	6.72e3	6.58e3	4.8	YES	0.024	0.033	
1234678-HpCDF	40.048	1.001	1.15e3	9.68e2	1.153	1.189	1.050	749	640	1.47e4	1.18e4	19.7	NO	0.095	0.095	B
1234789-HpCDF	42.832	1.001	1.96e2	1.96e2	1.131	1.000	1.050	749	640	4.55e3	2.41e3	6.1	NO	0.022	0.022	
OCDF	48.295	1.006	1.59e3	1.76e3	1.023	0.903	0.890	650	1097	2.07e4	2.06e4	31.9	NO	0.252	0.252	B
2378-TCDD					1.023		0.770	1280	1015							
12378-PeCDD	32.287	1.001	1.72e2	2.50e2	0.939	0.688	1.550	1349	1257	4.15e3	3.98e3	3.1	YES	0.016	0.024	
123478-HxCDD					0.963		1.240	1393	1485							
123678-HxCDD					0.894		1.240	1393	1485							
123789-HxCDD	37.482	1.011	3.65e2	4.05e2	0.900	0.902	1.240	1393	1485	4.58e3	5.72e3	3.3	YES	0.036	0.042	
1234678-HpCDD	41.922	1.001	3.35e3	3.09e3	0.964	1.081	1.050	816	733	4.16e4	3.63e4	51.0	NO	0.389	0.389	B
OCDD	48.053	1.001	2.21e4	2.51e4	0.969	0.880	0.890	780	894	2.10e5	2.40e5	268.8	NO	3.743	3.743	B
13C-2378-TCDF	26.497	1.006	1.63e6	2.09e6	1.502	0.779	0.770	7774	4542	2.39e7	3.03e7	3070.2	NO		92.289	
13C-12378-PeCDF	30.654	1.164	1.85e6	1.17e6	1.215	1.580	1.550	4056	2902	2.69e7	1.73e7	6619.6	NO		92.649	
13C-23478-PeCDF	32.002	1.215	1.81e6	1.15e6	1.181	1.577	1.550	4056	2902	2.70e7	1.72e7	6663.1	NO		93.242	
13C-123478-HxCDF	35.696	0.952	7.85e5	1.51e6	1.246	0.521	0.510	2861	5031	1.16e7	2.25e7	4046.2	NO		84.785	
13C-123678-HxCDF	35.849	0.956	8.72e5	1.65e6	1.375	0.529	0.510	2861	5031	1.26e7	2.40e7	4421.4	NO		84.389	
13C-234678-HxCDF	36.792	0.982	7.97e5	1.54e6	1.186	0.519	0.510	2861	5031	1.16e7	2.22e7	4050.3	NO		90.581	
13C-123789-HxCDF	37.899	1.011	7.28e5	1.39e6	1.135	0.523	0.510	2861	5031	1.10e7	2.10e7	3849.9	NO		86.122	
13C-1234678-HpCDF	40.026	1.068	5.97e5	1.34e6	1.020	0.447	0.440	2053	3094	8.39e6	1.87e7	4086.5	NO		87.294	
13C-1234789-HpCDF	42.810	1.142	4.88e5	1.12e6	0.824	0.437	0.440	2053	3094	6.06e6	1.35e7	2952.3	NO		89.829	
13C-1234-TCDD	26.332	0.000	1.19e6	1.50e6	1.000	0.794	0.770	3790	2362	1.73e7	2.19e7	4572.8	NO		100.000	
13C-2378-TCDD	27.139	1.031	9.93e5	1.26e6	0.983	0.786	0.770	3790	2362	1.45e7	1.83e7	3823.8	NO		85.524	
13C-12378-PeCDD	32.265	1.225	1.15e6	7.35e5	0.787	1.569	1.550	1690	1378	1.71e7	1.08e7	10111.1	NO		89.432	
13C-123478-HxCDD	36.935	0.985	1.10e6	8.68e5	1.031	1.270	1.240	1967	1656	1.62e7	1.27e7	8211.6	NO		87.986	
13C-123678-HxCDD	37.066	0.989	1.18e6	9.48e5	1.137	1.250	1.240	1967	1656	1.71e7	1.35e7	8672.3	NO		86.396	
13C-1234678-HpCDD	41.900	1.118	8.89e5	8.28e5	0.892	1.074	1.050	2137	2319	1.11e7	1.05e7	5213.7	NO		88.687	
13C-OCDD	48.017	1.281	1.23e6	1.37e6	0.852	0.898	0.890	2164	1840	1.19e7	1.34e7	5514.9	NO		140.597	

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld

Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time

Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, 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	37.482	0.000	1.22e6	9.54e5	1.000	1.275	1.240	1967	1656	1.81e7	1.44e7	9217.8	NO		100.000
Total-tetrafurans			9.99e2		0.827			1270		1.53e4					0.085
Total-penta1			5.84e2					882		9.30e3					0.033
Total-pentafurans			1.76e3		0.837			1067		2.49e4					0.124
Total-hexafurans			8.12e2		0.977			1413		1.81e4					0.094
Total-heptafurans			2.27e3		1.142			749		3.18e4					0.224
Total-Furans			8.09e3		0.971			1270		1.21e5					0.817
Total-tetradioxins			4.16e2		1.023			1280		9.30e3					0.046
Total-pentadioxins			1.72e2		0.939			1349		4.15e3					0.024
Total-hexadioxins			1.16e3		0.919			1393		1.57e4					0.125
Total-heptadioxins			1.30e4		0.964			816		1.72e5					1.522
Total-Dioxins			3.68e4		0.950			1280		4.11e5					5.460
Total-TEQ			4.49e4					1280		5.32e5					6.277
37CL-2378-TCDD	27.154	1.031	1.11e6		1.091			1444		1.62e7		11199.0			37.850
FUNCTION1 PFK			1.02e8					863393		2.09e8					
FUNCTION2 PFK			1.80e5					162893		5.24e6					0.000
FUNCTION3 PFK			9.33e5					538065		4.69e6					0.000
FUNCTION4 PFK			0.00e0					509311		0.00e0					
FUNCTION5 PFK			8.68e5					318265		2.88e7					
FUNCTION1 HXCDPE			2.55e4					898		3.37e5					0.000
FUNCTION1 HPCDPE			3.87e3					1034		6.47e4					0.000
FUNCTION2 HPCDPE			1.85e2					894		2.58e3					0.000
FUNCTION3 OCDPE			2.74e2					743		7.53e3					0.000
FUNCTION4 NCDPE			4.81e2					914		6.32e3					0.000
FUNCTION5 DCDPE			0.00e0					485		0.00e0					

ARP4 : 00432

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, 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	23.87	941.137	0.827		0.031		0.63	0.77	YES	4.6
2	35	Total-tetrafurans	303.9016	26.75	958.257	0.827		0.031		0.46	0.77	YES	3.9
3	1	2378-TCDF	303.9016	26.51	708.045	0.827		0.023	0.023	0.88	0.77	NO	3.6

PP

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	36	Total-penta1	339.8597	27.95	918.188			0.033		1.75	1.55	NO	10.5

PF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	2	12378-PeCDF	339.8597	30.69	639.544	0.824		0.026	0.010	5.39	1.55	YES	7.6
2	37	Total-pentafurans	339.8597	29.52	2459.507	0.837		0.098		0.98	1.55	YES	15.8

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	38	Total-hexafurans	373.8208	35.05	716.834	0.977		0.032		0.74	1.24	YES	4.0
2	38	Total-hexafurans	373.8208	34.19	654.411	0.977		0.029		0.55	1.24	YES	4.1
3	7	123789-HxCDF	373.8208	37.93	675.139	0.956		0.033	0.024	0.68	1.24	YES	4.8

HPF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	9	1234789-HpCDF	407.7818	42.83	392.665	1.131		0.022	0.022	1.00	1.05	NO	6.1
2	39	Total-heptafurans	407.7818	40.86	2167.372	1.142		0.107		0.74	1.05	YES	16.7
3	8	1234678-HpCDF	407.7818	40.05	2119.475	1.153		0.095	0.095	1.19	1.05	NO	19.7

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	23.87	941.137	0.827		0.031		0.63	0.77	YES	4.6
2	40	Total-Furans	303.9016	28.23	193.304	0.971		0.005		0.76	0.77	NO	1.1
3	35	Total-tetrafurans	303.9016	26.75	958.257	0.827		0.031		0.46	0.77	YES	3.9
4	1	2378-TCDF	303.9016	26.51	708.045	0.827		0.023	0.023	0.88	0.77	NO	3.6
5	2	12378-PeCDF	339.8597	30.69	639.544	0.824		0.026	0.010	5.39	1.55	YES	7.6
6	37	Total-pentafurans	339.8597	29.52	2459.507	0.837		0.098		0.98	1.55	YES	15.8
7	38	Total-hexafurans	373.8208	35.05	716.834	0.977		0.032		0.74	1.24	YES	4.0
8	38	Total-hexafurans	373.8208	34.19	654.411	0.977		0.029		0.55	1.24	YES	4.1
9	7	123789-HxCDF	373.8208	37.93	675.139	0.956		0.033	0.024	0.68	1.24	YES	4.8
10	10	OCDF	441.7428	48.29	3347.198	1.023		0.252	0.252	0.90	0.89	NO	31.9
11	9	1234789-HpCDF	407.7818	42.83	392.665	1.131		0.022	0.022	1.00	1.05	NO	6.1
12	39	Total-heptafurans	407.7818	40.86	2167.372	1.142		0.107		0.74	1.05	YES	16.7
13	8	1234678-HpCDF	407.7818	40.05	2119.475	1.153		0.095	0.095	1.19	1.05	NO	19.7
14	36	Total-penta1	339.8597	27.95	918.188			0.033		1.75	1.55	NO	10.5

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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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-tetradioxins	319.8965	24.30	1059.348	1.023		0.046		0.65	0.77	YES	7.3

PD

	# Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	12 12378-PeCDD	355.8546	32.29	421.749	0.939		0.024	0.016	0.69	1.55	YES	3.1

HD

	# Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43 Total-hexadioxins	389.8157	34.78	1568.744	0.919		0.083		1.03	1.24	YES	8.0
2	15 123789-HxCDD	389.8157	37.48	770.692	0.900		0.042	0.036	0.90	1.24	YES	3.3

HPD

	# Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	16 1234678-HpCDD	423.7766	41.92	6439.522	0.964		0.389	0.389	1.08	1.05	NO	51.0
2	44 Total-heptadioxins	423.7766	40.61	18762.654	0.964		1.133		1.06	1.05	NO	159.5

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	24.30	1059.348	1.023		0.046		0.65	0.77	YES	7.3
2	12 12378-PeCDD	355.8546	32.29	421.749	0.939		0.024	0.016	0.69	1.55	YES	3.1
3	43 Total-hexadioxins	389.8157	34.78	1568.744	0.919		0.083		1.03	1.24	YES	8.0
4	15 123789-HxCDD	389.8157	37.48	770.692	0.900		0.042	0.036	0.90	1.24	YES	3.3
5	17 OCDD	457.7377	48.05	47129.401	0.969		3.743	3.743	0.88	0.89	NO	268.8
6	16 1234678-HpCDD	423.7766	41.92	6439.522	0.964		0.389	0.389	1.08	1.05	NO	51.0
7	44 Total-heptadioxins	423.7766	40.61	18762.654	0.964		1.133		1.06	1.05	NO	159.5

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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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	23.87	941.137	0.827	0.031		0.63	0.77	YES	4.6
2	40	Total-Furans	303.9016	28.23	193.304	0.971	0.005		0.76	0.77	NO	1.1
3	35	Total-tetrafurans	303.9016	26.75	958.257	0.827	0.031		0.46	0.77	YES	3.9
4	1	2378-TCDF	303.9016	26.51	708.045	0.827	0.023	0.023	0.88	0.77	NO	3.6
5	2	12378-PeCDF	339.8597	30.69	639.544	0.824	0.026	0.010	5.39	1.55	YES	7.6
6	37	Total-pentafurans	339.8597	29.52	2459.507	0.837	0.098		0.98	1.55	YES	15.8
7	38	Total-hexafurans	373.8208	35.05	716.834	0.977	0.032		0.74	1.24	YES	4.0
8	38	Total-hexafurans	373.8208	34.19	654.411	0.977	0.029		0.55	1.24	YES	4.1
9	7	123789-HxCDF	373.8208	37.93	675.139	0.956	0.033	0.024	0.68	1.24	YES	4.8
10	10	OCDF	441.7428	48.29	3347.198	1.023	0.252	0.252	0.90	0.89	NO	31.9
11	9	1234789-HpCDF	407.7818	42.83	392.665	1.131	0.022	0.022	1.00	1.05	NO	6.1
12	39	Total-heptafurans	407.7818	40.86	2167.372	1.142	0.107		0.74	1.05	YES	16.7
13	8	1234678-HpCDF	407.7818	40.05	2119.475	1.153	0.095	0.095	1.19	1.05	NO	19.7
14	36	Total-penta1	339.8597	27.95	918.188		0.033		1.75	1.55	NO	10.5
15	41	Total-tetradioxins	319.8965	24.30	1059.348	1.023	0.046		0.65	0.77	YES	7.3
16	12	12378-PeCDD	355.8546	32.29	421.749	0.939	0.024	0.016	0.69	1.55	YES	3.1
17	43	Total-hexadioxins	389.8157	34.78	1568.744	0.919	0.083		1.03	1.24	YES	8.0
18	15	123789-HxCDD	389.8157	37.48	770.692	0.900	0.042	0.036	0.90	1.24	YES	3.3
19	17	OCDD	457.7377	48.05	47129.401	0.969	3.743	3.743	0.88	0.89	NO	268.8
20	16	1234678-HpCDD	423.7766	41.92	6439.522	0.964	0.389	0.389	1.08	1.05	NO	51.0
21	44	Total-heptadioxins	423.7766	40.61	18762.654	0.964	1.133		1.06	1.05	NO	159.5

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	24.37	0.000							3.4
2	48	FUNCTION1 PFK	330.9792	22.91	0.000							38.2
3	48	FUNCTION1 PFK	330.9792	22.61	0.000							45.3
4	48	FUNCTION1 PFK	330.9792	22.30	0.000							53.1
5	48	FUNCTION1 PFK	330.9792	21.48	0.000							59.3
6	48	FUNCTION1 PFK	330.9792	21.12	0.000							43.1

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, 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	29.54	0.000		0.000					1.5
2	49 FUNCTION2 PFK	366.9792	29.34	0.000		0.000					1.0
3	49 FUNCTION2 PFK	366.9792	29.25	0.000		0.000					0.4
4	49 FUNCTION2 PFK	366.9792	29.15	0.000		0.000					1.4
5	49 FUNCTION2 PFK	366.9792	29.11	0.000		0.000					0.5
6	49 FUNCTION2 PFK	366.9792	28.89	0.000		0.000					1.2
7	49 FUNCTION2 PFK	366.9792	32.86	0.000		0.000					2.0
8	49 FUNCTION2 PFK	366.9792	32.79	0.000		0.000					2.2
9	49 FUNCTION2 PFK	366.9792	32.75	0.000		0.000					1.4
10	49 FUNCTION2 PFK	366.9792	32.58	0.000		0.000					1.0
11	49 FUNCTION2 PFK	366.9792	32.33	0.000		0.000					1.6
12	49 FUNCTION2 PFK	366.9792	32.22	0.000		0.000					1.4
13	49 FUNCTION2 PFK	366.9792	32.16	0.000		0.000					0.7
14	49 FUNCTION2 PFK	366.9792	31.82	0.000		0.000					0.4
15	49 FUNCTION2 PFK	366.9792	31.50	0.000		0.000					1.1
16	49 FUNCTION2 PFK	366.9792	31.11	0.000		0.000					1.7
17	49 FUNCTION2 PFK	366.9792	30.75	0.000		0.000					0.9
18	49 FUNCTION2 PFK	366.9792	30.51	0.000		0.000					0.4
19	49 FUNCTION2 PFK	366.9792	30.28	0.000		0.000					1.6
20	49 FUNCTION2 PFK	366.9792	30.14	0.000		0.000					0.7
21	49 FUNCTION2 PFK	366.9792	30.02	0.000		0.000					1.1
22	49 FUNCTION2 PFK	366.9792	29.60	0.000		0.000					0.9
23	49 FUNCTION2 PFK	366.9792	33.20	0.000		0.000					1.4
24	49 FUNCTION2 PFK	366.9792	33.05	0.000		0.000					1.2
25	49 FUNCTION2 PFK	366.9792	32.99	0.000		0.000					2.5
26	49 FUNCTION2 PFK	366.9792	32.92	0.000		0.000					2.2

PFK3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50 FUNCTION3 PFK	380.9760	37.30	0.000		0.000					8.7

PFK4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
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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	45.71	0.000							0.6
2	52 FUNCTION5 PFK	480.9696	45.61	0.000							1.3
3	52 FUNCTION5 PFK	480.9696	45.45	0.000							2.0
4	52 FUNCTION5 PFK	480.9696	45.35	0.000							1.8
5	52 FUNCTION5 PFK	480.9696	45.29	0.000							0.7
6	52 FUNCTION5 PFK	480.9696	45.22	0.000							1.8
7	52 FUNCTION5 PFK	480.9696	45.15	0.000							1.4
8	52 FUNCTION5 PFK	480.9696	45.11	0.000							0.8
9	52 FUNCTION5 PFK	480.9696	46.65	0.000							0.3
10	52 FUNCTION5 PFK	480.9696	46.54	0.000							1.3
11	52 FUNCTION5 PFK	480.9696	46.48	0.000							0.7
12	52 FUNCTION5 PFK	480.9696	46.46	0.000							0.6
13	52 FUNCTION5 PFK	480.9696	46.42	0.000							1.3
14	52 FUNCTION5 PFK	480.9696	46.37	0.000							0.5
15	52 FUNCTION5 PFK	480.9696	46.34	0.000							0.7
16	52 FUNCTION5 PFK	480.9696	46.30	0.000							0.5
17	52 FUNCTION5 PFK	480.9696	46.22	0.000							1.1
18	52 FUNCTION5 PFK	480.9696	46.17	0.000							0.8
19	52 FUNCTION5 PFK	480.9696	46.12	0.000							0.5
20	52 FUNCTION5 PFK	480.9696	46.02	0.000							0.9
21	52 FUNCTION5 PFK	480.9696	45.96	0.000							1.3
22	52 FUNCTION5 PFK	480.9696	45.89	0.000							2.2
23	52 FUNCTION5 PFK	480.9696	45.81	0.000							1.6
24	52 FUNCTION5 PFK	480.9696	45.76	0.000							1.1
25	52 FUNCTION5 PFK	480.9696	47.52	0.000							1.4
26	52 FUNCTION5 PFK	480.9696	47.49	0.000							0.9
27	52 FUNCTION5 PFK	480.9696	47.45	0.000							0.5
28	52 FUNCTION5 PFK	480.9696	47.41	0.000							1.8
29	52 FUNCTION5 PFK	480.9696	47.32	0.000							0.7
30	52 FUNCTION5 PFK	480.9696	47.28	0.000							1.7
31	52 FUNCTION5 PFK	480.9696	47.23	0.000							1.1
32	52 FUNCTION5 PFK	480.9696	47.18	0.000							1.6
33	52 FUNCTION5 PFK	480.9696	47.10	0.000							1.2
34	52 FUNCTION5 PFK	480.9696	47.05	0.000							2.0
35	52 FUNCTION5 PFK	480.9696	47.01	0.000							1.6
36	52 FUNCTION5 PFK	480.9696	46.96	0.000							1.9
37	52 FUNCTION5 PFK	480.9696	46.92	0.000							1.0
38	52 FUNCTION5 PFK	480.9696	46.85	0.000							1.8
39	52 FUNCTION5 PFK	480.9696	46.77	0.000							0.7
40	52 FUNCTION5 PFK	480.9696	46.69	0.000							0.4
41	52 FUNCTION5 PFK	480.9696	48.26	0.000							0.5
42	52 FUNCTION5 PFK	480.9696	48.22	0.000							0.7
43	52 FUNCTION5 PFK	480.9696	48.18	0.000							0.6
44	52 FUNCTION5 PFK	480.9696	48.11	0.000							1.6
45	52 FUNCTION5 PFK	480.9696	48.06	0.000							1.8
46	52 FUNCTION5 PFK	480.9696	48.03	0.000							2.0
47	52 FUNCTION5 PFK	480.9696	47.99	0.000							2.4
48	52 FUNCTION5 PFK	480.9696	47.93	0.000							2.5
49	52 FUNCTION5 PFK	480.9696	47.88	0.000							1.6

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
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PFK5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	52 FUNCTION5 PFK	480.9696	47.84	0.000							0.8
51	52 FUNCTION5 PFK	480.9696	47.76	0.000							2.9
52	52 FUNCTION5 PFK	480.9696	47.71	0.000							2.5
53	52 FUNCTION5 PFK	480.9696	47.68	0.000							2.2
54	52 FUNCTION5 PFK	480.9696	47.64	0.000							2.0
55	52 FUNCTION5 PFK	480.9696	47.60	0.000							1.9
56	52 FUNCTION5 PFK	480.9696	47.56	0.000							1.5
57	52 FUNCTION5 PFK	480.9696	49.09	0.000							0.9
58	52 FUNCTION5 PFK	480.9696	49.06	0.000							0.9
59	52 FUNCTION5 PFK	480.9696	49.01	0.000							0.5
60	52 FUNCTION5 PFK	480.9696	48.98	0.000							0.5
61	52 FUNCTION5 PFK	480.9696	48.90	0.000							0.4
62	52 FUNCTION5 PFK	480.9696	48.87	0.000							0.4
63	52 FUNCTION5 PFK	480.9696	48.83	0.000							0.7
64	52 FUNCTION5 PFK	480.9696	48.78	0.000							0.4
65	52 FUNCTION5 PFK	480.9696	48.73	0.000							0.6
66	52 FUNCTION5 PFK	480.9696	48.67	0.000							0.4
67	52 FUNCTION5 PFK	480.9696	48.64	0.000							0.5
68	52 FUNCTION5 PFK	480.9696	48.62	0.000							1.4
69	52 FUNCTION5 PFK	480.9696	48.58	0.000							1.4
70	52 FUNCTION5 PFK	480.9696	48.50	0.000							1.6
71	52 FUNCTION5 PFK	480.9696	48.45	0.000							1.0
72	52 FUNCTION5 PFK	480.9696	48.29	0.000							0.8
73	52 FUNCTION5 PFK	480.9696	49.44	0.000							0.7
74	52 FUNCTION5 PFK	480.9696	49.33	0.000							0.9
75	52 FUNCTION5 PFK	480.9696	49.29	0.000							1.0
76	52 FUNCTION5 PFK	480.9696	49.25	0.000							1.1
77	52 FUNCTION5 PFK	480.9696	49.20	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	28.05	0.000		0.000					13.9
2	53 FUNCTION1 HXCD...	375.8364	26.59	0.000		0.000					293.2
3	53 FUNCTION1 HXCD...	375.8364	26.30	0.000		0.000					62.7
4	53 FUNCTION1 HXCD...	375.8364	24.15	0.000		0.000					2.1
5	53 FUNCTION1 HXCD...	375.8364	21.92	0.000		0.000					2.8

Quantify Totals Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

ETHERS2

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	54 FUNCTION1 HPCD...	409.7974	21.72	0.000		0.000					3.9
2	54 FUNCTION1 HPCD...	409.7974	21.67	0.000		0.000					3.5
3	54 FUNCTION1 HPCD...	409.7974	21.34	0.000		0.000					3.4
4	54 FUNCTION1 HPCD...	409.7974	21.10	0.000		0.000					1.6
5	54 FUNCTION1 HPCD...	409.7974	28.20	0.000		0.000					3.7
6	54 FUNCTION1 HPCD...	409.7974	28.07	0.000		0.000					3.1
7	54 FUNCTION1 HPCD...	409.7974	26.56	0.000		0.000					2.1
8	54 FUNCTION1 HPCD...	409.7974	25.88	0.000		0.000					3.5
9	54 FUNCTION1 HPCD...	409.7974	24.21	0.000		0.000					2.1
10	54 FUNCTION1 HPCD...	409.7974	22.82	0.000		0.000					35.8

ETHERS3

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	55 FUNCTION2 HPCD...	409.7974	33.21	0.000		0.000					2.9

ETHERS4

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	56 FUNCTION3 OCDPE	445.7555	38.06	0.000		0.000					3.5
2	56 FUNCTION3 OCDPE	445.7555	37.32	0.000		0.000					1.7
3	56 FUNCTION3 OCDPE	445.7555	33.78	0.000		0.000					4.9

ETHERS5

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	57 FUNCTION4 NCDPE	479.7165	39.60	0.000		0.000					6.9

ETHERS6

	# Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1											

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld

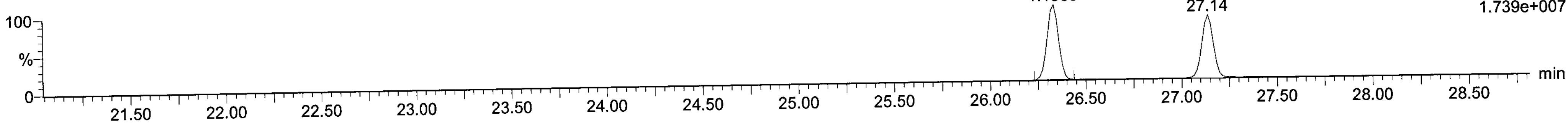
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time

Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

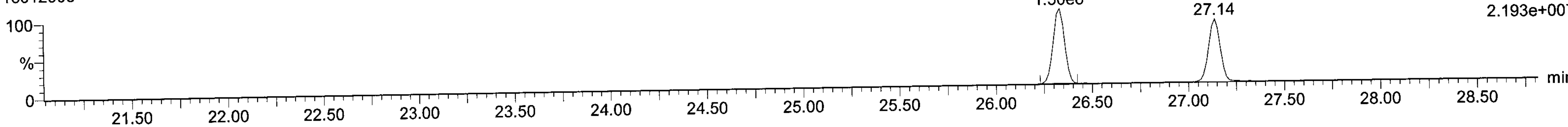
Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

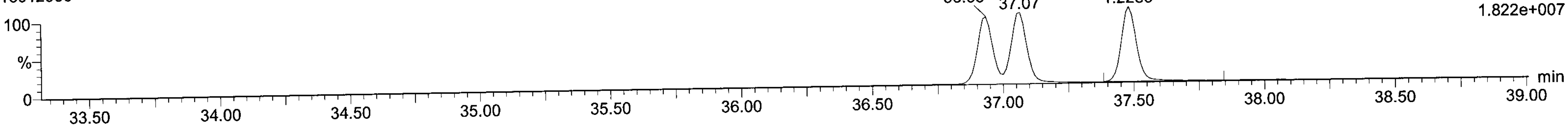
13C-1234-TCDD
16012906



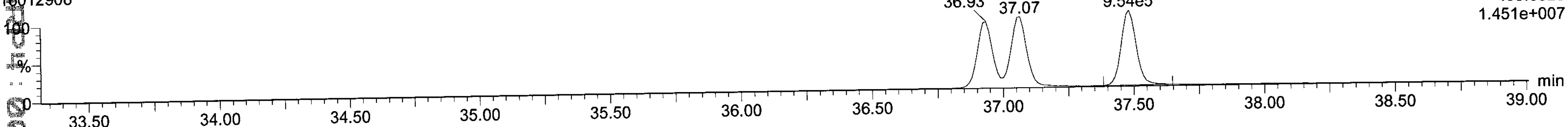
13C-1234-TCDD
16012906



13C-123789-HxCDD
16012906



13C-123789-HxCDD
16012906

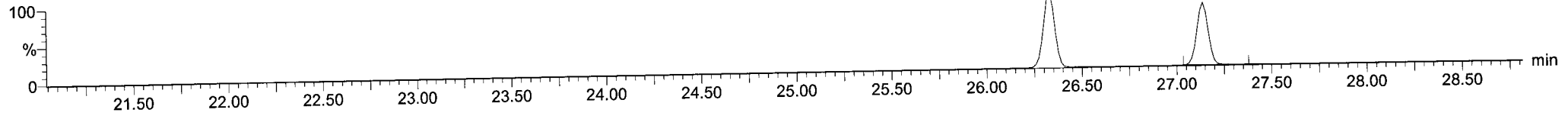


APR4:00440

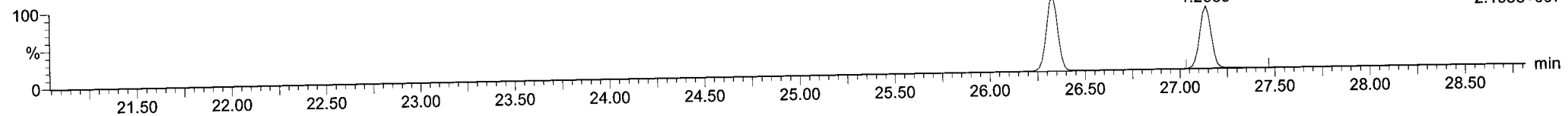
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

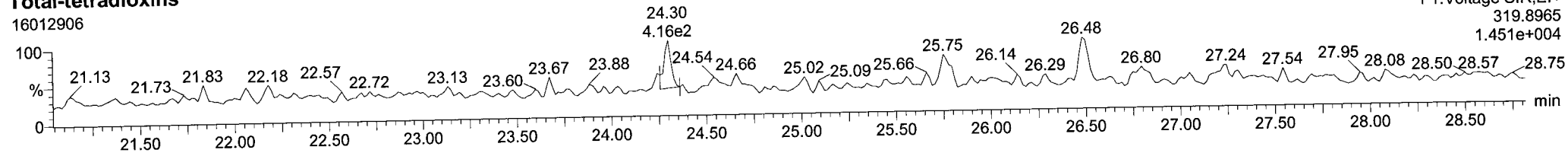
13C-2378-TCDD
16012906
F1:Voltage SIR,EI+
331.9368
1.739e+007



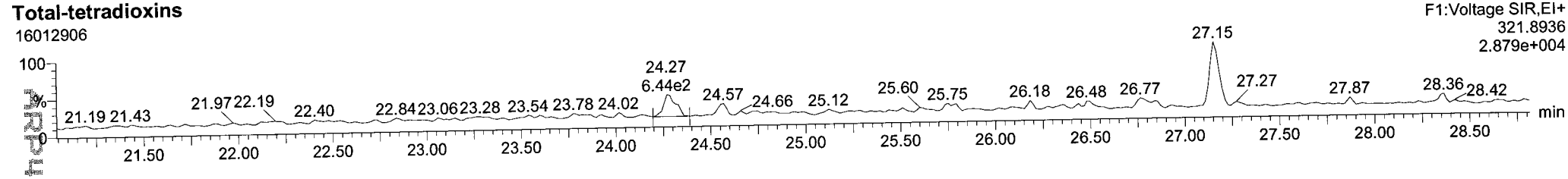
13C-2378-TCDD
16012906
F1:Voltage SIR,EI+
333.9339
2.193e+007



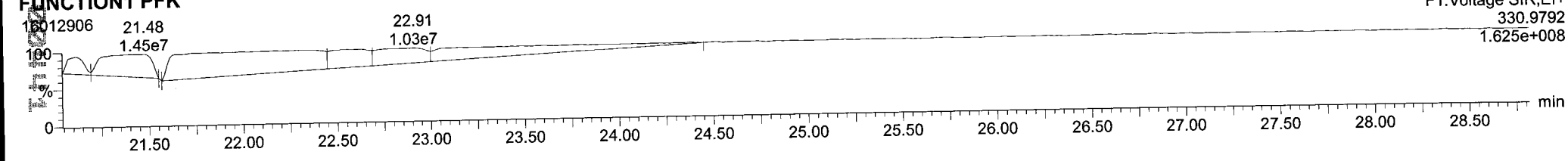
Total-tetradioxins
16012906
F1:Voltage SIR,EI+
319.8965
1.451e+004



Total-tetradioxins
16012906
F1:Voltage SIR,EI+
321.8936
2.879e+004



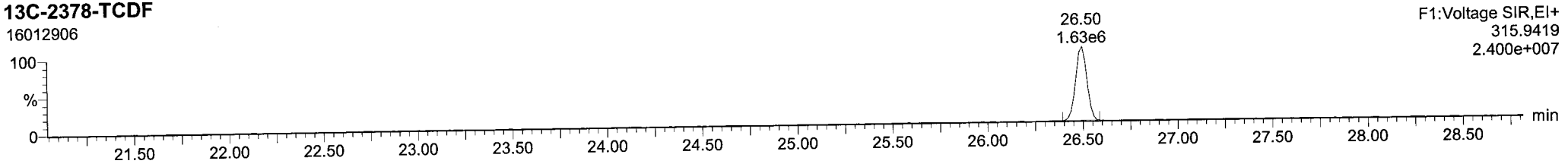
FUNCTION1 PFK
16012906
F1:Voltage SIR,EI+
330.9792
1.625e+008



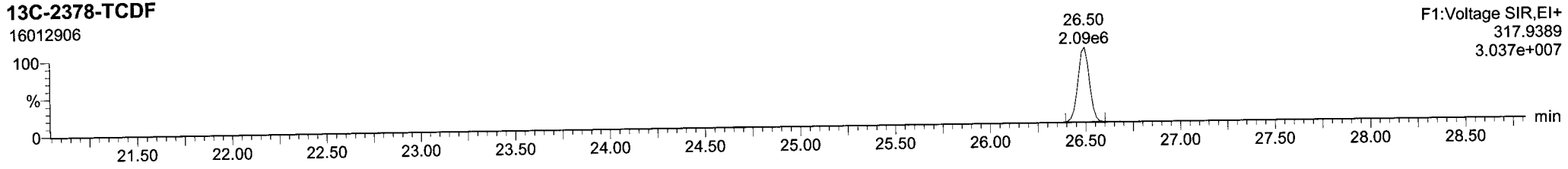
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

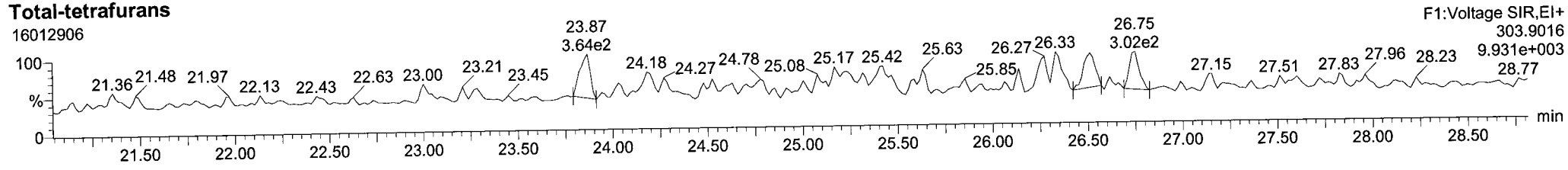
13C-2378-TCDF
16012906
F1:Voltage SIR,EI+
315.9419
2.400e+007



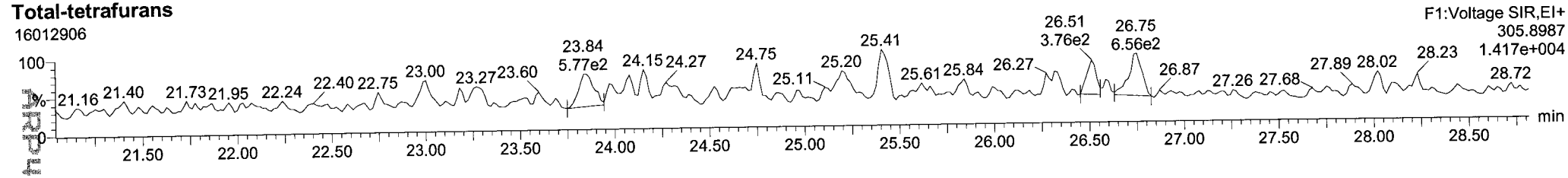
13C-2378-TCDF
16012906
F1:Voltage SIR,EI+
317.9389
3.037e+007



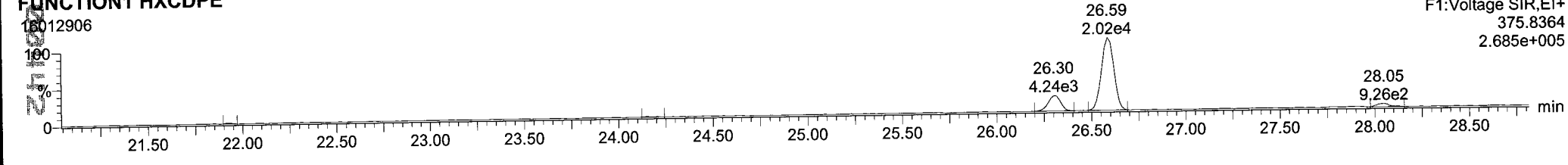
Total-tetrafurans
16012906
F1:Voltage SIR,EI+
303.9016
9.931e+003



Total-tetrafurans
16012906
F1:Voltage SIR,EI+
305.8987
1.417e+004



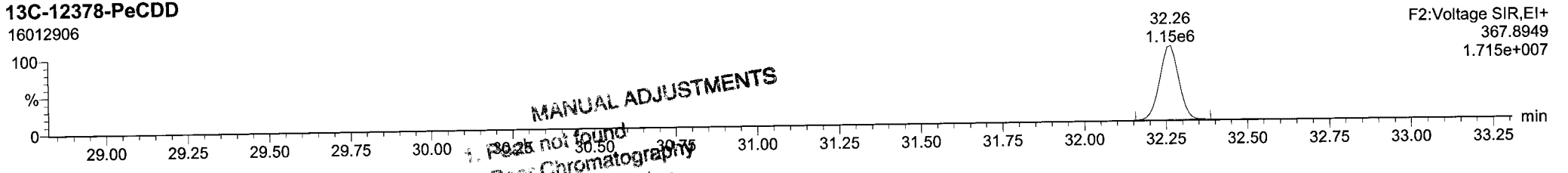
FUNCTION1 HXCDPE
16012906
F1:Voltage SIR,EI+
375.8364
2.685e+005



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

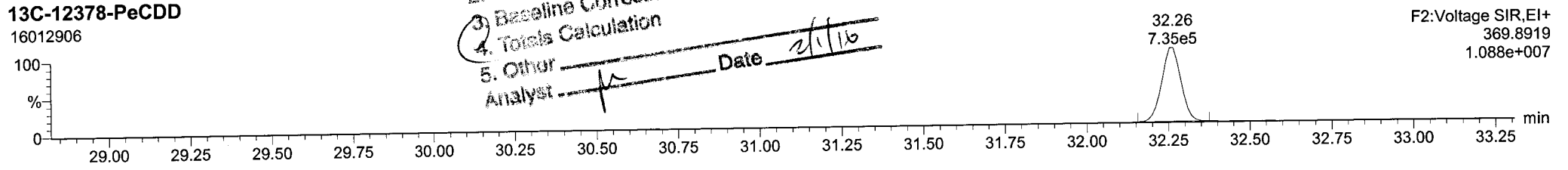
ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD
16012906

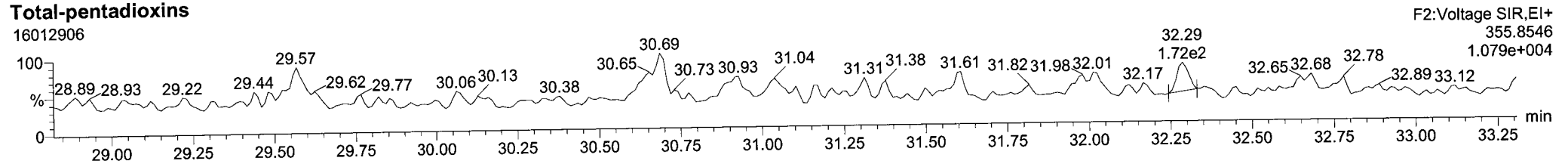


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst
Date 2/1/16

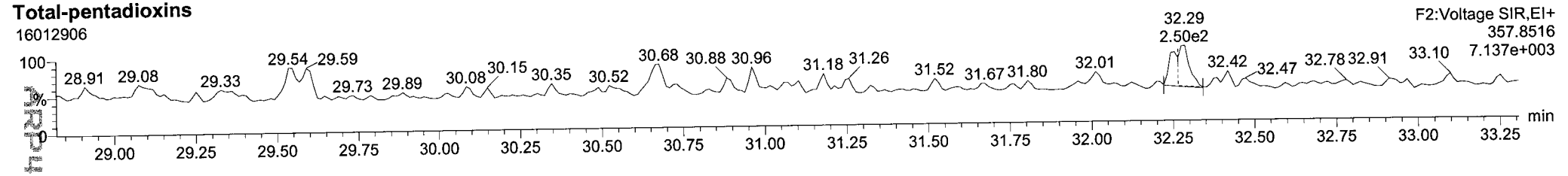
13C-12378-PeCDD
16012906



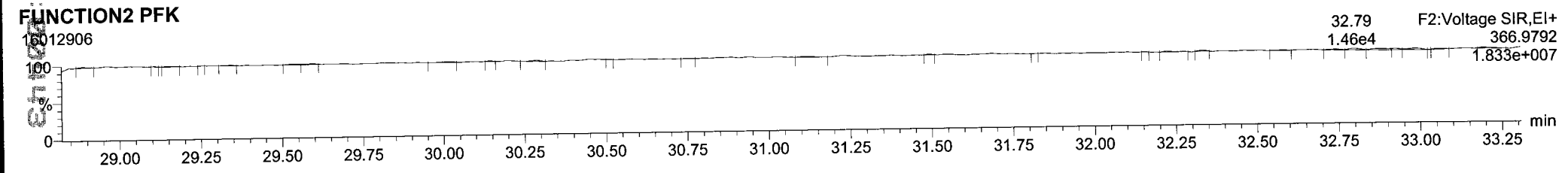
Total-pentadioxins
16012906



Total-pentadioxins
16012906



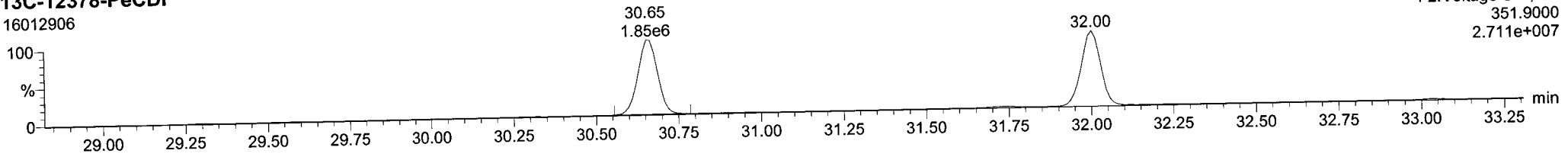
FUNCTION2 PFK
16012906



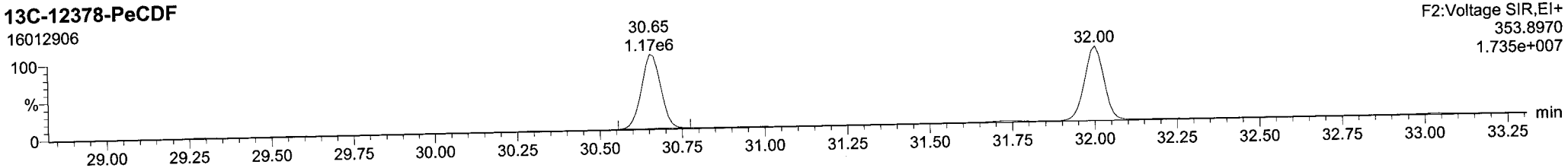
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

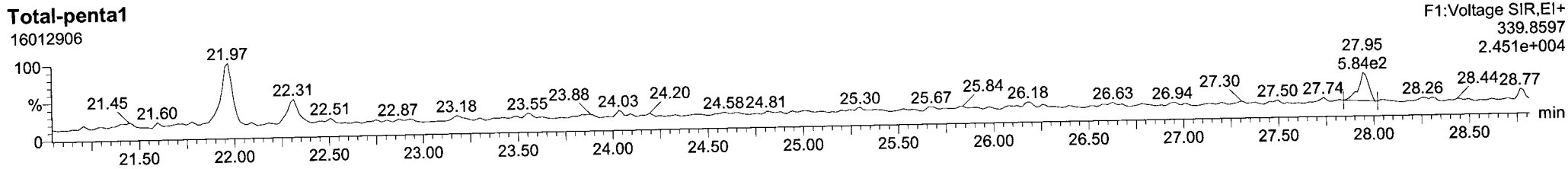
13C-12378-PeCDF
16012906
F2:Voltage SIR,EI+
351.9000
2.711e+007



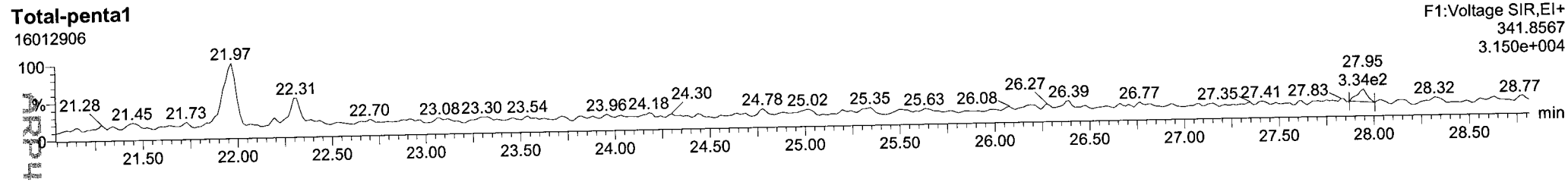
13C-12378-PeCDF
16012906
F2:Voltage SIR,EI+
353.8970
1.735e+007



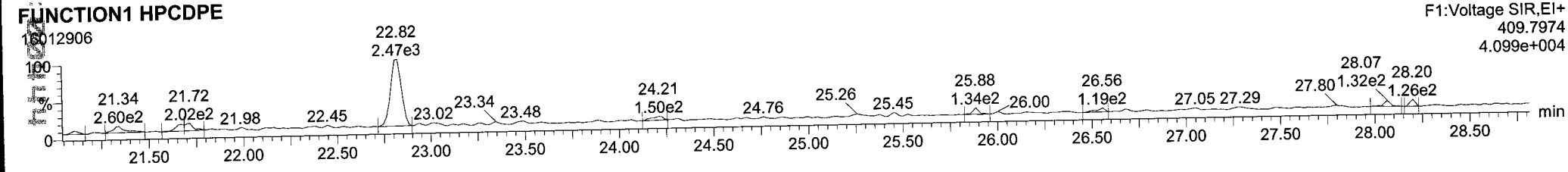
Total-penta1
16012906
F1:Voltage SIR,EI+
339.8597
2.451e+004



Total-penta1
16012906
F1:Voltage SIR,EI+
341.8567
3.150e+004



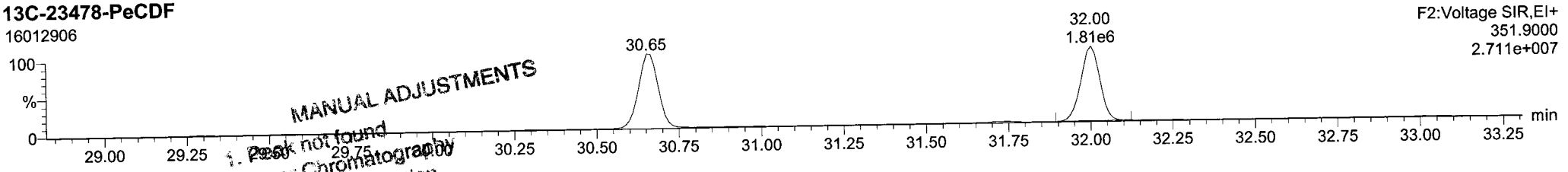
FUNCTION1 HPCDPE
16012906
F1:Voltage SIR,EI+
409.7974
4.099e+004



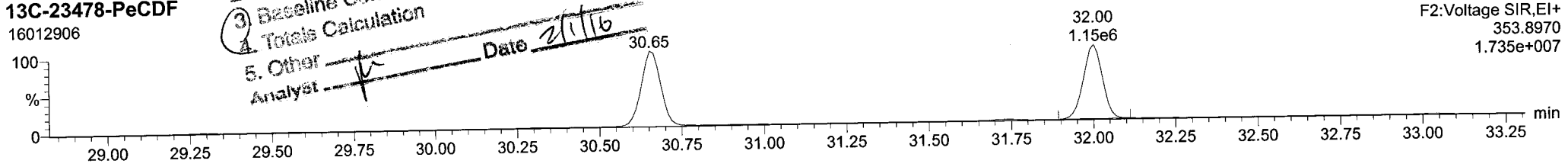
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

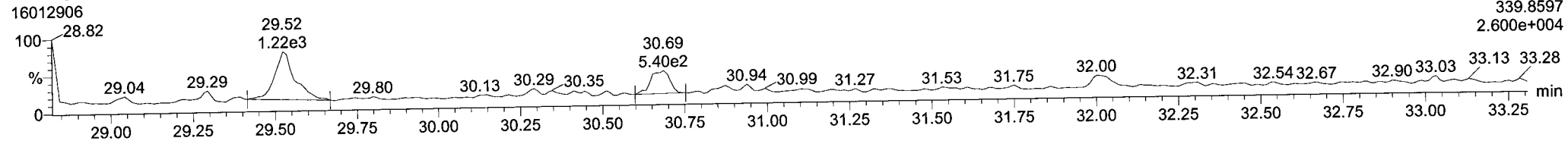
13C-23478-PeCDF
16012906
F2:Voltage SIR,EI+
351.9000
2.711e+007



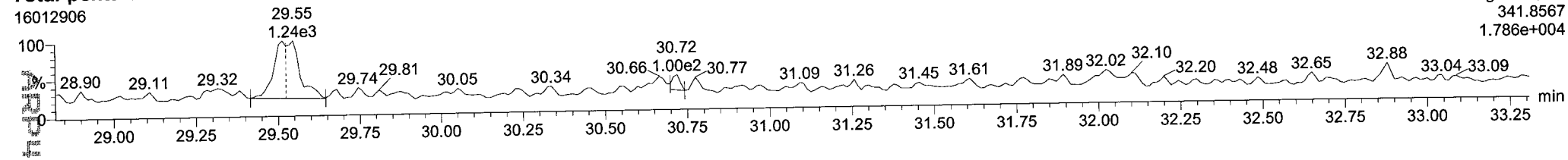
13C-23478-PeCDF
16012906
F2:Voltage SIR,EI+
353.8970
1.735e+007



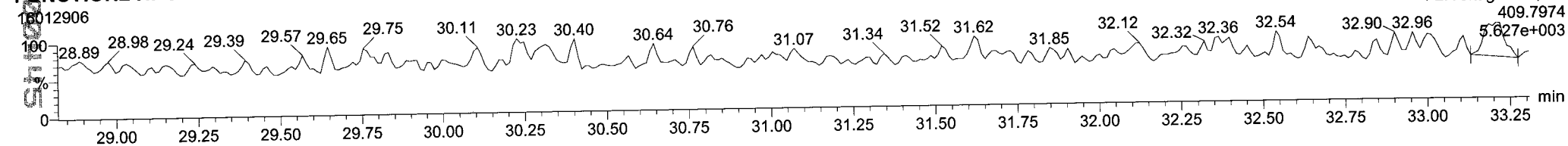
Total-pentafurans
16012906
F2:Voltage SIR,EI+
339.8597
2.600e+004



Total-pentafurans
16012906
F2:Voltage SIR,EI+
341.8567
1.786e+004



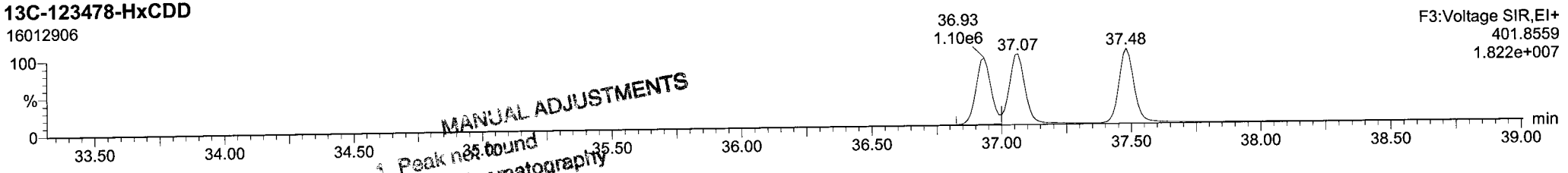
FUNCTION2 HPCDPE
16012906
F2:Voltage SIR,EI+
409.7974
5.627e+003



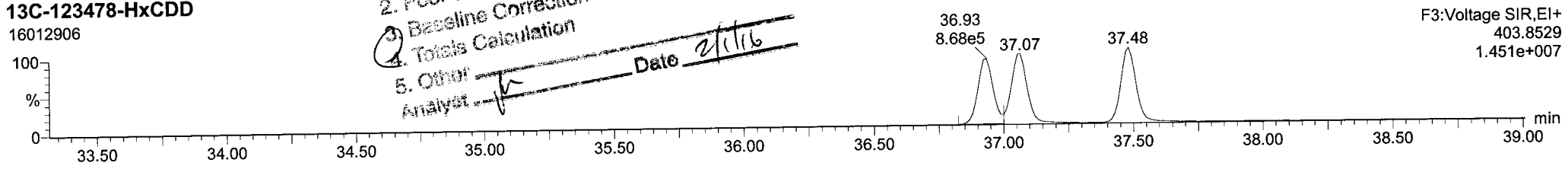
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

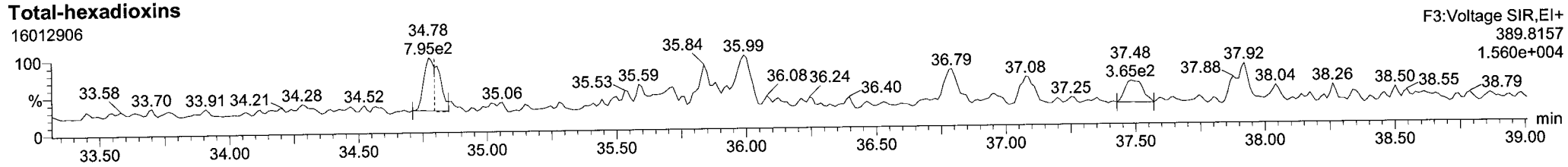
13C-123478-HxCDD
16012906



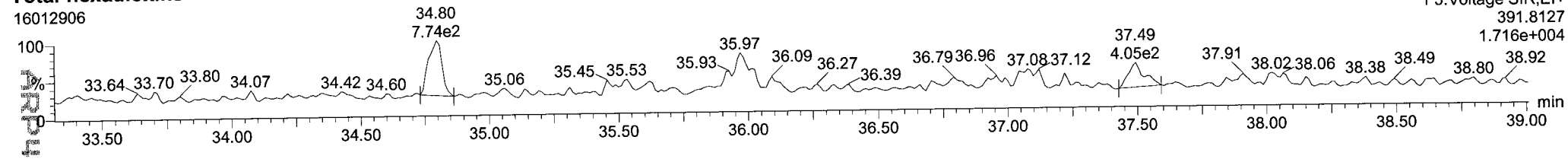
13C-123478-HxCDD
16012906



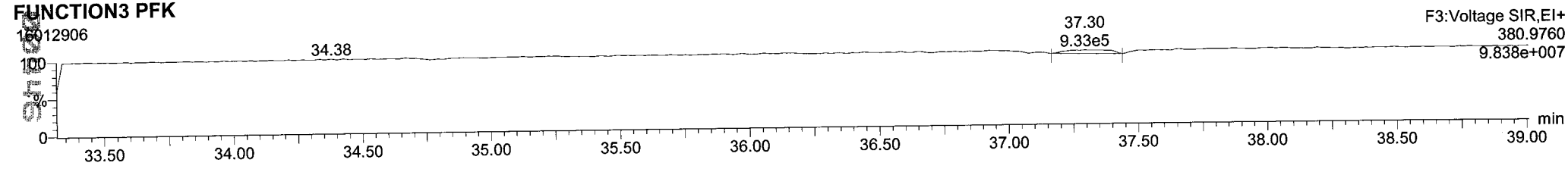
Total-hexadioxins
16012906



Total-hexadioxins
16012906



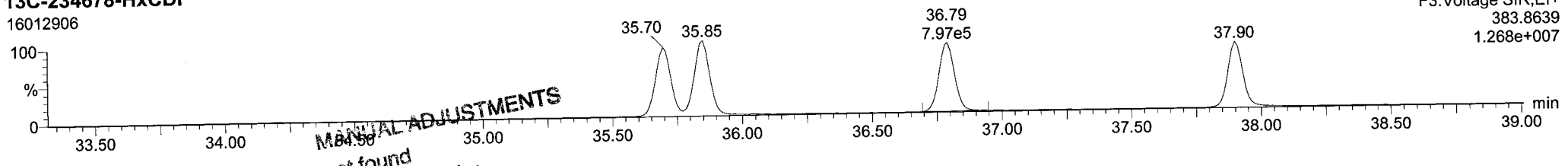
FUNCTION3 PFK
16012906



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF
16012906
F3:Voltage SIR,EI+
383.8639
1.268e+007

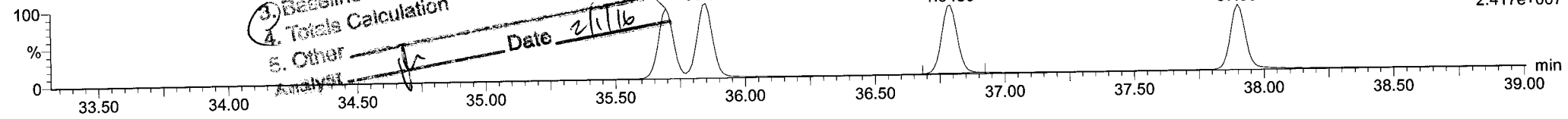


MANUAL ADJUSTMENTS

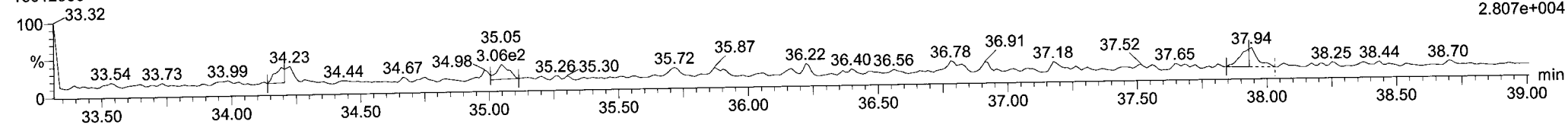
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 2/1/16

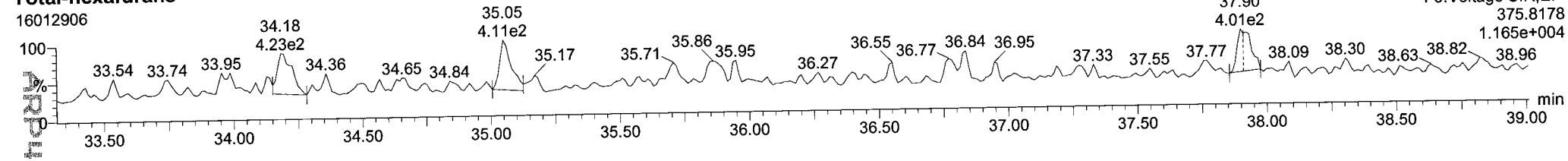
13C-234678-HxCDF
16012906
F3:Voltage SIR,EI+
385.8610
2.417e+007



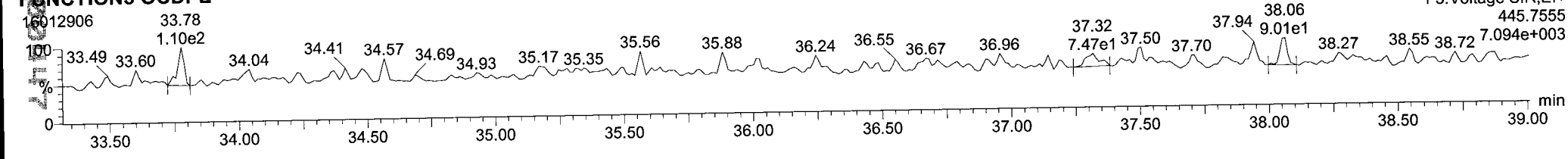
Total-hexafurans
16012906
F3:Voltage SIR,EI+
373.8208
2.807e+004



Total-hexafurans
16012906
F3:Voltage SIR,EI+
375.8178
1.165e+004



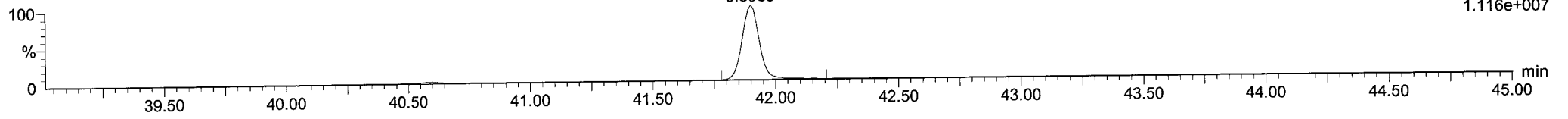
FUNCTION3 OCDPE
16012906
F3:Voltage SIR,EI+
445.7555
7.094e+003



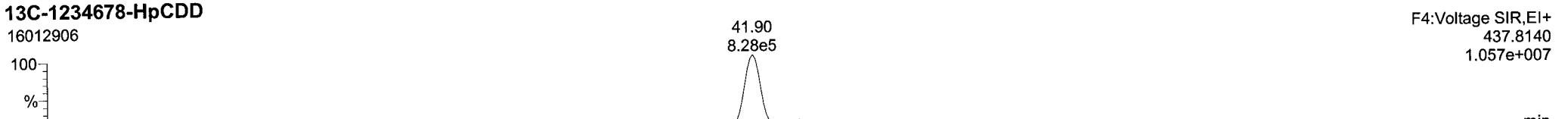
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

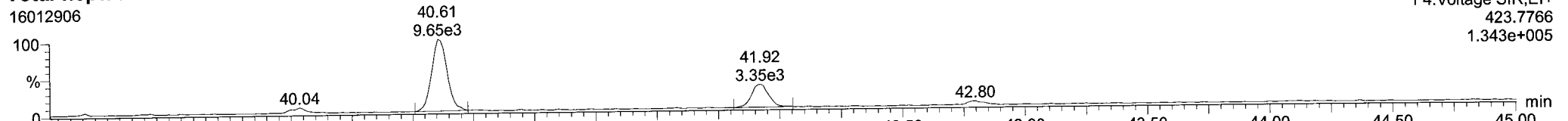
13C-1234678-HpCDD
16012906



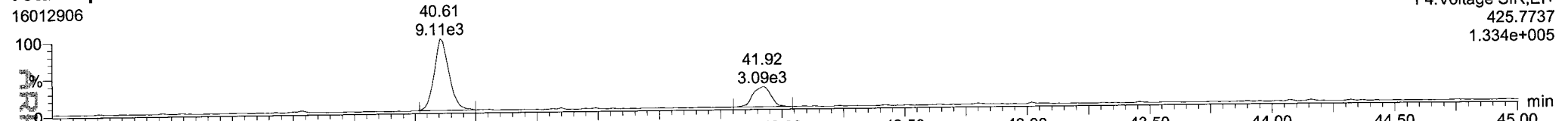
13C-1234678-HpCDD
16012906



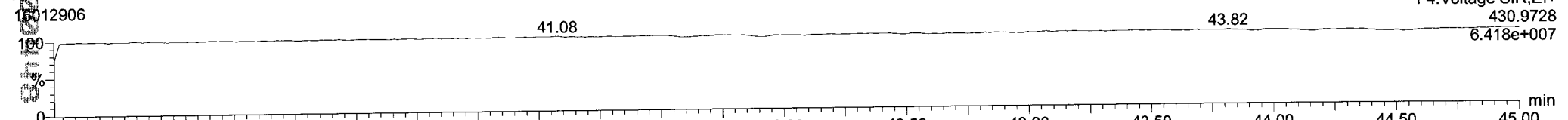
Total-heptadioxins
16012906



Total-heptadioxins
16012906



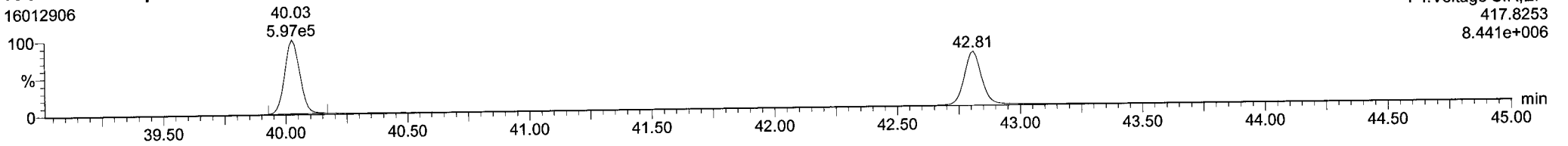
FUNCTION4 PFK
16012906



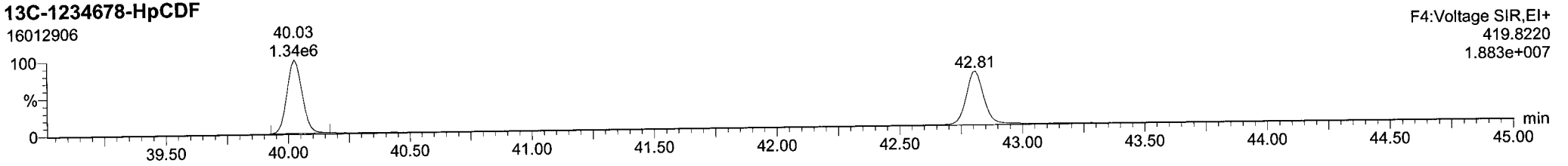
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

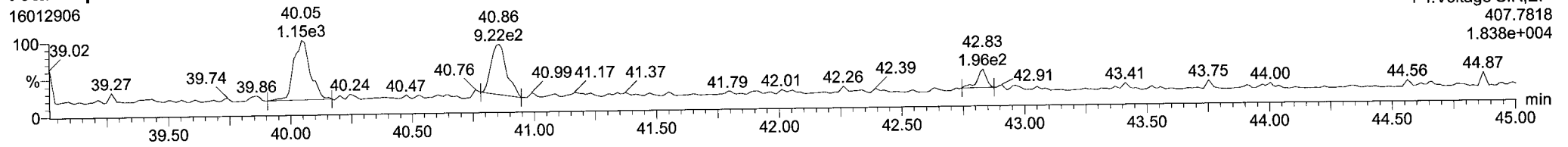
13C-1234678-HpCDF



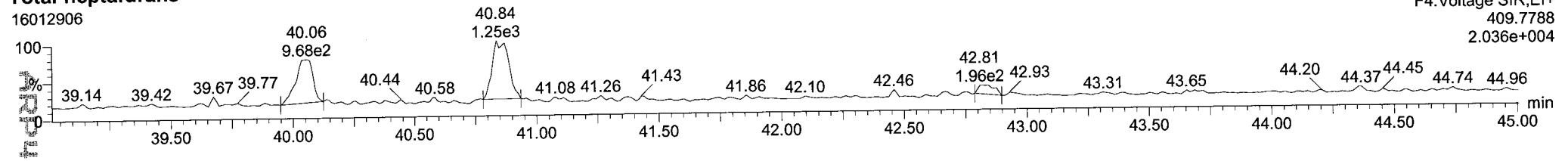
13C-1234678-HpCDF



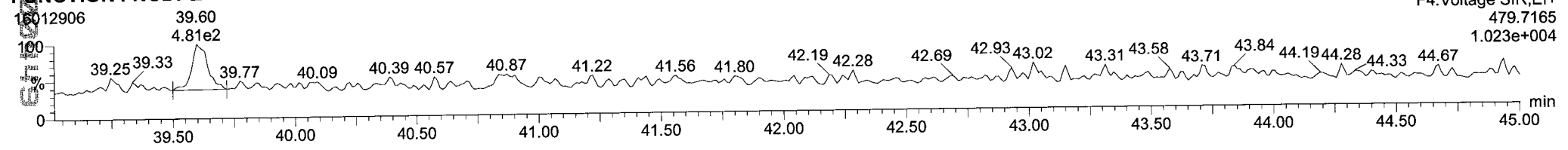
Total-heptafurans



Total-heptafurans



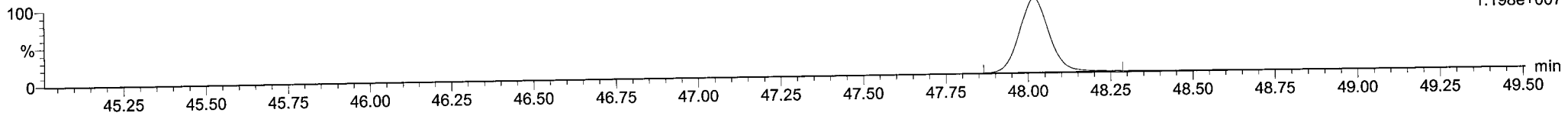
FUNCTION4 NCDPE



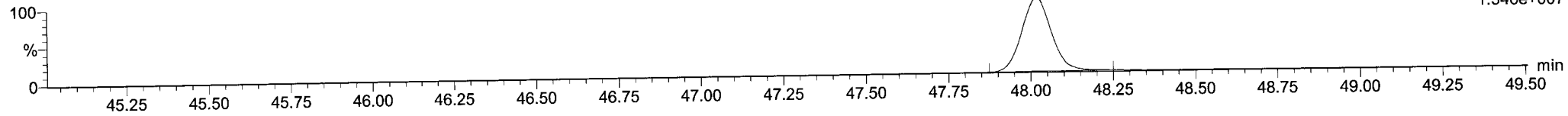
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

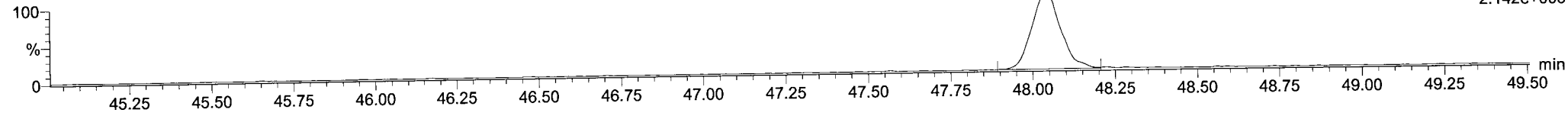
13C-OCDD
16012906
48.02
1.23e6
F5:Voltage SIR,EI+
469.7779
1.198e+007



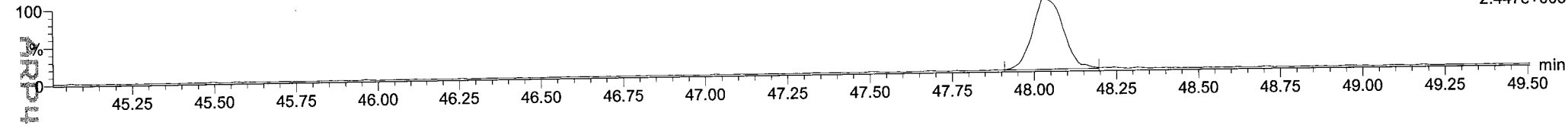
13C-OCDD
16012906
48.02
1.37e6
F5:Voltage SIR,EI+
471.7750
1.346e+007



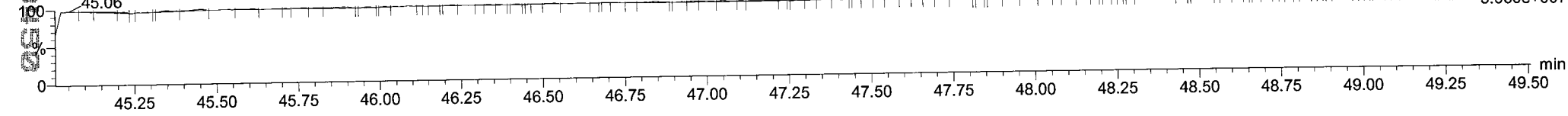
OCDD
16012906
48.05
2.21e4
F5:Voltage SIR,EI+
457.7377
2.142e+005



OCDD
16012906
48.03
2.51e4
F5:Voltage SIR,EI+
459.7348
2.447e+005



FUNCTION5 PFK
16012906
45.06
47.41
1.43e4
F5:Voltage SIR,EI+
480.9696
3.960e+007

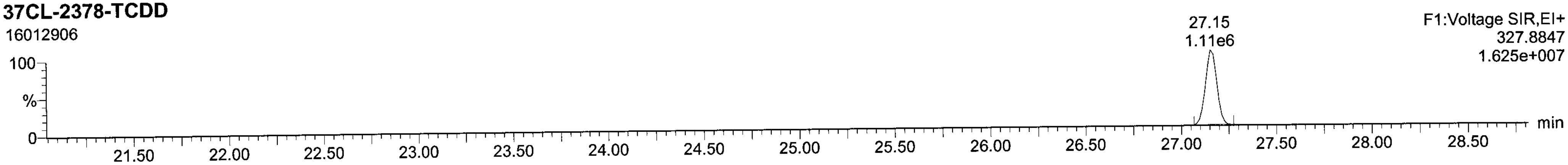


Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

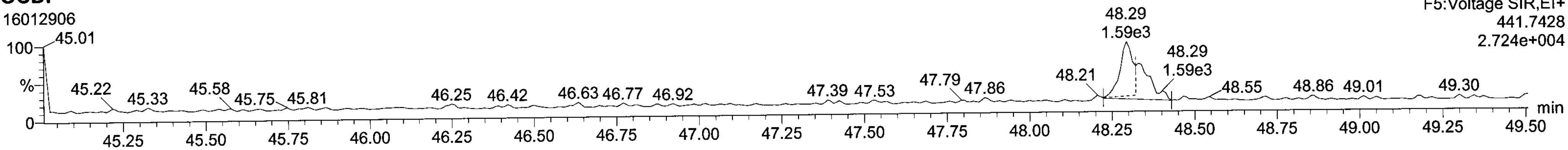
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:29 Pacific Standard Time

ID: APR4A, Name: 16012906, Date: 29-Jan-2016, Time: 16:13:47, Conditions: AUTOSPEC01, User: pk

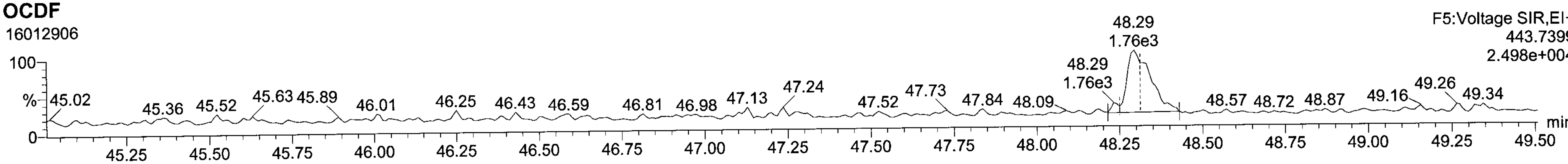
37CL-2378-TCDD
16012906



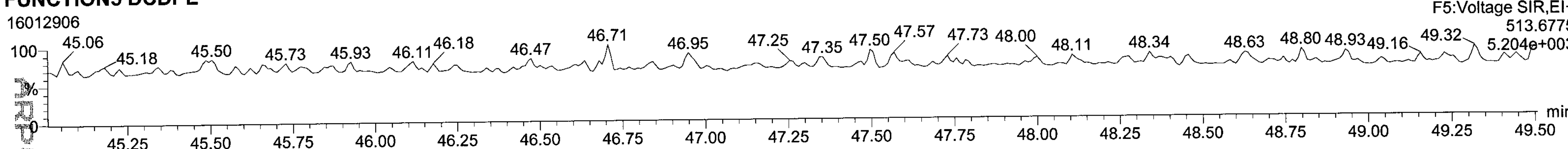
OCDF
16012906



OCDF
16012906

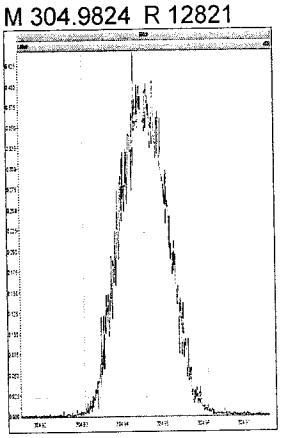


FUNCTION5 DCDPE
16012906

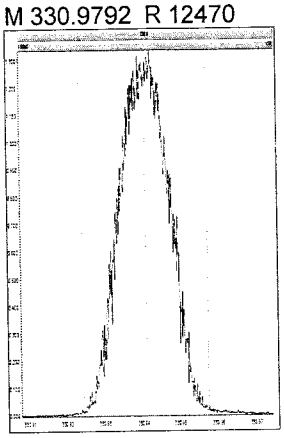


Printed: Friday, January 29, 2016 23:28:03 Pacific Standard Time

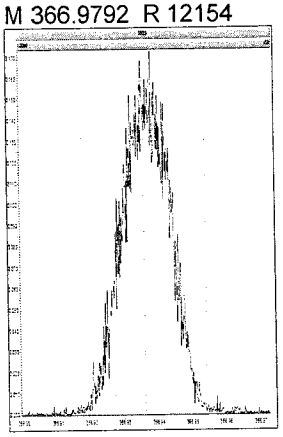
M 304.9824 R 12821



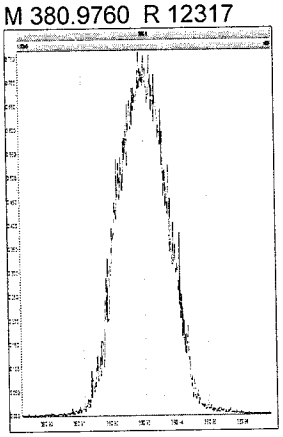
M 330.9792 R 12470



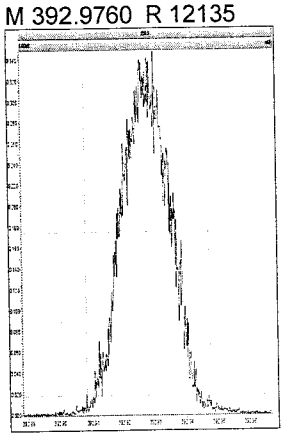
M 366.9792 R 12154



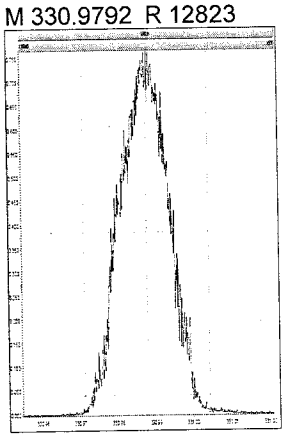
M 380.9760 R 12317



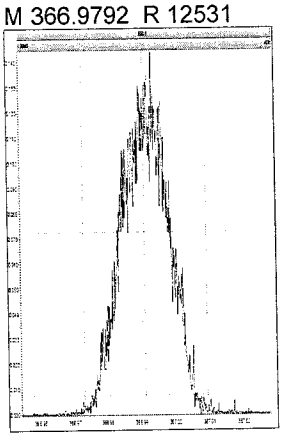
M 392.9760 R 12135



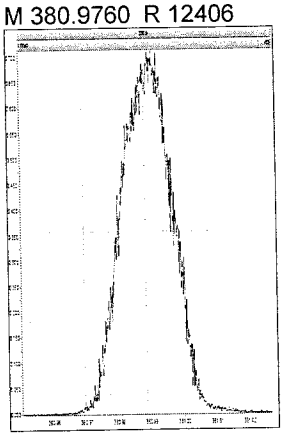
M 330.9792 R 12823



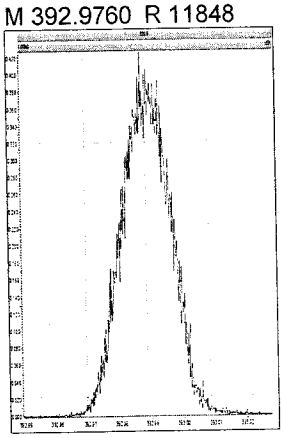
M 366.9792 R 12531



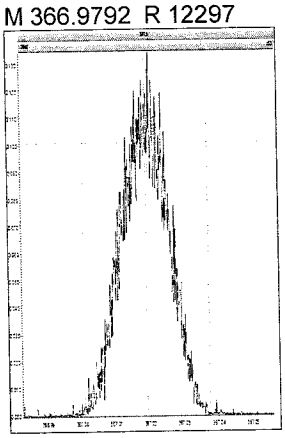
M 380.9760 R 12406



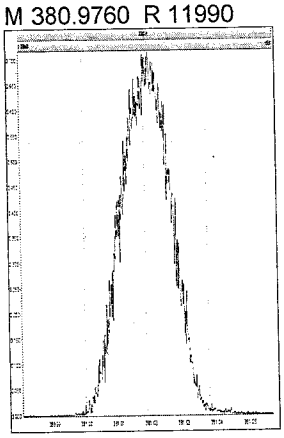
M 392.9760 R 11848



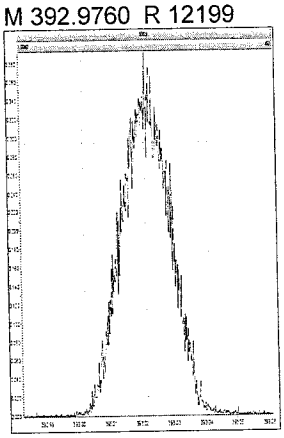
M 366.9792 R 12297



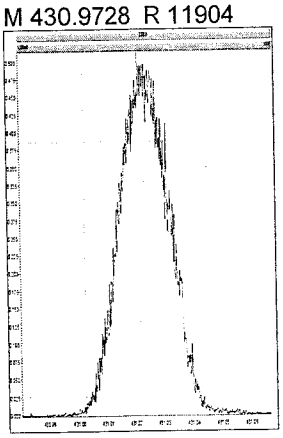
M 380.9760 R 11990



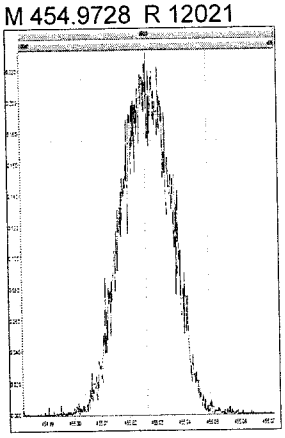
M 392.9760 R 12199



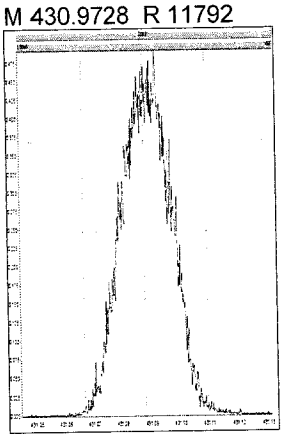
M 430.9728 R 11904



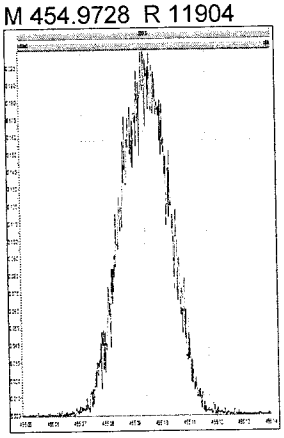
M 454.9728 R 12021



M 430.9728 R 11792

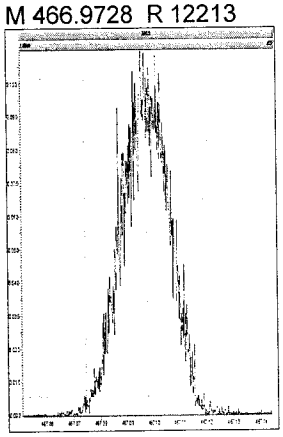


M 454.9728 R 11904

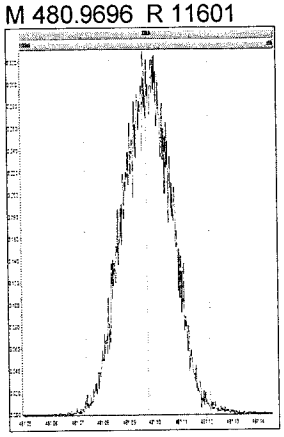


Printed: Friday, January 29, 2016 23:28:03 Pacific Standard Time

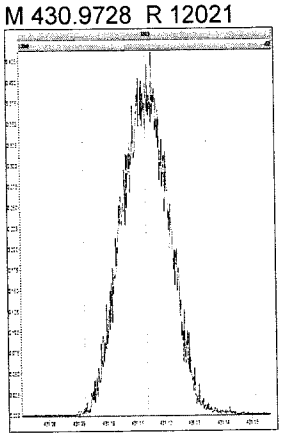
M 466.9728 R 12213



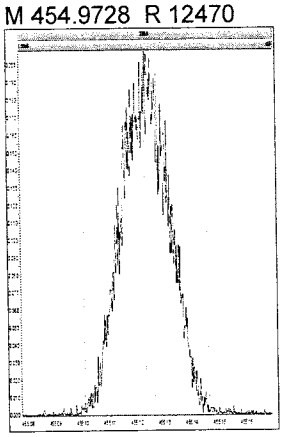
M 480.9696 R 11601



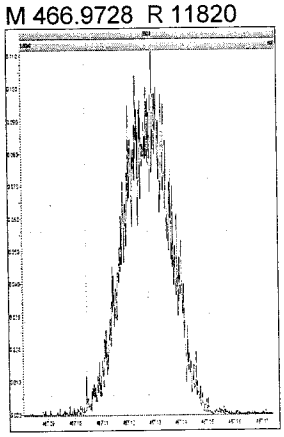
M 430.9728 R 12021



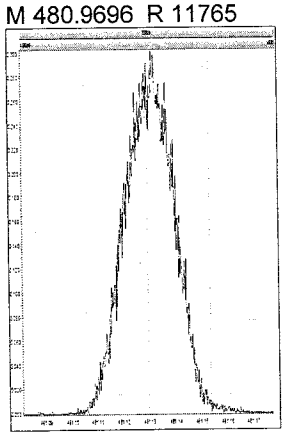
M 454.9728 R 12470



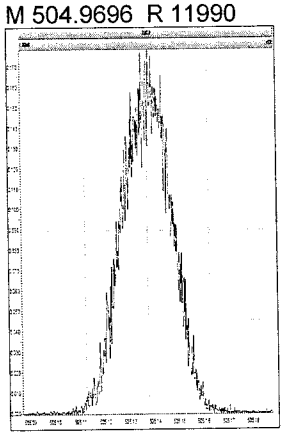
M 466.9728 R 11820



M 480.9696 R 11765



M 504.9696 R 11990



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, 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	26.497	1.001	1.45e5	2.10e5	0.827	0.688	0.770	1381	1347	2.10e6	3.02e6	1518.5	NO	10.352	10.352
12378-PeCDF	30.665	1.001	8.65e5	5.97e5	0.824	1.449	1.550	2888	2796	1.25e7	8.62e6	4320.3	NO	53.444	53.444
23478-PeCDF	32.002	1.001	8.62e5	5.95e5	0.850	1.448	1.550	2888	2796	1.29e7	8.87e6	4455.3	NO	52.301	52.301
123478-HxCDF	35.697	1.000	6.95e5	6.01e5	0.973	1.158	1.240	3180	2657	1.04e7	8.79e6	3271.8	NO	52.394	52.394
234678-HxCDF	36.793	1.001	6.80e5	5.91e5	1.025	1.151	1.240	3180	2657	1.01e7	8.80e6	3174.5	NO	52.108	52.108
123678-HxCDF	35.850	1.001	7.07e5	6.19e5	0.953	1.143	1.240	3180	2657	1.02e7	8.88e6	3219.1	NO	52.410	52.410
123789-HxCDF	37.900	1.000	6.06e5	5.22e5	0.956	1.162	1.240	3180	2657	9.41e6	8.06e6	2960.2	NO	49.340	49.340
1234678-HpCDF	40.026	1.001	6.01e5	6.14e5	1.153	0.978	1.050	2181	1961	8.36e6	8.69e6	3832.5	NO	52.243	52.243
1234789-HpCDF	42.789	1.000	4.86e5	5.06e5	1.131	0.959	1.050	2181	1961	5.93e6	6.06e6	2720.3	NO	52.592	52.592
OCDF	48.278	1.006	7.46e5	8.79e5	1.023	0.849	0.890	1312	1575	7.23e6	8.38e6	5511.3	NO	106.005	106.005
2378-TCDD	27.139	1.001	1.19e5	1.56e5	1.023	0.762	0.770	1131	1173	1.68e6	2.19e6	1489.2	NO	10.125	10.125
12378-PeCDD	32.265	1.001	6.16e5	3.98e5	0.939	1.549	1.550	2507	1560	9.19e6	5.92e6	3667.3	NO	51.452	51.452
123478-HxCDD	36.924	1.000	5.55e5	4.48e5	0.963	1.239	1.240	1788	1566	8.32e6	6.78e6	4651.9	NO	50.661	50.661
123678-HxCDD	37.056	1.000	5.50e5	4.39e5	0.894	1.251	1.240	1788	1566	7.94e6	6.43e6	4441.0	NO	51.378	51.378
123789-HxCDD	37.483	1.012	5.58e5	4.49e5	0.900	1.241	1.240	1788	1566	8.49e6	6.76e6	4746.2	NO	53.129	53.129
1234678-HpCDD	41.890	1.001	4.50e5	4.27e5	0.964	1.053	1.050	1984	2632	5.77e6	5.61e6	2908.0	NO	52.140	52.140
OCDD	48.008	1.001	6.95e5	7.91e5	0.969	0.879	0.890	1916	1004	6.80e6	7.71e6	3547.2	NO	102.278	102.278
13C-2378-TCDF	26.482	1.006	1.82e6	2.33e6	1.502	0.780	0.770	6381	3078	2.57e7	3.26e7	4023.0	NO		104.634
13C-12378-PeCDF	30.643	1.164	2.03e6	1.30e6	1.215	1.564	1.550	2319	2127	2.96e7	1.88e7	12762.1	NO		103.570
13C-23478-PeCDF	31.980	1.215	2.00e6	1.27e6	1.181	1.572	1.550	2319	2127	2.97e7	1.90e7	12820.3	NO		105.210
13C-123478-HxCDF	35.686	0.953	8.61e5	1.68e6	1.246	0.512	0.510	2707	2533	1.25e7	2.45e7	4624.5	NO		104.878
13C-123678-HxCDF	35.828	0.956	9.06e5	1.75e6	1.375	0.518	0.510	2707	2533	1.30e7	2.52e7	4803.6	NO		99.193
13C-234678-HxCDF	36.771	0.982	8.16e5	1.57e6	1.186	0.521	0.510	2707	2533	1.20e7	2.31e7	4439.8	NO		103.113
13C-123789-HxCDF	37.889	1.011	8.19e5	1.57e6	1.135	0.522	0.510	2707	2533	1.24e7	2.37e7	4586.9	NO		108.222
13C-1234678-HpCDF	40.004	1.068	6.22e5	1.39e6	1.020	0.447	0.440	2276	3146	8.76e6	1.95e7	3850.5	NO		101.522
13C-1234789-HpCDF	42.778	1.142	5.18e5	1.15e6	0.824	0.451	0.440	2276	3146	6.39e6	1.41e7	2809.6	NO		104.020
13C-1234-TCDD	26.317	0.000	1.17e6	1.47e6	1.000	0.794	0.770	3383	1619	1.65e7	2.05e7	4871.8	NO		100.000
13C-2378-TCDD	27.124	1.031	1.17e6	1.48e6	0.983	0.792	0.770	3383	1619	1.67e7	2.10e7	4940.3	NO		102.251
13C-12378-PeCDD	32.243	1.225	1.28e6	8.15e5	0.787	1.572	1.550	1805	1366	1.91e7	1.21e7	10575.3	NO		100.968
13C-123478-HxCDD	36.913	0.985	1.15e6	9.05e5	1.031	1.273	1.240	2071	1605	1.71e7	1.35e7	8269.9	NO		102.588
13C-123678-HxCDD	37.045	0.989	1.20e6	9.51e5	1.137	1.267	1.240	2071	1605	1.75e7	1.40e7	8470.0	NO		97.412
13C-1234678-HpCDD	41.868	1.118	8.90e5	8.55e5	0.892	1.041	1.050	2120	2236	1.16e7	1.10e7	5455.7	NO		100.501
13C-OCDD	47.982	1.281	1.41e6	1.59e6	0.852	0.885	0.890	1546	2560	1.38e7	1.54e7	8896.3	NO		180.902

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld

Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time

Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, 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	37.461	0.000	1.09e6	8.61e5	1.000	1.260	1.240	2071	1605	1.66e7	1.32e7	8028.8	NO		100.000
Total-tetrafurans			4.49e5		0.827			1381		6.51e6					32.099
Total-penta1			1.12e6					926		1.61e7					60.935
Total-pentafurans			2.64e6		0.837			2888		3.86e7					161.617
Total-hexafurans			3.48e6		0.977			3180		5.19e7					267.347
Total-heptafurans			1.09e6		1.142			2181		1.43e7					105.048
Total-Furans			9.54e6		0.971			1381		1.35e8					733.049
Total-tetradioxins			6.64e5		1.023			1131		8.14e6					55.857
Total-pentadioxins			2.19e6		0.939			2507		2.79e7					182.301
Total-hexadioxins			2.38e6		0.919			1788		3.55e7					222.534
Total-heptadioxins			9.73e5		0.964			1984		1.32e7					113.089
Total-Dioxins			6.90e6		0.950			1131		9.16e7					676.059
Total-TEQ			1.64e7					1131		2.26e8					1409.108
37CL-2378-TCDD	27.139	1.031	2.94e5		1.091			1745		4.16e6		2384.0			10.201
FUNCTION1 PFK			1.48e6					819277		2.54e7					
FUNCTION2 PFK			3.48e4					144016		1.10e6					0.000
FUNCTION3 PFK			5.79e4					699985		1.69e6					0.000
FUNCTION4 PFK			2.65e5					549601		8.89e6					
FUNCTION5 PFK			6.30e4					378503		2.89e6					
FUNCTION1 HXCDPE			4.33e2					600		1.11e4					0.000
FUNCTION1 HPCDPE			4.25e2					808		8.22e3					0.000
FUNCTION2 HPCDPE			1.20e3					764		1.96e4					0.000
FUNCTION3 OCDPE			1.64e2					654		4.31e3					0.000
FUNCTION4 NCDPE			1.15e2					636		1.76e3					0.000
FUNCTION5 DCDPE			0.00e0					442		0.00e0					

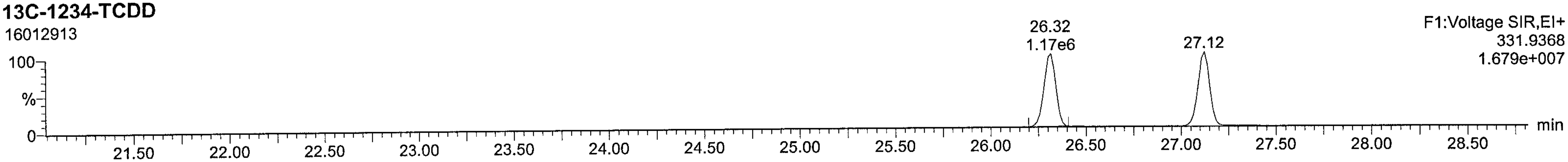
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

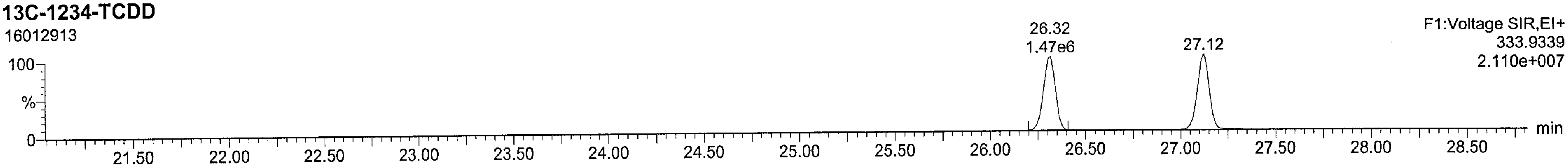
Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

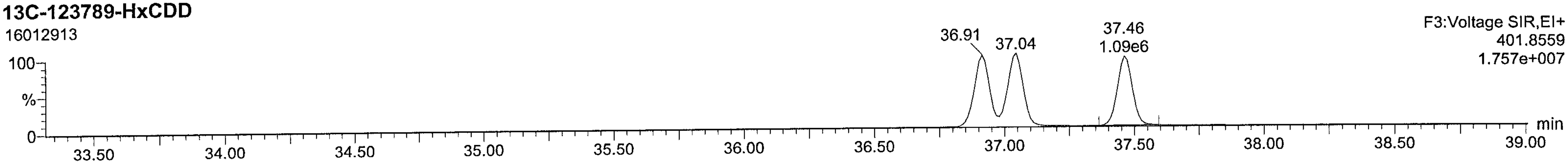
13C-1234-TCDD
16012913



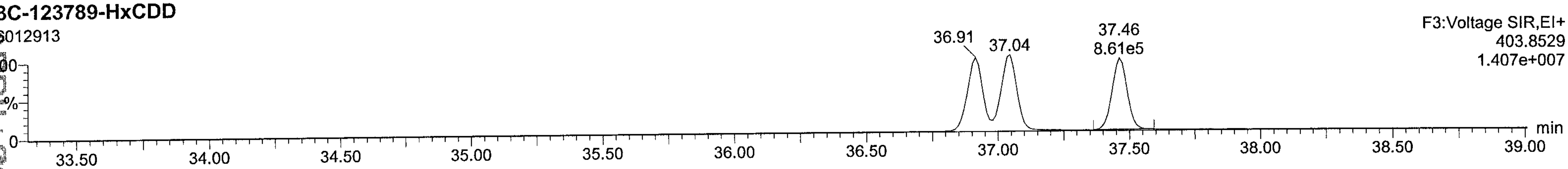
13C-1234-TCDD
16012913



13C-123789-HxCDD
16012913



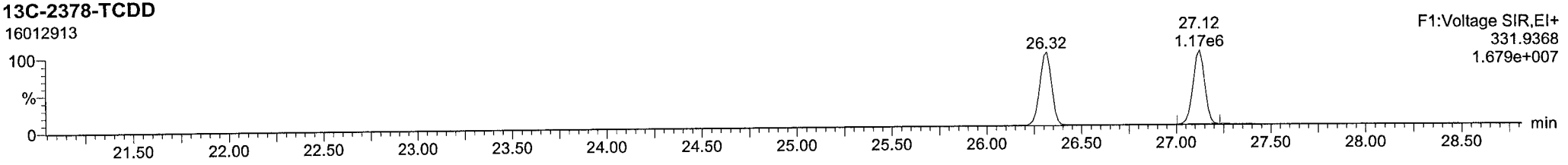
13C-123789-HxCDD
16012913



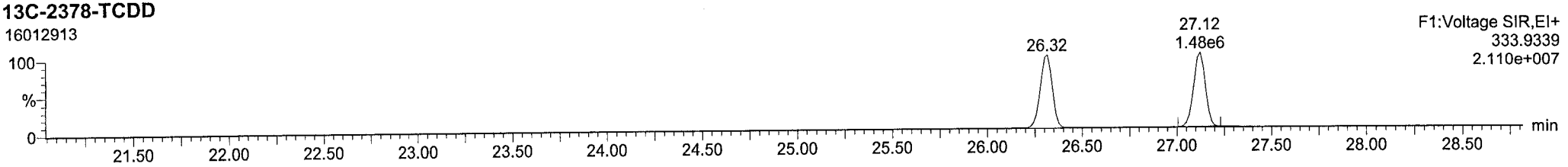
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

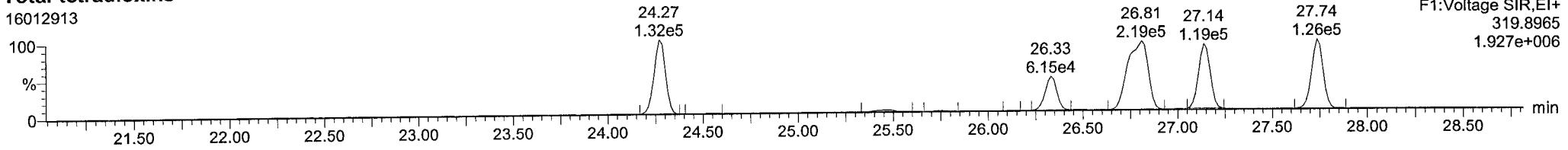
13C-2378-TCDD
16012913



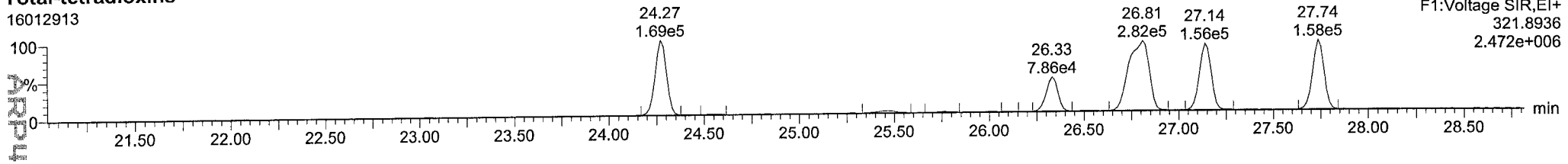
13C-2378-TCDD
16012913



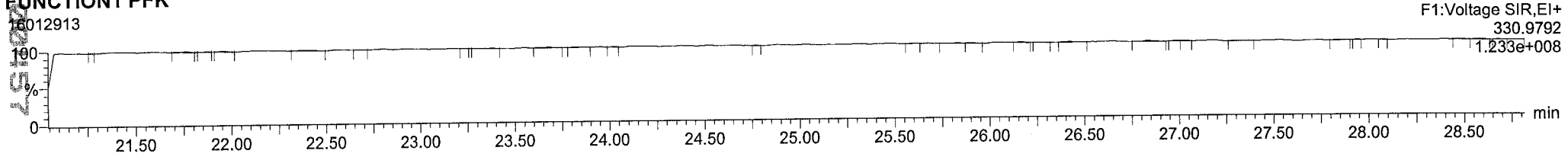
Total-tetradioxins
16012913



Total-tetradioxins
16012913



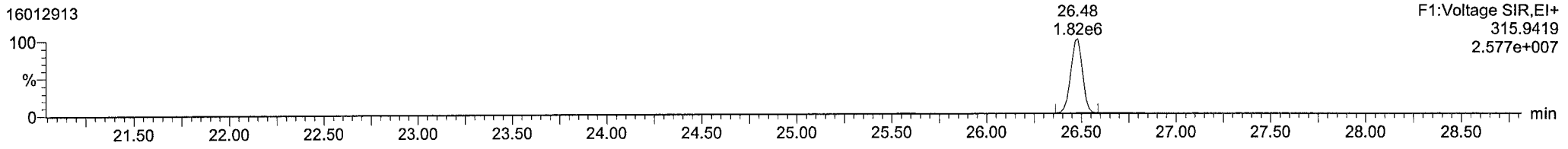
FUNCTION1 PFK
16012913



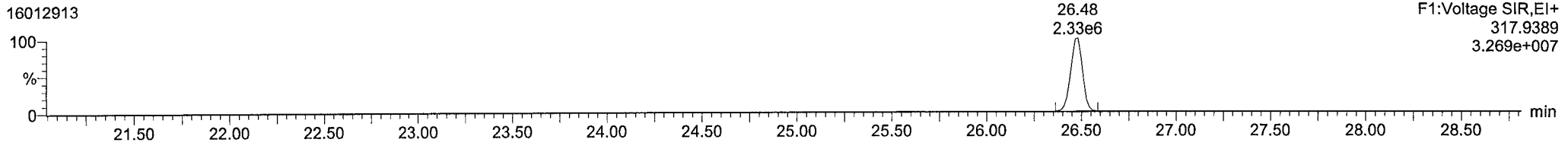
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

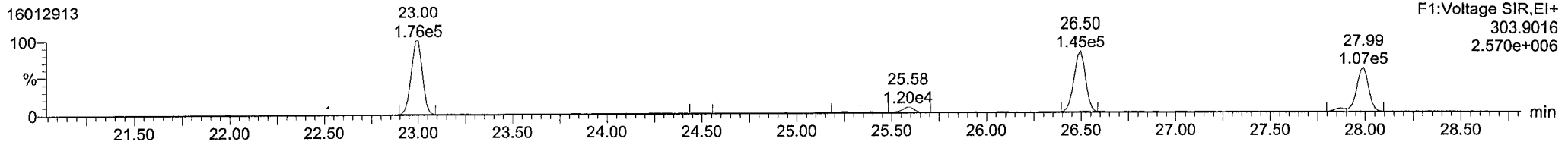
13C-2378-TCDF



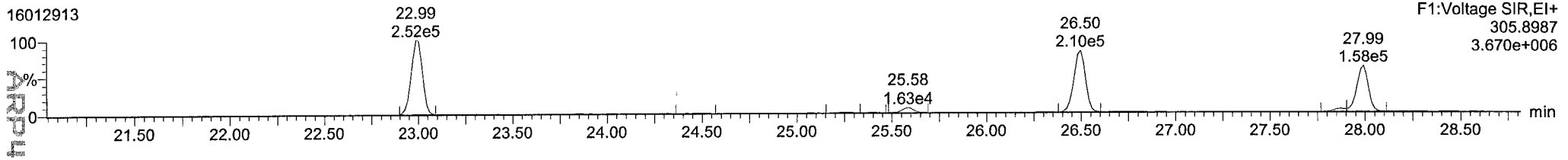
13C-2378-TCDF



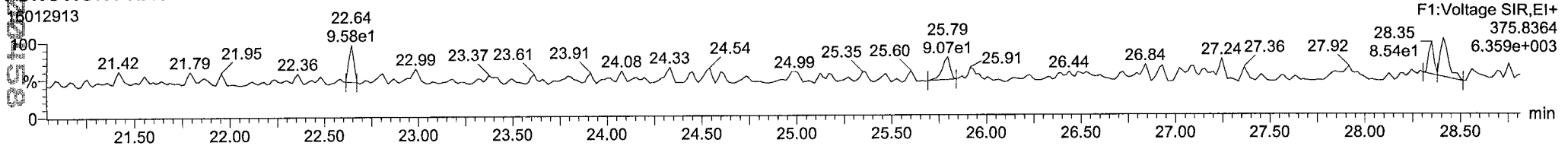
Total-tetrafurans



Total-tetrafurans



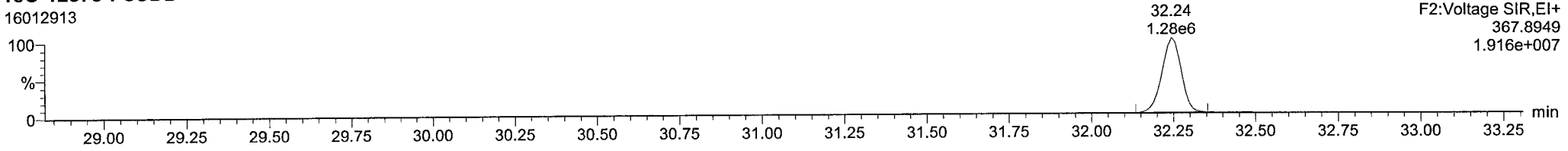
FUNCTION1 HXCDPE



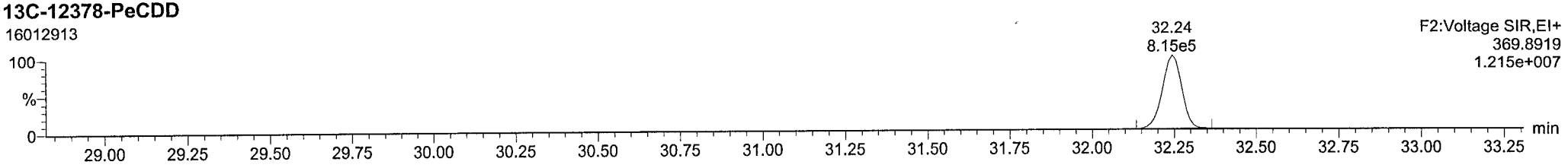
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

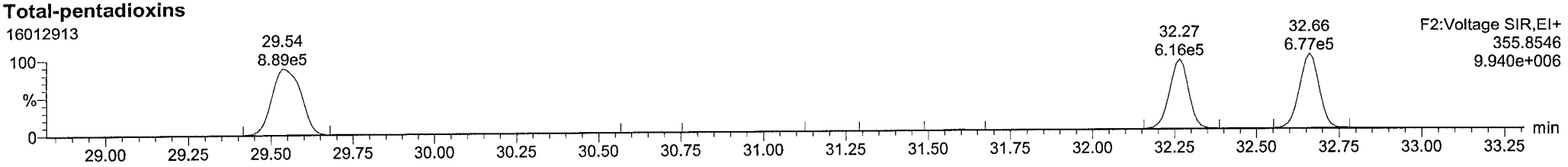
13C-12378-PeCDD



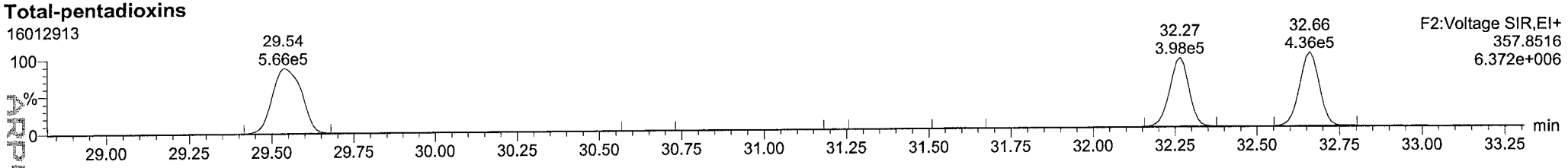
13C-12378-PeCDD



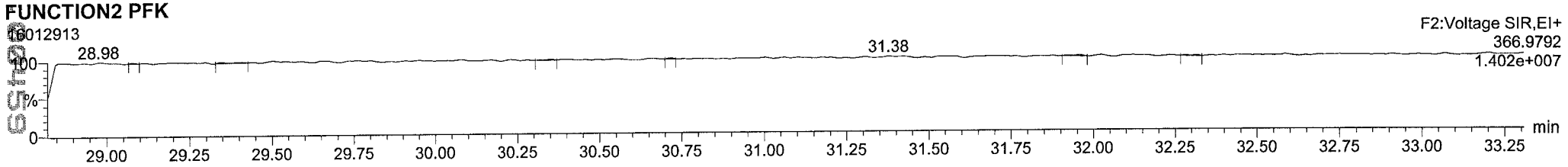
Total-pentadioxins



Total-pentadioxins



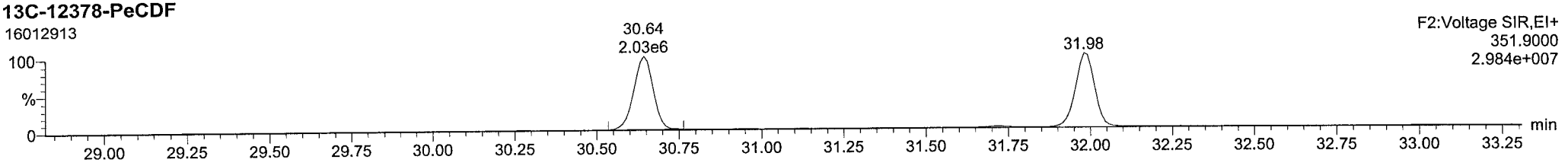
FUNCTION2 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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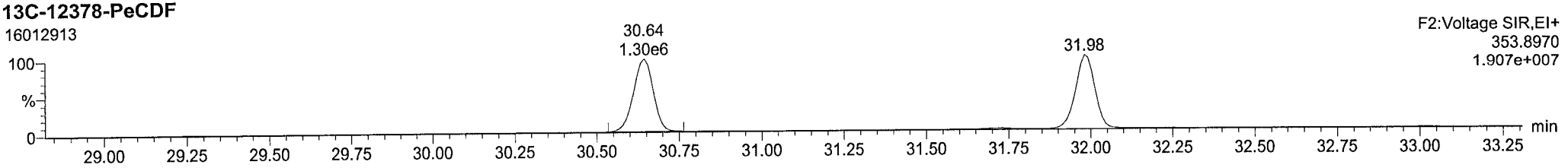
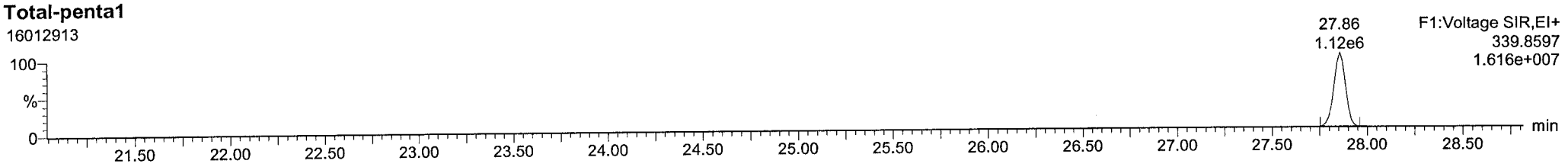
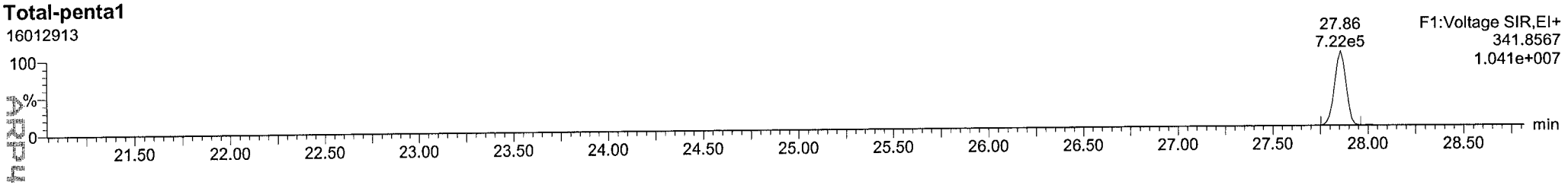


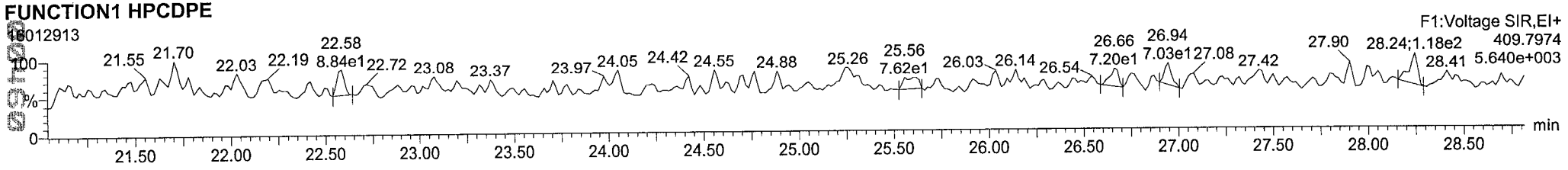
Total-penta1



Total-penta1



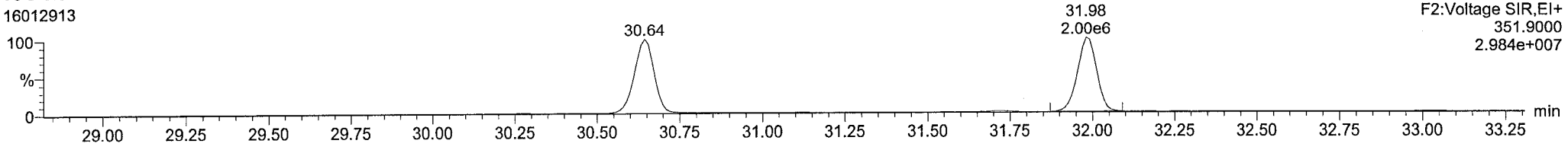
FUNCTION1 HPCDPE



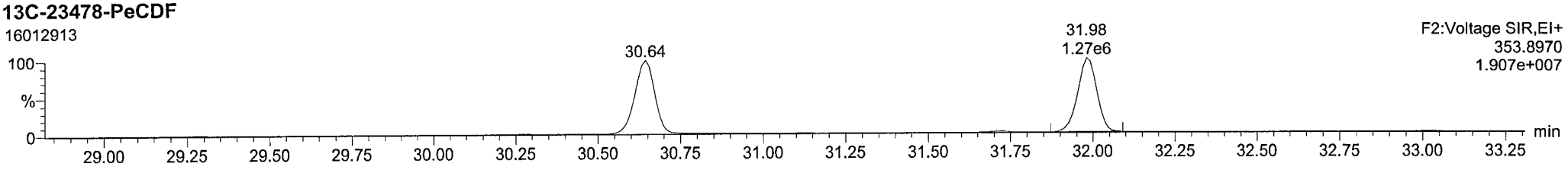
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

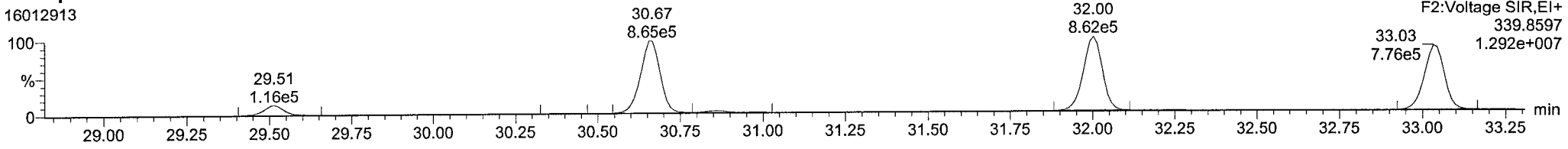
13C-23478-PeCDF



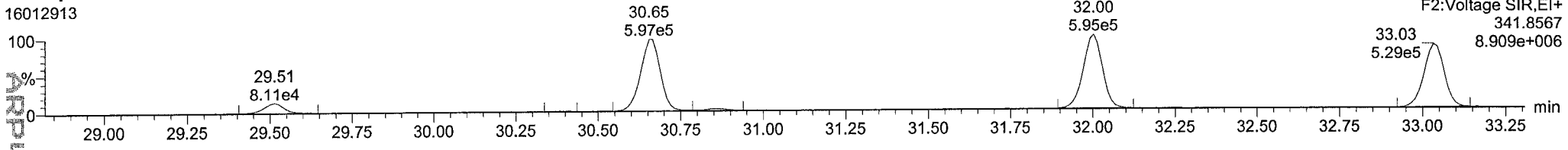
13C-23478-PeCDF



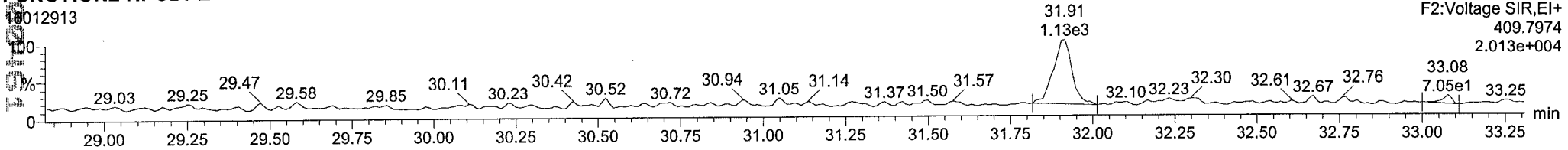
Total-pentafurans



Total-pentafurans



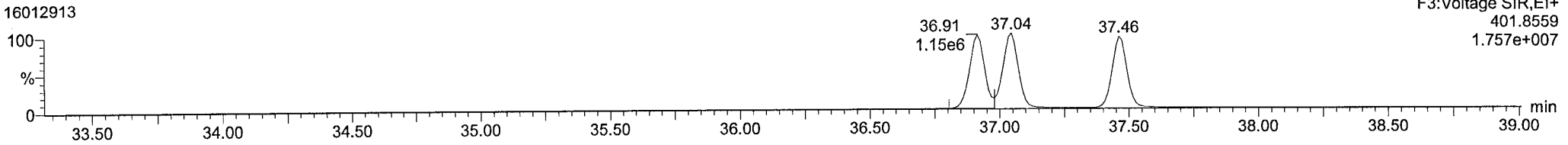
FUNCTION2 HPCDPE



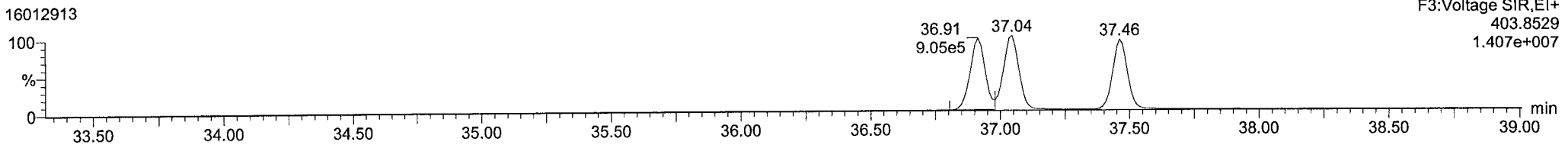
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

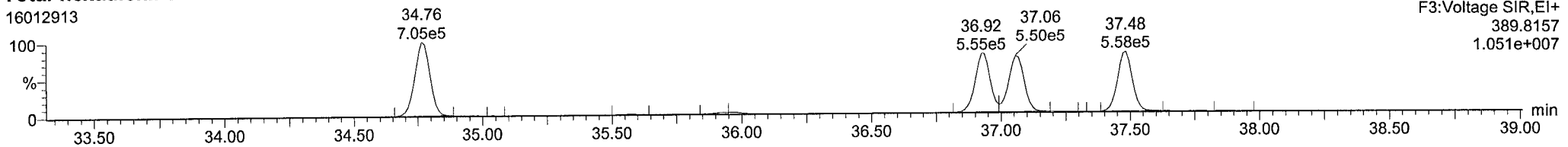
13C-123478-HxCDD



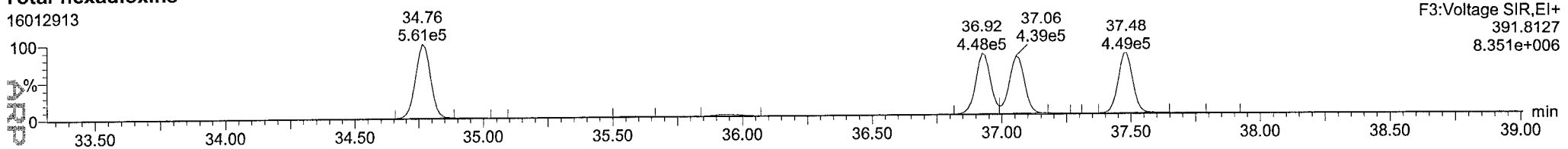
13C-123478-HxCDD



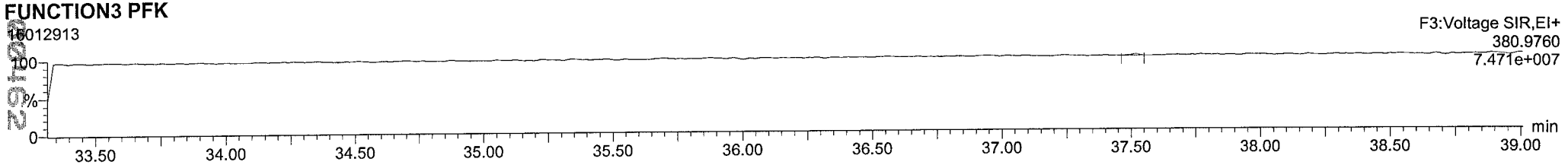
Total-hexadioxins



Total-hexadioxins



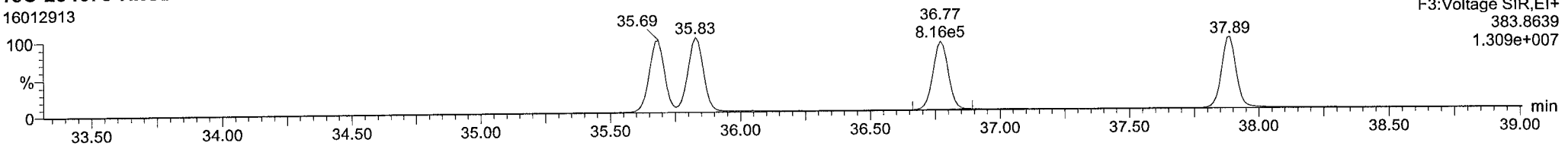
FUNCTION3 PFK



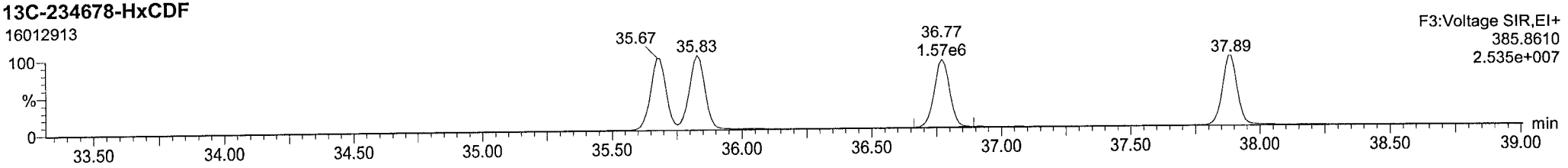
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

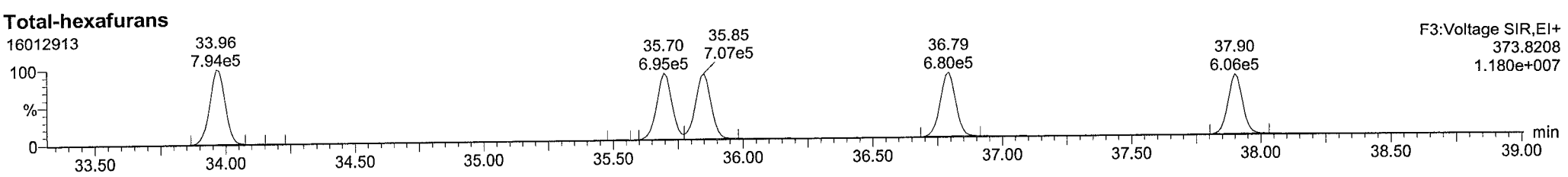
13C-234678-HxCDF



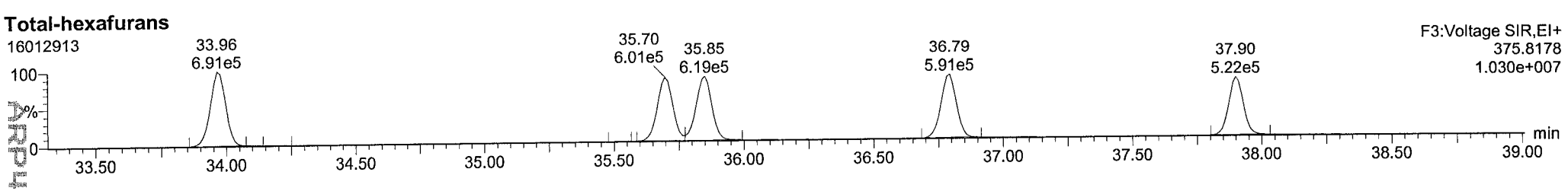
13C-234678-HxCDF



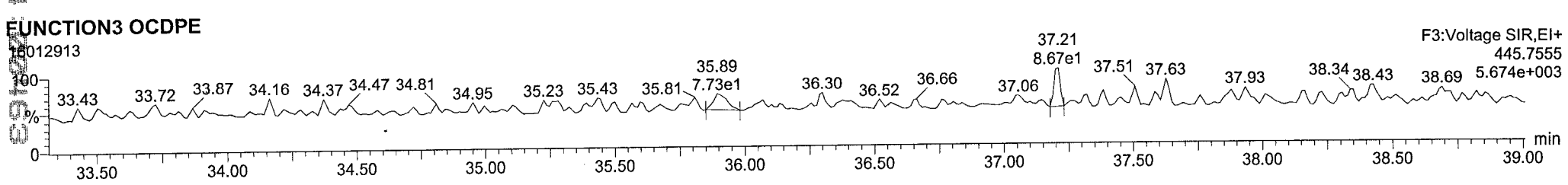
Total-hexafurans



Total-hexafurans



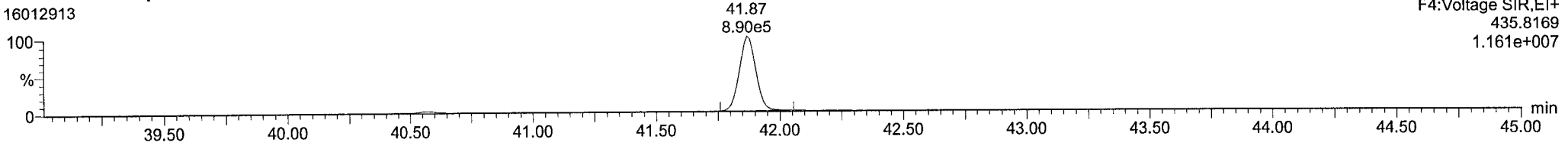
FUNCTION3 OCDPE



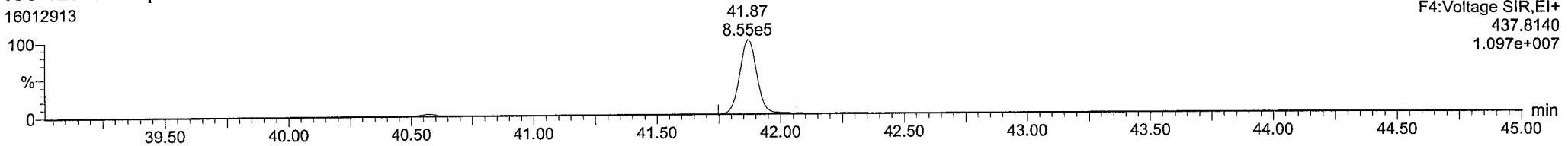
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

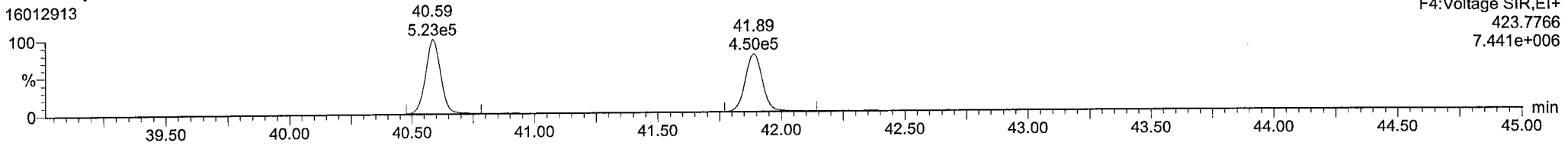
13C-1234678-HpCDD



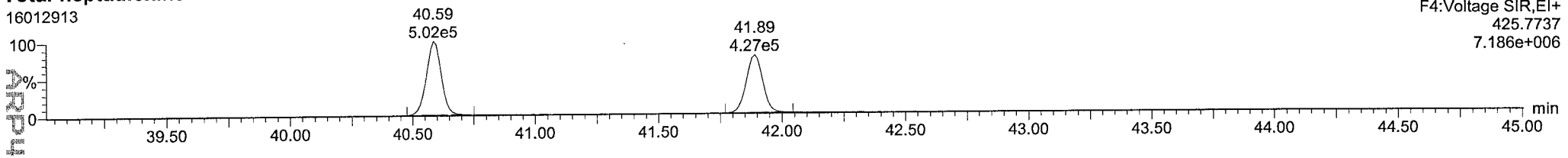
13C-1234678-HpCDD



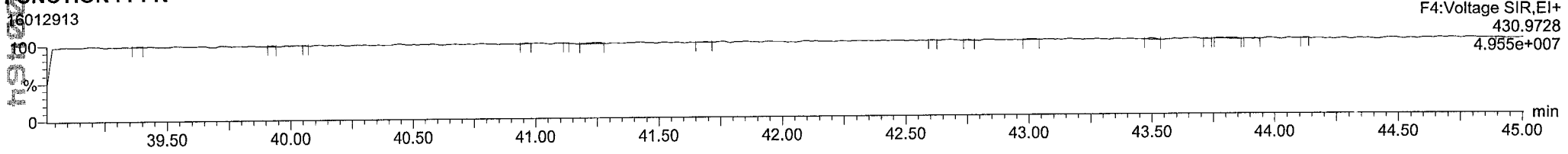
Total-heptadioxins



Total-heptadioxins



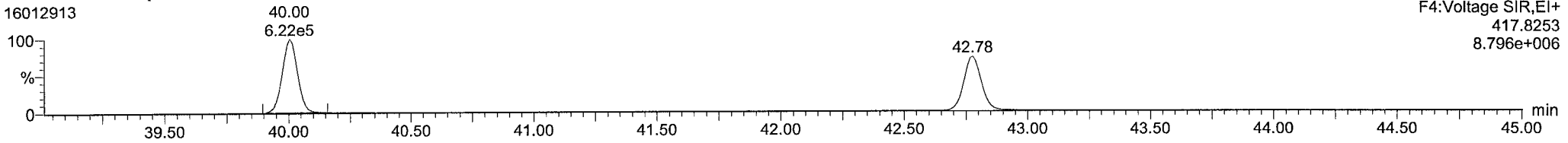
FUNCTION4 PFK



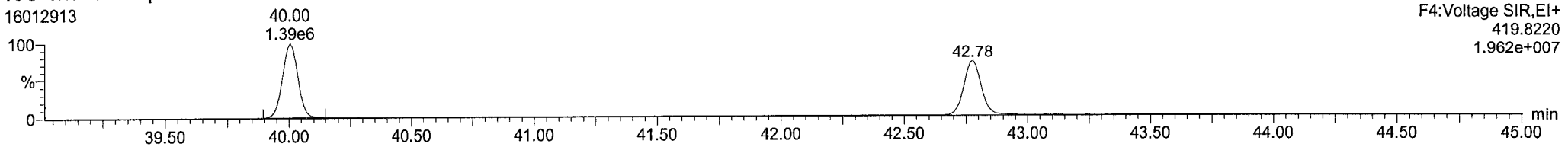
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

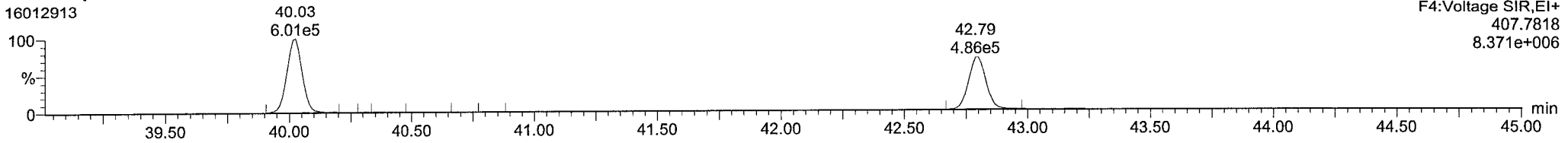
13C-1234678-HpCDF



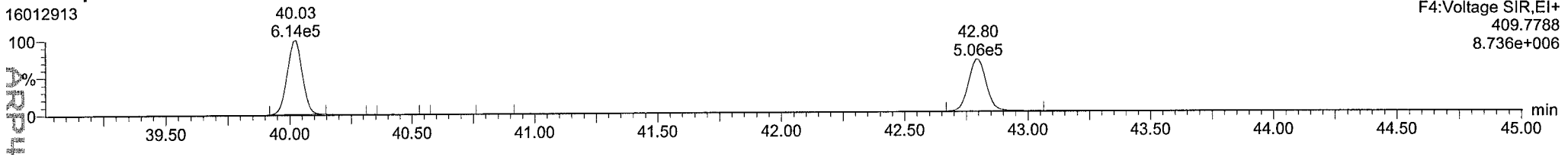
13C-1234678-HpCDF



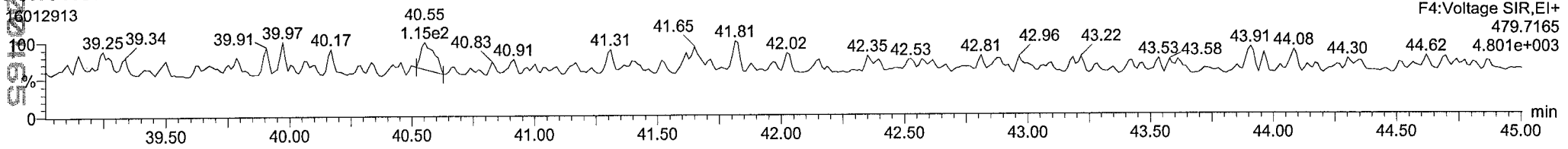
Total-heptafurans



Total-heptafurans



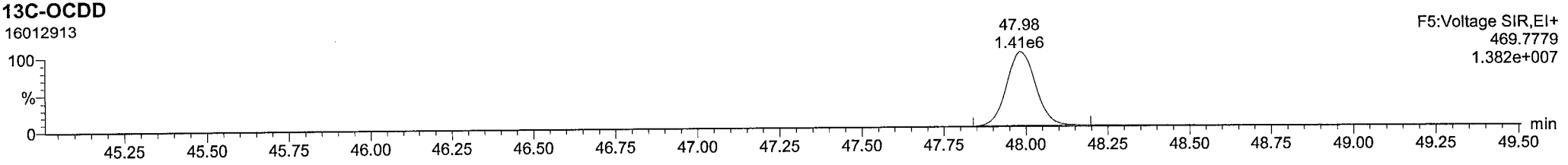
FUNCTION4 NCDPE



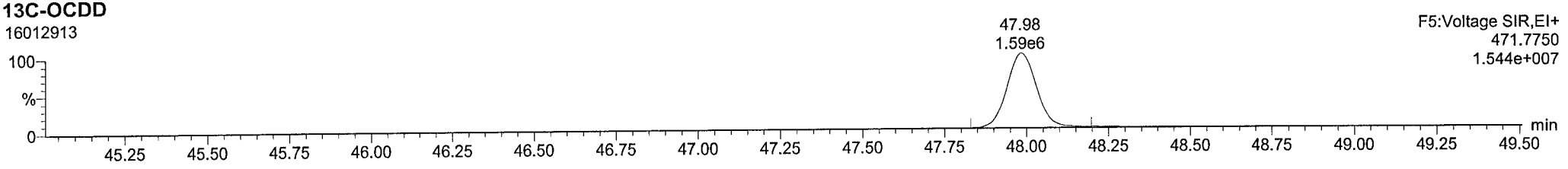
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

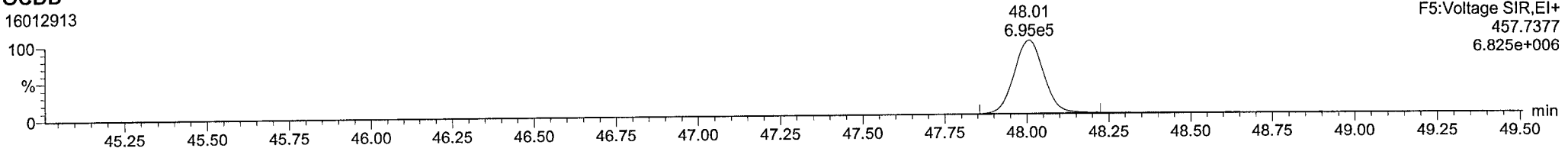
13C-OCDD
16012913



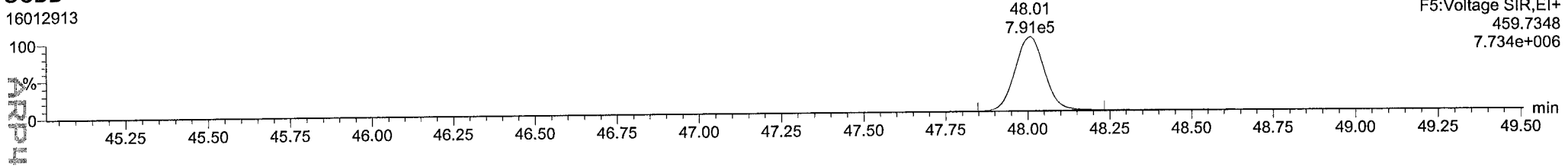
13C-OCDD
16012913



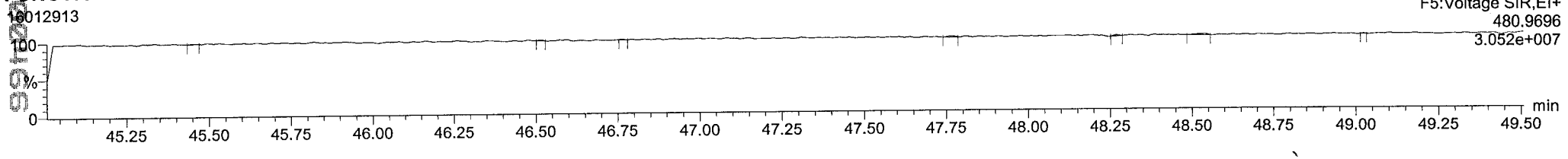
OCDD
16012913



OCDD
16012913



FUNCTION5 PFK
16012913



Quantify Sample Report MassLynx MassLynx V4.1 SCN909

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld

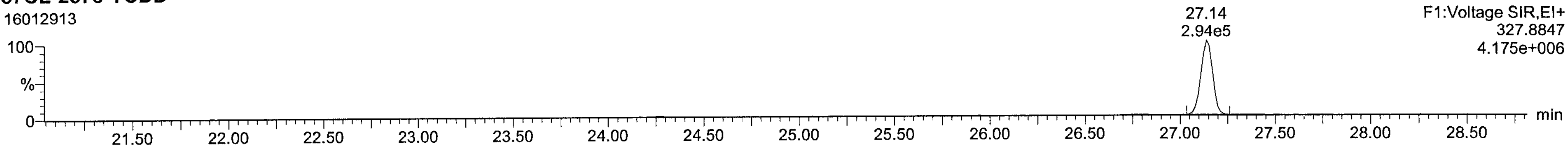
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time

Printed: Monday, February 01, 2016 12:07:55 Pacific Standard Time

ID: CS3, Name: 16012913, Date: 29-Jan-2016, Time: 22:29:47, Conditions: AUTOSPEC01, User: pk

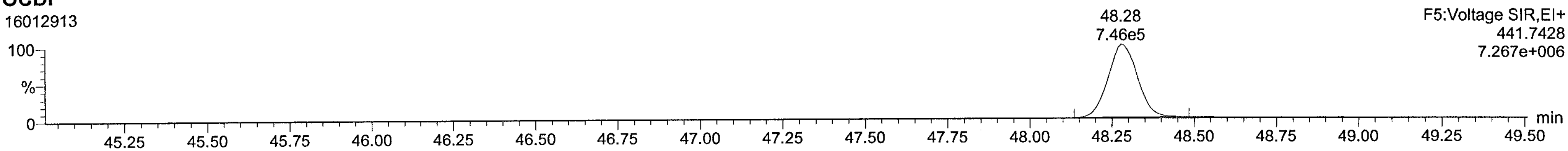
37CL-2378-TCDD

16012913



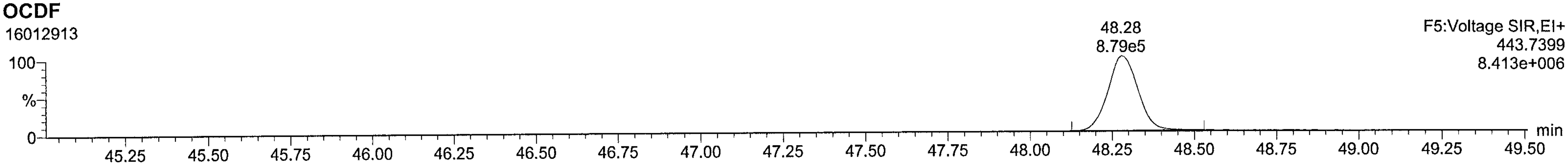
OCDF

16012913



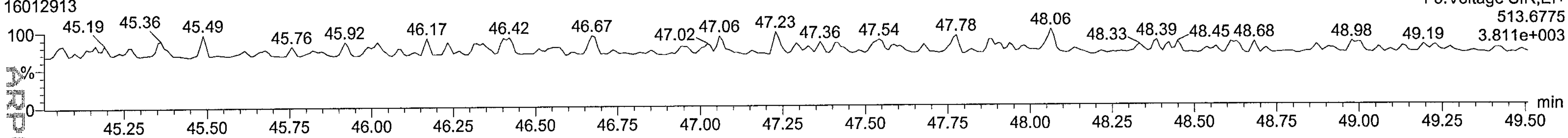
OCDF

16012913



FUNCTION5 DCDPE

16012913



ARP4 : 00467

Quantify Audit Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:09:47 Pacific Standard Time

Event	Details	Sample ID
Process Quantify		
Process Integrate		
Process Extract		
Pre modification peak	Sample:16012904, Compound:OF, RT:48.385	1
Pre modification peak	Sample:16012904, Compound:OF, RT:48.358	1
Pre modification peak	Sample:16012906, Compound:OF, RT:48.295	3
Pre modification peak	Sample:16012906, Compound:OF, RT:48.295	3
Pre modification peak	Sample:16012906, Compound:PF, RT:29.547	3
Pre modification peak	Sample:16012906, Compound:PF, RT:32.024	3
Pre modification peak	Sample:16012906, Compound:HF, RT:37.899	3
Pre modification peak	Sample:16012906, Compound:HF, RT:37.932	3
Pre modification peak	Sample:16012906, Compound:PD, RT:29.536	3
Pre modification peak	Sample:16012906, Compound:PD, RT:32.287	3
Pre modification peak	Sample:16012906, Compound:HD, RT:34.775	3
Pre modification peak	Sample:16012907, Compound:OF, RT:48.322	4
Pre modification peak	Sample:16012907, Compound:OF, RT:48.340	4
Pre modification peak	Sample:16012907, Compound:TF, RT:24.181	4
Pre modification peak	Sample:16012907, Compound:TF, RT:24.076	4
Pre modification peak	Sample:16012907, Compound:TF, RT:25.197	4
Pre modification peak	Sample:16012907, Compound:PF, RT:29.525	4
Pre modification peak	Sample:16012907, Compound:PF, RT:29.558	4
Pre modification peak	Sample:16012907, Compound:HF, RT:35.060	4
Pre modification peak	Sample:16012907, Compound:HF, RT:35.060	4
Pre modification peak	Sample:16012907, Compound:HF, RT:37.932	4
Pre modification peak	Sample:16012908, Compound:OF, RT:48.305	5
Pre modification peak	Sample:16012908, Compound:OF, RT:48.314	5
Pre modification peak	Sample:16012908, Compound:HD, RT:37.067	5
Pre modification peak	Sample:16012908, Compound:TF, RT:25.182	5
Pre modification peak	Sample:16012908, Compound:PP, RT:27.931	5
Pre modification peak	Sample:16012908, Compound:PF, RT:29.525	5
Pre modification peak	Sample:16012908, Compound:HPF, RT:40.059	5
Pre modification peak	Sample:16012908, Compound:HD, RT:36.124	5
Pre modification peak	Sample:16012908, Compound:HD, RT:35.938	5
Pre modification peak	Sample:16012909, Compound:OF, RT:48.330	6
Pre modification peak	Sample:16012909, Compound:OF, RT:48.321	6
Pre modification peak	Sample:16012909, Compound:TF, RT:25.197	6
Pre modification peak	Sample:16012909, Compound:TF, RT:25.839	6
Pre modification peak	Sample:16012909, Compound:PF, RT:29.294	6
Pre modification peak	Sample:16012909, Compound:HD, RT:35.992	6
Pre modification peak	Sample:16012910, Compound:OF, RT:48.341	7
Pre modification peak	Sample:16012910, Compound:PF, RT:29.547	7
Pre modification peak	Sample:16012910, Compound:TD, RT:26.810	7
Pre modification peak	Sample:16012910, Compound:PD, RT:29.558	7
Pre modification peak	Sample:16012910, Compound:PD, RT:30.687	7
Pre modification peak	Sample:16012910, Compound:HD, RT:35.981	7
Pre modification peak	Sample:16012911, Compound:OF, RT:48.331	8
Pre modification peak	Sample:16012911, Compound:TF, RT:25.152	8
Pre modification peak	Sample:16012911, Compound:TF, RT:26.272	8
Pre modification peak	Sample:16012911, Compound:TF, RT:26.496	8
Pre modification peak	Sample:16012911, Compound:HF, RT:35.049	8
Pre modification peak	Sample:16012911, Compound:HPF, RT:42.842	8
Pre modification peak	Sample:16012911, Compound:TD, RT:26.780	8
Pre modification peak	Sample:16012911, Compound:PD, RT:29.558	8

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:09:47 Pacific Standard Time

Event	Details	Sample ID
Pre modification peak	Sample:16012911, Compound:PD, RT:29.569	8
Pre modification peak	Sample:16012911, Compound:PD, RT:30.687	8
Pre modification peak	Sample:16012912, Compound:TF, RT:23.015	9
Pre modification peak	Sample:16012912, Compound:TF, RT:24.046	9
Pre modification peak	Sample:16012912, Compound:TF, RT:24.046	9
Pre modification peak	Sample:16012912, Compound:TF, RT:24.017	9
Pre modification peak	Sample:16012912, Compound:TF, RT:25.227	9
Pre modification peak	Sample:16012912, Compound:TF, RT:25.212	9
Pre modification peak	Sample:16012912, Compound:PD, RT:30.665	9
Pre modification peak	Sample:16012912, Compound:HD, RT:35.981	9
Pre modification peak	Sample:16012912, Compound:HD, RT:37.483	9
Pre modification peak	Sample:16012912, Compound:HD, RT:37.088	9
Peak modified	Sample:16012904, Compound:OF, RT:48.385	1
Peak modified	Sample:16012904, Compound:OF, RT:48.358	1
Peak modified	Sample:16012906, Compound:OF, RT:48.295	3
Peak modified	Sample:16012906, Compound:OF, RT:48.295	3
Peak modified	Sample:16012906, Compound:PF, RT:29.547	3
Peak modified	Sample:16012906, Compound:PF, RT:32.024	3
Peak modified	Sample:16012906, Compound:HF, RT:37.899	3
Peak modified	Sample:16012906, Compound:HF, RT:37.932	3
Peak modified	Sample:16012906, Compound:PD, RT:29.536	3
Peak modified	Sample:16012906, Compound:PD, RT:32.287	3
Peak modified	Sample:16012906, Compound:HD, RT:34.775	3
Peak modified	Sample:16012907, Compound:OF, RT:48.322	4
Peak modified	Sample:16012907, Compound:OF, RT:48.340	4
Peak modified	Sample:16012907, Compound:TF, RT:24.181	4
Peak modified	Sample:16012907, Compound:TF, RT:24.076	4
Peak modified	Sample:16012907, Compound:TF, RT:25.197	4
Peak modified	Sample:16012907, Compound:PF, RT:29.525	4
Peak modified	Sample:16012907, Compound:PF, RT:29.558	4
Peak modified	Sample:16012907, Compound:HF, RT:35.060	4
Peak modified	Sample:16012907, Compound:HF, RT:35.060	4
Peak modified	Sample:16012907, Compound:HF, RT:37.932	4
Peak modified	Sample:16012908, Compound:OF, RT:48.305	5
Peak modified	Sample:16012908, Compound:OF, RT:48.314	5
Peak modified	Sample:16012908, Compound:HD, RT:37.067	5
Peak modified	Sample:16012908, Compound:TF, RT:25.182	5
Peak modified	Sample:16012908, Compound:PP, RT:27.931	5
Peak modified	Sample:16012908, Compound:PF, RT:29.525	5
Peak modified	Sample:16012908, Compound:HPF, RT:40.059	5
Peak modified	Sample:16012908, Compound:HD, RT:36.124	5
Peak modified	Sample:16012908, Compound:HD, RT:35.938	5
Peak modified	Sample:16012909, Compound:OF, RT:48.330	6
Peak modified	Sample:16012909, Compound:OF, RT:48.321	6
Peak modified	Sample:16012909, Compound:TF, RT:25.197	6
Peak modified	Sample:16012909, Compound:TF, RT:25.839	6
Peak modified	Sample:16012909, Compound:PF, RT:29.294	6
Peak modified	Sample:16012909, Compound:HD, RT:35.992	6
Peak modified	Sample:16012910, Compound:OF, RT:48.341	7
Peak modified	Sample:16012910, Compound:PF, RT:29.547	7
Peak modified	Sample:16012910, Compound:TD, RT:26.810	7
Peak modified	Sample:16012910, Compound:PD, RT:29.558	7
Peak modified	Sample:16012910, Compound:PD, RT:30.687	7

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: APR4

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: MB

Date: 1/15/16

Final Volume 50.0

Final Volume (Hg):

Sample ID APR4 ASPK, MB1SPK

	Prepcode:	FRN		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	ID3892		
	Vol Added (mL):	1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg		CVA	1.0		
Hg MBSPK		CVA	1.0		
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

APR4 : 8017

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: MB Date: 1/15/16 Time: 1030

Matrix: Tissue Block ID: #4 Block Temp: 93°C Thermometer: up 45

ARI Sample ID	Btl #	pH<2	Prep Code: FRN Initial Wt (g) ~~Vol (mL)~~	Prep Code: FRN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
APR4 A	1	–	2.579	50.0			Batch
" AMP	1	–	2.583				
" ASPK	1	–	2.582				
" MB1	–	–	–				
" MB1SPK	–	–	–				
ATSØ A	1	–	2.509				
" B	1	–	2.555				
" C	1	–	2.577				
" D	1	–	2.584				
" E	1	–	2.507				
" F	1	–	2.577	50.0			

MS 1/15/16

Chemical/Reagent ID:

HNO_3: D3741 HCl: – H_2O_2: D2934 Tube Lot #: 150403

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: APR4

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA

Analysis Date: 01/19/16 ~~01/19/2~~ DO

ICP2	Analyst DO 01/28/16	Peer 1-20-16	Comment
Logbook:			
Analyst, Date, Method info	✓	—	
Sample ID's	✓	—	
Standard/QC solution ID's recorded	✓	—	
Prep codes	✓	—	
Dilution factors	✓	—	
Crossouts/Corrections/Deletions	✓	—	
Calibration:			
Blank & Standard intensities	✓	—	
Standard deviations	✓	—	
Curve fit	✓	—	
Calibration Verification:		—	
ICV/CCV	✓		
ICB/CCB	✓	—	
Samples:			
RSD's & SD's	✓	—	
Internal Standards	✓	—	
Carry-over	✓	—	
Method QC:			
CRI/CRA	✓	—	
ICSA/ICSAB	✓	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	—	
Matrix Spikes	✓	—	AUG3, AUA6
Matrix Duplicates	✓	—	AUG3
Method Blanks	✓	—	AUG7, AUA6
Data Distribution:			
Requested elements/isotope identified	✓	—	
Correct samples identified for distribution	✓	—	
Raw data match distributed data	✓	—	
Data filename correct	✓	—	
Necessary Analysts Notes and CAF's	✓	—	AUG3, AUG7, AUA6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: 11/5/16 Analysis Date: 11/9/16 Analyst: DO

LR Date: 11/3&11/5 Page: 1 of 3

All corrections made by analyst unless otherwise noted. DO 11/9/16

Edit Label	Delete Data	ARI Sample ID		Prep. Code	Dilution	Comments
		STD	0	E&181		
		↓	2	E&184		
			3	E&185		
			4	E&186		
		↓	5	E&187		
		ICV		D5452		
		ICB		STD0		
		CRI		E&148		
		ICSA		D4330		Sn↑
		ICSAB		D4331		Sn↑
PI BLANK →		CCV 1		ICV		
		CCB 1		STD0		
		APR4	MB1	FRN		
		ATS0	A	↓		
		↓	B			
			C			
			D			
		↓	E			
		APR4	ADUP		✓	
		↓	A		✓	
			ASPK		✓	
		↓	MB1SPK	↓		
		CCV 2				
		CCB2				End PKG APR4

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7300
Serial No. – 077C8121202

IEC Date: _____ Analysis Date: 1/19/16 Analyst: DS

LR Date: _____ Page: 2 of 3

All corrections made by analyst unless otherwise noted. DS 1/19/16

Edit Label	Delete Data	ARI Sample ID		Prep. Code	Dilution	Comments
		ATZ2	MB2	DMN		
		↓	MB1	TWC		
		ATZ4	MB1	↓		
		ATZ2	A	↓		
		↓	B	DMN		
		ATS8	F	FRN		
		ATZ4	B	TWC		
		↓	MB1SPK	↓		
		ATZ2	MB1SPK	↓		
		↓	MB2SPK	DMN		0.888mL ICP SPK (D3892)
		CCV3				
		CCB3				End PKG ATS8
		AUG7	MB1	SWC	2	Ca > RL (0.1628 mg/L) CAF
		AUA6	MB	↓	↓	Ca > RL (0.87372 mg/L) CAF
		AUG3	MB1	↓	↓	
		ATZ4	ATDUP	TWC	✓	
		↓	A	↓	✓	
		↓	ASPK	↓	✓	
		AUG3	MB1SPK	SWC	10	
		AUA6	MBSPK	↓	↓	
		AUG7	MB1SPK	↓	↓	
		CCV4				
		CCB4				
	✓	AUG7	A	SWC	2	RR25x Fe 72400ug/L

Analysis Begun

Start Time: 1/19/2016 10:02:19 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 1/19/2016 8:33:30 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2160119
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 1/19/2016 10:02:20 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2240847.3	5028.22	0.22%	100.0	%
ScR 361.383	176125.9	1430.68	0.81%	100.0	%
Ag 328.068†	-69.4	41.56	59.91%	[0.00]	mg/L
Al 308.215†	46.8	7.62	16.30%	[0.00]	mg/L
As 188.979†	-5.2	1.67	32.16%	[0.00]	mg/L
B 249.677†	31.1	0.48	1.53%	[0.00]	mg/L
Ba 233.527†	4.0	3.61	91.16%	[0.00]	mg/L
Be 313.042†	457.6	1.83	0.40%	[0.00]	mg/L
Ca 317.933†	56.0	4.66	8.33%	[0.00]	mg/L
Cd 228.802†	243.8	2.09	0.86%	[0.00]	mg/L
Co 228.616†	-71.6	4.27	5.97%	[0.00]	mg/L
Cr 267.716†	-36.3	1.17	3.21%	[0.00]	mg/L
Cu 324.752†	3436.9	26.37	0.77%	[0.00]	mg/L
Fe 273.955†	5.4	1.59	29.44%	[0.00]	mg/L
K 766.490†	434.5	2.28	0.52%	[0.00]	mg/L
Mg 279.077†	33.9	4.99	14.73%	[0.00]	mg/L
Mn 257.610†	47.4	1.74	3.66%	[0.00]	mg/L
Mo 202.031†	35.4	0.89	2.51%	[0.00]	mg/L
Na 589.592†	234.3	13.72	5.85%	[0.00]	mg/L
Na 330.237†	-98.1	3.19	3.25%	[0.00]	mg/L
Ni 231.604†	-11.0	2.21	20.10%	[0.00]	mg/L
Pb 220.353†	25.2	5.43	21.54%	[0.00]	mg/L
Sb 206.836†	31.5	2.99	9.49%	[0.00]	mg/L
Se 196.026†	-28.6	4.10	14.34%	[0.00]	mg/L
Si 288.158†	32.2	1.94	6.04%	[0.00]	mg/L
Sn 189.927†	-1.3	1.52	114.09%	[0.00]	mg/L
Sr 421.552†	109.5	0.60	0.54%	[0.00]	mg/L
Ti 334.903†	-28.8	6.56	22.83%	[0.00]	mg/L
Tl 190.801†	-18.7	1.77	9.46%	[0.00]	mg/L
V 292.402†	140.8	2.70	1.92%	[0.00]	mg/L
Zn 206.200†	7.6	1.25	16.41%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 1/19/2016 10:06:20 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	170.0 kPa	0.75 L/min

Mean Data: STD2

	Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2255797.9	15677.83	0.70%	100.7	%
ScR 361.383	176945.9	211.59	0.12%	100.5	%
Ba 233.527†	23336.9	147.00	0.63%	[10]	mg/L
Cd 228.802†	210186.5	641.19	0.31%	[10]	mg/L
Co 228.616†	208213.0	632.89	0.30%	[10]	mg/L
Cr 267.716†	30190.3	54.68	0.18%	[10]	mg/L
Cu 324.752†	2448421.5	6891.19	0.28%	[10]	mg/L
Mn 257.610†	173324.9	144.56	0.08%	[10]	mg/L
V 292.402†	1143646.6	4371.29	0.38%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 1/19/2016 10:08:05 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2233959.9	3716.55	0.17%	99.69	%
ScR 361.383	171881.5	603.06	0.35%	97.59	%
Ag 328.068†	154084.6	391.45	0.25%	[1.0]	mg/L
As 188.979†	8422.5	37.62	0.45%	[10]	mg/L
B 249.677†	37846.1	179.23	0.47%	[10]	mg/L
Be 313.042†	1514366.8	636.30	0.04%	[5.0]	mg/L
Na 589.592†	679641.1	1428.52	0.21%	[50]	mg/L
Ni 231.604†	19483.7	94.03	0.48%	[10]	mg/L
Pb 220.353†	46331.3	182.78	0.39%	[10]	mg/L
Se 196.026†	7142.8	26.89	0.38%	[10]	mg/L
Sr 421.552†	3280754.0	9109.33	0.28%	[5]	mg/L
Tl 190.801†	10528.1	38.70	0.37%	[10]	mg/L
Zn 206.200†	16723.6	81.58	0.49%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 1/19/2016 10:11:07 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2262397.7	8771.31	0.39%	101.0	%
ScR 361.383	178088.7	737.14	0.41%	101.1	%
Mo 202.031†	103483.6	583.76	0.56%	[10]	mg/L
Sb 206.836†	18162.8	113.12	0.62%	[10]	mg/L
Si 288.158†	11309.6	69.94	0.62%	[10]	mg/L
Sn 189.927†	17935.9	88.23	0.49%	[10]	mg/L
Ti 334.903†	110170.7	233.68	0.21%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 1/19/2016 10:13:21 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2094310.2	6679.04	0.32%	93.46	%
ScR 361.383	175419.1	1518.61	0.87%	99.60	%
Al 308.215†	30868.1	313.85	1.02%	[30]	mg/L
Ca 317.933†	196355.0	1430.33	0.73%	[30]	mg/L
Fe 273.955†	57081.4	545.70	0.96%	[100]	mg/L
K 766.490†	213953.0	788.35	0.37%	[100]	mg/L
Mg 279.077†	22151.4	222.86	1.01%	[30]	mg/L
Na 330.237†	1540.4	8.94	0.58%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	154100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1029	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	842.2	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	3785	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	2334	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	302900	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	6545	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	21020	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	20820	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	3019	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	244800	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	570.8	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2140	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	738.4	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	17330	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	10350	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13590	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	15.40	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	1948	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	4633	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	1816	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	714.3	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1131	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	1794	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	656200	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	11020	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1053	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	114400	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	1672	0.00000	1.000000	

Analysis Begun

Start Time: 1/19/2016 10:15:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 1/19/2016 8:33:30 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2160119
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV

Autosampler Location: 7
Date Collected: 1/19/2016 10:15:07 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2224427.5	99.27	%	0.222				0.22%
ScR 361.383	173236.0	98.36	%	0.144				0.15%
Ag 328.068†	152528.5	0.9902	mg/L	0.00253	0.9902	mg/L	0.00253	0.26%
Al 308.215†	2113.9	2.022	mg/L	0.0070	2.022	mg/L	0.0070	0.35%
As 188.979†	1684.3	2.022	mg/L	0.0018	2.022	mg/L	0.0018	0.09%
B 249.677†	3746.5	0.9887	mg/L	0.00166	0.9887	mg/L	0.00166	0.17%
Ba 233.527†	2404.6	1.030	mg/L	0.0037	1.030	mg/L	0.0037	0.36%
Be 313.042†	293847.9	0.9700	mg/L	0.00166	0.9700	mg/L	0.00166	0.17%
Ca 317.933†	12771.9	1.950	mg/L	0.0055	1.950	mg/L	0.0055	0.28%
Cd 228.802†	22137.8	1.043	mg/L	0.0025	1.043	mg/L	0.0025	0.24%
Co 228.616†	21017.1	1.008	mg/L	0.0021	1.008	mg/L	0.0021	0.21%
Cr 267.716†	3131.1	1.036	mg/L	0.0027	1.036	mg/L	0.0027	0.26%
Cu 324.752†	242448.2	0.9899	mg/L	0.00229	0.9899	mg/L	0.00229	0.23%
Fe 273.955†	1182.6	2.065	mg/L	0.0162	2.065	mg/L	0.0162	0.78%
K 766.490†	42415.9	19.82	mg/L	0.086	19.82	mg/L	0.086	0.44%
Mg 279.077†	1493.3	2.029	mg/L	0.0087	2.029	mg/L	0.0087	0.43%
Mn 257.610†	16825.6	0.9712	mg/L	0.00545	0.9712	mg/L	0.00545	0.56%
Mo 202.031†	10321.4	0.9974	mg/L	0.00488	0.9974	mg/L	0.00488	0.49%
Na 589.592†	667517.9	49.11	mg/L	0.173	49.11	mg/L	0.173	0.35%
Na 330.237†	796.6	51.64	mg/L	0.309	51.64	mg/L	0.309	0.60%
Ni 231.604†	1934.1	0.9929	mg/L	0.00168	0.9929	mg/L	0.00168	0.17%
Pb 220.353†	9388.1	2.027	mg/L	0.0054	2.027	mg/L	0.0054	0.27%
Sb 206.836†	3770.5	2.073	mg/L	0.0048	2.073	mg/L	0.0048	0.23%
Se 196.026†	1459.2	2.041	mg/L	0.0048	2.041	mg/L	0.0048	0.24%
Si 288.158†	2325.1	2.055	mg/L	0.0174	2.055	mg/L	0.0174	0.85%
Sn 189.927†	1763.4	0.9848	mg/L	0.00554	0.9848	mg/L	0.00554	0.56%
Sr 421.552†	637979.0	0.9723	mg/L	0.00355	0.9723	mg/L	0.00355	0.37%
Ti 334.903†	10819.9	0.9808	mg/L	0.00520	0.9808	mg/L	0.00520	0.53%
Tl 190.801†	2125.2	2.010	mg/L	0.0116	2.010	mg/L	0.0116	0.58%
V 292.402†	115797.5	1.017	mg/L	0.0014	1.017	mg/L	0.0014	0.14%
Zn 206.200†	1645.4	0.9842	mg/L	0.00297	0.9842	mg/L	0.00297	0.30%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 1/19/2016 10:19:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	170.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2251710.6	100.5	%	0.19				0.18%
ScR 361.383	177310.8	100.7	%	0.47				0.46%
Ag 328.068†	31.9	0.00021	mg/L	0.000182	0.00021	mg/L	0.000182	88.16%
Al 308.215†	1.6	0.00149	mg/L	0.004337	0.00149	mg/L	0.004337	290.63%
As 188.979†	1.3	0.00156	mg/L	0.000670	0.00156	mg/L	0.000670	43.00%
B 249.677†	17.4	0.00461	mg/L	0.001172	0.00461	mg/L	0.001172	25.42%
Ba 233.527†	0.1	0.00006	mg/L	0.000510	0.00006	mg/L	0.000510	847.45%
Be 313.042†	49.8	0.00016	mg/L	0.000036	0.00016	mg/L	0.000036	22.02%
Ca 317.933†	2.2	0.00033	mg/L	0.000390	0.00033	mg/L	0.000390	118.68%
Cd 228.802†	2.7	0.00012	mg/L	0.000149	0.00012	mg/L	0.000149	124.33%
Co 228.616†	1.5	0.00007	mg/L	0.000169	0.00007	mg/L	0.000169	235.52%
Cr 267.716†	0.8	0.00027	mg/L	0.000820	0.00027	mg/L	0.000820	304.47%
Cu 324.752†	42.3	0.00017	mg/L	0.000069	0.00017	mg/L	0.000069	40.04%
Fe 273.955†	1.3	0.00222	mg/L	0.002850	0.00222	mg/L	0.002850	128.61%
K 766.490†	44.4	0.02077	mg/L	0.020133	0.02077	mg/L	0.020133	96.94%
Mg 279.077†	-1.6	-0.00218	mg/L	0.004160	-0.00218	mg/L	0.004160	190.92%
Mn 257.610†	5.1	0.00030	mg/L	0.000030	0.00030	mg/L	0.000030	10.24%
Mo 202.031†	23.9	0.00231	mg/L	0.000804	0.00231	mg/L	0.000804	34.80%
Na 589.592†	199.3	0.01466	mg/L	0.004107	0.01466	mg/L	0.004107	28.01%
Na 330.237†	2.4	0.1590	mg/L	0.07320	0.1590	mg/L	0.07320	46.04%
Ni 231.604†	-1.7	-0.00088	mg/L	0.001764	-0.00088	mg/L	0.001764	199.79%
Pb 220.353†	8.8	0.00191	mg/L	0.001424	0.00191	mg/L	0.001424	74.62%
Sb 206.836†	13.5	0.00746	mg/L	0.002214	0.00746	mg/L	0.002214	29.70%
Se 196.026†	1.2	0.00164	mg/L	0.000686	0.00164	mg/L	0.000686	41.94%
Si 288.158†	-0.9	-0.00082	mg/L	0.002689	-0.00082	mg/L	0.002689	326.72%
Sn 189.927†	0.5	0.00028	mg/L	0.001293	0.00028	mg/L	0.001293	468.23%
Sr 421.552†	148.4	0.00023	mg/L	0.000036	0.00023	mg/L	0.000036	15.88%
Ti 334.903†	3.9	0.00035	mg/L	0.000536	0.00035	mg/L	0.000536	151.75%
Tl 190.801†	4.4	0.00414	mg/L	0.003413	0.00414	mg/L	0.003413	82.45%
V 292.402†	10.3	0.00009	mg/L	0.000186	0.00009	mg/L	0.000186	202.34%
Zn 206.200†	0.4	0.00022	mg/L	0.000619	0.00022	mg/L	0.000619	278.21%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 1/19/2016 10:23:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2262903.6	101.0	%	0.90				0.89%
ScR 361.383	177775.9	100.9	%	0.08				0.08%
Ag 328.068†	466.5	0.00303	mg/L	0.000091	0.00303	mg/L	0.000091	3.02%
Al 308.215†	51.4	0.04979	mg/L	0.002693	0.04979	mg/L	0.002693	5.41%
As 188.979†	45.0	0.05356	mg/L	0.002447	0.05356	mg/L	0.002447	4.57%
B 249.677†	84.2	0.02224	mg/L	0.001354	0.02224	mg/L	0.001354	6.09%
Ba 233.527†	4.9	0.00209	mg/L	0.000987	0.00209	mg/L	0.000987	47.27%
Be 313.042†	327.0	0.00108	mg/L	0.000044	0.00108	mg/L	0.000044	4.06%
Ca 317.933†	351.3	0.05365	mg/L	0.000366	0.05365	mg/L	0.000366	0.68%
Cd 228.802†	50.5	0.00211	mg/L	0.000081	0.00211	mg/L	0.000081	3.85%
Co 228.616†	65.6	0.00314	mg/L	0.000071	0.00314	mg/L	0.000071	2.26%
Cr 267.716†	18.2	0.00601	mg/L	0.000486	0.00601	mg/L	0.000486	8.08%
Cu 324.752†	538.2	0.00220	mg/L	0.000134	0.00220	mg/L	0.000134	6.12%
Fe 273.955†	29.4	0.05154	mg/L	0.001591	0.05154	mg/L	0.001591	3.09%
K 766.490†	1093.0	0.5109	mg/L	0.00625	0.5109	mg/L	0.00625	1.22%
Mg 279.077†	36.0	0.04870	mg/L	0.001914	0.04870	mg/L	0.001914	3.93%
Mn 257.610†	18.4	0.00107	mg/L	0.000209	0.00107	mg/L	0.000209	19.61%
Mo 202.031†	57.1	0.00551	mg/L	0.000227	0.00551	mg/L	0.000227	4.11%
Na 589.592†	6759.0	0.4972	mg/L	0.00402	0.4972	mg/L	0.00402	0.81%
Na 330.237†	9.0	0.5815	mg/L	0.22193	0.5815	mg/L	0.22193	38.16%
Ni 231.604†	19.5	0.00999	mg/L	0.001542	0.00999	mg/L	0.001542	15.43%
Pb 220.353†	102.4	0.02211	mg/L	0.000295	0.02211	mg/L	0.000295	1.33%
Sb 206.836†	98.9	0.05447	mg/L	0.001106	0.05447	mg/L	0.001106	2.03%
Se 196.026†	35.3	0.04946	mg/L	0.003932	0.04946	mg/L	0.003932	7.95%
Si 288.158†	67.6	0.05971	mg/L	0.002926	0.05971	mg/L	0.002926	4.90%
Sn 189.927†	19.4	0.01088	mg/L	0.001352	0.01088	mg/L	0.001352	12.43%
Sr 421.552†	690.4	0.00105	mg/L	0.000031	0.00105	mg/L	0.000031	2.97%
Ti 334.903†	53.8	0.00487	mg/L	0.000338	0.00487	mg/L	0.000338	6.94%
Tl 190.801†	56.4	0.05353	mg/L	0.004685	0.05353	mg/L	0.004685	8.75%
V 292.402†	347.2	0.00306	mg/L	0.000030	0.00306	mg/L	0.000030	0.99%
Zn 206.200†	17.7	0.01059	mg/L	0.000349	0.01059	mg/L	0.000349	3.29%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 1/19/2016 10:27:10 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2145501.4	95.75	%	0.978				1.02%
ScR 361.383	170936.1	97.05	%	0.110				0.11%
Ag 328.068†	-150.6	-0.00097	mg/L	0.000111	-0.00097	mg/L	0.000111	11.35%
Al 308.215†	207591.5	201.8	mg/L	0.65	201.8	mg/L	0.65	0.32%
As 188.979†	34.1	0.02729	mg/L	0.003618	0.02729	mg/L	0.003618	13.25%
B 249.677†	4.8	0.00127	mg/L	0.004025	0.00127	mg/L	0.004025	317.45%
Ba 233.527†	79.6	0.00286	mg/L	0.001149	0.00286	mg/L	0.001149	40.24%
Be 313.042†	28.6	0.00009	mg/L	0.000019	0.00009	mg/L	0.000019	20.67%
Ca 317.933†	656812.9	100.4	mg/L	0.23	100.4	mg/L	0.23	0.23%
Cd 228.802†	12.9	-0.00118	mg/L	0.000128	-0.00118	mg/L	0.000128	10.89%
Co 228.616†	61.4	0.00293	mg/L	0.000245	0.00293	mg/L	0.000245	8.35%
Cr 267.716†	11.6	0.00011	mg/L	0.001036	0.00011	mg/L	0.001036	934.74%
Cu 324.752†	-1556.5	0.00176	mg/L	0.000251	0.00176	mg/L	0.000251	14.24%
Fe 273.955†	112313.2	196.8	mg/L	0.82	196.8	mg/L	0.82	0.42%
K 766.490†	59.8	0.02794	mg/L	0.003286	0.02794	mg/L	0.003286	11.76%
Mg 279.077†	77946.0	105.4	mg/L	0.27	105.4	mg/L	0.27	0.26%
Mn 257.610†	12.0	-0.00109	mg/L	0.000253	-0.00109	mg/L	0.000253	23.18%
Mo 202.031†	56.6	0.00363	mg/L	0.000638	0.00363	mg/L	0.000638	17.57%
Na 589.592†	42.5	0.00312	mg/L	0.001788	0.00312	mg/L	0.001788	57.25%
Na 330.237†	3.9	0.2572	mg/L	0.32655	0.2572	mg/L	0.32655	126.95%
Ni 231.604†	2.6	0.00137	mg/L	0.000396	0.00137	mg/L	0.000396	28.97%
Pb 220.353†	-160.3	0.00232	mg/L	0.002052	0.00232	mg/L	0.002052	88.48%
Sb 206.836†	25.3	0.01357	mg/L	0.003313	0.01357	mg/L	0.003313	24.42%
Se 196.026†	40.7	0.01685	mg/L	0.003607	0.01685	mg/L	0.003607	21.41%
Si 288.158†	-13.1	-0.01133	mg/L	0.008142	-0.01133	mg/L	0.008142	71.87%
Sn 189.927†	-77.4	-0.02091	mg/L	0.000623	-0.02091	mg/L	0.000623	2.98%
Sr 421.552†	4227.0	0.00644	mg/L	0.000048	0.00644	mg/L	0.000048	0.74%
Ti 334.903†	120.1	0.00413	mg/L	0.000618	0.00413	mg/L	0.000618	14.96%
Tl 190.801†	-30.2	-0.00625	mg/L	0.006140	-0.00625	mg/L	0.006140	98.25%
V 292.402†	1332.0	0.00312	mg/L	0.000172	0.00312	mg/L	0.000172	5.52%
Zn 206.200†	9.2	0.00551	mg/L	0.000568	0.00551	mg/L	0.000568	10.31%

Cont

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 1/19/2016 10:31:25 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2139218.9	95.46	%	0.109				0.11%
ScR 361.383	170934.8	97.05	%	0.193				0.20%
Ag 328.068†	165336.4	1.073	mg/L	0.0094	1.073	mg/L	0.0094	0.88%
Al 308.215†	205783.1	200.0	mg/L	0.41	200.0	mg/L	0.41	0.20%
As 188.979†	885.0	1.037	mg/L	0.0104	1.037	mg/L	0.0104	1.00%
B 249.677†	11.6	0.00070	mg/L	0.001427	0.00070	mg/L	0.001427	202.64%
Ba 233.527†	2442.0	1.015	mg/L	0.0048	1.015	mg/L	0.0048	0.47%
Be 313.042†	297508.6	0.9821	mg/L	0.00059	0.9821	mg/L	0.00059	0.06%
Ca 317.933†	652132.4	99.64	mg/L	0.156	99.64	mg/L	0.156	0.16%
Cd 228.802†	21915.3	1.036	mg/L	0.0058	1.036	mg/L	0.0058	0.56%
Co 228.616†	19899.6	0.9555	mg/L	0.00654	0.9555	mg/L	0.00654	0.68%
Cr 267.716†	3078.8	1.016	mg/L	0.0019	1.016	mg/L	0.0019	0.19%
Cu 324.752†	254893.6	1.049	mg/L	0.0007	1.049	mg/L	0.0007	0.07%
Fe 273.955†	112405.1	196.9	mg/L	0.56	196.9	mg/L	0.56	0.28%
K 766.490†	15.5	0.00726	mg/L	0.006161	0.00726	mg/L	0.006161	84.88%
Mg 279.077†	73705.0	99.68	mg/L	0.195	99.68	mg/L	0.195	0.20%
Mn 257.610†	16774.0	0.9662	mg/L	0.00436	0.9662	mg/L	0.00436	0.45%
Mo 202.031†	48.9	0.00291	mg/L	0.000735	0.00291	mg/L	0.000735	25.30%
Na 589.592†	-30.8	-0.00226	mg/L	0.001284	-0.00226	mg/L	0.001284	56.71%
Na 330.237†	11.7	0.4637	mg/L	0.19446	0.4637	mg/L	0.19446	41.94%
Ni 231.604†	1855.3	0.9524	mg/L	0.00335	0.9524	mg/L	0.00335	0.35%
Pb 220.353†	4475.5	1.003	mg/L	0.0029	1.003	mg/L	0.0029	0.28%
Sb 206.836†	1903.8	1.037	mg/L	0.0063	1.037	mg/L	0.0063	0.60%
Se 196.026†	758.0	1.021	mg/L	0.0068	1.021	mg/L	0.0068	0.67%
Si 288.158†	-19.0	-0.01290	mg/L	0.001866	-0.01290	mg/L	0.001866	14.47%
Sn 189.927†	-79.7	-0.02177	mg/L	0.000362	-0.02177	mg/L	0.000362	1.66%
Sr 421.552†	4145.0	0.00632	mg/L	0.000015	0.00632	mg/L	0.000015	0.24%
Ti 334.903†	121.5	0.00411	mg/L	0.000558	0.00411	mg/L	0.000558	13.59%
Tl 190.801†	987.4	0.9503	mg/L	0.00407	0.9503	mg/L	0.00407	0.43%
V 292.402†	114020.7	0.9928	mg/L	0.00862	0.9928	mg/L	0.00862	0.87%
Zn 206.200†	1567.5	0.9375	mg/L	0.00436	0.9375	mg/L	0.00436	0.46%

cont

Sequence No.: 6
Sample ID: DI CHECK

Autosampler Location: 304
Date Collected: 1/19/2016 10:36:49 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2313130.9	103.2	%	0.49				0.48%
ScR 361.383	182666.3	103.7	%	1.24				1.19%
Ag 328.068†	25.3	0.00016	mg/L	0.000035	0.00016	mg/L	0.000035	21.15%
Al 308.215†	16.9	0.01645	mg/L	0.005517	0.01645	mg/L	0.005517	33.55%
As 188.979†	2.8	0.00331	mg/L	0.000848	0.00331	mg/L	0.000848	25.65%
B 249.677†	-0.3	-0.00008	mg/L	0.001068	-0.00008	mg/L	0.001068	>999.9%
Ba 233.527†	0.9	0.00038	mg/L	0.000535	0.00038	mg/L	0.000535	140.30%
Be 313.042†	10.2	0.00003	mg/L	0.000014	0.00003	mg/L	0.000014	40.54%
Ca 317.933†	44.7	0.00683	mg/L	0.003178	0.00683	mg/L	0.003178	46.52%
Cd 228.802†	-0.5	-0.00004	mg/L	0.000069	-0.00004	mg/L	0.000069	170.16%
Co 228.616†	11.0	0.00053	mg/L	0.000069	0.00053	mg/L	0.000069	13.09%
Cr 267.716†	2.5	0.00084	mg/L	0.000943	0.00084	mg/L	0.000943	112.41%
Cu 324.752†	-37.7	-0.00015	mg/L	0.000243	-0.00015	mg/L	0.000243	158.22%
Fe 273.955†	7.5	0.01308	mg/L	0.006705	0.01308	mg/L	0.006705	51.25%
K 766.490†	21.4	0.01001	mg/L	0.016709	0.01001	mg/L	0.016709	166.93%
Mg 279.077†	7.1	0.00956	mg/L	0.002988	0.00956	mg/L	0.002988	31.26%
Mn 257.610†	-0.1	-0.00001	mg/L	0.000093	-0.00001	mg/L	0.000093	>999.9%
Mo 202.031†	-2.4	-0.00023	mg/L	0.000342	-0.00023	mg/L	0.000342	147.34%
Na 589.592†	-1.6	-0.00012	mg/L	0.001246	-0.00012	mg/L	0.001246	>999.9%
Na 330.237†	-0.7	-0.04495	mg/L	0.075362	-0.04495	mg/L	0.075362	167.65%
Ni 231.604†	0.2	0.00011	mg/L	0.000642	0.00011	mg/L	0.000642	583.38%
Pb 220.353†	1.7	0.00037	mg/L	0.000296	0.00037	mg/L	0.000296	79.67%
Sb 206.836†	-2.8	-0.00159	mg/L	0.000509	-0.00159	mg/L	0.000509	32.01%
Se 196.026†	4.3	0.00599	mg/L	0.004160	0.00599	mg/L	0.004160	69.41%
Si 288.158†	-9.1	-0.00801	mg/L	0.003259	-0.00801	mg/L	0.003259	40.69%
Sn 189.927†	-1.8	-0.00099	mg/L	0.001233	-0.00099	mg/L	0.001233	124.32%
Sr 421.552†	18.6	0.00003	mg/L	0.000010	0.00003	mg/L	0.000010	36.76%
Ti 334.903†	1.1	0.00010	mg/L	0.000243	0.00010	mg/L	0.000243	240.06%
Tl 190.801†	5.0	0.00474	mg/L	0.004918	0.00474	mg/L	0.004918	103.83%
V 292.402†	8.5	0.00008	mg/L	0.000098	0.00008	mg/L	0.000098	128.03%
Zn 206.200†	0.2	0.00012	mg/L	0.000171	0.00012	mg/L	0.000171	136.62%

Sequence No.: 7
Sample ID: CV

Autosampler Location: 7
Date Collected: 1/19/2016 10:40:48 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	170.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2219091.3	99.03	%	0.554				0.56%
ScR 361.383	174097.4	98.85	%	0.466				0.47%
Ag 328.068†	151893.1	0.9861	mg/L	0.00382	0.9861	mg/L	0.00382	0.39%
Al 308.215†	2076.7	1.986	mg/L	0.0117	1.986	mg/L	0.0117	0.59%
As 188.979†	1666.4	2.001	mg/L	0.0211	2.001	mg/L	0.0211	1.05%
B 249.677†	3672.1	0.9690	mg/L	0.00672	0.9690	mg/L	0.00672	0.69%
Ba 233.527†	2356.7	1.009	mg/L	0.0101	1.009	mg/L	0.0101	1.01%
Be 313.042†	289902.6	0.9569	mg/L	0.00747	0.9569	mg/L	0.00747	0.78%
Ca 317.933†	12621.8	1.927	mg/L	0.0073	1.927	mg/L	0.0073	0.38%
Cd 228.802†	22199.0	1.046	mg/L	0.0008	1.046	mg/L	0.0008	0.07%
Co 228.616†	20843.8	0.9992	mg/L	0.00204	0.9992	mg/L	0.00204	0.20%
Cr 267.716†	3077.1	1.018	mg/L	0.0071	1.018	mg/L	0.0071	0.70%
Cu 324.752†	241704.3	0.9868	mg/L	0.00117	0.9868	mg/L	0.00117	0.12%
Fe 273.955†	1164.5	2.033	mg/L	0.0174	2.033	mg/L	0.0174	0.86%
K 766.490†	42116.0	19.68	mg/L	0.028	19.68	mg/L	0.028	0.14%
Mg 279.077†	1461.9	1.987	mg/L	0.0119	1.987	mg/L	0.0119	0.60%
Mn 257.610†	16761.1	0.9674	mg/L	0.00238	0.9674	mg/L	0.00238	0.25%
Mo 202.031†	10270.0	0.9924	mg/L	0.00555	0.9924	mg/L	0.00555	0.56%
Na 589.592†	664944.7	48.92	mg/L	0.088	48.92	mg/L	0.088	0.18%
Na 330.237†	784.8	50.88	mg/L	0.390	50.88	mg/L	0.390	0.77%
Ni 231.604†	1906.2	0.9786	mg/L	0.00363	0.9786	mg/L	0.00363	0.37%
Pb 220.353†	9346.3	2.018	mg/L	0.0010	2.018	mg/L	0.0010	0.05%
Sb 206.836†	3749.5	2.062	mg/L	0.0141	2.062	mg/L	0.0141	0.68%
Se 196.026†	1440.6	2.015	mg/L	0.0161	2.015	mg/L	0.0161	0.80%
Si 288.158†	2276.5	2.012	mg/L	0.0043	2.012	mg/L	0.0043	0.21%
Sn 189.927†	1751.1	0.9779	mg/L	0.01118	0.9779	mg/L	0.01118	1.14%
Sr 421.552†	636290.1	0.9697	mg/L	0.00179	0.9697	mg/L	0.00179	0.18%
Ti 334.903†	10781.4	0.9773	mg/L	0.00297	0.9773	mg/L	0.00297	0.30%
Tl 190.801†	2108.3	1.994	mg/L	0.0135	1.994	mg/L	0.0135	0.67%
V 292.402†	114991.4	1.010	mg/L	0.0039	1.010	mg/L	0.0039	0.38%
Zn 206.200†	1610.2	0.9632	mg/L	0.00702	0.9632	mg/L	0.00702	0.73%

Sequence No.: 8
Sample ID: CB

Autosampler Location: 1
Date Collected: 1/19/2016 10:44:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2257104.4	100.7	%	0.63				0.63%
ScR 361.383	175511.5	99.65	%	0.524				0.53%
Ag 328.068†	2.2	0.00001	mg/L	0.000205	0.00001	mg/L	0.000205	>999.9%
Al 308.215†	2.8	0.00273	mg/L	0.004769	0.00273	mg/L	0.004769	174.55%
As 188.979†	-1.9	-0.00230	mg/L	0.001727	-0.00230	mg/L	0.001727	75.05%
B 249.677†	5.7	0.00151	mg/L	0.000997	0.00151	mg/L	0.000997	66.08%
Ba 233.527†	0.7	0.00031	mg/L	0.001509	0.00031	mg/L	0.001509	489.09%
Be 313.042†	33.0	0.00011	mg/L	0.000032	0.00011	mg/L	0.000032	29.73%
Ca 317.933†	0.4	0.00006	mg/L	0.000610	0.00006	mg/L	0.000610	997.00%
Cd 228.802†	-0.8	-0.00002	mg/L	0.000164	-0.00002	mg/L	0.000164	660.52%
Co 228.616†	4.1	0.00020	mg/L	0.000225	0.00020	mg/L	0.000225	113.83%
Cr 267.716†	0.8	0.00026	mg/L	0.000446	0.00026	mg/L	0.000446	172.33%
Cu 324.752†	1.8	0.00001	mg/L	0.000117	0.00001	mg/L	0.000117	>999.9%
Fe 273.955†	1.4	0.00250	mg/L	0.001606	0.00250	mg/L	0.001606	64.24%
K 766.490†	55.3	0.02586	mg/L	0.012075	0.02586	mg/L	0.012075	46.70%
Mg 279.077†	-1.6	-0.00216	mg/L	0.001870	-0.00216	mg/L	0.001870	86.61%
Mn 257.610†	0.4	0.00002	mg/L	0.000102	0.00002	mg/L	0.000102	428.89%
Mo 202.031†	18.1	0.00175	mg/L	0.000695	0.00175	mg/L	0.000695	39.78%
Na 589.592†	60.6	0.00446	mg/L	0.006590	0.00446	mg/L	0.006590	147.89%
Na 330.237†	0.4	0.02694	mg/L	0.166303	0.02694	mg/L	0.166303	617.23%
Ni 231.604†	0.1	0.00007	mg/L	0.002350	0.00007	mg/L	0.002350	>999.9%
Pb 220.353†	3.8	0.00081	mg/L	0.000678	0.00081	mg/L	0.000678	83.27%
Sb 206.836†	10.4	0.00574	mg/L	0.002035	0.00574	mg/L	0.002035	35.45%
Se 196.026†	-1.8	-0.00249	mg/L	0.004965	-0.00249	mg/L	0.004965	199.31%
Si 288.158†	-1.0	-0.00086	mg/L	0.001012	-0.00086	mg/L	0.001012	117.87%
Sn 189.927†	0.3	0.00018	mg/L	0.001349	0.00018	mg/L	0.001349	748.40%
Sr 421.552†	98.0	0.00015	mg/L	0.000053	0.00015	mg/L	0.000053	35.26%
Ti 334.903†	5.8	0.00052	mg/L	0.000358	0.00052	mg/L	0.000358	68.34%
Tl 190.801†	0.9	0.00083	mg/L	0.004399	0.00083	mg/L	0.004399	527.77%
V 292.402†	-13.4	-0.00012	mg/L	0.000268	-0.00012	mg/L	0.000268	232.24%
Zn 206.200†	1.6	0.00095	mg/L	0.001089	0.00095	mg/L	0.001089	114.39%

Sequence No.: 9
Sample ID: APR4 MB1 FRN

Autosampler Location: 305
Date Collected: 1/19/2016 10:48:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: APR4 MB1 FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: APR4 MB1 FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2275229.8	101.5	%	0.30				0.30%
ScR 361.383	177895.9	101.0	%	0.43				0.43%
Ag 328.068†	29.5	0.00019	mg/L	0.000153	0.00019	mg/L	0.000153	79.73%
Al 308.215†	247.3	0.2403	mg/L	0.00425	0.2403	mg/L	0.00425	1.77%
As 188.979†	-1.7	-0.00160	mg/L	0.001576	-0.00160	mg/L	0.001576	98.76%
B 249.677†	2.9	0.00077	mg/L	0.000378	0.00077	mg/L	0.000378	48.95%
Ba 233.527†	0.9	0.00040	mg/L	0.001110	0.00040	mg/L	0.001110	278.86%
Be 313.042†	-10.1	-0.00003	mg/L	0.000024	-0.00003	mg/L	0.000024	71.16%
Ca 317.933†	1958.3	0.2992	mg/L	0.00350	0.2992	mg/L	0.00350	1.17%
Cd 228.802†	-6.8	-0.00031	mg/L	0.000087	-0.00031	mg/L	0.000087	28.15%
Co 228.616†	-3.4	-0.00019	mg/L	0.000281	-0.00019	mg/L	0.000281	144.15%
Cr 267.716†	2.7	0.00087	mg/L	0.000472	0.00087	mg/L	0.000472	53.95%
Cu 324.752†	-25.9	-0.00011	mg/L	0.000221	-0.00011	mg/L	0.000221	201.78%
Fe 273.955†	2.6	0.00461	mg/L	0.001410	0.00461	mg/L	0.001410	30.60%
K 766.490†	30.9	0.01442	mg/L	0.004479	0.01442	mg/L	0.004479	31.06%
Mg 279.077†	64.5	0.08737	mg/L	0.008373	0.08737	mg/L	0.008373	9.58%
Mn 257.610†	1.3	0.00007	mg/L	0.000123	0.00007	mg/L	0.000123	175.44%
Mo 202.031†	9.9	0.00095	mg/L	0.000198	0.00095	mg/L	0.000198	20.89%
Na 589.592†	287.7	0.02117	mg/L	0.003900	0.02117	mg/L	0.003900	18.42%
Na 330.237†	6.5	0.4252	mg/L	0.28914	0.4252	mg/L	0.28914	68.00%
Ni 231.604†	-0.3	-0.00017	mg/L	0.002044	-0.00017	mg/L	0.002044	>999.9%
Pb 220.353†	2.6	0.00061	mg/L	0.001235	0.00061	mg/L	0.001235	202.54%
Sb 206.836†	9.3	0.00513	mg/L	0.001843	0.00513	mg/L	0.001843	35.90%
Se 196.026†	-2.4	-0.00347	mg/L	0.001630	-0.00347	mg/L	0.001630	46.94%
Si 288.158†	-2.9	-0.00258	mg/L	0.003141	-0.00258	mg/L	0.003141	121.95%
Sn 189.927†	2.2	0.00128	mg/L	0.002218	0.00128	mg/L	0.002218	172.81%
Sr 421.552†	152.5	0.00023	mg/L	0.000023	0.00023	mg/L	0.000023	10.07%
Ti 334.903†	190.5	0.01727	mg/L	0.000675	0.01727	mg/L	0.000675	3.91%
Tl 190.801†	-0.3	-0.00031	mg/L	0.001054	-0.00031	mg/L	0.001054	336.69%
V 292.402†	-10.0	-0.00009	mg/L	0.000067	-0.00009	mg/L	0.000067	71.94%
Zn 206.200†	16.7	0.01001	mg/L	0.000615	0.01001	mg/L	0.000615	6.14%

Sequence No.: 10
Sample ID: ATS0 A FRN

Autosampler Location: 306
Date Collected: 1/19/2016 10:52:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATS0 A FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATS0 A FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2209587.9	98.61	%	0.276				0.28%
ScR 361.383	172952.5	98.20	%	0.423				0.43%
Ag 328.068†	51.6	0.00034	mg/L	0.000116	0.00034	mg/L	0.000116	34.49%
Al 308.215†	618.5	0.6008	mg/L	0.00582	0.6008	mg/L	0.00582	0.97%
As 188.979†	57.0	0.06573	mg/L	0.003085	0.06573	mg/L	0.003085	4.69%
B 249.677†	757.7	0.2002	mg/L	0.00113	0.2002	mg/L	0.00113	0.56%
Ba 233.527†	6.9	0.00271	mg/L	0.001280	0.00271	mg/L	0.001280	47.17%
Be 313.042†	6.0	0.00002	mg/L	0.000033	0.00002	mg/L	0.000033	173.92%
Ca 317.933†	134082.7	20.48	mg/L	0.025	20.48	mg/L	0.025	0.12%
Cd 228.802†	430.5	0.02010	mg/L	0.000226	0.02010	mg/L	0.000226	1.13%
Co 228.616†	37.9	0.00176	mg/L	0.000126	0.00176	mg/L	0.000126	7.17%
Cr 267.716†	39.5	0.00988	mg/L	0.001614	0.00988	mg/L	0.001614	16.33%
Cu 324.752†	10557.1	0.04238	mg/L	0.000231	0.04238	mg/L	0.000231	0.54%
Fe 273.955†	782.9	1.371	mg/L	0.0098	1.371	mg/L	0.0098	0.72%
K 766.490†	231169.5	108.0	mg/L	0.14	108.0	mg/L	0.14	0.13%
Mg 279.077†	22526.7	30.50	mg/L	0.074	30.50	mg/L	0.074	0.24%
Mn 257.610†	1349.5	0.07778	mg/L	0.000399	0.07778	mg/L	0.000399	0.51%
Mo 202.031†	103.6	0.00963	mg/L	0.000524	0.00963	mg/L	0.000524	5.44%
Na 589.592†	2883068.2	212.1	mg/L	0.17	212.1	mg/L	0.17	0.08%
Na 330.237†	3316.0	215.1	mg/L	1.17	215.1	mg/L	1.17	0.54%
Ni 231.604†	10.4	0.00533	mg/L	0.001301	0.00533	mg/L	0.001301	24.41%
Pb 220.353†	15.2	0.00331	mg/L	0.000418	0.00331	mg/L	0.000418	12.61%
Sb 206.836†	2.5	0.00112	mg/L	0.000859	0.00112	mg/L	0.000859	76.58%
Se 196.026†	22.0	0.02920	mg/L	0.001411	0.02920	mg/L	0.001411	4.83%
Si 288.158†	466.2	0.4124	mg/L	0.00300	0.4124	mg/L	0.00300	0.73%
Sn 189.927†	-20.7	-0.00703	mg/L	0.002053	-0.00703	mg/L	0.002053	29.22%
Sr 421.552†	140560.6	0.2142	mg/L	0.00019	0.2142	mg/L	0.00019	0.09%
Ti 334.903†	374.6	0.03261	mg/L	0.000384	0.03261	mg/L	0.000384	1.18%
Tl 190.801†	2.6	0.00259	mg/L	0.002452	0.00259	mg/L	0.002452	94.56%
V 292.402†	398.6	0.00348	mg/L	0.000077	0.00348	mg/L	0.000077	2.21%
Zn 206.200†	1055.0	0.6309	mg/L	0.00348	0.6309	mg/L	0.00348	0.55%

Sequence No.: 11
Sample ID: ATS0 B FRN

Autosampler Location: 307
Date Collected: 1/19/2016 10:57:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATS0 B FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATS0 B FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2186411.0	97.57	%	0.104				0.11%
ScR 361.383	174100.8	98.85	%	0.280				0.28%
Ag 328.068†	13.0	0.00009	mg/L	0.000144	0.00009	mg/L	0.000144	167.53%
Al 308.215†	1158.6	1.126	mg/L	0.0044	1.126	mg/L	0.0044	0.39%
As 188.979†	57.5	0.06574	mg/L	0.002225	0.06574	mg/L	0.002225	3.38%
B 249.677†	765.3	0.2022	mg/L	0.00127	0.2022	mg/L	0.00127	0.63%
Ba 233.527†	13.5	0.00544	mg/L	0.000616	0.00544	mg/L	0.000616	11.33%
Be 313.042†	7.1	0.00002	mg/L	0.000018	0.00002	mg/L	0.000018	85.89%
Ca 317.933†	211537.1	32.31	mg/L	0.191	32.31	mg/L	0.191	0.59%
Cd 228.802†	341.3	0.01585	mg/L	0.000126	0.01585	mg/L	0.000126	0.80%
Co 228.616†	50.9	0.00232	mg/L	0.000197	0.00232	mg/L	0.000197	8.48%
Cr 267.716†	41.7	0.01035	mg/L	0.000319	0.01035	mg/L	0.000319	3.09%
Cu 324.752†	17087.0	0.06913	mg/L	0.000414	0.06913	mg/L	0.000414	0.60%
Fe 273.955†	1204.4	2.110	mg/L	0.0071	2.110	mg/L	0.0071	0.34%
K 766.490†	203475.5	95.10	mg/L	0.321	95.10	mg/L	0.321	0.34%
Mg 279.077†	24114.2	32.65	mg/L	0.232	32.65	mg/L	0.232	0.71%
Mn 257.610†	1647.2	0.09490	mg/L	0.000299	0.09490	mg/L	0.000299	0.32%
Mo 202.031†	123.1	0.01131	mg/L	0.000601	0.01131	mg/L	0.000601	5.31%
Na 589.592†	3148968.1	231.7	mg/L	0.75	231.7	mg/L	0.75	0.32%
Na 330.237†	3627.1	235.3	mg/L	0.97	235.3	mg/L	0.97	0.41%
Ni 231.604†	25.5	0.01310	mg/L	0.001763	0.01310	mg/L	0.001763	13.46%
Pb 220.353†	16.4	0.00363	mg/L	0.000666	0.00363	mg/L	0.000666	18.37%
Sb 206.836†	3.7	0.00172	mg/L	0.000381	0.00172	mg/L	0.000381	22.21%
Se 196.026†	20.0	0.02626	mg/L	0.002298	0.02626	mg/L	0.002298	8.75%
Si 288.158†	515.7	0.4562	mg/L	0.00408	0.4562	mg/L	0.00408	0.90%
Sn 189.927†	-34.4	-0.01200	mg/L	0.001913	-0.01200	mg/L	0.001913	15.94%
Sr 421.552†	176444.4	0.2689	mg/L	0.00074	0.2689	mg/L	0.00074	0.27%
Ti 334.903†	753.6	0.06621	mg/L	0.000462	0.06621	mg/L	0.000462	0.70%
Tl 190.801†	2.2	0.00227	mg/L	0.001071	0.00227	mg/L	0.001071	47.10%
V 292.402†	670.4	0.00581	mg/L	0.000175	0.00581	mg/L	0.000175	3.02%
Zn 206.200†	950.4	0.5684	mg/L	0.00177	0.5684	mg/L	0.00177	0.31%

Sequence No.: 12
Sample ID: ATS0 C FRN

Autosampler Location: 308
Date Collected: 1/19/2016 11:01:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATS0 C FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATS0 C FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2205780.7	98.44	%	0.504				0.51%
ScR 361.383	176142.9	100.0	%	1.16				1.16%
Ag 328.068†	2.1	0.00002	mg/L	0.000087	0.00002	mg/L	0.000087	567.88%
Al 308.215†	939.7	0.9128	mg/L	0.01116	0.9128	mg/L	0.01116	1.22%
As 188.979†	75.7	0.08205	mg/L	0.003692	0.08205	mg/L	0.003692	4.50%
B 249.677†	765.7	0.2023	mg/L	0.00336	0.2023	mg/L	0.00336	1.66%
Ba 233.527†	7.5	0.00293	mg/L	0.000140	0.00293	mg/L	0.000140	4.78%
Be 313.042†	0.4	-0.00000	mg/L	0.000021	-0.00000	mg/L	0.000021	>999.9%
Ca 317.933†	455668.5	69.61	mg/L	0.321	69.61	mg/L	0.321	0.46%
Cd 228.802†	424.9	0.01970	mg/L	0.000179	0.01970	mg/L	0.000179	0.91%
Co 228.616†	58.2	0.00269	mg/L	0.000070	0.00269	mg/L	0.000070	2.61%
Cr 267.716†	37.6	0.00901	mg/L	0.000553	0.00901	mg/L	0.000553	6.14%
Cu 324.752†	11643.5	0.04683	mg/L	0.000264	0.04683	mg/L	0.000264	0.56%
Fe 273.955†	1056.5	1.851	mg/L	0.0194	1.851	mg/L	0.0194	1.05%
K 766.490†	235320.3	110.0	mg/L	0.66	110.0	mg/L	0.66	0.60%
Mg 279.077†	21700.7	29.38	mg/L	0.417	29.38	mg/L	0.417	1.42%
Mn 257.610†	1713.5	0.09858	mg/L	0.000993	0.09858	mg/L	0.000993	1.01%
Mo 202.031†	135.2	0.01179	mg/L	0.000329	0.01179	mg/L	0.000329	2.79%
Na 589.592†	2801264.3	206.1	mg/L	0.67	206.1	mg/L	0.67	0.33%
Na 330.237†	3219.4	208.8	mg/L	3.27	208.8	mg/L	3.27	1.56%
Ni 231.604†	13.2	0.00679	mg/L	0.000727	0.00679	mg/L	0.000727	10.71%
Pb 220.353†	13.0	0.00288	mg/L	0.000720	0.00288	mg/L	0.000720	24.98%
Sb 206.836†	-1.7	-0.00128	mg/L	0.001497	-0.00128	mg/L	0.001497	116.72%
Se 196.026†	29.5	0.03966	mg/L	0.002758	0.03966	mg/L	0.002758	6.95%
Si 288.158†	458.2	0.4054	mg/L	0.00281	0.4054	mg/L	0.00281	0.69%
Sn 189.927†	-43.8	-0.00898	mg/L	0.001576	-0.00898	mg/L	0.001576	17.54%
Sr 421.552†	219465.2	0.3345	mg/L	0.00118	0.3345	mg/L	0.00118	0.35%
Ti 334.903†	645.9	0.05392	mg/L	0.000593	0.05392	mg/L	0.000593	1.10%
Tl 190.801†	3.7	0.00375	mg/L	0.002806	0.00375	mg/L	0.002806	74.80%
V 292.402†	589.2	0.00511	mg/L	0.000098	0.00511	mg/L	0.000098	1.92%
Zn 206.200†	1113.5	0.6659	mg/L	0.00792	0.6659	mg/L	0.00792	1.19%

Sequence No.: 13
Sample ID: ATS0 D FRN

Autosampler Location: 309
Date Collected: 1/19/2016 11:05:43 AM
Data Type: Original

Dilution: 1.000000X
User canceled analysis.

Analysis Begun

Start Time: 1/19/2016 11:07:34 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 1/19/2016 8:33:30 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2160119
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 13
Sample ID: ATS0 D FRN

Autosampler Location: 309
Date Collected: 1/19/2016 11:07:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATS0 D FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATS0 D FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2204425.1	98.37	%	0.142				0.14%
ScR 361.383	175272.8	99.52	%	0.876				0.88%
Ag 328.068†	39.6	0.00026	mg/L	0.000167	0.00026	mg/L	0.000167	63.95%
Al 308.215†	1118.6	1.087	mg/L	0.0162	1.087	mg/L	0.0162	1.49%
As 188.979†	62.0	0.07017	mg/L	0.002097	0.07017	mg/L	0.002097	2.99%
B 249.677†	869.0	0.2296	mg/L	0.00109	0.2296	mg/L	0.00109	0.47%
Ba 233.527†	11.5	0.00460	mg/L	0.001606	0.00460	mg/L	0.001606	34.88%
Be 313.042†	-1.1	-0.00001	mg/L	0.000018	-0.00001	mg/L	0.000018	229.27%
Ca 317.933†	256957.5	39.25	mg/L	0.347	39.25	mg/L	0.347	0.88%
Cd 228.802†	418.2	0.01947	mg/L	0.000373	0.01947	mg/L	0.000373	1.92%
Co 228.616†	50.1	0.00228	mg/L	0.000196	0.00228	mg/L	0.000196	8.57%
Cr 267.716†	34.8	0.00802	mg/L	0.001075	0.00802	mg/L	0.001075	13.41%
Cu 324.752†	12897.5	0.05194	mg/L	0.000246	0.05194	mg/L	0.000246	0.47%
Fe 273.955†	1169.3	2.048	mg/L	0.0258	2.048	mg/L	0.0258	1.26%
K 766.490†	233574.5	109.2	mg/L	0.89	109.2	mg/L	0.89	0.81%
Mg 279.077†	23976.5	32.47	mg/L	0.327	32.47	mg/L	0.327	1.01%
Mn 257.610†	1566.5	0.09022	mg/L	0.000933	0.09022	mg/L	0.000933	1.03%
Mo 202.031†	181.7	0.01684	mg/L	0.000247	0.01684	mg/L	0.000247	1.46%
Na 589.592†	3067821.1	225.7	mg/L	1.60	225.7	mg/L	1.60	0.71%
Na 330.237†	3561.4	231.0	mg/L	2.67	231.0	mg/L	2.67	1.16%
Ni 231.604†	12.3	0.00629	mg/L	0.001225	0.00629	mg/L	0.001225	19.48%
Pb 220.353†	12.1	0.00272	mg/L	0.001233	0.00272	mg/L	0.001233	45.33%
Sb 206.836†	1.7	0.00069	mg/L	0.001001	0.00069	mg/L	0.001001	144.97%
Se 196.026†	22.3	0.02943	mg/L	0.005221	0.02943	mg/L	0.005221	17.74%
Si 288.158†	602.8	0.5332	mg/L	0.00454	0.5332	mg/L	0.00454	0.85%
Sn 189.927†	-36.0	-0.01137	mg/L	0.001015	-0.01137	mg/L	0.001015	8.93%
Sr 421.552†	181681.1	0.2769	mg/L	0.00192	0.2769	mg/L	0.00192	0.69%
Ti 334.903†	765.8	0.06684	mg/L	0.000491	0.06684	mg/L	0.000491	0.73%
Tl 190.801†	2.6	0.00269	mg/L	0.001137	0.00269	mg/L	0.001137	42.25%
V 292.402†	1571.4	0.01368	mg/L	0.000019	0.01368	mg/L	0.000019	0.14%
Zn 206.200†	1116.0	0.6674	mg/L	0.00545	0.6674	mg/L	0.00545	0.82%

Sequence No.: 14
Sample ID: ATS0 E FRN

Autosampler Location: 310
Date Collected: 1/19/2016 11:11:52 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATS0 E FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATS0 E FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2192352.1	97.84	%	0.396				0.40%
ScR 361.383	173201.5	98.34	%	0.748				0.76%
Ag 328.068†	5.3	0.00004	mg/L	0.000171	0.00004	mg/L	0.000171	479.96%
Al 308.215†	1311.7	1.274	mg/L	0.0182	1.274	mg/L	0.0182	1.43%
As 188.979†	50.0	0.05789	mg/L	0.000674	0.05789	mg/L	0.000674	1.16%
B 249.677†	796.9	0.2106	mg/L	0.00330	0.2106	mg/L	0.00330	1.57%
Ba 233.527†	13.7	0.00549	mg/L	0.000917	0.00549	mg/L	0.000917	16.71%
Be 313.042†	7.7	0.00002	mg/L	0.000008	0.00002	mg/L	0.000008	35.47%
Ca 317.933†	167458.1	25.58	mg/L	0.167	25.58	mg/L	0.167	0.65%
Cd 228.802†	306.9	0.01426	mg/L	0.000109	0.01426	mg/L	0.000109	0.77%
Co 228.616†	49.9	0.00226	mg/L	0.000131	0.00226	mg/L	0.000131	5.80%
Cr 267.716†	34.8	0.00776	mg/L	0.001049	0.00776	mg/L	0.001049	13.52%
Cu 324.752†	12719.4	0.05133	mg/L	0.000573	0.05133	mg/L	0.000573	1.12%
Fe 273.955†	1301.5	2.280	mg/L	0.0311	2.280	mg/L	0.0311	1.36%
K 766.490†	185247.3	86.58	mg/L	0.441	86.58	mg/L	0.441	0.51%
Mg 279.077†	26731.1	36.20	mg/L	0.453	36.20	mg/L	0.453	1.25%
Mn 257.610†	1612.7	0.09294	mg/L	0.001172	0.09294	mg/L	0.001172	1.26%
Mo 202.031†	102.9	0.00947	mg/L	0.000180	0.00947	mg/L	0.000180	1.90%
Na 589.592†	3530344.2	259.7	mg/L	1.27	259.7	mg/L	1.27	0.49%
Na 330.237†	4113.2	266.9	mg/L	3.67	266.9	mg/L	3.67	1.37%
Ni 231.604†	12.7	0.00653	mg/L	0.001378	0.00653	mg/L	0.001378	21.10%
Pb 220.353†	21.0	0.00466	mg/L	0.000702	0.00466	mg/L	0.000702	15.07%
Sb 206.836†	1.8	0.00076	mg/L	0.001708	0.00076	mg/L	0.001708	225.06%
Se 196.026†	18.5	0.02394	mg/L	0.005190	0.02394	mg/L	0.005190	21.68%
Si 288.158†	475.7	0.4208	mg/L	0.01075	0.4208	mg/L	0.01075	2.55%
Sn 189.927†	-26.9	-0.00935	mg/L	0.001945	-0.00935	mg/L	0.001945	20.79%
Sr 421.552†	171002.8	0.2606	mg/L	0.00126	0.2606	mg/L	0.00126	0.48%
Ti 334.903†	824.5	0.07310	mg/L	0.000690	0.07310	mg/L	0.000690	0.94%
Tl 190.801†	2.0	0.00211	mg/L	0.005367	0.00211	mg/L	0.005367	254.83%
V 292.402†	588.1	0.00507	mg/L	0.000119	0.00507	mg/L	0.000119	2.34%
Zn 206.200†	887.1	0.5305	mg/L	0.00667	0.5305	mg/L	0.00667	1.26%

Sequence No.: 15
Sample ID: APR4 ADUP FRN

Autosampler Location: 311
Date Collected: 1/19/2016 11:16:09 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: APR4 ADUP FRN

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: APR4 ADUP FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2183096.7	97.42	%	0.463				0.47%
ScR 361.383	173776.7	98.67	%	0.600				0.61%
Ag 328.068†	57.9	0.00038	mg/L	0.000193	0.00038	mg/L	0.000193	51.39%
Al 308.215†	471.6	0.4579	mg/L	0.00484	0.4579	mg/L	0.00484	1.06%
As 188.979†	51.7	0.05887	mg/L	0.004328	0.05887	mg/L	0.004328	7.35%
B 249.677†	812.2	0.2146	mg/L	0.00217	0.2146	mg/L	0.00217	1.01%
Ba 233.527†	5.6	0.00224	mg/L	0.000283	0.00224	mg/L	0.000283	12.64%
Be 313.042†	3.6	0.00001	mg/L	0.000018	0.00001	mg/L	0.000018	159.50%
Ca 317.933†	152203.6	23.25	mg/L	0.148	23.25	mg/L	0.148	0.64%
Cd 228.802†	355.3	0.01656	mg/L	0.000184	0.01656	mg/L	0.000184	1.11%
Co 228.616†	36.8	0.00172	mg/L	0.000147	0.00172	mg/L	0.000147	8.51%
Cr 267.716†	33.6	0.00714	mg/L	0.000961	0.00714	mg/L	0.000961	13.46%
Cu 324.752†	8833.6	0.03539	mg/L	0.000170	0.03539	mg/L	0.000170	0.48%
Fe 273.955†	571.1	1.000	mg/L	0.0063	1.000	mg/L	0.0063	0.63%
K 766.490†	189335.9	88.49	mg/L	0.338	88.49	mg/L	0.338	0.38%
Mg 279.077†	28131.9	38.10	mg/L	0.298	38.10	mg/L	0.298	0.78%
Mn 257.610†	1015.9	0.05852	mg/L	0.000366	0.05852	mg/L	0.000366	0.63%
Mo 202.031†	216.1	0.02045	mg/L	0.000171	0.02045	mg/L	0.000171	0.84%
Na 589.592†	3845295.6	282.9	mg/L	1.02	282.9	mg/L	1.02	0.36%
Na 330.237†	4479.3	290.7	mg/L	1.39	290.7	mg/L	1.39	0.48%
Ni 231.604†	10.0	0.00511	mg/L	0.001005	0.00511	mg/L	0.001005	19.67%
Pb 220.353†	15.6	0.00339	mg/L	0.001202	0.00339	mg/L	0.001202	35.47%
Sb 206.836†	0.2	-0.00013	mg/L	0.000885	-0.00013	mg/L	0.000885	661.05%
Se 196.026†	16.6	0.02136	mg/L	0.002091	0.02136	mg/L	0.002091	9.79%
Si 288.158†	448.2	0.3964	mg/L	0.00508	0.3964	mg/L	0.00508	1.28%
Sn 189.927†	-21.0	-0.00653	mg/L	0.001912	-0.00653	mg/L	0.001912	29.28%
Sr 421.552†	169347.3	0.2581	mg/L	0.00120	0.2581	mg/L	0.00120	0.47%
Ti 334.903†	277.6	0.02360	mg/L	0.000331	0.02360	mg/L	0.000331	1.40%
Tl 190.801†	3.2	0.00313	mg/L	0.001798	0.00313	mg/L	0.001798	57.38%
V 292.402†	238.4	0.00209	mg/L	0.000132	0.00209	mg/L	0.000132	6.30%
Zn 206.200†	748.3	0.4475	mg/L	0.00179	0.4475	mg/L	0.00179	0.40%

Sequence No.: 16
Sample ID: APR4 A FRN

Autosampler Location: 312
Date Collected: 1/19/2016 11:20:26 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: APR4 A FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: APR4 A FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2175450.7	97.08	%	0.553				0.57%
ScR 361.383	173800.5	98.68	%	0.363				0.37%
Ag 328.068†	68.7	0.00045	mg/L	0.000106	0.00045	mg/L	0.000106	23.71%
Al 308.215†	437.1	0.4243	mg/L	0.00398	0.4243	mg/L	0.00398	0.94%
As 188.979†	54.3	0.06027	mg/L	0.000369	0.06027	mg/L	0.000369	0.61%
B 249.677†	787.3	0.2081	mg/L	0.00036	0.2081	mg/L	0.00036	0.18%
Ba 233.527†	5.9	0.00238	mg/L	0.000616	0.00238	mg/L	0.000616	25.85%
Be 313.042†	2.7	0.00001	mg/L	0.000009	0.00001	mg/L	0.000009	110.45%
Ca 317.933†	231981.5	35.43	mg/L	0.065	35.43	mg/L	0.065	0.18%
Cd 228.802†	341.2	0.01587	mg/L	0.000292	0.01587	mg/L	0.000292	1.84%
Co 228.616†	38.0	0.00179	mg/L	0.000123	0.00179	mg/L	0.000123	6.88%
Cr 267.716†	33.4	0.00718	mg/L	0.000999	0.00718	mg/L	0.000999	13.91%
Cu 324.752†	8485.3	0.03399	mg/L	0.000265	0.03399	mg/L	0.000265	0.78%
Fe 273.955†	537.1	0.9410	mg/L	0.00251	0.9410	mg/L	0.00251	0.27%
K 766.490†	181543.0	84.85	mg/L	0.216	84.85	mg/L	0.216	0.26%
Mg 279.077†	26697.3	36.15	mg/L	0.050	36.15	mg/L	0.050	0.14%
Mn 257.610†	976.3	0.05618	mg/L	0.000089	0.05618	mg/L	0.000089	0.16%
Mo 202.031†	228.9	0.02147	mg/L	0.000071	0.02147	mg/L	0.000071	0.33%
Na 589.592†	3700164.3	272.2	mg/L	0.50	272.2	mg/L	0.50	0.18%
Na 330.237†	4297.6	278.9	mg/L	0.25	278.9	mg/L	0.25	0.09%
Ni 231.604†	10.4	0.00535	mg/L	0.002258	0.00535	mg/L	0.002258	42.17%
Pb 220.353†	17.5	0.00380	mg/L	0.000671	0.00380	mg/L	0.000671	17.65%
Sb 206.836†	1.2	0.00034	mg/L	0.001549	0.00034	mg/L	0.001549	451.68%
Se 196.026†	16.1	0.02072	mg/L	0.003346	0.02072	mg/L	0.003346	16.15%
Si 288.158†	439.0	0.3884	mg/L	0.00819	0.3884	mg/L	0.00819	2.11%
Sn 189.927†	-31.9	-0.00995	mg/L	0.002753	-0.00995	mg/L	0.002753	27.66%
Sr 421.552†	190085.1	0.2897	mg/L	0.00055	0.2897	mg/L	0.00055	0.19%
Ti 334.903†	260.0	0.02119	mg/L	0.000432	0.02119	mg/L	0.000432	2.04%
Tl 190.801†	-0.3	-0.00016	mg/L	0.005519	-0.00016	mg/L	0.005519	>999.9%
V 292.402†	238.1	0.00209	mg/L	0.000035	0.00209	mg/L	0.000035	1.66%
Zn 206.200†	707.6	0.4232	mg/L	0.00160	0.4232	mg/L	0.00160	0.38%

Sequence No.: 17
Sample ID: APR4 ASPK FRN

Autosampler Location: 313
Date Collected: 1/19/2016 11:24:43 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: APR4 ASPK FRN

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: APR4 ASPK FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2190134.6	97.74	%	0.469				0.48%
ScR 361.383	180263.5	102.3	%	0.35				0.35%
Ag 328.068†	45429.1	0.2951	mg/L	0.00034	0.2951	mg/L	0.00034	0.12%
Al 308.215†	4420.2	4.281	mg/L	0.0118	4.281	mg/L	0.0118	0.27%
As 188.979†	3463.0	4.106	mg/L	0.0178	4.106	mg/L	0.0178	0.43%
B 249.677†	762.4	0.1991	mg/L	0.00091	0.1991	mg/L	0.00091	0.46%
Ba 233.527†	8986.7	3.850	mg/L	0.0084	3.850	mg/L	0.0084	0.22%
Be 313.042†	279043.8	0.9211	mg/L	0.00990	0.9211	mg/L	0.00990	1.08%
Ca 317.933†	253326.4	38.70	mg/L	0.207	38.70	mg/L	0.207	0.53%
Cd 228.802†	22336.5	1.040	mg/L	0.0027	1.040	mg/L	0.0027	0.26%
Co 228.616†	19668.5	0.9441	mg/L	0.00142	0.9441	mg/L	0.00142	0.15%
Cr 267.716†	2923.9	0.9620	mg/L	0.00244	0.9620	mg/L	0.00244	0.25%
Cu 324.752†	255006.2	1.041	mg/L	0.0040	1.041	mg/L	0.0040	0.39%
Fe 273.955†	2797.6	4.894	mg/L	0.0226	4.894	mg/L	0.0226	0.46%
K 766.490†	224859.1	105.1	mg/L	0.19	105.1	mg/L	0.19	0.18%
Mg 279.077†	40877.3	55.36	mg/L	0.116	55.36	mg/L	0.116	0.21%
Mn 257.610†	17196.6	0.9928	mg/L	0.00561	0.9928	mg/L	0.00561	0.57%
Mo 202.031†	224.4	0.02097	mg/L	0.000149	0.02097	mg/L	0.000149	0.71%
Na 589.592†	3968888.9	292.0	mg/L	0.80	292.0	mg/L	0.80	0.27%
Na 330.237†	4749.5	307.9	mg/L	1.11	307.9	mg/L	1.11	0.36%
Ni 231.604†	1812.4	0.9286	mg/L	0.00288	0.9286	mg/L	0.00288	0.31%
Pb 220.353†	17456.8	3.769	mg/L	0.0124	3.769	mg/L	0.0124	0.33%
Sb 206.836†	13.1	-0.00328	mg/L	0.002757	-0.00328	mg/L	0.002757	84.17%
Se 196.026†	3069.5	4.293	mg/L	0.0286	4.293	mg/L	0.0286	0.67%
Si 288.158†	488.2	0.4355	mg/L	0.00276	0.4355	mg/L	0.00276	0.63%
Sn 189.927†	-39.6	-0.01336	mg/L	0.001359	-0.01336	mg/L	0.001359	10.17%
Sr 421.552†	774022.0	1.180	mg/L	0.0040	1.180	mg/L	0.0040	0.34%
Ti 334.903†	246.0	0.01951	mg/L	0.000171	0.01951	mg/L	0.000171	0.88%
Tl 190.801†	3875.3	3.672	mg/L	0.0197	3.672	mg/L	0.0197	0.54%
V 292.402†	112887.4	0.9910	mg/L	0.00270	0.9910	mg/L	0.00270	0.27%
Zn 206.200†	2225.6	1.331	mg/L	0.0018	1.331	mg/L	0.0018	0.14%

Sequence No.: 18
Sample ID: APR4 MB1SPK FRN

Autosampler Location: 314
Date Collected: 1/19/2016 11:29:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: APR4 MB1SPK FRN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: APR4 MB1SPK FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2263435.0	101.0	%	0.27				0.27%
ScR 361.383	178956.3	101.6	%	1.17				1.16%
Ag 328.068†	147085.1	0.9549	mg/L	0.00484	0.9549	mg/L	0.00484	0.51%
Al 308.215†	4162.4	4.031	mg/L	0.0475	4.031	mg/L	0.0475	1.18%
As 188.979†	3297.4	3.912	mg/L	0.0232	3.912	mg/L	0.0232	0.59%
B 249.677†	6.8	-0.00059	mg/L	0.000742	-0.00059	mg/L	0.000742	125.40%
Ba 233.527†	9147.4	3.919	mg/L	0.0624	3.919	mg/L	0.0624	1.59%
Be 313.042†	280564.0	0.9261	mg/L	0.01789	0.9261	mg/L	0.01789	1.93%
Ca 317.933†	126126.5	19.27	mg/L	0.265	19.27	mg/L	0.265	1.38%
Cd 228.802†	21911.1	1.021	mg/L	0.0037	1.021	mg/L	0.0037	0.36%
Co 228.616†	20286.7	0.9738	mg/L	0.00628	0.9738	mg/L	0.00628	0.64%
Cr 267.716†	3052.7	1.008	mg/L	0.0148	1.008	mg/L	0.0148	1.47%
Cu 324.752†	241663.1	0.9872	mg/L	0.00396	0.9872	mg/L	0.00396	0.40%
Fe 273.955†	2356.3	4.121	mg/L	0.0589	4.121	mg/L	0.0589	1.43%
K 766.490†	42515.3	19.87	mg/L	0.298	19.87	mg/L	0.298	1.50%
Mg 279.077†	14420.8	19.53	mg/L	0.279	19.53	mg/L	0.279	1.43%
Mn 257.610†	16925.9	0.9773	mg/L	0.01406	0.9773	mg/L	0.01406	1.44%
Mo 202.031†	41.4	0.00365	mg/L	0.000303	0.00365	mg/L	0.000303	8.31%
Na 589.592†	266803.6	19.63	mg/L	0.318	19.63	mg/L	0.318	1.62%
Na 330.237†	332.4	21.28	mg/L	0.360	21.28	mg/L	0.360	1.69%
Ni 231.604†	1898.4	0.9726	mg/L	0.01458	0.9726	mg/L	0.01458	1.50%
Pb 220.353†	18327.3	3.957	mg/L	0.0207	3.957	mg/L	0.0207	0.52%
Sb 206.836†	18.2	-0.00094	mg/L	0.002533	-0.00094	mg/L	0.002533	269.12%
Se 196.026†	2727.4	3.816	mg/L	0.0203	3.816	mg/L	0.0203	0.53%
Si 288.158†	-10.5	-0.00553	mg/L	0.002791	-0.00553	mg/L	0.002791	50.48%
Sn 189.927†	-31.3	-0.01298	mg/L	0.000976	-0.01298	mg/L	0.000976	7.52%
Sr 421.552†	637527.8	0.9716	mg/L	0.01704	0.9716	mg/L	0.01704	1.75%
Ti 334.903†	40.0	0.00213	mg/L	0.000236	0.00213	mg/L	0.000236	11.08%
Tl 190.801†	4094.3	3.879	mg/L	0.0167	3.879	mg/L	0.0167	0.43%
V 292.402†	116077.6	1.019	mg/L	0.0017	1.019	mg/L	0.0017	0.17%
Zn 206.200†	1578.1	0.9441	mg/L	0.01492	0.9441	mg/L	0.01492	1.58%

Sequence No.: 19
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 1/19/2016 11:33:16 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2280082.3	101.8	%	0.30				0.30%
ScR 361.383	179552.2	101.9	%	0.39				0.38%
Ag 328.068†	152355.6	0.9891	mg/L	0.00322	0.9891	mg/L	0.00322	0.33%
Al 308.215†	2083.3	1.992	mg/L	0.0173	1.992	mg/L	0.0173	0.87%
As 188.979†	1673.6	2.009	mg/L	0.0098	2.009	mg/L	0.0098	0.49%
B 249.677†	3666.8	0.9677	mg/L	0.00289	0.9677	mg/L	0.00289	0.30%
Ba 233.527†	2356.4	1.009	mg/L	0.0075	1.009	mg/L	0.0075	0.74%
Be 313.042†	292832.7	0.9666	mg/L	0.00153	0.9666	mg/L	0.00153	0.16%
Ca 317.933†	12675.7	1.935	mg/L	0.0110	1.935	mg/L	0.0110	0.57%
Cd 228.802†	22108.4	1.041	mg/L	0.0076	1.041	mg/L	0.0076	0.73%
Co 228.616†	20676.7	0.9912	mg/L	0.00858	0.9912	mg/L	0.00858	0.87%
Cr 267.716†	3085.0	1.021	mg/L	0.0029	1.021	mg/L	0.0029	0.28%
Cu 324.752†	241839.6	0.9874	mg/L	0.00186	0.9874	mg/L	0.00186	0.19%
Fe 273.955†	1168.5	2.040	mg/L	0.0151	2.040	mg/L	0.0151	0.74%
K 766.490†	42029.6	19.64	mg/L	0.041	19.64	mg/L	0.041	0.21%
Mg 279.077†	1464.2	1.990	mg/L	0.0185	1.990	mg/L	0.0185	0.93%
Mn 257.610†	16886.8	0.9747	mg/L	0.00207	0.9747	mg/L	0.00207	0.21%
Mo 202.031†	10203.7	0.9860	mg/L	0.01054	0.9860	mg/L	0.01054	1.07%
Na 589.592†	663992.8	48.85	mg/L	0.016	48.85	mg/L	0.016	0.03%
Na 330.237†	796.4	51.63	mg/L	0.329	51.63	mg/L	0.329	0.64%
Ni 231.604†	1897.1	0.9739	mg/L	0.00265	0.9739	mg/L	0.00265	0.27%
Pb 220.353†	9274.6	2.003	mg/L	0.0216	2.003	mg/L	0.0216	1.08%
Sb 206.836†	3731.8	2.052	mg/L	0.0067	2.052	mg/L	0.0067	0.33%
Se 196.026†	1448.6	2.026	mg/L	0.0028	2.026	mg/L	0.0028	0.14%
Si 288.158†	2282.7	2.017	mg/L	0.0022	2.017	mg/L	0.0022	0.11%
Sn 189.927†	1751.8	0.9783	mg/L	0.00050	0.9783	mg/L	0.00050	0.05%
Sr 421.552†	637131.3	0.9710	mg/L	0.00095	0.9710	mg/L	0.00095	0.10%
Ti 334.903†	10776.9	0.9769	mg/L	0.00226	0.9769	mg/L	0.00226	0.23%
Tl 190.801†	2093.9	1.980	mg/L	0.0051	1.980	mg/L	0.0051	0.26%
V 292.402†	114033.5	1.001	mg/L	0.0135	1.001	mg/L	0.0135	1.35%
Zn 206.200†	1614.5	0.9658	mg/L	0.00773	0.9658	mg/L	0.00773	0.80%

Sequence No.: 20
Sample ID: CB7

Autosampler Location: 1
Date Collected: 1/19/2016 11:37:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2303820.5	102.8	%	0.45				0.44%
ScR 361.383	181281.3	102.9	%	0.37				0.36%
Ag 328.068†	43.0	0.00028	mg/L	0.000153	0.00028	mg/L	0.000153	55.00%
Al 308.215†	-4.5	-0.00437	mg/L	0.004542	-0.00437	mg/L	0.004542	103.87%
As 188.979†	1.0	0.00118	mg/L	0.001824	0.00118	mg/L	0.001824	154.36%
B 249.677†	2.4	0.00064	mg/L	0.001653	0.00064	mg/L	0.001653	256.93%
Ba 233.527†	1.1	0.00047	mg/L	0.000755	0.00047	mg/L	0.000755	160.30%
Be 313.042†	42.4	0.00014	mg/L	0.000019	0.00014	mg/L	0.000019	13.48%
Ca 317.933†	12.1	0.00184	mg/L	0.001716	0.00184	mg/L	0.001716	93.27%
Cd 228.802†	-1.3	-0.00007	mg/L	0.000103	-0.00007	mg/L	0.000103	156.30%
Co 228.616†	1.9	0.00009	mg/L	0.000074	0.00009	mg/L	0.000074	81.16%
Cr 267.716†	1.2	0.00039	mg/L	0.001221	0.00039	mg/L	0.001221	312.56%
Cu 324.752†	-9.2	-0.00004	mg/L	0.000212	-0.00004	mg/L	0.000212	551.51%
Fe 273.955†	0.4	0.00076	mg/L	0.001969	0.00076	mg/L	0.001969	257.60%
K 766.490†	53.0	0.02476	mg/L	0.019512	0.02476	mg/L	0.019512	78.80%
Mg 279.077†	3.6	0.00482	mg/L	0.006968	0.00482	mg/L	0.006968	144.57%
Mn 257.610†	0.9	0.00005	mg/L	0.000104	0.00005	mg/L	0.000104	189.68%
Mo 202.031†	18.3	0.00177	mg/L	0.000561	0.00177	mg/L	0.000561	31.68%
Na 589.592†	490.6	0.03609	mg/L	0.013845	0.03609	mg/L	0.013845	38.36%
Na 330.237†	5.9	0.3821	mg/L	0.03077	0.3821	mg/L	0.03077	8.05%
Ni 231.604†	1.1	0.00056	mg/L	0.000226	0.00056	mg/L	0.000226	40.48%
Pb 220.353†	2.9	0.00063	mg/L	0.000999	0.00063	mg/L	0.000999	159.01%
Sb 206.836†	11.2	0.00619	mg/L	0.000528	0.00619	mg/L	0.000528	8.53%
Se 196.026†	3.5	0.00495	mg/L	0.003282	0.00495	mg/L	0.003282	66.31%
Si 288.158†	-5.6	-0.00493	mg/L	0.001745	-0.00493	mg/L	0.001745	35.37%
Sn 189.927†	1.5	0.00087	mg/L	0.001620	0.00087	mg/L	0.001620	187.21%
Sr 421.552†	148.4	0.00023	mg/L	0.000066	0.00023	mg/L	0.000066	29.11%
Ti 334.903†	6.6	0.00060	mg/L	0.000315	0.00060	mg/L	0.000315	52.45%
Tl 190.801†	1.0	0.00095	mg/L	0.001470	0.00095	mg/L	0.001470	155.25%
V 292.402†	0.6	0.00001	mg/L	0.000097	0.00001	mg/L	0.000097	>999.9%
Zn 206.200†	1.1	0.00066	mg/L	0.000797	0.00066	mg/L	0.000797	121.31%

Sequence No.: 21
Sample ID: ATZ2 MB2 DMN

Autosampler Location: 315
Date Collected: 1/19/2016 11:41:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ2 MB2 DMN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATZ2 MB2 DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2355652.5	105.1	%	0.40				0.38%
ScR 361.383	186887.3	106.1	%	0.94				0.89%
Ag 328.068†	22.3	0.00014	mg/L	0.000173	0.00014	mg/L	0.000173	119.71%
Al 308.215†	17.3	0.01677	mg/L	0.004203	0.01677	mg/L	0.004203	25.06%
As 188.979†	1.1	0.00126	mg/L	0.000285	0.00126	mg/L	0.000285	22.60%
B 249.677†	7.9	0.00209	mg/L	0.000679	0.00209	mg/L	0.000679	32.47%
Ba 233.527†	-0.3	-0.00012	mg/L	0.000461	-0.00012	mg/L	0.000461	380.57%
Be 313.042†	1.7	0.00001	mg/L	0.000022	0.00001	mg/L	0.000022	393.39%
Ca 317.933†	253.1	0.03866	mg/L	0.000125	0.03866	mg/L	0.000125	0.32%
Cd 228.802†	-5.4	-0.00027	mg/L	0.000066	-0.00027	mg/L	0.000066	24.97%
Co 228.616†	11.6	0.00056	mg/L	0.000028	0.00056	mg/L	0.000028	5.10%
Cr 267.716†	0.7	0.00022	mg/L	0.000046	0.00022	mg/L	0.000046	21.19%
Cu 324.752†	-82.5	-0.00034	mg/L	0.000215	-0.00034	mg/L	0.000215	63.88%
Fe 273.955†	-0.8	-0.00135	mg/L	0.002013	-0.00135	mg/L	0.002013	149.04%
K 766.490†	27.0	0.01260	mg/L	0.004800	0.01260	mg/L	0.004800	38.08%
Mg 279.077†	-2.0	-0.00269	mg/L	0.002403	-0.00269	mg/L	0.002403	89.19%
Mn 257.610†	-3.3	-0.00019	mg/L	0.000077	-0.00019	mg/L	0.000077	40.16%
Mo 202.031†	-4.3	-0.00042	mg/L	0.000208	-0.00042	mg/L	0.000208	49.95%
Na 589.592†	449.4	0.03306	mg/L	0.000479	0.03306	mg/L	0.000479	1.45%
Na 330.237†	3.8	0.2441	mg/L	0.12801	0.2441	mg/L	0.12801	52.43%
Ni 231.604†	0.7	0.00037	mg/L	0.001372	0.00037	mg/L	0.001372	375.77%
Pb 220.353†	5.4	0.00117	mg/L	0.000875	0.00117	mg/L	0.000875	75.01%
Sb 206.836†	-3.6	-0.00197	mg/L	0.001727	-0.00197	mg/L	0.001727	87.60%
Se 196.026†	4.6	0.00637	mg/L	0.005285	0.00637	mg/L	0.005285	82.97%
Si 288.158†	-13.5	-0.01190	mg/L	0.005083	-0.01190	mg/L	0.005083	42.70%
Sn 189.927†	-0.8	-0.00043	mg/L	0.000739	-0.00043	mg/L	0.000739	171.01%
Sr 421.552†	167.3	0.00025	mg/L	0.000050	0.00025	mg/L	0.000050	19.45%
Ti 334.903†	-2.2	-0.00020	mg/L	0.000430	-0.00020	mg/L	0.000430	214.97%
Tl 190.801†	2.1	0.00203	mg/L	0.003500	0.00203	mg/L	0.003500	171.99%
V 292.402†	6.0	0.00005	mg/L	0.000033	0.00005	mg/L	0.000033	62.36%
Zn 206.200†	-0.3	-0.00016	mg/L	0.000974	-0.00016	mg/L	0.000974	613.96%

Sequence No.: 22
Sample ID: ATZ2 MB1 TWC

Autosampler Location: 316
Date Collected: 1/19/2016 11:45:19 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ2 MB1 TWC

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATZ2 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2305551.6	102.9	%	0.85				0.82%
ScR 361.383	181956.8	103.3	%	0.49				0.48%
Ag 328.068†	8.2	0.00005	mg/L	0.000092	0.00005	mg/L	0.000092	172.80%
Al 308.215†	3.6	0.00350	mg/L	0.001821	0.00350	mg/L	0.001821	52.06%
As 188.979†	1.2	0.00137	mg/L	0.001797	0.00137	mg/L	0.001797	131.28%
B 249.677†	-0.7	-0.00019	mg/L	0.000595	-0.00019	mg/L	0.000595	308.92%
Ba 233.527†	3.0	0.00127	mg/L	0.000753	0.00127	mg/L	0.000753	59.08%
Be 313.042†	-4.1	-0.00001	mg/L	0.000030	-0.00001	mg/L	0.000030	225.45%
Ca 317.933†	46.3	0.00705	mg/L	0.000294	0.00705	mg/L	0.000294	4.17%
Cd 228.802†	-3.6	-0.00018	mg/L	0.000124	-0.00018	mg/L	0.000124	69.64%
Co 228.616†	1.0	0.00005	mg/L	0.000203	0.00005	mg/L	0.000203	400.48%
Cr 267.716†	2.8	0.00094	mg/L	0.001011	0.00094	mg/L	0.001011	107.15%
Cu 324.752†	-93.7	-0.00038	mg/L	0.000243	-0.00038	mg/L	0.000243	63.65%
Fe 273.955†	2.4	0.00428	mg/L	0.000919	0.00428	mg/L	0.000919	21.49%
K 766.490†	26.2	0.01225	mg/L	0.002695	0.01225	mg/L	0.002695	22.00%
Mg 279.077†	-0.4	-0.00059	mg/L	0.008228	-0.00059	mg/L	0.008228	>999.9%
Mn 257.610†	-1.4	-0.00008	mg/L	0.000113	-0.00008	mg/L	0.000113	141.04%
Mo 202.031†	3.1	0.00030	mg/L	0.000368	0.00030	mg/L	0.000368	121.69%
Na 589.592†	278.9	0.02052	mg/L	0.002906	0.02052	mg/L	0.002906	14.17%
Na 330.237†	6.9	0.4444	mg/L	0.14765	0.4444	mg/L	0.14765	33.22%
Ni 231.604†	0.5	0.00024	mg/L	0.000629	0.00024	mg/L	0.000629	257.13%
Pb 220.353†	3.1	0.00067	mg/L	0.000342	0.00067	mg/L	0.000342	51.35%
Sb 206.836†	-0.2	-0.00014	mg/L	0.002394	-0.00014	mg/L	0.002394	>999.9%
Se 196.026†	-0.6	-0.00081	mg/L	0.003253	-0.00081	mg/L	0.003253	402.51%
Si 288.158†	-2.4	-0.00216	mg/L	0.004311	-0.00216	mg/L	0.004311	199.28%
Sn 189.927†	-0.6	-0.00034	mg/L	0.000960	-0.00034	mg/L	0.000960	279.38%
Sr 421.552†	43.4	0.00007	mg/L	0.000018	0.00007	mg/L	0.000018	26.90%
Ti 334.903†	-5.0	-0.00045	mg/L	0.000431	-0.00045	mg/L	0.000431	95.58%
Tl 190.801†	1.2	0.00116	mg/L	0.000394	0.00116	mg/L	0.000394	33.93%
V 292.402†	-2.2	-0.00002	mg/L	0.000161	-0.00002	mg/L	0.000161	>999.9%
Zn 206.200†	2.2	0.00131	mg/L	0.000390	0.00131	mg/L	0.000390	29.73%

Sequence No.: 23
Sample ID: ATZ4 MB1 TWC

Autosampler Location: 317
Date Collected: 1/19/2016 11:49:19 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ4 MB1 TWC

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATZ4 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2314859.7	103.3	%	0.06				0.06%
ScR 361.383	182985.2	103.9	%	0.82				0.79%
Ag 328.068†	31.0	0.00020	mg/L	0.000191	0.00020	mg/L	0.000191	95.13%
Al 308.215†	1.8	0.00172	mg/L	0.002001	0.00172	mg/L	0.002001	116.46%
As 188.979†	1.6	0.00192	mg/L	0.002213	0.00192	mg/L	0.002213	115.14%
B 249.677†	-3.7	-0.00098	mg/L	0.001192	-0.00098	mg/L	0.001192	121.81%
Ba 233.527†	0.1	0.00003	mg/L	0.000337	0.00003	mg/L	0.000337	>999.9%
Be 313.042†	-10.6	-0.00003	mg/L	0.000031	-0.00003	mg/L	0.000031	87.44%
Ca 317.933†	62.2	0.00949	mg/L	0.001031	0.00949	mg/L	0.001031	10.86%
Cd 228.802†	-5.3	-0.00026	mg/L	0.000065	-0.00026	mg/L	0.000065	24.97%
Co 228.616†	0.1	0.00000	mg/L	0.000131	0.00000	mg/L	0.000131	>999.9%
Cr 267.716†	5.1	0.00168	mg/L	0.001533	0.00168	mg/L	0.001533	91.42%
Cu 324.752†	-74.3	-0.00030	mg/L	0.000191	-0.00030	mg/L	0.000191	62.80%
Fe 273.955†	1.4	0.00249	mg/L	0.001438	0.00249	mg/L	0.001438	57.82%
K 766.490†	63.8	0.02983	mg/L	0.016858	0.02983	mg/L	0.016858	56.51%
Mg 279.077†	1.9	0.00257	mg/L	0.003234	0.00257	mg/L	0.003234	125.75%
Mn 257.610†	1.5	0.00008	mg/L	0.000240	0.00008	mg/L	0.000240	286.27%
Mo 202.031†	1.1	0.00011	mg/L	0.000240	0.00011	mg/L	0.000240	226.38%
Na 589.592†	604.1	0.04444	mg/L	0.001462	0.04444	mg/L	0.001462	3.29%
Na 330.237†	2.5	0.1615	mg/L	0.21944	0.1615	mg/L	0.21944	135.85%
Ni 231.604†	-0.5	-0.00026	mg/L	0.000445	-0.00026	mg/L	0.000445	172.89%
Pb 220.353†	-3.4	-0.00073	mg/L	0.001353	-0.00073	mg/L	0.001353	185.91%
Sb 206.836†	4.7	0.00259	mg/L	0.000838	0.00259	mg/L	0.000838	32.39%
Se 196.026†	1.2	0.00168	mg/L	0.002584	0.00168	mg/L	0.002584	154.24%
Si 288.158†	-2.9	-0.00258	mg/L	0.003215	-0.00258	mg/L	0.003215	124.81%
Sn 189.927†	2.0	0.00111	mg/L	0.001462	0.00111	mg/L	0.001462	131.70%
Sr 421.552†	29.3	0.00004	mg/L	0.000014	0.00004	mg/L	0.000014	31.82%
Ti 334.903†	5.7	0.00051	mg/L	0.000496	0.00051	mg/L	0.000496	96.33%
Tl 190.801†	3.2	0.00306	mg/L	0.003192	0.00306	mg/L	0.003192	104.16%
V 292.402†	-9.5	-0.00008	mg/L	0.000118	-0.00008	mg/L	0.000118	153.72%
Zn 206.200†	12.0	0.00716	mg/L	0.000967	0.00716	mg/L	0.000967	13.50%

Sequence No.: 24
Sample ID: ATZ2 A TWC

Autosampler Location: 318
Date Collected: 1/19/2016 11:53:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ2 A TWC

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: ATZ2 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2100093.8	93.72	%	0.398				0.42%
ScR 361.383	171289.4	97.25	%	1.263				1.30%
Ag 328.068†	-28.2	-0.00018	mg/L	0.000292	-0.00018	mg/L	0.000292	165.07%
Al 308.215†	7652.3	7.436	mg/L	0.0868	7.436	mg/L	0.0868	1.17%
As 188.979†	19.1	0.02779	mg/L	0.002670	0.02779	mg/L	0.002670	9.61%
B 249.677†	1354.6	0.3579	mg/L	0.00554	0.3579	mg/L	0.00554	1.55%
Ba 233.527†	166.3	0.06968	mg/L	0.001229	0.06968	mg/L	0.001229	1.76%
Be 313.042†	50.9	0.00016	mg/L	0.000010	0.00016	mg/L	0.000010	6.09%
Ca 317.933†	322433.1	49.24	mg/L	0.149	49.24	mg/L	0.149	0.30%
Cd 228.802†	9.7	0.00027	mg/L	0.000143	0.00027	mg/L	0.000143	53.64%
Co 228.616†	111.9	0.00460	mg/L	0.000316	0.00460	mg/L	0.000316	6.87%
Cr 267.716†	84.7	0.01753	mg/L	0.000798	0.01753	mg/L	0.000798	4.55%
Cu 324.752†	13270.6	0.05378	mg/L	0.000615	0.05378	mg/L	0.000615	1.14%
Fe 273.955†	5594.0	9.800	mg/L	0.0972	9.800	mg/L	0.0972	0.99%
K 766.490†	66015.1	30.85	mg/L	0.173	30.85	mg/L	0.173	0.56%
Mg 279.077†	76914.0	104.2	mg/L	1.35	104.2	mg/L	1.35	1.29%
Mn 257.610†	4539.2	0.2616	mg/L	0.00278	0.2616	mg/L	0.00278	1.06%
Mo 202.031†	99.4	0.00871	mg/L	0.000396	0.00871	mg/L	0.000396	4.55%
Na 589.592†	10339750.4	760.7	mg/L	11.19	760.7	mg/L	11.19	1.47%
Na 330.237†	12391.7	804.5	mg/L	8.39	804.5	mg/L	8.39	1.04%
Ni 231.604†	31.7	0.01626	mg/L	0.001768	0.01626	mg/L	0.001768	10.87%
Pb 220.353†	88.0	0.02021	mg/L	0.000136	0.02021	mg/L	0.000136	0.67%
Sb 206.836†	9.2	0.00471	mg/L	0.001854	0.00471	mg/L	0.001854	39.34%
Se 196.026†	10.0	0.00767	mg/L	0.005337	0.00767	mg/L	0.005337	69.59%
Si 288.158†	18753.0	16.58	mg/L	0.370	16.58	mg/L	0.370	2.23%
Sn 189.927†	-50.8	-0.01741	mg/L	0.001902	-0.01741	mg/L	0.001902	10.93%
Sr 421.552†	411848.9	0.6277	mg/L	0.00134	0.6277	mg/L	0.00134	0.21%
Ti 334.903†	4734.2	0.4264	mg/L	0.00342	0.4264	mg/L	0.00342	0.80%
Tl 190.801†	2.4	0.00327	mg/L	0.001689	0.00327	mg/L	0.001689	51.64%
V 292.402†	2782.9	0.02383	mg/L	0.000105	0.02383	mg/L	0.000105	0.44%
Zn 206.200†	480.5	0.2903	mg/L	0.00220	0.2903	mg/L	0.00220	0.76%

Sequence No.: 25
Sample ID: ATZ2 B DMN

Autosampler Location: 319
Date Collected: 1/19/2016 11:57:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ2 B DMN

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATZ2 B DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2171272.1	96.90	%	0.222				0.23%
ScR 361.383	176071.6	99.97	%	0.650				0.65%
Ag 328.068†	-36.5	-0.00024	mg/L	0.000249	-0.00024	mg/L	0.000249	105.12%
Al 308.215†	35.9	0.03475	mg/L	0.001638	0.03475	mg/L	0.001638	4.71%
As 188.979†	25.4	0.02408	mg/L	0.003045	0.02408	mg/L	0.003045	12.64%
B 249.677†	1380.1	0.3647	mg/L	0.00574	0.3647	mg/L	0.00574	1.57%
Ba 233.527†	72.9	0.03122	mg/L	0.000689	0.03122	mg/L	0.000689	2.21%
Be 313.042†	16.1	0.00005	mg/L	0.000025	0.00005	mg/L	0.000025	46.55%
Ca 317.933†	300407.6	45.87	mg/L	0.141	45.87	mg/L	0.141	0.31%
Cd 228.802†	4.7	0.00005	mg/L	0.000189	0.00005	mg/L	0.000189	344.69%
Co 228.616†	24.8	0.00118	mg/L	0.000143	0.00118	mg/L	0.000143	12.10%
Cr 267.716†	41.3	0.00340	mg/L	0.000912	0.00340	mg/L	0.000912	26.82%
Cu 324.752†	1550.4	0.00559	mg/L	0.000110	0.00559	mg/L	0.000110	1.97%
Fe 273.955†	9.3	0.01632	mg/L	0.004550	0.01632	mg/L	0.004550	27.88%
K 766.490†	66053.1	30.87	mg/L	0.071	30.87	mg/L	0.071	0.23%
Mg 279.077†	72588.6	98.30	mg/L	0.259	98.30	mg/L	0.259	0.26%
Mn 257.610†	1616.2	0.09307	mg/L	0.000690	0.09307	mg/L	0.000690	0.74%
Mo 202.031†	84.6	0.00733	mg/L	0.000517	0.00733	mg/L	0.000517	7.05%
Na 589.592†	10481097.0	771.1	mg/L	5.27	771.1	mg/L	5.27	0.68%
Na 330.237†	12533.7	813.6	mg/L	2.97	813.6	mg/L	2.97	0.37%
Ni 231.604†	3.1	0.00158	mg/L	0.000708	0.00158	mg/L	0.000708	44.89%
Pb 220.353†	-8.9	-0.00189	mg/L	0.001626	-0.00189	mg/L	0.001626	85.99%
Sb 206.836†	-7.7	-0.00469	mg/L	0.001975	-0.00469	mg/L	0.001975	42.12%
Se 196.026†	14.7	0.01589	mg/L	0.001824	0.01589	mg/L	0.001824	11.48%
Si 288.158†	6781.4	5.996	mg/L	0.0805	5.996	mg/L	0.0805	1.34%
Sn 189.927†	-52.7	-0.01920	mg/L	0.000707	-0.01920	mg/L	0.000707	3.68%
Sr 421.552†	395668.4	0.6030	mg/L	0.00175	0.6030	mg/L	0.00175	0.29%
Ti 334.903†	67.2	0.00300	mg/L	0.000474	0.00300	mg/L	0.000474	15.80%
Tl 190.801†	3.0	0.00287	mg/L	0.002363	0.00287	mg/L	0.002363	82.29%
V 292.402†	138.2	0.00128	mg/L	0.000040	0.00128	mg/L	0.000040	3.15%
Zn 206.200†	142.1	0.08606	mg/L	0.001656	0.08606	mg/L	0.001656	1.92%

Sequence No.: 26
Sample ID: ATS0 F FRN

Autosampler Location: 320
Date Collected: 1/19/2016 12:02:32 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATS0 F FRN

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: ATS0 F FRN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2198476.3	98.11	%	0.200				0.20%
ScR 361.383	174979.5	99.35	%	1.076				1.08%
Ag 328.068†	21.1	0.00014	mg/L	0.000132	0.00014	mg/L	0.000132	95.55%
Al 308.215†	841.6	0.8177	mg/L	0.01039	0.8177	mg/L	0.01039	1.27%
As 188.979†	46.4	0.05347	mg/L	0.003527	0.05347	mg/L	0.003527	6.60%
B 249.677†	725.7	0.1918	mg/L	0.00061	0.1918	mg/L	0.00061	0.32%
Ba 233.527†	11.1	0.00452	mg/L	0.000938	0.00452	mg/L	0.000938	20.77%
Be 313.042†	-5.3	-0.00002	mg/L	0.000043	-0.00002	mg/L	0.000043	232.20%
Ca 317.933†	132777.3	20.28	mg/L	0.025	20.28	mg/L	0.025	0.12%
Cd 228.802†	301.5	0.01403	mg/L	0.000167	0.01403	mg/L	0.000167	1.19%
Co 228.616†	34.0	0.00155	mg/L	0.000178	0.00155	mg/L	0.000178	11.43%
Cr 267.716†	28.0	0.00591	mg/L	0.000542	0.00591	mg/L	0.000542	9.18%
Cu 324.752†	8877.9	0.03564	mg/L	0.000144	0.03564	mg/L	0.000144	0.40%
Fe 273.955†	822.8	1.441	mg/L	0.0069	1.441	mg/L	0.0069	0.48%
K 766.490†	184302.0	86.14	mg/L	0.493	86.14	mg/L	0.493	0.57%
Mg 279.077†	23807.1	32.24	mg/L	0.170	32.24	mg/L	0.170	0.53%
Mn 257.610†	1265.1	0.07290	mg/L	0.000543	0.07290	mg/L	0.000543	0.74%
Mo 202.031†	93.7	0.00868	mg/L	0.000047	0.00868	mg/L	0.000047	0.54%
Na 589.592†	3158774.1	232.4	mg/L	1.59	232.4	mg/L	1.59	0.69%
Na 330.237†	3677.7	238.6	mg/L	2.17	238.6	mg/L	2.17	0.91%
Ni 231.604†	10.3	0.00529	mg/L	0.000175	0.00529	mg/L	0.000175	3.31%
Pb 220.353†	13.4	0.00298	mg/L	0.002114	0.00298	mg/L	0.002114	70.99%
Sb 206.836†	3.6	0.00176	mg/L	0.000391	0.00176	mg/L	0.000391	22.24%
Se 196.026†	18.4	0.02408	mg/L	0.003053	0.02408	mg/L	0.003053	12.68%
Si 288.158†	552.1	0.4883	mg/L	0.03260	0.4883	mg/L	0.03260	6.68%
Sn 189.927†	-22.6	-0.00811	mg/L	0.002506	-0.00811	mg/L	0.002506	30.90%
Sr 421.552†	146614.2	0.2234	mg/L	0.00170	0.2234	mg/L	0.00170	0.76%
Ti 334.903†	479.7	0.04216	mg/L	0.000429	0.04216	mg/L	0.000429	1.02%
Tl 190.801†	2.3	0.00238	mg/L	0.003610	0.00238	mg/L	0.003610	151.61%
V 292.402†	396.7	0.00344	mg/L	0.000030	0.00344	mg/L	0.000030	0.87%
Zn 206.200†	811.1	0.4851	mg/L	0.00488	0.4851	mg/L	0.00488	1.01%

Sequence No.: 27
Sample ID: ATZ4 B TWC

Autosampler Location: 321
Date Collected: 1/19/2016 12:06:49 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ4 B TWC

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: ATZ4 B TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2304300.8	102.8	%	0.48				0.46%
ScR 361.383	182049.7	103.4	%	0.44				0.43%
Ag 328.068†	21.4	0.00014	mg/L	0.000077	0.00014	mg/L	0.000077	55.23%
Al 308.215†	1427.9	1.388	mg/L	0.0083	1.388	mg/L	0.0083	0.60%
As 188.979†	5.7	0.00636	mg/L	0.004444	0.00636	mg/L	0.004444	69.83%
B 249.677†	58.7	0.01551	mg/L	0.000824	0.01551	mg/L	0.000824	5.31%
Ba 233.527†	27.9	0.01184	mg/L	0.000451	0.01184	mg/L	0.000451	3.81%
Be 313.042†	-4.6	-0.00002	mg/L	0.000008	-0.00002	mg/L	0.000008	48.60%
Ca 317.933†	58374.2	8.919	mg/L	0.0021	8.919	mg/L	0.0021	0.02%
Cd 228.802†	-8.2	-0.00043	mg/L	0.000155	-0.00043	mg/L	0.000155	35.90%
Co 228.616†	10.7	0.00046	mg/L	0.000204	0.00046	mg/L	0.000204	44.02%
Cr 267.716†	5.6	0.00151	mg/L	0.000561	0.00151	mg/L	0.000561	37.12%
Cu 324.752†	937.2	0.00382	mg/L	0.000132	0.00382	mg/L	0.000132	3.46%
Fe 273.955†	439.1	0.7693	mg/L	0.00294	0.7693	mg/L	0.00294	0.38%
K 766.490†	7341.1	3.431	mg/L	0.0211	3.431	mg/L	0.0211	0.62%
Mg 279.077†	2287.2	3.096	mg/L	0.0156	3.096	mg/L	0.0156	0.50%
Mn 257.610†	273.1	0.01571	mg/L	0.000161	0.01571	mg/L	0.000161	1.02%
Mo 202.031†	26.7	0.00241	mg/L	0.000073	0.00241	mg/L	0.000073	3.03%
Na 589.592†	49478.8	3.640	mg/L	0.0224	3.640	mg/L	0.0224	0.62%
Na 330.237†	67.6	4.396	mg/L	0.1904	4.396	mg/L	0.1904	4.33%
Ni 231.604†	7.1	0.00363	mg/L	0.001916	0.00363	mg/L	0.001916	52.82%
Pb 220.353†	7.1	0.00182	mg/L	0.001388	0.00182	mg/L	0.001388	76.23%
Sb 206.836†	9.8	0.00534	mg/L	0.001117	0.00534	mg/L	0.001117	20.91%
Se 196.026†	1.2	0.00123	mg/L	0.007812	0.00123	mg/L	0.007812	634.44%
Si 288.158†	5505.6	4.868	mg/L	0.0193	4.868	mg/L	0.0193	0.40%
Sn 189.927†	-14.4	-0.00606	mg/L	0.001308	-0.00606	mg/L	0.001308	21.59%
Sr 421.552†	33784.2	0.05149	mg/L	0.000059	0.05149	mg/L	0.000059	0.11%
Ti 334.903†	320.2	0.02846	mg/L	0.000115	0.02846	mg/L	0.000115	0.40%
Tl 190.801†	-0.1	-0.00002	mg/L	0.003204	-0.00002	mg/L	0.003204	>999.9%
V 292.402†	269.7	0.00232	mg/L	0.000175	0.00232	mg/L	0.000175	7.56%
Zn 206.200†	7.6	0.00540	mg/L	0.001422	0.00540	mg/L	0.001422	26.36%

Sequence No.: 28
Sample ID: ATZ4 MB1SPK TWC

Autosampler Location: 322
Date Collected: 1/19/2016 12:10:48 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ4 MB1SPK TWC

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: ATZ4 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2276867.9	101.6	%	0.28				0.27%
ScR 361.383	179415.6	101.9	%	0.25				0.25%
Ag 328.068†	78018.2	0.5065	mg/L	0.00175	0.5065	mg/L	0.00175	0.35%
Al 308.215†	2056.0	1.991	mg/L	0.0147	1.991	mg/L	0.0147	0.74%
As 188.979†	1668.1	1.979	mg/L	0.0095	1.979	mg/L	0.0095	0.48%
B 249.677†	-0.5	-0.00133	mg/L	0.001037	-0.00133	mg/L	0.001037	78.09%
Ba 233.527†	4611.7	1.976	mg/L	0.0088	1.976	mg/L	0.0088	0.45%
Be 313.042†	140105.4	0.4625	mg/L	0.00273	0.4625	mg/L	0.00273	0.59%
Ca 317.933†	63940.5	9.769	mg/L	0.0351	9.769	mg/L	0.0351	0.36%
Cd 228.802†	10989.6	0.5121	mg/L	0.00162	0.5121	mg/L	0.00162	0.32%
Co 228.616†	10075.2	0.4836	mg/L	0.00124	0.4836	mg/L	0.00124	0.26%
Cr 267.716†	1496.7	0.4944	mg/L	0.00164	0.4944	mg/L	0.00164	0.33%
Cu 324.752†	116023.0	0.4739	mg/L	0.00151	0.4739	mg/L	0.00151	0.32%
Fe 273.955†	1169.5	2.045	mg/L	0.0117	2.045	mg/L	0.0117	0.57%
K 766.490†	20982.2	9.807	mg/L	0.0364	9.807	mg/L	0.0364	0.37%
Mg 279.077†	7126.9	9.651	mg/L	0.0364	9.651	mg/L	0.0364	0.38%
Mn 257.610†	8405.1	0.4853	mg/L	0.00107	0.4853	mg/L	0.00107	0.22%
Mo 202.031†	21.9	0.00194	mg/L	0.000261	0.00194	mg/L	0.000261	13.51%
Na 589.592†	131864.8	9.701	mg/L	0.0404	9.701	mg/L	0.0404	0.42%
Na 330.237†	166.5	10.66	mg/L	0.172	10.66	mg/L	0.172	1.61%
Ni 231.604†	937.8	0.4804	mg/L	0.00300	0.4804	mg/L	0.00300	0.62%
Pb 220.353†	9225.1	1.992	mg/L	0.0054	1.992	mg/L	0.0054	0.27%
Sb 206.836†	11.7	0.00103	mg/L	0.001620	0.00103	mg/L	0.001620	156.63%
Se 196.026†	1399.2	1.957	mg/L	0.0032	1.957	mg/L	0.0032	0.16%
Si 288.158†	11.3	0.01189	mg/L	0.007981	0.01189	mg/L	0.007981	67.11%
Sn 189.927†	-20.4	-0.00911	mg/L	0.003025	-0.00911	mg/L	0.003025	33.23%
Sr 421.552†	315660.6	0.4811	mg/L	0.00254	0.4811	mg/L	0.00254	0.53%
Ti 334.903†	15.6	0.00066	mg/L	0.000774	0.00066	mg/L	0.000774	117.68%
Tl 190.801†	2048.6	1.941	mg/L	0.0150	1.941	mg/L	0.0150	0.77%
V 292.402†	56214.8	0.4936	mg/L	0.00203	0.4936	mg/L	0.00203	0.41%
Zn 206.200†	778.6	0.4658	mg/L	0.00150	0.4658	mg/L	0.00150	0.32%

Sequence No.: 29
Sample ID: ATZ2 MB1SPK TWC

Autosampler Location: 323
Date Collected: 1/19/2016 12:15:03 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ2 MB1SPK TWC

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: ATZ2 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2275464.9	101.5	%	0.19				0.19%
ScR 361.383	180095.0	102.3	%	0.44				0.43%
Ag 328.068†	77831.9	0.5053	mg/L	0.00235	0.5053	mg/L	0.00235	0.46%
Al 308.215†	2039.8	1.975	mg/L	0.0190	1.975	mg/L	0.0190	0.96%
As 188.979†	1669.2	1.980	mg/L	0.0094	1.980	mg/L	0.0094	0.47%
B 249.677†	-0.1	-0.00121	mg/L	0.000822	-0.00121	mg/L	0.000822	68.14%
Ba 233.527†	4573.0	1.959	mg/L	0.0138	1.959	mg/L	0.0138	0.71%
Be 313.042†	140640.0	0.4642	mg/L	0.00151	0.4642	mg/L	0.00151	0.33%
Ca 317.933†	61820.1	9.445	mg/L	0.0107	9.445	mg/L	0.0107	0.11%
Cd 228.802†	10935.6	0.5095	mg/L	0.00340	0.5095	mg/L	0.00340	0.67%
Co 228.616†	10050.7	0.4825	mg/L	0.00382	0.4825	mg/L	0.00382	0.79%
Cr 267.716†	1484.8	0.4905	mg/L	0.00504	0.4905	mg/L	0.00504	1.03%
Cu 324.752†	116556.5	0.4761	mg/L	0.00109	0.4761	mg/L	0.00109	0.23%
Fe 273.955†	1164.9	2.037	mg/L	0.0140	2.037	mg/L	0.0140	0.69%
K 766.490†	20674.2	9.663	mg/L	0.0347	9.663	mg/L	0.0347	0.36%
Mg 279.077†	7045.2	9.540	mg/L	0.0175	9.540	mg/L	0.0175	0.18%
Mn 257.610†	8266.3	0.4773	mg/L	0.00137	0.4773	mg/L	0.00137	0.29%
Mo 202.031†	20.4	0.00180	mg/L	0.000339	0.00180	mg/L	0.000339	18.84%
Na 589.592†	130957.0	9.634	mg/L	0.0129	9.634	mg/L	0.0129	0.13%
Na 330.237†	165.2	10.58	mg/L	0.271	10.58	mg/L	0.271	2.56%
Ni 231.604†	931.4	0.4771	mg/L	0.00623	0.4771	mg/L	0.00623	1.30%
Pb 220.353†	9184.3	1.983	mg/L	0.0103	1.983	mg/L	0.0103	0.52%
Sb 206.836†	9.9	0.00009	mg/L	0.002378	0.00009	mg/L	0.002378	>999.9%
Se 196.026†	1411.4	1.975	mg/L	0.0044	1.975	mg/L	0.0044	0.22%
Si 288.158†	3.5	0.00497	mg/L	0.000882	0.00497	mg/L	0.000882	17.74%
Sn 189.927†	-14.4	-0.00585	mg/L	0.001028	-0.00585	mg/L	0.001028	17.58%
Sr 421.552†	313185.8	0.4773	mg/L	0.00042	0.4773	mg/L	0.00042	0.09%
Ti 334.903†	9.0	0.00008	mg/L	0.000334	0.00008	mg/L	0.000334	433.17%
Tl 190.801†	2063.5	1.955	mg/L	0.0087	1.955	mg/L	0.0087	0.44%
V 292.402†	55951.0	0.4912	mg/L	0.00270	0.4912	mg/L	0.00270	0.55%
Zn 206.200†	775.3	0.4638	mg/L	0.00524	0.4638	mg/L	0.00524	1.13%

Sequence No.: 30
Sample ID: ATZ2 MB2SPK DMN

Autosampler Location: 324
Date Collected: 1/19/2016 12:19:03 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ATZ2 MB2SPK DMN

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: ATZ2 MB2SPK DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2325895.2	103.8	%	0.62				0.59%
ScR 361.383	182571.7	103.7	%	1.44				1.39%
Ag 328.068†	82284.8	0.5342	mg/L	0.00252	0.5342	mg/L	0.00252	0.47%
Al 308.215†	2146.4	2.079	mg/L	0.0162	2.079	mg/L	0.0162	0.78%
As 188.979†	1804.4	2.141	mg/L	0.0179	2.141	mg/L	0.0179	0.84%
B 249.677†	10.5	0.00152	mg/L	0.001314	0.00152	mg/L	0.001314	86.28%
Ba 233.527†	4748.4	2.034	mg/L	0.0157	2.034	mg/L	0.0157	0.77%
Be 313.042†	144658.6	0.4775	mg/L	0.00365	0.4775	mg/L	0.00365	0.77%
Ca 317.933†	66474.5	10.16	mg/L	0.119	10.16	mg/L	0.119	1.18%
Cd 228.802†	11929.7	0.5559	mg/L	0.00217	0.5559	mg/L	0.00217	0.39%
Co 228.616†	10514.6	0.5047	mg/L	0.00327	0.5047	mg/L	0.00327	0.65%
Cr 267.716†	1547.1	0.5110	mg/L	0.00362	0.5110	mg/L	0.00362	0.71%
Cu 324.752†	117746.5	0.4810	mg/L	0.00080	0.4810	mg/L	0.00080	0.17%
Fe 273.955†	1214.0	2.123	mg/L	0.0211	2.123	mg/L	0.0211	1.00%
K 766.490†	21956.0	10.26	mg/L	0.038	10.26	mg/L	0.038	0.37%
Mg 279.077†	7466.1	10.11	mg/L	0.082	10.11	mg/L	0.082	0.81%
Mn 257.610†	8711.5	0.5030	mg/L	0.00556	0.5030	mg/L	0.00556	1.10%
Mo 202.031†	15.3	0.00130	mg/L	0.000349	0.00130	mg/L	0.000349	26.95%
Na 589.592†	137181.1	10.09	mg/L	0.022	10.09	mg/L	0.022	0.22%
Na 330.237†	164.6	10.53	mg/L	0.238	10.53	mg/L	0.238	2.26%
Ni 231.604†	970.3	0.4971	mg/L	0.00453	0.4971	mg/L	0.00453	0.91%
Pb 220.353†	9732.5	2.101	mg/L	0.0069	2.101	mg/L	0.0069	0.33%
Sb 206.836†	6.5	-0.00203	mg/L	0.000885	-0.00203	mg/L	0.000885	43.56%
Se 196.026†	1683.1	2.355	mg/L	0.0136	2.355	mg/L	0.0136	0.58%
Si 288.158†	-6.1	-0.00338	mg/L	0.004887	-0.00338	mg/L	0.004887	144.47%
Sn 189.927†	-17.4	-0.00734	mg/L	0.000286	-0.00734	mg/L	0.000286	3.89%
Sr 421.552†	324941.2	0.4952	mg/L	0.00156	0.4952	mg/L	0.00156	0.32%
Ti 334.903†	17.2	0.00077	mg/L	0.000387	0.00077	mg/L	0.000387	49.88%
Tl 190.801†	2183.8	2.069	mg/L	0.0168	2.069	mg/L	0.0168	0.81%
V 292.402†	57539.5	0.5052	mg/L	0.00273	0.5052	mg/L	0.00273	0.54%
Zn 206.200†	828.7	0.4957	mg/L	0.00349	0.4957	mg/L	0.00349	0.70%

Sequence No.: 31
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 1/19/2016 12:23:18 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	171.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2254859.7	100.6	%	0.49				0.48%
ScR 361.383	174958.8	99.34	%	0.367				0.37%
Ag 328.068†	158336.1	1.028	mg/L	0.0105	1.028	mg/L	0.0105	1.03%
Al 308.215†	2088.3	1.997	mg/L	0.0058	1.997	mg/L	0.0058	0.29%
As 188.979†	1660.5	1.995	mg/L	0.0122	1.995	mg/L	0.0122	0.61%
B 249.677†	3687.6	0.9732	mg/L	0.00508	0.9732	mg/L	0.00508	0.52%
Ba 233.527†	2352.0	1.007	mg/L	0.0047	1.007	mg/L	0.0047	0.46%
Be 313.042†	293409.4	0.9685	mg/L	0.00183	0.9685	mg/L	0.00183	0.19%
Ca 317.933†	13380.1	2.043	mg/L	0.0093	2.043	mg/L	0.0093	0.45%
Cd 228.802†	22089.4	1.041	mg/L	0.0116	1.041	mg/L	0.0116	1.12%
Co 228.616†	20597.3	0.9873	mg/L	0.00578	0.9873	mg/L	0.00578	0.59%
Cr 267.716†	3088.9	1.022	mg/L	0.0033	1.022	mg/L	0.0033	0.33%
Cu 324.752†	242008.4	0.9881	mg/L	0.00201	0.9881	mg/L	0.00201	0.20%
Fe 273.955†	1188.1	2.074	mg/L	0.0119	2.074	mg/L	0.0119	0.57%
K 766.490†	42716.5	19.97	mg/L	0.075	19.97	mg/L	0.075	0.38%
Mg 279.077†	1468.1	1.995	mg/L	0.0069	1.995	mg/L	0.0069	0.34%
Mn 257.610†	17757.7	1.025	mg/L	0.0073	1.025	mg/L	0.0073	0.71%
Mo 202.031†	10439.3	1.009	mg/L	0.0050	1.009	mg/L	0.0050	0.50%
Na 589.592†	672058.8	49.44	mg/L	0.118	49.44	mg/L	0.118	0.24%
Na 330.237†	792.2	51.37	mg/L	0.187	51.37	mg/L	0.187	0.36%
Ni 231.604†	1901.5	0.9762	mg/L	0.00328	0.9762	mg/L	0.00328	0.34%
Pb 220.353†	9505.5	2.053	mg/L	0.0138	2.053	mg/L	0.0138	0.67%
Sb 206.836†	3722.3	2.047	mg/L	0.0126	2.047	mg/L	0.0126	0.62%
Se 196.026†	1444.8	2.021	mg/L	0.0103	2.021	mg/L	0.0103	0.51%
Si 288.158†	2305.5	2.038	mg/L	0.0117	2.038	mg/L	0.0117	0.57%
Sn 189.927†	1749.9	0.9773	mg/L	0.00676	0.9773	mg/L	0.00676	0.69%
Sr 421.552†	647943.8	0.9875	mg/L	0.00251	0.9875	mg/L	0.00251	0.25%
Ti 334.903†	11317.5	1.026	mg/L	0.0051	1.026	mg/L	0.0051	0.50%
Tl 190.801†	2084.2	1.971	mg/L	0.0115	1.971	mg/L	0.0115	0.58%
V 292.402†	113441.6	0.9960	mg/L	0.01089	0.9960	mg/L	0.01089	1.09%
Zn 206.200†	1626.0	0.9727	mg/L	0.00500	0.9727	mg/L	0.00500	0.51%

Sequence No.: 32
Sample ID: CB3

Autosampler Location: 1
Date Collected: 1/19/2016 12:27:20 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	172.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2278597.6	101.7	%	0.39				0.38%
ScR 361.383	179257.9	101.8	%	0.50				0.49%
Ag 328.068†	8.9	0.00006	mg/L	0.000092	0.00006	mg/L	0.000092	159.83%
Al 308.215†	0.9	0.00084	mg/L	0.007215	0.00084	mg/L	0.007215	857.92%
As 188.979†	0.7	0.00078	mg/L	0.001651	0.00078	mg/L	0.001651	211.45%
B 249.677†	4.1	0.00108	mg/L	0.000539	0.00108	mg/L	0.000539	49.86%
Ba 233.527†	-1.1	-0.00045	mg/L	0.000408	-0.00045	mg/L	0.000408	90.23%
Be 313.042†	13.3	0.00004	mg/L	0.000037	0.00004	mg/L	0.000037	84.21%
Ca 317.933†	-1.5	-0.00024	mg/L	0.000385	-0.00024	mg/L	0.000385	163.45%
Cd 228.802†	-2.5	-0.00012	mg/L	0.000071	-0.00012	mg/L	0.000071	57.18%
Co 228.616†	5.6	0.00027	mg/L	0.000063	0.00027	mg/L	0.000063	23.62%
Cr 267.716†	0.3	0.00009	mg/L	0.000189	0.00009	mg/L	0.000189	207.75%
Cu 324.752†	-129.9	-0.00053	mg/L	0.000170	-0.00053	mg/L	0.000170	31.99%
Fe 273.955†	0.2	0.00032	mg/L	0.001250	0.00032	mg/L	0.001250	384.78%
K 766.490†	41.5	0.01938	mg/L	0.010394	0.01938	mg/L	0.010394	53.63%
Mg 279.077†	-2.0	-0.00267	mg/L	0.005837	-0.00267	mg/L	0.005837	218.60%
Mn 257.610†	1.3	0.00007	mg/L	0.000049	0.00007	mg/L	0.000049	66.16%
Mo 202.031†	15.9	0.00154	mg/L	0.000636	0.00154	mg/L	0.000636	41.40%
Na 589.592†	486.1	0.03576	mg/L	0.001757	0.03576	mg/L	0.001757	4.91%
Na 330.237†	4.2	0.2733	mg/L	0.08564	0.2733	mg/L	0.08564	31.33%
Ni 231.604†	1.6	0.00083	mg/L	0.001396	0.00083	mg/L	0.001396	167.23%
Pb 220.353†	5.8	0.00126	mg/L	0.000483	0.00126	mg/L	0.000483	38.50%
Sb 206.836†	10.4	0.00574	mg/L	0.003588	0.00574	mg/L	0.003588	62.51%
Se 196.026†	1.8	0.00246	mg/L	0.003185	0.00246	mg/L	0.003185	129.37%
Si 288.158†	-2.2	-0.00195	mg/L	0.001544	-0.00195	mg/L	0.001544	79.08%
Sn 189.927†	0.9	0.00049	mg/L	0.001563	0.00049	mg/L	0.001563	316.17%
Sr 421.552†	77.0	0.00012	mg/L	0.000037	0.00012	mg/L	0.000037	31.88%
Ti 334.903†	1.7	0.00015	mg/L	0.000284	0.00015	mg/L	0.000284	183.26%
Tl 190.801†	0.9	0.00084	mg/L	0.002936	0.00084	mg/L	0.002936	349.06%
V 292.402†	1.4	0.00001	mg/L	0.000131	0.00001	mg/L	0.000131	996.14%
Zn 206.200†	-0.3	-0.00019	mg/L	0.000709	-0.00019	mg/L	0.000709	368.35%

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Signature January-27-2016
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 27, 2016

Cindy Fields
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

ARI Job No.: AUA2

Dear Ms. Fields:

Please find enclosed the sample receipt documentation and the final data package for samples from the project referenced above.

Sample receipt and details regarding requested analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: AUA2

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: AUA2

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA Project Name: _____

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: AUA2 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): 0.1

Time: 1100

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D205276

Cooler Accepted by: CA Date: 12-18-15 Time: 1100

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: CA Date: 1/13/16 Time: 1117

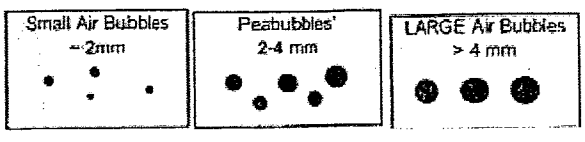
*** Notify Project Manager of discrepancies or concerns ***

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

Additional Notes, Discrepancies, & Resolutions:

NO COC received

By: CA Date: 12/18/15



Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: AUA2

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
ARI Job No.: AUA2

Sample Receipt

Three tissue samples were received on December 18, 2015 under ARI job AUA2. The cooler temperature measured by IR thermometer following ARI SOP was 0.1°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

PAHs by SW8270D-SIM

The samples were extracted and analyzed within the method recommended holding times for samples stored frozen.

Initial calibrations were within method requirements.

The initial calibration verification (ICV) on 1/22/16 fell outside the 20% control limit low for Benzo(b)fluoranthene and Total Benzofluoranthenes. All detected results associated with this ICV have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within control 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.

Lipids by Method Bligh & Dyer

The samples were extracted and analyzed within the method recommended holding times for samples stored frozen.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: AUA2
Client: Anchor QEA, LLC
Project Event: N/A
Project Name: N/A

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	13EB_ME-MTW01Z	AUA2A	16-418	Tissue	01/07/13	12/18/15 11:00
2.	13CPS_DB-MTW01Z	AUA2B	16-419	Tissue	01/10/13	12/18/15 11:00
3.	13NPS_CIAR2-MTW01Z	AUA2C	16-420	Tissue	01/14/13	12/18/15 11:00

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S	Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
NA	The flagged analyte was not analyzed for
NR	Spiked compound recovery is not reported due to chromatographic interference
NS	The flagged analyte was not spiked into the sample
M	Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
M2	The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
Y	The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
EMPC	Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
C	The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
P	The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference
X	Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
Z	Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

Analytical Method Information

Printed: 01/27/2016 12:27 pm

8270D-SIM PAH (0.5 ug/kg) in Tissue (EPA 8270D-SIM)

Preservation: Cool <6°C

Container: Glass WM, Clear, 8 oz

Amount Required: 150 g

Hold Time: 14 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Naphthalene	0.500	0.600 ug/kg		30	30-160	30	30-160	30
1-Methylnaphthalene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
2-Methylnaphthalene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Biphenyl	0.500	0.500 ug/kg		30	30-160	30	30-160	30
2,6-Dimethylnaphthalene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Acenaphthylene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Acenaphthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Dibenzofuran	0.500	0.500 ug/kg		30	30-160	30	30-160	30
2,3,5-Trimethylnaphthalene	0.500	0.500 ug/kg						
Fluorene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Dibenzothiophene	0.500	0.500 ug/kg						
Phenanthrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Anthracene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Carbazole	0.500	0.500 ug/kg		30	30-160	30	30-160	30
1-Methylphenanthrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(a)anthracene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Chrysene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(b)fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(k)fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(j)fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(e)pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(a)pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Indeno(1,2,3-cd)pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Dibenzo(a,h)anthracene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(g,h,i)perylene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Perylene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzofluoranthenes, Total	1.00	1.00 ug/kg		30	30-160	30	46-120	30
Surr: 2-Methylnaphthalene-d10			30-160					
Surr: Dibenzo[a,h]anthracene-d14			30-160					
Surr: Fluoranthene-d10			30-160					
Naphthalene-d8								
Acenaphthene-d10								
Phenanthrene-d10								
Chrysene-d12								
Perylene-d12								

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: AUA2

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: 13EB_ME-MTW01Z
SAMPLE

Lab Sample ID: AUA2A
LIMS ID: 16-418
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: AUA2-Anchor QEA, LLC
Project: NA
Event: NA
Date Sampled: 01/07/13
Date Received: 12/18/15

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 16:30
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.00 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.32 %

CAS Number	Analyte	LOQ	Result	
91-20-3	Naphthalene	0.50	1.09	
91-57-6	2-Methylnaphthalene	0.50	1.43	
208-96-8	Acenaphthylene	0.50	0.86	
83-32-9	Acenaphthene	0.50	4.62	
86-73-7	Fluorene	0.50	6.66	
85-01-8	Phenanthrene	0.50	30.1	
120-12-7	Anthracene	0.50	8.54	
206-44-0	Fluoranthene	0.50	52.7	E
129-00-0	Pyrene	0.50	33.4	
56-55-3	Benzo(a)anthracene	0.50	15.0	
218-01-9	Chrysene	0.50	17.0	
205-99-2	Benzo(b)fluoranthene	0.50	12.1	
207-08-9	Benzo(k)fluoranthene	0.50	7.11	Q
50-32-8	Benzo(a)pyrene	0.50	5.81	
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	1.67	
53-70-3	Dibenz(a,h)anthracene	0.50	0.51	
191-24-2	Benzo(g,h,i)perylene	0.50	2.31	
198-55-0	Perylene	0.50	2.82	
192-97-2	Benzo(e)pyrene	0.50	8.90	
TOTBFA	Total Benzofluoranthenes	0.50	25.6	Q

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	52.3%
d10-2-Methylnaphthalene	45.7%
d14-Dibenzo(a,h)anthracene	56.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: 13EB_ME-MTW01Z
DILUTION

Lab Sample ID: AUA2A
LIMS ID: 16-418
Matrix: Tissue
Data Release Authorized:
Reported: 01/27/16

QC Report No: AUA2-Anchor QEA, LLC
Project: NA
Event: NA
Date Sampled: 01/07/13
Date Received: 12/18/15

Date Extracted: 01/14/16
Date Analyzed: 01/25/16 13:00
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.00 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 10.0
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.32 %

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	5.00	< 5.00 U
91-57-6	2-Methylnaphthalene	5.00	< 5.00 U
208-96-8	Acenaphthylene	5.00	< 5.00 U
83-32-9	**Acenaphthene**	**5.00**	**5.28**
86-73-7	**Fluorene**	**5.00**	**7.20**
85-01-8	**Phenanthrene**	**5.00**	**43.9**
120-12-7	**Anthracene**	**5.00**	**10.4**
206-44-0	**Fluoranthene**	**5.00**	**81.4**
129-00-0	**Pyrene**	**5.00**	**47.2**
56-55-3	**Benzo(a)anthracene**	**5.00**	**18.4**
218-01-9	**Chrysene**	**5.00**	**23.7**
205-99-2	**Benzo(b)fluoranthene**	**5.00**	**14.8**
207-08-9	**Benzo(k)fluoranthene**	**5.00**	**10.2**
50-32-8	**Benzo(a)pyrene**	**5.00**	**7.11**
193-39-5	Indeno(1,2,3-cd)pyrene	5.00	< 5.00 U
53-70-3	Dibenz(a,h)anthracene	5.00	< 5.00 U
191-24-2	Benzo(g,h,i)perylene	5.00	< 5.00 U
198-55-0	Perylene	5.00	< 5.00 U
192-97-2	**Benzo(e)pyrene**	**5.00**	**11.9**
TOTBFA	**Total Benzofluoranthenes**	**5.00**	**34.3**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	64.3%
d10-2-Methylnaphthalene	49.0%
d14-Dibenzo(a,h)anthracene	57.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: 13CPS_DB-MTW01Z
SAMPLE

Lab Sample ID: AUA2B
LIMS ID: 16-419
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: AUA2-Anchor QEA, LLC
Project: NA
Event: NA
Date Sampled: 01/10/13
Date Received: 12/18/15

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 17:00
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.02 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.39 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.56**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	Fluorene	0.50	< 0.50 U
85-01-8	**Phenanthrene**	**0.50**	**1.24**
120-12-7	Anthracene	0.50	< 0.50 U
206-44-0	**Fluoranthene**	**0.50**	**2.19**
129-00-0	**Pyrene**	**0.50**	**1.57**
56-55-3	**Benzo(a)anthracene**	**0.50**	**0.51**
218-01-9	**Chrysene**	**0.50**	**1.09**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**0.60**
207-08-9	Benzo(k)fluoranthene	0.50	< 0.50 U
50-32-8	Benzo(a)pyrene	0.50	< 0.50 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	Benzo(e)pyrene	0.50	< 0.50 U
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**1.17 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	52.3%
d10-2-Methylnaphthalene	42.0%
d14-Dibenzo(a,h)anthracene	56.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: 13NPS_CIAR2-MTW01Z
SAMPLE

Lab Sample ID: AUA2C
LIMS ID: 16-420
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: AUA2-Anchor QEA, LLC
Project: NA
Event: NA
Date Sampled: 01/14/13
Date Received: 12/18/15

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 17:30
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.01 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.29 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.66**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	Fluorene	0.50	< 0.50 U
85-01-8	**Phenanthrene**	**0.50**	**0.66**
120-12-7	Anthracene	0.50	< 0.50 U
206-44-0	**Fluoranthene**	**0.50**	**0.75**
129-00-0	**Pyrene**	**0.50**	**0.58**
56-55-3	Benzo(a)anthracene	0.50	< 0.50 U
218-01-9	Chrysene	0.50	< 0.50 U
205-99-2	Benzo(b)fluoranthene	0.50	< 0.50 U
207-08-9	Benzo(k)fluoranthene	0.50	< 0.50 U
50-32-8	Benzo(a)pyrene	0.50	< 0.50 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	Benzo(e)pyrene	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.50	< 0.50 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	60.3%
d10-2-Methylnaphthalene	51.0%
d14-Dibenzo(a,h)anthracene	66.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Tissue

QC Report No: AUA2-Anchor QEA, LLC
Project:

Client ID	FLN	MNP	DBA	TOT OUT
MB-011416	61.3%	47.0%	65.7%	0
LCS-011416	61.3%	48.0%	64.3%	0
13EB_ME-MTW01Z	52.3%	45.7%	56.0%	0
13EB_ME-MTW01Z DL	64.3%	49.0%	57.7%	0
13CPS_DB-MTW01Z	52.3%	42.0%	56.7%	0
13NPS_CIAR2-MTW01Z	60.3%	51.0%	66.7%	0

	LCS/MB LIMITS (Advisory)	QC LIMITS (Advisory)
(FLN) = d10-Fluoranthene	(30-160)	(30-160)
(MNP) = d10-2-Methylnaphthalene	(30-160)	(30-160)
(DBA) = d14-Dibenzo(a,h)anthracene	(30-160)	(30-160)

Prep Method: TissM
Log Number Range: 16-418 to 16-420

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: LCS-011416
LAB CONTROL SAMPLE

Lab Sample ID: LCS-011416
LIMS ID: 16-418
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: AUA2-Anchor QEA, LLC
Project: NA
Event: NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/14/16
Date Analyzed LCS: 01/22/16 10:57
Instrument/Analyst LCS: NT11/JLW

Sample Amount LCS: 10.00 g-as-rec
Final Extract Volume LCS: 0.50 mL
Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	7.68	15.0	51.2%
2-Methylnaphthalene	7.96	15.0	53.1%
Acenaphthylene	7.38	15.0	49.2%
Acenaphthene	7.76	15.0	51.7%
Fluorene	8.68	15.0	57.9%
Phenanthrene	8.55	15.0	57.0%
Anthracene	8.47	15.0	56.5%
Fluoranthene	9.45	15.0	63.0%
Pyrene	9.67	15.0	64.5%
Benzo(a)anthracene	9.99	15.0	66.6%
Chrysene	9.34	15.0	62.3%
Benzo(b)fluoranthene	9.32	15.0	62.1%
Benzo(k)fluoranthene	8.44 Q	15.0	56.3%
Benzo(a)pyrene	8.44	15.0	56.3%
Indeno(1,2,3-cd)pyrene	9.88	15.0	65.9%
Dibenz(a,h)anthracene	10.2	15.0	68.0%
Benzo(g,h,i)perylene	9.84	15.0	65.6%
Perylene	8.42	15.0	56.1%
Benzo(e)pyrene	8.96	15.0	59.7%
Total Benzofluoranthenes	26.3 Q	45.0	58.4%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	61.3%
d10-2-Methylnaphthalene	48.0%
d14-Dibenzo(a,h)anthracene	64.3%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

APR4MBS1

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Lab File ID: 16012207 Date Extracted: 01/14/16

Instrument ID: NT11 Date Analyzed: 01/22/16

Matrix: SOLID Time Analyzed: 1027

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	APR4LCSS1	APR4LCSS1	16012208	01/22/16
02	SRM 1974C	APR4SRM1	16012209	01/22/16
03	PG-T0-MUS-COC-15	APR4A	16012210	01/22/16
04	PG-SMA2-2-MUS-CO	ATS0A	16012211	01/22/16
05	PG-PJ-1-MUS-COC-	ATS0B	16012212	01/22/16
06	PG-PJ-1-MUS-COC	ATS0BMS	16012213	01/22/16
07	PG-PJ-1-MUS-COC	ATS0BMSD	16012214	01/22/16
08	PG-WS-1-MUS-COC-	ATS0C	16012215	01/22/16
09	PG-GP-1-MUS-COC-	ATS0D	16012216	01/22/16
10	PG-SMA2-5-MUS-CO	ATS0E	16012217	01/22/16
11	PG-SMA2-4-MUS-CO	ATS0F	16012218	01/22/16
12	13EB_ME-MTW01Z	AUA2A	16012219	01/22/16
13	13CPS_DB-MTW01Z	AUA2B	16012220	01/22/16
14	13NPS_CIAR2-MTW0	AUA2C	16012221	01/22/16
15	13EB_ME-MTW01Z	AUA2A,10	16012512	01/25/16
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM

Sample ID: MB-011416
METHOD BLANK

Lab Sample ID: MB-011416
LIMS ID: 16-418
Matrix: Tissue
Data Release Authorized:
Reported: 01/27/16

QC Report No: AUA2-Anchor QEA, LLC
Project: NA
Event: NA
Date Sampled: NA
Date Received: NA

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 10:27
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.00 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: NA

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.50	< 0.50 U
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	Fluorene	0.50	< 0.50 U
85-01-8	Phenanthrene	0.50	< 0.50 U
120-12-7	Anthracene	0.50	< 0.50 U
206-44-0	Fluoranthene	0.50	< 0.50 U
129-00-0	Pyrene	0.50	< 0.50 U
56-55-3	Benzo(a)anthracene	0.50	< 0.50 U
218-01-9	Chrysene	0.50	< 0.50 U
205-99-2	Benzo(b)fluoranthene	0.50	< 0.50 U
207-08-9	Benzo(k)fluoranthene	0.50	< 0.50 U
50-32-8	Benzo(a)pyrene	0.50	< 0.50 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	Benzo(e)pyrene	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.50	< 0.50 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	61.3%
d10-2-Methylnaphthalene	47.0%
d14-Dibenzo(a,h)anthracene	65.7%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

Instrument ID: NT11 Project: PORT GAMBLE CLEAN-UP

DFTPP Injection Date: 12/04/15 DFTPP Injection Time: 0845

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	36.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	50.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.8
275	10.0 - 60.0% of mass 198	29.8
365	Greater than 1.0% of mass 198	3.54
441	0.0 - 24.0% of mass 442	13.4 (16.4)2
442	50.0 - 200.0% of mass 198	81.9
443	15.0 - 24.0% of mass 442	18.6 (22.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LLSIM 250	15120402	12/04/15	0903
02		LLSIM 100	15120403	12/04/15	0933
03		LLSIM 10	15120404	12/04/15	1003
04		LLSIM 50	15120405	12/04/15	1033
05		LLSIM 500	15120406	12/04/15	1103
06		LLSIM 1000	15120407	12/04/15	1133
07		LLSIM SCV 25	15120408	12/04/15	1204
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09					
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FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

Instrument ID: NT11 Project: PORT GAMBLE CLEAN-UP

DFTPP Injection Date: 01/22/16 DFTPP Injection Time: 0848

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.7
68	Less than 2.0% of mass 69	0.2 (0.4)1
69	Mass 69 relative abundance	41.6
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	47.8
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.7
275	10.0 - 60.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	3.32
441	0.0 - 24.0% of mass 442	12.5 (16.3)2
442	50.0 - 200.0% of mass 198	77.1
443	15.0 - 24.0% of mass 442	16.8 (21.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LL SIM ICV	16012205	01/22/16	0905
02		LL SIM MRL	16012206	01/22/16	0957
03	APR4MBS1	APR4MBS1	16012207	01/22/16	1027
04	APR4LCSS1	APR4LCSS1	16012208	01/22/16	1057
05	SRM 1974C	APR4SRM1	16012209	01/22/16	1128
06	PG-T0-MUS-COC-15	APR4A	16012210	01/22/16	1158
07	PG-SMA2-2-MUS-CO	ATS0A	16012211	01/22/16	1228
08	PG-PJ-1-MUS-COC-	ATS0B	16012212	01/22/16	1258
09	PG-PJ-1-MUS-COC	ATS0BMS	16012213	01/22/16	1328
10	PG-PJ-1-MUS-COC	ATS0BMSD	16012214	01/22/16	1359
11	PG-WS-1-MUS-COC-	ATS0C	16012215	01/22/16	1429
12	PG-GP-1-MUS-COC-	ATS0D	16012216	01/22/16	1459
13	PG-SMA2-5-MUS-CO	ATS0E	16012217	01/22/16	1529
14	PG-SMA2-4-MUS-CO	ATS0F	16012218	01/22/16	1559
15	13EB_ME-MTW01Z	AUA2A	16012219	01/22/16	1630
16	13CPS_DB-MTW01Z	AUA2B	16012220	01/22/16	1700
17	13NPS_CIAR2-MTW0	AUA2C	16012221	01/22/16	1730
18		LL SIM CCV	16012222	01/22/16	1800
19					
20					

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

Instrument ID: NT11 Project: PORT GAMBLE CLEAN-UP

DFTPP Injection Date: 01/25/16 DFTPP Injection Time: 0857

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.4
68	Less than 2.0% of mass 69	0.4 (0.8)1
69	Mass 69 relative abundance	45.6
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	50.8
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.7
275	10.0 - 60.0% of mass 198	28.5
365	Greater than 1.0% of mass 198	2.89
441	0.0 - 24.0% of mass 442	12.4 (16.4)2
442	50.0 - 200.0% of mass 198	75.5
443	15.0 - 24.0% of mass 442	16.4 (21.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LLPAH ICV	16012505	01/25/16	0914
02		LLPAH 50	16012507	01/25/16	0959
03		LLPAH 10	16012506	01/25/16	1029
04		LLPAH 500	16012509	01/25/16	1059
05		LLPAH 100	16012508	01/25/16	1129
06		LLPAH 1000	16012510	01/25/16	1200
07		LLPAH SCV	16012511	01/25/16	1230
08	13EB_ME-MTW01Z	AUA2A	16012512	01/25/16	1300
09		LLPAH CCV	16012515	01/25/16	1432
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Calibration Date: 12/04/15

LAB FILE ID: RRF10 =15120404 RRF50 =15120405 RRF100=15120403
RRF250=15120402 RRF500=15120406 RRF1000=15120407

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.199	1.257	1.208	1.138	1.095	1.034	1.155	7.1
2-Methylnaphthalene	0.757	0.822	0.818	0.825	0.787	0.754	0.794	4.1
Acenaphthylene	1.587	1.688	1.646	1.628	1.602	1.535	1.614	3.3
Acenaphthene	1.084	1.136	1.097	1.066	1.041	1.005	1.072	4.3
Dibenzofuran	1.637	1.742	1.685	1.623	1.559	1.437	1.614	6.6
Fluorene	1.159	1.259	1.248	1.231	1.209	1.156	1.210	3.7
Phenanthrene	1.201	1.339	1.261	1.223	1.143	1.063	1.205	7.9
Anthracene	1.014	1.089	1.089	1.118	1.122	1.039	1.078	4.0
Fluoranthene	1.095	1.291	1.250	1.266	1.227	1.130	1.210	6.5
Pyrene	1.570	1.718	1.639	1.574	1.557	1.445	1.584	5.8
Benzo(a)anthracene	1.264	1.424	1.349	1.340	1.338	1.285	1.333	4.2
Chrysene	1.461	1.649	1.511	1.434	1.412	1.314	1.464	7.6
Benzo(b)fluoranthene	1.236	1.449	1.335	1.309	1.428	1.373	1.355	5.8
Benzo(k)fluoranthene	1.404	1.665	1.575	1.601	1.638	1.592	1.579	5.8
Benzo(j)fluoranthene	1.324	1.581	1.430	1.419	1.477	1.400	1.438	6.0
Benzo(a)pyrene	1.122	1.390	1.285	1.305	1.392	1.352	1.308	7.7
Indeno(1,2,3-cd)pyrene	1.070	1.396	1.342	1.372	1.529	1.530	1.373	12.3
Dibenzo(a,h)anthracene	0.794	1.057	1.071	1.111	1.233	1.249	1.086	15.1
Benzo(g,h,i)perylene	1.030	1.235	1.174	1.174	1.272	1.268	1.192	7.6
1-Methylnaphthalene	0.672	0.743	0.744	0.740	0.711	0.681	0.715	4.6
Perylene	1.258	1.475	1.355	1.306	1.390	1.351	1.356	5.5
Benzo(e)pyrene	1.300	1.485	1.371	1.324	1.391	1.346	1.370	4.8
2-Methylnaphthalene-d10	0.706	0.768	0.761	0.766	0.738	0.714	0.742	3.7
Dibenzo(a,h)anthracene-d14	0.593	0.781	0.799	0.816	0.911	0.944	0.807	15.3
Fluoranthene-d10	1.015	1.152	1.114	1.133	1.122	1.062	1.100	4.7

<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: AUA2 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Calibration Date: 01/25/16

LAB FILE ID: RRF10 =16012506 RRF50 =16012507 RRF100=16012508
RRF250=16012505 RRF500=16012509 RRF1000=16012510

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.231	1.209	1.193	0.976	1.069	0.962	1.107	10.9
2-Methylnaphthalene	0.826	0.851	0.843	0.718	0.804	0.732	0.796	7.2
Acenaphthylene	1.824	1.792	1.710	1.472	1.577	1.436	1.635	10.1
Acenaphthene	1.112	1.111	1.086	0.920	1.020	0.942	1.032	8.3
Dibenzofuran	1.764	1.733	1.704	1.401	1.512	1.367	1.580	11.1
Fluorene	1.390	1.356	1.310	1.103	1.213	1.112	1.247	9.9
Phenanthrene	1.287	1.240	1.240	0.971	1.081	0.974	1.132	12.6
Anthracene	1.177	1.187	1.150	0.968	1.083	0.967	1.089	9.3
Fluoranthene	1.262	1.238	1.257	1.031	1.149	1.028	1.161	9.5
Pyrene	1.756	1.708	1.635	1.337	1.485	1.311	1.539	12.3
Benzo(a)anthracene	1.447	1.408	1.385	1.142	1.303	1.176	1.310	9.7
Chrysene	1.494	1.452	1.454	1.153	1.320	1.171	1.341	11.2
Benzo(b)fluoranthene	1.436	1.437	1.408	1.088	1.315	1.216	1.317	10.7
Benzo(k)fluoranthene	1.474	1.385	1.480	1.191	1.421	1.299	1.375	8.2
Benzo(j)fluoranthene	1.355	1.341	1.348	1.049	1.257	1.162	1.252	9.9
Benzo(a)pyrene	1.266	1.248	1.280	1.030	1.247	1.172	1.207	7.8
Indeno(1,2,3-cd)pyrene	1.175	1.225	1.268	1.070	1.352	1.324	1.236	8.4
Dibenzo(a,h)anthracene	0.870	0.960	1.011	0.852	1.086	1.078	0.976	10.3
Benzo(g,h,i)perylene	1.117	1.112	1.132	0.933	1.154	1.115	1.094	7.3
1-Methylnaphthalene	0.766	0.769	0.769	0.641	0.721	0.658	0.721	8.1
Perylene	1.299	1.311	1.312	1.050	1.264	1.177	1.236	8.4
Benzo(e)pyrene	1.372	1.321	1.332	1.048	1.259	1.162	1.249	9.8
2-Methylnaphthalene-d10	0.803	0.806	0.784	0.662	0.743	0.686	0.747	8.2
Dibenzo(a,h)anthracene-d14	0.661	0.750	0.765	0.657	0.824	0.819	0.746	9.8
Fluoranthene-d10	1.196	1.164	1.155	0.941	1.066	0.973	1.082	9.9

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Cont. Calib. Date: 01/22/16

Init. Calib. Date: 12/04/15 Cont. Calib. Time: 0905

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Naphthalene	1.155	1.010	0.700	AVRG	-12.6	
2-Methylnaphthalene	0.794	0.729	0.400	AVRG	-8.2	
Acenaphthylene	1.614	1.497	0.900	AVRG	-7.2	
Acenaphthene	1.072	0.947	0.900	AVRG	-11.7	
Dibenzofuran	1.614	1.441	0.800	AVRG	-10.7	
Fluorene	1.210	1.133	0.900	AVRG	-6.4	
Phenanthrene	1.205	1.029	0.700	AVRG	-14.6	
Anthracene	1.078	1.003	0.700	AVRG	-7.0	
Fluoranthene	1.210	1.061	0.600	AVRG	-12.3	
Pyrene	1.584	1.428	0.600	AVRG	-9.8	
Benzo(a)anthracene	1.333	1.185	0.800	AVRG	-11.1	
Chrysene	1.464	1.224	0.700	AVRG	-16.4	
Benzo(b)fluoranthene	1.355	1.162	0.700	AVRG	-14.2	
Benzo(k)fluoranthene	1.579	1.250	0.700	AVRG	-20.8	<-
Benzo(j)fluoranthene	1.438	1.183	0.010	AVRG	-17.7	
Benzo(a)pyrene	1.308	1.118	0.700	AVRG	-14.5	
Indeno(1,2,3-cd)pyrene	1.373	1.186	0.500	AVRG	-13.6	
Dibenzo(a,h)anthracene	1.086	0.964	0.400	AVRG	-11.2	
Benzo(g,h,i)perylene	1.192	1.035	0.500	AVRG	-13.2	
1-Methylnaphthalene	0.715	0.651	0.010	AVRG	-9.0	
Perylene	1.356	1.117	0.010	AVRG	-17.6	
Benzo(e)pyrene	1.370	1.107	0.010	AVRG	-19.2	
2-Methylnaphthalene-d10	0.742	0.671	0.010	AVRG	-9.6	
Dibenzo(a,h)anthracene-d14	0.807	0.735	0.010	AVRG	-8.9	
Fluoranthene-d10	1.100	0.976	0.010	AVRG	-11.3	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: AUA2 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Cont. Calib. Date: 01/25/16

Init. Calib. Date: 01/25/16 Cont. Calib. Time: 0914

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	1.107	0.976	0.700	AVRG	-11.8
2-Methylnaphthalene	0.796	0.718	0.400	AVRG	-9.8
Acenaphthylene	1.635	1.472	0.900	AVRG	-10.0
Acenaphthene	1.032	0.920	0.900	AVRG	-10.8
Dibenzofuran	1.580	1.401	0.800	AVRG	-11.3
Fluorene	1.247	1.103	0.900	AVRG	-11.5
Phenanthrene	1.132	0.971	0.700	AVRG	-14.2
Anthracene	1.089	0.968	0.700	AVRG	-11.1
Fluoranthene	1.161	1.031	0.600	AVRG	-11.2
Pyrene	1.539	1.337	0.600	AVRG	-13.1
Benzo(a)anthracene	1.310	1.142	0.800	AVRG	-12.8
Chrysene	1.341	1.153	0.700	AVRG	-14.0
Benzo(b)fluoranthene	1.317	1.088	0.700	AVRG	-17.4
Benzo(k)fluoranthene	1.375	1.191	0.700	AVRG	-13.4
Benzo(j)fluoranthene	1.252	1.049	0.010	AVRG	-16.2
Benzo(a)pyrene	1.207	1.030	0.700	AVRG	-14.7
Indeno(1,2,3-cd)pyrene	1.236	1.070	0.500	AVRG	-13.4
Dibenzo(a,h)anthracene	0.976	0.852	0.400	AVRG	-12.7
Benzo(g,h,i)perylene	1.094	0.933	0.500	AVRG	-14.7
1-Methylnaphthalene	0.721	0.641	0.010	AVRG	-11.1
Perylene	1.236	1.050	0.010	AVRG	-15.0
Benzo(e)pyrene	1.249	1.048	0.010	AVRG	-16.1
2-Methylnaphthalene-d10	0.747	0.662	0.010	AVRG	-11.4
Dibenzo(a,h)anthracene-d14	0.746	0.657	0.010	AVRG	-11.9
Fluoranthene-d10	1.082	0.941	0.010	AVRG	-13.0

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 12/04/15

	IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
ICAL MIDPT	327896	6.60	239179	9.60	372253	12.27
UPPER LIMIT	655792		478358		744506	
LOWER LIMIT	163948		119590		186127	
CCAL	337457	6.60	238950	9.60	380348	12.27
UPPER LIMIT		7.10		10.10		12.77
LOWER LIMIT		6.10		9.10		11.77
01	330144	6.60	236381	9.60	360337	12.27
02						
03						
04						
05						
06						
07						
08						
09						
10						
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18						
19						
20						

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 12/04/15

	IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
ICAL MIDPT	294711	17.02	260595	19.84		
UPPER LIMIT	589422		521190			
LOWER LIMIT	147356		130298			
CCAL	298514	17.01	256244	19.84		
UPPER LIMIT		17.51		20.34		
LOWER LIMIT		16.51		19.34		
01	291007	17.01	242244	19.83		
02						
03						
04						
05						
06						
07						
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15						
16						
17						
18						
19						
20						

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 01/22/16

		IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
	ICAL MIDPT	327896	6.60	239179	9.60	372253	12.27
	UPPER LIMIT	655792		478358		744506	
	LOWER LIMIT	163948		119590		186127	
	CCAL	368312	6.73	275119	9.74	442913	12.42
	UPPER LIMIT		7.23		10.24		12.92
	LOWER LIMIT		6.23		9.24		11.92
01		345356	6.74	235311	9.76	378135	12.42
02	APR4MBS1	368895	6.73	251480	9.74	405369	12.42
03	APR4LCSS1	360526	6.73	257556	9.74	412183	12.42
04	SRM 1974C	362258	6.73	249465	9.74	398741	12.42
05	PG-T0-MUS-CO	371890	6.72	259279	9.74	437520	12.42
06	PG-SMA2-2-MU	363469	6.73	256352	9.74	419386	12.42
07	PG-PJ-1-MUS-	374753	6.73	264386	9.74	426020	12.42
08	PG-PJ-1-MUS-	373582	6.73	269039	9.74	428623	12.42
09	PG-PJ-1-MUS-	377287	6.73	271691	9.74	435691	12.42
10	PG-WS-1-MUS-	376882	6.73	268849	9.74	435864	12.42
11	PG-GP-1-MUS-	377268	6.72	268633	9.74	436597	12.41
12	PG-SMA2-5-MU	384886	6.73	273475	9.74	449495	12.42
13	PG-SMA2-4-MU	381586	6.72	270392	9.74	439377	12.42
14	13EB_ME-MTW0	373510	6.73	268987	9.74	440845	12.42
15	13CPS_DB-MTW	370975	6.73	264737	9.74	432287	12.42
16	13NPS_CIAR2-	382765	6.72	270341	9.75	435855	12.42
17							
18							
19							
20							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 01/22/16

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	294711	17.02	260595	19.84		
	UPPER LIMIT	589422		521190			
	LOWER LIMIT	147356		130298			
	CCAL	337848	17.17	324201	20.06		
	UPPER LIMIT		17.67		20.56		
	LOWER LIMIT		16.67		19.56		
01		274122	17.18	249583	20.07		
02	APR4MBS1	295936	17.17	283292	20.06		
03	APR4LCSS1	314530	17.17	306666	20.06		
04	SRM 1974C	300525	17.17	299419	20.06		
05	PG-T0-MUS-CO	299515	17.17	303212	20.06		
06	PG-SMA2-2-MU	310418	17.17	308119	20.06		
07	PG-PJ-1-MUS-	316427	17.17	315181	20.07		
08	PG-PJ-1-MUS-	324379	17.17	323020	20.06		
09	PG-PJ-1-MUS-	325376	17.17	324453	20.06		
10	PG-WS-1-MUS-	322334	17.17	323010	20.06		
11	PG-GP-1-MUS-	322279	17.17	320562	20.06		
12	PG-SMA2-5-MU	339179	17.17	335158	20.06		
13	PG-SMA2-4-MU	325728	17.17	325370	20.06		
14	13EB_ME-MIW0	336414	17.17	339083	20.06		
15	13CPS_DB-MIW	321859	17.17	327843	20.06		
16	13NPS_CIAR2-	323444	17.17	326352	20.06		
17							
18							
19							
20							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: AUA2 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 01/25/16

		IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
	ICAL MIDPT	356051	6.71	264524	9.71	444949	12.38
	UPPER LIMIT	712102		529048		889898	
	LOWER LIMIT	178026		132262		222475	
	CCAL	312072	6.71	248822	9.71	422923	12.38
	UPPER LIMIT		7.21		10.21		12.88
	LOWER LIMIT		6.21		9.21		11.88
01		297375	6.71	218000	9.71	349233	12.38
02	13EB_ME-MTW0	301571	6.70	210363	9.71	345651	12.38
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: AUA2 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 01/25/16

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	343139	17.12	319277	20.01		
	UPPER LIMIT	686278		638554			
	LOWER LIMIT	171570		159639			
	CCAL	330299	17.12	314395	20.00		
	UPPER LIMIT		17.62		20.50		
	LOWER LIMIT		16.62		19.50		
01		282390	17.12	252294	20.00		
02	13EB_ME-MTW0	257794	17.12	243887	20.00		
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

Percent Lipids

ARI Job ID: AUA2

ANALYTICAL RESOURCES INCORPORATED

LIPIDS ANALYSIS DATA SHEET
Percent Lipids by Method Bligh&Dyer

Data Release Authorized:
Reported: 01/20/16
Date Received: 12/18/15
Page 1 of 1

QC Report No: AUA2-Anchor QEA, LLC
Project:

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	RL	Result
13EB_ME-MTW01Z AUA2A 16-418	01/07/13	Tissue	01/14/16	0.0010	1.32 %
13CPS_DB-MTW01Z AUA2B 16-419	01/10/13	Tissue	01/14/16	0.0009	1.39 %
13NPS_CIAR2-MTW01Z AUA2C 16-420	01/14/13	Tissue	01/14/16	0.0010	1.29 %
Method Blank			01/14/16	0.0010	0.0700 %

Results Are On A Wet Weight Basis

RL-Analytical reporting limit
U-Undetected at reported detection limit

Percent Lipids-lipid
Data By: Jim Hawk
Created: 1/20/16

Worklist: 5469
Analyst: TH
Comments:

SA (g)	Tare (g)	Final (g)	Aliq Vol (uL)	Ext Vol (mL)	Lipids ( )	Qual	RPD (%)
Blank 10.00	1.163	1.170	1000.	1.0	0.0700 0.0010		
AUA2A 10.39	1.162	1.299	1000.	1.0	1.32 0.0010		
AUA2B 10.55	1.164	1.311	1000.	1.0	1.39 0.0009		
AUA2C 10.30	1.160	1.293	1000.	1.0	1.29 0.0010		

Incorporated
Analytical Chemists and
Consultants

(Modified Bligh/Dyer) % Lipids – Tissue
Modified TissueMizer (3550C) (SOP # 340S)

Preparation Test % Lipid Test # 1
ARI JOB No(s) ATSΦ/APR4/AUA2

Batch set up by: In-House SP

Jar #	ARI Sample ID	Original Extracted Weight (wet wt)	Original Volume (FEV) (mL)	(split aliquot) Y/N	Volume Taken (µL)	Tare Weight (g)	Tare+Sample Weight (g)	Comments	Verify Client ID
	ATSΦ MBT	10.00 g	1 mL	(Y/N)	(1,000 µL)	1.1628	1.1705		
1	A	10.23	1 mL	(Y/N)	(1,000 µL)	1.1603	1.2738		
1	Adup	10.75	1 mL	(Y/N)	(1,000 µL)	1.1649	1.2869		TH 1/14/16
1	Atrip	10.21	1 mL	(Y/N)	(1,000 µL)	1.1636	1.2837		
1	B	10.73	1 mL	(Y/N)	(1,000 µL)	1.1608	1.2660		Analyst/Date
1	C	10.41	1 mL	(Y/N)	(1,000 µL)	1.1602	1.2856		KD 80-85°C 1 2 3 4 5 6
1	D	10.21	1 mL	(Y/N)	(1,000 µL)	1.1618	1.2739		
1	E	10.22	1 mL	(Y/N)	(1,000 µL)	1.1663	1.2747		RMH 1-18-16
1	F	10.37	1 mL	(Y/N)	(1,000 µL)	1.1673	1.2626		
1	APR4 A	10.28	1 mL	(Y/N)	(1,000 µL)	1.1606 41 SP 1/19/16	1.2957		
1	AUA2 A	10.39	1 mL	(Y/N)	(1,000 µL)	1.1628 15 SP 1/19/16	1.2992		
1	B	10.55	1 mL	(Y/N)	(1,000 µL)	1.1636	1.3107		
1	C	10.30	1 mL	(Y/N)	(1,000 µL)	1.1558	1.2926		Analyst/Date
			mL	(Y/N)	(µL)				TurboVap 1 2 3
			mL	(Y/N)	(µL)				SP 1/19/16
			mL	(Y/N)	(µL)				
			mL	(Y/N)	(µL)				
			mL	(Y/N)	(µL)				
			mL	(Y/N)	(µL)			SP 1/20/16	
Analyst/Date	TH 1/14/16					SP 1/19/16	SP 1/20/16	Reviewed by/Date SP 1/20/16	Analyst/Date
Balance ID:	B139298002					Analytical Balance ID:		B146454145	

SPECIAL INSTRUCTIONS: 1. Weigh into 250mL Centrifuge bottles. 2. Use 10 g neutral Sodium Sulfate for the blanks. 3. Add 1:1 DCM/Acetone. 4. Add Sodium Sulfate to samples just prior to tissuemizzing. 5. Tissuemize (2X) with 1:1 DCM/Acetone + (1X) DCM only. 6. Collect in 500mL flask + Lg Funnel with glasswool (NO Sodium Sulfate). 7. KD (Normal drying column) at 80-85°C. 8. Turbovap to 1mL. 9. Record weights of empty tins from Analytical Balance in Tare Weight column. 10. Transfer the 1mL extract into the empty tins. 11. Dry extracts in tins under hood for a minimum of 2 hours. 12. Store extracts in a desiccator over night. 13. Re-weigh tins with Analytical Balance. 14. Record weights in Tare+Sample Weight column. 15. %Lipids are calculated by entering on LIMS.

* NOTE: GENERALLY A 10:1 RATIO IS THE TARGET (10g sample To 1mL FEV)

Freeze Y (N)

Reagent and Solutions Identification

(Modified Bligh/Dyer) % Lipids – Tissue
Modified TissueMizer (3550C) (SOP # 340S)

ARI JOB No(s) ATS4/APR4/AUA2

(Modified Bligh/Dyer) % Lipids Tissue:	Analyst/Date
TissueMizing Station: Anhydrous Sodium Sulfate: (I# + jar date) D445348 1:1 Methylene Chloride/Acetone: (H#) E444448 Methylene Chloride: (I#) E444442 Neutral Glasswool: (I#) D443978	TissueMize CT 1/15/16 TJC
KD Station: Neutral Glasswool: (I#) Anhydrous Sodium Sulfate: (I# + jar date) Methylene Chloride: (I#) E000042	KD RMH 1-18-16
Vialing Station: Methylene Chloride: (I#) E000042	Vialing SP

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: AUA2

Client ID: Anchor QEA, LLC

Batch ID:

Parameter: % Lipids

Client Project:

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	9 1/21/16

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: AUA2

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

Miscellaneous
Water/Soil/Sed/Tissue/Other
Separatory Funnel (3510C)/Liq-Liq (3520C)
Sonication (3550C)/Microwave (3546)
TissueMize (Modified 3550C)

Analysis Low level/ SimPAH

Preparation Test Misc # 1
ARI Job No(s) APR4/ ATSØ/ AUA2
Batch # _____ Batch set up by SP

EPH Aromatic LLDCM

Bottle #	ARI Sample I.D.	Weight ~~Or Volume~~ Extracted	~~Sonic Horn ID + Chk~~	(REQ/ ~~Opt~~) GPC (Y) N 1:1 (Low Level column)	(REQ/ Opt) Acid Clean Y/N	(REQ/ Opt) Sulfur Clean Y/N	(REQ/ Opt) ~~SPE~~ Clean (Y) N 1:1	Final Effective Volume	Vol to Lab	Comments
	APR4 BLK	10.00 g		↓			↓	Ø.5mL	Ø.5mL	
	↓ BS	10.00g						↓	↓	
	BS Dup									
	MRL Check									
1/14/16	APR4 SRM	10.ØØ								SRM 1974C
1	1 A	10.Ø2								
1	ATSØ A	10.Ø4								
1	B	10.Ø1								
1	BMS	10.Ø1								
1	BMSD	10.ØØ								
1	C	10.Ø4								
1	D	10.Ø3								
1	E	10.Ø5								
1	↓ F	10.Ø4								
1	AUA2 A	10.ØØ								
1	B	10.Ø2								
1	↓ C	10.Ø1		↓			↓	↓	↓	
									SP 1/21/16	
Analyst/Date	VW Ø1/14/16			GM 1/19/16			SP 1/20/16	SP 1/21/16	SP 1/21/16	Reviewed by/Date SP 1/21/16

Verify Client ID
VW Ø1/14/16
Analyst/Date

Pre-GPC KD
(1) 2 3 4 5 6
~~50~~ °C
~~Exchange to Hex?~~
Analyst/Date 1/15/16

TurboVap
Pre-GPC
1 2 3 (4) 5
GM 1/19/16
Analyst/Date

Post GPC Ø1/24/16
KD 1 2 3 4 5 6
~~100~~ °C
Exchange to Hex?
Analyst/Date

TurboVap
Post-GPC
(1) 2 3 4 5
SP 1/20/16
Analyst/Date

TurboVap
Pre-Cleanups
(1) 2 3 4 5
SP 1/20/16
Analyst/Date

TurboVap
Post-Cleanups
1 2 3 4 5 (00)
SP 1/21/16
Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Low level Surrogate SimPAH	I (D045238)	1.5/7.5µg/mL	1ØØ µL	11/11/16	CT	VW
Spike	( )		µL			
Spike	( )		µL			
Low level Spike SimPAH	18 (D044411)	1.5/7.5µg/mL	1ØØ µL	11/11/16	CT	VW
MRL Spike	( )		µL			
Extraction Time: 16.5Ø	Liq/Liq Start:	Liq/Liq Stop:		Balance ID: B13929-34Ø2		

SPECIAL INSTRUCTIONS: (2+) 1:1 LL DCM/Acetone
(1x) LLDCM only
KD = LLDCM!
GPC = LLDCM!
VIALER = LLPCM!

3057F

Revision 07
06/23/15

AUA2 : 00040

Organic Extractions
Reagent and Solutions Identification

Analysis: LL-SimPNA
Method: _____

ARI Job No(s) APR4, A+5Ø

Soil/Sediment/Solid/Tissue/Other:	Analyst/Date
Sonication/Microwave/Tissuemize Station:	Sonication/Microwave /Tissuemize
Neutral Sodium Sulfate: (D66538)	01/15/16
Pre-deactivated Sodium Sulfate: (N/A)	
~~Neutral Glasswool:~~ (D663978)	
Pre-deactivated Glasswool: (NA)	
1:1 Hexane/Acetone: (NA)	
80:20 Hexane/Acetone: (NA)	
1:1 DCM/Acetone: (E0Ø0167)	
80:20 DCM/Acetone: (N/A)	
Hexane: (N/A)	
DCM: (DØØ4497)	
Other: ( )	
Other: ( )	
Pre-GPC KD Station:	Pre-GPC KD
~~Hexane:~~ ( )	RH
DCM: (DØØ4685)	1/15/16
~~Neutral Sodium Sulfate:~~ ( )	
~~Pre-deactivated Sodium Sulfate:~~ ( )	
~~Neutral Glasswool:~~ ( )	
~~Pre-deactivated Glasswool:~~ ( )	
Other: ( )	
Other: ( )	
GPC Filter Prep:	GPC Filter Prep
DCM: (DØØ4685)	WW
Other: ( )	1/18/16
Other: ( )	
GPC Station:	GPC
Acetone: (DØØ3482)	GP
DCM: (DØØ4685)	1/18/16
1:1 DCM/Acetone: ( )	
Other: ( )	
Other: ( )	
Post GPC KD Station:	Post GPC KD
DCM: (DØØ4635)	ME/CT
Hexane: (DØØ3Ø45)	Ø1/2Ø/16
Other: ( )	
Other: ( )	
Vialing Station:	Vialing SP
Hexane: (DØØ5345)	1/20/16
DCM: (DØØ4685) 60:40 Pent/DCM EØØØ235	
Concentrated Sulfuric Acid: ( )	
Ethyl Acetate: ( )	
Tetrabutylammonium hydrogensulfate (TBAS): ( )	
Sodium Sulfite: ( )	
Copper: ( )	
Silica Gel (SPE) Darts: ( )	
0% Silica Gel: (DØØ4343)	
Alumina: ( )	
HexMgBr: ( )	
Other: Glass wool (DØØ1829)	
Other: Sodium Sulfate DØØ5373 ( )	SP 1/21/16

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: AUA2 Client ID: Anchor QEA, LLC

Batch ID:

Parameter: Low level SimPNA Client Project:

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

SIM PAH Raw Data
Initial Calibration

ARI Job ID: AUA2

Analysis	Matrix	Method
8270D-SIM PAH (0.5 ug/kg)	Solid	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code	YES	JLW	12/05/2015
	Comments: *YL00008*			
2	DFTPP Tune met criteria	YES	JLW	12/05/2015
3	DDT breakdown <20%	YES	JLW	12/05/2015
4	Peak Tailing factor <= 2%	NO	JLW	12/05/2015
	Comments: *Benzidine TD @ 2.11*			
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	12/05/2015
6	NO ICAL Q Flag applied	YES	JLW	12/05/2015
7	Manual integrations include before/after pictures	NA	JLW	12/05/2015
8	Spectral Library matches updated	YES	JLW	12/05/2015
9	Internal Standard areas within 50-200% from reference	YES	JLW	12/05/2015
10	Minimum response factors met			12/30/1899
11	All SCV within +/- 20% (DOD)	YES	JLW	12/05/2015
12	All SCV within +/- 30%	YES	JLW	12/05/2015
13	NO Linear or Quadratic fits used	YES	JLW	12/05/2015
14	NO Calibration points dropped	YES	JLW	12/05/2015
15	Additional notes	NA	JLW	12/05/2015
16	Reviewer approval (Reviewer)	YES	BB	12/07/2015

* = Indicates Automated Response from Element DataSyst

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2015 09:03
End Cal Date : 04-DEC-2015 11:33
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Last Edit : 05-Dec-2015 09:24 jonathonw
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20151204.b\15120404.D
Level 2: \\target\share\chem3\nt11.i\20151204.b\15120405.D
Level 3: \\target\share\chem3\nt11.i\20151204.b\15120403.D
Level 4: \\target\share\chem3\nt11.i\20151204.b\15120402.D
Level 5: \\target\share\chem3\nt11.i\20151204.b\15120406.D
Level 6: \\target\share\chem3\nt11.i\20151204.b\15120407.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
5 Naphthalene	1.19875	1.25660	1.20859	1.13779	1.09546	1.03421	1.15523	7.090
7 2-Methylnaphthalene	0.75696	0.82162	0.81758	0.82518	0.78721	0.75401	0.79376	4.105
8 1-Methylnaphthalene	0.67221	0.74285	0.74457	0.74059	0.71073	0.68104	0.71533	4.554
10 Acenaphthylene	1.58688	1.68774	1.64577	1.62759	1.60202	1.53483	1.61414	3.252
12 Acenaphthene	1.08363	1.13588	1.09716	1.06578	1.04086	1.00481	1.07135	4.251
14 Dibenzofuran	1.63702	1.74172	1.68518	1.62325	1.55902	1.43742	1.61394	6.569
15 Fluorene	1.15912	1.25912	1.24842	1.23125	1.20885	1.15567	1.21040	3.673
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.20070	1.33868	1.26117	1.22278	1.14299	1.06348	1.20497	7.894
20 Anthracene	1.01417	1.08937	1.08864	1.11858	1.12165	1.03900	1.07857	4.018
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.09490	1.29137	1.25014	1.26562	1.22706	1.12956	1.20977	6.544
25 Pyrene	1.56990	1.71816	1.63928	1.57402	1.55717	1.44465	1.58387	5.751
28 Benzo(a)anthracene	1.26389	1.42412	1.34869	1.34036	1.33833	1.28529	1.33345	4.200
30 Chrysene	1.46075	1.64931	1.51090	1.43415	1.41191	1.31399	1.46350	7.649
44 Benzo(b)fluoranthene	1.23590	1.44922	1.33506	1.30908	1.42782	1.37318	1.35504	5.830
45 Benzo(k)fluoranthene	1.40405	1.66492	1.57480	1.60115	1.63773	1.59156	1.57904	5.812
46 Benzo(j)fluoranthene	1.32355	1.58148	1.42960	1.41908	1.47673	1.39992	1.43839	5.986
34 Benzo(a)pyrene	1.12243	1.39016	1.28482	1.30477	1.39200	1.35226	1.30774	7.704
37 Indeno(1,2,3-cd)pyrene	1.07019	1.39573	1.34204	1.37226	1.52877	1.52953	1.37309	12.270
38 Dibenzo(a,h)anthracene	0.79381	1.05747	1.07068	1.11092	1.23311	1.24877	1.08579	15.143
39 Benzo(g,h,i)perylene	1.03016	1.23486	1.17375	1.17405	1.27154	1.26755	1.19199	7.571
47 Perylene	1.25753	1.47517	1.35486	1.30583	1.39016	1.35136	1.35582	5.480
48 Benzo(e)pyrene	1.29965	1.48474	1.37096	1.32360	1.39138	1.34634	1.36945	4.764
$ 6 2-Methylnaphthalene-d10	0.70562	0.76809	0.76144	0.76607	0.73856	0.71434	0.74235	3.683
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	1.01495	1.15239	1.11432	1.13346	1.12157	1.06256	1.09988	4.666

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2015 09:03
End Cal Date : 04-DEC-2015 11:33
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Last Edit : 05-Dec-2015 09:24 jonathonw
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
$ 36 Dibenzo(a,h)anthracene-d14	0.59288	0.78076	0.79874	0.81630	0.91118	0.94354	0.80723	15.292

Analytical Resources, Incorporated
Analytical Chemists and Consultants

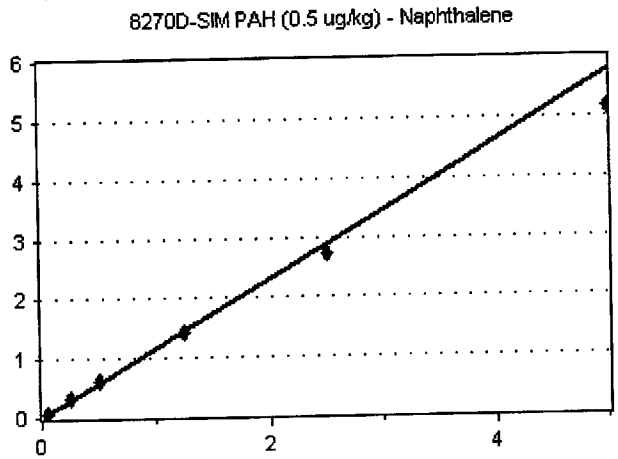
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Naphthalene

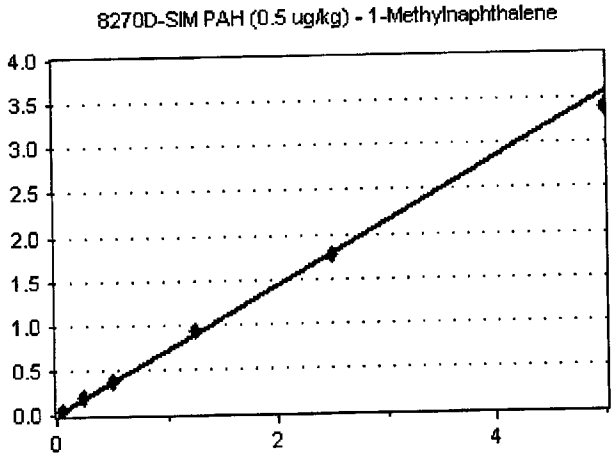


Average RF

RF RSD: 7.089665

[Conc] = 1.155235 * [Response]

1-Methylnaphthalene



Average RF

RF RSD: 4.554497

[Conc] = 0.7153312 * [Response]

Printed: 12/5/2015 10:41:13AM

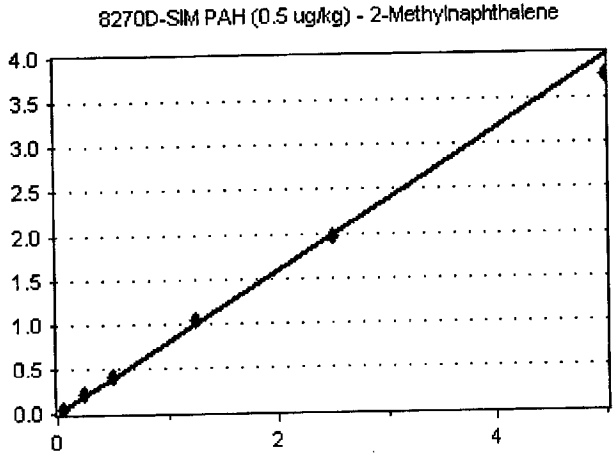
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene

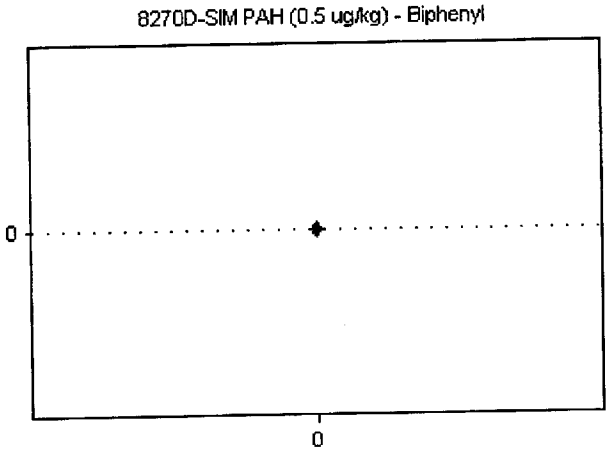


Average RF

RF RSD: 4.104786

[Conc] = 0.7937607 * [Response]

Biphenyl



Average RF

RF RSD:

[Conc] = * [Response]

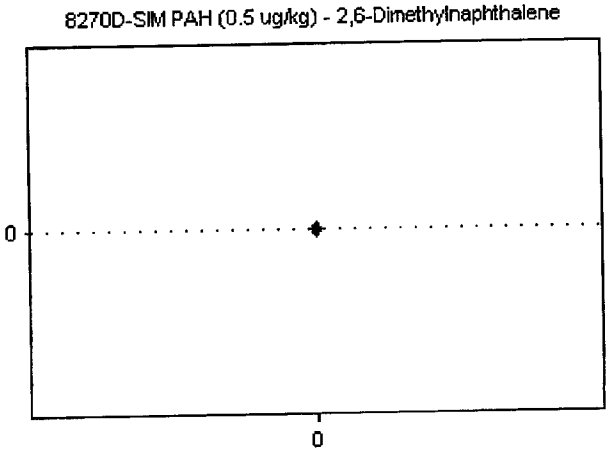
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2,6-Dimethylnaphthalene

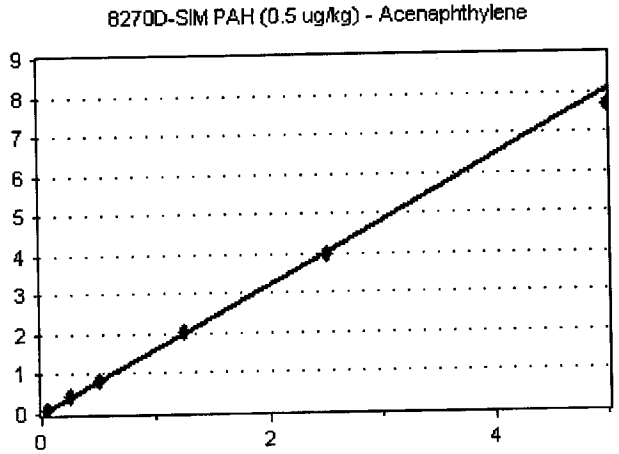


Average RF

RF RSD:

[Conc] = * [Response]

Acenaphthylene



Average RF

RF RSD: 3.252344

[Conc] = 1.614139 * [Response]

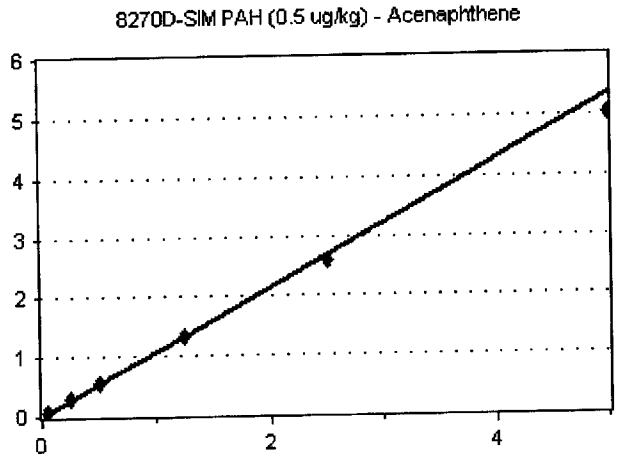
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Acenaphthene

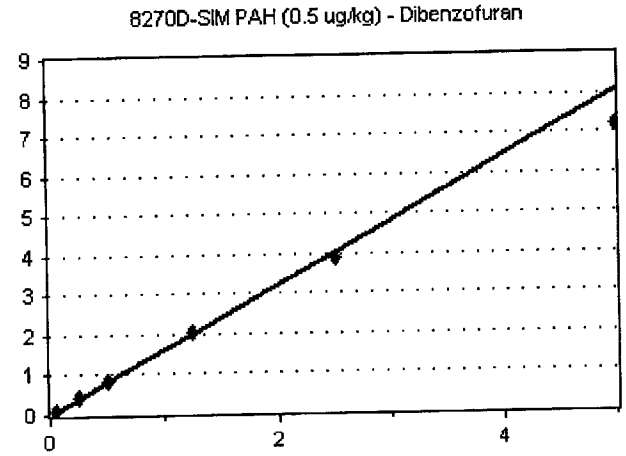


Average RF

RF RSD: 4.250741

[Conc] = 1.071353 * [Response]

Dibenzofuran



Average RF

RF RSD: 6.568803

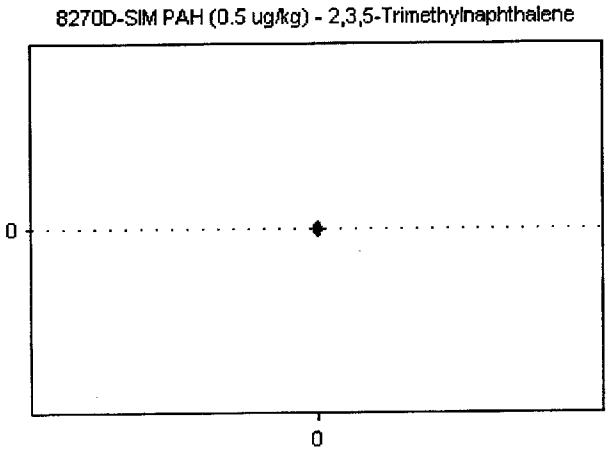
[Conc] = 1.613935 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2,3,5-Trimethylnaphthalene

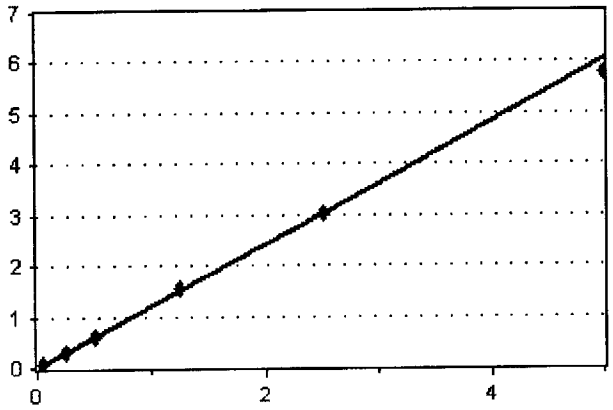


Average RF

RF RSD:

[Conc] = * [Response]

Fluorene



Average RF

RF RSD: 3.672642

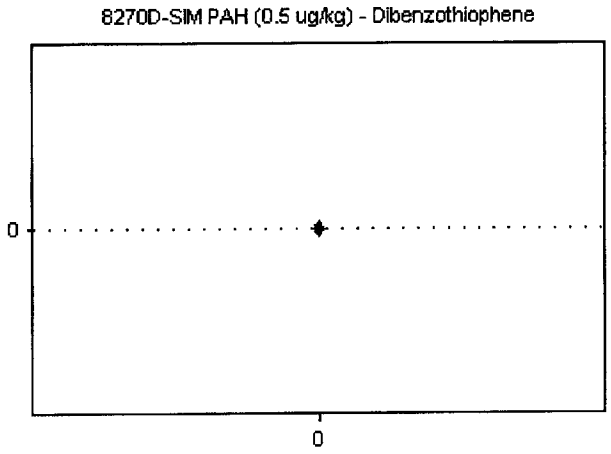
[Conc] = 1.210404 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

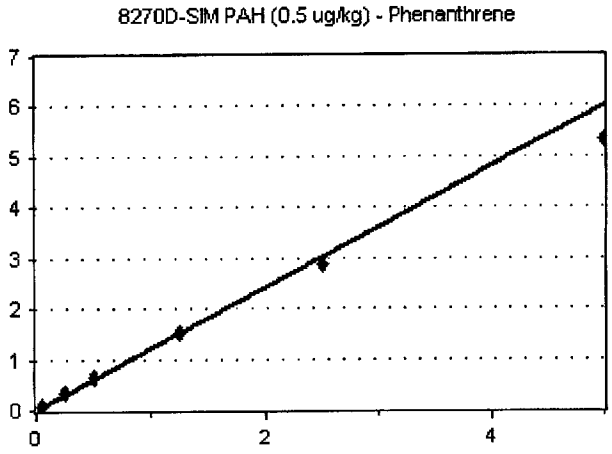
8270D-SIM PAH (0.5 ug/k

Dibenzothiophene



Average RF
RF RSD:
[Conc] = * [Response]

Phenanthrene



Average RF
RF RSD: 7.893657
[Conc] = 1.204967 * [Response]

Printed: 12/5/2015 10:41:13AM

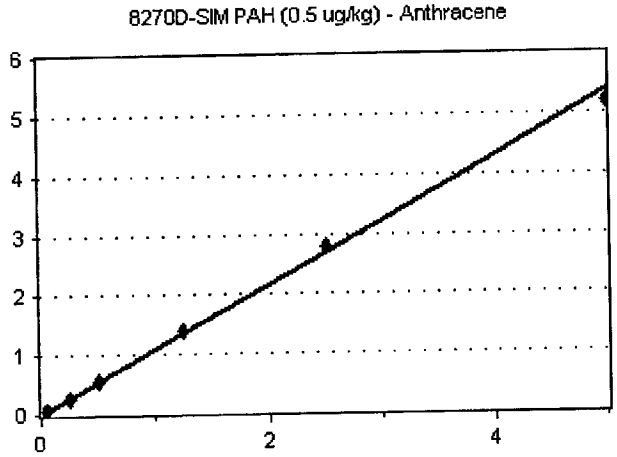
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Anthracene

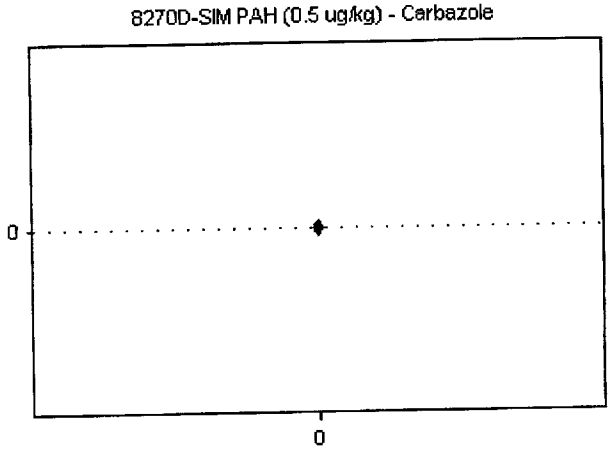


Average RF

RF RSD: 4.017562

[Conc] = 1.078569 * [Response]

Carbazole



Average RF

RF RSD:

[Conc] = * [Response]

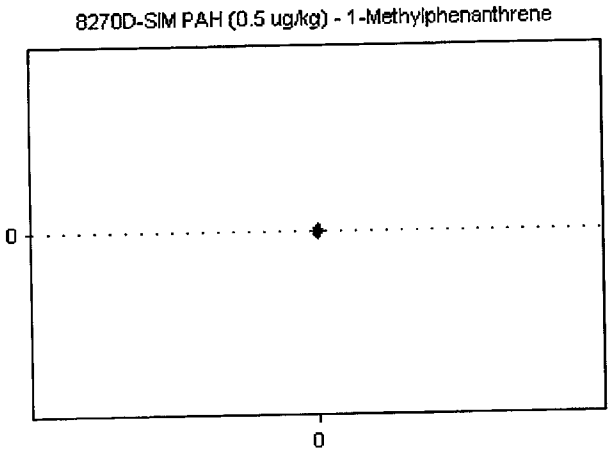
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

1-Methylphenanthrene

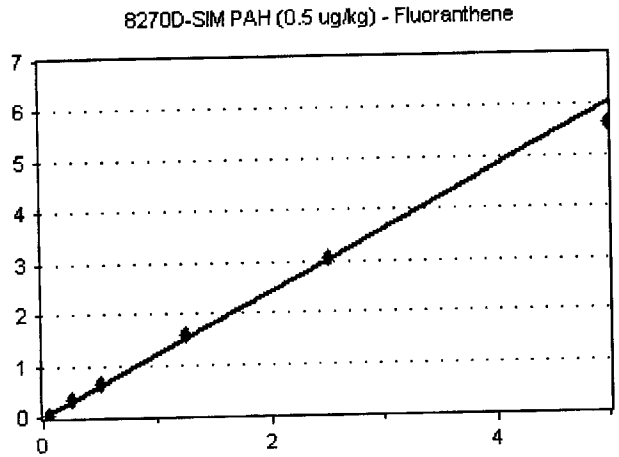


Average RF

RF RSD:

[Conc] = * [Response]

Fluoranthene



Average RF

RF RSD: 6.543763

[Conc] = 1.209772 * [Response]

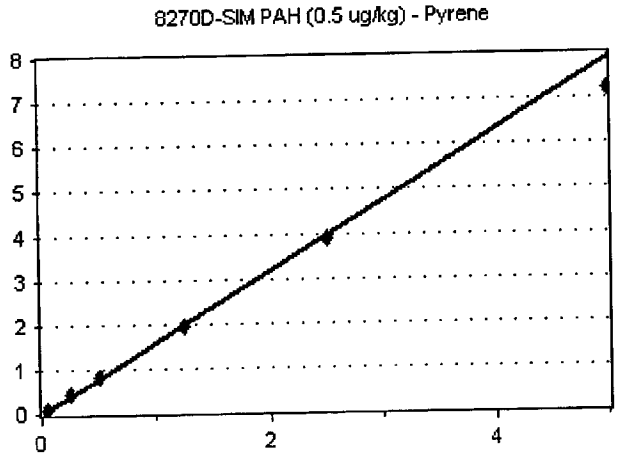
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Pyrene

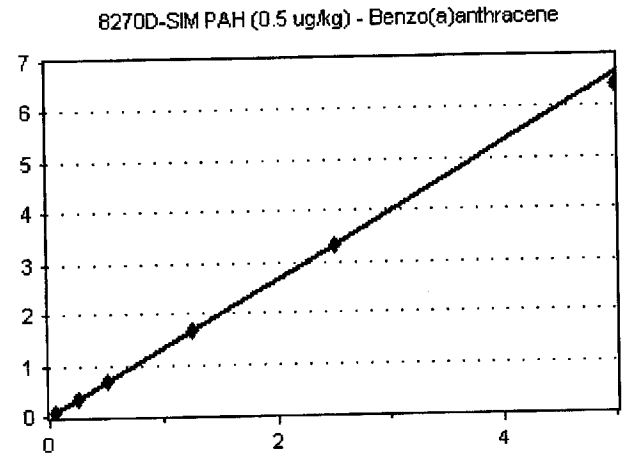


Average RF

RF RSD: 5.75149

[Conc] = 1.583866 * [Response]

Benzo(a)anthracene



Average RF

RF RSD: 4.200089

[Conc] = 1.333447 * [Response]

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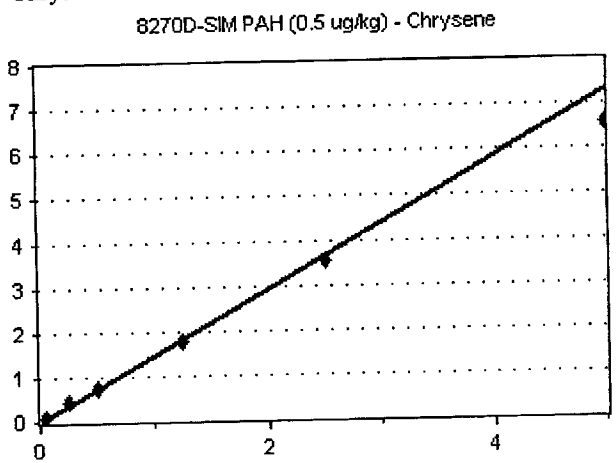
Analytical Chemists and Consultants

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**04-Dec-2015 08:45 By JLW**
Calibration ID:	**YL00008**	**Last Edit Date:**	**05-Dec-2015 10:30 By JLW**

8270D-SIM PAH (0.5 ug/k

Chrysene

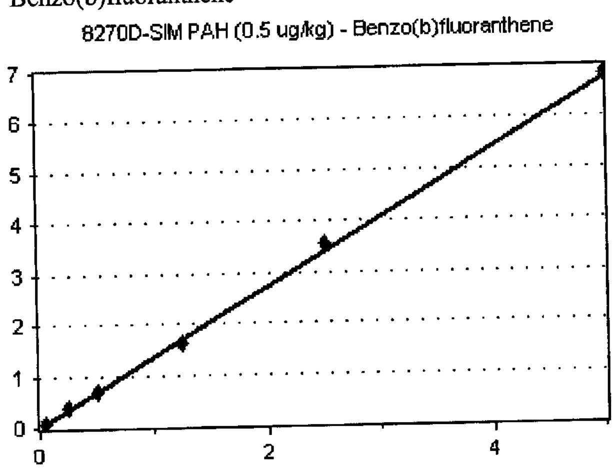


Average RF

RF RSD: 7.648974

[Conc] = 1.463504 * [Response]

Benzo(b)fluoranthene



Average RF

RF RSD: 5.829888

[Conc] = 1.355043 * [Response]

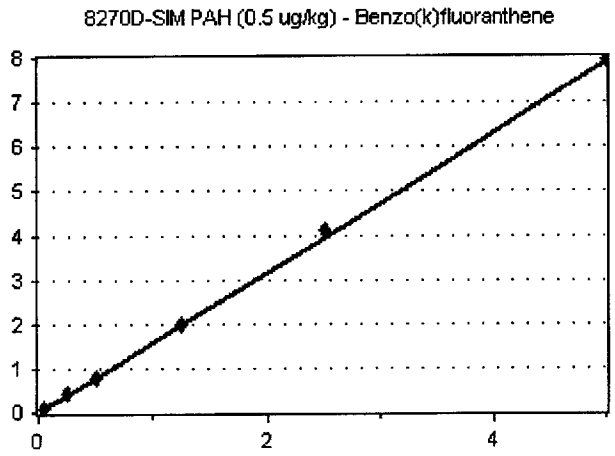
Printed: 12/5/2015 10:41:13AM

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Benzo(k)fluoranthene

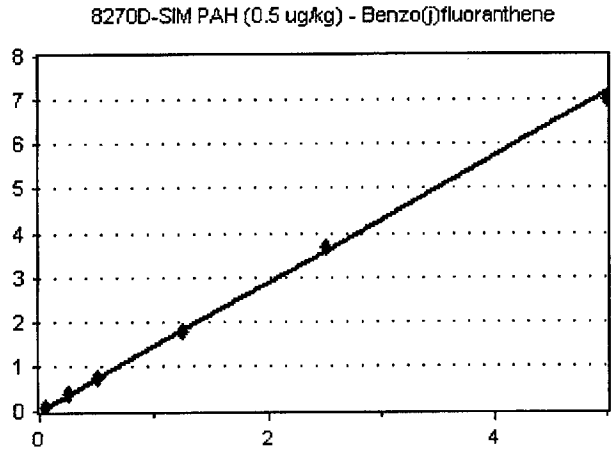


Average RF

RF RSD: 5.811618

[Conc] = 1.579036 * [Response]

Benzo(j)fluoranthene



Average RF

RF RSD: 5.985693

[Conc] = 1.438395 * [Response]

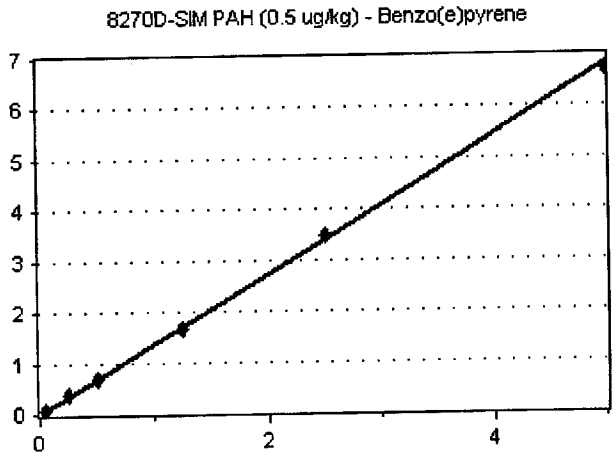
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Benzo(e)pyrene

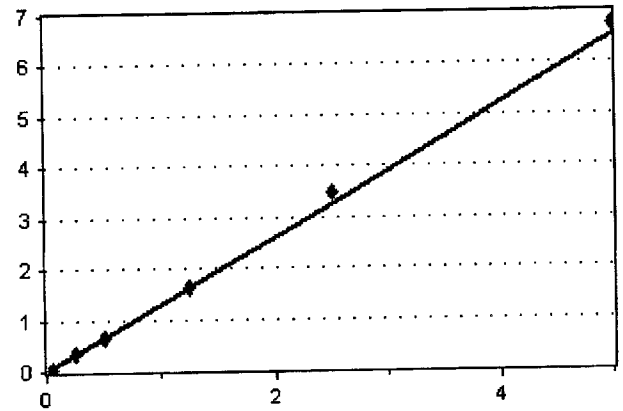


Average RF

RF RSD: 4.764213

[Conc] = 1.369446 * [Response]

Benzo(a)pyrene



Average RF

RF RSD: 7.703707

[Conc] = 1.307741 * [Response]

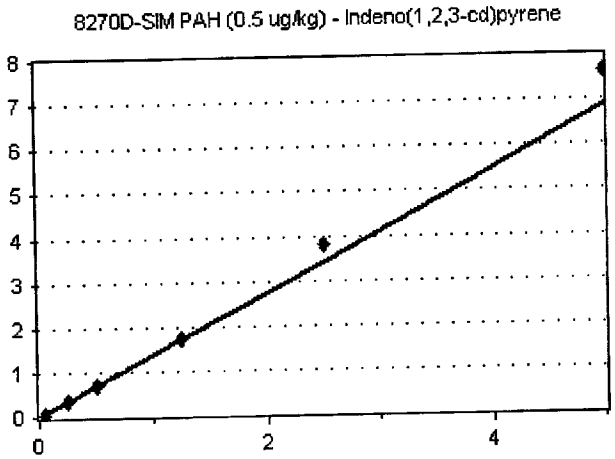
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Indeno(1,2,3-cd)pyrene

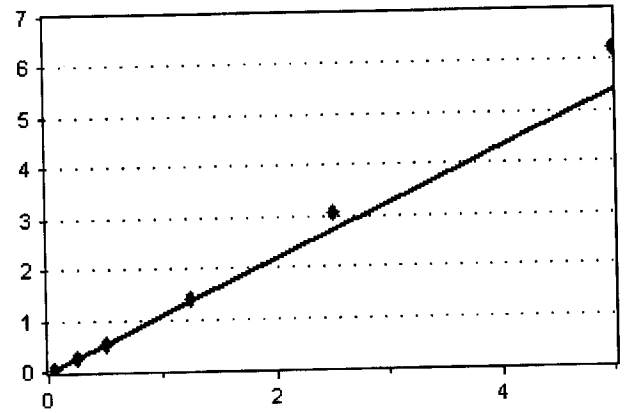


Average RF

RF RSD: 12.27039

[Conc] = 1.373086 * [Response]

Dibenzo(a,h)anthracene



Average RF

RF RSD: 15.14332

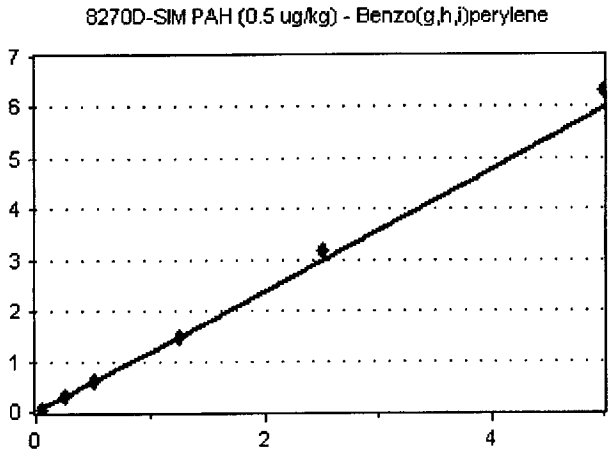
[Conc] = 1.085794 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Benzo(g,h,i)perylene

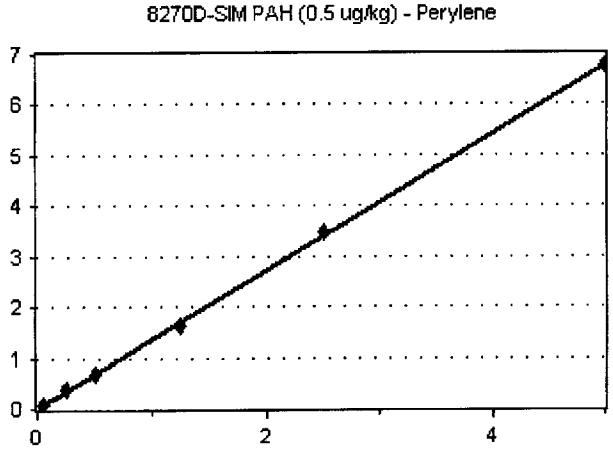


Average RF

RF RSD: 7.570849

[Conc] = 1.191986 * [Response]

Perylene



Average RF

RF RSD: 5.480223

[Conc] = 1.355818 * [Response]

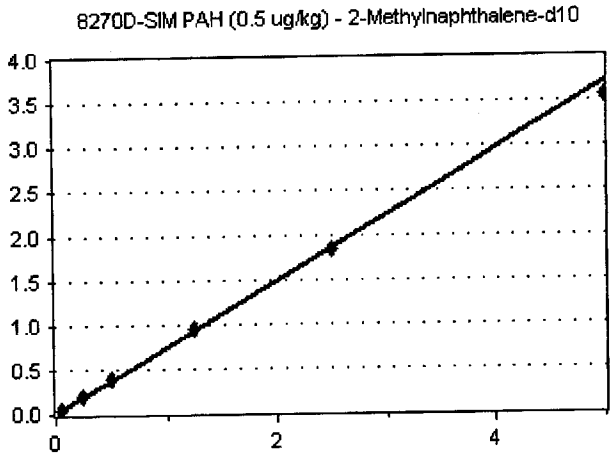
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene-d10

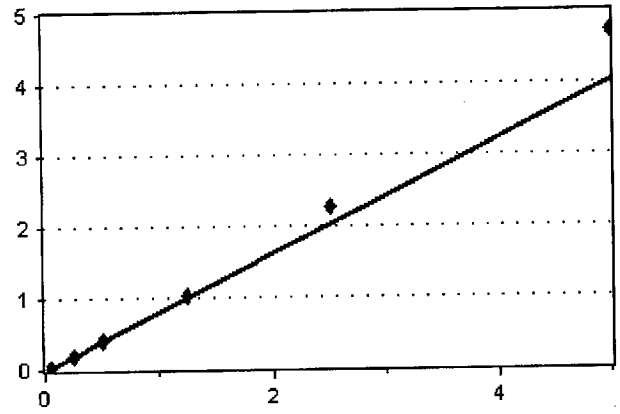


Average RF

RF RSD: 3.68313

[Conc] = 0.7423531 * [Response]

Dibenzo[a,h]anthracene-d14



Average RF

RF RSD: 15.29202

[Conc] = 0.8072325 * [Response]

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Analytical Chemists and Consultants

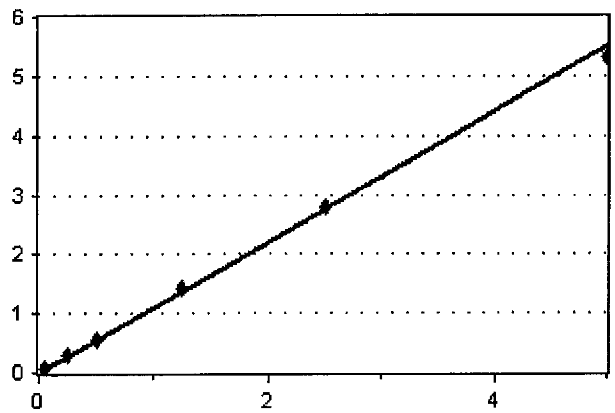
Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**04-Dec-2015 08:45 By JLW**
Calibration ID:	**YL00008**	**Last Edit Date:**	**05-Dec-2015 10:30 By JLW**

8270D-SIM PAH (0.5 ug/k

Fluoranthene-d10

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



Average RF

RF RSD: 4.666284

[Conc] = 1.099877 * [Response]

Naphthalene-d8

Average RF

RF RSD:

[Conc] = * [Response]

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20151204.b

ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 04-DEC-2015

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0845	15120401.D	TUNE 10		1	NO MANUAL INTEGRATION
0903	15120402.D	LLSIM 250		1	NO MANUAL INTEGRATION
0933	15120403.D	LLSIM 100		1	NO MANUAL INTEGRATION
1003	15120404.D	LLSIM 10		1	NO MANUAL INTEGRATION
1033	15120405.D	LLSIM 50		1	NO MANUAL INTEGRATION
1103	15120406.D	LLSIM 500		1	NO MANUAL INTEGRATION
1133	15120407.D	LLSIM 1000		1	NO MANUAL INTEGRATION
1204	15120408.D	LLSIM SCV 250		1	NO MANUAL INTEGRATION

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20151204.b

	Time	Filename	LabID	ClientId	DF									
1	0845	15120401.D	TUNE 10		1	NO ISTDS FOUND								
2	0903	15120402.D	LLSIM 250		1	6.60	327896	9.60	239179	12.27	372253	17.02	294711	19.84	260595
3	0933	15120403.D	LLSIM 100		1	6.60	322094	9.60	228988	12.27	364343	17.02	276576	19.84	245162
4	1003	15120404.D	LLSIM 10		1	6.60	325673	9.60	218580	12.27	358974	17.01	262207	19.84	229323
5	1033	15120405.D	LLSIM 50		1	6.60	322810	9.60	219192	12.27	354307	17.01	262604	19.84	229726
6	1103	15120406.D	LLSIM 500		1	6.60	340768	9.60	241553	12.27	382017	17.01	296788	19.84	253397
7	1133	15120407.D	LLSIM 1000		1	6.60	337457	9.60	238950	12.27	380348	17.01	298514	19.84	256244
8	1204	15120408.D	LLSIM SCV 250		1	6.60	330144	9.60	236381	12.27	360337	17.01	291007	19.83	242244

Report Date : 05-Dec-2015 10:32

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20151204.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	15120402	15120403	15120404	15120405	15120406	15120407
INJ.DATE:	04-DEC-2015	04-DEC-2015	04-DEC-2015	04-DEC-2015	04-DEC-2015	04-DEC-2015
INJ.TIME:	09:03	09:33	10:03	10:33	11:03	11:33

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	6.598	6.597	6.598	6.598	6.598	6.598	6.598	6.348-6.848	6.598	0.000
	5 Naphthalene	6.640	6.629	6.629	6.629	6.629	6.629	6.629	6.379-6.879	6.631	0.004
$	6 2-Methylnaphthalene-d1	7.575	7.575	7.575	7.575	7.575	7.575	7.575	7.325-7.825	7.575	0.000
	7 2-Methylnaphthalene	7.638	7.638	7.638	7.627	7.627	7.627	7.627	7.377-7.877	7.632	0.006
	8 1-Methylnaphthalene	7.890	7.890	7.890	7.890	7.890	7.890	7.890	7.640-8.140	7.890	0.000
	10 Acenaphthylene	9.446	9.446	9.446	9.446	9.446	9.446	9.446	9.196-9.696	9.446	0.000
*	11 Acenaphthene-d10	9.601	9.601	9.601	9.601	9.601	9.601	9.601	9.351-9.851	9.601	0.000
	12 Acenaphthene	9.656	9.656	9.656	9.656	9.656	9.656	9.656	9.406-9.906	9.656	0.000
	14 Dibenzofuran	9.867	9.867	9.867	9.867	9.867	9.867	9.867	9.617-10.117	9.867	0.000
	15 Fluorene	10.487	10.487	10.487	10.487	10.487	10.487	10.487	10.237-10.737	10.487	0.000
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	4.785	4.535-5.035	+++++	+++++
*	18 Phenanthrene-d10	12.269	12.269	12.269	12.269	12.269	12.269	12.269	12.019-12.519	12.269	0.000
	19 Phenanthrene	12.314	12.313	12.314	12.314	12.313	12.313	12.313	12.063-12.563	12.313	0.000
	20 Anthracene	12.369	12.369	12.369	12.369	12.369	12.369	12.369	12.119-12.619	12.369	0.000
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	14.375	14.375	14.375	14.365	14.375	14.375	14.375	14.125-14.625	14.373	0.004

Reviewer 1 ______ JS Date: 12/5/15
Reviewer 2 ______ Date: 12/7/15

Report Date : 05-Dec-2015 10:32

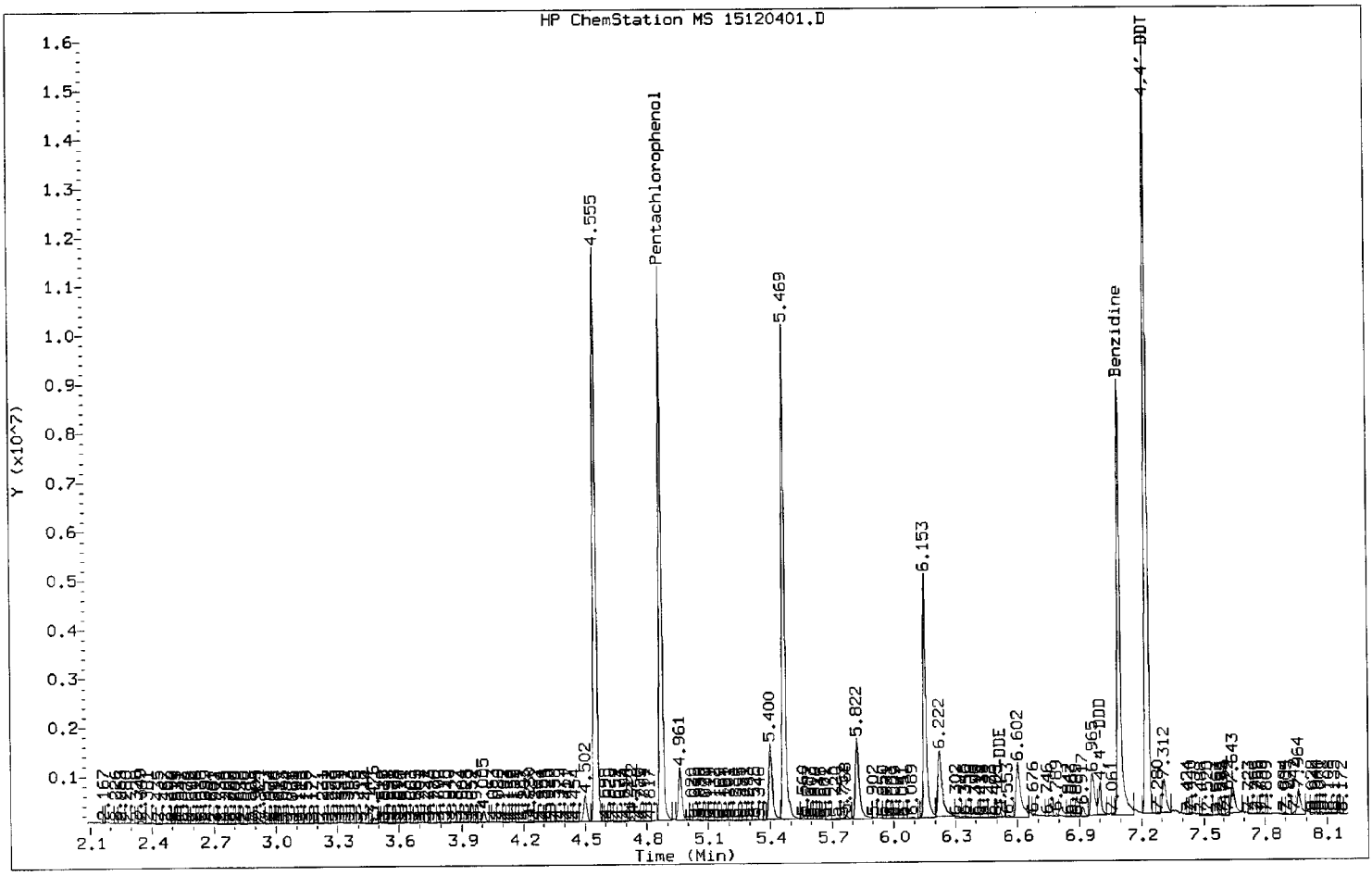
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

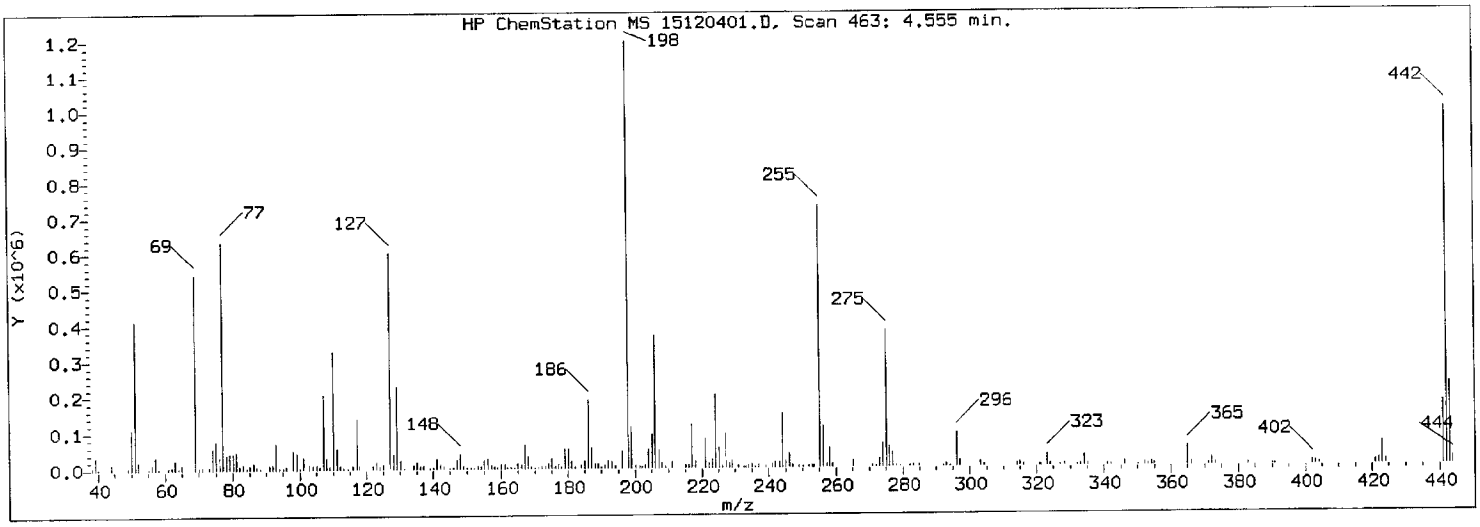
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20151204.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
24 Fluoranthene	14.404	14.404	14.404	14.404	14.404	14.404	14.404	14.154-14.654	14.404	0.000
25 Pyrene	14.903	14.903	14.903	14.903	14.903	14.903	14.903	14.653-15.153	14.903	0.000
28 Benzo(a)anthracene	16.918	16.918	16.918	16.918	16.918	16.918	16.918	16.668-17.168	16.918	0.000
* 29 Chrysene-d12	17.018	17.018	17.010	17.010	17.010	17.010	17.010	16.760-17.260	17.012	0.004
30 Chrysene	17.068	17.059	17.060	17.060	17.059	17.059	17.059	16.809-17.309	17.061	0.003
44 Benzo(b)fluoranthene	18.785	18.785	18.785	18.785	18.785	18.785	18.785	18.535-19.035	18.785	0.000
45 Benzo(k)fluoranthene	18.833	18.833	18.824	18.824	18.823	18.833	18.833	18.583-19.083	18.828	0.005
46 Benzo(j)fluoranthene	18.891	18.891	18.891	18.891	18.891	18.891	18.891	18.641-19.141	18.891	0.000
34 Benzo(a)pyrene	19.640	19.630	19.631	19.631	19.631	19.631	19.631	19.381-19.881	19.632	0.004
* 35 Perylene-d12	19.842	19.842	19.842	19.842	19.842	19.842	19.842	19.592-20.092	19.842	0.000
$ 36 Dibenzo(a,h)anthracene	22.208	22.197	22.197	22.197	22.197	22.197	22.197	21.947-22.447	22.199	0.005
37 Indeno(1,2,3-cd)pyrene	22.330	22.330	22.330	22.330	22.330	22.330	22.330	22.080-22.580	22.330	0.000
38 Dibenzo(a,h)anthracene	22.319	22.319	22.319	22.308	22.308	22.308	22.308	22.058-22.558	22.313	0.006
39 Benzo(g,h,i)perylene	23.427	23.426	23.427	23.427	23.426	23.426	23.426	23.176-23.676	23.426	0.000
47 Perylene	19.900	19.900	19.900	19.900	19.900	19.900	19.900	19.650-20.150	19.900	0.000
48 Benzo(e)pyrene	19.525	19.525	19.525	19.525	19.525	19.525	19.525	19.275-19.775	19.525	0.000

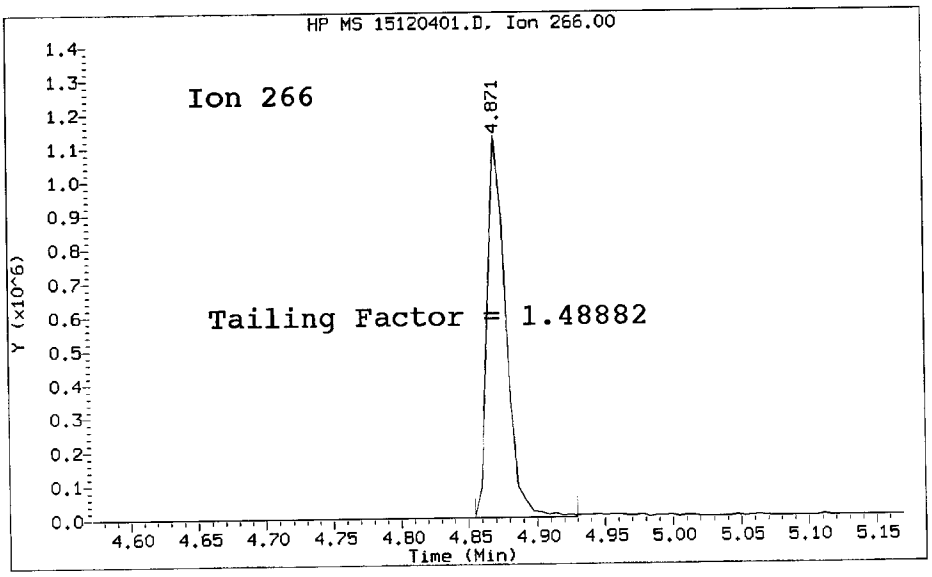
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20151204.b/15120401.D/15120401.D
Method Used: \20151204.b\DFTPP.m Inst: nt11
Injection Date: 04-DEC-2015 08:45 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 12/04/2015 09:41



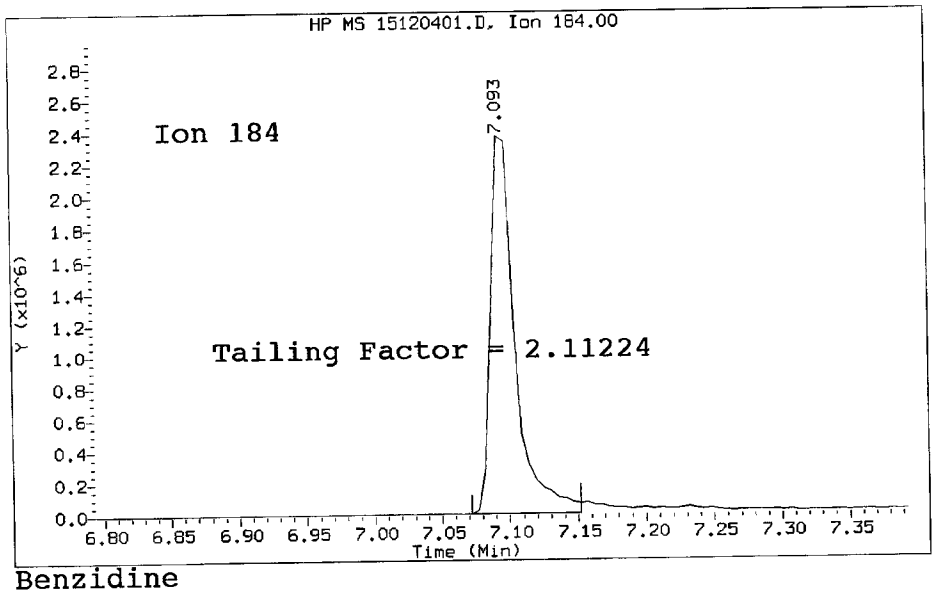


Datafile Analyzed: /20151204.b/15120401.D/15120401.D
Method Used: \20151204.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 04-DEC-2015 08:45 Operator: JR
Sample Info: TUNE 10
Report Date: 12/04/2015 09:41



Pentachlorophenol
==========
Exp. RT = 4.914
Found RT = 4.871

Tail Factor = 1.489 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.141
Found RT = 7.093

The tailing factor for Benzidine EXCEEDED

Tail Factor = 2.112 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	1.4888179	2.000	PASS	
Benzidine	2.1122449	2.000	FAIL	[Failure]

12/7/15

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2078544			N/A
4,4-DDE	12541	0.6	20.0	PASS
4,4-DDD	100432	4.6	20.0	PASS
4,4-DDD + DDE	112973	5.2	20.0	PASS

Tuning Sample, nt11.i/20151204.b/15120401.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	36.71
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.72
70	Less than 2.00% of mass 69	0.25 (0.53)
127	10.00 - 80.00% of mass 198	50.34
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.78
275	10.00 - 60.00% of mass 198	29.75
365	Greater than 1.00% of mass 198	3.54
441	0.01 - 24.00% of mass 442	13.40 (16.36)
442	50.00 - 200.00% of mass 198	81.93
443	15.00 - 24.00% of mass 442	18.59 (22.69)

Data File: 15120401.D
Spectrum: Avg. Scans 462-464 (4.56), Background Scan 456
Location of Maximum: 198.00
Number of points: 252

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	5903	123.00	15321	191.00	4529	276.00	37792
39.00	32472	124.00	6008	192.00	15383	277.00	25616
40.00	2234	125.00	8697	193.00	14981	278.00	5143
44.00	1291	127.00	487424	194.00	2969	279.00	797
49.00	2336	128.00	36048	195.00	935	282.00	1077
50.00	99976	129.00	198784	196.00	36952	283.00	4344
51.00	355456	130.00	17864	198.00	968192	285.00	4257
52.00	19288	131.00	3029	199.00	85016	290.00	736
53.00	699	132.00	770	200.00	7648	292.00	695
55.00	817	134.00	4444	201.00	4181	293.00	3995
56.00	12284	135.00	17328	202.00	2800	294.00	1601
57.00	28160	136.00	7249	203.00	7062	296.00	79296
58.00	882	137.00	7197	204.00	45768	297.00	10726
61.00	4027	139.00	686	205.00	78432	301.00	1083
62.00	4478	140.00	3181	206.00	296256	303.00	9535
63.00	21296	141.00	26728	207.00	40064	304.00	2760
64.00	2870	142.00	9703	208.00	13008	310.00	1258
65.00	7567	143.00	5423	209.00	4174	314.00	5255
69.00	452352	144.00	1270	210.00	2826	315.00	11430
70.00	2404	145.00	2146	211.00	10991	316.00	4496
71.00	1729	146.00	3758	212.00	1343	317.00	1730
74.00	51136	147.00	11875	213.00	1135	321.00	2836
75.00	72784	148.00	28688	215.00	5759	322.00	766
76.00	27064	149.00	7601	216.00	5158	323.00	27808
77.00	512768	150.00	1111	217.00	87992	324.00	3710
78.00	35304	151.00	3226	218.00	10624	327.00	3445
79.00	35128	152.00	2009	221.00	58632	328.00	2747
80.00	28640	153.00	8844	222.00	12655	332.00	2890
81.00	40048	154.00	6510	223.00	18704	333.00	2909
82.00	10036	155.00	17848	224.00	170624	334.00	18896
83.00	13510	156.00	20976	225.00	44928	335.00	3574
84.00	155	157.00	5537	226.00	4319	341.00	3496
85.00	9792	158.00	5165	227.00	75184	342.00	946
86.00	11647	159.00	2604	228.00	10251	346.00	5555
87.00	6242	160.00	7198	229.00	15494	350.00	704
88.00	2104	161.00	9881	231.00	4886	352.00	9894
91.00	8456	162.00	2652	233.00	1517	353.00	6975
92.00	8959	163.00	959	234.00	3642	354.00	7491
93.00	59144	164.00	701	235.00	4833	355.00	2236
94.00	4278	165.00	10199	236.00	1621	365.00	34240
95.00	1022	166.00	9417	237.00	5726	366.00	4979
96.00	2824	167.00	49792	239.00	1926	371.00	2016
98.00	40528	168.00	25208	241.00	6592	372.00	17560
99.00	34656	169.00	4359	242.00	9932	373.00	3339
100.00	3425	170.00	2037	243.00	9154	383.00	2922
101.00	24160	171.00	2039	244.00	122792	390.00	1755
102.00	687	172.00	5959	245.00	17280	391.00	814
103.00	7164	173.00	5076	246.00	28232	402.00	5209
104.00	12935	174.00	11539	247.00	4557	403.00	6386

105.00	10605	175.00	20720	249.00	3982	404.00	2710
106.00	7128	176.00	7696	250.00	1046	421.00	6452
107.00	162176	177.00	11926	252.00	969	422.00	10014
108.00	27064	178.00	3414	253.00	5072	423.00	50464
109.00	2954	179.00	42472	255.00	572352	424.00	9853
110.00	279360	180.00	32368	256.00	86752	425.00	909
111.00	42360	181.00	14321	257.00	6074	441.00	129768
112.00	6933	182.00	2960	258.00	40416	442.00	793216
113.00	1332	184.00	4180	259.00	6964	443.00	179968
114.00	829	185.00	19872	265.00	16576	444.00	15867
116.00	8676	186.00	147328	271.00	1077	445.00	897
117.00	106856	187.00	42160	272.00	2517		
118.00	7215	188.00	5898	273.00	20392		
120.00	674	189.00	10119	274.00	55504		
122.00	7466	190.00	1772	275.00	288064		

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120402.D
Lab Smp Id: LLSIM 250
Inj Date : 04-DEC-2015 09:03 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 250
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 09:03 Cal File: 15120402.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

JU 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
* 4	Naphthalene-d8	136	6.597	6.597	(1.000)	327896	200.000	
5	Naphthalene	128	6.639	6.629	(1.006)	466348	250.000	246
$ 6	2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	313990	250.000	258
7	2-Methylnaphthalene	142	7.637	7.627	(1.158)	338215	250.000	260
8	1-Methylnaphthalene	142	7.889	7.889	(1.196)	303545	250.000	259
10	Acenaphthylene	152	9.446	9.445	(0.984)	486608	250.000	252
* 11	Acenaphthene-d10	164	9.601	9.600	(1.000)	239179	200.000	
12	Acenaphthene	153	9.656	9.656	(1.006)	318640	250.000	249
14	Dibenzofuran	168	9.866	9.866	(1.028)	485308	250.000	251
15	Fluorene	166	10.486	10.486	(1.092)	368110	250.000	254
* 18	Phenanthrene-d10	188	12.269	12.269	(1.000)	372253	200.000	
19	Phenanthrene	178	12.313	12.313	(1.004)	568980	250.000	254
20	Anthracene	178	12.368	12.368	(1.008)	520493	250.000	259
$ 23	Fluoranthene-d10	212	14.375	14.374	(1.172)	527419	250.000	258
24	Fluoranthene	202	14.403	14.403	(1.174)	588912	250.000	262
25	Pyrene	202	14.903	14.903	(0.876)	579853	250.000	248
28	Benzo(a)anthracene	228	16.918	16.918	(0.994)	493775	250.000	251
* 29	Chrysene-d12	240	17.018	17.009	(1.000)	294711	200.000	
30	Chrysene	228	17.067	17.059	(1.003)	528325	250.000	245
44	Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	426424	250.000	242
45	Benzo(k)fluoranthene	252	18.833	18.833	(0.949)	521565	250.000	254
46	Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	462257	250.000	247
34	Benzo(a)pyrene	252	19.640	19.630	(0.990)	425021	250.000	249
* 35	Perylene-d12	264	19.842	19.842	(1.000)	260595	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.208	22.197	(1.119)	265906	250.000	253
37	Indeno(1,2,3-cd)pyrene	276	22.330	22.329	(1.125)	447004	250.000	250
38	Dibenzo(a,h)anthracene	278	22.318	22.307	(1.125)	361875	250.000	256
39	Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	382439	250.000	246
47	Perylene	252	19.899	19.899	(1.003)	425367	250.000	241
48	Benzo(e)pyrene	252	19.524	19.524	(0.984)	431155	250.000	242

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120402.D
Lab Smp Id: LLSIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	327896	0.00
11 Acenaphthene-d10	239179	119590	478358	239179	0.00
18 Phenanthrene-d10	372253	186127	744506	372253	0.00
29 Chrysene-d12	294711	147356	589422	294711	0.00
35 Perylene-d12	260595	130298	521190	260595	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	0.00
29 Chrysene-d12	17.02	16.52	17.52	17.02	0.00
35 Perylene-d12	19.84	19.34	20.34	19.84	0.00

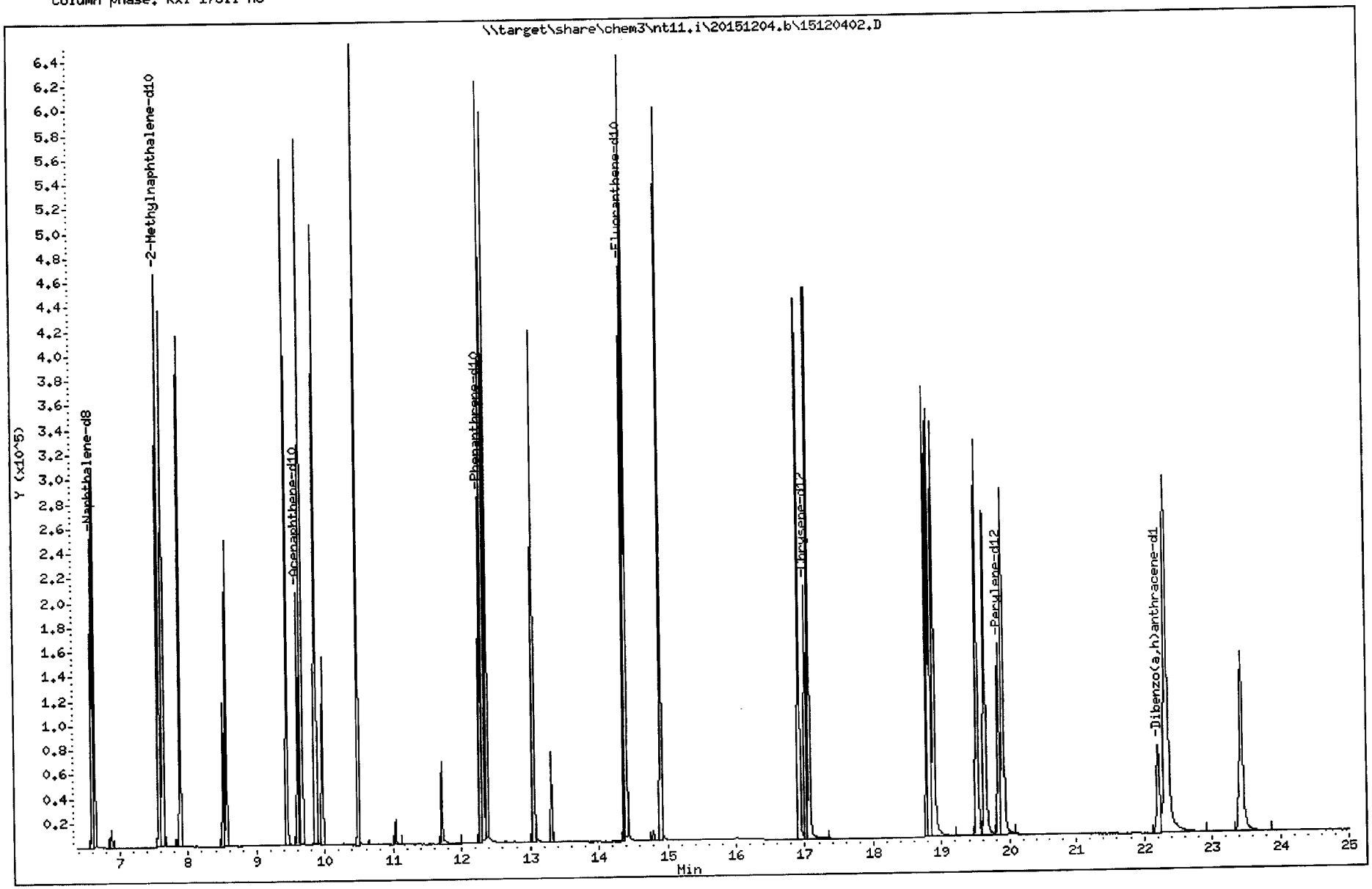
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120402.D
Date : 04-DEC-2015 09:03
Client ID:
Sample Info: LLSIM 250

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120402.D

Lab ID: LLSIM 250
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 09:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120403.D
Lab Smp Id: LLSIM 100
Inj Date : 04-DEC-2015 09:33 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 100
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 09:33 Cal File: 15120403.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

JO 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	322094	200.000	
	5 Naphthalene	128	6.628	6.629	(1.005)	194640	100.000	105
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	122627	100.000	103
	7 2-Methylnaphthalene	142	7.637	7.627	(1.158)	131669	100.000	103
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	119911	100.000	104
	10 Acenaphthylene	152	9.445	9.445	(0.984)	188431	100.000	102
*	11 Acenaphthene-d10	164	9.600	9.600	(1.000)	228988	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	125618	100.000	102
	14 Dibenzofuran	168	9.866	9.866	(1.028)	192943	100.000	104
	15 Fluorene	166	10.486	10.486	(1.092)	142937	100.000	103
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	364343	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	229750	100.000	105
	20 Anthracene	178	12.368	12.368	(1.008)	198320	100.000	101
$	23 Fluoranthene-d10	212	14.374	14.374	(1.172)	202998	100.000	101
	24 Fluoranthene	202	14.403	14.403	(1.174)	227740	100.000	103
	25 Pyrene	202	14.903	14.903	(0.876)	226693	100.000	103
	28 Benzo(a)anthracene	228	16.918	16.918	(0.994)	186507	100.000	101
*	29 Chrysene-d12	240	17.017	17.009	(1.000)	276576	200.000	
	30 Chrysene	228	17.059	17.059	(1.002)	208940	100.000	103
	44 Benzo(b)fluoranthene	252	18.784	18.785	(0.947)	163653	100.000	98.5
	45 Benzo(k)fluoranthene	252	18.832	18.833	(0.949)	193041	100.000	99.7
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	175242	100.000	99.4
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	157495	100.000	98.2
*	35 Perylene-d12	264	19.841	19.842	(1.000)	245162	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.196	22.197	(1.119)	97910	100.000	98.9
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	164508	100.000	97.7
	38 Dibenzo(a,h)anthracene	278	22.318	22.307	(1.125)	131245	100.000	98.6
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	143879	100.000	98.5
	47 Perylene	252	19.899	19.899	(1.003)	166080	100.000	99.9
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	168054	100.000	100

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120403.D
Lab Smp Id: LLSIM 100
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	322094	-1.77
11 Acenaphthene-d10	239179	119590	478358	228988	-4.26
18 Phenanthrene-d10	372253	186127	744506	364343	-2.12
29 Chrysene-d12	294711	147356	589422	276576	-6.15
35 Perylene-d12	260595	130298	521190	245162	-5.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.02	-0.00
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

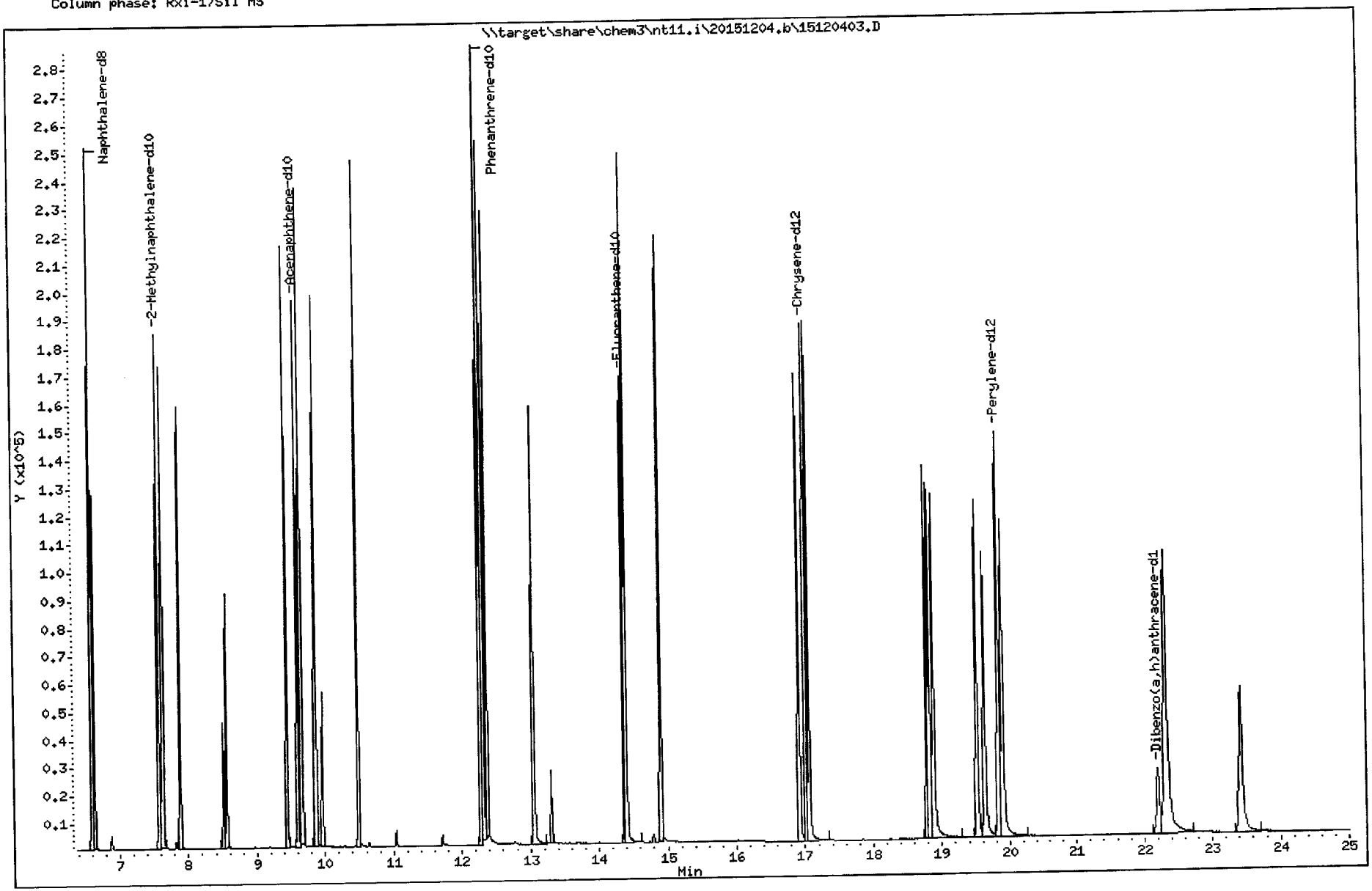
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120403.D
Date : 04-DEC-2015 09:33
Client ID:
Sample Info: LLSIM 100

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120403.D

Lab ID: LLSIM 100
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 09:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120404.D
Lab Smp Id: LLSIM 10
Inj Date : 04-DEC-2015 10:03 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 10
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 10:03 Cal File: 15120404.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

SW 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	325673	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	19520	10.0000	10.4
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	11490	10.0000	9.51
	7 2-Methylnaphthalene	142	7.637	7.627	(1.158)	12326	10.0000	9.54
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	10946	10.0000	9.40
	10 Acenaphthylene	152	9.446	9.445	(0.984)	17343	10.0000	9.83
*	11 Acenaphthene-d10	164	9.601	9.600	(1.000)	218580	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	11843	10.0000	10.1
	14 Dibenzofuran	168	9.866	9.866	(1.028)	17891	10.0000	10.1
	15 Fluorene	166	10.486	10.486	(1.092)	12668	10.0000	9.58
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	358974	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	21551	10.0000	9.96
	20 Anthracene	178	12.368	12.368	(1.008)	18203	10.0000	9.40
$	23 Fluoranthene-d10	212	14.375	14.374	(1.172)	18217	10.0000	9.23
	24 Fluoranthene	202	14.403	14.403	(1.174)	19652	10.0000	9.05
	25 Pyrene	202	14.903	14.903	(0.876)	20582	10.0000	9.91
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	16570	10.0000	9.48
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	262207	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	19151	10.0000	9.98
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	14171	10.0000	9.12
	45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	16099	10.0000	8.89
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	15176	10.0000	9.20
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	12870	10.0000	8.58
*	35 Perylene-d12	264	19.842	19.842	(1.000)	229323	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.197	22.197	(1.119)	6798	10.0000	7.34
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	12271	10.0000	7.79
	38 Dibenzo(a,h)anthracene	278	22.318	22.307	(1.125)	9102	10.0000	7.31
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	11812	10.0000	8.64
	47 Perylene	252	19.899	19.899	(1.003)	14419	10.0000	9.28
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	14902	10.0000	9.49

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120404.D
Lab Smp Id: LLSIM 10
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	325673	-0.68
11 Acenaphthene-d10	239179	119590	478358	218580	-8.61
18 Phenanthrene-d10	372253	186127	744506	358974	-3.57
29 Chrysene-d12	294711	147356	589422	262207	-11.03
35 Perylene-d12	260595	130298	521190	229323	-12.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

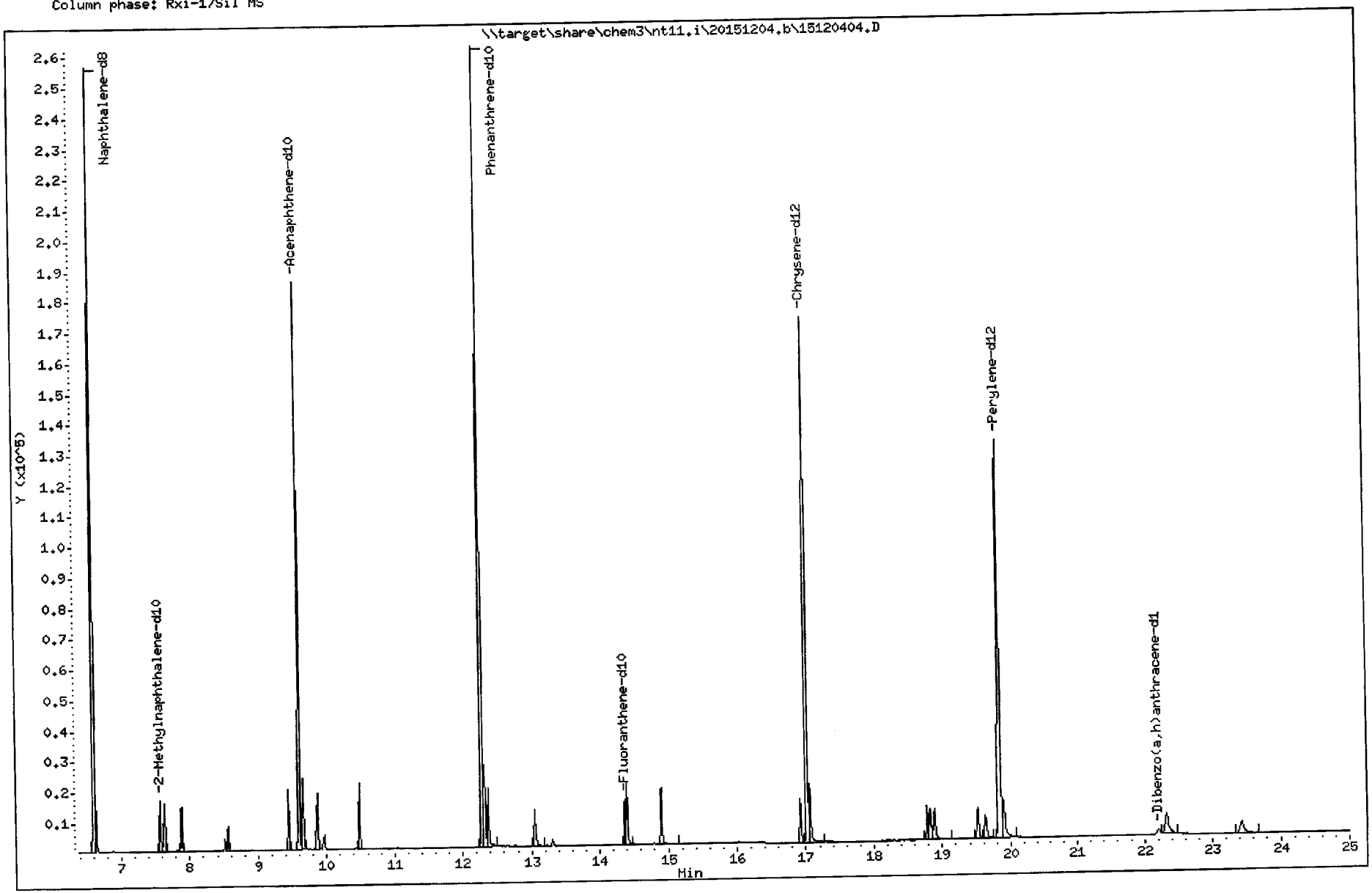
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120404.D
Date : 04-DEC-2015 10:03
Client ID:
Sample Info: LLSIM 10

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120404.D

Lab ID: LLSIM 10
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 10:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120405.D
Lab Smp Id: LLSIM 50
Inj Date : 04-DEC-2015 10:33 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 50
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 10:33 Cal File: 15120405.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

BZ 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	322810	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	101411	50.0000	54.4
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	61987	50.0000	51.7
	7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	66307	50.0000	51.8
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	59950	50.0000	51.9
	10 Acenaphthylene	152	9.446	9.445	(0.984)	92485	50.0000	52.3
*	11 Acenaphthene-d10	164	9.601	9.600	(1.000)	219192	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	62244	50.0000	53.0
	14 Dibenzofuran	168	9.866	9.866	(1.028)	95443	50.0000	54.0
	15 Fluorene	166	10.486	10.486	(1.092)	68997	50.0000	52.0
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	354307	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	118576	50.0000	55.5
	20 Anthracene	178	12.368	12.368	(1.008)	96493	50.0000	50.5
$	23 Fluoranthene-d10	212	14.365	14.374	(1.171)	102075	50.0000	52.4
	24 Fluoranthene	202	14.403	14.403	(1.174)	114385	50.0000	53.4
	25 Pyrene	202	14.903	14.903	(0.876)	112799	50.0000	54.2
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	93495	50.0000	53.4
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	262604	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	108279	50.0000	56.3
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	83231	50.0000	53.5
	45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	95619	50.0000	52.7
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	90827	50.0000	55.0
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	79839	50.0000	53.2
*	35 Perylene-d12	264	19.842	19.842	(1.000)	229726	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.197	22.197	(1.119)	44840	50.0000	48.4
	37 Indeno(1,2,3-cd)pyrene	276	22.330	22.329	(1.125)	80159	50.0000	50.8
	38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.124)	60732	50.0000	48.7
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	70920	50.0000	51.8
	47 Perylene	252	19.899	19.899	(1.003)	84721	50.0000	54.4
	48 Benzo(e)pyrene	252	19.525	19.524	(0.984)	85271	50.0000	54.2

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120405.D
Lab Smp Id: LLSIM 50
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	322810	-1.55
11 Acenaphthene-d10	239179	119590	478358	219192	-8.36
18 Phenanthrene-d10	372253	186127	744506	354307	-4.82
29 Chrysene-d12	294711	147356	589422	262604	-10.89
35 Perylene-d12	260595	130298	521190	229726	-11.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	0.00

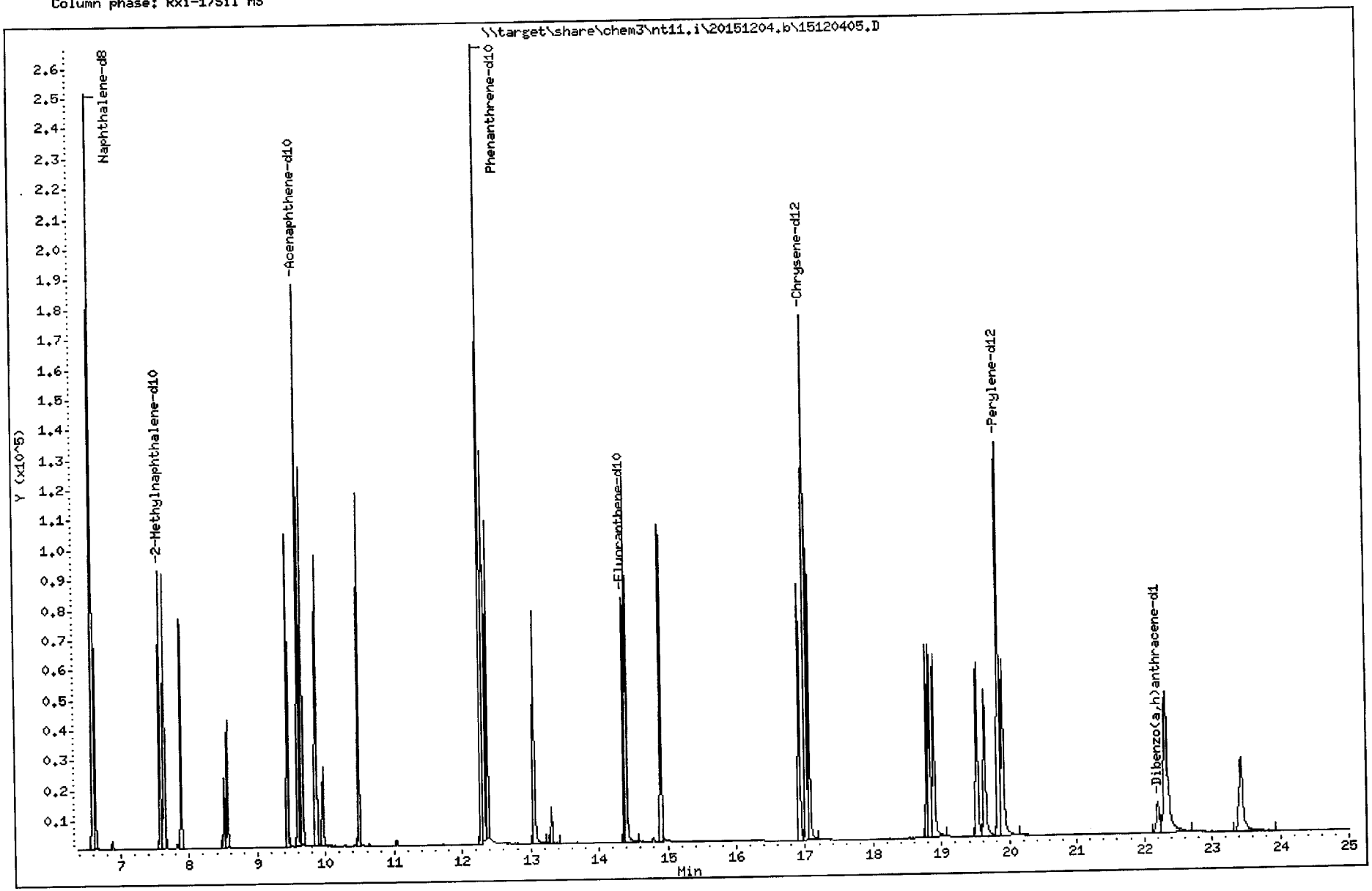
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120405.D
Date : 04-DEC-2015 10:33
Client ID:
Sample Info: LLSIM 50

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120405.D

Lab ID: LLSIM 50
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 10:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120406.D
Lab Smp Id: LLSIM 500
Inj Date : 04-DEC-2015 11:03 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 500
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 11:03 Cal File: 15120406.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

JW 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	340768	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	933248	500.000	474
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	629193	500.000	497
	7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	670644	500.000	496
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	605485	500.000	497
	10 Acenaphthylene	152	9.445	9.445	(0.984)	967430	500.000	496
*	11 Acenaphthene-d10	164	9.600	9.600	(1.000)	241553	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	628559	500.000	486
	14 Dibenzofuran	168	9.866	9.866	(1.028)	941463	500.000	483
	15 Fluorene	166	10.486	10.486	(1.092)	730006	500.000	499
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	382017	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	1091600	500.000	474
	20 Anthracene	178	12.368	12.368	(1.008)	1071225	500.000	520
$	23 Fluoranthene-d10	212	14.374	14.374	(1.172)	1071150	500.000	510
	24 Fluoranthene	202	14.403	14.403	(1.174)	1171890	500.000	507
	25 Pyrene	202	14.903	14.903	(0.876)	1155377	500.000	492
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	993004	500.000	502
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	296788	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	1047594	500.000	482
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	904516	500.000	527
	45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	1037488	500.000	519
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	935496	500.000	513
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	881824	500.000	532
*	35 Perylene-d12	264	19.841	19.842	(1.000)	253397	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.196	22.197	(1.119)	577224	500.000	564
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	968463	500.000	557
	38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.124)	781168	500.000	568
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	805513	500.000	533
	47 Perylene	252	19.899	19.899	(1.003)	880659	500.000	513
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	881426	500.000	508

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120406.D
Lab Smp Id: LLSIM 500
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	340768	3.93
11 Acenaphthene-d10	239179	119590	478358	241553	0.99
18 Phenanthrene-d10	372253	186127	744506	382017	2.62
29 Chrysene-d12	294711	147356	589422	296788	0.70
35 Perylene-d12	260595	130298	521190	253397	-2.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

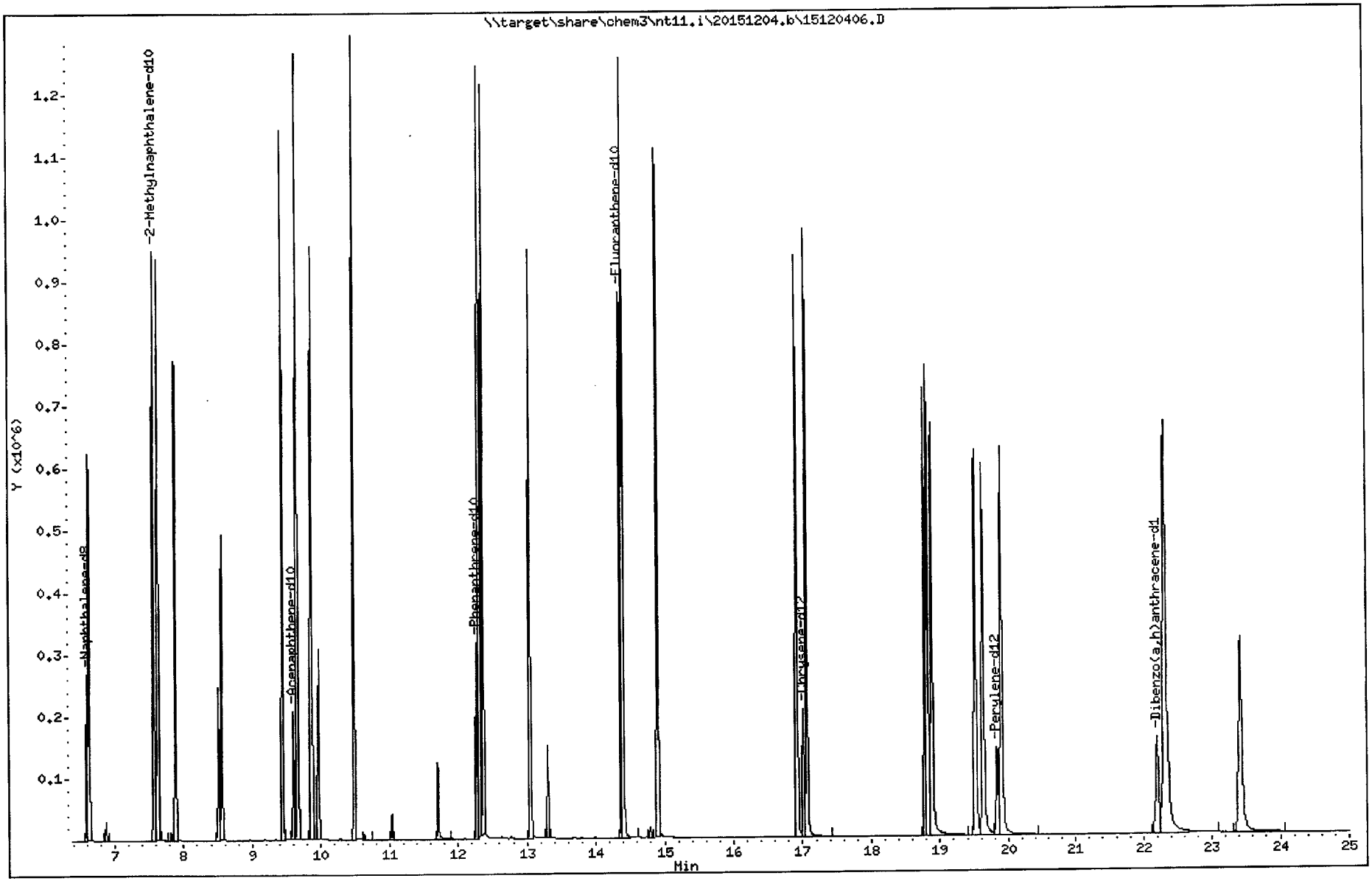
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120406.D
Date : 04-DEC-2015 11:03
Client ID:
Sample Info: LLSIM 500

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120406.D

Lab ID: LLSIM 500
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 11:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120407.D
Lab Smp Id: LLSIM 1000
Inj Date : 04-DEC-2015 11:33 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 1000
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

BW 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	337457	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	1745003	1000.00	895
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	1205300	1000.00	962
	7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	1272236	1000.00	950
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	1149104	1000.00	952
	10 Acenaphthylene	152	9.445	9.445	(0.984)	1833736	1000.00	951
*	11 Acenaphthene-d10	164	9.600	9.600	(1.000)	238950	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	1200492	1000.00	938
	14 Dibenzofuran	168	9.866	9.866	(1.028)	1717363	1000.00	891
	15 Fluorene	166	10.486	10.486	(1.092)	1380739	1000.00	955
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	380348	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	2022457	1000.00	883
	20 Anthracene	178	12.368	12.368	(1.008)	1975909	1000.00	963
$	23 Fluoranthene-d10	212	14.374	14.374	(1.172)	2020716	1000.00	966
	24 Fluoranthene	202	14.403	14.403	(1.174)	2148123	1000.00	934
	25 Pyrene	202	14.903	14.903	(0.876)	2156236	1000.00	912
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	1918385	1000.00	964
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	298514	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	1961226	1000.00	898
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	1759341	1000.00	1010
	45 Benzo(k)fluoranthene	252	18.833	18.833	(0.949)	2039144	1000.00	1010
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	1793610	1000.00	973
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	1732537	1000.00	1030
*	35 Perylene-d12	264	19.842	19.842	(1.000)	256244	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.197	22.197	(1.119)	1208888	1000.00	1170
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	1959663	1000.00	1110
	38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.124)	1599951	1000.00	1150
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	1624015	1000.00	1060
	47 Perylene	252	19.899	19.899	(1.003)	1731385	1000.00	997
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	1724956	1000.00	983

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120407.D
Lab Smp Id: LLSIM 1000
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	337457	2.92
11 Acenaphthene-d10	239179	119590	478358	238950	-0.10
18 Phenanthrene-d10	372253	186127	744506	380348	2.17
29 Chrysene-d12	294711	147356	589422	298514	1.29
35 Perylene-d12	260595	130298	521190	256244	-1.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

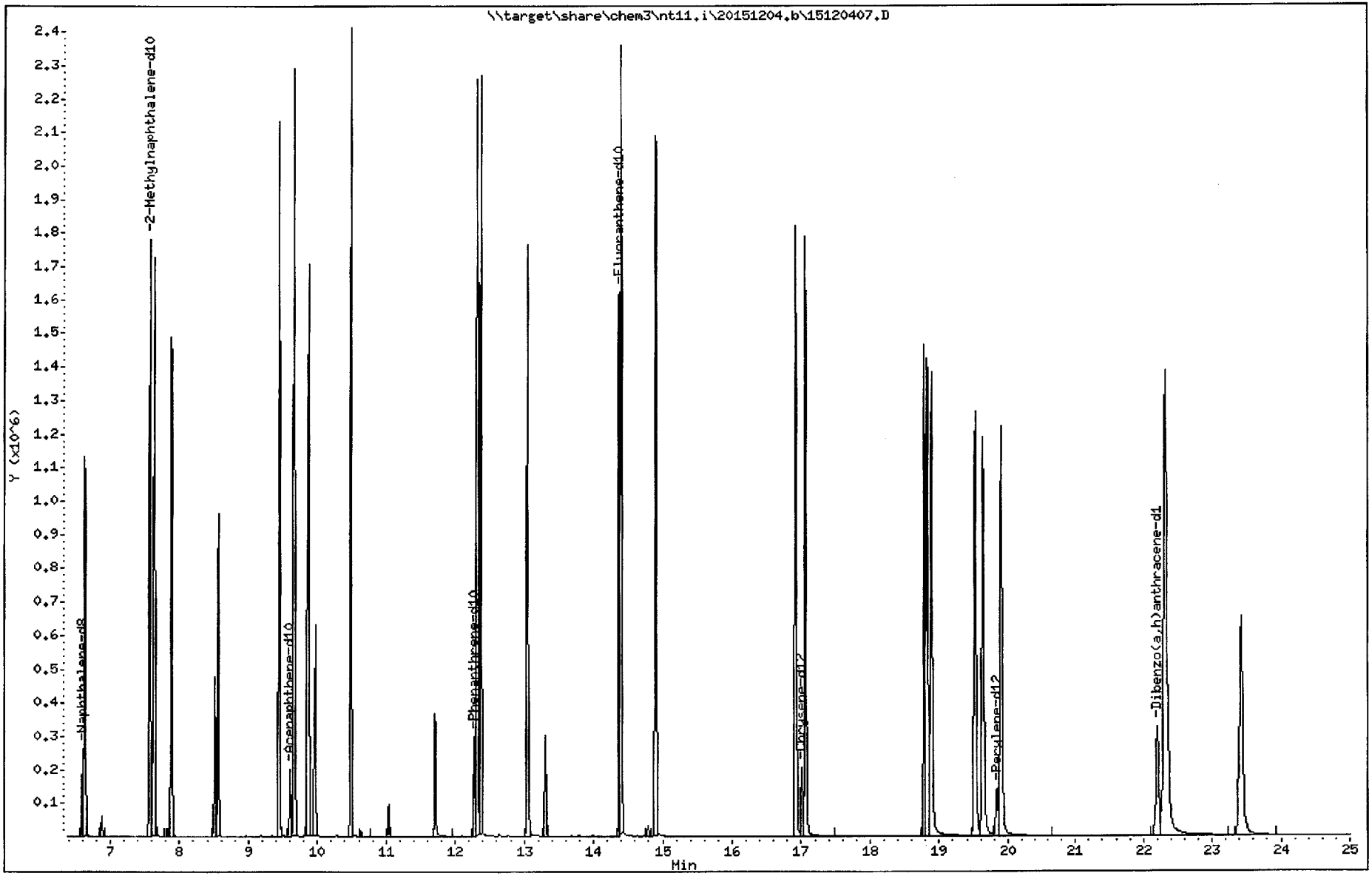
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120407.D
Date : 04-DEC-2015 11:33
Client ID:
Sample Info: LLSIM 1000

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120407.D

Lab ID: LLSIM 1000
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 11:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120408.D
Lab Smp Id: LLSIM SCV 250
Inj Date : 04-DEC-2015 12:04 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM SCV 250
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

JW 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/L)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	330144	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	446422	234.100	234
$	6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	286909	218.968	219
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	286856	242.931	243
	10 Acenaphthylene	152	9.445	9.445	(0.984)	450083	235.922	236
*	11 Acenaphthene-d10	164	9.600	9.600	(1.000)	236381	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	307274	242.667	243
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	10.486	10.486	(1.092)	337933	236.220	236
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	360337	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	535994	246.891	247
	20 Anthracene	178	12.368	12.368	(1.008)	485229	249.701	250
$	23 Fluoranthene-d10	212	Compound Not Detected.					
	24 Fluoranthene	202	14.403	14.403	(1.174)	518632	237.945	238
	25 Pyrene	202	14.903	14.903	(0.876)	586418	254.458	254
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	456787	235.431	235
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	291007	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	500271	234.930	235
	44 Benzo(b)fluoranthene	252	18.784	18.785	(0.947)	394832	240.567	241
	45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	474361	248.024	248
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/L)
	34 Benzo(a)pyrene.	252	19.630	19.630	(0.990)	391410	247.108	247
*	35 Perylene-d12	264	19.832	19.842	(1.000)	242244	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.126)	412835	248.231	248
	38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.125)	328597	249.858	250
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	360543	249.725	250
	47 Perylene	252	Compound Not Detected.					
	48 Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120408.D
Lab Smp Id: LLSIM SCV 250
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	330144	0.69
11 Acenaphthene-d10	239179	119590	478358	236381	-1.17
18 Phenanthrene-d10	372253	186127	744506	360337	-3.20
29 Chrysene-d12	294711	147356	589422	291007	-1.26
35 Perylene-d12	260595	130298	521190	242244	-7.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.83	-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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LLSIM SCV 250
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Client SDG: SDGa03180
Fraction: SV

Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

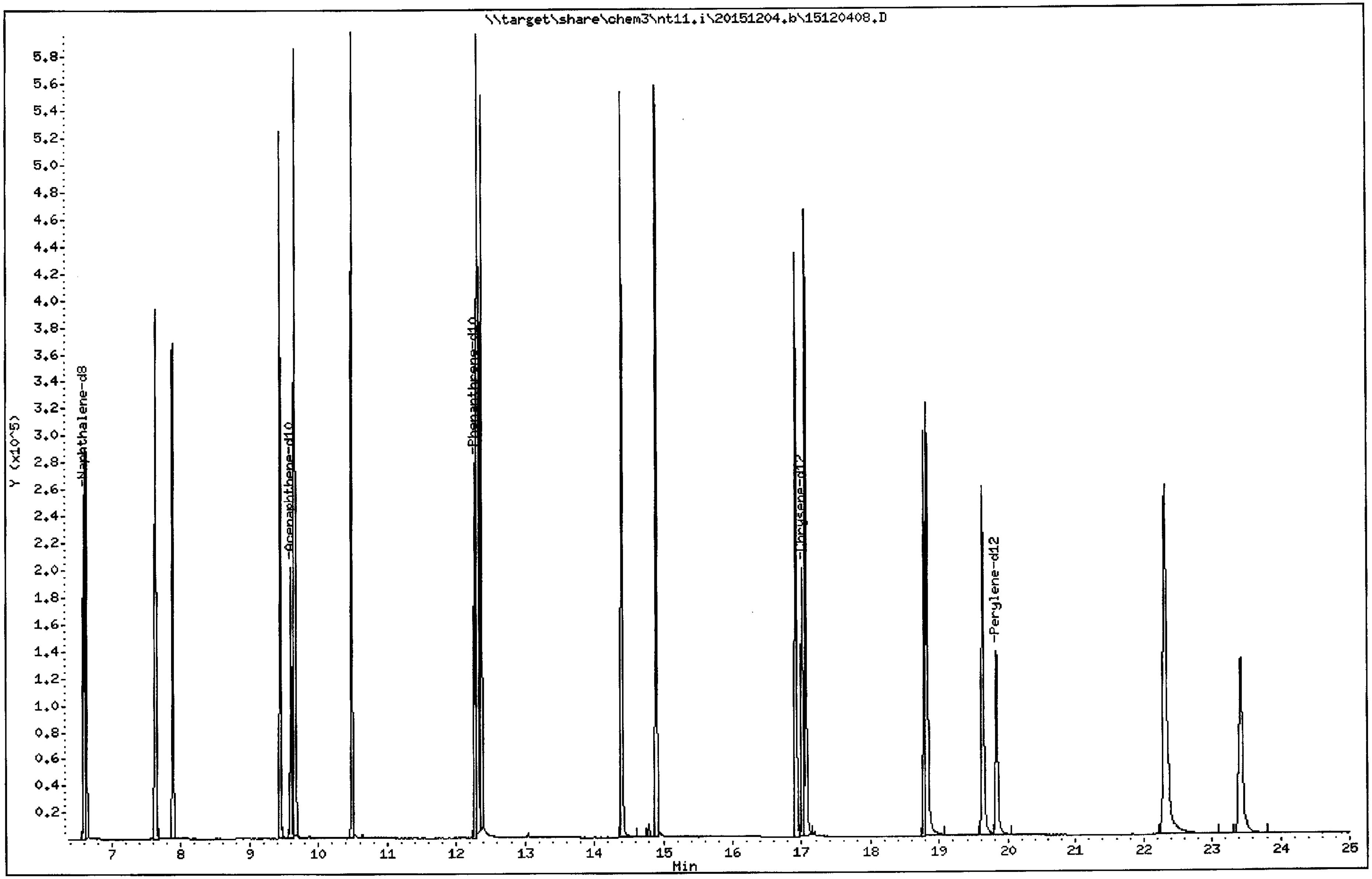
SURROGATE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthale	6000	0.000	*	42-120
$ 23 Fluoranthene-d10	6000	0.000	*	57-120
$ 36 Dibenzo(a,h)anthr	6000	0.000	*	29-120

no surr

Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D
Date : 04-DEC-2015 12:04
Client ID:
Sample Info: LLSIM SCV 250
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

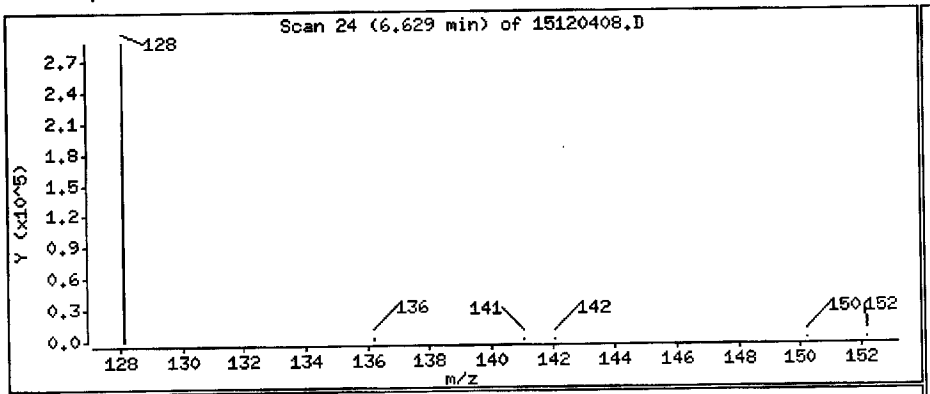
Operator: JW

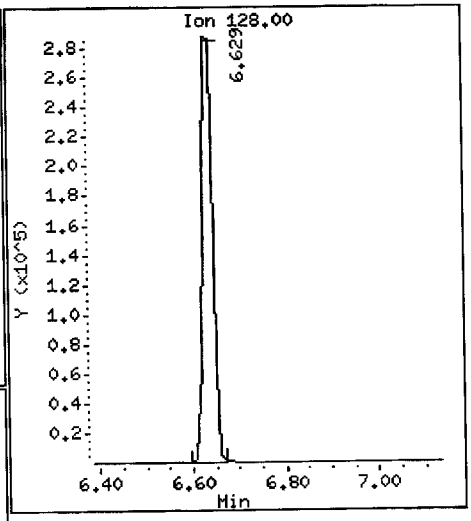
Column phase: Rxi-17Sil MS

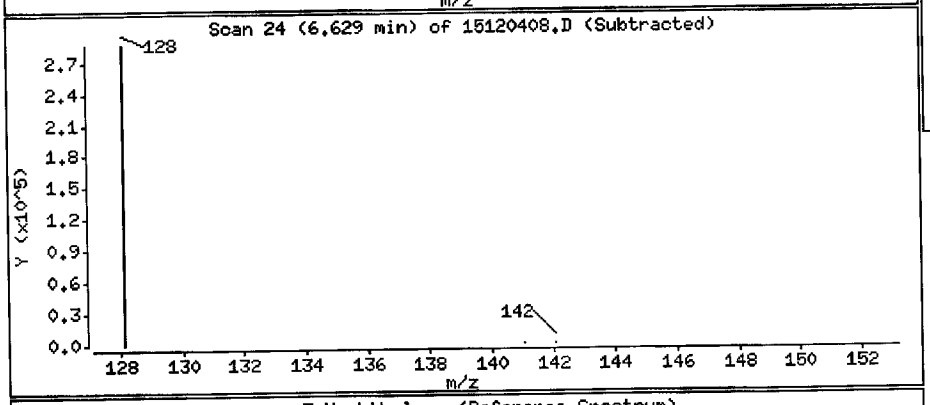
Column diameter: 0.25

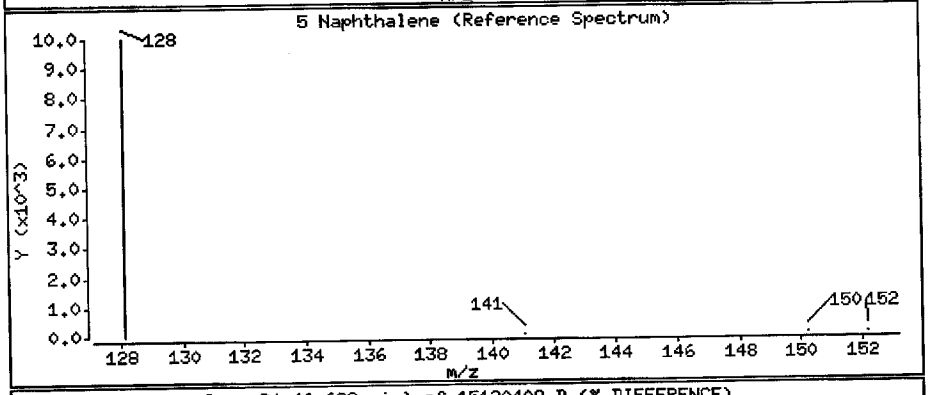
5 Naphthalene

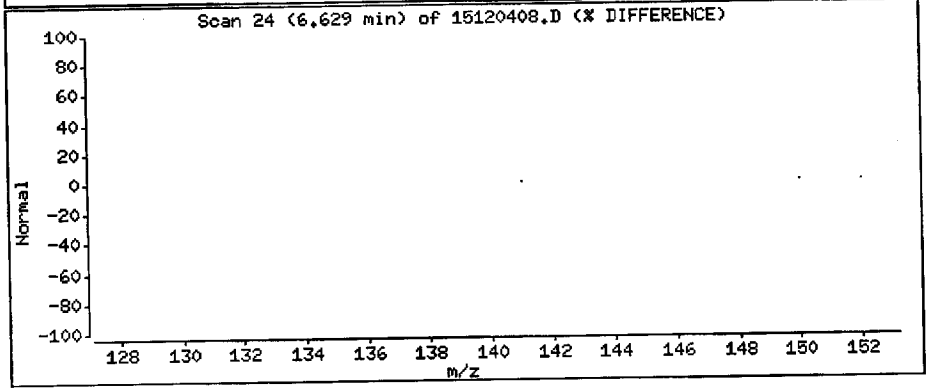
Concentration: 234 ng/L











Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

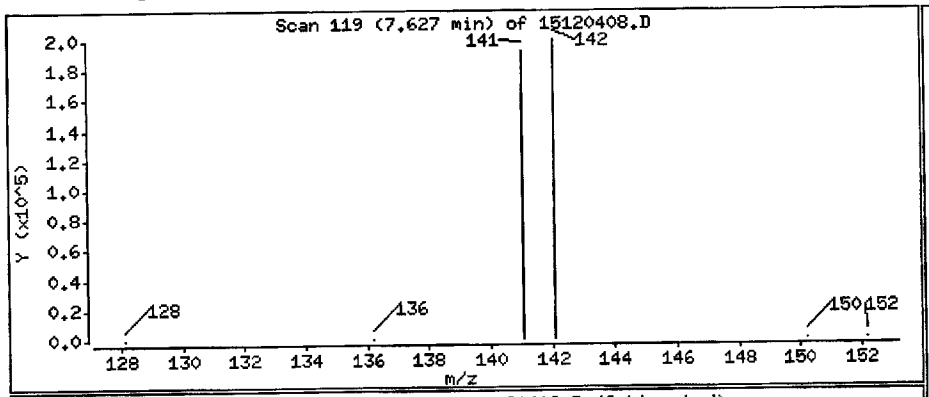
Operator: JW

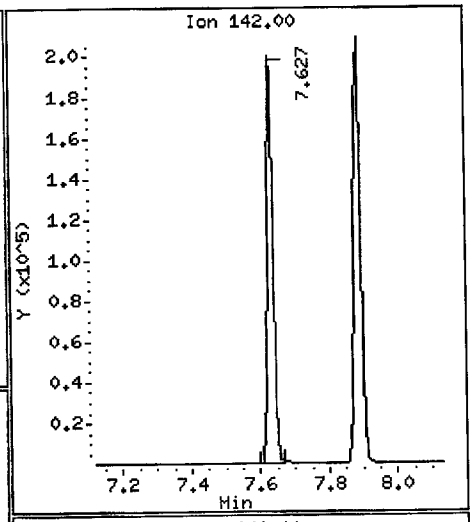
Column phase: Rxi-17Sil MS

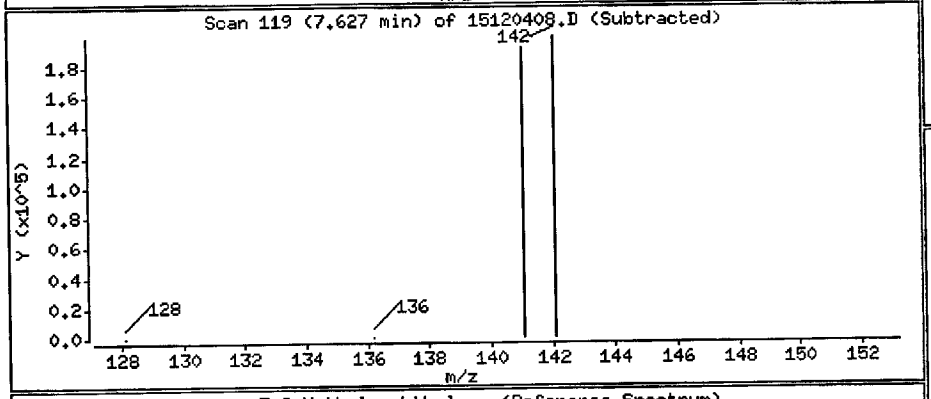
Column diameter: 0.25

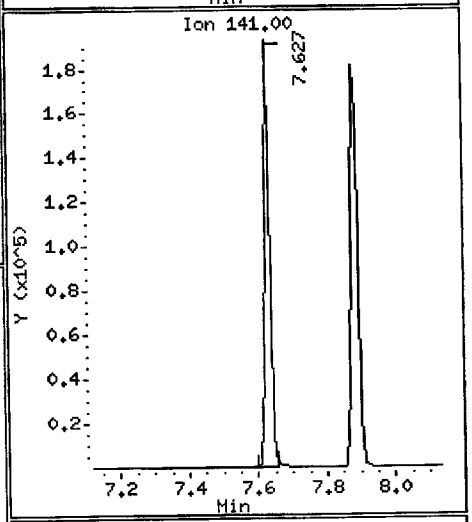
7 2-Methylnaphthalene

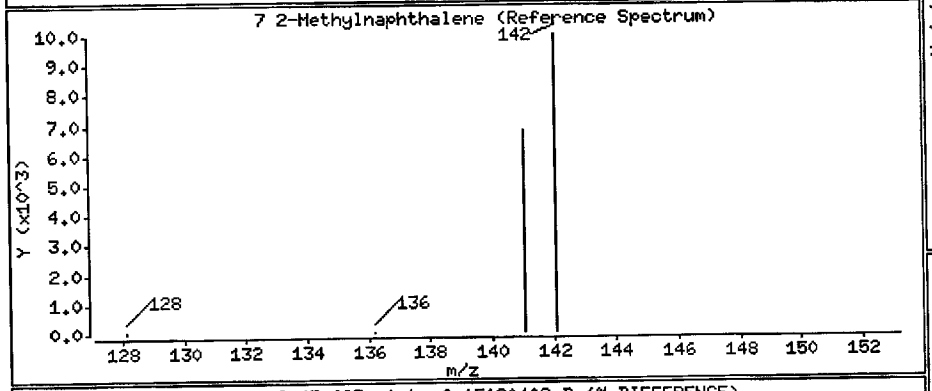
Concentration: 219 ng/L

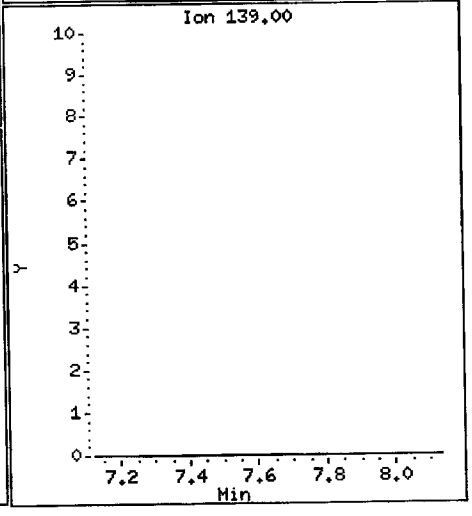


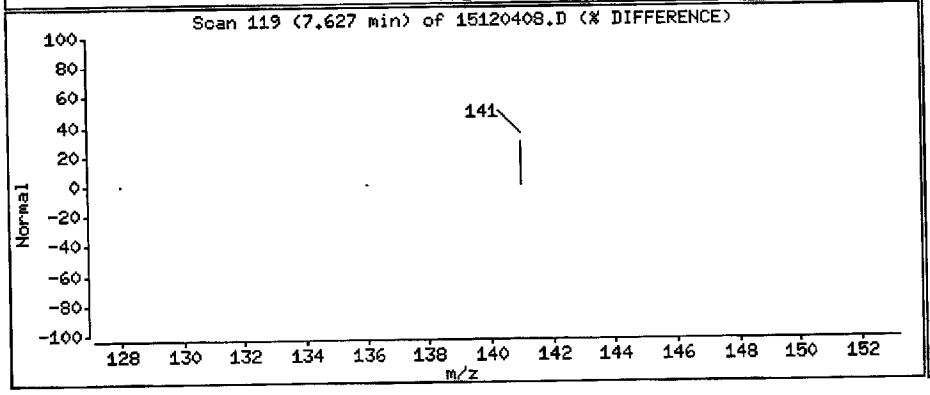












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

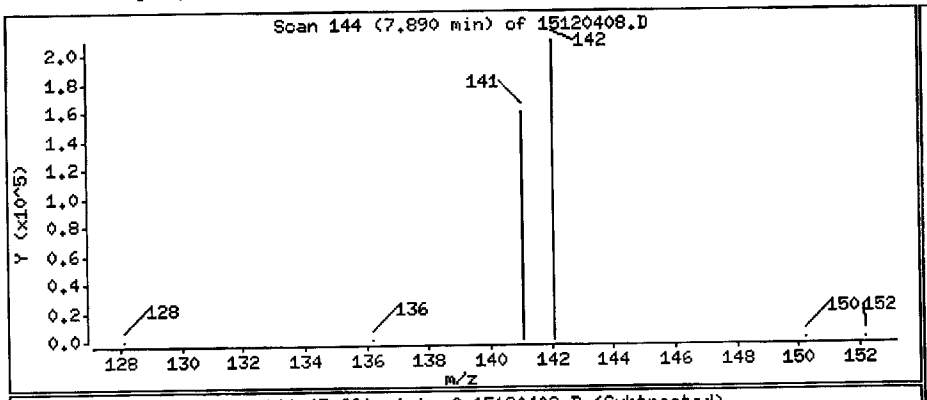
Operator: JW

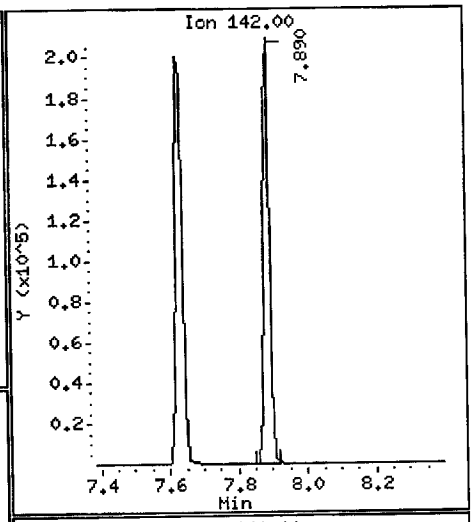
Column phase: Rxi-17Sil MS

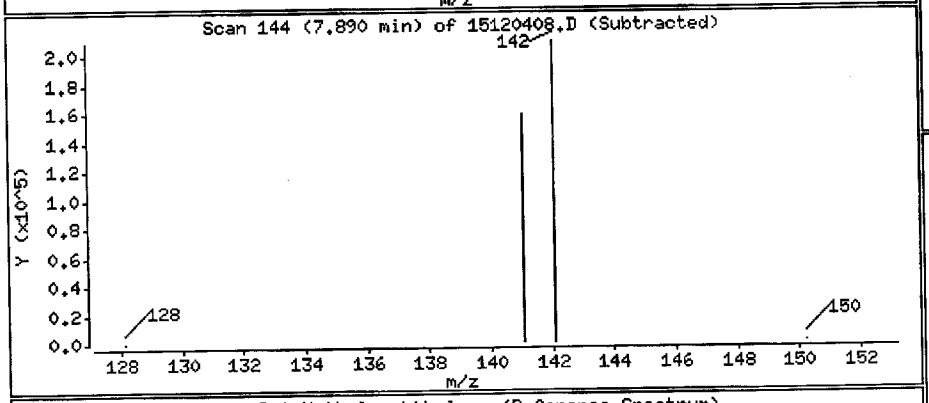
Column diameter: 0.25

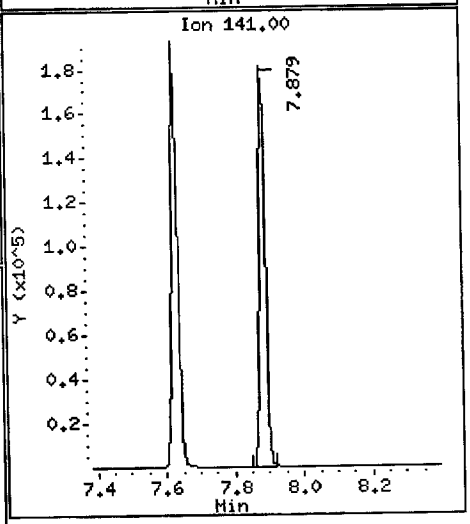
8 1-Methylnaphthalene

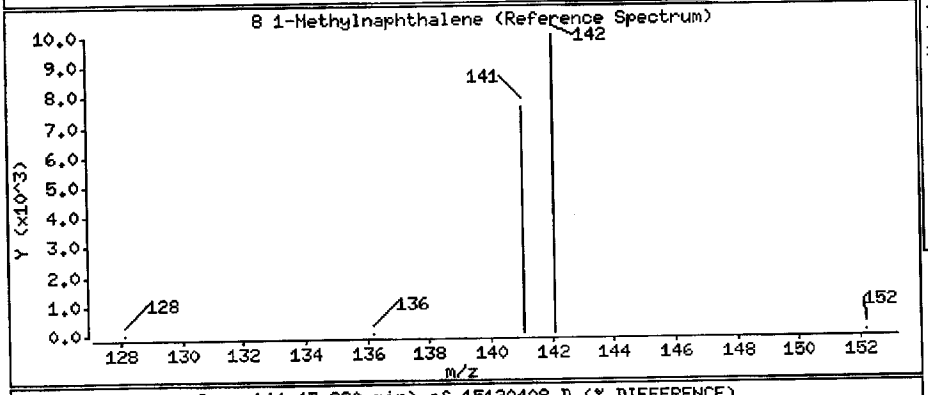
Concentration: 243 ng/L

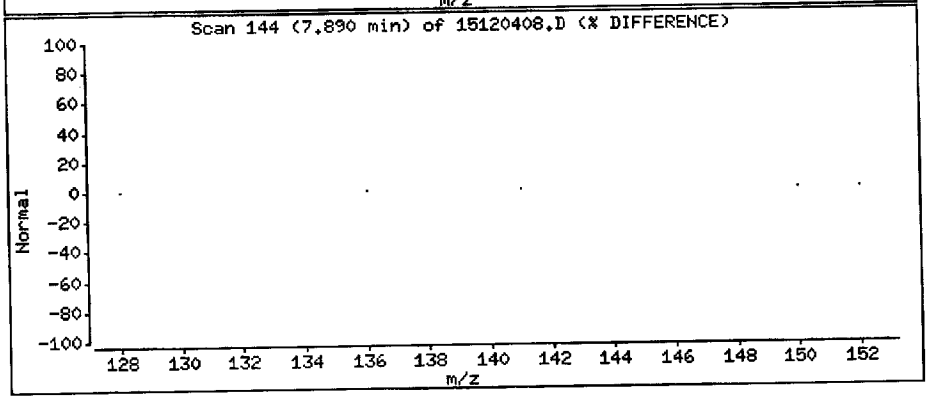












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

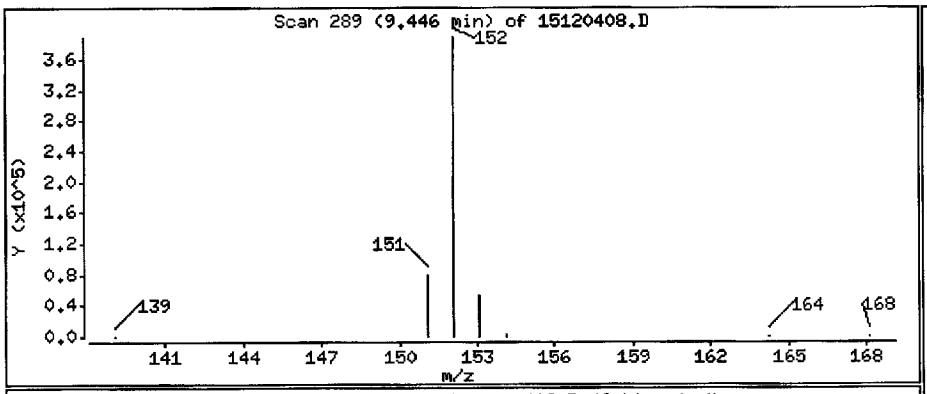
Operator: JW

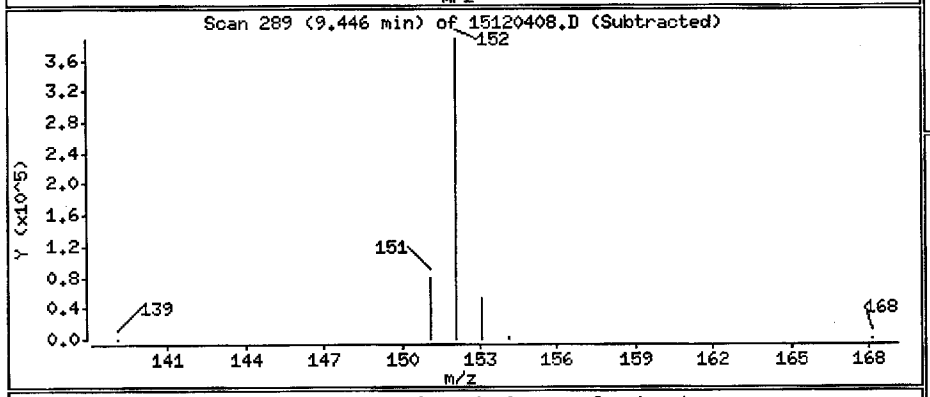
Column phase: Rxi-17Sil MS

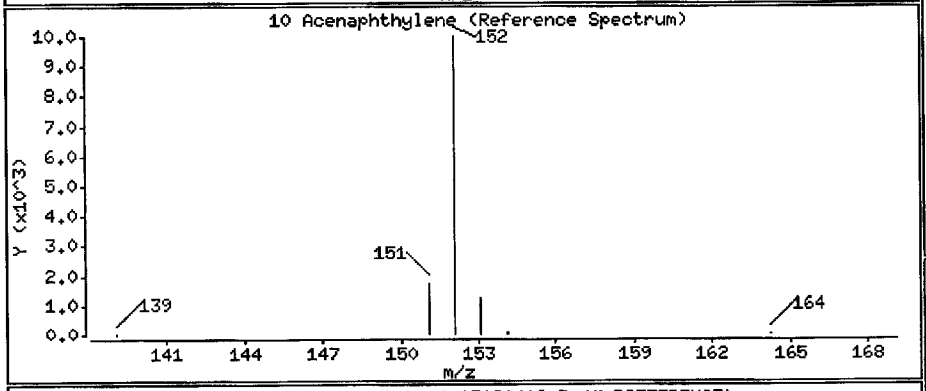
Column diameter: 0.25

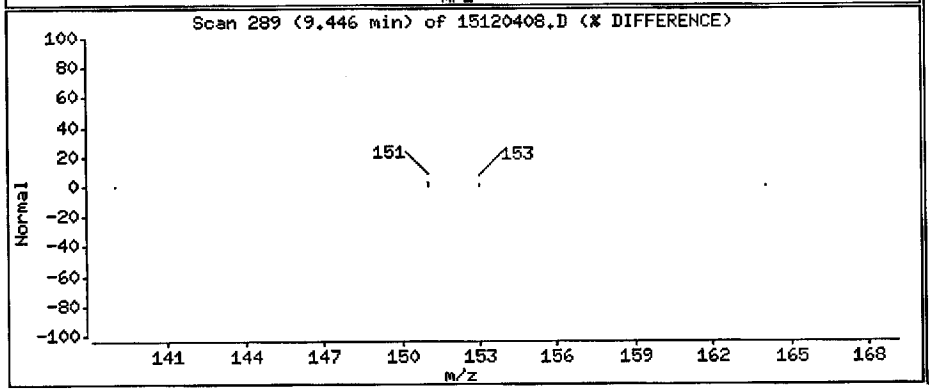
10 Acenaphthylene

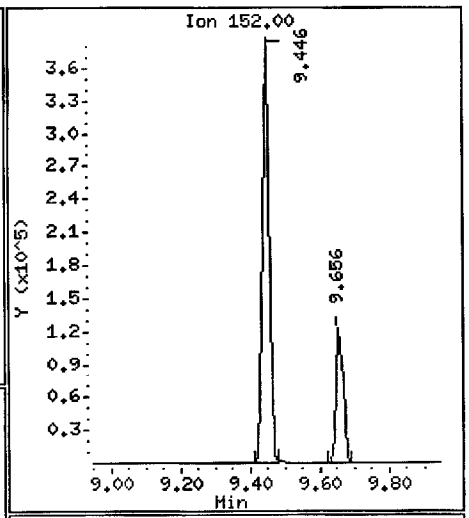
Concentration: 236 ng/L

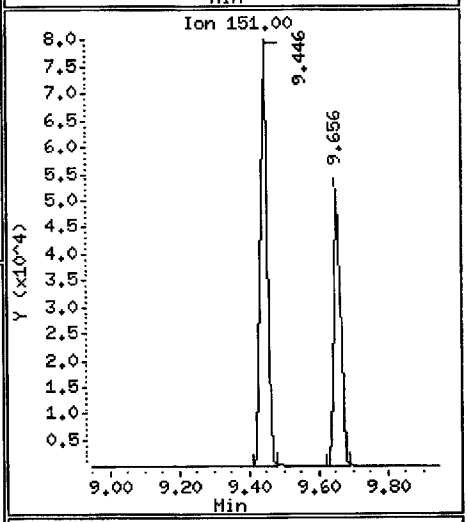


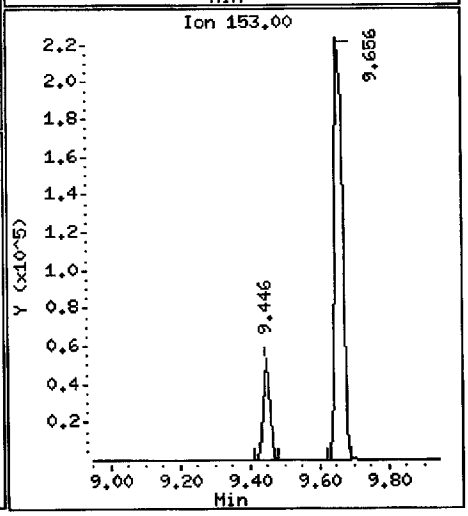












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

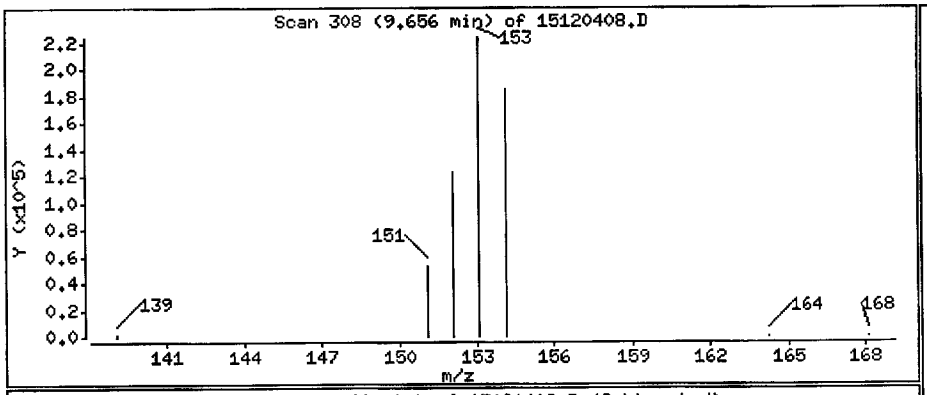
Operator: JW

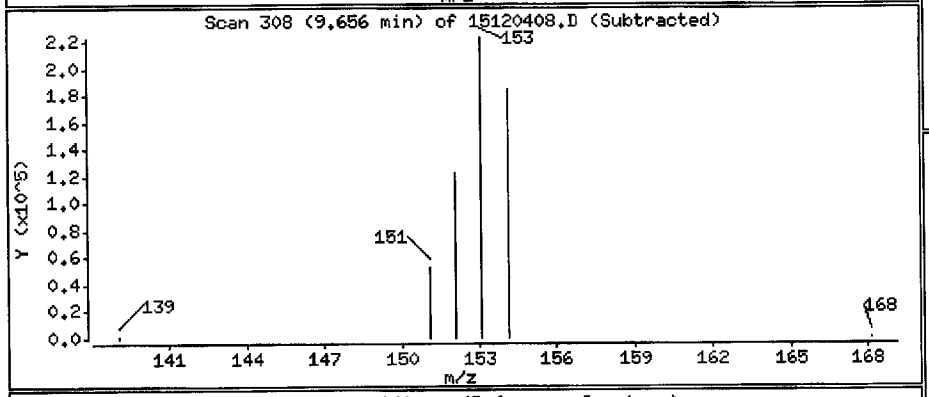
Column phase: Rxi-17Sil MS

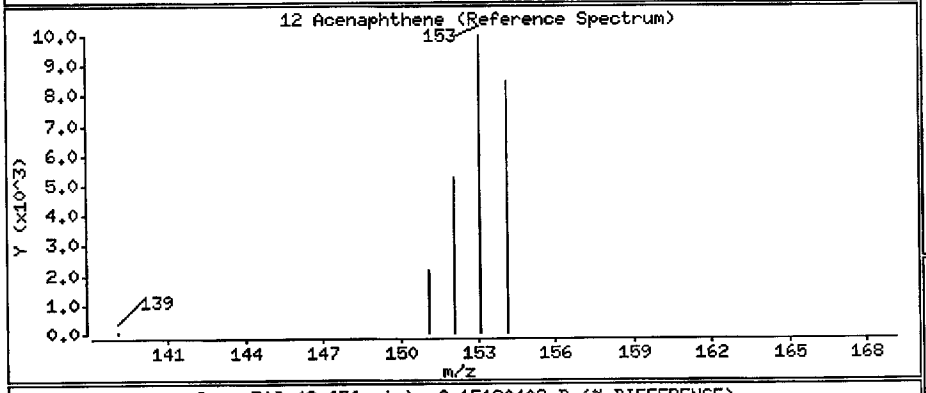
Column diameter: 0.25

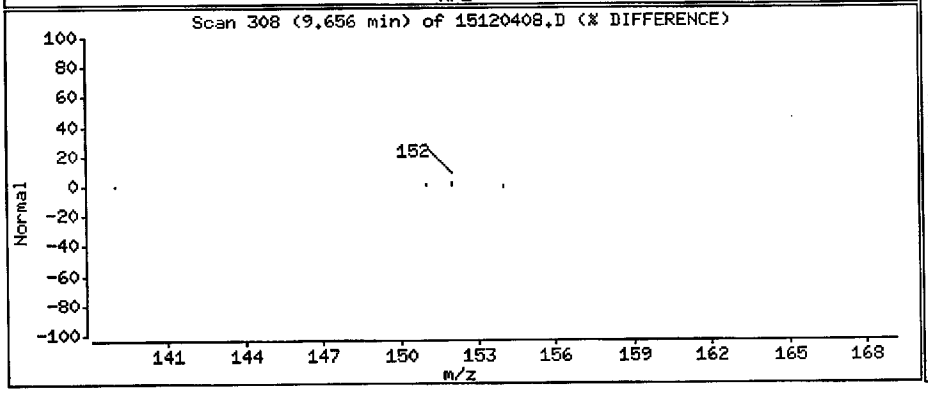
12 Acenaphthene

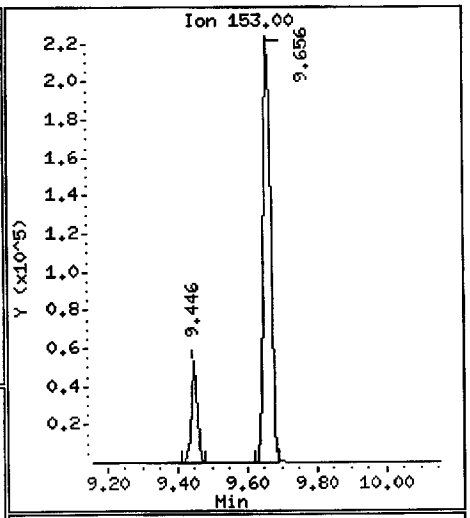
Concentration: 243 ng/L

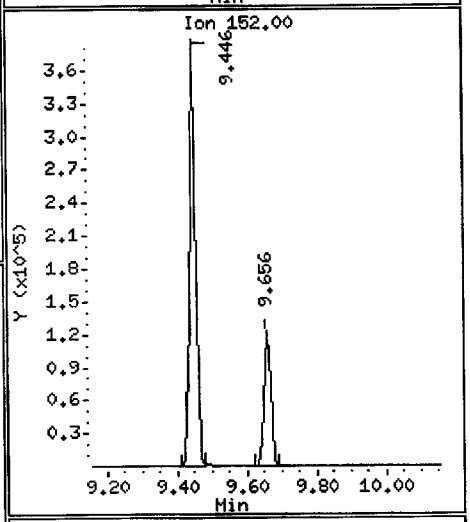


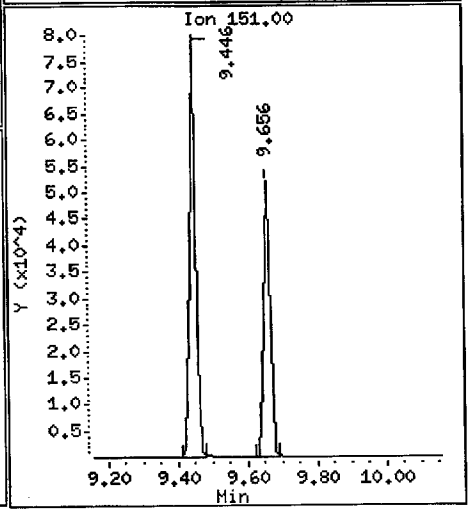












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

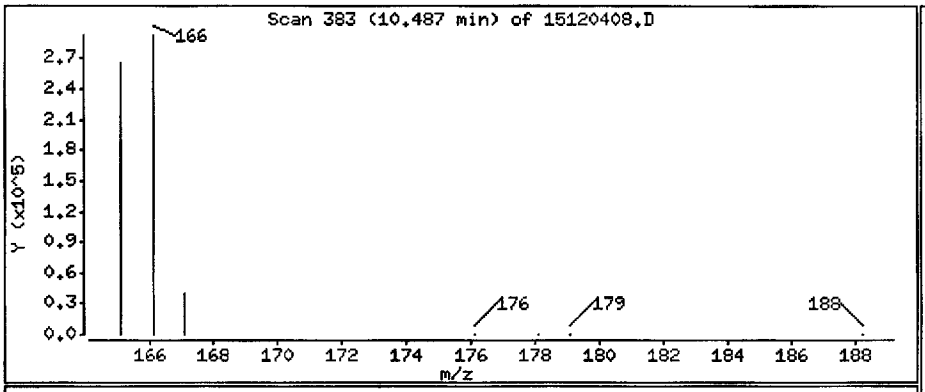
Operator: JW

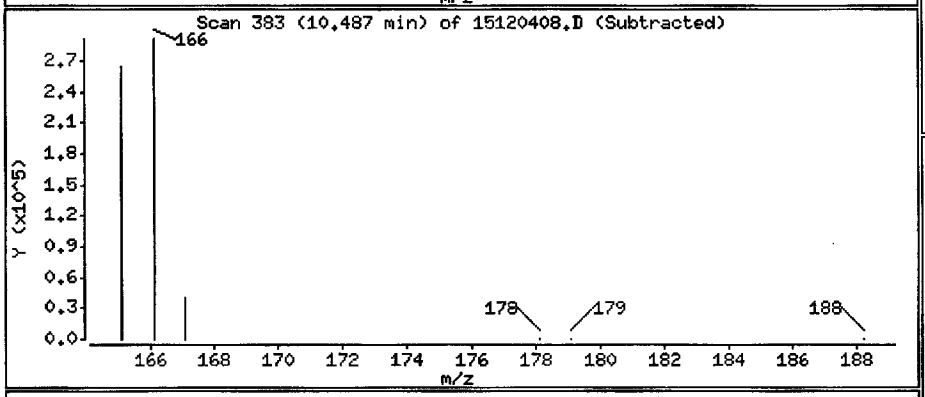
Column phase: Rxi-17Sil MS

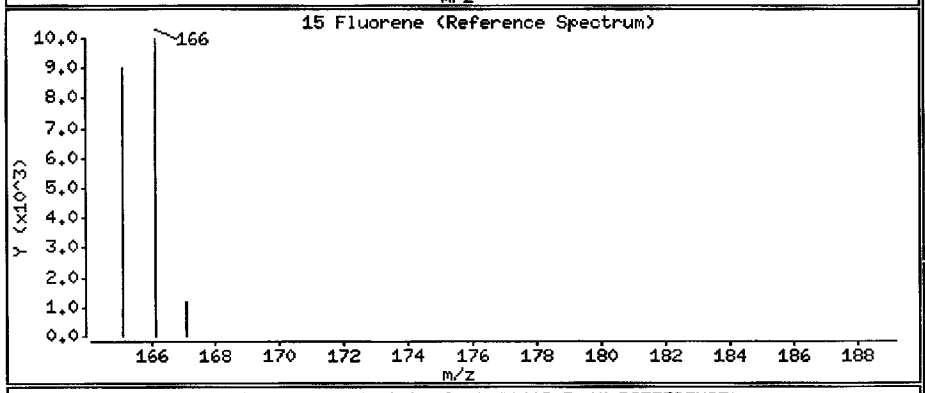
Column diameter: 0.25

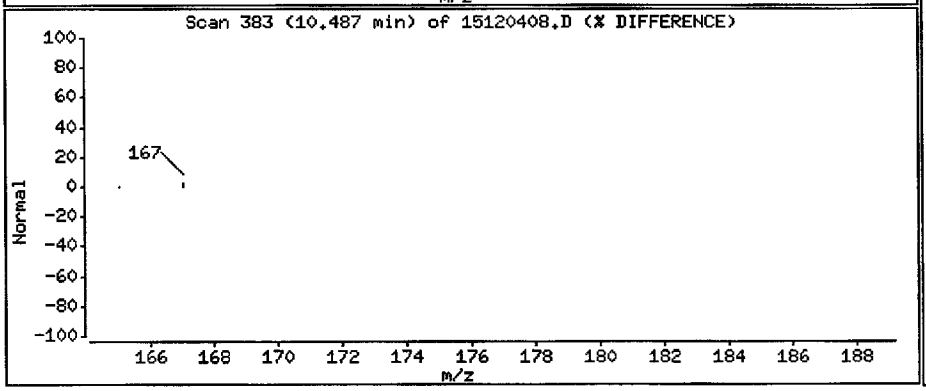
15 Fluorene

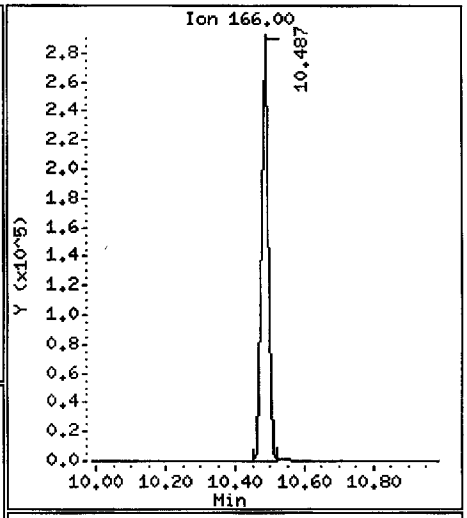
Concentration: 236 ng/L

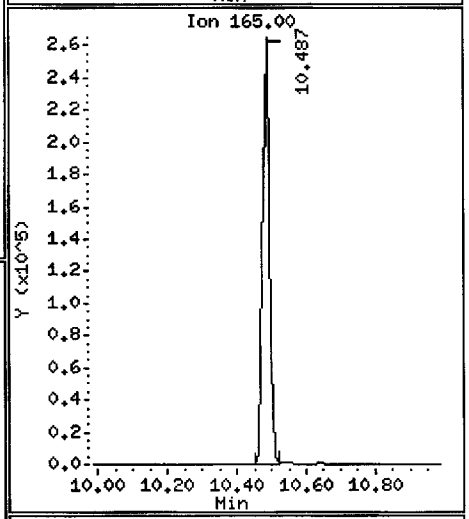


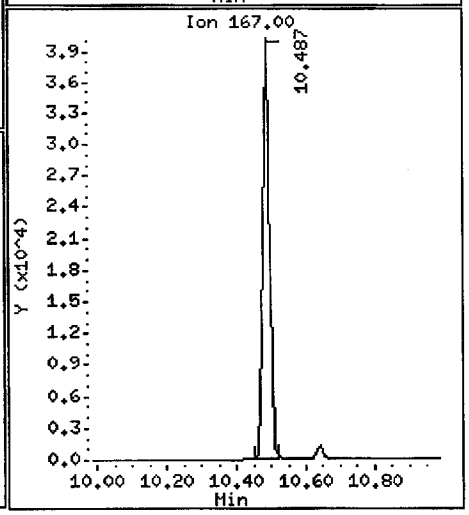












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

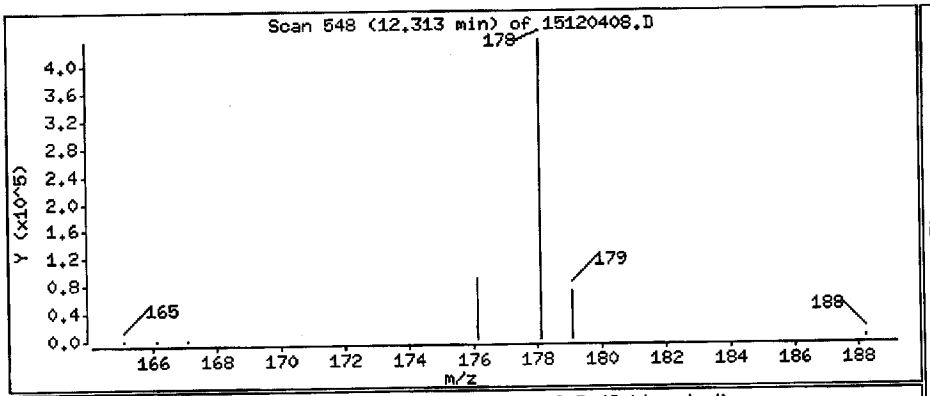
Operator: JW

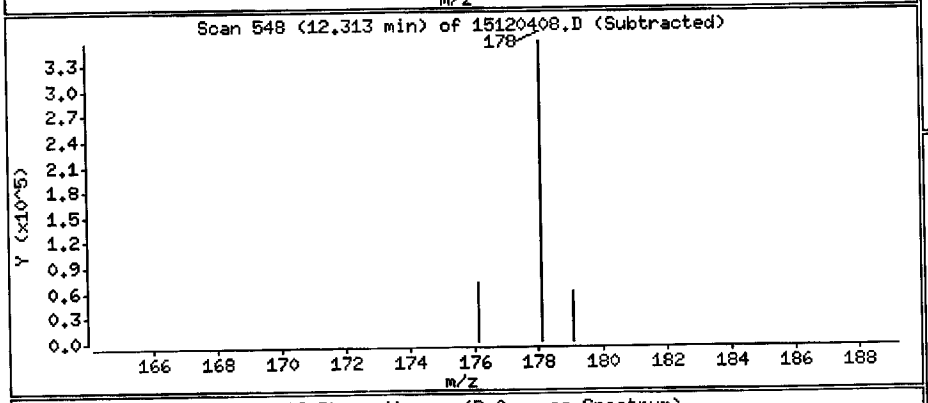
Column phase: Rxi-17Sil MS

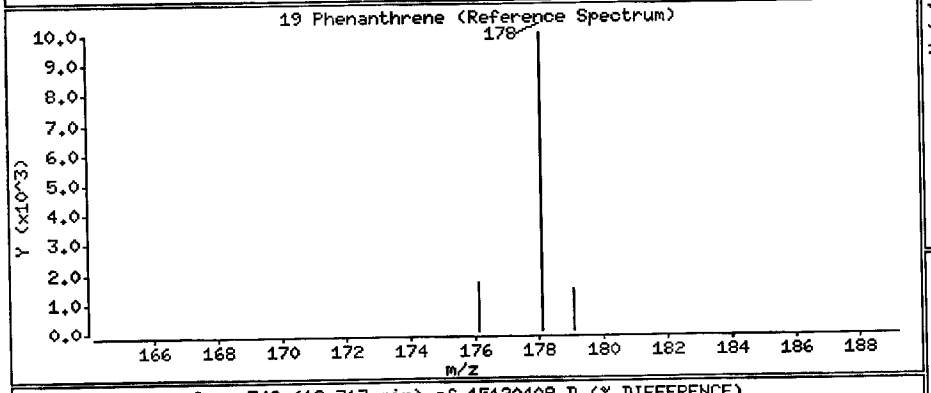
Column diameter: 0.25

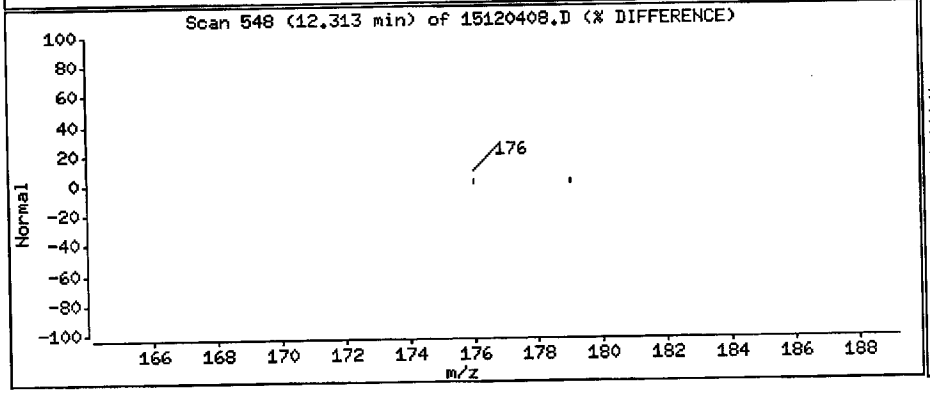
19 Phenanthrene

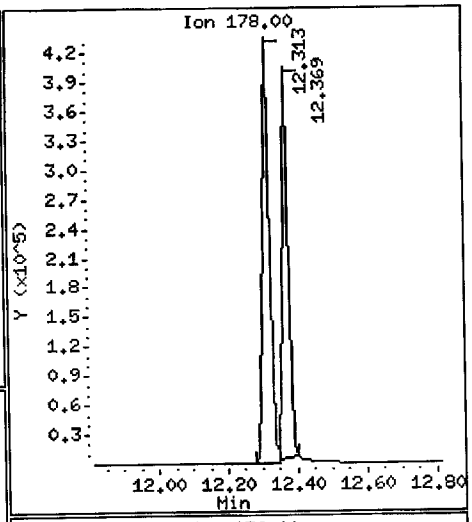
Concentration: 247 ng/L

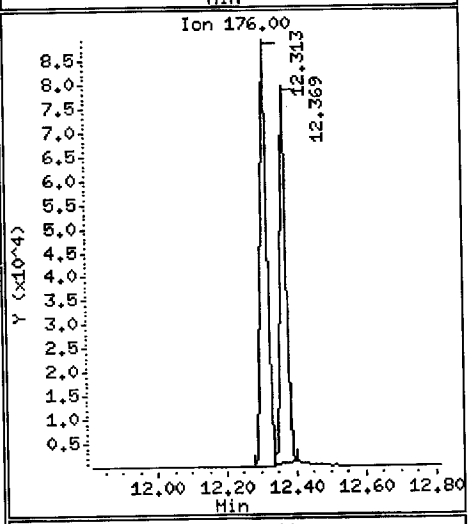


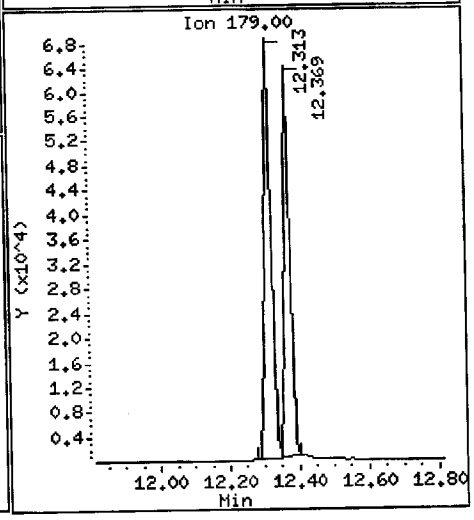












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

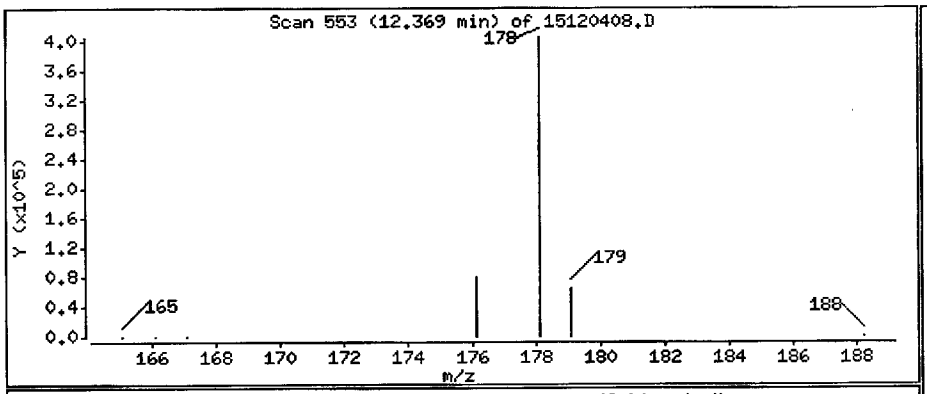
Operator: JW

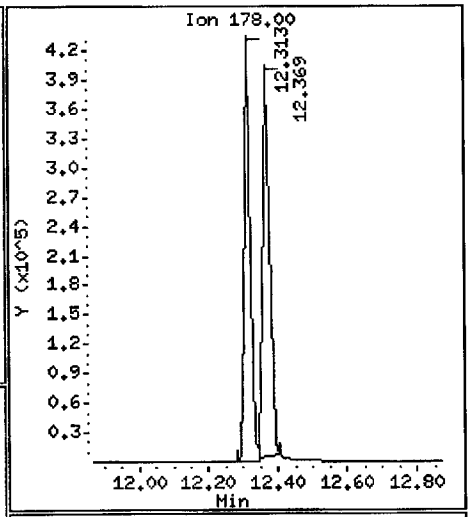
Column phase: Rxi-17Sil MS

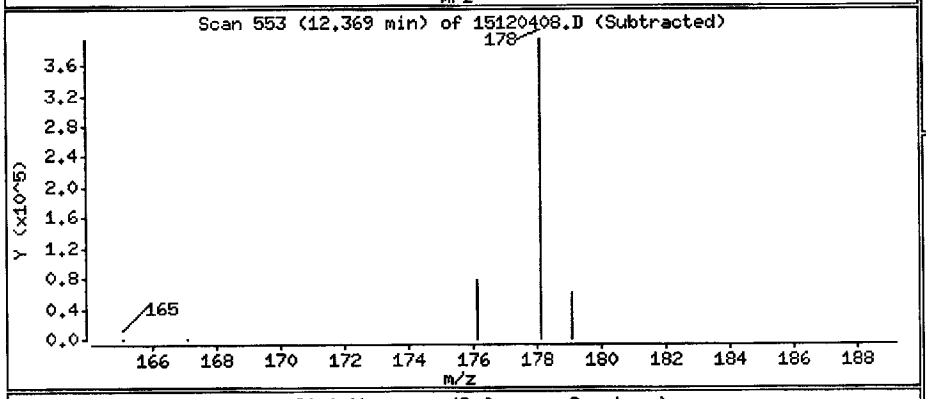
Column diameter: 0.25

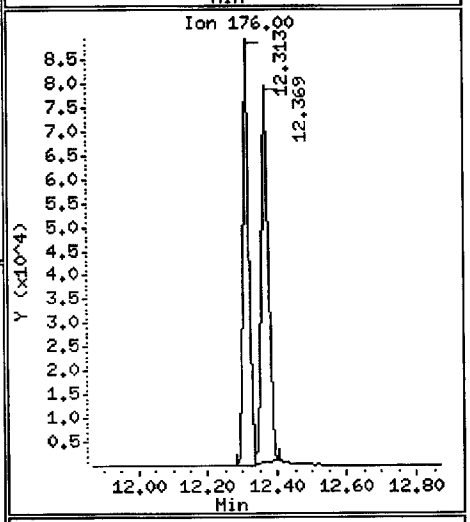
20 Anthracene

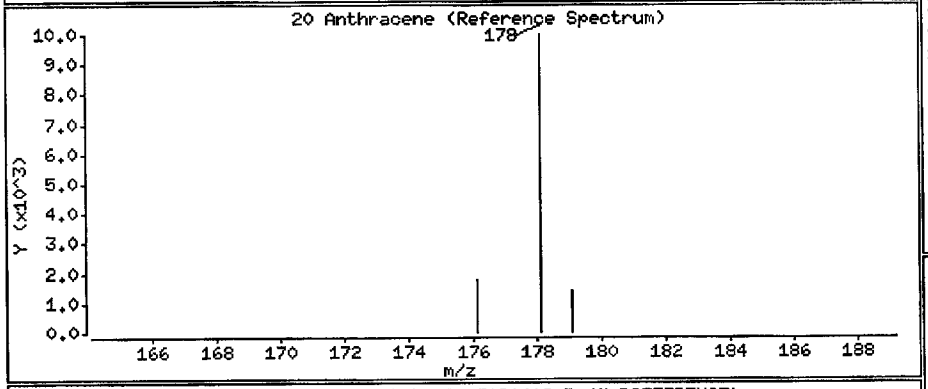
Concentration: 250 ng/L

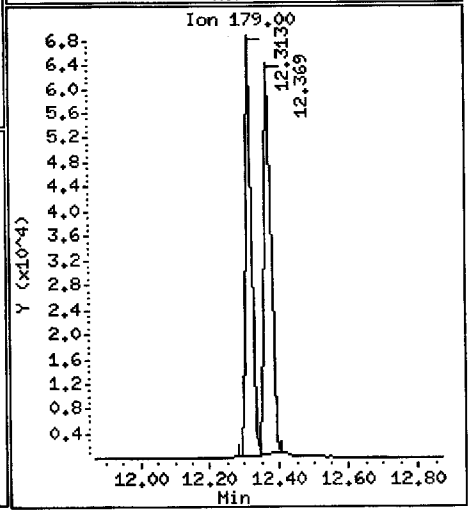


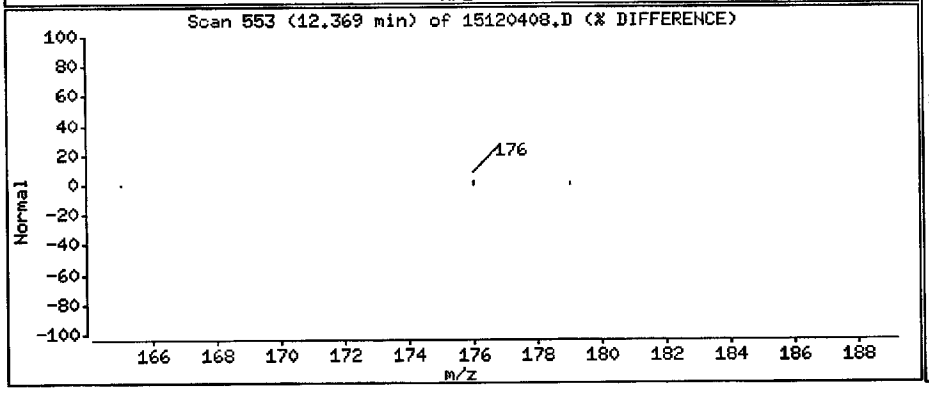












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

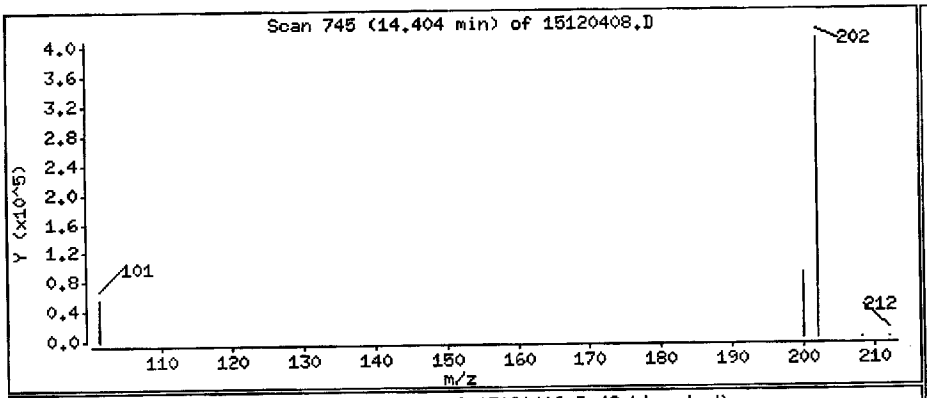
Operator: JW

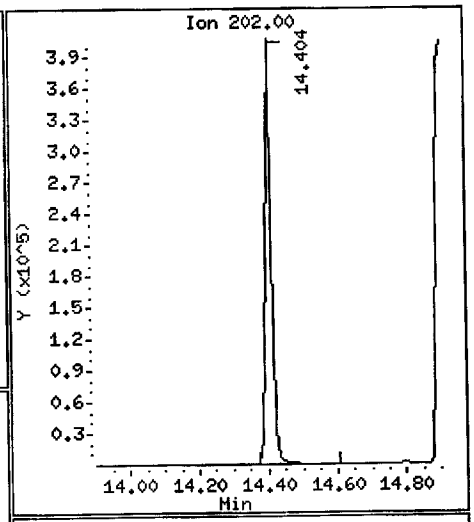
Column phase: Rxi-17Sil MS

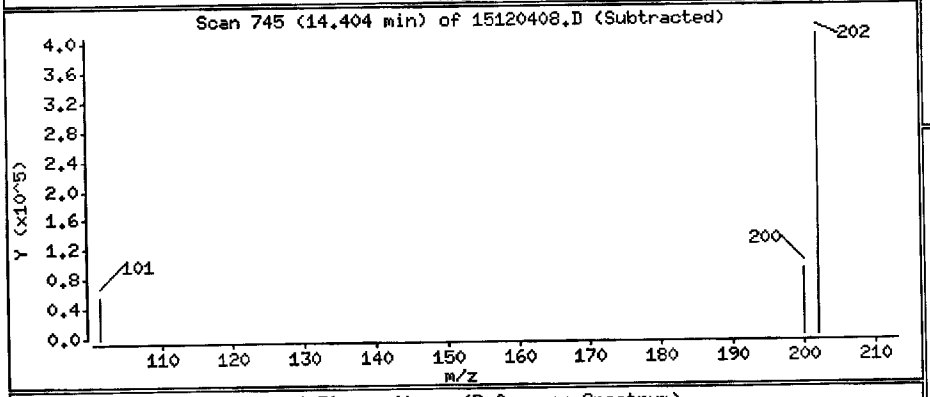
Column diameter: 0.25

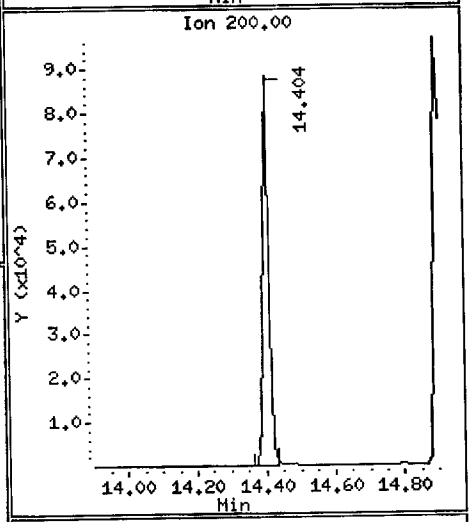
24 Fluoranthene

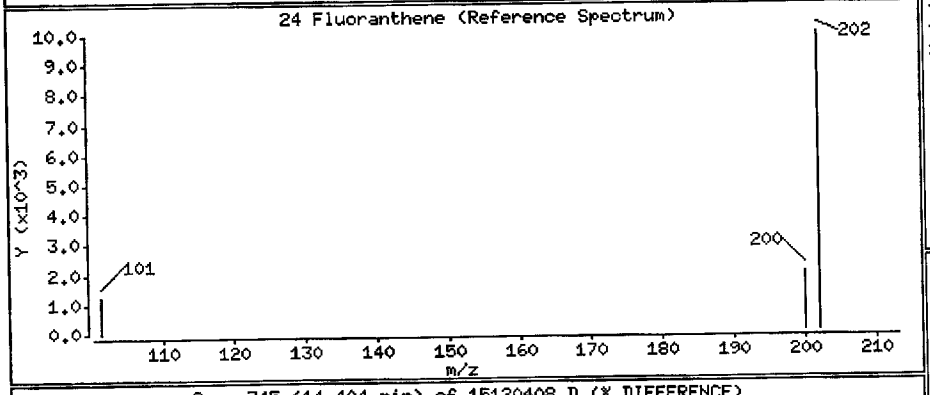
Concentration: 238 ng/L

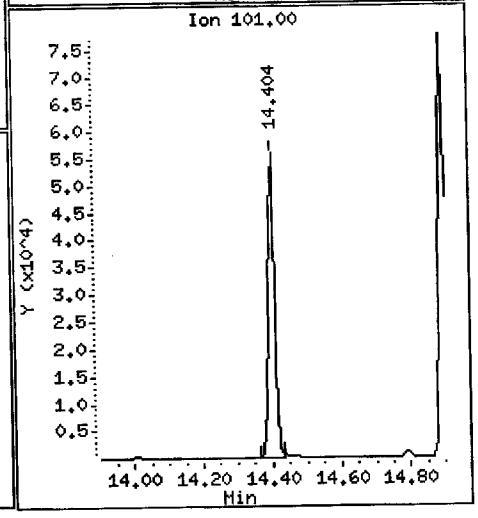


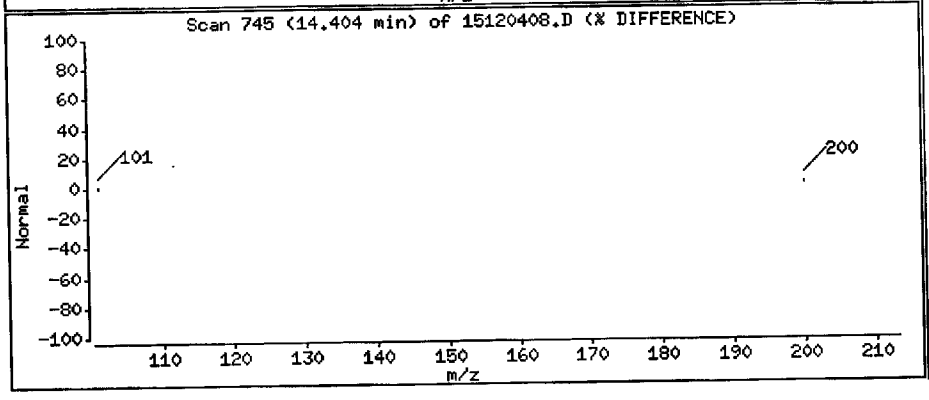












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

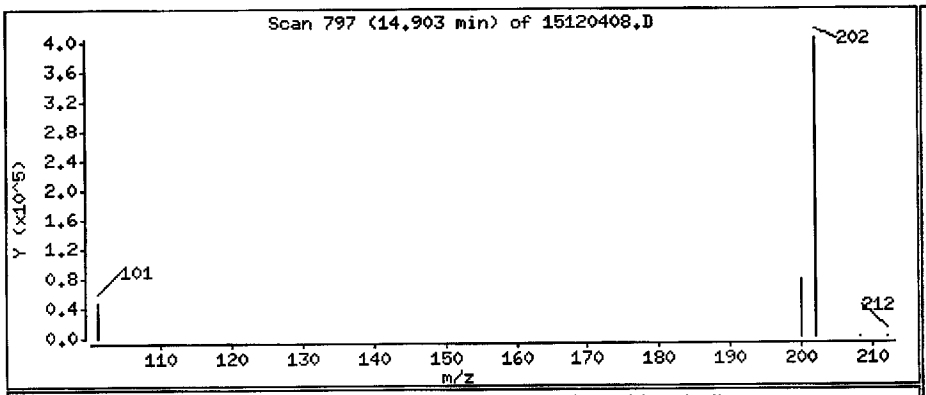
Operator: JW

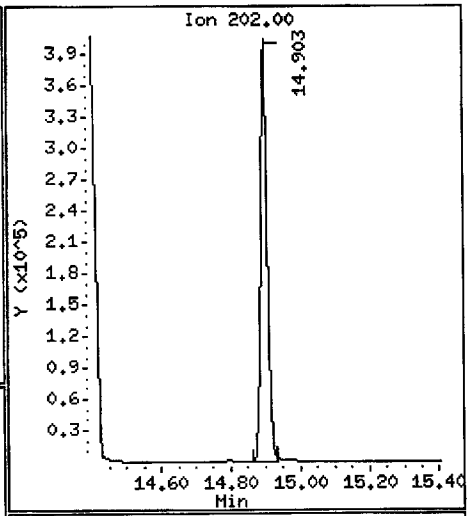
Column phase: Rxi-17Sil MS

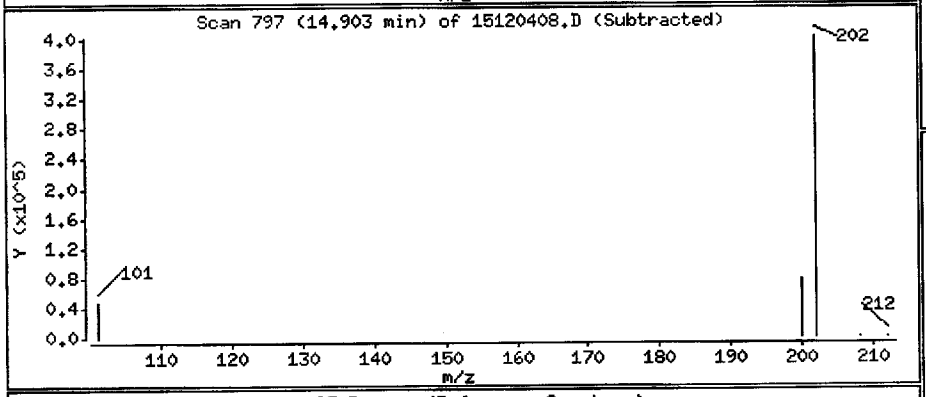
Column diameter: 0.25

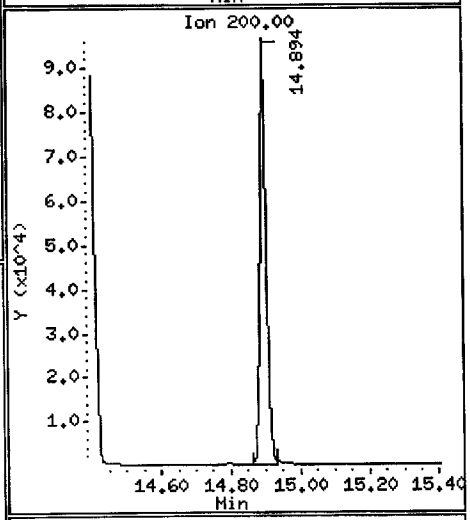
25 Pyrene

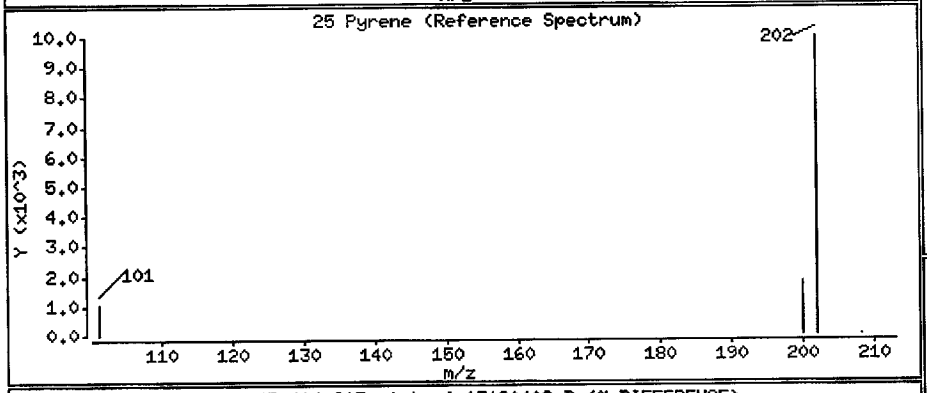
Concentration: 254 ng/L

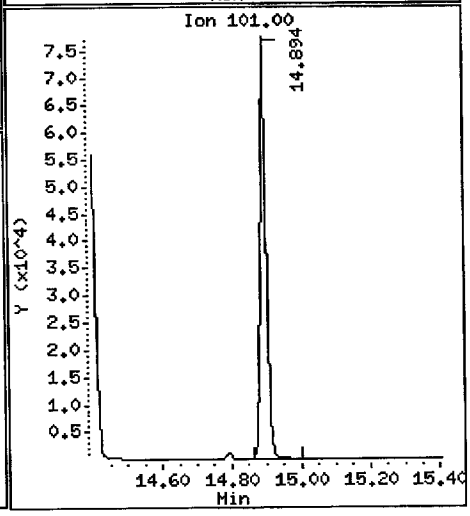


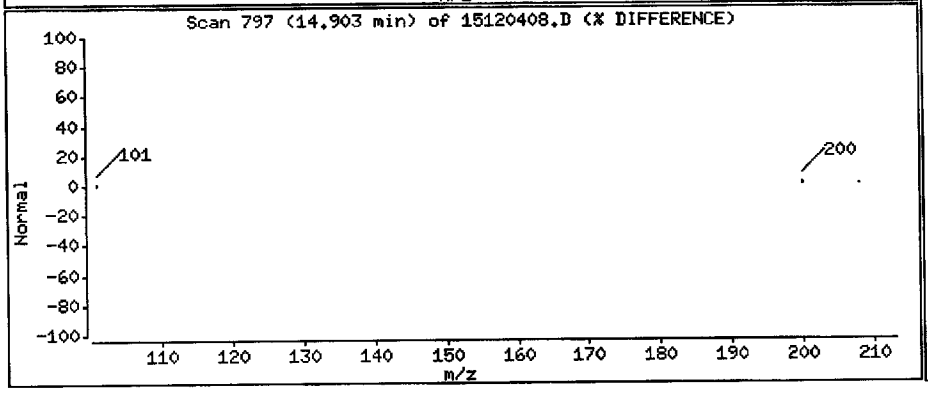












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

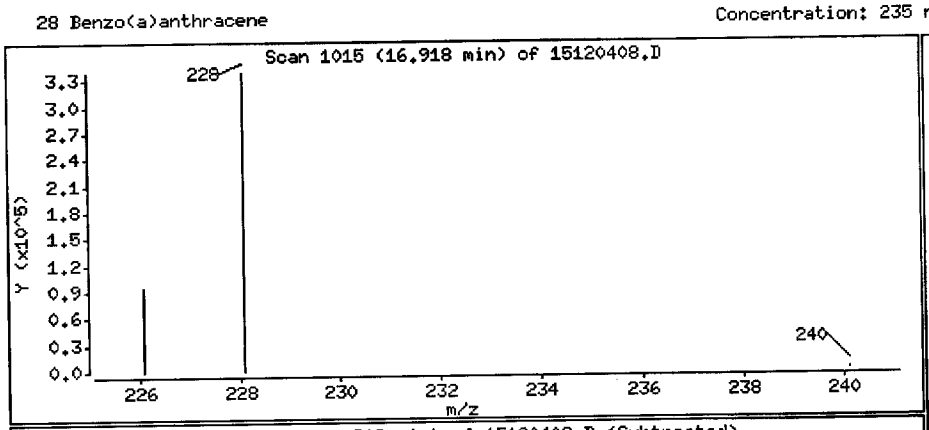
Operator: JW

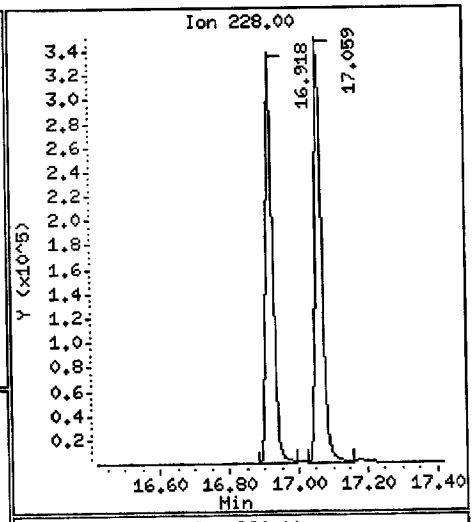
Column phase: Rxi-17Sil MS

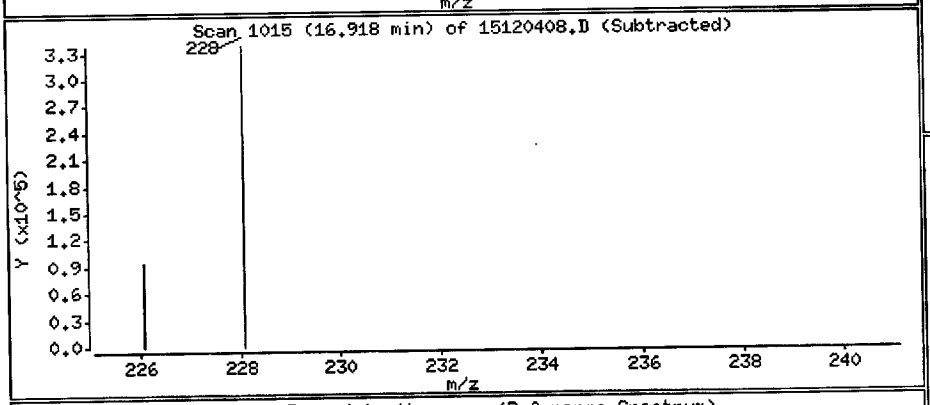
Column diameter: 0.25

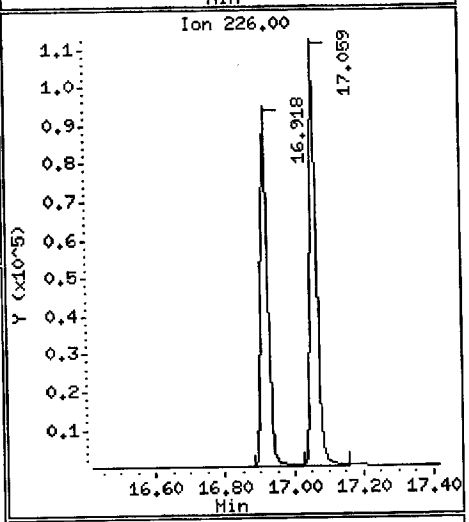
28 Benzo(a)anthracene

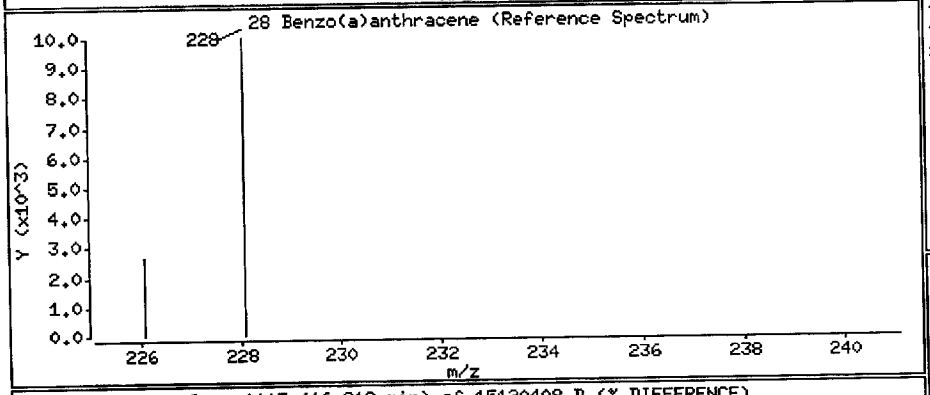
Concentration: 235 ng/L

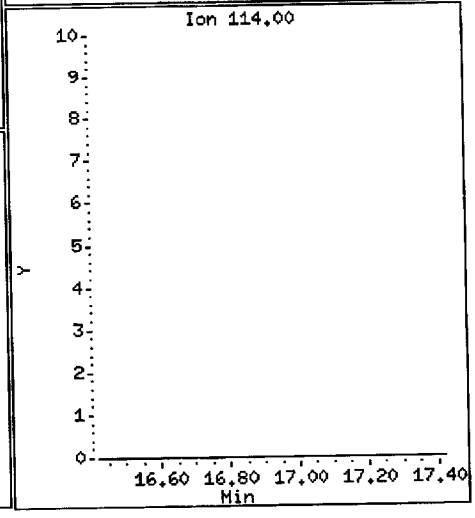


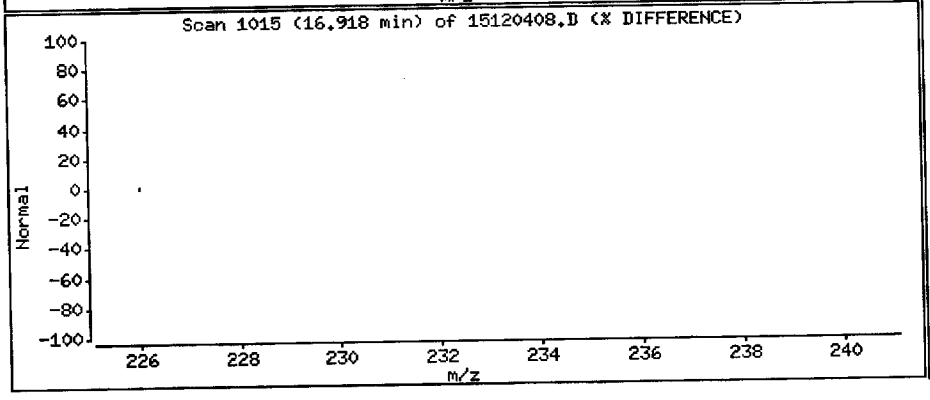












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

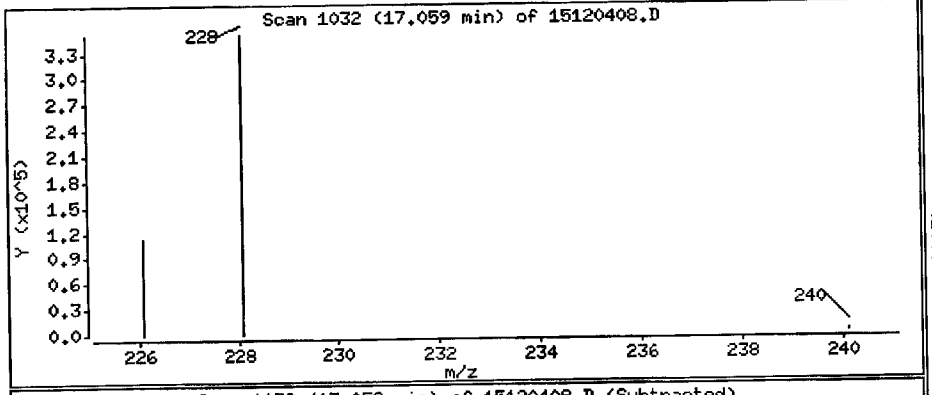
Operator: JW

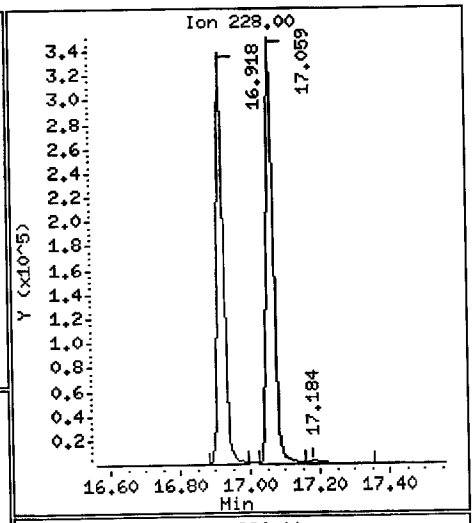
Column phase: Rxi-17Sil MS

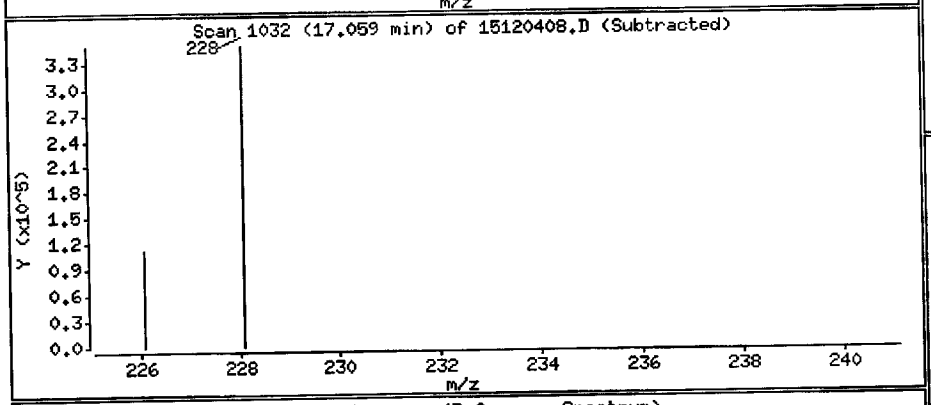
Column diameter: 0.25

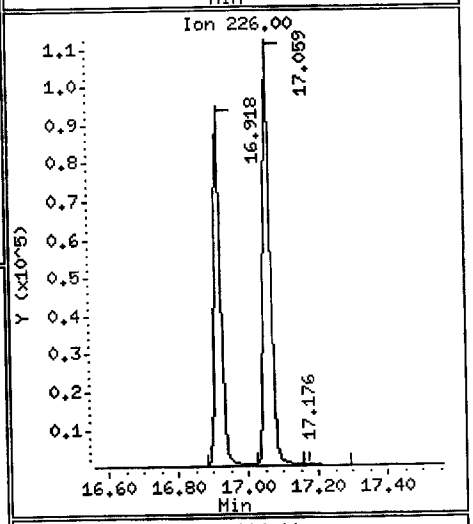
30 Chrysene

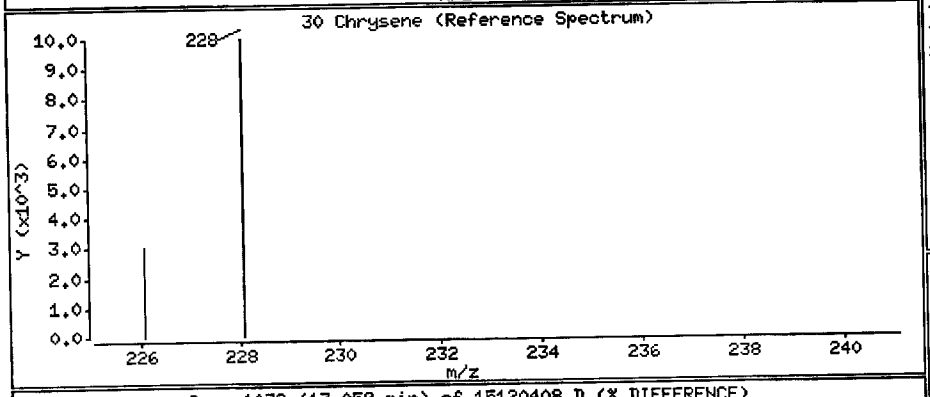
Concentration: 235 ng/L

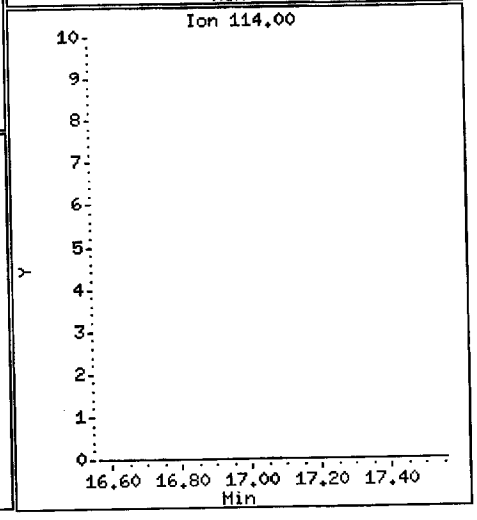


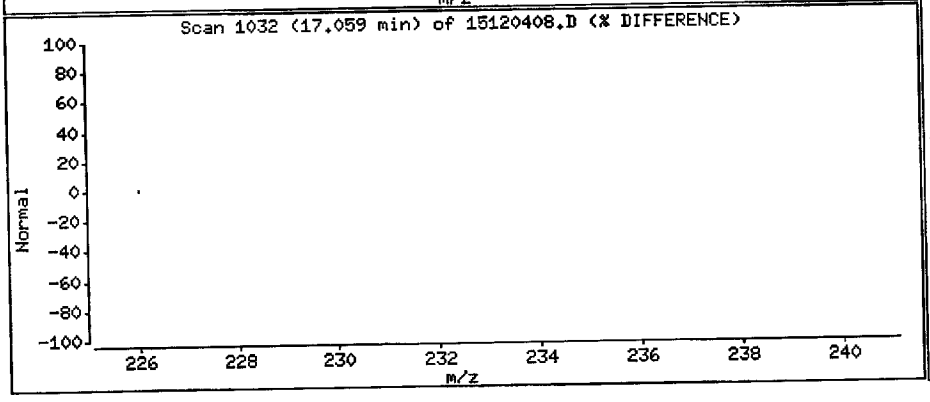












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

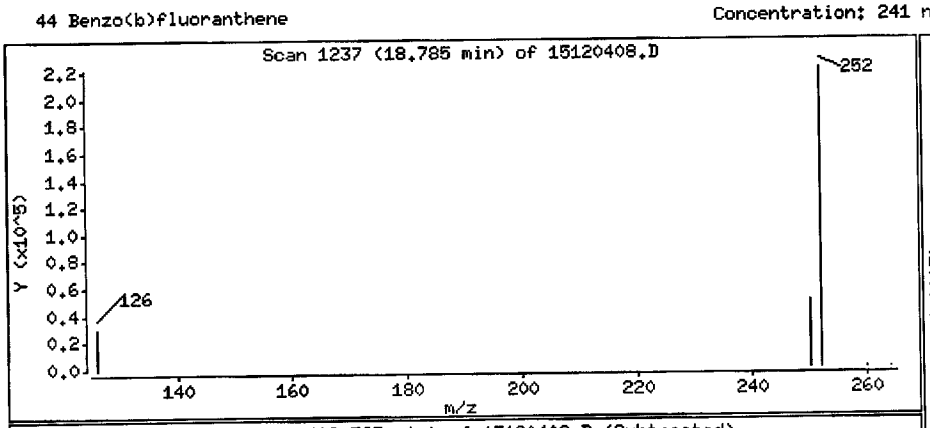
Operator: JW

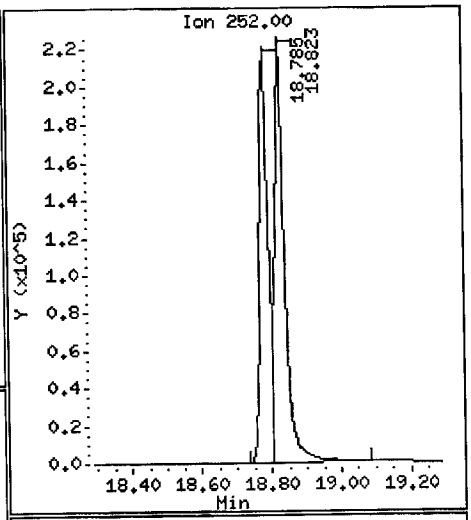
Column phase: Rxi-17Sil MS

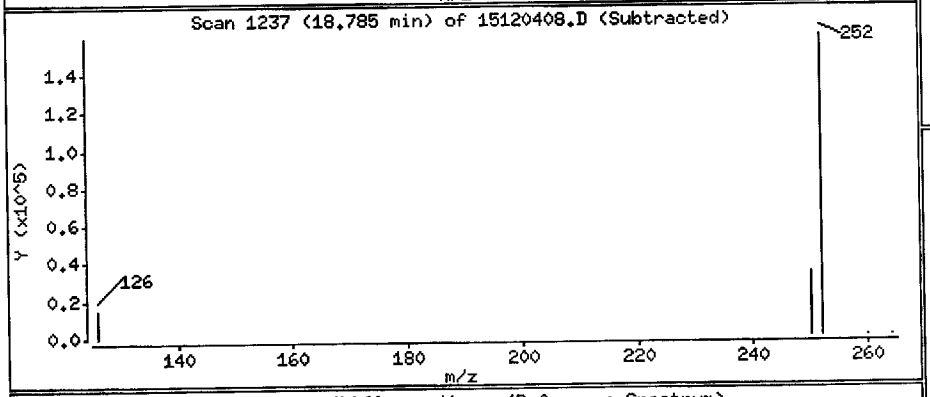
Column diameter: 0.25

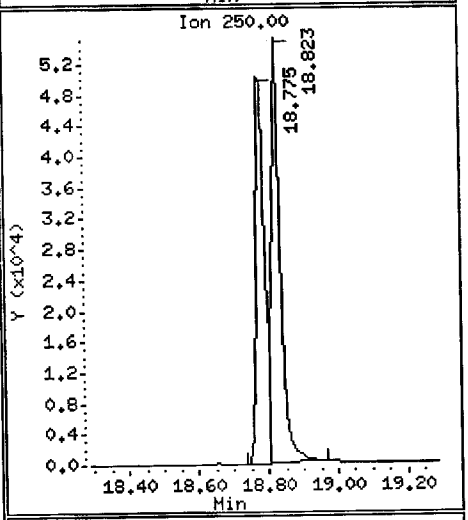
44 Benzo(b)fluoranthene

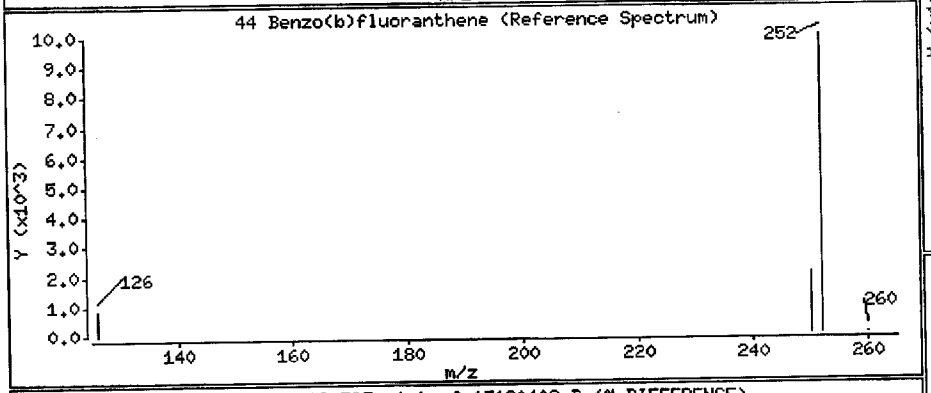
Concentration: 241 ng/L

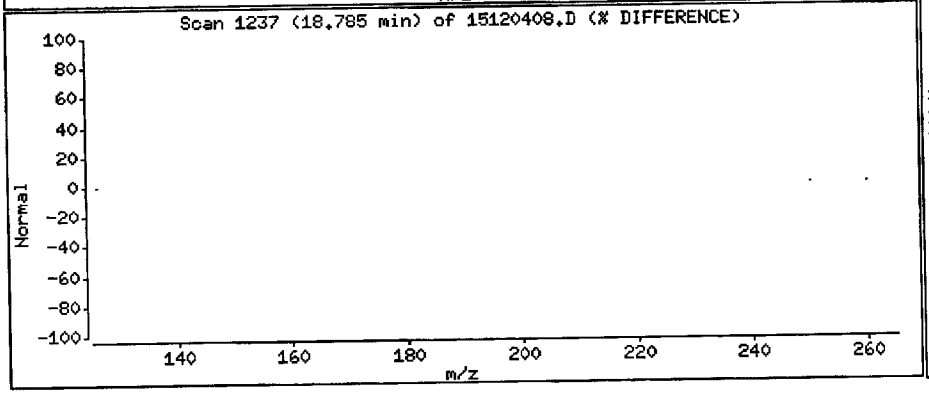


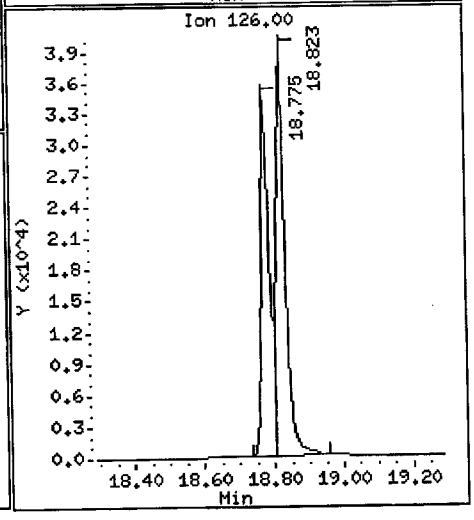












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

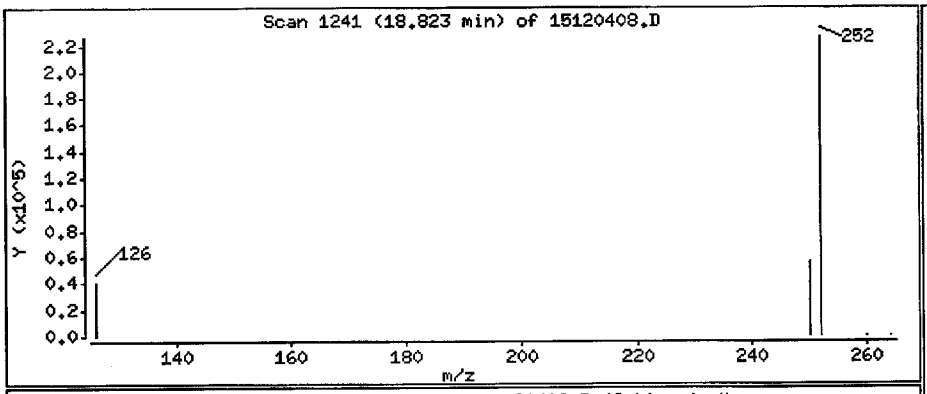
Operator: JW

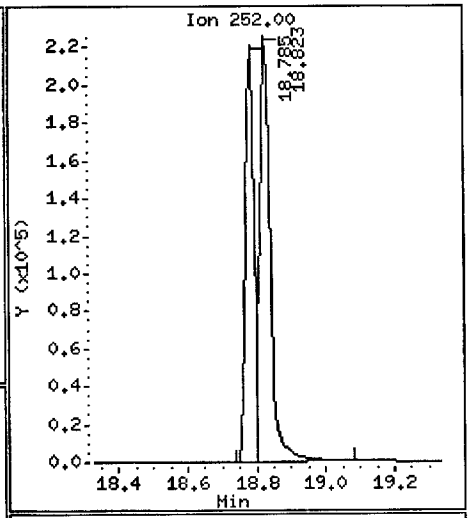
Column phase: Rxi-17Sil MS

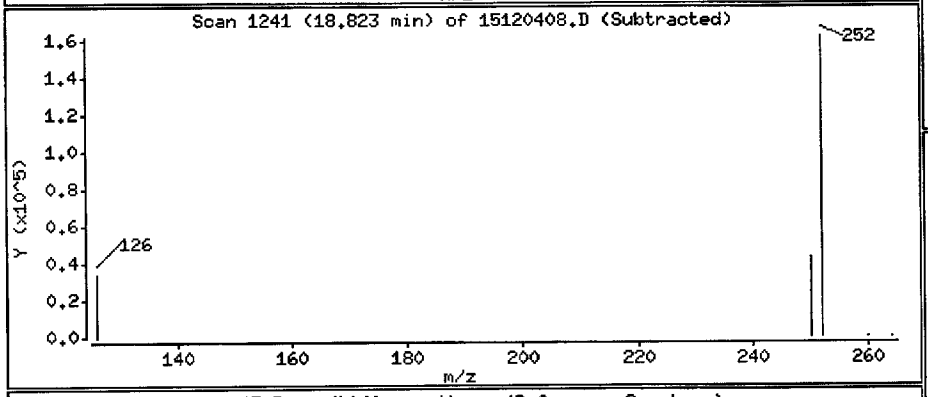
Column diameter: 0.25

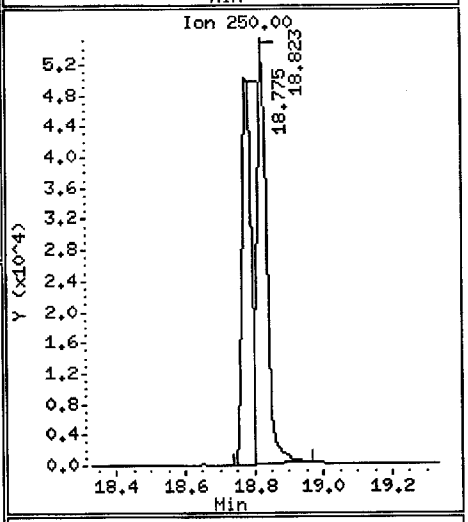
45 Benzo(k)fluoranthene

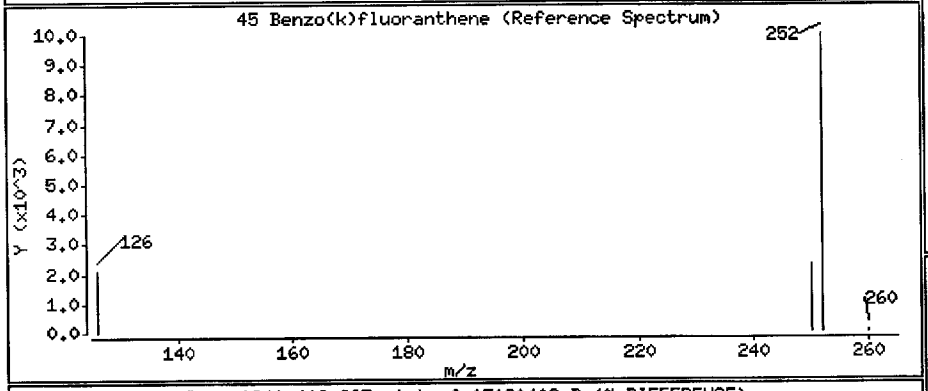
Concentration: 248 ng/L

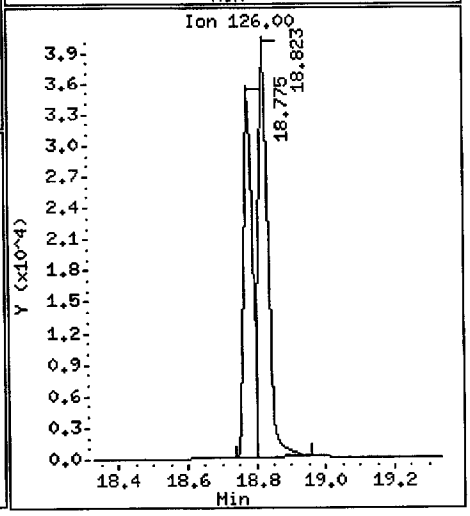


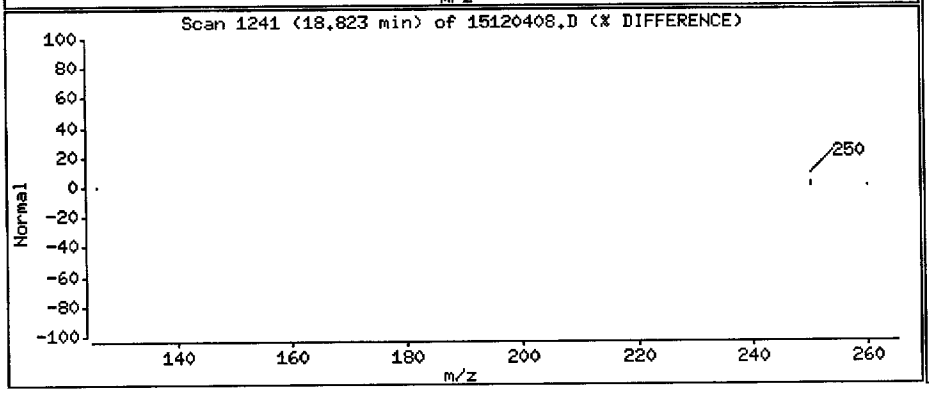












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

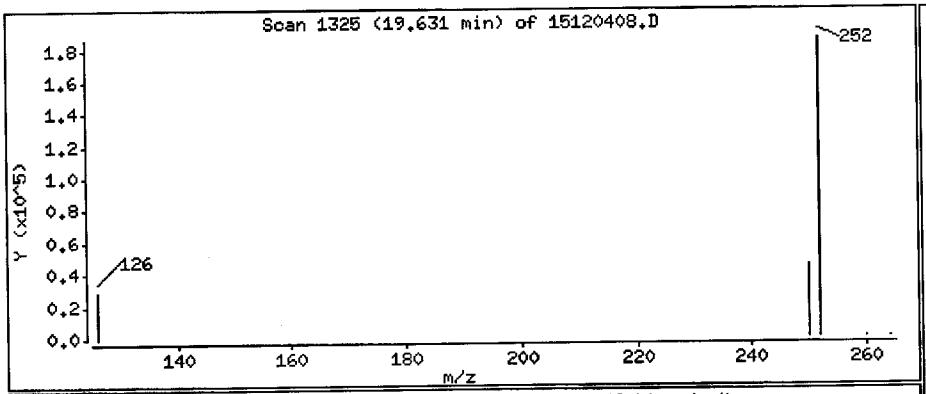
Operator: JW

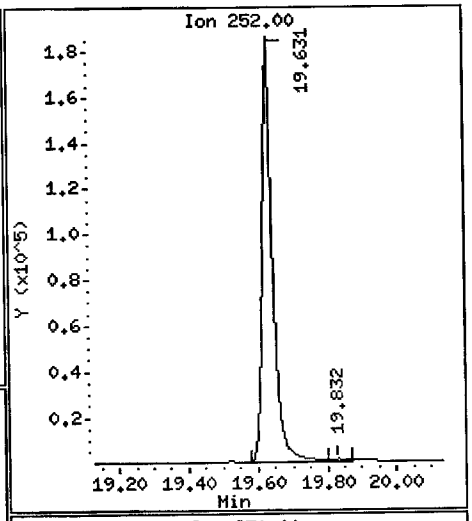
Column phase: Rxi-17Sil MS

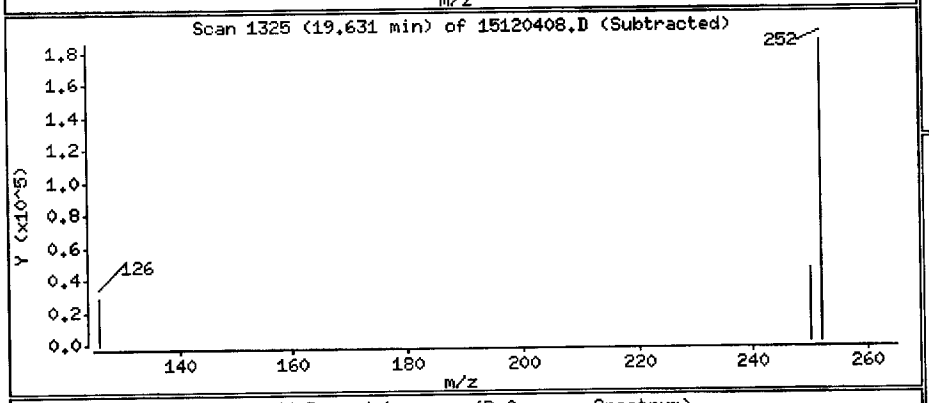
Column diameter: 0.25

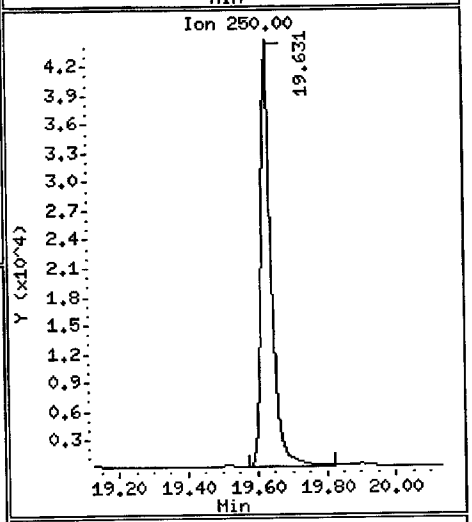
34 Benzo(a)pyrene

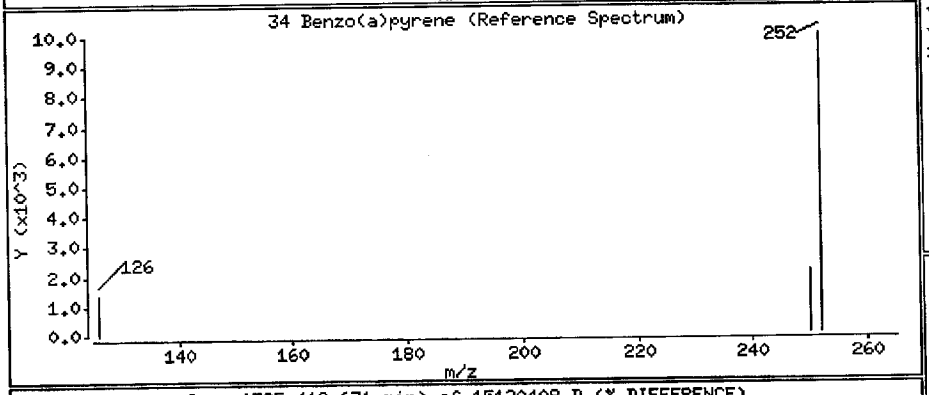
Concentration: 247 ng/L

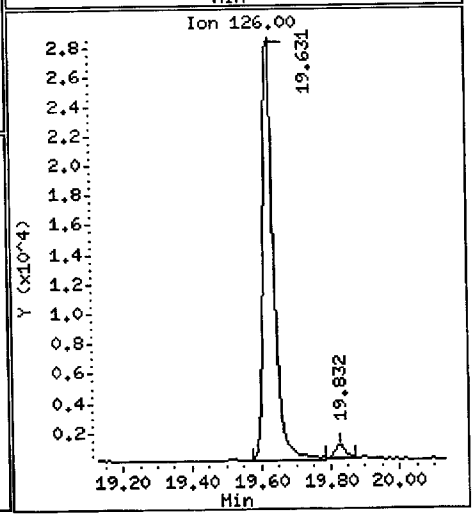


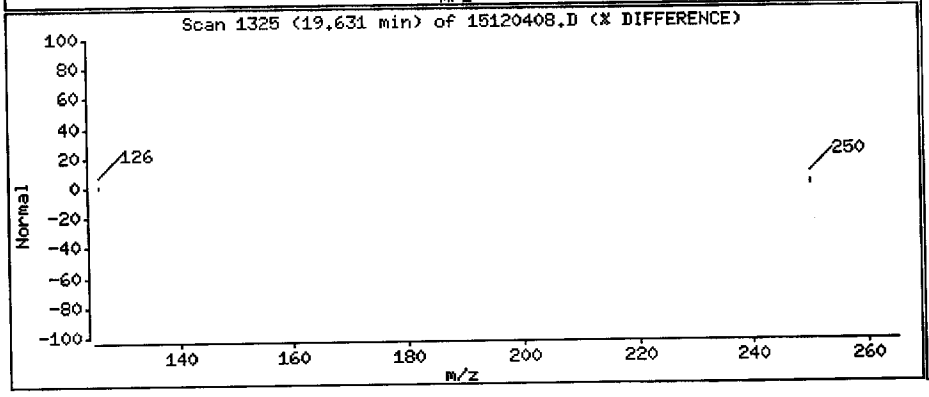












AUG 2016

Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

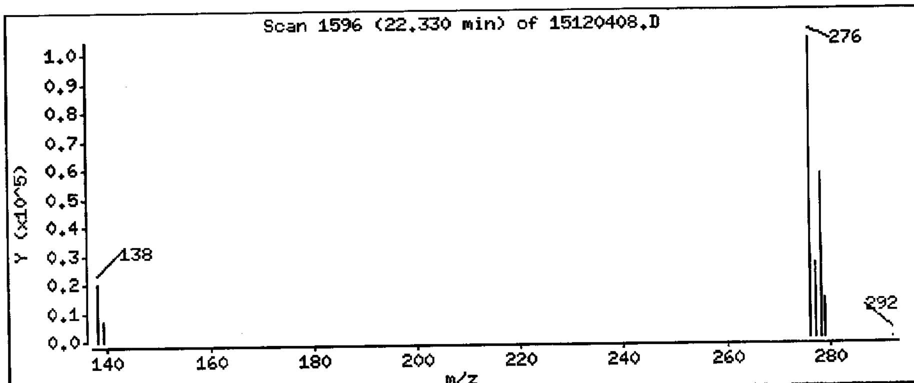
Operator: JW

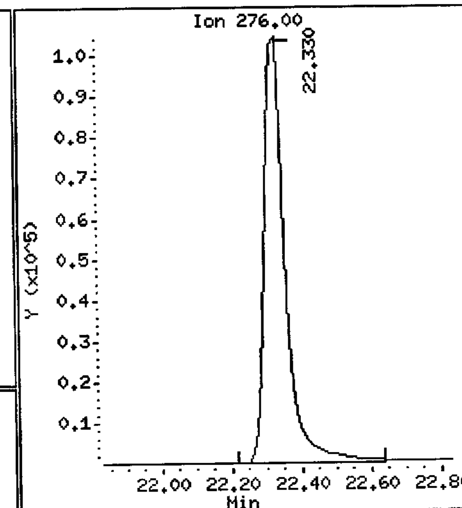
Column phase: Rxi-17Sil MS

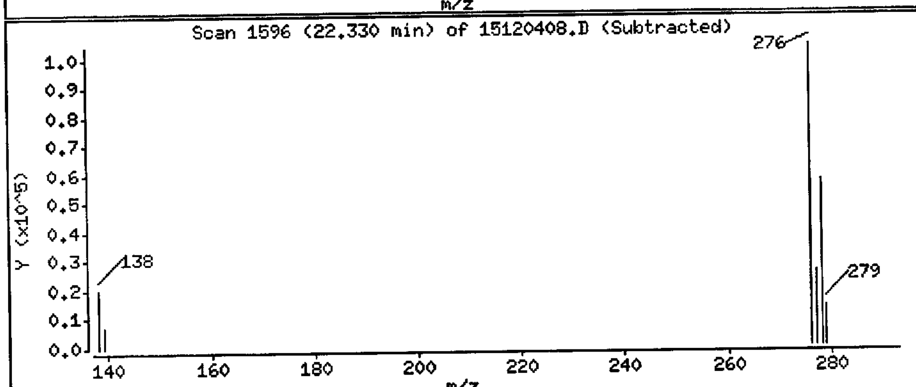
Column diameter: 0.25

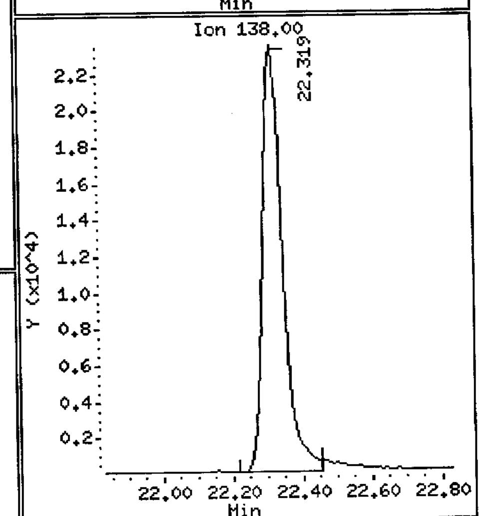
37 Indeno(1,2,3-cd)pyrene

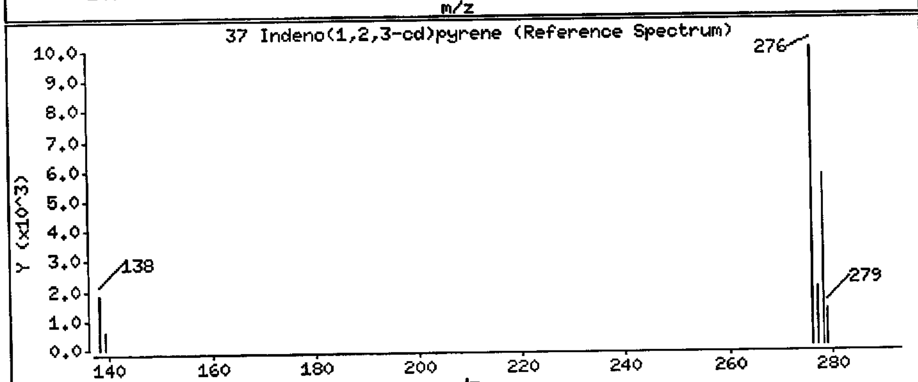
Concentration: 248 ng/L

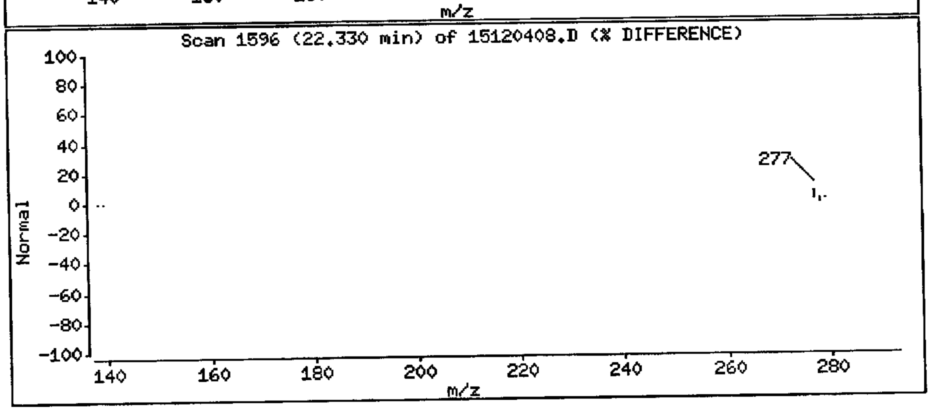












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

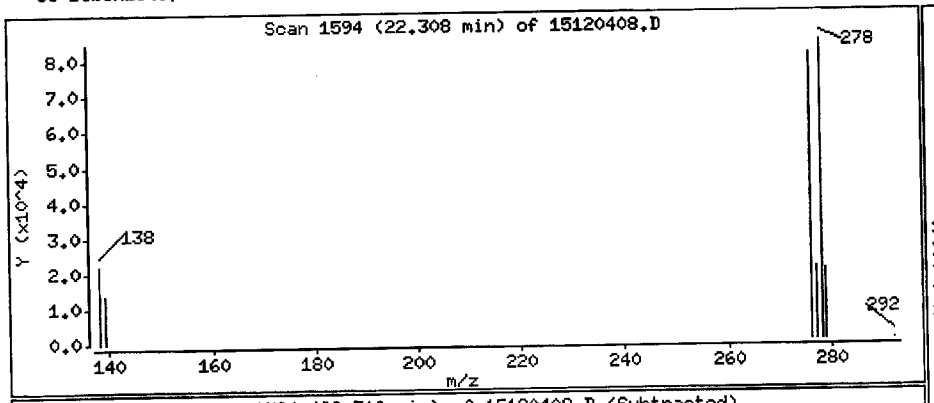
Operator: JW

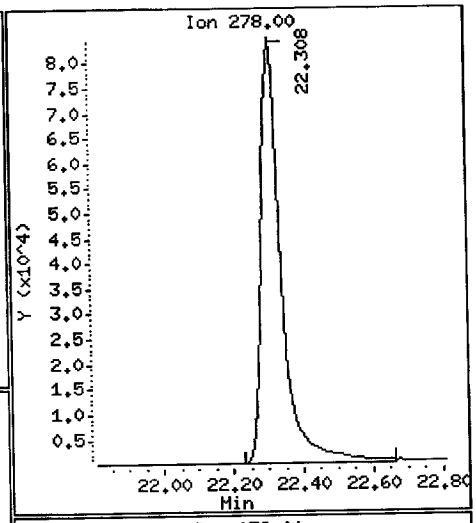
Column phase: Rxi-17Sil MS

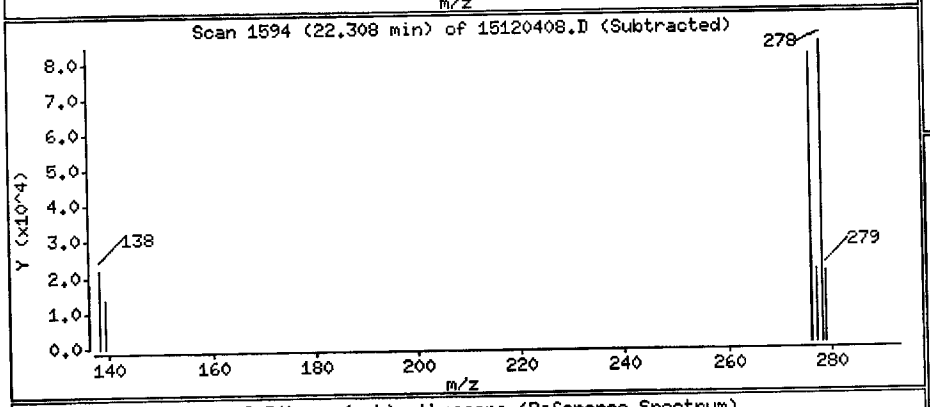
Column diameter: 0.25

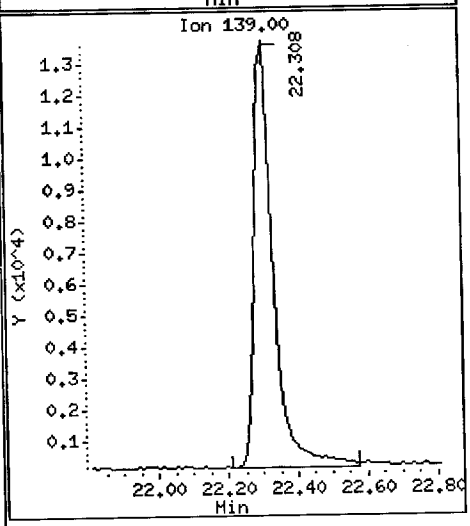
38 Dibenzo(a,h)anthracene

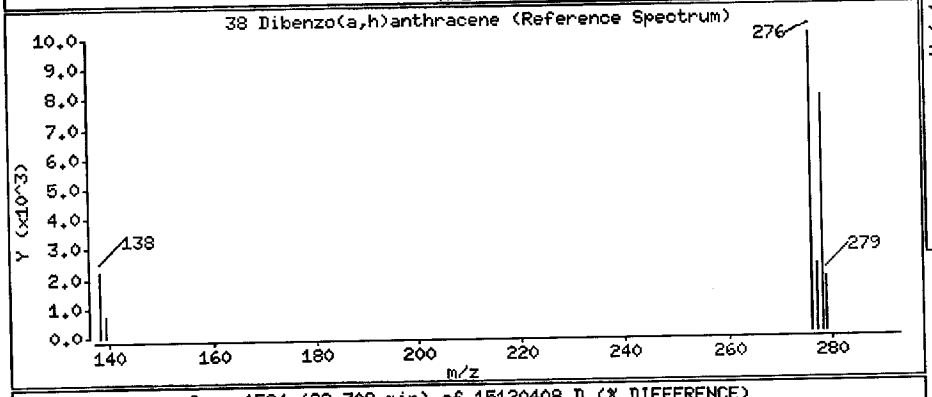
Concentration: 250 ng/L

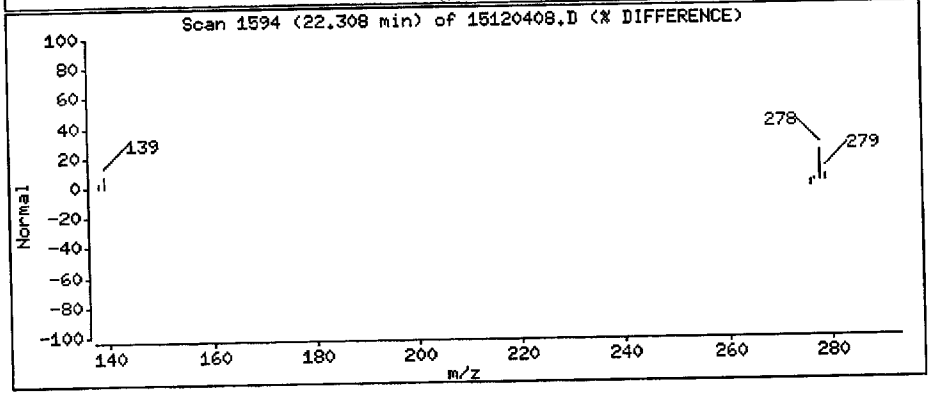












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

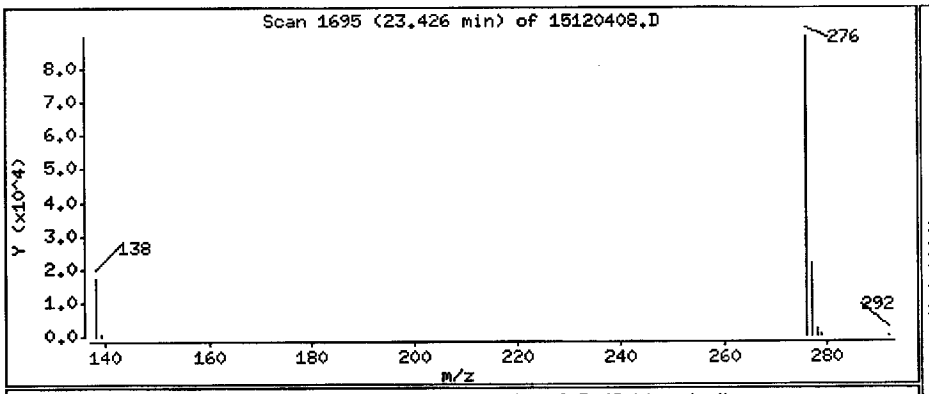
Operator: JW

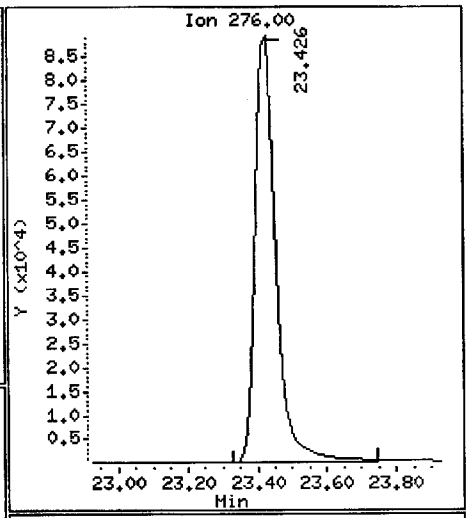
Column phase: Rxi-17Sil MS

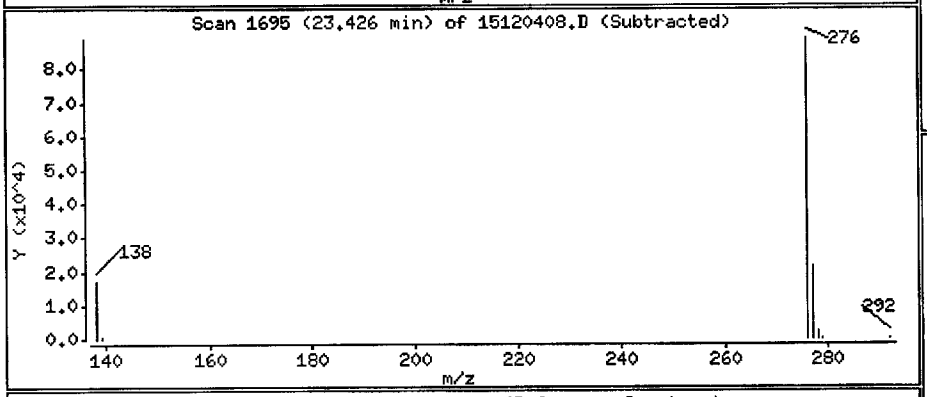
Column diameter: 0.25

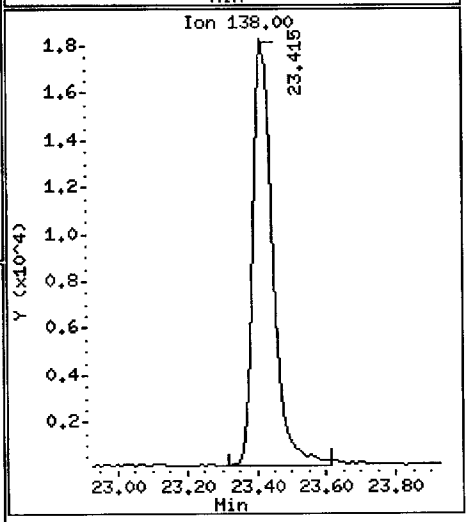
39 Benzo(g,h,i)perylene

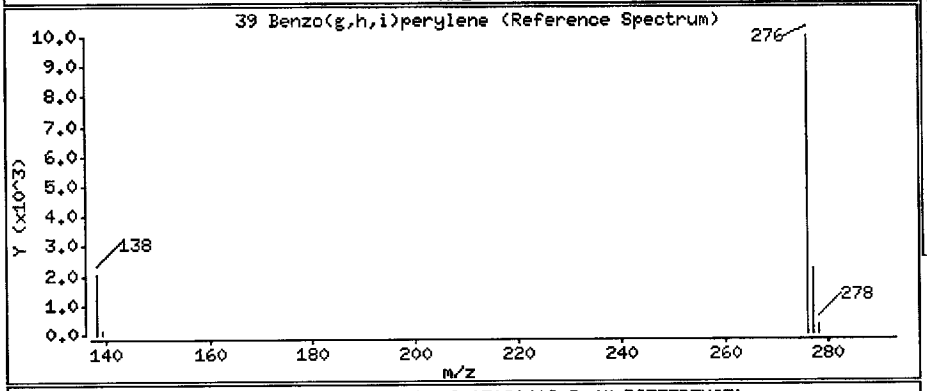
Concentration: 250 ng/L

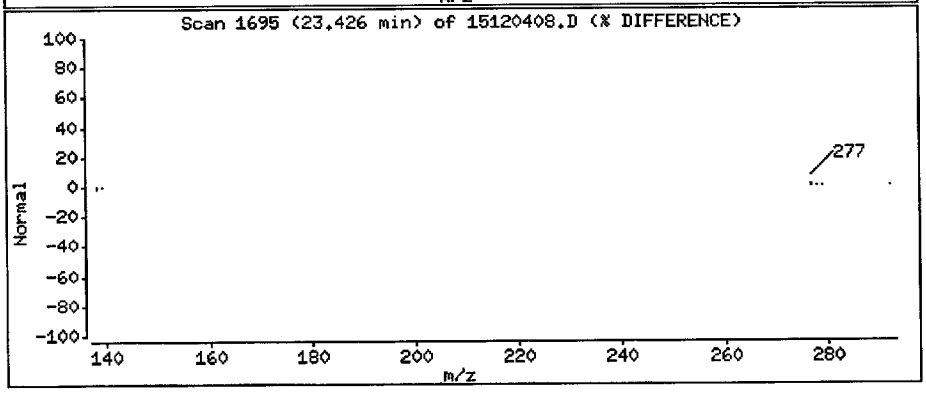












REVIEW SUMMARY FOR FILE - 15120408.D

Lab ID: LLSIM SCV 250
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 12:04

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,20151204.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

Analysis	Matrix	Method
8270D-SIM PAH (0.5 ug/kg)	Solid	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code	YES	JLW	01/25/2016
	Comments: *ZA00015*			
2	DFTPP Tune met criteria	YES	JLW	01/25/2016
3	DDT breakdown <20%	YES	JLW	01/25/2016
4	Peak Tailing factor <= 2%	YES	JLW	01/25/2016
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	01/25/2016
6	NO ICAL Q Flag applied	YES	JLW	01/25/2016
7	Manual integrations include before/after pictures	NA	JLW	01/25/2016
8	Spectral Library matches updated	NA	JLW	01/25/2016
9	Internal Standard areas within 50-200% from reference	YES	JLW	01/25/2016
10	Minimum response factors met	YES	JLW	01/25/2016
11	All SCV within +/- 20% (DOD)	YES	JLW	01/25/2016
12	All SCV within +/- 30%	YES	JLW	01/25/2016
13	NO Linear or Quadratic fits used	YES	JLW	01/25/2016
14	NO Calibration points dropped	YES	JLW	01/25/2016
15	Additional notes	NA	JLW	01/25/2016
16	Reviewer approval (Reviewer)	YES	BB	01/25/2016

* = Indicates Automated Response from Element DataSyst

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2016 09:14
End Cal Date : 25-JAN-2016 12:00
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Last Edit : 25-Jan-2016 12:22 jonathonw
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20160125.b\16012506.D
Level 2: \\target\share\chem3\nt11.i\20160125.b\16012507.D
Level 3: \\target\share\chem3\nt11.i\20160125.b\16012508.D
Level 4: \\target\share\chem3\nt11.i\20160125.b\16012505.D
Level 5: \\target\share\chem3\nt11.i\20160125.b\16012509.D
Level 6: \\target\share\chem3\nt11.i\20160125.b\16012510.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
5 Naphthalene	1.23125	1.20925	1.19281	0.97552	1.06864	0.96201	1.10658	10.922
7 2-Methylnaphthalene	0.82651	0.85115	0.84278	0.71799	0.80383	0.73153	0.79563	7.212
8 1-Methylnaphthalene	0.76563	0.76861	0.76881	0.64068	0.72138	0.65849	0.72060	8.068
10 Acenaphthylene	1.82400	1.79230	1.71027	1.47247	1.57680	1.43637	1.63537	10.062
12 Acenaphthene	1.11170	1.11141	1.08590	0.91981	1.01993	0.94225	1.03183	8.264
14 Dibenzofuran	1.76444	1.73288	1.70352	1.40113	1.51173	1.36747	1.58020	11.123
15 Fluorene	1.38984	1.35567	1.31049	1.10342	1.21297	1.11159	1.24733	9.907
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.28714	1.24014	1.24049	0.97076	1.08094	0.97391	1.13223	12.561
20 Anthracene	1.17726	1.18749	1.14964	0.96820	1.08296	0.96684	1.08873	9.251
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.26250	1.23777	1.25745	1.03072	1.14897	1.02812	1.16092	9.457
25 Pyrene	1.75596	1.70807	1.63510	1.33717	1.48523	1.31137	1.53882	12.342
28 Benzo(a)anthracene	1.44714	1.40816	1.38469	1.14241	1.30313	1.17561	1.31019	9.668
30 Chrysene	1.49434	1.45258	1.45360	1.15300	1.32060	1.17070	1.34080	11.232
44 Benzo(b)fluoranthene	1.43552	1.43694	1.40803	1.08771	1.31473	1.21659	1.31659	10.708
45 Benzo(k)fluoranthene	1.47456	1.38493	1.48058	1.19066	1.42099	1.29867	1.37507	8.168
46 Benzo(j)fluoranthene	1.35528	1.34123	1.34854	1.04890	1.25673	1.16150	1.25203	9.938
34 Benzo(a)pyrene	1.26626	1.24843	1.27972	1.02993	1.24737	1.17258	1.20738	7.830
37 Indeno(1,2,3-cd)pyrene	1.17517	1.22550	1.26750	1.07059	1.35258	1.32373	1.23585	8.366
38 Dibenzo(a,h)anthracene	0.87048	0.95973	1.01063	0.85214	1.08636	1.07821	0.97626	10.301
39 Benzo(g,h,i)perylene	1.11731	1.11248	1.13248	0.93347	1.15405	1.11510	1.09415	7.333
47 Perylene	1.29950	1.31091	1.31240	1.05008	1.26399	1.17666	1.23559	8.438
48 Benzo(e)pyrene	1.37153	1.32075	1.33256	1.04774	1.25868	1.16199	1.24888	9.827
$ 6 2-Methylnaphthalene-d10	0.80348	0.80607	0.78360	0.66232	0.74338	0.68630	0.74752	8.222
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	1.19648	1.16354	1.15494	0.94147	1.06650	0.97310	1.08267	9.855

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JAN-2016 09:14
End Cal Date : 25-JAN-2016 12:00
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Last Edit : 25-Jan-2016 12:22 jonathonw
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
$ 36 Dibenzo(a,h)anthracene-d14	0.66127	0.75054	0.76490	0.65699	0.82414	0.81914	0.74617	9.836

Analytical Resources, Incorporated
Analytical Chemists and Consultants

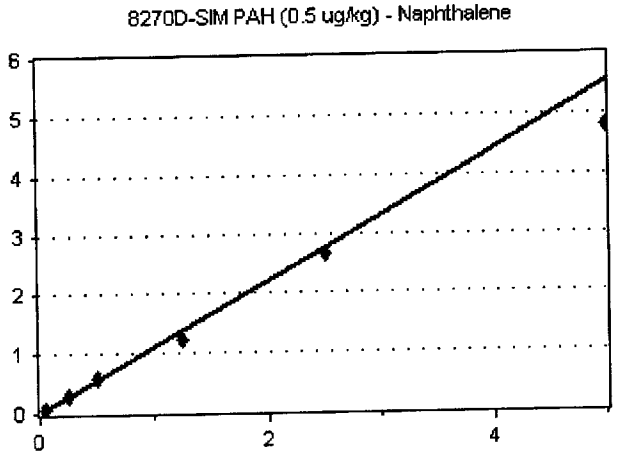
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

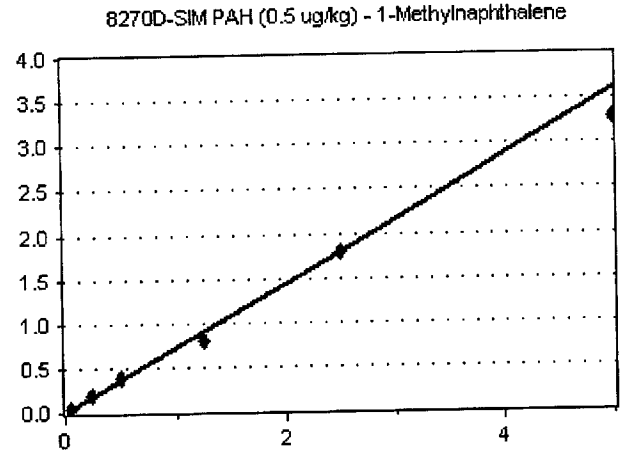
8270D-SIM PAH (0.5 ug/k

Naphthalene



Average RF
RF RSD: 10.92202
[Conc] = 1.106578 * [Response]

1-Methylnaphthalene



Average RF
RF RSD: 8.068453
[Conc] = 0.7206017 * [Response]

Printed: 1/25/2016 2:02:03PM

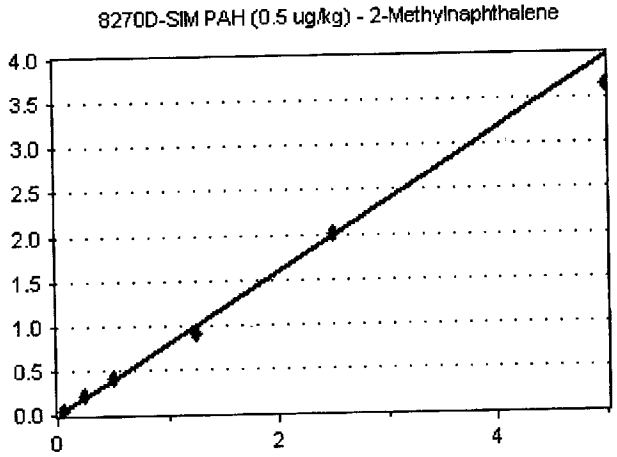
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene

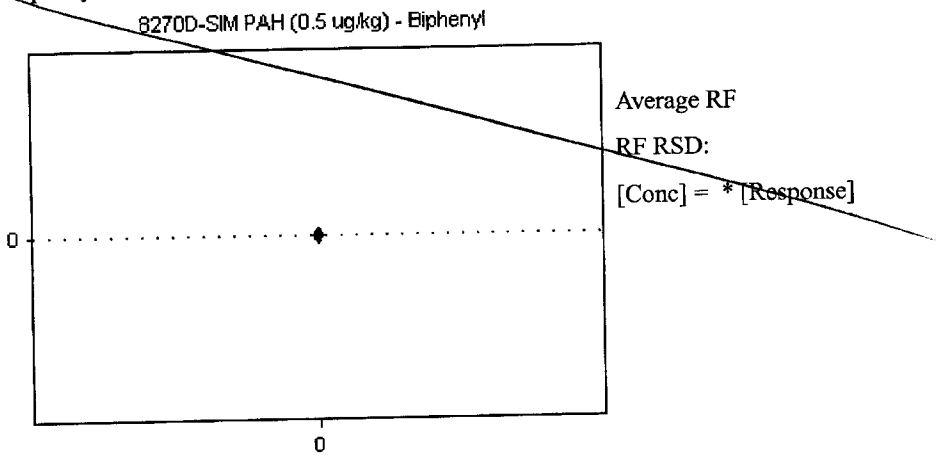


Average RF

RF RSD: 7.211931

[Conc] = 0.7956312 * [Response]

Biphenyl



Average RF

RF RSD:

[Conc] = * [Response]

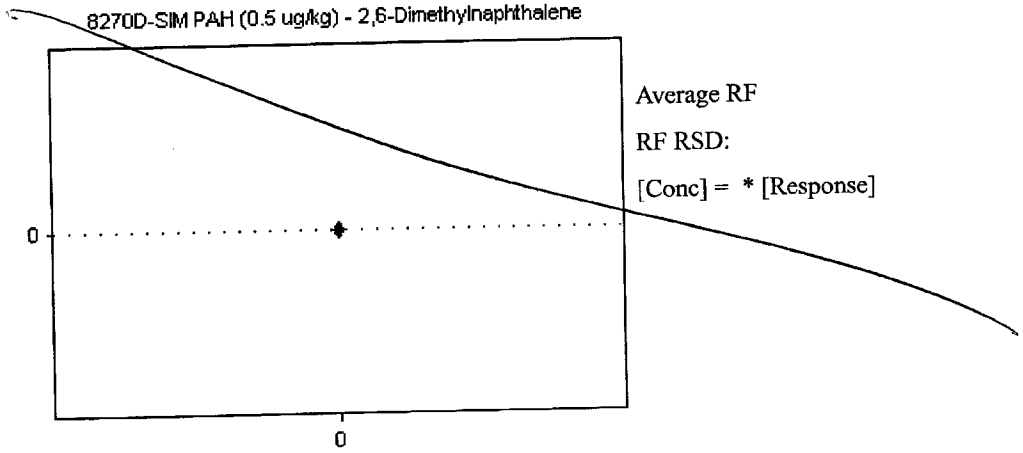
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

2,6-Dimethylnaphthalene

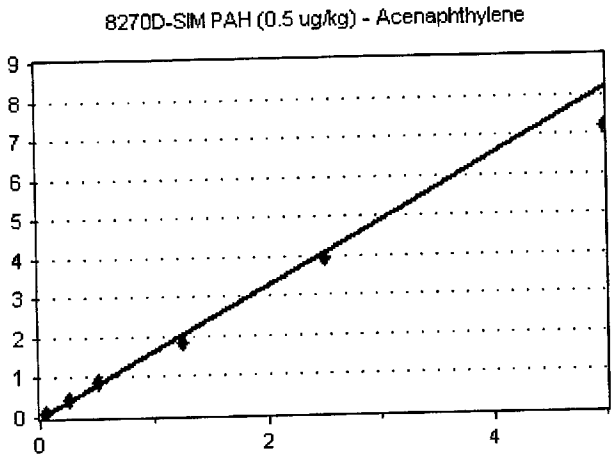


Average RF

RF RSD:

[Conc] = * [Response]

Acenaphthylene



Average RF

RF RSD: 10.06206

[Conc] = 1.635367 * [Response]

Printed: 1/25/2016 2:02:03PM

Calibration Report

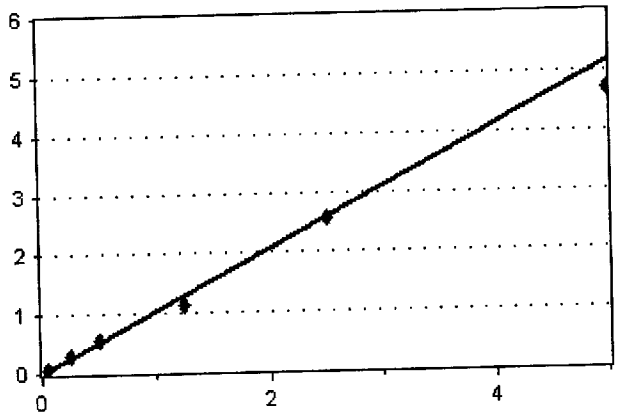
Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

Acenaphthene

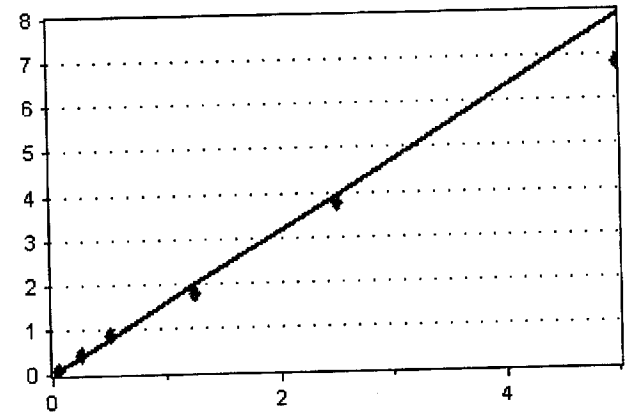
8270D-SIM PAH (0.5 ug/kg) - Acenaphthene



Average RF
RF RSD: 8.263575
[Conc] = 1.031833 * [Response]

Dibenzofuran

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



Average RF
RF RSD: 11.12303
[Conc] = 1.580196 * [Response]

Printed: 1/25/2016 2:02:03PM

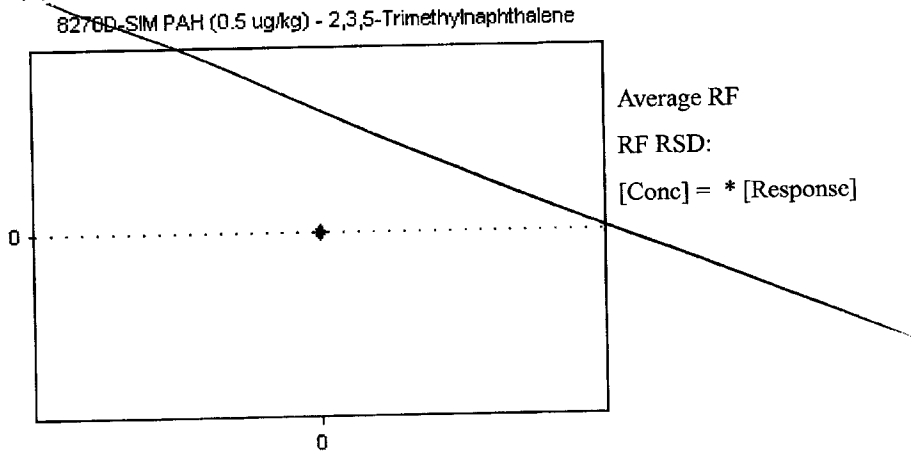
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

2,3,5-Trimethylnaphthalene

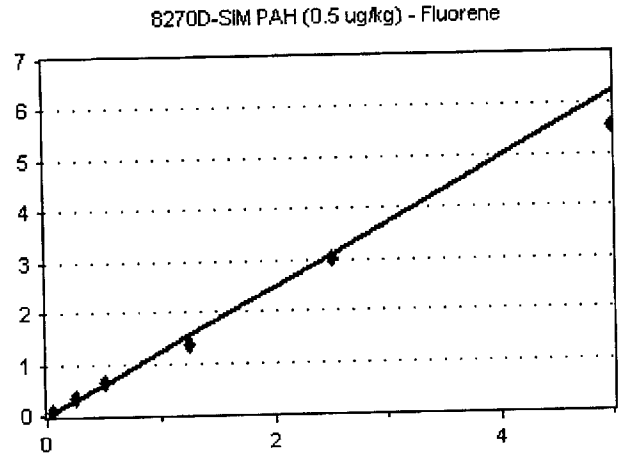


Average RF

RF RSD:

[Conc] = * [Response]

Fluorene



Average RF

RF RSD: 9.907105

[Conc] = 1.24733 * [Response]

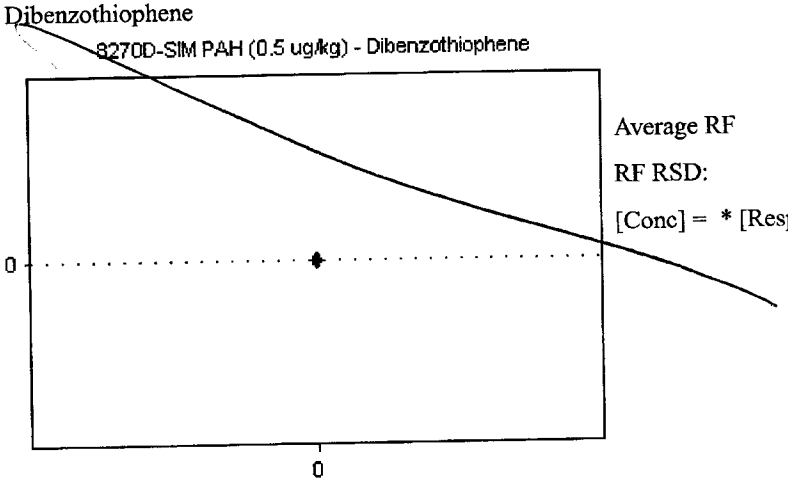
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

Dibenzothiophene

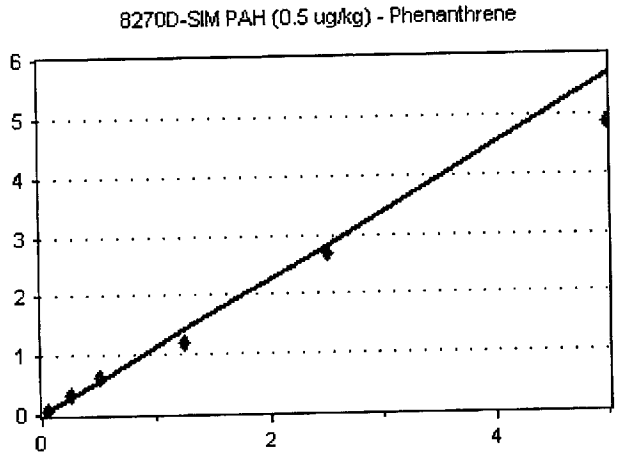


Average RF

RF RSD:

[Conc] = * [Response]

Phenanthrene



Average RF

RF RSD: 12.56097

[Conc] = 1.132227 * [Response]

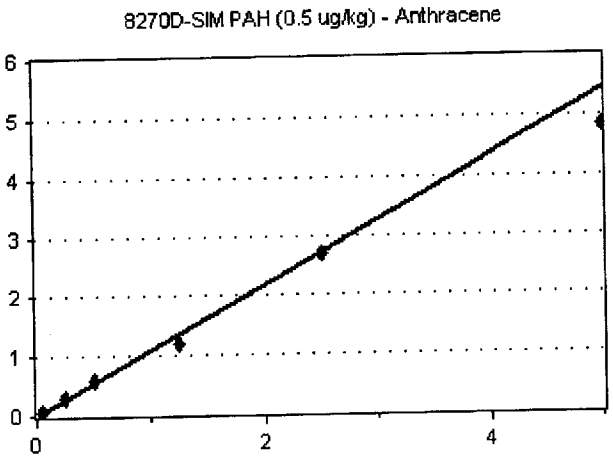
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

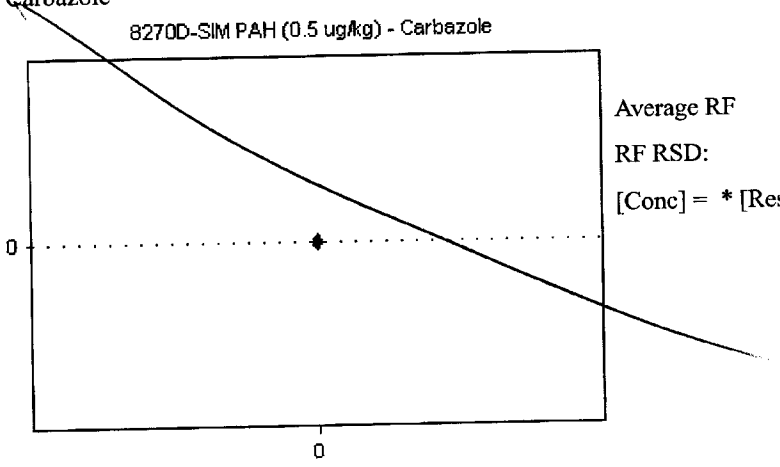
8270D-SIM PAH (0.5 ug/k

Anthracene



Average RF
RF RSD: 9.250857
[Conc] = 1.088733 * [Response]

Carbazole



Average RF
RF RSD:
[Conc] = * [Response]

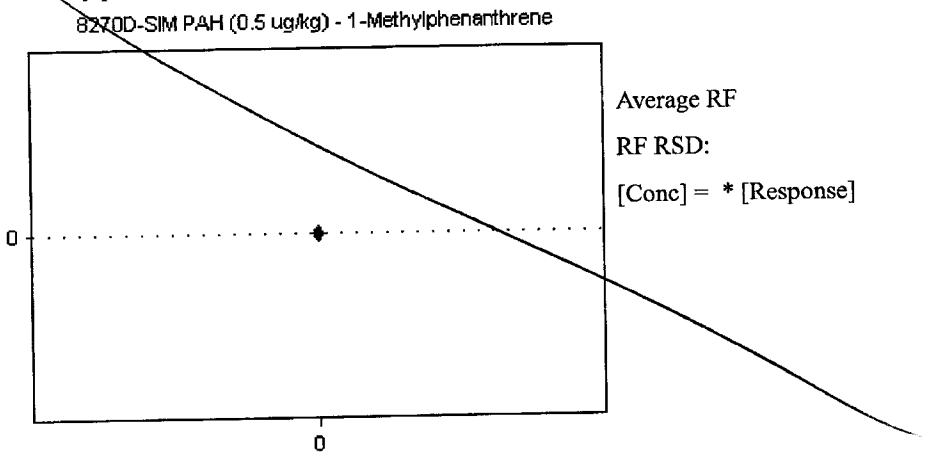
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

1-Methylphenanthrene

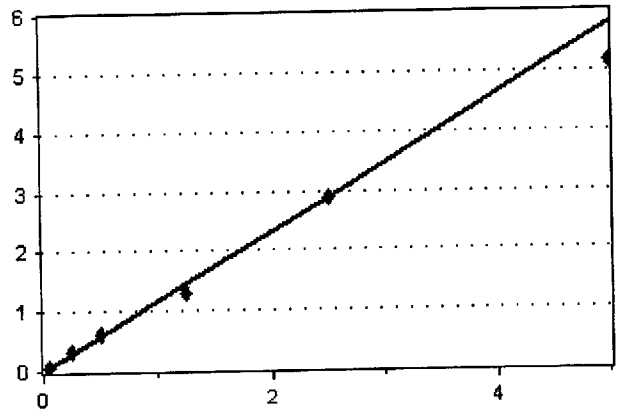


Average RF

RF RSD:

[Conc] = * [Response]

Fluoranthene



Average RF

RF RSD: 9.457339

[Conc] = 1.160923 * [Response]

Printed: 1/25/2016 2:02:03PM

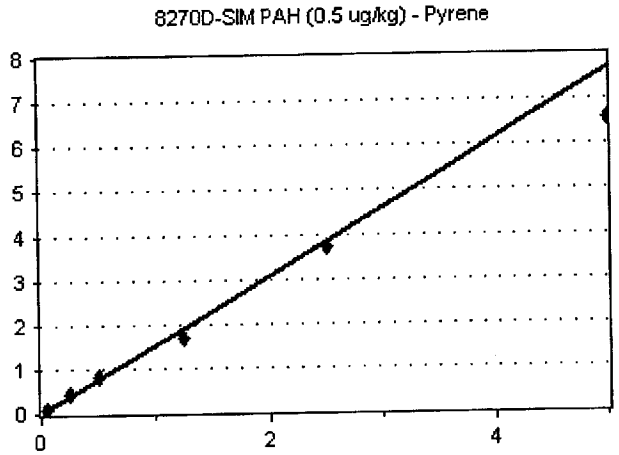
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

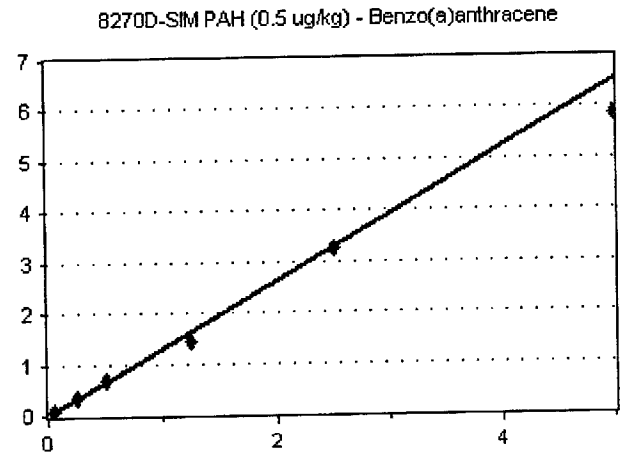
8270D-SIM PAH (0.5 ug/k

Pyrene



Average RF
RF RSD: 12.34151
[Conc] = 1.538816 * [Response]

Benzo(a)anthracene



Average RF
RF RSD: 9.667504
[Conc] = 1.310189 * [Response]

Printed: 1/25/2016 2:02:03PM

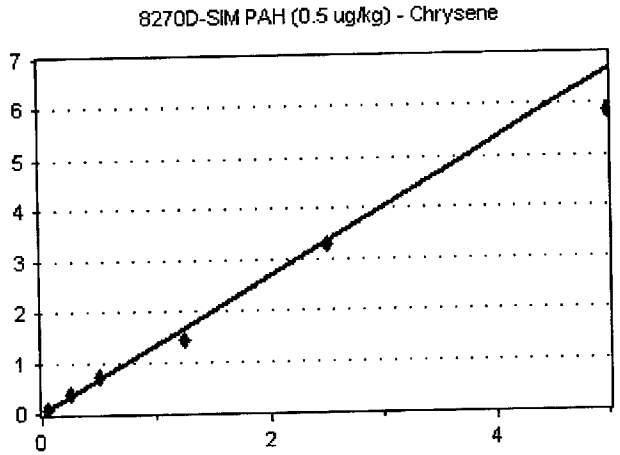
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

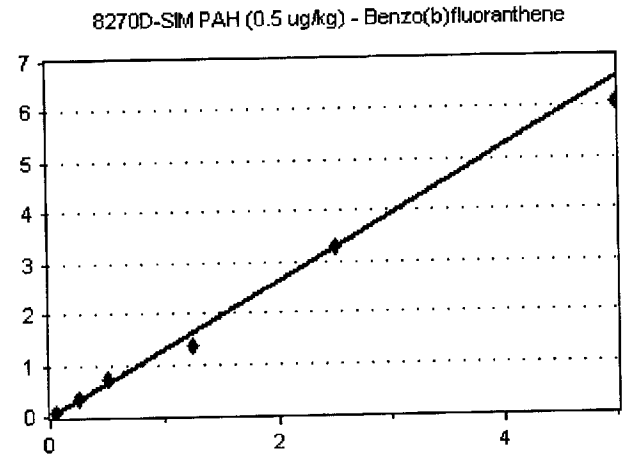
8270D-SIM PAH (0.5 ug/k

Chrysene



Average RF
RF RSD: 11.2321
[Conc] = 1.340803 * [Response]

Benzo(b)fluoranthene



Average RF
RF RSD: 10.70822
[Conc] = 1.316586 * [Response]

Printed: 1/25/2016 2:02:03PM

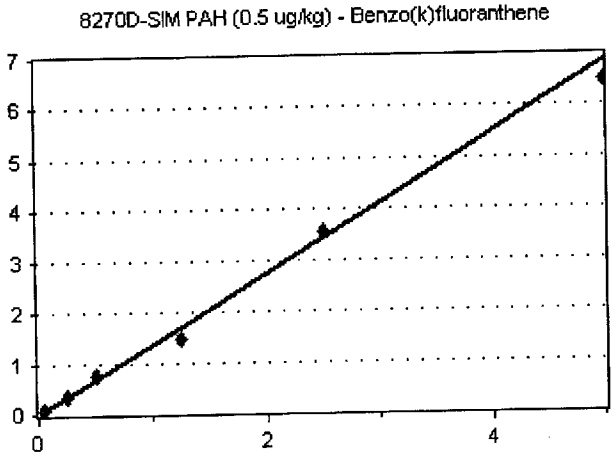
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

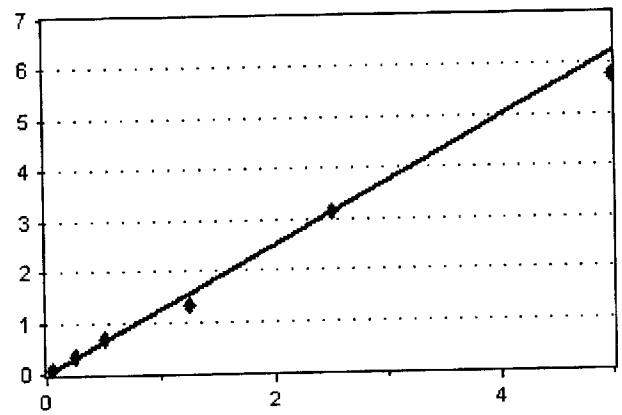
8270D-SIM PAH (0.5 ug/k

Benzo(k)fluoranthene



Average RF
RF RSD: 8.168264
[Conc] = 1.375066 * [Response]

Benzo(j)fluoranthene



Average RF
RF RSD: 9.937959
[Conc] = 1.252029 * [Response]

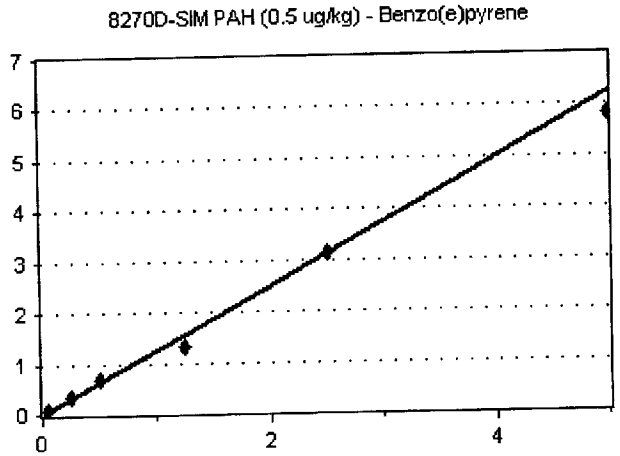
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

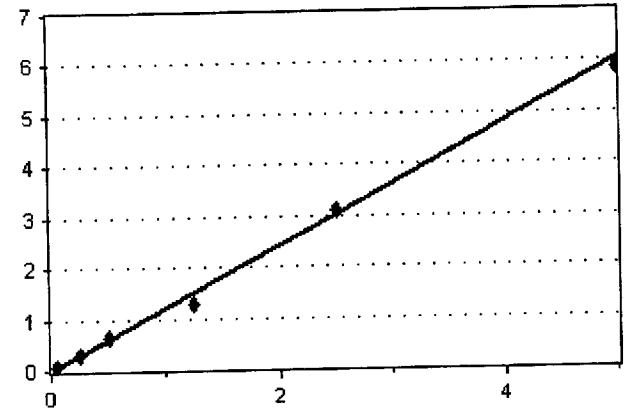
8270D-SIM PAH (0.5 ug/k

Benzo(e)pyrene



Average RF
RF RSD: 9.827213
[Conc] = 1.248877 * [Response]

Benzo(a)pyrene



Average RF
RF RSD: 7.829669
[Conc] = 1.207383 * [Response]

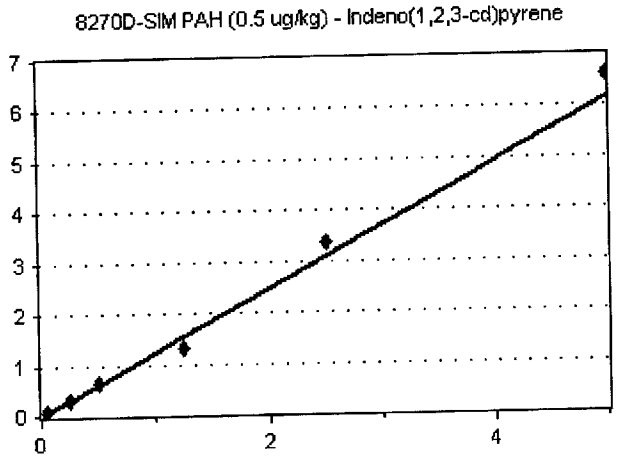
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

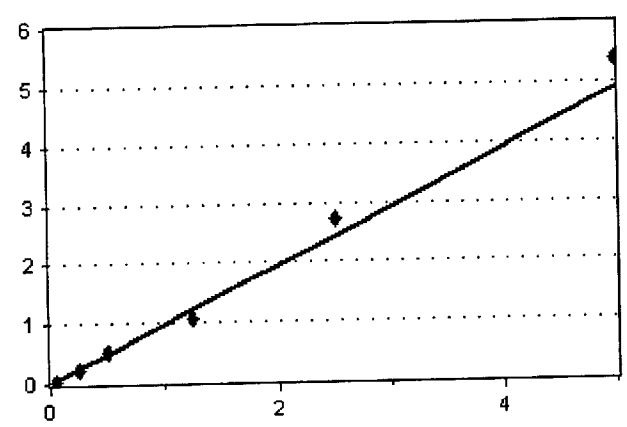
8270D-SIM PAH (0.5 ug/k

Indeno(1,2,3-cd)pyrene



Average RF
RF RSD: 8.366101
[Conc] = 1.235846 * [Response]

Dibenzo(a,h)anthracene



Average RF
RF RSD: 10.30108
[Conc] = 0.9762581 * [Response]

Printed: 1/25/2016 2:02:03PM

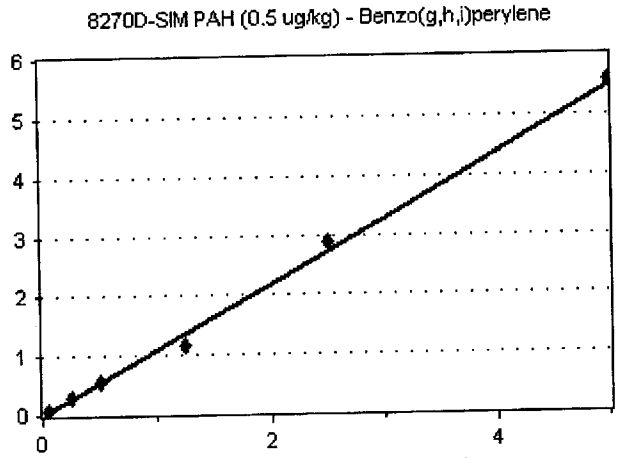
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

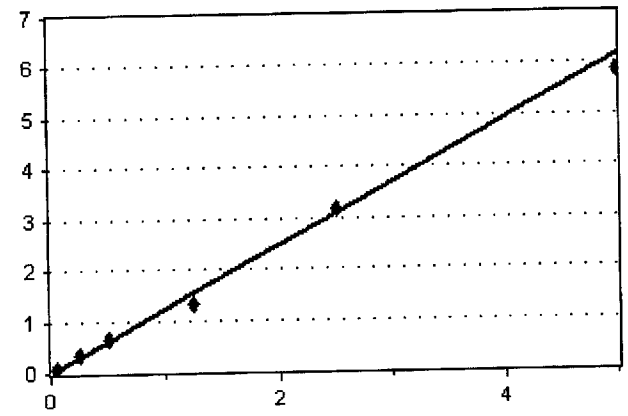
8270D-SIM PAH (0.5 ug/k

Benzo(g,h,i)perylene



Average RF
RF RSD: 7.332754
[Conc] = 1.094149 * [Response]

Perylene



Average RF
RF RSD: 8.438263
[Conc] = 1.235591 * [Response]

Printed: 1/25/2016 2:02:03PM

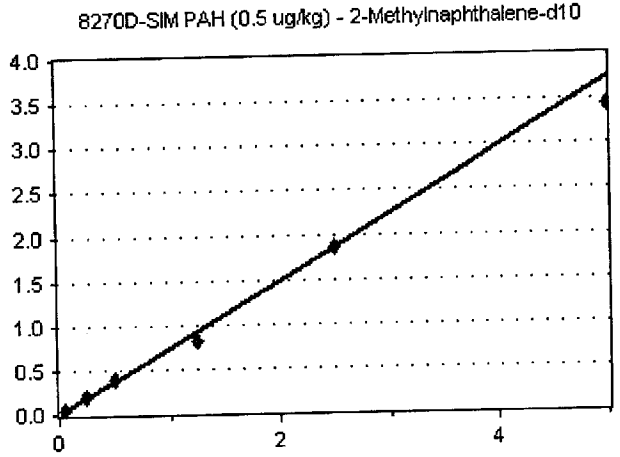
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

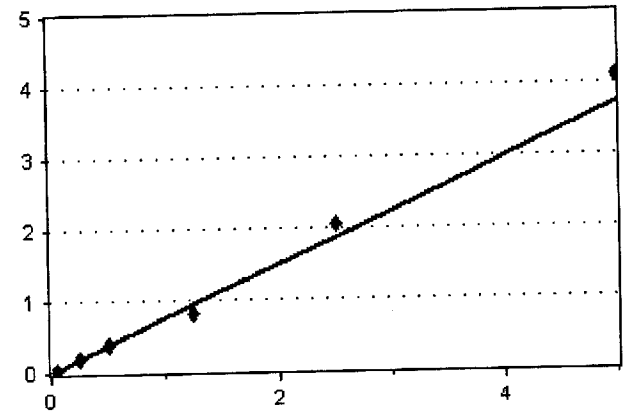
8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene-d10



Average RF
RF RSD: 8.221795
[Conc] = 0.7475239 * [Response]

Dibenzo[a,h]anthracene-d14



Average RF
RF RSD: 9.836392
[Conc] = 0.7461651 * [Response]

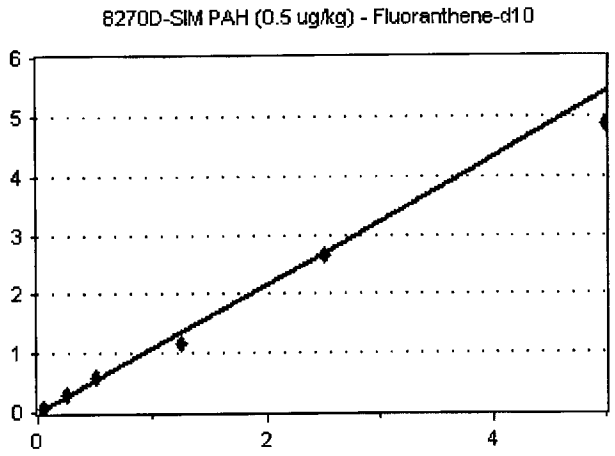
Calibration Report

Instrument: NT11
Calibration ID: ZA00015

Calibration Date: 25-Jan-2016 08:57 By JLW
Last Edit Date: 25-Jan-2016 13:53 By JLW

8270D-SIM PAH (0.5 ug/k

Fluoranthene-d10



Average RF

RF RSD: 9.854978

[Conc] = 1.082671 * [Response]

Naphthalene-d8

Average RF

RF RSD:

[Conc] = * [Response]

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: 20150730 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Calibration Date: 01/25/16

LAB FILE ID: RRF10 =16012506 RRF50 =16012507 RRF100=16012508
RRF250=16012505 RRF500=16012509 RRF1000=16012510

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	RRF	%RSD /R^2
Naphthalene	1.231	1.209	1.193	0.976	1.069	0.962	1.107	10.9
2-Methylnaphthalene	0.826	0.851	0.843	0.718	0.804	0.732	0.796	7.2
Acenaphthylene	1.824	1.792	1.710	1.472	1.577	1.436	1.635	10.1
Acenaphthene	1.112	1.111	1.086	0.920	1.020	0.942	1.032	8.3
Dibenzofuran	1.764	1.733	1.704	1.401	1.512	1.367	1.580	11.1
Fluorene	1.390	1.356	1.310	1.103	1.213	1.112	1.247	9.9
Phenanthrene	1.287	1.240	1.240	0.971	1.081	0.974	1.132	12.6
Anthracene	1.177	1.187	1.150	0.968	1.083	0.967	1.089	9.3
Fluoranthene	1.262	1.238	1.257	1.031	1.149	1.028	1.161	9.5
Pyrene	1.756	1.708	1.635	1.337	1.485	1.311	1.539	12.3
Benzo(a)anthracene	1.447	1.408	1.385	1.142	1.303	1.176	1.310	9.7
Chrysene	1.494	1.452	1.454	1.153	1.320	1.171	1.341	11.2
Benzo(a)pyrene	1.266	1.248	1.280	1.030	1.247	1.172	1.207	7.8
Indeno(1,2,3-cd)pyrene	1.175	1.225	1.268	1.070	1.352	1.324	1.236	8.4
Dibenzo(a,h)anthracene	0.870	0.960	1.011	0.852	1.086	1.078	0.976	10.3
Benzo(g,h,i)perylene	1.117	1.112	1.132	0.933	1.154	1.115	1.094	7.3
Pentachlorophenol								
1-Methylnaphthalene	0.766	0.769	0.769	0.641	0.721	0.658	0.721	8.1
Carbazole								
Benzo(b)fluoranthene	1.436	1.437	1.408	1.088	1.315	1.216	1.317	10.7
Benzo(k)fluoranthene	1.474	1.385	1.480	1.191	1.421	1.299	1.375	8.2
Benzo(j)fluoranthene	1.355	1.341	1.348	1.049	1.257	1.162	1.252	9.9
Perylene	1.299	1.311	1.312	1.050	1.264	1.177	1.236	8.4
Benzo(e)pyrene	1.372	1.321	1.332	1.048	1.259	1.162	1.249	9.8
2-Methylnaphthalene-d10	0.803	0.806	0.784	0.662	0.743	0.686	0.747	8.2
Fluoranthene-d10	1.196	1.164	1.155	0.941	1.066	0.973	1.082	9.9
Dibenzo(a,h)anthracene-d14	0.661	0.750	0.765	0.657	0.824	0.819	0.746	9.8
2,4,6-Tribromophenol								

<- Outside QC limits: %RSD <20% or R^2 > 0.990

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: 20150730 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 16012505 Ical Date: 01/25/16

Instrument ID: NT11 Cont. Cal Date: 01/25/16

	IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
ICAL MIDPT	356051	6.71	264524	9.71	444949	12.38
UPPER LIMIT	712102		529048		889898	
LOWER LIMIT	178026		132262		222475	
CCAL	309113	6.71	227974	9.71	372441	12.38
UPPER LIMIT		7.21		10.21		12.88
LOWER LIMIT		6.21		9.21		11.88
01	297375	6.71	218000	9.71	349233	12.38
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC.

Client: ANCHOR QEA, LLC

ARI Job No: 20150730

Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 16012505

Ical Date: 01/25/16

Instrument ID: NT11

Cont. Cal Date: 01/25/16

		IS4 (CRY) AREA #	RT #	IS5 (PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	343139	17.12	319277	20.01		
	UPPER LIMIT	686278		638554			
	LOWER LIMIT	171570		159639			
	CCAL	295350	17.12	273271	20.00		
	UPPER LIMIT		17.62		20.50		
	LOWER LIMIT		16.62		19.50		
01		282390	17.12	252294	20.00		
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160125.b

ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 25-JAN-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0857	16012504.D	TUNE 10		1	NO MANUAL INTEGRATION
0914	16012505.D	LLPAH ICV		1	NO MANUAL INTEGRATION
1029	16012506.D	LLPAH 10		1	NO MANUAL INTEGRATION
0959	16012507.D	LLPAH 50		1	NO MANUAL INTEGRATION
1129	16012508.D	LLPAH 100		1	NO MANUAL INTEGRATION
1059	16012509.D	LLPAH 500		1	NO MANUAL INTEGRATION
1200	16012510.D	LLPAH 1000		1	NO MANUAL INTEGRATION
1230	16012511.D	LLPAH SCV		1	NO MANUAL INTEGRATION

Report Date : 25-Jan-2016 13:44

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20160125.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	16012505	16012507	16012506	16012509	16012508	16012510
INJ.DATE:	25-JAN-2016	25-JAN-2016	25-JAN-2016	25-JAN-2016	25-JAN-2016	25-JAN-2016
INJ.TIME:	09:14	09:59	10:29	10:59	11:29	12:00

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	6.708	6.708	6.708	6.708	6.708	6.708	6.708	6.458-6.958	6.708	0.000
	5 Naphthalene	6.739	6.739	6.739	6.739	6.739	6.739	6.739	6.489-6.989	6.739	0.000
$	6 2-Methylnaphthalene-d1	7.685	7.685	7.685	7.685	7.674	7.674	7.674	7.424-7.924	7.681	0.005
	7 2-Methylnaphthalene	7.737	7.737	7.737	7.737	7.737	7.737	7.737	7.487-7.987	7.737	0.000
	8 1-Methylnaphthalene	7.989	7.989	7.989	7.989	7.989	7.989	7.989	7.739-8.239	7.989	0.000
	10 Acenaphthylene	9.551	9.562	9.551	9.551	9.551	9.551	9.551	9.301-9.801	9.552	0.005
*	11 Acenaphthene-d10	9.706	9.717	9.706	9.706	9.706	9.706	9.706	9.456-9.956	9.707	0.005
	12 Acenaphthene	9.772	9.772	9.772	9.772	9.772	9.772	9.772	9.522-10.022	9.772	0.000
	14 Dibenzofuran	9.971	9.982	9.971	9.971	9.971	9.971	9.971	9.721-10.221	9.973	0.005
	15 Fluorene	10.591	10.602	10.591	10.591	10.591	10.591	10.591	10.341-10.841	10.593	0.005
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	4.785	4.535-5.035	+++++	+++++
*	18 Phenanthrene-d10	12.385	12.385	12.385	12.385	12.385	12.385	12.385	12.135-12.635	12.385	0.000
	19 Phenanthrene	12.429	12.429	12.429	12.429	12.418	12.429	12.429	12.179-12.679	12.427	0.004
	20 Anthracene	12.484	12.485	12.474	12.473	12.474	12.473	12.473	12.223-12.723	12.477	0.006
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	14.486	14.486	14.486	14.486	14.476	14.476	14.476	14.226-14.726	14.482	0.005

Reviewer 1 ____ Date: 1/25/16
Reviewer 2 ____ Date: 1/25/16

Report Date : 25-Jan-2016 13:44

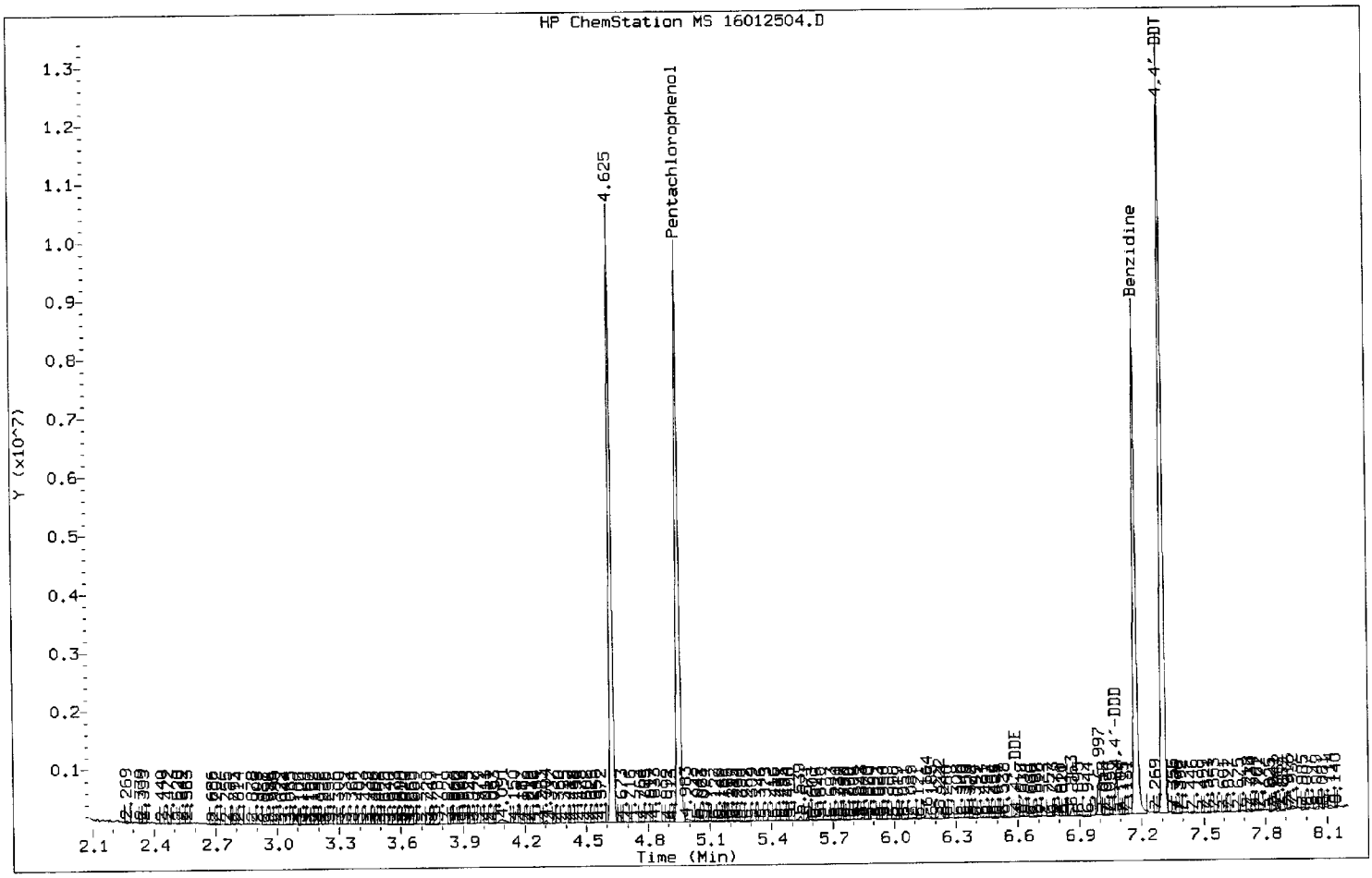
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

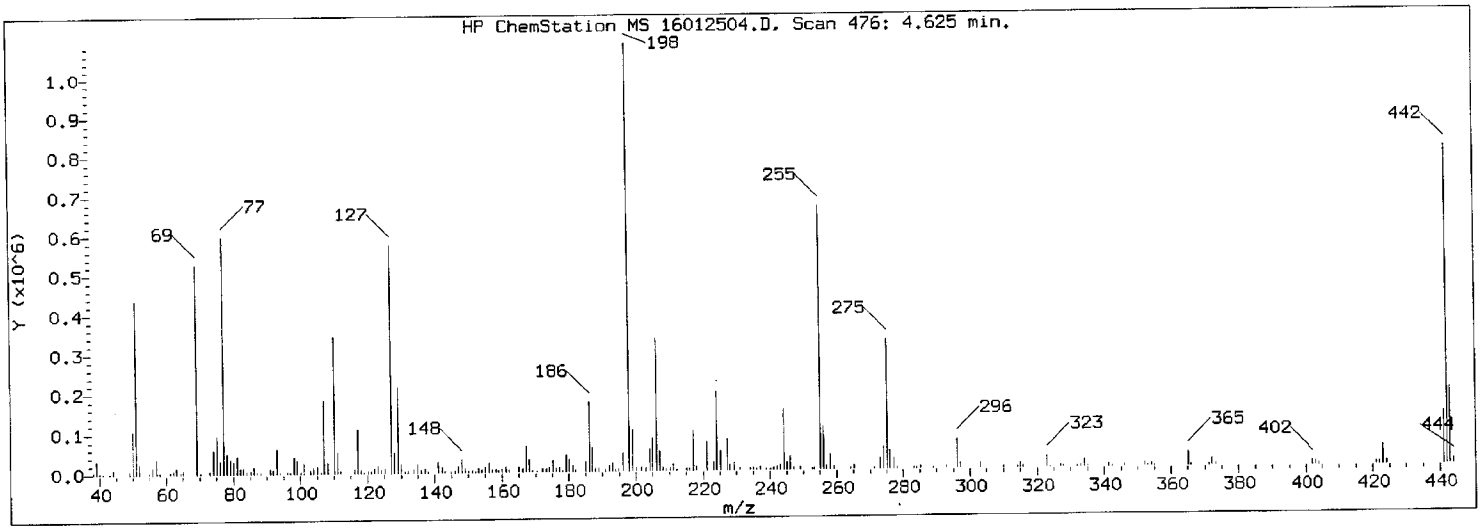
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20160125.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	24 Fluoranthene	14.514	14.524	14.515	14.514	14.515	14.514	14.514	14.264-14.764	14.516	0.004
	25 Pyrene	15.014	15.014	15.014	15.014	15.014	15.014	15.014	14.764-15.264	15.014	0.000
	28 Benzo(a)anthracene	17.030	17.038	17.030	17.030	17.030	17.030	17.030	16.780-17.280	17.031	0.003
*	29 Chrysene-d12	17.121	17.130	17.121	17.121	17.121	17.121	17.121	16.871-17.371	17.123	0.003
	30 Chrysene	17.171	17.179	17.171	17.171	17.171	17.171	17.171	16.921-17.421	17.172	0.003
	44 Benzo(b)fluoranthene	18.921	18.921	18.922	18.922	18.912	18.921	18.921	18.671-19.171	18.920	0.004
	45 Benzo(k)fluoranthene	18.969	18.970	18.960	18.960	18.960	18.960	18.960	18.710-19.210	18.963	0.005
	46 Benzo(j)fluoranthene	19.027	19.037	19.027	19.027	19.027	19.027	19.027	18.777-19.277	19.029	0.004
	34 Benzo(a)pyrene	19.796	19.796	19.796	19.796	19.786	19.796	19.796	19.546-20.046	19.794	0.004
*	35 Perylene-d12	20.007	20.007	20.007	20.007	19.998	19.998	19.998	19.748-20.248	20.004	0.005
$	36 Dibenzo(a,h)anthracene	22.443	22.443	22.432	22.443	22.432	22.443	22.443	22.193-22.693	22.439	0.006
	37 Indeno(1,2,3-cd)pyrene	22.575	22.575	22.564	22.564	22.565	22.575	22.575	22.325-22.825	22.570	0.006
	38 Dibenzo(a,h)anthracene	22.553	22.564	22.553	22.553	22.553	22.553	22.553	22.303-22.803	22.555	0.005
	39 Benzo(g,h,i)perylene	23.716	23.716	23.705	23.705	23.705	23.705	23.705	23.455-23.955	23.709	0.006
	47 Perylene	20.074	20.075	20.065	20.065	20.065	20.065	20.065	19.815-20.315	20.068	0.005
	48 Benzo(e)pyrene	19.681	19.681	19.681	19.681	19.681	19.681	19.681	19.431-19.931	19.681	0.000

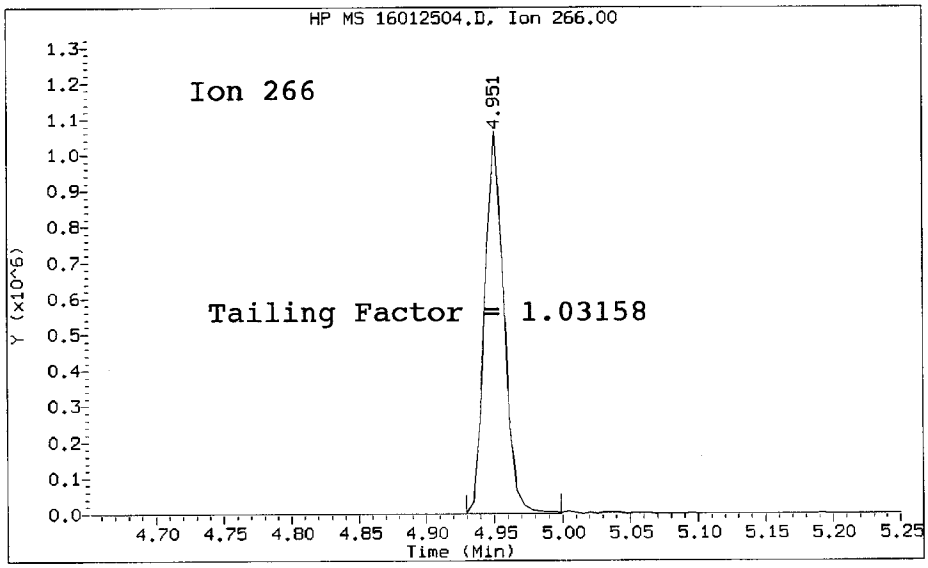
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160125.b/16012504.D/16012504.D
Method Used: \20160125.b\DFTPP.m Inst: nt11
Injection Date: 25-JAN-2016 08:57 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 01/25/2016 09:09



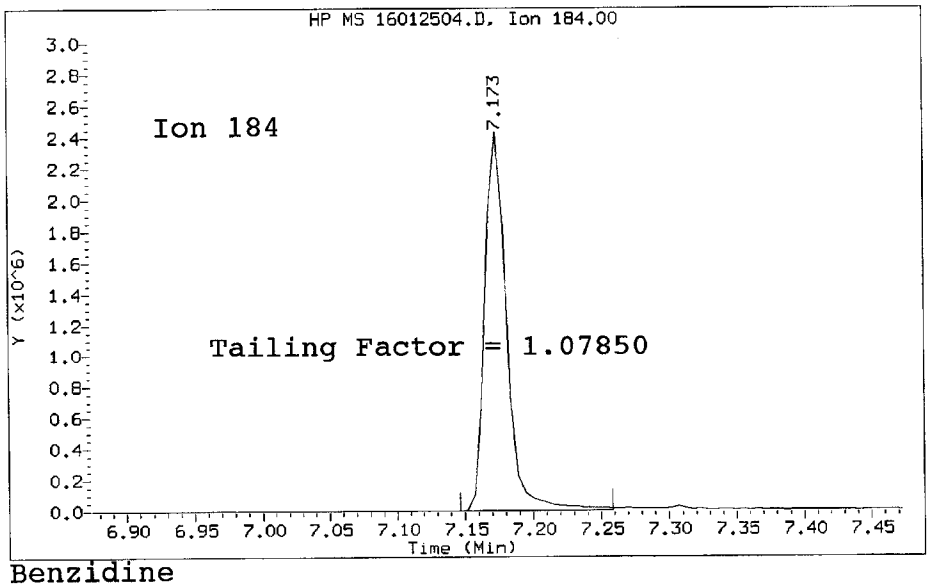


Datafile Analyzed: /20160125.b/16012504.D/16012504.D
Method Used: \20160125.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 25-JAN-2016 08:57 Operator: JR
Sample Info: TUNE 10
Report Date: 01/25/2016 09:09



Pentachlorophenol
==========
Exp. RT = 4.993
Found RT = 4.951

Tail Factor = 1.032 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.221
Found RT = 7.173

Tail Factor = 1.078 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.45
68	Less than 2.00% of mass 69	0.37 (0.81)
69	Mass 69 relative abundance	45.57
70	Less than 2.00% of mass 69	0.29 (0.63)
127	10.00 - 80.00% of mass 198	50.81
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.74
275	10.00 - 60.00% of mass 198	28.48
365	Greater than 1.00% of mass 198	2.89
441	0.01 - 24.00% of mass 442	12.40 (16.41)
442	50.00 - 200.00% of mass 198	75.54
443	15.00 - 24.00% of mass 442	16.39 (21.69)

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.0315789	2.000	PASS
Benzidine	1.0784983	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1860276			N/A
4,4-DDE	8198	0.4	20.0	PASS
4,4-DDD	124298	6.3	20.0	PASS
4,4-DDD + DDE	132496	6.6	20.0	PASS

Tuning Sample, nt11.i/20160125.b/16012504.D, *** PASSED ***

Data File: 16012504.D
Spectrum: Avg. Scans 475-477 (4.63), Background Scan 470
Location of Maximum: 198.00
Number of points: 244

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	3649	120.00	2093	189.00	6588	273.00	16744
39.00	23416	121.00	1355	191.00	5306	274.00	42336
40.00	2821	122.00	8348	192.00	12210	275.00	253312
41.00	751	123.00	13455	193.00	14186	276.00	34312
43.00	740	124.00	5977	194.00	1910	277.00	19064
44.00	1103	125.00	7429	195.00	1308	278.00	2909
49.00	1335	127.00	451840	196.00	35320	283.00	3255
50.00	86040	128.00	35152	198.00	889344	284.00	832
51.00	333056	129.00	168000	199.00	77688	285.00	4669
52.00	16370	130.00	16424	200.00	5755	289.00	707
55.00	3839	131.00	1646	201.00	6194	293.00	5387
56.00	11002	132.00	2558	202.00	2546	296.00	58592
57.00	27120	134.00	6150	203.00	5344	297.00	8132
58.00	1084	135.00	14263	204.00	40192	303.00	8680
61.00	4453	136.00	4923	205.00	61784	304.00	1882
62.00	5898	137.00	7270	206.00	269376	310.00	864
63.00	14254	138.00	2256	207.00	38520	314.00	1111
64.00	1684	139.00	710	208.00	7629	315.00	6898
65.00	8896	141.00	18856	209.00	2955	316.00	5846
68.00	3292	142.00	9147	210.00	4025	322.00	2037
69.00	405312	143.00	4171	211.00	10899	323.00	23200
70.00	2541	145.00	1964	212.00	4262	324.00	3512
73.00	4101	146.00	4148	215.00	1774	327.00	3549
74.00	42416	147.00	13499	216.00	3495	328.00	807
75.00	72696	148.00	25376	217.00	68544	332.00	3036
76.00	26600	149.00	7146	218.00	9377	333.00	1285
77.00	460672	150.00	979	221.00	58512	334.00	13573
78.00	31040	151.00	4284	222.00	2379	335.00	4378
79.00	27688	152.00	1473	223.00	18400	336.00	770
80.00	23600	153.00	6911	224.00	152832	341.00	3102
81.00	32800	154.00	5303	225.00	36752	342.00	766
82.00	9299	155.00	13420	226.00	2432	346.00	3637
83.00	9216	156.00	18976	227.00	61136	351.00	685
84.00	557	157.00	3983	228.00	8686	352.00	7540
85.00	5522	158.00	5101	229.00	12504	353.00	3491
86.00	8497	159.00	3868	231.00	6526	354.00	6396
87.00	4346	160.00	6848	233.00	803	355.00	1196
88.00	2973	161.00	10662	234.00	4102	365.00	25664
91.00	8185	162.00	3791	235.00	4443	366.00	3165
92.00	7611	165.00	9192	236.00	2359	371.00	821
93.00	49776	166.00	6324	237.00	5889	372.00	13465
94.00	3390	167.00	45400	239.00	2902	373.00	3113
96.00	936	168.00	21944	240.00	896	377.00	679
97.00	1770	169.00	3837	241.00	3783	383.00	882
98.00	30680	170.00	736	242.00	6940	384.00	883
99.00	29104	171.00	718	243.00	8594	390.00	770
100.00	3048	172.00	3954	244.00	110872	402.00	6242
101.00	17480	173.00	4499	245.00	15704	403.00	6551
103.00	6162	174.00	8976	246.00	23296	404.00	2057

104.00	11942	175.00	23464	247.00	4598	421.00	5587
105.00	12846	176.00	5626	249.00	4985	422.00	6188
106.00	1995	177.00	8652	252.00	911	423.00	43232
107.00	141248	178.00	2929	253.00	4212	424.00	5324
108.00	25624	179.00	33368	255.00	528192	441.00	110248
109.00	3384	180.00	23904	256.00	83696	442.00	671808
110.00	255808	181.00	13103	257.00	8213	443.00	145728
111.00	38624	182.00	2291	258.00	28904	444.00	12291
112.00	4258	184.00	1696	259.00	6298	445.00	705
116.00	6833	185.00	19448	264.00	794		
117.00	87088	186.00	143040	265.00	9743		
118.00	7590	187.00	43488	266.00	2006		
119.00	673	188.00	7046	271.00	1026		

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012505.D
Lab Smp Id: LLPAH ICV
Inj Date : 25-JAN-2016 09:14 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH ICV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

AD 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	356051	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	434168	250.000	220
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	294773	250.000	222
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	319553	250.000	226
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	285143	250.000	222
	10 Acenaphthylene	152	9.550	9.550	(0.984)	486879	250.000	225
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	264524	200.000	
	12 Acenaphthene	153	9.771	9.772	(1.007)	304139	250.000	223
	14 Dibenzofuran	168	9.971	9.971	(1.027)	463292	250.000	222
	15 Fluorene	166	10.591	10.591	(1.091)	364851	250.000	221
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	444949	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	539922	250.000	214
	20 Anthracene	178	12.484	12.473	(1.008)	538499	250.000	222
$	23 Fluoranthene-d10	212	14.485	14.476	(1.170)	523633	250.000	217
	24 Fluoranthene	202	14.514	14.514	(1.172)	573274	250.000	222
	25 Pyrene	202	15.014	15.014	(0.877)	573543	250.000	217
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	490006	250.000	218
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	343139	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	494549	250.000	215
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	434099	250.000	207
	45 Benzo(k)fluoranthene	252	18.969	18.959	(0.948)	475189	250.000	216

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	418612	250.000	209
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	411042	250.000	213
*	35 Perylene-d12	264	20.007	19.997	(1.000)	319277	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	262204	250.000	220
	37 Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.128)	427270	250.000	217
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	340086	250.000	218
	39 Benzo(g,h,i)perylene	276	23.716	23.705	(1.185)	372546	250.000	213
	47 Perylene	252	20.074	20.064	(1.003)	419081	250.000	212
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	418150	250.000	210

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012505.D
Lab Smp Id: LLPAH ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	356051	0.00
11 Acenaphthene-d10	264524	132262	529048	264524	0.00
18 Phenanthrene-d10	444949	222475	889898	444949	0.00
29 Chrysene-d12	343139	171570	686278	343139	0.00
35 Perylene-d12	319277	159639	638554	319277	0.00

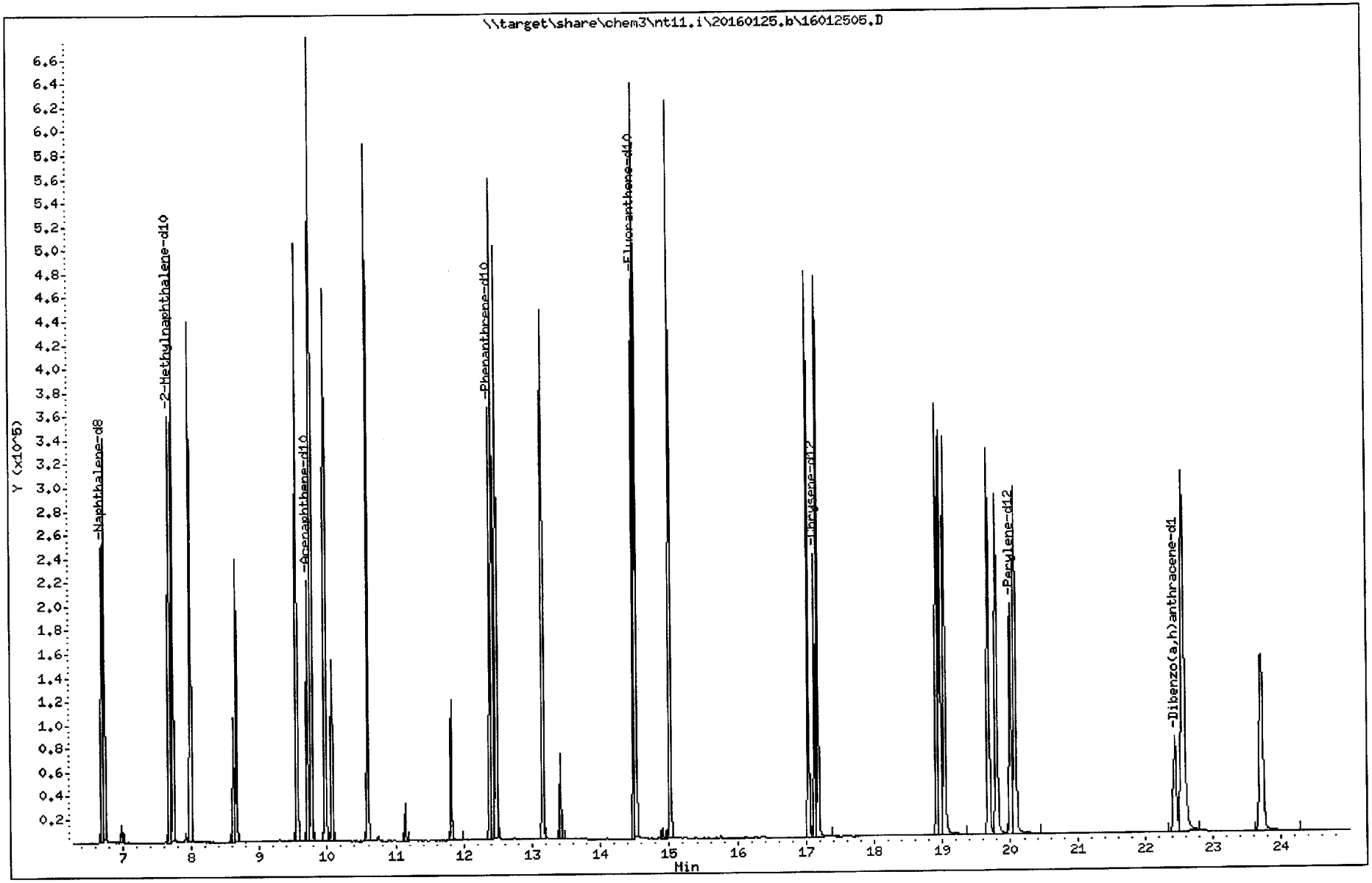
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012505.D
Date : 25-JAN-2016 09:14
Client ID:
Sample Info: LLPAH ICV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012505.D

Lab ID: LLPAH ICV
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 09:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012507.D
Lab Smp Id: LLPAH 50
Inj Date : 25-JAN-2016 09:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 50
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.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: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/26/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	294064	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	88899	50.0000	54.6
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	59259	50.0000	53.9
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	62573	50.0000	53.5
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	56505	50.0000	53.3
	10 Acenaphthylene	152	9.561	9.550	(0.984)	96982	50.0000	54.8
*	11 Acenaphthene-d10	164	9.716	9.705	(1.000)	216442	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.006)	60139	50.0000	53.9
	14 Dibenzofuran	168	9.982	9.971	(1.027)	93767	50.0000	54.8
	15 Fluorene	166	10.602	10.591	(1.091)	73356	50.0000	54.3
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	363731	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	112769	50.0000	54.8
	20 Anthracene	178	12.484	12.473	(1.008)	107982	50.0000	54.5
$	23 Fluoranthene-d10	212	14.485	14.476	(1.170)	105804	50.0000	53.7
	24 Fluoranthene	202	14.524	14.514	(1.173)	112554	50.0000	53.3
	25 Pyrene	202	15.014	15.014	(0.876)	115927	50.0000	55.5
	28 Benzo(a)anthracene	228	17.038	17.029	(0.995)	95572	50.0000	53.7
*	29 Chrysene-d12	240	17.129	17.121	(1.000)	271481	200.000	
	30 Chrysene	228	17.179	17.171	(1.003)	98587	50.0000	54.2
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	90541	50.0000	54.6
	45 Benzo(k)fluoranthene	252	18.969	18.959	(0.948)	87264	50.0000	50.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.036	19.027	(0.951)	84510	50.0000	53.6
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	78663	50.0000	51.7
*	35 Perylene-d12	264	20.007	19.997	(1.000)	252038	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	47291	50.0000	50.3
	37 Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.128)	77218	50.0000	49.6
	38 Dibenzo(a,h)anthracene	278	22.564	22.553	(1.128)	60472	50.0000	49.2
	39 Benzo(g,h,i)perylene	276	23.716	23.705	(1.185)	70097	50.0000	50.8
	47 Perylene	252	20.074	20.064	(1.003)	82600	50.0000	53.0
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	83220	50.0000	52.9

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012507.D
Lab Smp Id: LLPAH 50
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	294064	-17.41
11 Acenaphthene-d10	264524	132262	529048	216442	-18.18
18 Phenanthrene-d10	444949	222475	889898	363731	-18.25
29 Chrysene-d12	343139	171570	686278	271481	-20.88
35 Perylene-d12	319277	159639	638554	252038	-21.06

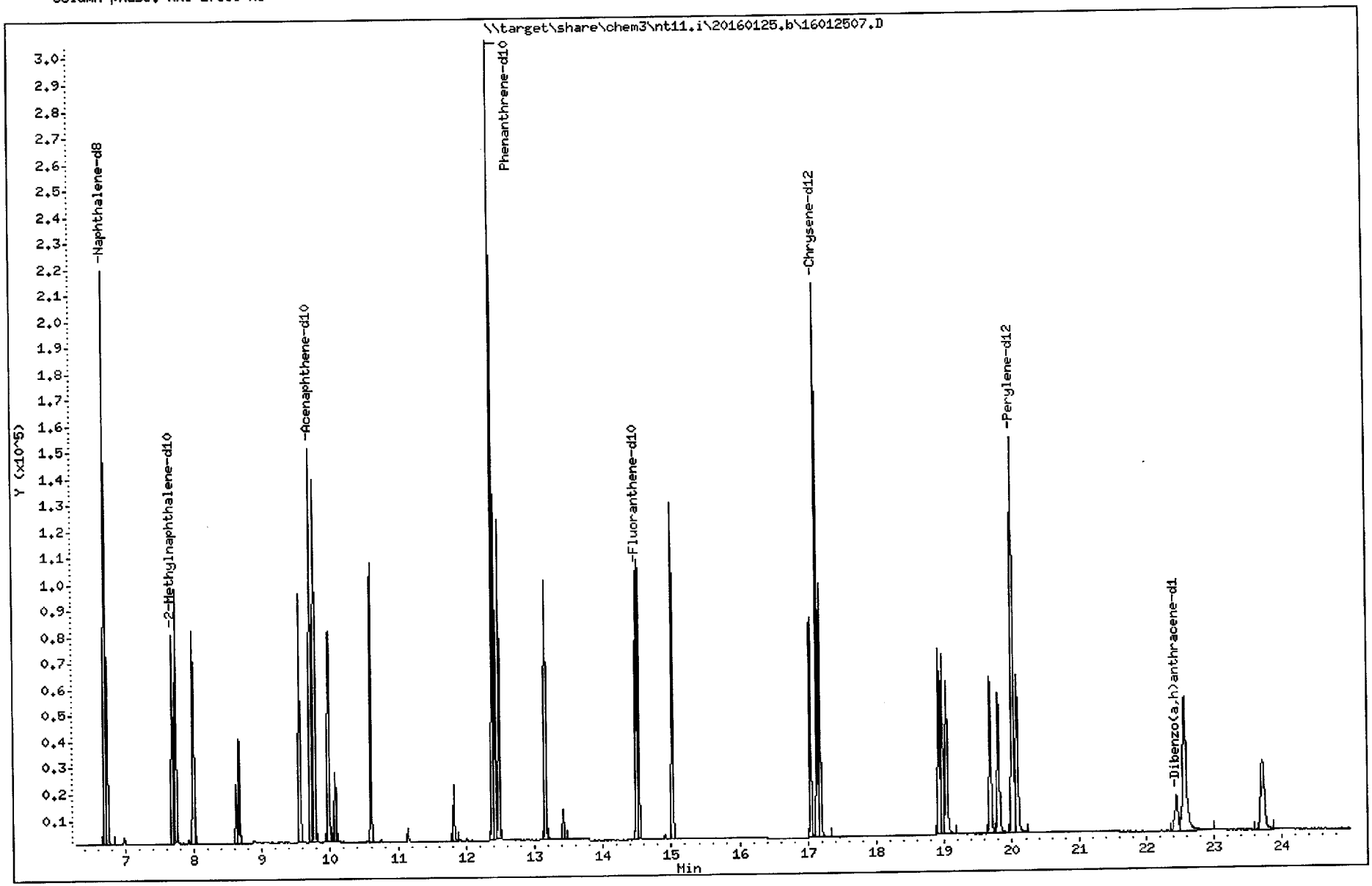
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.72	0.11
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.13	0.05
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012507.D
Date : 25-JAN-2016 09:59
Client ID:
Sample Info: LLPAH 50
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012507.D

Lab ID: LLPAH 50
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 09:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012506.D
Lab Smp Id: LLPAH 10
Inj Date : 25-JAN-2016 10:29 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 10
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.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: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JC 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	299647	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	18447	10.0000	11.1
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	12038	10.0000	10.7
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	12383	10.0000	10.4
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	11471	10.0000	10.6
	10 Acenaphthylene	152	9.550	9.550	(0.984)	19628	10.0000	11.2
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	215219	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	11963	10.0000	10.8
	14 Dibenzofuran	168	9.971	9.971	(1.027)	18987	10.0000	11.2
	15 Fluorene	166	10.591	10.591	(1.091)	14956	10.0000	11.1
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	354756	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	22831	10.0000	11.4
	20 Anthracene	178	12.473	12.473	(1.007)	20882	10.0000	10.8
$	23 Fluoranthene-d10	212	14.485	14.476	(1.170)	21223	10.0000	11.1
	24 Fluoranthene	202	14.514	14.514	(1.172)	22394	10.0000	10.9
	25 Pyrene	202	15.014	15.014	(0.877)	23290	10.0000	11.4
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	19194	10.0000	11.0
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	265268	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	19820	10.0000	11.1
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	17319	10.0000	10.9
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	17790	10.0000	10.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	16351	10.0000	10.8
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	15277	10.0000	10.5
*	35 Perylene-d12	264	20.007	19.997	(1.000)	241293	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.121)	7978	10.0000	8.86
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	14178	10.0000	9.51
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	10502	10.0000	8.92
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	13480	10.0000	10.2
	47 Perylene	252	20.064	20.064	(1.003)	15678	10.0000	10.5
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	16547	10.0000	11.0

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012506.D
Lab Smp Id: LLPAH 10
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	299647	-15.84
11 Acenaphthene-d10	264524	132262	529048	215219	-18.64
18 Phenanthrene-d10	444949	222475	889898	354756	-20.27
29 Chrysene-d12	343139	171570	686278	265268	-22.69
35 Perylene-d12	319277	159639	638554	241293	-24.43

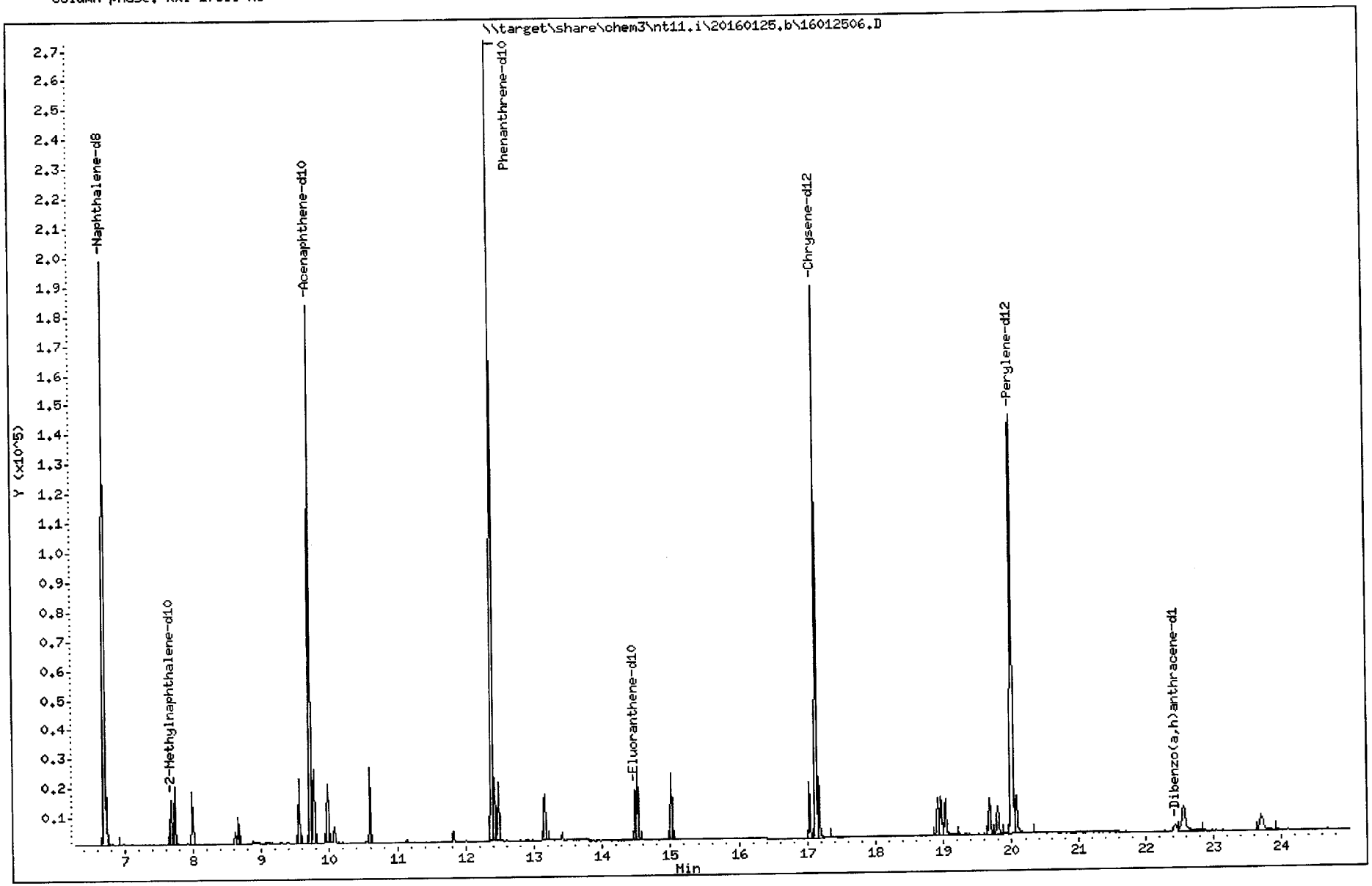
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012506.D
Date : 25-JAN-2016 10:29
Client ID:
Sample Info: LLPAH 10
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012506.D

Lab ID: LLPAH 10
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 10:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012509.D
Lab Smp Id: LLPAH 500
Inj Date : 25-JAN-2016 10:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 500
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.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: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

TO 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	303314	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	810334	500.000	483
$	6 2-Methylnaphthalene-d10	152	7.684	7.674	(1.146)	563695	500.000	497
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	609536	500.000	505
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	547015	500.000	501
	10 Acenaphthylene	152	9.550	9.550	(0.984)	900307	500.000	482
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	228389	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	582352	500.000	494
	14 Dibenzofuran	168	9.971	9.971	(1.027)	863159	500.000	478
	15 Fluorene	166	10.591	10.591	(1.091)	692573	500.000	486
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	374517	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	1012075	500.000	477
	20 Anthracene	178	12.473	12.473	(1.007)	1013964	500.000	497
$	23 Fluoranthene-d10	212	14.485	14.476	(1.170)	998553	500.000	493
	24 Fluoranthene	202	14.514	14.514	(1.172)	1075774	500.000	495
	25 Pyrene	202	15.014	15.014	(0.877)	1077457	500.000	483
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	945351	500.000	497
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	290179	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	958023	500.000	492
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	877554	500.000	499
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	948480	500.000	517

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	838838	500.000	502
	34 Benzo(a)pyrene	252	19.795	19.795	(0.989)	832593	500.000	517
*	35 Perylene-d12	264	20.007	19.997	(1.000)	266991	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	550098	500.000	552
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	902818	500.000	547
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	725124	500.000	556
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	770302	500.000	527
	47 Perylene	252	20.064	20.064	(1.003)	843684	500.000	511
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	840139	500.000	504

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012509.D
Lab Smp Id: LLPAH 500
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	303314	-14.81
11 Acenaphthene-d10	264524	132262	529048	228389	-13.66
18 Phenanthrene-d10	444949	222475	889898	374517	-15.83
29 Chrysene-d12	343139	171570	686278	290179	-15.43
35 Perylene-d12	319277	159639	638554	266991	-16.38

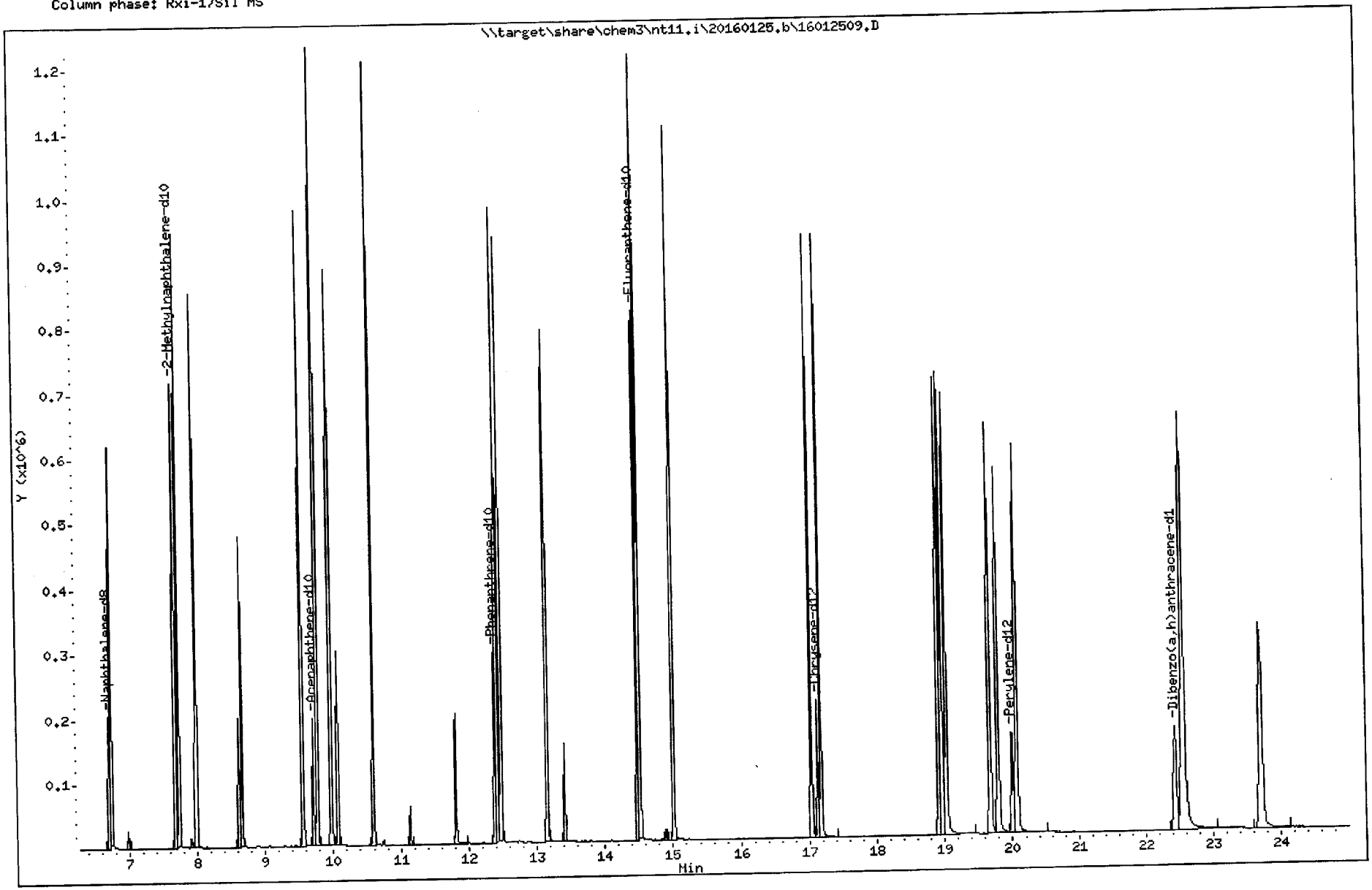
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012509.D
Date : 25-JAN-2016 10:59
Client ID:
Sample Info: LLPAH 500
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012509.D

Lab ID: LLPAH 500
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 10:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012508.D
Lab Smp Id: LLPAH 100
Inj Date : 25-JAN-2016 11:29 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 100
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.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: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

TC 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	299208	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	178449	100.000	108
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.144)	117230	100.000	105
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	126083	100.000	106
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	115017	100.000	107
	10 Acenaphthylene	152	9.550	9.550	(0.984)	188606	100.000	105
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	220557	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	119751	100.000	105
	14 Dibenzofuran	168	9.971	9.971	(1.027)	187862	100.000	108
	15 Fluorene	166	10.591	10.591	(1.091)	144519	100.000	105
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	361305	200.000	
	19 Phenanthrene	178	12.418	12.429	(1.003)	224097	100.000	110
	20 Anthracene	178	12.473	12.473	(1.007)	207686	100.000	106
$	23 Fluoranthene-d10	212	14.476	14.476	(1.169)	208642	100.000	107
	24 Fluoranthene	202	14.514	14.514	(1.172)	227161	100.000	108
	25 Pyrene	202	15.014	15.014	(0.877)	229911	100.000	106
	28 Benzo(a)anthracene	228	17.030	17.029	(0.995)	194701	100.000	106
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	281219	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	204390	100.000	108
	44 Benzo(b)fluoranthene	252	18.911	18.921	(0.946)	178870	100.000	107
	45 Benzo(k)fluoranthene	252	18.960	18.959	(0.948)	188086	100.000	108

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	171312	100.000	108
	34 Benzo(a)pyrene	252	19.786	19.795	(0.989)	162570	100.000	106
*	35 Perylene-d12	264	19.997	19.997	(1.000)	254071	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.122)	97170	100.000	103
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	161018	100.000	103
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	128386	100.000	104
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	143865	100.000	104
	47 Perylene	252	20.064	20.064	(1.003)	166722	100.000	106
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	169283	100.000	107

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012508.D
Lab Smp Id: LLPAH 100
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	299208	-15.96
11 Acenaphthene-d10	264524	132262	529048	220557	-16.62
18 Phenanthrene-d10	444949	222475	889898	361305	-18.80
29 Chrysene-d12	343139	171570	686278	281219	-18.05
35 Perylene-d12	319277	159639	638554	254071	-20.42

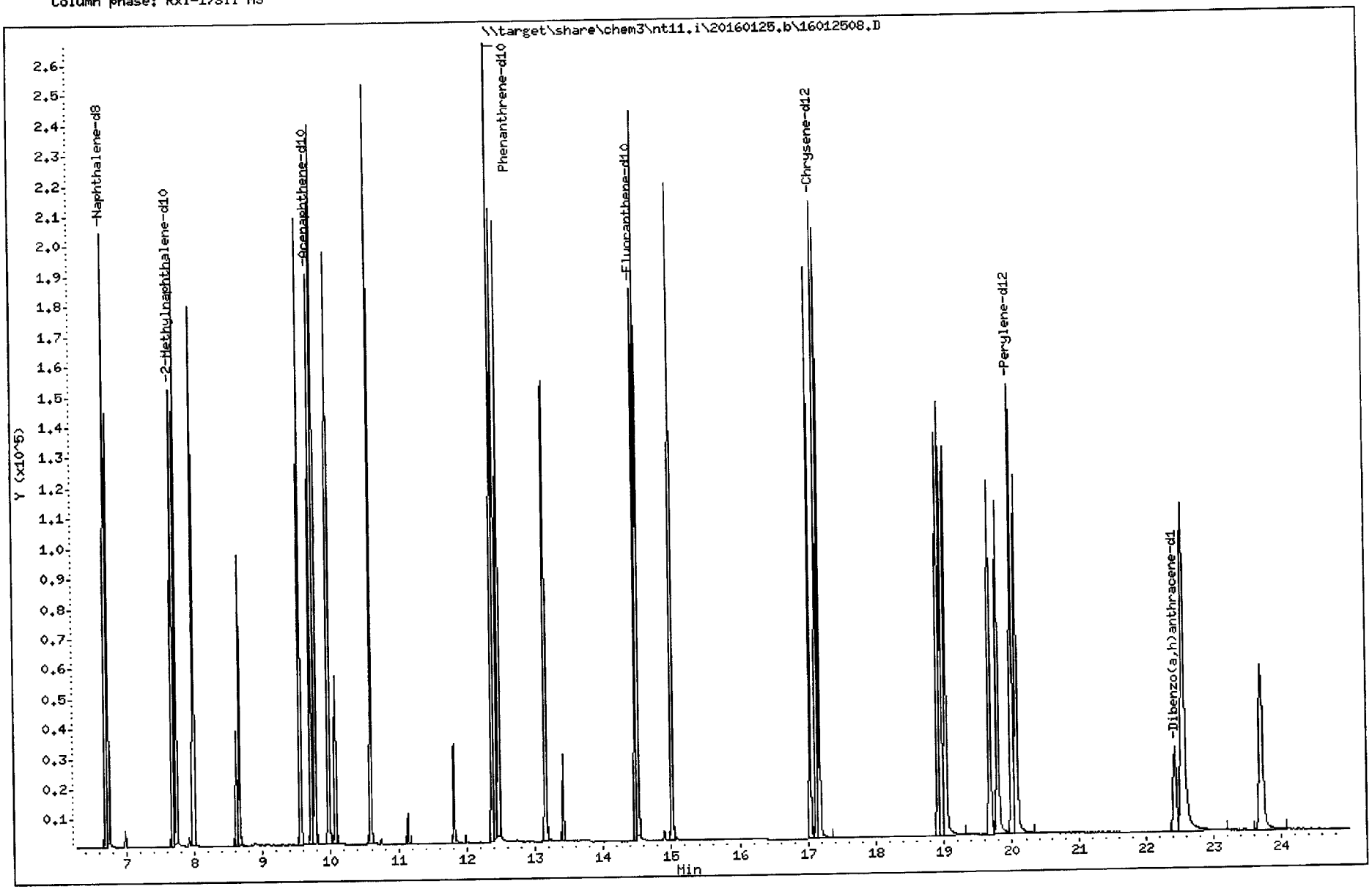
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012508.D
Date : 25-JAN-2016 11:29
Client ID:
Sample Info: LLPAH 100
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR F

Lab ID: LLPAH 100
nt11.i, 20160125.b\

RT	CO-ELUT
	NO CO-EL

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT
NONE	

On Column LOD for n

Exception: Napht
Exception: Phena
Exception: Anthr
Exception: Pyren
Exception: Benzo
Exception: Benzo
Exception: Peryl
Exception: Benzo
Exception: 2-Met
Exception: Diben
Exception: Fluor

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012510.D
Lab Smp Id: LLPAH 1000
Inj Date : 25-JAN-2016 12:00 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH 1000
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.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: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	309113	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	1486842	1000.00	869
$	6 2-Methylnaphthalene-d10	152	7.674	7.674	(1.144)	1060714	1000.00	918
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	1130621	1000.00	919
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	1017746	1000.00	914
	10 Acenaphthylene	152	9.550	9.550	(0.984)	1637276	1000.00	878
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	227974	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	1074041	1000.00	913
	14 Dibenzofuran	168	9.971	9.971	(1.027)	1558739	1000.00	865
	15 Fluorene	166	10.591	10.591	(1.091)	1267065	1000.00	891
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	372441	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	1813611	1000.00	860
	20 Anthracene	178	12.473	12.473	(1.007)	1800460	1000.00	888
$	23 Fluoranthene-d10	212	14.476	14.476	(1.169)	1812106	1000.00	899
	24 Fluoranthene	202	14.514	14.514	(1.172)	1914574	1000.00	886
	25 Pyrene	202	15.014	15.014	(0.877)	1936563	1000.00	852
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	1736076	1000.00	897
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	295350	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	1728837	1000.00	873
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	1662296	1000.00	924
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	1774449	1000.00	944

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	1587026	1000.00	928
	34 Benzo(a)pyrene	252	19.795	19.795	(0.990)	1602164	1000.00	971
*	35 Perylene-d12	264	19.997	19.997	(1.000)	273271	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	1119235	1000.00	1100
	37 Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.129)	1808681	1000.00	1070
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	1473214	1000.00	1100
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	1523618	1000.00	1020
	47 Perylene	252	20.064	20.064	(1.003)	1607740	1000.00	952
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	1587696	1000.00	930

Data File: \\target\share\chem3\nt11.i\20160125.b\16012510.D
Report Date: 25-Jan-2016 12:23

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012510.D
Lab Smp Id: LLPAH 1000
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	309113	-13.18
11 Acenaphthene-d10	264524	132262	529048	227974	-13.82
18 Phenanthrene-d10	444949	222475	889898	372441	-16.30
29 Chrysene-d12	343139	171570	686278	295350	-13.93
35 Perylene-d12	319277	159639	638554	273271	-14.41

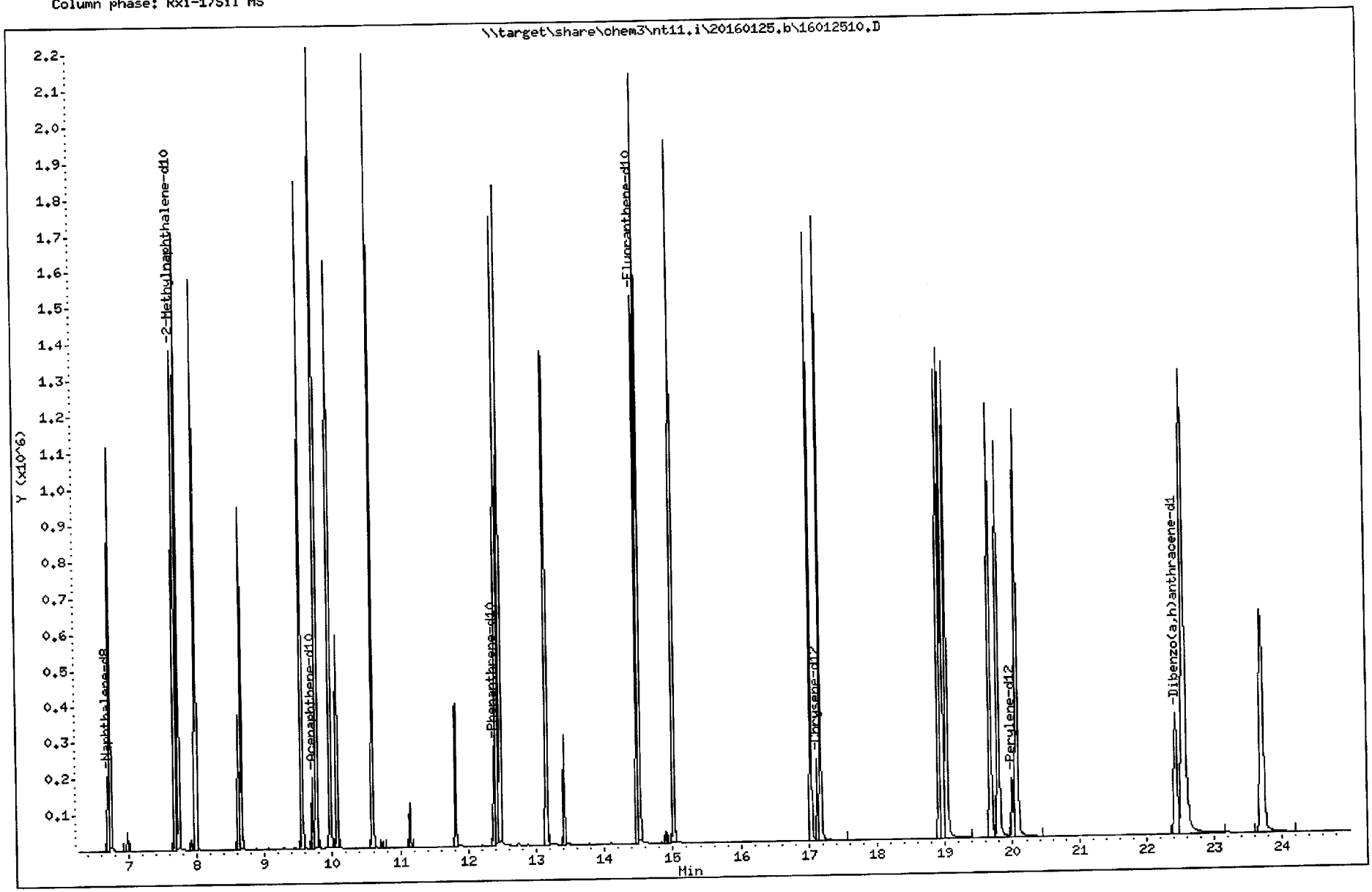
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012510.D
Date : 25-JAN-2016 12:00
Client ID:
Sample Info: LLPAH 1000
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012510.D

Lab ID: LLPAH 1000
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 12:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012511.D
Lab Smp Id: LLPAH SCV
Inj Date : 25-JAN-2016 12:30 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH SCV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 25-Jan-2016 12:22 jonathonw Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

SD 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/Kg)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	297375	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	393033	238.876	11900
$	6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	268187	226.700	11300
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	261967	244.499	12200
	10 Acenaphthylene	152	9.550	9.550	(0.984)	425342	238.614	11900
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	218000	200.000	
	12 Acenaphthene	153	9.772	9.772	(1.007)	280994	249.840	12500
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	10.591	10.591	(1.091)	325324	239.281	12000
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	349233	200.000	
	19 Phenanthrene	178	12.418	12.429	(1.003)	494432	250.085	12500
	20 Anthracene	178	12.473	12.473	(1.007)	478375	251.630	12600
$	23 Fluoranthene-d10	212	Compound Not Detected.					
	24 Fluoranthene	202	14.514	14.514	(1.172)	487263	240.367	12000
	25 Pyrene	202	15.014	15.014	(0.877)	550874	253.540	12700
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	441556	238.689	11900
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	282390	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	460355	243.169	12200
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	392027	236.042	11800
	45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	427665	246.549	12300
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/Kg)
	34 Benzo(a)pyrene	252	19.786	19.795	(0.989)	379557	249.204	12500
*	35 Perylene-d12	264	19.997	19.997	(1.000)	252294	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.575	(1.128)	387296	248.429	12400
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	305417	248.000	12400
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	340826	246.933	12300
	47 Perylene	252	Compound Not Detected.					
	48 Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012511.D
Lab Smp Id: LLPAH SCV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	297375	-16.48
11 Acenaphthene-d10	264524	132262	529048	218000	-17.59
18 Phenanthrene-d10	444949	222475	889898	349233	-21.51
29 Chrysene-d12	343139	171570	686278	282390	-17.70
35 Perylene-d12	319277	159639	638554	252294	-20.98

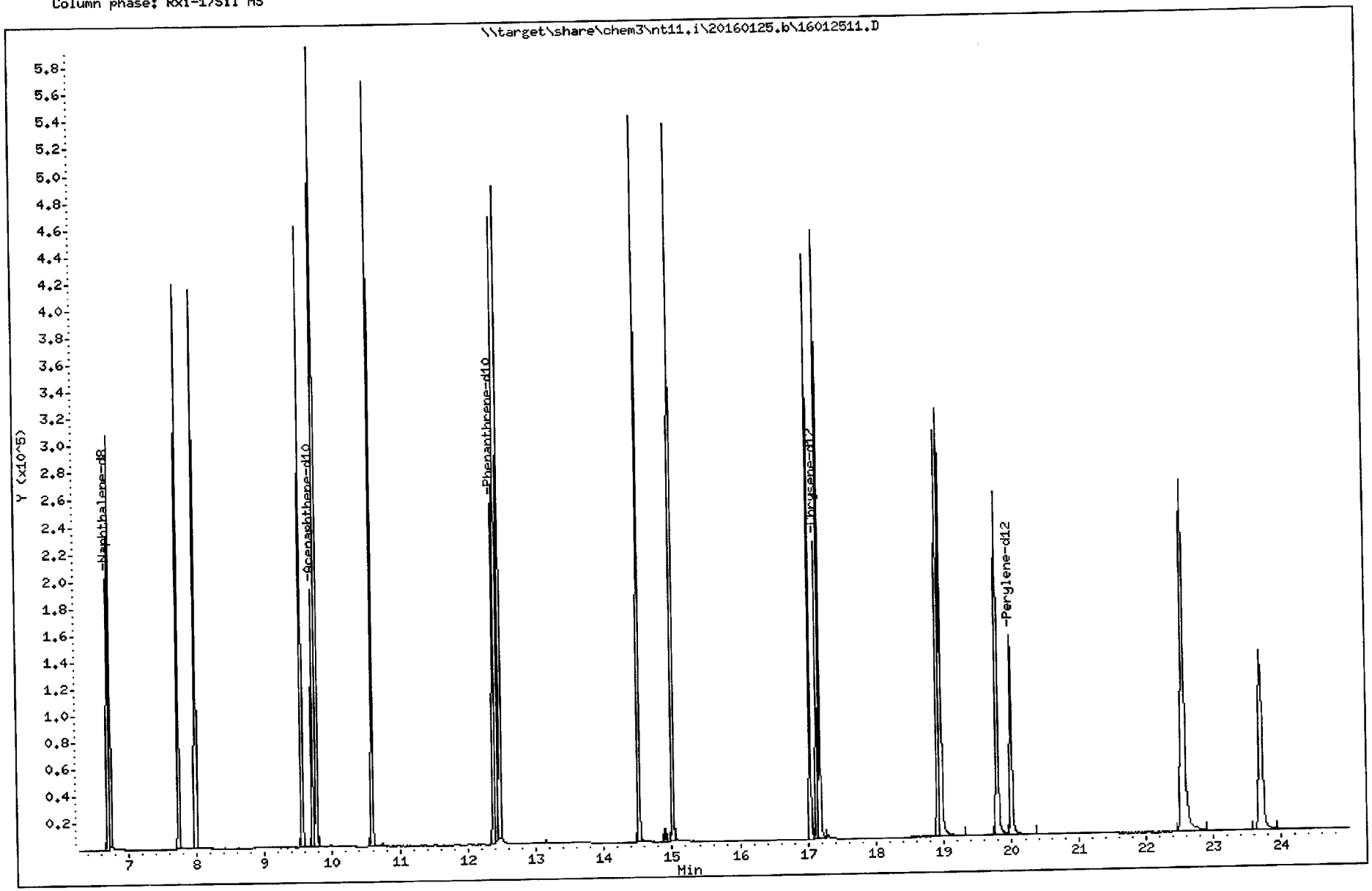
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-0.05

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012511.D
Date : 25-JAN-2016 12:30
Client ID:
Sample Info: LLPAH SCV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012511.D

Lab ID: LLPAH SCV
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 12:30

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,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: AUA2

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ELEMENT/NWA #.: AUA2 Client: Anchor QEA, LLC

METHOD: **8270D** (SIM-SVOA) **KRONE** (Butyl Tins) **8270D** (SVOA) **8270D** (OP-Pest)

Instrument: NT-6 NT-8 NT-10 (NT-11) NT-12 NT-14

Calibration Code: YL00008 / ZA00015 Analysis Start Date: 1/22/16

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ✓	Internal Standard within 50-200%?	(Y) / N / ✓
DDT Breakdown <20%?	(Y) / N / ✓	Retention Times within Windows?	(Y) / N / ✓
Peak Tailing Factor ≤2?	(Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
ICV/CCV Meets %D?	(Y) / N / ✓	BS/BSD Recovery in Control?	(Y) / N / ✓
ICAL Q Flag applied?	Y / (N) /	~~MS / MSD~~ Recovery in Control?	~~Y / N /~~
ICV/CCV Q flag applied?	(Y) / N /	Samples Diluted?	(Y) / N / ✓
Surrogate Recovery met?	(Y) / N / ✓	Special Analysis Request?	(Y) / N / ✓
Manual Integrations?	Y / (N) /	VDP Completed?	NA / (Y) / N /
Integration Summary?	(Y) / N / ✓	Technical Review?	/

Detail problems, corrective actions and/or other pertinent information below.

Q-flag for benzo(k)fluoranthene, which applies Q flag to total benzofluoranthenes. Note total contains benzo(j)fluoranthene as well, column has seperation of all three. This is for 1/22 run

AUA2 A rerun @ 10x on 1/25, B & C checked for carry over, not present reported from 1/22 run

Curve was lost even after inst. maint. dilution rerun on new curve ZA00015

Job/Forms batched w/ APR4 & ATSO

(Review 1) Analyst: [signature] **Date:** 1/26/16

(Review 2) Peer: _____ **Date:** _____

(Final Review) Reviewer: [signature] **Date:** 1/27

AUA2 : 00188

Analytical Resources Inc.: Organics Instrument Log
NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 1/22/16 Analysis: low PAH Analyst: JW

GC Program: lowsim Column No: D001726 Column Type: ~~1844~~ Rxi-17Silms

Instrument Tune (.U or .CT.): 150115.u EM Voltage: 1847

Calibration File: 160122d4.D Cali Code: Y100008 Injection Vol.: 2uL

IS/SS D002835

Ical/Ccal D004412 D005205

LCS/ICV

Document All Maintenance Tasks In Element

	Time	Filename	LabID	ClientId	DF									
1	0708	16012201.D	TUNE 10		1	NO ISTDS FOUND								
2	0725	16012202.D	LL SIM ICV		1	6.77	290356	9.77	200396	12.45	328472	17.19	243652	20.11	215215
3	0824	16012203.D			1	6.76	302565	9.77	213697	12.46	342867	17.21	264433	20.13	259585
4	0848	16012204.D	TUNE 10		1	NO ISTDS FOUND								
5	0905	16012205.D	LL SIM ICV		1	6.74	342116	9.74	244162	12.42	395241	17.17	296129	20.06	267218
6	0957	16012206.D	LL SIM MRL		1	6.74	345356	9.76	235311	12.42	378135	17.18	274122	20.07	249583
7	1027	16012207.D	APR4MBS1	APR4MBS1	1	6.73	368895	9.74	251480	12.42	405369	17.17	295936	20.06	283292
8	1057	16012208.D	APR4LCSS1	APR4LCSS1	1	6.73	360526	9.74	257556	12.42	412183	17.17	314530	20.06	306666
9	1128	16012209.D	APR4SRM1	SRM 1974C	1	6.73	362258	9.74	249465	12.42	398741	17.17	300525	20.06	299419
10	1158	16012210.D	APR4A	PG-T0-MUS-CO	1	6.72	371890	9.74	259279	12.42	437520	17.17	299515	20.06	303212
11	1228	16012211.D	ATS0A	PG-SMA2-2-MU	1	6.73	363469	9.74	256352	12.42	419386	17.17	310418	20.06	308119
12	1258	16012212.D	ATS0B	PG-PJ-1-MUS-	1	6.73	374753	9.74	264386	12.42	426020	17.17	316427	20.07	315181
13	1328	16012213.D	ATS0BMS	PG-PJ-1-MUS-	1	6.73	373582	9.74	269039	12.42	428623	17.17	324379	20.06	323020
14	1359	16012214.D	ATS0BMSD	PG-PJ-1-MUS-	1	6.73	377287	9.74	271691	12.42	435691	17.17	325376	20.06	324453
15	1429	16012215.D	ATS0C	PG-WS-1-MUS-	1	6.73	376882	9.74	268849	12.42	435864	17.17	322334	20.06	323010
16	1459	16012216.D	ATS0D	PG-GP-1-MUS-	1	6.72	377268	9.74	268633	12.41	436597	17.17	322279	20.06	320562
17	1529	16012217.D	ATS0E	PG-SMA2-5-MU	1	6.73	384886	9.74	273475	12.42	449495	17.17	339179	20.06	335158
18	1559	16012218.D	ATS0F	PG-SMA2-4-MU	1	6.72	381586	9.74	270392	12.42	439377	17.17	325728	20.06	325370
19	1630	16012219.D	AUA2A	13EB_ME-MTW0	1	6.73	373510	9.74	268987	12.42	440845	17.17	336414	20.06	339083
20	1700	16012220.D	AUA2B	13CPS_DB-MTW	1	6.73	370975	9.74	264737	12.42	432287	17.17	321859	20.06	327843
21	1730	16012221.D	AUA2C	13NPS_CIAR2-	1	6.72	382765	9.75	270341	12.42	435855	17.17	323444	20.06	326352
22	1800	16012222.D	LL SIM CCV		1	6.73	368312	9.74	275119	12.42	442913	17.17	337848	20.06	324201

JW 1/25/16

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160122.b

Instrument: nt11.i Date: 22-JAN-2016 Method: lowsim.m

INITIAL CAL: 04-DEC-2015

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 22-JAN-2016

Compound	%D
Benzo(k)fluoranthene	-20.8

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160122.b

ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 22-JAN-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0848	16012204.D	TUNE 10		1	NO MANUAL INTEGRATION
0905	16012205.D	LL SIM ICV		1	NO MANUAL INTEGRATION
0957	16012206.D	LL SIM MRL		1	NO MANUAL INTEGRATION
1027	16012207.D	APR4MBS1	APR4MBS1	1	NO MANUAL INTEGRATION
1057	16012208.D	APR4LCSS1	APR4LCSS1	1	NO MANUAL INTEGRATION
1128	16012209.D	APR4SRM1	SRM 1974C	1	NO MANUAL INTEGRATION
1158	16012210.D	APR4A	PG-T0-MUS-	1	NO MANUAL INTEGRATION
1228	16012211.D	ATS0A	PG-SMA2-2-	1	NO MANUAL INTEGRATION
1258	16012212.D	ATS0B	PG-PJ-1-MU	1	NO MANUAL INTEGRATION
1328	16012213.D	ATS0BMS	PG-PJ-1-MU	1	NO MANUAL INTEGRATION
1359	16012214.D	ATS0BMSD	PG-PJ-1-MU	1	NO MANUAL INTEGRATION
1429	16012215.D	ATS0C	PG-WS-1-MU	1	NO MANUAL INTEGRATION
1459	16012216.D	ATS0D	PG-GP-1-MU	1	NO MANUAL INTEGRATION
1529	16012217.D	ATS0E	PG-SMA2-5-	1	NO MANUAL INTEGRATION
1559	16012218.D	ATS0F	PG-SMA2-4-	1	NO MANUAL INTEGRATION
1630	16012219.D	AUA2A	13EB_ME-MT	1	NO MANUAL INTEGRATION
1700	16012220.D	AUA2B	13CPS_DB-M	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160122.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1730	16012221.D	AUA2C	13NPS_CIAR	1	NO MANUAL INTEGRATION
1800	16012222.D	LL SIM CCV		1	NO MANUAL INTEGRATION

Analysis	Matrix	Method
8270D-SIM PAH (0.5 ug/kg)	Solid	EPA 8270D-SIM

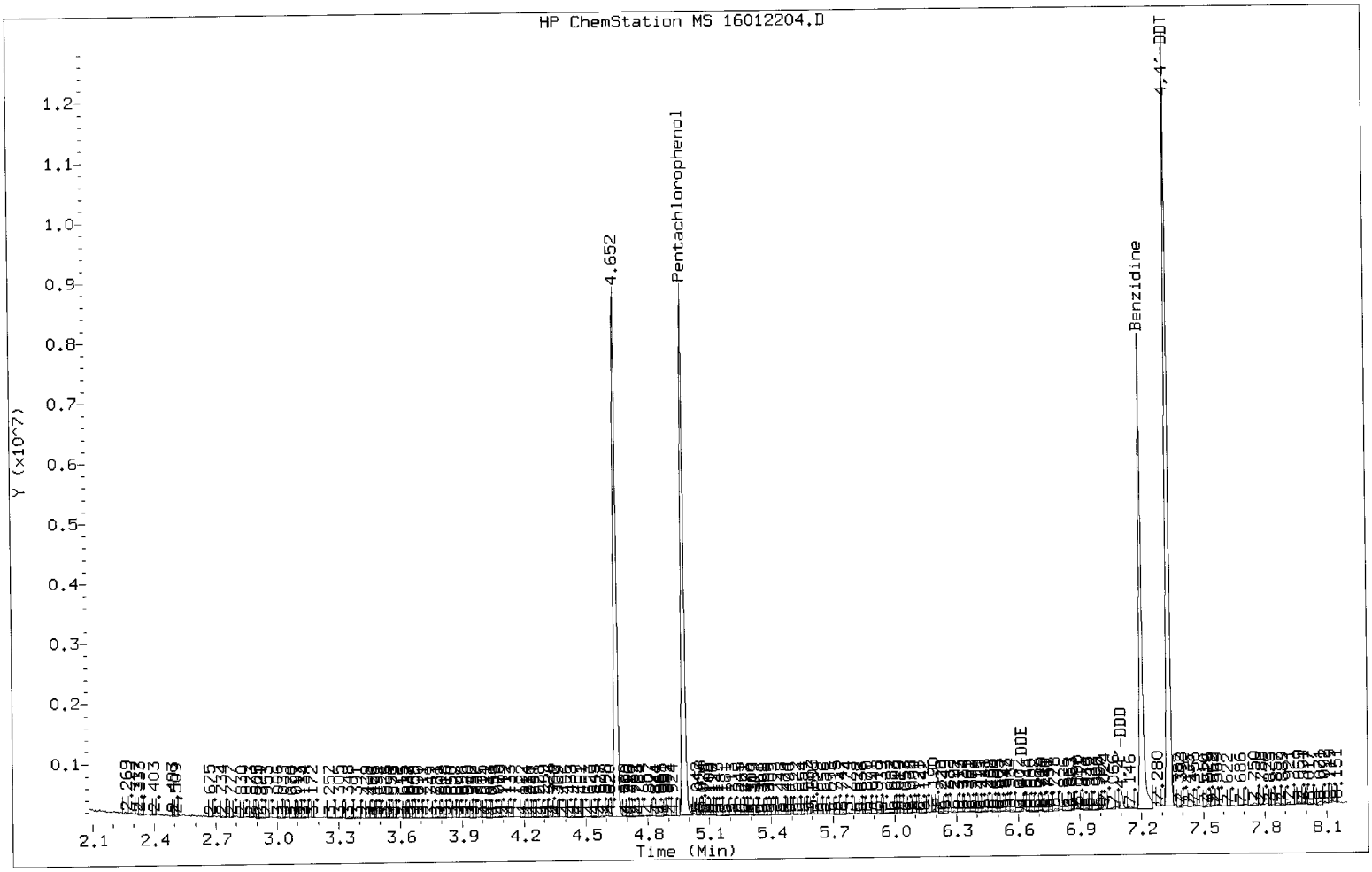
Checklist: Initial Calibration Checklist-SVOA

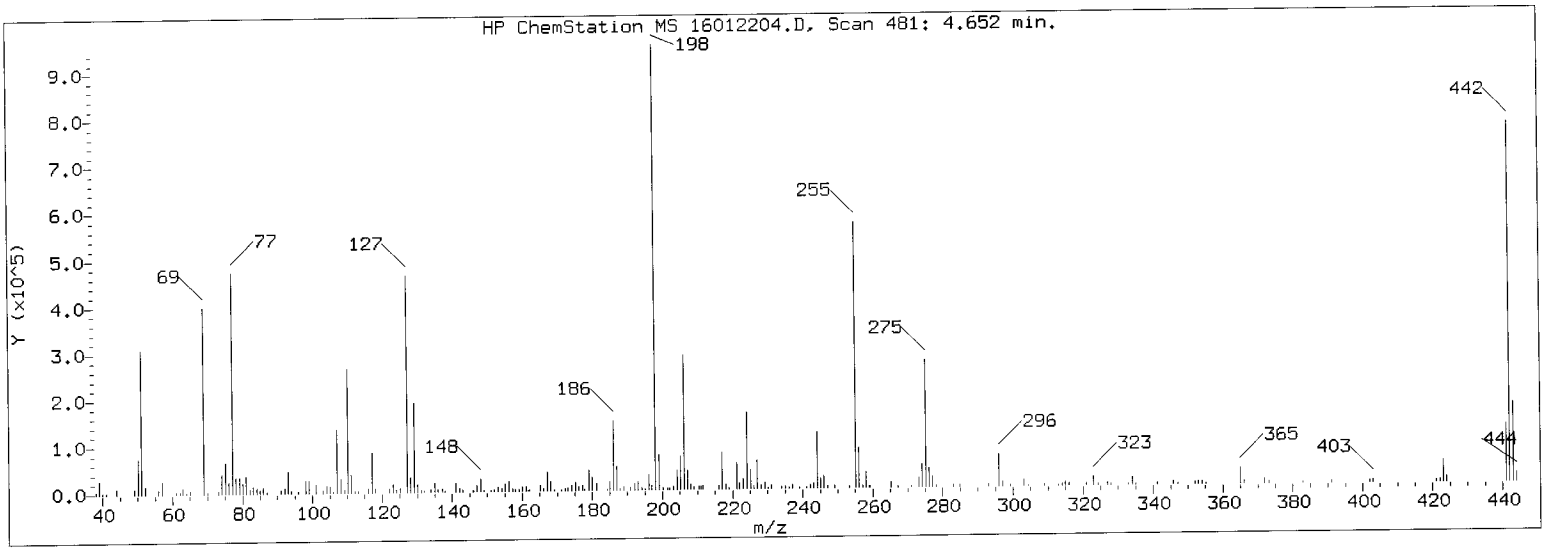
#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code	YES	JLW	12/05/2015
	Comments: *YL00008*			
2	DFTPP Tune met criteria	YES	JLW	12/05/2015
3	DDT breakdown <20%	YES	JLW	12/05/2015
4	Peak Tailing factor <= 2%	NO	JLW	12/05/2015
	Comments: *Benzidine TD @ 2.11*			
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	12/05/2015
6	NO ICAL Q Flag applied	YES	JLW	12/05/2015
7	Manual integrations include before/after pictures	NA	JLW	12/05/2015
8	Spectral Library matches updated	YES	JLW	12/05/2015
9	Internal Standard areas within 50-200% from reference	YES	JLW	12/05/2015
10	Minimum response factors met			12/30/1899
11	All SCV within +/- 20% (DOD)	YES	JLW	12/05/2015
12	All SCV within +/- 30%	YES	JLW	12/05/2015
13	NO Linear or Quadratic fits used	YES	JLW	12/05/2015
14	NO Calibration points dropped	YES	JLW	12/05/2015
15	Additional notes	NA	JLW	12/05/2015
16	Reviewer approval (Reviewer)	YES	BB	12/07/2015

* = Indicates Automated Response from Element DataSyst

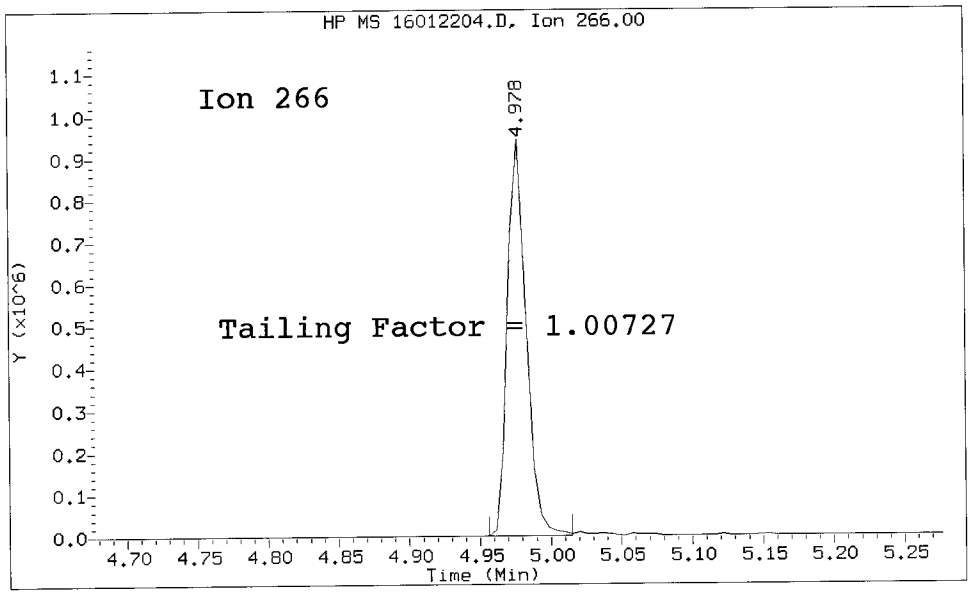
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160122.b/16012204.D/16012204.D
Method Used: \20160122.b\DFTPP.m Inst: nt11
Injection Date: 22-JAN-2016 08:48 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 01/22/2016 09:02



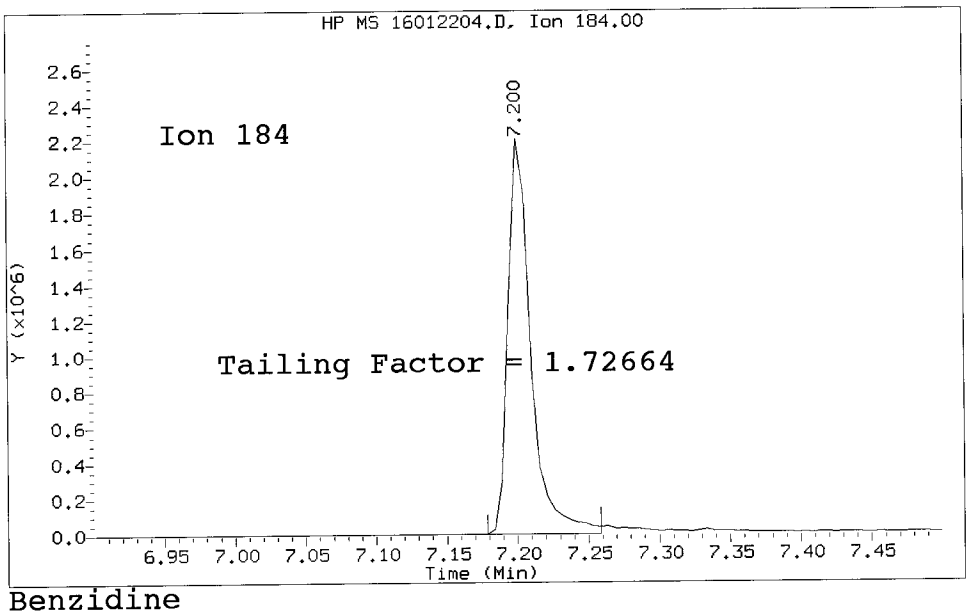


Datafile Analyzed: /20160122.b/16012204.D/16012204.D
Method Used: \20160122.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 22-JAN-2016 08:48 Operator: JR
Sample Info: TUNE 10
Report Date: 01/22/2016 09:02



Pentachlorophenol
==========
Exp. RT = 4.993
Found RT = 4.978

Tail Factor = 1.007 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.221
Found RT = 7.200

Tail Factor = 1.727 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.73
68	Less than 2.00% of mass 69	0.16 (0.39)
69	Mass 69 relative abundance	41.63
70	Less than 2.00% of mass 69	0.25 (0.61)
127	10.00 - 80.00% of mass 198	47.78
197	Less than 2.00% of mass 198	0.40
199	5.00 - 9.00% of mass 198	7.71
275	10.00 - 60.00% of mass 198	27.24
365	Greater than 1.00% of mass 198	3.32
441	0.01 - 24.00% of mass 442	12.54 (16.26)
442	50.00 - 200.00% of mass 198	77.14
443	15.00 - 24.00% of mass 442	16.83 (21.81)

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.0072727	2.000	PASS
Benzidine	1.7266388	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1726805			N/A
4,4-DDE	3549	0.2	20.0	PASS
4,4-DDD	52618	3.0	20.0	PASS
4,4-DDD + DDE	56167	3.2	20.0	PASS

Tuning Sample, nt11.i/20160122.b/16012204.D, *** PASSED ***

Data File: 16012204.D
Spectrum: Avg. Scans 480-482 (4.65), Background Scan 474
Location of Maximum: 198.00
Number of points: 234

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	3607	122.00	7336	189.00	6814	259.00	4520
39.00	25272	123.00	12165	190.00	687	265.00	10616
40.00	1066	124.00	5804	191.00	3058	267.00	824
41.00	1087	125.00	6712	192.00	9991	271.00	1786
44.00	2951	126.00	715	193.00	11855	273.00	17288
47.00	1915	127.00	371968	194.00	2573	274.00	41440
48.00	965	128.00	27128	195.00	969	275.00	212032
49.00	343	129.00	147840	196.00	26288	276.00	33296
50.00	69008	130.00	14201	197.00	3102	277.00	19368
51.00	254784	131.00	2791	198.00	778432	278.00	1718
52.00	12897	132.00	1860	199.00	60048	283.00	2182
56.00	8355	134.00	4232	200.00	5671	285.00	2120
57.00	22680	135.00	13298	201.00	3467	293.00	3851
61.00	3516	136.00	3638	202.00	2557	296.00	55384
62.00	3826	137.00	5257	203.00	5846	297.00	8144
63.00	9940	138.00	1734	204.00	32288	299.00	707
64.00	1093	141.00	18984	205.00	57688	301.00	924
65.00	7427	142.00	6237	206.00	232576	303.00	9467
68.00	1278	143.00	3531	207.00	29320	304.00	667
69.00	324032	146.00	4949	208.00	8015	308.00	766
70.00	1962	147.00	9660	209.00	1911	309.00	753
73.00	723	148.00	22696	210.00	4960	313.00	666
74.00	36448	149.00	2795	211.00	10724	314.00	3828
75.00	55760	150.00	734	215.00	1660	315.00	6576
76.00	19528	151.00	2894	216.00	5836	316.00	3799
77.00	385408	152.00	1966	217.00	56960	321.00	1720
78.00	29584	153.00	6313	218.00	7526	323.00	17272
79.00	25288	154.00	5608	219.00	1661	324.00	1938
80.00	16616	155.00	12727	220.00	890	327.00	4736
81.00	28720	156.00	18096	221.00	44040	328.00	2031
82.00	7311	157.00	4106	222.00	6970	333.00	2333
83.00	8522	158.00	3387	223.00	15012	334.00	16114
85.00	5376	159.00	2361	224.00	125528	335.00	2065
86.00	4792	160.00	6722	225.00	31192	341.00	1930
87.00	3303	161.00	8069	226.00	4356	346.00	3920
88.00	2091	162.00	3527	227.00	50936	347.00	798
91.00	4565	164.00	1307	228.00	7585	352.00	6058
92.00	7896	165.00	7812	229.00	11279	353.00	4458
93.00	39608	166.00	4164	230.00	1526	354.00	5282
94.00	2439	167.00	35072	231.00	5218	355.00	805
96.00	2499	168.00	16007	234.00	3064	365.00	25832
98.00	27064	169.00	3806	235.00	4198	366.00	4228
99.00	25248	171.00	980	236.00	2314	372.00	8757
100.00	1800	172.00	3057	237.00	5032	373.00	1989
101.00	16026	173.00	4470	239.00	1814	383.00	2358
103.00	3544	174.00	8647	241.00	1057	391.00	1271
104.00	11351	175.00	15815	242.00	6205	402.00	5535
105.00	8415	176.00	5995	243.00	4414	403.00	5821
106.00	1019	177.00	7242	244.00	90744	404.00	1129

107.00	114800	178.00	1626	245.00	14417	421.00	4462
108.00	24152	179.00	29840	246.00	18184	422.00	4482
109.00	4094	180.00	23120	247.00	3106	423.00	33288
110.00	220544	181.00	12070	249.00	2530	424.00	9008
111.00	29816	183.00	712	250.00	747	441.00	97608
112.00	3512	184.00	1794	253.00	1957	442.00	600448
113.00	690	185.00	14309	255.00	445120	443.00	130976
116.00	5974	186.00	118168	256.00	66840	444.00	13357
117.00	71488	187.00	35616	257.00	3449		
118.00	4363	188.00	3220	258.00	25832		

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 22-JAN-2016 09:05
Lab File ID: 16012205.D Init. Cal. Date(s): 04-DEC-2015 04-DEC-2015
Analysis Type: SOIL Init. Cal. Times: 09:03 11:33
Lab Sample ID: LL SIM ICV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160122.b\lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
5 Naphthalene	1.15523	1.01008	0.010	-12.56490	20.00000	Averaged	
$ 6 2-Methylnaphthalene-d10	0.74235	0.67060	0.010	-9.66554	20.00000	Averaged	
7 2-Methylnaphthalene	0.79376	0.72881	0.010	-8.18323	20.00000	Averaged	
8 1-Methylnaphthalene	0.71533	0.65102	0.010	-8.99055	20.00000	Averaged	
10 Acenaphthylene	1.61414	1.49736	0.010	-7.23476	20.00000	Averaged	
12 Acenaphthene	1.07135	0.94674	0.010	-11.63119	20.00000	Averaged	
14 Dibenzofuran	1.61394	1.44144	0.010	-10.68769	20.00000	Averaged	
15 Fluorene	1.21040	1.13274	0.010	-6.41645	20.00000	Averaged	
19 Phenanthrene	1.20497	1.02916	0.010	-14.58979	20.00000	Averaged	
20 Anthracene	1.07857	1.00293	0.010	-7.01252	20.00000	Averaged	
$ 23 Fluoranthene-d10	1.09988	0.97587	0.200	-11.27457	20.00000	Averaged	
24 Fluoranthene	1.20977	1.06068	0.010	-12.32404	20.00000	Averaged	
25 Pyrene	1.58387	1.42756	0.010	-9.86851	20.00000	Averaged	
28 Benzo(a)anthracene	1.33345	1.18471	0.010	-11.15468	20.00000	Averaged	
30 Chrysene	1.46350	1.22447	0.010	-16.33287	20.00000	Averaged	
44 Benzo(b)fluoranthene	1.35504	1.16216	0.200	-14.23482	20.00000	Averaged	
45 Benzo(k)fluoranthene	1.57904	1.24997	0.200	-20.83950	20.00000	Averaged	<-
46 Benzo(j)fluoranthene	1.43839	1.18290	0.200	-17.76252	20.00000	Averaged	
34 Benzo(a)pyrene	1.30774	1.11820	0.010	-14.49403	20.00000	Averaged	
$ 36 Dibenzo(a,h)anthracene-d14	0.80723	0.73518	0.010	-8.92537	20.00000	Averaged	
37 Indeno(1,2,3-cd)pyrene	1.37309	1.18637	0.010	-13.59810	20.00000	Averaged	
38 Dibenzo(a,h)anthracene	1.08579	0.96395	0.010	-11.22141	20.00000	Averaged	
39 Benzo(g,h,i)perylene	1.19199	1.03495	0.010	-13.17397	20.00000	Averaged	
47 Perylene	1.35582	1.11738	0.200	-17.58607	20.00000	Averaged	
48 Benzo(e)pyrene	1.36945	1.10703	0.200	-19.16194	20.00000	Averaged	

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012205.D
Lab Smp Id: LL SIM ICV
Inj Date : 22-JAN-2016 09:05 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM ICV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.744	6.744	(1.000)	342116	200.000	
	5 Naphthalene	128	6.776	6.776	(1.005)	431956	250.000	219
$	6 2-Methylnaphthalene-d10	152	7.721	7.721	(1.145)	286779	250.000	226
	7 2-Methylnaphthalene	142	7.774	7.774	(1.153)	311670	250.000	230
	8 1-Methylnaphthalene	142	8.026	8.026	(1.190)	278405	250.000	228
	10 Acenaphthylene	152	9.589	9.589	(0.984)	456998	250.000	232
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	244162	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.007)	288948	250.000	221
	14 Dibenzofuran	168	10.010	10.010	(1.027)	439932	250.000	223
	15 Fluorene	166	10.630	10.630	(1.091)	345715	250.000	234
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	395241	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	508460	250.000	214
	20 Anthracene	178	12.523	12.523	(1.008)	495501	250.000	232
$	23 Fluoranthene-d10	212	14.518	14.518	(1.169)	482130	250.000	222
	24 Fluoranthene	202	14.557	14.557	(1.172)	524030	250.000	219
	25 Pyrene	202	15.057	15.057	(0.877)	528428	250.000	225
	28 Benzo(a)anthracene	228	17.075	17.075	(0.995)	438532	250.000	222
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	296129	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	453252	250.000	209
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	388186	250.000	214(H)
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	417519	250.000	198(H)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	395115	250.000	206
34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	373503	250.000	214
* 35 Perylene-d12	264	20.062	20.062	(1.000)	267218	200.000	
$ 36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	245568	250.000	228
37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	396275	250.000	216
38 Dibenzo(a,h)anthracene	278	22.651	22.651	(1.129)	321982	250.000	222
39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	345698	250.000	217
47 Perylene	252	20.130	20.130	(1.003)	373231	250.000	206
48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	369774	250.000	202

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: 16012205.D
Lab Smp Id: LL SIM ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

Calibration Date: 22-JAN-2016
Calibration Time: 18:00

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	342116	4.34
11 Acenaphthene-d10	239179	119590	478358	244162	2.08
18 Phenanthrene-d10	372253	186127	744506	395241	6.18
29 Chrysene-d12	294711	147356	589422	296129	0.48
35 Perylene-d12	260595	130298	521190	267218	2.54

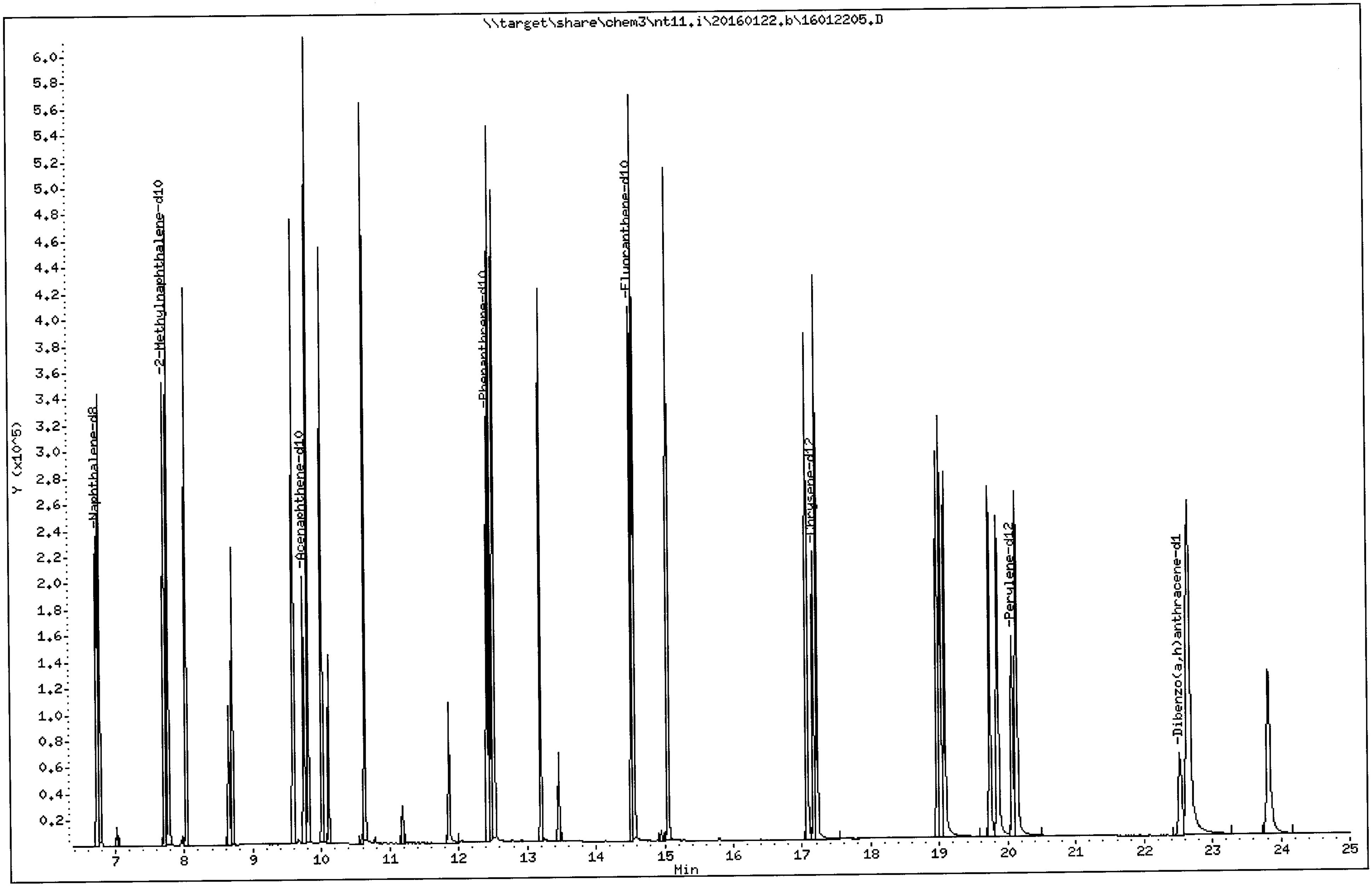
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.74	0.00
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160122.b\16012205.D
Date : 22-JAN-2016 09:05
Client ID:
Sample Info: LL SIM ICV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012205.D

Lab ID: LL SIM ICV
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 09:05

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012206.D
Lab Smp Id: LL SIM MRL
Inj Date : 22-JAN-2016 09:57 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM MRL
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

TO 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/Kg)
*	4 Naphthalene-d8	136	6.744	6.744	(1.000)	345356	200.000	
	5 Naphthalene	128	6.776	6.776	(1.005)	23679	11.8701	594
$	6 2-Methylnaphthalene-d10	152	7.721	7.721	(1.145)	14635	11.4168	571 (R)
	7 2-Methylnaphthalene	142	7.774	7.774	(1.153)	15554	11.3479	567
	8 1-Methylnaphthalene	142	8.036	8.026	(1.192)	14016	11.3470	567
	10 Acenaphthylene	152	9.600	9.589	(0.984)	23264	12.2499	612
*	11 Acenaphthene-d10	164	9.755	9.744	(1.000)	235311	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.006)	14766	11.7143	586
	14 Dibenzofuran	168	10.021	10.010	(1.027)	23440	12.3441	617
	15 Fluorene	166	10.641	10.630	(1.091)	17626	12.3769	619
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	378135	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	30106	13.2148	661
	20 Anthracene	178	12.523	12.523	(1.008)	24053	11.7952	590
$	23 Fluoranthene-d10	212	14.528	14.518	(1.169)	25449	12.2380	612 (R)
	24 Fluoranthene	202	14.557	14.557	(1.172)	27112	11.8533	593
	25 Pyrene	202	15.057	15.057	(0.877)	28035	12.9142	646
	28 Benzo(a)anthracene	228	17.076	17.075	(0.994)	22208	12.1512	608
*	29 Chrysene-d12	240	17.175	17.167	(1.000)	274122	200.000	
	30 Chrysene	228	17.225	17.217	(1.003)	23055	11.4936	575
	44 Benzo(b)fluoranthene	252	18.977	18.967	(0.945)	17108	10.1172	506
	45 Benzo(k)fluoranthene	252	19.025	19.015	(0.948)	20372	10.3385	517

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/Kg)
	46 Benzo(j)fluoranthene	252	19.092	19.082	(0.951)	19922	11.0986	555
	34 Benzo(a)pyrene	252	19.861	19.851	(0.989)	17153	10.5107	526
*	35 Perylene-d12	264	20.072	20.062	(1.000)	249583	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.540	22.529	(1.123)	9288	9.22016	461(R)
	37 Indeno(1,2,3-cd)pyrene	276	22.673	22.662	(1.130)	16178	9.44153	472
	38 Dibenzo(a,h)anthracene	278	22.651	22.651	(1.128)	12483	9.21269	461
	39 Benzo(g,h,i)perylene	276	23.836	23.814	(1.188)	14357	9.65178	483
	47 Perylene	252	20.139	20.130	(1.003)	17838	10.5429	527
	48 Benzo(e)pyrene	252	19.745	19.736	(0.984)	18320	10.7200	536

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012206.D
Lab Smp Id: LL SIM MRL
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

Calibration Date: 22-JAN-2016
Calibration Time: 09:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	345356	5.32
11 Acenaphthene-d10	239179	119590	478358	235311	-1.62
18 Phenanthrene-d10	372253	186127	744506	378135	1.58
29 Chrysene-d12	294711	147356	589422	274122	-6.99
35 Perylene-d12	260595	130298	521190	249583	-4.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.74	0.00
11 Acenaphthene-d10	9.74	9.24	10.24	9.76	0.11
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.18	0.05
35 Perylene-d12	20.06	19.56	20.56	20.07	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.

ARI Labs, Inc.

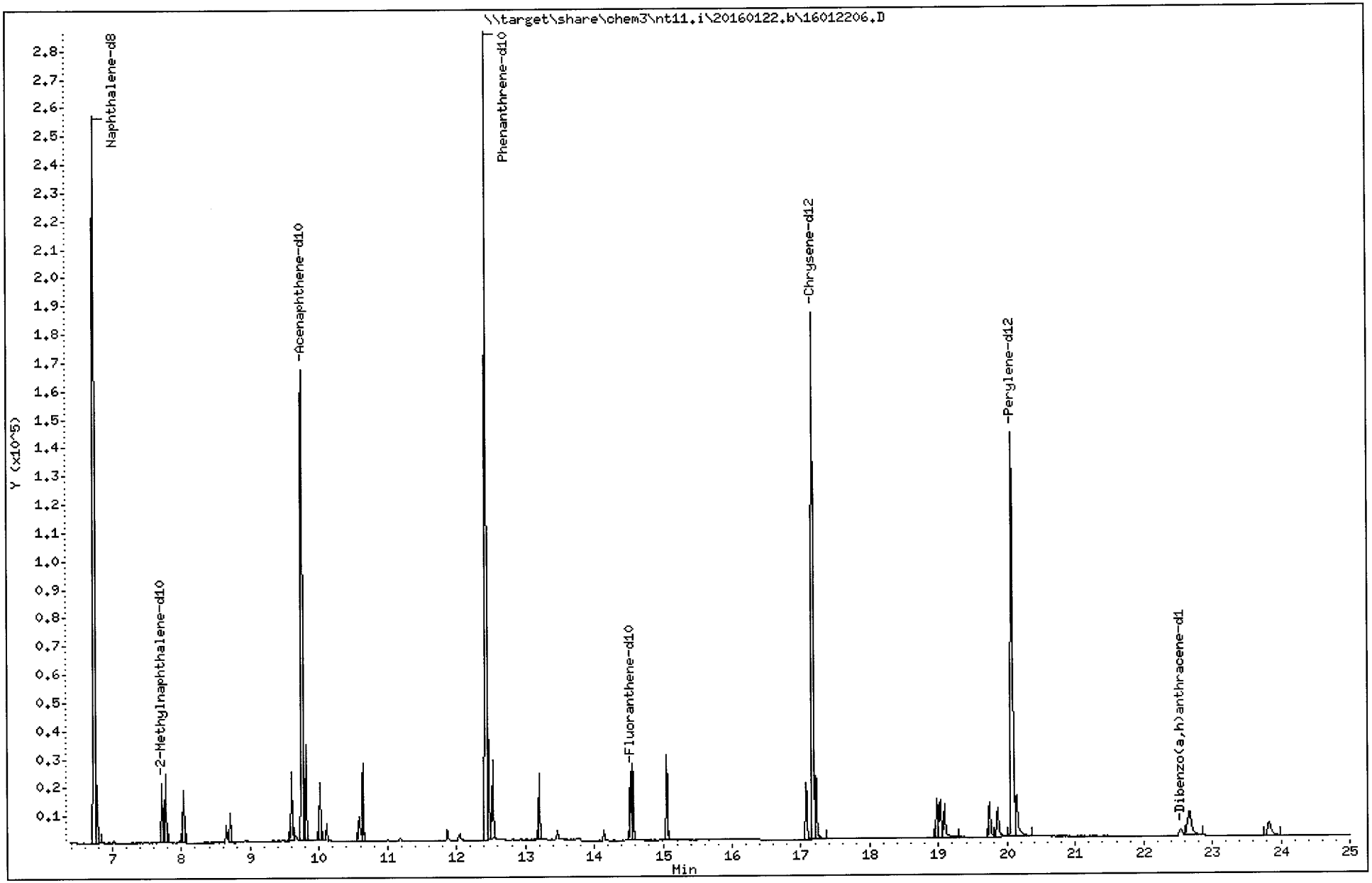
RECOVERY REPORT

Client Name:
Client SDG: SDGa04420
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: LL SIM MRL
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ng/Kg	CONC RECOVERED ng/Kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	571	3.81*	30-160
$ 23 Fluoranthene-d10	15000	612	4.08*	30-160
$ 36 Dibenzo(a,h)anthra	15000	461	3.07*	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012206.D
Date : 22-JAN-2016 09:57
Client ID:
Sample Info: LL SIM MRL
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012206.D

Lab ID: LL SIM MRL
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 09:57

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 22-JAN-2016 18:00
Lab File ID: 16012222.D Init. Cal. Date(s): 04-DEC-2015 04-DEC-2015
Analysis Type: SOIL Init. Cal. Times: 09:03 11:33
Lab Sample ID: LL SIM CCV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160122.b\lowsim.m

ccv

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
5 Naphthalene	1.15523	1.01182	0.010	-12.41432	20.00000	Averaged	
$ 6 2-Methylnaphthalene-d10	0.74235	0.69544	0.010	-6.31969	20.00000	Averaged	
7 2-Methylnaphthalene	0.79376	0.74787	0.010	-5.78194	20.00000	Averaged	
8 1-Methylnaphthalene	0.71533	0.68036	0.010	-4.88849	20.00000	Averaged	
10 Acenaphthylene	1.61414	1.54546	0.010	-4.25498	20.00000	Averaged	
12 Acenaphthene	1.07135	0.94423	0.010	-11.86579	20.00000	Averaged	
14 Dibenzofuran	1.61394	1.41355	0.010	-12.41578	20.00000	Averaged	
15 Fluorene	1.21040	1.13310	0.010	-6.38636	20.00000	Averaged	
19 Phenanthrene	1.20497	1.00481	0.010	-16.61100	20.00000	Averaged	
20 Anthracene	1.07857	1.02531	0.010	-4.93777	20.00000	Averaged	
$ 23 Fluoranthene-d10	1.09988	0.98829	0.200	-10.14508	20.00000	Averaged	
24 Fluoranthene	1.20977	1.05659	0.010	-12.66190	20.00000	Averaged	
25 Pyrene	1.58387	1.41304	0.010	-10.78535	20.00000	Averaged	
28 Benzo(a)anthracene	1.33345	1.20396	0.010	-9.71058	20.00000	Averaged	
30 Chrysene	1.46350	1.19614	0.010	-18.26873	20.00000	Averaged	
44 Benzo(b)fluoranthene	1.35504	1.18613	0.200	-12.46547	20.00000	Averaged	
45 Benzo(k)fluoranthene	1.57904	1.16913	0.200	-25.95931	20.00000	Averaged	<- ok
46 Benzo(j)fluoranthene	1.43839	1.09316	0.200	-24.00145	20.00000	Averaged	<- ok
34 Benzo(a)pyrene	1.30774	1.10745	0.010	-15.31574	20.00000	Averaged	
$ 36 Dibenzo(a,h)anthracene-d14	0.80723	0.77966	0.010	-3.41604	20.00000	Averaged	
37 Indeno(1,2,3-cd)pyrene	1.37309	1.23211	0.010	-10.26727	20.00000	Averaged	
38 Dibenzo(a,h)anthracene	1.08579	1.01780	0.010	-6.26235	20.00000	Averaged	
39 Benzo(g,h,i)perylene	1.19199	1.04962	0.010	-11.94336	20.00000	Averaged	
47 Perylene	1.35582	1.10544	0.200	-18.46728	20.00000	Averaged	
48 Benzo(e)pyrene	1.36945	1.07298	0.200	-21.64831	20.00000	Averaged	<- ok

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012222.D
Lab Smp Id: LL SIM CCV
Inj Date : 22-JAN-2016 18:00 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM CCV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:47 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 16 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

STD 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.734	6.734	(1.000)	368312	200.000	
	5 Naphthalene	128	6.776	6.776	(1.006)	465832	250.000	219
$	6 2-Methylnaphthalene-d10	152	7.711	7.711	(1.145)	320173	250.000	234
	7 2-Methylnaphthalene	142	7.774	7.774	(1.154)	344310	250.000	236
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	313232	250.000	238
	10 Acenaphthylene	152	9.589	9.589	(0.984)	531481	250.000	239
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	275119	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.007)	324719	250.000	220
	14 Dibenzofuran	168	10.010	10.010	(1.027)	486119	250.000	219
	15 Fluorene	166	10.630	10.630	(1.091)	389673	250.000	234
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	442913	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	556304	250.000	208
	20 Anthracene	178	12.523	12.523	(1.008)	567655	250.000	238
$	23 Fluoranthene-d10	212	14.519	14.519	(1.169)	547160	250.000	225
	24 Fluoranthene	202	14.557	14.557	(1.172)	584973	250.000	218
	25 Pyrene	202	15.057	15.057	(0.877)	596741	250.000	223
	28 Benzo(a)anthracene	228	17.067	17.067	(0.994)	508445	250.000	226
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	337848	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	505142	250.000	204
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	480681	250.000	219
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	473791	250.000	185

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.083	19.083	(0.951)	443004	250.000	190
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	448796	250.000	212
*	35 Perylene-d12	264	20.063	20.063	(1.000)	324201	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	315957	250.000	241
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	499313	250.000	224
	38 Dibenzo(a,h)anthracene	278	22.640	22.640	(1.128)	412464	250.000	234
	39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	425361	250.000	220
	47 Perylene	252	20.130	20.130	(1.003)	447979	250.000	204
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	434828	250.000	196

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012222.D
Lab Smp Id: LL SIM CCV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

Calibration Date: 22-JAN-2016
Calibration Time: 09:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

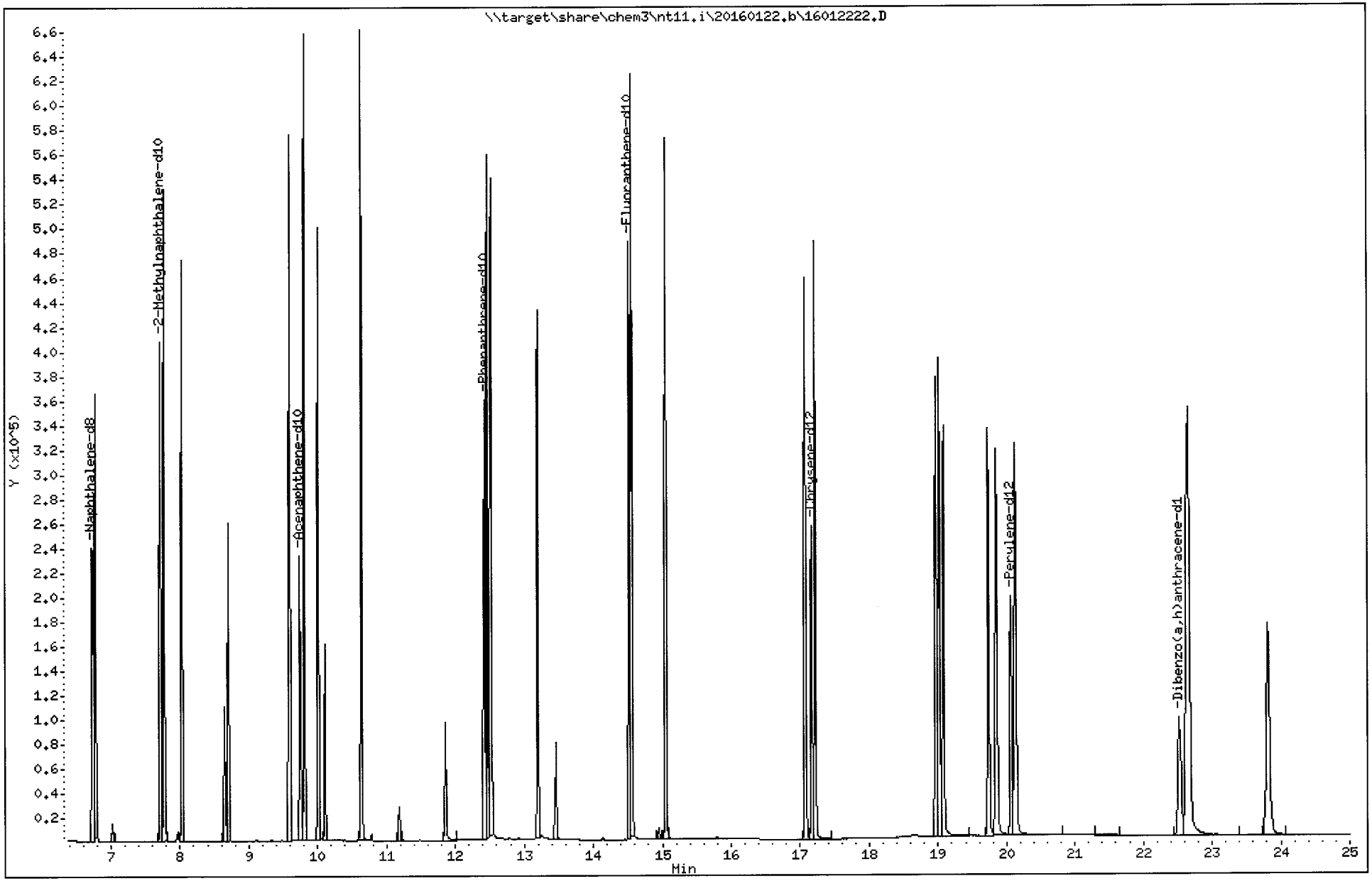
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	368312	12.33
11 Acenaphthene-d10	239179	119590	478358	275119	15.03
18 Phenanthrene-d10	372253	186127	744506	442913	18.98
29 Chrysene-d12	294711	147356	589422	337848	14.64
35 Perylene-d12	260595	130298	521190	324201	24.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.73	6.23	7.23	6.73	0.00
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

Data File: \\target\share\chem3\nt11.i\20160122.b\16012222.D
Date : 22-JAN-2016 18:00
Client ID:
Sample Info: LL SIM CCV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012222.D

Lab ID: LL SIM CCV
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 18:00

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012207.D
Lab Smp Id: APR4MBS1 Client Smp ID: APR4MBS1
Inj Date : 22-JAN-2016 10:27 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : APR4MBS1
Misc Info : 15-20439
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
* 4 Naphthalene-d8	136	6.734	6.744	(1.000)	368895	200.000	
5 Naphthalene	128	Compound Not Detected.					
$ 6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	192954	140.919	7050
7 2-Methylnaphthalene	142	Compound Not Detected.					
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	9.744	9.744	(1.000)	251480	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	Compound Not Detected.					
* 18 Phenanthrene-d10	188	12.424	12.424	(1.000)	405369	200.000	
19 Phenanthrene	178	Compound Not Detected.					
20 Anthracene	178	Compound Not Detected.					
$ 23 Fluoranthene-d10	212	14.519	14.518	(1.169)	409079	183.503	9180
24 Fluoranthene	202	Compound Not Detected.					
25 Pyrene	202	Compound Not Detected.					
28 Benzo(a)anthracene	228	Compound Not Detected.					
* 29 Chrysene-d12	240	17.167	17.167	(1.000)	295936	200.000	
30 Chrysene	228	Compound Not Detected.					
44 Benzo(b)fluoranthene	252	Compound Not Detected.					
45 Benzo(k)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	20.063	20.062	(1.000)	283292	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	225250	196.998	9850
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					
	48 Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012207.D
Lab Smp Id: APR4MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: APR4MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	368895	12.50
11 Acenaphthene-d10	239179	119590	478358	251480	5.14
18 Phenanthrene-d10	372253	186127	744506	405369	8.90
29 Chrysene-d12	294711	147356	589422	295936	0.42
35 Perylene-d12	260595	130298	521190	283292	8.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.15
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

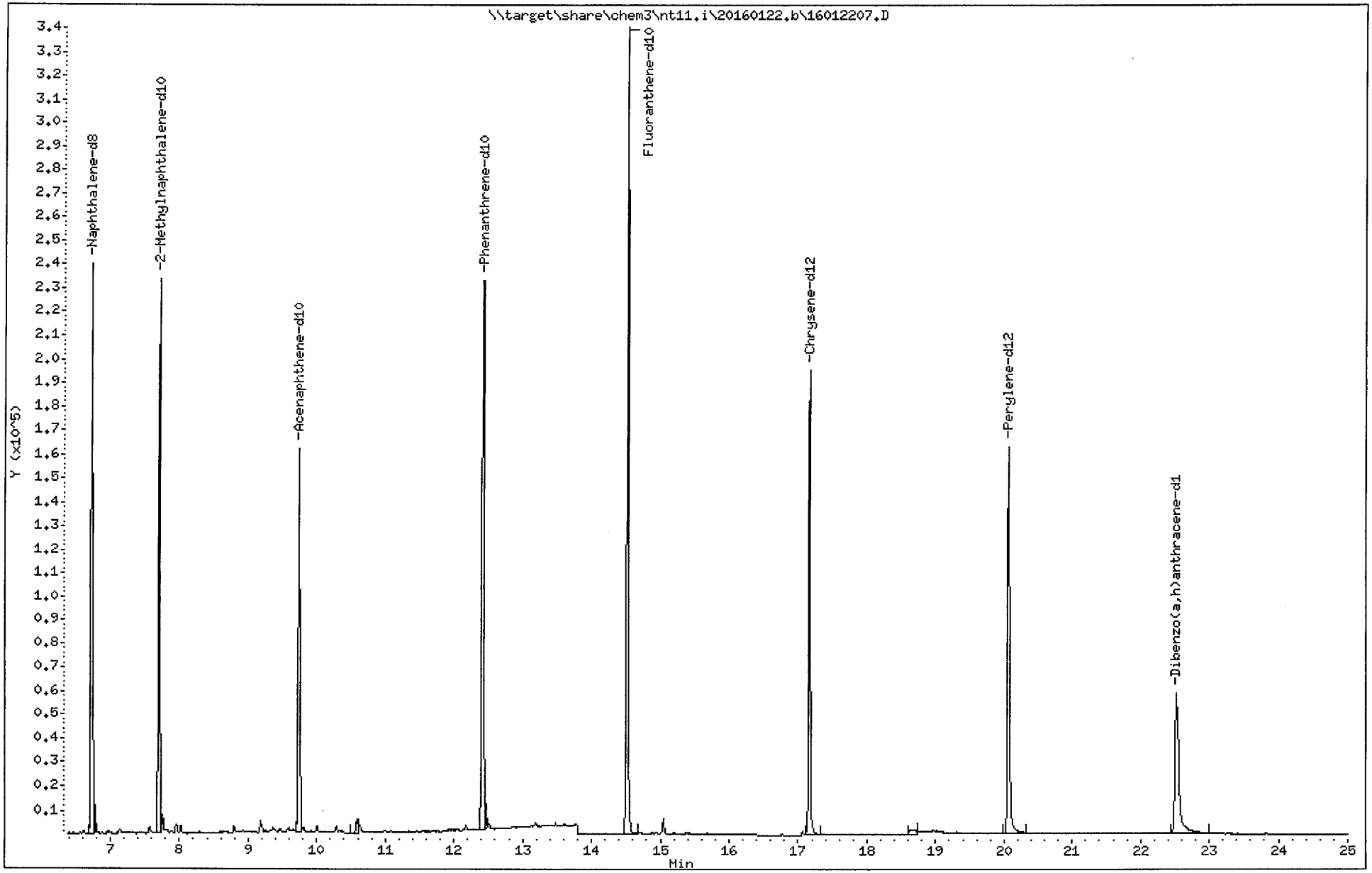
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: APR4MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

Client SDG: APR4
Fraction: SV
Client Smp ID: APR4MBS1
Operator: JW
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7050	46.97	30-160
$ 23 Fluoranthene-d10	15000	9180	61.17	30-160
$ 36 Dibenzo(a,h)anthra	15000	9850	65.67	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012207.D
Date : 22-JAN-2016 10:27
Client ID: APR4MBS1
Sample Info: APR4MBS1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012207.D

Lab ID: APR4MBS1
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 10:27

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012208.D
Lab Smp Id: APR4LCSS1 Client Smp ID: APR4LCSS1
Inj Date : 22-JAN-2016 10:57 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : APR4LCSS1
Misc Info : 15-20439
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	360526	200.000	
	5 Naphthalene	128	6.765	6.776	(1.005)	319931	153.631	7680
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	192117	143.565	7180
	7 2-Methylnaphthalene	142	7.763	7.774	(1.153)	227764	159.180	7960
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	202850	157.312	7870
	10 Acenaphthylene	152	9.589	9.589	(0.984)	306764	147.578	7380
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	257556	200.000	
	12 Acenaphthene	153	9.800	9.811	(1.006)	214202	155.256	7760
	14 Dibenzofuran	168	10.010	10.010	(1.027)	330618	159.074	7950
	15 Fluorene	166	10.630	10.630	(1.091)	270755	173.702	8690
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	412183	200.000	
	19 Phenanthrene	178	12.457	12.468	(1.003)	424716	171.027	8550
	20 Anthracene	178	12.512	12.523	(1.007)	376504	169.380	8470
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	417313	184.102	9210
	24 Fluoranthene	202	14.557	14.557	(1.172)	471193	188.988	9450
	25 Pyrene	202	15.047	15.057	(0.877)	481761	193.411	9670
	28 Benzo(a)anthracene	228	17.067	17.075	(0.994)	419082	199.844	9990
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	314530	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	430198	186.914	9350
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	387411	186.459	9320
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	408726	168.813	8440 Q

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	378018	171.395	8570
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	338391	168.757	8440
*	35 Perylene-d12	264	20.063	20.062	(1.000)	306666	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	238624	192.788	9640
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	416120	197.645	9880
	38 Dibenzo(a,h)anthracene	278	22.640	22.651	(1.128)	338705	203.441	10200
	39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	359662	196.783	9840
	47 Perylene	252	20.130	20.130	(1.003)	349791	168.256	8410
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	376360	179.235	8960

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012208.D
Lab Smp Id: APR4LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: APR4LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	360526	9.95
11 Acenaphthene-d10	239179	119590	478358	257556	7.68
18 Phenanthrene-d10	372253	186127	744506	412183	10.73
29 Chrysene-d12	294711	147356	589422	314530	6.72
35 Perylene-d12	260595	130298	521190	306666	17.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.15
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: APR4LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PEMDTISS.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

Client SDG: APR4
Fraction: SV
Client Smp ID: APR4LCSS1
Operator: JW
SampleType: LCS
Quant Type: ISTD

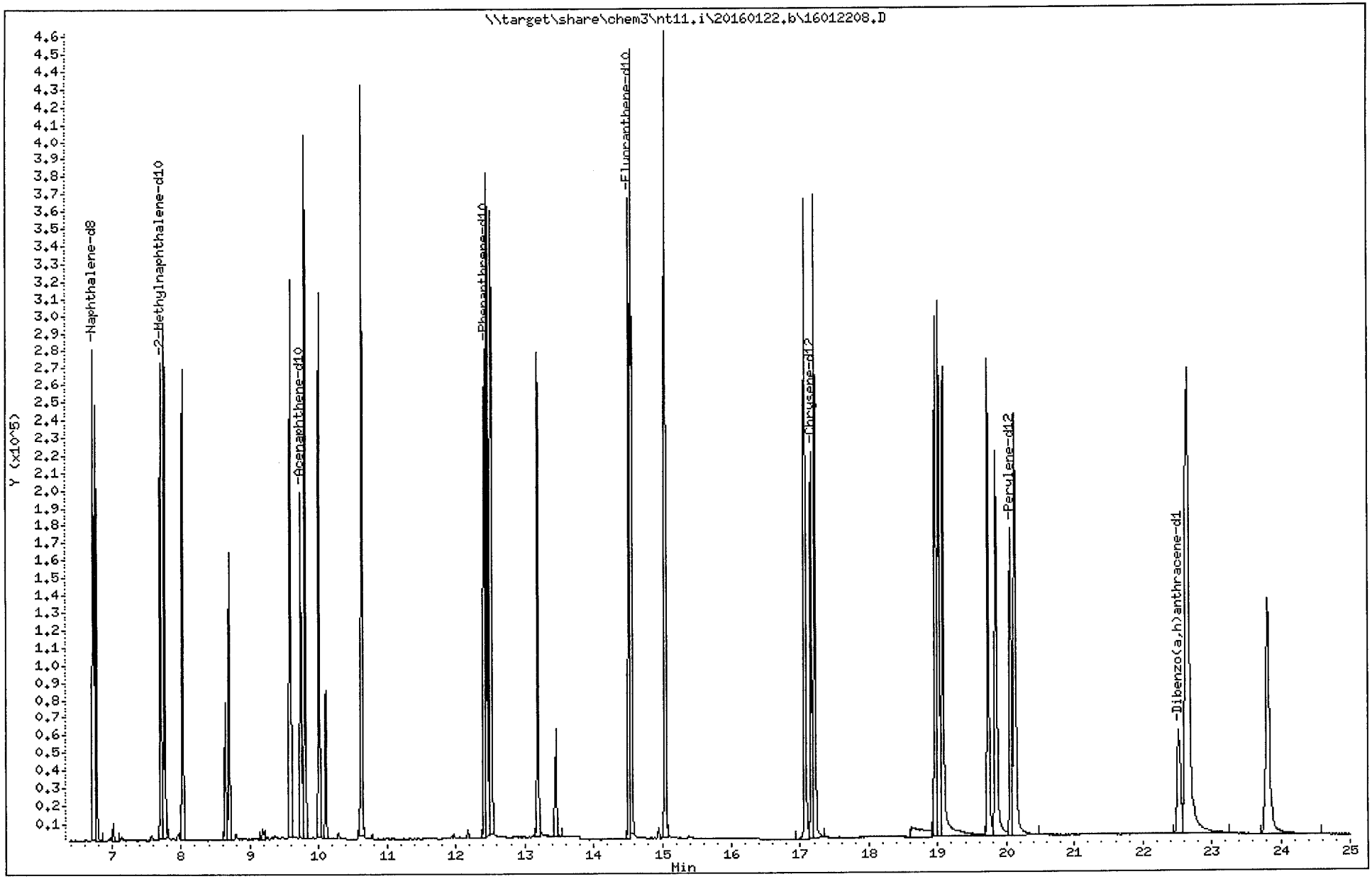
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
5	Naphthalene	15000	7680	51.21	30-160
7	2-Methylnaphthalen	15000	7960	53.06	30-160
10	Acenaphthylene	15000	7380	49.19	30-160
12	Acenaphthene	15000	7760	51.75	30-160
15	Fluorene	15000	8690	57.90	30-160
19	Phenanthrene	15000	8550	57.01	30-160
20	Anthracene	15000	8470	56.46	30-160
24	Fluoranthene	15000	9450	63.00	30-160
25	Pyrene	15000	9670	64.47	30-160
28	Benzo(a)anthracene	15000	9990	66.61	30-160
30	Chrysene	15000	9350	62.30	30-160
44	Benzo(b)fluoranthe	15000	9320	62.15	30-160
45	Benzo(k)fluoranthe	15000	8440	56.27	30-160
34	Benzo(a)pyrene	15000	8440	56.25	30-160
37	Indeno(1,2,3-cd)py	15000	9880	65.88	30-160
38	Dibenzo(a,h)anthra	15000	10200	67.81	30-160
39	Benzo(g,h,i)peryle	15000	9840	65.59	30-160
47	Perylene	15000	8410	56.09	30-160
48	Benzo(e)pyrene	15000	8960	59.75	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6	2-Methylnaphthalen	15000	7180	47.86	30-160
$ 23	Fluoranthene-d10	15000	9210	61.37	30-160
$ 36	Dibenzo(a,h)anthra	15000	9640	64.26	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012208.D
Date : 22-JAN-2016 10:57
Client ID: APR4LCSS1
Sample Info: APR4LCSS1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012208.D

Lab ID: APR4LCSS1
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 10:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012219.D
Lab Smp Id: AUA2A Client Smp ID: 13EB_ME-MTW01Z
Inj Date : 22-JAN-2016 16:30 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : AUA2A
Misc Info : 16-418
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

TJ 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.733	6.744	(1.000)	373510	200.000	
	5 Naphthalene	128	6.765	6.776	(1.005)	47005	21.7872	1090
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	189611	136.767	6840
	7 2-Methylnaphthalene	142	7.774	7.774	(1.154)	42302	28.5364	1430
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	20769	15.5466	777
	10 Acenaphthylene	152	9.589	9.589	(0.984)	37306	17.1845	859
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	268987	200.000	
	12 Acenaphthene	153	9.800	9.811	(1.006)	133018	92.3159	4620
	14 Dibenzofuran	168	10.010	10.010	(1.027)	162606	74.9116	3750
	15 Fluorene	166	10.630	10.630	(1.091)	216602	133.055	6650
*	18 Phenanthrene-d10	188	12.423	12.424	(1.000)	440845	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	1597538	601.479	30100
	20 Anthracene	178	12.523	12.523	(1.008)	406221	170.867	8540
$	23 Fluoranthene-d10	212	14.518	14.518	(1.169)	381077	157.186	7860
	24 Fluoranthene	202	14.557	14.557	(1.172)	2810826	1054.08	52700 E
	25 Pyrene	202	15.056	15.057	(0.877)	1782049	668.894	33400
	28 Benzo(a)anthracene	228	17.075	17.075	(0.995)	674278	300.621	15000
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	336414	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	837700	340.291	17000
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	555143	241.644	12100
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	380680	142.198	7110 Q

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	310111	127.164	6360
34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	257740	116.248	5810
* 35 Perylene-d12	264	20.062	20.062	(1.000)	339083	200.000	
$ 36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	229823	167.926	8400
37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	77754	33.4002	1670
38 Dibenzo(a,h)anthracene	278	22.639	22.651	(1.128)	18841	10.2348	512
39 Benzo(g,h,i)perylene	276	23.813	23.814	(1.187)	93358	46.1960	2310
47 Perylene	252	20.130	20.130	(1.003)	129641	56.3982	2820
48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	412934	177.852	8890

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012219.D
Lab Smp Id: AUA2A
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-418

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: 13EB_ME-MTW01Z
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	373510	13.91
11 Acenaphthene-d10	239179	119590	478358	268987	12.46
18 Phenanthrene-d10	372253	186127	744506	440845	18.43
29 Chrysene-d12	294711	147356	589422	336414	14.15
35 Perylene-d12	260595	130298	521190	339083	30.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.16
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	-0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	-0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	-0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	-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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Client SDG: AUA2
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: AUA2A
Client Smp ID: 13EB_ME-MTW01Z
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-418

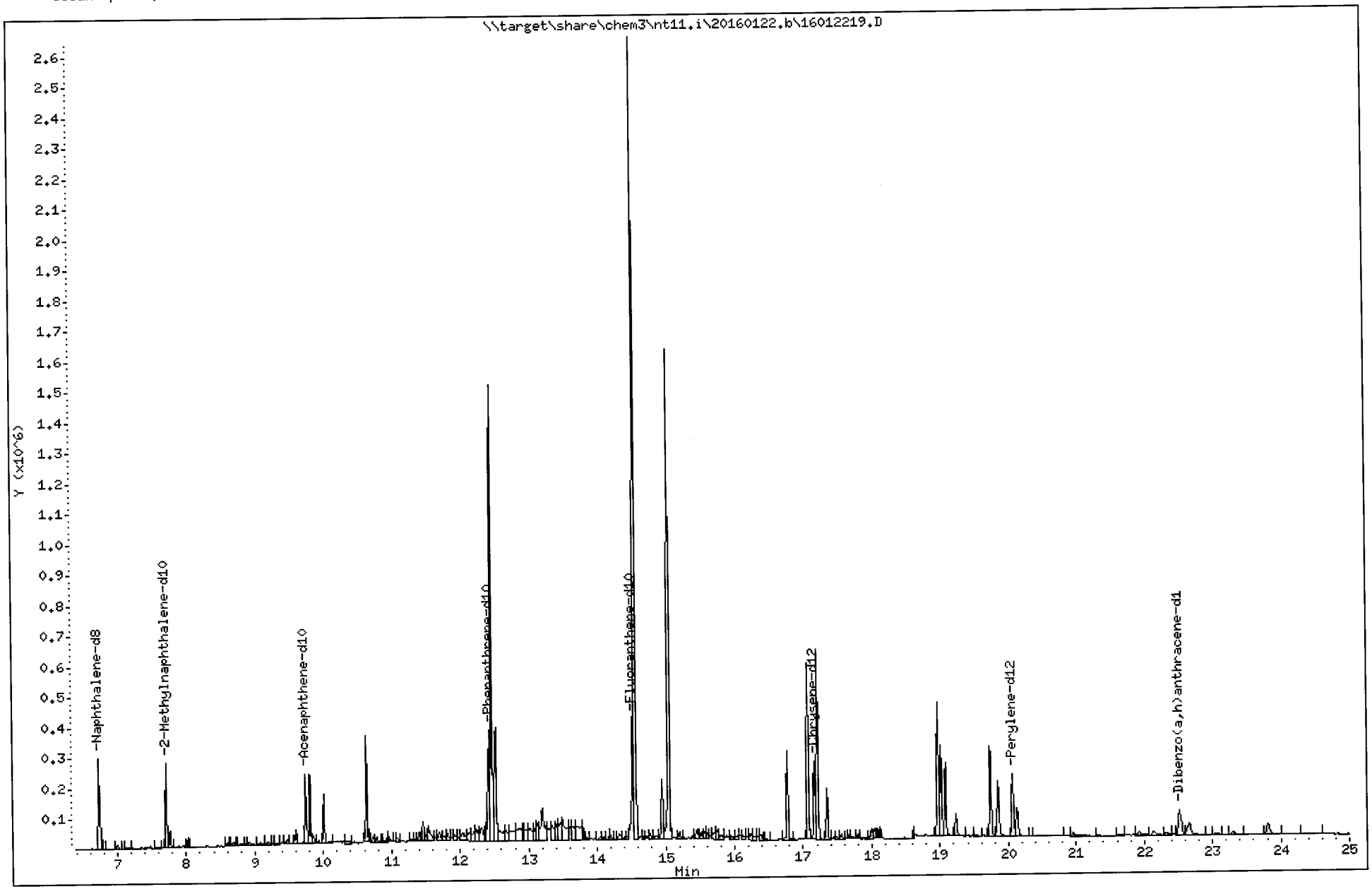
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	6840	45.59	30-160
$ 23 Fluoranthene-d10	15000	7860	52.40	30-160
$ 36 Dibenzo(a,h)anthra	15000	8400	55.98	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D
Date : 22-JAN-2016 16:30
Client ID: 13EB_ME-MTW01Z
Sample Info: AUA2A
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

AUA2:08231



Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

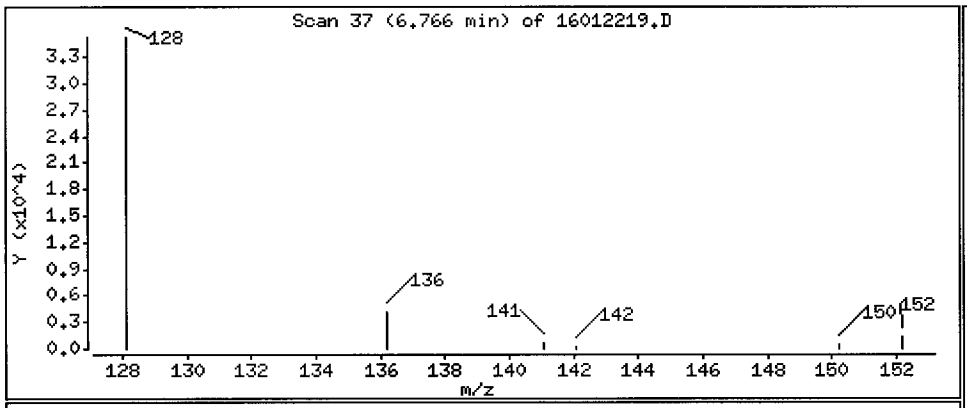
Operator: JW

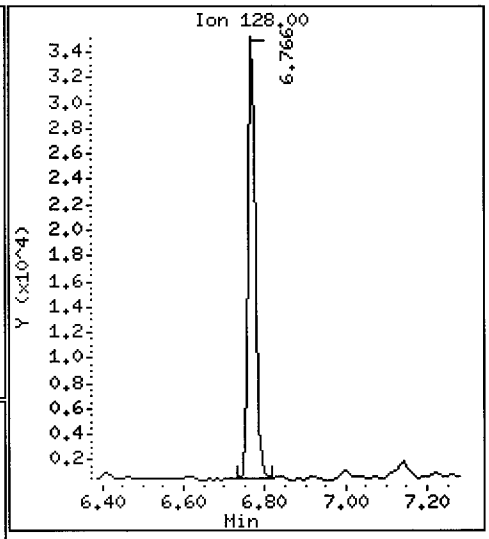
Column phase: Rxi-17Sil MS

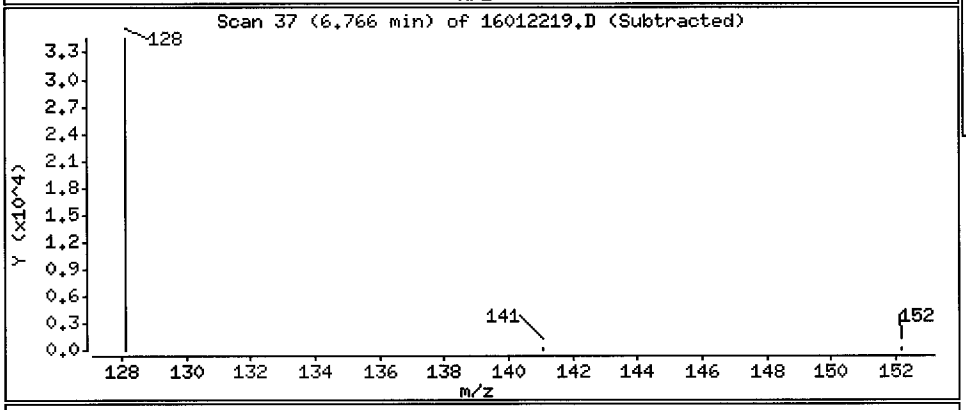
Column diameter: 0.25

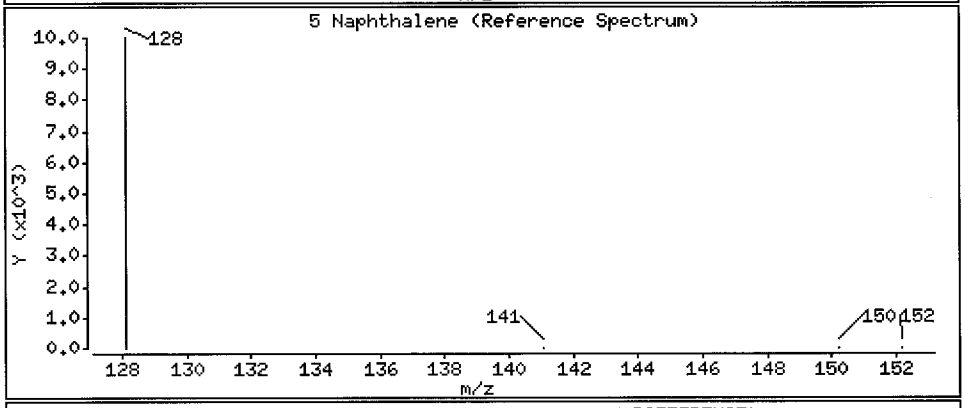
5 Naphthalene

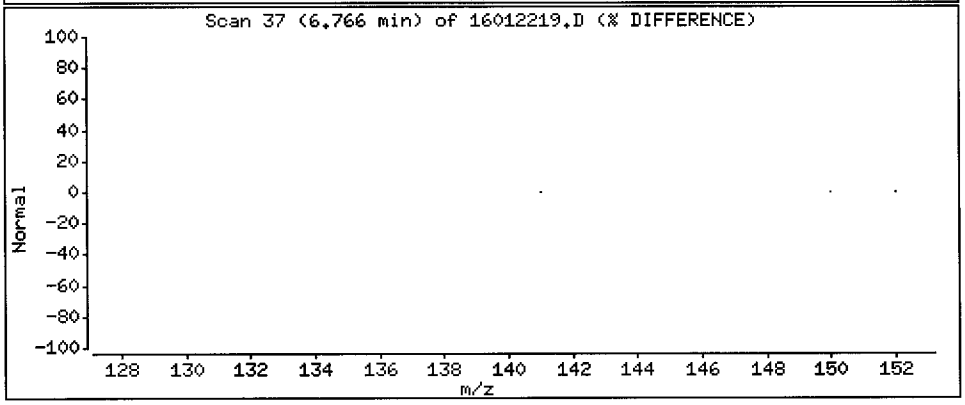
Concentration: 1090 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

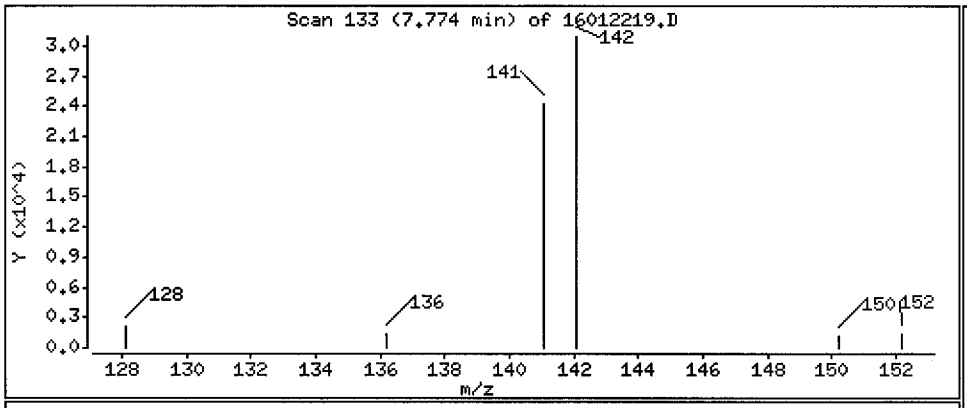
Operator: JW

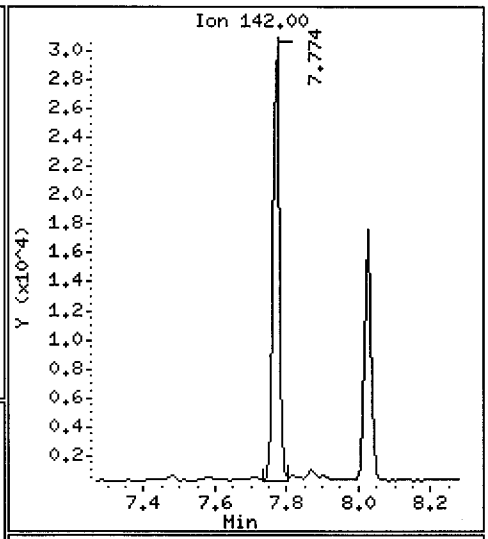
Column phase: Rxi-17Sil MS

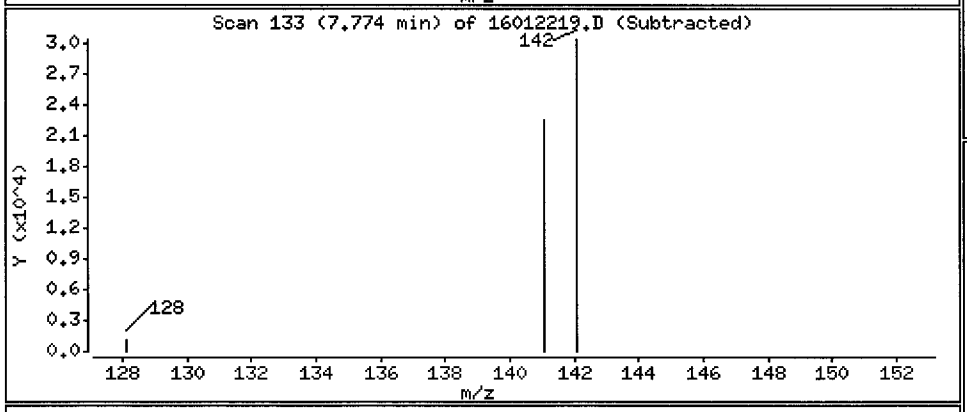
Column diameter: 0.25

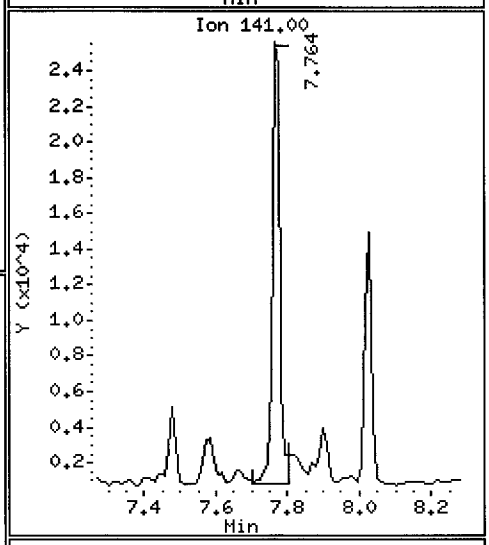
7 2-Methylnaphthalene

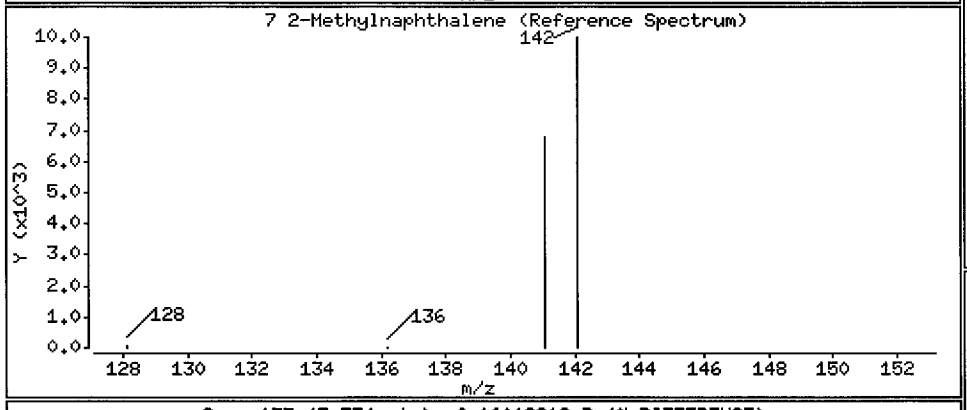
Concentration: 1430 ug/kg

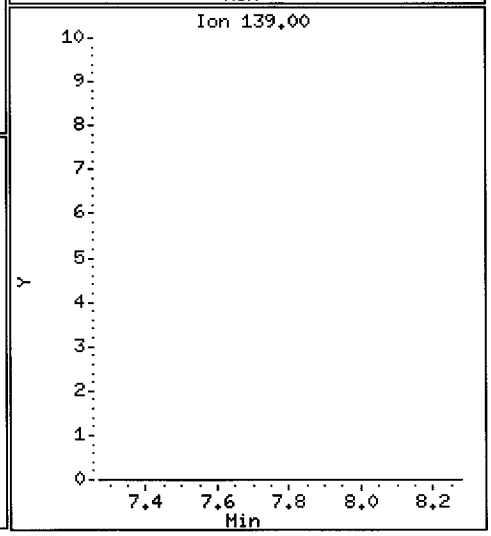


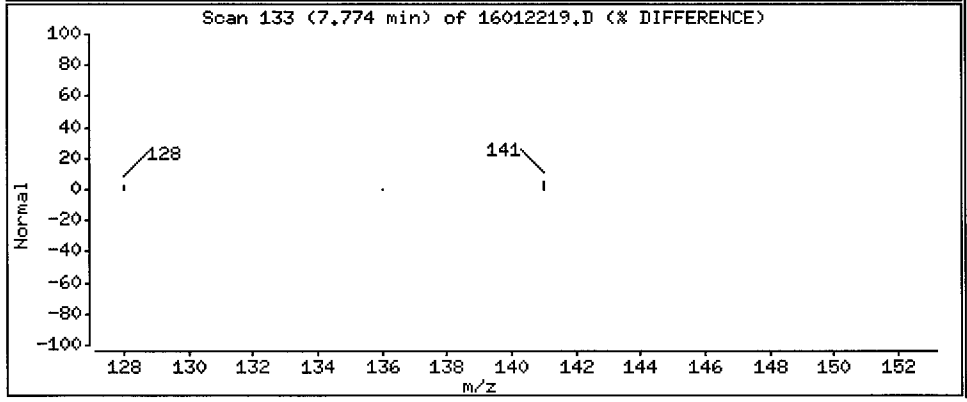












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

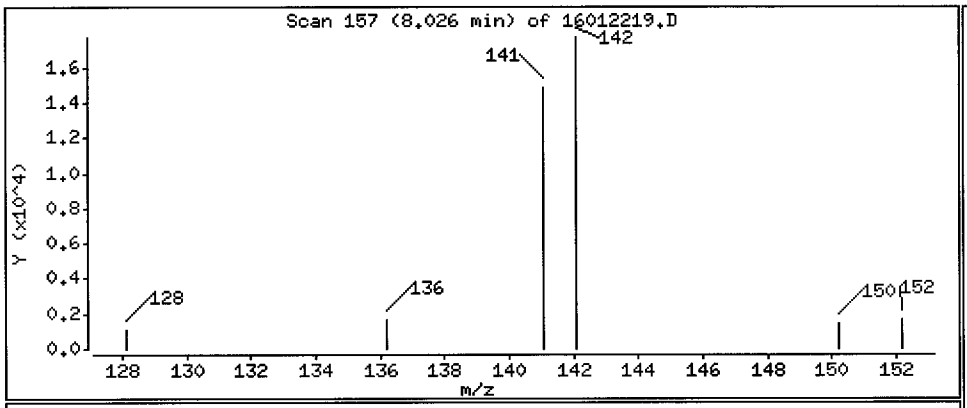
Operator: JW

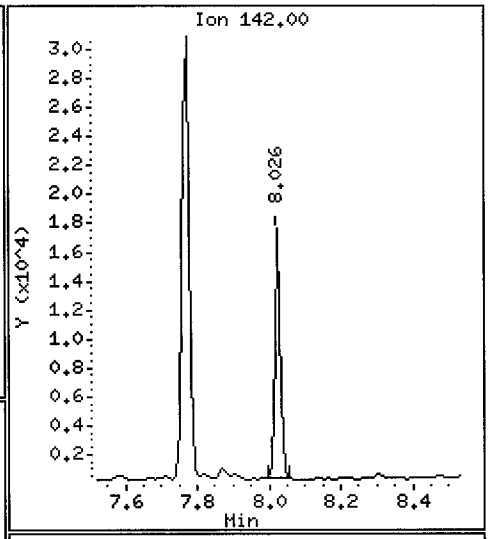
Column phase: Rxi-17Sil MS

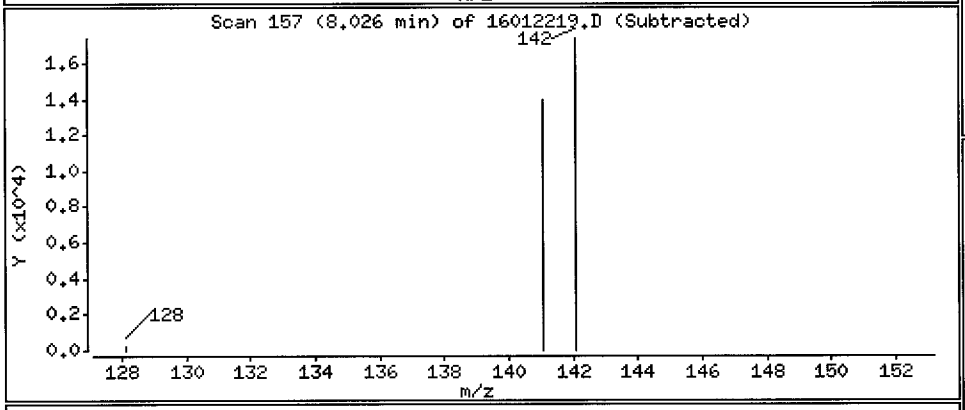
Column diameter: 0.25

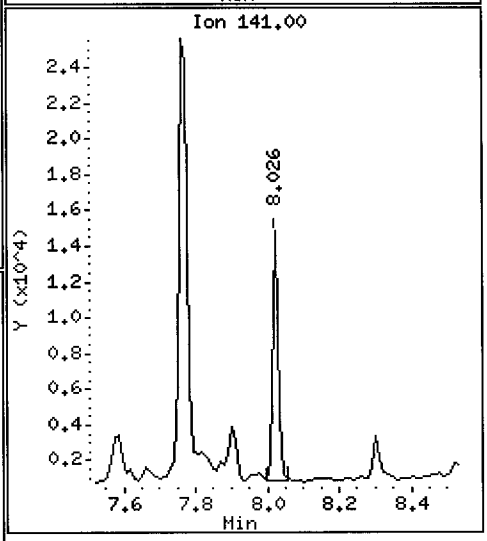
8 1-Methylnaphthalene

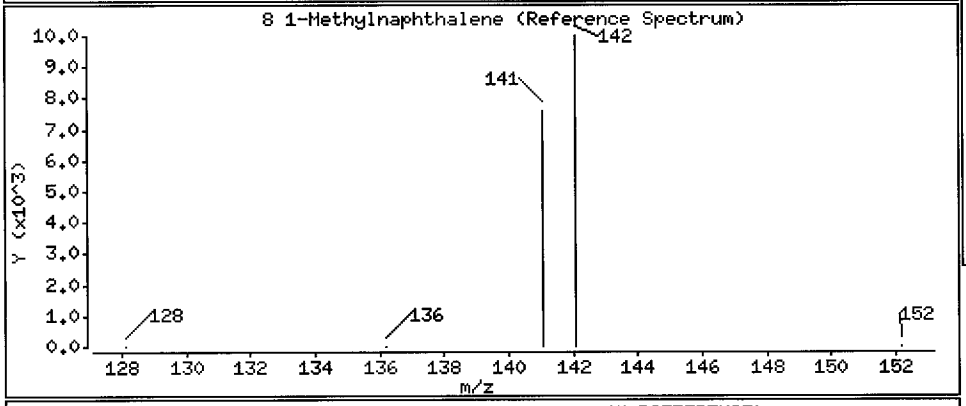
Concentration: 777 ug/kg

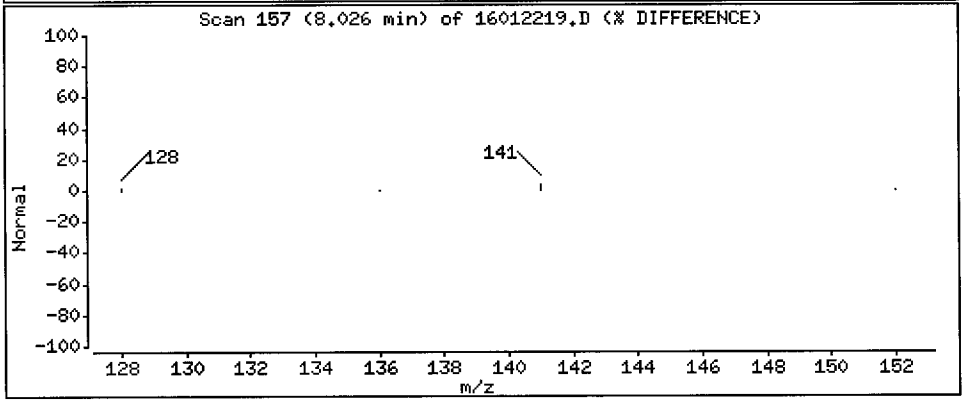












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

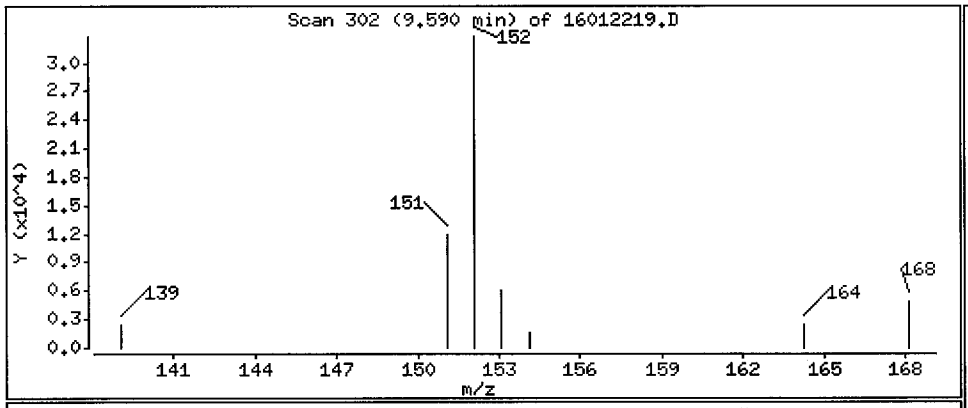
Operator: JW

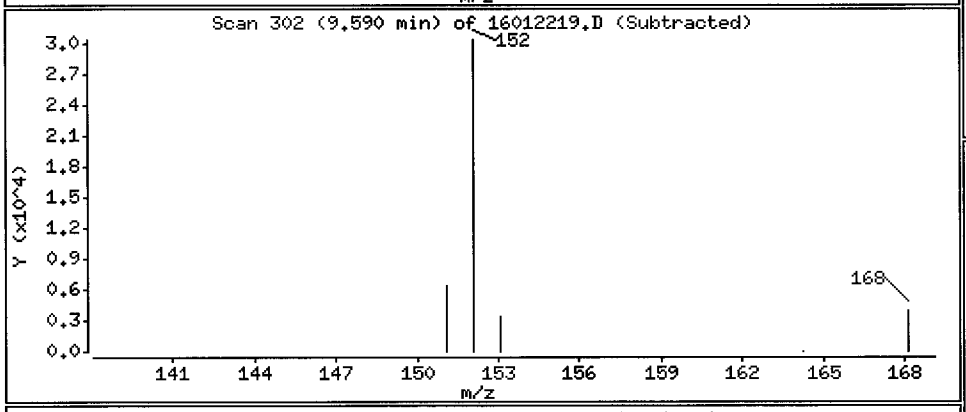
Column phase: Rxi-17Sil MS

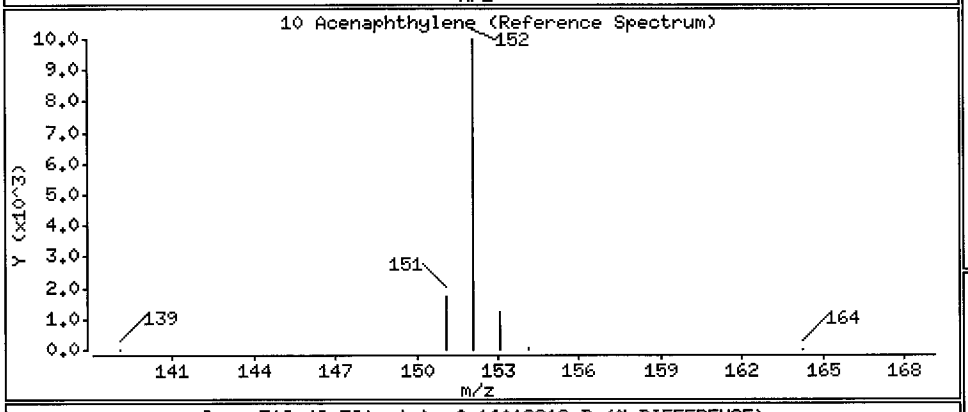
Column diameter: 0.25

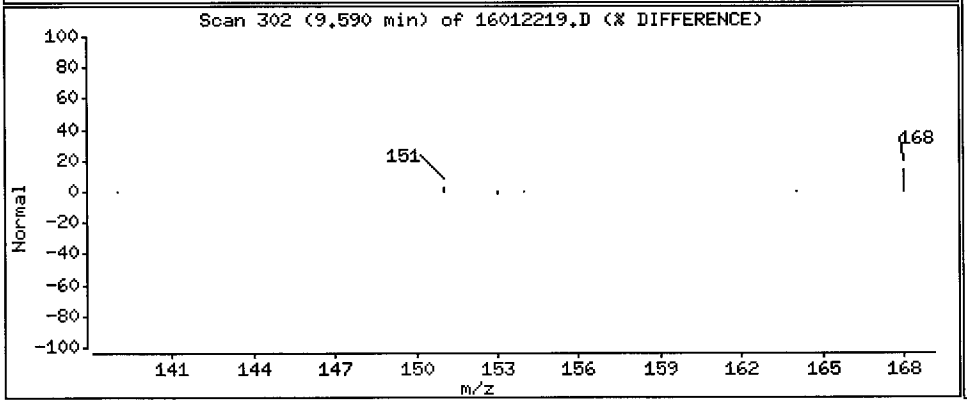
10 Acenaphthylene

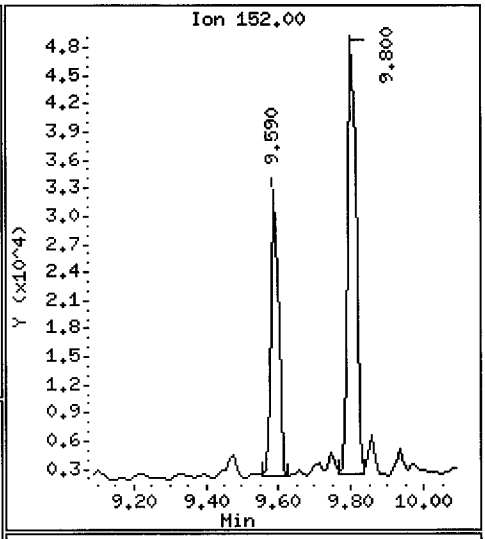
Concentration: 859 ug/kg

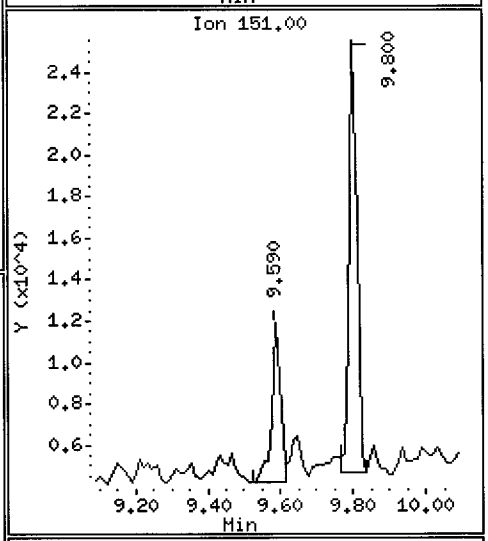


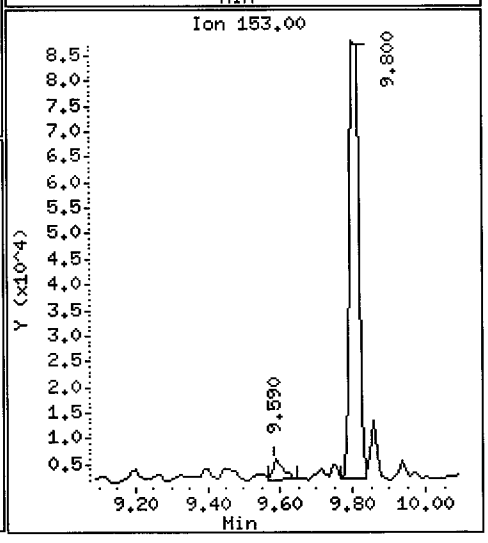












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

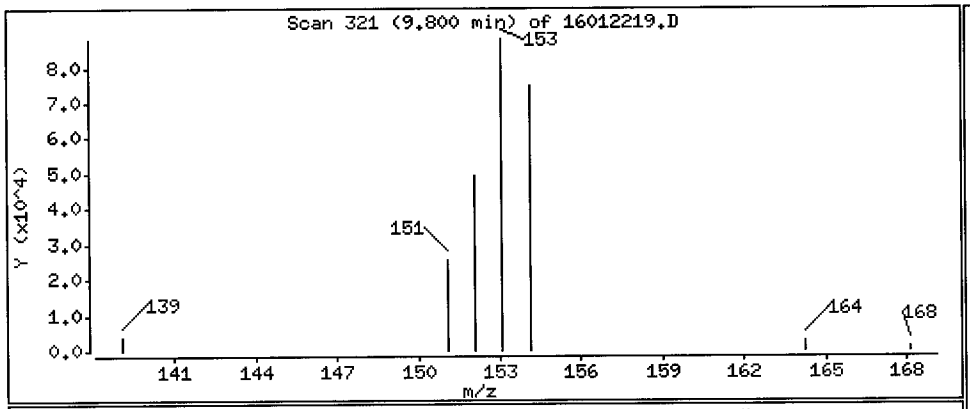
Operator: JW

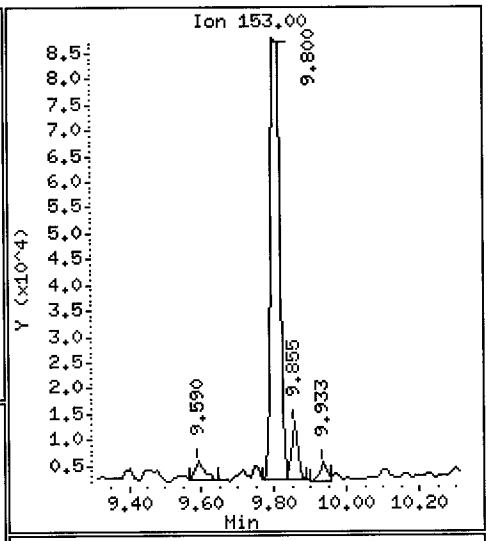
Column phase: Rxi-17Sil MS

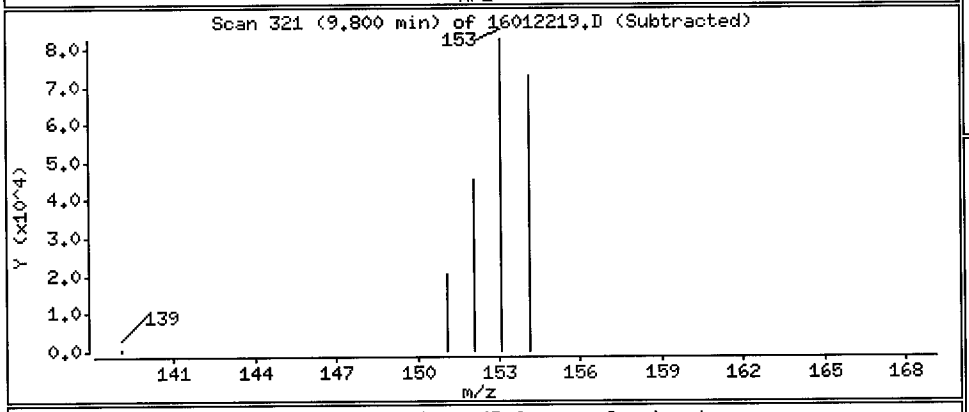
Column diameter: 0.25

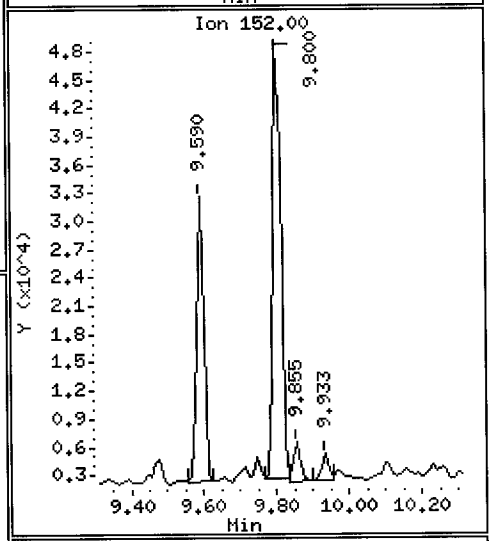
12 Acenaphthene

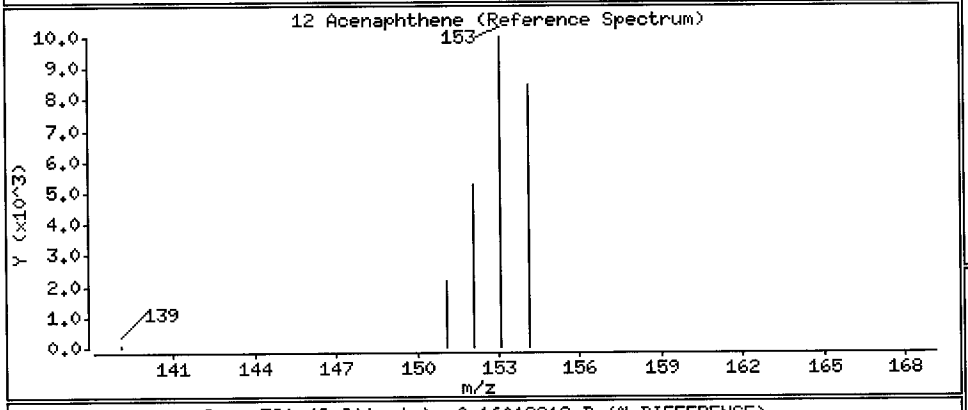
Concentration: 4620 ug/kg

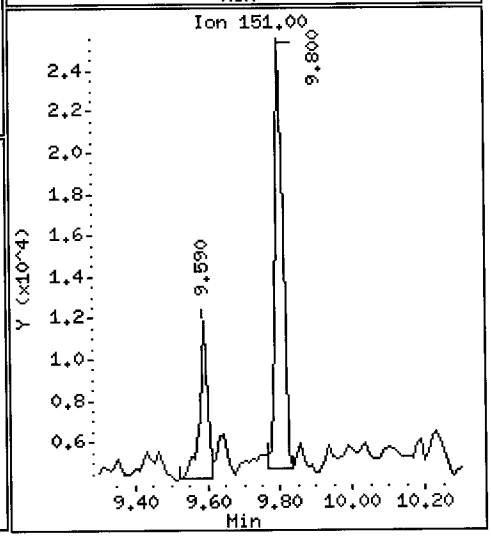


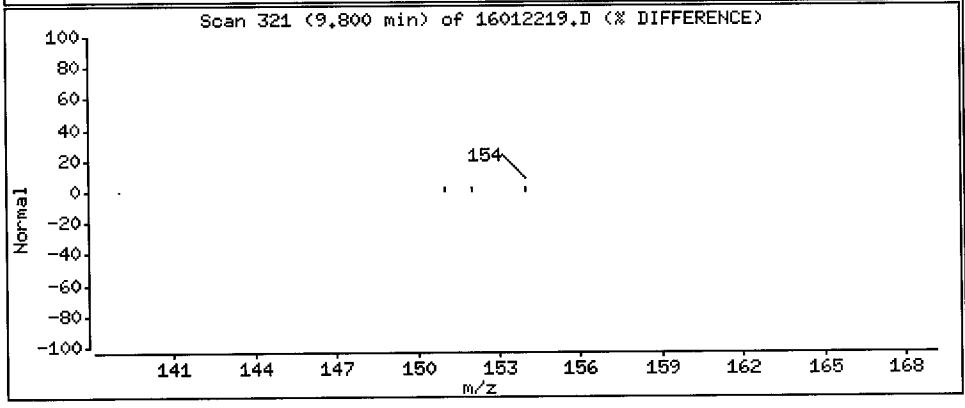












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

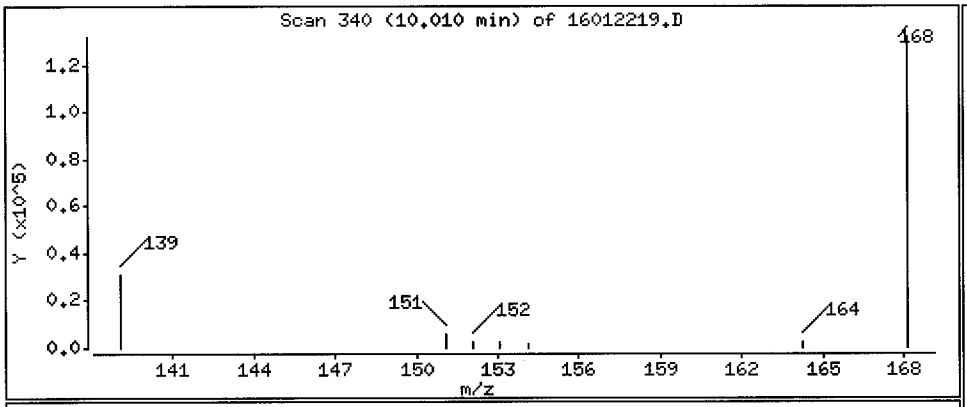
Operator: JW

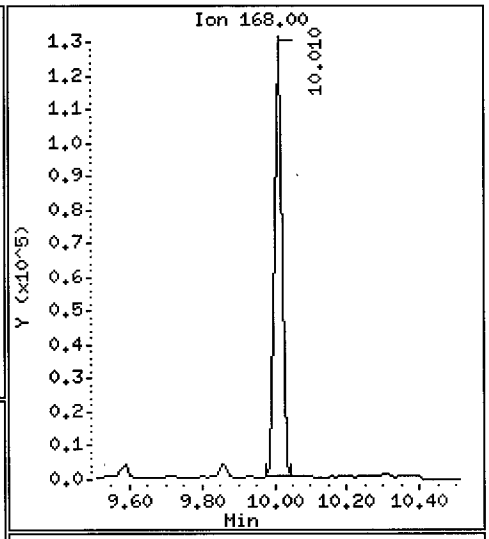
Column phase: Rxi-17Sil MS

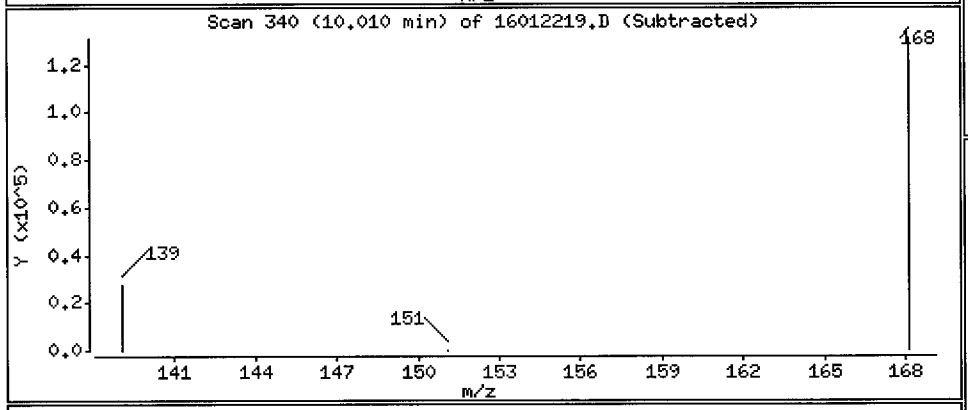
Column diameter: 0.25

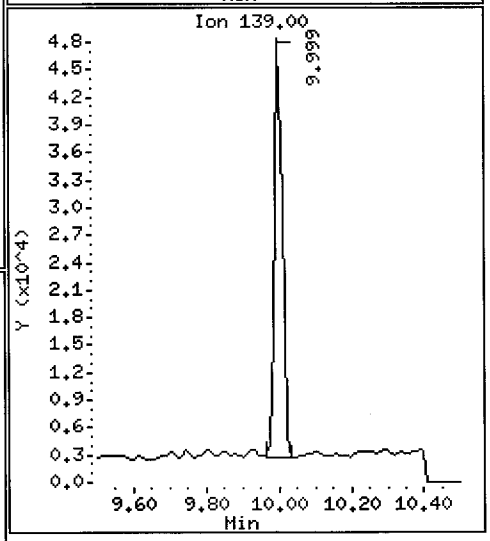
14 Dibenzofuran

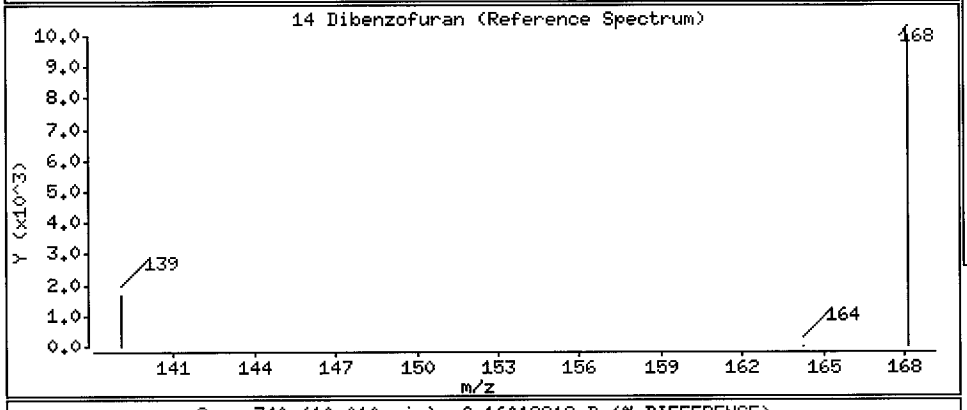
Concentration: 3750 ug/kg

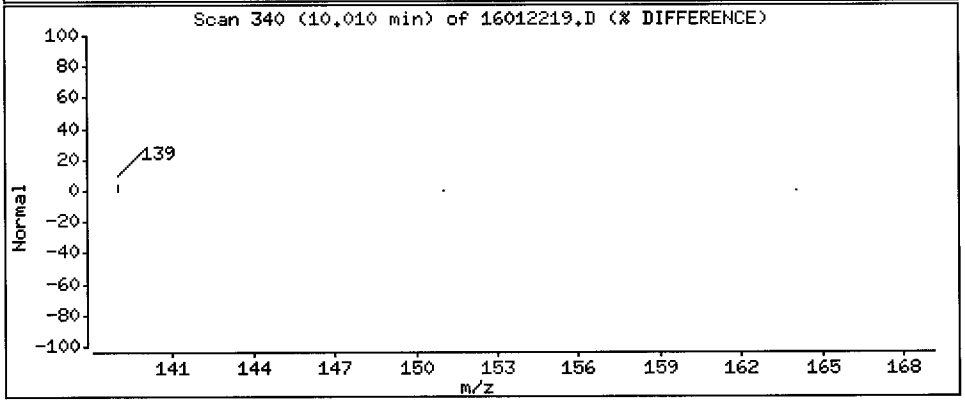












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

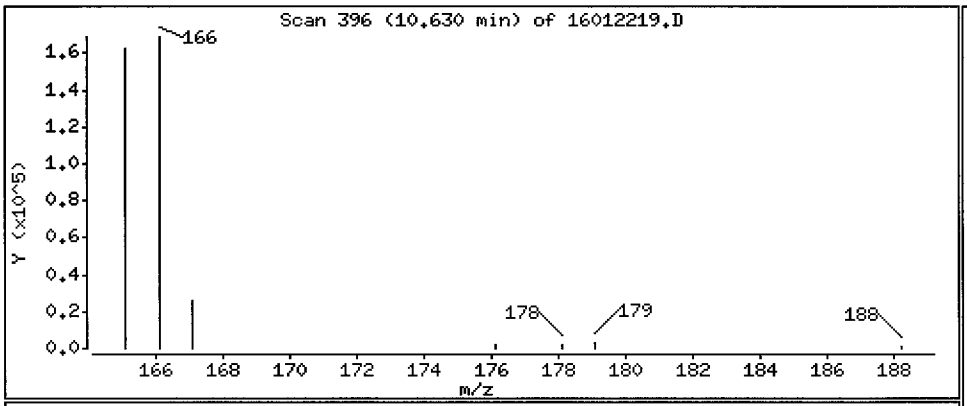
Operator: JW

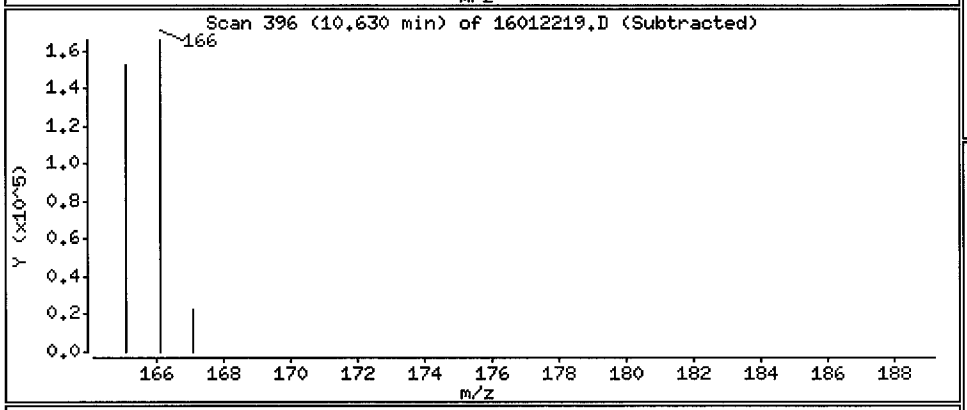
Column phase: Rxi-17Sil MS

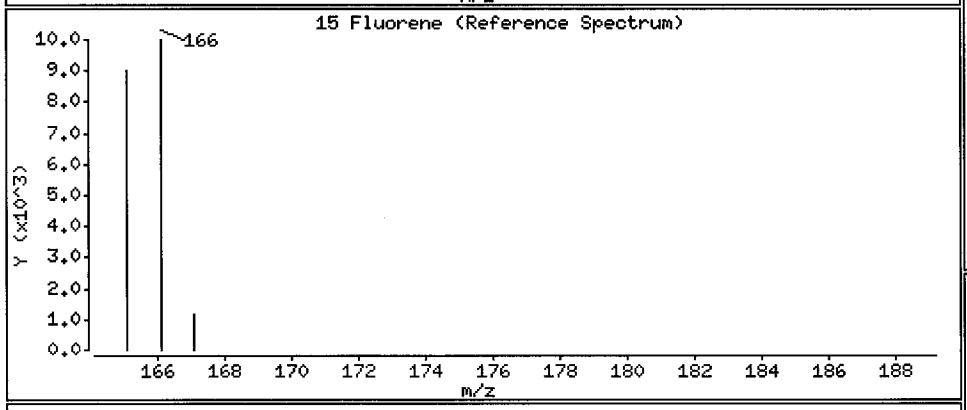
Column diameter: 0.25

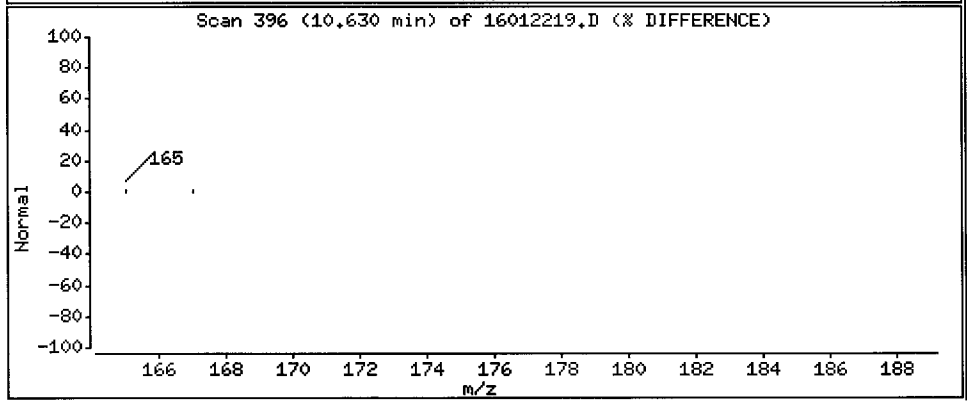
15 Fluorene

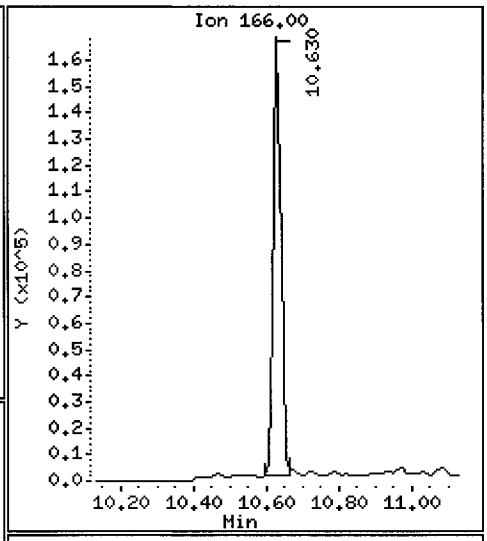
Concentration: 6650 ug/kg

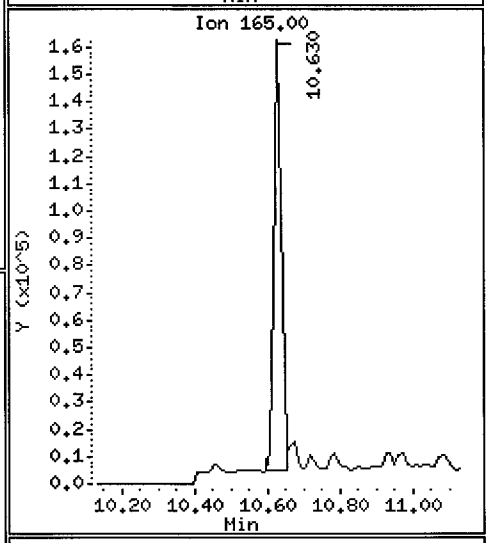


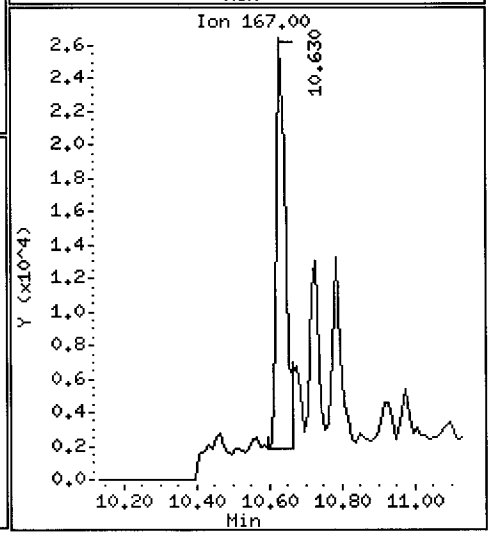












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

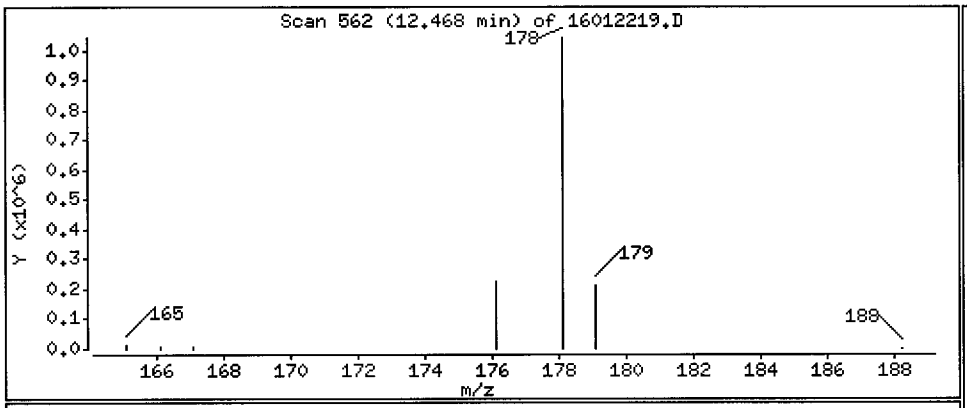
Operator: JW

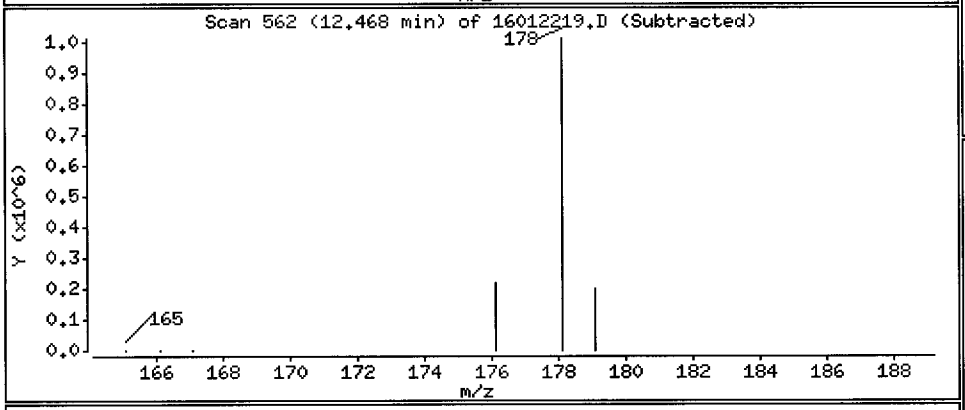
Column phase: Rxi-17Sil MS

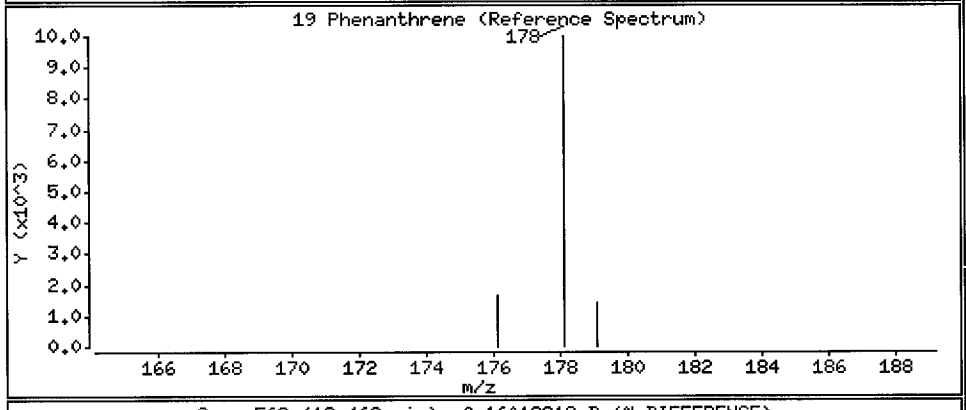
Column diameter: 0.25

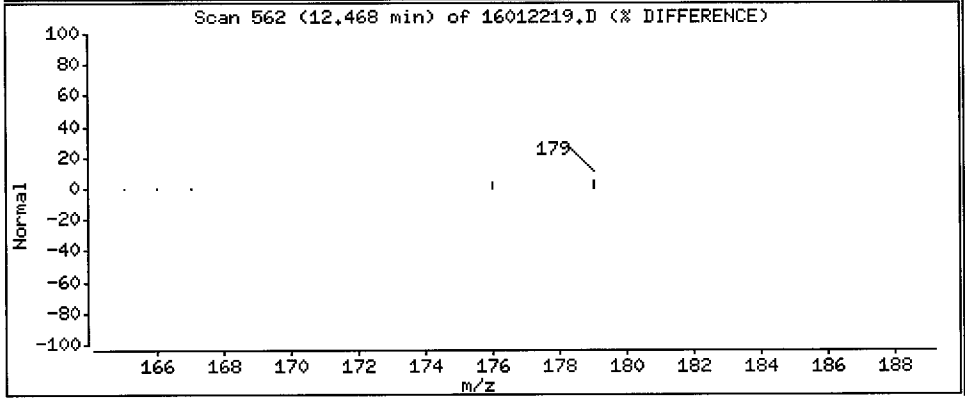
19 Phenanthrene

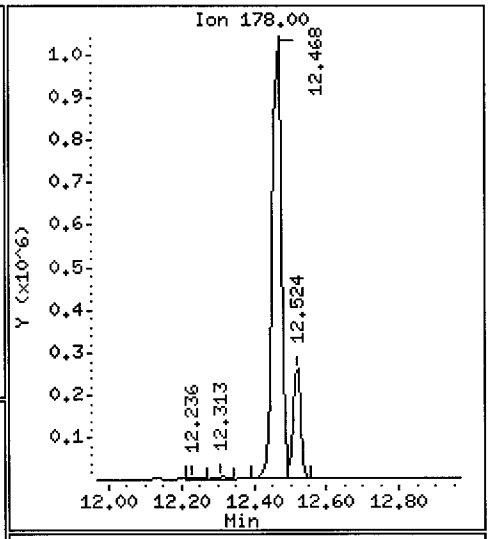
Concentration: 30100 ug/kg

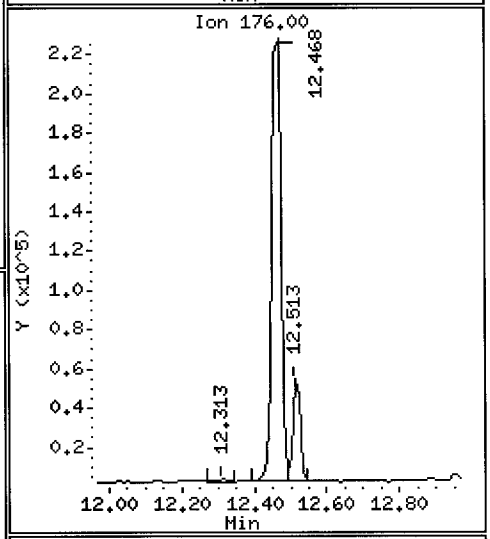


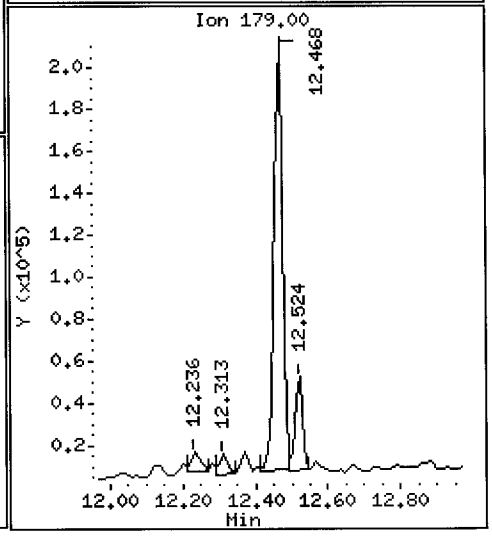












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

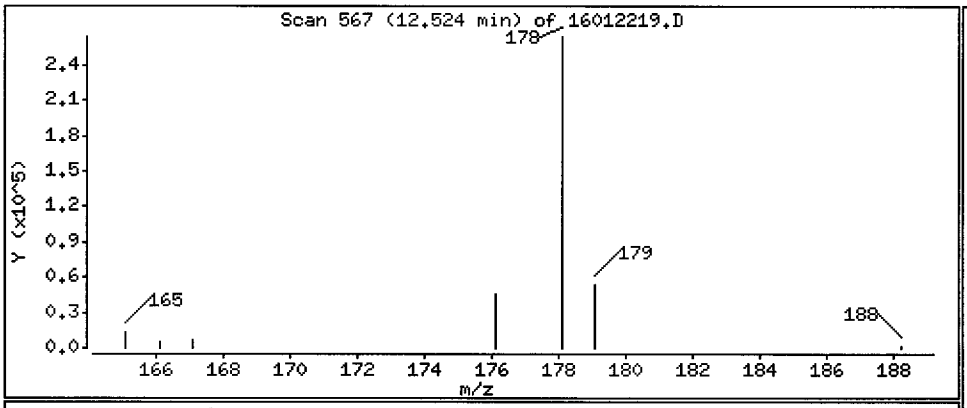
Operator: JW

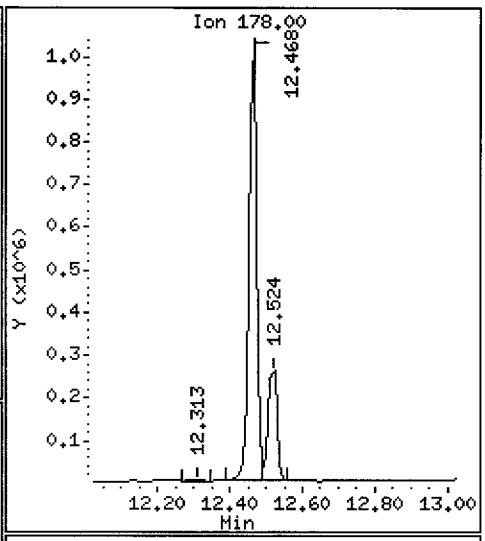
Column phase: Rxi-17Sil MS

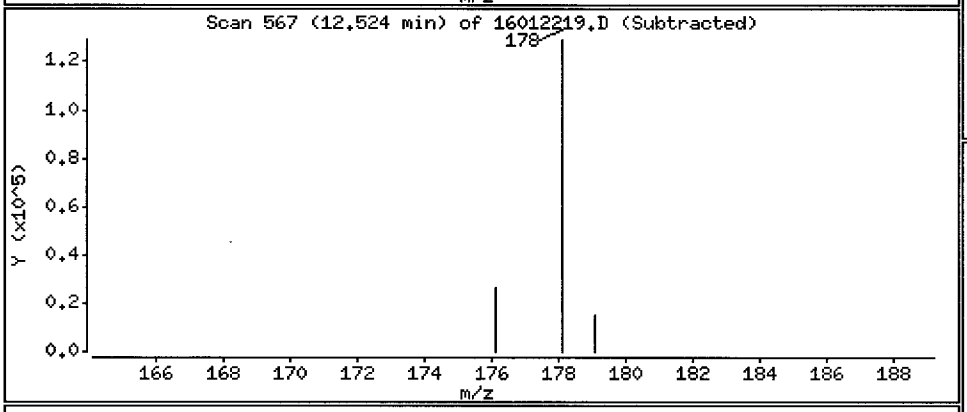
Column diameter: 0.25

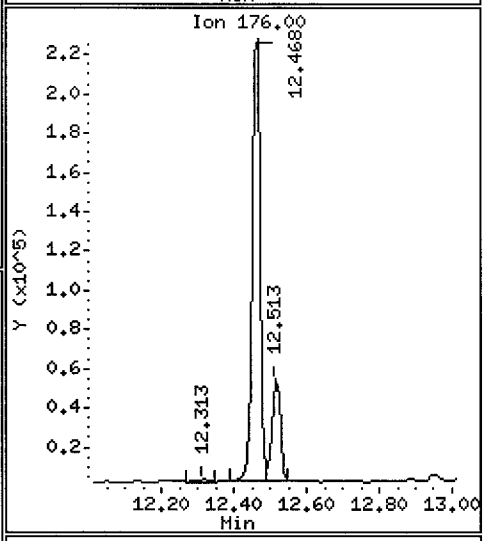
20 Anthracene

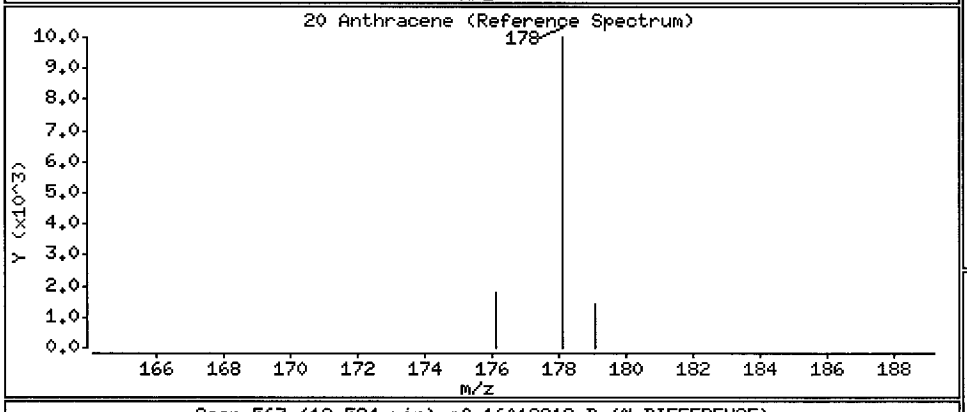
Concentration: 8540 ug/kg

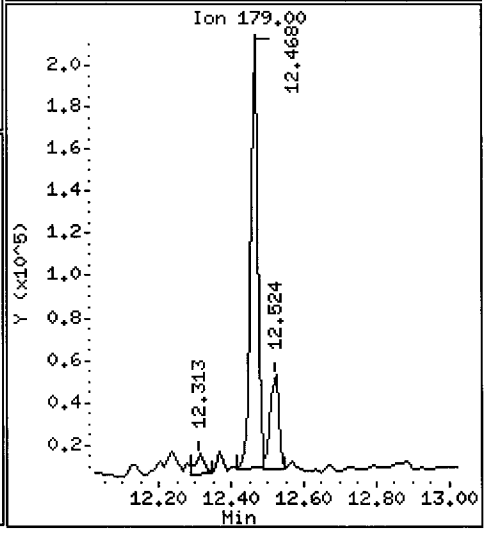


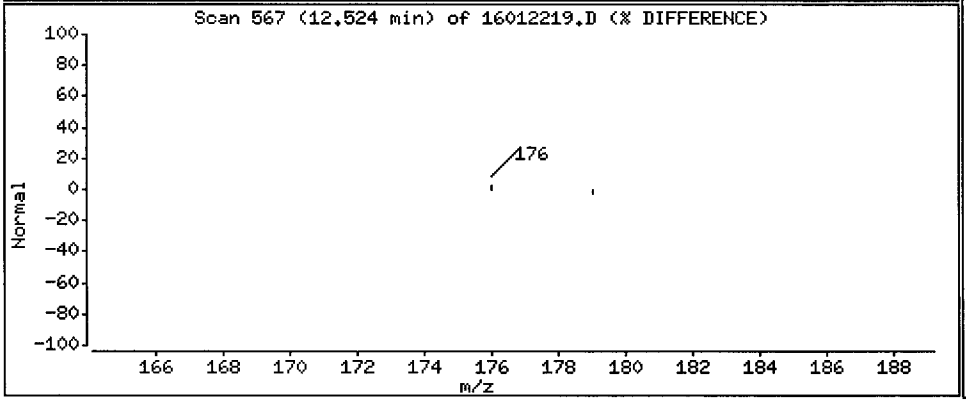












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

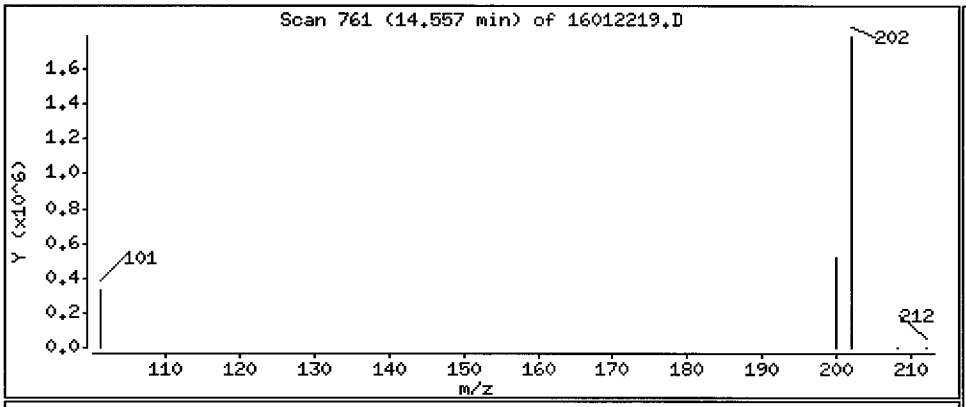
Operator: JW

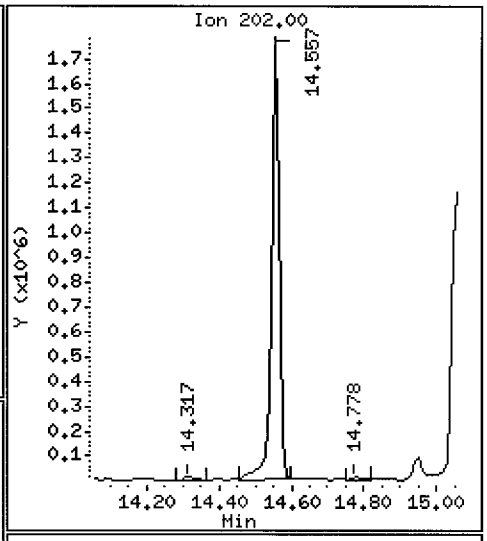
Column phase: Rxi-17Sil MS

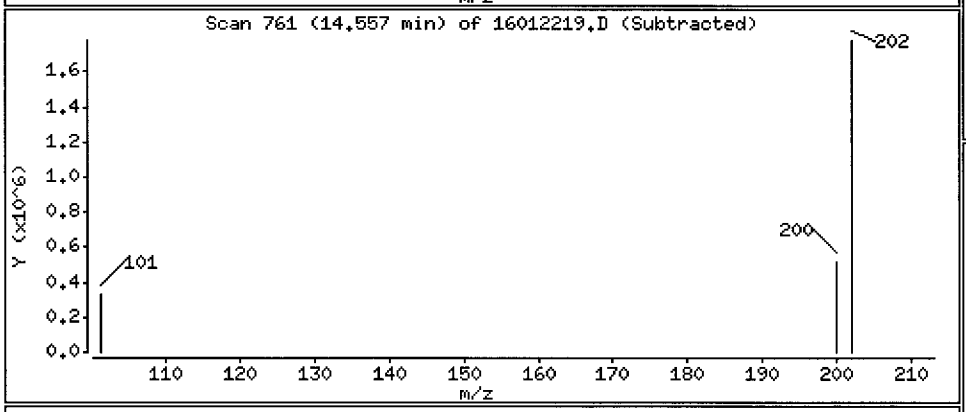
Column diameter: 0.25

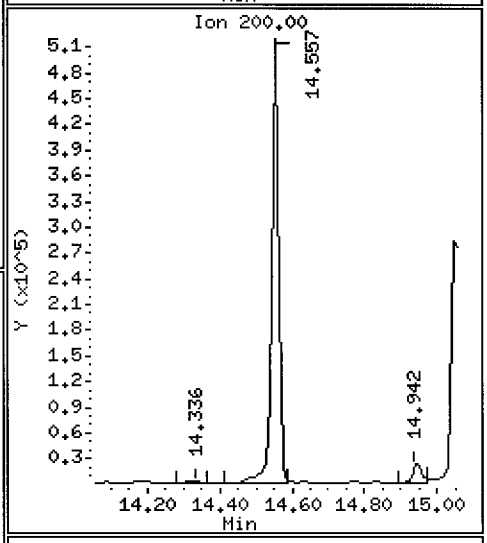
24 Fluoranthene

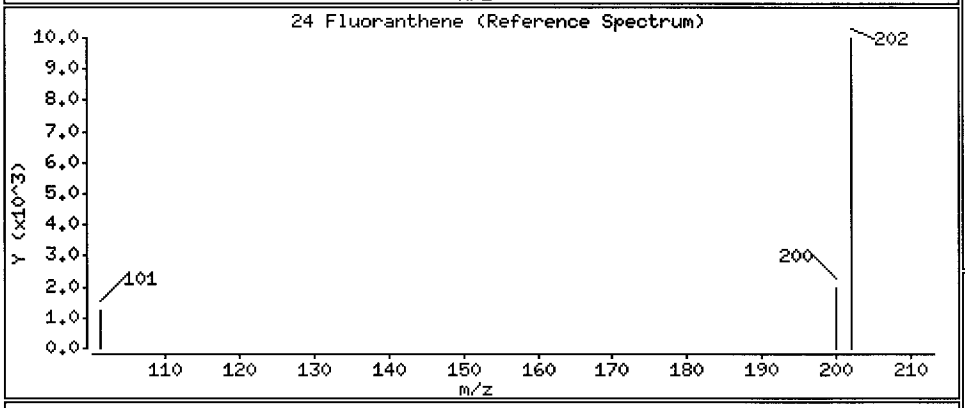
Concentration: 52700 ug/kg

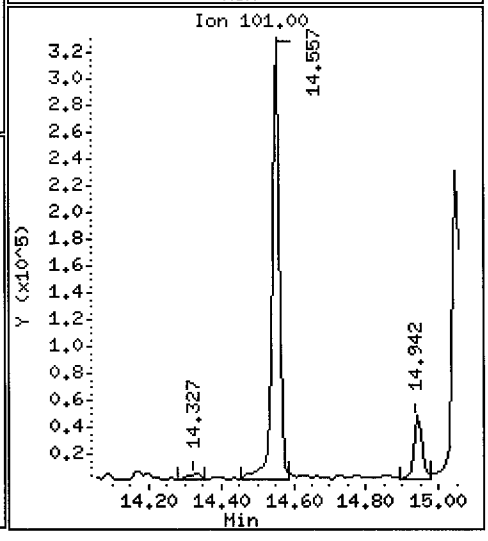


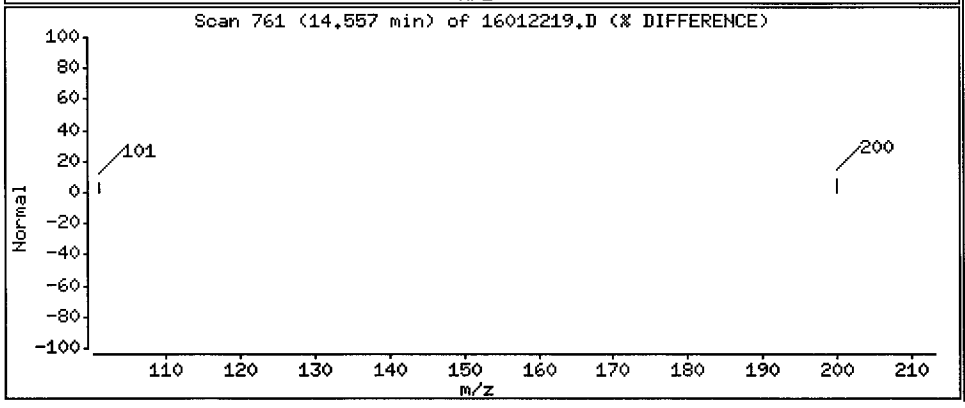












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

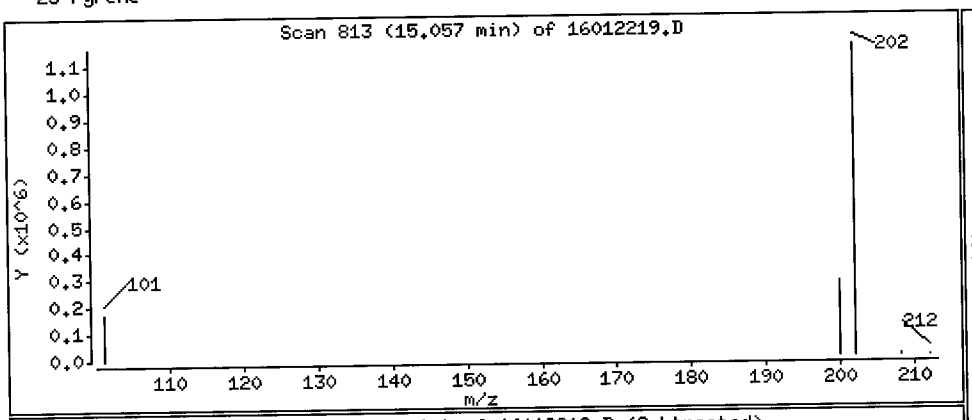
Operator: JW

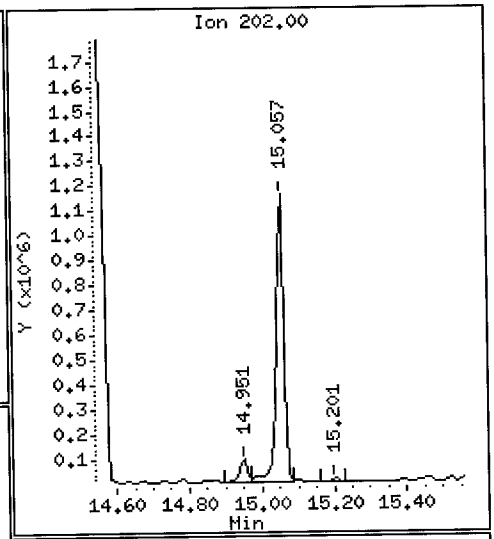
Column phase: Rxi-17Sil MS

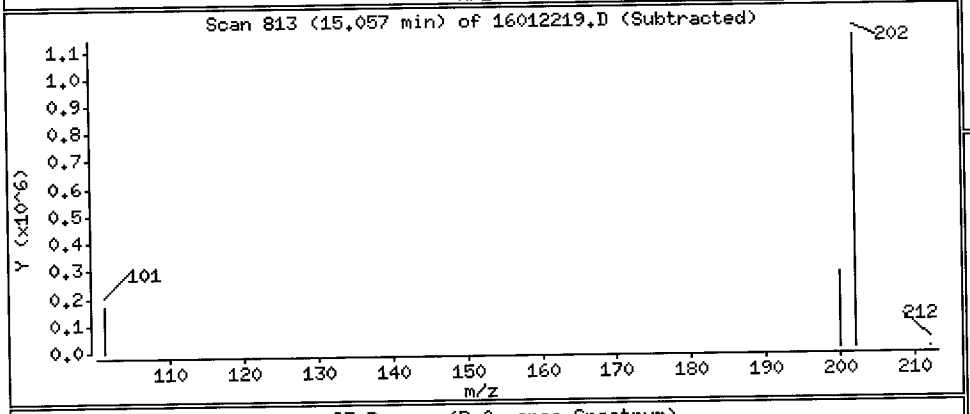
Column diameter: 0.25

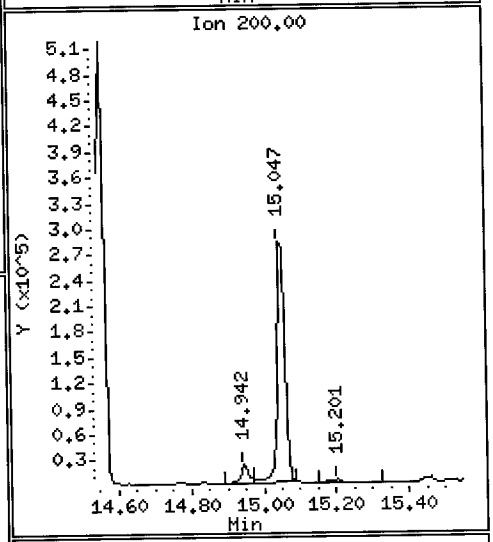
25 Pyrene

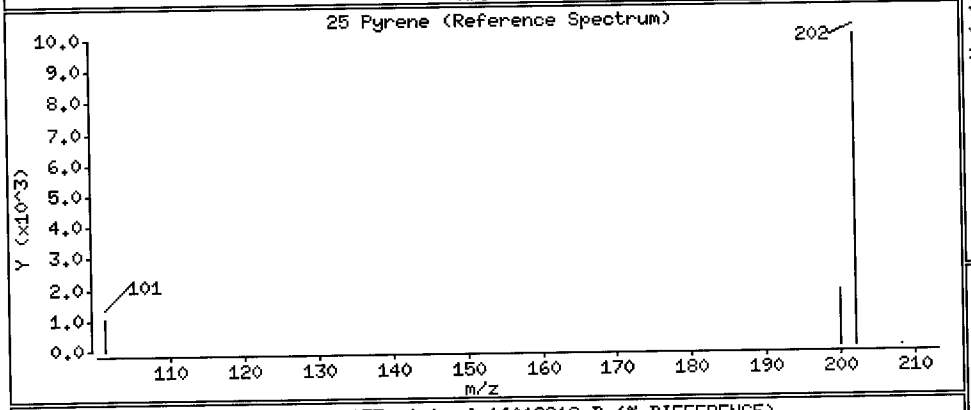
Concentration: 33400 ug/kg

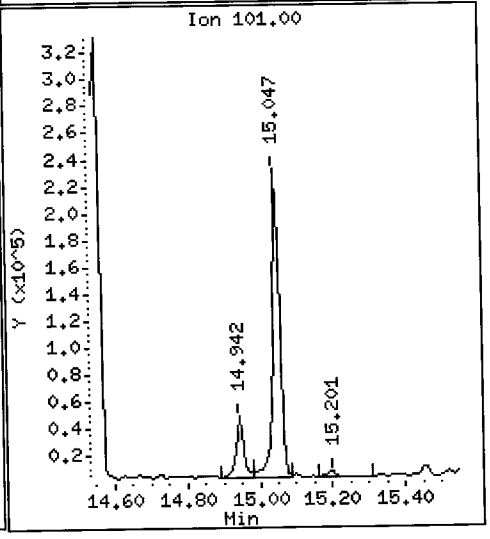


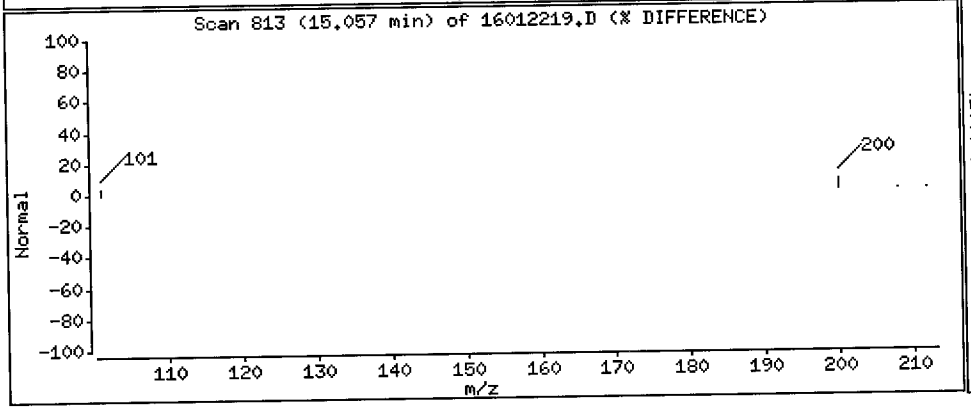












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

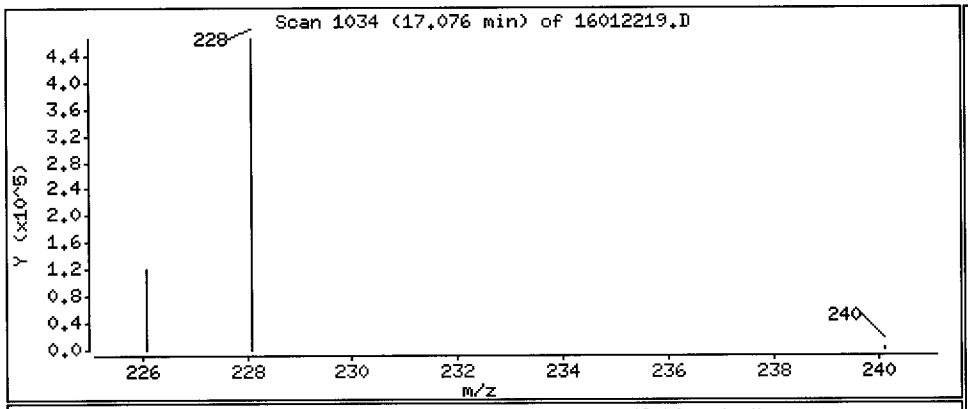
Operator: JW

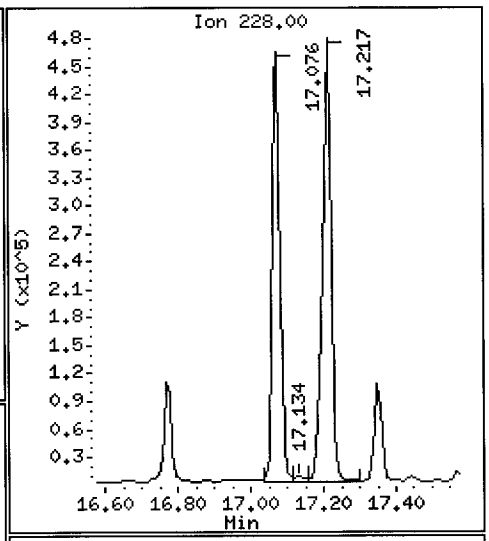
Column phase: Rxi-17Sil MS

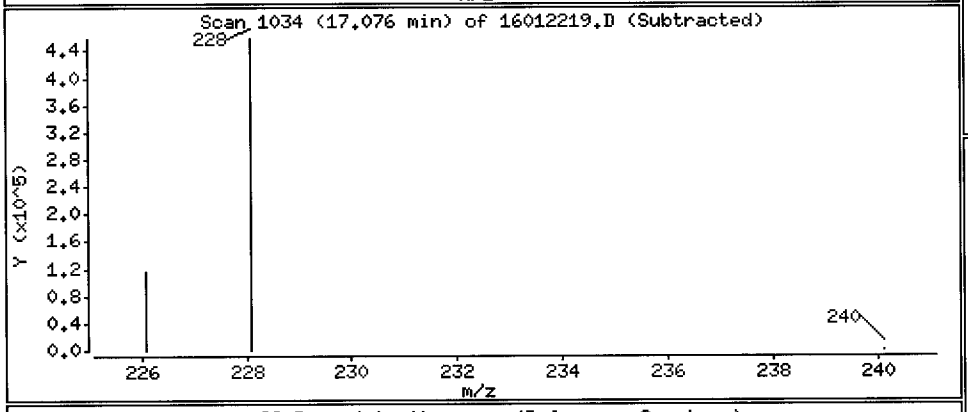
Column diameter: 0.25

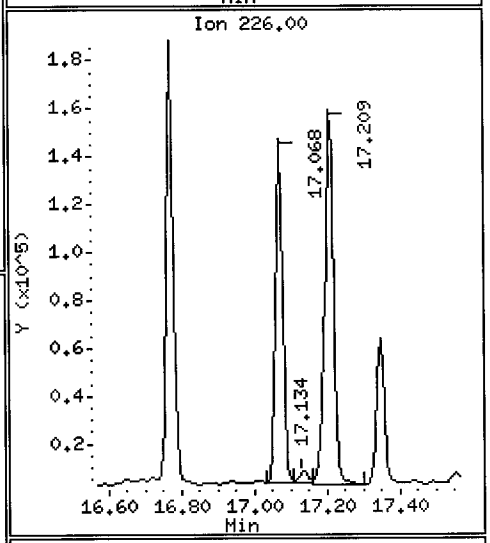
28 Benzo(a)anthracene

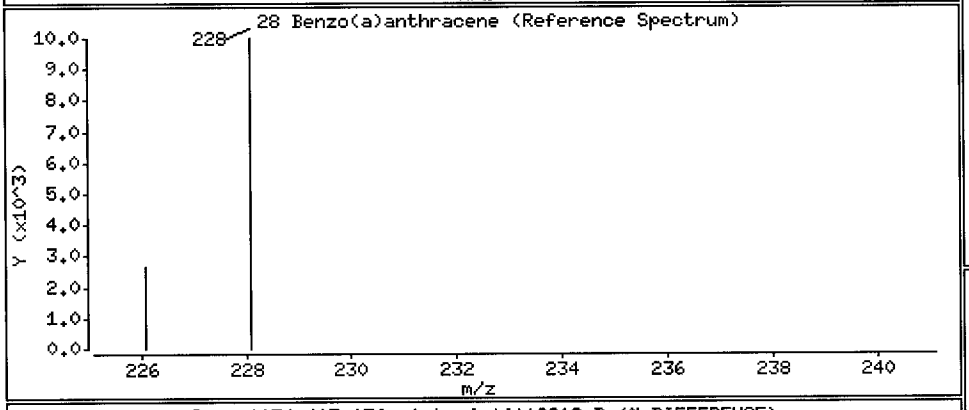
Concentration: 15000 ug/kg

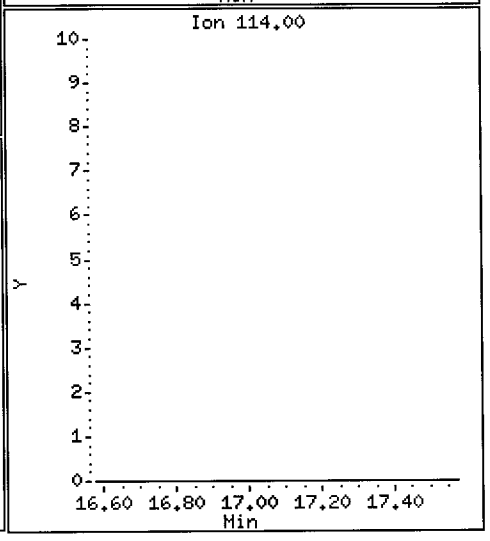


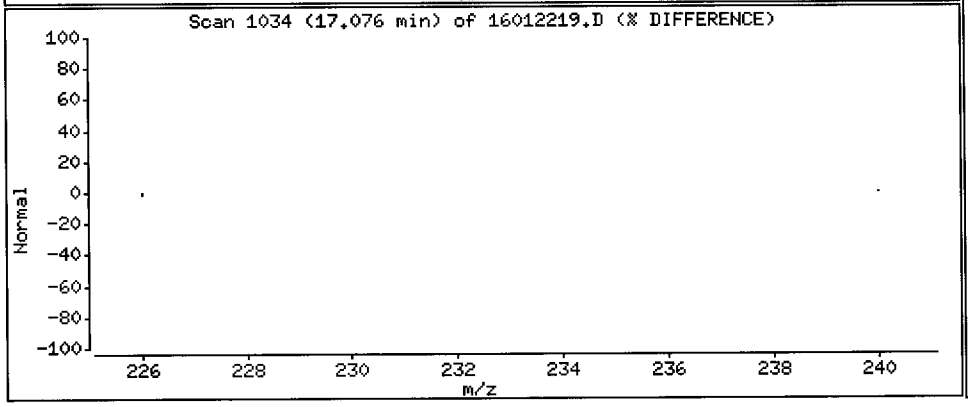












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

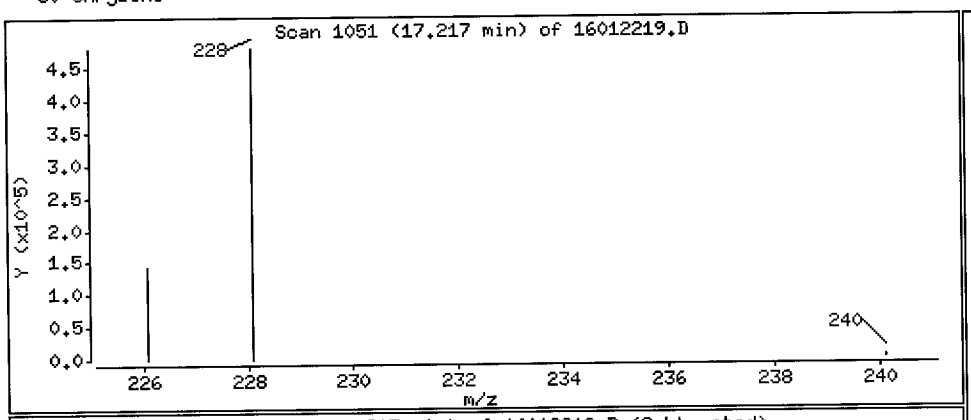
Operator: JW

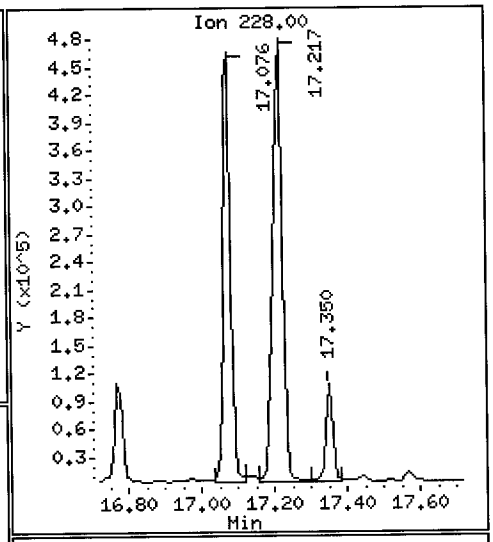
Column phase: Rxi-17Sil MS

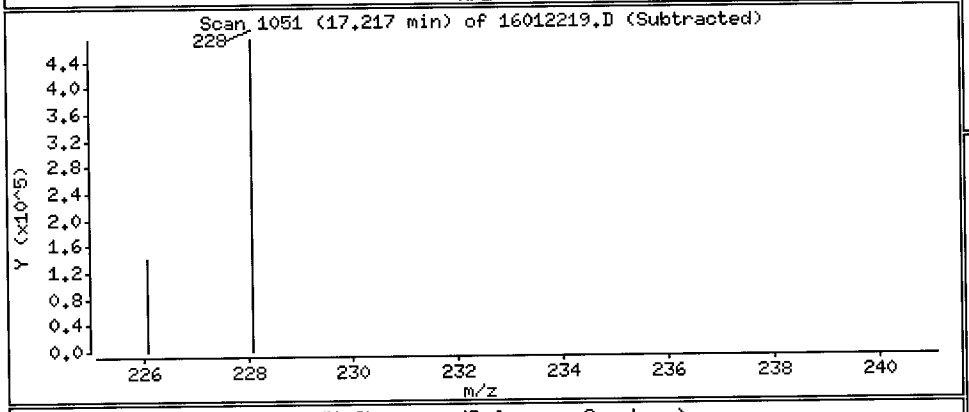
Column diameter: 0.25

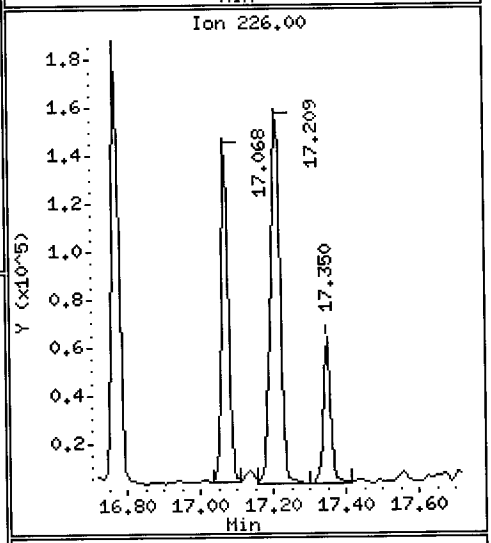
30 Chrysene

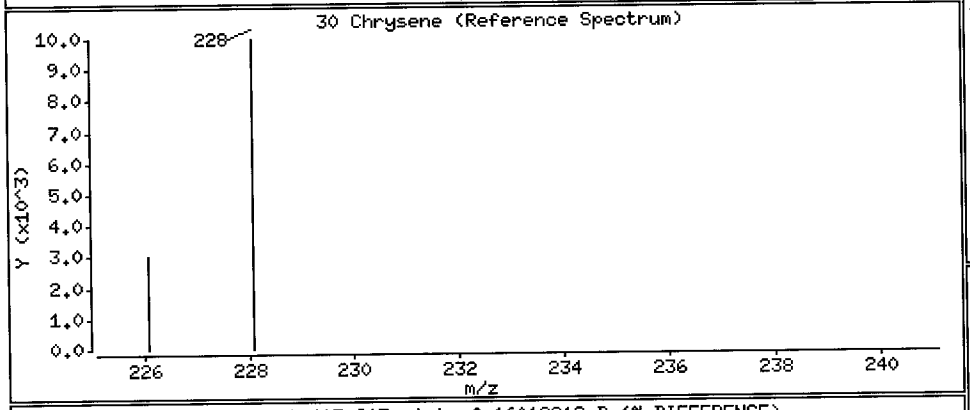
Concentration: 17000 ug/kg

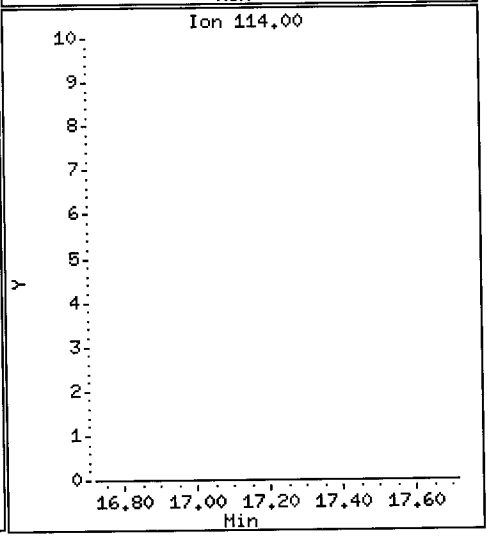


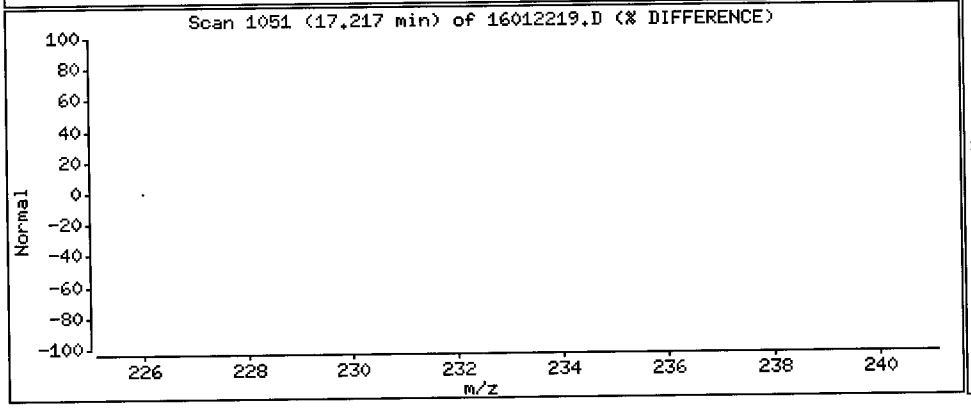












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

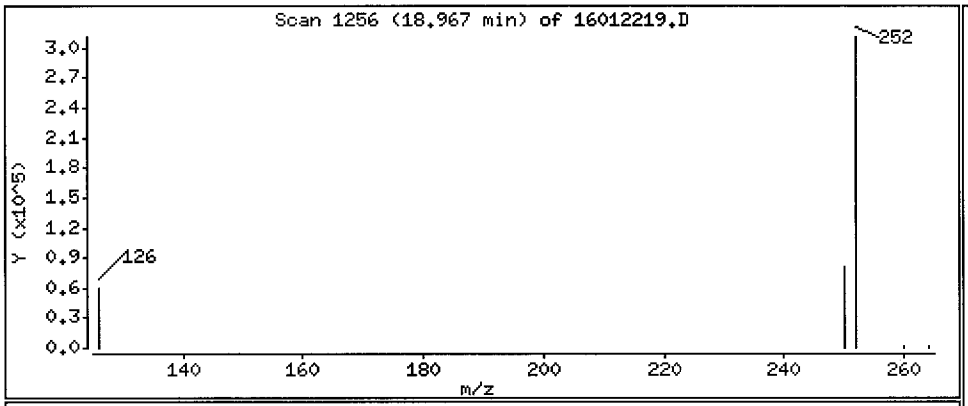
Operator: JW

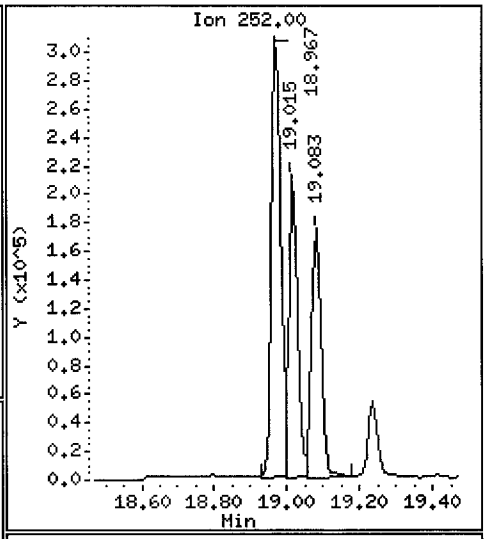
Column phase: Rxi-17Sil MS

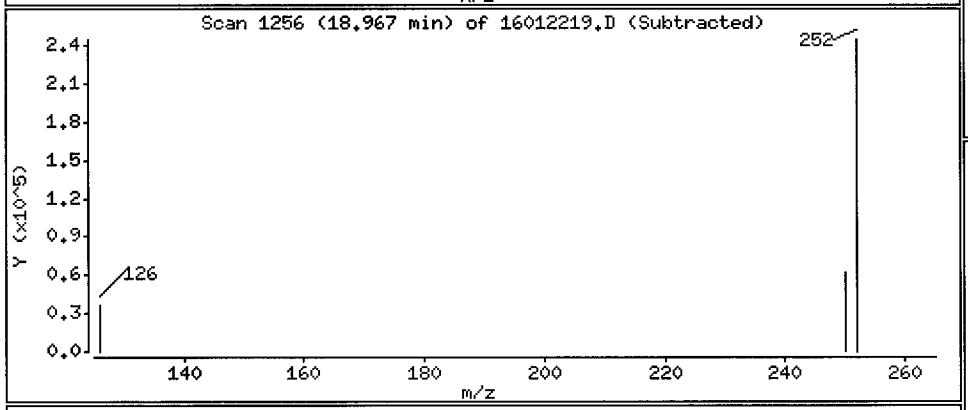
Column diameter: 0.25

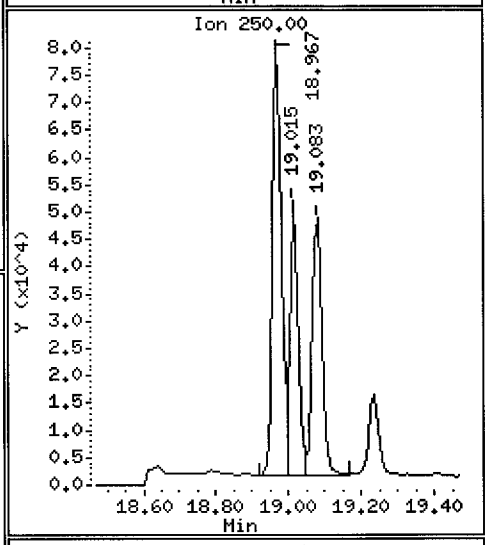
44 Benzo(b)fluoranthene

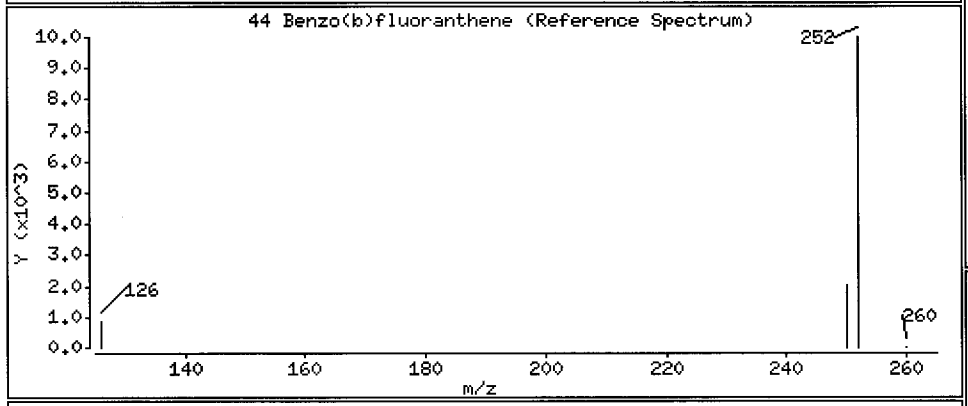
Concentration: 12100 ug/kg

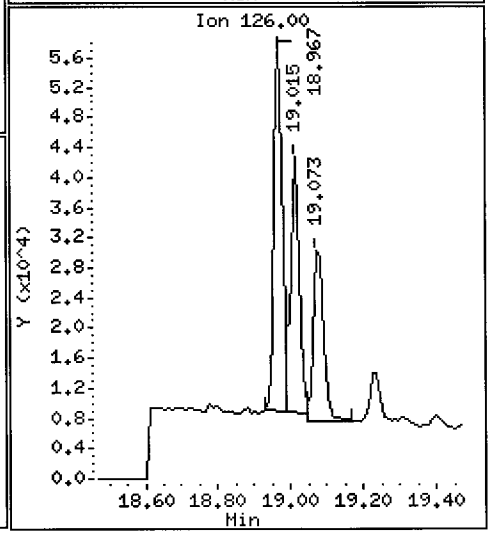


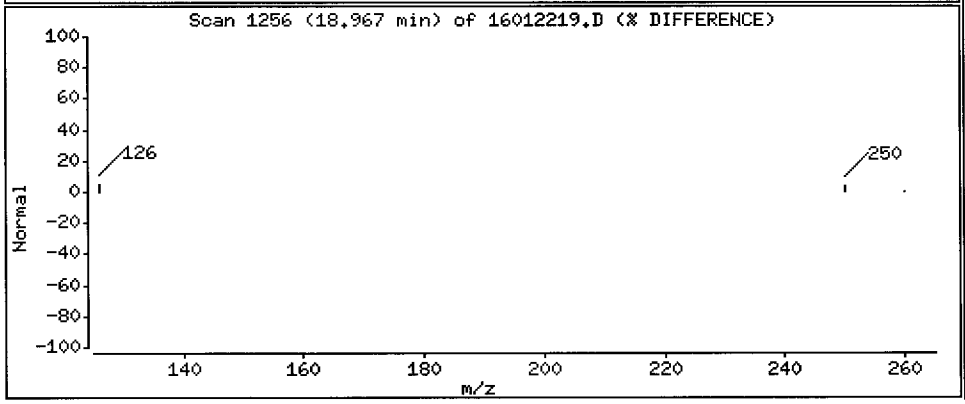












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

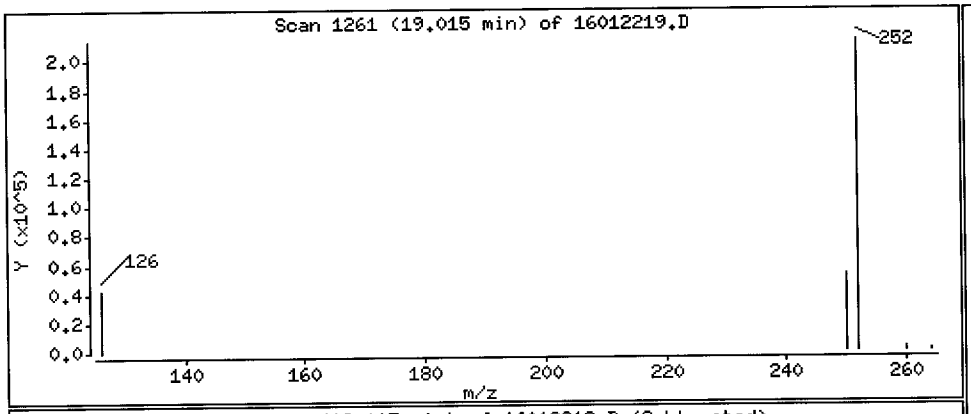
Operator: JW

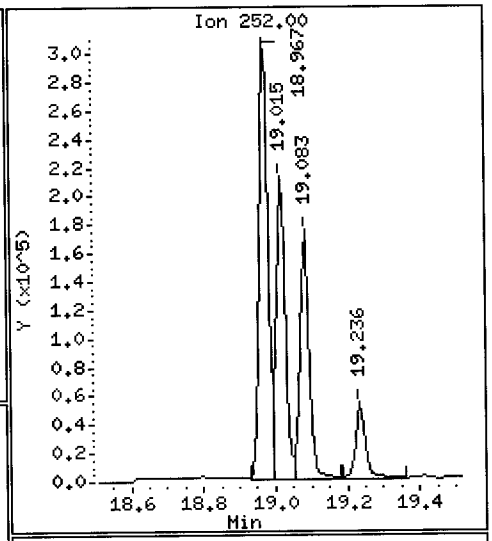
Column phase: Rxi-17Sil MS

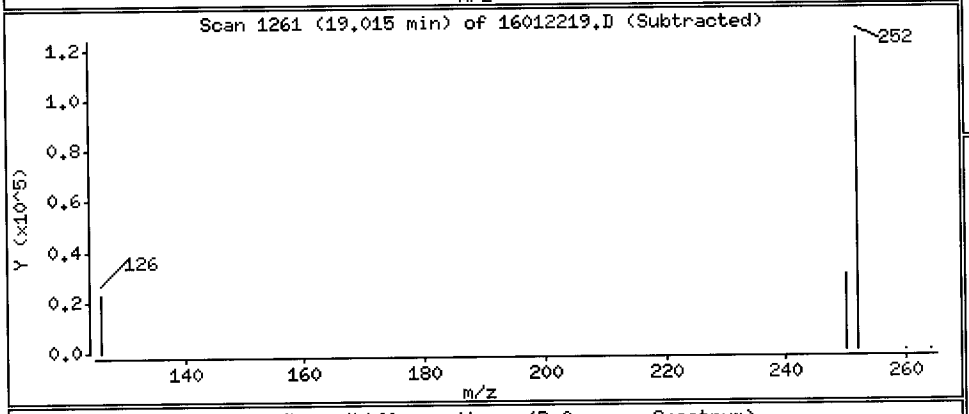
Column diameter: 0.25

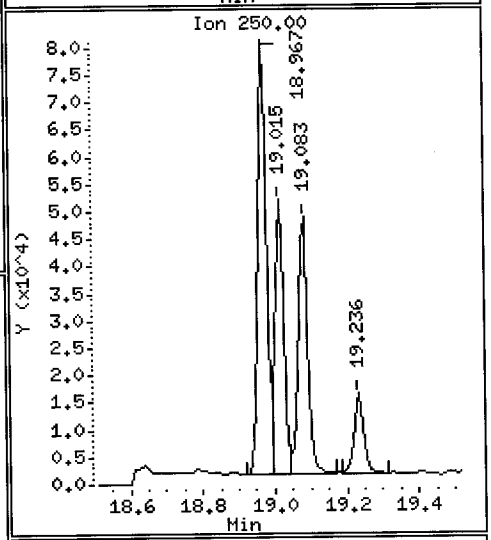
45 Benzo(k)fluoranthene

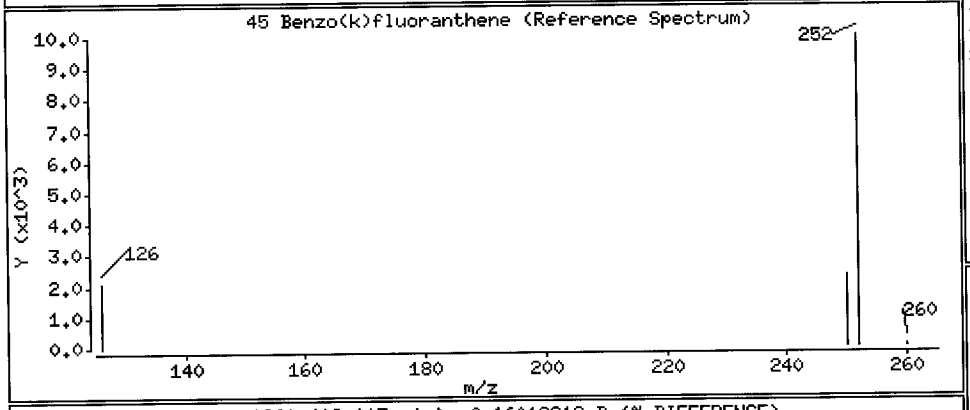
Concentration: 7110 ug/kg

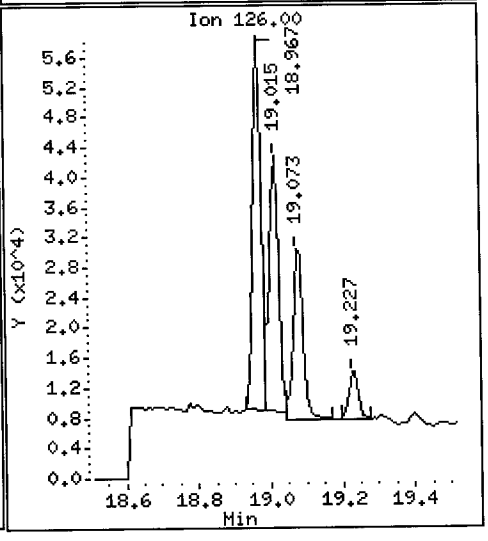


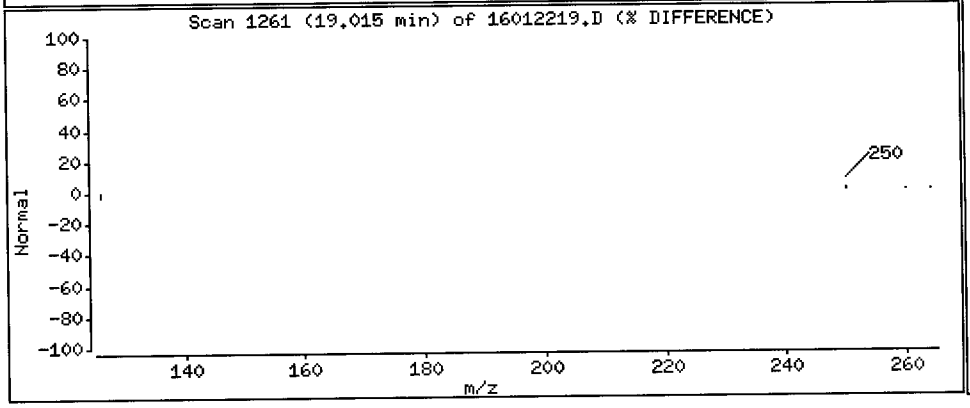












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

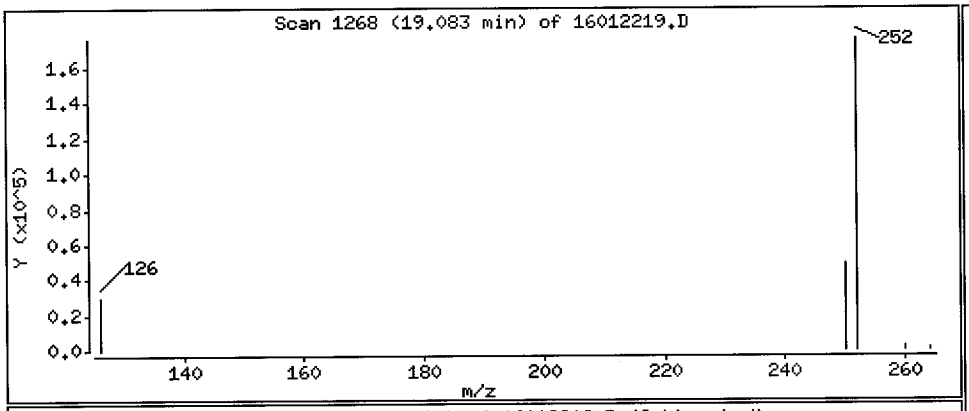
Operator: JW

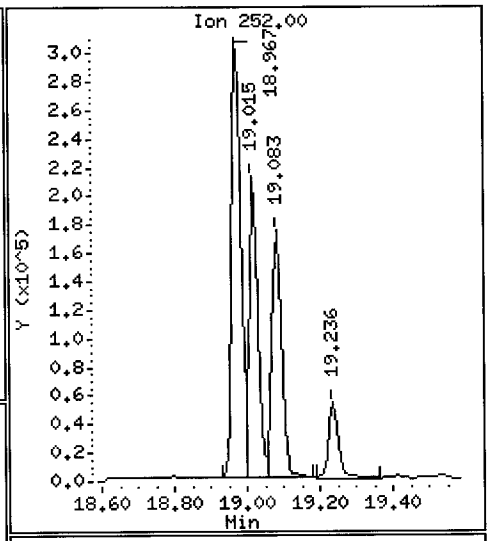
Column phase: Rxi-17Sil MS

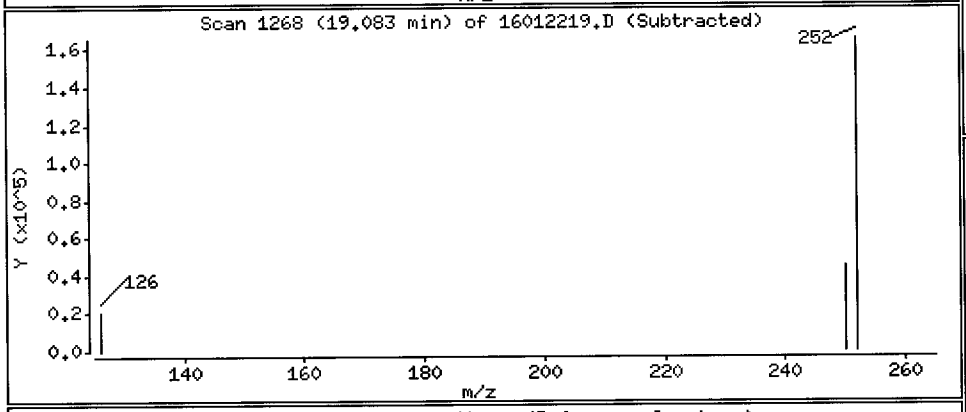
Column diameter: 0.25

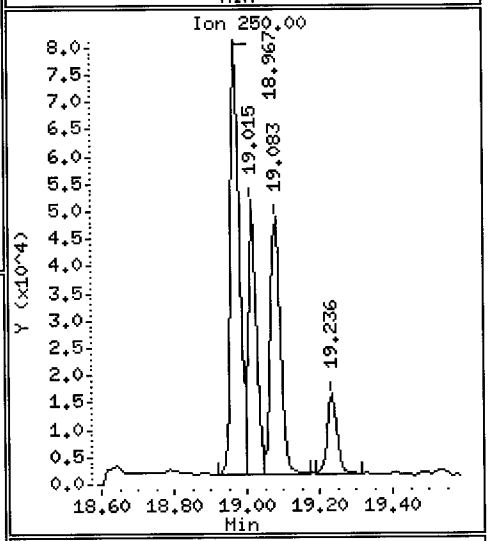
46 Benzo(j)fluoranthene

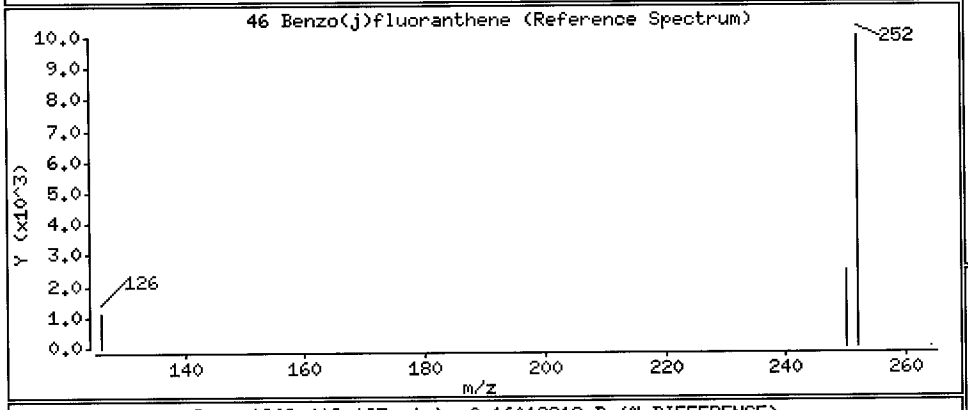
Concentration: 6360 ug/kg

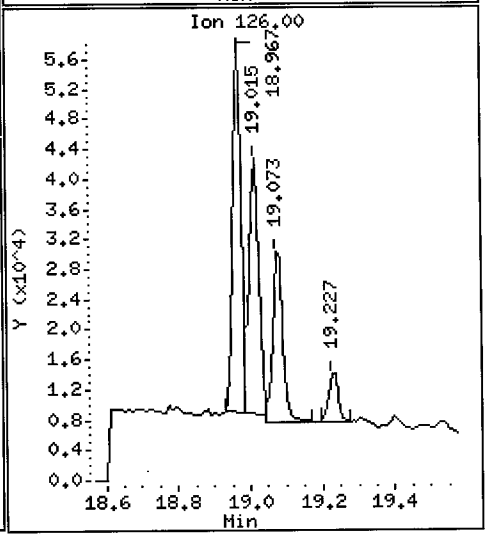


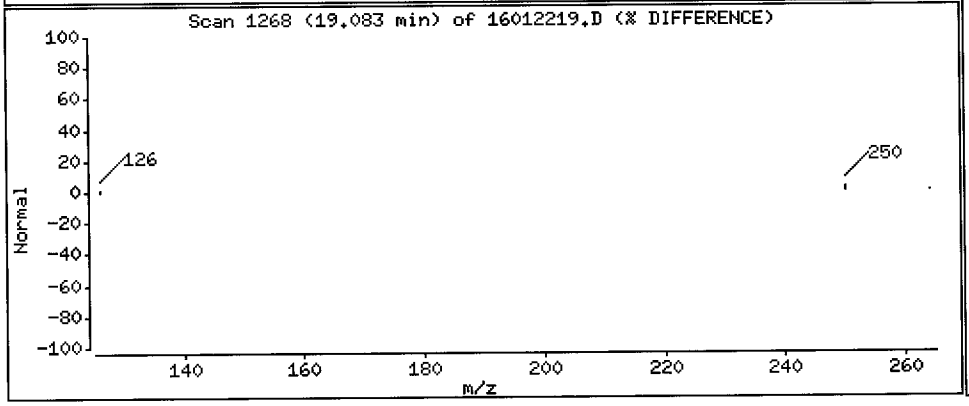












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

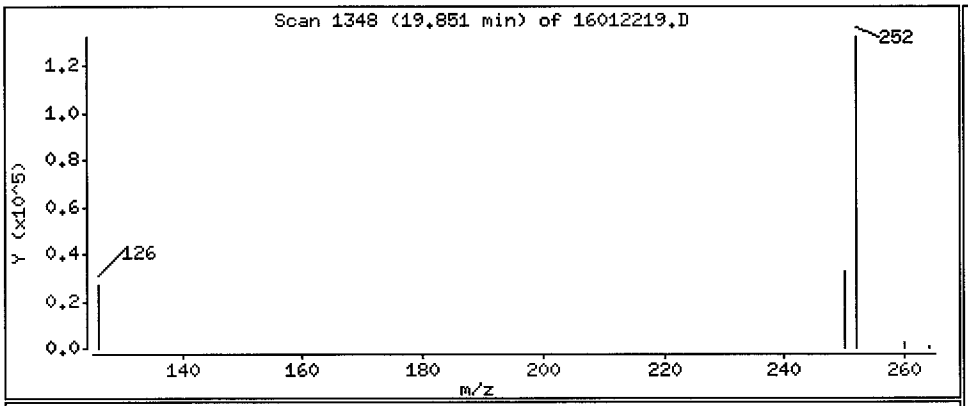
Operator: JW

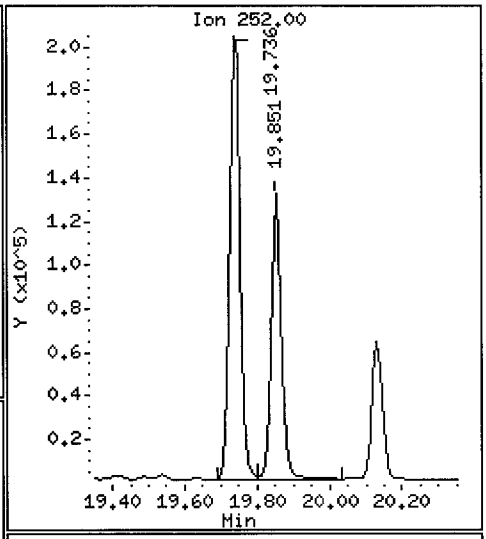
Column phase: Rxi-17Sil MS

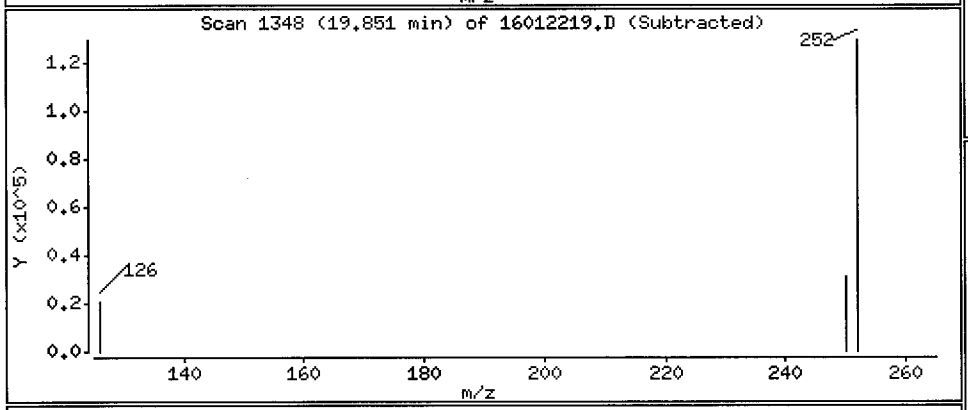
Column diameter: 0.25

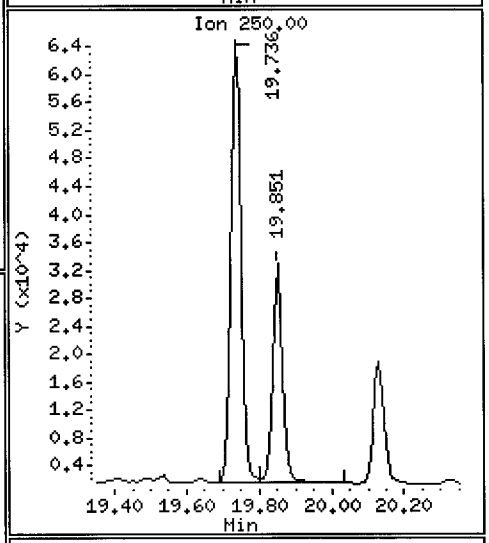
34 Benzo(a)pyrene

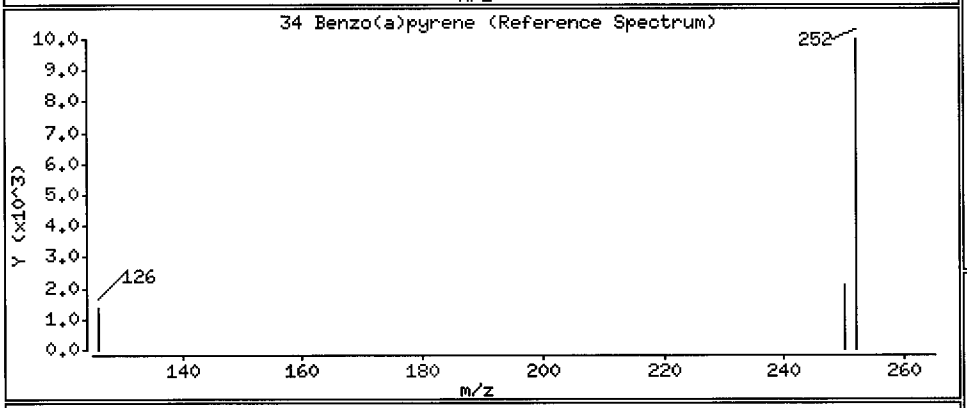
Concentration: 5810 ug/kg

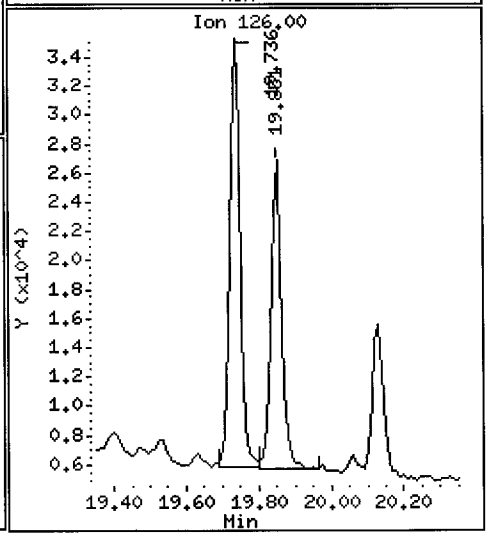


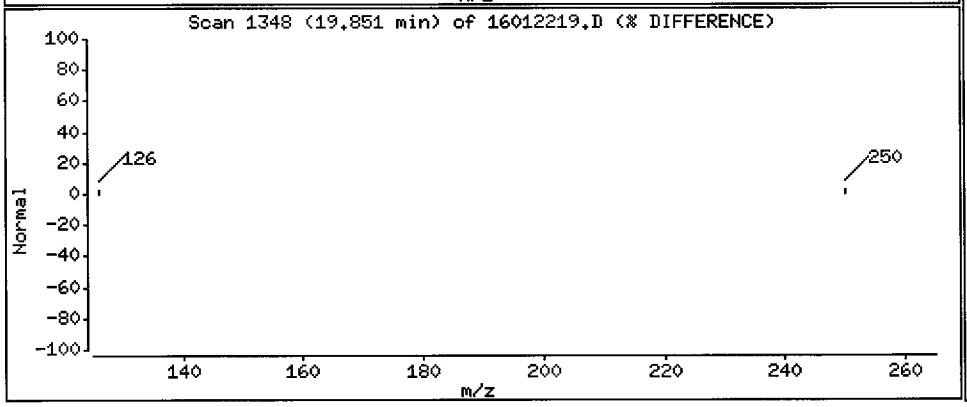












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

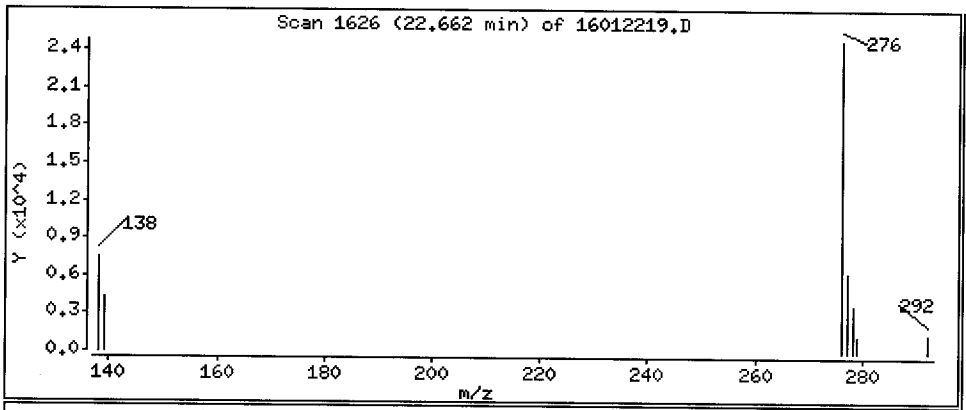
Operator: JW

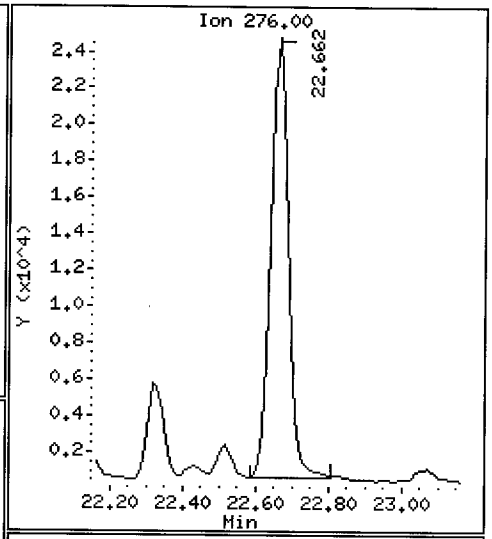
Column phase: Rxi-17Sil MS

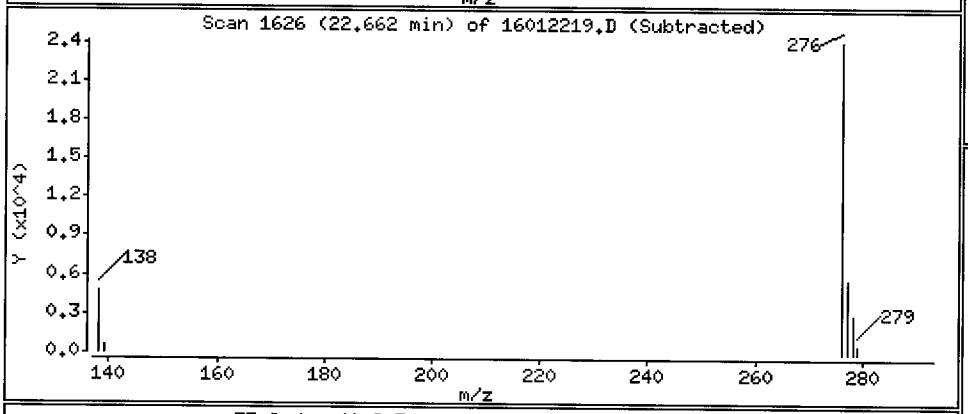
Column diameter: 0.25

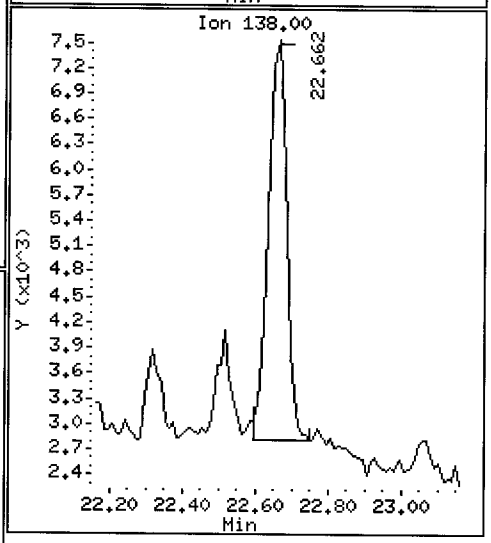
37 Indeno(1,2,3-cd)pyrene

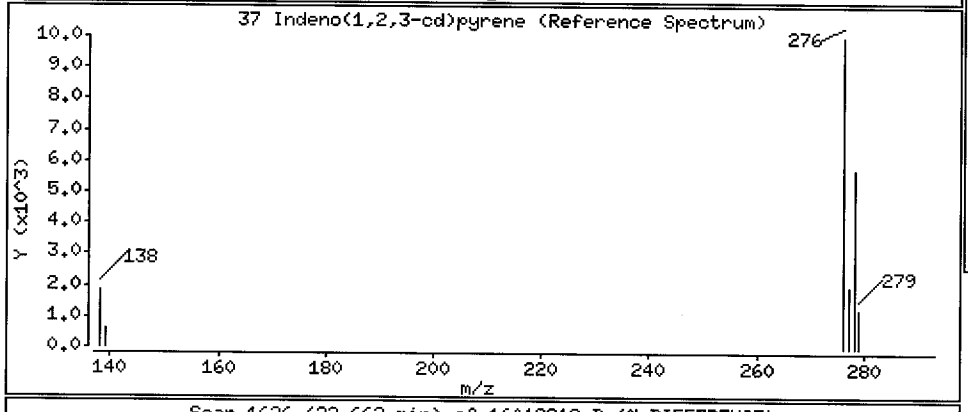
Concentration: 1670 ug/kg

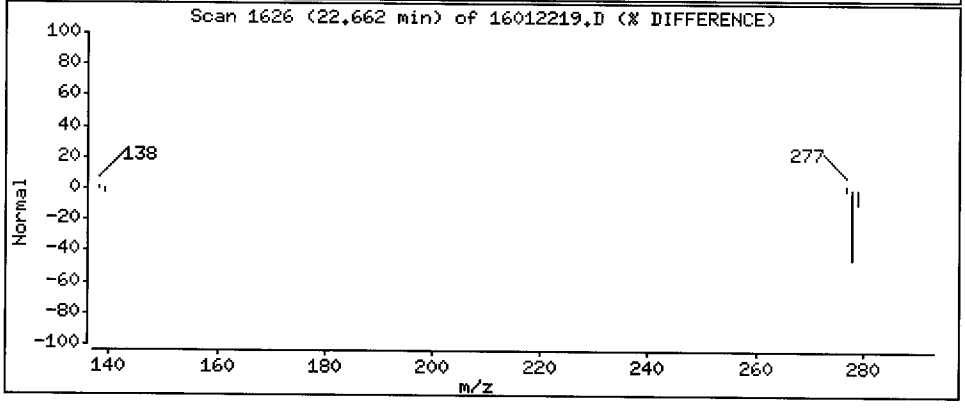












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

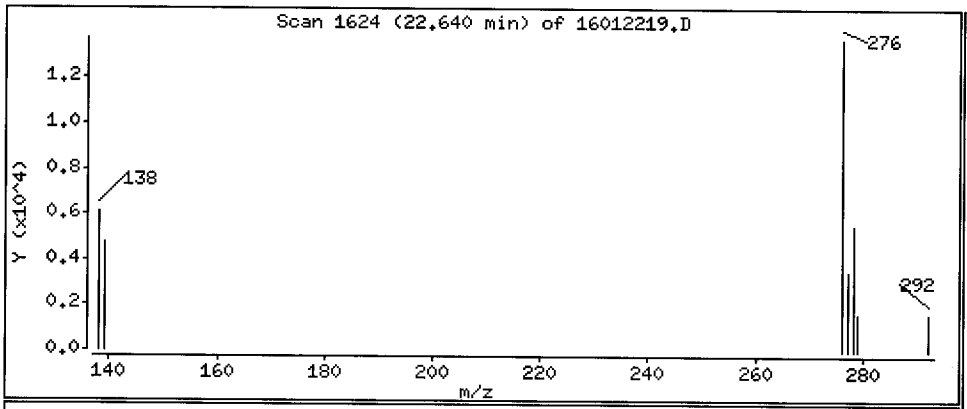
Operator: JW

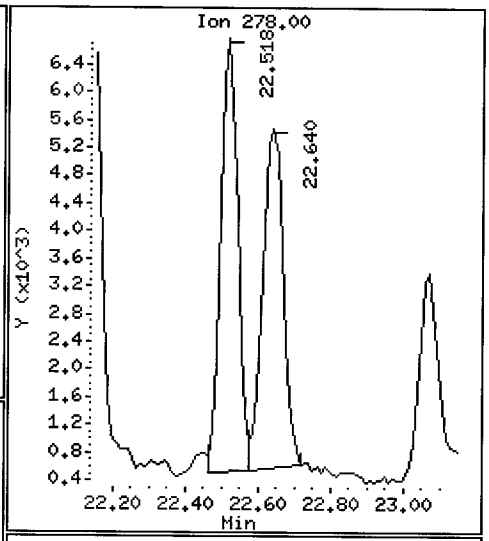
Column phase: Rxi-17Sil MS

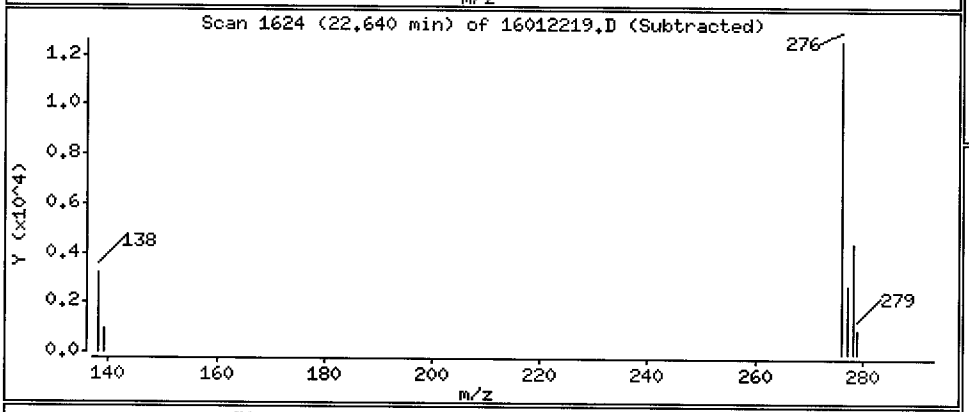
Column diameter: 0.25

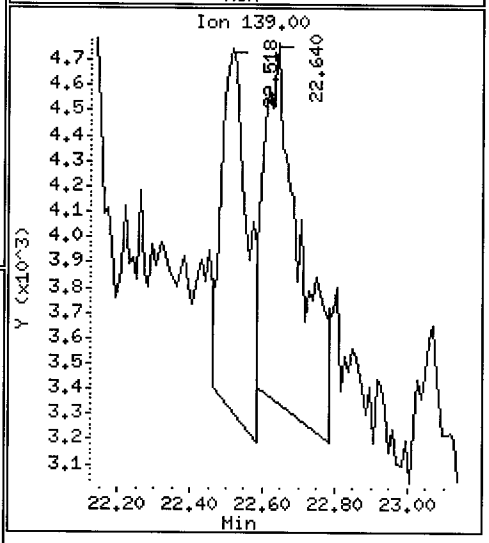
38 Dibenzo(a,h)anthracene

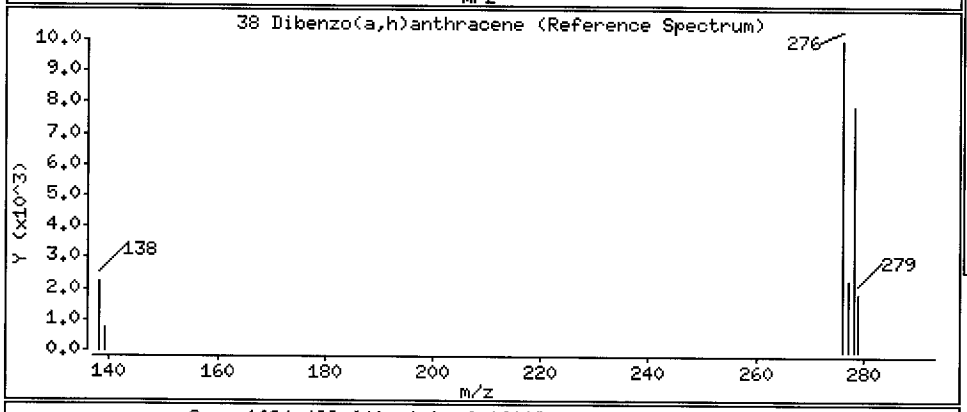
Concentration: 512 ug/kg

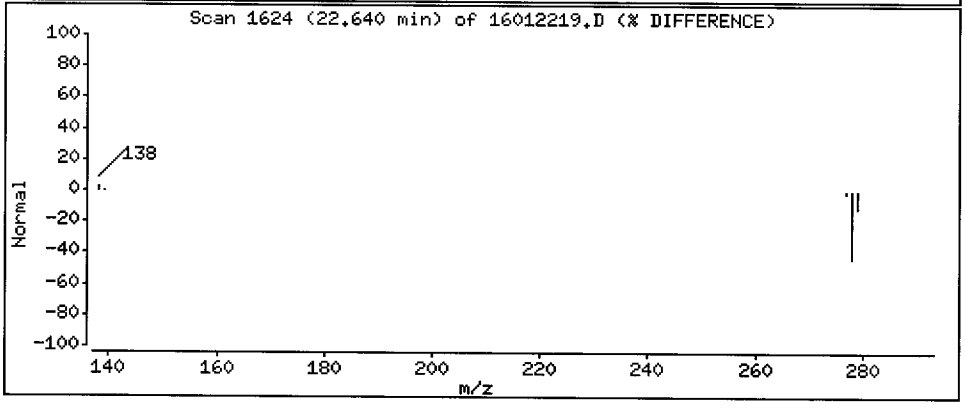












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Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

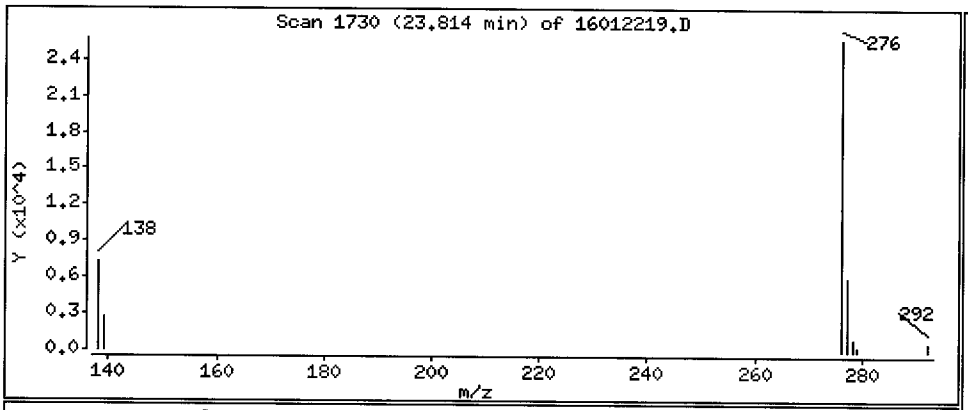
Operator: JW

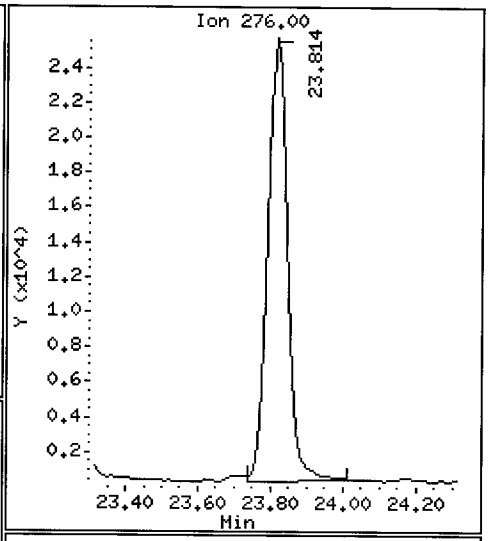
Column phase: Rxi-17Sil MS

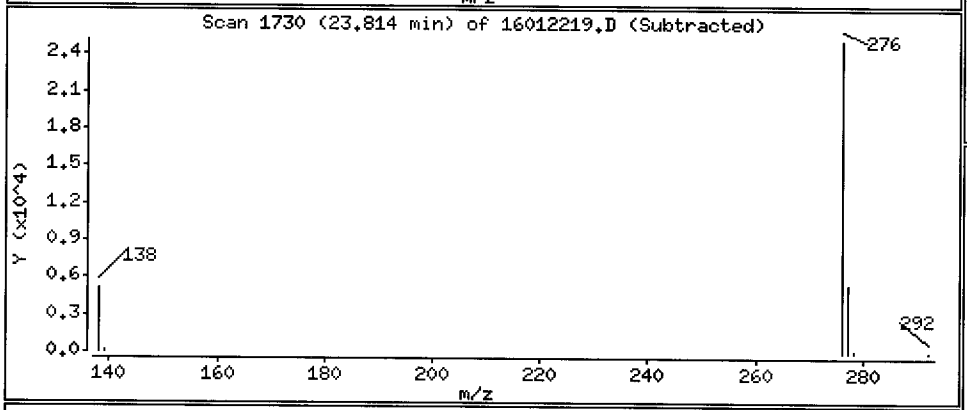
Column diameter: 0.25

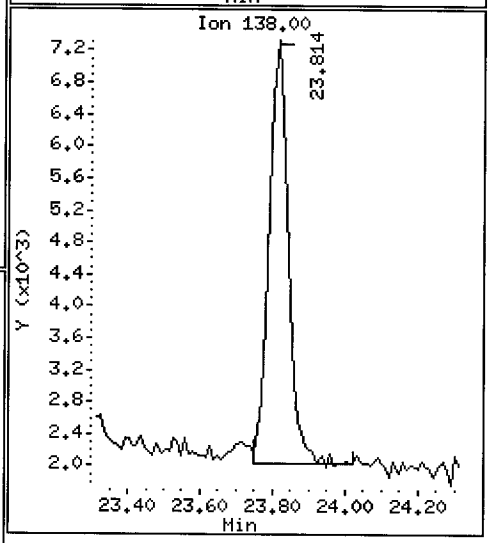
39 Benzo(g,h,i)perylene

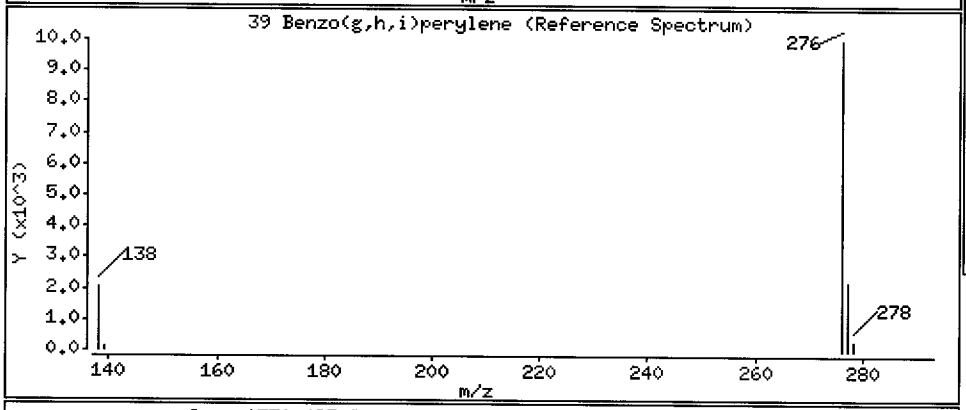
Concentration: 2310 ug/kg

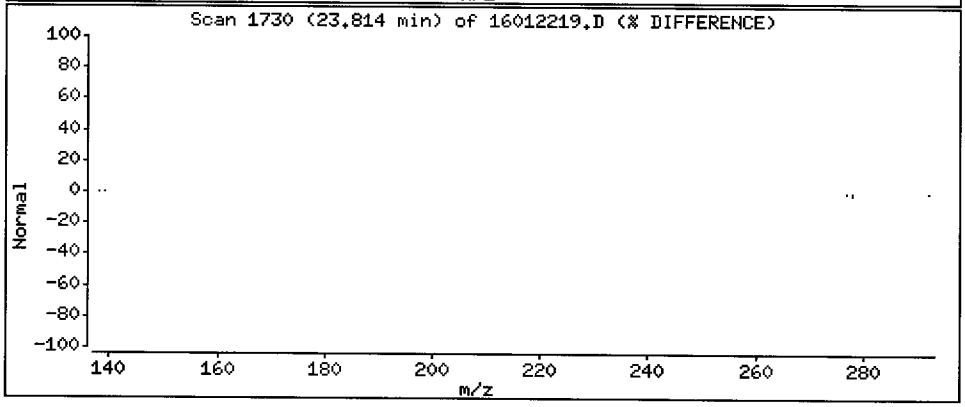












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

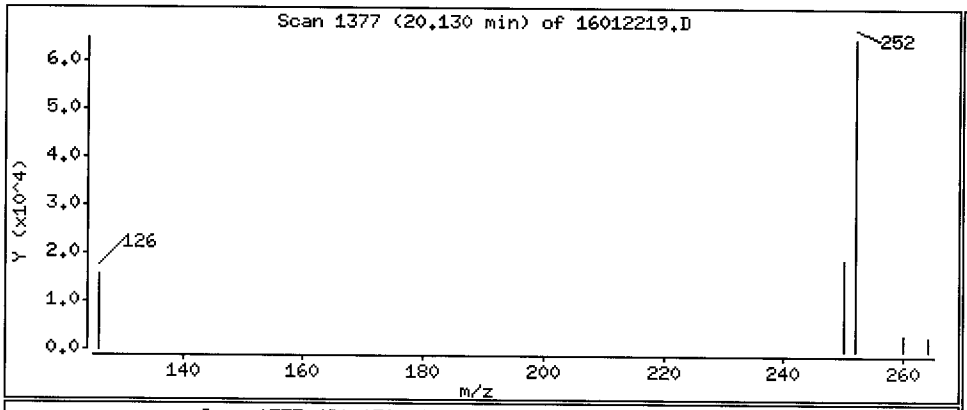
Operator: JW

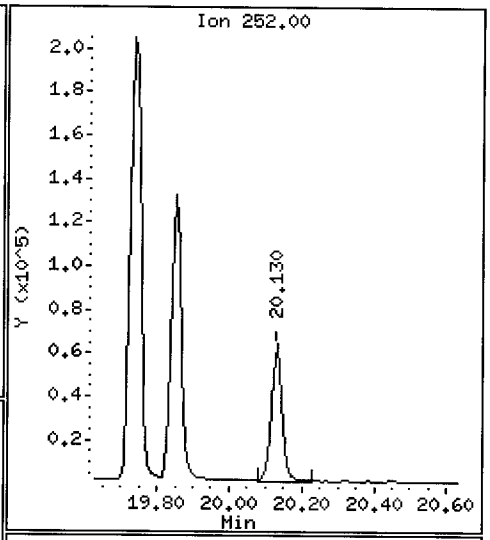
Column phase: Rxi-17Sil MS

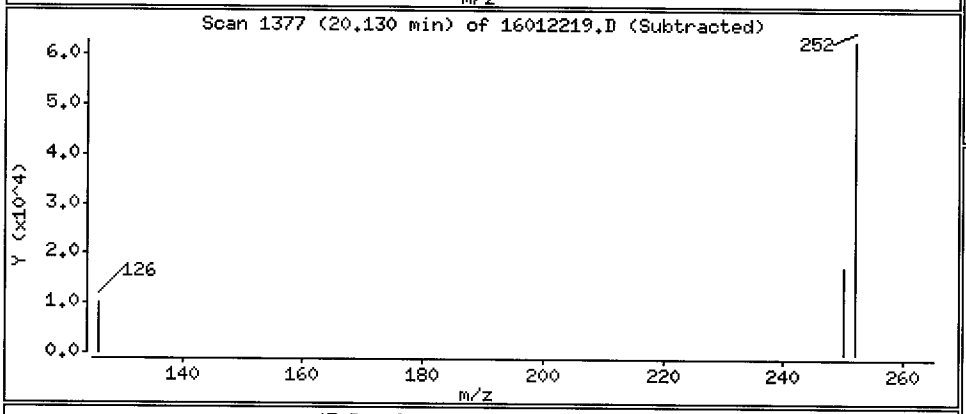
Column diameter: 0.25

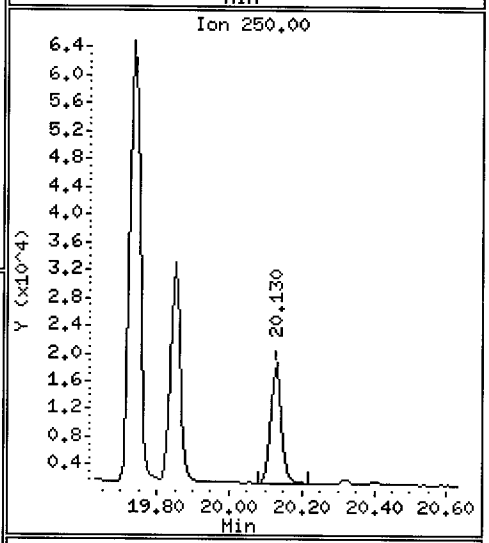
47 Perylene

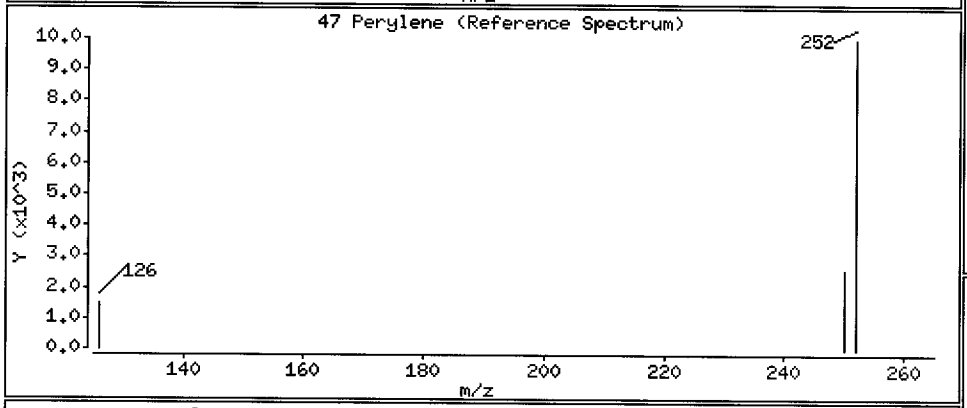
Concentration: 2820 ug/kg

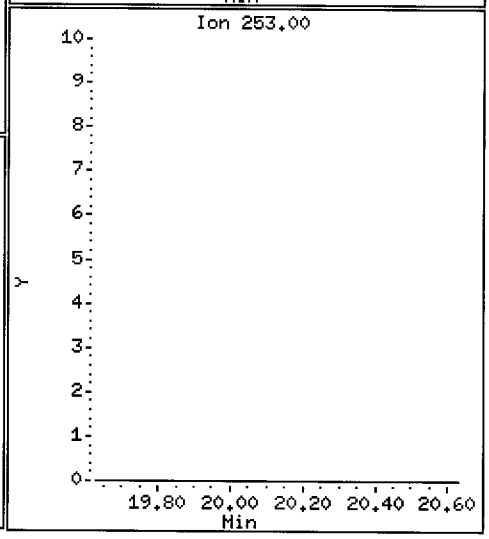


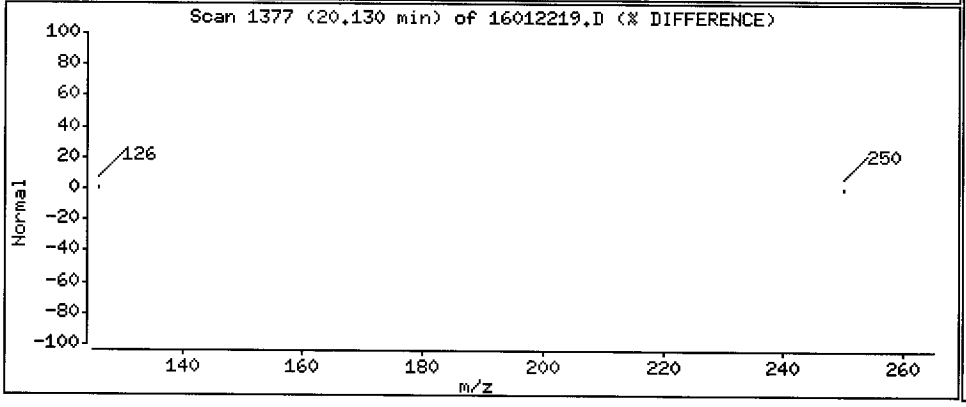












Data File: \\target\share\chem3\nt11.i\20160122.b\16012219.D

Date : 22-JAN-2016 16:30

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A

Volume Injected (uL): 2.0

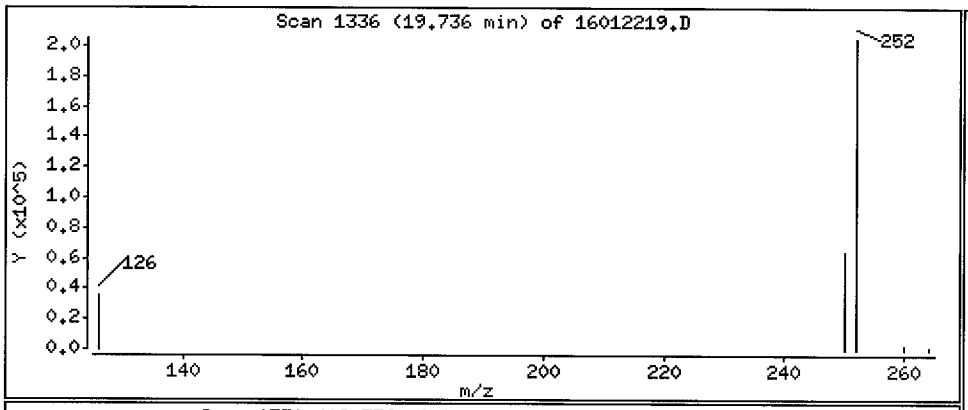
Operator: JW

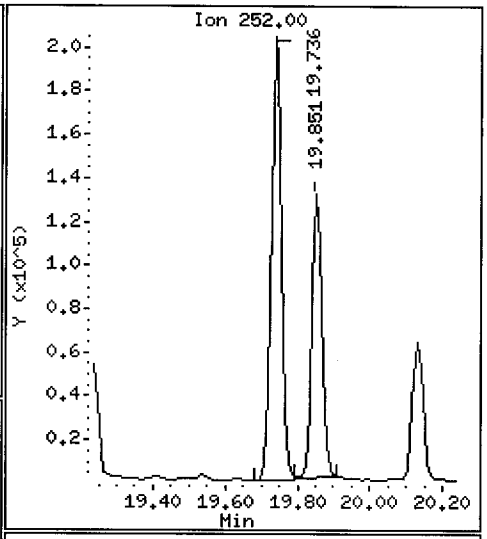
Column phase: Rxi-17Sil MS

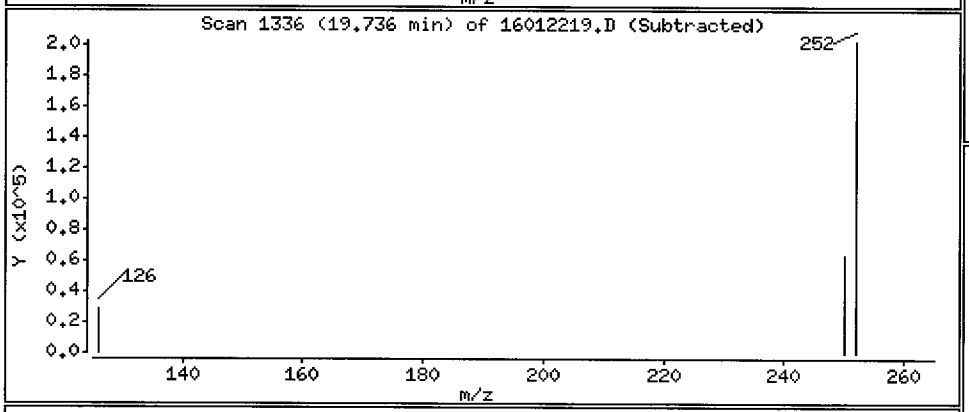
Column diameter: 0.25

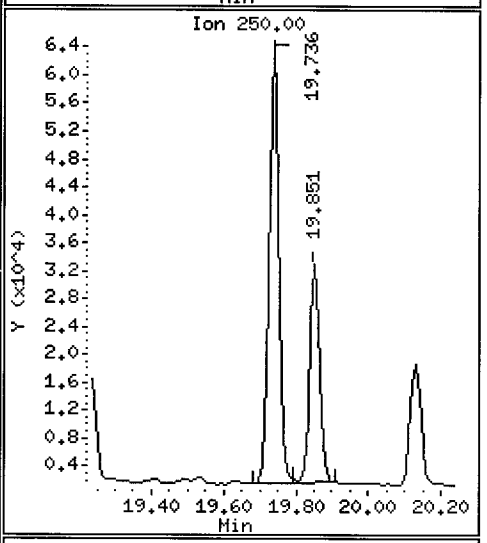
48 Benzo(e)pyrene

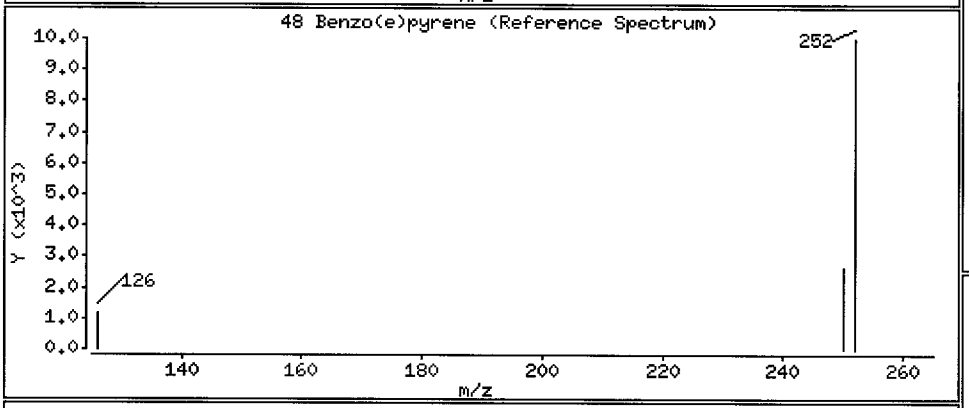
Concentration: 8890 ug/kg

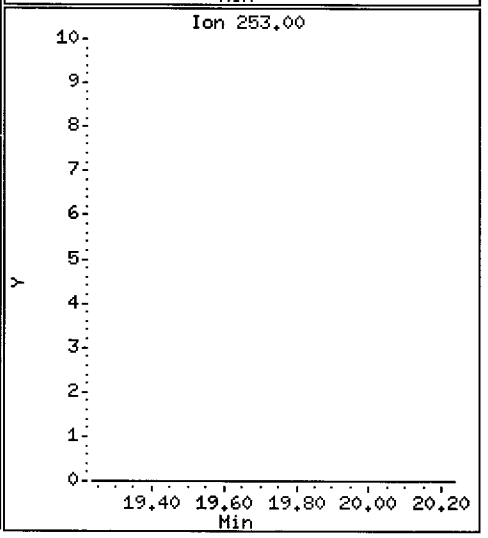


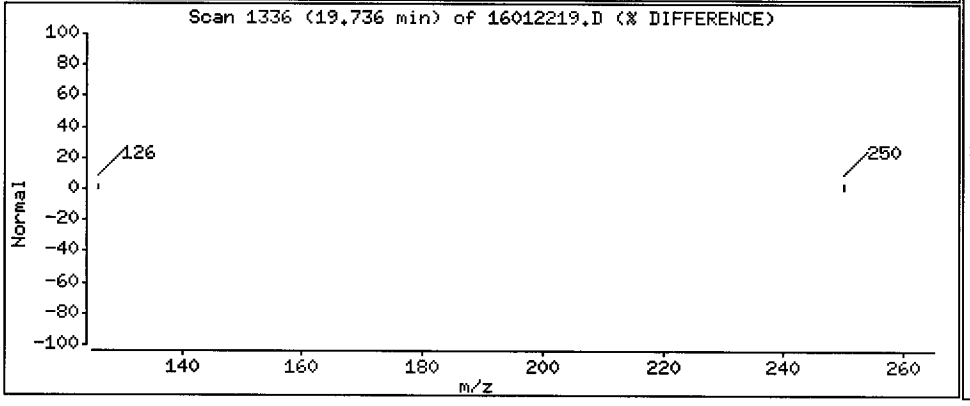












REVIEW SUMMARY FOR FILE - 16012219.D

Lab ID: AUA2A
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 16:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012220.D
Lab Smp Id: AUA2B Client Smp ID: 13CPS_DB-MTW01Z
Inj Date : 22-JAN-2016 17:00 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : AUA2B
Misc Info : 16-419
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.020	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JD 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)	
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	370975	200.000		
	5 Naphthalene	128	6.765	6.776	(1.005)	24253	11.3183	565	
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	173879	126.276	6300	
	7 2-Methylnaphthalene	142	Compound Not Detected.						
	8 1-Methylnaphthalene	142	Compound Not Detected.						
	10 Acenaphthylene	152	Compound Not Detected.						
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	264737	200.000		
	12 Acenaphthene	153	Compound Not Detected.						
	14 Dibenzofuran	168	Compound Not Detected.						
	15 Fluorene	166	Compound Not Detected.						
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	432287	200.000		
	19 Phenanthrene	178	12.468	12.468	(1.004)	64882	24.9119	1240	
	20 Anthracene	178	Compound Not Detected.						
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	372707	156.777	7820	
	24 Fluoranthene	202	14.557	14.557	(1.172)	114603	43.8279	2190	
	25 Pyrene	202	15.057	15.057	(0.877)	80250	31.4841	1570	
	28 Benzo(a)anthracene	228	17.076	17.075	(0.995)	22101	10.2991	514	
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	321859	200.000		
	30 Chrysene	228	17.217	17.217	(1.003)	51355	21.8049	1090	
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	26496	11.9286	595	
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	16286	6.29197	314	Q

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
46	Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	12284	5.20986	260
34	Benzo(a)pyrene	252	Compound Not Detected.					
* 35	Perylene-d12	264	20.062	20.062	(1.000)	327843	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	225401	170.342	8500
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	Compound Not Detected.					
47	Perylene	252	Compound Not Detected.					
48	Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012220.D
Lab Smp Id: AUA2B
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-419

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: 13CPS_DB-MTW01Z
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	370975	13.14
11 Acenaphthene-d10	239179	119590	478358	264737	10.69
18 Phenanthrene-d10	372253	186127	744506	432287	16.13
29 Chrysene-d12	294711	147356	589422	321859	9.21
35 Perylene-d12	260595	130298	521190	327843	25.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.16
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

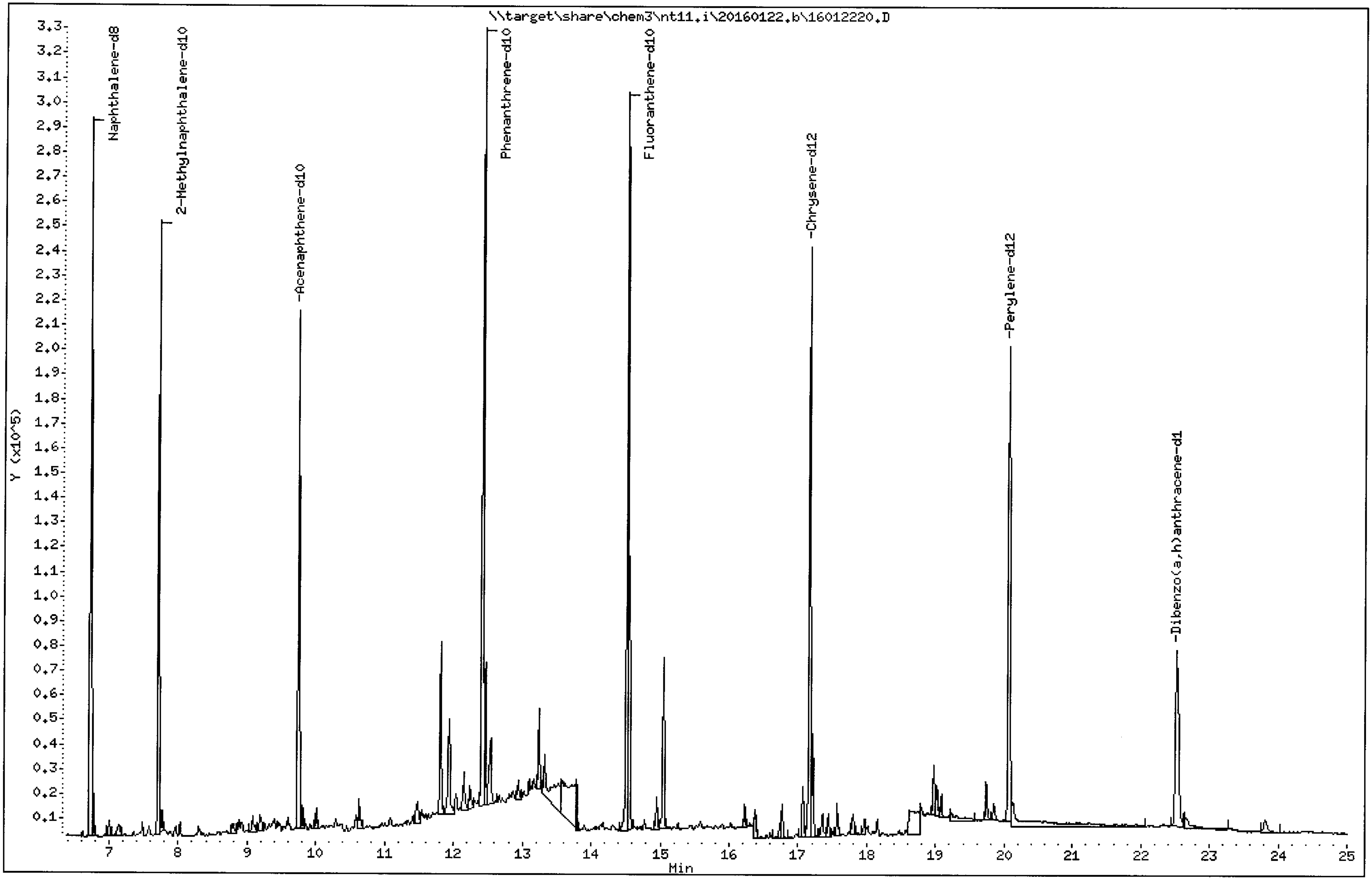
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: AUA2B
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-419

Client SDG: AUA2
Fraction: SV
Client Smp ID: 13CPS_DB-MTW01Z
Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	6300	42.09	30-160
$ 23 Fluoranthene-d10	15000	7820	52.26	30-160
$ 36 Dibenzo(a,h)anthra	15000	8500	56.78	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D
Date : 22-JAN-2016 17:00
Client ID: 13CPS_DB-MTW01Z
Sample Info: AUA2B
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

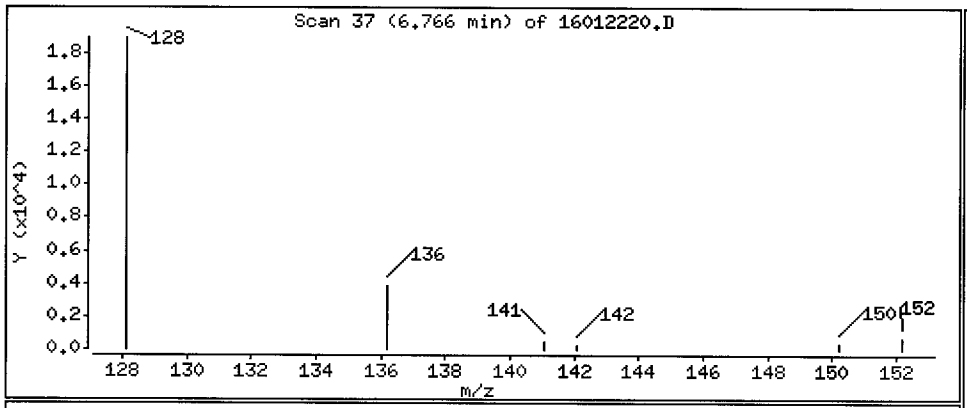
Operator: JW

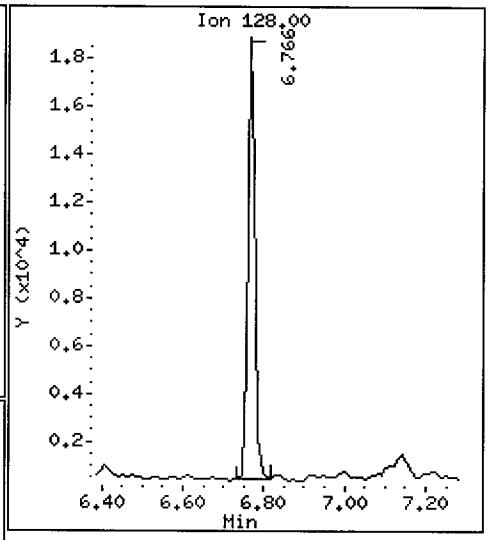
Column phase: Rxi-17Sil MS

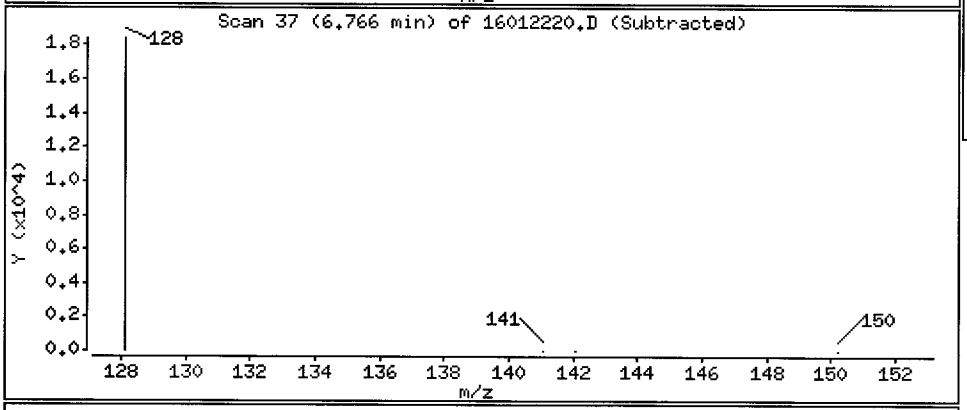
Column diameter: 0.25

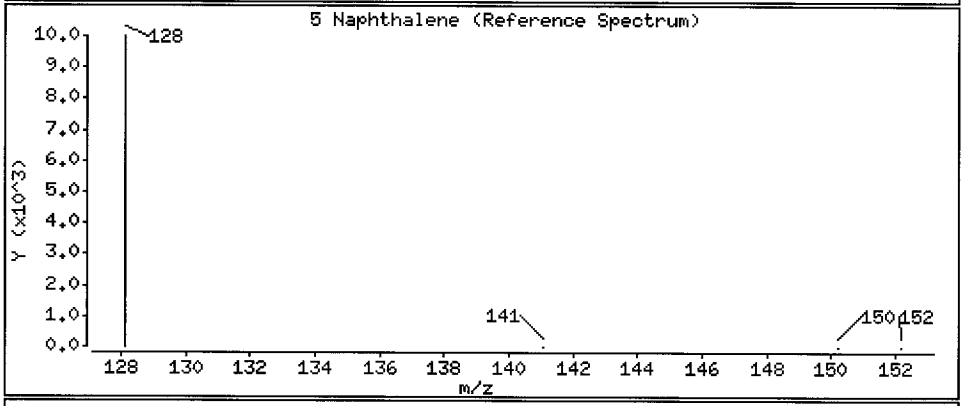
5 Naphthalene

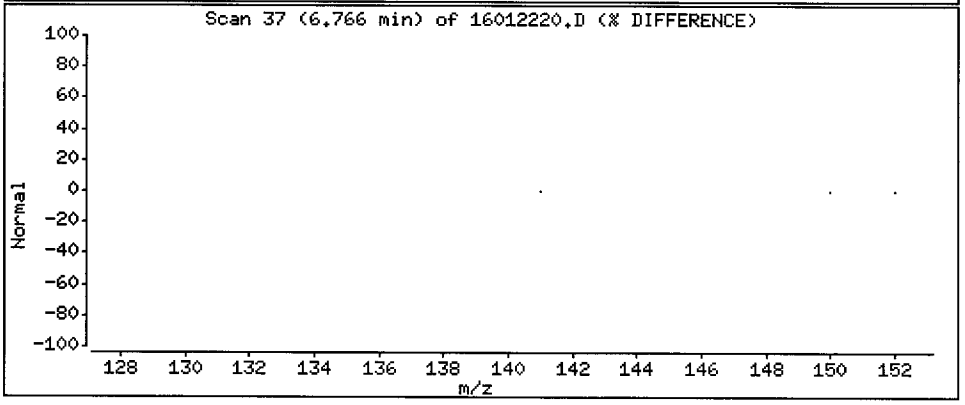
Concentration: 565 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

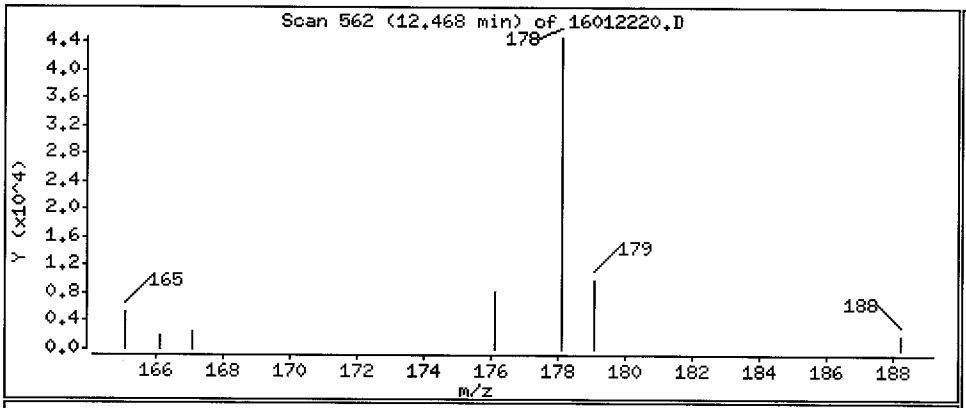
Operator: JW

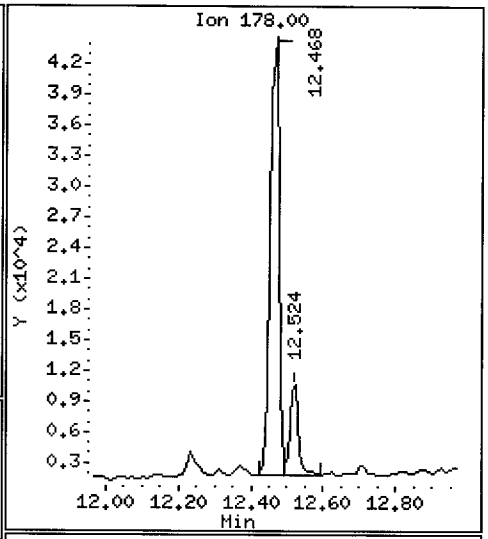
Column phase: Rxi-17Sil MS

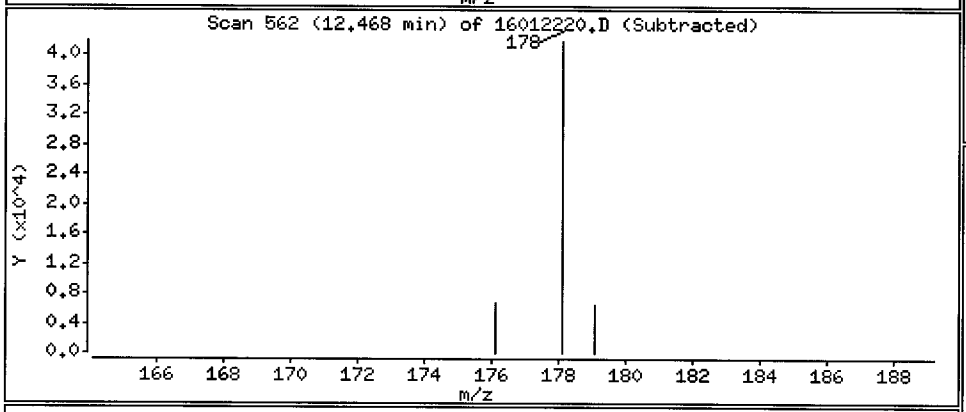
Column diameter: 0.25

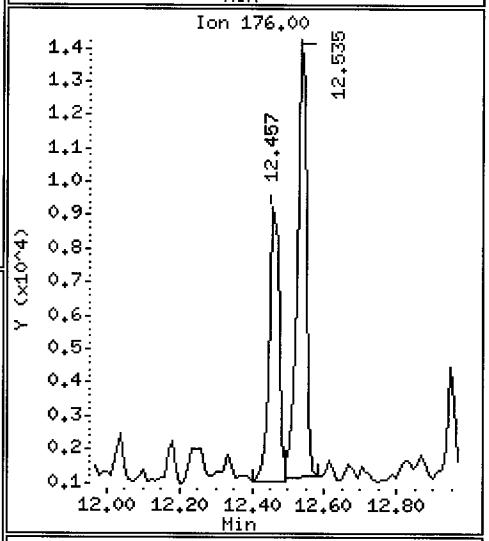
19 Phenanthrene

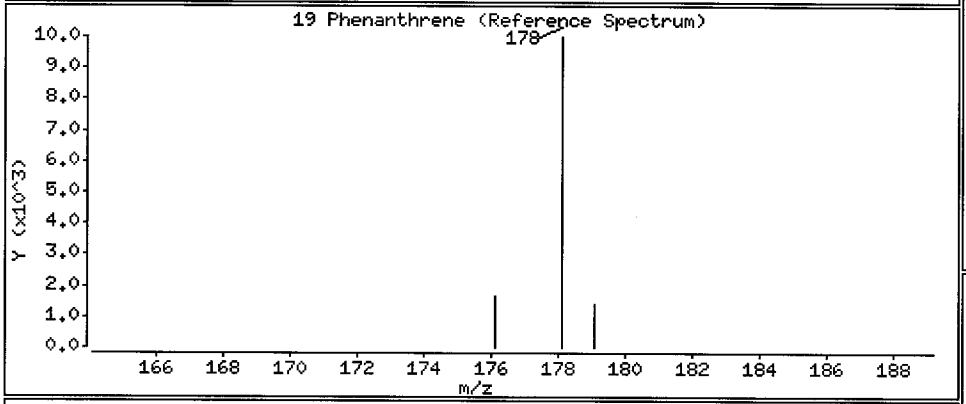
Concentration: 1240 ug/kg

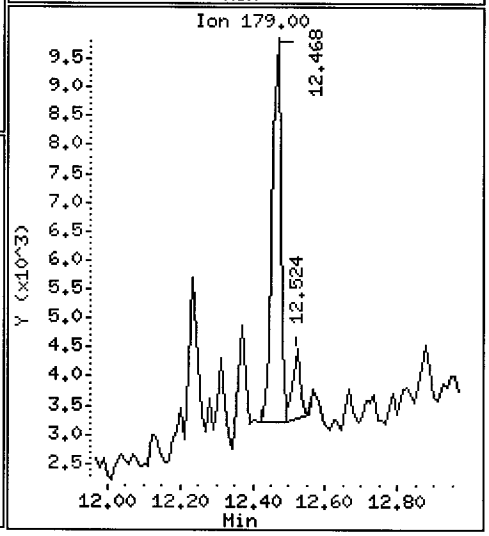


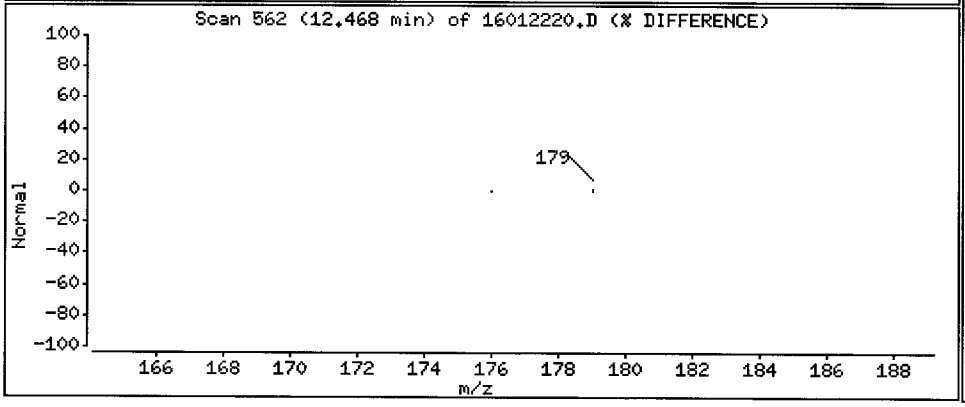












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

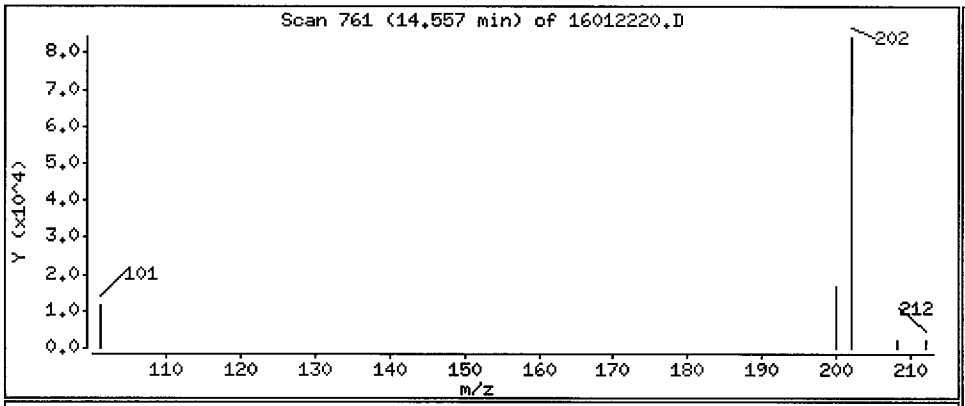
Operator: JW

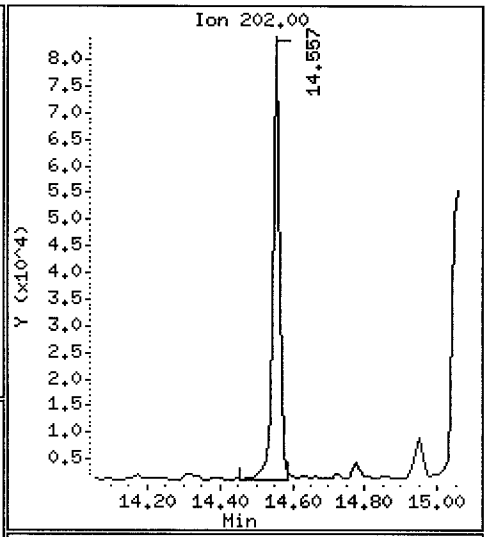
Column phase: Rxi-17Sil MS

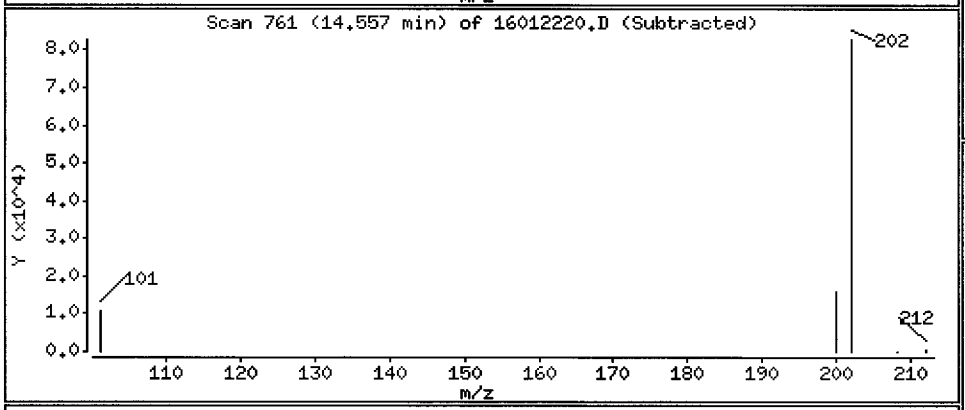
Column diameter: 0.25

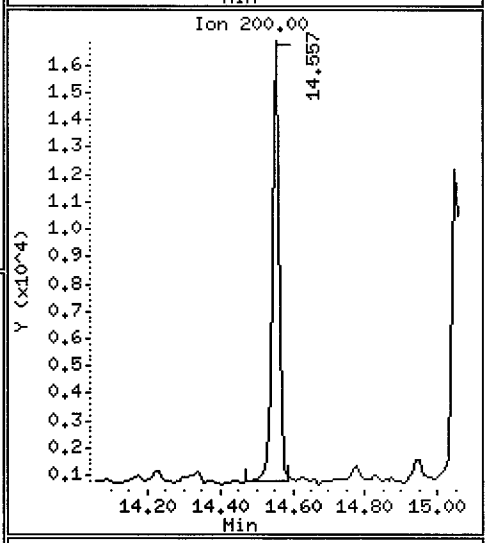
24 Fluoranthene

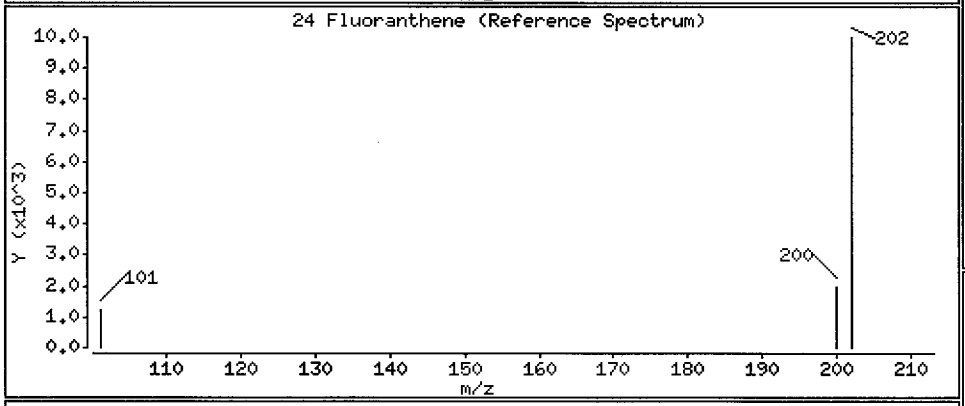
Concentration: 2190 ug/kg

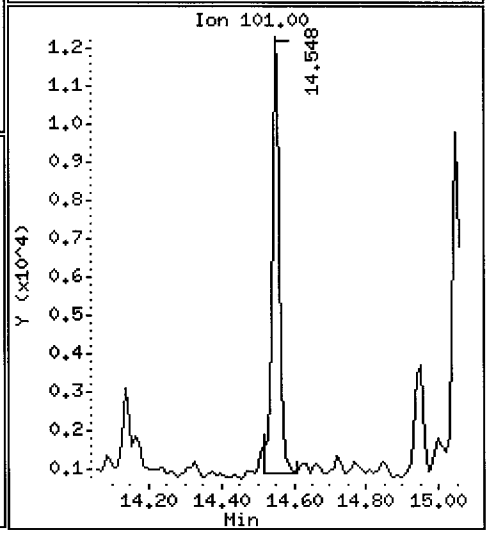


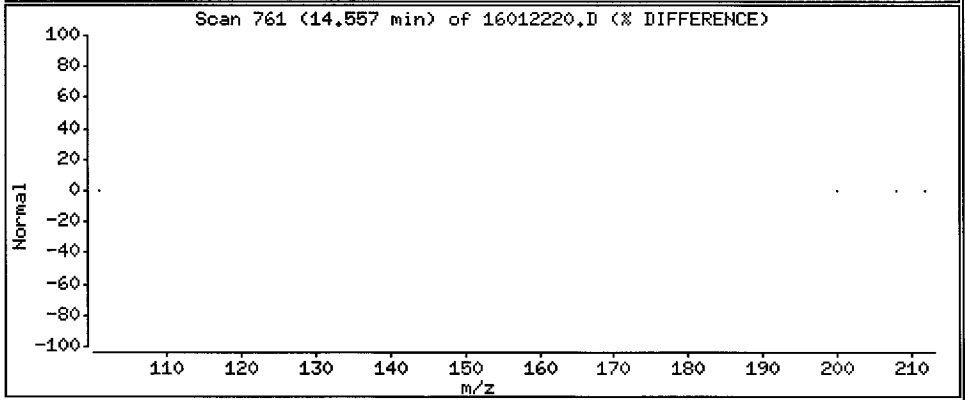












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

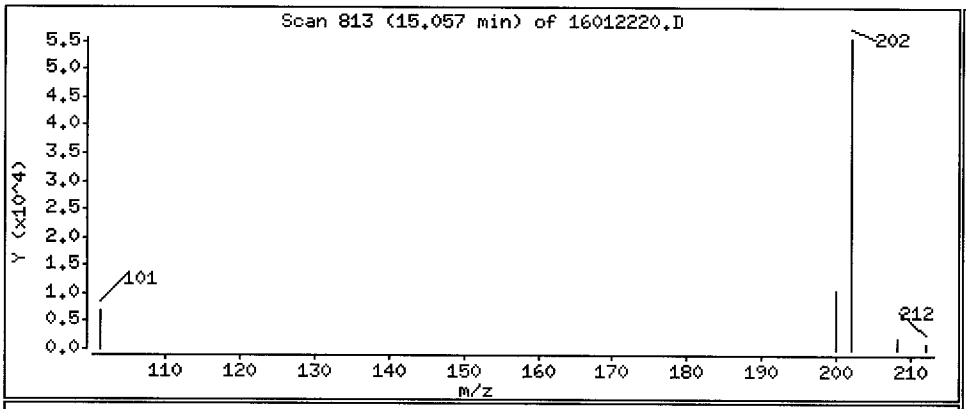
Operator: JW

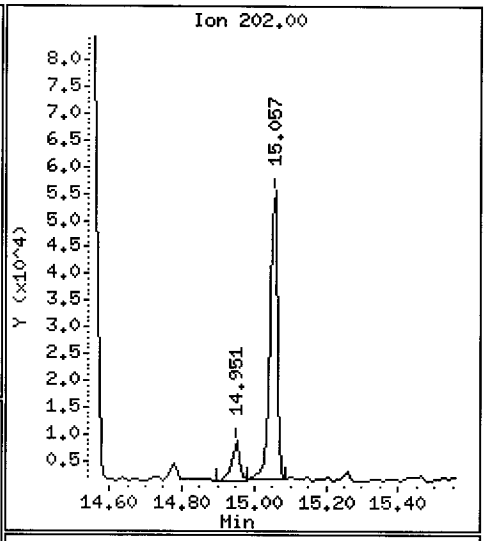
Column phase: Rxi-17Sil MS

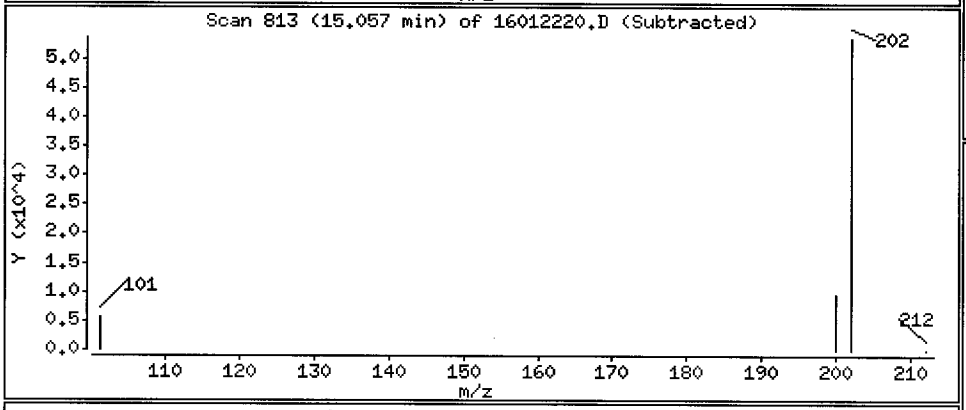
Column diameter: 0.25

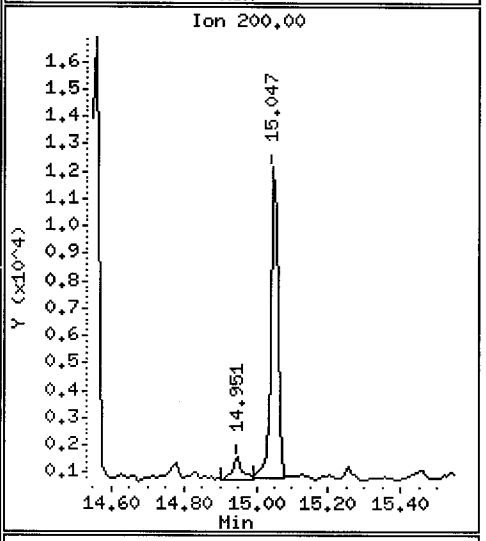
25 Pyrene

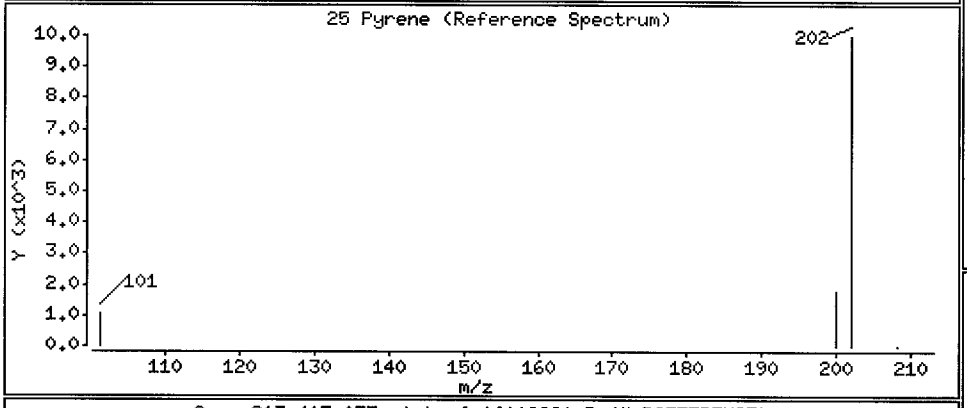
Concentration: 1570 ug/kg

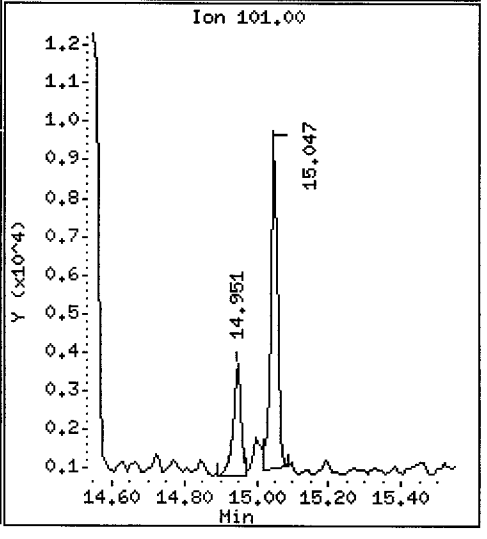


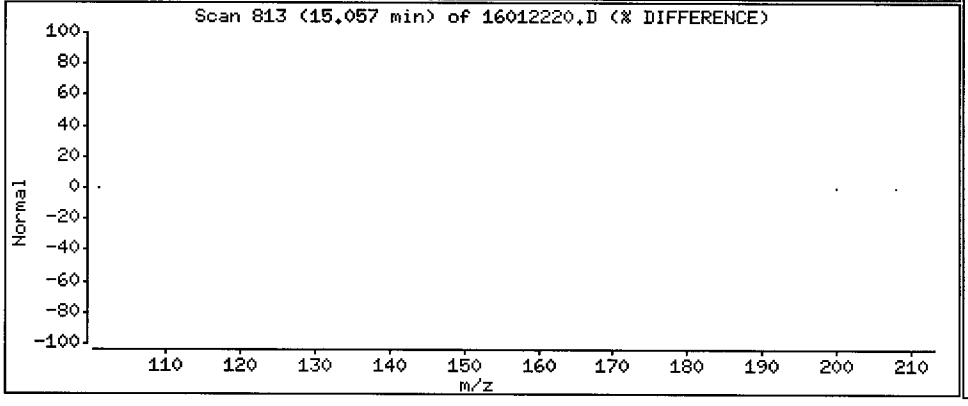












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

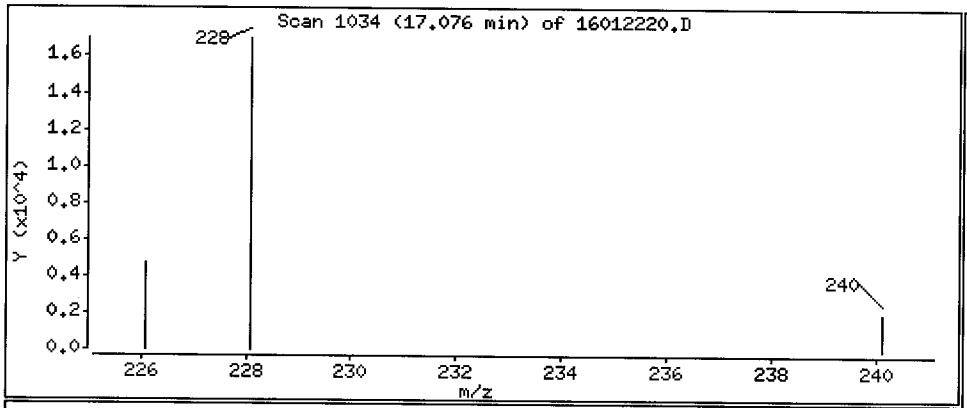
Operator: JW

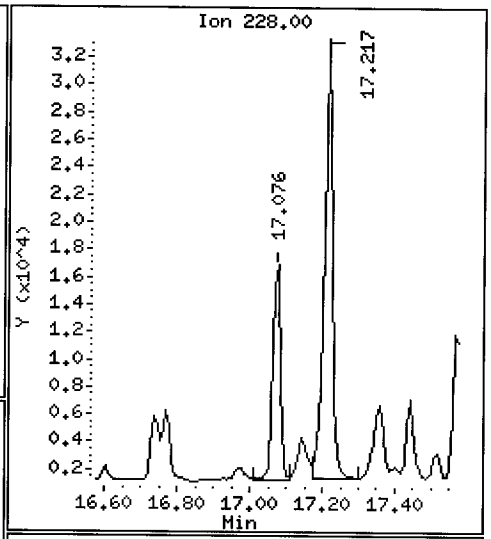
Column phase: Rxi-17Sil MS

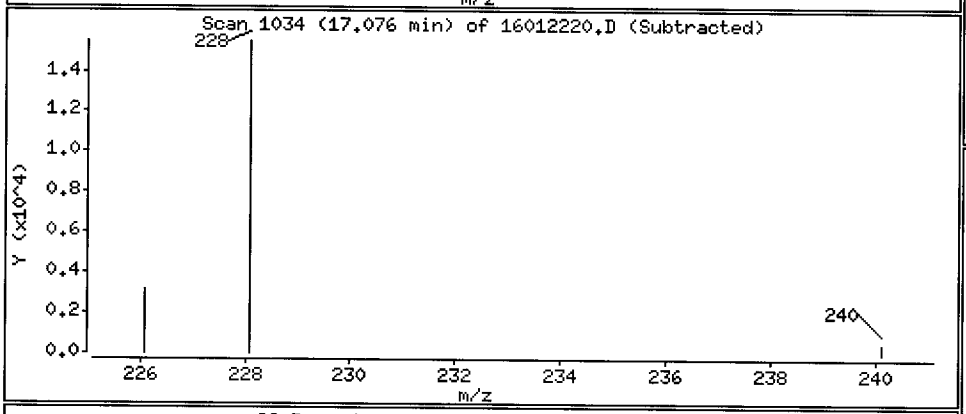
Column diameter: 0.25

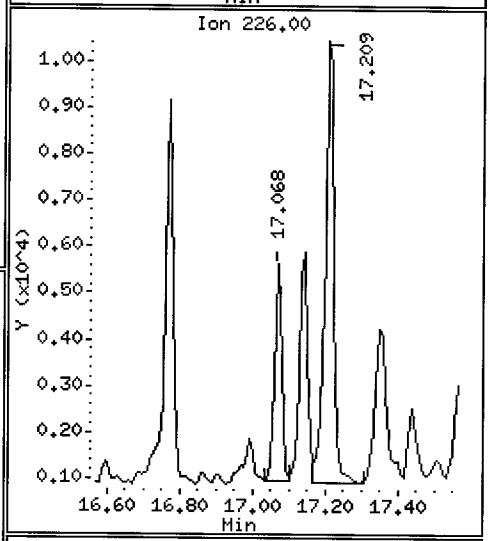
28 Benzo(a)anthracene

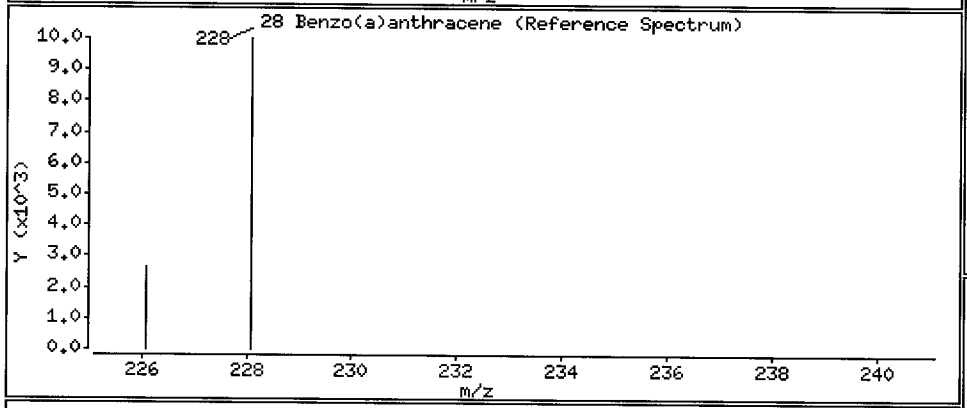
Concentration: 514 ug/kg

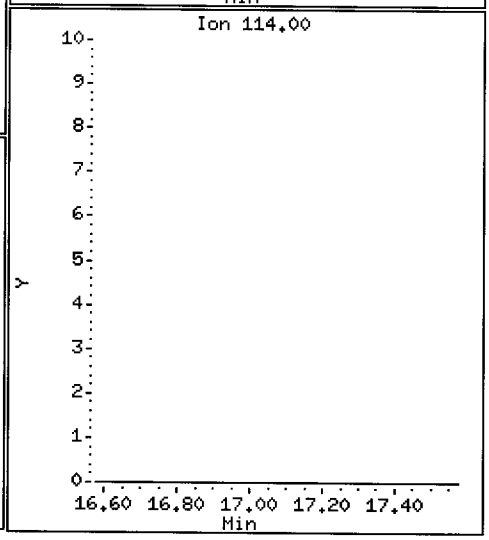


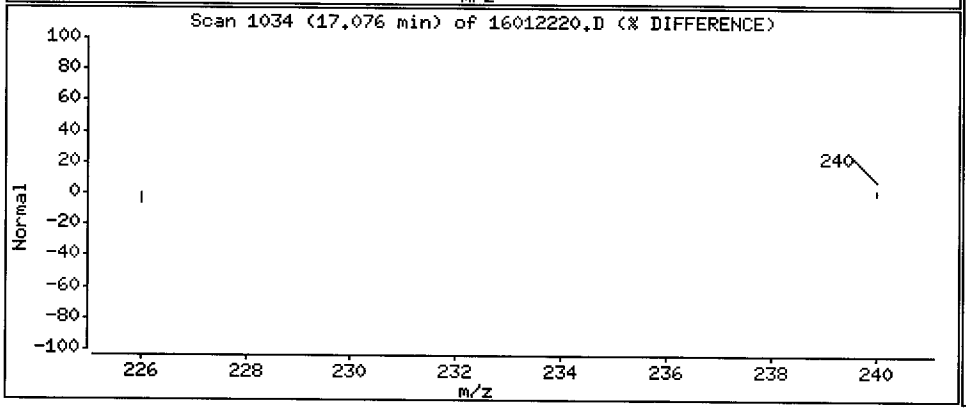












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

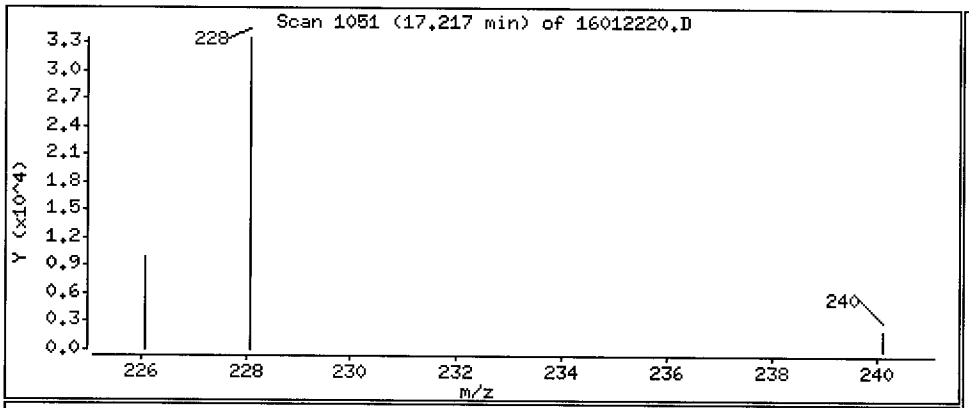
Operator: JW

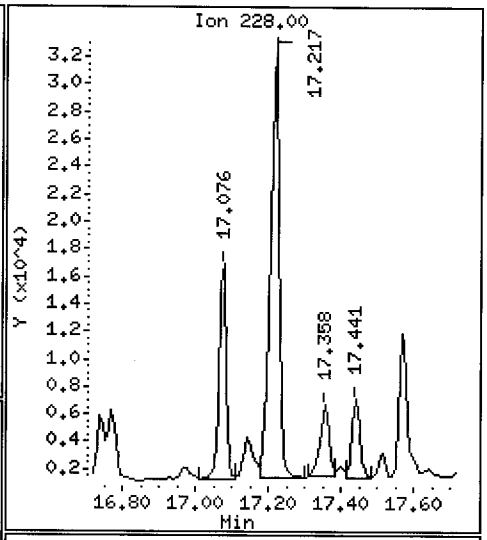
Column phase: Rxi-17Sil MS

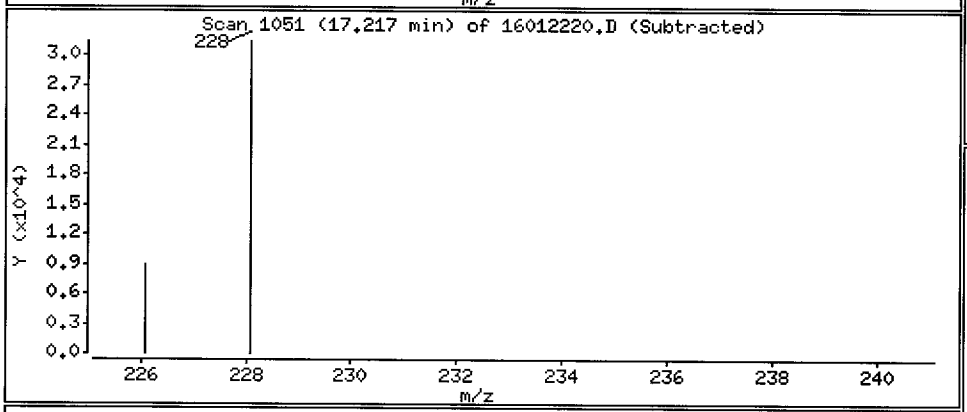
Column diameter: 0.25

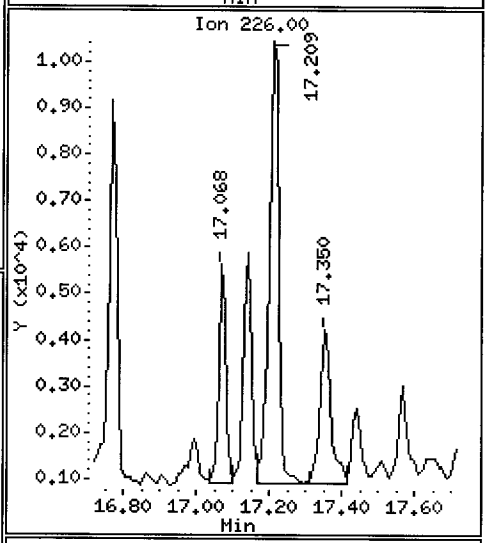
30 Chrysene

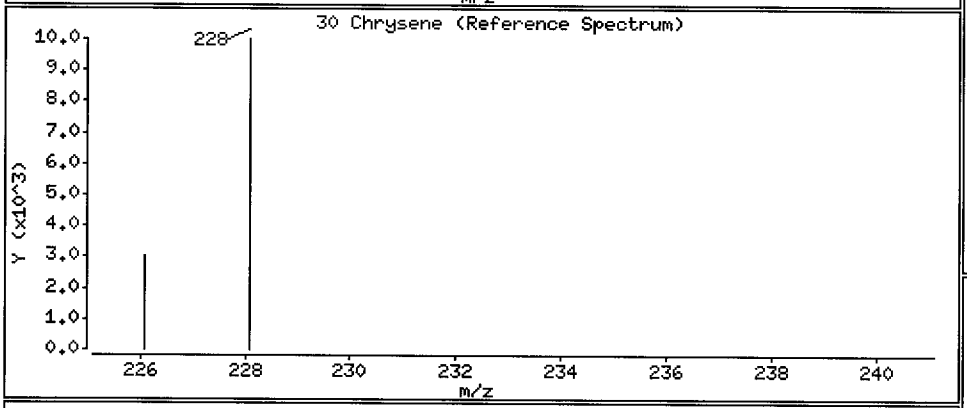
Concentration: 1090 ug/kg

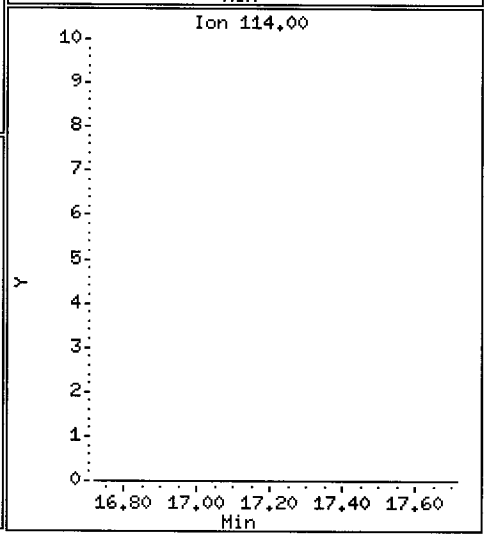


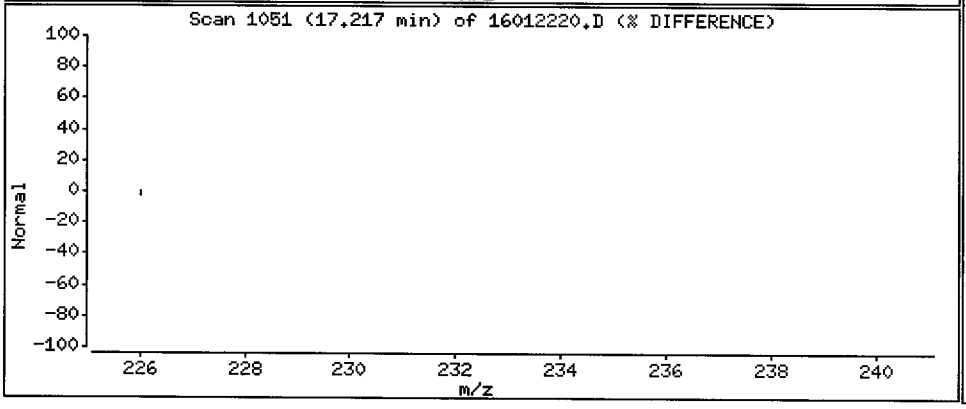












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

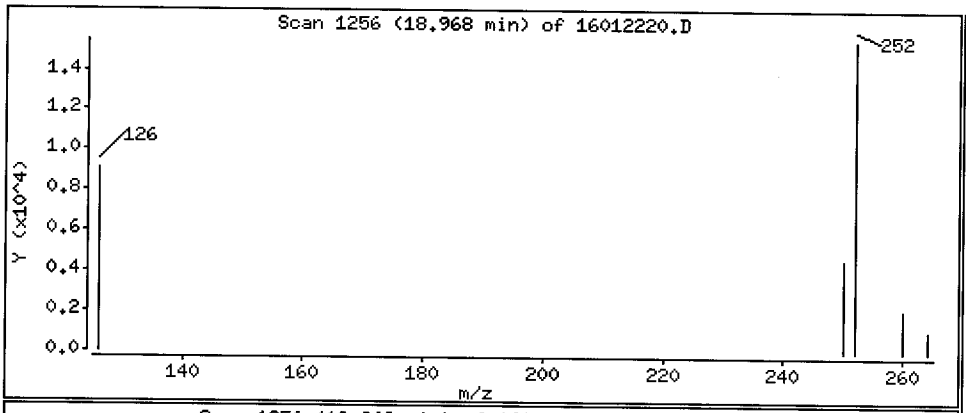
Operator: JW

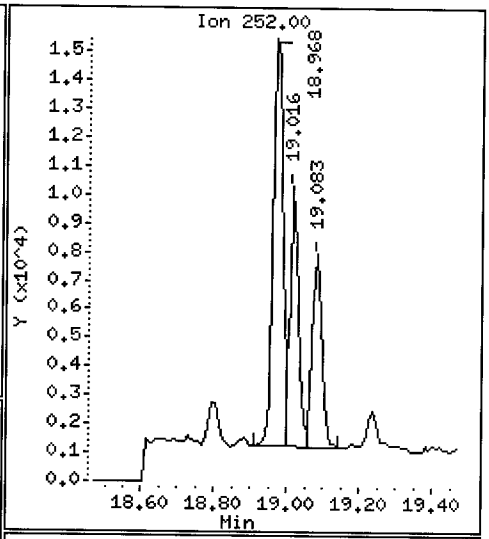
Column phase: Rxi-17Sil MS

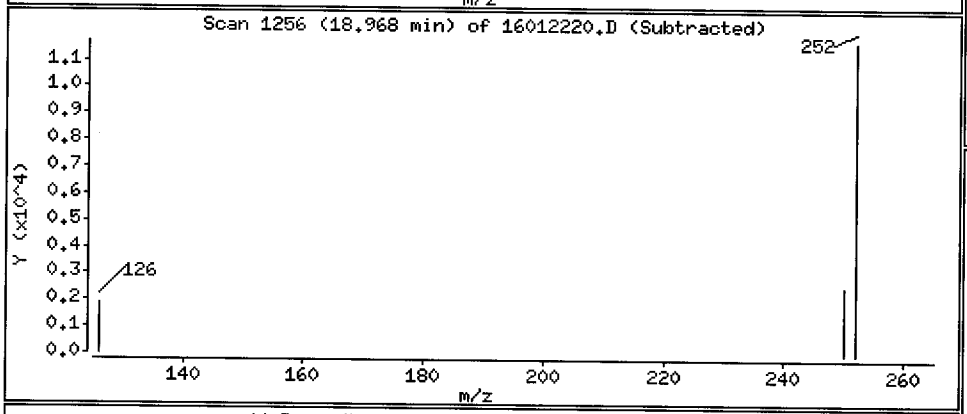
Column diameter: 0.25

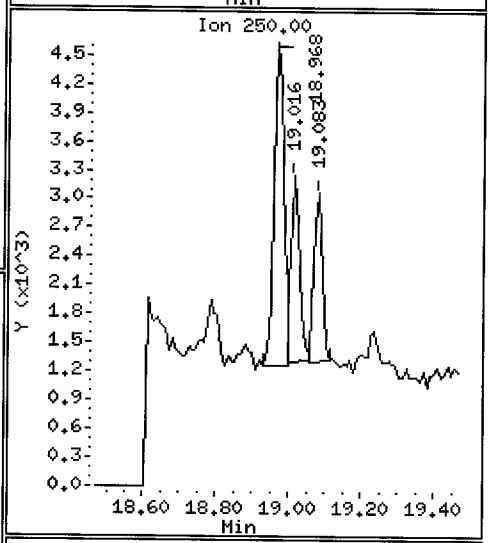
44 Benzo(b)fluoranthene

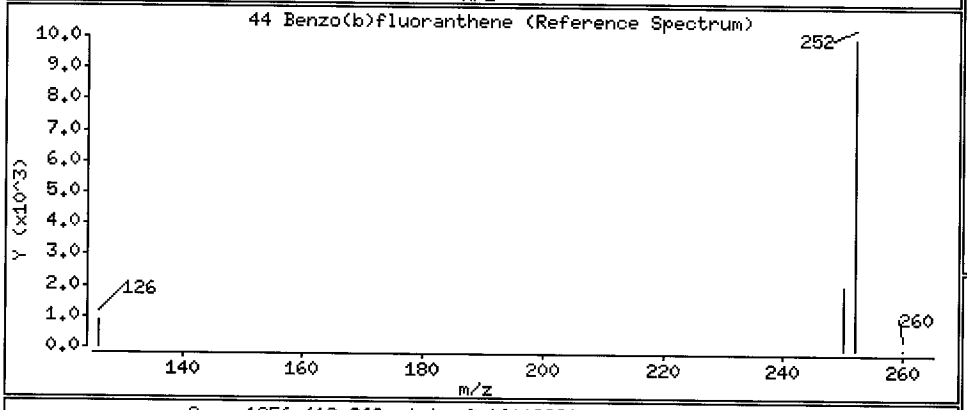
Concentration: 595 ug/kg

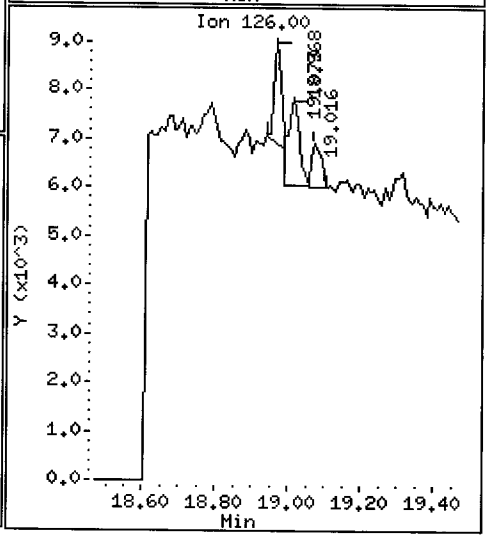


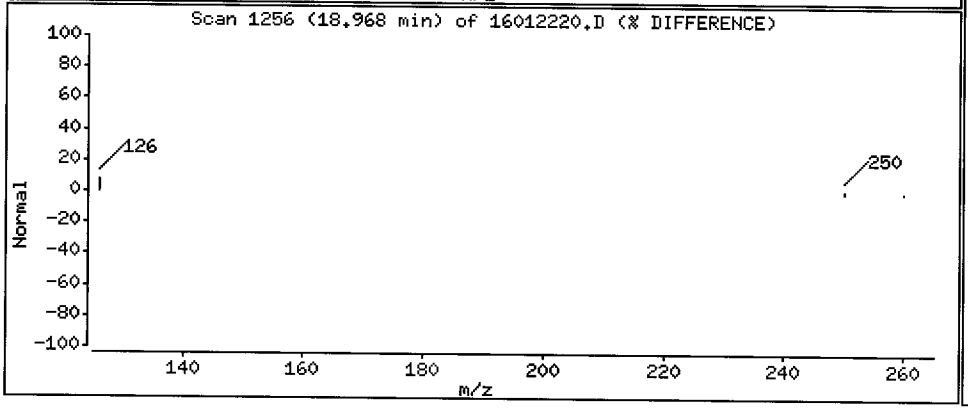












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

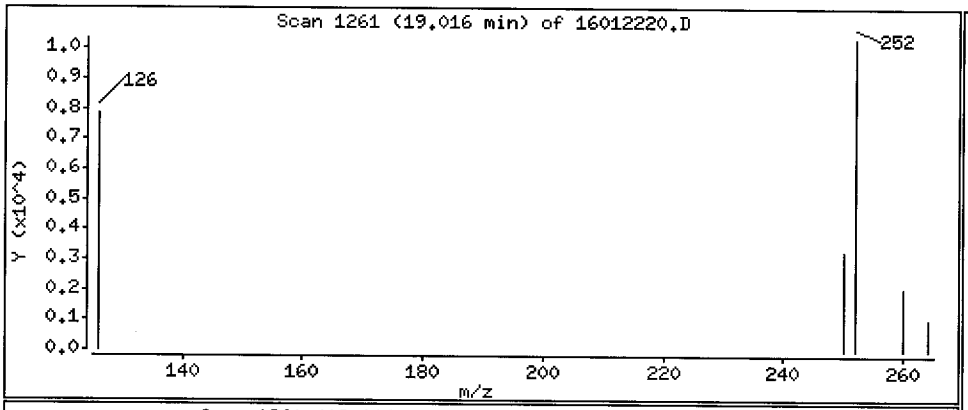
Operator: JW

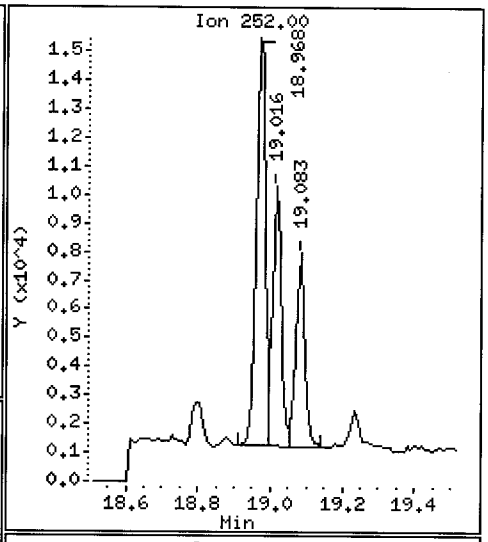
Column phase: Rxi-17Sil MS

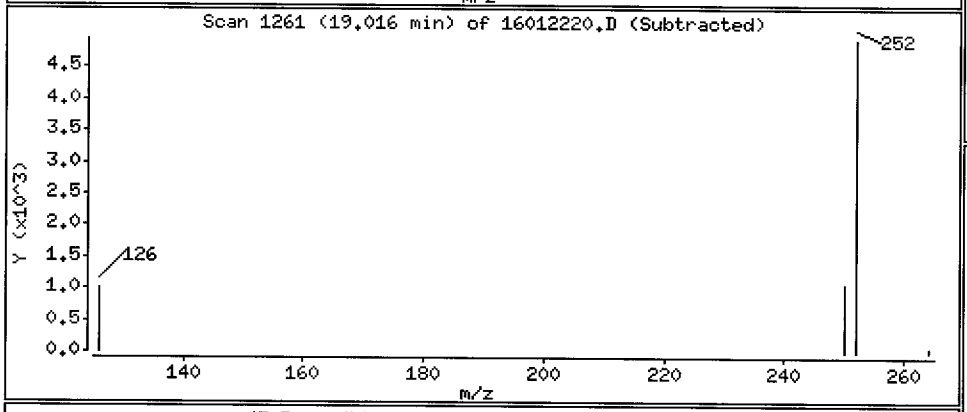
Column diameter: 0.25

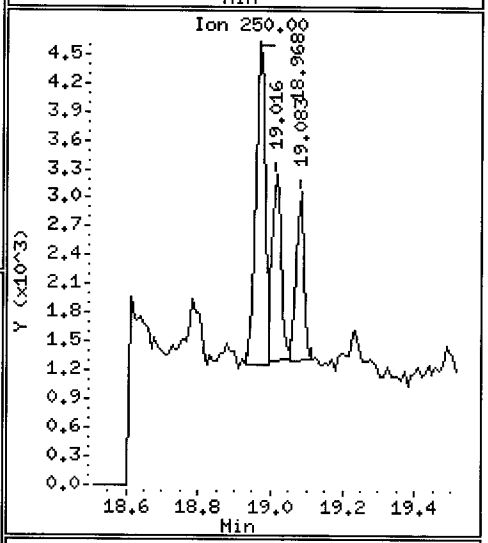
45 Benzo(k)fluoranthene

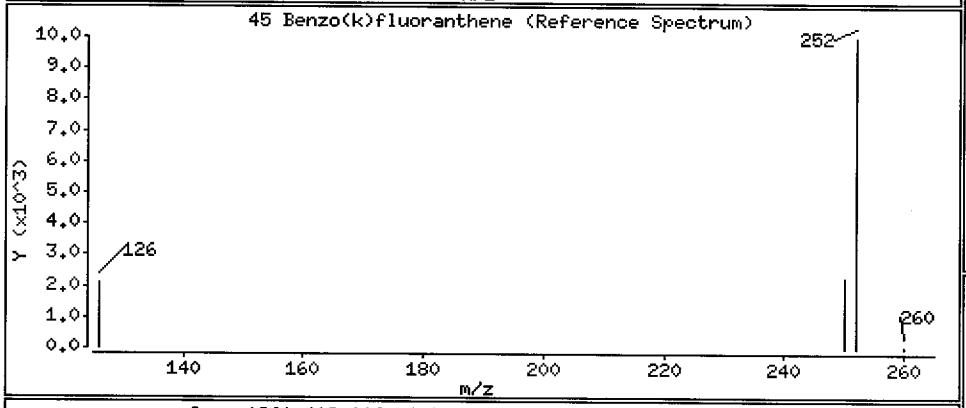
Concentration: 314 ug/kg

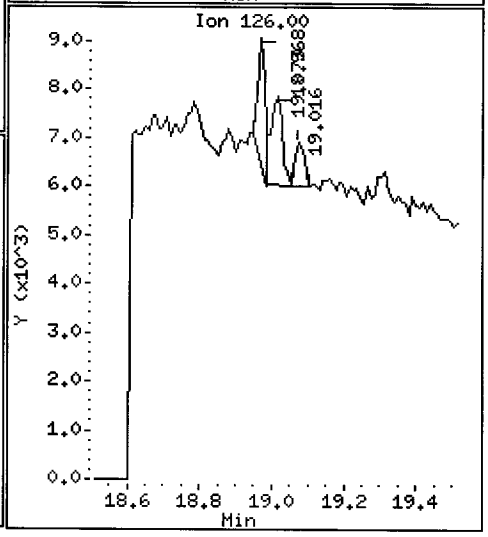


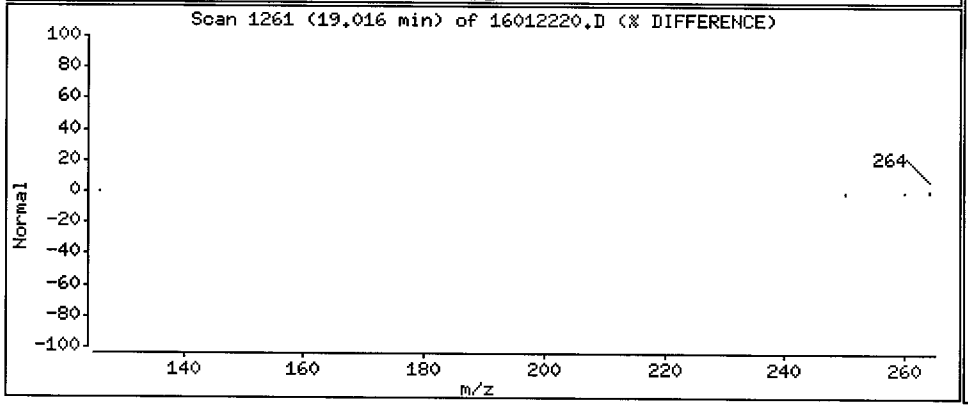












Data File: \\target\share\chem3\nt11.i\20160122.b\16012220.D

Date : 22-JAN-2016 17:00

Client ID: 13CPS_DB-MTW01Z

Instrument: nt11.i

Sample Info: AUA2B

Volume Injected (uL): 2.0

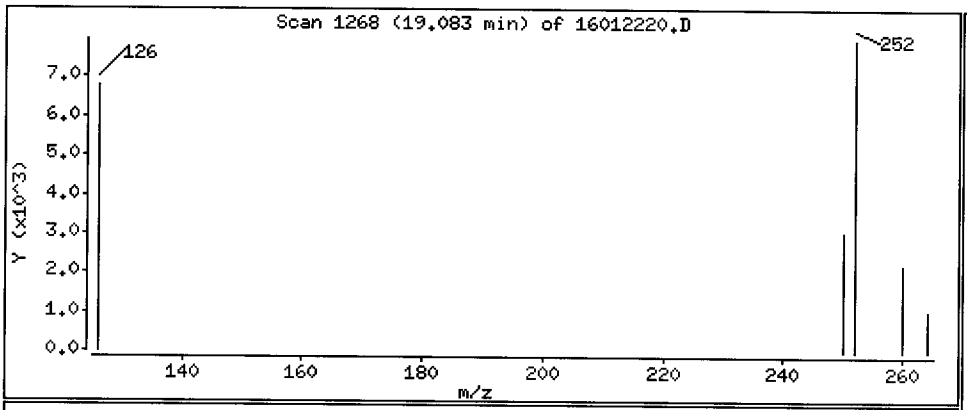
Operator: JW

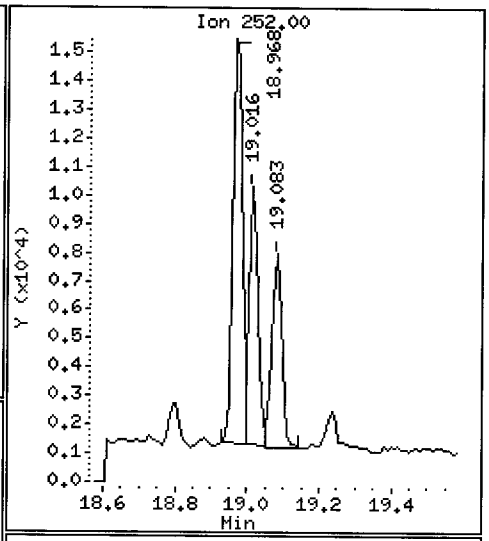
Column phase: Rxi-17Sil MS

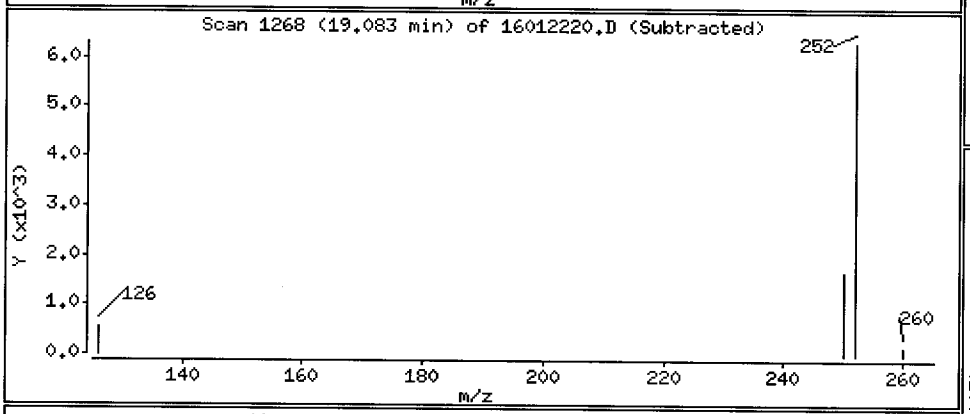
Column diameter: 0.25

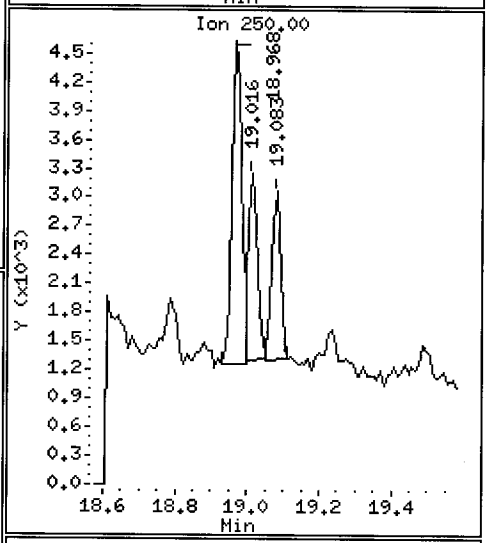
46 Benzo(j)fluoranthene

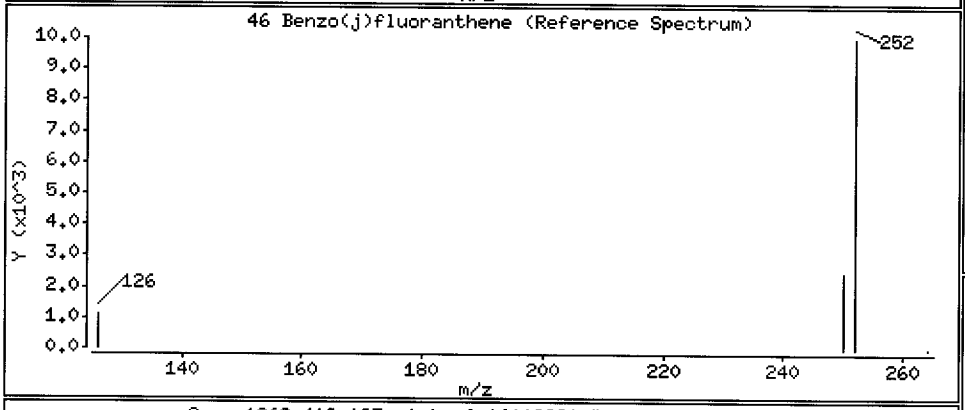
Concentration: 260 ug/kg

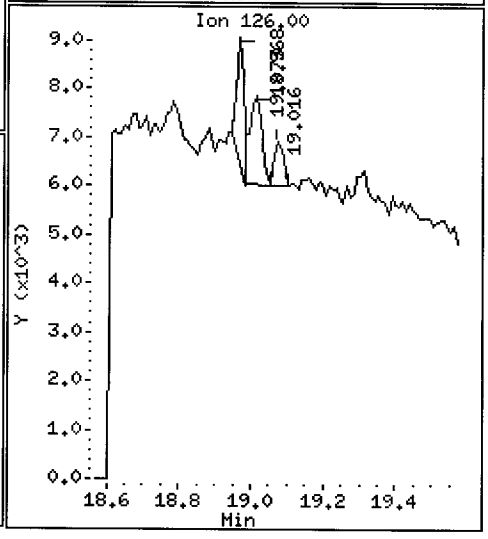


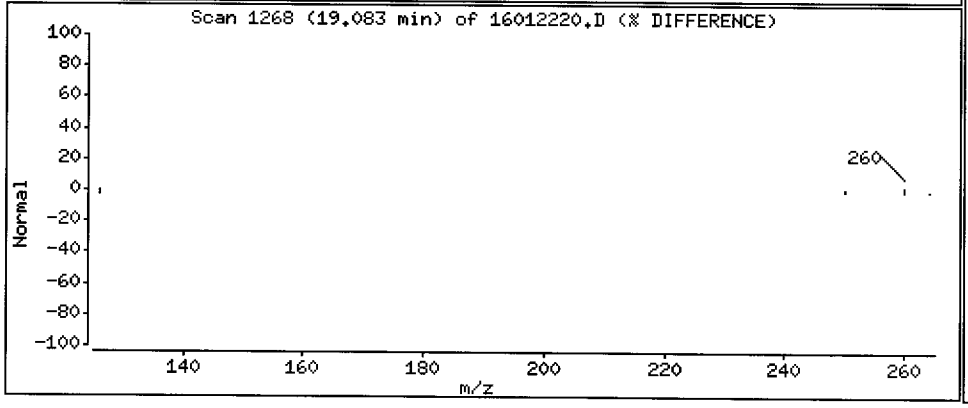












REVIEW SUMMARY FOR FILE - 16012220.D

Lab ID: AUA2B
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 17:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012221.D
Lab Smp Id: AUA2C Client Smp ID: 13NPS_CIAR2-MTW01Z
Inj Date : 22-JAN-2016 17:30 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : AUA2C
Misc Info : 16-420
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.010	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.723	6.744	(1.000)	382765	200.000	
	5 Naphthalene	128	6.765	6.776	(1.006)	29156	13.1873	659
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.147)	216825	152.615	7620
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.745	9.744	(1.000)	270341	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	435855	200.000	
	19 Phenanthrene	178	12.457	12.468	(1.003)	34910	13.2942	664
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	433395	180.812	9030
	24 Fluoranthene	202	14.557	14.557	(1.172)	39564	15.0067	750
	25 Pyrene	202	15.047	15.057	(0.877)	29711	11.5992	579
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	323444	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
46	Benzo(j)fluoranthene	252	Compound Not Detected.					
34	Benzo(a)pyrene	252	Compound Not Detected.					
* 35	Perylene-d12	264	20.063	20.062	(1.000)	326352	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	262898	199.587	9970
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	Compound Not Detected.					
47	Perylene	252	Compound Not Detected.					
48	Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012221.D
Lab Smp Id: AUA2C
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-420

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: 13NPS_CIAR2-MTW
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	382765	16.73
11 Acenaphthene-d10	239179	119590	478358	270341	13.03
18 Phenanthrene-d10	372253	186127	744506	435855	17.09
29 Chrysene-d12	294711	147356	589422	323444	9.75
35 Perylene-d12	260595	130298	521190	326352	25.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.72	-0.31
11 Acenaphthene-d10	9.74	9.24	10.24	9.75	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

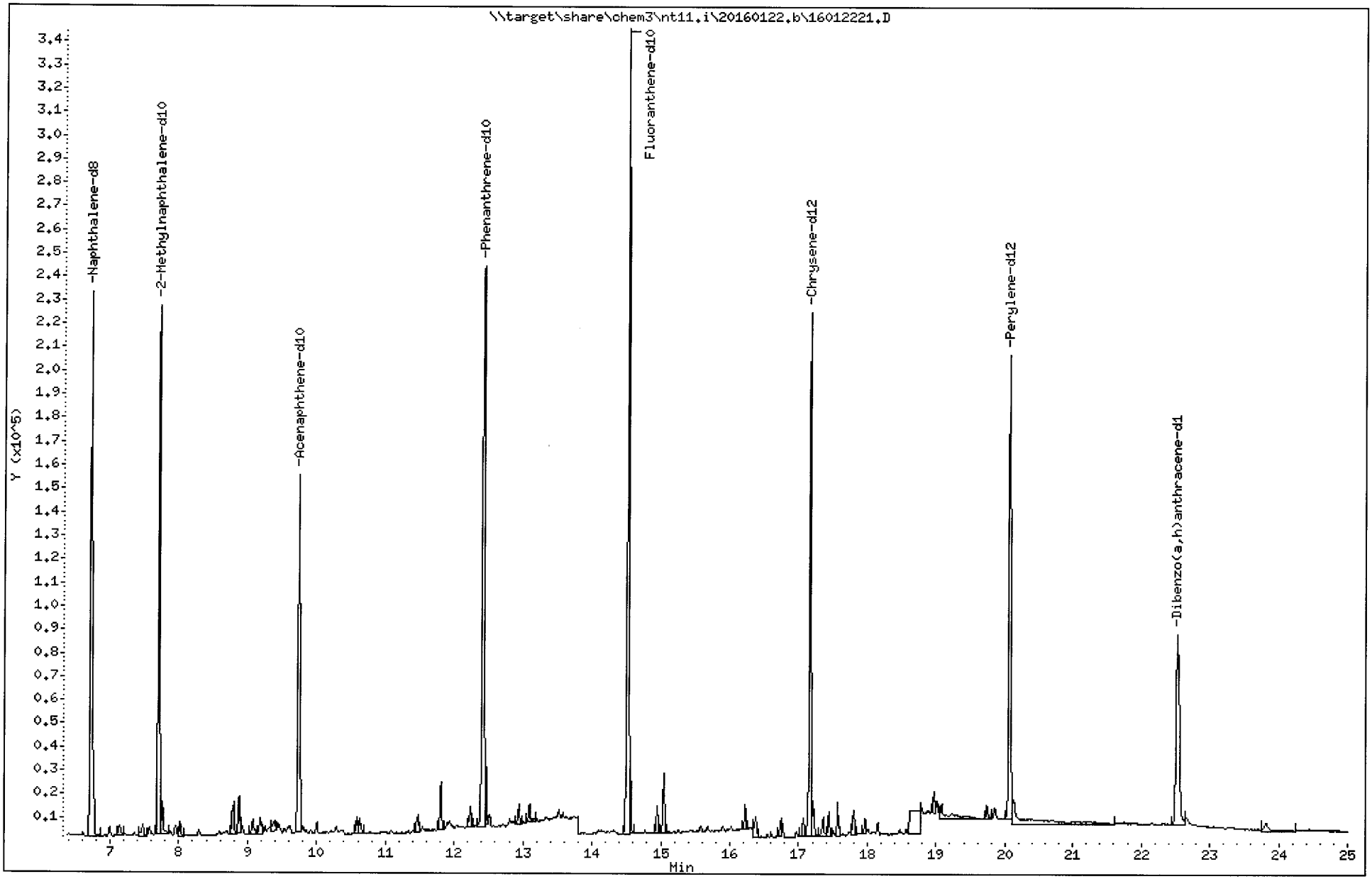
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: AUA2C
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-420

Client SDG: AUA2
Fraction: SV
Client Smp ID: 13NPS_CIAR2-MTW01Z
Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7620	50.87	30-160
$ 23 Fluoranthene-d10	15000	9030	60.27	30-160
$ 36 Dibenzo(a,h)anthra	15000	9970	66.53	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012221.D
Date : 22-JAN-2016 17:30
Client ID: 13NPS_CIAR2-MTW01Z
Sample Info: AUA2C
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20160122.b\16012221.D

Date : 22-JAN-2016 17:30

Client ID: 13NPS_CIAR2-MTW01Z

Instrument: nt11.i

Sample Info: AUA2C

Volume Injected (uL): 2.0

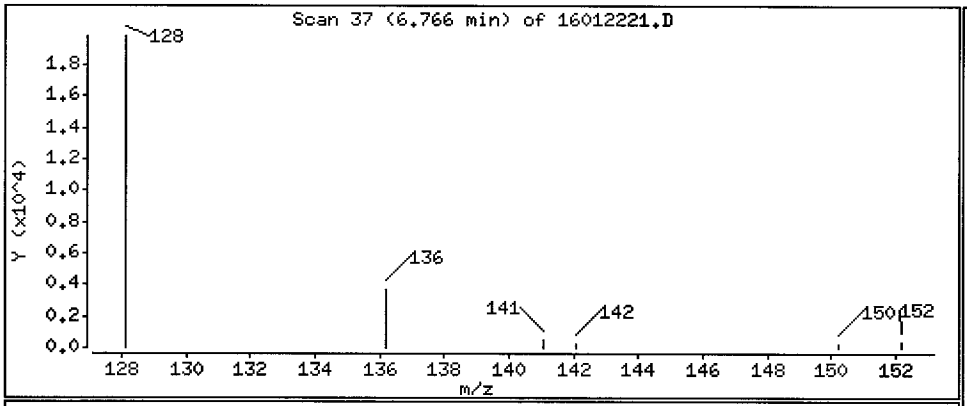
Operator: JW

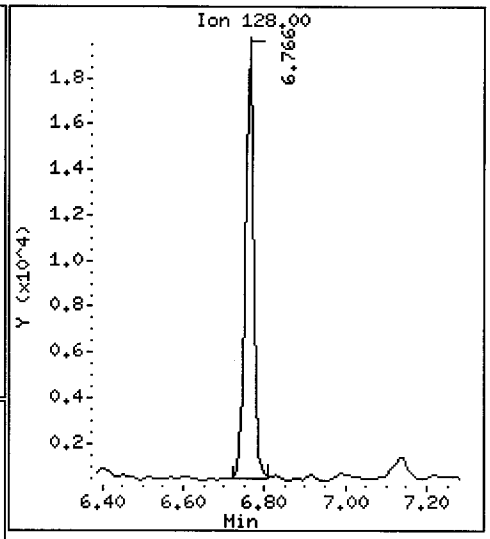
Column phase: Rxi-17Sil MS

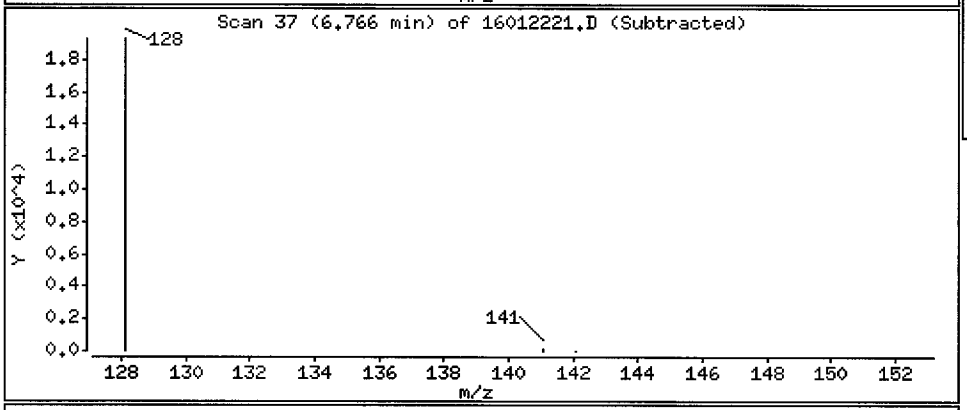
Column diameter: 0.25

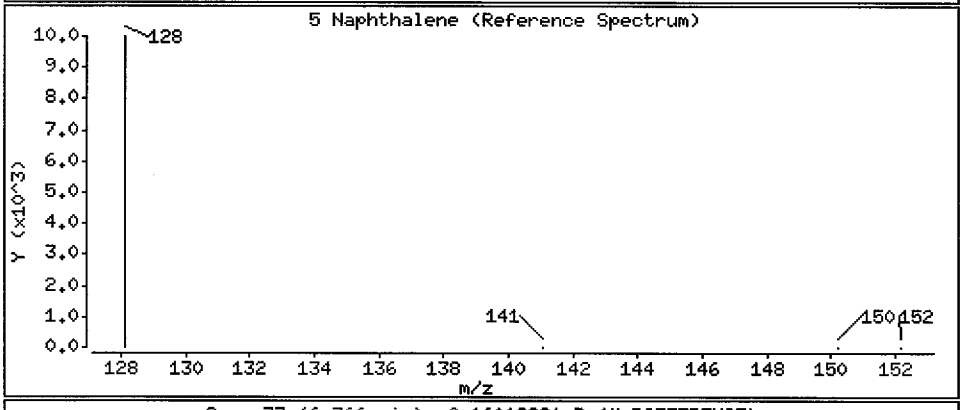
5 Naphthalene

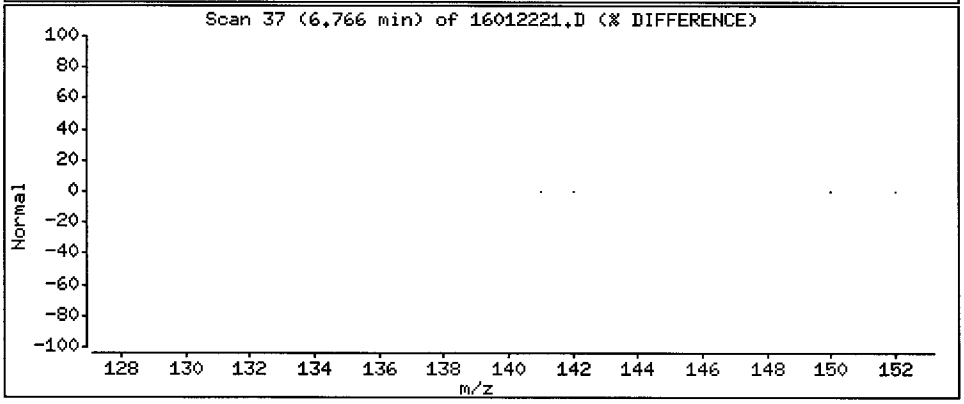
Concentration: 659 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012221.D

Date : 22-JAN-2016 17:30

Client ID: 13NPS_CIAR2-MTW01Z

Instrument: nt11.i

Sample Info: AUA2C

Volume Injected (uL): 2.0

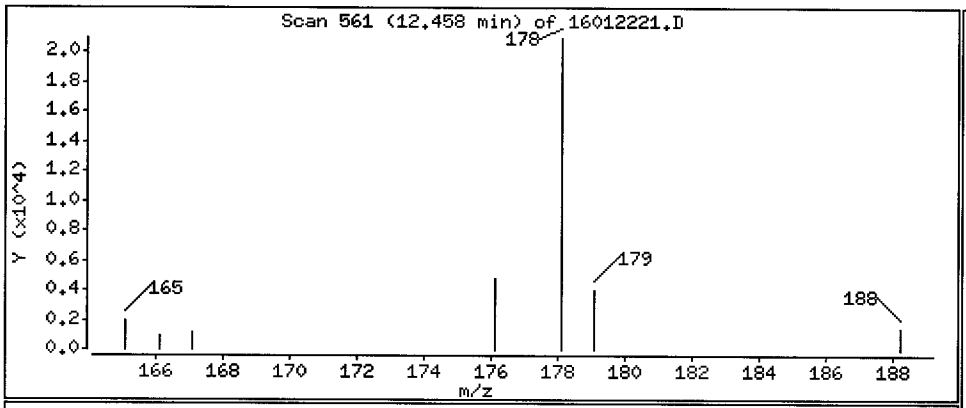
Operator: JW

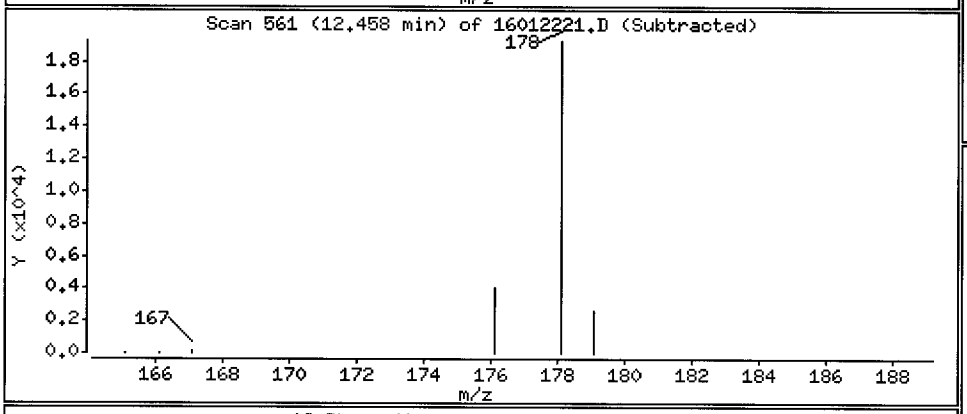
Column phase: Rxi-17Sil MS

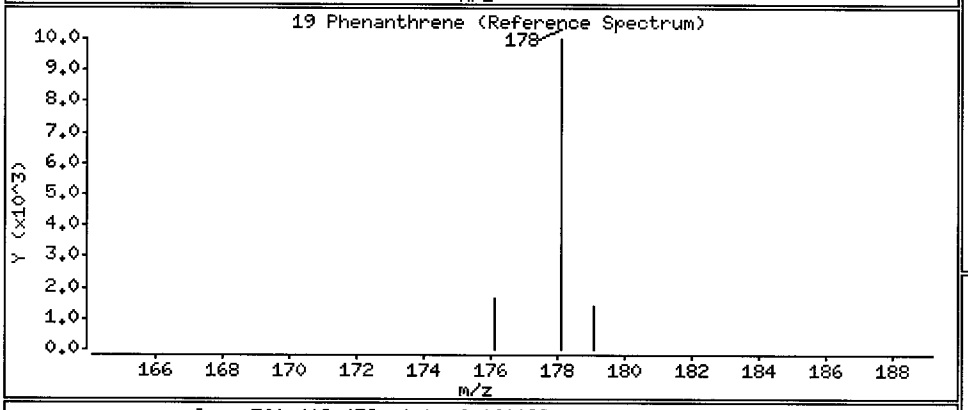
Column diameter: 0.25

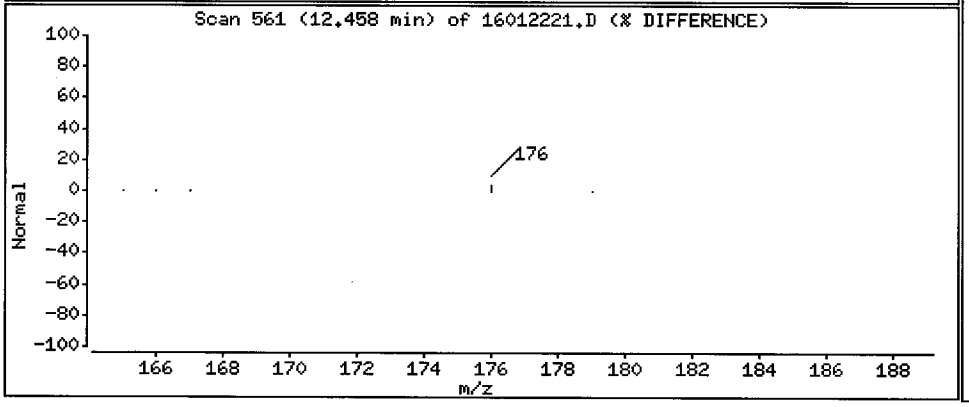
19 Phenanthrene

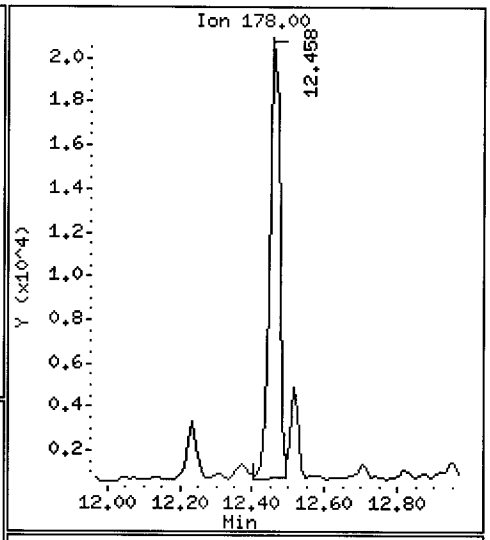
Concentration: 664 ug/kg

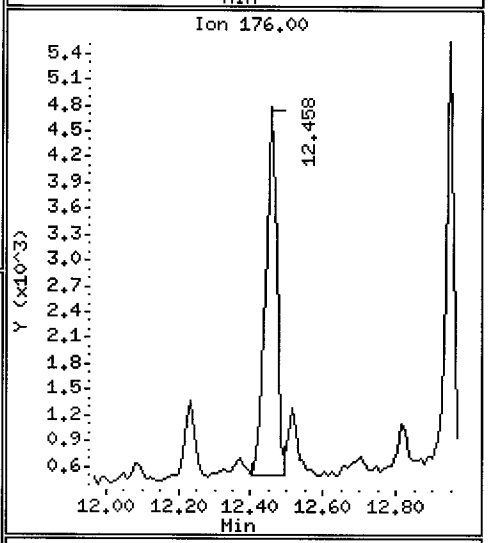


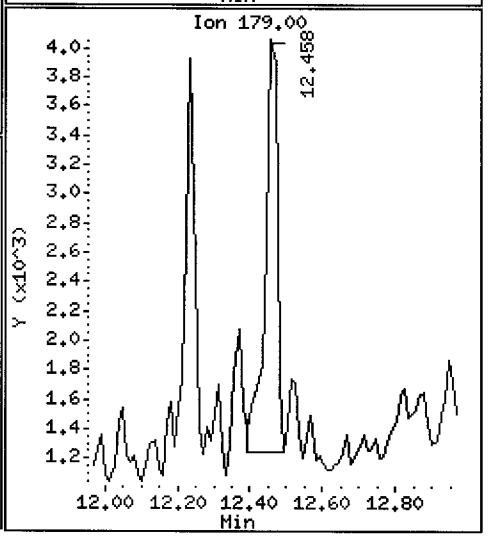












Data File: \\target\share\chem3\nt11.i\20160122.b\16012221.D

Date : 22-JAN-2016 17:30

Client ID: 13NPS_CIAR2-MTW01Z

Instrument: nt11.i

Sample Info: AUA2C

Volume Injected (uL): 2.0

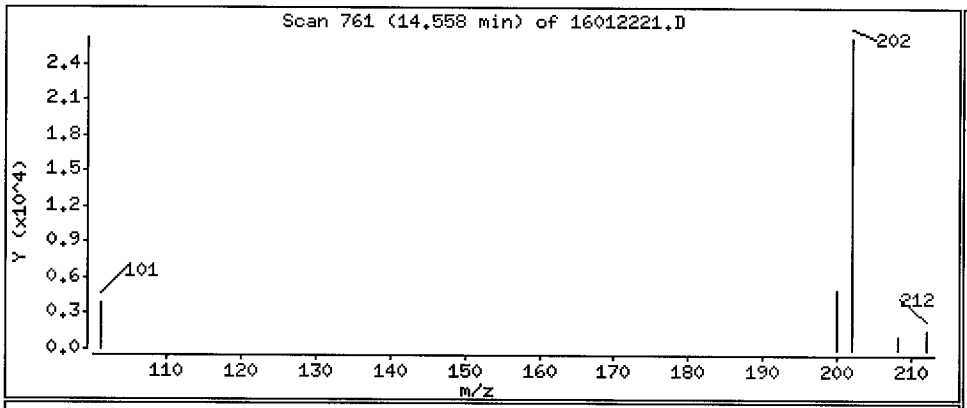
Operator: JW

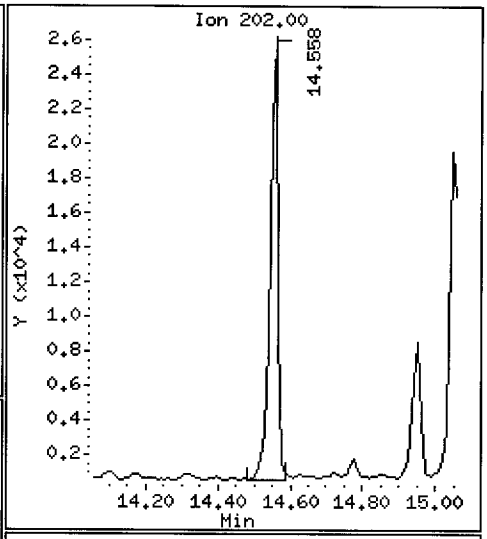
Column phase: Rxi-17Sil MS

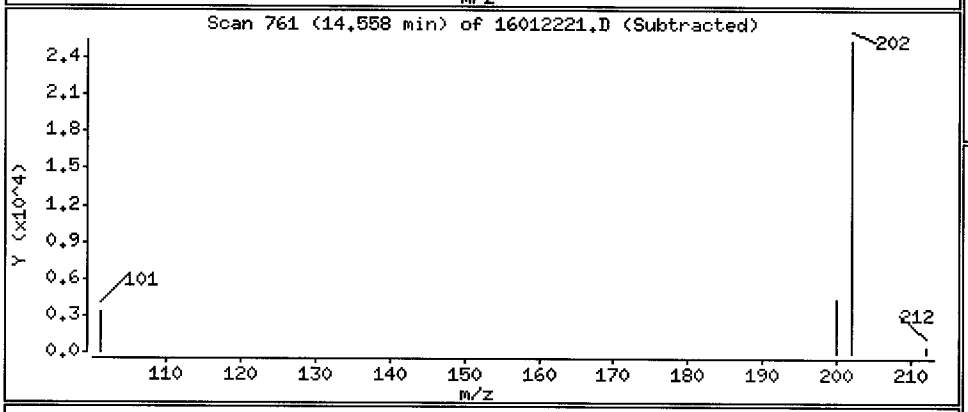
Column diameter: 0.25

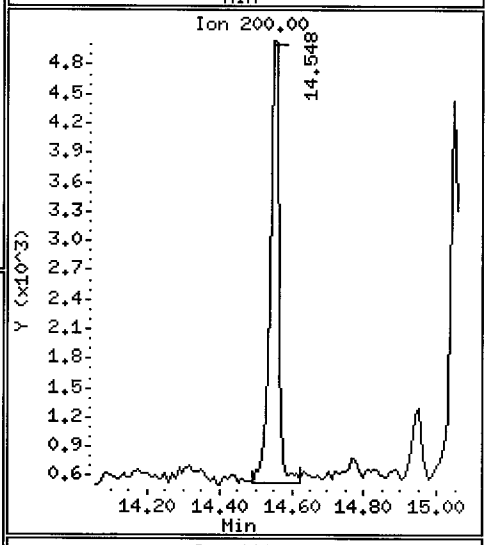
24 Fluoranthene

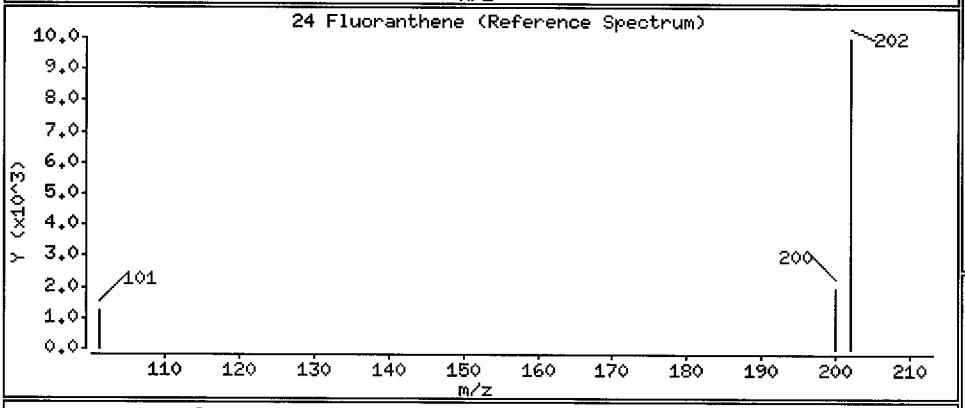
Concentration: 750 ug/kg

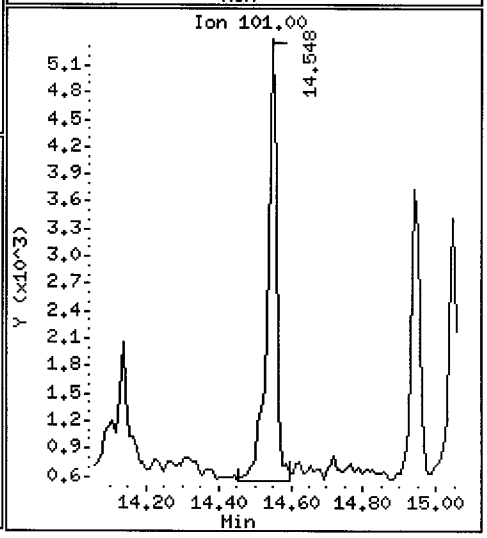


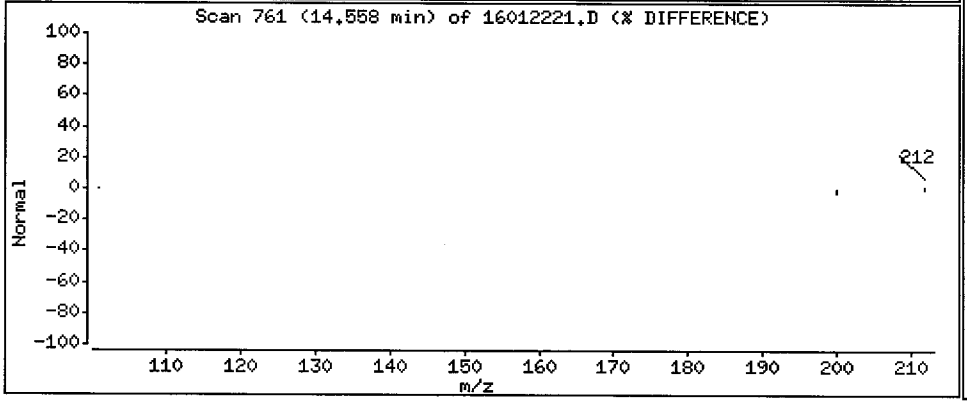












Data File: \\target\share\chem3\nt11.i\20160122.b\16012221.D

Date : 22-JAN-2016 17:30

Client ID: 13NPS_CIAR2-MTW01Z

Instrument: nt11.i

Sample Info: AUA2C

Volume Injected (uL): 2.0

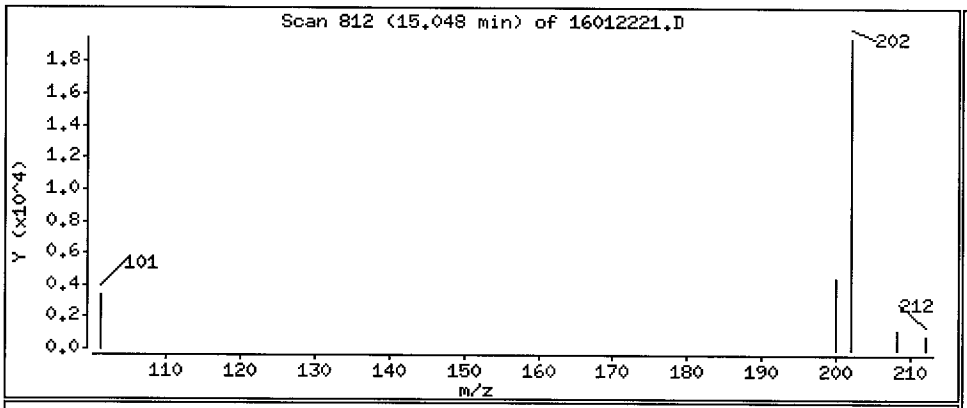
Operator: JW

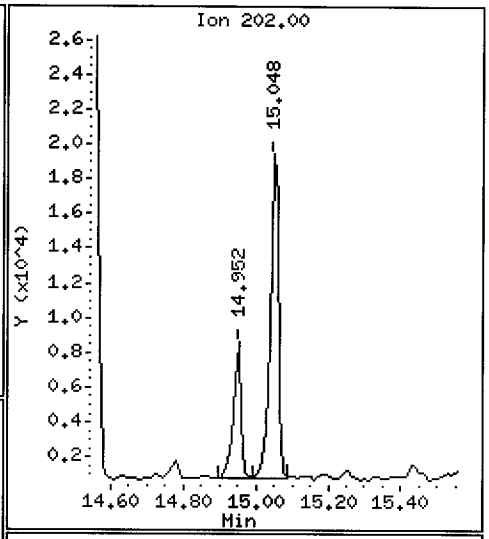
Column phase: Rxi-17Sil MS

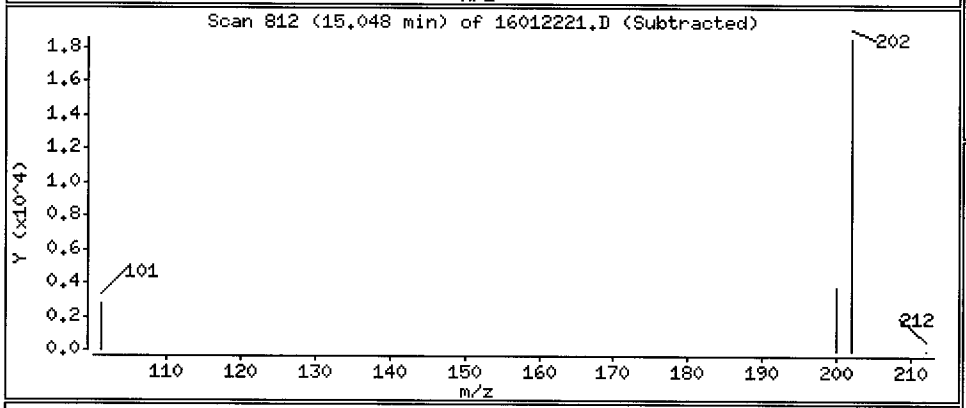
Column diameter: 0.25

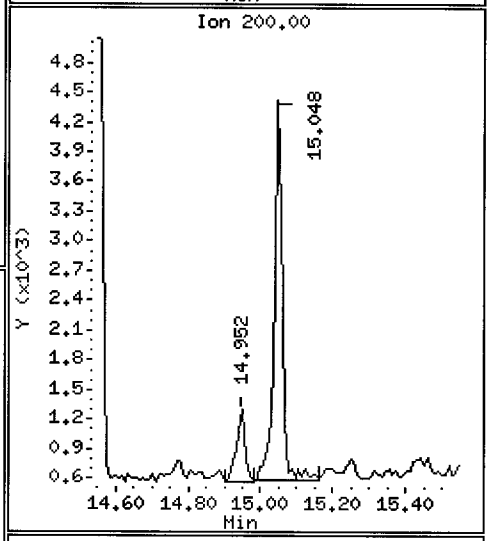
25 Pyrene

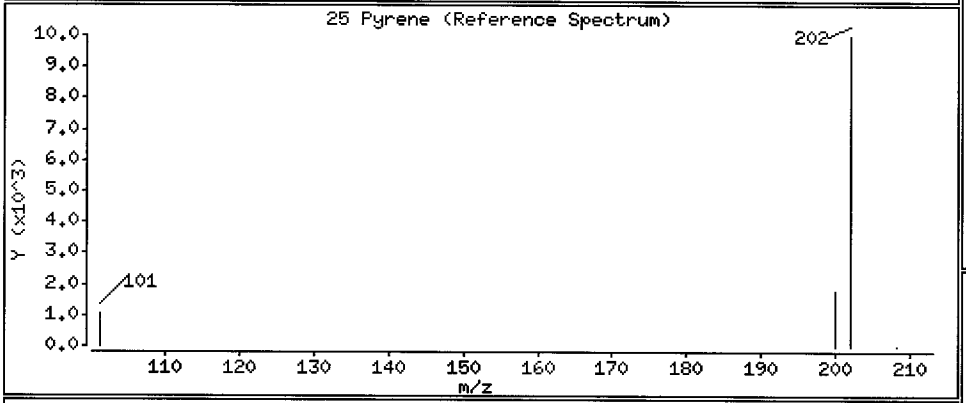
Concentration: 579 ug/kg

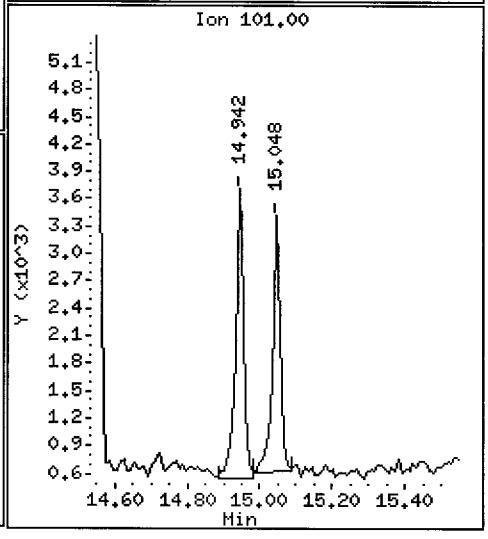


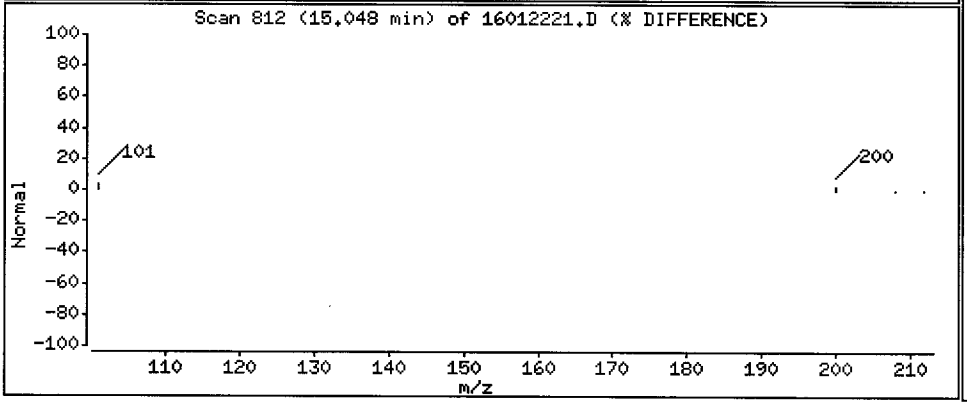












REVIEW SUMMARY FOR FILE - 16012221.D

Lab ID: AUA2C
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 17:30

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 1/25/16 Analysis: lowPAH Analyst: JW

GC Program: lowsim Column No: D0017216 Column Type: Rxi-17Silms

Instrument Tune (.U or .CT.): 150115.U EM Voltage: 1847

Calibration File: _____ Cali Code: ZA00015 Injection Vol.: 2uL

IS/SS

D0028335

Ical/Ccal

D004412

D005206

LCS/ICV

D004410

Document All Maintenance Tasks In Element

	Time	Filename	LabID	ClientId	DF								
1	0724	16012501.D	TUNE 10		1	NO ISTDS FOUND							
2	0741	16012502.D	LLPAH ICV		1	6.74	325085	9.74	248090	12.42	417430	17.17	308246	20.07	302521
3	0833	16012503.D	RINSE		1	6.71	320668	9.72	250444	12.40	417494	17.14	323408	20.02	307973
4	0857	16012504.D	TUNE 10		1	NO ISTDS FOUND							
5	0914	16012505.D	LLPAH ICV		1	6.71	356051	9.71	264524	12.38	444949	17.12	343139	20.01	319277
6	1029	16012506.D	LLPAH 10		1	6.71	299647	9.71	215219	12.38	354756	17.12	265268	20.01	241293
7	0959	16012507.D	LLPAH 50		1	6.71	294064	9.72	216442	12.38	363731	17.13	271481	20.01	252038
8	1129	16012508.D	LLPAH 100		1	6.71	299208	9.71	220557	12.38	361305	17.12	281219	20.00	254071
9	1059	16012509.D	LLPAH 500		1	6.71	303314	9.71	228389	12.38	374517	17.12	290179	20.01	266991
10	1200	16012510.D	LLPAH 1000		1	6.71	309113	9.71	227974	12.38	372441	17.12	295350	20.00	273271
11	1230	16012511.D	LLPAH SCV		1	6.71	297375	9.71	218000	12.38	349233	17.12	282390	20.00	252294
12	1300	16012512.D	AUA2A	13EB_ME-MTW0	10	6.70	301571	9.71	210363	12.38	345651	17.12	257794	20.00	243887
13	1331	16012513.D	AUA2B	13CPS_DB-MTW	1	6.70	425584	9.71	318975	12.38	533038	17.12	418862	20.00	423970
14	1401	16012514.D	AUA2C	13NPS_CIAR2-	1	6.70	283944	9.71	214913	12.37	368648	17.12	288963	20.00	288350
15	1432	16012515.D	LLPAH CCV		1	6.71	312072	9.71	248822	12.38	422923	17.12	330299	20.00	314395

AW

1/26/16

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

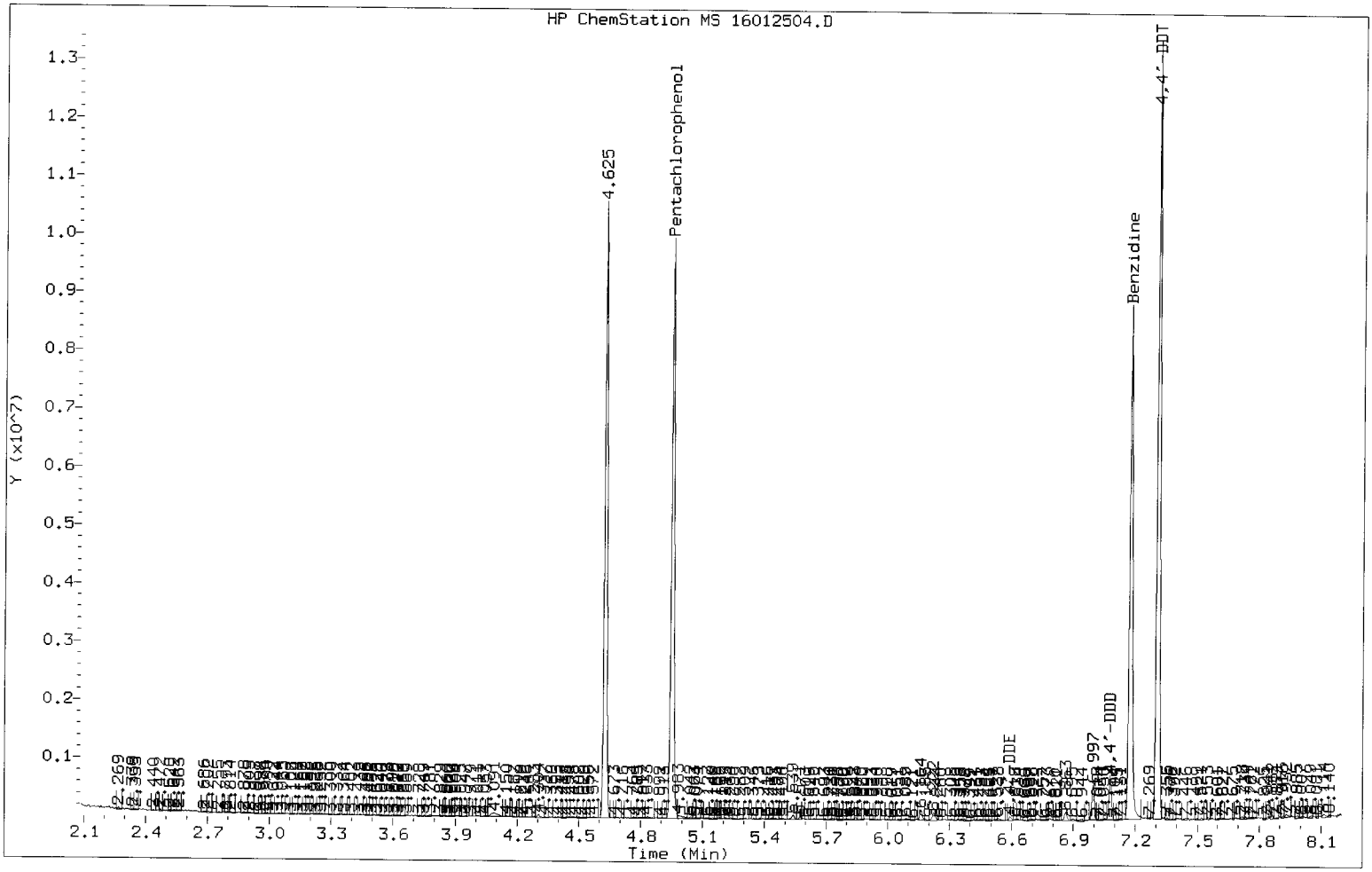
MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160125.b

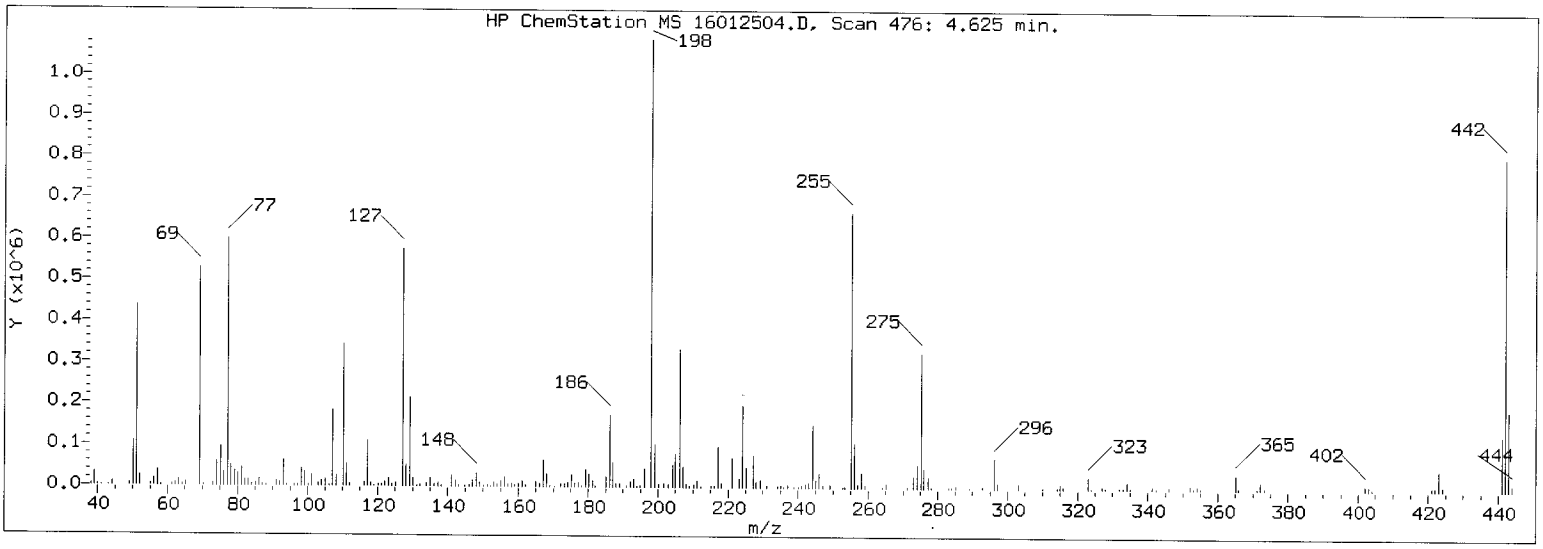
ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 25-JAN-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0857	16012504.D	TUNE 10		1	NO MANUAL INTEGRATION
0914	16012505.D	LLPAH ICV		1	NO MANUAL INTEGRATION
1300	16012512.D	AUA2A	13EB_ME-MT	10	NO MANUAL INTEGRATION
1432	16012515.D	LLPAH CCV		1	NO MANUAL INTEGRATION

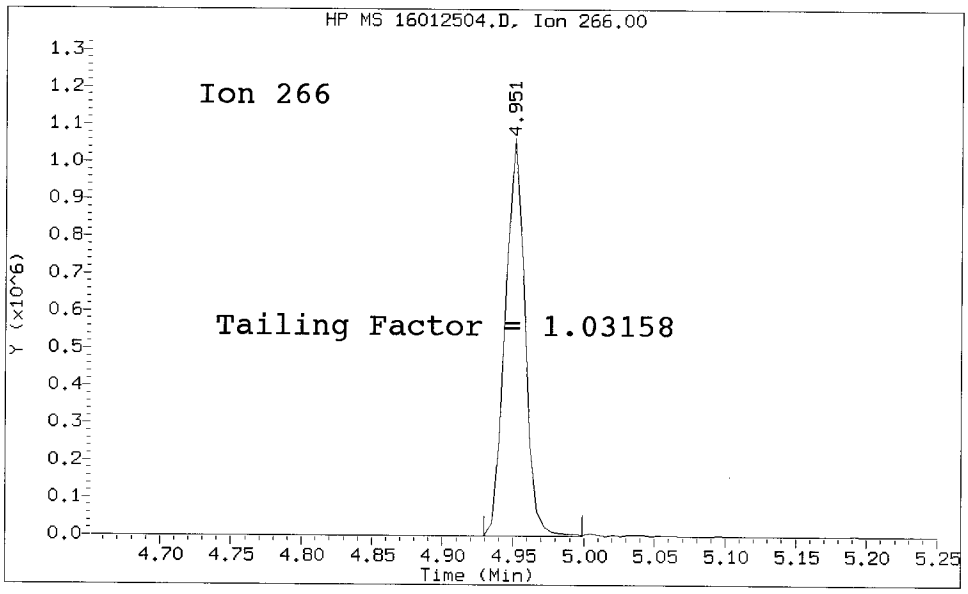
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160125.b/16012504.D/16012504.D
Method Used: \20160125.b\DFTPP.m Inst: nt11
Injection Date: 25-JAN-2016 08:57 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 01/25/2016 09:09



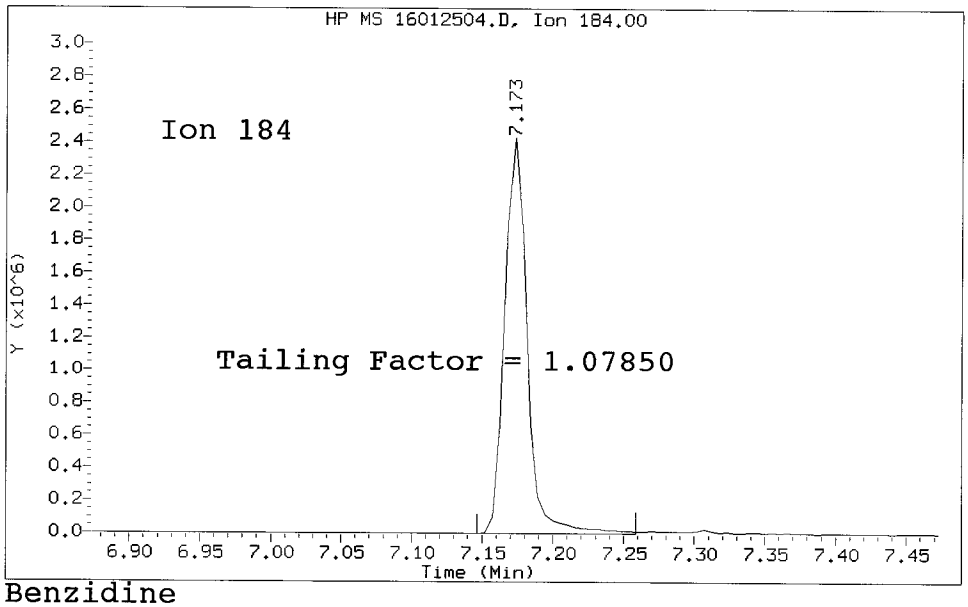


Datafile Analyzed: /20160125.b/16012504.D/16012504.D
Method Used: \20160125.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 25-JAN-2016 08:57 Operator: JR
Sample Info: TUNE 10
Report Date: 01/25/2016 09:09



Pentachlorophenol
==========
Exp. RT = 4.993
Found RT = 4.951

Tail Factor = 1.032 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.221
Found RT = 7.173

Tail Factor = 1.078 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.45
68	Less than 2.00% of mass 69	0.37 (0.81)
69	Mass 69 relative abundance	45.57
70	Less than 2.00% of mass 69	0.29 (0.63)
127	10.00 - 80.00% of mass 198	50.81
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.74
275	10.00 - 60.00% of mass 198	28.48
365	Greater than 1.00% of mass 198	2.89
441	0.01 - 24.00% of mass 442	12.40 (16.41)
442	50.00 - 200.00% of mass 198	75.54
443	15.00 - 24.00% of mass 442	16.39 (21.69)

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.0315789	2.000	PASS
Benzidine	1.0784983	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1860276			N/A
4,4-DDE	8198	0.4	20.0	PASS
4,4-DDD	124298	6.3	20.0	PASS
4,4-DDD + DDE	132496	6.6	20.0	PASS

Tuning Sample, nt11.i/20160125.b/16012504.D, *** PASSED ***

Data File: 16012504.D
Spectrum: Avg. Scans 475-477 (4.63), Background Scan 470
Location of Maximum: 198.00
Number of points: 244

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	3649	120.00	2093	189.00	6588	273.00	16744
39.00	23416	121.00	1355	191.00	5306	274.00	42336
40.00	2821	122.00	8348	192.00	12210	275.00	253312
41.00	751	123.00	13455	193.00	14186	276.00	34312
43.00	740	124.00	5977	194.00	1910	277.00	19064
44.00	1103	125.00	7429	195.00	1308	278.00	2909
49.00	1335	127.00	451840	196.00	35320	283.00	3255
50.00	86040	128.00	35152	198.00	889344	284.00	832
51.00	333056	129.00	168000	199.00	77688	285.00	4669
52.00	16370	130.00	16424	200.00	5755	289.00	707
55.00	3839	131.00	1646	201.00	6194	293.00	5387
56.00	11002	132.00	2558	202.00	2546	296.00	58592
57.00	27120	134.00	6150	203.00	5344	297.00	8132
58.00	1084	135.00	14263	204.00	40192	303.00	8680
61.00	4453	136.00	4923	205.00	61784	304.00	1882
62.00	5898	137.00	7270	206.00	269376	310.00	864
63.00	14254	138.00	2256	207.00	38520	314.00	1111
64.00	1684	139.00	710	208.00	7629	315.00	6898
65.00	8896	141.00	18856	209.00	2955	316.00	5846
68.00	3292	142.00	9147	210.00	4025	322.00	2037
69.00	405312	143.00	4171	211.00	10899	323.00	23200
70.00	2541	145.00	1964	212.00	4262	324.00	3512
73.00	4101	146.00	4148	215.00	1774	327.00	3549
74.00	42416	147.00	13499	216.00	3495	328.00	807
75.00	72696	148.00	25376	217.00	68544	332.00	3036
76.00	26600	149.00	7146	218.00	9377	333.00	1285
77.00	460672	150.00	979	221.00	58512	334.00	13573
78.00	31040	151.00	4284	222.00	2379	335.00	4378
79.00	27688	152.00	1473	223.00	18400	336.00	770
80.00	23600	153.00	6911	224.00	152832	341.00	3102
81.00	32800	154.00	5303	225.00	36752	342.00	766
82.00	9299	155.00	13420	226.00	2432	346.00	3637
83.00	9216	156.00	18976	227.00	61136	351.00	685
84.00	557	157.00	3983	228.00	8686	352.00	7540
85.00	5522	158.00	5101	229.00	12504	353.00	3491
86.00	8497	159.00	3868	231.00	6526	354.00	6396
87.00	4346	160.00	6848	233.00	803	355.00	1196
88.00	2973	161.00	10662	234.00	4102	365.00	25664
91.00	8185	162.00	3791	235.00	4443	366.00	3165
92.00	7611	165.00	9192	236.00	2359	371.00	821
93.00	49776	166.00	6324	237.00	5889	372.00	13465
94.00	3390	167.00	45400	239.00	2902	373.00	3113
96.00	936	168.00	21944	240.00	896	377.00	679
97.00	1770	169.00	3837	241.00	3783	383.00	882
98.00	30680	170.00	736	242.00	6940	384.00	883
99.00	29104	171.00	718	243.00	8594	390.00	770
100.00	3048	172.00	3954	244.00	110872	402.00	6242
101.00	17480	173.00	4499	245.00	15704	403.00	6551
103.00	6162	174.00	8976	246.00	23296	404.00	2057

104.00	11942	175.00	23464	247.00	4598	421.00	5587
105.00	12846	176.00	5626	249.00	4985	422.00	6188
106.00	1995	177.00	8652	252.00	911	423.00	43232
107.00	141248	178.00	2929	253.00	4212	424.00	5324
108.00	25624	179.00	33368	255.00	528192	441.00	110248
109.00	3384	180.00	23904	256.00	83696	442.00	671808
110.00	255808	181.00	13103	257.00	8213	443.00	145728
111.00	38624	182.00	2291	258.00	28904	444.00	12291
112.00	4258	184.00	1696	259.00	6298	445.00	705
116.00	6833	185.00	19448	264.00	794		
117.00	87088	186.00	143040	265.00	9743		
118.00	7590	187.00	43488	266.00	2006		
119.00	673	188.00	7046	271.00	1026		

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 25-JAN-2016 09:14
Lab File ID: 16012505.D Init. Cal. Date(s): 25-JAN-2016 25-JAN-2016
Analysis Type: SOIL Init. Cal. Times: 09:14 12:00
Lab Sample ID: LLPAH ICV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160125.b\lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.10658	0.97552	0.010	-11.84368	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.74752	0.66232	0.010	-11.39864	20.00000	Averaged
7 2-Methylnaphthalene	0.79563	0.71799	0.010	-9.75796	20.00000	Averaged
8 1-Methylnaphthalene	0.72060	0.64068	0.010	-11.09110	20.00000	Averaged
10 Acenaphthylene	1.63537	1.47247	0.010	-9.96099	20.00000	Averaged
12 Acenaphthene	1.03183	0.91981	0.010	-10.85693	20.00000	Averaged
14 Dibenzofuran	1.58020	1.40113	0.010	-11.33165	20.00000	Averaged
15 Fluorene	1.24733	1.10342	0.010	-11.53751	20.00000	Averaged
19 Phenanthrene	1.13223	0.97076	0.010	-14.26123	20.00000	Averaged
20 Anthracene	1.08873	0.96820	0.010	-11.07099	20.00000	Averaged
$ 23 Fluoranthene-d10	1.08267	0.94147	0.200	-13.04185	20.00000	Averaged
24 Fluoranthene	1.16092	1.03072	0.010	-11.21521	20.00000	Averaged
25 Pyrene	1.53882	1.33717	0.010	-13.10413	20.00000	Averaged
28 Benzo(a)anthracene	1.31019	1.14241	0.010	-12.80584	20.00000	Averaged
30 Chrysene	1.34080	1.15300	0.010	-14.00677	20.00000	Averaged
44 Benzo(b)fluoranthene	1.31659	1.08771	0.200	-17.38445	20.00000	Averaged
45 Benzo(k)fluoranthene	1.37507	1.19066	0.200	-13.41051	20.00000	Averaged
46 Benzo(j)fluoranthene	1.25203	1.04890	0.200	-16.22402	20.00000	Averaged
34 Benzo(a)pyrene	1.20738	1.02993	0.010	-14.69718	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	0.74617	0.65699	0.010	-11.95054	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.23585	1.07059	0.010	-13.37155	20.00000	Averaged
38 Dibenzo(a,h)anthracene	0.97626	0.85214	0.010	-12.71362	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.09415	0.93347	0.010	-14.68495	20.00000	Averaged
47 Perylene	1.23559	1.05008	0.200	-15.01433	20.00000	Averaged
48 Benzo(e)pyrene	1.24888	1.04774	0.200	-16.10522	20.00000	Averaged

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012505.D
Lab Smp Id: LLPAH ICV
Inj Date : 25-JAN-2016 09:14 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH ICV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 26-Jan-2016 06:16 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/26/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.707	6.707	(1.000)	356051	200.000	
	5 Naphthalene	128	6.739	6.739	(1.005)	434168	250.000	220
$	6 2-Methylnaphthalene-d10	152	7.684	7.684	(1.146)	294773	250.000	222
	7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	319553	250.000	226
	8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	285143	250.000	222
	10 Acenaphthylene	152	9.550	9.550	(0.984)	486879	250.000	225
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	264524	200.000	
	12 Acenaphthene	153	9.771	9.771	(1.007)	304139	250.000	223
	14 Dibenzofuran	168	9.971	9.971	(1.027)	463292	250.000	222
	15 Fluorene	166	10.591	10.591	(1.091)	364851	250.000	221
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	444949	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	539922	250.000	214
	20 Anthracene	178	12.484	12.484	(1.008)	538499	250.000	222
$	23 Fluoranthene-d10	212	14.485	14.485	(1.170)	523633	250.000	217
	24 Fluoranthene	202	14.514	14.514	(1.172)	573274	250.000	222
	25 Pyrene	202	15.014	15.014	(0.877)	573543	250.000	217
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	490006	250.000	218
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	343139	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	494549	250.000	215
	44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	434099	250.000	207
	45 Benzo(k)fluoranthene	252	18.969	18.969	(0.948)	475189	250.000	216

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
46	Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	418612	250.000	209
34	Benzo(a)pyrene	252	19.795	19.795	(0.989)	411042	250.000	213
* 35	Perylene-d12	264	20.007	20.007	(1.000)	319277	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.442	22.442	(1.122)	262204	250.000	220
37	Indeno(1,2,3-cd)pyrene	276	22.575	22.575	(1.128)	427270	250.000	217
38	Dibenzo(a,h)anthracene	278	22.553	22.553	(1.127)	340086	250.000	218
39	Benzo(g,h,i)perylene	276	23.716	23.716	(1.185)	372546	250.000	213
47	Perylene	252	20.074	20.074	(1.003)	419081	250.000	212
48	Benzo(e)pyrene	252	19.680	19.680	(0.984)	418150	250.000	210

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012505.D
Lab Smp Id: LLPAH ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 14:32

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	356051	0.00
11 Acenaphthene-d10	264524	132262	529048	264524	0.00
18 Phenanthrene-d10	444949	222475	889898	444949	0.00
29 Chrysene-d12	343139	171570	686278	343139	0.00
35 Perylene-d12	319277	159639	638554	319277	0.00

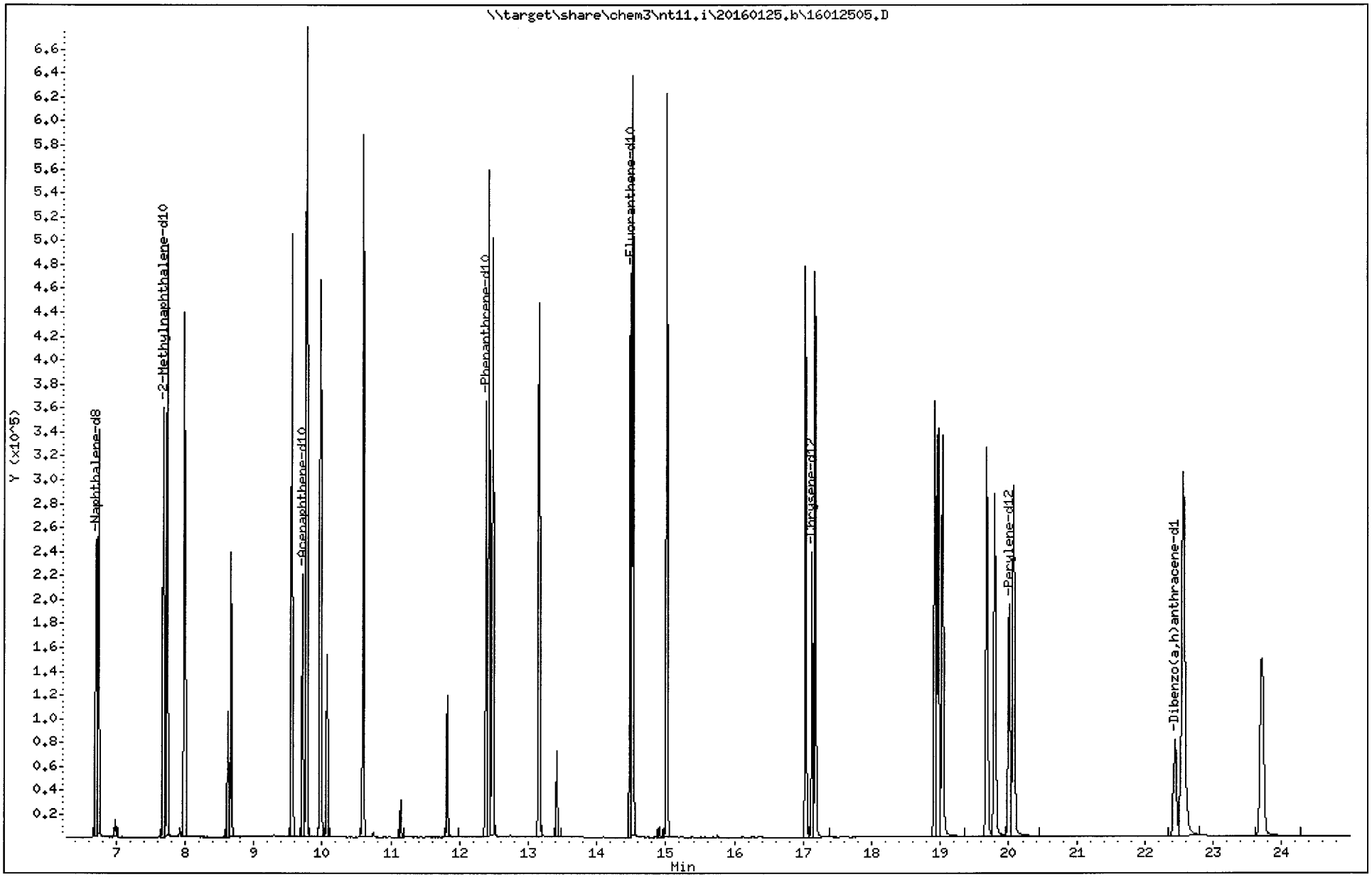
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.01	19.51	20.51	20.01	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012505.D
Date : 25-JAN-2016 09:14
Client ID:
Sample Info: LLPAH ICV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012505.D

Lab ID: LLPAH ICV
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 09:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 25-JAN-2016 14:32
Lab File ID: 16012515.D Init. Cal. Date(s): 25-JAN-2016 25-JAN-2016
Analysis Type: SOIL Init. Cal. Times: 09:14 12:00
Lab Sample ID: LLPAH CCV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160125.b\lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	1.10658	0.98282	0.010	-11.18346	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.74752	0.68851	0.010	-7.89419	20.00000	Averaged
7 2-Methylnaphthalene	0.79563	0.74424	0.010	-6.45968	20.00000	Averaged
8 1-Methylnaphthalene	0.72060	0.67151	0.010	-6.81307	20.00000	Averaged
10 Acenaphthylene	1.63537	1.47559	0.010	-9.77032	20.00000	Averaged
12 Acenaphthene	1.03183	0.91487	0.010	-11.33538	20.00000	Averaged
14 Dibenzofuran	1.58020	1.37657	0.010	-12.88597	20.00000	Averaged
15 Fluorene	1.24733	1.11273	0.010	-10.79120	20.00000	Averaged
19 Phenanthrene	1.13223	0.95994	0.010	-15.21664	20.00000	Averaged
20 Anthracene	1.08873	0.97716	0.010	-10.24833	20.00000	Averaged
$ 23 Fluoranthene-d10	1.08267	0.95384	0.200	-11.89938	20.00000	Averaged
24 Fluoranthene	1.16092	1.01064	0.010	-12.94523	20.00000	Averaged
25 Pyrene	1.53882	1.32823	0.010	-13.68500	20.00000	Averaged
28 Benzo(a)anthracene	1.31019	1.13704	0.010	-13.21519	20.00000	Averaged
30 Chrysene	1.34080	1.14888	0.010	-14.31393	20.00000	Averaged
44 Benzo(b)fluoranthene	1.31659	1.10003	0.200	-16.44811	20.00000	Averaged
45 Benzo(k)fluoranthene	1.37507	1.15477	0.200	-16.02046	20.00000	Averaged
46 Benzo(j)fluoranthene	1.25203	1.02492	0.200	-18.13933	20.00000	Averaged
34 Benzo(a)pyrene	1.20738	1.02856	0.010	-14.81096	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	0.74617	0.67238	0.010	-9.88829	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.23585	1.09268	0.010	-11.58409	20.00000	Averaged
38 Dibenzo(a,h)anthracene	0.97626	0.87752	0.010	-10.11390	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.09415	0.93543	0.010	-14.50645	20.00000	Averaged
47 Perylene	1.23559	1.04039	0.200	-15.79792	20.00000	Averaged
48 Benzo(e)pyrene	1.24888	1.02934	0.200	-17.57835	20.00000	Averaged

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012515.D
Lab Smp Id: LLPAH CCV
Inj Date : 25-JAN-2016 14:32 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLPAH CCV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 26-Jan-2016 06:16 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/26/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
* 4 Naphthalene-d8	136	6.707	6.707	(1.000)	312072	200.000	
5 Naphthalene	128	6.739	6.739	(1.005)	383390	250.000	222
$ 6 2-Methylnaphthalene-d10	152	7.684	7.684	(1.146)	268582	250.000	230
7 2-Methylnaphthalene	142	7.737	7.737	(1.153)	290319	250.000	234
8 1-Methylnaphthalene	142	7.989	7.989	(1.191)	261948	250.000	233
10 Acenaphthylene	152	9.550	9.550	(0.984)	458948	250.000	226
* 11 Acenaphthene-d10	164	9.705	9.705	(1.000)	248822	200.000	
12 Acenaphthene	153	9.771	9.771	(1.007)	284550	250.000	222
14 Dibenzofuran	168	9.971	9.971	(1.027)	428152	250.000	218
15 Fluorene	166	10.591	10.591	(1.091)	346089	250.000	223
* 18 Phenanthrene-d10	188	12.384	12.384	(1.000)	422923	200.000	
19 Phenanthrene	178	12.429	12.429	(1.004)	507476	250.000	212
20 Anthracene	178	12.473	12.473	(1.007)	516577	250.000	224
$ 23 Fluoranthene-d10	212	14.485	14.485	(1.170)	504251	250.000	220
24 Fluoranthene	202	14.514	14.514	(1.172)	534278	250.000	218
25 Pyrene	202	15.013	15.013	(0.877)	548391	250.000	216
28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	469456	250.000	217
* 29 Chrysene-d12	240	17.121	17.121	(1.000)	330299	200.000	
30 Chrysene	228	17.171	17.171	(1.003)	474343	250.000	214
44 Benzo(b)fluoranthene	252	18.921	18.921	(0.946)	432306	250.000	209
45 Benzo(k)fluoranthene	252	18.959	18.959	(0.948)	453819	250.000	210

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	402787	250.000	205
	34 Benzo(a)pyrene	252	19.786	19.786	(0.989)	404217	250.000	213
*	35 Perylene-d12	264	19.997	19.997	(1.000)	314395	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.431	22.431	(1.122)	264242	250.000	225
	37 Indeno(1,2,3-cd)pyrene	276	22.564	22.564	(1.128)	429418	250.000	221
	38 Dibenzo(a,h)anthracene	278	22.553	22.553	(1.128)	344860	250.000	225
	39 Benzo(g,h,i)perylene	276	23.705	23.705	(1.185)	367617	250.000	214
	47 Perylene	252	20.064	20.064	(1.003)	408868	250.000	211
	48 Benzo(e)pyrene	252	19.680	19.680	(0.984)	404526	250.000	206

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012515.D
Lab Smp Id: LLPAH CCV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info:

Calibration Date: 25-JAN-2016
Calibration Time: 09:14
Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	312072	-12.35
11 Acenaphthene-d10	264524	132262	529048	248822	-5.94
18 Phenanthrene-d10	444949	222475	889898	422923	-4.95
29 Chrysene-d12	343139	171570	686278	330299	-3.74
35 Perylene-d12	319277	159639	638554	314395	-1.53

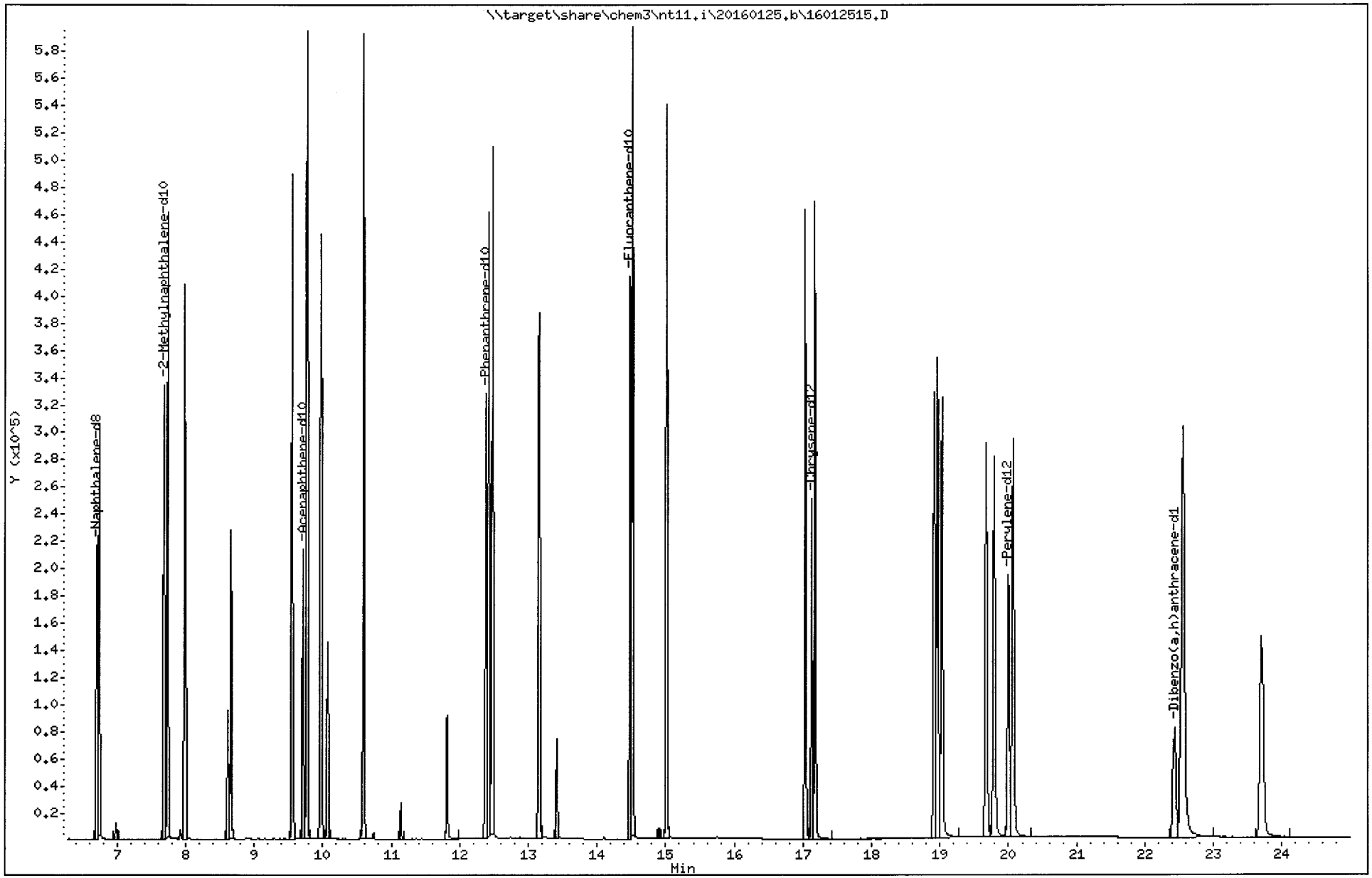
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.71	0.00
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	0.00
35 Perylene-d12	20.00	19.50	20.50	20.00	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160125.b\16012515.D
Date : 25-JAN-2016 14:32
Client ID:
Sample Info: LLPAH CCV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012515.D

Lab ID: LLPAH CCV
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 14:32

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160125.b\16012512.D
Lab Smp Id: AUA2A Client Smp ID: 13EB_ME-MTW01Z
Inj Date : 25-JAN-2016 13:00 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : AUA2A,10
Misc Info : 16-418
Comment :
Method : \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Meth Date : 26-Jan-2016 06:16 nt11.i Quant Type: ISTD
Cal Date : 25-JAN-2016 12:00 Cal File: 16012510.D
Als bottle: 9
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	10.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.697	6.707	(1.000)	301571	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.674	7.684	(1.146)	16599	14.7264	7360
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.705	9.705	(1.000)	210363	200.000	
	12 Acenaphthene	153	9.771	9.771	(1.007)	11446	10.5464	5270
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	10.591	10.591	(1.091)	18905	14.4097	7200
*	18 Phenanthrene-d10	188	12.384	12.384	(1.000)	345651	200.000	
	19 Phenanthrene	178	12.429	12.429	(1.004)	171747	87.7703	43900
	20 Anthracene	178	12.473	12.484	(1.007)	39259	20.8646	10400
$	23 Fluoranthene-d10	212	14.475	14.485	(1.169)	36195	19.3439	9670
	24 Fluoranthene	202	14.514	14.514	(1.172)	326541	162.752	81400
	25 Pyrene	202	15.013	15.014	(0.877)	187194	94.3762	47200
	28 Benzo(a)anthracene	228	17.029	17.029	(0.995)	62260	36.8665	18400
*	29 Chrysene-d12	240	17.121	17.121	(1.000)	257794	200.000	
	30 Chrysene	228	17.171	17.171	(1.003)	81818	47.3414	23700
	44 Benzo(b)fluoranthene	252	18.911	18.921	(0.946)	47662	29.6869	14800
	45 Benzo(k)fluoranthene	252	18.959	18.969	(0.948)	34188	20.3888	10200

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
46	Benzo(j)fluoranthene	252	19.027	19.027	(0.951)	28236	18.4940	9250
34	Benzo(a)pyrene	252	19.786	19.795	(0.989)	20935	14.2190	7110
* 35	Perylene-d12	264	19.997	20.007	(1.000)	243887	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.431	22.442	(1.122)	15747	17.3063	8650
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	Compound Not Detected.					
47	Perylene	252	Compound Not Detected.					
48	Benzo(e)pyrene	252	19.680	19.680	(0.984)	36305	23.8390	11900

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012512.D
Lab Smp Id: AUA2A
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info: 16-418

Calibration Date: 25-JAN-2016
Calibration Time: 09:14
Client Smp ID: 13EB_ME-MTW01Z
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	356051	178026	712102	301571	-15.30
11 Acenaphthene-d10	264524	132262	529048	210363	-20.47
18 Phenanthrene-d10	444949	222475	889898	345651	-22.32
29 Chrysene-d12	343139	171570	686278	257794	-24.87
35 Perylene-d12	319277	159639	638554	243887	-23.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.71	6.21	7.21	6.70	-0.16
11 Acenaphthene-d10	9.71	9.21	10.21	9.71	-0.00
18 Phenanthrene-d10	12.38	11.88	12.88	12.38	-0.00
29 Chrysene-d12	17.12	16.62	17.62	17.12	-0.00
35 Perylene-d12	20.01	19.51	20.51	20.00	-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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: AUA2A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160125.b\lowsim.m
Misc Info: 16-418

Client SDG: AUA2
Fraction: SV
Client Smp ID: 13EB_ME-MTW01Z
Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7360	49.09	30-160
$ 23 Fluoranthene-d10	15000	9670	64.48	30-160
$ 36 Dibenzo(a,h)anthra	15000	8650	57.69	30-160

Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Sample Info: AUA2A,10

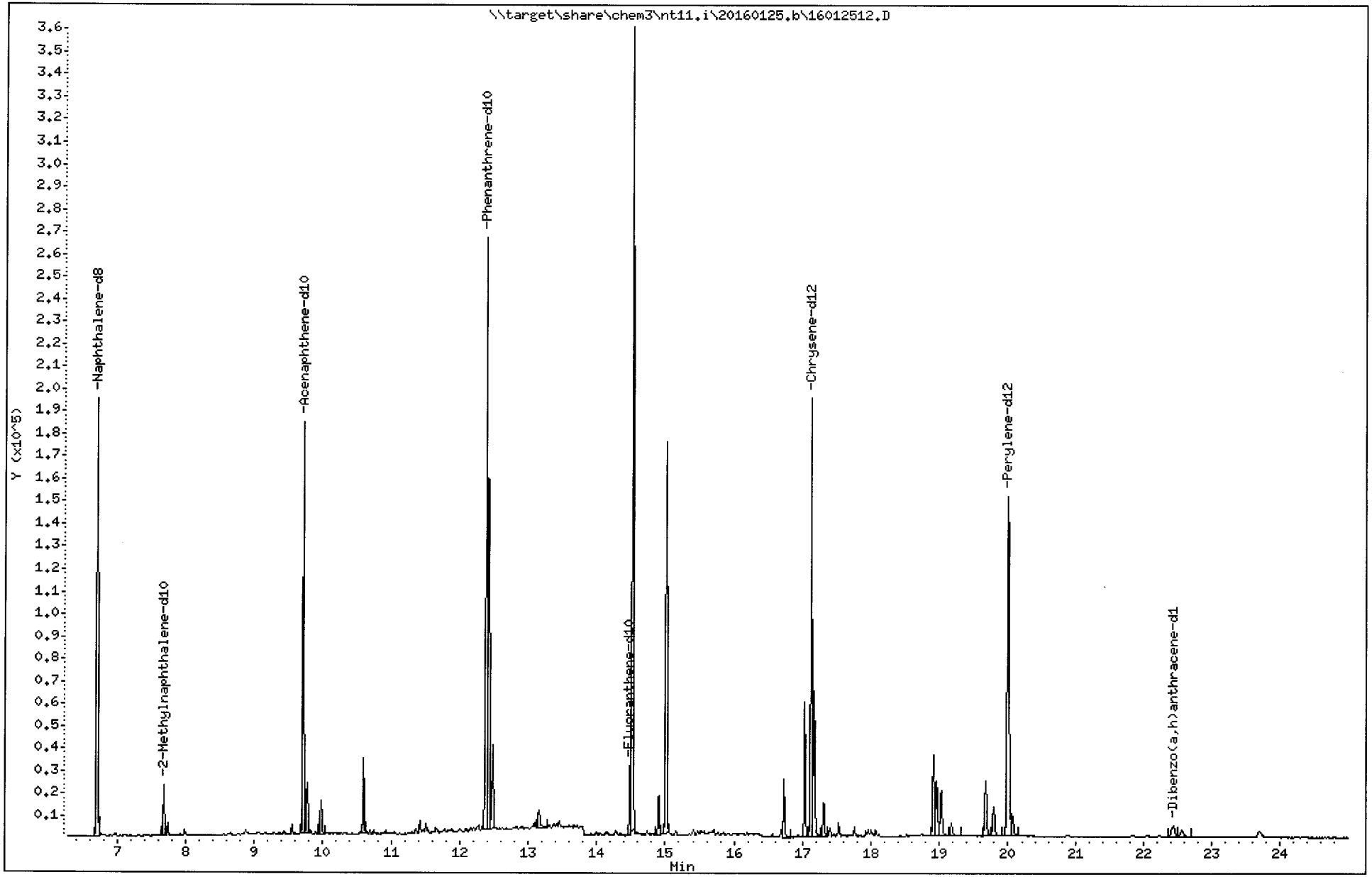
Volume Injected (uL): 2.0

Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW

Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

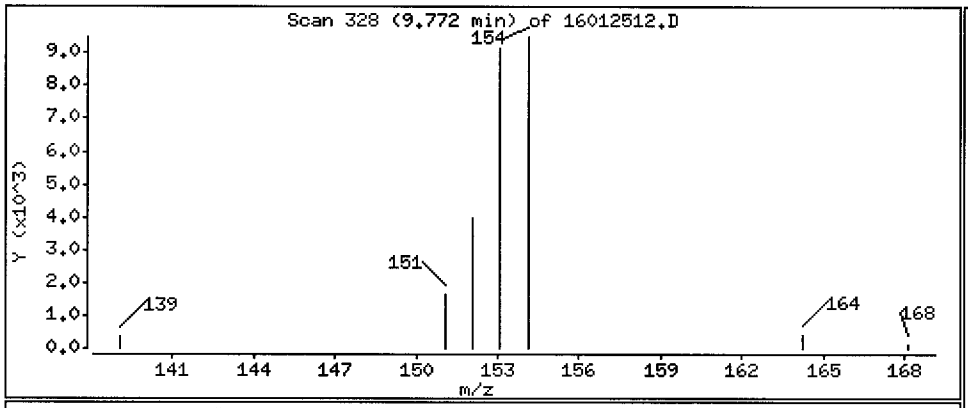
Operator: JW

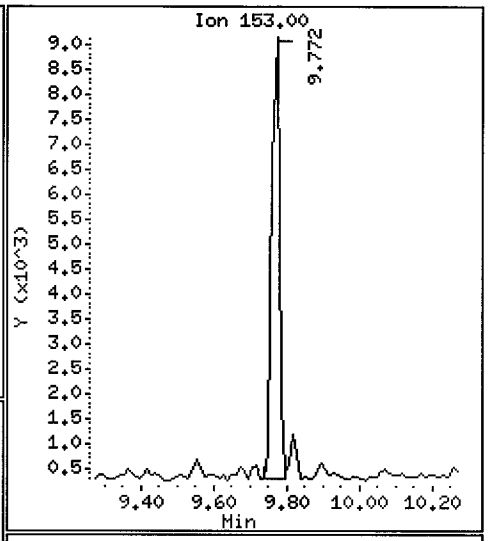
Column phase: Rxi-17Sil MS

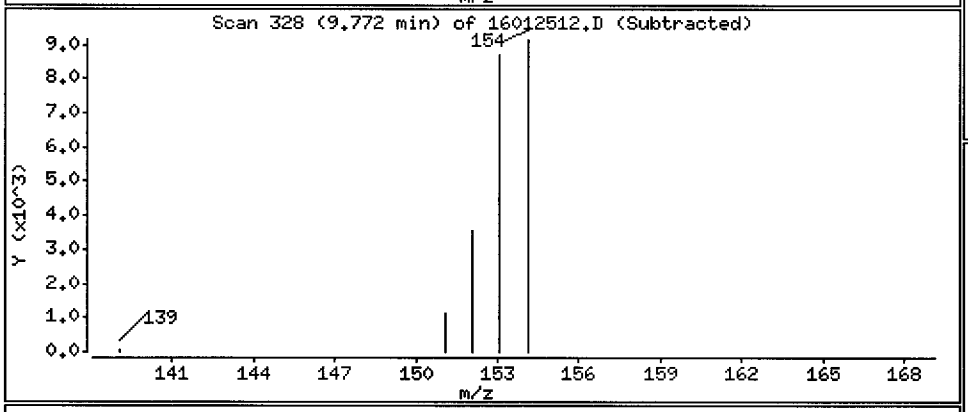
Column diameter: 0.25

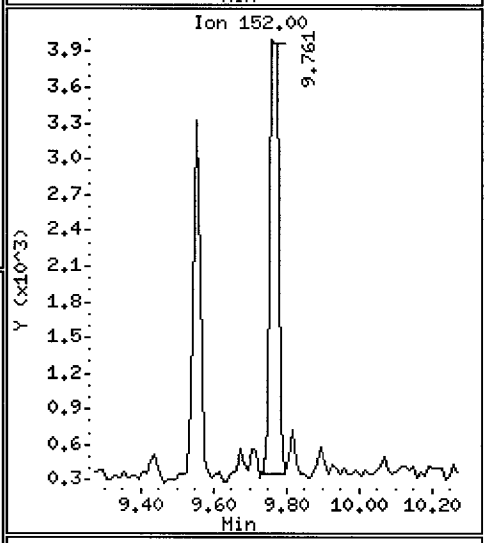
12 Acenaphthene

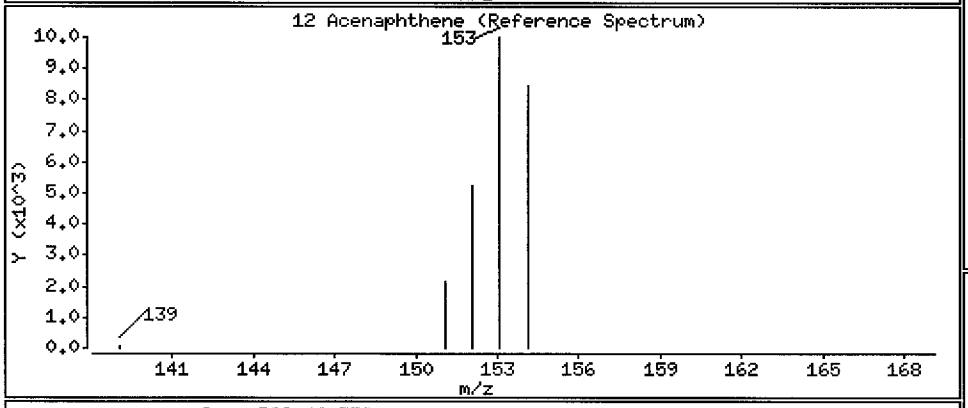
Concentration: 5270 ug/kg

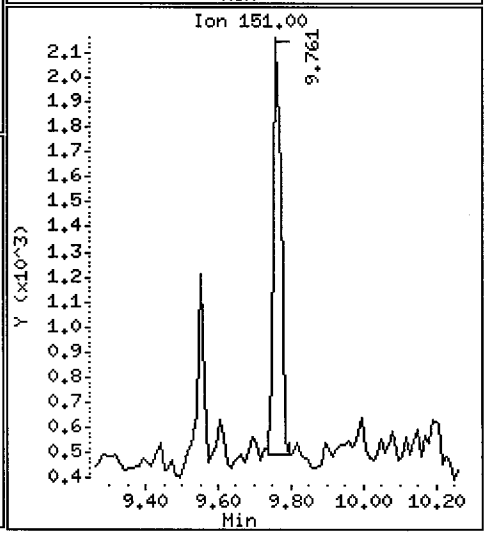


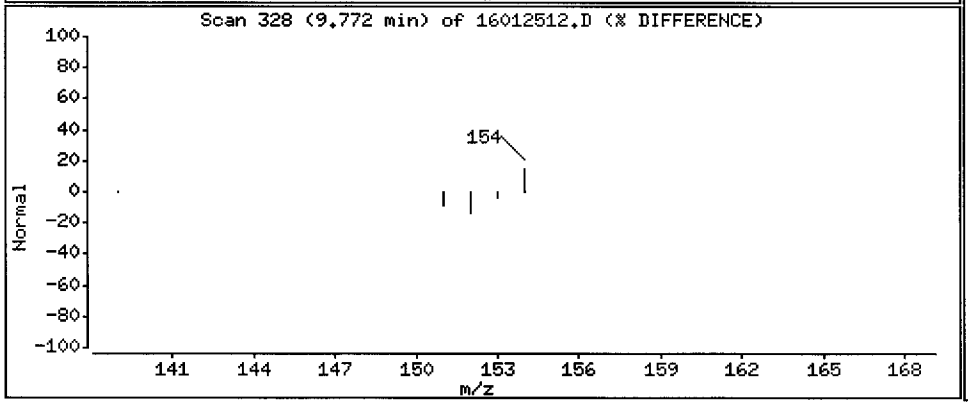












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

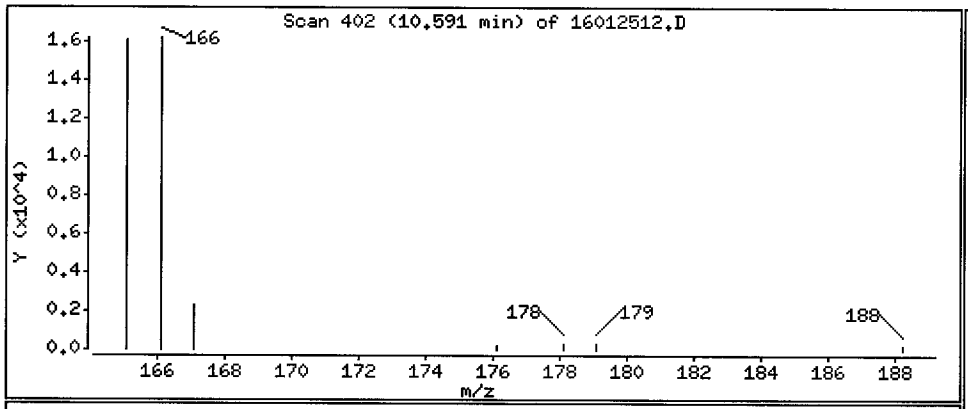
Operator: JW

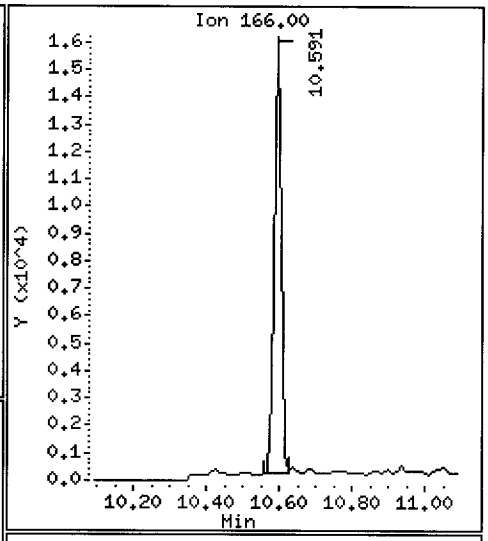
Column phase: Rxi-17Sil MS

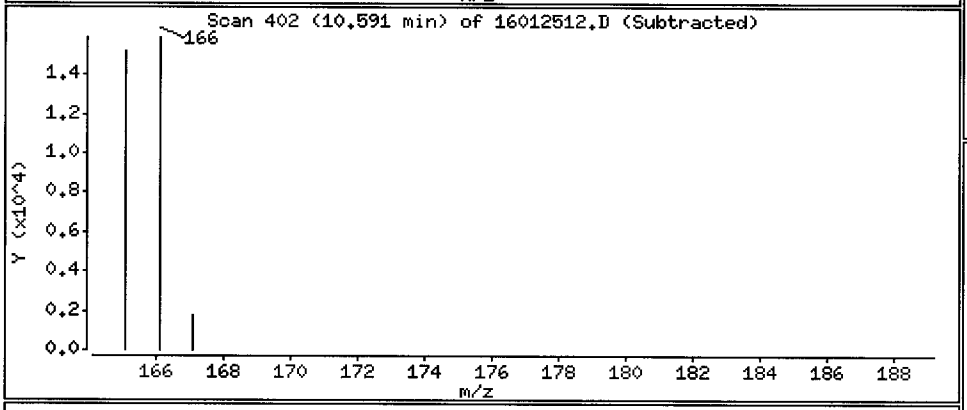
Column diameter: 0.25

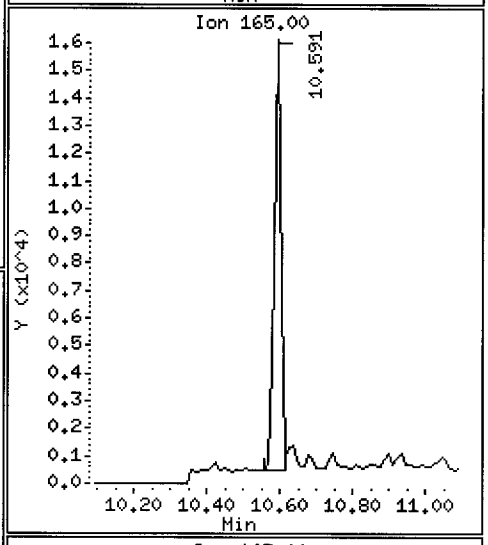
15 Fluorene

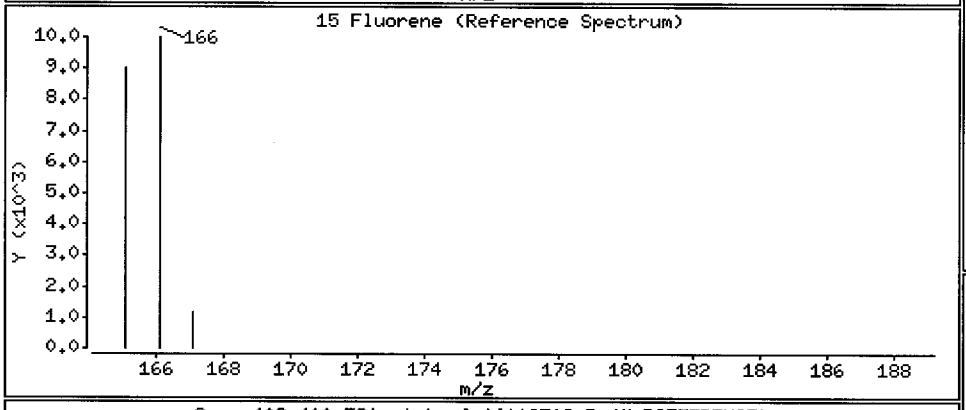
Concentration: 7200 ug/kg

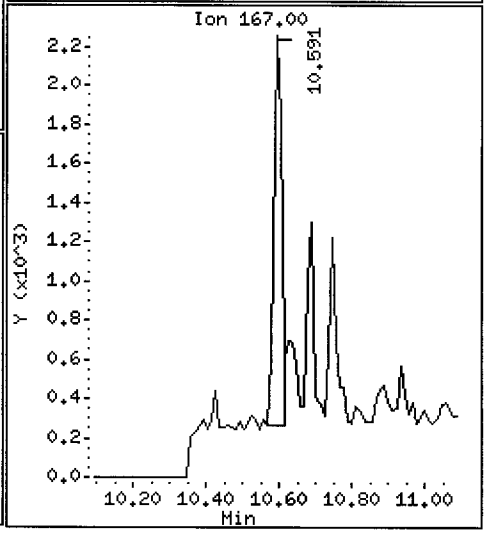


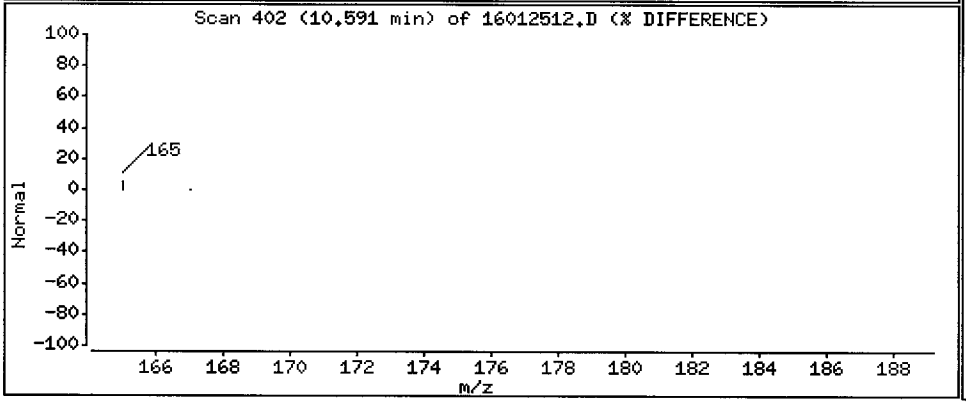












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

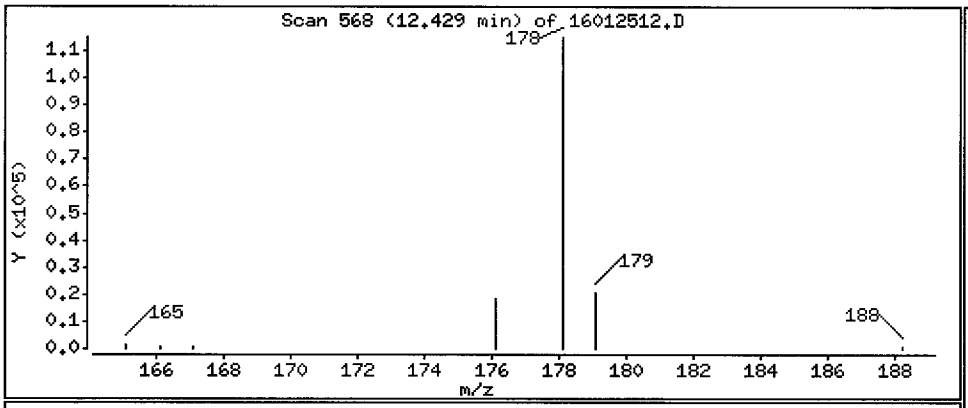
Operator: JW

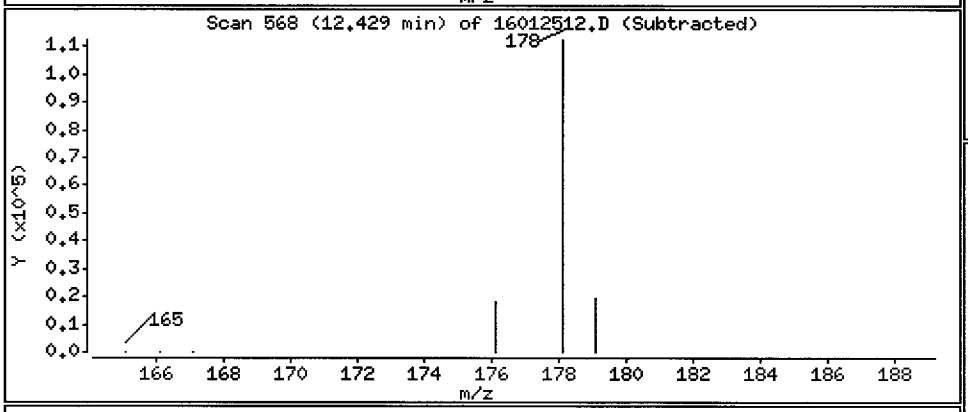
Column phase: Rxi-17Sil MS

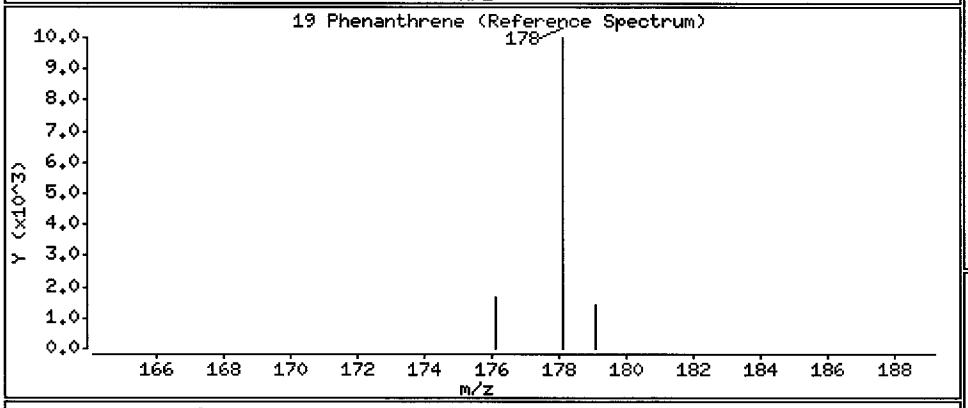
Column diameter: 0.25

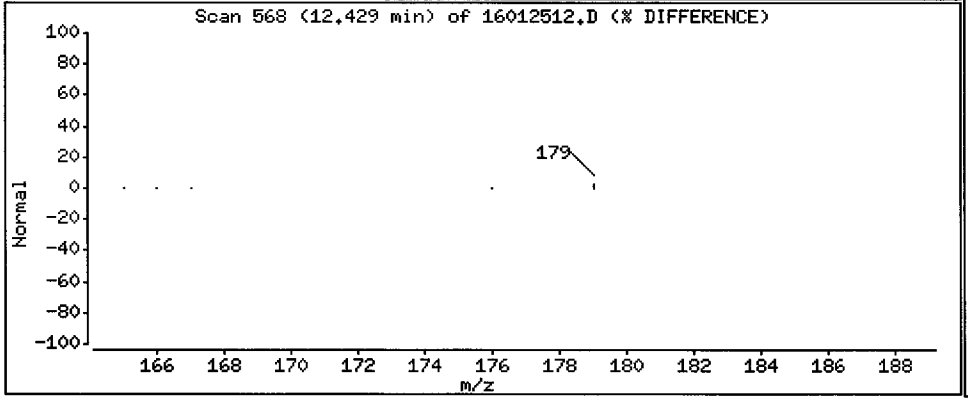
19 Phenanthrene

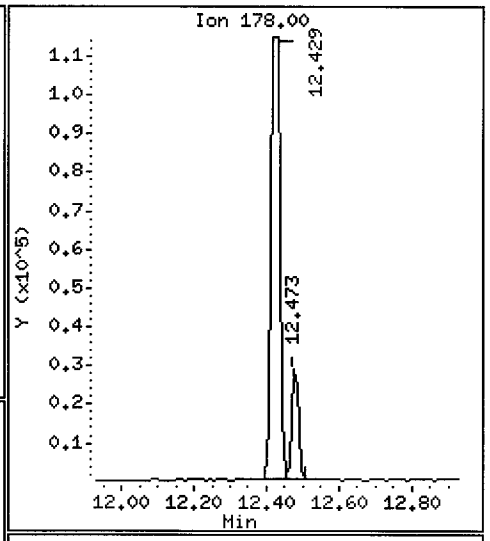
Concentration: 43900 ug/kg

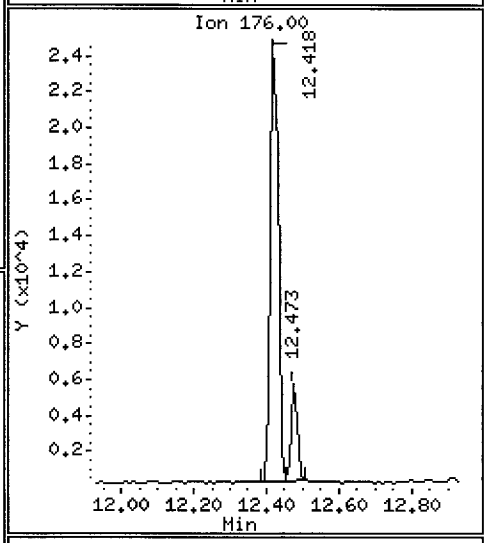


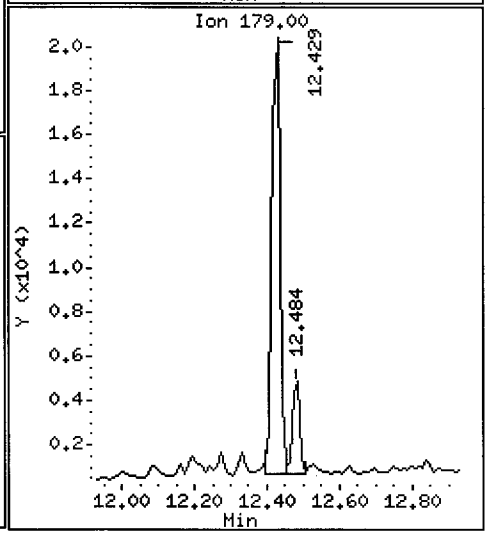












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

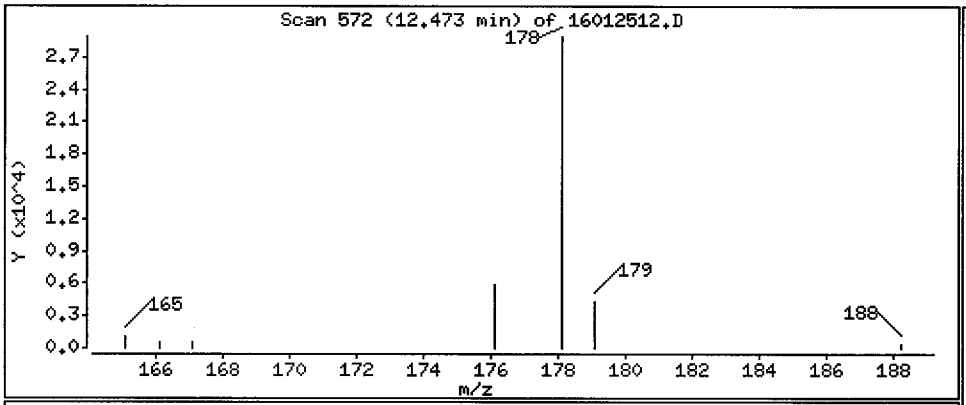
Operator: JW

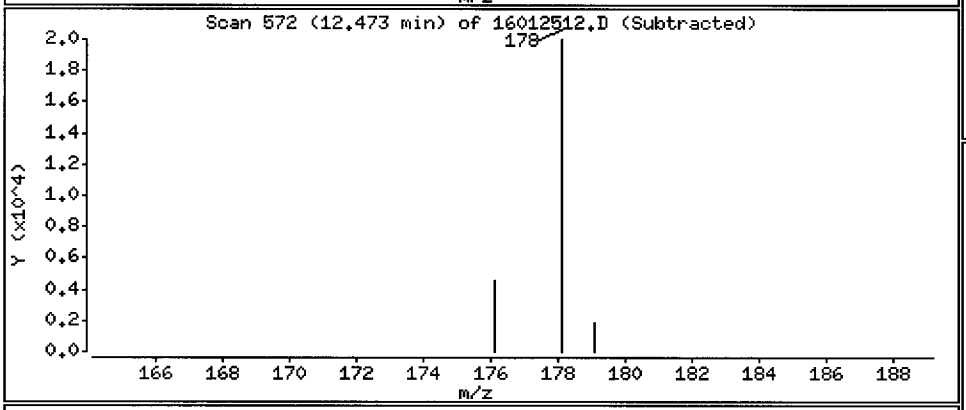
Column phase: Rxi-17Sil MS

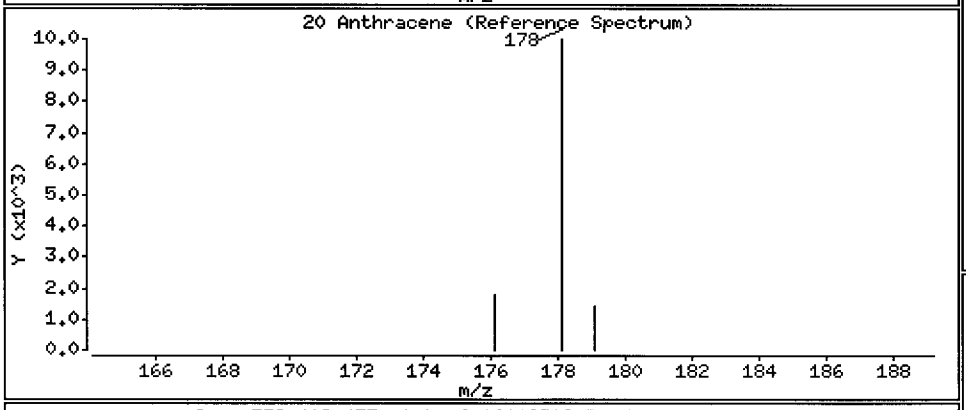
Column diameter: 0.25

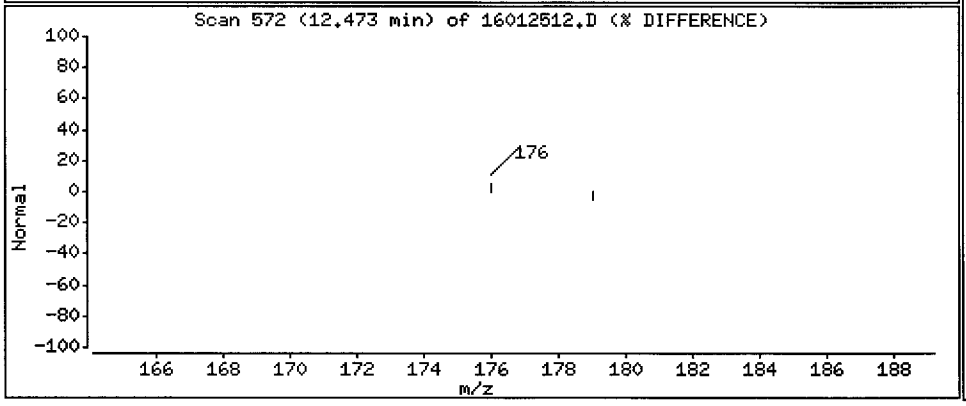
20 Anthracene

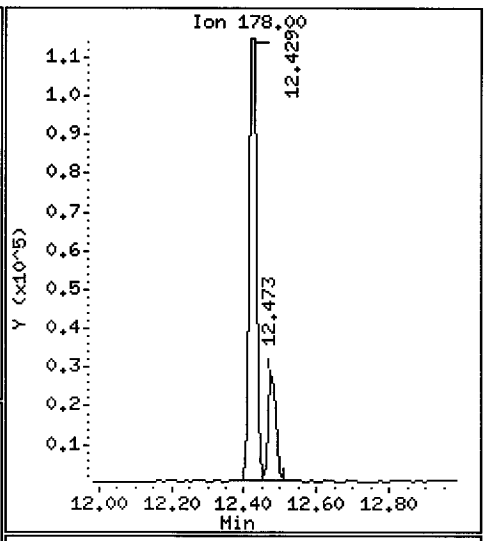
Concentration: 10400 ug/kg

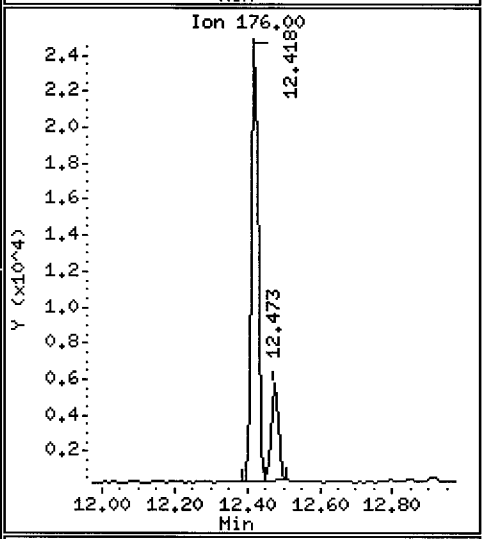


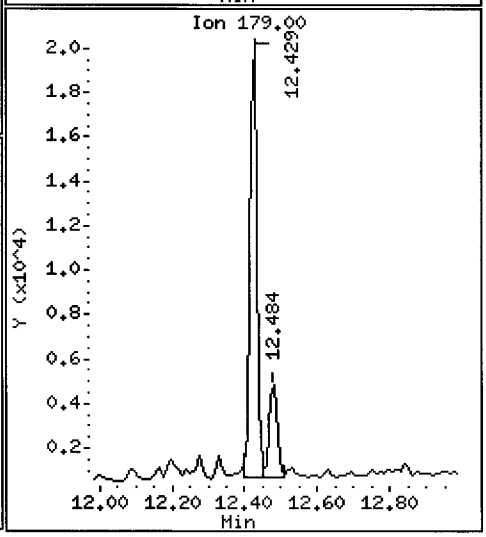












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

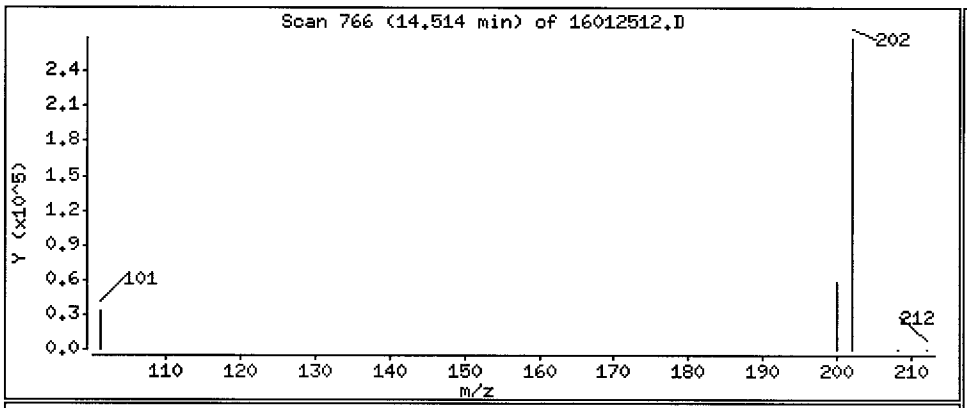
Operator: JW

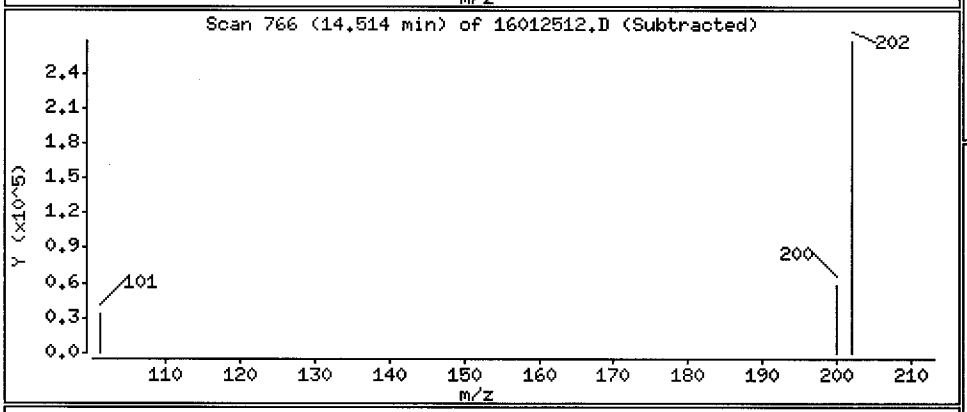
Column phase: Rxi-17Sil MS

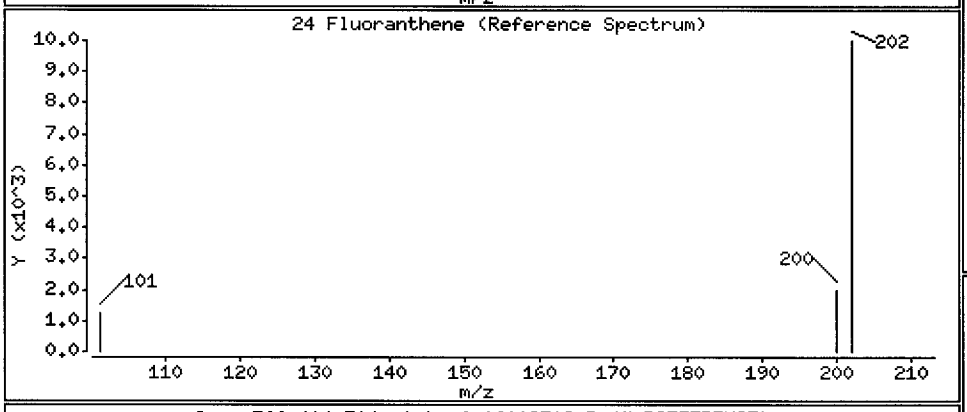
Column diameter: 0.25

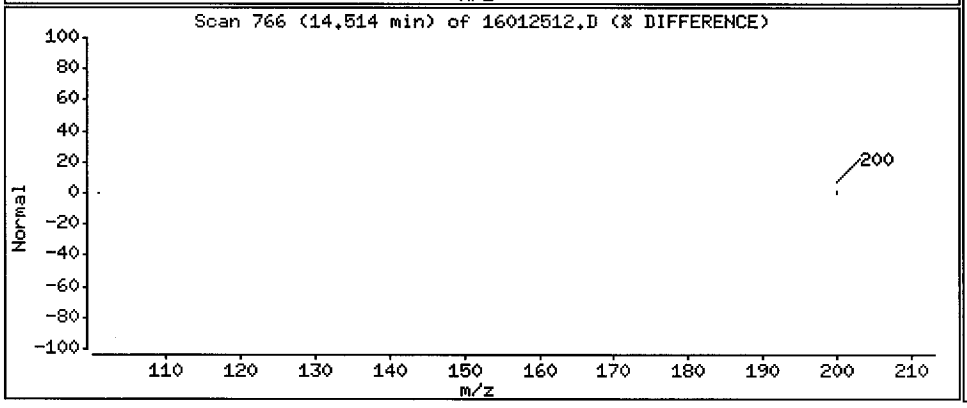
24 Fluoranthene

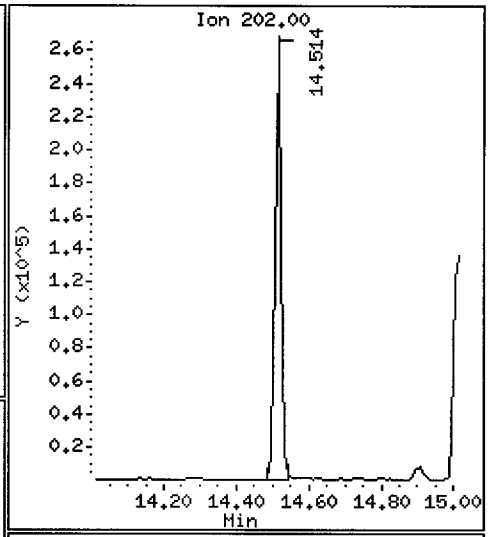
Concentration: 81400 ug/kg

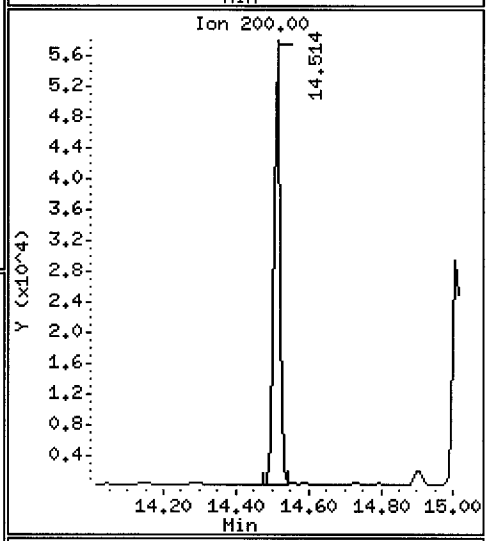


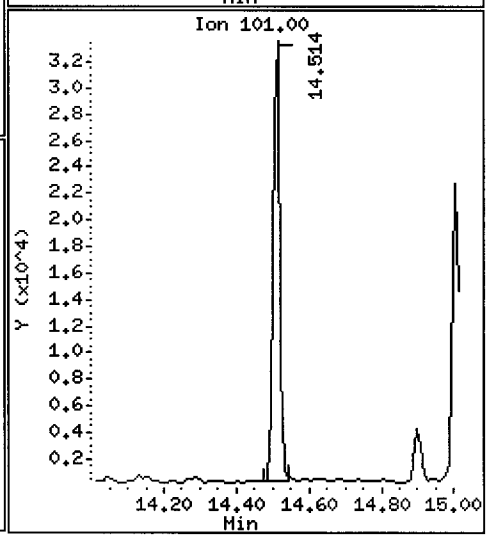












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

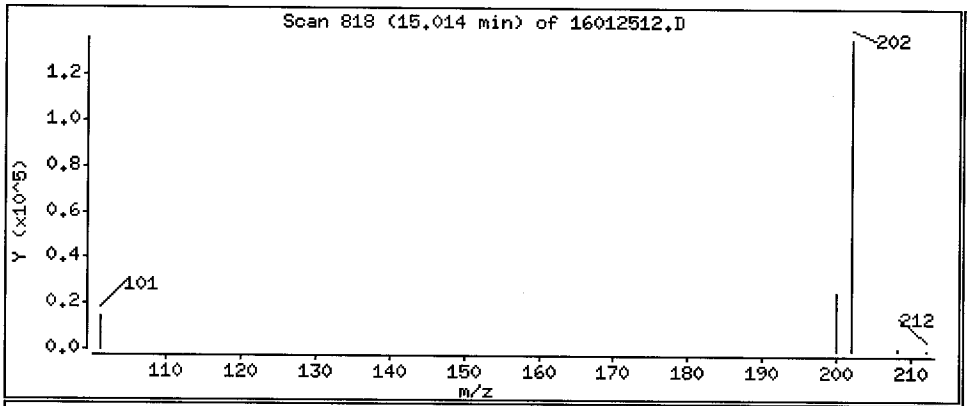
Operator: JW

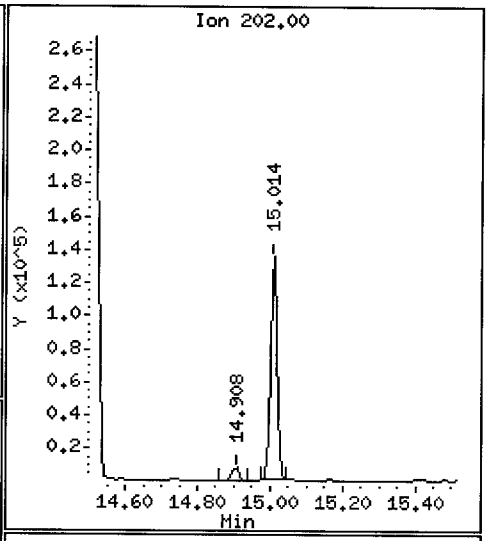
Column phase: Rxi-17Sil MS

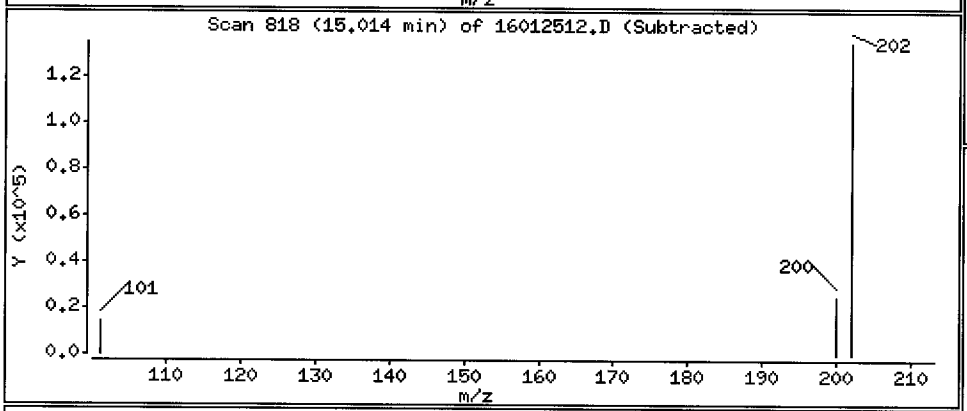
Column diameter: 0.25

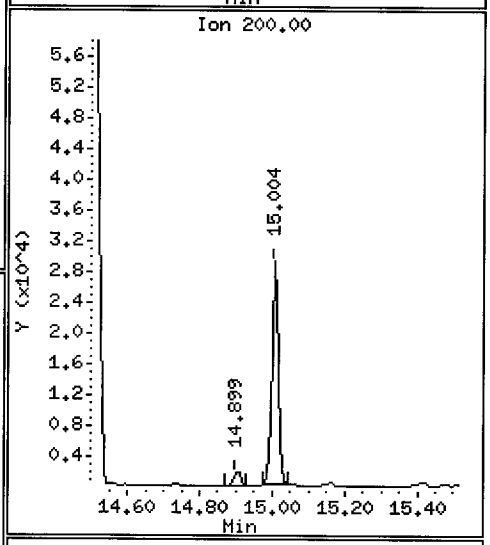
25 Pyrene

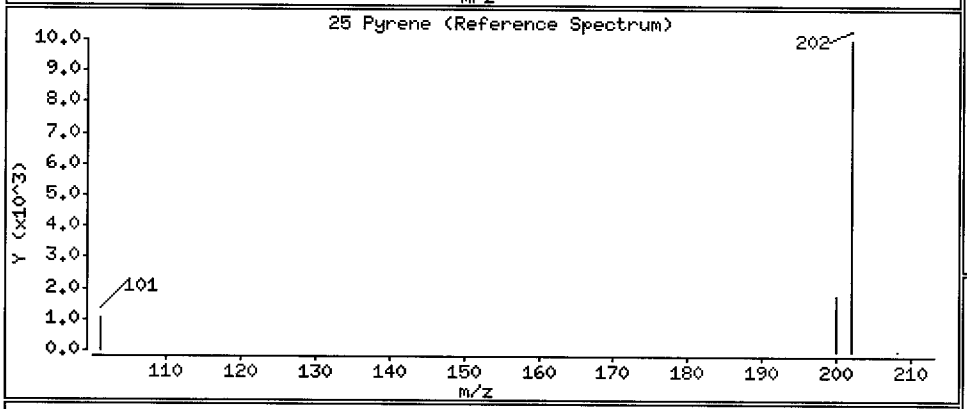
Concentration: 47200 ug/kg

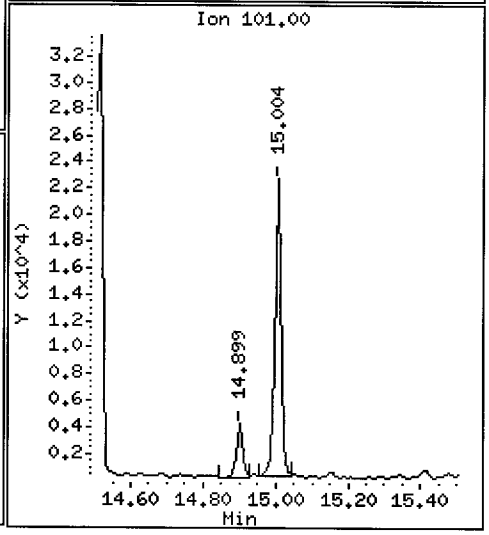


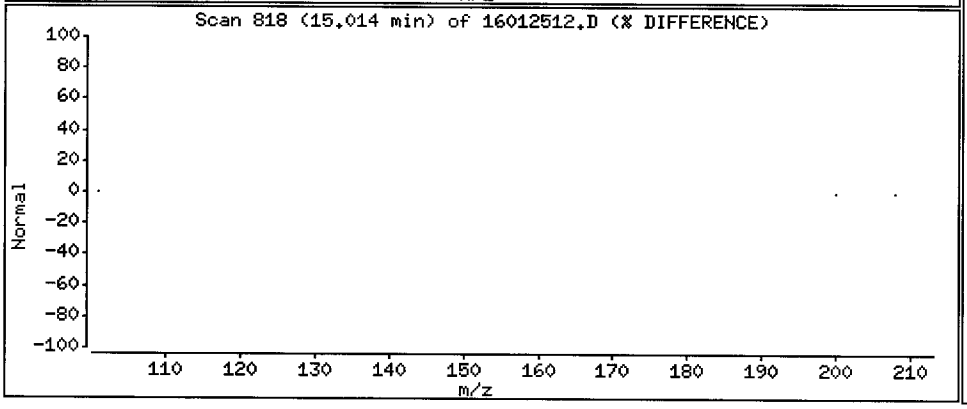












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

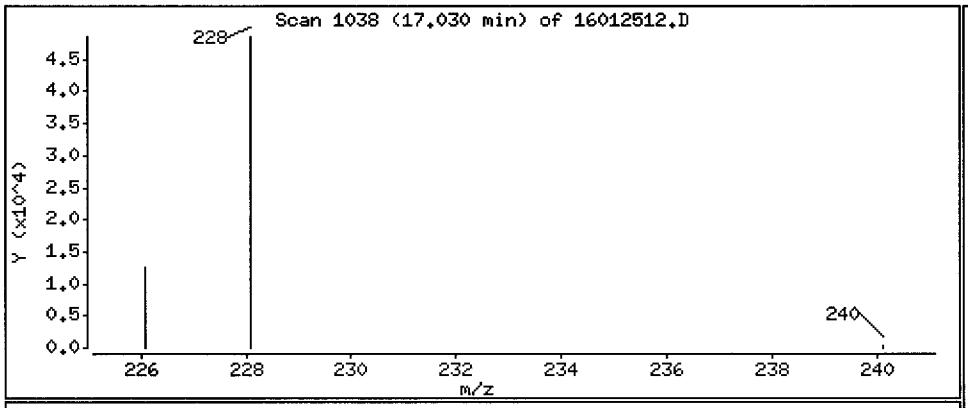
Operator: JW

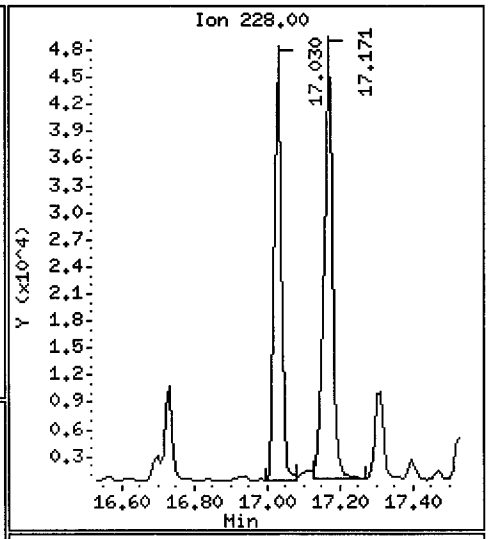
Column phase: Rxi-17Sil MS

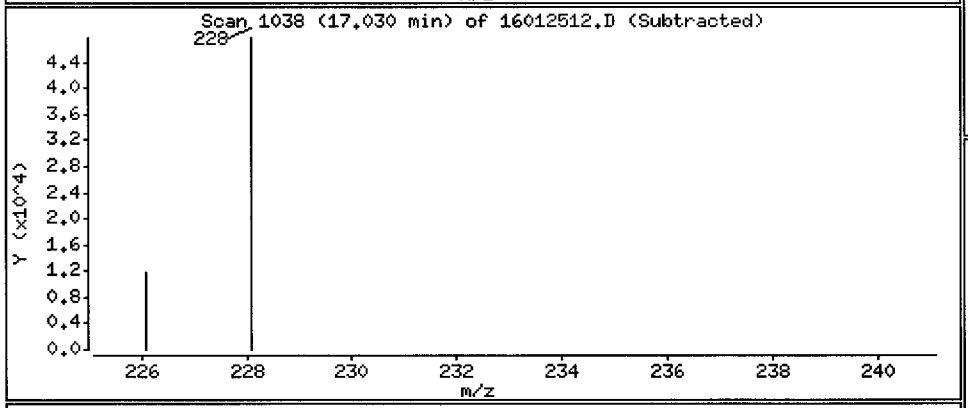
Column diameter: 0.25

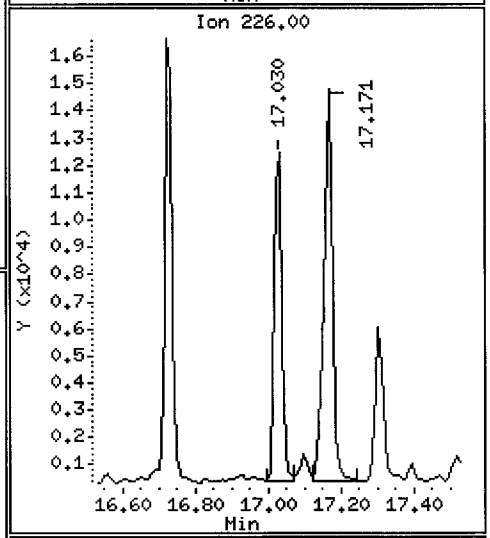
28 Benzo(a)anthracene

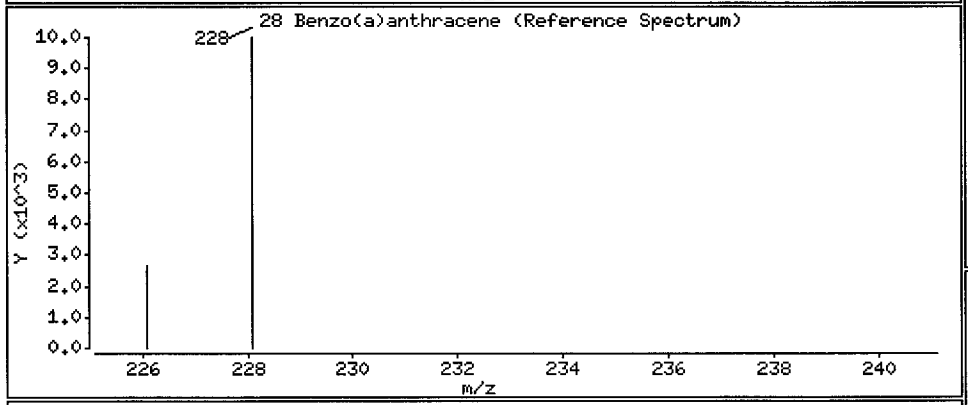
Concentration: 18400 ug/kg

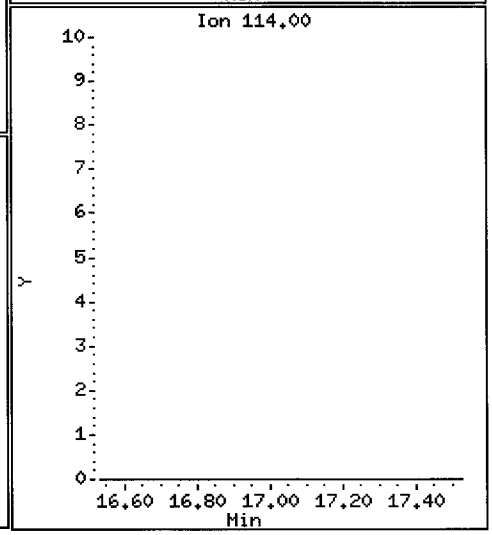


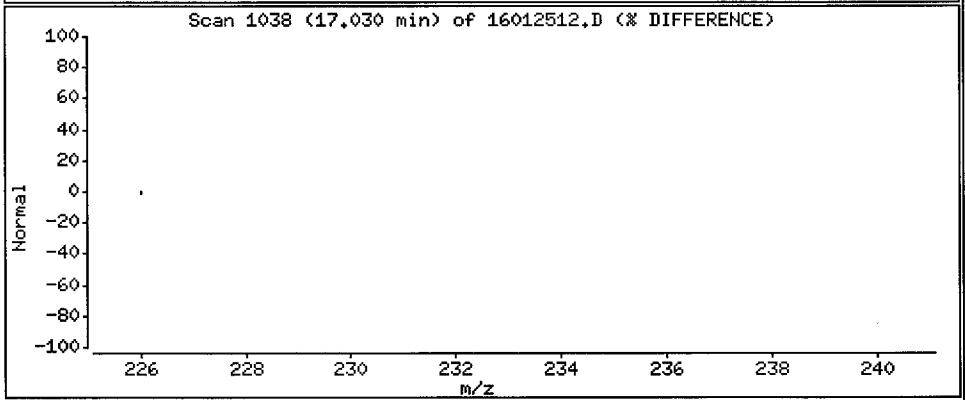












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

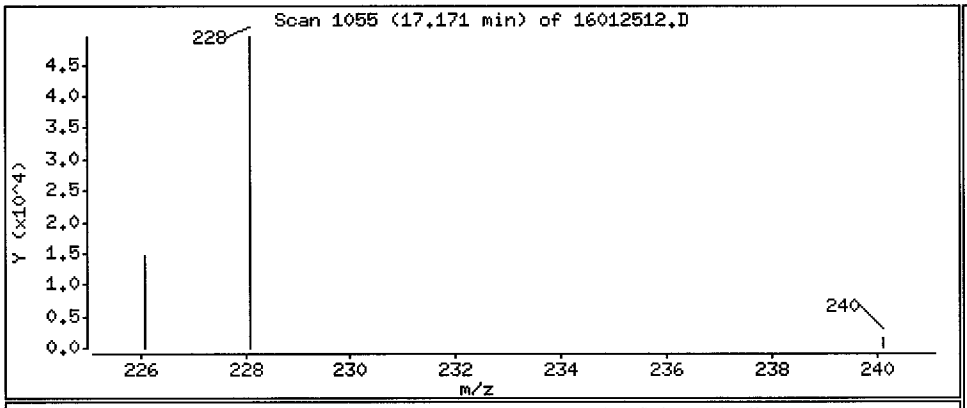
Operator: JW

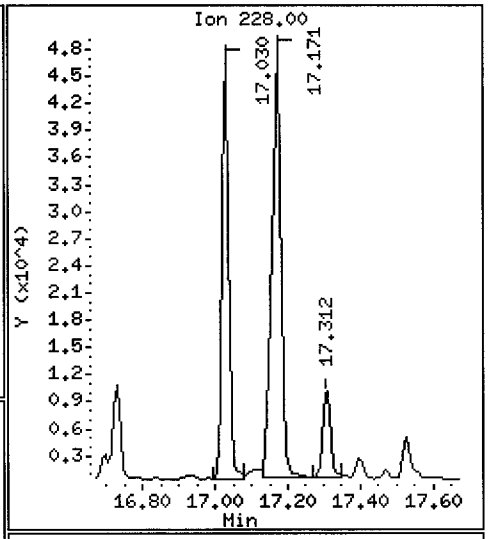
Column phase: Rxi-17Sil MS

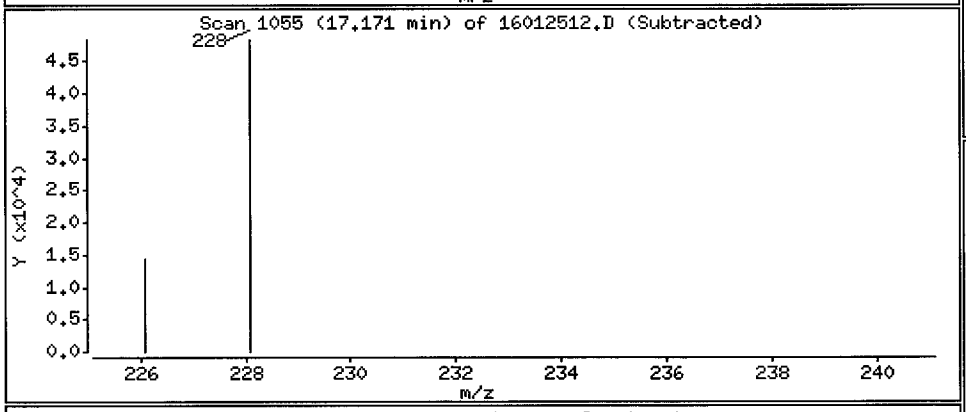
Column diameter: 0.25

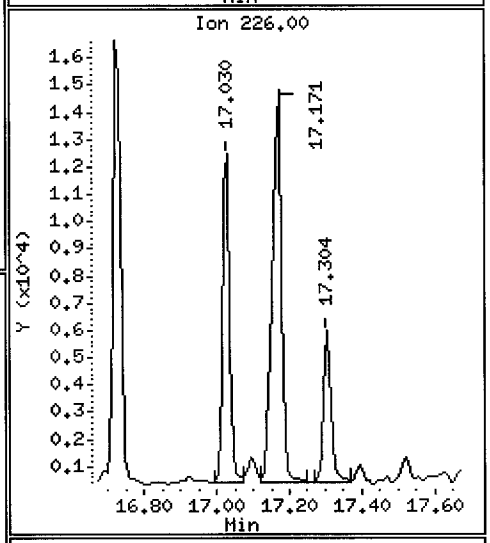
30 Chrysene

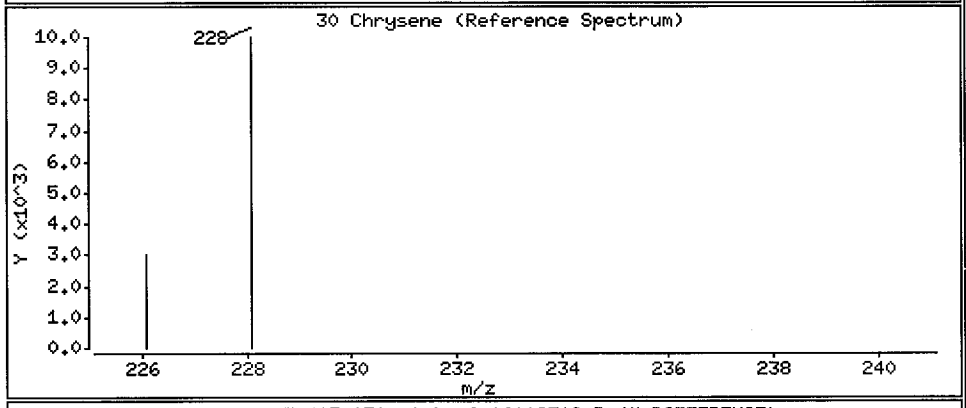
Concentration: 23700 ug/kg

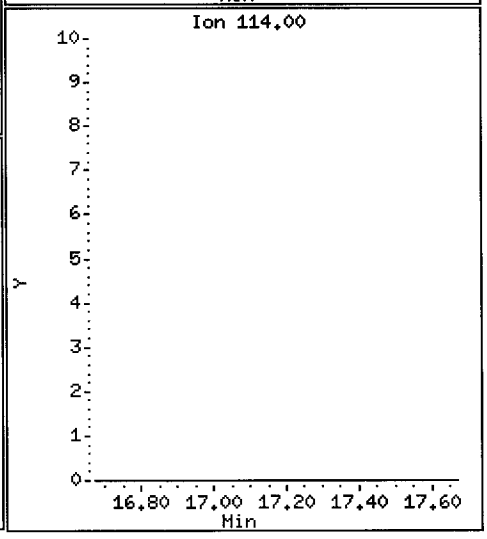


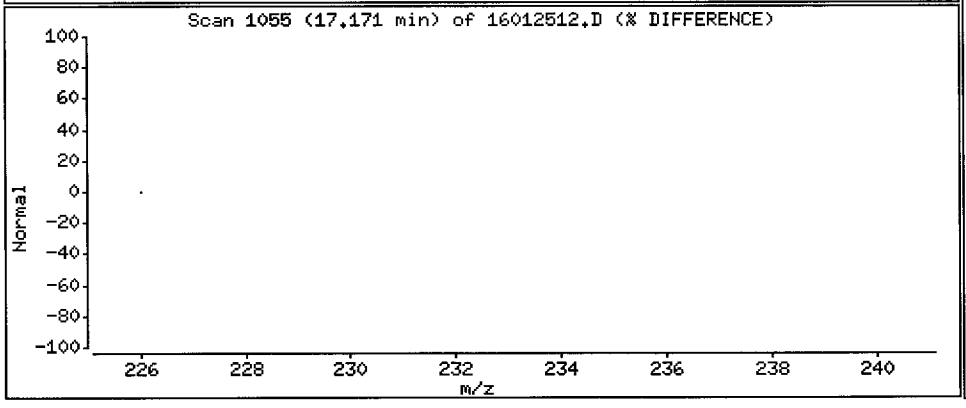












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

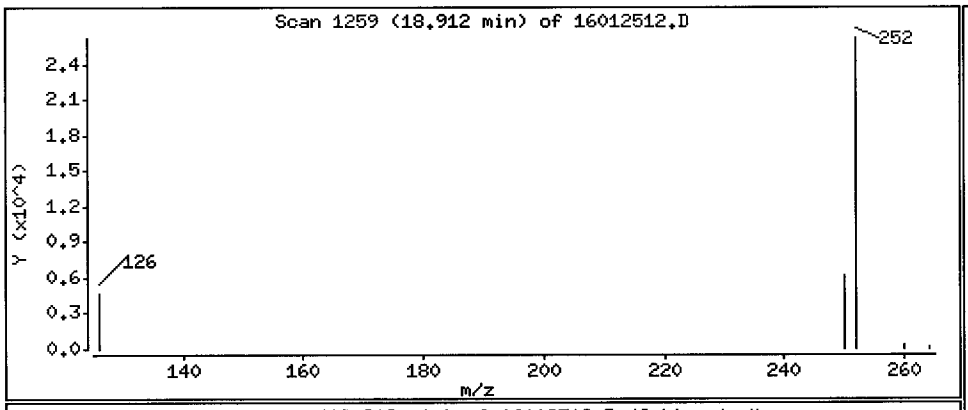
Operator: JW

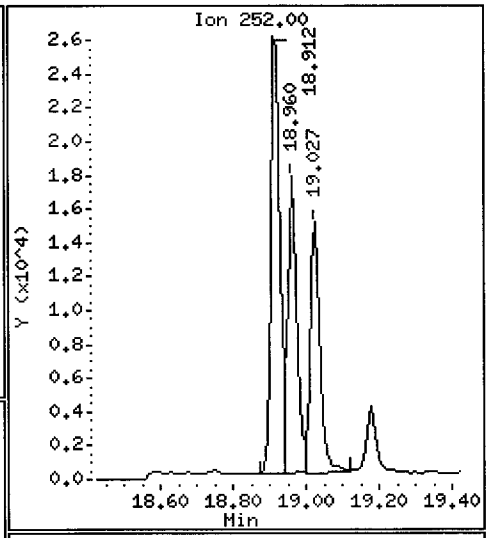
Column phase: Rxi-17Sil MS

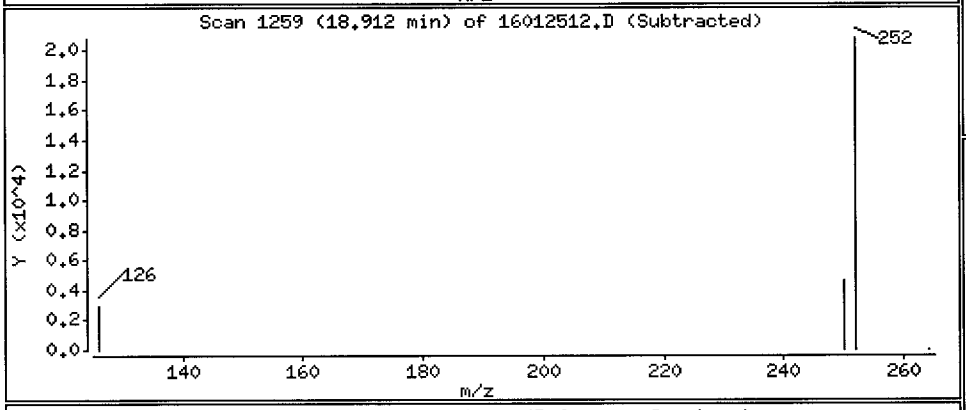
Column diameter: 0.25

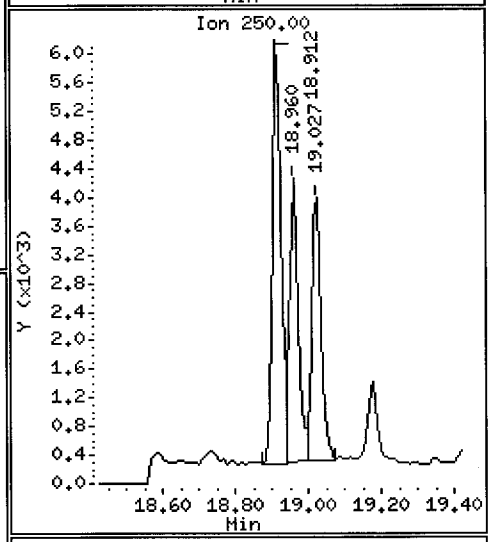
44 Benzo(b)fluoranthene

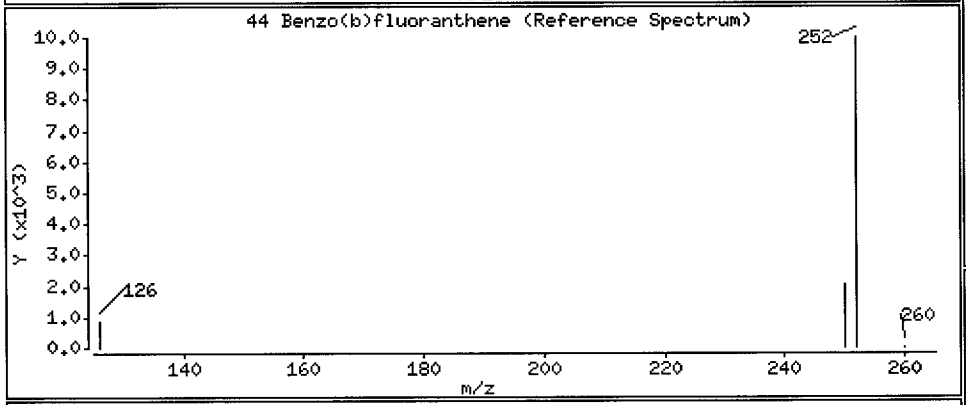
Concentration: 14800 ug/kg

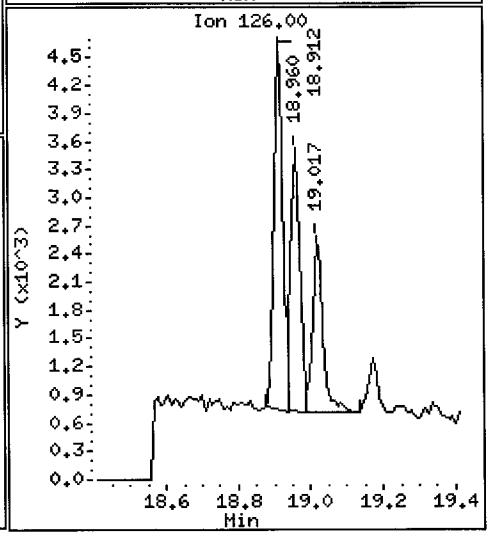


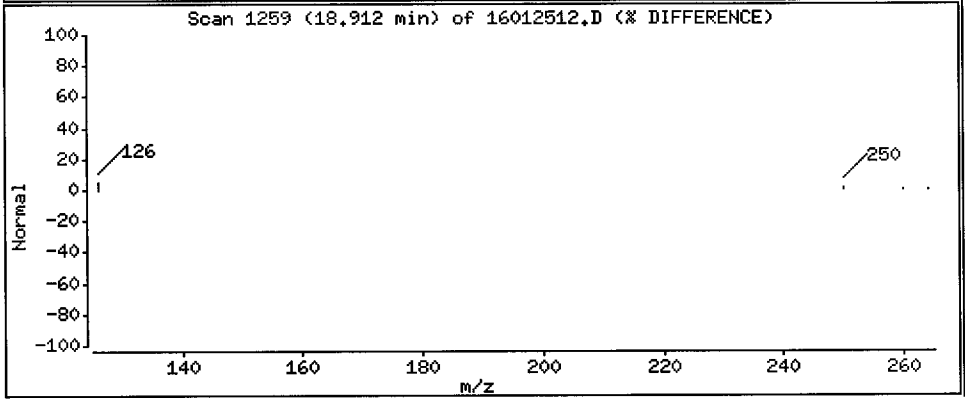












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

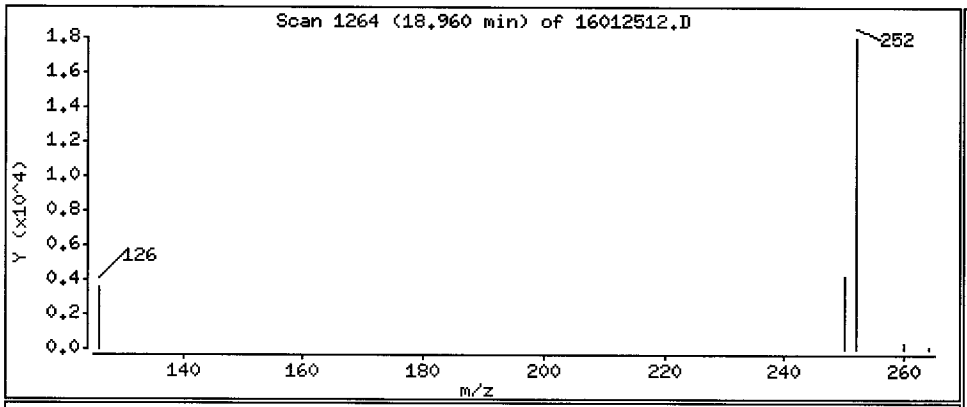
Operator: JW

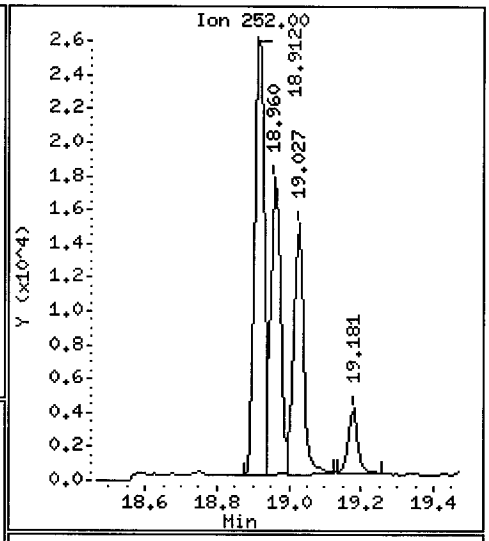
Column phase: Rxi-17Sil MS

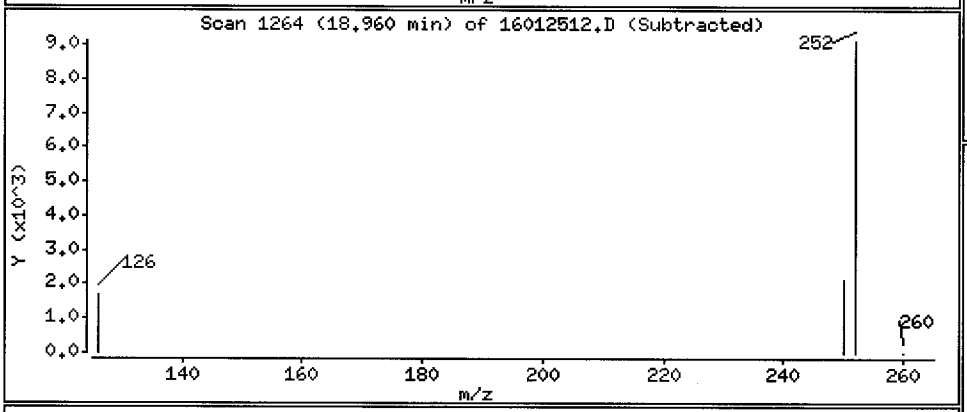
Column diameter: 0.25

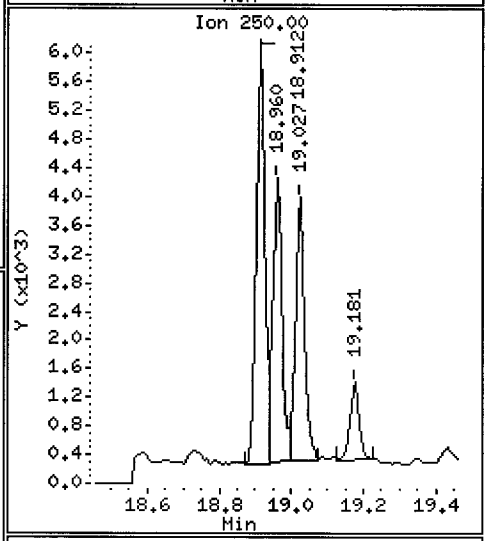
45 Benzo(k)fluoranthene

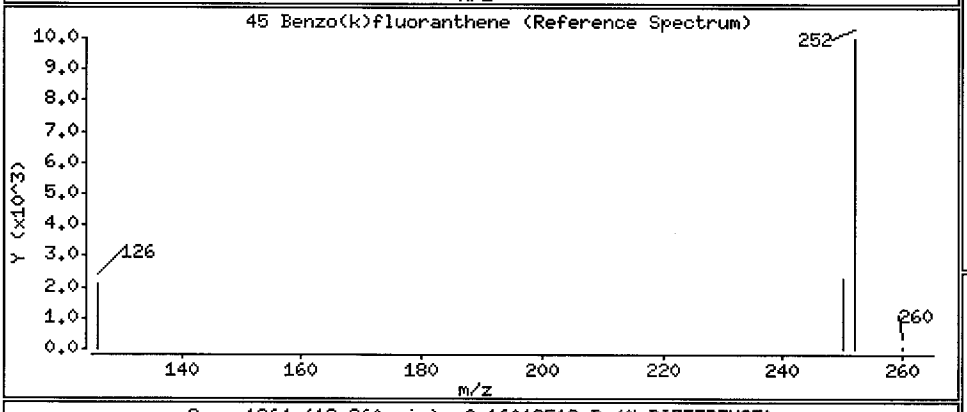
Concentration: 10200 ug/kg

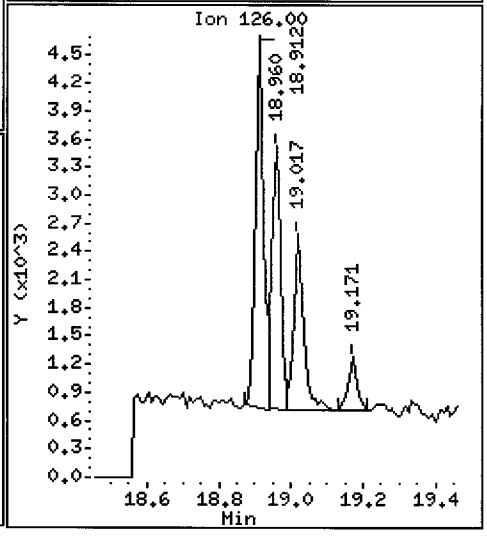


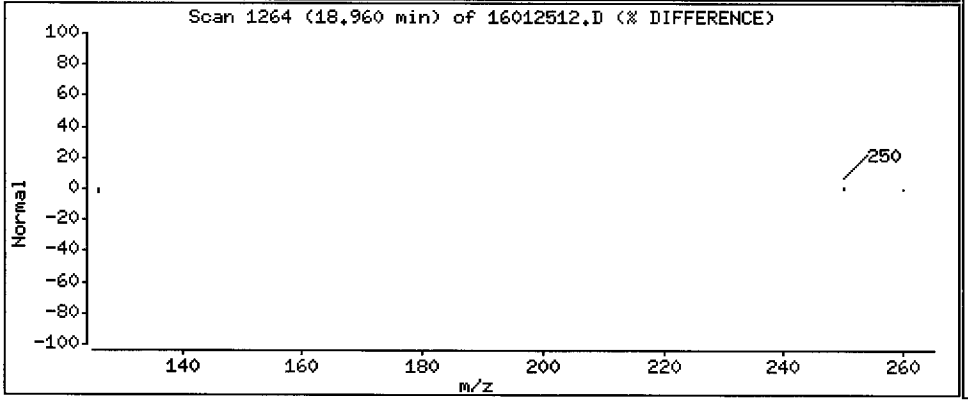












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

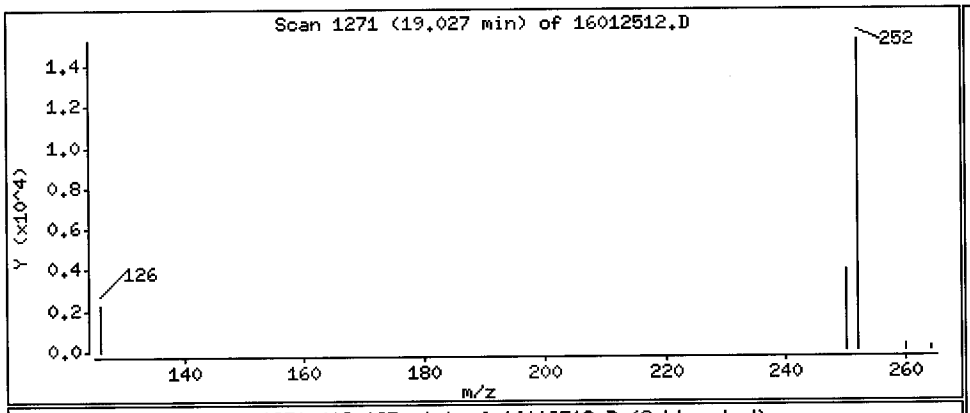
Operator: JW

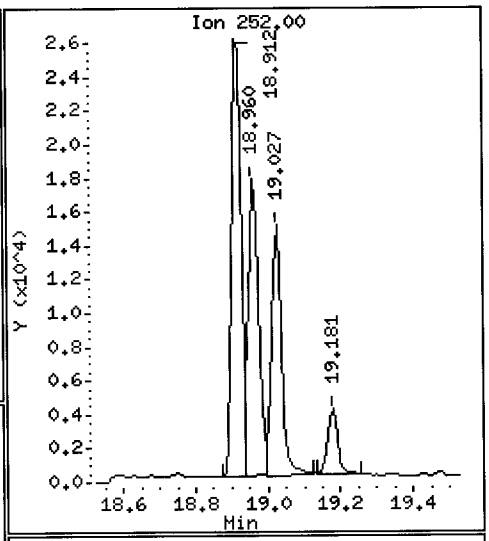
Column phase: Rxi-17Sil MS

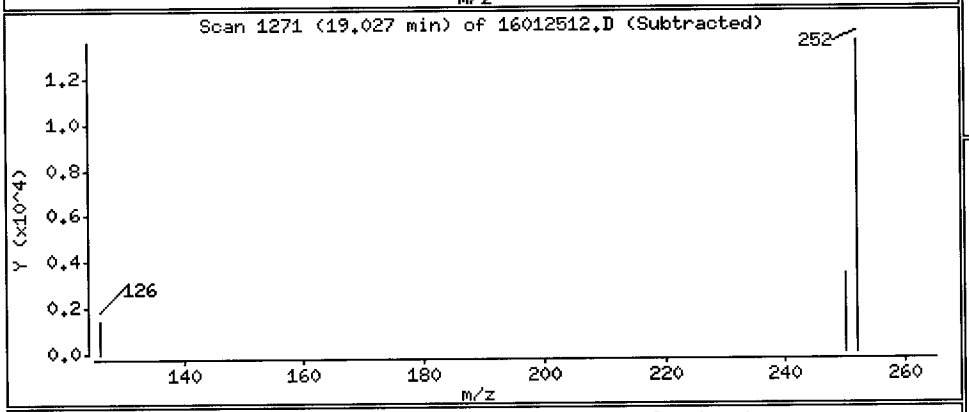
Column diameter: 0.25

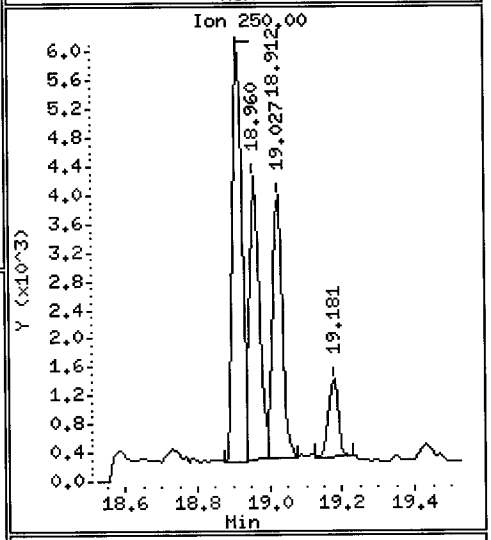
46 Benzo(j)fluoranthene

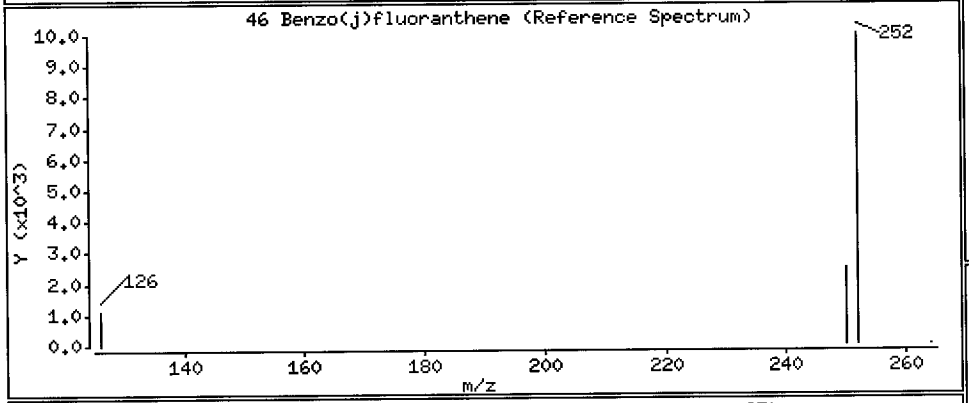
Concentration: 9250 ug/kg

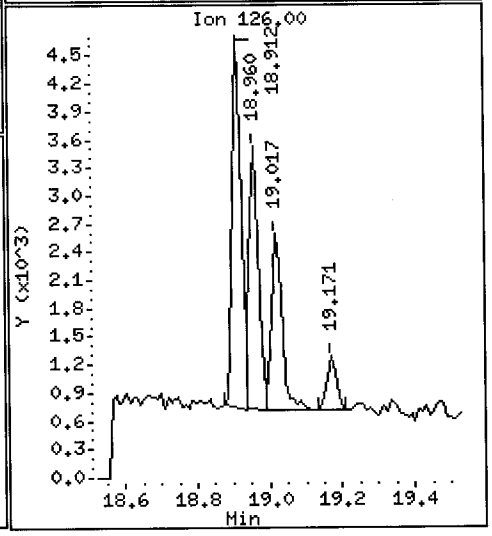


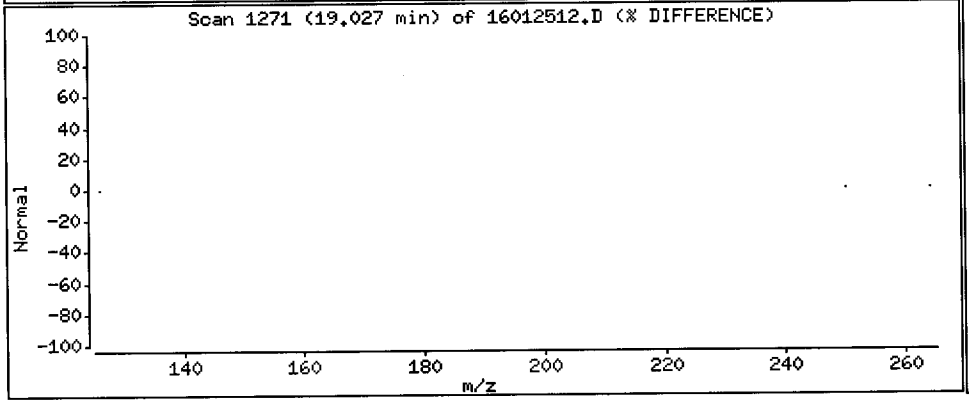












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

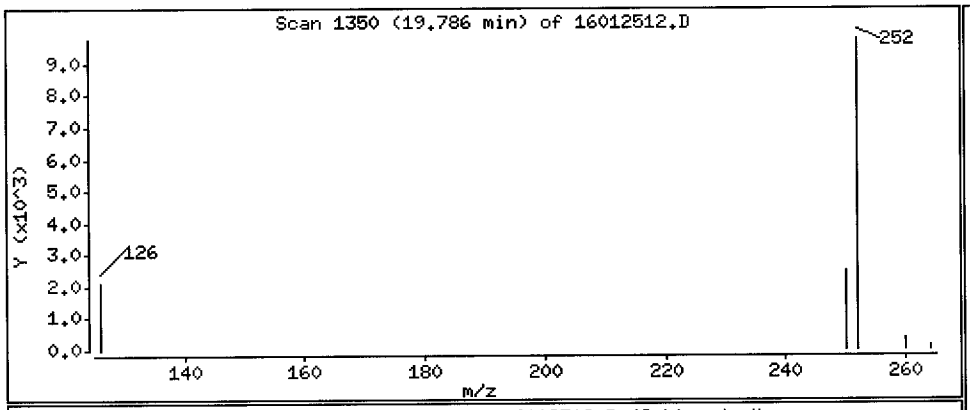
Operator: JW

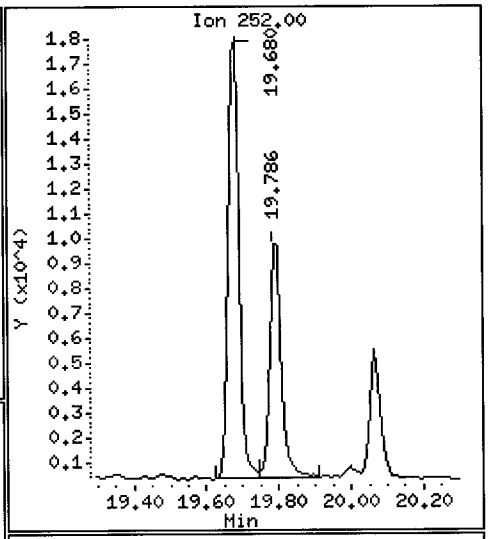
Column phase: Rxi-17Sil MS

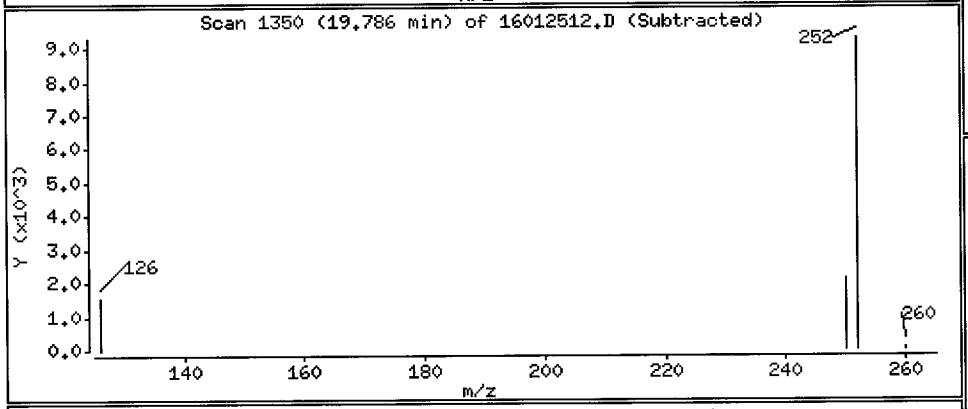
Column diameter: 0.25

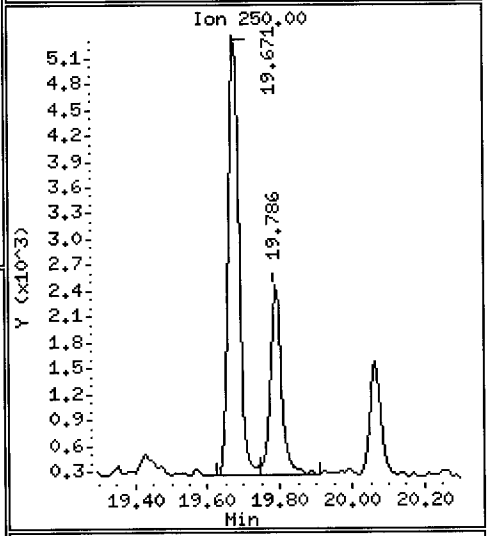
34 Benzo(a)pyrene

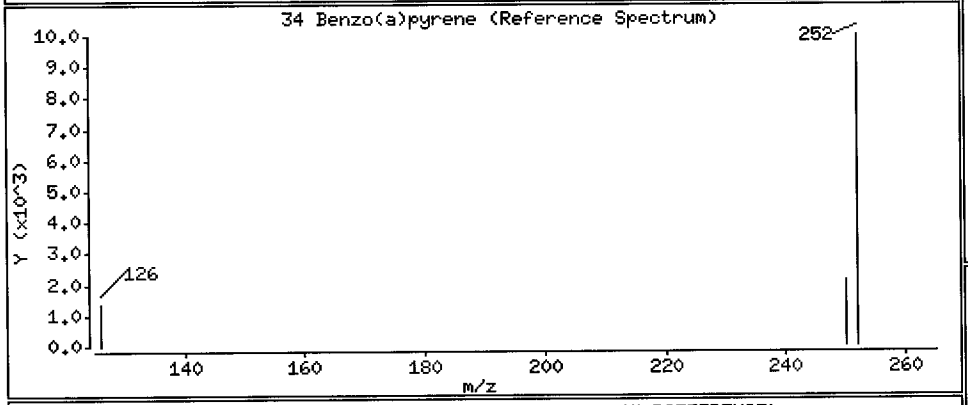
Concentration: 7110 ug/kg

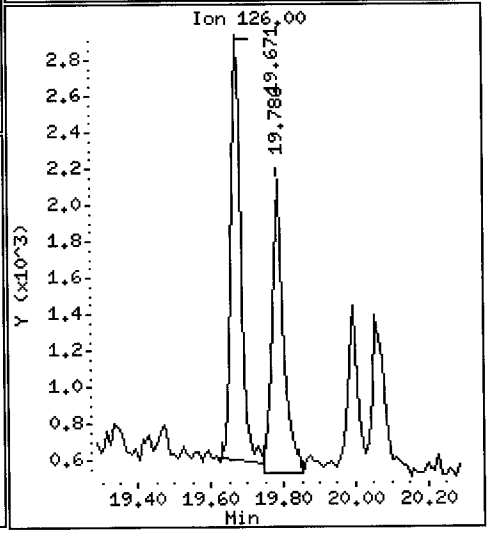


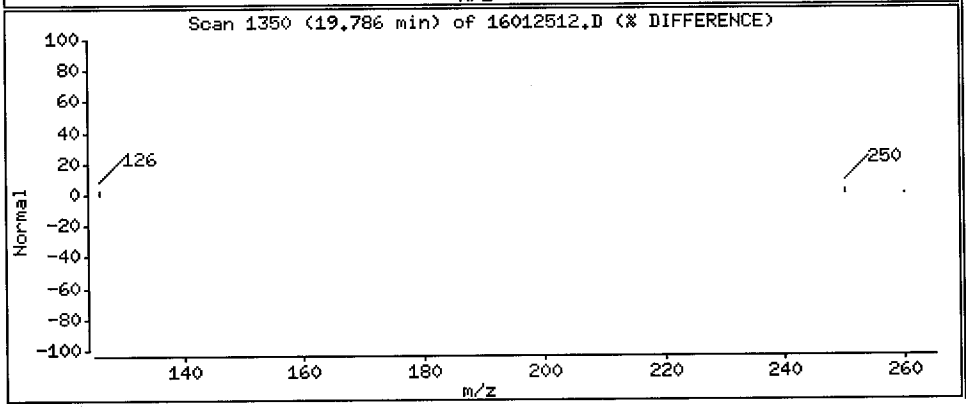












Data File: \\target\share\chem3\nt11.i\20160125.b\16012512.D

Date : 25-JAN-2016 13:00

Client ID: 13EB_ME-MTW01Z

Instrument: nt11.i

Sample Info: AUA2A,10

Volume Injected (uL): 2.0

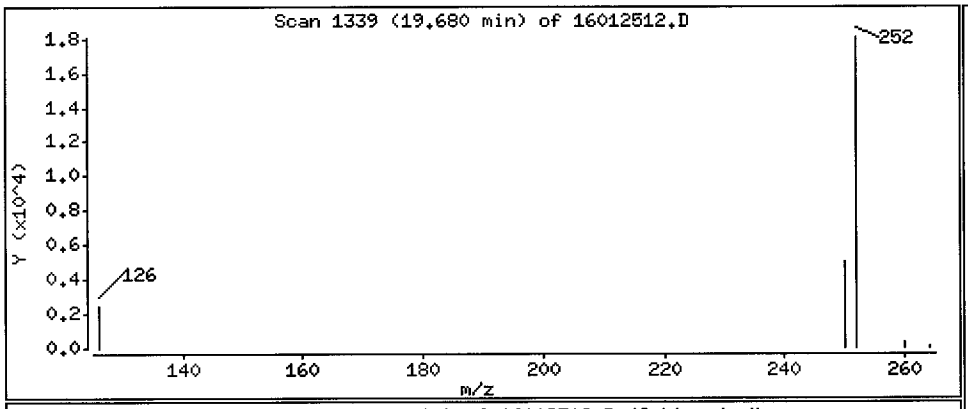
Operator: JW

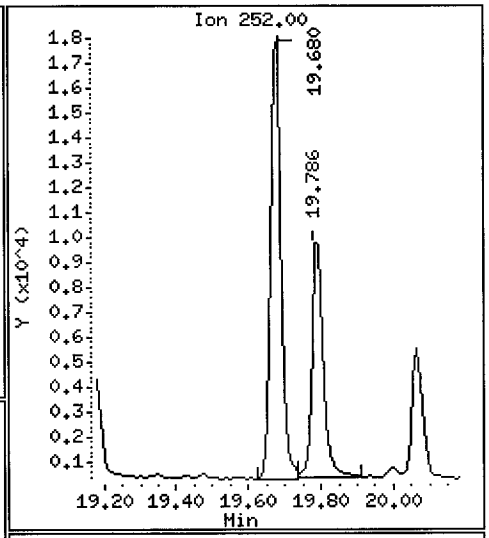
Column phase: Rxi-17Sil MS

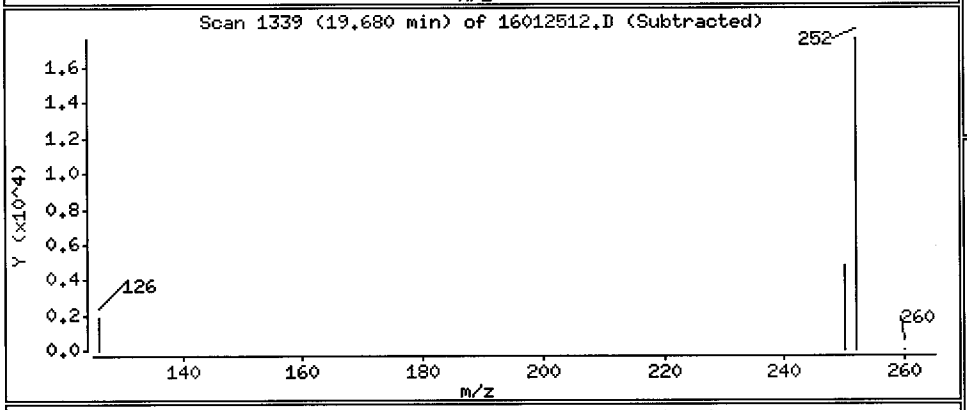
Column diameter: 0.25

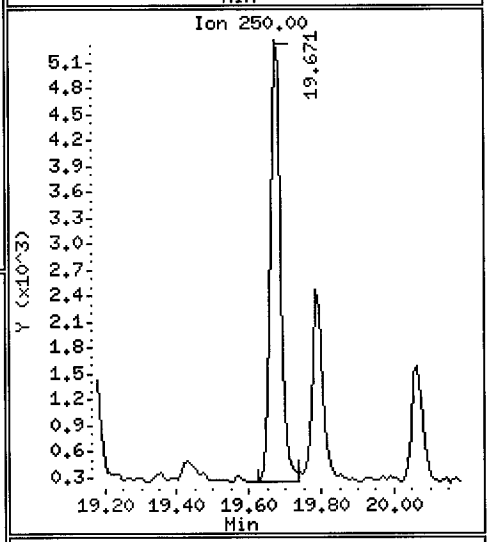
48 Benzo(e)pyrene

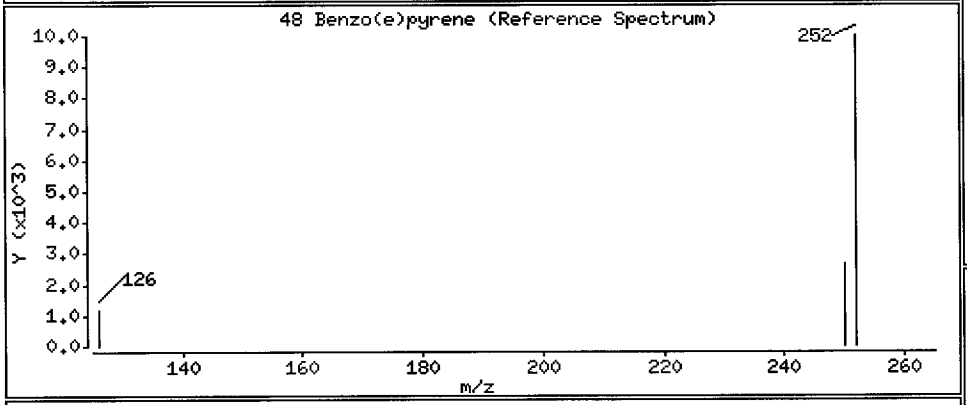
Concentration: 11900 ug/kg

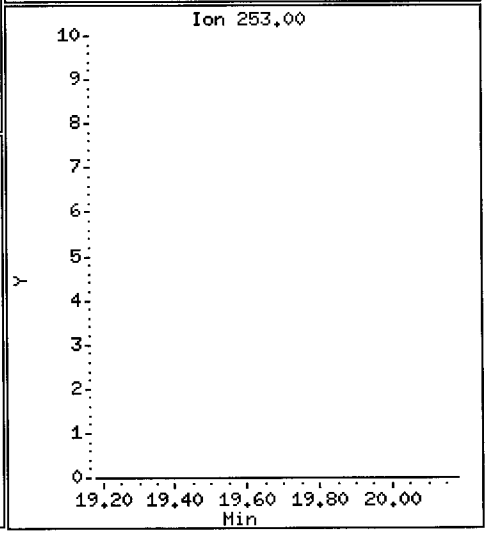


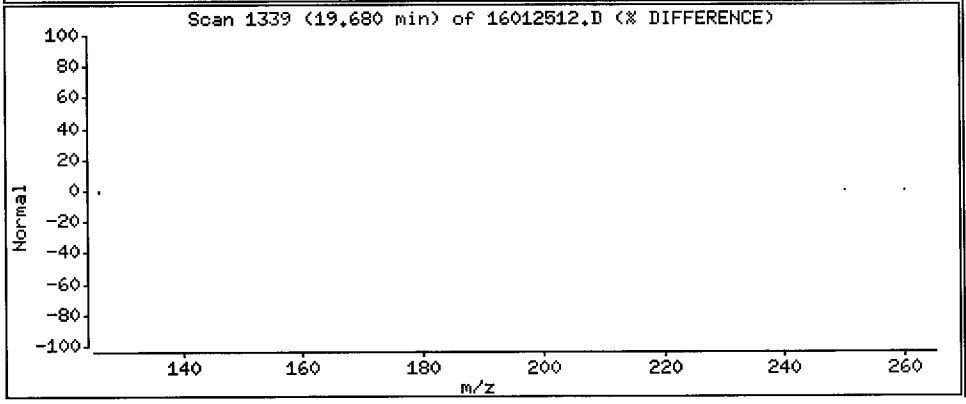












REVIEW SUMMARY FOR FILE - 16012512.D

Lab ID: AUA2A
nt11.i, 20160125.b\lowsim.m, 25-JAN-2016 13:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160125.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

Table of Contents: ARI Job ATS0

Client: Anchor QEA, LLC

Project: 150388-01.01 Port Gamble Clean-Up

AV
Signature

January-28-2016
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 2, 2016

Cindy Fields
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Project: Port Gamble Clean-up, 150388010
ARI Job No.: ATS0

Dear Ms. Fields:

Please find enclosed the Chain-of-Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details regarding requested analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile: ATS0

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: ATS0

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: ATSO	Turn-around Requested: Standard	Page: 1 of 1	
ARI Client Company: Anchor QEA	Phone: 206-287-9130	Date: 01/16	Ice Present? Yes
Client Contact: Cindy Fields		No. of Coolers: 2	Cooler Temps: 0.6, 0.9°C
Client Project Name: Port Gamble Clean-up			
Client Project #: 150388-01.01	Samplers: J. Florer, R. O'Rourke		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Sample ID	Date	Time	Matrix	No. Containers	Lipids	PCBs Congeners	Dioxin/Furans	Cadmium	PAHs (SIM)				Notes/Comments
PG-SMA2-2-MUS-COC-160104	01/07/16	1400	Tissue	1	X	X	X	X	X				Composite the 2 bags per sample
PG-PJ-1-MUS-COC-160104	"	0900	"	1	X	X	X	X	X				"
PG-WS-1-MUS-COC-160104	"	1145	"	1	X	X	X	X	X				"
PG-GF-1-MUS-COC-160104	"	1010	"	1	X	X	X	X	X				"
PG-SMA2-5 ~~COC~~ MUS-COC-160104	01/04/16	1600	"	1	X	X	X	X	X				"
PG-SMA2-4-MUS-COC-160105	01/05/16	0940	Tissue	1	X	X	X	X	X				"

Comments/Special Instructions: rinse, shuck, composite, homogenize all mussels for each sample.	Relinquished by: (Signature) J. Florer	Received by: (Signature) Tyler Rankin	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Joanna Florer	Printed Name: Tyler Rankin	Printed Name:	Printed Name:
	Company: Anchor QEA	Company: ARI	Company:	Company:
	Date & Time: 1/6/15 1033	Date & Time: 1/6/15 1033	Date & Time:	Date & Time:

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA Project Name: Port Gamble Clean-Up

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No: ATSØ 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) 0.6 0.9 ___ ___

Time: _____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: D005276

Cooler Accepted by: TR Date: 1-6-16 Time: 1033

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: _____

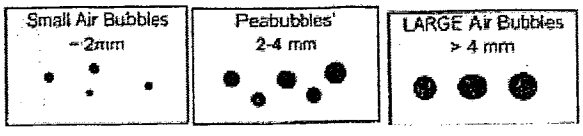
Samples Logged by: TR Date: 1-6-16 Time: 1043

***** 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)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Prep Sheet Notes

ARI Job No.: ATSΦ / APR4 Client ID: Anchor QEA

Parameter: Tissue Prep Client Project: Port Gamble clean-up

Matrix: Filter bag (tissue) other

Samples were rinsed with D-I Water to remove any sand, seaweed, etc., then shelled, homogenized and blended.
Sample weights after prep are as follows.

(H) ATSΦ A = 431.15g (H) ATSΦ B = 676.25 1:1 (T)/(H) ATSΦ C' = 587.54 (1004.91) (* SEE NOTES)
(T) ↓ = 320.70g (T) ↓ 715.94 1:1 (H)/(T) ↓ C² 497.37
(H) ATSΦ D = 594.16g (H) ATSΦ E = 564.11 (H) ATSΦ F = 489.40
(T) ↓ = 586.71g (T) ↓ 567.77 (T) ↓ = 589.84

(H) APR4 A = 225.18
(T) ↓ = 227.55

ATSΦ C (HYBRID only) - ARCHIVE = 189.36g

ATSΦ C = Approximately 21 Schucked HYBRID WERE ADDED TO THE SCHUCKED TROSSULUS JAR. AN ADDITIONAL 54 schucked HYBRID WERE THEN ADDED TO THE TRUSSULUS TO HAVE A MORE 50/50 MIX OF EACH SPECIES.

Pre-Dry Prep Time: 14HRS (2 TIMES) 1/12/16	Analyst/Date:	Post-Dry Prep Time:	Analyst/Date:	Balance ID:

Special Instructions: B334705934

(8270) PNA Filter Bag:
1. Follow prep and extraction instructions on bench sheet.

Small PCB Filter Bag:
1. Weigh wet filter bag and record weight on blue prep sheet. 2. Any solids splits taken at this time. (Record weights on blue prep sheet). 3. Filter bags are dried overnight by attaching them to the drying apparatus (wrapped in aluminum foil in a tube shape). 4. Re-weigh dried samples and record weight on blue prep sheet. 5. Cut off plastic rings and record weights on blue prep sheet. 6. Record sample dry weights without plastic rings on blue prep sheet and bench sheet. 7. Roll up filter bag and place in labeled 32oz jars. 8. Add Hexane until jar is half full. 9. Add 20g sodium sulfate to filter bag in jar. 10. Blanks=Weigh 10g Sodium Sulfate into labeled 32oz jars. Add Hexane until jar is ¼ full. 11. Add surr/spike. 12. Tighten lids and place in large ziplock bags. 13. Tumble for 12 hours (min 6 hours). 14. Record "prep time" on blue prep sheet. 15. KD (normal drying columns) on 100°C water bath. 16. Turbovap to approx. 4mL. 17. Vial with Hexane at 5mL in scintillation vials for required cleanups. (Acid/Sulfur/SPE). 18. Pre-SPE Screen 1mL. (Note: Determination of Required SPE cleanup is based on Pre-SPE Screen. 19. After cleanups: TurboVap and vial 1mL in Hexane.

Large PCB Filter Bag instructions on the back of this prep sheet. (Turn over)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Prep Sheet Notes

ARI Job No.: AT5Φ/APR4 Client ID: Anchor QEA

Parameter: Sample Compositing Client Project: Port Gamble Clean-up

Matrix: Filter bag/tissue/(other)

Sample Component Weights for Composites.

AT5ΦA (H)=25Φ.35 (T)=25Φ.25 AT5ΦB (H)=25Φ.49 (T)=25Φ.29

~~AT5ΦC (H)=25Φ. (T)=25Φ.34~~ AT5ΦD (H)=25Φ.51 (T)=25Φ.86

AT5ΦE (H)=25Φ.56 (T)=25Φ.22 AT5ΦF (H)=25Φ.17 (T)=25Φ.50

APR4A (H)=1Φ.26 (T)=1Φ.41

~~Pre-Dry~~ Prep Time: 1.75 hrs	Analyst/Date: [illegible] 01/13/16	Post-Dry Prep Time:	Analyst/Date:	Balance ID:

Special Instructions:

(8270) PNA Filter Bag:
1. Follow prep and extraction instructions on bench sheet.

Small PCB Filter Bag:
1. Weigh wet filter bag and record weight on blue prep sheet. 2. Any solids splits taken at this time. (Record weights on blue prep sheet). 3. Filter bags are dried overnight by attaching them to the drying apparatus (wrapped in aluminum foil in a tube shape). 4. Re-weigh dried samples and record weight on blue prep sheet. 5. Cut off plastic rings and record weights on blue prep sheet. 6. Record sample dry weights without plastic rings on blue prep sheet and bench sheet. 7. Roll up filter bag and place in labeled 32oz jars. 8. Add Hexane until jar is half full. 9. Add 20g sodium sulfate to filter bag in jar. 10. Blanks=Weigh 10g Sodium Sulfate into labeled 32oz jars. Add Hexane until jar is ¼ full. 11. Add surr/spike. 12. Tighten lids and place in large ziplock bags. 13. Tumble for 12 hours (min 6 hours). 14. Record "prep time" on blue prep sheet. 15. KD (normal drying columns) on 100°C water bath. 16. Turbovap to approx. 4mL. 17. Vial with Hexane at 5mL in scintillation vials for required cleanups. (Acid/Sulfur/SPE). 18. Pre-SPE Screen 1mL. (Note: Determination of Required SPE cleanup is based on Pre-SPE Screen. 19. After cleanups: TurboVap and vial 1mL in Hexane.

Large PCB Filter Bag instructions on the back of this prep sheet. (Turn over)

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: ATS0

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: Anchor QEA
Project: Port Gamble Clean-up, 1503880-01.01
ARI Job No.: ATS0

Sample Receipt

Six tissue samples were received on January 6, 2016 under ARI job ATS0. The cooler temperatures measured by IR thermometer following ARI SOP were 0.6 and 0.9°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

All samples were prepared, homogenized, and composited, per client request.

PAHs by SW8270D-SIM

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times for samples stored frozen.

Initial calibrations were within method requirements.

The initial calibration verification (ICV) on 1/22/16 fell outside the 20% control limit low for Benzo(b)fluoranthene and Total Benzofluoranthenes. All detected results associated with this ICV have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within control 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. NIST 1974C was analyzed as a reference material and results have been reported under a separate cover (ARI job APR4).

The matrix spike and matrix spike duplicate percent recoveries were within control limits.

Dioxin/Furans by EPA 1613B

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

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique isomer separation for the 2378-TCDF, eliminating the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

Both extraction and cleanup surrogates had recoveries within control limits.

The method blank contained reportable responses below the reporting limit for several compounds. "B" qualifiers were applied to associated results that were less than ten times the levels found in the method blank. No further corrective action was taken.

The OPR (Ongoing Precision and Accuracy or LCS) percent recoveries were within control limits.

Specific results have been "EMPC"-flagged indicating a response not meeting requirements of positive identification. The EMPC values are treated as undetects under some programs and as hits under programs with more conservative protocols.

The TEQ is presented with WHO2005 with ND=0 for undetects and ND=1/2 for undetects, with EMPCs included as hits.

Cadmium by SW6010C

The samples were digested and analyzed within the method recommended holding times for samples stored frozen.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

Lipids by Method Bligh&Dyer

The samples were prepared and analyzed within the method recommended holding times for samples stored frozen.

The method blank had a result that was greater than the reporting limit. The associated sample result was greater than ten times the level reported in the method blank. No corrective action was taken.

The replicate RPDs were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: ATS0
Client: Anchor QEA, LLC
Project Event: 150388-01.01
Project Name: Port Gamble Clean-Up

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	PG-SMA2-2-MUS-COC-160104	ATS0A	16-135	Tissue	01/04/16 14:00	01/06/16 10:33
2.	PG-PJ-1-MUS-COC-160104	ATS0B	16-136	Tissue	01/04/16 09:00	01/06/16 10:33
3.	PG-WS-1-MUS-COC-160104	ATS0C	16-137	Tissue	01/04/16 11:45	01/06/16 10:33
4.	PG-GP-1-MUS-COC-160104	ATS0D	16-138	Tissue	01/04/16 10:10	01/06/16 10:33
5.	PG-SMA2-5-MUS-COC-160104	ATS0E	16-139	Tissue	01/04/16 16:00	01/06/16 10:33
6.	PG-SMA2-4-MUS-COC-160105	ATS0F	16-140	Tissue	01/05/16 09:40	01/06/16 10:33

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Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

Geotechnical Data

A	The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

Analytical Method Information

Printed: 01/28/2016 10:40 am

8270D-SIM PAH (0.5 ug/kg) in Tissue (EPA 8270D-SIM)

Preservation: Cool <6°C

Container: Glass WM, Clear, 8 oz

Amount Required: 150 g

Hold Time: 14 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Naphthalene	0.500	0.600 ug/kg		30	30-160	30	30-160	30
1-Methylnaphthalene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
2-Methylnaphthalene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Biphenyl	0.500	0.500 ug/kg		30	30-160	30	30-160	30
2,6-Dimethylnaphthalene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Acenaphthylene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Acenaphthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Dibenzofuran	0.500	0.500 ug/kg		30	30-160	30	30-160	30
2,3,5-Trimethylnaphthalene	0.500	0.500 ug/kg						
Fluorene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Dibenzothiophene	0.500	0.500 ug/kg						
Phenanthrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Anthracene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Carbazole	0.500	0.500 ug/kg		30	30-160	30	30-160	30
1-Methylphenanthrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(a)anthracene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Chrysene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(b)fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(k)fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(j)fluoranthene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(e)pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(a)pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Indeno(1,2,3-cd)pyrene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Dibenzo(a,h)anthracene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzo(g,h,i)perylene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Perylene	0.500	0.500 ug/kg		30	30-160	30	30-160	30
Benzofluoranthenes, Total	1.00	1.00 ug/kg		30	30-160	30	46-120	30
Surr: 2-Methylnaphthalene-d10			30-160					
Surr: Dibenzo[a,h]anthracene-d14			30-160					
Surr: Fluoranthene-d10			30-160					
Naphthalene-d8								
Acenaphthene-d10								
Phenanthrene-d10								
Chrysene-d12								
Perylene-d12								

ATS0 : 00014

Analytical Method Information

Printed: 01/28/2016 10:40 am

1613B Dioxin in Tissue (EPA 1613B)

Preservation: Cool <6°C

Container: Glass WM, Amber, 8 oz

Amount Required: 150 g **Hold Time:** 365 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
2,3,7,8-TCDF	0.0500	1.00 ng/kg		25			75-158	25
2,3,7,8-TCDD	0.160	1.00 ng/kg		25			67-158	25
1,2,3,7,8-PeCDF	0.470	5.00 ng/kg		25			80-134	25
2,3,4,7,8-PeCDF	0.410	5.00 ng/kg		25			68-160	25
1,2,3,7,8-PeCDD	0.490	5.00 ng/kg		25			70-142	25
1,2,3,4,7,8-HxCDF	0.440	5.00 ng/kg		25			72-134	25
1,2,3,6,7,8-HxCDF	0.390	5.00 ng/kg		25			84-130	25
2,3,4,6,7,8-HxCDF	0.410	5.00 ng/kg		25			70-156	25
1,2,3,7,8,9-HxCDF	0.490	5.00 ng/kg		25			78-130	25
1,2,3,4,7,8-HxCDD	0.480	5.00 ng/kg		25			70-164	25
1,2,3,6,7,8-HxCDD	0.370	5.00 ng/kg		25			76-134	25
1,2,3,7,8,9-HxCDD	0.350	5.00 ng/kg		25			64-162	25
1,2,3,4,6,7,8-HpCDF	0.470	5.00 ng/kg		25			82-122	25
1,2,3,4,7,8,9-HpCDF	0.450	5.00 ng/kg		25			78-138	25
1,2,3,4,6,7,8-HpCDD	0.580	5.00 ng/kg		25			70-140	25
OCDF	0.740	10.0 ng/kg		25			63-170	25
OCDD	1.83	10.0 ng/kg		25			78-144	25
Total TCDF		1.00 ng/kg						
Total TCDD		1.00 ng/kg						
Total PeCDF		1.00 ng/kg						
Total PeCDD		1.00 ng/kg						
Total HxCDF		1.00 ng/kg						
Total HxCDD		1.00 ng/kg						
Total HpCDF		1.00 ng/kg						
Total HpCDD		1.00 ng/kg						
Surr: 13C12-2,3,7,8-TCDF			24-169					
Surr: 13C12-2,3,7,8-TCDD			25-164					
Surr: 13C12-1,2,3,7,8-PeCDF			24-185					
Surr: 13C12-2,3,4,7,8-PeCDF			21-178					
Surr: 13C12-1,2,3,7,8-PeCDD			25-181					
Surr: 13C12-1,2,3,4,7,8-HxCDF			26-152					
Surr: 13C12-1,2,3,6,7,8-HxCDF			26-123					
Surr: 13C12-2,3,4,6,7,8-HxCDF			28-136					
Surr: 13C12-1,2,3,7,8,9-HxCDF			29-147					
Surr: 13C12-1,2,3,4,7,8-HxCDD			32-141					
Surr: 13C12-1,2,3,6,7,8-HxCDD			28-130					
Surr: 13C12-1,2,3,4,6,7,8-HpCDF			28-143					
Surr: 13C12-1,2,3,4,7,8,9-HpCDF			26-138					
Surr: 13C12-1,2,3,4,6,7,8-HpCDD			23-140					
Surr: 13C12-OCDD			17-157					
Surr: 37Cl4-2,3,7,8-TCDD			35-197					
13C12-1,2,3,4-TCDD								
13C12-1,2,3,7,8,9-HxCDD								

Analytical Method Information

Printed: 01/28/2016 10:41 am

Met 6010C - Cd in Tissue (EPA 6010C)

Preservation: Cool <6°C

Container: Glass WM, Clear, 4 oz

Amount Required: 100 g **Hold Time:** 180 days

Analyte	MDL	Reporting Limit	Surrogate %Rec	Duplicate RPD	----Matrix Spike---- %Rec	RPD	--Blank Spike / LCS-- %Rec	RPD
Cadmium	0.00248	0.0400 mg/kg		20	75-125	20	80-120	20

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: ATS0

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: PG-SMA2-2-MUS-COC-160104 SAMPLE

Lab Sample ID: ATS0A
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 12:28
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.04 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.11 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.60**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	**Fluorene**	**0.50**	**0.65**
85-01-8	**Phenanthrene**	**0.50**	**4.20**
120-12-7	**Anthracene**	**0.50**	**1.23**
206-44-0	**Fluoranthene**	**0.50**	**6.50**
129-00-0	**Pyrene**	**0.50**	**4.98**
56-55-3	**Benzo(a)anthracene**	**0.50**	**1.64**
218-01-9	**Chrysene**	**0.50**	**2.14**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**1.52**
207-08-9	**Benzo(k)fluoranthene**	**0.50**	**1.19 Q**
50-32-8	**Benzo(a)pyrene**	**0.50**	**0.59**
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	**Benzo(e)pyrene**	**0.50**	**1.11**
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**3.66 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	66.0%
d10-2-Methylnaphthalene	55.0%
d14-Dibenzo(a,h)anthracene	72.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: PG-PJ-1-MUS-COC-160104**
Extraction Method: TissM **SAMPLE**

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 12:58
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.01 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 0.979 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.56**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	**Fluorene**	**0.50**	**0.66**
85-01-8	**Phenanthrene**	**0.50**	**4.29**
120-12-7	**Anthracene**	**0.50**	**0.99**
206-44-0	**Fluoranthene**	**0.50**	**6.28**
129-00-0	**Pyrene**	**0.50**	**4.34**
56-55-3	**Benzo(a)anthracene**	**0.50**	**1.51**
218-01-9	**Chrysene**	**0.50**	**2.06**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**1.20**
207-08-9	**Benzo(k)fluoranthene**	**0.50**	**0.78 Q**
50-32-8	Benzo(a)pyrene	0.50	< 0.50 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	**Benzo(e)pyrene**	**0.50**	**0.87**
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**2.68 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	63.3%
d10-2-Methylnaphthalene	47.7%
d14-Dibenzo(a,h)anthracene	68.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: PG-WS-1-MUS-COC-160104 SAMPLE

Lab Sample ID: ATS0C
LIMS ID: 16-137
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 14:29
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.04 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.21 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.55**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	**Acenaphthene**	**0.50**	**0.58**
86-73-7	**Fluorene**	**0.50**	**0.86**
85-01-8	**Phenanthrene**	**0.50**	**5.94**
120-12-7	**Anthracene**	**0.50**	**1.70**
206-44-0	**Fluoranthene**	**0.50**	**9.95**
129-00-0	**Pyrene**	**0.50**	**7.33**
56-55-3	**Benzo(a)anthracene**	**0.50**	**2.83**
218-01-9	**Chrysene**	**0.50**	**3.44**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**2.45**
207-08-9	**Benzo(k)fluoranthene**	**0.50**	**1.58 Q**
50-32-8	**Benzo(a)pyrene**	**0.50**	**0.97**
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	**Perylene**	**0.50**	**0.65**
192-97-2	**Benzo(e)pyrene**	**0.50**	**1.67**
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**5.40 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	59.3%
d10-2-Methylnaphthalene	47.0%
d14-Dibenzo(a,h)anthracene	63.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: PG-GP-1-MUS-COC-160104**
Extraction Method: TissM **SAMPLE**

Lab Sample ID: ATS0D
LIMS ID: 16-138
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 14:59
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.03 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.10 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.59**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	**Fluorene**	**0.50**	**0.73**
85-01-8	**Phenanthrene**	**0.50**	**4.52**
120-12-7	**Anthracene**	**0.50**	**0.95**
206-44-0	**Fluoranthene**	**0.50**	**5.98**
129-00-0	**Pyrene**	**0.50**	**4.33**
56-55-3	**Benzo(a)anthracene**	**0.50**	**1.42**
218-01-9	**Chrysene**	**0.50**	**1.99**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**1.18**
207-08-9	**Benzo(k)fluoranthene**	**0.50**	**0.74 Q**
50-32-8	Benzo(a)pyrene	0.50	< 0.50 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	**Benzo(e)pyrene**	**0.50**	**0.82**
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**2.57 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	59.7%
d10-2-Methylnaphthalene	49.3%
d14-Dibenzo(a,h)anthracene	66.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: PG-SMA2-5-MUS-COC-160104**
Extraction Method: TissM **SAMPLE**

Lab Sample ID: ATS0E
LIMS ID: 16-139
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 15:29
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.05 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 1.07 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.84**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	**Acenaphthene**	**0.50**	**1.22**
86-73-7	**Fluorene**	**0.50**	**1.80**
85-01-8	**Phenanthrene**	**0.50**	**13.1**
120-12-7	**Anthracene**	**0.50**	**4.69**
206-44-0	**Fluoranthene**	**0.50**	**33.6**
129-00-0	**Pyrene**	**0.50**	**25.2**
56-55-3	**Benzo(a)anthracene**	**0.50**	**7.53**
218-01-9	**Chrysene**	**0.50**	**8.65**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**5.99**
207-08-9	**Benzo(k)fluoranthene**	**0.50**	**4.12 Q**
50-32-8	**Benzo(a)pyrene**	**0.50**	**2.76**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**0.50**	**0.70**
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	**Benzo(g,h,i)perylene**	**0.50**	**0.99**
198-55-0	**Perylene**	**0.50**	**1.75**
192-97-2	**Benzo(e)pyrene**	**0.50**	**5.24**
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**13.5 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	58.7%
d10-2-Methylnaphthalene	49.7%
d14-Dibenzo(a,h)anthracene	62.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: PG-SMA2-4-MUS-COC-160105 SAMPLE

Lab Sample ID: ATS0F
LIMS ID: 16-140
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/05/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 15:59
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.04 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 0.926 %

CAS Number	Analyte	LOQ	Result
91-20-3	**Naphthalene**	**0.50**	**0.56**
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	**Fluorene**	**0.50**	**0.77**
85-01-8	**Phenanthrene**	**0.50**	**5.47**
120-12-7	**Anthracene**	**0.50**	**1.75**
206-44-0	**Fluoranthene**	**0.50**	**10.7**
129-00-0	**Pyrene**	**0.50**	**7.09**
56-55-3	**Benzo(a)anthracene**	**0.50**	**2.96**
218-01-9	**Chrysene**	**0.50**	**3.17**
205-99-2	**Benzo(b)fluoranthene**	**0.50**	**2.45**
207-08-9	**Benzo(k)fluoranthene**	**0.50**	**1.49 Q**
50-32-8	**Benzo(a)pyrene**	**0.50**	**1.13**
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	**Benzo(g,h,i)perylene**	**0.50**	**0.71**
198-55-0	**Perylene**	**0.50**	**0.76**
192-97-2	**Benzo(e)pyrene**	**0.50**	**1.58**
TOTBFA	**Total Benzofluoranthenes**	**0.50**	**5.21 Q**

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	61.3%
d10-2-Methylnaphthalene	52.3%
d14-Dibenzo(a,h)anthracene	66.3%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Tissue

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01

Client ID	FLN	MNP	DBA	TOT OUT
PG-SMA2-2-MUS-COC-1601	66.0%	55.0%	72.7%	0
MB-011416	61.3%	47.0%	65.7%	0
LCS-011416	61.3%	48.0%	64.3%	0
PG-PJ-1-MUS-COC-160104	63.3%	47.7%	68.3%	0
PG-PJ-1-MUS-COC-160104 MS	63.7%	48.7%	68.7%	0
PG-PJ-1-MUS-COC-160104 MS	53.3%	38.0%	57.7%	0
PG-WS-1-MUS-COC-160104	59.3%	47.0%	63.0%	0
PG-GP-1-MUS-COC-160104	59.7%	49.3%	66.0%	0
PG-SMA2-5-MUS-COC-1601	58.7%	49.7%	62.0%	0
PG-SMA2-4-MUS-COC-1601	61.3%	52.3%	66.3%	0

	LCS/MB LIMITS (Advisory)	QC LIMITS (Advisory)
(FLN) = d10-Fluoranthene	(30-160)	(30-160)
(MNP) = d10-2-Methylnaphthalene	(30-160)	(30-160)
(DBA) = d14-Dibenzo(a,h)anthracene	(30-160)	(30-160)

Prep Method: TissM
Log Number Range: 16-135 to 16-140

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-PJ-1-MUS-COC-160104
MATRIX SPIKE

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted MS/MSD: 01/14/16

Sample Amount MS: 10.01 g-as-rec
MSD: 10.00 g-as-rec

Date Analyzed MS: 01/22/16 13:28
MSD: 01/22/16 13:59

Final Extract Volume MS: 0.50 mL
MSD: 0.50 mL

Instrument/Analyst MS: NT11/JLW
MSD: NT11/JLW

Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Naphthalene	0.6	7.2	15.0	44.0%	5.8	15.0	34.7%	21.5%
2-Methylnaphthalene	< 0.5 U	8.0	15.0	53.3%	6.5	15.0	43.3%	20.7%
Acenaphthylene	< 0.5 U	9.1	15.0	60.7%	7.6	15.0	50.7%	18.0%
Acenaphthene	< 0.5 U	8.9	15.0	59.3%	7.4	15.0	49.3%	18.4%
Fluorene	0.7	10.2	15.0	63.3%	8.6	15.0	52.7%	17.0%
Phenanthrene	4.3	12.7	15.0	56.0%	10.9	15.0	44.0%	15.3%
Anthracene	1.0	11.0	15.0	66.7%	9.5	15.0	56.7%	14.6%
Fluoranthene	6.3	15.2	15.0	59.3%	13.3	15.0	46.7%	13.3%
Pyrene	4.3	13.9	15.0	64.0%	12.2	15.0	52.7%	13.0%
Benzo(a)anthracene	1.5	11.6	15.0	67.3%	10.1	15.0	57.3%	13.8%
Chrysene	2.1	11.0	15.0	59.3%	9.8	15.0	51.3%	11.5%
Benzo(b)fluoranthene	1.2	10.7	15.0	63.3%	9.4	15.0	54.7%	12.9%
Benzo(k)fluoranthene	0.8 Q	9.2 Q	15.0	56.0%	8.1 Q	15.0	48.7%	12.7%
Benzo(a)pyrene	< 0.5 U	9.6	15.0	64.0%	8.5	15.0	56.7%	12.2%
Indeno(1,2,3-cd)pyrene	< 0.5 U	10.3	15.0	68.7%	9.1	15.0	60.7%	12.4%
Dibenz(a,h)anthracene	< 0.5 U	10.6	15.0	70.7%	9.3	15.0	62.0%	13.1%
Benzo(g,h,i)perylene	< 0.5 U	10.1	15.0	67.3%	9.0	15.0	60.0%	11.5%
Perylene	< 0.5 U	9.3	15.0	62.0%	8.2	15.0	54.7%	12.6%
Benzo(e)pyrene	0.9	9.6	15.0	58.0%	8.5	15.0	50.7%	12.2%
Total Benzofluoranthenes	2.7 Q	28.8 Q	45.0	58.0%	25.4 Q	45.0	50.4%	12.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: PG-PJ-1-MUS-COC-160104
MATRIX SPIKE

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 13:28
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.01 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 0.979 %

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.50	---
91-57-6	2-Methylnaphthalene	0.50	---
208-96-8	Acenaphthylene	0.50	---
83-32-9	Acenaphthene	0.50	---
86-73-7	Fluorene	0.50	---
85-01-8	Phenanthrene	0.50	---
120-12-7	Anthracene	0.50	---
206-44-0	Fluoranthene	0.50	---
129-00-0	Pyrene	0.50	---
56-55-3	Benzo(a)anthracene	0.50	---
218-01-9	Chrysene	0.50	---
205-99-2	Benzo(b)fluoranthene	0.50	---
207-08-9	Benzo(k)fluoranthene	0.50	---
50-32-8	Benzo(a)pyrene	0.50	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	---
53-70-3	Dibenz(a,h)anthracene	0.50	---
191-24-2	Benzo(g,h,i)perylene	0.50	---
198-55-0	Perylene	0.50	---
192-97-2	Benzo(e)pyrene	0.50	---
TOTBFA	Total Benzofluoranthenes	0.50	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	63.7%
d10-2-Methylnaphthalene	48.7%
d14-Dibenzo(a,h)anthracene	68.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS
Extraction Method: TissM
Page 1 of 1

Sample ID: PG-PJ-1-MUS-COC-160104
MATRIX SPIKE DUPLICATE

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized: MW
Reported: 01/27/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 13:59
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.00 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: 0.979 %

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.50	---
91-57-6	2-Methylnaphthalene	0.50	---
208-96-8	Acenaphthylene	0.50	---
83-32-9	Acenaphthene	0.50	---
86-73-7	Fluorene	0.50	---
85-01-8	Phenanthrene	0.50	---
120-12-7	Anthracene	0.50	---
206-44-0	Fluoranthene	0.50	---
129-00-0	Pyrene	0.50	---
56-55-3	Benzo(a)anthracene	0.50	---
218-01-9	Chrysene	0.50	---
205-99-2	Benzo(b)fluoranthene	0.50	---
207-08-9	Benzo(k)fluoranthene	0.50	---
50-32-8	Benzo(a)pyrene	0.50	---
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	---
53-70-3	Dibenz(a,h)anthracene	0.50	---
191-24-2	Benzo(g,h,i)perylene	0.50	---
198-55-0	Perylene	0.50	---
192-97-2	Benzo(e)pyrene	0.50	---
TOTBFA	Total Benzofluoranthenes	0.50	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	53.3%
d10-2-Methylnaphthalene	38.0%
d14-Dibenzo(a,h)anthracene	57.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS

Sample ID: LCS-011416
LAB CONTROL SAMPLE

Lab Sample ID: LCS-011416
LIMS ID: 15-20439
Matrix: Tissue
Data Release Authorized: Thw
Reported: 01/27/16

QC Report No: APR4-Anchor QEA, LLC
Project: Port Gamble Clean-up
Event: 1503880101
Date Sampled: NA
Date Received: NA

Date Extracted: 01/14/16
Date Analyzed LCS: 01/22/16 10:57
Instrument/Analyst LCS: NT11/JLW

Sample Amount LCS: 10.00 g-as-rec
Final Extract Volume LCS: 0.50 mL
Dilution Factor LCS: 1.00

Analyte	LCS		Spike Added	Recovery
Naphthalene	7.68		15.0	51.2%
2-Methylnaphthalene	7.96		15.0	53.1%
Acenaphthylene	7.38		15.0	49.2%
Acenaphthene	7.76		15.0	51.7%
Fluorene	8.68		15.0	57.9%
Phenanthrene	8.55		15.0	57.0%
Anthracene	8.47		15.0	56.5%
Fluoranthene	9.45		15.0	63.0%
Pyrene	9.67		15.0	64.5%
Benzo(a)anthracene	9.99		15.0	66.6%
Chrysene	9.34		15.0	62.3%
Benzo(b)fluoranthene	9.32		15.0	62.1%
Benzo(k)fluoranthene	8.44	Q	15.0	56.3%
Benzo(a)pyrene	8.44		15.0	56.3%
Indeno(1,2,3-cd)pyrene	9.88		15.0	65.9%
Dibenz(a,h)anthracene	10.2		15.0	68.0%
Benzo(g,h,i)perylene	9.84		15.0	65.6%
Perylene	8.42		15.0	56.1%
Benzo(e)pyrene	8.96		15.0	59.7%
Total Benzofluoranthenes	26.3	Q	45.0	58.4%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	61.3%
d10-2-Methylnaphthalene	48.0%
d14-Dibenzo(a,h)anthracene	64.3%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

APR4MBS1

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Lab File ID: 16012207 Date Extracted: 01/14/16

Instrument ID: NT11 Date Analyzed: 01/22/16

Matrix: SOLID Time Analyzed: 1027

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	APR4LCSS1	APR4LCSS1	16012208	01/22/16
02	SRM 1974C	APR4SRM1	16012209	01/22/16
03	PG-T0-MUS-COC-15	APR4A	16012210	01/22/16
04	PG-SMA2-2-MUS-CO	ATS0A	16012211	01/22/16
05	PG-PJ-1-MUS-COC-	ATS0B	16012212	01/22/16
06	PG-PJ-1-MUS-COC	ATS0BMS	16012213	01/22/16
07	PG-PJ-1-MUS-COC	ATS0BMSD	16012214	01/22/16
08	PG-WS-1-MUS-COC-	ATS0C	16012215	01/22/16
09	PG-GP-1-MUS-COC-	ATS0D	16012216	01/22/16
10	PG-SMA2-5-MUS-CO	ATS0E	16012217	01/22/16
11	PG-SMA2-4-MUS-CO	ATS0F	16012218	01/22/16
12	13EB_ME-MTW01Z	AUA2A	16012219	01/22/16
13	13CPS_DB-MTW01Z	AUA2B	16012220	01/22/16
14	13NPS_CIAR2-MTW0	AUA2C	16012221	01/22/16
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FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-011416**
Extraction Method: TissM **METHOD BLANK**

Lab Sample ID: MB-011416
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized:
Reported: 01/25/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
Event: 150388-01.01
Date Sampled: NA
Date Received: NA

Date Extracted: 01/14/16
Date Analyzed: 01/22/16 10:27
Instrument/Analyst: NT11/JLW
GPC Cleanup: Yes
Silica Gel Cleanup: Yes
Alumina Cleanup: No

Sample Amount: 10.00 g-as-rec
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00
Percent Moisture: NA
Sulfur Cleanup: No

Lipids: NA

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.50	< 0.50 U
91-57-6	2-Methylnaphthalene	0.50	< 0.50 U
208-96-8	Acenaphthylene	0.50	< 0.50 U
83-32-9	Acenaphthene	0.50	< 0.50 U
86-73-7	Fluorene	0.50	< 0.50 U
85-01-8	Phenanthrene	0.50	< 0.50 U
120-12-7	Anthracene	0.50	< 0.50 U
206-44-0	Fluoranthene	0.50	< 0.50 U
129-00-0	Pyrene	0.50	< 0.50 U
56-55-3	Benzo(a)anthracene	0.50	< 0.50 U
218-01-9	Chrysene	0.50	< 0.50 U
205-99-2	Benzo(b)fluoranthene	0.50	< 0.50 U
207-08-9	Benzo(k)fluoranthene	0.50	< 0.50 U
50-32-8	Benzo(a)pyrene	0.50	< 0.50 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.50	< 0.50 U
53-70-3	Dibenz(a,h)anthracene	0.50	< 0.50 U
191-24-2	Benzo(g,h,i)perylene	0.50	< 0.50 U
198-55-0	Perylene	0.50	< 0.50 U
192-97-2	Benzo(e)pyrene	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.50	< 0.50 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	61.3%
d10-2-Methylnaphthalene	47.0%
d14-Dibenzo(a,h)anthracene	65.7%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

Instrument ID: NT11 Project: PORT GAMBLE CLEAN-UP

DFTPP Injection Date: 12/04/15 DFTPP Injection Time: 0845

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	36.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	50.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.8
275	10.0 - 60.0% of mass 198	29.8
365	Greater than 1.0% of mass 198	3.54
441	0.0 - 24.0% of mass 442	13.4 (16.4)2
442	50.0 - 200.0% of mass 198	81.9
443	15.0 - 24.0% of mass 442	18.6 (22.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LLSIM 250	15120402	12/04/15	0903
02		LLSIM 100	15120403	12/04/15	0933
03		LLSIM 10	15120404	12/04/15	1003
04		LLSIM 50	15120405	12/04/15	1033
05		LLSIM 500	15120406	12/04/15	1103
06		LLSIM 1000	15120407	12/04/15	1133
07		LLSIM SCV 25	15120408	12/04/15	1204
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5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

Instrument ID: NT11 Project: PORT GAMBLE CLEAN-UP

DFTPP Injection Date: 01/22/16 DFTPP Injection Time: 0848

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.7
68	Less than 2.0% of mass 69	0.2 (0.4)1
69	Mass 69 relative abundance	41.6
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	47.8
197	Less than 2.0% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.7
275	10.0 - 60.0% of mass 198	27.2
365	Greater than 1.0% of mass 198	3.32
441	0.0 - 24.0% of mass 442	12.5 (16.3)2
442	50.0 - 200.0% of mass 198	77.1
443	15.0 - 24.0% of mass 442	16.8 (21.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		LL SIM ICV	16012205	01/22/16	0905
02		LL SIM MRL	16012206	01/22/16	0957
03	APR4MBS1	APR4MBS1	16012207	01/22/16	1027
04	APR4LCSS1	APR4LCSS1	16012208	01/22/16	1057
05	SRM 1974C	APR4SRM1	16012209	01/22/16	1128
06	PG-T0-MUS-COC-15	APR4A	16012210	01/22/16	1158
07	PG-SMA2-2-MUS-CO	ATS0A	16012211	01/22/16	1228
08	PG-PJ-1-MUS-COC-	ATS0B	16012212	01/22/16	1258
09	PG-PJ-1-MUS-COC	ATS0BMS	16012213	01/22/16	1328
10	PG-PJ-1-MUS-COC	ATS0BMSD	16012214	01/22/16	1359
11	PG-WS-1-MUS-COC-	ATS0C	16012215	01/22/16	1429
12	PG-GP-1-MUS-COC-	ATS0D	16012216	01/22/16	1459
13	PG-SMA2-5-MUS-CO	ATS0E	16012217	01/22/16	1529
14	PG-SMA2-4-MUS-CO	ATS0F	16012218	01/22/16	1559
15	13EB_ME-MTW01Z	AUA2A	16012219	01/22/16	1630
16	13CPS_DB-MTW01Z	AUA2B	16012220	01/22/16	1700
17	13NPS_CIAR2-MTW0	AUA2C	16012221	01/22/16	1730
18		LL SIM CCV	16012222	01/22/16	1800
19					
20					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Calibration Date: 12/04/15

LAB FILE ID: RRF10 =15120404 RRF50 =15120405 RRF100=15120403
RRF250=15120402 RRF500=15120406 RRF1000=15120407

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	___ RRF	%RSD /R^2
Naphthalene	1.199	1.257	1.208	1.138	1.095	1.034	1.155	7.1
2-Methylnaphthalene	0.757	0.822	0.818	0.825	0.787	0.754	0.794	4.1
Acenaphthylene	1.587	1.688	1.646	1.628	1.602	1.535	1.614	3.3
Acenaphthene	1.084	1.136	1.097	1.066	1.041	1.005	1.072	4.3
Dibenzofuran	1.637	1.742	1.685	1.623	1.559	1.437	1.614	6.6
Fluorene	1.159	1.259	1.248	1.231	1.209	1.156	1.210	3.7
Phenanthrene	1.201	1.339	1.261	1.223	1.143	1.063	1.205	7.9
Anthracene	1.014	1.089	1.089	1.118	1.122	1.039	1.078	4.0
Fluoranthene	1.095	1.291	1.250	1.266	1.227	1.130	1.210	6.5
Pyrene	1.570	1.718	1.639	1.574	1.557	1.445	1.584	5.8
Benzo(a)anthracene	1.264	1.424	1.349	1.340	1.338	1.285	1.333	4.2
Chrysene	1.461	1.649	1.511	1.434	1.412	1.314	1.464	7.6
Benzo(b)fluoranthene	1.236	1.449	1.335	1.309	1.428	1.373	1.355	5.8
Benzo(k)fluoranthene	1.404	1.665	1.575	1.601	1.638	1.592	1.579	5.8
Benzo(j)fluoranthene	1.324	1.581	1.430	1.419	1.477	1.400	1.438	6.0
Benzo(a)pyrene	1.122	1.390	1.285	1.305	1.392	1.352	1.308	7.7
Indeno(1,2,3-cd)pyrene	1.070	1.396	1.342	1.372	1.529	1.530	1.373	12.3
Dibenzo(a,h)anthracene	0.794	1.057	1.071	1.111	1.233	1.249	1.086	15.1
Benzo(g,h,i)perylene	1.030	1.235	1.174	1.174	1.272	1.268	1.192	7.6
1-Methylnaphthalene	0.672	0.743	0.744	0.740	0.711	0.681	0.715	4.6
Perylene	1.258	1.475	1.355	1.306	1.390	1.351	1.356	5.5
Benzo(e)pyrene	1.300	1.485	1.371	1.324	1.391	1.346	1.370	4.8
2-Methylnaphthalene-d10	0.706	0.768	0.761	0.766	0.738	0.714	0.742	3.7
Dibenzo(a,h)anthracene-d14	0.593	0.781	0.799	0.816	0.911	0.944	0.807	15.3
Fluoranthene-d10	1.015	1.152	1.114	1.133	1.122	1.062	1.100	4.7

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Instrument ID: NT11 Cont. Calib. Date: 01/22/16

Init. Calib. Date: 12/04/15 Cont. Calib. Time: 0905

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Naphthalene	1.155	1.010	0.700	AVRG	-12.6	
2-Methylnaphthalene	0.794	0.729	0.400	AVRG	-8.2	
Acenaphthylene	1.614	1.497	0.900	AVRG	-7.2	
Acenaphthene	1.072	0.947	0.900	AVRG	-11.7	
Dibenzofuran	1.614	1.441	0.800	AVRG	-10.7	
Fluorene	1.210	1.133	0.900	AVRG	-6.4	
Phenanthrene	1.205	1.029	0.700	AVRG	-14.6	
Anthracene	1.078	1.003	0.700	AVRG	-7.0	
Fluoranthene	1.210	1.061	0.600	AVRG	-12.3	
Pyrene	1.584	1.428	0.600	AVRG	-9.8	
Benzo(a)anthracene	1.333	1.185	0.800	AVRG	-11.1	
Chrysene	1.464	1.224	0.700	AVRG	-16.4	
Benzo(b)fluoranthene	1.355	1.162	0.700	AVRG	-14.2	
Benzo(k)fluoranthene	1.579	1.250	0.700	AVRG	-20.8	<-
Benzo(j)fluoranthene	1.438	1.183	0.010	AVRG	-17.7	
Benzo(a)pyrene	1.308	1.118	0.700	AVRG	-14.5	
Indeno(1,2,3-cd)pyrene	1.373	1.186	0.500	AVRG	-13.6	
Dibenzo(a,h)anthracene	1.086	0.964	0.400	AVRG	-11.2	
Benzo(g,h,i)perylene	1.192	1.035	0.500	AVRG	-13.2	
1-Methylnaphthalene	0.715	0.651	0.010	AVRG	-9.0	
Perylene	1.356	1.117	0.010	AVRG	-17.6	
Benzo(e)pyrene	1.370	1.107	0.010	AVRG	-19.2	
2-Methylnaphthalene-d10	0.742	0.671	0.010	AVRG	-9.6	
Dibenzo(a,h)anthracene-d14	0.807	0.735	0.010	AVRG	-8.9	
Fluoranthene-d10	1.100	0.976	0.010	AVRG	-11.3	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 12/04/15

	IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
ICAL MIDPT	327896	6.60	239179	9.60	372253	12.27
UPPER LIMIT	655792		478358		744506	
LOWER LIMIT	163948		119590		186127	
CCAL	337457	6.60	238950	9.60	380348	12.27
UPPER LIMIT		7.10		10.10		12.77
LOWER LIMIT		6.10		9.10		11.77
01	330144	6.60	236381	9.60	360337	12.27
02						
03						
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IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 12/04/15

		IS4 (CRY)		IS5 (PRY)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	294711	17.02	260595	19.84		
	UPPER LIMIT	589422		521190			
	LOWER LIMIT	147356		130298			
	CCAL	298514	17.01	256244	19.84		
	UPPER LIMIT		17.51		20.34		
	LOWER LIMIT		16.51		19.34		
01		291007	17.01	242244	19.83		
02							
03							
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 01/22/16

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	327896	6.60	239179	9.60	372253	12.27
	UPPER LIMIT	655792		478358		744506	
	LOWER LIMIT	163948		119590		186127	
	CCAL	368312	6.73	275119	9.74	442913	12.42
	UPPER LIMIT		7.23		10.24		12.92
	LOWER LIMIT		6.23		9.24		11.92
01		345356	6.74	235311	9.76	378135	12.42
02	APR4MBS1	368895	6.73	251480	9.74	405369	12.42
03	APR4LCSS1	360526	6.73	257556	9.74	412183	12.42
04	SRM 1974C	362258	6.73	249465	9.74	398741	12.42
05	PG-T0-MUS-CO	371890	6.72	259279	9.74	437520	12.42
06	PG-SMA2-2-MU	363469	6.73	256352	9.74	419386	12.42
07	PG-PJ-1-MUS-	374753	6.73	264386	9.74	426020	12.42
08	PG-PJ-1-MUS-	373582	6.73	269039	9.74	428623	12.42
09	PG-PJ-1-MUS-	377287	6.73	271691	9.74	435691	12.42
10	PG-WS-1-MUS-	376882	6.73	268849	9.74	435864	12.42
11	PG-GP-1-MUS-	377268	6.72	268633	9.74	436597	12.41
12	PG-SMA2-5-MU	384886	6.73	273475	9.74	449495	12.42
13	PG-SMA2-4-MU	381586	6.72	270392	9.74	439377	12.42
14	13EB_ME-MTW0	373510	6.73	268987	9.74	440845	12.42
15	13CPS_DB-MTW	370975	6.73	264737	9.74	432287	12.42
16	13NPS_CIAR2-	382765	6.72	270341	9.75	435855	12.42
17							
18							
19							
20							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC. Client: ANCHOR QEA, LLC

ARI Job No: APR4 Project: PORT GAMBLE CLEAN-UP

Ical Midpoint ID: 15120402 Ical Date: 12/04/15

Instrument ID: NT11 Cont. Cal Date: 01/22/16

		IS4 (CRY)		IS5 (PRY)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	294711	17.02	260595	19.84		
	UPPER LIMIT	589422		521190			
	LOWER LIMIT	147356		130298			
	CCAL	337848	17.17	324201	20.06		
	UPPER LIMIT		17.67		20.56		
	LOWER LIMIT		16.67		19.56		
01		274122	17.18	249583	20.07		
02	APR4MBS1	295936	17.17	283292	20.06		
03	APR4LCSS1	314530	17.17	306666	20.06		
04	SRM 1974C	300525	17.17	299419	20.06		
05	PG-T0-MUS-CO	299515	17.17	303212	20.06		
06	PG-SMA2-2-MU	310418	17.17	308119	20.06		
07	PG-PJ-1-MUS-	316427	17.17	315181	20.07		
08	PG-PJ-1-MUS-	324379	17.17	323020	20.06		
09	PG-PJ-1-MUS-	325376	17.17	324453	20.06		
10	PG-WS-1-MUS-	322334	17.17	323010	20.06		
11	PG-GP-1-MUS-	322279	17.17	320562	20.06		
12	PG-SMA2-5-MU	339179	17.17	335158	20.06		
13	PG-SMA2-4-MU	325728	17.17	325370	20.06		
14	13EB_ME-MTW0	336414	17.17	339083	20.06		
15	13CPS_DB-MTW	321859	17.17	327843	20.06		
16	13NPS_CIAR2-	323444	17.17	326352	20.06		
17							
18							
19							
20							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: ATS0

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-SMA2-2-MUS-COC-160104

Lab Sample ID: ATS0A
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 17:07
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Silica-Florisil Cleanup: Yes
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.45	0.65-0.89		1.00	0.158	JEMPC
2,3,7,8-TCDD		0.65-0.89	0.0380	1.00	< 0.0380	U
1,2,3,7,8-PeCDF	0.70	1.32-1.78		1.00	0.0460	BJEMPC
2,3,4,7,8-PeCDF	1.61	1.32-1.78		1.00	0.0464	J
1,2,3,7,8-PeCDD		1.32-1.78	0.0520	1.00	< 0.0520	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0500	1.00	< 0.0500	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0480	1.00	< 0.0480	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0460	1.00	< 0.0460	U
1,2,3,7,8,9-HxCDF	1.25	1.05-1.43		1.00	0.0742	J
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0480	1.00	< 0.0480	U
1,2,3,6,7,8-HxCDD	1.16	1.05-1.43		1.00	0.0808	J
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0500	1.00	< 0.0500	U
1,2,3,4,6,7,8-HpCDF	1.06	0.88-1.20		1.00	0.127	BJ
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0380	1.00	< 0.0380	U
1,2,3,4,6,7,8-HpCDD	0.94	0.88-1.20		1.00	1.01	B
OCDF	0.88	0.76-1.02		2.00	0.376	BJ
OCDD	0.85	0.76-1.02		10.0	13.6	B

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	1.14	EMPC
Total TCDD	0.0380	1.00	0.613	EMPC
Total PeCDF		2.00	0.371	EMPC
Total PeCDD	0.0520	1.00	< 0.0520	U
Total HxCDF		2.00	0.213	EMPC
Total HxCDD		2.00	0.494	EMPC
Total HpCDF		2.00	0.296	
Total HpCDD		2.00	11.7	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.06

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.12

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-SMA2-2-MUS-COC-160104

Lab Sample ID: ATS0A
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 17:07
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	97.2	24-169	
13C-2,3,7,8-TCDD	0.80	0.65-0.89	90.1	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	98.8	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	98.2	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	93.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	85.3	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	84.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.51	0.43-0.59	93.4	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	90.2	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	87.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	88.0	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	91.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	96.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	94.0	23-140	
13C-OCDD	0.88	0.76-1.02	81.8	17-157	
37Cl4-2,3,7,8-TCDD			102	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

Sample ID: PG-PJ-1-MUS-COC-160104

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 18:01
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Silica-Florisil Cleanup: Yes
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.74	0.65-0.89		0.996	0.130	J
2,3,7,8-TCDD		0.65-0.89	0.0458	0.996	< 0.0458	U
1,2,3,7,8-PeCDF		1.32-1.78	0.0538	0.996	< 0.0538	U
2,3,4,7,8-PeCDF		1.32-1.78	0.0518	0.996	< 0.0518	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0518	0.996	< 0.0518	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0518	0.996	< 0.0518	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0478	0.996	< 0.0478	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0478	0.996	< 0.0478	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0518	0.996	< 0.0518	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0797	0.996	< 0.0797	U
1,2,3,6,7,8-HxCDD	1.31	1.05-1.43		0.996	0.102	J
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0817	0.996	< 0.0817	U
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		0.996	0.175	BJ
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0319	0.996	< 0.0319	U
1,2,3,4,6,7,8-HpCDD	0.97	0.88-1.20		0.996	1.36	B
OCDF	0.83	0.76-1.02		1.99	0.437	BJ
OCDD	0.92	0.76-1.02		9.96	14.0	B

Homologue Group	EDL	RL	Result	
Total TCDF		0.996	0.599	EMPC
Total TCDD	0.0458	0.996	0.235	
Total PeCDF	0.0538	1.99	0.269	EMPC
Total PeCDD	0.0518	0.996	0.173	EMPC
Total HxCDF	0.0518	1.99	0.157	EMPC
Total HxCDD		1.99	0.900	EMPC
Total HpCDF		1.99	0.496	
Total HpCDD		1.99	11.2	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.04

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.12

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-PJ-1-MUS-COC-160104

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 18:01
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	92.4	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	84.1	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	93.0	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	93.4	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	90.8	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	84.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	84.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	90.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	88.1	29-147	
13C-1,2,3,4,7,8-HxCDD	1.30	1.05-1.43	86.4	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	85.9	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	89.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	90.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	90.7	23-140	
13C-OCDD	0.91	0.76-1.02	76.0	17-157	
37Cl4-2,3,7,8-TCDD			96.8	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-WS-1-MUS-COC-160104

Lab Sample ID: ATS0C
LIMS ID: 16-137
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 18:55
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Silica-Florisil Cleanup: Yes
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.59	0.65-0.89		0.997	0.162	JEMPC
2,3,7,8-TCDD		0.65-0.89	0.0379	0.997	< 0.0379	U
1,2,3,7,8-PeCDF	1.65	1.32-1.78		0.997	0.0612	BJ
2,3,4,7,8-PeCDF	5.97	1.32-1.78		0.997	0.0379	JEMPC
1,2,3,7,8-PeCDD		1.32-1.78	0.0518	0.997	< 0.0518	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0399	0.997	< 0.0399	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0379	0.997	< 0.0379	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0379	0.997	< 0.0379	U
1,2,3,7,8,9-HxCDF	1.12	1.05-1.43		0.997	0.0648	J
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0379	0.997	< 0.0379	U
1,2,3,6,7,8-HxCDD	1.10	1.05-1.43		0.997	0.117	J
1,2,3,7,8,9-HxCDD	1.32	1.05-1.43		0.997	0.0620	J
1,2,3,4,6,7,8-HpCDF	0.90	0.88-1.20		0.997	0.173	BJ
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0279	0.997	< 0.0279	U
1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20		0.997	1.20	B
OCDF	0.96	0.76-1.02		1.99	0.443	BJ
OCDD	0.90	0.76-1.02		9.97	16.1	B

Homologue Group	EDL	RL	Result	
Total TCDF		0.997	0.927	EMPC
Total TCDD	0.0379	0.997	0.704	EMPC
Total PeCDF		1.99	0.576	EMPC
Total PeCDD	0.0518	0.997	0.247	EMPC
Total HxCDF		1.99	0.250	EMPC
Total HxCDD		1.99	0.985	EMPC
Total HpCDF		1.99	0.393	
Total HpCDD		1.99	12.4	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.07

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.13

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-WS-1-MUS-COC-160104

Lab Sample ID: ATS0C
LIMS ID: 16-137
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 18:55
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.79	0.65-0.89	99.2	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	91.8	25-164	
13C-1,2,3,7,8-PeCDF	1.59	1.32-1.78	102	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	101	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	98.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	89.2	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	88.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	97.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	95.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	93.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	92.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.46	0.37-0.51	94.7	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	95.7	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	93.8	23-140	
13C-OCDD	0.89	0.76-1.02	81.0	17-157	
37Cl4-2,3,7,8-TCDD			103	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
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Sample ID: PG-GP-1-MUS-COC-160104

Lab Sample ID: ATS0D
LIMS ID: 16-138
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 19:48
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Silica-Florisil Cleanup: Yes
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.52	0.65-0.89		0.997	0.148	JEMPC
2,3,7,8-TCDD		0.65-0.89	0.0379	0.997	< 0.0379	U
1,2,3,7,8-PeCDF		1.32-1.78	0.0658	0.997	< 0.0658	U
2,3,4,7,8-PeCDF		1.32-1.78	0.0618	0.997	< 0.0618	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0419	0.997	< 0.0419	U
1,2,3,4,7,8-HxCDF	1.19	1.05-1.43		0.997	0.0393	J
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0399	0.997	< 0.0399	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0399	0.997	< 0.0399	U
1,2,3,7,8,9-HxCDF	1.03	1.05-1.43		0.997	0.0439	JEMPC
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0578	0.997	< 0.0578	U
1,2,3,6,7,8-HxCDD	1.62	1.05-1.43		0.997	0.0658	JEMPC
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0598	0.997	< 0.0598	U
1,2,3,4,6,7,8-HpCDF	1.14	0.88-1.20		0.997	0.127	BJ
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0359	0.997	< 0.0359	U
1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20		0.997	0.821	BJ
OCDF	0.76	0.76-1.02		1.99	0.320	BJ
OCDD	0.89	0.76-1.02		9.97	9.47	B

Homologue Group	EDL	RL	Result	
Total TCDF		0.997	0.800	EMPC
Total TCDD	0.0379	0.997	0.491	EMPC
Total PeCDF	0.0658	1.99	0.215	EMPC
Total PeCDD	0.0419	0.997	0.133	EMPC
Total HxCDF		1.99	0.204	EMPC
Total HxCDD		1.99	0.675	EMPC
Total HpCDF		1.99	0.306	
Total HpCDD		1.99	4.89	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.04

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.10

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
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ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-GP-1-MUS-COC-160104

Lab Sample ID: ATS0D
LIMS ID: 16-138
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 19:48
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	94.7	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	87.8	25-164	
13C-1,2,3,7,8-PeCDF	1.59	1.32-1.78	94.6	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	94.9	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	91.3	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	89.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	89.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	96.1	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	91.6	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	91.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	89.9	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	88.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	86.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	83.0	23-140	
13C-OCDD	0.87	0.76-1.02	76.1	17-157	
37Cl4-2,3,7,8-TCDD			99.3	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
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ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-SMA2-5-MUS-COC-160104

Lab Sample ID: ATS0E
LIMS ID: 16-139
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 20:42
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Silica-Florisil Cleanup: Yes
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.43	0.65-0.89		0.998	0.150	JEMPC
2,3,7,8-TCDD		0.65-0.89	0.0479	0.998	< 0.0479	U
1,2,3,7,8-PeCDF		1.32-1.78	0.0639	0.998	< 0.0639	U
2,3,4,7,8-PeCDF		1.32-1.78	0.0599	0.998	< 0.0599	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0639	0.998	< 0.0639	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0439	0.998	< 0.0439	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0399	0.998	< 0.0399	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0419	0.998	< 0.0419	U
1,2,3,7,8,9-HxCDF	1.39	1.05-1.43		0.998	0.0780	J
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0579	0.998	< 0.0579	U
1,2,3,6,7,8-HxCDD	1.45	1.05-1.43		0.998	0.116	JEMPC
1,2,3,7,8,9-HxCDD	0.72	1.05-1.43		0.998	0.0599	JEMPC
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		0.998	0.252	BJ
1,2,3,4,7,8,9-HpCDF	1.29	0.88-1.20		0.998	0.0419	JEMPC
1,2,3,4,6,7,8-HpCDD	0.96	0.88-1.20		0.998	1.61	B
OCDF	0.87	0.76-1.02		2.00	0.768	BJ
OCDD	0.87	0.76-1.02		9.98	19.6	B

Homologue Group	EDL	RL	Result	
Total TCDF		0.998	1.34	EMPC
Total TCDD	0.0479	0.998	0.898	EMPC
Total PeCDF	0.0639	2.00	0.354	EMPC
Total PeCDD	0.0639	0.998	0.307	EMPC
Total HxCDF		2.00	0.304	
Total HxCDD		2.00	1.25	EMPC
Total HpCDF		2.00	0.663	EMPC
Total HpCDD		2.00	14.5	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.07

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.14

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-SMA2-5-MUS-COC-160104

Lab Sample ID: ATS0E
LIMS ID: 16-139
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 20:42
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	86.0	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	80.7	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	86.7	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	88.3	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	85.3	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	80.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	82.5	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	87.1	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	85.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	84.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	80.4	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	82.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	82.1	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	79.1	23-140	
13C-OCDD	0.89	0.76-1.02	69.3	17-157	
37Cl4-2,3,7,8-TCDD			96.7	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
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ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-SMA2-4-MUS-COC-160105

Lab Sample ID: ATS0F
LIMS ID: 16-140
Matrix: Tissue
Data Release Authorized:
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/05/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 21:36
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Silica-Florisil Cleanup: Yes
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.55	0.65-0.89		0.998	0.0699	JEMPC
2,3,7,8-TCDD		0.65-0.89	0.0339	0.998	< 0.0339	U
1,2,3,7,8-PeCDF	1.37	1.32-1.78		0.998	0.0449	BJ
2,3,4,7,8-PeCDF	0.88	1.32-1.78		0.998	0.0359	JEMPC
1,2,3,7,8-PeCDD		1.32-1.78	0.0599	0.998	< 0.0599	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0299	0.998	< 0.0299	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0279	0.998	< 0.0279	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0279	0.998	< 0.0279	U
1,2,3,7,8,9-HxCDF	0.85	1.05-1.43		0.998	0.0659	JEMPC
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0559	0.998	< 0.0559	U
1,2,3,6,7,8-HxCDD	1.09	1.05-1.43		0.998	0.0711	J
1,2,3,7,8,9-HxCDD	1.34	1.05-1.43		0.998	0.0513	J
1,2,3,4,6,7,8-HpCDF	0.78	0.88-1.20		0.998	0.152	BJEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0240	0.998	< 0.0240	U
1,2,3,4,6,7,8-HpCDD	0.96	0.88-1.20		0.998	0.866	BJ
OCDF	0.75	0.76-1.02		2.00	0.313	BJEMPC
OCDD	0.91	0.76-1.02		9.98	11.0	B

Homologue Group	EDL	RL	Result	
Total TCDF		0.998	0.710	EMPC
Total TCDD	0.0339	0.998	0.465	EMPC
Total PeCDF		2.00	0.410	EMPC
Total PeCDD	0.0599	0.998	0.0667	EMPC
Total HxCDF		2.00	0.208	EMPC
Total HxCDD		2.00	0.646	EMPC
Total HpCDF		2.00	0.373	EMPC
Total HpCDD		2.00	5.86	EMPC

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.05

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.11

Reported in pg/g

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Dioxins/Furans by EPA 1613B
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ANALYTICAL RESOURCES INCORPORATED

Sample ID: PG-SMA2-4-MUS-COC-160105

Lab Sample ID: ATS0F
LIMS ID: 16-140
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/05/16
Date Received: 01/06/16

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 21:36
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Extract Split: 1.00
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	98.0	24-169	
13C-2,3,7,8-TCDD	0.80	0.65-0.89	89.9	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	97.6	24-185	
13C-2,3,4,7,8-PeCDF	1.59	1.32-1.78	100	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	95.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	86.3	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	84.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	93.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	92.2	29-147	
13C-1,2,3,4,7,8-HxCDD	1.29	1.05-1.43	88.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.21	1.05-1.43	88.0	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	90.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	94.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.07	0.88-1.20	92.6	23-140	
13C-OCDD	0.89	0.76-1.02	75.9	17-157	
37Cl4-2,3,7,8-TCDD			99.2	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: OPR-012516

Lab Sample ID: OPR-012516
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: NA
Date Received: NA

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 15:20
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.71	0.65-0.89	1.00	23.1
2,3,7,8-TCDD	0.80	0.65-0.89	1.00	23.6
1,2,3,7,8-PeCDF	1.47	1.32-1.78	1.00	117
2,3,4,7,8-PeCDF	1.46	1.32-1.78	1.00	115
1,2,3,7,8-PeCDD	1.56	1.32-1.78	1.00	112
1,2,3,4,7,8-HxCDF	1.15	1.05-1.43	1.00	116
1,2,3,6,7,8-HxCDF	1.16	1.05-1.43	1.00	115
2,3,4,6,7,8-HxCDF	1.18	1.05-1.43	1.00	116
1,2,3,7,8,9-HxCDF	1.17	1.05-1.43	1.00	114
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	1.00	113
1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	1.00	116
1,2,3,7,8,9-HxCDD	1.25	1.05-1.43	1.00	115
1,2,3,4,6,7,8-HpCDF	0.97	0.88-1.20	1.00	117
1,2,3,4,7,8,9-HpCDF	0.97	0.88-1.20	1.00	115
1,2,3,4,6,7,8-HpCDD	1.02	0.88-1.20	1.00	115
OCDF	0.84	0.76-1.02	2.00	217
OCDD	0.90	0.76-1.02	10.0	224

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	23.9	
Total TCDD		1.00	24.2	
Total PeCDF		2.00	238	EMPC
Total PeCDD		1.00	112	EMPC
Total HxCDF		2.00	461	
Total HxCDD		2.00	345	EMPC
Total HpCDF		2.00	232	EMPC
Total HpCDD		2.00	116	

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B
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ANALYTICAL RESOURCES INCORPORATED

Sample ID: OPR-012516

Lab Sample ID: OPR-012516
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized:
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: NA
Date Received: NA

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 15:20
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	90.4	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	87.0	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	94.9	24-185	
13C-2,3,4,7,8-PeCDF	1.59	1.32-1.78	95.0	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	92.3	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	87.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	84.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	89.4	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	85.4	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	86.4	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	82.8	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	82.8	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	83.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.07	0.88-1.20	83.3	23-140	
13C-OCDD	0.90	0.76-1.02	75.0	17-157	
37Cl4-2,3,7,8-TCDD			102	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: OPR-012516

Lab Sample ID: OPR-012516
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized:
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: NA
Date Received: NA

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 15:20
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	23.1	20.0	116	75-158
2,3,7,8-TCDD	23.6	20.0	118	67-158
1,2,3,7,8-PeCDF	117	100	117	80-134
2,3,4,7,8-PeCDF	115	100	115	68-160
1,2,3,7,8-PeCDD	112	100	112	70-142
1,2,3,4,7,8-HxCDF	116	100	116	72-134
1,2,3,6,7,8-HxCDF	115	100	115	84-130
2,3,4,6,7,8-HxCDF	116	100	116	70-156
1,2,3,7,8,9-HxCDF	114	100	114	78-130
1,2,3,4,7,8-HxCDD	113	100	113	70-164
1,2,3,6,7,8-HxCDD	116	100	116	76-134
1,2,3,7,8,9-HxCDD	115	100	115	64-162
1,2,3,4,6,7,8-HpCDF	117	100	117	82-132
1,2,3,4,7,8,9-HpCDF	115	100	115	78-138
1,2,3,4,6,7,8-HpCDD	115	100	115	70-140
OCDF	217	200	108	63-170
OCDD	224	200	112	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
ATS0MBT

Lab Name: ANALYTICAL RESOURCES, INC.
Contract: ANCHOR
Lab Code: ATS0
Project: PORT GAMBLE
Matrix:(Soil/Water/Ash/Tissue/Oil) TISSUE
Lab Sample ID: ATS0MBT
Sample wt/vol: 10 (g/ml) g
Lab File ID: 16012904
Water Sample Prep: (sep/spe)
Date Received: 06-JAN-16
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Date Extracted: 25-JAN-16
Instrument ID: AUTOSPEC1
Date Analyzed: 29-JAN-16

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
ATS0OPR	ATS0OPR	16012905	01/29/16
PG-T0-MUS-COC-151030	APR4A	16012906	01/29/16
PG-SMA2-2-MUS-COC-160104T	AT50A	16012907	01/29/16
PG-PJ-1-MUS-COC-160104T	AT50B	16012908	01/29/16
PG-WS-1-MUS-COC-160104T	AT50C	16012909	01/29/16
PG-GP-1-MUS-COC-160104T	AT50D	16012910	01/29/16
PG-SMA2-5-MUS-COC-160104T	AT50E	16012911	01/29/16
PG-SMA2-4-MUS-COC-160104T	AT50F	16012912	01/29/16

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: MB-012516

Lab Sample ID: MB-012516
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized: MW
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: NA
Date Received: NA

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 14:28
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.0320	1.00	< 0.0320	U
2,3,7,8-TCDD		0.65-0.89	0.0380	1.00	< 0.0380	U
1,2,3,7,8-PeCDF	0.65	1.32-1.78		1.00	0.0500	JEMPC
2,3,4,7,8-PeCDF		1.32-1.78	0.0340	1.00	< 0.0340	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0440	1.00	< 0.0440	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0360	1.00	< 0.0360	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0340	1.00	< 0.0340	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0360	1.00	< 0.0360	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0400	1.00	< 0.0400	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0480	1.00	< 0.0480	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0500	1.00	< 0.0500	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0500	1.00	< 0.0500	U
1,2,3,4,6,7,8-HpCDF	0.62	0.88-1.20		1.00	0.142	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0740	1.00	< 0.0740	U
1,2,3,4,6,7,8-HpCDD	1.13	0.88-1.20		1.00	0.374	J
OCDF	0.77	0.76-1.02		2.00	0.541	J
OCDD	0.93	0.76-1.02		10.0	6.16	

Homologue Group	EDL	RL	Result	
Total TCDF	0.0320	1.00	< 0.0320	U
Total TCDD	0.0380	1.00	< 0.0380	U
Total PeCDF		2.00	0.0500	EMPC
Total PeCDD	0.0440	1.00	0.0378	EMPC
Total HxCDF	0.0400	2.00	< 0.0400	U
Total HxCDD	0.0500	2.00	0.124	EMPC
Total HpCDF		2.00	0.286	EMPC
Total HpCDD		2.00	0.743	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.01

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.07

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: MB-012516

Lab Sample ID: MB-012516
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized:
Reported: 02/02/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: NA
Date Received: NA

Date Extracted: 01/25/16
Date Analyzed: 01/29/16 14:28
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-as-rec
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	96.0	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	92.1	25-164	
13C-1,2,3,7,8-PeCDF	1.58	1.32-1.78	103	24-185	
13C-2,3,4,7,8-PeCDF	1.58	1.32-1.78	104	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	100	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	87.9	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	86.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	89.4	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	86.6	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	86.4	32-141	
13C-1,2,3,6,7,8-HxCDD	1.28	1.05-1.43	84.0	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	91.2	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	90.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.08	0.88-1.20	90.6	23-140	
13C-OCDD	0.89	0.76-1.02	79.0	17-157	
37Cl4-2,3,7,8-TCDD			116	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: ATS0
GC Column: RTX-DIOXIN2 ID: 0.25 mm
Instrument ID: AUTOSPEC1

Contract: ANCHOR
Project: PORT GAMBLE
Lab File ID: 16012902
Date Analyzed: 29-JAN-16
Time Analyzed: 10:58

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	24.32	27.78
TCDF	23.03	28.02
PeCDD	29.57	32.69
PeCDF	27.90	33.07
HxCDD	34.80	37.50
HxCDF	34.00	37.93
HpCDD	40.62	41.92
HpCDF	40.05	42.83

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.
TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.
Lab Code: ATS0
GC Column: RTX-DIOXIN2 ID: .25 mm
Instrument: AUTOSPEC1

Contract: ANCHOR
Project: PORT GAMBLE
Lab File ID: 16012903
Date Analyzed: 29-JAN-16
Time Analyzed: 11:49

Percent Valley determination for RTX-DIOXIN2 column -

1278-TCDD/2378-TCDD: 13.2

3467-TCDF/2378-TCDF: 10.3

QC Limits:
Percent Valley between TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: ANCHOR

Lab Code: ATS0 Project: PORT GAMBLE

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 15-OCT-15

Init: Calib. Times: 15:02 to 19:31

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	16012902	01/29/16	1058
ISC	ISC	16012903	01/29/16	1149
ATS0MB	ATS0MBS	16012904	01/29/16	1428
ATS0OPR	ATS0OPR	16012905	01/29/16	1520
PG-T0-MUS-COC-151030	APR4A	16012906	01/29/16	1613
PG-SMA2-2-MUS-COC-160104T	AT50A	16012907	01/29/16	1707
PG-PJ-1-MUS-COC-160104T	AT50B	16012908	01/29/16	1801
PG-WS-1-MUS-COC-160104T	AT50C	16012909	01/29/16	1855
PG-GP-1-MUS-COC-160104T	AT50D	16012910	01/29/16	1948
PG-SMA2-5-MUS-COC-160104T	AT50E	16012911	01/29/16	2042
PG-SMA2-4-MUS-COC-160104T	AT50F	16012912	01/29/16	2136
CS3	CS3	16012913	01/29/16	2229

6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	ANCHOR
Lab Code:	ATS0	Case No.:	PORT GAMBLE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	15-Oct-15	Init.Calib.Time CSL:	15:02:44
Init.Calib.Date CS1:	15-Oct-15	Init.Calib.Time CS1:	16:02:00
Init.Calib.Date CS2:	15-Oct-15	Init.Calib.Time CS2:	16:52:59
Init.Calib.Date CS3:	15-Oct-15	Init.Calib.Time CS3:	17:45:44
Init.Calib.Date CS4:	15-Oct-15	Init.Calib.Time CS4:	18:38:36
Init.Calib.Date CS5:	15-Oct-15	Init.Calib.Time CS5:	19:31:22

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	0.00	1.05	0.96	0.98	1.01	1.12	1.02	6.1	20.0
2378-TCDF	0.00	0.79	0.81	0.82	0.85	0.86	0.83	3.2	20.0
12378-PeCDF	0.78	0.78	0.81	0.84	0.85	0.88	0.82	4.9	20.0
12378-PeCDD	0.90	0.92	0.95	0.94	0.97	0.96	0.94	3.2	20.0
23478-PeCDF	0.81	0.83	0.85	0.86	0.87	0.89	0.85	3.6	20.0
123478-HxCDF	0.92	0.95	0.96	0.98	0.99	1.02	0.97	3.5	20.0
123678-HxCDF	0.90	0.91	0.95	0.96	1.00	0.98	0.95	4.2	20.0
123478-HxCDD	0.92	0.91	0.95	0.98	1.00	1.01	0.96	4.3	20.0
123678-HxCDD	0.90	0.86	0.87	0.89	0.92	0.93	0.89	3.0	20.0
123789-HxCDD[2]	0.87	0.88	0.89	0.90	0.91	0.95	0.90	3.0	20.0
234678-HxCDF	0.96	0.98	1.00	1.04	1.07	1.09	1.02	5.0	20.0
123789-HxCDF	0.99	0.96	0.92	0.92	0.93	1.01	0.96	4.1	20.0
1234678-HpCDF	1.13	1.09	1.14	1.18	1.17	1.21	1.15	3.6	20.0
1234678-HpCDD	0.89	0.92	0.97	0.99	1.00	1.01	0.96	4.7	20.0
1234789-HpCDF	1.02	1.07	1.13	1.17	1.18	1.22	1.13	6.6	20.0
OCDD	0.98	0.89	0.95	0.98	0.98	1.03	0.97	4.8	20.0
OCDF[1]	0.93	0.92	1.02	1.04	1.12	1.11	1.02	8.4	20.0
37CL-2378-TCDD	1.05	1.06	1.06	1.09	1.08	1.20	1.09	5.2	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.
(2) The RR is calculated based on the labeled analog of OCDD.

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.94	0.95	1.02	1.01	0.98	0.99	0.98	3.1	35.0
13C-12378-PeCDD	0.77	0.79	0.77	0.75	0.75	0.89	0.79	6.9	35.0
13C-123478-HxCDD	1.04	1.04	1.00	1.05	1.01	1.05	1.03	2.2	35.0
13C-123678-HxCDD	1.15	1.15	1.12	1.18	1.10	1.12	1.14	2.5	35.0
13C-1234678-HpCDD	0.92	0.91	0.88	0.91	0.85	0.88	0.89	2.8	35.0
13C-OCDD	0.88	0.88	0.82	0.84	0.83	0.86	0.85	3.4	35.0
13C-2378-TCDF	1.52	1.53	1.51	1.49	1.44	1.52	1.50	2.2	35.0
13C-12378-PeCDF	1.21	1.23	1.20	1.17	1.15	1.33	1.22	5.1	35.0
13C-23478-PeCDF	1.17	1.20	1.16	1.14	1.11	1.32	1.18	6.3	35.0
13C-123478-HxCDF	1.25	1.24	1.23	1.28	1.23	1.24	1.25	1.7	35.0
13C-123678-HxCDF	1.41	1.39	1.36	1.40	1.31	1.38	1.38	2.6	35.0
13C-234678-HxCDF	1.21	1.20	1.17	1.21	1.14	1.18	1.19	2.4	35.0
13C-123789-HxCDF	1.13	1.13	1.14	1.18	1.13	1.10	1.13	2.4	35.0
13C-1234678-HpCDF	1.05	1.05	1.00	1.04	0.99	1.00	1.02	2.7	35.0
13C-1234789-HpCDF	0.84	0.86	0.81	0.83	0.80	0.81	0.82	2.7	35.0

6DFB - Form VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	ANCHOR
Lab Code:	ATS0	Case No.:	PORT GAMBLE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	15-Oct-15	Init.Calib.Time CSL:	15:02:44
Init.Calib.Date CS1:	15-Oct-15	Init.Calib.Time CS1:	16:02:00
Init.Calib.Date CS2:	15-Oct-15	Init.Calib.Time CS2:	16:52:59
Init.Calib.Date CS3:	15-Oct-15	Init.Calib.Time CS3:	17:45:44
Init.Calib.Date CS4:	15-Oct-15	Init.Calib.Time CS4:	18:38:36
Init.Calib.Date CS5:	15-Oct-15	Init.Calib.Time CS5:	19:31:22

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.00	0.73	0.80	0.80	0.78	0.78		0.65 - 0.89
2378-TCDF	304/306	0.00	0.67	0.66	0.66	0.67	0.68		0.65 - 0.89
12378-PeCDF	340/342	1.38	1.37	1.35	1.40	1.43	1.42		1.32 - 1.78
12378-PeCDD	356/358	1.58	1.56	1.55	1.53	1.55	1.55		1.32 - 1.78
23478-PeCDF	340/342	1.45	1.36	1.42	1.39	1.41	1.41		1.32 - 1.78
123478-HxCDF	374/376	1.23	1.12	1.12	1.14	1.12	1.13		1.05 - 1.43
123678-HxCDF	374/376	1.10	1.08	1.08	1.07	1.13	1.13		1.05 - 1.43
123478-HxCDD	390/392	1.19	1.31	1.25	1.24	1.24	1.25		1.05 - 1.43
123678-HxCDD	390/392	1.19	1.18	1.23	1.25	1.22	1.24		1.05 - 1.43
123789-HxCDD	390/392	1.33	1.29	1.20	1.20	1.25	1.24		1.05 - 1.43
234678-HxCDF	374/376	1.14	1.17	1.12	1.11	1.13	1.12		1.05 - 1.43
123789-HxCDF	374/376	1.17	1.10	1.14	1.10	1.12	1.14		1.05 - 1.43
1234678-HpCDF	408/410	0.96	0.90	0.94	0.92	0.94	0.95		0.89 - 1.21
1234678-HpCDD	424/426	1.01	1.03	1.06	1.05	1.03	1.04		0.89 - 1.21
1234789-HpCDF	408/410	0.94	0.92	0.92	0.93	0.97	0.95		0.89 - 1.21
OCDD	458/460	0.92	0.94	0.88	0.89	0.86	0.88		0.76 - 1.02
OCDF	442/444	0.84	0.83	0.81	0.83	0.83	0.83		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.79	0.78	0.78	0.79	0.78	0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	1.57	1.57	1.54	1.57	1.60	1.57		1.32 - 1.78
13C-123478-HxCDD	402/404	1.26	1.26	1.27	1.26	1.26	1.27		1.05 - 1.43
13C-123678-HxCDD	402/404	1.25	1.24	1.25	1.23	1.25	1.28		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.04	1.03	1.04	1.05	1.05	1.04		0.89 - 1.21
13C-OCDD	470/472	0.87	0.89	0.90	0.90	0.89	0.89		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0.77	0.77	0.78	0.77	0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.60	1.61	1.54	1.56	1.61	1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.57	1.57	1.58	1.57	1.57	1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	0.51	0.51	0.51	0.51	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.51	0.51	0.51	0.50	0.52	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.51	0.51	0.53	0.52	0.52	0.53		0.43 - 0.59
13C-123789-HxCDF	384/386	0.51	0.52	0.52	0.51	0.51	0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.45	0.45	0.45	0.44	0.45	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.44	0.43	0.43	0.44	0.45	0.45		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.79	0.80	0.79	0.79	0.79	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	1.25	1.23	1.25	1.24	1.26	1.25		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	ANCHOR
Lab Code:	ATS0	Case No.:	PORT GAMBLE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	16012902
Date Analysed	29-Jan-16	Time Analysed	10:58:17
Init.Calib.Date:	15-OCT-15	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.04	1.02	1.2		0.77		0.65 - 0.89
2378-TCDF	304/306	0.86	0.83	3.8		0.69		0.65 - 0.89
12378-PeCDF	340/342	0.85	0.82	2.7		1.44		1.32 - 1.78
12378-PeCDD	356/358	0.97	0.94	3.5		1.56		1.32 - 1.78
23478-PeCDF	340/342	0.89	0.85	4.3		1.46		1.32 - 1.78
123478-HxCDF	374/376	1.01	0.97	4.2		1.16		1.05 - 1.43
123678-HxCDF	374/376	1.00	0.95	4.6		1.16		1.05 - 1.43
123478-HxCDD	390/392	0.98	0.96	2.0		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.91	0.89	1.5		1.24		1.05 - 1.43
123789-HxCDD	390/392	0.96	0.90	6.3		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.08	1.02	5.4		1.15		1.05 - 1.43
123789-HxCDF	374/376	0.94	0.96	-1.6		1.14		1.05 - 1.43
1234678-HpCDF	408/410	1.19	1.15	3.5		0.95		0.89 - 1.21
1234678-HpCDD	424/426	1.01	0.96	4.3		1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.19	1.13	5.0		0.97		0.89 - 1.21
OCDD	458/460	0.99	0.97	2.4		0.90		0.76 - 1.02
OCDF	442/444	1.08	1.02	5.7		0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	1.03	0.98	5.0		0.79		0.65 - 0.89
13C-12378-PeCDD	368/370	0.78	0.79	-0.7		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	1.04	1.03	0.5		1.30		1.05 - 1.43
13C-123678-HxCDD	402/404	1.09	1.14	-4.0		1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.91	0.89	2.1		1.07		0.89 - 1.21
13C-OCDD	470/472	0.83	0.85	-2.6		0.88		0.76 - 1.02
13C-2378-TCDF	316/318	1.59	1.50	5.5		0.77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.27	1.22	4.4		1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.23	1.18	3.8		1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	1.27	1.25	2.3		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.32	1.38	-3.8		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.20	1.19	1.5		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.23	1.13	8.4		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.05	1.02	2.7		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.86	0.82	4.9		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.13	1.09	3.4		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.25		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	ANCHOR
Lab Code:	ATS0	Case No.:	PORT GAMBLE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	16012902
Date Analysed	29-Jan-16	Time Analysed	10:58:17
Init.Calib.Date:	15-OCT-15	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.001	27.18
2378-TCDF	1.001	26.53
12378-PeCDF	1.000	30.69
12378-PeCDD	1.001	32.30
23478-PeCDF	1.001	32.04
123478-HxCDF	1.001	35.73
123678-HxCDF	1.001	35.88
123478-HxCDD	1.000	36.96
123678-HxCDD	1.000	37.09
123789-HxCDD	1.012	37.50
234678-HxCDF	1.001	36.83
123789-HxCDF	1.001	37.93
1234678-HpCDF	1.000	40.05
1234678-HpCDD	1.000	41.92
1234789-HpCDF	1.000	42.83
OCDD	1.000	48.04
OCDF	1.006	48.32

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.031	27.15
13C-12378-PeCDD	1.225	32.28
13C-123478-HxCDD	0.985	36.95
13C-123678-HxCDD	0.989	37.08
13C-1234678-HpCDD	1.117	41.90
13C-OCDD	1.281	48.03
13C-2378-TCDF	1.006	26.51
13C-12378-PeCDF	1.164	30.68
13C-23478-PeCDF	1.215	32.01
13C-123478-HxCDF	0.952	35.71
13C-123678-HxCDF	0.956	35.86
13C-234678-HxCDF	0.982	36.80
13C-123789-HxCDF	1.011	37.91
13C-1234678-HpCDF	1.068	40.04
13C-1234789-HpCDF	1.142	42.81

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.18

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.35
13C-123789-HxCDD	0.00	37.49

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	ANCHOR
Lab Code:	ATS0	Case No.:	PORT GAMBLE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	16012913
Date Analysed	29-Jan-16	Time Analysed	22:29:47
Init.Calib.Date:	15-OCT-15	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	1.04	1.02	1.2		0.76		0.65 - 0.89
2378-TCDF	304/306	0.86	0.83	3.5		0.69		0.65 - 0.89
12378-PeCDF	340/342	0.88	0.82	6.9		1.45		1.32 - 1.78
12378-PeCDD	356/358	0.97	0.94	2.9		1.55		1.32 - 1.78
23478-PeCDF	340/342	0.89	0.85	4.6		1.45		1.32 - 1.78
123478-HxCDF	374/376	1.02	0.97	4.8		1.16		1.05 - 1.43
123678-HxCDF	374/376	1.00	0.95	4.8		1.14		1.05 - 1.43
123478-HxCDD	390/392	0.98	0.96	1.3		1.24		1.05 - 1.43
123678-HxCDD	390/392	0.92	0.89	2.8		1.25		1.05 - 1.43
123789-HxCDD	390/392	0.96	0.90	6.3		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.07	1.02	4.2		1.15		1.05 - 1.43
123789-HxCDF	374/376	0.94	0.96	-1.3		1.16		1.05 - 1.43
1234678-HpCDF	408/410	1.21	1.15	4.5		0.98		0.89 - 1.21
1234678-HpCDD	424/426	1.01	0.96	4.3		1.05		0.89 - 1.21
1234789-HpCDF	408/410	1.19	1.13	5.2		0.96		0.89 - 1.21
OCDD	458/460	0.99	0.97	2.3		0.88		0.76 - 1.02
OCDF	442/444	1.08	1.02	6.0		0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	1.00	0.98	2.3		0.79		0.65 - 0.89
13C-12378-PeCDD	368/370	0.79	0.79	1.0		1.57		1.32 - 1.78
13C-123478-HxCDD	402/404	1.06	1.03	2.6		1.27		1.05 - 1.43
13C-123678-HxCDD	402/404	1.11	1.14	-2.6		1.27		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.90	0.89	0.5		1.04		0.89 - 1.21
13C-OCDD	470/472	0.77	0.85	-9.5		0.88		0.76 - 1.02
13C-2378-TCDF	316/318	1.57	1.50	4.6		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.26	1.22	3.6		1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.24	1.18	5.2		1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	1.31	1.25	4.9		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.36	1.38	-0.8		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.22	1.19	3.1		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.23	1.13	8.2		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.04	1.02	1.5		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.86	0.82	4.0		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.11	1.09	2.0		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.26		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	ANCHOR
Lab Code:	ATS0	Case No.:	PORT GAMBLE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	16012913
Date Analysed	29-Jan-16	Time Analysed	22:29:47
Init.Calib.Date:	15-OCT-15	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.001	27.14
2378-TCDF	1.001	26.50
12378-PeCDF	1.001	30.67
12378-PeCDD	1.001	32.27
23478-PeCDF	1.001	32.00
123478-HxCDF	1.000	35.70
123678-HxCDF	1.001	35.85
123478-HxCDD	1.000	36.92
123678-HxCDD	1.000	37.06
123789-HxCDD	1.012	37.48
234678-HxCDF	1.001	36.79
123789-HxCDF	1.000	37.90
1234678-HpCDF	1.000	40.03
1234678-HpCDD	1.000	41.89
1234789-HpCDF	1.000	42.79
OCDD	1.001	48.01
OCDF	1.006	48.28

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.031	27.12
13C-12378-PeCDD	1.225	32.24
13C-123478-HxCDD	0.985	36.91
13C-123678-HxCDD	0.989	37.04
13C-1234678-HpCDD	1.118	41.87
13C-OCDD	1.281	47.98
13C-2378-TCDF	1.006	26.48
13C-12378-PeCDF	1.164	30.64
13C-23478-PeCDF	1.215	31.98
13C-123478-HxCDF	0.953	35.69
13C-123678-HxCDF	0.956	35.83
13C-234678-HxCDF	0.982	36.77
13C-123789-HxCDF	1.011	37.89
13C-1234678-HpCDF	1.068	40.00
13C-1234789-HpCDF	1.142	42.78

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27.14

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.32
13C-123789-HxCDD	0.00	37.46

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

Metals Analysis
Report and Summary QC Forms

ARI Job ID: ATS0

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
PG-T0-MUS-COC-1510	APR4A	15-20439	
PG-T0-MUS-COC-1510D	APR4ADUP	15-20439	
PG-T0-MUS-COC-1510S	APR4ASPK	15-20439	
PBS	APR4MB1	15-20439	
LCSS	APR4MB1SPK	15-20439	
PG-SMA2-2-MUS-COC-	ATS0A	16-135	
PG-PJ-1-MUS-COC-16	ATS0B	16-136	
PG-WS-1-MUS-COC-16	ATS0C	16-137	
PG-GP-1-MUS-COC-16	ATS0D	16-138	
PG-SMA2-5-MUS-COC-	ATS0E	16-139	
PG-SMA2-4-MUS-COC-	ATS0F	16-140	

Were ICP interelement corrections applied ?	Yes/No	YES
Were ICP background corrections applied ?	Yes/No	YES
If yes - were raw data generated before application of background corrections ?	Yes/No	NO

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: Eric Larson Name: Eric Larson

Date: 1-20-10 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PG-SMA2-2-MUS-COC-160104
SAMPLE

Lab Sample ID: ATS0A
LIMS ID: 16-135
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	**7440-43-9**	**Cadmium**	0.04	**0.40**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PG-PJ-1-MUS-COC-160104
SAMPLE

Lab Sample ID: ATS0B
LIMS ID: 16-136
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	**7440-43-9**	**Cadmium**	0.04	**0.31**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: PG-WS-1-MUS-COC-160104
SAMPLE

Lab Sample ID: ATS0C
LIMS ID: 16-137
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	**7440-43-9**	**Cadmium**	0.04	**0.38**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PG-GP-1-MUS-COC-160104
SAMPLE

Lab Sample ID: ATS0D
LIMS ID: 16-138
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	**7440-43-9**	**Cadmium**	0.04	**0.38**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: PG-SMA2-5-MUS-COC-160104
SAMPLE

Lab Sample ID: ATS0E
LIMS ID: 16-139
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/04/16
Date Received: 01/06/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	**7440-43-9**	**Cadmium**	0.04	**0.28**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: PG-SMA2-4-MUS-COC-160105
SAMPLE

Lab Sample ID: ATS0F
LIMS ID: 16-140
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01
Date Sampled: 01/05/16
Date Received: 01/06/16

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	**7440-43-9**	**Cadmium**	0.04	**0.27**	

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LAB CONTROL

Lab Sample ID: APR4LCS
LIMS ID: 15-20439
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: APR4-Anchor QEA, LLC
Project: Port Gamble Clean-up
1503880101
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Cadmium	6010C	20.4	20.0	102%	

Reported in mg/kg-wet

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: METHOD BLANK

Lab Sample ID: APR4MB
LIMS ID: 15-20439
Matrix: Tissue
Data Release Authorized:
Reported: 01/20/16

QC Report No: APR4-Anchor QEA, LLC
Project: Port Gamble Clean-up
1503880101
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	LOQ	mg/kg-as-rec	Q
3050B	01/15/16	6010C	01/19/16	7440-43-9	Cadmium	0.04	0.04	U

U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Cadmium	CD	ICP	IP011971	1000.0	1042.74	104.3	1000.0	1045.76	104.6	1041.40	104.1	1040.58	104.1				

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I	TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Cadmium	CD	ICP	IP011971		2.0	2.11	105.5										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Cadmium	CD	ICP	IP011971	5.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U				

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

ICS SOURCE: I.V.

RUNID: IP011971

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	201753.5	199981.7	**100.0**						
Antimony		1000	13.6	1036.8	**103.7**						
Arsenic		1000	27.3	1037.0	**103.7**						
Barium		1000	2.9	1014.9	**101.5**						
Beryllium		1000	0.1	982.1	**98.2**						
Boron			1.3	0.7							
Cadmium		1000	-1.2	1035.9	**103.6**						
Calcium	100000	100000	100350.8	99635.7	**99.6**						
Chromium		1000	0.1	1015.8	**101.6**						
Cobalt		1000	2.9	955.5	**95.6**						
Copper		1000	1.8	1049.4	**104.9**						
Iron	200000	200000	196759.8	196913.6	**98.5**						
Lead		1000	2.3	1002.9	**100.3**						
Magnesium	100000	100000	105423.2	99682.4	**99.7**						
Manganese		1000	-1.1	966.2	**96.6**						
Molybdenum			3.6	2.9							
Nickel		1000	1.4	952.4	**95.2**						
Potassium			27.9	7.3							
Selenium		1000	16.8	1020.5	**102.1**						
Silicon			-11.3	-12.9							
Silver		1000	-1.0	1073.3	**107.3**						
Sodium			3.1	-2.3							
Strontium			6.4	6.3							
Thallium		1000	-6.2	950.3	**95.0**						
Tin			-20.9	-21.8							
Titanium			4.1	4.1							
Vanadium		1000	3.1	992.8	**99.3**						
Zinc		1000	5.5	937.5	**93.8**						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Cadmium	CD	ICP	OPTIMA ICP 2	228.80		5	2.0	4/1/2012	20000.0	5/27/2015

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

IEC DATE: 1/5/2016

INSTRUMENT ID: OPTIMA ICP 1

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	14.7924220	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.1347330	0.0000000	-1.0660850	1.6287880	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1619400	0.0000000	0.0000000	0.1406640
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.6057370	0.0000000	0.0000000	0.0000000	0.0000000	0.1250180	0.0000000	0.0000000	0.0079490
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.5200790	0.0076930	0.0000000	-0.0359620	0.0000000	0.0000000	-0.0391990
Cobalt	228.62	0.0000000	0.0000000	0.1021560	0.0000000	0.0000000	0.0000000	0.0000000	-0.0313664	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1747430	-0.0205733	0.0000000	-0.0443630
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.0269110	0.0000000	0.0000000
Lead	220.35	-0.2304480	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.7905170	1.3513780	0.0487660
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1232790	0.0000000	-1.6648310	-1.2729830	0.0000000	0.6500090
Manganese	257.61	0.0068696	0.0000000	0.0000000	0.0000000	0.0039080	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0182900	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.1733140	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5005300	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.4810440	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0322879
Sodium	330.24	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	6.2416330	0.4098520	0.0000000	-0.1141150
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1815637	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0674280	0.0000000	0.0000000	0.2004620	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.1323790	0.0000000	0.0433830
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1277681	0.0000000	0.0000000

ATSG: 6082

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

IEC DATE: 1/5/2016

SDG: APR4

INSTRUMENT ID: OPTIMA ICP 1

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	16.6791990	0.0000000	0.0000000	0.0000000	1.6050850	0.0000000	14.4572670	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5069520	0.0000000	-4.0601450	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.6223120	0.0000000	0.0000000	0.0000000	-27.5814050	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0895220	0.0000000	0.0000000	0.0000000	0.0000000	0.1953560	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0125780	0.0000000	0.2292760	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9227370	0.0000000	0.0000000	0.0000000	0.0000000	0.0671390	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.1010740	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3494600	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1298730	0.1583160	0.0000000	0.0000000	1.7862780	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0057160	0.0000000	0.3208870	0.0000000	0.0000000	0.0000000	0.1832950	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.2567580	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.6138960	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.1995920	0.0000000	0.0000000	0.0000000	-0.0220710	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5480870	0.0000000	0.4463050	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0481990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.6820300	0.0000000
Silicon	288.16	0.0000000	0.0000000	-1.5952730	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.2760730	0.0000000
Sodium	330.24	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	247.8313240	0.0000000	0.0000000	318.3962490
Thallium	190.80	0.0000000	0.0000000	-1.5056600	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.6978960	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0440830	-0.5226220	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.9947150	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1465610	-0.3842450	0.0000000	0.0000000	0.0000000	0.5446660	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2762240	0.0000000	-0.0714258	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up

SDG: APR4

ANALYSIS METHOD: ICP

ARI PREP CODE: FRN

PREPDATE: 1/15/2016

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
PG-T0-MUS-COC-1510	APR4A	2.579	0.0	50.0
PG-T0-MUS-COC-1510D	APR4ADUP	2.583	0.0	50.0
PG-T0-MUS-COC-1510S	APR4ASPK	2.582	0.0	50.0
PBS	APR4MB1	2.500	0.0	50.0
LCSW	APR4MB1SPK	2.500	0.0	50.0
PG-SMA2-2-MUS-COC-	ATS0A	2.509	0.0	50.0
PG-PJ-1-MUS-COC-16	ATS0B	2.555	0.0	50.0
PG-WS-1-MUS-COC-16	ATS0C	2.577	0.0	50.0
PG-GP-1-MUS-COC-16	ATS0D	2.584	0.0	50.0
PG-SMA2-5-MUS-COC-	ATS0E	2.507	0.0	50.0
PG-SMA2-4-MUS-COC-	ATS0F	2.577	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 1/19/2016

SDG: APR4 | RUNID: IP011971 | METHOD: ICP | END DATE: 1/19/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	10022									X																					
S2	S2	1.00	10062									X																					
S3	S3	1.00	10080																														
S4	S4	1.00	10110																														
S5	S5	1.00	10132																														
ICV	ICV	1.00	10150									X																					
ICB	ICB	1.00	10190									X																					
CRI	CRII	1.00	10230									X																					
ICSA	ICSAI	1.00	10271									X																					
ICSAB	ICSABI	1.00	10312									X																					
ZZZZZZ	DICHECK	1.00	10364																														
CCV	CCV1	1.00	10404									X																					
CCB	CCB1	1.00	10445									X																					
PBW	APR4MB1	1.00	10485									X																					
PG-SMA2-2-MUS-COC-	ATS0A	1.00	10525									X																					
PG-PJ-1-MUS-COC-16	ATS0B	1.00	10570									X																					
PG-WS-1-MUS-COC-16	ATS0C	1.00	11012									X																					
PG-GP-1-MUS-COC-16	ATS0D	1.00	11073									X																					
PG-SMA2-5-MUS-COC-	ATS0E	1.00	11115									X																					
PG-T0-MUS-COC-1510D	APR4ADUP	1.00	11160									X																					
PG-T0-MUS-COC-1510	APR4A	1.00	11202									X																					
PG-T0-MUS-COC-1510S	APR4ASPK	1.00	11244									X																					
LCSW	APR4MB1SPK	1.00	11290									X																					
CCV	CCV2	1.00	11331									X																					
CCB	CCB2	1.00	11371									X																					
ZZZZZZ	ATZ2MB2	1.00	11411																														
ZZZZZZ	ATZ2MB1	1.00	11451																														
ZZZZZZ	ATZ4MB1	1.00	11491																														
ZZZZZZ	ATZ2A	1.00	11531																														
ZZZZZZ	ATZ2B	1.00	11575																														
PG-SMA2-4-MUS-COC-	ATS0F	1.00	12023									X																					
ZZZZZZ	ATZ4B	1.00	12064																														
ZZZZZZ	ATZ4MB1SPK	1.00	12104																														
ZZZZZZ	ATZ2MB1SPK	1.00	12150																														
ZZZZZZ	ATZ2MB2SPK	1.00	12190																														

FORM XIV

ATS0:0005

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA, LLC

PROJECT: Port Gamble Clean-up | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 1/19/2016

SDG: APR4 | RUNID: IP011971 | METHOD: ICP | END DATE: 1/19/2016

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
CCV	CCV3	1.00	12231									X																					
CCB	CCB3	1.00	12272									X																					

ATS: 88086

Percent Lipids

ARI Job ID: ATS0

ANALYTICAL RESOURCES INCORPORATED

LIPIDS ANALYSIS DATA SHEET
Percent Lipids by Method Bligh&Dyer

Data Release Authorized:
Reported: 01/20/16
Date Received: 01/06/16

QC Report No: ATS0-Anchor QEA, LLC
Project: Port Gamble Clean-Up
150388-01.01

Client/ ARI ID	Date Sampled	Matrix	Analysis Date	RL	Result
PG-SMA2-2-MUS-COC-160104 ATS0A 16-135	01/04/16	Tissue	01/14/16	0.0010	1.11 %
PG-PJ-1-MUS-COC-160104 ATS0B 16-136	01/04/16	Tissue	01/14/16	0.0009	0.979 %
PG-WS-1-MUS-COC-160104 ATS0C 16-137	01/04/16	Tissue	01/14/16	0.0010	1.21 %
PG-GP-1-MUS-COC-160104 ATS0D 16-138	01/04/16	Tissue	01/14/16	0.0010	1.10 %
PG-SMA2-5-MUS-COC-160104 ATS0E 16-139	01/04/16	Tissue	01/14/16	0.0010	1.07 %
PG-SMA2-4-MUS-COC-160105 ATS0F 16-140	01/05/16	Tissue	01/14/16	0.0010	0.926 %
Method Blank			01/14/16	0.0010	0.0700 %
PG-SMA2-2-MUS-COC-160104 DUP ATS0ADUP 16-135	01/04/16	Tissue	01/14/16	0.0009	1.13 % RPD: 1.8 %
PG-SMA2-2-MUS-COC-160104 TRP ATS0ATRP 16-135	01/04/16	Tissue	01/14/16	0.0010	1.18 % RPD: 6.1 %

Results Are On A Wet Weight Basis

RL-Analytical reporting limit
U-Undetected at reported detection limit

Incorporated
Analytical Chemists and
Consultants

(Modified Bligh/Dyer) % Lipids – Tissue
Modified TissueMizer (3550C) (SOP # 340S)

Preparation Test % Lipid Test # 1
ARI JOB No(s) ATSØ/APR4/AUA2

Batch set up by: SP In-House

Jar #	ARI Sample ID	Original Extracted Weight (wet wt)	Original Volume (FEV) (mL)	(split aliquot) Y/N	Volume Taken (µL)	Tare Weight (g)	Tare+Sample Weight (g)	Comments	Verify Client ID
	ATSØ MBT	10.009	1 mL	(Y/N)	(1,000 µL)	1.1628	1.1705		
1	A	10.23	1 mL	(Y/N)	(1,000 µL)	1.1603	1.2738		
1	Adup	10.75	1 mL	(Y/N)	(1,000 µL)	1.1649	1.2869		TH 1/14/16
1	Atrip	10.21	1 mL	(Y/N)	(1,000 µL)	1.1636	1.2837		
1	B	10.73	1 mL	(Y/N)	(1,000 µL)	1.1608	1.2660		Analyst/Date
1	C	10.41	1 mL	(Y/N)	(1,000 µL)	1.1642	1.2856		KD 80-85°C (1) 2 3 4 5 6
1	D	10.21	1 mL	(Y/N)	(1,000 µL)	1.1618	1.2739		
1	E	10.22	1 mL	(Y/N)	(1,000 µL)	1.1663	1.2747		
1	F	10.37	1 mL	(Y/N)	(1,000 µL)	1.1673	1.2626		RMH 1-18-16
1	APR4 A	10.28	1 mL	(Y/N)	(1,000 µL)	1.1641 SP 1/19/16	1.2957		
1	AUA2 A	10.39	1 mL	(Y/N)	(1,000 µL)	1.1628 15 SP 1/19/16	1.2992		
1	B	10.55	1 mL	(Y/N)	(1,000 µL)	1.1636	1.3107		
1	C	10.30	1 mL	(Y/N)	(1,000 µL)	1.1558	1.2926		Analyst/Date
			mL	(Y/N)	(µL)				TurboVap (1) 2 3
			mL	(Y/N)	(µL)				
			mL	(Y/N)	(µL)				SP 1/19/16
			mL	(Y/N)	(µL)				
			mL	(Y/N)	(µL)				
			mL	(Y/N)	(µL)			SP 1/20/16	
Analyst/Date	TH 1/14/16					SP 1/19/16	SP 1/20/16	Reviewed by/Date SP 1/20/16	Analyst/Date
Balance ID:	B139298002					Analytical Balance ID:		B146454145	

SPECIAL INSTRUCTIONS: 1. Weigh into 250mL Centrifuge bottles. 2. Use 10 g neutral Sodium Sulfate for the blanks. 3. Add 1:1 DCM/Acetone. 4. Add Sodium Sulfate to samples <u>just prior</u> to tissuemizzing. 5. Tissuemize (2X) with 1:1 DCM/Acetone + (1X) DCM only. 6. Collect in 500mL flask + Lg Funnel with glasswool (NO Sodium Sulfate). 7. KD (Normal drying column) at 80-85°C. 8. Turbovap to 1mL. 9. Record weights of empty tins from Analytical Balance in Tare Weight column. 10. Transfer the 1mL extract into the empty tins. 11. Dry extracts in tins under hood for a minimum of 2 hours. 12. Store extracts in a desiccator over night. 13. Re-weigh tins with Analytical Balance. 14. Record weights in Tare+Sample Weight column. 15. %Lipids are calculated by entering on LIMS.

* NOTE: GENERALLY A 10:1 RATIO IS THE TARGET (10g sample To 1mL FEV)

Freeze Y (N)

Reagent and Solutions Identification

(Modified Bligh/Dyer) % Lipids – Tissue
Modified TissueMizer (3550C) (SOP # 340S)

ARI JOB No(s) ATSØ/APR4/AUAZ

(Modified Bligh/Dyer) % Lipids Tissue:	Analyst/Date
TissueMizing Station: Anhydrous Sodium Sulfate: (I# + jar date)D445348 1:1 Methylene Chloride/Acetone: (H#)E444448 Methylene Chloride: (I#)E444442 Neutral Glasswool: (I#)D443978	TissueMize CT 1/15/16 TJC
KD Station: Neutral Glasswool: (I#) Anhydrous Sodium Sulfate: (I# + jar date) Methylene Chloride: (I#) EØØØØ42	KD RMH 1-18-16
Vialing Station: Methylene Chloride: (I#) EØØØØ42	Vialing SP

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: ATSQ/ARRY Client ID: Anchor QEA, LLC

Batch ID: _____

Parameter: % Lipids Client Project: Port Gamble Clean-up

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen= B 1/20/16	

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: ATS0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

Miscellaneous
Water/Soil/Sed/~~Tissue~~/Other
Separatory Funnel (3510C)/Liq-Liq (3520C)
Sonication (3550C)/Microwave (3546)
~~TissueMize (Modified 3550C)~~

Analysis Low level / SimPAH

Preparation Test Misc # 1
ARI Job No(s) APR4 / ATS0 / AUA2
Batch # _____

EPH Aromatic LLDCM

Batch set up by SP

Bottle #	ARI Sample I.D.	Weight ~~Or Volume~~ Extracted	~~Sonic Horn ID~~ + ~~Chk~~	(REQ/ ~~Opt~~) GPC (Low Level column) Y N 1:1	(REQ/ Opt) Acid Clean Y/N	(REQ/ Opt) Sulfur Clean Y/N	(REQ/ Opt) ~~SPE~~ Clean Y N 1:1	Final Effective Volume	Vol to Lab	Comments
	APR4 BLK	10.00 g		↓			↓	0.5mL	0.5mL	
	↓ BS	10.00g						↓	↓	
	BS Dup									
	MRL Check									
1/14/16	APR4 SRM	10.00								SRM 1974c
1	↓ A	10.02								
1	ATS0 A	10.04								
1	B	10.01								
1	BMS	10.01								
1	BMSD	10.00								
1	C	10.04								
1	D	10.03								
1	E	10.05								
1	↓ F	10.04								
1	AUA2 A	10.00								
1	B	10.02								
1	↓ C	10.01		↓			↓	↓	↓	
									SP 1/21/16	
Analyst/Date	YK 01/14/16			GM 1/19/16			SP 1/20/16	SP 1/21/16	SP 1/21/16	Reviewed by/Date SP 1/21/16

Verify Client ID: YK 01/14/16 — Analyst/Date

Pre-GPC KD: (1) 2 3 4 5 6 — ~~50~~ °C — ~~Exchange to Hex?~~ — Analyst/Date 1/15/16

TurboVap Pre-GPC: 1 2 3 (4) 5 — GM 1/19/16 — Analyst/Date

Post GPC 01/24/16 — KD 1 2 3 (4) 5 6 — 100 °C — Exchange to Hex? — Analyst/Date

TurboVap Post-GPC: (1) 2 3 4 5 — SP 1/20/16 — Analyst/Date

TurboVap Pre-Cleanups: (1) 2 3 4 5 — SP 1/20/16 — Analyst/Date

TurboVap Post-Cleanups: 1 2 3 (4) 5 — 100 — SP 1/21/16 — Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Low level Surrogate SimPAH	I (D045238)	1.5/7.5 µg/mL	100 µL	11/11/16	CT	YK
Spike	( )		µL			
Spike	( )		µL			
Low level Spike SimPAH	18 (D044411)	1.5/7.5 µg/mL	100 µL	11/11/16	CT	YK
MRL Spike	( )		µL			

Extraction Time: 16.5h | Liq/Liq Start: LL | Liq/Liq Stop: | Balance ID: B139297002

SPECIAL INSTRUCTIONS:
(24) 1:1 DCM/Acetone
(1x) LLDCM only
KD = LLDCM!
GPC = LLDCM!
VIALER = LLDCM!

3057F

Revision 07
06/23/15

ATS0 : 00093

Organic Extractions
Reagent and Solutions Identification

Analysis: LL-Sim PNA
Method: _____

ARI Job No(s) APR4, ATS0

Soil/Sediment/Solid/Tissue/Other:	Analyst/Date
Sonication/Microwave/Tissuemize Station:	Sonication/Microwave /Tissuemize
Neutral Sodium Sulfate: (D066398)	01/15/16
Pre-deactivated Sodium Sulfate: (N/A)	
~~Neutral Glasswool:~~ (D066398)	YL/CT
Pre-deactivated Glasswool: (NA)	
1:1 Hexane/Acetone: (NA)	
80:20 Hexane/Acetone: (NA)	
YL 1:1 DCM/Acetone: (E000167)	
80:20 DCM/Acetone: (N/A)	
Hexane: (N/A)	
YL DCM: (D004497)	
Other: ( )	
Other: ( )	
Pre-GPC KD Station:	Pre-GPC KD
~~Hexane: ( )~~	RH
LL DCM: (D004685)	1/15/16
~~Neutral Sodium Sulfate: ( )~~	
~~Pre-deactivated Sodium Sulfate: ( )~~	
~~Neutral Glasswool: ( )~~	
~~Pre-deactivated Glasswool: ( )~~	
Other: ( )	
Other: ( )	
GPC Filter Prep:	GPC Filter Prep
DCM: (D004685)	MW
Other: ( )	1/18/16
Other: ( )	
GPC Station:	GPC
Acetone: (D004482)	GM
LL DCM: (D004685)	1/18/16
1:1 DCM/Acetone: ( )	
Other: ( )	
Other: ( )	
Post GPC KD Station:	Post GPC KD
YL DCM: (D004625)	ME/CT
Hexane: (D004345)	01/20/16
Other: ( )	
Other: ( )	
Vialing Station:	Vialing SP
Hexane: (D004345)	1/20/16
LL DCM: (D004685) 60:40 Pent/DCM E000235	
Concentrated Sulfuric Acid: ( )	
Ethyl Acetate: ( )	
Tetrabutylammonium hydrogensulfate (TBAS): ( )	
Sodium Sulfite: ( )	
Copper: ( )	
Silica Gel (SPE) Darts: ( )	
0% Silica Gel: (D004343)	
Alumina: ( )	
HexMgBr: ( )	
Other: Glass wool (D001829)	SP 1/21/16
Other: Sodium Sulfate D005373 ( )	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: APR4/ATSQ

Client ID: Anchor QEA, LLC

Batch ID:

Parameter: Low level SimpNA

Client Project: Port Gamble Cleanup

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

SIM PAH Raw Data
Initial Calibration

ARI Job ID: ATS0

Analysis	Matrix	Method
8270D-SIM PAH (0.5 ug/kg)	Solid	EPA 8270D-SIM

Checklist: Initial Calibration Checklist-SVOA

#	Checklist Item	Response	Analyst Initials	Date
1	Element Calibration Code	YES	JLW	12/05/2015
	Comments: *YL00008*			
2	DFTPP Tune met criteria	YES	JLW	12/05/2015
3	DDT breakdown <20%	YES	JLW	12/05/2015
4	Peak Tailing factor <= 2%	NO	JLW	12/05/2015
	Comments: *Benzidine TD @ 2.11*			
5	ICal meets 20% RSD, LR COD, and QR COD limits	YES	JLW	12/05/2015
6	NO ICAL Q Flag applied	YES	JLW	12/05/2015
7	Manual integrations include before/after pictures	NA	JLW	12/05/2015
8	Spectral Library matches updated	YES	JLW	12/05/2015
9	Internal Standard areas within 50-200% from reference	YES	JLW	12/05/2015
10	Minimum response factors met			12/30/1899
11	All SCV within +/- 20% (DOD)	YES	JLW	12/05/2015
12	All SCV within +/- 30%	YES	JLW	12/05/2015
13	NO Linear or Quadratic fits used	YES	JLW	12/05/2015
14	NO Calibration points dropped	YES	JLW	12/05/2015
15	Additional notes	NA	JLW	12/05/2015
16	Reviewer approval (Reviewer)	YES	BB	12/07/2015

* = Indicates Automated Response from Element DataSyst

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2015 09:03
End Cal Date : 04-DEC-2015 11:33
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Last Edit : 05-Dec-2015 09:24 jonathonw
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem3\nt11.i\20151204.b\15120404.D
Level 2: \\target\share\chem3\nt11.i\20151204.b\15120405.D
Level 3: \\target\share\chem3\nt11.i\20151204.b\15120403.D
Level 4: \\target\share\chem3\nt11.i\20151204.b\15120402.D
Level 5: \\target\share\chem3\nt11.i\20151204.b\15120406.D
Level 6: \\target\share\chem3\nt11.i\20151204.b\15120407.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
5 Naphthalene	1.19875	1.25660	1.20859	1.13779	1.09546	1.03421	1.15523	7.090
7 2-Methylnaphthalene	0.75696	0.82162	0.81758	0.82518	0.78721	0.75401	0.79376	4.105
8 1-Methylnaphthalene	0.67221	0.74285	0.74457	0.74059	0.71073	0.68104	0.71533	4.554
10 Acenaphthylene	1.58688	1.68774	1.64577	1.62759	1.60202	1.53483	1.61414	3.252
12 Acenaphthene	1.08363	1.13588	1.09716	1.06578	1.04086	1.00481	1.07135	4.251
14 Dibenzofuran	1.63702	1.74172	1.68518	1.62325	1.55902	1.43742	1.61394	6.569
15 Fluorene	1.15912	1.25912	1.24842	1.23125	1.20885	1.15567	1.21040	3.673
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.20070	1.33868	1.26117	1.22278	1.14299	1.06348	1.20497	7.894
20 Anthracene	1.01417	1.08937	1.08864	1.11858	1.12165	1.03900	1.07857	4.018
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.09490	1.29137	1.25014	1.26562	1.22706	1.12956	1.20977	6.544
25 Pyrene	1.56990	1.71816	1.63928	1.57402	1.55717	1.44465	1.58387	5.751
28 Benzo(a)anthracene	1.26389	1.42412	1.34869	1.34036	1.33833	1.28529	1.33345	4.200
30 Chrysene	1.46075	1.64931	1.51090	1.43415	1.41191	1.31399	1.46350	7.649
44 Benzo(b)fluoranthene	1.23590	1.44922	1.33506	1.30908	1.42782	1.37318	1.35504	5.830
45 Benzo(k)fluoranthene	1.40405	1.66492	1.57480	1.60115	1.63773	1.59156	1.57904	5.812
46 Benzo(j)fluoranthene	1.32355	1.58148	1.42960	1.41908	1.47673	1.39992	1.43839	5.986
34 Benzo(a)pyrene	1.12243	1.39016	1.28482	1.30477	1.39200	1.35226	1.30774	7.704
37 Indeno(1,2,3-cd)pyrene	1.07019	1.39573	1.34204	1.37226	1.52877	1.52953	1.37309	12.270
38 Dibenzo(a,h)anthracene	0.79381	1.05747	1.07068	1.11092	1.23311	1.24877	1.08579	15.143
39 Benzo(g,h,i)perylene	1.03016	1.23486	1.17375	1.17405	1.27154	1.26755	1.19199	7.571
47 Perylene	1.25753	1.47517	1.35486	1.30583	1.39016	1.35136	1.35582	5.480
48 Benzo(e)pyrene	1.29965	1.48474	1.37096	1.32360	1.39138	1.34634	1.36945	4.764
$ 6 2-Methylnaphthalene-d10	0.70562	0.76809	0.76144	0.76607	0.73856	0.71434	0.74235	3.683
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 23 Fluoranthene-d10	1.01495	1.15239	1.11432	1.13346	1.12157	1.06256	1.09988	4.666

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 04-DEC-2015 09:03
End Cal Date : 04-DEC-2015 11:33
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Last Edit : 05-Dec-2015 09:24 jonathonw
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
$ 36 Dibenzo(a,h)anthracene-d14	0.59288	0.78076	0.79874	0.81630	0.91118	0.94354	0.80723	15.292

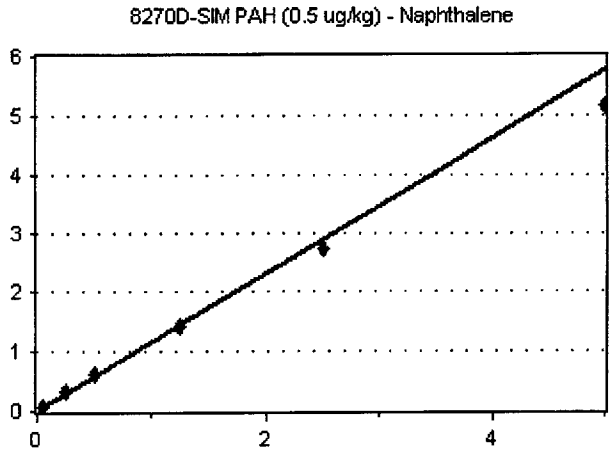
Analytical Resources, Incorporated
Analytical Chemists and Consultants

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**04-Dec-2015 08:45 By JLW**
Calibration ID:	**YL00008**	**Last Edit Date:**	**05-Dec-2015 10:30 By JLW**

8270D-SIM PAH (0.5 ug/k

Naphthalene

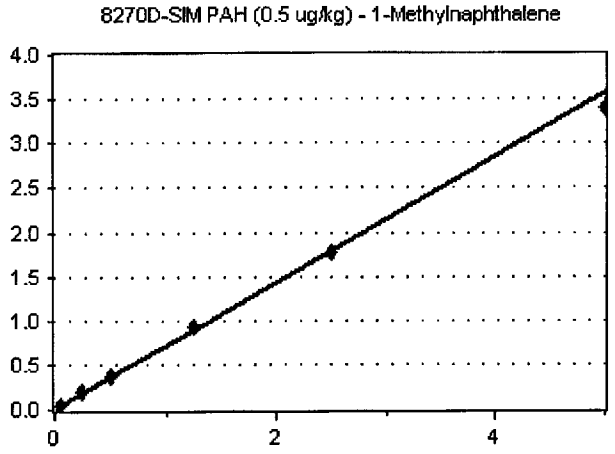


Average RF

RF RSD: 7.089665

[Conc] = 1.155235 * [Response]

1-Methylnaphthalene



Average RF

RF RSD: 4.554497

[Conc] = 0.7153312 * [Response]

Printed: 12/5/2015 10:41:13AM

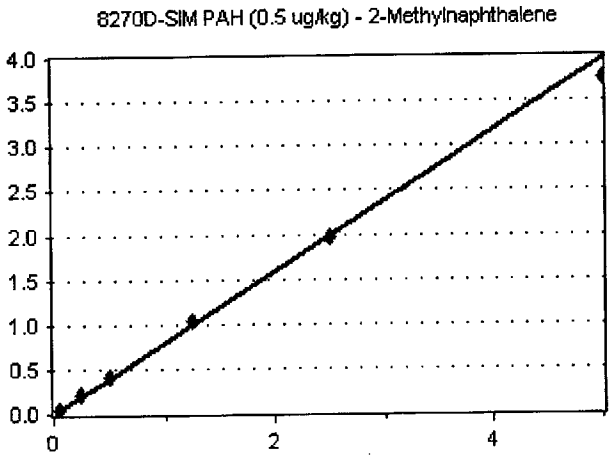
Calibration Report

Instrument: NT11
Calibration ID: YL00008

Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene

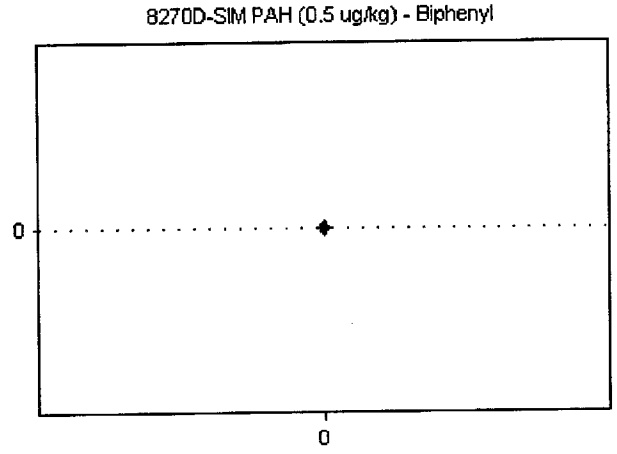


Average RF

RF RSD: 4.104786

[Conc] = 0.7937607 * [Response]

Biphenyl



Average RF

RF RSD:

[Conc] = * [Response]

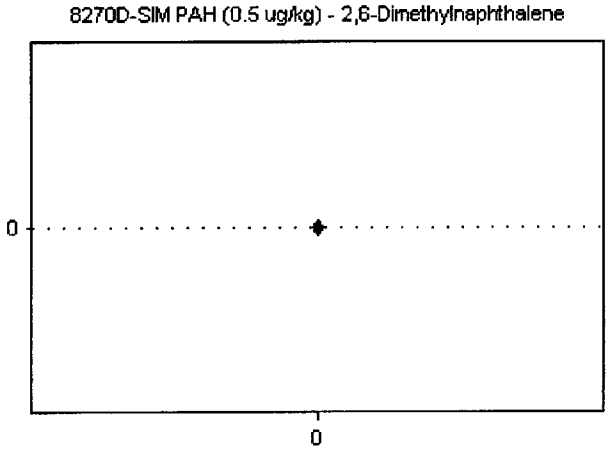
Printed: 12/5/2015 10:41:13AM

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2,6-Dimethylnaphthalene

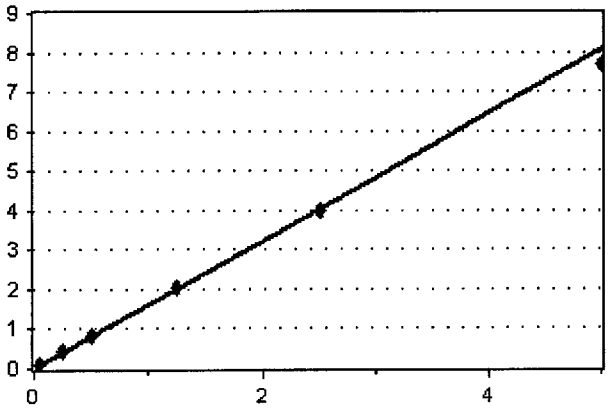


Average RF

RF RSD:

[Conc] = * [Response]

Acenaphthylene



Average RF

RF RSD: 3.252344

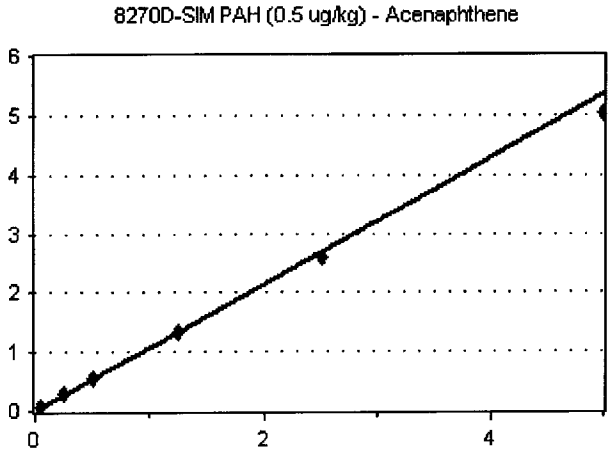
[Conc] = 1.614139 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Acenaphthene

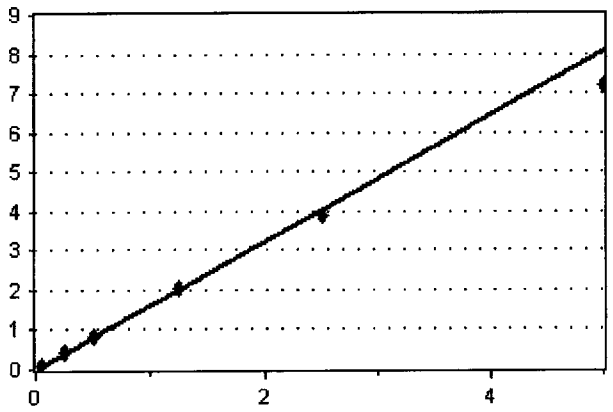


Average RF

RF RSD: 4.250741

[Conc] = 1.071353 * [Response]

Dibenzofuran



Average RF

RF RSD: 6.568803

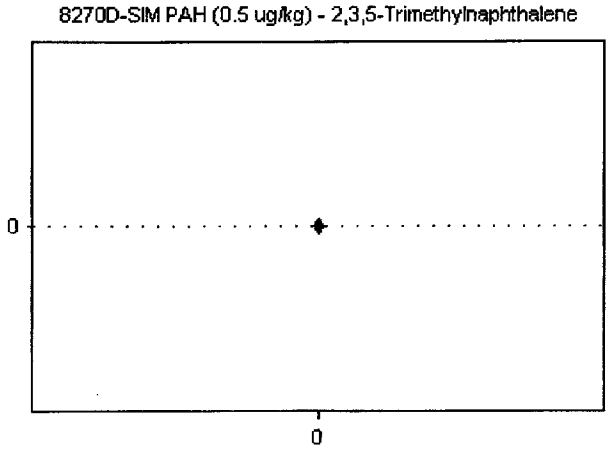
[Conc] = 1.613935 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

2,3,5-Trimethylnaphthalene

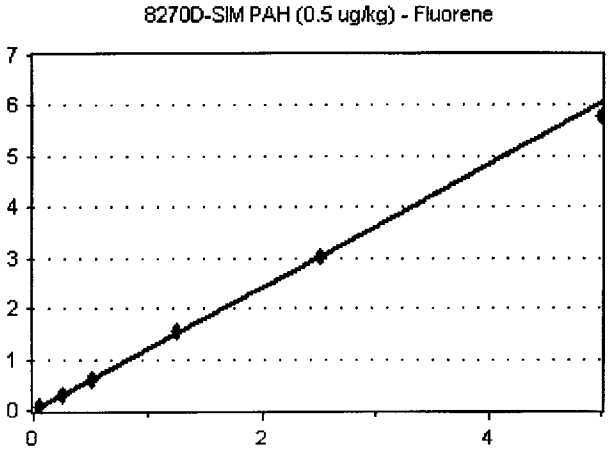


Average RF

RF RSD:

[Conc] = * [Response]

Fluorene



Average RF

RF RSD: 3.672642

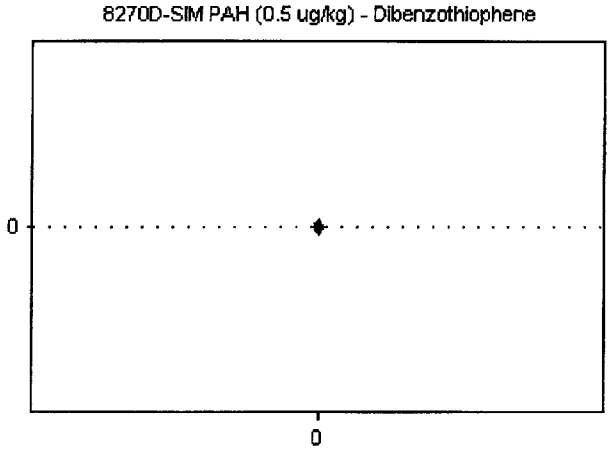
[Conc] = 1.210404 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**04-Dec-2015 08:45 By JLW**
Calibration ID:	**YL00008**	**Last Edit Date:**	**05-Dec-2015 10:30 By JLW**

8270D-SIM PAH (0.5 ug/k

Dibenzothiophene

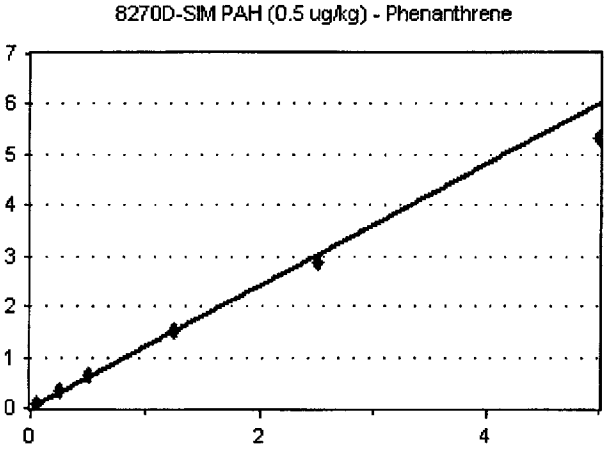


Average RF

RF RSD:

[Conc] = * [Response]

Phenanthrene



Average RF

RF RSD: 7.893657

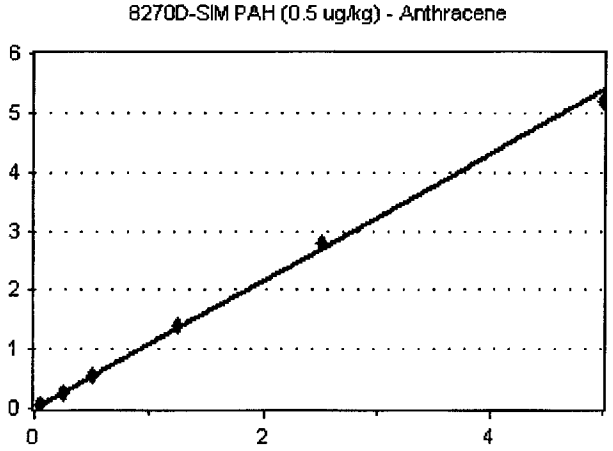
[Conc] = 1.204967 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**04-Dec-2015 08:45 By JLW**
Calibration ID:	**YL00008**	**Last Edit Date:**	**05-Dec-2015 10:30 By JLW**

8270D-SIM PAH (0.5 ug/k

Anthracene

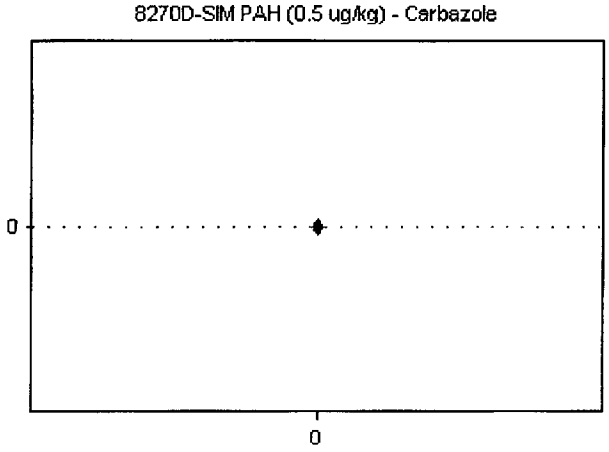


Average RF

RF RSD: 4.017562

[Conc] = 1.078569 * [Response]

Carbazole



Average RF

RF RSD:

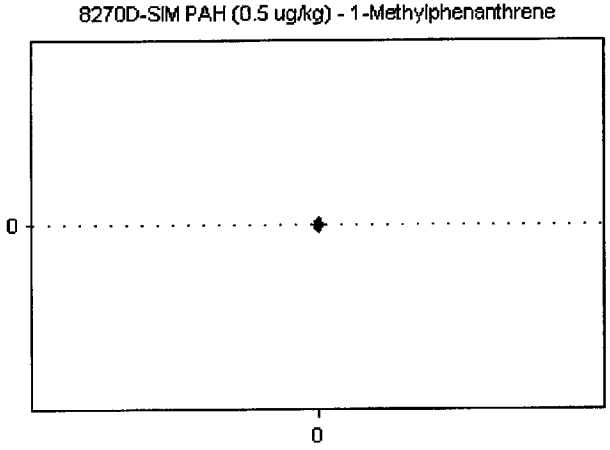
[Conc] = * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

1-Methylphenanthrene

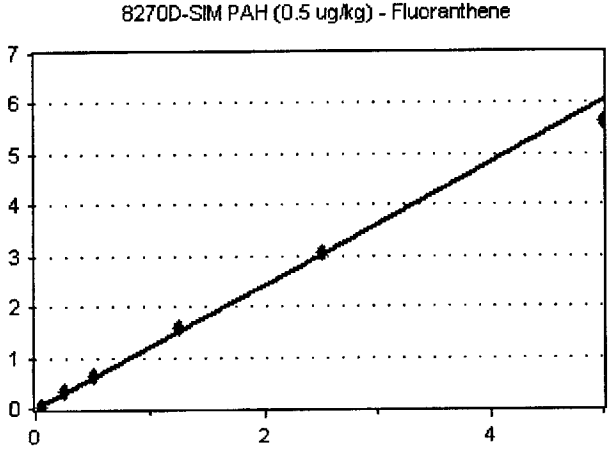


Average RF

RF RSD:

[Conc] = * [Response]

Fluoranthene



Average RF

RF RSD: 6.543763

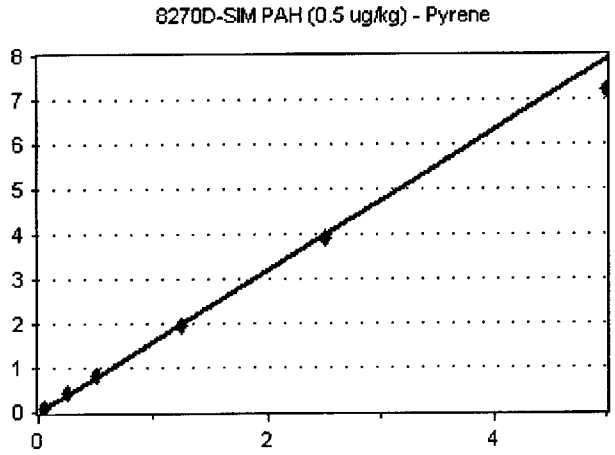
[Conc] = 1.209772 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Pyrene

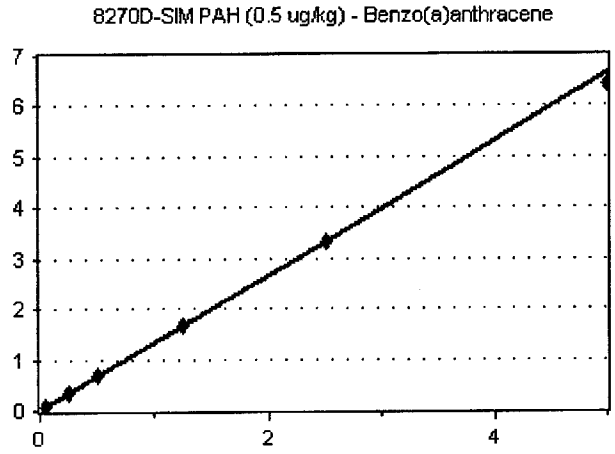


Average RF

RF RSD: 5.75149

[Conc] = 1.583866 * [Response]

Benzo(a)anthracene



Average RF

RF RSD: 4.200089

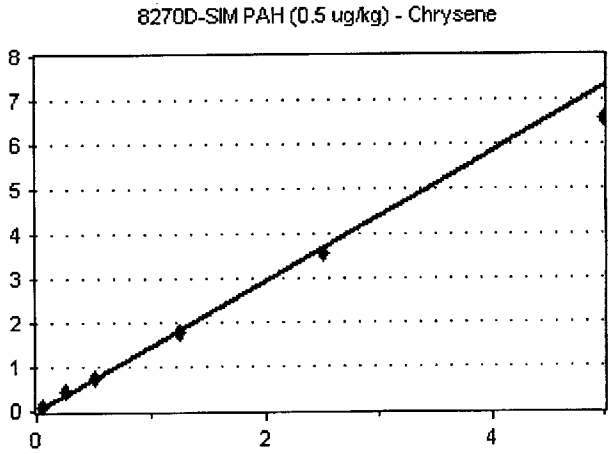
[Conc] = 1.333447 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Chrysene

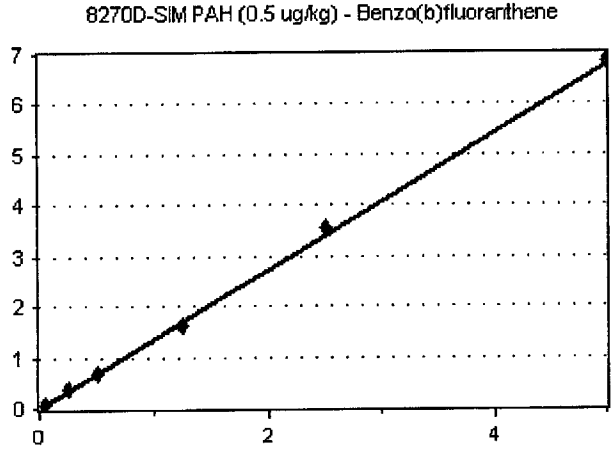


Average RF

RF RSD: 7.648974

[Conc] = 1.463504 * [Response]

Benzo(b)fluoranthene



Average RF

RF RSD: 5.829888

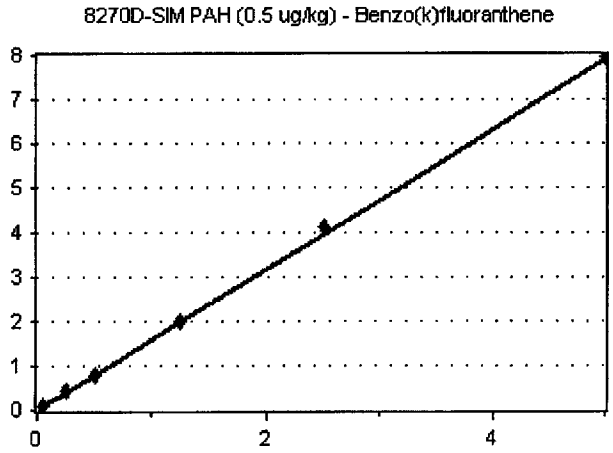
[Conc] = 1.355043 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Benzo(k)fluoranthene

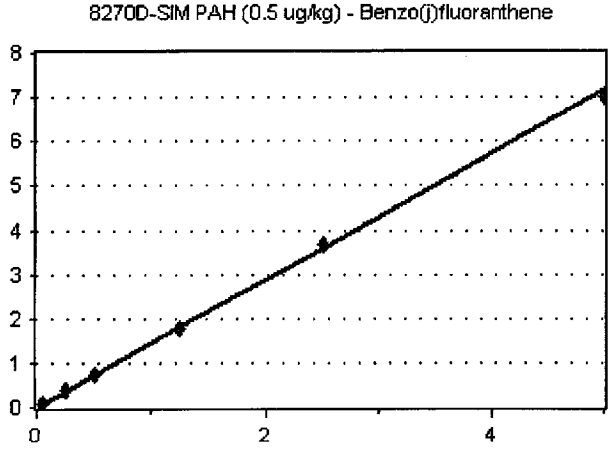


Average RF

RF RSD: 5.811618

[Conc] = 1.579036 * [Response]

Benzo(j)fluoranthene



Average RF

RF RSD: 5.985693

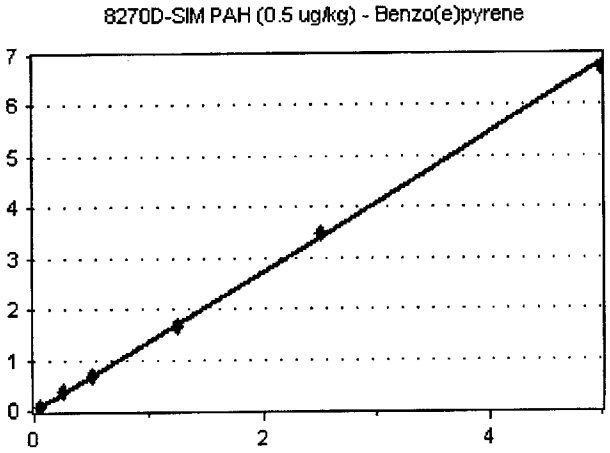
[Conc] = 1.438395 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Benzo(e)pyrene

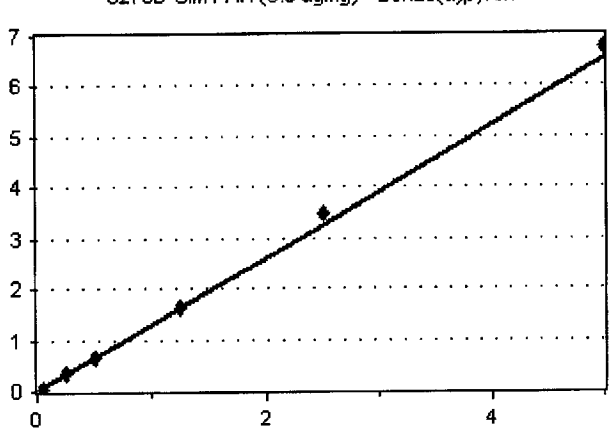


Average RF

RF RSD: 4.764213

[Conc] = 1.369446 * [Response]

Benzo(a)pyrene



Average RF

RF RSD: 7.703707

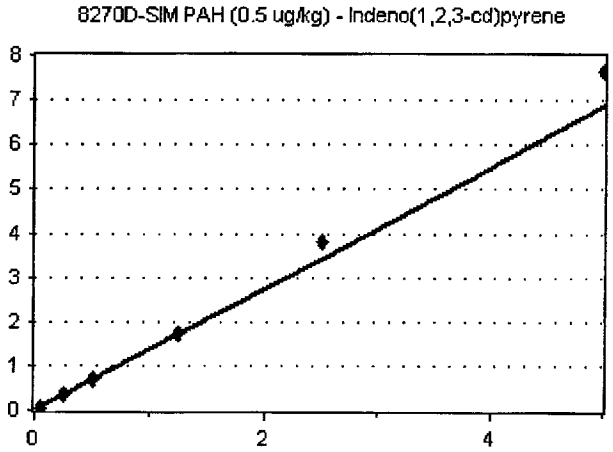
[Conc] = 1.307741 * [Response]

Calibration Report

Instrument:	**NT11**	**Calibration Date:**	**04-Dec-2015 08:45 By JLW**
Calibration ID:	**YL00008**	**Last Edit Date:**	**05-Dec-2015 10:30 By JLW**

8270D-SIM PAH (0.5 ug/k

Indeno(1,2,3-cd)pyrene

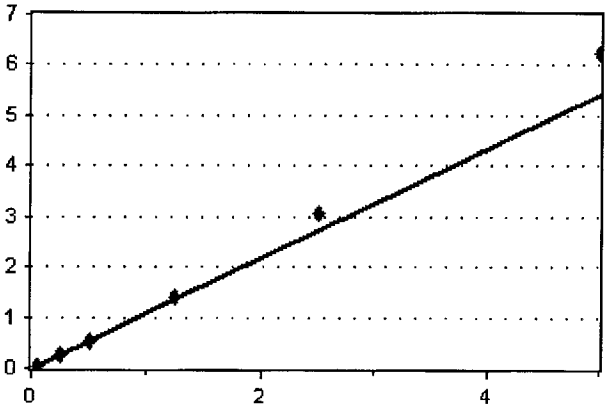


Average RF

RF RSD: 12.27039

[Conc] = 1.373086 * [Response]

Dibenzo(a,h)anthracene



Average RF

RF RSD: 15.14332

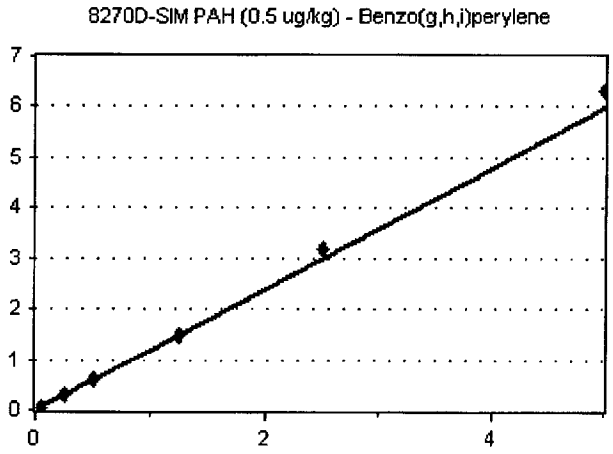
[Conc] = 1.085794 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Benzo(g,h,i)perylene

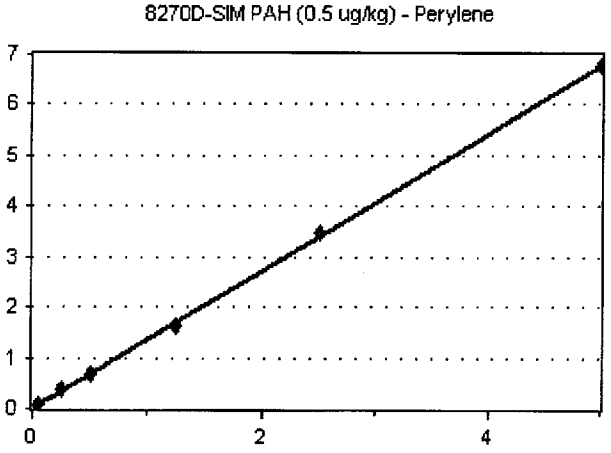


Average RF

RF RSD: 7.570849

[Conc] = 1.191986 * [Response]

Perylene



Average RF

RF RSD: 5.480223

[Conc] = 1.355818 * [Response]

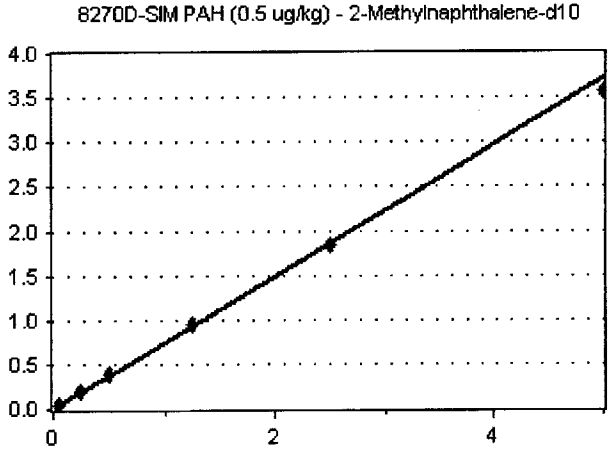
ATSS : 901.13

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

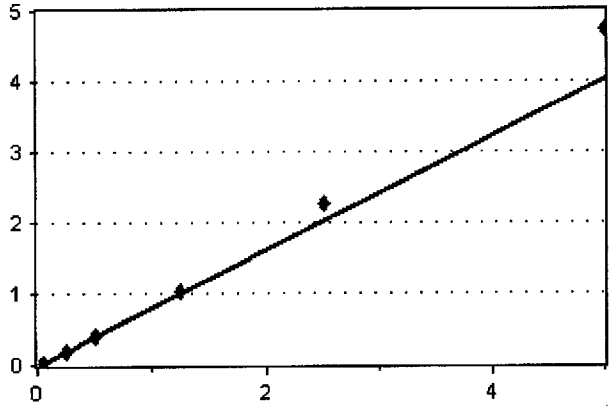
8270D-SIM PAH (0.5 ug/k

2-Methylnaphthalene-d10



Average RF
RF RSD: 3.68313
[Conc] = 0.7423531 * [Response]

Dibenzo[a,h]anthracene-d14



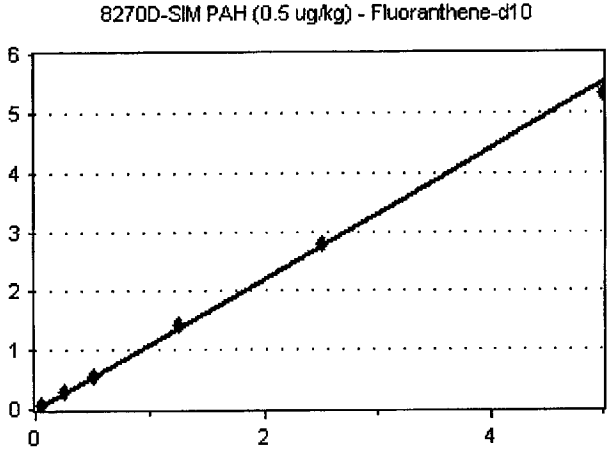
Average RF
RF RSD: 15.29202
[Conc] = 0.8072325 * [Response]

Calibration Report

Instrument: NT11
Calibration ID: YL00008
Calibration Date: 04-Dec-2015 08:45 By JLW
Last Edit Date: 05-Dec-2015 10:30 By JLW

8270D-SIM PAH (0.5 ug/k

Fluoranthene-d10



Average RF

RF RSD: 4.666284

[Conc] = 1.099877 * [Response]

Naphthalene-d8

Average RF

RF RSD:

[Conc] = * [Response]

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20151204.b

ARI Job No.: TUNE   Method: DFTPP.m   Instrument: nt11.i   Date: 04-DEC-2015

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0845	15120401.D	TUNE 10		1	NO MANUAL INTEGRATION
0903	15120402.D	LLSIM 250		1	NO MANUAL INTEGRATION
0933	15120403.D	LLSIM 100		1	NO MANUAL INTEGRATION
1003	15120404.D	LLSIM 10		1	NO MANUAL INTEGRATION
1033	15120405.D	LLSIM 50		1	NO MANUAL INTEGRATION
1103	15120406.D	LLSIM 500		1	NO MANUAL INTEGRATION
1133	15120407.D	LLSIM 1000		1	NO MANUAL INTEGRATION
1204	15120408.D	LLSIM SCV 250		1	NO MANUAL INTEGRATION

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20151204.b

	Time	Filename	LabID	ClientId	DF									
1	0845	15120401.D	TUNE 10		1	NO ISTDS FOUND								
2	0903	15120402.D	LLSIM 250		1	6.60	327896	9.60	239179	12.27	372253	17.02	294711	19.84	260595
3	0933	15120403.D	LLSIM 100		1	6.60	322094	9.60	228988	12.27	364343	17.02	276576	19.84	245162
4	1003	15120404.D	LLSIM 10		1	6.60	325673	9.60	218580	12.27	358974	17.01	262207	19.84	229323
5	1033	15120405.D	LLSIM 50		1	6.60	322810	9.60	219192	12.27	354307	17.01	262604	19.84	229726
6	1103	15120406.D	LLSIM 500		1	6.60	340768	9.60	241553	12.27	382017	17.01	296788	19.84	253397
7	1133	15120407.D	LLSIM 1000		1	6.60	337457	9.60	238950	12.27	380348	17.01	298514	19.84	256244
8	1204	15120408.D	LLSIM SCV 250		1	6.60	330144	9.60	236381	12.27	360337	17.01	291007	19.83	242244

Report Date : 05-Dec-2015 10:32

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20151204.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	15120402	15120403	15120404	15120405	15120406	15120407
INJ.DATE:	04-DEC-2015	04-DEC-2015	04-DEC-2015	04-DEC-2015	04-DEC-2015	04-DEC-2015
INJ.TIME:	09:03	09:33	10:03	10:33	11:03	11:33

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 4 Naphthalene-d8	6.598	6.597	6.598	6.598	6.598	6.598	6.598	6.348-6.848	6.598	0.000
5 Naphthalene	6.640	6.629	6.629	6.629	6.629	6.629	6.629	6.379-6.879	6.631	0.004
$ 6 2-Methylnaphthalene-d1	7.575	7.575	7.575	7.575	7.575	7.575	7.575	7.325-7.825	7.575	0.000
7 2-Methylnaphthalene	7.638	7.638	7.638	7.627	7.627	7.627	7.627	7.377-7.877	7.632	0.006
8 1-Methylnaphthalene	7.890	7.890	7.890	7.890	7.890	7.890	7.890	7.640-8.140	7.890	0.000
10 Acenaphthylene	9.446	9.446	9.446	9.446	9.446	9.446	9.446	9.196-9.696	9.446	0.000
* 11 Acenaphthene-d10	9.601	9.601	9.601	9.601	9.601	9.601	9.601	9.351-9.851	9.601	0.000
12 Acenaphthene	9.656	9.656	9.656	9.656	9.656	9.656	9.656	9.406-9.906	9.656	0.000
14 Dibenzofuran	9.867	9.867	9.867	9.867	9.867	9.867	9.867	9.617-10.117	9.867	0.000
15 Fluorene	10.487	10.487	10.487	10.487	10.487	10.487	10.487	10.237-10.737	10.487	0.000
$ 16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	4.785	4.535-5.035	+++++	+++++
~~* 18 Phenanthrene-d10~~	12.269	12.269	12.269	12.269	12.269	12.269	12.269	12.019-12.519	12.269	0.000
19 Phenanthrene	12.314	12.313	12.314	12.314	12.313	12.313	12.313	12.063-12.563	12.313	0.000
20 Anthracene	12.369	12.369	12.369	12.369	12.369	12.369	12.369	12.119-12.619	12.369	0.000
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$ 23 Fluoranthene-d10	14.375	14.375	14.375	14.365	14.375	14.375	14.375	14.125-14.625	14.373	0.004

Reviewer 1 JS Date: 12/5/15
Reviewer 2 [signature] Date: 12/7/15

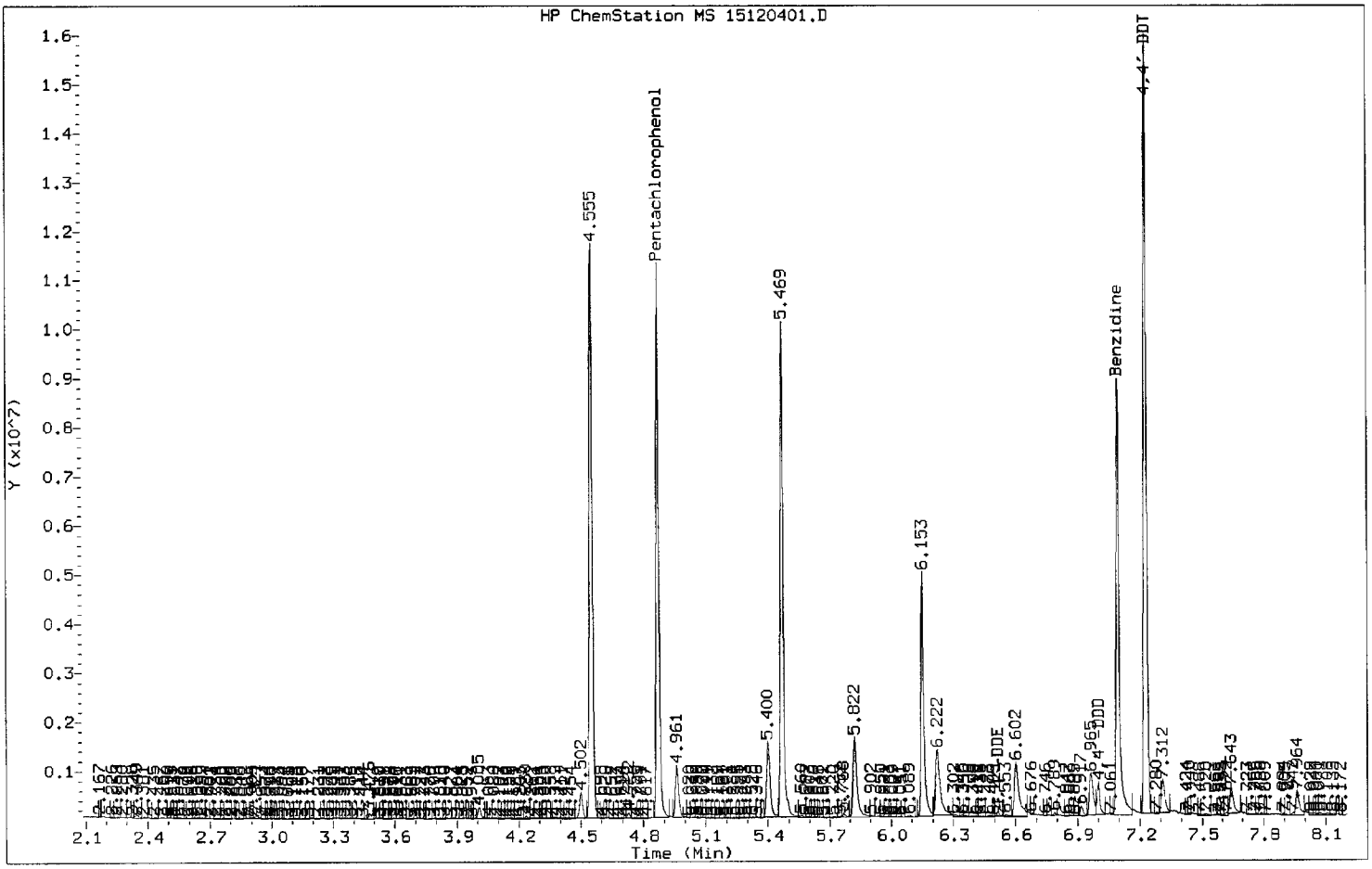
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

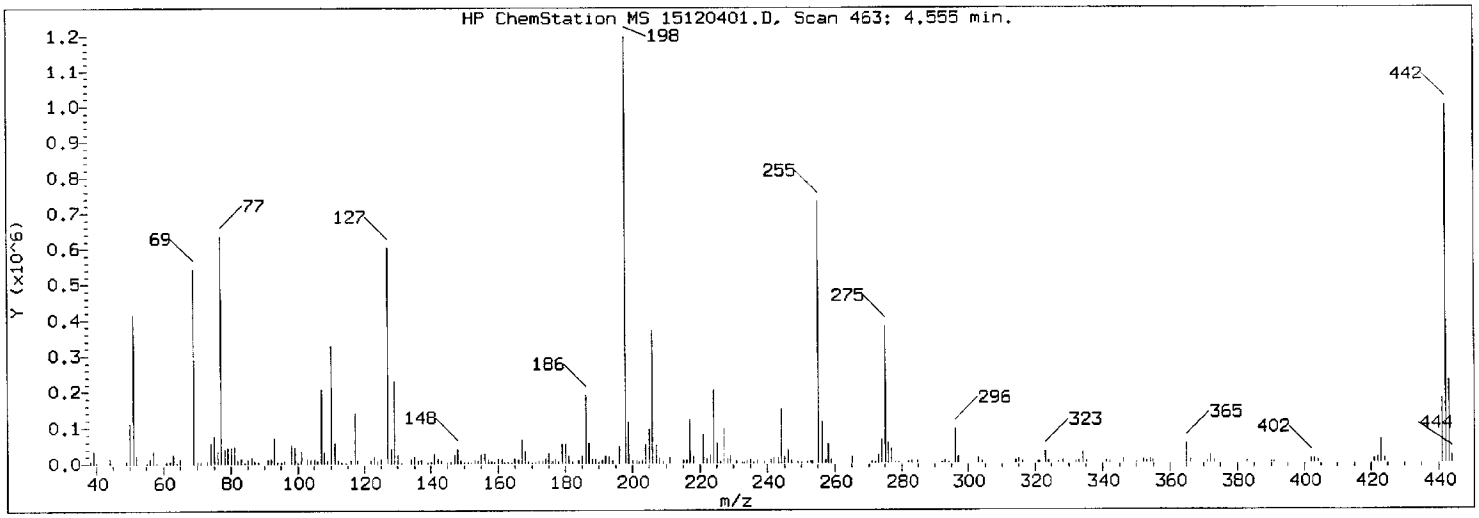
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Batch File: \\target\share\chem3\nt11.i\20151204.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
24 Fluoranthene	14.404	14.404	14.404	14.404	14.404	14.404	14.404	14.154-14.654	14.404	0.000
25 Pyrene	14.903	14.903	14.903	14.903	14.903	14.903	14.903	14.653-15.153	14.903	0.000
28 Benzo(a)anthracene	16.918	16.918	16.918	16.918	16.918	16.918	16.918	16.668-17.168	16.918	0.000
* 29 Chrysene-d12	17.018	17.018	17.010	17.010	17.010	17.010	17.010	16.760-17.260	17.012	0.004
30 Chrysene	17.068	17.059	17.060	17.060	17.059	17.059	17.059	16.809-17.309	17.061	0.003
44 Benzo(b)fluoranthene	18.785	18.785	18.785	18.785	18.785	18.785	18.785	18.535-19.035	18.785	0.000
45 Benzo(k)fluoranthene	18.833	18.833	18.824	18.824	18.823	18.833	18.833	18.583-19.083	18.828	0.005
46 Benzo(j)fluoranthene	18.891	18.891	18.891	18.891	18.891	18.891	18.891	18.641-19.141	18.891	0.000
34 Benzo(a)pyrene	19.640	19.630	19.631	19.631	19.631	19.631	19.631	19.381-19.881	19.632	0.004
* 35 Perylene-d12	19.842	19.842	19.842	19.842	19.842	19.842	19.842	19.592-20.092	19.842	0.000
$ 36 Dibenzo(a,h)anthracene	22.208	22.197	22.197	22.197	22.197	22.197	22.197	21.947-22.447	22.199	0.005
37 Indeno(1,2,3-cd)pyrene	22.330	22.330	22.330	22.330	22.330	22.330	22.330	22.080-22.580	22.330	0.000
38 Dibenzo(a,h)anthracene	22.319	22.319	22.319	22.308	22.308	22.308	22.308	22.058-22.558	22.313	0.006
39 Benzo(g,h,i)perylene	23.427	23.426	23.427	23.427	23.426	23.426	23.426	23.176-23.676	23.426	0.000
47 Perylene	19.900	19.900	19.900	19.900	19.900	19.900	19.900	19.650-20.150	19.900	0.000
48 Benzo(e)pyrene	19.525	19.525	19.525	19.525	19.525	19.525	19.525	19.275-19.775	19.525	0.000

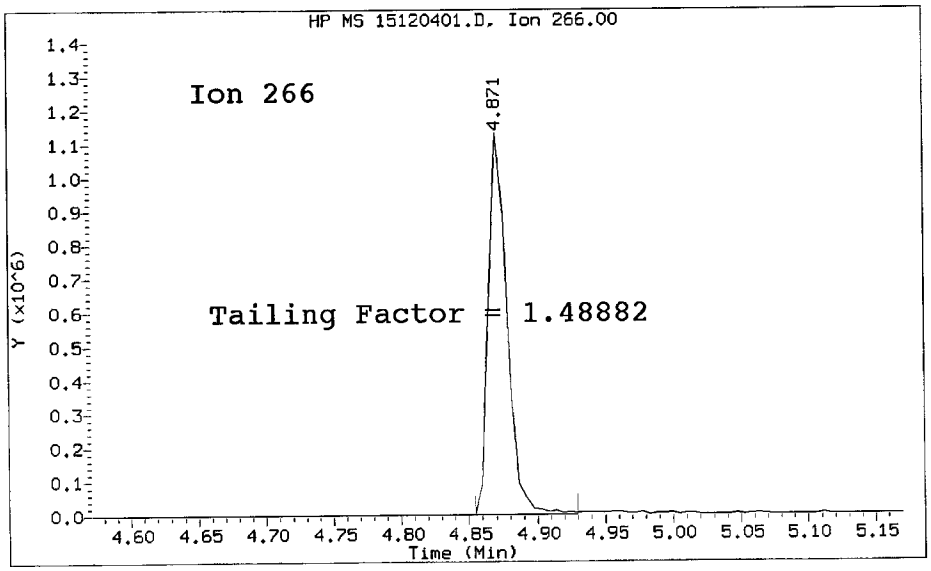
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20151204.b/15120401.D/15120401.D
Method Used: \20151204.b\DFTPP.m Inst: nt11
Injection Date: 04-DEC-2015 08:45 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 12/04/2015 09:41



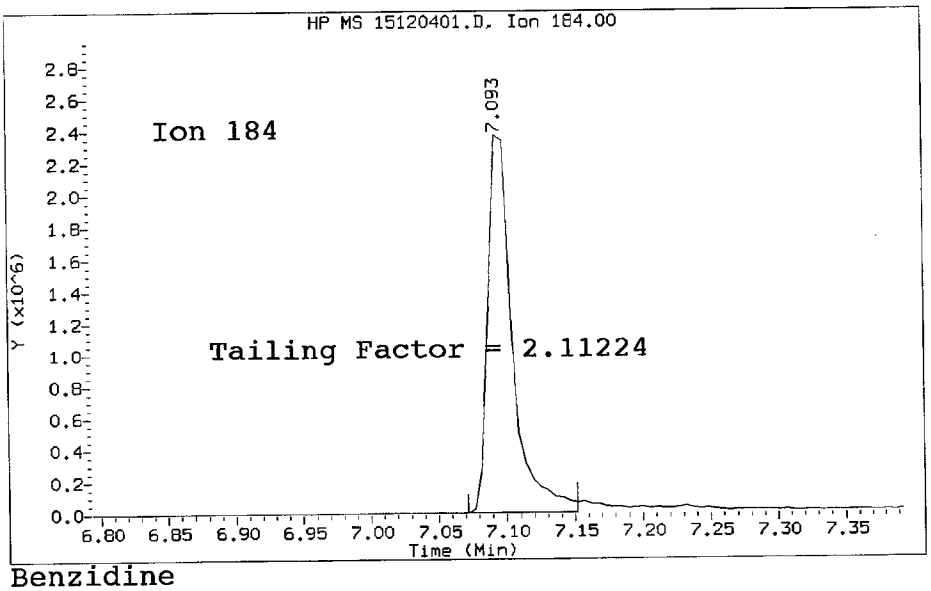


Datafile Analyzed: /20151204.b/15120401.D/15120401.D
Method Used: \20151204.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 04-DEC-2015 08:45 Operator: JR
Sample Info: TUNE 10
Report Date: 12/04/2015 09:41



Pentachlorophenol
==========
Exp. RT = 4.914
Found RT = 4.871

Tail Factor = 1.489 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.141
Found RT = 7.093

The tailing factor for Benzidine EXCEEDED

Tail Factor = 2.112 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test	
Pentachlorophenol	1.4888179	2.000	PASS	
Benzidine	2.1122449	2.000	FAIL	[Failure]

12/7/15

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2078544			N/A
4,4-DDE	12541	0.6	20.0	PASS
4,4-DDD	100432	4.6	20.0	PASS
4,4-DDD + DDE	112973	5.2	20.0	PASS

Tuning Sample, nt11.i/20151204.b/15120401.D, *** FAILED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	36.71
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.72
70	Less than 2.00% of mass 69	0.25 (0.53)
127	10.00 - 80.00% of mass 198	50.34
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.78
275	10.00 - 60.00% of mass 198	29.75
365	Greater than 1.00% of mass 198	3.54
441	0.01 - 24.00% of mass 442	13.40 (16.36)
442	50.00 - 200.00% of mass 198	81.93
443	15.00 - 24.00% of mass 442	18.59 (22.69)

Data File: 15120401.D
Spectrum: Avg. Scans 462-464 (4.56), Background Scan 456
Location of Maximum: 198.00
Number of points: 252

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	5903	123.00	15321	191.00	4529	276.00	37792
39.00	32472	124.00	6008	192.00	15383	277.00	25616
40.00	2234	125.00	8697	193.00	14981	278.00	5143
44.00	1291	127.00	487424	194.00	2969	279.00	797
49.00	2336	128.00	36048	195.00	935	282.00	1077
50.00	99976	129.00	198784	196.00	36952	283.00	4344
51.00	355456	130.00	17864	198.00	968192	285.00	4257
52.00	19288	131.00	3029	199.00	85016	290.00	736
53.00	699	132.00	770	200.00	7648	292.00	695
55.00	817	134.00	4444	201.00	4181	293.00	3995
56.00	12284	135.00	17328	202.00	2800	294.00	1601
57.00	28160	136.00	7249	203.00	7062	296.00	79296
58.00	882	137.00	7197	204.00	45768	297.00	10726
61.00	4027	139.00	686	205.00	78432	301.00	1083
62.00	4478	140.00	3181	206.00	296256	303.00	9535
63.00	21296	141.00	26728	207.00	40064	304.00	2760
64.00	2870	142.00	9703	208.00	13008	310.00	1258
65.00	7567	143.00	5423	209.00	4174	314.00	5255
69.00	452352	144.00	1270	210.00	2826	315.00	11430
70.00	2404	145.00	2146	211.00	10991	316.00	4496
71.00	1729	146.00	3758	212.00	1343	317.00	1730
74.00	51136	147.00	11875	213.00	1135	321.00	2836
75.00	72784	148.00	28688	215.00	5759	322.00	766
76.00	27064	149.00	7601	216.00	5158	323.00	27808
77.00	512768	150.00	1111	217.00	87992	324.00	3710
78.00	35304	151.00	3226	218.00	10624	327.00	3445
79.00	35128	152.00	2009	221.00	58632	328.00	2747
80.00	28640	153.00	8844	222.00	12655	332.00	2890
81.00	40048	154.00	6510	223.00	18704	333.00	2909
82.00	10036	155.00	17848	224.00	170624	334.00	18896
83.00	13510	156.00	20976	225.00	44928	335.00	3574
84.00	155	157.00	5537	226.00	4319	341.00	3496
85.00	9792	158.00	5165	227.00	75184	342.00	946
86.00	11647	159.00	2604	228.00	10251	346.00	5555
87.00	6242	160.00	7198	229.00	15494	350.00	704
88.00	2104	161.00	9881	231.00	4886	352.00	9894
91.00	8456	162.00	2652	233.00	1517	353.00	6975
92.00	8959	163.00	959	234.00	3642	354.00	7491
93.00	59144	164.00	701	235.00	4833	355.00	2236
94.00	4278	165.00	10199	236.00	1621	365.00	34240
95.00	1022	166.00	9417	237.00	5726	366.00	4979
96.00	2824	167.00	49792	239.00	1926	371.00	2016
98.00	40528	168.00	25208	241.00	6592	372.00	17560
99.00	34656	169.00	4359	242.00	9932	373.00	3339
100.00	3425	170.00	2037	243.00	9154	383.00	2922
101.00	24160	171.00	2039	244.00	122792	390.00	1755
102.00	687	172.00	5959	245.00	17280	391.00	814
103.00	7164	173.00	5076	246.00	28232	402.00	5209
104.00	12935	174.00	11539	247.00	4557	403.00	6386

105.00	10605	175.00	20720	249.00	3982	404.00	2710
106.00	7128	176.00	7696	250.00	1046	421.00	6452
107.00	162176	177.00	11926	252.00	969	422.00	10014
108.00	27064	178.00	3414	253.00	5072	423.00	50464
109.00	2954	179.00	42472	255.00	572352	424.00	9853
110.00	279360	180.00	32368	256.00	86752	425.00	909
111.00	42360	181.00	14321	257.00	6074	441.00	129768
112.00	6933	182.00	2960	258.00	40416	442.00	793216
113.00	1332	184.00	4180	259.00	6964	443.00	179968
114.00	829	185.00	19872	265.00	16576	444.00	15867
116.00	8676	186.00	147328	271.00	1077	445.00	897
117.00	106856	187.00	42160	272.00	2517		
118.00	7215	188.00	5898	273.00	20392		
120.00	674	189.00	10119	274.00	55504		
122.00	7466	190.00	1772	275.00	288064		

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120402.D
Lab Smp Id: LLSIM 250
Inj Date : 04-DEC-2015 09:03 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 250
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 09:03 Cal File: 15120402.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

JU 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	327896	200.000	
	5 Naphthalene	128	6.639	6.629	(1.006)	466348	250.000	246
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	313990	250.000	258
	7 2-Methylnaphthalene	142	7.637	7.627	(1.158)	338215	250.000	260
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	303545	250.000	259
	10 Acenaphthylene	152	9.446	9.445	(0.984)	486608	250.000	252
*	11 Acenaphthene-d10	164	9.601	9.600	(1.000)	239179	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	318640	250.000	249
	14 Dibenzofuran	168	9.866	9.866	(1.028)	485308	250.000	251
	15 Fluorene	166	10.486	10.486	(1.092)	368110	250.000	254
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	372253	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	568980	250.000	254
	20 Anthracene	178	12.368	12.368	(1.008)	520493	250.000	259
$	23 Fluoranthene-d10	212	14.375	14.374	(1.172)	527419	250.000	258
	24 Fluoranthene	202	14.403	14.403	(1.174)	588912	250.000	262
	25 Pyrene	202	14.903	14.903	(0.876)	579853	250.000	248
	28 Benzo(a)anthracene	228	16.918	16.918	(0.994)	493775	250.000	251
*	29 Chrysene-d12	240	17.018	17.009	(1.000)	294711	200.000	
	30 Chrysene	228	17.067	17.059	(1.003)	528325	250.000	245
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	426424	250.000	242
	45 Benzo(k)fluoranthene	252	18.833	18.833	(0.949)	521565	250.000	254
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	462257	250.000	247
	34 Benzo(a)pyrene	252	19.640	19.630	(0.990)	425021	250.000	249
*	35 Perylene-d12	264	19.842	19.842	(1.000)	260595	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.208	22.197	(1.119)	265906	250.000	253
	37 Indeno(1,2,3-cd)pyrene	276	22.330	22.329	(1.125)	447004	250.000	250
	38 Dibenzo(a,h)anthracene	278	22.318	22.307	(1.125)	361875	250.000	256
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	382439	250.000	246
	47 Perylene	252	19.899	19.899	(1.003)	425367	250.000	241
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	431155	250.000	242

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120402.D
Lab Smp Id: LLSIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	327896	0.00
11 Acenaphthene-d10	239179	119590	478358	239179	0.00
18 Phenanthrene-d10	372253	186127	744506	372253	0.00
29 Chrysene-d12	294711	147356	589422	294711	0.00
35 Perylene-d12	260595	130298	521190	260595	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	0.00
29 Chrysene-d12	17.02	16.52	17.52	17.02	0.00
35 Perylene-d12	19.84	19.34	20.34	19.84	0.00

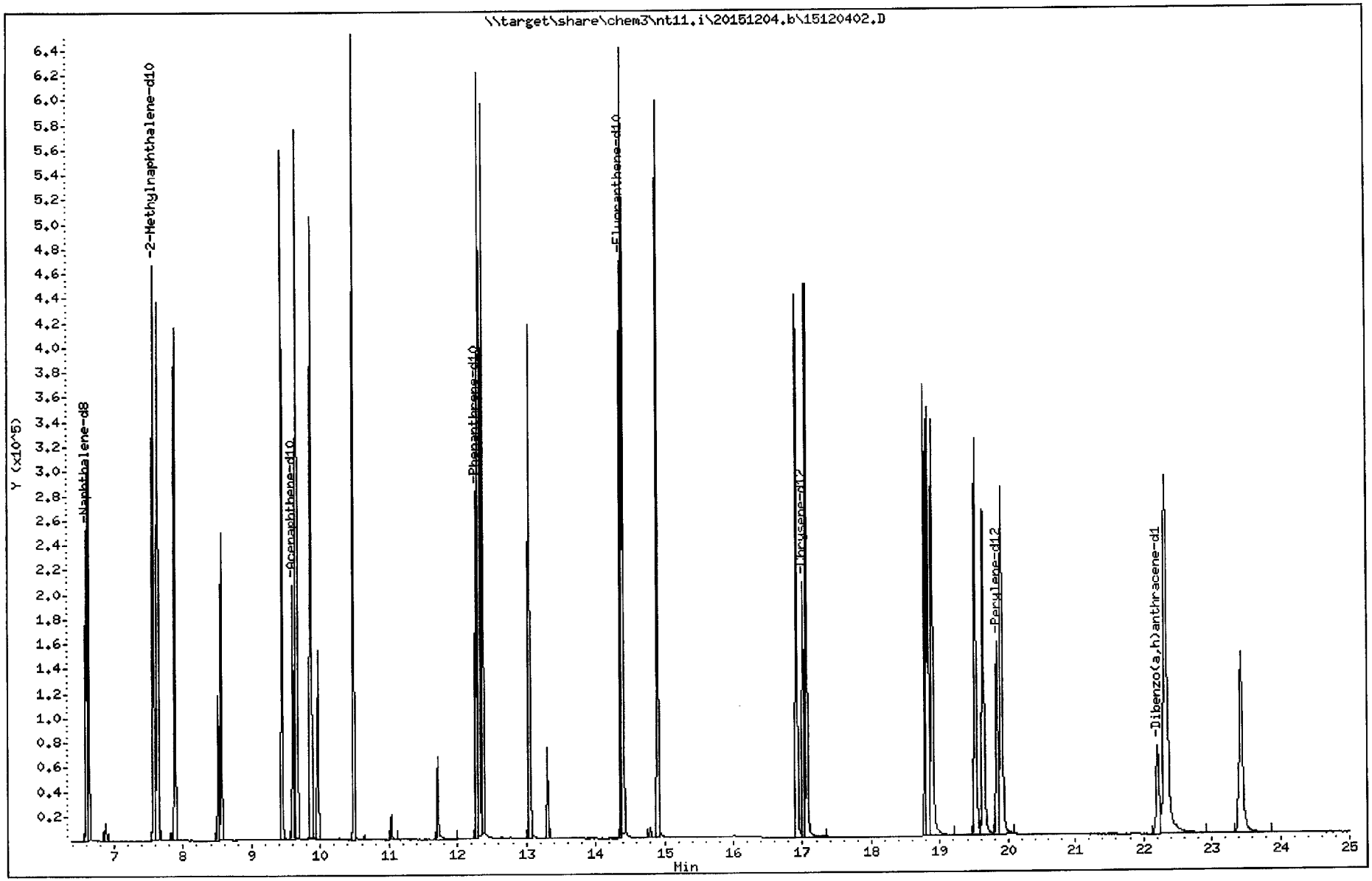
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120402.D
Date : 04-DEC-2015 09:03
Client ID:
Sample Info: LLSIM 250

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120402.D

Lab ID: LLSIM 250
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 09:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120403.D
Lab Smp Id: LLSIM 100
Inj Date : 04-DEC-2015 09:33 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 100
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 09:33 Cal File: 15120403.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

SO 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	322094	200.000	
	5 Naphthalene	128	6.628	6.629	(1.005)	194640	100.000	105
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	122627	100.000	103
	7 2-Methylnaphthalene	142	7.637	7.627	(1.158)	131669	100.000	103
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	119911	100.000	104
	10 Acenaphthylene	152	9.445	9.445	(0.984)	188431	100.000	102
*	11 Acenaphthene-d10	164	9.600	9.600	(1.000)	228988	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	125618	100.000	102
	14 Dibenzofuran	168	9.866	9.866	(1.028)	192943	100.000	104
	15 Fluorene	166	10.486	10.486	(1.092)	142937	100.000	103
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	364343	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	229750	100.000	105
	20 Anthracene	178	12.368	12.368	(1.008)	198320	100.000	101
$	23 Fluoranthene-d10	212	14.374	14.374	(1.172)	202998	100.000	101
	24 Fluoranthene	202	14.403	14.403	(1.174)	227740	100.000	103
	25 Pyrene	202	14.903	14.903	(0.876)	226693	100.000	103
	28 Benzo(a)anthracene	228	16.918	16.918	(0.994)	186507	100.000	101
*	29 Chrysene-d12	240	17.017	17.009	(1.000)	276576	200.000	
	30 Chrysene	228	17.059	17.059	(1.002)	208940	100.000	103
	44 Benzo(b)fluoranthene	252	18.784	18.785	(0.947)	163653	100.000	98.5
	45 Benzo(k)fluoranthene	252	18.832	18.833	(0.949)	193041	100.000	99.7
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	175242	100.000	99.4
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	157495	100.000	98.2
*	35 Perylene-d12	264	19.841	19.842	(1.000)	245162	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.196	22.197	(1.119)	97910	100.000	98.9
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	164508	100.000	97.7
	38 Dibenzo(a,h)anthracene	278	22.318	22.307	(1.125)	131245	100.000	98.6
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	143879	100.000	98.5
	47 Perylene	252	19.899	19.899	(1.003)	166080	100.000	99.9
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	168054	100.000	100

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120403.D
Lab Smp Id: LLSIM 100
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	322094	-1.77
11 Acenaphthene-d10	239179	119590	478358	228988	-4.26
18 Phenanthrene-d10	372253	186127	744506	364343	-2.12
29 Chrysene-d12	294711	147356	589422	276576	-6.15
35 Perylene-d12	260595	130298	521190	245162	-5.92

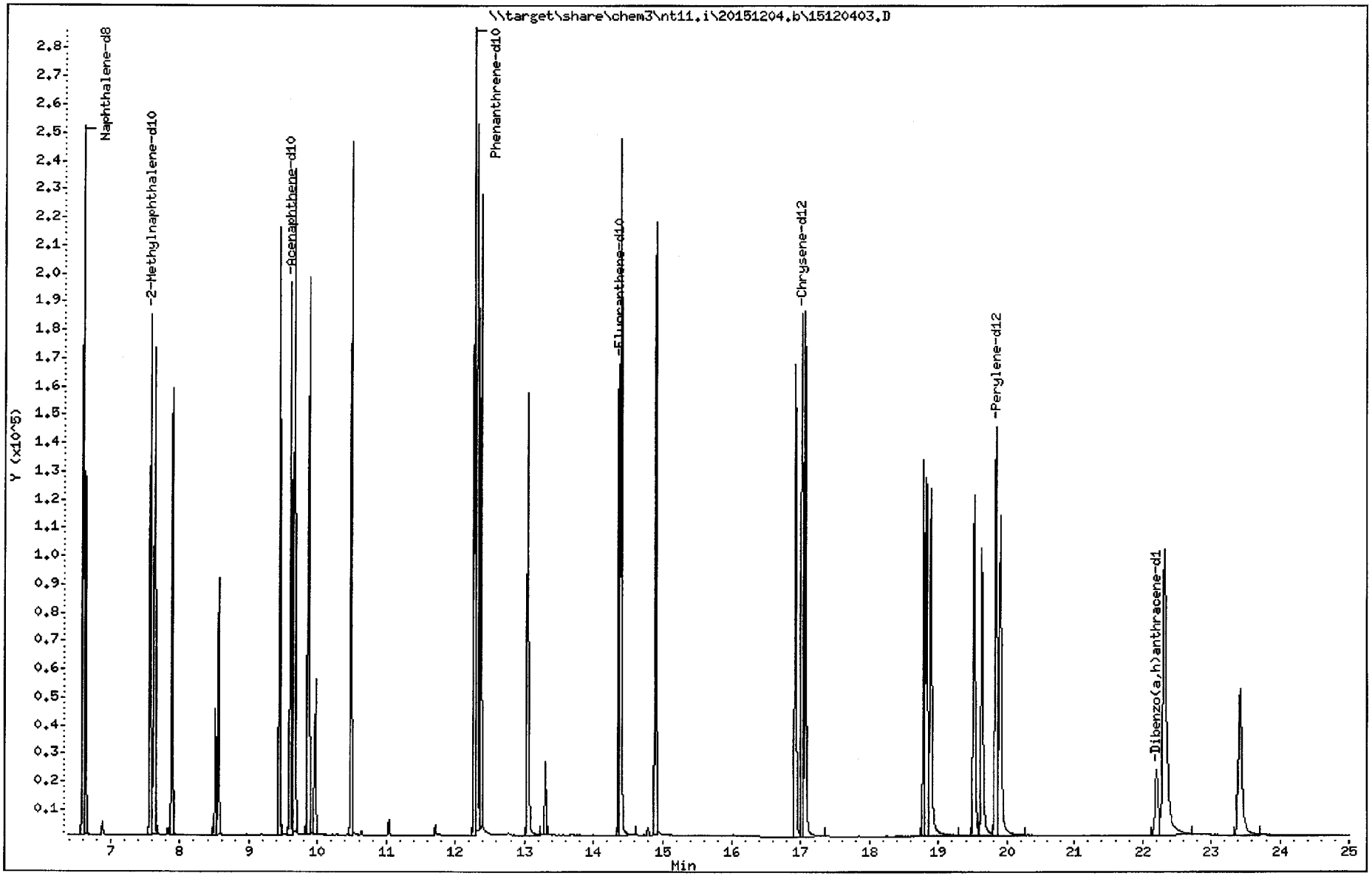
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.02	-0.00
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

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.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120403.D
Date : 04-DEC-2015 09:33
Client ID:
Sample Info: LLSIM 100

Instrument: nt11.i
Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120403.D

Lab ID: LLSIM 100
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 09:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120404.D
Lab Smp Id: LLSIM 10
Inj Date : 04-DEC-2015 10:03 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 10
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 10:03 Cal File: 15120404.D
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

SW 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	325673	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	19520	10.0000	10.4
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	11490	10.0000	9.51
	7 2-Methylnaphthalene	142	7.637	7.627	(1.158)	12326	10.0000	9.54
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	10946	10.0000	9.40
	10 Acenaphthylene	152	9.446	9.445	(0.984)	17343	10.0000	9.83
*	11 Acenaphthene-d10	164	9.601	9.600	(1.000)	218580	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	11843	10.0000	10.1
	14 Dibenzofuran	168	9.866	9.866	(1.028)	17891	10.0000	10.1
	15 Fluorene	166	10.486	10.486	(1.092)	12668	10.0000	9.58
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	358974	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	21551	10.0000	9.96
	20 Anthracene	178	12.368	12.368	(1.008)	18203	10.0000	9.40
$	23 Fluoranthene-d10	212	14.375	14.374	(1.172)	18217	10.0000	9.23
	24 Fluoranthene	202	14.403	14.403	(1.174)	19652	10.0000	9.05
	25 Pyrene	202	14.903	14.903	(0.876)	20582	10.0000	9.91
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	16570	10.0000	9.48
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	262207	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	19151	10.0000	9.98
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	14171	10.0000	9.12
	45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	16099	10.0000	8.89
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	15176	10.0000	9.20
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	12870	10.0000	8.58
*	35 Perylene-d12	264	19.842	19.842	(1.000)	229323	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.197	22.197	(1.119)	6798	10.0000	7.34
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	12271	10.0000	7.79
	38 Dibenzo(a,h)anthracene	278	22.318	22.307	(1.125)	9102	10.0000	7.31
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	11812	10.0000	8.64
	47 Perylene	252	19.899	19.899	(1.003)	14419	10.0000	9.28
	48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	14902	10.0000	9.49

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120404.D
Lab Smp Id: LLSIM 10
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	325673	-0.68
11 Acenaphthene-d10	239179	119590	478358	218580	-8.61
18 Phenanthrene-d10	372253	186127	744506	358974	-3.57
29 Chrysene-d12	294711	147356	589422	262207	-11.03
35 Perylene-d12	260595	130298	521190	229323	-12.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

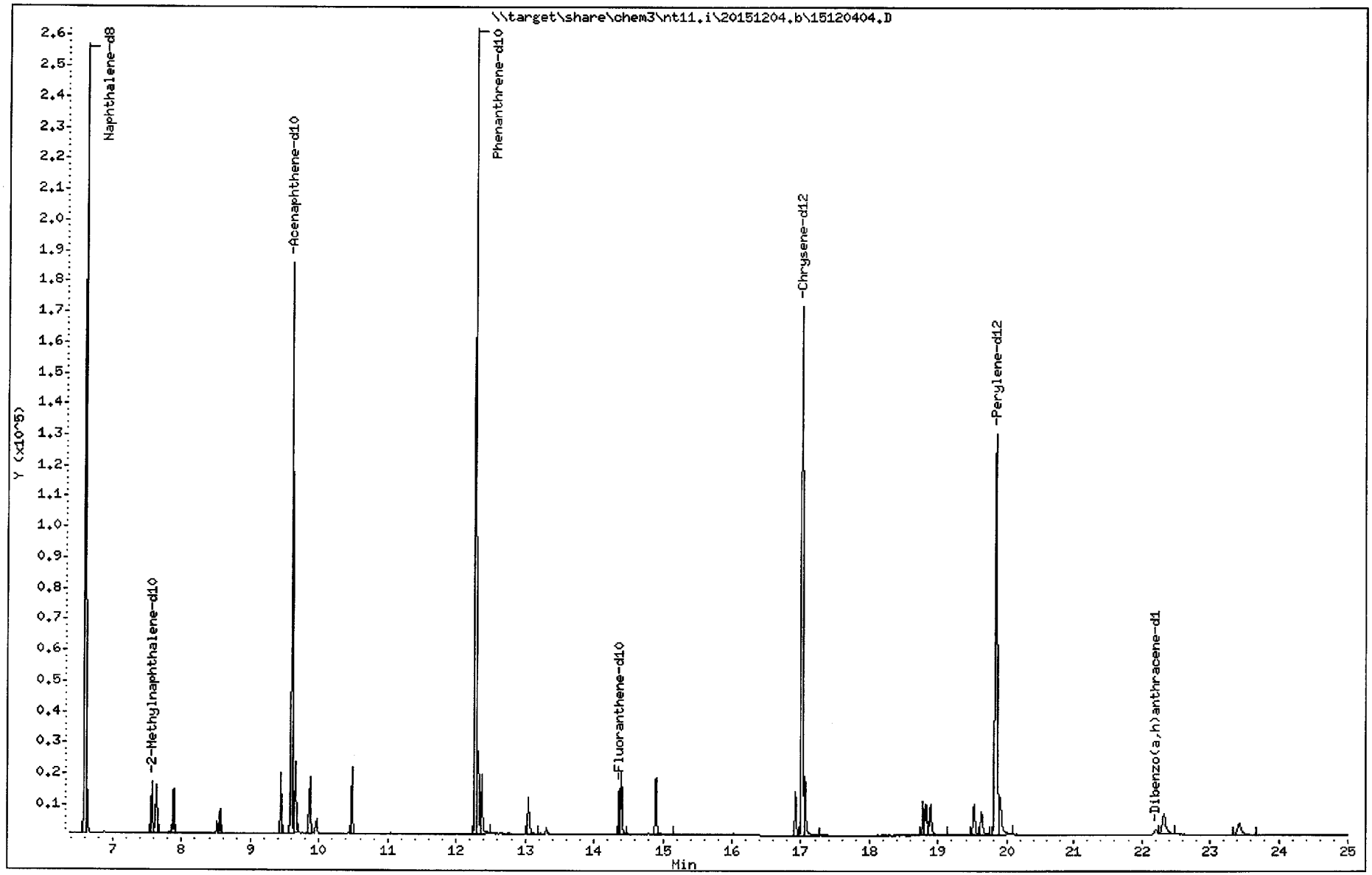
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120404.D
Date : 04-DEC-2015 10:03
Client ID:
Sample Info: LLSIM 10

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120404.D

Lab ID: LLSIM 10
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 10:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120405.D
Lab Smp Id: LLSIM 50
Inj Date : 04-DEC-2015 10:33 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 50
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 10:33 Cal File: 15120405.D
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

SJ 12/5/15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.597	6.597	(1.000)	322810	200.000	
	5 Naphthalene	128	6.629	6.629	(1.005)	101411	50.0000	54.4
$	6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	61987	50.0000	51.7
	7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	66307	50.0000	51.8
	8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	59950	50.0000	51.9
	10 Acenaphthylene	152	9.446	9.445	(0.984)	92485	50.0000	52.3
*	11 Acenaphthene-d10	164	9.601	9.600	(1.000)	219192	200.000	
	12 Acenaphthene	153	9.656	9.656	(1.006)	62244	50.0000	53.0
	14 Dibenzofuran	168	9.866	9.866	(1.028)	95443	50.0000	54.0
	15 Fluorene	166	10.486	10.486	(1.092)	68997	50.0000	52.0
*	18 Phenanthrene-d10	188	12.269	12.269	(1.000)	354307	200.000	
	19 Phenanthrene	178	12.313	12.313	(1.004)	118576	50.0000	55.5
	20 Anthracene	178	12.368	12.368	(1.008)	96493	50.0000	50.5
$	23 Fluoranthene-d10	212	14.365	14.374	(1.171)	102075	50.0000	52.4
	24 Fluoranthene	202	14.403	14.403	(1.174)	114385	50.0000	53.4
	25 Pyrene	202	14.903	14.903	(0.876)	112799	50.0000	54.2
	28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	93495	50.0000	53.4
*	29 Chrysene-d12	240	17.009	17.009	(1.000)	262604	200.000	
	30 Chrysene	228	17.059	17.059	(1.003)	108279	50.0000	56.3
	44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	83231	50.0000	53.5
	45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	95619	50.0000	52.7
	46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	90827	50.0000	55.0
	34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	79839	50.0000	53.2
*	35 Perylene-d12	264	19.842	19.842	(1.000)	229726	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.197	22.197	(1.119)	44840	50.0000	48.4
	37 Indeno(1,2,3-cd)pyrene	276	22.330	22.329	(1.125)	80159	50.0000	50.8
	38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.124)	60732	50.0000	48.7
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	70920	50.0000	51.8
	47 Perylene	252	19.899	19.899	(1.003)	84721	50.0000	54.4
	48 Benzo(e)pyrene	252	19.525	19.524	(0.984)	85271	50.0000	54.2

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120405.D
Lab Smp Id: LLSIM 50
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	322810	-1.55
11 Acenaphthene-d10	239179	119590	478358	219192	-8.36
18 Phenanthrene-d10	372253	186127	744506	354307	-4.82
29 Chrysene-d12	294711	147356	589422	262604	-10.89
35 Perylene-d12	260595	130298	521190	229726	-11.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	0.00

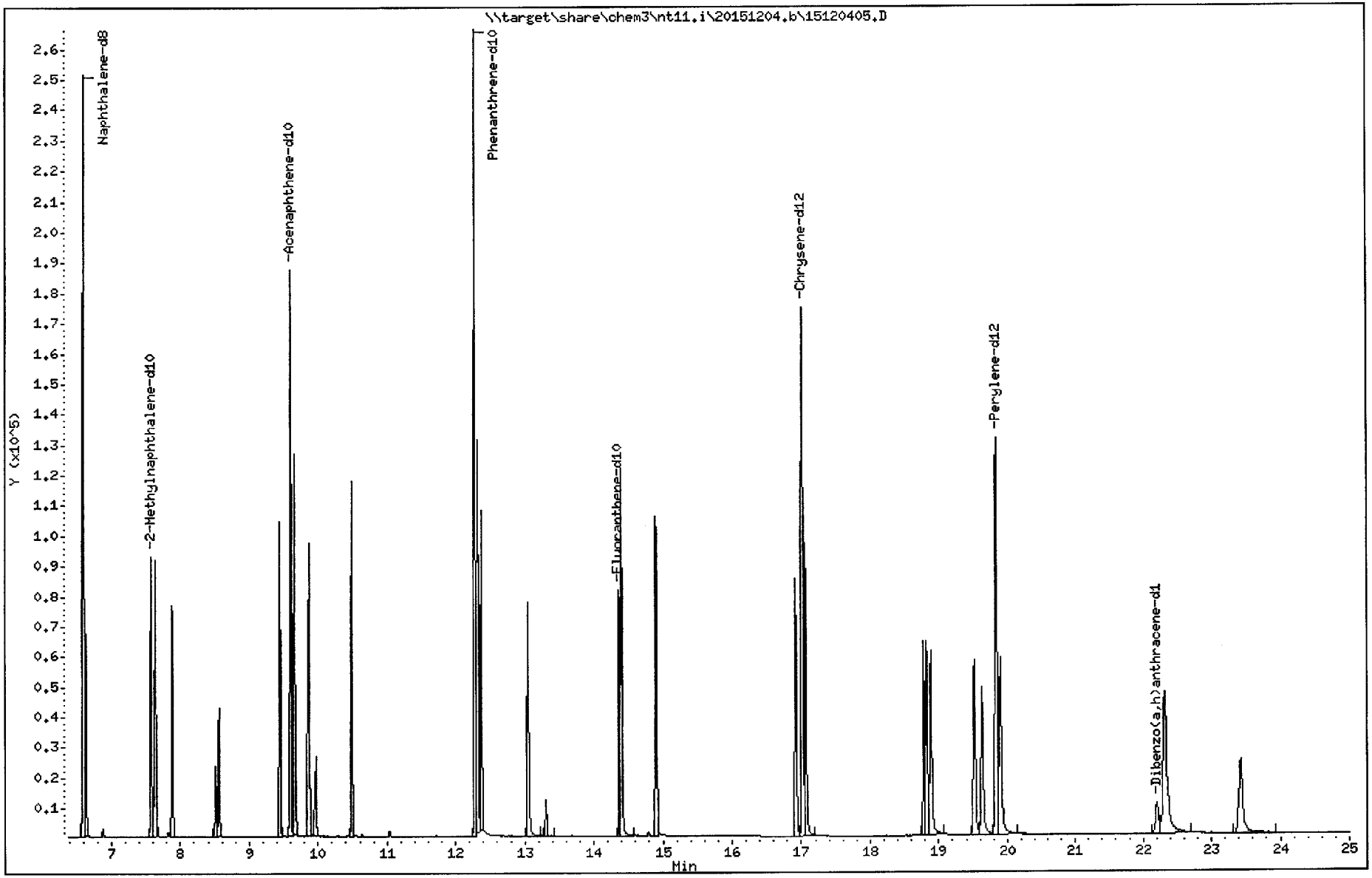
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120405.D
Date : 04-DEC-2015 10:33
Client ID:
Sample Info: LLSIM 50

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120405.D

Lab ID: LLSIM 50
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 10:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120406.D
Lab Smp Id: LLSIM 500
Inj Date : 04-DEC-2015 11:03 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 500
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 11:03 Cal File: 15120406.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

JW 2/5/15

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4	Naphthalene-d8	136	6.597	6.597	(1.000)	340768	200.000	
	5	Naphthalene	128	6.629	6.629	(1.005)	933248	500.000	474
$	6	2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	629193	500.000	497
	7	2-Methylnaphthalene	142	7.627	7.627	(1.156)	670644	500.000	496
	8	1-Methylnaphthalene	142	7.889	7.889	(1.196)	605485	500.000	497
	10	Acenaphthylene	152	9.445	9.445	(0.984)	967430	500.000	496
*	11	Acenaphthene-d10	164	9.600	9.600	(1.000)	241553	200.000	
	12	Acenaphthene	153	9.656	9.656	(1.006)	628559	500.000	486
	14	Dibenzofuran	168	9.866	9.866	(1.028)	941463	500.000	483
	15	Fluorene	166	10.486	10.486	(1.092)	730006	500.000	499
*	18	Phenanthrene-d10	188	12.269	12.269	(1.000)	382017	200.000	
	19	Phenanthrene	178	12.313	12.313	(1.004)	1091600	500.000	474
	20	Anthracene	178	12.368	12.368	(1.008)	1071225	500.000	520
$	23	Fluoranthene-d10	212	14.374	14.374	(1.172)	1071150	500.000	510
	24	Fluoranthene	202	14.403	14.403	(1.174)	1171890	500.000	507
	25	Pyrene	202	14.903	14.903	(0.876)	1155377	500.000	492
	28	Benzo(a)anthracene	228	16.918	16.918	(0.995)	993004	500.000	502
*	29	Chrysene-d12	240	17.009	17.009	(1.000)	296788	200.000	
	30	Chrysene	228	17.059	17.059	(1.003)	1047594	500.000	482
	44	Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	904516	500.000	527
	45	Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	1037488	500.000	519
	46	Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	935496	500.000	513
	34	Benzo(a)pyrene	252	19.630	19.630	(0.989)	881824	500.000	532
*	35	Perylene-d12	264	19.841	19.842	(1.000)	253397	200.000	
$	36	Dibenzo(a,h)anthracene-d14	292	22.196	22.197	(1.119)	577224	500.000	564
	37	Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	968463	500.000	557
	38	Dibenzo(a,h)anthracene	278	22.307	22.307	(1.124)	781168	500.000	568
	39	Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	805513	500.000	533
	47	Perylene	252	19.899	19.899	(1.003)	880659	500.000	513
	48	Benzo(e)pyrene	252	19.524	19.524	(0.984)	881426	500.000	508

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120406.D
Lab Smp Id: LLSIM 500
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	340768	3.93
11 Acenaphthene-d10	239179	119590	478358	241553	0.99
18 Phenanthrene-d10	372253	186127	744506	382017	2.62
29 Chrysene-d12	294711	147356	589422	296788	0.70
35 Perylene-d12	260595	130298	521190	253397	-2.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

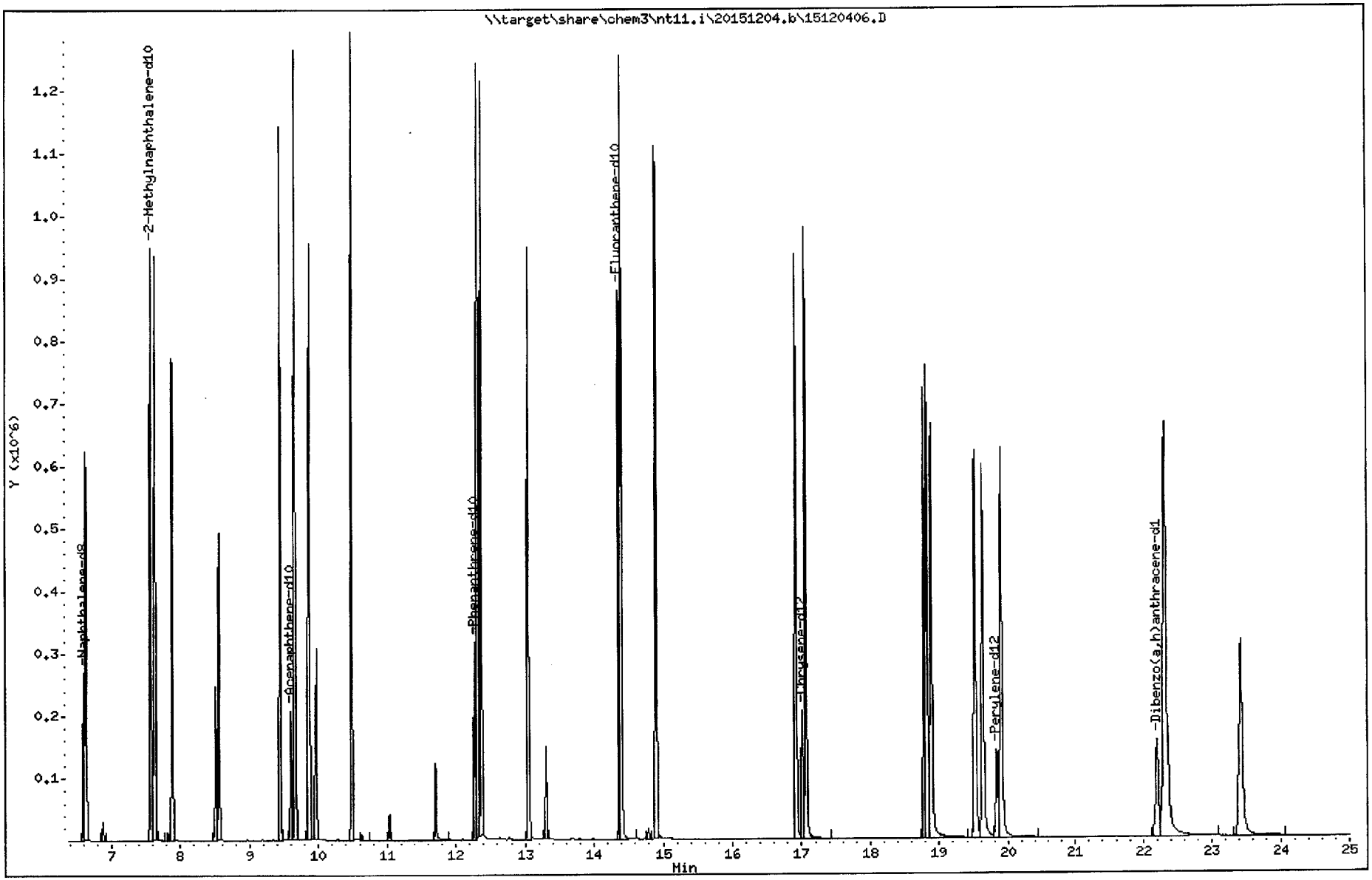
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120406.D
Date : 04-DEC-2015 11:03
Client ID:
Sample Info: LLSIM 500

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120406.D

Lab ID: LLSIM 500
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 11:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120407.D
Lab Smp Id: LLSIM 1000
Inj Date : 04-DEC-2015 11:33 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM 1000
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14

BD 12/5/15

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
* 4 Naphthalene-d8	136	6.597	6.597	(1.000)	337457	200.000	
5 Naphthalene	128	6.629	6.629	(1.005)	1745003	1000.00	895
$ 6 2-Methylnaphthalene-d10	152	7.574	7.574	(1.148)	1205300	1000.00	962
7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	1272236	1000.00	950
8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	1149104	1000.00	952
10 Acenaphthylene	152	9.445	9.445	(0.984)	1833736	1000.00	951
* 11 Acenaphthene-d10	164	9.600	9.600	(1.000)	238950	200.000	
12 Acenaphthene	153	9.656	9.656	(1.006)	1200492	1000.00	938
14 Dibenzofuran	168	9.866	9.866	(1.028)	1717363	1000.00	891
15 Fluorene	166	10.486	10.486	(1.092)	1380739	1000.00	955
* 18 Phenanthrene-d10	188	12.269	12.269	(1.000)	380348	200.000	
19 Phenanthrene	178	12.313	12.313	(1.004)	2022457	1000.00	883
20 Anthracene	178	12.368	12.368	(1.008)	1975909	1000.00	963
$ 23 Fluoranthene-d10	212	14.374	14.374	(1.172)	2020716	1000.00	966
24 Fluoranthene	202	14.403	14.403	(1.174)	2148123	1000.00	934
25 Pyrene	202	14.903	14.903	(0.876)	2156236	1000.00	912
28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	1918385	1000.00	964
* 29 Chrysene-d12	240	17.009	17.009	(1.000)	298514	200.000	
30 Chrysene	228	17.059	17.059	(1.003)	1961226	1000.00	898
44 Benzo(b)fluoranthene	252	18.785	18.785	(0.947)	1759341	1000.00	1010
45 Benzo(k)fluoranthene	252	18.833	18.833	(0.949)	2039144	1000.00	1010
46 Benzo(j)fluoranthene	252	18.890	18.890	(0.952)	1793610	1000.00	973
34 Benzo(a)pyrene	252	19.630	19.630	(0.989)	1732537	1000.00	1030
* 35 Perylene-d12	264	19.842	19.842	(1.000)	256244	200.000	
$ 36 Dibenzo(a,h)anthracene-d14	292	22.197	22.197	(1.119)	1208888	1000.00	1170
37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.125)	1959663	1000.00	1110
38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.124)	1599951	1000.00	1150
39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	1624015	1000.00	1060
47 Perylene	252	19.899	19.899	(1.003)	1731385	1000.00	997
48 Benzo(e)pyrene	252	19.524	19.524	(0.984)	1724956	1000.00	983

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120407.D
Lab Smp Id: LLSIM 1000
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	337457	2.92
11 Acenaphthene-d10	239179	119590	478358	238950	-0.10
18 Phenanthrene-d10	372253	186127	744506	380348	2.17
29 Chrysene-d12	294711	147356	589422	298514	1.29
35 Perylene-d12	260595	130298	521190	256244	-1.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.84	-0.00

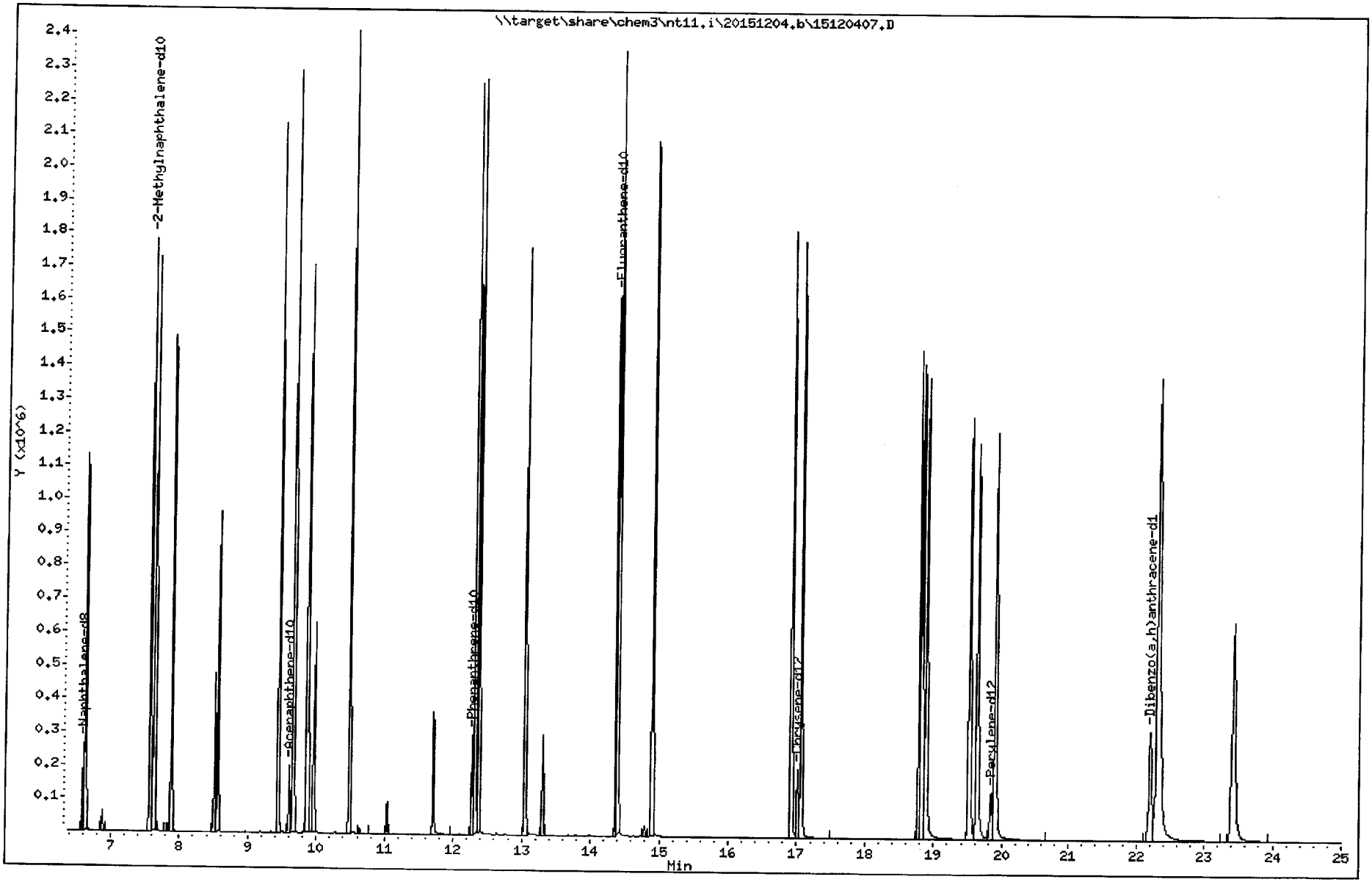
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: \\target\share\chem3\nt11.i\20151204.b\15120407.D
Date : 04-DEC-2015 11:33
Client ID:
Sample Info: LLSIM 1000

Instrument: nt11.i

Operator: JW
Column diameter: 0.25

Column phase: Rxi-17Sil MS



REVIEW SUMMARY FOR FILE - 15120407.D

Lab ID: LLSIM 1000
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 11:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20151204.b\lowsim.m,Sublist: PEMD.sub = 0.0000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20151204.b\15120408.D
Lab Smp Id: LLSIM SCV 250
Inj Date : 04-DEC-2015 12:04 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LLSIM SCV 250
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Meth Date : 05-Dec-2015 09:24 jonathonw Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Final Extract Volume (uL)
Vo	500.000	Sample Volume extracted (mL)
Cpnd Variable		Local Compound Variable

JW 12/5/15

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/L)
* 4 Naphthalene-d8	136	6.597	6.597	(1.000)	330144	200.000	
5 Naphthalene	128	6.629	6.629	(1.005)	446422	234.100	234
$ 6 2-Methylnaphthalene-d10	152	Compound Not Detected.					
7 2-Methylnaphthalene	142	7.627	7.627	(1.156)	286909	218.968	219
8 1-Methylnaphthalene	142	7.889	7.889	(1.196)	286856	242.931	243
10 Acenaphthylene	152	9.445	9.445	(0.984)	450083	235.922	236
* 11 Acenaphthene-d10	164	9.600	9.600	(1.000)	236381	200.000	
12 Acenaphthene	153	9.656	9.656	(1.006)	307274	242.667	243
14 Dibenzofuran	168	Compound Not Detected.					
15 Fluorene	166	10.486	10.486	(1.092)	337933	236.220	236
* 18 Phenanthrene-d10	188	12.269	12.269	(1.000)	360337	200.000	
19 Phenanthrene	178	12.313	12.313	(1.004)	535994	246.891	247
20 Anthracene	178	12.368	12.368	(1.008)	485229	249.701	250
$ 23 Fluoranthene-d10	212	Compound Not Detected.					
24 Fluoranthene	202	14.403	14.403	(1.174)	518632	237.945	238
25 Pyrene	202	14.903	14.903	(0.876)	586418	254.458	254
28 Benzo(a)anthracene	228	16.918	16.918	(0.995)	456787	235.431	235
* 29 Chrysene-d12	240	17.009	17.009	(1.000)	291007	200.000	
30 Chrysene	228	17.059	17.059	(1.003)	500271	234.930	235
44 Benzo(b)fluoranthene	252	18.784	18.785	(0.947)	394832	240.567	241
45 Benzo(k)fluoranthene	252	18.823	18.833	(0.949)	474361	248.024	248
46 Benzo(j)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/L)
	34 Benzo(a)pyrene.	252	19.630	19.630	(0.990)	391410	247.108	247
*	35 Perylene-d12	264	19.832	19.842	(1.000)	242244	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					
	37 Indeno(1,2,3-cd)pyrene	276	22.329	22.329	(1.126)	412835	248.231	248
	38 Dibenzo(a,h)anthracene	278	22.307	22.307	(1.125)	328597	249.858	250
	39 Benzo(g,h,i)perylene	276	23.426	23.426	(1.181)	360543	249.725	250
	47 Perylene	252	Compound Not Detected.					
	48 Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 15120408.D
Lab Smp Id: LLSIM SCV 250
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

Calibration Date: 04-DEC-2015
Calibration Time: 09:03

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	330144	0.69
11 Acenaphthene-d10	239179	119590	478358	236381	-1.17
18 Phenanthrene-d10	372253	186127	744506	360337	-3.20
29 Chrysene-d12	294711	147356	589422	291007	-1.26
35 Perylene-d12	260595	130298	521190	242244	-7.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.60	6.10	7.10	6.60	-0.00
11 Acenaphthene-d10	9.60	9.10	10.10	9.60	-0.00
18 Phenanthrene-d10	12.27	11.77	12.77	12.27	-0.00
29 Chrysene-d12	17.02	16.52	17.52	17.01	-0.05
35 Perylene-d12	19.84	19.34	20.34	19.83	-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.

ARI Labs, Inc.

RECOVERY REPORT

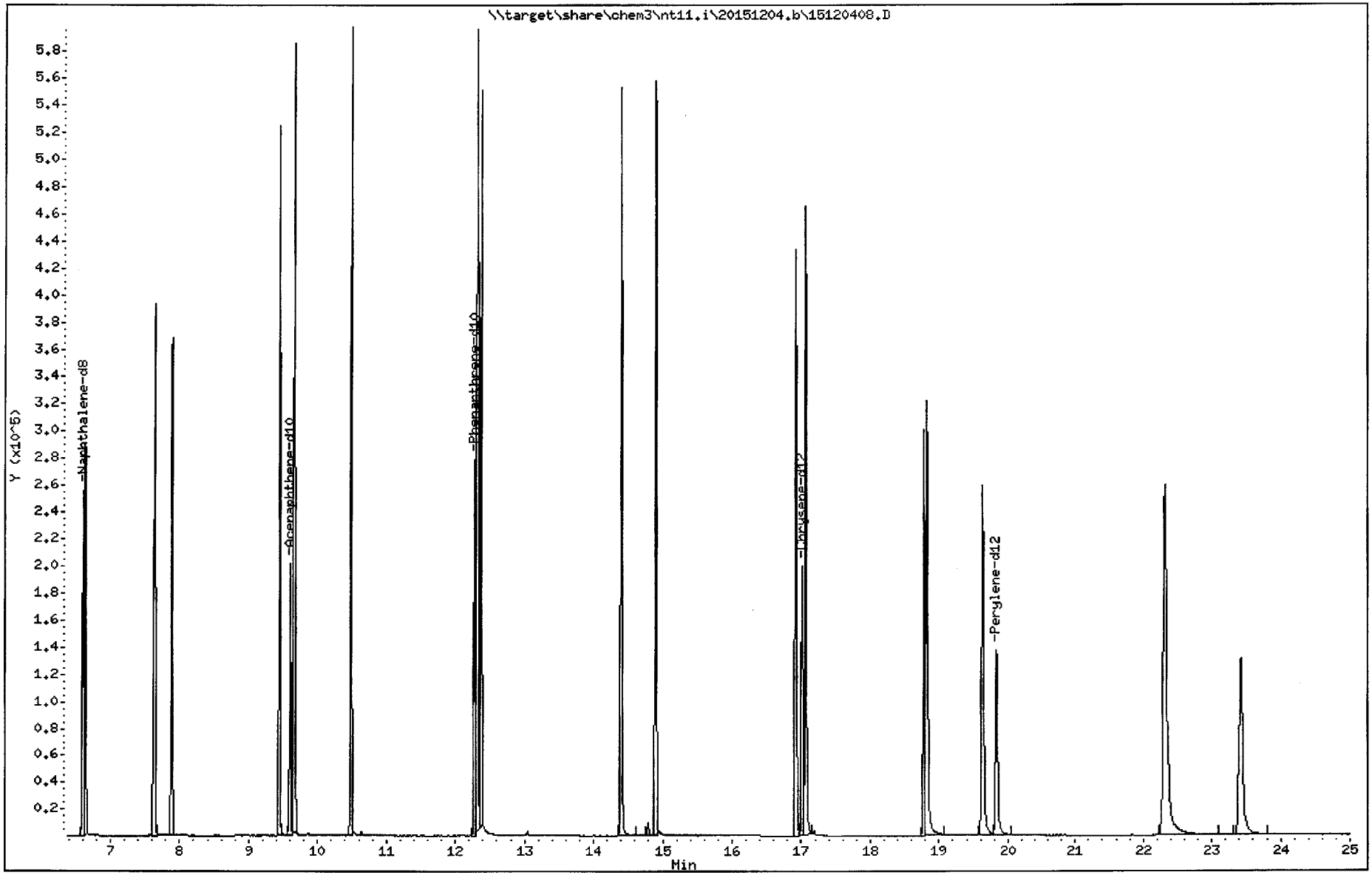
Client Name: Client SDG: SDGa03180
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: LLSIM SCV 250
Level: LOW Operator: JW
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20151204.b\lowsim.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ng/L	CONC RECOVERED ng/L	% RECOVERED no surr	LIMITS
$ 6 2-Methylnaphthale	6000	0.000	*	42-120
$ 23 Fluoranthene-d10	6000	0.000	*	57-120
$ 36 Dibenzo(a,h)anthr	6000	0.000	*	29-120

Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D
Date : 04-DEC-2015 12:04
Client ID:
Sample Info: LLSIM SCV 250
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

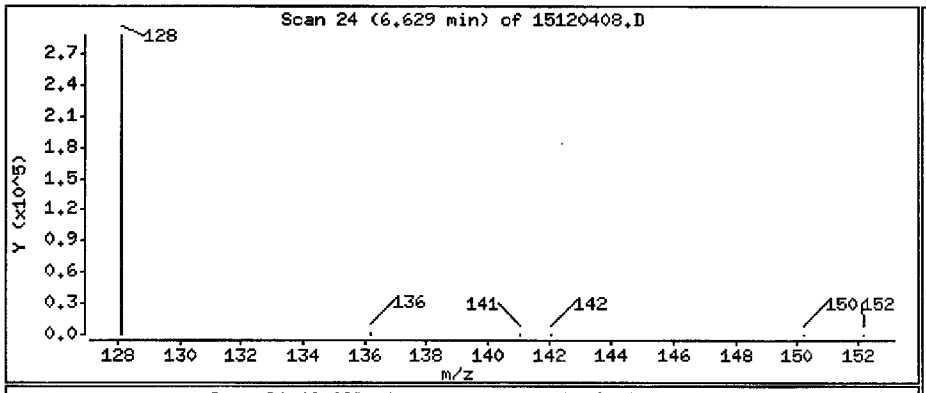
Operator: JW

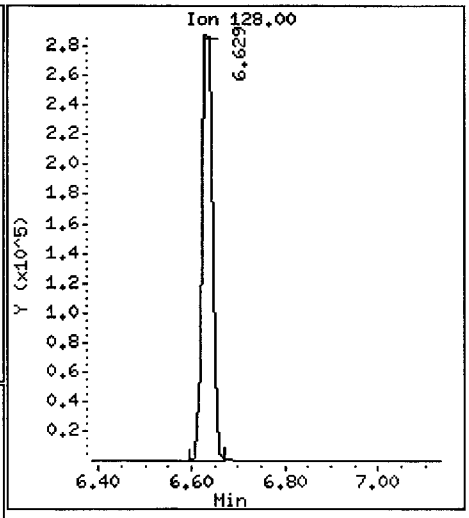
Column phase: Rxi-17Sil MS

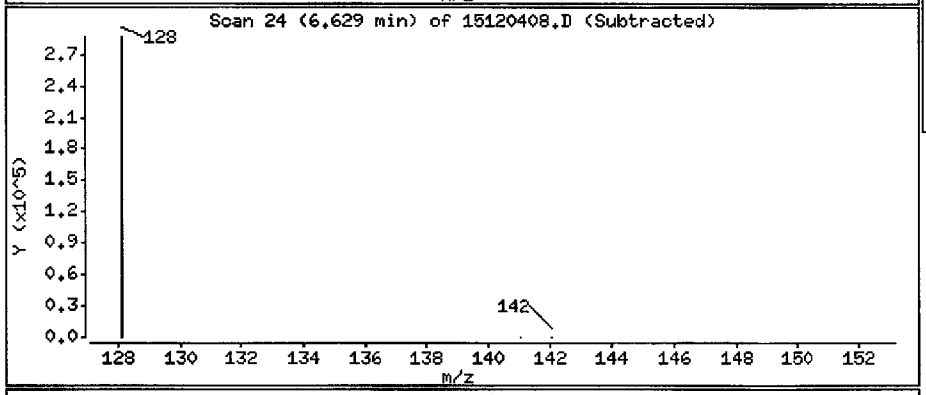
Column diameter: 0.25

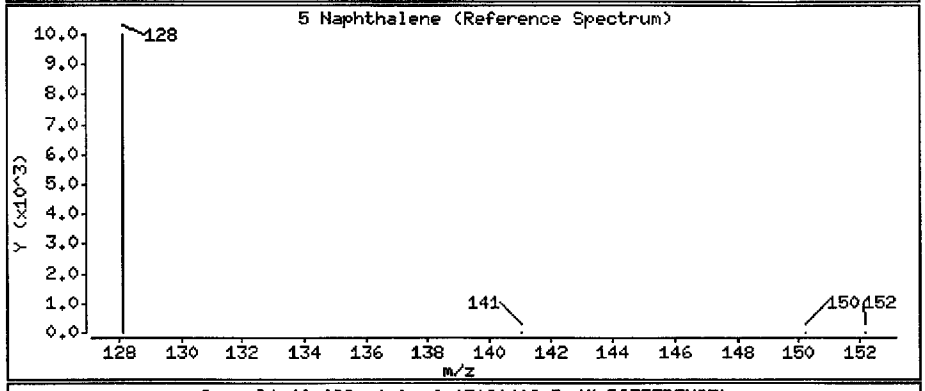
5 Naphthalene

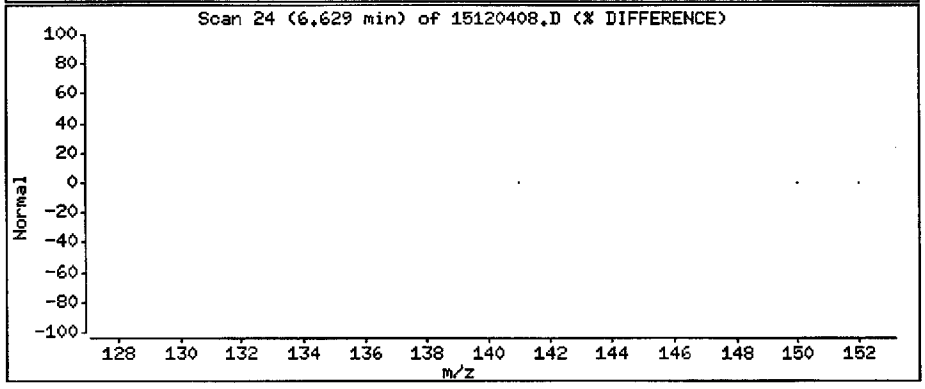
Concentration: 234 ng/L











Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

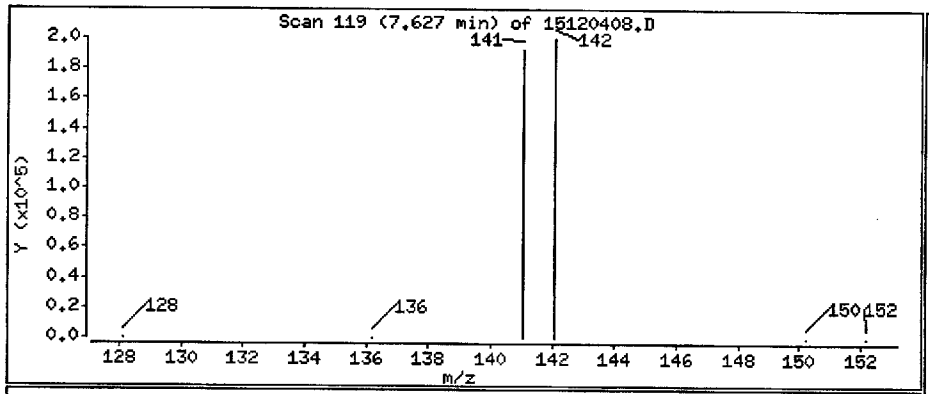
Operator: JW

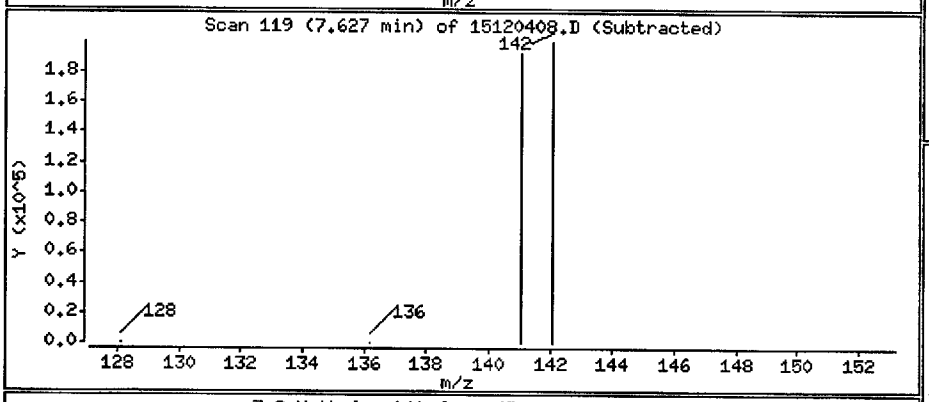
Column phase: Rxi-17Sil MS

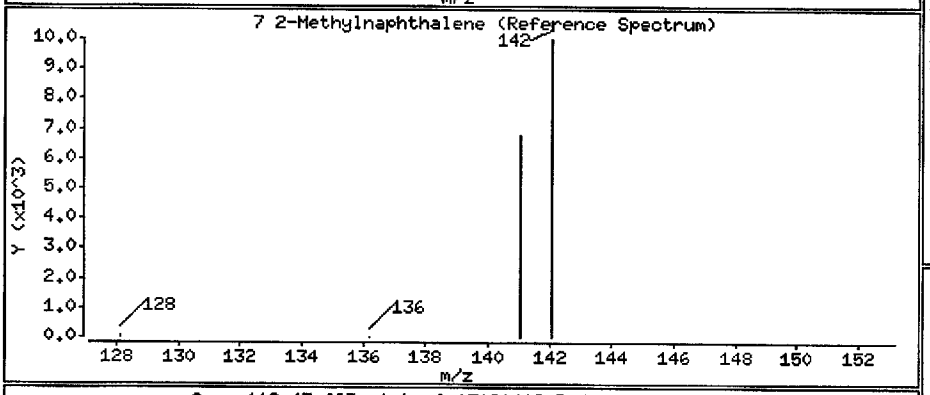
Column diameter: 0.25

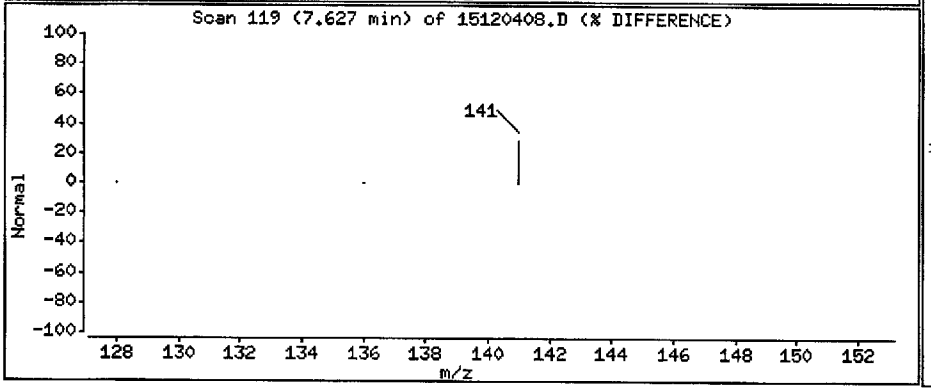
7 2-Methylnaphthalene

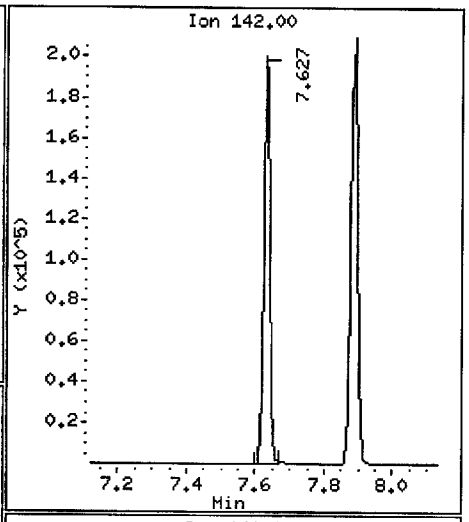
Concentration: 219 ng/L

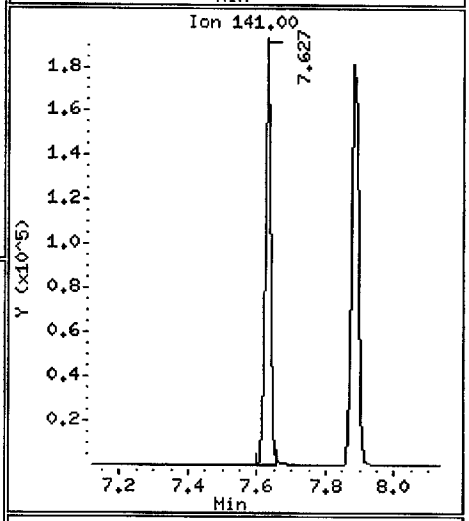


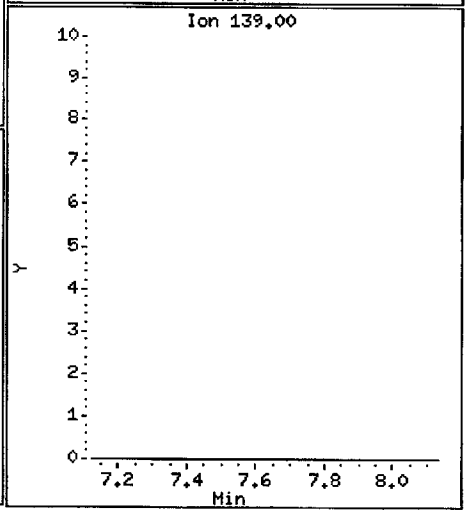












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

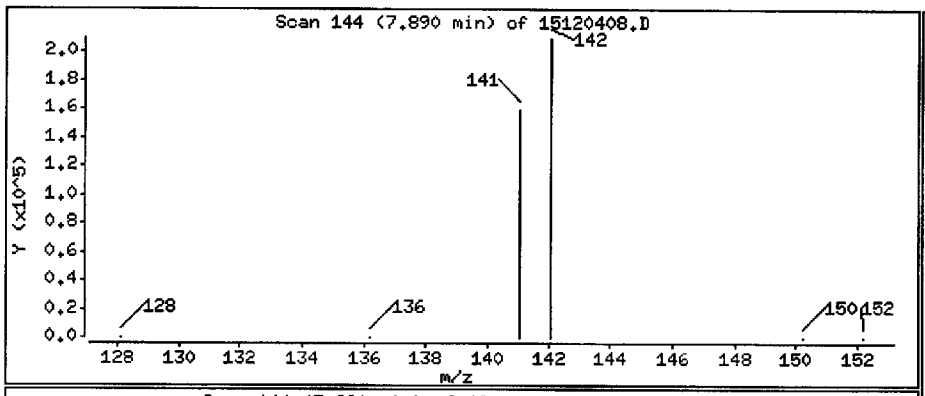
Operator: JW

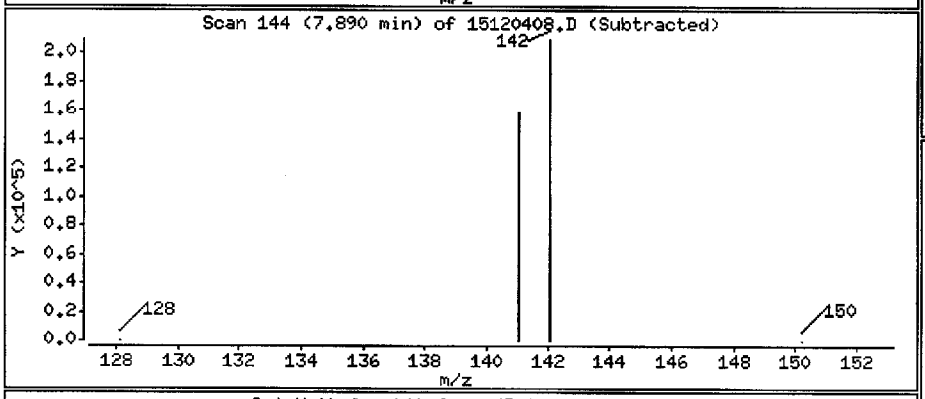
Column phase: Rxi-17Sil MS

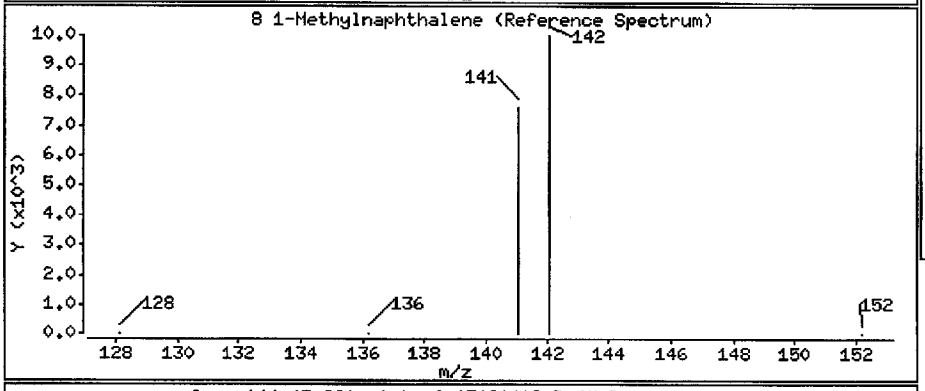
Column diameter: 0.25

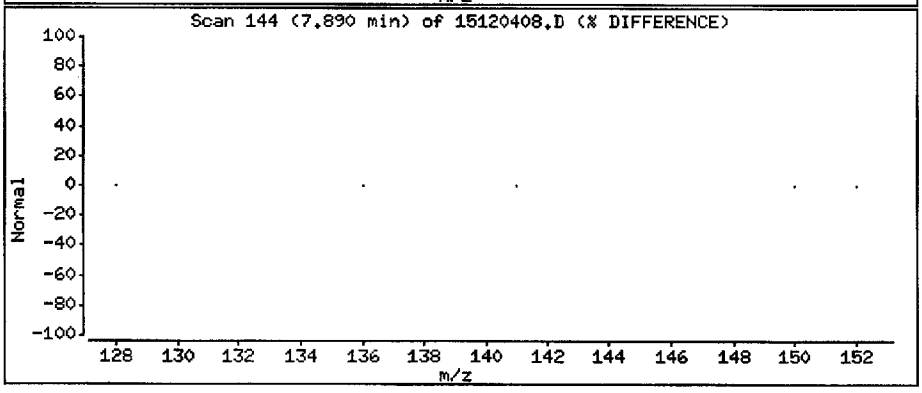
8 1-Methylnaphthalene

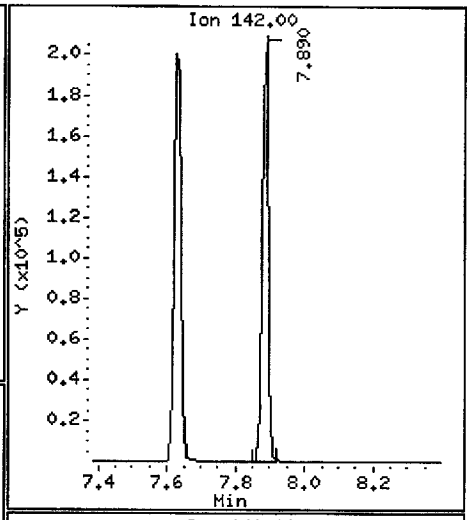
Concentration: 243 ng/L

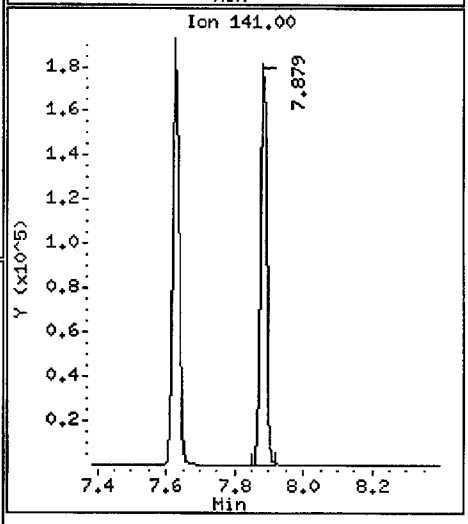












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

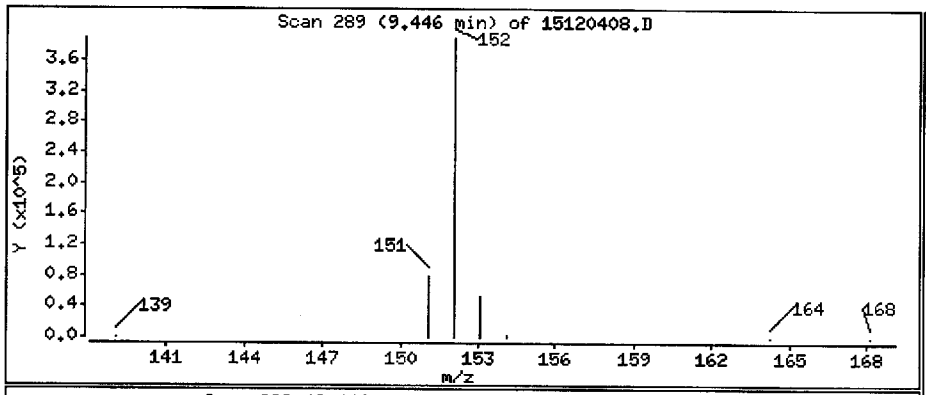
Operator: JW

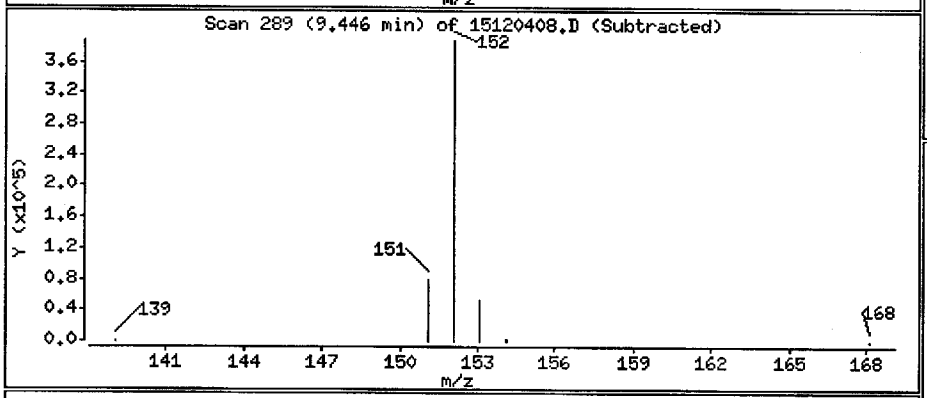
Column phase: Rxi-17Sil MS

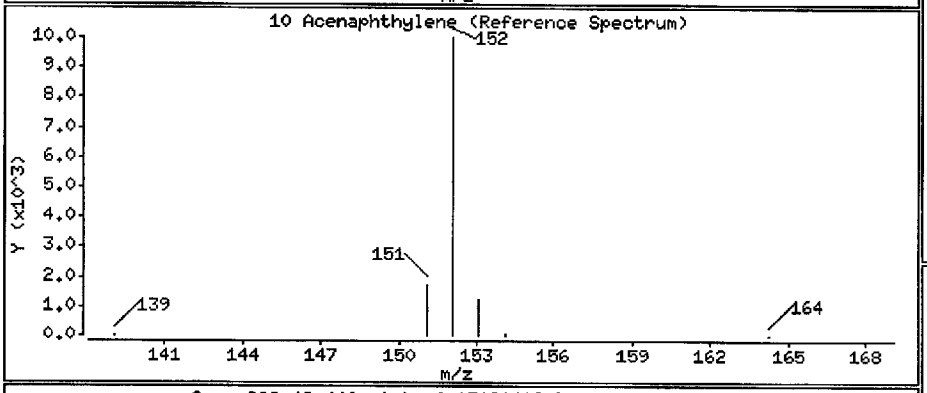
Column diameter: 0.25

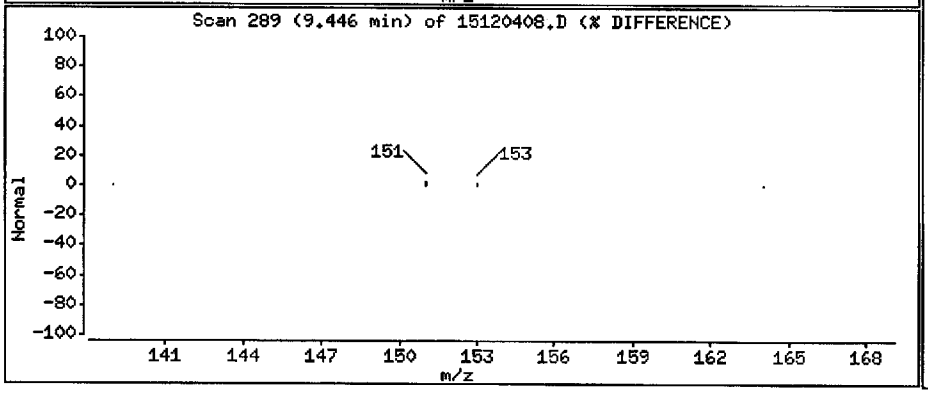
10 Acenaphthylene

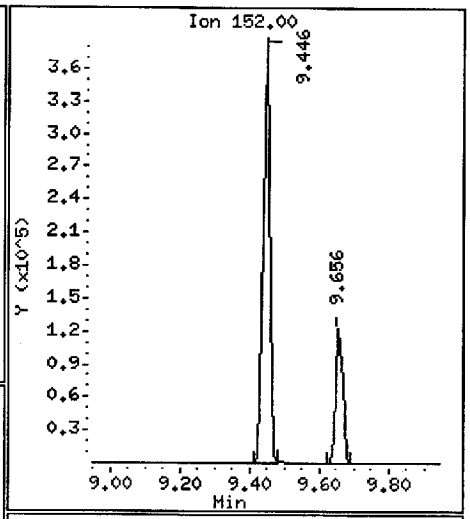
Concentration: 236 ng/L

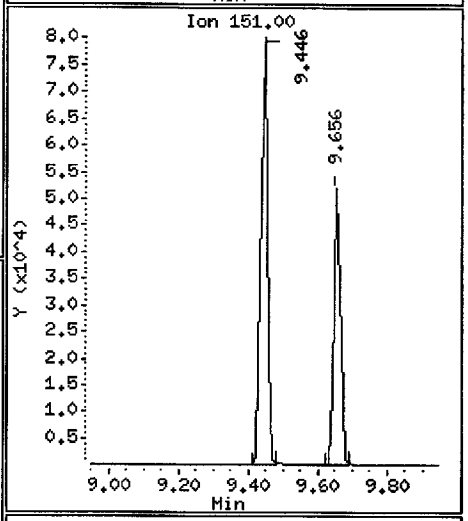


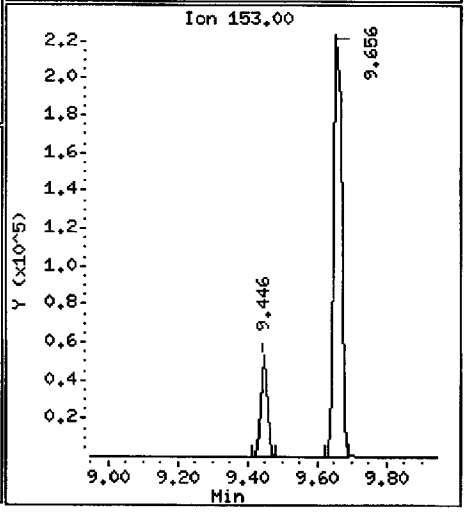












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

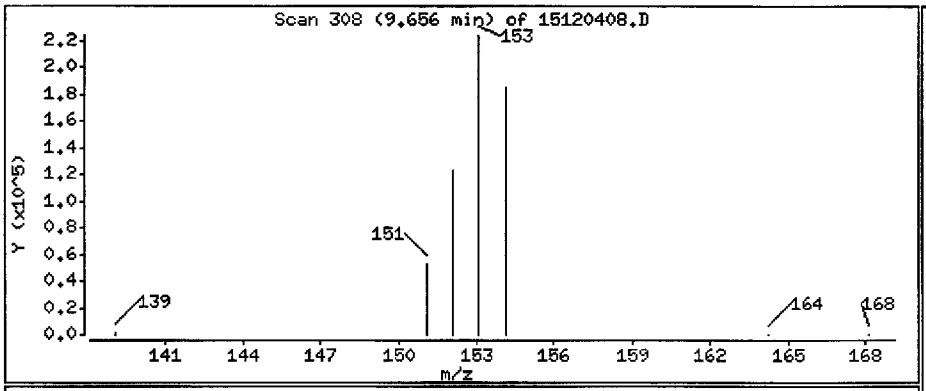
Operator: JW

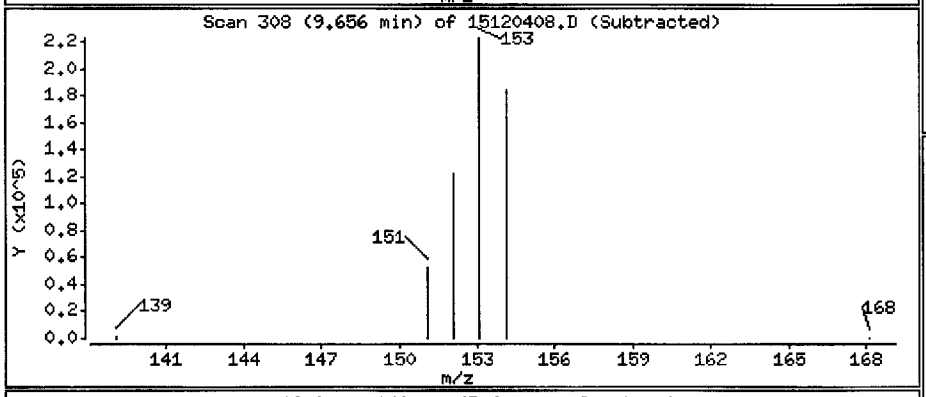
Column phase: Rxi-17Sil MS

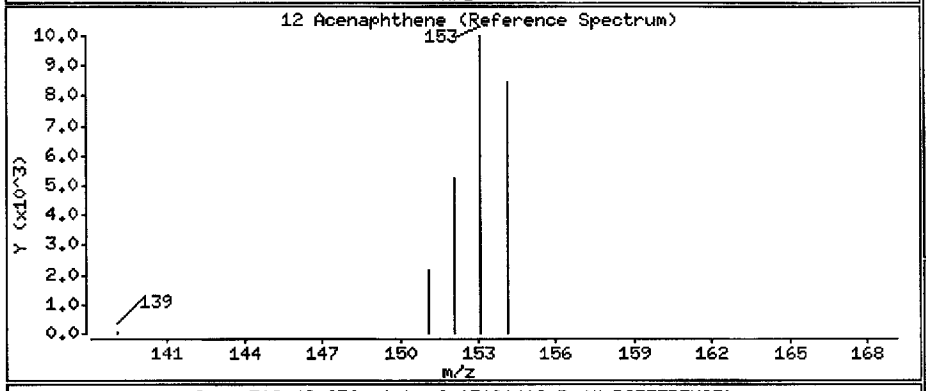
Column diameter: 0.25

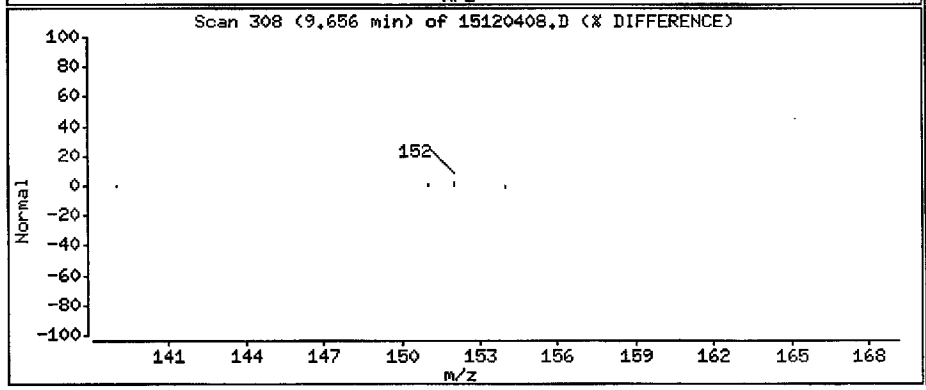
12 Acenaphthene

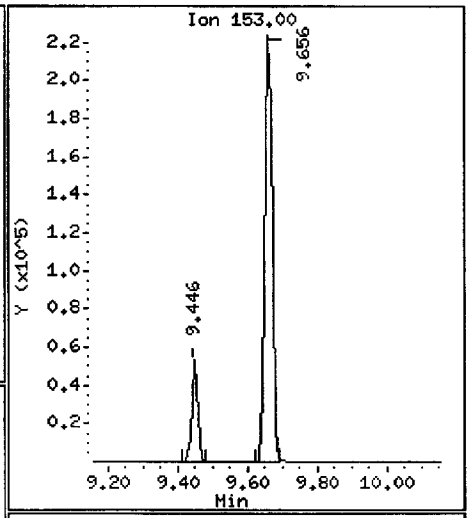
Concentration: 243 ng/L

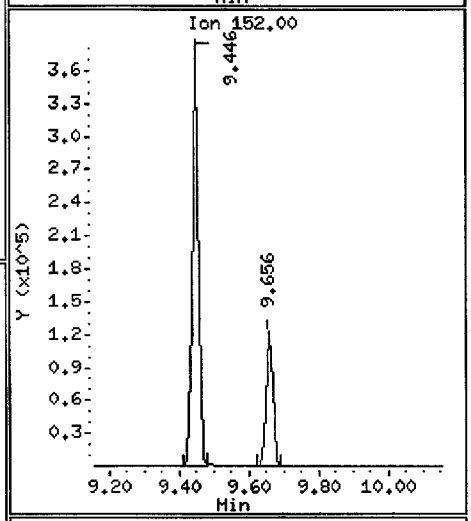


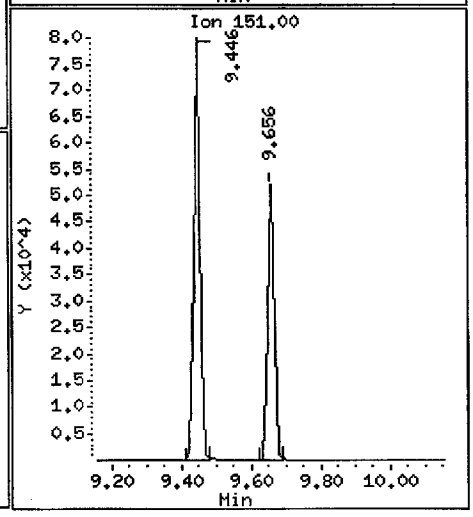












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

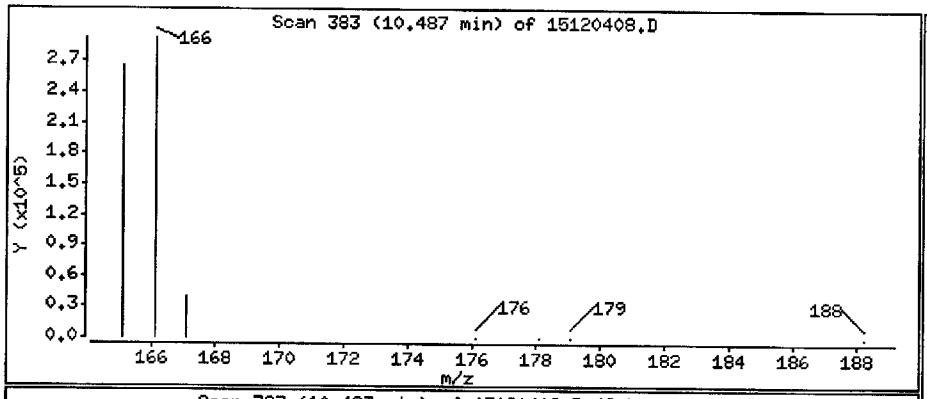
Operator: JW

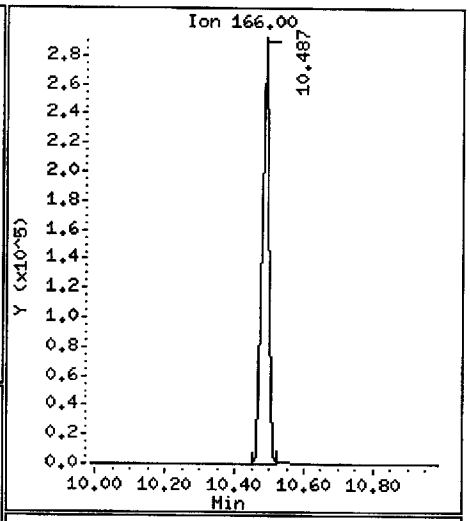
Column phase: Rxi-17Sil MS

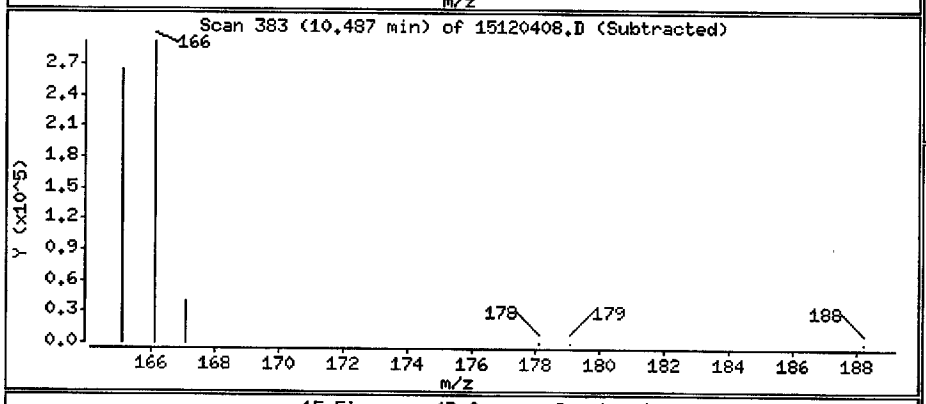
Column diameter: 0.25

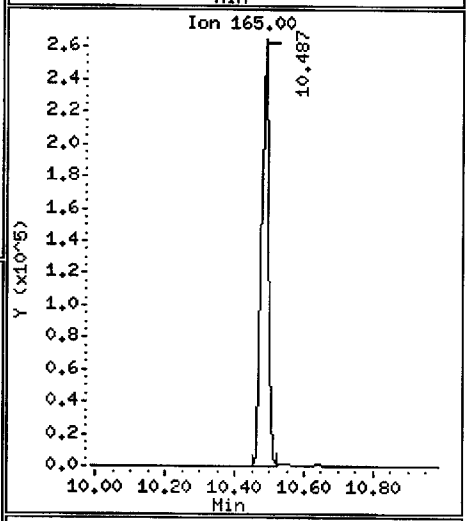
15 Fluorene

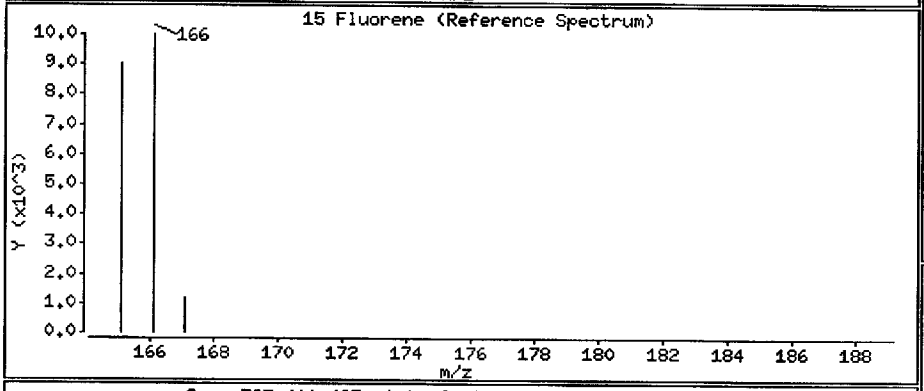
Concentration: 236 ng/L

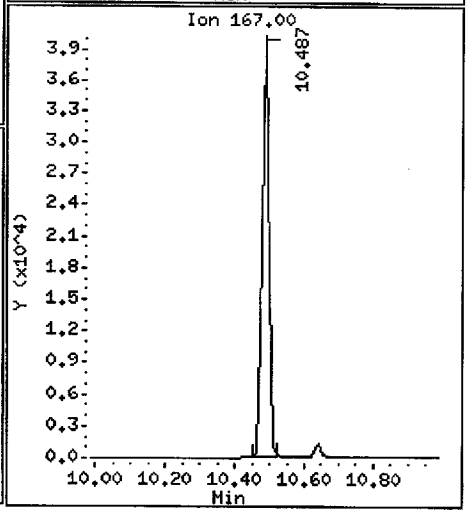


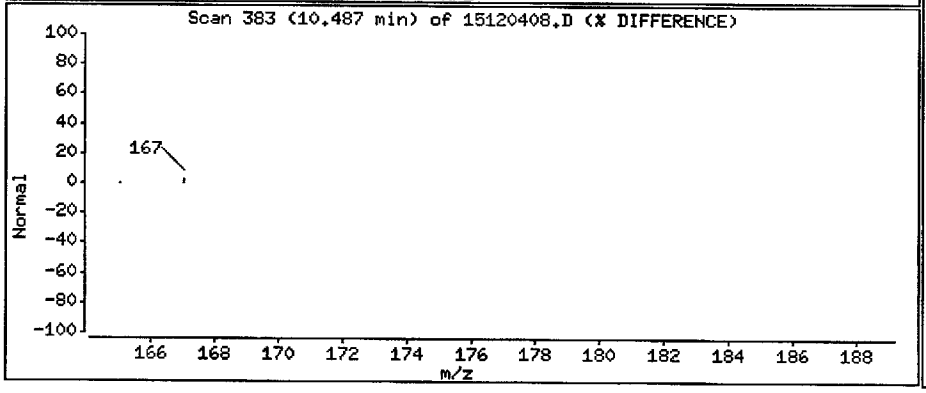












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

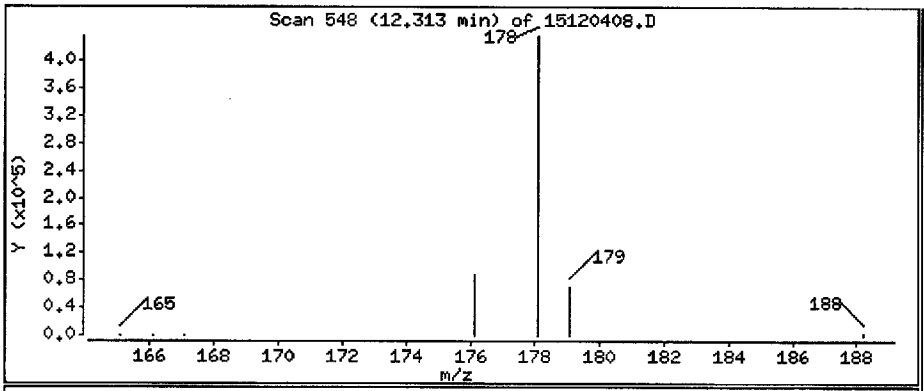
Operator: JW

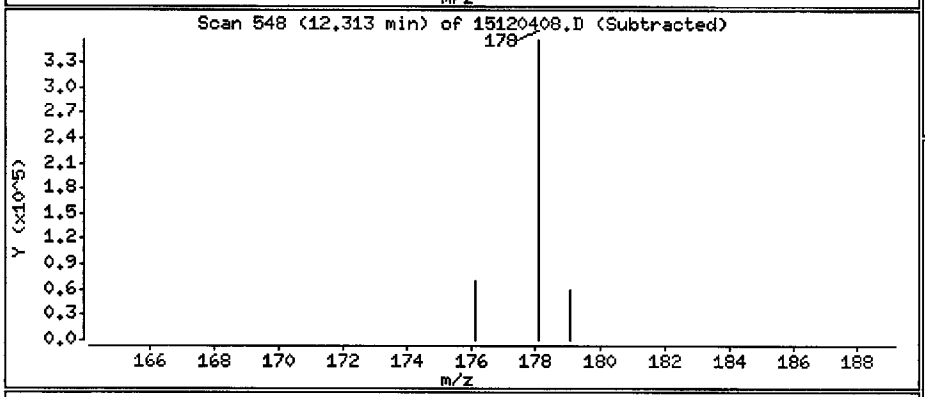
Column phase: Rxi-17Sil MS

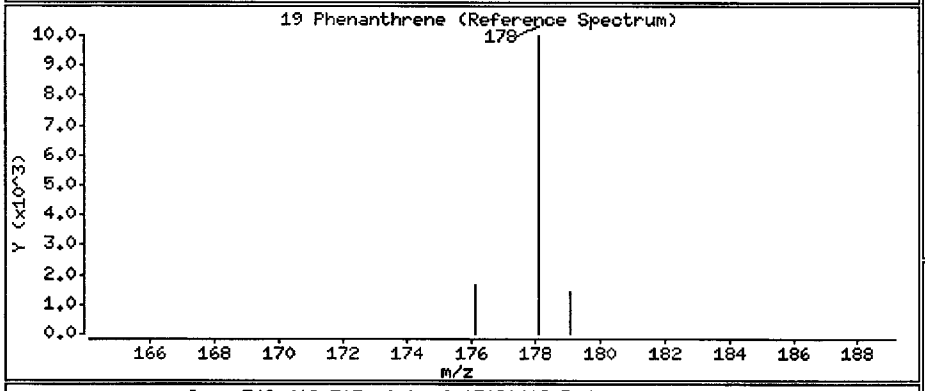
Column diameter: 0.25

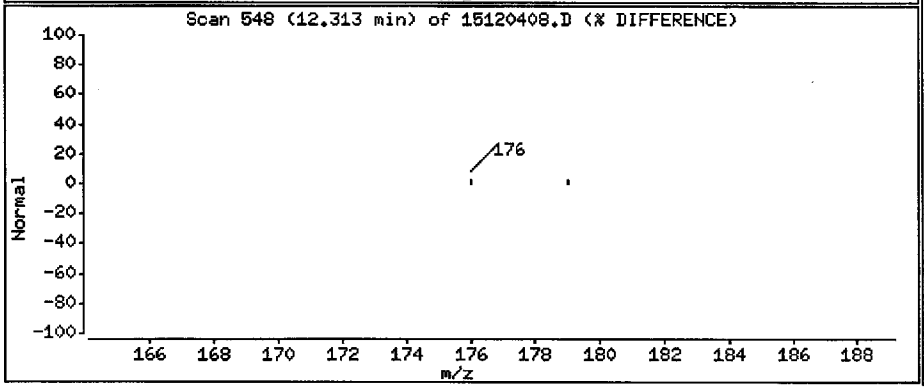
19 Phenanthrene

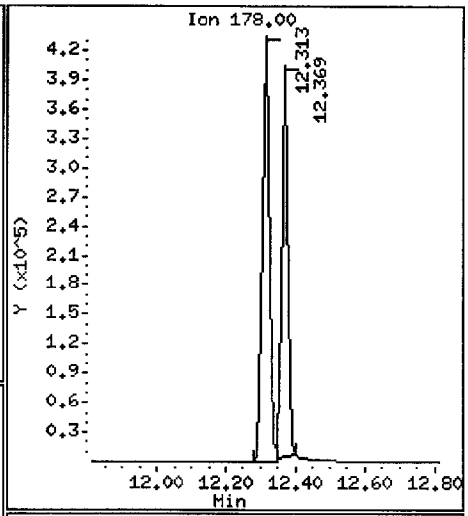
Concentration: 247 ng/L

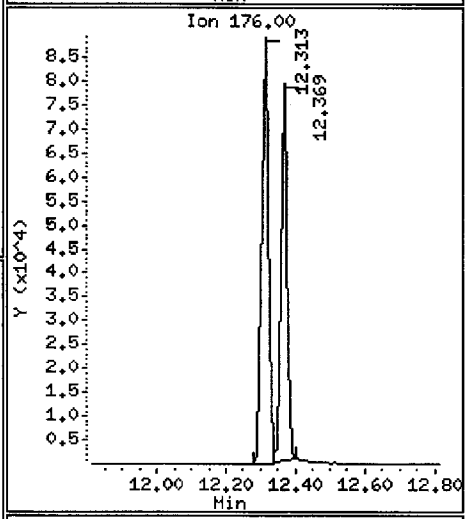


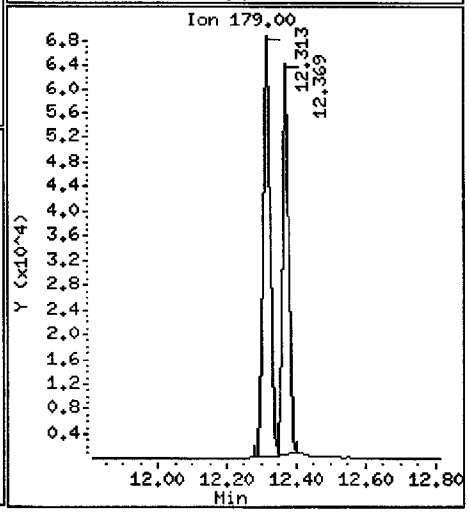












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

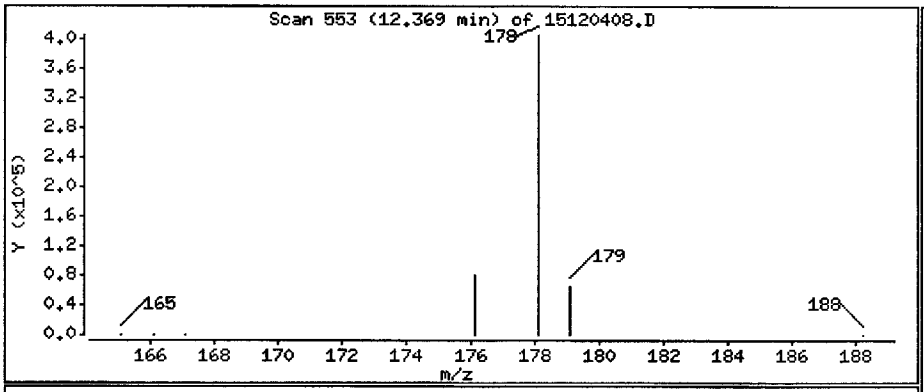
Operator: JW

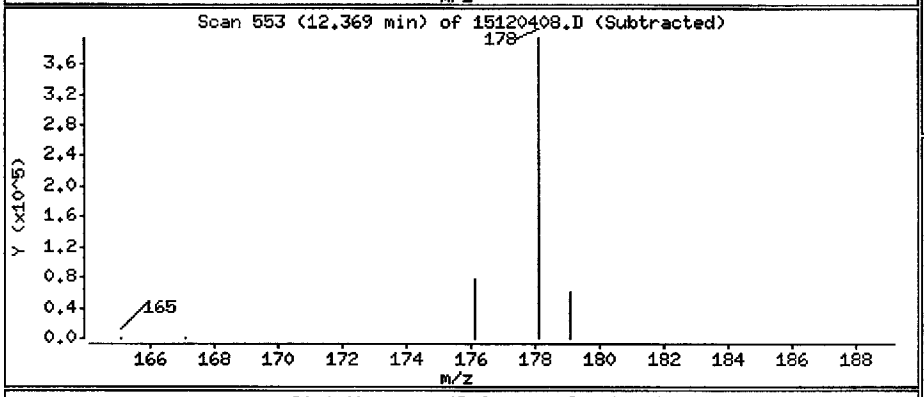
Column phase: Rxi-17Sil MS

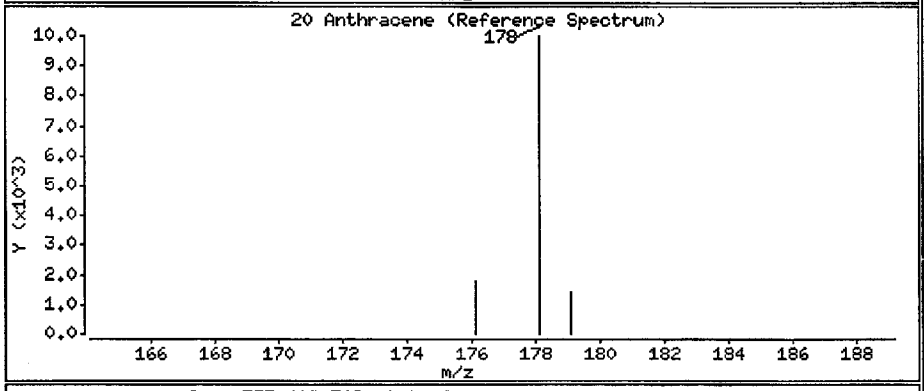
Column diameter: 0.25

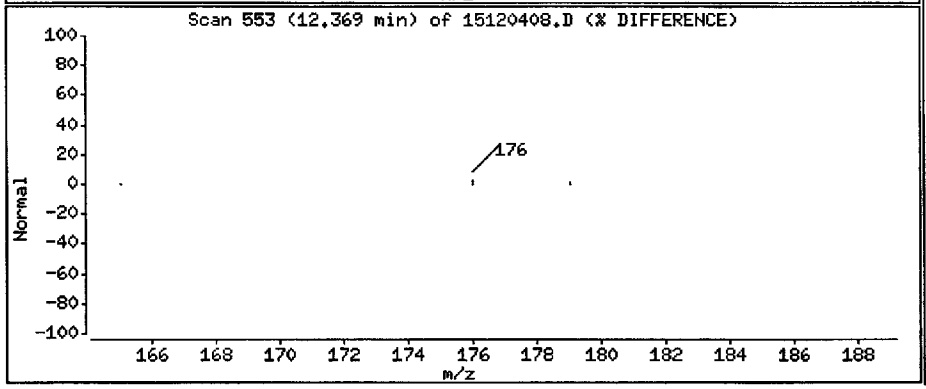
20 Anthracene

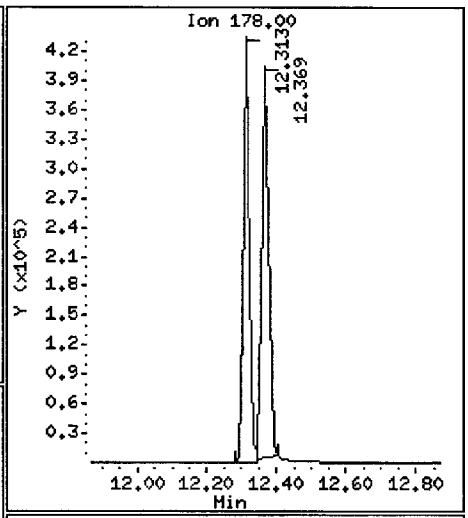
Concentration: 250 ng/L

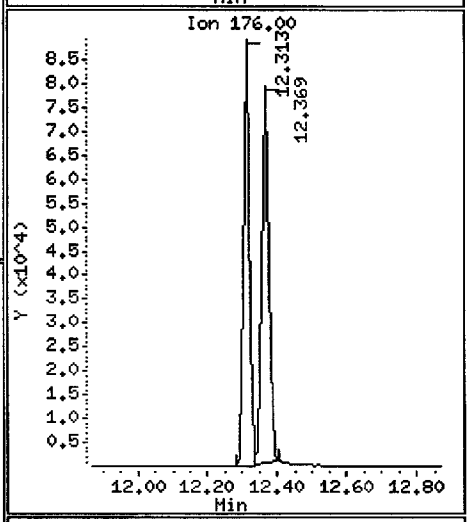


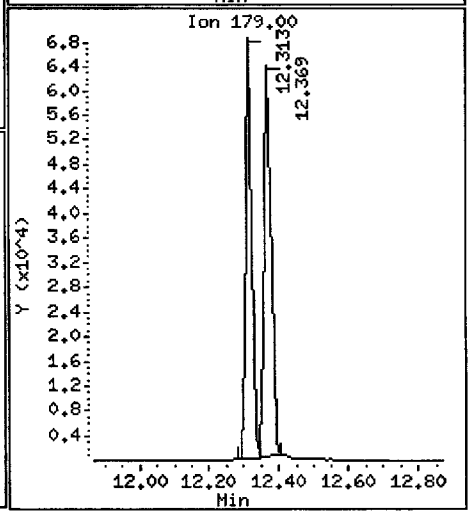












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

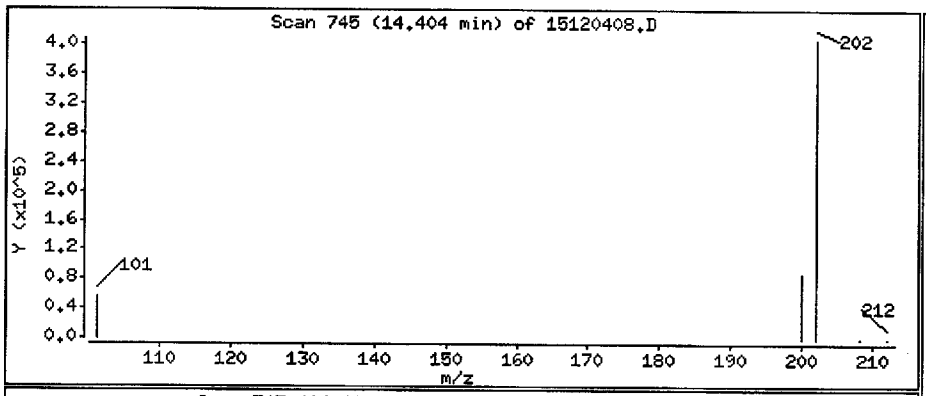
Operator: JW

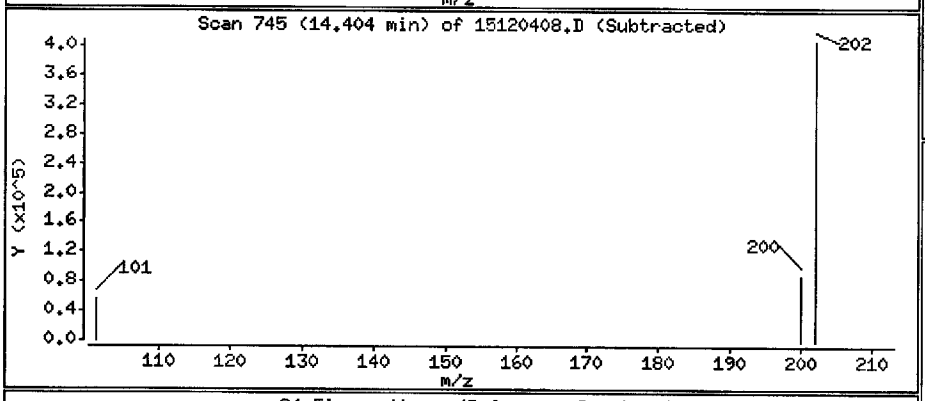
Column phase: Rxi-17Sil MS

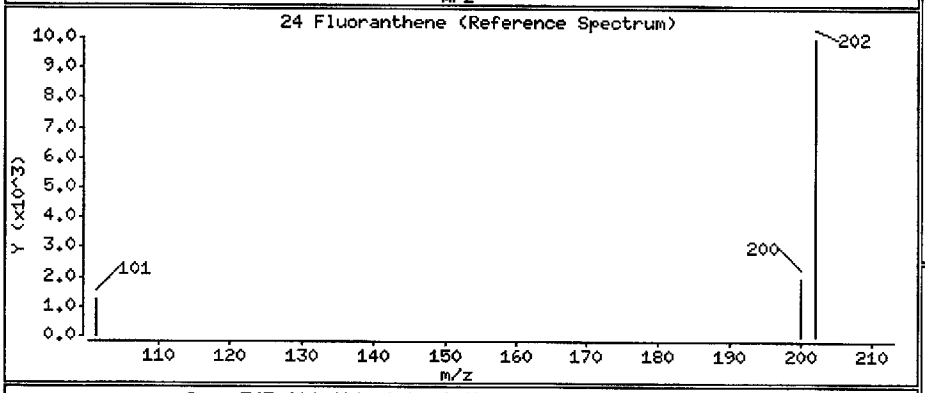
Column diameter: 0.25

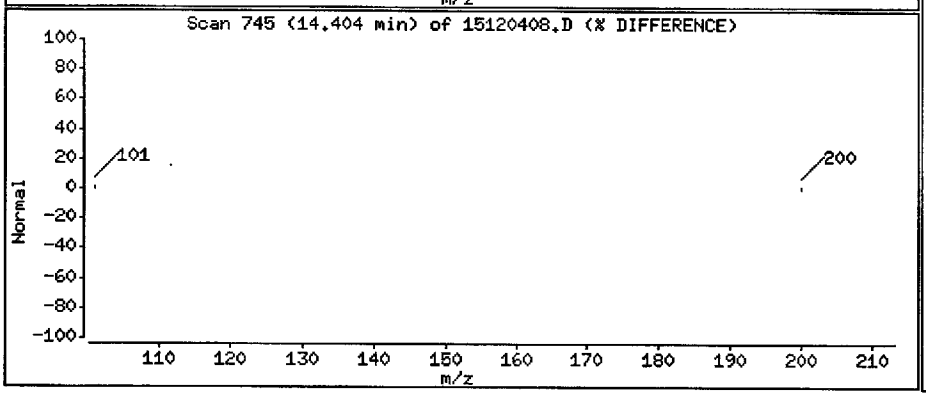
24 Fluoranthene

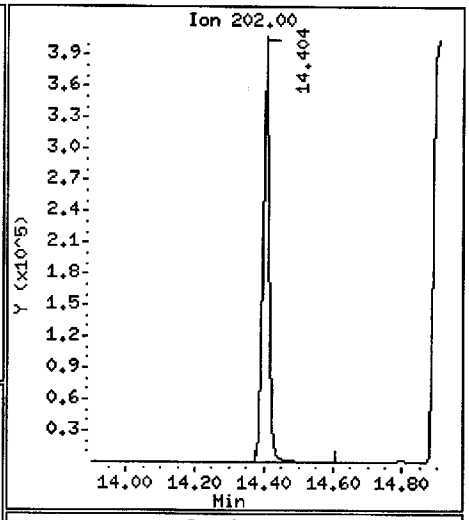
Concentration: 238 ng/L

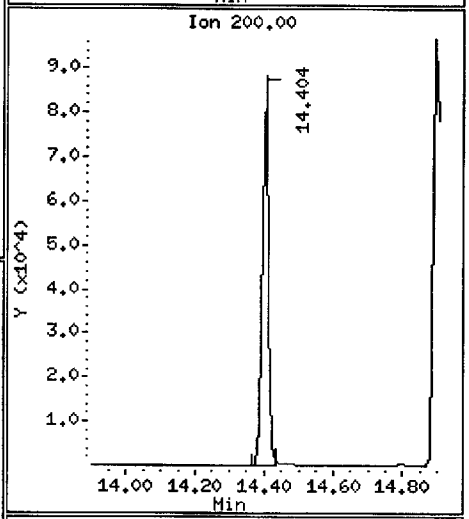


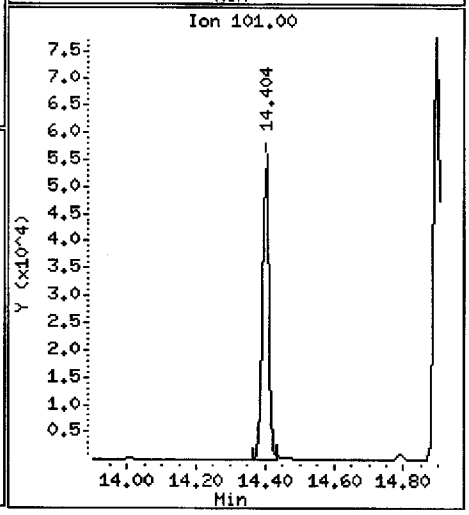












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

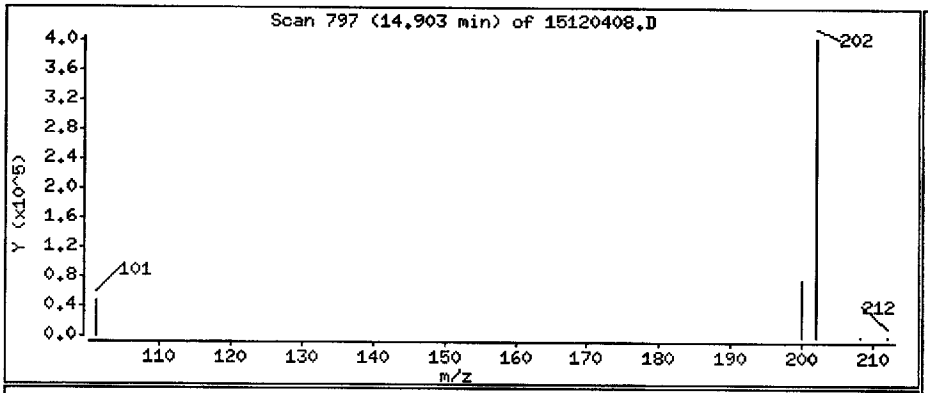
Operator: JW

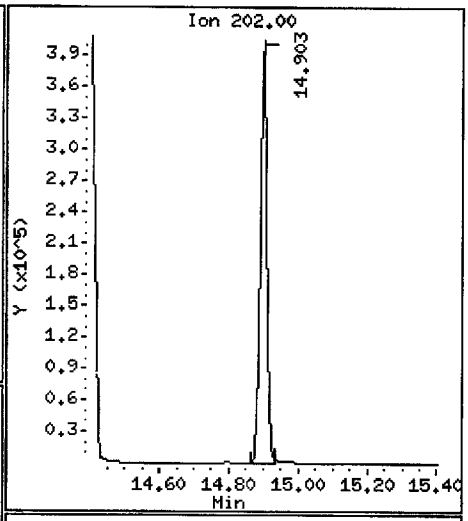
Column phase: Rxi-17Sil MS

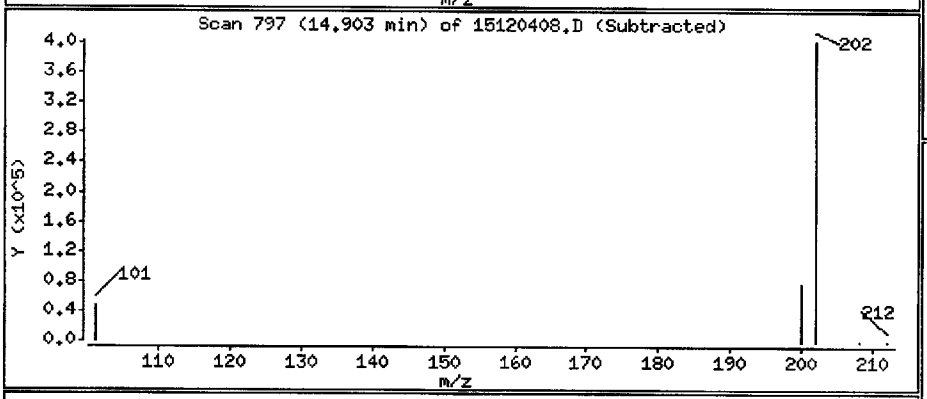
Column diameter: 0.25

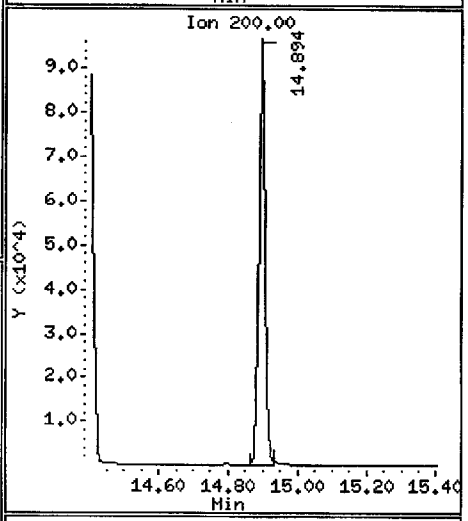
25 Pyrene

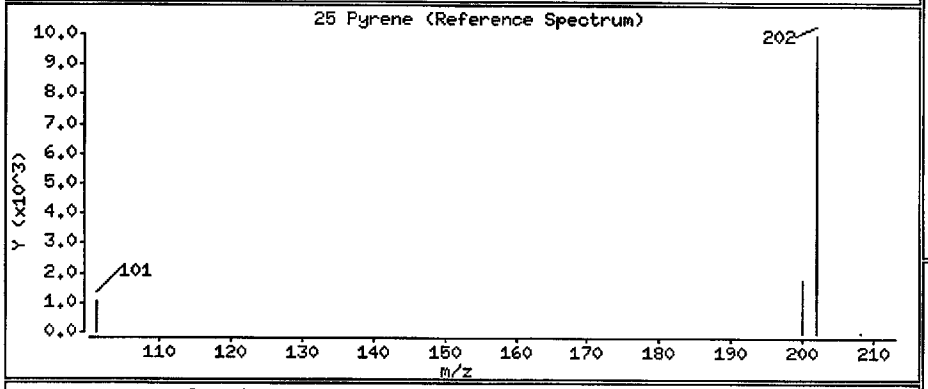
Concentration: 254 ng/L

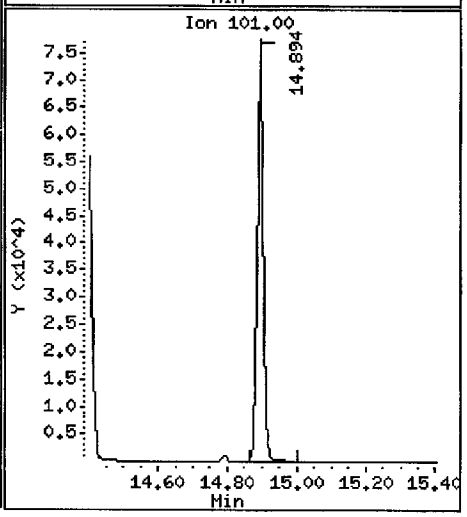


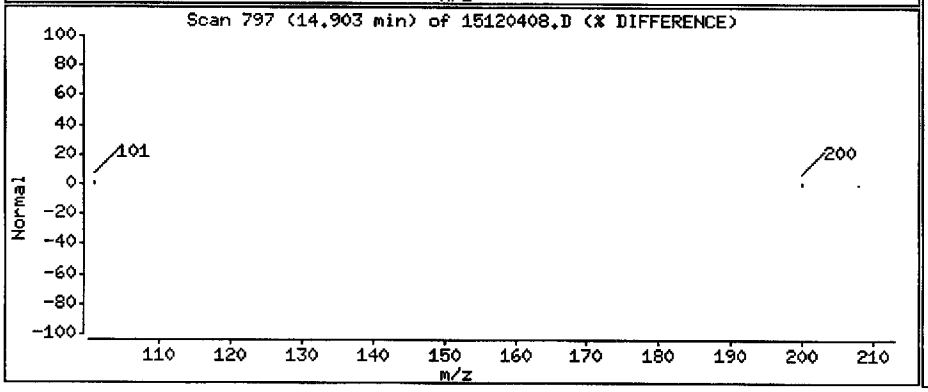












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

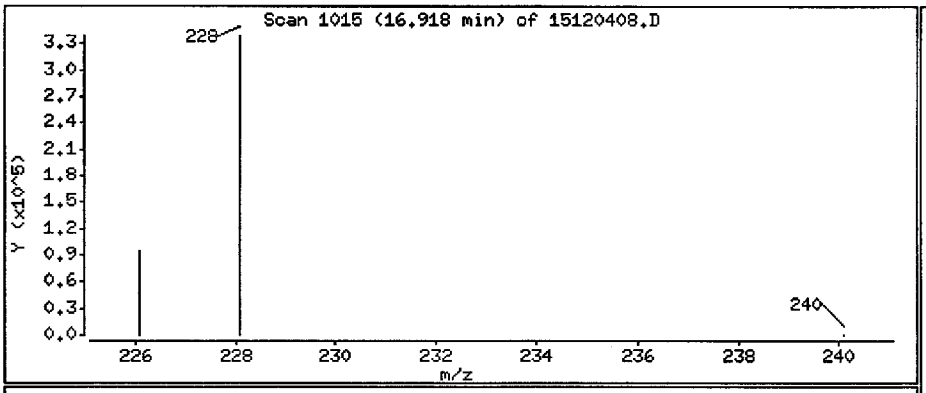
Operator: JW

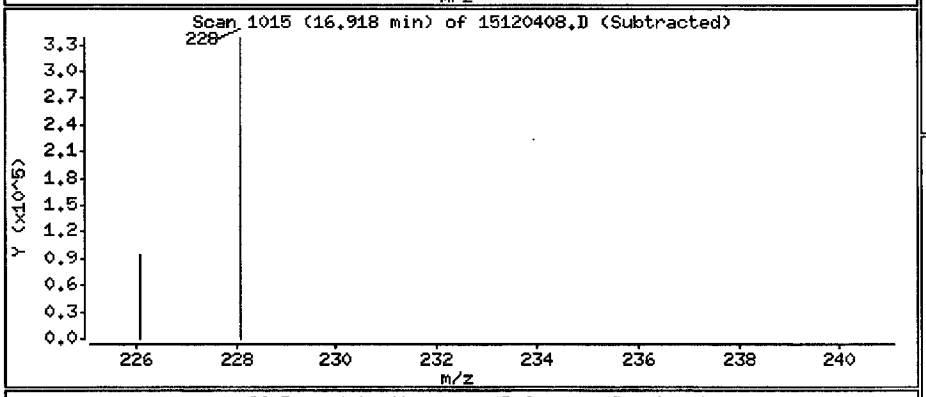
Column phase: Rxi-17Sil MS

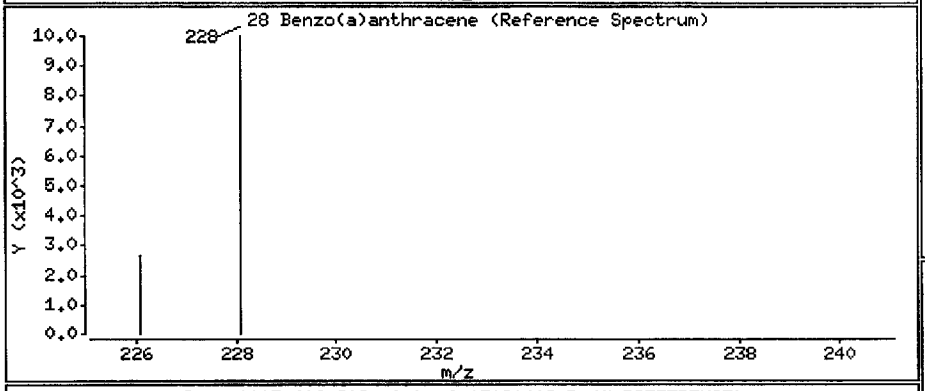
Column diameter: 0.25

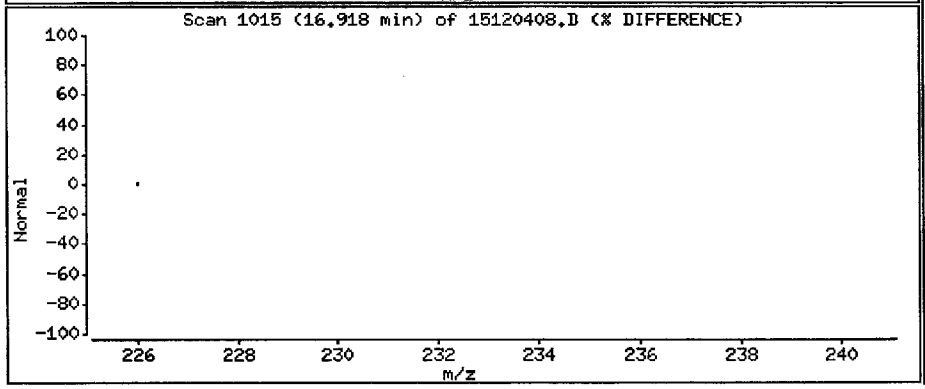
28 Benzo(a)anthracene

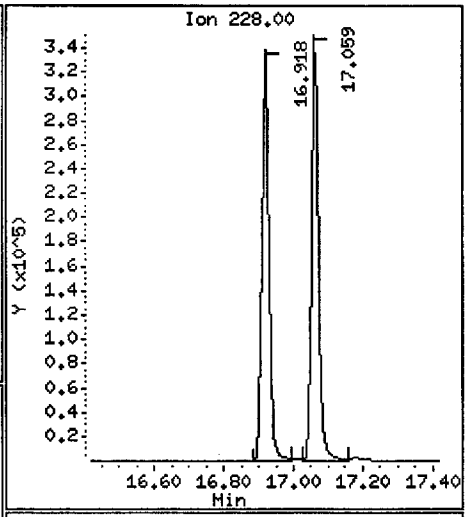
Concentration: 235 ng/L

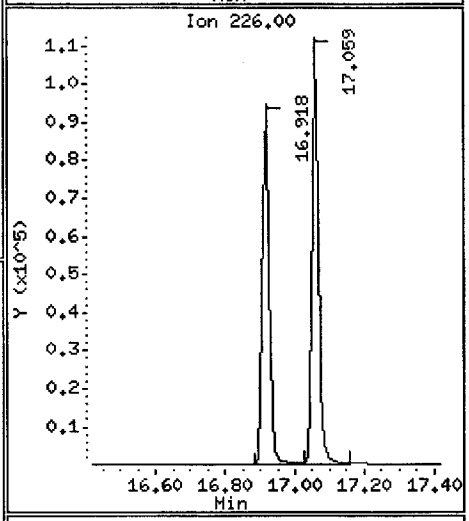


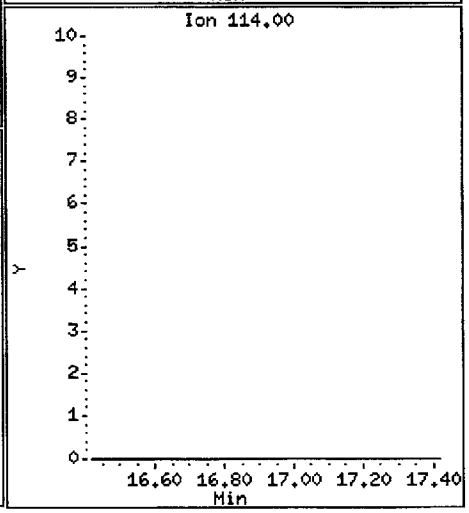












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

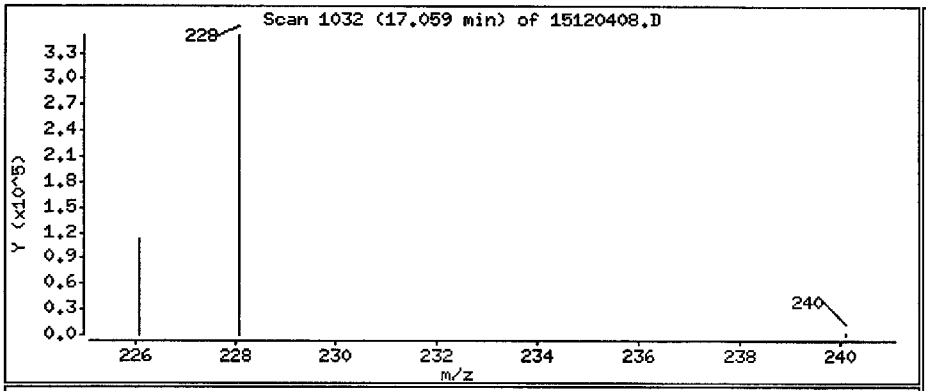
Operator: JW

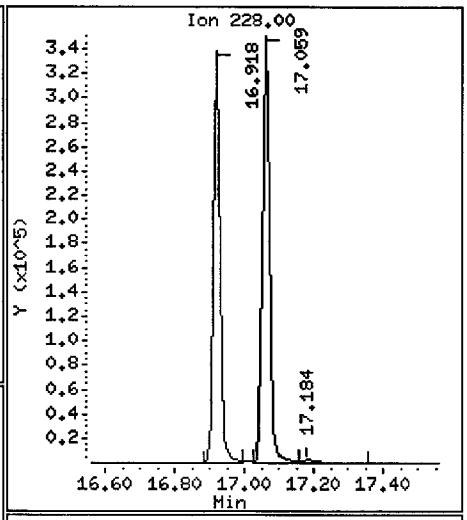
Column phase: Rxi-17Sil MS

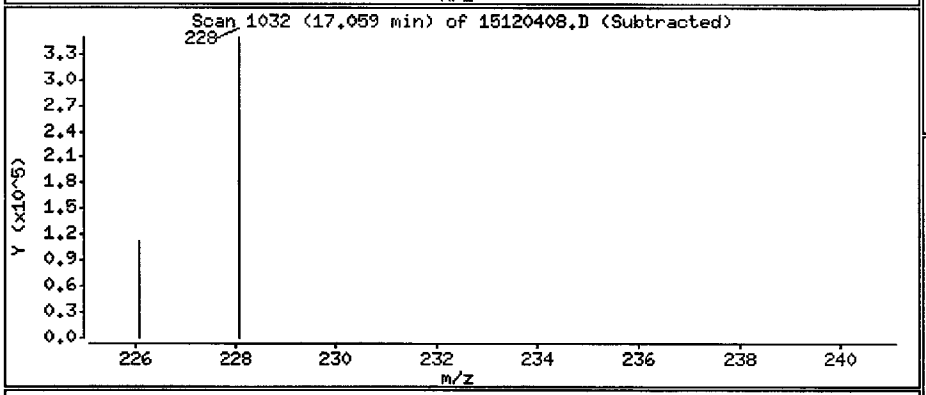
Column diameter: 0.25

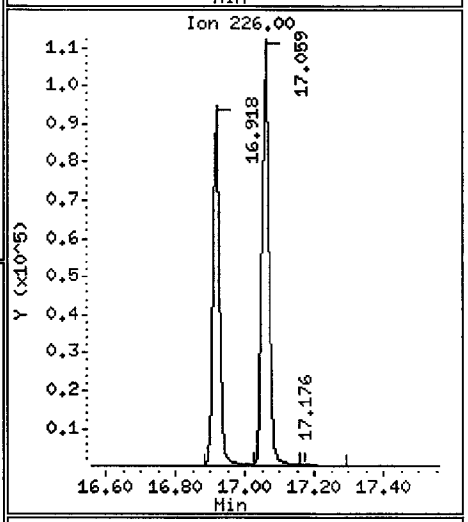
30 Chrysene

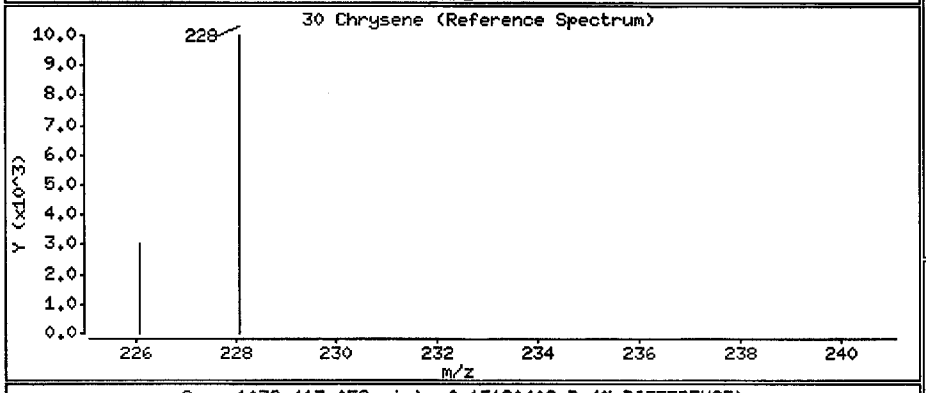
Concentration: 235 ng/L

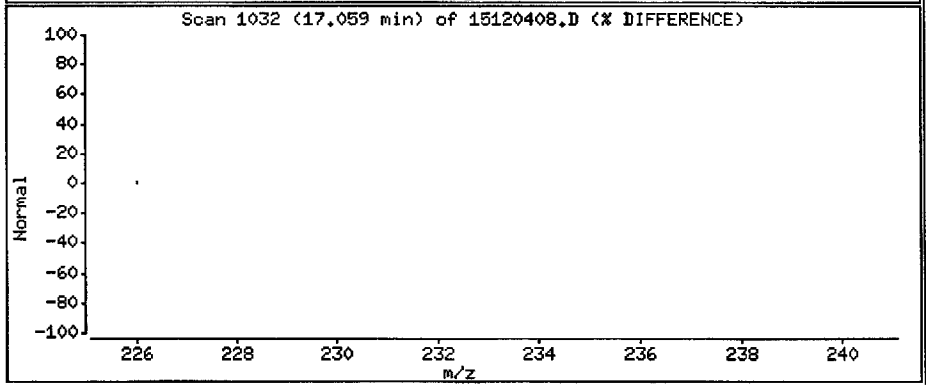


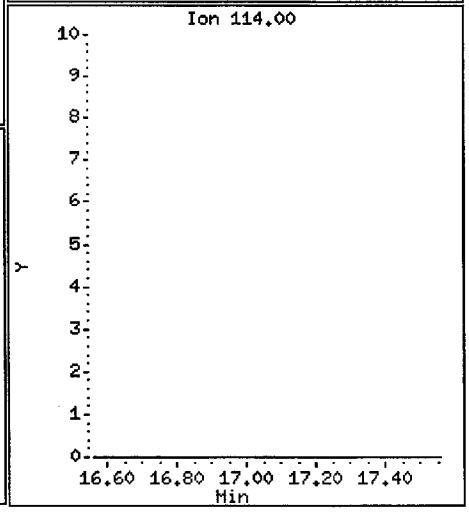












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

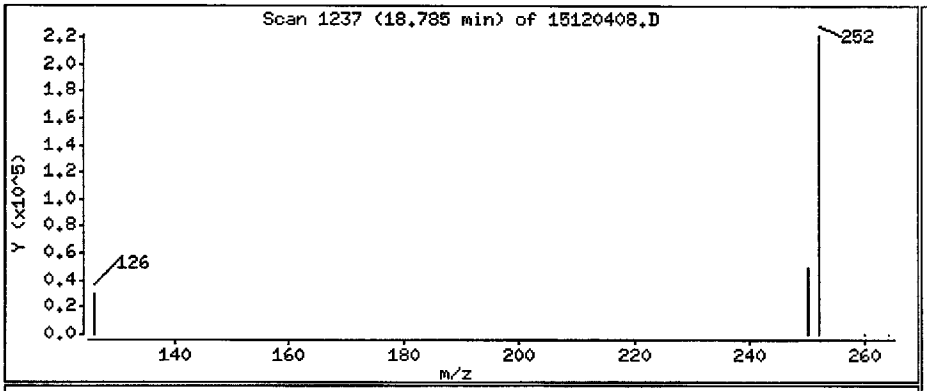
Operator: JW

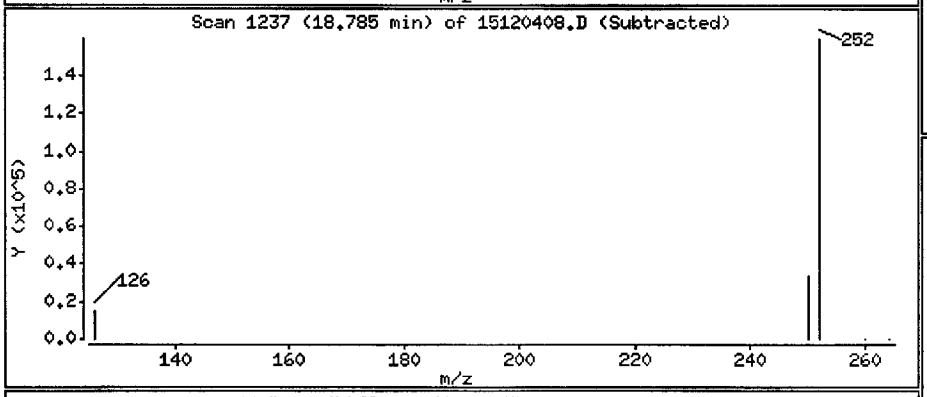
Column phase: Rxi-17Sil MS

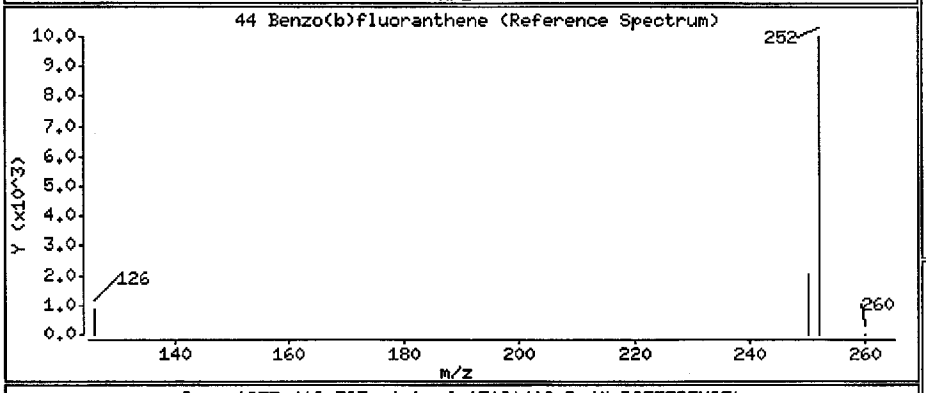
Column diameter: 0.25

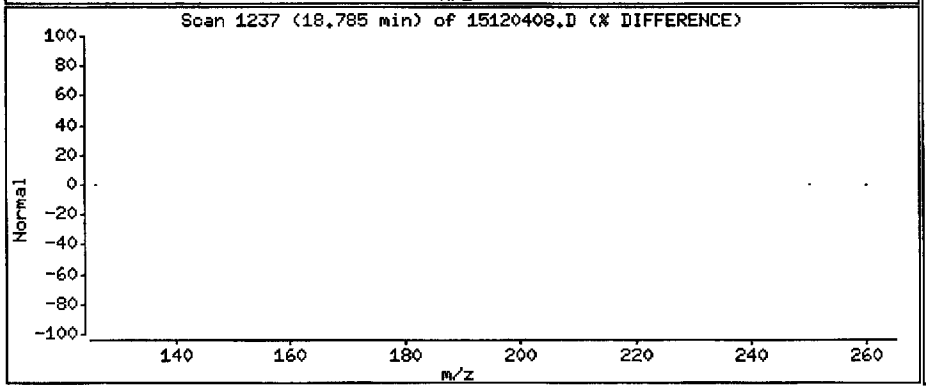
44 Benzo(b)fluoranthene

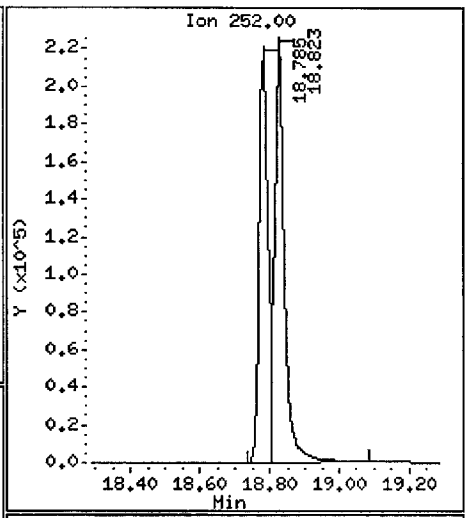
Concentration: 241 ng/L

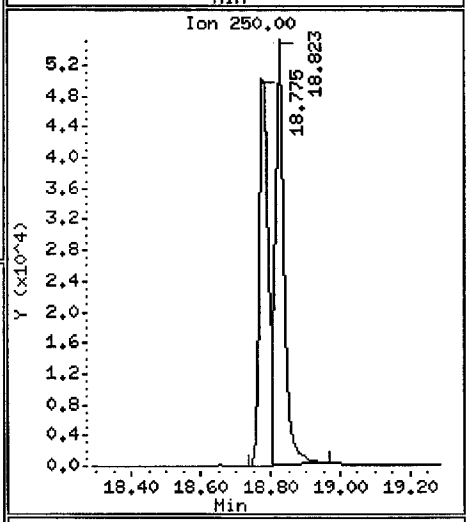


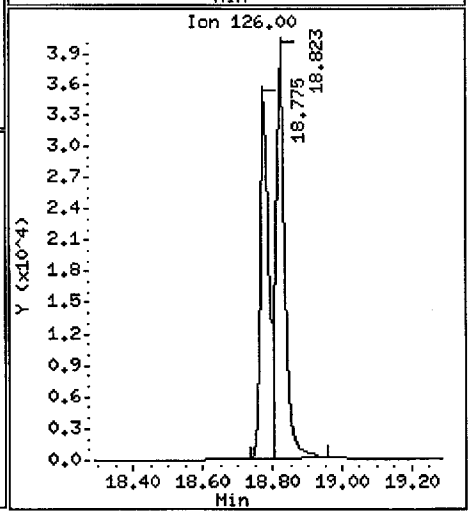












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

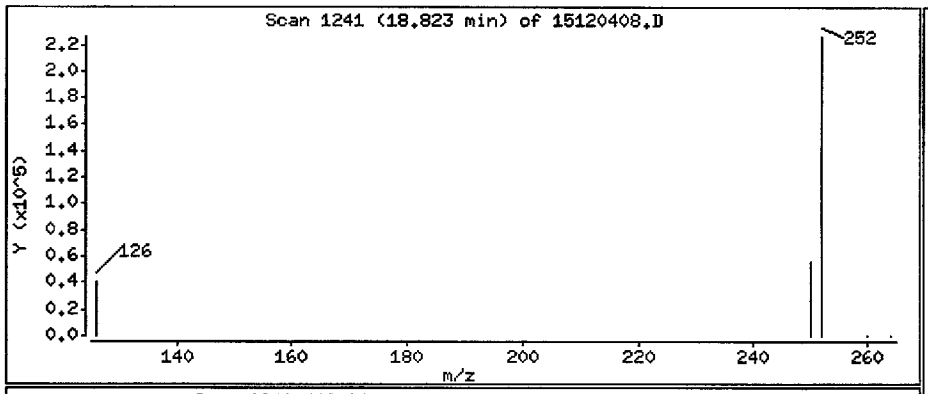
Operator: JW

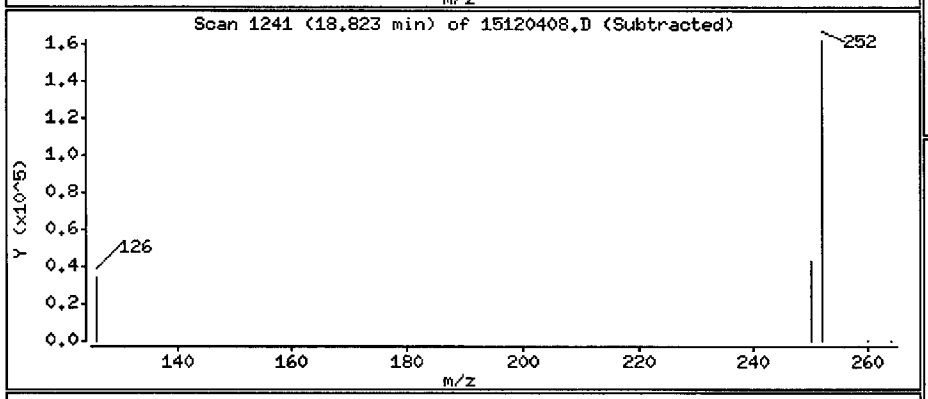
Column phase: Rxi-17Sil MS

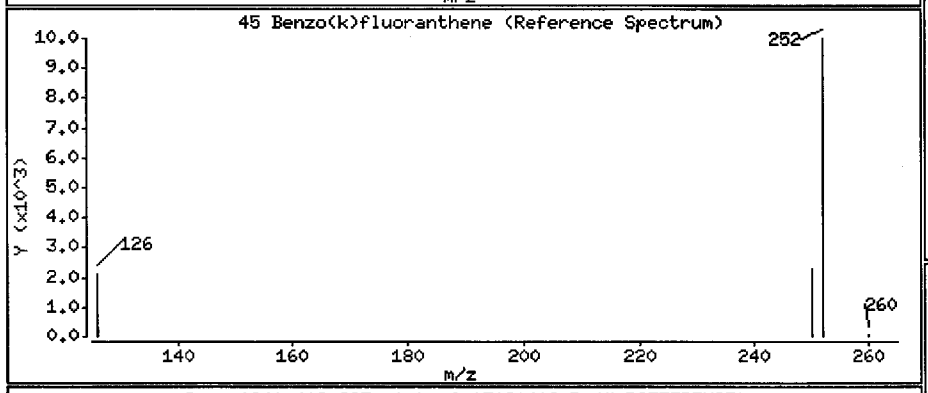
Column diameter: 0.25

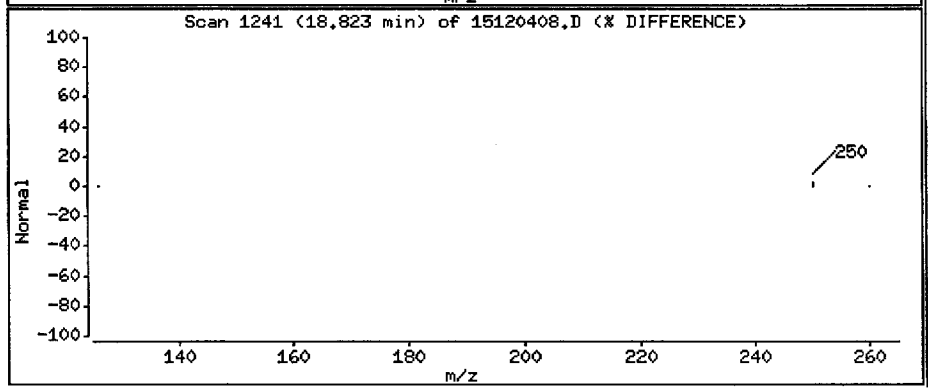
45 Benzo(k)fluoranthene

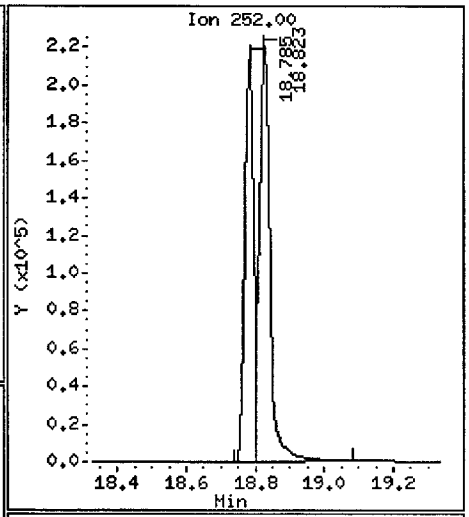
Concentration: 248 ng/L

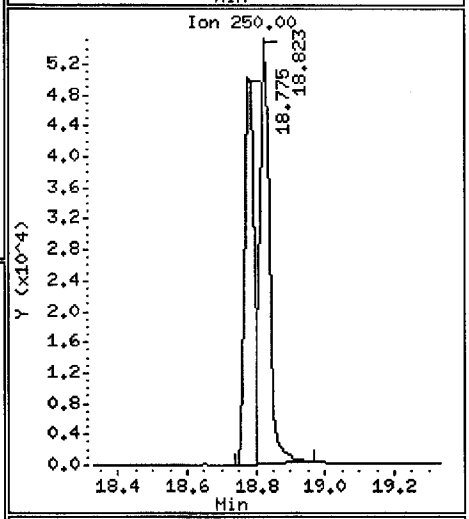


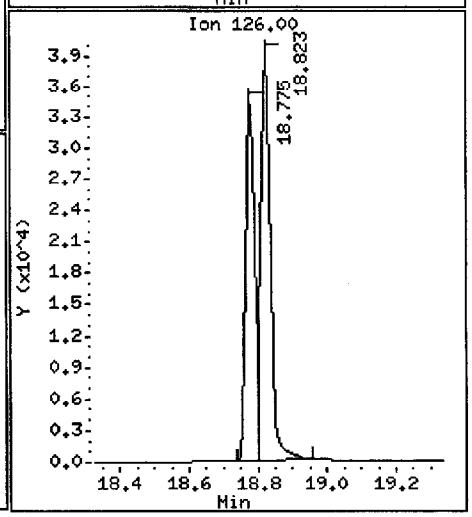












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

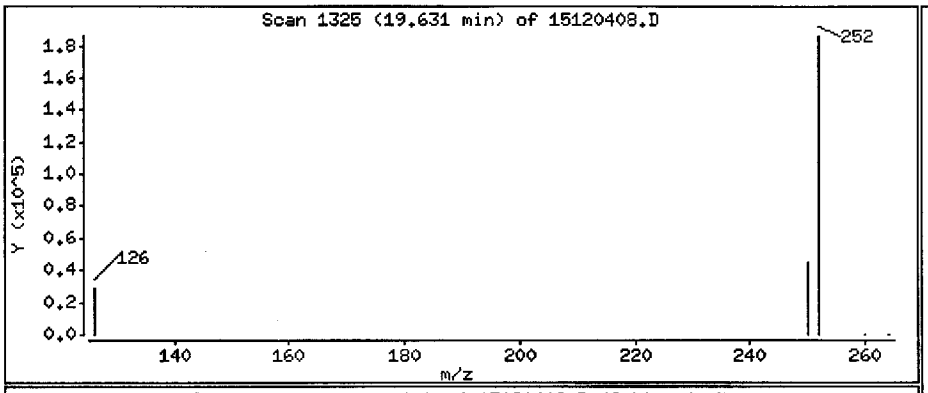
Operator: JW

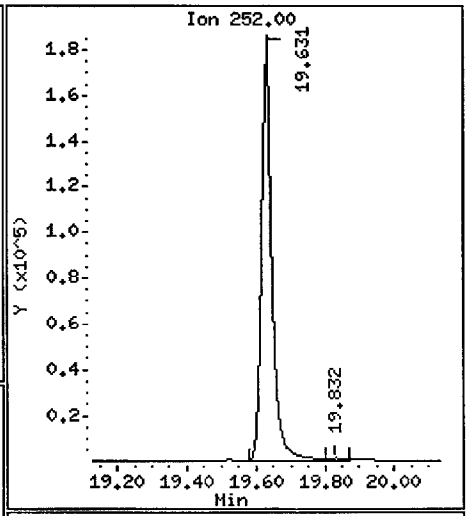
Column phase: Rxi-17Sil MS

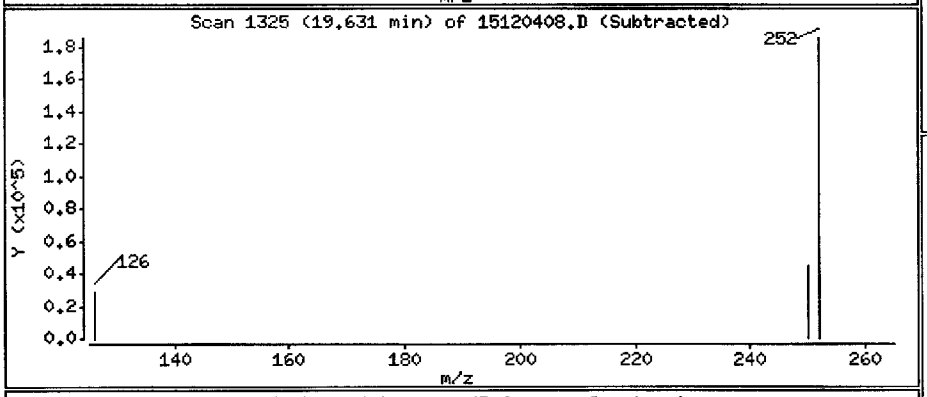
Column diameter: 0.25

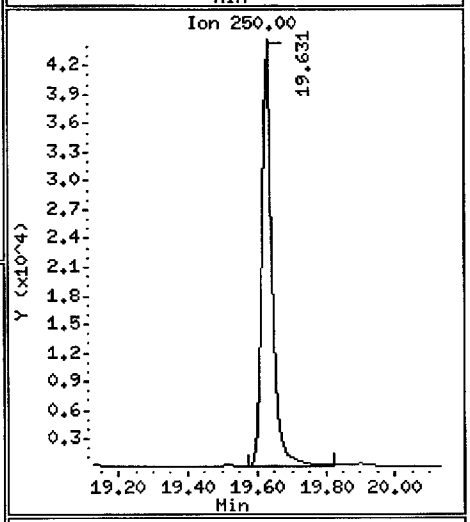
34 Benzo(a)pyrene

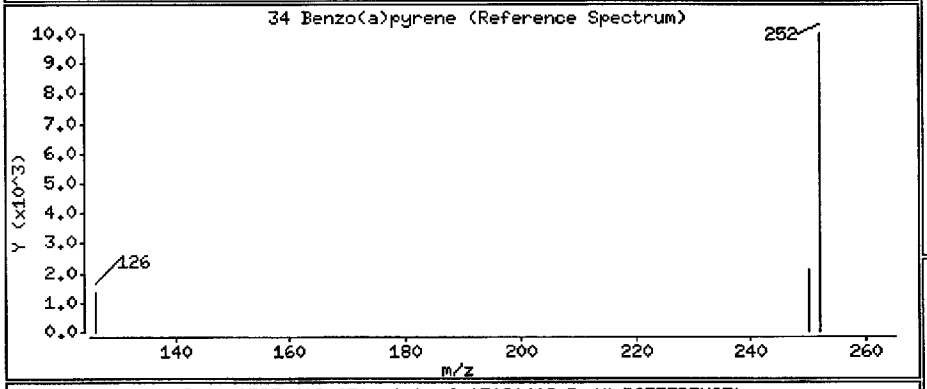
Concentration: 247 ng/L

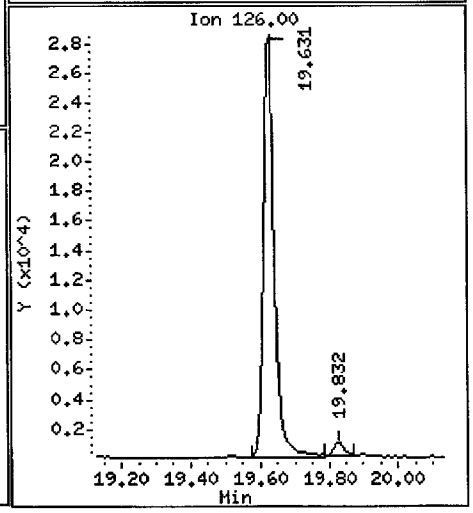


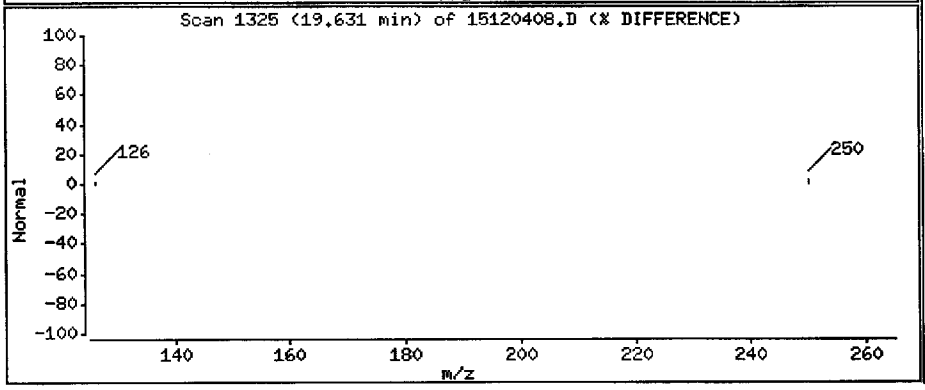












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

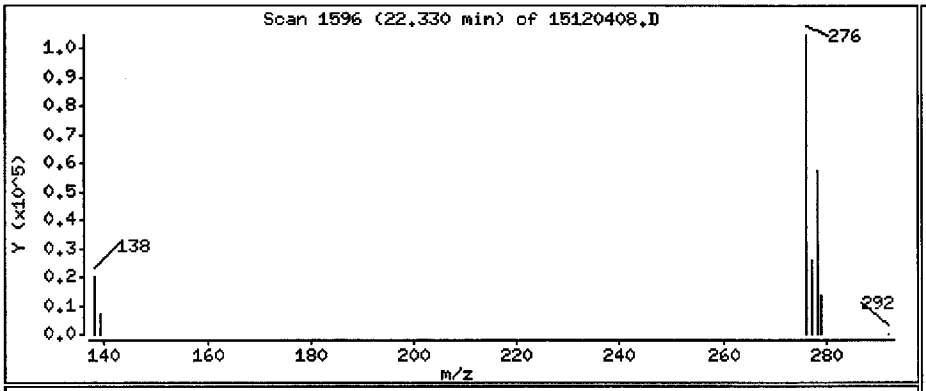
Operator: JW

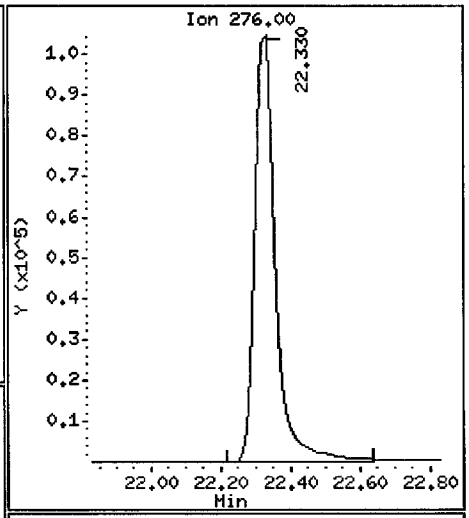
Column phase: Rxi-17Sil MS

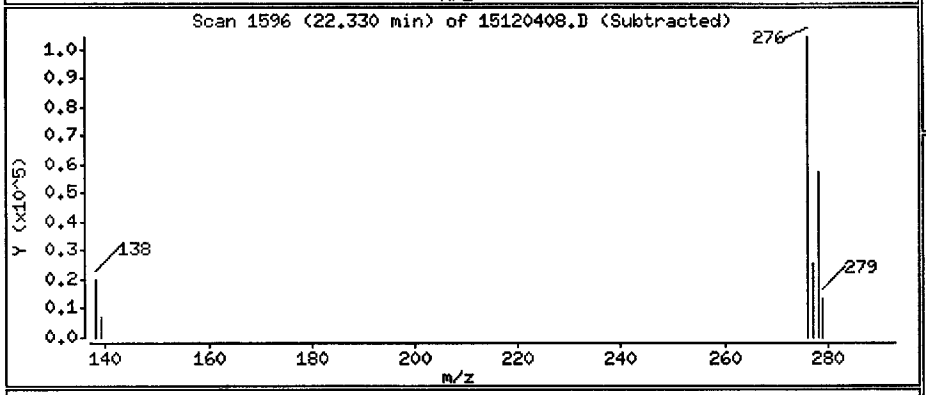
Column diameter: 0.25

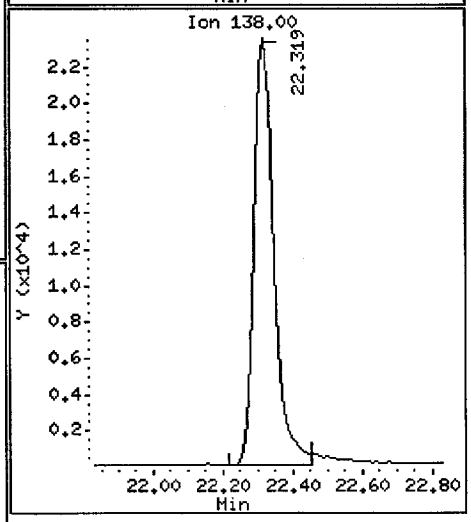
37 Indeno(1,2,3-cd)pyrene

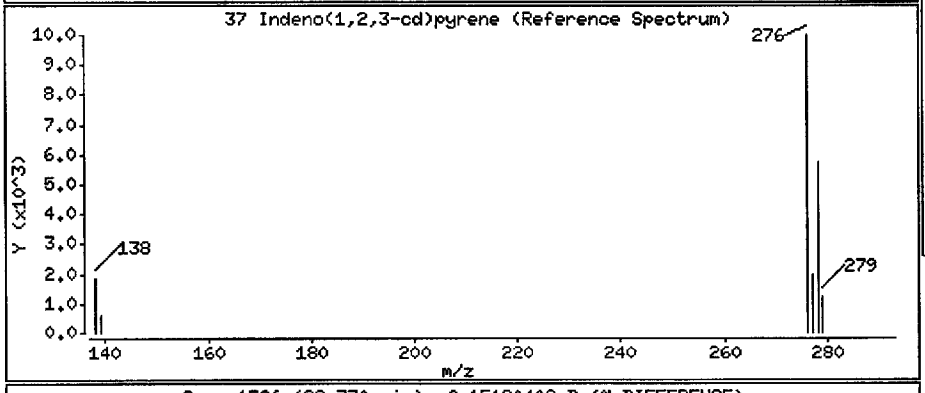
Concentration: 248 ng/L

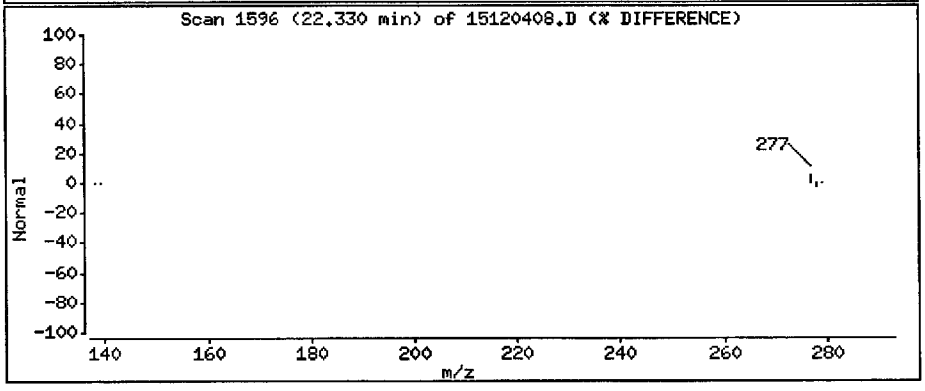












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

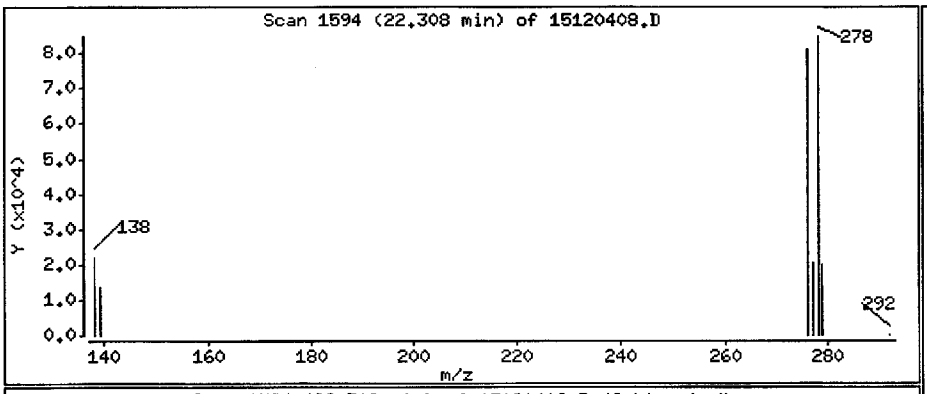
Operator: JW

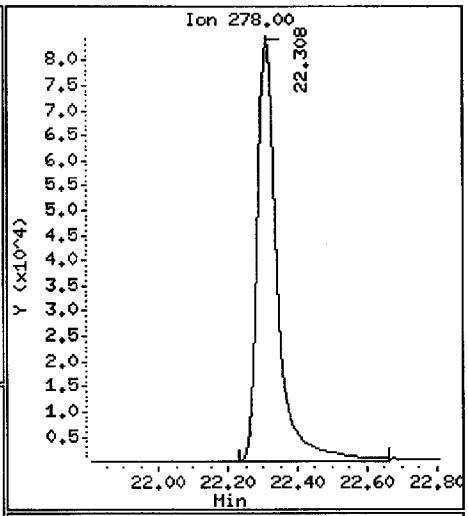
Column phase: Rxi-17Sil MS

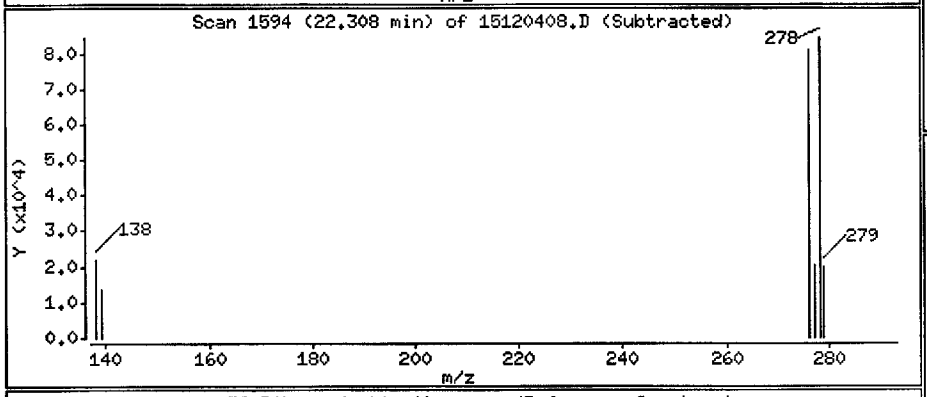
Column diameter: 0.25

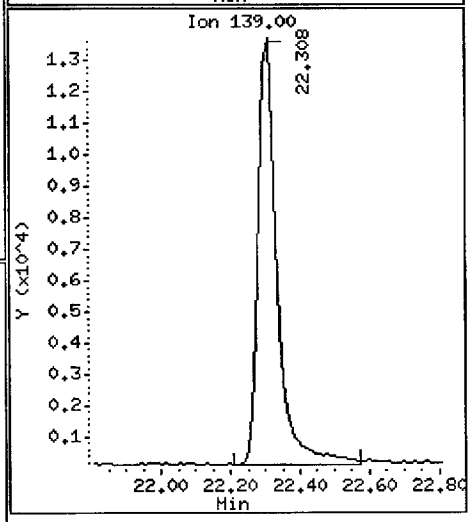
38 Dibenzo(a,h)anthracene

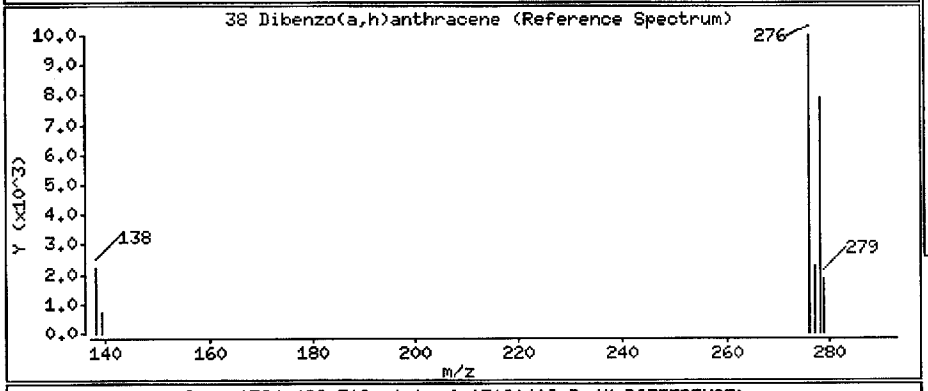
Concentration: 250 ng/L

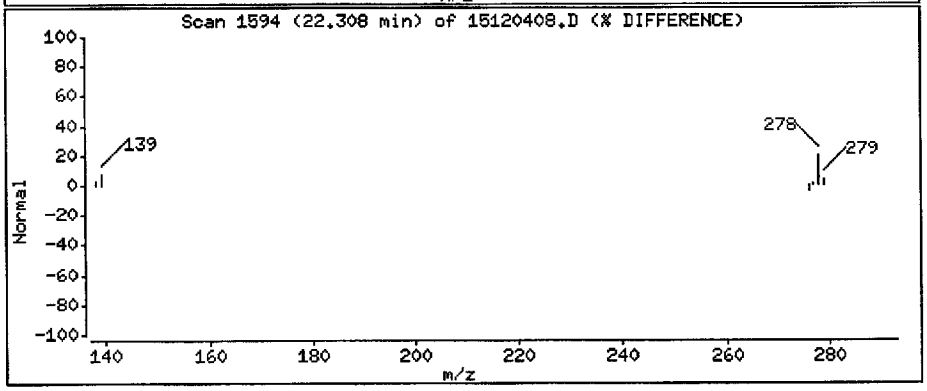












Data File: \\target\share\chem3\nt11.i\20151204.b\15120408.D

Date : 04-DEC-2015 12:04

Client ID:

Instrument: nt11.i

Sample Info: LLSIM SCV 250

Volume Injected (uL): 2.0

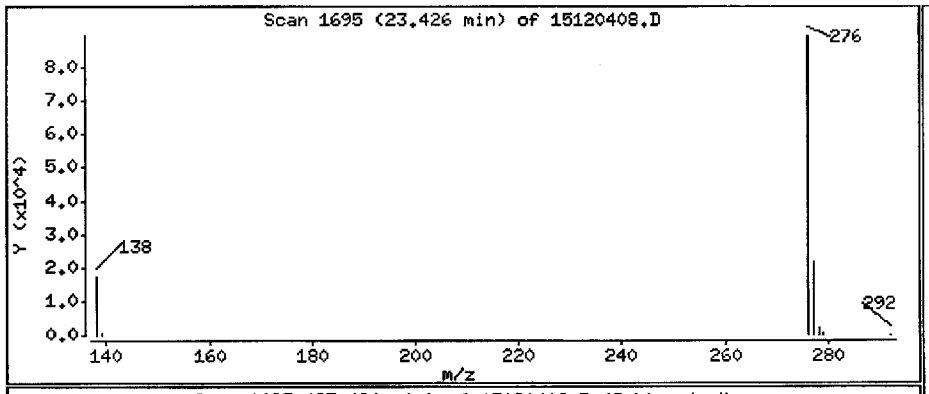
Operator: JW

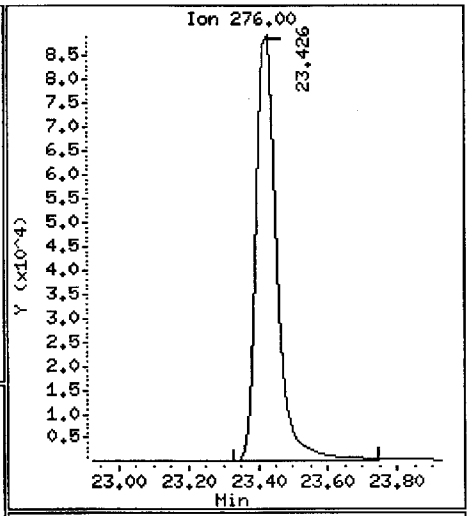
Column phase: Rxi-17Sil MS

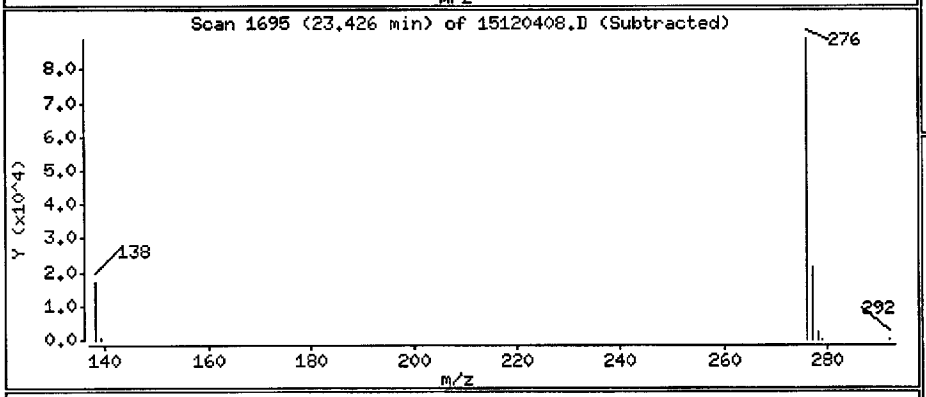
Column diameter: 0.25

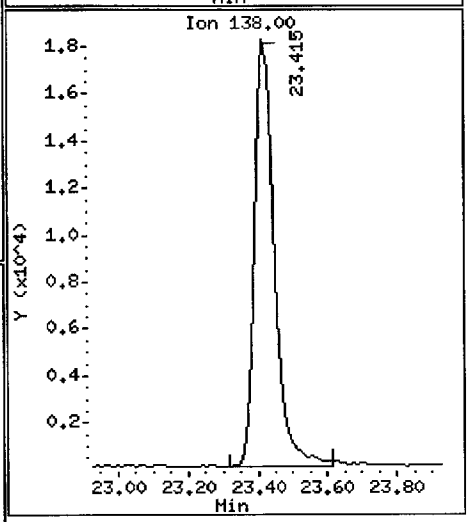
39 Benzo(g,h,i)perylene

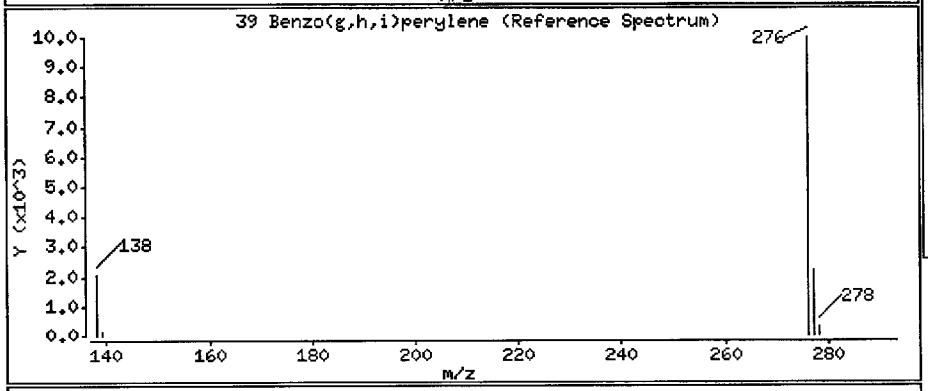
Concentration: 250 ng/L

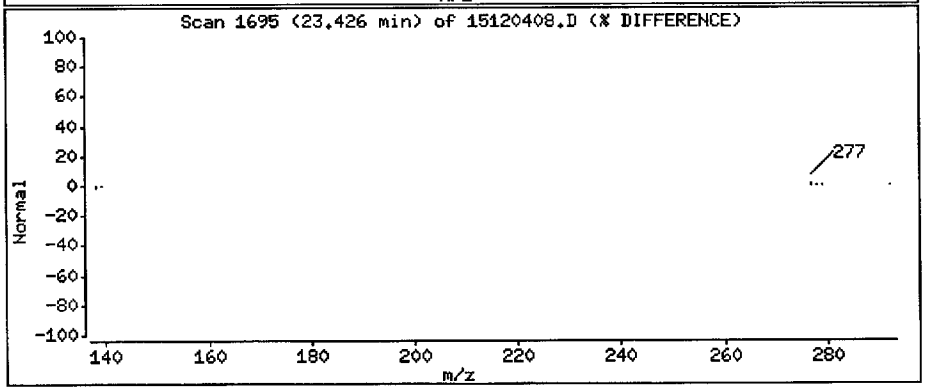












REVIEW SUMMARY FOR FILE - 15120408.D

Lab ID: LLSIM SCV 250
nt11.i, 20151204.b\lowsim.m, 04-DEC-2015 12:04

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,20151204.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: ATS0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ELEMENT/NWA #.: ATSO Client: Anchor QEA, LLC

METHOD: **8270D** (SIM-SVOA) **KRONE** (Butyl Tins) **8270D** (SVOA) **8270D** (OP-Pest)

Instrument: NT-6 NT-8 NT-10 NT-11 NT-12 NT-14

Calibration Code: Y200008 Analysis Start Date: 1/22/16

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ____	Internal Standard within 50-200%?	Y / N / ____
DDT Breakdown <20%?	Y / N / ____	Retention Times within Windows?	Y / N / ____
Peak Tailing Factor ≤2?	Y / N / ____	Method Blank in Control?	Y / N / ____
ICV/CCV Meets %D?	Y / N / ____	BS/BSD Recovery in Control?	Y / N / ____
ICAL Q Flag applied?	Y / N / ____	MS / MSD Recovery in Control? Reviewed see Form III	Y / N / ____
ICV/CCV Q flag applied?	Y / N / ____	Samples Diluted?	Y / N / ____
Surrogate Recovery met?	Y / N / ____	Special Analysis Request?	Y / N / ____
Manual Integrations?	Y / N / ____	VDP Completed?	NA / Y / N / ____
Integration Summary?	Y / N / ____	Technical Review?	____ / ____

Detail problems, corrective actions and/or other pertinent information below.

Q-flag for benzo(k)fluoranthene, which applies Q flag to total benzofluoranthenes. Note total contains benzo(j)fluoranthene as well, Column has seperation of all three.

Job/Forms batched w/ APR4 & AMA2

(Review 1) Analyst: JW **Date:** 1/25/16

(Review 2) Peer: _____ **Date:** _____

(Final Review) Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log
NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 1/22/16 Analysis: low PAH Analyst: JW

GC Program: lowsim Column No: D001726 Column Type: ~~1554~~ Rxi-17Silms

Instrument Tune (.U or .CT.): 150115.U EM Voltage: 1847

Calibration File: 16012204.D Cali Code: Y100008 Injection Vol.: 2uL

IS/SS

D002835

Ical/Ccal

D004412
D005205

LCS/ICV

Document All Maintenance Tasks In Element

	Time	Filename	LabID	ClientId	DF									
1	0708	16012201.D	TUNE 10		1	NO ISTDS FOUND								
2	0725	16012202.D	LL SIM ICV		1	6.77	290356	9.77	200396	12.45	328472	17.19	243652	20.11	215215
3	0824	16012203.D			1	6.76	302565	9.77	213697	12.46	342867	17.21	264433	20.13	259585
4	0848	16012204.D	TUNE 10		1	NO ISTDS FOUND								
5	0905	16012205.D	LL SIM ICV		1	6.74	342116	9.74	244162	12.42	395241	17.17	296129	20.06	267218
6	0957	16012206.D	LL SIM MRL		1	6.74	345356	9.76	235311	12.42	378135	17.18	274122	20.07	249583
7	1027	16012207.D	APR4MBS1	APR4MBS1	1	6.73	368895	9.74	251480	12.42	405369	17.17	295936	20.06	283292
8	1057	16012208.D	APR4LCSS1	APR4LCSS1	1	6.73	360526	9.74	257556	12.42	412183	17.17	314530	20.06	306686
9	1128	16012209.D	APR4SRM1	SRM 1974C	1	6.73	362258	9.74	249465	12.42	398741	17.17	300525	20.06	299419
10	1158	16012210.D	APR4A	PG-T0-MUS-CO	1	6.72	371890	9.74	259279	12.42	437520	17.17	299515	20.06	303212
11	1228	16012211.D	ATS0A	PG-SMA2-2-MU	1	6.73	363469	9.74	256352	12.42	419386	17.17	310418	20.06	308119
12	1258	16012212.D	ATS0B	PG-PJ-1-MUS-	1	6.73	374753	9.74	264386	12.42	426020	17.17	316427	20.07	315181
13	1328	16012213.D	ATS0BMS	PG-PJ-1-MUS-	1	6.73	373582	9.74	269039	12.42	428623	17.17	324379	20.06	323020
14	1359	16012214.D	ATS0BMSD	PG-PJ-1-MUS-	1	6.73	377287	9.74	271691	12.42	435691	17.17	325376	20.06	324453
15	1429	16012215.D	ATS0C	PG-WS-1-MUS-	1	6.73	376882	9.74	268849	12.42	435864	17.17	322334	20.06	323010
16	1459	16012216.D	ATS0D	PG-GP-1-MUS-	1	6.72	377268	9.74	268633	12.41	436597	17.17	322279	20.06	320562
17	1529	16012217.D	ATS0E	PG-SMA2-5-MU	1	6.73	384886	9.74	273475	12.42	449495	17.17	339179	20.06	335158
18	1559	16012218.D	ATS0F	PG-SMA2-4-MU	1	6.72	381586	9.74	270392	12.42	439377	17.17	325728	20.06	325370
19	1630	16012219.D	AUA2A	13EB_ME-MTWO	1	6.73	373510	9.74	268987	12.42	440845	17.17	336414	20.06	339083
20	1700	16012220.D	AUA2B	13CPS_DB-MTW	1	6.73	370975	9.74	264737	12.42	432287	17.17	321859	20.06	327843
21	1730	16012221.D	AUA2C	13NPS_CIAR2-	1	6.72	382765	9.75	270341	12.42	435855	17.17	323444	20.06	326352
22	1800	16012222.D	LL SIM CCV		1	6.73	368312	9.74	275119	12.42	442913	17.17	337848	20.06	324201

JW 1/25/16

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

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160122.b

ARI Job No.: TUNE Method: DFTPP.m Instrument: nt11.i Date: 22-JAN-2016

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0848	16012204.D	TUNE 10		1	NO MANUAL INTEGRATION
0905	16012205.D	LL SIM ICV		1	NO MANUAL INTEGRATION
0957	16012206.D	LL SIM MRL		1	NO MANUAL INTEGRATION
1027	16012207.D	APR4MBS1	APR4MBS1	1	NO MANUAL INTEGRATION
1057	16012208.D	APR4LCSS1	APR4LCSS1	1	NO MANUAL INTEGRATION
1128	16012209.D	APR4SRM1	SRM 1974C	1	NO MANUAL INTEGRATION
1158	16012210.D	APR4A	PG-T0-MUS-	1	NO MANUAL INTEGRATION
1228	16012211.D	ATS0A	PG-SMA2-2-	1	NO MANUAL INTEGRATION
1258	16012212.D	ATS0B	PG-PJ-1-MU	1	NO MANUAL INTEGRATION
1328	16012213.D	ATS0BMS	PG-PJ-1-MU	1	NO MANUAL INTEGRATION
1359	16012214.D	ATS0BMSD	PG-PJ-1-MU	1	NO MANUAL INTEGRATION
1429	16012215.D	ATS0C	PG-WS-1-MU	1	NO MANUAL INTEGRATION
1459	16012216.D	ATS0D	PG-GP-1-MU	1	NO MANUAL INTEGRATION
1529	16012217.D	ATS0E	PG-SMA2-5-	1	NO MANUAL INTEGRATION
1559	16012218.D	ATS0F	PG-SMA2-4-	1	NO MANUAL INTEGRATION
1630	16012219.D	AUA2A	13EB_ME-MT	1	NO MANUAL INTEGRATION
1700	16012220.D	AUA2B	13CPS_DB-M	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160122.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1730	16012221.D	AUA2C	13NPS_CIAR	1	NO MANUAL INTEGRATION
1800	16012222.D	LL SIM CCV		1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt11.i\20160122.b

Instrument: nt11.i Date: 22-JAN-2016 Method: lowsim.m

INITIAL CAL: 04-DEC-2015

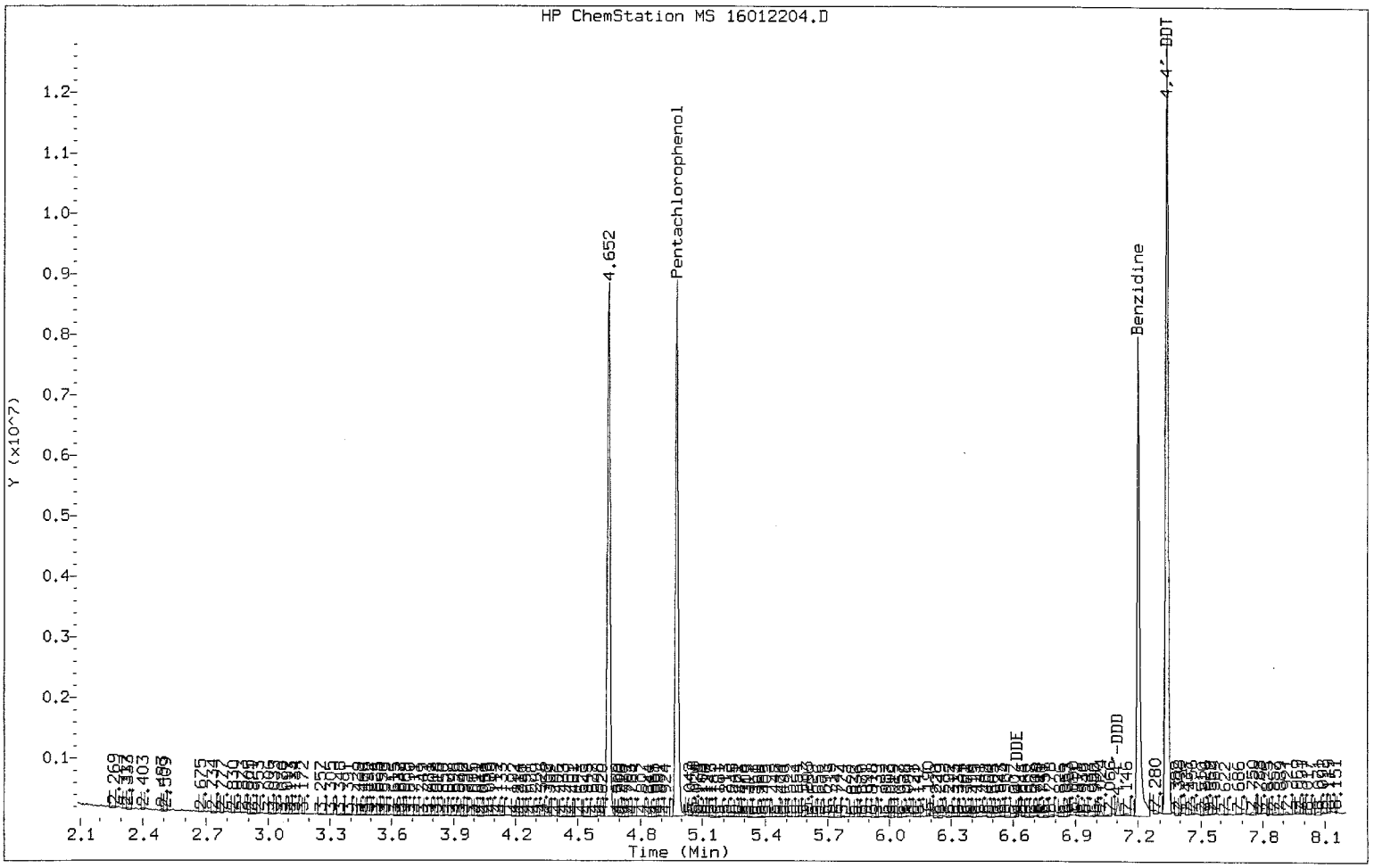
Compound	%RSD or R^2
NO Q-FLAGS	

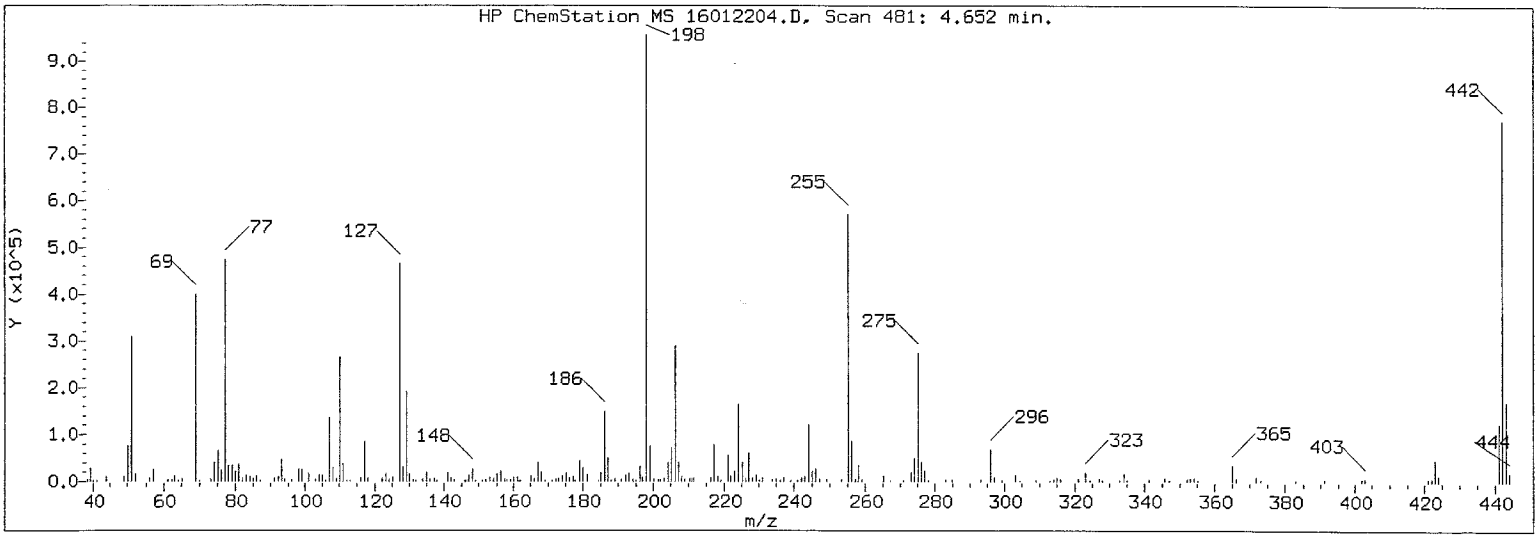
CONTINUING CAL: 22-JAN-2016

Compound	%D
Benzo(k)fluoranthene	-20.8

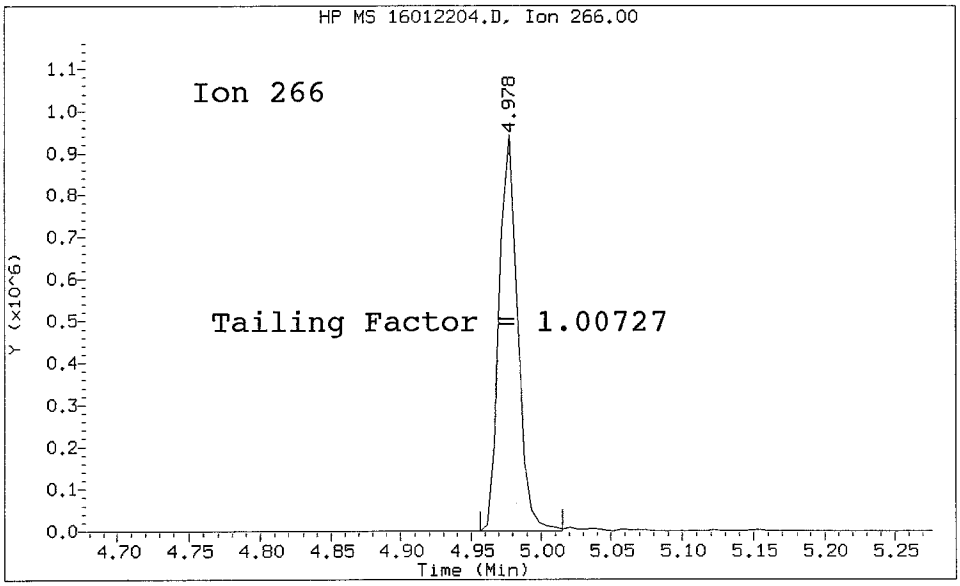
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20160122.b/16012204.D/16012204.D
Method Used: \20160122.b\DFTPP.m Inst: nt11
Injection Date: 22-JAN-2016 08:48 Operator: JW
Sample Info: TUNE 10 TUNE 10
Report Date: 01/22/2016 09:02



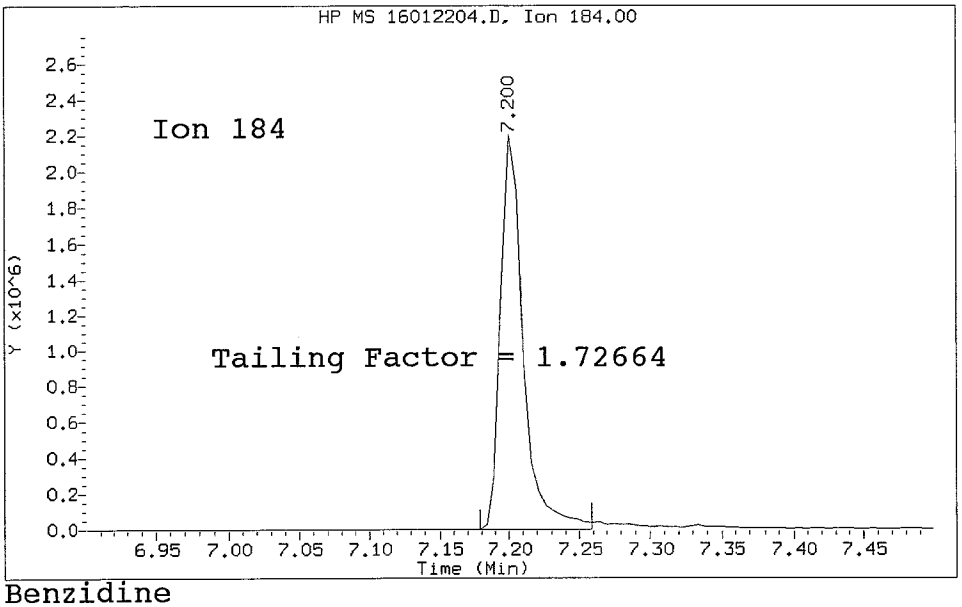


Datafile Analyzed: /20160122.b/16012204.D/16012204.D
Method Used: \20160122.b\DFTPP.m\sw846ddt.m Inst: nt11
Injection Date: 22-JAN-2016 08:48 Operator: JR
Sample Info: TUNE 10
Report Date: 01/22/2016 09:02



Pentachlorophenol
==========
Exp. RT = 4.993
Found RT = 4.978

Tail Factor = 1.007 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.221
Found RT = 7.200

Tail Factor = 1.727 Maximum Allowed = 2.0

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.73
68	Less than 2.00% of mass 69	0.16 (0.39)
69	Mass 69 relative abundance	41.63
70	Less than 2.00% of mass 69	0.25 (0.61)
127	10.00 - 80.00% of mass 198	47.78
197	Less than 2.00% of mass 198	0.40
199	5.00 - 9.00% of mass 198	7.71
275	10.00 - 60.00% of mass 198	27.24
365	Greater than 1.00% of mass 198	3.32
441	0.01 - 24.00% of mass 442	12.54 (16.26)
442	50.00 - 200.00% of mass 198	77.14
443	15.00 - 24.00% of mass 442	16.83 (21.81)

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.0072727	2.000	PASS
Benzidine	1.7266388	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1726805			N/A
4,4-DDE	3549	0.2	20.0	PASS
4,4-DDD	52618	3.0	20.0	PASS
4,4-DDD + DDE	56167	3.2	20.0	PASS

Tuning Sample, nt11.i/20160122.b/16012204.D, *** PASSED ***

Data File: 16012204.D
Spectrum: Avg. Scans 480-482 (4.65), Background Scan 474
Location of Maximum: 198.00
Number of points: 234

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	3607	122.00	7336	189.00	6814	259.00	4520
39.00	25272	123.00	12165	190.00	687	265.00	10616
40.00	1066	124.00	5804	191.00	3058	267.00	824
41.00	1087	125.00	6712	192.00	9991	271.00	1786
44.00	2951	126.00	715	193.00	11855	273.00	17288
47.00	1915	127.00	371968	194.00	2573	274.00	41440
48.00	965	128.00	27128	195.00	969	275.00	212032
49.00	343	129.00	147840	196.00	26288	276.00	33296
50.00	69008	130.00	14201	197.00	3102	277.00	19368
51.00	254784	131.00	2791	198.00	778432	278.00	1718
52.00	12897	132.00	1860	199.00	60048	283.00	2182
56.00	8355	134.00	4232	200.00	5671	285.00	2120
57.00	22680	135.00	13298	201.00	3467	293.00	3851
61.00	3516	136.00	3638	202.00	2557	296.00	55384
62.00	3826	137.00	5257	203.00	5846	297.00	8144
63.00	9940	138.00	1734	204.00	32288	299.00	707
64.00	1093	141.00	18984	205.00	57688	301.00	924
65.00	7427	142.00	6237	206.00	232576	303.00	9467
68.00	1278	143.00	3531	207.00	29320	304.00	667
69.00	324032	146.00	4949	208.00	8015	308.00	766
70.00	1962	147.00	9660	209.00	1911	309.00	753
73.00	723	148.00	22696	210.00	4960	313.00	666
74.00	36448	149.00	2795	211.00	10724	314.00	3828
75.00	55760	150.00	734	215.00	1660	315.00	6576
76.00	19528	151.00	2894	216.00	5836	316.00	3799
77.00	385408	152.00	1966	217.00	56960	321.00	1720
78.00	29584	153.00	6313	218.00	7526	323.00	17272
79.00	25288	154.00	5608	219.00	1661	324.00	1938
80.00	16616	155.00	12727	220.00	890	327.00	4736
81.00	28720	156.00	18096	221.00	44040	328.00	2031
82.00	7311	157.00	4106	222.00	6970	333.00	2333
83.00	8522	158.00	3387	223.00	15012	334.00	16114
85.00	5376	159.00	2361	224.00	125528	335.00	2065
86.00	4792	160.00	6722	225.00	31192	341.00	1930
87.00	3303	161.00	8069	226.00	4356	346.00	3920
88.00	2091	162.00	3527	227.00	50936	347.00	798
91.00	4565	164.00	1307	228.00	7585	352.00	6058
92.00	7896	165.00	7812	229.00	11279	353.00	4458
93.00	39608	166.00	4164	230.00	1526	354.00	5282
94.00	2439	167.00	35072	231.00	5218	355.00	805
96.00	2499	168.00	16007	234.00	3064	365.00	25832
98.00	27064	169.00	3806	235.00	4198	366.00	4228
99.00	25248	171.00	980	236.00	2314	372.00	8757
100.00	1800	172.00	3057	237.00	5032	373.00	1989
101.00	16026	173.00	4470	239.00	1814	383.00	2358
103.00	3544	174.00	8647	241.00	1057	391.00	1271
104.00	11351	175.00	15815	242.00	6205	402.00	5535
105.00	8415	176.00	5995	243.00	4414	403.00	5821
106.00	1019	177.00	7242	244.00	90744	404.00	1129

107.00	114800	178.00	1626	245.00	14417	421.00	4462
108.00	24152	179.00	29840	246.00	18184	422.00	4482
109.00	4094	180.00	23120	247.00	3106	423.00	33288
110.00	220544	181.00	12070	249.00	2530	424.00	9008
111.00	29816	183.00	712	250.00	747	441.00	97608
112.00	3512	184.00	1794	253.00	1957	442.00	600448
113.00	690	185.00	14309	255.00	445120	443.00	130976
116.00	5974	186.00	118168	256.00	66840	444.00	13357
117.00	71488	187.00	35616	257.00	3449		
118.00	4363	188.00	3220	258.00	25832		

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 22-JAN-2016 09:05
Lab File ID: 16012205.D Init. Cal. Date(s): 04-DEC-2015 04-DEC-2015
Analysis Type: SOIL Init. Cal. Times: 09:03 11:33
Lab Sample ID: LL SIM ICV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160122.b\lowsim.m

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
5 Naphthalene	1.15523	1.01008	0.010	-12.56490	20.00000	Averaged	
$ 6 2-Methylnaphthalene-d10	0.74235	0.67060	0.010	-9.66554	20.00000	Averaged	
7 2-Methylnaphthalene	0.79376	0.72881	0.010	-8.18323	20.00000	Averaged	
8 1-Methylnaphthalene	0.71533	0.65102	0.010	-8.99055	20.00000	Averaged	
10 Acenaphthylene	1.61414	1.49736	0.010	-7.23476	20.00000	Averaged	
12 Acenaphthene	1.07135	0.94674	0.010	-11.63119	20.00000	Averaged	
14 Dibenzofuran	1.61394	1.44144	0.010	-10.68769	20.00000	Averaged	
15 Fluorene	1.21040	1.13274	0.010	-6.41645	20.00000	Averaged	
19 Phenanthrene	1.20497	1.02916	0.010	-14.58979	20.00000	Averaged	
20 Anthracene	1.07857	1.00293	0.010	-7.01252	20.00000	Averaged	
$ 23 Fluoranthene-d10	1.09988	0.97587	0.200	-11.27457	20.00000	Averaged	
24 Fluoranthene	1.20977	1.06068	0.010	-12.32404	20.00000	Averaged	
25 Pyrene	1.58387	1.42756	0.010	-9.86851	20.00000	Averaged	
28 Benzo(a)anthracene	1.33345	1.18471	0.010	-11.15468	20.00000	Averaged	
30 Chrysene	1.46350	1.22447	0.010	-16.33287	20.00000	Averaged	
44 Benzo(b)fluoranthene	1.35504	1.16216	0.200	-14.23482	20.00000	Averaged	
45 Benzo(k)fluoranthene	1.57904	1.24997	0.200	-20.83950	20.00000	Averaged	<-
46 Benzo(j)fluoranthene	1.43839	1.18290	0.200	-17.76252	20.00000	Averaged	
34 Benzo(a)pyrene	1.30774	1.11820	0.010	-14.49403	20.00000	Averaged	
$ 36 Dibenzo(a,h)anthracene-d14	0.80723	0.73518	0.010	-8.92537	20.00000	Averaged	
37 Indeno(1,2,3-cd)pyrene	1.37309	1.18637	0.010	-13.59810	20.00000	Averaged	
38 Dibenzo(a,h)anthracene	1.08579	0.96395	0.010	-11.22141	20.00000	Averaged	
39 Benzo(g,h,i)perylene	1.19199	1.03495	0.010	-13.17397	20.00000	Averaged	
47 Perylene	1.35582	1.11738	0.200	-17.58607	20.00000	Averaged	
48 Benzo(e)pyrene	1.36945	1.10703	0.200	-19.16194	20.00000	Averaged	

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012205.D
Lab Smp Id: LL SIM ICV
Inj Date : 22-JAN-2016 09:05 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM ICV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.744	6.744	(1.000)	342116	200.000	
	5 Naphthalene	128	6.776	6.776	(1.005)	431956	250.000	219
$	6 2-Methylnaphthalene-d10	152	7.721	7.721	(1.145)	286779	250.000	226
	7 2-Methylnaphthalene	142	7.774	7.774	(1.153)	311670	250.000	230
	8 1-Methylnaphthalene	142	8.026	8.026	(1.190)	278405	250.000	228
	10 Acenaphthylene	152	9.589	9.589	(0.984)	456998	250.000	232
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	244162	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.007)	288948	250.000	221
	14 Dibenzofuran	168	10.010	10.010	(1.027)	439932	250.000	223
	15 Fluorene	166	10.630	10.630	(1.091)	345715	250.000	234
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	395241	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	508460	250.000	214
	20 Anthracene	178	12.523	12.523	(1.008)	495501	250.000	232
$	23 Fluoranthene-d10	212	14.518	14.518	(1.169)	482130	250.000	222
	24 Fluoranthene	202	14.557	14.557	(1.172)	524030	250.000	219
	25 Pyrene	202	15.057	15.057	(0.877)	528428	250.000	225
	28 Benzo(a)anthracene	228	17.075	17.075	(0.995)	438532	250.000	222
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	296129	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	453252	250.000	209
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	388186	250.000	214(H)
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	417519	250.000	198(H)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	395115	250.000	206
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	373503	250.000	214
*	35 Perylene-d12	264	20.062	20.062	(1.000)	267218	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	245568	250.000	228
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	396275	250.000	216
	38 Dibenzo(a,h)anthracene	278	22.651	22.651	(1.129)	321982	250.000	222
	39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	345698	250.000	217
	47 Perylene	252	20.130	20.130	(1.003)	373231	250.000	206
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	369774	250.000	202

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: 16012205.D
Lab Smp Id: LL SIM ICV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

Calibration Date: 22-JAN-2016
Calibration Time: 18:00

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	342116	4.34
11 Acenaphthene-d10	239179	119590	478358	244162	2.08
18 Phenanthrene-d10	372253	186127	744506	395241	6.18
29 Chrysene-d12	294711	147356	589422	296129	0.48
35 Perylene-d12	260595	130298	521190	267218	2.54

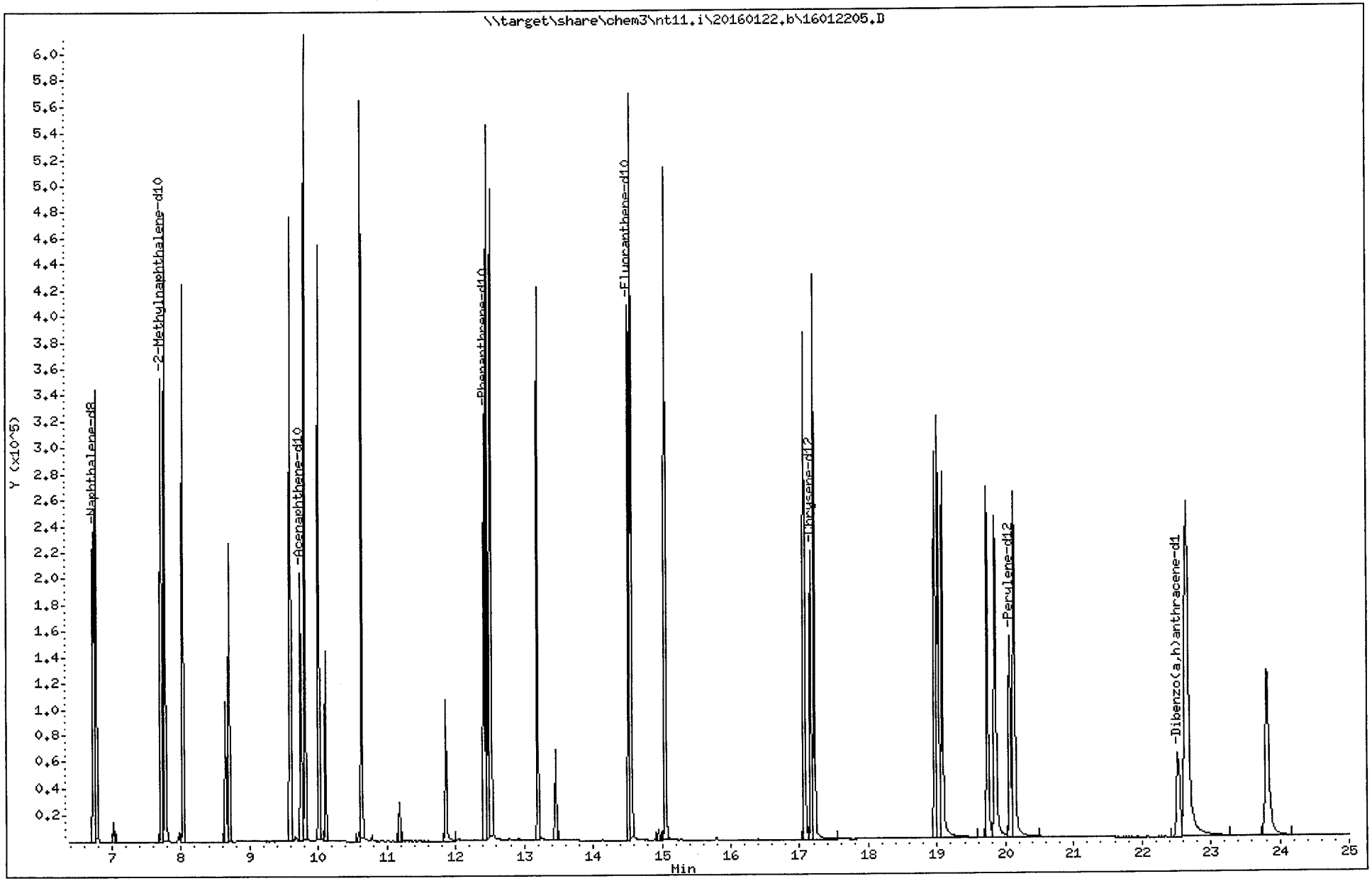
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.74	0.00
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160122.b\16012205.D
Date : 22-JAN-2016 09:05
Client ID:
Sample Info: LL SIM ICV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012205.D

Lab ID: LL SIM ICV
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 09:05

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012206.D
Lab Smp Id: LL SIM MRL
Inj Date : 22-JAN-2016 09:57 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM MRL
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JC 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/Kg)
*	4 Naphthalene-d8	136	6.744	6.744	(1.000)	345356	200.000	
	5 Naphthalene	128	6.776	6.776	(1.005)	23679	11.8701	594
$	6 2-Methylnaphthalene-d10	152	7.721	7.721	(1.145)	14635	11.4168	571 (R)
	7 2-Methylnaphthalene	142	7.774	7.774	(1.153)	15554	11.3479	567
	8 1-Methylnaphthalene	142	8.036	8.026	(1.192)	14016	11.3470	567
	10 Acenaphthylene	152	9.600	9.589	(0.984)	23264	12.2499	612
*	11 Acenaphthene-d10	164	9.755	9.744	(1.000)	235311	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.006)	14766	11.7143	586
	14 Dibenzofuran	168	10.021	10.010	(1.027)	23440	12.3441	617
	15 Fluorene	166	10.641	10.630	(1.091)	17626	12.3769	619
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	378135	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	30106	13.2148	661
	20 Anthracene	178	12.523	12.523	(1.008)	24053	11.7952	590
$	23 Fluoranthene-d10	212	14.528	14.518	(1.169)	25449	12.2380	612 (R)
	24 Fluoranthene	202	14.557	14.557	(1.172)	27112	11.8533	593
	25 Pyrene	202	15.057	15.057	(0.877)	28035	12.9142	646
	28 Benzo(a)anthracene	228	17.076	17.075	(0.994)	22208	12.1512	608
*	29 Chrysene-d12	240	17.175	17.167	(1.000)	274122	200.000	
	30 Chrysene	228	17.225	17.217	(1.003)	23055	11.4936	575
	44 Benzo(b)fluoranthene	252	18.977	18.967	(0.945)	17108	10.1172	506
	45 Benzo(k)fluoranthene	252	19.025	19.015	(0.948)	20372	10.3385	517

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/Kg)
	46 Benzo(j)fluoranthene	252	19.092	19.082	(0.951)	19922	11.0986	555
	34 Benzo(a)pyrene	252	19.861	19.851	(0.989)	17153	10.5107	526
*	35 Perylene-d12	264	20.072	20.062	(1.000)	249583	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.540	22.529	(1.123)	9288	9.22016	461(R)
	37 Indeno(1,2,3-cd)pyrene	276	22.673	22.662	(1.130)	16178	9.44153	472
	38 Dibenzo(a,h)anthracene	278	22.651	22.651	(1.128)	12483	9.21269	461
	39 Benzo(g,h,i)perylene	276	23.836	23.814	(1.188)	14357	9.65178	483
	47 Perylene	252	20.139	20.130	(1.003)	17838	10.5429	527
	48 Benzo(e)pyrene	252	19.745	19.736	(0.984)	18320	10.7200	536

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012206.D
Lab Smp Id: LL SIM MRL
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

Calibration Date: 22-JAN-2016
Calibration Time: 09:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	345356	5.32
11 Acenaphthene-d10	239179	119590	478358	235311	-1.62
18 Phenanthrene-d10	372253	186127	744506	378135	1.58
29 Chrysene-d12	294711	147356	589422	274122	-6.99
35 Perylene-d12	260595	130298	521190	249583	-4.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.74	0.00
11 Acenaphthene-d10	9.74	9.24	10.24	9.76	0.11
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.18	0.05
35 Perylene-d12	20.06	19.56	20.56	20.07	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.

ARI Labs, Inc.

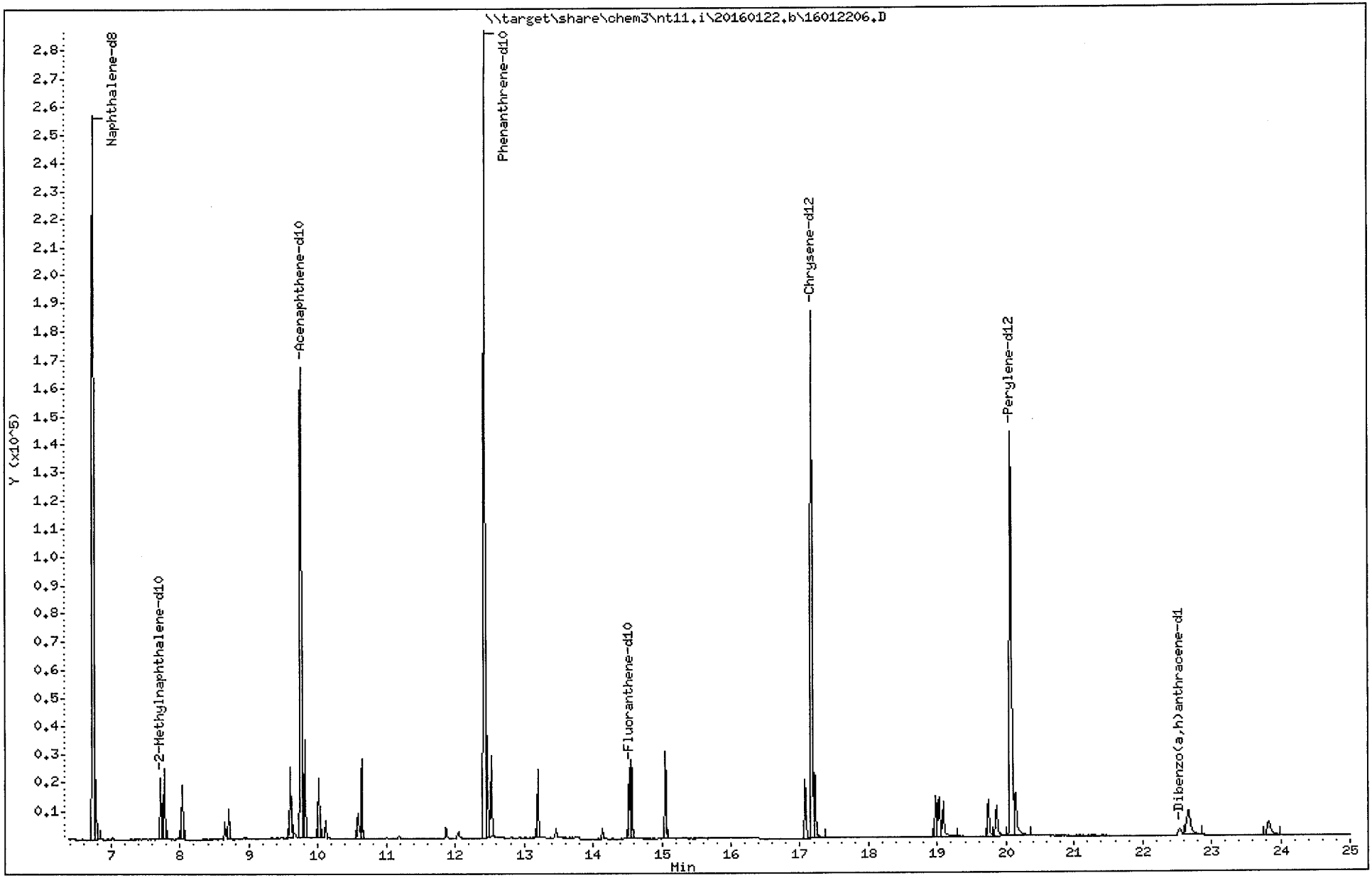
RECOVERY REPORT

Client Name: Client SDG: SDGa04420
Sample Matrix: SOLID Fraction: SV
Lab Smp Id: LL SIM MRL
Level: LOW Operator: JW
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

SURROGATE COMPOUND	CONC ADDED ng/Kg	CONC RECOVERED ng/Kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	571	3.81*	30-160
$ 23 Fluoranthene-d10	15000	612	4.08*	30-160
$ 36 Dibenzo(a,h)anthra	15000	461	3.07*	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012206.D
Date : 22-JAN-2016 09:57
Client ID:
Sample Info: LL SIM MRL
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012206.D

Lab ID: LL SIM MRL
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 09:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 22-JAN-2016 18:00
Lab File ID: 16012222.D Init. Cal. Date(s): 04-DEC-2015 04-DEC-2015
Analysis Type: SOIL Init. Cal. Times: 09:03 11:33
Lab Sample ID: LL SIM CCV Quant Type: ISTD
Method: \\target\share\chem3\nt11.i\20160122.b\lowsim.m

ccv mid 50/10

COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
5 Naphthalene	1.15523	1.01182	0.010	-12.41432	20.00000	Averaged	
$ 6 2-Methylnaphthalene-d10	0.74235	0.69544	0.010	-6.31969	20.00000	Averaged	
7 2-Methylnaphthalene	0.79376	0.74787	0.010	-5.78194	20.00000	Averaged	
8 1-Methylnaphthalene	0.71533	0.68036	0.010	-4.88849	20.00000	Averaged	
10 Acenaphthylene	1.61414	1.54546	0.010	-4.25498	20.00000	Averaged	
12 Acenaphthene	1.07135	0.94423	0.010	-11.86579	20.00000	Averaged	
14 Dibenzofuran	1.61394	1.41355	0.010	-12.41578	20.00000	Averaged	
15 Fluorene	1.21040	1.13310	0.010	-6.38636	20.00000	Averaged	
19 Phenanthrene	1.20497	1.00481	0.010	-16.61100	20.00000	Averaged	
20 Anthracene	1.07857	1.02531	0.010	-4.93777	20.00000	Averaged	
$ 23 Fluoranthene-d10	1.09988	0.98829	0.200	-10.14508	20.00000	Averaged	
24 Fluoranthene	1.20977	1.05659	0.010	-12.66190	20.00000	Averaged	
25 Pyrene	1.58387	1.41304	0.010	-10.78535	20.00000	Averaged	
28 Benzo(a)anthracene	1.33345	1.20396	0.010	-9.71058	20.00000	Averaged	
30 Chrysene	1.46350	1.19614	0.010	-18.26873	20.00000	Averaged	
44 Benzo(b)fluoranthene	1.35504	1.18613	0.200	-12.46547	20.00000	Averaged	
45 Benzo(k)fluoranthene	1.57904	1.16913	0.200	-25.95931	20.00000	Averaged	<- ok
46 Benzo(j)fluoranthene	1.43839	1.09316	0.200	-24.00145	20.00000	Averaged	<- ok
34 Benzo(a)pyrene	1.30774	1.10745	0.010	-15.31574	20.00000	Averaged	
$ 36 Dibenzo(a,h)anthracene-d14	0.80723	0.77966	0.010	-3.41604	20.00000	Averaged	
37 Indeno(1,2,3-cd)pyrene	1.37309	1.23211	0.010	-10.26727	20.00000	Averaged	
38 Dibenzo(a,h)anthracene	1.08579	1.01780	0.010	-6.26235	20.00000	Averaged	
39 Benzo(g,h,i)perylene	1.19199	1.04962	0.010	-11.94336	20.00000	Averaged	
47 Perylene	1.35582	1.10544	0.200	-18.46728	20.00000	Averaged	
48 Benzo(e)pyrene	1.36945	1.07298	0.200	-21.64831	20.00000	Averaged	<- ok

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012222.D
Lab Smp Id: LL SIM CCV
Inj Date : 22-JAN-2016 18:00 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : LL SIM CCV
Misc Info :
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:47 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 16 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

SW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	6.734	6.734	(1.000)	368312	200.000	
	5 Naphthalene	128	6.776	6.776	(1.006)	465832	250.000	219
$	6 2-Methylnaphthalene-d10	152	7.711	7.711	(1.145)	320173	250.000	234
	7 2-Methylnaphthalene	142	7.774	7.774	(1.154)	344310	250.000	236
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	313232	250.000	238
	10 Acenaphthylene	152	9.589	9.589	(0.984)	531481	250.000	239
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	275119	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.007)	324719	250.000	220
	14 Dibenzofuran	168	10.010	10.010	(1.027)	486119	250.000	219
	15 Fluorene	166	10.630	10.630	(1.091)	389673	250.000	234
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	442913	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	556304	250.000	208
	20 Anthracene	178	12.523	12.523	(1.008)	567655	250.000	238
$	23 Fluoranthene-d10	212	14.519	14.519	(1.169)	547160	250.000	225
	24 Fluoranthene	202	14.557	14.557	(1.172)	584973	250.000	218
	25 Pyrene	202	15.057	15.057	(0.877)	596741	250.000	223
	28 Benzo(a)anthracene	228	17.067	17.067	(0.994)	508445	250.000	226
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	337848	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	505142	250.000	204
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	480681	250.000	219
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	473791	250.000	185

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
	46 Benzo(j)fluoranthene	252	19.083	19.083	(0.951)	443004	250.000	190
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	448796	250.000	212
*	35 Perylene-d12	264	20.063	20.063	(1.000)	324201	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	315957	250.000	241
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	499313	250.000	224
	38 Dibenzo(a,h)anthracene	278	22.640	22.640	(1.128)	412464	250.000	234
	39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	425361	250.000	220
	47 Perylene	252	20.130	20.130	(1.003)	447979	250.000	204
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	434828	250.000	196

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012222.D
Lab Smp Id: LL SIM CCV
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info:

Calibration Date: 22-JAN-2016
Calibration Time: 09:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	368312	12.33
11 Acenaphthene-d10	239179	119590	478358	275119	15.03
18 Phenanthrene-d10	372253	186127	744506	442913	18.98
29 Chrysene-d12	294711	147356	589422	337848	14.64
35 Perylene-d12	260595	130298	521190	324201	24.41

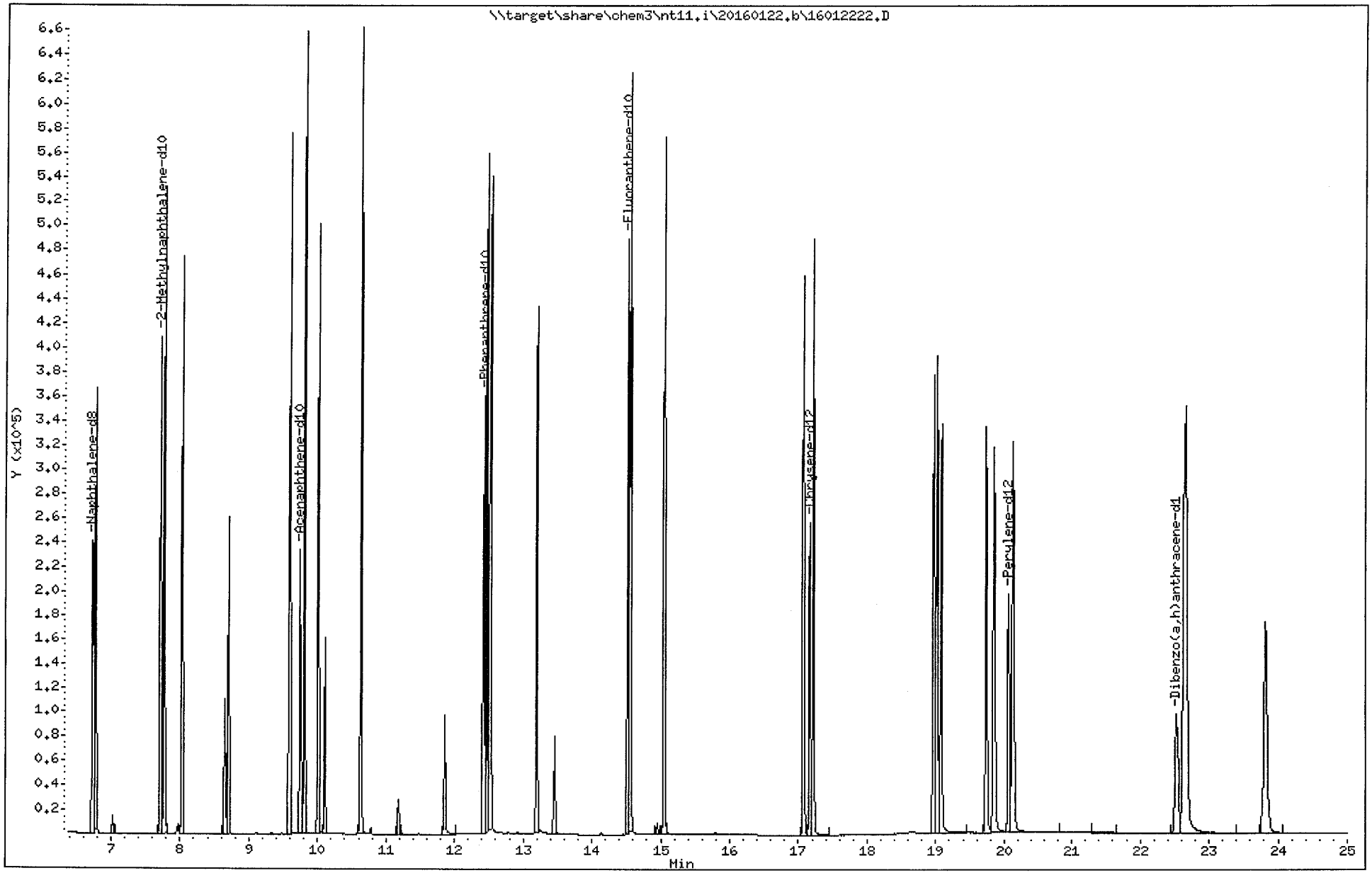
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.73	6.23	7.23	6.73	0.00
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	0.00

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.

Data File: \\target\share\chem3\nt11.i\20160122.b\16012222.D
Date : 22-JAN-2016 18:00
Client ID:
Sample Info: LL SIM CCV
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012222.D

Lab ID: LL SIM CCV
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 18:00

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012207.D
Lab Smp Id: APR4MBS1 Client Smp ID: APR4MBS1
Inj Date : 22-JAN-2016 10:27 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : APR4MBS1
Misc Info : 15-20439
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	368895	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	192954	140.919	7050
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	251480	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	405369	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	409079	183.503	9180
	24 Fluoranthene	202	Compound Not Detected.					
	25 Pyrene	202	Compound Not Detected.					
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	295936	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
46	Benzo(j)fluoranthene	252	Compound Not Detected.					
34	Benzo(a)pyrene	252	Compound Not Detected.					
* 35	Perylene-d12	264	20.063	20.062	(1.000)	283292	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	225250	196.998	9850
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	Compound Not Detected.					
47	Perylene	252	Compound Not Detected.					
48	Benzo(e)pyrene	252	Compound Not Detected.					

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012207.D
Lab Smp Id: APR4MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: APR4MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	368895	12.50
11 Acenaphthene-d10	239179	119590	478358	251480	5.14
18 Phenanthrene-d10	372253	186127	744506	405369	8.90
29 Chrysene-d12	294711	147356	589422	295936	0.42
35 Perylene-d12	260595	130298	521190	283292	8.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.15
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: APR4MBS1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

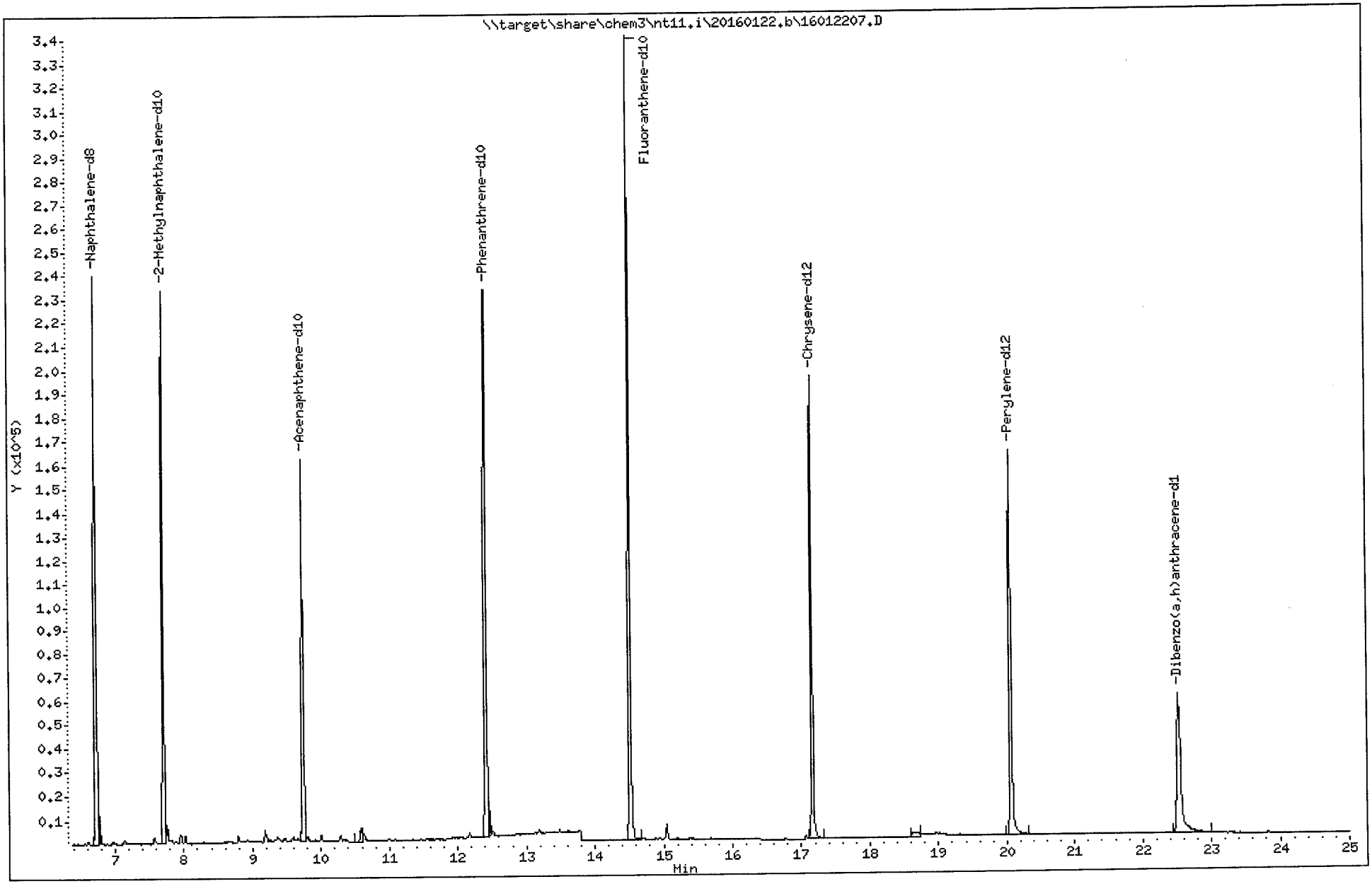
Client SDG: APR4
Fraction: SV
Client Smp ID: APR4MBS1
Operator: JW
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7050	46.97	30-160
$ 23 Fluoranthene-d10	15000	9180	61.17	30-160
$ 36 Dibenzo(a,h)anthra	15000	9850	65.67	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012207.D
Date : 22-JAN-2016 10:27
Client ID: APR4MBS1
Sample Info: APR4MBS1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012207.D

Lab ID: APR4MBS1
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 10:27

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012208.D
Lab Smp Id: APR4LCSS1 Client Smp ID: APR4LCSS1
Inj Date : 22-JAN-2016 10:57 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : APR4LCSS1
Misc Info : 15-20439
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	360526	200.000	
	5 Naphthalene	128	6.765	6.776	(1.005)	319931	153.631	7680
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	192117	143.565	7180
	7 2-Methylnaphthalene	142	7.763	7.774	(1.153)	227764	159.180	7960
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	202850	157.312	7870
	10 Acenaphthylene	152	9.589	9.589	(0.984)	306764	147.578	7380
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	257556	200.000	
	12 Acenaphthene	153	9.800	9.811	(1.006)	214202	155.256	7760
	14 Dibenzofuran	168	10.010	10.010	(1.027)	330618	159.074	7950
	15 Fluorene	166	10.630	10.630	(1.091)	270755	173.702	8690
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	412183	200.000	
	19 Phenanthrene	178	12.457	12.468	(1.003)	424716	171.027	8550
	20 Anthracene	178	12.512	12.523	(1.007)	376504	169.380	8470
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	417313	184.102	9210
	24 Fluoranthene	202	14.557	14.557	(1.172)	471193	188.988	9450
	25 Pyrene	202	15.047	15.057	(0.877)	481761	193.411	9670
	28 Benzo(a)anthracene	228	17.067	17.075	(0.994)	419082	199.844	9990
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	314530	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	430198	186.914	9350
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	387411	186.459	9320
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	408726	168.813	8440

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	378018	171.395	8570
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	338391	168.757	8440
*	35 Perylene-d12	264	20.063	20.062	(1.000)	306666	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	238624	192.788	9640
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	416120	197.645	9880
	38 Dibenzo(a,h)anthracene	278	22.640	22.651	(1.128)	338705	203.441	10200
	39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	359662	196.783	9840
	47 Perylene	252	20.130	20.130	(1.003)	349791	168.256	8410
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	376360	179.235	8960

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012208.D
Lab Smp Id: APR4LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: APR4LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	360526	9.95
11 Acenaphthene-d10	239179	119590	478358	257556	7.68
18 Phenanthrene-d10	372253	186127	744506	412183	10.73
29 Chrysene-d12	294711	147356	589422	314530	6.72
35 Perylene-d12	260595	130298	521190	306666	17.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.15
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: APR4LCSS1
Level: LOW
Data Type: MS DATA
SpikeList File: PEMDTISS.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 15-20439

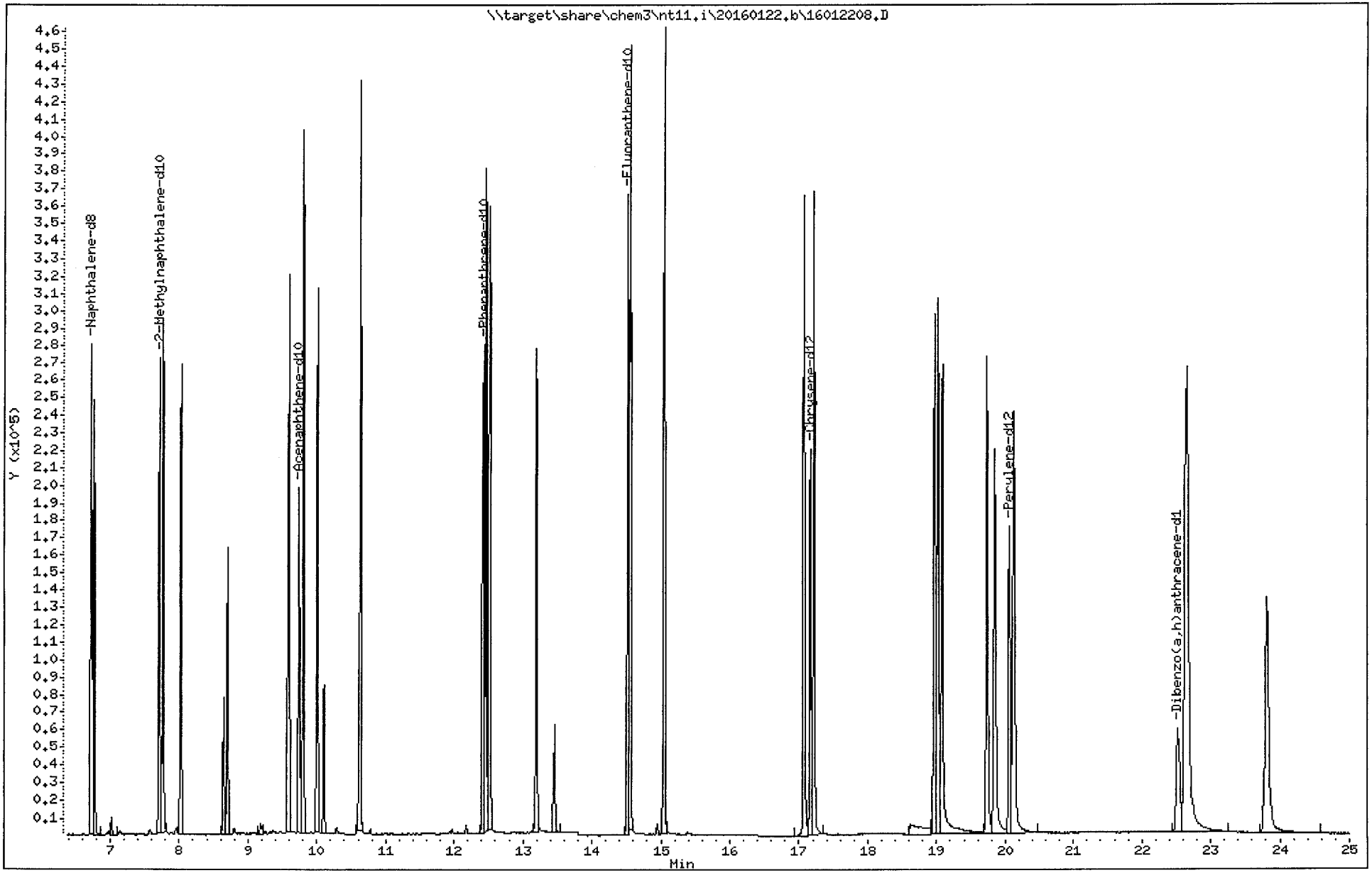
Client SDG: APR4
Fraction: SV
Client Smp ID: APR4LCSS1
Operator: JW
SampleType: LCS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
5	Naphthalene	15000	7680	51.21	30-160
7	2-Methylnaphthalen	15000	7960	53.06	30-160
10	Acenaphthylene	15000	7380	49.19	30-160
12	Acenaphthene	15000	7760	51.75	30-160
15	Fluorene	15000	8690	57.90	30-160
19	Phenanthrene	15000	8550	57.01	30-160
20	Anthracene	15000	8470	56.46	30-160
24	Fluoranthene	15000	9450	63.00	30-160
25	Pyrene	15000	9670	64.47	30-160
28	Benzo(a)anthracene	15000	9990	66.61	30-160
30	Chrysene	15000	9350	62.30	30-160
44	Benzo(b)fluoranthe	15000	9320	62.15	30-160
45	Benzo(k)fluoranthe	15000	8440	56.27	30-160
34	Benzo(a)pyrene	15000	8440	56.25	30-160
37	Indeno(1,2,3-cd)py	15000	9880	65.88	30-160
38	Dibenzo(a,h)anthra	15000	10200	67.81	30-160
39	Benzo(g,h,i)peryle	15000	9840	65.59	30-160
47	Perylene	15000	8410	56.09	30-160
48	Benzo(e)pyrene	15000	8960	59.75	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6	2-Methylnaphthalen	15000	7180	47.86	30-160
$ 23	Fluoranthene-d10	15000	9210	61.37	30-160
$ 36	Dibenzo(a,h)anthra	15000	9640	64.26	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012208.D
Date : 22-JAN-2016 10:57
Client ID: APR4LCSS1
Sample Info: APR4LCSS1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012208.D

Lab ID: APR4LCSS1
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 10:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012211.D
Lab Smp Id: ATS0A Client Smp ID: PG-SMA2-2-MUS-COC-1
Inj Date : 22-JAN-2016 12:28 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0A
Misc Info : 16-135
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.040	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

SO 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	363469	200.000	
	5 Naphthalene	128	6.765	6.776	(1.005)	25398	12.0974	602
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	222682	165.058	8220
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	256352	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	10.630	10.630	(1.091)	20115	12.9653	646
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	419386	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	212897	84.2579	4200
	20 Anthracene	178	12.512	12.523	(1.007)	55873	24.7042	1230
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	457498	198.363	9880
	24 Fluoranthene	202	14.557	14.557	(1.172)	330932	130.452	6500
	25 Pyrene	202	15.057	15.057	(0.877)	245848	100.007	4980
	28 Benzo(a)anthracene	228	17.067	17.075	(0.994)	68056	32.8832	1640
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	310418	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	97622	42.9771	2140
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	63555	30.4444	1520
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	58083	23.8764	1190

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	42395	19.1315	953
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	23699	11.7630	586
*	35 Perylene-d12	264	20.062	20.062	(1.000)	308119	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	270538	217.541	10800
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	47057	22.3044	1110

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012211.D
Lab Smp Id: ATS0A
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-135

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-SMA2-2-MUS-C
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	363469	10.85
11 Acenaphthene-d10	239179	119590	478358	256352	7.18
18 Phenanthrene-d10	372253	186127	744506	419386	12.66
29 Chrysene-d12	294711	147356	589422	310418	5.33
35 Perylene-d12	260595	130298	521190	308119	18.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.16
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

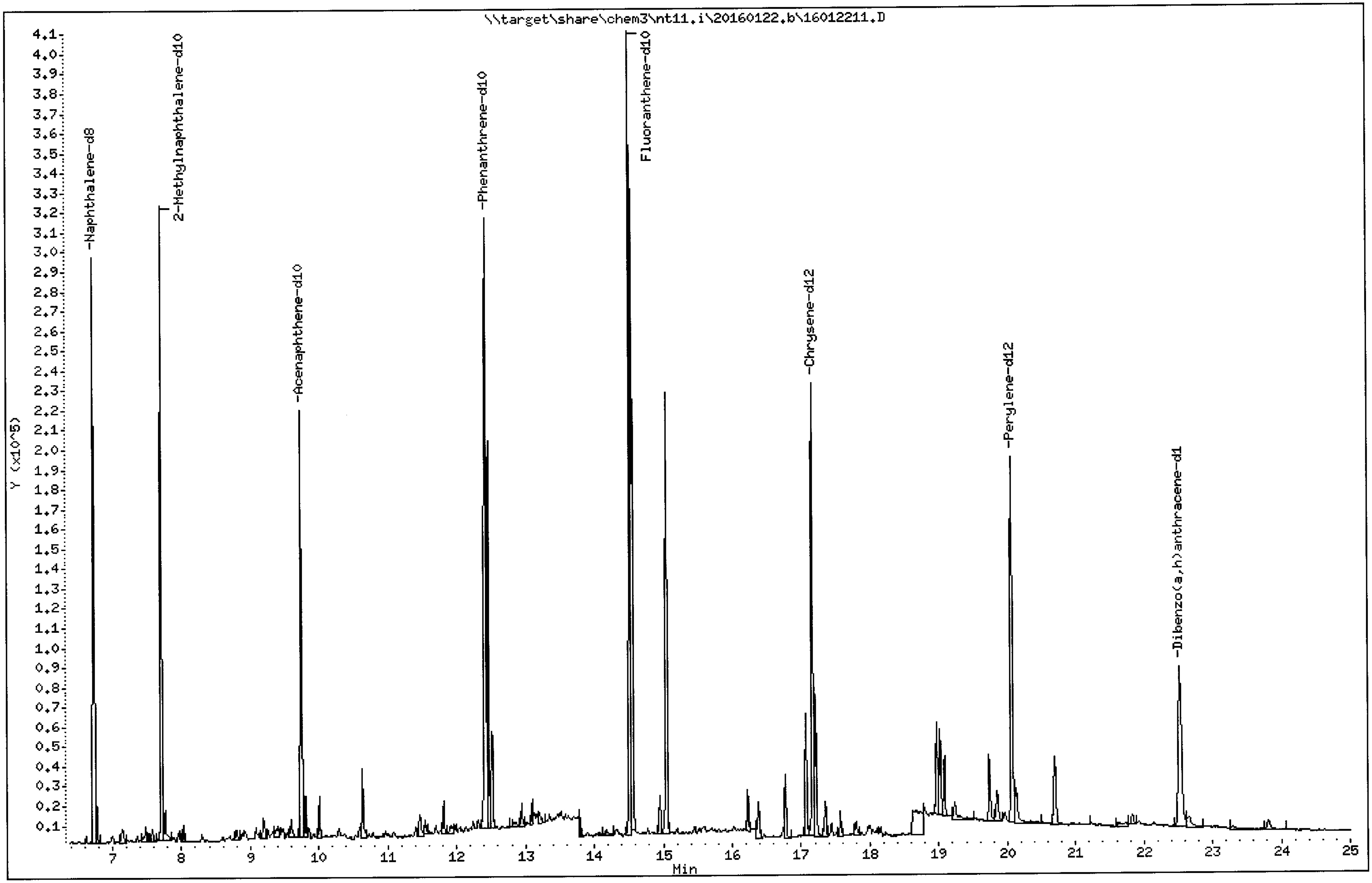
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: ATS0A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-135

Client SDG: ATS0
Fraction: SV
Client Smp ID: PG-SMA2-2-MUS-COC-1
Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	14900	8220	55.02	30-160
$ 23 Fluoranthene-d10	14900	9880	66.12	30-160
$ 36 Dibenzo(a,h)anthra	14900	10800	72.51	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D
Date : 22-JAN-2016 12:28
Client ID: PG-SMA2-2-MUS-COC-1
Sample Info: ATSOA
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



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Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

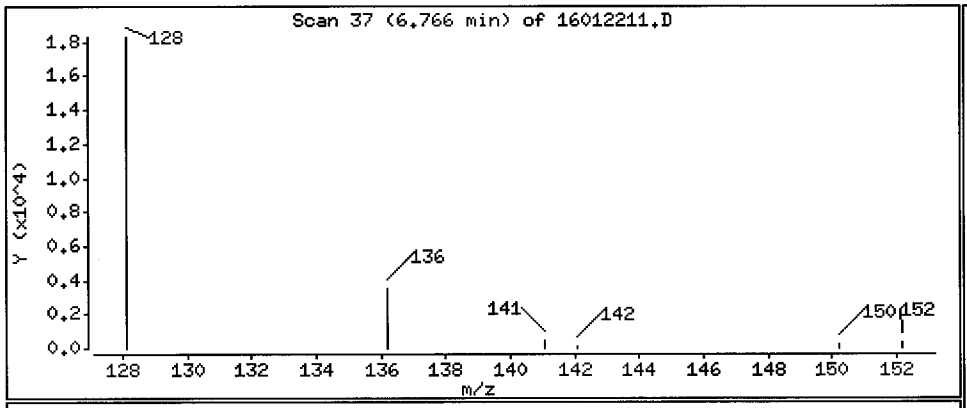
Operator: JW

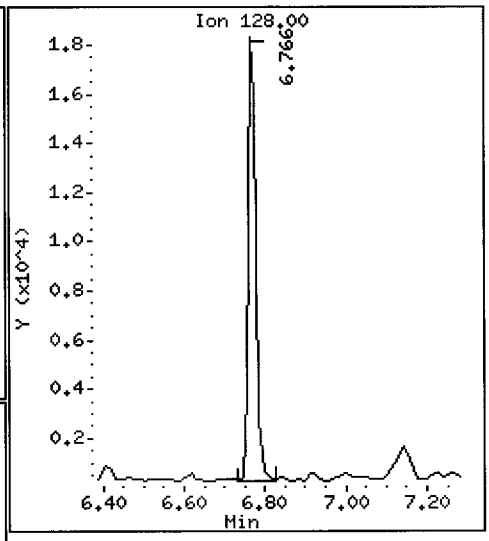
Column phase: Rxi-17Sil MS

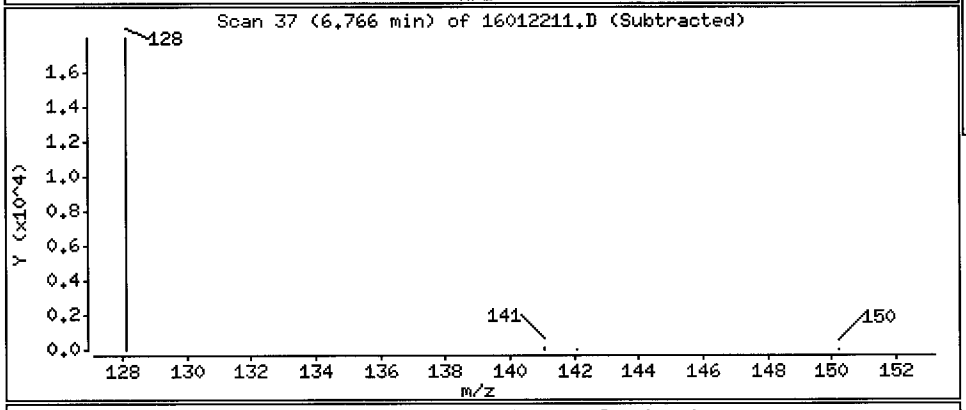
Column diameter: 0.25

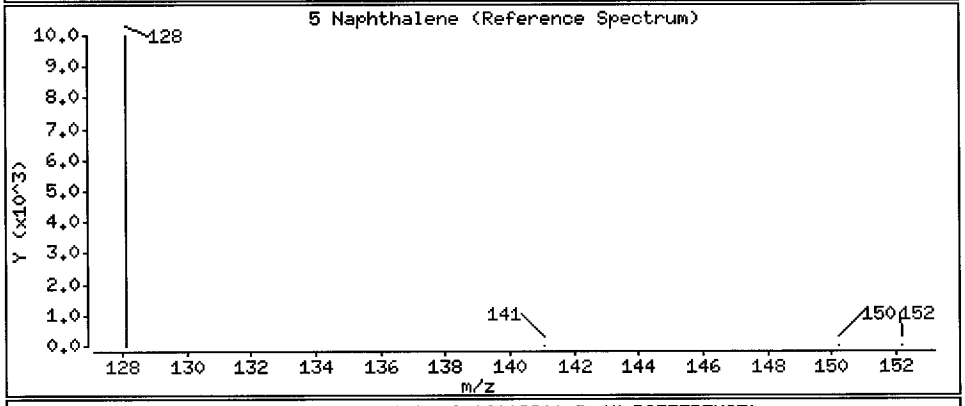
5 Naphthalene

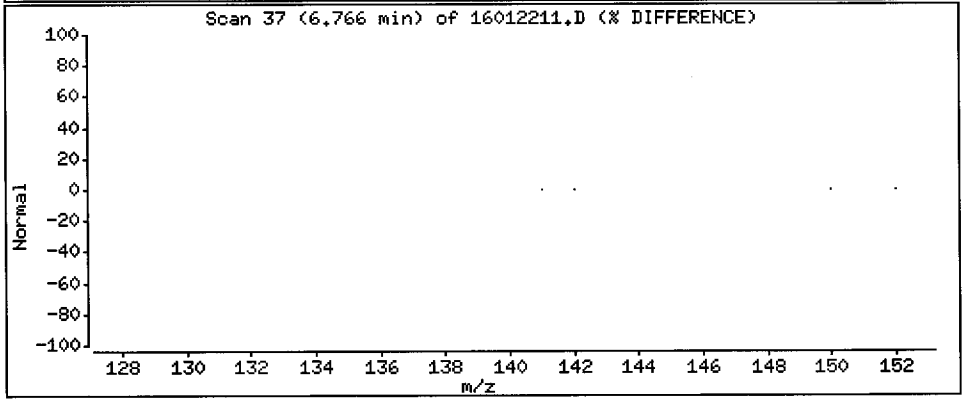
Concentration: 602 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

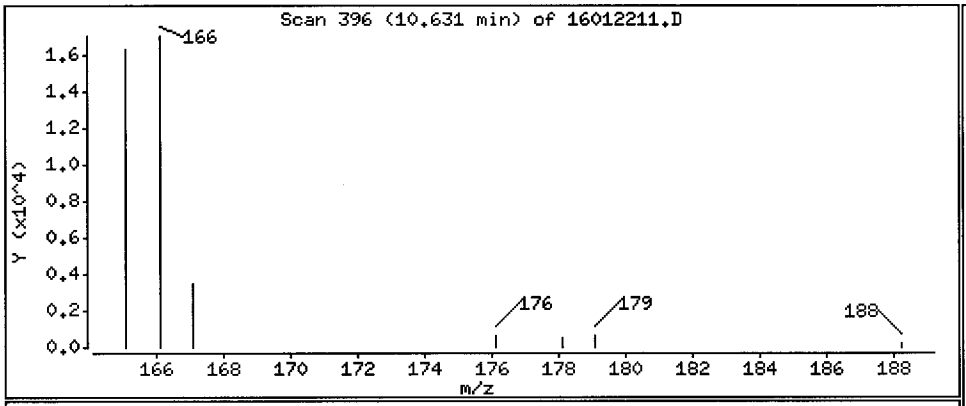
Operator: JW

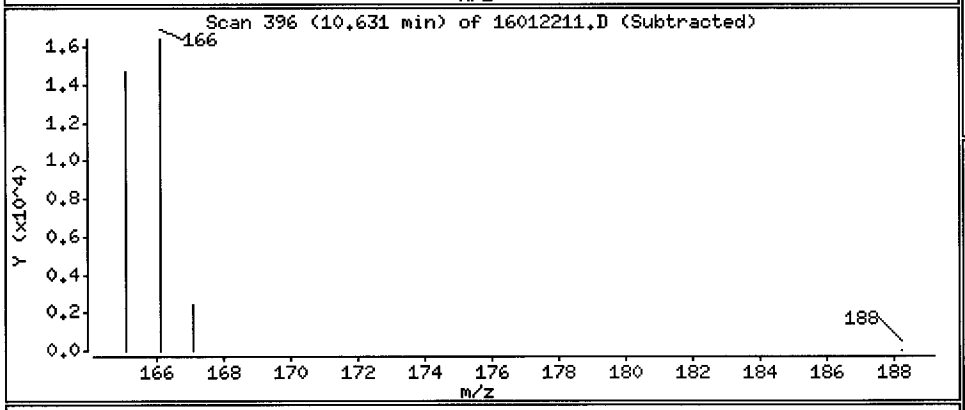
Column phase: Rxi-17Sil MS

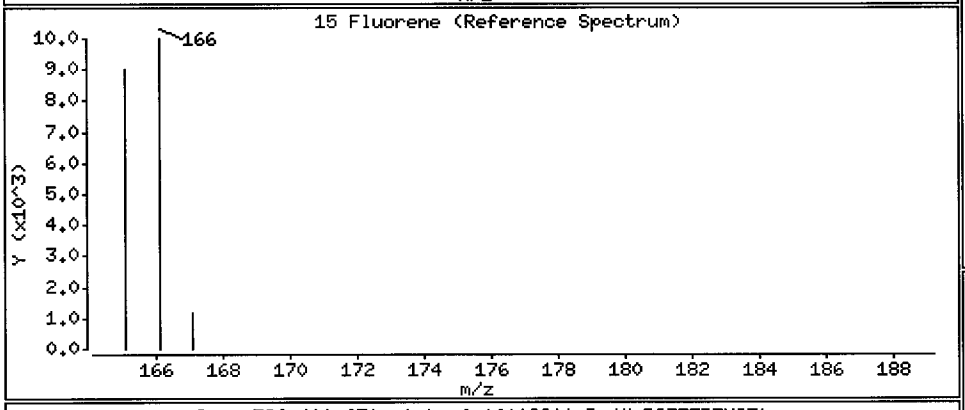
Column diameter: 0.25

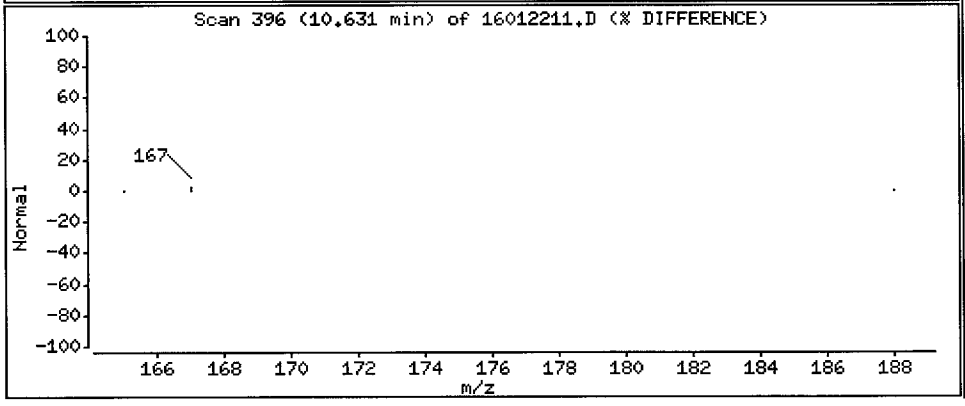
15 Fluorene

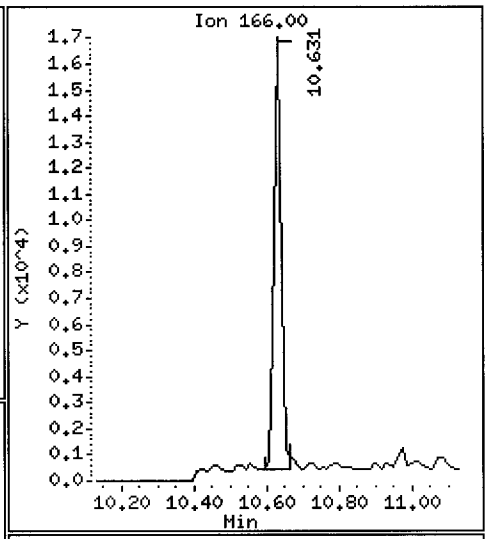
Concentration: 646 ug/kg

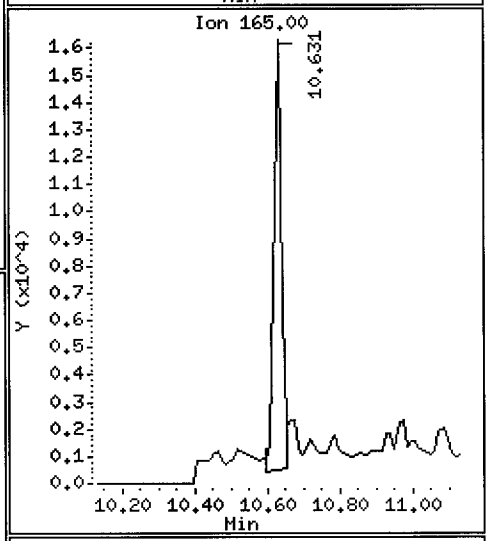


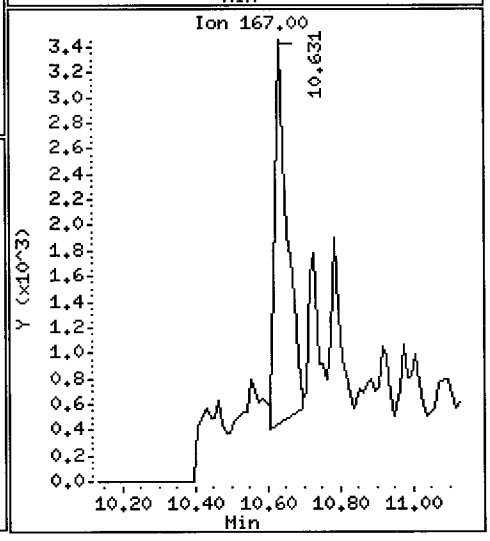












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

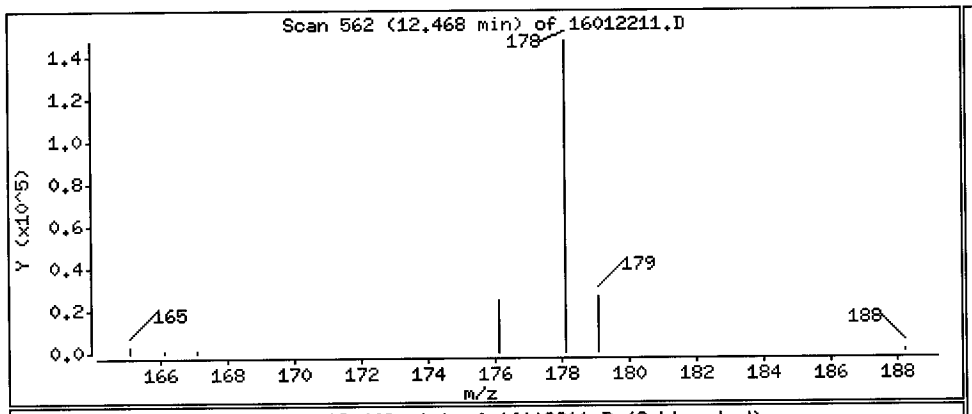
Operator: JW

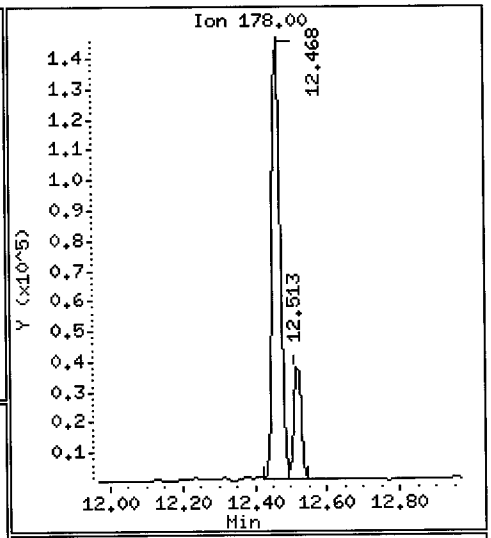
Column phase: Rxi-17Sil MS

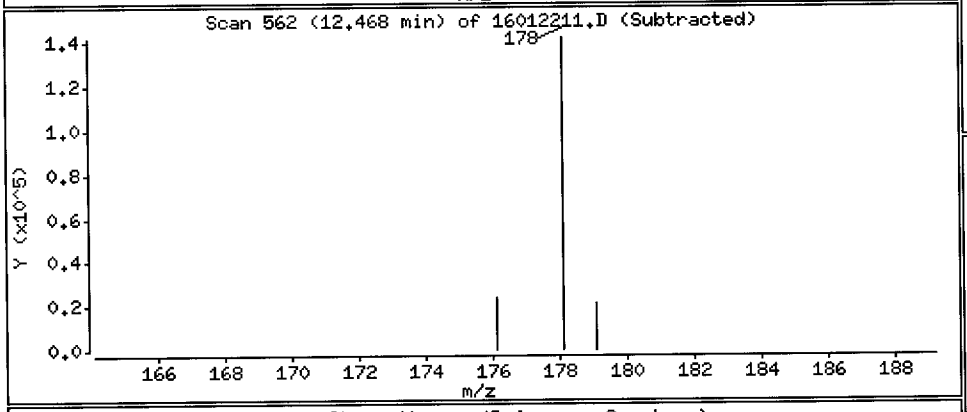
Column diameter: 0.25

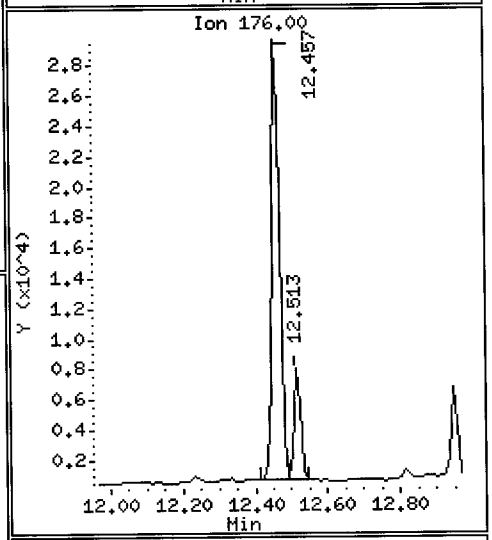
19 Phenanthrene

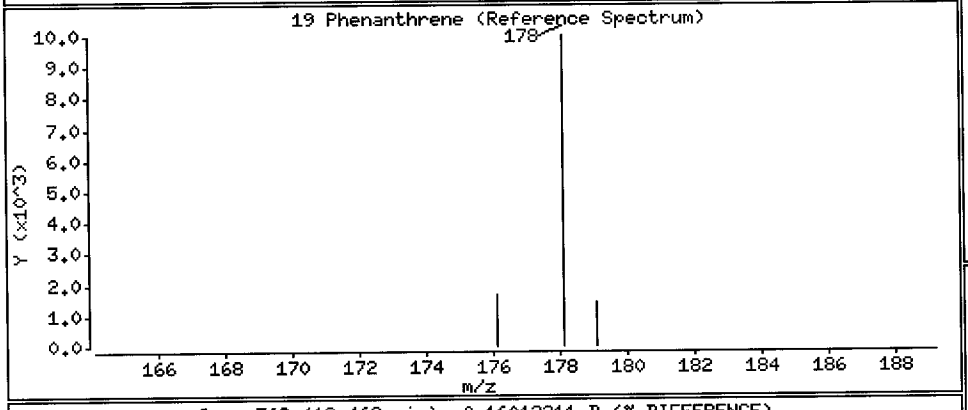
Concentration: 4200 ug/kg

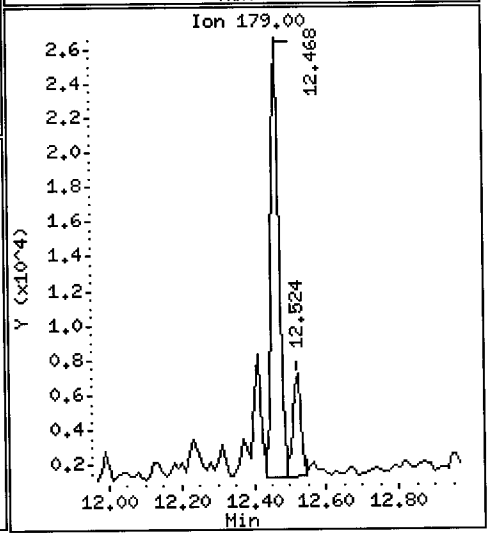


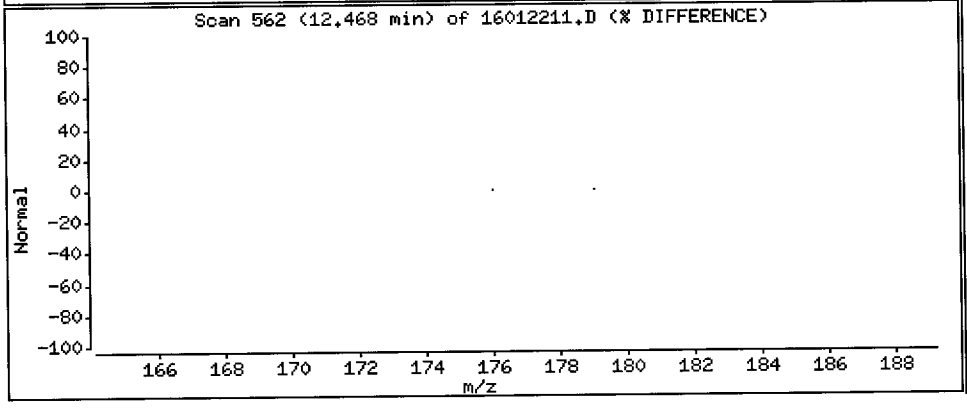












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

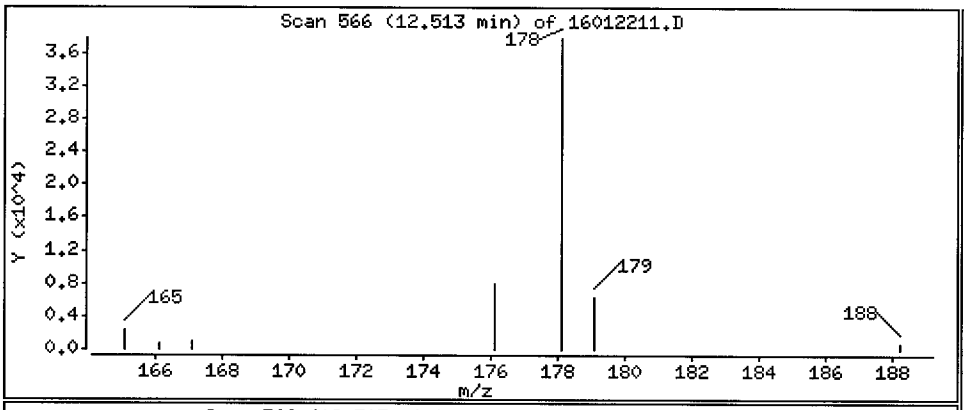
Operator: JW

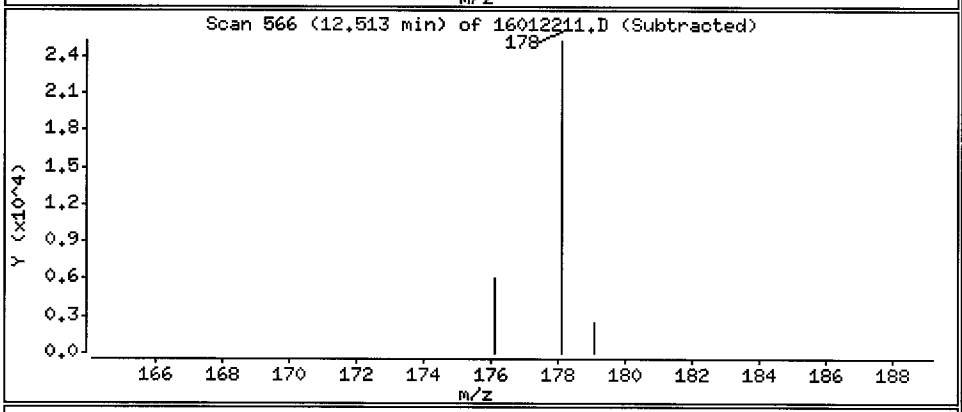
Column phase: Rxi-17Sil MS

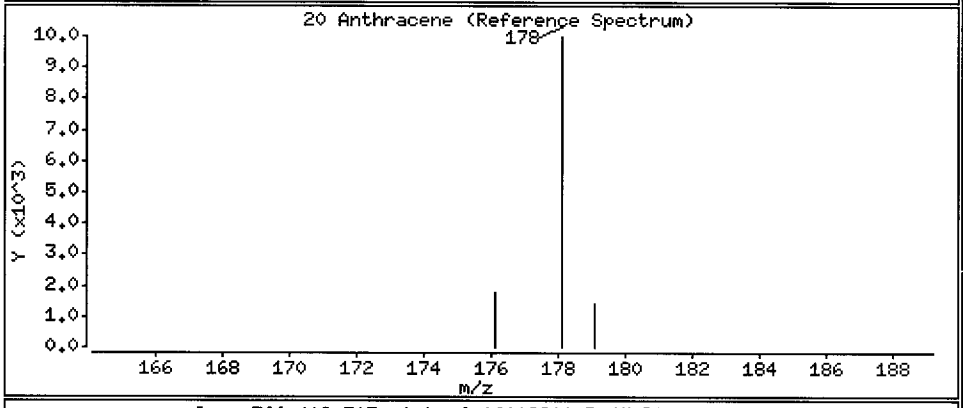
Column diameter: 0.25

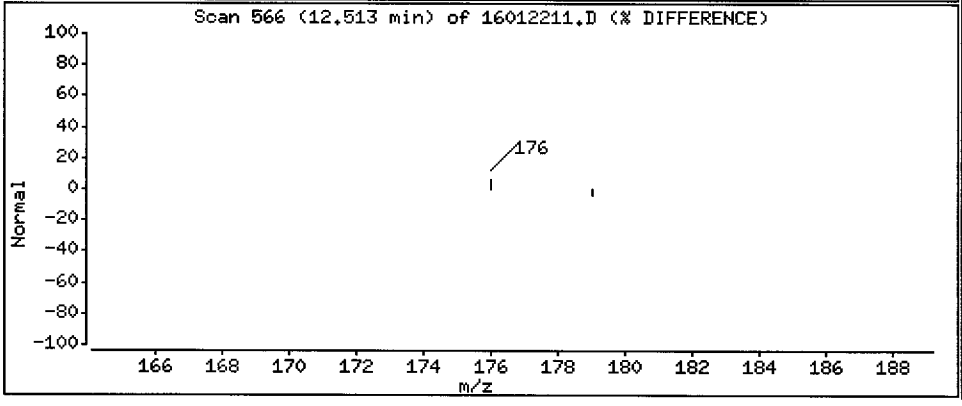
20 Anthracene

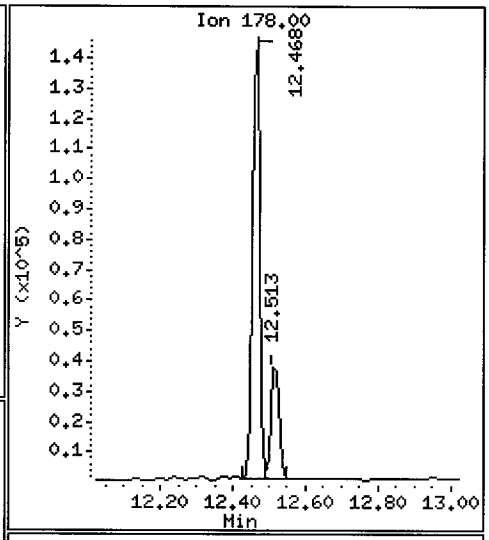
Concentration: 1230 ug/kg

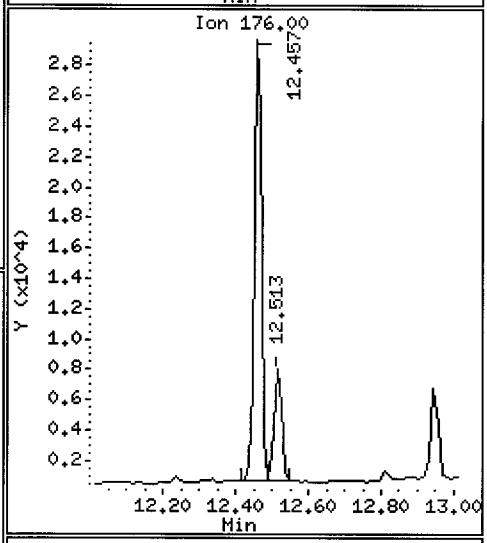


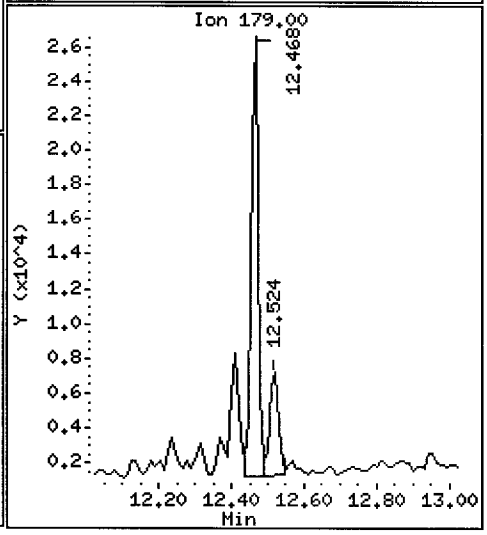












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

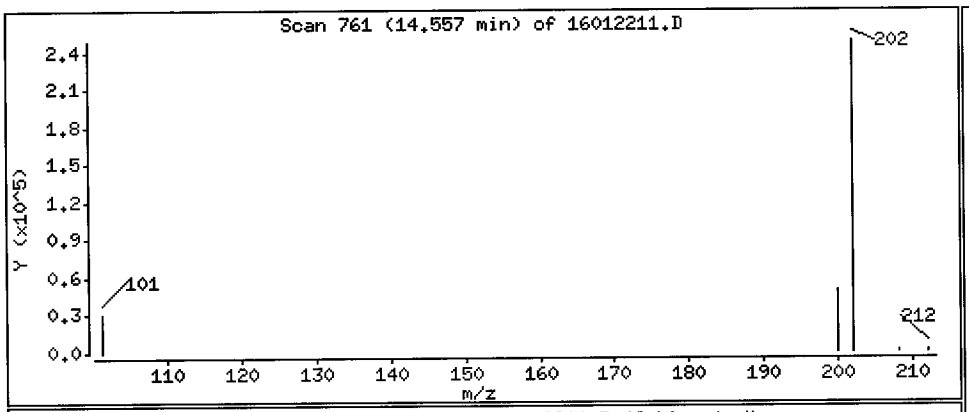
Operator: JW

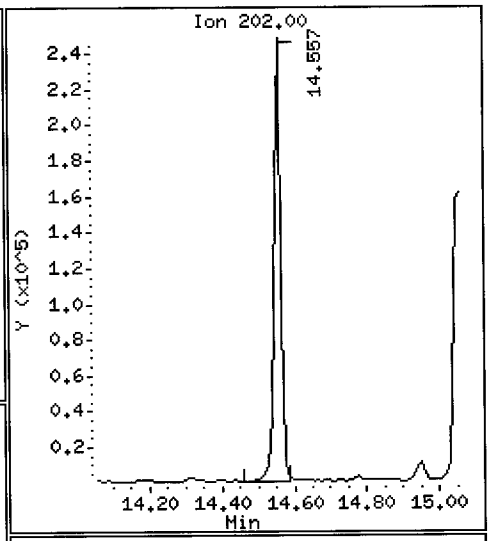
Column phase: Rxi-17Sil MS

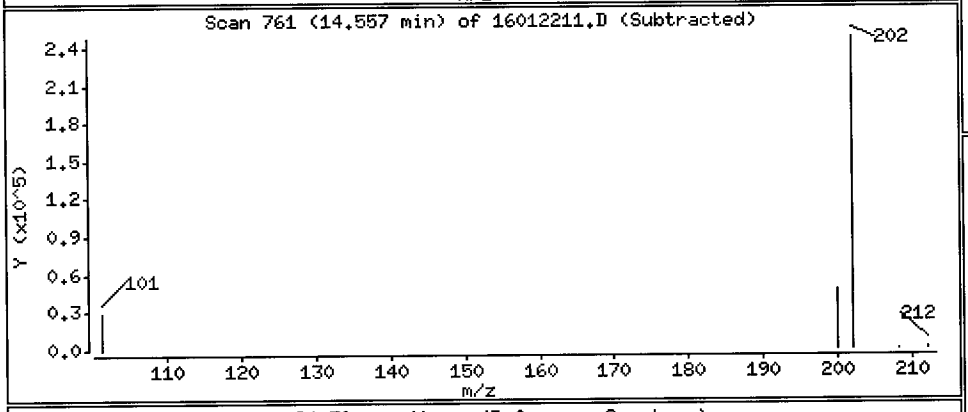
Column diameter: 0.25

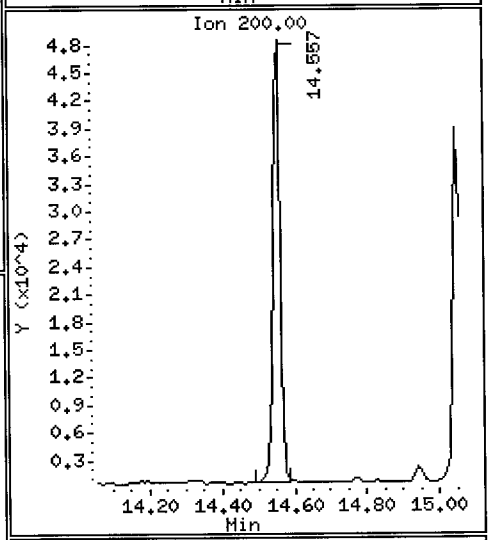
24 Fluoranthene

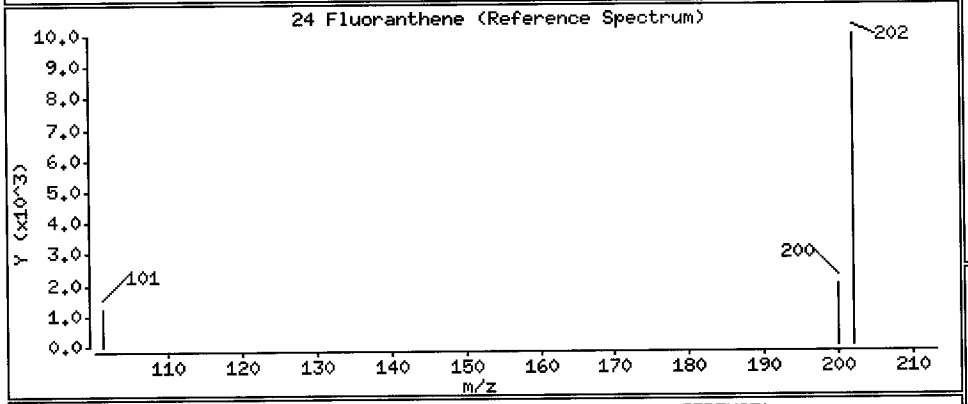
Concentration: 6500 ug/kg

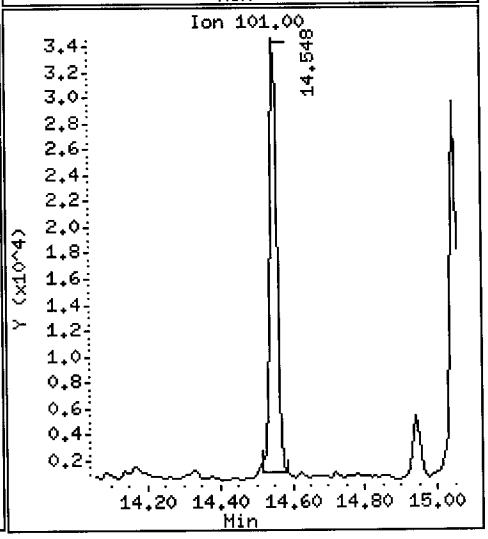


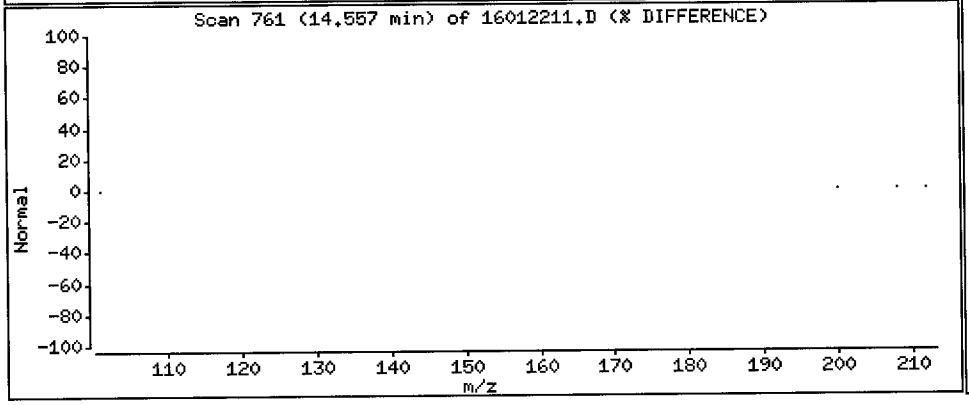












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

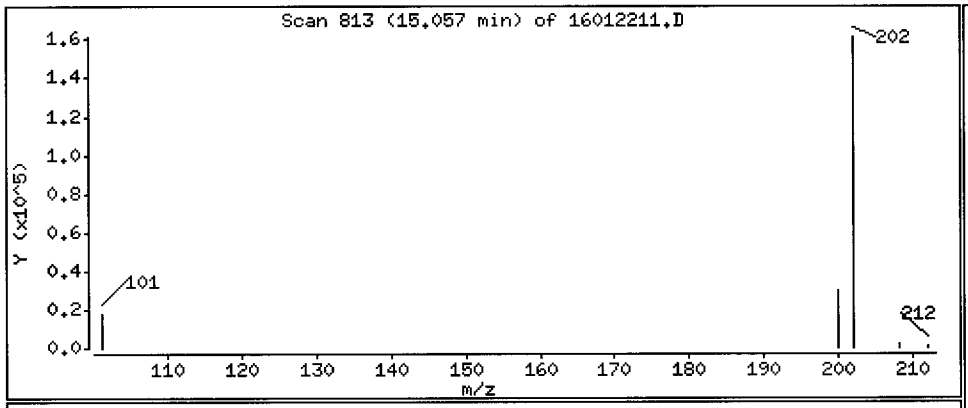
Operator: JW

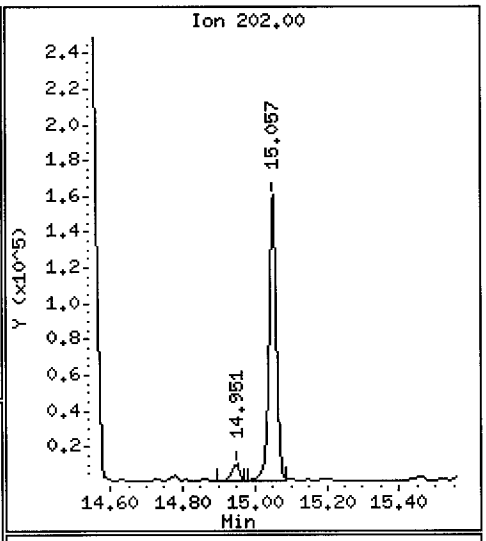
Column phase: Rxi-17Sil MS

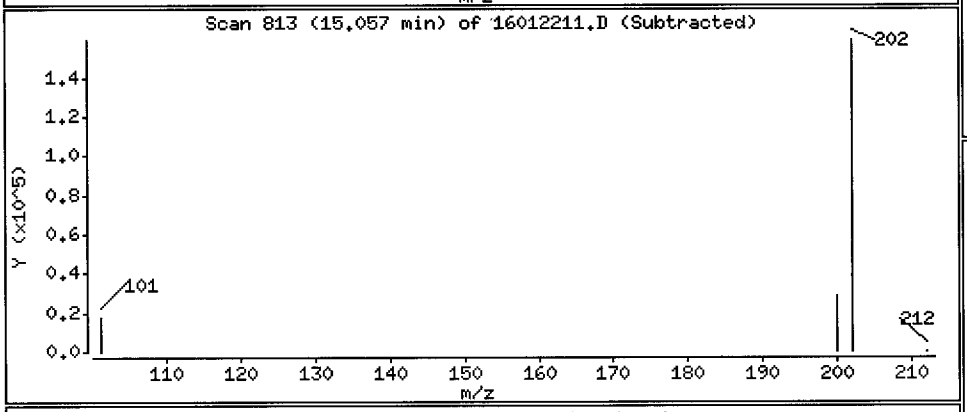
Column diameter: 0.25

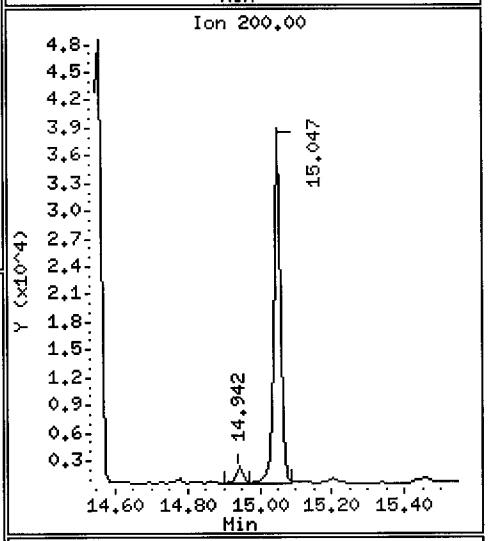
25 Pyrene

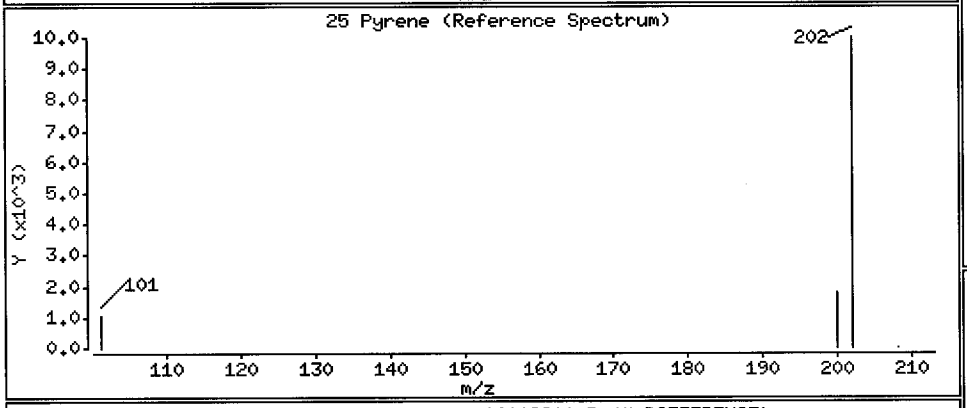
Concentration: 4980 ug/kg

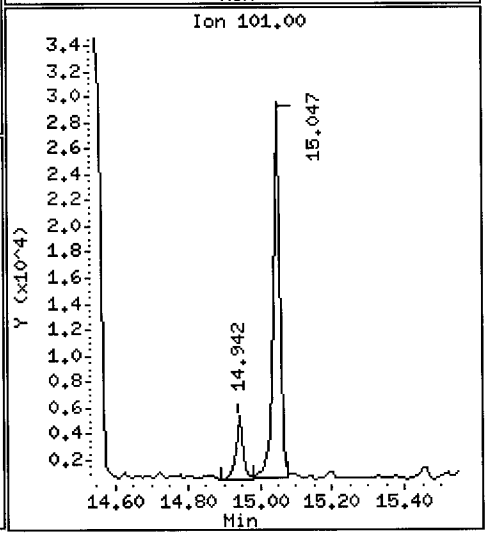


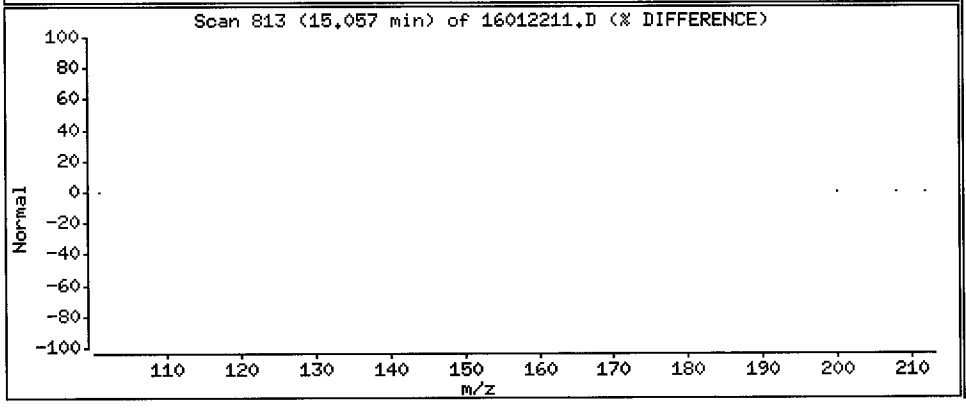












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

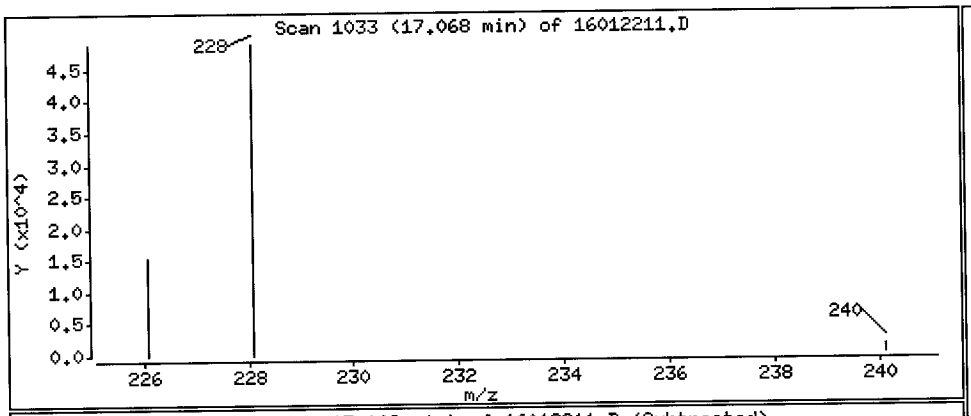
Operator: JW

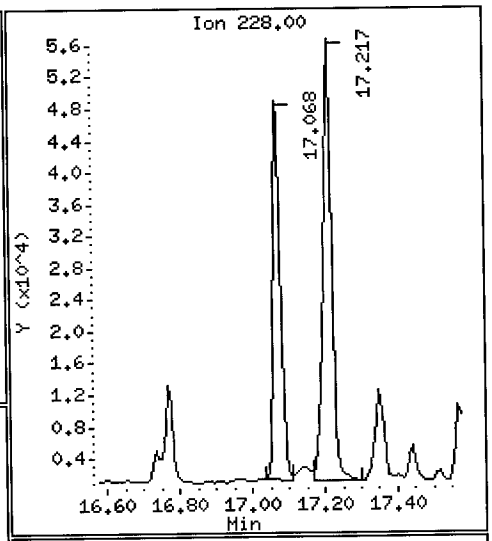
Column phase: Rxi-17Sil MS

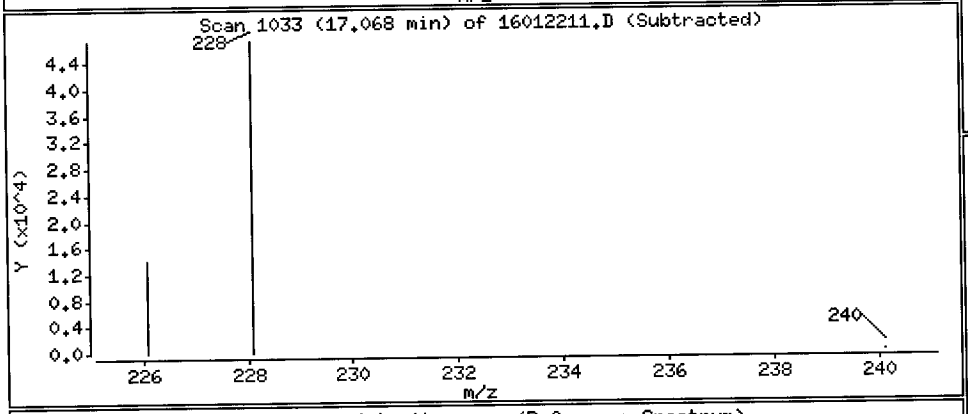
Column diameter: 0.25

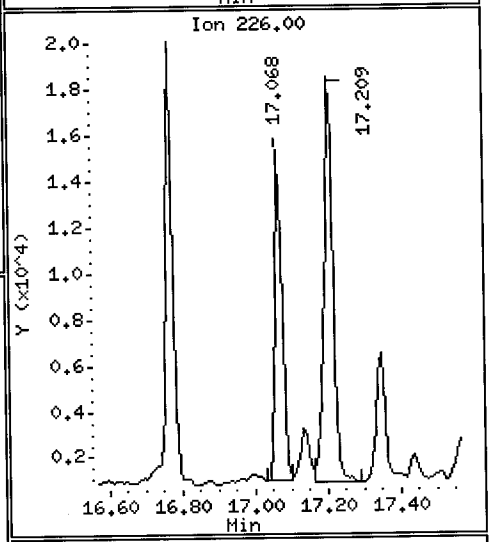
28 Benzo(a)anthracene

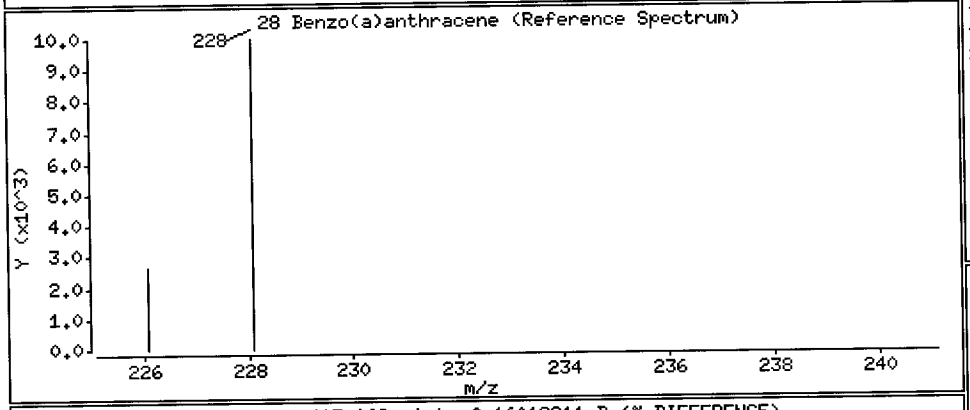
Concentration: 1640 ug/kg

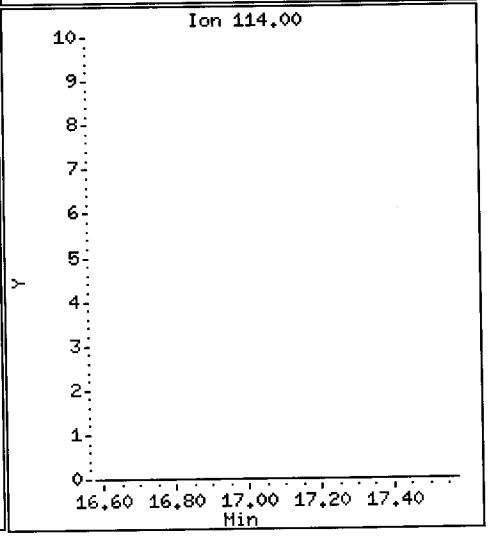


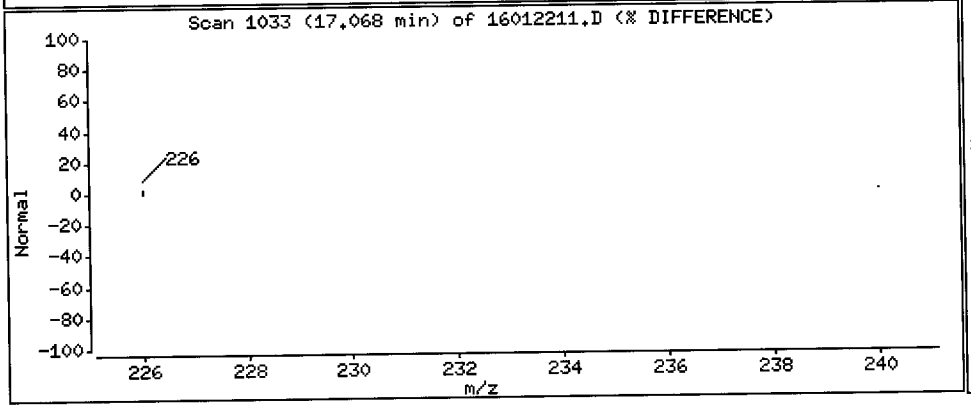












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Date : 22-JAN-2016 12:28

Client ID: PC-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

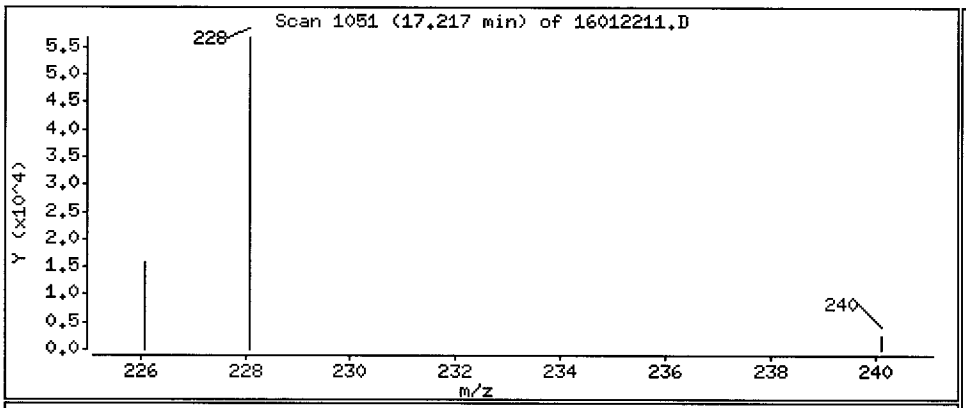
Operator: JW

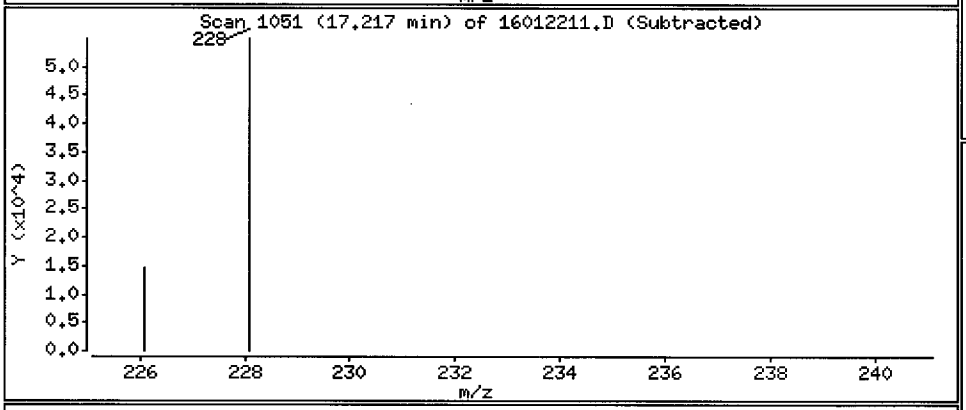
Column phase: Rxi-17Sil MS

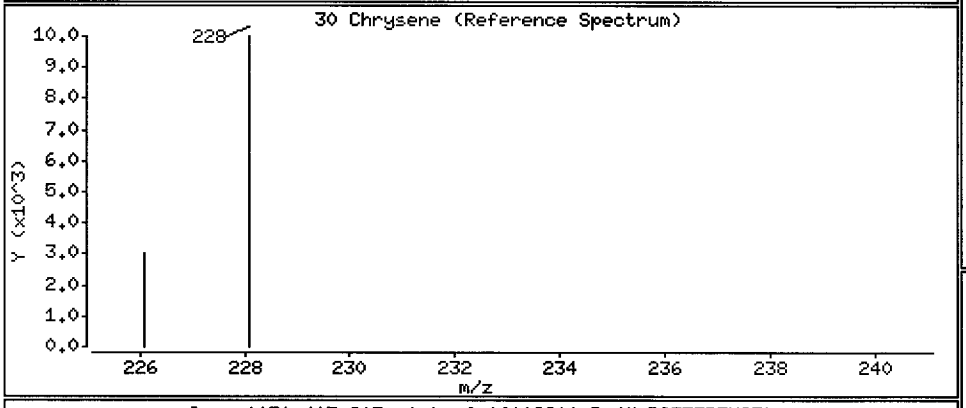
Column diameter: 0.25

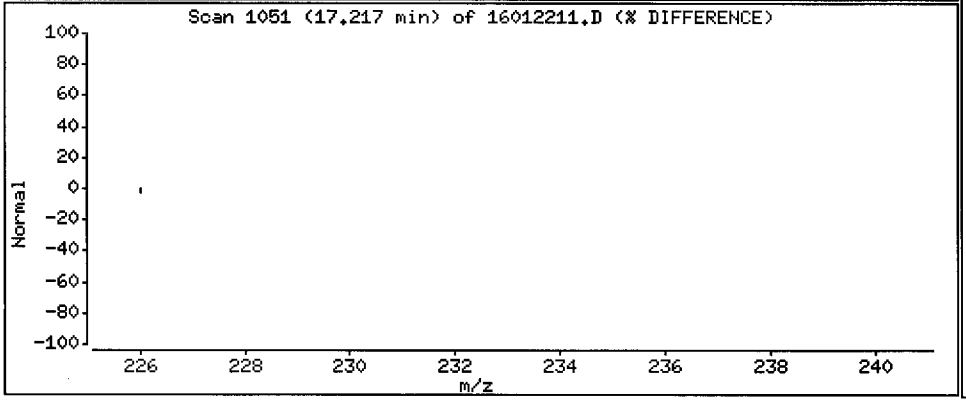
30 Chrysene

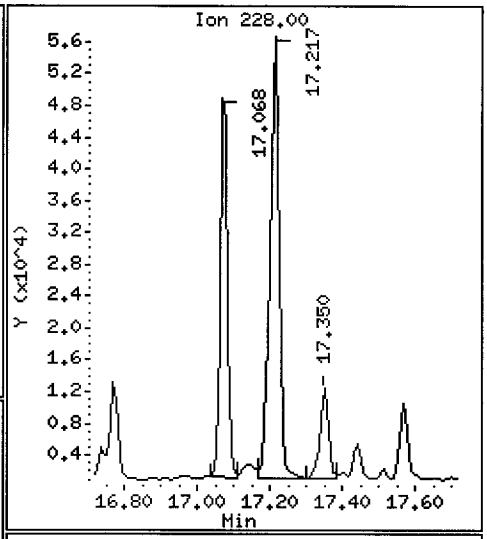
Concentration: 2140 ug/kg

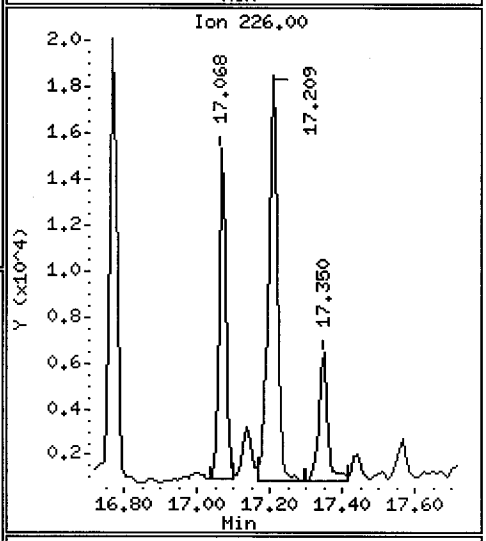


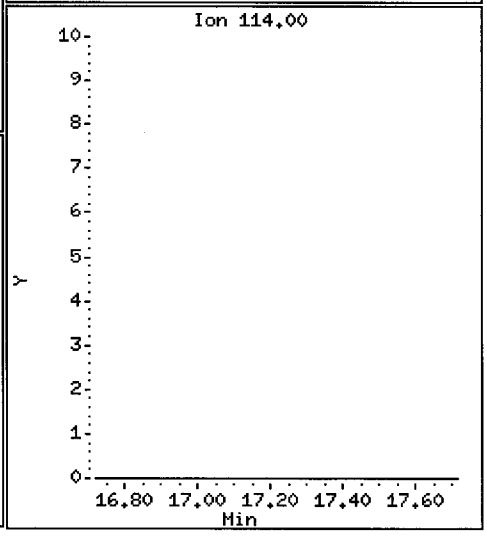












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Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

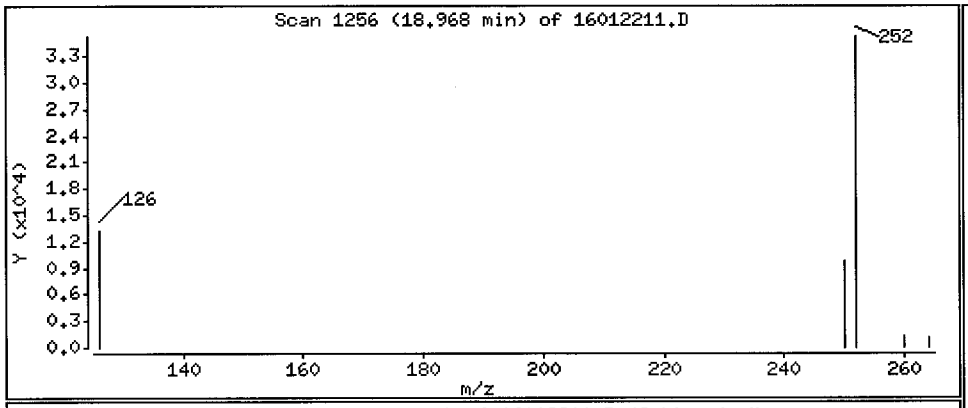
Operator: JW

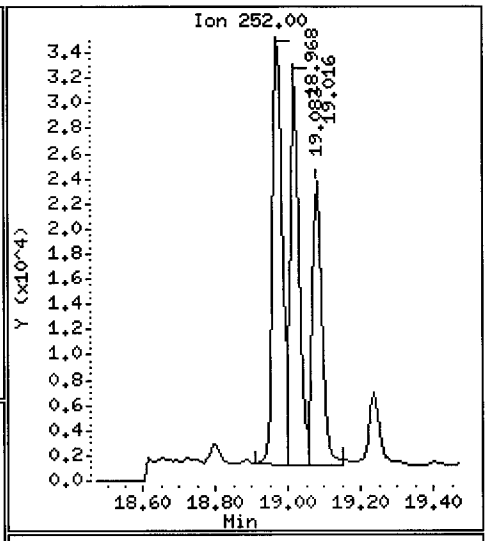
Column phase: Rxi-17Sil MS

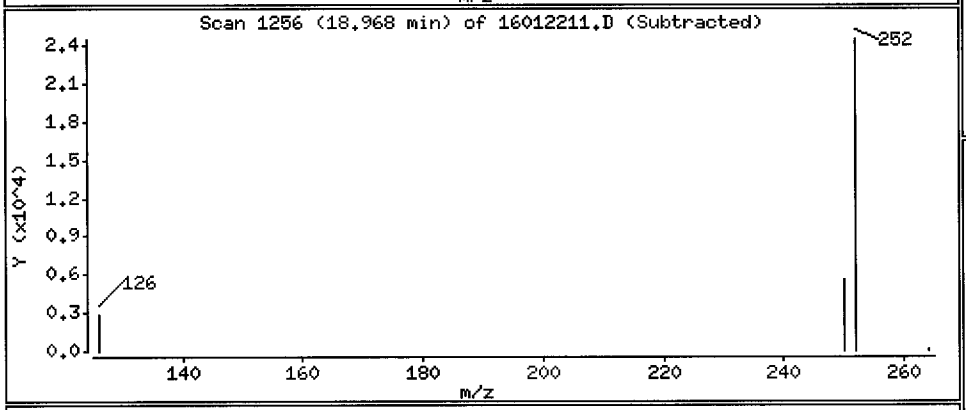
Column diameter: 0.25

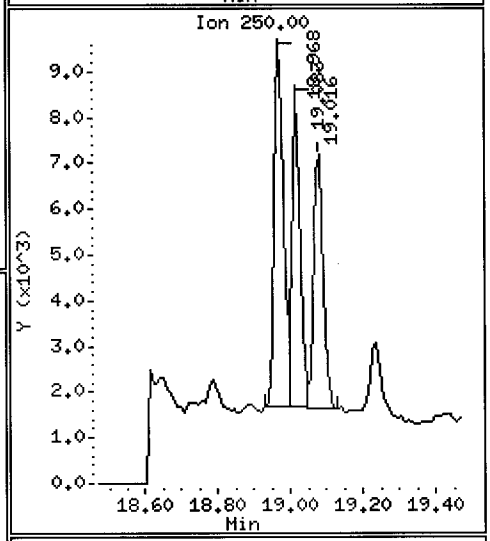
44 Benzo(b)fluoranthene

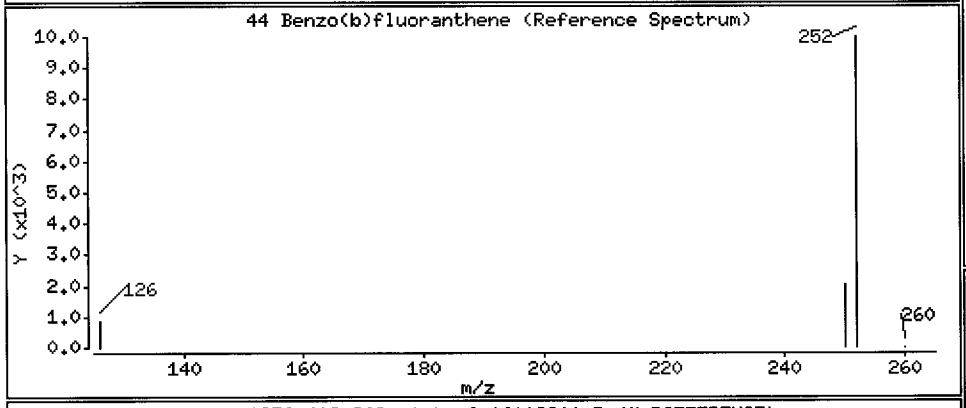
Concentration: 1520 ug/kg

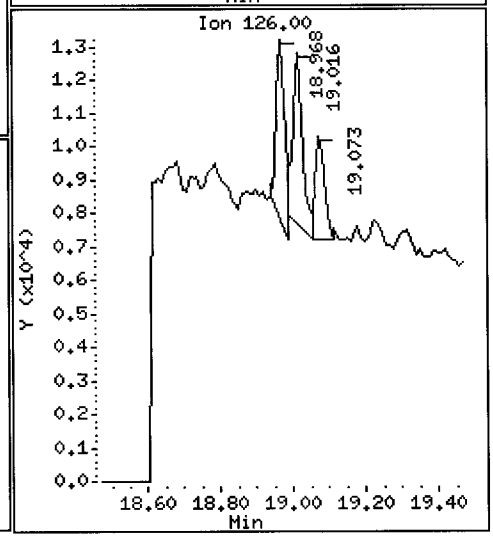


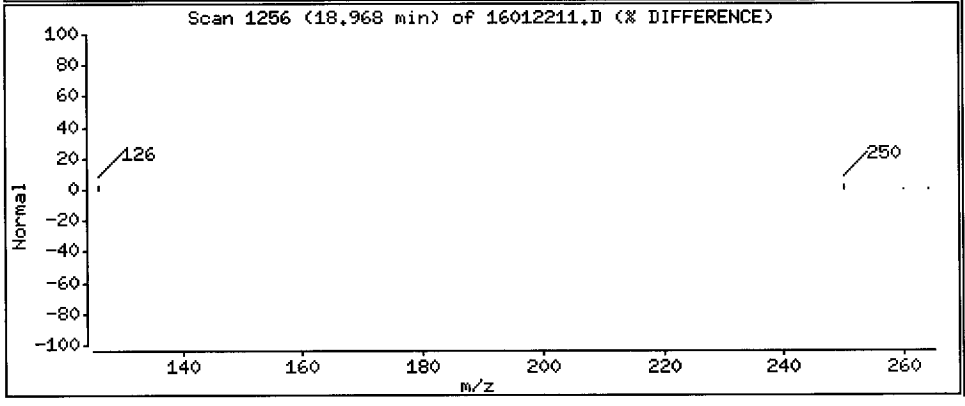












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Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

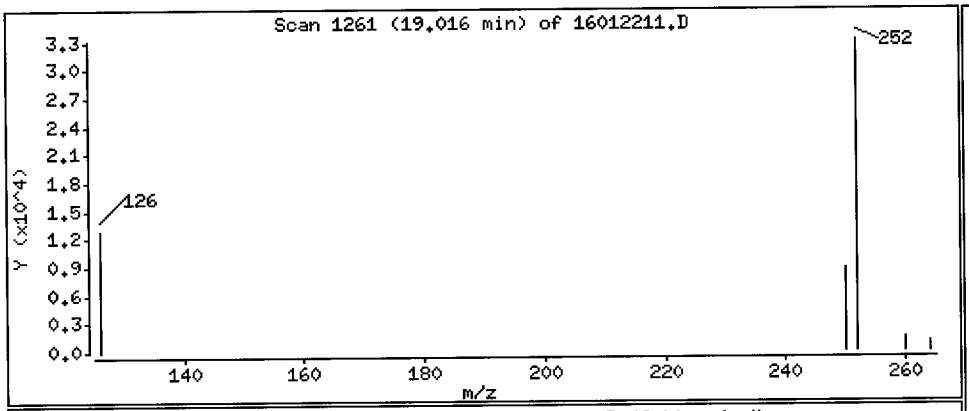
Operator: JW

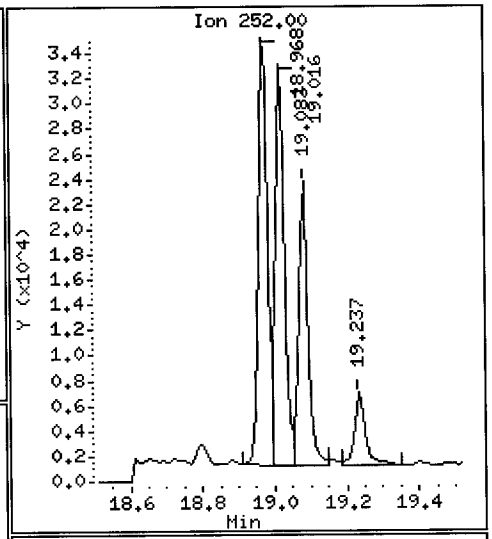
Column phase: Rxi-17Sil MS

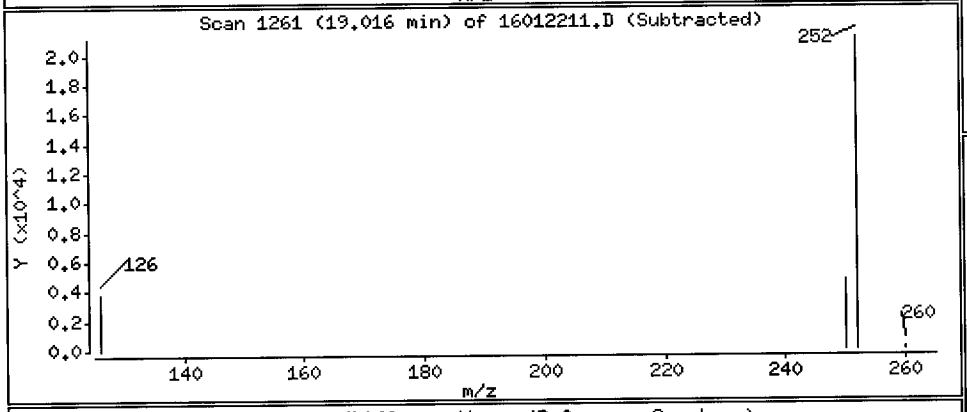
Column diameter: 0.25

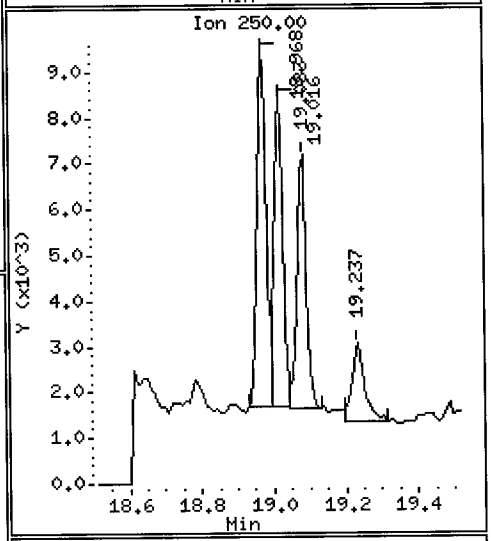
45 Benzo(k)fluoranthene

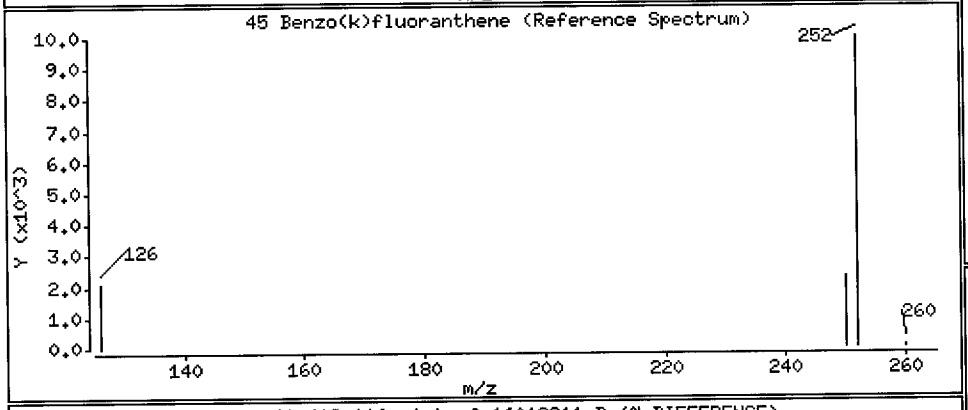
Concentration: 1190 ug/kg

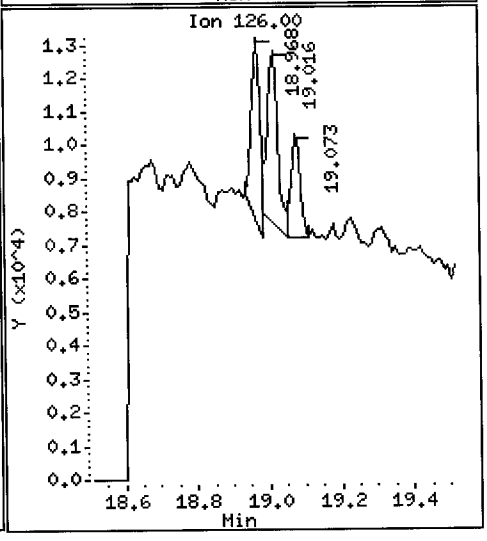


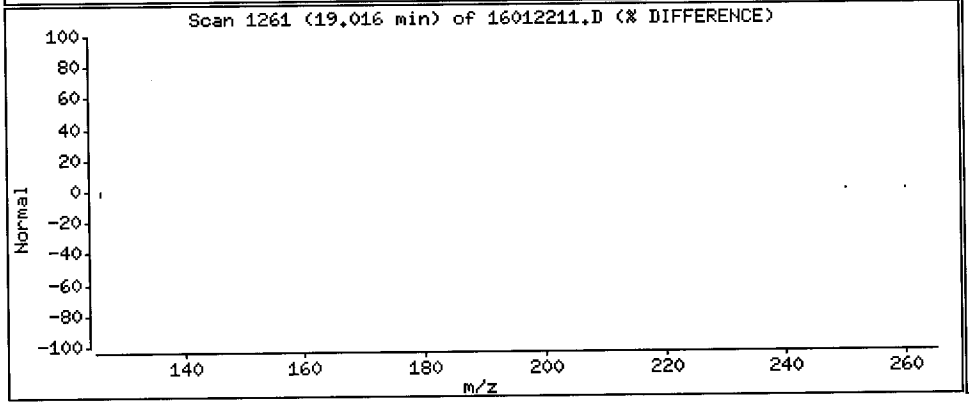












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Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

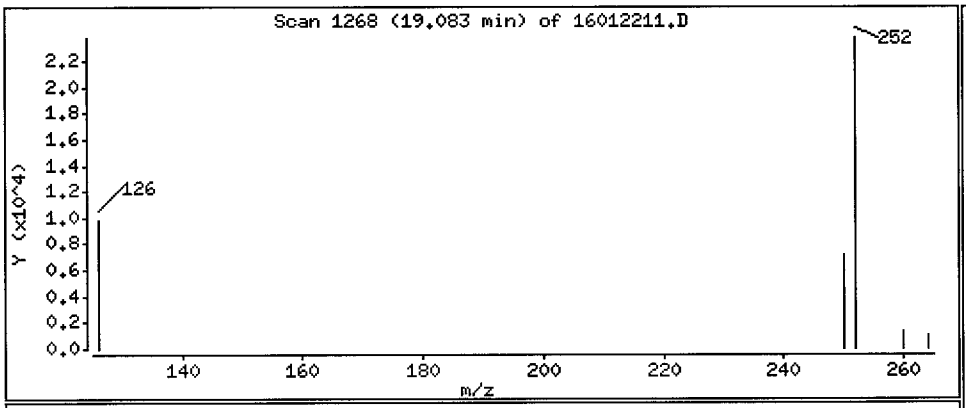
Operator: JW

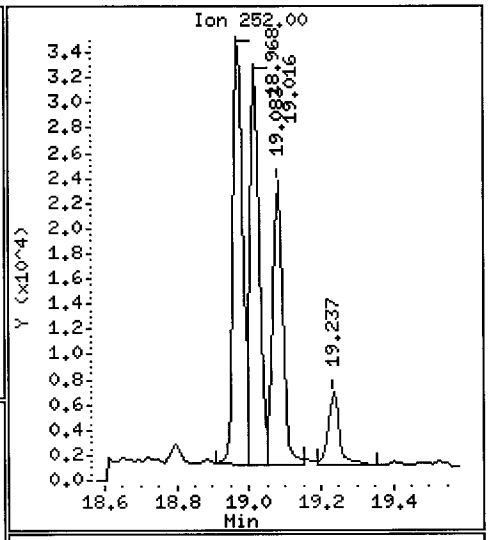
Column phase: Rxi-17Sil MS

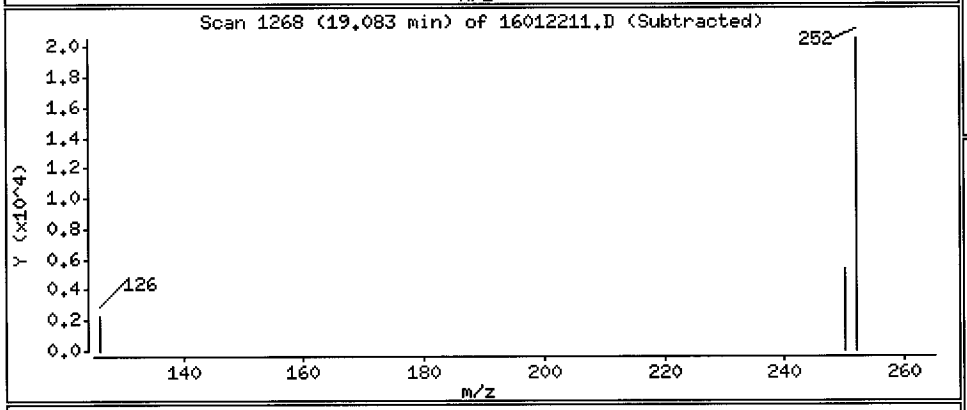
Column diameter: 0.25

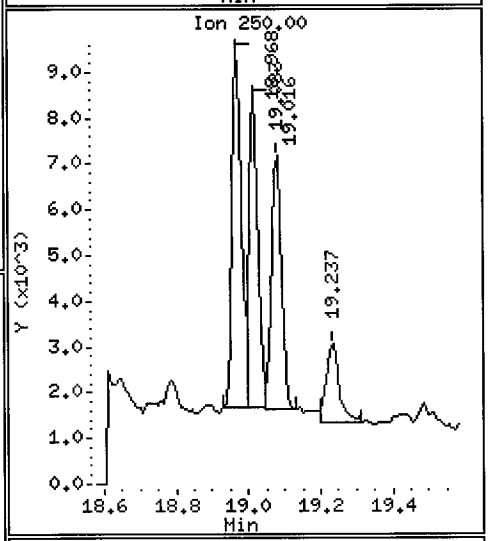
46 Benzo(j)fluoranthene

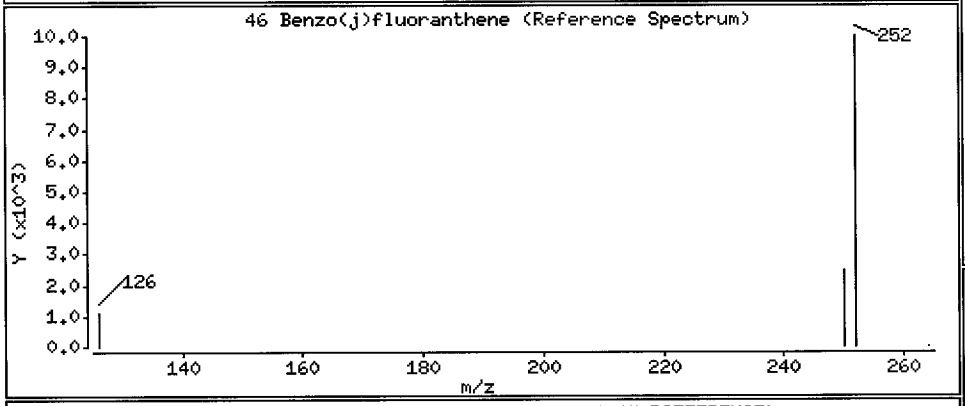
Concentration: 953 ug/kg

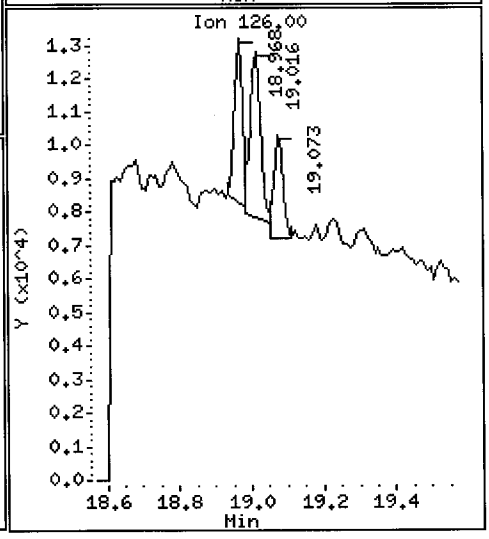


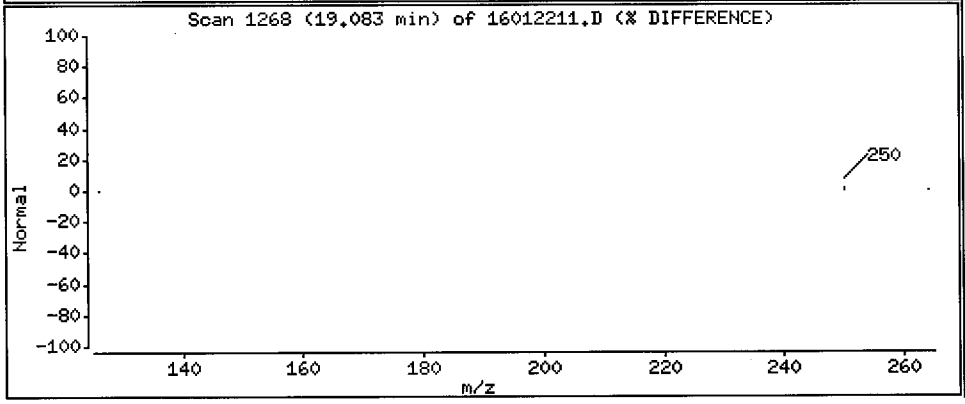












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

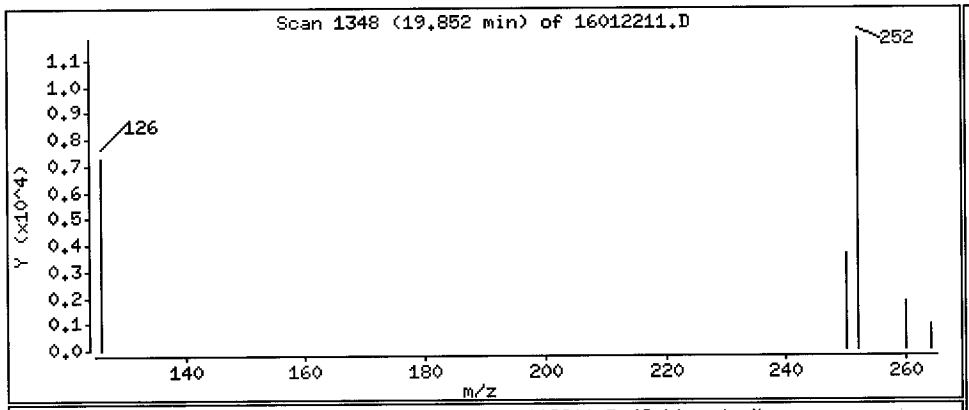
Operator: JW

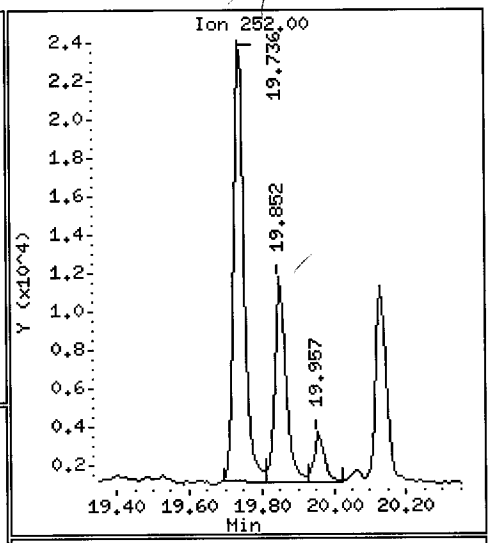
Column phase: Rxi-17Sil MS

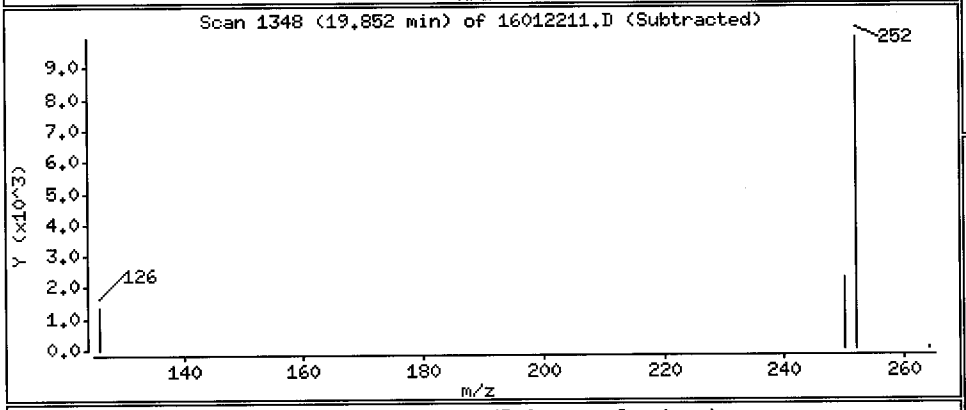
Column diameter: 0.25

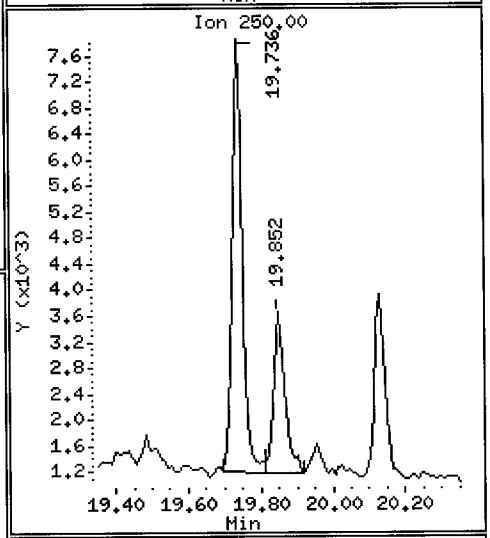
34 Benzo(a)pyrene

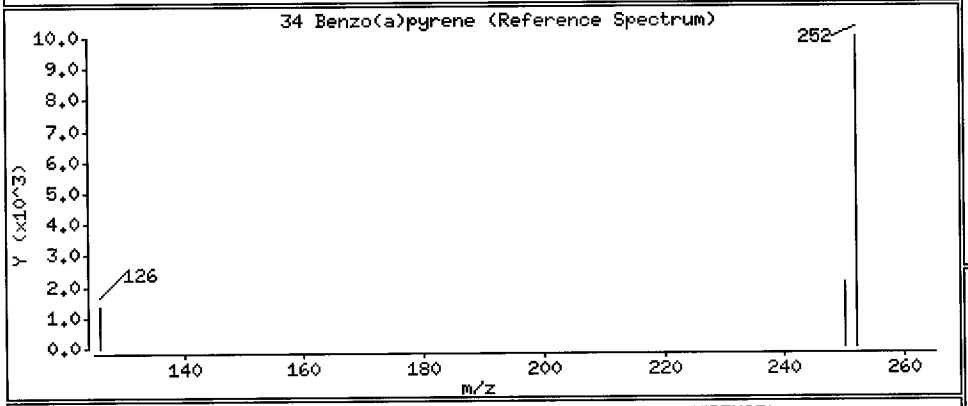
Concentration: 586 ug/kg

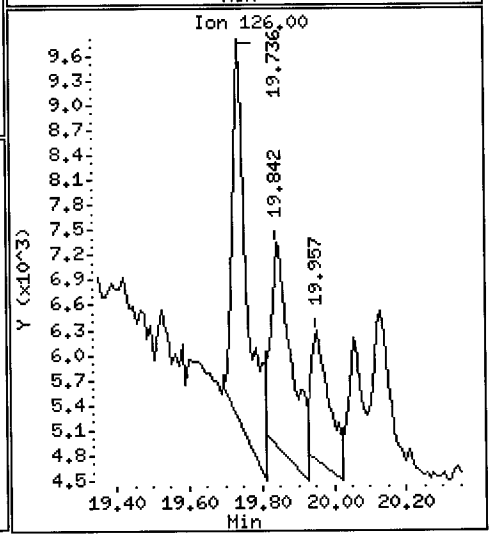


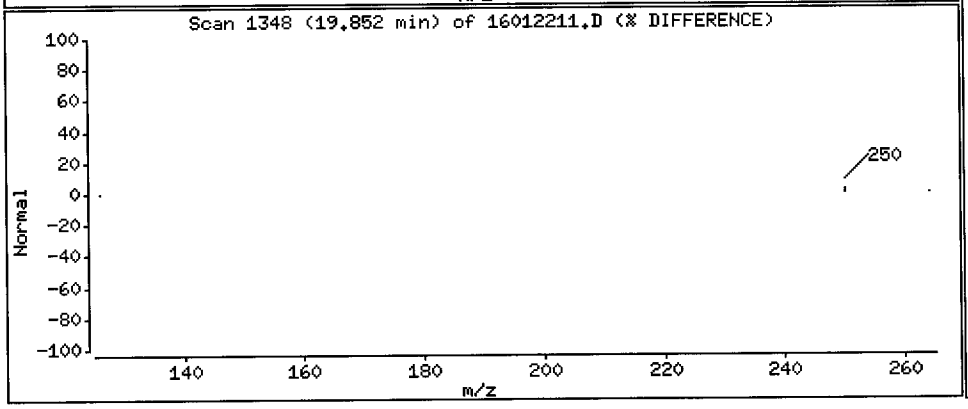












Data File: \\target\share\chem3\nt11.i\20160122.b\16012211.D

Date : 22-JAN-2016 12:28

Client ID: PG-SMA2-2-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0A

Volume Injected (uL): 2.0

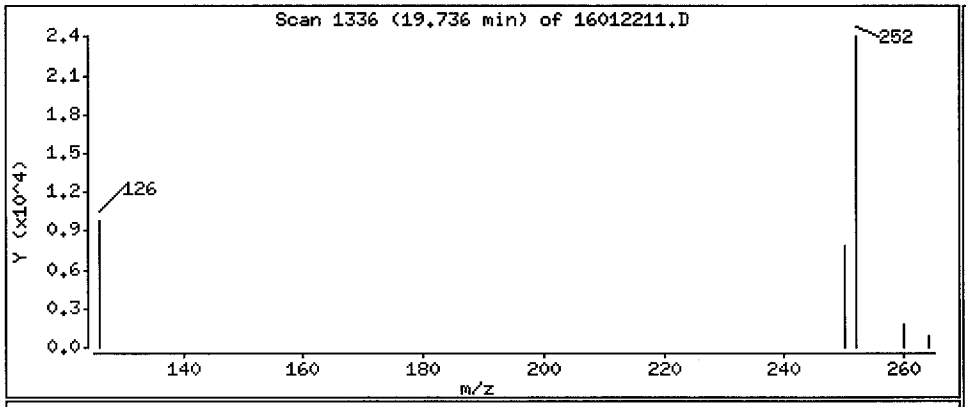
Operator: JW

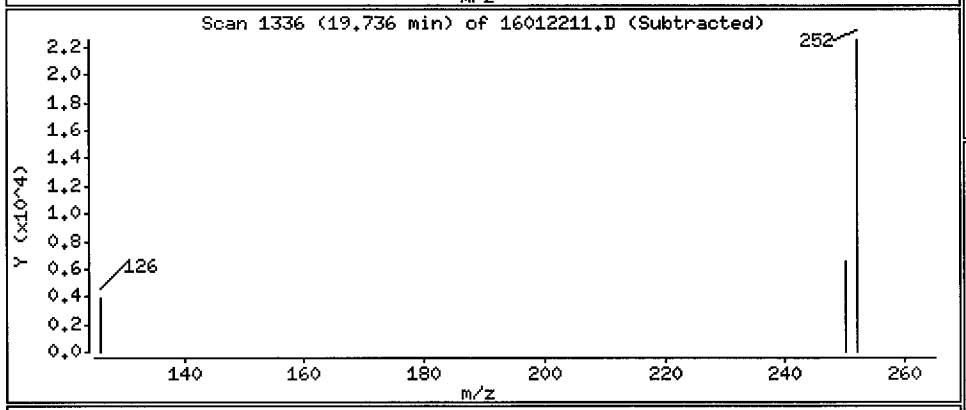
Column phase: Rxi-17Sil MS

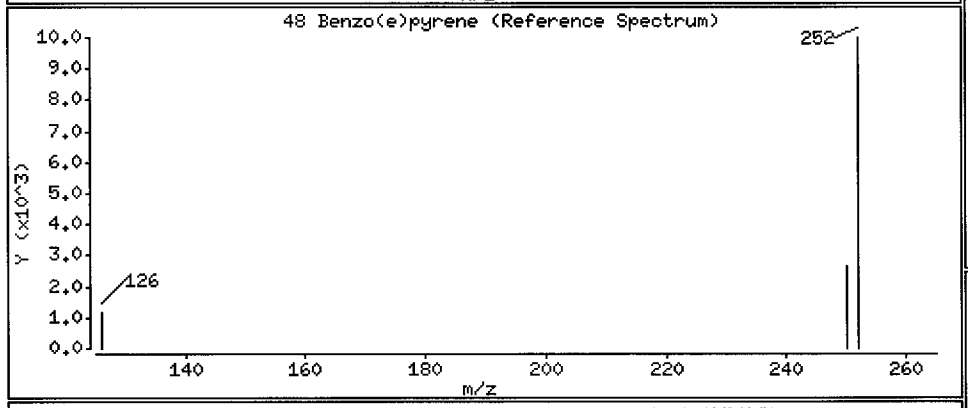
Column diameter: 0.25

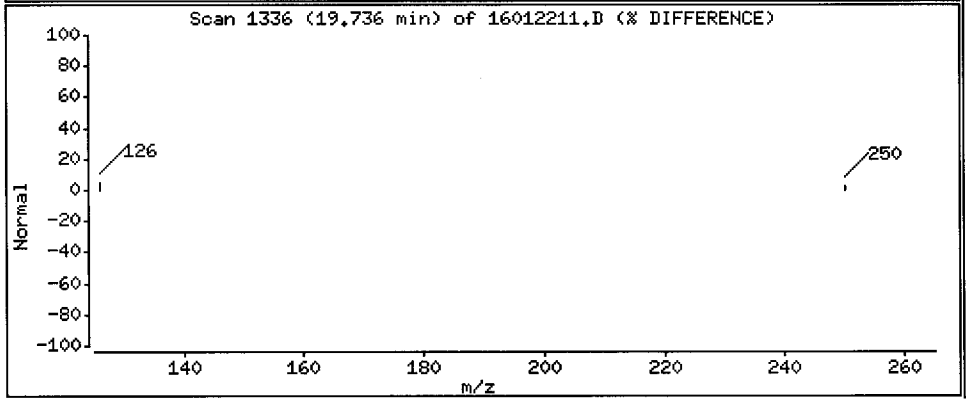
48 Benzo(e)pyrene

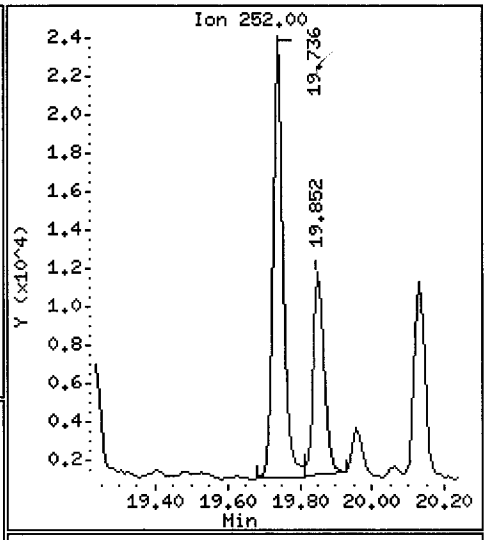
Concentration: 1110 ug/kg

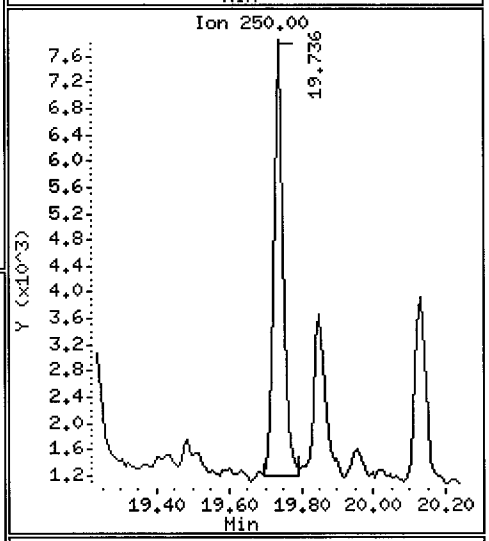


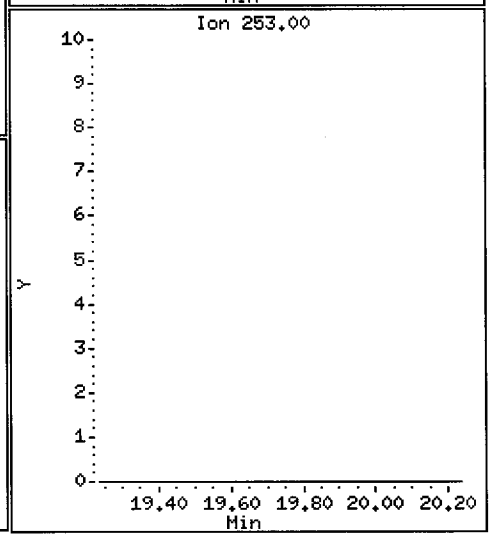












REVIEW SUMMARY FOR FILE - 16012211.D

Lab ID: ATS0A
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 12:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012212.D
Lab Smp Id: ATS0B Client Smp ID: PG-PJ-1-MUS-COC-160
Inj Date : 22-JAN-2016 12:58 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0B
Misc Info : 16-136
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.010	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	374753	200.000	
	5 Naphthalene	128	6.776	6.776	(1.006)	24117	11.1414	557
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	198911	142.999	7140
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	264386	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	10.010	10.010	(1.027)	22089	10.3534	517
	15 Fluorene	166	10.630	10.630	(1.091)	20975	13.1088	655
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	426020	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	220336	85.8441	4290
	20 Anthracene	178	12.523	12.523	(1.008)	45446	19.7810	988
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	445684	190.232	9500
	24 Fluoranthene	202	14.557	14.557	(1.172)	323866	125.679	6280
	25 Pyrene	202	15.057	15.057	(0.877)	217865	86.9412	4340
	28 Benzo(a)anthracene	228	17.076	17.075	(0.995)	63656	30.1731	1510
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	316427	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	95562	41.2713	2060
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	51107	23.9330	1200
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.947)	39105	15.7149	785

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
46	Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	31804	14.0305	701
34	Benzo(a)pyrene	252	Compound Not Detected.					
* 35	Perylene-d12	264	20.072	20.062	(1.000)	315181	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.122)	261168	205.301	10300
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	Compound Not Detected.					
47	Perylene	252	Compound Not Detected.					
48	Benzo(e)pyrene	252	19.736	19.736	(0.983)	37542	17.3957	869

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012212.D
Lab Smp Id: ATS0B
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-136

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-PJ-1-MUS-COC
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	374753	14.29
11 Acenaphthene-d10	239179	119590	478358	264386	10.54
18 Phenanthrene-d10	372253	186127	744506	426020	14.44
29 Chrysene-d12	294711	147356	589422	316427	7.37
35 Perylene-d12	260595	130298	521190	315181	20.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.15
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.07	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.

ARI Labs, Inc.

RECOVERY REPORT

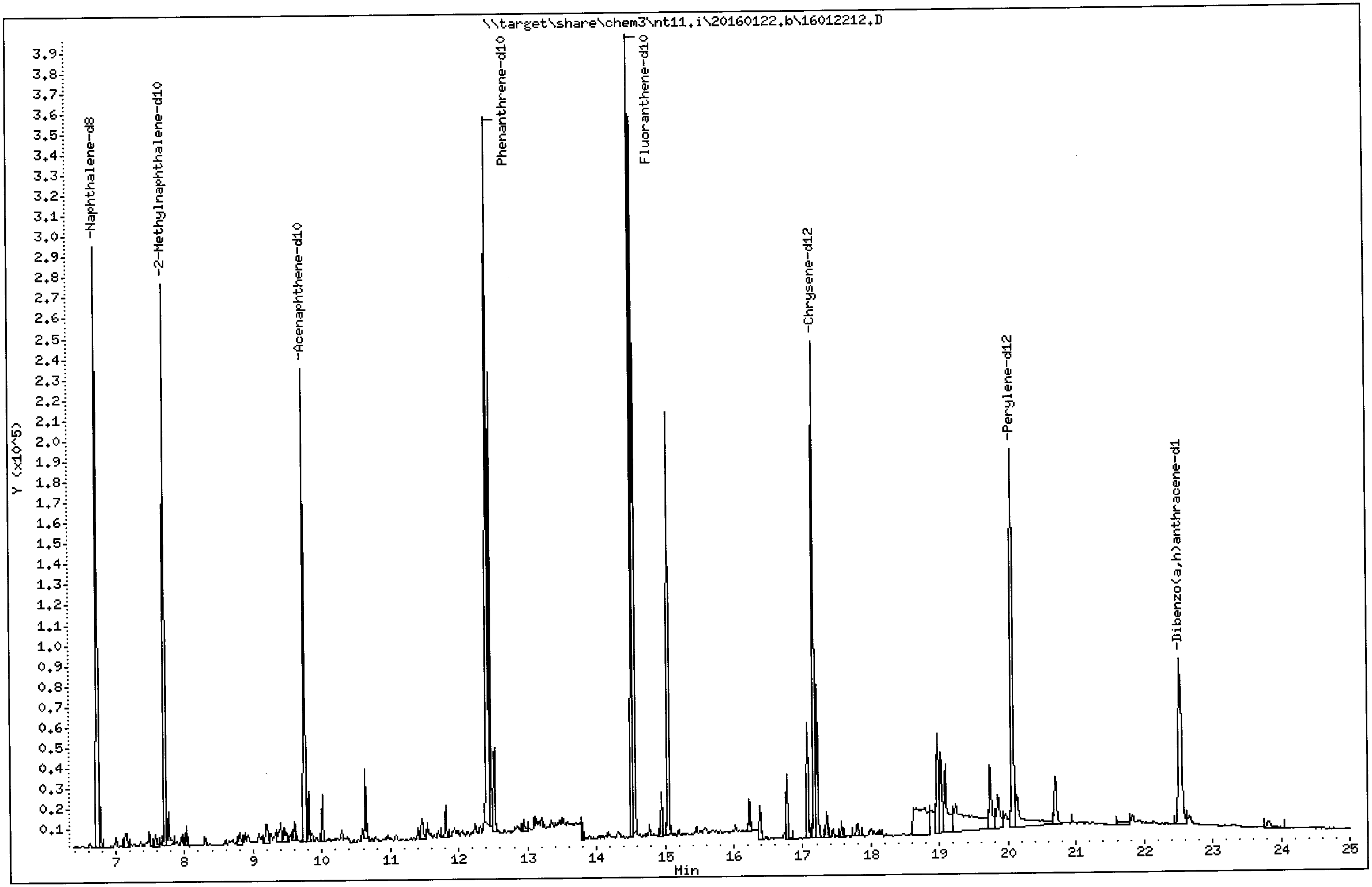
Client Name: Anchor QEA, LLC
Client SDG: ATS0
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: ATS0B
Client Smp ID: PG-PJ-1-MUS-COC-160
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-136

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7140	47.67	30-160
$ 23 Fluoranthene-d10	15000	9500	63.41	30-160
$ 36 Dibenzo(a,h)anthra	15000	10300	68.43	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D
Date : 22-JAN-2016 12:58
Client ID: PG-PJ-1-MUS-COC-160
Sample Info: ATSOB
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

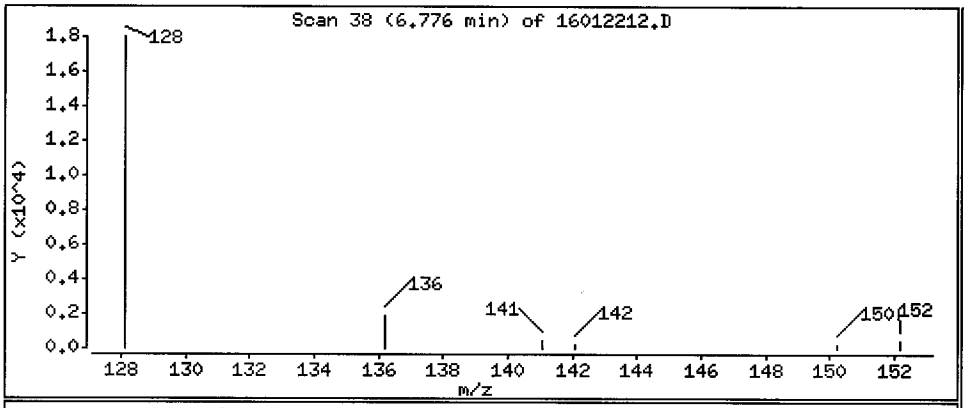
Operator: JW

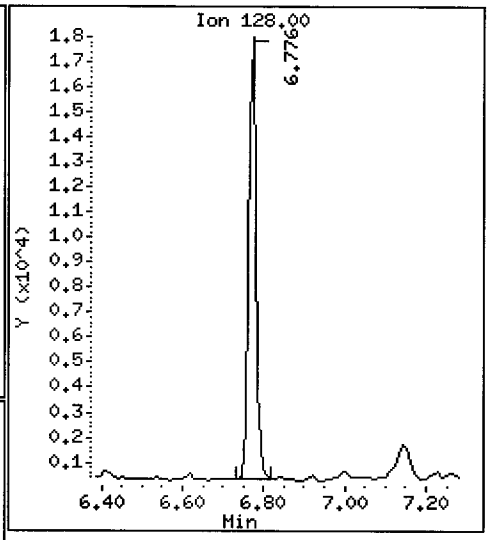
Column phase: Rxi-17Sil MS

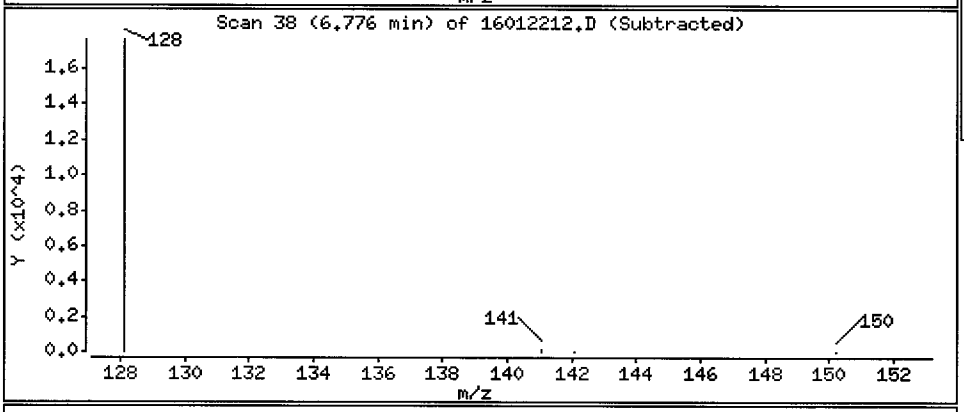
Column diameter: 0.25

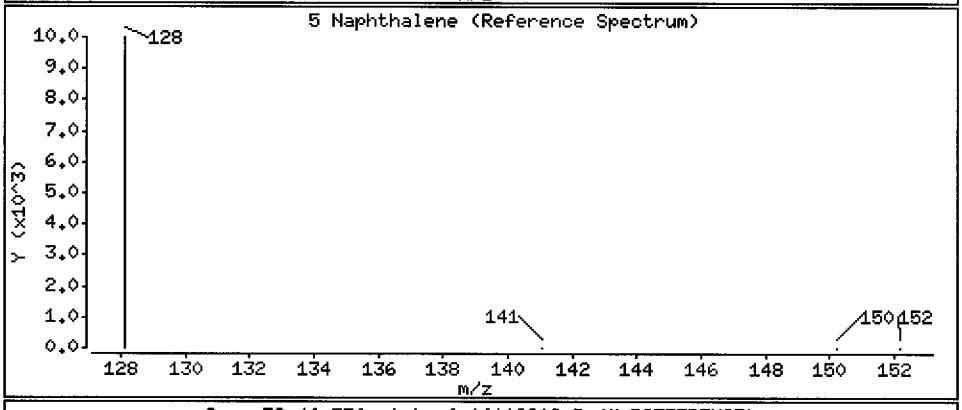
5 Naphthalene

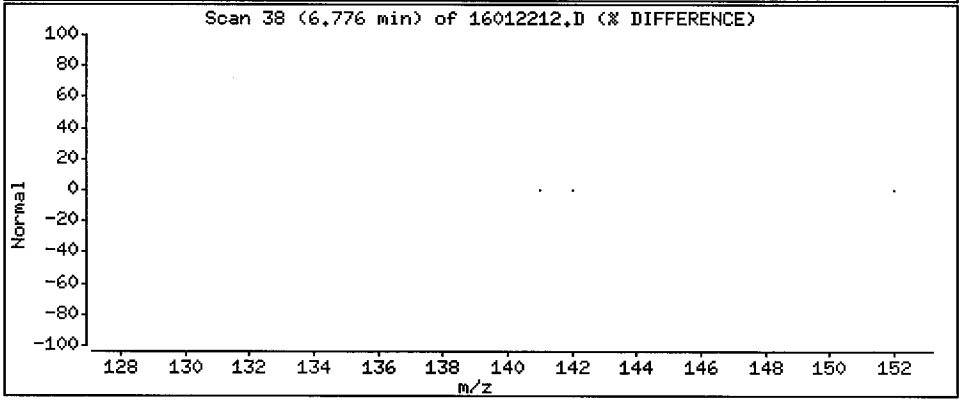
Concentration: 557 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

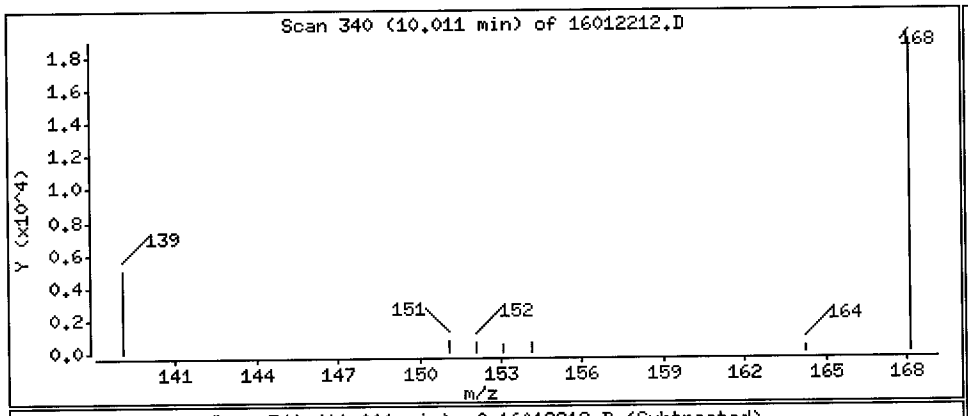
Operator: JW

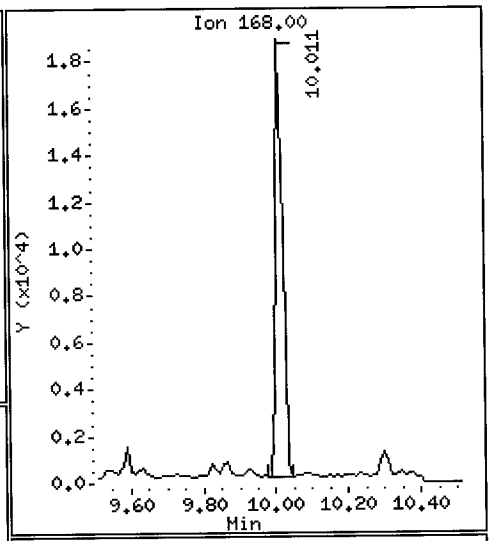
Column phase: Rxi-17Sil MS

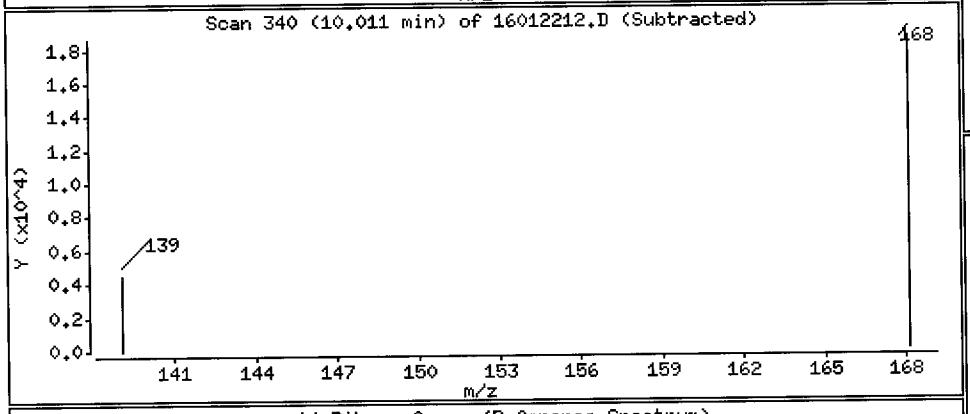
Column diameter: 0.25

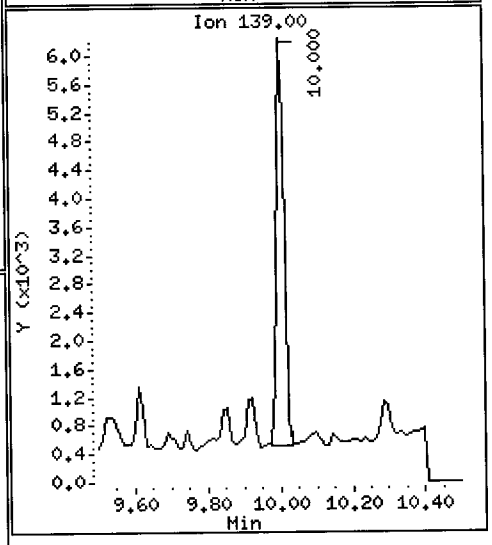
14 Dibenzofuran

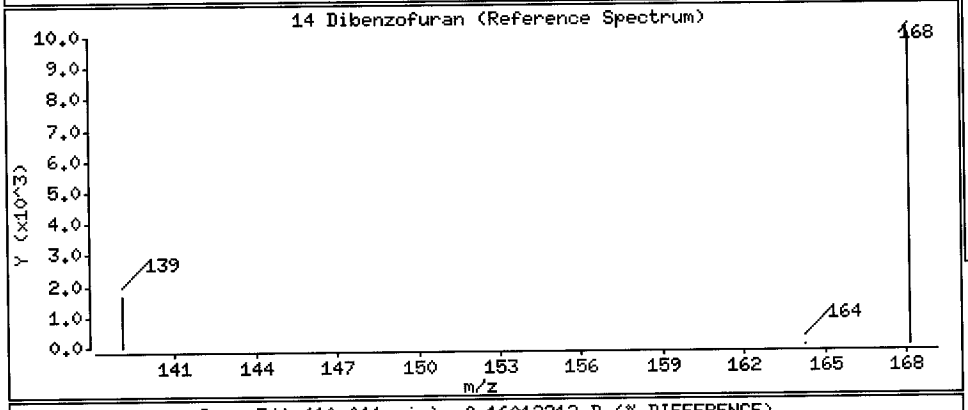
Concentration: 517 ug/kg

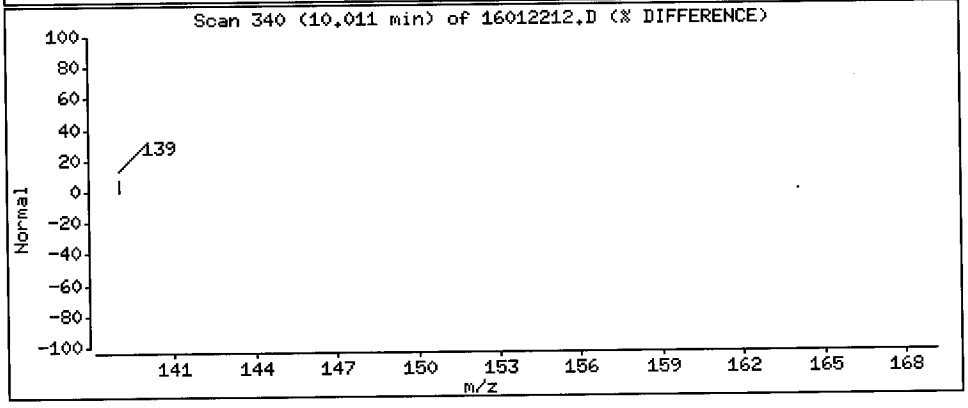












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

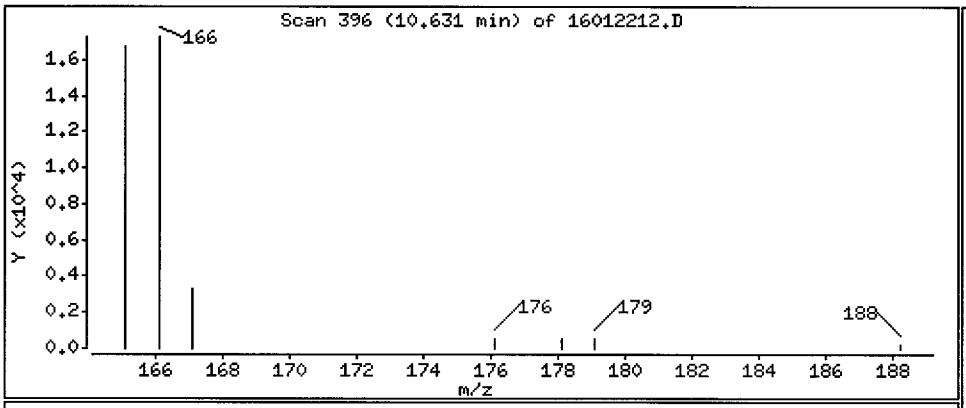
Operator: JW

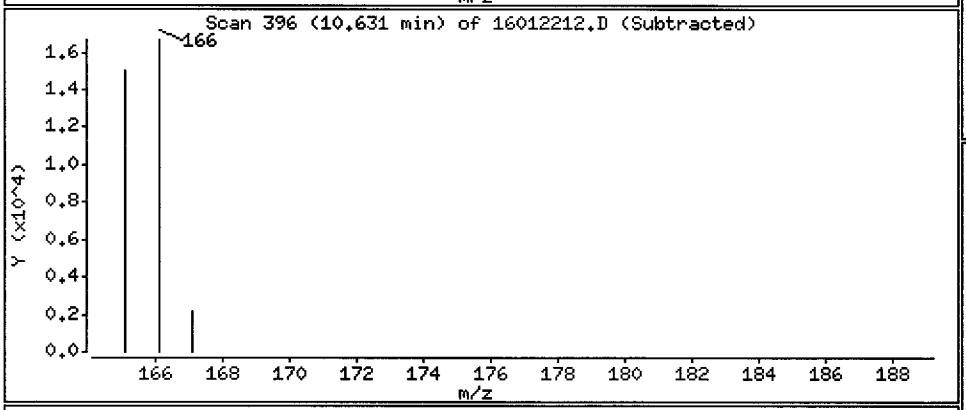
Column phase: Rxi-17Sil MS

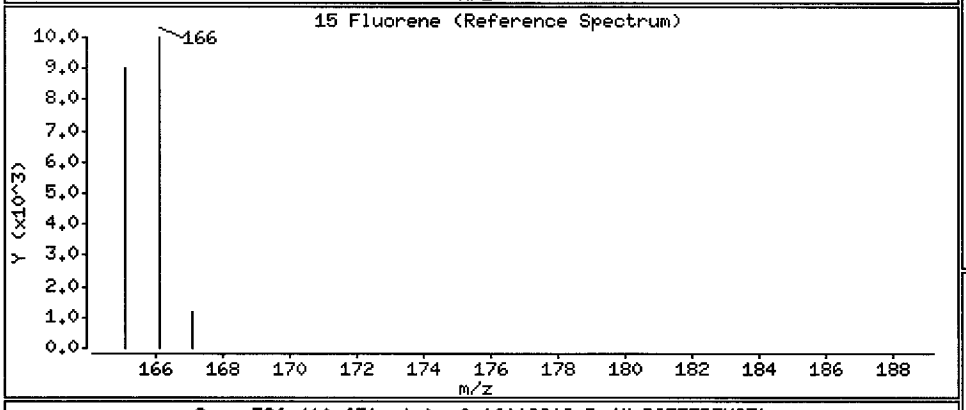
Column diameter: 0.25

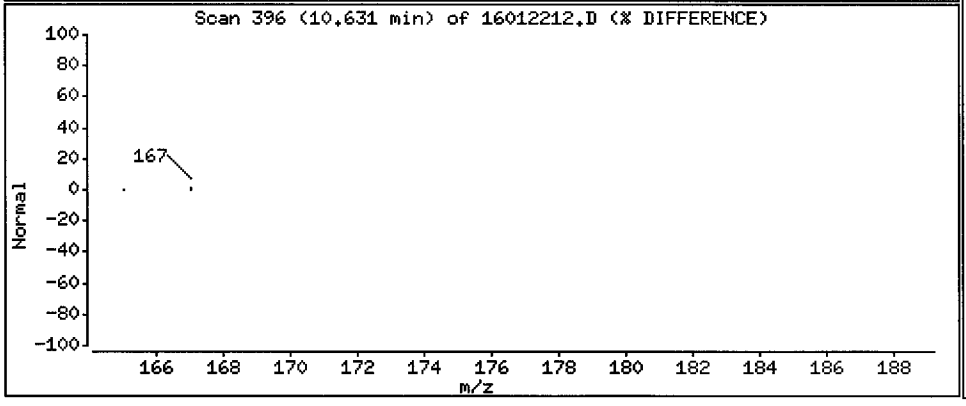
15 Fluorene

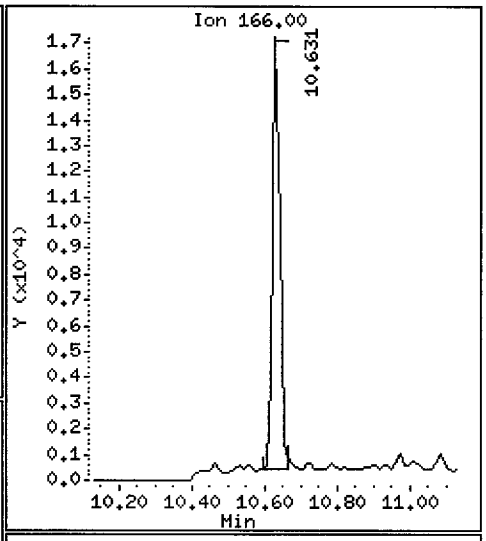
Concentration: 655 ug/kg

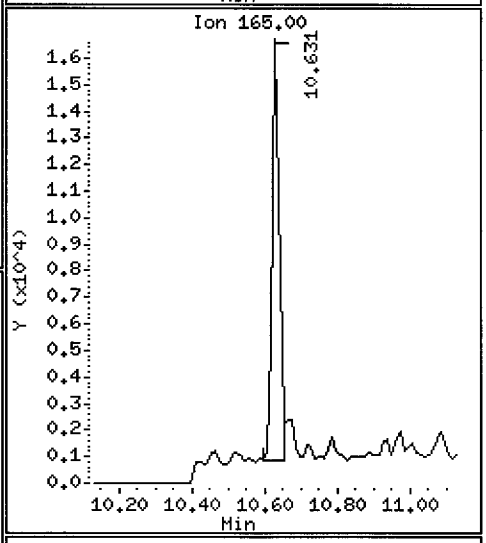


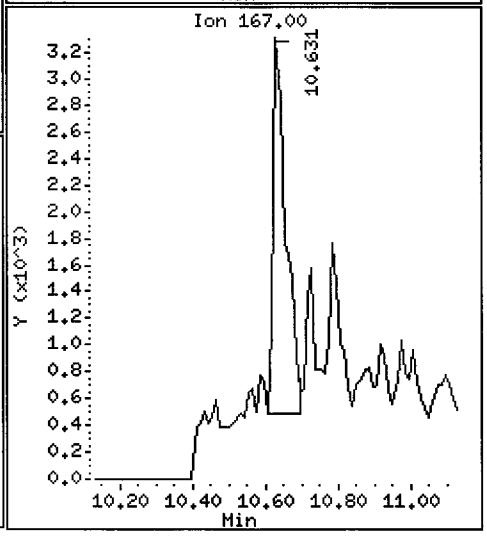












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

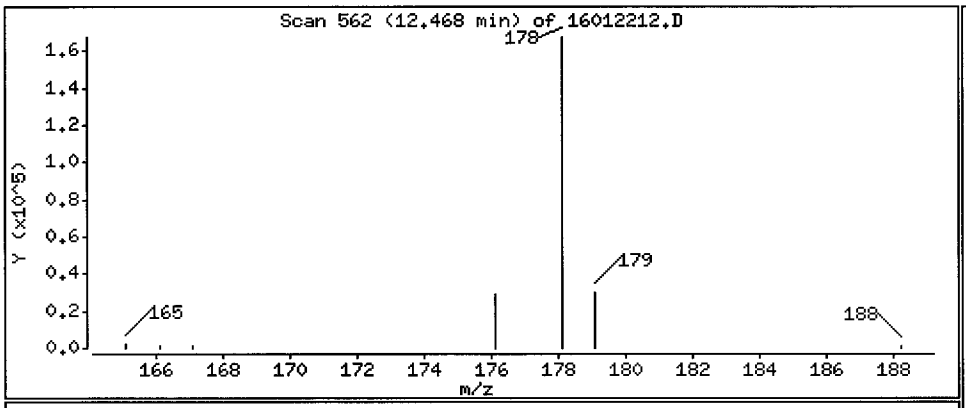
Operator: JW

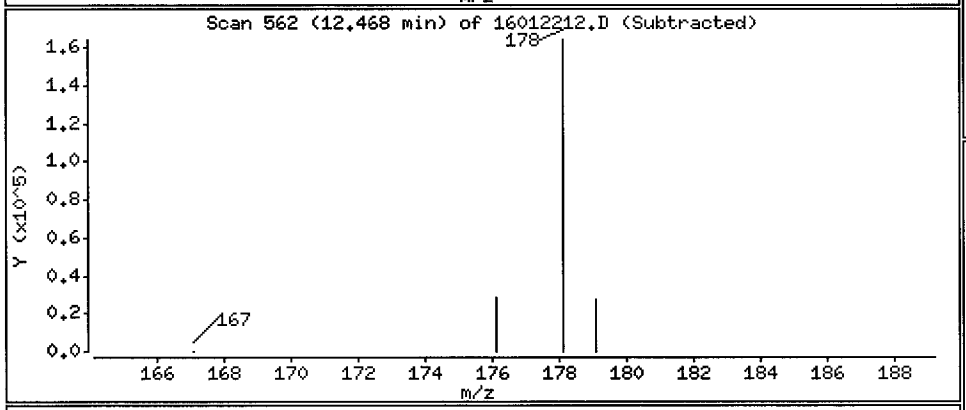
Column phase: Rxi-17Sil MS

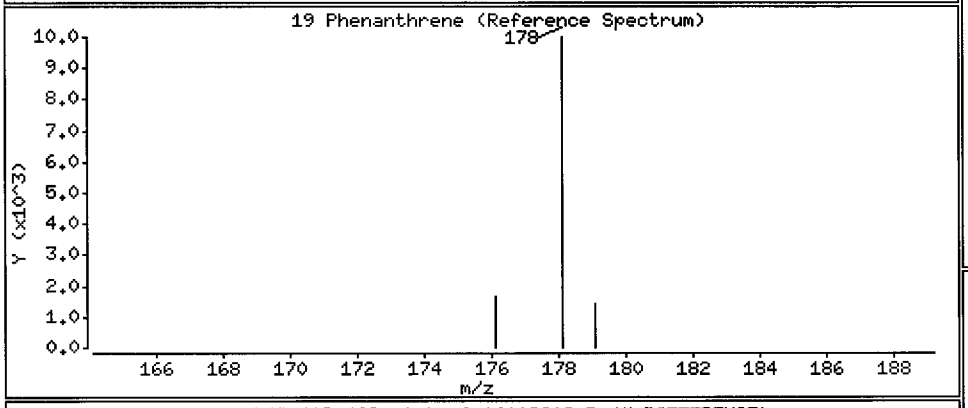
Column diameter: 0.25

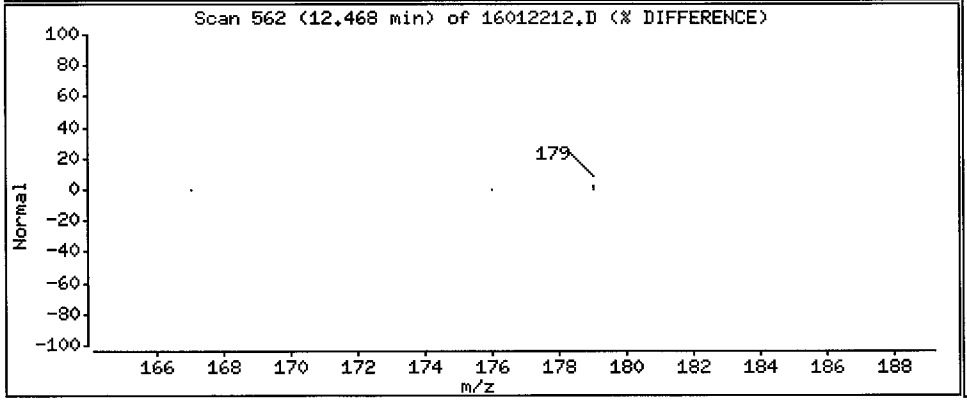
19 Phenanthrene

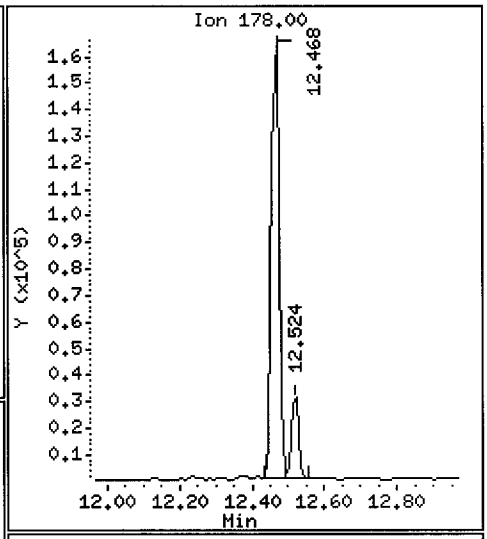
Concentration: 4290 ug/kg

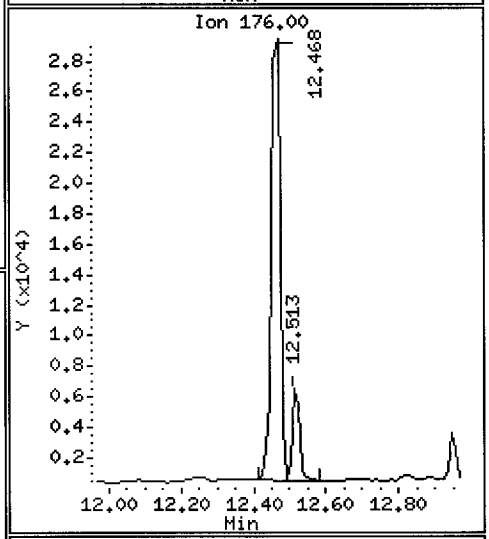


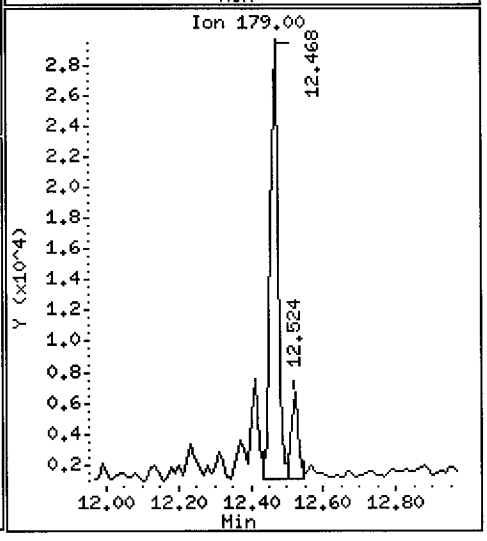












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

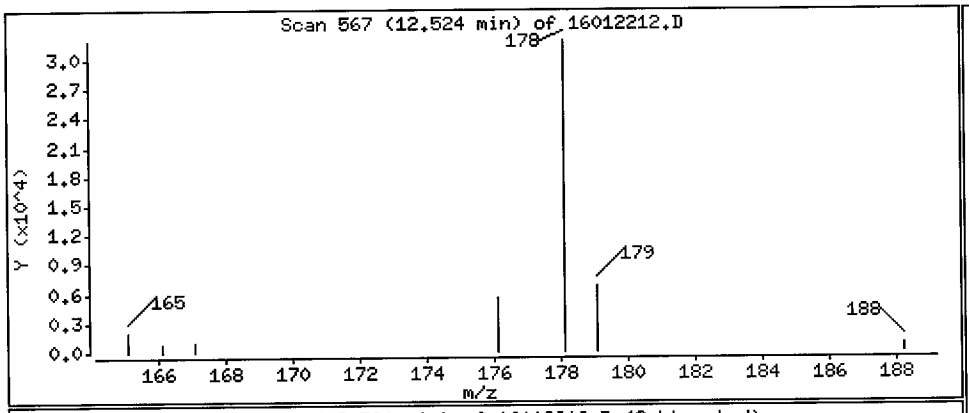
Operator: JW

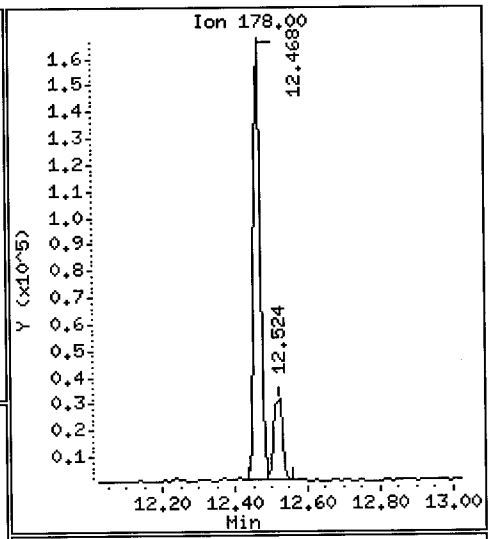
Column phase: Rxi-17Sil MS

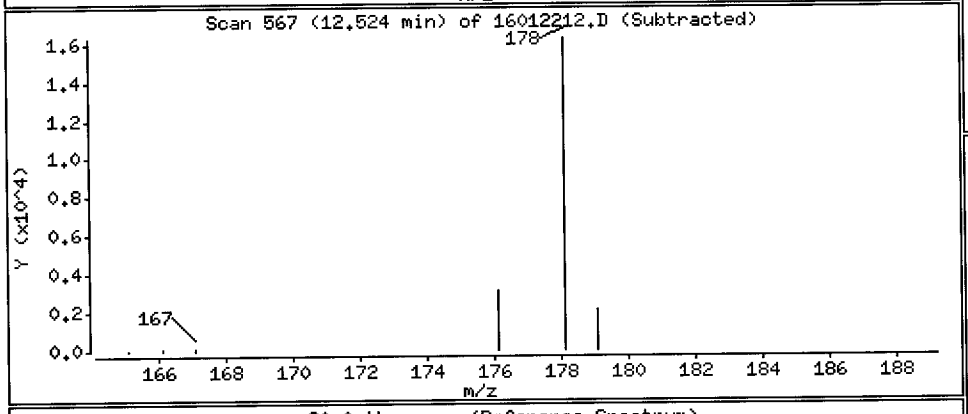
Column diameter: 0.25

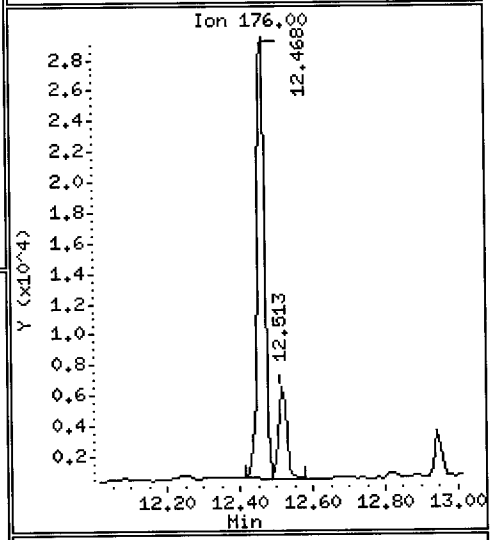
20 Anthracene

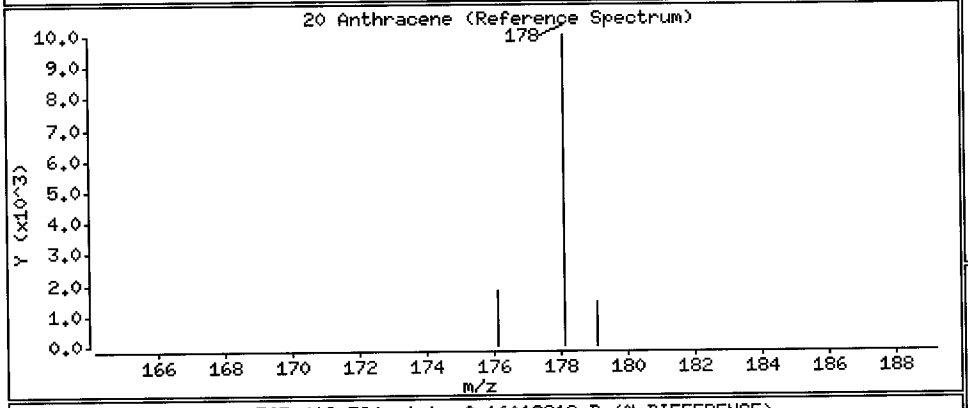
Concentration: 988 ug/kg

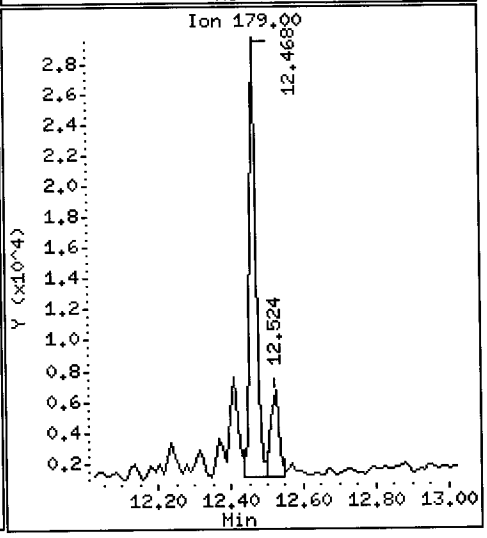


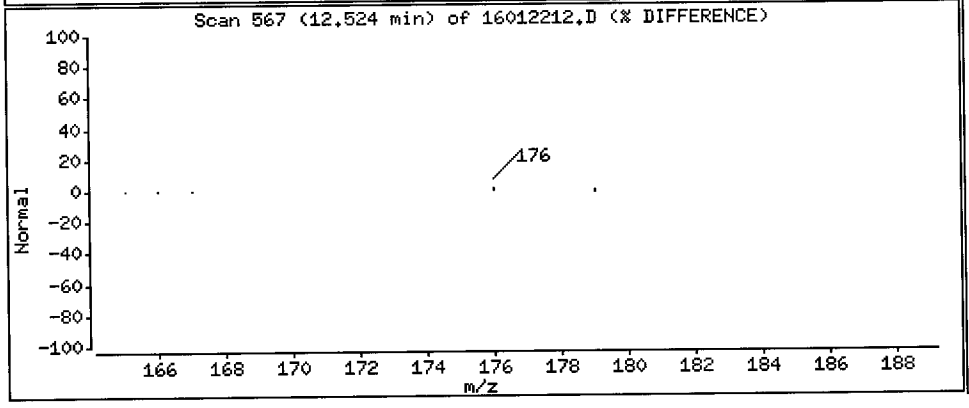












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

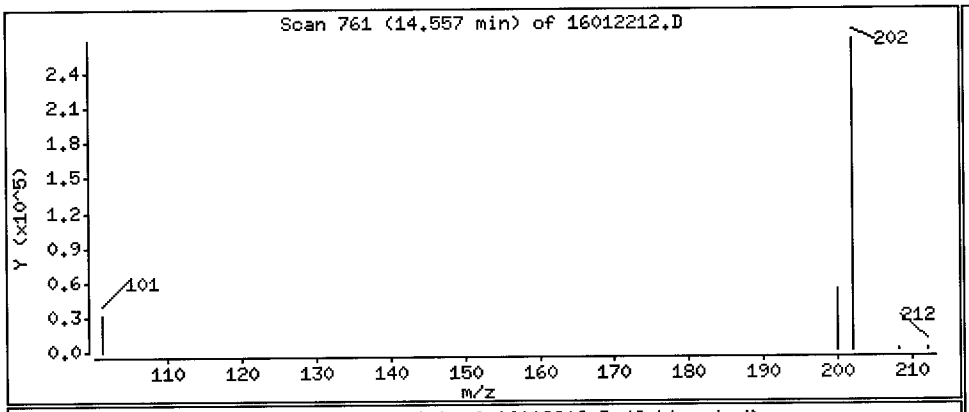
Operator: JW

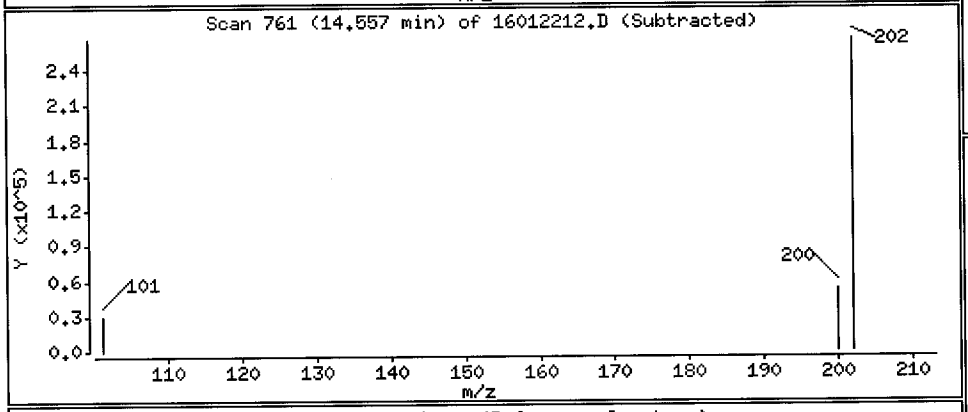
Column phase: Rxi-17Sil MS

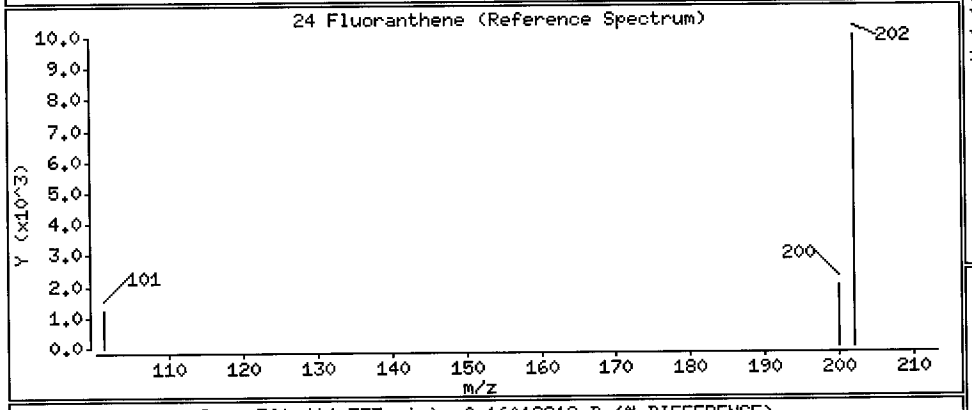
Column diameter: 0.25

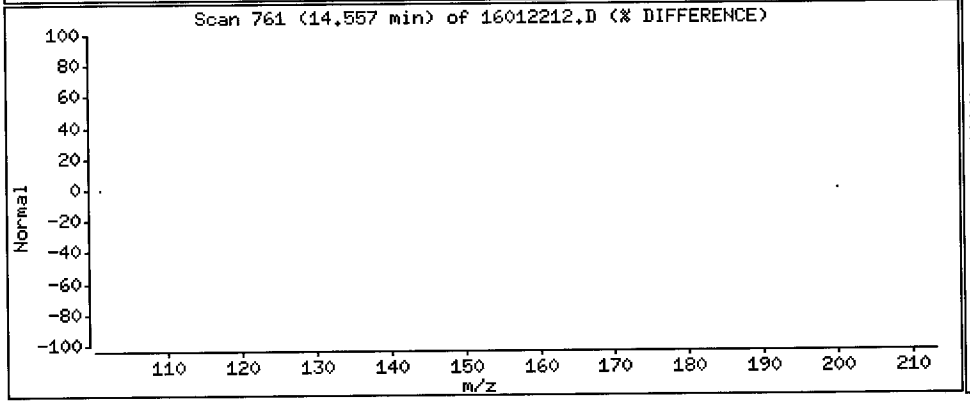
24 Fluoranthene

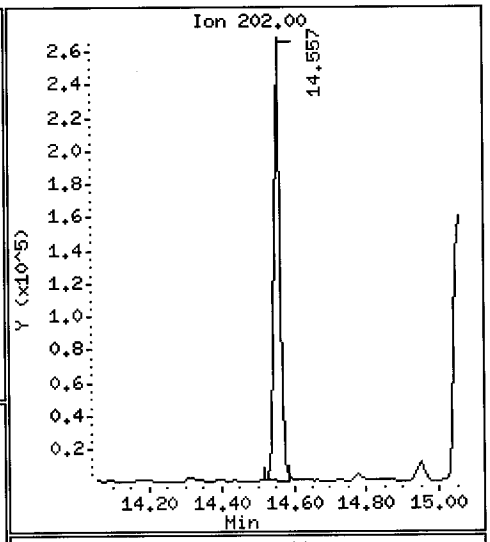
Concentration: 6280 ug/kg

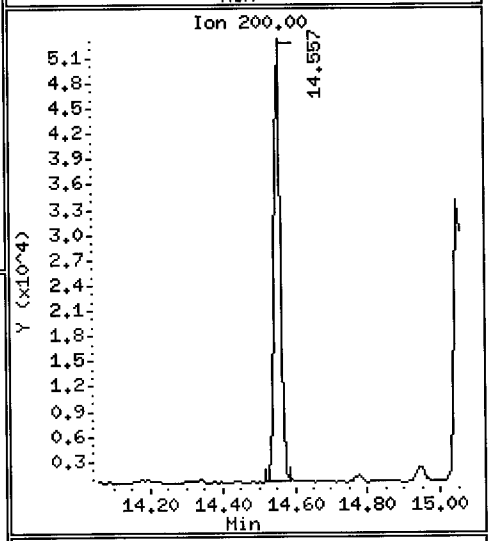


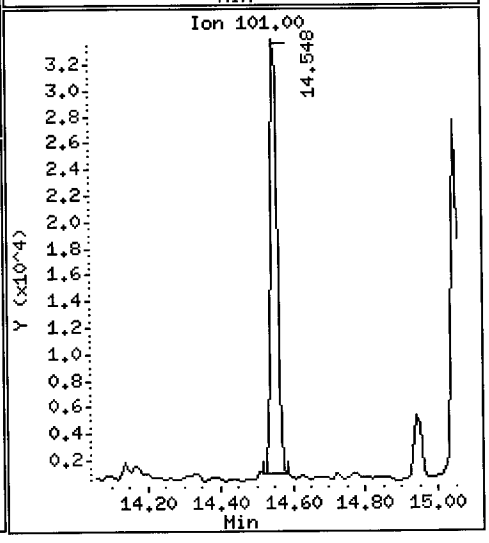












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

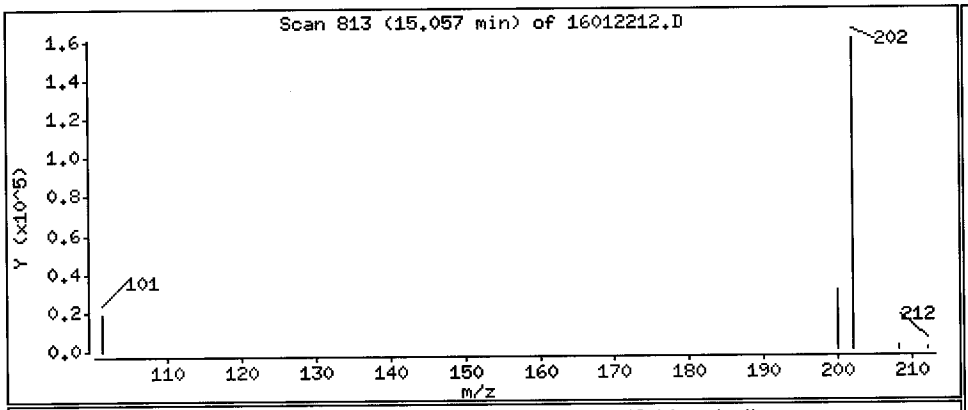
Operator: JW

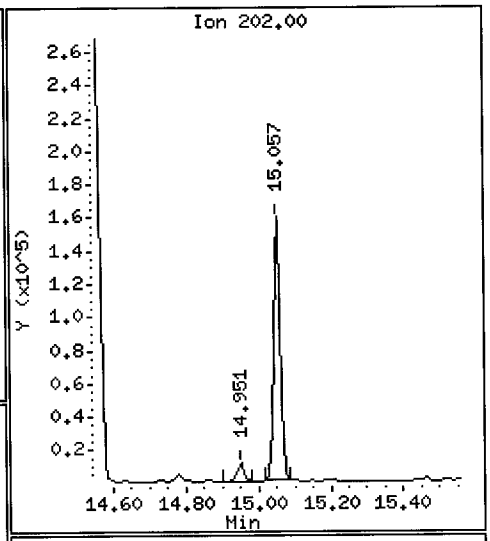
Column phase: Rxi-17Sil MS

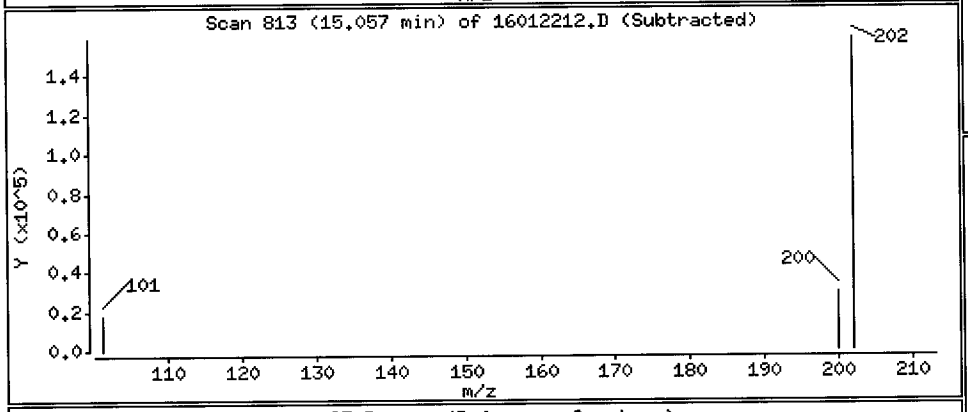
Column diameter: 0.25

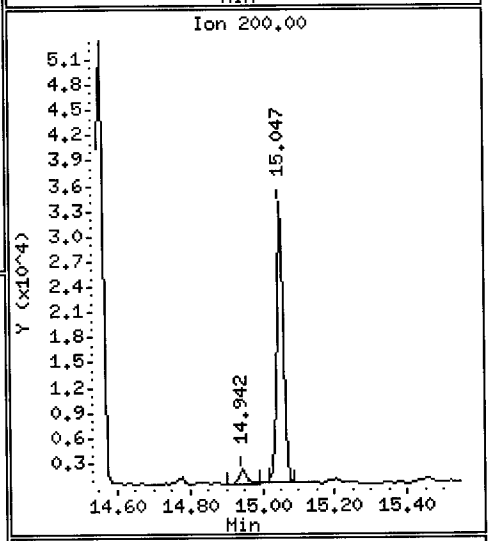
25 Pyrene

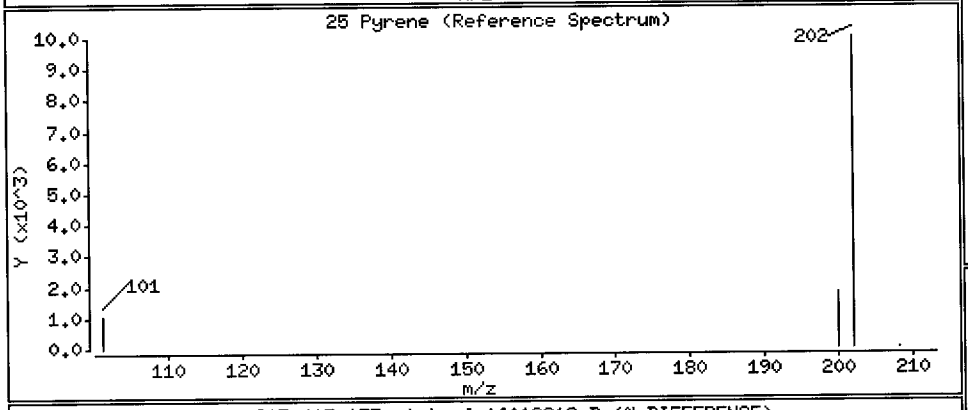
Concentration: 4340 ug/kg

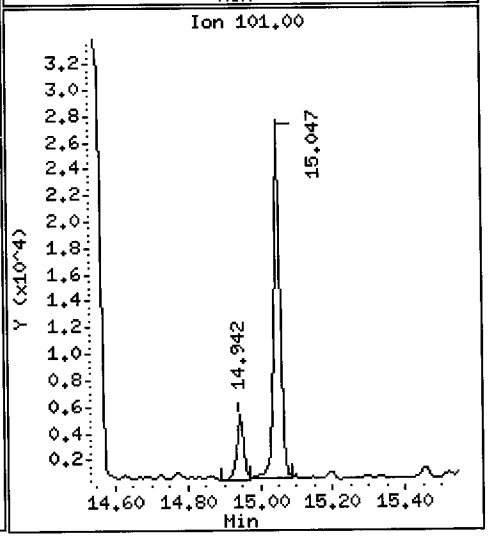


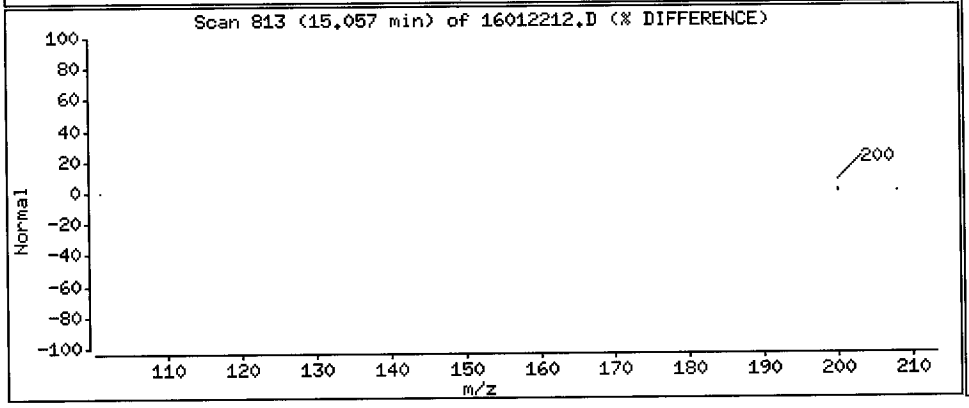












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

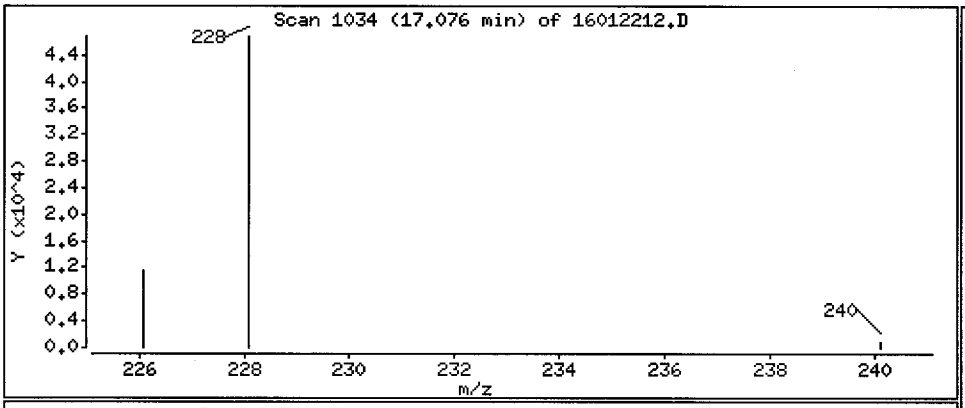
Operator: JW

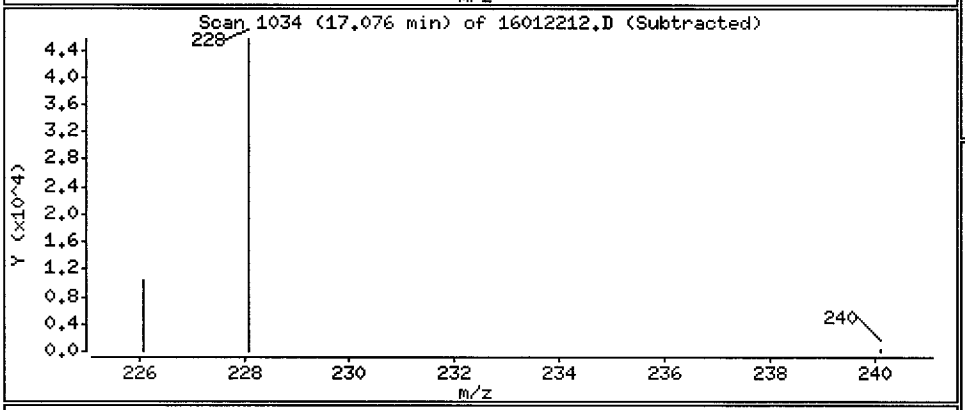
Column phase: Rxi-17Sil MS

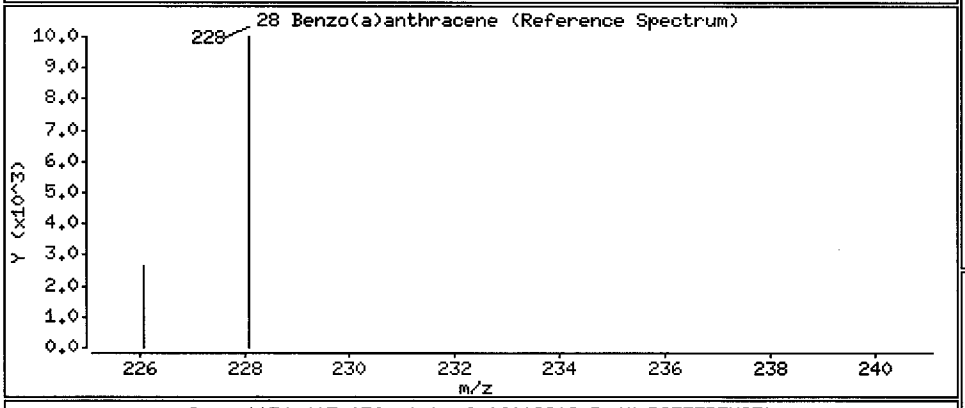
Column diameter: 0.25

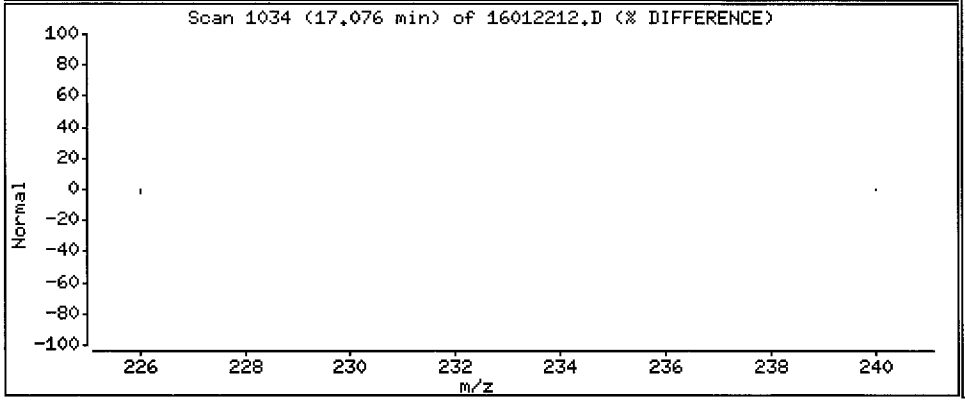
28 Benzo(a)anthracene

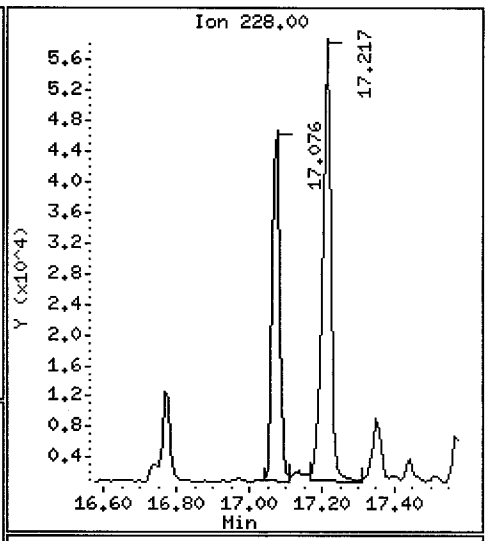
Concentration: 1510 ug/kg

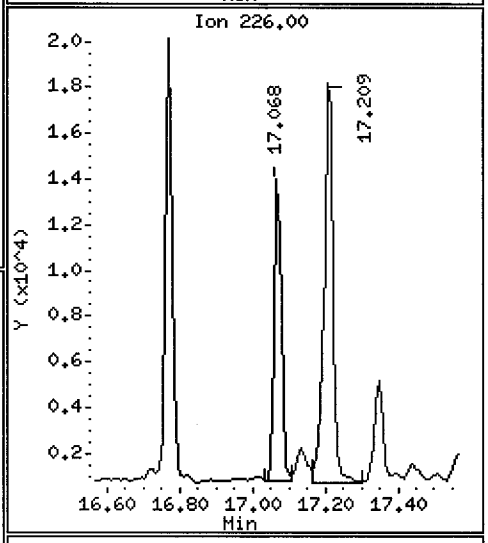


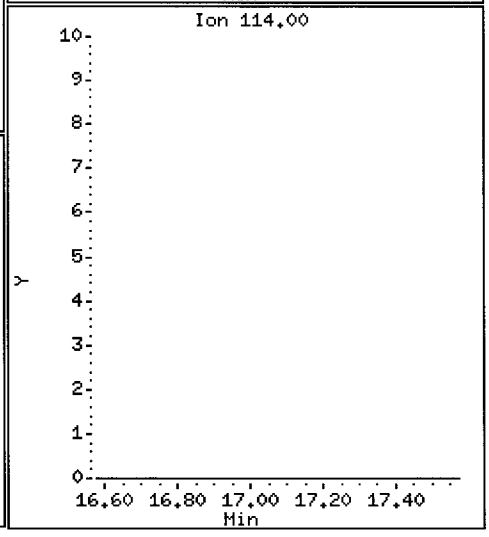












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Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

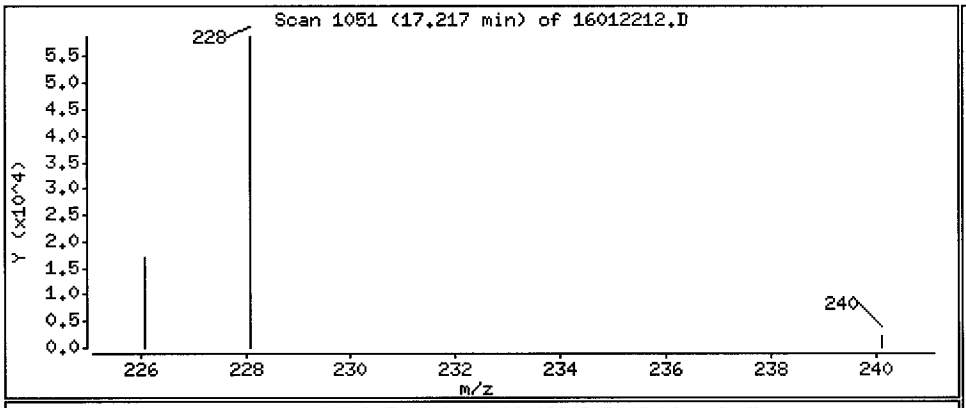
Operator: JW

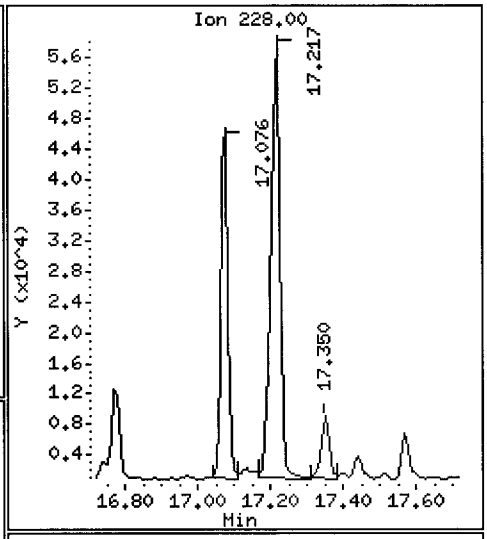
Column phase: Rxi-17Sil MS

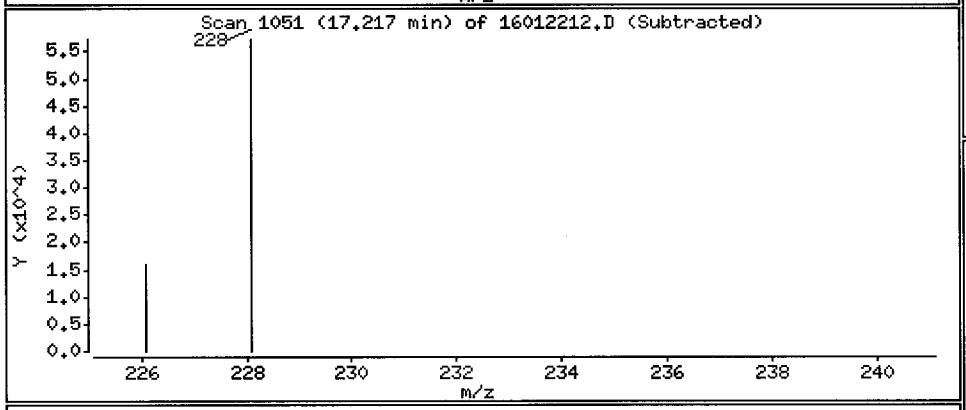
Column diameter: 0.25

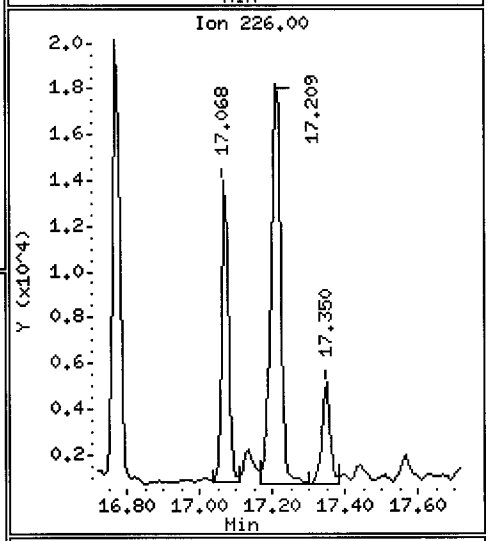
30 Chrysene

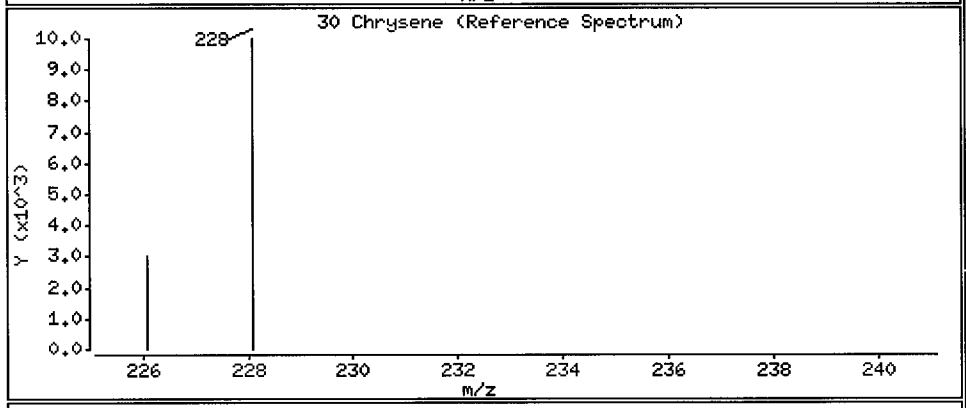
Concentration: 2060 ug/kg

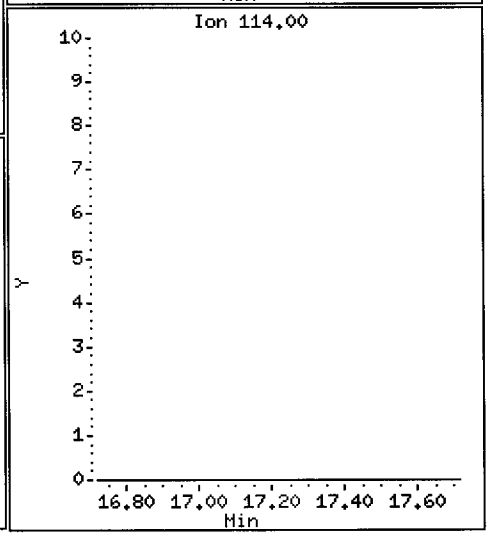


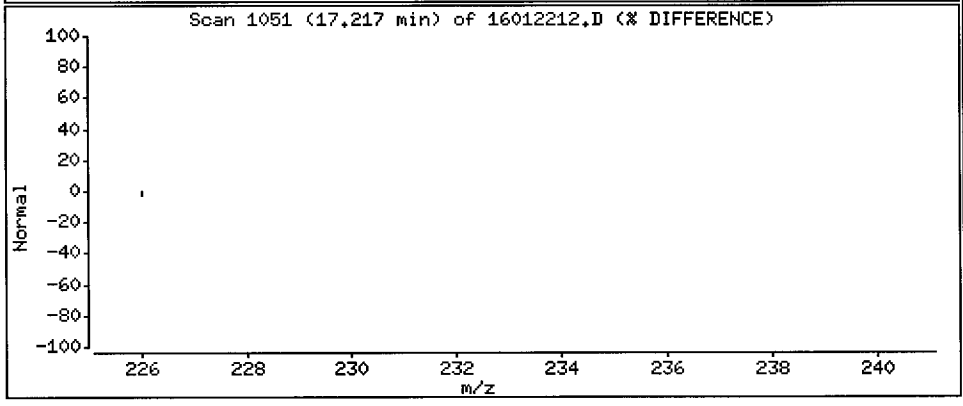












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Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

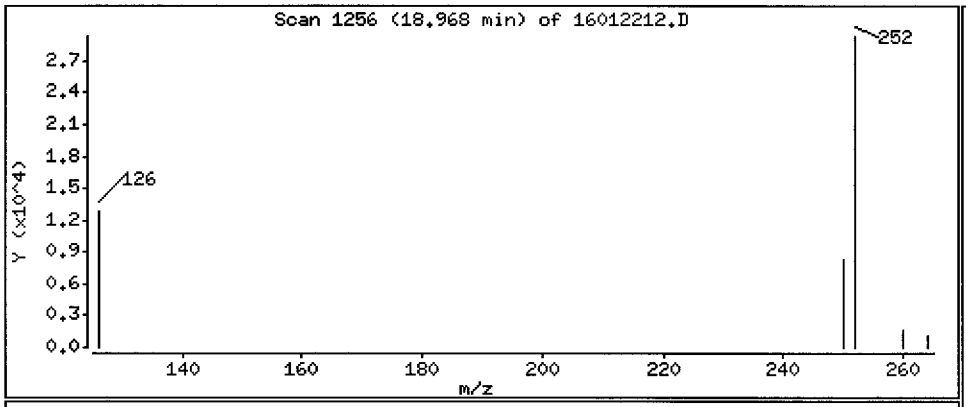
Operator: JW

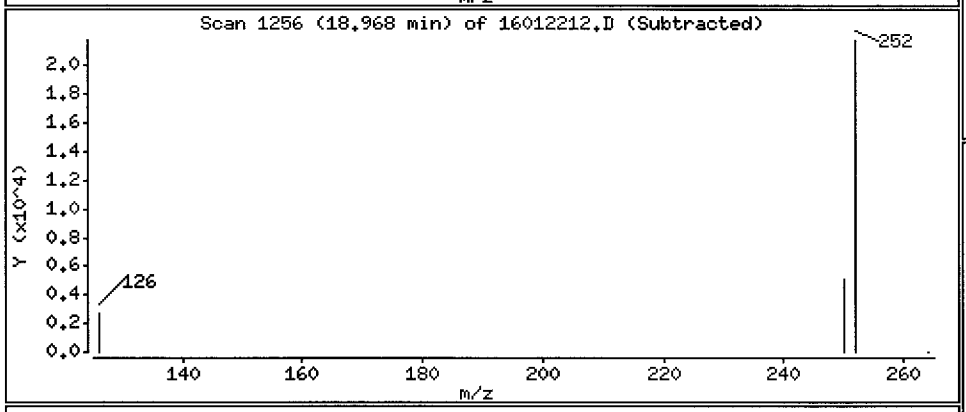
Column phase: Rxi-17Sil MS

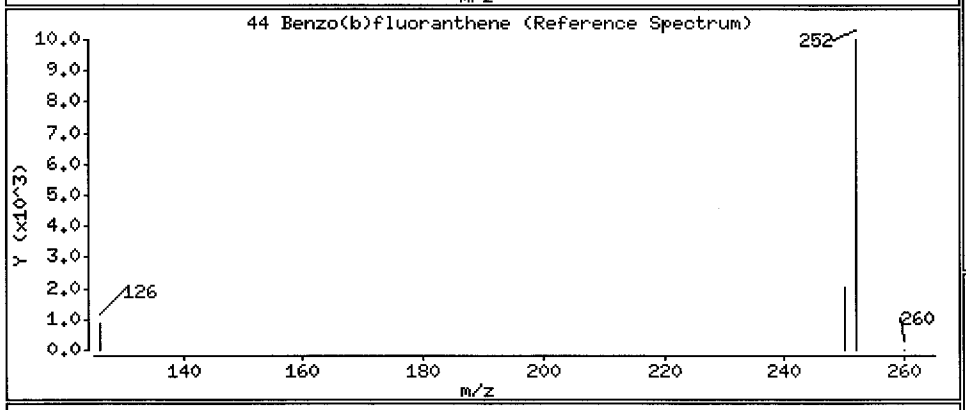
Column diameter: 0.25

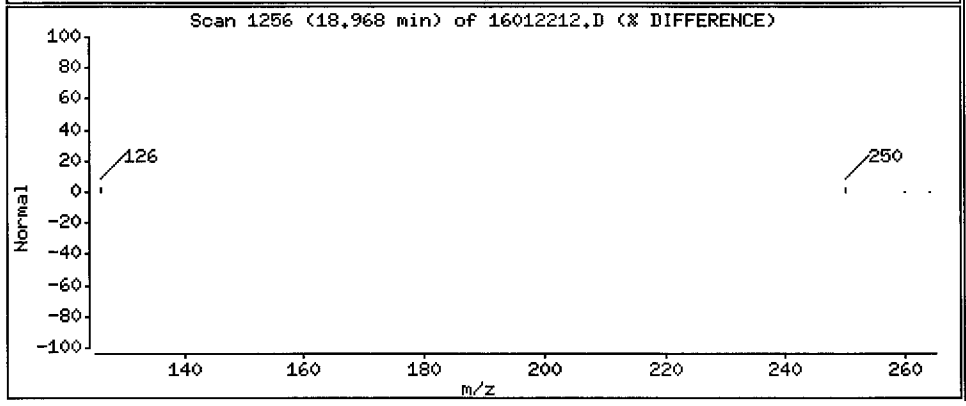
44 Benzo(b)fluoranthene

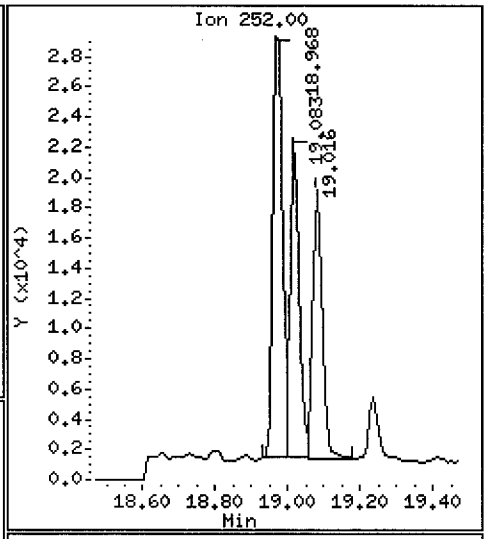
Concentration: 1200 ug/kg

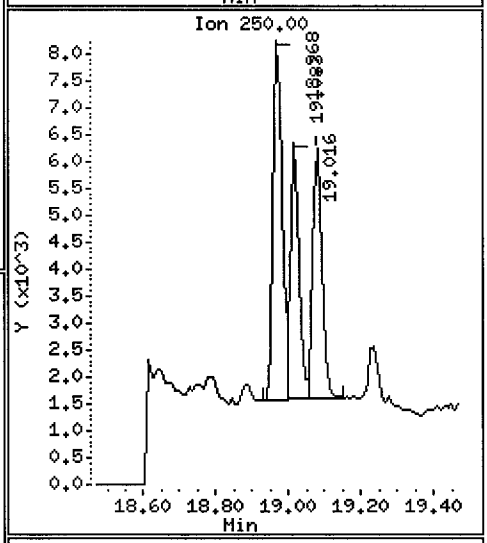


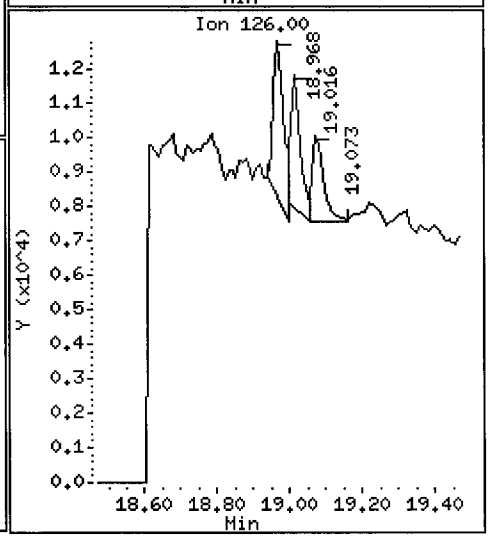












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

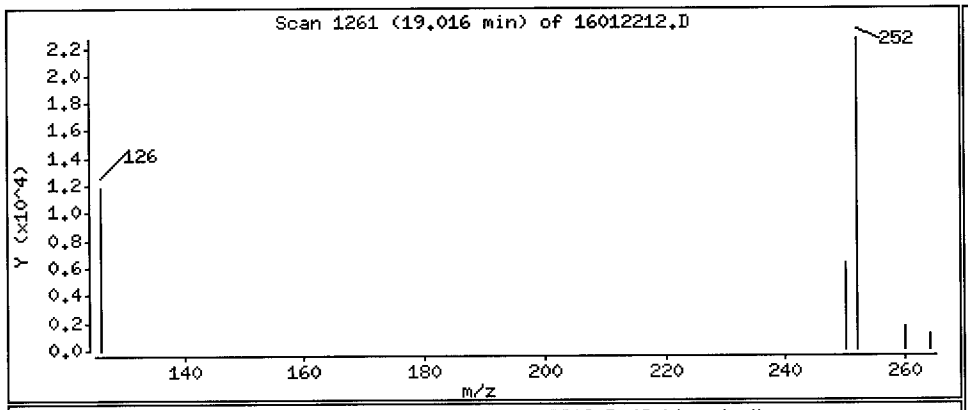
Operator: JW

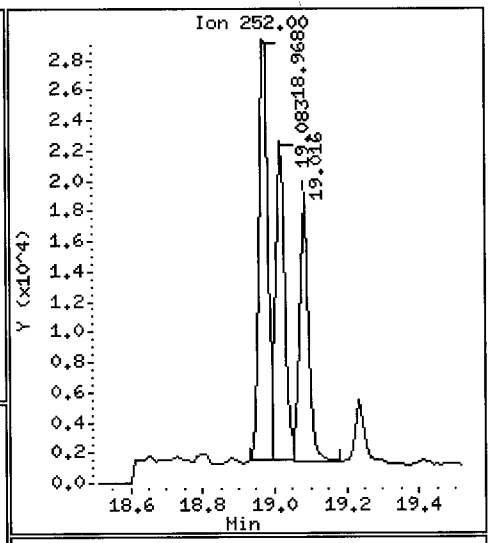
Column phase: Rxi-17Sil MS

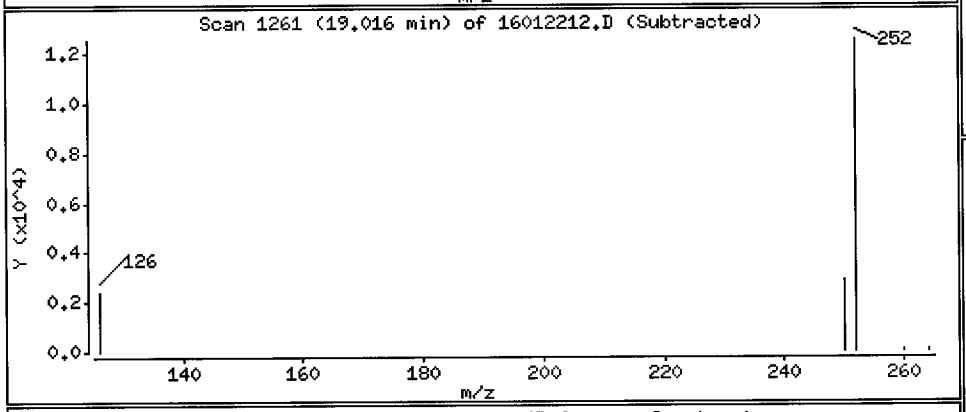
Column diameter: 0.25

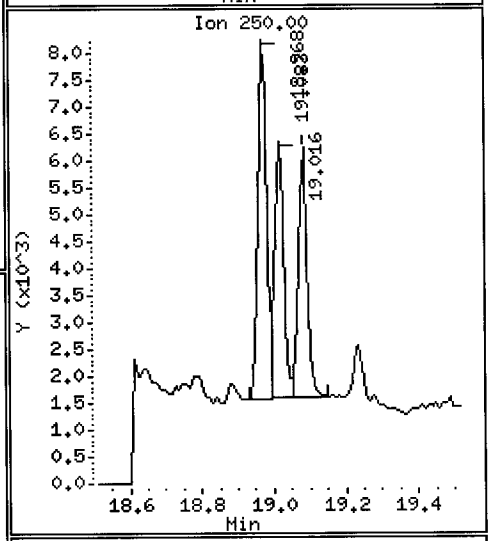
45 Benzo(k)fluoranthene

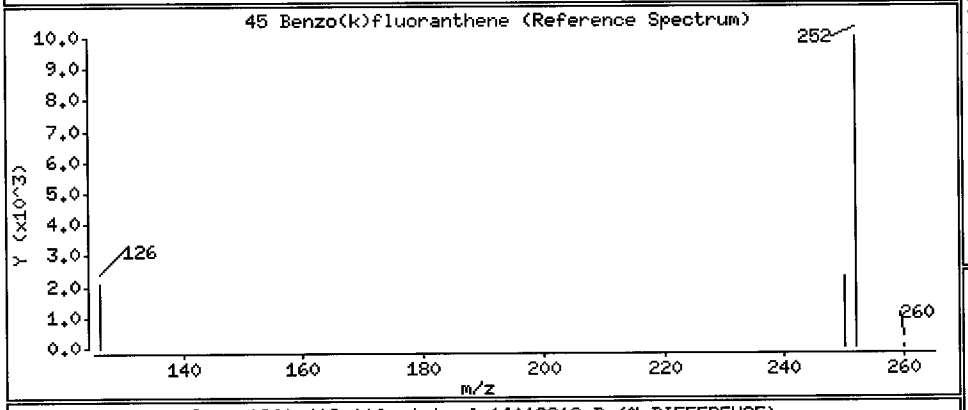
Concentration: 785 ug/kg

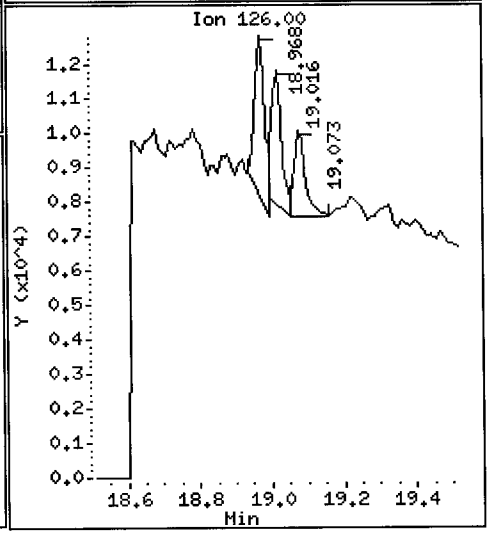


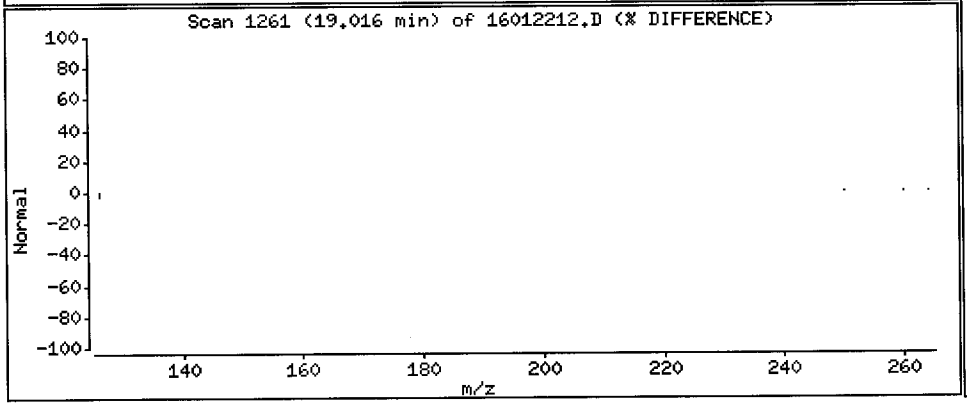












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

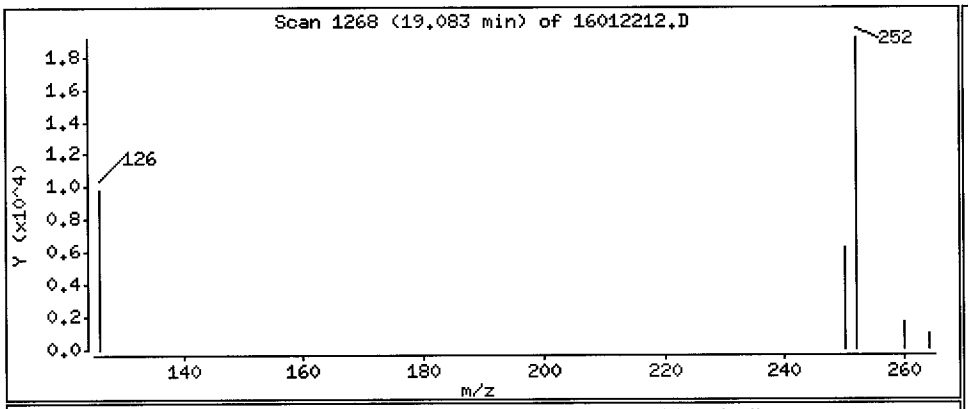
Operator: JW

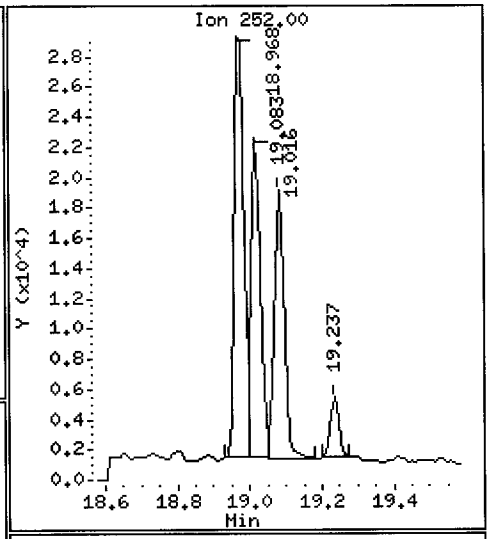
Column phase: Rxi-17Sil MS

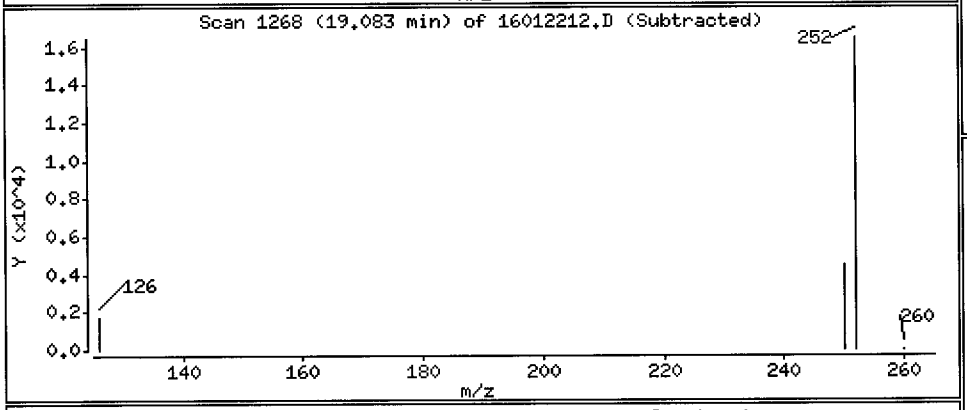
Column diameter: 0.25

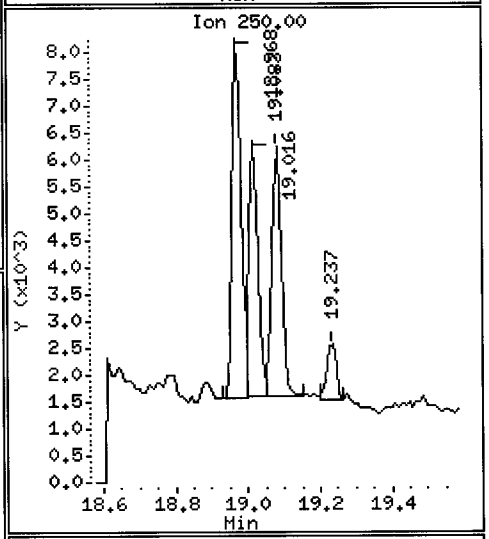
46 Benzo(j)fluoranthene

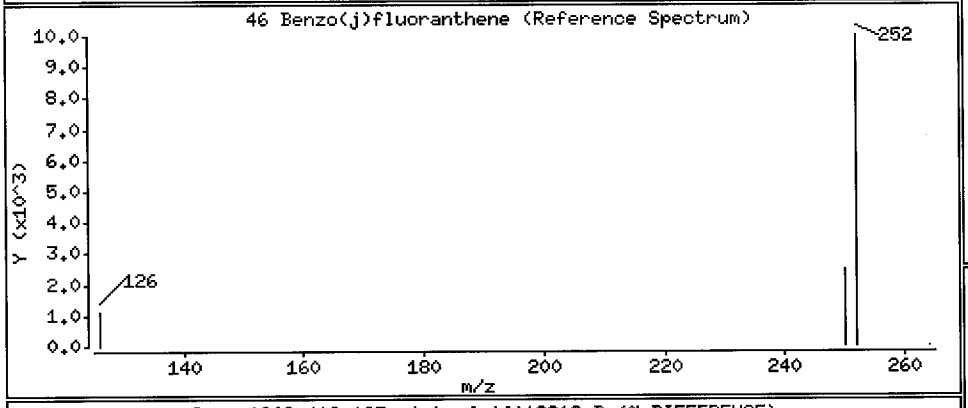
Concentration: 701 ug/kg

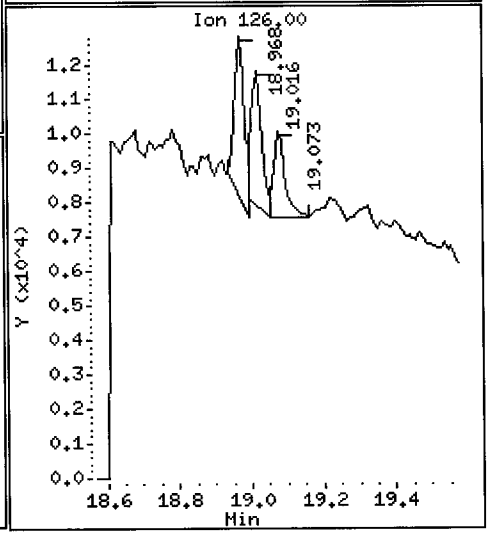


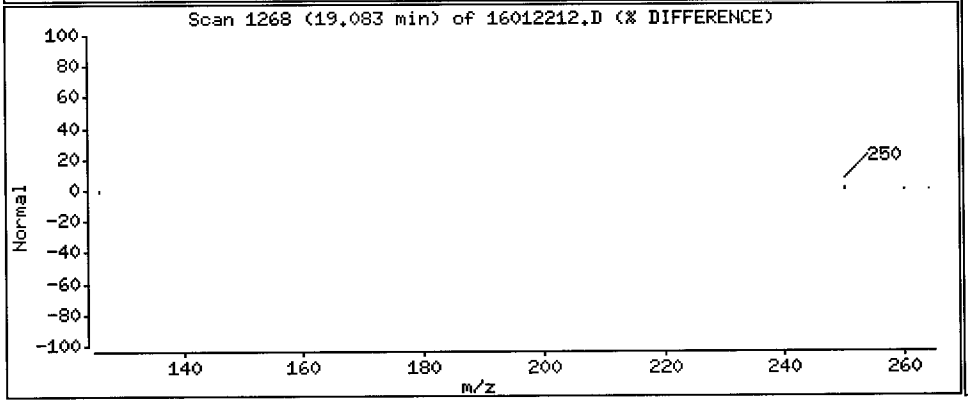












Data File: \\target\share\chem3\nt11.i\20160122.b\16012212.D

Date : 22-JAN-2016 12:58

Client ID: PG-PJ-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0B

Volume Injected (uL): 2.0

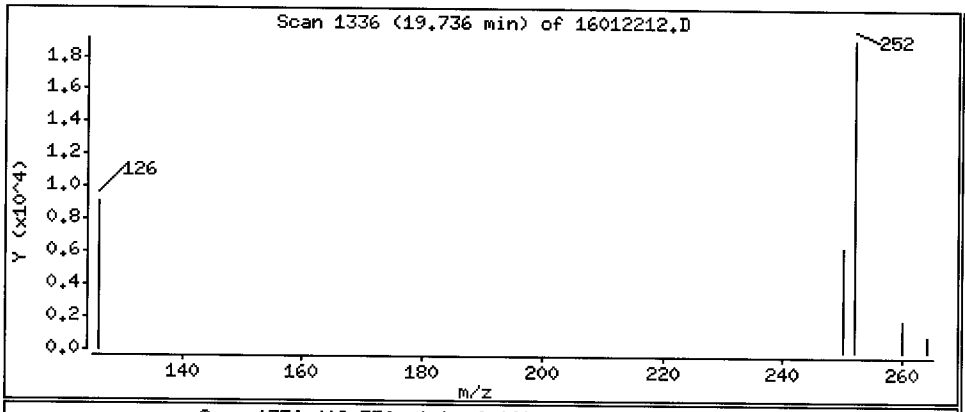
Operator: JW

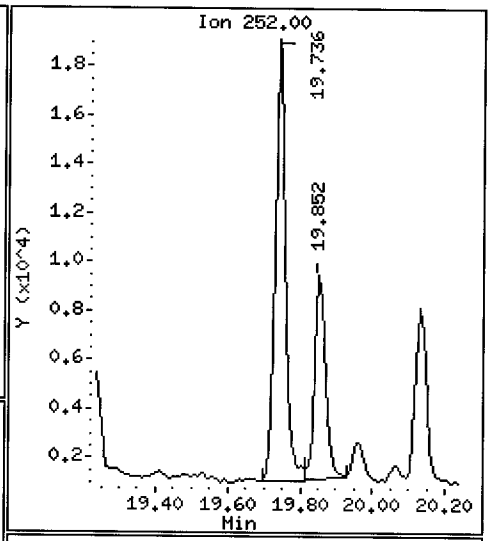
Column phase: Rxi-17Sil MS

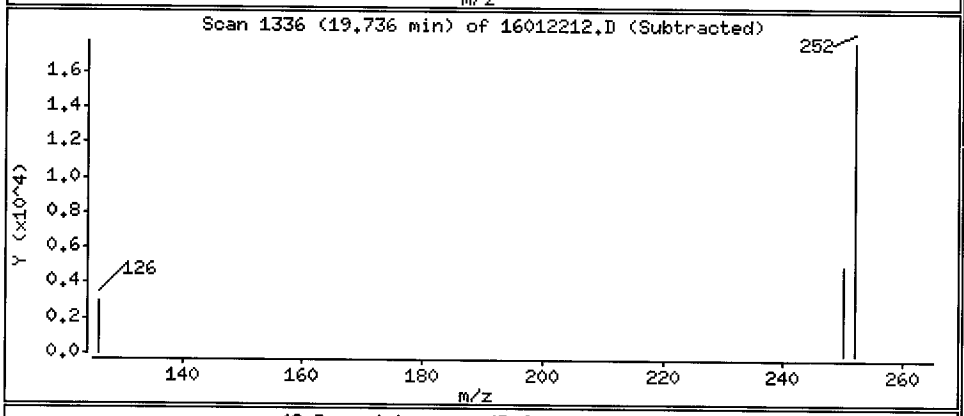
Column diameter: 0.25

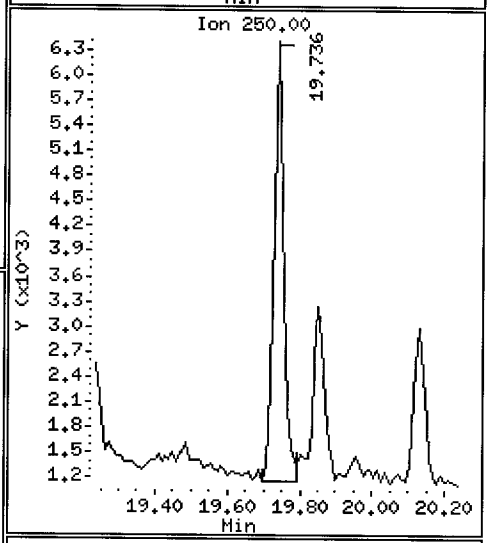
48 Benzo(e)pyrene

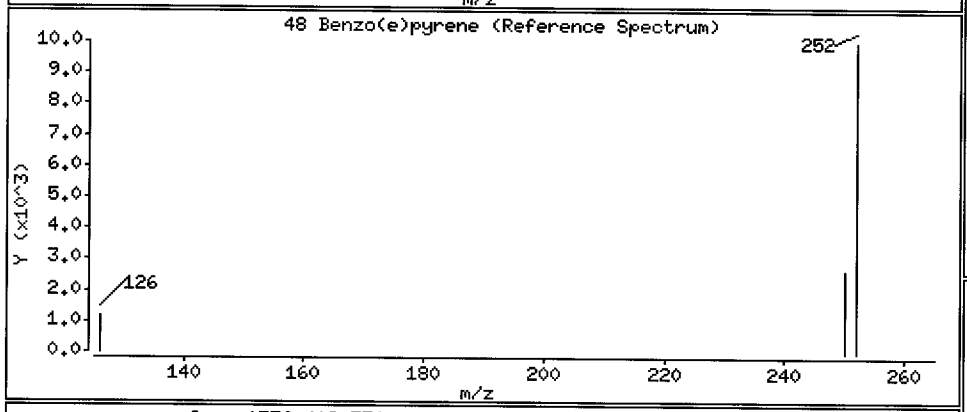
Concentration: 869 ug/kg

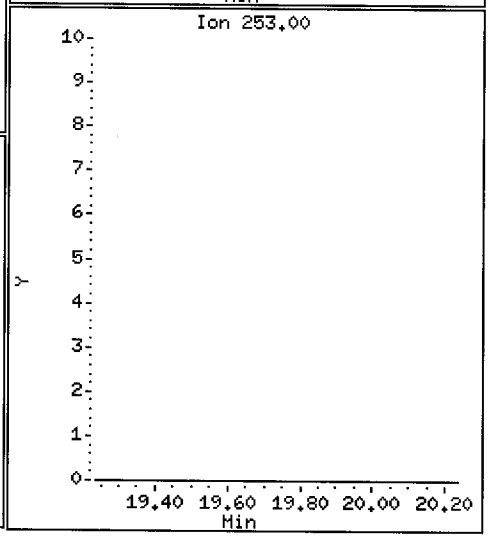


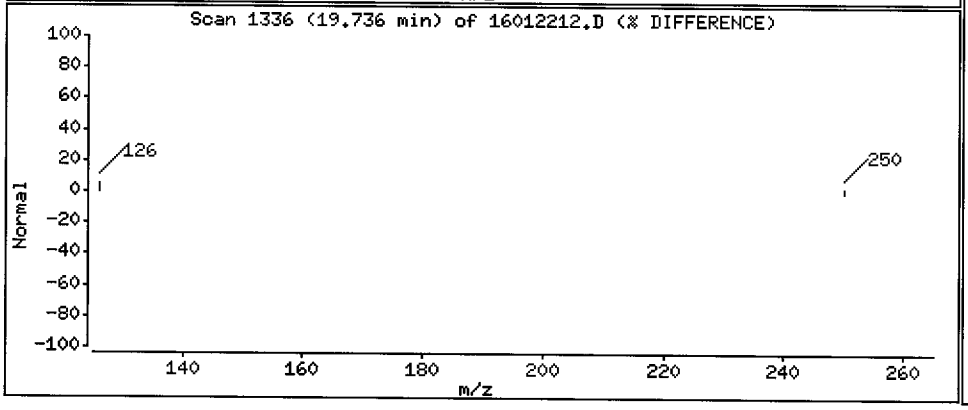












REVIEW SUMMARY FOR FILE - 16012212.D

Lab ID: ATS0B
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 12:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012213.D
Lab Smp Id: ATS0BMS Client Smp ID: PG-PJ-1-MUS-COC MS
Inj Date : 22-JAN-2016 13:28 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0BMS
Misc Info : 16-136
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 7 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.010	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	373582	200.000	
	5 Naphthalene	128	6.776	6.776	(1.006)	310983	144.115	7200
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	202176	145.802	7280
	7 2-Methylnaphthalene	142	7.774	7.774	(1.154)	237051	159.881	7990
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	214233	160.333	8010
	10 Acenaphthylene	152	9.589	9.589	(0.984)	396096	182.421	9110
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	269039	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.007)	255738	177.451	8860
	14 Dibenzofuran	168	10.010	10.010	(1.027)	393896	181.430	9060
	15 Fluorene	166	10.630	10.630	(1.091)	332819	204.405	10200
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	428623	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	658221	254.889	12700
	20 Anthracene	178	12.523	12.523	(1.008)	511355	221.222	11100
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	449914	190.871	9530
	24 Fluoranthene	202	14.557	14.557	(1.172)	790055	304.725	15200
	25 Pyrene	202	15.057	15.057	(0.877)	714918	278.301	13900
	28 Benzo(a)anthracene	228	17.075	17.075	(0.995)	501429	231.852	11600
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	324379	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	523693	220.628	11000
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	467560	213.641	10700
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	468934	183.874	9180

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	415194	178.720	8930
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	404793	191.651	9570
*	35 Perylene-d12	264	20.062	20.062	(1.000)	323020	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	268034	205.585	10300
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	455508	205.399	10300
	38 Dibenzo(a,h)anthracene	278	22.639	22.651	(1.128)	370717	211.395	10600
	39 Benzo(g,h,i)perylene	276	23.825	23.814	(1.188)	390376	202.774	10100
	47 Perylene	252	20.130	20.130	(1.003)	406280	185.534	9270
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	426521	192.840	9630

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012213.D
Lab Smp Id: ATS0BMS
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-136

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-PJ-1-MUS-COC
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	373582	13.93
11 Acenaphthene-d10	239179	119590	478358	269039	12.48
18 Phenanthrene-d10	372253	186127	744506	428623	15.14
29 Chrysene-d12	294711	147356	589422	324379	10.07
35 Perylene-d12	260595	130298	521190	323020	23.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.16
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

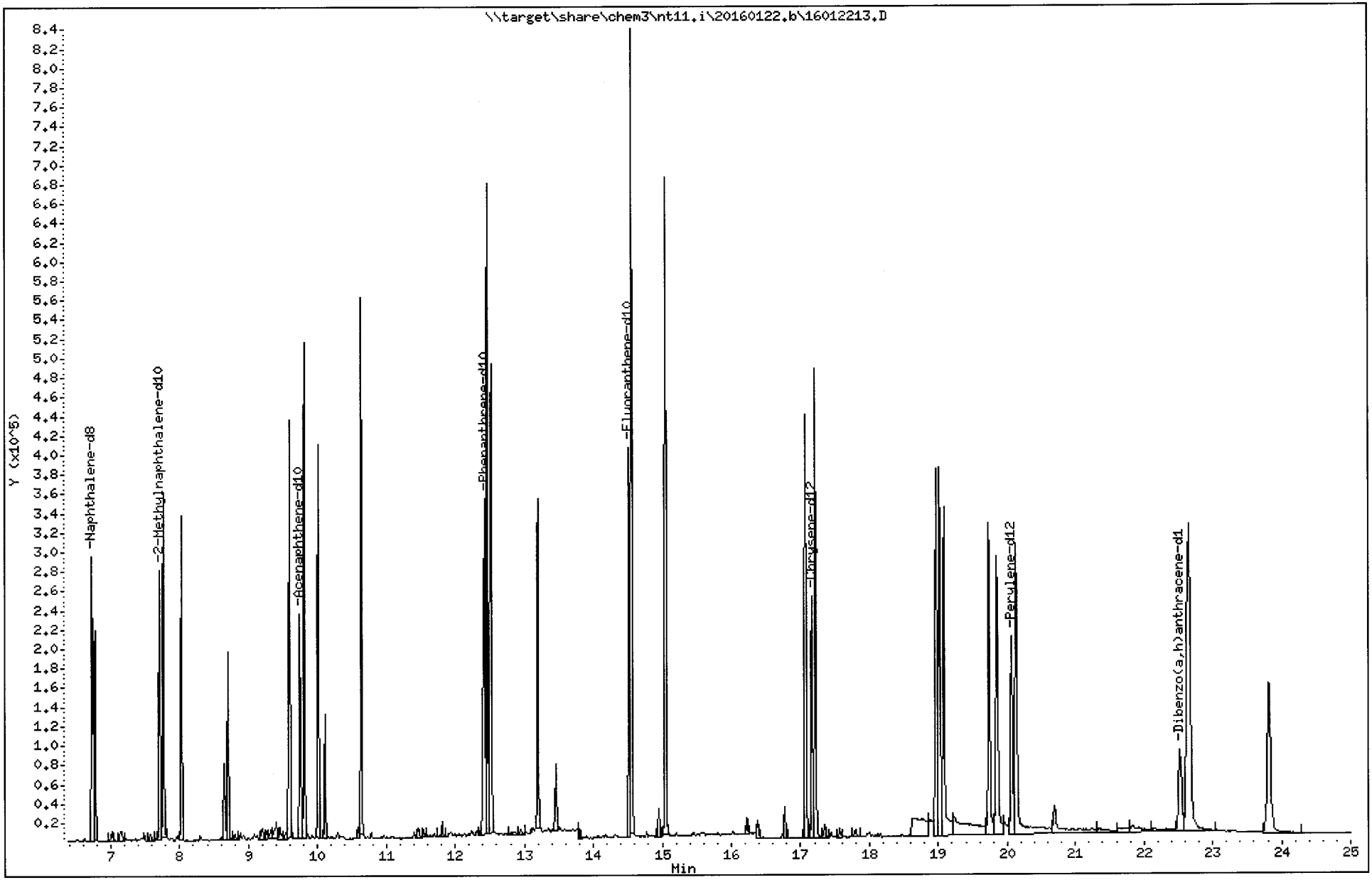
RECOVERY REPORT

Client Name: Anchor
Client SDG: ATS0
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: ATS0BMS
Client Smp ID: PG-PJ-1-MUS-COC MS
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: MS
SpikeList File: PEMDTISS.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-136

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
5 Naphthalene	15000	7200	48.04	30-160
7 2-Methylnaphthalen	15000	7990	53.29	30-160
10 Acenaphthylene	15000	9110	60.81	30-160
12 Acenaphthene	15000	8860	59.15	30-160
15 Fluorene	15000	10200	68.14	30-160
19 Phenanthrene	15000	12700	84.96	30-160
20 Anthracene	15000	11100	73.74	30-160
24 Fluoranthene	15000	15200	101.58	30-160
25 Pyrene	15000	13900	92.77	30-160
28 Benzo(a)anthracene	15000	11600	77.28	30-160
30 Chrysene	15000	11000	73.54	30-160
44 Benzo(b)fluoranthe	15000	10700	71.21	30-160
45 Benzo(k)fluoranthe	15000	9180	61.29	30-160
34 Benzo(a)pyrene	15000	9570	63.88	30-160
37 Indeno(1,2,3-cd)py	15000	10300	68.47	30-160
38 Dibenzo(a,h)anthra	15000	10600	70.47	30-160
39 Benzo(g,h,i)peryle	15000	10100	67.59	30-160
47 Perylene	15000	9270	61.84	30-160
48 Benzo(e)pyrene	15000	9630	64.28	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7280	48.60	30-160
$ 23 Fluoranthene-d10	15000	9530	63.62	30-160
$ 36 Dibenzo(a,h)anthra	15000	10300	68.53	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012213.D
Date : 22-JAN-2016 13:28
Client ID: PG-PJ-1-MUS-COC MS
Instrument: nt11.i
Sample Info: ATS0BMS
Volume Injected (uL): 2.0
Operator: JW
Column phase: Rxi-17Sil MS
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012213.D

Lab ID: ATS0BMS
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 13:28

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012214.D
Lab Smp Id: ATS0BMSD Client Smp ID: PG-PJ-1-MUS-COC MSD
Inj Date : 22-JAN-2016 13:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0BMSD
Misc Info : 16-136
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 8 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.000	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	377287	200.000	
	5 Naphthalene	128	6.776	6.776	(1.006)	253330	116.245	5810
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	159711	114.047	5700
	7 2-Methylnaphthalene	142	7.774	7.774	(1.154)	194100	129.627	6480
	8 1-Methylnaphthalene	142	8.026	8.026	(1.192)	176045	130.459	6520
	10 Acenaphthylene	152	9.589	9.589	(0.984)	333557	152.119	7610
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	271691	200.000	
	12 Acenaphthene	153	9.811	9.811	(1.007)	214891	147.652	7380
	14 Dibenzofuran	168	10.010	10.010	(1.027)	332021	151.438	7570
	15 Fluorene	166	10.630	10.630	(1.091)	283636	172.499	8620
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	435691	200.000	
	19 Phenanthrene	178	12.468	12.468	(1.004)	573821	218.601	10900
	20 Anthracene	178	12.523	12.523	(1.008)	445698	189.690	9480
$	23 Fluoranthene-d10	212	14.519	14.518	(1.169)	383550	160.077	8000
	24 Fluoranthene	202	14.557	14.557	(1.172)	700458	265.785	13300
	25 Pyrene	202	15.057	15.057	(0.877)	628008	243.720	12200
	28 Benzo(a)anthracene	228	17.076	17.075	(0.995)	439984	202.818	10100
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	325376	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	465181	195.377	9770
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	413804	188.243	9410
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	415444	162.181	8110

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	368467	157.906	7900
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	360789	170.063	8500
*	35 Perylene-d12	264	20.063	20.062	(1.000)	324453	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	225915	172.514	8630
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	406218	182.364	9120
	38 Dibenzo(a,h)anthracene	278	22.640	22.651	(1.128)	326953	185.616	9280
	39 Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	347986	179.957	9000
	47 Perylene	252	20.130	20.130	(1.003)	358884	163.166	8160
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	375648	169.089	8450

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012214.D
Lab Smp Id: ATS0BMSD
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-136

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-PJ-1-MUS-COC
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	377287	15.06
11 Acenaphthene-d10	239179	119590	478358	271691	13.59
18 Phenanthrene-d10	372253	186127	744506	435691	17.04
29 Chrysene-d12	294711	147356	589422	325376	10.41
35 Perylene-d12	260595	130298	521190	324453	24.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.15
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

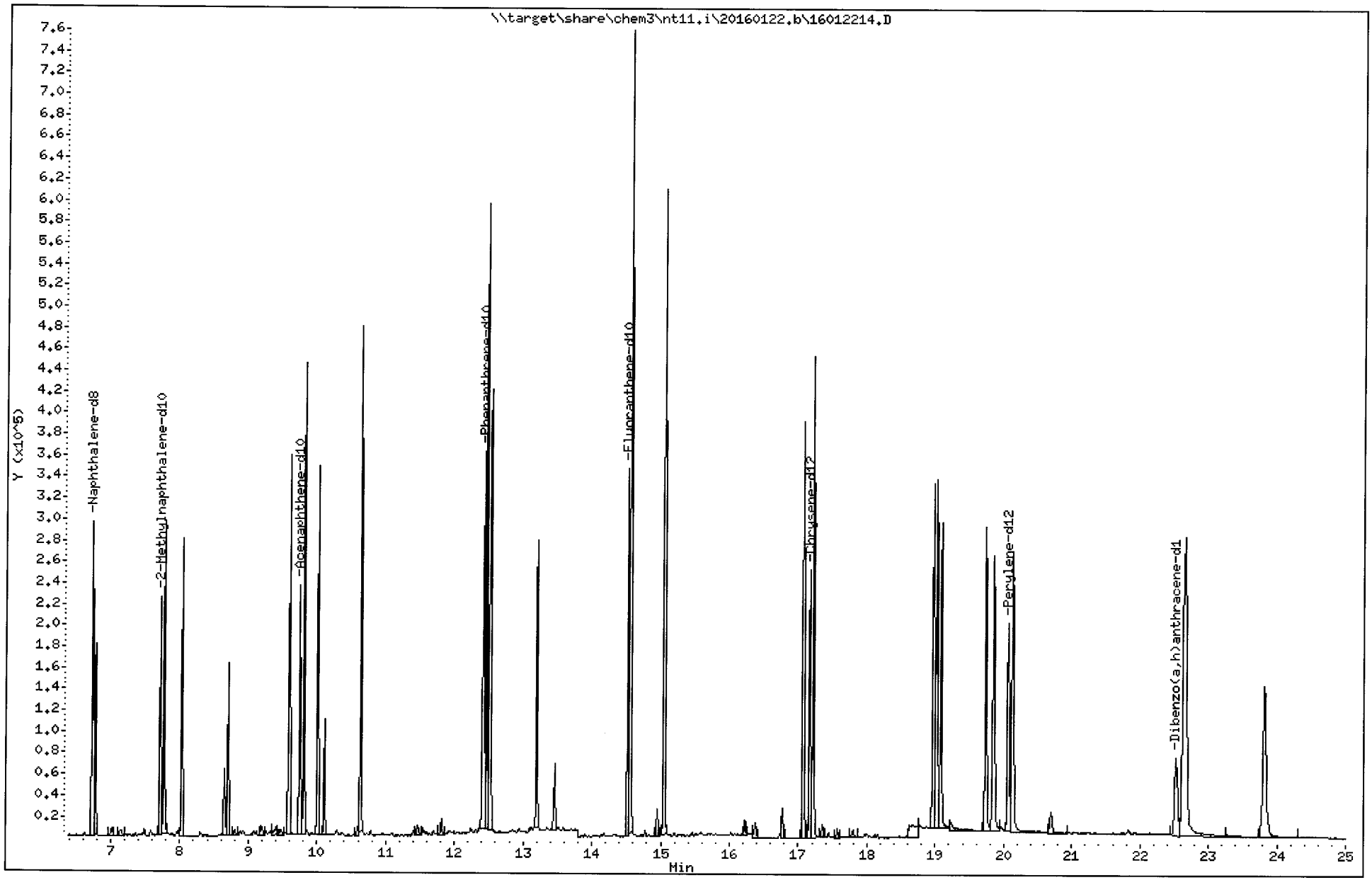
Client Name: Anchor
Client SDG: ATS0
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: ATS0BMSD
Client Smp ID: PG-PJ-1-MUS-COC MSD
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: MS
SpikeList File: PEMDTISS.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-136

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
5 Naphthalene	15000	5810	38.75	30-160
7 2-Methylnaphthalen	15000	6480	43.21	30-160
10 Acenaphthylene	15000	7610	50.71	30-160
12 Acenaphthene	15000	7380	49.22	30-160
15 Fluorene	15000	8620	57.50	30-160
19 Phenanthrene	15000	10900	72.87	30-160
20 Anthracene	15000	9480	63.23	30-160
24 Fluoranthene	15000	13300	88.59	30-160
25 Pyrene	15000	12200	81.24	30-160
28 Benzo(a)anthracene	15000	10100	67.61	30-160
30 Chrysene	15000	9770	65.13	30-160
44 Benzo(b)fluoranthe	15000	9410	62.75	30-160
45 Benzo(k)fluoranthe	15000	8110	54.06	30-160
34 Benzo(a)pyrene	15000	8500	56.69	30-160
37 Indeno(1,2,3-cd)py	15000	9120	60.79	30-160
38 Dibenzo(a,h)anthra	15000	9280	61.87	30-160
39 Benzo(g,h,i)peryle	15000	9000	59.99	30-160
47 Perylene	15000	8160	54.39	30-160
48 Benzo(e)pyrene	15000	8450	56.36	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	5700	38.02	30-160
$ 23 Fluoranthene-d10	15000	8000	53.36	30-160
$ 36 Dibenzo(a,h)anthra	15000	8630	57.50	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012214.D
Date : 22-JAN-2016 13:59
Client ID: PG-PJ-1-MUS-COC MSD
Sample Info: ATSOBMSD
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



REVIEW SUMMARY FOR FILE - 16012214.D

Lab ID: ATS0BMSD
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 13:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012215.D
Lab Smp Id: ATS0C Client Smp ID: PG-WS-1-MUS-COC-160
Inj Date : 22-JAN-2016 14:29 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0C
Misc Info : 16-137
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.040	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

SW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
* 4	Naphthalene-d8	136	6.734	6.744	(1.000)	376882	200.000	
5	Naphthalene	128	6.765	6.776	(1.005)	24232	11.1312	554
$ 6	2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	197150	140.932	7020
7	2-Methylnaphthalene	142	Compound Not Detected.					
8	1-Methylnaphthalene	142	Compound Not Detected.					
10	Acenaphthylene	152	Compound Not Detected.					
* 11	Acenaphthene-d10	164	9.744	9.744	(1.000)	268849	200.000	
12	Acenaphthene	153	9.800	9.811	(1.006)	16670	11.5751	576
14	Dibenzofuran	168	10.010	10.010	(1.027)	26738	12.3244	614
15	Fluorene	166	10.630	10.630	(1.091)	28177	17.3175	862
* 18	Phenanthrene-d10	188	12.424	12.424	(1.000)	435864	200.000	
19	Phenanthrene	178	12.457	12.468	(1.003)	313052	119.212	5940
20	Anthracene	178	12.512	12.523	(1.007)	80051	34.0563	1700
$ 23	Fluoranthene-d10	212	14.519	14.518	(1.169)	426862	178.083	8870
24	Fluoranthene	202	14.557	14.557	(1.172)	526498	199.697	9950
25	Pyrene	202	15.047	15.057	(0.877)	375475	147.091	7330
28	Benzo(a)anthracene	228	17.076	17.075	(0.995)	121976	56.7574	2830
* 29	Chrysene-d12	240	17.167	17.167	(1.000)	322334	200.000	
30	Chrysene	228	17.217	17.217	(1.003)	163116	69.1555	3440
44	Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	107617	49.1747	2450
45	Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	80884	31.7165	1580

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	64172	27.6237	1380
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	41009	19.4165	967
*	35 Perylene-d12	264	20.062	20.062	(1.000)	323010	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	246405	189.001	9410
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	20.130	20.130	(1.003)	28682	13.0985	652
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	74196	33.5467	1670

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012215.D
Lab Smp Id: ATS0C
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-137

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-WS-1-MUS-COC
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	376882	14.94
11 Acenaphthene-d10	239179	119590	478358	268849	12.40
18 Phenanthrene-d10	372253	186127	744506	435864	17.09
29 Chrysene-d12	294711	147356	589422	322334	9.37
35 Perylene-d12	260595	130298	521190	323010	23.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.16
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

RECOVERY REPORT

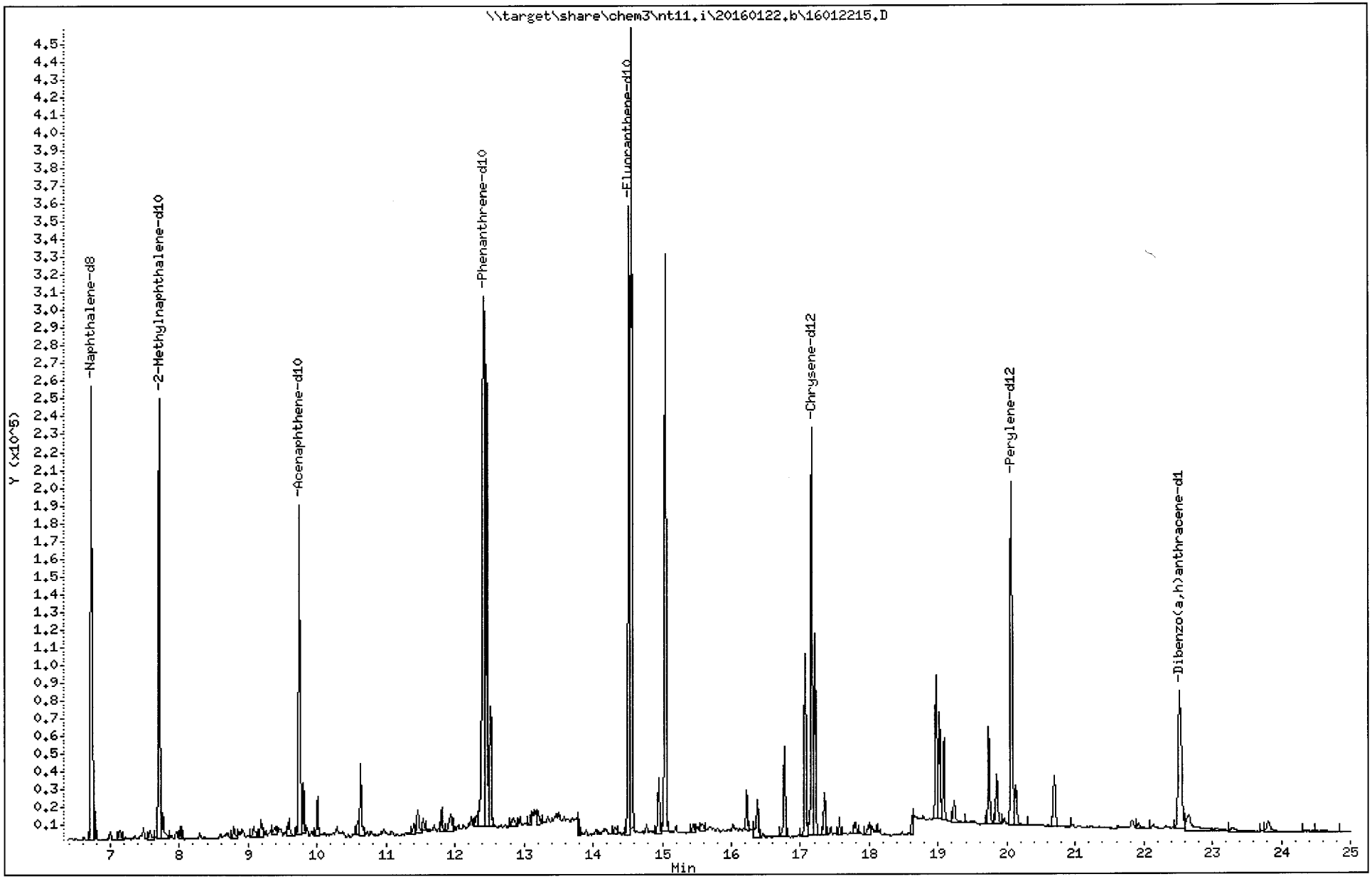
Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: ATS0C
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-137

Client SDG: ATS0
Fraction: SV
Client Smp ID: PG-WS-1-MUS-COC-160
Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	14900	7020	46.98	30-160
$ 23 Fluoranthene-d10	14900	8870	59.36	30-160
$ 36 Dibenzo(a,h)anthra	14900	9410	63.00	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D
Date : 22-JAN-2016 14:29
Client ID: PG-WS-1-MUS-COC-160
Sample Info: ATSOC
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0C

Volume Injected (uL): 2.0

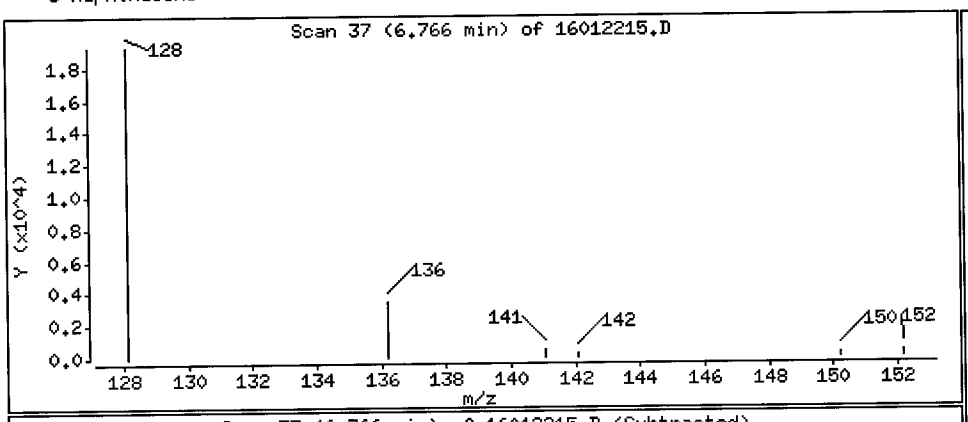
Operator: JW

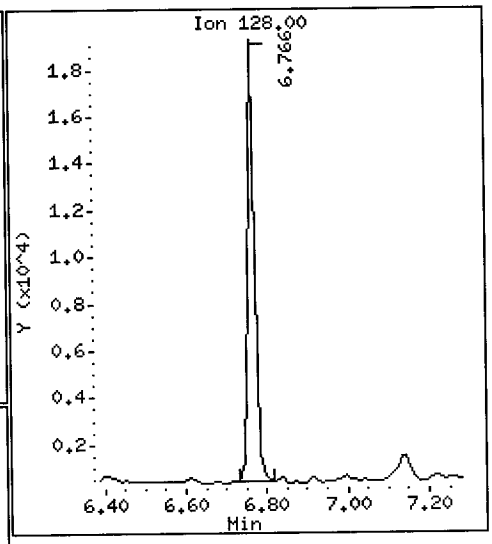
Column phase: Rxi-17Sil MS

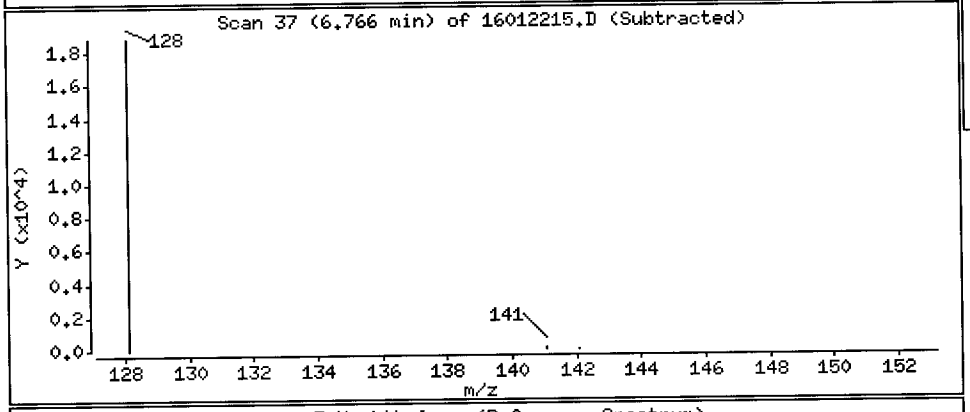
Column diameter: 0.25

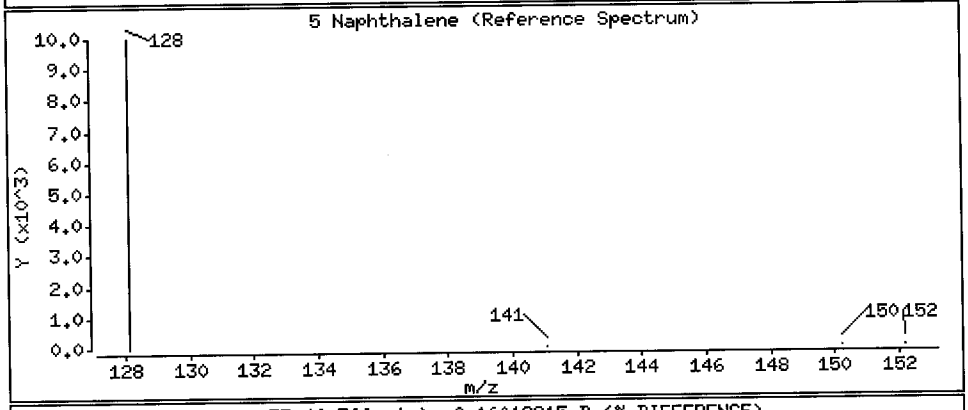
5 Naphthalene

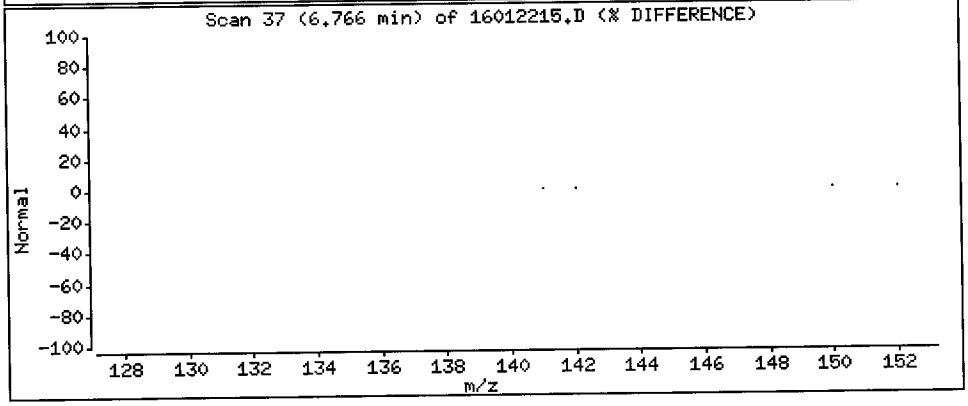
Concentration: 554 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

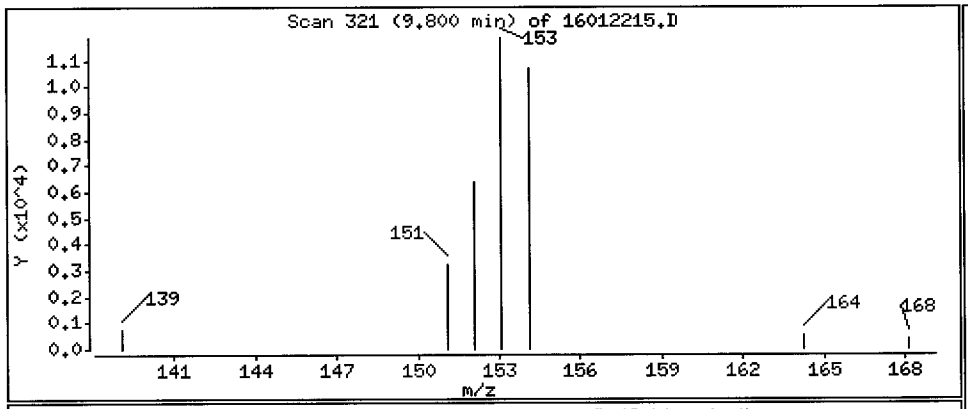
Operator: JW

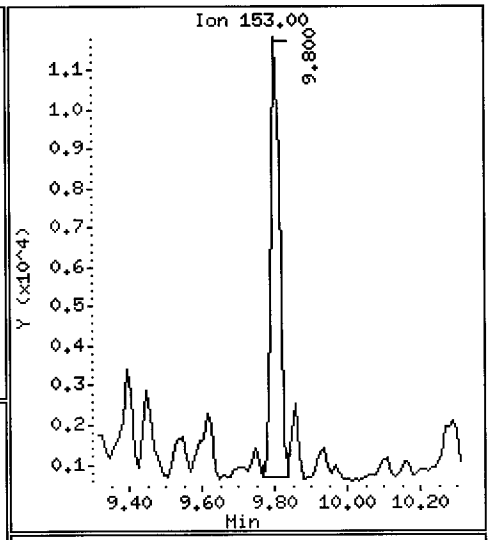
Column phase: Rxi-17Sil MS

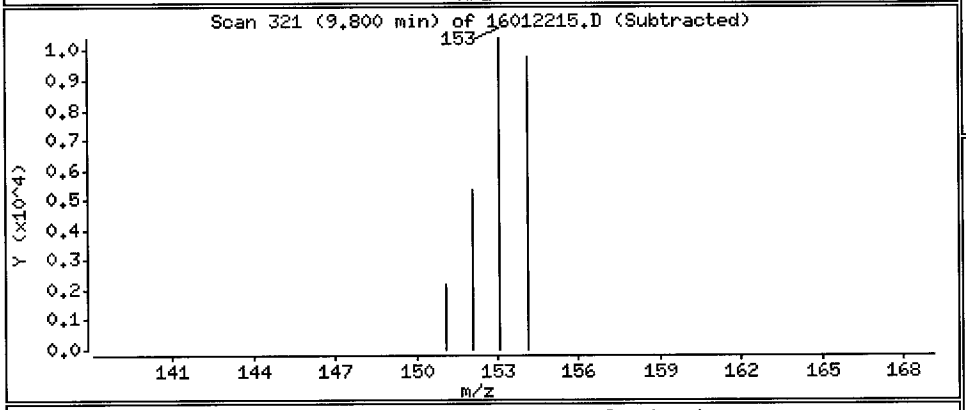
Column diameter: 0.25

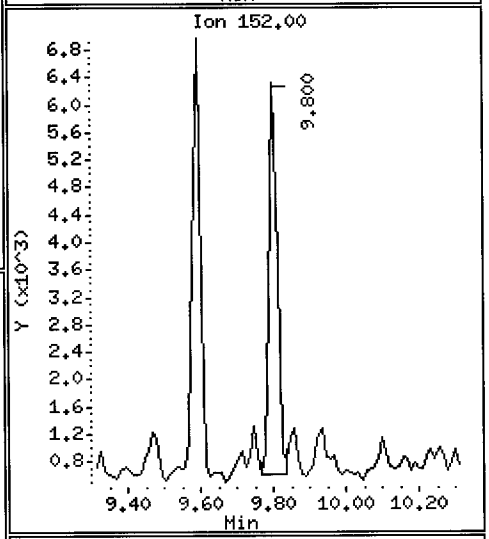
12 Acenaphthene

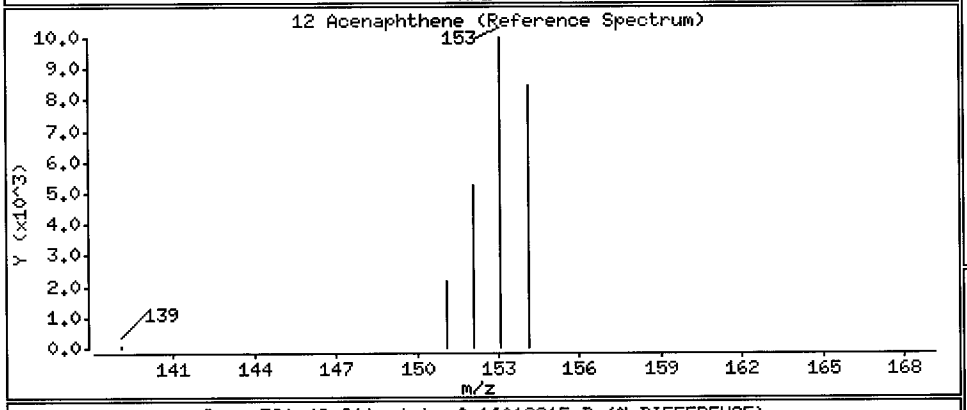
Concentration: 576 ug/kg

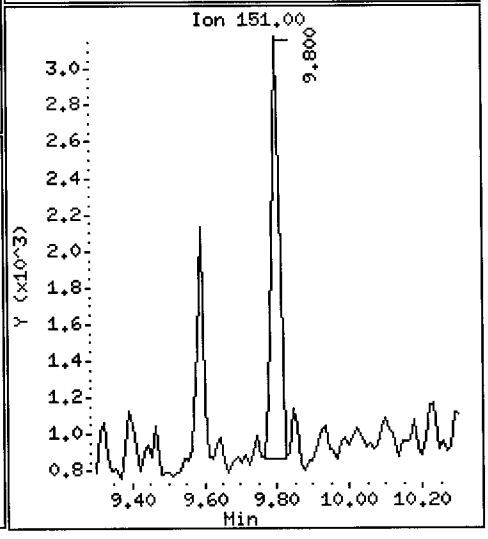


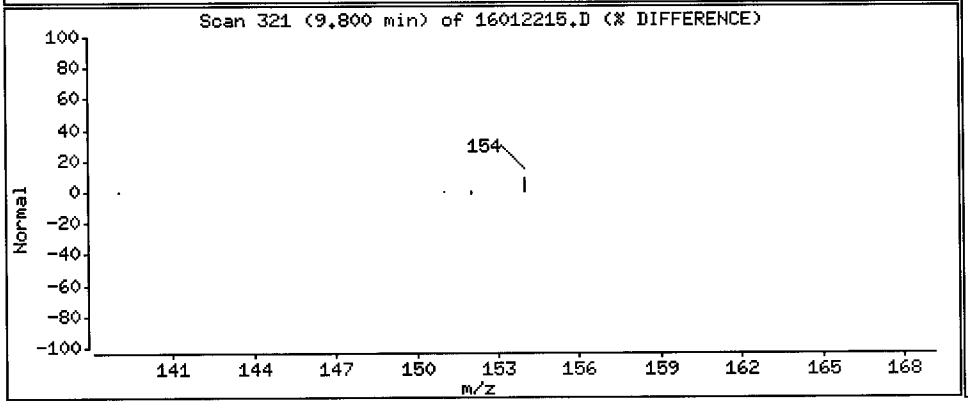












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0C

Volume Injected (uL): 2.0

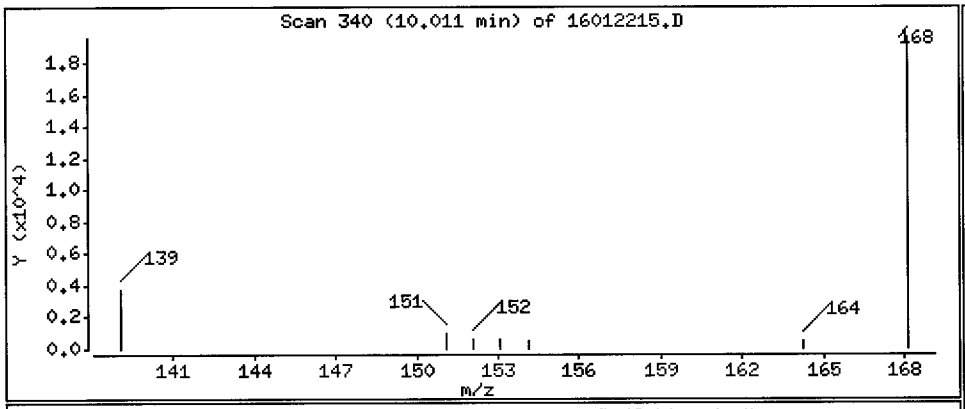
Operator: JW

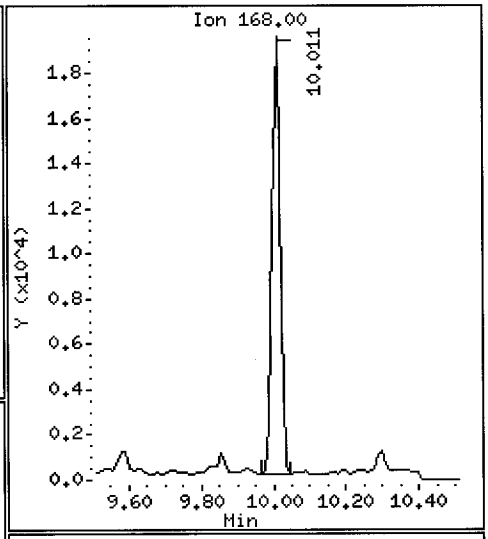
Column phase: Rxi-17Sil MS

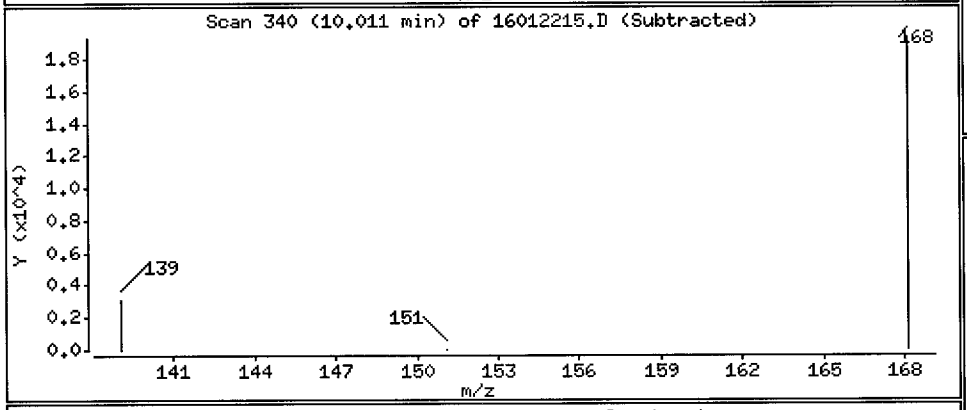
Column diameter: 0.25

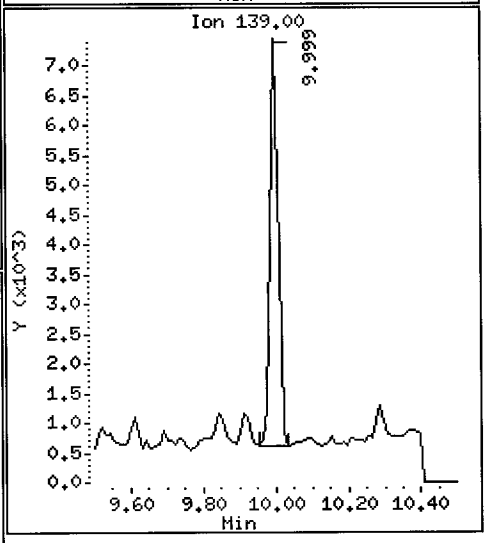
14 Dibenzofuran

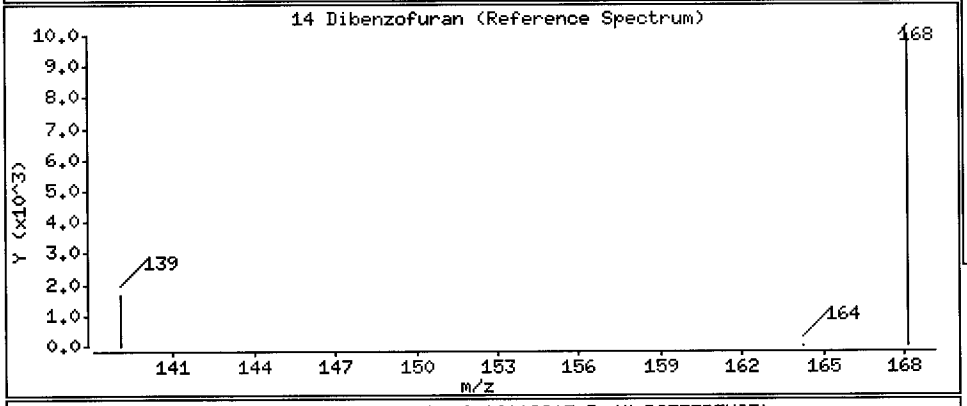
Concentration: 614 ug/kg

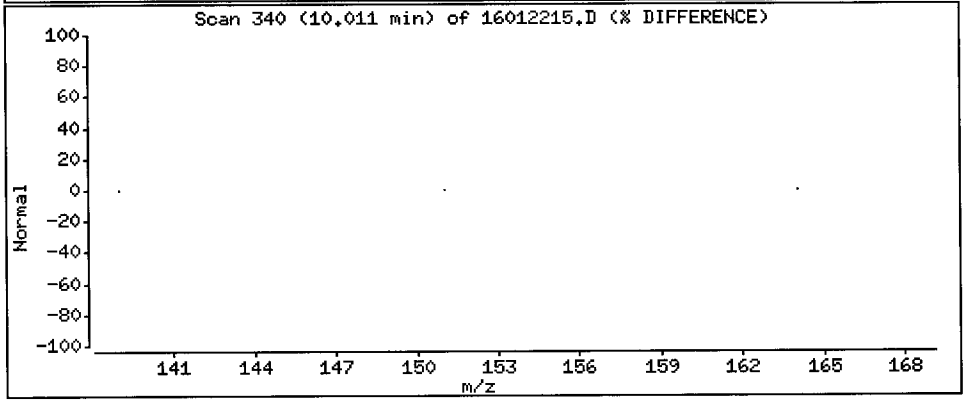












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

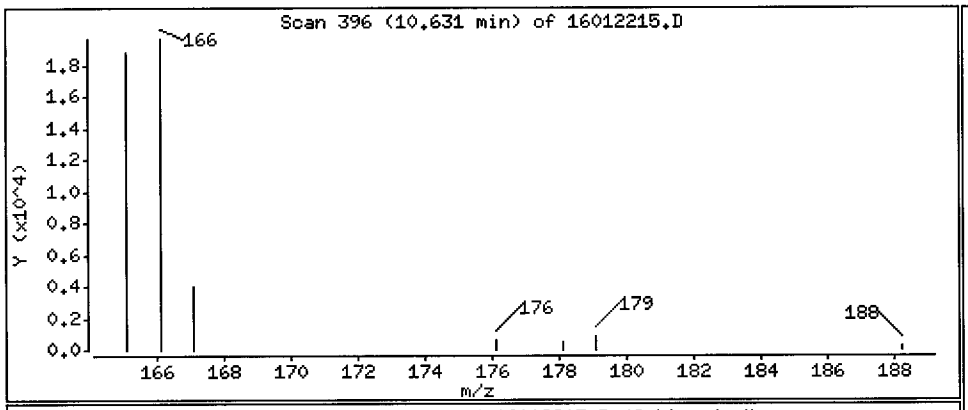
Operator: JW

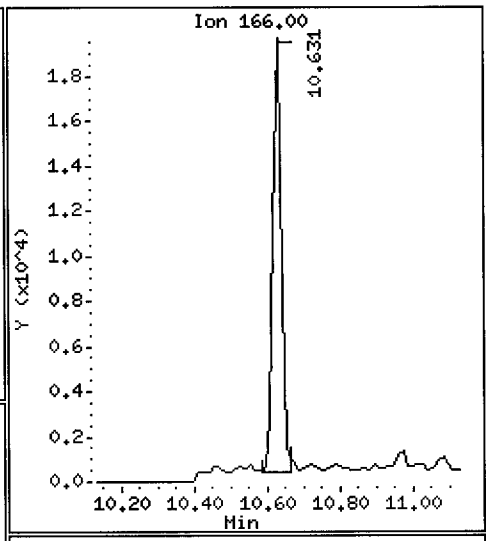
Column phase: Rxi-17Sil MS

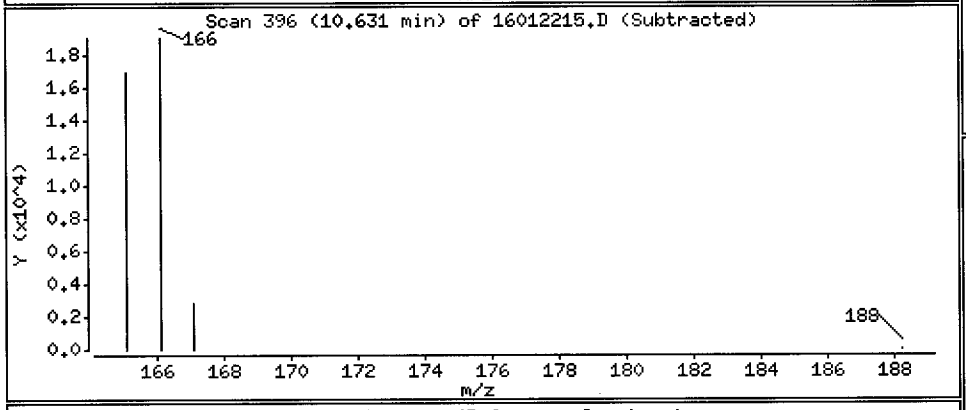
Column diameter: 0.25

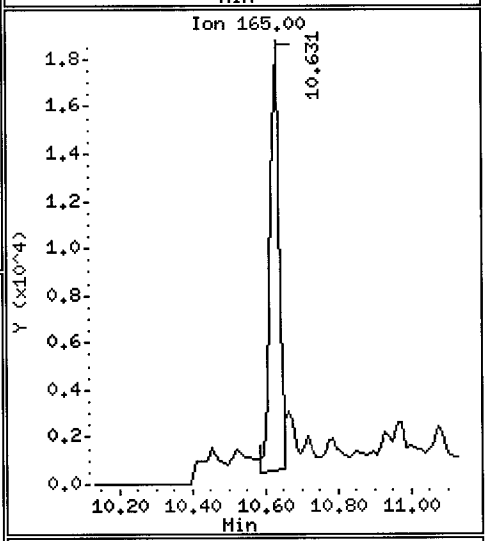
15 Fluorene

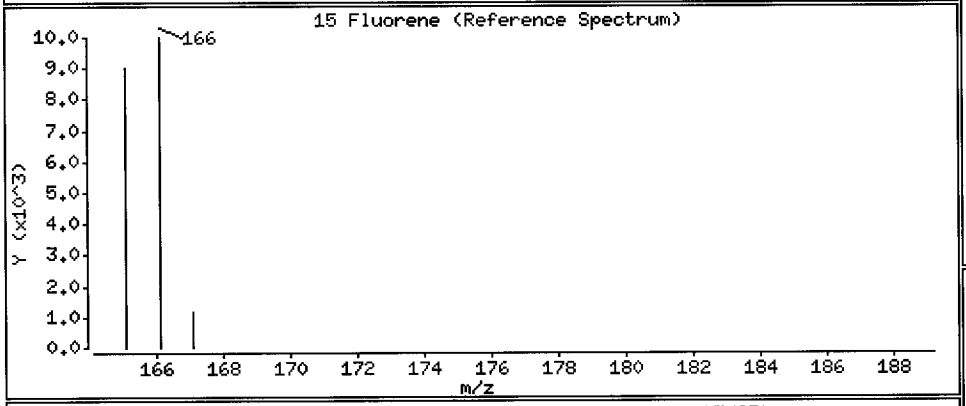
Concentration: 862 ug/kg

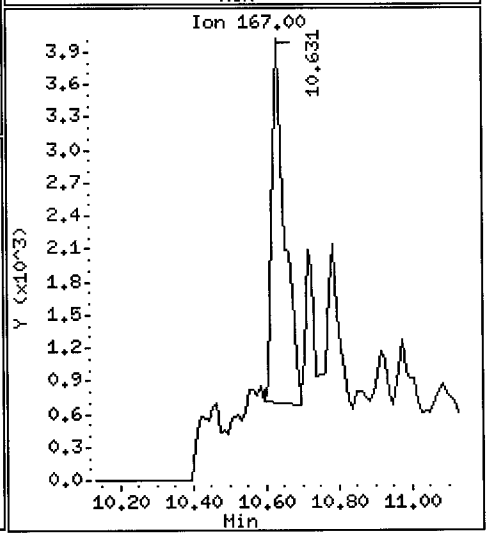


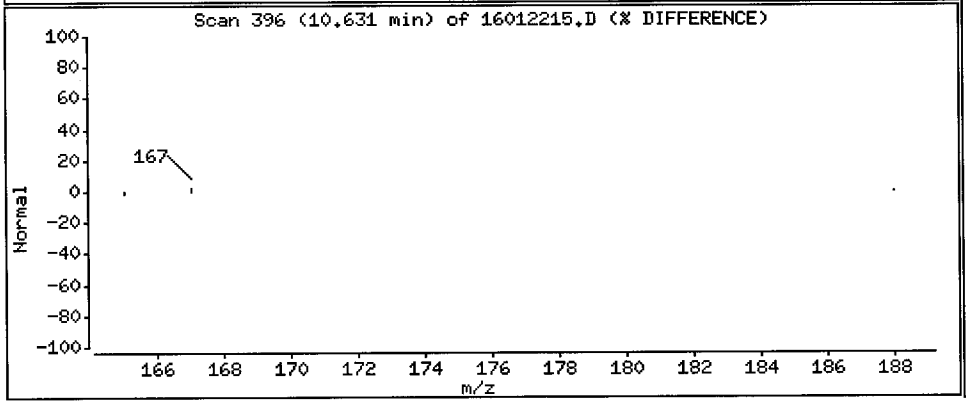












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

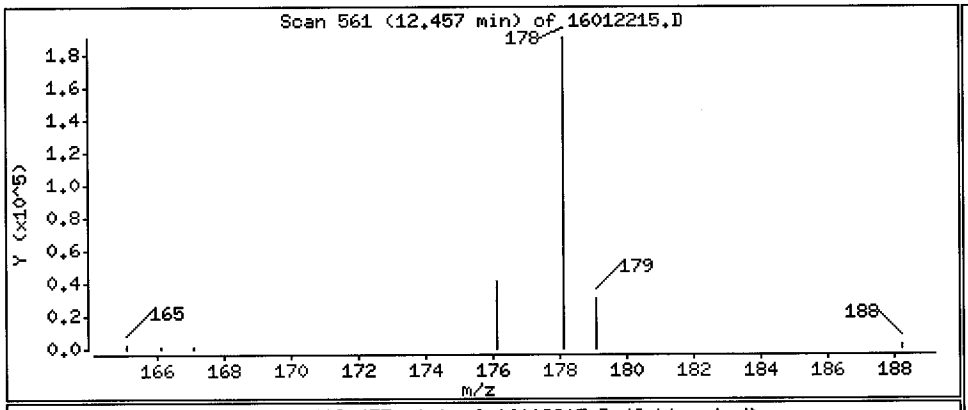
Operator: JW

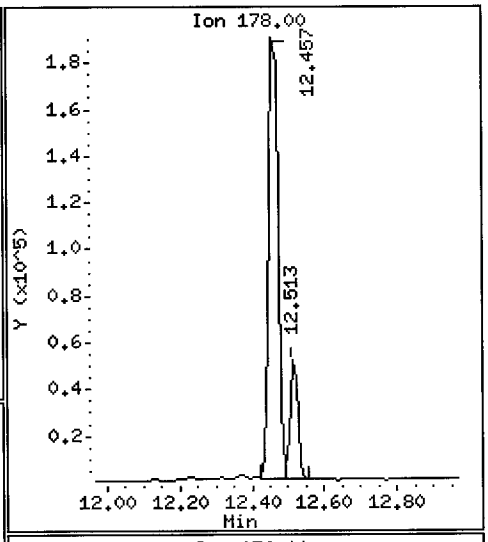
Column phase: Rxi-17Sil MS

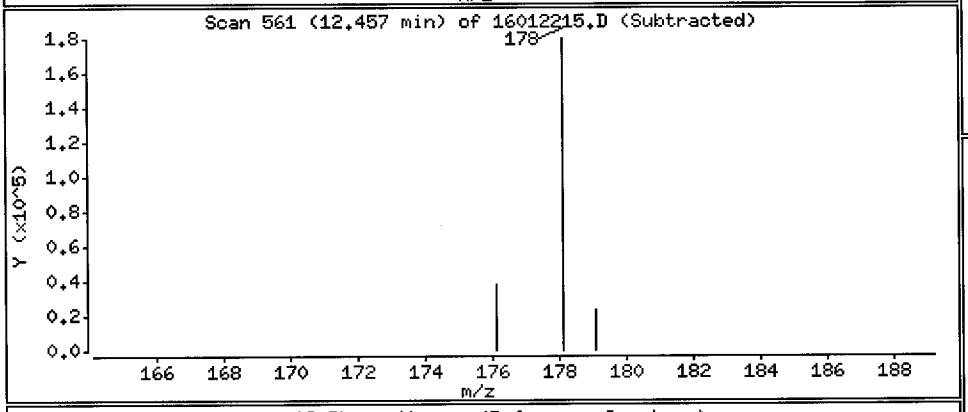
Column diameter: 0.25

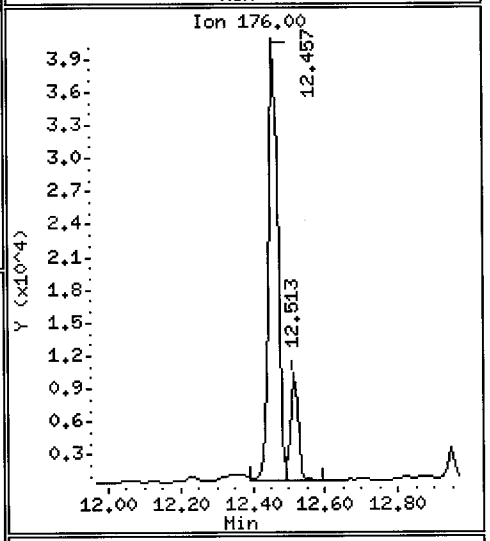
19 Phenanthrene

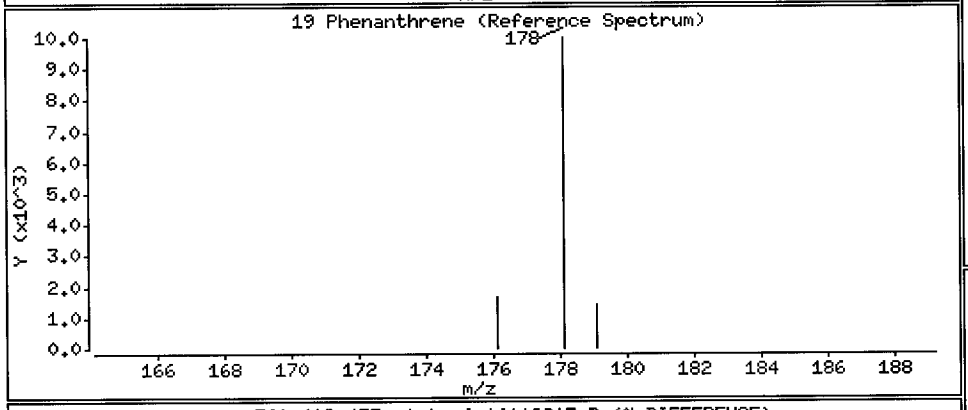
Concentration: 5940 ug/kg

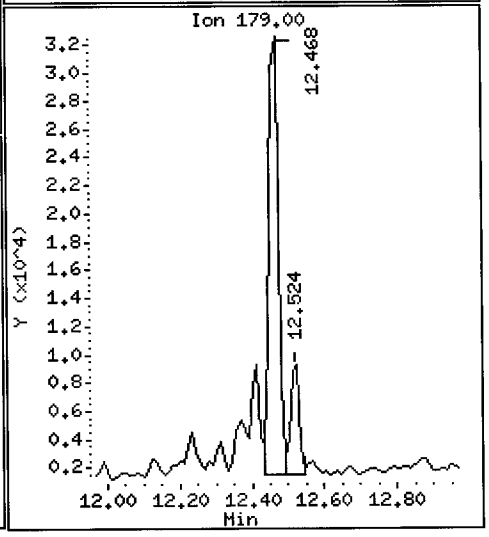


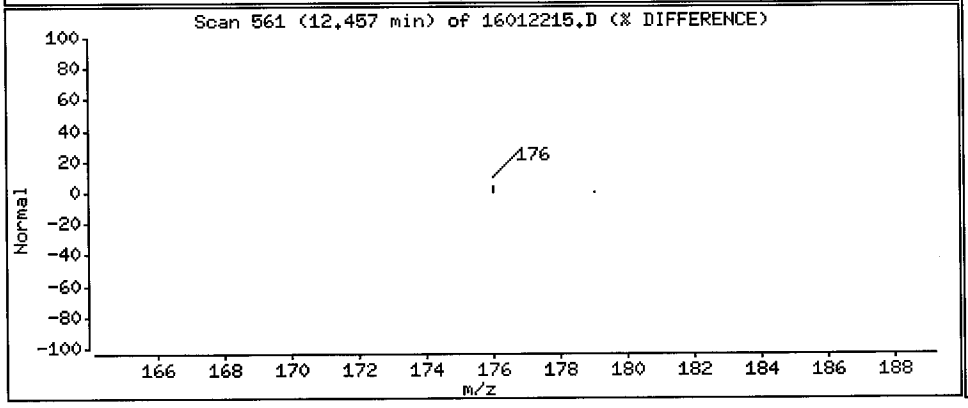












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0C

Volume Injected (uL): 2.0

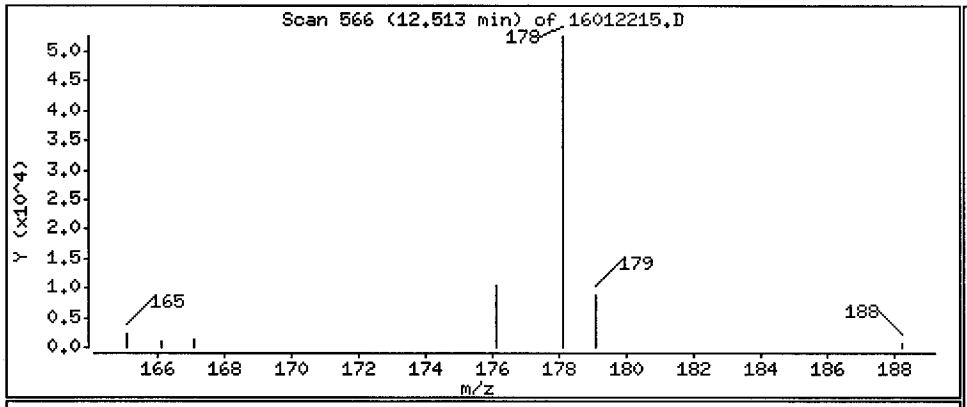
Operator: JW

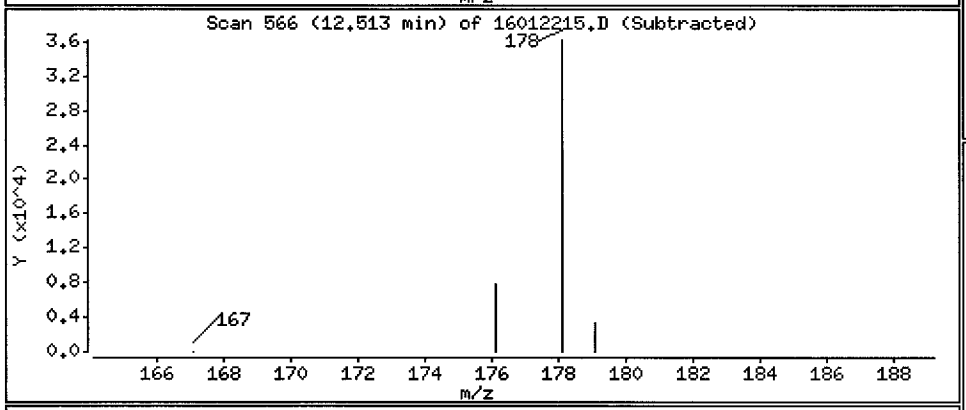
Column phase: Rxi-17Sil MS

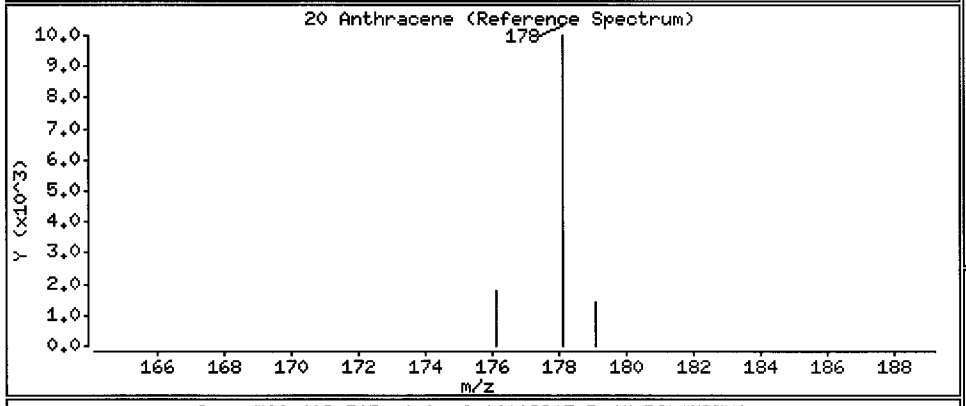
Column diameter: 0.25

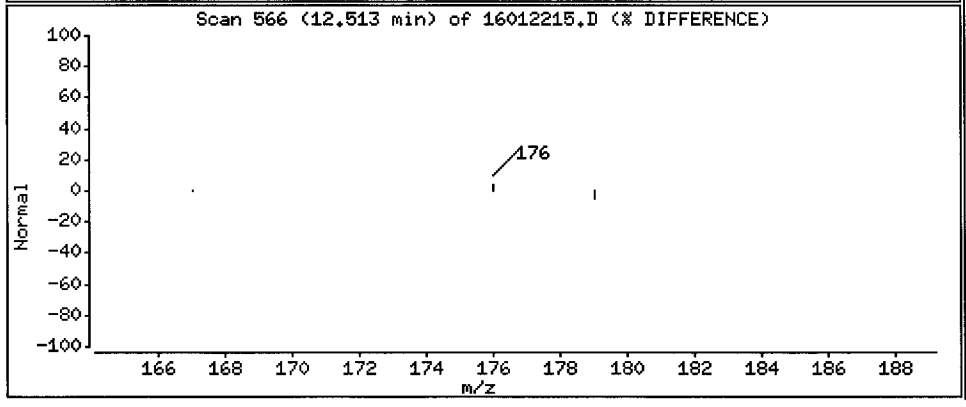
20 Anthracene

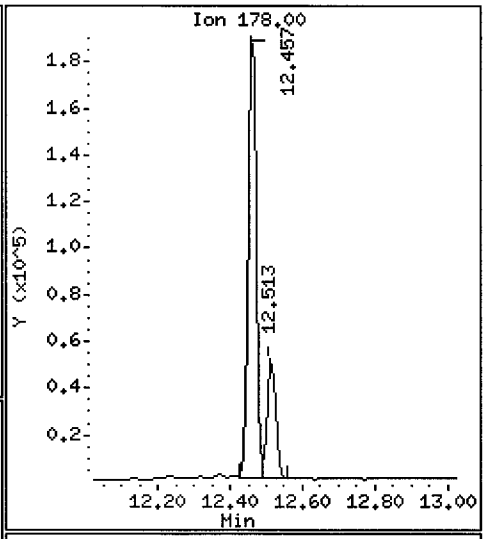
Concentration: 1700 ug/kg

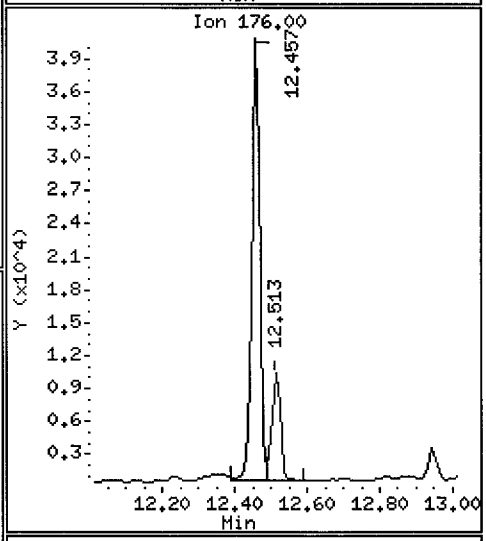


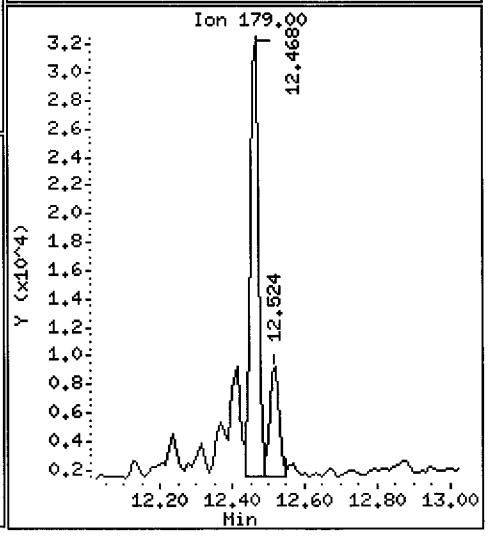












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

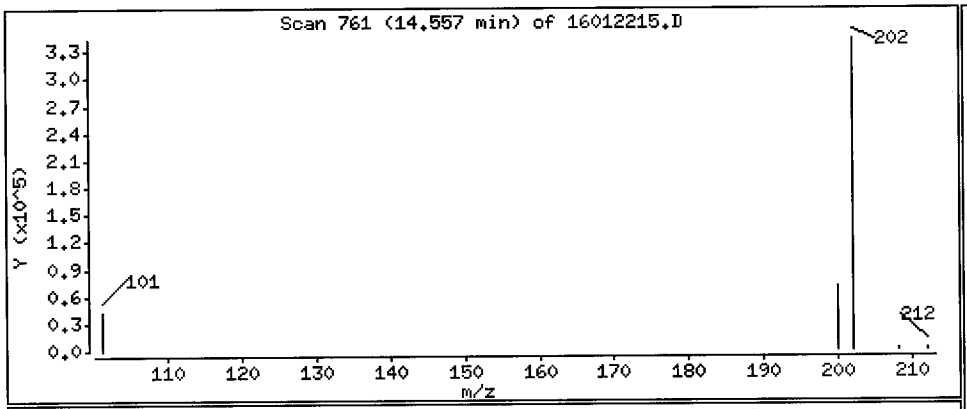
Operator: JW

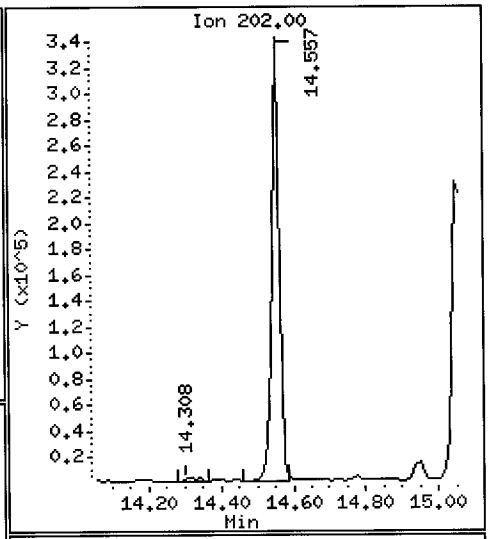
Column phase: Rxi-17Sil MS

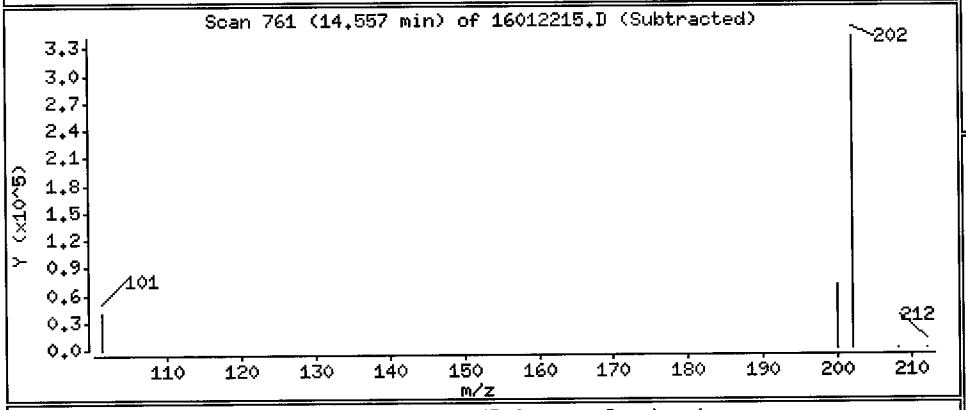
Column diameter: 0.25

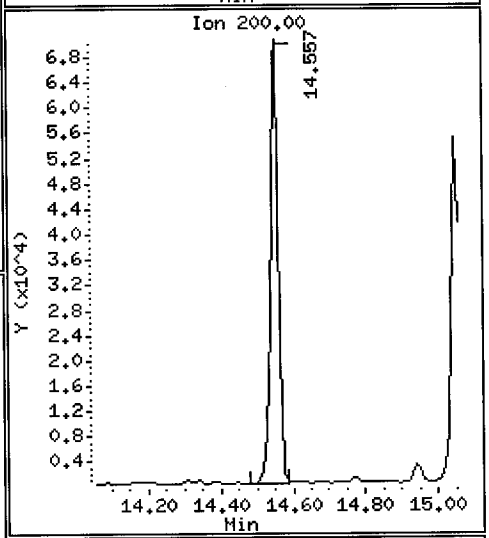
24 Fluoranthene

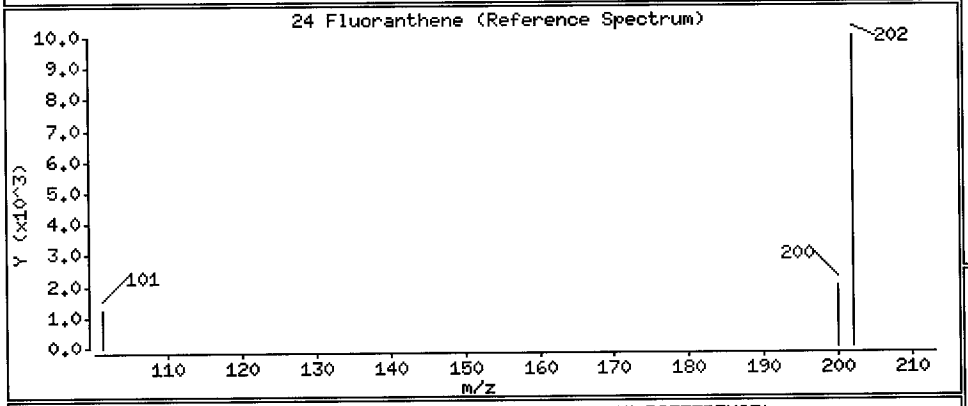
Concentration: 9950 ug/kg

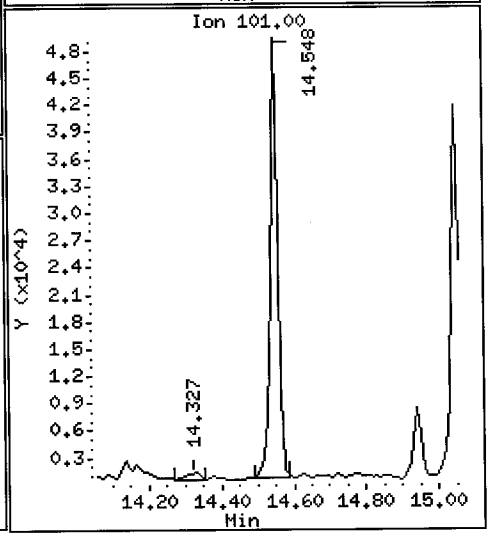


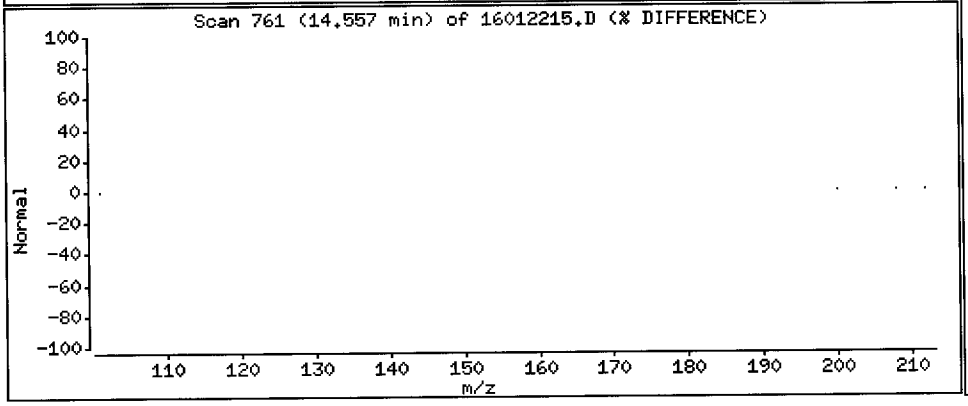












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

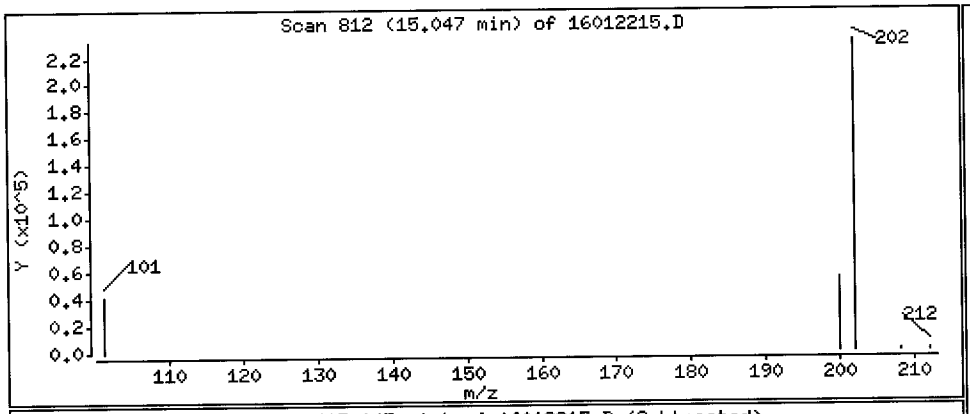
Operator: JW

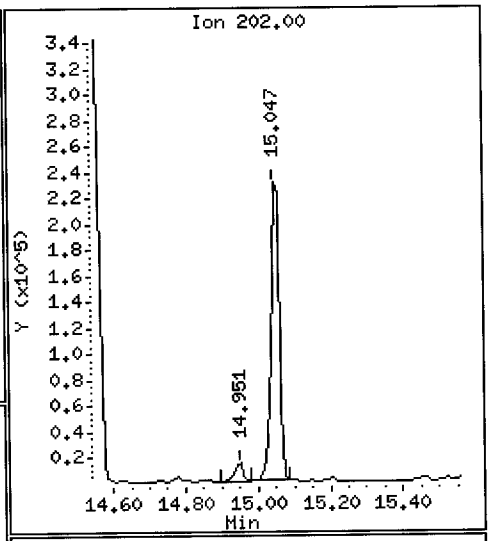
Column phase: Rxi-17Sil MS

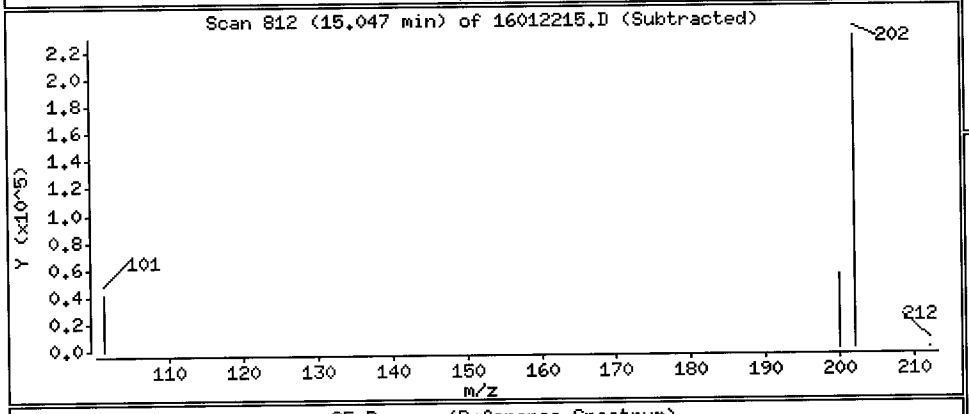
Column diameter: 0.25

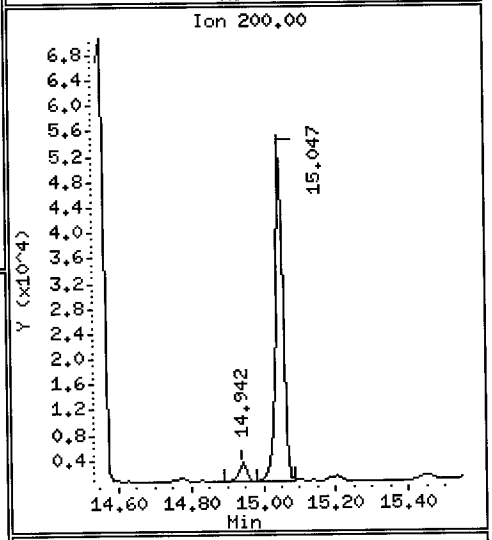
25 Pyrene

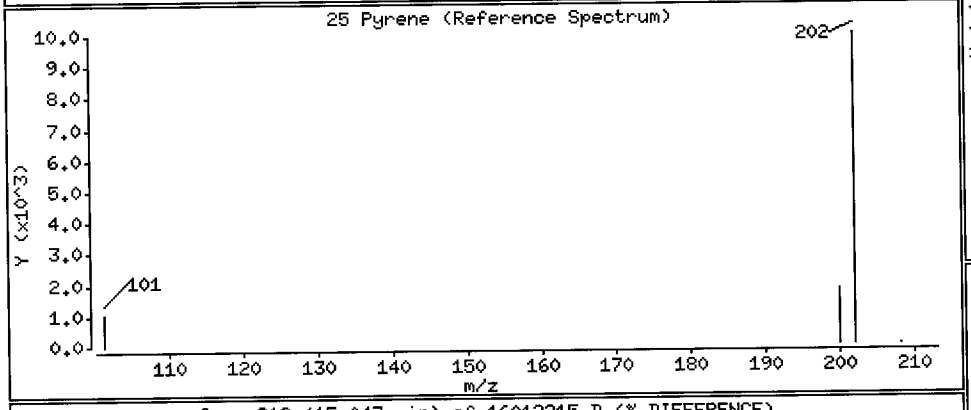
Concentration: 7330 ug/kg

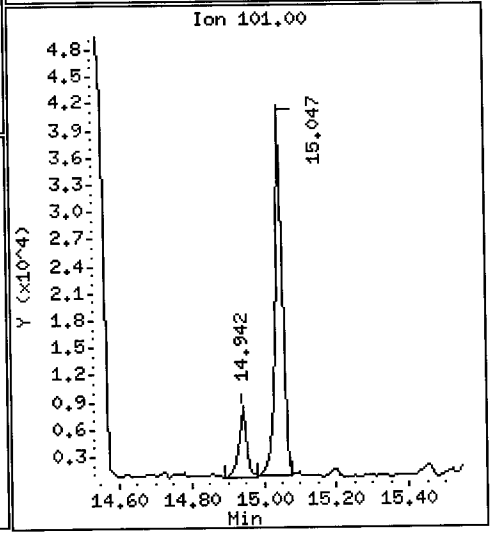


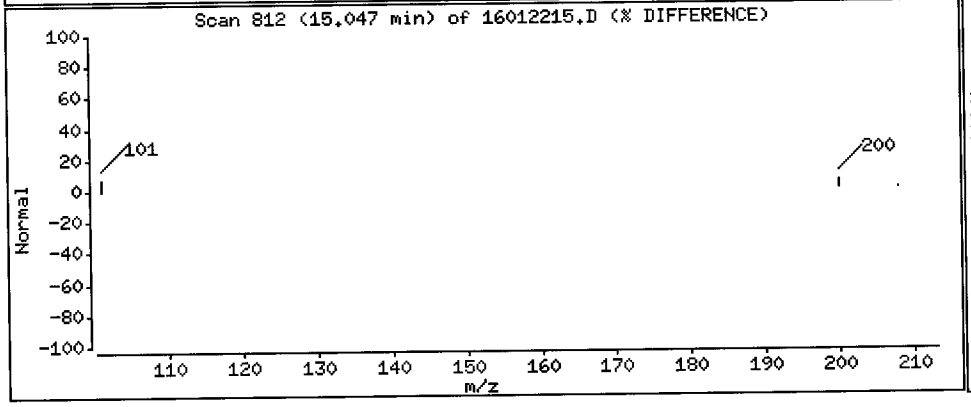












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

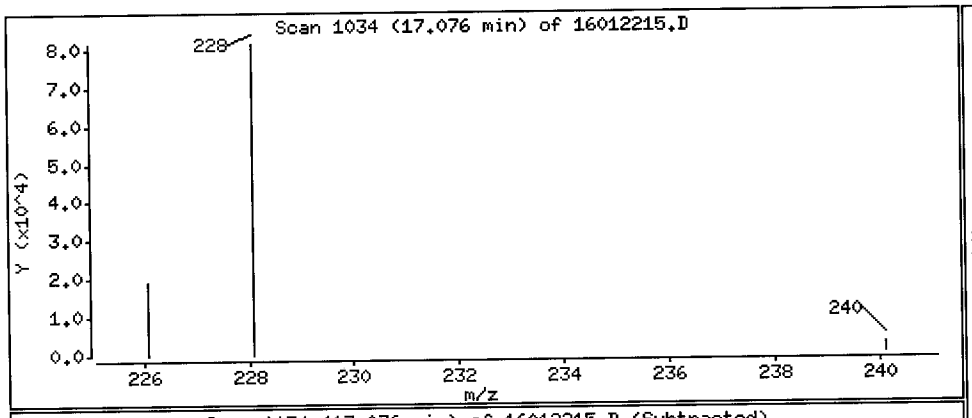
Operator: JW

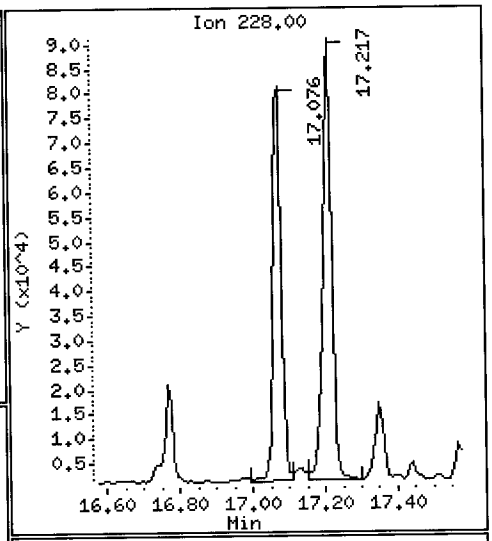
Column phase: Rxi-17Sil MS

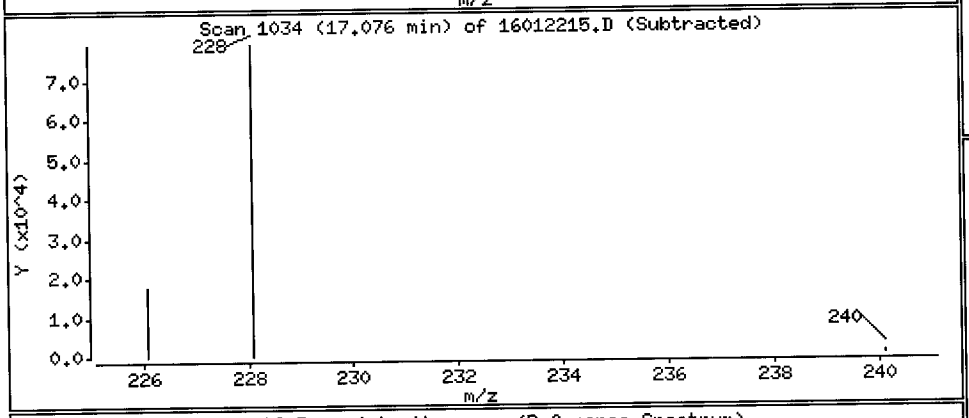
Column diameter: 0.25

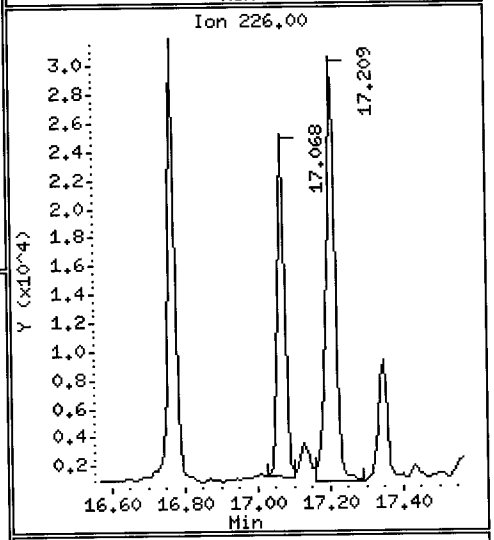
28 Benzo(a)anthracene

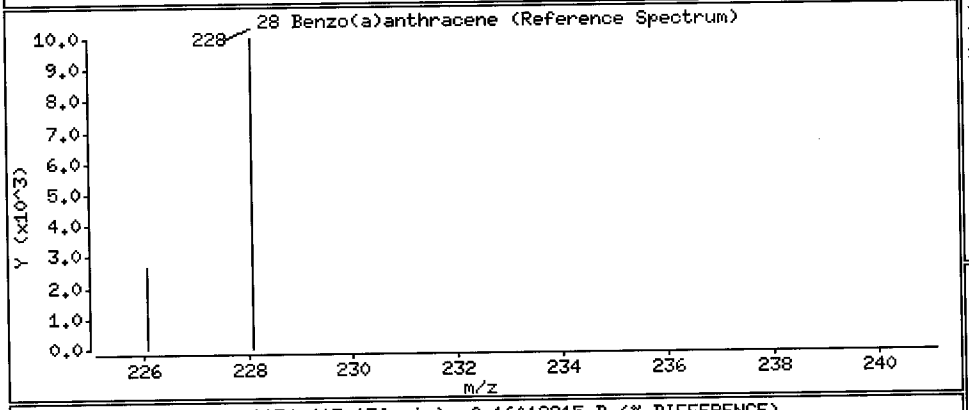
Concentration: 2830 ug/kg

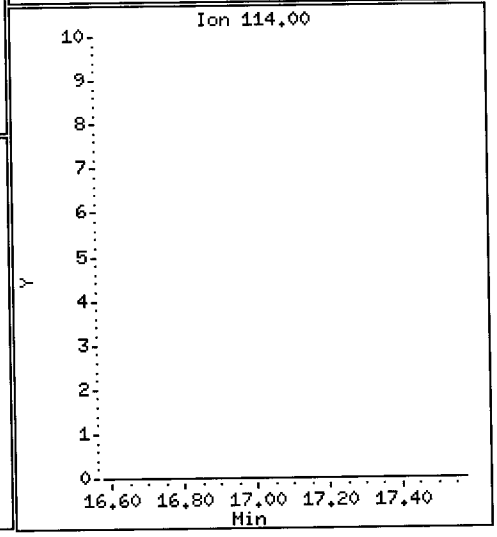


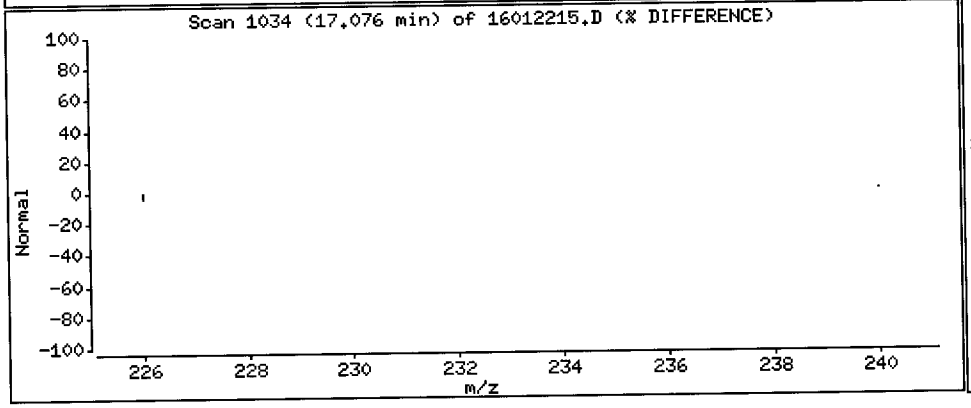












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Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0C

Volume Injected (uL): 2.0

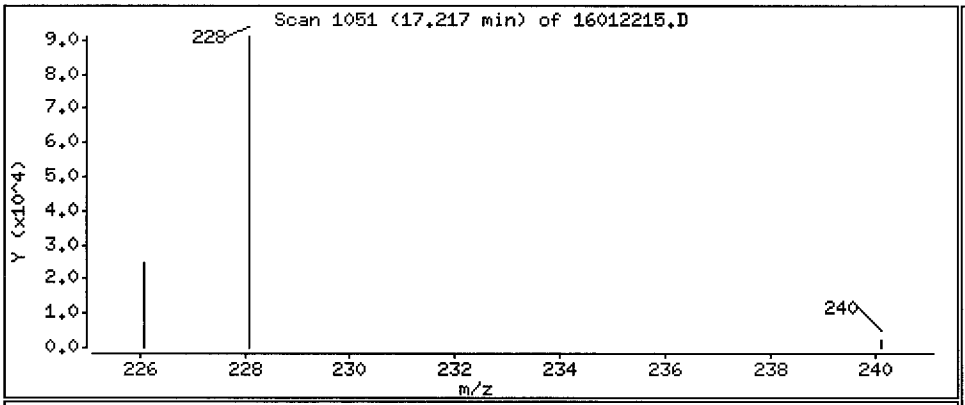
Operator: JW

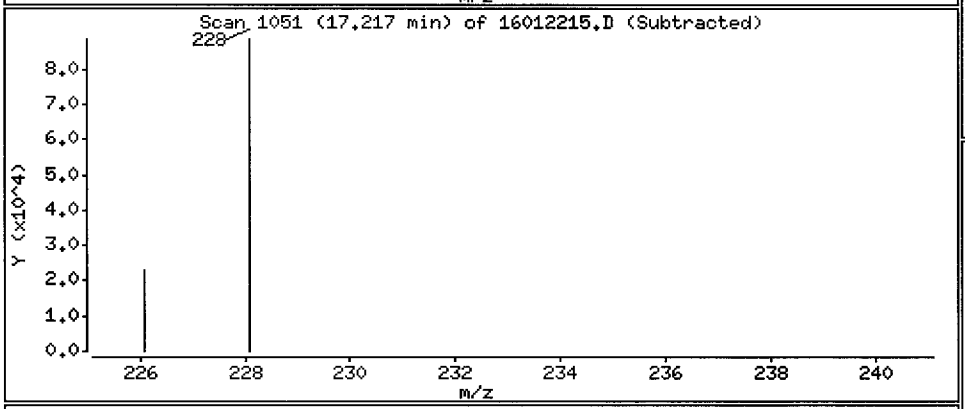
Column phase: Rxi-17Sil MS

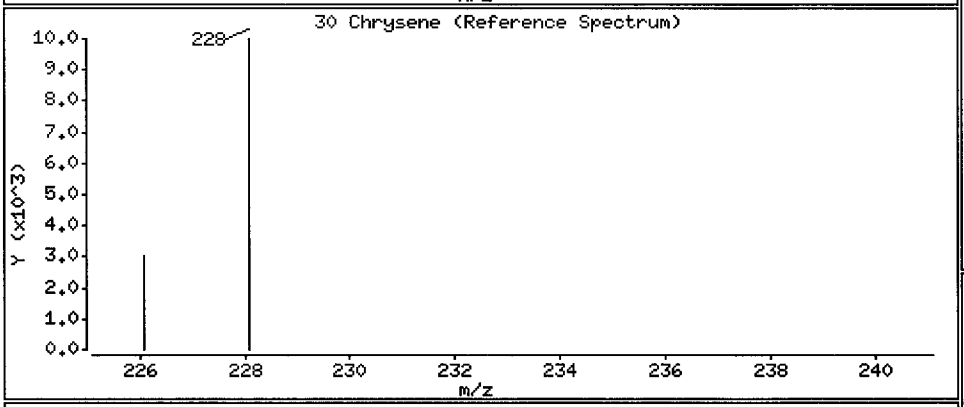
Column diameter: 0.25

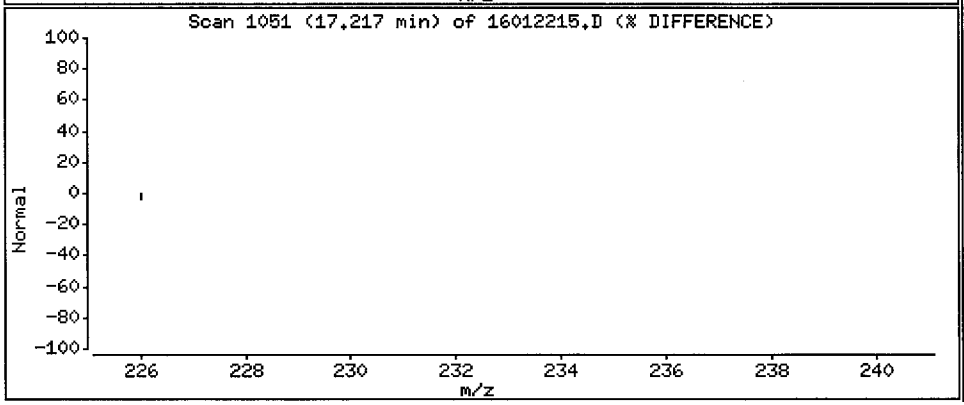
30 Chrysene

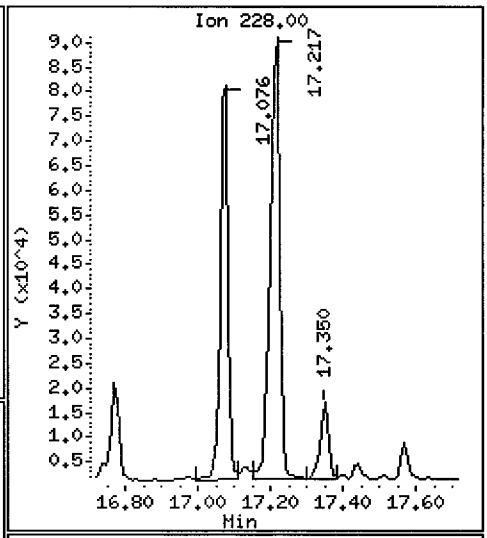
Concentration: 3440 ug/kg

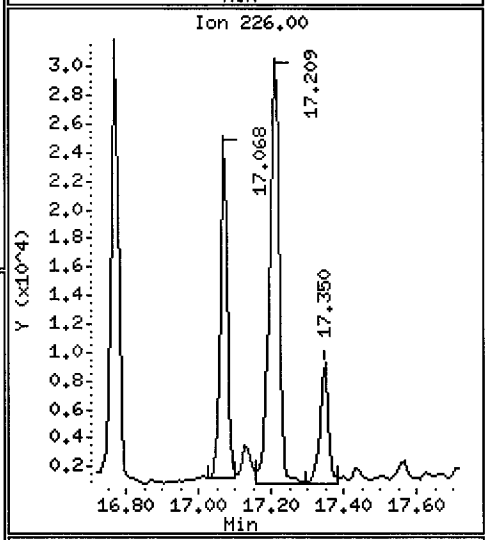


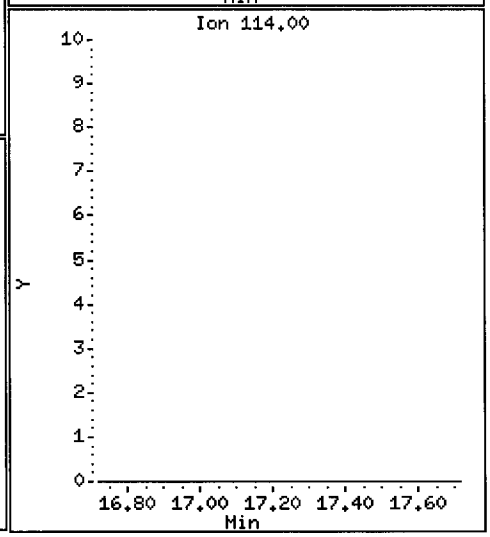












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0C

Volume Injected (uL): 2.0

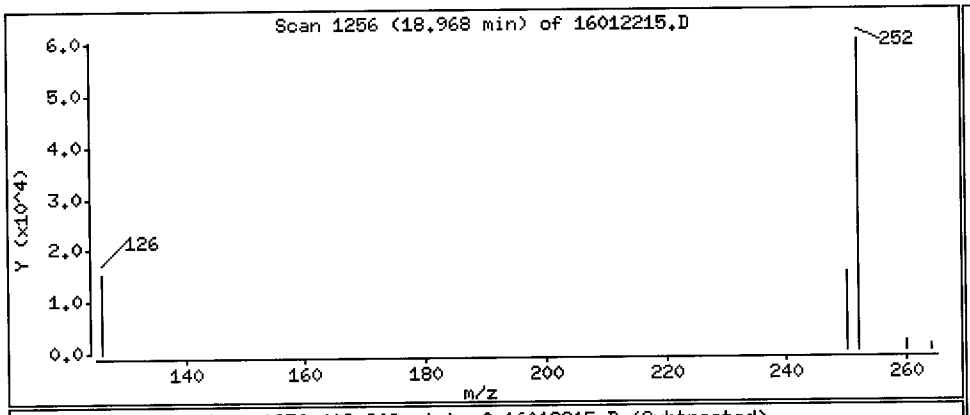
Operator: JW

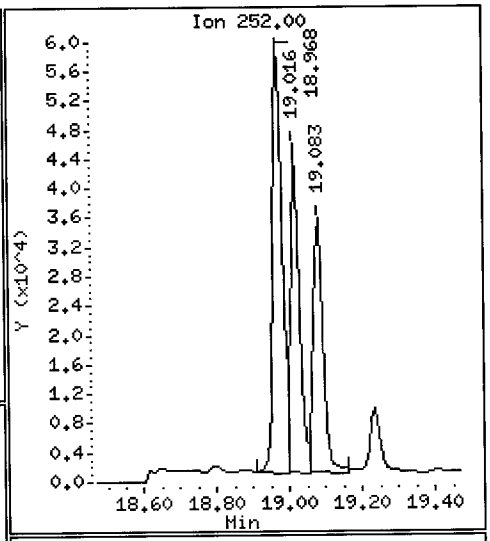
Column phase: Rxi-17Sil MS

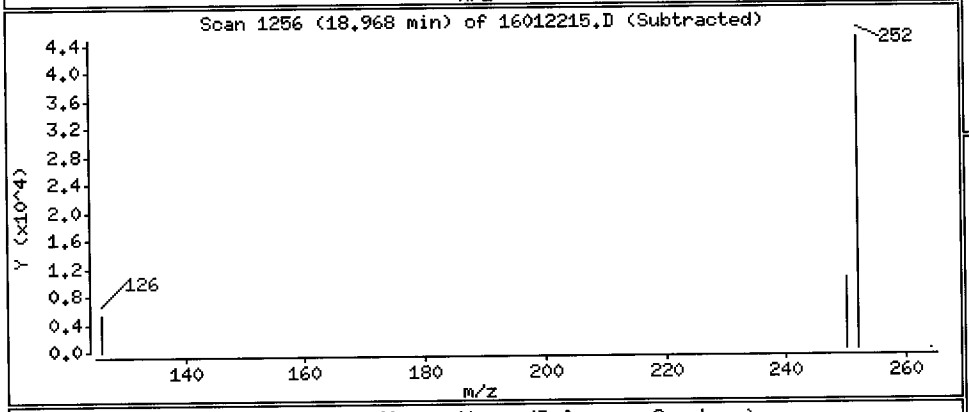
Column diameter: 0.25

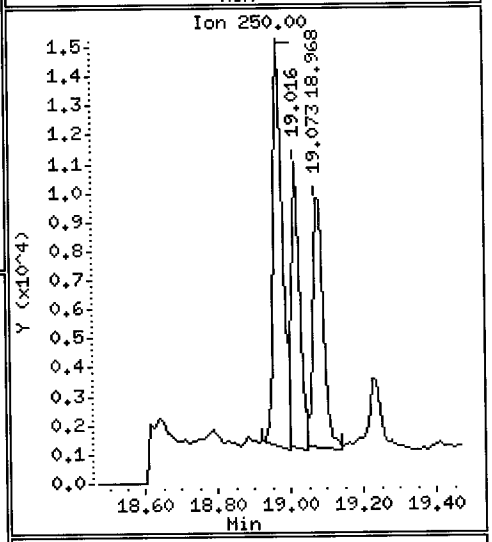
44 Benzo(b)fluoranthene

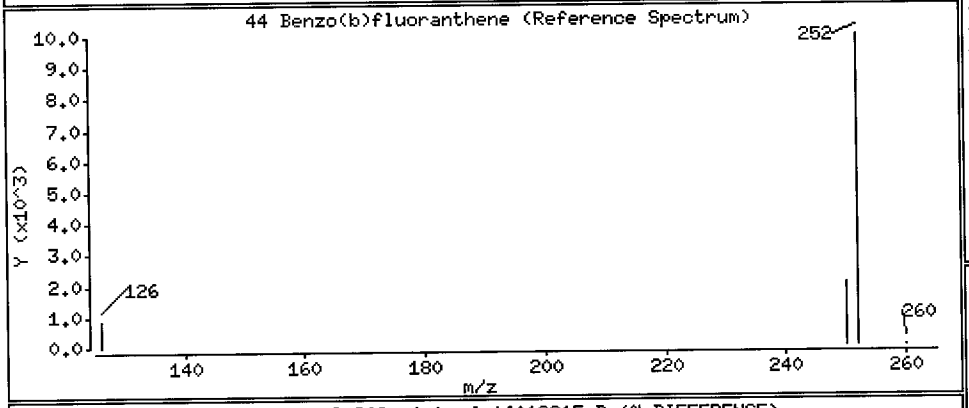
Concentration: 2450 ug/kg

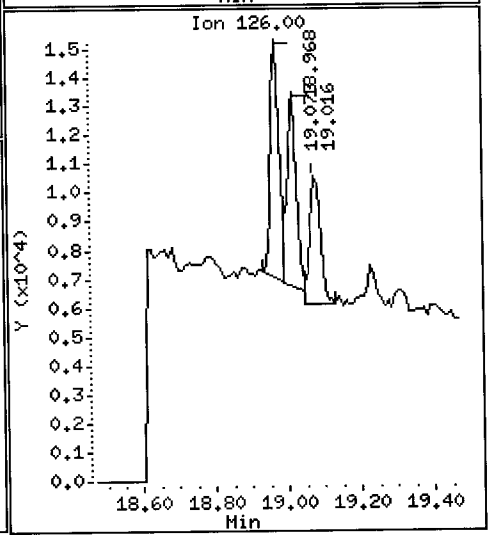


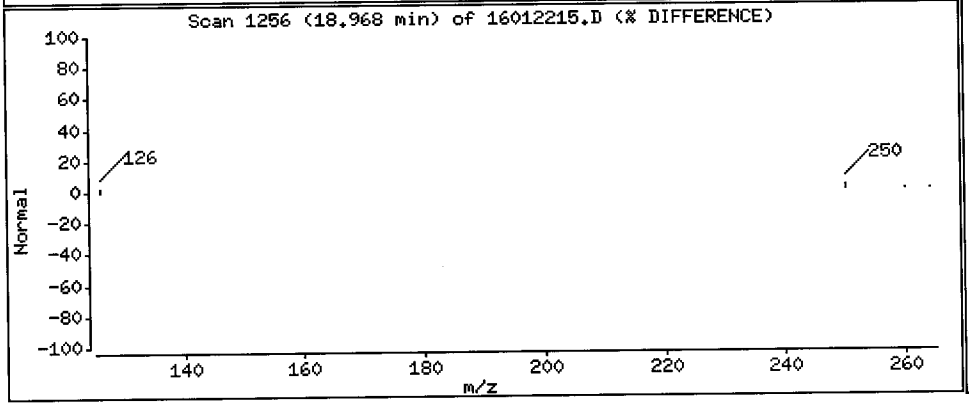












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

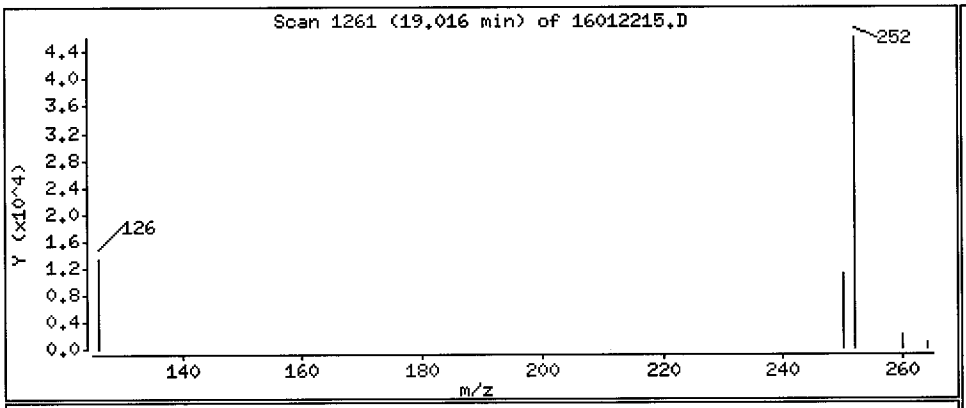
Operator: JW

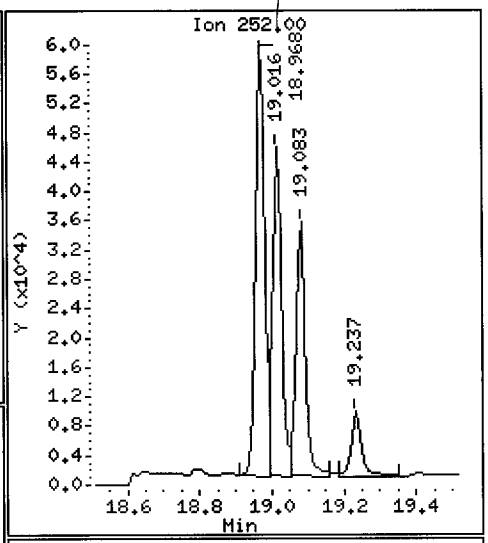
Column phase: Rxi-17Sil MS

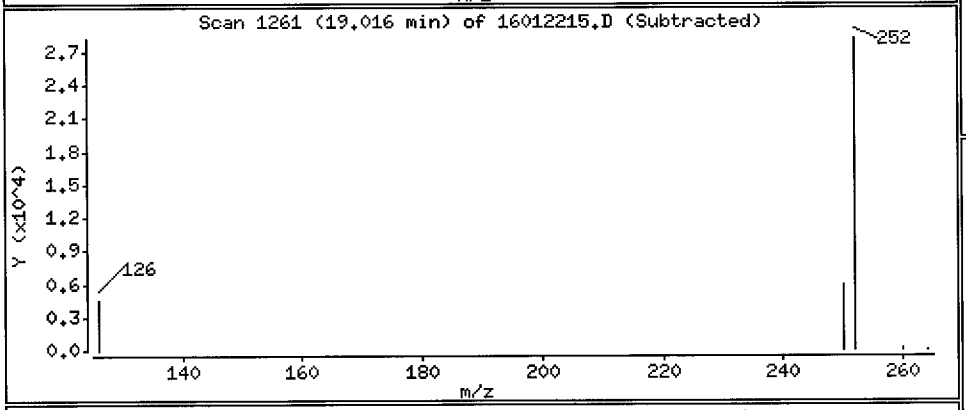
Column diameter: 0.25

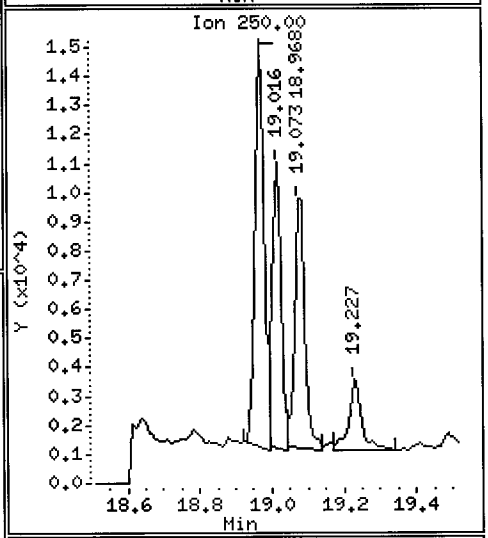
45 Benzo(k)fluoranthene

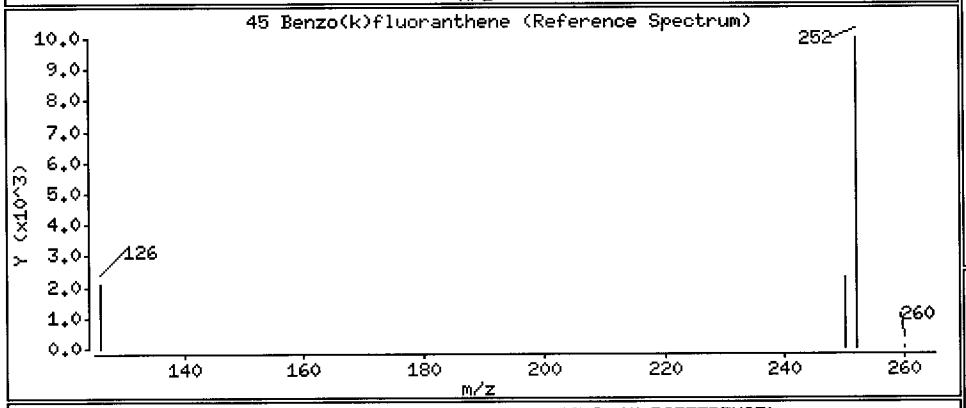
Concentration: 1580 ug/kg

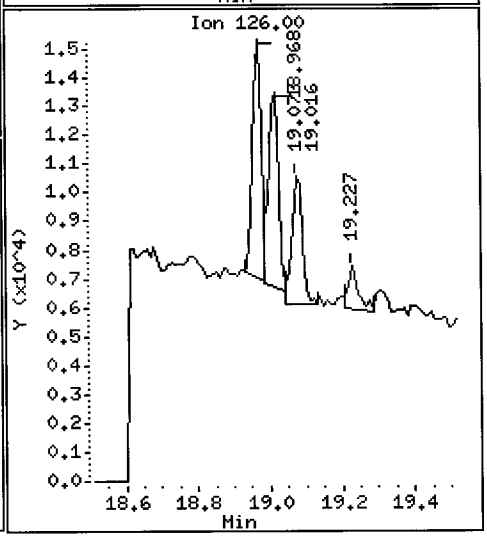


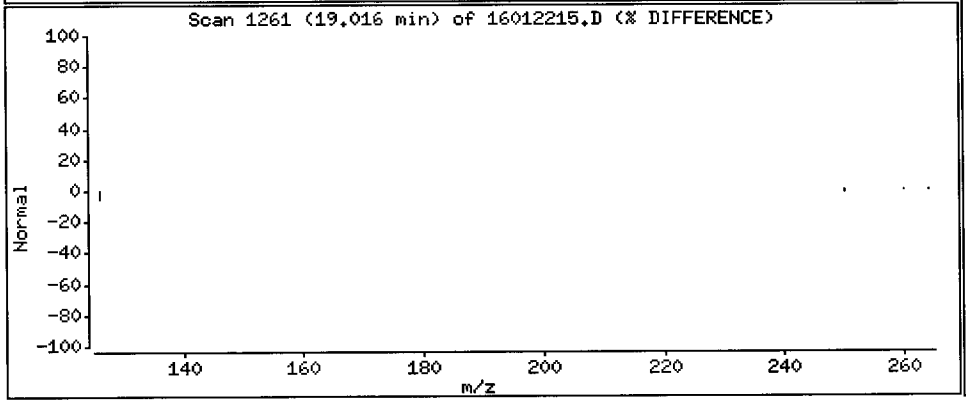












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

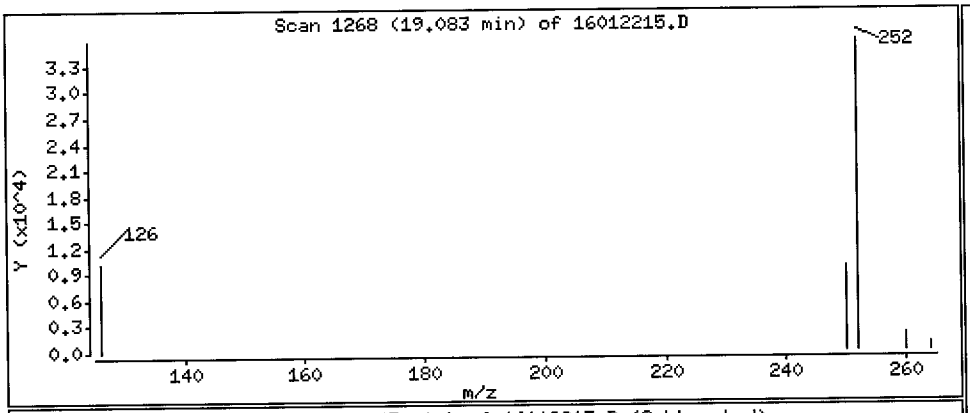
Operator: JW

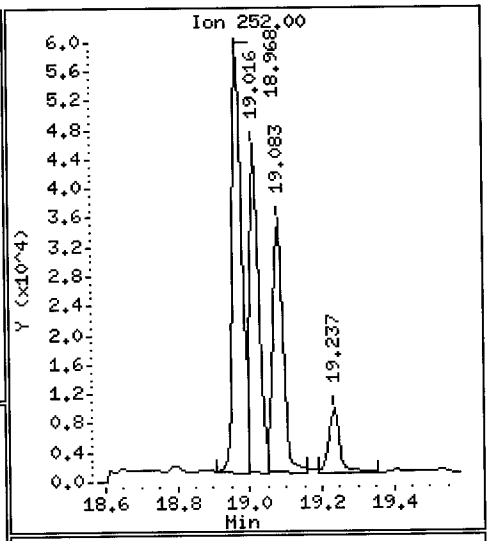
Column phase: Rxi-17Sil MS

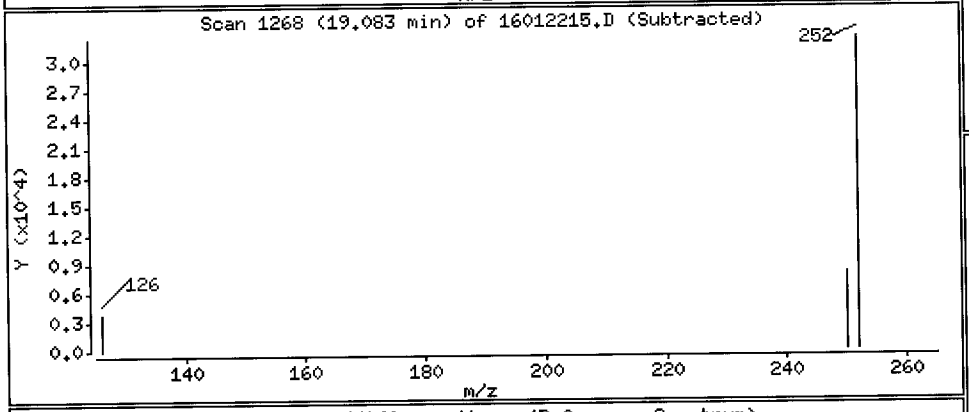
Column diameter: 0.25

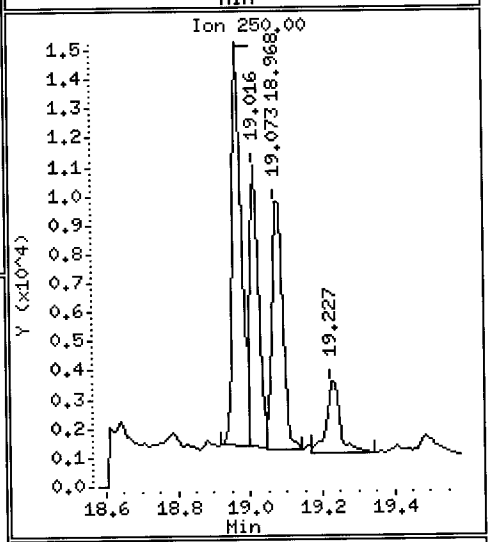
46 Benzo(j)fluoranthene

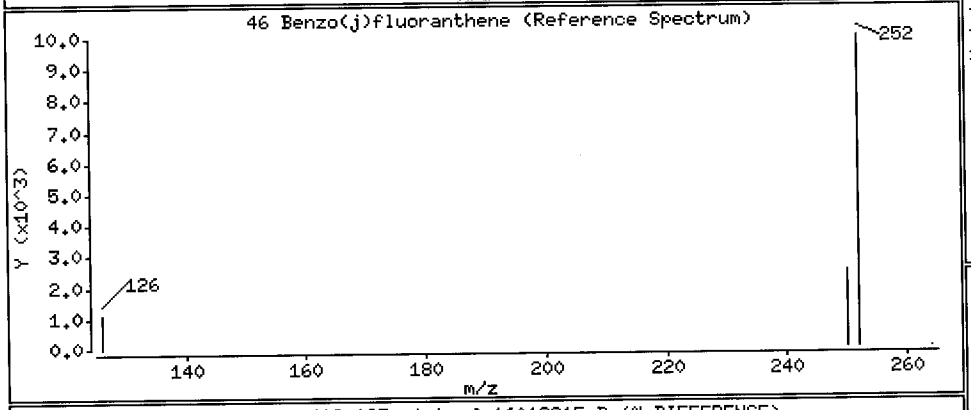
Concentration: 1380 ug/kg

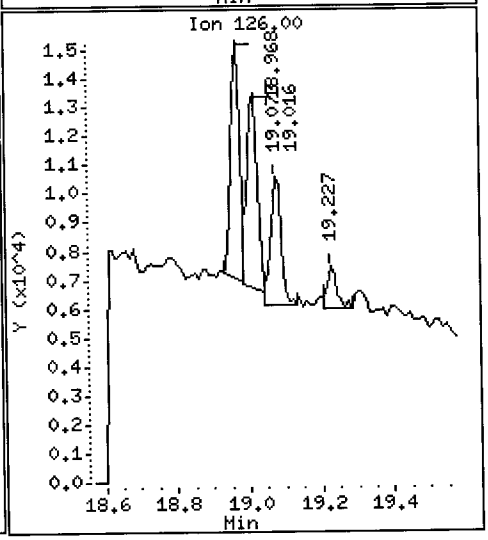


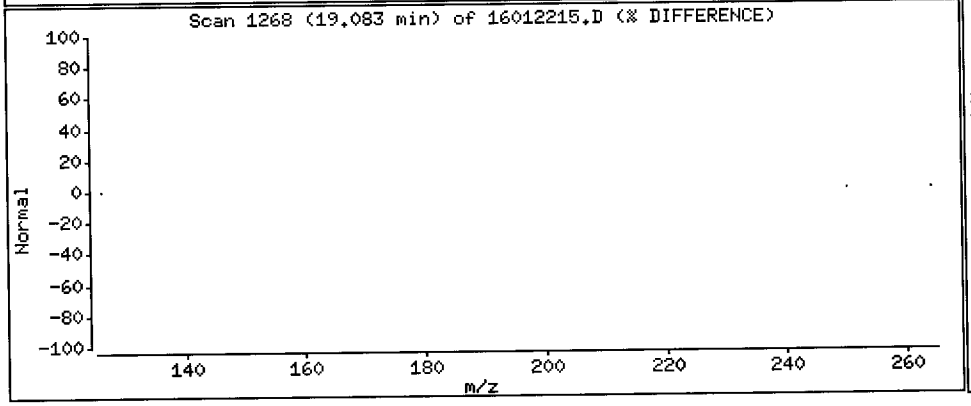












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

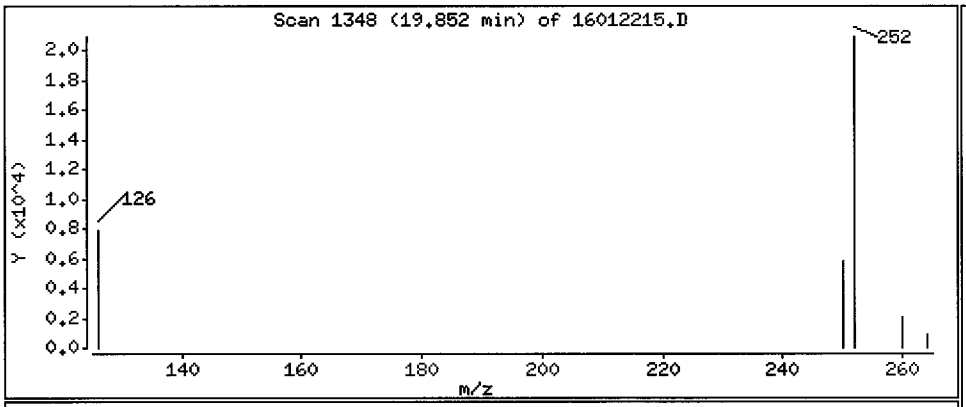
Operator: JW

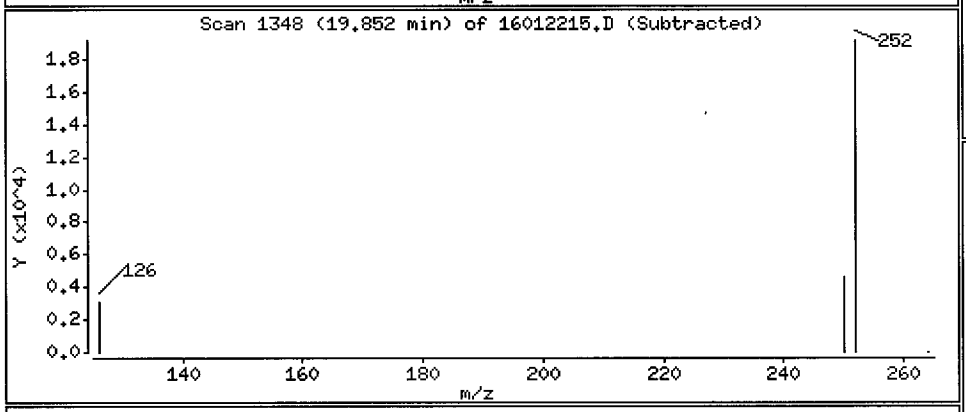
Column phase: Rxi-17Sil MS

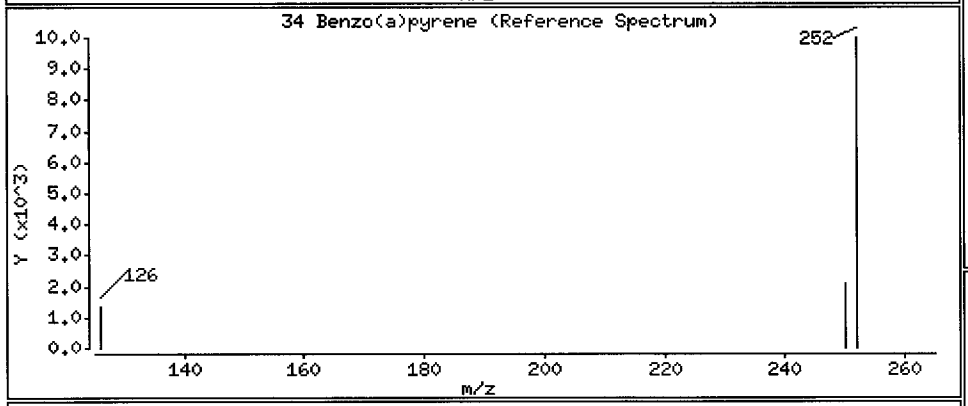
Column diameter: 0.25

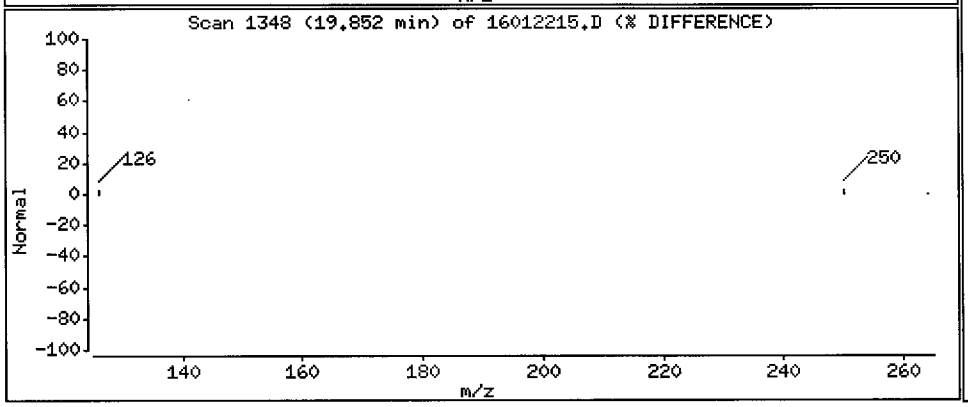
34 Benzo(a)pyrene

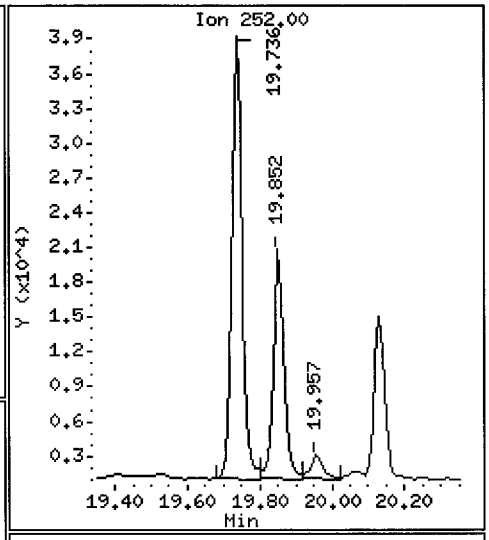
Concentration: 967 ug/kg

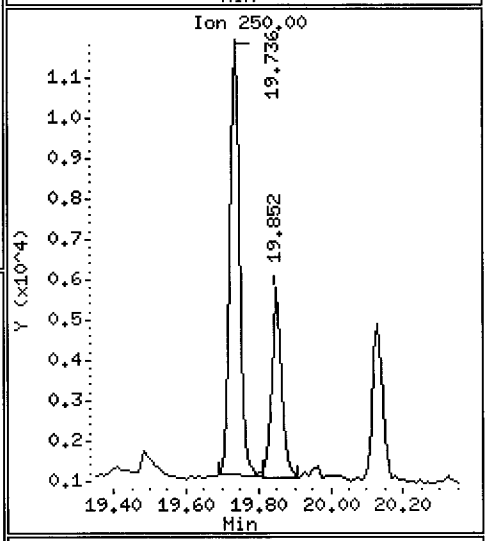


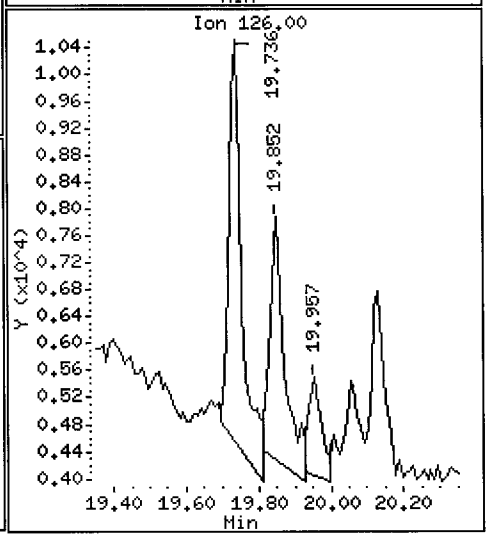












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOC

Volume Injected (uL): 2.0

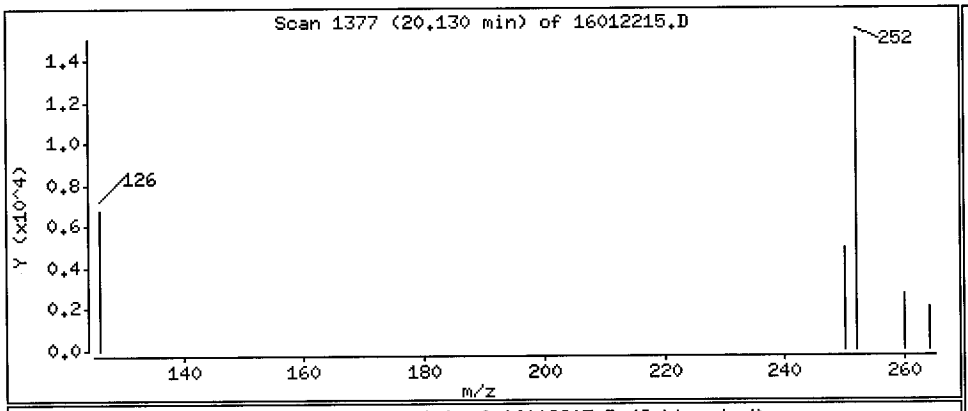
Operator: JW

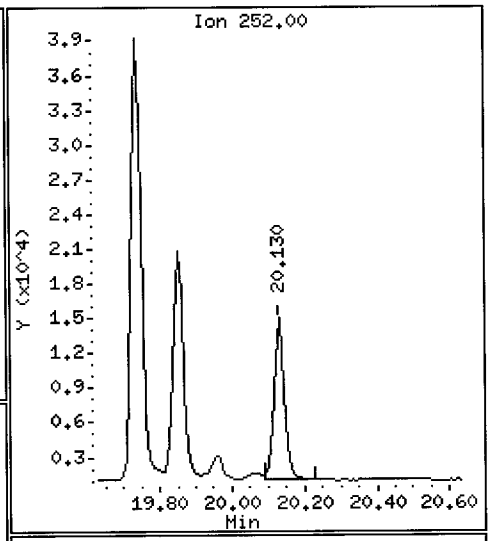
Column phase: Rxi-17Sil MS

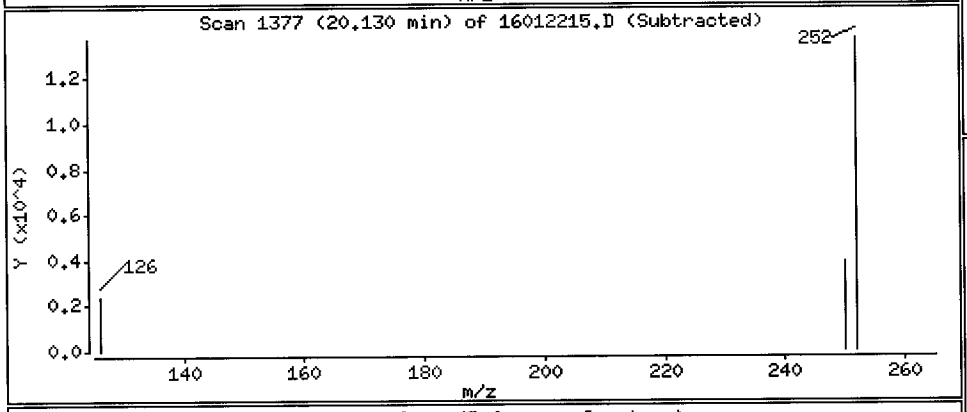
Column diameter: 0.25

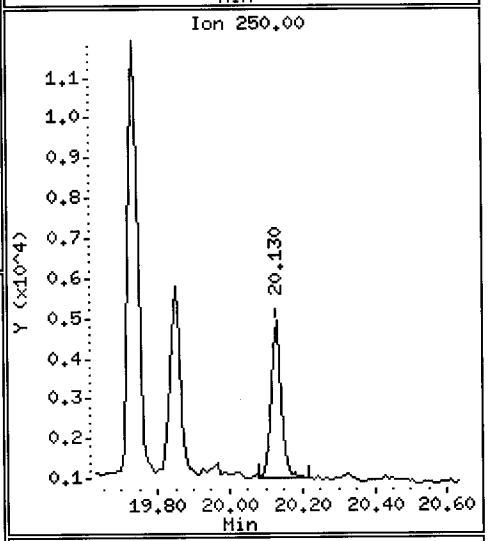
47 Perylene

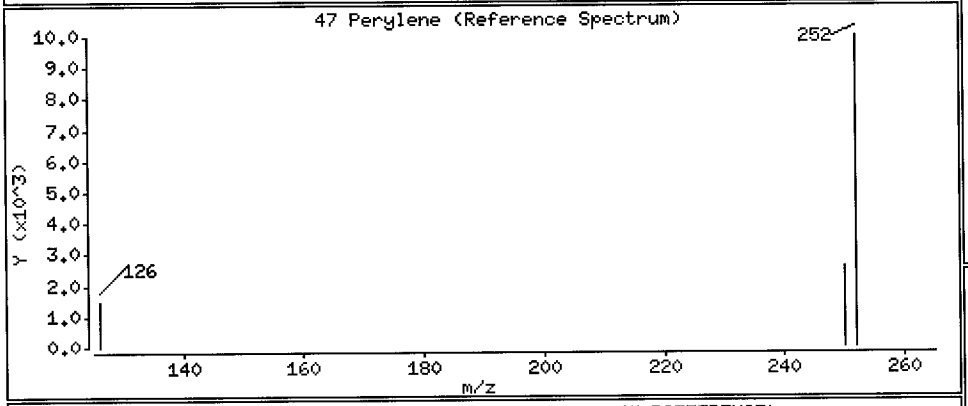
Concentration: 652 ug/kg

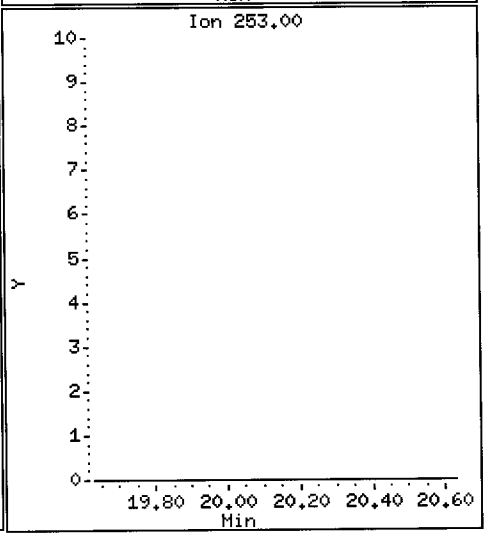


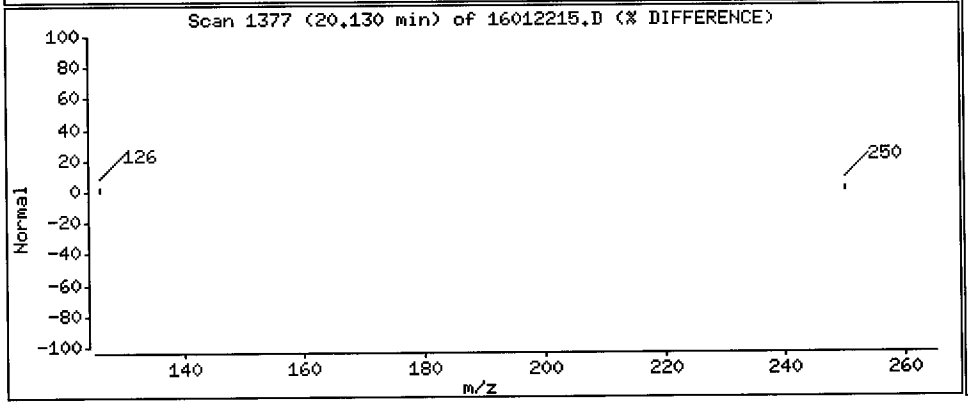












Data File: \\target\share\chem3\nt11.i\20160122.b\16012215.D

Date : 22-JAN-2016 14:29

Client ID: PG-WS-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0C

Volume Injected (uL): 2.0

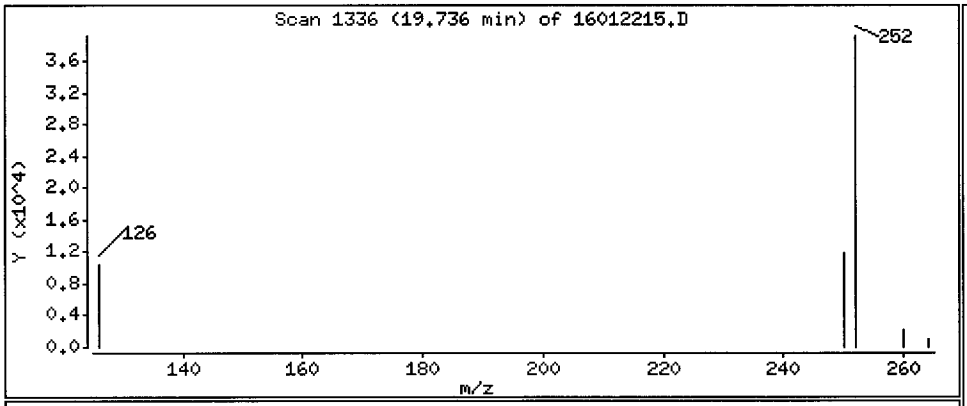
Operator: JW

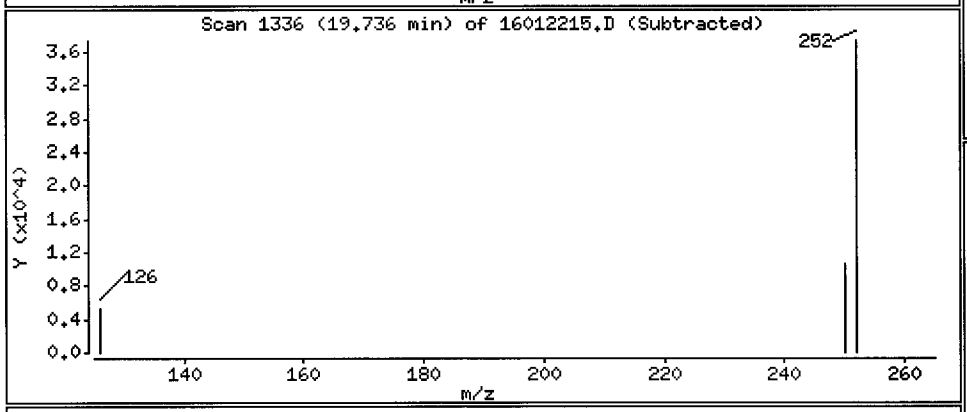
Column phase: Rxi-17Sil MS

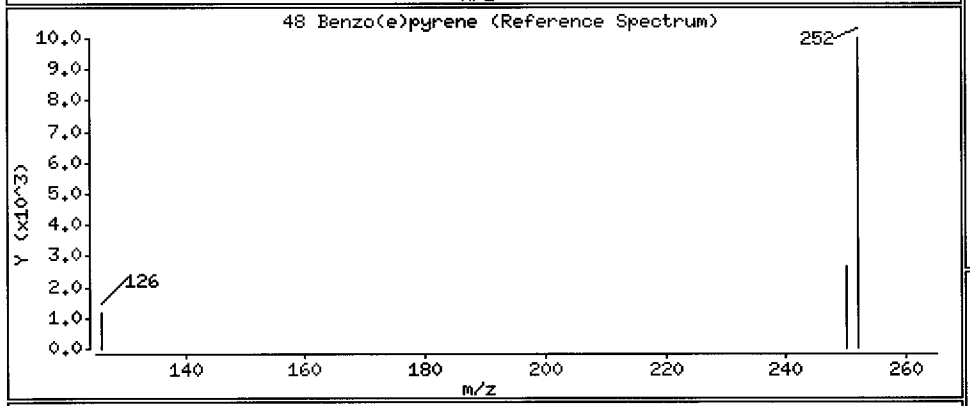
Column diameter: 0.25

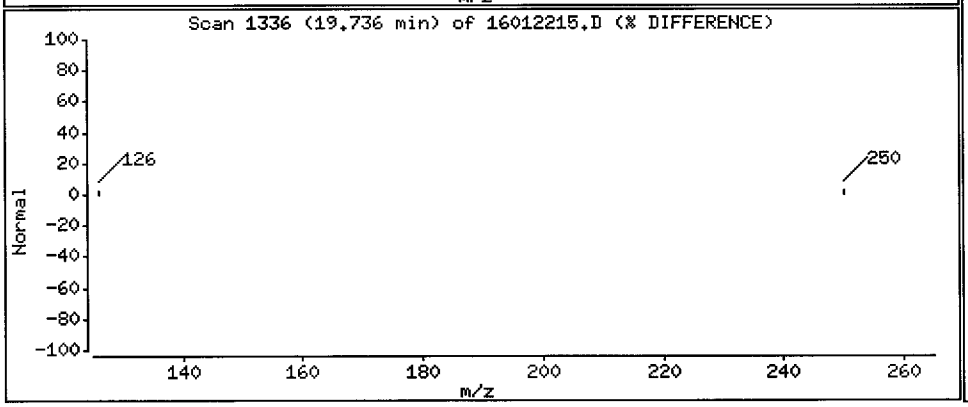
48 Benzo(e)pyrene

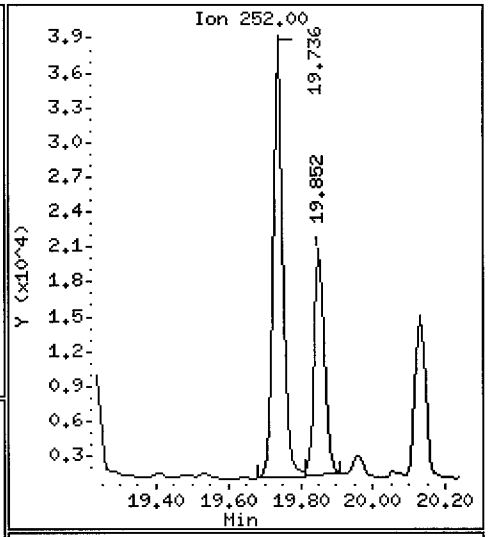
Concentration: 1670 ug/kg

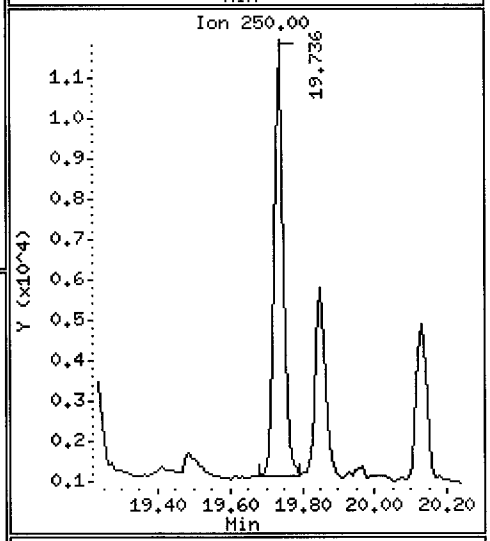


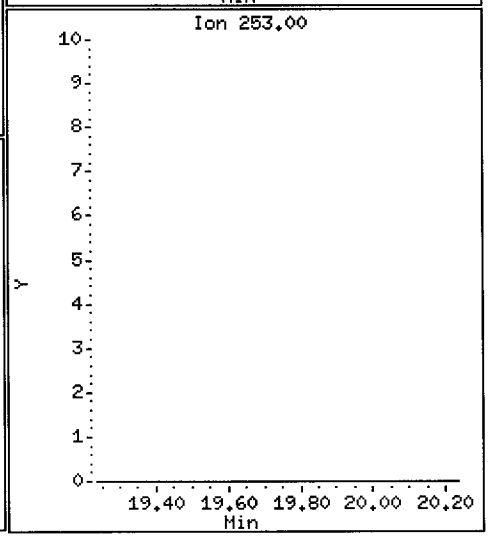












REVIEW SUMMARY FOR FILE - 16012215.D

Lab ID: ATS0C
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 14:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012216.D
Lab Smp Id: ATS0D Client Smp ID: PG-GP-1-MUS-COC-160
Inj Date : 22-JAN-2016 14:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0D
Misc Info : 16-138
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.030	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/25/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.723	6.744	(1.000)	377268	200.000	
	5 Naphthalene	128	6.765	6.776	(1.006)	25682	11.7852	587
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.147)	207808	148.399	7400
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	268633	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	10.010	10.010	(1.027)	25597	11.8079	589
	15 Fluorene	166	10.630	10.630	(1.091)	23902	14.7019	733
*	18 Phenanthrene-d10	188	12.413	12.424	(1.000)	436597	200.000	
	19 Phenanthrene	178	12.457	12.468	(1.004)	238329	90.6048	4520
	20 Anthracene	178	12.512	12.523	(1.008)	44955	19.0932	952
$	23 Fluoranthene-d10	212	14.519	14.518	(1.170)	429146	178.735	8910
	24 Fluoranthene	202	14.557	14.557	(1.173)	316659	119.905	5980
	25 Pyrene	202	15.047	15.057	(0.877)	221477	86.7777	4330
	28 Benzo(a)anthracene	228	17.067	17.075	(0.994)	61400	28.5753	1420
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	322279	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	93968	39.8459	1990
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	51458	23.6929	1180
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	37687	14.8908	742

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	29796	12.9240	644
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	20.063	20.062	(1.000)	320562	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	255626	197.572	9850
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	36335	16.5538	825

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012216.D
Lab Smp Id: ATS0D
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-138

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-GP-1-MUS-COC
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	377268	15.06
11 Acenaphthene-d10	239179	119590	478358	268633	12.31
18 Phenanthrene-d10	372253	186127	744506	436597	17.29
29 Chrysene-d12	294711	147356	589422	322279	9.35
35 Perylene-d12	260595	130298	521190	320562	23.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.72	-0.31
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.41	-0.09
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

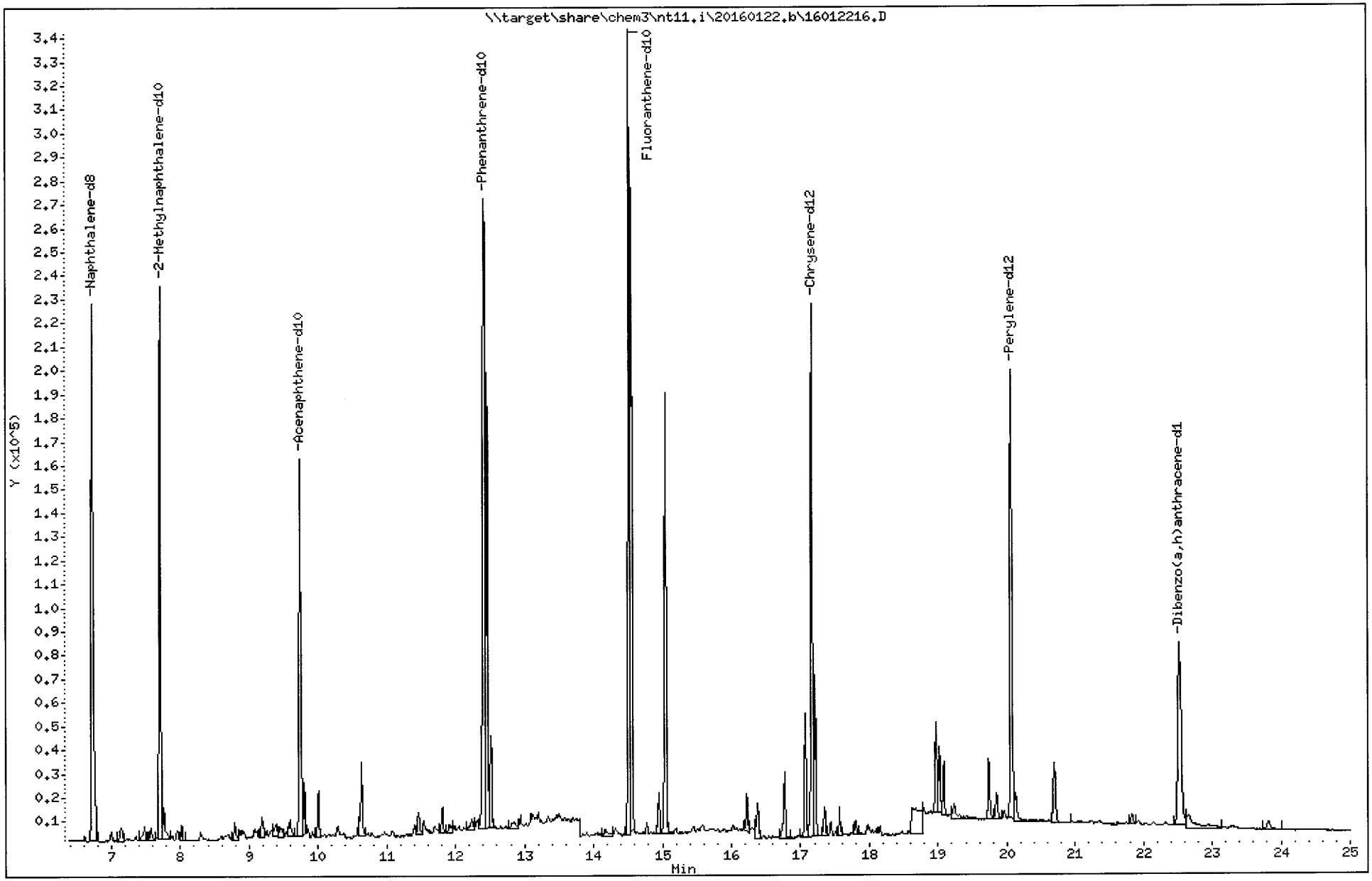
RECOVERY REPORT

Client Name: Anchor QEA, LLC
Client SDG: ATS0
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: ATS0D
Client Smp ID: PG-GP-1-MUS-COC-160
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-138

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	15000	7400	49.47	30-160
$ 23 Fluoranthene-d10	15000	8910	59.58	30-160
$ 36 Dibenzo(a,h)anthra	15000	9850	65.86	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D
Date : 22-JAN-2016 14:59
Client ID: PG-GP-1-MUS-COC-160
Sample Info: ATS0D
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



ATS0 : 00292

Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

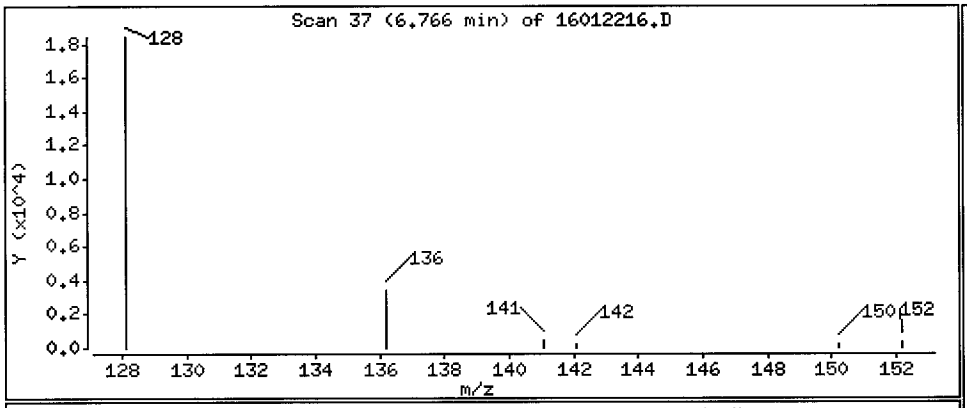
Operator: JW

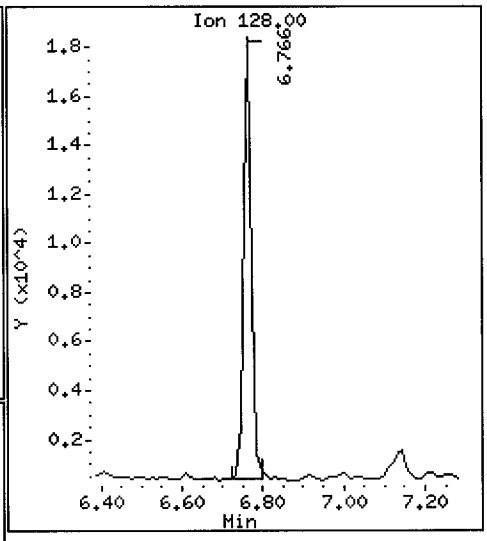
Column phase: Rxi-17Sil MS

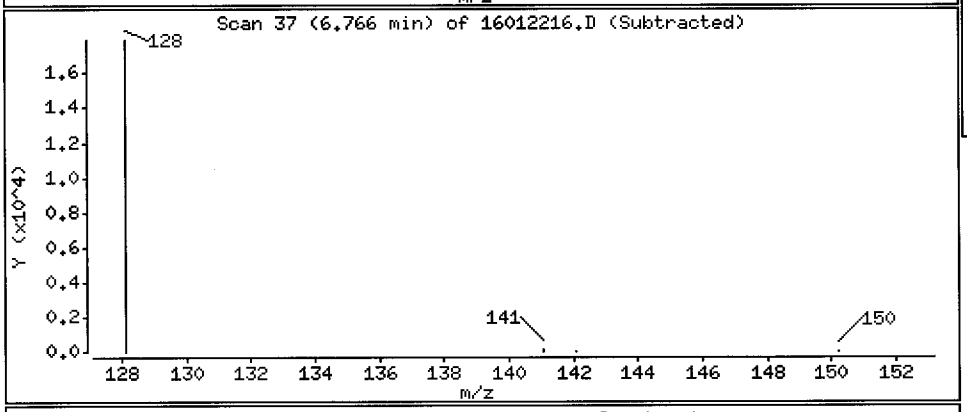
Column diameter: 0.25

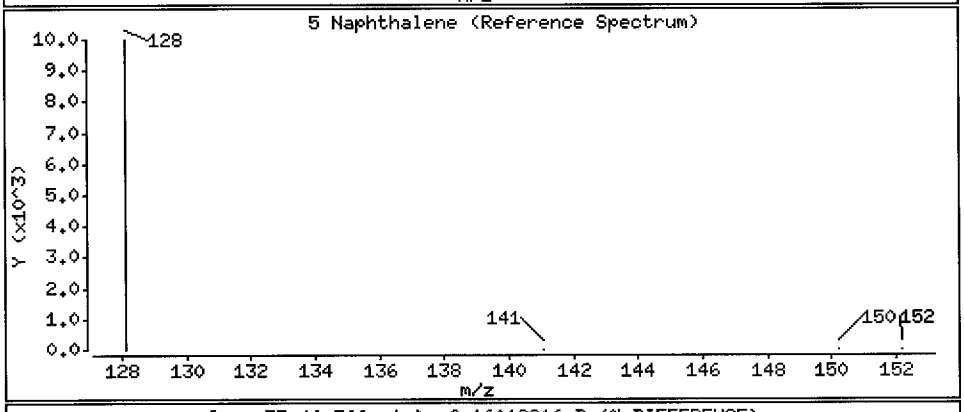
5 Naphthalene

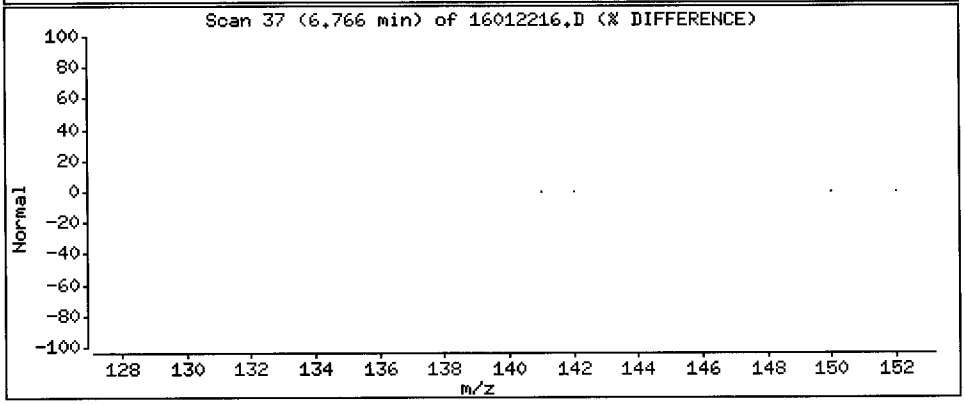
Concentration: 587 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

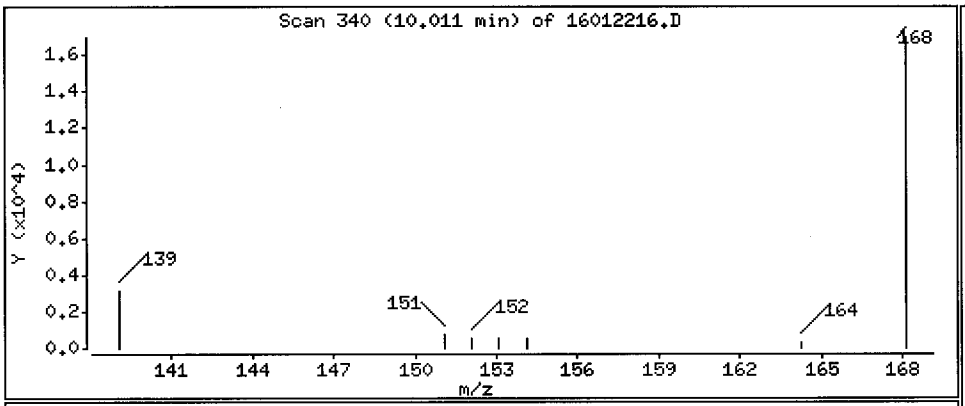
Client ID: PG-GP-1-MUS-COC-160 Instrument: nt11.i

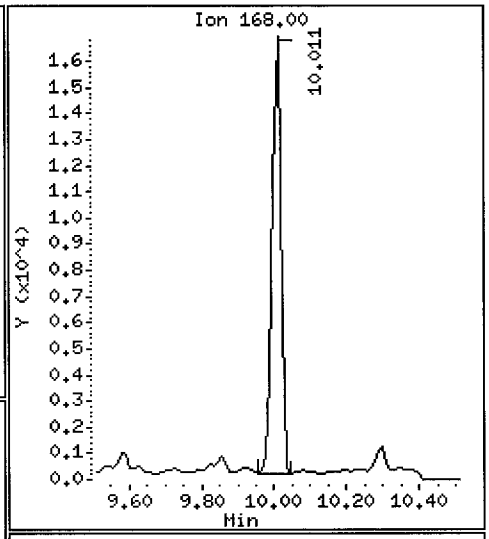
Sample Info: ATSOD

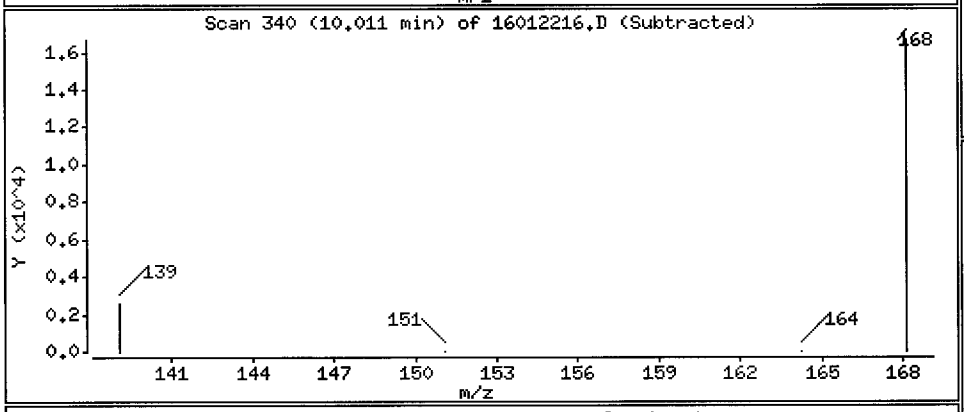
Volume Injected (uL): 2.0 Operator: JW

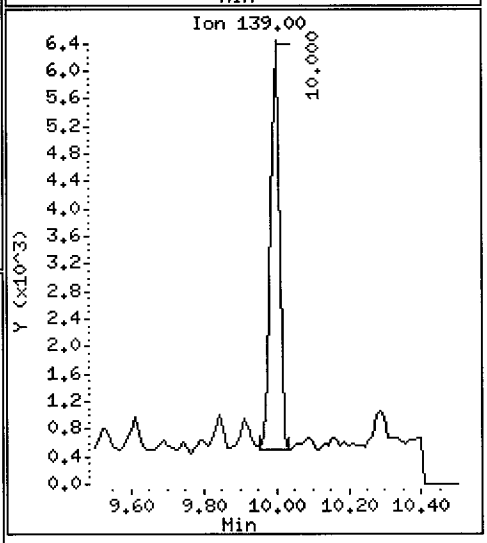
Column phase: Rxi-17Sil MS Column diameter: 0.25

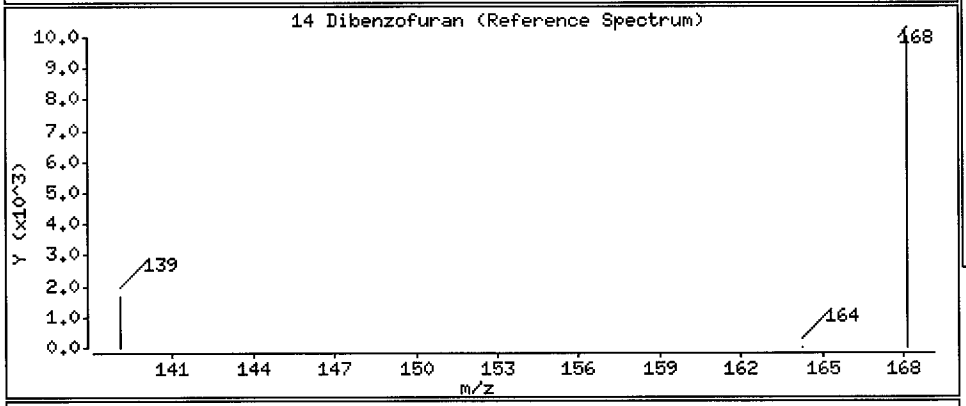
14 Dibenzofuran Concentration: 589 ug/kg

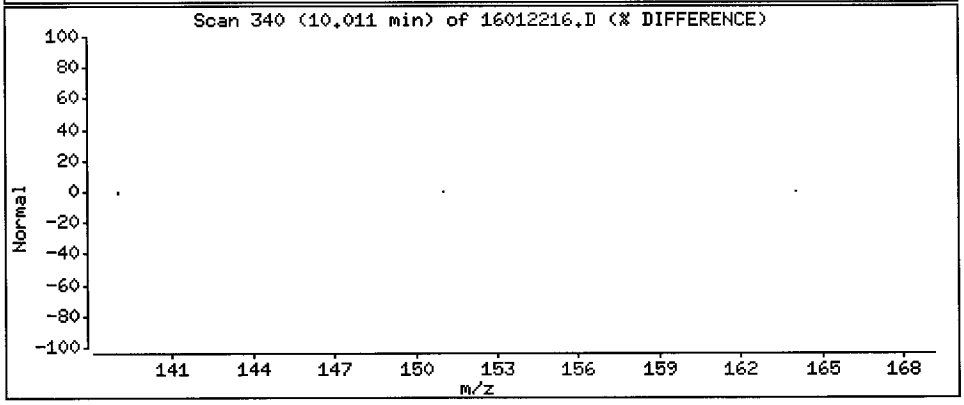












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

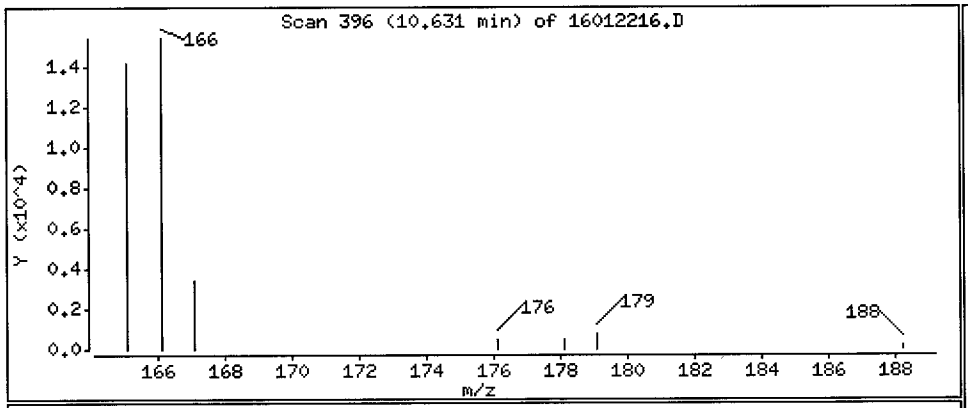
Operator: JW

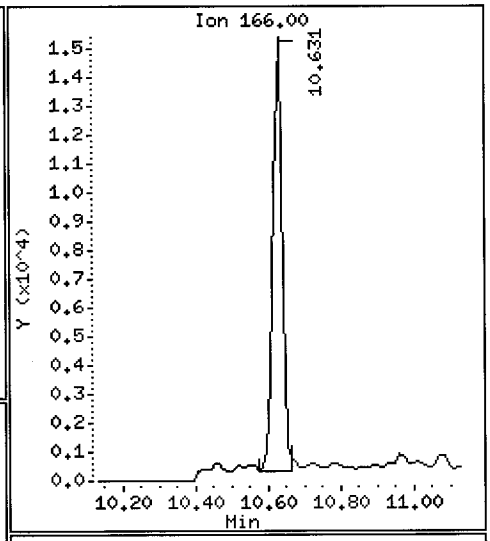
Column phase: Rxi-17Sil MS

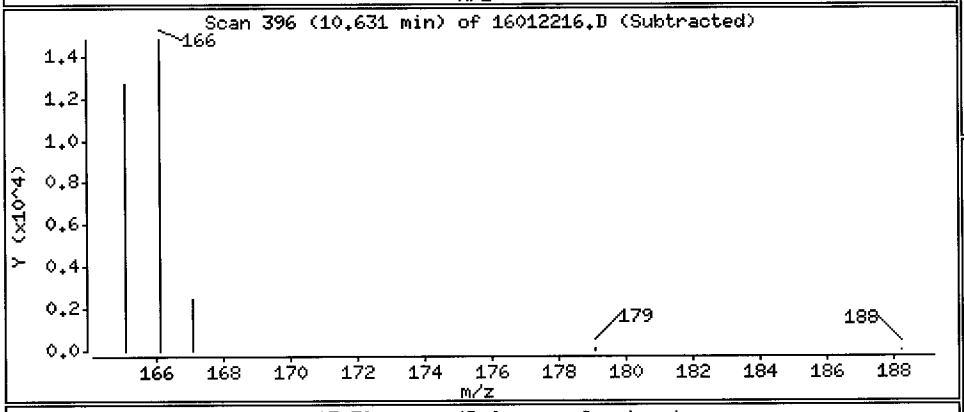
Column diameter: 0.25

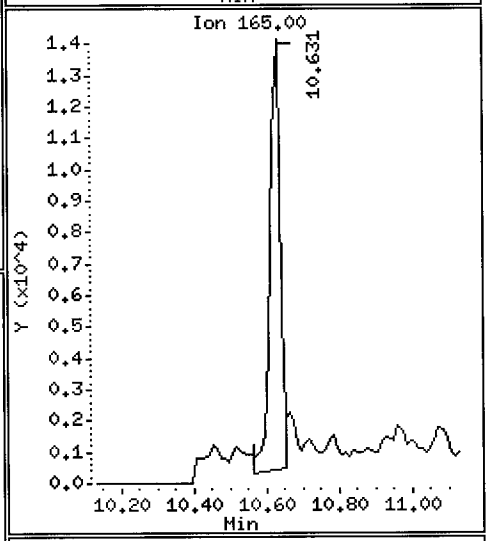
15 Fluorene

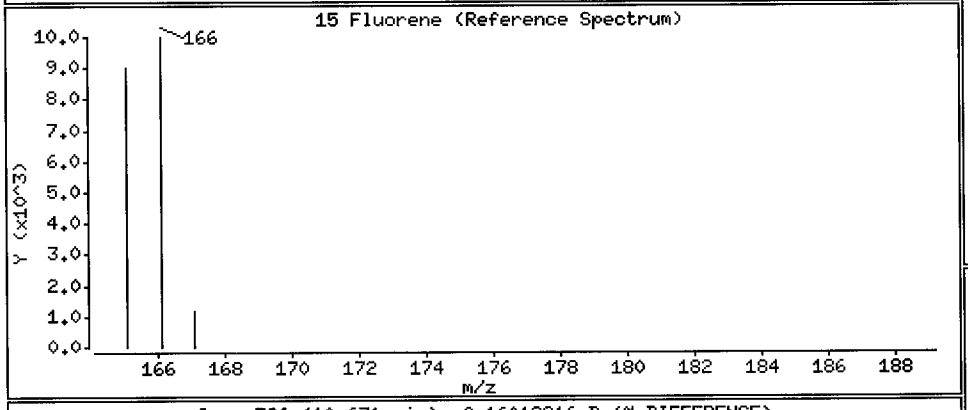
Concentration: 733 ug/kg

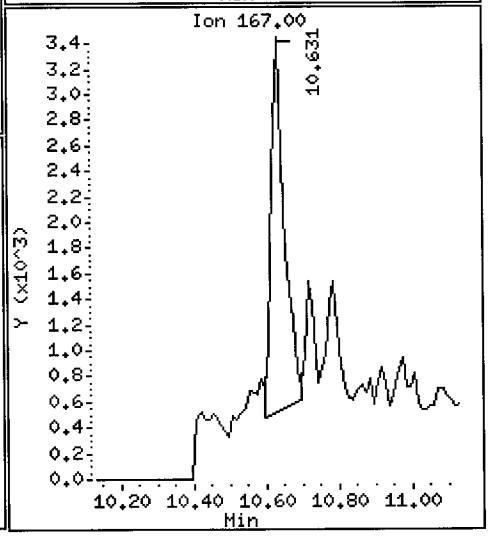


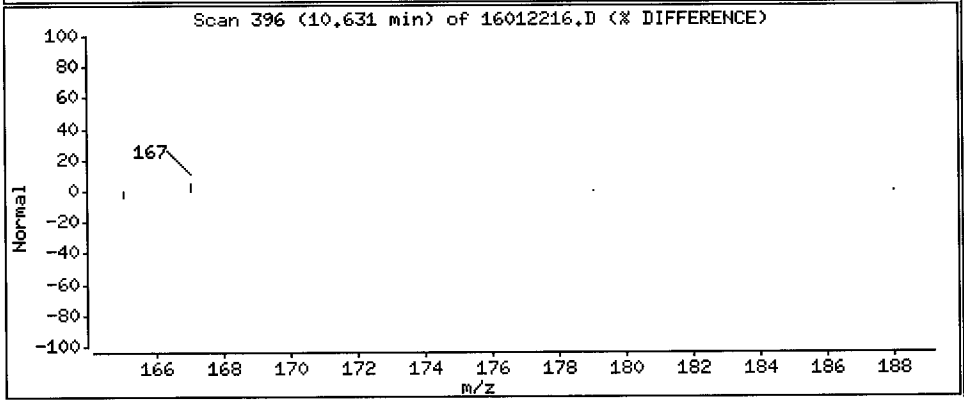












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

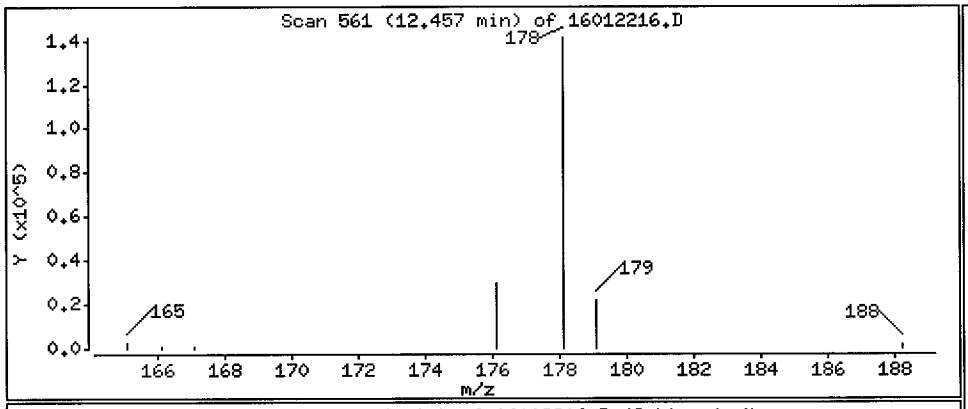
Operator: JW

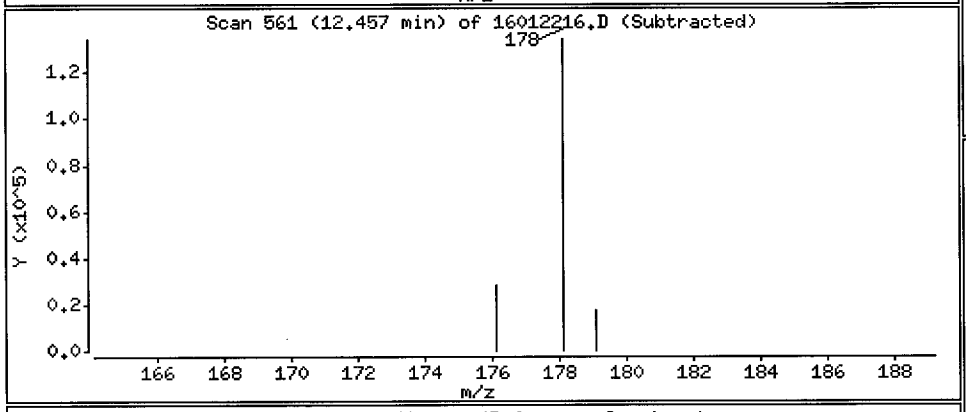
Column phase: Rxi-17Sil MS

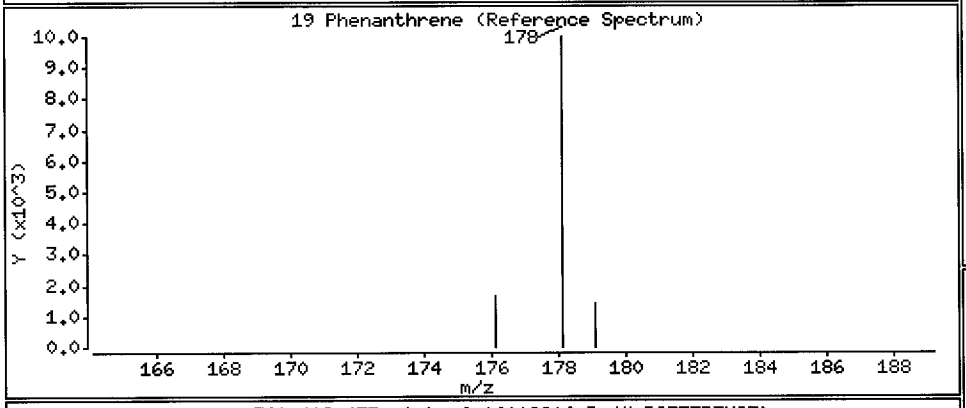
Column diameter: 0.25

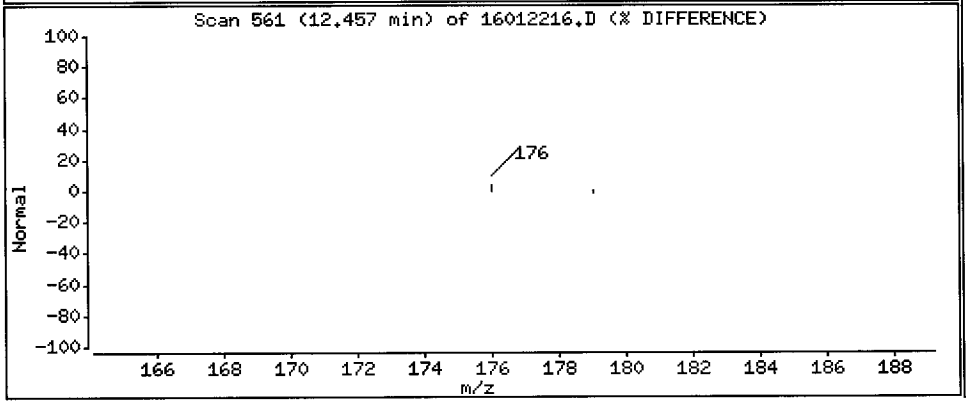
19 Phenanthrene

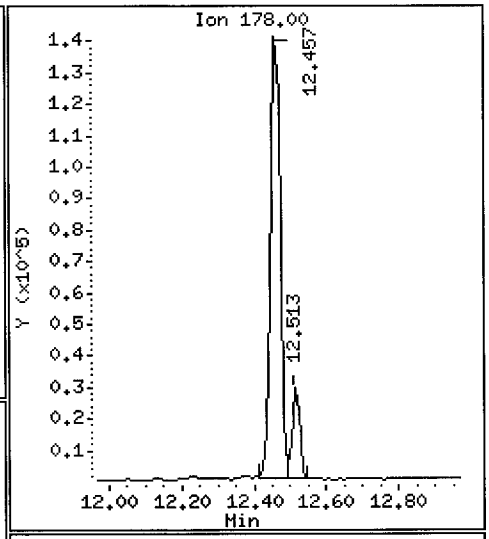
Concentration: 4520 ug/kg

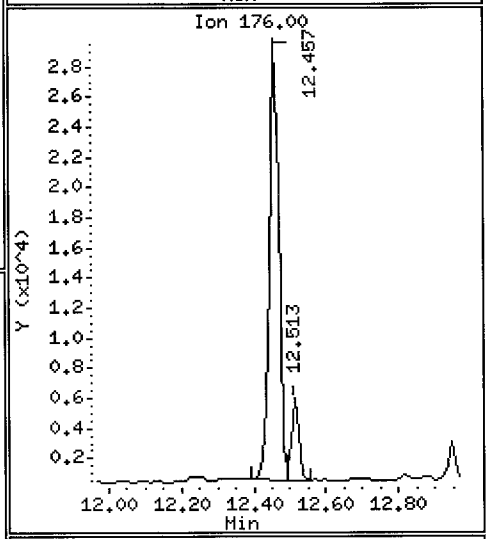


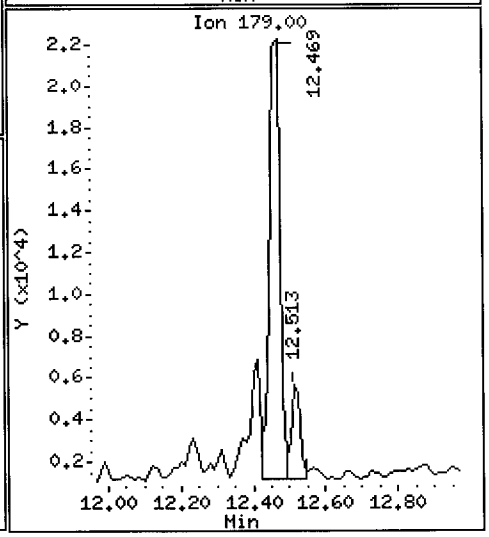












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOD

Volume Injected (uL): 2.0

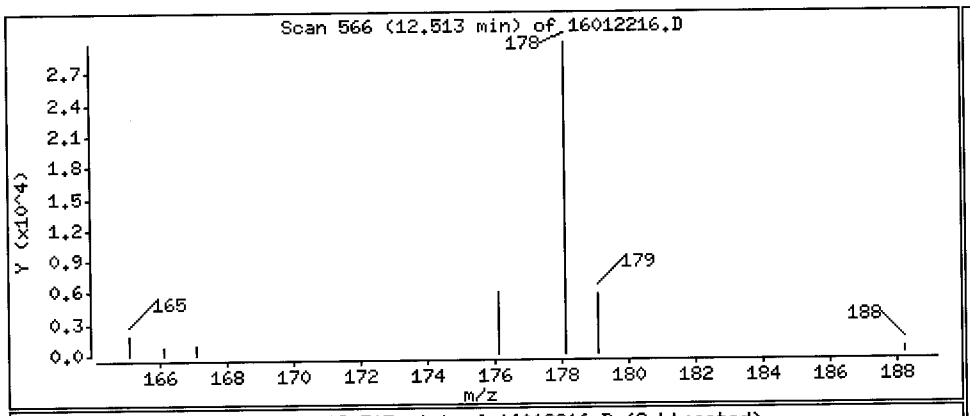
Operator: JW

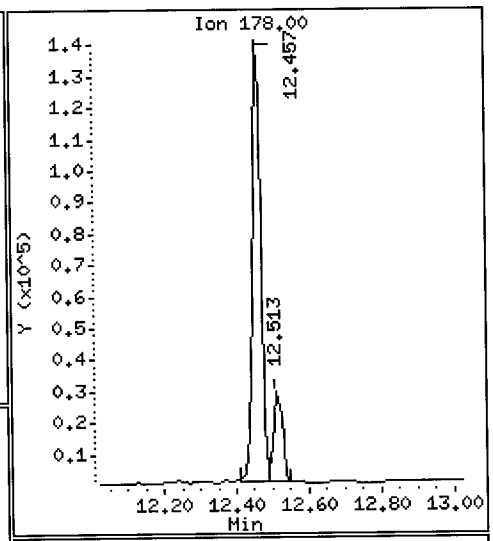
Column phase: Rxi-17Sil MS

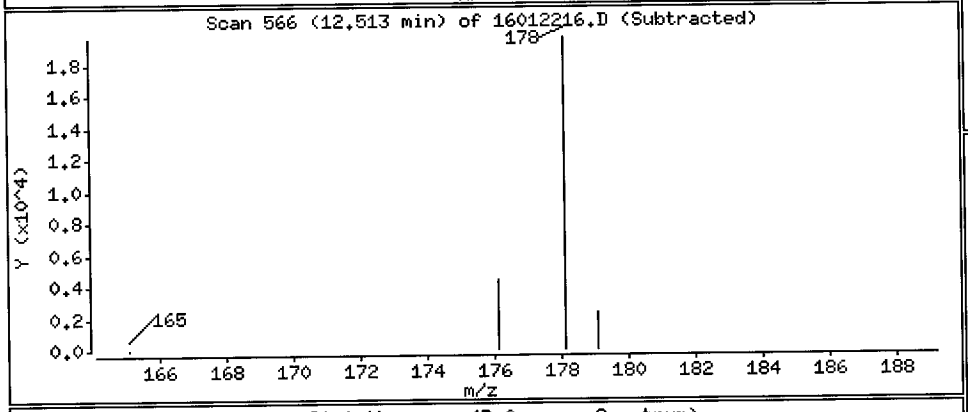
Column diameter: 0.25

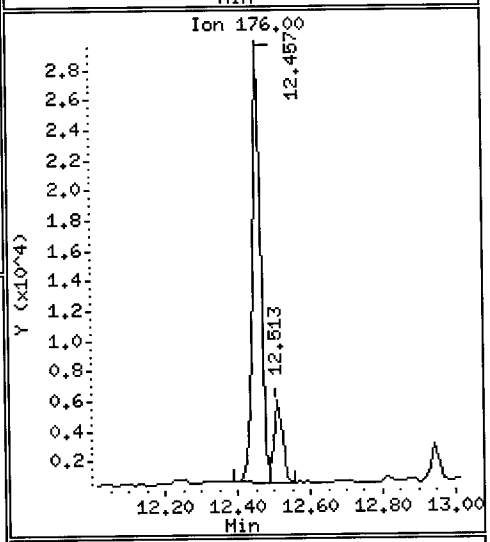
20 Anthracene

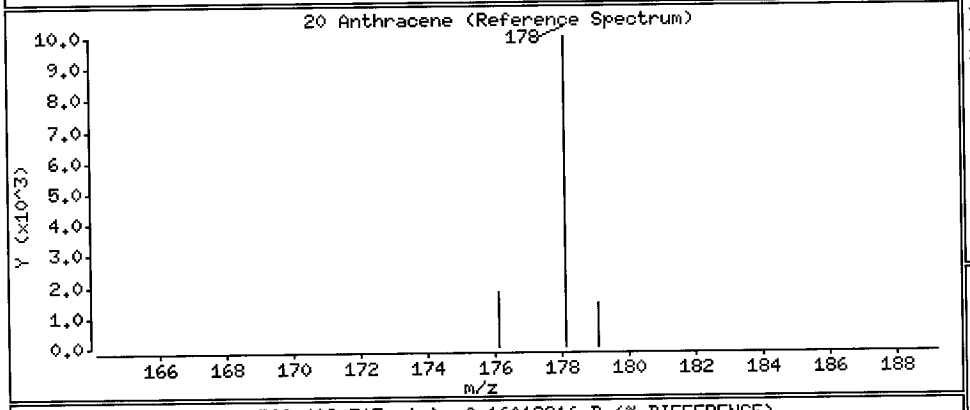
Concentration: 952 ug/kg

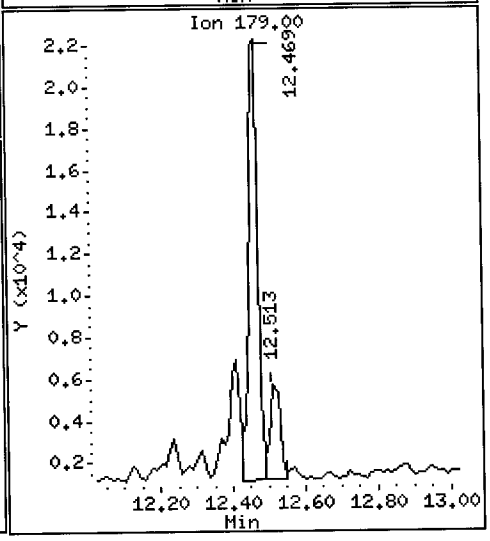


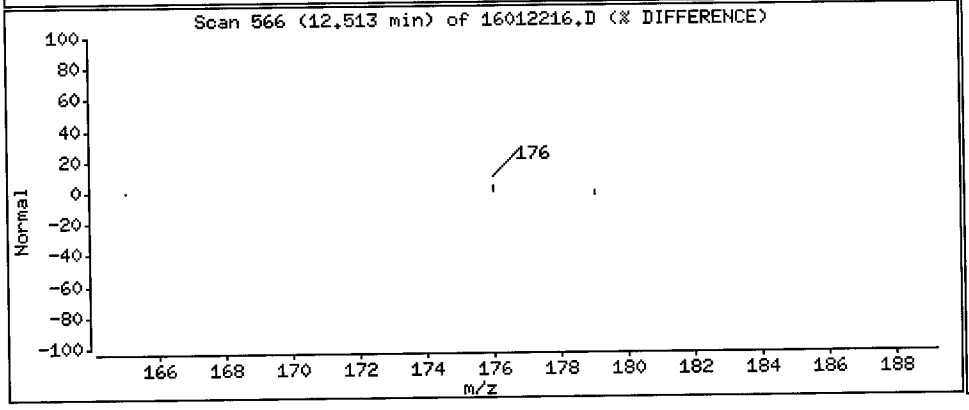












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

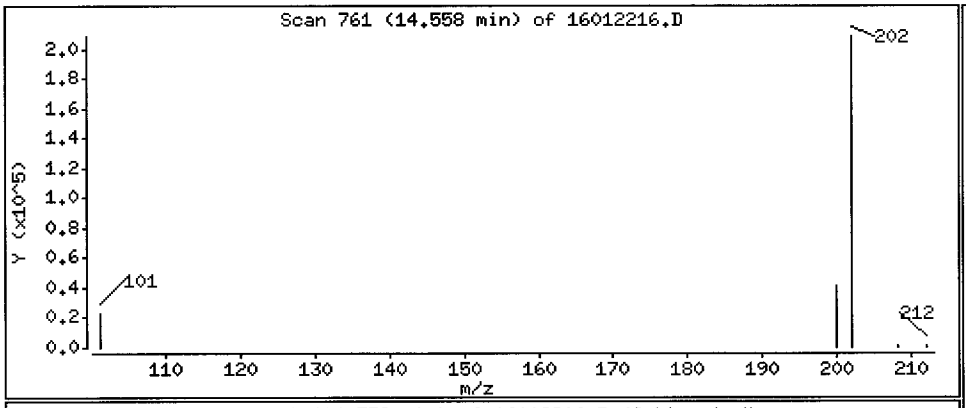
Operator: JW

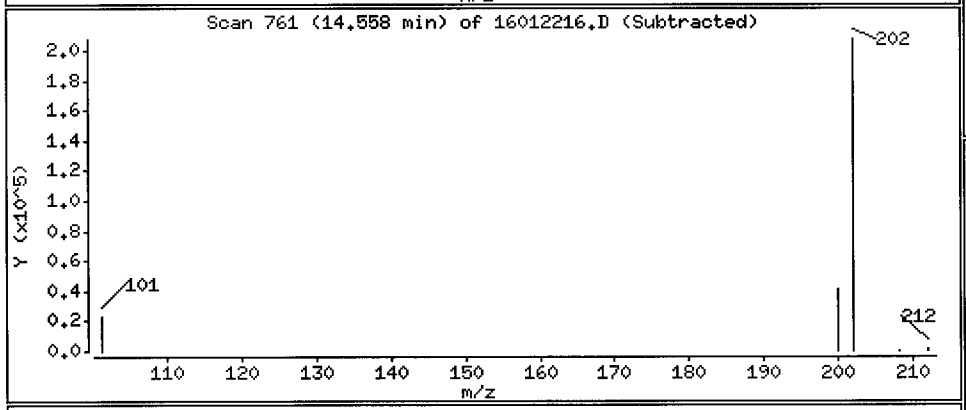
Column phase: Rxi-17Sil MS

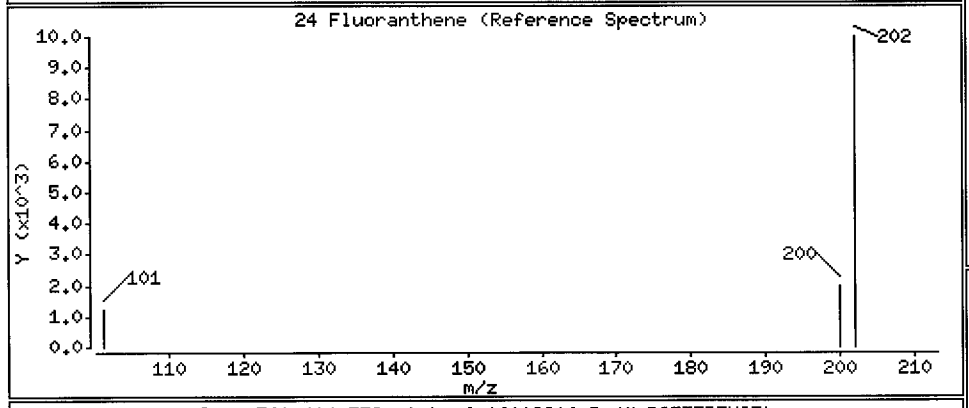
Column diameter: 0.25

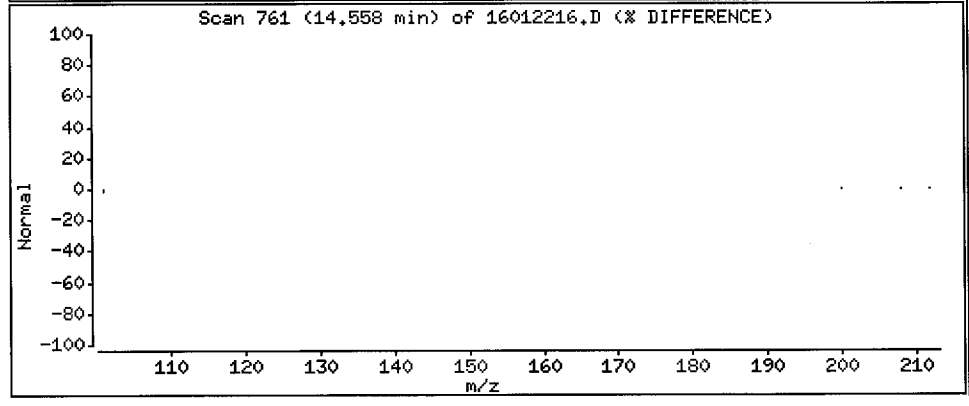
24 Fluoranthene

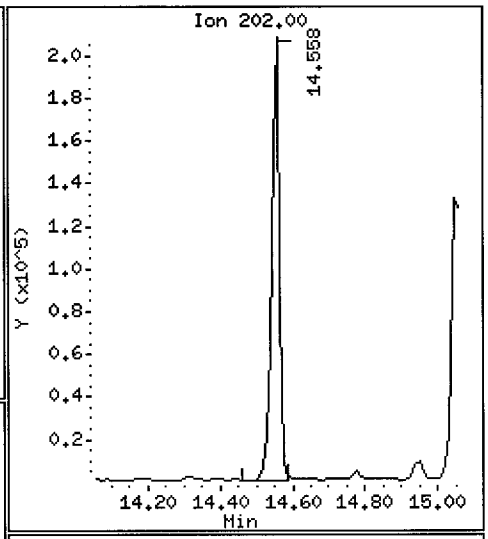
Concentration: 5980 ug/kg

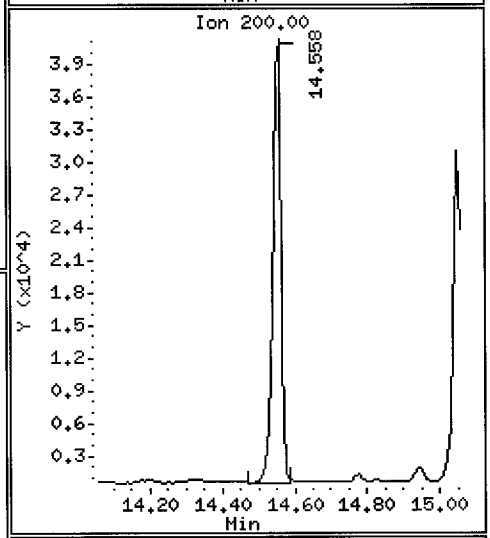


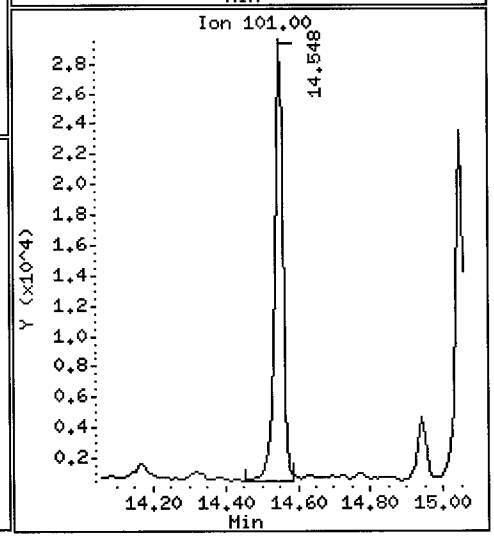












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATSOD

Volume Injected (uL): 2.0

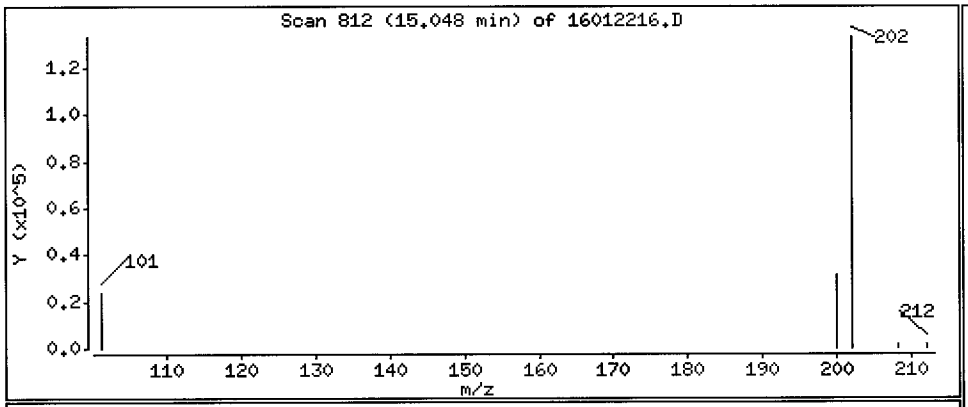
Operator: JW

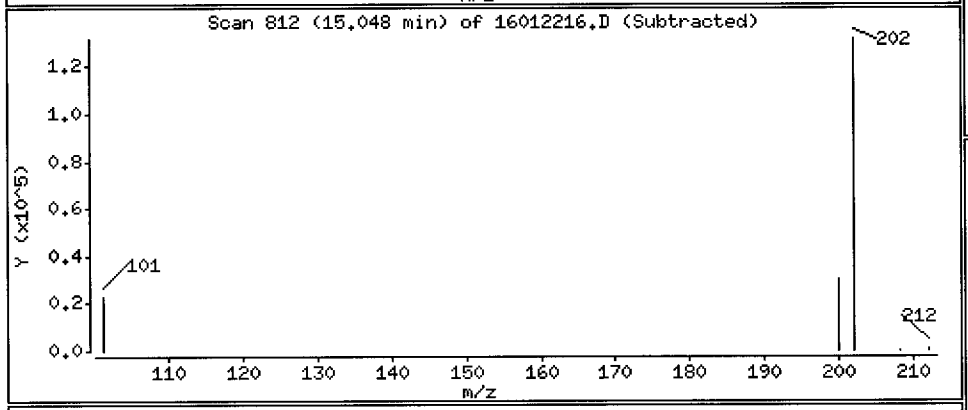
Column phase: Rxi-17Sil MS

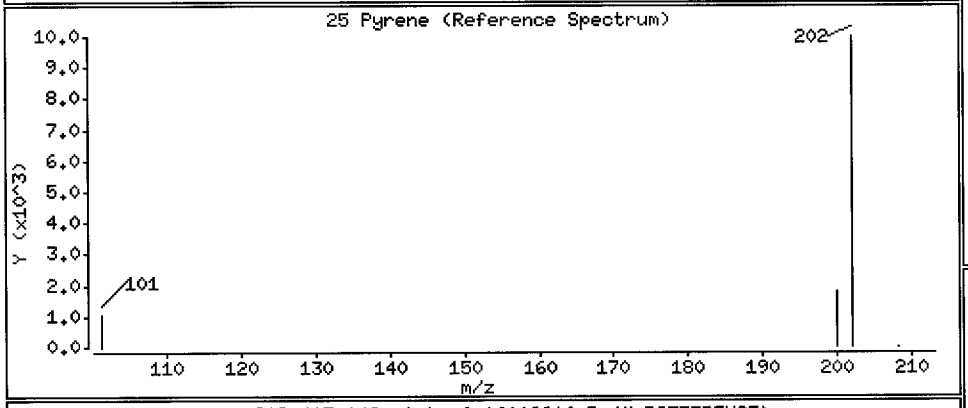
Column diameter: 0.25

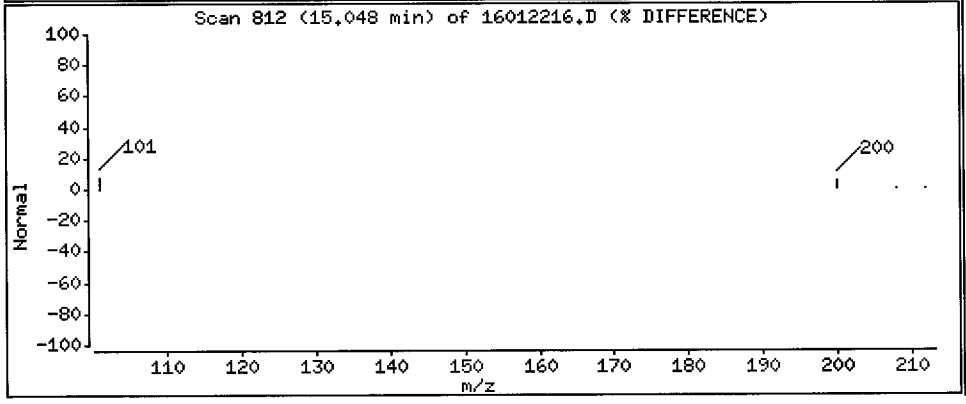
25 Pyrene

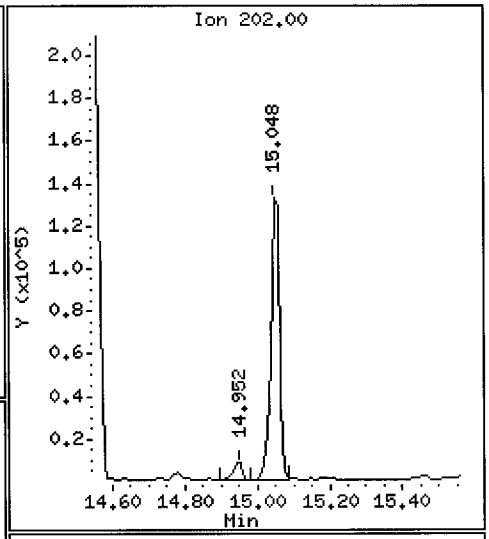
Concentration: 4330 ug/kg

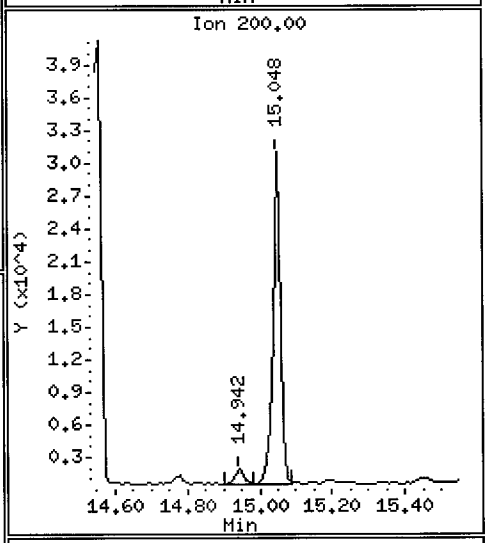


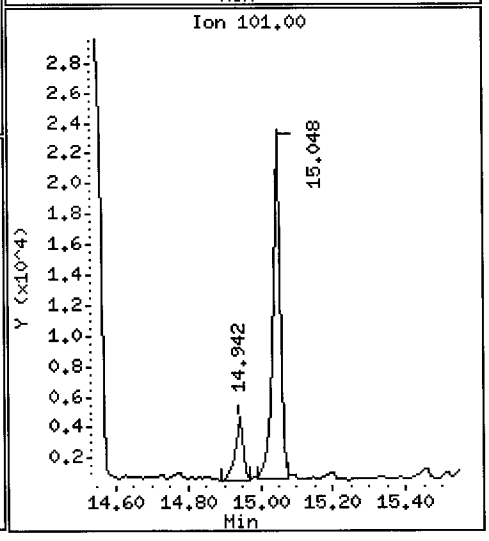












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

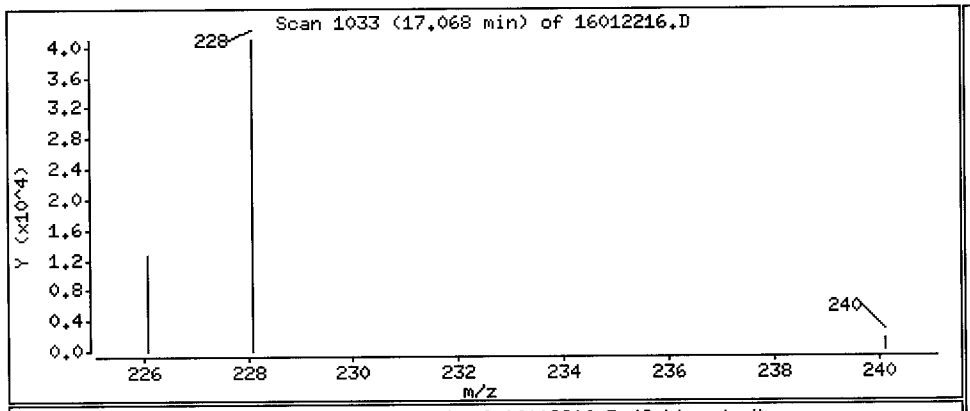
Operator: JW

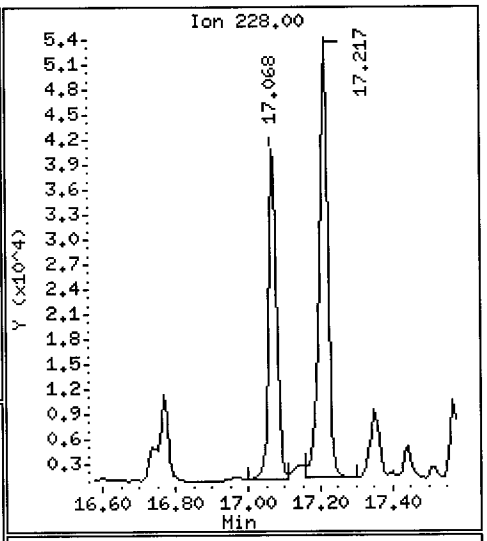
Column phase: Rxi-17Sil MS

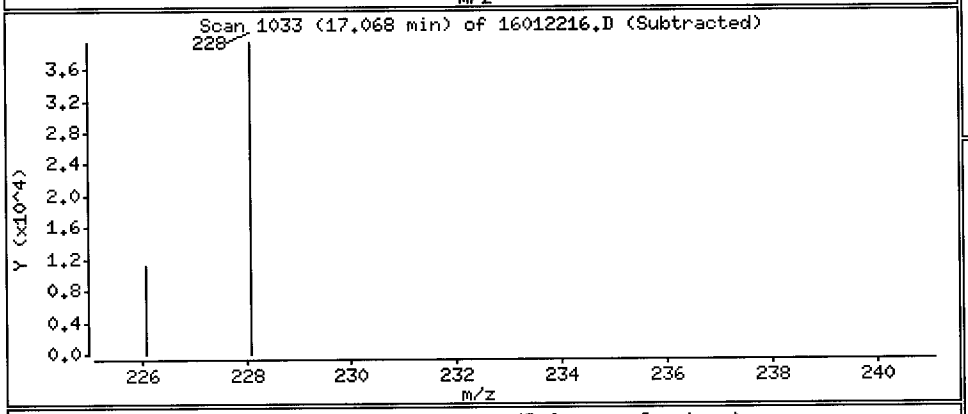
Column diameter: 0.25

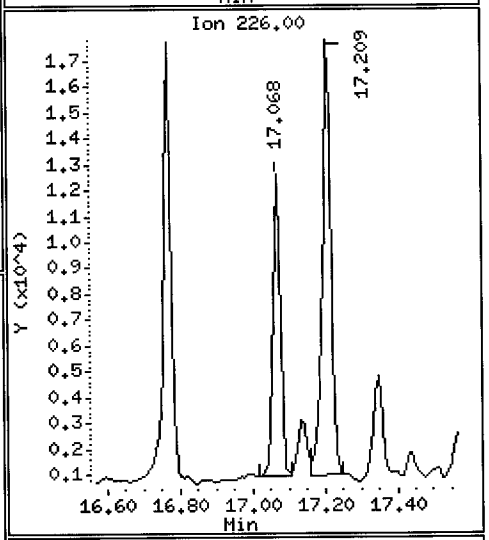
28 Benzo(a)anthracene

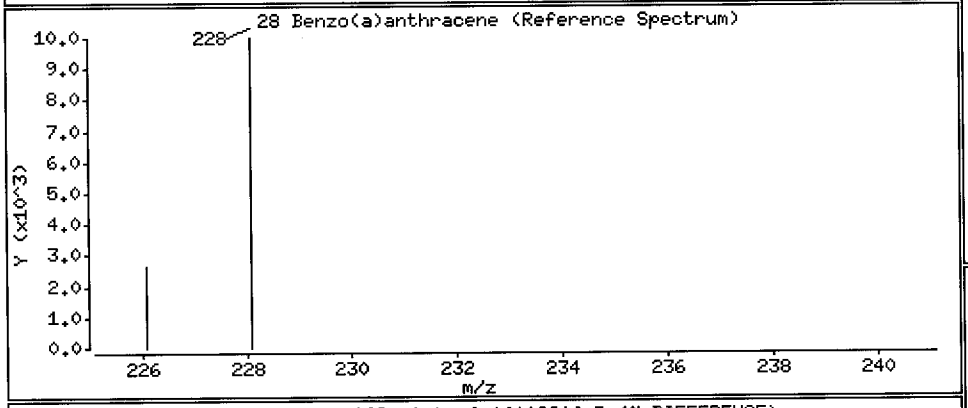
Concentration: 1420 ug/kg

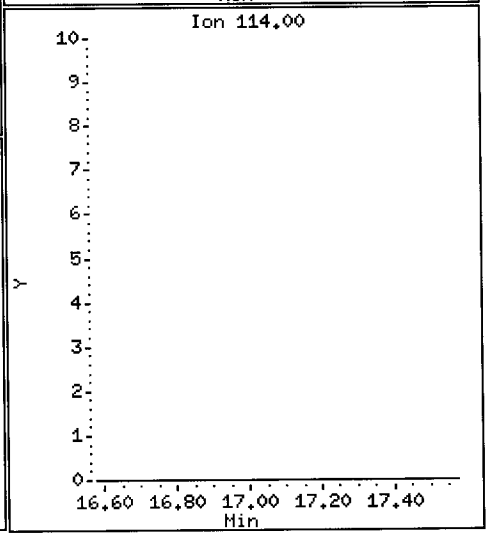


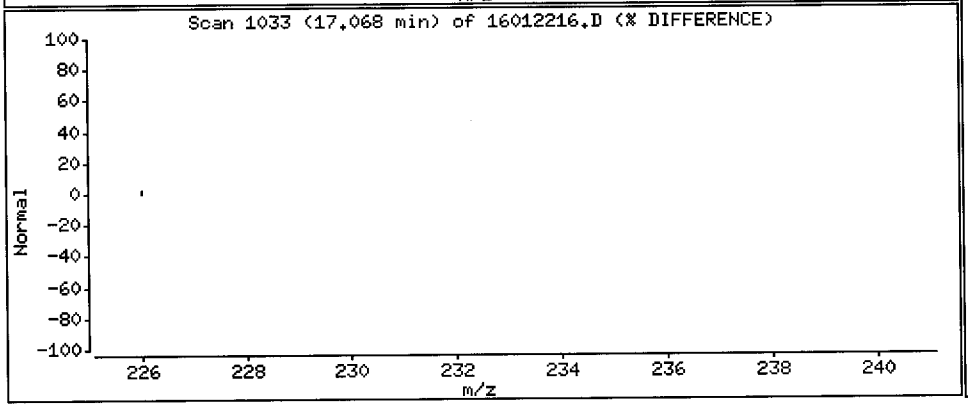












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

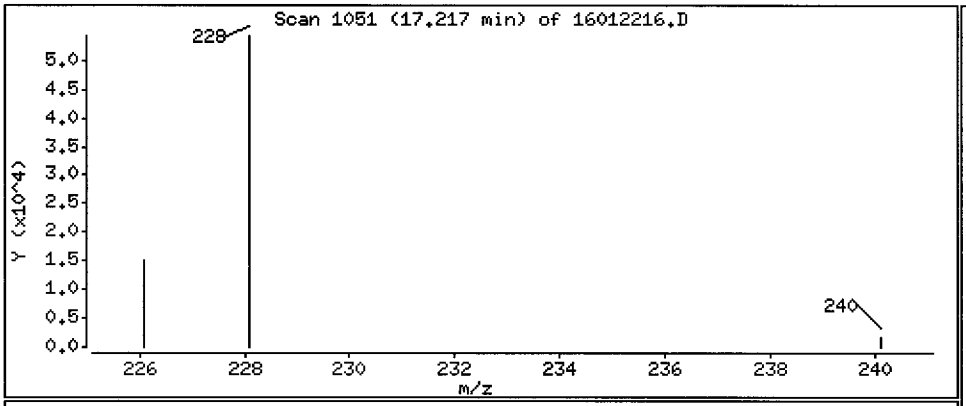
Operator: JW

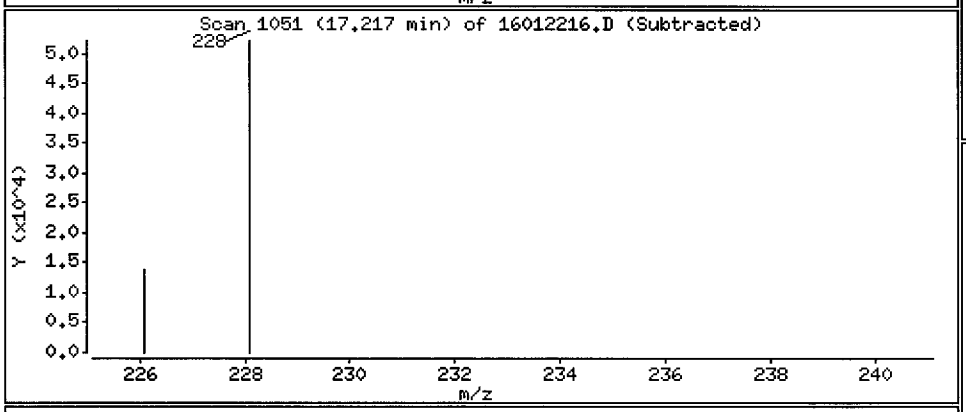
Column phase: Rxi-17Sil MS

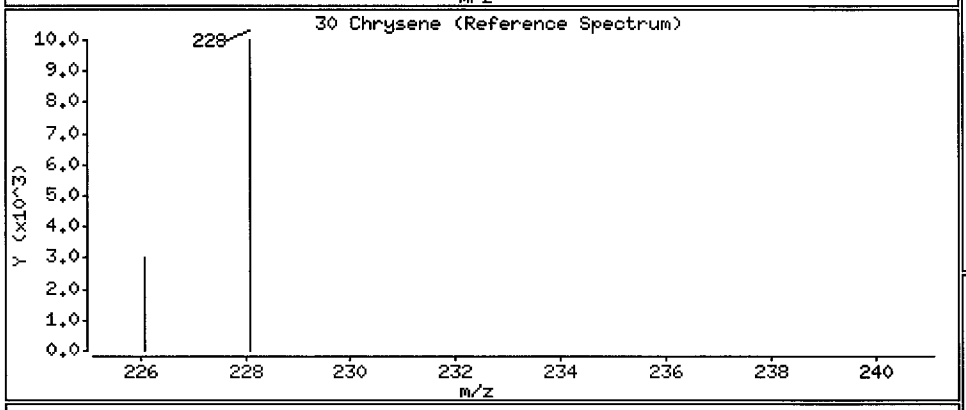
Column diameter: 0.25

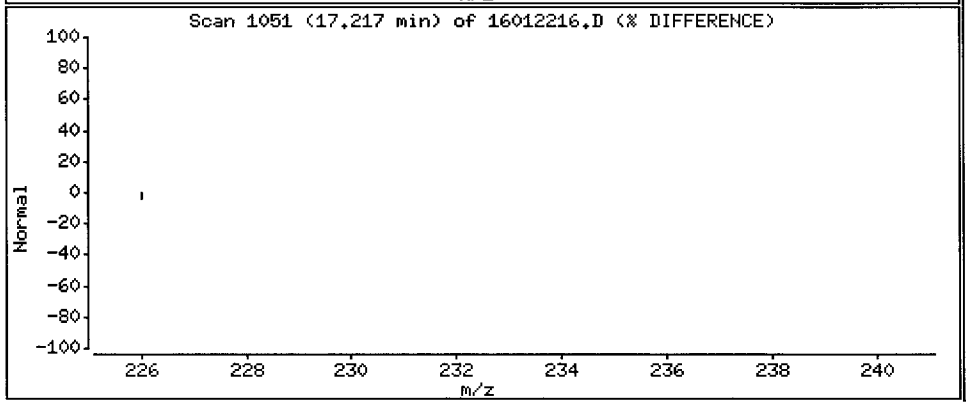
30 Chrysene

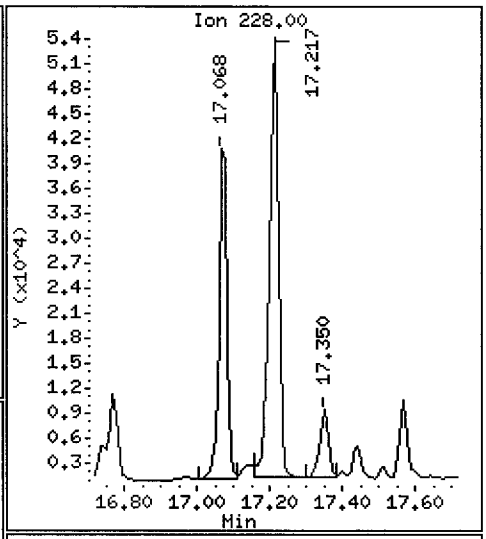
Concentration: 1990 ug/kg

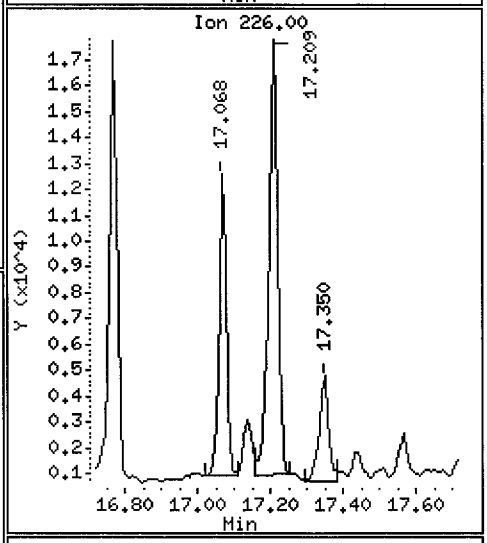


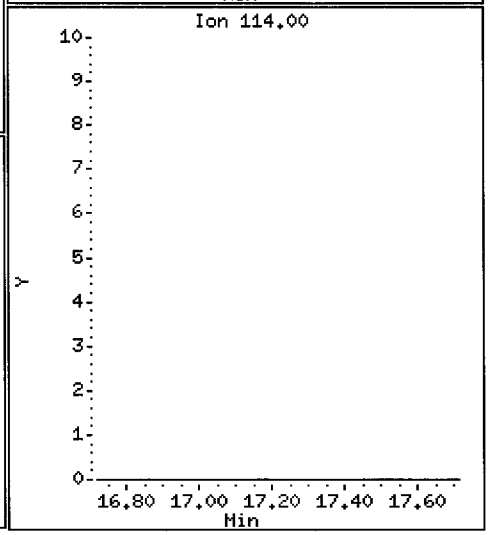












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

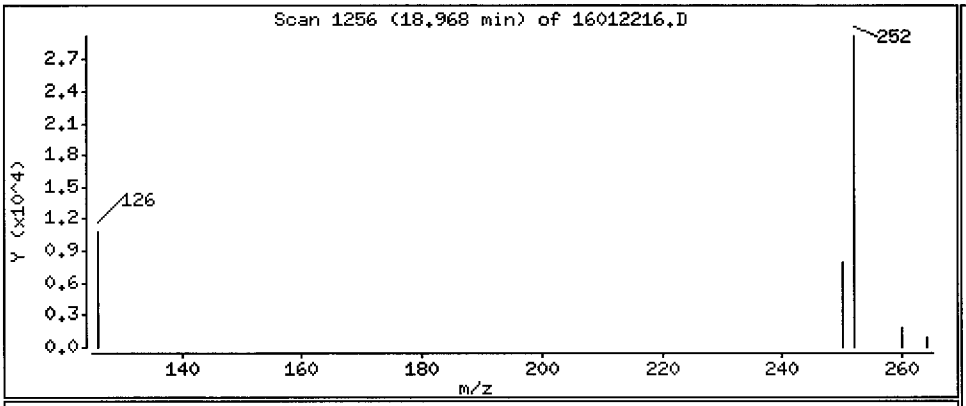
Operator: JW

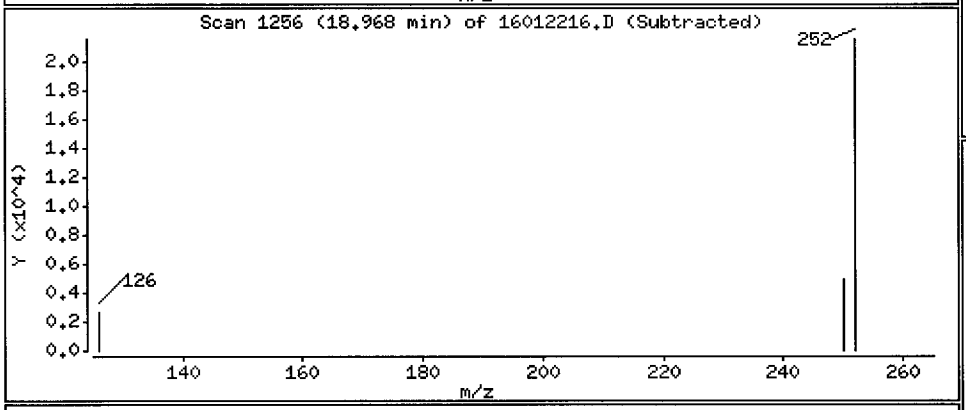
Column phase: Rxi-17Sil MS

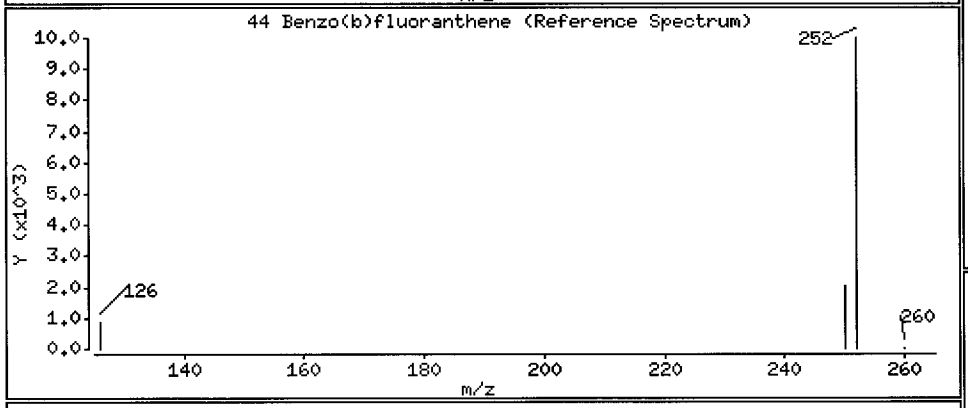
Column diameter: 0.25

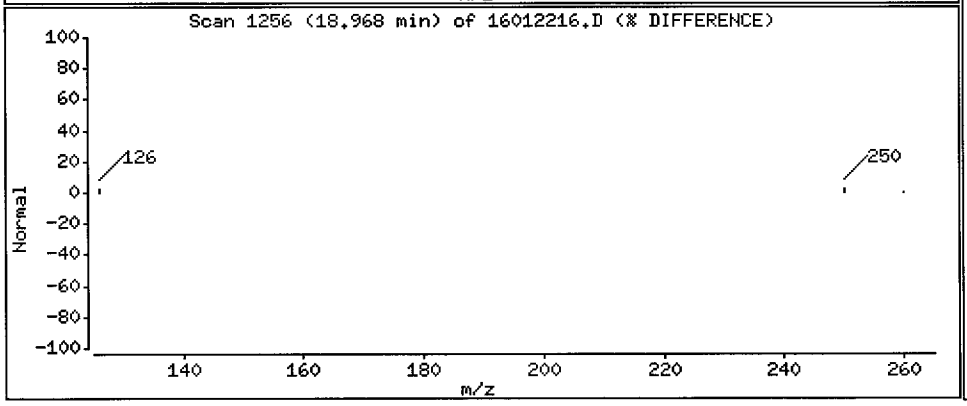
44 Benzo(b)fluoranthene

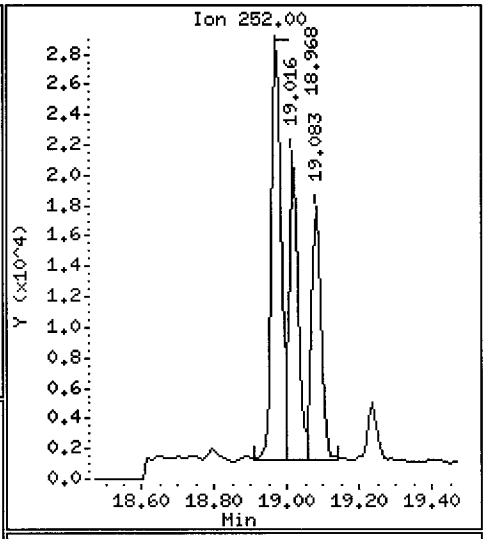
Concentration: 1180 ug/kg

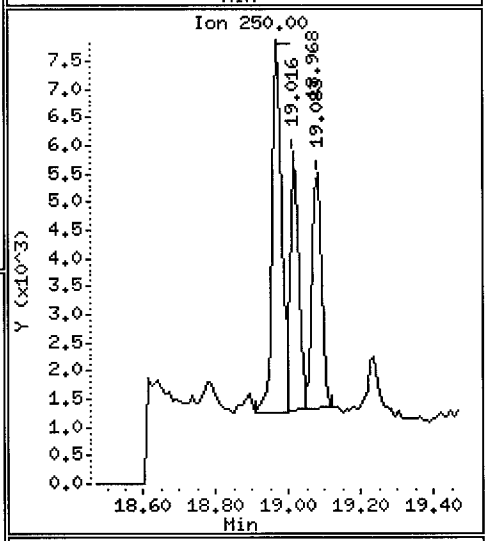


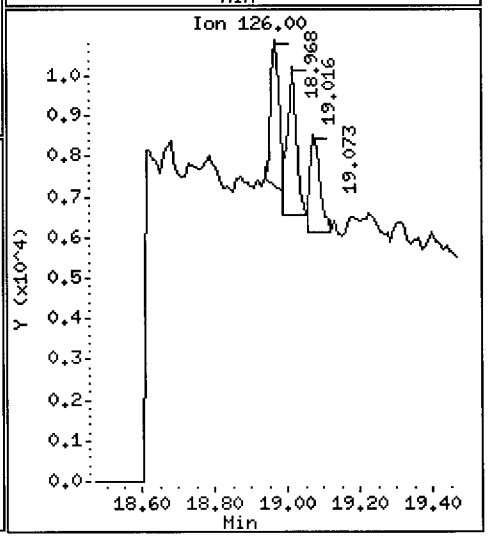












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

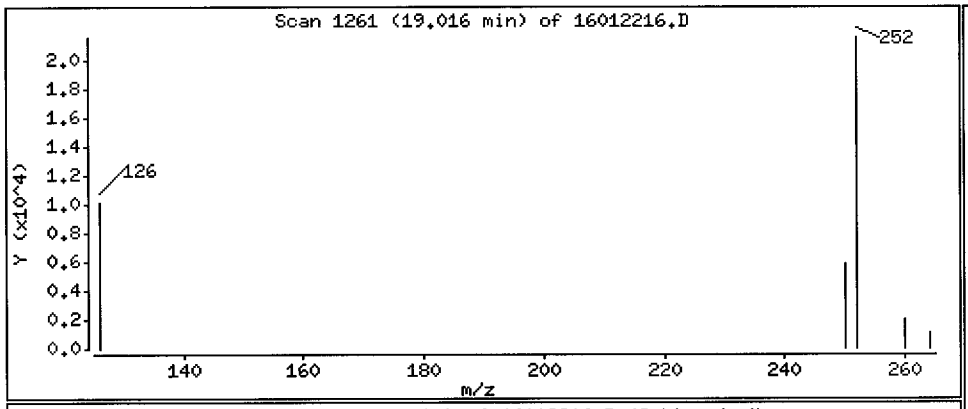
Operator: JW

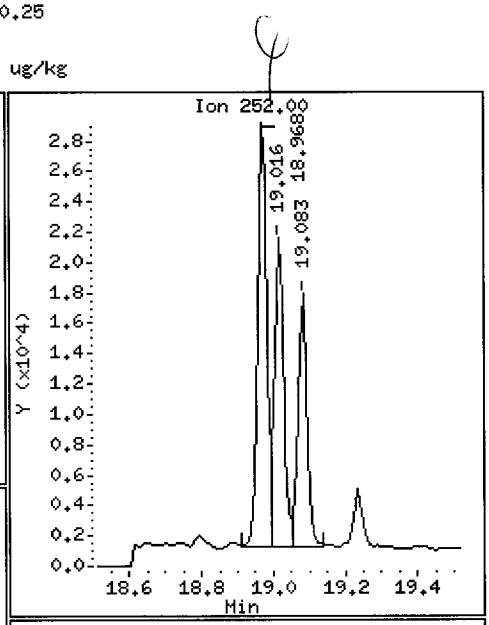
Column phase: Rxi-17Sil MS

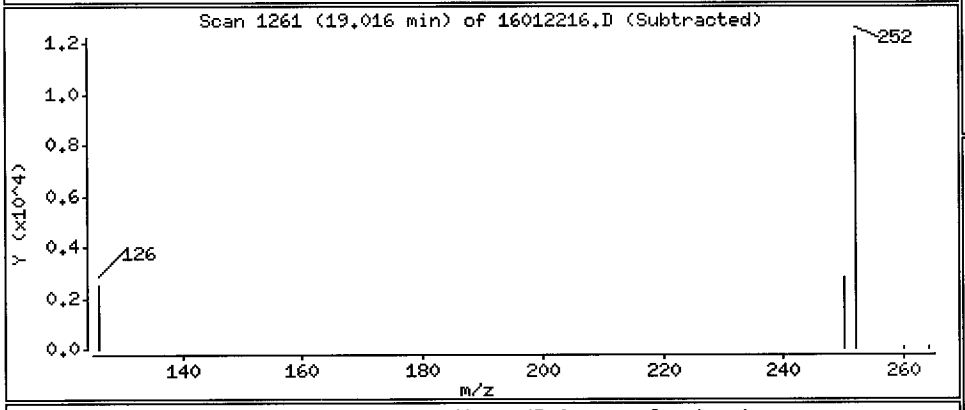
Column diameter: 0.25

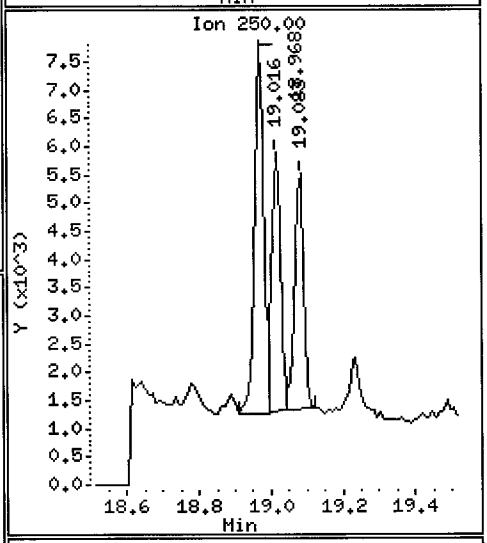
45 Benzo(k)fluoranthene

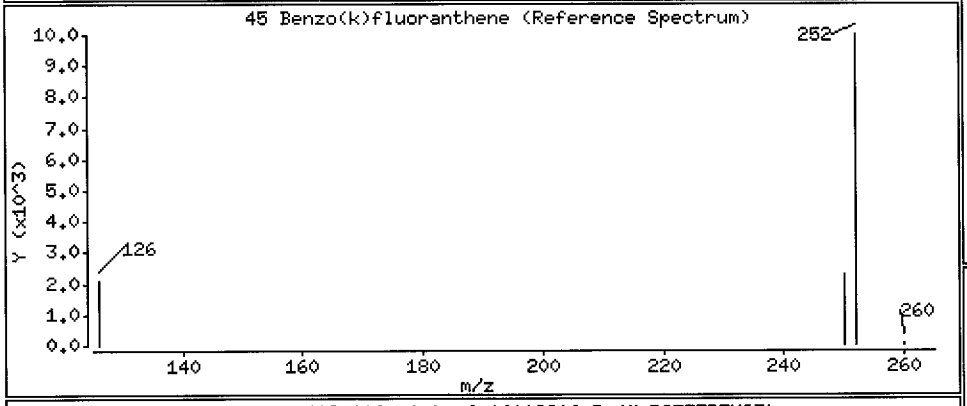
Concentration: 742 ug/kg

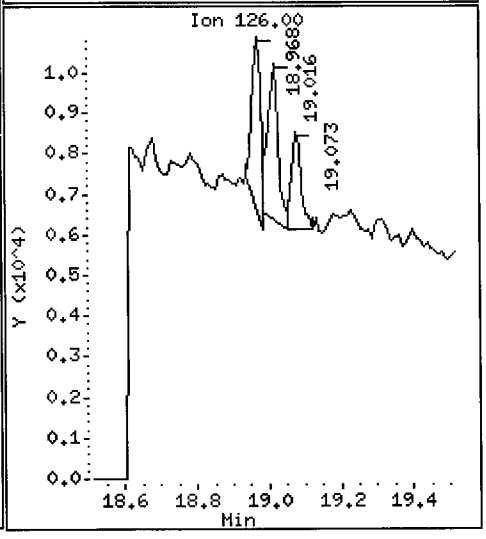


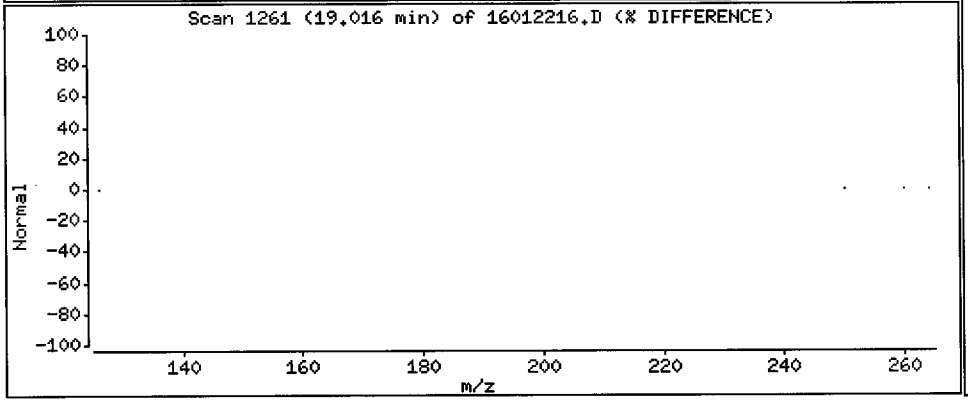












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

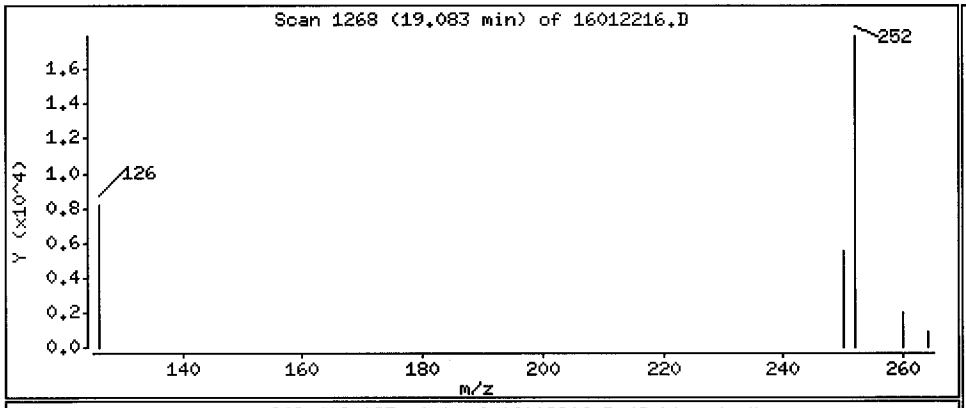
Operator: JW

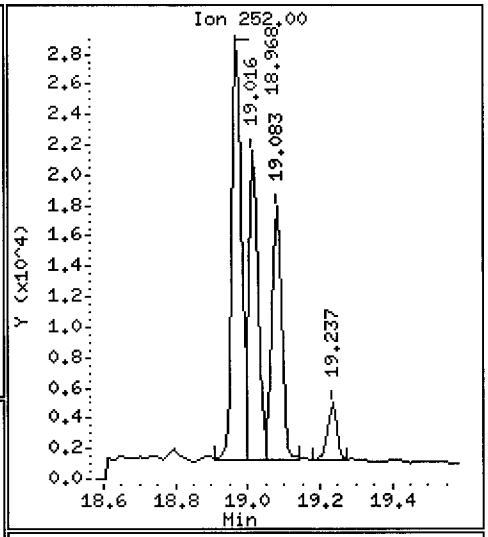
Column phase: Rxi-17Sil MS

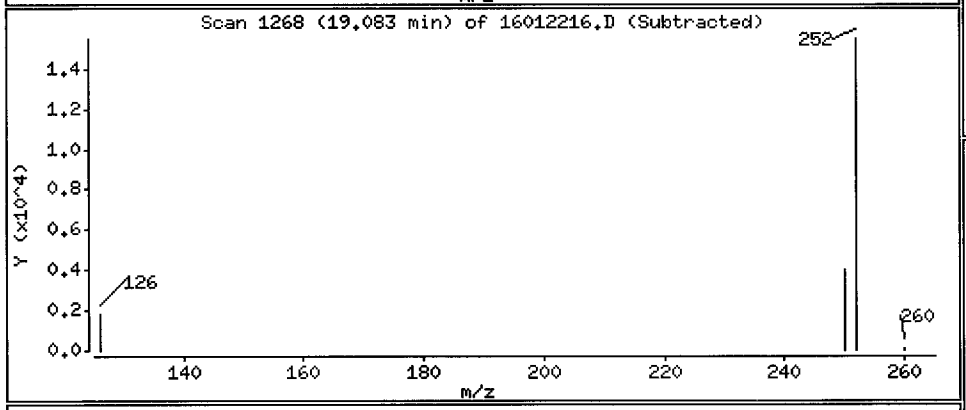
Column diameter: 0.25

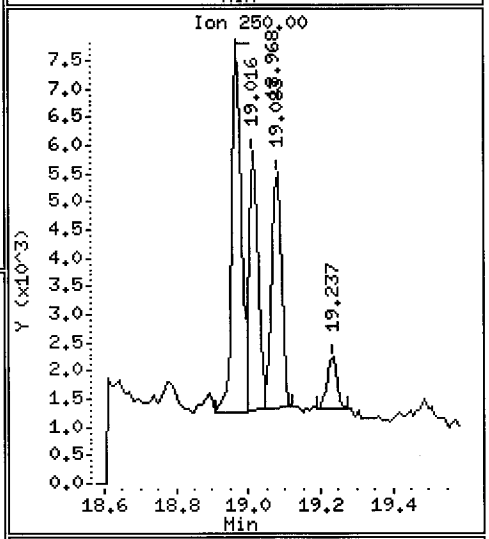
46 Benzo(j)fluoranthene

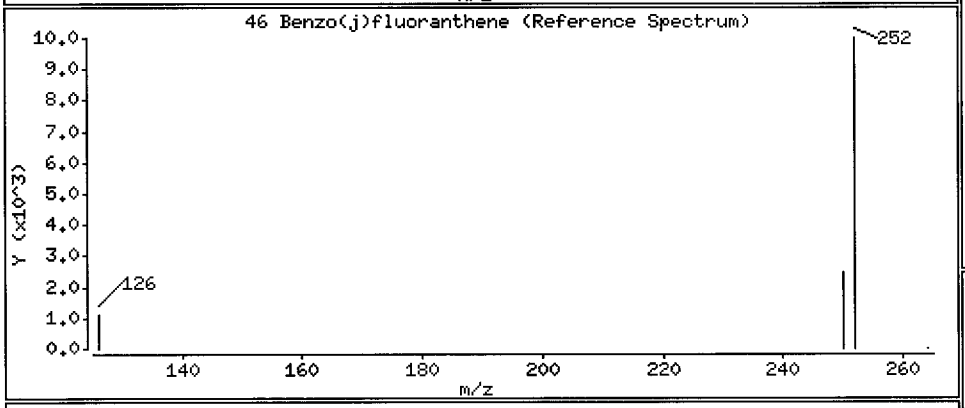
Concentration: 644 ug/kg

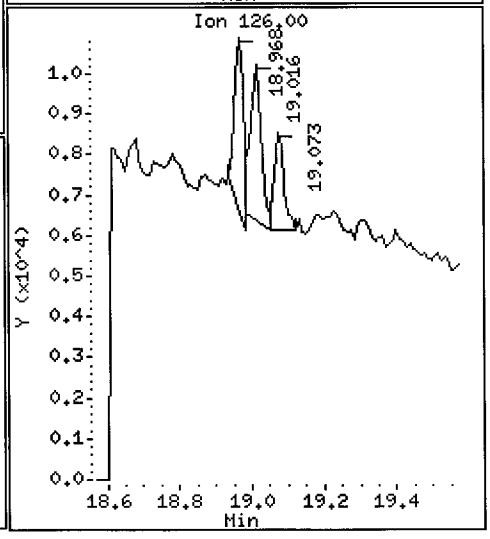


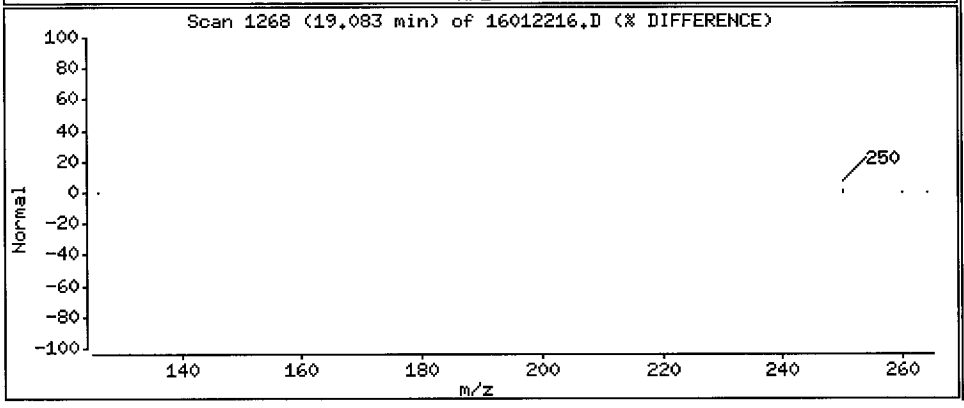












Data File: \\target\share\chem3\nt11.i\20160122.b\16012216.D

Date : 22-JAN-2016 14:59

Client ID: PG-GP-1-MUS-COC-160

Instrument: nt11.i

Sample Info: ATS0D

Volume Injected (uL): 2.0

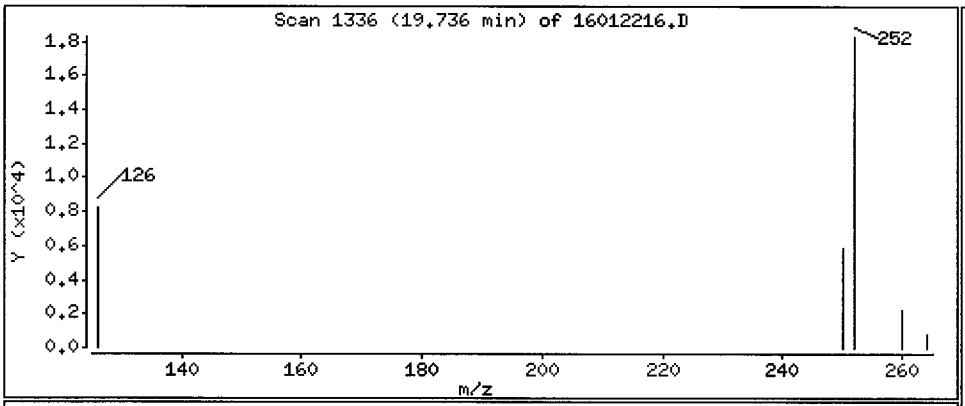
Operator: JW

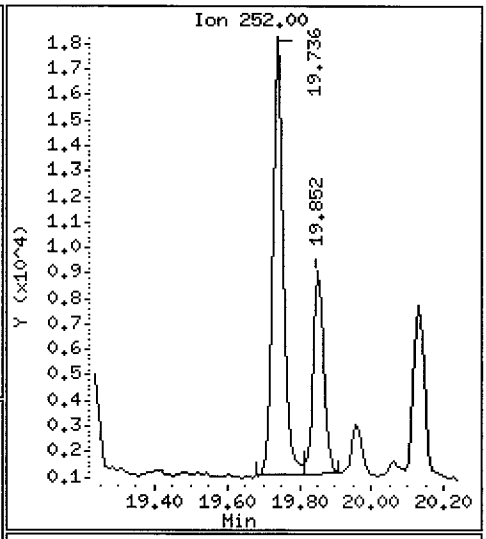
Column phase: Rxi-17Sil MS

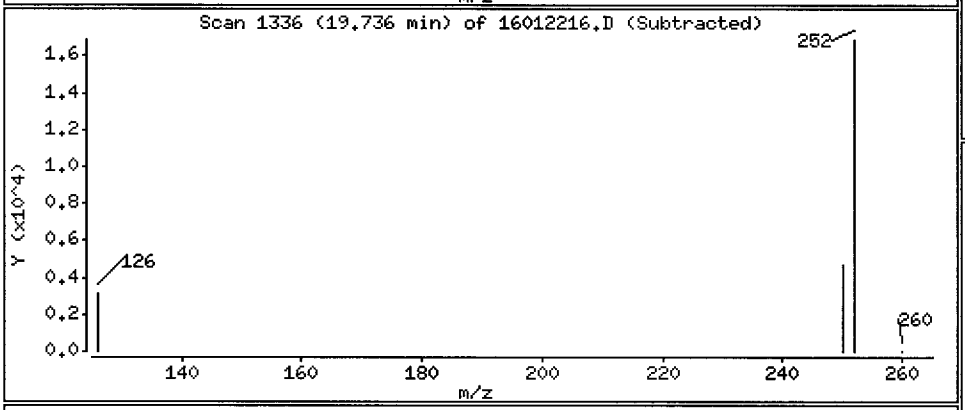
Column diameter: 0.25

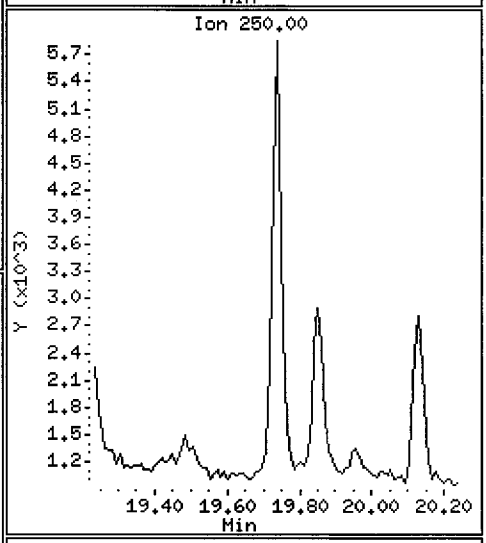
48 Benzo(e)pyrene

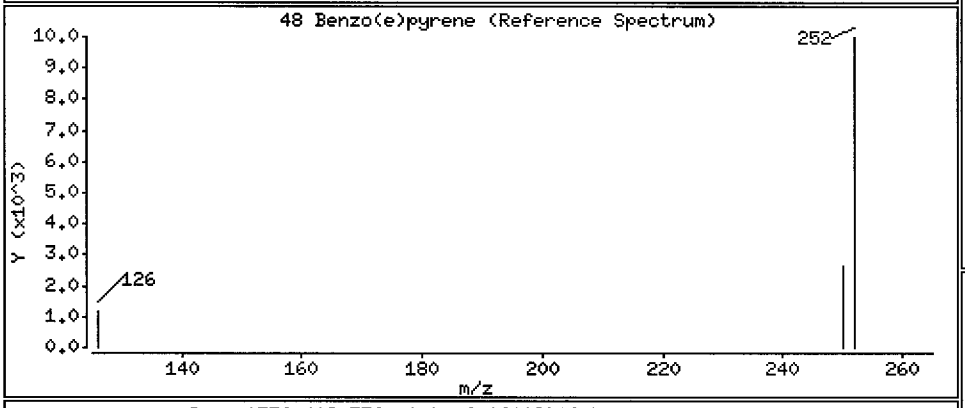
Concentration: 825 ug/kg

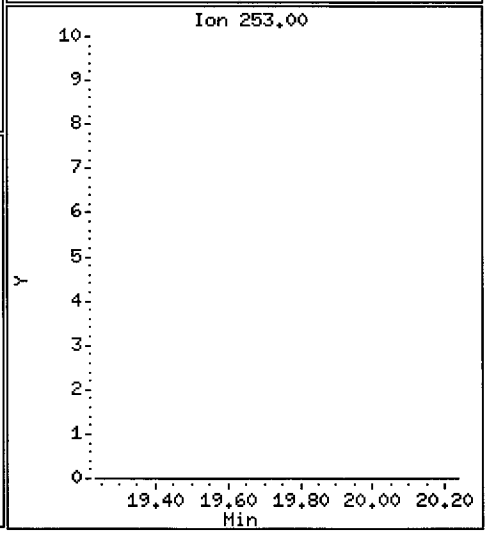


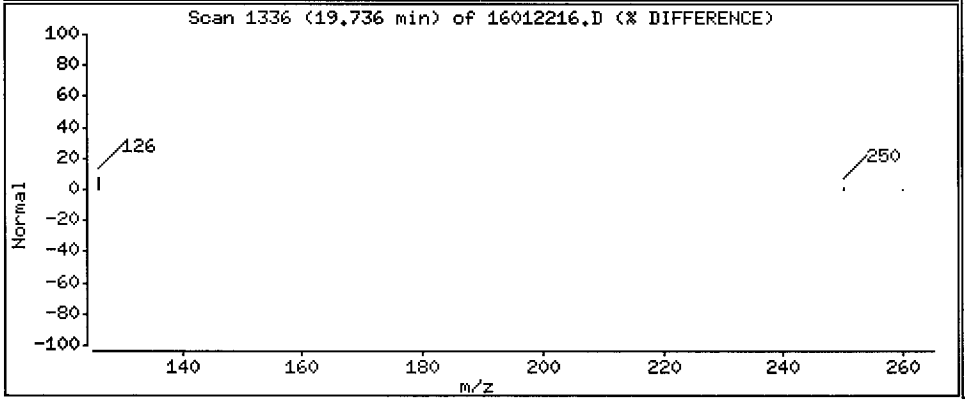












REVIEW SUMMARY FOR FILE - 16012216.D

Lab ID: ATS0D
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 14:59

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012217.D
Lab Smp Id: ATS0E Client Smp ID: PG-SMA2-5-MUS-COC-1
Inj Date : 22-JAN-2016 15:29 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0E
Misc Info : 16-139
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.050	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

JW 1/26/16

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
*	4 Naphthalene-d8	136	6.734	6.744	(1.000)	384886	200.000	
	5 Naphthalene	128	6.765	6.776	(1.005)	37731	16.9717	844
$	6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.145)	213489	149.439	7430
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-Methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	9.744	9.744	(1.000)	273475	200.000	
	12 Acenaphthene	153	9.800	9.811	(1.006)	35858	24.4774	1220
	14 Dibenzofuran	168	10.010	10.010	(1.027)	47999	21.7500	1080
	15 Fluorene	166	10.630	10.630	(1.091)	60016	36.2618	1800
*	18 Phenanthrene-d10	188	12.424	12.424	(1.000)	449495	200.000	
	19 Phenanthrene	178	12.457	12.468	(1.003)	714224	263.733	13100
	20 Anthracene	178	12.512	12.523	(1.007)	228556	94.2865	4690
$	23 Fluoranthene-d10	212	14.518	14.518	(1.169)	435571	176.206	8770
	24 Fluoranthene	202	14.557	14.557	(1.172)	1836809	675.562	33600
	25 Pyrene	202	15.056	15.057	(0.877)	1358101	505.609	25200
	28 Benzo(a)anthracene	228	17.075	17.075	(0.995)	342216	151.330	7530
*	29 Chrysene-d12	240	17.167	17.167	(1.000)	339179	200.000	
	30 Chrysene	228	17.217	17.217	(1.003)	431601	173.896	8650
	44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	273249	120.333	5990
	45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	219157	82.8216	4120

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
	46 Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	162132	67.2622	3350
	34 Benzo(a)pyrene	252	19.851	19.851	(0.989)	121716	55.5400	2760
*	35 Perylene-d12	264	20.062	20.062	(1.000)	335158	200.000	
$	36 Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	251206	185.700	9240
	37 Indeno(1,2,3-cd)pyrene	276	22.662	22.662	(1.130)	32565	14.1525	704
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	23.813	23.814	(1.187)	39607	19.8281	986
	47 Perylene	252	20.130	20.130	(1.003)	79994	35.2076	1750
	48 Benzo(e)pyrene	252	19.736	19.736	(0.984)	241993	105.448	5250

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012217.D
Lab Smp Id: ATS0E
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-139

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-SMA2-5-MUS-C
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	384886	17.38
11 Acenaphthene-d10	239179	119590	478358	273475	14.34
18 Phenanthrene-d10	372253	186127	744506	449495	20.75
29 Chrysene-d12	294711	147356	589422	339179	15.09
35 Perylene-d12	260595	130298	521190	335158	28.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.73	-0.16
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	-0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	-0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	-0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	-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.

ARI Labs, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC
Sample Matrix: SOLID
Lab Smp Id: ATS0E
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-139

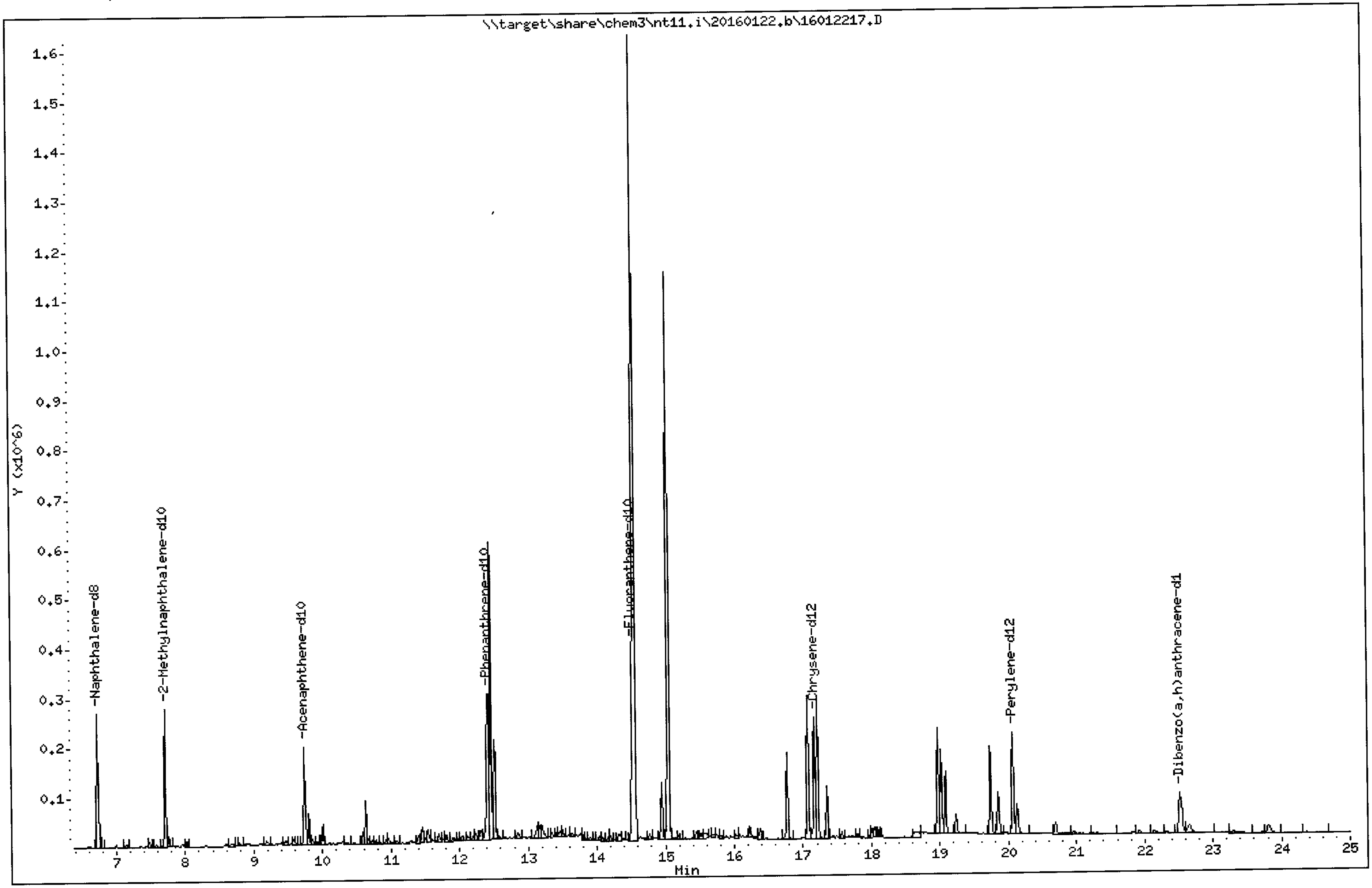
Client SDG: ATS0
Fraction: SV
Client Smp ID: PG-SMA2-5-MUS-COC-1
Operator: JW
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	14900	7430	49.81	30-160
$ 23 Fluoranthene-d10	14900	8770	58.74	30-160
$ 36 Dibenzo(a,h)anthra	14900	9240	61.90	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D
Date : 22-JAN-2016 15:29
Client ID: PG-SMA2-5-MUS-COC-1
Sample Info: ATSOE
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: JW
Column diameter: 0.25



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Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

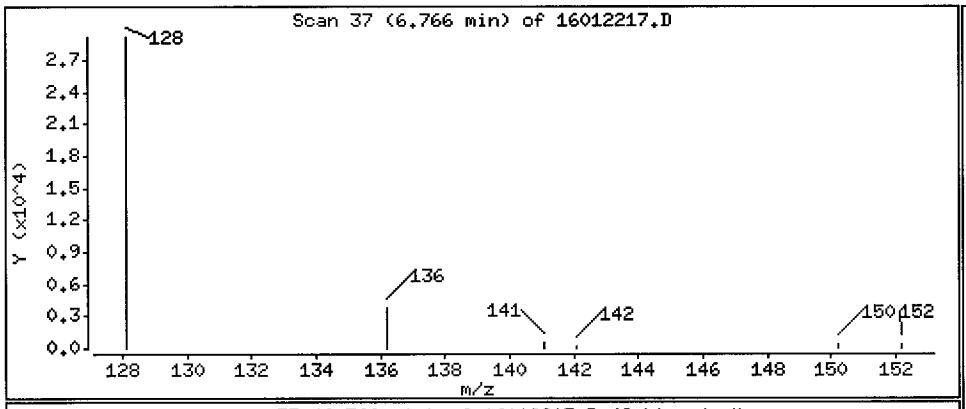
Operator: JW

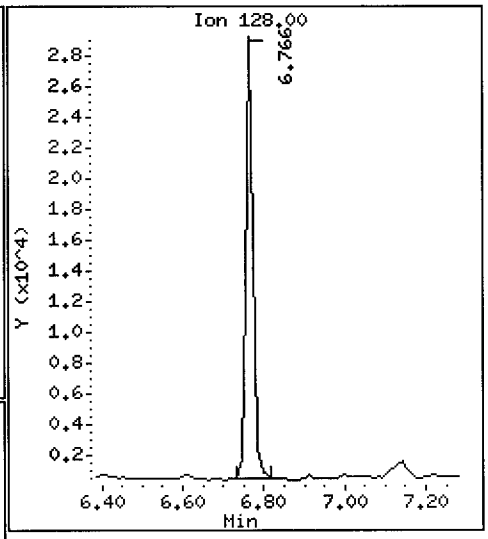
Column phase: Rxi-17Sil MS

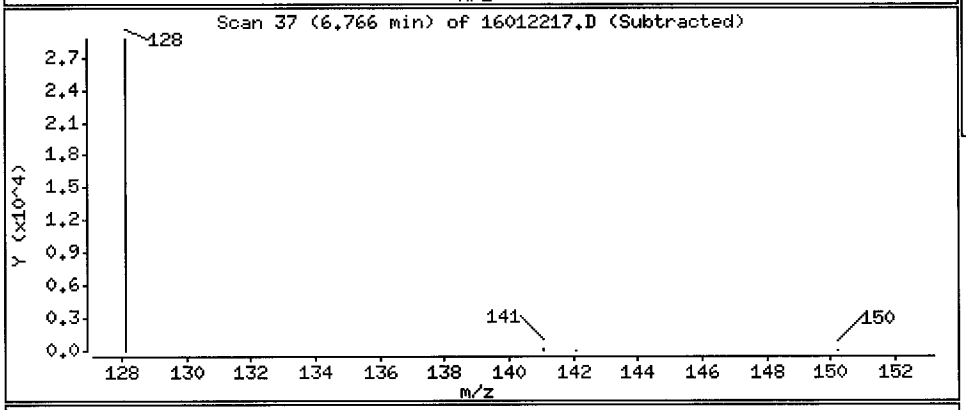
Column diameter: 0.25

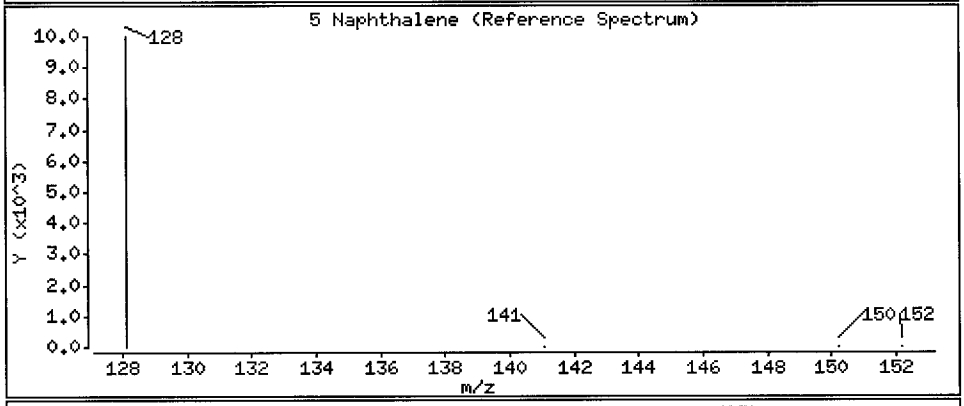
5 Naphthalene

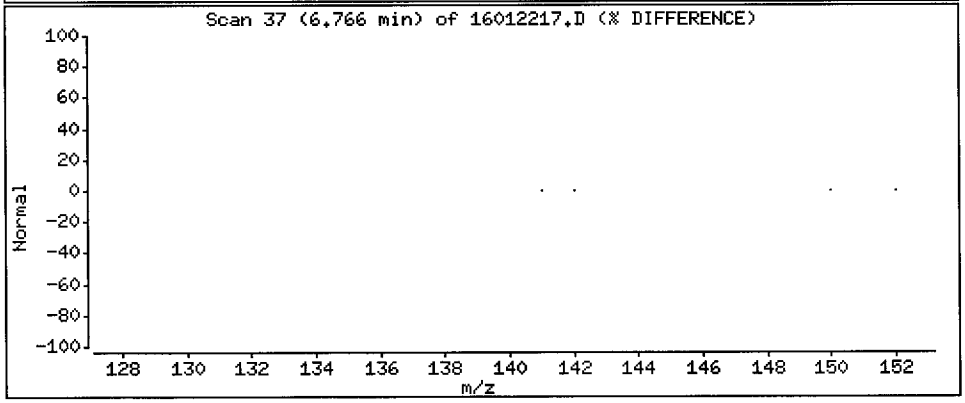
Concentration: 844 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

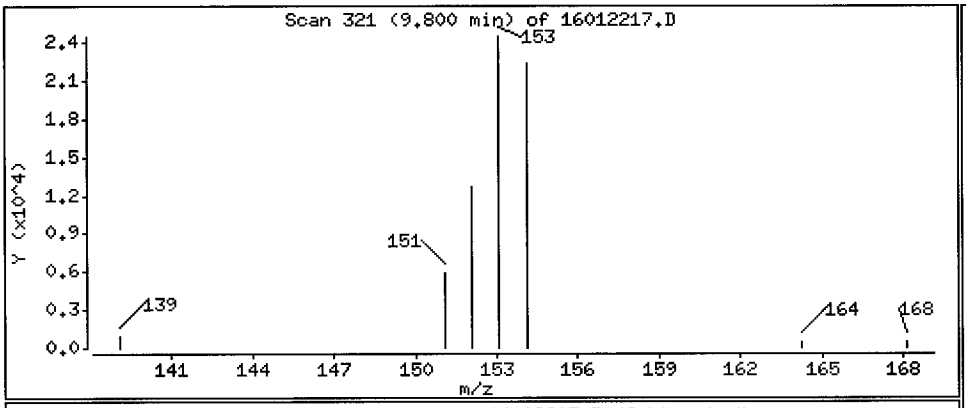
Operator: JW

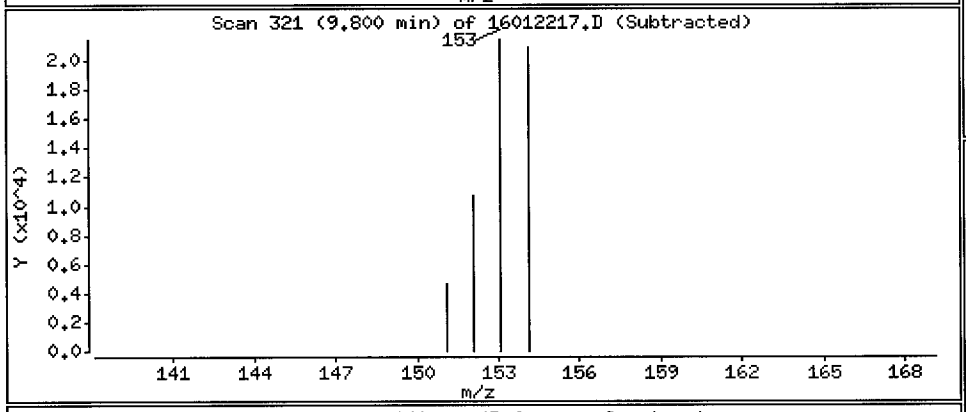
Column phase: Rxi-17Sil MS

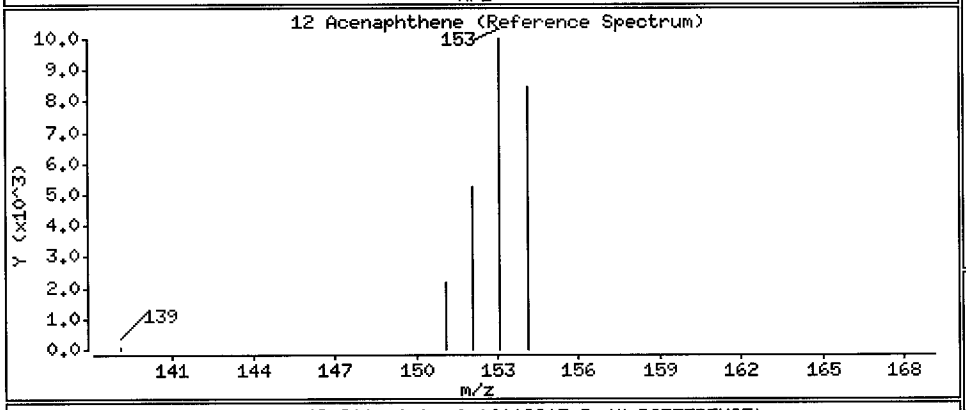
Column diameter: 0.25

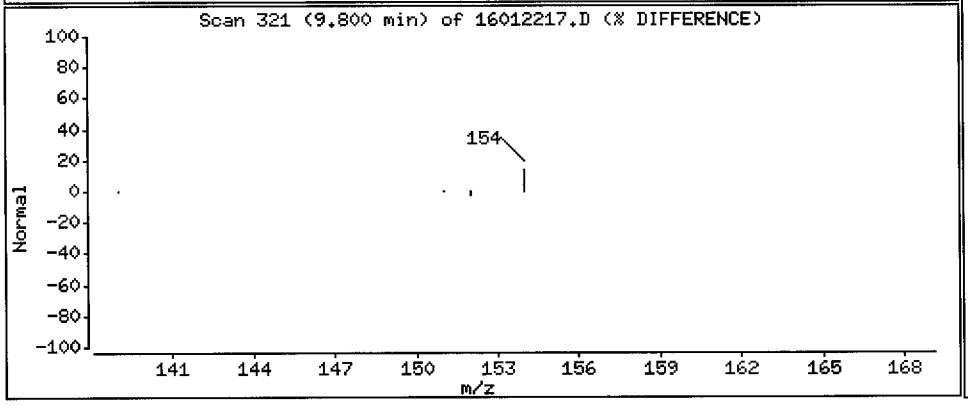
12 Acenaphthene

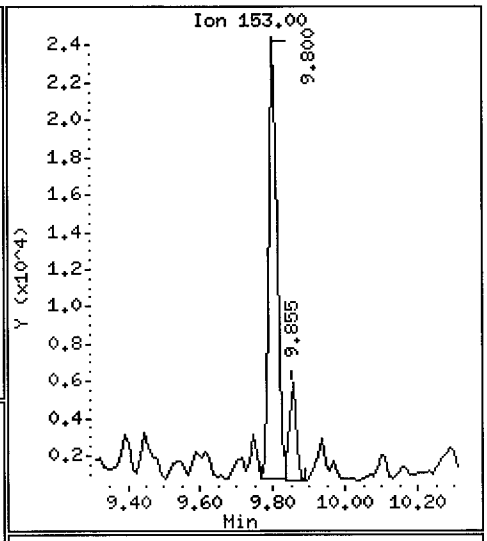
Concentration: 1220 ug/kg

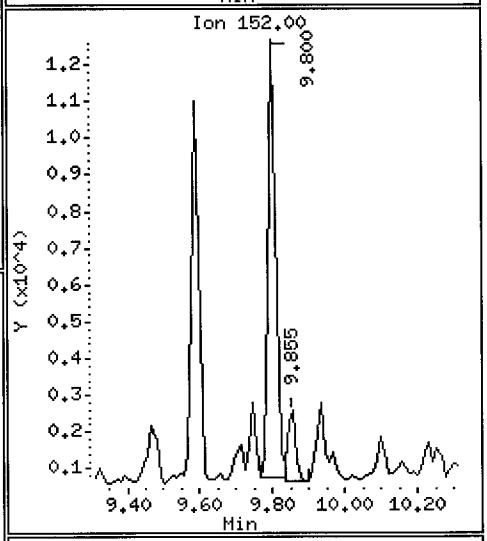


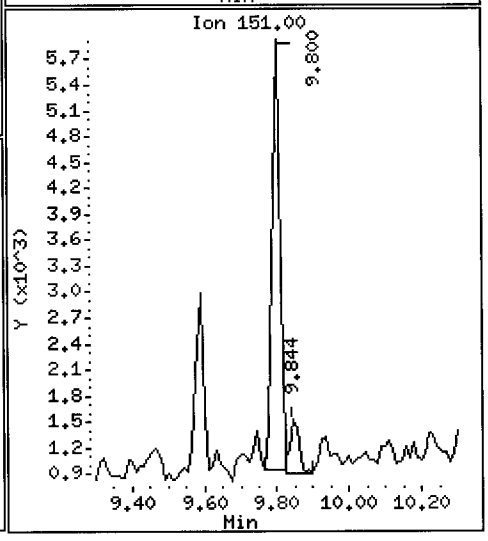












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

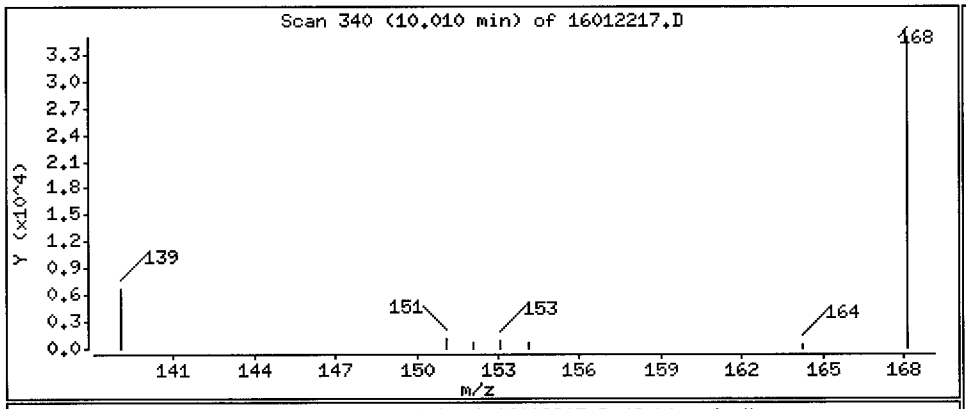
Operator: JW

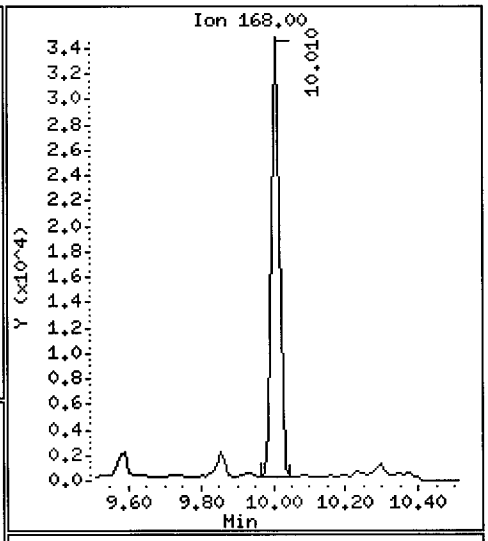
Column phase: Rxi-17Sil MS

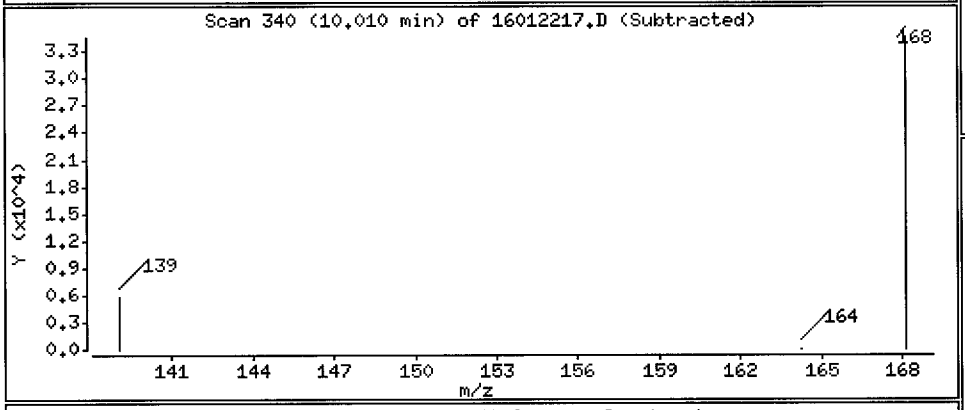
Column diameter: 0.25

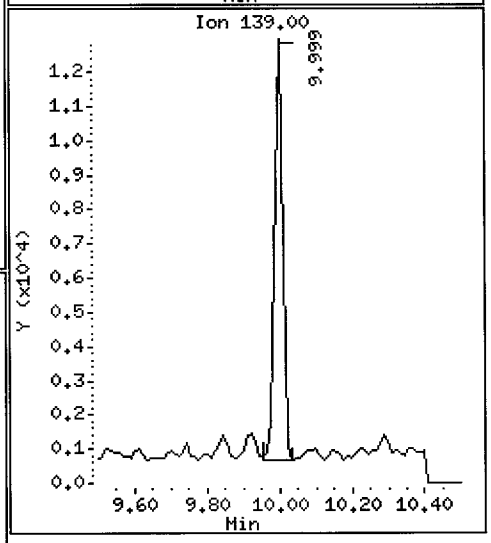
14 Dibenzofuran

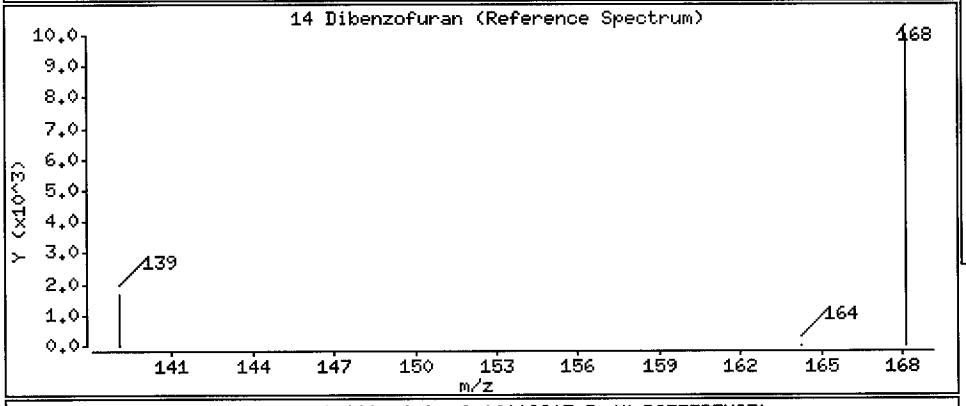
Concentration: 1080 ug/kg

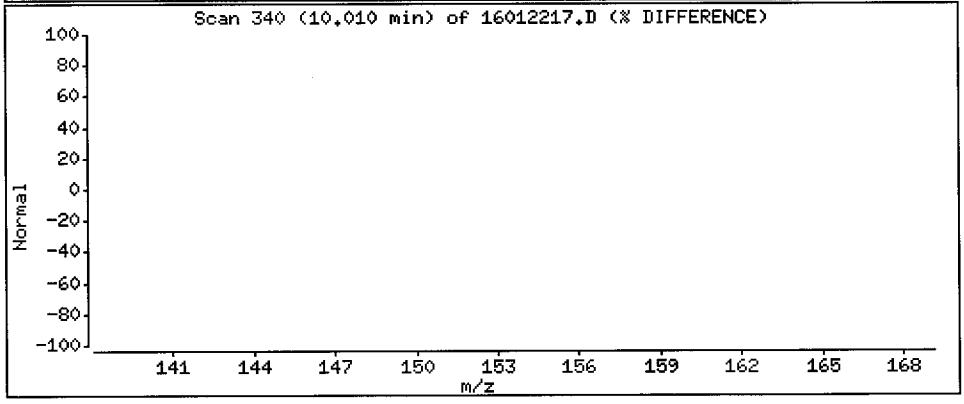












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

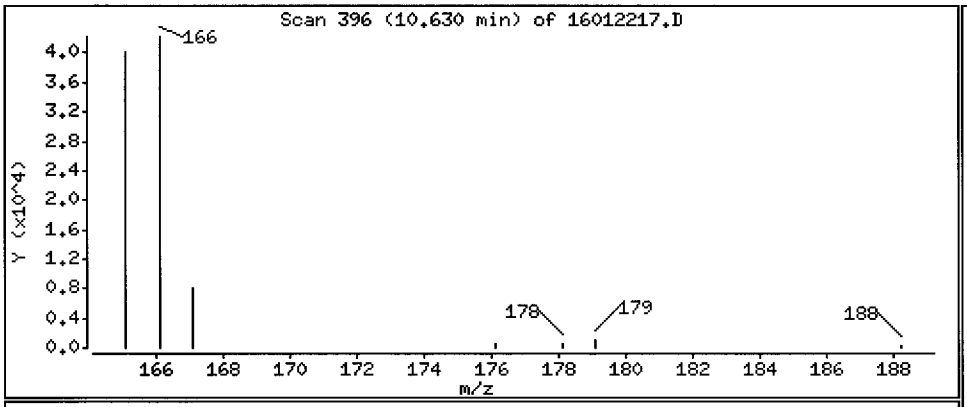
Operator: JW

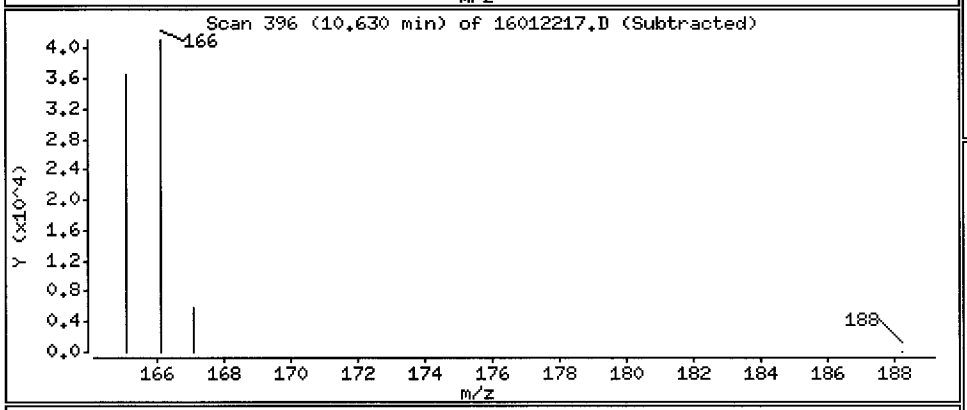
Column phase: Rxi-17Sil MS

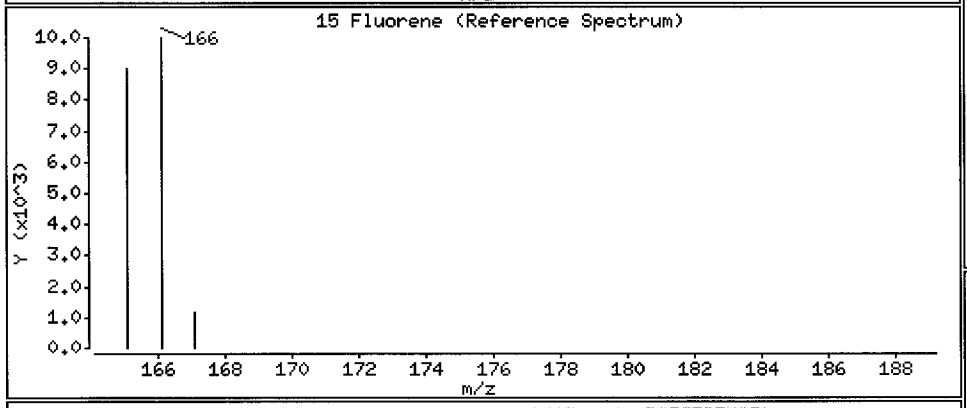
Column diameter: 0.25

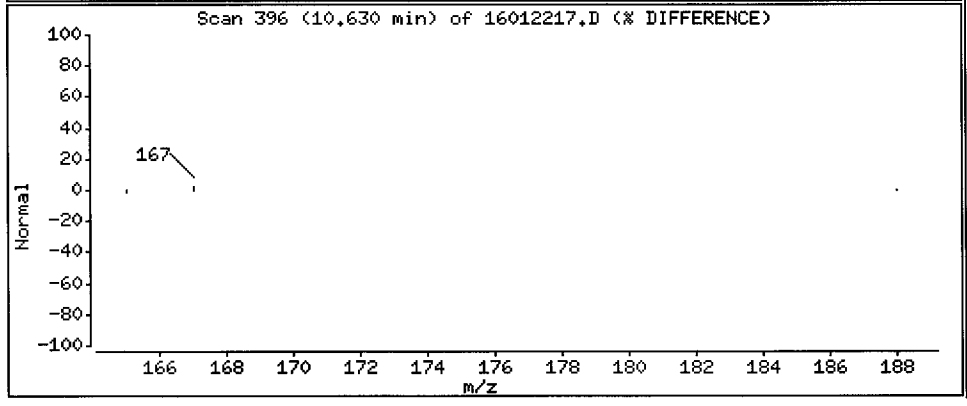
15 Fluorene

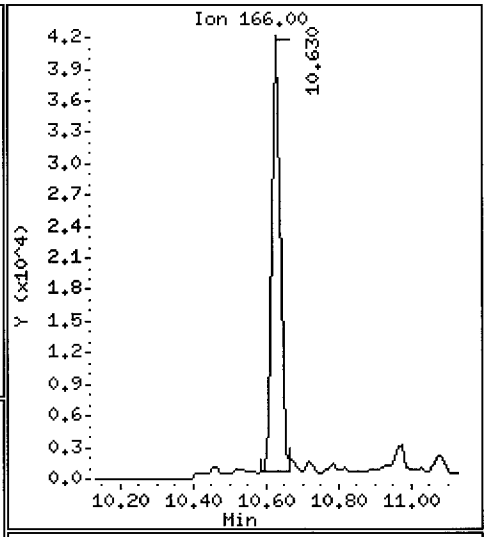
Concentration: 1800 ug/kg

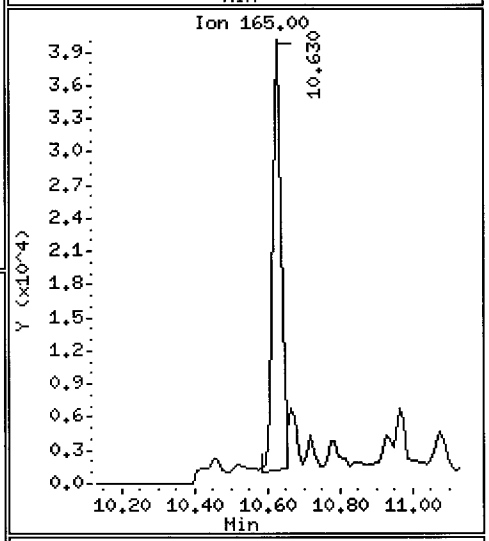


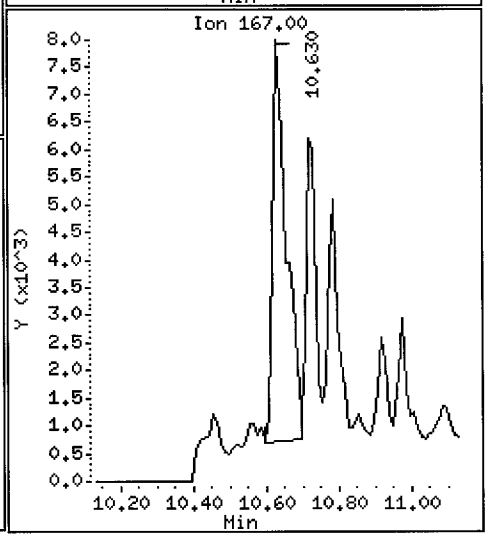












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

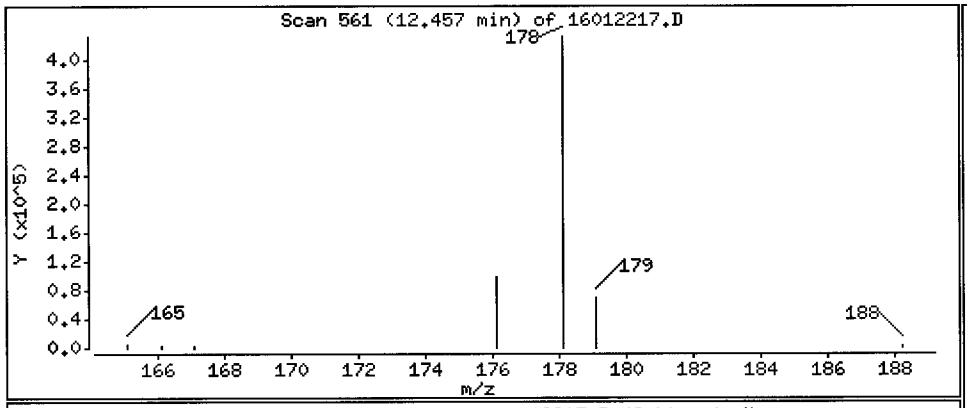
Operator: JW

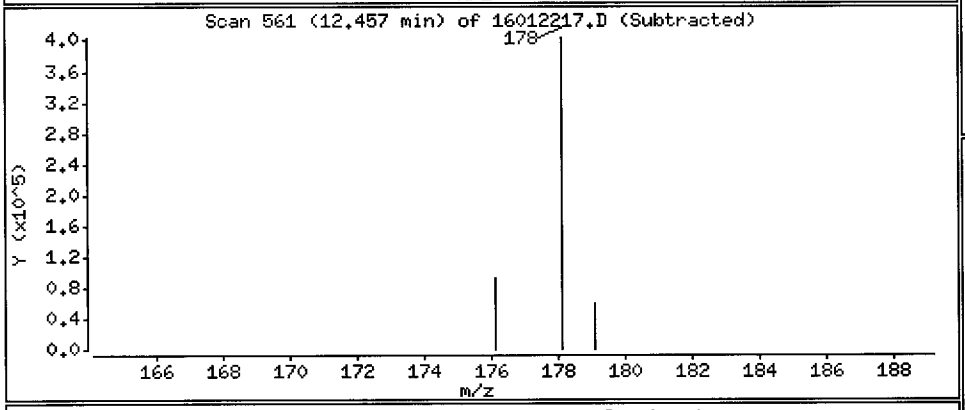
Column phase: Rxi-17Sil MS

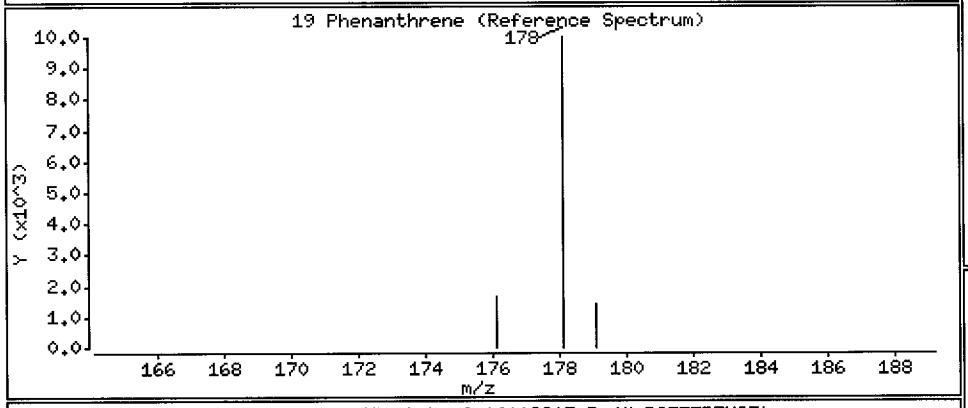
Column diameter: 0.25

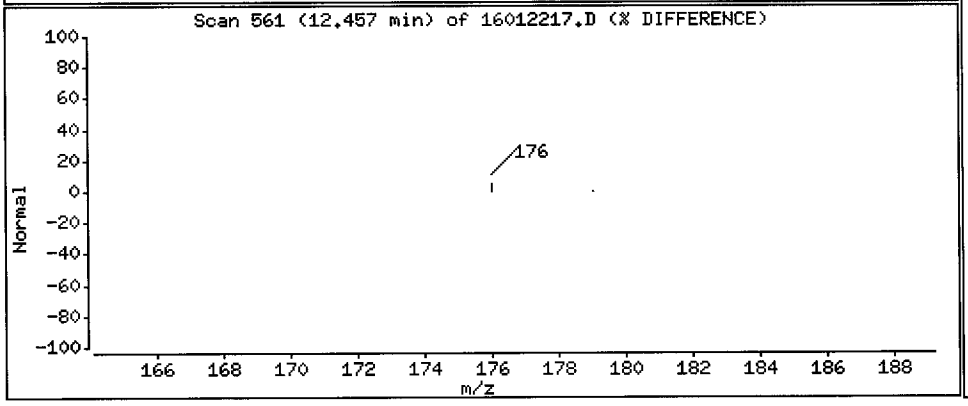
19 Phenanthrene

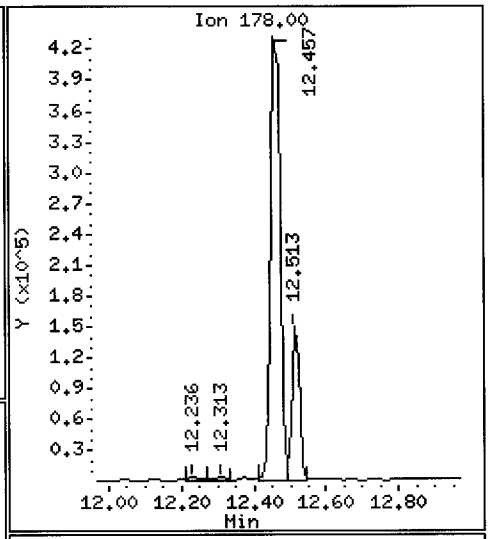
Concentration: 13100 ug/kg

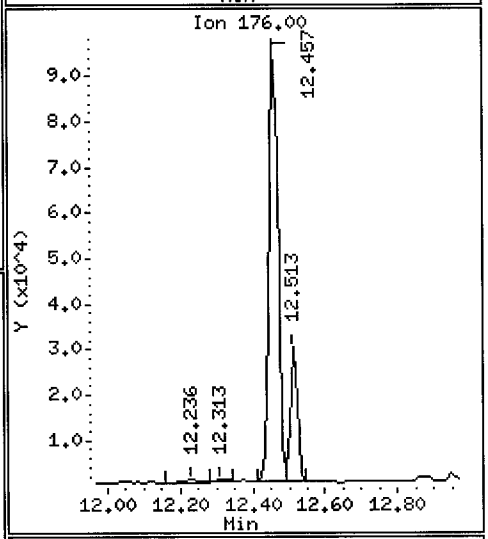


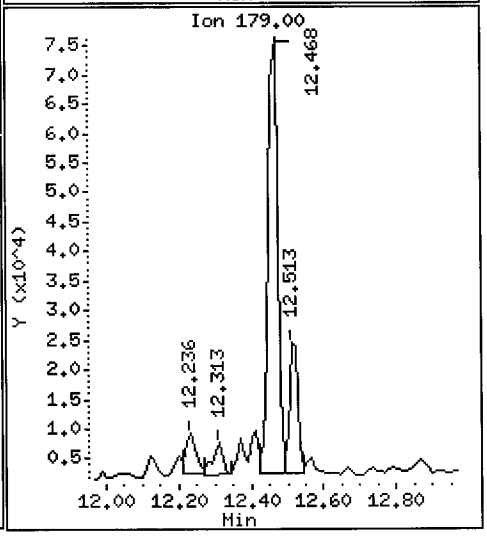












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

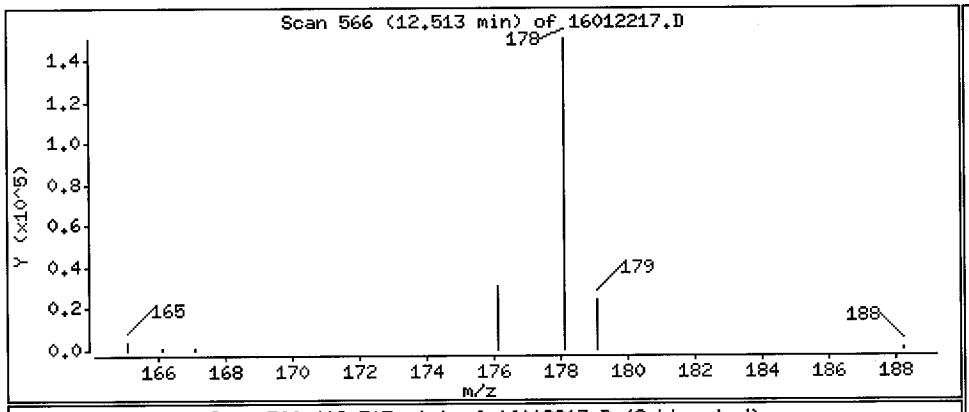
Operator: JW

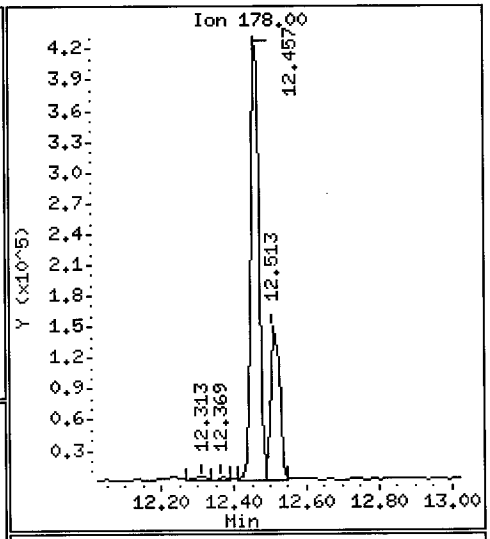
Column phase: Rxi-17Sil MS

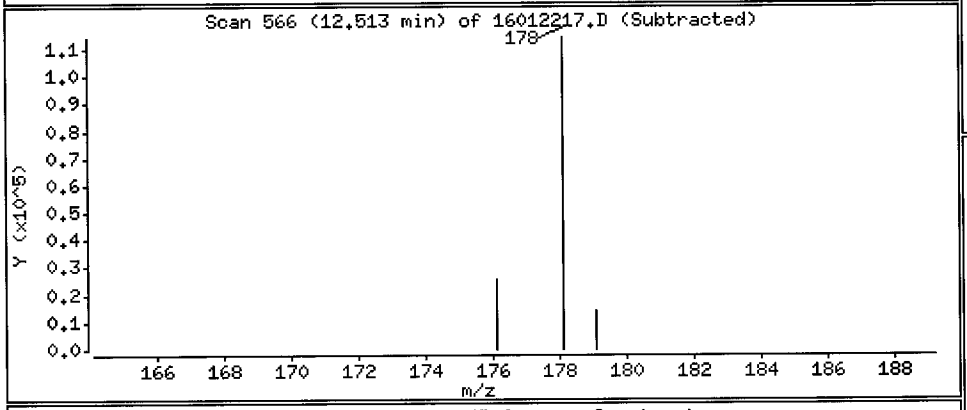
Column diameter: 0.25

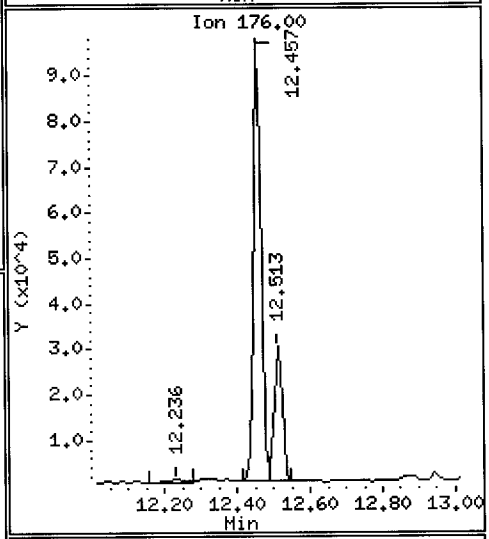
20 Anthracene

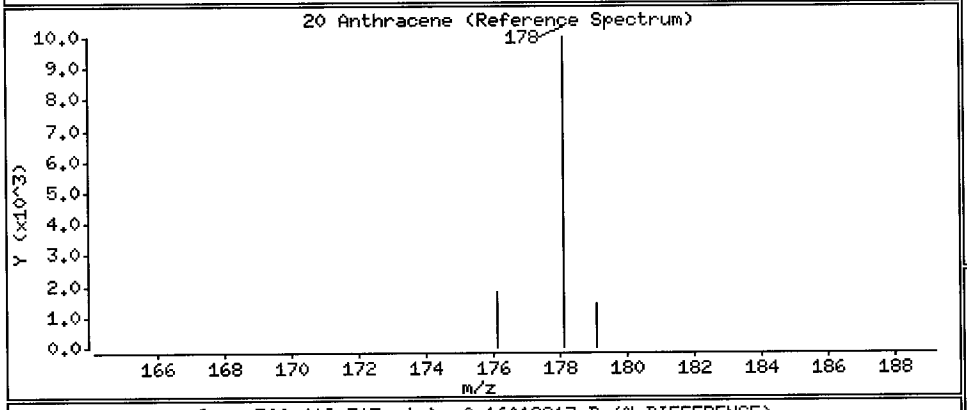
Concentration: 4690 ug/kg

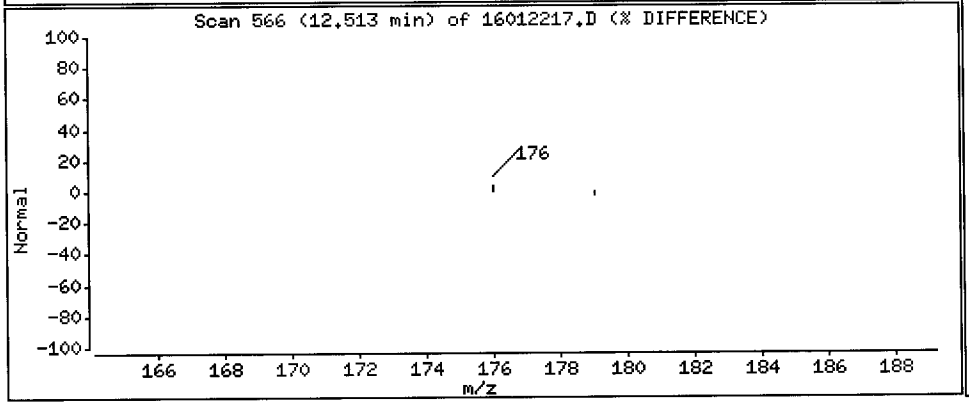


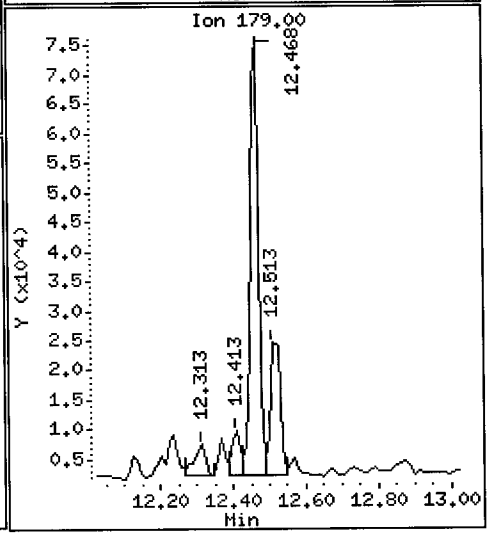












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

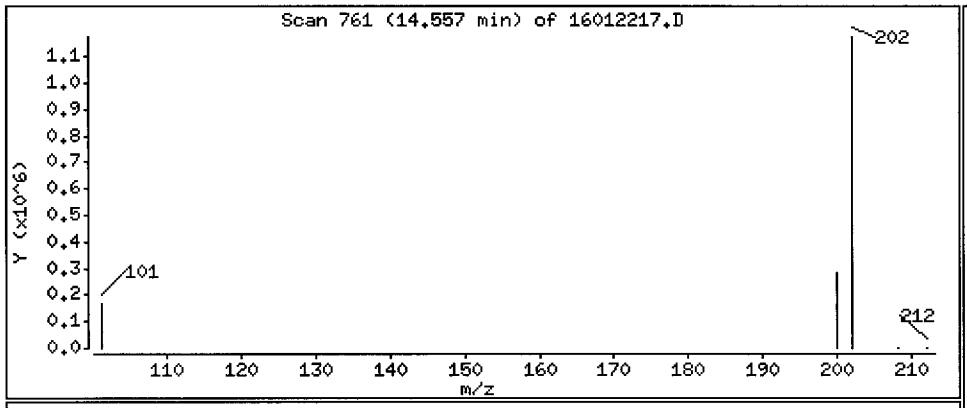
Operator: JW

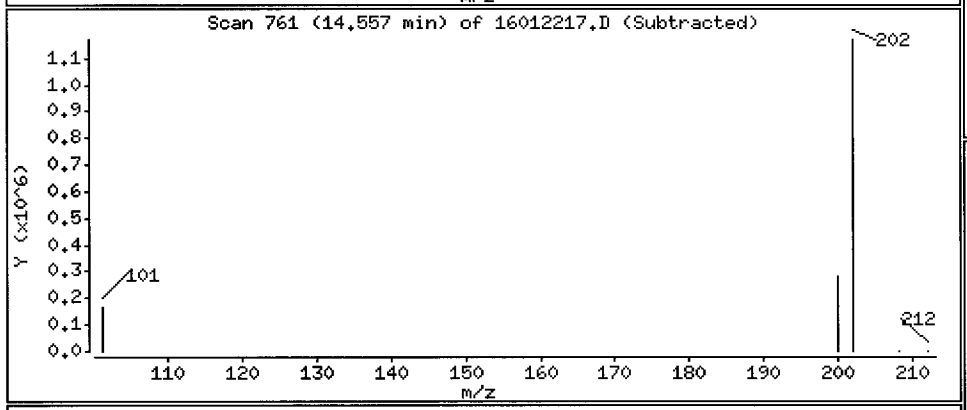
Column phase: Rxi-17Sil MS

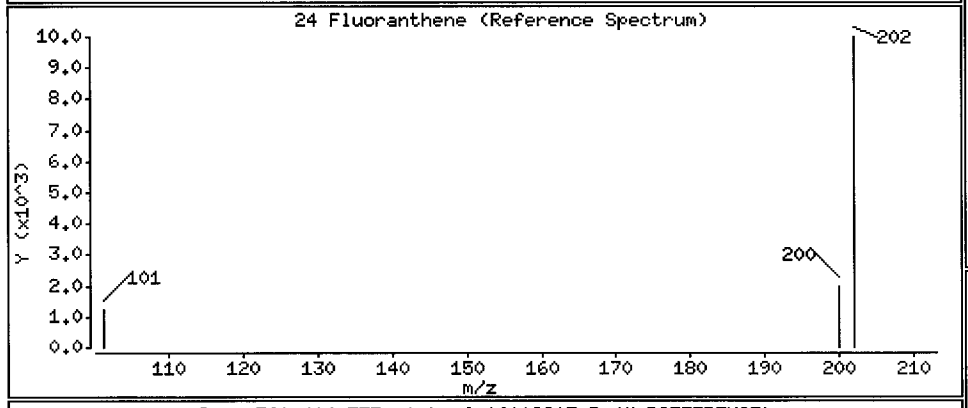
Column diameter: 0.25

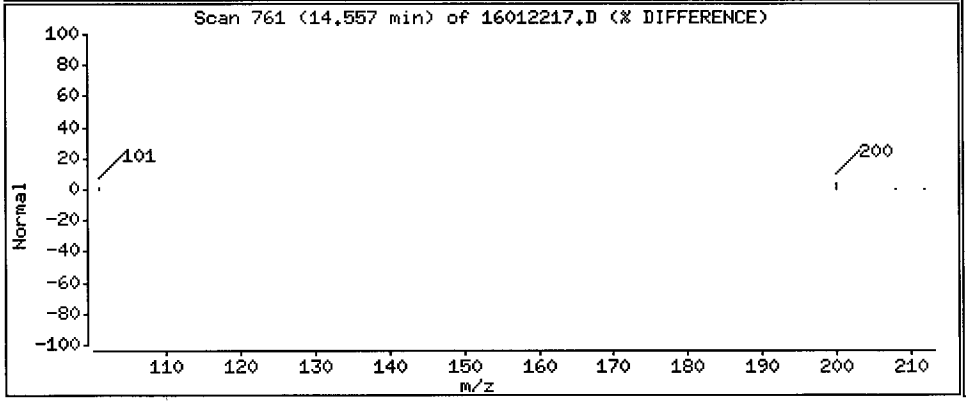
24 Fluoranthene

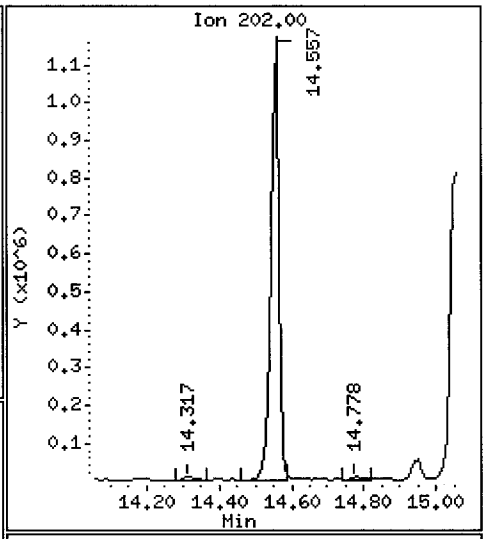
Concentration: 33600 ug/kg

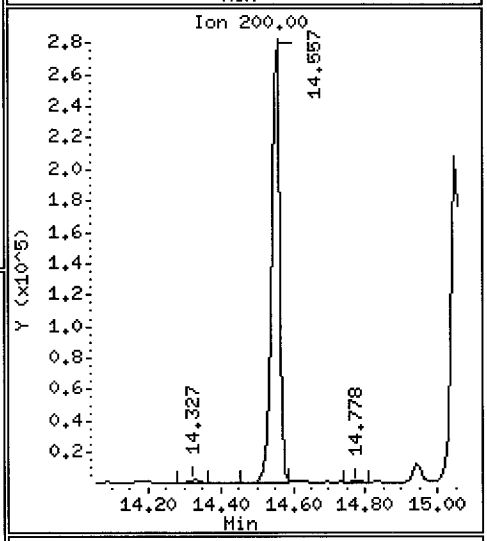


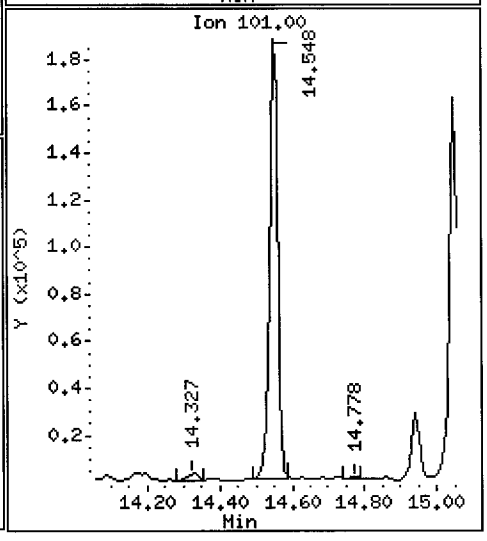












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

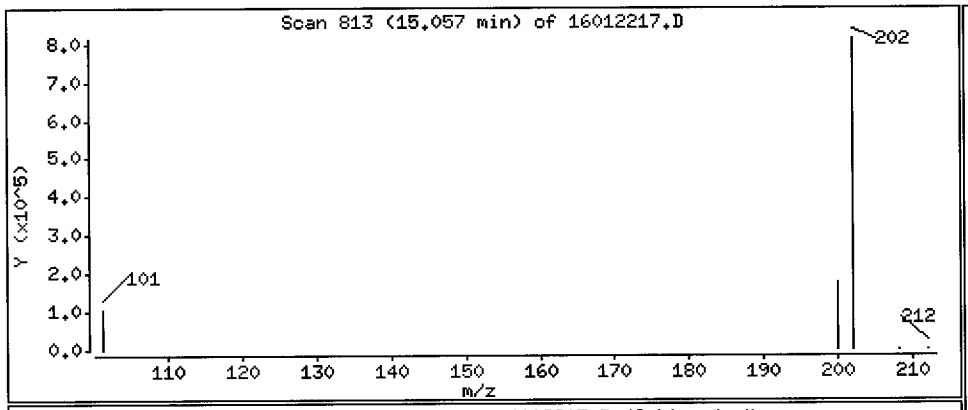
Operator: JW

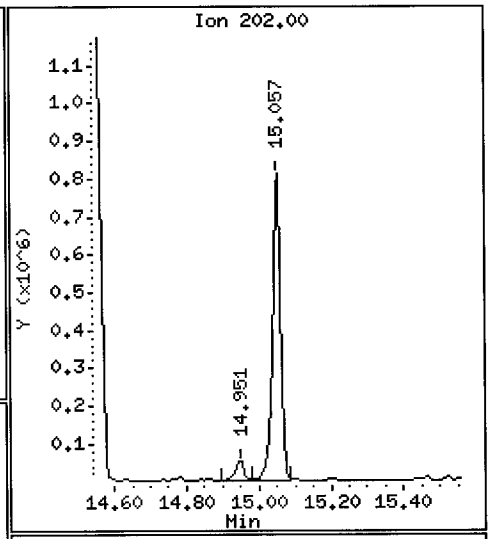
Column phase: Rxi-17Sil MS

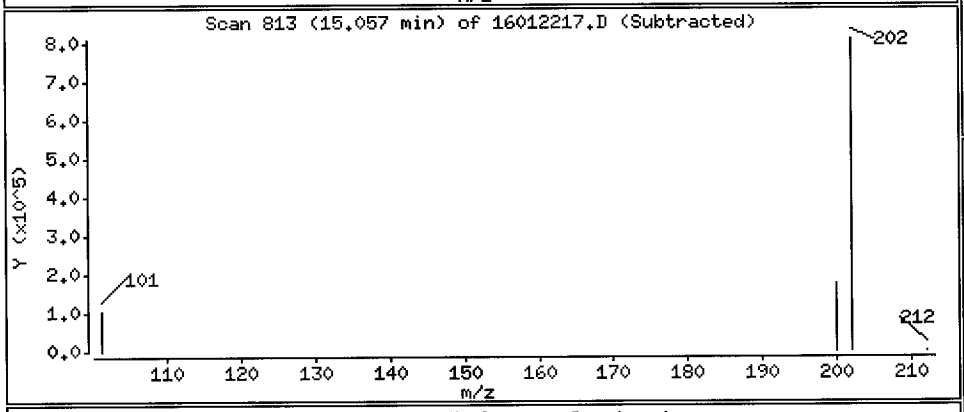
Column diameter: 0.25

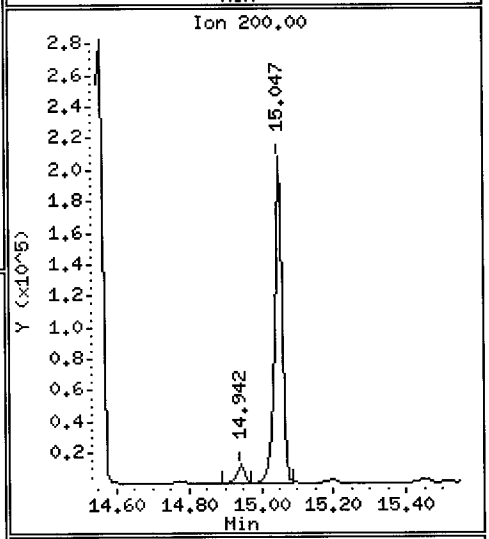
25 Pyrene

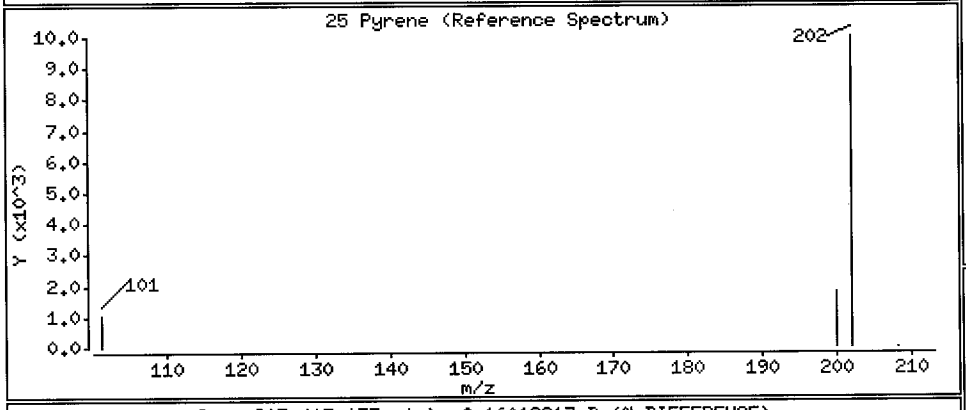
Concentration: 25200 ug/kg

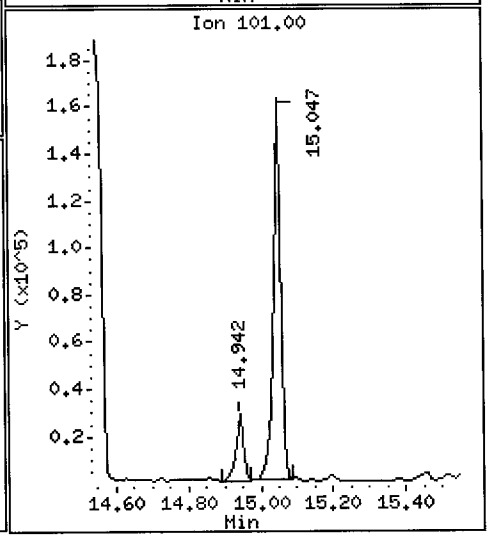


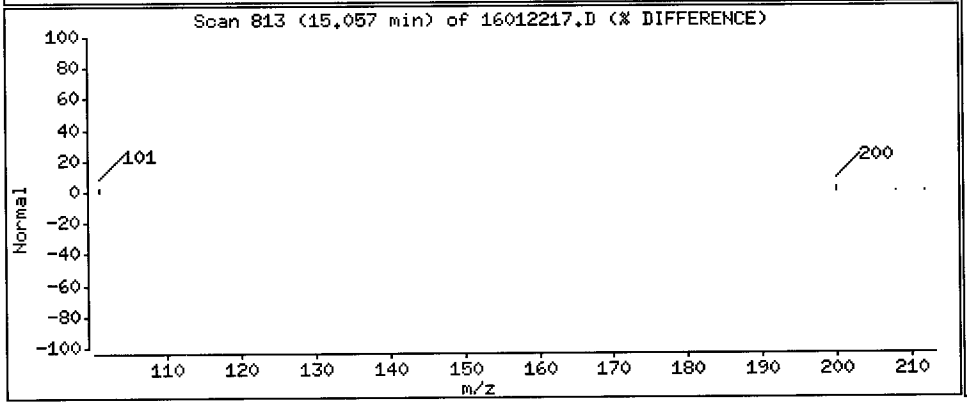












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

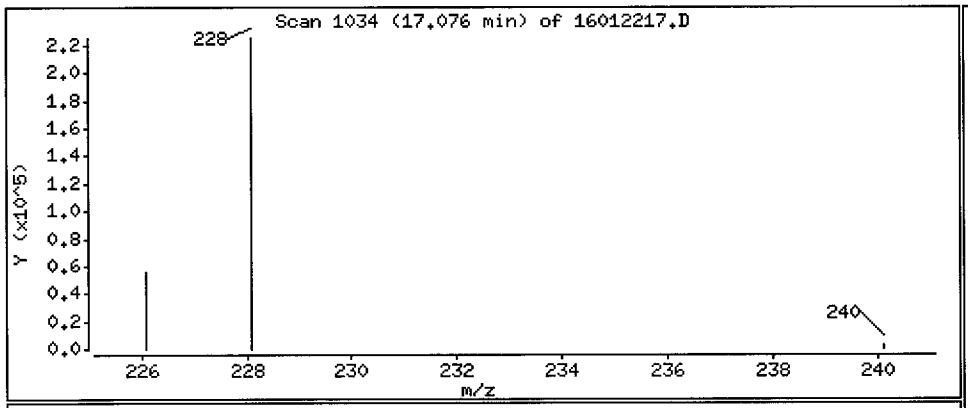
Operator: JW

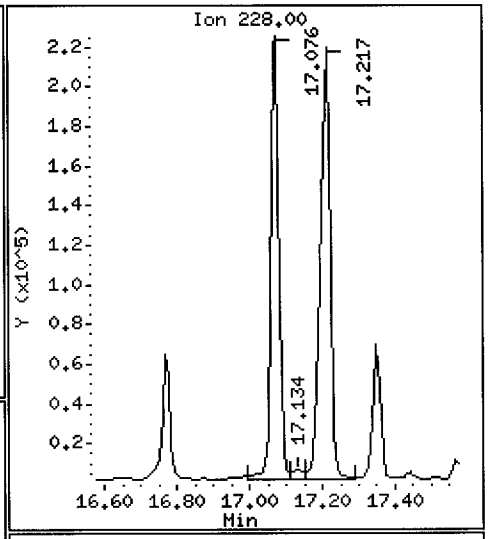
Column phase: Rxi-17Sil MS

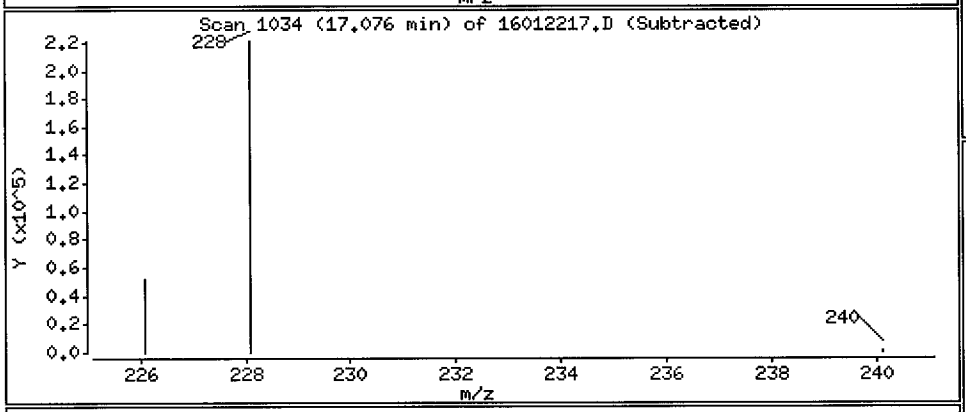
Column diameter: 0.25

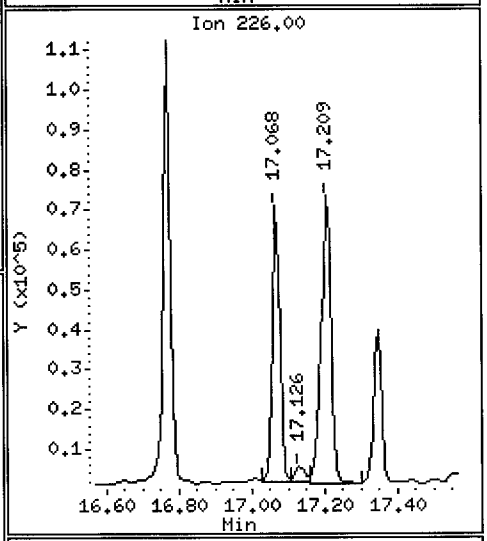
28 Benzo(a)anthracene

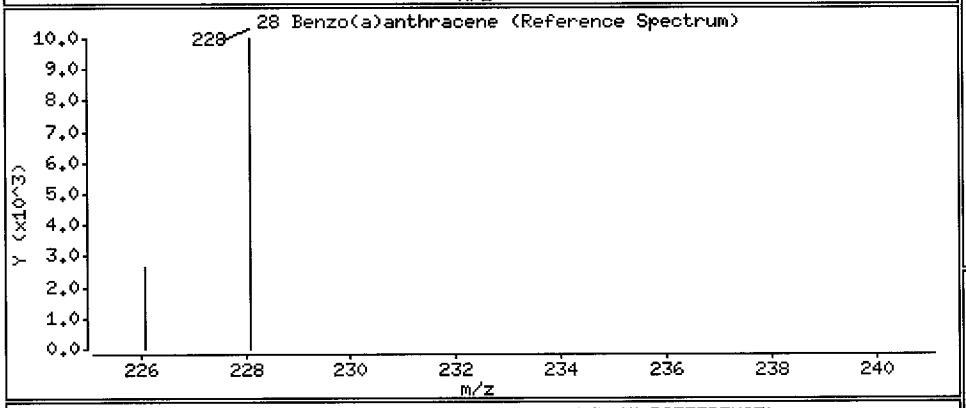
Concentration: 7530 ug/kg

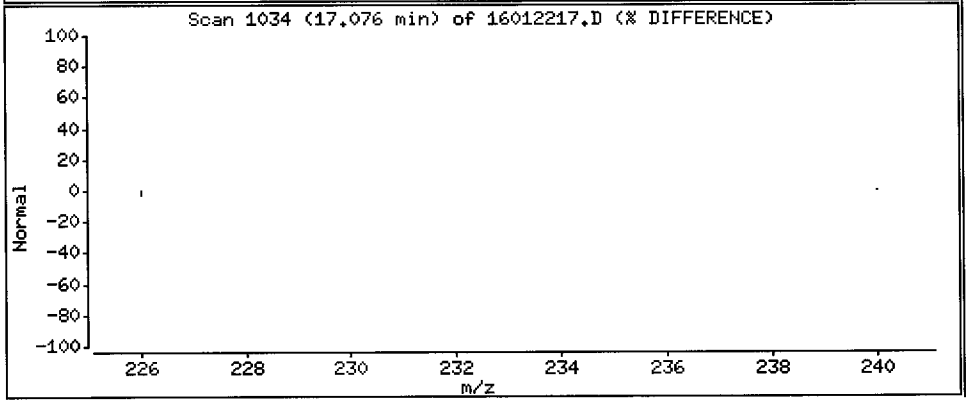


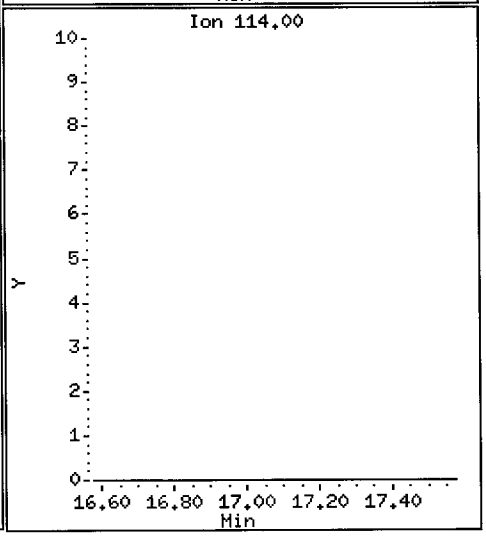












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

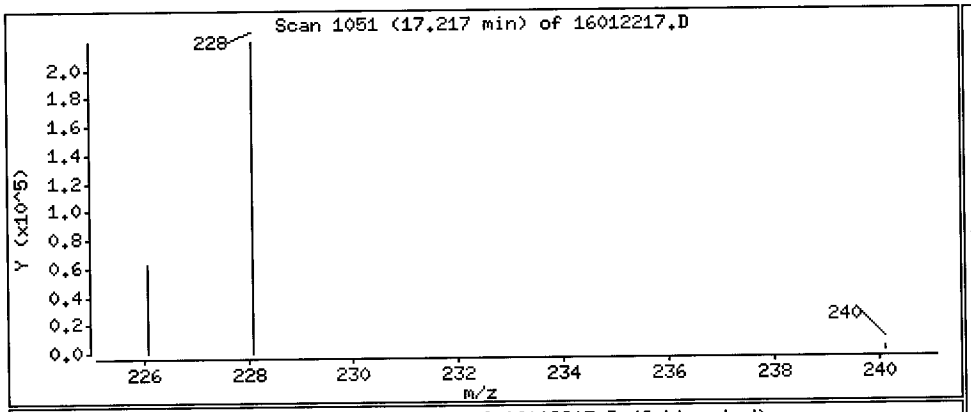
Operator: JW

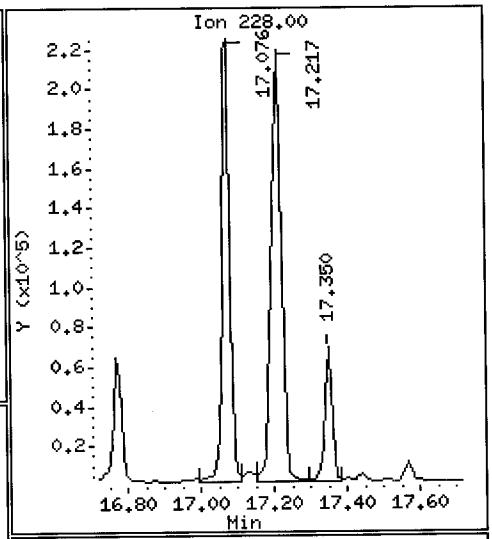
Column phase: Rxi-17Sil MS

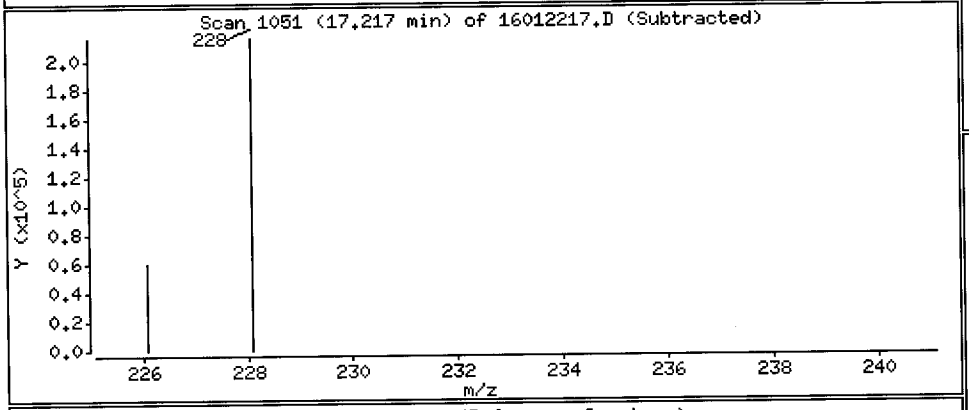
Column diameter: 0.25

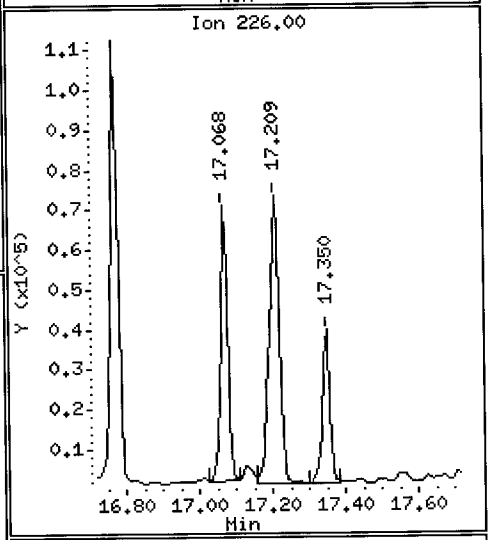
30 Chrysene

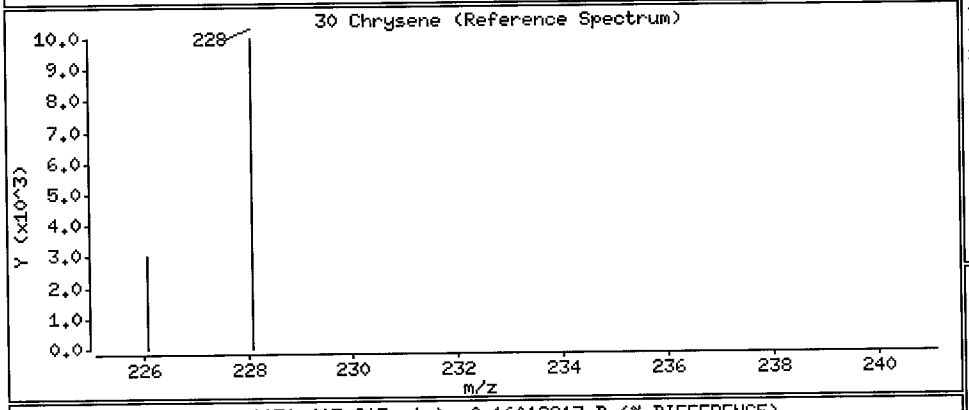
Concentration: 8650 ug/kg

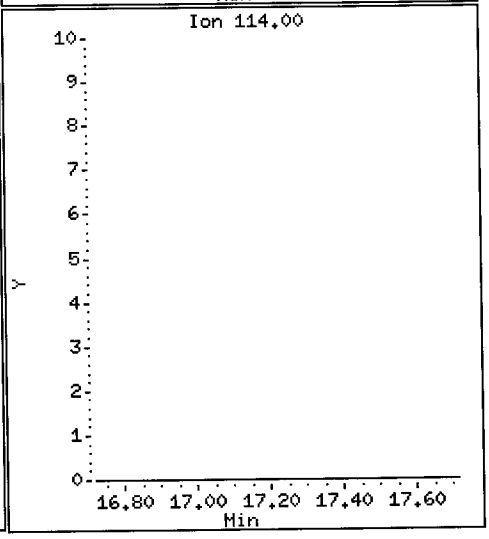


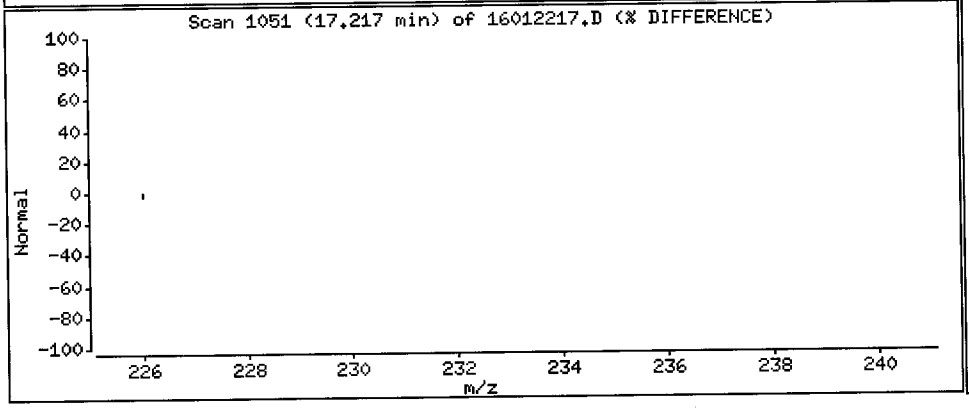












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

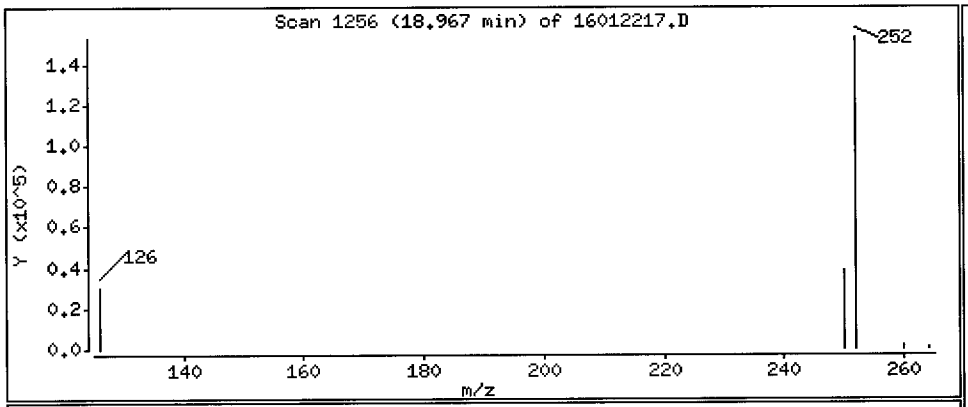
Operator: JW

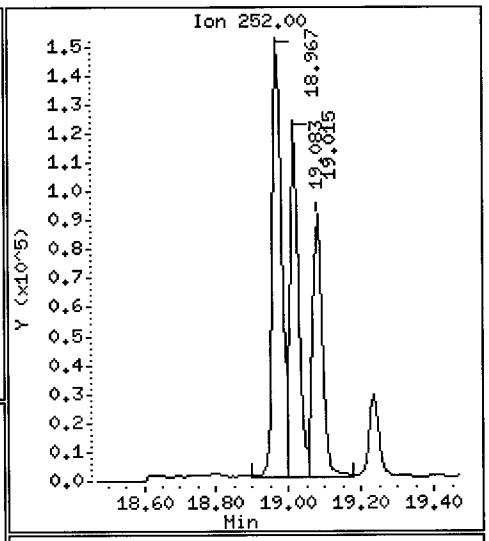
Column phase: Rxi-17Sil MS

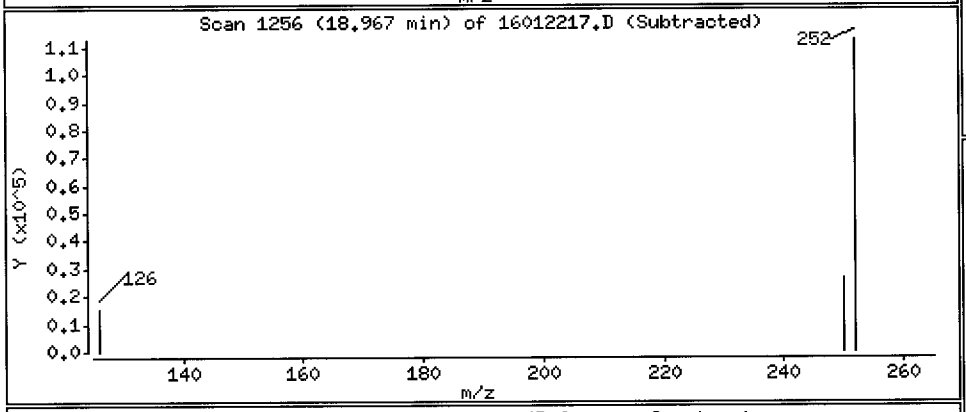
Column diameter: 0.25

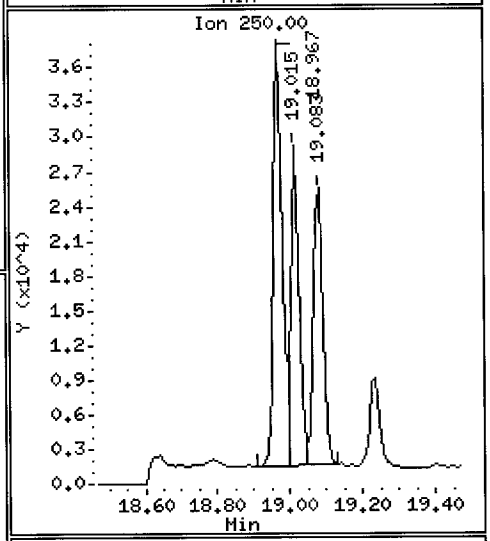
44 Benzo(b)fluoranthene

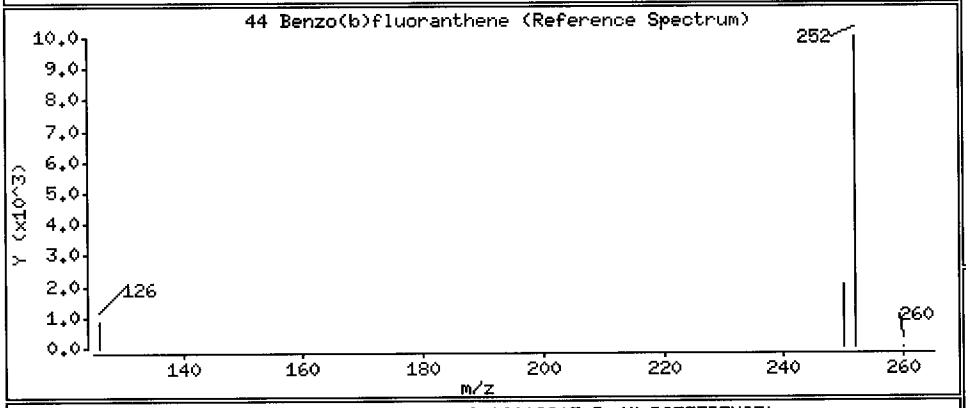
Concentration: 5990 ug/kg

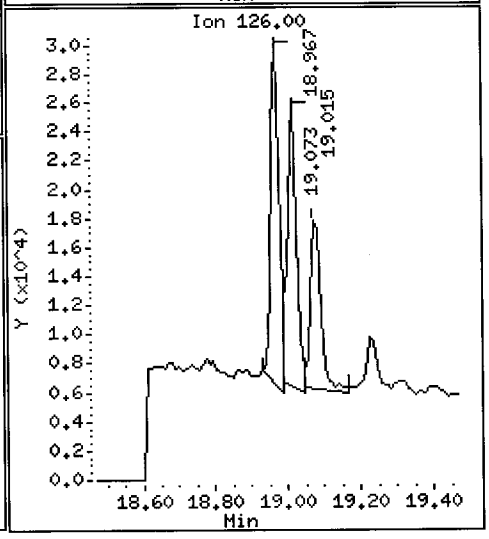


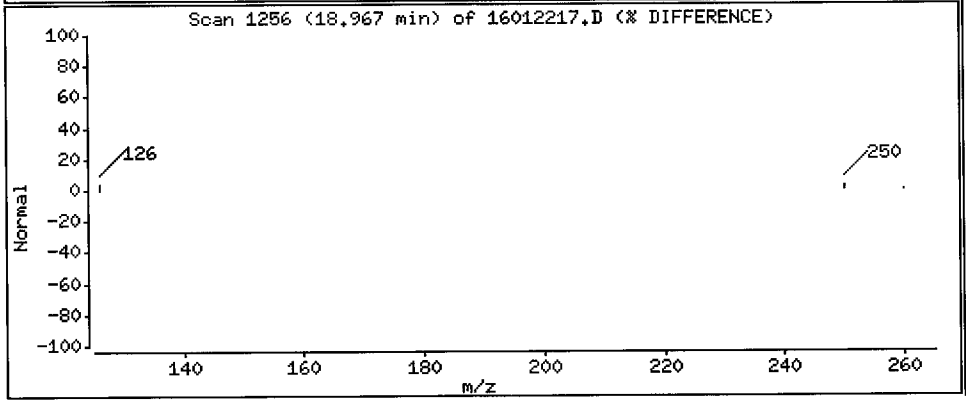












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

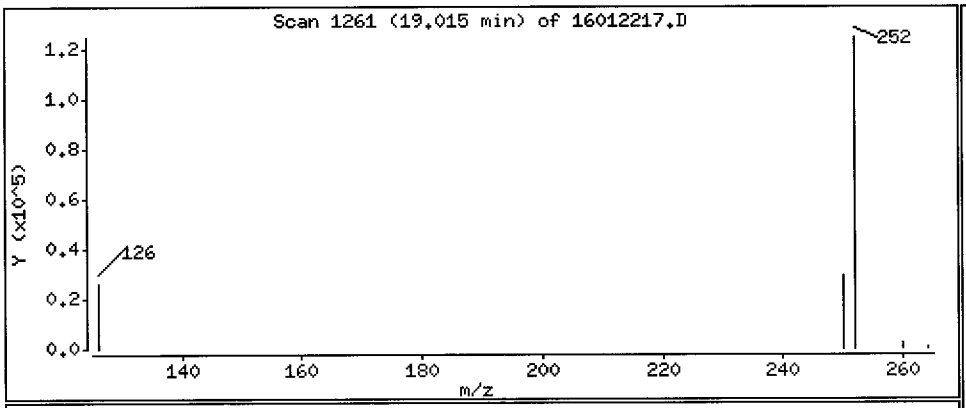
Operator: JW

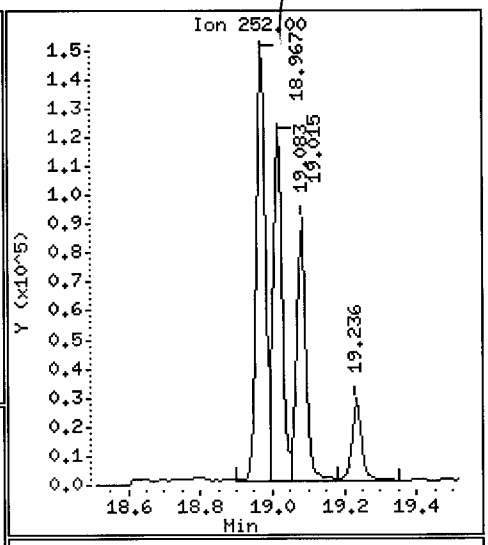
Column phase: Rxi-17Sil MS

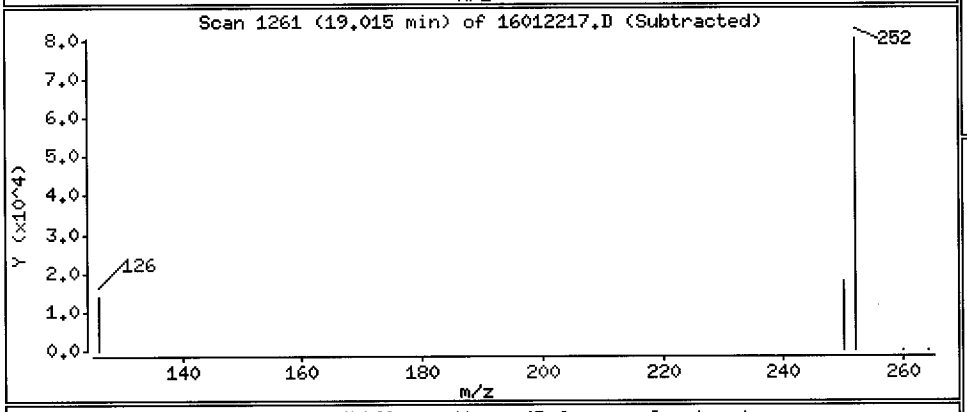
Column diameter: 0.25

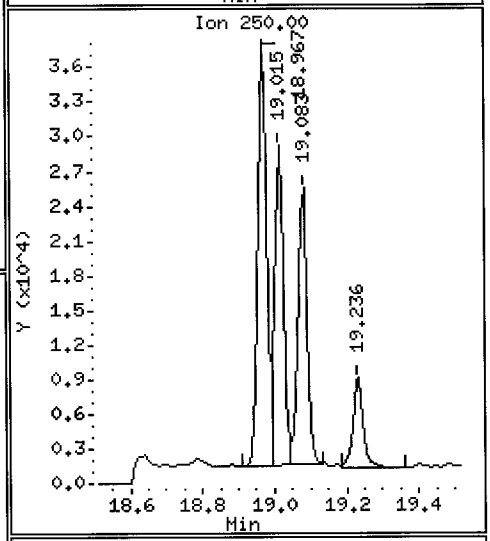
45 Benzo(k)fluoranthene

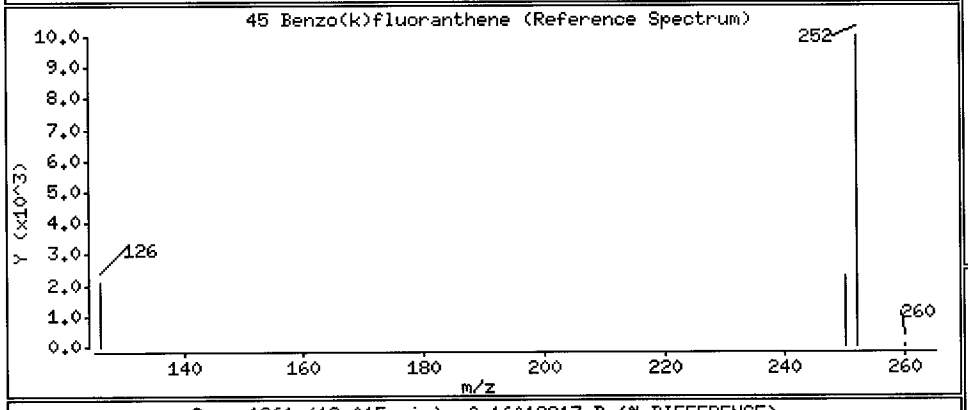
Concentration: 4120 ug/kg

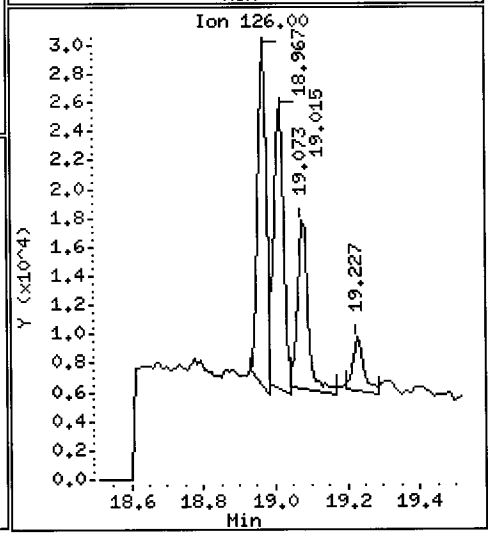


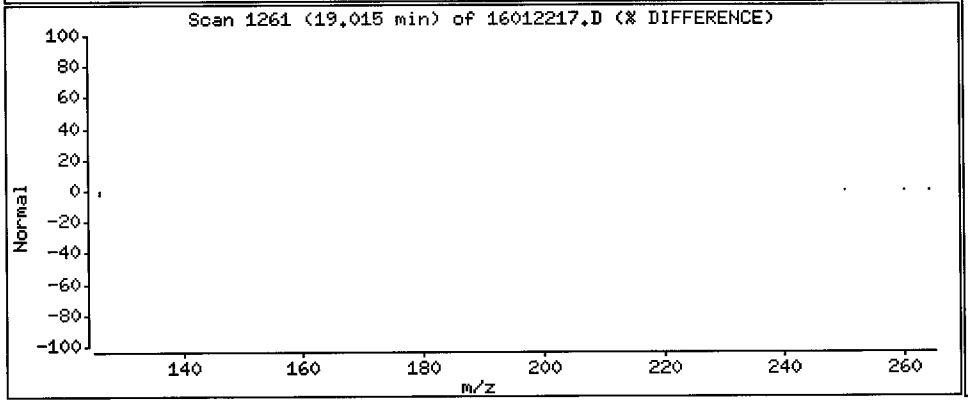












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

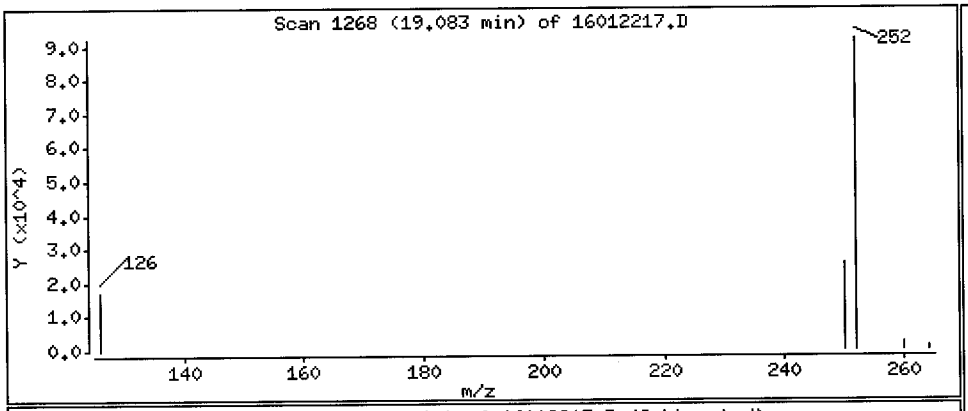
Operator: JW

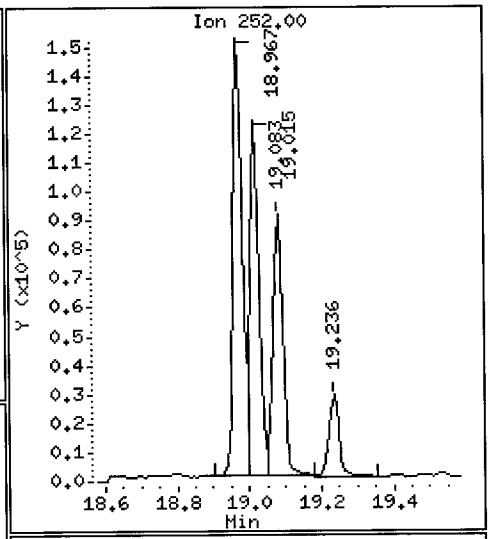
Column phase: Rxi-17Sil MS

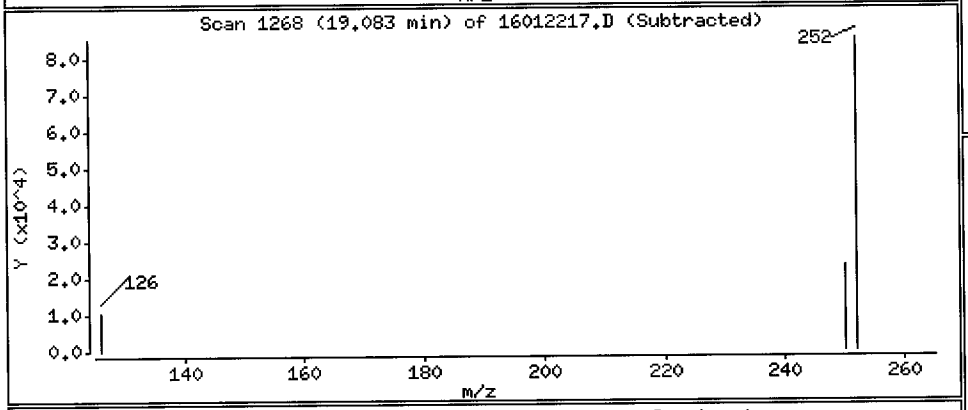
Column diameter: 0.25

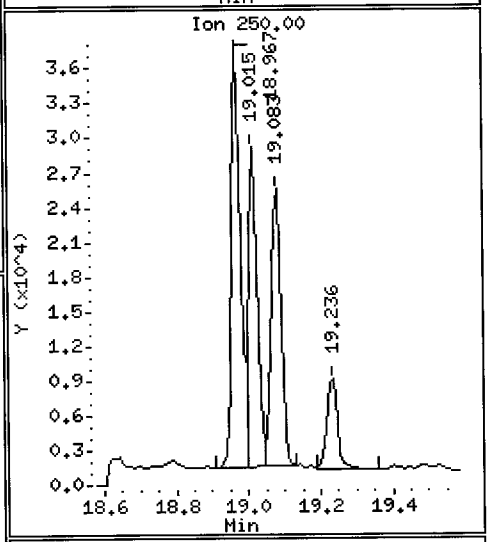
46 Benzo(j)fluoranthene

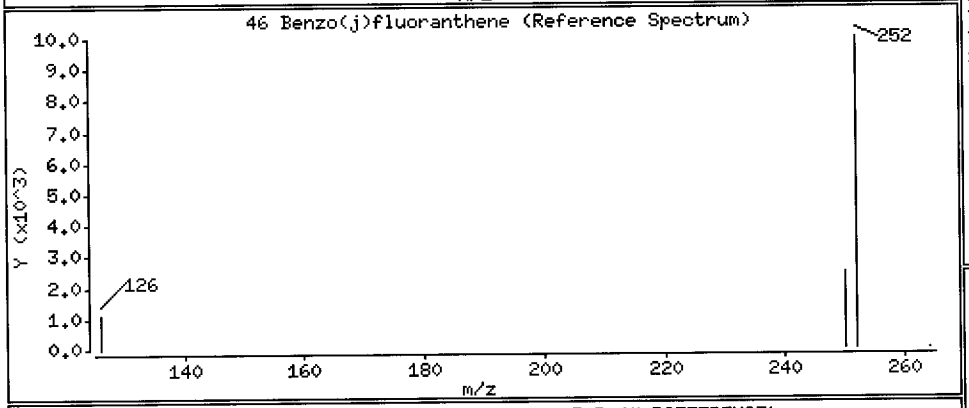
Concentration: 3350 ug/kg

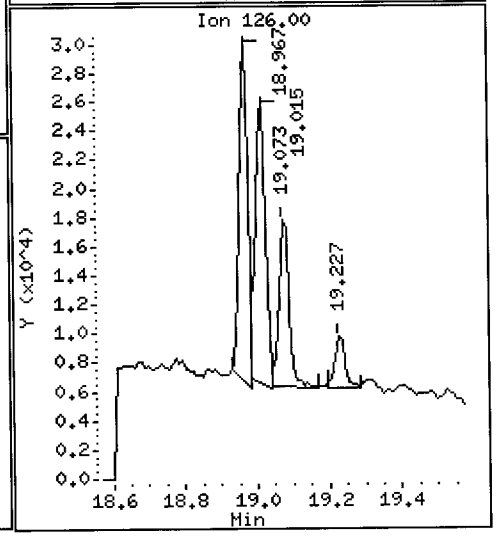


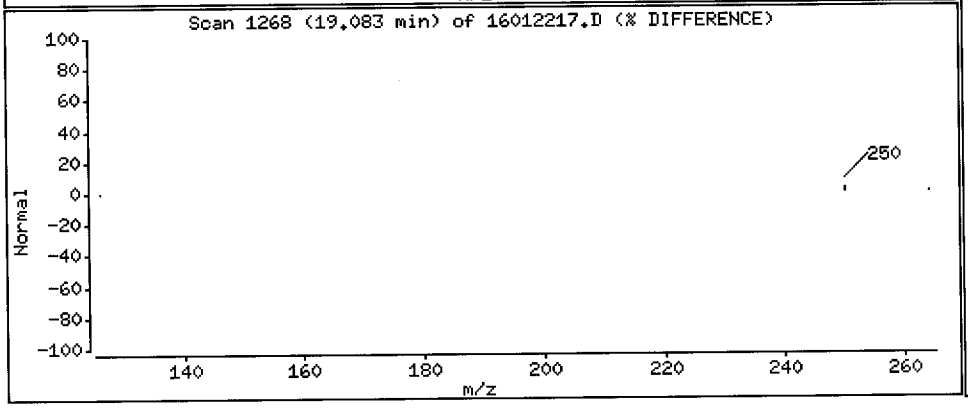












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Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

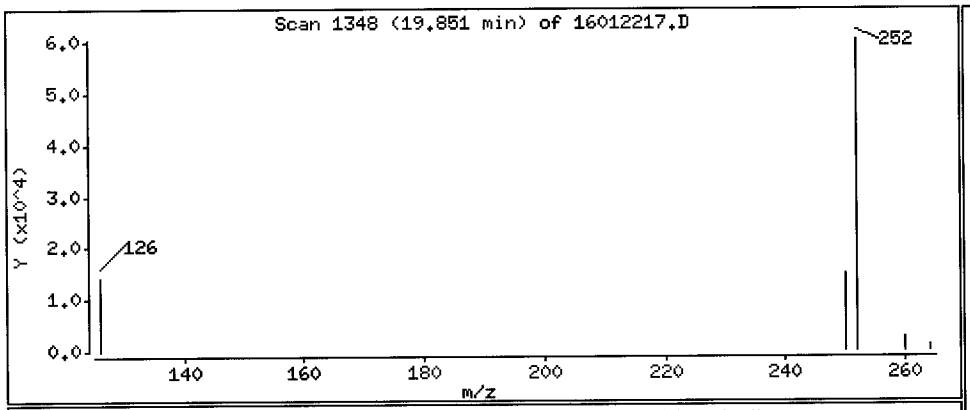
Operator: JW

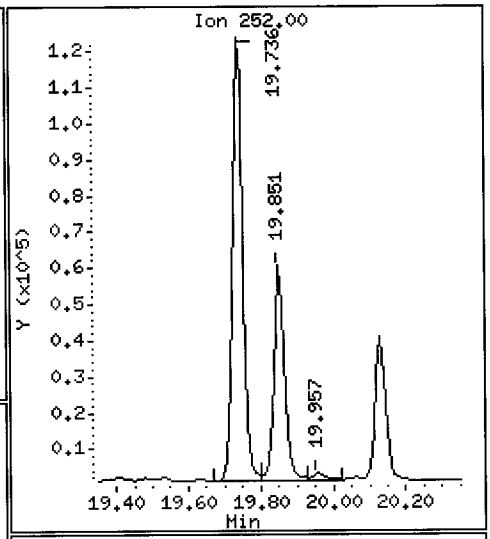
Column phase: Rxi-17Sil MS

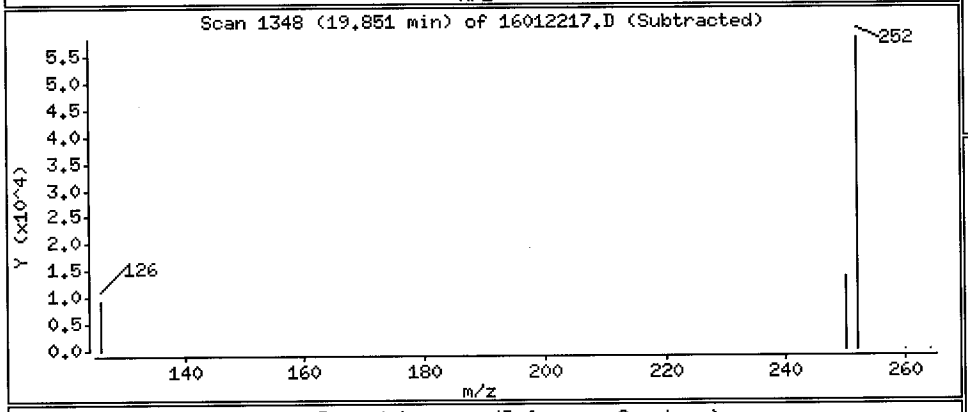
Column diameter: 0.25

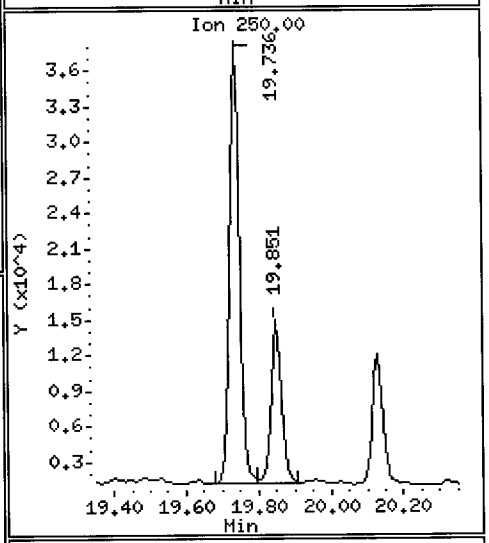
34 Benzo(a)pyrene

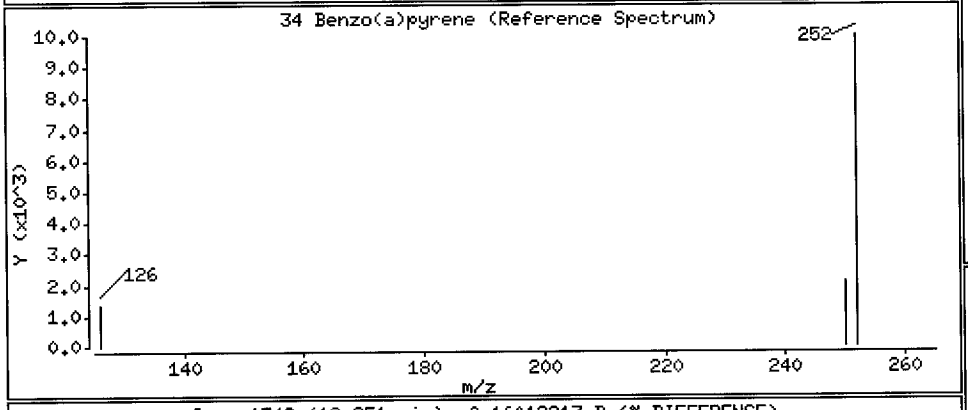
Concentration: 2760 ug/kg

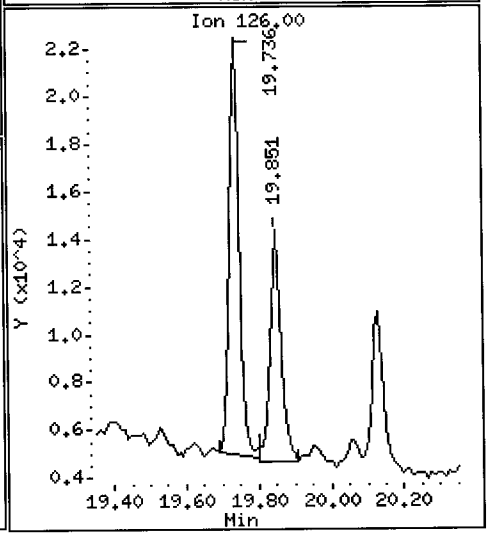


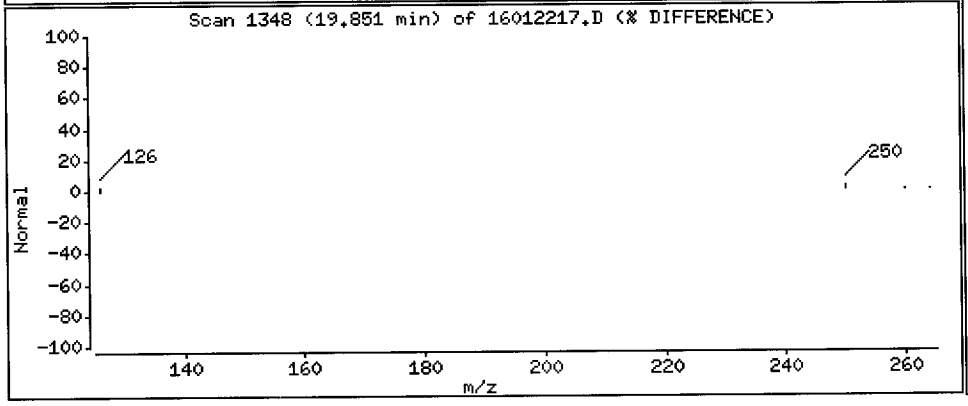












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Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

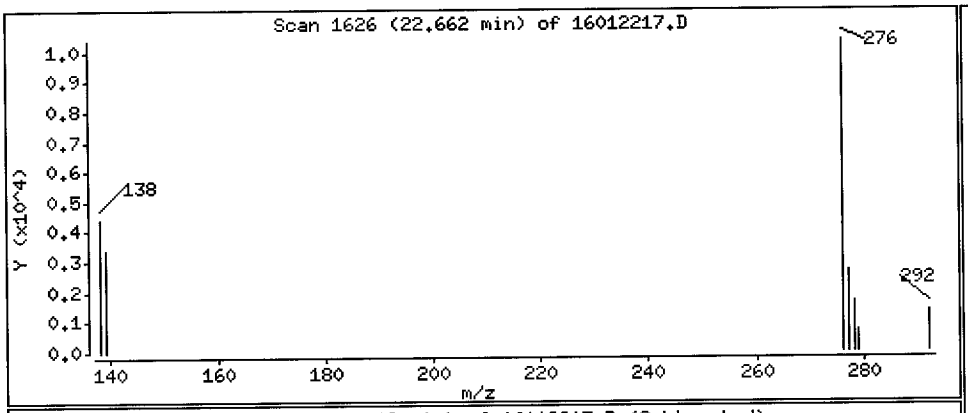
Operator: JW

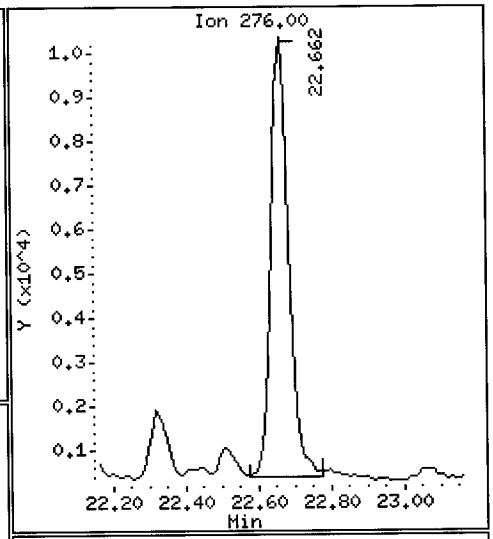
Column phase: Rxi-17Sil MS

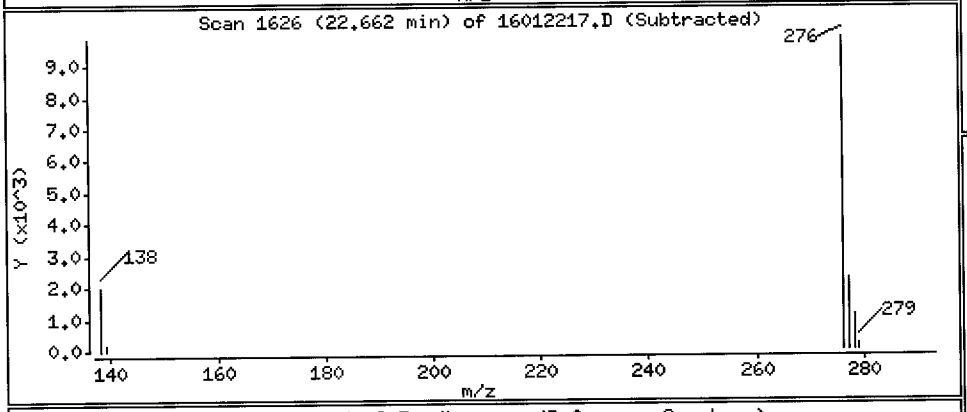
Column diameter: 0.25

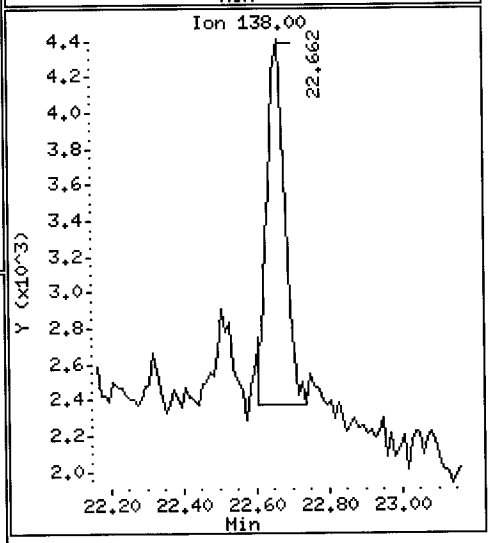
37 Indeno(1,2,3-cd)pyrene

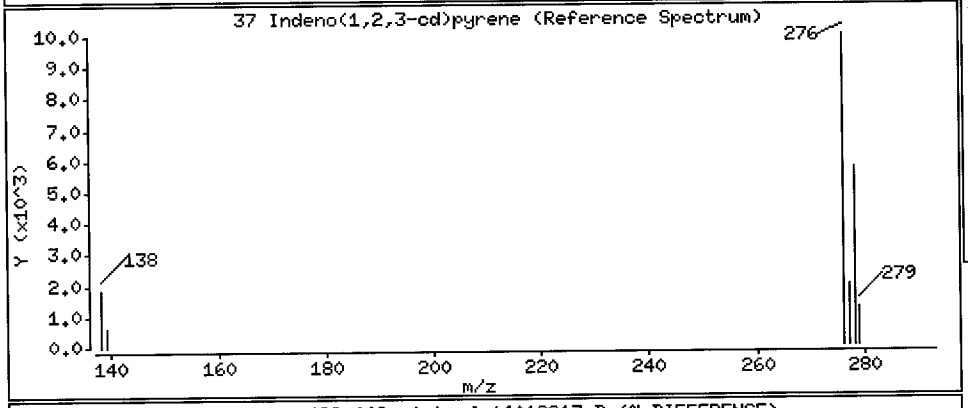
Concentration: 704 ug/kg

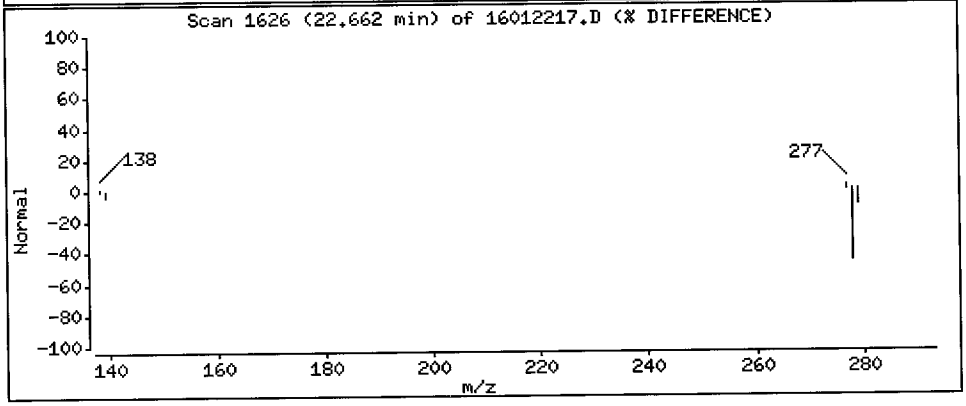












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

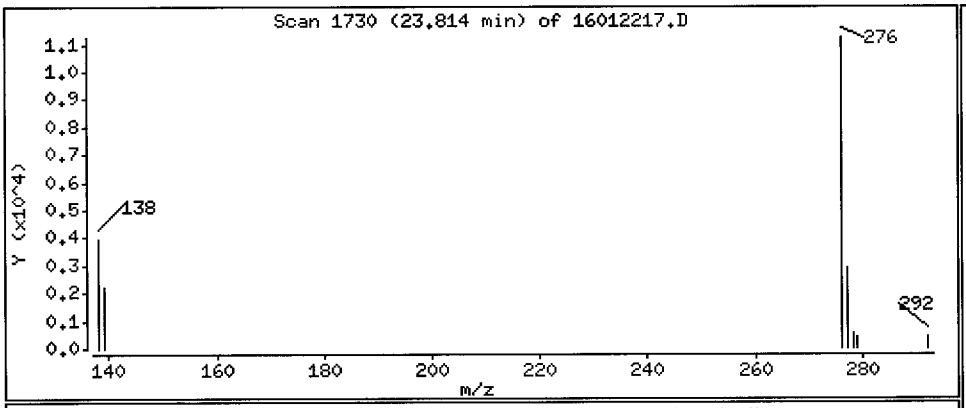
Operator: JW

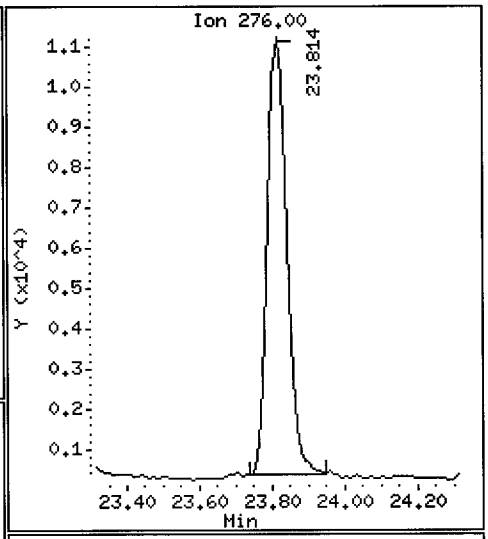
Column phase: Rxi-17Sil MS

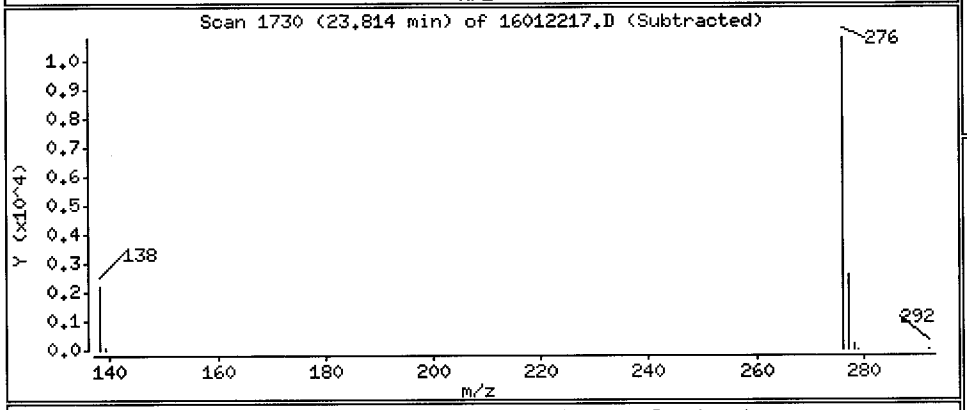
Column diameter: 0.25

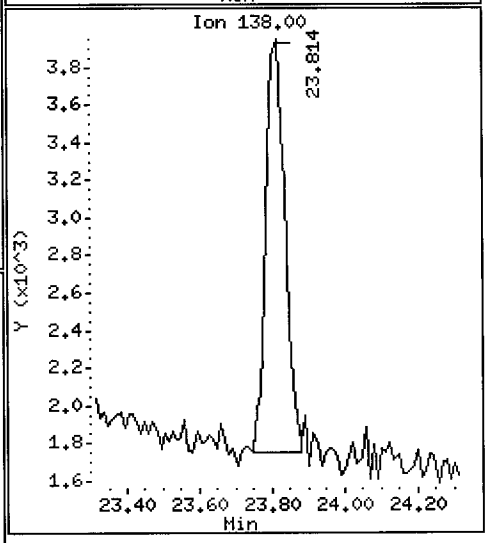
39 Benzo(g,h,i)perylene

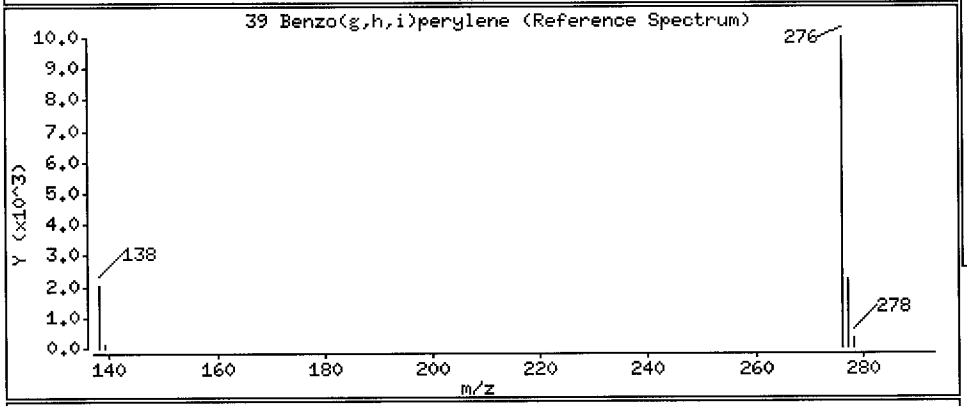
Concentration: 986 ug/kg

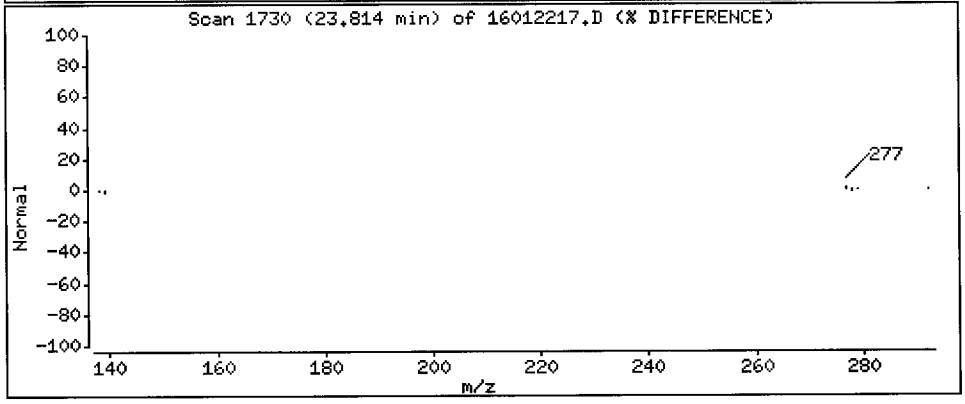












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

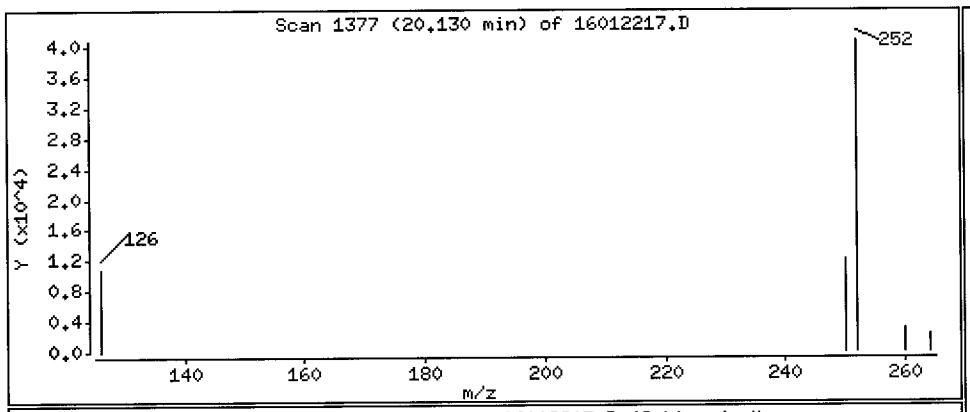
Operator: JW

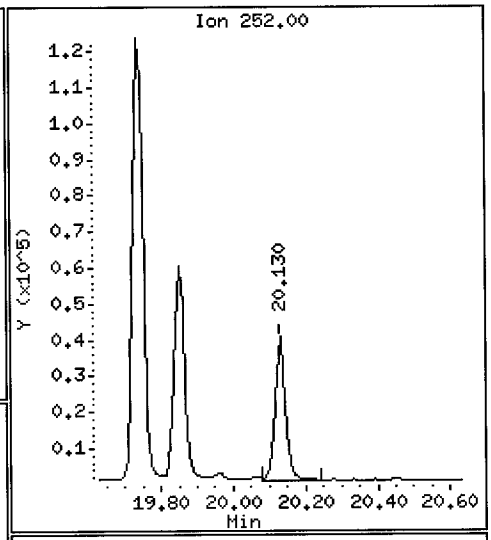
Column phase: Rxi-17Sil MS

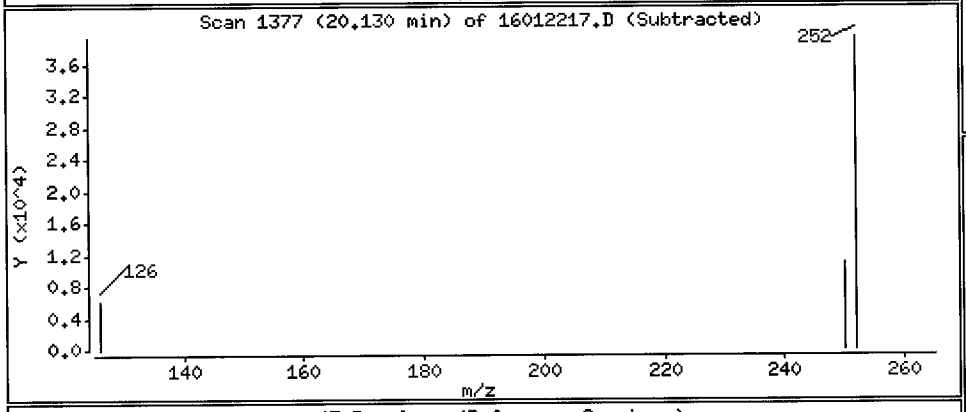
Column diameter: 0.25

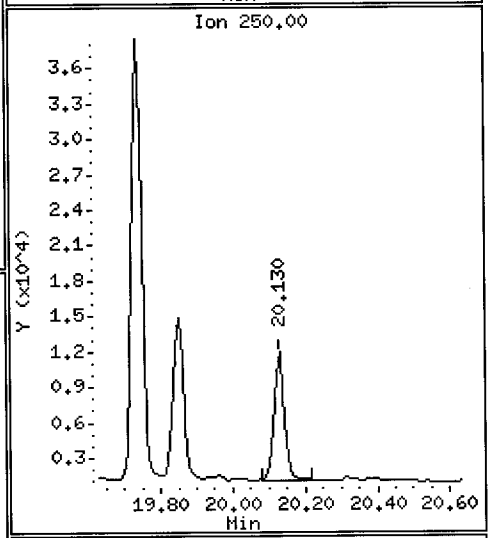
47 Perylene

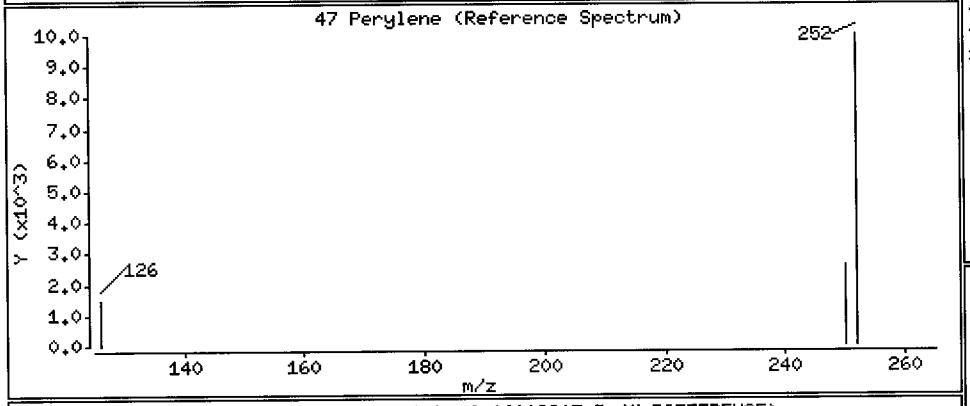
Concentration: 1750 ug/kg

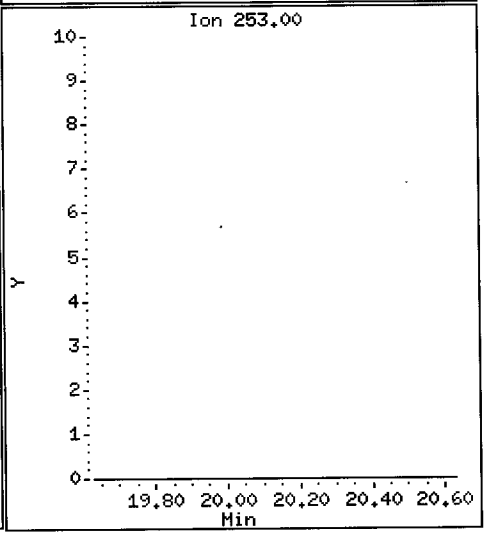


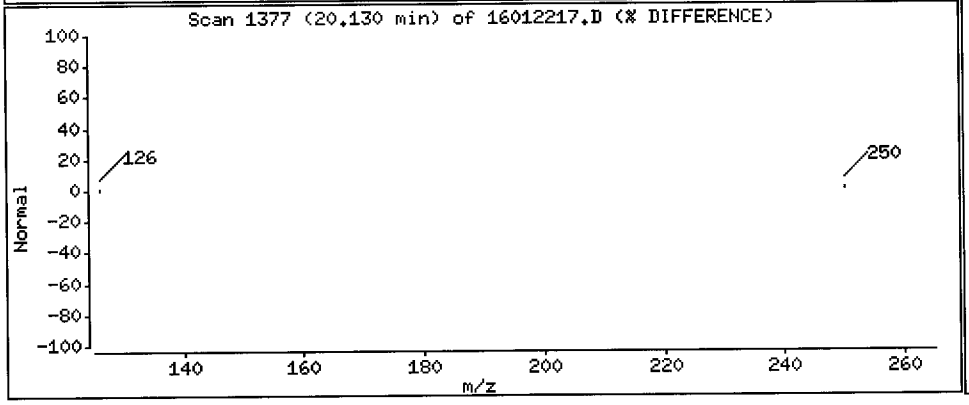












Data File: \\target\share\chem3\nt11.i\20160122.b\16012217.D

Date : 22-JAN-2016 15:29

Client ID: PG-SMA2-5-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0E

Volume Injected (uL): 2.0

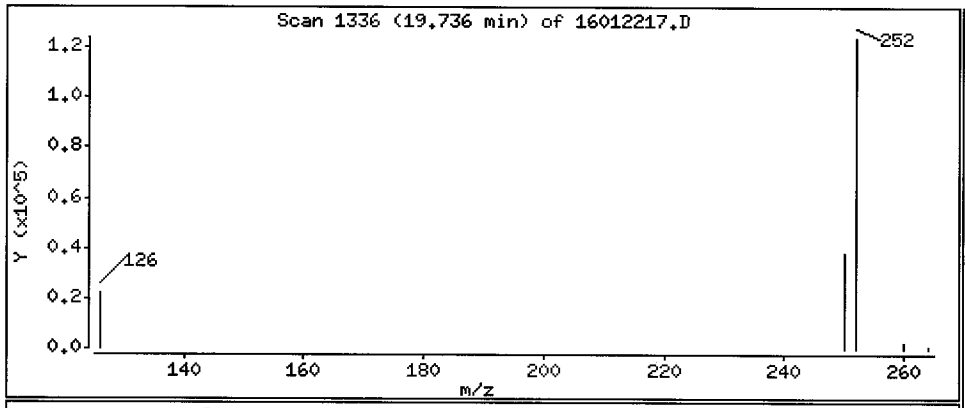
Operator: JW

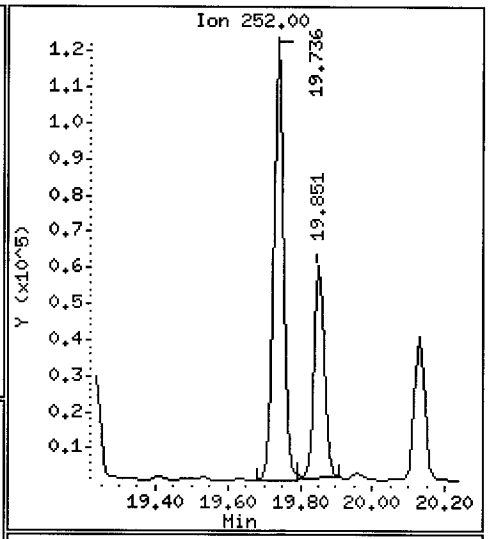
Column phase: Rxi-17Sil MS

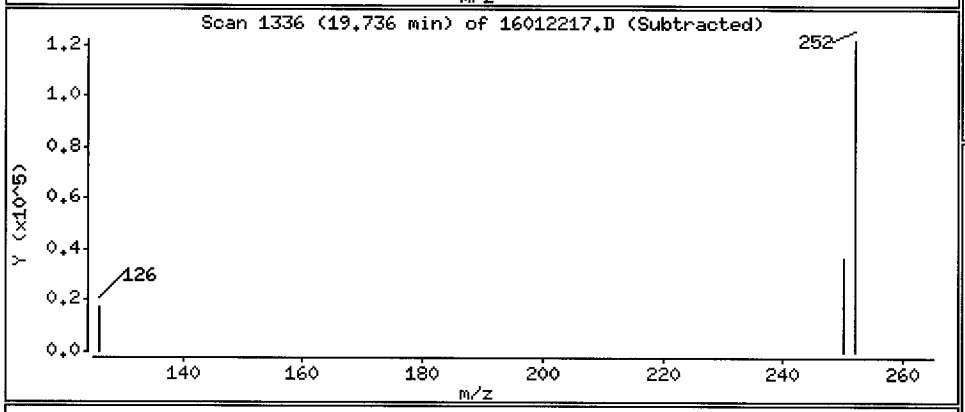
Column diameter: 0.25

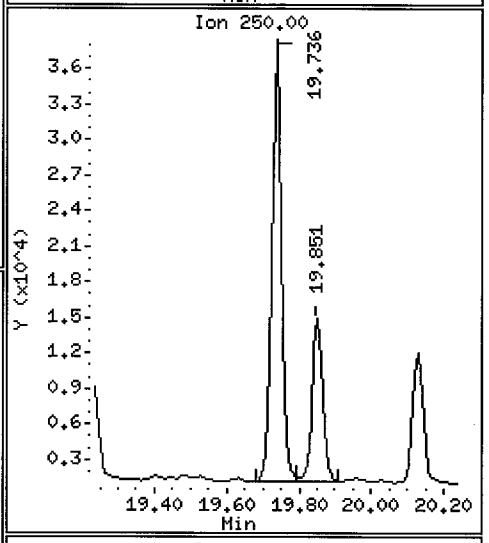
48 Benzo(e)pyrene

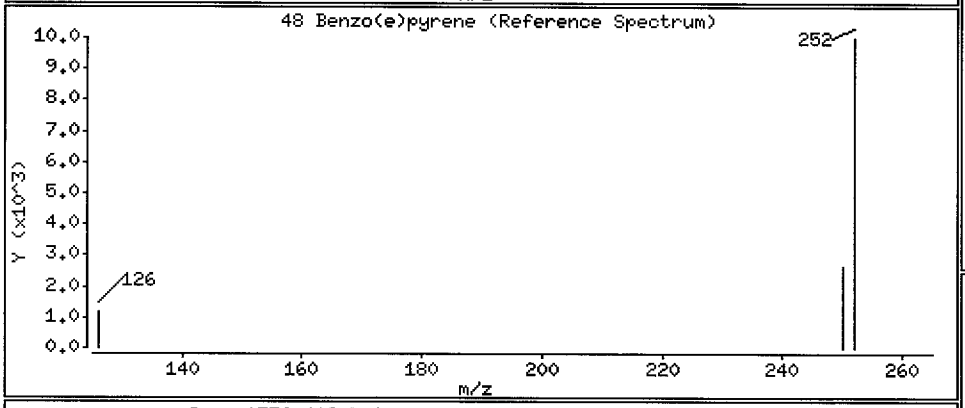
Concentration: 5250 ug/kg

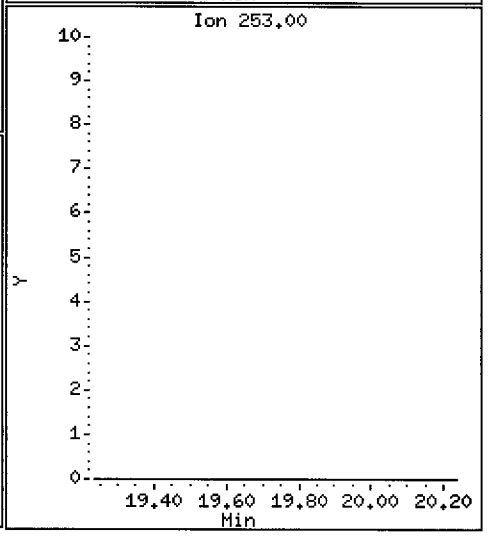


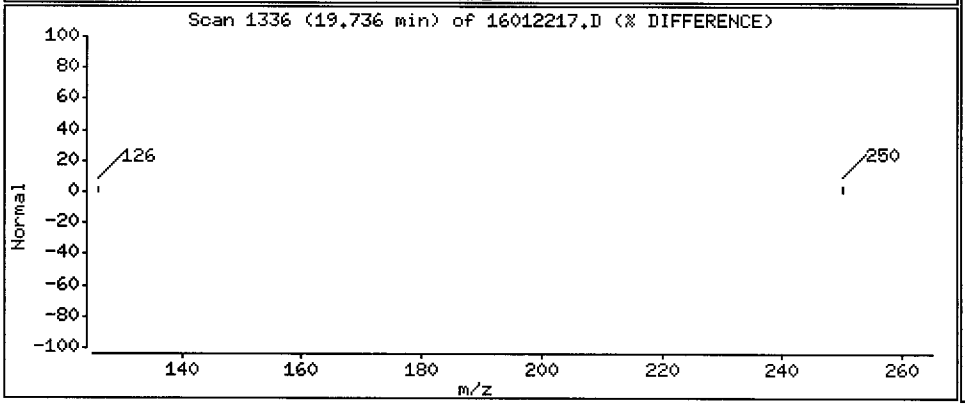












REVIEW SUMMARY FOR FILE - 16012217.D

Lab ID: ATS0E
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 15:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

ARI Labs, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : \\target\share\chem3\nt11.i\20160122.b\16012218.D
Lab Smp Id: ATS0F Client Smp ID: PG-SMA2-4-MUS-COC-1
Inj Date : 22-JAN-2016 15:59 MS Autotune Date: 23-APR-2014 12:54
Operator : JW Inst ID: nt11.i
Smp Info : ATS0F
Misc Info : 16-140
Comment :
Method : \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Meth Date : 25-Jan-2016 07:43 nt11.i Quant Type: ISTD
Cal Date : 04-DEC-2015 11:33 Cal File: 15120407.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PEMD.sub
Target Version: 4.14
Processing Host: AUTOSPECDATA2

Concentration Formula: Amt * DF * Vt/(Ws * (100-M)/100) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vt	500.000	Volume of final extract (uL)
Ws	10.040	Weight of sample extracted (g)
M	0.00000	% Moisture (not decanted)
Cpnd Variable		Local Compound Variable

1/25/16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/kg)
* 4 Naphthalene-d8	136	6.723	6.744	(1.000)	381586	200.000	
5 Naphthalene	128	6.765	6.776	(1.006)	24949	11.3193	564
$ 6 2-Methylnaphthalene-d10	152	7.711	7.721	(1.147)	222731	157.256	7830
7 2-Methylnaphthalene	142	Compound Not Detected.					
8 1-Methylnaphthalene	142	Compound Not Detected.					
10 Acenaphthylene	152	Compound Not Detected.					
* 11 Acenaphthene-d10	164	9.744	9.744	(1.000)	270392	200.000	
12 Acenaphthene	153	Compound Not Detected.					
14 Dibenzofuran	168	10.010	10.010	(1.027)	23449	10.7467	535
15 Fluorene	166	10.630	10.630	(1.091)	25440	15.5461	774
* 18 Phenanthrene-d10	188	12.424	12.424	(1.000)	439377	200.000	
19 Phenanthrene	178	12.457	12.468	(1.003)	290872	109.880	5470
20 Anthracene	178	12.512	12.523	(1.007)	83174	35.1020	1750
$ 23 Fluoranthene-d10	212	14.519	14.518	(1.169)	445162	184.233	9170
24 Fluoranthene	202	14.557	14.557	(1.172)	568910	214.059	10700
25 Pyrene	202	15.047	15.057	(0.877)	367254	142.372	7090
28 Benzo(a)anthracene	228	17.067	17.075	(0.994)	129249	59.5150	2960
* 29 Chrysene-d12	240	17.167	17.167	(1.000)	325728	200.000	
30 Chrysene	228	17.217	17.217	(1.003)	151900	63.7292	3170
44 Benzo(b)fluoranthene	252	18.967	18.967	(0.945)	108265	49.1120	2450
45 Benzo(k)fluoranthene	252	19.015	19.015	(0.948)	76981	29.9671	1490

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/kg)
46	Benzo(j)fluoranthene	252	19.082	19.082	(0.951)	60069	25.6699	1280
34	Benzo(a)pyrene	252	19.851	19.851	(0.989)	48129	22.6223	1130
* 35	Perylene-d12	264	20.063	20.062	(1.000)	325370	200.000	
$ 36	Dibenzo(a,h)anthracene-d14	292	22.529	22.529	(1.123)	260995	198.740	9900
37	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
38	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39	Benzo(g,h,i)perylene	276	23.814	23.814	(1.187)	27650	14.2586	710
47	Perylene	252	20.130	20.130	(1.003)	33449	15.1647	755
48	Benzo(e)pyrene	252	19.736	19.736	(0.984)	70557	31.6700	1580

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 16012218.D
Lab Smp Id: ATS0F
Analysis Type: SV
Quant Type: ISTD
Operator: JW
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-140

Calibration Date: 22-JAN-2016
Calibration Time: 09:05
Client Smp ID: PG-SMA2-4-MUS-C
Level: LOW
Sample Type: Tissue

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	327896	163948	655792	381586	16.37
11 Acenaphthene-d10	239179	119590	478358	270392	13.05
18 Phenanthrene-d10	372253	186127	744506	439377	18.03
29 Chrysene-d12	294711	147356	589422	325728	10.52
35 Perylene-d12	260595	130298	521190	325370	24.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	6.74	6.24	7.24	6.72	-0.31
11 Acenaphthene-d10	9.74	9.24	10.24	9.74	0.00
18 Phenanthrene-d10	12.42	11.92	12.92	12.42	0.00
29 Chrysene-d12	17.17	16.67	17.67	17.17	0.00
35 Perylene-d12	20.06	19.56	20.56	20.06	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.

ARI Labs, Inc.

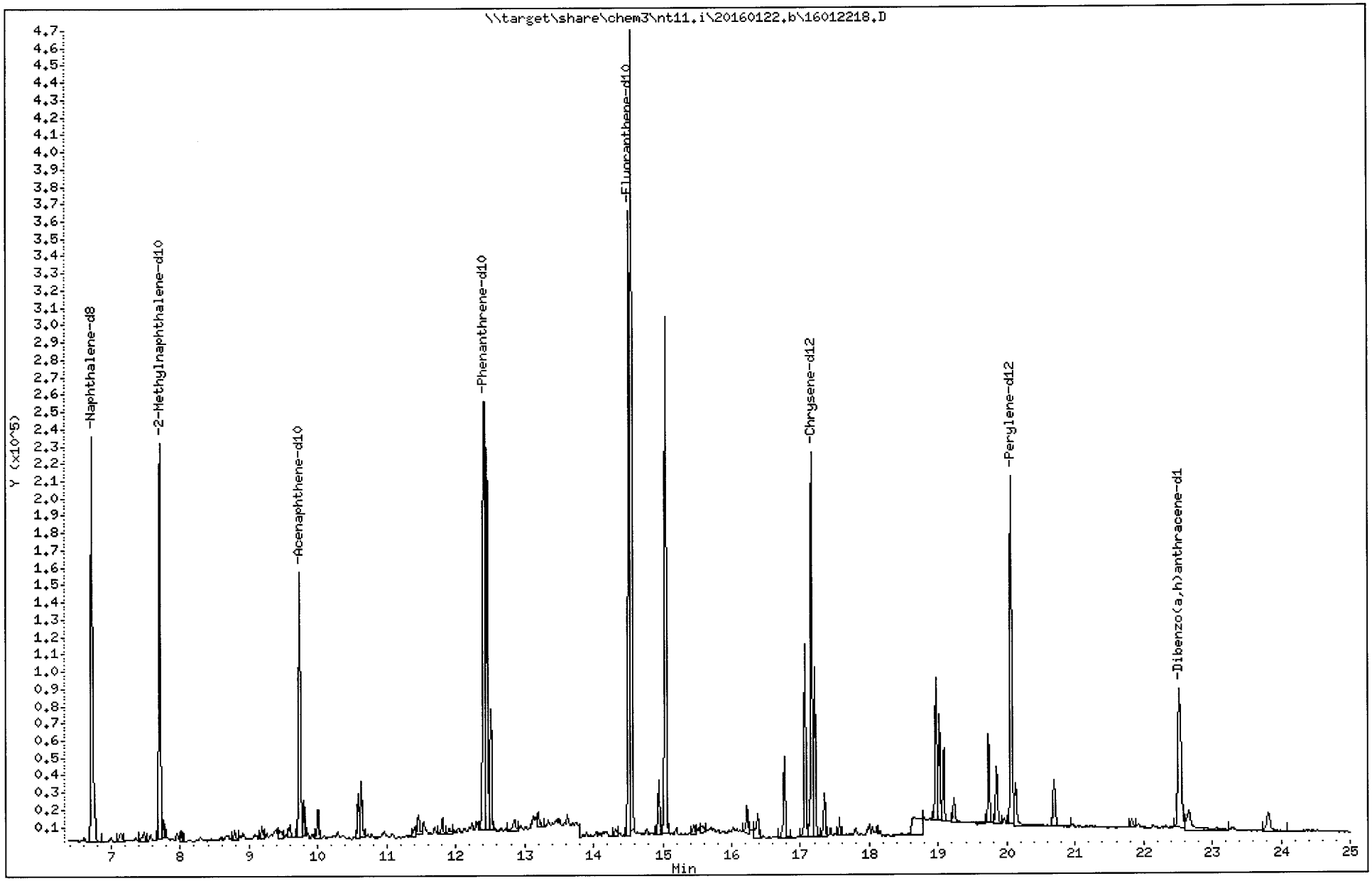
RECOVERY REPORT

Client Name: Anchor QEA, LLC
Client SDG: ATS0
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: ATS0F
Client Smp ID: PG-SMA2-4-MUS-COC-1
Level: LOW
Operator: JW
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: waterlcs.spk
Quant Type: ISTD
Sublist File: PEMD.sub
Method File: \\target\share\chem3\nt11.i\20160122.b\lowsim.m
Misc Info: 16-140

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	14900	7830	52.42	30-160
$ 23 Fluoranthene-d10	14900	9170	61.41	30-160
$ 36 Dibenzo(a,h)anthra	14900	9900	66.25	30-160

Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D
Date : 22-JAN-2016 15:59
Client ID: PC-SMA2-4-MUS-COC-1
Sample Info: ATSOF
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: JW
Column diameter: 0.25



Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0F

Volume Injected (uL): 2.0

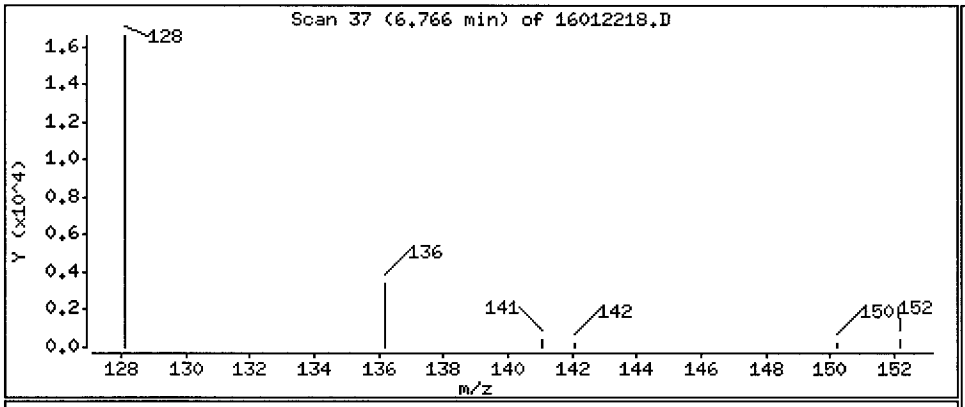
Operator: JW

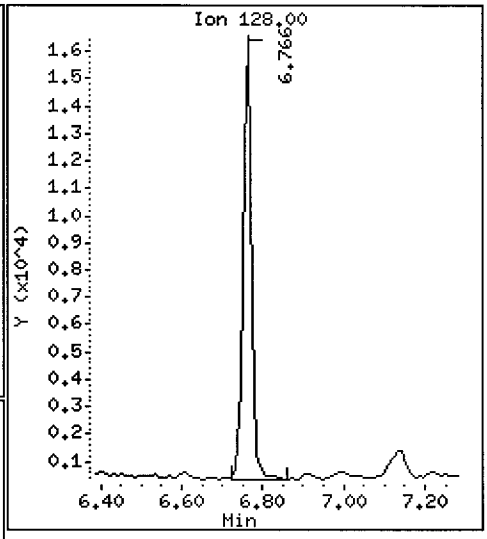
Column phase: Rxi-17Sil MS

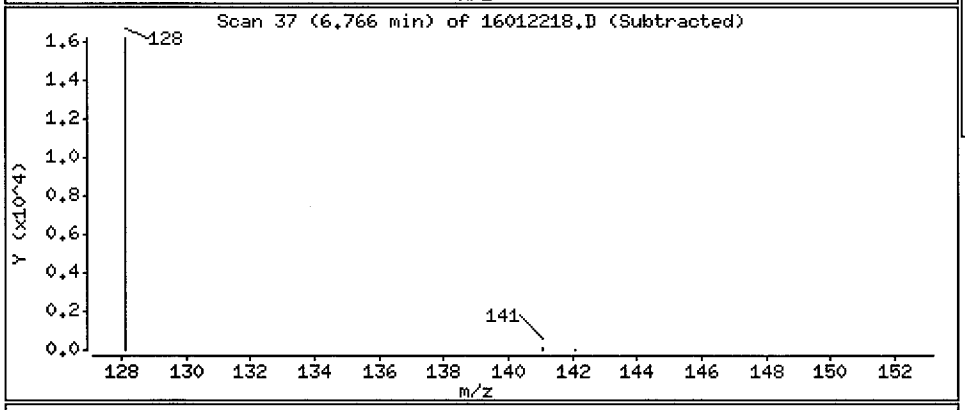
Column diameter: 0.25

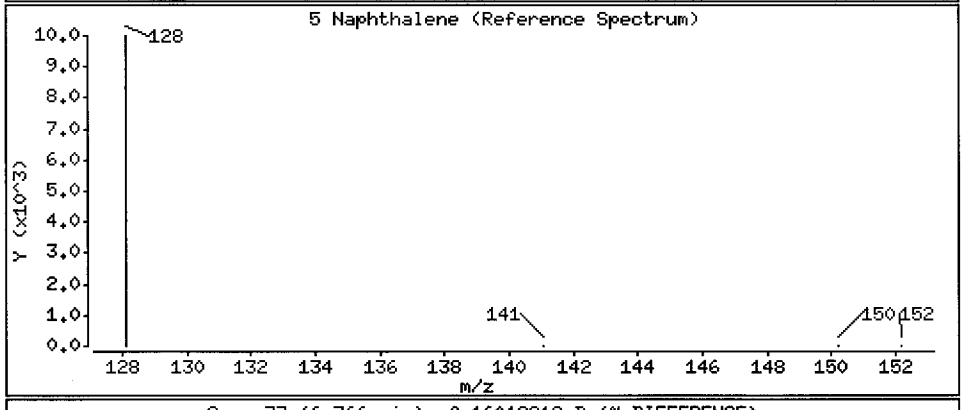
5 Naphthalene

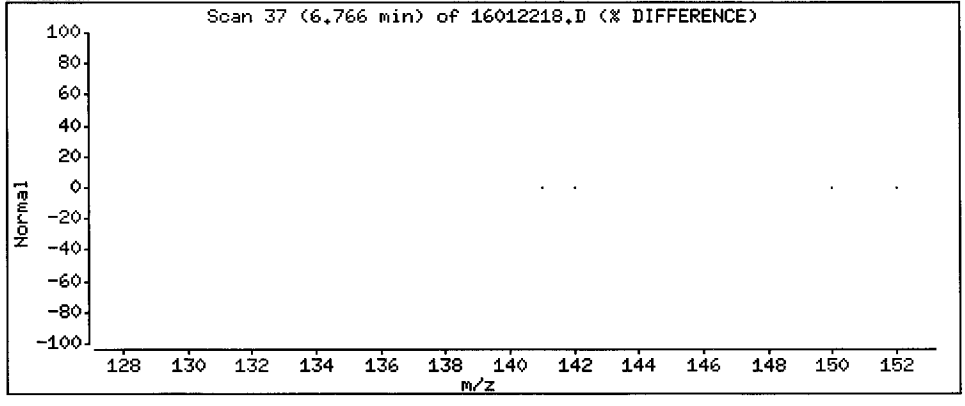
Concentration: 564 ug/kg











Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0F

Volume Injected (uL): 2.0

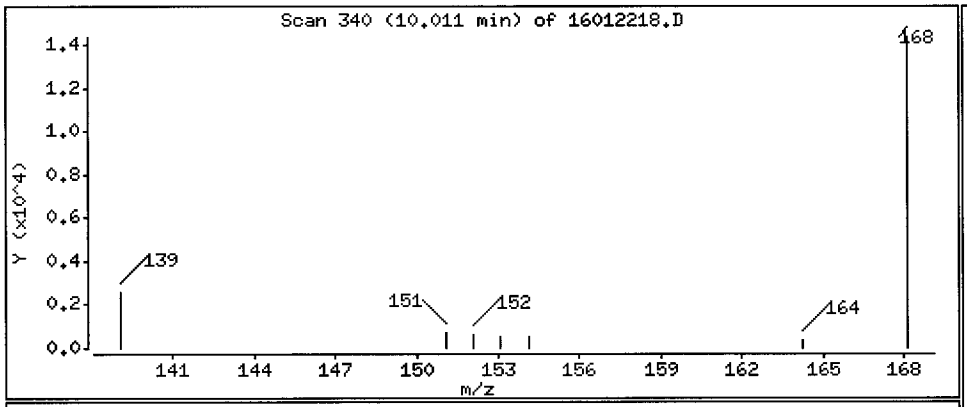
Operator: JW

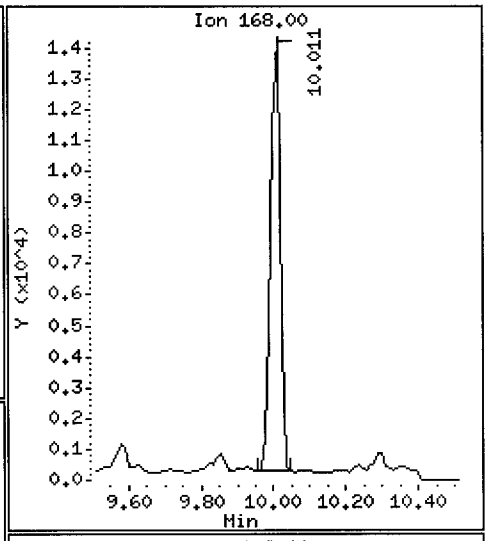
Column phase: Rxi-17Sil MS

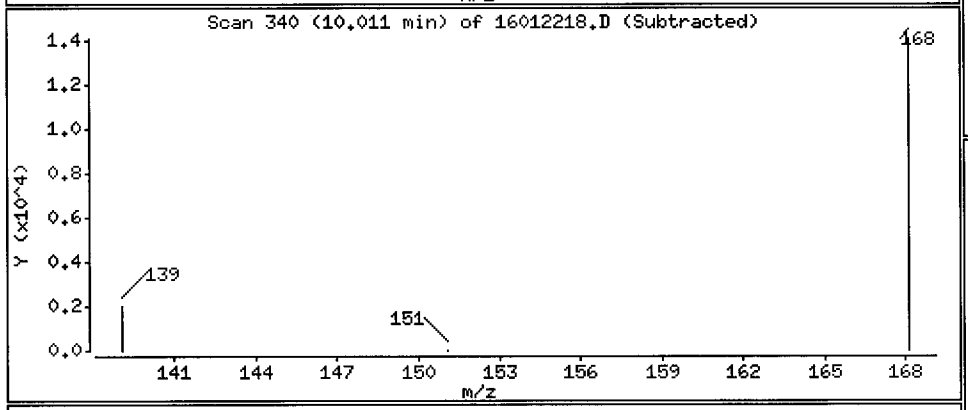
Column diameter: 0.25

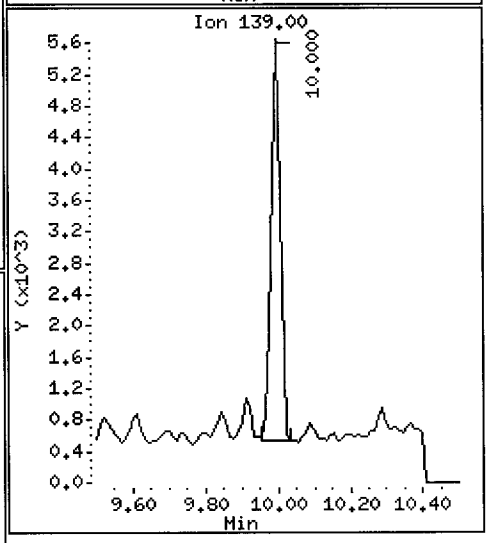
14 Dibenzofuran

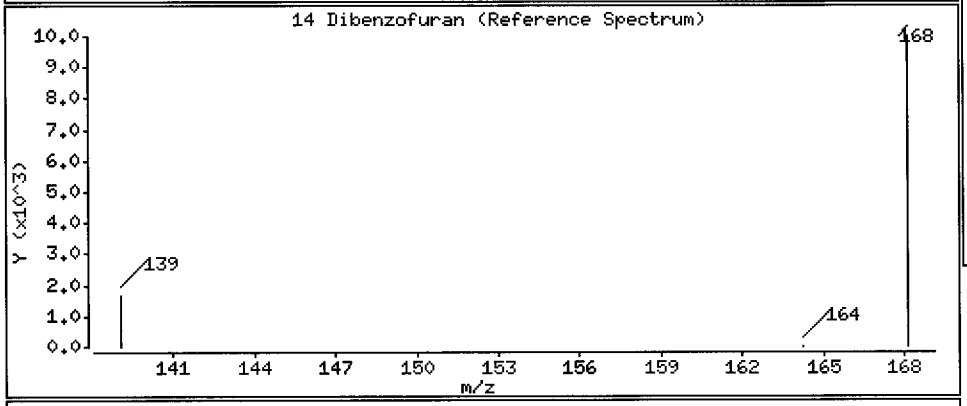
Concentration: 535 ug/kg

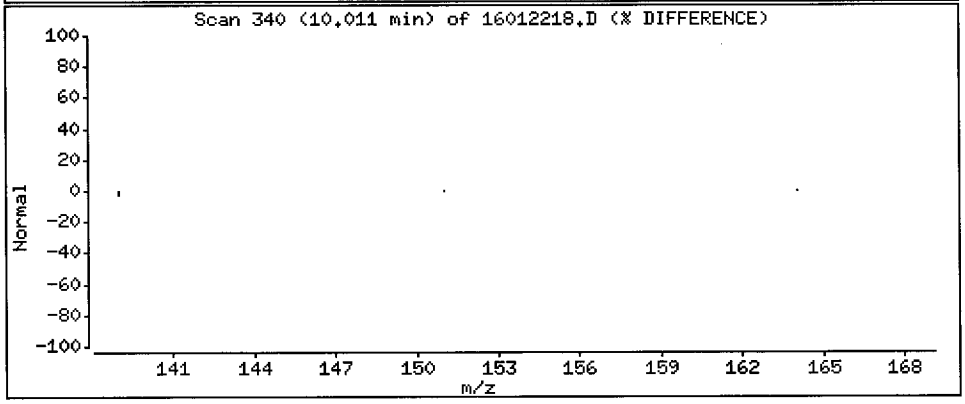












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SHA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

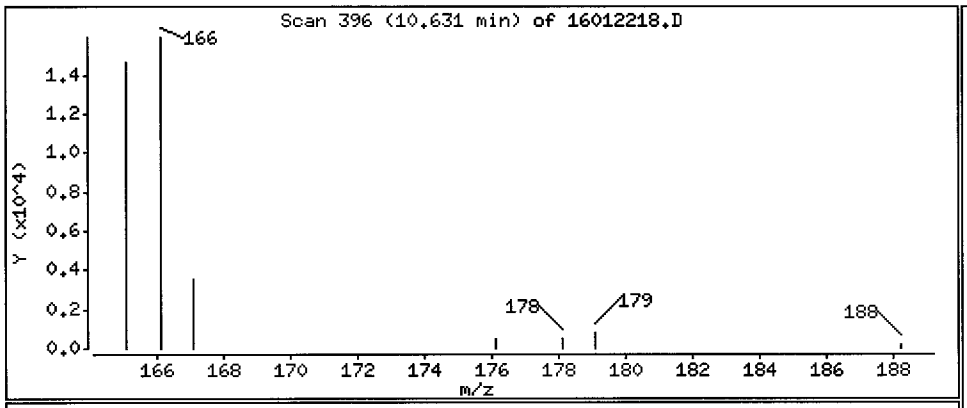
Operator: JW

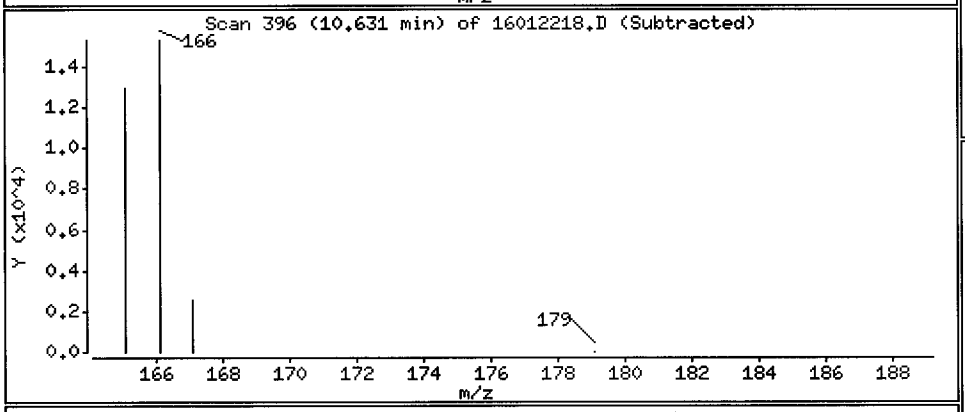
Column phase: Rxi-17Sil MS

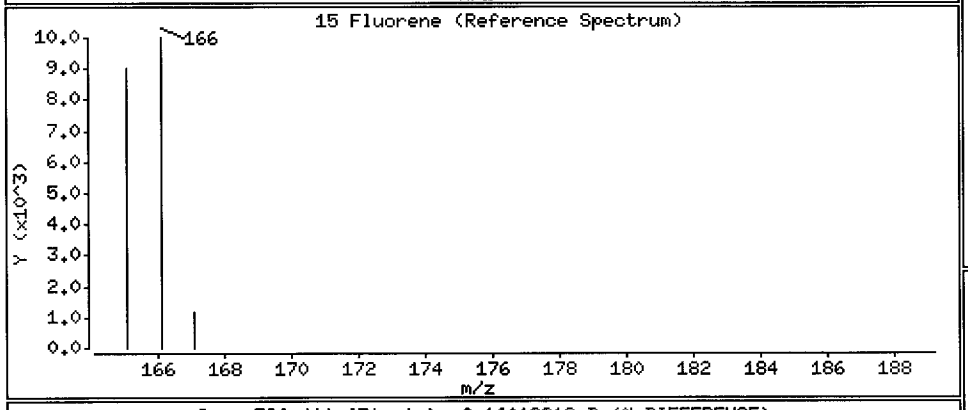
Column diameter: 0.25

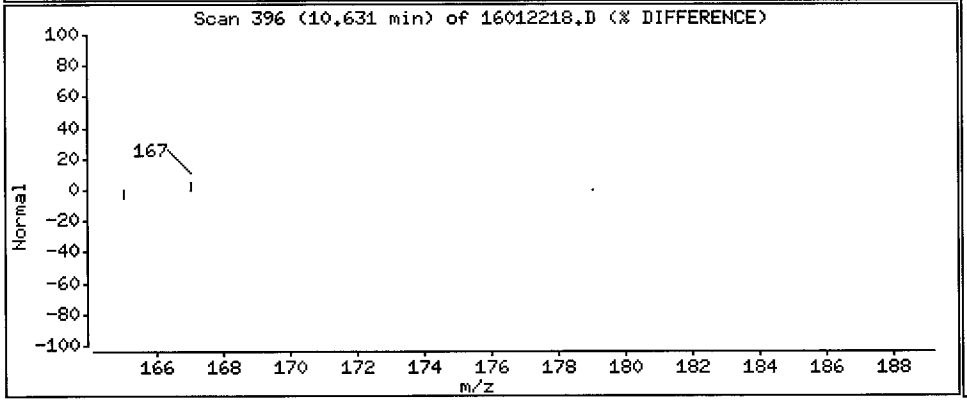
15 Fluorene

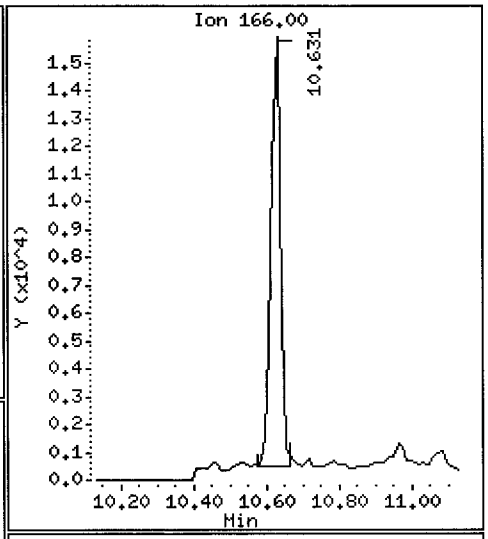
Concentration: 774 ug/kg

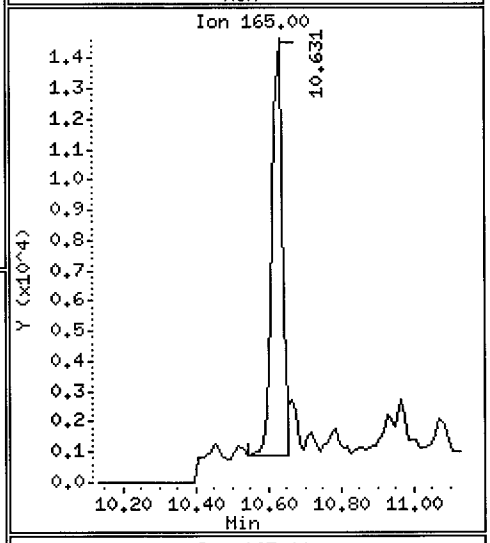


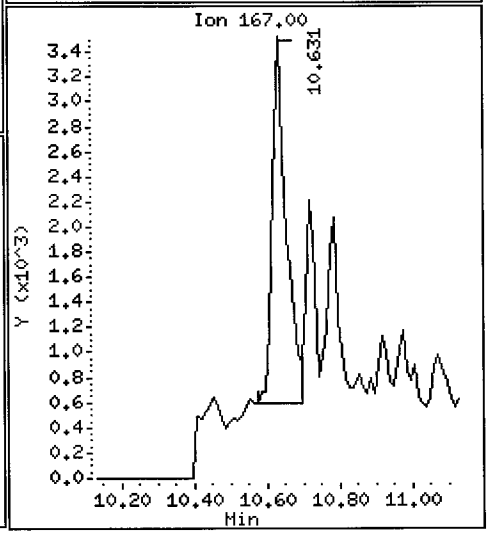












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

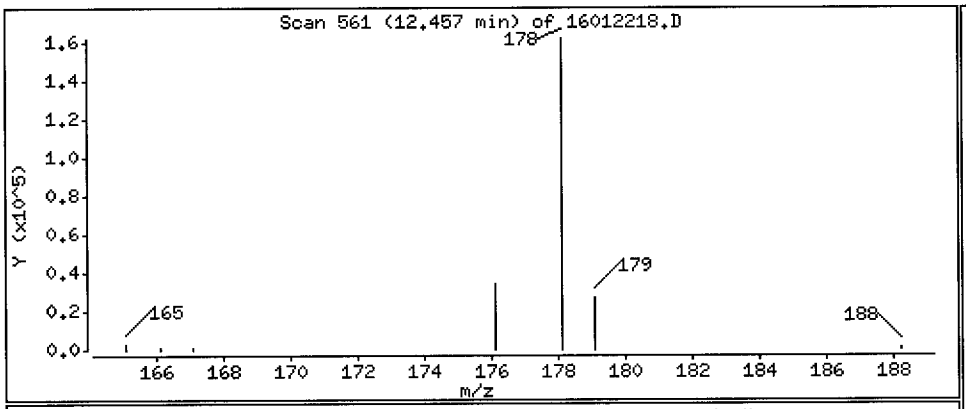
Operator: JW

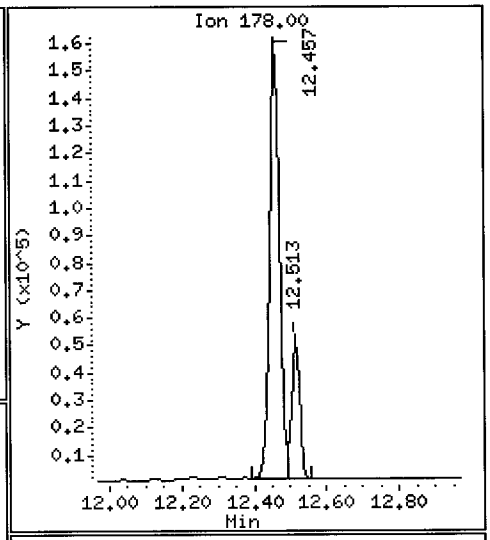
Column phase: Rxi-17Sil MS

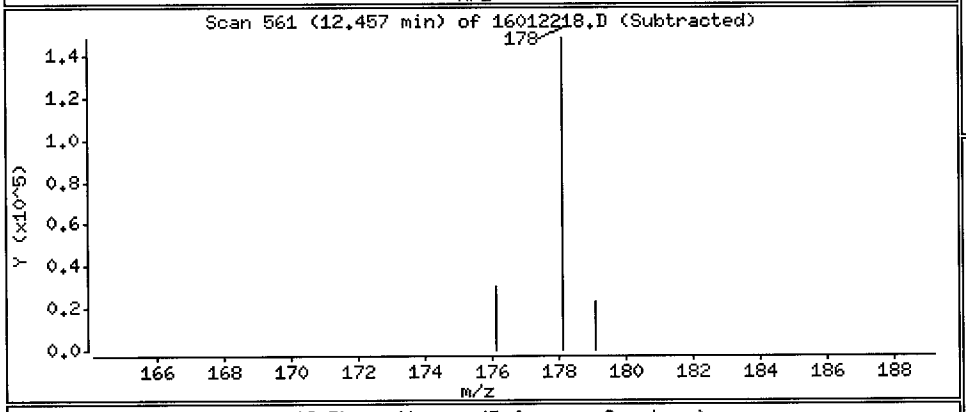
Column diameter: 0.25

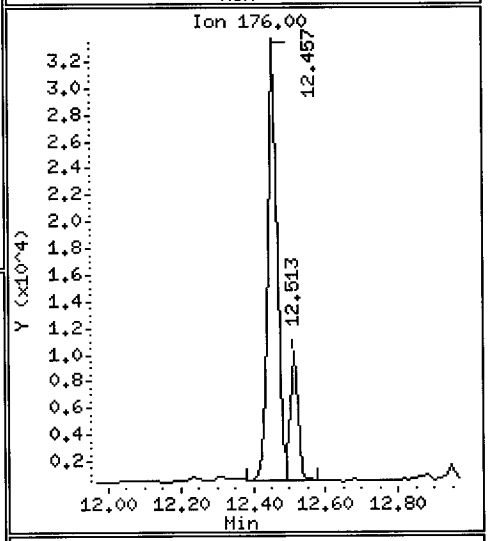
19 Phenanthrene

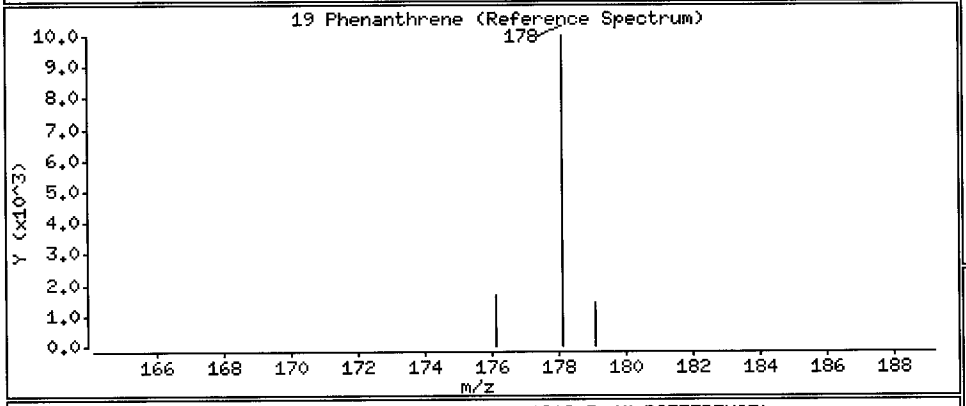
Concentration: 5470 ug/kg

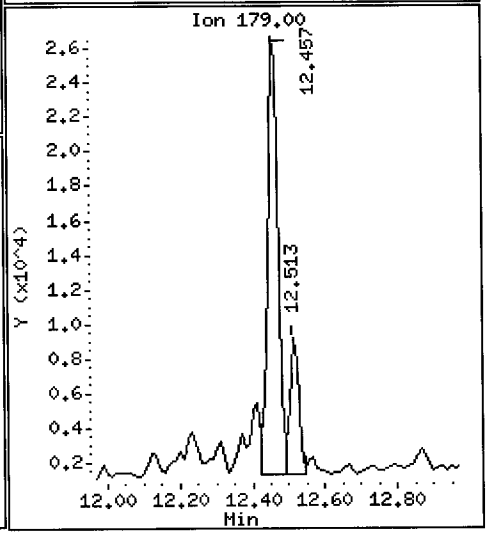


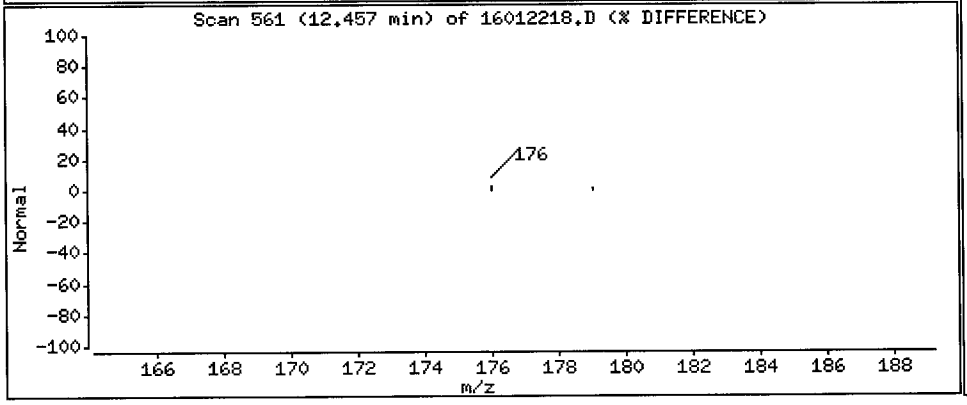












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

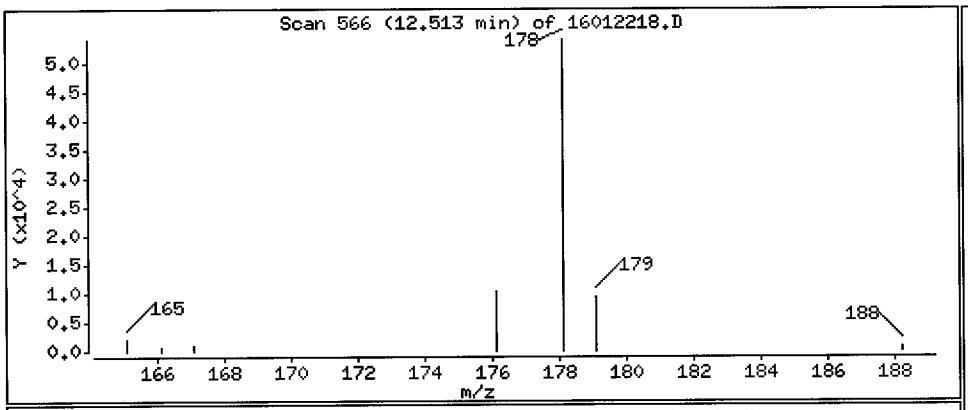
Operator: JW

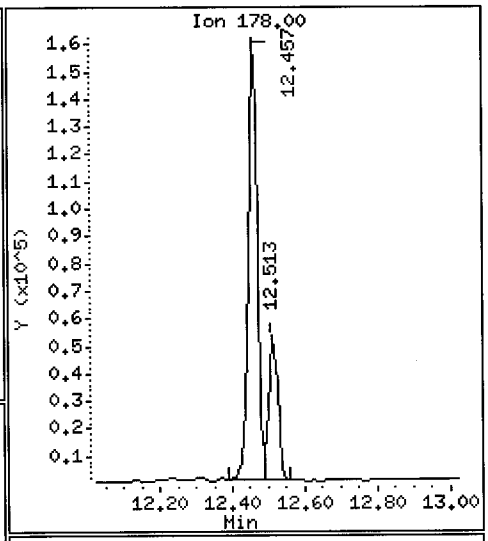
Column phase: Rxi-17Sil MS

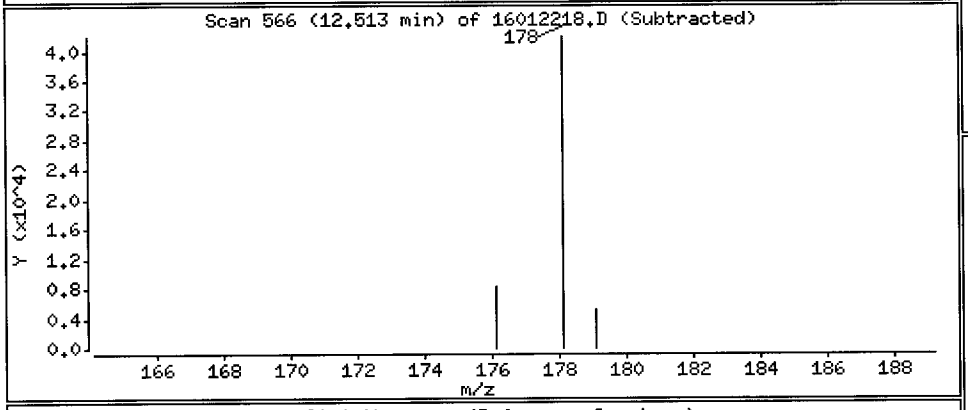
Column diameter: 0.25

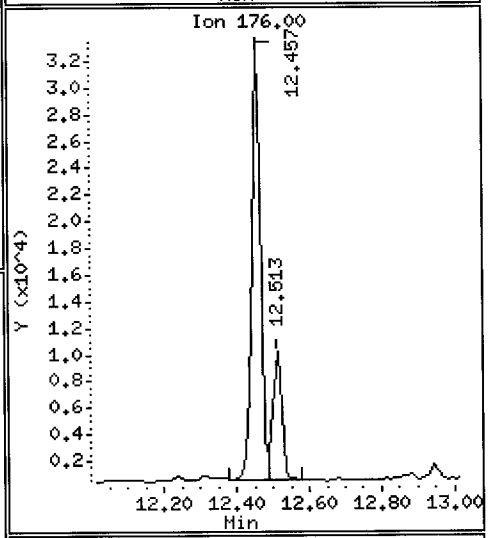
20 Anthracene

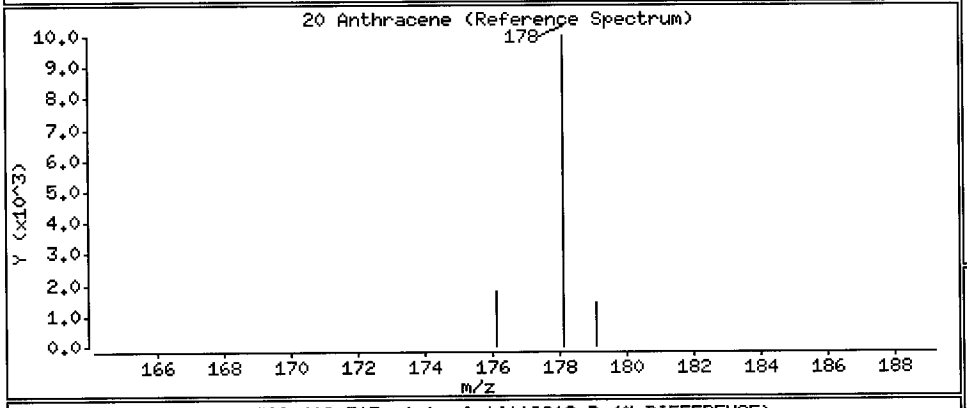
Concentration: 1750 ug/kg

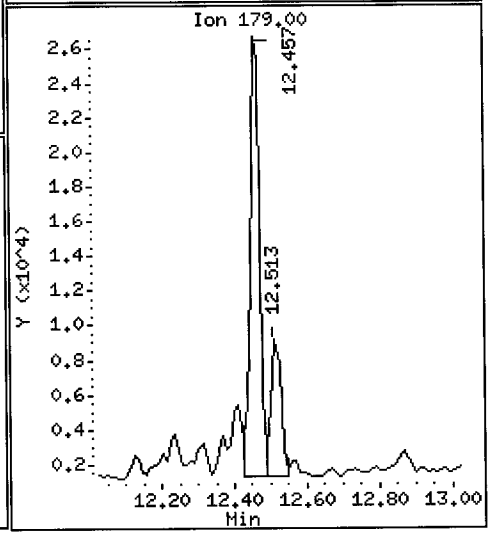


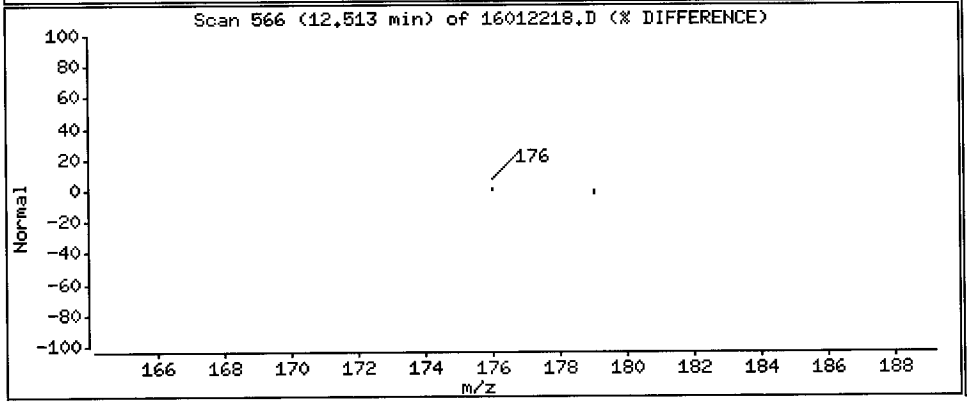












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0F

Volume Injected (uL): 2.0

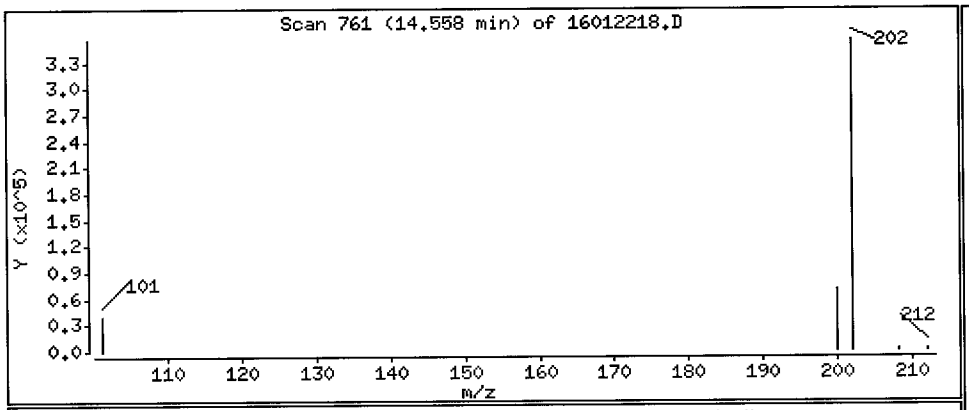
Operator: JW

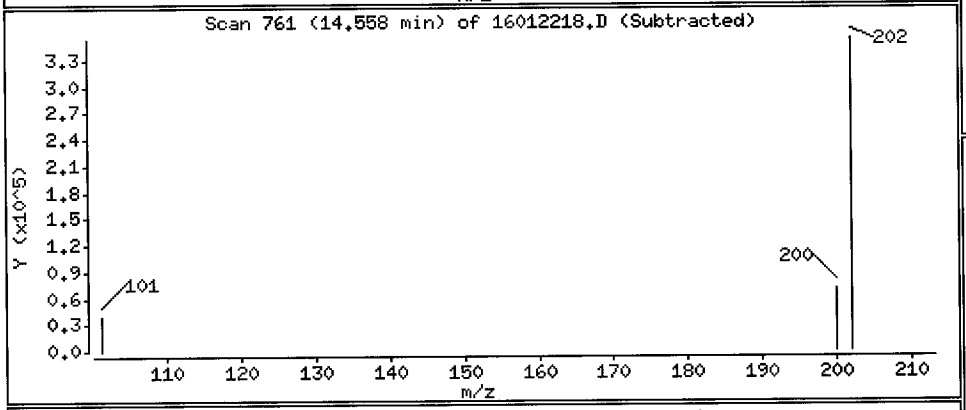
Column phase: Rxi-17Sil MS

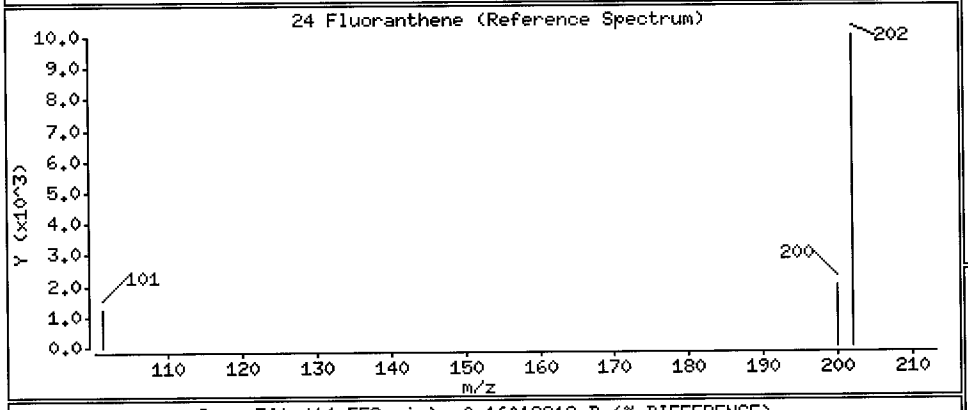
Column diameter: 0.25

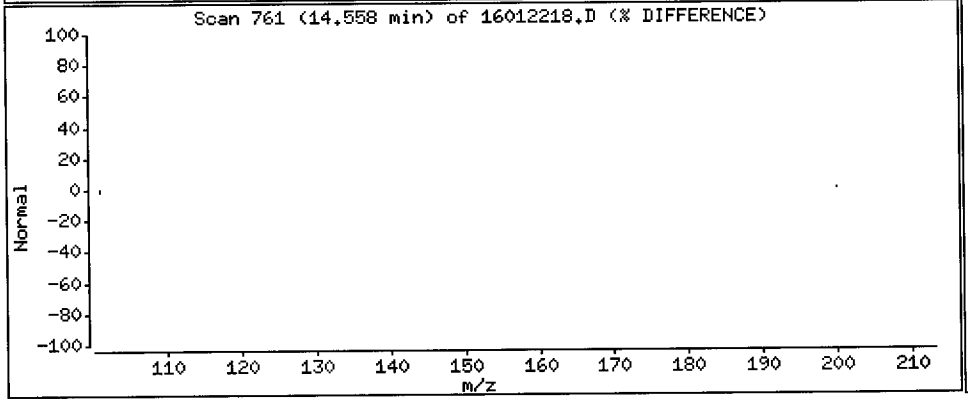
24 Fluoranthene

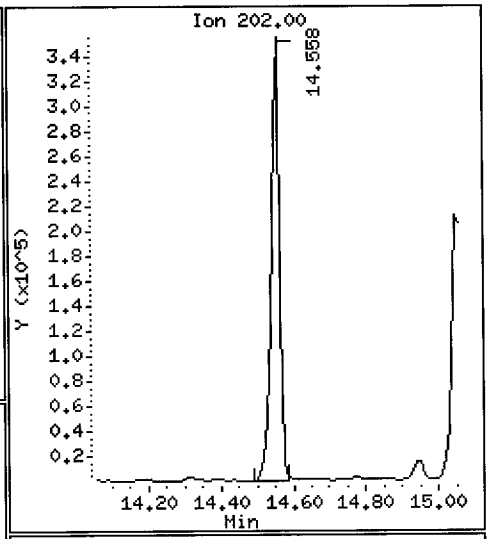
Concentration: 10700 ug/kg

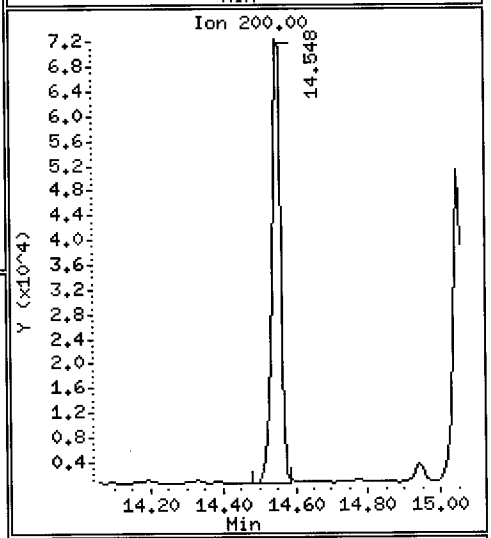


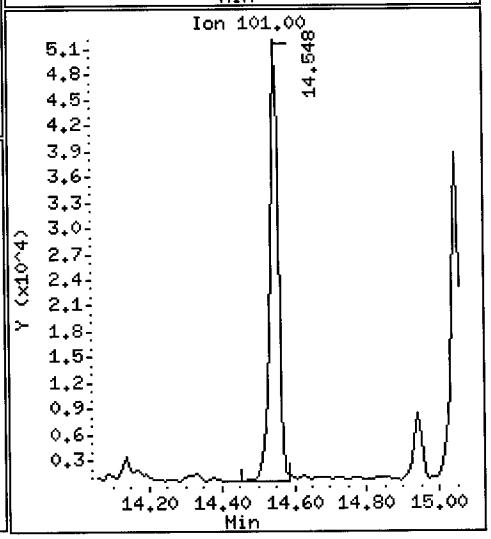












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

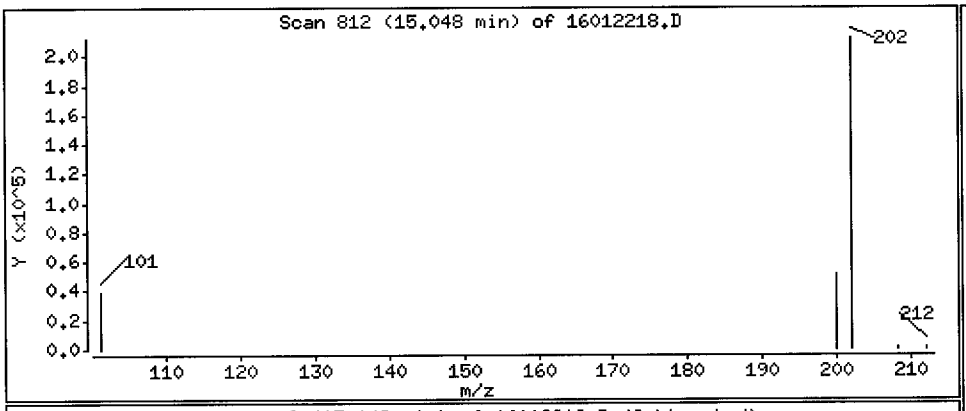
Operator: JW

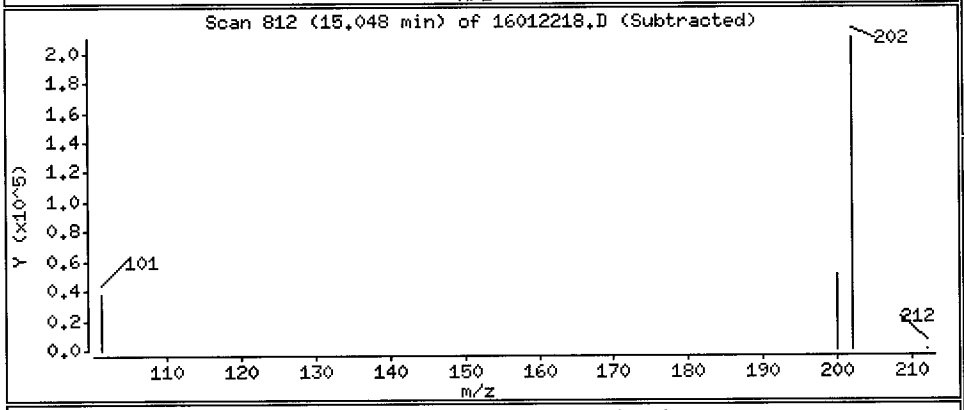
Column phase: Rxi-17Sil MS

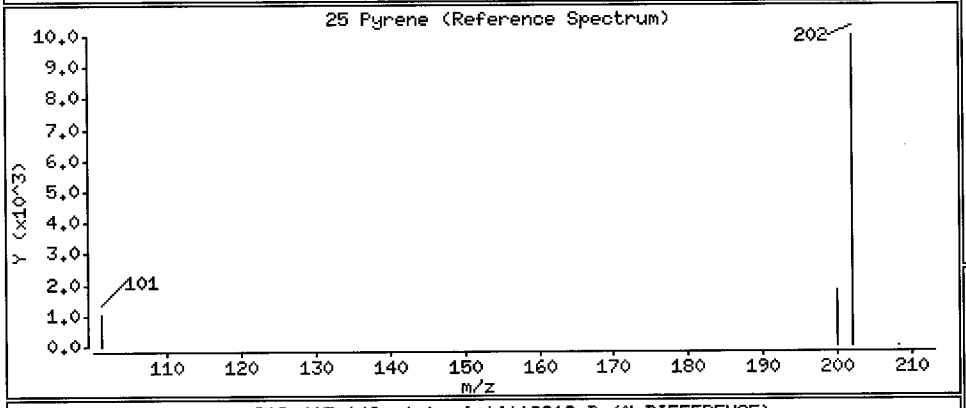
Column diameter: 0.25

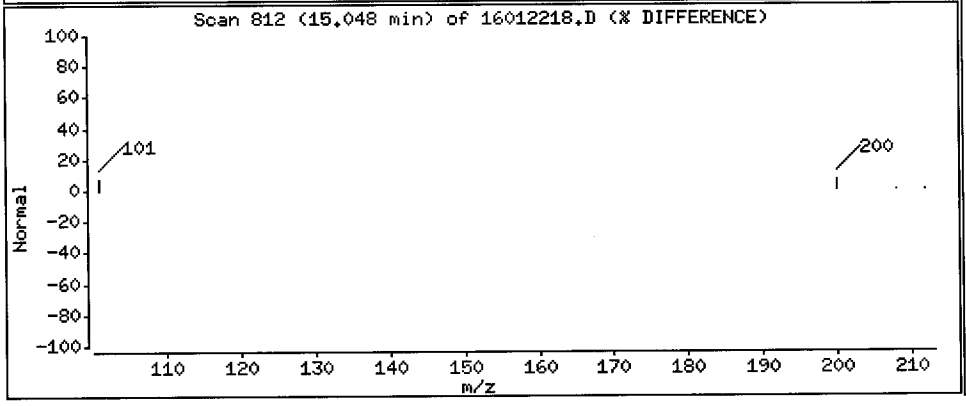
25 Pyrene

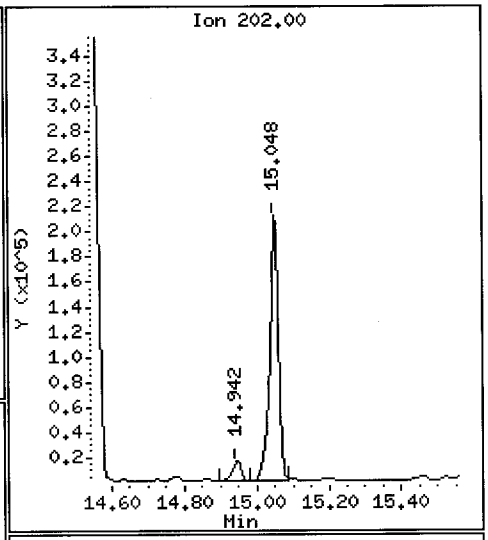
Concentration: 7090 ug/kg

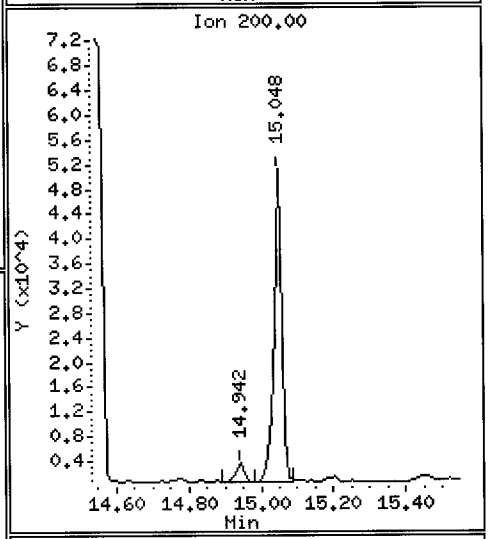


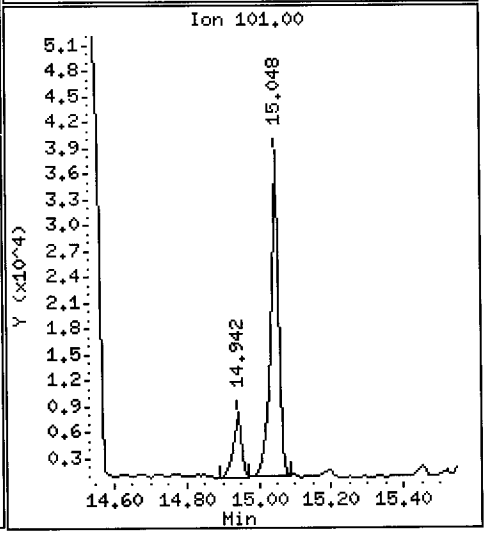












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Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

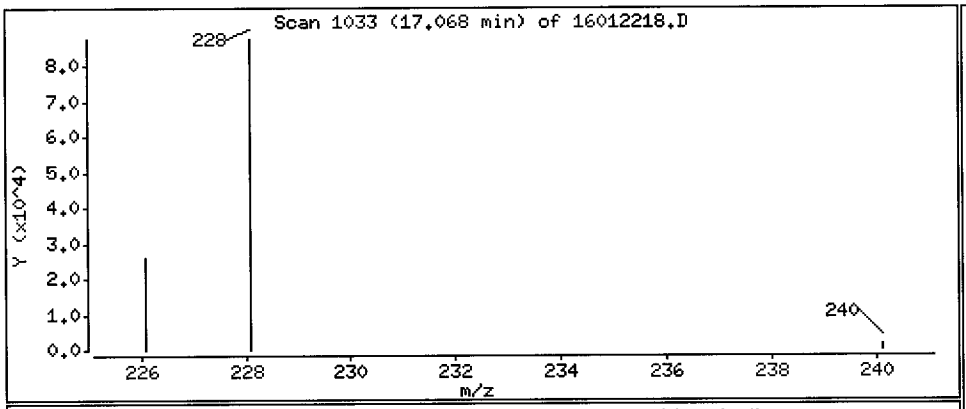
Operator: JW

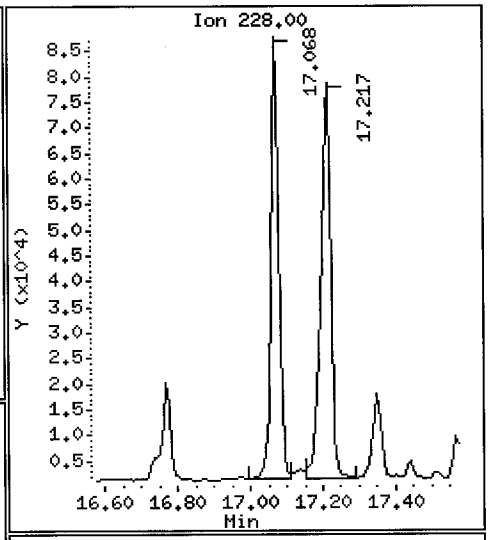
Column phase: Rxi-17Sil MS

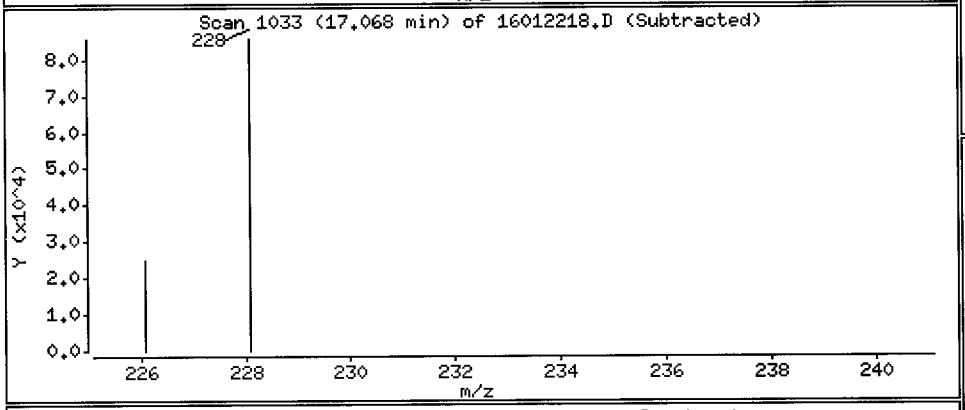
Column diameter: 0.25

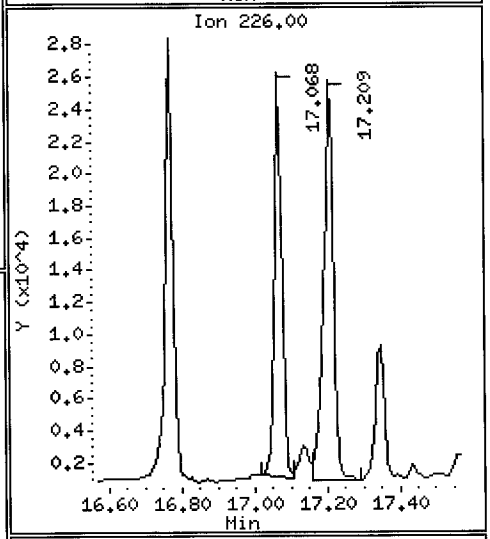
28 Benzo(a)anthracene

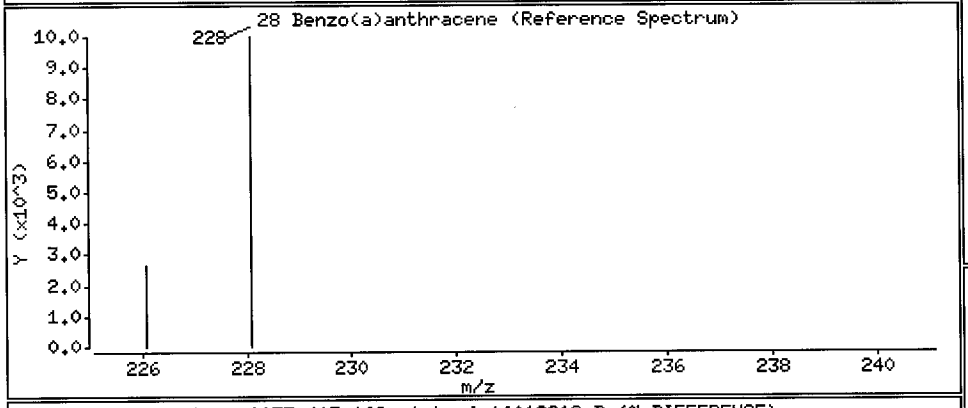
Concentration: 2960 ug/kg

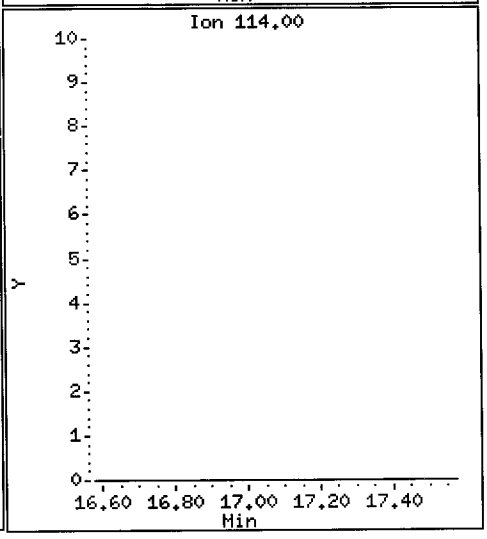


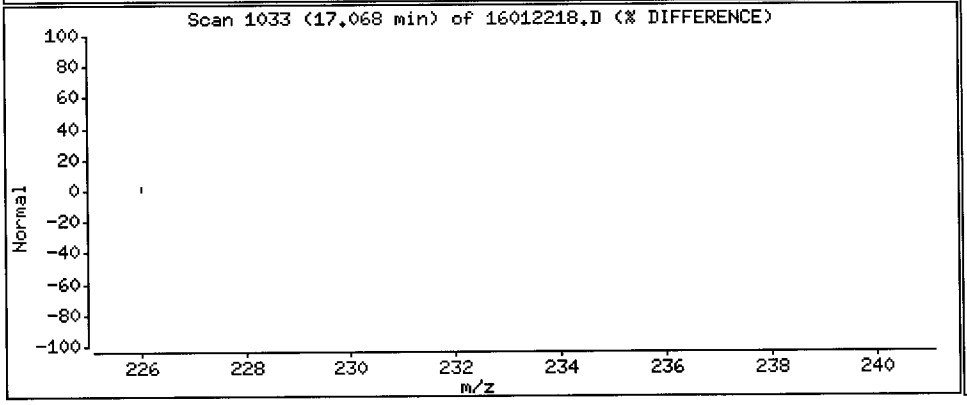












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Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATS0F

Volume Injected (uL): 2.0

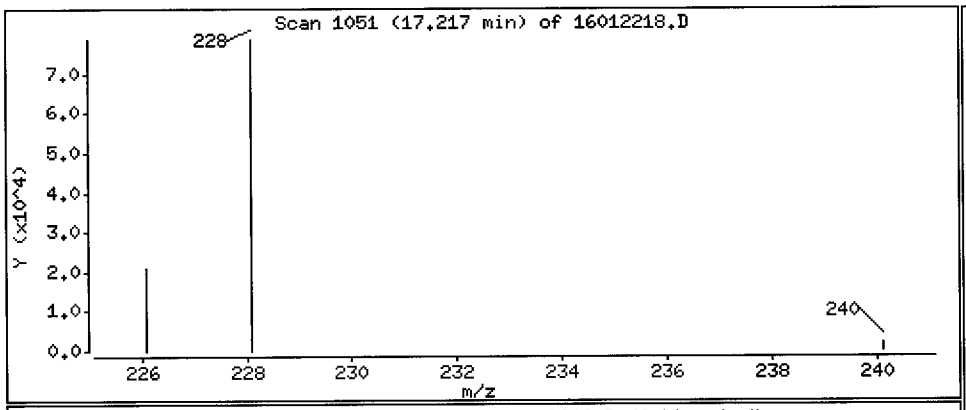
Operator: JW

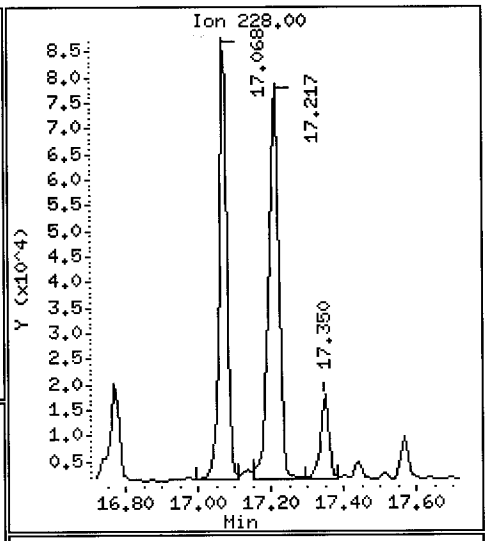
Column phase: Rxi-17Sil MS

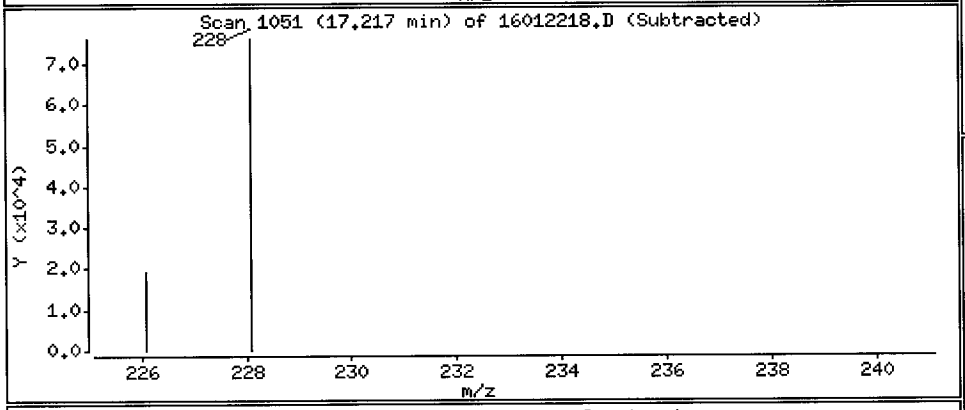
Column diameter: 0.25

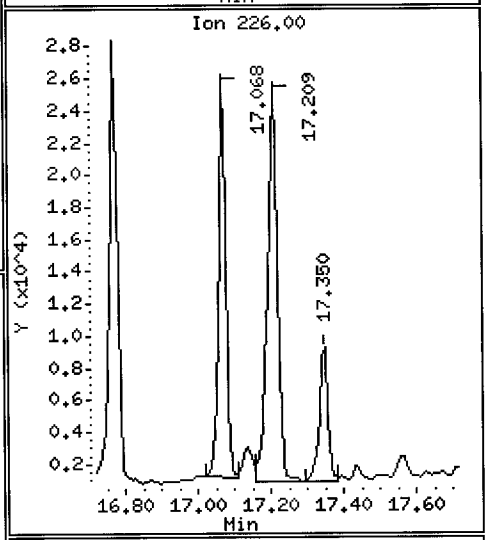
30 Chrysene

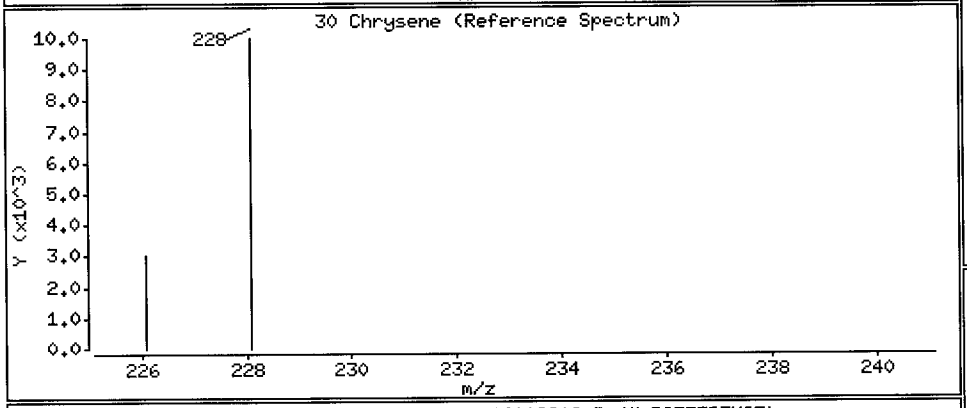
Concentration: 3170 ug/kg

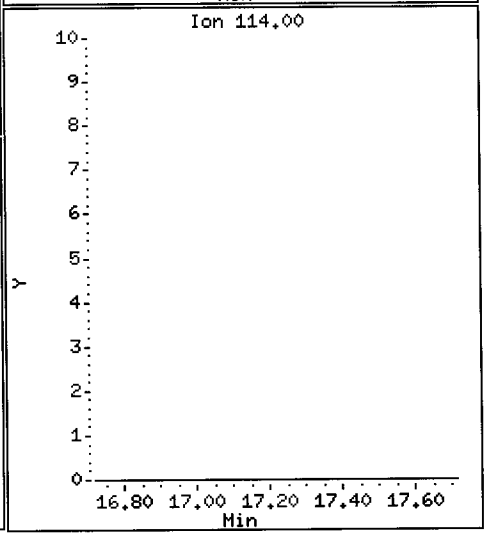


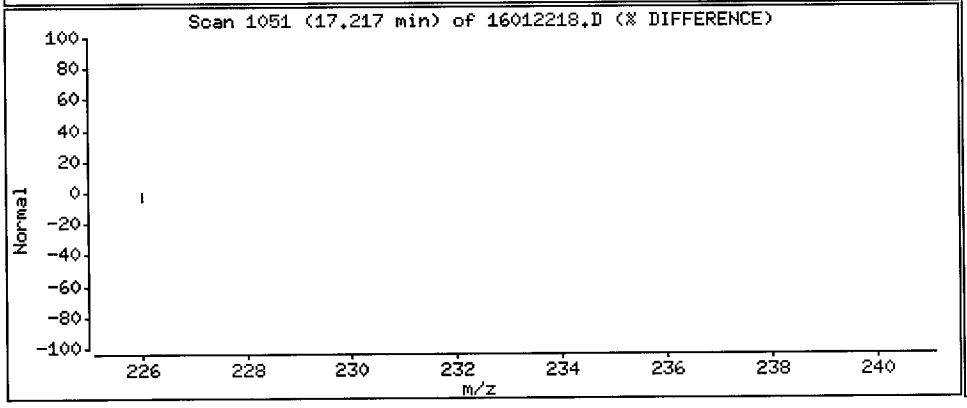












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Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

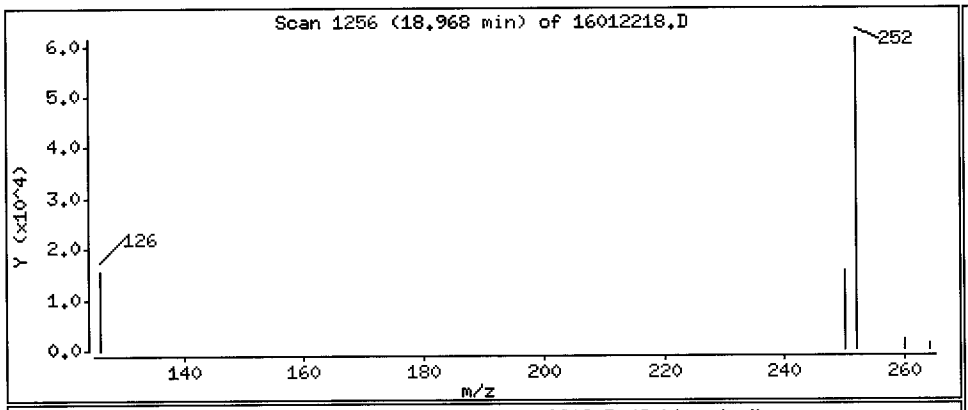
Operator: JW

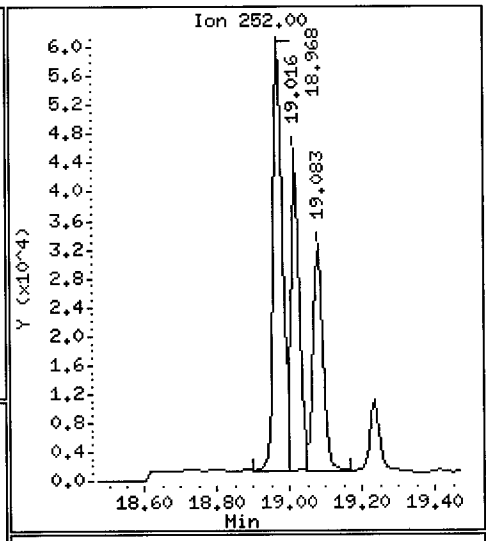
Column phase: Rxi-17Sil MS

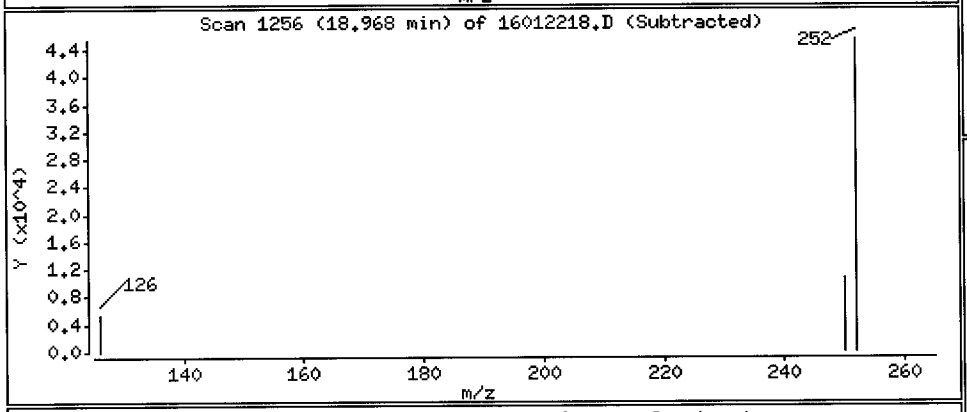
Column diameter: 0.25

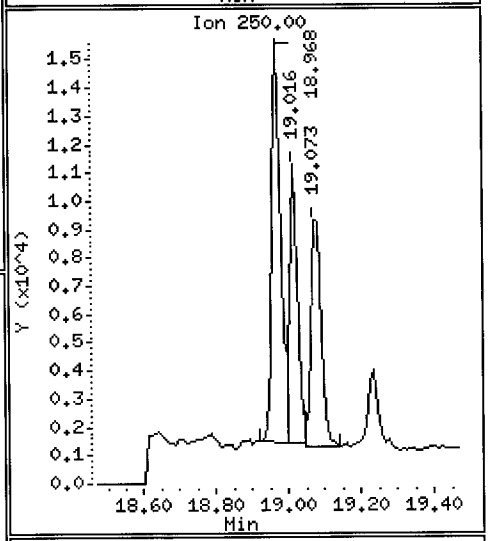
44 Benzo(b)fluoranthene

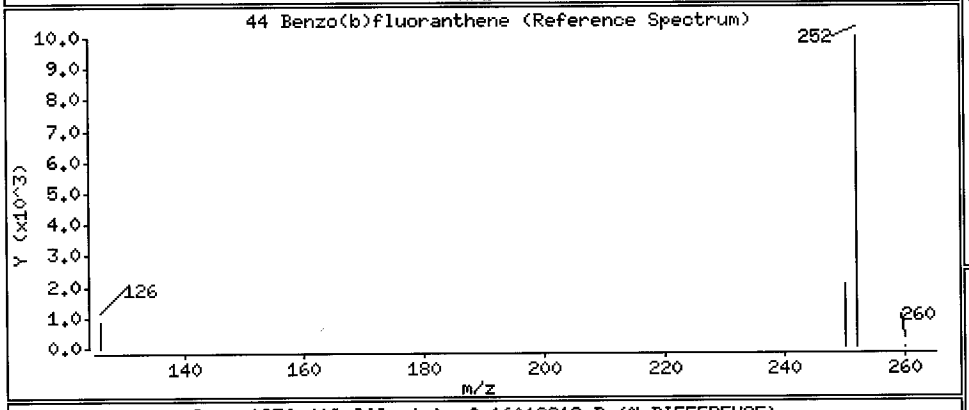
Concentration: 2450 ug/kg

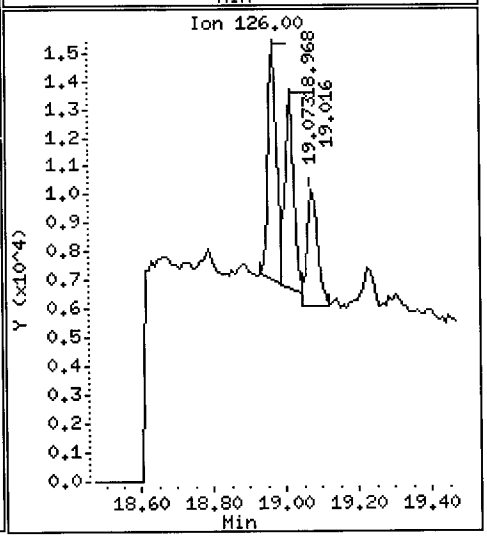


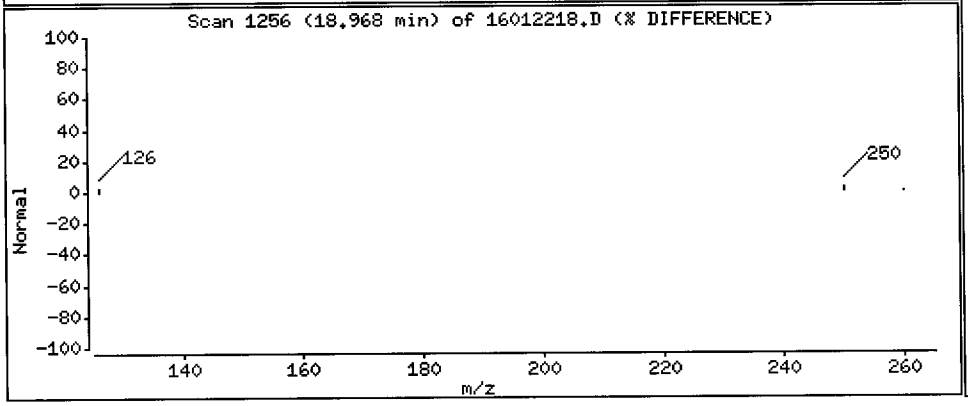












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

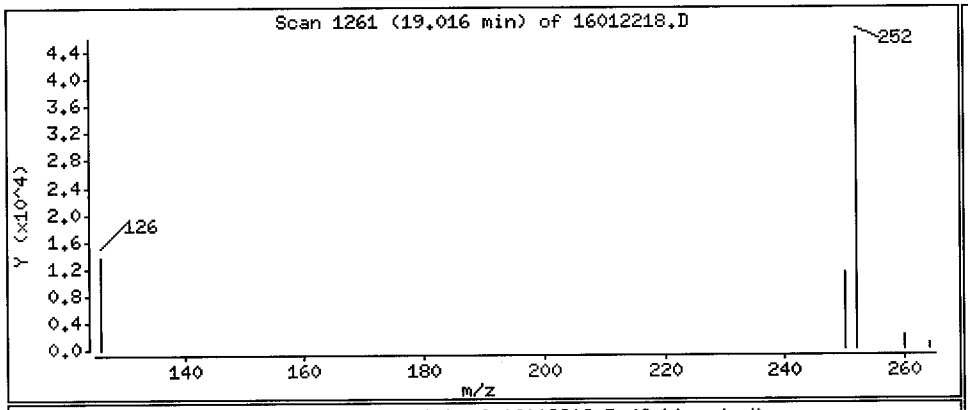
Operator: JW

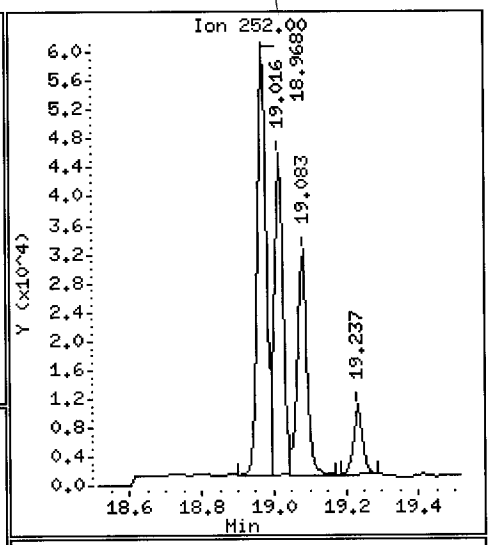
Column phase: Rxi-17Sil MS

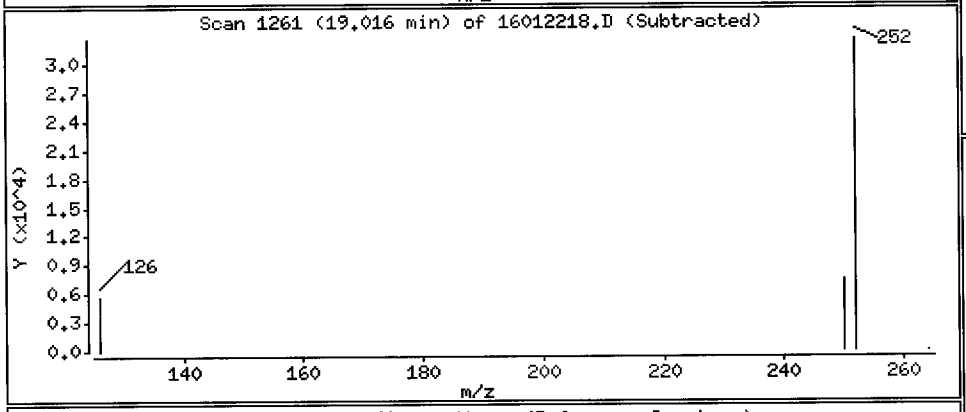
Column diameter: 0.25

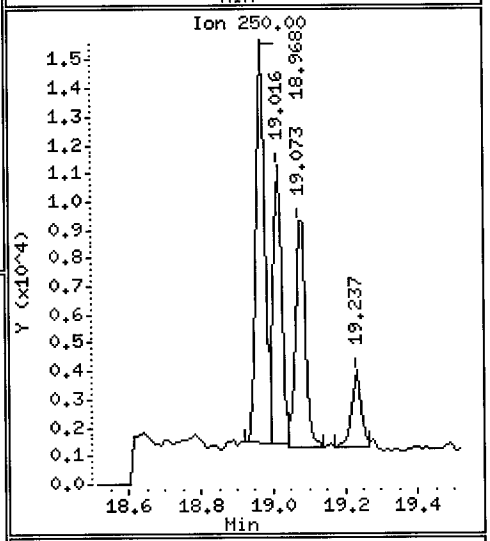
45 Benzo(k)fluoranthene

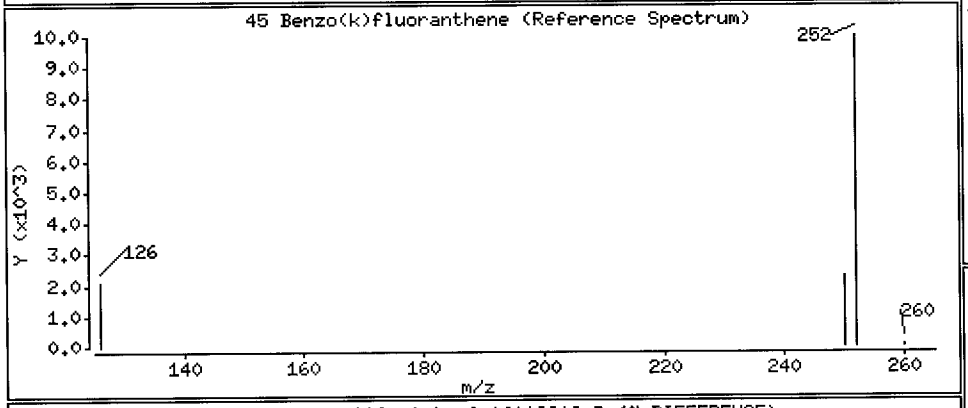
Concentration: 1490 ug/kg

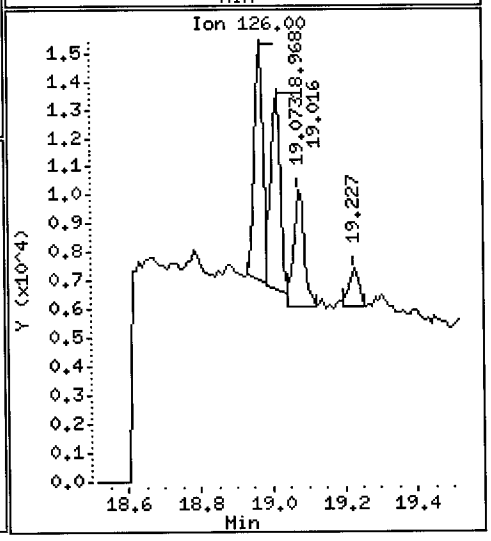


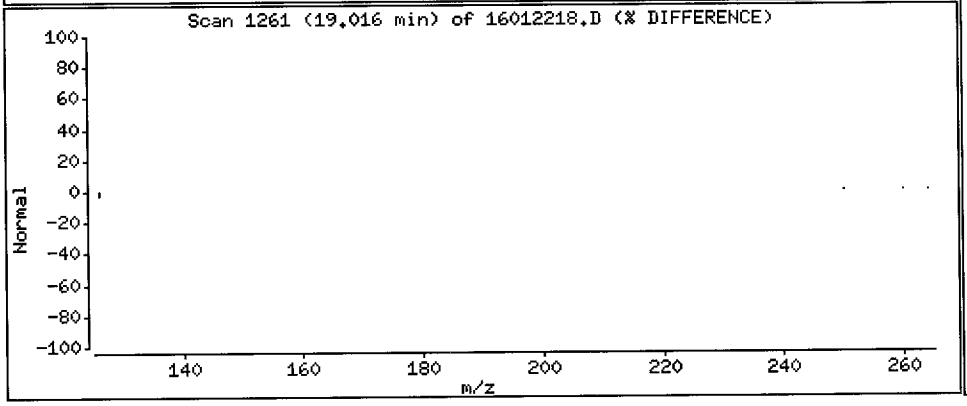












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

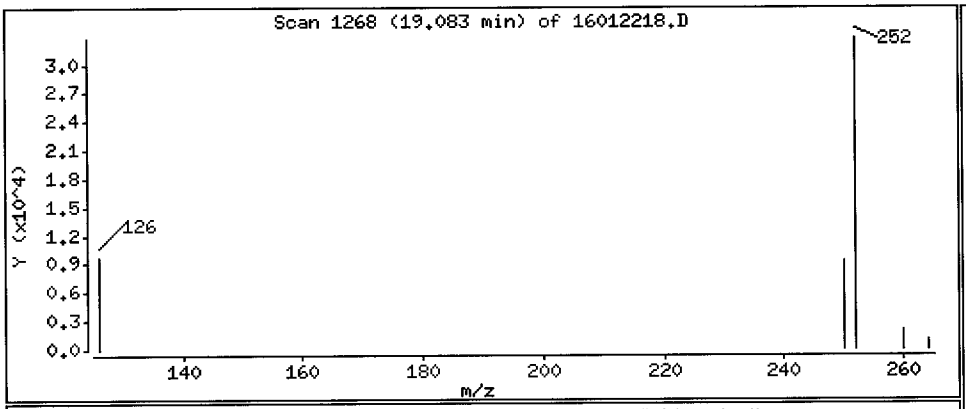
Operator: JW

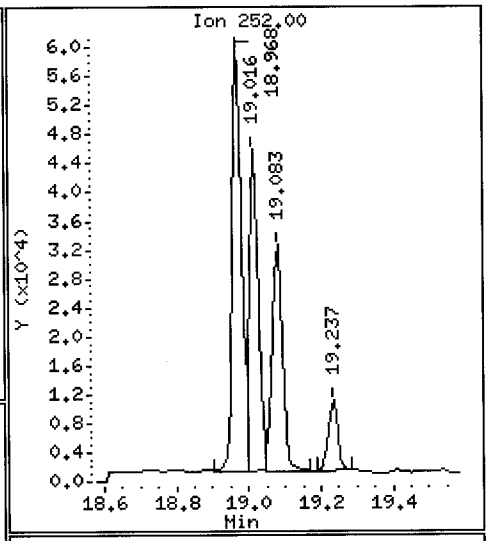
Column phase: Rxi-17Sil MS

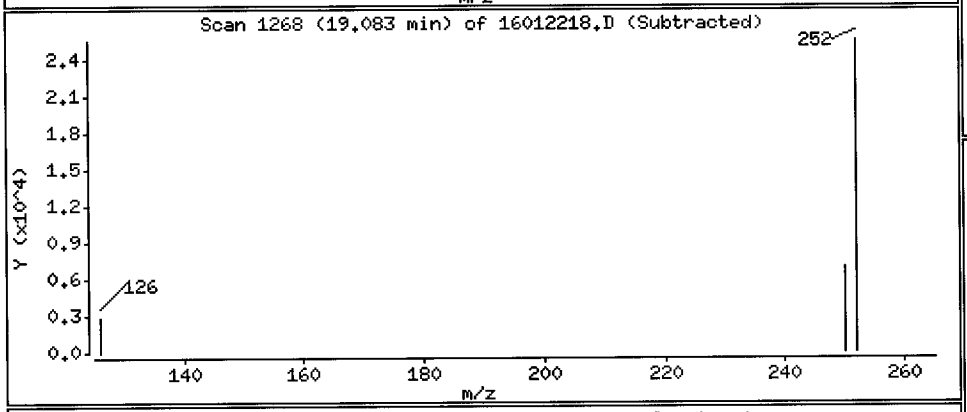
Column diameter: 0.25

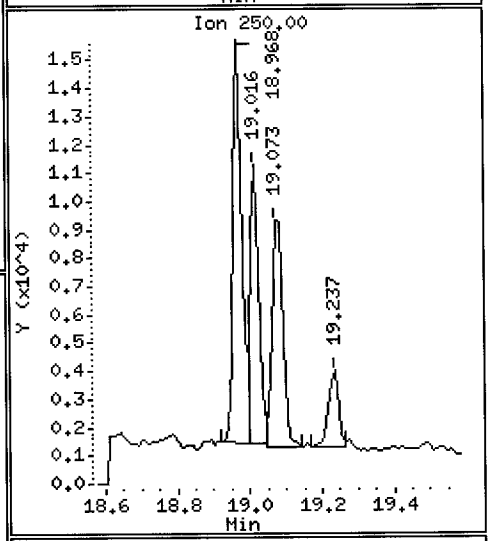
46 Benzo(j)fluoranthene

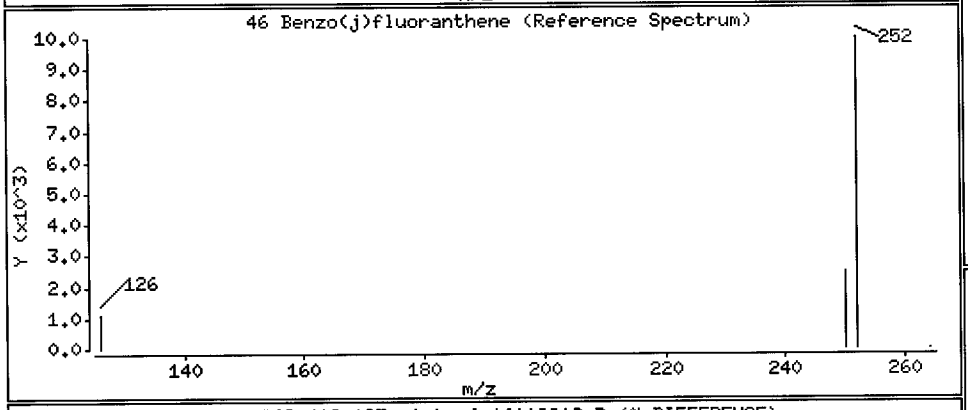
Concentration: 1280 ug/kg

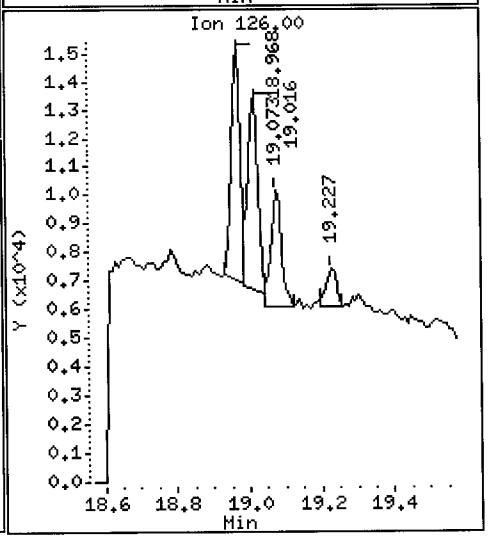


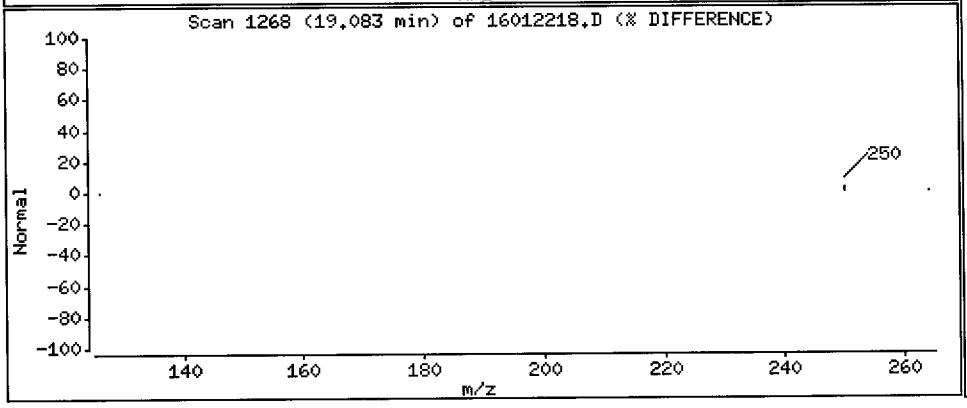












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

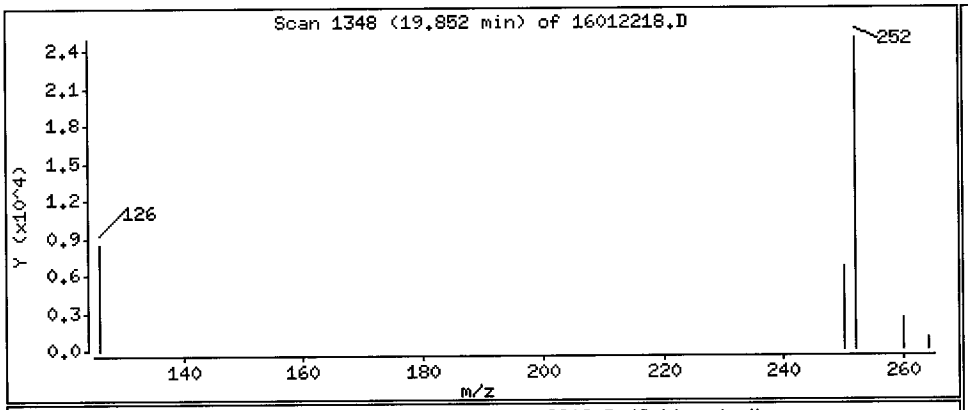
Operator: JW

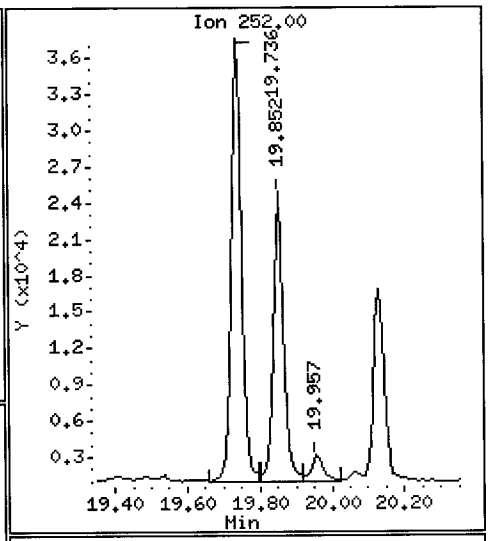
Column phase: Rxi-17Sil MS

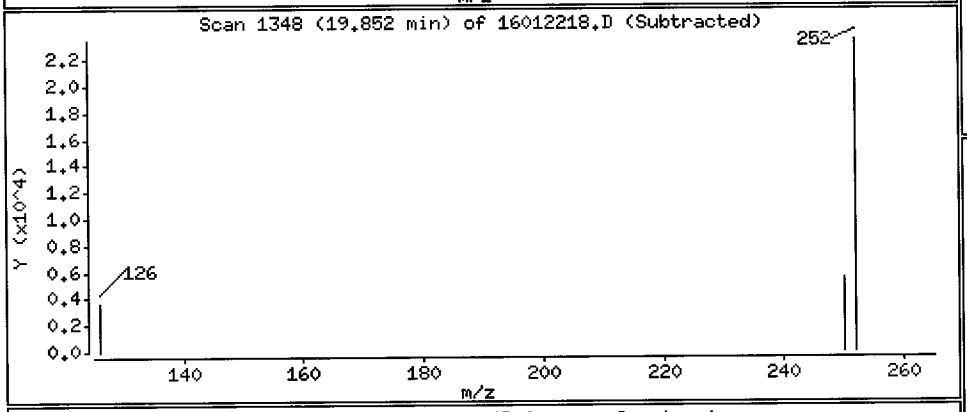
Column diameter: 0.25

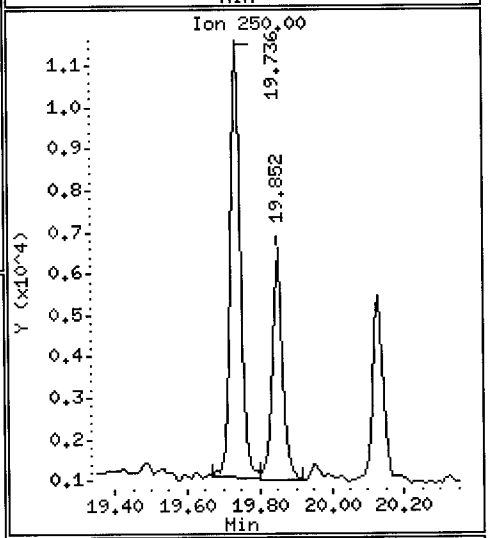
34 Benzo(a)pyrene

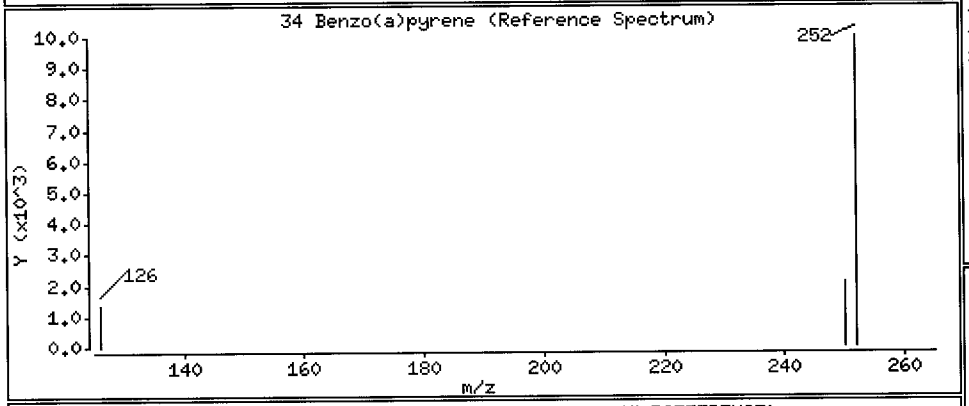
Concentration: 1130 ug/kg

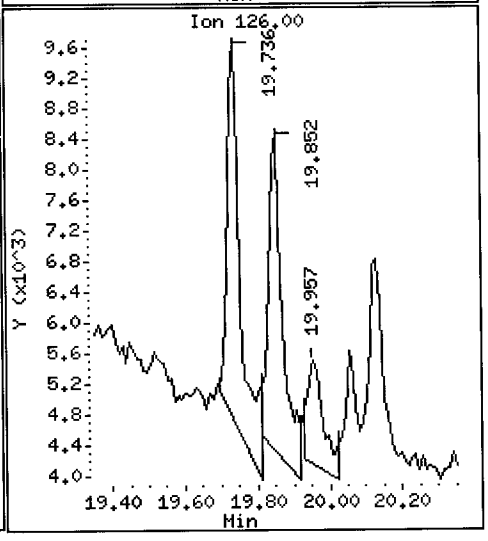


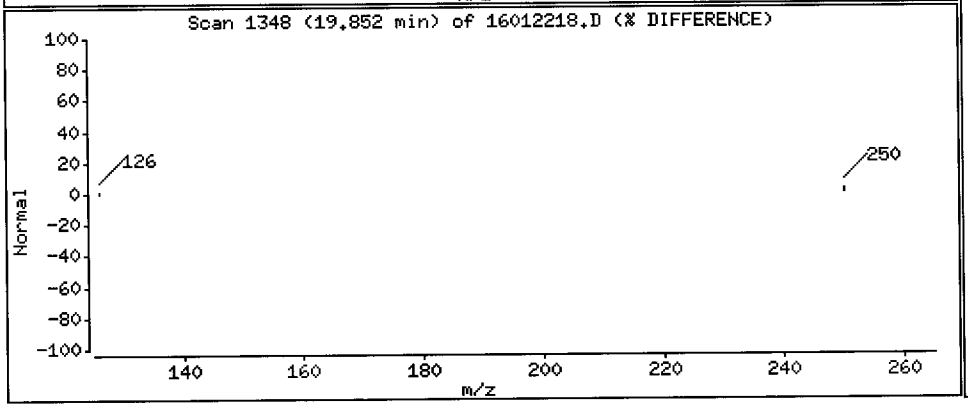












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

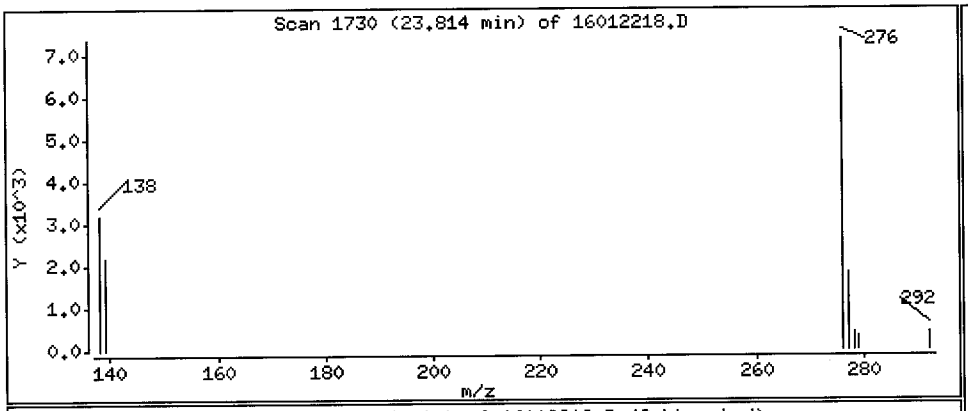
Operator: JW

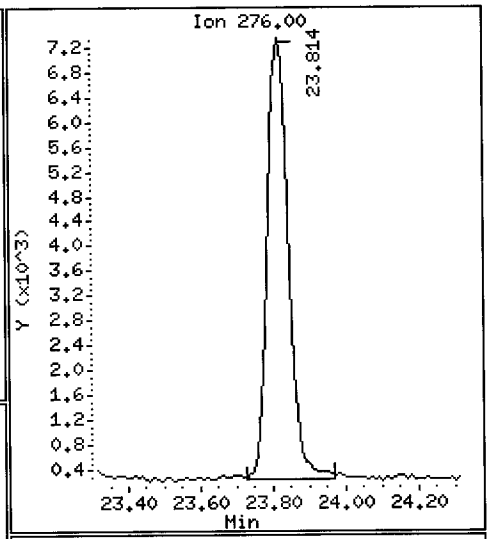
Column phase: Rxi-17Sil MS

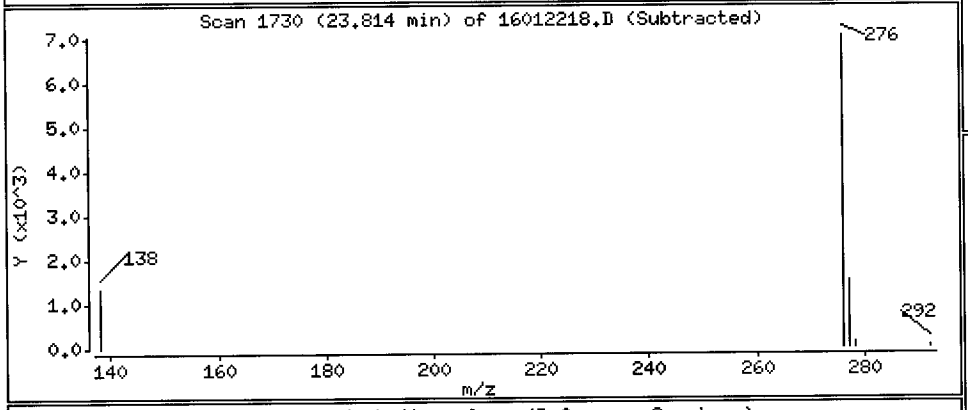
Column diameter: 0.25

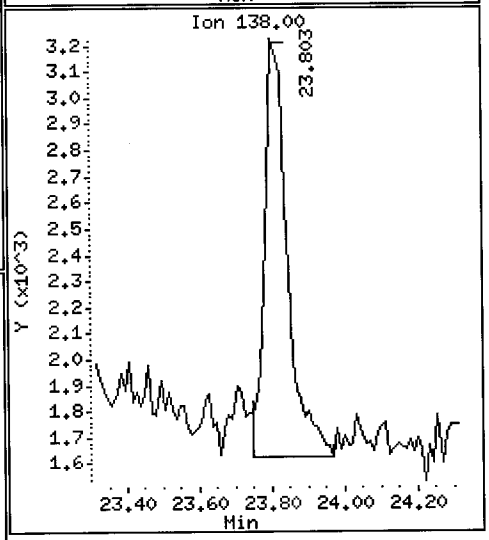
39 Benzo(g,h,i)perylene

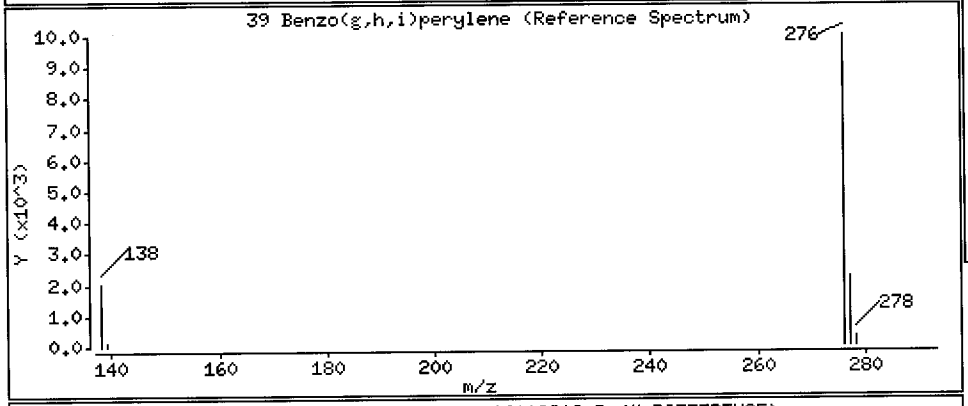
Concentration: 710 ug/kg

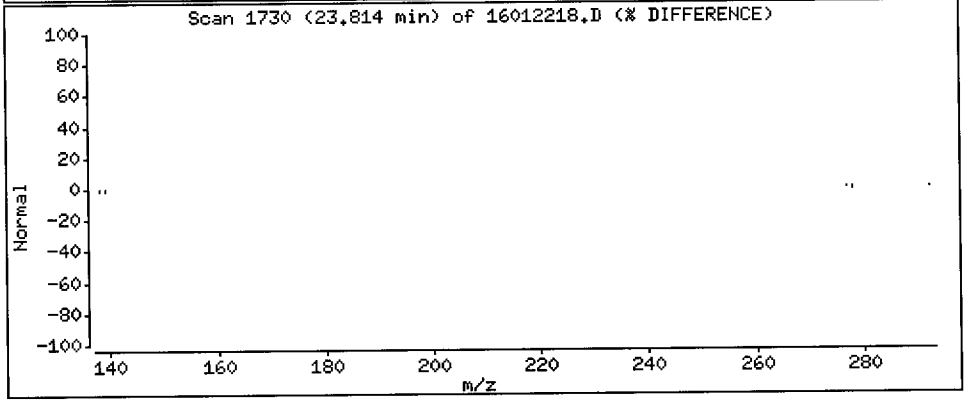












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

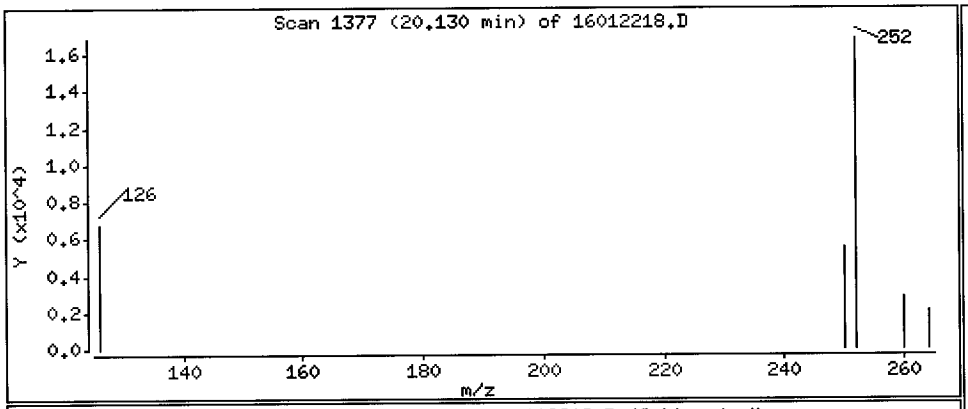
Operator: JW

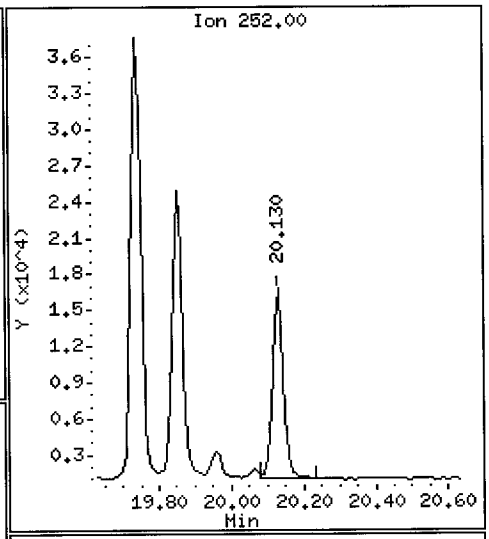
Column phase: Rxi-17Sil MS

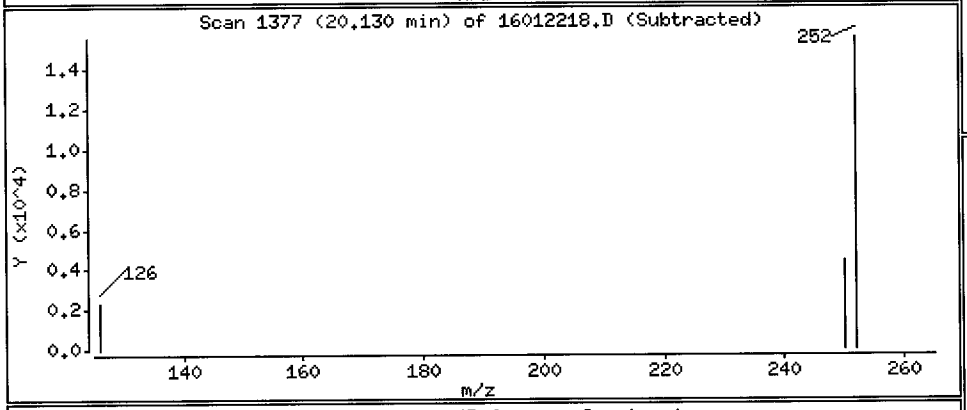
Column diameter: 0.25

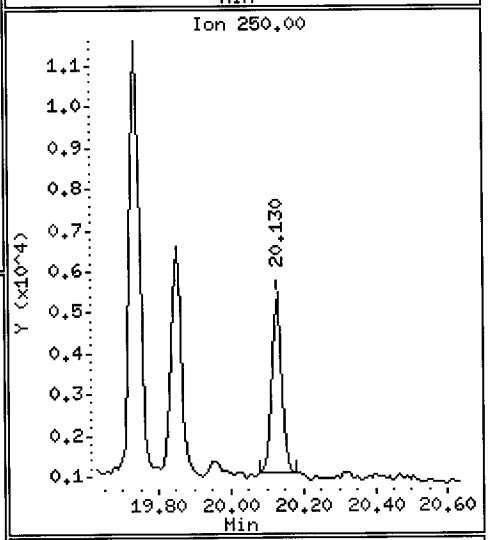
47 Perylene

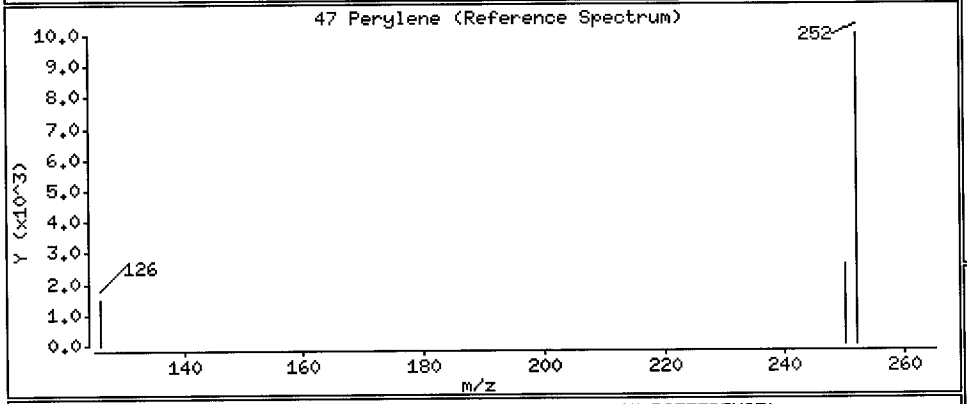
Concentration: 755 ug/kg

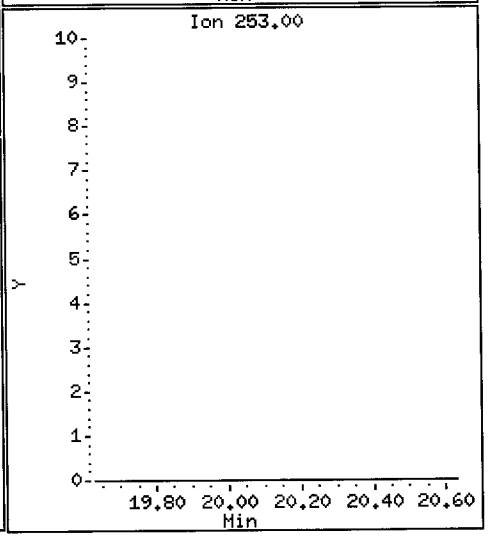


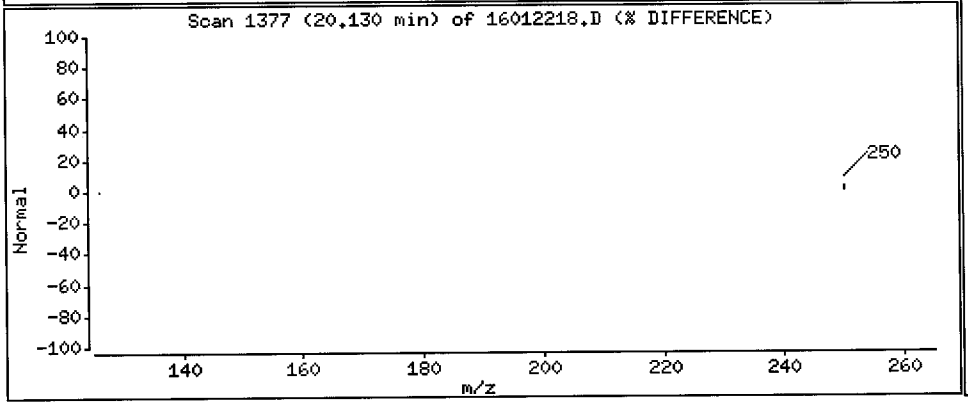












Data File: \\target\share\chem3\nt11.i\20160122.b\16012218.D

Date : 22-JAN-2016 15:59

Client ID: PG-SMA2-4-MUS-COC-1

Instrument: nt11.i

Sample Info: ATSOF

Volume Injected (uL): 2.0

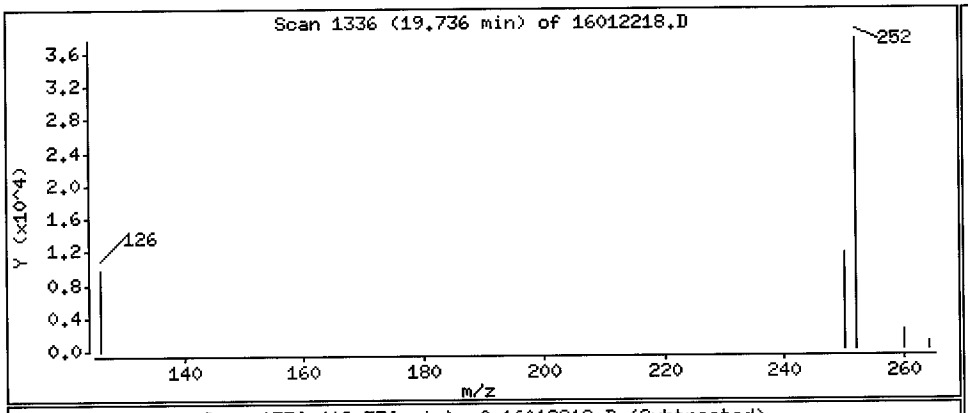
Operator: JW

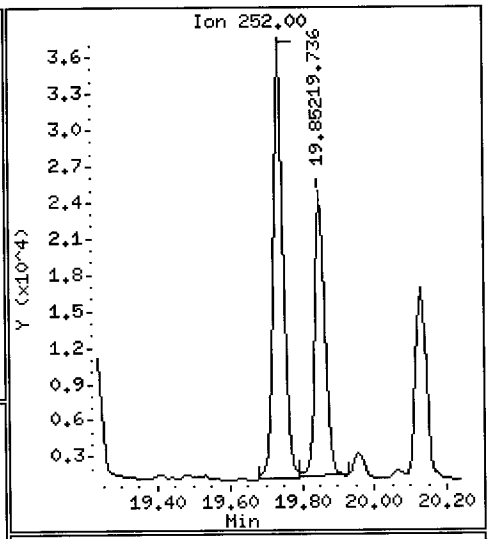
Column phase: Rxi-17Sil MS

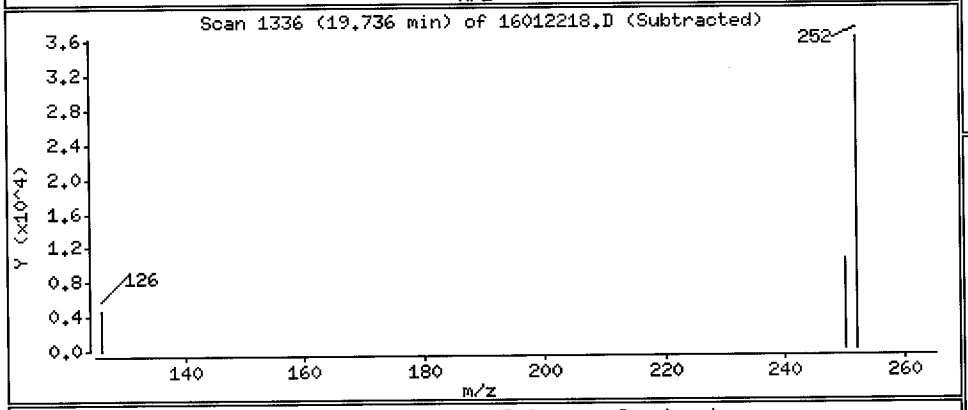
Column diameter: 0.25

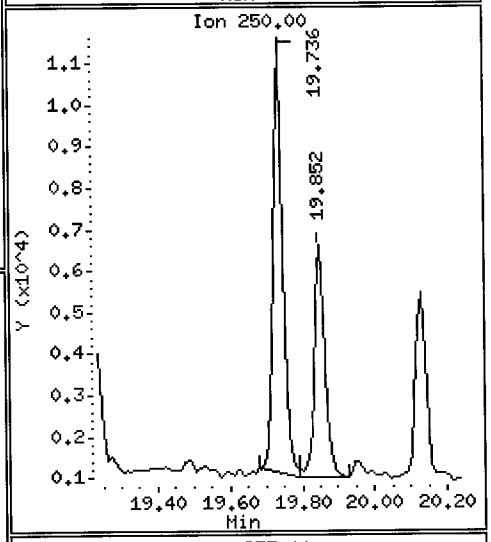
48 Benzo(e)pyrene

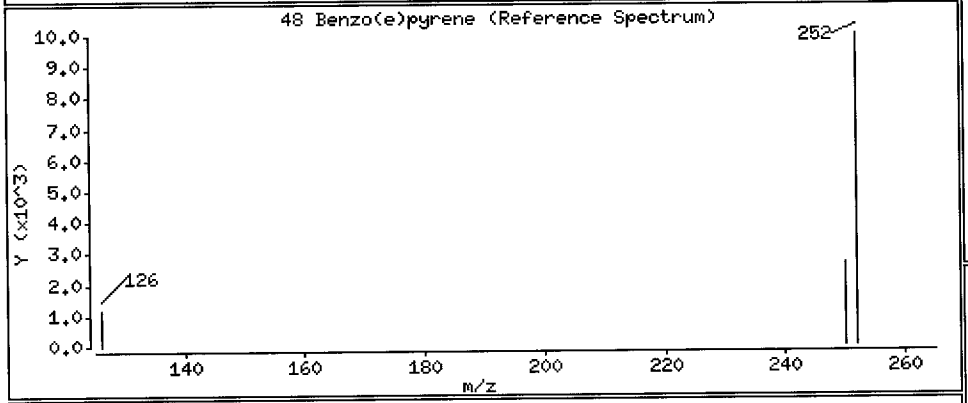
Concentration: 1580 ug/kg

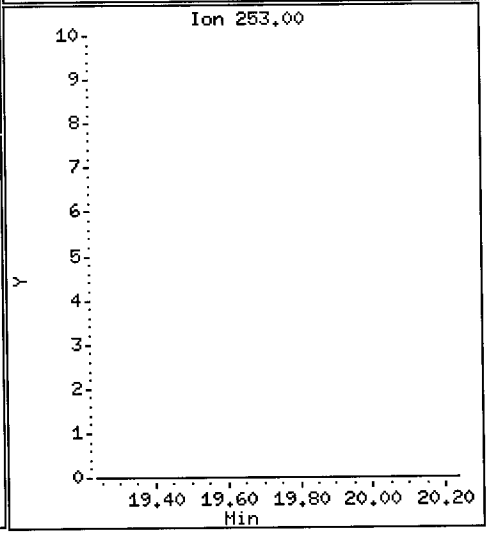


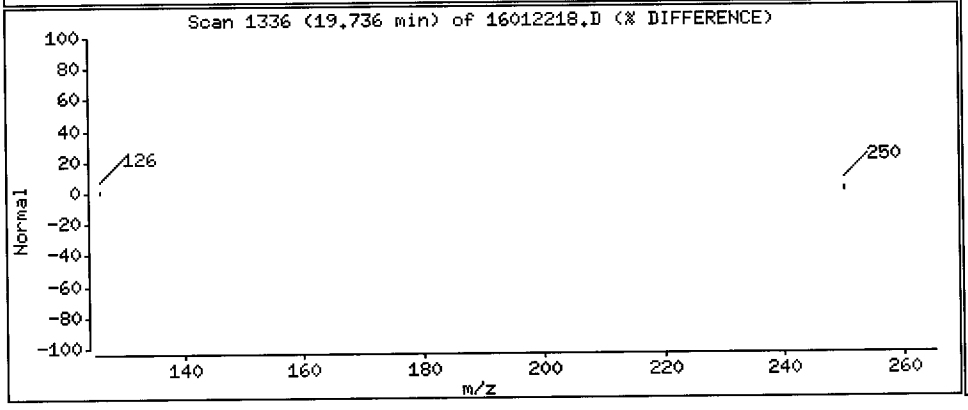












REVIEW SUMMARY FOR FILE - 16012218.D

Lab ID: ATS0F
nt11.i, 20160122.b\lowsim.m, 22-JAN-2016 15:59

RT CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

On Column LOD for nt11.i,20160122.b\lowsim.m,Sublist: PEMD.sub = 3.0000

Exception: Naphthalene 7.0000
Exception: Phenanthrene 2.5000
Exception: Anthracene 2.0000
Exception: Pyrene 4.0000
Exception: Benzo(j)fluoranthene 2.5000
Exception: Benzo(a)pyrene 2.0000
Exception: Perylene 3.5000
Exception: Benzo(e)pyrene 2.0000
Exception: 2-Methylnaphthalene-d10 (Surr) 0.1000
Exception: Dibenzo(a,h)anthracene-d14 (Surr) 0.1000
Exception: Fluoranthene-d10 (Surr) 0.1000

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: ATS0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s): APR4, ATSO

Matrix (circle one)	Soil	Sediment	Oil (Tissue)
Extraction Method	Start Time/Date:	End Time/Date:	
Soxhlet	1148 1/25/16	0610 1/26/16	

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	M	1/25/16
Purified Sand	✓			
Toluene		D005364	M	1/25/16
Hexane		D005304	M	1/25 26/16 (1/27/16 M 1/28/16)
CH_2Cl_2		D004685	M	1/27/16
H_2SO_4		D004364	M	1/26/16
Na_2SO_4		D005308 E000110	M	1/25/16 1/26/16 1/27/16
Glasswool		C003071	M	1/26/16
~~10% $AgNO_3$~~ Corn oil (M 1/25)		J8024	M	1/25/16
Basic Silica		D005278	M	1/27/16
Acid Silica		D004635	M	1/27/16
0% Silica		D004702	M	1/25/16 1/27/16
Activated Florisil		D003219	M	1/27/16
Dual Carbon Column	✓			
Other (98: 2 Hex/DCM)		E000104	M	1/27/16
Nonane		J8006	M	1/27/16

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
	APR4-MB	10.00g	(1) / 2	10uL	0.0	
	OPR	10.00g	1 (2)	10uL	0.0	
~~1~~	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~		
1	A	10.04	(1) / 2	10uL	7.5	
1	ATSO-A	10.00	1 (2)	10uL	8.3	
1	B	10.04	(1) / 2	10uL	8.5	
1	C	10.03	1 (2)	10uL	8.4	
1	D	10.03	(1) / 2	10uL	8.6	
1	E	10.02	1 (2)	10uL	5.8	
1	F	10.02	(1) / 2	10uL	8.8	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		M 1/25/16	M 1/26/16	M 1/27/16	M 1/26/16	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	E000054	2/4ng/mL	1/8/17	M	1/25/16	M x2
Ongoing Precision /Recovery	20 µL	D005453	10/50/100ng/mL	8/20/16	M	1/25/16	M x2
QLS Standard	20 µL	21/	0.5/2.5/5ng/mL				
Clean-up Standard	1.0 mL	E000053	0.8ng/mL	1/8/17	M	1/27/16	M x2
Internal Standard	10 µL		200ng/mL				

Verify Client ID

Analyst/Date: M 1/25/16

Acid Clean (Y/N): (Y)

Analyst/Date: M 1/26/16

Silica-Florisil Y/N

Analyst/Date:

Supervisor Review: _____ Bench Sheet No.: 00266

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: ATSΦ Client ID: Anchor QEA, LLC

Batch ID: _____

Parameter: Dioxin Client Project: Port Gamble clean-up

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
ATSΦ - A-F - NO Client ID Label on the jar for ID check the ID on the Lid of Sample jar matched the Lims Sheets.	M 1/25/16
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Dioxin Raw Data
Initial Calibration

ARI Job ID: ATS0

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin Curve 10/15/15

HR-GC/MS Analyst Notes / Data Review Checklist

ELEMENT/NWA: _____ Client ID: _____

Element Calibration Code: YS00017 METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01** Analysis Start Date: _____

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / _____	Signal / Noise ≥ 3.0?	Y / N / _____
TCDD /TCDF Resolution ≤ 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 ≤ 25%?	NA / _____
EPA Case #	NA/_____	Technical Review?	_____/_____

Detail problems, corrective actions and/or other pertinent information below:

- TCDD/TCDF are 5 point curves: CS1 - CS5.
  All others are 6 points: CSL - CS5.
- All cpds < 20% RSD. All curves Avg.

(Review 1)Analyst: _____ **Date:** 10/16/15

(Review 2)Peer: _____ **Date:** _____

(Final Review)Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 10/15/15 Analysis: Dioxins Analyst: MK

GC Program: 8290D Column No: DB20 Column Type: RTX Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): oct0715_1-5 Detector Voltage: 330

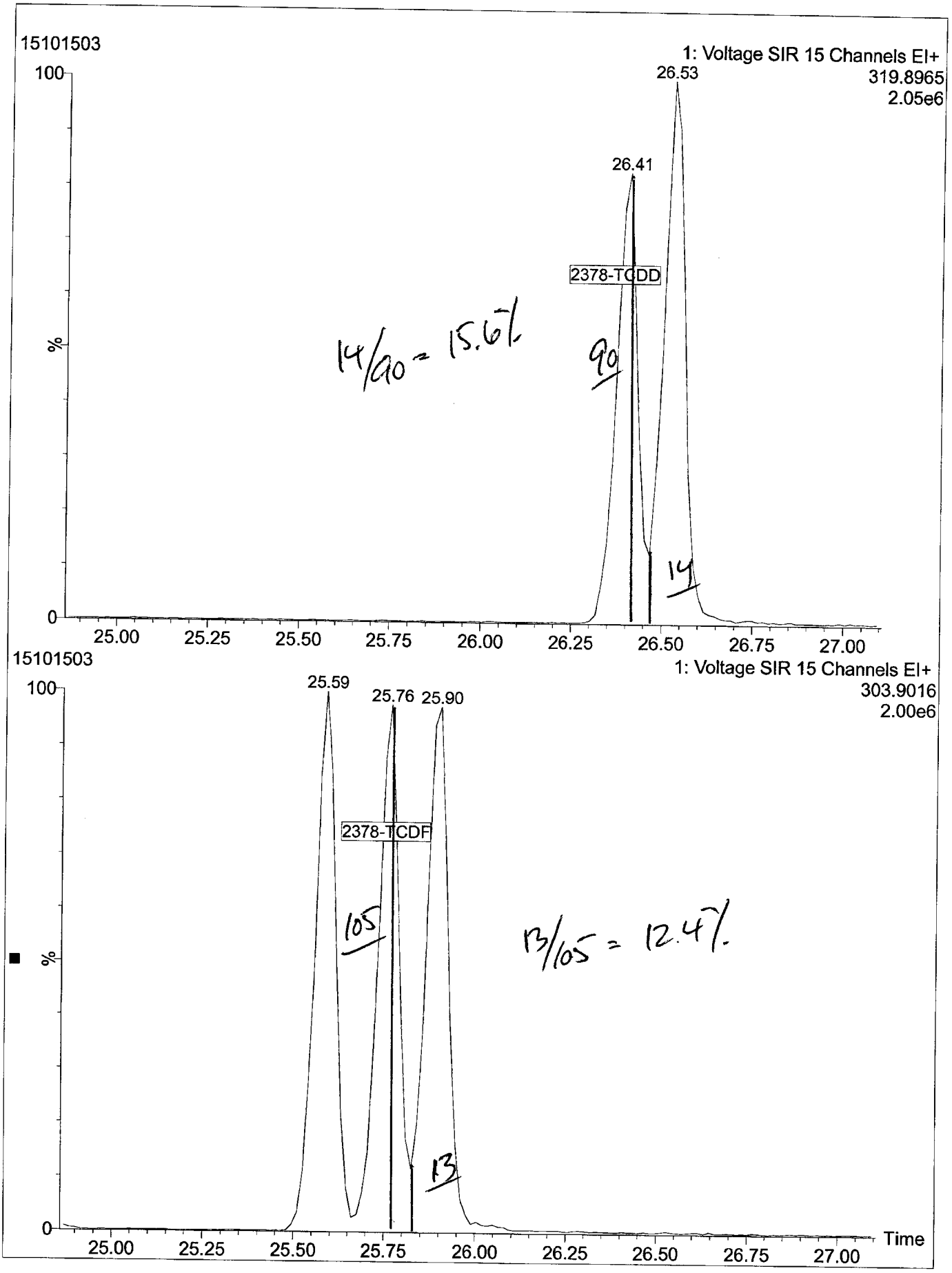
Resolution Check Files: 14:08, 21:21 Curve Date: 10/15/15

IS/SS	Ical/Ccal	LCS/ICV
	D623	
D1086	C125 D621	C2712
	D4214 B2539	
	B2536	
	C3204	

#	Acq.Date	Acq.Time	File	ID	Comments
1	15-Oct-15	13:06:33	15101502	CS3WD	
2	15-Oct-15	14:11:47	15101503	ISC01	
3	15-Oct-15	15:02:44	15101504	CSL	
4	15-Oct-15	16:02:00	15101505	CS1	
5	15-Oct-15	16:52:59	15101506	CS2	
6	15-Oct-15	17:45:44	15101507	CS3	
7	15-Oct-15	18:38:36	15101508	CS4	
8	15-Oct-15	19:31:22	15101509	CS5	
9	15-Oct-15	20:24:17	15101510	ICV	
10	15-Oct-15	21:21:51	15101511	ISC02	

MK 10/16/15

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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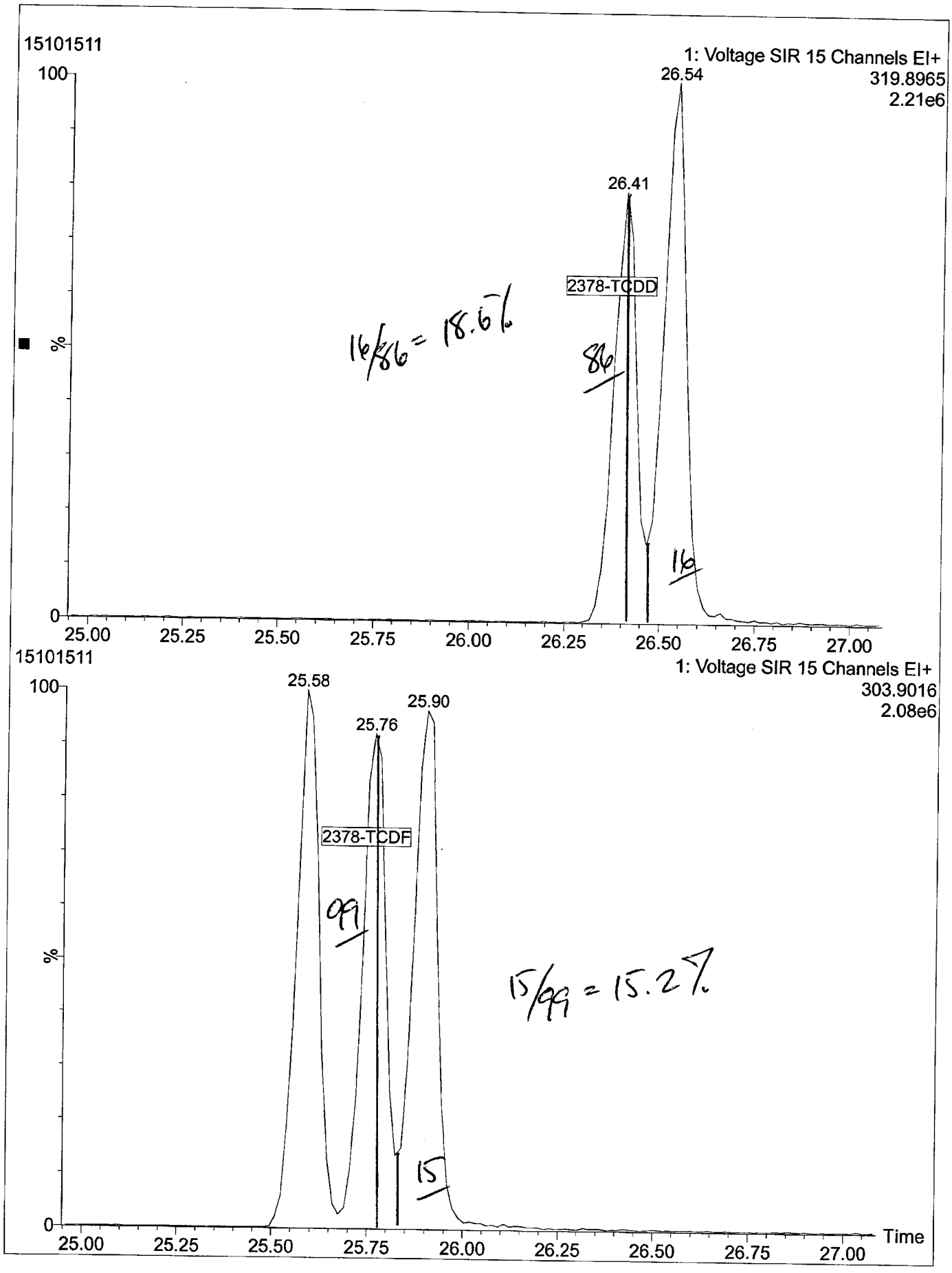
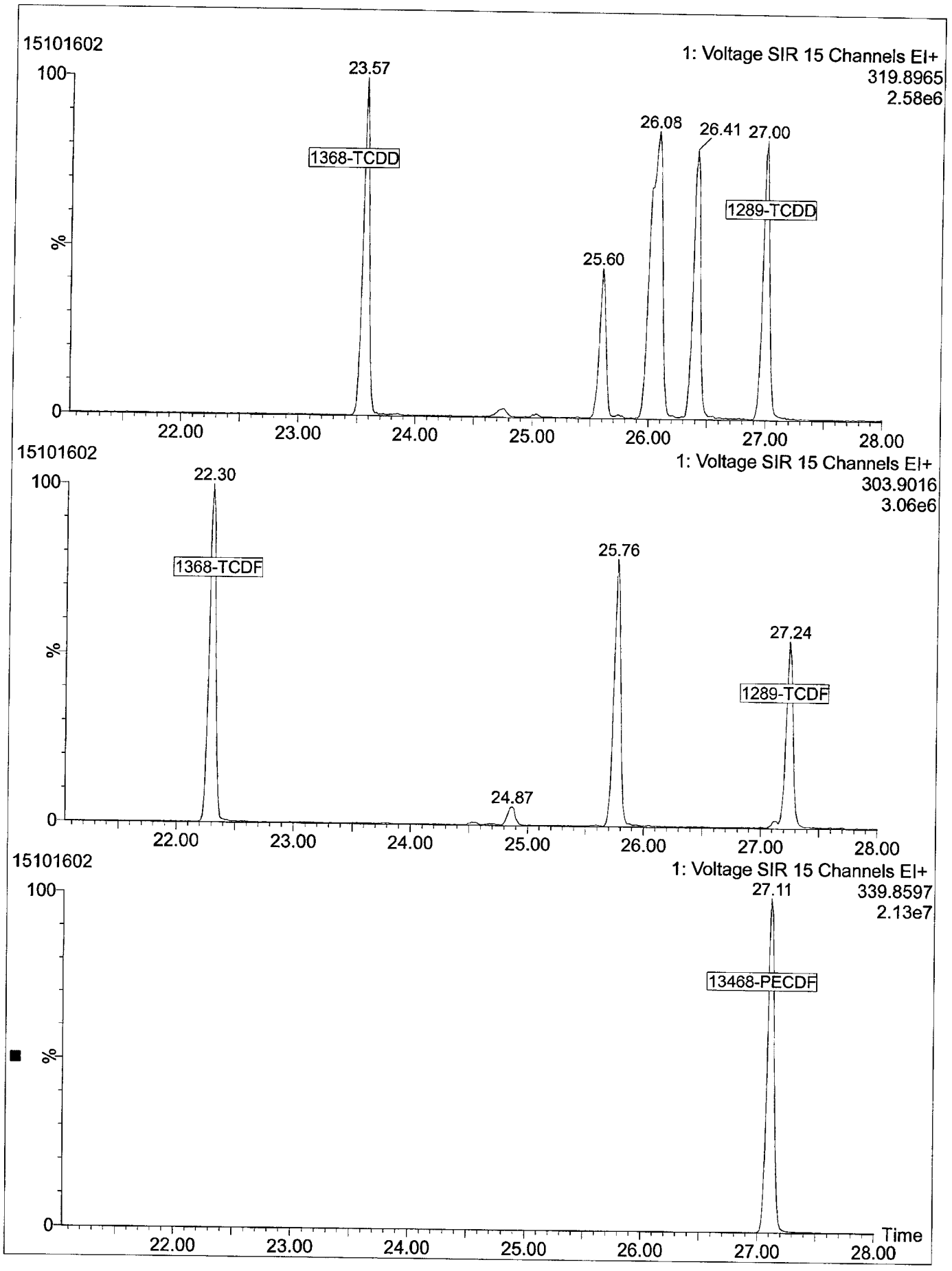
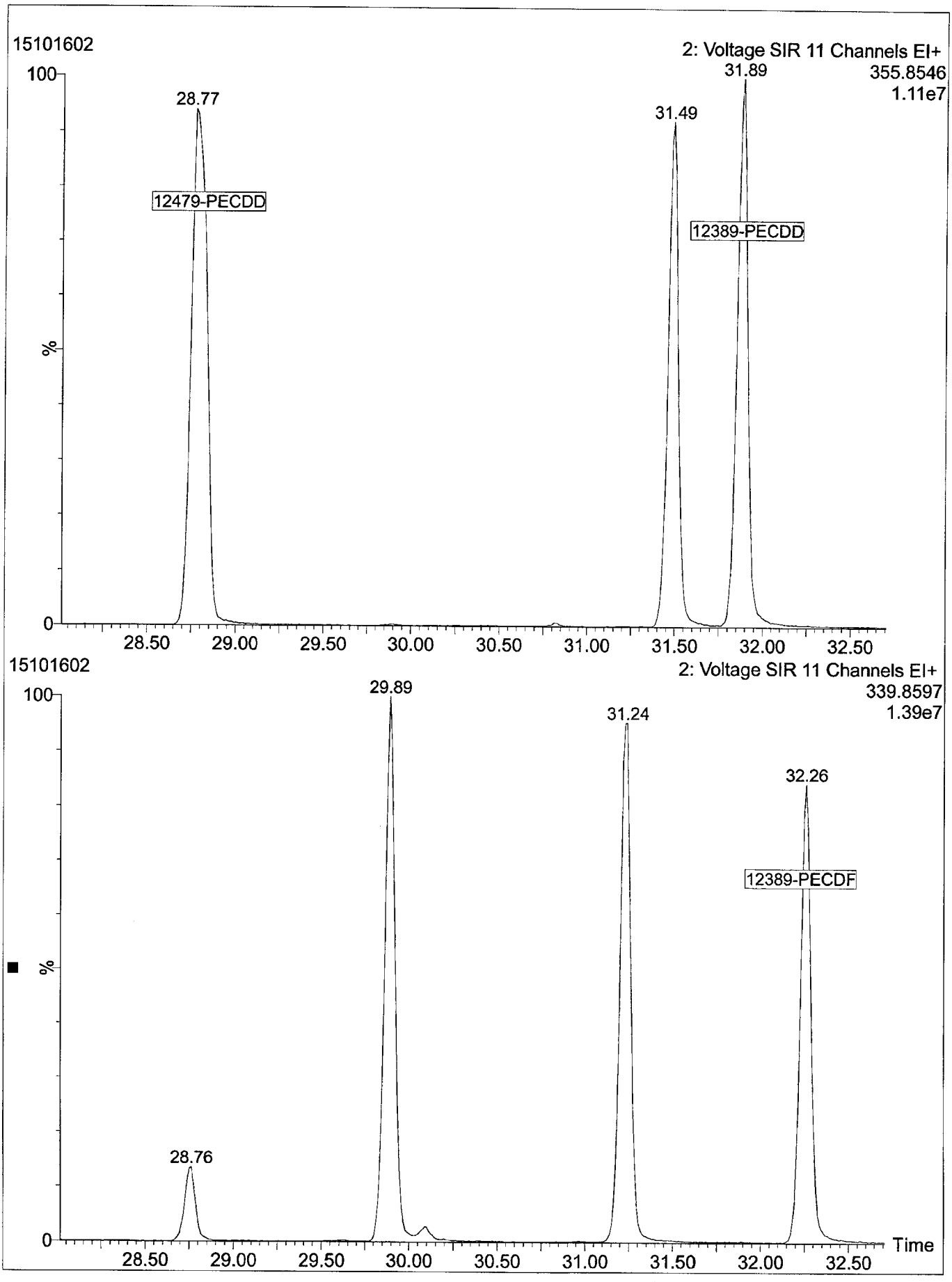
1: Voltage SIR 15 Channels EI+
319.8965
2.05e6
26.53
26.41
2378-TCDD
14/90 = 15.6%
90
14
100
%
0
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
15101503
1: Voltage SIR 15 Channels EI+
303.9016
2.00e6
25.59
25.76
25.90
2378-TCDF
105
13/105 = 12.4%
13
100
%
0
Time
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00


15101511
1: Voltage SIR 15 Channels EI+
319.8965
2.21e6
26.54
26.41
2378-TCDD
16/86 = 18.6%
86
16
100
%
0
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00
15101511
1: Voltage SIR 15 Channels EI+
303.9016
2.08e6
25.58
25.90
25.76
2378-TCDF
99
15
15/99 = 15.2%
100
%
0
Time
25.00
25.25
25.50
25.75
26.00
26.25
26.50
26.75
27.00


15101602
1: Voltage SIR 15 Channels EI+
319.8965
2.58e6
100
%
0
23.57
1368-TCDD
25.60
26.08
26.41
27.00
1289-TCDD
22.00
23.00
24.00
25.00
26.00
27.00
28.00
15101602
1: Voltage SIR 15 Channels EI+
303.9016
3.06e6
100
%
0
22.30
1368-TCDF
24.87
25.76
27.24
1289-TCDF
22.00
23.00
24.00
25.00
26.00
27.00
28.00
15101602
1: Voltage SIR 15 Channels EI+
339.8597
2.13e7
100
%
0
27.11
13468-PECDF
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00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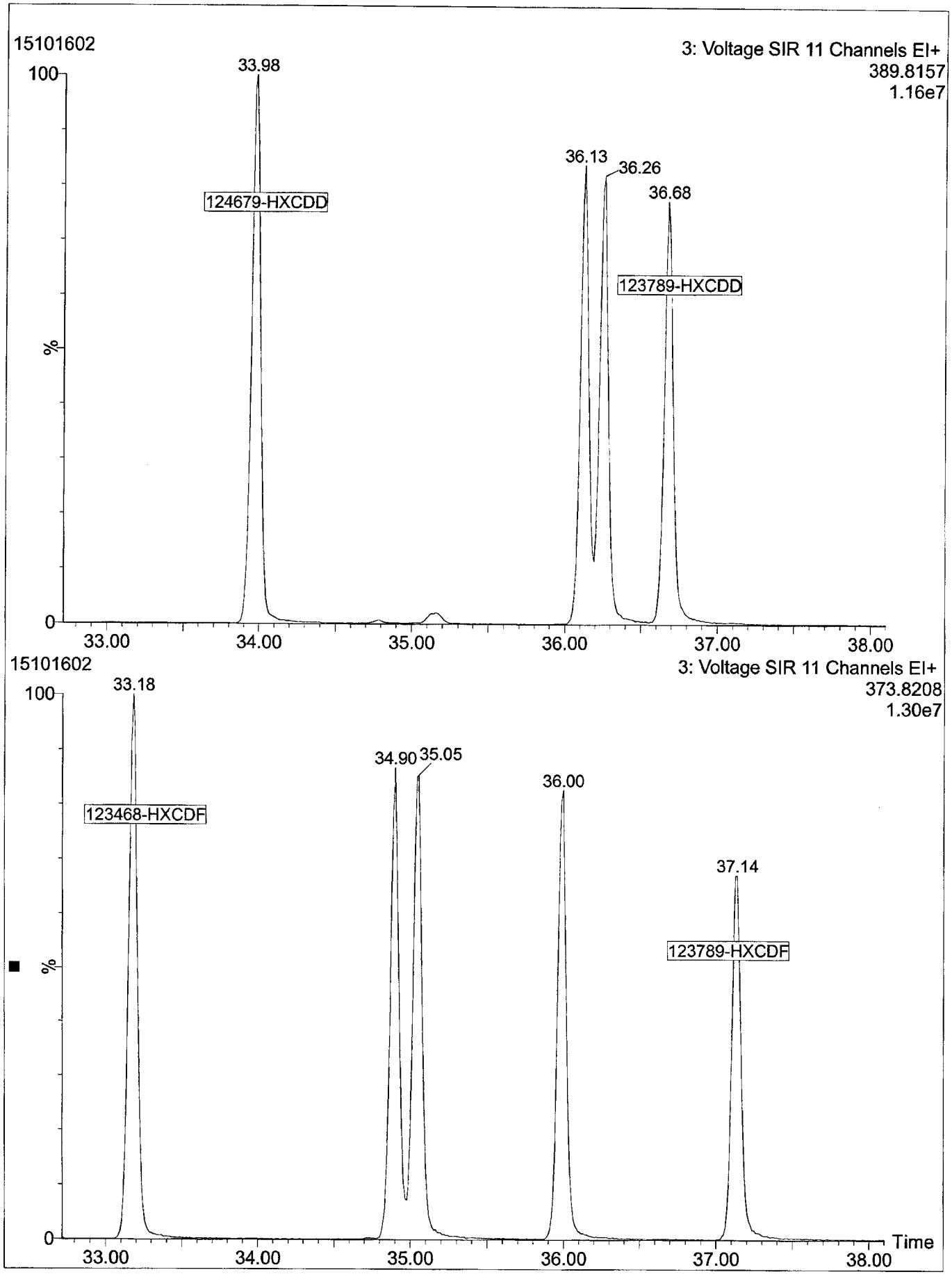
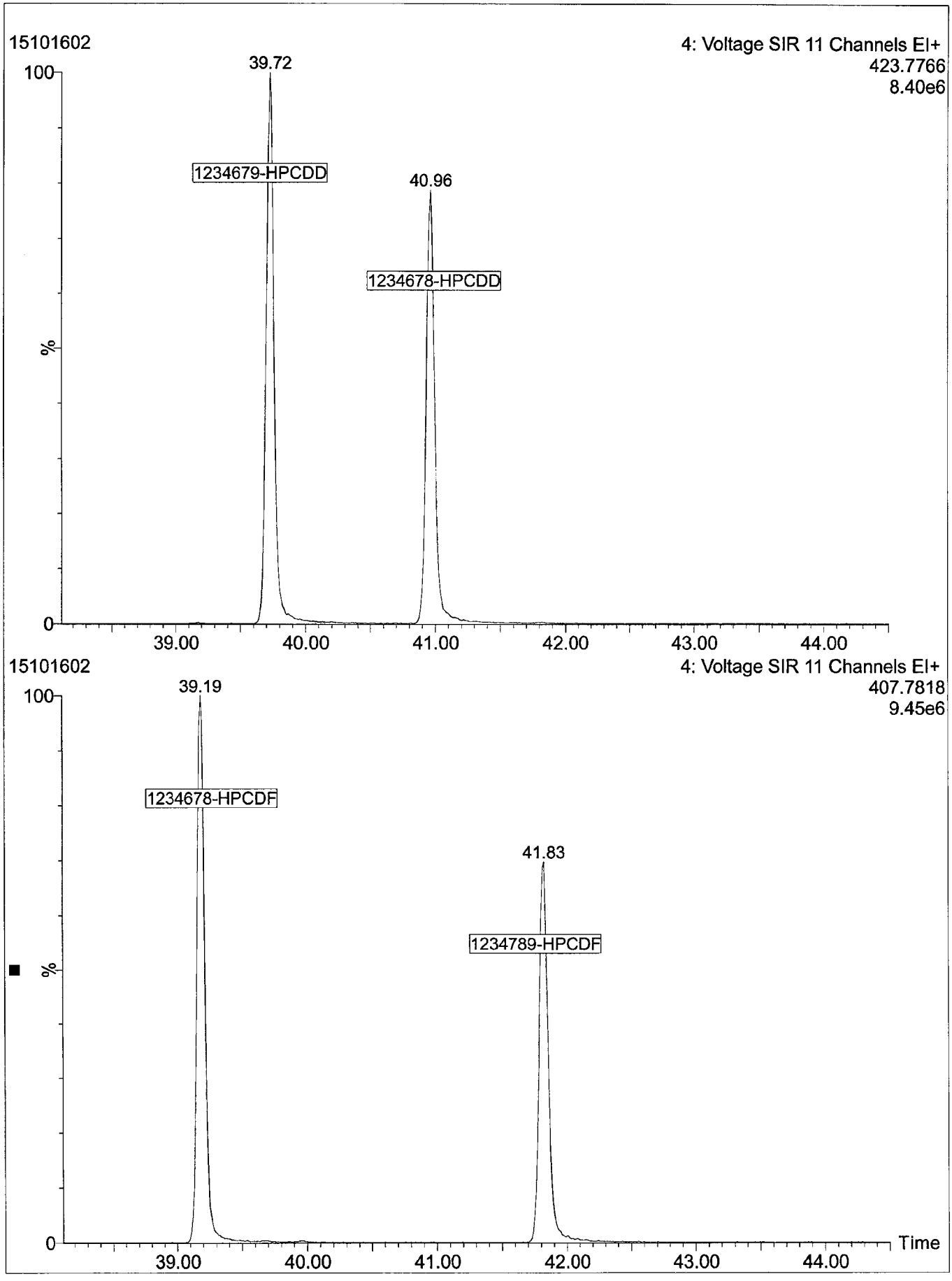
2: Voltage SIR 11 Channels EI+
355.8546
1.11e7
100
28.77
31.89
31.49
12479-PECDD
12389-PECDD
%
0
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
15101602
2: Voltage SIR 11 Channels EI+
339.8597
1.39e7
100
29.89
31.24
32.26
12389-PECDF
28.76
%
0
Time
28.50
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50


15101602
3: Voltage SIR 11 Channels EI+
389.8157
1.16e7
100
33.98
124679-HXCDD
36.13
36.26
36.68
123789-HXCDD
%
0
33.00
34.00
35.00
36.00
37.00
38.00
15101602
3: Voltage SIR 11 Channels EI+
373.8208
1.30e7
100
33.18
123468-HXCDF
34.90
35.05
36.00
37.14
123789-HXCDF
%
0
Time
33.00
34.00
35.00
36.00
37.00
38.00


15101602
4: Voltage SIR 11 Channels EI+
423.7766
8.40e6
39.72
1234679-HPCDD
40.96
1234678-HPCDD
100
%
0
39.00
40.00
41.00
42.00
43.00
44.00
15101602
4: Voltage SIR 11 Channels EI+
407.7818
9.45e6
39.19
1234678-HPCDF
41.83
1234789-HPCDF
100
%
0
Time
39.00
40.00
41.00
42.00
43.00
44.00

Quantify Audit Report MassLynx MassLynx V4.1 SCN909
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 11:05:14 Pacific Daylight Time

Event	Details	Sample ID
Process Quantify		
Process Integrate		
Process Extract		
Process Calibrate		
Pre modification peak	Sample:15101504, Compound:HF, RT:35.021	1
Pre modification peak	Sample:15101504, Compound:HF, RT:35.032	1
Pre modification peak	Sample:15101505, Compound:TF, RT:25.749	2
Pre modification peak	Sample:15101505, Compound:HPF, RT:41.805	2
Pre modification peak	Sample:15101506, Compound:TF, RT:25.735	3
Pre modification peak	Sample:15101506, Compound:TF, RT:25.735	3
Pre modification peak	Sample:15101504, Compound:PF, RT:31.206	1
Pre modification peak	Sample:15101504, Compound:HD, RT:36.654	1
Pre modification peak	Sample:15101505, Compound:OD, RT:46.682	2
Peak modified	Sample:15101504, Compound:HF, RT:35.021	1
Peak modified	Sample:15101504, Compound:HF, RT:35.032	1
Peak modified	Sample:15101505, Compound:TF, RT:25.749	2
Peak modified	Sample:15101505, Compound:HPF, RT:41.805	2
Peak modified	Sample:15101506, Compound:TF, RT:25.735	3
Peak modified	Sample:15101506, Compound:TF, RT:25.735	3
Peak modified	Sample:15101506, Compound:TF, RT:25.735	3
Peak modified	Sample:15101504, Compound:PF, RT:31.206	1
Peak modified	Sample:15101504, Compound:HD, RT:36.654	1
Peak modified	Sample:15101505, Compound:OD, RT:46.682	2
Peak deleted	Sample:15101504, Compound:TF, RT:25.734	1
Peak deleted	Sample:15101504, Compound:TD, RT:26.377	1
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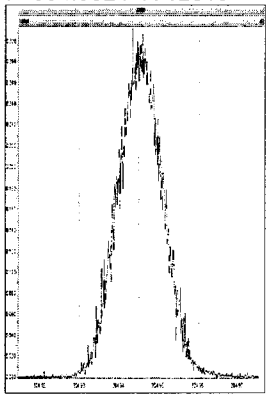

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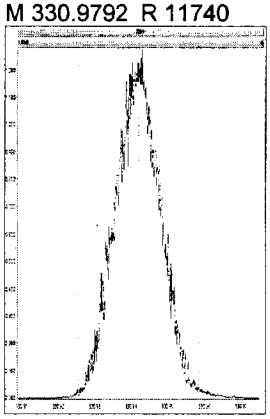

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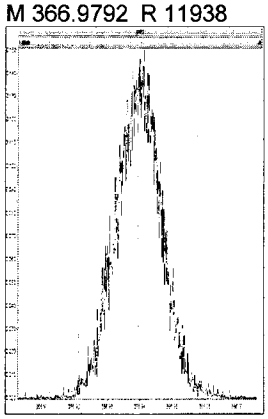

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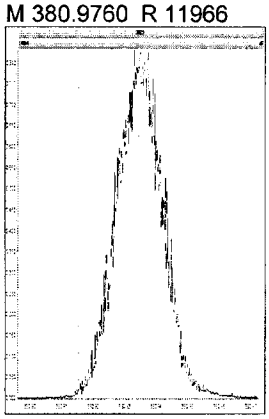

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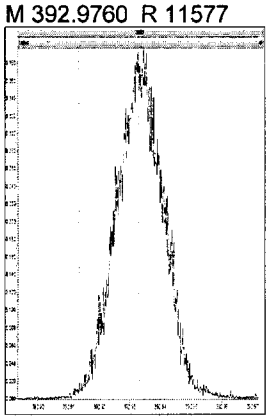

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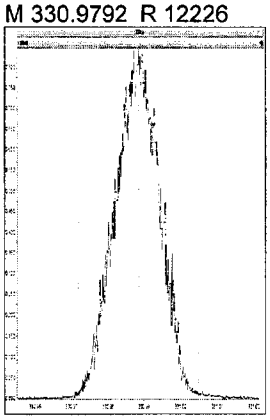

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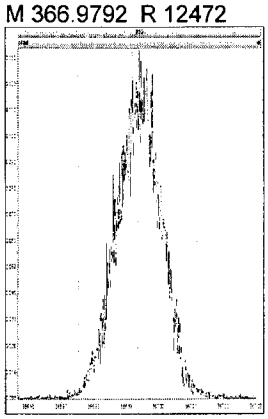

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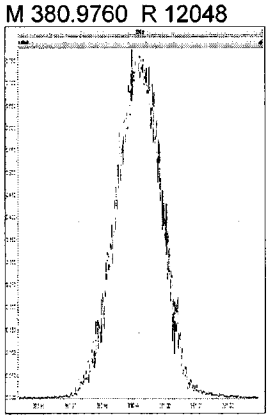

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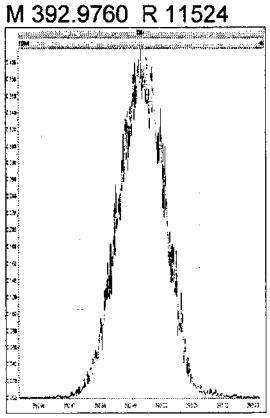

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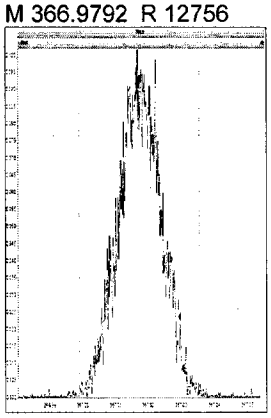

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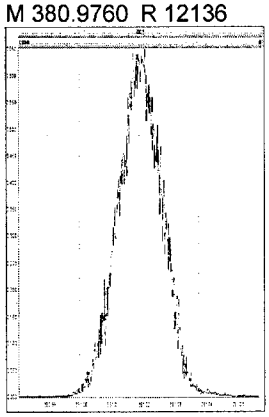

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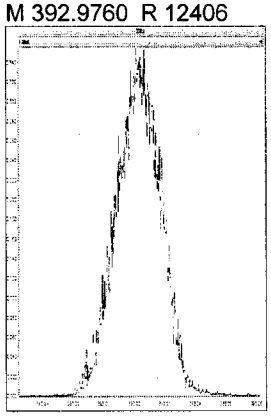

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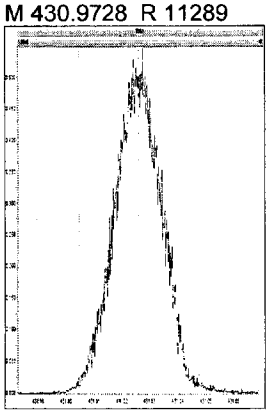

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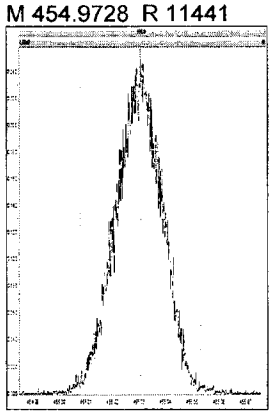

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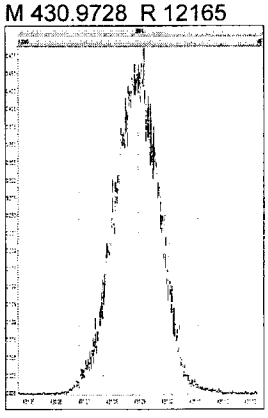

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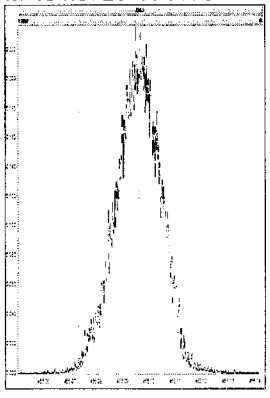

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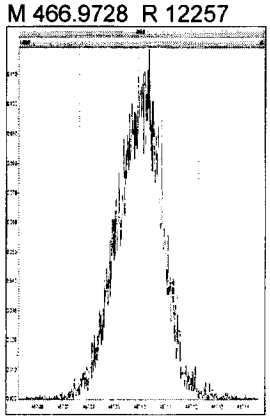

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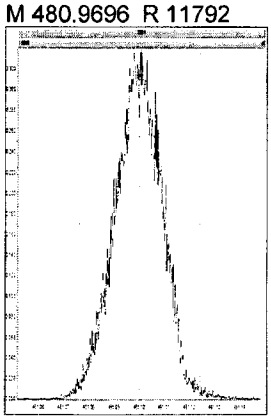

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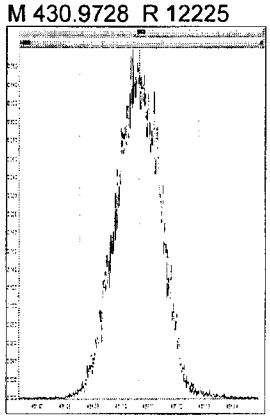

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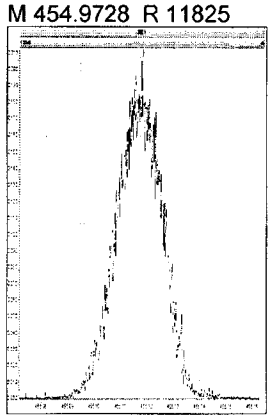

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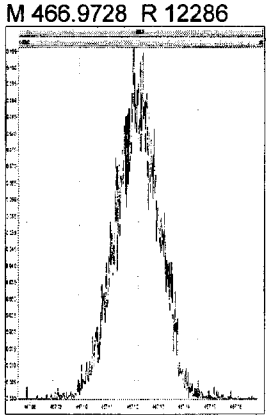

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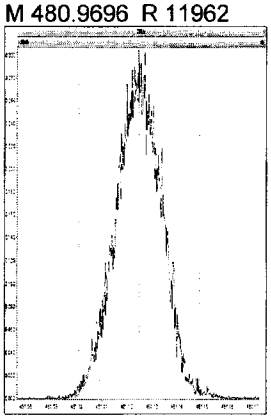

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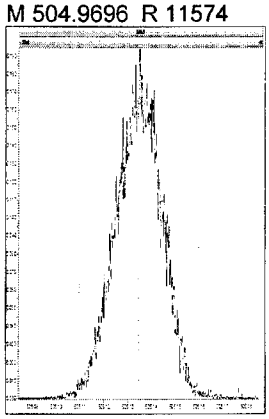

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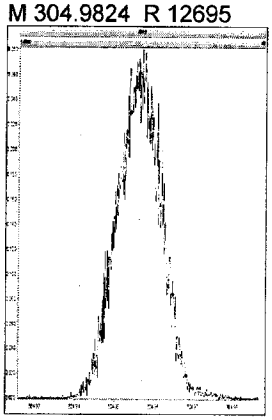

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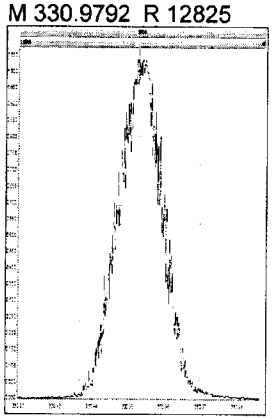

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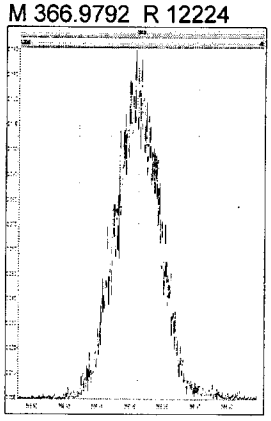

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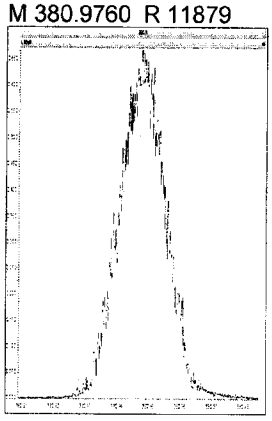

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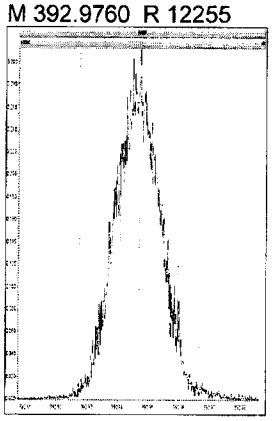

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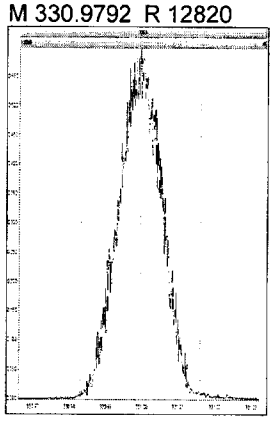
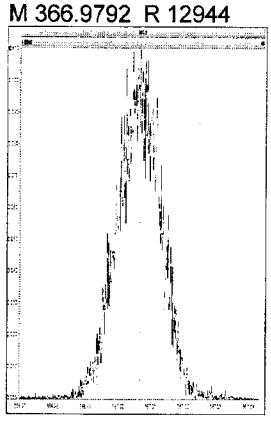
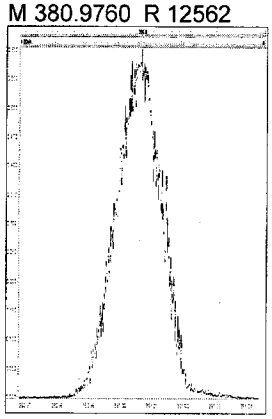


M 366.9792 R 12944



M 380.9760 R 12562



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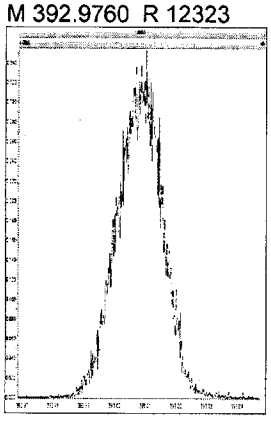

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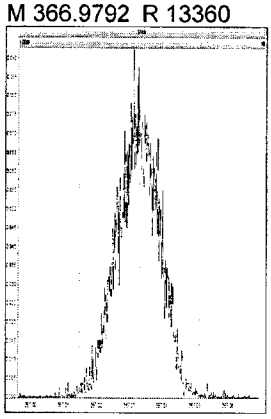

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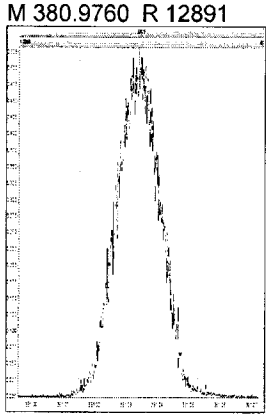
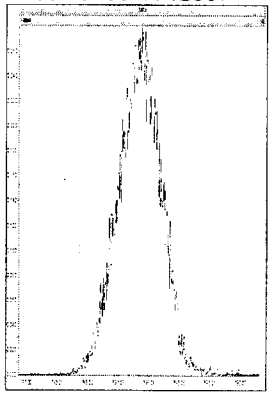
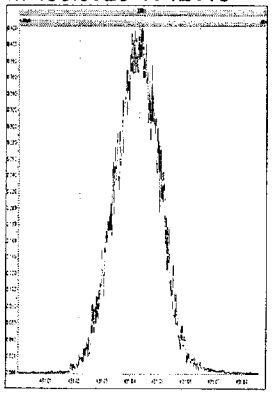


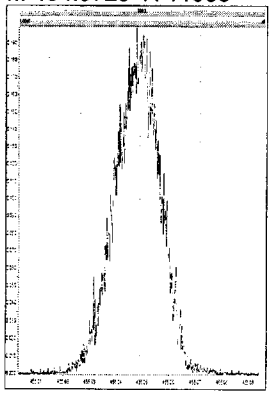
M 392.9760 R 12667



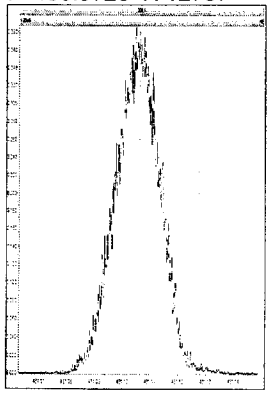
M 430.9728 R 12118



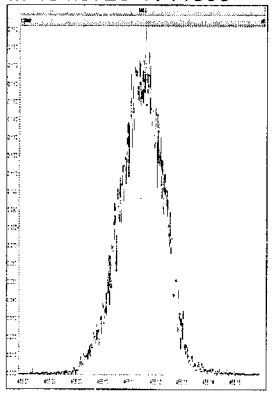
M 454.9728 R 11933



M 430.9728 R 12757

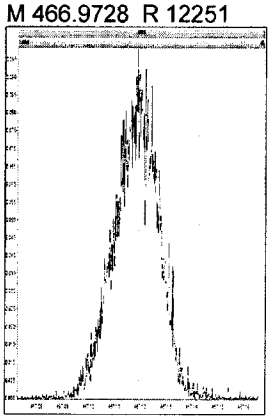


M 454.9728 R 11990

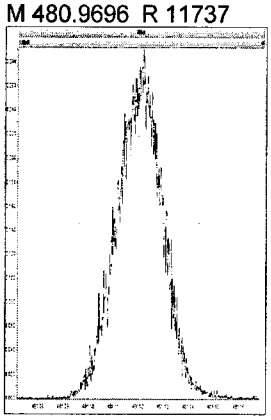


Printed: Thursday, October 15, 2015 21:21:49 Pacific Daylight Time

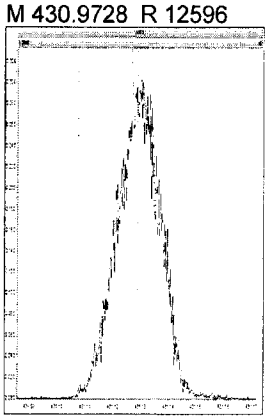
M 466.9728 R 12251



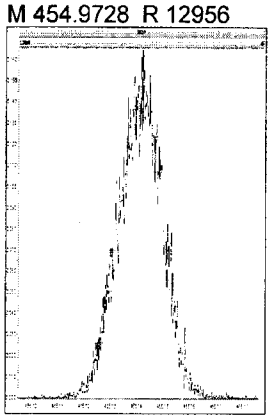
M 480.9696 R 11737



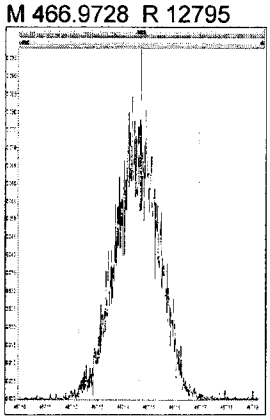
M 430.9728 R 12596



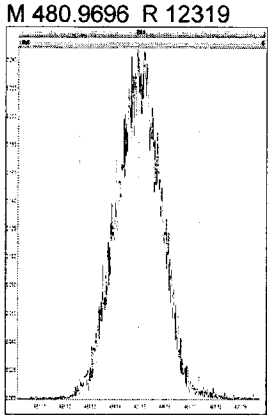
M 454.9728 R 12956



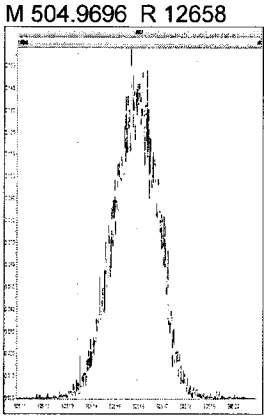
M 466.9728 R 12795



M 480.9696 R 12319



M 504.9696 R 12658



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, 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					0.827		0.770	485	1056						
12378-PeCDF	29.869	1.000	6.57e3	4.76e3	0.824	1.382	1.550	904	1177	8.53e4	6.51e4	94.4	NO	0.474	0.474
23478-PeCDF	31.206	1.000	6.69e3	4.60e3	0.850	1.454	1.550	904	1177	1.02e5	6.96e4	112.6	NO	0.475	0.475
123478-HxCDF	34.867	1.000	5.40e3	4.39e3	0.973	1.230	1.240	744	561	7.07e4	5.60e4	95.0	NO	0.474	0.474
234678-HxCDF	35.963	1.000	5.26e3	4.61e3	1.025	1.141	1.240	744	561	7.05e4	7.02e4	94.7	NO	0.470	0.470
123678-HxCDF	35.021	1.000	5.63e3	5.10e3	0.953	1.105	1.240	744	561	8.34e4	7.01e4	112.0	NO	0.472	0.472
123789-HxCDF	37.103	1.000	5.14e3	4.39e3	0.956	1.170	1.240	744	561	7.11e4	6.09e4	95.6	NO	0.520	0.520
1234678-HpCDF	39.164	1.000	4.92e3	5.13e3	1.153	0.960	1.050	578	517	7.40e4	8.02e4	128.0	NO	0.489	0.489
1234789-HpCDF	41.795	1.000	3.51e3	3.75e3	1.131	0.935	1.050	578	517	4.39e4	5.17e4	75.9	NO	0.450	0.450
OCDF	46.943	1.006	6.33e3	7.56e3	1.023	0.838	0.890	720	944	6.25e4	7.69e4	86.8	NO	0.907	0.907
2378-TCDD					1.023		0.770	1054	605						
12378-PeCDD	31.469	1.001	5.05e3	3.20e3	0.939	1.581	1.550	992	441	6.91e4	5.01e4	69.6	NO	0.476	0.476
123478-HxCDD	36.106	1.001	4.40e3	3.70e3	0.963	1.188	1.240	776	794	5.97e4	5.71e4	77.0	NO	0.478	0.478
123678-HxCDD	36.237	1.001	4.76e3	4.01e3	0.894	1.186	1.240	776	794	6.50e4	5.95e4	83.8	NO	0.504	0.504
123789-HxCDD	36.654	1.012	4.61e3	3.47e3	0.900	1.327	1.240	776	794	6.29e4	5.45e4	81.0	NO	0.485	0.485
1234678-HpCDD	40.940	1.000	3.51e3	3.46e3	0.964	1.015	1.050	577	531	4.71e4	3.99e4	81.6	NO	0.463	0.463
OCDD	46.674	1.000	7.05e3	7.69e3	0.969	0.917	0.890	531	718	6.90e4	7.76e4	130.0	NO	1.016	1.016
13C-2378-TCDF	25.719	1.006	1.59e6	2.05e6	1.502	0.777	0.770	4767	2478	2.19e7	2.83e7	4595.4	NO		101.097
13C-12378-PeCDF	29.858	1.168	1.79e6	1.11e6	1.215	1.603	1.550	3616	2786	2.42e7	1.54e7	6685.8	NO		99.644
13C-23478-PeCDF	31.195	1.221	1.71e6	1.09e6	1.181	1.573	1.550	3616	2786	2.45e7	1.56e7	6762.9	NO		98.978
13C-123478-HxCDF	34.856	0.951	7.18e5	1.41e6	1.246	0.511	0.510	2704	5337	1.02e7	1.98e7	3775.3	NO		100.653
13C-123678-HxCDF	35.010	0.955	8.08e5	1.58e6	1.375	0.512	0.510	2704	5337	1.09e7	2.13e7	4045.0	NO		102.504
13C-234678-HxCDF	35.952	0.981	6.93e5	1.36e6	1.186	0.511	0.510	2704	5337	9.67e6	1.88e7	3577.9	NO		102.098
13C-123789-HxCDF	37.092	1.012	6.51e5	1.26e6	1.135	0.515	0.510	2704	5337	8.86e6	1.71e7	3276.9	NO		99.670
13C-1234678-HpCDF	39.153	1.069	5.50e5	1.23e6	1.020	0.446	0.440	2443	3880	7.71e6	1.72e7	3157.9	NO		103.230
13C-1234789-HpCDF	41.773	1.140	4.34e5	9.93e5	0.824	0.437	0.440	2443	3880	5.25e6	1.20e7	2149.4	NO		102.297
13C-1234-TCDD	25.555	0.000	1.06e6	1.34e6	1.000	0.788	0.770	2931	1849	1.48e7	1.90e7	5036.6	NO		100.000
13C-2378-TCDD	26.362	1.032	9.94e5	1.26e6	0.983	0.787	0.770	2931	1849	1.39e7	1.74e7	4736.2	NO		95.915
13C-12378-PeCDD	31.447	1.231	1.13e6	7.16e5	0.787	1.573	1.550	2647	1211	1.59e7	1.01e7	5995.9	NO		97.787
13C-123478-HxCDD	36.084	0.985	9.80e5	7.79e5	1.031	1.258	1.240	1671	1737	1.40e7	1.12e7	8361.8	NO		100.738
13C-123678-HxCDD	36.215	0.988	1.08e6	8.64e5	1.137	1.252	1.240	1671	1737	1.47e7	1.17e7	8814.2	NO		101.126
13C-1234678-HpCDD	40.918	1.117	7.98e5	7.64e5	0.892	1.044	1.050	2298	2622	9.97e6	9.59e6	4338.0	NO		103.400
13C-OCDD	46.665	1.273	1.39e6	1.60e6	0.852	0.868	0.890	2424	2603	1.38e7	1.55e7	5677.4	NO		207.609

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, 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	36.643	0.000	9.41e5	7.52e5	1.000	1.252	1.240	1671	1737	1.29e7	1.05e7	7738.7	NO		100.000
Total-tetrafurans			0.00e0		0.827			485		0.00e0					
Total-penta1			0.00e0					637		0.00e0					
Total-pentafurans			1.33e4		0.837			904		1.87e5					0.949
Total-hexafurans			2.14e4		0.977			744		2.96e5					1.936
Total-heptafurans			8.43e3		1.142			578		1.18e5					0.939
Total-Furans			4.95e4		0.971			485		6.63e5					4.731
Total-tetradioxins			4.69e2		1.023			1054		6.87e3					0.029
Total-pentadioxins			5.05e3		0.939			992		6.91e4					0.476
Total-hexadioxins			1.45e4		0.919			776		2.00e5					1.522
Total-heptadioxins			3.51e3		0.964			577		4.71e4					0.463
Total-Dioxins			3.06e4		0.950			1054		3.92e5					3.508
Total-TEQ			8.00e4					1054		1.06e6					8.238
37CL-2378-TCDD	26.377	1.032	2.51e3		1.091			1500		3.36e4		22.4			0.096
FUNCTION1 PFK			1.87e6					603060		3.14e7					
FUNCTION2 PFK			1.61e6					146963		2.27e7					0.000
FUNCTION3 PFK			1.19e6					505723		2.64e7					0.000
FUNCTION4 PFK			1.79e7					304568		5.90e7					
FUNCTION5 PFK			1.94e5					243188		8.67e6					
FUNCTION1 HXCDPE			0.00e0					477		0.00e0					
FUNCTION1 HPCDPE			3.32e2					653		7.06e3					0.000
FUNCTION2 HPCDPE			1.96e2					800		4.03e3					0.000
FUNCTION3 OCDPE			0.00e0					338		0.00e0					
FUNCTION4 NCDPE			0.00e0					765		0.00e0					
FUNCTION5 DCDPE			0.00e0					278		0.00e0					

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD
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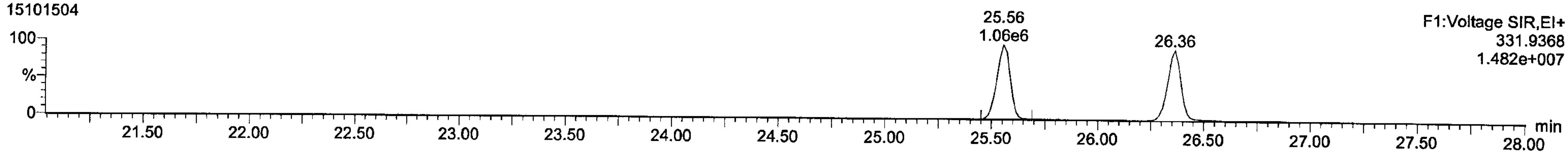

13C-1234-TCDD
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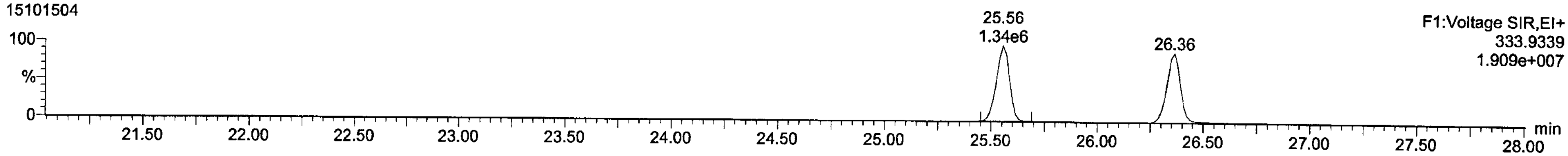

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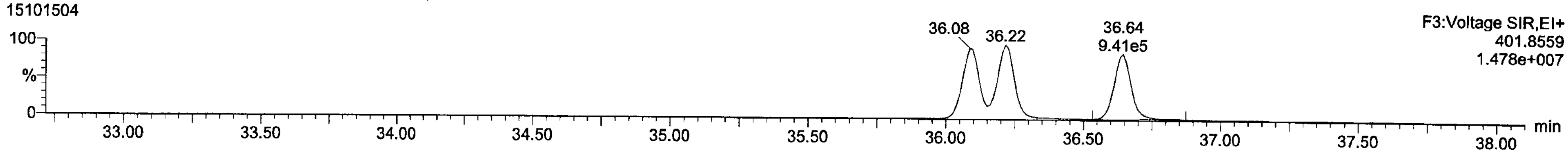

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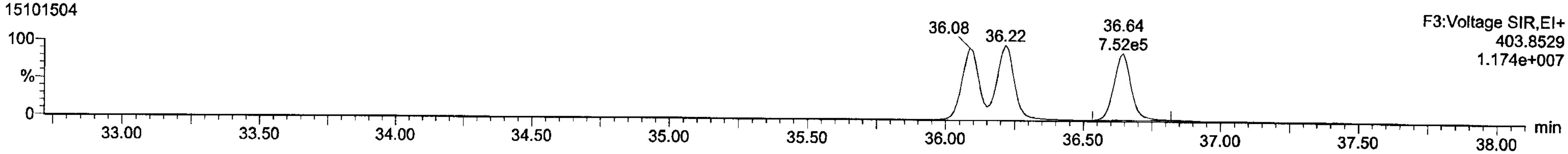


Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\151015IC.qld

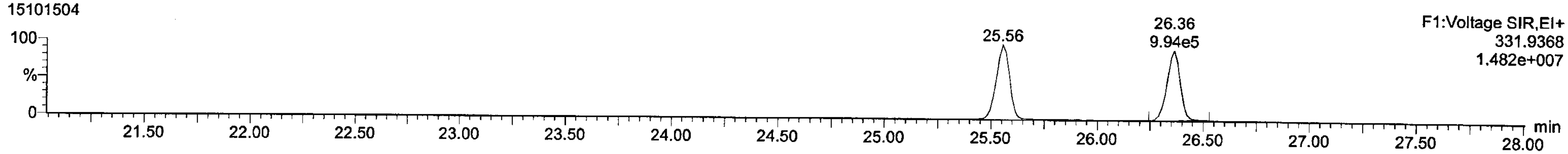
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD

15101504



13C-2378-TCDD

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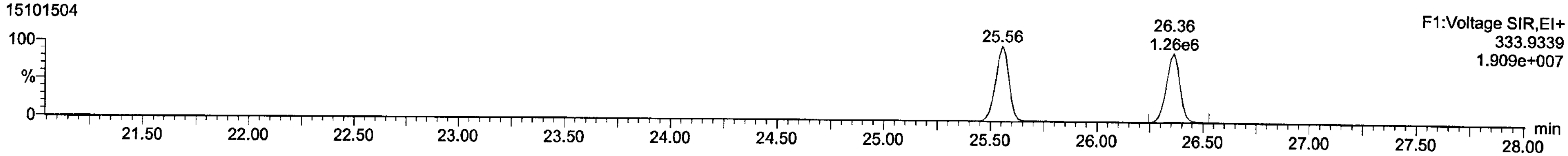
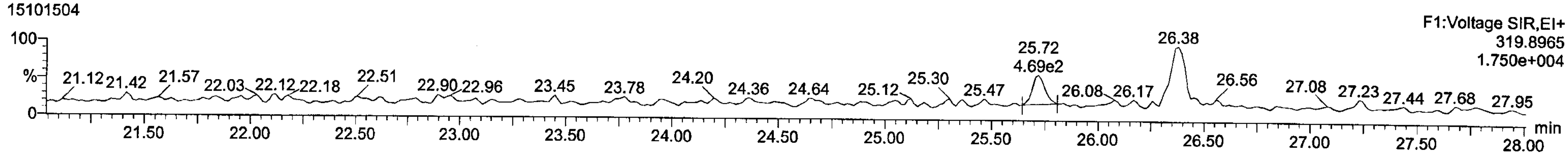


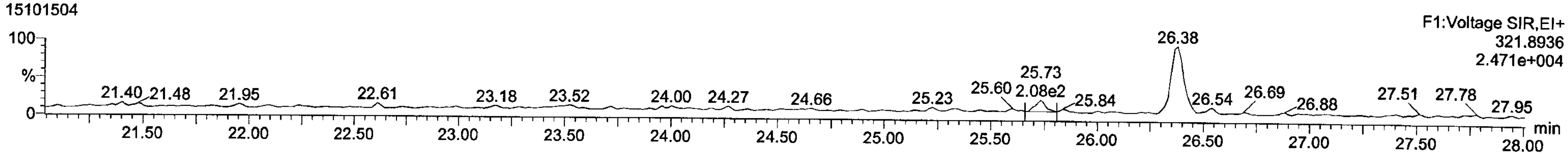
Total-tetradioxins

15101504



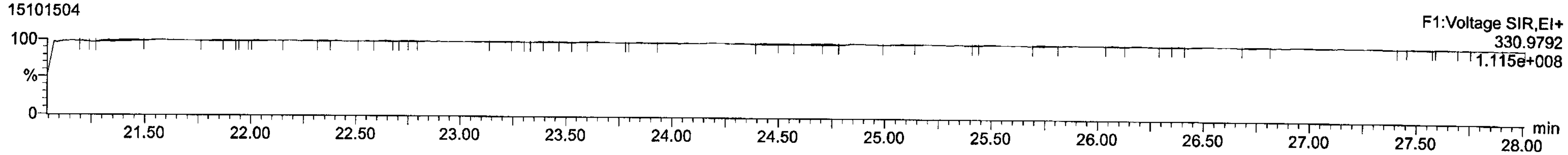
Total-tetradioxins

15101504



FUNCTION1 PFK

15101504



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF
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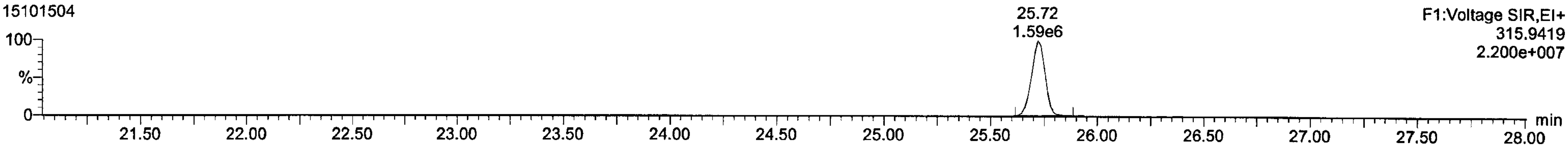

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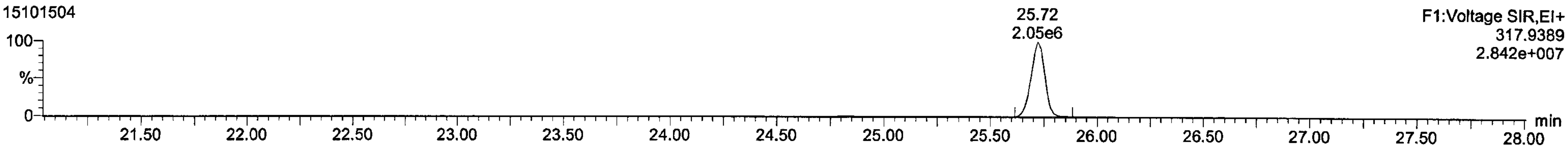
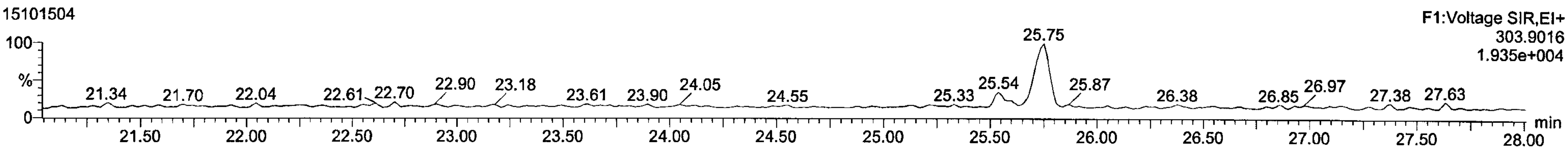
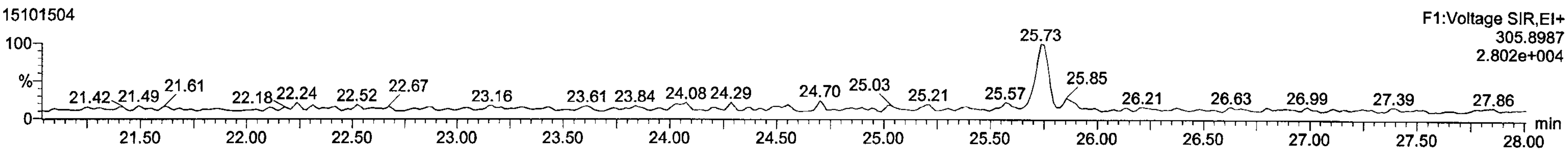


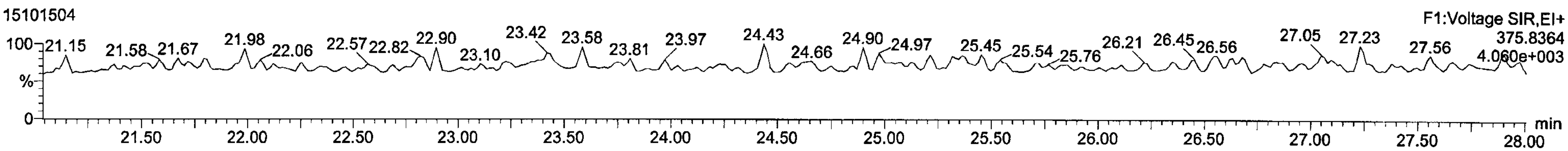
Total-tetrafurans
15101504



Total-tetrafurans
15101504

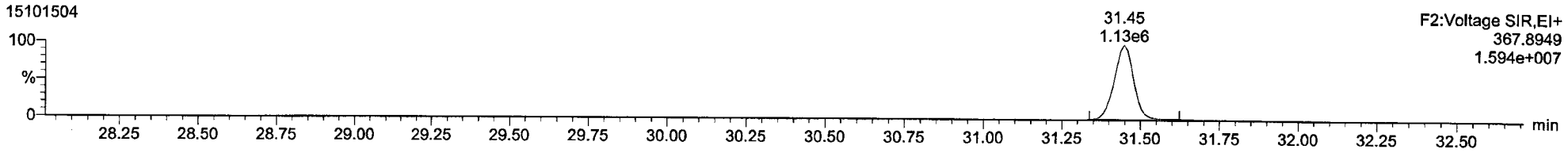


FUNCTION1 HXCDPE
15101504

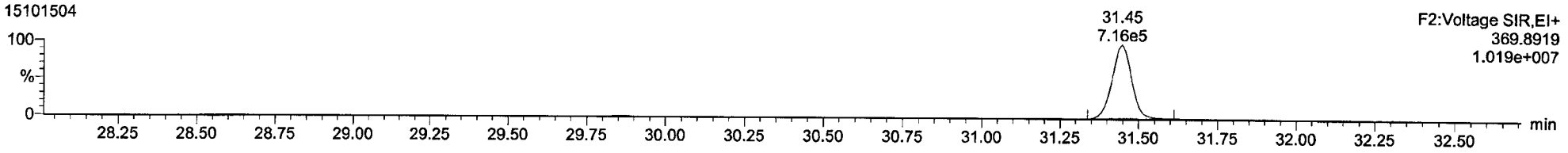


ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

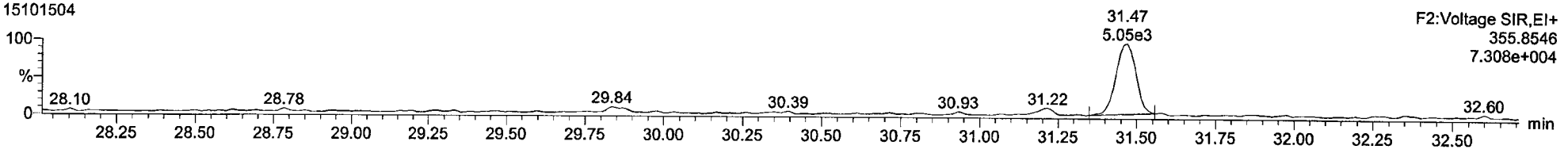
13C-12378-PeCDD



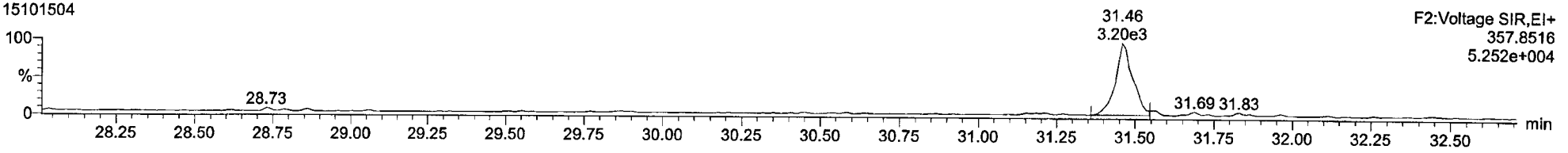
13C-12378-PeCDD



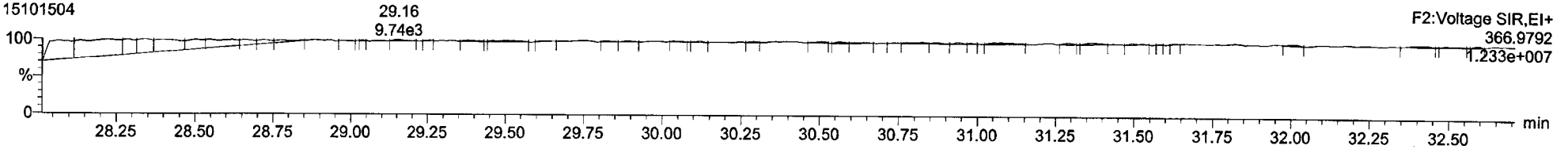
Total-pentadioxins



Total-pentadioxins



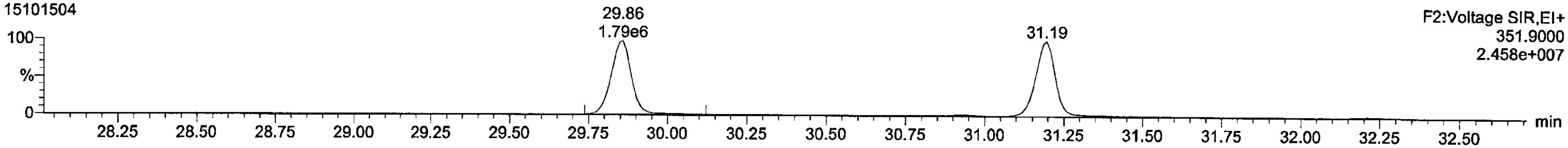
FUNCTION2 PFK



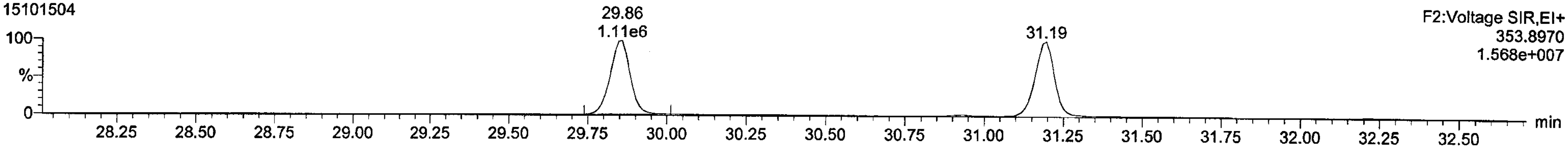
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

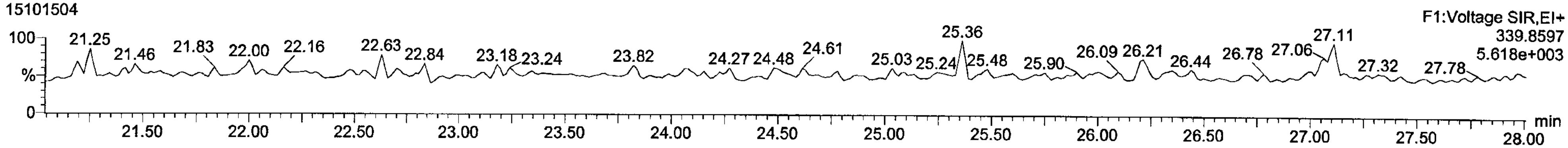
13C-12378-PeCDF
15101504



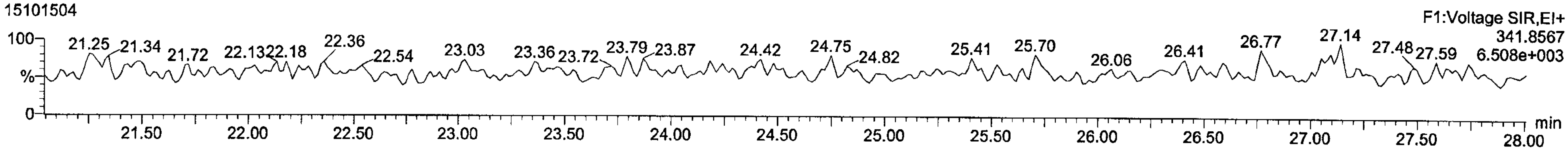
13C-12378-PeCDF
15101504



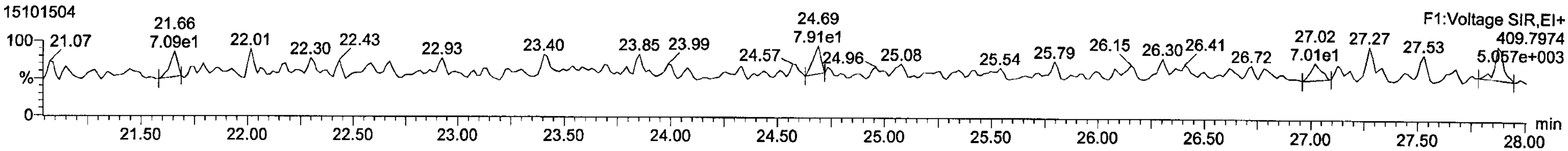
Total-penta1
15101504



Total-penta1
15101504

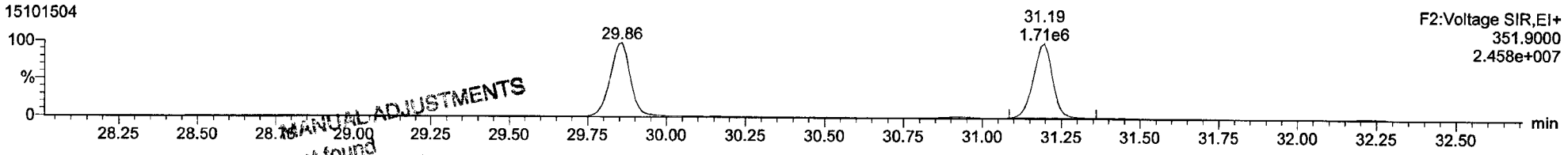


FUNCTION1 HPCDPE
15101504

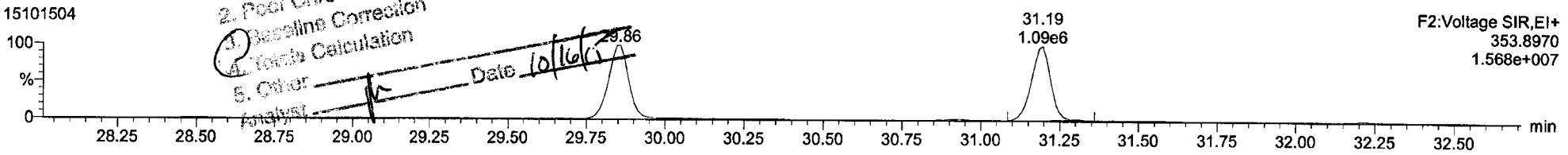


ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

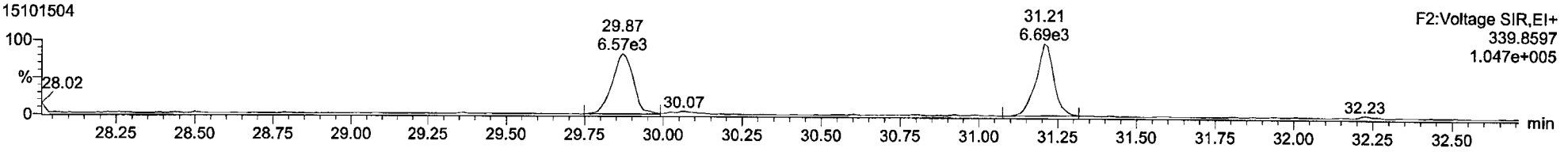
13C-23478-PeCDF



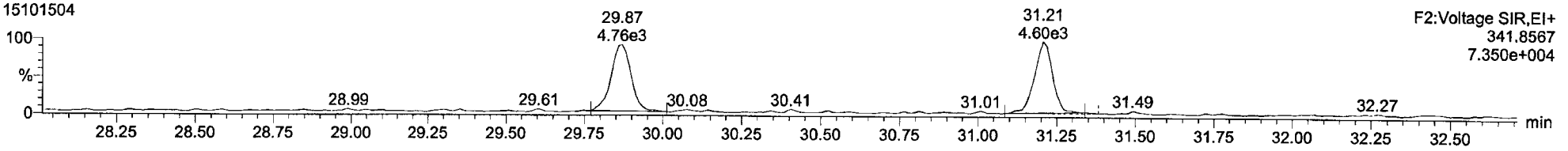
13C-23478-PeCDF



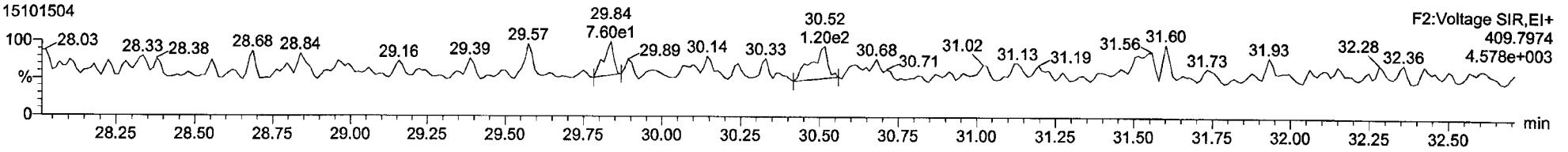
Total-pentafurans



Total-pentafurans



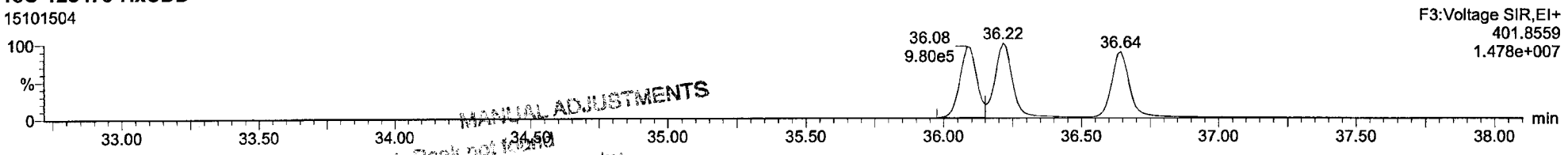
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

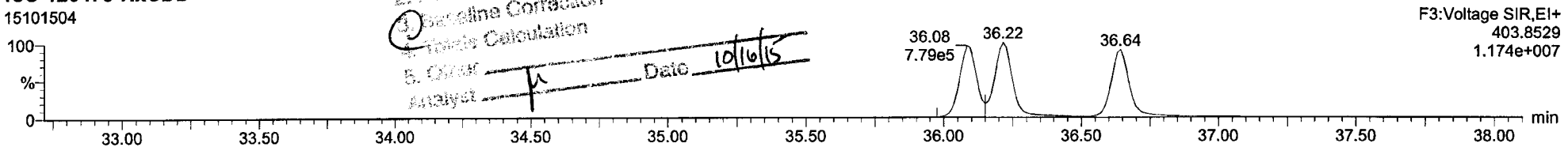
ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD
15101504

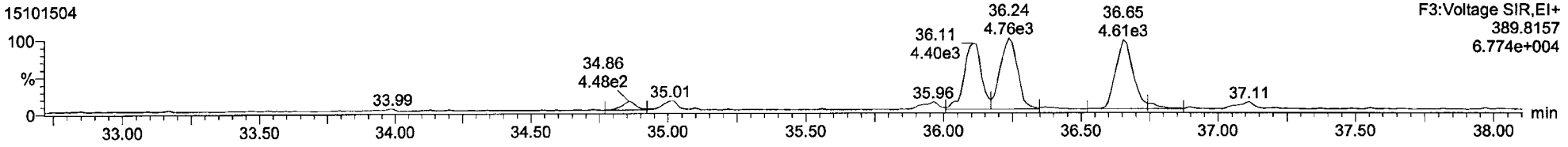


MANUAL ADJUSTMENTS
1. Peak not found
2. Peak Chromatography
3. Baseline Correction
4. Ratio Calculation
5. Other
Analyst Date 10/16/15

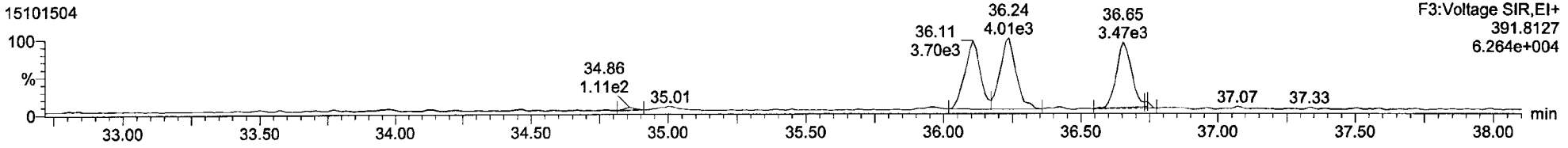
13C-123478-HxCDD
15101504



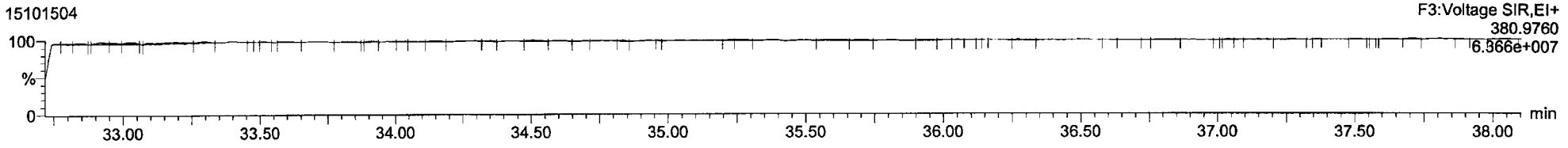
Total-hexadioxins
15101504



Total-hexadioxins
15101504



FUNCTION3 PFK
15101504



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\151015IC.qld

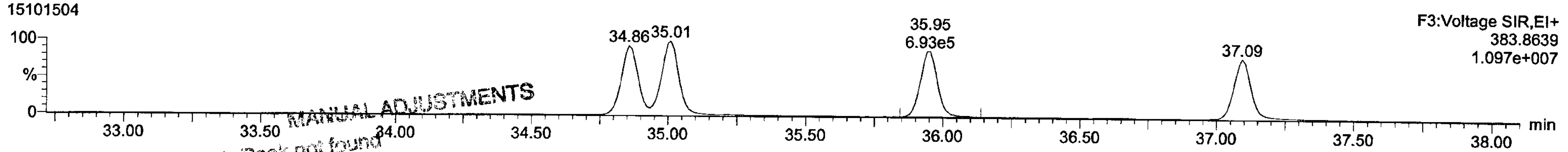
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF

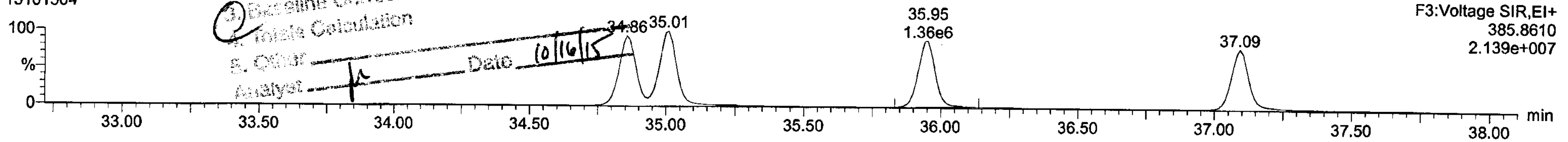
15101504



MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
(3.) Baseline Correction
4. Totals Calculation
5. Other
Analyst pk Date 10/16/15

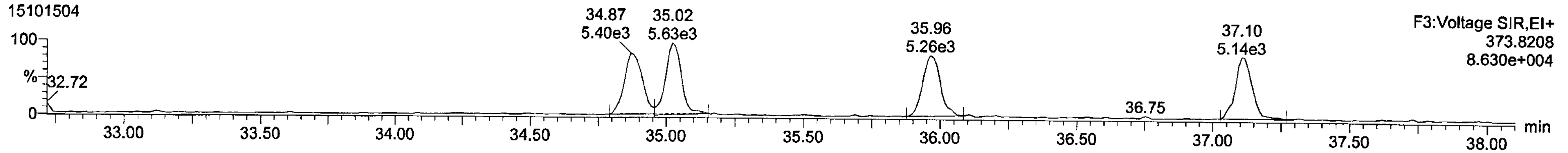
13C-234678-HxCDF

15101504



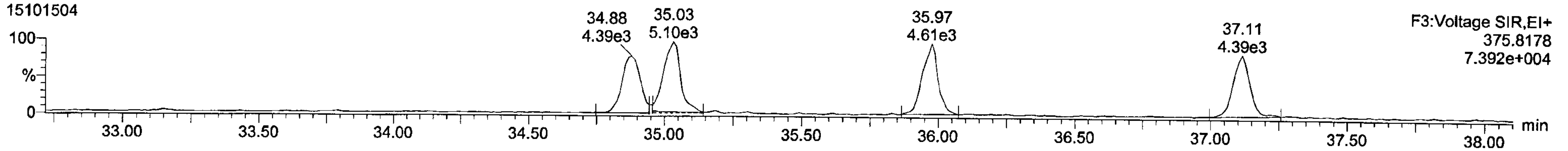
Total-hexafurans

15101504



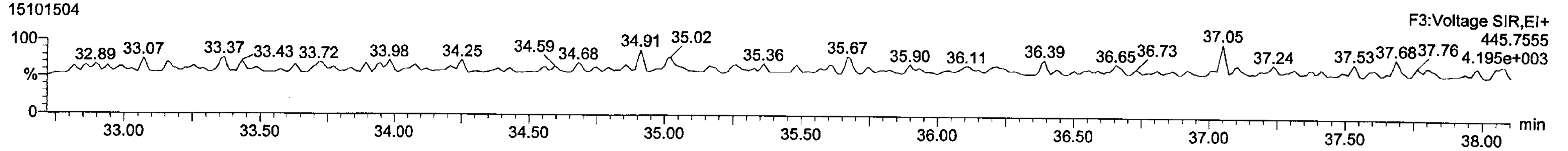
Total-hexafurans

15101504



FUNCTION3 OCDPE

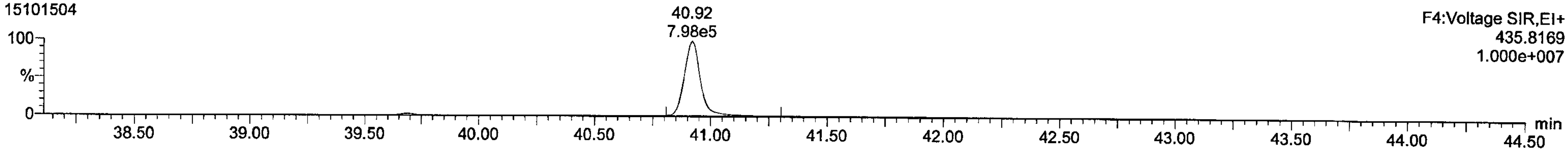
15101504



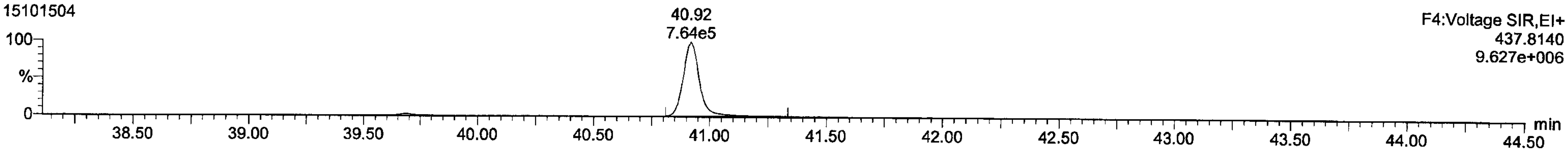
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

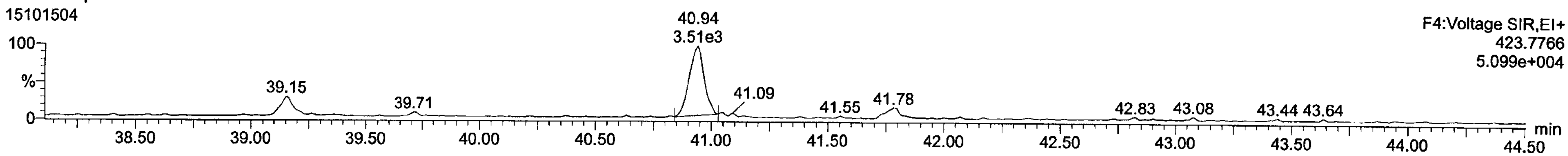
13C-1234678-HpCDD
15101504



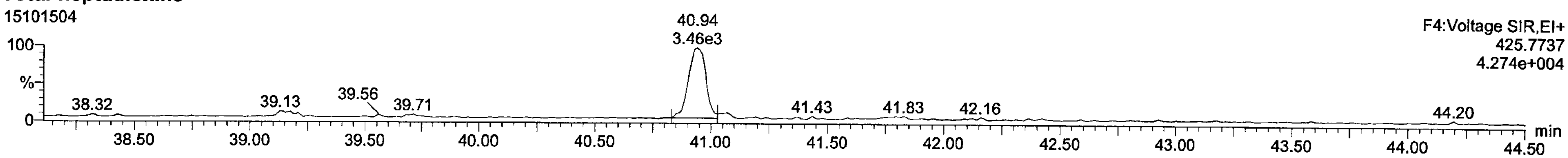
13C-1234678-HpCDD
15101504



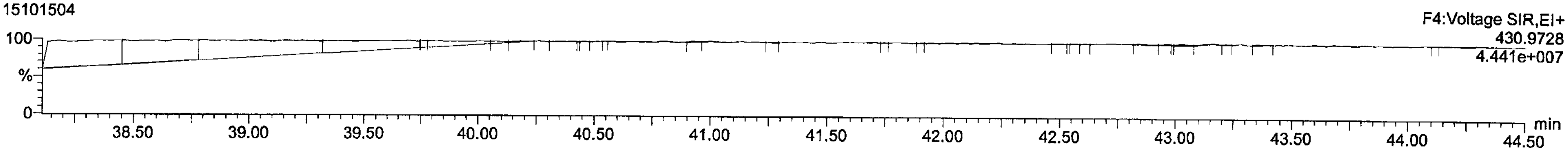
Total-heptadioxins
15101504



Total-heptadioxins
15101504



FUNCTION4 PFK
15101504

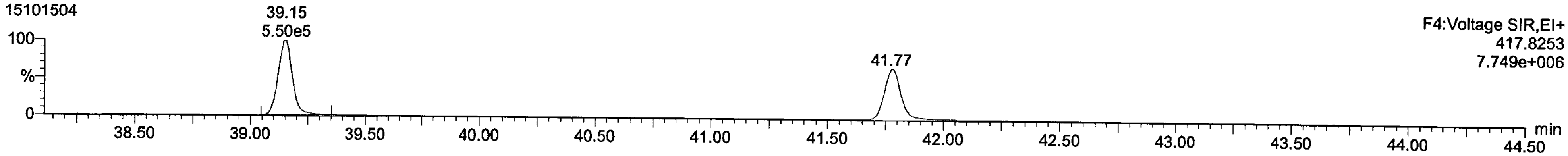


ATS0 · 00380

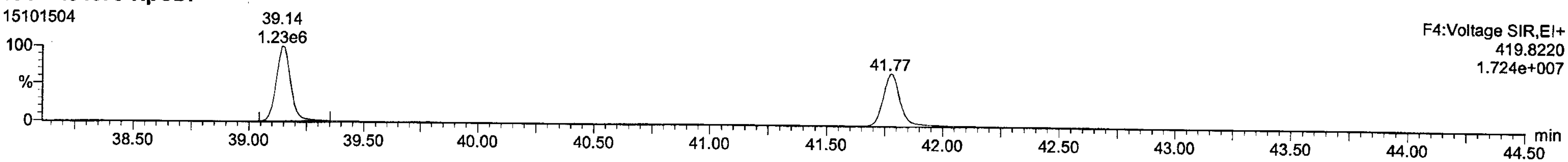
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

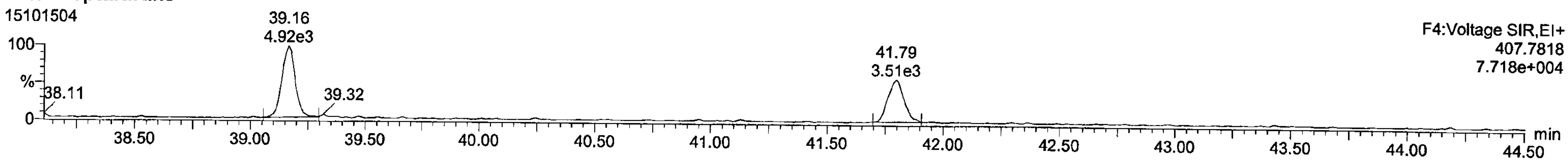
13C-1234678-HpCDF



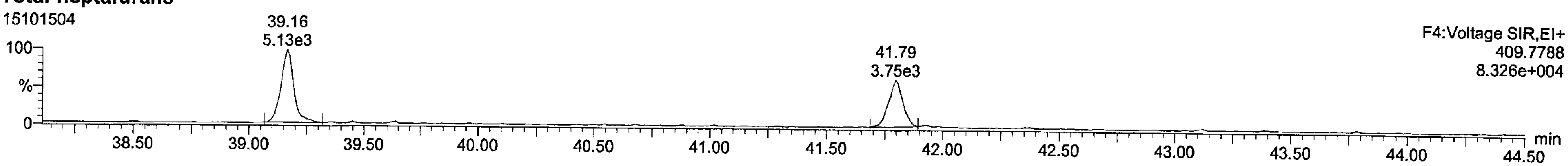
13C-1234678-HpCDF



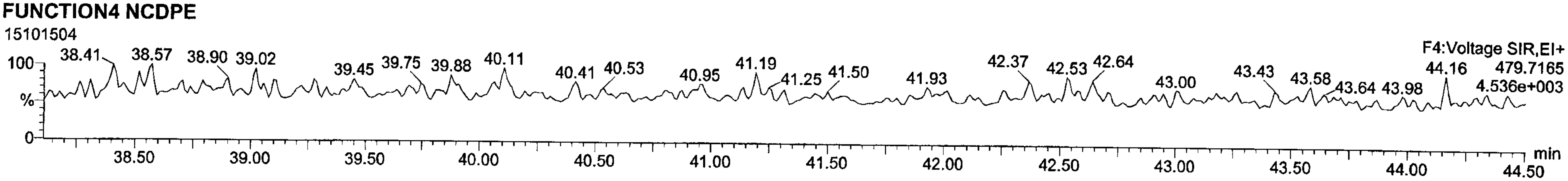
Total-heptafurans



Total-heptafurans



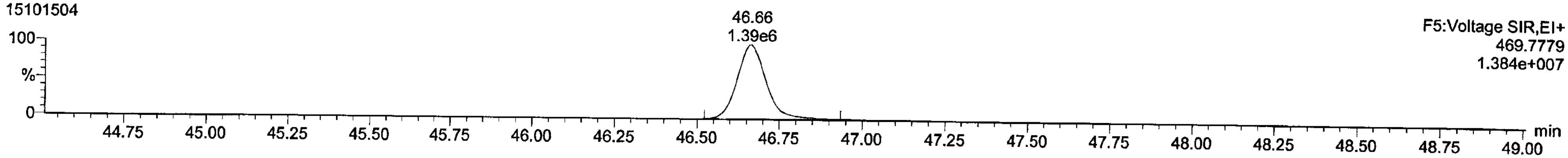
FUNCTION4 NCDPE



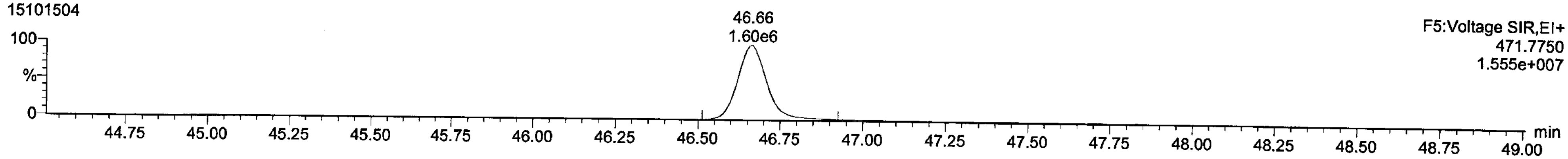
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

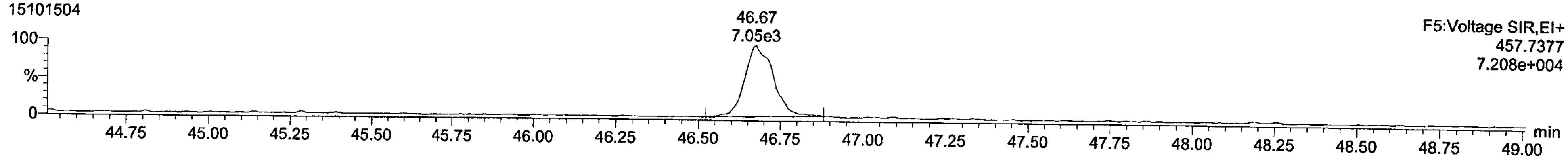
13C-OCDD
15101504



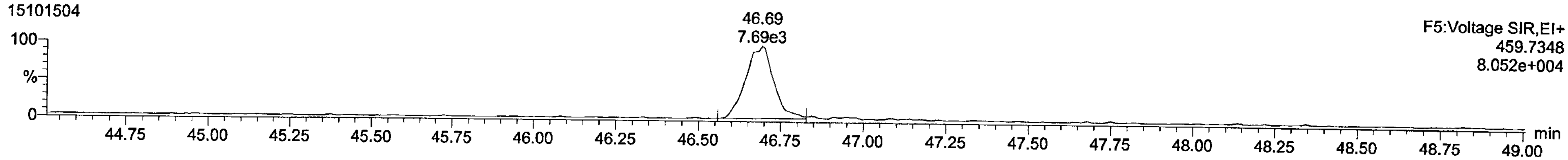
13C-OCDD
15101504



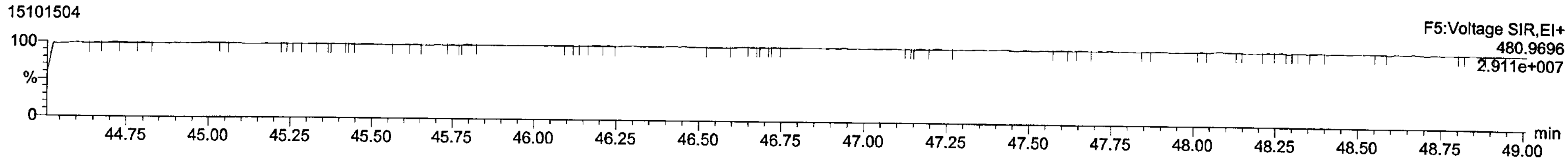
OCDD
15101504



OCDD
15101504



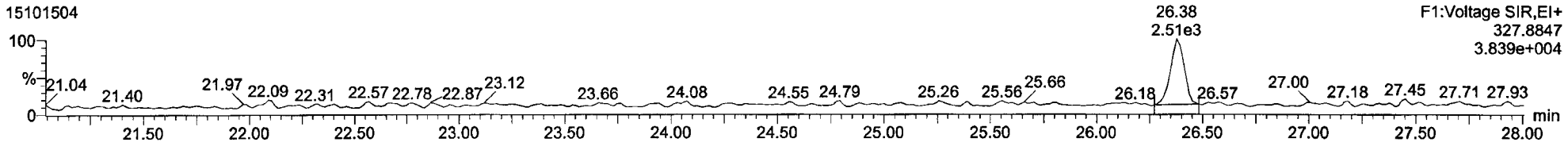
FUNCTION5 PFK
15101504



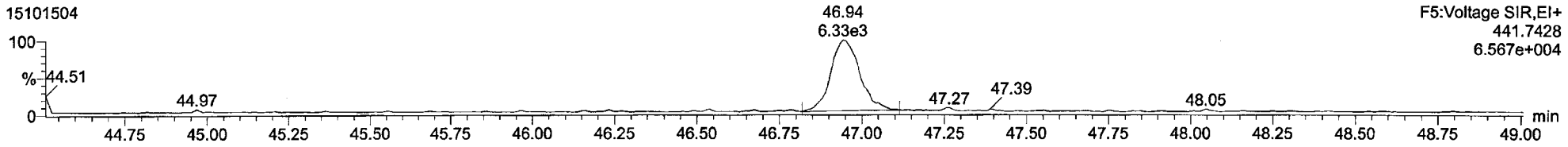
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:55 Pacific Daylight Time

ID: CSL, Name: 15101504, Date: 15-Oct-2015, Time: 15:02:44, Conditions: AUTOSPEC01, User: pk

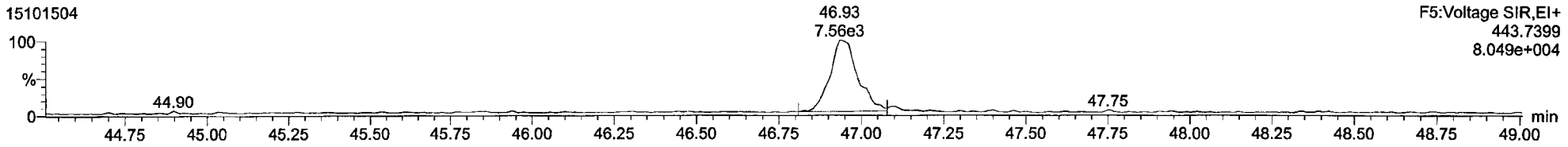
37CL-2378-TCDD



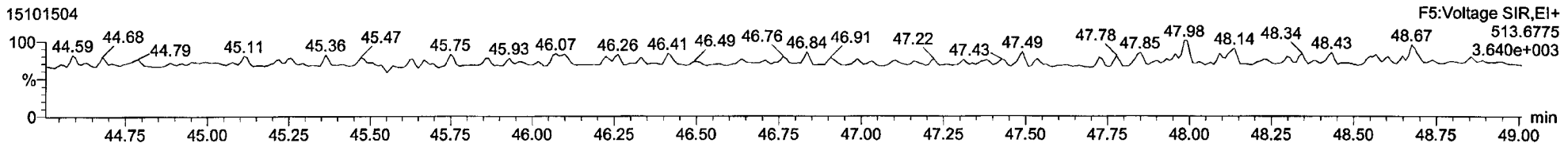
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:57 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, 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	25.749	1.001	5.93e3	8.82e3	0.827	0.672	0.770	584	991	7.13e4	1.16e5	122.2	NO	0.480	0.480
12378-PeCDF	29.880	1.000	3.37e4	2.45e4	0.824	1.374	1.550	1606	1125	4.71e5	3.29e5	293.5	NO	2.360	2.360
23478-PeCDF	31.217	1.000	3.46e4	2.54e4	0.850	1.361	1.550	1606	1125	5.18e5	3.49e5	322.4	NO	2.427	2.427
123478-HxCDF	34.889	1.001	2.75e4	2.46e4	0.973	1.116	1.240	1175	875	4.00e5	3.50e5	340.0	NO	2.452	2.452
234678-HxCDF	35.974	1.000	2.80e4	2.40e4	1.025	1.166	1.240	1175	875	4.02e5	3.37e5	341.8	NO	2.382	2.382
123678-HxCDF	35.031	1.000	2.92e4	2.71e4	0.953	1.079	1.240	1175	875	4.03e5	3.73e5	342.7	NO	2.397	2.397
123789-HxCDF	37.125	1.001	2.51e4	2.28e4	0.956	1.098	1.240	1175	875	3.33e5	3.04e5	283.7	NO	2.508	2.508
1234678-HpCDF	39.174	1.001	2.40e4	2.65e4	1.153	0.903	1.050	770	799	3.38e5	3.72e5	438.7	NO	2.366	2.366
1234789-HpCDF	41.805	1.000	1.94e4	2.11e4	1.131	0.922	1.050	770	799	2.44e5	2.86e5	317.5	NO	2.366	2.366
OCDF	46.951	1.006	3.25e4	3.93e4	1.023	0.828	0.890	966	954	3.16e5	3.79e5	326.5	NO	4.496	4.496
2378-TCDD	26.392	1.001	5.13e3	7.07e3	1.023	0.725	0.770	887	473	6.59e4	9.62e4	74.3	NO	0.514	0.514
12378-PeCDD	31.480	1.001	2.67e4	1.72e4	0.939	1.556	1.550	877	401	3.79e5	2.40e5	432.1	NO	2.435	2.435
123478-HxCDD	36.116	1.001	2.37e4	1.81e4	0.963	1.307	1.240	784	671	3.36e5	2.68e5	428.4	NO	2.365	2.365
123678-HxCDD	36.248	1.001	2.37e4	2.00e4	0.894	1.183	1.240	784	671	3.30e5	2.87e5	420.4	NO	2.412	2.412
123789-HxCDD	36.664	1.012	2.40e4	1.85e4	0.900	1.292	1.240	784	671	3.24e5	2.58e5	413.3	NO	2.446	2.446
1234678-HpCDD	40.950	1.000	1.88e4	1.83e4	0.964	1.026	1.050	713	739	2.34e5	2.25e5	328.2	NO	2.398	2.398
OCDD	46.682	1.000	3.36e4	3.59e4	0.969	0.938	0.890	601	722	3.52e5	3.55e5	585.9	NO	4.596	4.596
13C-2378-TCDF	25.735	1.006	1.62e6	2.09e6	1.502	0.774	0.770	5261	2837	2.24e7	2.88e7	4261.1	NO		101.559
13C-12378-PeCDF	29.869	1.168	1.85e6	1.14e6	1.215	1.613	1.550	4466	2387	2.48e7	1.58e7	5555.2	NO		101.124
13C-23478-PeCDF	31.206	1.220	1.78e6	1.13e6	1.181	1.567	1.550	4466	2387	2.50e7	1.60e7	5603.3	NO		101.227
13C-123478-HxCDF	34.867	0.951	7.41e5	1.44e6	1.246	0.513	0.510	2769	4074	1.05e7	2.07e7	3808.0	NO		99.206
13C-123678-HxCDF	35.020	0.955	8.35e5	1.63e6	1.375	0.512	0.510	2769	4074	1.13e7	2.17e7	4088.3	NO		101.369
13C-234678-HxCDF	35.963	0.981	7.23e5	1.41e6	1.186	0.514	0.510	2769	4074	1.01e7	1.95e7	3665.2	NO		101.537
13C-123789-HxCDF	37.103	1.012	6.79e5	1.32e6	1.135	0.515	0.510	2769	4074	9.16e6	1.76e7	3309.0	NO		99.535
13C-1234678-HpCDF	39.152	1.068	5.77e5	1.27e6	1.020	0.454	0.440	2333	3666	7.87e6	1.78e7	3374.5	NO		102.538
13C-1234789-HpCDF	41.783	1.140	4.55e5	1.06e6	0.824	0.430	0.440	2333	3666	5.50e6	1.25e7	2357.7	NO		103.906
13C-1234-TCDD	25.570	0.000	1.08e6	1.36e6	1.000	0.795	0.770	2900	1792	1.51e7	1.91e7	5208.6	NO		100.000
13C-2378-TCDD	26.377	1.032	1.02e6	1.30e6	0.983	0.785	0.770	2900	1792	1.38e7	1.74e7	4767.5	NO		96.936
13C-12378-PeCDD	31.458	1.230	1.17e6	7.48e5	0.787	1.566	1.550	1686	1300	1.65e7	1.05e7	9808.4	NO		100.157
13C-123478-HxCDD	36.094	0.985	1.02e6	8.13e5	1.031	1.260	1.240	3984	1600	1.48e7	1.18e7	3710.6	NO		100.813
13C-123678-HxCDD	36.226	0.988	1.12e6	9.02e5	1.137	1.245	1.240	3984	1600	1.55e7	1.25e7	3897.5	NO		100.794
13C-1234678-HpCDD	40.928	1.117	8.13e5	7.91e5	0.892	1.028	1.050	2236	1618	1.03e7	9.76e6	4589.3	NO		101.780
13C-OCDD	46.673	1.273	1.47e6	1.65e6	0.852	0.894	0.890	2822	2065	1.37e7	1.54e7	4866.9	NO		207.389

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

Printed: Friday, October 16, 2015 09:49:57 Pacific Daylight Time

ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

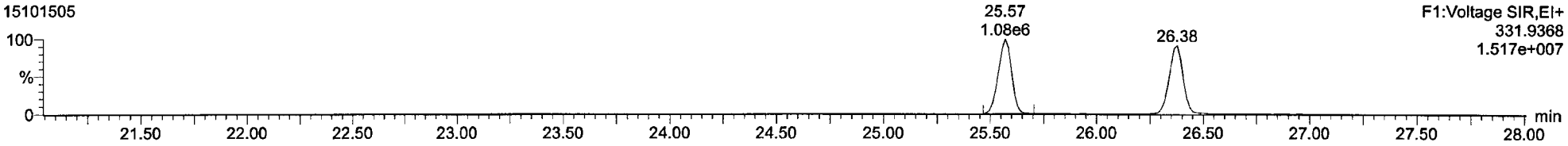
Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	36.653	0.000	9.74e5	7.93e5	1.000	1.228	1.240	3984	1600	1.33e7	1.07e7	3327.0	NO		100.000
Total-tetrafurans			6.31e3		0.827			584		7.79e4					0.504
Total-penta1			0.00e0					489		0.00e0					
Total-pentafurans			6.94e4		0.837			1606		1.01e6					4.875
Total-hexafurans			1.11e5		0.977			1175		1.55e6					9.800
Total-heptafurans			4.36e4		1.142			770		5.87e5					4.750
Total-Furans			2.62e5		0.971			584		3.54e6					24.425
Total-tetradioxins			5.85e3		1.023			887		7.46e4					0.551
Total-pentadioxins			2.70e4		0.939			877		3.83e5					2.460
Total-hexadioxins			7.15e4		0.919			784		9.94e5					7.257
Total-heptadioxins			1.88e4		0.964			713		2.34e5					2.398
Total-Dioxins			1.57e5		0.950			887		2.04e6					17.261
Total-TEQ			4.19e5					887		5.58e6					41.687
37CL-2378-TCDD	26.392	1.032	1.29e4		1.091			1496		1.78e5		119.1			0.485
FUNCTION1 PFK			5.66e7					671431		2.16e8					
FUNCTION2 PFK			6.17e4					111219		2.26e6					0.000
FUNCTION3 PFK			4.23e5					420338		1.06e7					0.000
FUNCTION4 PFK			4.50e5					241972		1.35e7					
FUNCTION5 PFK			0.00e0					236957		0.00e0					
FUNCTION1 HXCDPE			8.20e1					368		1.35e3					0.000
FUNCTION1 HPCDPE			3.42e2					695		7.44e3					0.000
FUNCTION2 HPCDPE			0.00e0					676		0.00e0					
FUNCTION3 OCDPE			0.00e0					412		0.00e0					
FUNCTION4 NCDPE			0.00e0					549		0.00e0					
FUNCTION5 DCDPE			0.00e0					292		0.00e0					

Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:57 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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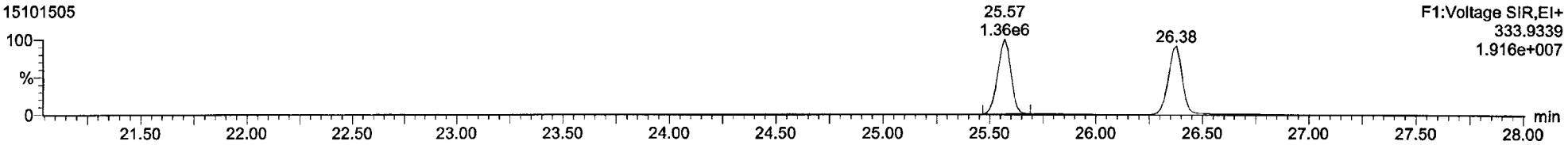
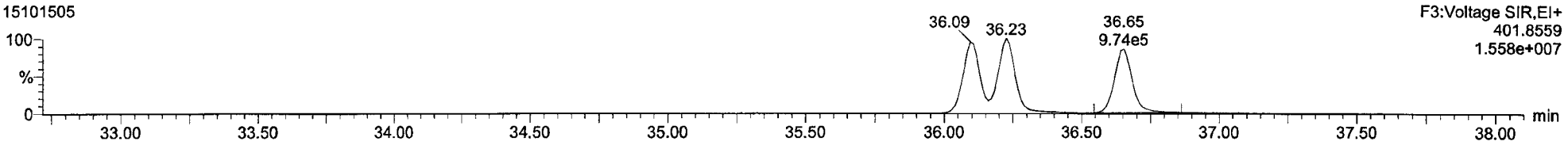


13C-123789-HxCDD



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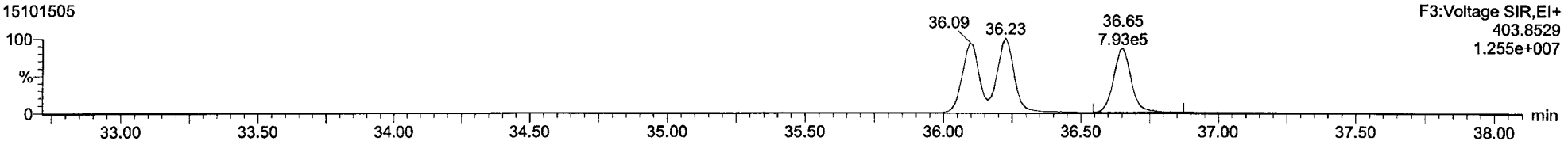

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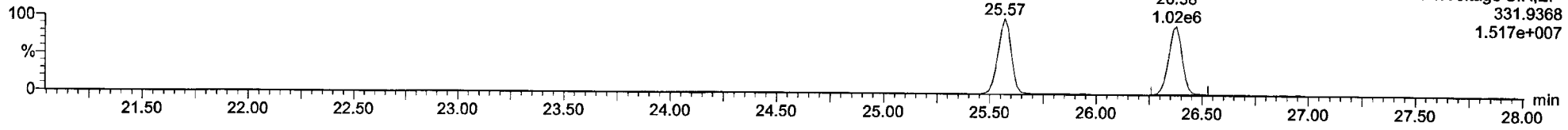
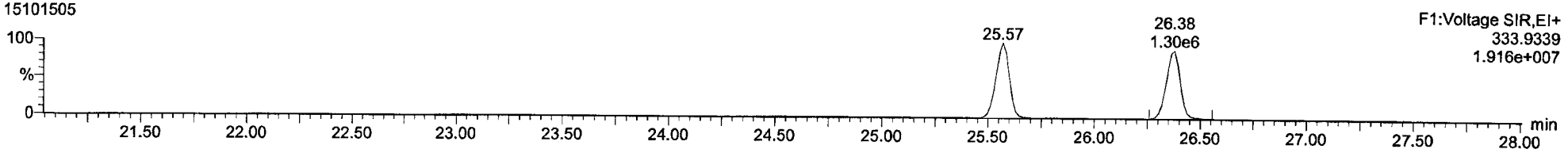
13C-2378-TCDD

15101505



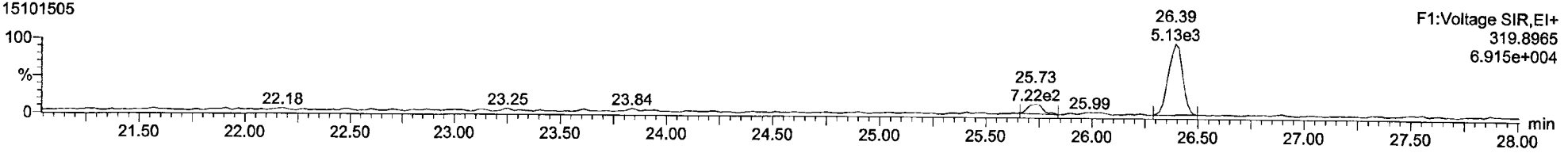
13C-2378-TCDD

15101505



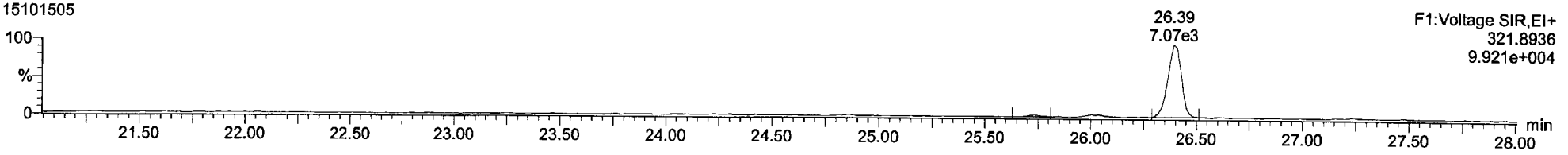
Total-tetradioxins

15101505



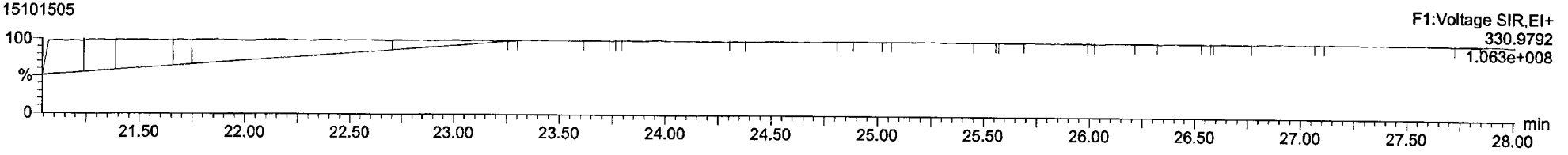
Total-tetradioxins

15101505



FUNCTION1 PFK

15101505



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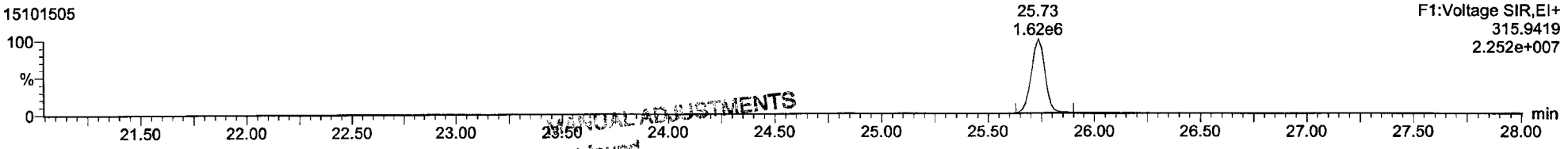
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:57 Pacific Daylight Time

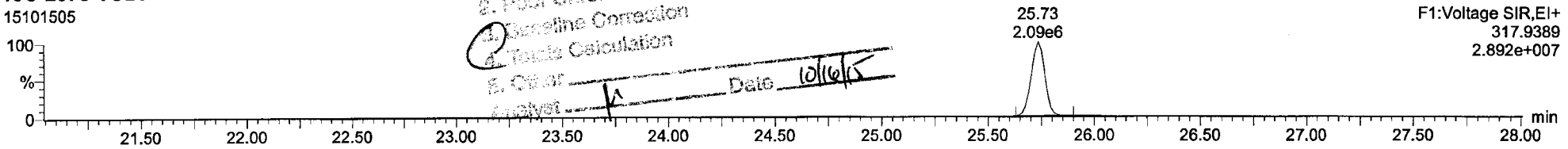
ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF

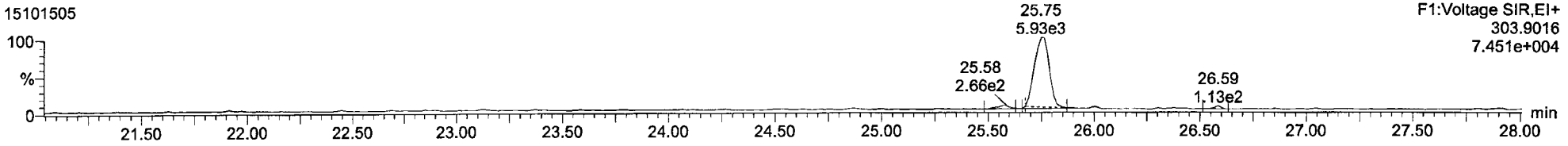


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Tedia Calculation
5. Other
Analyst Date 10/16/15

13C-2378-TCDF



Total-tetrafurans



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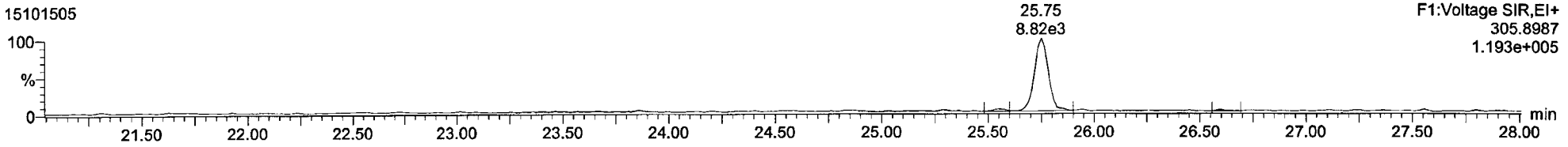
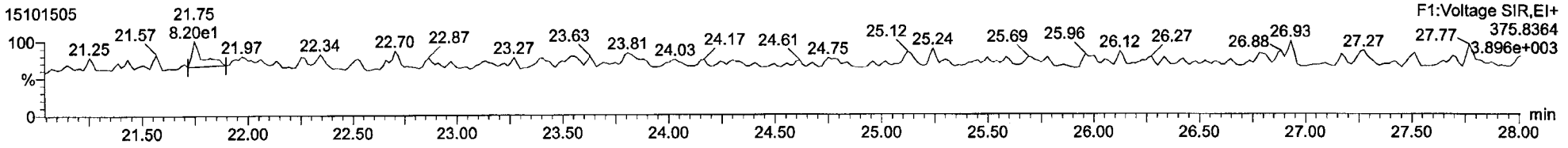


FUNCTION1 HXCDPE



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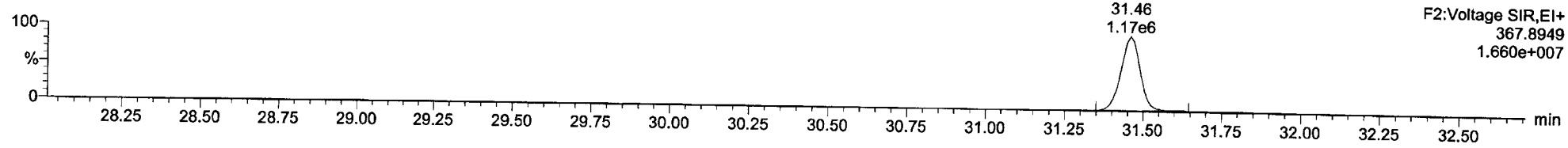
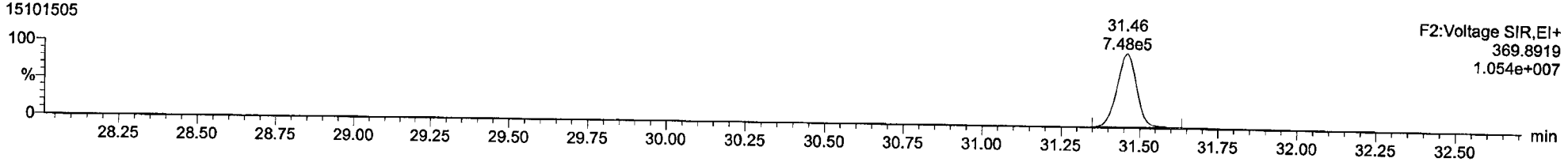
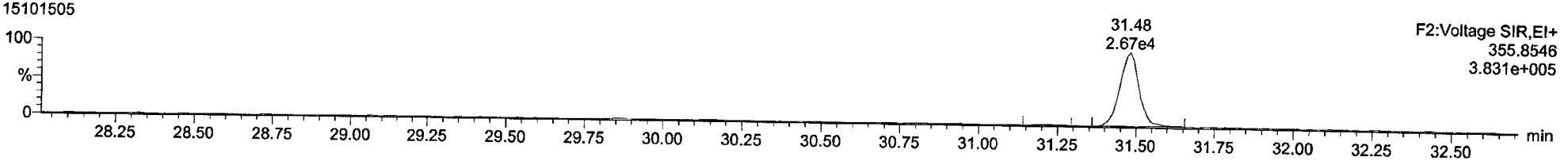
13C-12378-PeCDD
15101505



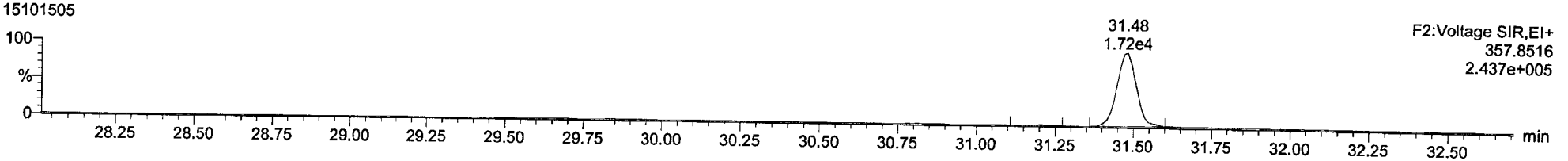
13C-12378-PeCDD
15101505



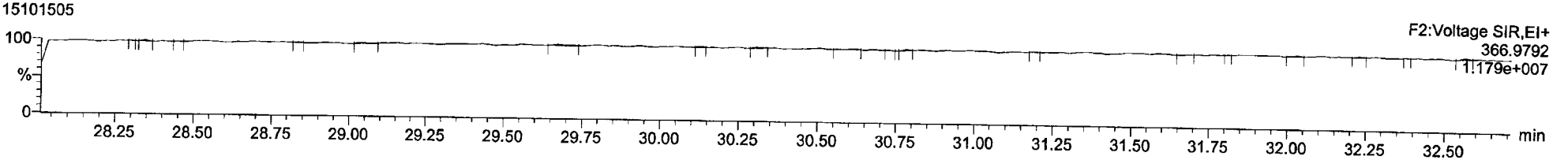
Total-pentadioxins
15101505



Total-pentadioxins
15101505



FUNCTION2 PFK
15101505



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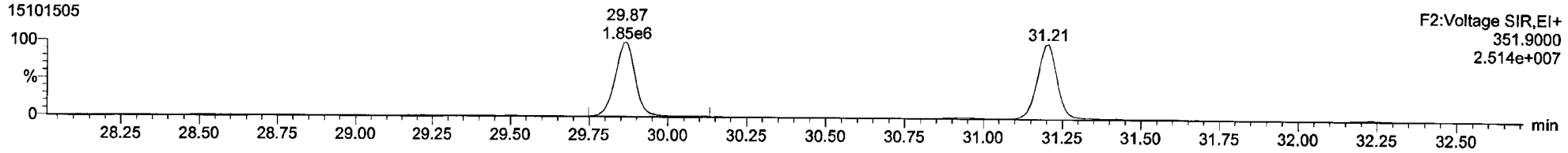
13C-12378-PeCDF



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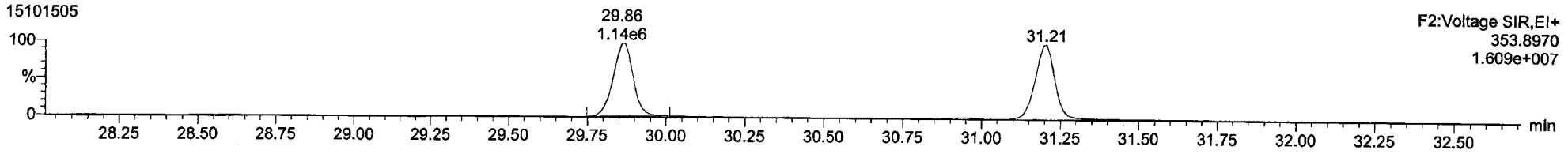
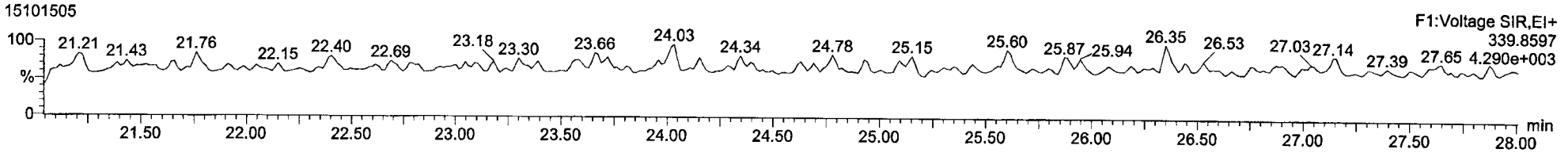
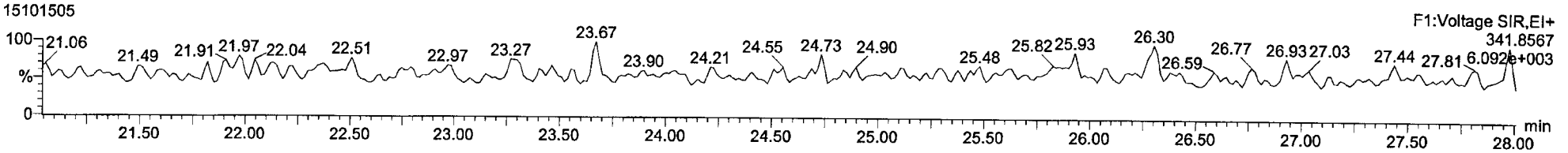


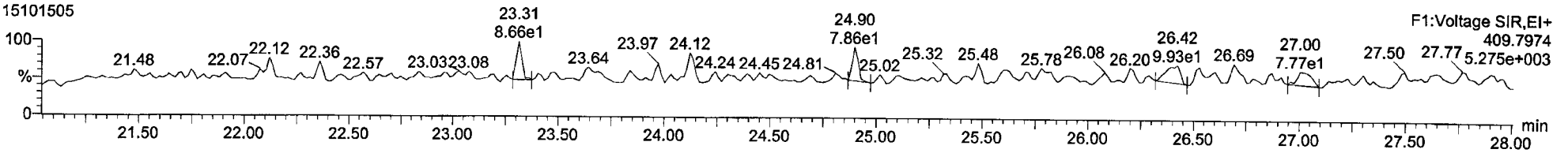
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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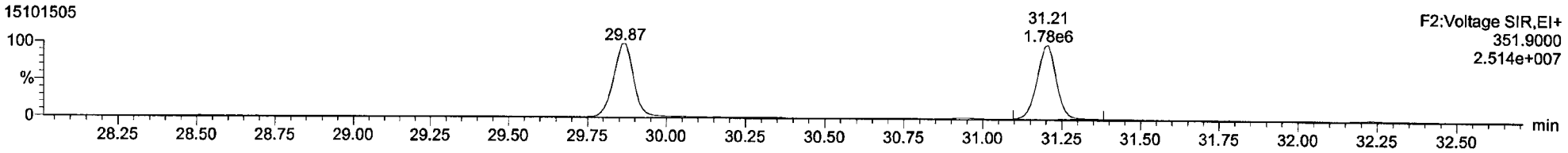
13C-23478-PeCDF



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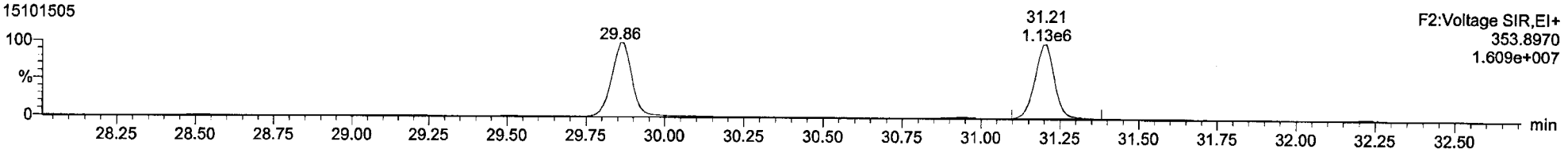
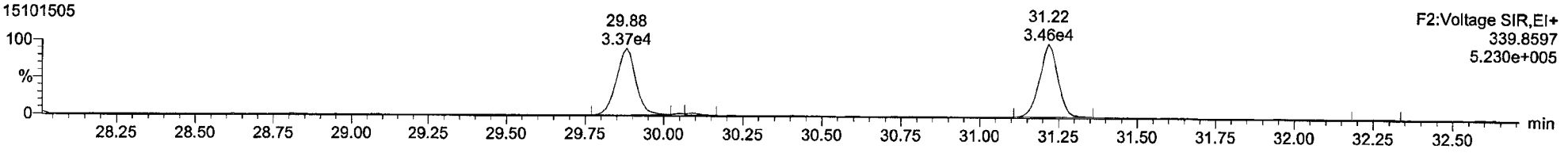
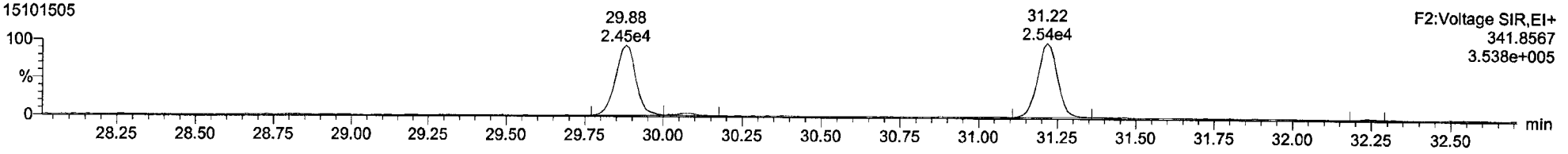


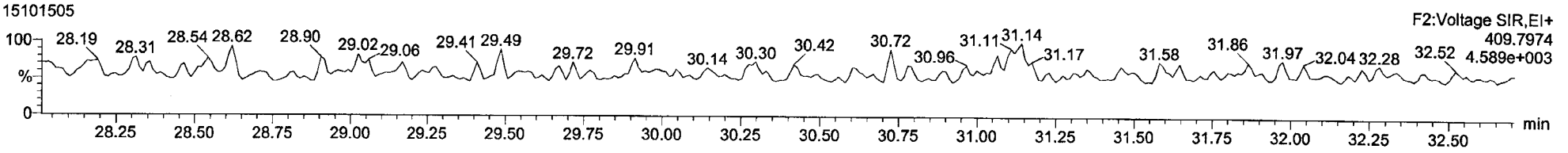
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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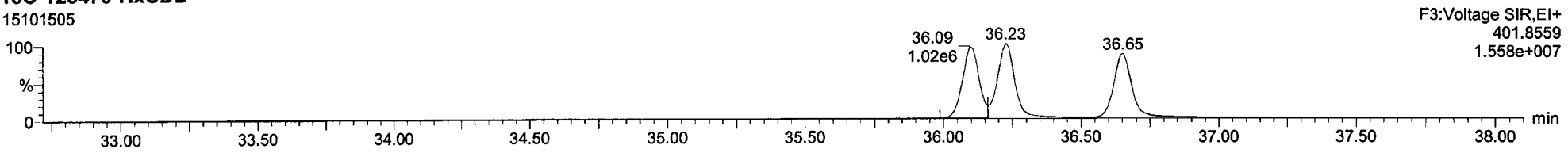
ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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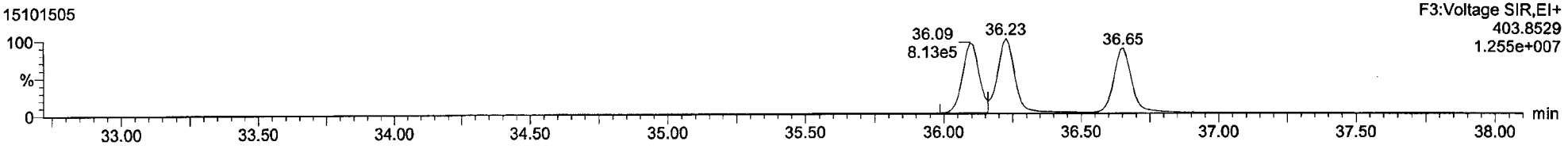
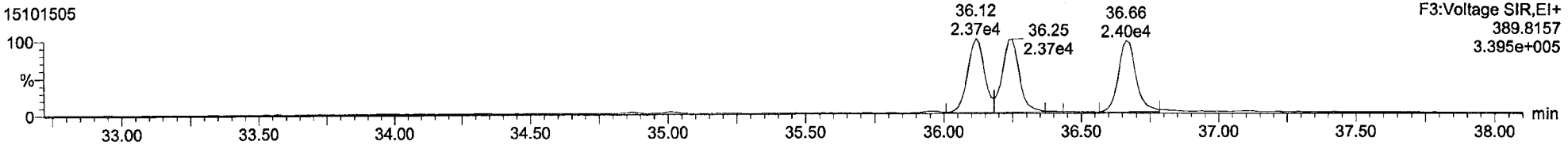
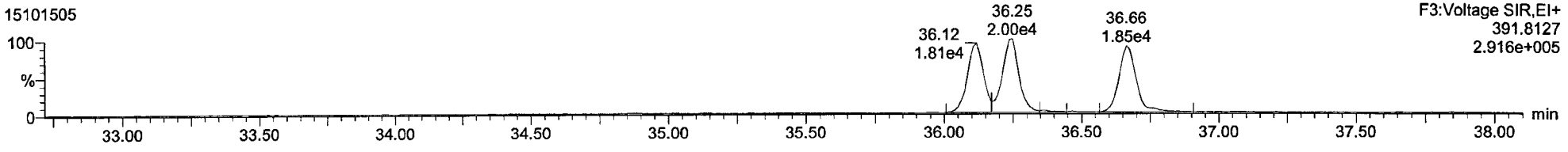


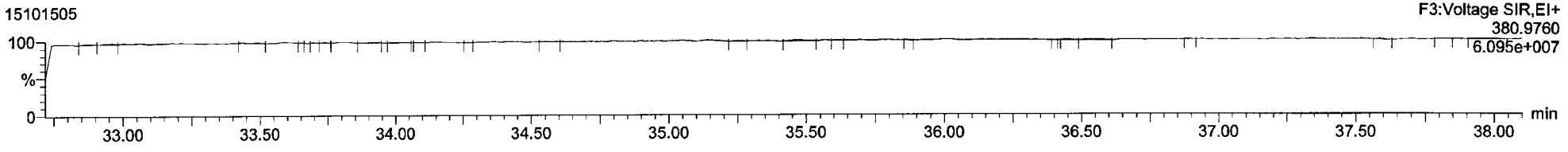
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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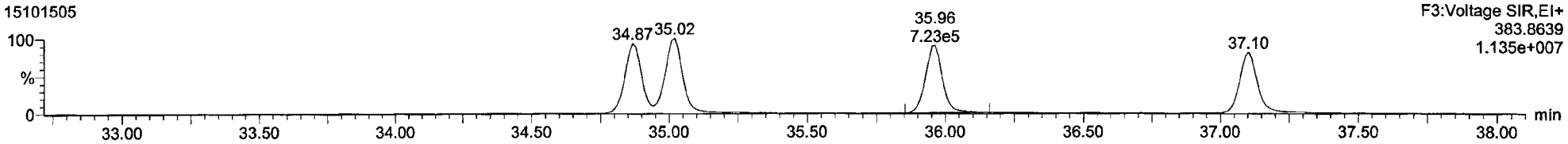
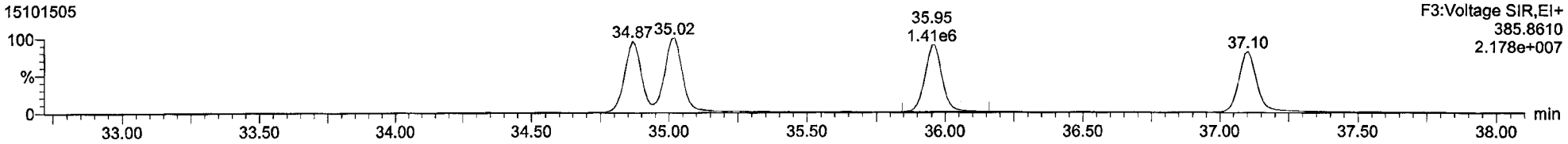
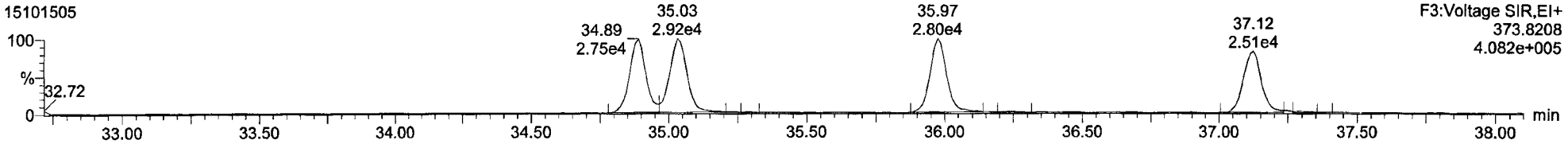
13C-234678-HxCDF



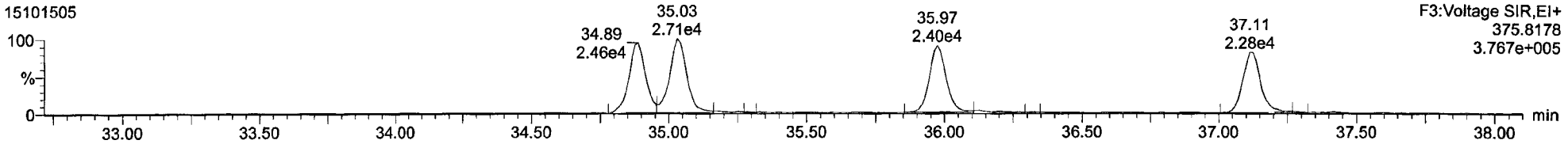
13C-234678-HxCDF



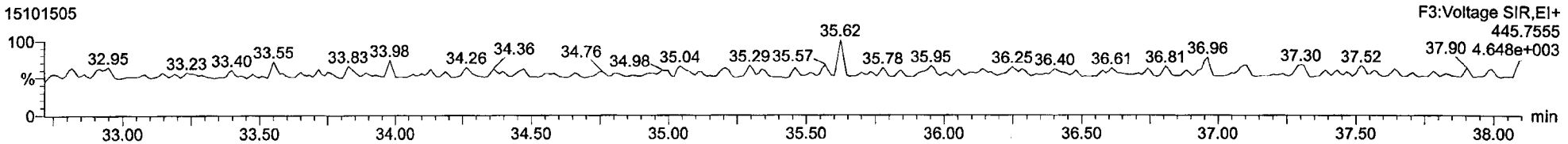
Total-hexafurans



Total-hexafurans

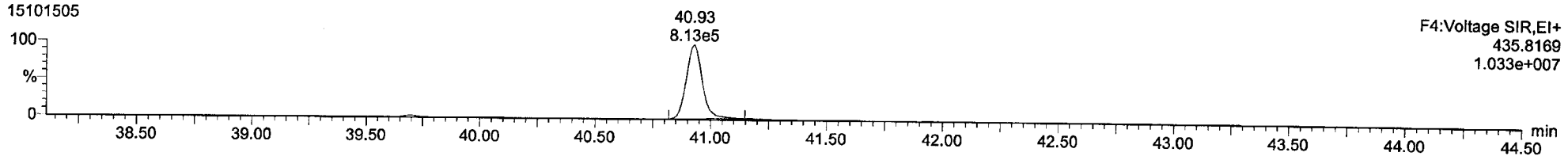


FUNCTION3 OCDPE

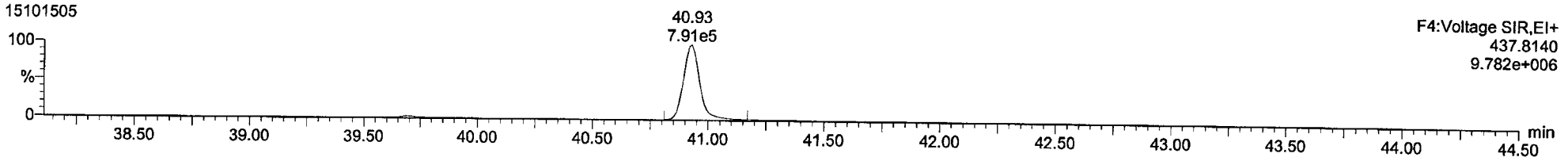


ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

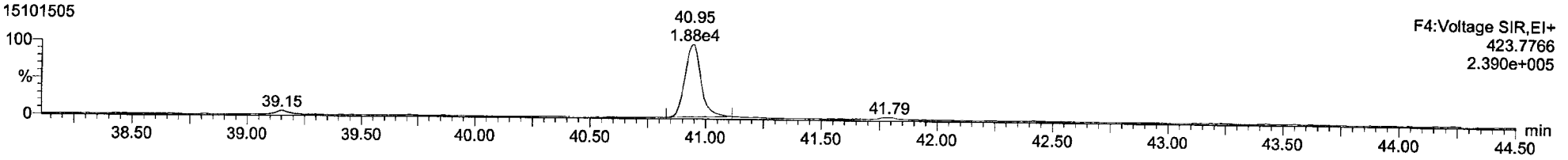
13C-1234678-HpCDD



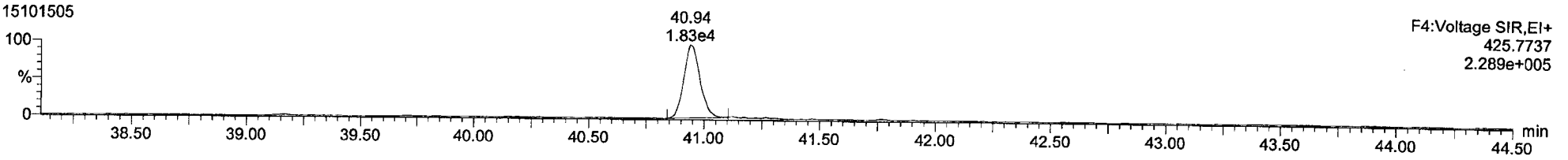
13C-1234678-HpCDD



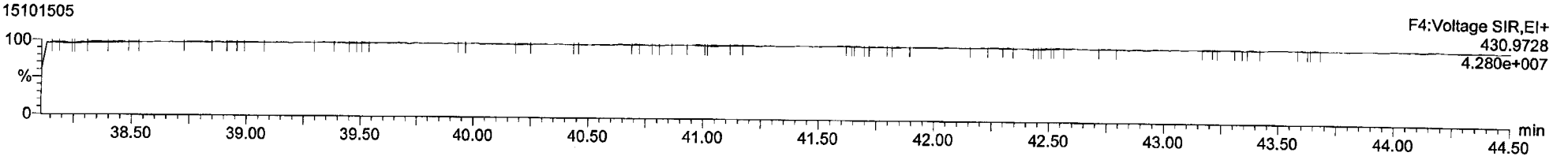
Total-heptadioxins



Total-heptadioxins

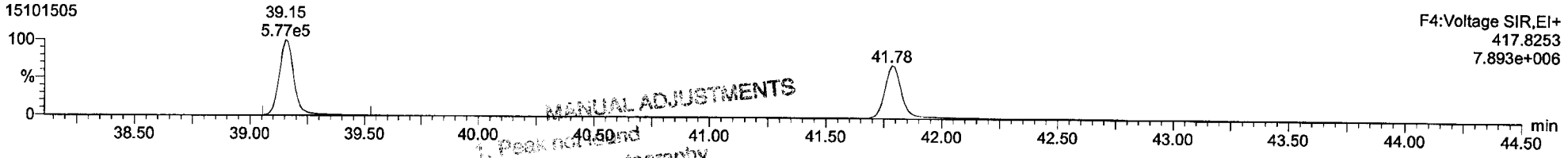


FUNCTION4 PFK



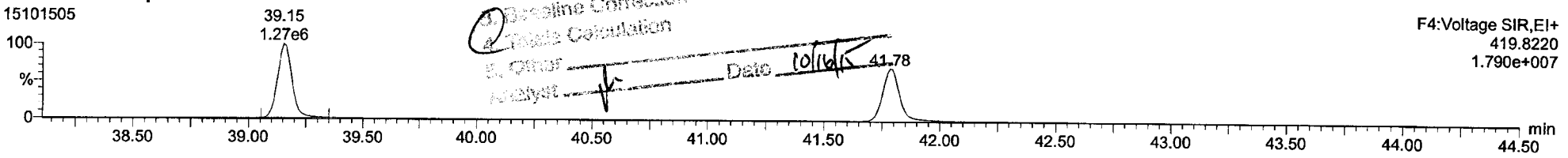
ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF

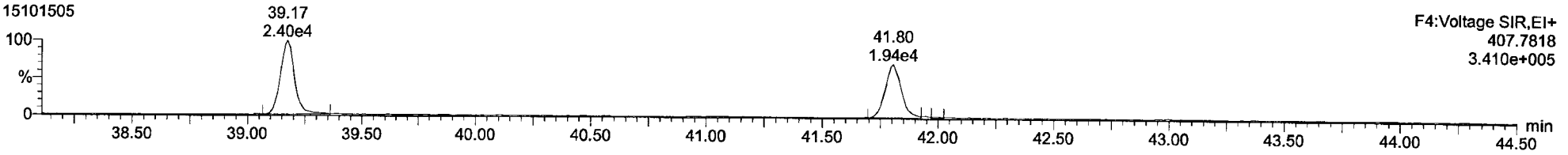


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Ratio Calculation
5. Other
Analyst Date 10/16/15

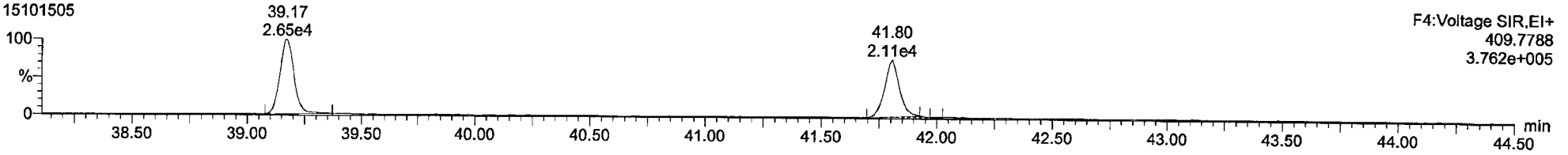
13C-1234678-HpCDF



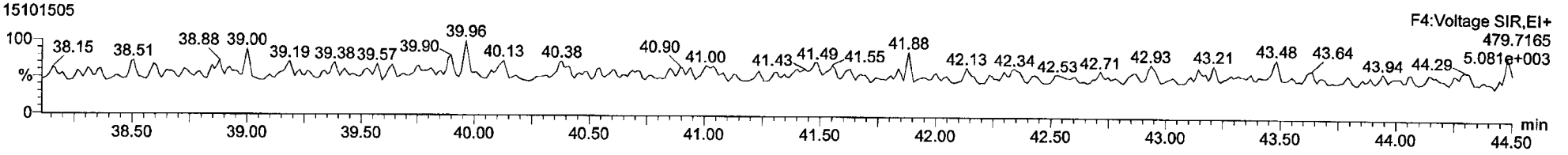
Total-heptafurans



Total-heptafurans



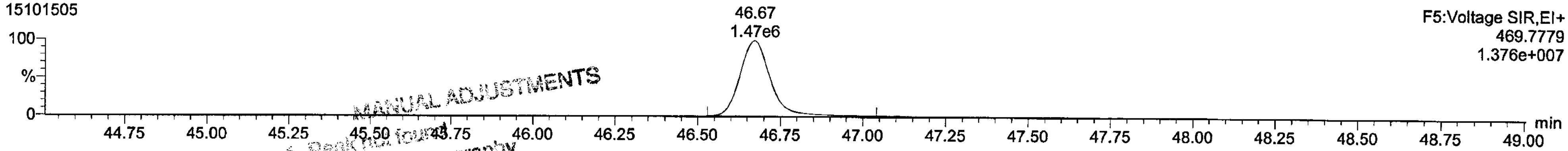
FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:57 Pacific Daylight Time

ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

13C-OCDD
15101505



MANUAL ADJUSTMENTS
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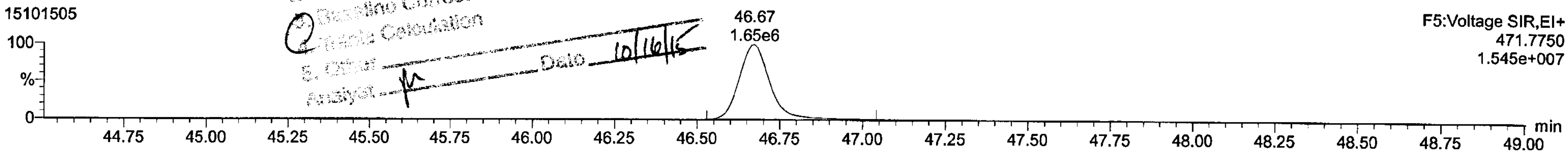
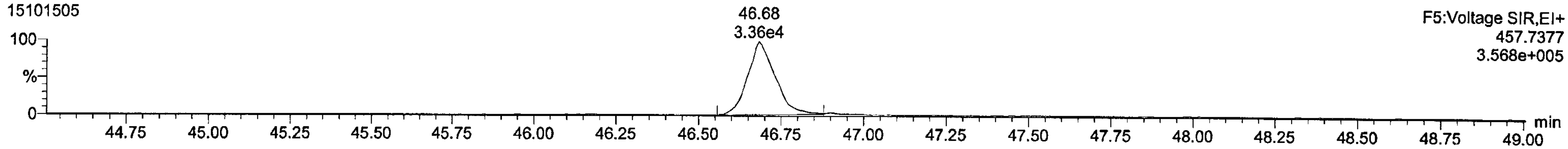
3. Baseline Correction
4. Traits Calculation
[illegible]
Analyst [illegible] Date 10/16/15

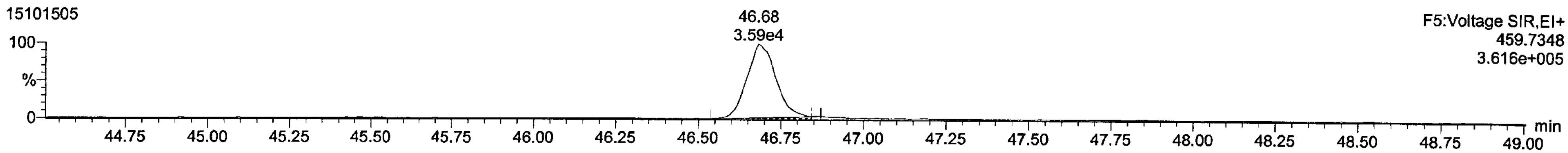
13C-OCDD
15101505



OCDD
15101505



OCDD
15101505



FUNCTION5 PFK
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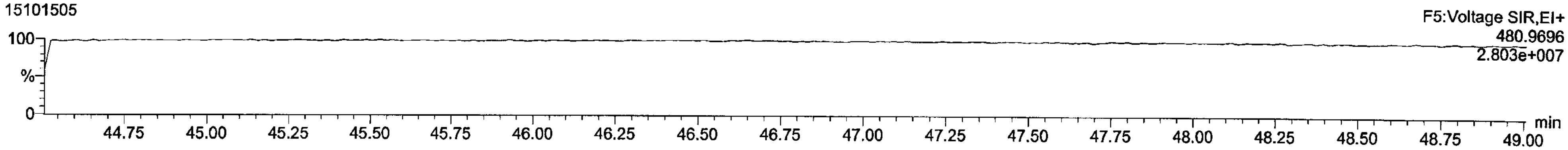
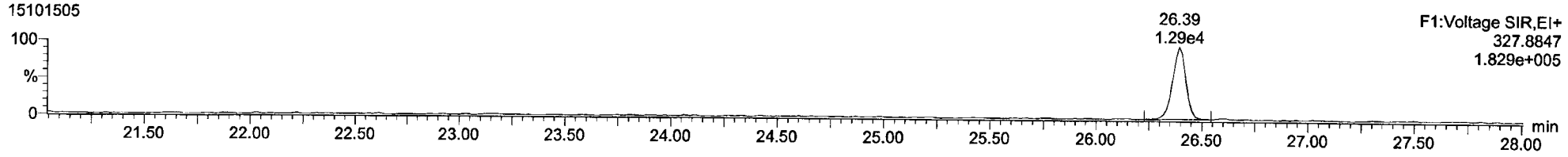
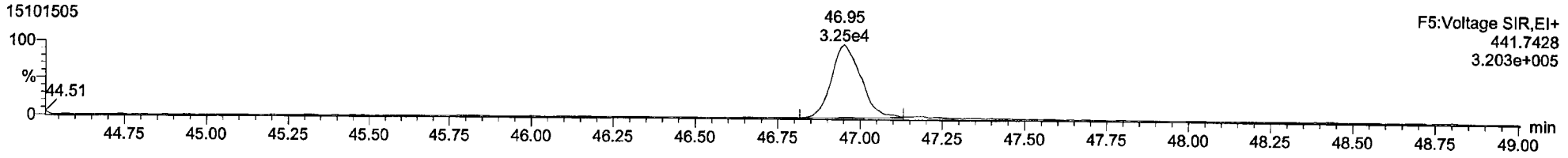


ID: CS1, Name: 15101505, Date: 15-Oct-2015, Time: 16:02:00, Conditions: AUTOSPEC01, User: pk

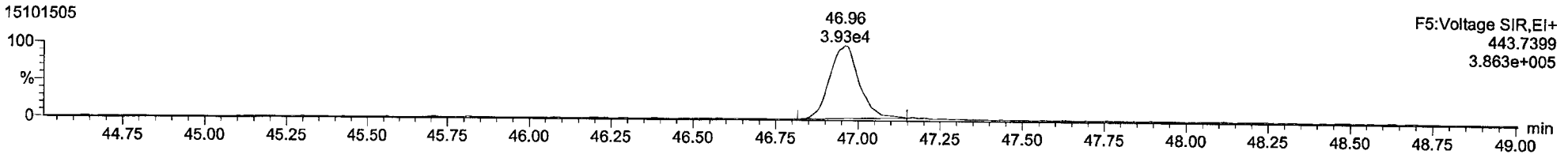
37CL-2378-TCDD



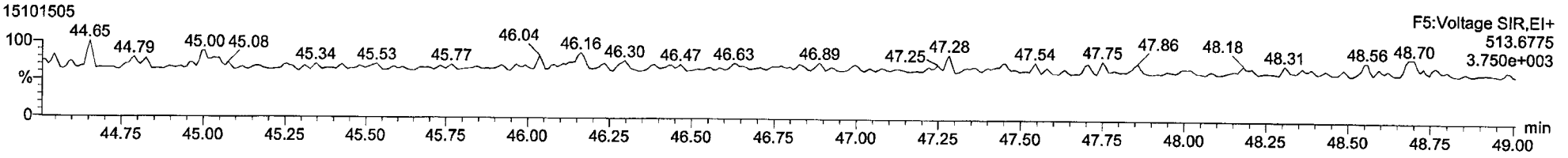
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:59 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, 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	25.735	1.001	2.52e4	3.83e4	0.827	0.657	0.770	839	1298	3.63e5	5.49e5	433.0	NO	1.958	1.958
12378-PeCDF	29.869	1.001	1.45e5	1.07e5	0.824	1.352	1.550	937	1454	2.04e6	1.51e6	2181.0	NO	9.850	9.850
23478-PeCDF	31.206	1.000	1.49e5	1.05e5	0.850	1.418	1.550	937	1454	2.14e6	1.52e6	2284.7	NO	9.966	9.966
123478-HxCDF	34.878	1.001	1.18e5	1.05e5	0.973	1.125	1.240	1419	2043	1.72e6	1.57e6	1209.2	NO	9.879	9.879
234678-HxCDF	35.963	1.000	1.17e5	1.05e5	1.025	1.116	1.240	1419	2043	1.65e6	1.50e6	1164.7	NO	9.805	9.805
123678-HxCDF	35.020	1.000	1.27e5	1.18e5	0.953	1.082	1.240	1419	2043	1.69e6	1.60e6	1193.5	NO	10.006	10.006
123789-HxCDF	37.114	1.001	1.06e5	9.27e4	0.956	1.142	1.240	1419	2043	1.43e6	1.25e6	1004.9	NO	9.648	9.648
1234678-HpCDF	39.164	1.000	1.04e5	1.11e5	1.153	0.941	1.050	1298	1377	1.46e6	1.61e6	1122.2	NO	9.908	9.908
1234789-HpCDF	41.794	1.000	8.31e4	9.01e4	1.131	0.923	1.050	1298	1377	1.03e6	1.07e6	789.9	NO	9.996	9.996
OCDF	46.951	1.006	1.40e5	1.74e5	1.023	0.807	0.890	1155	1576	1.38e6	1.70e6	1197.8	NO	19.937	19.937
2378-TCDD	26.377	1.001	2.25e4	2.81e4	1.023	0.800	0.770	956	615	3.06e5	3.99e5	320.0	NO	1.878	1.878
12378-PeCDD	31.469	1.001	1.15e5	7.41e4	0.939	1.554	1.550	1151	597	1.64e6	1.01e6	1421.8	NO	10.117	10.117
123478-HxCDD	36.105	1.001	9.98e4	8.00e4	0.963	1.247	1.240	850	1765	1.47e6	1.18e6	1727.4	NO	9.916	9.916
123678-HxCDD	36.237	1.001	1.01e5	8.20e4	0.894	1.234	1.240	850	1765	1.41e6	1.15e6	1656.6	NO	9.685	9.685
123789-HxCDD	36.653	1.012	9.66e4	8.07e4	0.900	1.198	1.240	850	1765	1.34e6	1.09e6	1573.6	NO	9.850	9.850
1234678-HpCDD	40.939	1.000	8.33e4	7.87e4	0.964	1.059	1.050	950	1252	1.05e6	1.00e6	1103.4	NO	10.074	10.074
OCDD	46.682	1.000	1.37e5	1.55e5	0.969	0.881	0.890	1241	1433	1.36e6	1.53e6	1099.0	NO	19.525	19.525
13C-2378-TCDF	25.719	1.006	1.71e6	2.21e6	1.502	0.774	0.770	4466	2203	2.40e7	3.12e7	5378.2	NO		100.740
13C-12378-PeCDF	29.847	1.168	1.88e6	1.23e6	1.215	1.536	1.550	3320	3079	2.61e7	1.70e7	7872.9	NO		98.692
13C-23478-PeCDF	31.195	1.221	1.84e6	1.16e6	1.181	1.580	1.550	3320	3079	2.62e7	1.65e7	7879.7	NO		98.102
13C-123478-HxCDF	34.856	0.951	7.85e5	1.54e6	1.246	0.511	0.510	4143	4385	1.14e7	2.22e7	2749.9	NO		98.524
13C-123678-HxCDF	35.009	0.955	8.73e5	1.70e6	1.375	0.514	0.510	4143	4385	1.18e7	2.28e7	2849.3	NO		98.859
13C-234678-HxCDF	35.952	0.981	7.60e5	1.45e6	1.186	0.525	0.510	4143	4385	1.05e7	2.02e7	2545.1	NO		98.304
13C-123789-HxCDF	37.092	1.012	7.36e5	1.42e6	1.135	0.520	0.510	4143	4385	9.99e6	1.93e7	2410.5	NO		100.229
13C-1234678-HpCDF	39.153	1.069	5.82e5	1.30e6	1.020	0.448	0.440	2174	3772	8.21e6	1.81e7	3776.4	NO		97.518
13C-1234789-HpCDF	41.783	1.140	4.58e5	1.07e6	0.824	0.426	0.440	2174	3772	5.59e6	1.27e7	2572.1	NO		98.306
13C-1234-TCDD	25.555	0.000	1.14e6	1.45e6	1.000	0.790	0.770	2845	1519	1.67e7	2.11e7	5865.5	NO		100.000
13C-2378-TCDD	26.362	1.032	1.15e6	1.48e6	0.983	0.780	0.770	2845	1519	1.61e7	2.06e7	5645.0	NO		103.373
13C-12378-PeCDD	31.447	1.231	1.21e6	7.84e5	0.787	1.539	1.550	1217	1716	1.71e7	1.09e7	14015.5	NO		97.611
13C-123478-HxCDD	36.083	0.985	1.05e6	8.32e5	1.031	1.266	1.240	2022	1855	1.54e7	1.22e7	7608.2	NO		96.621
13C-123678-HxCDD	36.215	0.988	1.17e6	9.41e5	1.137	1.248	1.240	2022	1855	1.62e7	1.30e7	7996.1	NO		98.403
13C-1234678-HpCDD	40.917	1.117	8.49e5	8.19e5	0.892	1.037	1.050	2704	1983	1.08e7	1.04e7	3984.5	NO		98.878
13C-OCDD	46.664	1.273	1.46e6	1.62e6	0.852	0.901	0.890	2413	2734	1.41e7	1.60e7	5839.2	NO		191.435

Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:59 Pacific Daylight Time

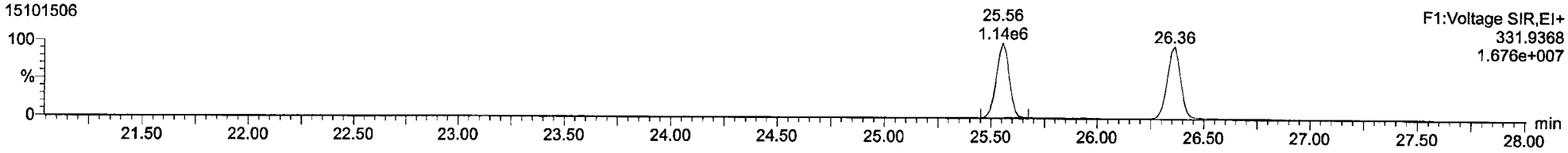
ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

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	36.643	0.000	1.05e6	8.40e5	1.000	1.251	1.240	2022	1855	1.43e7	1.14e7	7079.2	NO		100.000
Total-tetrafurans			2.55e4		0.827			839		3.70e5					1.976
Total-penta1			0.00e0					400		0.00e0					
Total-pentafurans			3.02e5		0.837			937		4.27e6					20.262
Total-hexafurans			4.69e5		0.977			1419		6.49e6					39.358
Total-heptafurans			1.88e5		1.142			1298		2.50e6					20.036
Total-Furans			1.12e6		0.971			839		1.50e7					101.569
Total-tetradioxins			2.31e4		1.023			956		3.16e5					1.906
Total-pentadioxins			1.16e5		0.939			1151		1.65e6					10.154
Total-hexadioxins			2.98e5		0.919			850		4.22e6					29.500
Total-heptadioxins			8.45e4		0.964			950		1.07e6					10.198
Total-Dioxins			6.58e5		0.950			956		8.62e6					71.283
Total-TEQ			1.78e6					956		2.36e7					172.852
37CL-2378-TCDD	26.377	1.032	5.52e4		1.091			1477		7.70e5		521.1			1.950
FUNCTION1 PFK			0.00e0					625796		0.00e0					
FUNCTION2 PFK			1.60e5					120675		4.48e6					0.000
FUNCTION3 PFK			0.00e0					435461		0.00e0					
FUNCTION4 PFK			2.10e5					302741		6.10e6					
FUNCTION5 PFK			0.00e0					260682		0.00e0					
FUNCTION1 HXCDPE			0.00e0					411		0.00e0					
FUNCTION1 HPCDPE			1.84e2					576		3.15e3					0.000
FUNCTION2 HPCDPE			3.96e2					960		6.89e3					0.000
FUNCTION3 OCDPE			0.00e0					365		0.00e0					
FUNCTION4 NCDPE			0.00e0					566		0.00e0					
FUNCTION5 DCDPE			0.00e0					278		0.00e0					

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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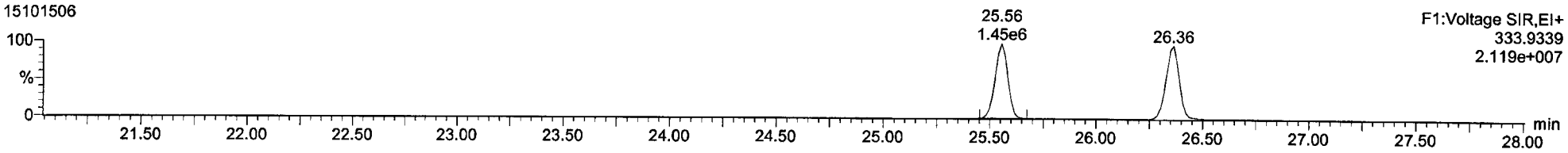

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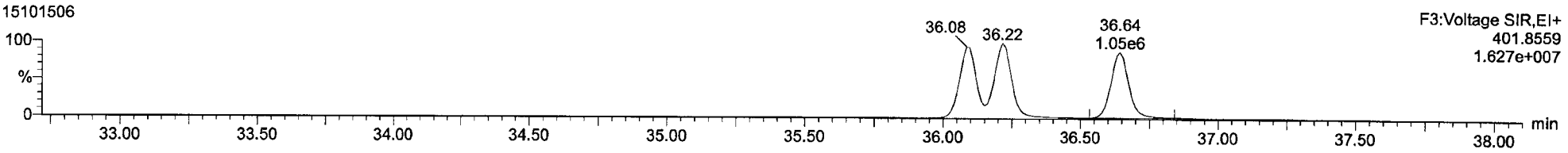

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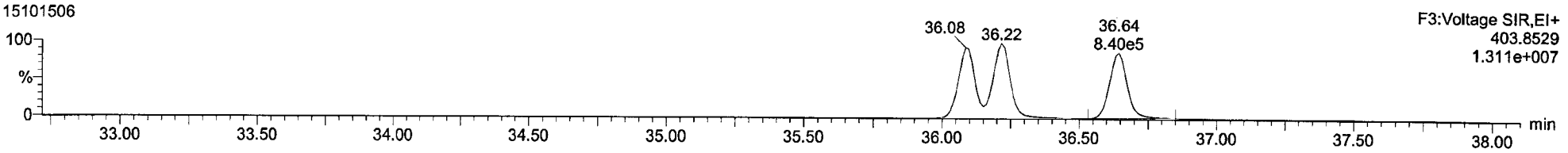

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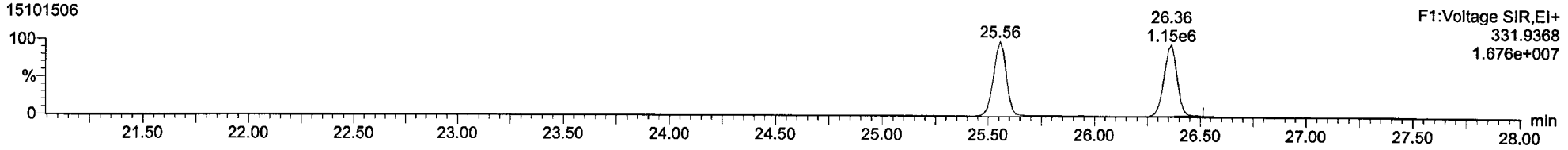
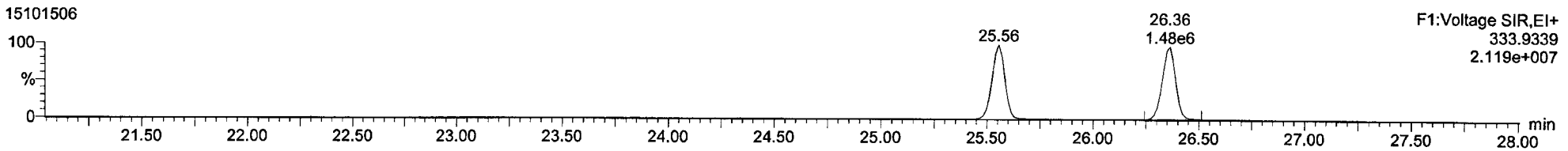
Printed: Friday, October 16, 2015 09:49:59 Pacific Daylight Time

ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

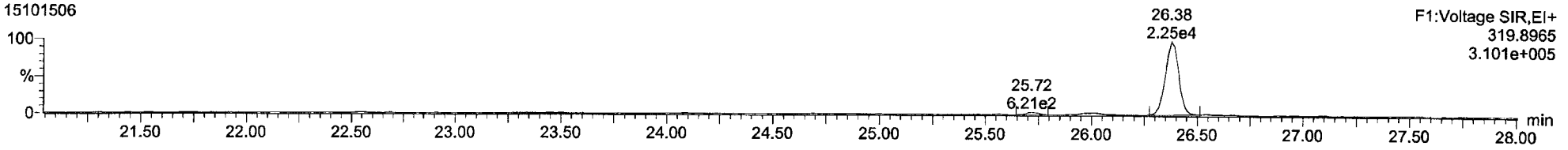
13C-2378-TCDD



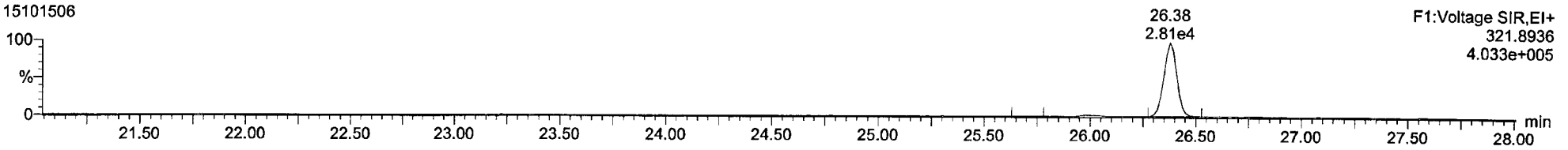
13C-2378-TCDD



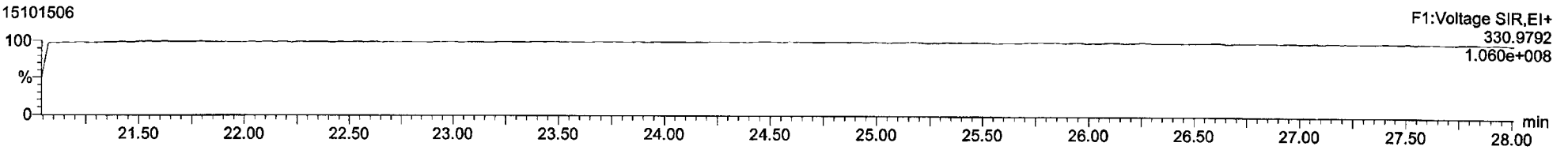
Total-tetradioxins



Total-tetradioxins



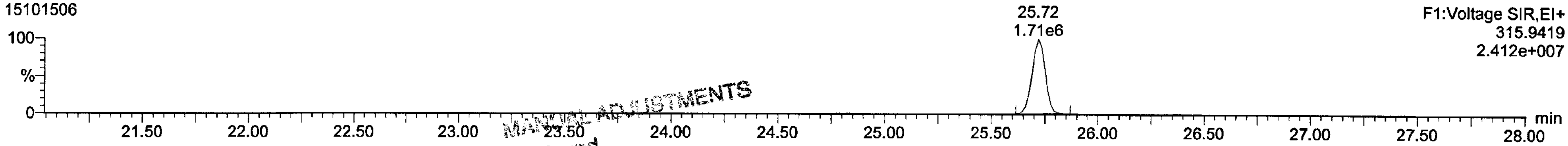
FUNCTION1 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:49:59 Pacific Daylight Time

ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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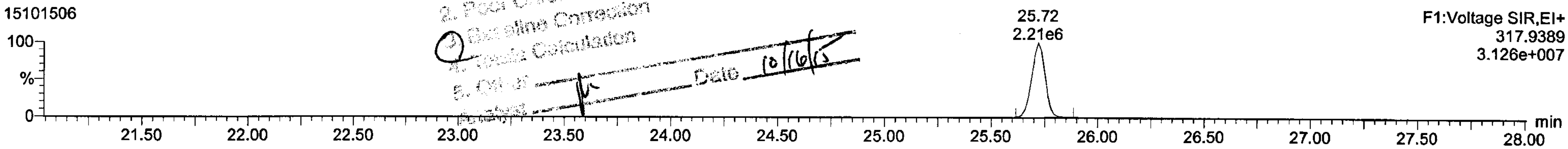
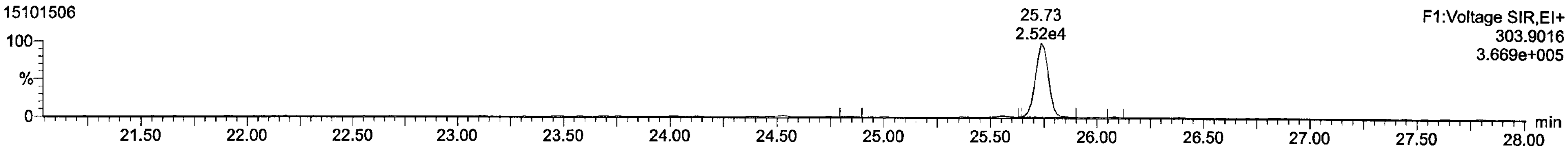
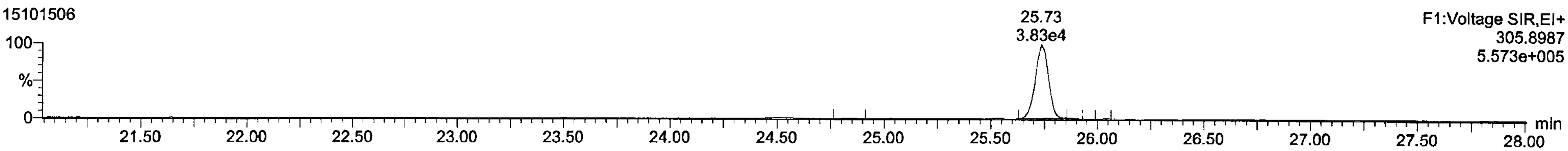


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. ... Calculation
5. Other
... Date 10/16/15

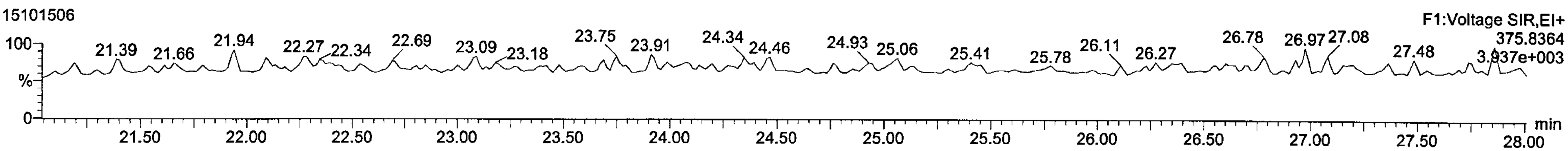
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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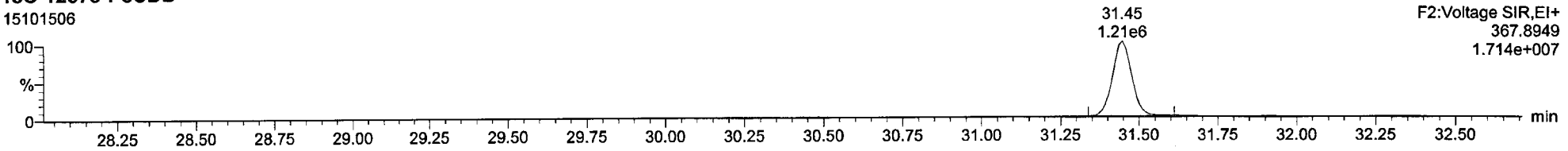
ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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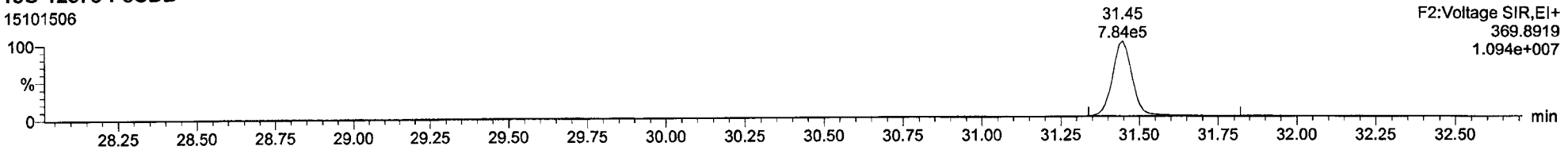
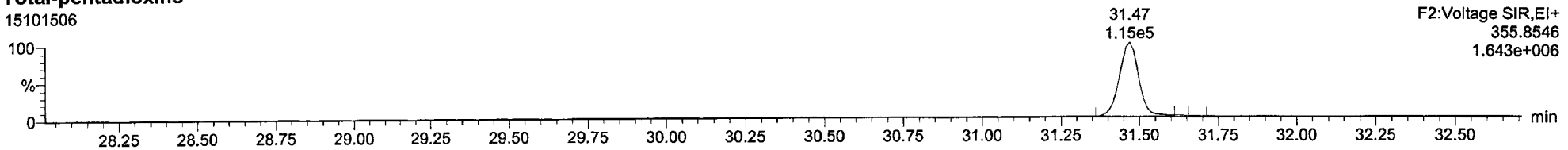
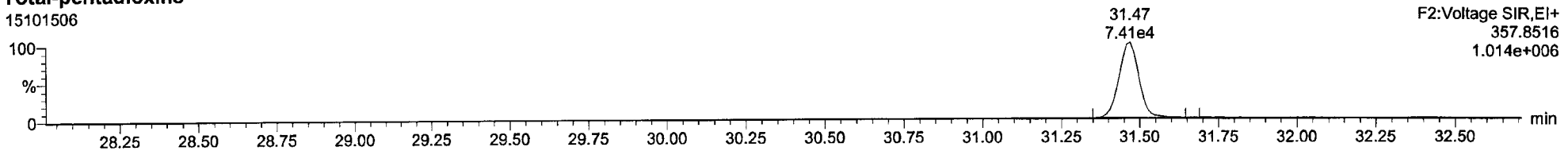


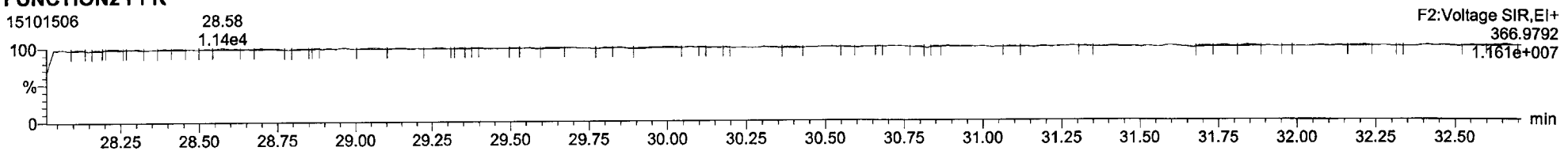
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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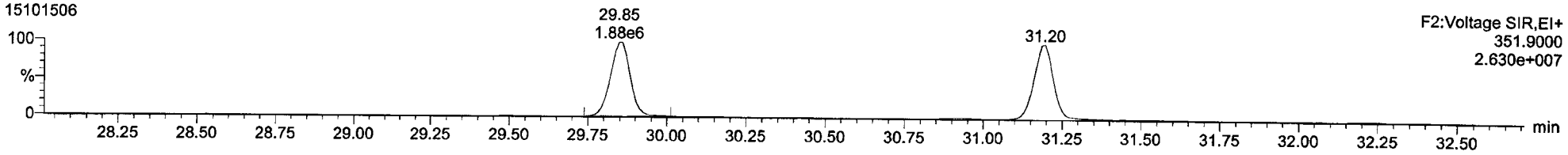
ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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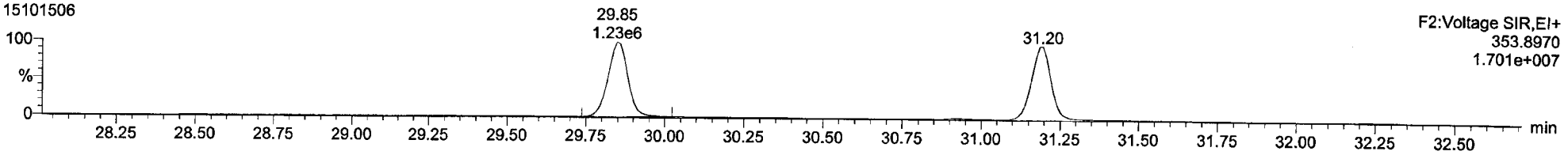
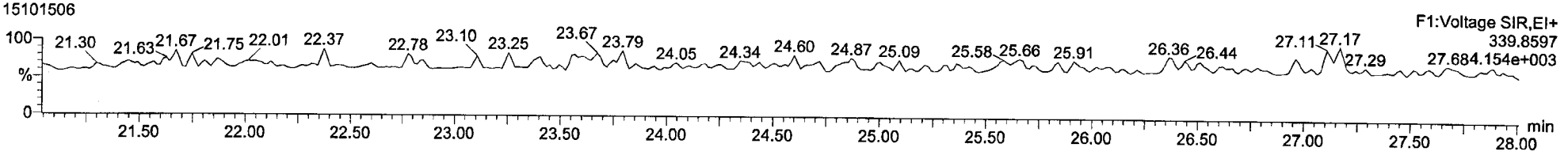
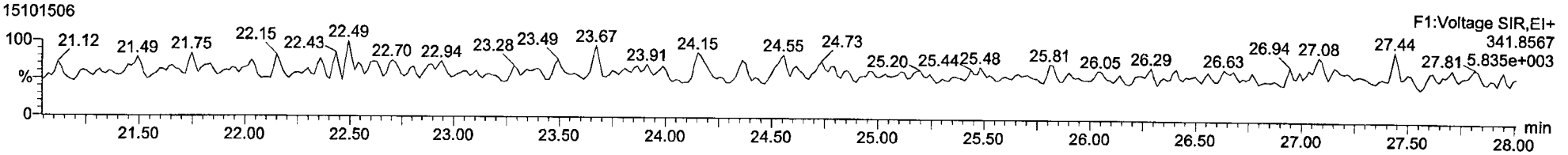


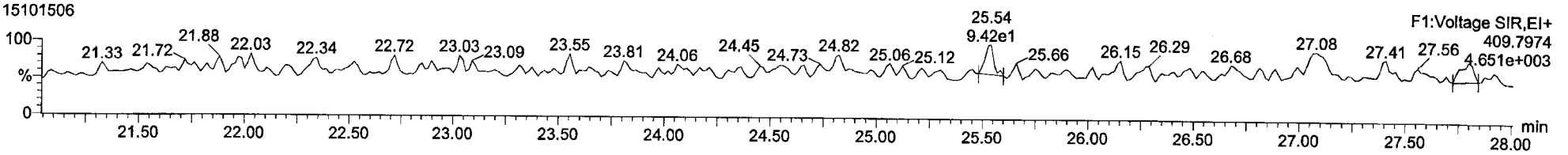
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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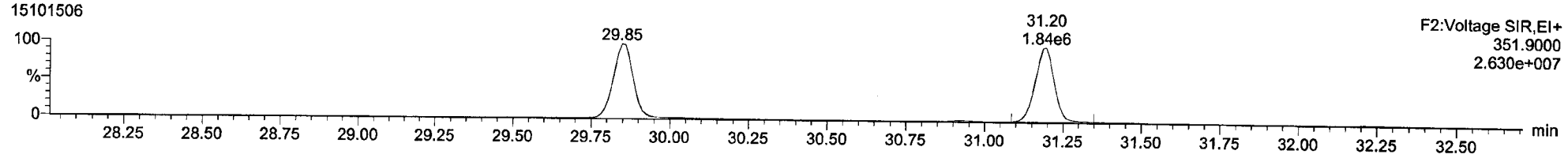

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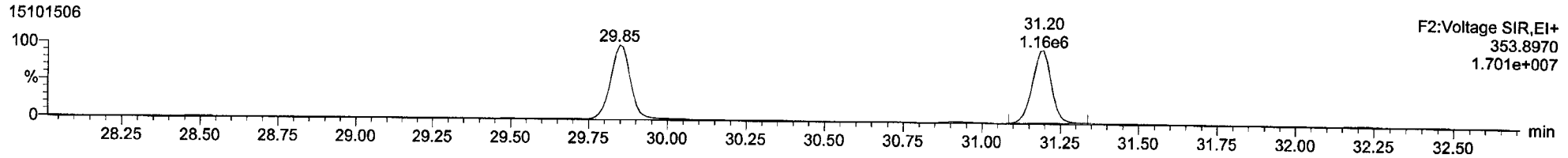
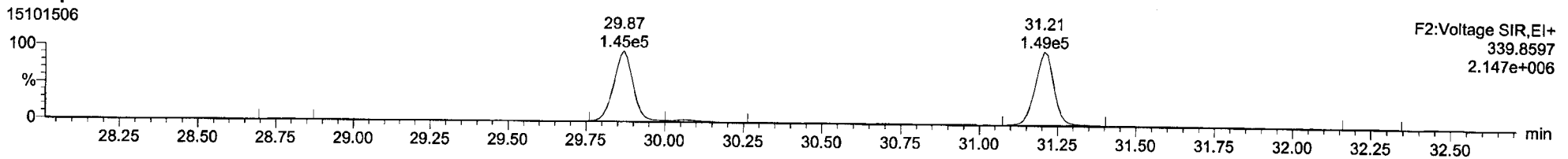
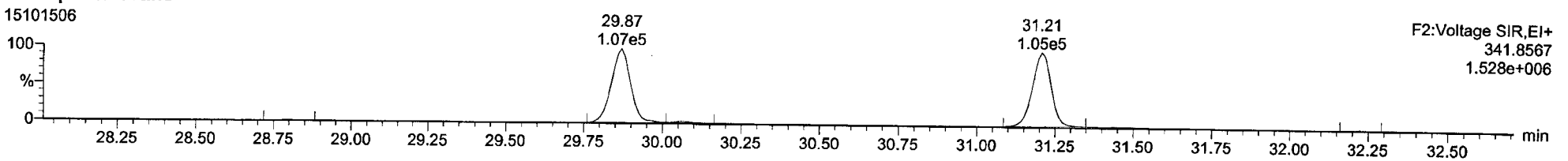


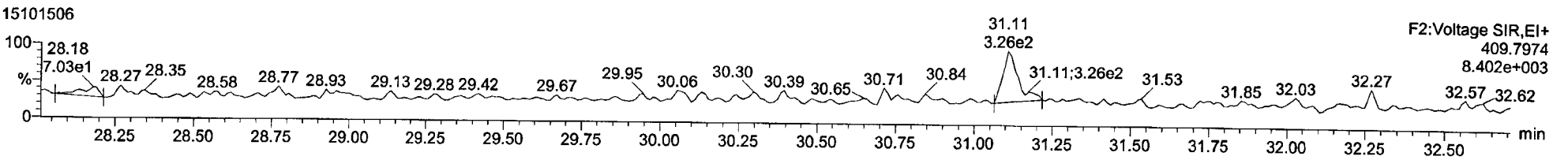
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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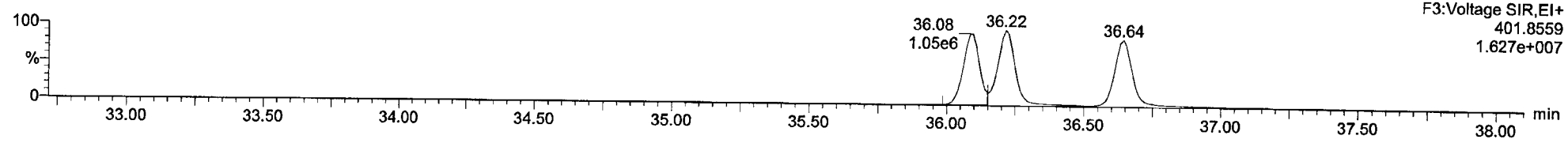
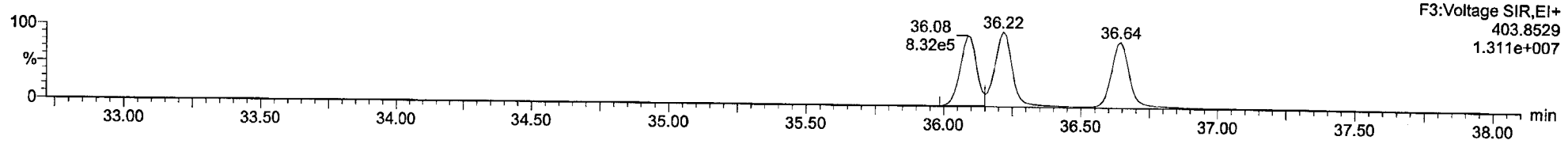
13C-123478-HxCDD
15101506



13C-123478-HxCDD
15101506



Total-hexadioxins
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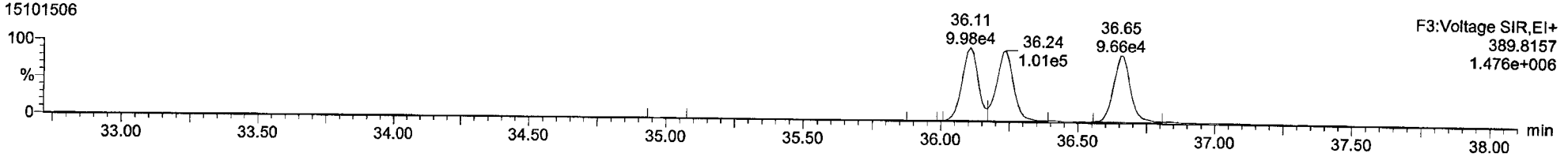

Total-hexadioxins
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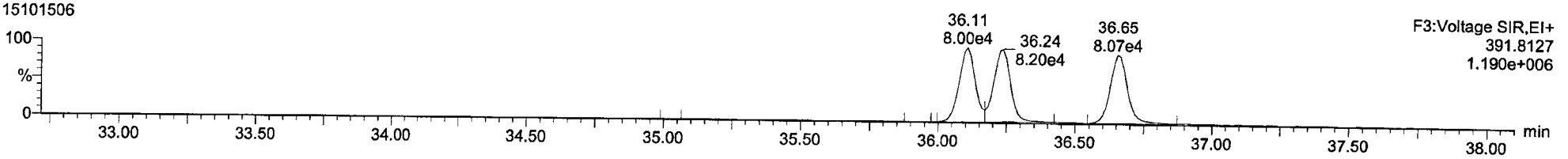
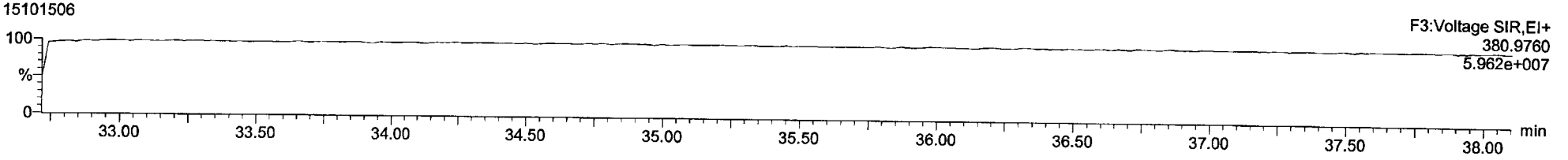


FUNCTION3 PFK
15101506



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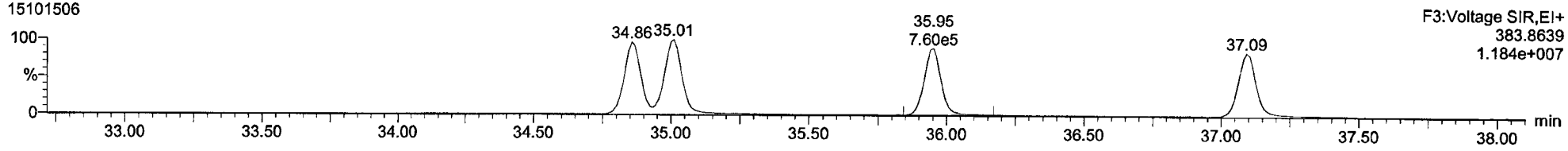
13C-234678-HxCDF



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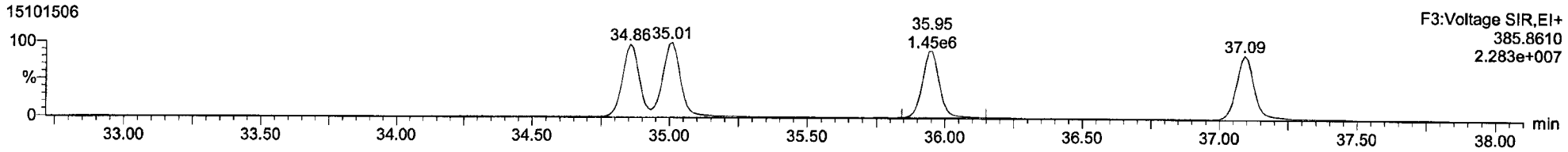
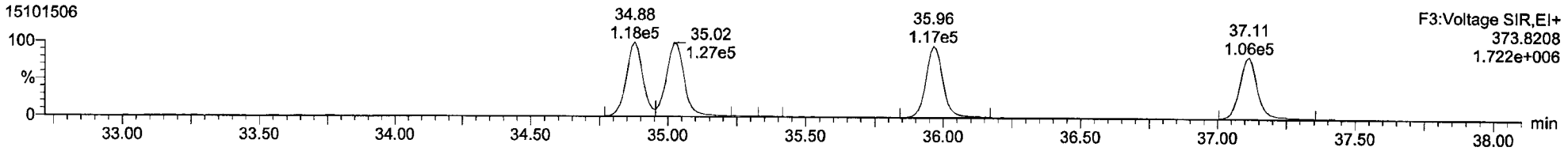
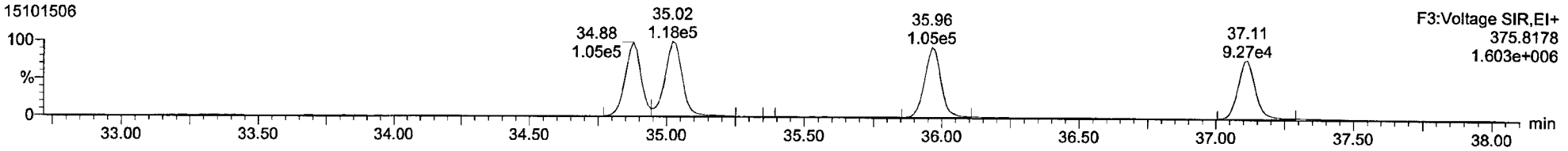


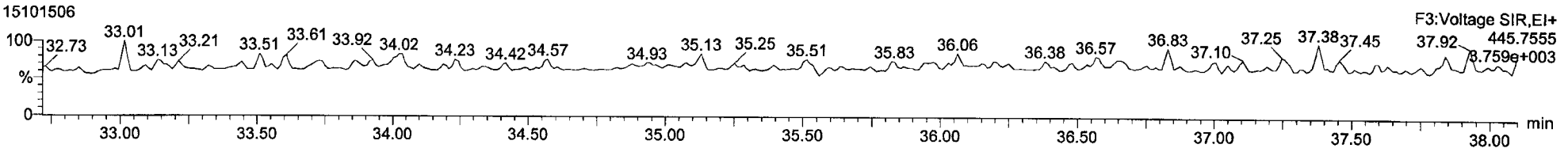
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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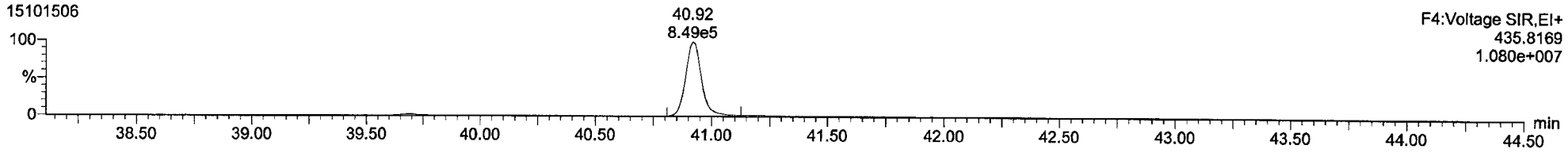
13C-1234678-HpCDD



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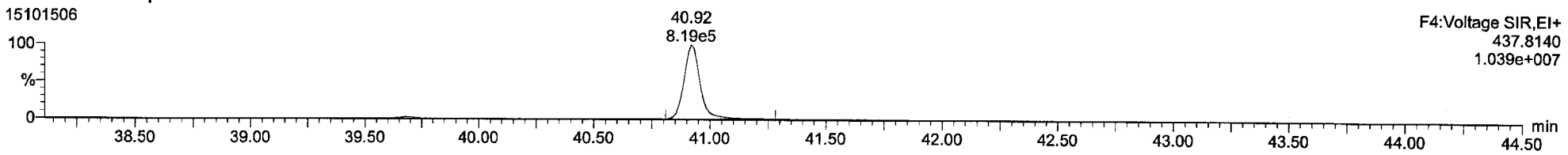
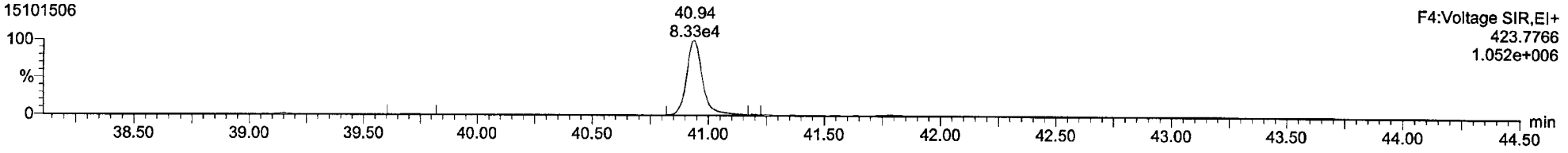
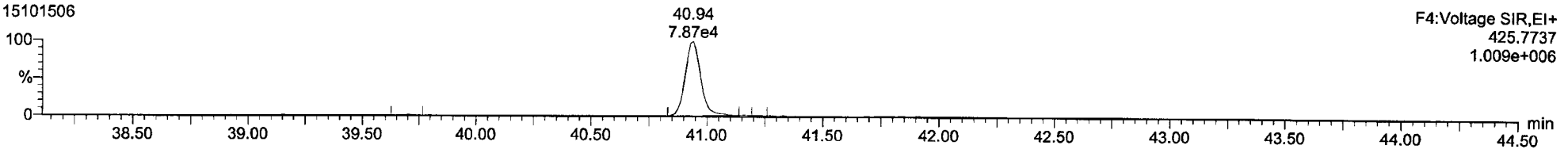


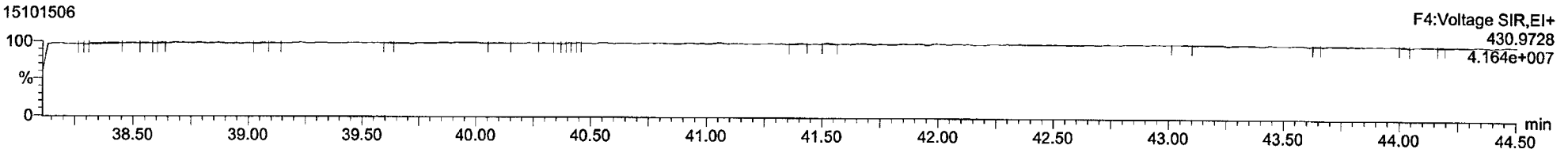
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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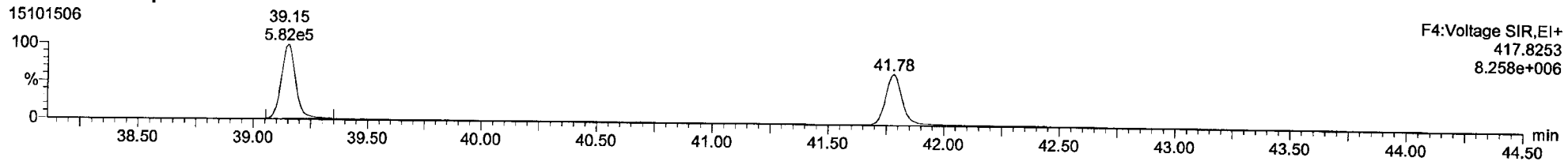
13C-1234678-HpCDF



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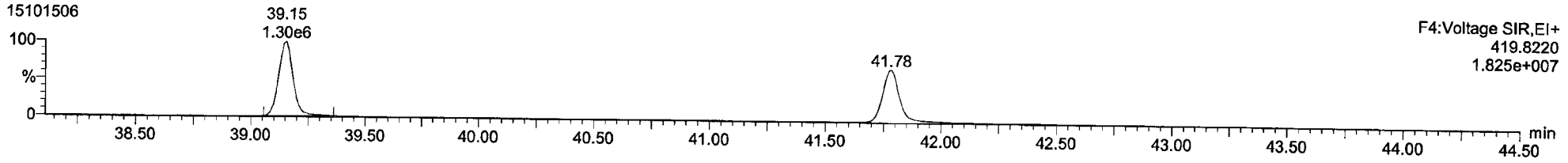
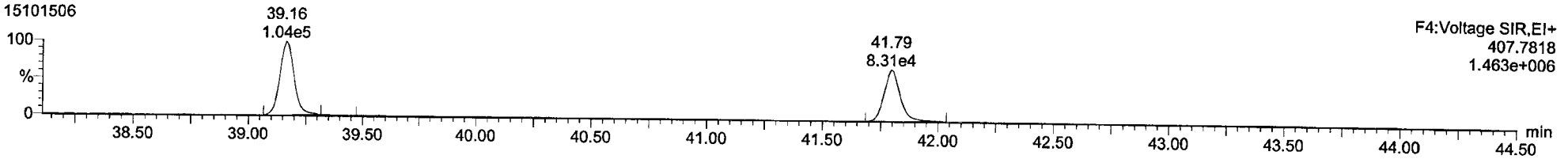
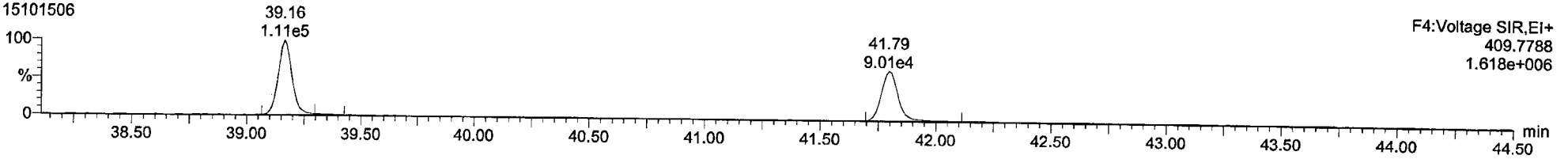


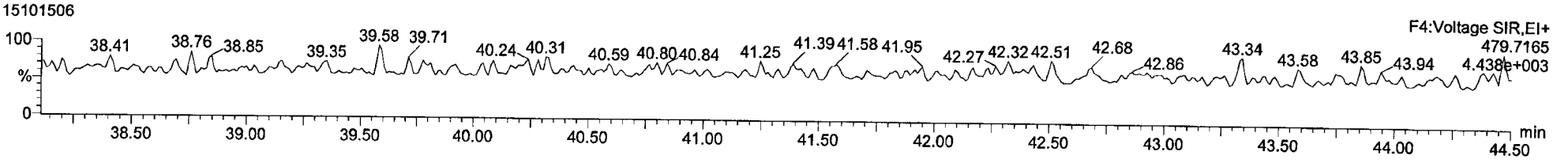
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

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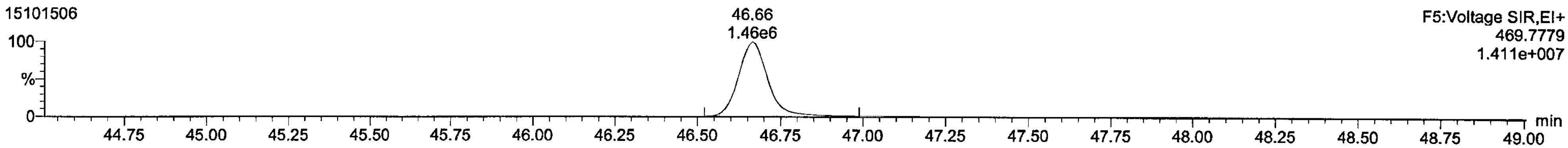
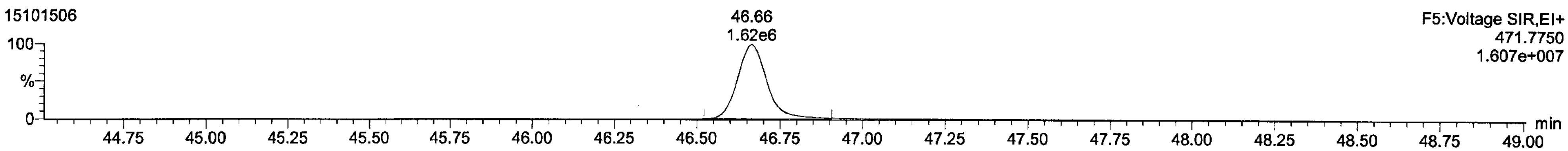
ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

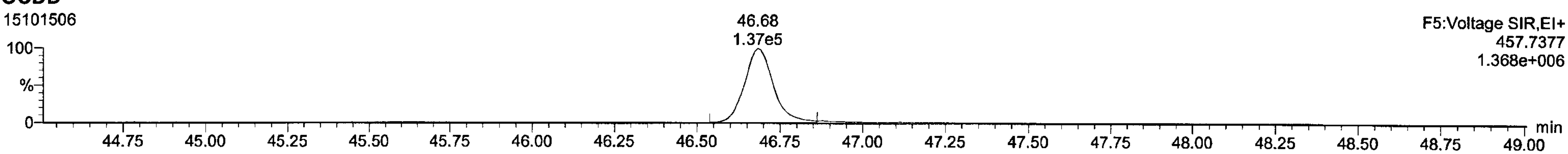
13C-OCDD



13C-OCDD



OCDD



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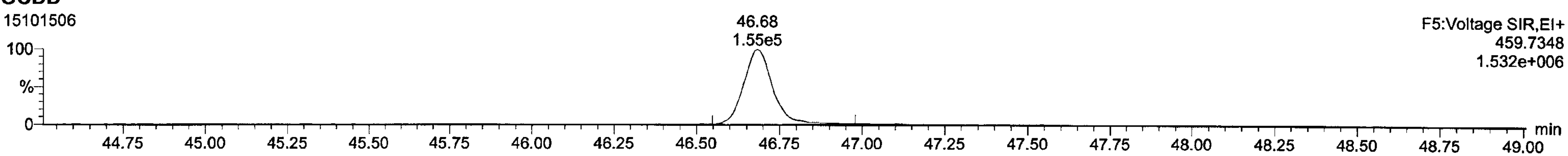
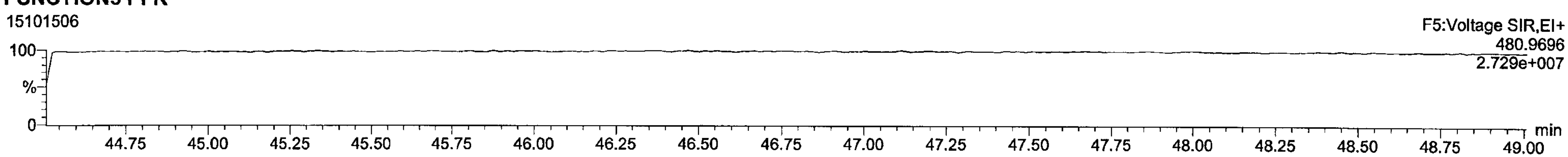


FUNCTION5 PFK



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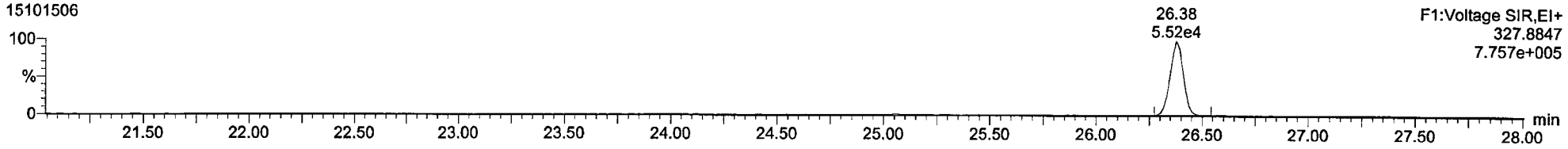
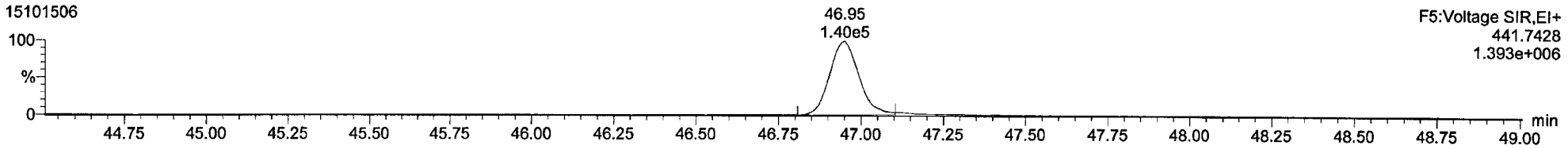
ID: CS2, Name: 15101506, Date: 15-Oct-2015, Time: 16:52:59, Conditions: AUTOSPEC01, User: pk

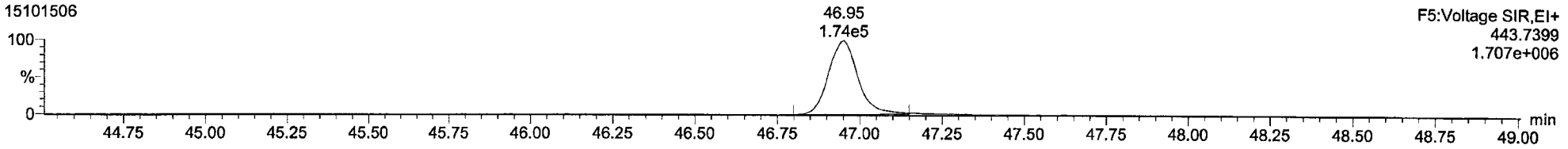
37CL-2378-TCDD



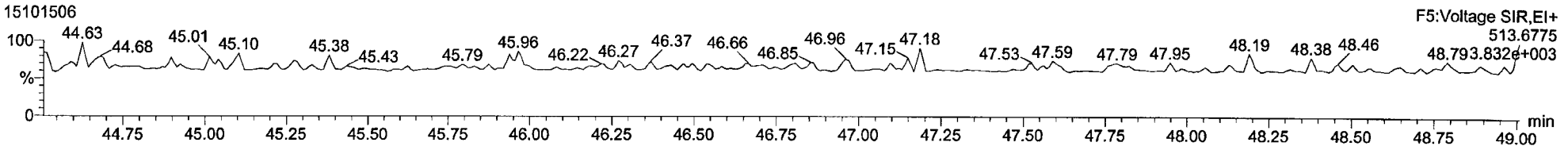
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, 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	25.750	1.001	1.48e5	2.24e5	0.827	0.661	0.770	1635	1444	2.09e6	3.19e6	1280.9	NO	9.965	9.965
12378-PeCDF	29.880	1.000	8.77e5	6.25e5	0.824	1.404	1.550	2596	2474	1.25e7	8.98e6	4815.8	NO	51.210	51.210
23478-PeCDF	31.218	1.000	8.61e5	6.18e5	0.850	1.394	1.550	2596	2474	1.25e7	8.96e6	4814.9	NO	50.437	50.437
123478-HxCDF	34.889	1.001	6.87e5	6.04e5	0.973	1.138	1.240	3574	5225	9.98e6	8.86e6	2792.2	NO	50.593	50.593
234678-HxCDF	35.975	1.001	6.80e5	6.15e5	1.025	1.106	1.240	3574	5225	9.64e6	8.64e6	2697.4	NO	50.959	50.959
123678-HxCDF	35.032	1.000	7.12e5	6.64e5	0.953	1.073	1.240	3574	5225	9.89e6	8.94e6	2766.8	NO	50.555	50.555
123789-HxCDF	37.126	1.001	5.81e5	5.30e5	0.956	1.097	1.240	3574	5225	8.04e6	7.22e6	2249.8	NO	48.065	48.065
1234678-HpCDF	39.175	1.000	5.94e5	6.49e5	1.153	0.916	1.050	2948	2978	8.69e6	9.21e6	2947.4	NO	50.934	50.934
1234789-HpCDF	41.806	1.000	4.74e5	5.09e5	1.131	0.930	1.050	2948	2978	5.89e6	6.25e6	1996.7	NO	51.541	51.541
OCDF	46.961	1.006	8.10e5	9.78e5	1.023	0.828	0.890	1918	3140	7.67e6	9.30e6	3999.3	NO	101.917	101.917
2378-TCDD	26.392	1.001	1.33e5	1.67e5	1.023	0.795	0.770	1346	1088	1.93e6	2.40e6	1435.2	NO	9.546	9.546
12378-PeCDD	31.481	1.001	6.50e5	4.24e5	0.939	1.534	1.550	3247	2345	9.31e6	5.99e6	2868.1	NO	49.938	49.938
123478-HxCDD	36.117	1.001	5.83e5	4.70e5	0.963	1.241	1.240	3172	3754	8.45e6	6.74e6	2662.7	NO	50.751	50.751
123678-HxCDD	36.249	1.001	5.95e5	4.76e5	0.894	1.250	1.240	3172	3754	8.34e6	6.60e6	2628.5	NO	49.635	49.635
123789-HxCDD	36.665	1.012	5.63e5	4.67e5	0.900	1.205	1.240	3172	3754	7.99e6	6.49e6	2520.0	NO	50.097	50.097
1234678-HpCDD	40.940	1.000	4.66e5	4.46e5	0.964	1.045	1.050	2500	2672	5.86e6	5.70e6	2342.8	NO	51.110	51.110
OCDD	46.692	1.000	7.93e5	8.94e5	0.969	0.887	0.890	1924	2997	7.73e6	8.76e6	4015.6	NO	101.536	101.536
13C-2378-TCDF	25.735	1.006	1.98e6	2.54e6	1.502	0.777	0.770	4103	2128	2.80e7	3.61e7	6831.3	NO		99.121
13C-12378-PeCDF	29.869	1.168	2.17e6	1.39e6	1.215	1.564	1.550	3436	3503	3.05e7	1.94e7	8869.4	NO		96.507
13C-23478-PeCDF	31.207	1.220	2.11e6	1.34e6	1.181	1.569	1.550	3436	3503	2.98e7	1.89e7	8686.2	NO		96.216
13C-123478-HxCDF	34.868	0.951	8.88e5	1.74e6	1.246	0.511	0.510	4050	5222	1.26e7	2.47e7	3107.0	NO		103.127
13C-123678-HxCDF	35.021	0.955	9.55e5	1.90e6	1.375	0.502	0.510	4050	5222	1.33e7	2.57e7	3276.3	NO		101.719
13C-234678-HxCDF	35.953	0.981	8.46e5	1.63e6	1.186	0.518	0.510	4050	5222	1.18e7	2.29e7	2925.5	NO		102.306
13C-123789-HxCDF	37.104	1.012	8.22e5	1.60e6	1.135	0.515	0.510	4050	5222	1.12e7	2.18e7	2757.3	NO		104.332
13C-1234678-HpCDF	39.164	1.069	6.46e5	1.47e6	1.020	0.440	0.440	2620	3278	9.11e6	2.04e7	3478.6	NO		101.503
13C-1234789-HpCDF	41.784	1.140	5.18e5	1.17e6	0.824	0.443	0.440	2620	3278	6.14e6	1.38e7	2343.4	NO		100.233
13C-1234-TCDD	25.570	0.000	1.34e6	1.70e6	1.000	0.788	0.770	2546	1117	1.91e7	2.42e7	7495.4	NO		100.000
13C-2378-TCDD	26.377	1.032	1.35e6	1.72e6	0.983	0.786	0.770	2546	1117	1.85e7	2.35e7	7274.0	NO		103.155
13C-12378-PeCDD	31.459	1.230	1.40e6	8.90e5	0.787	1.573	1.550	1509	1046	2.01e7	1.27e7	13319.8	NO		95.870
13C-123478-HxCDD	36.095	0.985	1.20e6	9.53e5	1.031	1.260	1.240	1966	1269	1.74e7	1.39e7	8838.3	NO		102.307
13C-123678-HxCDD	36.227	0.988	1.33e6	1.08e6	1.137	1.226	1.240	1966	1269	1.87e7	1.51e7	9507.2	NO		104.017
13C-1234678-HpCDD	40.929	1.117	9.49e5	9.02e5	0.892	1.052	1.050	2167	2336	1.21e7	1.16e7	5603.6	NO		101.551
13C-OCDD	46.674	1.273	1.62e6	1.81e6	0.852	0.900	0.890	2426	2975	1.56e7	1.75e7	6441.4	NO		197.193

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

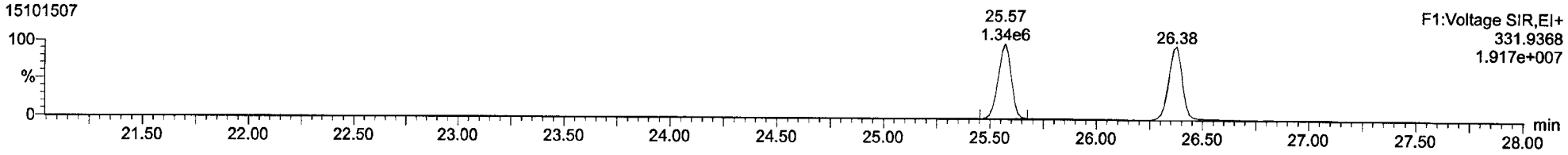
ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

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	36.654	0.000	1.13e6	9.11e5	1.000	1.242	1.240	1966	1269	1.56e7	1.26e7	7955.6	NO		100.000
Total-tetrafurans			4.56e5		0.827			1635		6.51e6					30.520
Total-penta1			1.35e6					1234		1.90e7					69.154
Total-pentafurans			2.64e6		0.837			2596		3.78e7					154.462
Total-hexafurans			3.48e6		0.977			3574		4.92e7					261.036
Total-heptafurans			1.07e6		1.142			2948		1.46e7					102.756
Total-Furans			9.81e6		0.971			1635		1.35e8					719.863
Total-tetradioxins			7.33e5		1.023			1346		8.95e6					52.983
Total-pentadioxins			2.33e6		0.939			3247		2.86e7					178.127
Total-hexadioxins			2.49e6		0.919			3172		3.56e7					215.714
Total-heptadioxins			1.01e6		0.964			2500		1.32e7					109.915
Total-Dioxins			7.35e6		0.950			1346		9.41e7					658.283
Total-TEQ			1.72e7					1346		2.29e8					1378.147
37CL-2378-TCDD	26.392	1.032	3.31e5		1.091			1268		4.73e6		3727.2			10.009
FUNCTION1 PFK			4.74e5					551976		6.71e6					
FUNCTION2 PFK			1.12e5					96938		3.54e6					0.000
FUNCTION3 PFK			6.72e5					408622		1.67e7					0.000
FUNCTION4 PFK			5.25e5					291757		1.63e7					
FUNCTION5 PFK			2.09e5					199987		7.29e6					
FUNCTION1 HXCDPE			2.35e2					456		3.03e3					0.000
FUNCTION1 HPCDPE			1.68e2					713		4.25e3					0.000
FUNCTION2 HPCDPE			1.52e3					827		2.45e4					0.000
FUNCTION3 OCDPE			0.00e0					292		0.00e0					
FUNCTION4 NCDPE			0.00e0					634		0.00e0					
FUNCTION5 DCDPE			0.00e0					288		0.00e0					

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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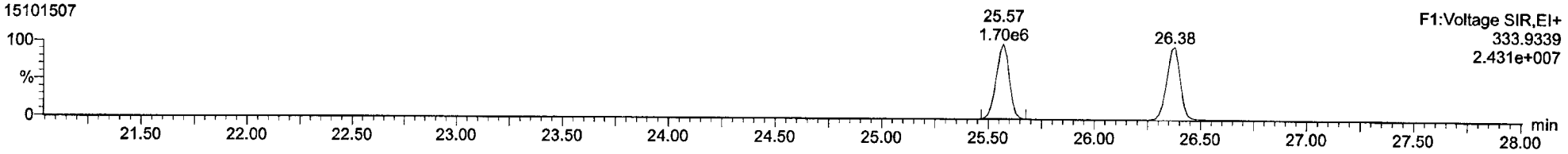

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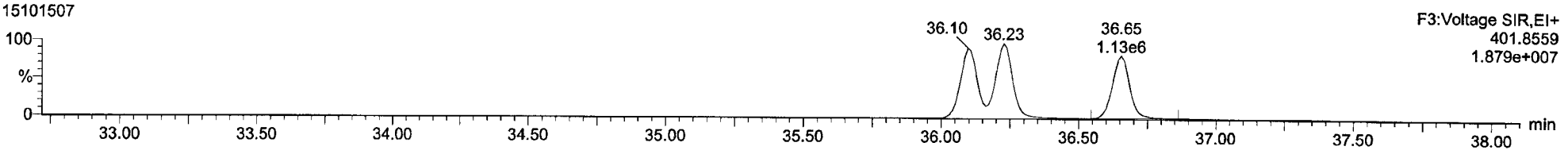

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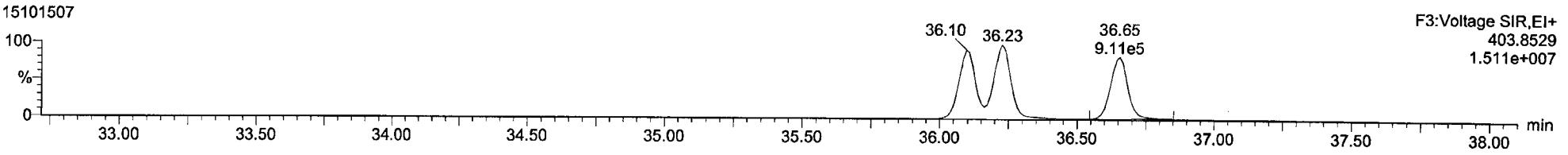
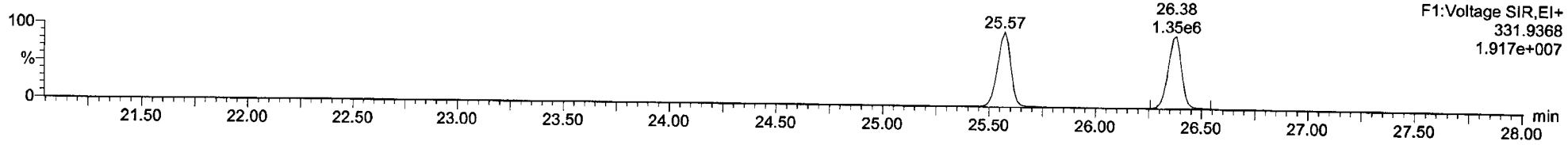


ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD
15101507



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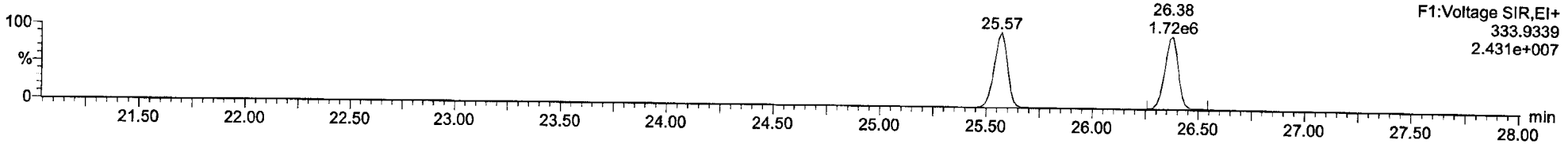
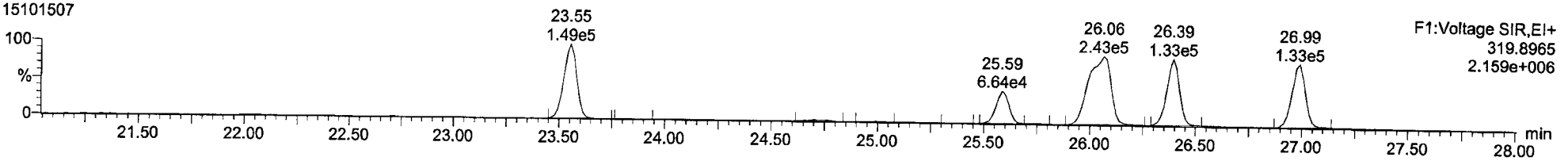
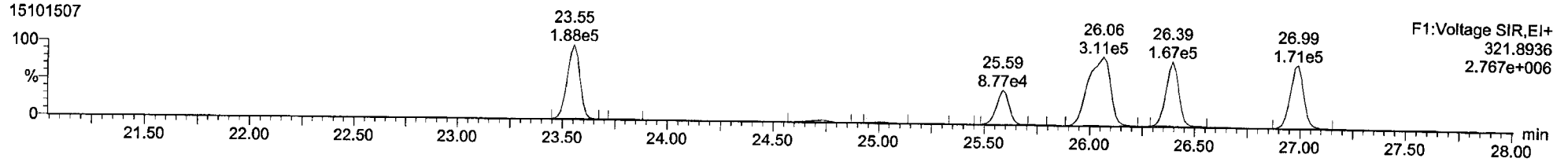


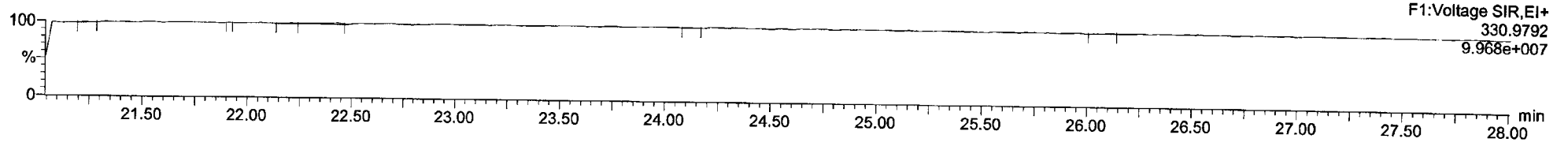
Total-tetradioxins
15101507



Total-tetradioxins
15101507



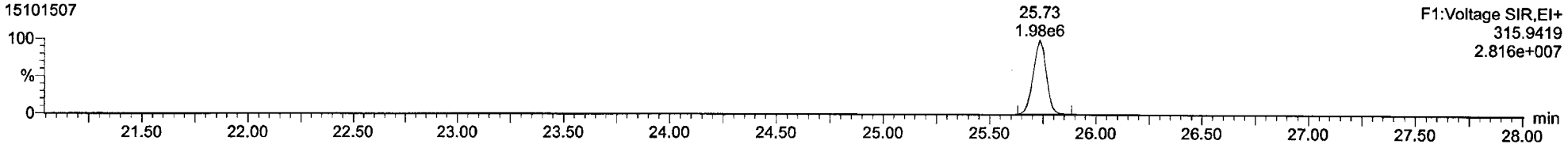
FUNCTION1 PFK
15101507



Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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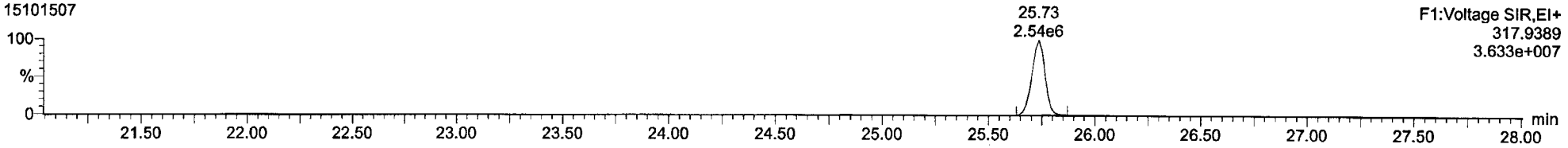
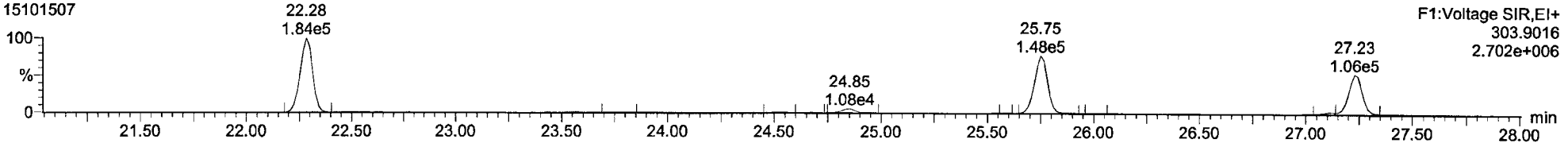
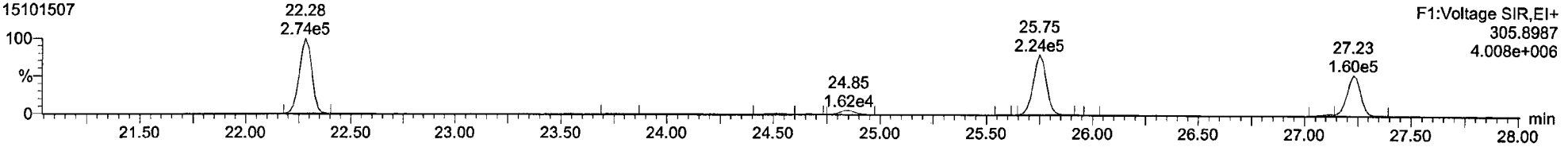


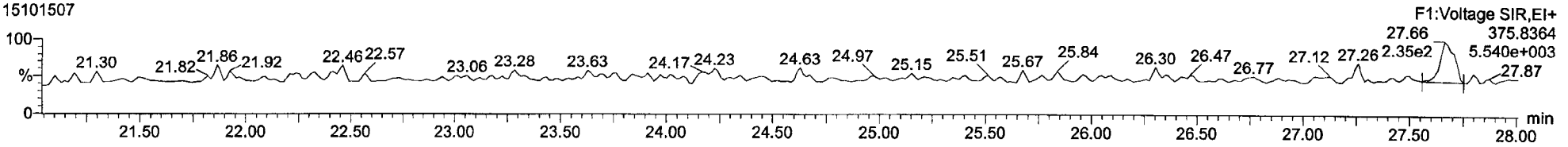
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

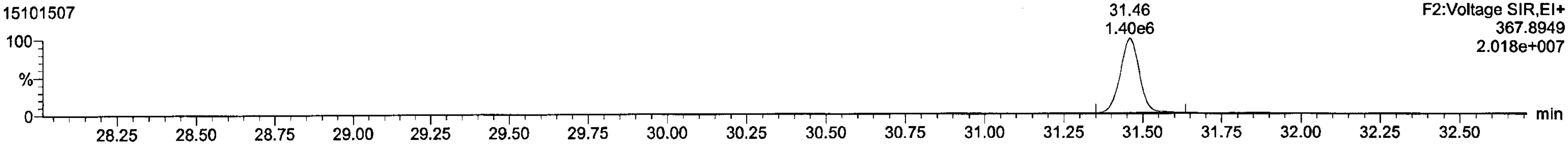
Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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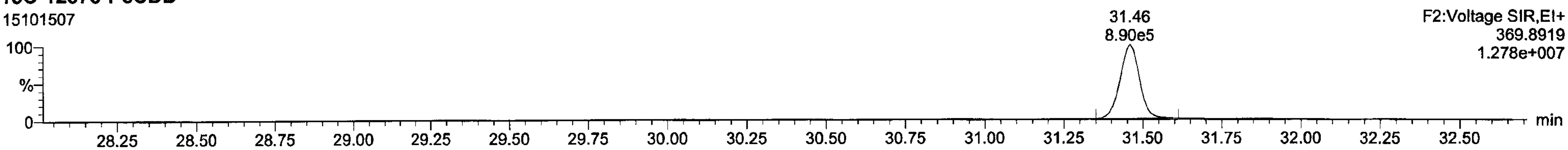
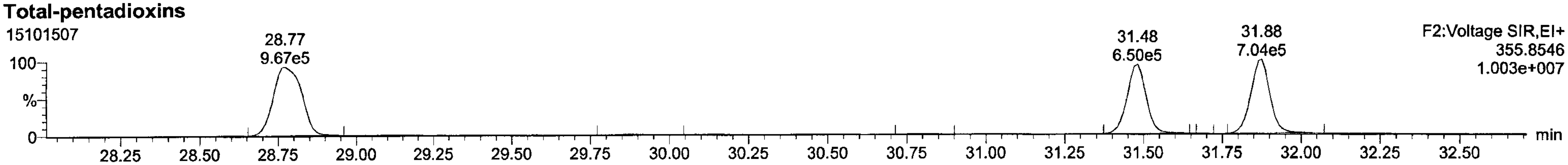
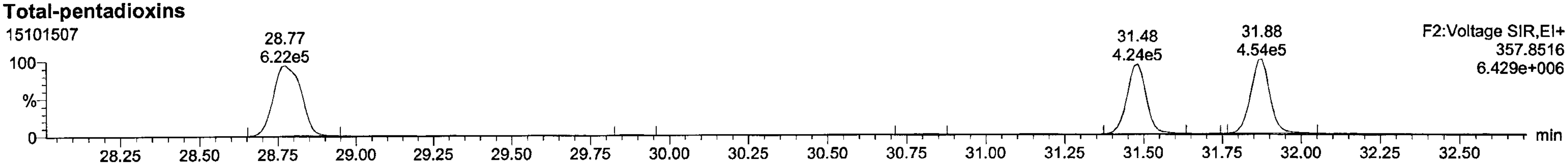


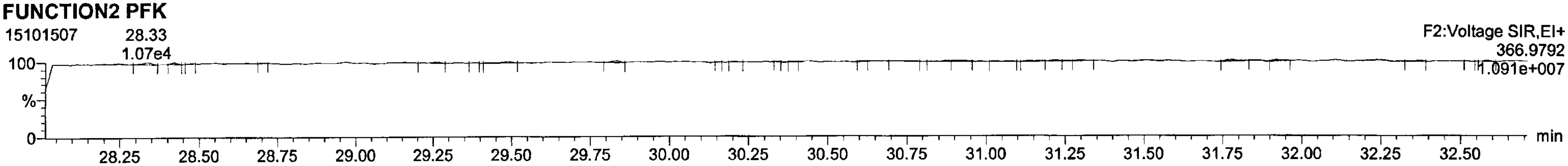
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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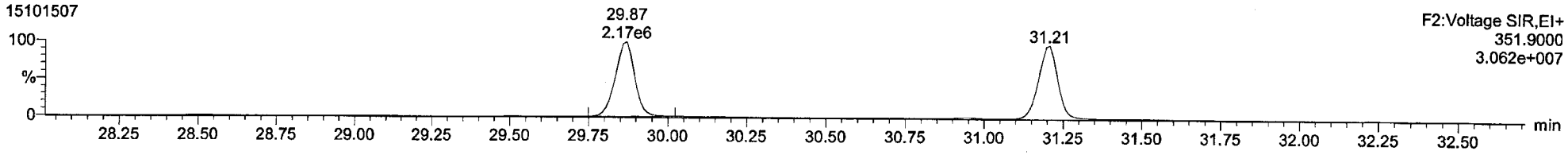
ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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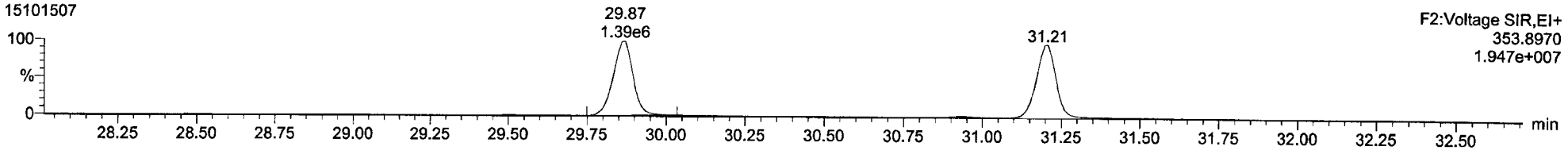
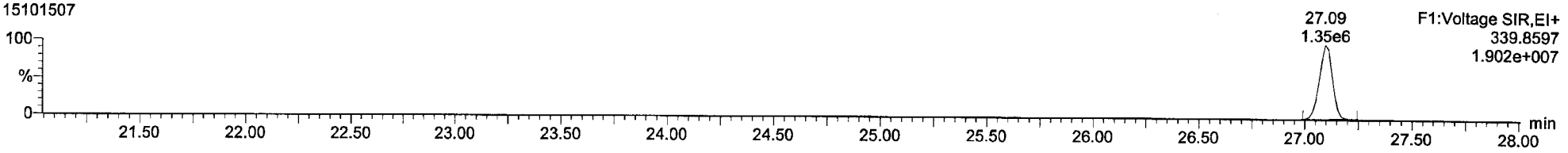
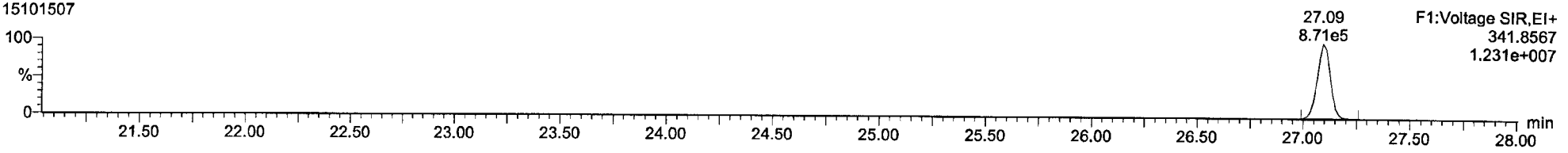


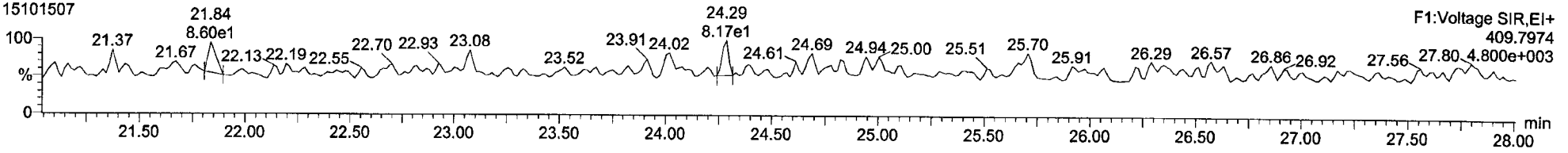
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

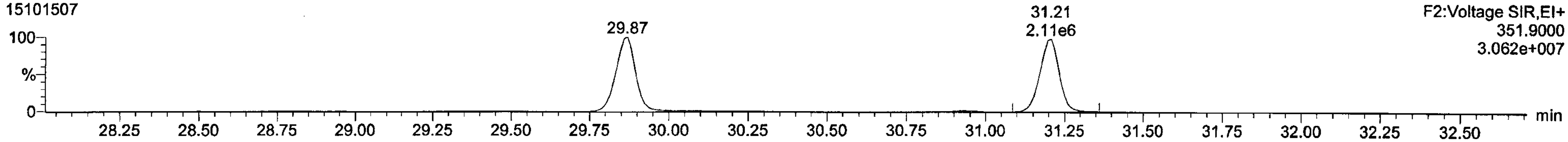
Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



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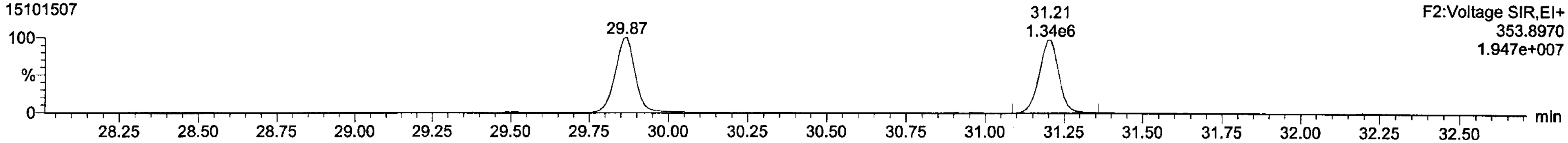
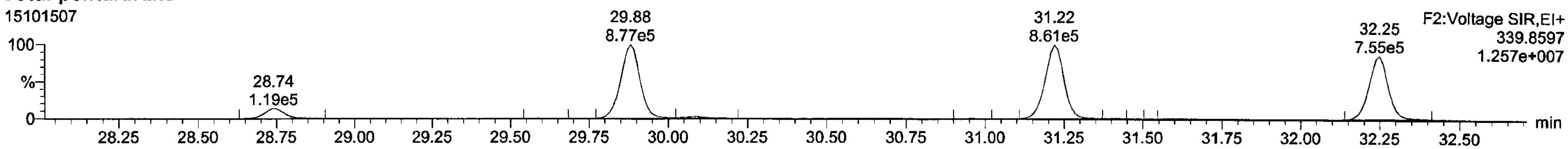
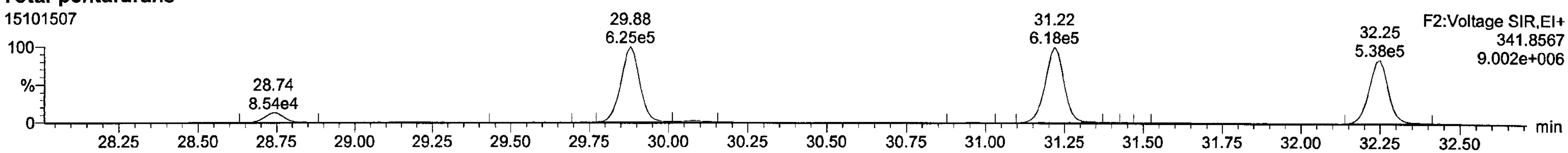


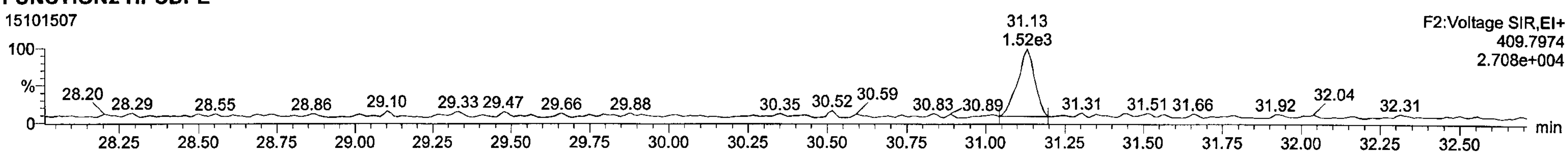
Total-pentafurans



Total-pentafurans



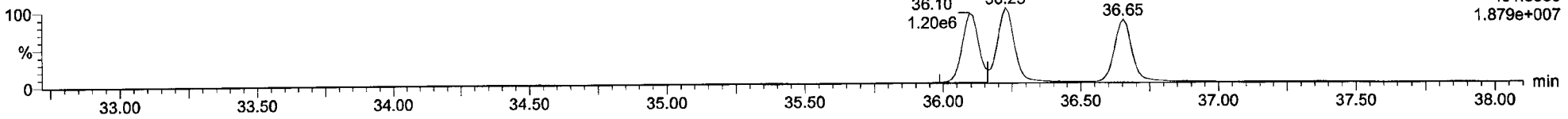
FUNCTION2 HPCDPE



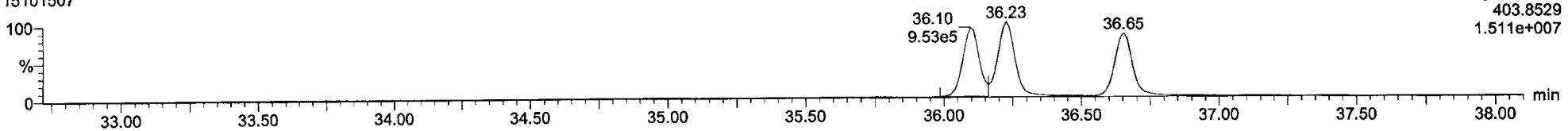
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

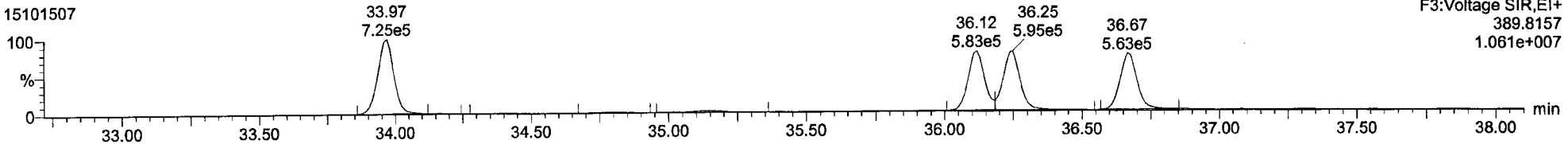
13C-123478-HxCDD
15101507
F3:Voltage SIR,EI+
401.8559
1.879e+007



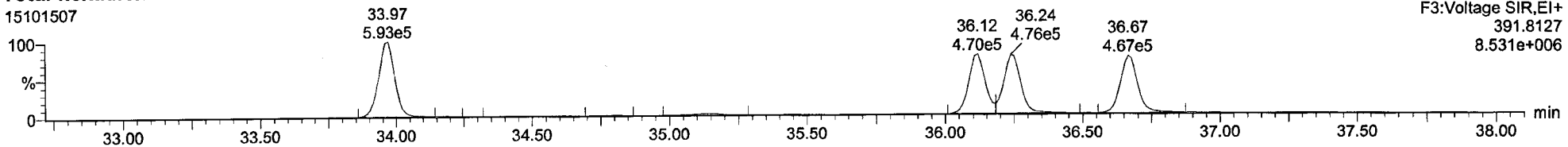
13C-123478-HxCDD
15101507
F3:Voltage SIR,EI+
403.8529
1.511e+007



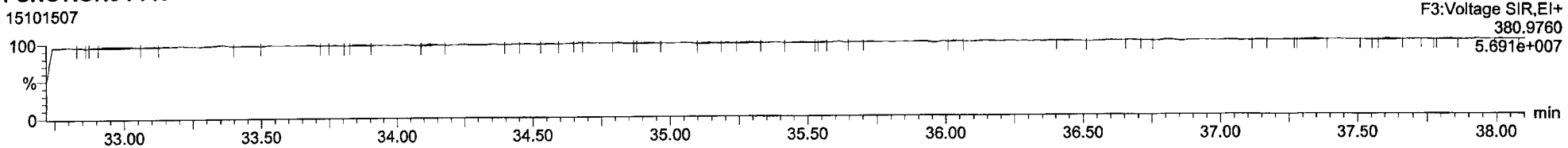
Total-hexadioxins
15101507
F3:Voltage SIR,EI+
389.8157
1.061e+007



Total-hexadioxins
15101507
F3:Voltage SIR,EI+
391.8127
8.531e+006

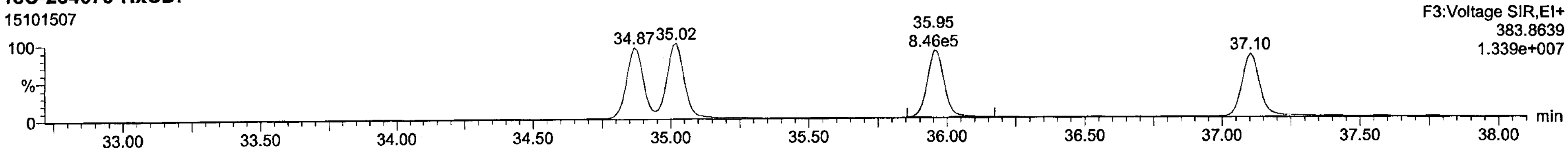


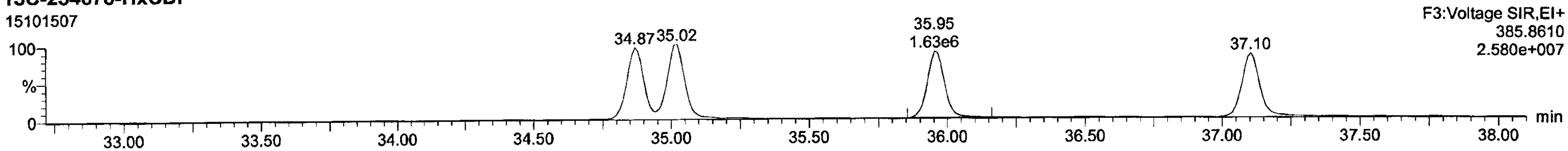
FUNCTION3 PFK
15101507
F3:Voltage SIR,EI+
380.9760
5.691e+007

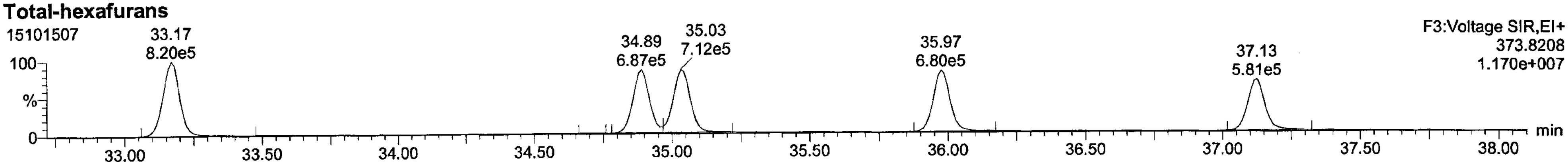


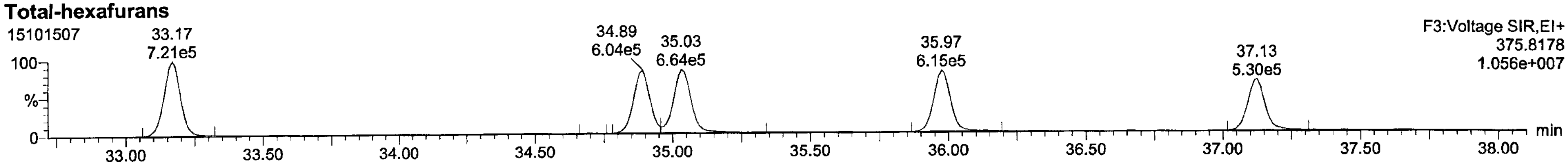
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

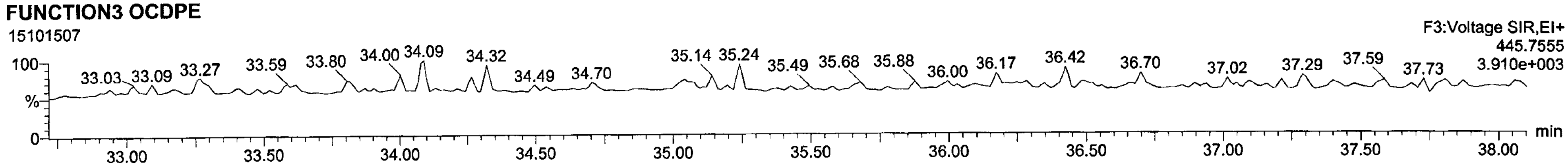
ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF
15101507


13C-234678-HxCDF
15101507


Total-hexafurans
15101507


Total-hexafurans
15101507


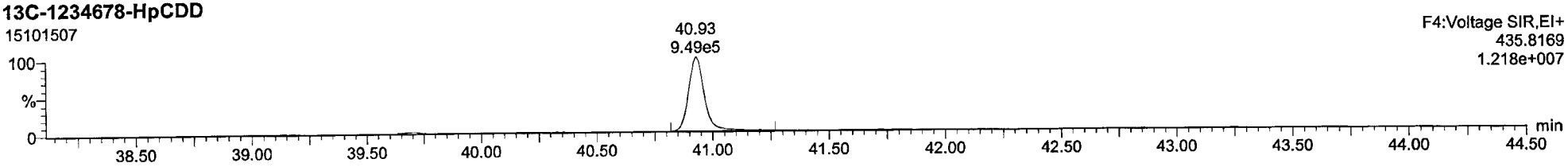
FUNCTION3 OCDPE
15101507


ATS0 · 00421

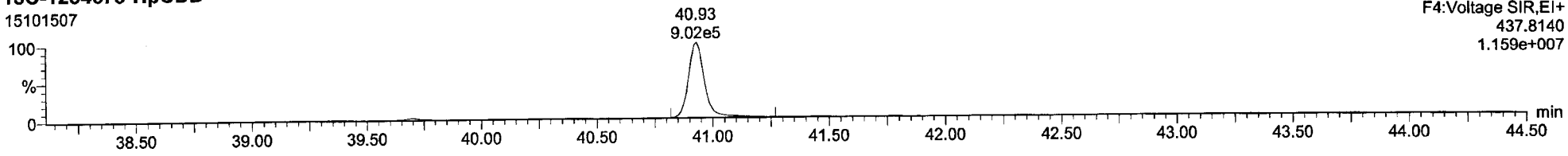
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

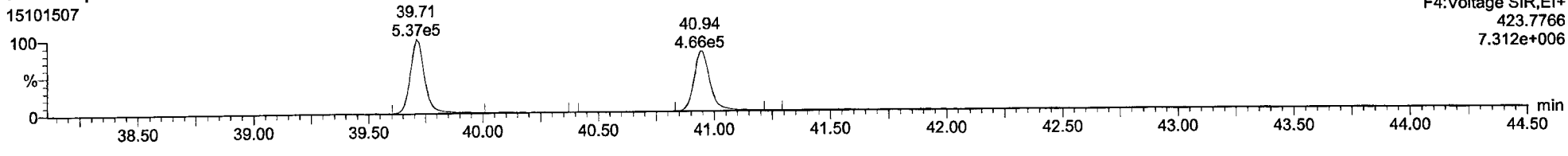
13C-1234678-HpCDD
15101507



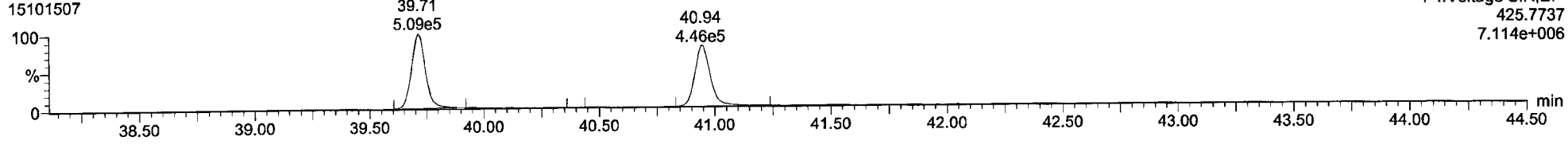
13C-1234678-HpCDD
15101507



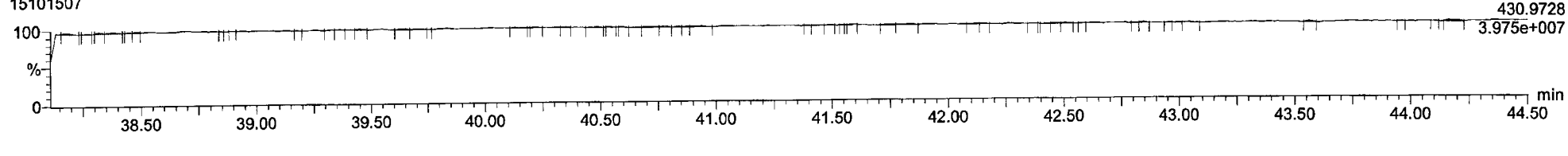
Total-heptadioxins
15101507



Total-heptadioxins
15101507



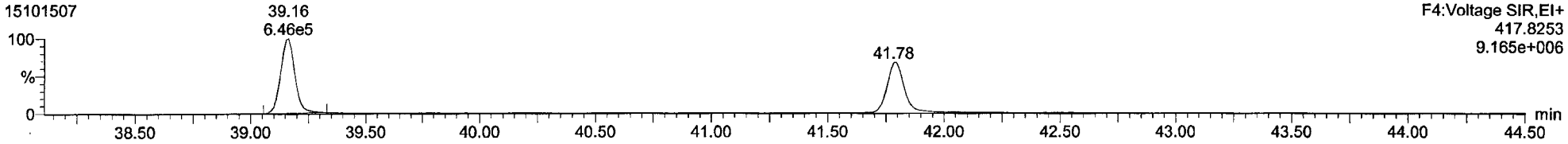
FUNCTION4 PFK
15101507



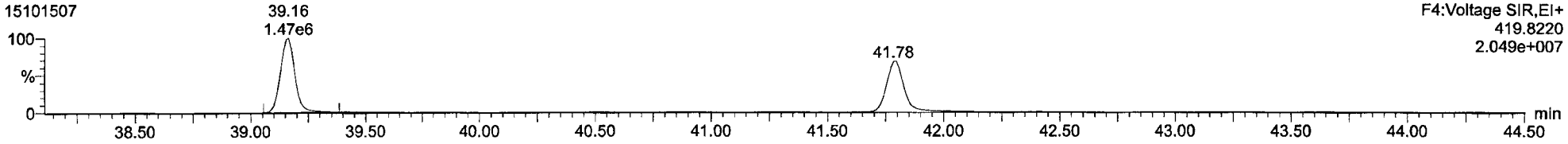
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

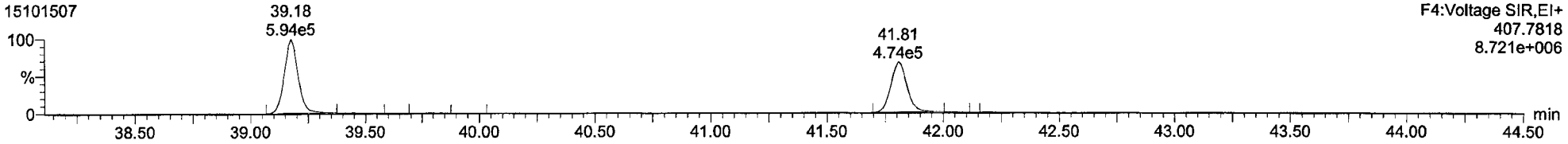
13C-1234678-HpCDF



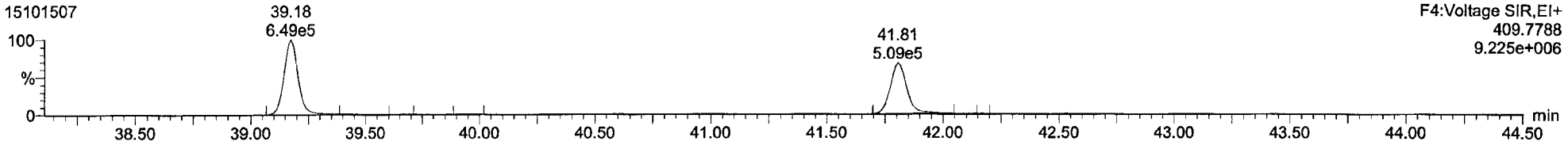
13C-1234678-HpCDF



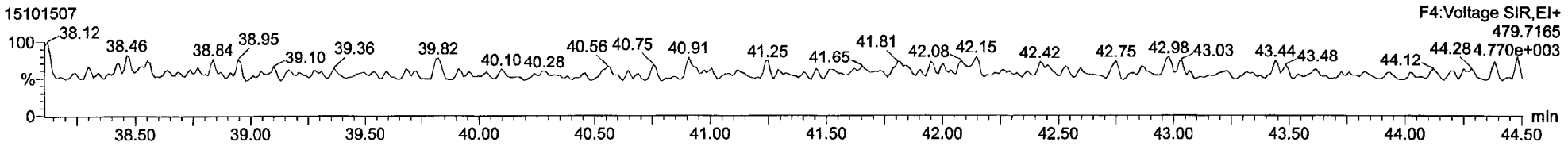
Total-heptafurans



Total-heptafurans



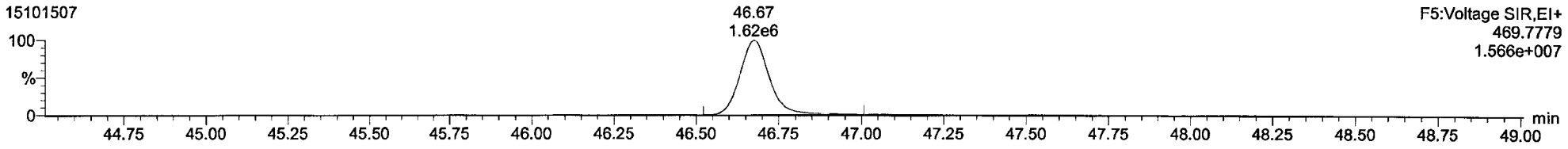
FUNCTION4 NCDPE



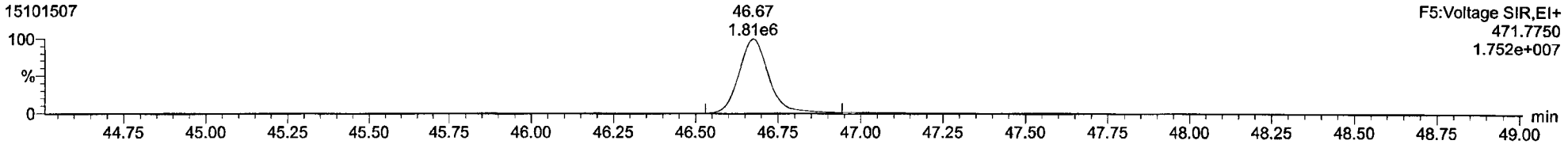
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

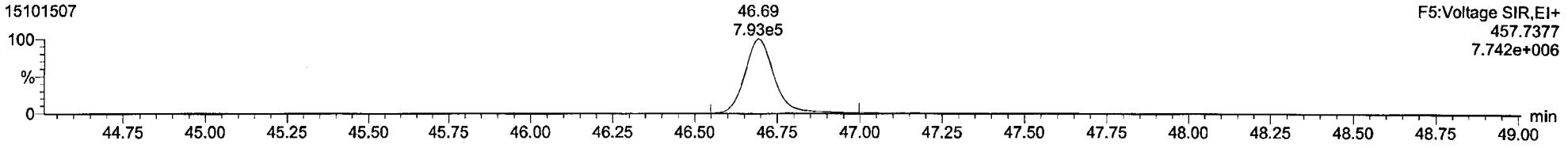
13C-OCDD



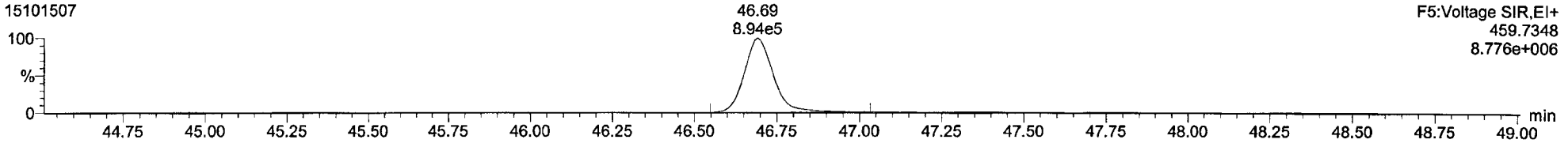
13C-OCDD



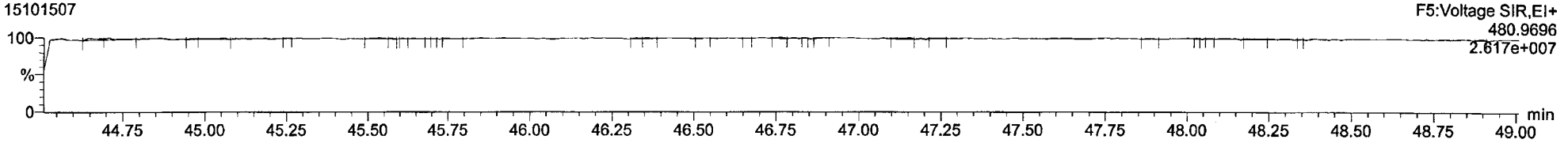
OCDD



OCDD



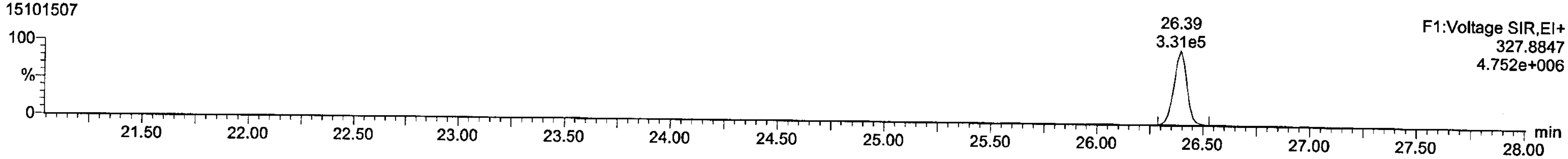
FUNCTION5 PFK



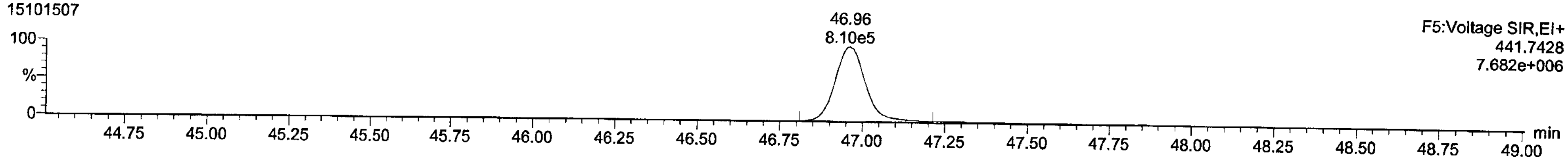
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:01 Pacific Daylight Time

ID: CS3, Name: 15101507, Date: 15-Oct-2015, Time: 17:45:44, Conditions: AUTOSPEC01, User: pk

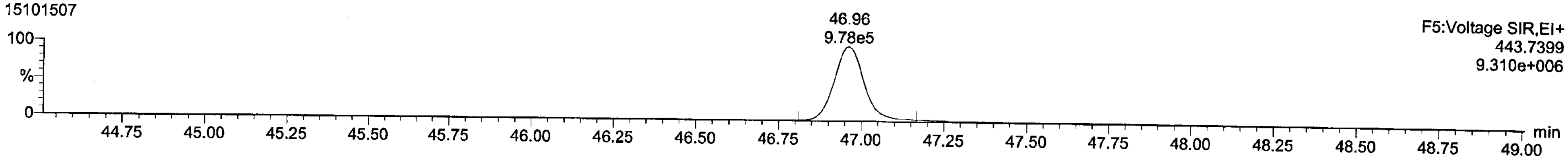
37CL-2378-TCDD
15101507



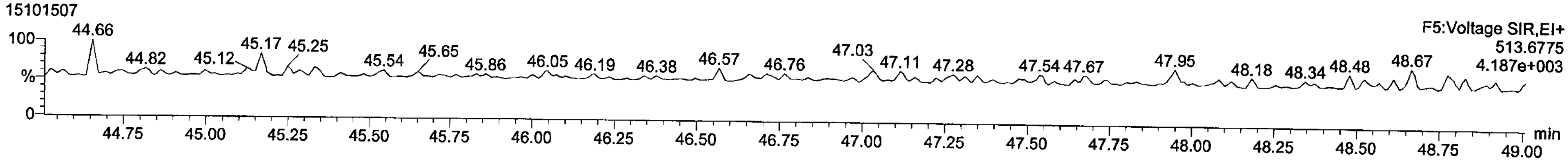
OCDF
15101507



OCDF
15101507



FUNCTION5 DCDPE
15101507



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, 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	25.735	1.001	4.97e5	7.43e5	0.827	0.668	0.770	1123	1359	6.87e6	1.02e7	6112.1	NO	41.111	41.111
12378-PeCDF	29.869	1.000	2.92e6	2.05e6	0.824	1.428	1.550	3249	3383	4.12e7	2.88e7	12689.7	NO	207.004	207.004
23478-PeCDF	31.206	1.000	2.86e6	2.02e6	0.850	1.412	1.550	3249	3383	4.06e7	2.90e7	12497.4	NO	205.103	205.103
123478-HxCDF	34.878	1.001	2.24e6	1.99e6	0.973	1.121	1.240	4216	4631	3.21e7	2.87e7	7624.3	NO	204.181	204.181
234678-HxCDF	35.963	1.000	2.25e6	2.00e6	1.025	1.128	1.240	4216	4631	3.19e7	2.83e7	7565.1	NO	209.149	209.149
123678-HxCDF	35.020	1.000	2.41e6	2.14e6	0.953	1.127	1.240	4216	4631	3.30e7	2.95e7	7820.4	NO	210.494	210.494
123789-HxCDF	37.114	1.001	1.92e6	1.71e6	0.956	1.124	1.240	4216	4631	2.57e7	2.30e7	6098.1	NO	194.774	194.774
1234678-HpCDF	39.164	1.000	1.95e6	2.09e6	1.153	0.936	1.050	4135	3642	2.80e7	3.00e7	6762.6	NO	203.265	203.265
1234789-HpCDF	41.794	1.000	1.60e6	1.66e6	1.131	0.969	1.050	4135	3642	1.91e7	2.02e7	4616.7	NO	209.362	209.362
OCDF	46.951	1.006	2.90e6	3.51e6	1.023	0.827	0.890	2913	2843	2.75e7	3.31e7	9452.7	NO	438.434	438.434
2378-TCDD	26.377	1.001	4.40e5	5.66e5	1.023	0.776	0.770	1356	1109	6.16e6	7.82e6	4544.7	NO	39.514	39.514
12378-PeCDD	31.469	1.001	2.24e6	1.45e6	0.939	1.545	1.550	2031	1389	3.16e7	2.04e7	15551.3	NO	207.432	207.432
123478-HxCDD	36.105	1.001	1.94e6	1.57e6	0.963	1.236	1.240	2770	3087	2.79e7	2.24e7	10054.8	NO	207.948	207.948
123678-HxCDD	36.237	1.001	1.93e6	1.58e6	0.894	1.224	1.240	2770	3087	2.69e7	2.18e7	9710.0	NO	205.453	205.453
123789-HxCDD	36.653	1.012	1.85e6	1.48e6	0.900	1.246	1.240	2770	3087	2.53e7	2.03e7	9143.2	NO	202.511	202.511
1234678-HpCDD	40.939	1.000	1.50e6	1.45e6	0.964	1.031	1.050	2609	2291	1.94e7	1.87e7	7417.1	NO	207.392	207.392
OCDD	46.682	1.000	2.59e6	3.02e6	0.969	0.857	0.890	2866	3171	2.63e7	2.98e7	9161.3	NO	405.395	405.395
13C-2378-TCDF	25.720	1.006	1.59e6	2.06e6	1.502	0.772	0.770	5235	2968	2.20e7	2.83e7	4210.6	NO		95.964
13C-12378-PeCDF	29.858	1.168	1.80e6	1.12e6	1.215	1.607	1.550	4176	2382	2.44e7	1.57e7	5842.7	NO		94.801
13C-23478-PeCDF	31.195	1.221	1.71e6	1.09e6	1.181	1.570	1.550	4176	2382	2.35e7	1.50e7	5636.5	NO		93.696
13C-123478-HxCDF	34.856	0.951	7.16e5	1.41e6	1.246	0.507	0.510	2592	3718	1.01e7	1.99e7	3888.3	NO		98.681
13C-123678-HxCDF	35.009	0.955	7.75e5	1.50e6	1.375	0.518	0.510	2592	3718	1.07e7	2.06e7	4137.3	NO		95.336
13C-234678-HxCDF	35.952	0.981	6.77e5	1.30e6	1.186	0.519	0.510	2592	3718	9.45e6	1.79e7	3646.4	NO		96.416
13C-123789-HxCDF	37.092	1.012	6.62e5	1.29e6	1.135	0.514	0.510	2592	3718	8.97e6	1.74e7	3459.1	NO		99.237
13C-1234678-HpCDF	39.153	1.069	5.37e5	1.18e6	1.020	0.453	0.440	2382	3645	7.34e6	1.66e7	3082.0	NO		97.411
13C-1234789-HpCDF	41.783	1.140	4.27e5	9.51e5	0.824	0.449	0.440	2382	3645	5.06e6	1.14e7	2124.9	NO		96.517
13C-1234-TCDD	25.555	0.000	1.12e6	1.41e6	1.000	0.793	0.770	2614	1198	1.59e7	2.01e7	6089.8	NO		100.000
13C-2378-TCDD	26.362	1.032	1.09e6	1.40e6	0.983	0.783	0.770	2614	1198	1.52e7	1.94e7	5807.8	NO		100.005
13C-12378-PeCDD	31.447	1.230	1.16e6	7.28e5	0.787	1.598	1.550	1517	1086	1.63e7	1.03e7	10730.7	NO		94.917
13C-123478-HxCDD	36.083	0.985	9.77e5	7.75e5	1.031	1.260	1.240	3305	1270	1.39e7	1.11e7	4201.9	NO		98.104
13C-123678-HxCDD	36.215	0.988	1.06e6	8.47e5	1.137	1.253	1.240	3305	1270	1.48e7	1.19e7	4483.3	NO		96.898
13C-1234678-HpCDD	40.917	1.117	7.57e5	7.22e5	0.892	1.048	1.050	1582	2146	9.78e6	9.34e6	6180.4	NO		95.658
13C-OCDD	46.664	1.273	1.35e6	1.52e6	0.852	0.887	0.890	2641	2462	1.32e7	1.47e7	4995.2	NO		193.888

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

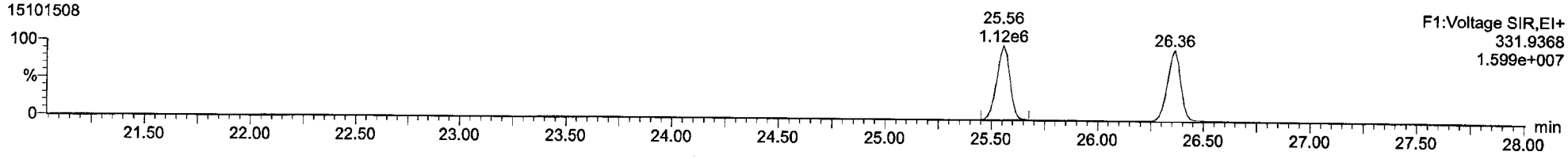
Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	36.643	0.000	9.64e5	7.68e5	1.000	1.255	1.240	3305	1270	1.29e7	1.03e7	3889.3	NO		100.000
Total-tetrafurans			5.05e5		0.827			1123		6.99e6					41.805
Total-penta1			2.08e2					533		3.31e3					0.016
Total-pentafurans			5.91e6		0.837			3249		8.35e7					421.701
Total-hexafurans			8.83e6		0.977			4216		1.23e8					819.301
Total-heptafurans			3.56e6		1.142			4135		4.71e7					412.886
Total-Furans			2.17e7		0.971			1123		2.88e8					2134.144
Total-tetradioxins			4.51e5		1.023			1356		6.29e6					40.609
Total-pentadioxins			2.24e6		0.939			2031		3.17e7					207.918
Total-hexadioxins			5.72e6		0.919			2770		8.01e7					615.939
Total-heptadioxins			1.51e6		0.964			2609		1.94e7					208.239
Total-Dioxins			1.25e7		0.950			1356		1.64e8					1478.112
Total-TEQ			3.42e7					1356		4.52e8					3612.256
37CL-2378-TCDD	26.377	1.032	1.10e6		1.091			1545		1.52e7		9828.2			39.722
FUNCTION1 PFK			1.59e6					560264		2.50e7					
FUNCTION2 PFK			1.60e5					128870		4.73e6					0.000
FUNCTION3 PFK			2.32e7					462327		1.82e8					0.000
FUNCTION4 PFK			1.98e5					264875		5.72e6					
FUNCTION5 PFK			0.00e0					245762		0.00e0					
FUNCTION1 HXCDPE			1.99e2					407		3.45e3					0.000
FUNCTION1 HPCDPE			2.47e2					631		5.42e3					0.000
FUNCTION2 HPCDPE			5.39e3					741		7.76e4					0.000
FUNCTION3 OCDPE			0.00e0					322		0.00e0					
FUNCTION4 NCDPE			0.00e0					558		0.00e0					
FUNCTION5 DCDPE			0.00e0					346		0.00e0					

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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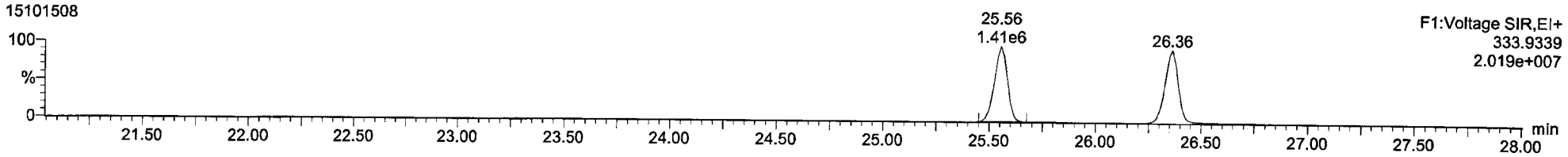

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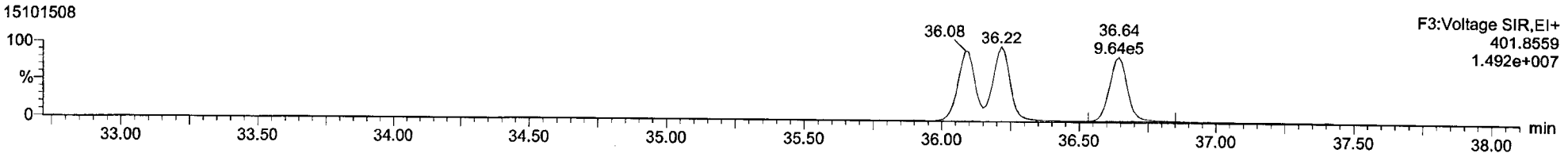

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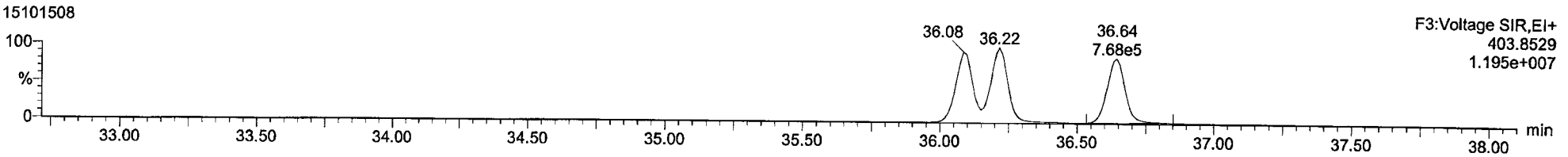

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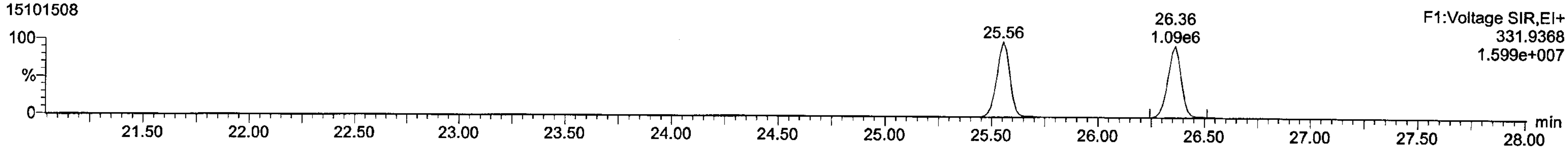
13C-2378-TCDD
15101508



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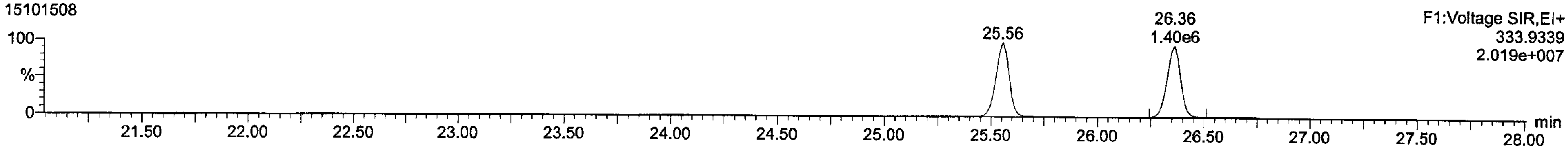
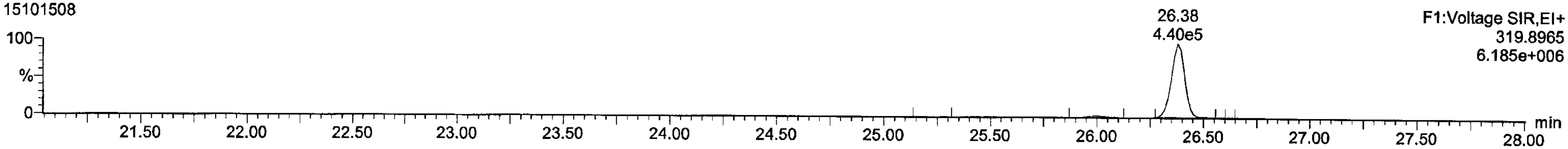
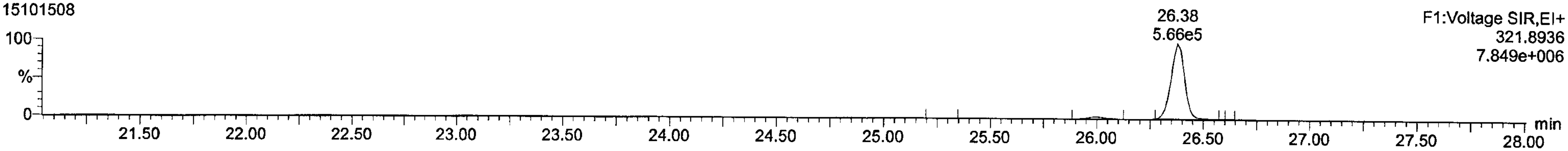
15101508



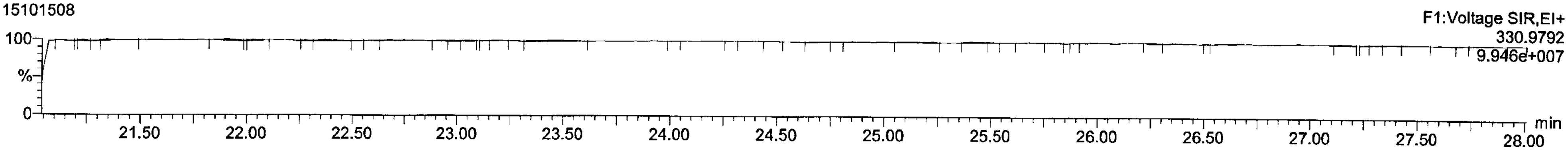
Total-tetradioxins
15101508



Total-tetradioxins
15101508



FUNCTION1 PFK
15101508



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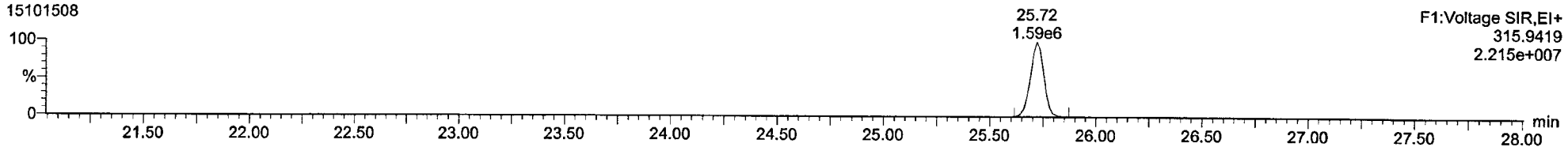
ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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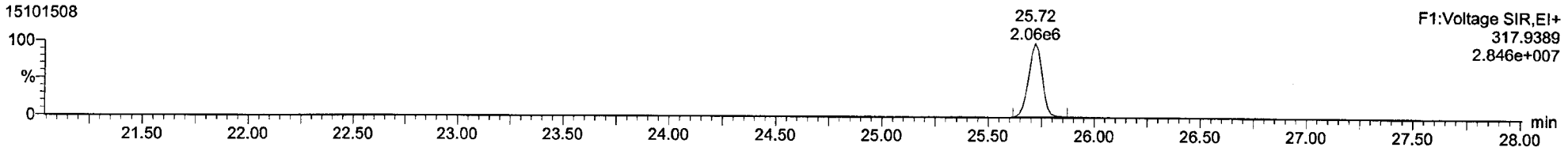
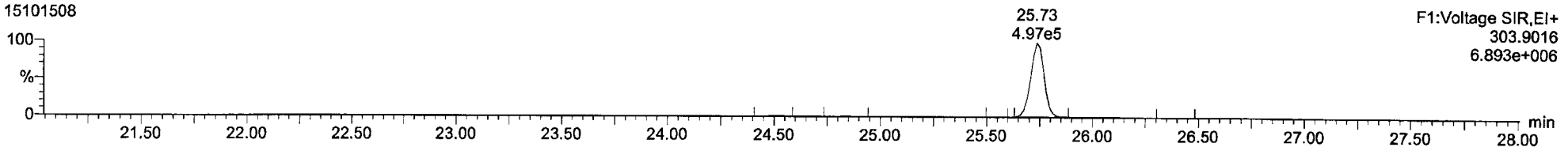


Total-tetrafurans



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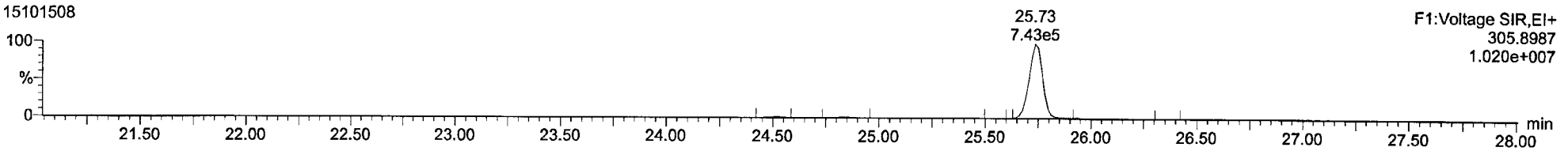
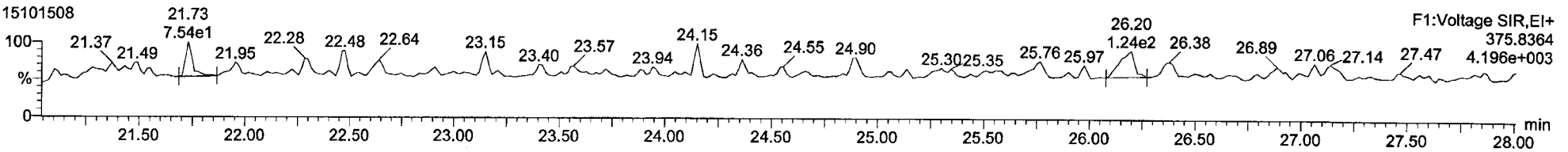


FUNCTION1 HXCDPE



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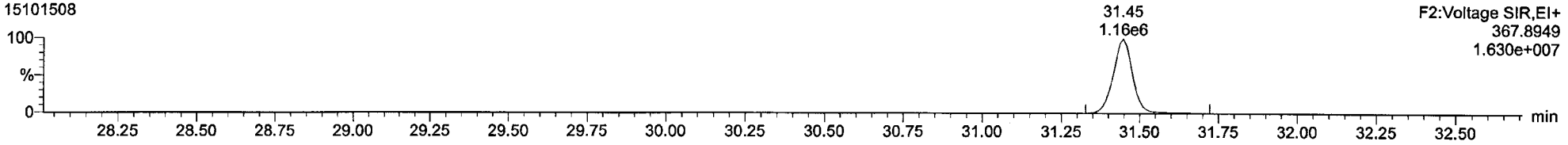
ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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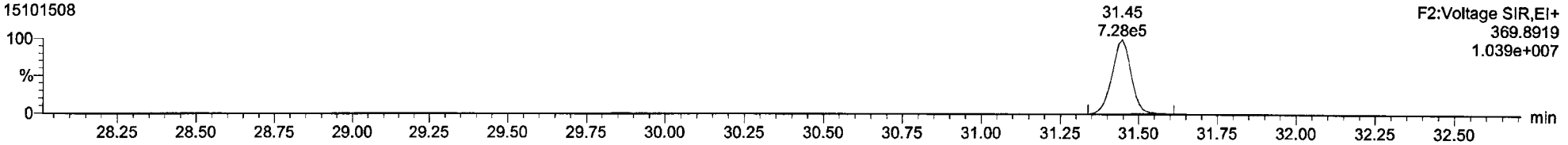
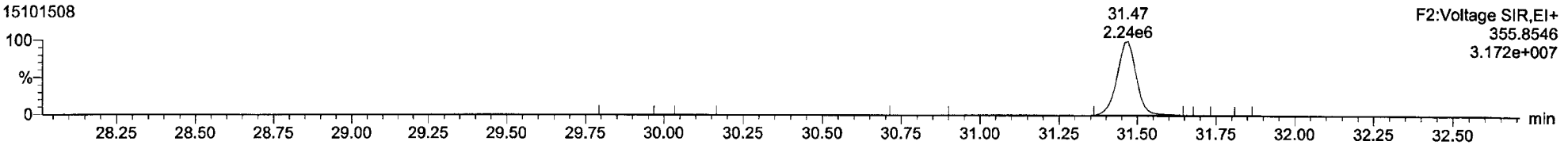
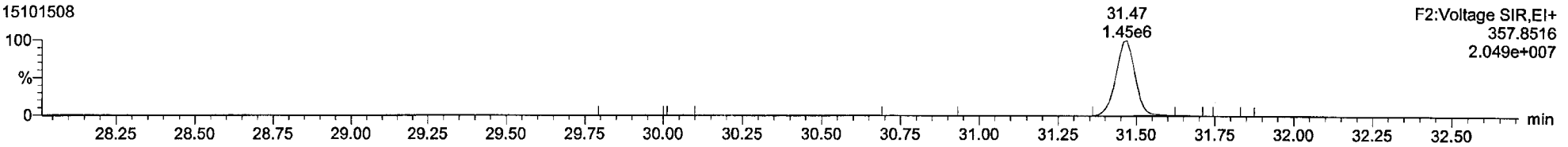


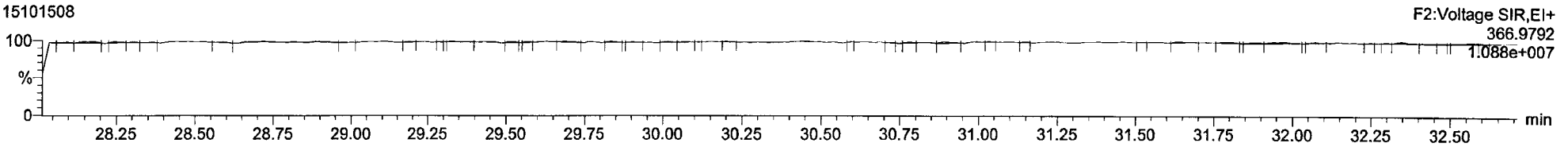
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
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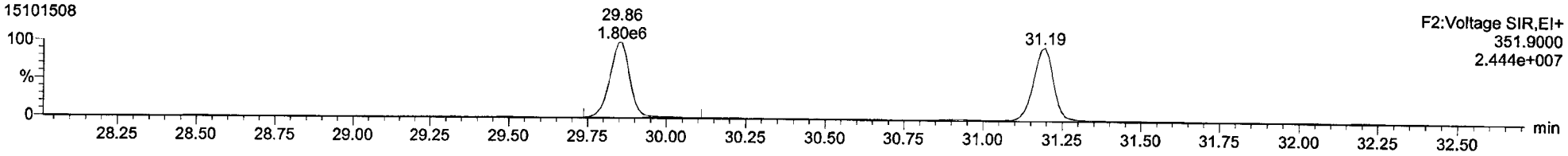
ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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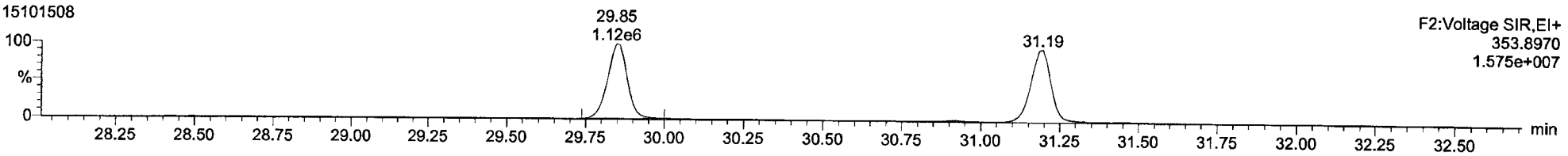
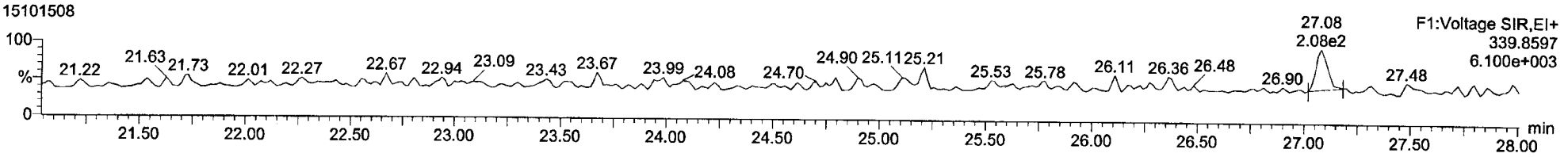
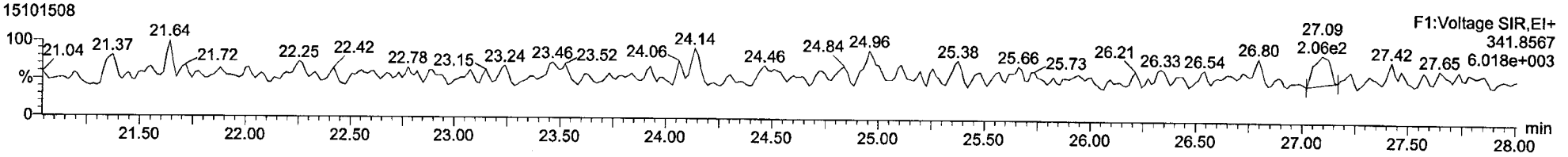


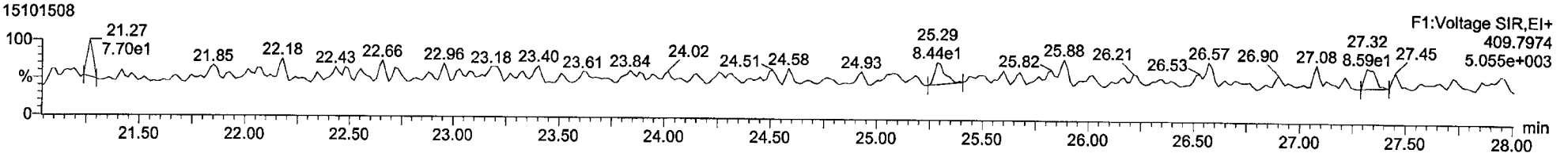
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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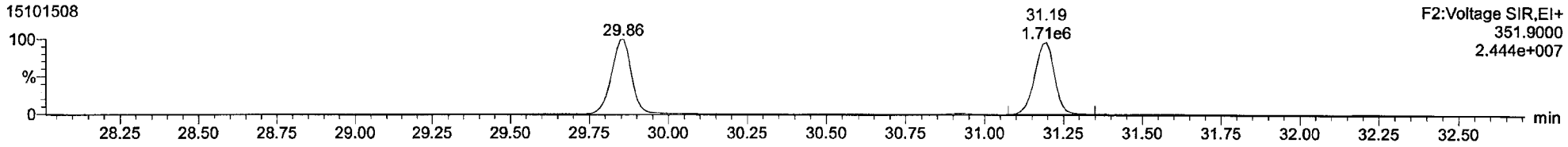
13C-23478-PeCDF



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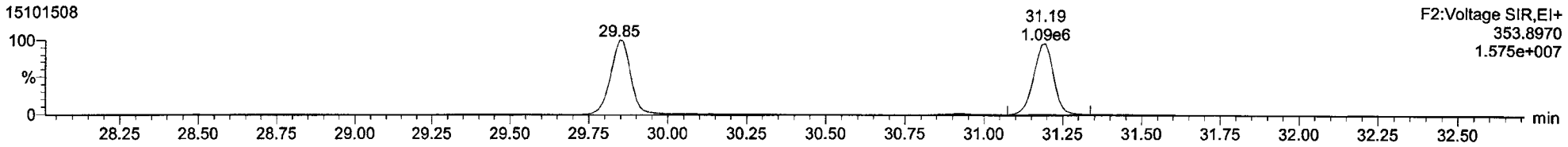
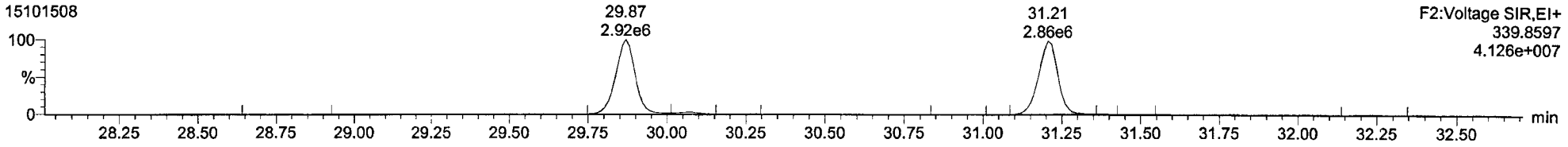
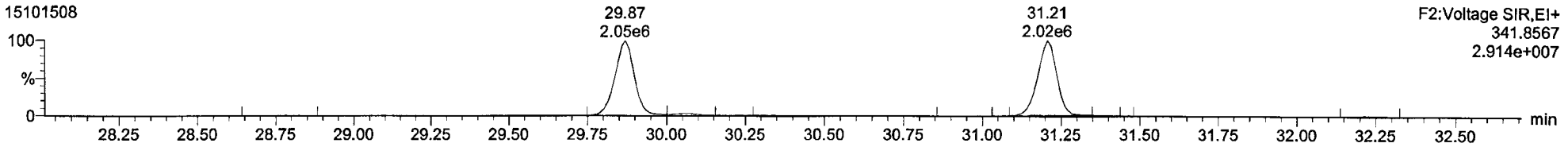


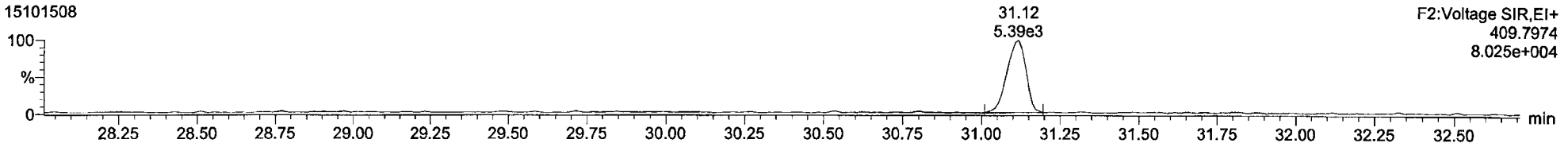
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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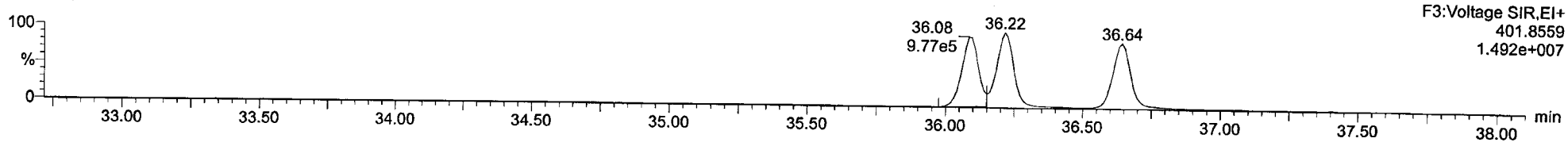
13C-123478-HxCDD
15101508



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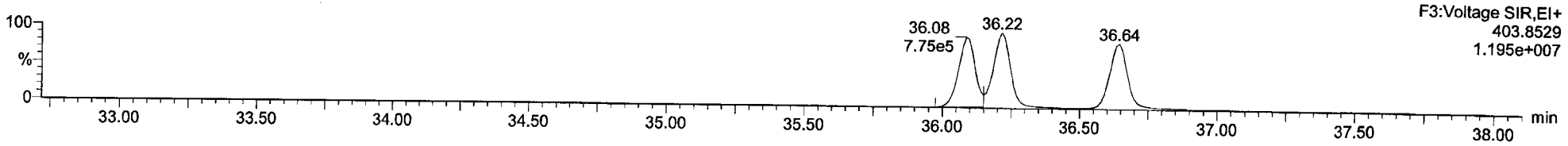

Total-hexadioxins
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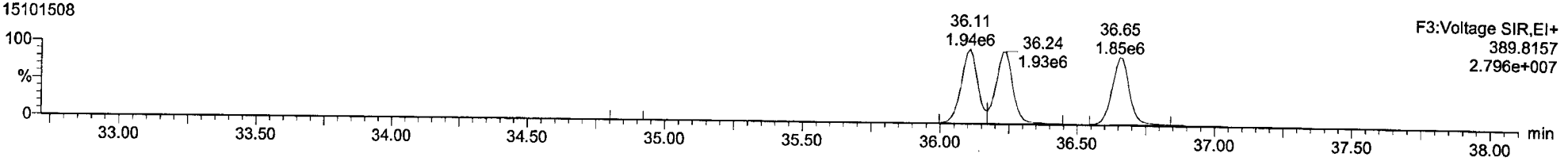

Total-hexadioxins
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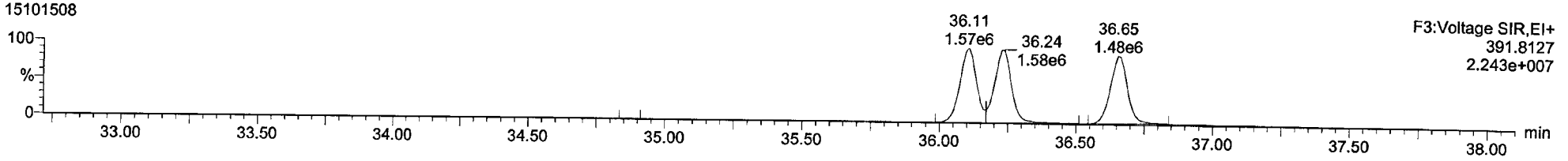

FUNCTION3 PFK
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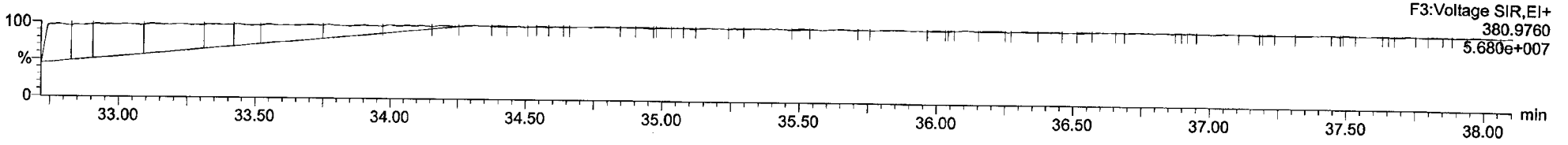

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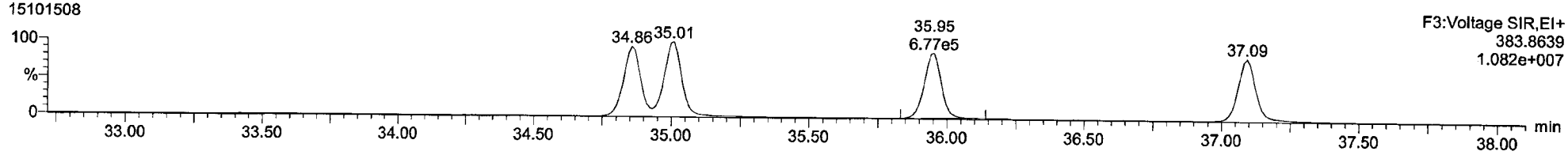
13C-234678-HxCDF

15101508



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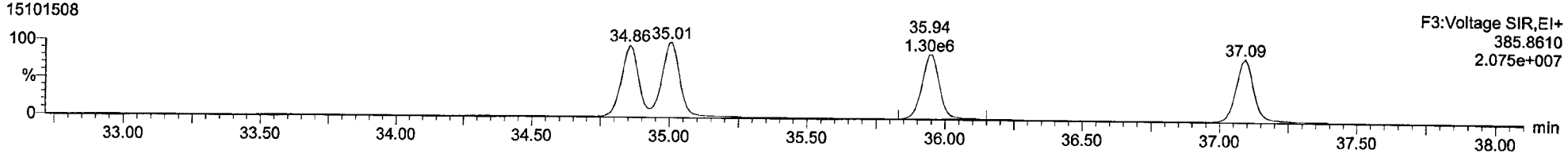
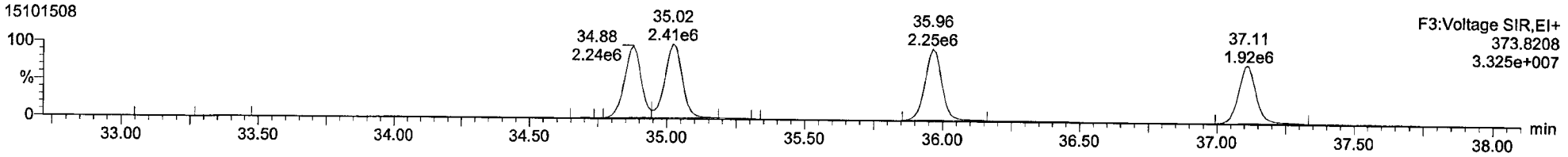


Total-hexafurans

15101508



Total-hexafurans

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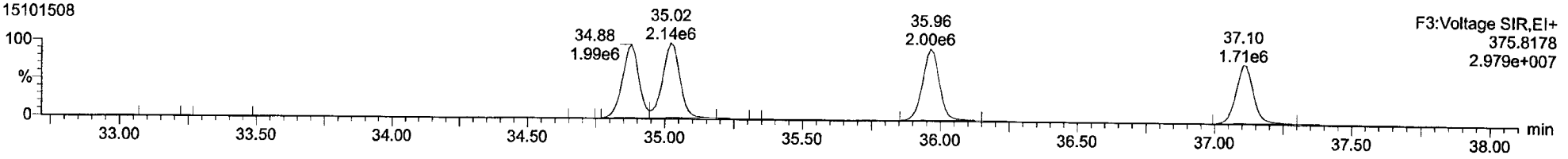
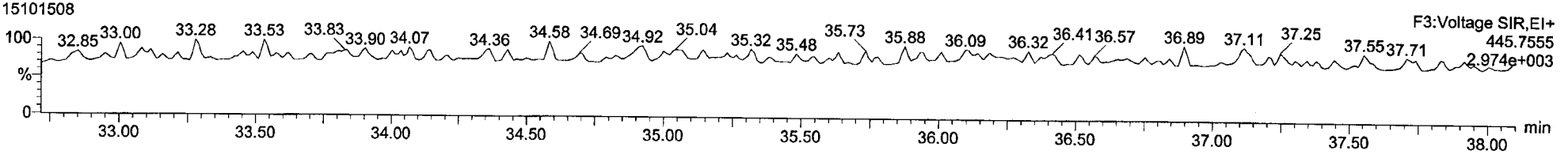


FUNCTION3 OCDPE

15101508



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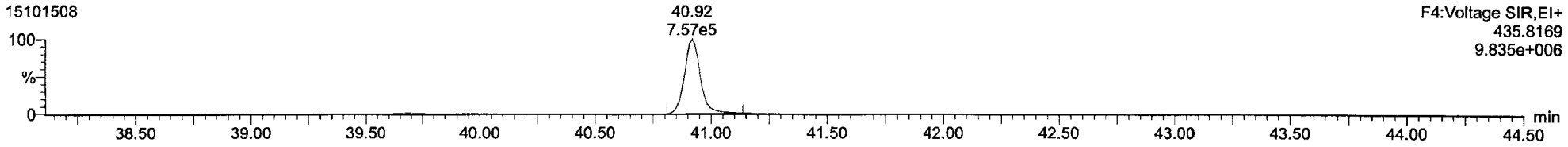
13C-1234678-HpCDD



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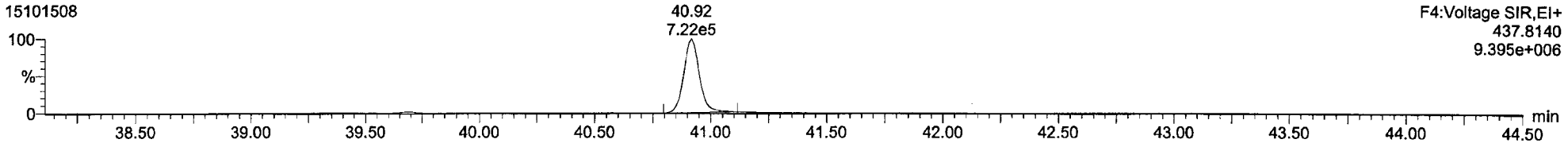
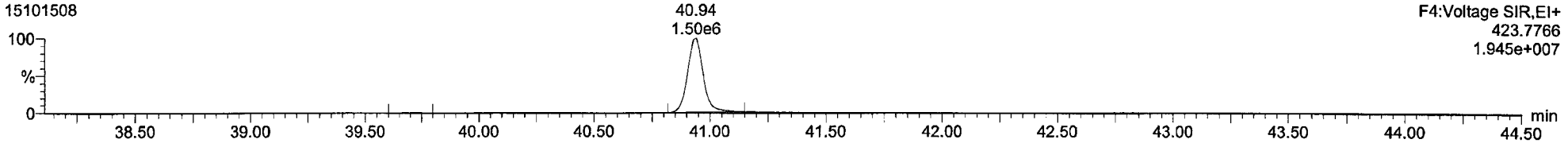
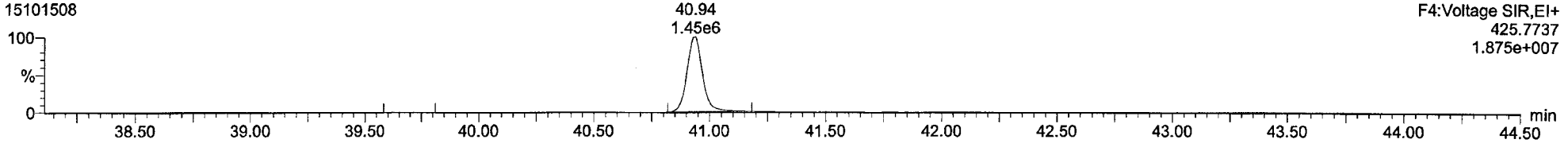


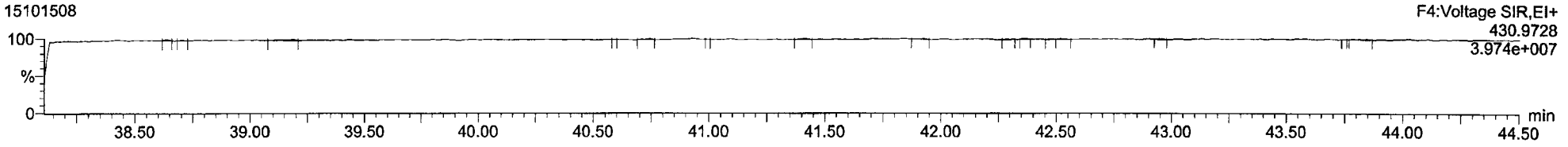
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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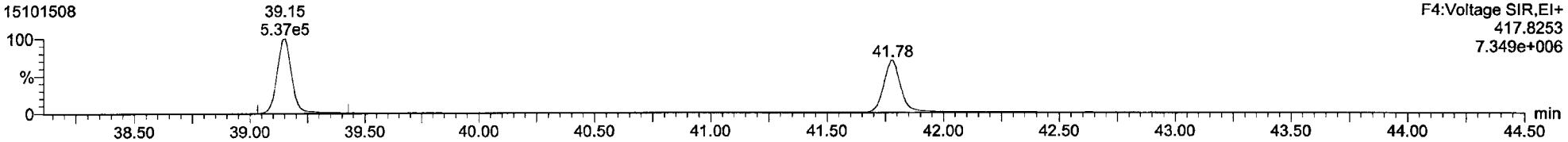
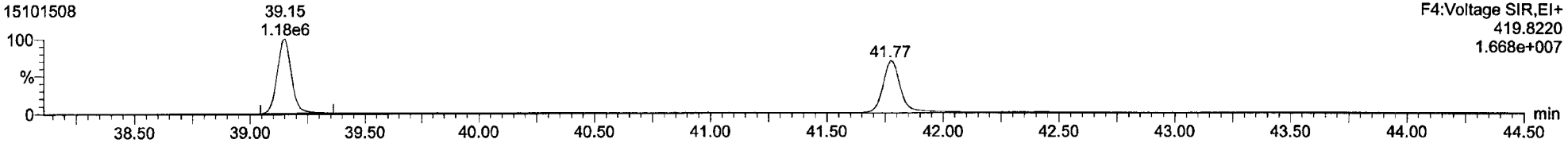
13C-1234678-HpCDF



13C-1234678-HpCDF



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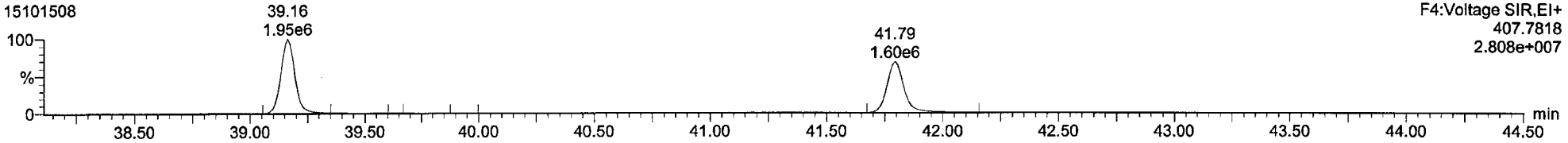

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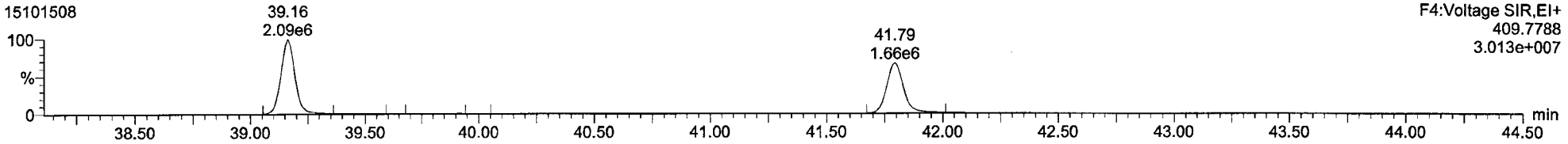
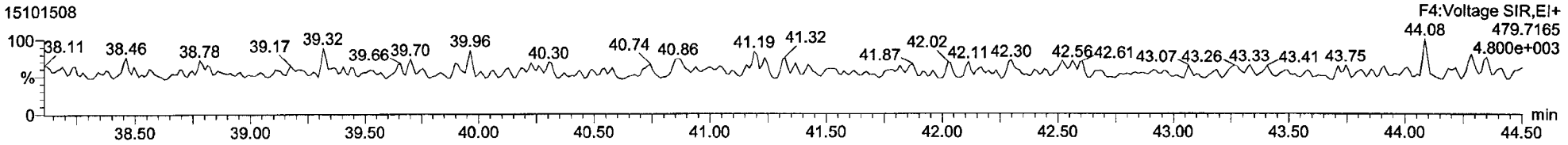


FUNCTION4 NCDPE



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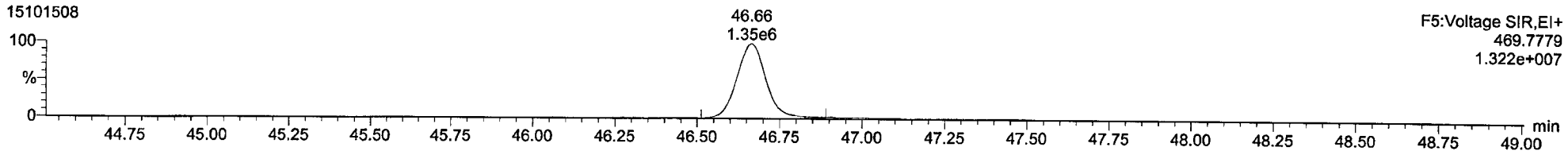
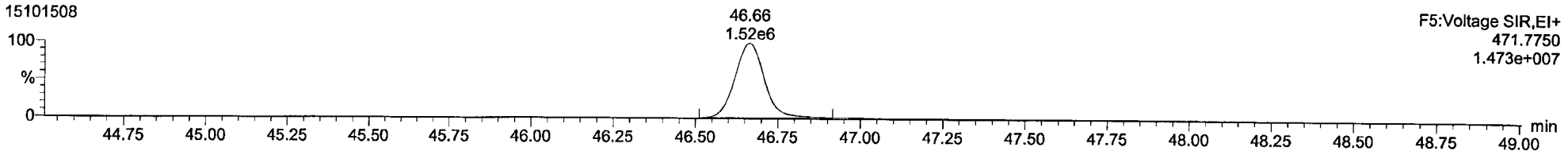
13C-OCDD



13C-OCDD



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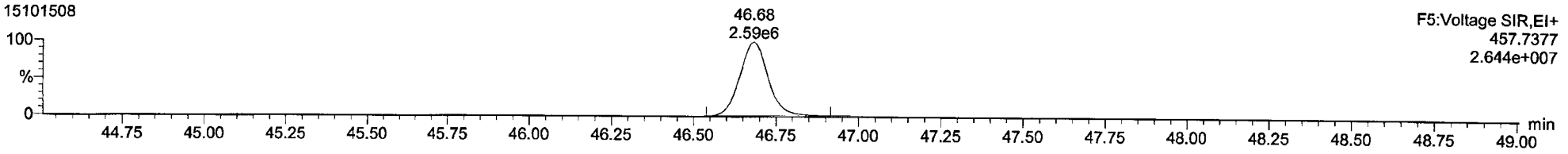

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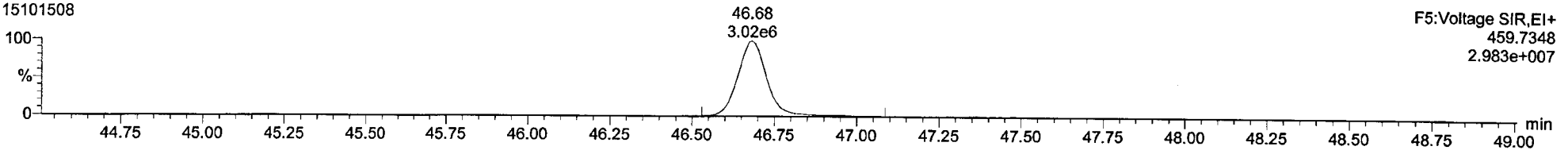
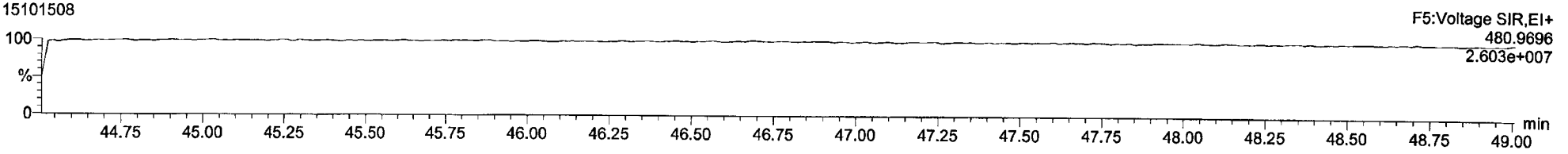


FUNCTION5 PFK



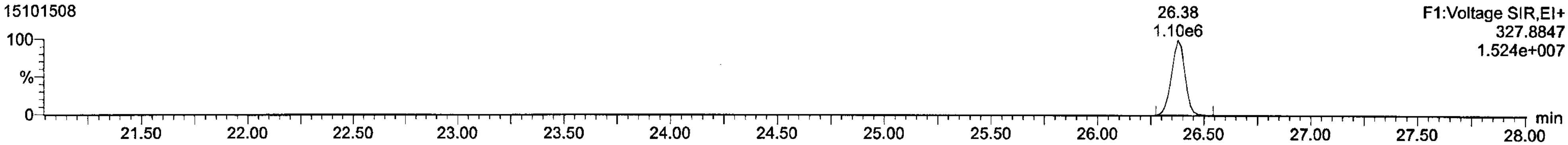
Dataset: P:\DIOXIN8290.PRO\151015IC.qld

Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time

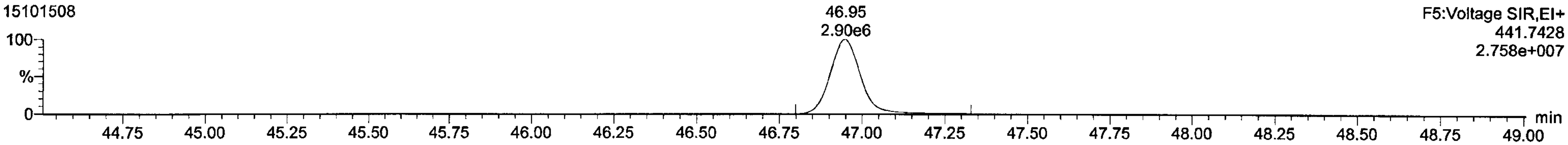
Printed: Friday, October 16, 2015 09:50:03 Pacific Daylight Time

ID: CS4, Name: 15101508, Date: 15-Oct-2015, Time: 18:38:36, Conditions: AUTOSPEC01, User: pk

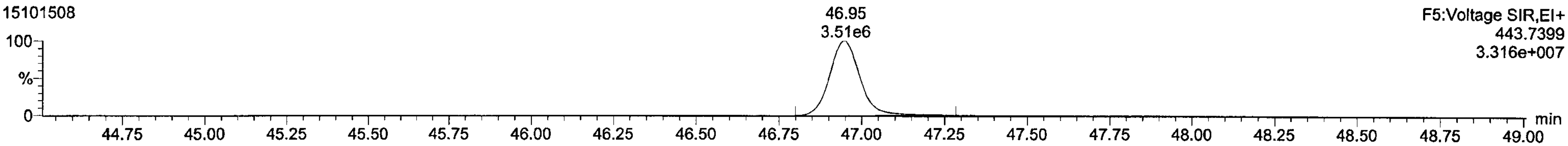
37CL-2378-TCDD



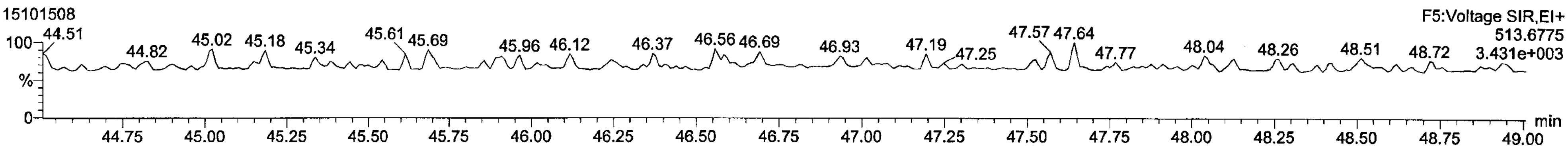
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015IC.qld
Last Altered: Friday, October 16, 2015 09:47:27 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, 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	25.735	1.001	2.34e6	3.45e6	0.827	0.677	0.770	2243	2134	3.35e7	4.99e7	14955.2	NO	207.161	207.161
12378-PeCDF	29.869	1.001	1.51e7	1.07e7	0.824	1.420	1.550	5698	9562	2.23e8	1.56e8	39215.1	NO	1063.525	1063.525
23478-PeCDF	31.206	1.000	1.53e7	1.08e7	0.850	1.413	1.550	5698	9562	2.26e8	1.60e8	39723.3	NO	1048.477	1048.477
123478-HxCDF	34.878	1.001	1.21e7	1.07e7	0.973	1.128	1.240	7790	3755	1.79e8	1.59e8	22958.8	NO	1049.849	1049.849
234678-HxCDF	35.963	1.000	1.21e7	1.08e7	1.025	1.121	1.240	7790	3755	1.83e8	1.63e8	23495.2	NO	1062.833	1062.833
123678-HxCDF	35.021	1.000	1.29e7	1.14e7	0.953	1.127	1.240	7790	3755	1.86e8	1.66e8	23887.8	NO	1033.225	1033.225
123789-HxCDF	37.114	1.001	1.06e7	9.30e6	0.956	1.140	1.240	7790	3755	1.50e8	1.32e8	19229.1	NO	1056.182	1056.182
1234678-HpCDF	39.164	1.000	1.05e7	1.11e7	1.153	0.945	1.050	6039	6934	1.58e8	1.67e8	26196.8	NO	1050.487	1050.487
1234789-HpCDF	41.794	1.000	8.63e6	9.10e6	1.131	0.948	1.050	6039	6934	1.11e8	1.18e8	18418.3	NO	1076.291	1076.291
OCDF	46.960	1.006	1.55e7	1.86e7	1.023	0.832	0.890	3422	5931	1.62e8	1.94e8	47403.0	NO	2163.404	2163.404
2378-TCDD	26.377	1.001	2.14e6	2.75e6	1.023	0.776	0.770	1319	1882	3.08e7	3.95e7	23376.7	NO	218.215	218.215
12378-PeCDD	31.469	1.001	1.16e7	7.48e6	0.939	1.553	1.550	2231	1973	1.73e8	1.11e8	77524.3	NO	1025.445	1025.445
123478-HxCDD	36.105	1.001	1.05e7	8.44e6	0.963	1.246	1.240	3761	4440	1.56e8	1.25e8	41392.7	NO	1051.354	1051.354
123678-HxCDD	36.237	1.001	1.03e7	8.31e6	0.894	1.245	1.240	3761	4440	1.53e8	1.22e8	40697.3	NO	1038.659	1038.659
123789-HxCDD	36.653	1.012	1.02e7	8.21e6	0.900	1.239	1.240	3761	4440	1.51e8	1.22e8	40138.9	NO	1052.621	1052.621
1234678-HpCDD	40.939	1.000	8.12e6	7.81e6	0.964	1.040	1.050	5466	5139	1.08e8	1.04e8	19841.7	NO	1047.702	1047.702
OCDD	46.691	1.000	1.48e7	1.69e7	0.969	0.877	0.890	4932	3988	1.56e8	1.75e8	31604.8	NO	2118.899	2118.899
13C-2378-TCDF	25.720	1.006	1.48e6	1.90e6	1.502	0.777	0.770	3887	2445	2.13e7	2.75e7	5485.7	NO		101.519
13C-12378-PeCDF	29.847	1.168	1.80e6	1.14e6	1.215	1.573	1.550	3157	2186	2.59e7	1.65e7	8213.2	NO		109.232
13C-23478-PeCDF	31.195	1.221	1.79e6	1.14e6	1.181	1.575	1.550	3157	2186	2.58e7	1.65e7	8174.2	NO		111.780
13C-123478-HxCDF	34.856	0.951	7.53e5	1.47e6	1.246	0.512	0.510	4180	2958	1.10e7	2.16e7	2623.8	NO		99.809
13C-123678-HxCDF	35.009	0.955	8.39e5	1.63e6	1.375	0.516	0.510	4180	2958	1.20e7	2.32e7	2875.4	NO		100.213
13C-234678-HxCDF	35.952	0.981	7.27e5	1.38e6	1.186	0.525	0.510	4180	2958	1.05e7	2.04e7	2515.2	NO		99.339
13C-123789-HxCDF	37.092	1.012	6.66e5	1.30e6	1.135	0.511	0.510	4180	2958	9.52e6	1.86e7	2277.2	NO		96.996
13C-1234678-HpCDF	39.153	1.069	5.51e5	1.24e6	1.020	0.446	0.440	1334	2750	8.00e6	1.80e7	5995.9	NO		97.800
13C-1234789-HpCDF	41.783	1.140	4.50e5	1.01e6	0.824	0.447	0.440	1334	2750	5.56e6	1.25e7	4165.1	NO		98.741
13C-1234-TCDD	25.555	0.000	9.73e5	1.24e6	1.000	0.783	0.770	2688	2047	1.45e7	1.84e7	5390.8	NO		100.000
13C-2378-TCDD	26.362	1.032	9.58e5	1.23e6	0.983	0.778	0.770	2688	2047	1.36e7	1.76e7	5075.7	NO		100.616
13C-12378-PeCDD	31.447	1.231	1.21e6	7.71e5	0.787	1.570	1.550	1261	1057	1.79e7	1.15e7	14210.5	NO		113.657
13C-123478-HxCDD	36.084	0.985	1.05e6	8.26e5	1.031	1.267	1.240	2835	1283	1.53e7	1.22e7	5400.8	NO		101.416
13C-123678-HxCDD	36.215	0.988	1.13e6	8.83e5	1.137	1.275	1.240	2835	1283	1.58e7	1.28e7	5586.5	NO		98.763
13C-1234678-HpCDD	40.917	1.117	8.05e5	7.72e5	0.892	1.042	1.050	1981	1661	1.08e7	1.02e7	5432.1	NO		98.733
13C-OCDD	46.673	1.274	1.46e6	1.63e6	0.852	0.894	0.890	3038	1938	1.51e7	1.70e7	4979.7	NO		202.484

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, 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	36.643	0.000	9.94e5	7.97e5	1.000	1.247	1.240	2835	1283	1.45e7	1.16e7	5110.4	NO		100.000
Total-tetrafurans			2.38e6		0.827			2243		3.42e7					210.902
Total-penta1			0.00e0					524		0.00e0					
Total-pentafurans			3.11e7		0.837			5698		4.58e8					2158.480
Total-hexafurans			4.77e7		0.977			7790		6.99e8					4208.001
Total-heptafurans			1.92e7		1.142			6039		2.70e8					2129.112
Total-Furans			1.16e8		0.971			2243		1.62e9					10869.899
Total-tetradioxins			2.19e6		1.023			1319		3.15e7					223.650
Total-pentadioxins			1.16e7		0.939			2231		1.73e8					1027.656
Total-hexadioxins			3.10e7		0.919			3761		4.60e8					3142.816
Total-heptadioxins			8.15e6		0.964			5466		1.09e8					1051.375
Total-Dioxins			6.78e7		0.950			1319		9.29e8					7564.447
Total-TEQ			1.84e8					1319		2.55e9					18434.346
37CL-2378-TCDD	26.377	1.032	5.33e6		1.091			1799		7.72e7		42947.9			220.293
FUNCTION1 PFK			1.67e6					475628		3.10e7					
FUNCTION2 PFK			4.61e4					102875		1.29e6					0.000
FUNCTION3 PFK			2.91e7					404520		1.85e8					0.000
FUNCTION4 PFK			9.49e5					304670		2.31e7					
FUNCTION5 PFK			1.44e5					302561		5.12e6					
FUNCTION1 HXCDPE			7.68e1					494		1.71e3					0.000
FUNCTION1 HPCDPE			2.54e2					764		4.06e3					0.000
FUNCTION2 HPCDPE			2.36e4					742		3.56e5					0.000
FUNCTION3 OCDPE			0.00e0					257		0.00e0					
FUNCTION4 NCDPE			0.00e0					582		0.00e0					
FUNCTION5 DCDPE			0.00e0					313		0.00e0					

Dataset: P:\DIOXIN8290.PRO\151015IC.qld
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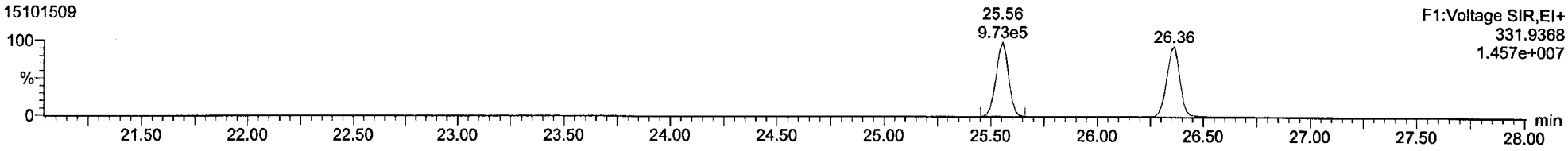
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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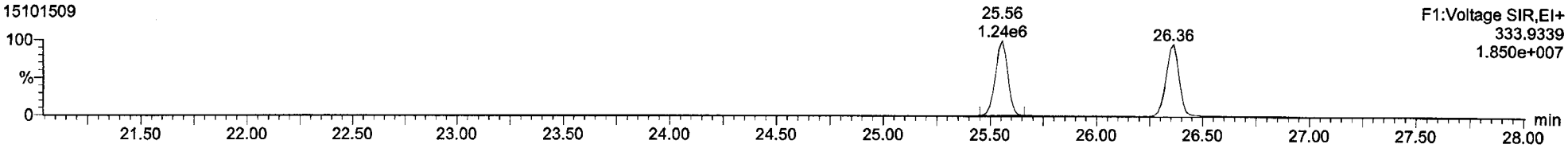

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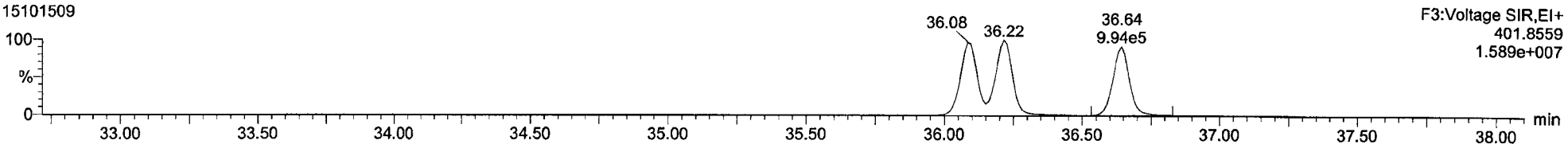

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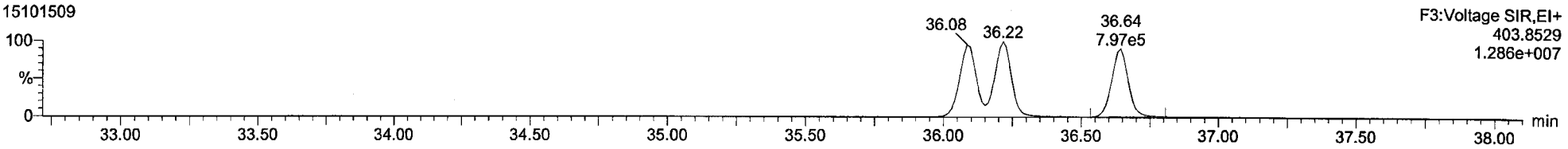

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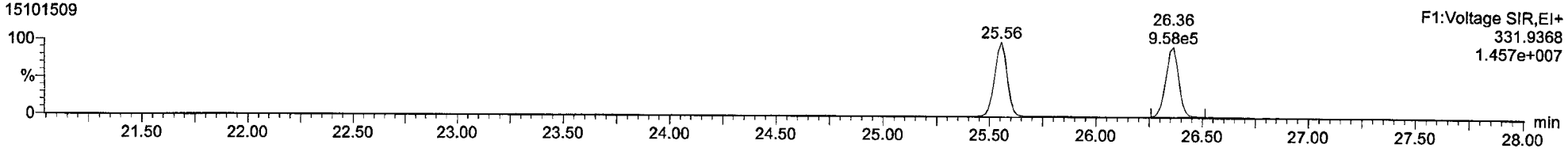

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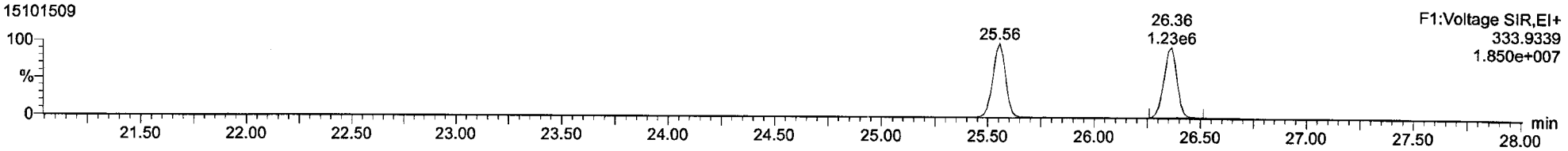
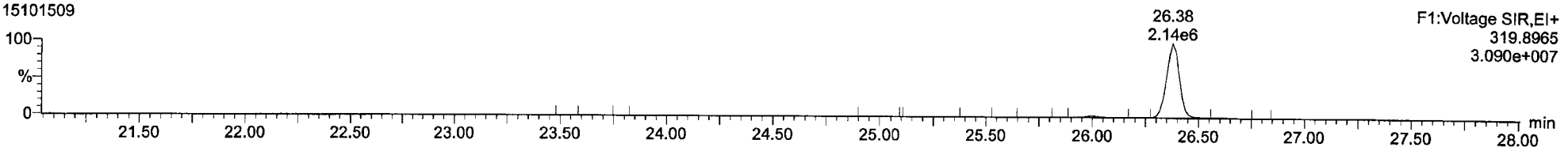
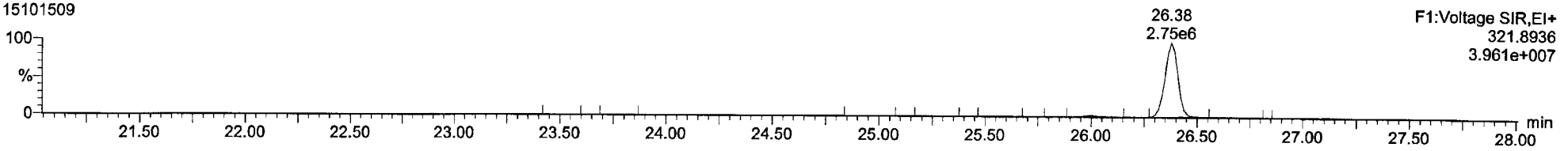


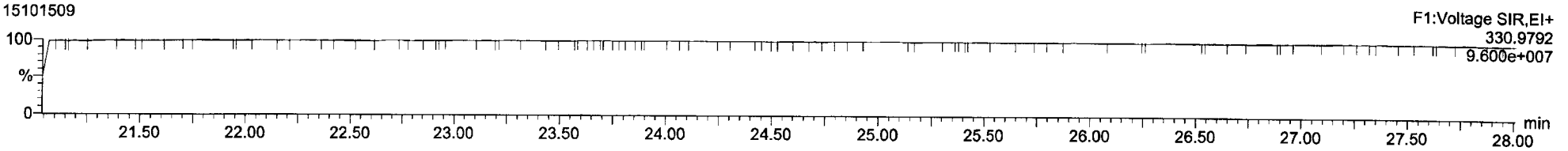
Total-tetradioxins



Total-tetradioxins



FUNCTION1 PFK



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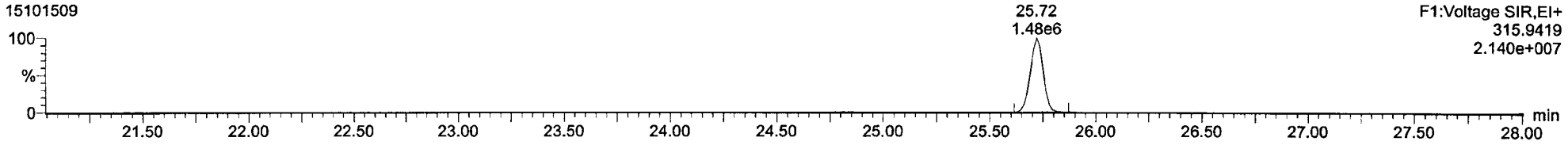
Printed: Friday, October 16, 2015 09:50:05 Pacific Daylight Time

ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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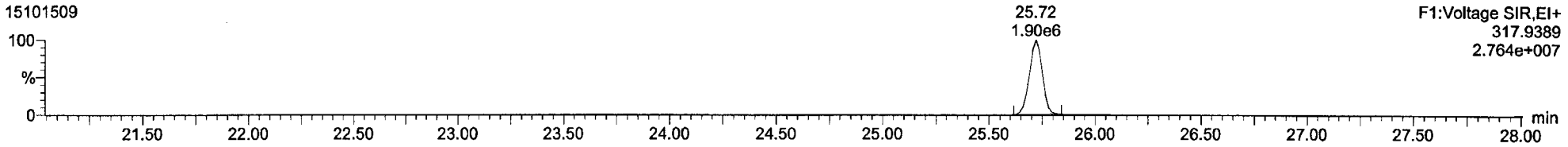
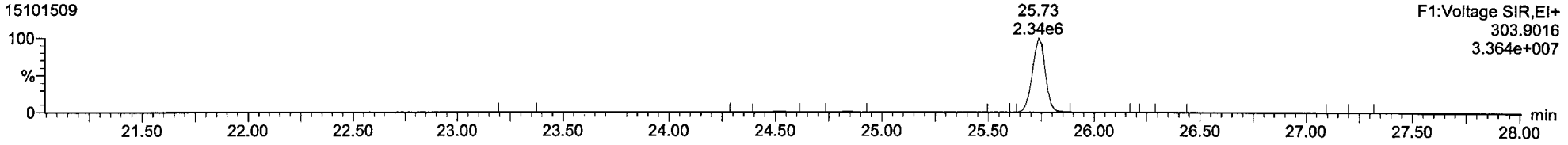
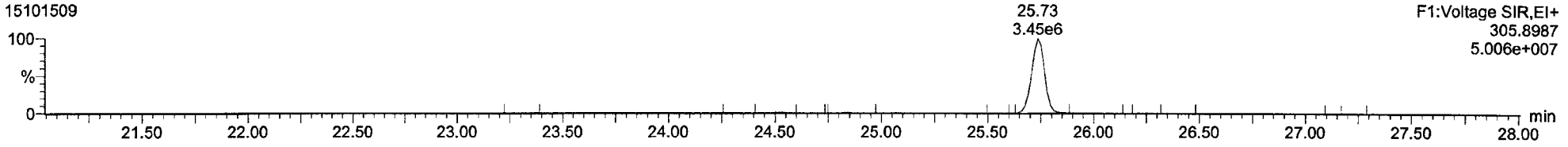


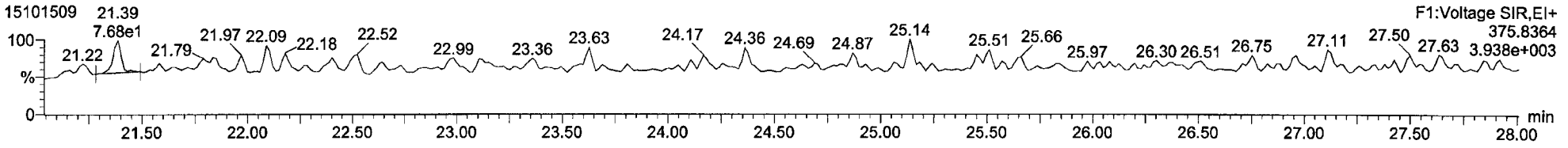
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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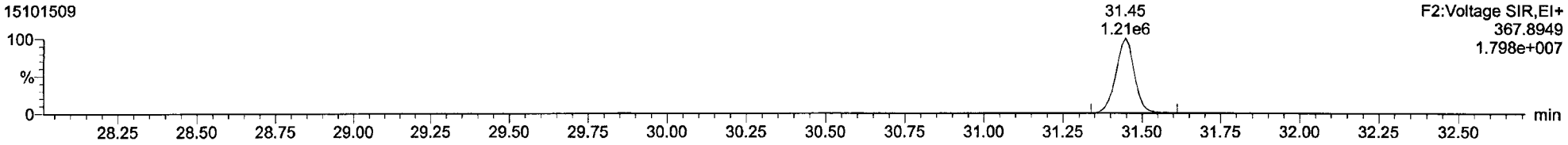
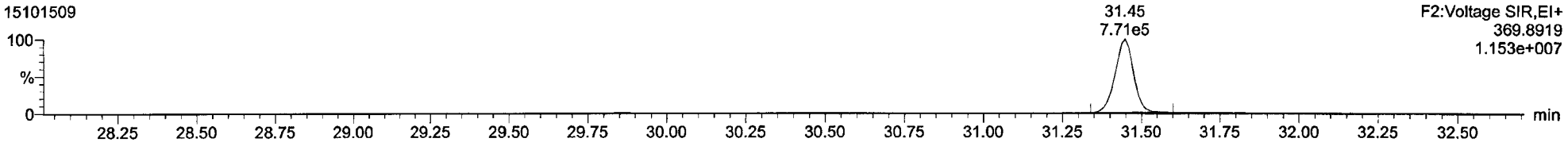
ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

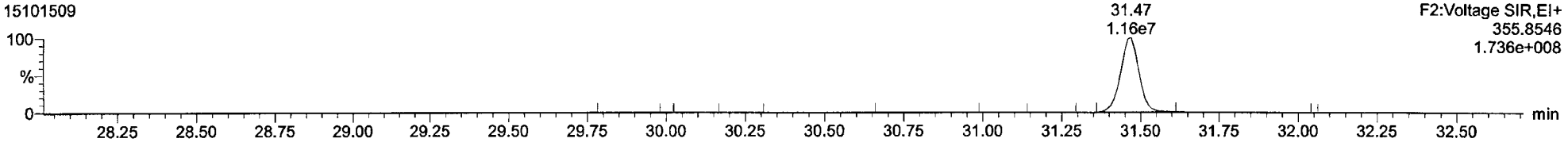
13C-12378-PeCDD



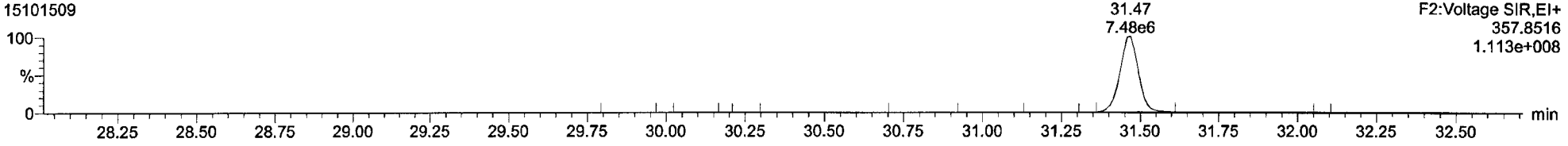
13C-12378-PeCDD



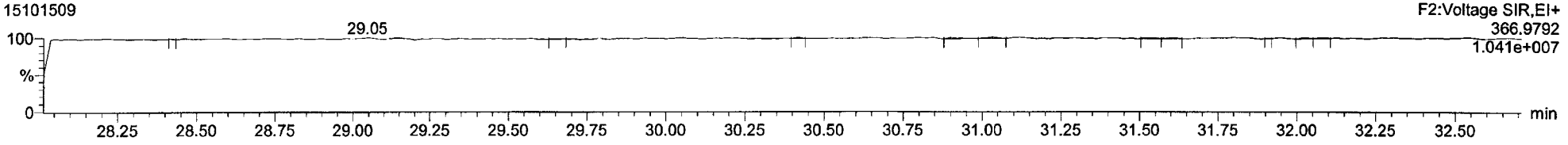
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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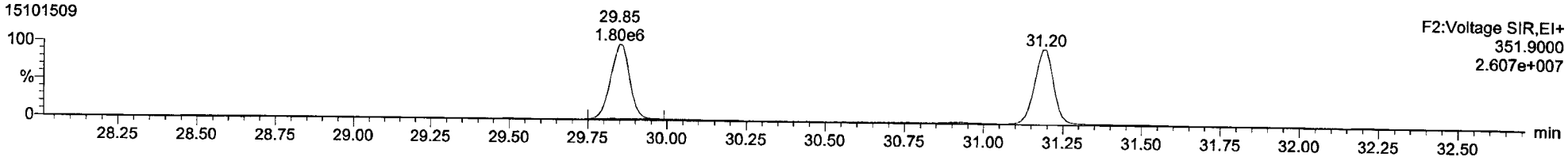
13C-12378-PeCDF



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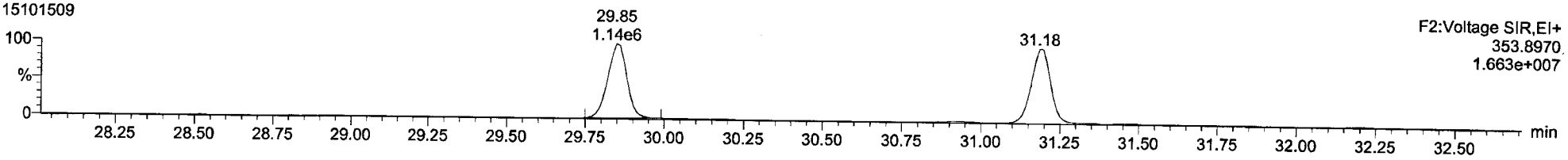
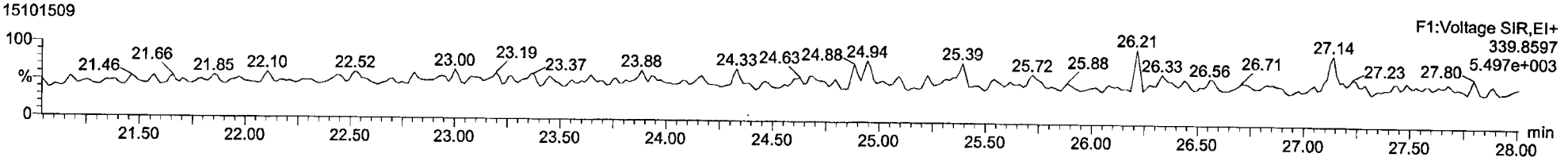
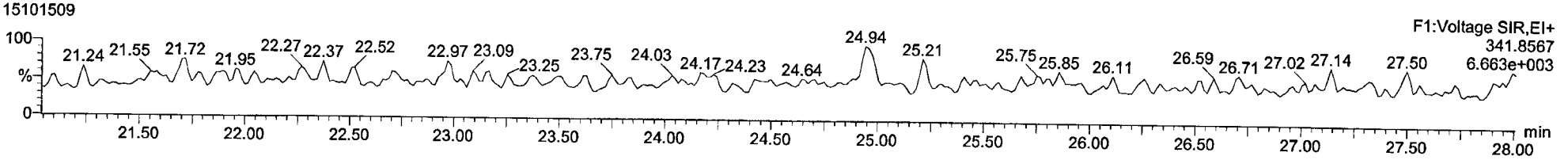


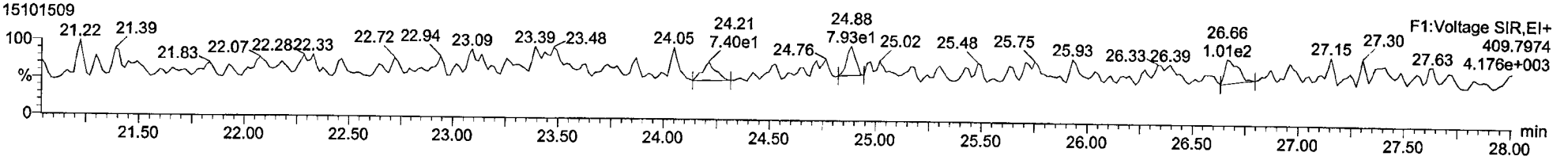
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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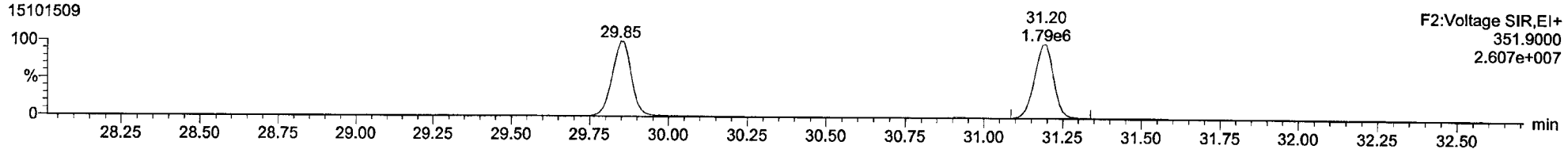
13C-23478-PeCDF



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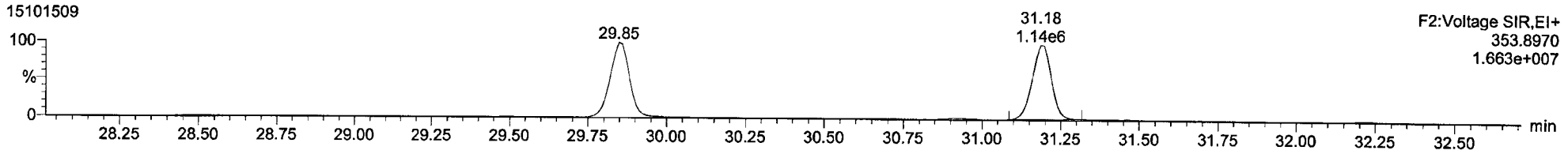
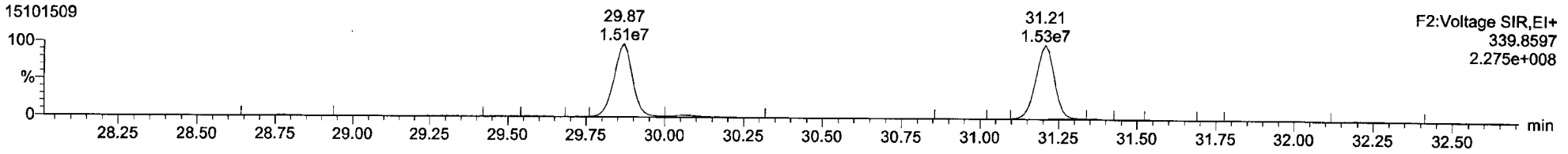
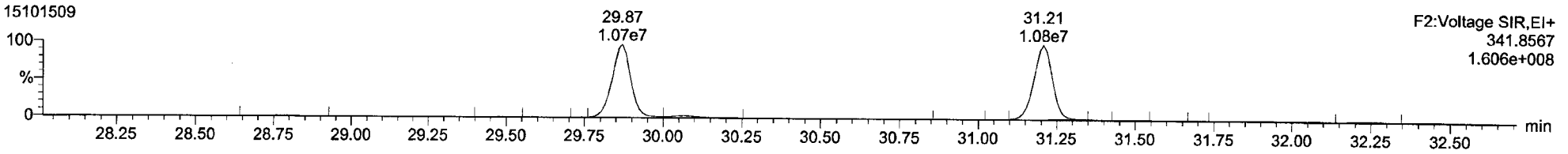


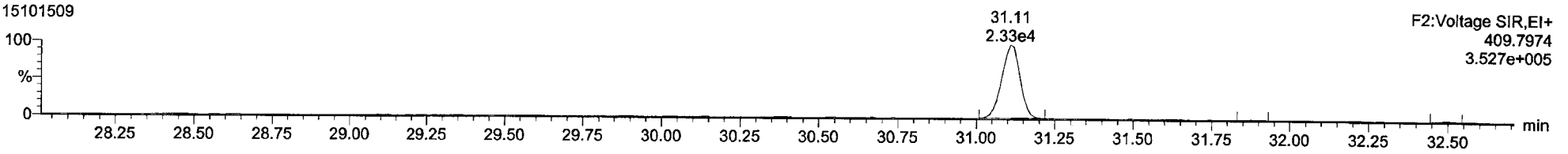
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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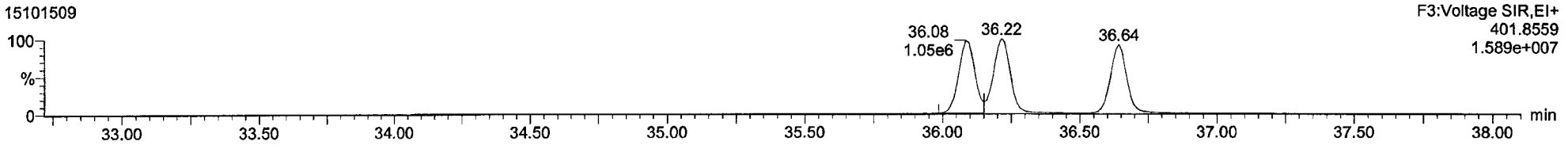
13C-123478-HxCDD



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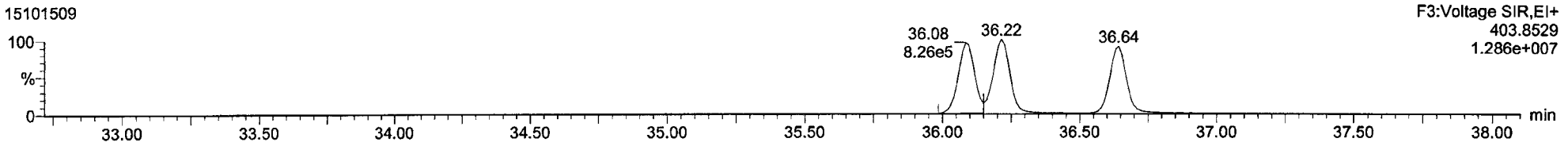

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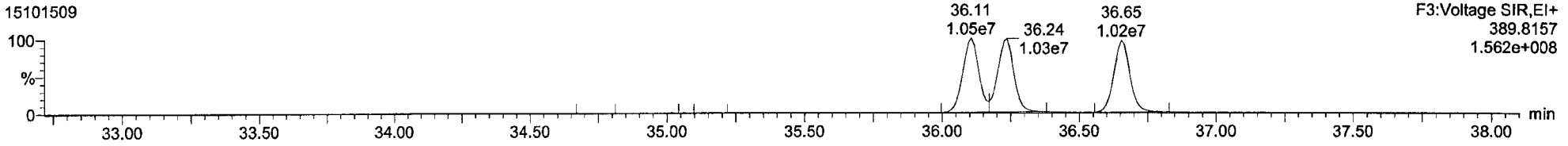
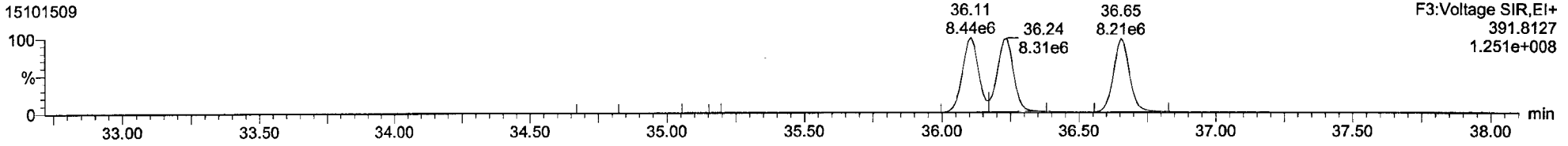
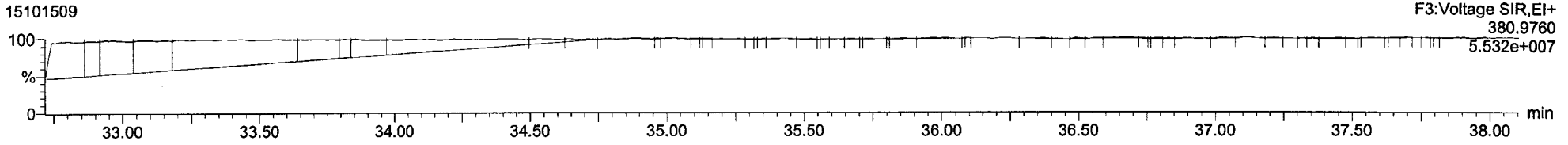


Total-hexadioxins



FUNCTION3 PFK



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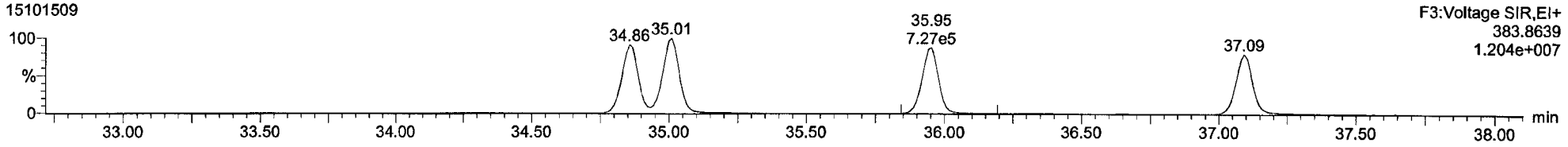
13C-234678-HxCDF



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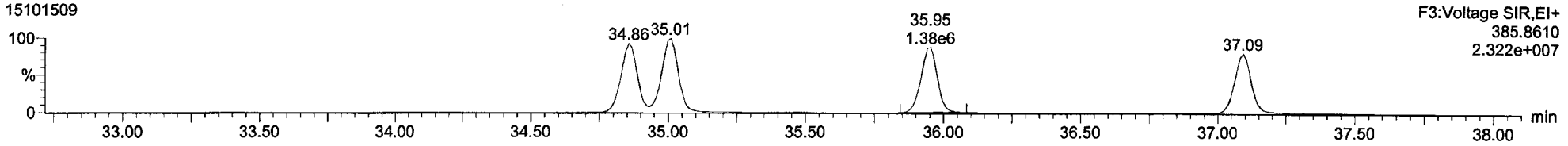
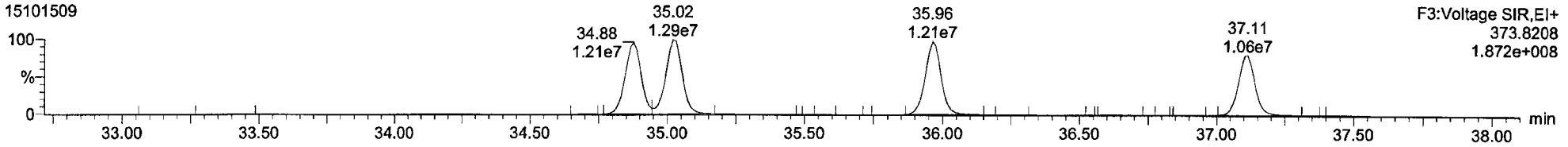


Total-hexafurans



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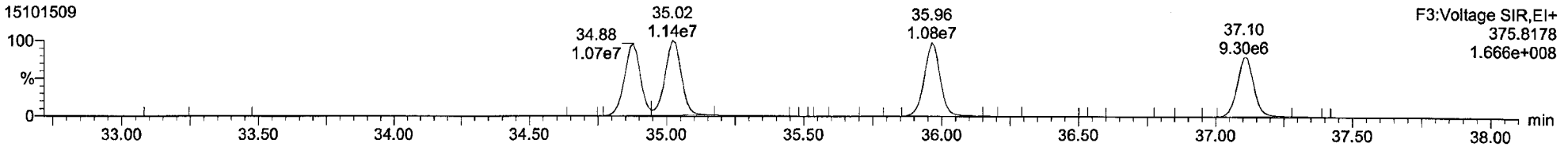
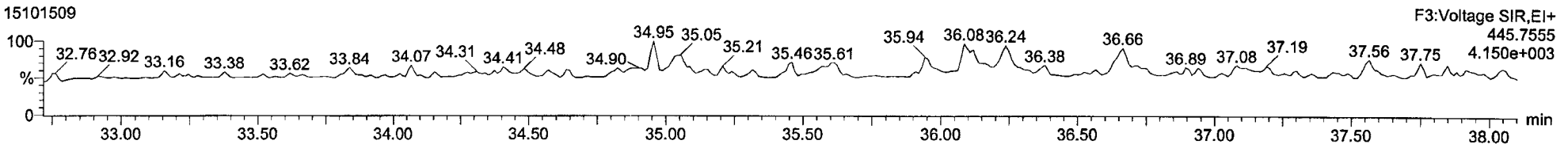


FUNCTION3 OCDPE



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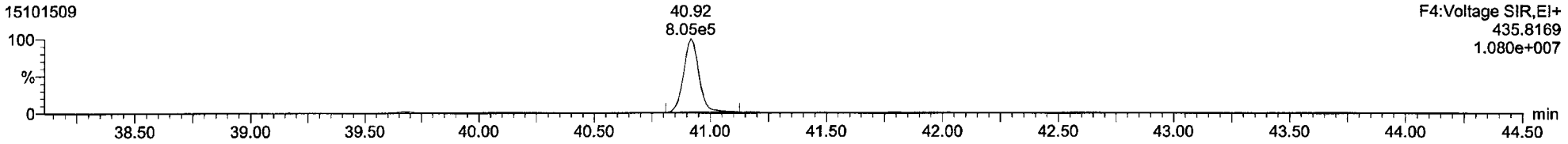
13C-1234678-HpCDD



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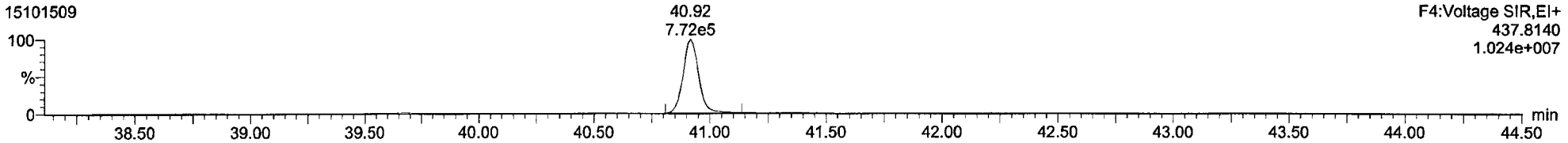
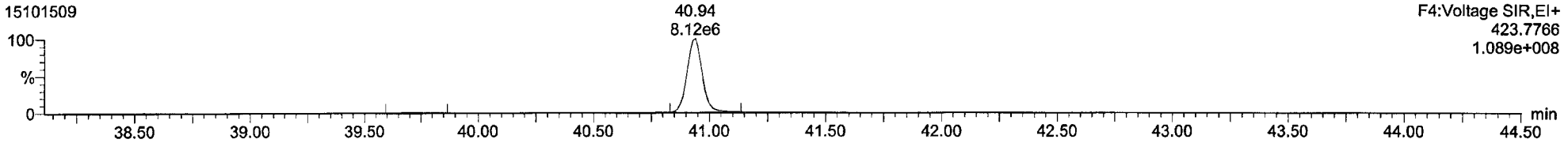
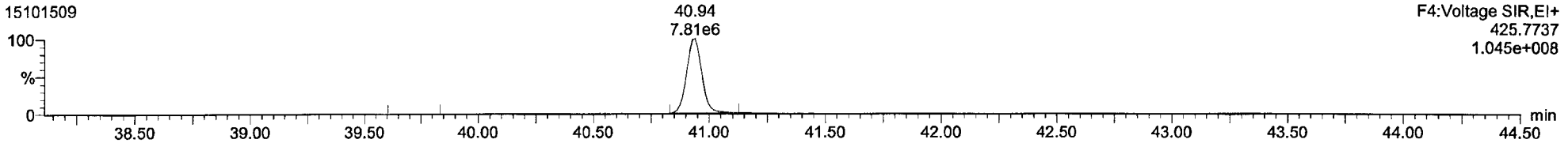


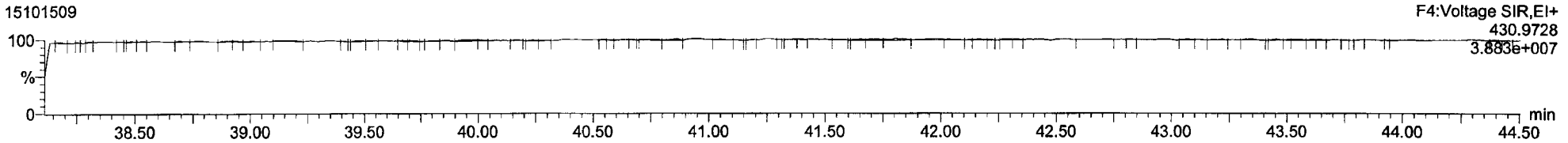
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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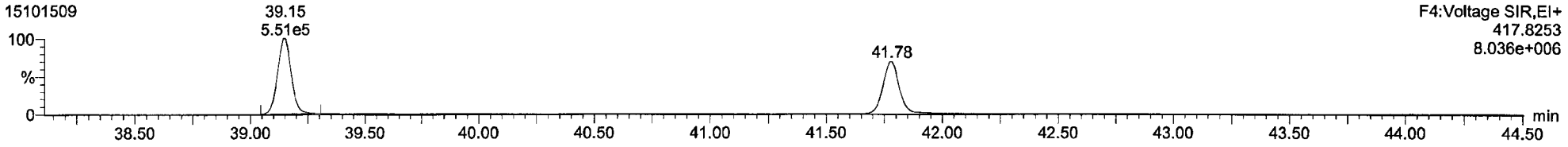
13C-1234678-HpCDF



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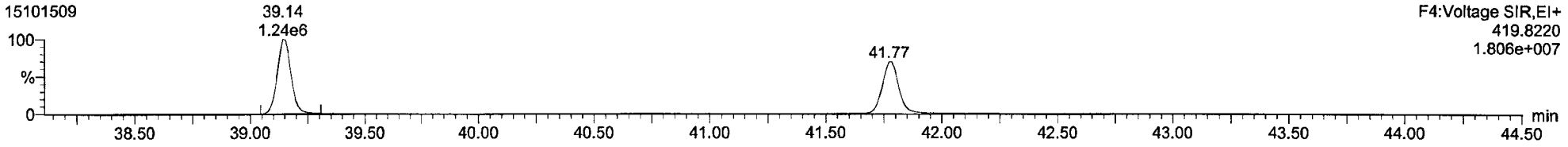
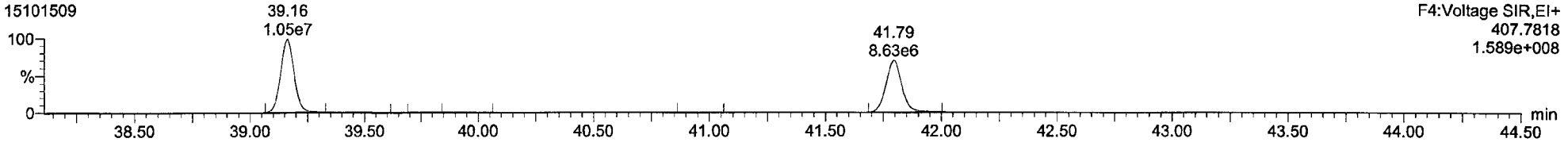
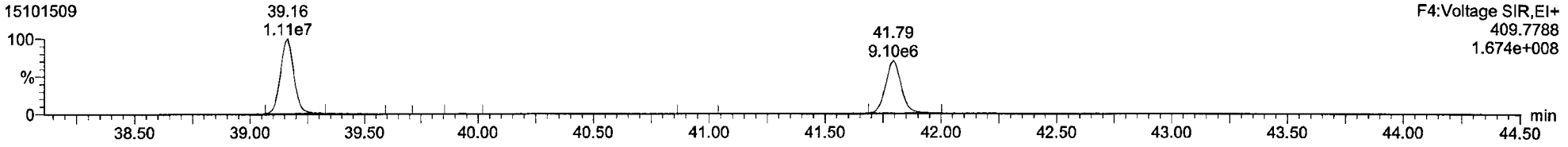


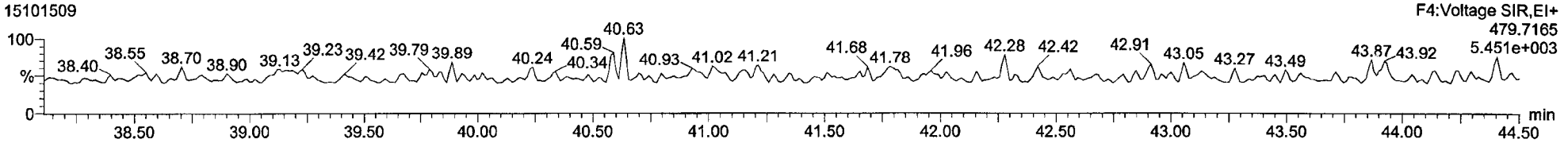
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



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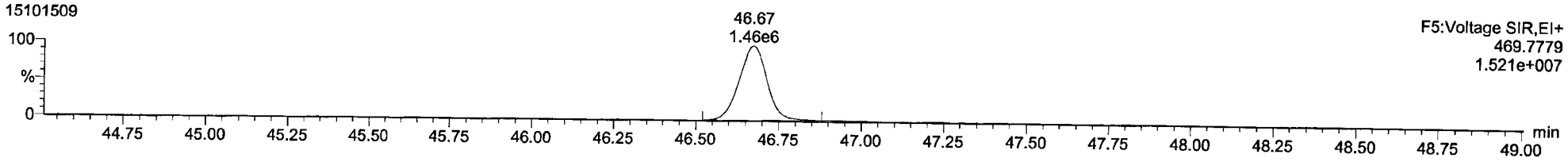
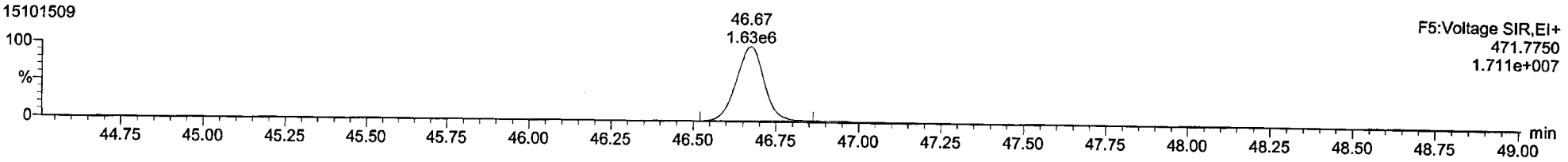
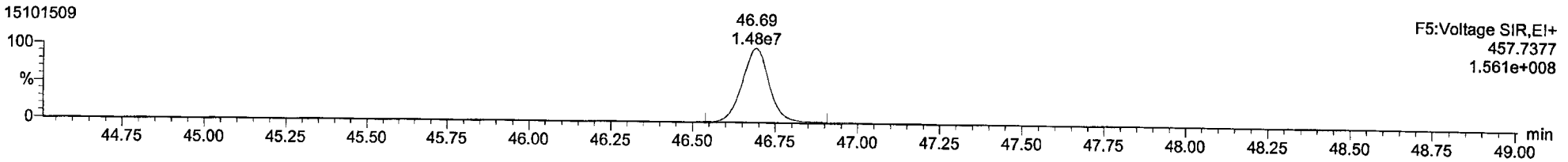
13C-OCDD



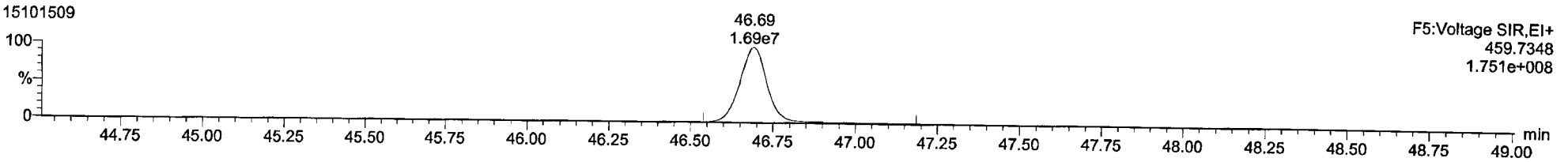
13C-OCDD



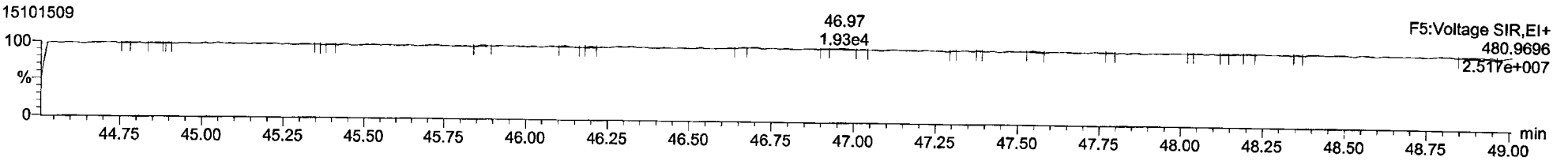
OCDD



OCDD



FUNCTION5 PFK



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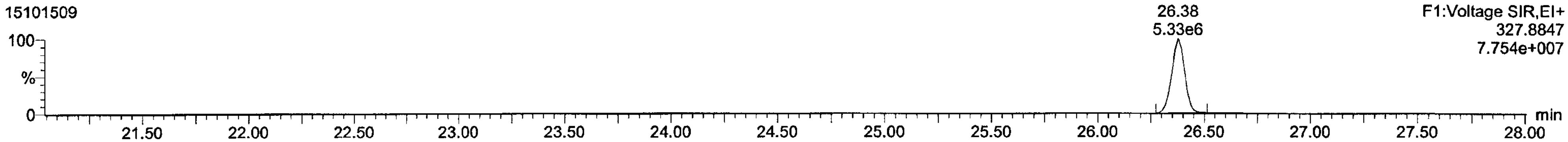
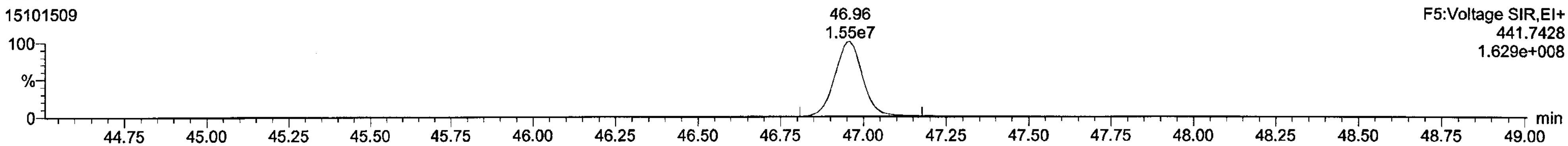
ID: CS5, Name: 15101509, Date: 15-Oct-2015, Time: 19:31:22, Conditions: AUTOSPEC01, User: pk

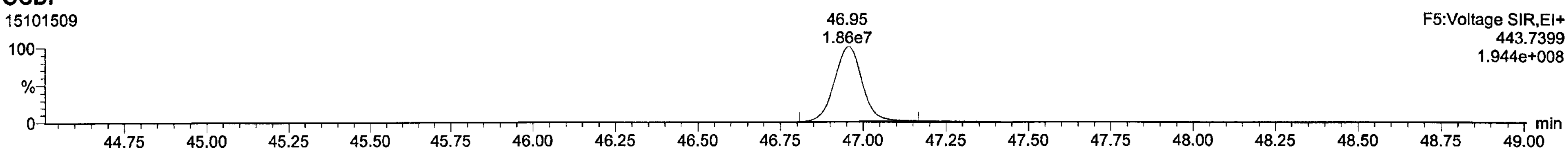
37CL-2378-TCDD



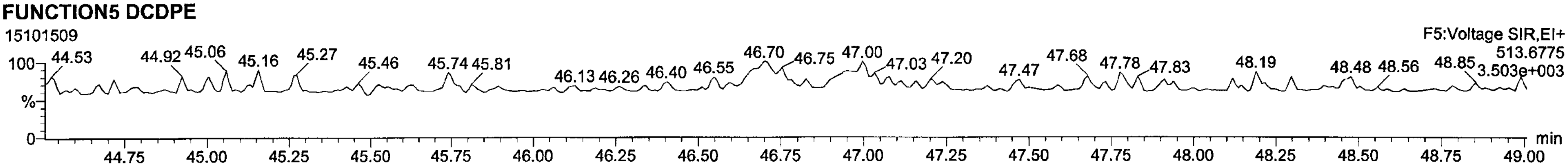
OCDF



OCDF



FUNCTION5 DCDPE



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Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, 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	25.750	1.001	1.00e5	1.53e5	0.827	0.655	0.770	818	1443	1.39e6	2.02e6	1694.2	NO	9.964	9.964
12378-PeCDF	29.869	1.000	6.34e5	4.64e5	0.824	1.366	1.550	2331	2631	8.96e6	6.44e6	3843.4	NO	54.863	54.863
23478-PeCDF	31.206	1.000	5.97e5	4.30e5	0.850	1.388	1.550	2331	2631	8.65e6	6.18e6	3709.7	NO	50.512	50.512
123478-HxCDF	34.879	1.000	5.06e5	4.51e5	0.973	1.123	1.240	2256	2827	7.39e6	6.55e6	3276.5	NO	56.905	56.905
234678-HxCDF	35.975	1.001	4.92e5	4.35e5	1.025	1.130	1.240	2256	2827	6.80e6	6.01e6	3012.1	NO	49.539	49.539
123678-HxCDF	35.032	1.001	5.36e5	4.85e5	0.953	1.106	1.240	2256	2827	7.39e6	6.65e6	3276.1	NO	53.673	53.673
123789-HxCDF	37.115	1.001	4.39e5	4.07e5	0.956	1.078	1.240	2256	2827	5.96e6	5.42e6	2642.6	NO	54.716	54.716
1234678-HpCDF	39.165	1.000	4.26e5	4.48e5	1.153	0.952	1.050	2326	2451	6.06e6	6.30e6	2606.3	NO	53.731	53.731
1234789-HpCDF	41.795	1.000	3.55e5	3.75e5	1.131	0.946	1.050	2326	2451	4.19e6	4.55e6	1802.9	NO	52.870	52.870
OCDF	46.952	1.006	6.28e5	7.64e5	1.023	0.822	0.890	2321	1656	6.03e6	7.32e6	2596.2	NO	118.266	118.266
2378-TCDD	26.377	1.001	9.73e4	1.26e5	1.023	0.771	0.770	1023	899	1.30e6	1.71e6	1273.8	NO	9.557	9.557
12378-PeCDD	31.469	1.001	4.96e5	3.14e5	0.939	1.579	1.550	1564	1282	6.92e6	4.42e6	4425.2	NO	49.161	49.161
123478-HxCDD	36.106	1.000	4.16e5	3.36e5	0.963	1.238	1.240	1390	2057	6.01e6	4.85e6	4322.4	NO	52.507	52.507
123678-HxCDD	36.238	1.001	4.25e5	3.44e5	0.894	1.235	1.240	1390	2057	5.94e6	4.83e6	4274.1	NO	57.661	57.661
123789-HxCDD	36.665	1.012	4.38e5	3.45e5	0.900	1.268	1.240	1390	2057	5.77e6	4.65e6	4153.0	NO	58.354	58.354
1234678-HpCDD	40.940	1.001	3.56e5	3.37e5	0.964	1.059	1.050	1688	1451	4.47e6	4.29e6	2648.7	NO	51.401	51.401
OCDD	46.683	1.000	5.93e5	6.76e5	0.969	0.877	0.890	1832	1783	5.77e6	6.48e6	3150.6	NO	113.957	113.957
13C-2378-TCDF	25.720	1.006	1.35e6	1.72e6	1.502	0.783	0.770	4199	2458	1.80e7	2.32e7	4296.9	NO		87.674
13C-12378-PeCDF	29.858	1.168	1.49e6	9.43e5	1.215	1.578	1.550	2271	3028	2.07e7	1.30e7	9114.0	NO		85.808
13C-23478-PeCDF	31.195	1.221	1.46e6	9.33e5	1.181	1.566	1.550	2271	3028	2.09e7	1.34e7	9225.0	NO		86.925
13C-123478-HxCDF	34.868	0.952	5.88e5	1.14e6	1.246	0.516	0.510	3699	2919	8.33e6	1.62e7	2253.3	NO		87.686
13C-123678-HxCDF	35.010	0.955	6.80e5	1.32e6	1.375	0.517	0.510	3699	2919	9.28e6	1.79e7	2507.7	NO		91.690
13C-234678-HxCDF	35.953	0.981	6.21e5	1.20e6	1.186	0.516	0.510	3699	2919	8.67e6	1.67e7	2343.2	NO		97.205
13C-123789-HxCDF	37.093	1.012	5.59e5	1.06e6	1.135	0.528	0.510	3699	2919	7.27e6	1.41e7	1965.7	NO		90.057
13C-1234678-HpCDF	39.154	1.069	4.31e5	9.80e5	1.020	0.440	0.440	2425	3140	6.10e6	1.39e7	2516.2	NO		87.352
13C-1234789-HpCDF	41.784	1.140	3.75e5	8.46e5	0.824	0.443	0.440	2425	3140	4.52e6	1.02e7	1862.1	NO		93.705
13C-1234-TCDD	25.555	0.000	1.03e6	1.30e6	1.000	0.788	0.770	2352	1818	1.45e7	1.83e7	6152.4	NO		100.000
13C-2378-TCDD	26.362	1.032	1.01e6	1.27e6	0.983	0.794	0.770	2352	1818	1.40e7	1.77e7	5959.9	NO		99.802
13C-12378-PeCDD	31.448	1.231	1.07e6	6.85e5	0.787	1.558	1.550	1882	1902	1.51e7	9.64e6	8020.8	NO		95.563
13C-123478-HxCDD	36.095	0.985	8.41e5	6.46e5	1.031	1.301	1.240	2297	3286	1.18e7	9.20e6	5146.9	NO		91.158
13C-123678-HxCDD	36.216	0.988	8.18e5	6.76e5	1.137	1.210	1.240	2297	3286	1.12e7	8.92e6	4888.1	NO		83.041
13C-1234678-HpCDD	40.918	1.117	7.19e5	6.79e5	0.892	1.060	1.050	1762	2253	8.99e6	8.59e6	5098.5	NO		99.053
13C-OCDD	46.665	1.273	1.09e6	1.21e6	0.852	0.901	0.890	2463	1702	1.04e7	1.16e7	4203.5	NO		170.666

Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

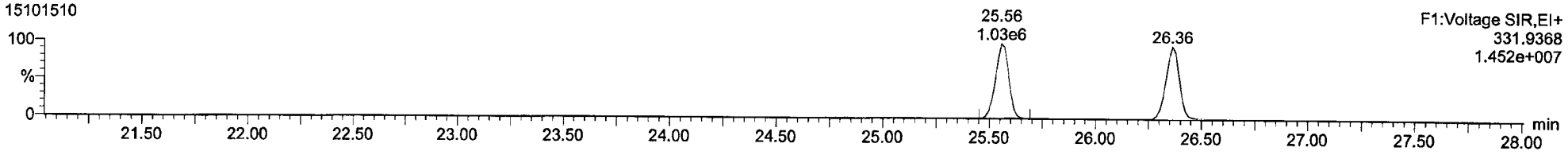
Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	36.643	0.000	8.82e5	7.00e5	1.000	1.259	1.240	2297	3286	1.20e7	9.48e6	5206.4	NO		100.000
Total-tetrafurans			1.01e5		0.827			818		1.40e6					10.057
Total-penta1			0.00e0					818		0.00e0					
Total-pentafurans			1.24e6		0.837			2331		1.78e7					106.636
Total-hexafurans			1.97e6		0.977			2256		2.76e7					215.027
Total-heptafurans			7.83e5		1.142			2326		1.03e7					106.992
Total-Furans			4.73e6		0.971			818		6.31e7					556.978
Total-tetradioxins			9.73e4		1.023			1023		1.30e6					9.557
Total-pentadioxins			4.96e5		0.939			1564		6.94e6					49.226
Total-hexadioxins			1.28e6		0.919			1390		1.78e7					168.671
Total-heptadioxins			3.57e5		0.964			1688		4.49e6					51.536
Total-Dioxins			2.83e6		0.950			1023		3.63e7					392.946
Total-TEQ			7.55e6					1023		9.93e7					949.924
37CL-2378-TCDD	26.377	1.032	2.41e5		1.091			1632		3.26e6		1996.6			9.463
FUNCTION1 PFK			1.09e6					600562		2.10e7					
FUNCTION2 PFK			2.65e6					123856		8.85e6					0.000
FUNCTION3 PFK			5.41e4					287251		1.50e6					0.000
FUNCTION4 PFK			1.28e7					267086		8.41e7					
FUNCTION5 PFK			1.56e5					226615		6.68e6					
FUNCTION1 HXCDPE			7.04e1					458		1.49e3					0.000
FUNCTION1 HPCDPE			7.64e2					687		1.43e4					0.000
FUNCTION2 HPCDPE			0.00e0					752		0.00e0					
FUNCTION3 OCDPE			0.00e0					442		0.00e0					
FUNCTION4 NCDPE			7.23e1					581		2.72e3					0.000
FUNCTION5 DCDPE			0.00e0					326		0.00e0					

Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

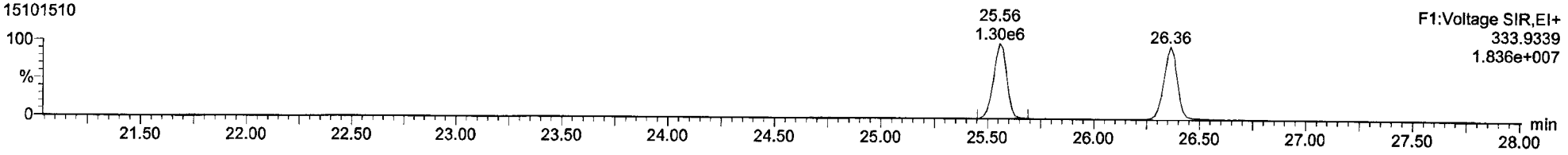
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1510153SN.mdb 15 Oct 2015 16:11:27
Calibration: P:\DIOXIN8290.PRO\CurveDB\151015ICAL.cdb 16 Oct 2015 09:47:27

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

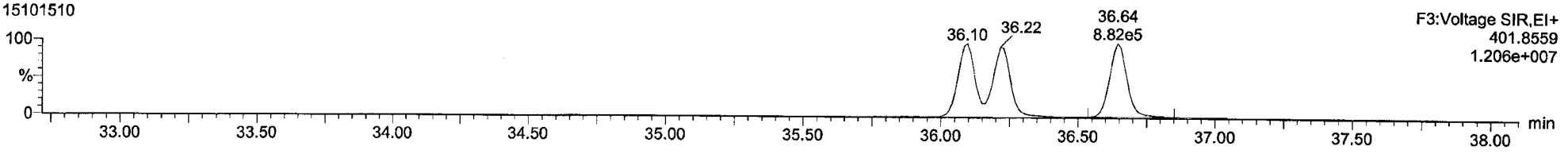
13C-1234-TCDD



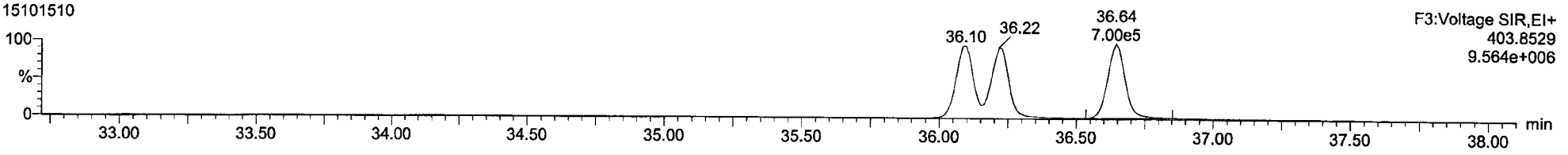
13C-1234-TCDD



13C-123789-HxCDD



13C-123789-HxCDD



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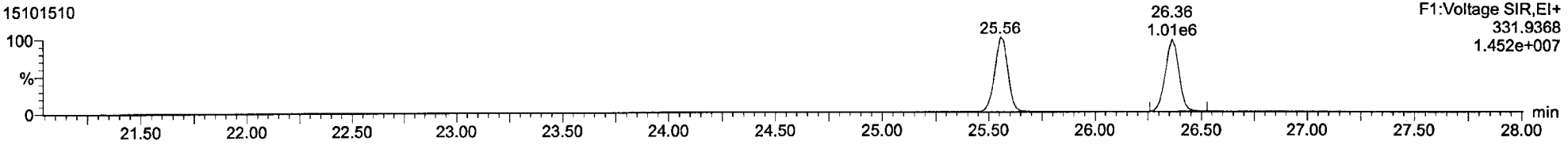
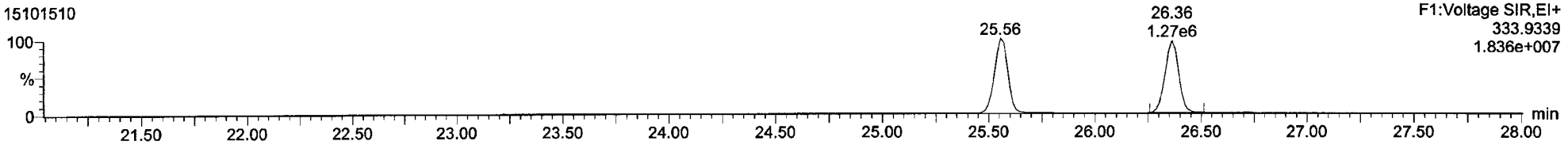
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

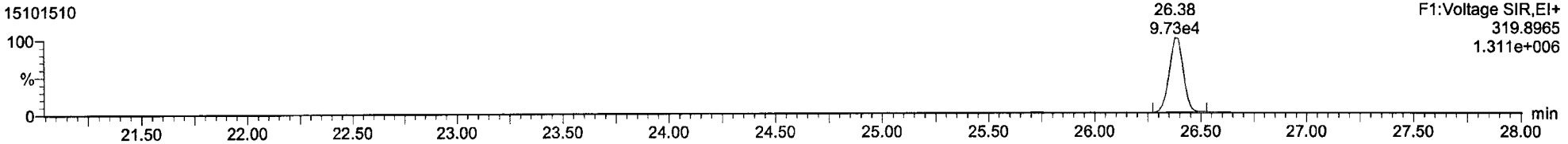
13C-2378-TCDD



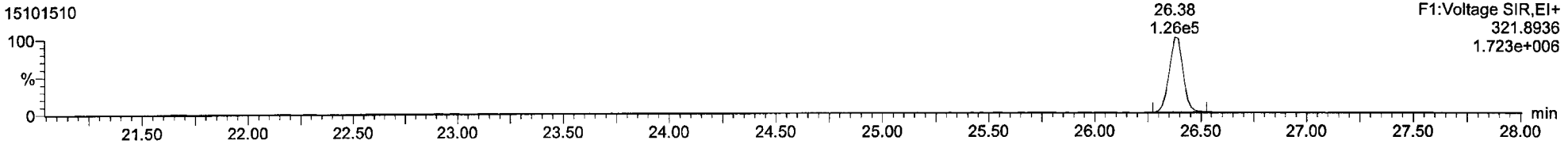
13C-2378-TCDD



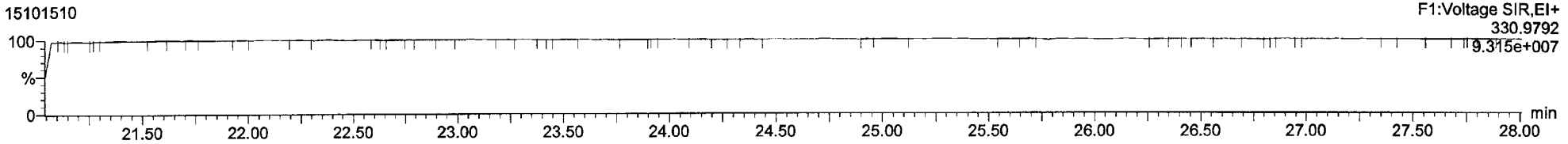
Total-tetradioxins



Total-tetradioxins



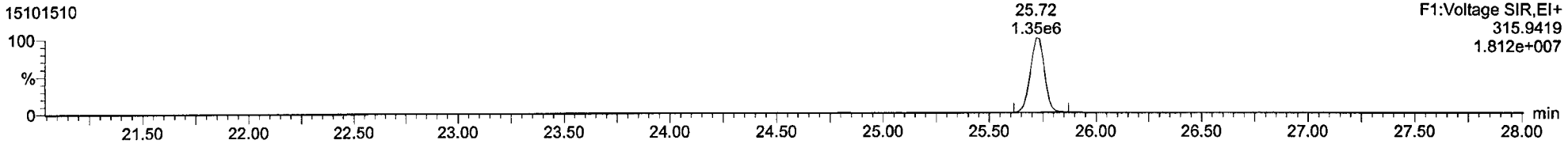
FUNCTION1 PFK



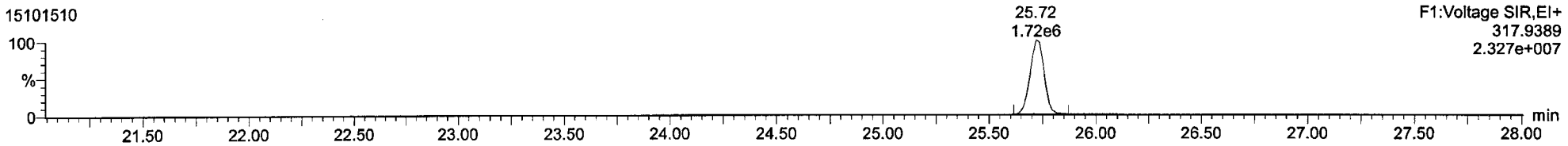
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

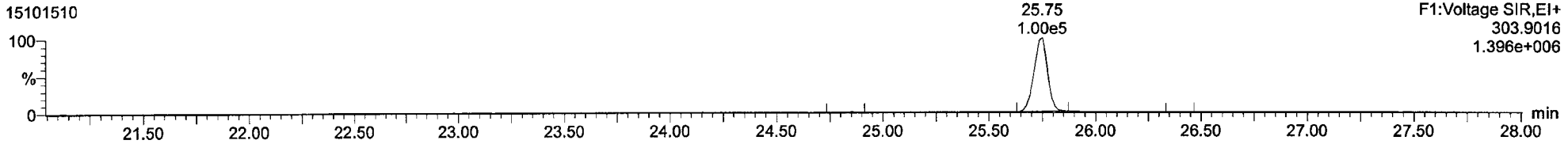
13C-2378-TCDF



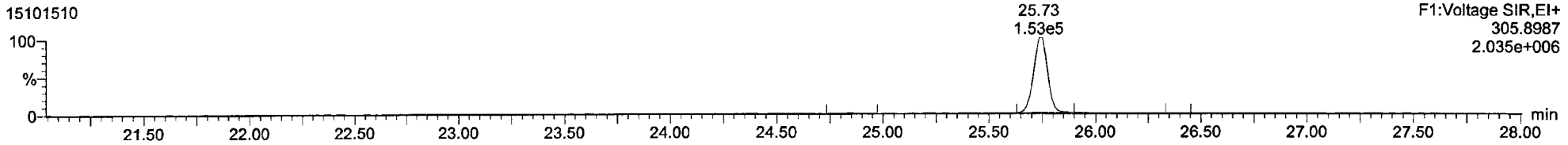
13C-2378-TCDF



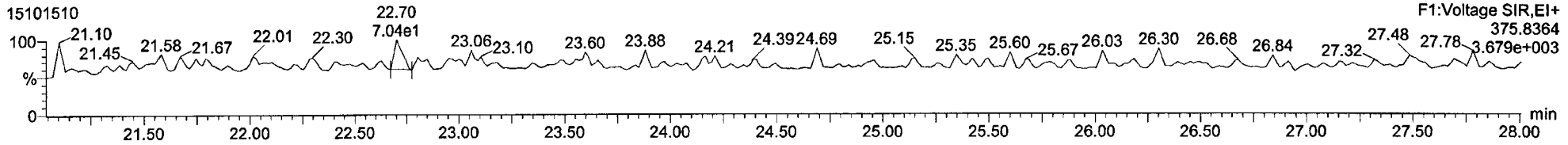
Total-tetrafurans



Total-tetrafurans

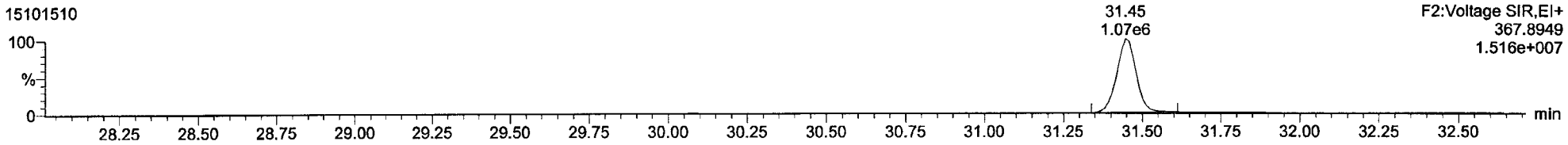


FUNCTION1 HXCDPE



ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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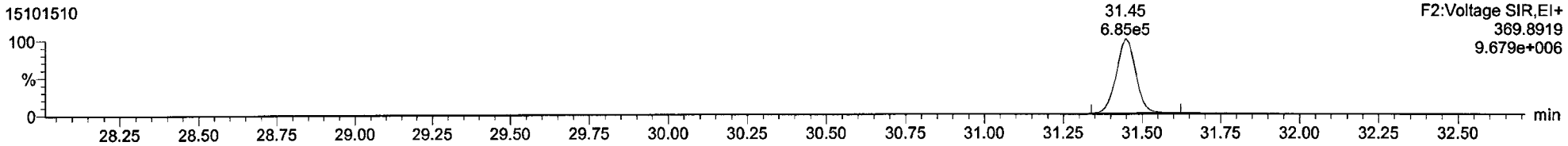
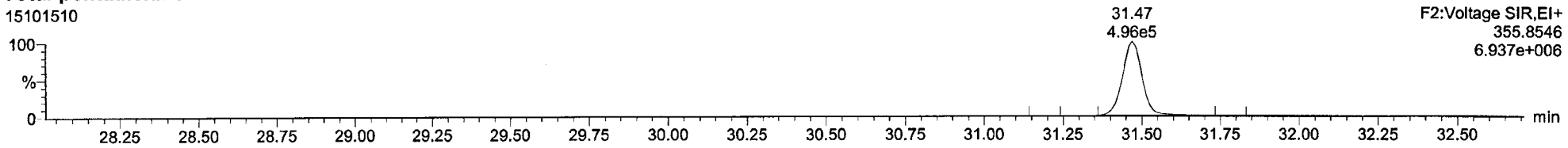
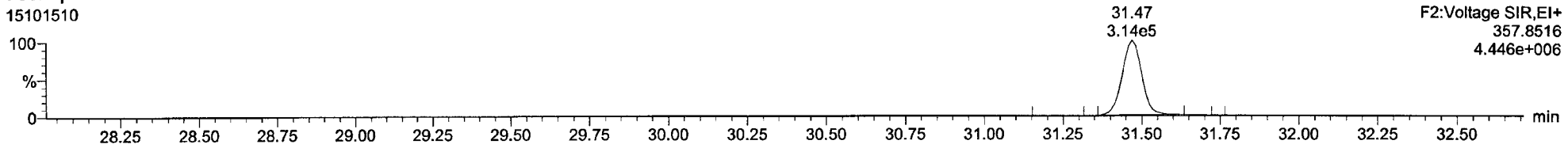


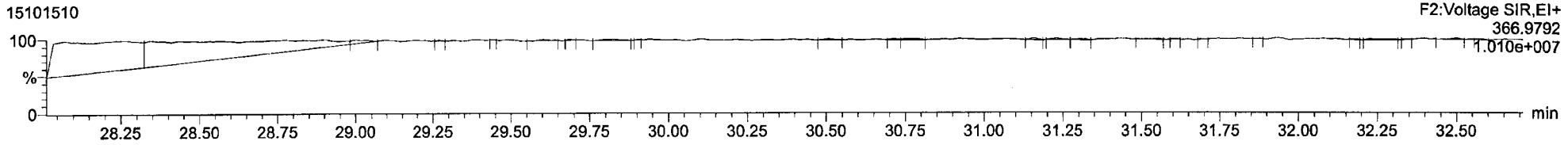
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
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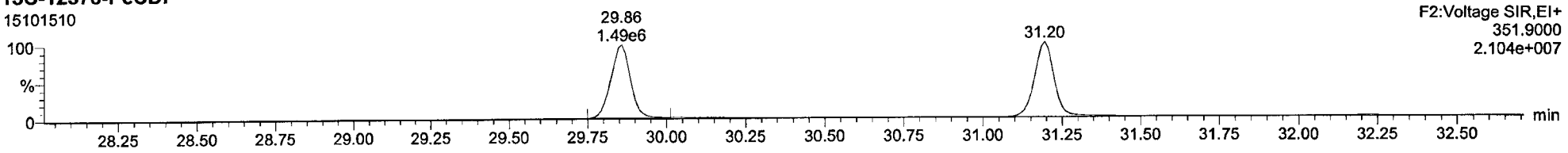
ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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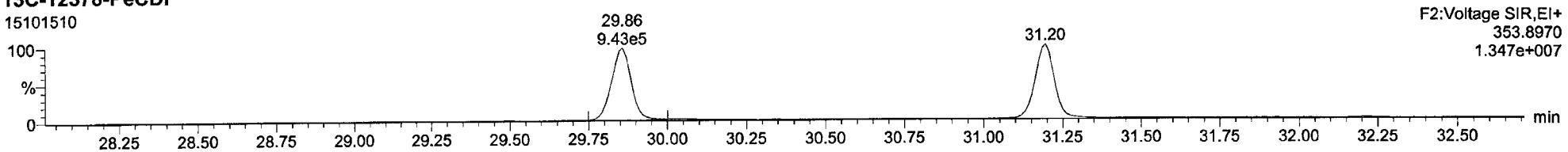
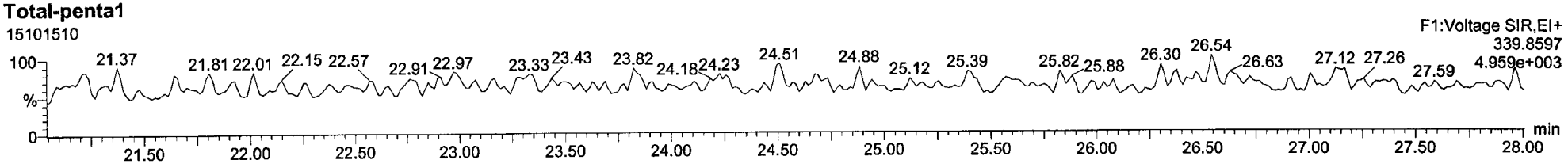
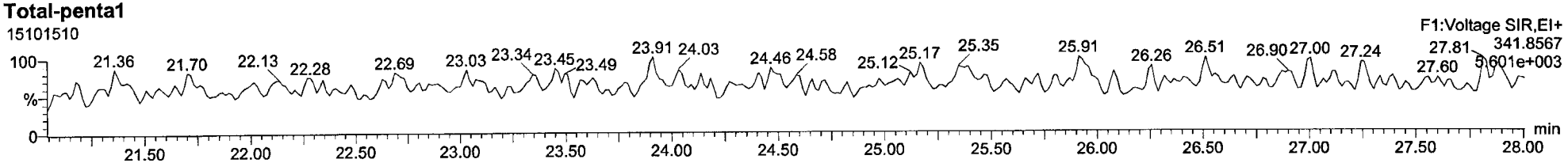


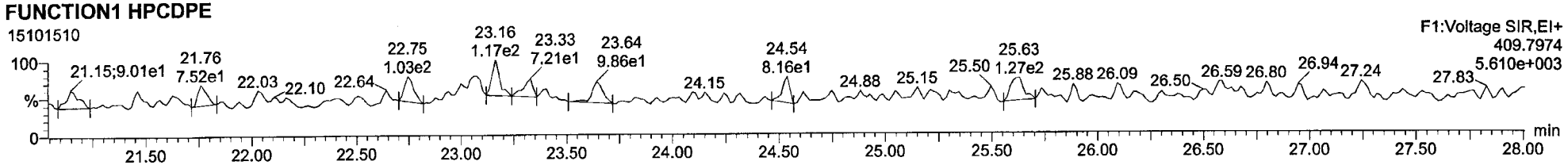
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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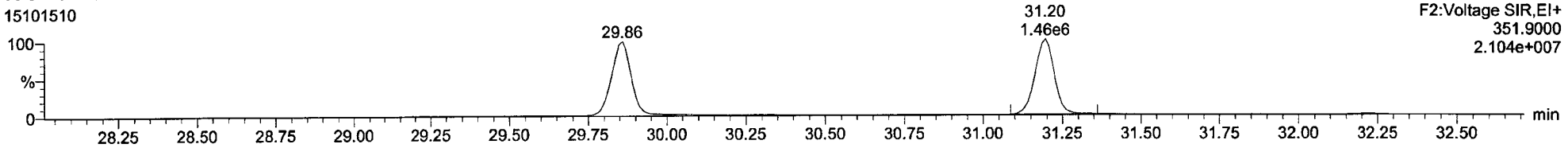
13C-23478-PeCDF



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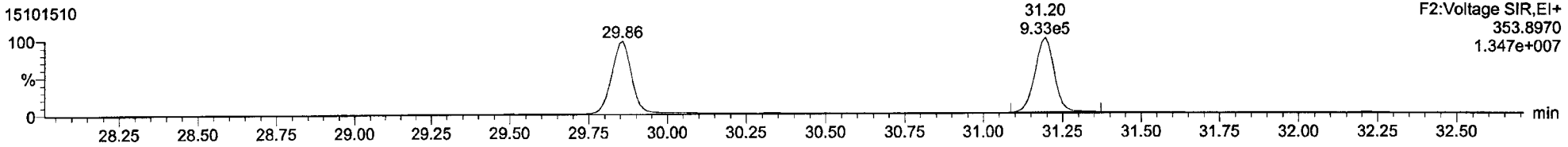
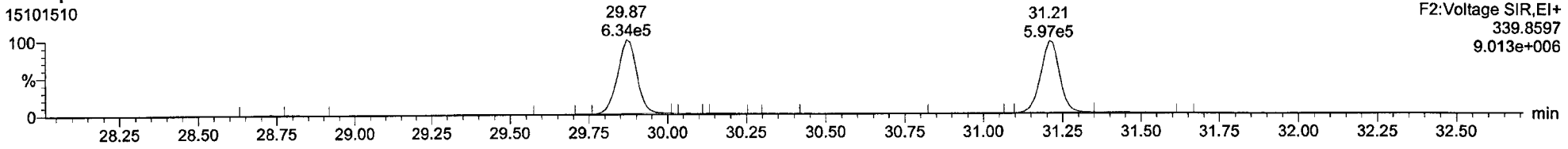
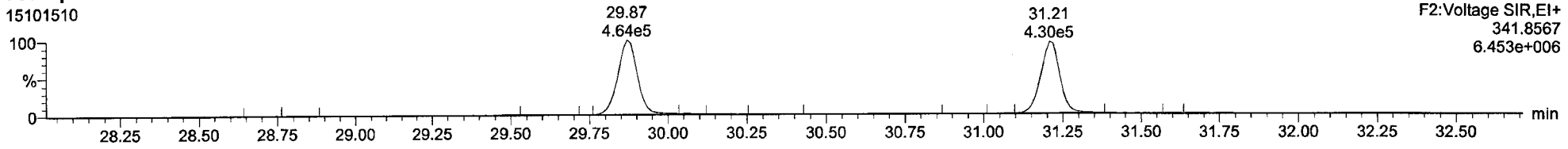


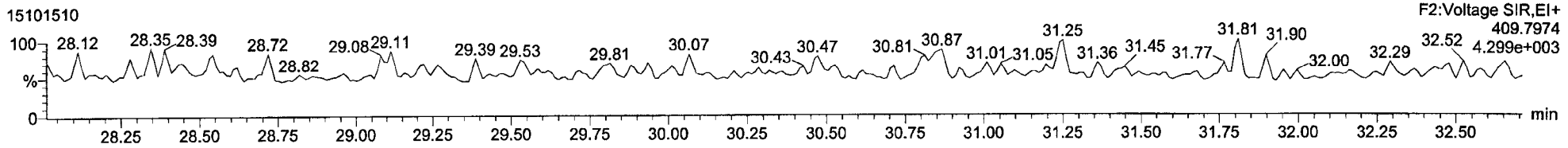
Total-pentafurans



Total-pentafurans



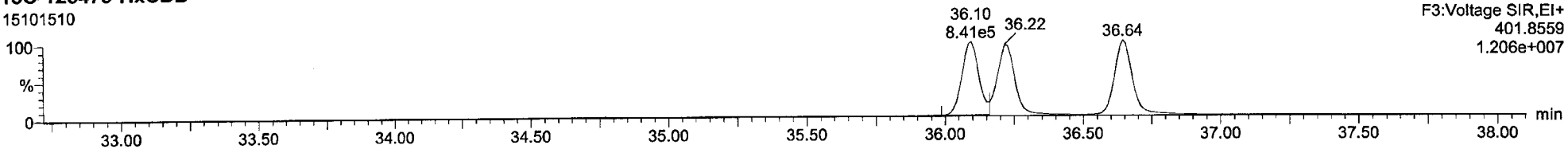
FUNCTION2 HPCDPE



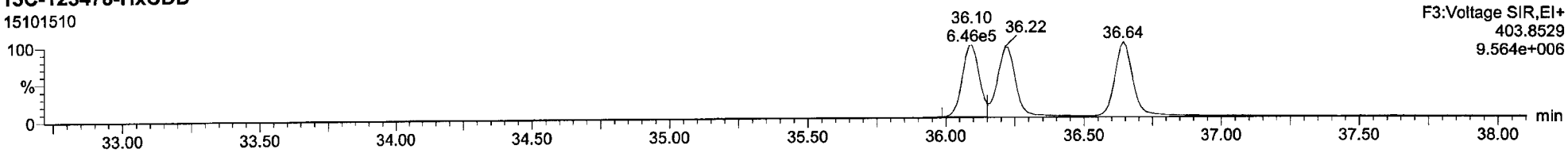
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\151015ICV.qld
Last Altered: Friday, October 16, 2015 09:53:17 Pacific Daylight Time
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

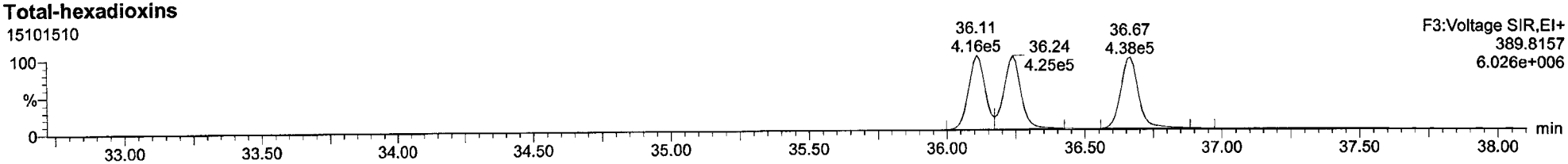
13C-123478-HxCDD
15101510



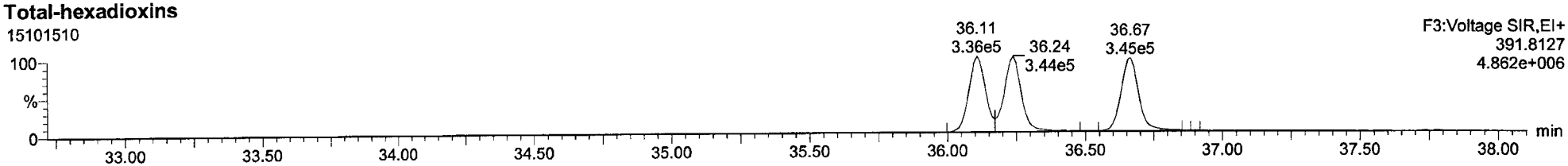
13C-123478-HxCDD
15101510



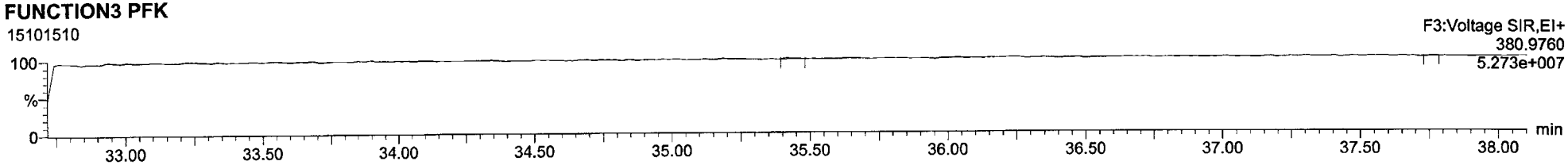
Total-hexadioxins
15101510



Total-hexadioxins
15101510



FUNCTION3 PFK
15101510



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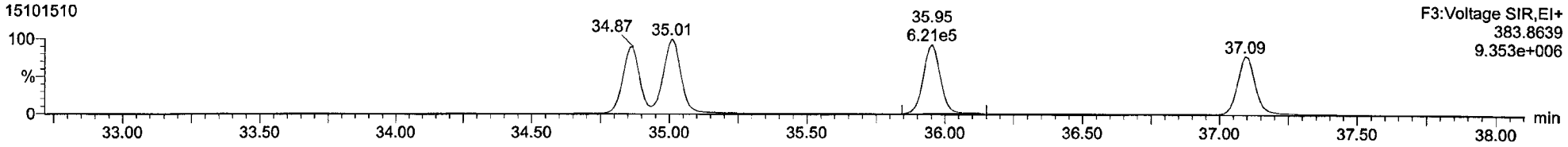
13C-234678-HxCDF



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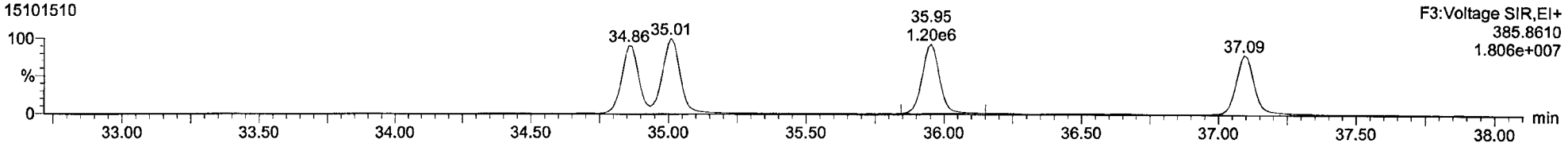
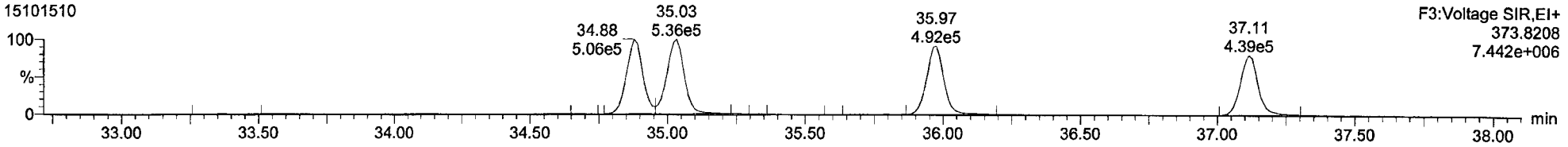
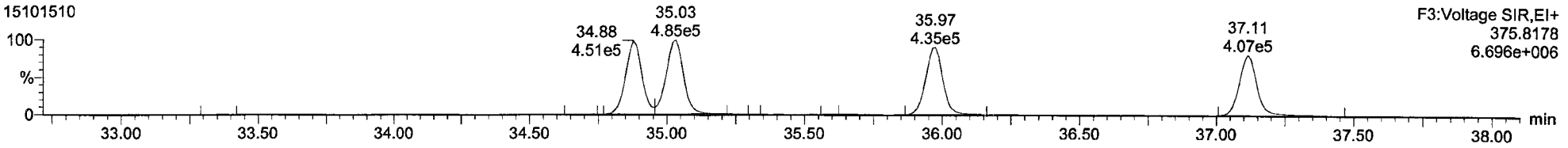


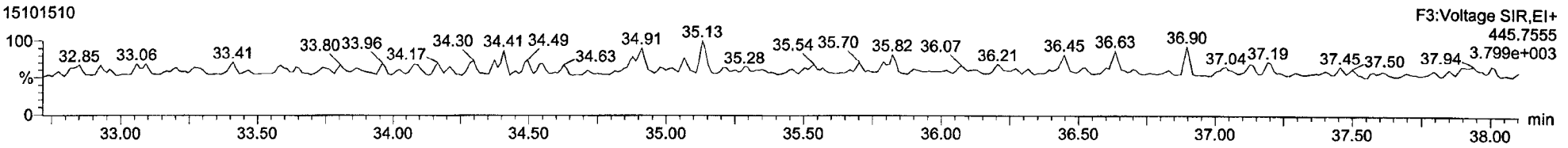
Total-hexafurans



Total-hexafurans

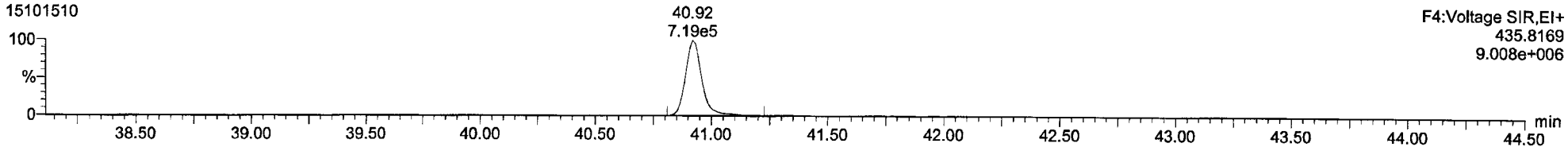


FUNCTION3 OCDPE

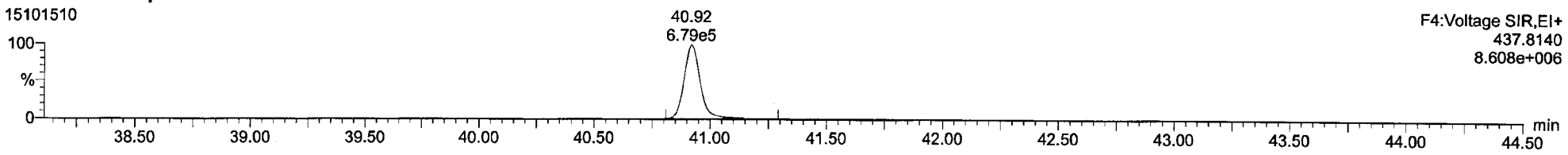


ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



13C-1234678-HpCDD



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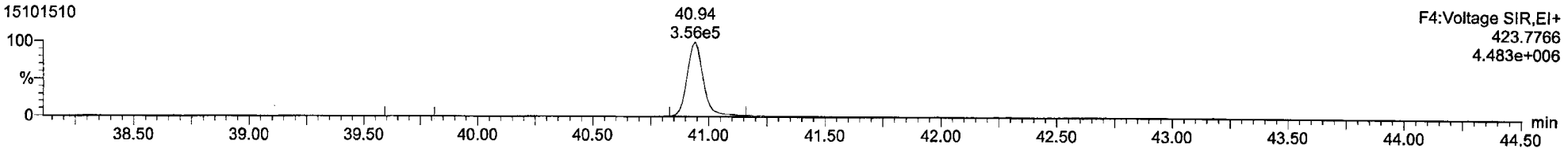

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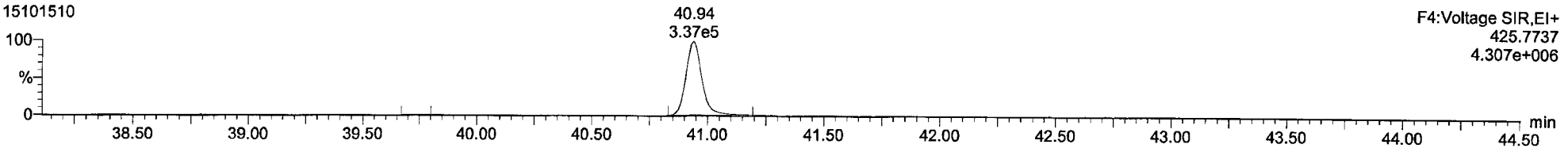
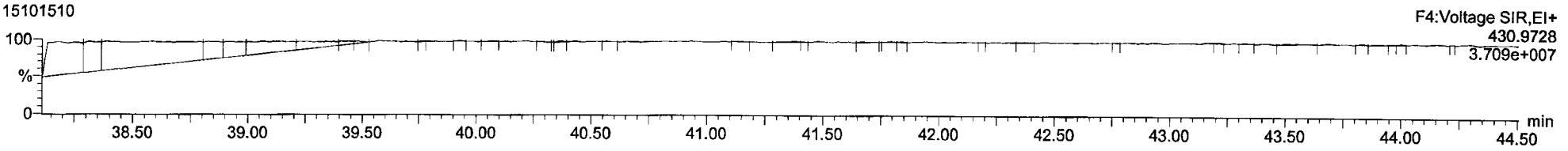
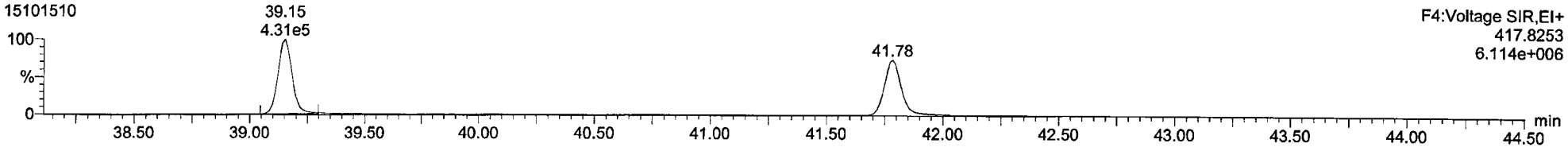


FUNCTION4 PFK

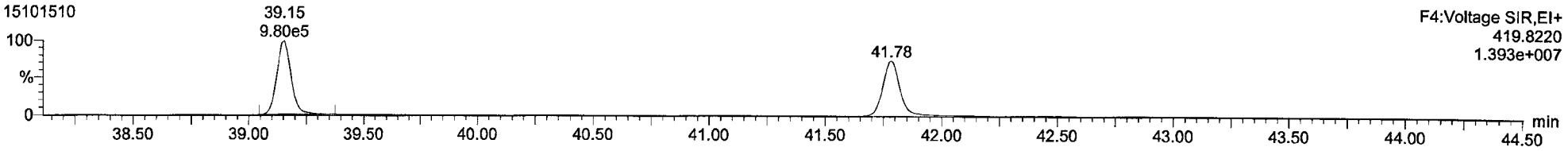


ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

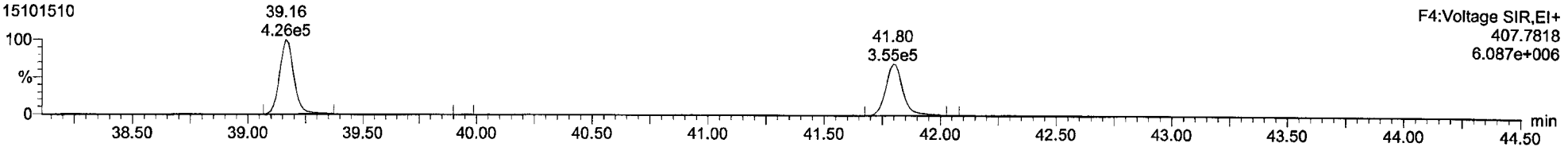
13C-1234678-HpCDF



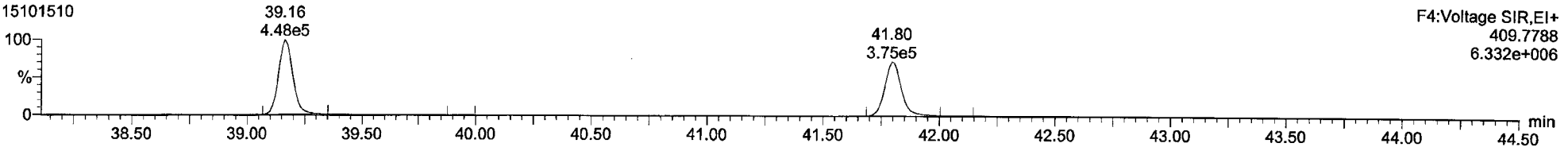
13C-1234678-HpCDF



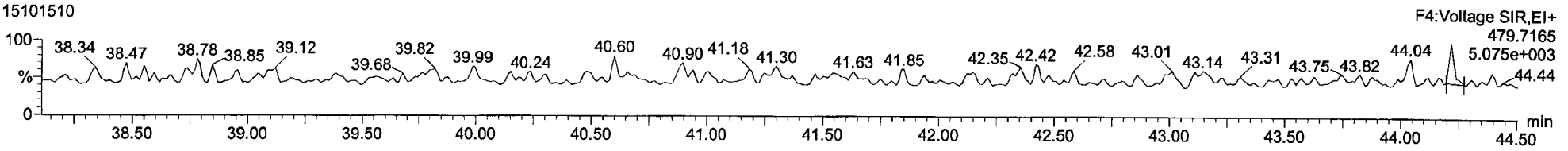
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
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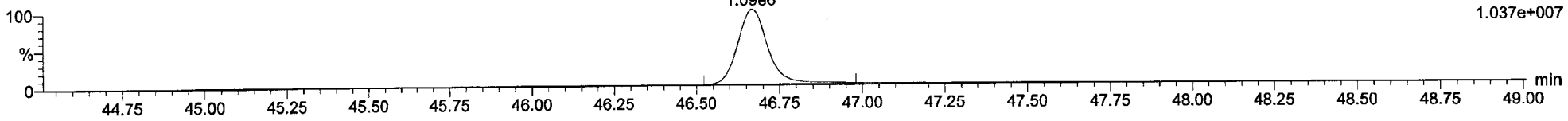
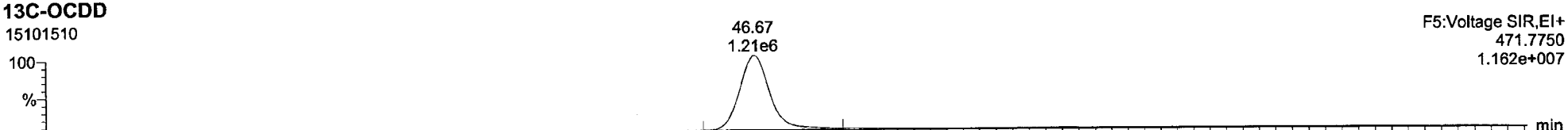
Printed: Friday, October 16, 2015 09:54:10 Pacific Daylight Time

ID: ICV, Name: 15101510, Date: 15-Oct-2015, Time: 20:24:17, Conditions: AUTOSPEC01, User: pk

13C-OCDD
15101510



13C-OCDD
15101510



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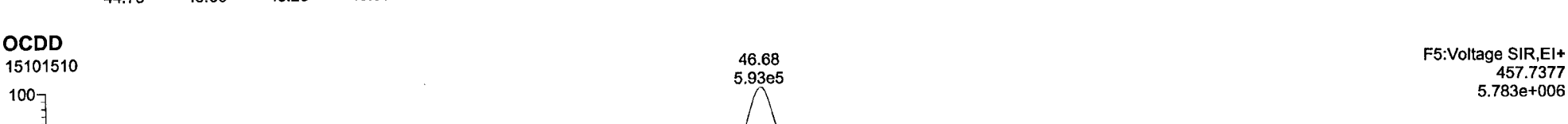
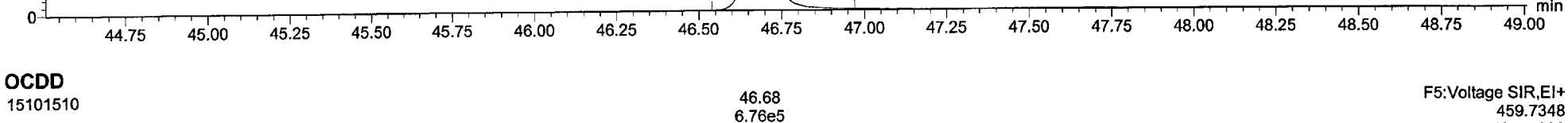
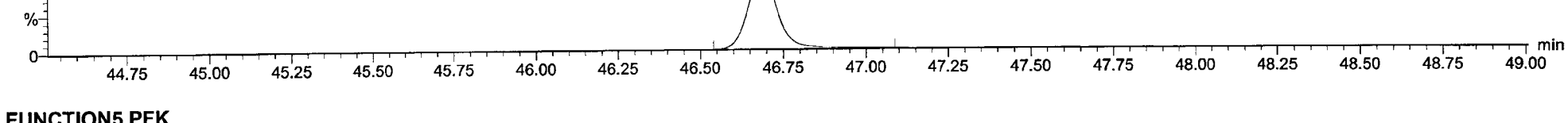


OCDD
15101510



FUNCTION5 PFK
15101510



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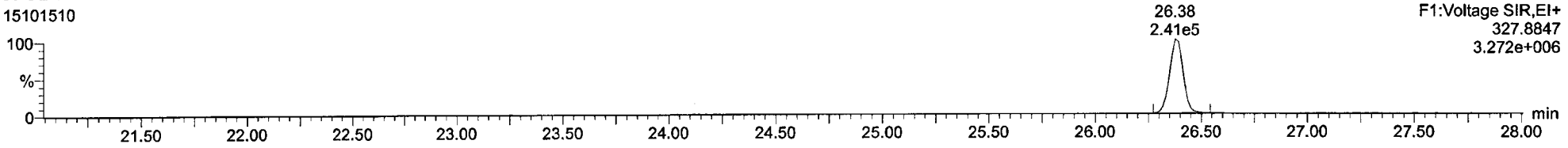
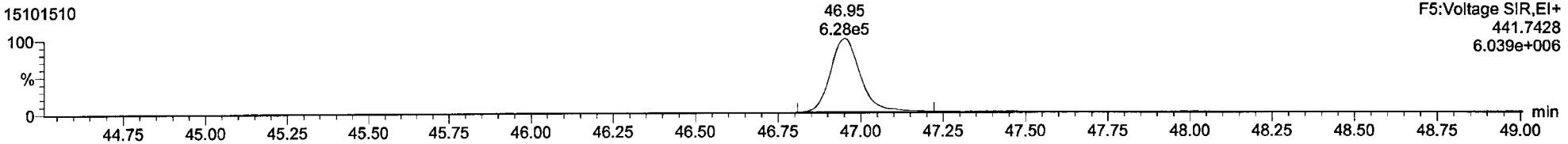
37CL-2378-TCDD



OCDF



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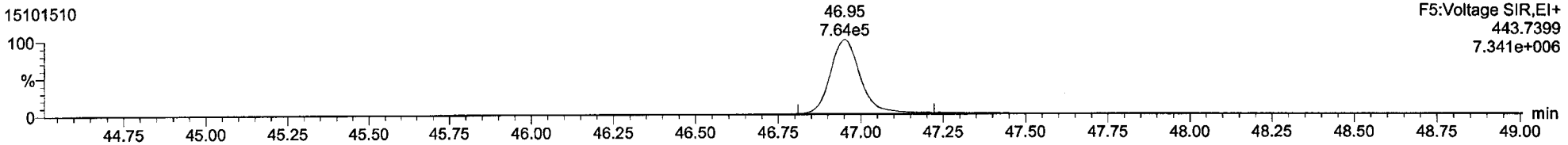
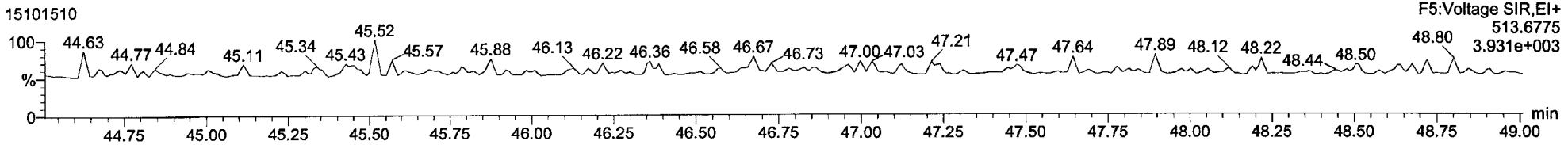


FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: ATS0

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ELEMENT/NWA: ATSO Client ID: Archer

Element Calibration Code: YJ00017 METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01** Analysis ~~Start~~ Date: 1/29/16

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / ✓	Signal / Noise ≥ 3.0?	(Y) / N / ✓
TCDD /TCDF Resolution ≤ 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 ≤ 25%?	NA /
EPA Case #	NA/	Technical Review?	/

Detail problems, corrective actions and/or other pertinent information below:

Ok

(Review 1)Analyst: [signature] **Date:** 2/1/16

(Review 2)Peer: **Date:**

(Final Review)Reviewer: [signature] **Date:** 2/2

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 1/29/16 Analysis: Dioxins Analyst: jlh

GC Program: 8290D Column No: D1322 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): Jan0616 1-5 Detector Voltage: 340

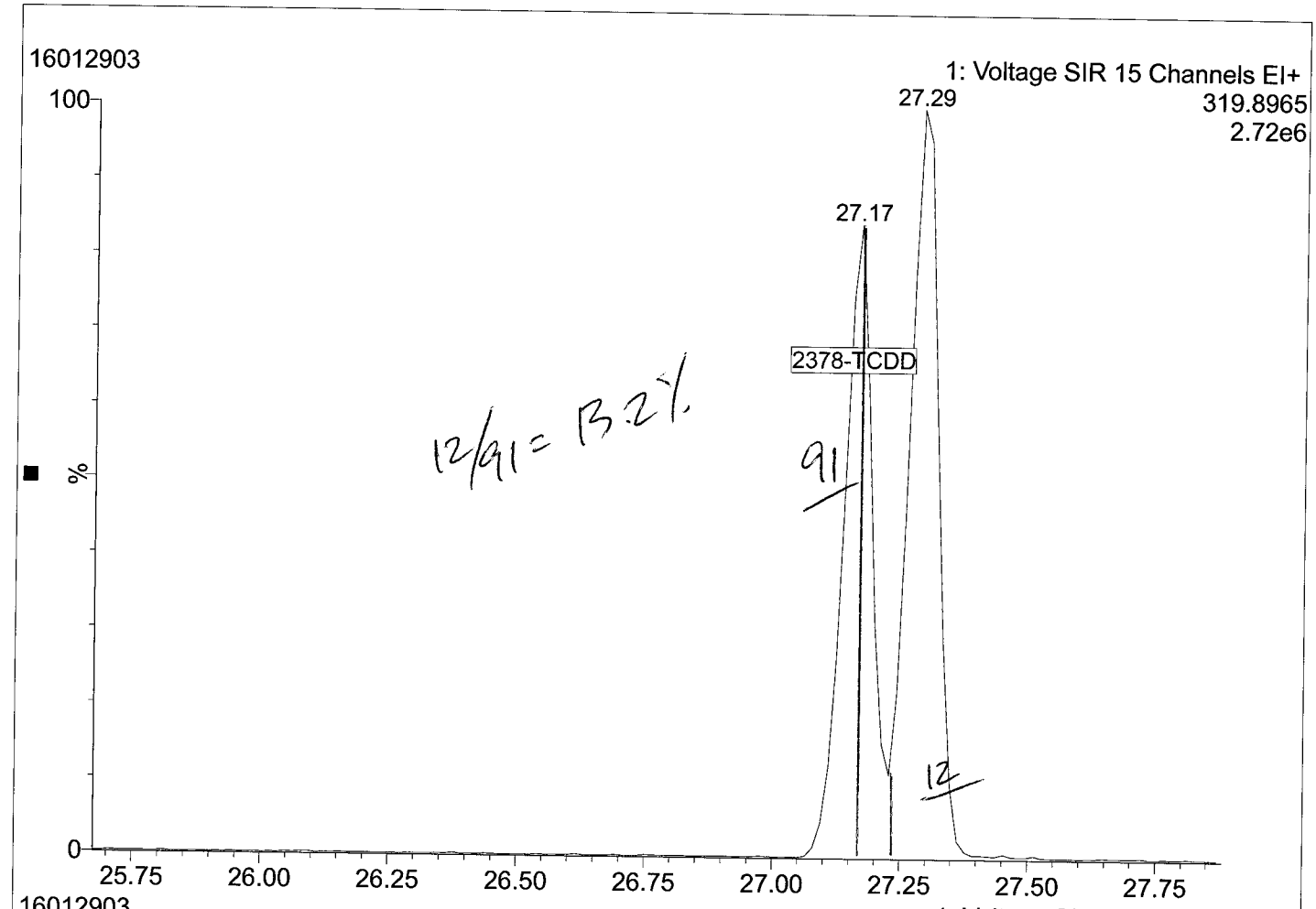
Resolution Check Files: 10:55, 23:28 Curve Date: 10/15/15

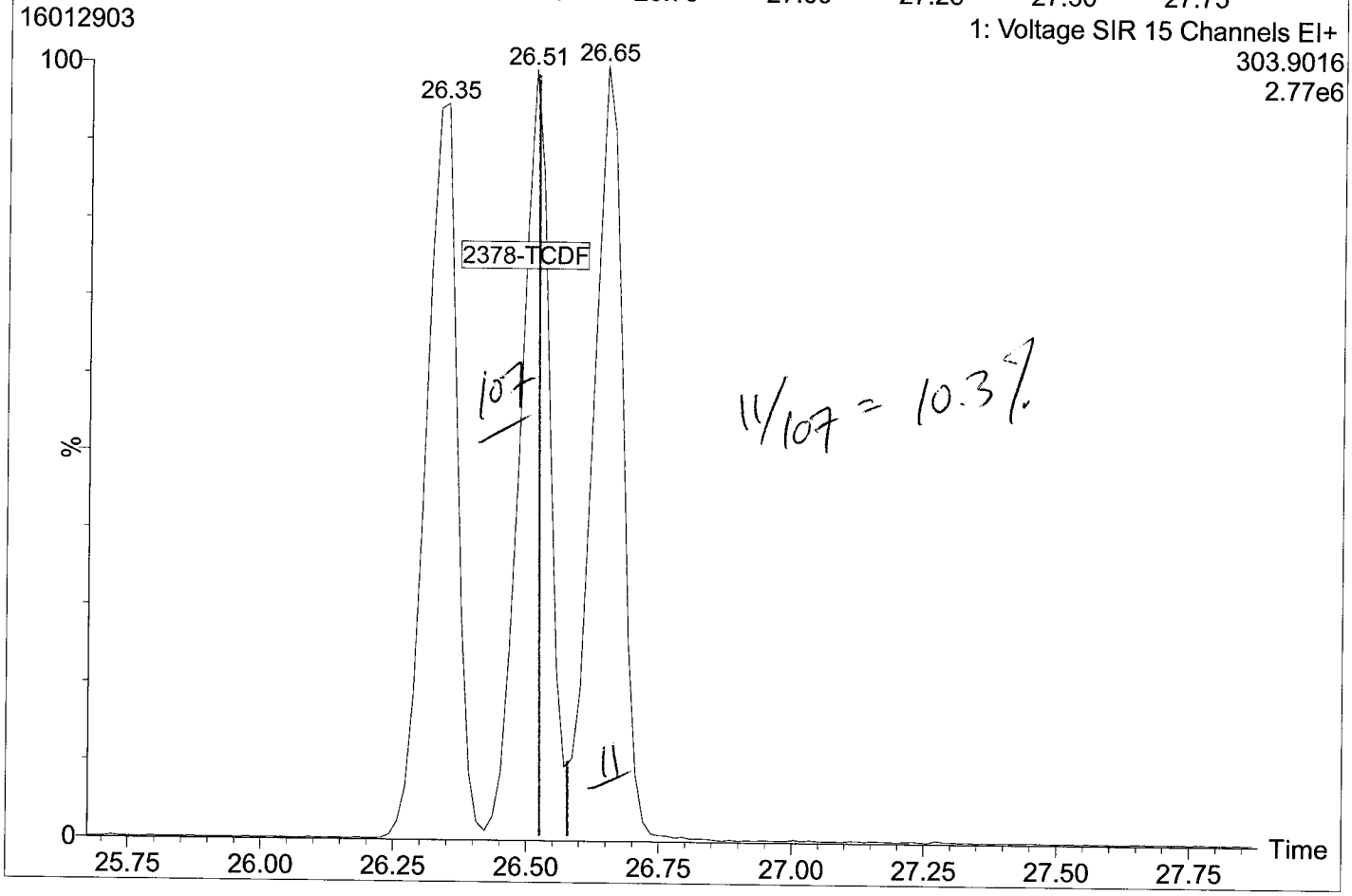
IS/SS	Ical/Ccal	LCS/ICV
D4376	C125	
	C4214	

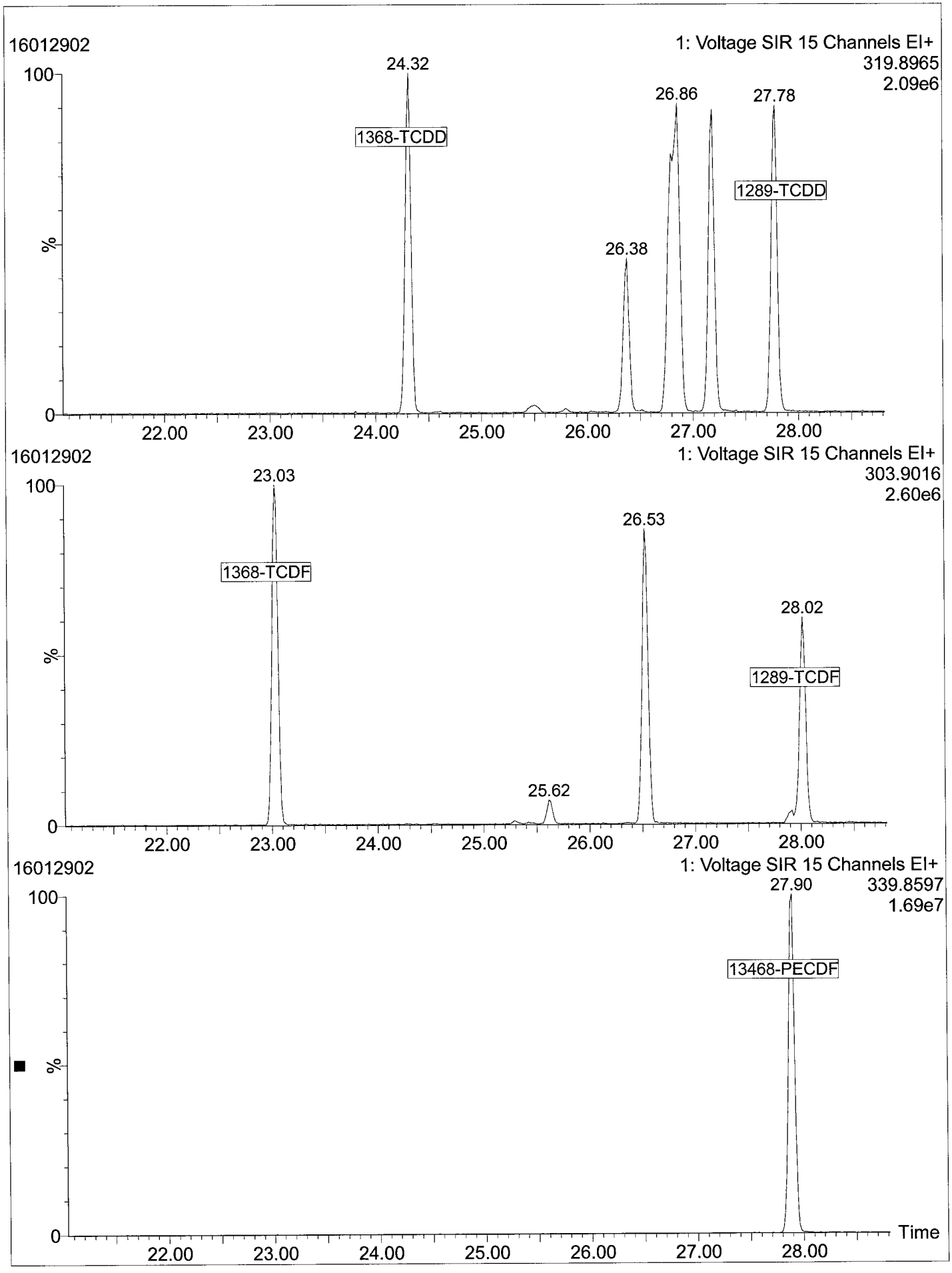
#	Acq.Date	Acq.Time	File	ID	Comments
1	29-Jan-16	10:58:17	16012902	CS3	
2	29-Jan-16	11:49:44	16012903	ISC01	
3	29-Jan-16	14:28:15	16012904	AT50MBT	
4	29-Jan-16	15:20:03	16012905	AT50OPR	
5	29-Jan-16	16:13:47	16012906	APR4A	
6	29-Jan-16	17:07:35	16012907	AT50A	
7	29-Jan-16	18:01:18	16012908	AT50B	
8	29-Jan-16	18:55:08	16012909	AT50C	
9	29-Jan-16	19:48:42	16012910	AT50D	
10	29-Jan-16	20:42:23	16012911	AT50E	
11	29-Jan-16	21:36:00	16012912	AT50F	
12	29-Jan-16	22:29:47	16012913	CS3	
13	29-Jan-16	23:28:05	16012914	TOL E0285	

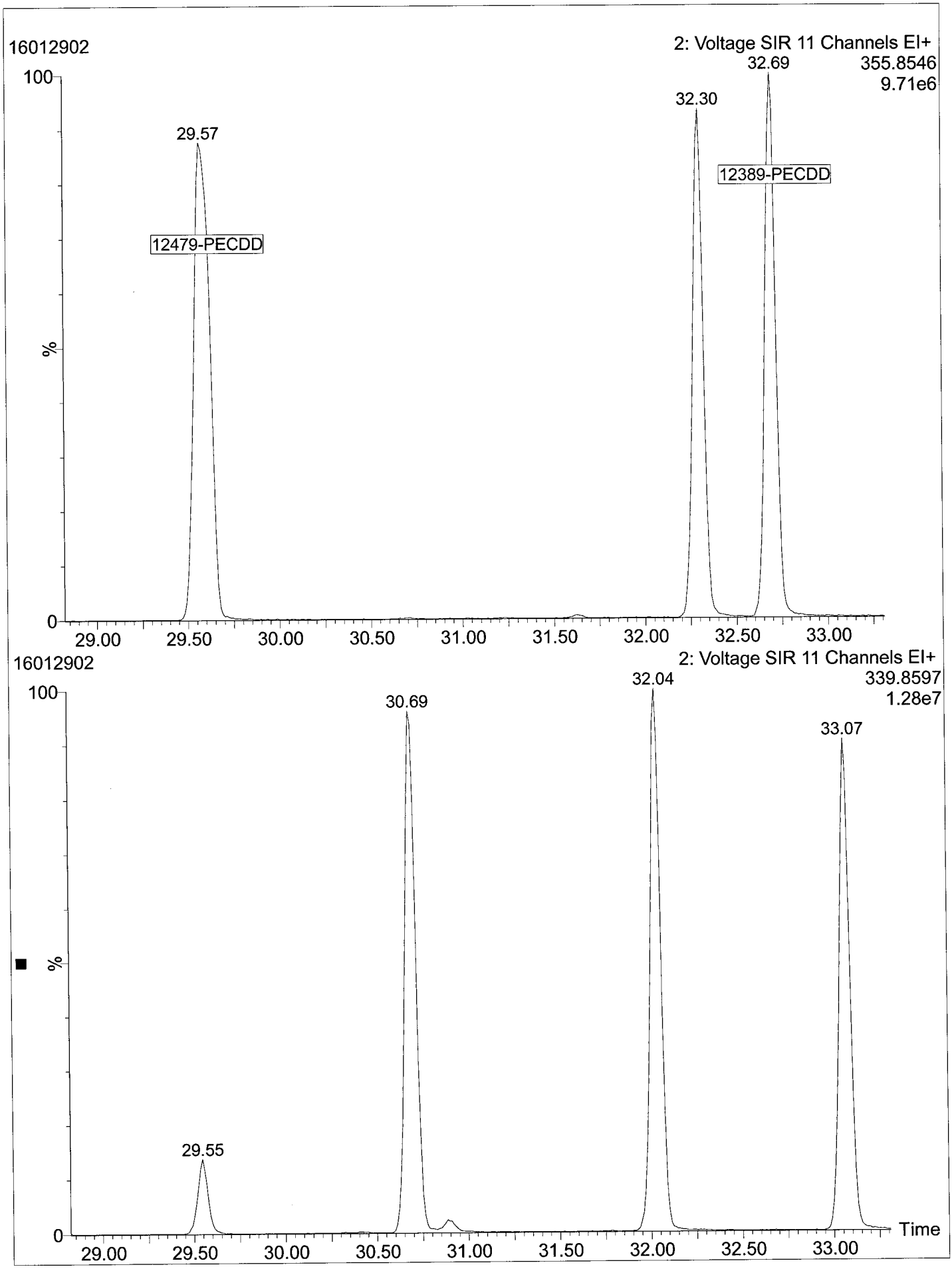
jlh 2/1/16

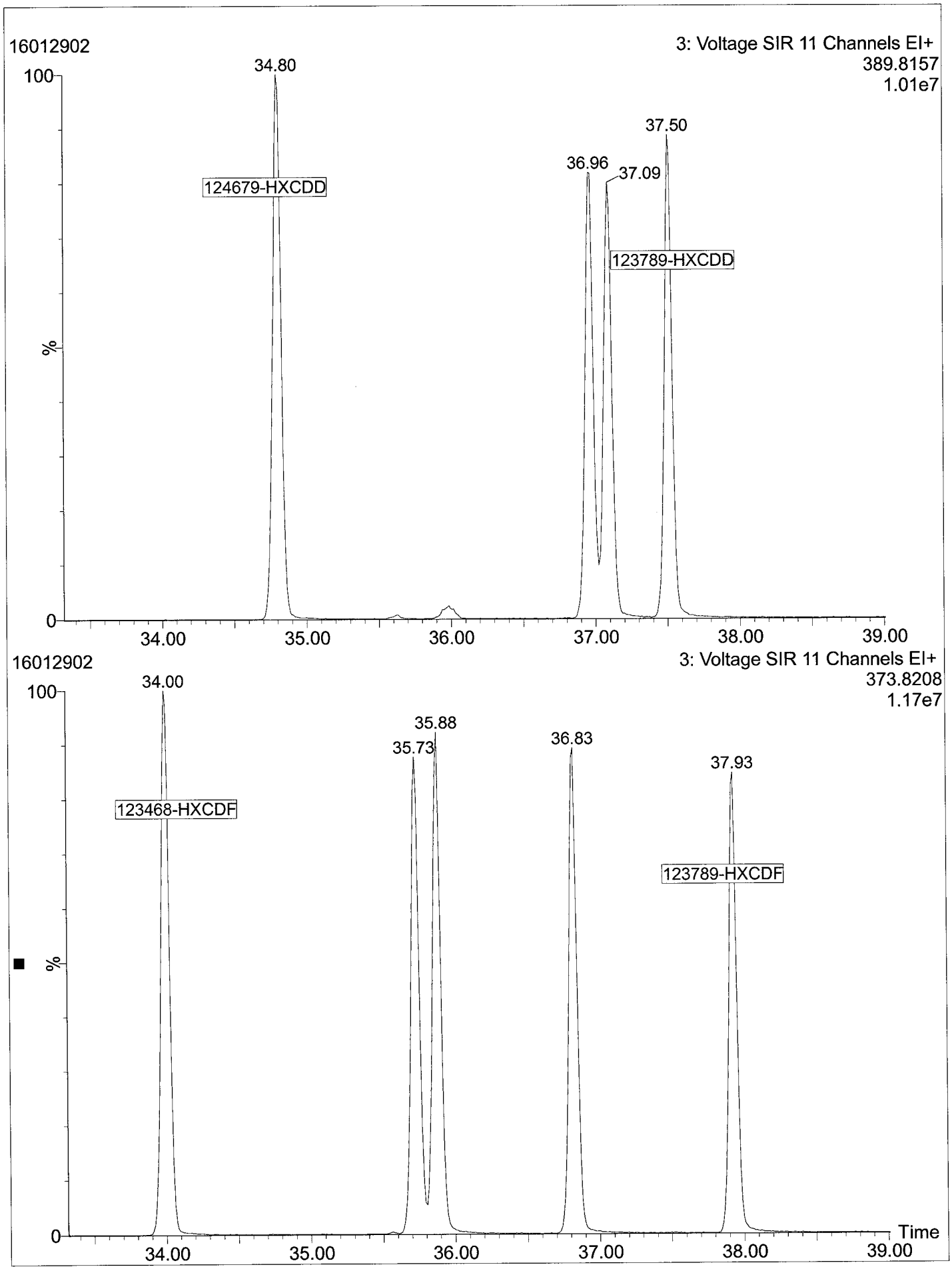
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In Element LIMS

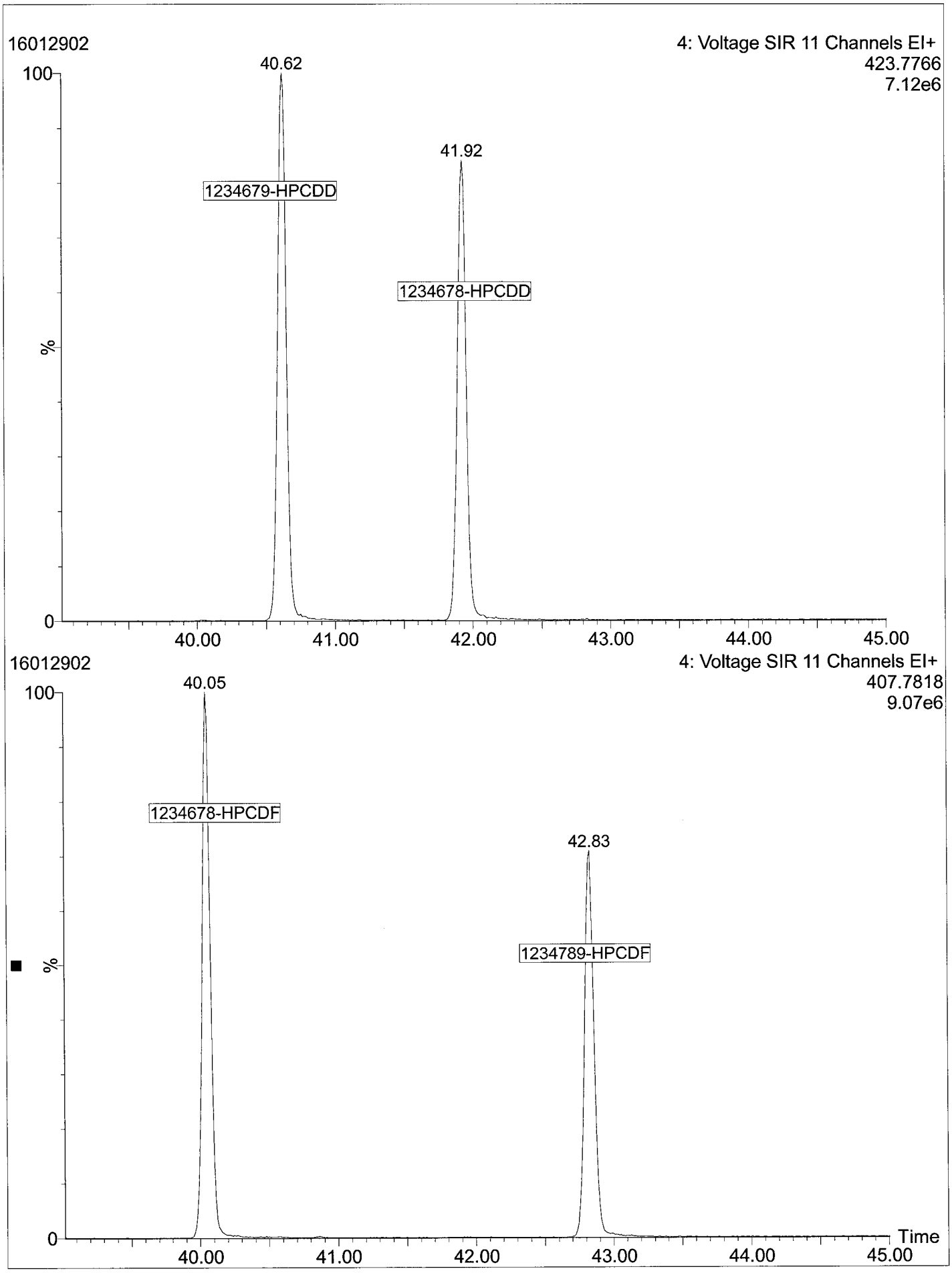

16012903
1: Voltage SIR 15 Channels EI+
319.8965
2.72e6
100
%
0
27.29
27.17
2378-TCDD
91
12
12/91 = 13.2%
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75


16012903
1: Voltage SIR 15 Channels EI+
303.9016
2.77e6
100
%
0
26.35
26.51
26.65
2378-TCDF
107
11
11/107 = 10.3%
Time
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50
27.75


16012902
1: Voltage SIR 15 Channels EI+
319.8965
2.09e6
24.32
1368-TCDD
26.86
27.78
1289-TCDD
26.38
100
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
16012902
1: Voltage SIR 15 Channels EI+
303.9016
2.60e6
23.03
1368-TCDF
26.53
28.02
1289-TCDF
25.62
100
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
16012902
1: Voltage SIR 15 Channels EI+
339.8597
1.69e7
27.90
13468-PECDF
100
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00

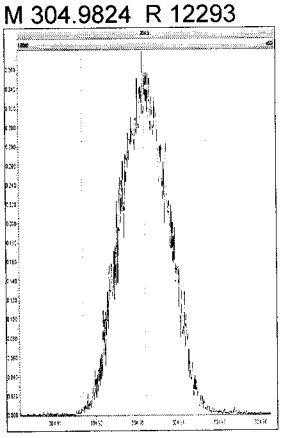

16012902
2: Voltage SIR 11 Channels EI+
355.8546
9.71e6
100
29.57
32.30
32.69
12479-PECDD
12389-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
16012902
2: Voltage SIR 11 Channels EI+
339.8597
1.28e7
100
30.69
32.04
33.07
29.55
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00


16012902
3: Voltage SIR 11 Channels EI+
389.8157
1.01e7
100
%
0
34.80
124679-HXCDD
37.50
36.96
37.09
123789-HXCDD
34.00
35.00
36.00
37.00
38.00
39.00
16012902
3: Voltage SIR 11 Channels EI+
373.8208
1.17e7
100
%
0
34.00
123468-HXCDF
35.88
35.73
36.83
37.93
123789-HXCDF
Time
34.00
35.00
36.00
37.00
38.00
39.00

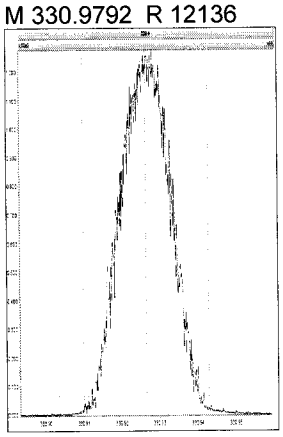

16012902
4: Voltage SIR 11 Channels EI+
423.7766
7.12e6
40.62
41.92
1234679-HPCDD
1234678-HPCDD
100
%
0
40.00
41.00
42.00
43.00
44.00
45.00
16012902
4: Voltage SIR 11 Channels EI+
407.7818
9.07e6
40.05
1234678-HPCDF
42.83
1234789-HPCDF
100
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Printed: Friday, January 29, 2016 10:55:47 Pacific Standard Time

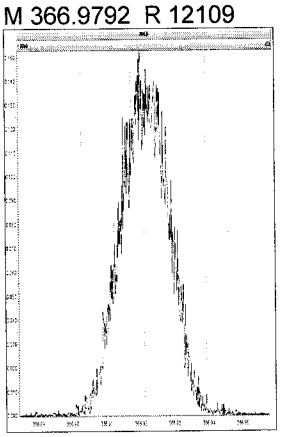
M 304.9824 R 12293



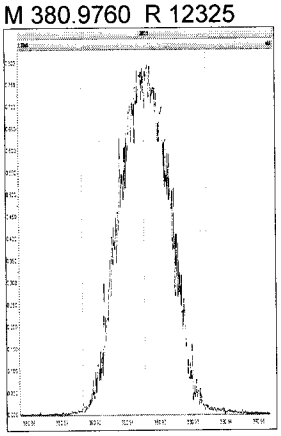
M 330.9792 R 12136



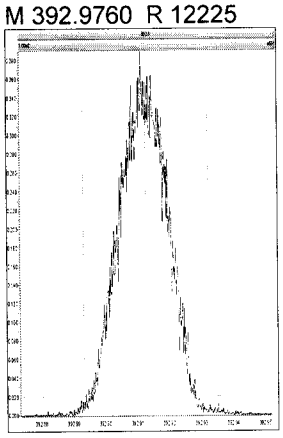
M 366.9792 R 12109



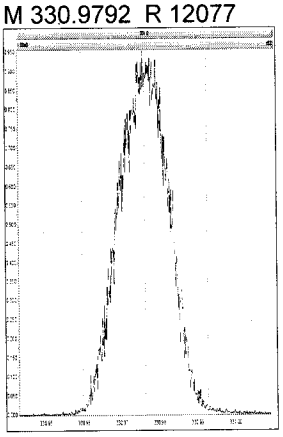
M 380.9760 R 12325



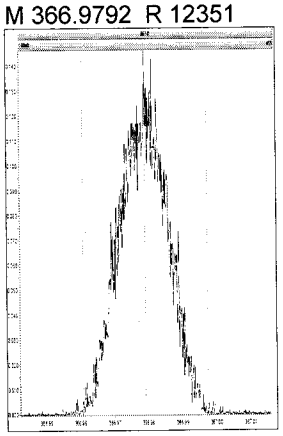
M 392.9760 R 12225



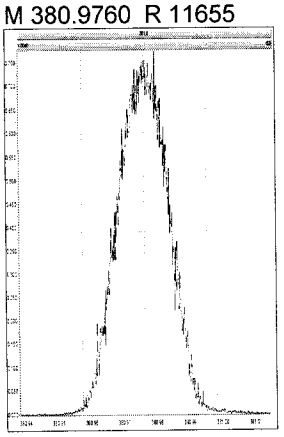
M 330.9792 R 12077



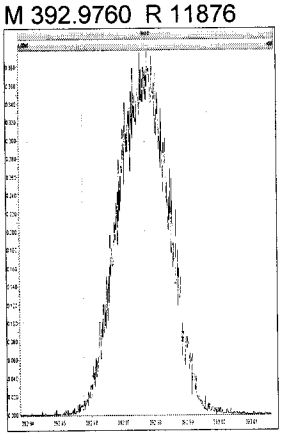
M 366.9792 R 12351



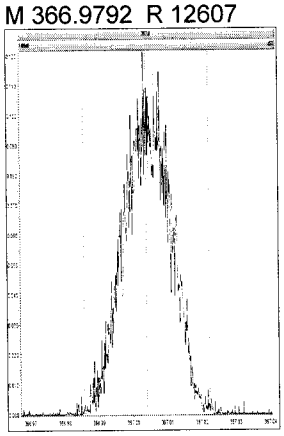
M 380.9760 R 11655



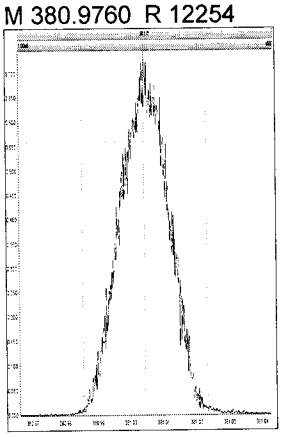
M 392.9760 R 11876



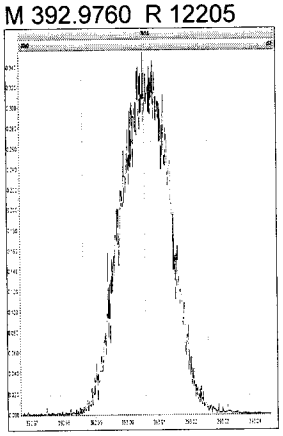
M 366.9792 R 12607



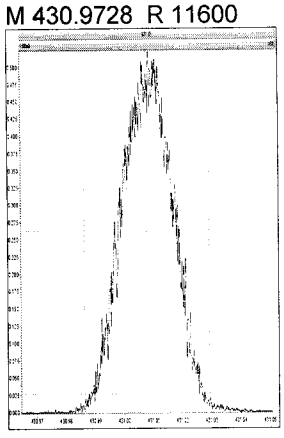
M 380.9760 R 12254



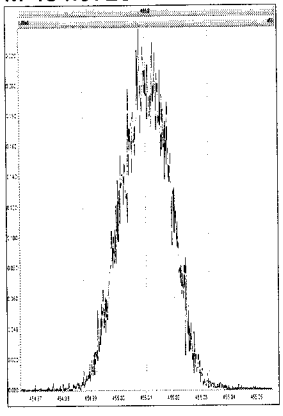
M 392.9760 R 12205



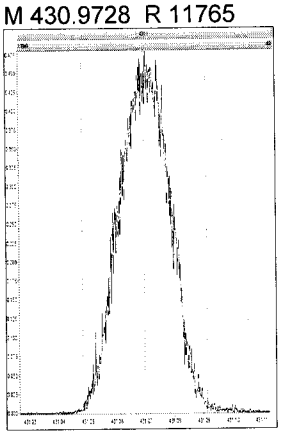
M 430.9728 R 11600



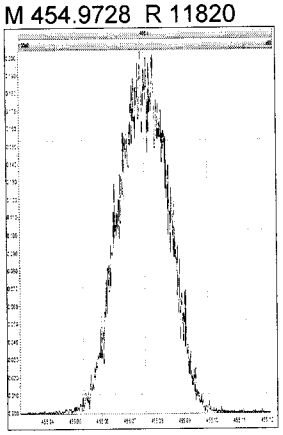
M 454.9728 R 12383



M 430.9728 R 11765

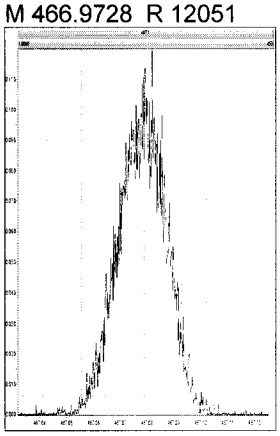


M 454.9728 R 11820

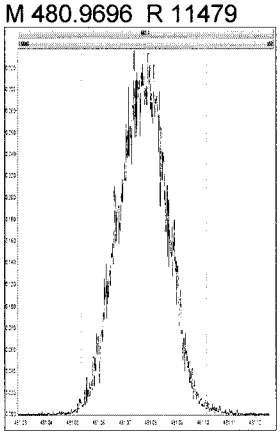


Printed: Friday, January 29, 2016 10:55:47 Pacific Standard Time

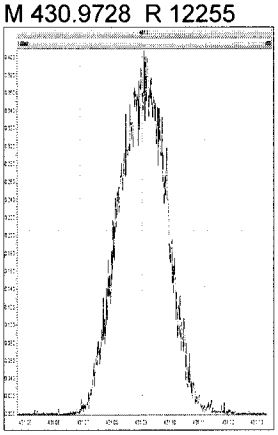
M 466.9728 R 12051



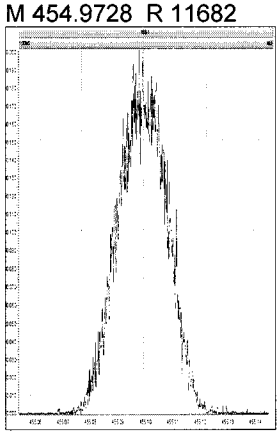
M 480.9696 R 11479



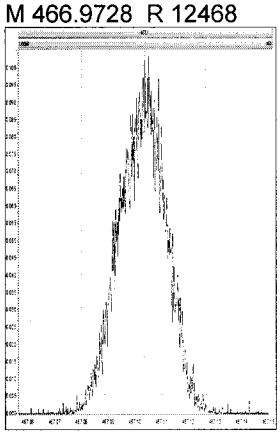
M 430.9728 R 12255



M 454.9728 R 11682



M 466.9728 R 12468



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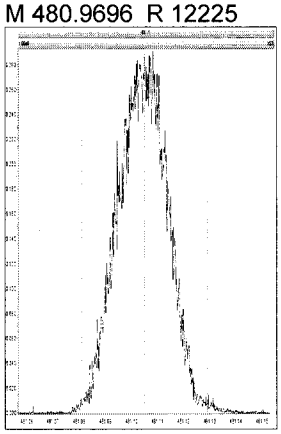
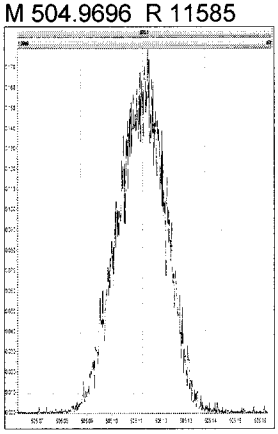


M 504.9696 R 11585



Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, 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	26.527	1.001	1.46e5	2.10e5	0.827	0.694	0.770	953	1927	2.07e6	2.95e6	2167.7	NO	10.385	10.385
12378-PeCDF	30.687	1.000	8.28e5	5.74e5	0.824	1.442	1.550	3099	2347	1.16e7	8.14e6	3747.1	NO	51.360	51.360
23478-PeCDF	32.035	1.001	8.42e5	5.77e5	0.850	1.460	1.550	3099	2347	1.22e7	8.35e6	3946.4	NO	52.160	52.160
123478-HxCDF	35.729	1.001	6.76e5	5.82e5	0.973	1.161	1.240	2567	2779	9.81e6	8.40e6	3821.9	NO	52.118	52.118
234678-HxCDF	36.825	1.001	6.77e5	5.88e5	1.025	1.152	1.240	2567	2779	9.81e6	8.48e6	3823.1	NO	52.701	52.701
123678-HxCDF	35.883	1.001	6.89e5	5.94e5	0.953	1.161	1.240	2567	2779	1.01e7	8.51e6	3917.7	NO	52.293	52.293
123789-HxCDF	37.932	1.001	6.00e5	5.26e5	0.956	1.140	1.240	2567	2779	9.30e6	7.91e6	3624.8	NO	49.178	49.178
1234678-HpCDF	40.048	1.000	5.93e5	6.25e5	1.153	0.950	1.050	2442	2199	8.60e6	8.90e6	3522.5	NO	51.766	51.766
1234789-HpCDF	42.832	1.000	4.91e5	5.07e5	1.131	0.968	1.050	2442	2199	6.12e6	6.16e6	2506.1	NO	52.504	52.504
OCDF	48.322	1.006	8.02e5	9.44e5	1.023	0.850	0.890	1681	1576	7.74e6	9.24e6	4603.5	NO	105.708	105.708
2378-TCDD	27.184	1.001	1.21e5	1.58e5	1.023	0.769	0.770	1250	816	1.70e6	2.18e6	1359.8	NO	10.120	10.120
12378-PeCDD	32.298	1.001	6.03e5	3.88e5	0.939	1.556	1.550	2565	2051	8.65e6	5.54e6	3372.0	NO	51.736	51.736
123478-HxCDD	36.957	1.000	5.47e5	4.44e5	0.963	1.233	1.240	2365	1819	7.96e6	6.48e6	3365.5	NO	51.015	51.015
123678-HxCDD	37.089	1.000	5.32e5	4.31e5	0.894	1.235	1.240	2365	1819	7.66e6	6.20e6	3241.1	NO	50.748	50.748
123789-HxCDD	37.505	1.012	5.48e5	4.42e5	0.900	1.239	1.240	2365	1819	8.39e6	6.84e6	3549.7	NO	53.141	53.141
1234678-HpCDD	41.922	1.000	4.53e5	4.38e5	0.964	1.035	1.050	1702	1618	5.82e6	5.62e6	3421.9	NO	52.134	52.134
OCDD	48.044	1.000	7.57e5	8.45e5	0.969	0.896	0.890	1707	1285	7.57e6	8.49e6	4432.7	NO	102.398	102.398
13C-2378-TCDF	26.511	1.006	1.80e6	2.33e6	1.502	0.774	0.770	5956	3218	2.56e7	3.30e7	4294.3	NO		105.550
13C-12378-PeCDF	30.676	1.164	2.02e6	1.29e6	1.215	1.572	1.550	2736	2032	2.88e7	1.84e7	10530.8	NO		104.449
13C-23478-PeCDF	32.013	1.215	1.95e6	1.25e6	1.181	1.569	1.550	2736	2032	2.79e7	1.79e7	10183.4	NO		103.829
13C-123478-HxCDF	35.707	0.952	8.43e5	1.64e6	1.246	0.515	0.510	2966	2995	1.20e7	2.36e7	4043.6	NO		102.315
13C-123678-HxCDF	35.861	0.956	8.78e5	1.70e6	1.375	0.517	0.510	2966	2995	1.27e7	2.46e7	4282.9	NO		96.197
13C-234678-HxCDF	36.804	0.982	8.00e5	1.54e6	1.186	0.518	0.510	2966	2995	1.18e7	2.27e7	3983.7	NO		101.471
13C-123789-HxCDF	37.910	1.011	8.17e5	1.58e6	1.135	0.518	0.510	2966	2995	1.27e7	2.43e7	4280.2	NO		108.446
13C-1234678-HpCDF	40.037	1.068	6.29e5	1.41e6	1.020	0.446	0.440	1817	2176	9.08e6	2.02e7	4996.5	NO		102.691
13C-1234789-HpCDF	42.810	1.142	5.25e5	1.16e6	0.824	0.453	0.440	1817	2176	6.43e6	1.41e7	3537.7	NO		104.888
13C-1234-TCDD	26.347	0.000	1.15e6	1.46e6	1.000	0.789	0.770	4132	1668	1.62e7	2.06e7	3931.5	NO		100.000
13C-2378-TCDD	27.154	1.031	1.19e6	1.51e6	0.983	0.789	0.770	4132	1668	1.65e7	2.10e7	4002.2	NO		105.023
13C-12378-PeCDD	32.276	1.225	1.25e6	7.90e5	0.787	1.583	1.550	1324	1008	1.80e7	1.14e7	13622.5	NO		99.312
13C-123478-HxCDD	36.946	0.985	1.14e6	8.76e5	1.031	1.301	1.240	2247	2489	1.65e7	1.29e7	7341.4	NO		100.512
13C-123678-HxCDD	37.077	0.989	1.17e6	9.51e5	1.137	1.232	1.240	2247	2489	1.68e7	1.33e7	7473.2	NO		95.992
13C-1234678-HpCDD	41.900	1.117	9.14e5	8.58e5	0.892	1.065	1.050	1840	2247	1.17e7	1.11e7	6383.2	NO		102.058
13C-OCDD	48.026	1.281	1.51e6	1.72e6	0.852	0.881	0.890	3075	2124	1.50e7	1.70e7	4885.5	NO		194.819

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**

Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld

Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time

Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

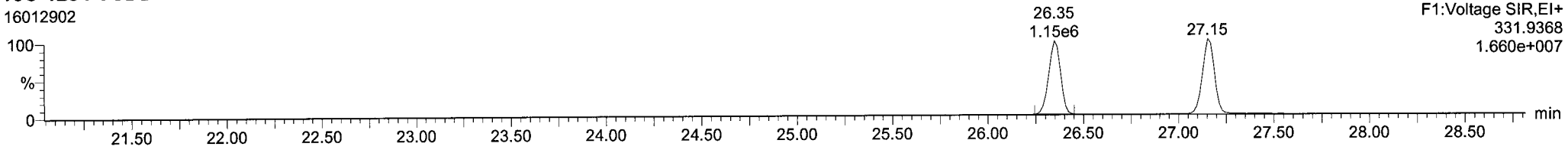
Name	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N	EMPC?	EMPC	pg
13C-123789-HxCDD	37.494	0.000	1.08e6	8.65e5	1.000	1.249	1.240	2247	2489	1.66e7	1.34e7	7401.1	NO		100.000
Total-tetrafurans			4.40e5		0.827			953		6.23e6					31.583
Total-penta1			1.13e6					825		1.55e7					62.515
Total-pentafurans			2.55e6		0.837			3099		3.66e7					158.262
Total-hexafurans			3.41e6		0.977			2567		5.02e7					266.283
Total-heptafurans			1.09e6		1.142			2442		1.48e7					104.433
Total-Furans			9.43e6		0.971			953		1.31e8					728.799
Total-tetradioxins			6.66e5		1.023			1250		8.02e6					55.158
Total-pentadioxins			2.14e6		0.939			2565		2.64e7					182.852
Total-hexadioxins			2.33e6		0.919			2365		3.40e7					221.093
Total-heptadioxins			9.71e5		0.964			1702		1.28e7					111.554
Total-Dioxins			6.87e6		0.950			1250		8.87e7					673.055
Total-TEQ			1.63e7					1250		2.20e8					1401.854
37CL-2378-TCDD	27.184	1.032	2.94e5		1.091			1489		4.05e6		2722.1			10.335
FUNCTION1 PFK			1.26e6					1025556		2.04e7					
FUNCTION2 PFK			3.60e4					154702		9.23e5					0.000
FUNCTION3 PFK			2.86e4					686724		1.12e6					0.000
FUNCTION4 PFK			2.63e4					466120		1.11e6					
FUNCTION5 PFK			3.35e5					300885		1.33e7					
FUNCTION1 HXCDPE			6.64e2					746		1.46e4					0.000
FUNCTION1 HPCDPE			1.79e2					811		4.06e3					0.000
FUNCTION2 HPCDPE			1.32e3					930		2.17e4					0.000
FUNCTION3 OCDPE			0.00e0					449		0.00e0					
FUNCTION4 NCDPE			0.00e0					815		0.00e0					
FUNCTION5 DCDPE			0.00e0					514		0.00e0					

Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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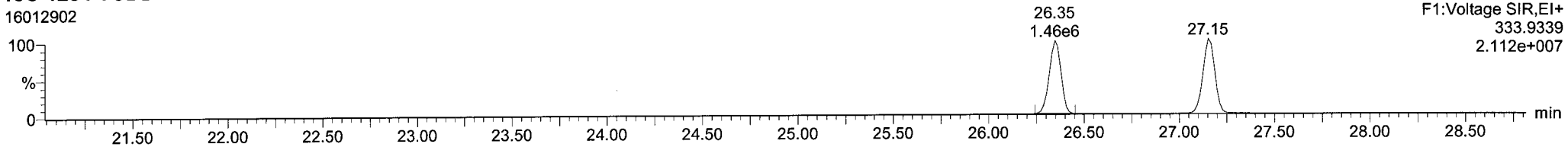

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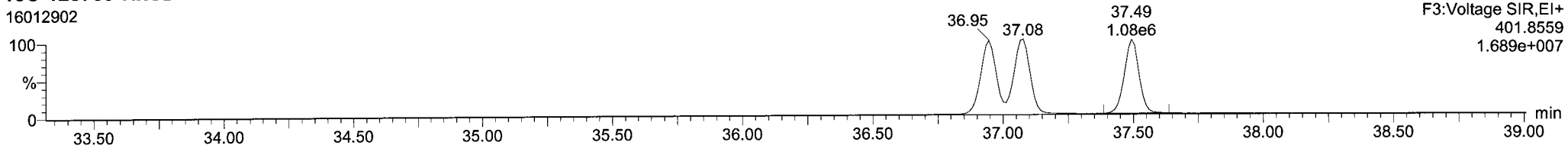

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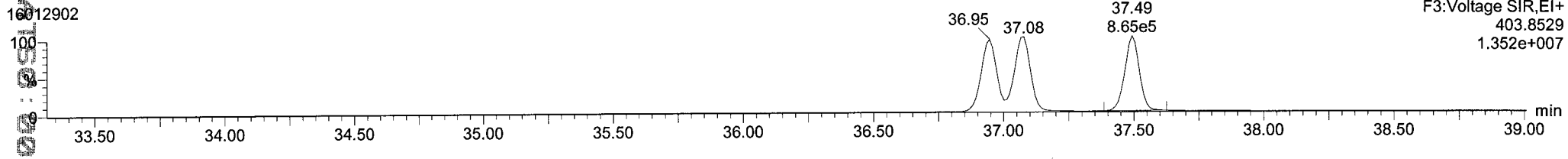
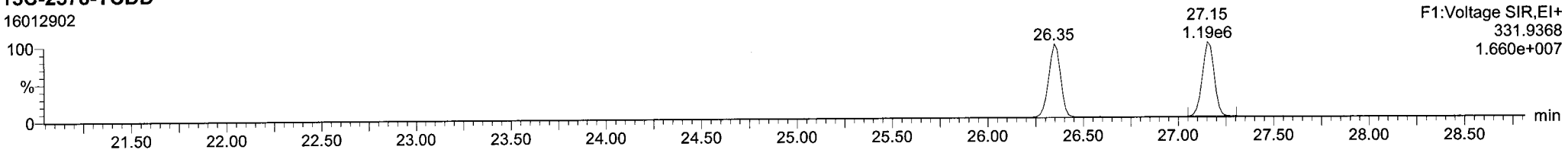


Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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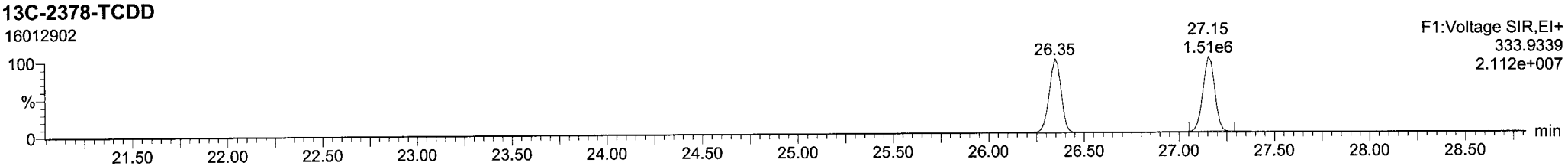
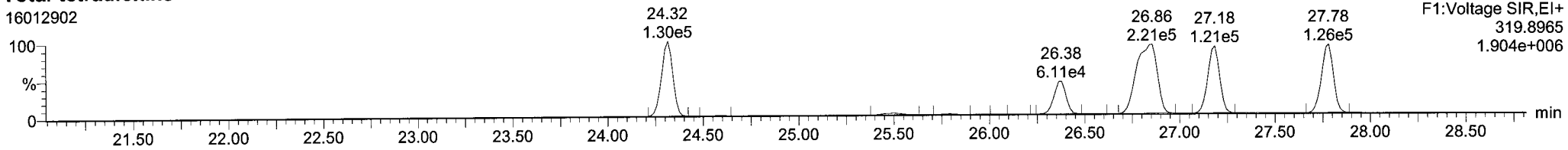
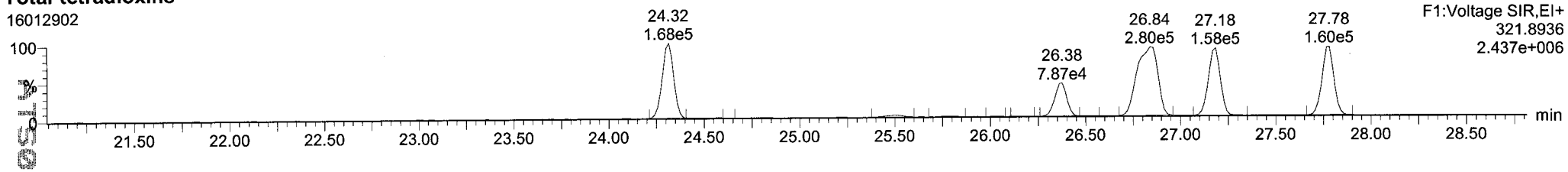


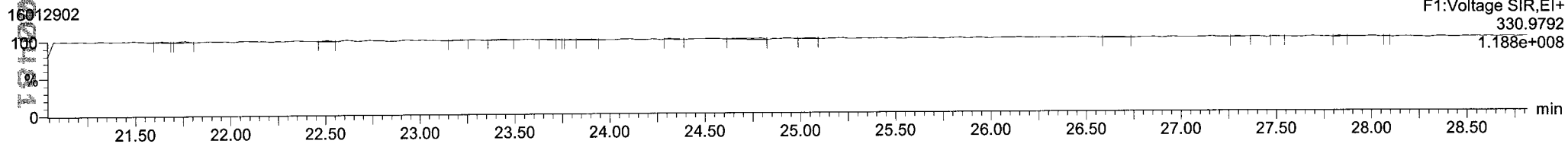
Total-tetradioxins



Total-tetradioxins



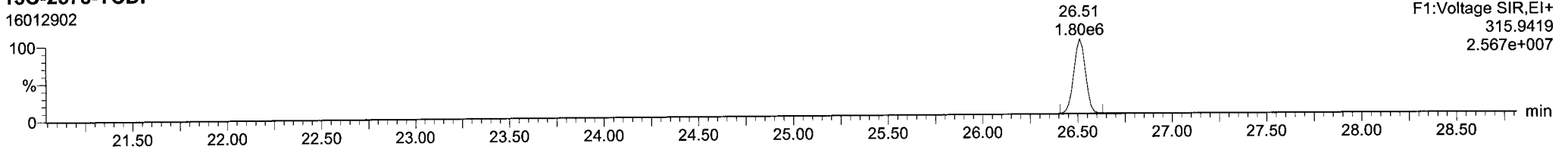
FUNCTION1 PFK



Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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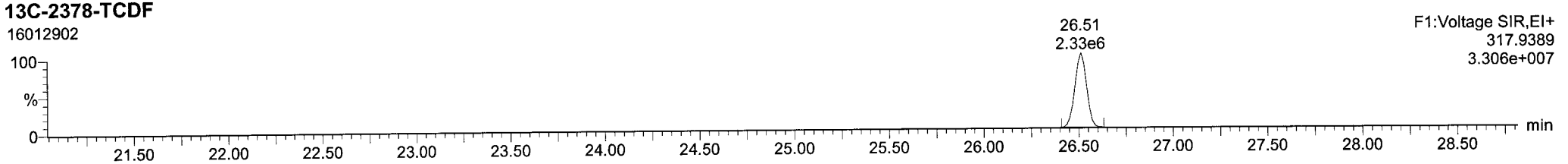
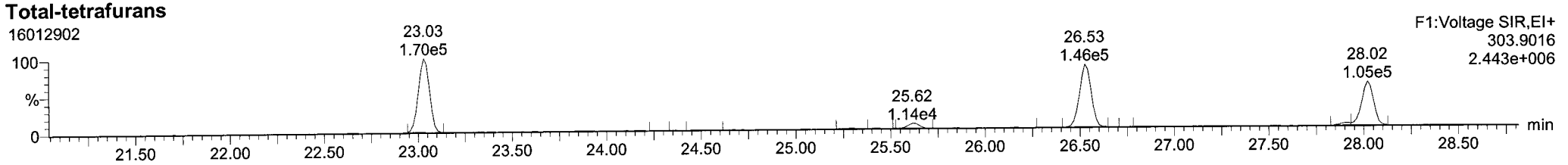
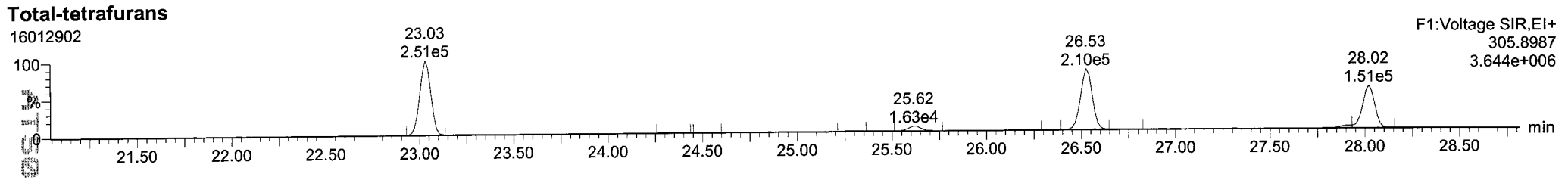


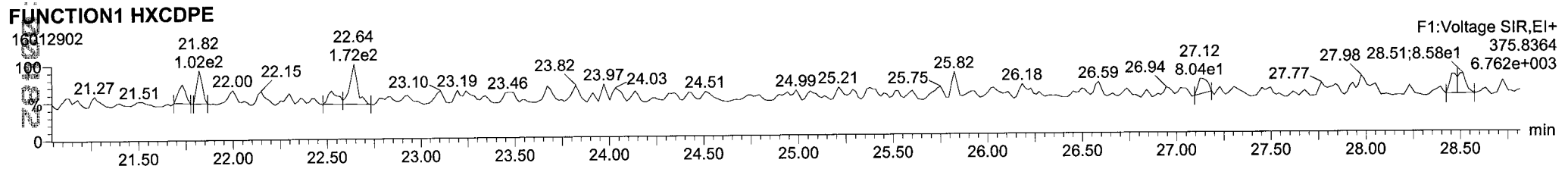
Total-tetrafurans



Total-tetrafurans



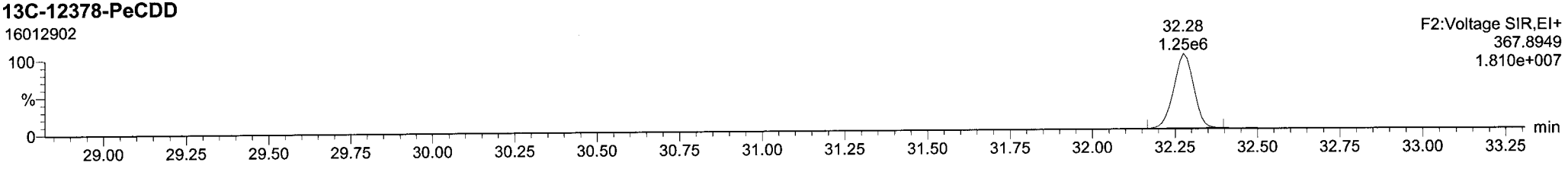
FUNCTION1 HXCDPE



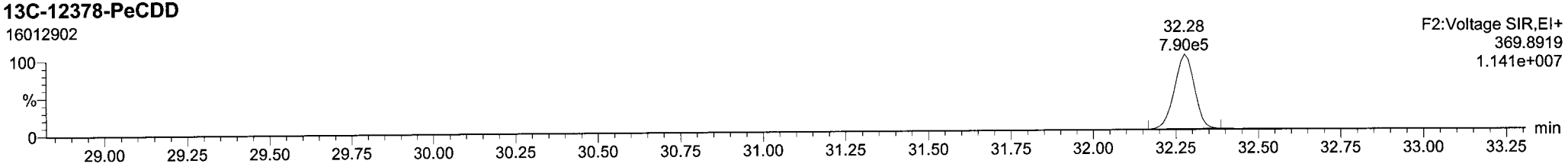
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

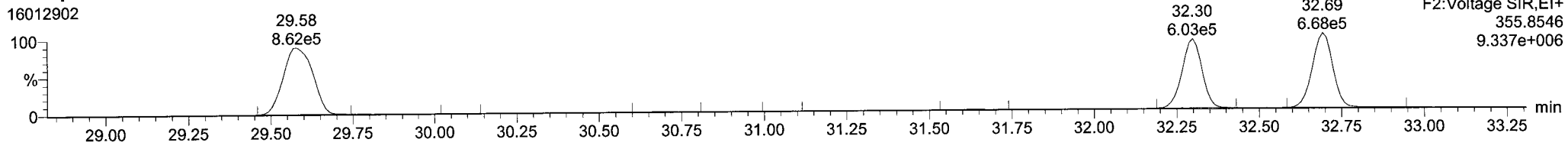
13C-12378-PeCDD



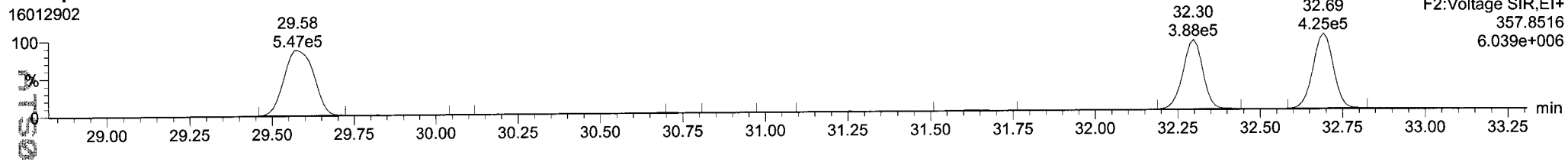
13C-12378-PeCDD



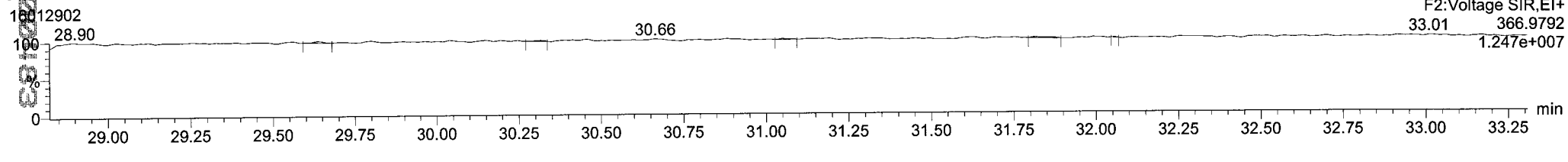
Total-pentadioxins



Total-pentadioxins



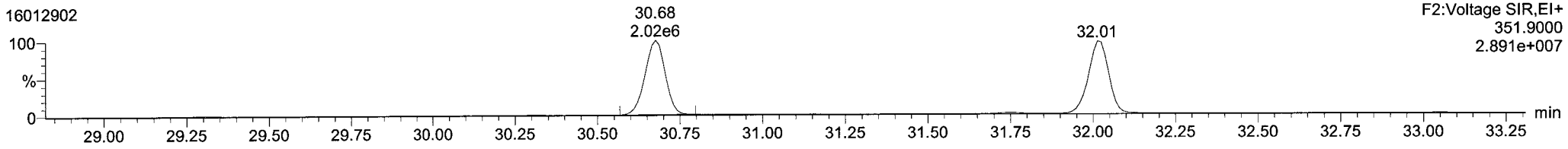
FUNCTION2 PFK



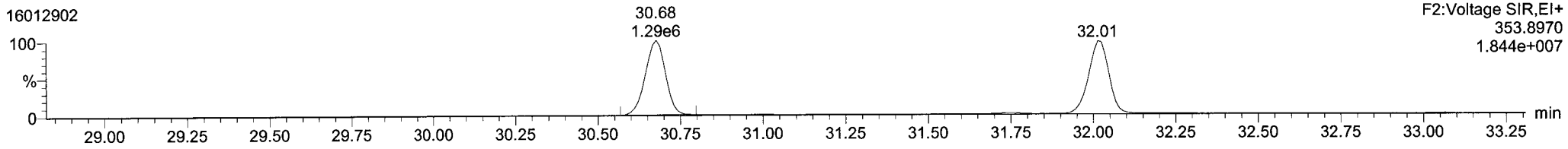
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

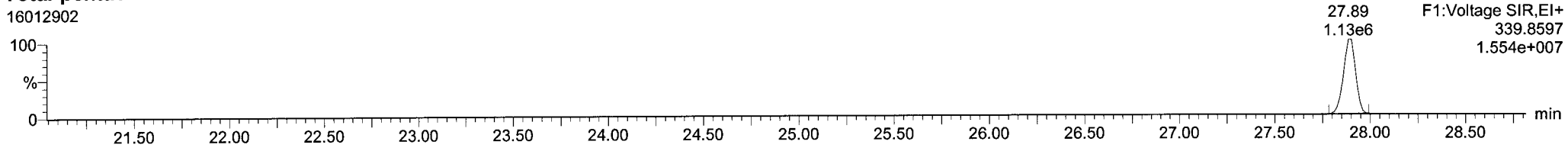
13C-12378-PeCDF



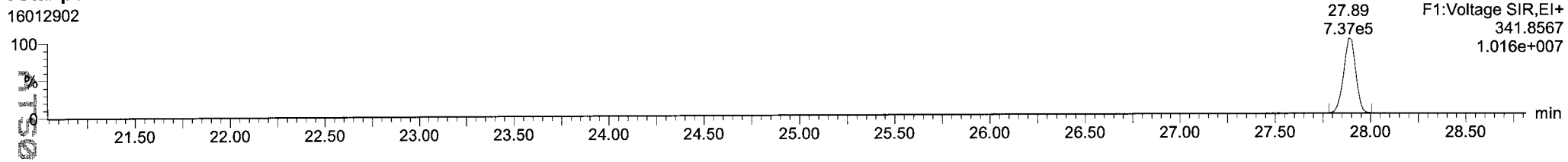
13C-12378-PeCDF



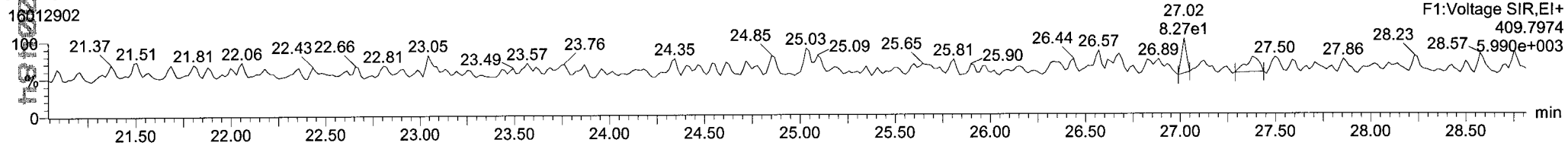
Total-penta1



Total-penta1



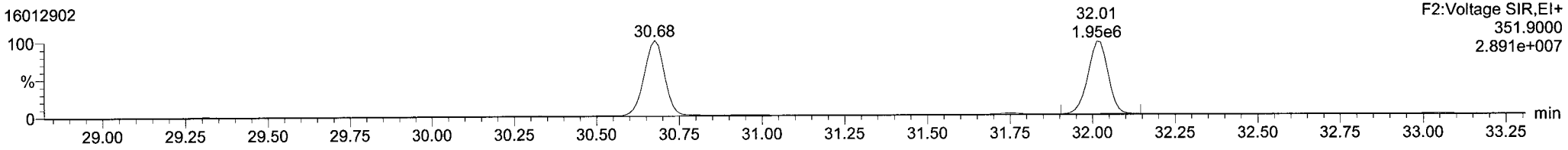
FUNCTION1 HPCDPE



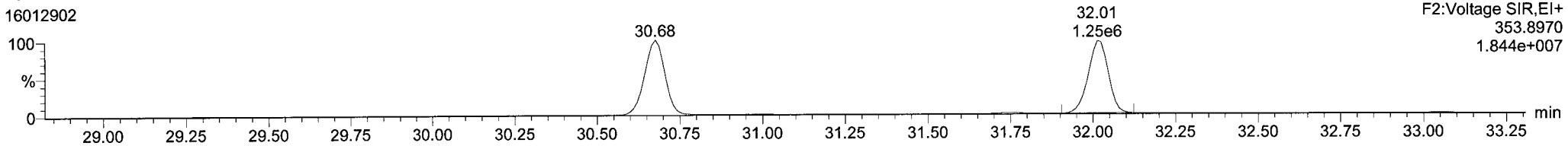
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

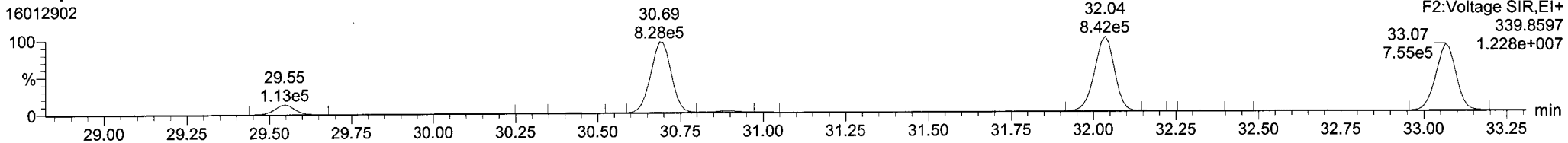
13C-23478-PeCDF



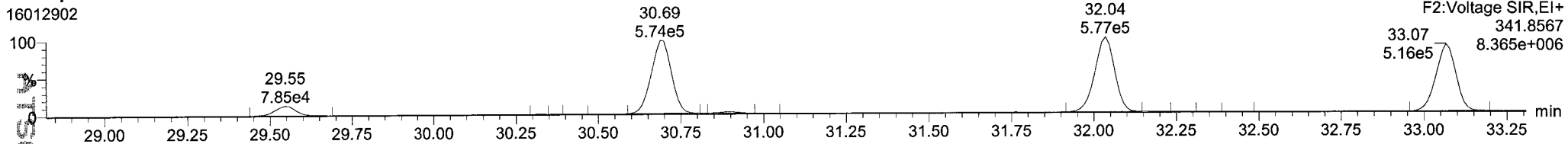
13C-23478-PeCDF



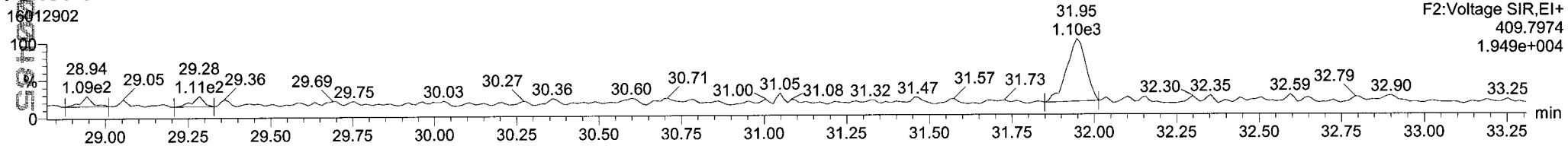
Total-pentafurans



Total-pentafurans



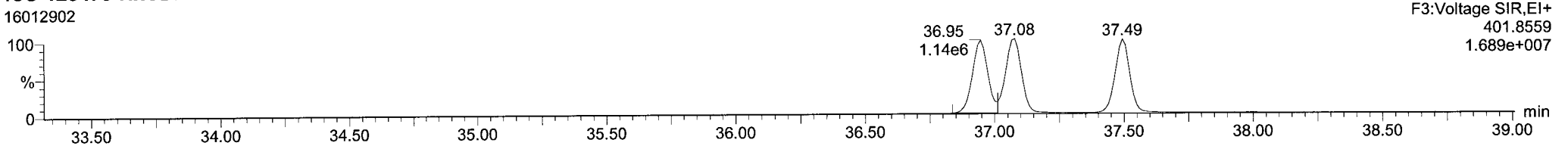
FUNCTION2 HPCDPE



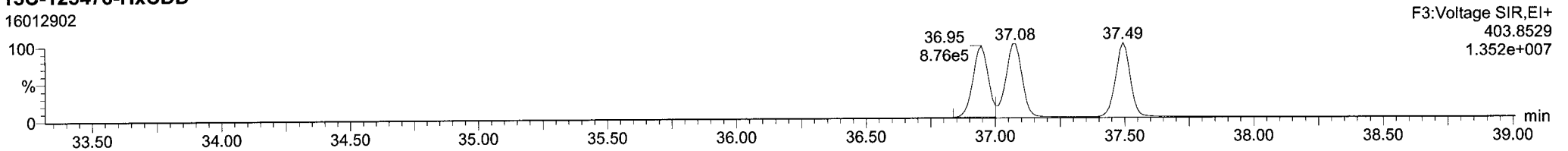
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

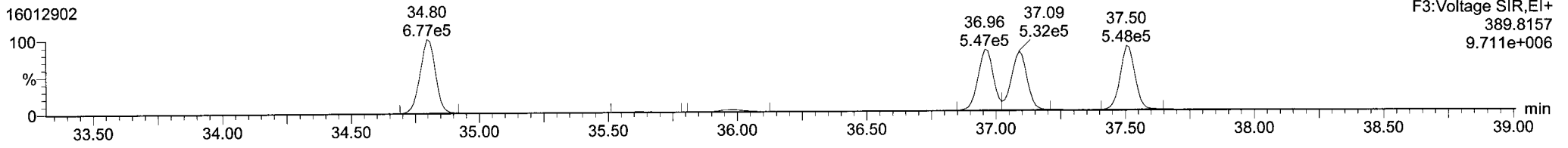
13C-123478-HxCDD



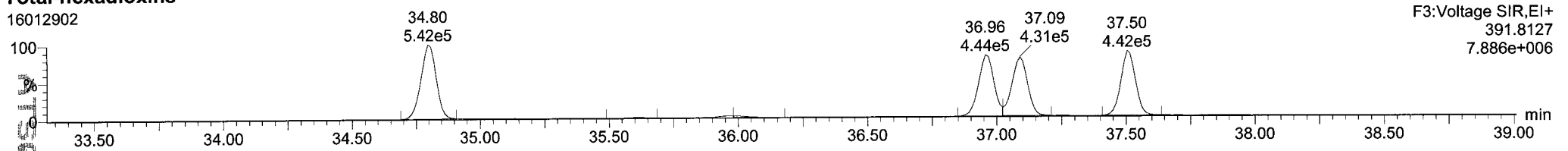
13C-123478-HxCDD



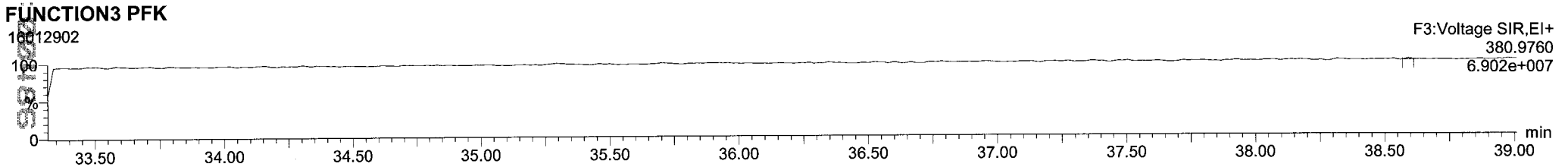
Total-hexadioxins



Total-hexadioxins



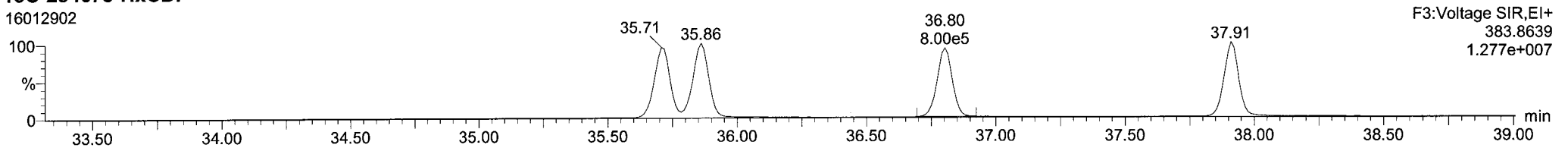
FUNCTION3 PFK



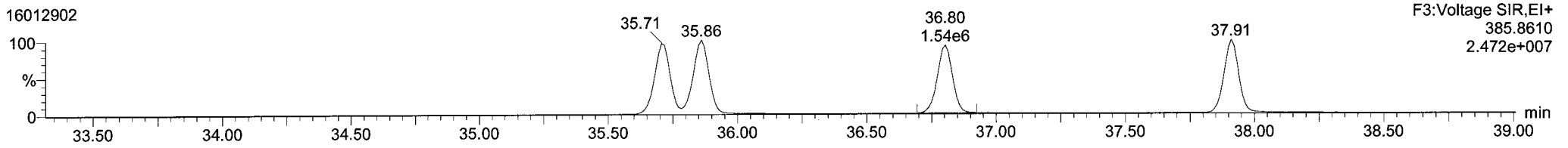
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

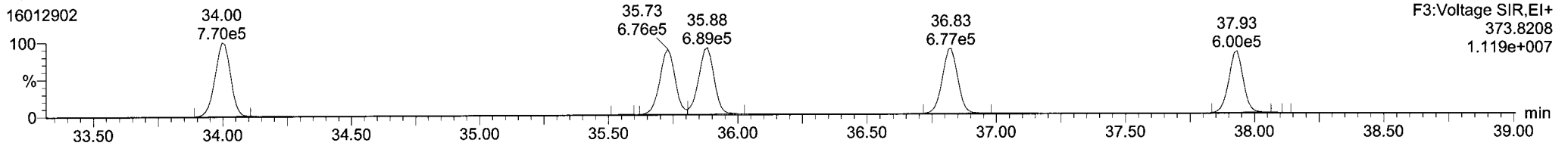
13C-234678-HxCDF



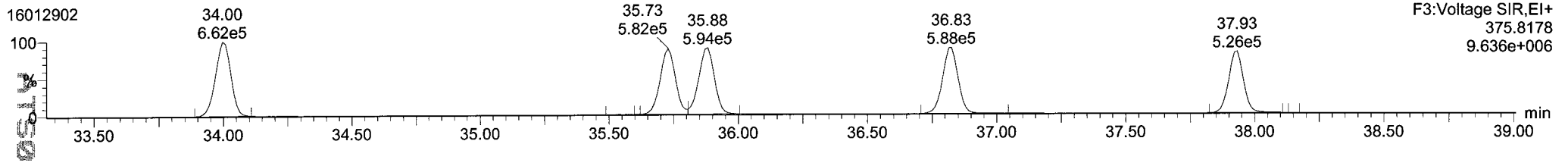
13C-234678-HxCDF



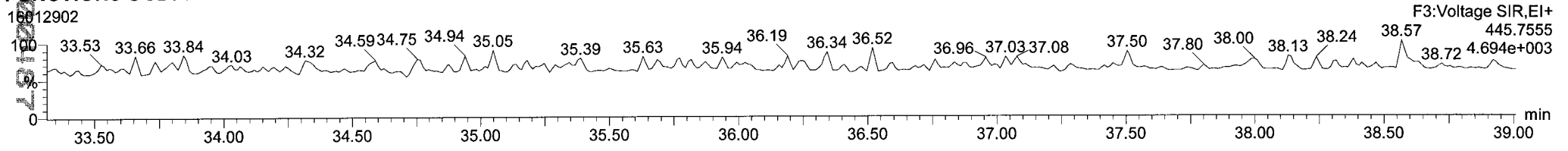
Total-hexafurans



Total-hexafurans



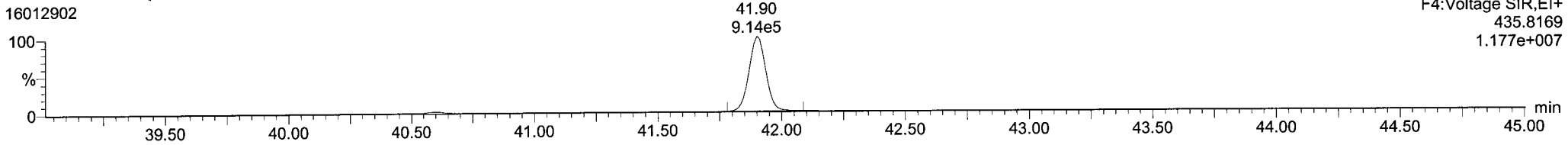
FUNCTION3 OCDPE



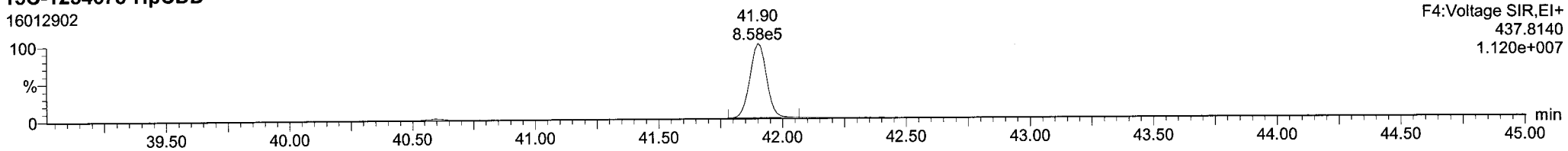
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

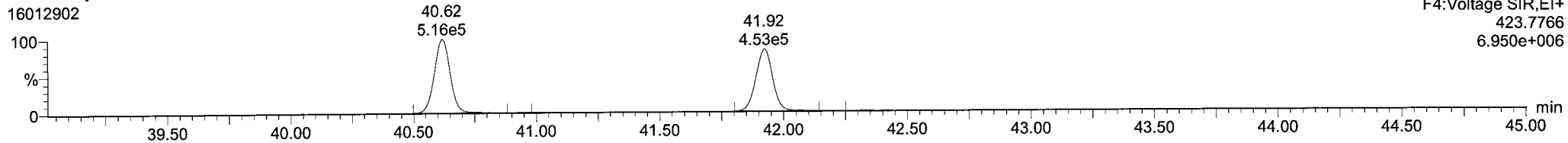
13C-1234678-HpCDD



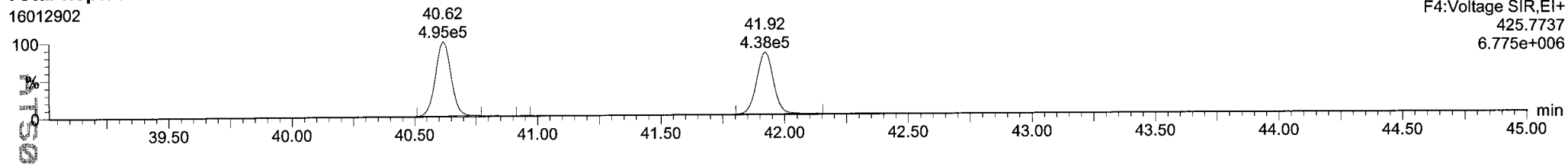
13C-1234678-HpCDD



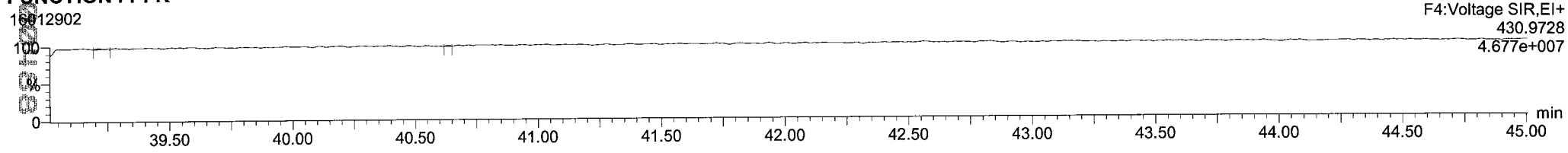
Total-heptadioxins



Total-heptadioxins



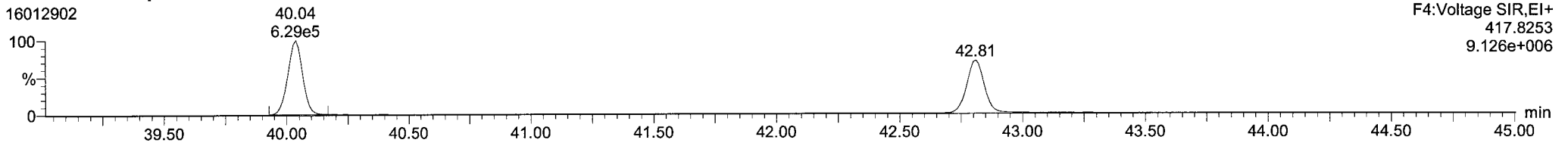
FUNCTION4 PFK



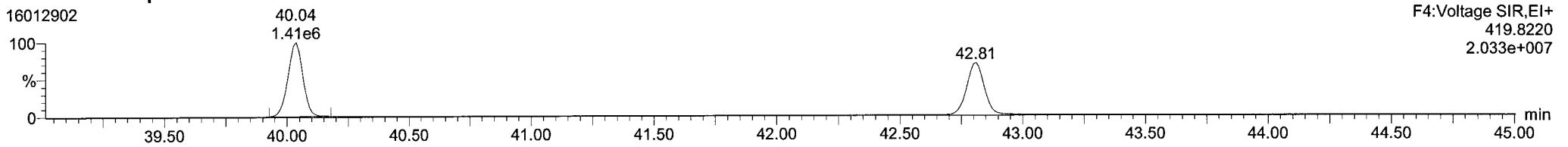
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

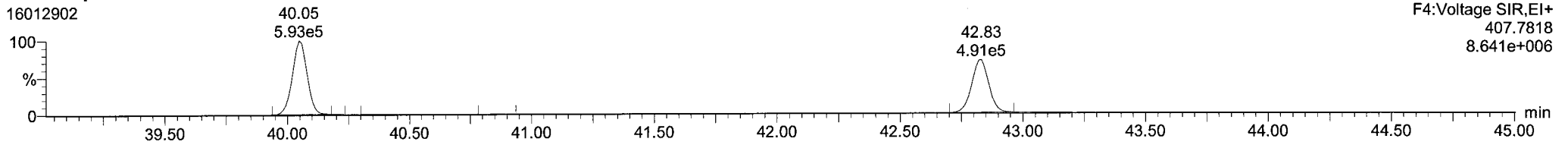
13C-1234678-HpCDF



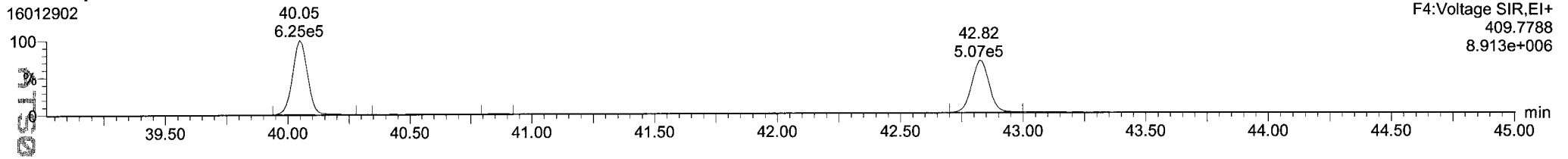
13C-1234678-HpCDF



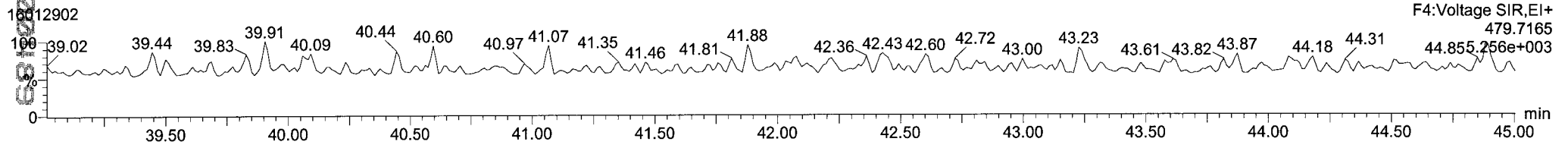
Total-heptafurans



Total-heptafurans



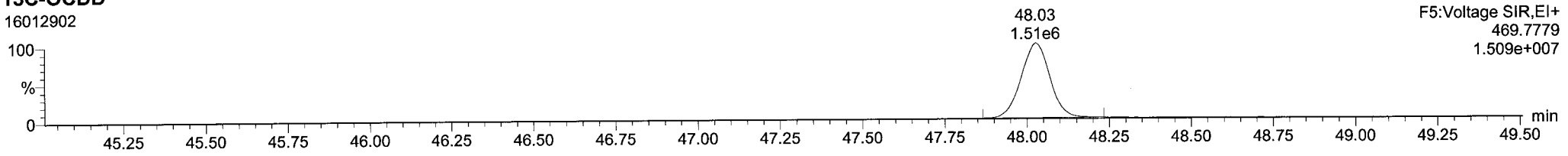
FUNCTION4 NCDPE



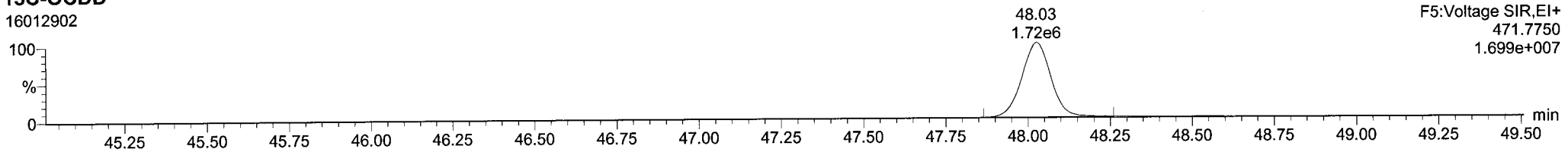
Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

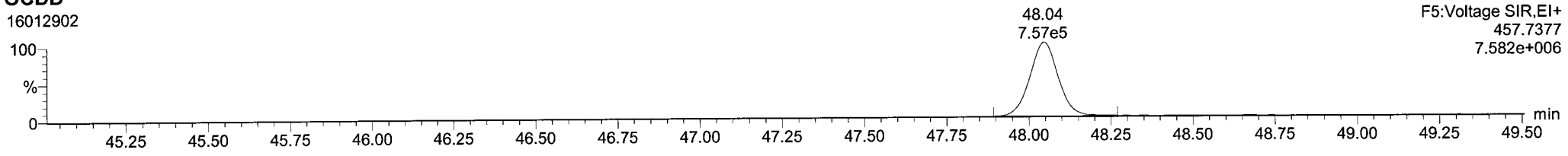
13C-OCDD
16012902



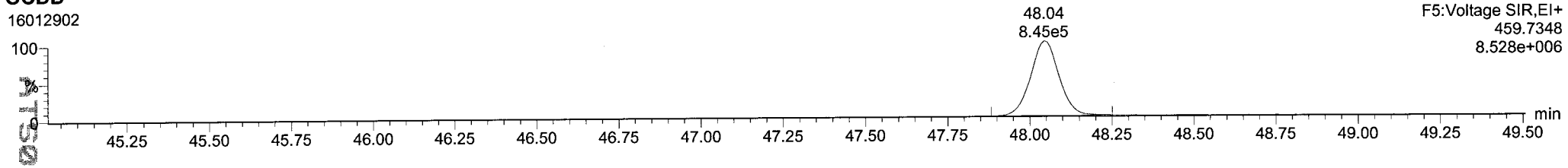
13C-OCDD
16012902



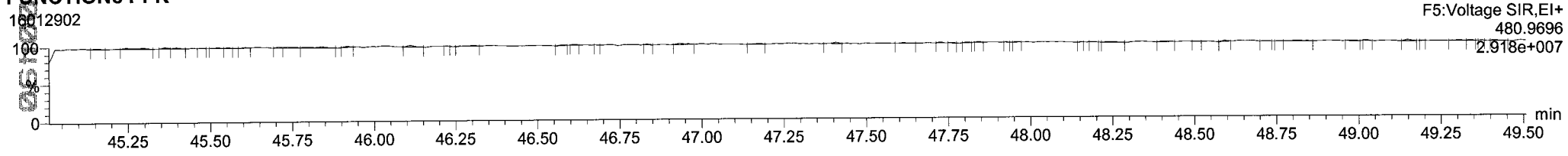
OCDD
16012902



OCDD
16012902



FUNCTION5 PFK
16012902

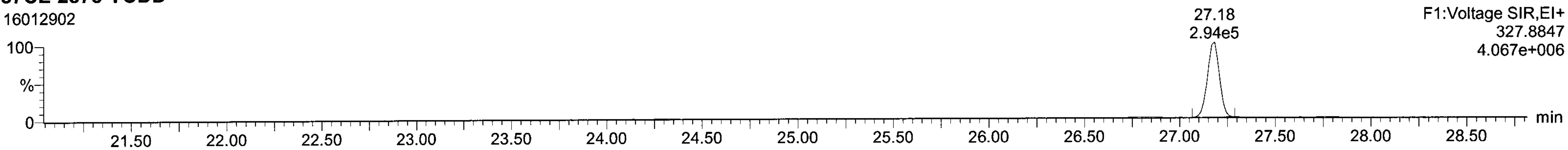


Quantify Sample Report **MassLynx MassLynx V4.1 SCN909**

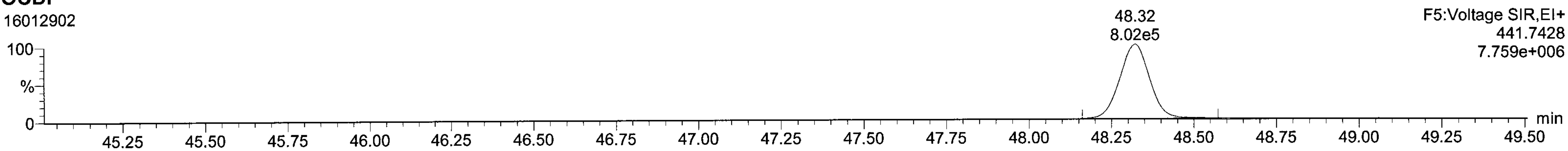
Dataset: P:\DIOXIN8290.PRO\160129OPEN.qld
Last Altered: Friday, January 29, 2016 14:11:50 Pacific Standard Time
Printed: Monday, February 01, 2016 14:54:44 Pacific Standard Time

ID: CS3, Name: 16012902, Date: 29-Jan-2016, Time: 10:58:17, Conditions: AUTOSPEC01, User: pk

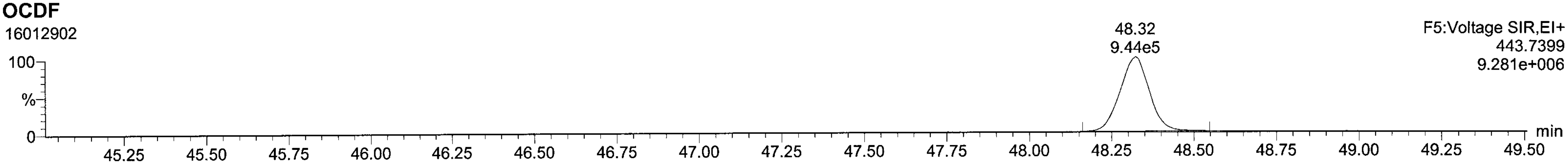
37CL-2378-TCDD
16012902



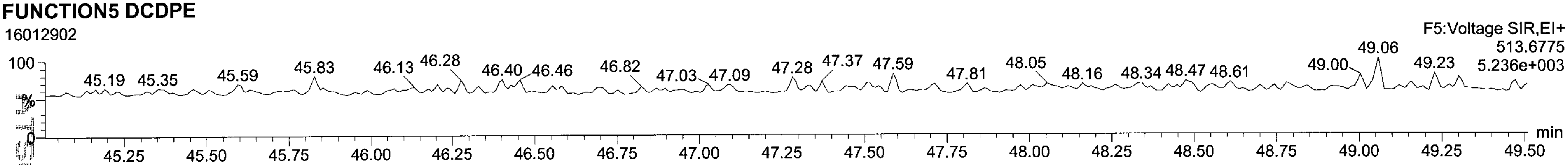
OCDF
16012902



OCDF
16012902



FUNCTION5 DCDPE
16012902



ATS0:00491

ANALYTICAL RESOURCES
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: AT50MBT
Lab.File ID: 16012904
Date Analysed: 29-Jan-16

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	0.00			0.019
12378-PeCDD	356/358	0.00			0.022
123478-HxCDD	390/392	0.00			0.024
123678-HxCDD	390/392	0.00			0.025
123789-HxCDD	390/392	0.00			0.025
1234678-HpCDD	424/426	41.96	0.187		
OCDD	458/460	48.10	3.08		
2378-TCDF	304/306	0.00			0.016
12378-PeCDF	340/342	30.70	0.0250	0.0160	
23478-PeCDF	340/342	0.00			0.017
123478-HxCDF	374/376	0.00			0.018
234678-HxCDF	374/376	0.00			0.018
123678-HxCDF	374/376	0.00			0.017
123789-HxCDF	374/376	0.00			0.020
1234678-HpCDF	408/410	40.07	0.0711	0.0530	
1234789-HpCDF	408/410	0.00			0.037
OCDF	442/444	48.36	0.270		

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Quantify Sample Summary Report **MassLynx MassLynx V4.1 SCN909**
Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

ID: AT50MBT, Name: 16012904, Date: 29-Jan-2016, Time: 14:28:15, 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					0.827		0.770	1090	1376						
12378-PeCDF	30.698	1.000	2.73e2	4.22e2	0.824	0.647	1.550	885	1420	5.66e3	5.03e3	6.4	YES	0.016	0.025
23478-PeCDF					0.850		1.550	885	1420						
123478-HxCDF					0.973		1.240	1053	1057						
234678-HxCDF					1.025		1.240	1053	1057						
123678-HxCDF					0.953		1.240	1053	1057						
123789-HxCDF					0.956		1.240	1053	1057						
1234678-HpCDF	40.070	1.000	6.70e2	1.08e3	1.153	0.623	1.050	1299	1456	1.11e4	1.47e4	8.6	YES	0.053	0.071
1234789-HpCDF					1.131		1.050	1299	1456						
OCDF	48.358	1.006	1.85e3	2.41e3	1.023	0.768	0.890	927	1272	1.77e4	2.30e4	19.1	NO	0.270	0.270
2378-TCDD					1.023		0.770	1316	841						
12378-PeCDD					0.939		1.550	1550	493						
123478-HxCDD					0.963		1.240	1113	1166						
123678-HxCDD					0.894		1.240	1113	1166						
123789-HxCDD					0.900		1.240	1113	1166						
1234678-HpCDD	41.955	1.001	1.77e3	1.56e3	0.964	1.130	1.050	913	849	2.57e4	1.98e4	28.1	NO	0.187	0.187
OCDD	48.098	1.000	2.22e4	2.38e4	0.969	0.930	0.890	863	712	2.28e5	2.46e5	264.4	NO	3.081	3.081
13C-2378-TCDF	26.526	1.006	1.69e6	2.17e6	1.502	0.779	0.770	6823	3687	2.43e7	3.11e7	3554.4	NO		95.958
13C-12378-PeCDF	30.698	1.164	2.06e6	1.31e6	1.215	1.575	1.550	3137	2927	2.95e7	1.87e7	9390.7	NO		103.456
13C-23478-PeCDF	32.035	1.215	2.01e6	1.27e6	1.181	1.583	1.550	3137	2927	2.92e7	1.85e7	9309.4	NO		103.519
13C-123478-HxCDF	35.729	0.953	8.54e5	1.65e6	1.246	0.518	0.510	3447	4688	1.25e7	2.42e7	3632.5	NO		87.885
13C-123678-HxCDF	35.882	0.957	9.20e5	1.81e6	1.375	0.509	0.510	3447	4688	1.31e7	2.51e7	3804.7	NO		86.696
13C-234678-HxCDF	36.814	0.982	8.34e5	1.59e6	1.186	0.524	0.510	3447	4688	1.20e7	2.33e7	3492.2	NO		89.406
13C-123789-HxCDF	37.932	1.011	7.71e5	1.48e6	1.135	0.522	0.510	3447	4688	1.13e7	2.16e7	3280.1	NO		86.636
13C-1234678-HpCDF	40.059	1.068	6.50e5	1.48e6	1.020	0.440	0.440	2963	2830	8.90e6	1.99e7	3004.2	NO		91.232
13C-1234789-HpCDF	42.843	1.142	5.28e5	1.17e6	0.824	0.452	0.440	2963	2830	6.14e6	1.39e7	2072.5	NO		89.935
13C-1234-TCDD	26.362	0.000	1.18e6	1.50e6	1.000	0.788	0.770	4547	2110	1.71e7	2.16e7	3755.5	NO		100.000
13C-2378-TCDD	27.169	1.031	1.07e6	1.35e6	0.983	0.794	0.770	4547	2110	1.50e7	1.90e7	3297.7	NO		92.103
13C-12378-PeCDD	32.298	1.225	1.29e6	8.25e5	0.787	1.567	1.550	1138	2022	1.84e7	1.17e7	16162.3	NO		100.320
13C-123478-HxCDD	36.957	0.985	1.14e6	8.93e5	1.031	1.281	1.240	2219	1975	1.69e7	1.32e7	7606.7	NO		86.434
13C-123678-HxCDD	37.088	0.989	1.23e6	9.58e5	1.137	1.280	1.240	2219	1975	1.74e7	1.38e7	7831.6	NO		84.003
13C-1234678-HpCDD	41.933	1.118	9.57e5	8.90e5	0.892	1.075	1.050	2521	1794	1.19e7	1.13e7	4711.6	NO		90.547
13C-OCDD	48.080	1.282	1.45e6	1.63e6	0.852	0.888	0.890	1433	2144	1.40e7	1.58e7	9755.8	NO		158.122

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
Last Altered: Monday, February 01, 2016 12:05:55 Pacific Standard Time
Printed: Monday, February 01, 2016 12:08:22 Pacific Standard Time

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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	37.505	0.000	1.26e6	1.02e6	1.000	1.236	1.240	2219	1975	1.85e7	1.49e7	8329.2	NO		100.000
Total-tetrafurans			0.00e0		0.827			1090		0.00e0					
Total-penta1			0.00e0					651		0.00e0					
Total-pentafurans			2.73e2		0.837			885		5.66e3					0.025
Total-hexafurans			0.00e0		0.977			1053		0.00e0					
Total-heptafurans			1.48e3		1.142			1299		2.13e4					0.143
Total-Furans			3.60e3		0.971			1090		4.47e4					0.439
Total-tetradioxins			0.00e0		1.023			1316		0.00e0					
Total-pentadioxins			2.56e2		0.939			1550		6.28e3					0.019
Total-hexadioxins			8.22e2		0.919			1113		1.65e4					0.062
Total-heptadioxins			3.44e3		0.964			913		4.89e4					0.371
Total-Dioxins			2.68e4		0.950			1316		3.03e5					3.542
Total-TEQ			3.04e4					1316		3.47e5					3.980
37CL-2378-TCDD	27.198	1.032	1.36e6		1.091			1521		1.92e7		12587.0			46.597
FUNCTION1 PFK			1.31e8					806942		4.59e8					
FUNCTION2 PFK			4.12e5					175386		4.40e6					0.000
FUNCTION3 PFK			1.76e8					564778		1.83e8					0.000
FUNCTION4 PFK			1.98e5					470636		1.97e6					
FUNCTION5 PFK			0.00e0					300577		0.00e0					
FUNCTION1 HXCDPE			3.34e2					660		5.36e3					0.000
FUNCTION1 HPCDPE			4.54e2					693		9.01e3					0.000
FUNCTION2 HPCDPE			1.01e2					715		1.75e3					0.000
FUNCTION3 OCDPE			7.55e1					555		1.85e3					0.000
FUNCTION4 NCDPE			1.62e2					741		4.20e3					0.000
FUNCTION5 DCDPE			0.00e0					465		0.00e0					

Method: P:\DIOXIN8290.pro\MethDB\Dioxin1601293SN.mdb 29 Jan 2016 12:40:27
Calibration: P:\DIOXIN8290.pro\CurveDB\151015ICAL.cdb 16 Oct 2015 08:47:27

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TF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
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	2	12378-PeCDF	339.8597	30.70	694.582	0.824		0.025	0.016	0.65	1.55	YES	6.4

HF

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
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	40.88	1571.533	1.142		0.072		1.07	1.05	NO	7.8
2	8	1234678-HpCDF	407.7818	40.07	1745.998	1.153		0.071	0.053	0.62	1.05	YES	8.6

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	2	12378-PeCDF	339.8597	30.70	694.582	0.824		0.025	0.016	0.65	1.55	YES	6.4
2	39	Total-heptafurans	407.7818	40.88	1571.533	1.142		0.072		1.07	1.05	NO	7.8
3	8	1234678-HpCDF	407.7818	40.07	1745.998	1.153		0.071	0.053	0.62	1.05	YES	8.6
4	10	OCDF	441.7428	48.36	4262.023	1.023		0.270	0.270	0.77	0.89	NO	19.1

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	42	Total-pentadioxins	355.8546	30.68	376.494	0.939		0.019		2.12	1.55	YES	4.0

HD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	43	Total-hexadioxins	389.8157	35.87	676.676	0.919		0.035		2.52	1.24	YES	8.9
2	43	Total-hexadioxins	389.8157	35.72	528.014	0.919		0.027		1.77	1.24	YES	5.9

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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	41.96	3331.913	0.964		0.187	0.187	1.13	1.05	NO	28.1
2	44	Total-heptadioxins	423.7766	40.64	3283.356	0.964		0.184		1.04	1.05	NO	25.5

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	45	Total-Dioxins	319.8965	22.00	179.321	0.950		0.008		1.08	0.77	YES	2.1
2	43	Total-hexadioxins	389.8157	35.87	676.676	0.919		0.035		2.52	1.24	YES	8.9
3	43	Total-hexadioxins	389.8157	35.72	528.014	0.919		0.027		1.77	1.24	YES	5.9
4	42	Total-pentadioxins	355.8546	30.68	376.494	0.939		0.019		2.12	1.55	YES	4.0
5	16	1234678-HpCDD	423.7766	41.96	3331.913	0.964		0.187	0.187	1.13	1.05	NO	28.1
6	44	Total-heptadioxins	423.7766	40.64	3283.356	0.964		0.184		1.04	1.05	NO	25.5
7	17	OCDD	457.7377	48.10	45982.412	0.969		3.081	3.081	0.93	0.89	NO	264.4

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	2	12378-PeCDF	339.8597	30.70	694.582	0.824		0.025	0.016	0.65	1.55	YES	6.4
2	39	Total-heptafurans	407.7818	40.88	1571.533	1.142		0.072		1.07	1.05	NO	7.8
3	8	1234678-HpCDF	407.7818	40.07	1745.998	1.153		0.071	0.053	0.62	1.05	YES	8.6
4	10	OCDF	441.7428	48.36	4262.023	1.023		0.270	0.270	0.77	0.89	NO	19.1
5	45	Total-Dioxins	319.8965	22.00	179.321	0.950		0.008		1.08	0.77	YES	2.1
6	43	Total-hexadioxins	389.8157	35.87	676.676	0.919		0.035		2.52	1.24	YES	8.9
7	43	Total-hexadioxins	389.8157	35.72	528.014	0.919		0.027		1.77	1.24	YES	5.9
8	42	Total-pentadioxins	355.8546	30.68	376.494	0.939		0.019		2.12	1.55	YES	4.0
9	16	1234678-HpCDD	423.7766	41.96	3331.913	0.964		0.187	0.187	1.13	1.05	NO	28.1
10	44	Total-heptadioxins	423.7766	40.64	3283.356	0.964		0.184		1.04	1.05	NO	25.5
11	17	OCDD	457.7377	48.10	45982.412	0.969		3.081	3.081	0.93	0.89	NO	264.4

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF	M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	48	FUNCTION1 PFK	330.9792	23.64	0.000								10.9
2	48	FUNCTION1 PFK	330.9792	23.24	0.000								36.4
3	48	FUNCTION1 PFK	330.9792	22.91	0.000								65.1
4	48	FUNCTION1 PFK	330.9792	22.84	0.000								65.9
5	48	FUNCTION1 PFK	330.9792	22.64	0.000								76.3
6	48	FUNCTION1 PFK	330.9792	22.43	0.000								84.3
7	48	FUNCTION1 PFK	330.9792	22.33	0.000								89.0
8	48	FUNCTION1 PFK	330.9792	21.46	0.000								101.4
9	48	FUNCTION1 PFK	330.9792	21.16	0.000								40.2

Dataset: P:\DIOXIN8290.PRO\160129DATA.qld
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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	28.86	0.000		0.000					1.0
2	49	FUNCTION2 PFK	366.9792	33.26	0.000		0.000					1.0
3	49	FUNCTION2 PFK	366.9792	33.11	0.000		0.000					2.2
4	49	FUNCTION2 PFK	366.9792	31.96	0.000		0.000					5.1
5	49	FUNCTION2 PFK	366.9792	31.90	0.000		0.000					3.7
6	49	FUNCTION2 PFK	366.9792	31.75	0.000		0.000					0.0
7	49	FUNCTION2 PFK	366.9792	31.40	0.000		0.000					1.8
8	49	FUNCTION2 PFK	366.9792	30.92	0.000		0.000					0.4
9	49	FUNCTION2 PFK	366.9792	30.79	0.000		0.000					1.0
10	49	FUNCTION2 PFK	366.9792	30.34	0.000		0.000					4.3
11	49	FUNCTION2 PFK	366.9792	29.82	0.000		0.000					0.9
12	49	FUNCTION2 PFK	366.9792	29.46	0.000		0.000					1.5
13	49	FUNCTION2 PFK	366.9792	29.39	0.000		0.000					0.8
14	49	FUNCTION2 PFK	366.9792	29.02	0.000		0.000					0.9
15	49	FUNCTION2 PFK	366.9792	28.99	0.000		0.000					0.5

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	50	FUNCTION3 PFK	380.9760	34.34	0.000		0.000					39.7
2	50	FUNCTION3 PFK	380.9760	38.16	0.000		0.000					45.2
3	50	FUNCTION3 PFK	380.9760	36.78	0.000		0.000					97.7
4	50	FUNCTION3 PFK	380.9760	35.10	0.000		0.000					73.5
5	50	FUNCTION3 PFK	380.9760	34.91	0.000		0.000					68.3

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
1	51	FUNCTION4 PFK	430.9728	39.62	0.000							4.2

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	28.68	0.000		0.000					1.4
2	53	FUNCTION1 HXCD...	375.8364	26.05	0.000		0.000					3.7
3	53	FUNCTION1 HXCD...	375.8364	23.64	0.000		0.000					1.6
4	53	FUNCTION1 HXCD...	375.8364	23.43	0.000		0.000					1.4