uantify Totals Report MassLynx 4.1 SCN 714
ataset: P:\DIOXIN8290.PRO\130828DATA2.qld
ast Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
rinted: Thursday, August 29, 2013 10:04:10 Pacific Daylight Time

D: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

FK3

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
50	FUNCTION3 PFK	380.9760	33.68	0.000		0.000					3.9
50	FUNCTION3 PFK	380.9760	38.06	0.000		0.000					2.0
50	FUNCTION3 PFK	380.9760	37.59	0.000		0.000					9.3
50	FUNCTION3 PFK	380.9760	37.39	0.000		0.000					16.9
50	FUNCTION3 PFK	380.9760	36.03	0.000		0.000					2.8
50	FUNCTION3 PFK	380.9760	35.74	0.000		0.000					5.1
50	FUNCTION3 PFK	380.9760	35.60	0.000		0.000					2.8

FK4

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
51	FUNCTION4 PFK	430.9728	39.36	0.000							4.6

FK5

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

THERS1

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
53	FUNCTION1 HXCD...	375.8364	23.93	0.000		0.000					18.3
53	FUNCTION1 HXCD...	375.8364	22.57	0.000		0.000					5.1

THERS2

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
54	FUNCTION1 HPCD...	409.7974	25.81	0.000		0.000					4.0
54	FUNCTION1 HPCD...	409.7974	25.24	0.000		0.000					1.4
54	FUNCTION1 HPCD...	409.7974	24.33	0.000		0.000					3.0
54	FUNCTION1 HPCD...	409.7974	27.57	0.000		0.000					2.9
54	FUNCTION1 HPCD...	409.7974	27.39	0.000		0.000					3.0
54	FUNCTION1 HPCD...	409.7974	26.42	0.000		0.000					6.7

THERS3

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
55	FUNCTION2 HPCD...	409.7974	32.89	0.000		0.000					3.6
55	FUNCTION2 HPCD...	409.7974	32.82	0.000		0.000					2.5
55	FUNCTION2 HPCD...	409.7974	32.74	0.000		0.000					2.6
55	FUNCTION2 HPCD...	409.7974	32.55	0.000		0.000					4.4
55	FUNCTION2 HPCD...	409.7974	31.81	0.000		0.000					2.1
55	FUNCTION2 HPCD...	409.7974	30.91	0.000		0.000					2.1
55	FUNCTION2 HPCD...	409.7974	30.21	0.000		0.000					9.0

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ETHERS4

		Name	Mass	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R.2	S/N
	56	FUNCTION3 OCDPE	445.7555	34.94	0.000		0.000					3.3
	56	FUNCTION3 OCDPE	445.7555	34.53	0.000		0.000					1.1
	56	FUNCTION3 OCDPE	445.7555	33.83	0.000		0.000					2.0
	56	FUNCTION3 OCDPE	445.7555	33.39	0.000		0.000					2.1
	56	FUNCTION3 OCDPE	445.7555	36.87	0.000		0.000					6.1
	56	FUNCTION3 OCDPE	445.7555	36.81	0.000		0.000					4.5
	56	FUNCTION3 OCDPE	445.7555	36.76	0.000		0.000					4.3
	56	FUNCTION3 OCDPE	445.7555	36.71	0.000		0.000					2.9
	56	FUNCTION3 OCDPE	445.7555	36.64	0.000		0.000					1.5
	56	FUNCTION3 OCDPE	445.7555	36.58	0.000		0.000					2.6
	56	FUNCTION3 OCDPE	445.7555	36.56	0.000		0.000					2.8
	56	FUNCTION3 OCDPE	445.7555	36.46	0.000		0.000					2.1
	56	FUNCTION3 OCDPE	445.7555	36.41	0.000		0.000					3.4
	56	FUNCTION3 OCDPE	445.7555	36.34	0.000		0.000					3.1
	56	FUNCTION3 OCDPE	445.7555	36.31	0.000		0.000					1.7
	56	FUNCTION3 OCDPE	445.7555	35.29	0.000		0.000					3.8
	56	FUNCTION3 OCDPE	445.7555	35.22	0.000		0.000					2.6
	56	FUNCTION3 OCDPE	445.7555	35.20	0.000		0.000					3.3
	56	FUNCTION3 OCDPE	445.7555	35.09	0.000		0.000					2.5
	56	FUNCTION3 OCDPE	445.7555	35.03	0.000		0.000					3.1
	56	FUNCTION3 OCDPE	445.7555	38.20	0.000		0.000					2.4
	56	FUNCTION3 OCDPE	445.7555	38.14	0.000		0.000					1.8
	56	FUNCTION3 OCDPE	445.7555	37.12	0.000		0.000					3.8
	56	FUNCTION3 OCDPE	445.7555	36.94	0.000		0.000					2.6

ETHERS5

		Name	Mass	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R.2	S/N
	57	FUNCTION4 NCDPE	479.7165	41.58	0.000		0.000					8.9
	57	FUNCTION4 NCDPE	479.7165	41.41	0.000		0.000					24.0
	57	FUNCTION4 NCDPE	479.7165	41.36	0.000		0.000					17.0
	57	FUNCTION4 NCDPE	479.7165	41.18	0.000		0.000					8.1
	57	FUNCTION4 NCDPE	479.7165	41.05	0.000		0.000					5.2
	57	FUNCTION4 NCDPE	479.7165	41.01	0.000		0.000					5.1
	57	FUNCTION4 NCDPE	479.7165	40.97	0.000		0.000					3.7
	57	FUNCTION4 NCDPE	479.7165	39.16	0.000		0.000					74.6

ETHERS6

		Name	Mass	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R.2	S/N
	58	FUNCTION5 DCDPE	513.6775	47.43	0.000		0.000					4.9
	58	FUNCTION5 DCDPE	513.6775	47.41	0.000		0.000					5.9

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ID: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

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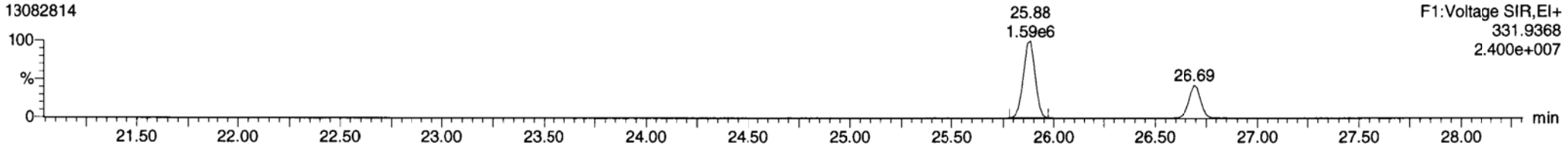

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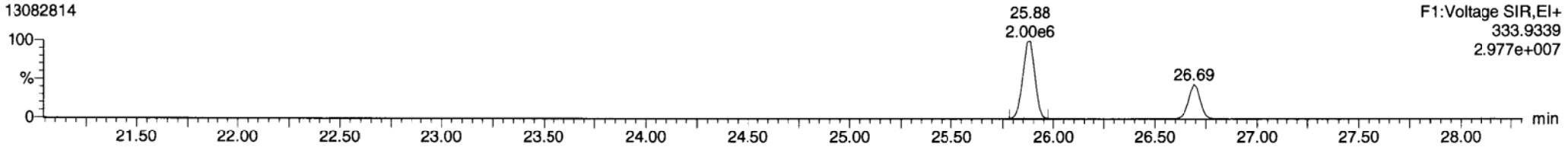

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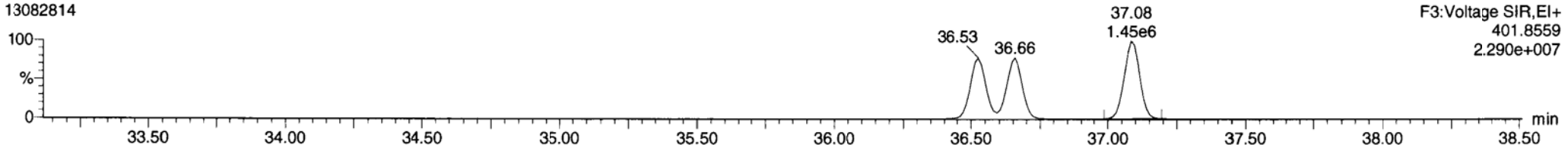

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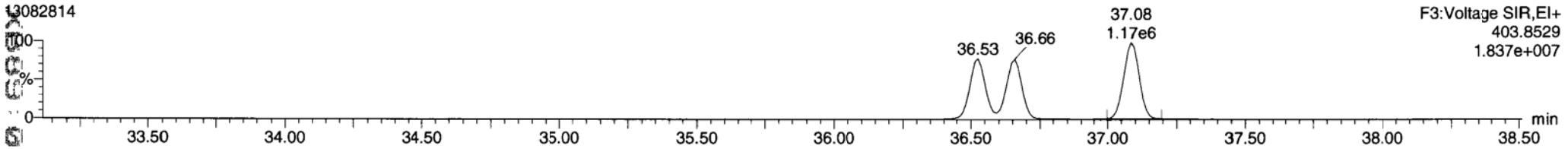

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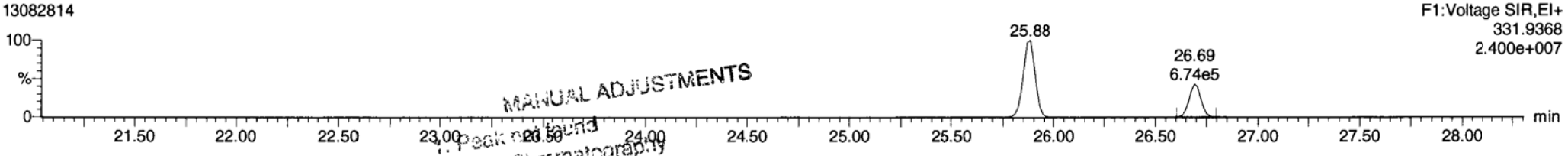

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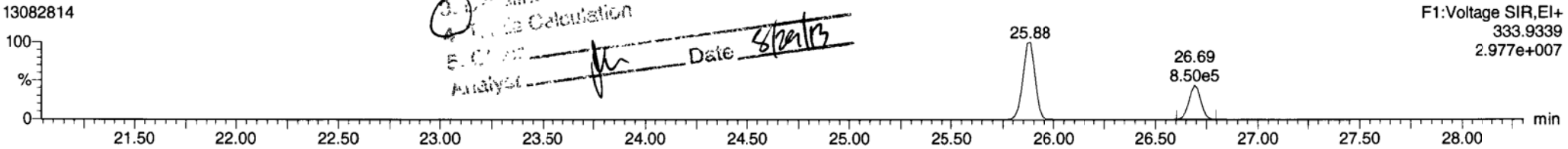

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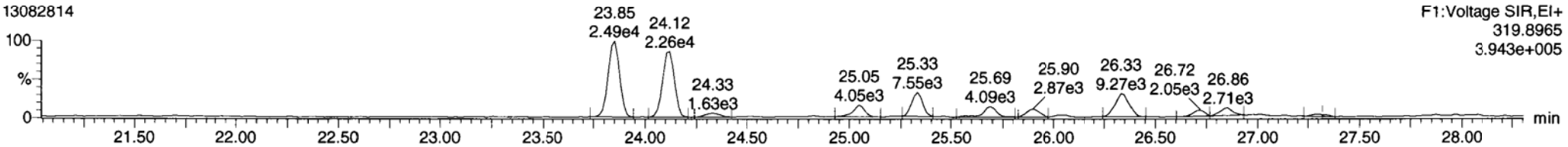

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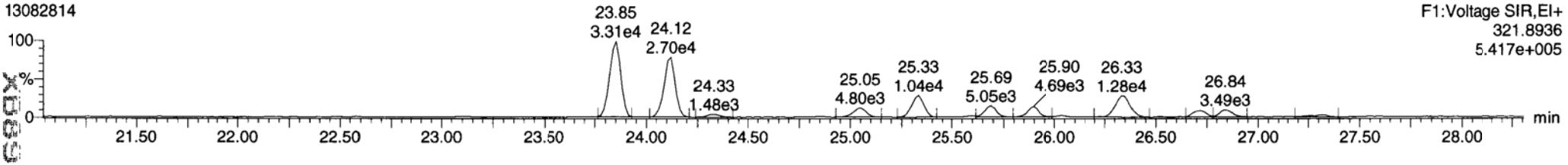

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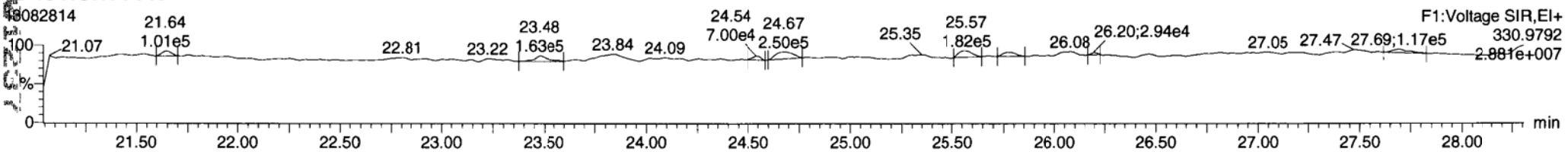

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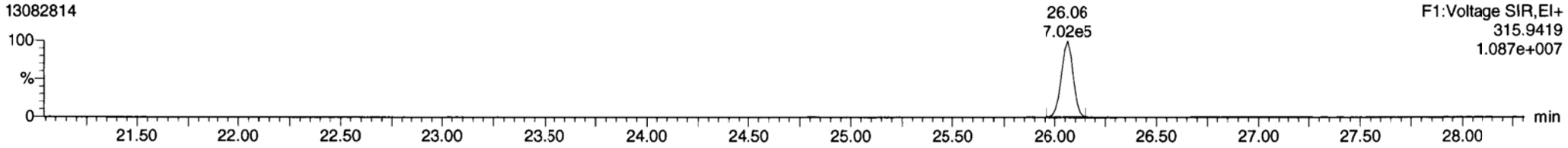
13C-2378-TCDF



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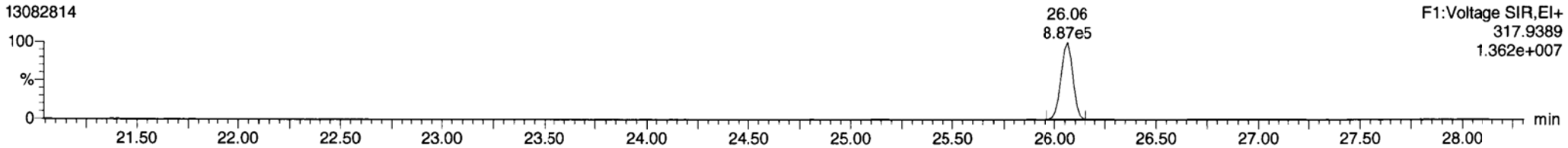

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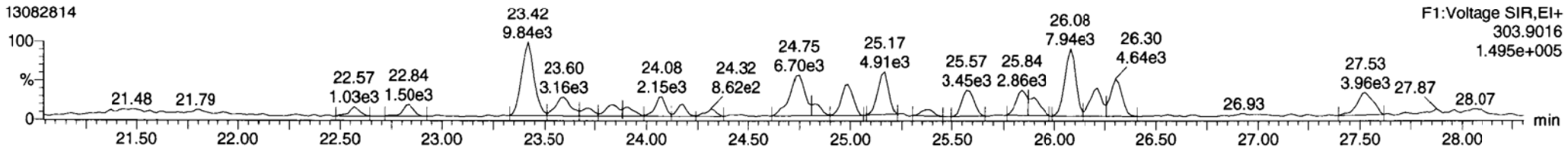

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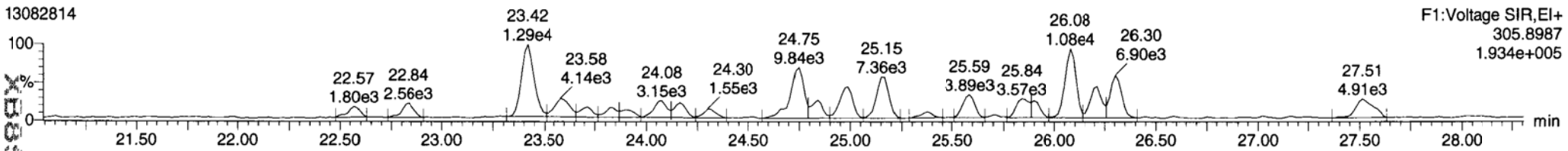
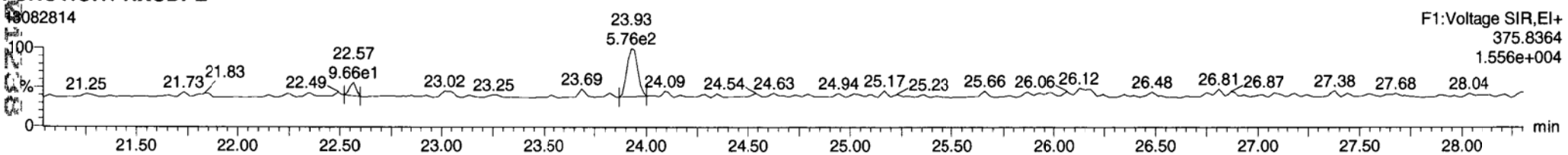


FUNCTION1 HXCDPE



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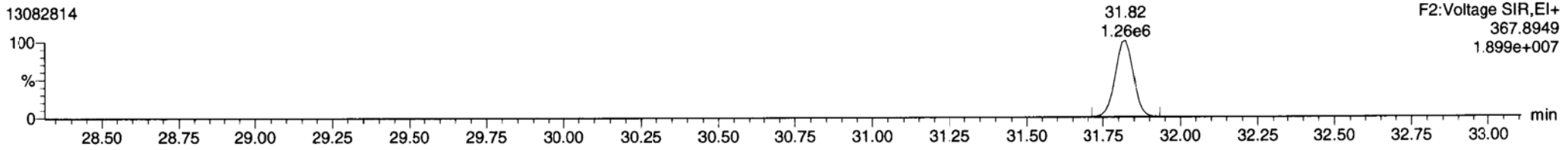
13C-12378-PeCDD



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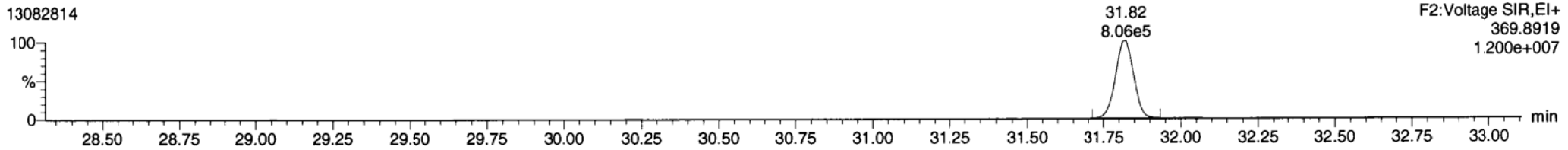
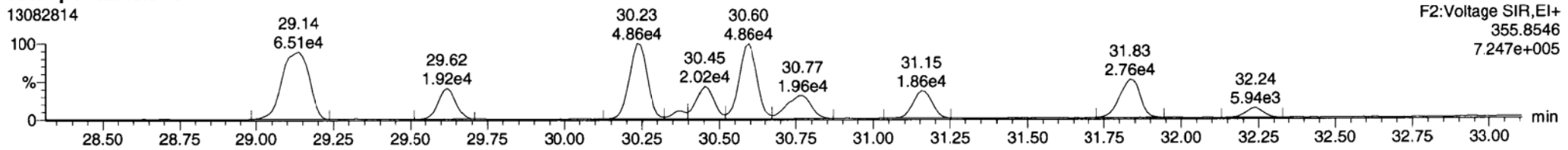


Total-pentadioxins



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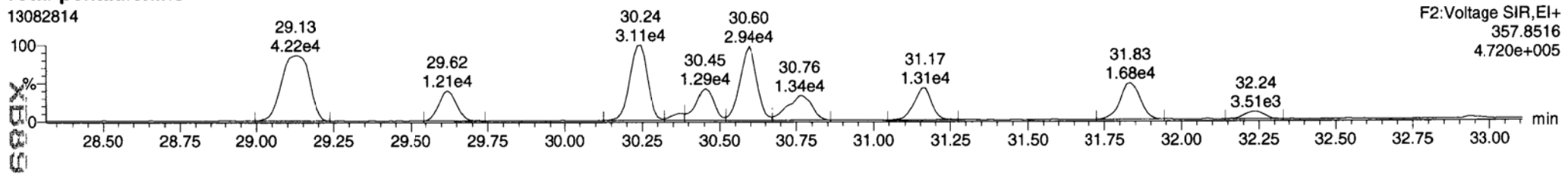
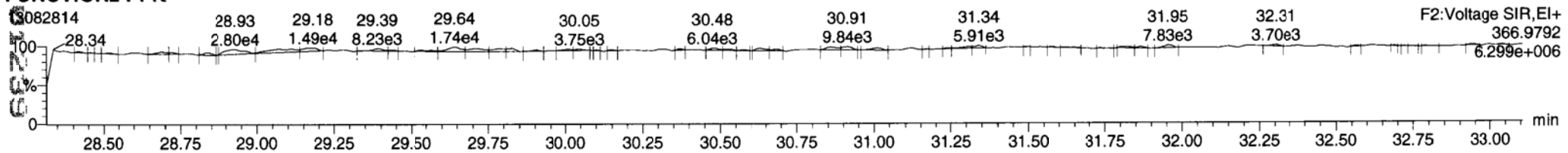


FUNCTION2 PFK



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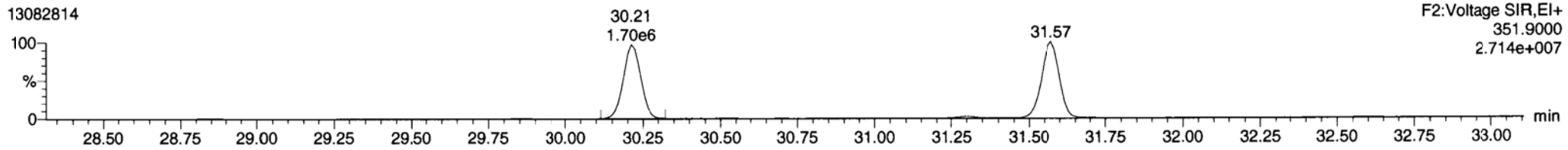
13C-12378-PeCDF



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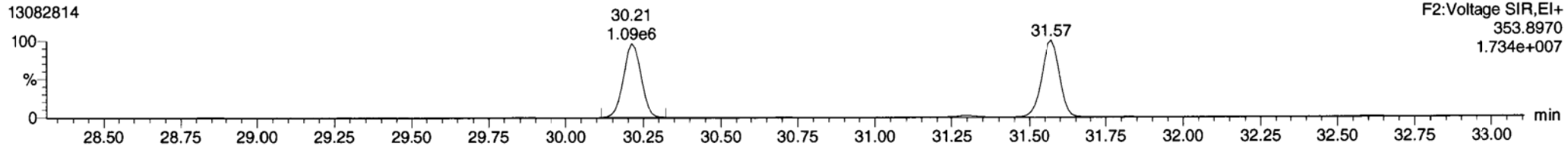

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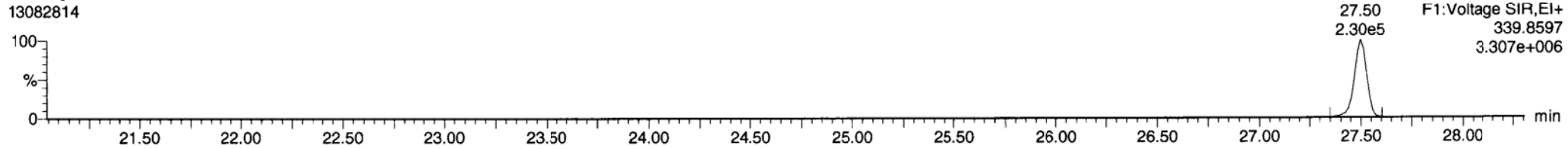

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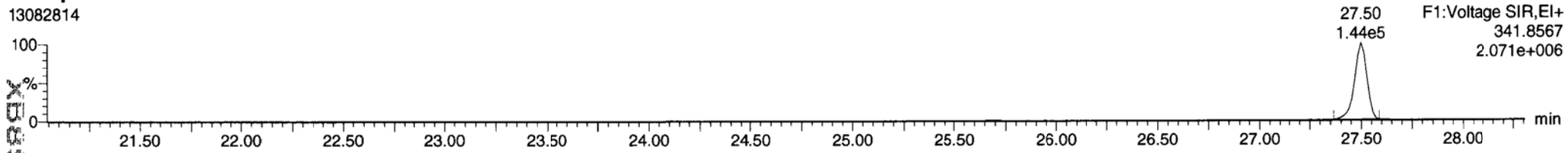
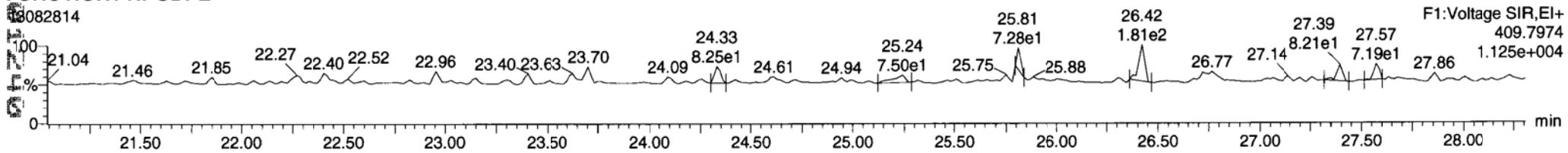


FUNCTION1 HPCDPE



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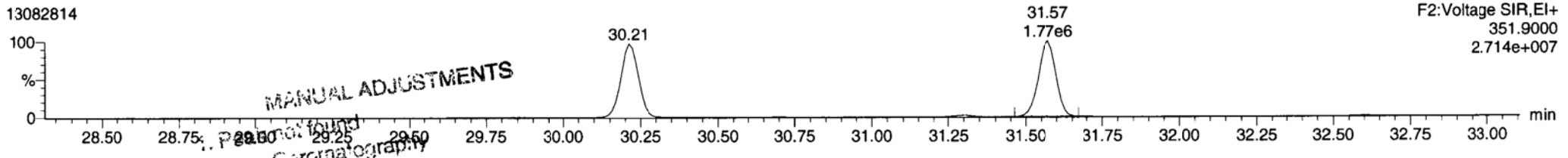
13C-23478-PeCDF



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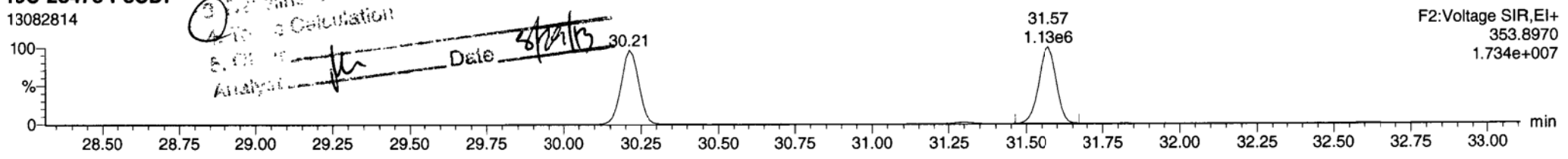
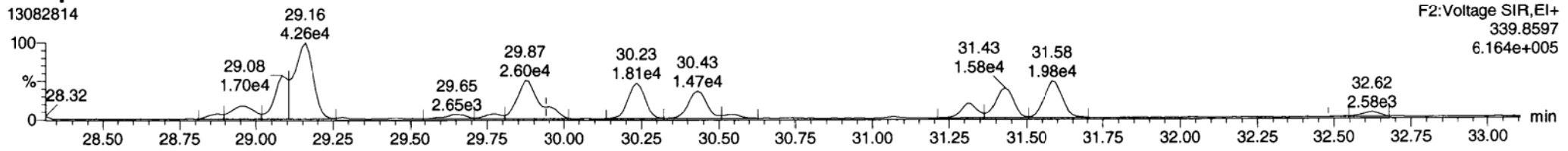


Total-pentafurans



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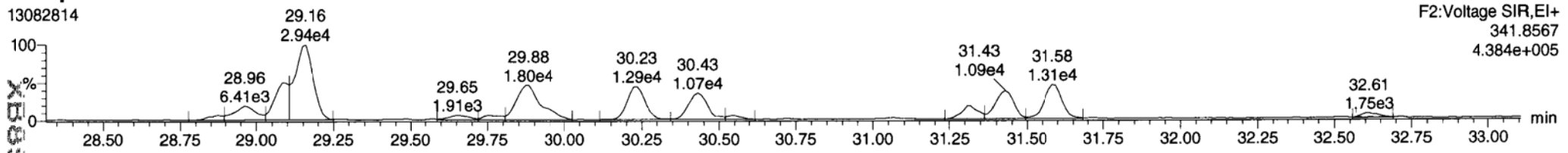

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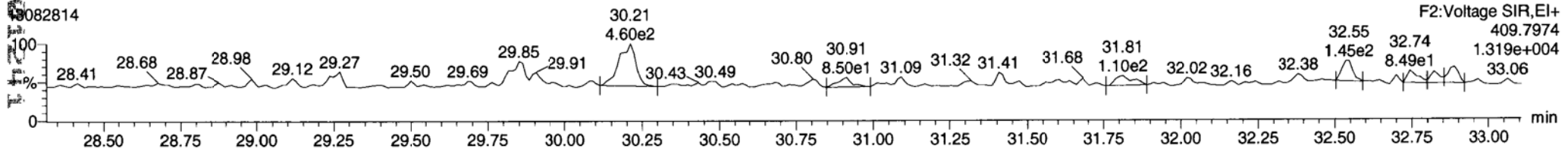

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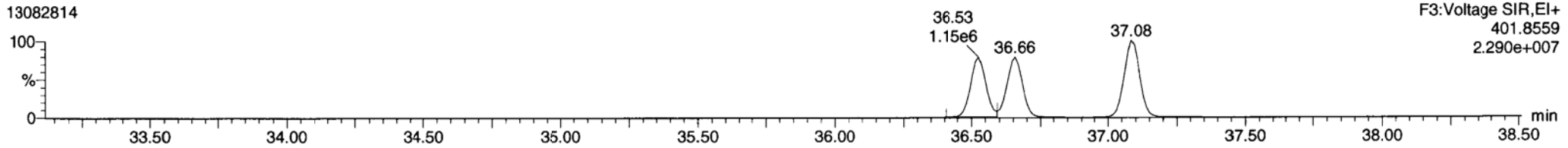
13C-123478-HxCDD



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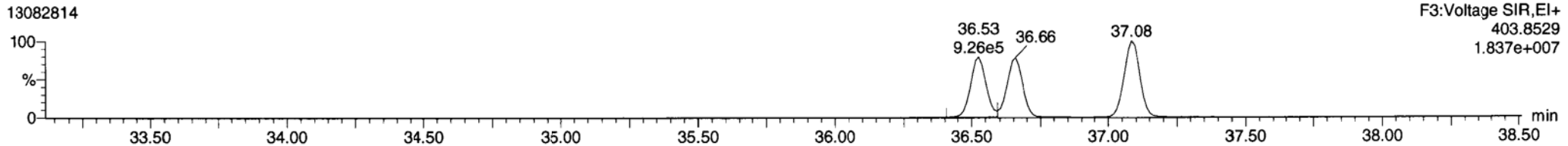

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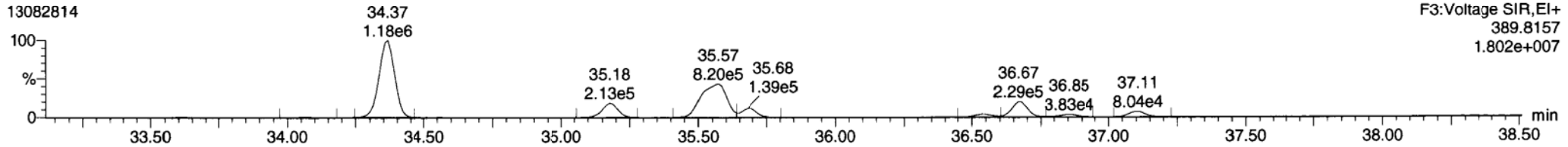
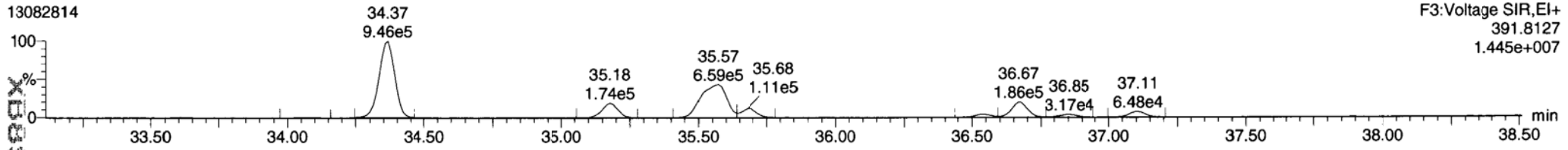
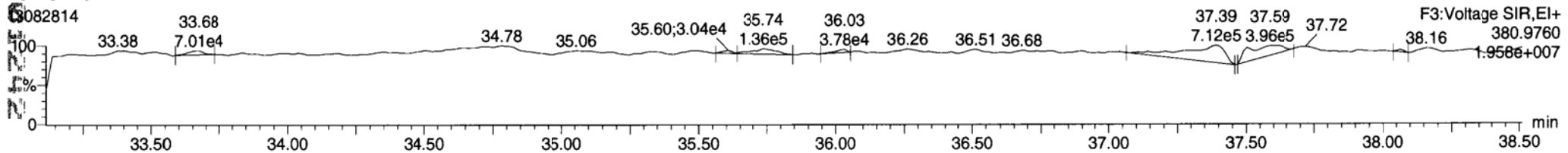


Total-hexadioxins



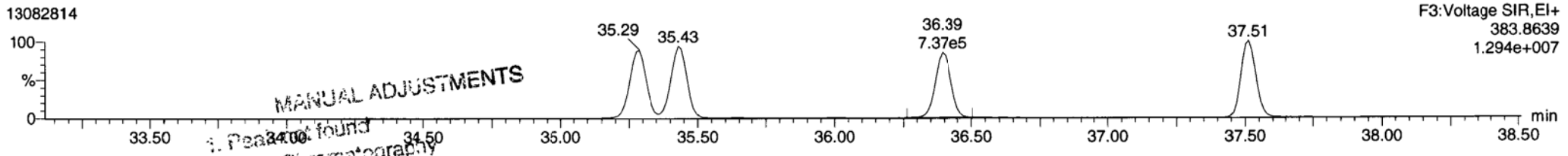
FUNCTION3 PFK



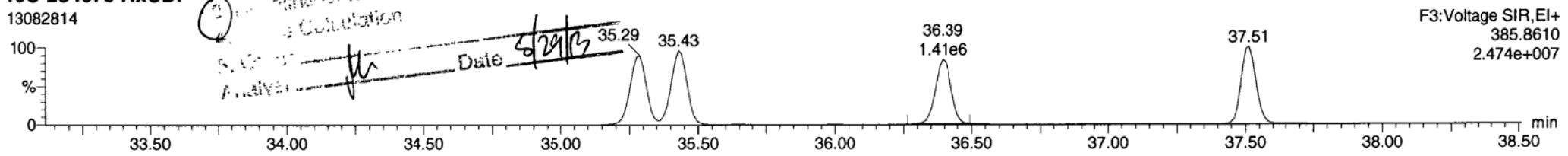
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:10 Pacific Daylight Time

ID: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

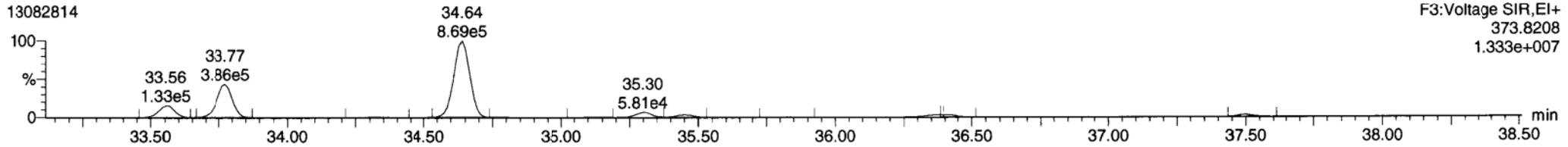
13C-234678-HxCDF



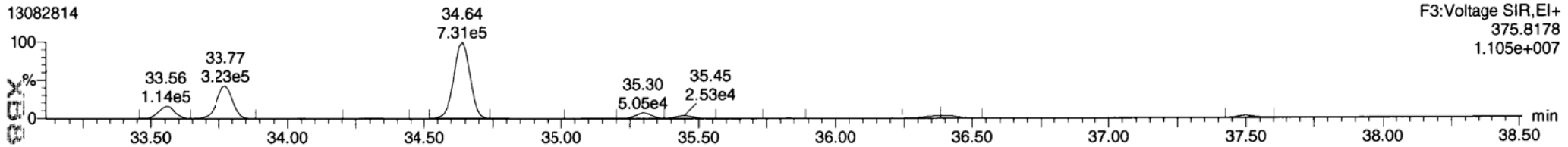
13C-234678-HxCDF



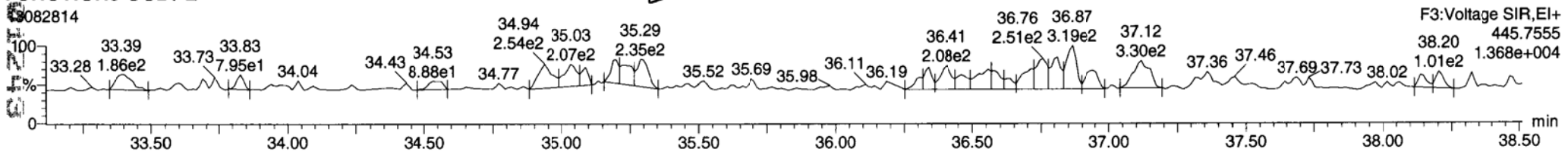
Total-hexafurans



Total-hexafurans



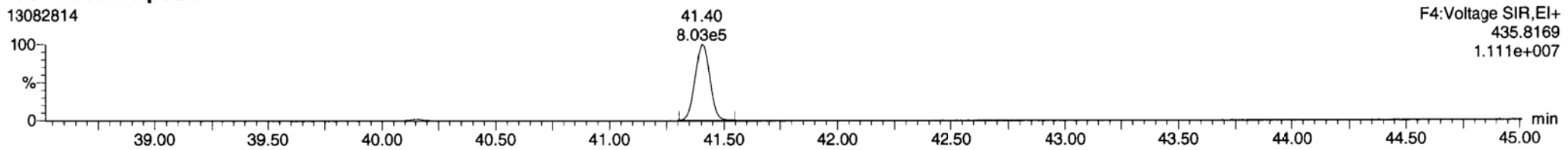
FUNCTION3 OCDPE



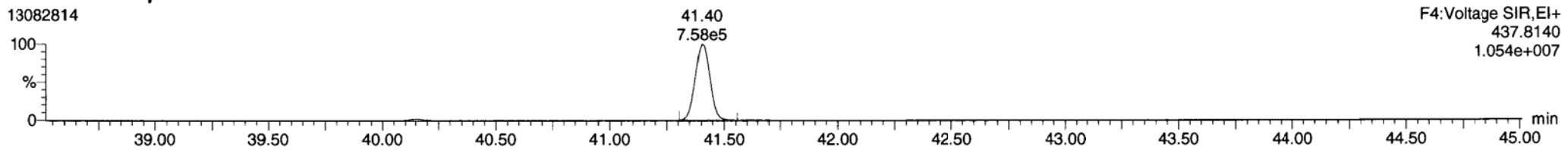
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:10 Pacific Daylight Time

ID: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

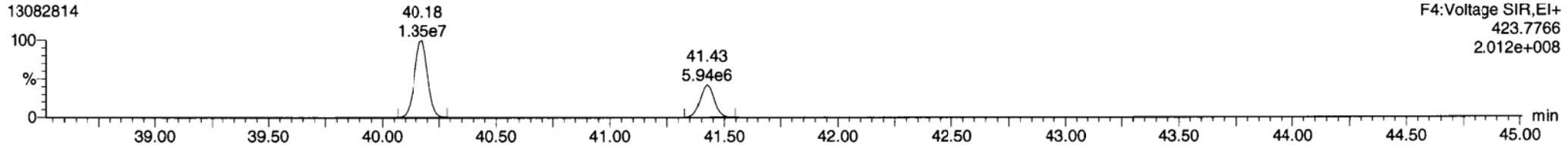
13C-1234678-HpCDD



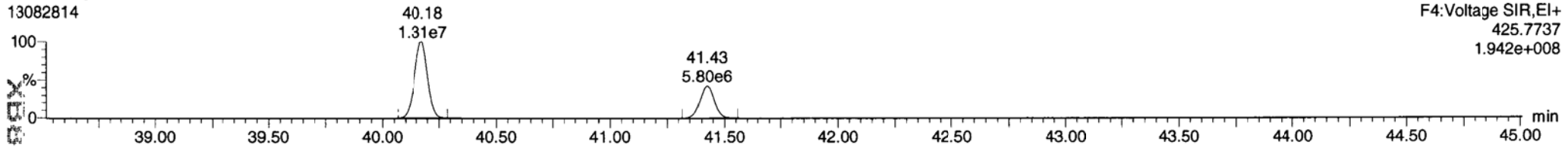
13C-1234678-HpCDD



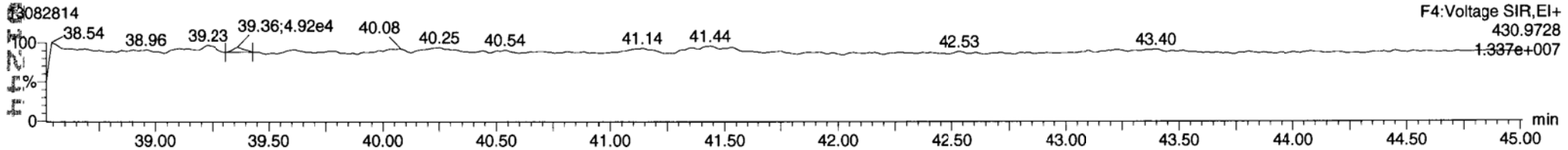
Total-heptadioxins



Total-heptadioxins

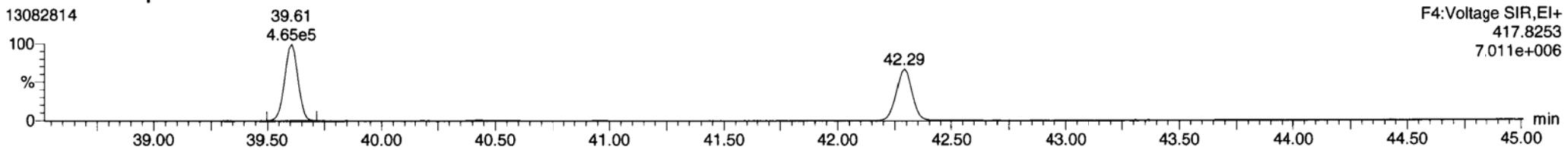


FUNCTION4 PFK

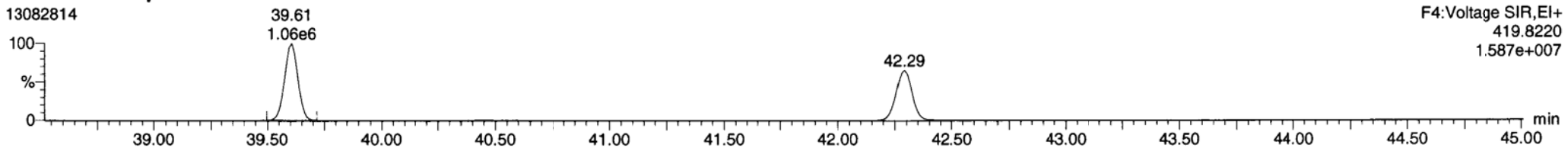


ID: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

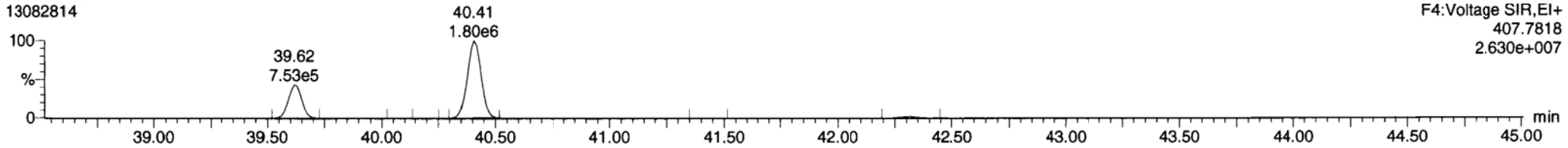
13C-1234678-HpCDF



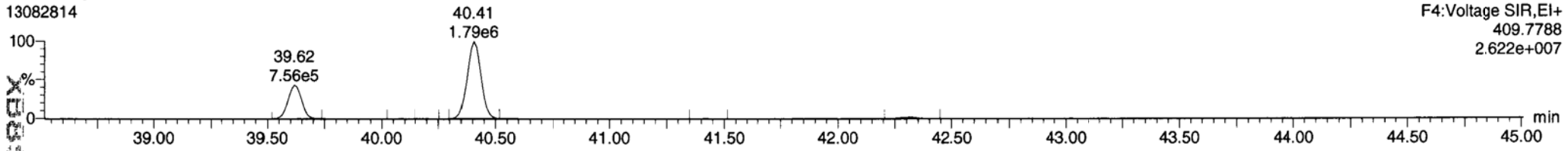
13C-1234678-HpCDF



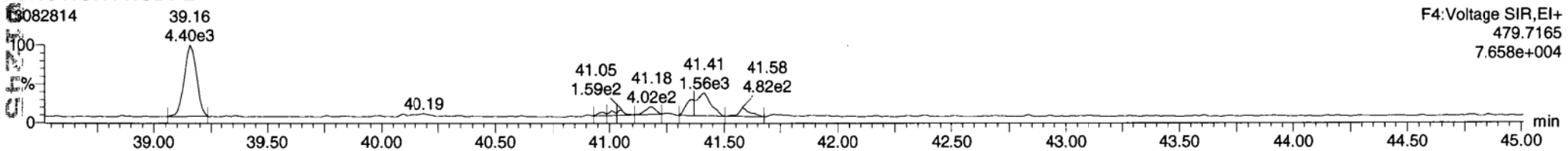
Total-heptafurans



Total-heptafurans



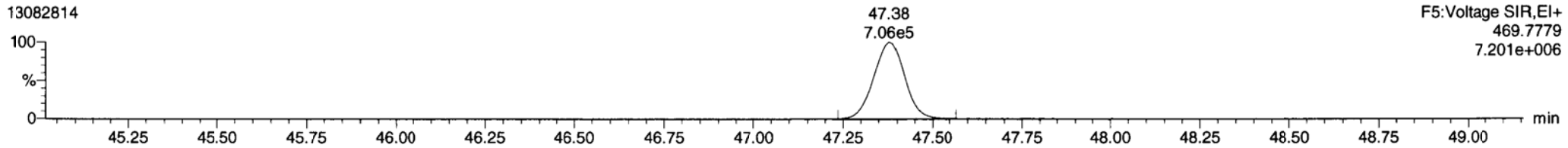
FUNCTION4 NCDPE



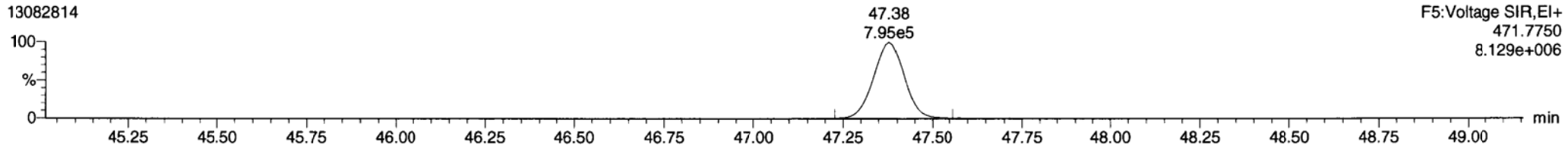
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:10 Pacific Daylight Time

ID: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

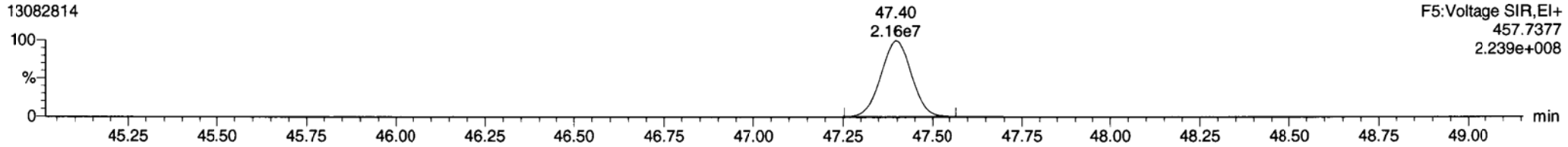
13C-OCDD



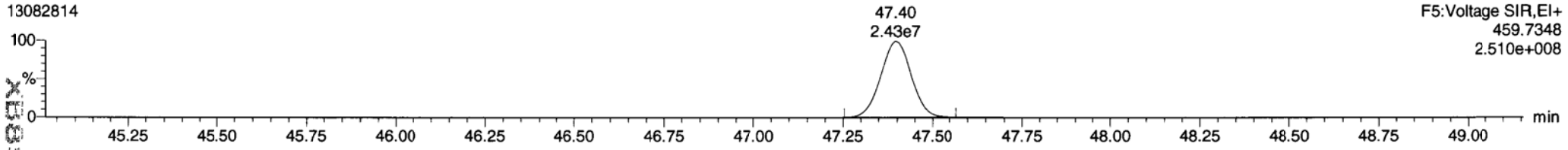
13C-OCDD



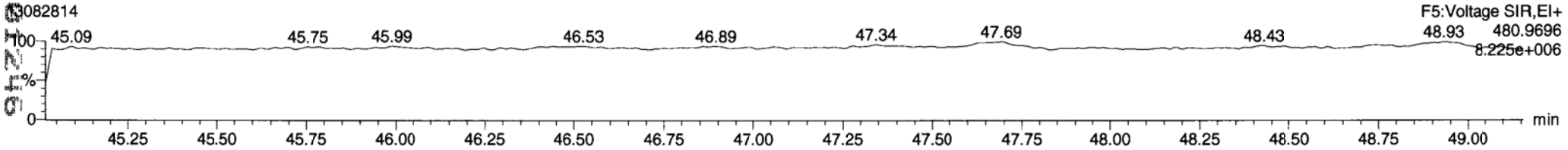
OCDD



OCDD



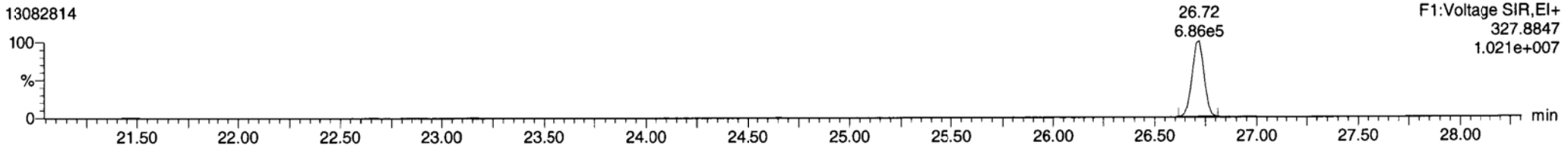
FUNCTION5 PFK



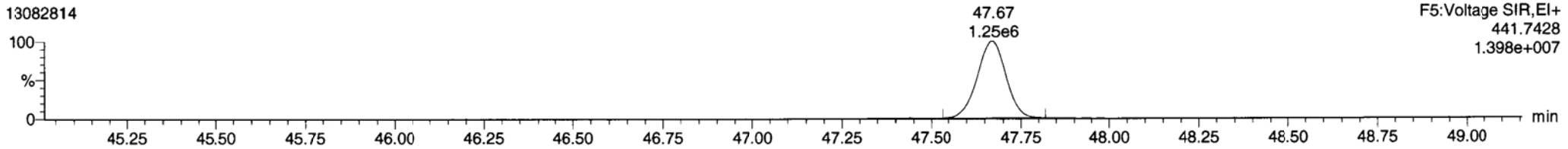
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:10 Pacific Daylight Time

ID: XB89B, Name: 13082814, Date: 28-Aug-2013, Time: 21:57:38, Conditions: AUTOSPEC01, User: pk

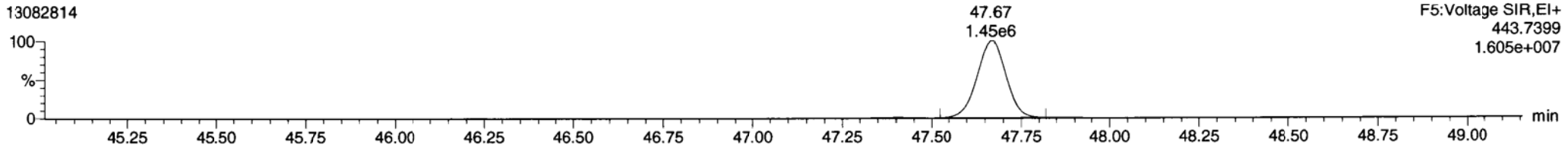
37CL-2378-TCDD



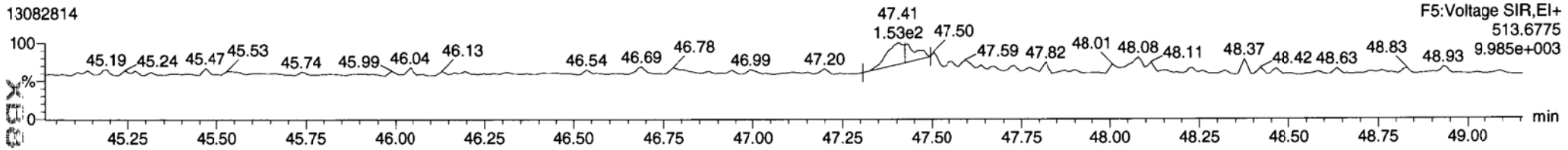
OCDF



OCDF



FUNCTION5 DCDPE



Z:\1\2013\08\28\130828DATA2.qgx

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

MR 8/29/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

Name	RT				RRF										
2378-TCDF	26.078	1.001	9.40e3	1.38e4	0.867	0.679	0.770	40.4	3750	2964	1.52e5	2.05e5	NO	1.213	1.213
12378-PeCDF	30.234	1.001	2.55e4	1.71e4	0.875	1.494	1.550	134.5	2834	1743	3.81e5	2.48e5	NO	1.413	1.413
23478-PeCDF	31.593	1.001	2.72e4	1.89e4	0.880	1.435	1.550	150.6	2834	1743	4.27e5	2.65e5	NO	1.476	1.476
123478-HxCDF	35.320	1.001	8.49e4	7.05e4	1.048	1.204	1.240	251.8	4852	2586	1.22e6	1.06e6	NO	5.204	5.204
234678-HxCDF	36.438	1.000	3.29e4	2.78e4	1.088	1.186	1.240	94.2	4852	2586	4.57e5	4.25e5	NO	2.156	2.156
123678-HxCDF	35.463	1.000	4.16e4	3.34e4	1.025	1.245	1.240	129.4	4852	2586	6.28e5	5.12e5	NO	2.476	2.476
123789-HxCDF	37.513	1.000	2.82e4	2.24e4	0.959	1.258	1.240	99.2	4852	2586	4.82e5	3.75e5	NO	1.976	1.976
1234678-HpCDF	39.628	1.001	8.61e5	8.55e5	1.215	1.007	1.050	2132.7	6088	2952	1.30e7	1.28e7	NO	72.735	72.735
1234789-HpCDF	42.314	1.001	5.15e4	5.33e4	1.200	0.966	1.050	108.1	6088	2952	6.58e5	6.89e5	NO	5.698	5.698
OCDF	47.684	1.006	2.20e6	2.54e6	1.064	0.867	0.890	14446.8	1738	2410	2.51e7	2.90e7	NO	395.732	395.732
2378-TCDD	26.721	1.001	2.46e3	4.24e3	0.994	0.579	0.770	13.0	2872	2333	3.73e4	5.87e4	YES	0.288	0.342
12378-PeCDD	31.834	1.000	3.13e4	2.06e4	0.976	1.516	1.550	172.4	2375	2181	4.09e5	2.76e5	NO	2.211	2.211
123478-HxCDD	36.570	1.000	5.28e4	4.27e4	0.967	1.236	1.240	122.9	6358	4860	7.81e5	6.46e5	NO	4.062	4.062
123678-HxCDD	36.701	1.001	2.79e5	2.30e5	0.902	1.215	1.240	669.4	6358	4860	4.26e6	3.50e6	NO	22.106	22.106
123789-HxCDD	37.140	1.013	1.09e5	8.87e4	0.914	1.232	1.240	266.6	6358	4860	1.70e6	1.41e6	NO	8.682	8.682
1234678-HpCDD	41.426	1.000	8.79e6	8.52e6	0.999	1.031	1.050	12272.0	10225	9583	1.25e8	1.23e8	NO	855.999	855.999
OCDD	47.415	1.000	3.55e7	4.01e7	0.979	0.887	0.890	89483.0	4015	4916	3.59e8	4.05e8	NO	6861.227	6861.227
13C-2378-TCDF	26.063	1.007	9.71e5	1.24e6	1.419	0.784	0.770	4530.8	3364	4750	1.52e7	1.96e7	NO		43.519
13C-12378-PeCDF	30.212	1.167	2.10e6	1.35e6	1.158	1.555	1.550	10497.4	3064	4276	3.22e7	2.06e7	NO		83.205
13C-23478-PeCDF	31.571	1.220	2.18e6	1.37e6	1.127	1.585	1.550	10740.9	3064	4276	3.29e7	2.08e7	NO		87.965
13C-123478-HxCDF	35.298	0.951	9.69e5	1.88e6	1.206	0.515	0.510	4536.8	3156	2747	1.43e7	2.78e7	NO		84.526
13C-123678-HxCDF	35.452	0.955	1.01e6	1.95e6	1.266	0.518	0.510	4854.8	3156	2747	1.53e7	2.93e7	NO		83.500
13C-234678-HxCDF	36.427	0.981	8.79e5	1.71e6	1.155	0.515	0.510	4095.8	3156	2747	1.29e7	2.49e7	NO		80.116
13C-123789-HxCDF	37.523	1.011	9.17e5	1.75e6	1.121	0.523	0.510	5601.7	3156	2747	1.77e7	3.40e7	NO		85.263
13C-1234678-HpCDF	39.606	1.067	5.98e5	1.34e6	1.040	0.445	0.440	3270.2	2714	2537	8.88e6	2.02e7	NO		66.838
13C-1234789-HpCDF	42.292	1.139	4.69e5	1.06e6	0.789	0.440	0.440	2190.8	2714	2537	5.95e6	1.36e7	NO		69.560
13C-1234-TCDD	25.884	0.000	1.58e6	2.00e6	1.000	0.791	0.770	7735.2	3179	2095	2.46e7	3.09e7	NO		100.000
13C-2378-TCDD	26.691	1.031	8.64e5	1.11e6	0.962	0.780	0.770	4165.2	3179	2095	1.32e7	1.69e7	NO		57.254
13C-12378-PeCDD	31.823	1.229	1.47e6	9.35e5	0.746	1.572	1.550	9259.6	2379	2150	2.20e7	1.40e7	NO		89.963
13C-123478-HxCDD	36.559	0.985	1.37e6	1.06e6	1.003	1.291	1.240	10152.7	1912	1771	1.94e7	1.53e7	NO		86.710
13C-123678-HxCDD	36.680	0.988	1.41e6	1.15e6	1.052	1.226	1.240	11053.5	1912	1771	2.11e7	1.72e7	NO		86.973
13C-1234678-HpCDD	41.415	1.116	1.04e6	9.89e5	0.880	1.047	1.050	7164.5	2027	1837	1.45e7	1.39e7	NO		82.366
13C-OCDD	47.397	1.277	1.06e6	1.19e6	0.775	0.887	0.890	9299.2	1098	1887	1.02e7	1.15e7	NO		103.975

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.118	0.000	1.54e6	1.26e6	1.000	1.225	1.240	12673.6	1912	1771	2.42e7	1.99e7	NO	100.000
Total-tetrafurans			8.69e4		0.867				3750		1.23e6			10.655
Total-penta1			2.93e5						1181		4.26e6			15.050
Total-pentafurans			2.42e5		0.877				2834		3.09e6			13.179
Total-hexafurans			2.00e6		1.030				4852		3.04e7			129.254
Total-heptafurans			3.43e6		1.207				6088		4.94e7			317.230
Total-Furans			8.26e6		1.022				3750		1.13e8			881.100
Total-tetradioxins			1.07e5		0.994				2872		1.58e6			12.712
Total-pentadioxins			3.71e5		0.976				2375		4.94e6			26.134
Total-hexadioxins			4.25e6		0.928				6358		5.66e7			332.326
Total-heptadioxins			3.29e7		0.999				10225		4.84e8			3205.230
Total-Dioxins			7.32e7		0.962				2872		9.07e8			10437.629
Total-TEQ			8.14e7						2872		1.02e9			11318.729
37CL-2378-TCDD	26.721	1.032	9.12e5		1.091			5358.3	2527		1.35e7			23.339
FUNCTION1 PFK			1.44e6						331722		2.22e7			
FUNCTION2 PFK			6.92e5						111401		5.15e6			0.000
FUNCTION3 PFK			3.25e6						263377		2.10e7			0.000
FUNCTION4 PFK			1.26e5						128876		1.91e6			
FUNCTION5 PFK			0.00e0						135302		0.00e0			
FUNCTION1 HXCDPE			1.16e3						731		2.22e4			0.000
FUNCTION1 HPCDPE			7.86e1						483		2.18e3			0.000
FUNCTION2 HPCDPE			1.64e3						1360		3.59e4			0.000
FUNCTION3 OCDPE			3.82e3						1144		8.49e4			0.000
FUNCTION4 NCDPE			1.35e4						1045		2.23e5			0.000
FUNCTION5 DCDPE			7.81e2						920		1.63e4			0.000

G+2 SIM-GC-HRMS-XB89C

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

TF

	35	Total-tetrafurans	303.9016	25.15	15638.005	0.867	0.816		0.81	0.77	NO	25.6
	35	Total-tetrafurans	303.9016	24.97	13416.710	0.867	0.700		0.74	0.77	NO	21.3
	35	Total-tetrafurans	303.9016	24.84	4581.350	0.867	0.239		0.47	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	24.75	16887.209	0.867	0.881		0.75	0.77	NO	25.7
	35	Total-tetrafurans	303.9016	24.32	3180.887	0.867	0.166		0.68	0.77	NO	5.0
	35	Total-tetrafurans	303.9016	24.18	3752.508	0.867	0.196		0.77	0.77	NO	5.9
	35	Total-tetrafurans	303.9016	24.06	8966.796	0.867	0.468		0.57	0.77	YES	13.0
	35	Total-tetrafurans	303.9016	23.93	3085.100	0.867	0.161		0.49	0.77	YES	4.1
	35	Total-tetrafurans	303.9016	23.84	5441.606	0.867	0.284		0.83	0.77	NO	8.4
	35	Total-tetrafurans	303.9016	23.70	3201.411	0.867	0.167		0.84	0.77	NO	6.2
	35	Total-tetrafurans	303.9016	23.60	9933.940	0.867	0.519		0.67	0.77	NO	11.3
	35	Total-tetrafurans	303.9016	23.42	35020.525	0.867	1.828		0.81	0.77	NO	57.4
	35	Total-tetrafurans	303.9016	22.84	4576.714	0.867	0.239		0.98	0.77	YES	9.2
	35	Total-tetrafurans	303.9016	22.58	4416.103	0.867	0.231		0.58	0.77	YES	7.4
	35	Total-tetrafurans	303.9016	27.50	9746.739	0.867	0.509		0.80	0.77	NO	11.8
	35	Total-tetrafurans	303.9016	26.30	11483.159	0.867	0.599		0.69	0.77	NO	18.2
	35	Total-tetrafurans	303.9016	26.20	8960.199	0.867	0.468		0.84	0.77	NO	12.6
	1	2378-TCDF	303.9016	26.08	23235.196	0.867	1.213	1.213	0.68	0.77	NO	40.4
	35	Total-tetrafurans	303.9016	25.84	6774.478	0.867	0.354		1.09	0.77	YES	14.5
	35	Total-tetrafurans	303.9016	25.59	6693.536	0.867	0.349		0.89	0.77	YES	13.3
	35	Total-tetrafurans	303.9016	25.90	5128.945	0.867	0.268		0.44	0.77	YES	10.8

TP

	36	Total-penta1	339.8597	27.50	482864.360		15.050		1.55	1.55	NO	3610.4

TF

	37	Total-pentafurans	339.8597	28.87	5543.355	0.877	0.181		1.51	1.55	NO	18.8
	37	Total-pentafurans	339.8597	32.62	5338.731	0.877	0.174		1.47	1.55	NO	16.5
	3	23478-PeCDF	339.8597	31.59	46071.709	0.880	1.476	1.476	1.44	1.55	NO	150.6
	37	Total-pentafurans	339.8597	31.44	40317.251	0.877	1.314		1.51	1.55	NO	124.2
	37	Total-pentafurans	339.8597	31.31	12624.824	0.877	0.411		1.38	1.55	NO	39.4
	37	Total-pentafurans	339.8597	31.07	1089.782	0.877	0.036		3.20	1.55	YES	5.1
	37	Total-pentafurans	339.8597	30.54	3893.224	0.877	0.127		1.51	1.55	NO	12.6
	37	Total-pentafurans	339.8597	30.44	36002.875	0.877	1.173		1.34	1.55	NO	111.4
	2	12378-PeCDF	339.8597	30.23	42637.297	0.875	1.413	1.413	1.49	1.55	NO	134.5
	37	Total-pentafurans	339.8597	29.88	54281.027	0.877	1.769		1.47	1.55	NO	124.3
	37	Total-pentafurans	339.8597	29.77	4932.468	0.877	0.161		1.93	1.55	YES	17.2
	37	Total-pentafurans	339.8597	29.16	134304.742	0.877	4.377		1.52	1.55	NO	289.8
	37	Total-pentafurans	339.8597	28.97	17413.373	0.877	0.567		1.59	1.55	NO	44.5

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HF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	5	234678-HxCDF	373.8208	36.44	60685.963	1.088	2.156	2.156	1.19	1.24	NO	94.2
	38	Total-hexafurans	373.8208	36.39	44636.242	1.030	1.567		1.21	1.24	NO	86.2
	38	Total-hexafurans	373.8208	36.03	2306.057	1.030	0.081		1.01	1.24	YES	4.0
	38	Total-hexafurans	373.8208	35.82	4663.526	1.030	0.164		1.02	1.24	YES	8.6
	6	123678-HxCDF	373.8208	35.46	74921.524	1.025	2.476	2.476	1.25	1.24	NO	129.4
	4	123478-HxCDF	373.8208	35.32	155457.563	1.048	5.204	5.204	1.20	1.24	NO	251.8
	38	Total-hexafurans	373.8208	35.14	14174.112	1.030	0.498		1.05	1.24	YES	19.8
	38	Total-hexafurans	373.8208	34.65	1936146.875	1.030	67.988		1.19	1.24	NO	3329.5
	38	Total-hexafurans	373.8208	34.32	12597.363	1.030	0.442		1.20	1.24	NO	19.1
	38	Total-hexafurans	373.8208	34.06	1938.910	1.030	0.068		1.12	1.24	NO	3.0
	38	Total-hexafurans	373.8208	33.79	977146.281	1.030	34.312		1.19	1.24	NO	1615.2
	38	Total-hexafurans	373.8208	33.57	350875.282	1.030	12.321		1.18	1.24	NO	597.0
	7	123789-HxCDF	373.8208	37.51	50602.250	0.959	1.976	1.976	1.26	1.24	NO	99.2

HPF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	9	1234789-HpCDF	407.7818	42.31	104859.367	1.200	5.698	5.698	0.97	1.05	NO	108.1
	39	Total-heptafurans	407.7818	41.44	8249.243	1.207	0.393		1.17	1.05	NO	11.5
	39	Total-heptafurans	407.7818	40.42	4963299.750	1.207	236.608		1.01	1.05	NO	5812.2
	39	Total-heptafurans	407.7818	40.18	22879.505	1.207	1.091		1.07	1.05	NO	24.7
	39	Total-heptafurans	407.7818	40.11	14787.138	1.207	0.705		0.80	1.05	YES	23.4
	8	1234678-HpCDF	407.7818	39.63	1715234.500	1.215	72.735	72.735	1.01	1.05	NO	2132.7

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Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	25.15	15638.005	0.867	0.816		0.81	0.77	NO	25.6
	35	Total-tetrafurans	303.9016	24.97	13416.710	0.867	0.700		0.74	0.77	NO	21.3
	35	Total-tetrafurans	303.9016	24.84	4581.350	0.867	0.239		0.47	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	24.75	16887.209	0.867	0.881		0.75	0.77	NO	25.7
	35	Total-tetrafurans	303.9016	24.32	3180.887	0.867	0.166		0.68	0.77	NO	5.0
	35	Total-tetrafurans	303.9016	24.18	3752.508	0.867	0.196		0.77	0.77	NO	5.9
	35	Total-tetrafurans	303.9016	24.06	8966.796	0.867	0.468		0.57	0.77	YES	13.0
	35	Total-tetrafurans	303.9016	23.93	3085.100	0.867	0.161		0.49	0.77	YES	4.1
	35	Total-tetrafurans	303.9016	23.84	5441.606	0.867	0.284		0.83	0.77	NO	8.4
	35	Total-tetrafurans	303.9016	23.70	3201.411	0.867	0.167		0.84	0.77	NO	6.2
	35	Total-tetrafurans	303.9016	23.60	9933.940	0.867	0.519		0.67	0.77	NO	11.3
	35	Total-tetrafurans	303.9016	23.42	35020.525	0.867	1.828		0.81	0.77	NO	57.4
	35	Total-tetrafurans	303.9016	22.84	4576.714	0.867	0.239		0.98	0.77	YES	9.2
	35	Total-tetrafurans	303.9016	22.58	4416.103	0.867	0.231		0.58	0.77	YES	7.4
	35	Total-tetrafurans	303.9016	27.50	9746.739	0.867	0.509		0.80	0.77	NO	11.8
	35	Total-tetrafurans	303.9016	26.30	11483.159	0.867	0.599		0.69	0.77	NO	18.2
	35	Total-tetrafurans	303.9016	26.20	8960.199	0.867	0.468		0.84	0.77	NO	12.6
	1	2378-TCDF	303.9016	26.08	23235.196	0.867	1.213	1.213	0.68	0.77	NO	40.4
	35	Total-tetrafurans	303.9016	25.84	6774.478	0.867	0.354		1.09	0.77	YES	14.5
	35	Total-tetrafurans	303.9016	25.59	6693.536	0.867	0.349		0.89	0.77	YES	13.3
	37	Total-pentafurans	339.8597	28.87	5543.355	0.877	0.181		1.51	1.55	NO	18.8
	37	Total-pentafurans	339.8597	32.62	5338.731	0.877	0.174		1.47	1.55	NO	16.5
	3	23478-PeCDF	339.8597	31.59	46071.709	0.880	1.476	1.476	1.44	1.55	NO	150.6
	37	Total-pentafurans	339.8597	31.44	40317.251	0.877	1.314		1.51	1.55	NO	124.2
	37	Total-pentafurans	339.8597	31.31	12624.824	0.877	0.411		1.38	1.55	NO	39.4
	37	Total-pentafurans	339.8597	31.07	1089.782	0.877	0.036		3.20	1.55	YES	5.1
	37	Total-pentafurans	339.8597	30.54	3893.224	0.877	0.127		1.51	1.55	NO	12.6
	37	Total-pentafurans	339.8597	30.44	36002.875	0.877	1.173		1.34	1.55	NO	111.4
	2	12378-PeCDF	339.8597	30.23	42637.297	0.875	1.413	1.413	1.49	1.55	NO	134.5
	37	Total-pentafurans	339.8597	29.88	54281.027	0.877	1.769		1.47	1.55	NO	124.3
	37	Total-pentafurans	339.8597	29.77	4932.468	0.877	0.161		1.93	1.55	YES	17.2
	37	Total-pentafurans	339.8597	29.16	134304.742	0.877	4.377		1.52	1.55	NO	289.8
	37	Total-pentafurans	339.8597	28.97	17413.373	0.877	0.567		1.59	1.55	NO	44.5
	5	234678-HxCDF	373.8208	36.44	60685.963	1.088	2.156	2.156	1.19	1.24	NO	94.2
	38	Total-hexafurans	373.8208	36.39	44636.242	1.030	1.567		1.21	1.24	NO	86.2
	38	Total-hexafurans	373.8208	36.03	2306.057	1.030	0.081		1.01	1.24	YES	4.0
	38	Total-hexafurans	373.8208	35.82	4663.526	1.030	0.164		1.02	1.24	YES	8.6
	6	123678-HxCDF	373.8208	35.46	74921.524	1.025	2.476	2.476	1.25	1.24	NO	129.4
	4	123478-HxCDF	373.8208	35.32	155457.563	1.048	5.204	5.204	1.20	1.24	NO	251.8
	38	Total-hexafurans	373.8208	35.14	14174.112	1.030	0.498		1.05	1.24	YES	19.8
	38	Total-hexafurans	373.8208	34.65	1936146.875	1.030	67.988		1.19	1.24	NO	3329.5
	38	Total-hexafurans	373.8208	34.32	12597.363	1.030	0.442		1.20	1.24	NO	19.1
	38	Total-hexafurans	373.8208	34.06	1938.910	1.030	0.068		1.12	1.24	NO	3.0
	38	Total-hexafurans	373.8208	33.79	977146.281	1.030	34.312		1.19	1.24	NO	1615.2
	38	Total-hexafurans	373.8208	33.57	350875.282	1.030	12.321		1.18	1.24	NO	597.0
	7	123789-HxCDF	373.8208	37.51	50602.250	0.959	1.976	1.976	1.26	1.24	NO	99.2
	9	1234789-HpCDF	407.7818	42.31	104859.367	1.200	5.698	5.698	0.97	1.05	NO	108.1
	39	Total-heptafurans	407.7818	41.44	8249.243	1.207	0.393		1.17	1.05	NO	11.5
	39	Total-heptafurans	407.7818	40.42	4963299.750	1.207	236.608		1.01	1.05	NO	5812.2

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Furans,TF,PP,PF,HF,HPF,OF

	39	Total-heptafurans	407.7818	40.18	22879.505	1.207	1.091		1.07	1.05	NO	24.7
	39	Total-heptafurans	407.7818	40.11	14787.138	1.207	0.705		0.80	1.05	YES	23.4
	8	1234678-HpCDF	407.7818	39.63	1715234.500	1.215	72.735	72.735	1.01	1.05	NO	2132.7
	10	OCDF	441.7428	47.68	4739220.750	1.064	395.732	395....	0.87	0.89	NO	14446.8
	36	Total-penta1	339.8597	27.50	482864.360		15.050		1.55	1.55	NO	3610.4
	35	Total-tetrafurans	303.9016	25.90	5128.945	0.867	0.268		0.44	0.77	YES	10.8

TD

	41	Total-tetradioxins	319.8965	26.35	20784.148	0.994	1.061		0.76	0.77	NO	39.2
	41	Total-tetradioxins	319.8965	26.05	1758.344	0.994	0.090		1.04	0.77	YES	4.5
	41	Total-tetradioxins	319.8965	25.90	13725.132	0.994	0.700		0.78	0.77	NO	29.5
	41	Total-tetradioxins	319.8965	25.69	7270.850	0.994	0.371		0.58	0.77	YES	16.5
	41	Total-tetradioxins	319.8965	25.33	21523.793	0.994	1.099		0.79	0.77	NO	45.2
	41	Total-tetradioxins	319.8965	25.05	11146.097	0.994	0.569		0.68	0.77	NO	21.1
	41	Total-tetradioxins	319.8965	24.33	3669.930	0.994	0.187		1.08	0.77	YES	9.7
	41	Total-tetradioxins	319.8965	24.12	72443.646	0.994	3.697		0.76	0.77	NO	164.8
	41	Total-tetradioxins	319.8965	23.85	80936.805	0.994	4.131		0.75	0.77	NO	188.6
	41	Total-tetradioxins	319.8965	27.29	2345.873	0.994	0.120		0.52	0.77	YES	4.4
	41	Total-tetradioxins	319.8965	26.84	6775.582	0.994	0.346		0.73	0.77	NO	15.0
	11	2378-TCDD	319.8965	26.72	6703.346	0.994	0.342	0.288	0.58	0.77	YES	13.0

PD

	42	Total-pentadioxins	355.8546	32.24	9955.737	0.976	0.424		1.38	1.55	NO	37.3
	12	12378-PeCDD	355.8546	31.83	51893.813	0.976	2.211	2.211	1.52	1.55	NO	172.4
	42	Total-pentadioxins	355.8546	31.17	36281.933	0.976	1.546		1.35	1.55	NO	128.2
	42	Total-pentadioxins	355.8546	30.77	46890.762	0.976	1.998		1.51	1.55	NO	136.2
	42	Total-pentadioxins	355.8546	30.60	109982.434	0.976	4.687		1.62	1.55	NO	429.3
	42	Total-pentadioxins	355.8546	30.45	40116.624	0.976	1.710		1.53	1.55	NO	155.4
	42	Total-pentadioxins	355.8546	30.38	6826.105	0.976	0.291		1.38	1.55	NO	30.7
	42	Total-pentadioxins	355.8546	30.24	109762.906	0.976	4.677		1.53	1.55	NO	421.7
	42	Total-pentadioxins	355.8546	29.62	51110.306	0.976	2.178		1.54	1.55	NO	195.7
	42	Total-pentadioxins	355.8546	29.13	150453.367	0.976	6.411		1.52	1.55	NO	374.9

HD

	15	123789-HxCDD	389.8157	37.14	197877.844	0.914	8.682	8.682	1.23	1.24	NO	266.6
	43	Total-hexadioxins	389.8157	36.89	105698.383	0.928	4.570		1.24	1.24	NO	140.8
	14	123678-HxCDD	389.8157	36.70	509521.672	0.902	22.106	22.106	1.21	1.24	NO	669.4
	13	123478-HxCDD	389.8157	36.57	95468.012	0.967	4.062	4.062	1.24	1.24	NO	122.9
	43	Total-hexadioxins	389.8157	35.70	416267.109	0.928	17.998		1.27	1.24	NO	566.4
	43	Total-hexadioxins	389.8157	35.58	2293194.375	0.928	99.150		1.23	1.24	NO	1776.8
	43	Total-hexadioxins	389.8157	35.19	554464.234	0.928	23.973		1.24	1.24	NO	732.5
	43	Total-hexadioxins	389.8157	34.38	3510574.500	0.928	151.785		1.24	1.24	NO	4628.2

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HPD

	16	1234678-HpCDD	423.7766	41.43	17316419....	0.999	855.999	855....	1.03	1.05	NO	12272.0
	44	Total-heptadioxins	423.7766	40.18	47523708....	0.999	2349.2...		1.03	1.05	NO	35109.0

Dioxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	26.35	20784.148	0.994	1.061		0.76	0.77	NO	39.2
	41	Total-tetradioxins	319.8965	26.05	1758.344	0.994	0.090		1.04	0.77	YES	4.5
	41	Total-tetradioxins	319.8965	25.90	13725.132	0.994	0.700		0.78	0.77	NO	29.5
	41	Total-tetradioxins	319.8965	25.69	7270.850	0.994	0.371		0.58	0.77	YES	16.5
	41	Total-tetradioxins	319.8965	25.33	21523.793	0.994	1.099		0.79	0.77	NO	45.2
	41	Total-tetradioxins	319.8965	25.05	11146.097	0.994	0.569		0.68	0.77	NO	21.1
	41	Total-tetradioxins	319.8965	24.33	3669.930	0.994	0.187		1.08	0.77	YES	9.7
	41	Total-tetradioxins	319.8965	24.12	72443.646	0.994	3.697		0.76	0.77	NO	164.8
	41	Total-tetradioxins	319.8965	23.85	80936.805	0.994	4.131		0.75	0.77	NO	188.6
	41	Total-tetradioxins	319.8965	27.29	2345.873	0.994	0.120		0.52	0.77	YES	4.4
	41	Total-tetradioxins	319.8965	26.84	6775.582	0.994	0.346		0.73	0.77	NO	15.0
	11	2378-TCDD	319.8965	26.72	6703.346	0.994	0.342	0.288	0.58	0.77	YES	13.0
	42	Total-pentadioxins	355.8546	32.24	9955.737	0.976	0.424		1.38	1.55	NO	37.3
	12	12378-PeCDD	355.8546	31.83	51893.813	0.976	2.211	2.211	1.52	1.55	NO	172.4
	42	Total-pentadioxins	355.8546	31.17	36281.933	0.976	1.546		1.35	1.55	NO	128.2
	42	Total-pentadioxins	355.8546	30.77	46890.762	0.976	1.998		1.51	1.55	NO	136.2
	42	Total-pentadioxins	355.8546	30.60	109982.434	0.976	4.687		1.62	1.55	NO	429.3
	42	Total-pentadioxins	355.8546	30.45	40116.624	0.976	1.710		1.53	1.55	NO	155.4
	42	Total-pentadioxins	355.8546	30.38	6826.105	0.976	0.291		1.38	1.55	NO	30.7
	42	Total-pentadioxins	355.8546	30.24	109762.906	0.976	4.677		1.53	1.55	NO	421.7
	42	Total-pentadioxins	355.8546	29.62	51110.306	0.976	2.178		1.54	1.55	NO	195.7
	42	Total-pentadioxins	355.8546	29.13	150453.367	0.976	6.411		1.52	1.55	NO	374.9
	15	123789-HxCDD	389.8157	37.14	197877.844	0.914	8.682	8.682	1.23	1.24	NO	266.6
	43	Total-hexadioxins	389.8157	36.89	105698.383	0.928	4.570		1.24	1.24	NO	140.8
	14	123678-HxCDD	389.8157	36.70	509521.672	0.902	22.106	22.106	1.21	1.24	NO	669.4
	13	123478-HxCDD	389.8157	36.57	95468.012	0.967	4.062	4.062	1.24	1.24	NO	122.9
	43	Total-hexadioxins	389.8157	35.70	416267.109	0.928	17.998		1.27	1.24	NO	566.4
	43	Total-hexadioxins	389.8157	35.58	2293194.375	0.928	99.150		1.23	1.24	NO	1776.8
	43	Total-hexadioxins	389.8157	35.19	554464.234	0.928	23.973		1.24	1.24	NO	732.5
	43	Total-hexadioxins	389.8157	34.38	3510574.500	0.928	151.785		1.24	1.24	NO	4628.2
	17	OCDD	457.7377	47.42	75592992....	0.979	6861.2...	6861...	0.89	0.89	NO	89483.0
	16	1234678-HpCDD	423.7766	41.43	17316419....	0.999	855.999	855....	1.03	1.05	NO	12272.0
	44	Total-heptadioxins	423.7766	40.18	47523708....	0.999	2349.2...		1.03	1.05	NO	35109.0

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TotalTEQ,Furans,Dioxins

	35	Total-tetrafurans	303.9016	25.15	15638.005	0.867	0.816		0.81	0.77	NO	25.6
	35	Total-tetrafurans	303.9016	24.97	13416.710	0.867	0.700		0.74	0.77	NO	21.3
	35	Total-tetrafurans	303.9016	24.84	4581.350	0.867	0.239		0.47	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	24.75	16887.209	0.867	0.881		0.75	0.77	NO	25.7
	35	Total-tetrafurans	303.9016	24.32	3180.887	0.867	0.166		0.68	0.77	NO	5.0
	35	Total-tetrafurans	303.9016	24.18	3752.508	0.867	0.196		0.77	0.77	NO	5.9
	35	Total-tetrafurans	303.9016	24.06	8966.796	0.867	0.468		0.57	0.77	YES	13.0
	35	Total-tetrafurans	303.9016	23.93	3085.100	0.867	0.161		0.49	0.77	YES	4.1
	35	Total-tetrafurans	303.9016	23.84	5441.606	0.867	0.284		0.83	0.77	NO	8.4
	35	Total-tetrafurans	303.9016	23.70	3201.411	0.867	0.167		0.84	0.77	NO	6.2
	35	Total-tetrafurans	303.9016	23.60	9933.940	0.867	0.519		0.67	0.77	NO	11.3
	35	Total-tetrafurans	303.9016	23.42	35020.525	0.867	1.828		0.81	0.77	NO	57.4
	35	Total-tetrafurans	303.9016	22.84	4576.714	0.867	0.239		0.98	0.77	YES	9.2
	35	Total-tetrafurans	303.9016	22.58	4416.103	0.867	0.231		0.58	0.77	YES	7.4
	35	Total-tetrafurans	303.9016	27.50	9746.739	0.867	0.509		0.80	0.77	NO	11.8
	35	Total-tetrafurans	303.9016	26.30	11483.159	0.867	0.599		0.69	0.77	NO	18.2
	35	Total-tetrafurans	303.9016	26.20	8960.199	0.867	0.468		0.84	0.77	NO	12.6
	1	2378-TCDF	303.9016	26.08	23235.196	0.867	1.213	1.213	0.68	0.77	NO	40.4
	35	Total-tetrafurans	303.9016	25.84	6774.478	0.867	0.354		1.09	0.77	YES	14.5
	35	Total-tetrafurans	303.9016	25.59	6693.536	0.867	0.349		0.89	0.77	YES	13.3
	37	Total-pentafurans	339.8597	28.87	5543.355	0.877	0.181		1.51	1.55	NO	18.8
	37	Total-pentafurans	339.8597	32.62	5338.731	0.877	0.174		1.47	1.55	NO	16.5
	3	23478-PeCDF	339.8597	31.59	46071.709	0.880	1.476	1.476	1.44	1.55	NO	150.6
	37	Total-pentafurans	339.8597	31.44	40317.251	0.877	1.314		1.51	1.55	NO	124.2
	37	Total-pentafurans	339.8597	31.31	12624.824	0.877	0.411		1.38	1.55	NO	39.4
	37	Total-pentafurans	339.8597	31.07	1089.782	0.877	0.036		3.20	1.55	YES	5.1
	37	Total-pentafurans	339.8597	30.54	3893.224	0.877	0.127		1.51	1.55	NO	12.6
	37	Total-pentafurans	339.8597	30.44	36002.875	0.877	1.173		1.34	1.55	NO	111.4
	2	12378-PeCDF	339.8597	30.23	42637.297	0.875	1.413	1.413	1.49	1.55	NO	134.5
	37	Total-pentafurans	339.8597	29.88	54281.027	0.877	1.769		1.47	1.55	NO	124.3
	37	Total-pentafurans	339.8597	29.77	4932.468	0.877	0.161		1.93	1.55	YES	17.2
	37	Total-pentafurans	339.8597	29.16	134304.742	0.877	4.377		1.52	1.55	NO	289.8
	37	Total-pentafurans	339.8597	28.97	17413.373	0.877	0.567		1.59	1.55	NO	44.5
	5	234678-HxCDF	373.8208	36.44	60685.963	1.088	2.156	2.156	1.19	1.24	NO	94.2
	38	Total-hexafurans	373.8208	36.39	44636.242	1.030	1.567		1.21	1.24	NO	86.2
	38	Total-hexafurans	373.8208	36.03	2306.057	1.030	0.081		1.01	1.24	YES	4.0
	38	Total-hexafurans	373.8208	35.82	4663.526	1.030	0.164		1.02	1.24	YES	8.6
	6	123678-HxCDF	373.8208	35.46	74921.524	1.025	2.476	2.476	1.25	1.24	NO	129.4
	4	123478-HxCDF	373.8208	35.32	155457.563	1.048	5.204	5.204	1.20	1.24	NO	251.8
	38	Total-hexafurans	373.8208	35.14	14174.112	1.030	0.498		1.05	1.24	YES	19.8
	38	Total-hexafurans	373.8208	34.65	1936146.875	1.030	67.988		1.19	1.24	NO	3329.5
	38	Total-hexafurans	373.8208	34.32	12597.363	1.030	0.442		1.20	1.24	NO	19.1
	38	Total-hexafurans	373.8208	34.06	1938.910	1.030	0.068		1.12	1.24	NO	3.0
	38	Total-hexafurans	373.8208	33.79	977146.281	1.030	34.312		1.19	1.24	NO	1615.2
	38	Total-hexafurans	373.8208	33.57	350875.282	1.030	12.321		1.18	1.24	NO	597.0
	7	123789-HxCDF	373.8208	37.51	50602.250	0.959	1.976	1.976	1.26	1.24	NO	99.2
	9	1234789-HpCDF	407.7818	42.31	104859.367	1.200	5.698	5.698	0.97	1.05	NO	108.1
	39	Total-heptafurans	407.7818	41.44	8249.243	1.207	0.393		1.17	1.05	NO	11.5
	39	Total-heptafurans	407.7818	40.42	4963299.750	1.207	236.608		1.01	1.05	NO	5812.2

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TotalTEQ,Furans,Dioxins

	Name					pg	pg				
39	Total-heptafurans	407.7818	40.18	22879.505	1.207	1.091		1.07	1.05	NO	24.7
39	Total-heptafurans	407.7818	40.11	14787.138	1.207	0.705		0.80	1.05	YES	23.4
8	1234678-HpCDF	407.7818	39.63	1715234.500	1.215	72.735	72.735	1.01	1.05	NO	2132.7
10	OCDF	441.7428	47.68	4739220.750	1.064	395.732	395....	0.87	0.89	NO	14446.8
36	Total-penta1	339.8597	27.50	482864.360		15.050		1.55	1.55	NO	3610.4
35	Total-tetrafurans	303.9016	25.90	5128.945	0.867	0.268		0.44	0.77	YES	10.8
41	Total-tetradioxins	319.8965	26.35	20784.148	0.994	1.061		0.76	0.77	NO	39.2
41	Total-tetradioxins	319.8965	26.05	1758.344	0.994	0.090		1.04	0.77	YES	4.5
41	Total-tetradioxins	319.8965	25.90	13725.132	0.994	0.700		0.78	0.77	NO	29.5
41	Total-tetradioxins	319.8965	25.69	7270.850	0.994	0.371		0.58	0.77	YES	16.5
41	Total-tetradioxins	319.8965	25.33	21523.793	0.994	1.099		0.79	0.77	NO	45.2
41	Total-tetradioxins	319.8965	25.05	11146.097	0.994	0.569		0.68	0.77	NO	21.1
41	Total-tetradioxins	319.8965	24.33	3669.930	0.994	0.187		1.08	0.77	YES	9.7
41	Total-tetradioxins	319.8965	24.12	72443.646	0.994	3.697		0.76	0.77	NO	164.8
41	Total-tetradioxins	319.8965	23.85	80936.805	0.994	4.131		0.75	0.77	NO	188.6
41	Total-tetradioxins	319.8965	27.29	2345.873	0.994	0.120		0.52	0.77	YES	4.4
41	Total-tetradioxins	319.8965	26.84	6775.582	0.994	0.346		0.73	0.77	NO	15.0
11	2378-TCDD	319.8965	26.72	6703.346	0.994	0.342	0.288	0.58	0.77	YES	13.0
42	Total-pentadioxins	355.8546	32.24	9955.737	0.976	0.424		1.38	1.55	NO	37.3
12	12378-PeCDD	355.8546	31.83	51893.813	0.976	2.211	2.211	1.52	1.55	NO	172.4
42	Total-pentadioxins	355.8546	31.17	36281.933	0.976	1.546		1.35	1.55	NO	128.2
42	Total-pentadioxins	355.8546	30.77	46890.762	0.976	1.998		1.51	1.55	NO	136.2
42	Total-pentadioxins	355.8546	30.60	109982.434	0.976	4.687		1.62	1.55	NO	429.3
42	Total-pentadioxins	355.8546	30.45	40116.624	0.976	1.710		1.53	1.55	NO	155.4
42	Total-pentadioxins	355.8546	30.38	6826.105	0.976	0.291		1.38	1.55	NO	30.7
42	Total-pentadioxins	355.8546	30.24	109762.906	0.976	4.677		1.53	1.55	NO	421.7
42	Total-pentadioxins	355.8546	29.62	51110.306	0.976	2.178		1.54	1.55	NO	195.7
42	Total-pentadioxins	355.8546	29.13	150453.367	0.976	6.411		1.52	1.55	NO	374.9
15	123789-HxCDD	389.8157	37.14	197877.844	0.914	8.682	8.682	1.23	1.24	NO	266.6
43	Total-hexadioxins	389.8157	36.89	105698.383	0.928	4.570		1.24	1.24	NO	140.8
14	123678-HxCDD	389.8157	36.70	509521.672	0.902	22.106	22.106	1.21	1.24	NO	669.4
13	123478-HxCDD	389.8157	36.57	95468.012	0.967	4.062	4.062	1.24	1.24	NO	122.9
43	Total-hexadioxins	389.8157	35.70	416267.109	0.928	17.998		1.27	1.24	NO	566.4
43	Total-hexadioxins	389.8157	35.58	2293194.375	0.928	99.150		1.23	1.24	NO	1776.8
43	Total-hexadioxins	389.8157	35.19	554464.234	0.928	23.973		1.24	1.24	NO	732.5
43	Total-hexadioxins	389.8157	34.38	3510574.500	0.928	151.785		1.24	1.24	NO	4628.2
17	OCDD	457.7377	47.42	75592992....	0.979	6861.2...	6861...	0.89	0.89	NO	89483.0
16	1234678-HpCDD	423.7766	41.43	17316419....	0.999	855.999	855....	1.03	1.05	NO	12272.0
44	Total-heptadioxins	423.7766	40.18	47523708....	0.999	2349.2...		1.03	1.05	NO	35109.0

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PFK1

	48	FUNCTION1 PFK	330.9792	22.06	0.000					1.1
	48	FUNCTION1 PFK	330.9792	21.92	0.000					1.4
	48	FUNCTION1 PFK	330.9792	21.83	0.000					1.1
	48	FUNCTION1 PFK	330.9792	21.57	0.000					2.0
	48	FUNCTION1 PFK	330.9792	21.31	0.000					1.8
	48	FUNCTION1 PFK	330.9792	21.12	0.000					0.5
	48	FUNCTION1 PFK	330.9792	26.44	0.000					1.9
	48	FUNCTION1 PFK	330.9792	25.78	0.000					2.2
	48	FUNCTION1 PFK	330.9792	25.69	0.000					1.6
	48	FUNCTION1 PFK	330.9792	25.59	0.000					8.9
	48	FUNCTION1 PFK	330.9792	25.35	0.000					0.8
	48	FUNCTION1 PFK	330.9792	25.15	0.000					1.6
	48	FUNCTION1 PFK	330.9792	24.69	0.000					3.2
	48	FUNCTION1 PFK	330.9792	24.54	0.000					2.2
	48	FUNCTION1 PFK	330.9792	24.39	0.000					0.5
	48	FUNCTION1 PFK	330.9792	23.82	0.000					2.0
	48	FUNCTION1 PFK	330.9792	23.48	0.000					2.0
	48	FUNCTION1 PFK	330.9792	23.24	0.000					1.5
	48	FUNCTION1 PFK	330.9792	22.93	0.000					1.9
	48	FUNCTION1 PFK	330.9792	22.75	0.000					3.4
	48	FUNCTION1 PFK	330.9792	22.52	0.000					1.8
	48	FUNCTION1 PFK	330.9792	22.27	0.000					1.2
	48	FUNCTION1 PFK	330.9792	28.08	0.000					2.1
	48	FUNCTION1 PFK	330.9792	27.87	0.000					1.1
	48	FUNCTION1 PFK	330.9792	27.75	0.000					4.6
	48	FUNCTION1 PFK	330.9792	27.69	0.000					3.9
	48	FUNCTION1 PFK	330.9792	27.45	0.000					0.3
	48	FUNCTION1 PFK	330.9792	27.05	0.000					4.3
	48	FUNCTION1 PFK	330.9792	26.87	0.000					3.1
	48	FUNCTION1 PFK	330.9792	26.77	0.000					1.1
	48	FUNCTION1 PFK	330.9792	26.54	0.000					1.9

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PFK2

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	49	FUNCTION2 PFK	366.9792	30.18	0.000	0.000						2.0
	49	FUNCTION2 PFK	366.9792	29.81	0.000	0.000						1.0
	49	FUNCTION2 PFK	366.9792	29.44	0.000	0.000						1.1
	49	FUNCTION2 PFK	366.9792	28.85	0.000	0.000						0.9
	49	FUNCTION2 PFK	366.9792	28.70	0.000	0.000						5.4
	49	FUNCTION2 PFK	366.9792	28.40	0.000	0.000						21.0
	49	FUNCTION2 PFK	366.9792	32.97	0.000	0.000						1.0
	49	FUNCTION2 PFK	366.9792	32.32	0.000	0.000						1.8
	49	FUNCTION2 PFK	366.9792	31.82	0.000	0.000						1.1
	49	FUNCTION2 PFK	366.9792	31.63	0.000	0.000						2.0
	49	FUNCTION2 PFK	366.9792	31.30	0.000	0.000						1.7
	49	FUNCTION2 PFK	366.9792	31.03	0.000	0.000						1.3
	49	FUNCTION2 PFK	366.9792	30.73	0.000	0.000						0.8
	49	FUNCTION2 PFK	366.9792	30.54	0.000	0.000						0.9
	49	FUNCTION2 PFK	366.9792	30.42	0.000	0.000						2.4
	49	FUNCTION2 PFK	366.9792	30.22	0.000	0.000						1.7

PFK3

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	50	FUNCTION3 PFK	380.9760	37.58	0.000	0.000						23.1
	50	FUNCTION3 PFK	380.9760	37.39	0.000	0.000						23.2
	50	FUNCTION3 PFK	380.9760	36.50	0.000	0.000						4.9
	50	FUNCTION3 PFK	380.9760	35.76	0.000	0.000						5.2
	50	FUNCTION3 PFK	380.9760	33.68	0.000	0.000						4.9
	50	FUNCTION3 PFK	380.9760	37.72	0.000	0.000						18.4

PFK4

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	51	FUNCTION4 PFK	430.9728	39.39	0.000							7.2
	51	FUNCTION4 PFK	430.9728	39.24	0.000							7.6

PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R...	S/N

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	ng	EMPC	1° Ratio	2° Ratio	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	27.26	0.000	0.000						2.6
	53	FUNCTION1 HXCD...	375.8364	26.69	0.000	0.000						2.1
	53	FUNCTION1 HXCD...	375.8364	26.11	0.000	0.000						3.1
	53	FUNCTION1 HXCD...	375.8364	25.88	0.000	0.000						5.4
	53	FUNCTION1 HXCD...	375.8364	24.90	0.000	0.000						4.0
	53	FUNCTION1 HXCD...	375.8364	23.93	0.000	0.000						9.1
	53	FUNCTION1 HXCD...	375.8364	23.73	0.000	0.000						4.0

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ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF %	Δ	EMPC	1° Ratio	2° Ratio	Δ Rts	S/N
	54	FUNCTION1 HPCD...	409.7974	24.78	0.000	0.000						4.5

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF %	Δ	EMPC	1° Ratio	2° Ratio	Δ Rts	S/N
	55	FUNCTION2 HPCD...	409.7974	32.77	0.000	0.000						2.5
	55	FUNCTION2 HPCD...	409.7974	32.56	0.000	0.000						2.2
	55	FUNCTION2 HPCD...	409.7974	32.49	0.000	0.000						1.7
	55	FUNCTION2 HPCD...	409.7974	31.52	0.000	0.000						2.4
	55	FUNCTION2 HPCD...	409.7974	31.10	0.000	0.000						1.1
	55	FUNCTION2 HPCD...	409.7974	30.27	0.000	0.000						2.8
	55	FUNCTION2 HPCD...	409.7974	30.19	0.000	0.000						5.9
	55	FUNCTION2 HPCD...	409.7974	29.87	0.000	0.000						5.3
	55	FUNCTION2 HPCD...	409.7974	29.84	0.000	0.000						1.4
	55	FUNCTION2 HPCD...	409.7974	29.28	0.000	0.000						1.2

ETHERS4

	#	Name	Trace	RT	Abs Resp	RRF %	Δ	EMPC	1° Ratio	2° Ratio	Δ Rts	S/N
	56	FUNCTION3 OCDPE	445.7555	35.27	0.000	0.000						3.4
	56	FUNCTION3 OCDPE	445.7555	35.22	0.000	0.000						6.4
	56	FUNCTION3 OCDPE	445.7555	35.02	0.000	0.000						2.2
	56	FUNCTION3 OCDPE	445.7555	34.98	0.000	0.000						2.9
	56	FUNCTION3 OCDPE	445.7555	34.74	0.000	0.000						1.2
	56	FUNCTION3 OCDPE	445.7555	37.68	0.000	0.000						2.3
	56	FUNCTION3 OCDPE	445.7555	37.64	0.000	0.000						2.4
	56	FUNCTION3 OCDPE	445.7555	37.36	0.000	0.000						3.0
	56	FUNCTION3 OCDPE	445.7555	37.17	0.000	0.000						5.4
	56	FUNCTION3 OCDPE	445.7555	36.98	0.000	0.000						3.8
	56	FUNCTION3 OCDPE	445.7555	36.88	0.000	0.000						5.4
	56	FUNCTION3 OCDPE	445.7555	36.77	0.000	0.000						4.3
	56	FUNCTION3 OCDPE	445.7555	36.72	0.000	0.000						4.4
	56	FUNCTION3 OCDPE	445.7555	36.62	0.000	0.000						2.7
	56	FUNCTION3 OCDPE	445.7555	36.56	0.000	0.000						2.9
	56	FUNCTION3 OCDPE	445.7555	36.53	0.000	0.000						7.6
	56	FUNCTION3 OCDPE	445.7555	36.45	0.000	0.000						4.8
	56	FUNCTION3 OCDPE	445.7555	36.33	0.000	0.000						3.9
	56	FUNCTION3 OCDPE	445.7555	36.15	0.000	0.000						2.3
	56	FUNCTION3 OCDPE	445.7555	35.32	0.000	0.000						2.8

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

D: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

THERS5

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	57	FUNCTION4 NCDPE	479.7165	42.89	0.000		0.000					3.8
	57	FUNCTION4 NCDPE	479.7165	42.65	0.000		0.000					2.1
	57	FUNCTION4 NCDPE	479.7165	41.65	0.000		0.000					3.4
	57	FUNCTION4 NCDPE	479.7165	41.58	0.000		0.000					4.2
	57	FUNCTION4 NCDPE	479.7165	41.42	0.000		0.000					30.9
	57	FUNCTION4 NCDPE	479.7165	41.38	0.000		0.000					24.1
	57	FUNCTION4 NCDPE	479.7165	41.17	0.000		0.000					7.1
	57	FUNCTION4 NCDPE	479.7165	41.02	0.000		0.000					8.2
	57	FUNCTION4 NCDPE	479.7165	39.17	0.000		0.000					129.6

THERS6

	#	Name	Trace	RT	Abs Resp	RRF M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	58	FUNCTION5 DCDPE	513.6775	47.60	0.000		0.000					3.1
	58	FUNCTION5 DCDPE	513.6775	47.55	0.000		0.000					4.3
	58	FUNCTION5 DCDPE	513.6775	47.43	0.000		0.000					6.2
	58	FUNCTION5 DCDPE	513.6775	47.38	0.000		0.000					4.0

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

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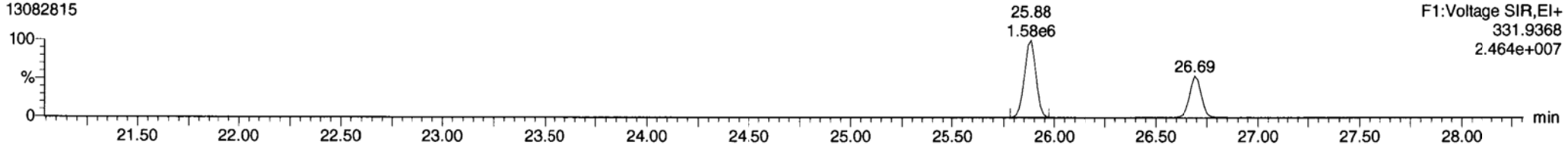
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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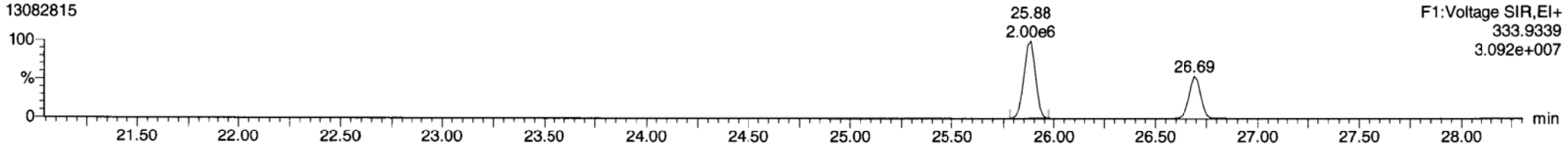

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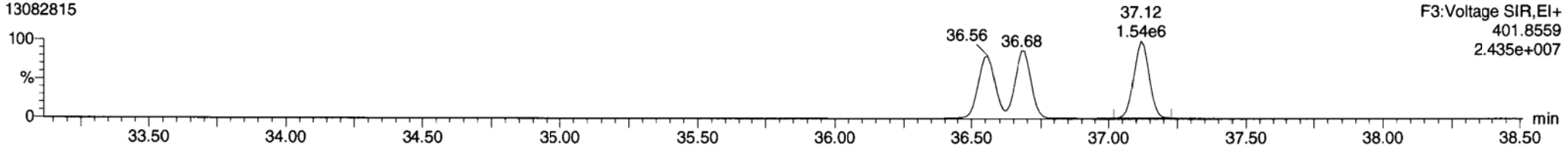

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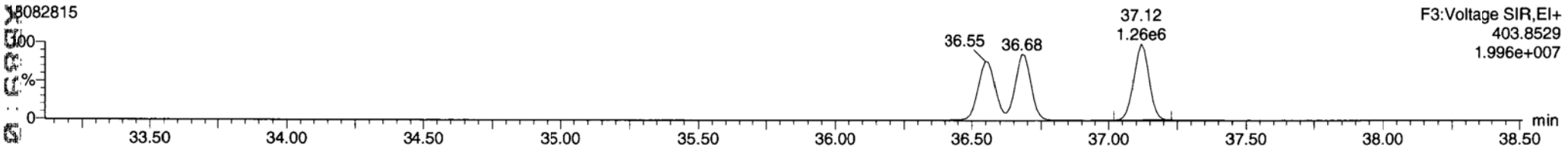

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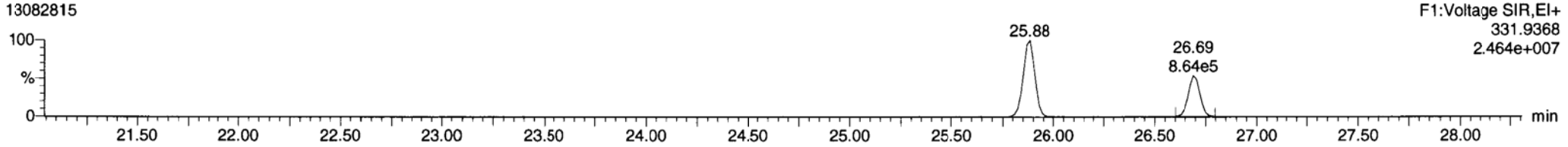
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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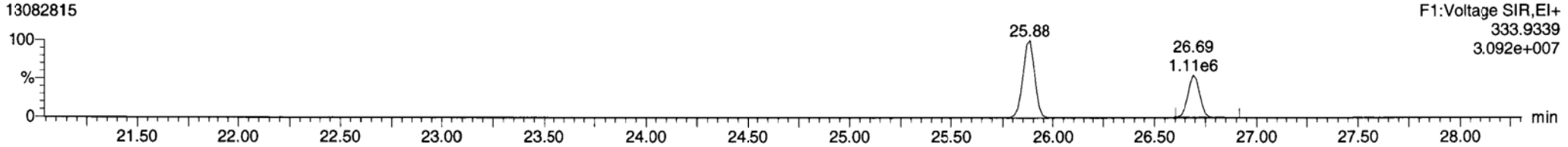

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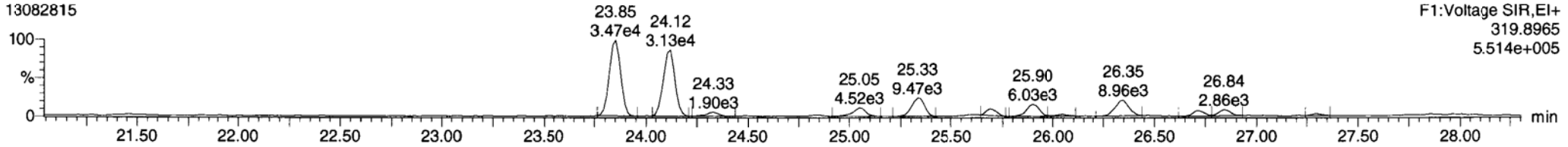
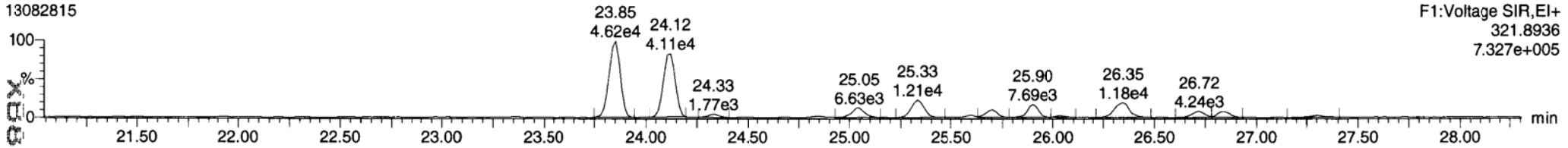
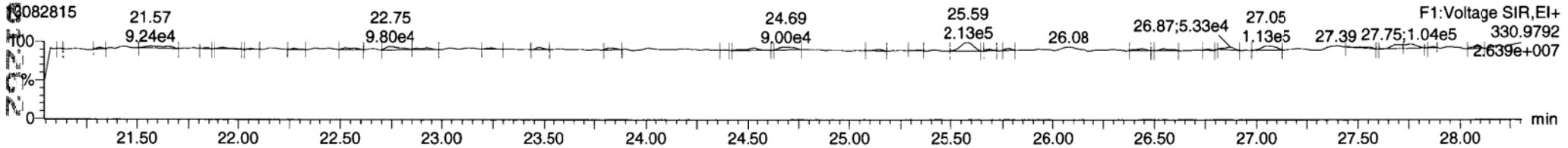


Total-tetradioxins



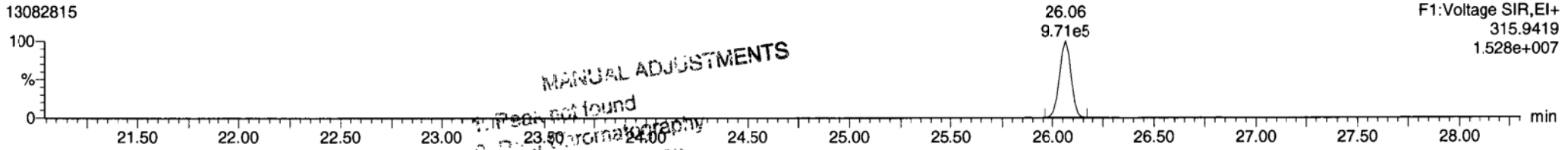
FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



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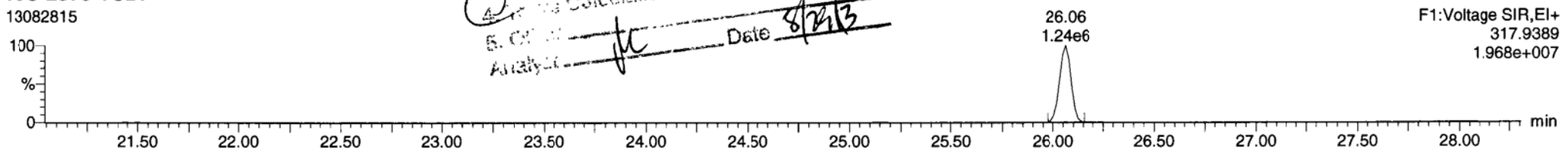
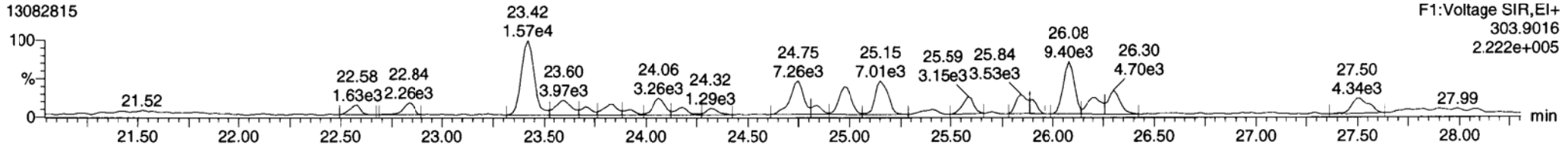
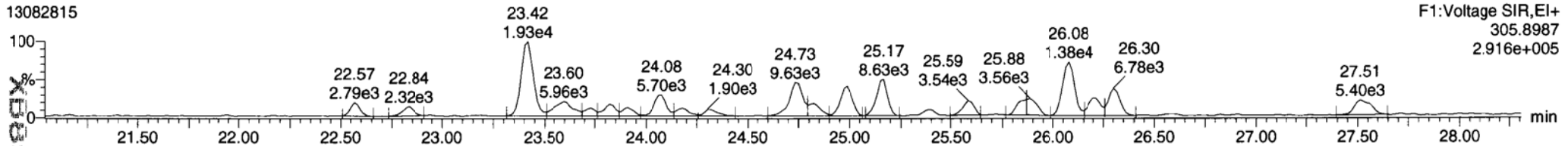


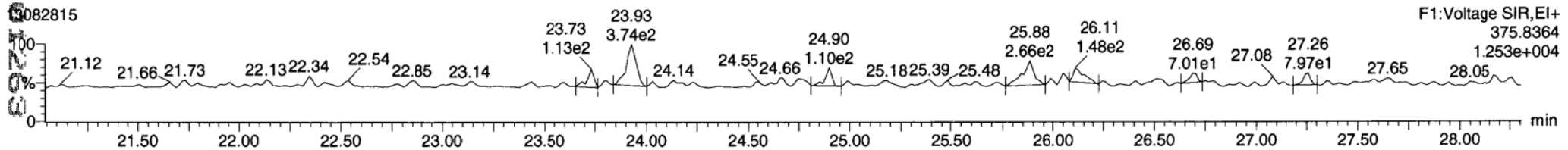
Total-tetrafurans



Total-tetrafurans



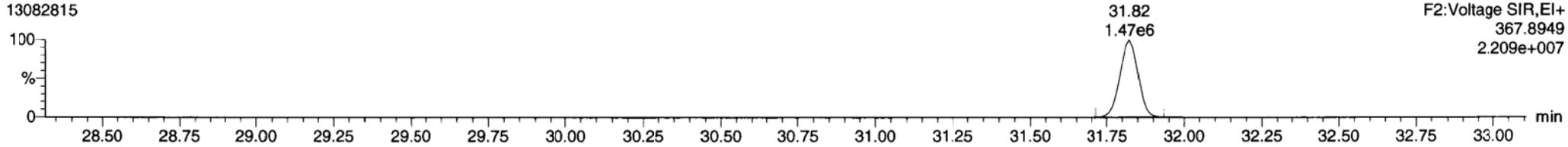
FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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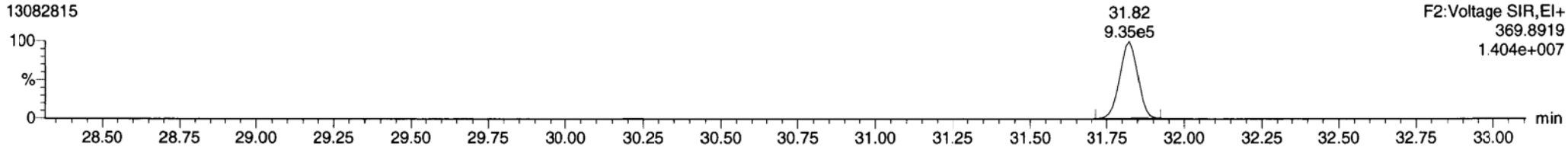
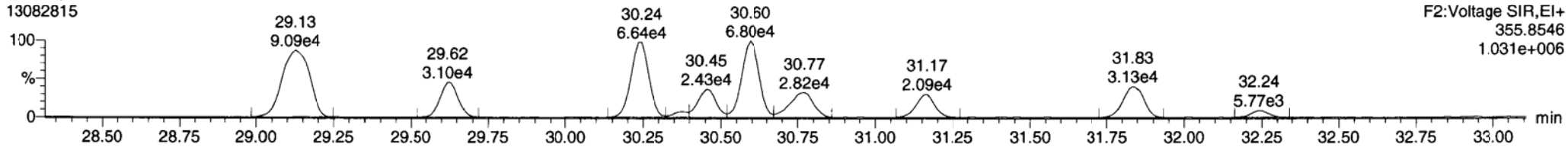
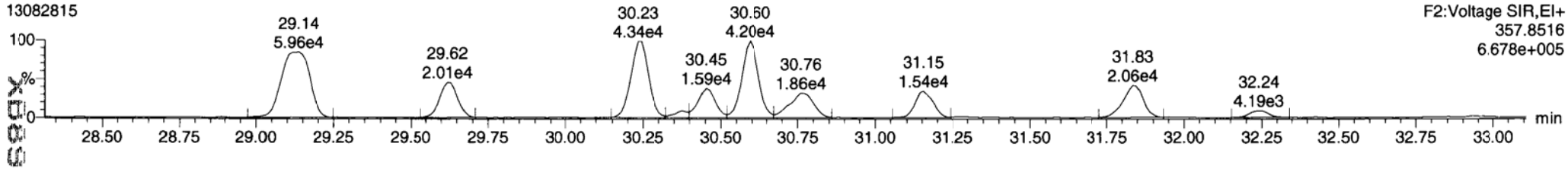


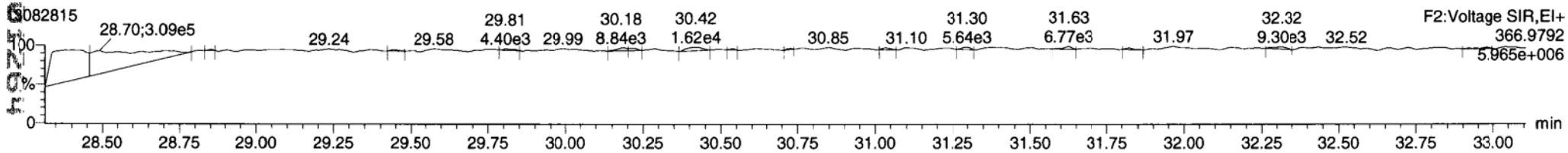
Total-pentadioxins



Total-pentadioxins



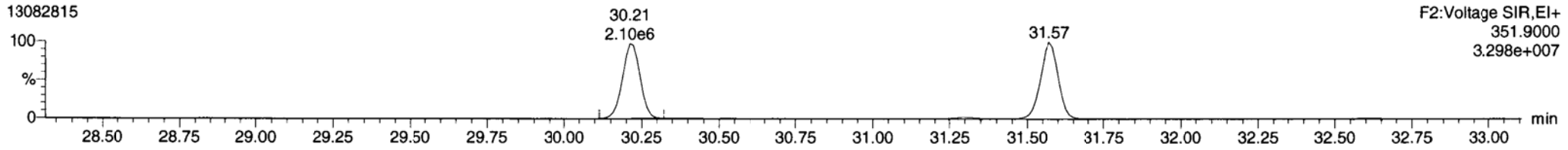
FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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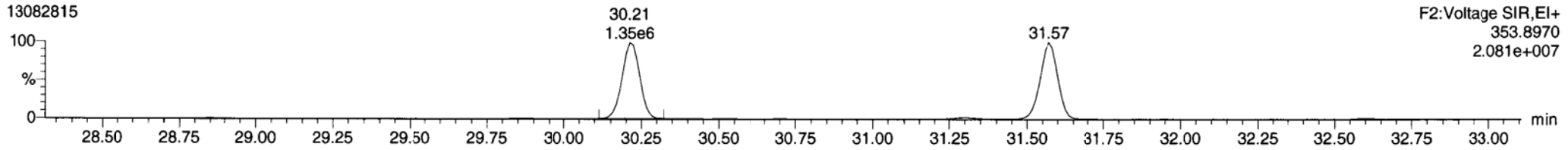
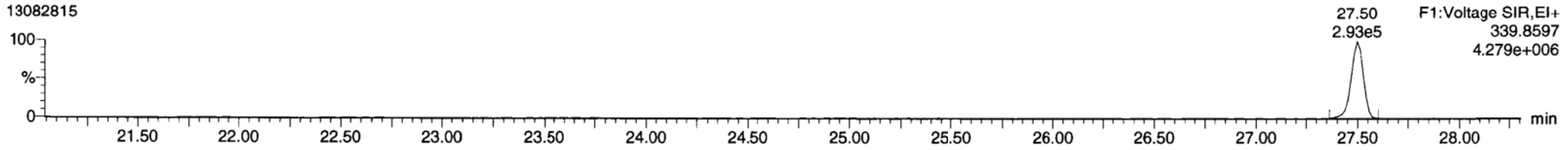
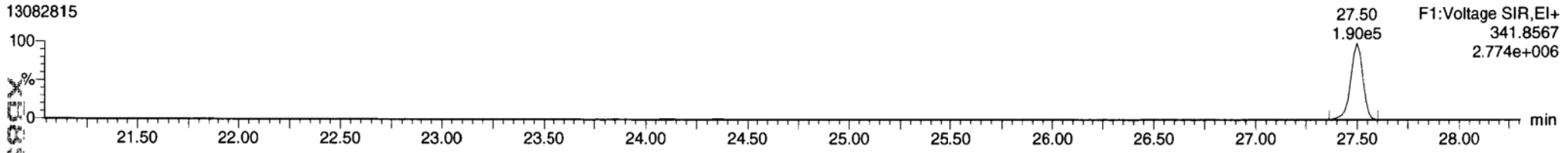


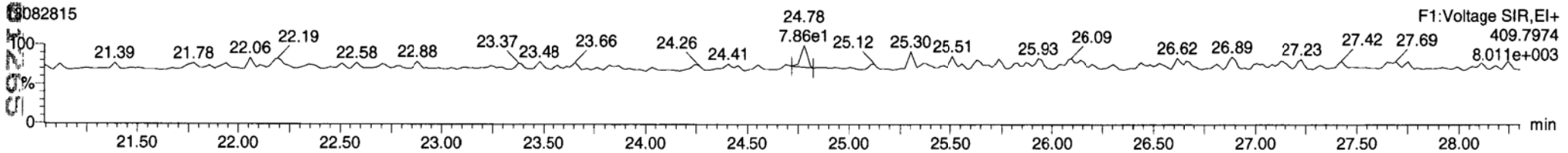
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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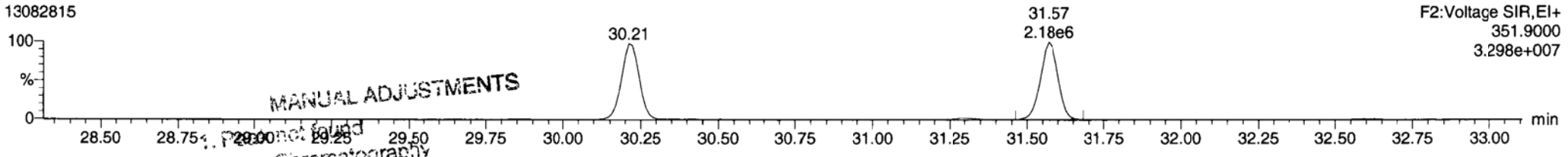
13C-23478-PeCDF



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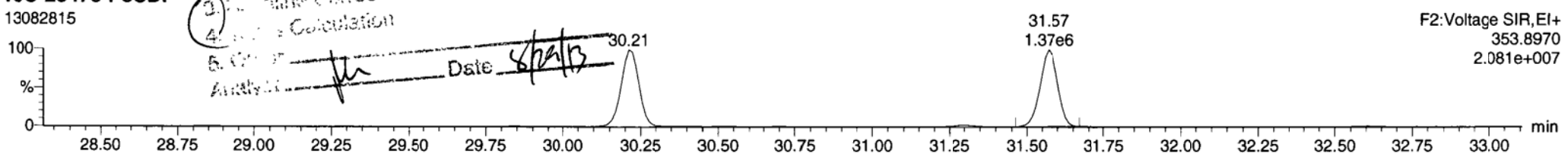
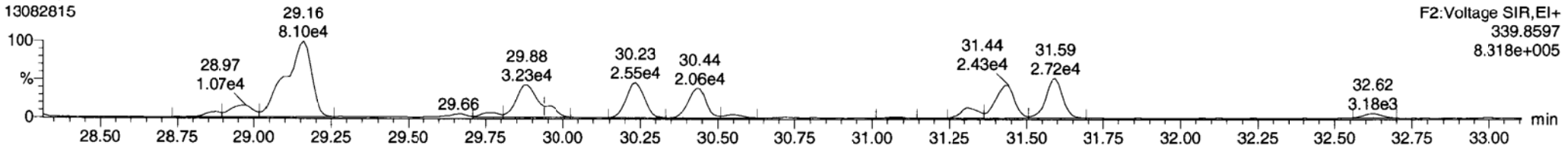
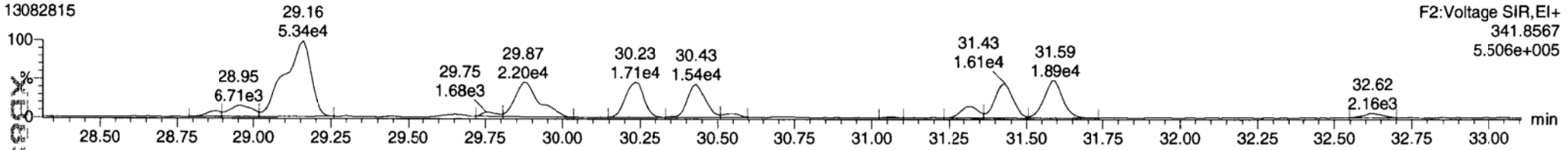


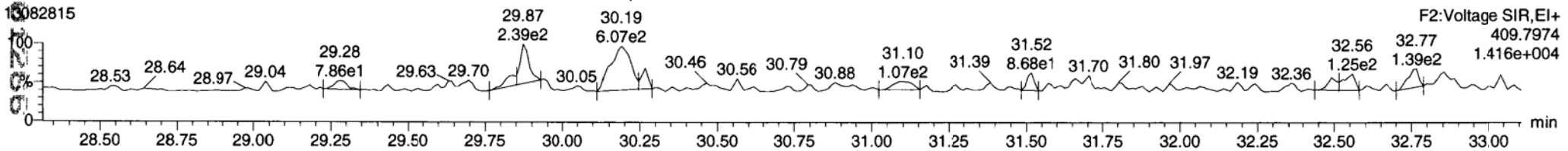
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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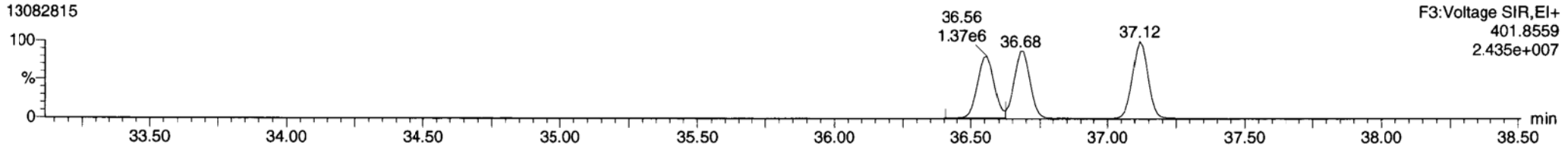
13C-123478-HxCDD



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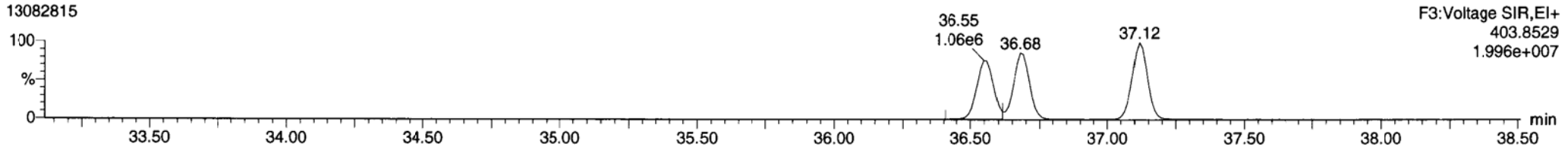
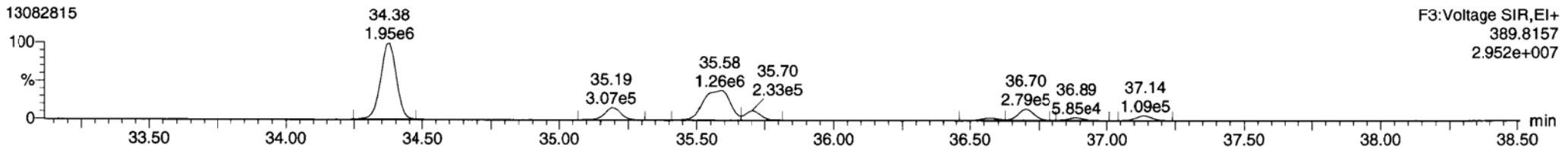
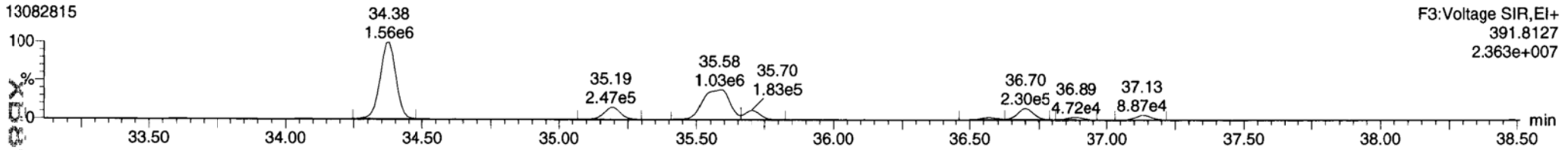


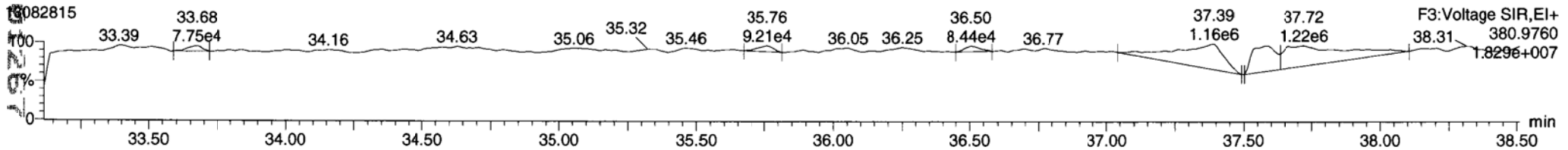
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

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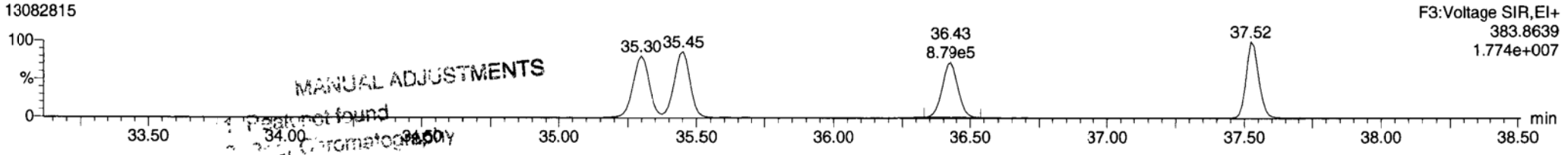
13C-234678-HxCDF



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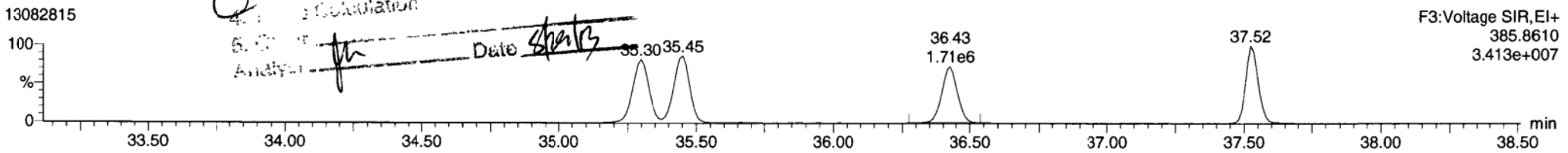
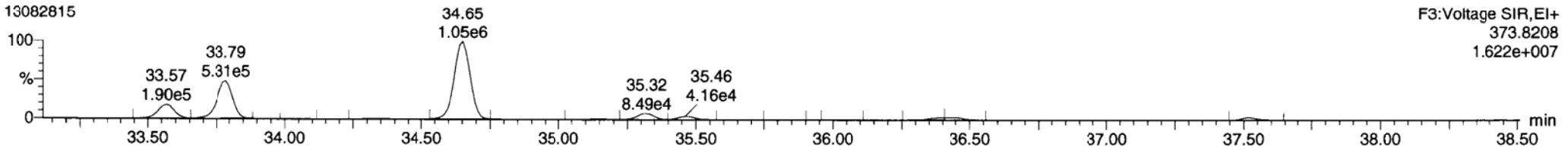
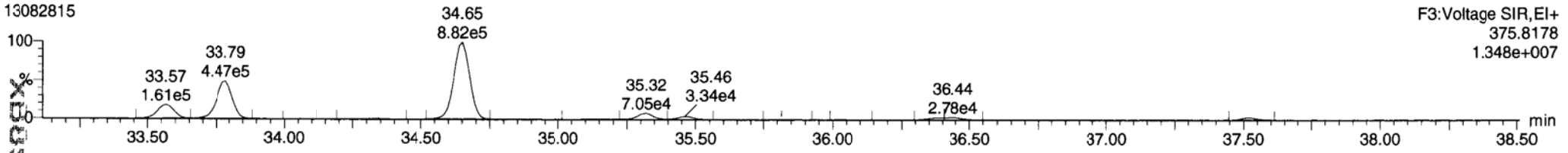


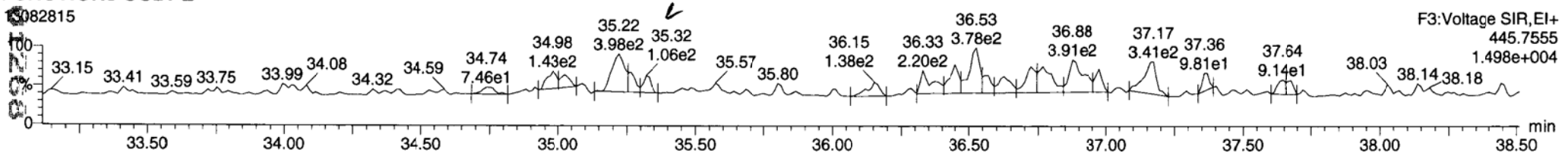
Total-hexafurans



Total-hexafurans



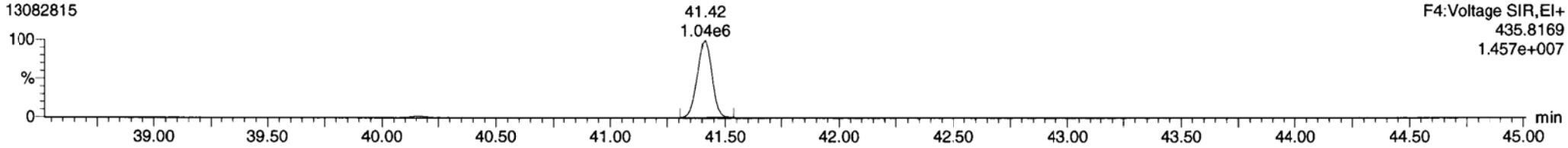
FUNCTION3 OCDPE



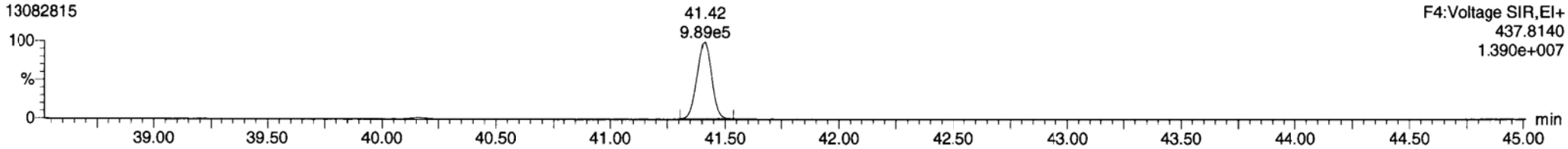
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

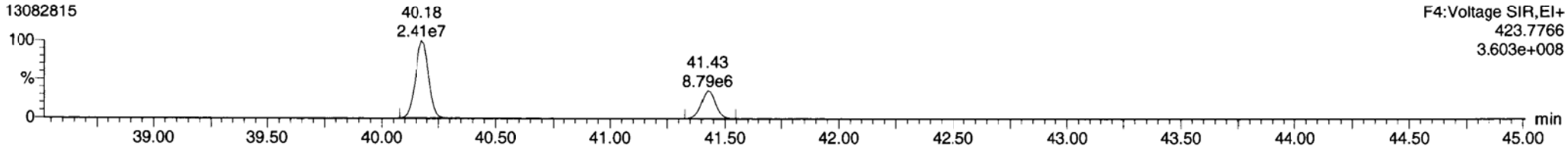
13C-1234678-HpCDD



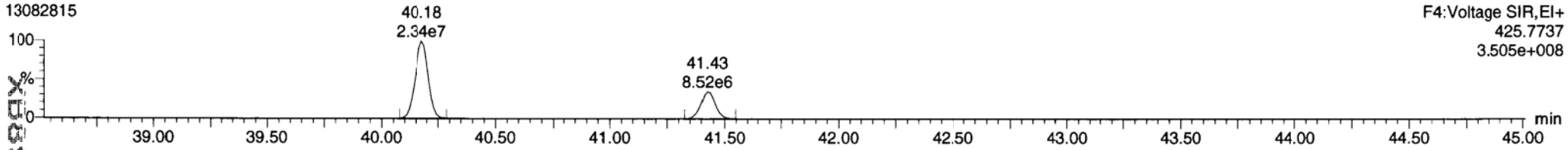
13C-1234678-HpCDD



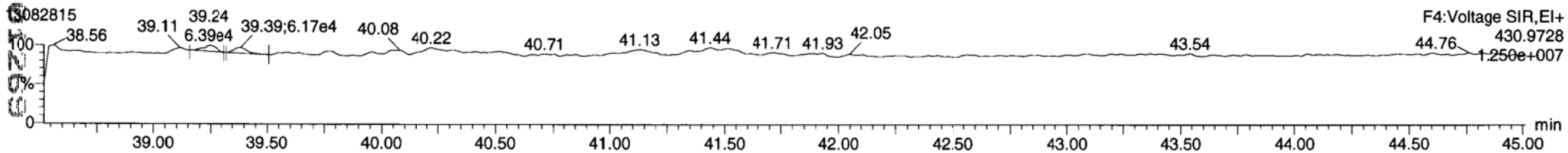
Total-heptadioxins



Total-heptadioxins



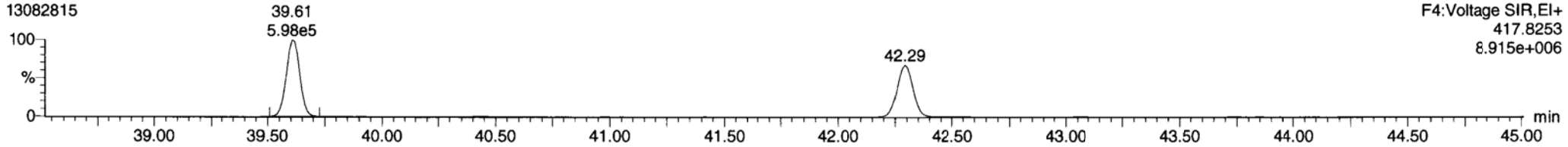
FUNCTION4 PFK



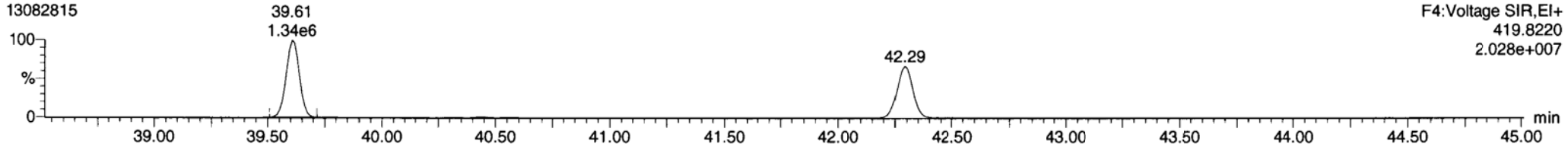
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

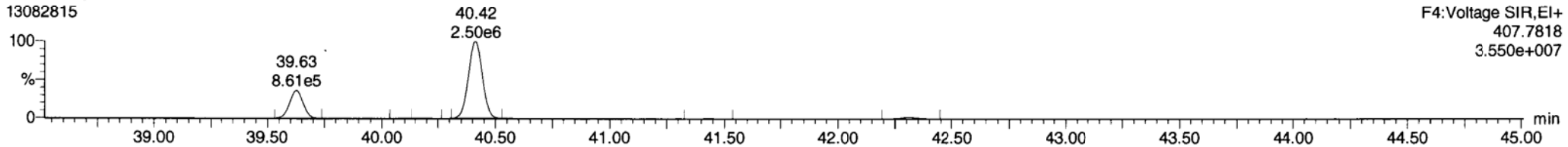
13C-1234678-HpCDF



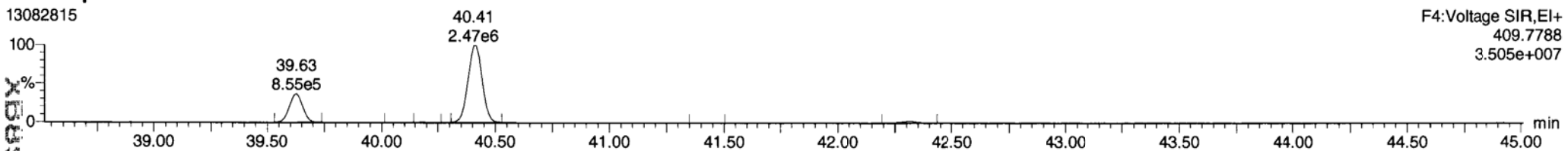
13C-1234678-HpCDF



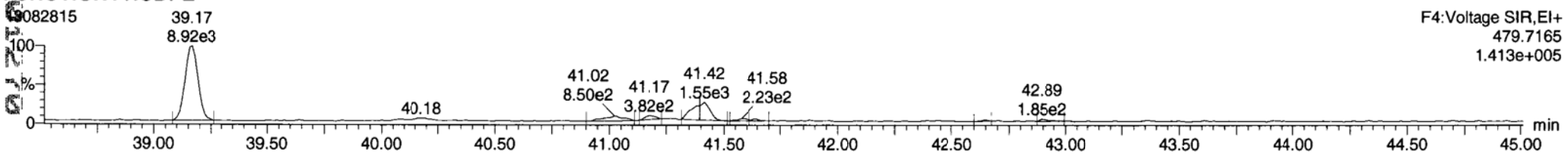
Total-heptafurans



Total-heptafurans



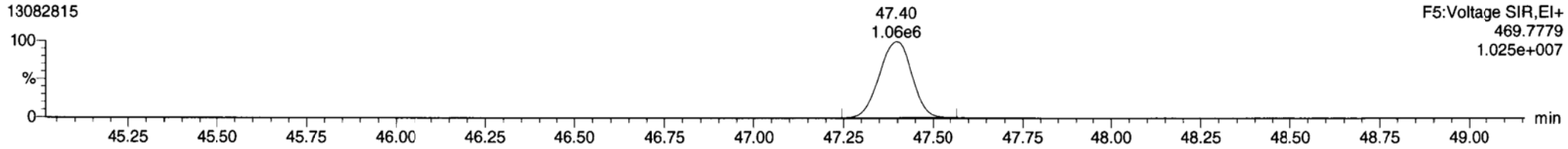
FUNCTION4 NCDPE



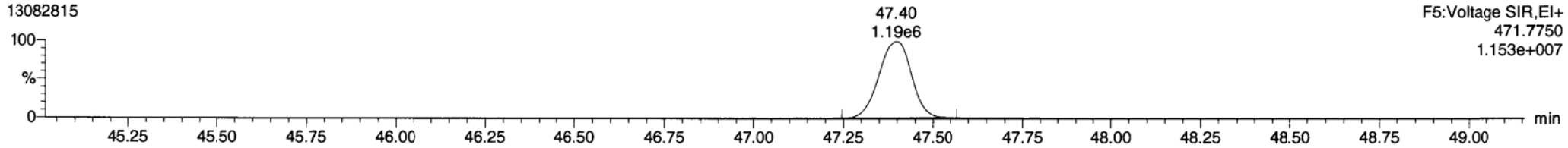
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

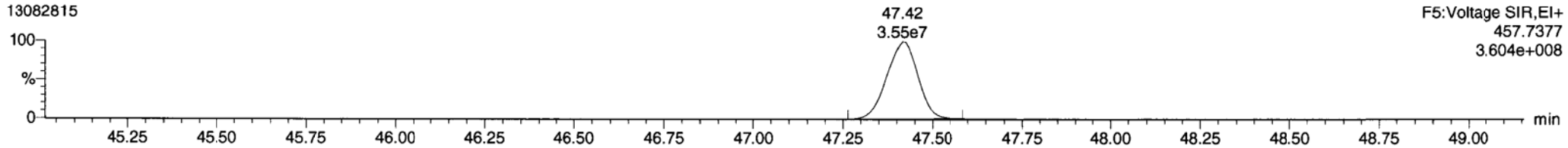
13C-OCDD



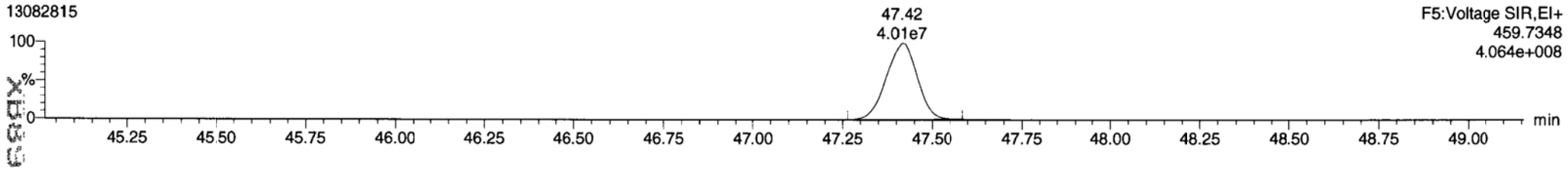
13C-OCDD



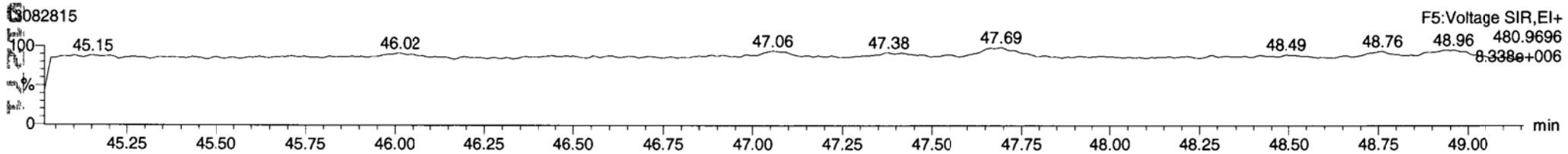
OCDD



OCDD



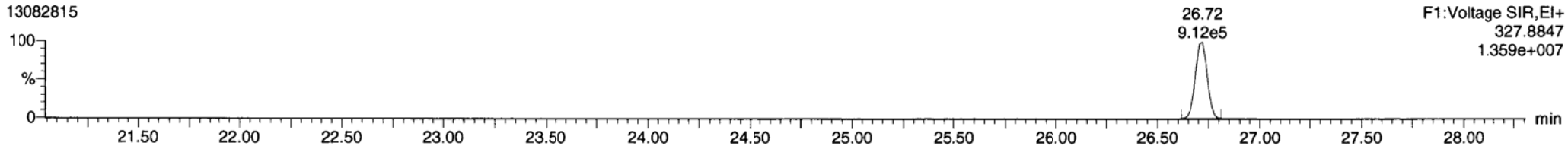
FUNCTION5 PFK



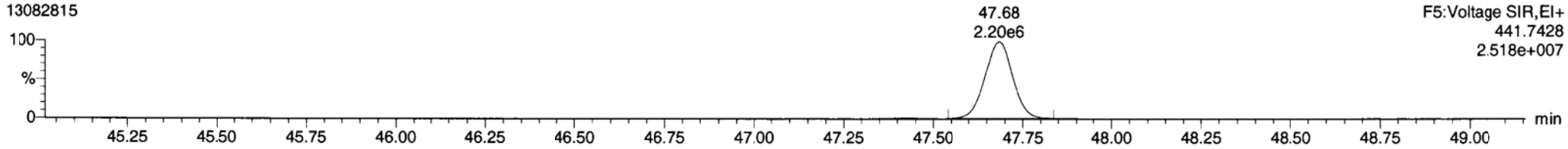
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:32 Pacific Daylight Time

ID: XB89C, Name: 13082815, Date: 28-Aug-2013, Time: 22:49:52, Conditions: AUTOSPEC01, User: pk

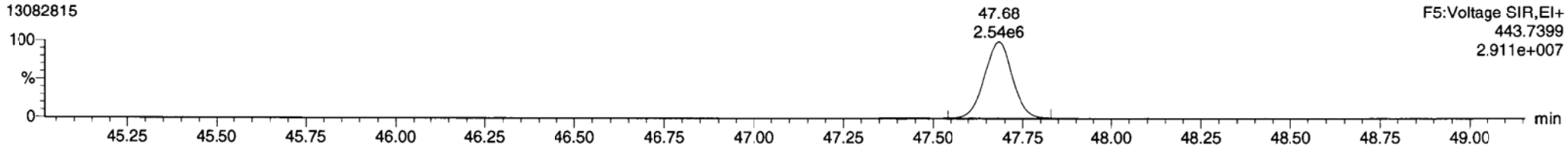
37CL-2378-TCDD



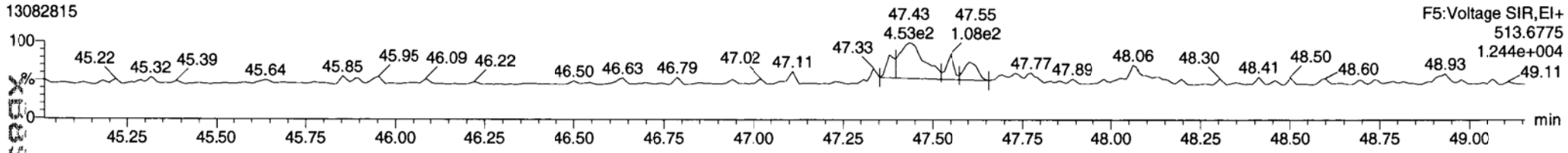
OCDF



OCDF



FUNCTION5 DCDPE



XB89C.S12

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

pk 8/29/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Response		RRF	Rel%	Pred R	S/N	Noise	Area	Height	EMPCT	Conc	
2378-TCDF	26.078	1.001	1.75e4	2.34e4	0.867	0.749	0.770	99.0	2826	2622	2.80e5	3.48e5	NO	1.509	1.509	
12378-PeCDF	30.212	1.000	1.82e4	1.28e4	0.875	1.429	1.550	234.2	1309	2502	3.06e5	2.08e5	NO	1.075	1.075	X
23478-PeCDF	31.572	1.001	1.97e4	1.36e4	0.880	1.446	1.550	233.0	1309	2502	3.05e5	1.96e5	NO	1.201	1.201	
123478-HxCDF	35.255	1.000	2.49e4	2.20e4	1.048	1.129	1.240	94.3	3858	1587	3.64e5	3.35e5	NO	1.834	1.834	
234678-HxCDF	36.373	1.001	1.53e4	1.32e4	1.088	1.155	1.240	53.7	3858	1587	2.07e5	1.85e5	NO	1.140	1.140	
123678-HxCDF	35.408	1.000	1.80e4	1.55e4	1.025	1.162	1.240	75.3	3858	1587	2.90e5	2.47e5	NO	1.291	1.291	
123789-HxCDF	37.458	1.000	5.03e3	4.22e3	0.959	1.191	1.240	20.2	3858	1587	7.79e4	7.24e4	NO	0.374	0.374	
1234678-HpCDF	39.563	1.000	2.21e5	2.22e5	1.215	0.993	1.050	2073.2	1579	1703	3.27e6	3.36e6	NO	20.391	20.391	
1234789-HpCDF	42.259	1.000	7.07e3	7.57e3	1.200	0.935	1.050	55.8	1579	1703	8.81e4	9.22e4	NO	0.844	0.844	
OCDF	47.639	1.006	1.93e5	2.27e5	1.064	0.851	0.890	1709.0	1187	2095	2.03e6	2.41e6	NO	33.647	33.647	
2378-TCDD	26.706	1.001	3.37e3	5.32e3	0.994	0.634	0.770	18.7	2724	1842	5.10e4	8.29e4	YES	0.353	0.395	
12378-PeCDD	31.813	1.000	1.91e4	1.32e4	0.976	1.441	1.550	82.8	2963	6818	2.45e5	1.70e5	NO	1.495	1.495	
123478-HxCDD	36.504	1.000	1.20e4	8.70e3	0.967	1.381	1.240	93.7	2040	1787	1.91e5	1.29e5	NO	0.994	0.994	
123678-HxCDD	36.636	1.001	3.60e4	2.84e4	0.902	1.269	1.240	266.4	2040	1787	5.43e5	4.47e5	NO	3.267	3.267	
123789-HxCDD	37.053	1.012	1.98e4	1.56e4	0.914	1.265	1.240	146.8	2040	1787	2.99e5	2.35e5	NO	1.784	1.784	
1234678-HpCDD	41.382	1.001	3.84e5	3.68e5	0.999	1.043	1.050	1612.0	3183	2426	5.13e6	4.89e6	NO	43.815	43.815	
OCDD	47.361	1.000	1.78e6	2.02e6	0.979	0.883	0.890	11303.8	1600	2135	1.81e7	2.06e7	NO	330.998	330.998	
13C-2378-TCDF	26.049	1.007	1.36e6	1.76e6	1.419	0.774	0.770	5271.5	3918	4007	2.07e7	2.70e7	NO		61.223	
13C-12378-PeCDF	30.201	1.167	2.01e6	1.28e6	1.158	1.569	1.550	8737.2	3629	2202	3.17e7	2.01e7	NO		79.118	
13C-23478-PeCDF	31.549	1.220	1.93e6	1.23e6	1.127	1.571	1.550	8257.2	3629	2202	3.00e7	1.92e7	NO		77.929	
13C-123478-HxCDF	35.244	0.951	8.30e5	1.61e6	1.206	0.515	0.510	4781.7	2641	3544	1.26e7	2.44e7	NO		72.026	
13C-123678-HxCDF	35.397	0.956	8.63e5	1.67e6	1.266	0.516	0.510	4902.6	2641	3544	1.29e7	2.48e7	NO		71.278	
13C-234678-HxCDF	36.351	0.981	7.86e5	1.51e6	1.155	0.519	0.510	4388.5	2641	3544	1.16e7	2.24e7	NO		70.868	
13C-123789-HxCDF	37.469	1.012	8.78e5	1.70e6	1.121	0.516	0.510	5520.8	2641	3544	1.46e7	2.87e7	NO		81.908	
13C-1234678-HpCDF	39.552	1.068	5.49e5	1.24e6	1.040	0.444	0.440	3259.7	2555	1928	8.33e6	1.89e7	NO		61.182	
13C-1234789-HpCDF	42.248	1.141	4.48e5	9.97e5	0.789	0.449	0.440	2181.6	2555	1928	5.57e6	1.27e7	NO		65.167	
13C-1234-TCDD	25.869	0.000	1.60e6	2.00e6	1.000	0.802	0.770	8749.1	2878	2115	2.52e7	3.13e7	NO		100.000	
13C-2378-TCDD	26.691	1.032	9.75e5	1.24e6	0.962	0.788	0.770	5223.9	2878	2115	1.50e7	1.89e7	NO		63.918	
13C-12378-PeCDD	31.802	1.229	1.35e6	8.59e5	0.746	1.576	1.550	9664.0	2170	1737	2.10e7	1.34e7	NO		82.393	
13C-123478-HxCDD	36.493	0.985	1.20e6	9.55e5	1.003	1.254	1.240	8169.7	2244	2059	1.83e7	1.47e7	NO		76.376	
13C-123678-HxCDD	36.614	0.988	1.21e6	9.76e5	1.052	1.240	1.240	8218.3	2244	2059	1.84e7	1.50e7	NO		73.937	
13C-1234678-HpCDD	41.361	1.117	8.76e5	8.44e5	0.880	1.038	1.050	4797.8	2424	1947	1.16e7	1.12e7	NO		69.550	
13C-OCDD	47.343	1.278	1.11e6	1.24e6	0.775	0.893	0.890	6199.9	1817	1847	1.13e7	1.26e7	NO		107.877	

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.042	0.000	1.55e6	1.25e6	1.000	1.239	1.240	10790.6	2244	2059	2.42e7	1.96e7	NO	100.000
Total-tetrafurans			3.43e5		0.867				2826		4.74e6			29.674
Total-penta1			2.85e5						1751		4.03e6			15.816
Total-pentafurans			3.37e5		0.877				1309		4.98e6			19.744
Total-hexafurans			4.20e5		1.030				3858		6.34e6			30.545
Total-heptafurans			5.51e5		1.207				1579		8.02e6			54.376
Total-Furans			2.13e6		1.022				2826		3.01e7			183.801
Total-tetradioxins			4.48e5		0.994				2724		6.96e6			46.443
Total-pentadioxins			6.07e5		0.976				2963		8.18e6			46.128
Total-hexadioxins			8.59e5		0.928				2040		1.25e7			76.796
Total-heptadioxins			1.04e6		0.999				3183		1.45e7			119.007
Total-Dioxins			4.74e6		0.962				2724		6.03e7			619.372
Total-TEQ			6.87e6						2724		9.04e7			803.173
37CL-2378-TCDD	26.706	1.032	9.95e5		1.091			8401.5	1844		1.55e7			25.341
FUNCTION1 PFK			1.78e6						337808		2.27e7			
FUNCTION2 PFK			1.23e5						108638		3.60e6			0.000
FUNCTION3 PFK			5.98e5						212823		9.79e6			0.000
FUNCTION4 PFK			1.11e6						158891		7.35e6			
FUNCTION5 PFK			0.00e0						159170		0.00e0			
FUNCTION1 HXCDPE			2.05e3						1128		3.94e4			0.000
FUNCTION1 HPCDPE			1.75e2						573		4.42e3			0.000
FUNCTION2 HPCDPE			1.28e4						1542		1.82e5			0.000
FUNCTION3 OCDPE			2.53e4						1252		3.57e5			0.000
FUNCTION4 NCDPE			6.86e4						1156		8.87e5			0.000
FUNCTION5 DCDPE			3.81e2						524		1.20e4			0.000

Fri Aug 30 09:27:16 2013 XB89D

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

D: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

TF

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	35	Total-tetrafurans	303.9016	24.97	76434.707	0.867	2.822		0.72	0.77	NO	156.3
	35	Total-tetrafurans	303.9016	24.82	27251.923	0.867	1.006		0.80	0.77	NO	74.1
	35	Total-tetrafurans	303.9016	24.73	76778.412	0.867	2.835		0.74	0.77	NO	131.2
	35	Total-tetrafurans	303.9016	24.32	13914.513	0.867	0.514		0.72	0.77	NO	30.9
	35	Total-tetrafurans	303.9016	24.17	9547.265	0.867	0.353		0.78	0.77	NO	22.6
	35	Total-tetrafurans	303.9016	24.06	47004.230	0.867	1.736		0.75	0.77	NO	106.6
	35	Total-tetrafurans	303.9016	23.90	13468.708	0.867	0.497		0.79	0.77	NO	33.2
	35	Total-tetrafurans	303.9016	23.82	29529.827	0.867	1.090		0.76	0.77	NO	69.6
	35	Total-tetrafurans	303.9016	23.72	23734.070	0.867	0.876		0.84	0.77	NO	50.9
	35	Total-tetrafurans	303.9016	23.58	53818.770	0.867	1.987		0.72	0.77	NO	86.4
	35	Total-tetrafurans	303.9016	23.42	133101.145	0.867	4.914		0.74	0.77	NO	282.8
	35	Total-tetrafurans	303.9016	22.82	25703.859	0.867	0.949		0.63	0.77	YES	56.3
	35	Total-tetrafurans	303.9016	22.57	29296.416	0.867	1.082		0.74	0.77	NO	67.1
	35	Total-tetrafurans	303.9016	27.50	11199.841	0.867	0.414		0.68	0.77	NO	15.2
	35	Total-tetrafurans	303.9016	26.59	2289.433	0.867	0.085		0.75	0.77	NO	6.1
	35	Total-tetrafurans	303.9016	26.30	37908.658	0.867	1.400		0.78	0.77	NO	85.0
	35	Total-tetrafurans	303.9016	26.20	19214.775	0.867	0.709		0.77	0.77	NO	49.6
	1	2378-TCDF	303.9016	26.08	40857.676	0.867	1.509	1.509	0.75	0.77	NO	99.0
	35	Total-tetrafurans	303.9016	25.84	47001.088	0.867	1.735		0.74	0.77	NO	60.8
	35	Total-tetrafurans	303.9016	25.70	2013.900	0.867	0.074		1.80	0.77	YES	8.4
	35	Total-tetrafurans	303.9016	25.57	24806.148	0.867	0.916		0.74	0.77	NO	56.0
	35	Total-tetrafurans	303.9016	25.38	13805.009	0.867	0.510		0.76	0.77	NO	31.8
	35	Total-tetrafurans	303.9016	25.15	44998.488	0.867	1.661		0.72	0.77	NO	96.0

PP

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	36	Total-penta1	339.8597	27.48	468064.641		15.816		1.56	1.55	NO	2300.1

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PF

	#	Name	Trace	RT	Abundance	RRF M...	pg	EMPC	1° Ratio	1° Ratio...	1° R...	S/N
	37	Total-pentafurans	339.8597	29.43	2551.866	0.877	0.090		1.83	1.55	YES	20.5
	37	Total-pentafurans	339.8597	29.28	3013.318	0.877	0.106		1.95	1.55	YES	21.9
	37	Total-pentafurans	339.8597	29.14	106177.899	0.877	3.751		1.49	1.55	NO	774.0
	37	Total-pentafurans	339.8597	29.07	92462.531	0.877	3.266		1.51	1.55	NO	670.9
	37	Total-pentafurans	339.8597	28.95	36240.215	0.877	1.280		1.56	1.55	NO	205.4
	37	Total-pentafurans	339.8597	28.86	17235.863	0.877	0.609		1.55	1.55	NO	123.5
	37	Total-pentafurans	339.8597	31.66	1311.970	0.877	0.046		2.61	1.55	YES	13.4
	3	23478-PeCDF	339.8597	31.57	33373.126	0.880	1.201	1.201	1.45	1.55	NO	233.0
	37	Total-pentafurans	339.8597	31.41	33923.758	0.877	1.198		1.40	1.55	NO	234.6
	37	Total-pentafurans	339.8597	31.30	26090.443	0.877	0.922		1.54	1.55	NO	195.4
	37	Total-pentafurans	339.8597	31.06	2609.047	0.877	0.092		2.02	1.55	YES	18.2
	37	Total-pentafurans	339.8597	30.69	3090.392	0.877	0.109		1.55	1.55	NO	22.2
	37	Total-pentafurans	339.8597	30.52	12686.768	0.877	0.448		1.50	1.55	NO	95.9
	37	Total-pentafurans	339.8597	30.41	32451.522	0.877	1.146		1.64	1.55	NO	257.9
	2	12378-PeCDF	339.8597	30.21	31004.417	0.875	1.075	1.075	1.43	1.55	NO	234.2
	37	Total-pentafurans	339.8597	29.86	101340.492	0.877	3.580		1.57	1.55	NO	535.4
	37	Total-pentafurans	339.8597	29.76	6603.917	0.877	0.233		1.56	1.55	NO	53.4
	37	Total-pentafurans	339.8597	29.64	13294.281	0.877	0.470		1.39	1.55	NO	69.3
	37	Total-pentafurans	339.8597	32.60	3351.397	0.877	0.118		1.23	1.55	YES	24.6

HF

	#	Name	Trace	RT	Abundance	RRF M...	pg	EMPC	1° Ratio	1° Ratio...	1° R...	S/N
	5	234678-HxCDF	373.8208	36.37	28528.890	1.088	1.140	1.140	1.16	1.24	NO	53.7
	38	Total-hexafurans	373.8208	35.98	2284.311	1.030	0.090		1.45	1.24	YES	5.2
	38	Total-hexafurans	373.8208	35.78	3238.639	1.030	0.128		1.15	1.24	NO	6.6
	38	Total-hexafurans	373.8208	35.64	1611.680	1.030	0.063		1.02	1.24	YES	3.4
	6	123678-HxCDF	373.8208	35.41	33536.857	1.025	1.291	1.291	1.16	1.24	NO	75.3
	4	123478-HxCDF	373.8208	35.25	46942.809	1.048	1.834	1.834	1.13	1.24	NO	94.3
	38	Total-hexafurans	373.8208	35.09	16964.530	1.030	0.668		1.10	1.24	NO	37.2
	38	Total-hexafurans	373.8208	34.61	305222.437	1.030	12.025		1.19	1.24	NO	666.7
	38	Total-hexafurans	373.8208	34.28	6709.617	1.030	0.264		1.25	1.24	NO	14.8
	38	Total-hexafurans	373.8208	34.01	1453.863	1.030	0.057		1.28	1.24	NO	3.9
	38	Total-hexafurans	373.8208	33.73	231062.914	1.030	9.104		1.19	1.24	NO	467.5
	38	Total-hexafurans	373.8208	33.52	88992.090	1.030	3.506		1.14	1.24	NO	195.2
	7	123789-HxCDF	373.8208	37.46	9252.099	0.959	0.374	0.374	1.19	1.24	NO	20.2

HPF

	#	Name	Trace	RT	Abundance	RRF M...	pg	EMPC	1° Ratio	1° Ratio...	1° R...	S/N
	9	1234789-HpCDF	407.7818	42.26	14636.626	1.200	0.844	0.844	0.93	1.05	NO	55.8
	39	Total-heptafurans	407.7818	40.35	639622.656	1.207	32.786		1.00	1.05	NO	2915.3
	39	Total-heptafurans	407.7818	40.06	6926.404	1.207	0.355		1.03	1.05	NO	33.9
	8	1234678-HpCDF	407.7818	39.56	442627.485	1.215	20.391	20.391	0.99	1.05	NO	2073.2

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Furans,TF,PP,PF,HF,HPF,OF

		Name		RT	Abs Resp	RRF No.		EMPC				S/N
	35	Total-tetrafurans	303.9016	24.97	76434.707	0.867	2.822		0.72	0.77	NO	156.3
	35	Total-tetrafurans	303.9016	24.82	27251.923	0.867	1.006		0.80	0.77	NO	74.1
	35	Total-tetrafurans	303.9016	24.73	76778.412	0.867	2.835		0.74	0.77	NO	131.2
	35	Total-tetrafurans	303.9016	24.32	13914.513	0.867	0.514		0.72	0.77	NO	30.9
	35	Total-tetrafurans	303.9016	24.17	9547.265	0.867	0.353		0.78	0.77	NO	22.6
	35	Total-tetrafurans	303.9016	24.06	47004.230	0.867	1.736		0.75	0.77	NO	106.6
	35	Total-tetrafurans	303.9016	23.90	13468.708	0.867	0.497		0.79	0.77	NO	33.2
	35	Total-tetrafurans	303.9016	23.82	29529.827	0.867	1.090		0.76	0.77	NO	69.6
	35	Total-tetrafurans	303.9016	23.72	23734.070	0.867	0.876		0.84	0.77	NO	50.9
	35	Total-tetrafurans	303.9016	23.58	53818.770	0.867	1.987		0.72	0.77	NO	86.4
	35	Total-tetrafurans	303.9016	23.42	133101.145	0.867	4.914		0.74	0.77	NO	282.8
	35	Total-tetrafurans	303.9016	22.82	25703.859	0.867	0.949		0.63	0.77	YES	56.3
	35	Total-tetrafurans	303.9016	22.57	29296.416	0.867	1.082		0.74	0.77	NO	67.1
	35	Total-tetrafurans	303.9016	27.50	11199.841	0.867	0.414		0.68	0.77	NO	15.2
	35	Total-tetrafurans	303.9016	26.59	2289.433	0.867	0.085		0.75	0.77	NO	6.1
	35	Total-tetrafurans	303.9016	26.30	37908.658	0.867	1.400		0.78	0.77	NO	85.0
	35	Total-tetrafurans	303.9016	26.20	19214.775	0.867	0.709		0.77	0.77	NO	49.6
	1	2378-TCDF	303.9016	26.08	40857.676	0.867	1.509	1.509	0.75	0.77	NO	99.0
	35	Total-tetrafurans	303.9016	25.84	47001.088	0.867	1.735		0.74	0.77	NO	60.8
	35	Total-tetrafurans	303.9016	25.70	2013.900	0.867	0.074		1.80	0.77	YES	8.4
	35	Total-tetrafurans	303.9016	25.57	24806.148	0.867	0.916		0.74	0.77	NO	56.0
	35	Total-tetrafurans	303.9016	25.38	13805.009	0.867	0.510		0.76	0.77	NO	31.8
	35	Total-tetrafurans	303.9016	25.15	44998.488	0.867	1.661		0.72	0.77	NO	96.0
	37	Total-pentafurans	339.8597	29.43	2551.866	0.877	0.090		1.83	1.55	YES	20.5
	37	Total-pentafurans	339.8597	29.28	3013.318	0.877	0.106		1.95	1.55	YES	21.9
	37	Total-pentafurans	339.8597	29.14	106177.899	0.877	3.751		1.49	1.55	NO	774.0
	37	Total-pentafurans	339.8597	29.07	92462.531	0.877	3.266		1.51	1.55	NO	670.9
	37	Total-pentafurans	339.8597	28.95	36240.215	0.877	1.280		1.56	1.55	NO	205.4
	37	Total-pentafurans	339.8597	28.86	17235.863	0.877	0.609		1.55	1.55	NO	123.5
	37	Total-pentafurans	339.8597	31.66	1311.970	0.877	0.046		2.61	1.55	YES	13.4
	3	23478-PeCDF	339.8597	31.57	33373.126	0.880	1.201	1.201	1.45	1.55	NO	233.0
	37	Total-pentafurans	339.8597	31.41	33923.758	0.877	1.198		1.40	1.55	NO	234.6
	37	Total-pentafurans	339.8597	31.30	26090.443	0.877	0.922		1.54	1.55	NO	195.4
	37	Total-pentafurans	339.8597	31.06	2609.047	0.877	0.092		2.02	1.55	YES	18.2
	37	Total-pentafurans	339.8597	30.69	3090.392	0.877	0.109		1.55	1.55	NO	22.2
	37	Total-pentafurans	339.8597	30.52	12686.768	0.877	0.448		1.50	1.55	NO	95.9
	37	Total-pentafurans	339.8597	30.41	32451.522	0.877	1.146		1.64	1.55	NO	257.9
	2	12378-PeCDF	339.8597	30.21	31004.417	0.875	1.075	1.075	1.43	1.55	NO	234.2
	37	Total-pentafurans	339.8597	29.86	101340.492	0.877	3.580		1.57	1.55	NO	535.4
	37	Total-pentafurans	339.8597	29.76	6603.917	0.877	0.233		1.56	1.55	NO	53.4
	37	Total-pentafurans	339.8597	29.64	13294.281	0.877	0.470		1.39	1.55	NO	69.3
	37	Total-pentafurans	339.8597	32.60	3351.397	0.877	0.118		1.23	1.55	YES	24.6
	5	234678-HxCDF	373.8208	36.37	28528.890	1.088	1.140	1.140	1.16	1.24	NO	53.7
	38	Total-hexafurans	373.8208	35.98	2284.311	1.030	0.090		1.45	1.24	YES	5.2
	38	Total-hexafurans	373.8208	35.78	3238.639	1.030	0.128		1.15	1.24	NO	6.6
	38	Total-hexafurans	373.8208	35.64	1611.680	1.030	0.063		1.02	1.24	YES	3.4
	6	123678-HxCDF	373.8208	35.41	33536.857	1.025	1.291	1.291	1.16	1.24	NO	75.3
	4	123478-HxCDF	373.8208	35.25	46942.809	1.048	1.834	1.834	1.13	1.24	NO	94.3
	38	Total-hexafurans	373.8208	35.09	16964.530	1.030	0.668		1.10	1.24	NO	37.2

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Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Mass	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	IT Rej	S/N
	38	Total-hexafurans	373.8208	34.61	305222.437	1.030	12.025		1.19	1.24	NO	666.7
	38	Total-hexafurans	373.8208	34.28	6709.617	1.030	0.264		1.25	1.24	NO	14.8
	38	Total-hexafurans	373.8208	34.01	1453.863	1.030	0.057		1.28	1.24	NO	3.9
	38	Total-hexafurans	373.8208	33.73	231062.914	1.030	9.104		1.19	1.24	NO	467.5
	38	Total-hexafurans	373.8208	33.52	88992.090	1.030	3.506		1.14	1.24	NO	195.2
	7	123789-HxCDF	373.8208	37.46	9252.099	0.959	0.374	0.374	1.19	1.24	NO	20.2
	9	1234789-HpCDF	407.7818	42.26	14636.626	1.200	0.844	0.844	0.93	1.05	NO	55.8
	39	Total-heptafurans	407.7818	40.35	639622.656	1.207	32.786		1.00	1.05	NO	2915.3
	39	Total-heptafurans	407.7818	40.06	6926.404	1.207	0.355		1.03	1.05	NO	33.9
	8	1234678-HpCDF	407.7818	39.56	442627.485	1.215	20.391	20.391	0.99	1.05	NO	2073.2
	10	OCDF	441.7428	47.64	420413.656	1.064	33.647	33.647	0.85	0.89	NO	1709.0
	36	Total-penta1	339.8597	27.48	468064.641		15.816		1.56	1.55	NO	2300.1

TD

	#	Name	Mass	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	IT Rej	S/N
	41	Total-tetradioxins	319.8965	25.59	3096.992	0.994	0.141		0.71	0.77	NO	8.1
	41	Total-tetradioxins	319.8965	25.33	81188.082	0.994	3.693		0.75	0.77	NO	197.9
	41	Total-tetradioxins	319.8965	25.05	49450.589	0.994	2.250		0.80	0.77	NO	115.9
	41	Total-tetradioxins	319.8965	24.84	1960.448	0.994	0.089		0.77	0.77	NO	5.6
	41	Total-tetradioxins	319.8965	24.32	16408.786	0.994	0.746		0.89	0.77	YES	45.6
	41	Total-tetradioxins	319.8965	24.11	275119.070	0.994	12.516		0.80	0.77	NO	712.6
	41	Total-tetradioxins	319.8965	23.84	427340.672	0.994	19.441		0.78	0.77	NO	1096.6
	41	Total-tetradioxins	319.8965	27.32	2994.630	0.994	0.136		0.96	0.77	YES	8.8
	41	Total-tetradioxins	319.8965	26.84	11823.674	0.994	0.538		0.83	0.77	NO	27.7
	11	2378-TCDD	319.8965	26.71	8692.781	0.994	0.395	0.353	0.63	0.77	YES	18.7
	41	Total-tetradioxins	319.8965	26.33	74252.578	0.994	3.378		0.80	0.77	NO	154.3
	41	Total-tetradioxins	319.8965	26.03	5986.673	0.994	0.272		0.91	0.77	YES	16.4
	41	Total-tetradioxins	319.8965	25.88	40836.657	0.994	1.858		0.72	0.77	NO	94.5
	41	Total-tetradioxins	319.8965	25.67	21745.768	0.994	0.989		0.75	0.77	NO	51.0

PD

	#	Name	Mass	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	1° Ratl...	IT Rej	S/N
	42	Total-pentadioxins	355.8546	30.57	202364.618	0.976	9.370		1.54	1.55	NO	647.8
	42	Total-pentadioxins	355.8546	30.43	23330.346	0.976	1.080		1.79	1.55	YES	83.0
	42	Total-pentadioxins	355.8546	30.22	259867.704	0.976	12.032		1.56	1.55	NO	845.1
	42	Total-pentadioxins	355.8546	29.60	15832.421	0.976	0.733		1.53	1.55	NO	51.3
	42	Total-pentadioxins	355.8546	29.12	317739.235	0.976	14.712		1.56	1.55	NO	638.1
	42	Total-pentadioxins	355.8546	32.21	10375.368	0.976	0.480		1.57	1.55	NO	31.3
	12	12378-PeCDD	355.8546	31.81	32291.521	0.976	1.495	1.495	1.44	1.55	NO	82.8
	42	Total-pentadioxins	355.8546	31.14	105879.281	0.976	4.902		1.56	1.55	NO	315.1
	42	Total-pentadioxins	355.8546	30.75	28565.680	0.976	1.323		1.67	1.55	NO	65.4

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HD

	15	123789-HxCDD	389.8157	37.05	35376.883	0.914	1.784	1.784	1.27	1.24	NO	146.8
	43	Total-hexadioxins	389.8157	36.81	16413.848	0.928	0.816		1.22	1.24	NO	65.9
	14	123678-HxCDD	389.8157	36.64	64372.584	0.902	3.267	3.267	1.27	1.24	NO	266.4
	13	123478-HxCDD	389.8157	36.50	20702.233	0.967	0.994	0.994	1.38	1.24	NO	93.7
	43	Total-hexadioxins	389.8157	35.64	16822.899	0.928	0.836		1.23	1.24	NO	66.4
	43	Total-hexadioxins	389.8157	35.53	204757.743	0.928	10.177		1.27	1.24	NO	538.1
	43	Total-hexadioxins	389.8157	35.15	953859.126	0.928	47.408		1.24	1.24	NO	3957.3
	43	Total-hexadioxins	389.8157	34.32	231651.563	0.928	11.513		1.27	1.24	NO	998.9

HPD

	16	1234678-HpCDD	423.7766	41.38	752623.094	0.999	43.815	43.815	1.04	1.05	NO	1612.0
	44	Total-heptadioxins	423.7766	40.11	1291598.813	0.999	75.192		1.02	1.05	NO	2951.6

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Dioxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	25.59	3096.992	0.994	0.141		0.71	0.77	NO	8.1
	41	Total-tetradioxins	319.8965	25.33	81188.082	0.994	3.693		0.75	0.77	NO	197.9
	41	Total-tetradioxins	319.8965	25.05	49450.589	0.994	2.250		0.80	0.77	NO	115.9
	41	Total-tetradioxins	319.8965	24.84	1960.448	0.994	0.089		0.77	0.77	NO	5.6
	41	Total-tetradioxins	319.8965	24.32	16408.786	0.994	0.746		0.89	0.77	YES	45.6
	41	Total-tetradioxins	319.8965	24.11	275119.070	0.994	12.516		0.80	0.77	NO	712.6
	41	Total-tetradioxins	319.8965	23.84	427340.672	0.994	19.441		0.78	0.77	NO	1096.6
	41	Total-tetradioxins	319.8965	27.32	2994.630	0.994	0.136		0.96	0.77	YES	8.8
	41	Total-tetradioxins	319.8965	26.84	11823.674	0.994	0.538		0.83	0.77	NO	27.7
	11	2378-TCDD	319.8965	26.71	8692.781	0.994	0.395	0.353	0.63	0.77	YES	18.7
	41	Total-tetradioxins	319.8965	26.33	74252.578	0.994	3.378		0.80	0.77	NO	154.3
	41	Total-tetradioxins	319.8965	26.03	5986.673	0.994	0.272		0.91	0.77	YES	16.4
	41	Total-tetradioxins	319.8965	25.88	40836.657	0.994	1.858		0.72	0.77	NO	94.5
	41	Total-tetradioxins	319.8965	25.67	21745.768	0.994	0.989		0.75	0.77	NO	51.0
	42	Total-pentadioxins	355.8546	30.57	202364.618	0.976	9.370		1.54	1.55	NO	647.8
	42	Total-pentadioxins	355.8546	30.43	23330.346	0.976	1.080		1.79	1.55	YES	83.0
	42	Total-pentadioxins	355.8546	30.22	259867.704	0.976	12.032		1.56	1.55	NO	845.1
	42	Total-pentadioxins	355.8546	29.60	15832.421	0.976	0.733		1.53	1.55	NO	51.3
	42	Total-pentadioxins	355.8546	29.12	317739.235	0.976	14.712		1.56	1.55	NO	638.1
	42	Total-pentadioxins	355.8546	32.21	10375.368	0.976	0.480		1.57	1.55	NO	31.3
	12	12378-PeCDD	355.8546	31.81	32291.521	0.976	1.495	1.495	1.44	1.55	NO	82.8
	42	Total-pentadioxins	355.8546	31.14	105879.281	0.976	4.902		1.56	1.55	NO	315.1
	42	Total-pentadioxins	355.8546	30.75	28565.680	0.976	1.323		1.67	1.55	NO	65.4
	15	123789-HxCDD	389.8157	37.05	35376.883	0.914	1.784	1.784	1.27	1.24	NO	146.8
	43	Total-hexadioxins	389.8157	36.81	16413.848	0.928	0.816		1.22	1.24	NO	65.9
	14	123678-HxCDD	389.8157	36.64	64372.584	0.902	3.267	3.267	1.27	1.24	NO	266.4
	13	123478-HxCDD	389.8157	36.50	20702.233	0.967	0.994	0.994	1.38	1.24	NO	93.7
	43	Total-hexadioxins	389.8157	35.64	16822.899	0.928	0.836		1.23	1.24	NO	66.4
	43	Total-hexadioxins	389.8157	35.53	204757.743	0.928	10.177		1.27	1.24	NO	538.1
	43	Total-hexadioxins	389.8157	35.15	953859.126	0.928	47.408		1.24	1.24	NO	3957.3
	43	Total-hexadioxins	389.8157	34.32	231651.563	0.928	11.513		1.27	1.24	NO	998.9
	17	OCDD	457.7377	47.36	3804806.250	0.979	330.998	330....	0.88	0.89	NO	11303.8
	16	1234678-HpCDD	423.7766	41.38	752623.094	0.999	43.815	43.815	1.04	1.05	NO	1612.0
	44	Total-heptadioxins	423.7766	40.11	1291598.813	0.999	75.192		1.02	1.05	NO	2951.6

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TotalTEQ,Furans,Dioxins

[redacted]	#	Name	[redacted]	RT	[redacted] Area	RRF M	[redacted] ppt	EMPC	[redacted] Ratio	[redacted] Ratio	[redacted] Flag	S/N
[redacted]	35	Total-tetrafurans	303.9016	24.97	76434.707	0.867	2.822		0.72	0.77	NO	156.3
[redacted]	35	Total-tetrafurans	303.9016	24.82	27251.923	0.867	1.006		0.80	0.77	NO	74.1
[redacted]	35	Total-tetrafurans	303.9016	24.73	76778.412	0.867	2.835		0.74	0.77	NO	131.2
[redacted]	35	Total-tetrafurans	303.9016	24.32	13914.513	0.867	0.514		0.72	0.77	NO	30.9
[redacted]	35	Total-tetrafurans	303.9016	24.17	9547.265	0.867	0.353		0.78	0.77	NO	22.6
[redacted]	35	Total-tetrafurans	303.9016	24.06	47004.230	0.867	1.736		0.75	0.77	NO	106.6
[redacted]	35	Total-tetrafurans	303.9016	23.90	13468.708	0.867	0.497		0.79	0.77	NO	33.2
[redacted]	35	Total-tetrafurans	303.9016	23.82	29529.827	0.867	1.090		0.76	0.77	NO	69.6
[redacted]	35	Total-tetrafurans	303.9016	23.72	23734.070	0.867	0.876		0.84	0.77	NO	50.9
[redacted]	35	Total-tetrafurans	303.9016	23.58	53818.770	0.867	1.987		0.72	0.77	NO	86.4
[redacted]	35	Total-tetrafurans	303.9016	23.42	133101.145	0.867	4.914		0.74	0.77	NO	282.8
[redacted]	35	Total-tetrafurans	303.9016	22.82	25703.859	0.867	0.949		0.63	0.77	YES	56.3
[redacted]	35	Total-tetrafurans	303.9016	22.57	29296.416	0.867	1.082		0.74	0.77	NO	67.1
[redacted]	35	Total-tetrafurans	303.9016	27.50	11199.841	0.867	0.414		0.68	0.77	NO	15.2
[redacted]	35	Total-tetrafurans	303.9016	26.59	2289.433	0.867	0.085		0.75	0.77	NO	6.1
[redacted]	35	Total-tetrafurans	303.9016	26.30	37908.658	0.867	1.400		0.78	0.77	NO	85.0
[redacted]	35	Total-tetrafurans	303.9016	26.20	19214.775	0.867	0.709		0.77	0.77	NO	49.6
[redacted]	1	2378-TCDF	303.9016	26.08	40857.676	0.867	1.509	1.509	0.75	0.77	NO	99.0
[redacted]	35	Total-tetrafurans	303.9016	25.84	47001.088	0.867	1.735		0.74	0.77	NO	60.8
[redacted]	35	Total-tetrafurans	303.9016	25.70	2013.900	0.867	0.074		1.80	0.77	YES	8.4
[redacted]	35	Total-tetrafurans	303.9016	25.57	24806.148	0.867	0.916		0.74	0.77	NO	56.0
[redacted]	35	Total-tetrafurans	303.9016	25.38	13805.009	0.867	0.510		0.76	0.77	NO	31.8
[redacted]	35	Total-tetrafurans	303.9016	25.15	44998.488	0.867	1.661		0.72	0.77	NO	96.0
[redacted]	37	Total-pentafurans	339.8597	29.43	2551.866	0.877	0.090		1.83	1.55	YES	20.5
[redacted]	37	Total-pentafurans	339.8597	29.28	3013.318	0.877	0.106		1.95	1.55	YES	21.9
[redacted]	37	Total-pentafurans	339.8597	29.14	106177.899	0.877	3.751		1.49	1.55	NO	774.0
[redacted]	37	Total-pentafurans	339.8597	29.07	92462.531	0.877	3.266		1.51	1.55	NO	670.9
[redacted]	37	Total-pentafurans	339.8597	28.95	36240.215	0.877	1.280		1.56	1.55	NO	205.4
[redacted]	37	Total-pentafurans	339.8597	28.86	17235.863	0.877	0.609		1.55	1.55	NO	123.5
[redacted]	37	Total-pentafurans	339.8597	31.66	1311.970	0.877	0.046		2.61	1.55	YES	13.4
[redacted]	3	23478-PeCDF	339.8597	31.57	33373.126	0.880	1.201	1.201	1.45	1.55	NO	233.0
[redacted]	37	Total-pentafurans	339.8597	31.41	33923.758	0.877	1.198		1.40	1.55	NO	234.6
[redacted]	37	Total-pentafurans	339.8597	31.30	26090.443	0.877	0.922		1.54	1.55	NO	195.4
[redacted]	37	Total-pentafurans	339.8597	31.06	2609.047	0.877	0.092		2.02	1.55	YES	18.2
[redacted]	37	Total-pentafurans	339.8597	30.69	3090.392	0.877	0.109		1.55	1.55	NO	22.2
[redacted]	37	Total-pentafurans	339.8597	30.52	12686.768	0.877	0.448		1.50	1.55	NO	95.9
[redacted]	37	Total-pentafurans	339.8597	30.41	32451.522	0.877	1.146		1.64	1.55	NO	257.9
[redacted]	2	12378-PeCDF	339.8597	30.21	31004.417	0.875	1.075	1.075	1.43	1.55	NO	234.2
[redacted]	37	Total-pentafurans	339.8597	29.86	101340.492	0.877	3.580		1.57	1.55	NO	535.4
[redacted]	37	Total-pentafurans	339.8597	29.76	6603.917	0.877	0.233		1.56	1.55	NO	53.4
[redacted]	37	Total-pentafurans	339.8597	29.64	13294.281	0.877	0.470		1.39	1.55	NO	69.3
[redacted]	37	Total-pentafurans	339.8597	32.60	3351.397	0.877	0.118		1.23	1.55	YES	24.6
[redacted]	5	234678-HxCDF	373.8208	36.37	28528.890	1.088	1.140	1.140	1.16	1.24	NO	53.7
[redacted]	38	Total-hexafurans	373.8208	35.98	2284.311	1.030	0.090		1.45	1.24	YES	5.2
[redacted]	38	Total-hexafurans	373.8208	35.78	3238.639	1.030	0.128		1.15	1.24	NO	6.6
[redacted]	38	Total-hexafurans	373.8208	35.64	1611.680	1.030	0.063		1.02	1.24	YES	3.4
[redacted]	6	123678-HxCDF	373.8208	35.41	33536.857	1.025	1.291	1.291	1.16	1.24	NO	75.3
[redacted]	4	123478-HxCDF	373.8208	35.25	46942.809	1.048	1.834	1.834	1.13	1.24	NO	94.3
[redacted]	38	Total-hexafurans	373.8208	35.09	16964.530	1.030	0.668		1.10	1.24	NO	37.2

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TotalTEQ,Furans,Dioxins

	38 Total-hexafurans	373.8208	34.61	305222.437	1.030	12.025		1.19	1.24	NO	666.7
	38 Total-hexafurans	373.8208	34.28	6709.617	1.030	0.264		1.25	1.24	NO	14.8
	38 Total-hexafurans	373.8208	34.01	1453.863	1.030	0.057		1.28	1.24	NO	3.9
	38 Total-hexafurans	373.8208	33.73	231062.914	1.030	9.104		1.19	1.24	NO	467.5
	38 Total-hexafurans	373.8208	33.52	88992.090	1.030	3.506		1.14	1.24	NO	195.2
	7 123789-HxCDF	373.8208	37.46	9252.099	0.959	0.374	0.374	1.19	1.24	NO	20.2
	9 1234789-HpCDF	407.7818	42.26	14636.626	1.200	0.844	0.844	0.93	1.05	NO	55.8
	39 Total-heptafurans	407.7818	40.35	639622.656	1.207	32.786		1.00	1.05	NO	2915.3
	39 Total-heptafurans	407.7818	40.06	6926.404	1.207	0.355		1.03	1.05	NO	33.9
	8 1234678-HpCDF	407.7818	39.56	442627.485	1.215	20.391	20.391	0.99	1.05	NO	2073.2
	10 OCDF	441.7428	47.64	420413.656	1.064	33.647	33.647	0.85	0.89	NO	1709.0
	36 Total-penta1	339.8597	27.48	468064.641		15.816		1.56	1.55	NO	2300.1
	41 Total-tetradioxins	319.8965	25.59	3096.992	0.994	0.141		0.71	0.77	NO	8.1
	41 Total-tetradioxins	319.8965	25.33	81188.082	0.994	3.693		0.75	0.77	NO	197.9
	41 Total-tetradioxins	319.8965	25.05	49450.589	0.994	2.250		0.80	0.77	NO	115.9
	41 Total-tetradioxins	319.8965	24.84	1960.448	0.994	0.089		0.77	0.77	NO	5.6
	41 Total-tetradioxins	319.8965	24.32	16408.786	0.994	0.746		0.89	0.77	YES	45.6
	41 Total-tetradioxins	319.8965	24.11	275119.070	0.994	12.516		0.80	0.77	NO	712.6
	41 Total-tetradioxins	319.8965	23.84	427340.672	0.994	19.441		0.78	0.77	NO	1096.6
	41 Total-tetradioxins	319.8965	27.32	2994.630	0.994	0.136		0.96	0.77	YES	8.8
	41 Total-tetradioxins	319.8965	26.84	11823.674	0.994	0.538		0.83	0.77	NO	27.7
	11 2378-TCDD	319.8965	26.71	8692.781	0.994	0.395	0.353	0.63	0.77	YES	18.7
	41 Total-tetradioxins	319.8965	26.33	74252.578	0.994	3.378		0.80	0.77	NO	154.3
	41 Total-tetradioxins	319.8965	26.03	5986.673	0.994	0.272		0.91	0.77	YES	16.4
	41 Total-tetradioxins	319.8965	25.88	40836.657	0.994	1.858		0.72	0.77	NO	94.5
	41 Total-tetradioxins	319.8965	25.67	21745.768	0.994	0.989		0.75	0.77	NO	51.0
	42 Total-pentadioxins	355.8546	30.57	202364.618	0.976	9.370		1.54	1.55	NO	647.8
	42 Total-pentadioxins	355.8546	30.43	23330.346	0.976	1.080		1.79	1.55	YES	83.0
	42 Total-pentadioxins	355.8546	30.22	259867.704	0.976	12.032		1.56	1.55	NO	845.1
	42 Total-pentadioxins	355.8546	29.60	15832.421	0.976	0.733		1.53	1.55	NO	51.3
	42 Total-pentadioxins	355.8546	29.12	317739.235	0.976	14.712		1.56	1.55	NO	638.1
	42 Total-pentadioxins	355.8546	32.21	10375.368	0.976	0.480		1.57	1.55	NO	31.3
	12 12378-PeCDD	355.8546	31.81	32291.521	0.976	1.495	1.495	1.44	1.55	NO	82.8
	42 Total-pentadioxins	355.8546	31.14	105879.281	0.976	4.902		1.56	1.55	NO	315.1
	42 Total-pentadioxins	355.8546	30.75	28565.680	0.976	1.323		1.67	1.55	NO	65.4
	15 123789-HxCDD	389.8157	37.05	35376.883	0.914	1.784	1.784	1.27	1.24	NO	146.8
	43 Total-hexadioxins	389.8157	36.81	16413.848	0.928	0.816		1.22	1.24	NO	65.9
	14 123678-HxCDD	389.8157	36.64	64372.584	0.902	3.267	3.267	1.27	1.24	NO	266.4
	13 123478-HxCDD	389.8157	36.50	20702.233	0.967	0.994	0.994	1.38	1.24	NO	93.7
	43 Total-hexadioxins	389.8157	35.64	16822.899	0.928	0.836		1.23	1.24	NO	66.4
	43 Total-hexadioxins	389.8157	35.53	204757.743	0.928	10.177		1.27	1.24	NO	538.1
	43 Total-hexadioxins	389.8157	35.15	953859.126	0.928	47.408		1.24	1.24	NO	3957.3
	43 Total-hexadioxins	389.8157	34.32	231651.563	0.928	11.513		1.27	1.24	NO	998.9
	17 OCDD	457.7377	47.36	3804806.250	0.979	330.998	330....	0.88	0.89	NO	11303.8
	16 1234678-HpCDD	423.7766	41.38	752623.094	0.999	43.815	43.815	1.04	1.05	NO	1612.0
	44 Total-heptadioxins	423.7766	40.11	1291598.813	0.999	75.192		1.02	1.05	NO	2951.6

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PFK1

	#	Name	Trace				pg	EMPC	T Ratio	Q Ratio	LRT	S/N
	48	FUNCTION1 PFK	330.9792	26.65	0.000							2.1
	48	FUNCTION1 PFK	330.9792	26.06	0.000							4.9
	48	FUNCTION1 PFK	330.9792	25.76	0.000							4.9
	48	FUNCTION1 PFK	330.9792	25.57	0.000							6.6
	48	FUNCTION1 PFK	330.9792	25.17	0.000							2.8
	48	FUNCTION1 PFK	330.9792	24.03	0.000							2.2
	48	FUNCTION1 PFK	330.9792	23.82	0.000							5.6
	48	FUNCTION1 PFK	330.9792	23.48	0.000							8.0
	48	FUNCTION1 PFK	330.9792	23.33	0.000							3.6
	48	FUNCTION1 PFK	330.9792	23.21	0.000							4.0
	48	FUNCTION1 PFK	330.9792	22.91	0.000							2.3
	48	FUNCTION1 PFK	330.9792	21.64	0.000							9.7
	48	FUNCTION1 PFK	330.9792	21.42	0.000							6.4
	48	FUNCTION1 PFK	330.9792	21.31	0.000							4.0

PFK2

	#	Name	Trace				pg	EMPC	T Ratio	Q Ratio	LRT	S/N
	49	FUNCTION2 PFK	366.9792	30.29	0.000		0.000					0.3
	49	FUNCTION2 PFK	366.9792	30.21	0.000		0.000					1.0
	49	FUNCTION2 PFK	366.9792	30.16	0.000		0.000					1.3
	49	FUNCTION2 PFK	366.9792	29.89	0.000		0.000					1.4
	49	FUNCTION2 PFK	366.9792	29.84	0.000		0.000					1.1
	49	FUNCTION2 PFK	366.9792	29.71	0.000		0.000					1.1
	49	FUNCTION2 PFK	366.9792	29.51	0.000		0.000					0.8
	49	FUNCTION2 PFK	366.9792	29.38	0.000		0.000					0.8
	49	FUNCTION2 PFK	366.9792	29.24	0.000		0.000					1.4
	49	FUNCTION2 PFK	366.9792	29.16	0.000		0.000					1.1
	49	FUNCTION2 PFK	366.9792	29.00	0.000		0.000					0.4
	49	FUNCTION2 PFK	366.9792	28.92	0.000		0.000					1.2
	49	FUNCTION2 PFK	366.9792	28.68	0.000		0.000					1.1
	49	FUNCTION2 PFK	366.9792	28.48	0.000		0.000					1.2
	49	FUNCTION2 PFK	366.9792	28.41	0.000		0.000					1.6
	49	FUNCTION2 PFK	366.9792	32.93	0.000		0.000					1.4
	49	FUNCTION2 PFK	366.9792	32.79	0.000		0.000					1.8
	49	FUNCTION2 PFK	366.9792	32.39	0.000		0.000					1.6
	49	FUNCTION2 PFK	366.9792	31.71	0.000		0.000					1.4
	49	FUNCTION2 PFK	366.9792	31.59	0.000		0.000					1.1
	49	FUNCTION2 PFK	366.9792	31.52	0.000		0.000					0.7
	49	FUNCTION2 PFK	366.9792	31.46	0.000		0.000					0.9
	49	FUNCTION2 PFK	366.9792	31.40	0.000		0.000					1.9
	49	FUNCTION2 PFK	366.9792	31.23	0.000		0.000					0.8
	49	FUNCTION2 PFK	366.9792	31.08	0.000		0.000					1.1
	49	FUNCTION2 PFK	366.9792	30.97	0.000		0.000					1.2
	49	FUNCTION2 PFK	366.9792	30.69	0.000		0.000					0.5
	49	FUNCTION2 PFK	366.9792	30.66	0.000		0.000					0.6
	49	FUNCTION2 PFK	366.9792	30.63	0.000		0.000					0.9
	49	FUNCTION2 PFK	366.9792	30.48	0.000		0.000					1.2

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ast Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
'rinted: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

): XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

'FK3

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	S/NPC	T. Rati...	T. Rati...	RT R...	S/N
[redacted]	50	FUNCTION3 PFK	380.9760	37.91	0.000	0.000						1.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.69	0.000	0.000						3.8
[redacted]	50	FUNCTION3 PFK	380.9760	37.59	0.000	0.000						8.2
[redacted]	50	FUNCTION3 PFK	380.9760	37.47	0.000	0.000						8.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.38	0.000	0.000						8.7
[redacted]	50	FUNCTION3 PFK	380.9760	36.93	0.000	0.000						1.7
[redacted]	50	FUNCTION3 PFK	380.9760	36.24	0.000	0.000						5.8
[redacted]	50	FUNCTION3 PFK	380.9760	35.64	0.000	0.000						1.5
[redacted]	50	FUNCTION3 PFK	380.9760	34.78	0.000	0.000						2.0
[redacted]	50	FUNCTION3 PFK	380.9760	33.51	0.000	0.000						2.9
[redacted]	50	FUNCTION3 PFK	380.9760	33.27	0.000	0.000						2.0

'FK4

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	S/NPC	T. Rati...	T. Rati...	RT R...	S/N
[redacted]	51	FUNCTION4 PFK	430.9728	40.51	0.000							1.4
[redacted]	51	FUNCTION4 PFK	430.9728	40.02	0.000							8.0
[redacted]	51	FUNCTION4 PFK	430.9728	39.22	0.000							6.5
[redacted]	51	FUNCTION4 PFK	430.9728	38.60	0.000							30.4

'FK5

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	S/NPC	T. Rati...	T. Rati...	RT R...	S/N

:THERS1

[redacted]	#	Name	Trace	RT	Abs Resp	RRF M...	pg	S/NPC	T. Rati...	T. Rati...	RT R...	S/N
[redacted]	53	FUNCTION1 HXCD...	375.8364	27.27	0.000	0.000						1.5
[redacted]	53	FUNCTION1 HXCD...	375.8364	26.89	0.000	0.000						1.2
[redacted]	53	FUNCTION1 HXCD...	375.8364	26.41	0.000	0.000						4.2
[redacted]	53	FUNCTION1 HXCD...	375.8364	26.27	0.000	0.000						1.3
[redacted]	53	FUNCTION1 HXCD...	375.8364	26.12	0.000	0.000						4.6
[redacted]	53	FUNCTION1 HXCD...	375.8364	25.85	0.000	0.000						1.6
[redacted]	53	FUNCTION1 HXCD...	375.8364	25.42	0.000	0.000						1.2
[redacted]	53	FUNCTION1 HXCD...	375.8364	24.49	0.000	0.000						1.3
[redacted]	53	FUNCTION1 HXCD...	375.8364	24.08	0.000	0.000						2.5
[redacted]	53	FUNCTION1 HXCD...	375.8364	23.49	0.000	0.000						2.4
[redacted]	53	FUNCTION1 HXCD...	375.8364	23.22	0.000	0.000						1.4
[redacted]	53	FUNCTION1 HXCD...	375.8364	22.78	0.000	0.000						3.1
[redacted]	53	FUNCTION1 HXCD...	375.8364	21.89	0.000	0.000						2.5
[redacted]	53	FUNCTION1 HXCD...	375.8364	21.46	0.000	0.000						1.8
[redacted]	53	FUNCTION1 HXCD...	375.8364	28.07	0.000	0.000						3.1
[redacted]	53	FUNCTION1 HXCD...	375.8364	27.62	0.000	0.000						1.2

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ETHERS2

	54	FUNCTION1 HPCD...	409.7974	27.80	0.000	0.000					4.5
	54	FUNCTION1 HPCD...	409.7974	24.29	0.000	0.000					3.2

ETHERS3

	55	FUNCTION2 HPCD...	409.7974	32.50	0.000	0.000					2.8
	55	FUNCTION2 HPCD...	409.7974	31.82	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	31.63	0.000	0.000					3.6
	55	FUNCTION2 HPCD...	409.7974	31.39	0.000	0.000					3.3
	55	FUNCTION2 HPCD...	409.7974	31.11	0.000	0.000					2.9
	55	FUNCTION2 HPCD...	409.7974	30.46	0.000	0.000					6.8
	55	FUNCTION2 HPCD...	409.7974	30.18	0.000	0.000					45.6
	55	FUNCTION2 HPCD...	409.7974	29.85	0.000	0.000					42.5
	55	FUNCTION2 HPCD...	409.7974	29.58	0.000	0.000					4.3
	55	FUNCTION2 HPCD...	409.7974	28.40	0.000	0.000					2.2
	55	FUNCTION2 HPCD...	409.7974	32.80	0.000	0.000					2.4

ETHERS4

	56	FUNCTION3 OCDPE	445.7555	37.07	0.000	0.000					9.7
	56	FUNCTION3 OCDPE	445.7555	37.01	0.000	0.000					4.3
	56	FUNCTION3 OCDPE	445.7555	36.82	0.000	0.000					8.8
	56	FUNCTION3 OCDPE	445.7555	36.71	0.000	0.000					17.2
	56	FUNCTION3 OCDPE	445.7555	36.61	0.000	0.000					2.9
	56	FUNCTION3 OCDPE	445.7555	36.57	0.000	0.000					3.8
	56	FUNCTION3 OCDPE	445.7555	36.45	0.000	0.000					5.5
	56	FUNCTION3 OCDPE	445.7555	36.41	0.000	0.000					8.8
	56	FUNCTION3 OCDPE	445.7555	36.31	0.000	0.000					14.9
	56	FUNCTION3 OCDPE	445.7555	36.10	0.000	0.000					2.3
	56	FUNCTION3 OCDPE	445.7555	35.45	0.000	0.000					12.8
	56	FUNCTION3 OCDPE	445.7555	35.19	0.000	0.000					106.1
	56	FUNCTION3 OCDPE	445.7555	35.00	0.000	0.000					16.7
	56	FUNCTION3 OCDPE	445.7555	34.94	0.000	0.000					46.2
	56	FUNCTION3 OCDPE	445.7555	37.66	0.000	0.000					8.0
	56	FUNCTION3 OCDPE	445.7555	37.44	0.000	0.000					6.2
	56	FUNCTION3 OCDPE	445.7555	37.33	0.000	0.000					10.8

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ETHERS5

	57	FUNCTION4 NCDPE	479.7165	43.45	0.000	0.000					2.0
	57	FUNCTION4 NCDPE	479.7165	41.89	0.000	0.000					2.8
	57	FUNCTION4 NCDPE	479.7165	41.74	0.000	0.000					11.8
	57	FUNCTION4 NCDPE	479.7165	41.71	0.000	0.000					11.3
	57	FUNCTION4 NCDPE	479.7165	41.56	0.000	0.000					40.3
	57	FUNCTION4 NCDPE	479.7165	41.34	0.000	0.000					112.5
	57	FUNCTION4 NCDPE	479.7165	41.13	0.000	0.000					103.5
	57	FUNCTION4 NCDPE	479.7165	40.92	0.000	0.000					48.3
	57	FUNCTION4 NCDPE	479.7165	40.30	0.000	0.000					3.9
	57	FUNCTION4 NCDPE	479.7165	39.62	0.000	0.000					2.2
	57	FUNCTION4 NCDPE	479.7165	39.14	0.000	0.000					428.8

ETHERS6

	58	FUNCTION5 DCDPE	513.6775	48.03	0.000	0.000					4.6
	58	FUNCTION5 DCDPE	513.6775	47.72	0.000	0.000					5.9
	58	FUNCTION5 DCDPE	513.6775	47.54	0.000	0.000					6.2
	58	FUNCTION5 DCDPE	513.6775	47.41	0.000	0.000					6.1

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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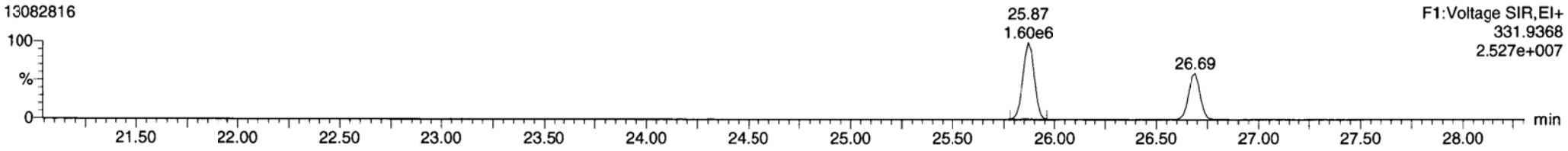
ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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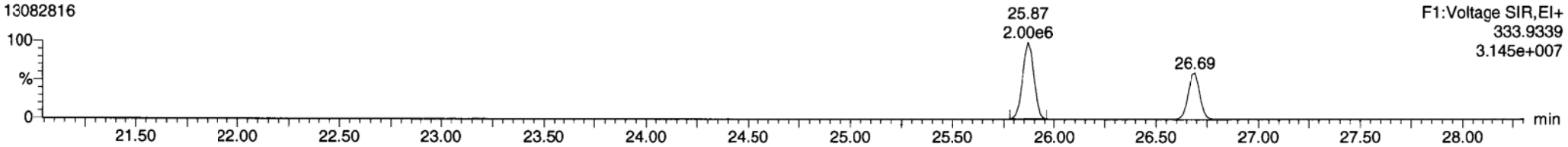

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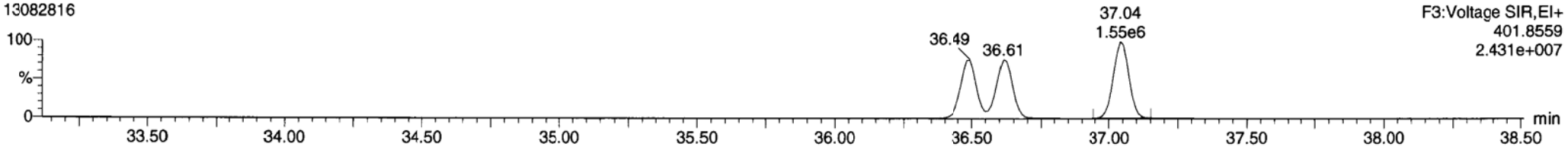

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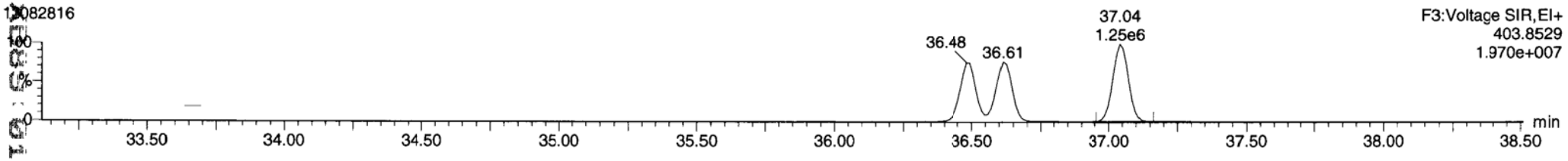

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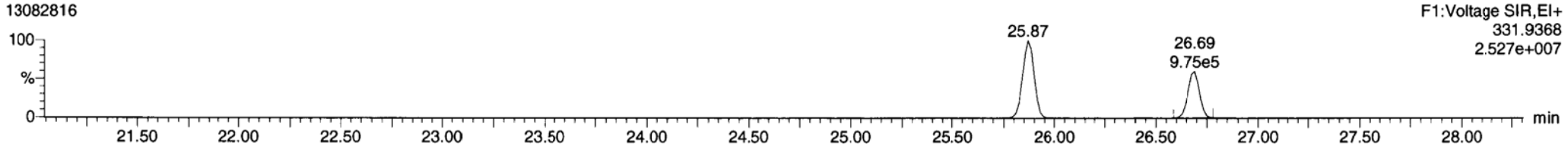
13C-2378-TCDD



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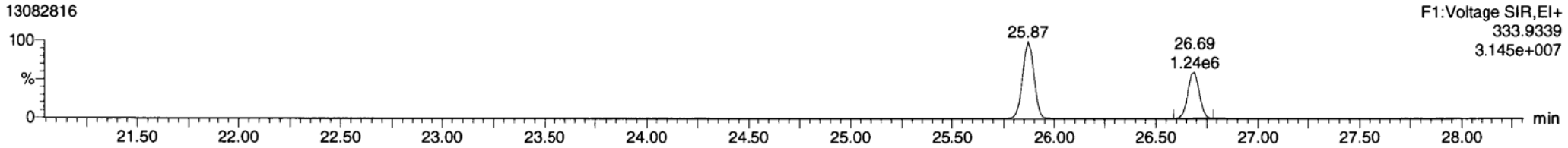

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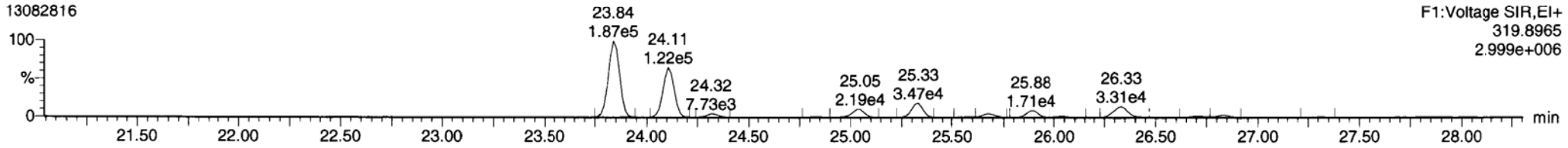
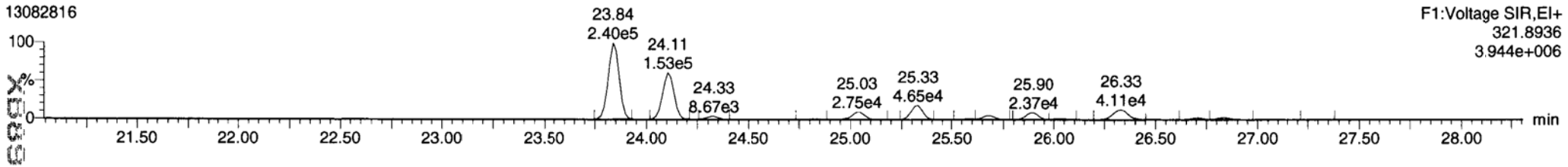
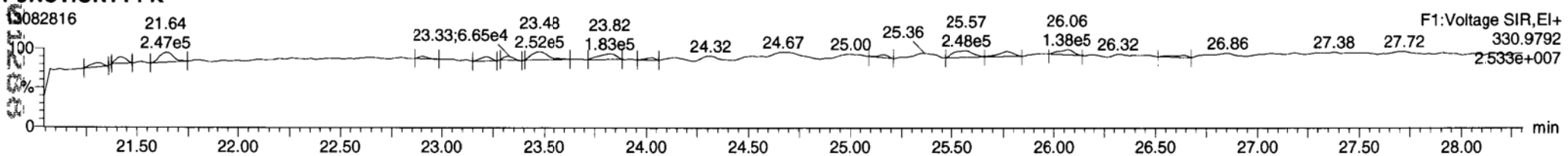


Total-tetradioxins



FUNCTION1 PFK



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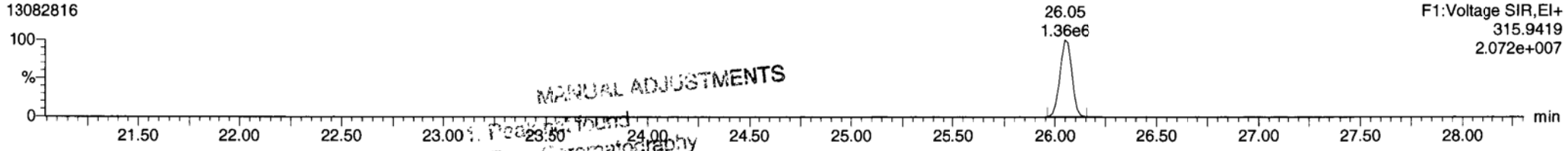
13C-2378-TCDF



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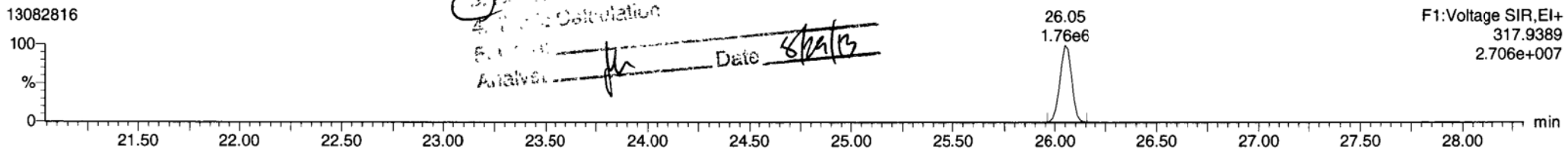
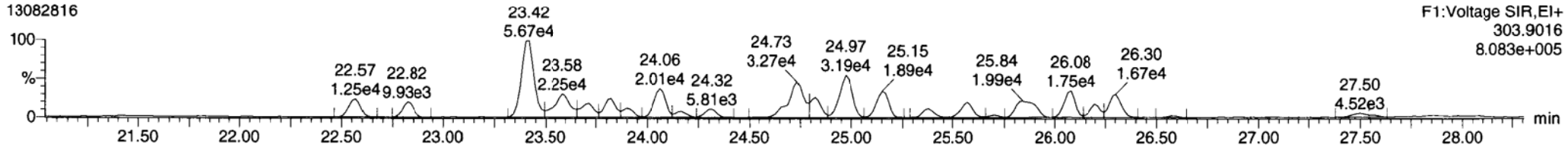
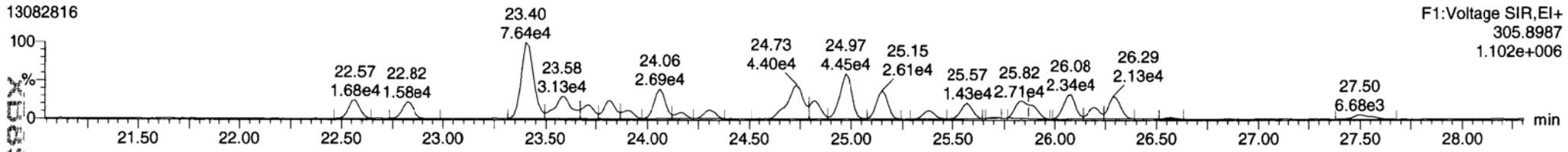


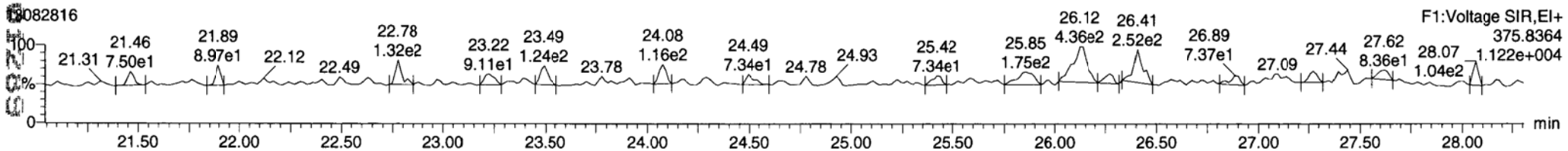
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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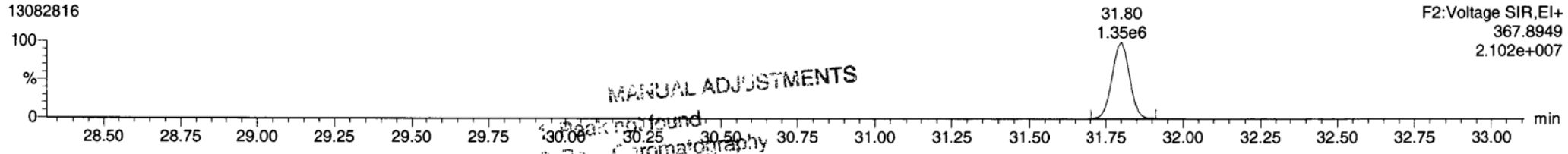
13C-12378-PeCDD



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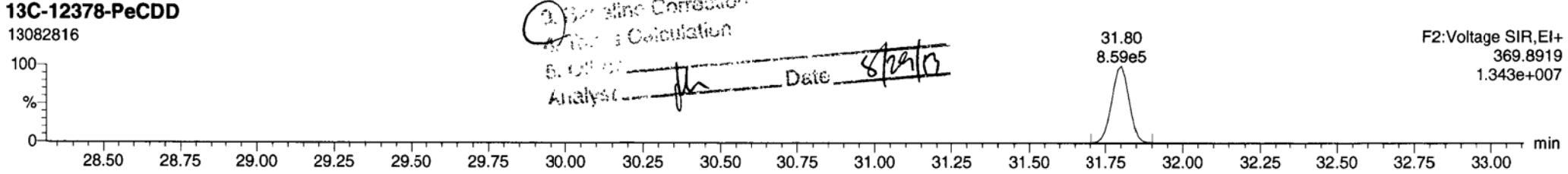

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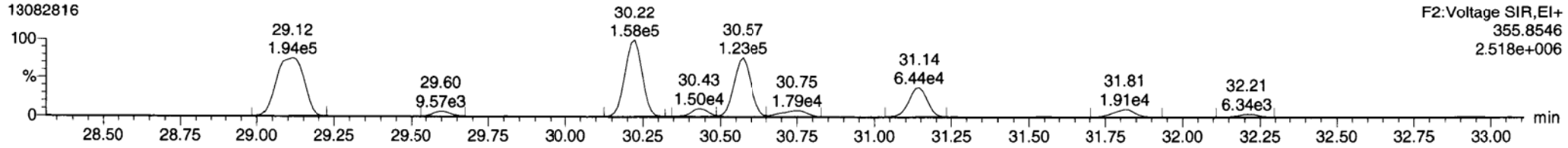
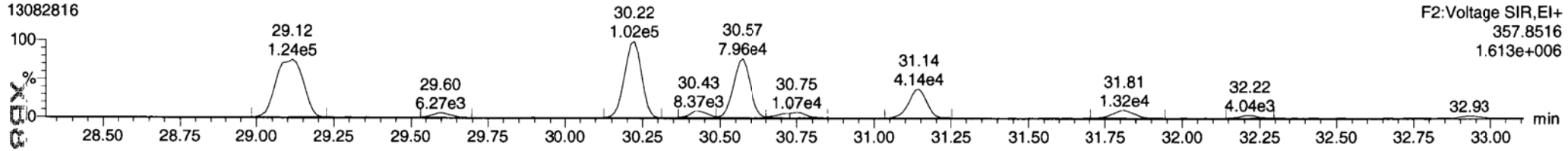
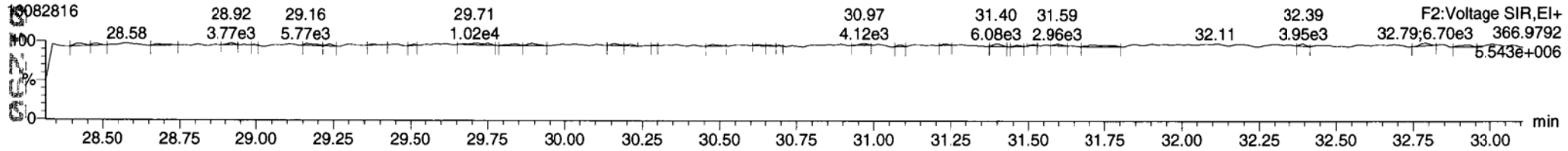


Total-pentadioxins



FUNCTION2 PFK



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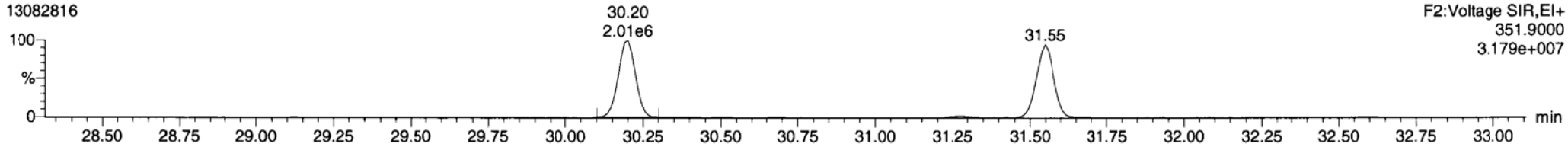
13C-12378-PeCDF



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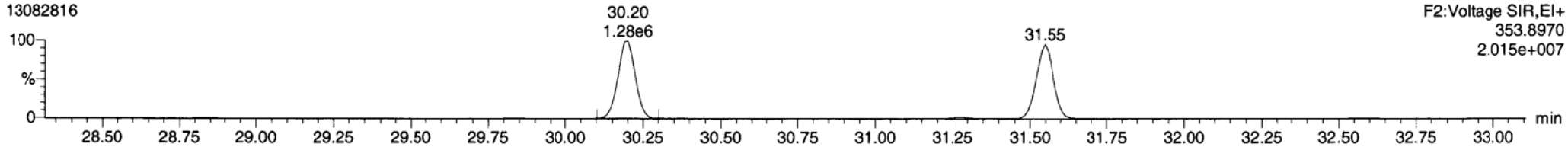

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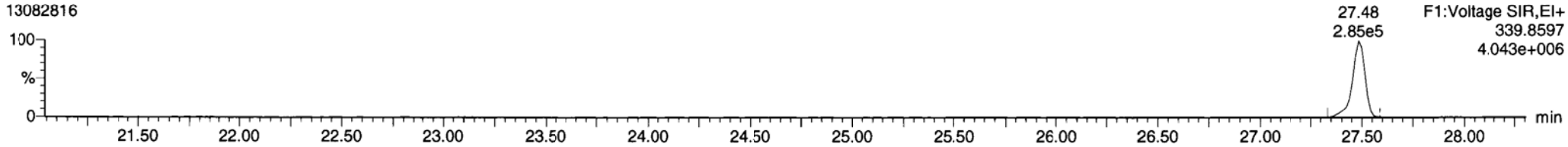

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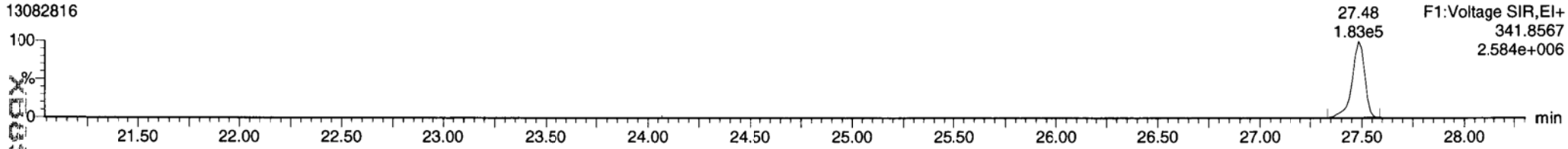

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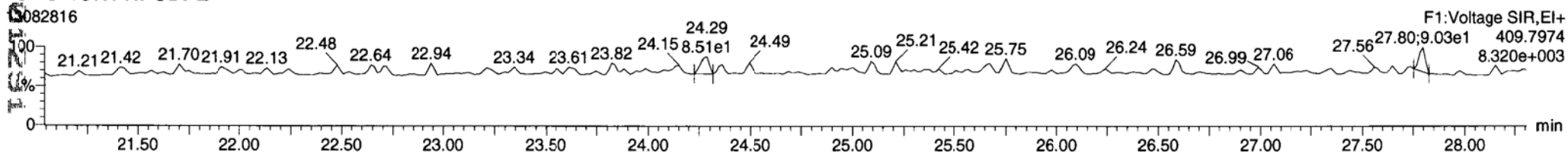

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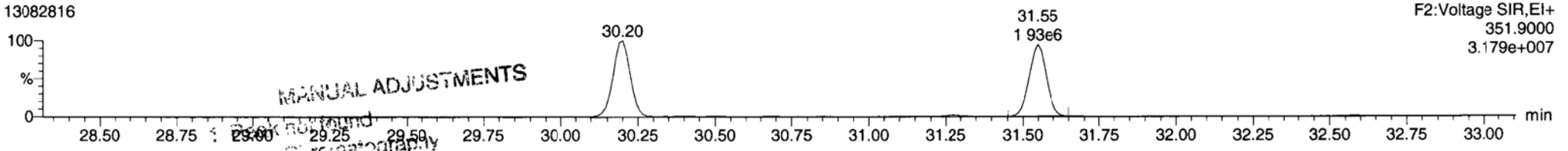
13C-23478-PeCDF



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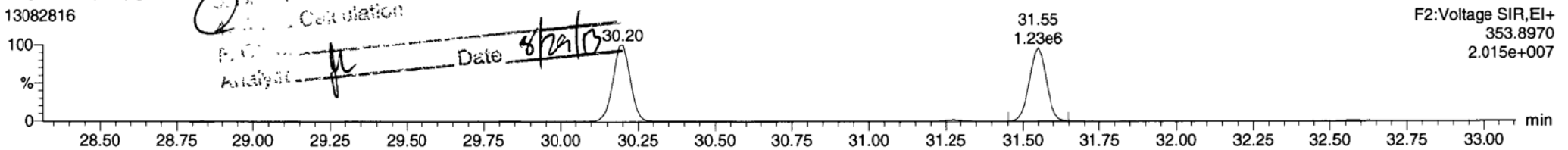
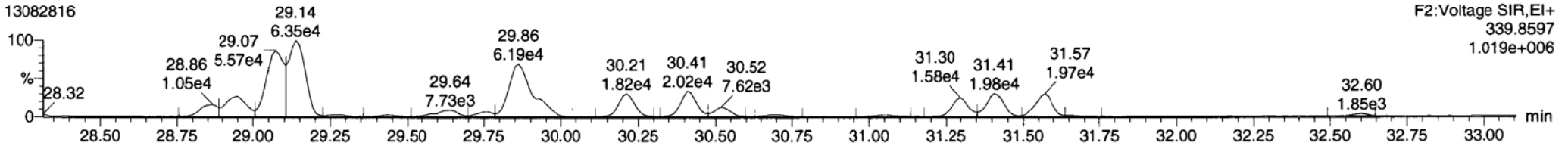
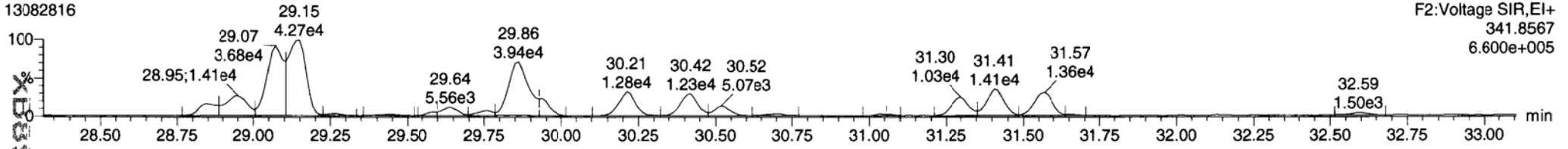


Total-pentafurans



Total-pentafurans



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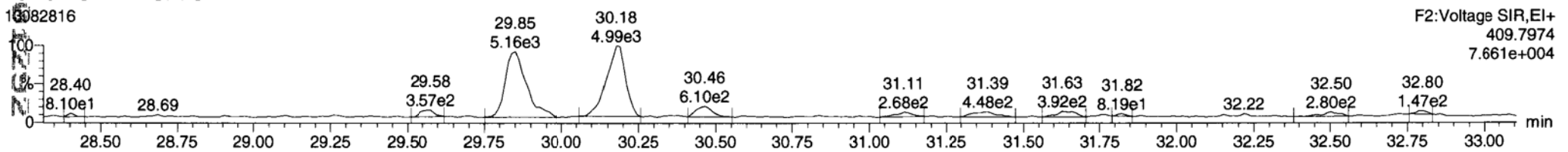

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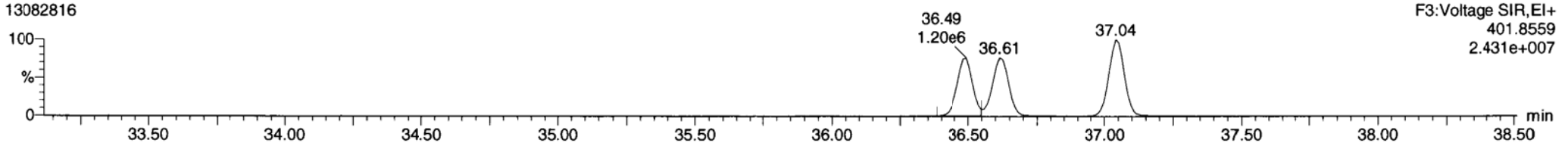
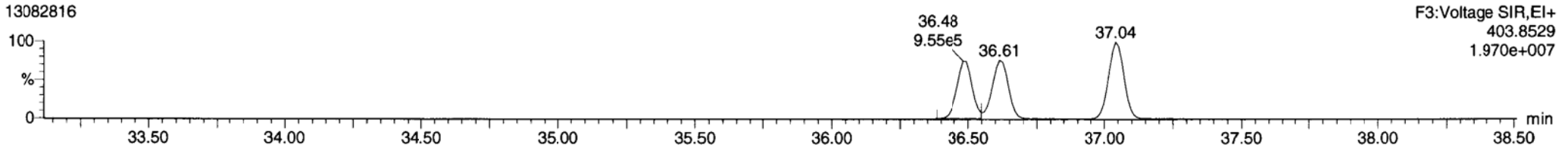
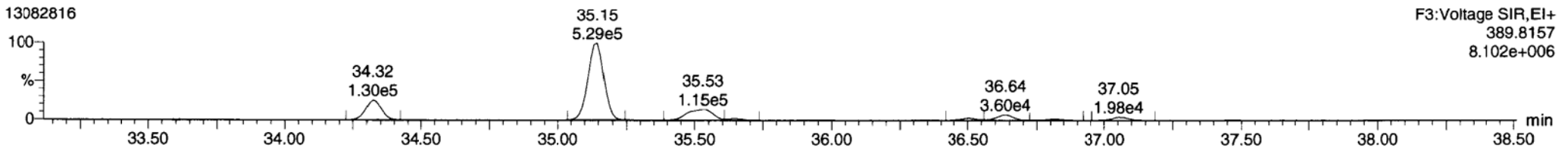
13C-123478-HxCDD



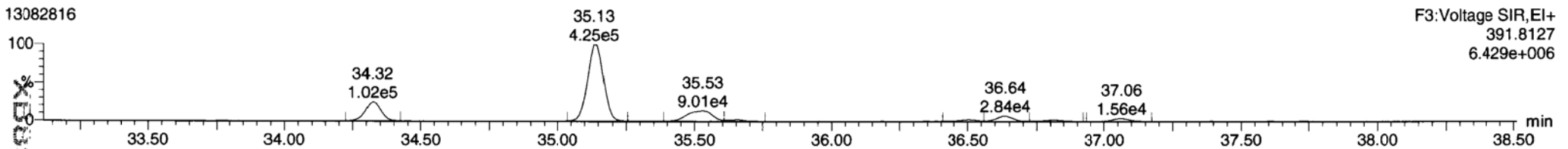
13C-123478-HxCDD



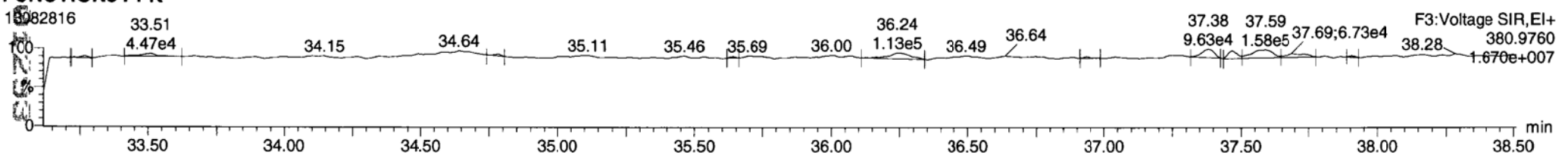
Total-hexadioxins



Total-hexadioxins



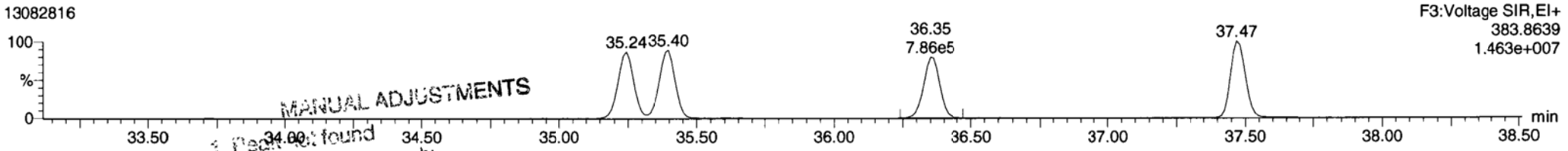
FUNCTION3 PFK



Dataset: P:\DIOX\N8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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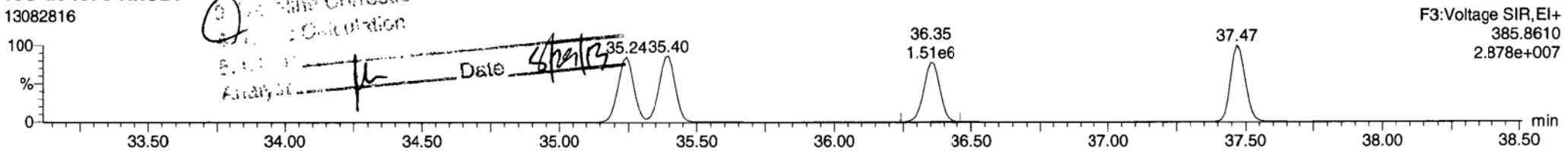
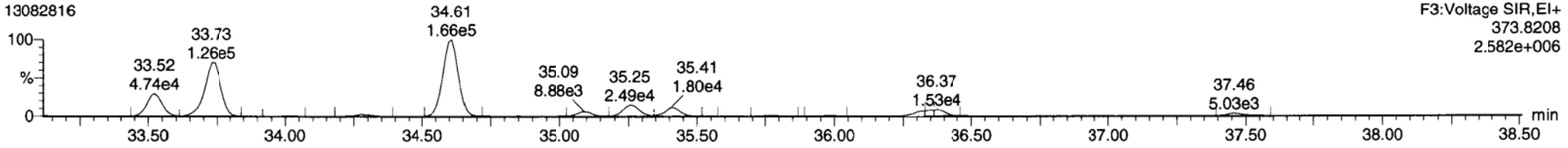
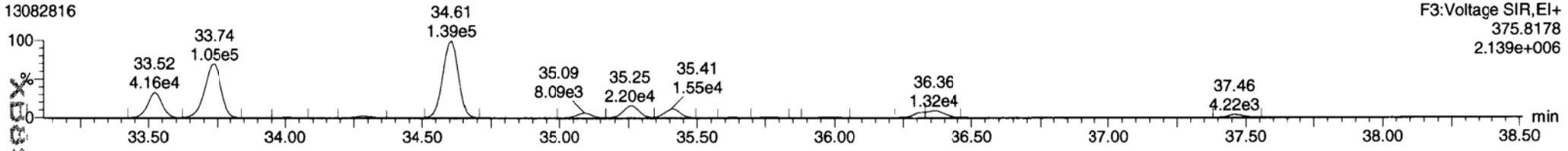


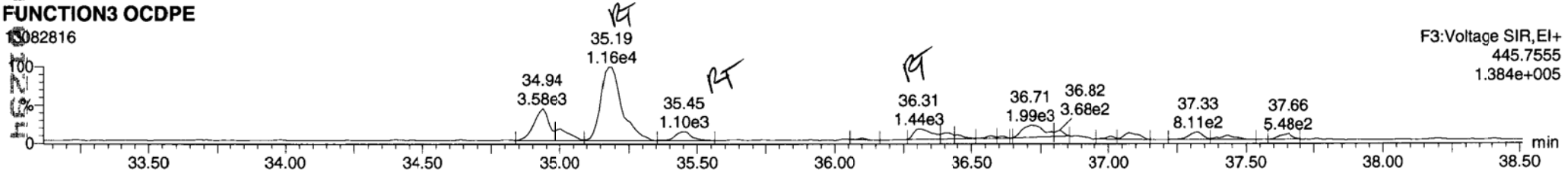
Total-hexafurans



Total-hexafurans



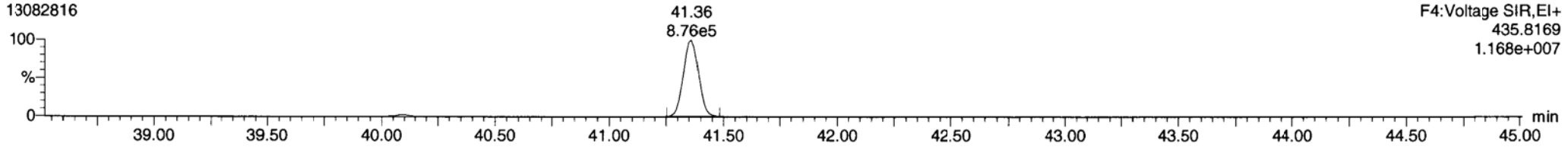
FUNCTION3 OCDPE



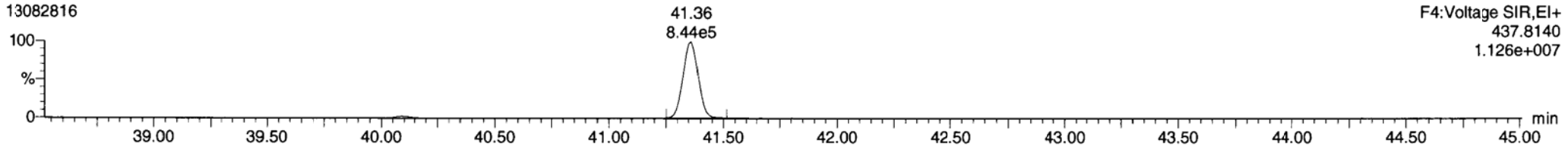
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

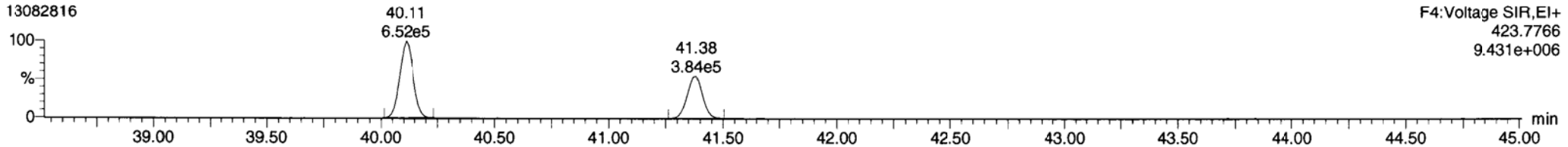
13C-1234678-HpCDD



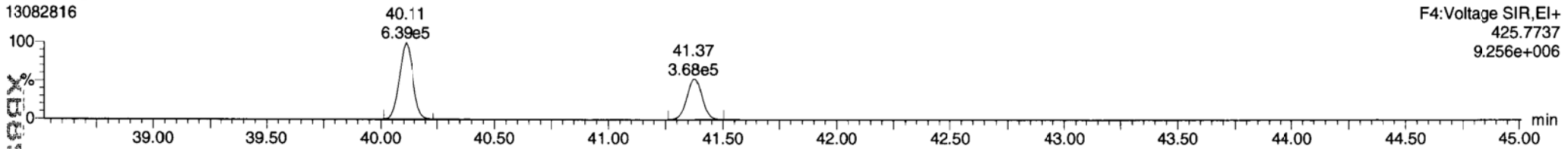
13C-1234678-HpCDD



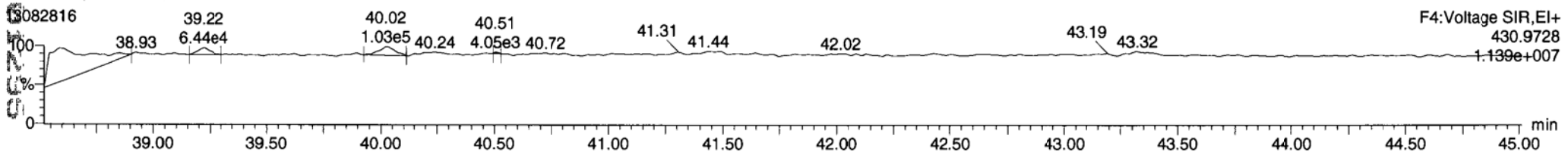
Total-heptadioxins



Total-heptadioxins



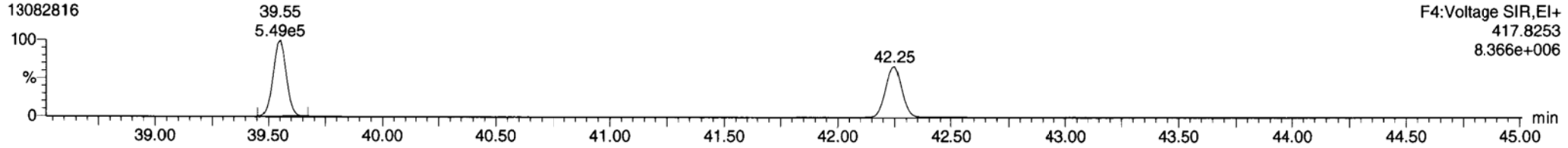
FUNCTION4 PFK



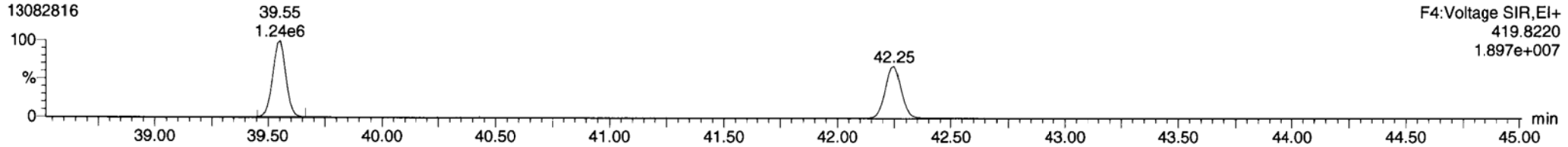
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

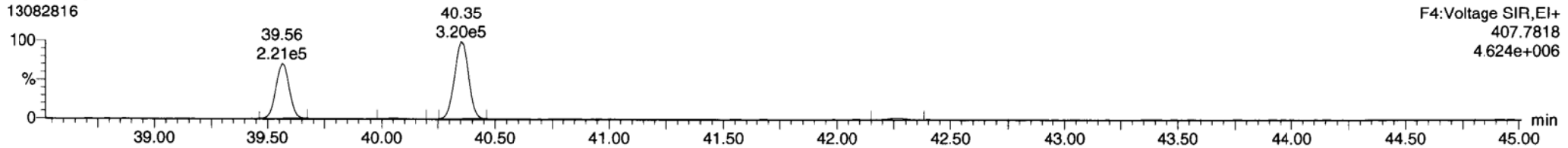
13C-1234678-HpCDF



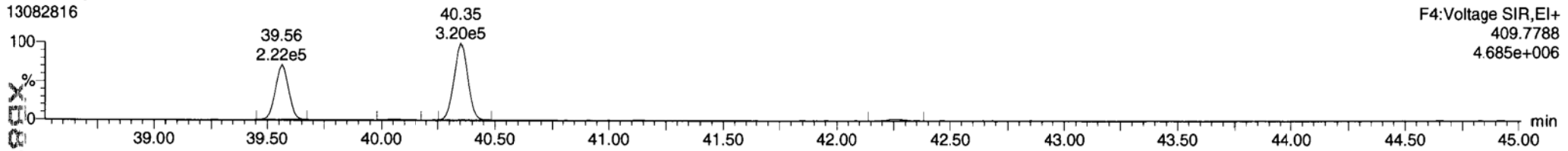
13C-1234678-HpCDF



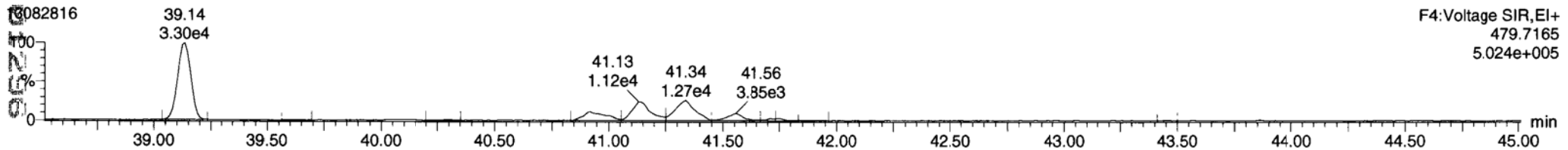
Total-heptafurans



Total-heptafurans



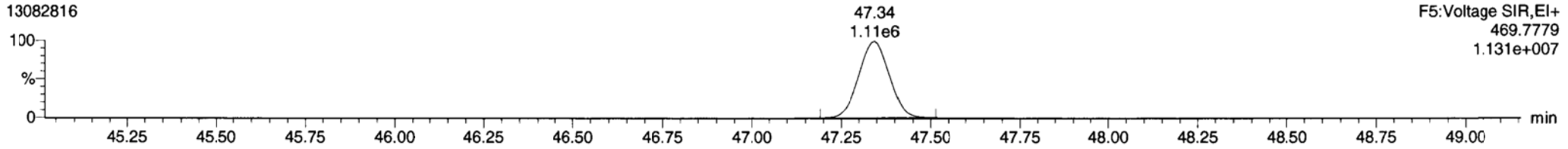
FUNCTION4 NCDPE



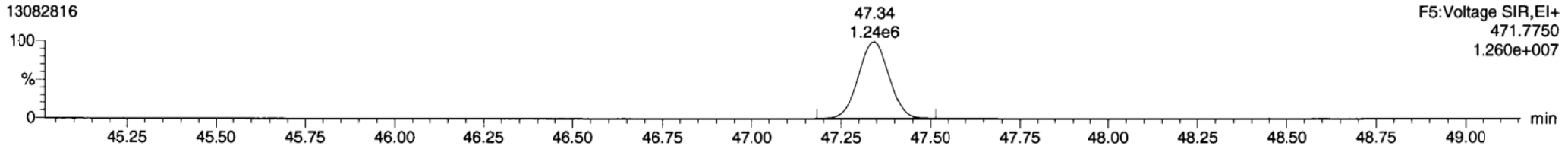
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

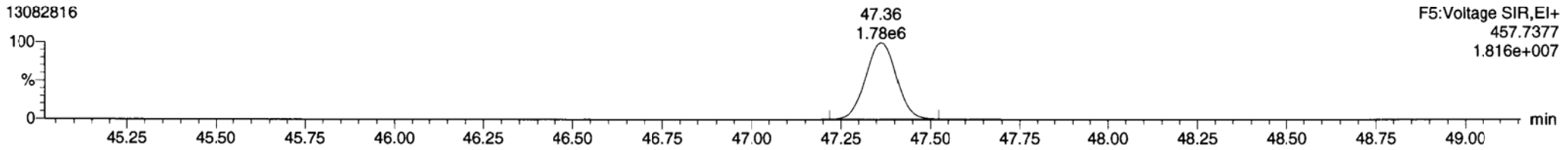
13C-OCDD



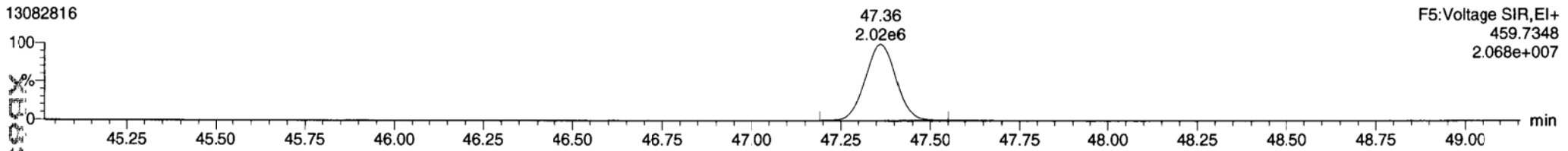
13C-OCDD



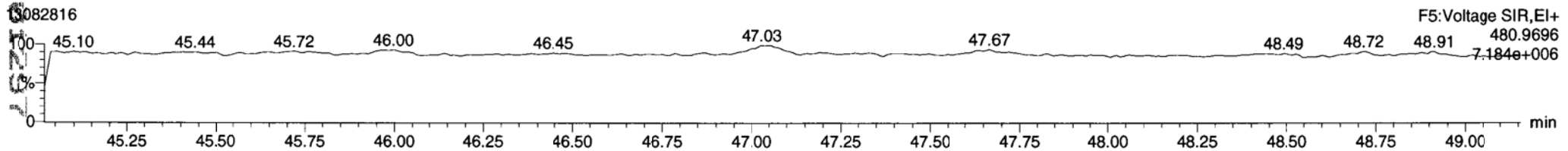
OCDD



OCDD



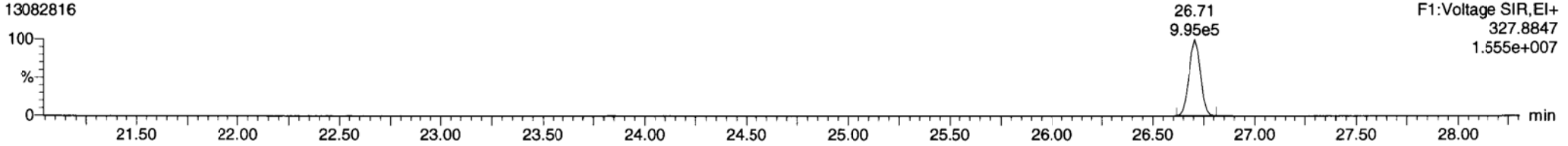
FUNCTION5 PFK



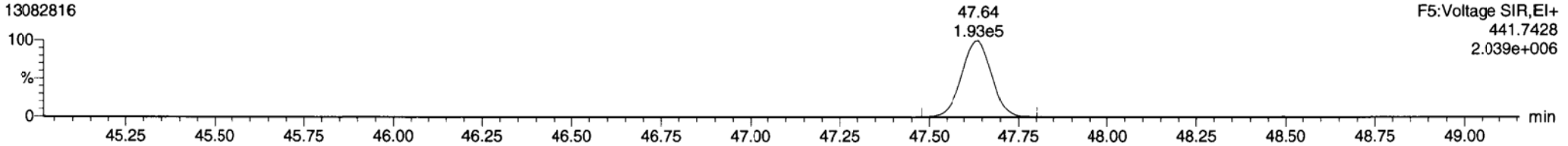
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:04:54 Pacific Daylight Time

ID: XB89D, Name: 13082816, Date: 28-Aug-2013, Time: 23:42:13, Conditions: AUTOSPEC01, User: pk

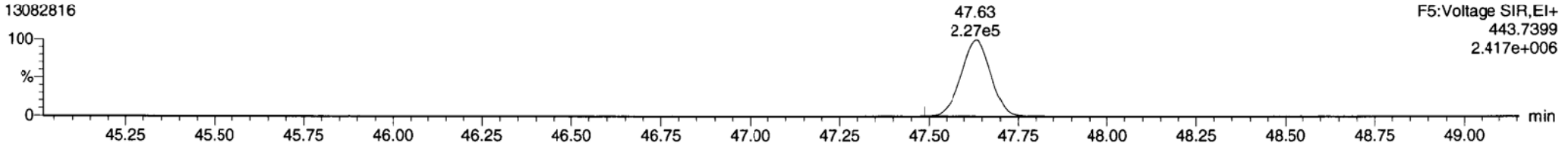
37CL-2378-TCDD



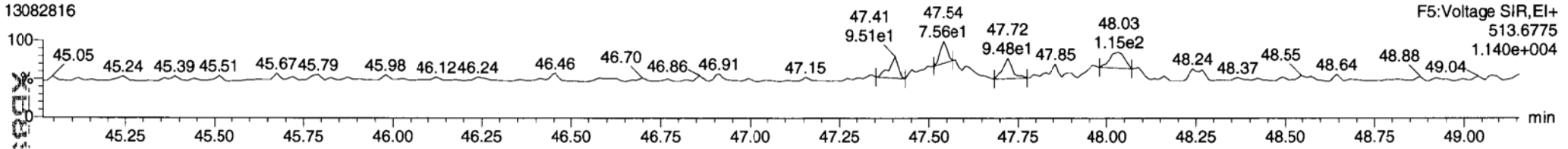
OCDF



OCDF



FUNCTION5 DCDPE



XB89D.D Sat Aug 31 09:59:59 2013

Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

8/29/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT	Response	Area2Area	RRF	Ratio	Ratio2	S/N	Resolution	Width	Height	Flags	Conc	Amount
2378-TCDF	26.078	1.001	4.47e4	6.22e4	0.867	0.719	0.770	130.5	4698	1961	6.13e5	8.76e5	NO	5.249	5.249
12378-PeCDF	30.223	1.001	3.42e4	2.24e4	0.875	1.525	1.550	172.4	3101	2611	5.35e5	3.37e5	NO	2.108	2.108
23478-PeCDF	31.571	1.000	5.76e4	3.99e4	0.880	1.441	1.550	278.5	3101	2611	8.63e5	6.00e5	NO	3.740	3.740
123478-HxCDF	35.287	1.001	6.89e4	6.05e4	1.048	1.139	1.240	355.6	2927	2877	1.04e6	8.92e5	NO	5.177	5.177
234678-HxCDF	36.350	0.999	5.91e4	5.06e4	1.088	1.168	1.240	331.5	2927	2877	9.70e5	7.80e5	NO	4.572	4.572
123678-HxCDF	35.430	1.000	6.05e4	5.02e4	1.025	1.204	1.240	310.9	2927	2877	9.10e5	7.46e5	NO	4.515	4.515
123789-HxCDF	37.479	0.999	2.16e4	1.82e4	0.959	1.186	1.240	107.3	2927	2877	3.14e5	2.60e5	NO	1.831	1.831
1234678-HpCDF	39.617	1.000	1.40e6	1.40e6	1.215	1.002	1.050	7273.6	2690	2284	1.96e7	1.93e7	NO	144.427	144.427
1234789-HpCDF	42.325	1.001	3.03e4	3.02e4	1.200	1.003	1.050	126.0	2690	2284	3.39e5	3.41e5	NO	4.087	4.087
OCDF	47.774	1.006	8.27e5	9.59e5	1.064	0.863	0.890	2574.6	3140	2681	8.08e6	9.28e6	NO	205.199	205.199
2378-TCDD	26.706	1.001	8.71e3	1.15e4	0.994	0.757	0.770	39.2	3458	1767	1.35e5	1.75e5	NO	1.047	1.047
12378-PeCDD	31.823	1.000	7.42e4	4.77e4	0.976	1.556	1.550	437.9	2257	1637	9.89e5	6.45e5	NO	5.502	5.502
123478-HxCDD	36.515	1.000	3.62e4	3.09e4	0.967	1.174	1.240	274.0	2144	2255	5.87e5	4.78e5	NO	3.333	3.333
123678-HxCDD	36.646	1.001	1.59e5	1.29e5	0.902	1.230	1.240	1146.7	2144	2255	2.46e6	2.02e6	NO	15.319	15.319
123789-HxCDD	37.074	1.012	6.54e4	5.24e4	0.914	1.249	1.240	484.2	2144	2255	1.04e6	7.85e5	NO	6.185	6.185
1234678-HpCDD	41.448	1.001	1.35e6	1.32e6	0.999	1.026	1.050	3946.7	4063	3738	1.60e7	1.54e7	NO	166.939	166.939
OCDD	47.514	1.000	4.22e6	4.77e6	0.979	0.886	0.890	16800.3	2534	2034	4.26e7	4.75e7	NO	1123.004	1123.004
13C-2378-TCDF	26.049	1.007	1.03e6	1.32e6	1.419	0.779	0.770	4373.6	3499	2292	1.53e7	1.99e7	NO		47.320
13C-12378-PeCDF	30.201	1.167	1.88e6	1.20e6	1.158	1.569	1.550	12566.5	2242	3250	2.82e7	1.81e7	NO		75.891
13C-23478-PeCDF	31.560	1.220	1.81e6	1.16e6	1.127	1.562	1.550	12462.8	2242	3250	2.79e7	1.80e7	NO		75.222
13C-123478-HxCDF	35.265	0.951	8.15e5	1.57e6	1.206	0.519	0.510	2769.0	4399	2962	1.22e7	2.34e7	NO		79.027
13C-123678-HxCDF	35.419	0.956	8.20e5	1.57e6	1.266	0.521	0.510	2785.4	4399	2962	1.23e7	2.35e7	NO		75.595
13C-234678-HxCDF	36.372	0.981	7.54e5	1.45e6	1.155	0.519	0.510	2534.8	4399	2962	1.11e7	2.12e7	NO		76.312
13C-123789-HxCDF	37.501	1.012	7.72e5	1.49e6	1.121	0.517	0.510	2634.7	4399	2962	1.16e7	2.25e7	NO		80.831
13C-1234678-HpCDF	39.606	1.069	4.94e5	1.10e6	1.040	0.447	0.440	2863.1	2393	2394	6.85e6	1.52e7	NO		61.440
13C-1234789-HpCDF	42.303	1.141	3.79e5	8.55e5	0.789	0.444	0.440	1815.5	2393	2394	4.34e6	9.68e6	NO		62.511
13C-1234-TCDD	25.869	0.000	1.54e6	1.95e6	1.000	0.790	0.770	8159.8	2952	2282	2.41e7	3.05e7	NO		100.000
13C-2378-TCDD	26.691	1.032	8.53e5	1.09e6	0.962	0.782	0.770	4441.1	2952	2282	1.31e7	1.67e7	NO		57.755
13C-12378-PeCDD	31.812	1.230	1.39e6	8.80e5	0.746	1.577	1.550	10320.2	2039	1749	2.10e7	1.33e7	NO		86.896
13C-123478-HxCDD	36.504	0.985	1.16e6	9.21e5	1.003	1.259	1.240	7303.8	2521	1915	1.84e7	1.45e7	NO		82.942
13C-123678-HxCDD	36.625	0.988	1.15e6	9.36e5	1.052	1.229	1.240	6992.1	2521	1915	1.76e7	1.44e7	NO		79.285
13C-1234678-HpCDD	41.426	1.118	8.16e5	7.82e5	0.880	1.044	1.050	6016.8	1566	1870	9.42e6	9.08e6	NO		72.594
13C-OCDD	47.496	1.281	7.75e5	8.60e5	0.775	0.901	0.890	5035.7	1525	1070	7.68e6	8.56e6	NO		84.389

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.063	0.000	1.39e6	1.11e6	1.000	1.243	1.240	8222.8	2521	1915	2.07e7	1.66e7	NO	100.000
Total-tetrafurans			8.42e5		0.867				4698		1.18e7			96.159
Total-penta1			1.71e6						1559		2.45e7			101.500
Total-pentafurans			1.27e6		0.877				3101		1.93e7			79.750
Total-hexafurans			2.26e6		1.030				2927		3.39e7			174.156
Total-heptafurans			3.39e6		1.207				2690		4.51e7			376.417
Total-Furans			1.03e7		1.022				4698		1.43e8			1033.522
Total-tetradioxins			7.14e5		0.994				3458		1.09e7			84.967
Total-pentadioxins			1.38e6		0.976				2257		1.87e7			102.114
Total-hexadioxins			1.94e6		0.928				2144		2.72e7			181.569
Total-heptadioxins			3.88e6		0.999				4063		4.75e7			478.047
Total-Dioxins			1.21e7		0.962				3458		1.47e8			1969.701
Total-TEQ			2.24e7						3458		2.90e8			3003.223
37CL-2378-TCDD	26.706	1.032	8.86e5		1.091			5074.9	2651		1.35e7			23.206
FUNCTION1 PFK			1.37e6						347845		1.74e7			
FUNCTION2 PFK			0.00e0						110187		0.00e0			
FUNCTION3 PFK			3.56e5						195035		4.79e6			0.000
FUNCTION4 PFK			1.01e5						164181		2.53e6			
FUNCTION5 PFK			0.00e0						149242		0.00e0			
FUNCTION1 HXCDPE			6.95e4						1260		1.10e6			0.000
FUNCTION1 HPCDPE			7.30e3						638		1.20e5			0.000
FUNCTION2 HPCDPE			3.28e4						1244		5.38e5			0.000
FUNCTION3 OCDPE			2.30e4						2745		3.47e5			0.000
FUNCTION4 NCDPE			5.67e4						1459		8.14e5			0.000
FUNCTION5 DCDPE			1.02e3						852		3.29e4			0.000

XB89E.61556

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

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TF

		Name	Trace	RT	Area	RF M.	Conc.	EMPC	Ion Rat.	Ion Rat.	Ion Rat.	S/N
	35	Total-tetrafurans	303.9016	24.82	34059.023	0.867	1.673		0.79	0.77	NO	50.2
	35	Total-tetrafurans	303.9016	24.73	131490.679	0.867	6.460		0.73	0.77	NO	149.3
	35	Total-tetrafurans	303.9016	24.32	17566.459	0.867	0.863		0.87	0.77	NO	26.1
	35	Total-tetrafurans	303.9016	24.17	11953.152	0.867	0.587		0.79	0.77	NO	22.9
	35	Total-tetrafurans	303.9016	24.06	192849.468	0.867	9.474		0.77	0.77	NO	243.2
	35	Total-tetrafurans	303.9016	23.91	18532.772	0.867	0.910		0.75	0.77	NO	31.2
	35	Total-tetrafurans	303.9016	23.82	64404.777	0.867	3.164		0.86	0.77	NO	95.4
	35	Total-tetrafurans	303.9016	23.70	27676.665	0.867	1.360		0.93	0.77	YES	34.8
	35	Total-tetrafurans	303.9016	23.58	82465.980	0.867	4.051		0.71	0.77	NO	80.3
	35	Total-tetrafurans	303.9016	23.40	510368.297	0.867	25.072		0.74	0.77	NO	660.7
	35	Total-tetrafurans	303.9016	23.08	6010.430	0.867	0.295		0.74	0.77	NO	8.7
	35	Total-tetrafurans	303.9016	22.82	46449.283	0.867	2.282		0.75	0.77	NO	64.8
	35	Total-tetrafurans	303.9016	22.57	37309.615	0.867	1.833		0.79	0.77	NO	55.8
	35	Total-tetrafurans	303.9016	27.50	51082.657	0.867	2.509		0.73	0.77	NO	54.0
	35	Total-tetrafurans	303.9016	27.11	13870.105	0.867	0.681		0.71	0.77	NO	18.9
	35	Total-tetrafurans	303.9016	26.57	4223.761	0.867	0.207		0.83	0.77	NO	6.3
	35	Total-tetrafurans	303.9016	26.45	50249.220	0.867	2.469		0.79	0.77	NO	72.5
	35	Total-tetrafurans	303.9016	26.30	69295.647	0.867	3.404		0.74	0.77	NO	95.3
	35	Total-tetrafurans	303.9016	26.20	40756.250	0.867	2.002		0.77	0.77	NO	60.5
	1	2378-TCDF	303.9016	26.08	106856.476	0.867	5.249	5.249	0.72	0.77	NO	130.5
	35	Total-tetrafurans	303.9016	25.82	80211.226	0.867	3.940		0.80	0.77	NO	74.1
	35	Total-tetrafurans	303.9016	25.70	4363.859	0.867	0.214		1.31	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	25.57	40425.394	0.867	1.986		0.81	0.77	NO	57.1
	35	Total-tetrafurans	303.9016	25.39	22979.901	0.867	1.129		0.80	0.77	NO	26.4
	35	Total-tetrafurans	303.9016	25.15	77310.805	0.867	3.798		0.74	0.77	NO	113.1
	35	Total-tetrafurans	303.9016	24.97	214639.031	0.867	10.544		0.73	0.77	NO	281.2

PP

		Name	Trace	RT	Area	RF M.	Conc.	EMPC	Ion Rat.	Ion Rat.	Ion Rat.	S/N
	36	Total-penta1	339.8597	28.23	19848.962		0.717		1.53	1.55	NO	125.0
	36	Total-penta1	339.8597	27.50	2790653.500		100.783		1.55	1.55	NO	15568.9

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PF

37	Total-pentafurans	339.8597	28.96	93274.149	0.877	3.522		1.57	1.55	NO	231.5
37	Total-pentafurans	339.8597	28.86	36119.333	0.877	1.364		1.47	1.55	NO	110.6
3	23478-PeCDF	339.8597	31.57	97508.805	0.880	3.740	3.740	1.44	1.55	NO	278.5
37	Total-pentafurans	339.8597	31.42	229068.664	0.877	8.649		1.52	1.55	NO	660.2
37	Total-pentafurans	339.8597	31.31	53009.020	0.877	2.002		1.50	1.55	NO	155.6
37	Total-pentafurans	339.8597	31.07	5548.550	0.877	0.210		1.75	1.55	NO	16.0
37	Total-pentafurans	339.8597	30.71	3855.949	0.877	0.146		1.15	1.55	YES	10.7
37	Total-pentafurans	339.8597	30.53	25167.029	0.877	0.950		1.61	1.55	NO	75.4
37	Total-pentafurans	339.8597	30.42	118635.031	0.877	4.479		1.51	1.55	NO	364.8
2	12378-PeCDF	339.8597	30.22	56674.740	0.875	2.108	2.108	1.53	1.55	NO	172.4
37	Total-pentafurans	339.8597	29.86	362758.390	0.877	13.697		1.51	1.55	NO	957.6
37	Total-pentafurans	339.8597	29.76	27904.607	0.877	1.054		1.58	1.55	NO	90.7
37	Total-pentafurans	339.8597	29.65	22555.045	0.877	0.852		1.56	1.55	NO	48.6
37	Total-pentafurans	339.8597	29.44	6462.907	0.877	0.244		0.77	1.55	YES	15.4
37	Total-pentafurans	339.8597	29.27	49104.285	0.877	1.854		1.49	1.55	NO	151.5
37	Total-pentafurans	339.8597	29.15	604114.078	0.877	22.810		1.49	1.55	NO	1777.7
37	Total-pentafurans	339.8597	29.08	293947.297	0.877	11.099		1.47	1.55	NO	1019.8
37	Total-pentafurans	339.8597	32.60	7431.627	0.877	0.281		1.27	1.55	YES	23.2
37	Total-pentafurans	339.8597	32.52	18294.444	0.877	0.691		1.53	1.55	NO	55.9

HF

38	Total-hexafurans	373.8208	34.62	1982761.688	1.030	83.244		1.21	1.24	NO	5531.2
38	Total-hexafurans	373.8208	34.31	25204.919	1.030	1.058		1.11	1.24	NO	67.1
38	Total-hexafurans	373.8208	34.03	4684.614	1.030	0.197		0.88	1.24	YES	12.5
38	Total-hexafurans	373.8208	33.76	1301123.001	1.030	54.626		1.21	1.24	NO	3573.3
38	Total-hexafurans	373.8208	33.54	393474.563	1.030	16.519		1.17	1.24	NO	1116.3
38	Total-hexafurans	373.8208	33.41	7107.784	1.030	0.298		1.22	1.24	NO	21.5
7	123789-HxCDF	373.8208	37.48	39789.188	0.959	1.831	1.831	1.19	1.24	NO	107.3
5	234678-HxCDF	373.8208	36.35	109728.450	1.088	4.572	4.572	1.17	1.24	NO	331.5
38	Total-hexafurans	373.8208	36.00	5270.113	1.030	0.221		1.26	1.24	NO	14.4
38	Total-hexafurans	373.8208	35.79	12700.931	1.030	0.533		1.36	1.24	NO	38.9
38	Total-hexafurans	373.8208	35.66	2510.604	1.030	0.105		1.09	1.24	NO	8.0
6	123678-HxCDF	373.8208	35.43	110734.691	1.025	4.515	4.515	1.20	1.24	NO	310.9
4	123478-HxCDF	373.8208	35.29	129431.426	1.048	5.177	5.177	1.14	1.24	NO	355.6
38	Total-hexafurans	373.8208	35.11	29961.540	1.030	1.258		0.98	1.24	YES	85.4

HPF

8	1234678-HpCDF	407.7818	39.62	2802711.750	1.215	144.427	144....	1.00	1.05	NO	7273.6
9	1234789-HpCDF	407.7818	42.32	60508.313	1.200	4.087	4.087	1.00	1.05	NO	126.0
39	Total-heptafurans	407.7818	41.46	667.185	1.207	0.039		1.99	1.05	YES	3.8
39	Total-heptafurans	407.7818	40.41	3875666.250	1.207	226.759		1.00	1.05	NO	9314.0
39	Total-heptafurans	407.7818	40.10	18890.076	1.207	1.105		1.04	1.05	NO	48.9

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Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	24.82	34059.023	0.867	1.673		0.79	0.77	NO	50.2
	35	Total-tetrafurans	303.9016	24.73	131490.679	0.867	6.460		0.73	0.77	NO	149.3
	35	Total-tetrafurans	303.9016	24.32	17566.459	0.867	0.863		0.87	0.77	NO	26.1
	35	Total-tetrafurans	303.9016	24.17	11953.152	0.867	0.587		0.79	0.77	NO	22.9
	35	Total-tetrafurans	303.9016	24.06	192849.468	0.867	9.474		0.77	0.77	NO	243.2
	35	Total-tetrafurans	303.9016	23.91	18532.772	0.867	0.910		0.75	0.77	NO	31.2
	35	Total-tetrafurans	303.9016	23.82	64404.777	0.867	3.164		0.86	0.77	NO	95.4
	35	Total-tetrafurans	303.9016	23.70	27676.665	0.867	1.360		0.93	0.77	YES	34.8
	35	Total-tetrafurans	303.9016	23.58	82465.980	0.867	4.051		0.71	0.77	NO	80.3
	35	Total-tetrafurans	303.9016	23.40	510368.297	0.867	25.072		0.74	0.77	NO	660.7
	35	Total-tetrafurans	303.9016	23.08	6010.430	0.867	0.295		0.74	0.77	NO	8.7
	35	Total-tetrafurans	303.9016	22.82	46449.283	0.867	2.282		0.75	0.77	NO	64.8
	35	Total-tetrafurans	303.9016	22.57	37309.615	0.867	1.833		0.79	0.77	NO	55.8
	40	Total-Furans	303.9016	27.98	8226.413	1.022	0.343		0.76	0.77	NO	12.5
	35	Total-tetrafurans	303.9016	27.50	51082.657	0.867	2.509		0.73	0.77	NO	54.0
	35	Total-tetrafurans	303.9016	27.11	13870.105	0.867	0.681		0.71	0.77	NO	18.9
	35	Total-tetrafurans	303.9016	26.57	4223.761	0.867	0.207		0.83	0.77	NO	6.3
	35	Total-tetrafurans	303.9016	26.45	50249.220	0.867	2.469		0.79	0.77	NO	72.5
	35	Total-tetrafurans	303.9016	26.30	69295.647	0.867	3.404		0.74	0.77	NO	95.3
	35	Total-tetrafurans	303.9016	26.20	40756.250	0.867	2.002		0.77	0.77	NO	60.5
	1	2378-TCDF	303.9016	26.08	106856.476	0.867	5.249	5.249	0.72	0.77	NO	130.5
	35	Total-tetrafurans	303.9016	25.82	80211.226	0.867	3.940		0.80	0.77	NO	74.1
	35	Total-tetrafurans	303.9016	25.70	4363.859	0.867	0.214		1.31	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	25.57	40425.394	0.867	1.986		0.81	0.77	NO	57.1
	35	Total-tetrafurans	303.9016	25.39	22979.901	0.867	1.129		0.80	0.77	NO	26.4
	35	Total-tetrafurans	303.9016	25.15	77310.805	0.867	3.798		0.74	0.77	NO	113.1
	35	Total-tetrafurans	303.9016	24.97	214639.031	0.867	10.544		0.73	0.77	NO	281.2
	37	Total-pentafurans	339.8597	28.96	93274.149	0.877	3.522		1.57	1.55	NO	231.5
	37	Total-pentafurans	339.8597	28.86	36119.333	0.877	1.364		1.47	1.55	NO	110.6
	3	23478-PeCDF	339.8597	31.57	97508.805	0.880	3.740	3.740	1.44	1.55	NO	278.5
	37	Total-pentafurans	339.8597	31.42	229068.664	0.877	8.649		1.52	1.55	NO	660.2
	37	Total-pentafurans	339.8597	31.31	53009.020	0.877	2.002		1.50	1.55	NO	155.6
	37	Total-pentafurans	339.8597	31.07	5548.550	0.877	0.210		1.75	1.55	NO	16.0
	37	Total-pentafurans	339.8597	30.71	3855.949	0.877	0.146		1.15	1.55	YES	10.7
	37	Total-pentafurans	339.8597	30.53	25167.029	0.877	0.950		1.61	1.55	NO	75.4
	37	Total-pentafurans	339.8597	30.42	118635.031	0.877	4.479		1.51	1.55	NO	364.8
	2	12378-PeCDF	339.8597	30.22	56674.740	0.875	2.108	2.108	1.53	1.55	NO	172.4
	37	Total-pentafurans	339.8597	29.86	362758.390	0.877	13.697		1.51	1.55	NO	957.6
	37	Total-pentafurans	339.8597	29.76	27904.607	0.877	1.054		1.58	1.55	NO	90.7
	37	Total-pentafurans	339.8597	29.65	22555.045	0.877	0.852		1.56	1.55	NO	48.6
	37	Total-pentafurans	339.8597	29.44	6462.907	0.877	0.244		0.77	1.55	YES	15.4
	37	Total-pentafurans	339.8597	29.27	49104.285	0.877	1.854		1.49	1.55	NO	151.5
	37	Total-pentafurans	339.8597	29.15	604114.078	0.877	22.810		1.49	1.55	NO	1777.7
	37	Total-pentafurans	339.8597	29.08	293947.297	0.877	11.099		1.47	1.55	NO	1019.8
	37	Total-pentafurans	339.8597	32.60	7431.627	0.877	0.281		1.27	1.55	YES	23.2
	37	Total-pentafurans	339.8597	32.52	18294.444	0.877	0.691		1.53	1.55	NO	55.9
	38	Total-hexafurans	373.8208	34.62	1982761.688	1.030	83.244		1.21	1.24	NO	5531.2
	38	Total-hexafurans	373.8208	34.31	25204.919	1.030	1.058		1.11	1.24	NO	67.1
	38	Total-hexafurans	373.8208	34.03	4684.614	1.030	0.197		0.88	1.24	YES	12.5

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Furans,TF,PP,PF,HF,HPF,OF

	38	Total-hexafurans	373.8208	33.76	1301123.001	1.030	54.626		1.21	1.24	NO	3573.3
	38	Total-hexafurans	373.8208	33.54	393474.563	1.030	16.519		1.17	1.24	NO	1116.3
	38	Total-hexafurans	373.8208	33.41	7107.784	1.030	0.298		1.22	1.24	NO	21.5
	7	123789-HxCDF	373.8208	37.48	39789.188	0.959	1.831	1.831	1.19	1.24	NO	107.3
	5	234678-HxCDF	373.8208	36.35	109728.450	1.088	4.572	4.572	1.17	1.24	NO	331.5
	38	Total-hexafurans	373.8208	36.00	5270.113	1.030	0.221		1.26	1.24	NO	14.4
	38	Total-hexafurans	373.8208	35.79	12700.931	1.030	0.533		1.36	1.24	NO	38.9
	38	Total-hexafurans	373.8208	35.66	2510.604	1.030	0.105		1.09	1.24	NO	8.0
	6	123678-HxCDF	373.8208	35.43	110734.691	1.025	4.515	4.515	1.20	1.24	NO	310.9
	4	123478-HxCDF	373.8208	35.29	129431.426	1.048	5.177	5.177	1.14	1.24	NO	355.6
	38	Total-hexafurans	373.8208	35.11	29961.540	1.030	1.258		0.98	1.24	YES	85.4
	8	1234678-HpCDF	407.7818	39.62	2802711.750	1.215	144.427	144....	1.00	1.05	NO	7273.6
	9	1234789-HpCDF	407.7818	42.32	60508.313	1.200	4.087	4.087	1.00	1.05	NO	126.0
	39	Total-heptafurans	407.7818	41.46	667.185	1.207	0.039		1.99	1.05	YES	3.8
	39	Total-heptafurans	407.7818	40.41	3875666.250	1.207	226.759		1.00	1.05	NO	9314.0
	39	Total-heptafurans	407.7818	40.10	18890.076	1.207	1.105		1.04	1.05	NO	48.9
	10	OCDF	441.7428	47.77	1785519.126	1.064	205.199	205....	0.86	0.89	NO	2574.6
	36	Total-penta1	339.8597	28.23	19848.962		0.717		1.53	1.55	NO	125.0
	36	Total-penta1	339.8597	27.50	2790653.500		100.783		1.55	1.55	NO	15568.9

TD

	41	Total-tetradioxins	319.8965	27.30	8579.360	0.994	0.444		0.86	0.77	NO	16.1
	41	Total-tetradioxins	319.8965	26.84	31919.440	0.994	1.653		0.77	0.77	NO	62.1
	11	2378-TCDD	319.8965	26.71	20213.187	0.994	1.047	1.047	0.76	0.77	NO	39.2
	41	Total-tetradioxins	319.8965	26.33	131979.754	0.994	6.833		0.79	0.77	NO	200.8
	41	Total-tetradioxins	319.8965	26.03	7122.955	0.994	0.369		0.82	0.77	NO	14.2
	41	Total-tetradioxins	319.8965	25.88	83822.981	0.994	4.340		0.76	0.77	NO	161.8
	41	Total-tetradioxins	319.8965	25.67	49219.715	0.994	2.548		0.76	0.77	NO	93.7
	41	Total-tetradioxins	319.8965	25.59	5781.133	0.994	0.299		0.84	0.77	NO	12.6
	41	Total-tetradioxins	319.8965	25.33	162593.234	0.994	8.418		0.75	0.77	NO	301.1
	41	Total-tetradioxins	319.8965	25.05	71913.408	0.994	3.723		0.76	0.77	NO	123.3
	41	Total-tetradioxins	319.8965	24.84	2714.984	0.994	0.141		0.80	0.77	NO	6.0
	41	Total-tetradioxins	319.8965	24.33	21532.700	0.994	1.115		0.84	0.77	NO	45.0
	41	Total-tetradioxins	319.8965	24.11	500506.563	0.994	25.914		0.78	0.77	NO	988.3
	41	Total-tetradioxins	319.8965	23.84	543173.500	0.994	28.123		0.76	0.77	NO	1093.5

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PD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	T. Ratio	C. Ratio	T. R...	S/N
	42	Total-pentadioxins	355.8546	32.23	37638.337	0.976	1.699		1.56	1.55	NO	150.3
	12	12378-PeCDD	355.8546	31.82	121869.770	0.976	5.502	5.502	1.56	1.55	NO	437.9
	42	Total-pentadioxins	355.8546	31.15	207670.196	0.976	9.376		1.54	1.55	NO	837.8
	42	Total-pentadioxins	355.8546	30.76	110765.317	0.976	5.001		1.62	1.55	NO	317.0
	42	Total-pentadioxins	355.8546	30.58	463902.203	0.976	20.944		1.56	1.55	NO	1949.3
	42	Total-pentadioxins	355.8546	30.44	101938.270	0.976	4.602		1.60	1.55	NO	417.9
	42	Total-pentadioxins	355.8546	30.23	544663.688	0.976	24.591		1.55	1.55	NO	2268.7
	42	Total-pentadioxins	355.8546	29.62	45358.871	0.976	2.048		1.53	1.55	NO	188.5
	42	Total-pentadioxins	355.8546	29.13	627920.704	0.976	28.350		1.55	1.55	NO	1695.3

HD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	T. Ratio	C. Ratio	T. R...	S/N
	43	Total-hexadioxins	389.8157	35.17	1285085.750	0.928	66.488		1.25	1.24	NO	5087.5
	43	Total-hexadioxins	389.8157	34.34	836984.344	0.928	43.304		1.25	1.24	NO	3244.3
	15	123789-HxCDD	389.8157	37.07	117804.664	0.914	6.185	6.185	1.25	1.24	NO	484.2
	43	Total-hexadioxins	389.8157	36.82	35334.764	0.928	1.828		1.24	1.24	NO	137.4
	14	123678-HxCDD	389.8157	36.65	288147.297	0.902	15.319	15.319	1.23	1.24	NO	1146.7
	13	123478-HxCDD	389.8157	36.51	67088.605	0.967	3.333	3.333	1.17	1.24	NO	274.0
	43	Total-hexadioxins	389.8157	35.67	30834.074	0.928	1.595		1.28	1.24	NO	134.4
	43	Total-hexadioxins	389.8157	35.56	841084.781	0.928	43.516		1.23	1.24	NO	2189.5

HPD

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	T. Ratio	C. Ratio	T. R...	S/N
	16	1234678-HpCDD	423.7766	41.45	2664513.375	0.999	166.939	166....	1.03	1.05	NO	3946.7
	44	Total-heptadioxins	423.7766	40.17	4965612.500	0.999	311.108		1.04	1.05	NO	7752.6

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

D: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

		Name	Trace...	...RT	... Response	RRF M...	...oq	EMPC	1² Ratio	2² Ratio	T...	...
	41	Total-tetradioxins	319.8965	27.30	8579.360	0.994	0.444		0.86	0.77	NO	16.1
	41	Total-tetradioxins	319.8965	26.84	31919.440	0.994	1.653		0.77	0.77	NO	62.1
	11	2378-TCDD	319.8965	26.71	20213.187	0.994	1.047	1.047	0.76	0.77	NO	39.2
	41	Total-tetradioxins	319.8965	26.33	131979.754	0.994	6.833		0.79	0.77	NO	200.8
	41	Total-tetradioxins	319.8965	26.03	7122.955	0.994	0.369		0.82	0.77	NO	14.2
	41	Total-tetradioxins	319.8965	25.88	83822.981	0.994	4.340		0.76	0.77	NO	161.8
	41	Total-tetradioxins	319.8965	25.67	49219.715	0.994	2.548		0.76	0.77	NO	93.7
	41	Total-tetradioxins	319.8965	25.59	5781.133	0.994	0.299		0.84	0.77	NO	12.6
	41	Total-tetradioxins	319.8965	25.33	162593.234	0.994	8.418		0.75	0.77	NO	301.1
	41	Total-tetradioxins	319.8965	25.05	71913.408	0.994	3.723		0.76	0.77	NO	123.3
	41	Total-tetradioxins	319.8965	24.84	2714.984	0.994	0.141		0.80	0.77	NO	6.0
	41	Total-tetradioxins	319.8965	24.33	21532.700	0.994	1.115		0.84	0.77	NO	45.0
	41	Total-tetradioxins	319.8965	24.11	500506.563	0.994	25.914		0.78	0.77	NO	988.3
	41	Total-tetradioxins	319.8965	23.84	543173.500	0.994	28.123		0.76	0.77	NO	1093.5
	42	Total-pentadioxins	355.8546	32.23	37638.337	0.976	1.699		1.56	1.55	NO	150.3
	12	12378-PeCDD	355.8546	31.82	121869.770	0.976	5.502	5.502	1.56	1.55	NO	437.9
	42	Total-pentadioxins	355.8546	31.15	207670.196	0.976	9.376		1.54	1.55	NO	837.8
	42	Total-pentadioxins	355.8546	30.76	110765.317	0.976	5.001		1.62	1.55	NO	317.0
	42	Total-pentadioxins	355.8546	30.58	463902.203	0.976	20.944		1.56	1.55	NO	1949.3
	42	Total-pentadioxins	355.8546	30.44	101938.270	0.976	4.602		1.60	1.55	NO	417.9
	42	Total-pentadioxins	355.8546	30.23	544663.688	0.976	24.591		1.55	1.55	NO	2268.7
	42	Total-pentadioxins	355.8546	29.62	45358.871	0.976	2.048		1.53	1.55	NO	188.5
	42	Total-pentadioxins	355.8546	29.13	627920.704	0.976	28.350		1.55	1.55	NO	1695.3
	43	Total-hexadioxins	389.8157	35.17	1285085.750	0.928	66.488		1.25	1.24	NO	5087.5
	43	Total-hexadioxins	389.8157	34.34	836984.344	0.928	43.304		1.25	1.24	NO	3244.3
	15	123789-HxCDD	389.8157	37.07	117804.664	0.914	6.185	6.185	1.25	1.24	NO	484.2
	43	Total-hexadioxins	389.8157	36.82	35334.764	0.928	1.828		1.24	1.24	NO	137.4
	14	123678-HxCDD	389.8157	36.65	288147.297	0.902	15.319	15.319	1.23	1.24	NO	1146.7
	13	123478-HxCDD	389.8157	36.51	67088.605	0.967	3.333	3.333	1.17	1.24	NO	274.0
	43	Total-hexadioxins	389.8157	35.67	30834.074	0.928	1.595		1.28	1.24	NO	134.4
	43	Total-hexadioxins	389.8157	35.56	841084.781	0.928	43.516		1.23	1.24	NO	2189.5
	17	OCDD	457.7377	47.51	8989699.500	0.979	1123.0...	1123...	0.89	0.89	NO	16800.3
	16	1234678-HpCDD	423.7766	41.45	2664513.375	0.999	166.939	166....	1.03	1.05	NO	3946.7
	44	Total-heptadioxins	423.7766	40.17	4965612.500	0.999	311.108		1.04	1.05	NO	7752.6

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

[redacted]	#	Name	Trans	RT	Area	RRF M...	pg	EMPC	1° Rat...	IP Ratio	1° R...	S/N
[redacted]	35	Total-tetrafurans	303.9016	24.82	34059.023	0.867	1.673		0.79	0.77	NO	50.2
[redacted]	35	Total-tetrafurans	303.9016	24.73	131490.679	0.867	6.460		0.73	0.77	NO	149.3
[redacted]	35	Total-tetrafurans	303.9016	24.32	17566.459	0.867	0.863		0.87	0.77	NO	26.1
[redacted]	35	Total-tetrafurans	303.9016	24.17	11953.152	0.867	0.587		0.79	0.77	NO	22.9
[redacted]	35	Total-tetrafurans	303.9016	24.06	192849.468	0.867	9.474		0.77	0.77	NO	243.2
[redacted]	35	Total-tetrafurans	303.9016	23.91	18532.772	0.867	0.910		0.75	0.77	NO	31.2
[redacted]	35	Total-tetrafurans	303.9016	23.82	64404.777	0.867	3.164		0.86	0.77	NO	95.4
[redacted]	35	Total-tetrafurans	303.9016	23.70	27676.665	0.867	1.360		0.93	0.77	YES	34.8
[redacted]	35	Total-tetrafurans	303.9016	23.58	82465.980	0.867	4.051		0.71	0.77	NO	80.3
[redacted]	35	Total-tetrafurans	303.9016	23.40	510368.297	0.867	25.072		0.74	0.77	NO	660.7
[redacted]	35	Total-tetrafurans	303.9016	23.08	6010.430	0.867	0.295		0.74	0.77	NO	8.7
[redacted]	35	Total-tetrafurans	303.9016	22.82	46449.283	0.867	2.282		0.75	0.77	NO	64.8
[redacted]	35	Total-tetrafurans	303.9016	22.57	37309.615	0.867	1.833		0.79	0.77	NO	55.8
[redacted]	40	Total-Furans	303.9016	27.98	8226.413	1.022	0.343		0.76	0.77	NO	12.5
[redacted]	35	Total-tetrafurans	303.9016	27.50	51082.657	0.867	2.509		0.73	0.77	NO	54.0
[redacted]	35	Total-tetrafurans	303.9016	27.11	13870.105	0.867	0.681		0.71	0.77	NO	18.9
[redacted]	35	Total-tetrafurans	303.9016	26.57	4223.761	0.867	0.207		0.83	0.77	NO	6.3
[redacted]	35	Total-tetrafurans	303.9016	26.45	50249.220	0.867	2.469		0.79	0.77	NO	72.5
[redacted]	35	Total-tetrafurans	303.9016	26.30	69295.647	0.867	3.404		0.74	0.77	NO	95.3
[redacted]	35	Total-tetrafurans	303.9016	26.20	40756.250	0.867	2.002		0.77	0.77	NO	60.5
[redacted]	1	2378-TCDF	303.9016	26.08	106856.476	0.867	5.249	5.249	0.72	0.77	NO	130.5
[redacted]	35	Total-tetrafurans	303.9016	25.82	80211.226	0.867	3.940		0.80	0.77	NO	74.1
[redacted]	35	Total-tetrafurans	303.9016	25.70	4363.859	0.867	0.214		1.31	0.77	YES	7.1
[redacted]	35	Total-tetrafurans	303.9016	25.57	40425.394	0.867	1.986		0.81	0.77	NO	57.1
[redacted]	35	Total-tetrafurans	303.9016	25.39	22979.901	0.867	1.129		0.80	0.77	NO	26.4
[redacted]	35	Total-tetrafurans	303.9016	25.15	77310.805	0.867	3.798		0.74	0.77	NO	113.1
[redacted]	35	Total-tetrafurans	303.9016	24.97	214639.031	0.867	10.544		0.73	0.77	NO	281.2
[redacted]	37	Total-pentafurans	339.8597	28.96	93274.149	0.877	3.522		1.57	1.55	NO	231.5
[redacted]	37	Total-pentafurans	339.8597	28.86	36119.333	0.877	1.364		1.47	1.55	NO	110.6
[redacted]	3	23478-PeCDF	339.8597	31.57	97508.805	0.880	3.740	3.740	1.44	1.55	NO	278.5
[redacted]	37	Total-pentafurans	339.8597	31.42	229068.664	0.877	8.649		1.52	1.55	NO	660.2
[redacted]	37	Total-pentafurans	339.8597	31.31	53009.020	0.877	2.002		1.50	1.55	NO	155.6
[redacted]	37	Total-pentafurans	339.8597	31.07	5548.550	0.877	0.210		1.75	1.55	NO	16.0
[redacted]	37	Total-pentafurans	339.8597	30.71	3855.949	0.877	0.146		1.15	1.55	YES	10.7
[redacted]	37	Total-pentafurans	339.8597	30.53	25167.029	0.877	0.950		1.61	1.55	NO	75.4
[redacted]	37	Total-pentafurans	339.8597	30.42	118635.031	0.877	4.479		1.51	1.55	NO	364.8
[redacted]	2	12378-PeCDF	339.8597	30.22	56674.740	0.875	2.108	2.108	1.53	1.55	NO	172.4
[redacted]	37	Total-pentafurans	339.8597	29.86	362758.390	0.877	13.697		1.51	1.55	NO	957.6
[redacted]	37	Total-pentafurans	339.8597	29.76	27904.607	0.877	1.054		1.58	1.55	NO	90.7
[redacted]	37	Total-pentafurans	339.8597	29.65	22555.045	0.877	0.852		1.56	1.55	NO	48.6
[redacted]	37	Total-pentafurans	339.8597	29.44	6462.907	0.877	0.244		0.77	1.55	YES	15.4
[redacted]	37	Total-pentafurans	339.8597	29.27	49104.285	0.877	1.854		1.49	1.55	NO	151.5
[redacted]	37	Total-pentafurans	339.8597	29.15	604114.078	0.877	22.810		1.49	1.55	NO	1777.7
[redacted]	37	Total-pentafurans	339.8597	29.08	293947.297	0.877	11.099		1.47	1.55	NO	1019.8
[redacted]	37	Total-pentafurans	339.8597	32.60	7431.627	0.877	0.281		1.27	1.55	YES	23.2
[redacted]	37	Total-pentafurans	339.8597	32.52	18294.444	0.877	0.691		1.53	1.55	NO	55.9
[redacted]	38	Total-hexafurans	373.8208	34.62	1982761.688	1.030	83.244		1.21	1.24	NO	5531.2
[redacted]	38	Total-hexafurans	373.8208	34.31	25204.919	1.030	1.058		1.11	1.24	NO	67.1
[redacted]	38	Total-hexafurans	373.8208	34.03	4684.614	1.030	0.197		0.88	1.24	YES	12.5

luantify Totals Report MassLynx 4.1 SCN 714
ataset: P:\DIOXIN8290.PRO\130828DATA2.qld
ast Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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): XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

otalTEQ,Furans,Dioxins

[redacted]	#	Name	Mass	RT	Abs Resp	RRF M...	... 2$	RRFC	1° Ion...	2° Ion...	1°/2°	S/N
	38	Total-hexafurans	373.8208	33.76	1301123.001	1.030	54.626		1.21	1.24	NO	3573.3
	38	Total-hexafurans	373.8208	33.54	393474.563	1.030	16.519		1.17	1.24	NO	1116.3
	38	Total-hexafurans	373.8208	33.41	7107.784	1.030	0.298		1.22	1.24	NO	21.5
	7	123789-HxCDF	373.8208	37.48	39789.188	0.959	1.831	1.831	1.19	1.24	NO	107.3
	5	234678-HxCDF	373.8208	36.35	109728.450	1.088	4.572	4.572	1.17	1.24	NO	331.5
	38	Total-hexafurans	373.8208	36.00	5270.113	1.030	0.221		1.26	1.24	NO	14.4
	38	Total-hexafurans	373.8208	35.79	12700.931	1.030	0.533		1.36	1.24	NO	38.9
	38	Total-hexafurans	373.8208	35.66	2510.604	1.030	0.105		1.09	1.24	NO	8.0
	6	123678-HxCDF	373.8208	35.43	110734.691	1.025	4.515	4.515	1.20	1.24	NO	310.9
	4	123478-HxCDF	373.8208	35.29	129431.426	1.048	5.177	5.177	1.14	1.24	NO	355.6
	38	Total-hexafurans	373.8208	35.11	29961.540	1.030	1.258		0.98	1.24	YES	85.4
	8	1234678-HpCDF	407.7818	39.62	2802711.750	1.215	144.427	144....	1.00	1.05	NO	7273.6
	9	1234789-HpCDF	407.7818	42.32	60508.313	1.200	4.087	4.087	1.00	1.05	NO	126.0
	39	Total-heptafurans	407.7818	41.46	667.185	1.207	0.039		1.99	1.05	YES	3.8
	39	Total-heptafurans	407.7818	40.41	3875666.250	1.207	226.759		1.00	1.05	NO	9314.0
	39	Total-heptafurans	407.7818	40.10	18890.076	1.207	1.105		1.04	1.05	NO	48.9
	10	OCDF	441.7428	47.77	1785519.126	1.064	205.199	205....	0.86	0.89	NO	2574.6
	36	Total-penta1	339.8597	28.23	19848.962		0.717		1.53	1.55	NO	125.0
	36	Total-penta1	339.8597	27.50	2790653.500		100.783		1.55	1.55	NO	15568.9
	41	Total-tetradioxins	319.8965	27.30	8579.360	0.994	0.444		0.86	0.77	NO	16.1
	41	Total-tetradioxins	319.8965	26.84	31919.440	0.994	1.653		0.77	0.77	NO	62.1
	11	2378-TCDD	319.8965	26.71	20213.187	0.994	1.047	1.047	0.76	0.77	NO	39.2
	41	Total-tetradioxins	319.8965	26.33	131979.754	0.994	6.833		0.79	0.77	NO	200.8
	41	Total-tetradioxins	319.8965	26.03	7122.955	0.994	0.369		0.82	0.77	NO	14.2
	41	Total-tetradioxins	319.8965	25.88	83822.981	0.994	4.340		0.76	0.77	NO	161.8
	41	Total-tetradioxins	319.8965	25.67	49219.715	0.994	2.548		0.76	0.77	NO	93.7
	41	Total-tetradioxins	319.8965	25.59	5781.133	0.994	0.299		0.84	0.77	NO	12.6
	41	Total-tetradioxins	319.8965	25.33	162593.234	0.994	8.418		0.75	0.77	NO	301.1
	41	Total-tetradioxins	319.8965	25.05	71913.408	0.994	3.723		0.76	0.77	NO	123.3
	41	Total-tetradioxins	319.8965	24.84	2714.984	0.994	0.141		0.80	0.77	NO	6.0
	41	Total-tetradioxins	319.8965	24.33	21532.700	0.994	1.115		0.84	0.77	NO	45.0
	41	Total-tetradioxins	319.8965	24.11	500506.563	0.994	25.914		0.78	0.77	NO	988.3
	41	Total-tetradioxins	319.8965	23.84	543173.500	0.994	28.123		0.76	0.77	NO	1093.5
	42	Total-pentadioxins	355.8546	32.23	37638.337	0.976	1.699		1.56	1.55	NO	150.3
	12	12378-PeCDD	355.8546	31.82	121869.770	0.976	5.502	5.502	1.56	1.55	NO	437.9
	42	Total-pentadioxins	355.8546	31.15	207670.196	0.976	9.376		1.54	1.55	NO	837.8
	42	Total-pentadioxins	355.8546	30.76	110765.317	0.976	5.001		1.62	1.55	NO	317.0
	42	Total-pentadioxins	355.8546	30.58	463902.203	0.976	20.944		1.56	1.55	NO	1949.3
	42	Total-pentadioxins	355.8546	30.44	101938.270	0.976	4.602		1.60	1.55	NO	417.9
	42	Total-pentadioxins	355.8546	30.23	544663.688	0.976	24.591		1.55	1.55	NO	2268.7
	42	Total-pentadioxins	355.8546	29.62	45358.871	0.976	2.048		1.53	1.55	NO	188.5
	42	Total-pentadioxins	355.8546	29.13	627920.704	0.976	28.350		1.55	1.55	NO	1695.3
	43	Total-hexadioxins	389.8157	35.17	1285085.750	0.928	66.488		1.25	1.24	NO	5087.5
	43	Total-hexadioxins	389.8157	34.34	836984.344	0.928	43.304		1.25	1.24	NO	3244.3
	15	123789-HxCDD	389.8157	37.07	117804.664	0.914	6.185	6.185	1.25	1.24	NO	484.2
	43	Total-hexadioxins	389.8157	36.82	35334.764	0.928	1.828		1.24	1.24	NO	137.4
	14	123678-HxCDD	389.8157	36.65	288147.297	0.902	15.319	15.319	1.23	1.24	NO	1146.7
	13	123478-HxCDD	389.8157	36.51	67088.605	0.967	3.333	3.333	1.17	1.24	NO	274.0
	43	Total-hexadioxins	389.8157	35.67	30834.074	0.928	1.595		1.28	1.24	NO	134.4

XB89 01368

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	43	Total-hexadioxins	389.8157	35.56	841084.781	0.928	43.516		1.23	1.24	NO	2189.5
	17	OCDD	457.7377	47.51	8989699.500	0.979	1123.0...	1123...	0.89	0.89	NO	16800.3
	16	1234678-HpCDD	423.7766	41.45	2664513.375	0.999	166.939	166....	1.03	1.05	NO	3946.7
	44	Total-heptadioxins	423.7766	40.17	4965612.500	0.999	311.108		1.04	1.05	NO	7752.6

PFK1

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	48	FUNCTION1 PFK	330.9792	28.17	0.000							2.6
	48	FUNCTION1 PFK	330.9792	27.36	0.000							2.9
	48	FUNCTION1 PFK	330.9792	26.77	0.000							1.7
	48	FUNCTION1 PFK	330.9792	26.06	0.000							4.5
	48	FUNCTION1 PFK	330.9792	25.76	0.000							4.4
	48	FUNCTION1 PFK	330.9792	24.54	0.000							3.5
	48	FUNCTION1 PFK	330.9792	23.46	0.000							6.1
	48	FUNCTION1 PFK	330.9792	22.90	0.000							3.4
	48	FUNCTION1 PFK	330.9792	22.37	0.000							4.6
	48	FUNCTION1 PFK	330.9792	22.24	0.000							2.3
	48	FUNCTION1 PFK	330.9792	21.64	0.000							5.7
	48	FUNCTION1 PFK	330.9792	21.43	0.000							5.9
	48	FUNCTION1 PFK	330.9792	21.30	0.000							2.6

PFK2

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N

PFK3

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	50	FUNCTION3 PFK	380.9760	38.15	0.000		0.000					2.5
	50	FUNCTION3 PFK	380.9760	37.46	0.000		0.000					3.5
	50	FUNCTION3 PFK	380.9760	37.39	0.000		0.000					4.9
	50	FUNCTION3 PFK	380.9760	36.30	0.000		0.000					2.9
	50	FUNCTION3 PFK	380.9760	35.01	0.000		0.000					10.8

PFK4

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	51	FUNCTION4 PFK	430.9728	40.09	0.000							4.3
	51	FUNCTION4 PFK	430.9728	40.01	0.000							5.5
	51	FUNCTION4 PFK	430.9728	38.65	0.000							5.6

PFK5

	#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N

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ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF.M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	24.29	0.000		0.000					4.1
	53	FUNCTION1 HXCD...	375.8364	24.08	0.000		0.000					255.3
	53	FUNCTION1 HXCD...	375.8364	23.06	0.000		0.000					58.4
	53	FUNCTION1 HXCD...	375.8364	22.04	0.000		0.000					1.3
	53	FUNCTION1 HXCD...	375.8364	27.95	0.000		0.000					24.0
	53	FUNCTION1 HXCD...	375.8364	27.45	0.000		0.000					1.9
	53	FUNCTION1 HXCD...	375.8364	27.09	0.000		0.000					60.0
	53	FUNCTION1 HXCD...	375.8364	26.44	0.000		0.000					266.8
	53	FUNCTION1 HXCD...	375.8364	26.08	0.000		0.000					180.7
	53	FUNCTION1 HXCD...	375.8364	25.42	0.000		0.000					12.4
	53	FUNCTION1 HXCD...	375.8364	24.97	0.000		0.000					4.9

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF.M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	54	FUNCTION1 HPCD...	409.7974	28.23	0.000		0.000					185.0
	54	FUNCTION1 HPCD...	409.7974	23.31	0.000		0.000					3.3

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF.M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	30.19	0.000		0.000					43.5
	55	FUNCTION2 HPCD...	409.7974	29.85	0.000		0.000					19.6
	55	FUNCTION2 HPCD...	409.7974	29.50	0.000		0.000					6.2
	55	FUNCTION2 HPCD...	409.7974	29.40	0.000		0.000					12.2
	55	FUNCTION2 HPCD...	409.7974	29.26	0.000		0.000					216.4
	55	FUNCTION2 HPCD...	409.7974	32.83	0.000		0.000					6.9
	55	FUNCTION2 HPCD...	409.7974	32.51	0.000		0.000					78.8
	55	FUNCTION2 HPCD...	409.7974	31.46	0.000		0.000					18.1
	55	FUNCTION2 HPCD...	409.7974	31.44	0.000		0.000					21.6
	55	FUNCTION2 HPCD...	409.7974	30.50	0.000		0.000					3.5
	55	FUNCTION2 HPCD...	409.7974	30.45	0.000		0.000					5.4

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ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M..	...pg	EMPC	1° Rat..	2° Rat..	1° R..	S/N
	56	FUNCTION3 OCDPE	445.7555	35.48	0.000		0.000					1.2
	56	FUNCTION3 OCDPE	445.7555	35.27	0.000		0.000					6.4
	56	FUNCTION3 OCDPE	445.7555	35.21	0.000		0.000					11.9
	56	FUNCTION3 OCDPE	445.7555	35.04	0.000		0.000					4.2
	56	FUNCTION3 OCDPE	445.7555	34.98	0.000		0.000					5.6
	56	FUNCTION3 OCDPE	445.7555	34.93	0.000		0.000					5.8
	56	FUNCTION3 OCDPE	445.7555	34.53	0.000		0.000					5.3
	56	FUNCTION3 OCDPE	445.7555	34.02	0.000		0.000					2.7
	56	FUNCTION3 OCDPE	445.7555	33.41	0.000		0.000					17.3
	56	FUNCTION3 OCDPE	445.7555	37.67	0.000		0.000					4.1
	56	FUNCTION3 OCDPE	445.7555	37.45	0.000		0.000					3.6
	56	FUNCTION3 OCDPE	445.7555	37.31	0.000		0.000					3.7
	56	FUNCTION3 OCDPE	445.7555	37.10	0.000		0.000					6.4
	56	FUNCTION3 OCDPE	445.7555	36.89	0.000		0.000					6.9
	56	FUNCTION3 OCDPE	445.7555	36.82	0.000		0.000					10.2
	56	FUNCTION3 OCDPE	445.7555	36.70	0.000		0.000					7.3
	56	FUNCTION3 OCDPE	445.7555	36.57	0.000		0.000					3.5
	56	FUNCTION3 OCDPE	445.7555	36.46	0.000		0.000					8.0
	56	FUNCTION3 OCDPE	445.7555	36.43	0.000		0.000					7.1
	56	FUNCTION3 OCDPE	445.7555	36.32	0.000		0.000					5.4

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M..	...pg	EMPC	1° Rat..	2° Rat..	1° R..	S/N
	57	FUNCTION4 NCDPE	479.7165	41.16	0.000		0.000					21.6
	57	FUNCTION4 NCDPE	479.7165	41.03	0.000		0.000					19.9
	57	FUNCTION4 NCDPE	479.7165	40.17	0.000		0.000					4.4
	57	FUNCTION4 NCDPE	479.7165	39.16	0.000		0.000					411.3
	57	FUNCTION4 NCDPE	479.7165	44.46	0.000		0.000					2.1
	57	FUNCTION4 NCDPE	479.7165	41.78	0.000		0.000					6.4
	57	FUNCTION4 NCDPE	479.7165	41.67	0.000		0.000					4.7
	57	FUNCTION4 NCDPE	479.7165	41.61	0.000		0.000					8.2
	57	FUNCTION4 NCDPE	479.7165	41.38	0.000		0.000					64.8
	57	FUNCTION4 NCDPE	479.7165	41.21	0.000		0.000					14.1

ETHERS6

	#	Name	Trace	RT	Abs.Resp	RRF M..	...pg	EMPC	1° Rat..	2° Rat..	1° R..	S/N
	58	FUNCTION5 DCDPE	513.6775	48.22	0.000		0.000					3.7
	58	FUNCTION5 DCDPE	513.6775	48.19	0.000		0.000					5.8
	58	FUNCTION5 DCDPE	513.6775	48.14	0.000		0.000					4.1
	58	FUNCTION5 DCDPE	513.6775	48.11	0.000		0.000					3.8
	58	FUNCTION5 DCDPE	513.6775	47.74	0.000		0.000					2.9
	58	FUNCTION5 DCDPE	513.6775	47.69	0.000		0.000					7.2
	58	FUNCTION5 DCDPE	513.6775	47.64	0.000		0.000					5.7
	58	FUNCTION5 DCDPE	513.6775	47.62	0.000		0.000					5.4

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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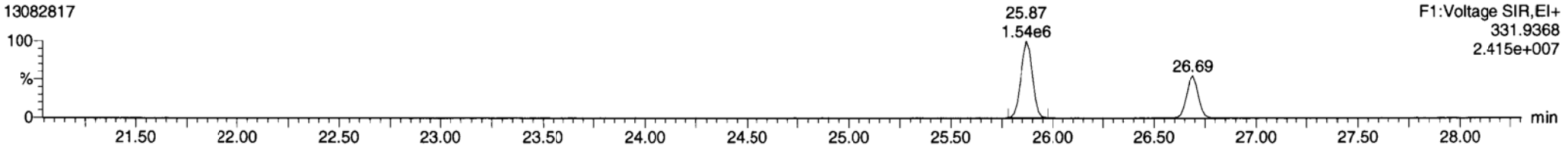

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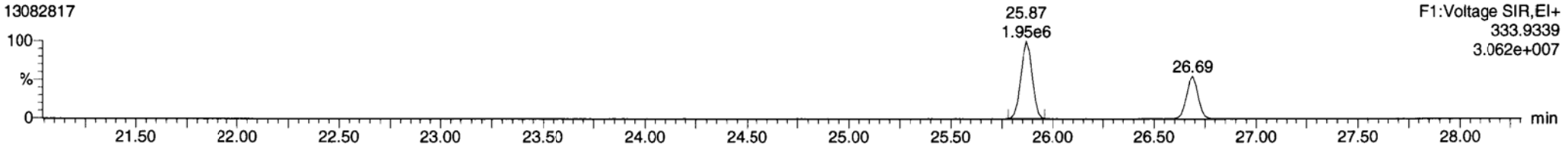

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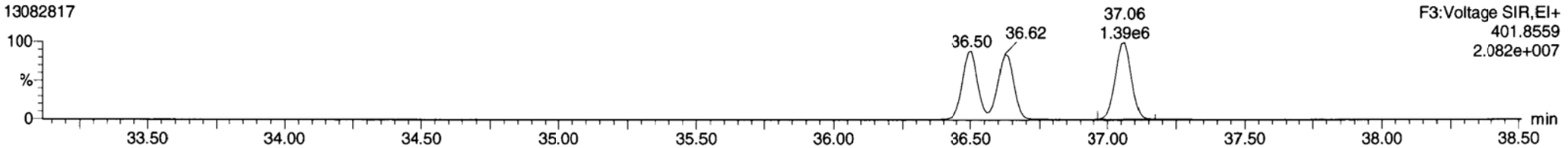

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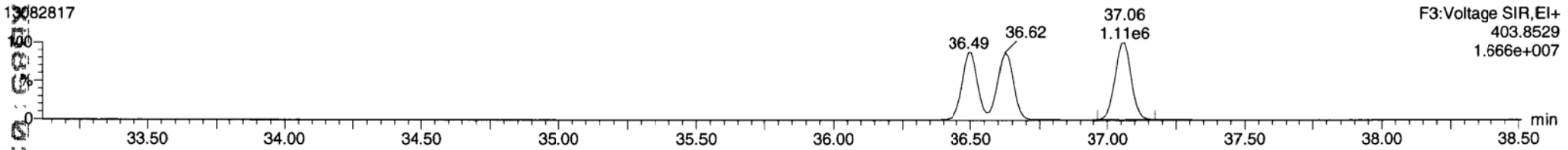

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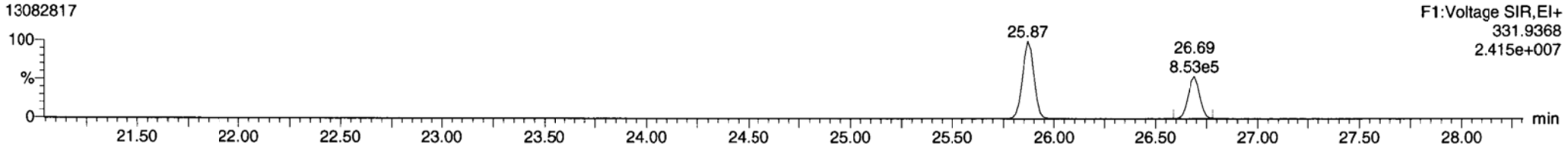
13C-2378-TCDD



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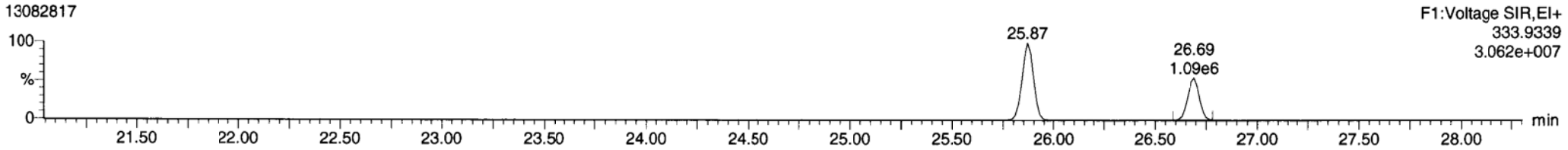

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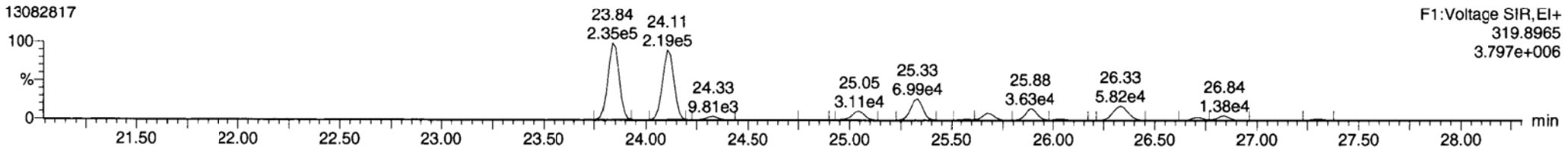
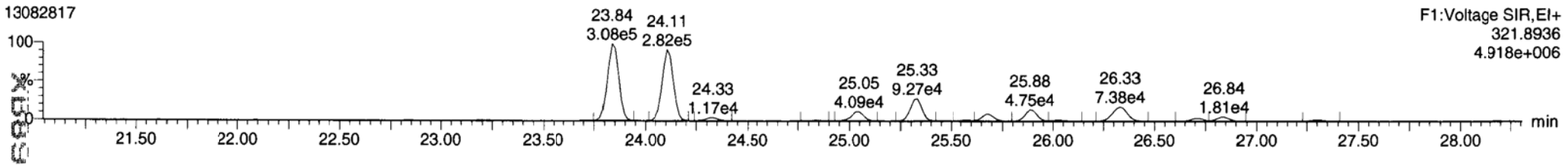
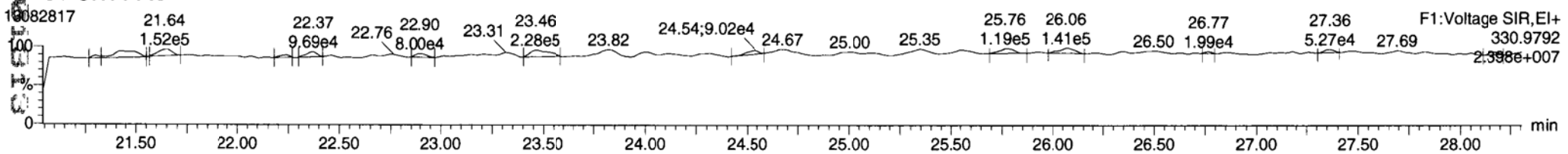


Total-tetradioxins



FUNCTION1 PFK



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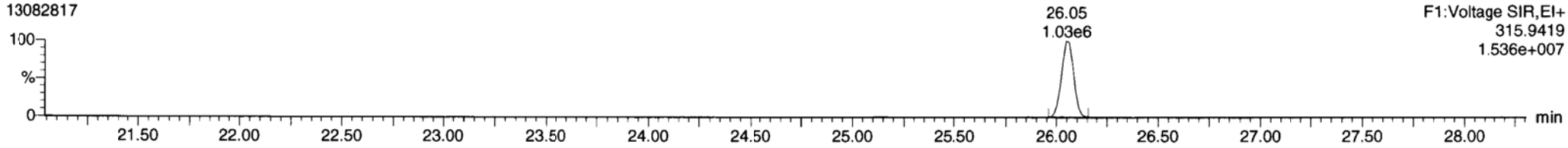
13C-2378-TCDF



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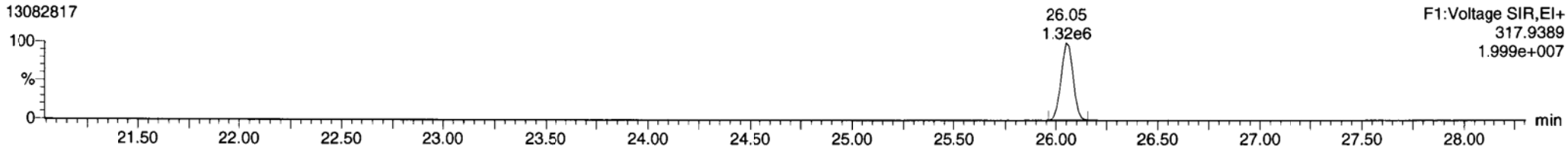

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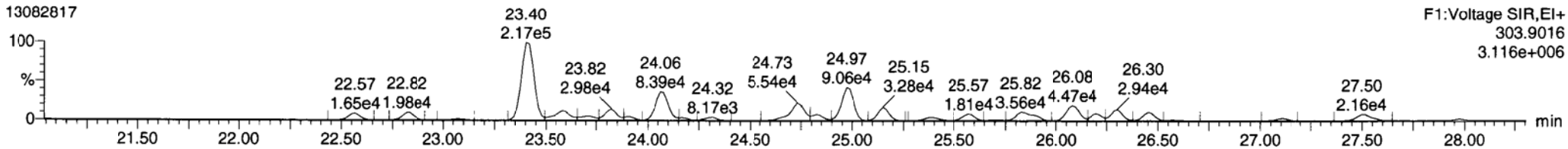

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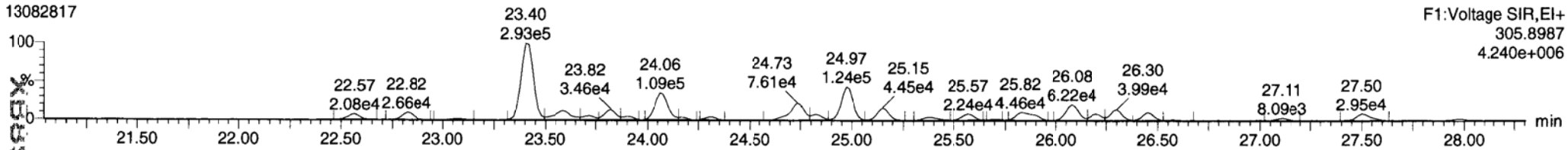
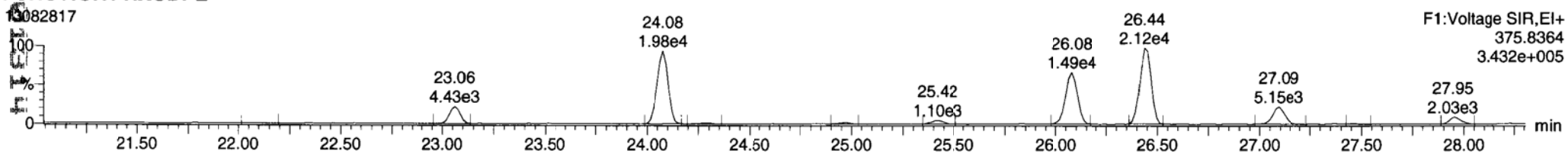


FUNCTION1 HXCDPE



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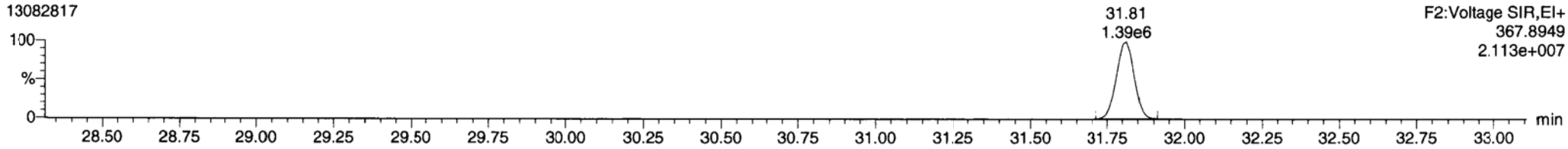
13C-12378-PeCDD



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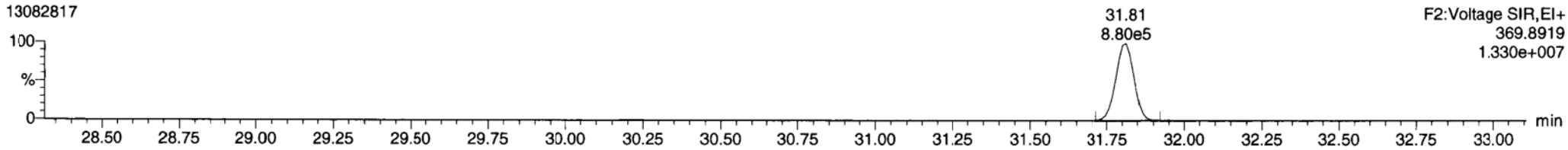

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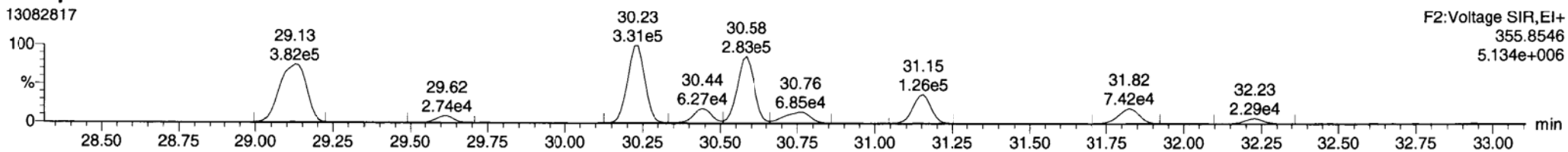

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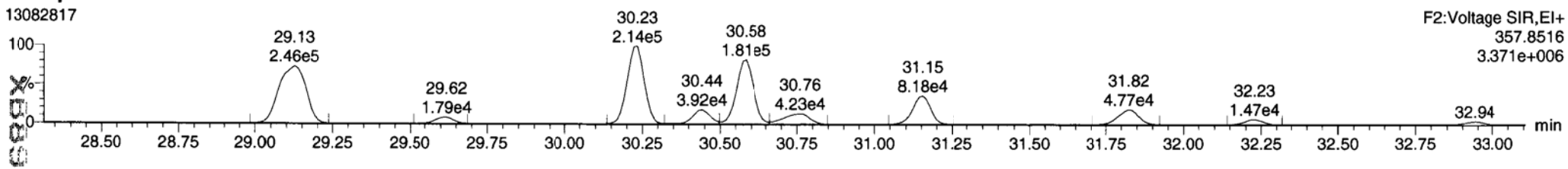
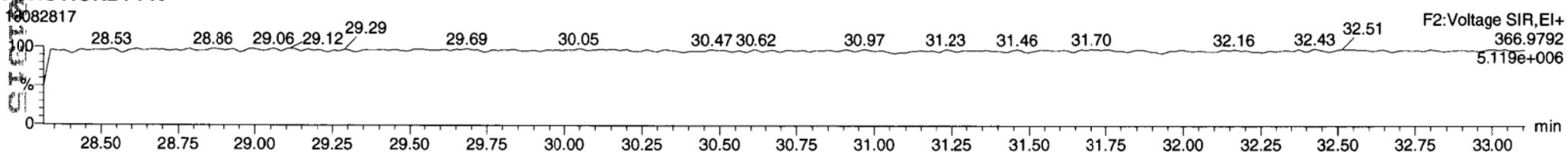


FUNCTION2 PFK



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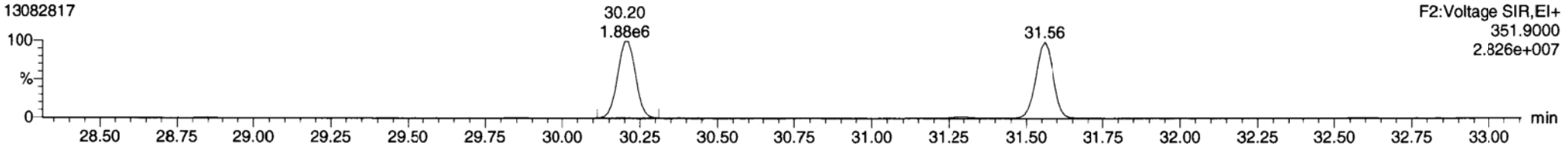
13C-12378-PeCDF



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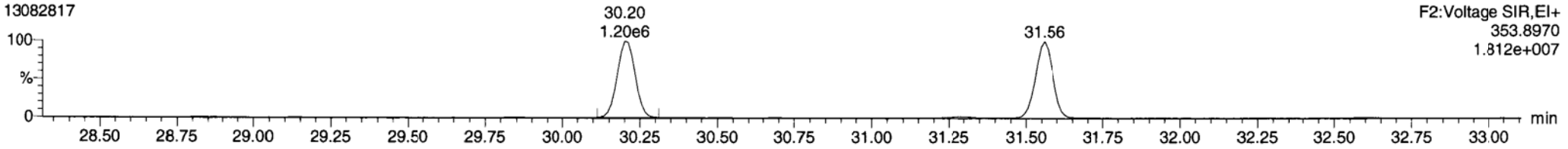

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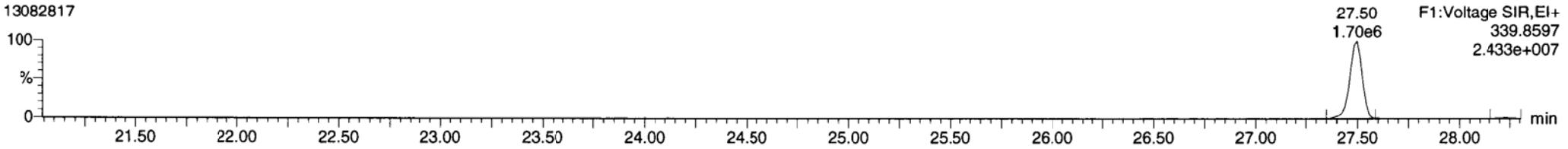

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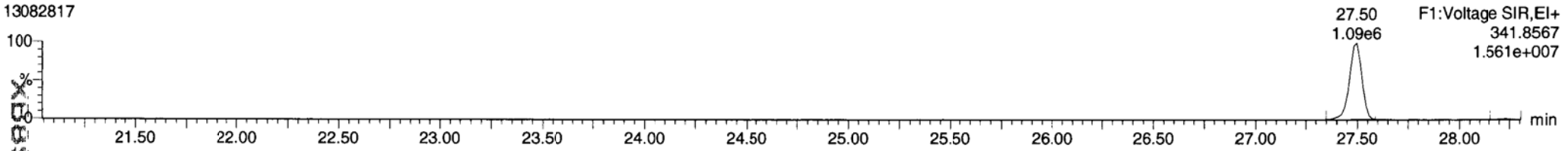
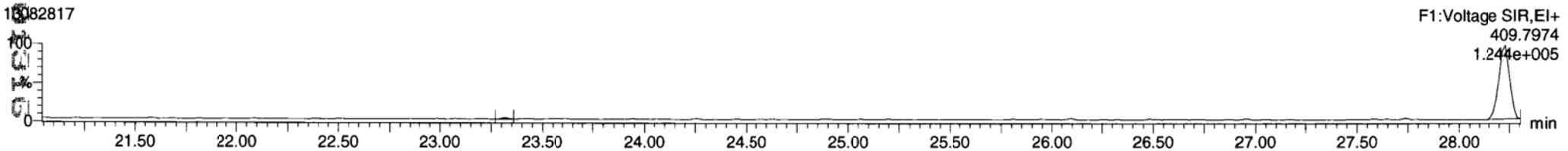


FUNCTION1 HPCDPE



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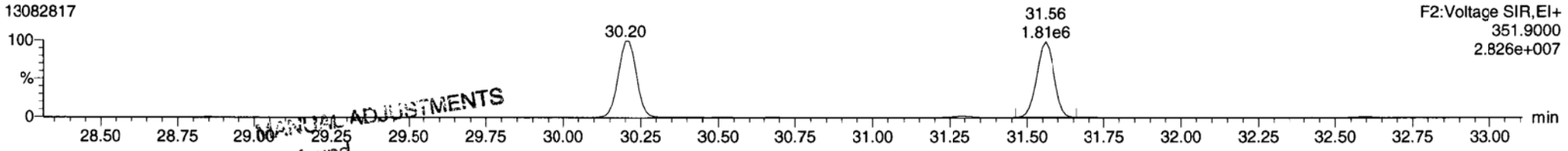
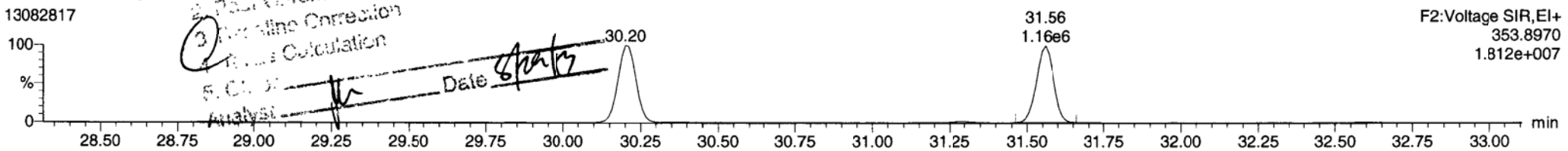
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

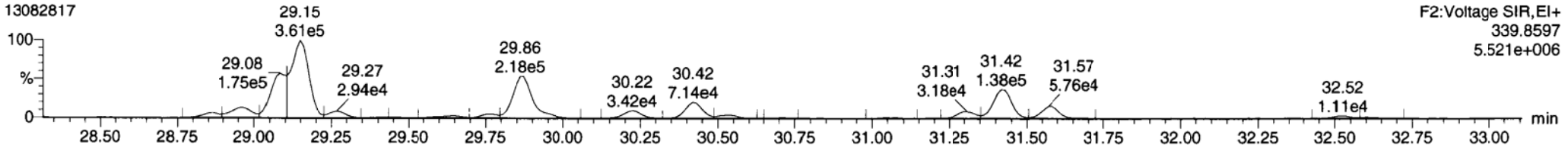
13C-23478-PeCDF



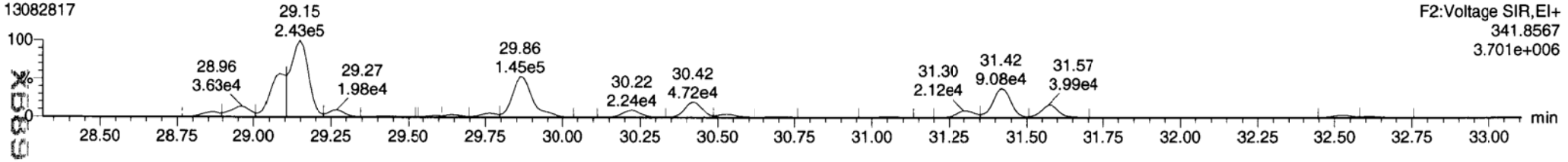
13C-23478-PeCDF



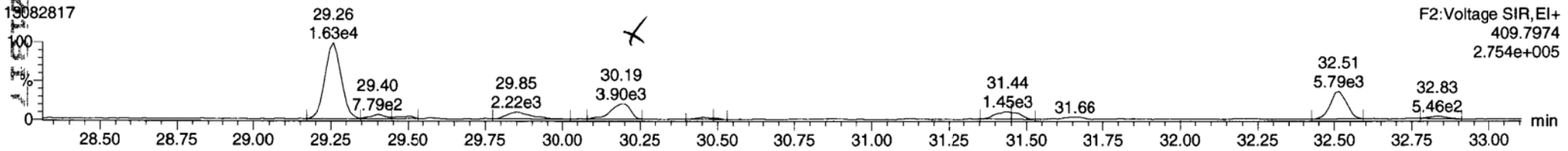
Total-pentafurans



Total-pentafurans



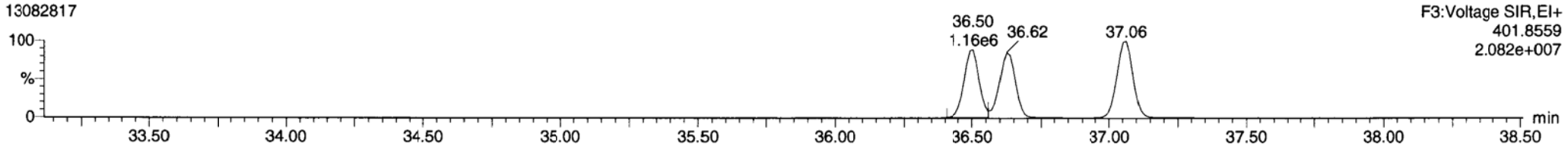
FUNCTION2 HPCDPE



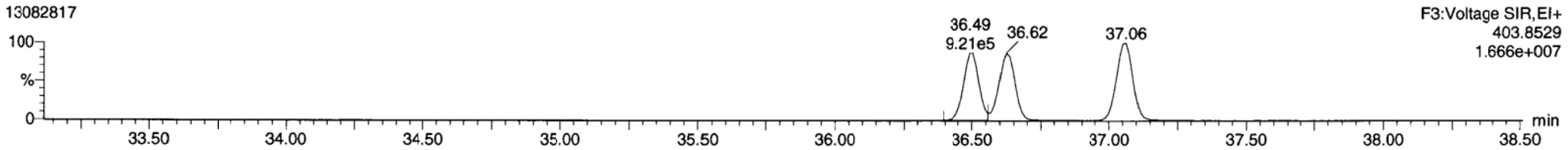
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

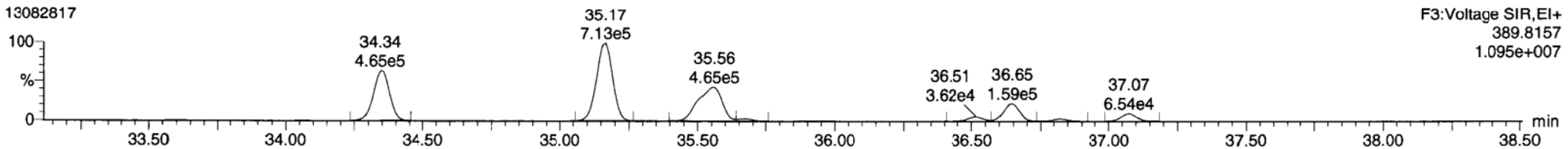
13C-123478-HxCDD



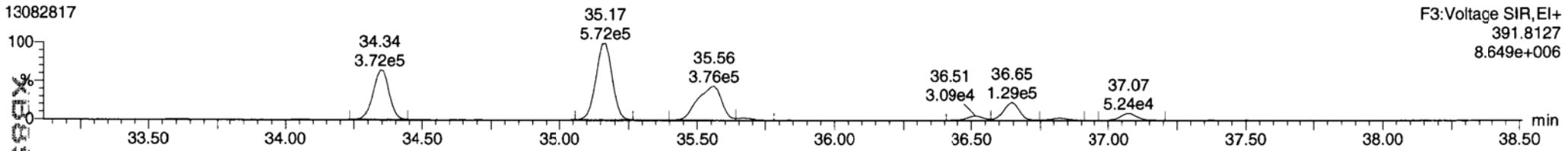
13C-123478-HxCDD



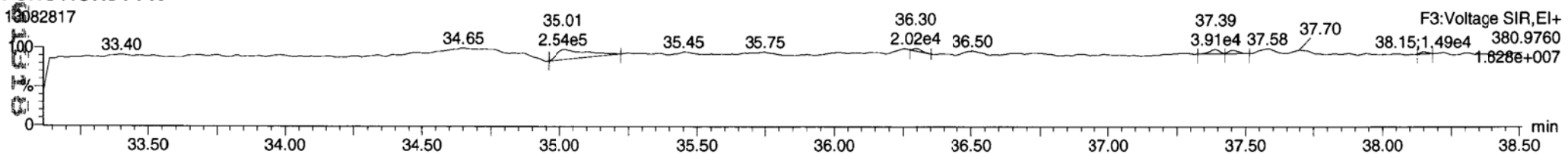
Total-hexadioxins



Total-hexadioxins



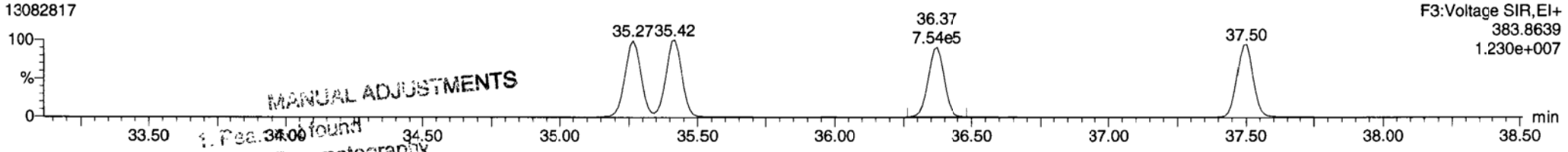
FUNCTION3 PFK



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

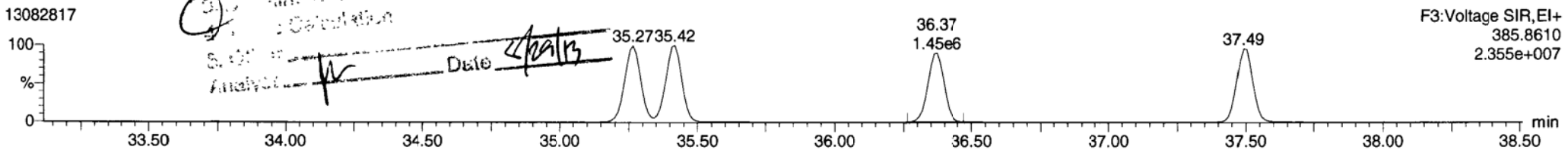
ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF

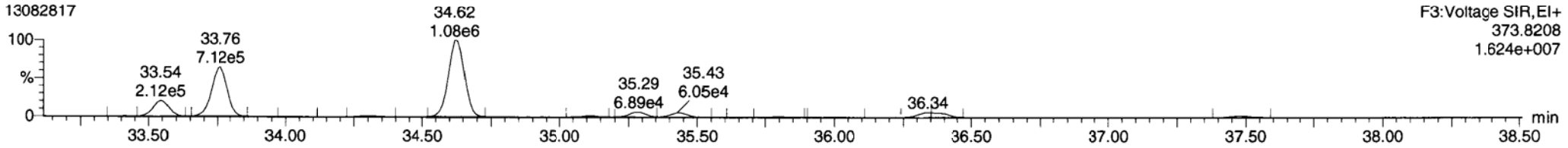


MANUAL ADJUSTMENTS
1. Peak not found
2. Peak Chromatography
3. Baseline Correction
4. Peak Calculation
5. Other
Analyst Date 8/29/13

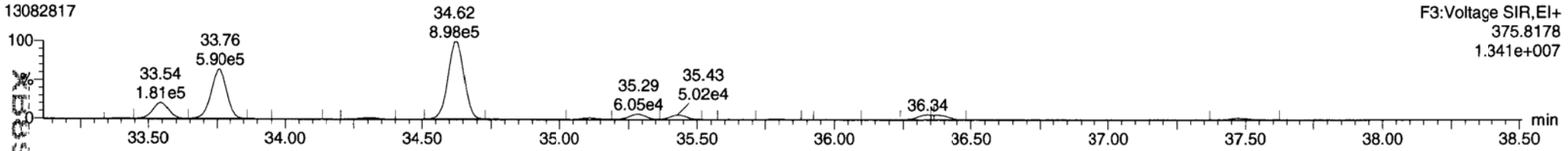
13C-234678-HxCDF



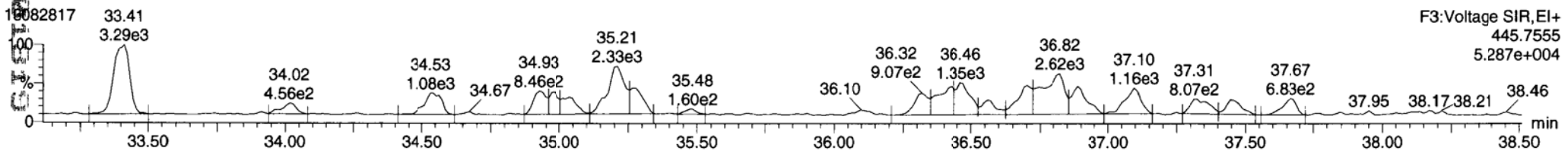
Total-hexafurans



Total-hexafurans



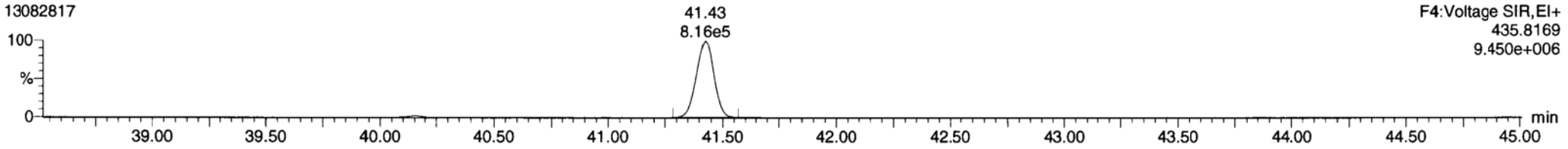
FUNCTION3 OCDPE



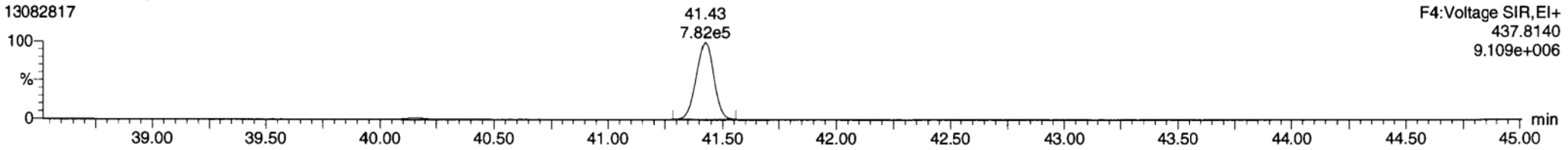
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

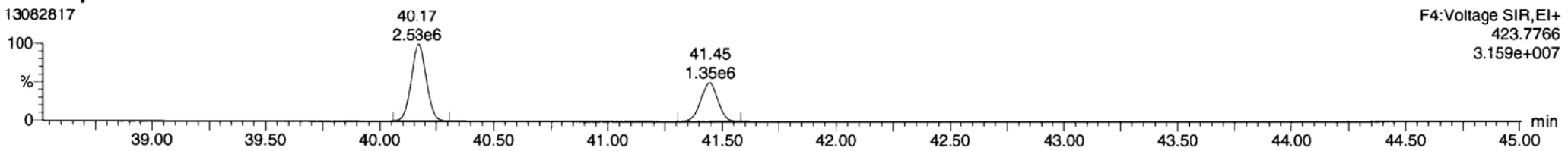
13C-1234678-HpCDD



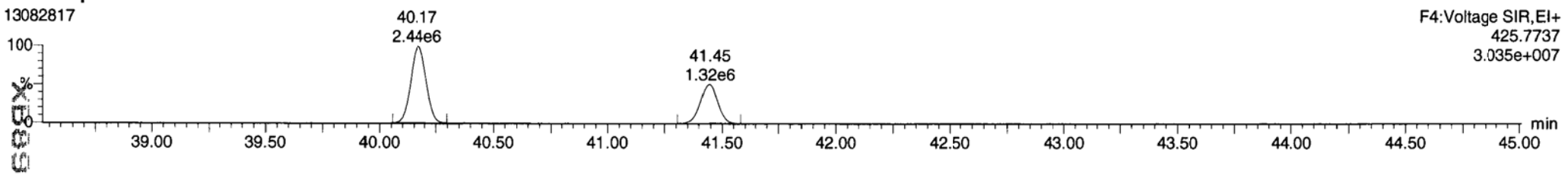
13C-1234678-HpCDD



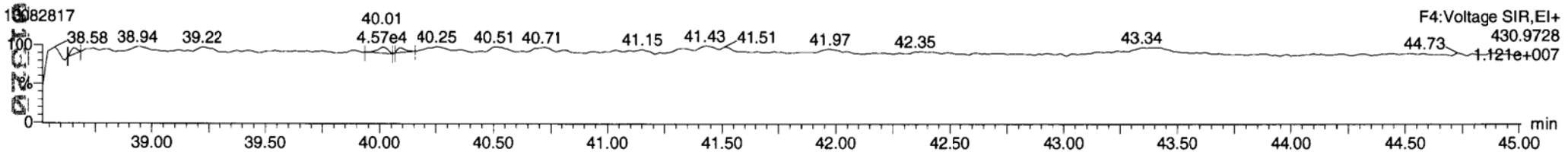
Total-heptadioxins



Total-heptadioxins



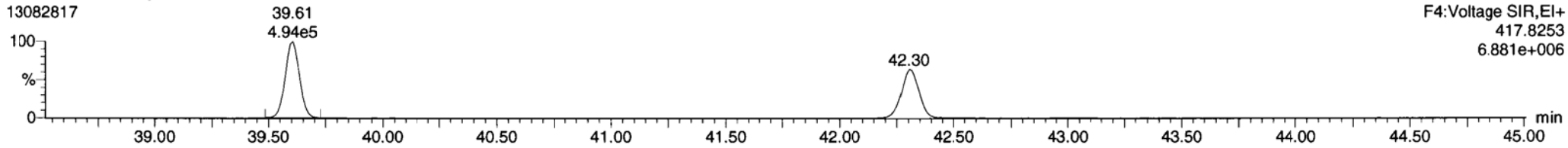
FUNCTION4 PFK



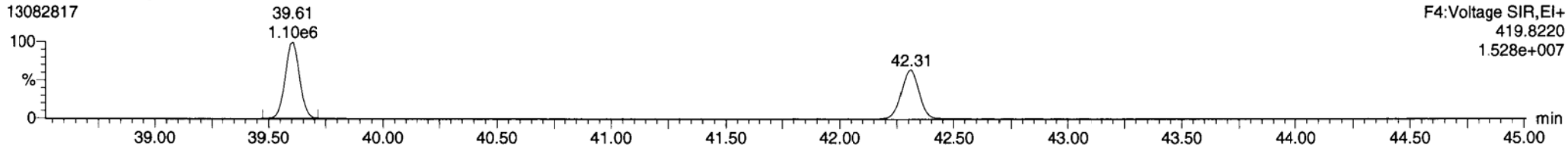
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

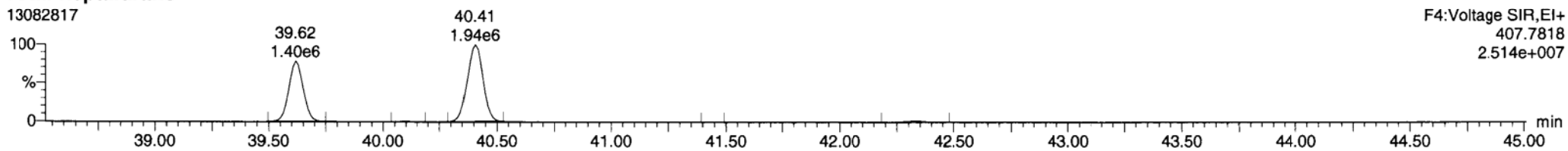
13C-1234678-HpCDF



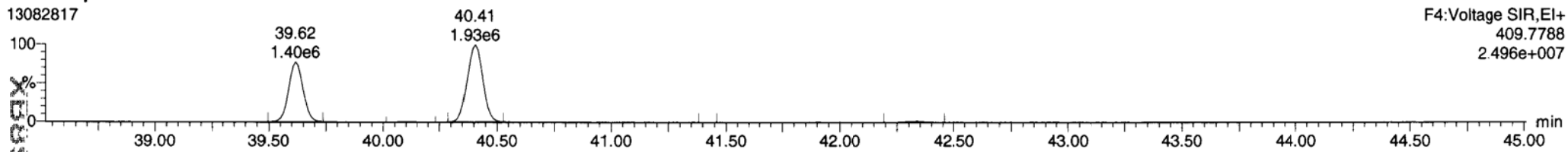
13C-1234678-HpCDF



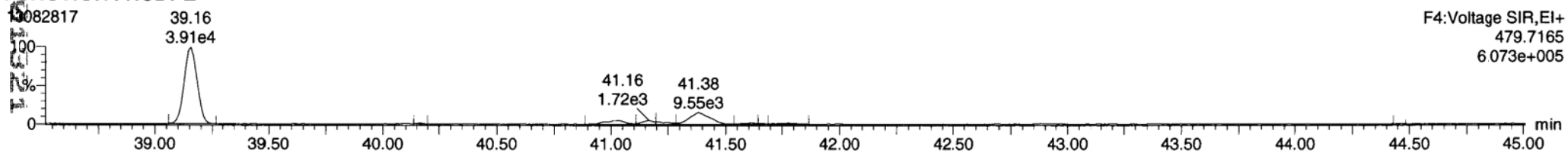
Total-heptafurans



Total-heptafurans



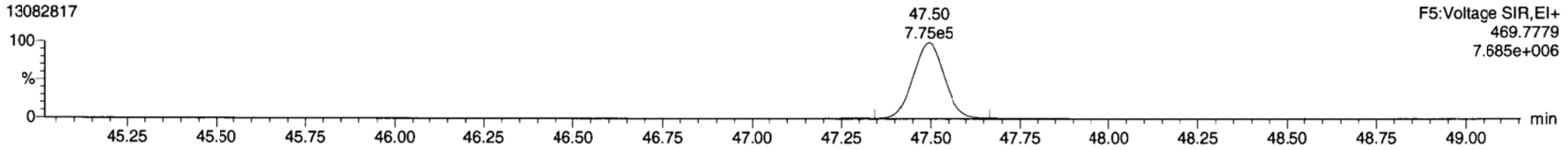
FUNCTION4 NCDPE



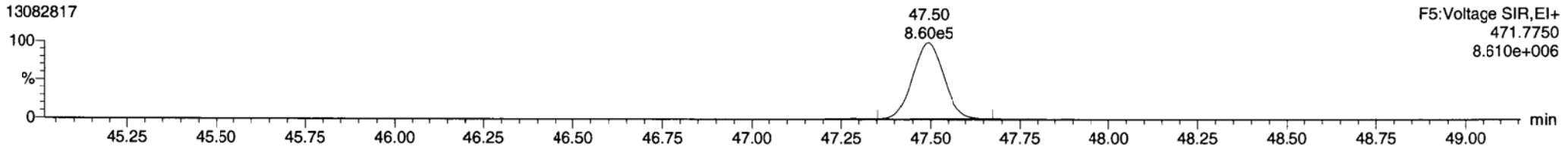
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

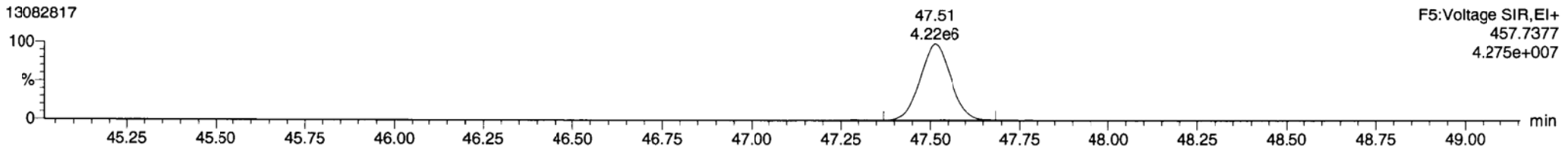
13C-OCDD



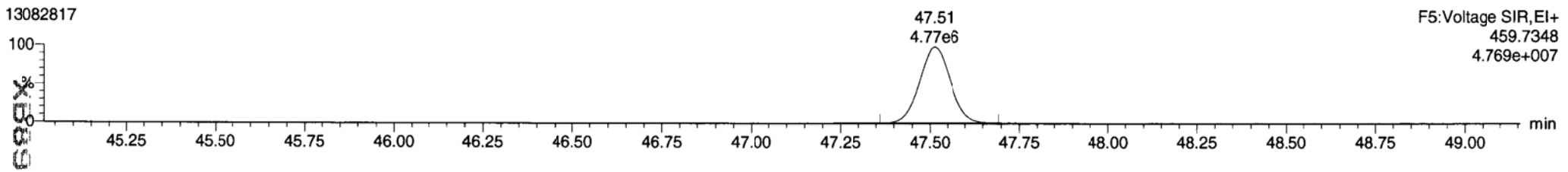
13C-OCDD



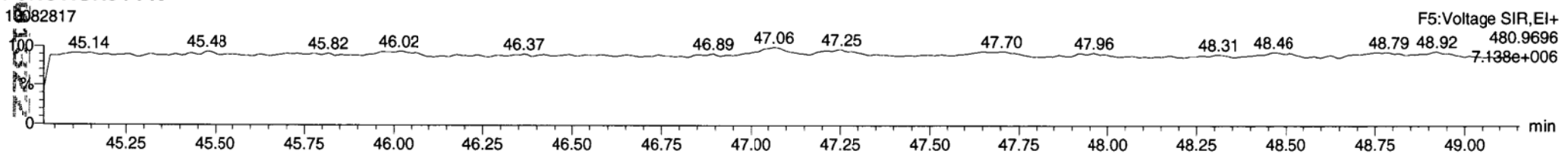
OCDD



OCDD



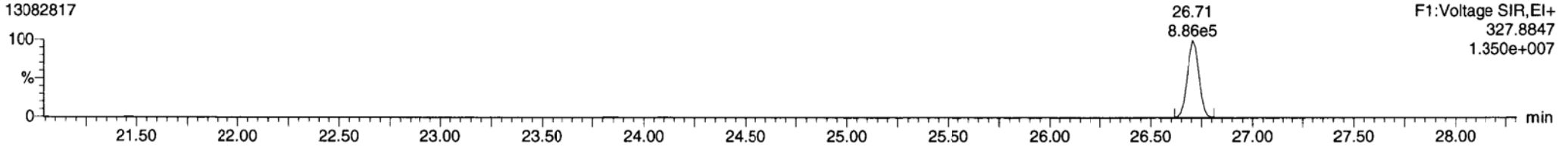
FUNCTION5 PFK



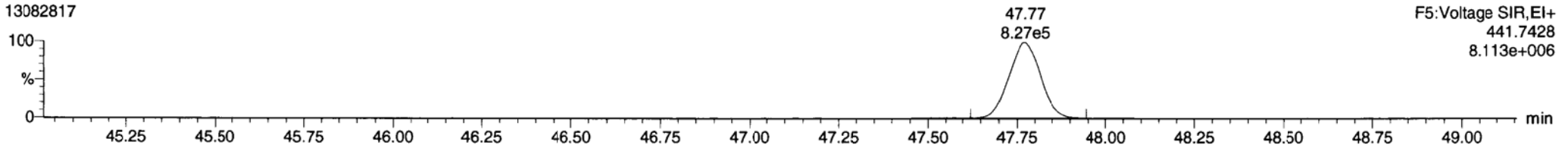
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:18 Pacific Daylight Time

ID: XB89E, Name: 13082817, Date: 29-Aug-2013, Time: 00:34:42, Conditions: AUTOSPEC01, User: pk

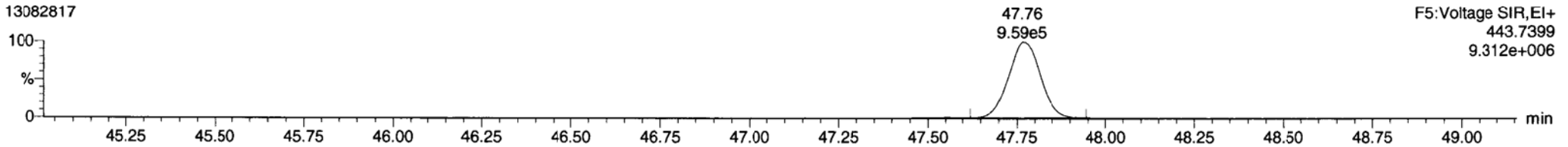
37CL-2378-TCDD



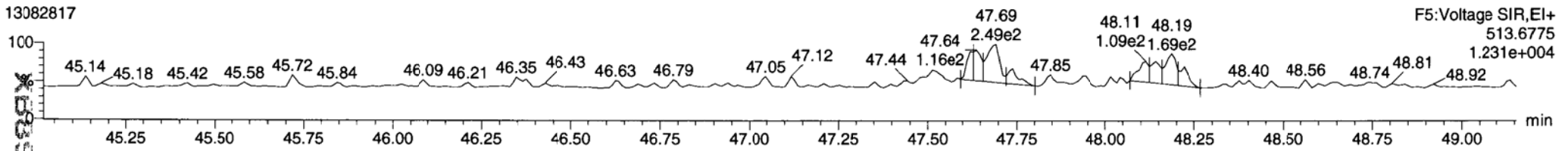
OCDF



OCDF



FUNCTION5 DCDPE



29 AUG 2013 9:05:18 PM

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:40 Pacific Daylight Time

pk 8/29/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.079	1.001	1.74e4	2.26e4	0.867	0.770	0.770	100.9	2534	2266	2.56e5	3.35e5	NO	1.561	1.561
12378-PeCDF	30.234	1.001	1.44e4	1.12e4	0.875	1.283	1.550	106.1	2085	2269	2.21e5	1.72e5	YES	0.937	1.013
23478-PeCDF	31.582	1.001	1.59e4	1.31e4	0.880	1.216	1.550	124.7	2085	2269	2.60e5	1.90e5	YES	1.081	1.197
123478-HxCDF	35.287	1.001	2.01e4	1.69e4	1.048	1.189	1.240	134.8	2187	1865	2.95e5	2.56e5	NO	1.690	1.690
234678-HxCDF	36.361	0.999	1.84e4	1.44e4	1.088	1.273	1.240	104.7	2187	1865	2.29e5	1.96e5	NO	1.373	1.373
123678-HxCDF	35.441	1.001	1.73e4	1.40e4	1.025	1.237	1.240	121.6	2187	1865	2.66e5	2.03e5	NO	1.539	1.539
123789-HxCDF	37.479	1.000	5.06e3	4.47e3	0.959	1.133	1.240	37.7	2187	1865	8.26e4	7.28e4	NO	0.438	0.438
1234678-HpCDF	39.595	1.001	3.00e5	2.94e5	1.215	1.020	1.050	2384.2	1832	2084	4.37e6	4.26e6	NO	30.371	30.371
1234789-HpCDF	42.281	1.000	8.20e3	8.96e3	1.200	0.915	1.050	49.3	1832	2084	9.04e4	1.03e5	NO	1.091	1.091
OCDF	47.702	1.006	2.67e5	3.08e5	1.064	0.867	0.890	1997.8	1398	2167	2.79e6	3.21e6	NO	49.567	49.567
2378-TCDD	26.721	1.001	3.68e3	6.48e3	0.994	0.568	0.770	32.3	1862	2193	6.01e4	9.43e4	YES	0.414	0.498
12378-PeCDD	31.823	1.000	2.58e4	1.74e4	0.976	1.485	1.550	152.1	2169	1581	3.30e5	2.30e5	NO	2.112	2.112
123478-HxCDD	36.526	1.000	1.35e4	1.07e4	0.967	1.263	1.240	79.3	2305	2063	1.83e5	1.73e5	NO	1.259	1.259
123678-HxCDD	36.657	1.000	4.39e4	3.61e4	0.902	1.215	1.240	290.6	2305	2063	6.70e5	5.76e5	NO	4.389	4.389
123789-HxCDD	37.085	1.012	2.36e4	1.86e4	0.914	1.266	1.240	162.5	2305	2063	3.74e5	2.88e5	NO	2.301	2.301
1234678-HpCDD	41.404	1.000	3.91e5	3.84e5	0.999	1.018	1.050	1933.5	2550	2512	4.93e6	4.89e6	NO	47.716	47.716
OCDD	47.442	1.000	1.35e6	1.53e6	0.979	0.883	0.890	9273.7	1430	1569	1.33e7	1.50e7	NO	268.875	268.875
13C-2378-TCDF	26.063	1.007	1.29e6	1.67e6	1.419	0.770	0.770	4610.0	4345	3060	2.00e7	2.61e7	NO		56.863
13C-12378-PeCDF	30.212	1.167	1.77e6	1.13e6	1.158	1.562	1.550	11450.8	2439	2838	2.79e7	1.80e7	NO		68.172
13C-23478-PeCDF	31.560	1.219	1.68e6	1.07e6	1.127	1.574	1.550	10581.1	2439	2838	2.58e7	1.64e7	NO		66.559
13C-123478-HxCDF	35.265	0.951	7.18e5	1.37e6	1.206	0.525	0.510	4821.1	2290	2487	1.10e7	2.08e7	NO		68.607
13C-123678-HxCDF	35.419	0.955	6.77e5	1.31e6	1.266	0.516	0.510	4210.1	2290	2487	9.64e6	1.85e7	NO		62.395
13C-234678-HxCDF	36.383	0.981	7.46e5	1.45e6	1.155	0.515	0.510	4760.6	2290	2487	1.09e7	2.11e7	NO		75.423
13C-123789-HxCDF	37.491	1.011	7.75e5	1.49e6	1.121	0.519	0.510	5810.6	2290	2487	1.33e7	2.56e7	NO		80.356
13C-1234678-HpCDF	39.573	1.067	4.99e5	1.11e6	1.040	0.449	0.440	3513.4	2096	1559	7.36e6	1.61e7	NO		61.466
13C-1234789-HpCDF	42.270	1.140	4.08e5	9.02e5	0.789	0.452	0.440	2373.7	2096	1559	4.97e6	1.09e7	NO		65.910
13C-1234-TCDD	25.884	0.000	1.63e6	2.04e6	1.000	0.800	0.770	9121.4	2888	1909	2.63e7	3.28e7	NO		100.000
13C-2378-TCDD	26.706	1.032	9.06e5	1.15e6	0.962	0.788	0.770	4692.3	2888	1909	1.36e7	1.72e7	NO		58.205
13C-12378-PeCDD	31.812	1.229	1.28e6	8.22e5	0.746	1.551	1.550	7095.6	2802	1352	1.99e7	1.28e7	NO		76.577
13C-123478-HxCDD	36.515	0.985	1.10e6	8.84e5	1.003	1.248	1.240	7288.6	2306	2135	1.68e7	1.35e7	NO		78.665
13C-123678-HxCDD	36.646	0.988	1.12e6	9.04e5	1.052	1.235	1.240	7200.6	2306	2135	1.66e7	1.37e7	NO		76.252
13C-1234678-HpCDD	41.393	1.116	8.31e5	7.94e5	0.880	1.047	1.050	4983.8	2087	1926	1.04e7	9.91e6	NO		73.312
13C-OCDD	47.424	1.279	1.03e6	1.15e6	0.775	0.890	0.890	4437.4	2326	1421	1.03e7	1.15e7	NO		111.848

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

[redacted]														
13C-123789-HxCDD	37.074	0.000	1.39e6	1.13e6	1.000	1.234	1.240	9274.9	2306	2135	2.14e7	1.73e7	NO	100.000
Total-tetrafurans			3.72e5		0.867				2534		5.27e6			34.505
Total-penta1			3.81e5						1528		5.55e6			23.938
Total-pentafurans			3.17e5		0.877				2085		4.72e6			21.666
Total-hexafurans			4.69e5		1.030				2187		6.99e6			39.414
Total-heptafurans			7.24e5		1.207				1832		1.03e7			78.723
Total-Furans			2.53e6		1.022				2534		3.56e7			247.813
Total-tetradioxins			4.68e5		0.994				1862		7.32e6			52.498
Total-pentadioxins			5.60e5		0.976				2169		7.69e6			44.956
Total-hexadioxins			7.12e5		0.928				2305		9.93e6			69.484
Total-heptadioxins			1.02e6		0.999				2550		1.37e7			123.940
Total-Dioxins			4.11e6		0.962				1862		5.19e7			559.754
Total-TEQ			6.64e6						1862		8.75e7			807.567
37CL-2378-TCDD	26.721	1.032	9.28e5		1.091			6133.3	2324		1.43e7			23.175
FUNCTION1 PFK			8.68e5						268679		1.07e7			
FUNCTION2 PFK			9.83e4						105050		2.88e6			0.000
FUNCTION3 PFK			2.14e6						192750		1.41e7			0.000
FUNCTION4 PFK			9.99e5						154354		6.14e6			
FUNCTION5 PFK			0.00e0						129079		0.00e0			
FUNCTION1 HXCDPE			1.75e3						903		3.61e4			0.000
FUNCTION1 HPCDPE			2.19e2						557		5.25e3			0.000
FUNCTION2 HPCDPE			7.35e3						1279		1.21e5			0.000
FUNCTION3 OCDPE			7.21e3						2371		1.36e5			0.000
FUNCTION4 NCDPE			3.53e4						1013		5.20e5			0.000
FUNCTION5 DCDPE			4.36e2						597		1.49e4			0.000

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Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

D: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

TF

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
35	Total-tetrafurans	303.9016	25.17	47430.795	0.867	1.849		0.68	0.77	NO	118.9
35	Total-tetrafurans	303.9016	24.99	82386.949	0.867	3.211		0.74	0.77	NO	208.6
35	Total-tetrafurans	303.9016	24.84	23383.201	0.867	0.911		0.78	0.77	NO	74.0
35	Total-tetrafurans	303.9016	24.75	75648.808	0.867	2.948		0.67	0.77	NO	141.2
35	Total-tetrafurans	303.9016	24.32	15580.736	0.867	0.607		0.71	0.77	NO	42.7
35	Total-tetrafurans	303.9016	24.18	11284.262	0.867	0.440		0.55	0.77	YES	23.8
35	Total-tetrafurans	303.9016	24.08	53927.772	0.867	2.102		0.74	0.77	NO	142.8
35	Total-tetrafurans	303.9016	23.91	16447.125	0.867	0.641		0.78	0.77	NO	47.2
35	Total-tetrafurans	303.9016	23.82	32359.442	0.867	1.261		0.76	0.77	NO	82.4
35	Total-tetrafurans	303.9016	23.72	26802.476	0.867	1.045		0.65	0.77	YES	54.4
35	Total-tetrafurans	303.9016	23.60	59214.541	0.867	2.308		0.72	0.77	NO	109.1
35	Total-tetrafurans	303.9016	23.42	171705.266	0.867	6.692		0.73	0.77	NO	424.4
35	Total-tetrafurans	303.9016	22.84	25153.214	0.867	0.980		0.71	0.77	NO	65.7
35	Total-tetrafurans	303.9016	22.58	28779.958	0.867	1.122		0.70	0.77	NO	73.1
35	Total-tetrafurans	303.9016	27.54	14833.051	0.867	0.578		0.90	0.77	YES	21.9
35	Total-tetrafurans	303.9016	26.57	2397.363	0.867	0.093		0.92	0.77	YES	6.5
35	Total-tetrafurans	303.9016	26.32	41459.975	0.867	1.616		0.76	0.77	NO	105.5
35	Total-tetrafurans	303.9016	26.21	21349.665	0.867	0.832		0.63	0.77	YES	50.7
1	2378-TCDF	303.9016	26.08	40057.943	0.867	1.561	1.561	0.77	0.77	NO	100.9
35	Total-tetrafurans	303.9016	25.85	49315.676	0.867	1.922		0.74	0.77	NO	84.4
35	Total-tetrafurans	303.9016	25.72	4480.629	0.867	0.175		0.61	0.77	YES	9.4
35	Total-tetrafurans	303.9016	25.60	27239.029	0.867	1.062		0.81	0.77	NO	58.2
35	Total-tetrafurans	303.9016	25.41	14087.869	0.867	0.549		0.66	0.77	NO	34.2

PP

#	Name	Trace	RT	Abs.Resp	RRF M...	pg	EMPC	1° Rati...	1° Rati...	1° R...	S/N
36	Total-penta1	339.8597	27.50	619977.906		23.938		1.60	1.55	NO	3634.6

XB89:01326

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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PF

		Name	Trace	RT	Abundance	RRF M1	Conc	EMPC	R Ratio	T Ratio	T Flg	S/N
	37	Total-pentafurans	339.8597	29.27	3702.049	0.877	0.149		1.30	1.55	YES	19.0
	37	Total-pentafurans	339.8597	29.15	118547.785	0.877	4.786		1.53	1.55	NO	552.0
	37	Total-pentafurans	339.8597	29.08	86004.305	0.877	3.472		1.42	1.55	NO	388.1
	37	Total-pentafurans	339.8597	28.96	34422.337	0.877	1.390		1.57	1.55	NO	122.7
	37	Total-pentafurans	339.8597	28.87	15503.395	0.877	0.626		1.33	1.55	NO	68.4
	37	Total-pentafurans	339.8597	32.61	3293.759	0.877	0.133		1.22	1.55	YES	13.9
	3	23478-PeCDF	339.8597	31.58	28972.258	0.880	1.197	1.081	1.22	1.55	YES	124.7
	37	Total-pentafurans	339.8597	31.43	34339.196	0.877	1.386		1.32	1.55	NO	141.0
	37	Total-pentafurans	339.8597	31.31	23136.976	0.877	0.934		1.36	1.55	NO	100.2
	37	Total-pentafurans	339.8597	30.72	2091.962	0.877	0.084		1.15	1.55	YES	8.5
	37	Total-pentafurans	339.8597	30.54	11899.912	0.877	0.480		1.54	1.55	NO	53.3
	37	Total-pentafurans	339.8597	30.43	30124.462	0.877	1.216		1.42	1.55	NO	133.1
	2	12378-PeCDF	339.8597	30.23	25675.640	0.875	1.013	0.937	1.28	1.55	YES	106.1
	37	Total-pentafurans	339.8597	29.87	98030.734	0.877	3.957		1.56	1.55	NO	350.7
	37	Total-pentafurans	339.8597	29.76	7305.674	0.877	0.295		1.18	1.55	YES	35.2
	37	Total-pentafurans	339.8597	29.65	11205.955	0.877	0.452		1.43	1.55	NO	37.9
	37	Total-pentafurans	339.8597	29.44	2330.084	0.877	0.094		1.18	1.55	YES	9.2

HF

		Name	Trace	RT	Abundance	RRF M1	Conc	EMPC	R Ratio	T Ratio	T Flg	S/N
	4	123478-HxCDF	373.8208	35.29	36946.756	1.048	1.690	1.690	1.19	1.24	NO	134.8
	38	Total-hexafurans	373.8208	35.11	15657.073	1.030	0.712		1.22	1.24	NO	63.9
	38	Total-hexafurans	373.8208	34.62	354682.844	1.030	16.127		1.15	1.24	NO	1289.7
	38	Total-hexafurans	373.8208	34.30	6710.743	1.030	0.305		1.35	1.24	NO	27.2
	38	Total-hexafurans	373.8208	34.04	1208.502	1.030	0.055		2.61	1.24	YES	7.0
	38	Total-hexafurans	373.8208	33.75	264737.164	1.030	12.038		1.17	1.24	NO	971.8
	38	Total-hexafurans	373.8208	33.54	103738.672	1.030	4.717		1.22	1.24	NO	406.0
	7	123789-HxCDF	373.8208	37.48	9535.659	0.959	0.438	0.438	1.13	1.24	NO	37.7
	5	234678-HxCDF	373.8208	36.36	32810.953	1.088	1.373	1.373	1.27	1.24	NO	104.7
	38	Total-hexafurans	373.8208	36.01	2651.590	1.030	0.121		1.12	1.24	NO	9.1
	38	Total-hexafurans	373.8208	35.79	4732.973	1.030	0.215		0.96	1.24	YES	17.8
	38	Total-hexafurans	373.8208	35.67	1859.548	1.030	0.085		0.70	1.24	YES	5.5
	6	123678-HxCDF	373.8208	35.44	31374.925	1.025	1.539	1.539	1.24	1.24	NO	121.6

HPF

		Name	Trace	RT	Abundance	RRF M1	Conc	EMPC	R Ratio	T Ratio	T Flg	S/N
	39	Total-heptafurans	407.7818	40.08	6360.907	1.207	0.361		1.24	1.05	YES	28.9
	8	1234678-HpCDF	407.7818	39.60	593936.125	1.215	30.371	30.371	1.02	1.05	NO	2384.2
	9	1234789-HpCDF	407.7818	42.28	17159.089	1.200	1.091	1.091	0.92	1.05	NO	49.3
	39	Total-heptafurans	407.7818	40.38	826801.094	1.207	46.900		1.00	1.05	NO	3158.5

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	25.17	47430.795	0.867	1.849		0.68	0.77	NO	118.9
	35	Total-tetrafurans	303.9016	24.99	82386.949	0.867	3.211		0.74	0.77	NO	208.6
	35	Total-tetrafurans	303.9016	24.84	23383.201	0.867	0.911		0.78	0.77	NO	74.0
	35	Total-tetrafurans	303.9016	24.75	75648.808	0.867	2.948		0.67	0.77	NO	141.2
	35	Total-tetrafurans	303.9016	24.32	15580.736	0.867	0.607		0.71	0.77	NO	42.7
	35	Total-tetrafurans	303.9016	24.18	11284.262	0.867	0.440		0.55	0.77	YES	23.8
	35	Total-tetrafurans	303.9016	24.08	53927.772	0.867	2.102		0.74	0.77	NO	142.8
	35	Total-tetrafurans	303.9016	23.91	16447.125	0.867	0.641		0.78	0.77	NO	47.2
	35	Total-tetrafurans	303.9016	23.82	32359.442	0.867	1.261		0.76	0.77	NO	82.4
	35	Total-tetrafurans	303.9016	23.72	26802.476	0.867	1.045		0.65	0.77	YES	54.4
	35	Total-tetrafurans	303.9016	23.60	59214.541	0.867	2.308		0.72	0.77	NO	109.1
	35	Total-tetrafurans	303.9016	23.42	171705.266	0.867	6.692		0.73	0.77	NO	424.4
	35	Total-tetrafurans	303.9016	22.84	25153.214	0.867	0.980		0.71	0.77	NO	65.7
	35	Total-tetrafurans	303.9016	22.58	28779.958	0.867	1.122		0.70	0.77	NO	73.1
	35	Total-tetrafurans	303.9016	27.54	14833.051	0.867	0.578		0.90	0.77	YES	21.9
	35	Total-tetrafurans	303.9016	26.57	2397.363	0.867	0.093		0.92	0.77	YES	6.5
	35	Total-tetrafurans	303.9016	26.32	41459.975	0.867	1.616		0.76	0.77	NO	105.5
	35	Total-tetrafurans	303.9016	26.21	21349.665	0.867	0.832		0.63	0.77	YES	50.7
	1	2378-TCDF	303.9016	26.08	40057.943	0.867	1.561	1.561	0.77	0.77	NO	100.9
	35	Total-tetrafurans	303.9016	25.85	49315.676	0.867	1.922		0.74	0.77	NO	84.4
	35	Total-tetrafurans	303.9016	25.72	4480.629	0.867	0.175		0.61	0.77	YES	9.4
	35	Total-tetrafurans	303.9016	25.60	27239.029	0.867	1.062		0.81	0.77	NO	58.2
	35	Total-tetrafurans	303.9016	25.41	14087.869	0.867	0.549		0.66	0.77	NO	34.2
	37	Total-pentafurans	339.8597	29.27	3702.049	0.877	0.149		1.30	1.55	YES	19.0
	37	Total-pentafurans	339.8597	29.15	118547.785	0.877	4.786		1.53	1.55	NO	552.0
	37	Total-pentafurans	339.8597	29.08	86004.305	0.877	3.472		1.42	1.55	NO	388.1
	37	Total-pentafurans	339.8597	28.96	34422.337	0.877	1.390		1.57	1.55	NO	122.7
	37	Total-pentafurans	339.8597	28.87	15503.395	0.877	0.626		1.33	1.55	NO	68.4
	37	Total-pentafurans	339.8597	32.61	3293.759	0.877	0.133		1.22	1.55	YES	13.9
	3	23478-PeCDF	339.8597	31.58	28972.258	0.880	1.197	1.081	1.22	1.55	YES	124.7
	37	Total-pentafurans	339.8597	31.43	34339.196	0.877	1.386		1.32	1.55	NO	141.0
	37	Total-pentafurans	339.8597	31.31	23136.976	0.877	0.934		1.36	1.55	NO	100.2
	37	Total-pentafurans	339.8597	30.72	2091.962	0.877	0.084		1.15	1.55	YES	8.5
	37	Total-pentafurans	339.8597	30.54	11899.912	0.877	0.480		1.54	1.55	NO	53.3
	37	Total-pentafurans	339.8597	30.43	30124.462	0.877	1.216		1.42	1.55	NO	133.1
	2	12378-PeCDF	339.8597	30.23	25675.640	0.875	1.013	0.937	1.28	1.55	YES	106.1
	37	Total-pentafurans	339.8597	29.87	98030.734	0.877	3.957		1.56	1.55	NO	350.7
	37	Total-pentafurans	339.8597	29.76	7305.674	0.877	0.295		1.18	1.55	YES	35.2
	37	Total-pentafurans	339.8597	29.65	11205.955	0.877	0.452		1.43	1.55	NO	37.9
	37	Total-pentafurans	339.8597	29.44	2330.084	0.877	0.094		1.18	1.55	YES	9.2
	4	123478-HxCDF	373.8208	35.29	36946.756	1.048	1.690	1.690	1.19	1.24	NO	134.8
	38	Total-hexafurans	373.8208	35.11	15657.073	1.030	0.712		1.22	1.24	NO	63.9
	38	Total-hexafurans	373.8208	34.62	354682.844	1.030	16.127		1.15	1.24	NO	1289.7
	38	Total-hexafurans	373.8208	34.30	6710.743	1.030	0.305		1.35	1.24	NO	27.2
	38	Total-hexafurans	373.8208	34.04	1208.502	1.030	0.055		2.61	1.24	YES	7.0
	38	Total-hexafurans	373.8208	33.75	264737.164	1.030	12.038		1.17	1.24	NO	971.8
	38	Total-hexafurans	373.8208	33.54	103738.672	1.030	4.717		1.22	1.24	NO	406.0
	7	123789-HxCDF	373.8208	37.48	9535.659	0.959	0.438	0.438	1.13	1.24	NO	37.7
	5	234678-HxCDF	373.8208	36.36	32810.953	1.088	1.373	1.373	1.27	1.24	NO	104.7

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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D: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	2° Ratio	2° Rati...	1° R...	S/N
	38	Total-hexafurans	373.8208	36.01	2651.590	1.030	0.121		1.12	1.24	NO	9.1
	38	Total-hexafurans	373.8208	35.79	4732.973	1.030	0.215		0.96	1.24	YES	17.8
	38	Total-hexafurans	373.8208	35.67	1859.548	1.030	0.085		0.70	1.24	YES	5.5
	6	123678-HxCDF	373.8208	35.44	31374.925	1.025	1.539	1.539	1.24	1.24	NO	121.6
	39	Total-heptafurans	407.7818	40.08	6360.907	1.207	0.361		1.24	1.05	YES	28.9
	8	1234678-HpCDF	407.7818	39.60	593936.125	1.215	30.371	30.371	1.02	1.05	NO	2384.2
	9	1234789-HpCDF	407.7818	42.28	17159.089	1.200	1.091	1.091	0.92	1.05	NO	49.3
	39	Total-heptafurans	407.7818	40.38	826801.094	1.207	46.900		1.00	1.05	NO	3158.5
	10	OCDF	441.7428	47.70	575833.907	1.064	49.567	49.567	0.87	0.89	NO	1997.8
	36	Total-penta1	339.8597	27.50	619977.906		23.938		1.60	1.55	NO	3634.6

TD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	2° Ratio	2° Rati...	1° R...	S/N
	11	2378-TCDD	319.8965	26.72	10158.483	0.994	0.498	0.414	0.57	0.77	YES	32.3
	41	Total-tetradioxins	319.8965	26.35	78127.758	0.994	3.827		0.75	0.77	NO	228.3
	41	Total-tetradioxins	319.8965	26.05	5565.180	0.994	0.273		0.97	0.77	YES	22.3
	41	Total-tetradioxins	319.8965	25.90	58918.766	0.994	2.886		0.78	0.77	NO	211.9
	41	Total-tetradioxins	319.8965	25.70	25293.525	0.994	1.239		0.73	0.77	NO	88.2
	41	Total-tetradioxins	319.8965	25.62	5091.409	0.994	0.249		0.77	0.77	NO	23.1
	41	Total-tetradioxins	319.8965	25.35	87664.937	0.994	4.294		0.77	0.77	NO	311.5
	41	Total-tetradioxins	319.8965	25.06	50306.912	0.994	2.464		0.77	0.77	NO	158.4
	41	Total-tetradioxins	319.8965	24.85	2264.118	0.994	0.111		0.82	0.77	NO	7.0
	41	Total-tetradioxins	319.8965	24.33	16070.229	0.994	0.787		0.80	0.77	NO	57.2
	41	Total-tetradioxins	319.8965	24.12	305410.563	0.994	14.959		0.78	0.77	NO	1147.3
	41	Total-tetradioxins	319.8965	23.85	409457.563	0.994	20.055		0.78	0.77	NO	1586.6
	41	Total-tetradioxins	319.8965	27.30	3636.111	0.994	0.178		0.56	0.77	YES	10.6
	41	Total-tetradioxins	319.8965	26.84	13888.423	0.994	0.680		0.80	0.77	NO	49.3

PD

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	2° Ratio	2° Rati...	1° R...	S/N
	42	Total-pentadioxins	355.8546	32.23	17299.205	0.976	0.845		1.67	1.55	NO	75.3
	12	12378-PeCDD	355.8546	31.82	43233.158	0.976	2.112	2.112	1.48	1.55	NO	152.1
	42	Total-pentadioxins	355.8546	31.15	95174.609	0.976	4.649		1.53	1.55	NO	394.2
	42	Total-pentadioxins	355.8546	30.76	37102.699	0.976	1.812		1.59	1.55	NO	110.2
	42	Total-pentadioxins	355.8546	30.58	179621.336	0.976	8.773		1.58	1.55	NO	806.6
	42	Total-pentadioxins	355.8546	30.45	30693.187	0.976	1.499		1.61	1.55	NO	148.0
	42	Total-pentadioxins	355.8546	30.23	227544.101	0.976	11.114		1.57	1.55	NO	1038.7
	42	Total-pentadioxins	355.8546	29.62	16581.925	0.976	0.810		1.48	1.55	NO	71.1
	42	Total-pentadioxins	355.8546	29.13	273184.039	0.976	13.343		1.54	1.55	NO	747.2

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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HD

	#	Name	Trace	RT	Abs.Resp	RRF.M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	43	Total-hexadioxins	389.8157	35.16	618061.375	0.928	33.237		1.22	1.24	NO	2214.5
	43	Total-hexadioxins	389.8157	34.34	215030.633	0.928	11.563		1.24	1.24	NO	789.7
	15	123789-HxCDD	389.8157	37.08	42158.946	0.914	2.301	2.301	1.27	1.24	NO	162.5
	43	Total-hexadioxins	389.8157	36.84	15336.792	0.928	0.825		1.30	1.24	NO	54.1
	14	123678-HxCDD	389.8157	36.66	79988.406	0.902	4.389	4.389	1.21	1.24	NO	290.6
	13	123478-HxCDD	389.8157	36.53	24199.047	0.967	1.259	1.259	1.26	1.24	NO	79.3
	43	Total-hexadioxins	389.8157	35.67	12117.634	0.928	0.652		0.95	1.24	YES	43.1
	43	Total-hexadioxins	389.8157	35.55	283754.906	0.928	15.259		1.24	1.24	NO	671.9

HPD

	#	Name	Trace	RT	Abs.Resp	RRF.M	pg	EMPC	1° Rati	1° Rati	1° R	S/N
	16	1234678-HpCDD	423.7766	41.40	774775.937	0.999	47.716	47.716	1.02	1.05	NO	1933.5
	44	Total-heptadioxins	423.7766	40.14	1237657.563	0.999	76.224		1.03	1.05	NO	3433.9

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ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	11 2378-TCDD	319.8965	26.72	10158.483	0.994	0.498	0.414	0.57	0.77	YES	32.3
	41 Total-tetradioxins	319.8965	26.35	78127.758	0.994	3.827		0.75	0.77	NO	228.3
	41 Total-tetradioxins	319.8965	26.05	5565.180	0.994	0.273		0.97	0.77	YES	22.3
	41 Total-tetradioxins	319.8965	25.90	58918.766	0.994	2.886		0.78	0.77	NO	211.9
	41 Total-tetradioxins	319.8965	25.70	25293.525	0.994	1.239		0.73	0.77	NO	88.2
	41 Total-tetradioxins	319.8965	25.62	5091.409	0.994	0.249		0.77	0.77	NO	23.1
	41 Total-tetradioxins	319.8965	25.35	87664.937	0.994	4.294		0.77	0.77	NO	311.5
	41 Total-tetradioxins	319.8965	25.06	50306.912	0.994	2.464		0.77	0.77	NO	158.4
	41 Total-tetradioxins	319.8965	24.85	2264.118	0.994	0.111		0.82	0.77	NO	7.0
	41 Total-tetradioxins	319.8965	24.33	16070.229	0.994	0.787		0.80	0.77	NO	57.2
	41 Total-tetradioxins	319.8965	24.12	305410.563	0.994	14.959		0.78	0.77	NO	1147.3
	41 Total-tetradioxins	319.8965	23.85	409457.563	0.994	20.055		0.78	0.77	NO	1586.6
	41 Total-tetradioxins	319.8965	27.30	3636.111	0.994	0.178		0.56	0.77	YES	10.6
	41 Total-tetradioxins	319.8965	26.84	13888.423	0.994	0.680		0.80	0.77	NO	49.3
	42 Total-pentadioxins	355.8546	32.23	17299.205	0.976	0.845		1.67	1.55	NO	75.3
	12 12378-PeCDD	355.8546	31.82	43233.158	0.976	2.112	2.112	1.48	1.55	NO	152.1
	42 Total-pentadioxins	355.8546	31.15	95174.609	0.976	4.649		1.53	1.55	NO	394.2
	42 Total-pentadioxins	355.8546	30.76	37102.699	0.976	1.812		1.59	1.55	NO	110.2
	42 Total-pentadioxins	355.8546	30.58	179621.336	0.976	8.773		1.58	1.55	NO	806.6
	42 Total-pentadioxins	355.8546	30.45	30693.187	0.976	1.499		1.61	1.55	NO	148.0
	42 Total-pentadioxins	355.8546	30.23	227544.101	0.976	11.114		1.57	1.55	NO	1038.7
	42 Total-pentadioxins	355.8546	29.62	16581.925	0.976	0.810		1.48	1.55	NO	71.1
	42 Total-pentadioxins	355.8546	29.13	273184.039	0.976	13.343		1.54	1.55	NO	747.2
	43 Total-hexadioxins	389.8157	35.16	618061.375	0.928	33.237		1.22	1.24	NO	2214.5
	43 Total-hexadioxins	389.8157	34.34	215030.633	0.928	11.563		1.24	1.24	NO	789.7
	15 123789-HxCDD	389.8157	37.08	42158.946	0.914	2.301	2.301	1.27	1.24	NO	162.5
	43 Total-hexadioxins	389.8157	36.84	15336.792	0.928	0.825		1.30	1.24	NO	54.1
	14 123678-HxCDD	389.8157	36.66	79988.406	0.902	4.389	4.389	1.21	1.24	NO	290.6
	13 123478-HxCDD	389.8157	36.53	24199.047	0.967	1.259	1.259	1.26	1.24	NO	79.3
	43 Total-hexadioxins	389.8157	35.67	12117.634	0.928	0.652		0.95	1.24	YES	43.1
	43 Total-hexadioxins	389.8157	35.55	283754.906	0.928	15.259		1.24	1.24	NO	671.9
	16 1234678-HpCDD	423.7766	41.40	774775.937	0.999	47.716	47.716	1.02	1.05	NO	1933.5
	44 Total-heptadioxins	423.7766	40.14	1237657.563	0.999	76.224		1.03	1.05	NO	3433.9
	17 OCDD	457.7377	47.44	2873639.000	0.979	268.875	268....	0.88	0.89	NO	9273.7

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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TotalTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	25.17	47430.795	0.867	1.849		0.68	0.77	NO	118.9
	35 Total-tetrafurans	303.9016	24.99	82386.949	0.867	3.211		0.74	0.77	NO	208.6
	35 Total-tetrafurans	303.9016	24.84	23383.201	0.867	0.911		0.78	0.77	NO	74.0
	35 Total-tetrafurans	303.9016	24.75	75648.808	0.867	2.948		0.67	0.77	NO	141.2
	35 Total-tetrafurans	303.9016	24.32	15580.736	0.867	0.607		0.71	0.77	NO	42.7
	35 Total-tetrafurans	303.9016	24.18	11284.262	0.867	0.440		0.55	0.77	YES	23.8
	35 Total-tetrafurans	303.9016	24.08	53927.772	0.867	2.102		0.74	0.77	NO	142.8
	35 Total-tetrafurans	303.9016	23.91	16447.125	0.867	0.641		0.78	0.77	NO	47.2
	35 Total-tetrafurans	303.9016	23.82	32359.442	0.867	1.261		0.76	0.77	NO	82.4
	35 Total-tetrafurans	303.9016	23.72	26802.476	0.867	1.045		0.65	0.77	YES	54.4
	35 Total-tetrafurans	303.9016	23.60	59214.541	0.867	2.308		0.72	0.77	NO	109.1
	35 Total-tetrafurans	303.9016	23.42	171705.266	0.867	6.692		0.73	0.77	NO	424.4
	35 Total-tetrafurans	303.9016	22.84	25153.214	0.867	0.980		0.71	0.77	NO	65.7
	35 Total-tetrafurans	303.9016	22.58	28779.958	0.867	1.122		0.70	0.77	NO	73.1
	35 Total-tetrafurans	303.9016	27.54	14833.051	0.867	0.578		0.90	0 77	YES	21.9
	35 Total-tetrafurans	303.9016	26.57	2397.363	0.867	0.093		0.92	0.77	YES	6.5
	35 Total-tetrafurans	303.9016	26.32	41459.975	0.867	1.616		0.76	0.77	NO	105.5
	35 Total-tetrafurans	303.9016	26.21	21349.665	0.867	0.832		0.63	0.77	YES	50.7
	1 2378-TCDF	303.9016	26.08	40057.943	0.867	1.561	1.561	0.77	0.77	NO	100.9
	35 Total-tetrafurans	303.9016	25.85	49315.676	0.867	1.922		0.74	0.77	NO	84.4
	35 Total-tetrafurans	303.9016	25.72	4480.629	0.867	0.175		0.61	0.77	YES	9.4
	35 Total-tetrafurans	303.9016	25.60	27239.029	0.867	1.062		0.81	0.77	NO	58.2
	35 Total-tetrafurans	303.9016	25.41	14087.869	0.867	0.549		0.66	0.77	NO	34.2
	37 Total-pentafurans	339.8597	29.27	3702.049	0.877	0.149		1.30	1.55	YES	19.0
	37 Total-pentafurans	339.8597	29.15	118547.785	0.877	4.786		1.53	1.55	NO	552.0
	37 Total-pentafurans	339.8597	29.08	86004.305	0.877	3.472		1.42	1.55	NO	388.1
	37 Total-pentafurans	339.8597	28.96	34422.337	0.877	1.390		1.57	1.55	NO	122.7
	37 Total-pentafurans	339.8597	28.87	15503.395	0.877	0.626		1.33	1.55	NO	68.4
	37 Total-pentafurans	339.8597	32.61	3293.759	0.877	0.133		1.22	1.55	YES	13.9
	3 23478-PeCDF	339.8597	31.58	28972.258	0.880	1.197	1.081	1.22	1.55	YES	124.7
	37 Total-pentafurans	339.8597	31.43	34339.196	0.877	1.386		1.32	1.55	NO	141.0
	37 Total-pentafurans	339.8597	31.31	23136.976	0.877	0.934		1.36	1.55	NO	100.2
	37 Total-pentafurans	339.8597	30.72	2091.962	0.877	0.084		1.15	1.55	YES	8.5
	37 Total-pentafurans	339.8597	30.54	11899.912	0.877	0.480		1.54	1.55	NO	53.3
	37 Total-pentafurans	339.8597	30.43	30124.462	0.877	1.216		1.42	1.55	NO	133.1
	2 12378-PeCDF	339.8597	30.23	25675.640	0.875	1.013	0.937	1.28	1.55	YES	106.1
	37 Total-pentafurans	339.8597	29.87	98030.734	0.877	3.957		1.56	1.55	NO	350.7
	37 Total-pentafurans	339.8597	29.76	7305.674	0.877	0.295		1.18	1.55	YES	35.2
	37 Total-pentafurans	339.8597	29.65	11205.955	0.877	0.452		1.43	1.55	NO	37.9
	37 Total-pentafurans	339.8597	29.44	2330.084	0.877	0.094		1.18	1.55	YES	9.2
	4 123478-HxCDF	373.8208	35.29	36946.756	1.048	1.690	1.690	1.19	1.24	NO	134.8
	38 Total-hexafurans	373.8208	35.11	15657.073	1.030	0.712		1.22	1.24	NO	63.9
	38 Total-hexafurans	373.8208	34.62	354682.844	1.030	16.127		1.15	1.24	NO	1289.7
	38 Total-hexafurans	373.8208	34.30	6710.743	1.030	0.305		1.35	1.24	NO	27.2
	38 Total-hexafurans	373.8208	34.04	1208.502	1.030	0.055		2.61	1.24	YES	7.0
	38 Total-hexafurans	373.8208	33.75	264737.164	1.030	12.038		1.17	1.24	NO	971.8
	38 Total-hexafurans	373.8208	33.54	103738.672	1.030	4.717		1.22	1.24	NO	406.0
	7 123789-HxCDF	373.8208	37.48	9535.659	0.959	0.438	0.438	1.13	1.24	NO	37.7
	5 234678-HxCDF	373.8208	36.36	32810.953	1.088	1.373	1.373	1.27	1.24	NO	104.7

XB89 01582

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TotalTEQ,Furans,Dioxins

	#	Name	Resp.	RT	Area Ratio	REF M...	Conc. pg	EMPC	Ion Ratio	Lib Ratio	Ion Ab...	S/N
	38	Total-hexafurans	373.8208	36.01	2651.590	1.030	0.121		1.12	1.24	NO	9.1
	38	Total-hexafurans	373.8208	35.79	4732.973	1.030	0.215		0.96	1.24	YES	17.8
	38	Total-hexafurans	373.8208	35.67	1859.548	1.030	0.085		0.70	1.24	YES	5.5
	6	123678-HxCDF	373.8208	35.44	31374.925	1.025	1.539	1.539	1.24	1.24	NO	121.6
	39	Total-heptafurans	407.7818	40.08	6360.907	1.207	0.361		1.24	1.05	YES	28.9
	8	1234678-HpCDF	407.7818	39.60	593936.125	1.215	30.371	30.371	1.02	1.05	NO	2384.2
	9	1234789-HpCDF	407.7818	42.28	17159.089	1.200	1.091	1.091	0.92	1.05	NO	49.3
	39	Total-heptafurans	407.7818	40.38	826801.094	1.207	46.900		1.00	1.05	NO	3158.5
	10	OCDF	441.7428	47.70	575833.907	1.064	49.567	49.567	0.87	0.89	NO	1997.8
	36	Total-penta1	339.8597	27.50	619977.906		23.938		1.60	1.55	NO	3634.6
	11	2378-TCDD	319.8965	26.72	10158.483	0.994	0.498	0.414	0.57	0.77	YES	32.3
	41	Total-tetradioxins	319.8965	26.35	78127.758	0.994	3.827		0.75	0.77	NO	228.3
	41	Total-tetradioxins	319.8965	26.05	5565.180	0.994	0.273		0.97	0.77	YES	22.3
	41	Total-tetradioxins	319.8965	25.90	58918.766	0.994	2.886		0.78	0.77	NO	211.9
	41	Total-tetradioxins	319.8965	25.70	25293.525	0.994	1.239		0.73	0.77	NO	88.2
	41	Total-tetradioxins	319.8965	25.62	5091.409	0.994	0.249		0.77	0.77	NO	23.1
	41	Total-tetradioxins	319.8965	25.35	87664.937	0.994	4.294		0.77	0.77	NO	311.5
	41	Total-tetradioxins	319.8965	25.06	50306.912	0.994	2.464		0.77	0.77	NO	158.4
	41	Total-tetradioxins	319.8965	24.85	2264.118	0.994	0.111		0.82	0.77	NO	7.0
	41	Total-tetradioxins	319.8965	24.33	16070.229	0.994	0.787		0.80	0.77	NO	57.2
	41	Total-tetradioxins	319.8965	24.12	305410.563	0.994	14.959		0.78	0.77	NO	1147.3
	41	Total-tetradioxins	319.8965	23.85	409457.563	0.994	20.055		0.78	0.77	NO	1586.6
	41	Total-tetradioxins	319.8965	27.30	3636.111	0.994	0.178		0.56	0.77	YES	10.6
	41	Total-tetradioxins	319.8965	26.84	13888.423	0.994	0.680		0.80	0.77	NO	49.3
	42	Total-pentadioxins	355.8546	32.23	17299.205	0.976	0.845		1.67	1.55	NO	75.3
	12	12378-PeCDD	355.8546	31.82	43233.158	0.976	2.112	2.112	1.48	1.55	NO	152.1
	42	Total-pentadioxins	355.8546	31.15	95174.609	0.976	4.649		1.53	1.55	NO	394.2
	42	Total-pentadioxins	355.8546	30.76	37102.699	0.976	1.812		1.59	1.55	NO	110.2
	42	Total-pentadioxins	355.8546	30.58	179621.336	0.976	8.773		1.58	1.55	NO	806.6
	42	Total-pentadioxins	355.8546	30.45	30693.187	0.976	1.499		1.61	1.55	NO	148.0
	42	Total-pentadioxins	355.8546	30.23	227544.101	0.976	11.114		1.57	1.55	NO	1038.7
	42	Total-pentadioxins	355.8546	29.62	16581.925	0.976	0.810		1.48	1.55	NO	71.1
	42	Total-pentadioxins	355.8546	29.13	273184.039	0.976	13.343		1.54	1.55	NO	747.2
	43	Total-hexadioxins	389.8157	35.16	618061.375	0.928	33.237		1.22	1.24	NO	2214.5
	43	Total-hexadioxins	389.8157	34.34	215030.633	0.928	11.563		1.24	1.24	NO	789.7
	15	123789-HxCDD	389.8157	37.08	42158.946	0.914	2.301	2.301	1.27	1.24	NO	162.5
	43	Total-hexadioxins	389.8157	36.84	15336.792	0.928	0.825		1.30	1.24	NO	54.1
	14	123678-HxCDD	389.8157	36.66	79988.406	0.902	4.389	4.389	1.21	1.24	NO	290.6
	13	123478-HxCDD	389.8157	36.53	24199.047	0.967	1.259	1.259	1.26	1.24	NO	79.3
	43	Total-hexadioxins	389.8157	35.67	12117.634	0.928	0.652		0.95	1.24	YES	43.1
	43	Total-hexadioxins	389.8157	35.55	283754.906	0.928	15.259		1.24	1.24	NO	671.9
	16	1234678-HpCDD	423.7766	41.40	774775.937	0.999	47.716	47.716	1.02	1.05	NO	1933.5
	44	Total-heptadioxins	423.7766	40.14	1237657.563	0.999	76.224		1.03	1.05	NO	3433.9
	17	OCDD	457.7377	47.44	2873639.000	0.979	268.875	268....	0.88	0.89	NO	9273.7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:40 Pacific Daylight Time

D: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

PFK1

	#	Name	Peak	RT	Abs Resp	RRF M...	Conc	EMPC	I.S. Rec...	I.S. Ret...	I.T. Ra...	S/N
	48	FUNCTION1 PFK	330.9792	23.48	0.000							6.7
	48	FUNCTION1 PFK	330.9792	21.64	0.000							7.1
	48	FUNCTION1 PFK	330.9792	21.42	0.000							4.8
	48	FUNCTION1 PFK	330.9792	26.35	0.000							3.6
	48	FUNCTION1 PFK	330.9792	25.60	0.000							11.5
	48	FUNCTION1 PFK	330.9792	24.69	0.000							6.1

PFK2

	#	Name	Peak	RT	Abs Resp	RRF M...	Conc	EMPC	I.S. Rec...	I.S. Ret...	I.T. Ra...	S/N
	49	FUNCTION2 PFK	366.9792	30.96	0.000	0.000						0.7
	49	FUNCTION2 PFK	366.9792	30.89	0.000	0.000						1.4
	49	FUNCTION2 PFK	366.9792	30.33	0.000	0.000						1.0
	49	FUNCTION2 PFK	366.9792	30.28	0.000	0.000						0.7
	49	FUNCTION2 PFK	366.9792	30.15	0.000	0.000						1.0
	49	FUNCTION2 PFK	366.9792	29.82	0.000	0.000						0.7
	49	FUNCTION2 PFK	366.9792	29.63	0.000	0.000						0.7
	49	FUNCTION2 PFK	366.9792	29.25	0.000	0.000						2.1
	49	FUNCTION2 PFK	366.9792	29.03	0.000	0.000						1.2
	49	FUNCTION2 PFK	366.9792	28.89	0.000	0.000						0.9
	49	FUNCTION2 PFK	366.9792	28.72	0.000	0.000						0.6
	49	FUNCTION2 PFK	366.9792	28.39	0.000	0.000						1.6
	49	FUNCTION2 PFK	366.9792	33.03	0.000	0.000						2.2
	49	FUNCTION2 PFK	366.9792	32.92	0.000	0.000						0.7
	49	FUNCTION2 PFK	366.9792	32.38	0.000	0.000						1.6
	49	FUNCTION2 PFK	366.9792	32.35	0.000	0.000						1.1
	49	FUNCTION2 PFK	366.9792	32.17	0.000	0.000						0.6
	49	FUNCTION2 PFK	366.9792	32.02	0.000	0.000						1.8
	49	FUNCTION2 PFK	366.9792	31.97	0.000	0.000						2.0
	49	FUNCTION2 PFK	366.9792	31.93	0.000	0.000						1.7
	49	FUNCTION2 PFK	366.9792	31.83	0.000	0.000						0.7
	49	FUNCTION2 PFK	366.9792	31.78	0.000	0.000						1.0
	49	FUNCTION2 PFK	366.9792	31.11	0.000	0.000						1.3

PFK3

	#	Name	Peak	RT	Abs Resp	RRF M...	Conc	EMPC	I.S. Rec...	I.S. Ret...	I.T. Ra...	S/N
	50	FUNCTION3 PFK	380.9760	37.49	0.000		0.000					11.8
	50	FUNCTION3 PFK	380.9760	37.39	0.000		0.000					12.9
	50	FUNCTION3 PFK	380.9760	35.47	0.000		0.000					23.9
	50	FUNCTION3 PFK	380.9760	35.24	0.000		0.000					5.8
	50	FUNCTION3 PFK	380.9760	38.31	0.000		0.000					6.4
	50	FUNCTION3 PFK	380.9760	37.60	0.000		0.000					12.6

D: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

PFK4

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	51	FUNCTION4 PFK	430.9728	40.04	0.000							6.8
	51	FUNCTION4 PFK	430.9728	39.23	0.000							3.8
	51	FUNCTION4 PFK	430.9728	38.61	0.000							29.2

PFK5

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N

ETHERS1

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	26.51	0.000		0.000					3.3
	53	FUNCTION1 HXCD...	375.8364	26.45	0.000		0.000					2.6
	53	FUNCTION1 HXCD...	375.8364	26.14	0.000		0.000					4.9
	53	FUNCTION1 HXCD...	375.8364	26.09	0.000		0.000					3.1
	53	FUNCTION1 HXCD...	375.8364	25.85	0.000		0.000					2.9
	53	FUNCTION1 HXCD...	375.8364	25.59	0.000		0.000					2.1
	53	FUNCTION1 HXCD...	375.8364	24.96	0.000		0.000					2.1
	53	FUNCTION1 HXCD...	375.8364	24.33	0.000		0.000					1.0
	53	FUNCTION1 HXCD...	375.8364	28.19	0.000		0.000					2.7
	53	FUNCTION1 HXCD...	375.8364	27.68	0.000		0.000					2.5
	53	FUNCTION1 HXCD...	375.8364	27.60	0.000		0.000					1.6
	53	FUNCTION1 HXCD...	375.8364	27.42	0.000		0.000					3.1
	53	FUNCTION1 HXCD...	375.8364	27.36	0.000		0.000					2.9
	53	FUNCTION1 HXCD...	375.8364	26.87	0.000		0.000					3.1
	53	FUNCTION1 HXCD...	375.8364	26.78	0.000		0.000					2.2

ETHERS2

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	54	FUNCTION1 HPCD...	409.7974	28.24	0.000		0.000					2.8
	54	FUNCTION1 HPCD...	409.7974	22.22	0.000		0.000					6.6

ETHERS3

	#	Name	Trace	RT	Abs Resp	RRF M...	pg	EMPC	1° Ratl...	2° Ratl...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	30.49	0.000		0.000					6.0
	55	FUNCTION2 HPCD...	409.7974	30.20	0.000		0.000					30.6
	55	FUNCTION2 HPCD...	409.7974	29.94	0.000		0.000					7.9
	55	FUNCTION2 HPCD...	409.7974	29.87	0.000		0.000					26.2
	55	FUNCTION2 HPCD...	409.7974	29.61	0.000		0.000					3.7
	55	FUNCTION2 HPCD...	409.7974	32.83	0.000		0.000					3.0
	55	FUNCTION2 HPCD...	409.7974	32.74	0.000		0.000					2.2
	55	FUNCTION2 HPCD...	409.7974	32.52	0.000		0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	31.66	0.000		0.000					4.7
	55	FUNCTION2 HPCD...	409.7974	31.61	0.000		0.000					2.6
	55	FUNCTION2 HPCD...	409.7974	31.40	0.000		0.000					3.6
	55	FUNCTION2 HPCD...	409.7974	30.85	0.000		0.000					1.7

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ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

ETHERS4

	56	FUNCTION3 OCDPE	445.7555	36.44	0.000	0.000					4.7
	56	FUNCTION3 OCDPE	445.7555	36.36	0.000	0.000					3.4
	56	FUNCTION3 OCDPE	445.7555	36.33	0.000	0.000					3.4
	56	FUNCTION3 OCDPE	445.7555	35.20	0.000	0.000					8.5
	56	FUNCTION3 OCDPE	445.7555	35.05	0.000	0.000					5.1
	56	FUNCTION3 OCDPE	445.7555	34.95	0.000	0.000					5.0
	56	FUNCTION3 OCDPE	445.7555	34.90	0.000	0.000					3.7
	56	FUNCTION3 OCDPE	445.7555	34.28	0.000	0.000					0.9
	56	FUNCTION3 OCDPE	445.7555	37.46	0.000	0.000					1.9
	56	FUNCTION3 OCDPE	445.7555	37.36	0.000	0.000					3.0
	56	FUNCTION3 OCDPE	445.7555	37.32	0.000	0.000					2.9
	56	FUNCTION3 OCDPE	445.7555	37.13	0.000	0.000					3.8
	56	FUNCTION3 OCDPE	445.7555	37.08	0.000	0.000					2.7
	56	FUNCTION3 OCDPE	445.7555	36.83	0.000	0.000					2.6
	56	FUNCTION3 OCDPE	445.7555	36.71	0.000	0.000					3.9
	56	FUNCTION3 OCDPE	445.7555	36.51	0.000	0.000					1.7

ETHERS5

	57	FUNCTION4 NCDPE	479.7165	41.67	0.000	0.000					3.6
	57	FUNCTION4 NCDPE	479.7165	41.57	0.000	0.000					8.1
	57	FUNCTION4 NCDPE	479.7165	41.37	0.000	0.000					51.9
	57	FUNCTION4 NCDPE	479.7165	41.16	0.000	0.000					21.5
	57	FUNCTION4 NCDPE	479.7165	41.01	0.000	0.000					16.3
	57	FUNCTION4 NCDPE	479.7165	40.93	0.000	0.000					10.4
	57	FUNCTION4 NCDPE	479.7165	39.15	0.000	0.000					392.2
	57	FUNCTION4 NCDPE	479.7165	43.07	0.000	0.000					2.6
	57	FUNCTION4 NCDPE	479.7165	41.74	0.000	0.000					6.6

ETHERS6

	58	FUNCTION5 DCDPE	513.6775	48.11	0.000	0.000					6.6
	58	FUNCTION5 DCDPE	513.6775	48.06	0.000	0.000					5.8
	58	FUNCTION5 DCDPE	513.6775	48.03	0.000	0.000					8.1
	58	FUNCTION5 DCDPE	513.6775	47.62	0.000	0.000					4.5

Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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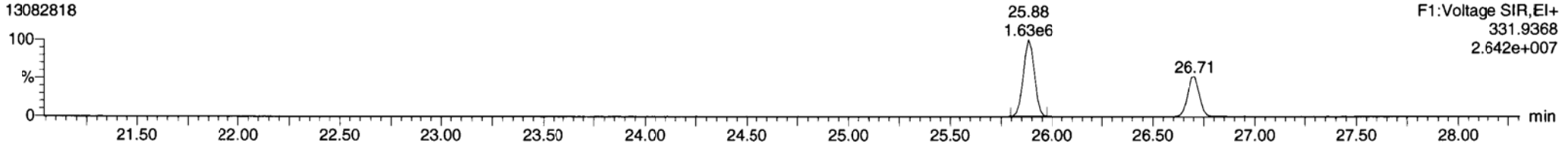
ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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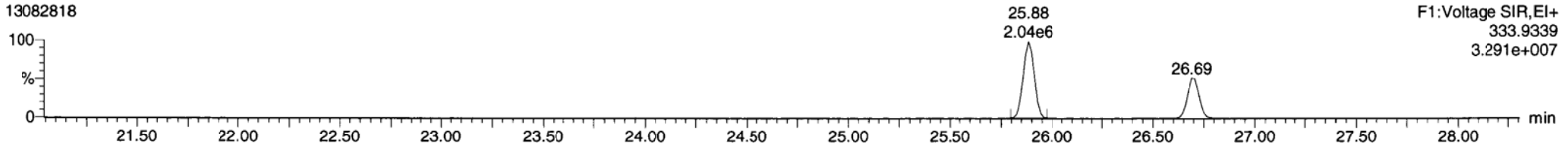

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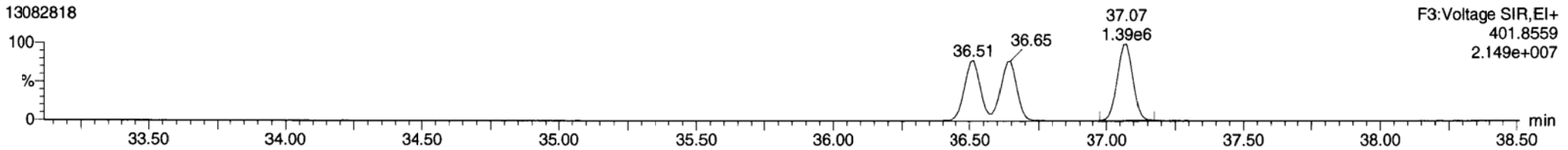

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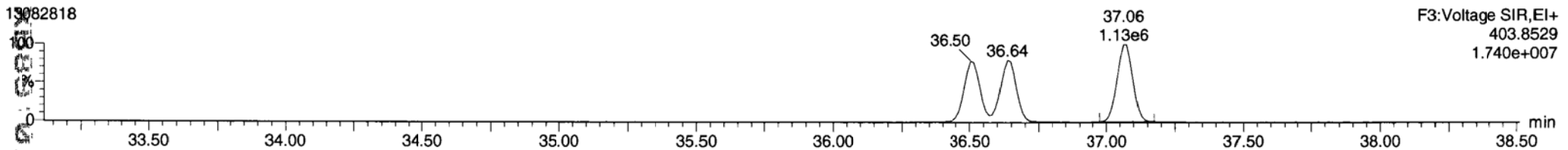

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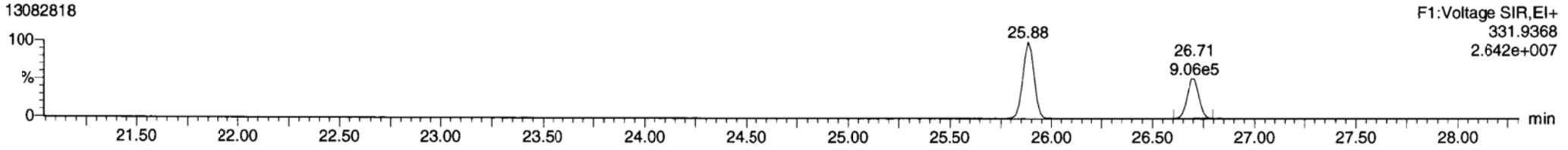
ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDD



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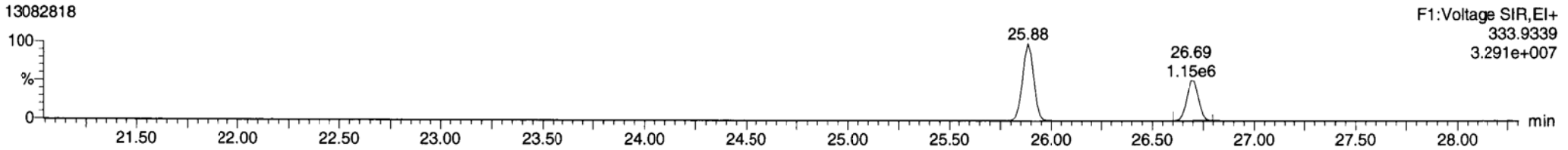

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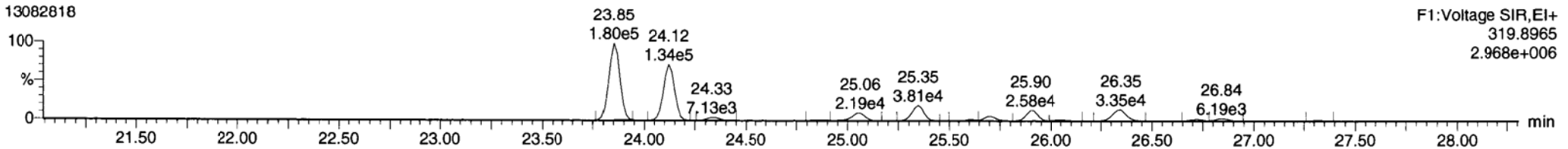
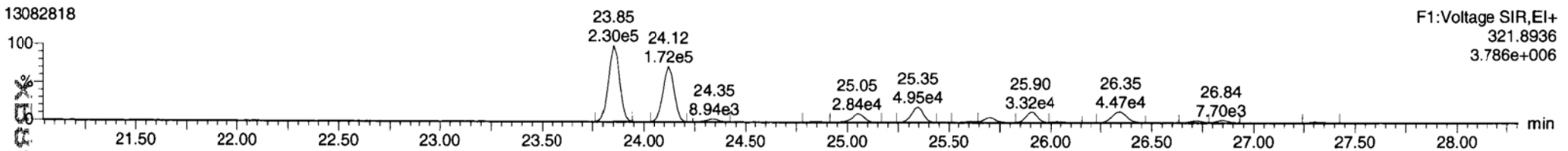
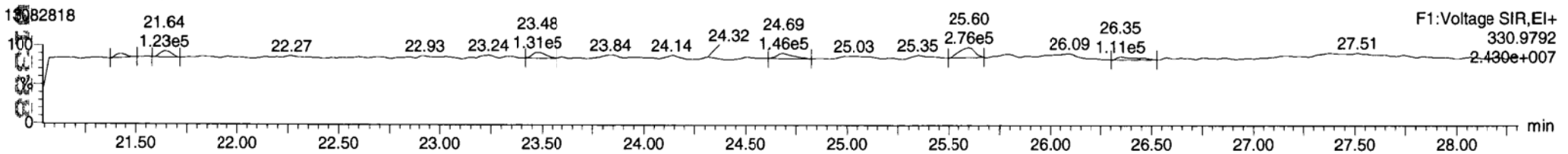


Total-tetradioxins



FUNCTION1 PFK



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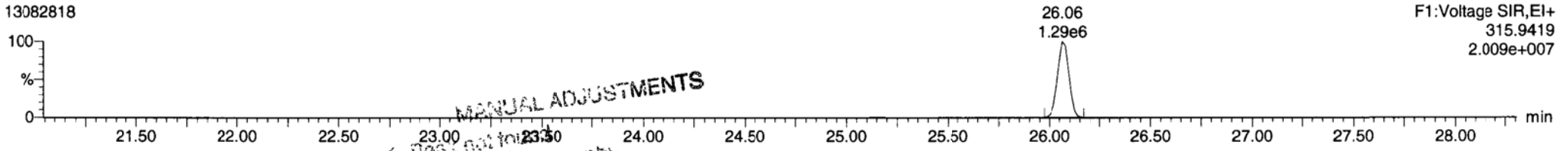
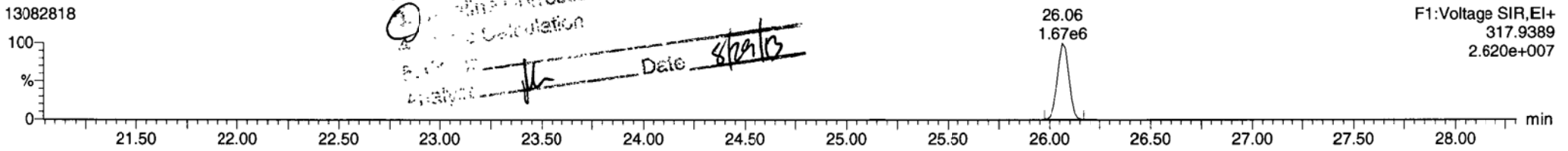
13C-2378-TCDF

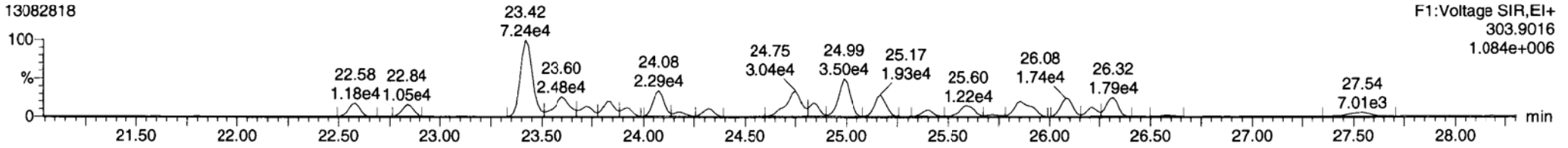


MANUAL ADJUSTMENTS
1. Peak not found
2. Peak Chromatography
3. Baseline Correction
4. Calculation
5. Date 8/29/13
Analyst

13C-2378-TCDF



Total-tetrafurans



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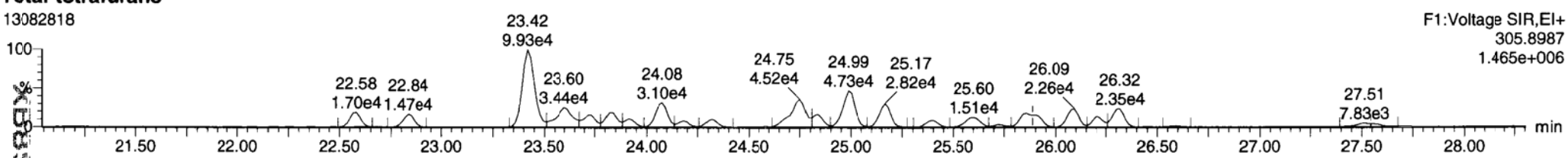
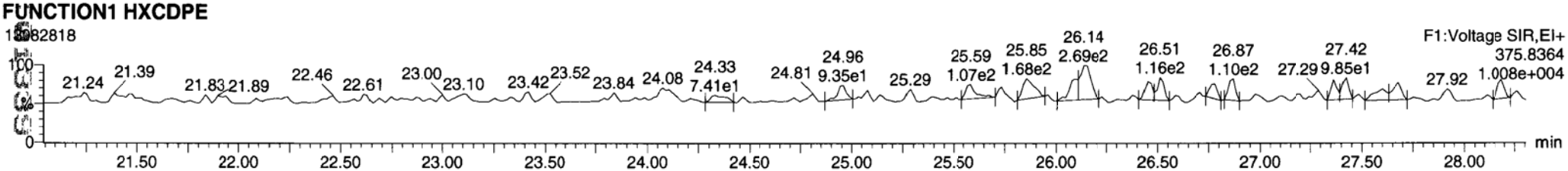


FUNCTION1 HXCDPE



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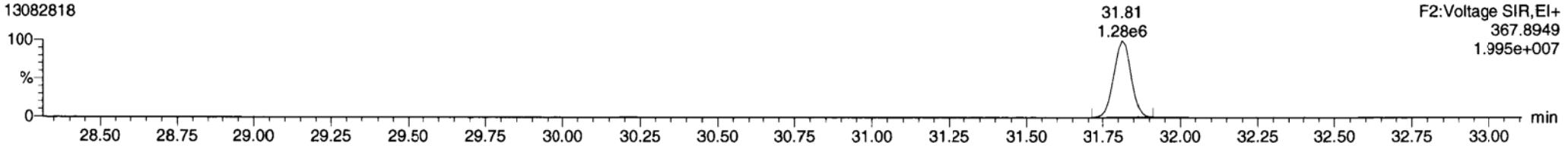
13C-12378-PeCDD



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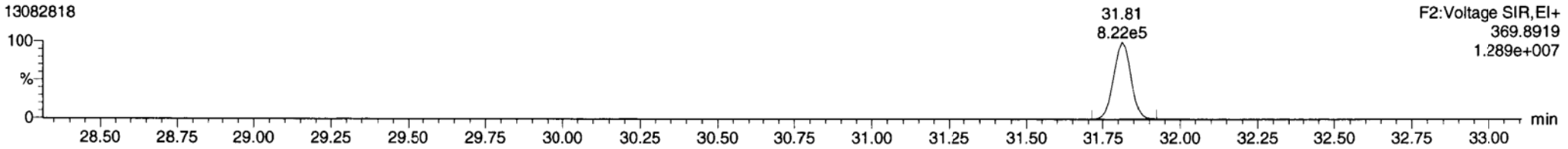
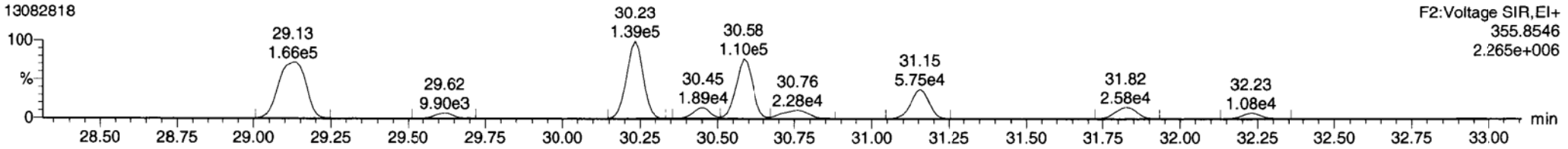
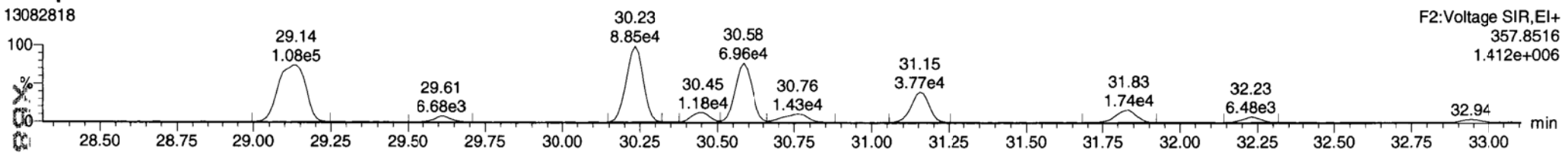


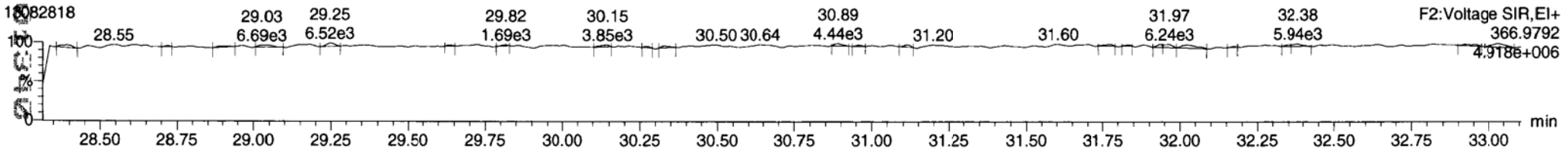
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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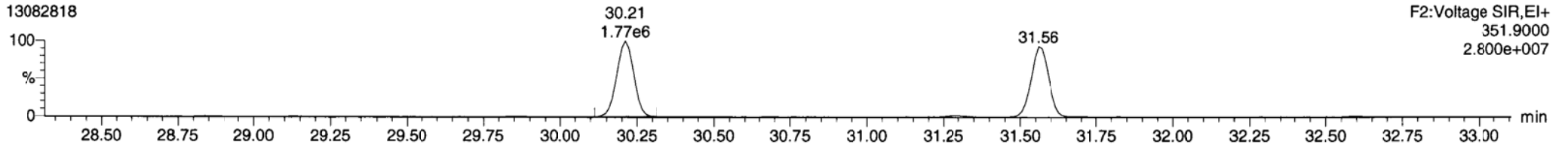
13C-12378-PeCDF



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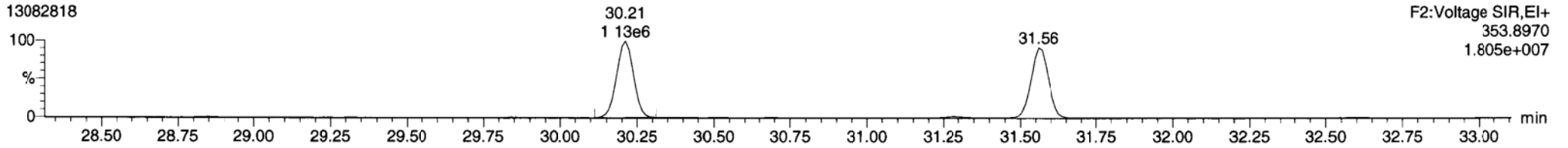
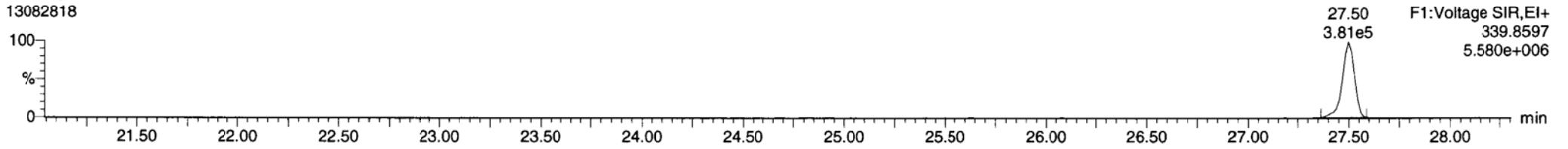
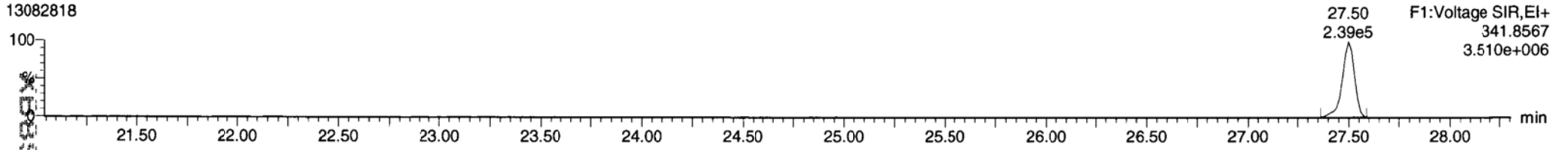


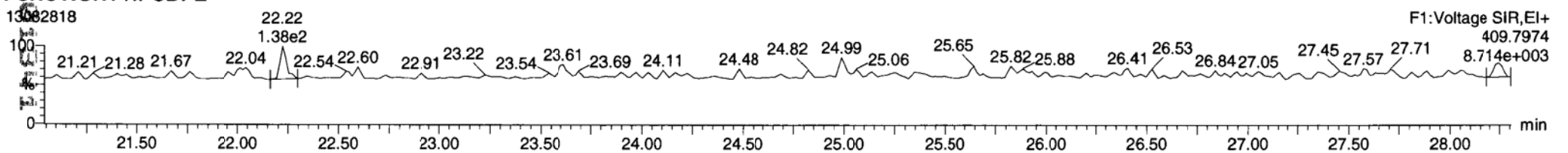
Total-penta1



Total-penta1



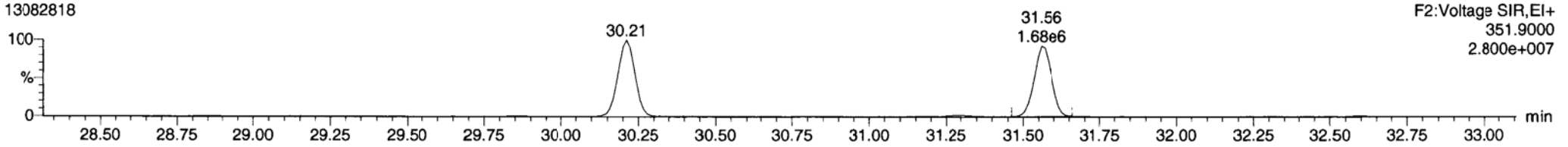
FUNCTION1 HPCDPE



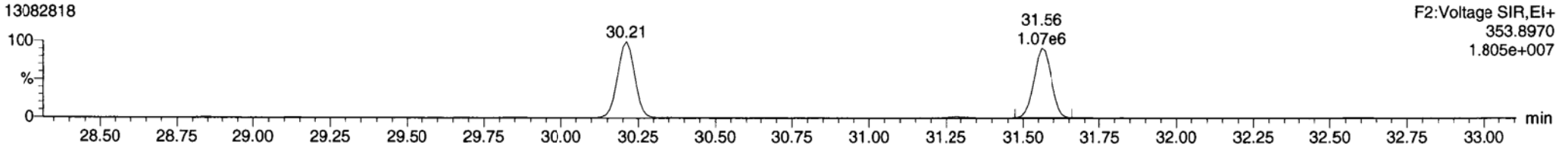
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:40 Pacific Daylight Time

ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



13C-23478-PeCDF



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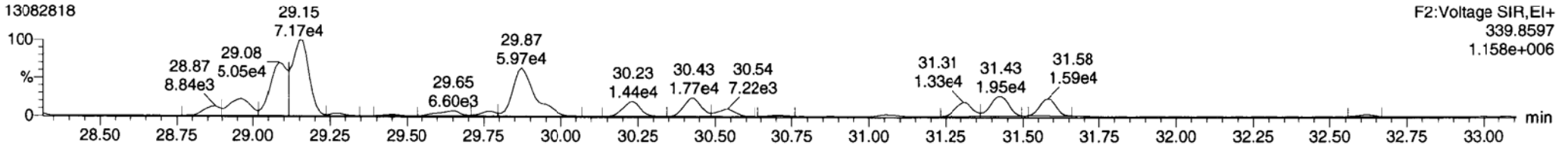

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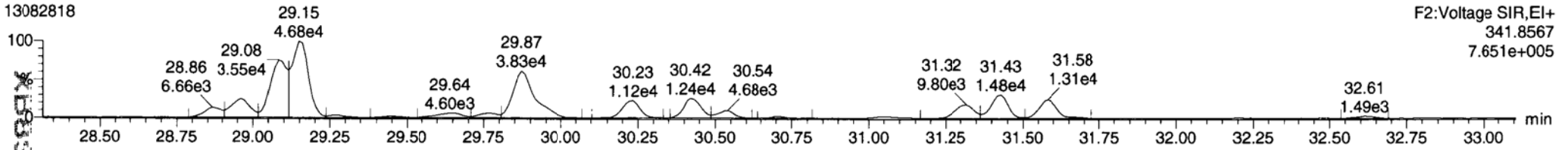
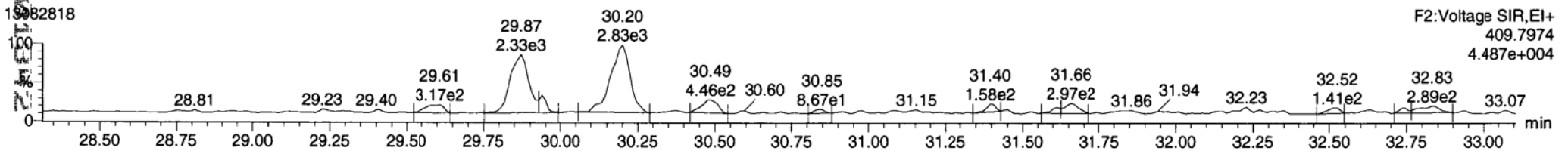


FUNCTION2 HPCDPE



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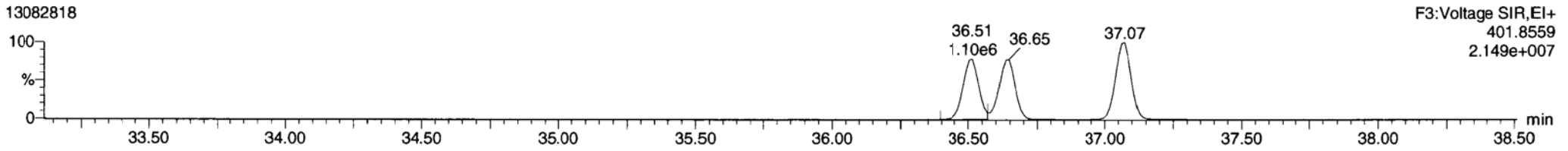
Printed: Thursday, August 29, 2013 10:05:40 Pacific Daylight Time

ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



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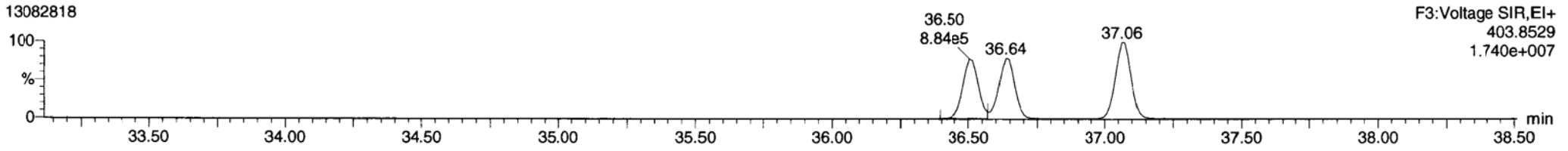
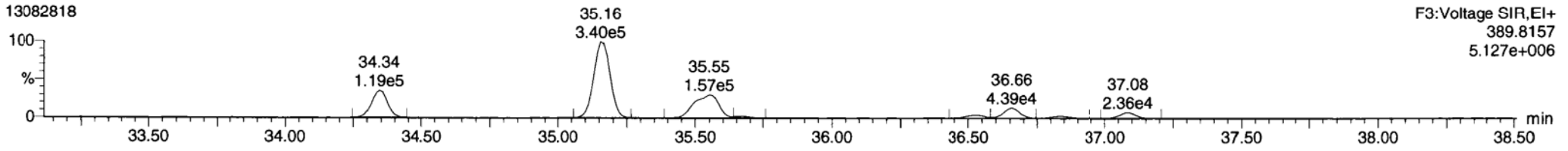
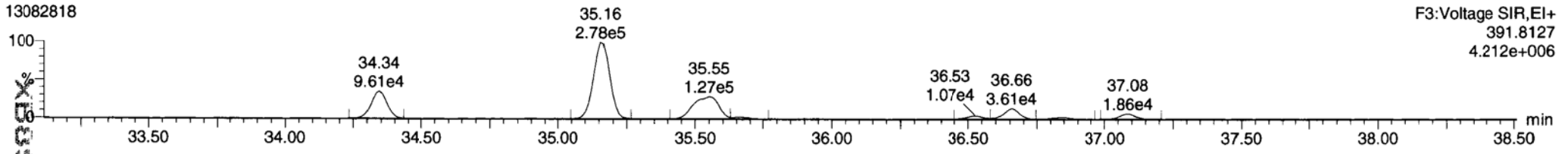


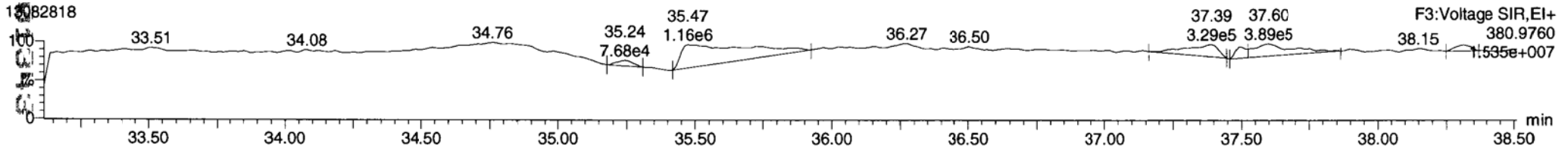
Total-hexadioxins



Total-hexadioxins



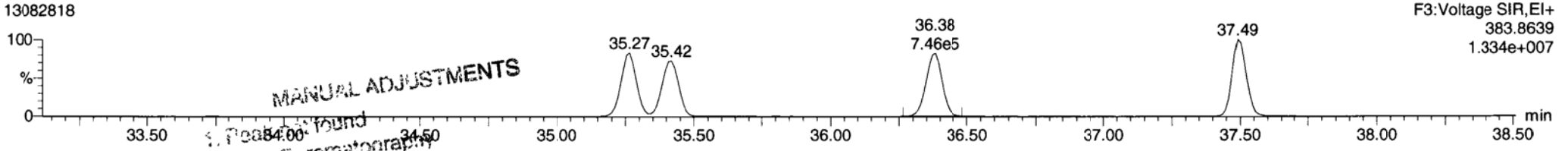
FUNCTION3 PFK



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:05:40 Pacific Daylight Time

ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF



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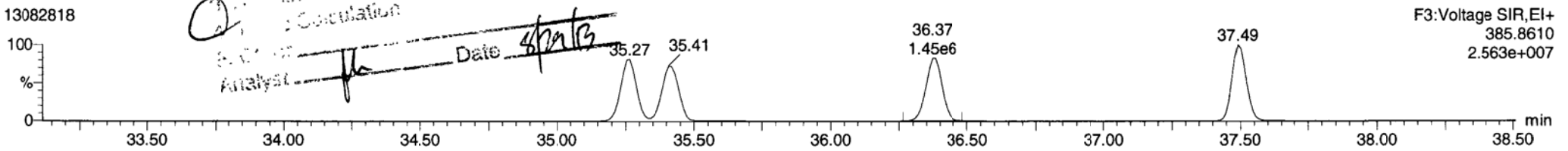
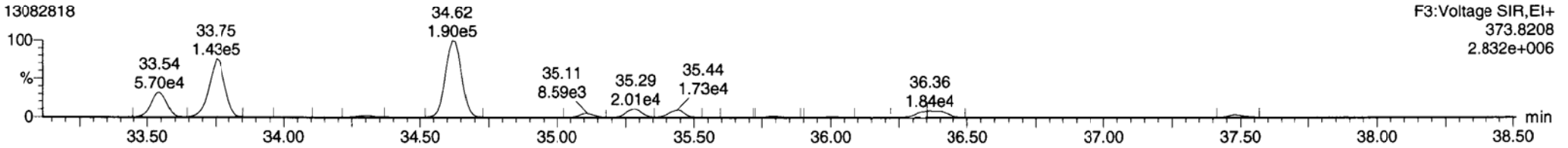


Total-hexafurans



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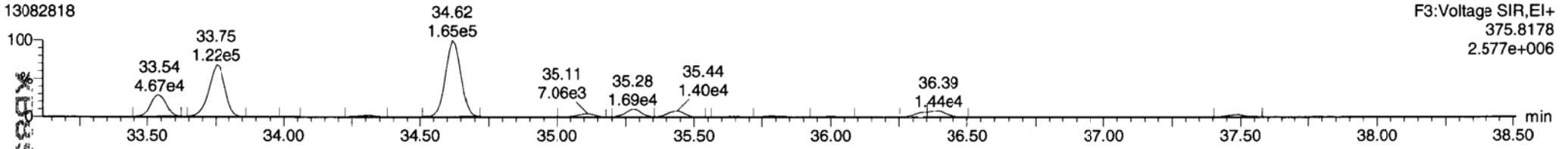
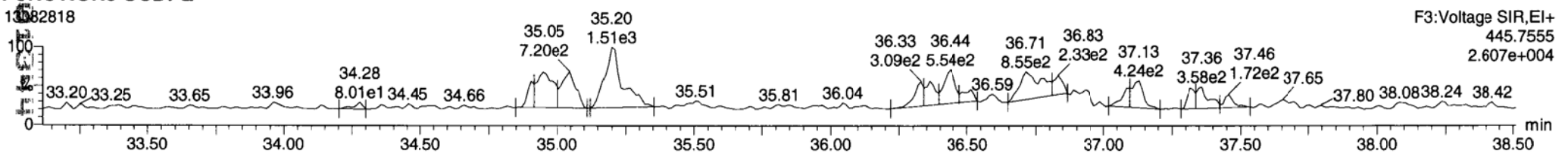


FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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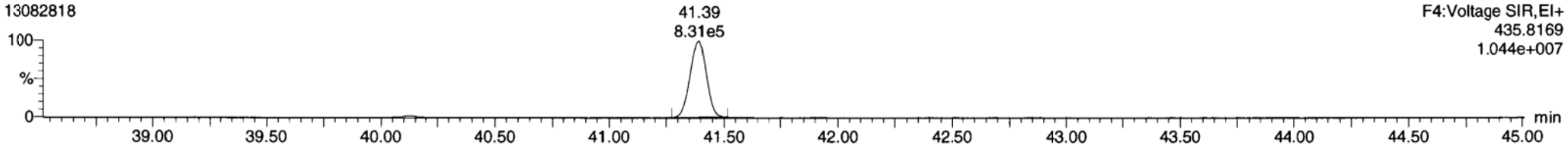
13C-1234678-HpCDD



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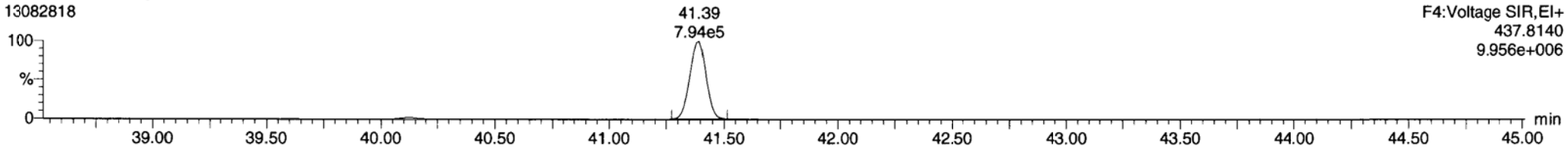
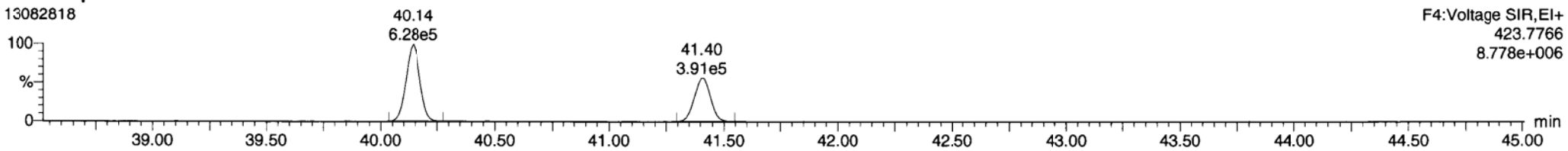


Total-heptadioxins



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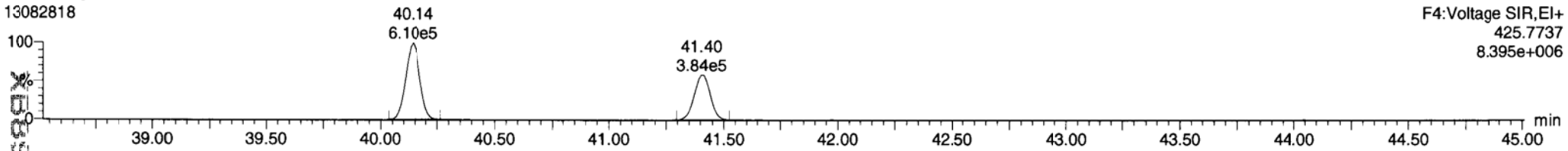
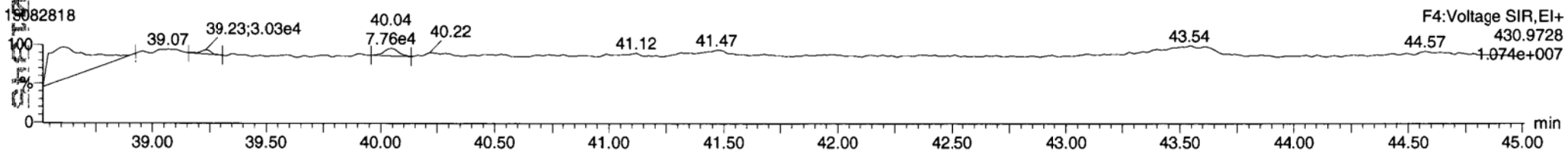


FUNCTION4 PFK



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Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
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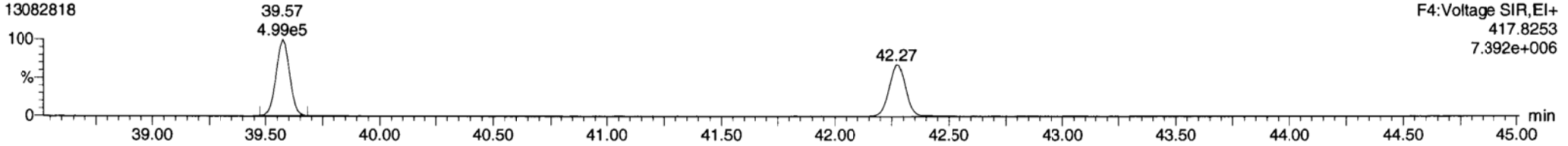
ID: XB89F, Name: 13082818, Date: 29-Aug-2013, Time: 01:27:03, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



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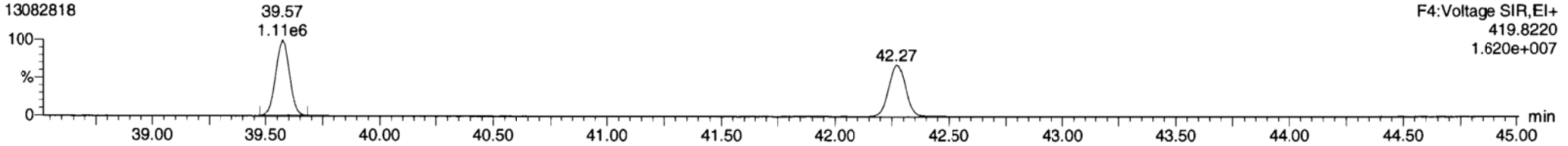
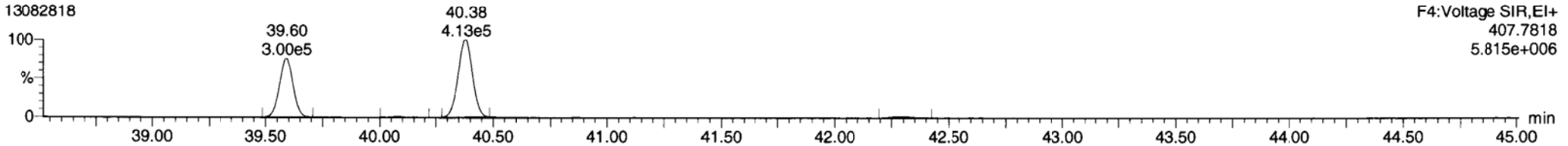


Total-heptafurans



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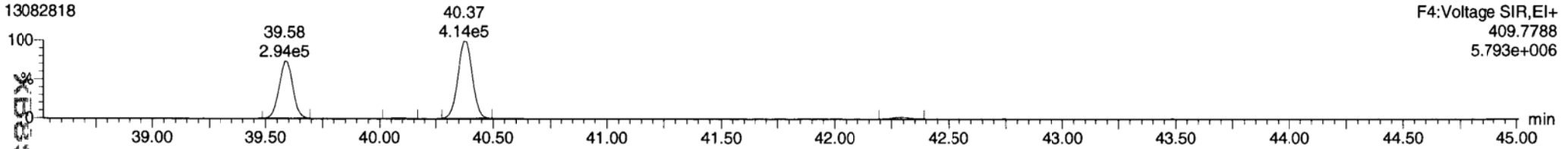
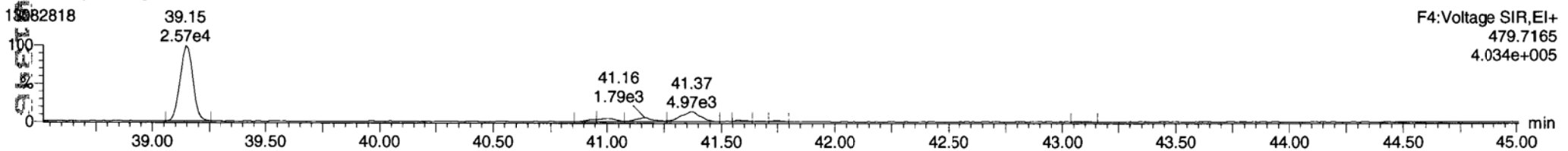


FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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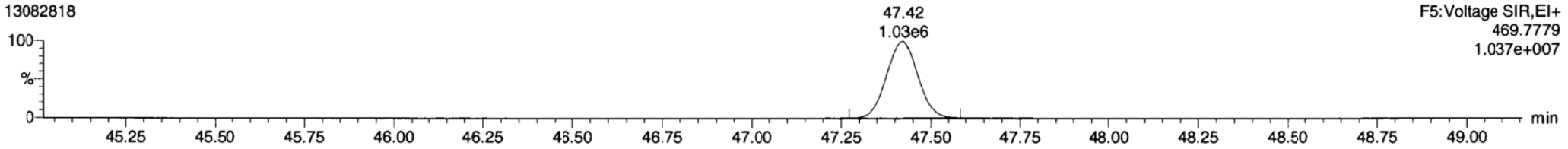
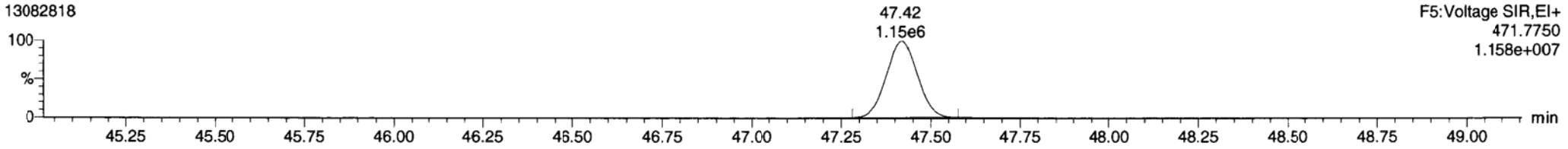
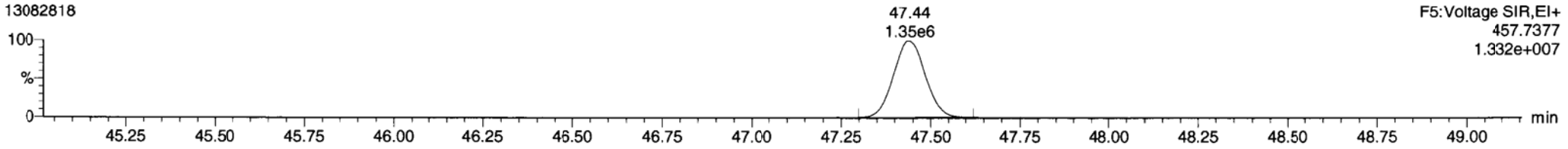
13C-OCDD



13C-OCDD



OCDD



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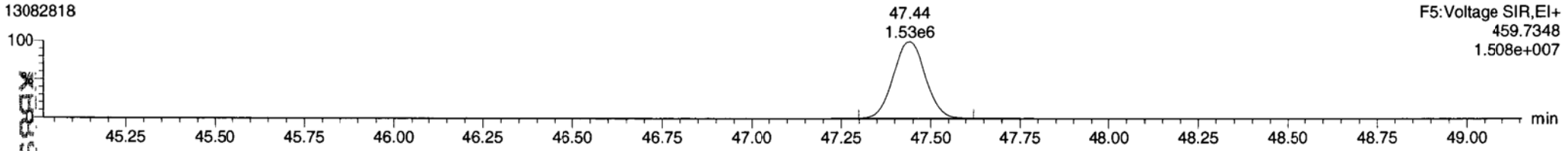
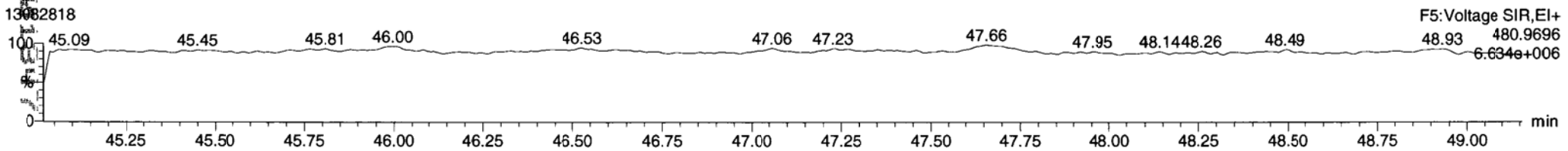


FUNCTION5 PFK



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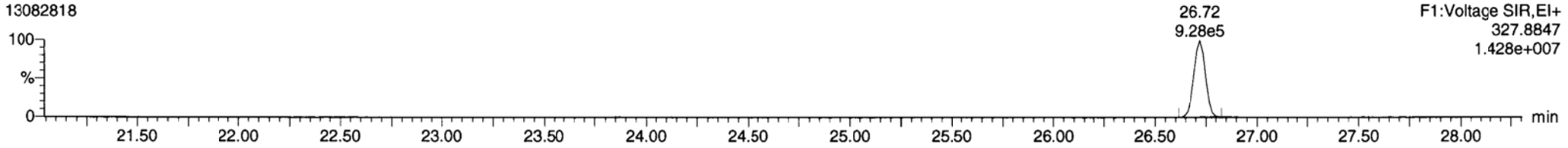
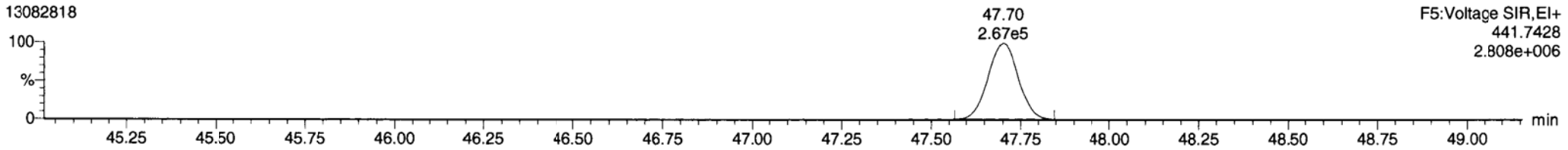
37CL-2378-TCDD



OCDF



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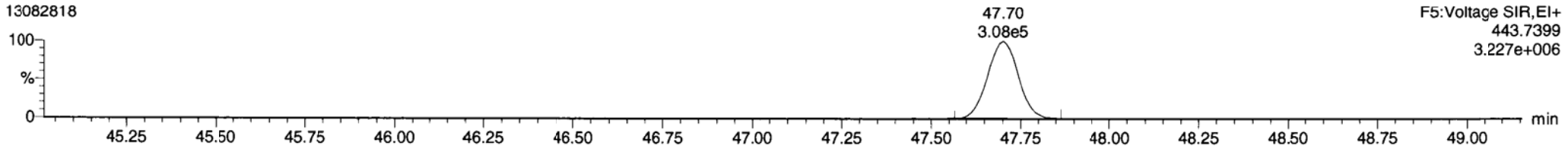
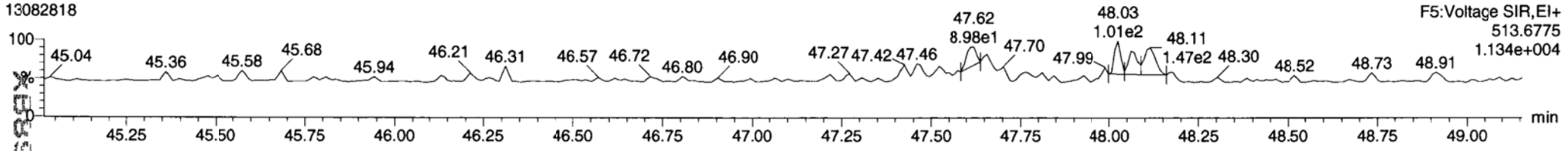


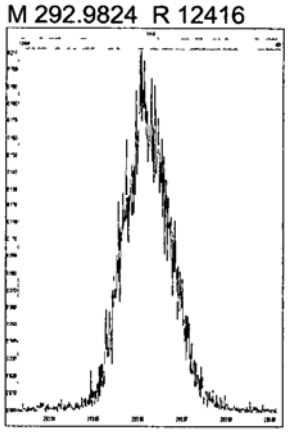
FUNCTION5 DCDPE



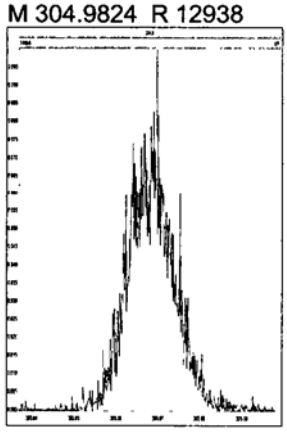
Q1SG5 13Feb13 XB89F

Printed: Thursday, August 29, 2013 03:19:47 Pacific Daylight Time

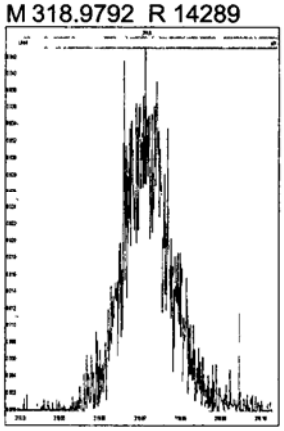
M 292.9824 R 12416



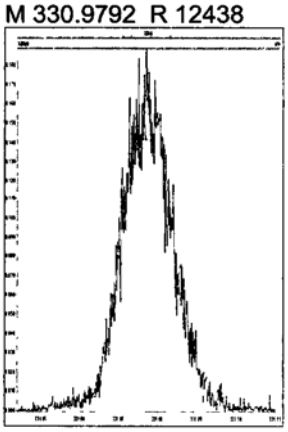
M 304.9824 R 12938



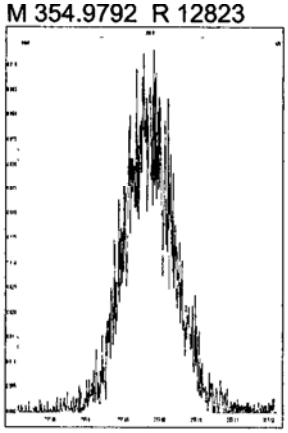
M 318.9792 R 14289



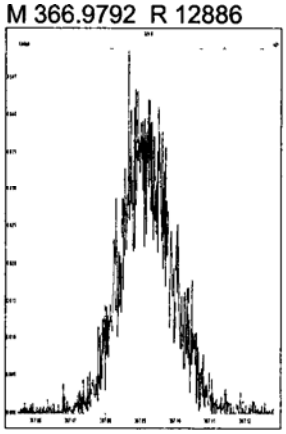
M 330.9792 R 12438



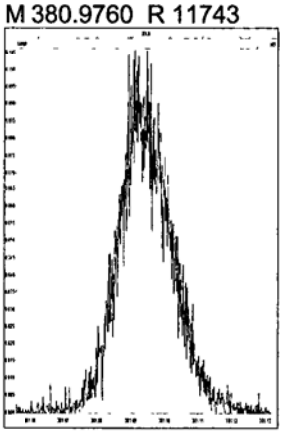
M 354.9792 R 12823



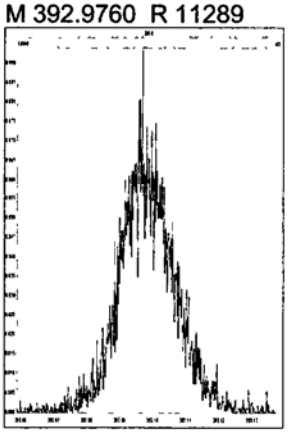
M 366.9792 R 12886



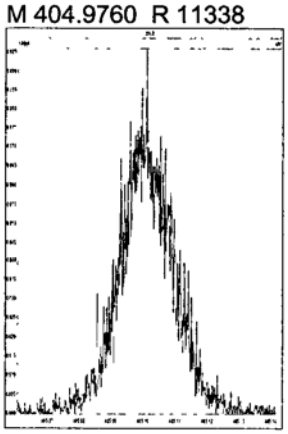
M 380.9760 R 11743



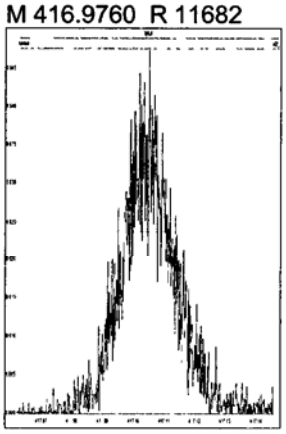
M 392.9760 R 11289



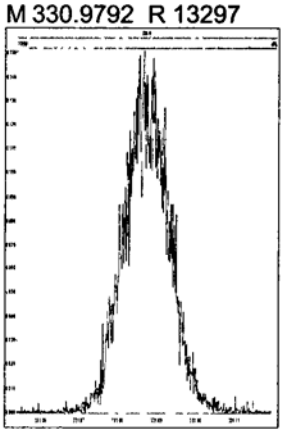
M 404.9760 R 11338



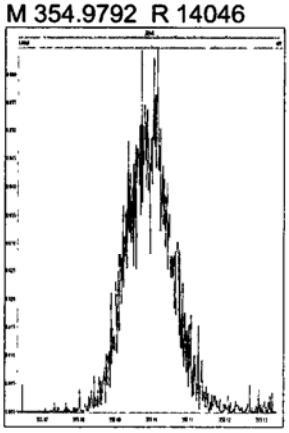
M 416.9760 R 11682



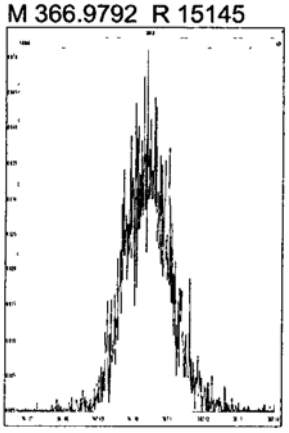
M 330.9792 R 13297



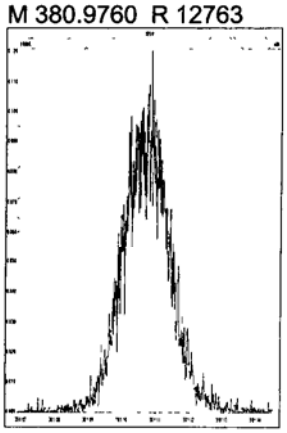
M 354.9792 R 14046



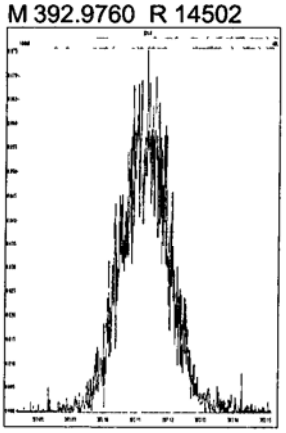
M 366.9792 R 15145



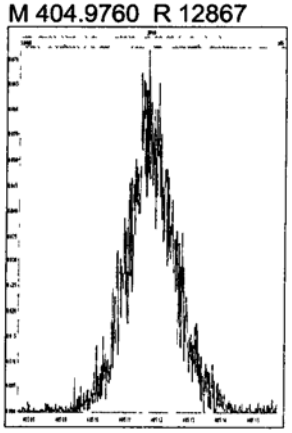
M 380.9760 R 12763



M 392.9760 R 14502



M 404.9760 R 12867



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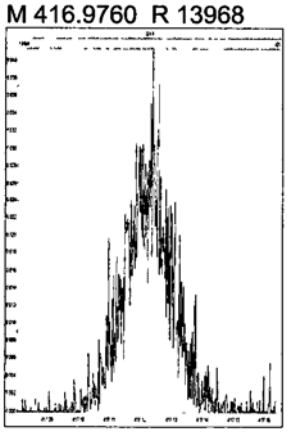
M 416.9760 R 13968



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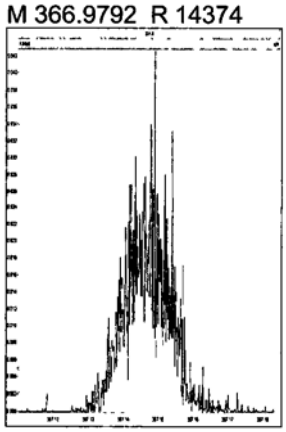

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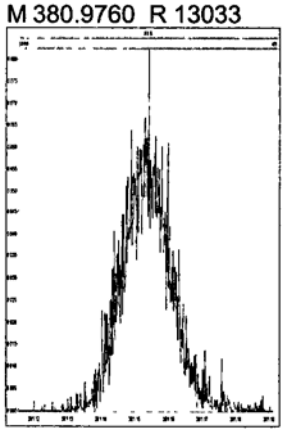

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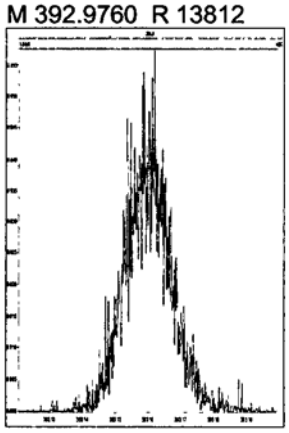

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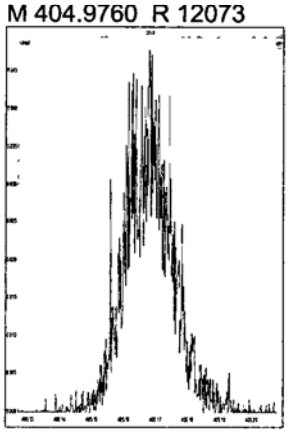
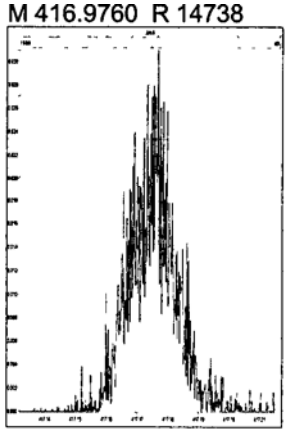
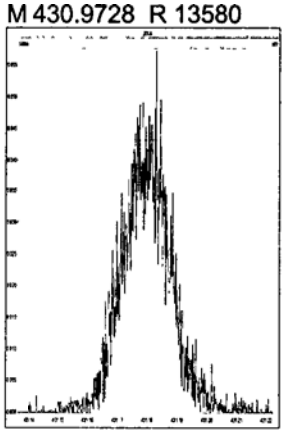


M 416.9760 R 14738



M 430.9728 R 13580



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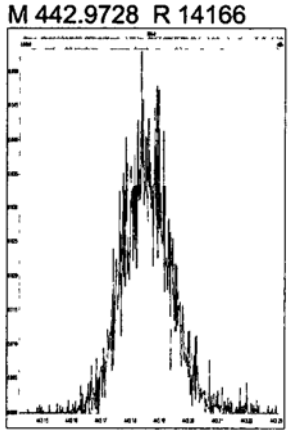

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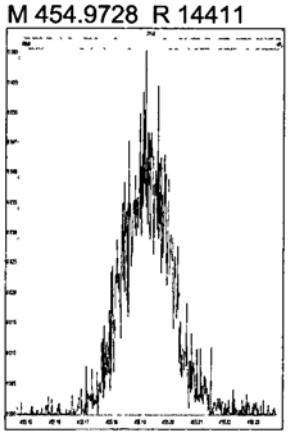
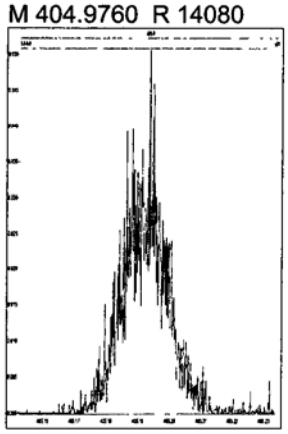


M 404.9760 R 14080



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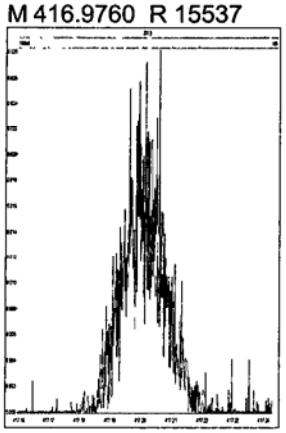
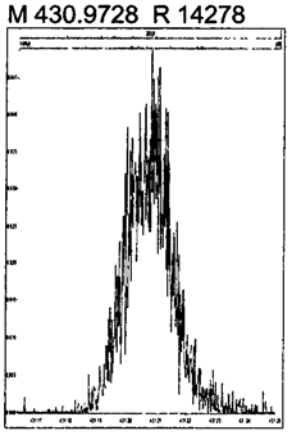
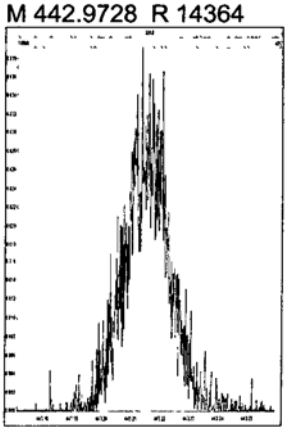


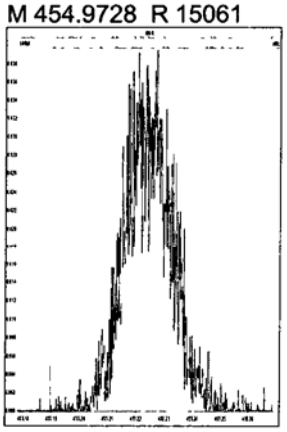
M 430.9728 R 14278



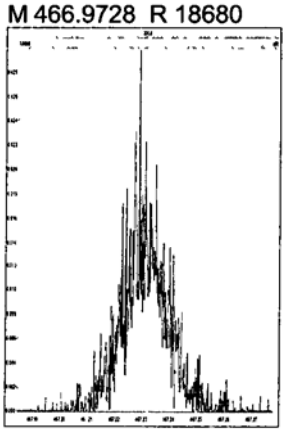
M 442.9728 R 14364



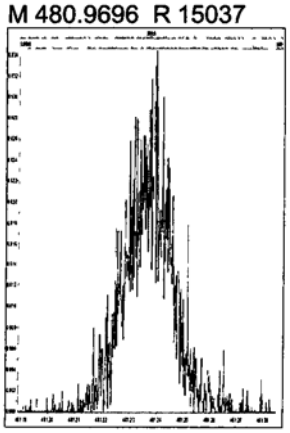
M 454.9728 R 15061



M 466.9728 R 18680



M 480.9696 R 15037



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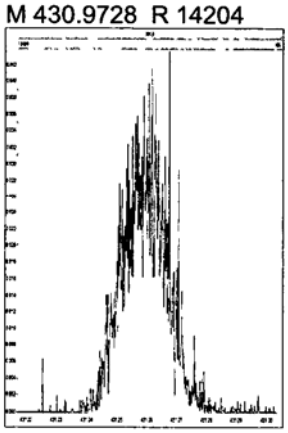
Printed: Thursday, August 29, 2013 03:19:47 Pacific Daylight Time

M 430.9728 R 14204



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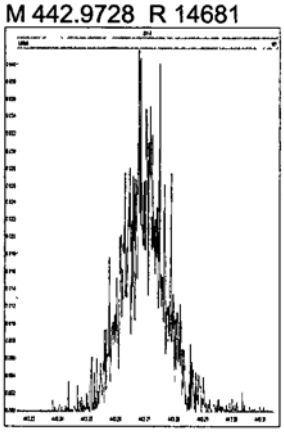

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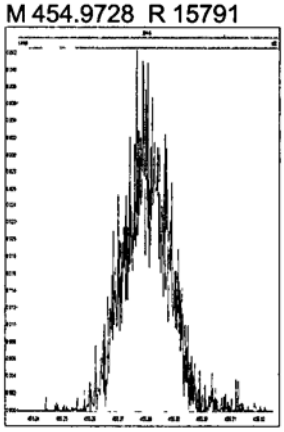
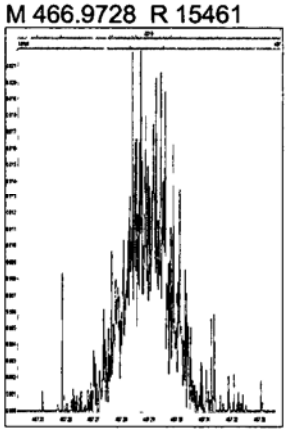
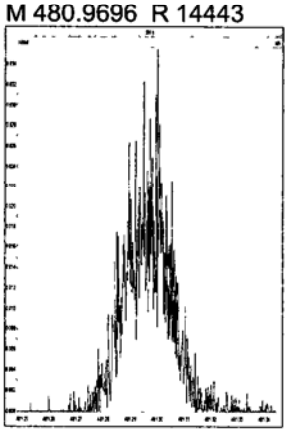


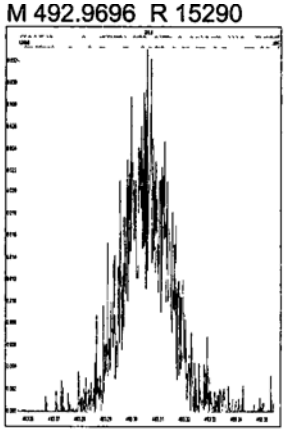
M 466.9728 R 15461



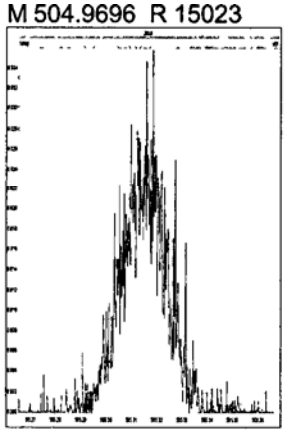
M 480.9696 R 14443



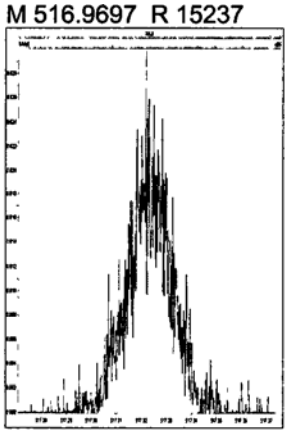
M 492.9696 R 15290



M 504.9696 R 15023



M 516.9697 R 15237



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Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
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Printed: Thursday, August 29, 2013 10:03:11 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130716.mdb 14 Aug 2013 14:32:26
Calibration: P:\DIOXIN8290.pro\CurveDB\130718ICAL.cdb 19 Jul 2013 10:15:25

ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

Name					RRT						
2378-TCDF	26.063	1.001	1.51e5	2.04e5	0.867	0.743	0.770	886.9	NO	10.369	10.369
12378-PeCDF	30.212	1.001	8.30e5	5.54e5	0.875	1.498	1.550	2746.4	NO	51.011	51.011
23478-PeCDF	31.560	1.000	8.36e5	5.66e5	0.880	1.477	1.550	2788.2	NO	51.318	51.318
123478-HxCDF	35.232	1.000	9.28e5	7.76e5	1.048	1.196	1.240	3517.8	NO	48.485	48.485
234678-HxCDF	36.329	1.000	9.18e5	7.63e5	1.088	1.203	1.240	3501.4	NO	50.457	50.457
123678-HxCDF	35.386	1.001	8.74e5	7.31e5	1.025	1.195	1.240	3362.8	NO	50.215	50.215
123789-HxCDF	37.469	1.000	6.84e5	5.67e5	0.959	1.207	1.240	2666.9	NO	50.425	50.425
1234678-HpCDF	39.530	1.001	6.79e5	6.77e5	1.215	1.003	1.050	4055.8	NO	50.382	50.382
1234789-HpCDF	42.237	1.000	5.39e5	5.44e5	1.200	0.991	1.050	2780.4	NO	51.318	51.318
OCDF	47.532	1.007	9.07e5	1.02e6	1.064	0.889	0.890	3967.5	NO	102.142	102.142
2378-TCDD	26.706	1.001	1.09e5	1.47e5	0.994	0.743	0.770	947.7	NO	10.065	10.065
12378-PeCDD	31.813	1.000	7.54e5	4.97e5	0.976	1.518	1.550	5033.0	NO	50.843	50.843
123478-HxCDD	36.460	1.000	7.34e5	5.88e5	0.967	1.247	1.240	4021.2	NO	50.023	50.023
123678-HxCDD	36.592	1.001	6.82e5	5.50e5	0.902	1.241	1.240	3684.1	NO	49.495	49.495
123789-HxCDD	37.019	1.012	6.14e5	4.99e5	0.914	1.230	1.240	3326.1	NO	44.313	44.313
1234678-HpCDD	41.339	1.000	5.18e5	4.92e5	0.999	1.052	1.050	3341.1	NO	49.687	49.687
OCDD	47.254	1.001	8.14e5	9.17e5	0.979	0.887	0.890	5191.4	NO	99.780	99.780
13C-2378-TCDF	26.049	1.007	1.74e6	2.22e6	1.419	0.782	0.770	8748.4	NO		95.133
13C-12378-PeCDF	30.190	1.167	1.90e6	1.20e6	1.158	1.579	1.550	6282.8	NO		91.402
13C-23478-PeCDF	31.549	1.220	1.90e6	1.21e6	1.127	1.572	1.550	6244.8	NO		94.115
13C-123478-HxCDF	35.222	0.952	1.14e6	2.21e6	1.206	0.514	0.510	6093.2	NO		118.744
13C-123678-HxCDF	35.364	0.956	1.07e6	2.05e6	1.266	0.522	0.510	5986.2	NO		105.379
13C-234678-HxCDF	36.318	0.981	1.05e6	2.01e6	1.155	0.522	0.510	5713.5	NO		113.246
13C-123789-HxCDF	37.458	1.012	8.88e5	1.70e6	1.121	0.523	0.510	5050.9	NO		98.634
13C-1234678-HpCDF	39.508	1.067	6.82e5	1.53e6	1.040	0.445	0.440	4961.0	NO		91.066
13C-1234789-HpCDF	42.215	1.141	5.41e5	1.22e6	0.789	0.445	0.440	3414.8	NO		95.233
13C-1234-TCDD	25.869	0.000	1.29e6	1.64e6	1.000	0.787	0.770	7642.0	NO		100.000
13C-2378-TCDD	26.691	1.032	1.13e6	1.43e6	0.962	0.796	0.770	6642.9	NO		90.846
13C-12378-PeCDD	31.802	1.229	1.54e6	9.81e5	0.746	1.568	1.550	9155.5	NO		115.292
13C-123478-HxCDD	36.449	0.985	1.54e6	1.20e6	1.003	1.286	1.240	11367.2	NO		116.477
13C-123678-HxCDD	36.570	0.988	1.52e6	1.25e6	1.052	1.217	1.240	11159.8	NO		112.220
13C-1234678-HpCDD	41.327	1.117	1.04e6	9.92e5	0.880	1.051	1.050	6635.1	NO		98.830
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Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:03:11 Pacific Daylight Time

ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

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Total-tetrafurans			4.67e5		0.867						31.978
Total-penta1			1.21e6								70.685
Total-pentafurans			2.66e6		0.877						163.256
Total-hexafurans			4.25e6		1.030						249.674
Total-heptafurans			1.22e6		1.207						101.798
Total-Furans			1.07e7		1.022						719.533
Total-tetradioxins			6.43e5		0.994						58.214
Total-pentadioxins			2.57e6		0.976						171.994
Total-hexadioxins			2.79e6		0.928						197.356
Total-heptadioxins			1.07e6		0.999						103.154
Total-Dioxins			7.89e6		0.962						630.526
Total-TEQ			1.86e7								1350.058
37CL-2378-TCDD	26.706	1.032	2.77e5		1.091			2419.7			8.670
FUNCTION1 PFK			4.41e5								
FUNCTION2 PFK			1.18e5								0.000
FUNCTION3 PFK			3.49e6								0.000
FUNCTION4 PFK			2.65e6								
FUNCTION5 PFK			0.00e0								
FUNCTION1 HXCDPE			5.27e2								0.000
FUNCTION1 HPCDPE			7.86e1								0.000
FUNCTION2 HPCDPE			1.02e3								0.000
FUNCTION3 OCDPE			2.03e2								0.000
FUNCTION4 NCDPE			7.47e1								0.000
FUNCTION5 DCDPE			0.00e0								

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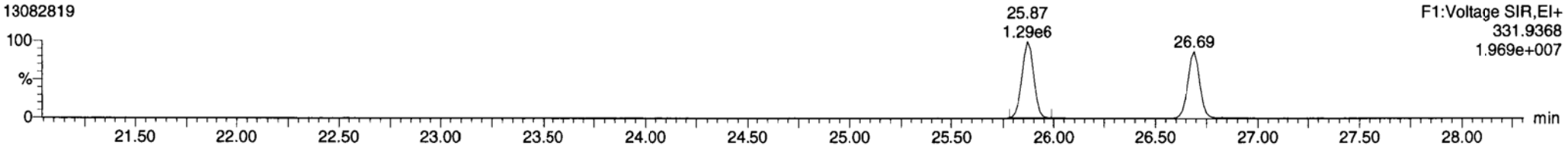
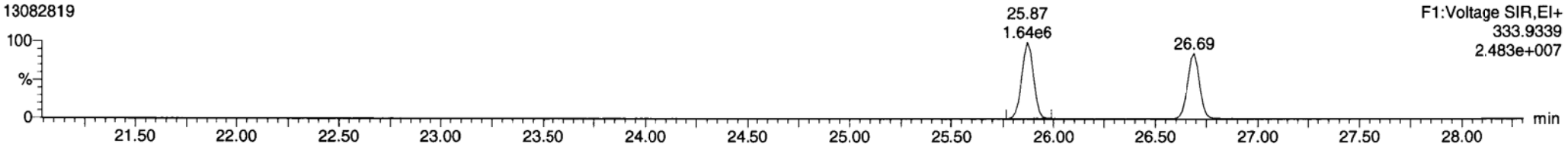
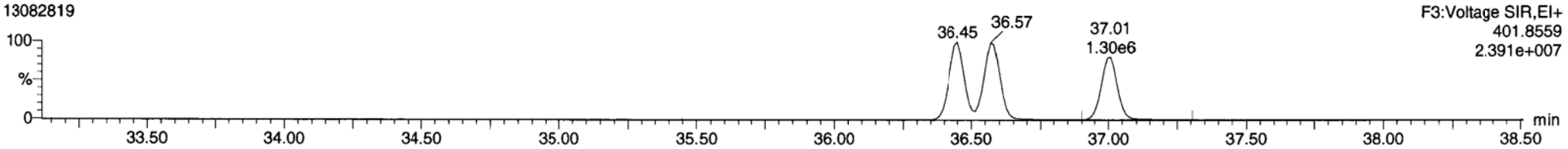
13C-1234-TCDD



13C-1234-TCDD



13C-123789-HxCDD



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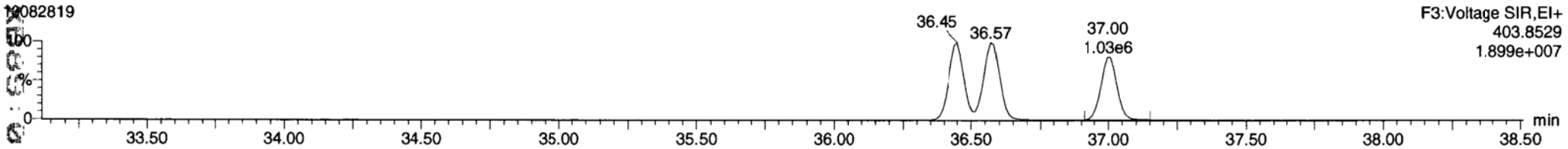

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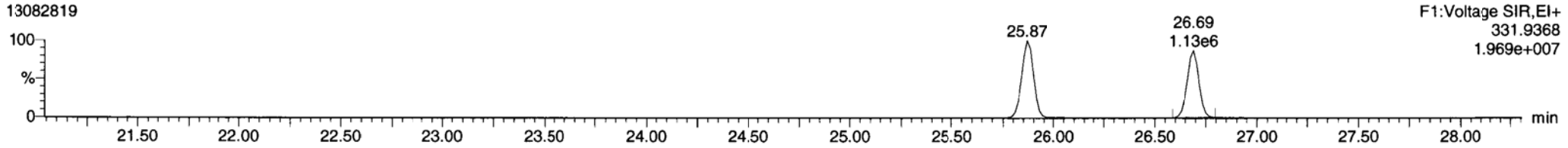
13C-2378-TCDD



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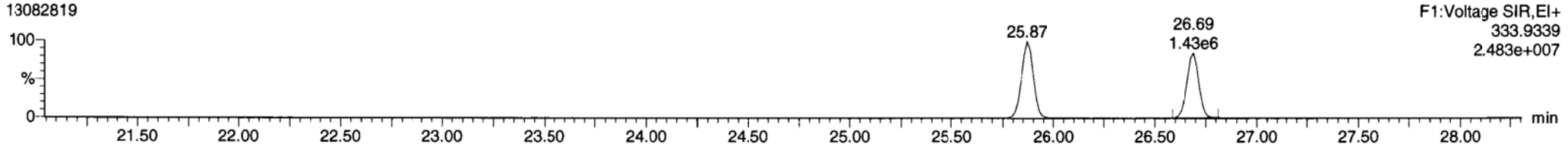
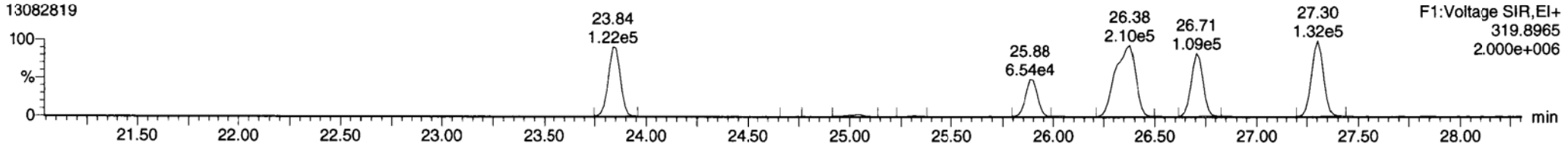
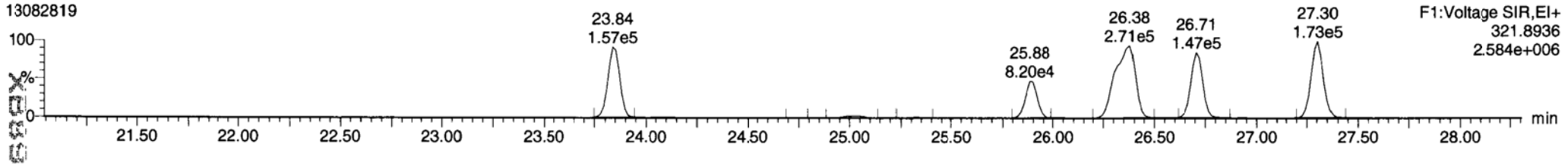


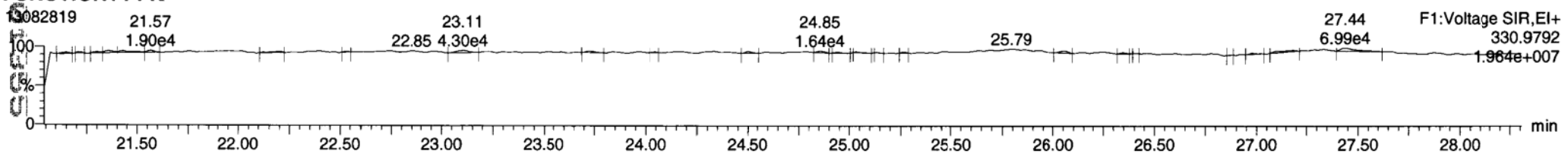
Total-tetradioxins



Total-tetradioxins



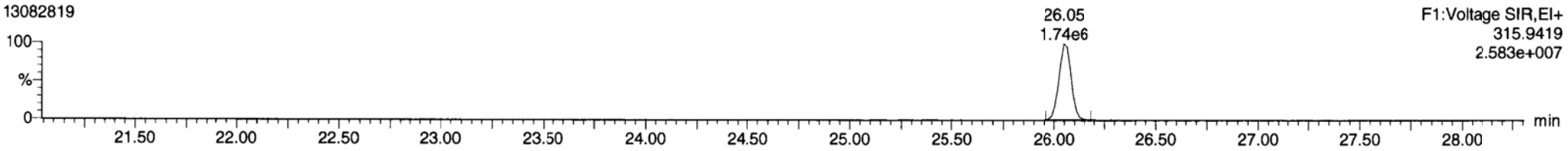
FUNCTION1 PFK



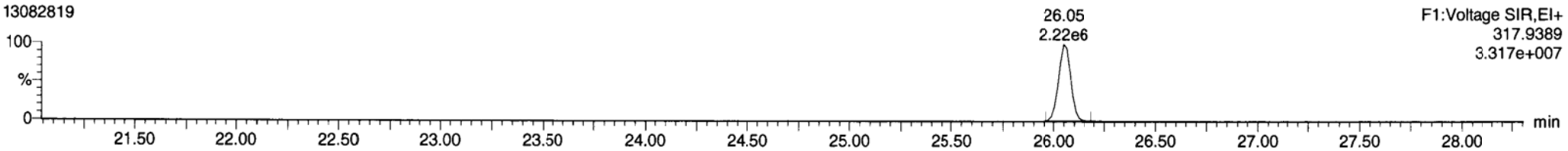
Dataset: P:\DIOXIN8290.PRO\130828DATA2.qld
Last Altered: Thursday, August 29, 2013 10:01:17 Pacific Daylight Time
Printed: Thursday, August 29, 2013 10:03:11 Pacific Daylight Time

ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

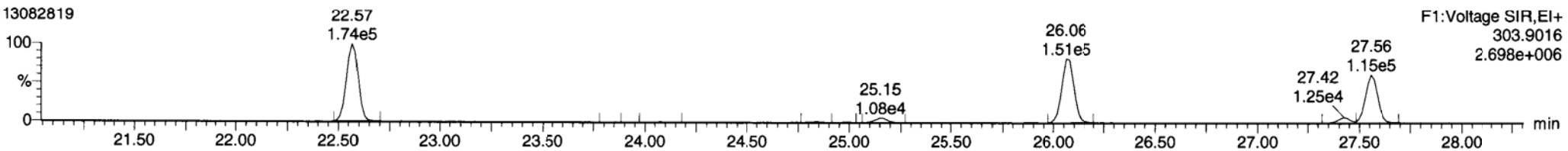
13C-2378-TCDF



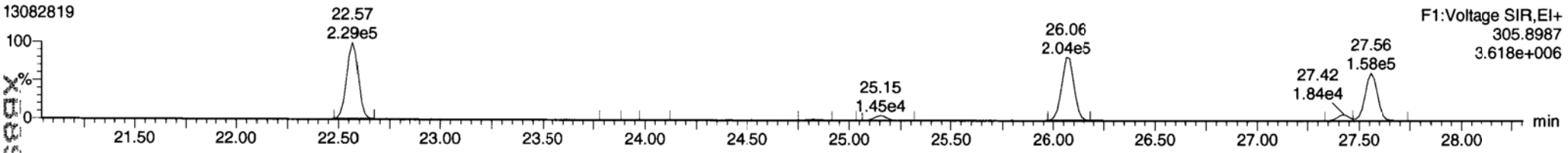
13C-2378-TCDF



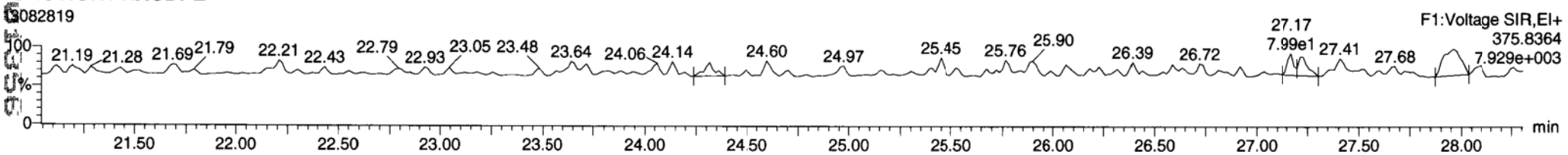
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE



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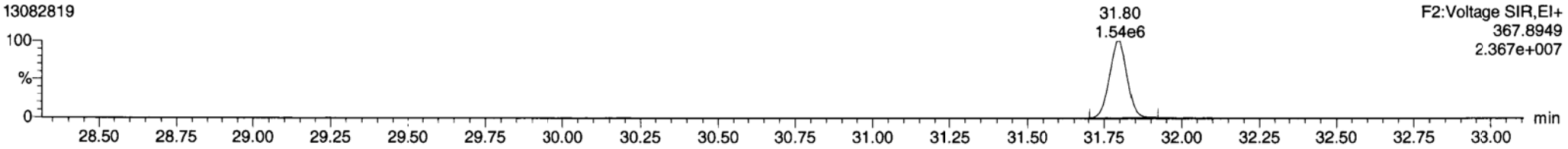
Printed: Thursday, August 29, 2013 10:03:11 Pacific Daylight Time

ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD



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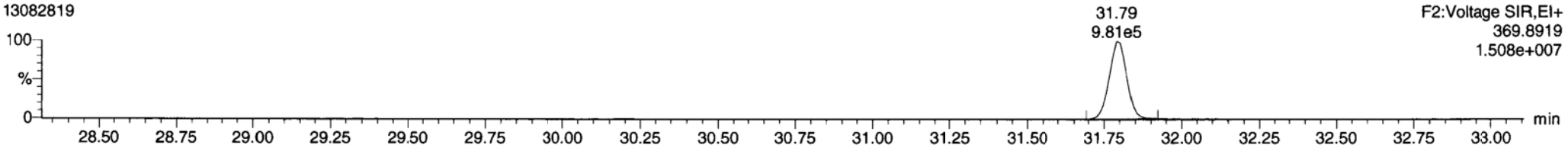
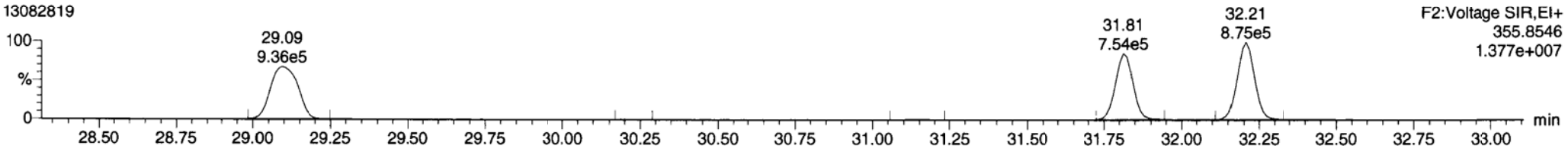
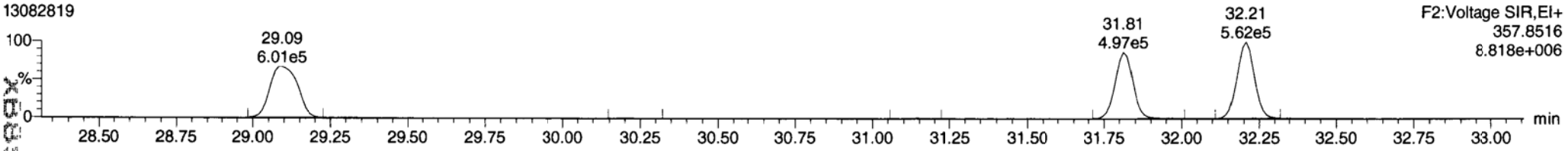


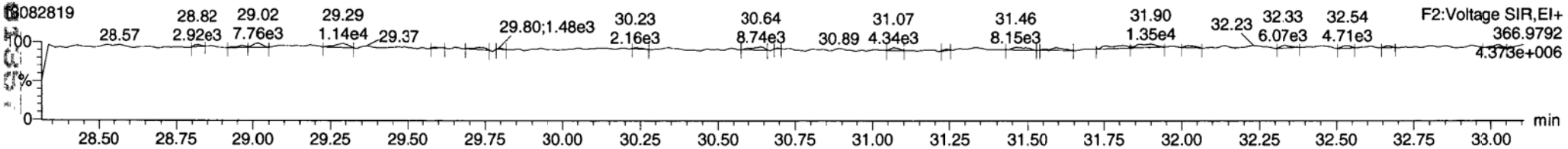
Total-pentadioxins



Total-pentadioxins



FUNCTION2 PFK



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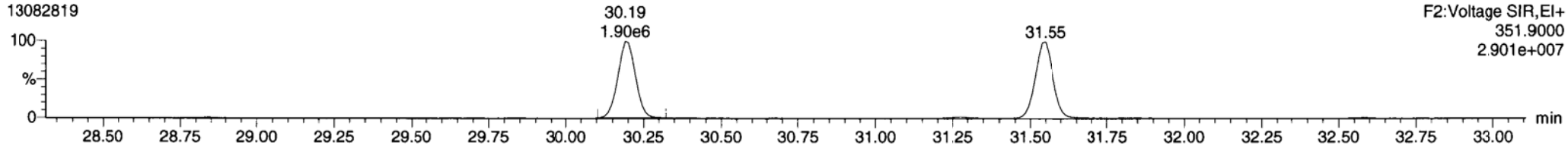
ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



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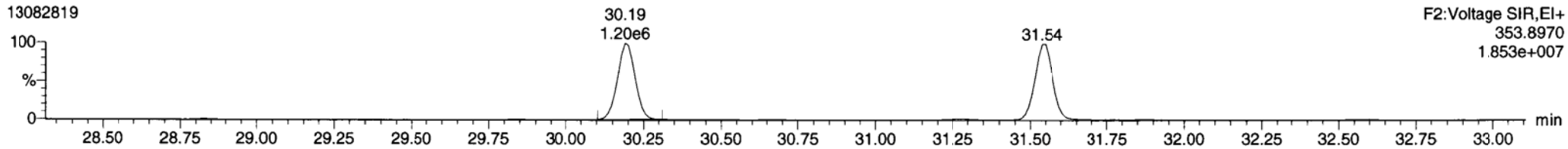
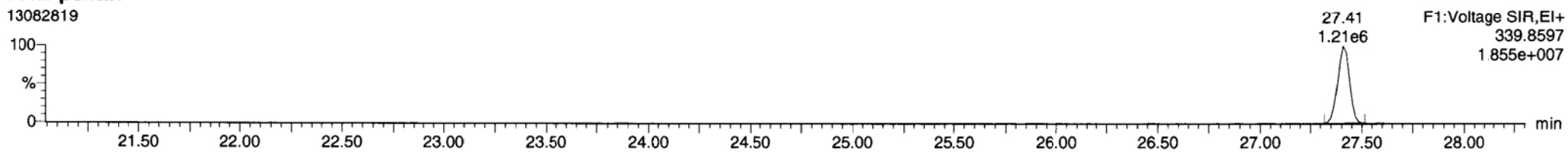
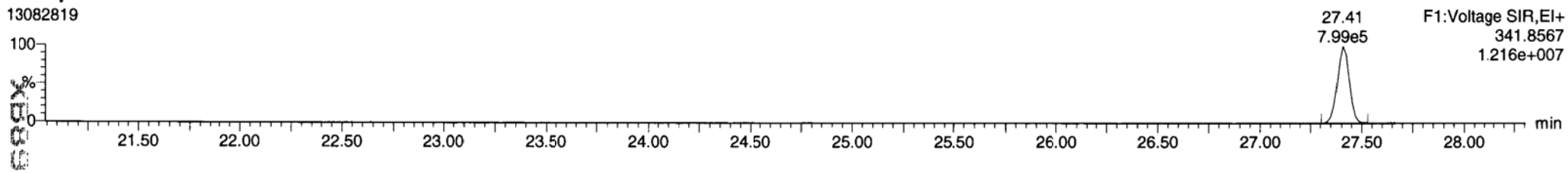


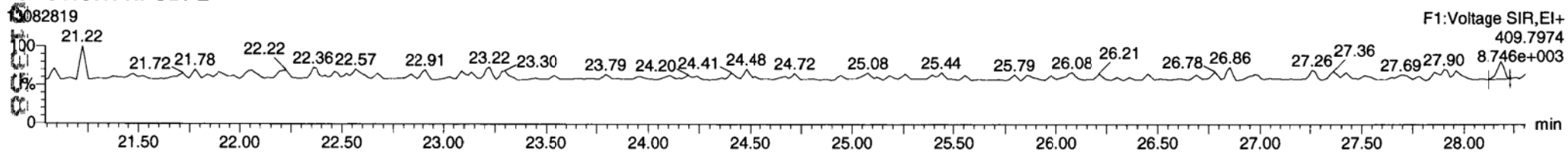
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



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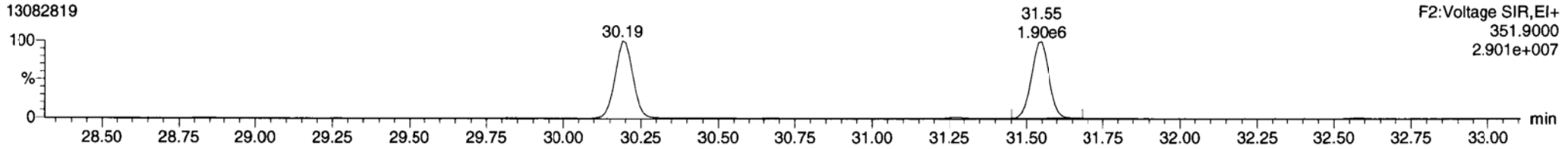
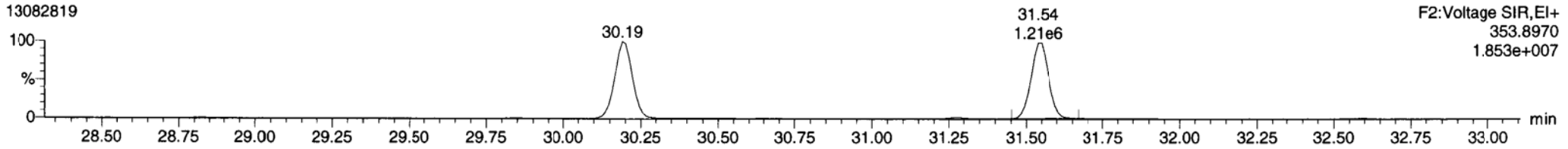
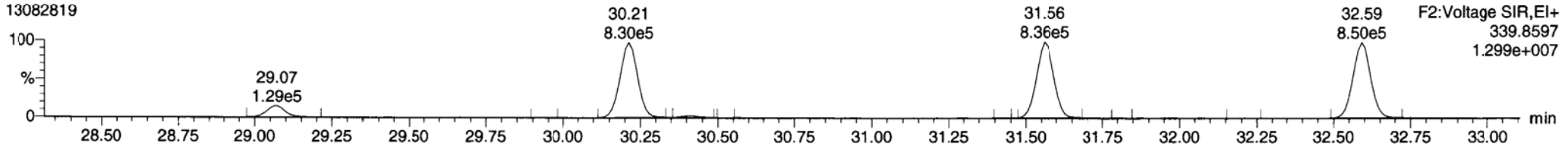
13C-23478-PeCDF



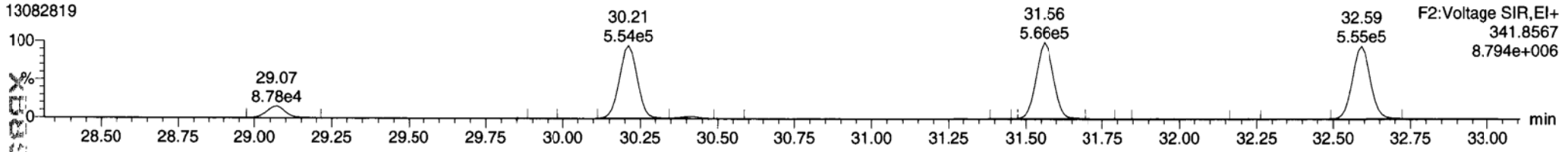
13C-23478-PeCDF



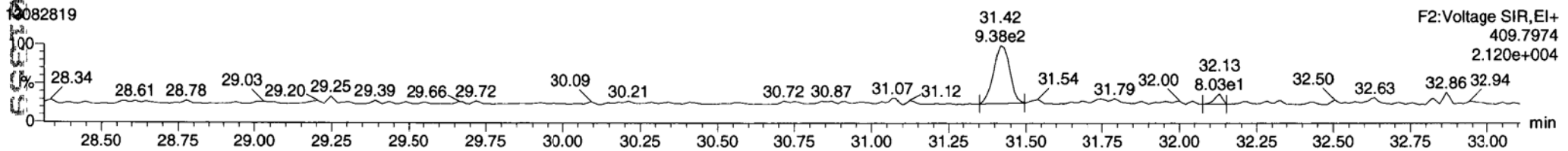
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



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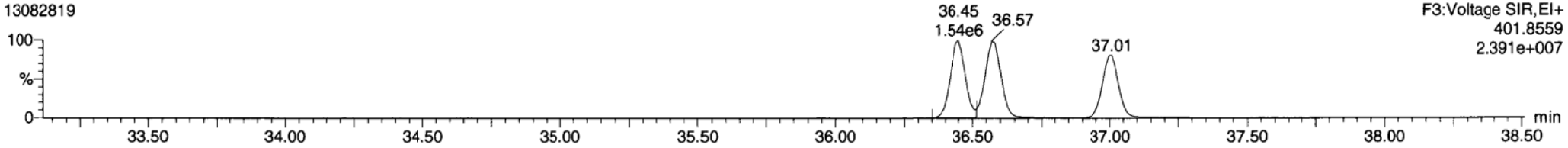
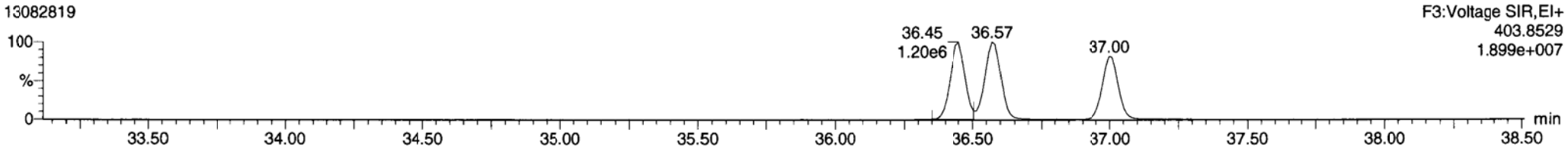
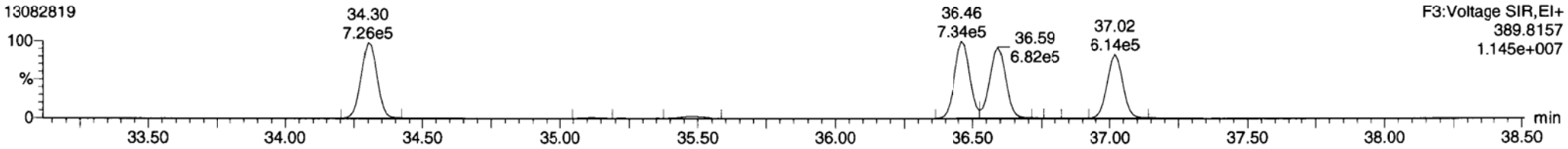
13C-123478-HxCDD



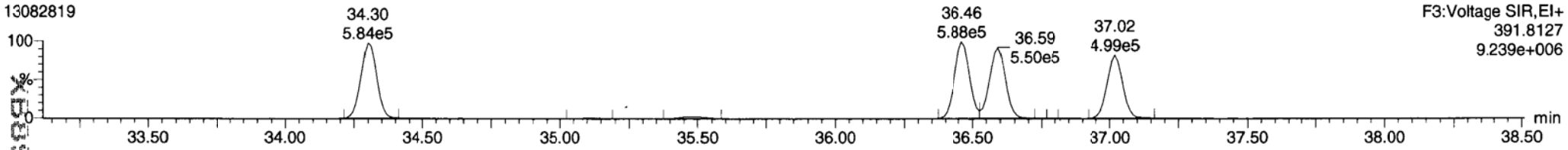
13C-123478-HxCDD



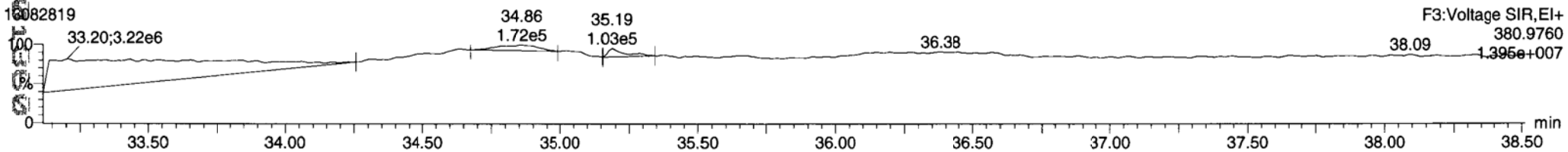
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



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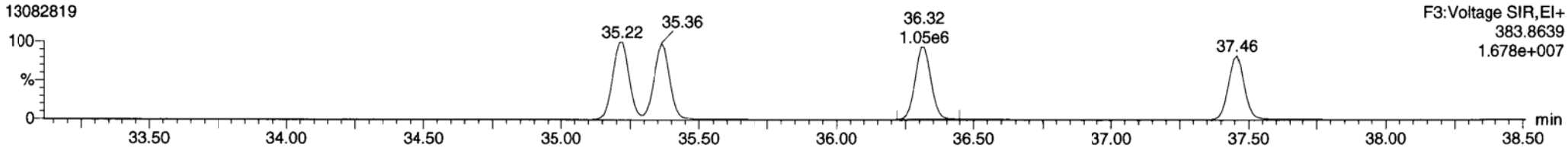
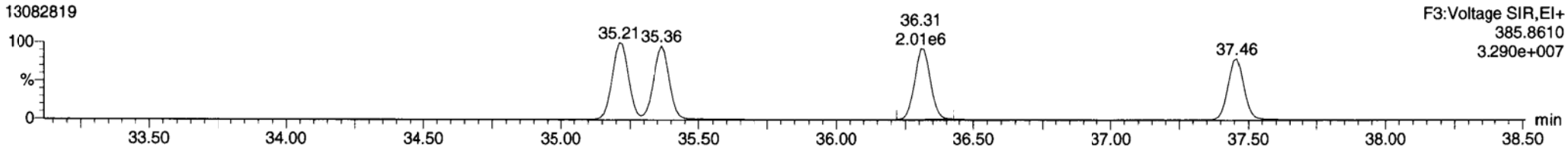
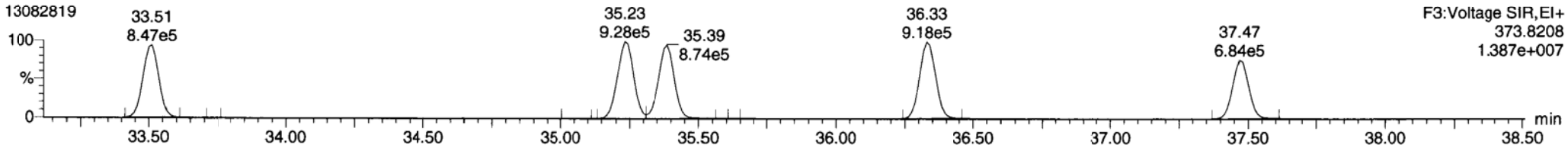
13C-234678-HxCDF



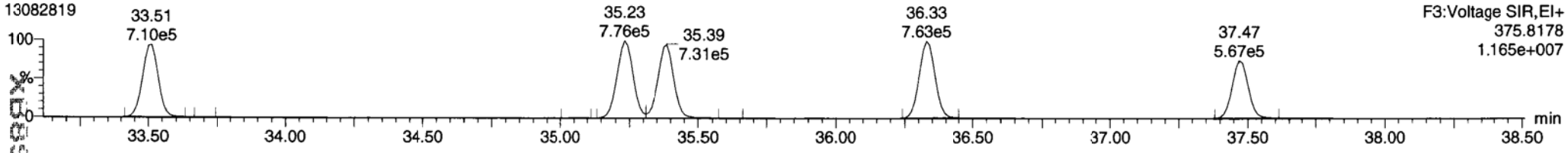
13C-234678-HxCDF



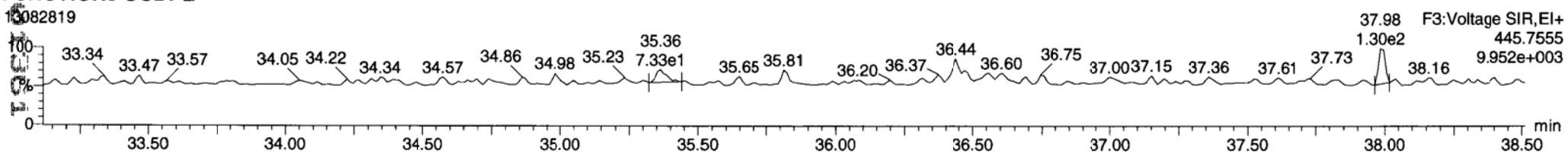
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE



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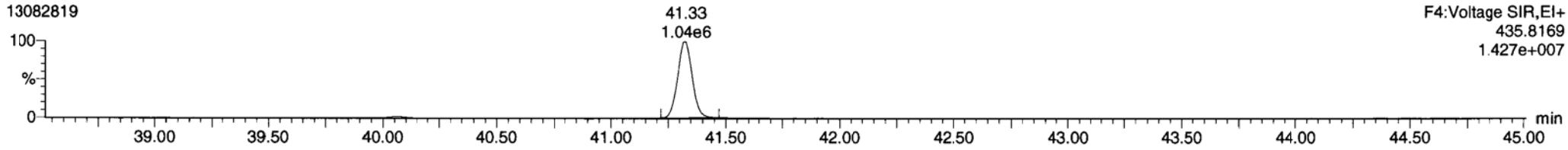
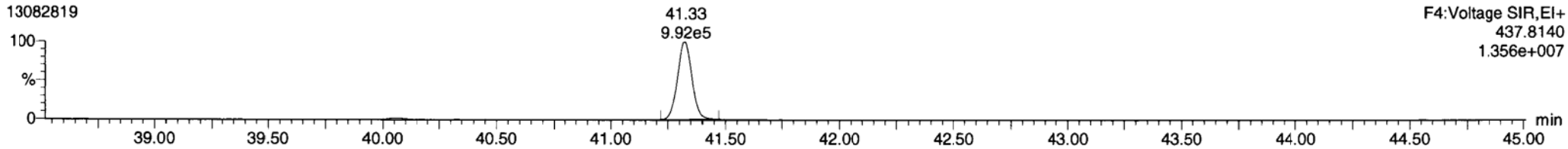
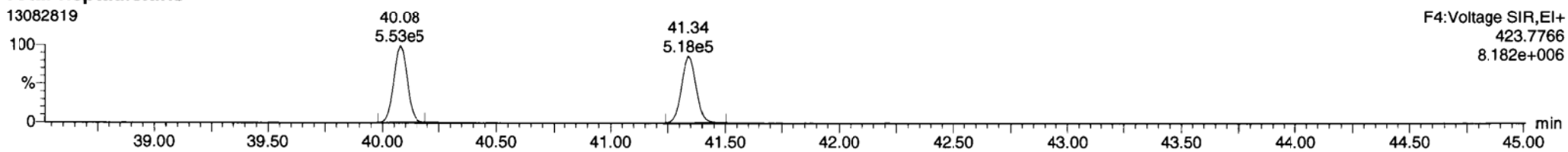
13C-1234678-HpCDD



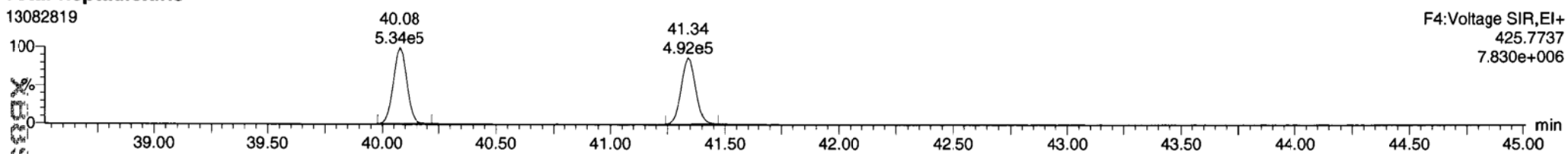
13C-1234678-HpCDD



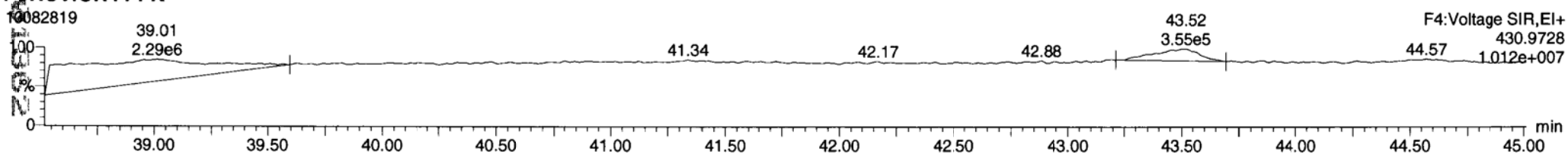
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



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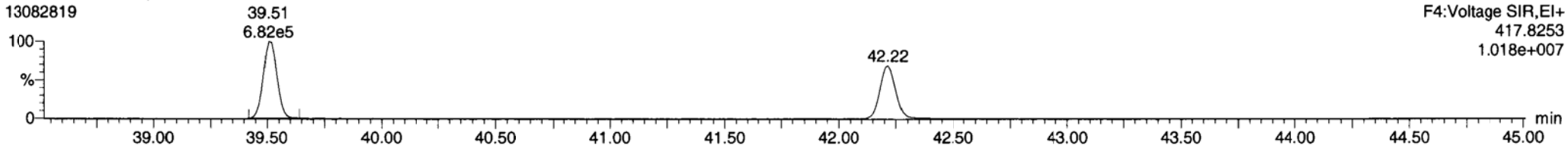
13C-1234678-HpCDF



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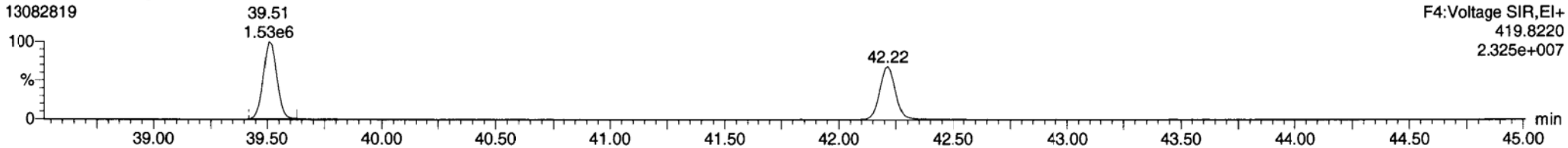
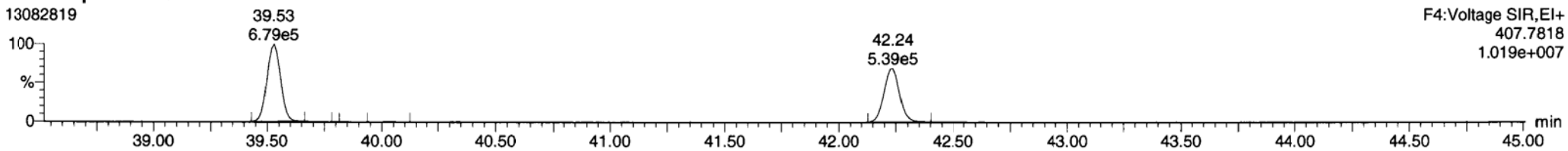
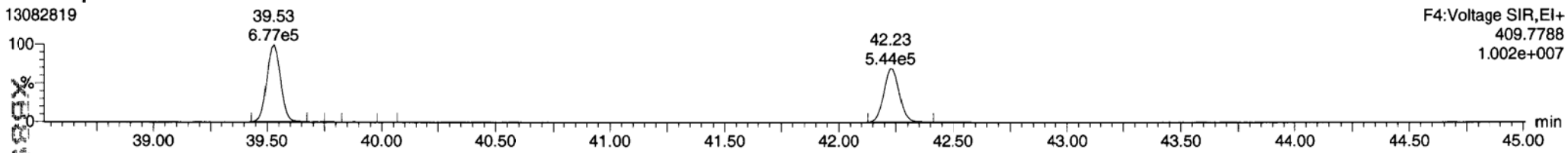


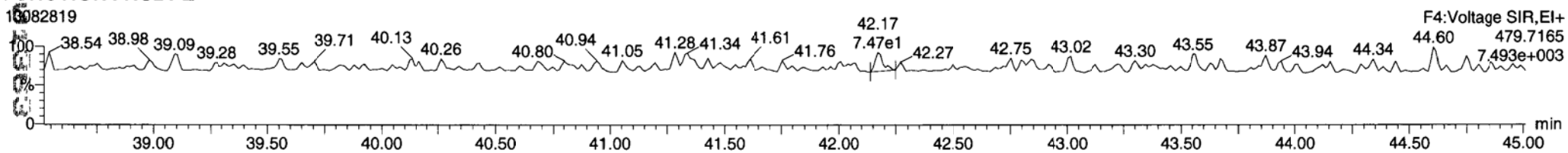
Total-heptafurans



Total-heptafurans

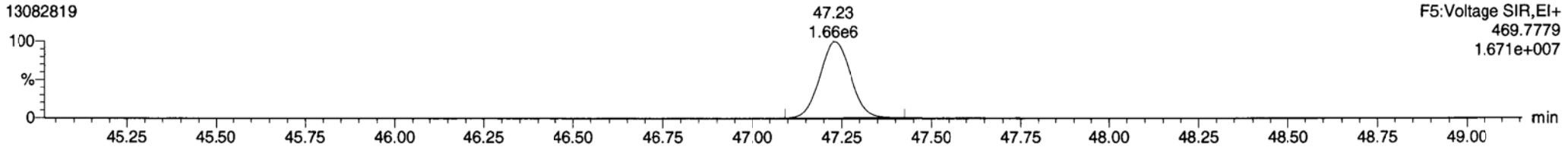


FUNCTION4 NCDPE

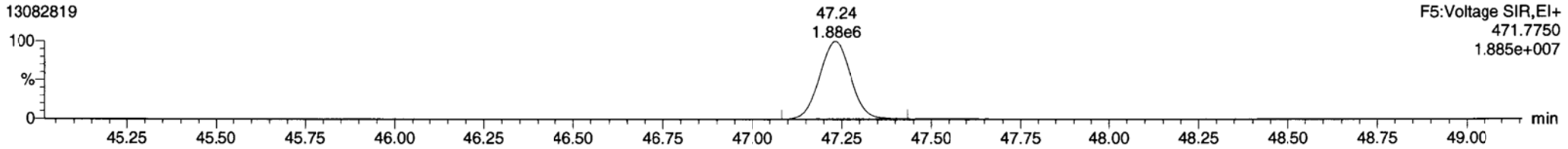


ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

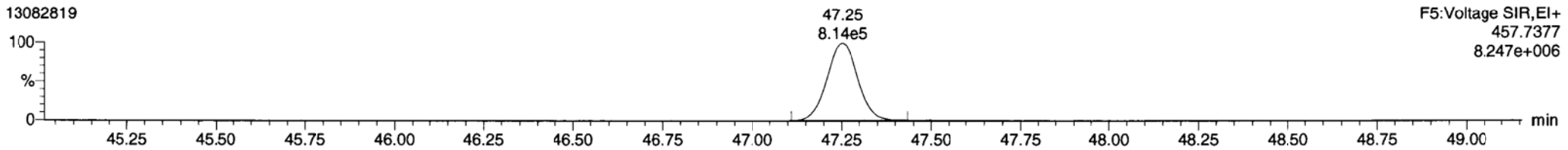
13C-OCDD



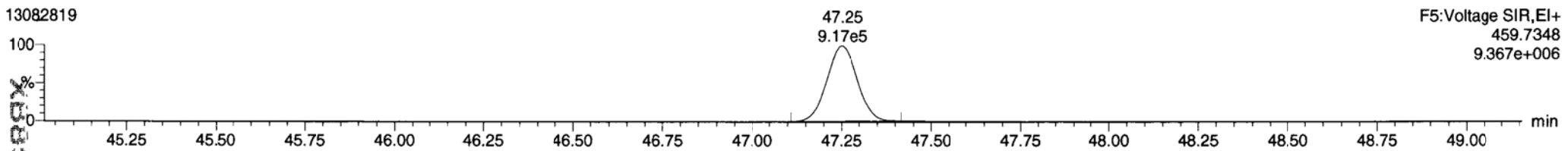
13C-OCDD



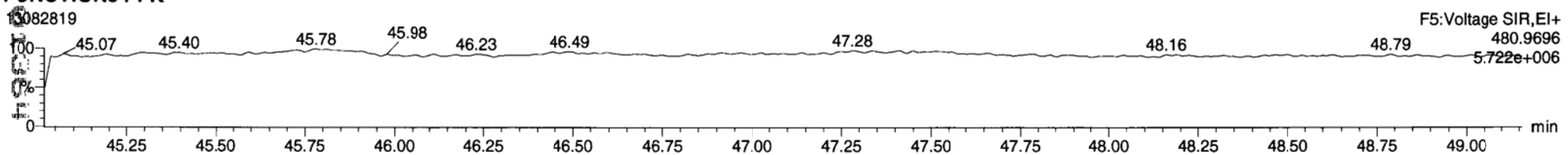
OCDD



OCDD



FUNCTION5 PFK



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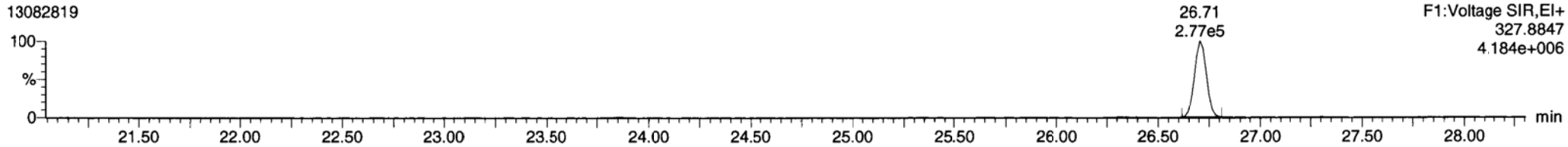
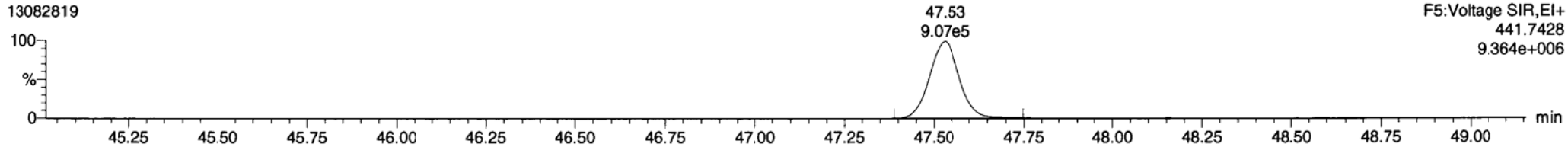
ID: CS3, Name: 13082819, Date: 29-Aug-2013, Time: 02:19:17, Conditions: AUTOSPEC01, User: pk

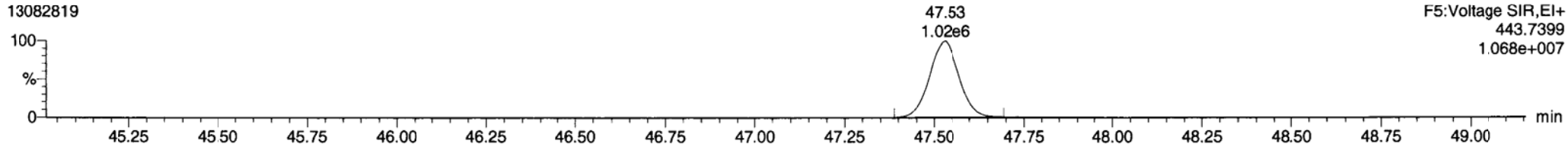
37CL-2378-TCDD



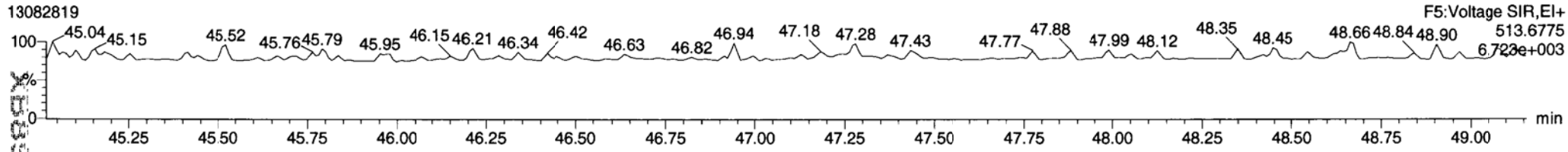
OCDF



OCDF



FUNCTION5 DCDPE



CS3 130829 XCDD

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: XB89

Incorporated
Analytical Chemists and
Consultants

Organic Extractions Benchsheet

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 5 (PCBSDMP20)

ARI Job No(s) XB89 Page 1 of 1 PSDDA (20ppb) Batch set up by: ~~SH~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 5.0g dry wt)	(REQ) Acid Clean (5mL)	(REQ) Sulfur Clean (5mL) High Sulfur 1 2 3	(Opt) Silica Gel Clean (1:5) Y / N	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
									CT 08/26/13 Analyst/Date
	MBS XB89	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		Microwave 1 2 3 CT 08/26/13 Analyst/Date
	SBS	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
	SBSDup	5.00g	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
	~~QLS~~	~~5.00g~~	~~5.0mL~~	~~5.0mL~~	~~1mL~~ Y / N	~~5.0mL~~	~~1mL~~		KD 100°C Exchange to Hexane (2 X 20mL) 1 2 3 4 5 6 SR 08/27/13 Analyst/Date
4	XB89 A	11.04	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
4	B	9.07	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
5	C	9.04	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
3	D	8.04	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
3	E	9.05	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		TurboVap 1 2 3 Pre-Cleanups SP 8/30/13 Analyst/Date
3	F	8.06	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
3	FMS	8.01	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
3	FMSD	8.06	5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL		TurboVap 1 2 3 Post Cleanups
			5.0mL	5.0mL	1mL Y / N	5.0mL	1mL	SP 8/30/13	
Analyst/Date CT 08/26/13			SP 8/30/13	SP 8/30/13		SP 8/30/13	SP 8/30/13	Reviewed by SR 8/30/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(B#1153)	2µg/mL	100µL	4/30/14	CT	AC
Spike	1(B#1452)	20µg/mL	125µL	8/21/14	CT	AC
~~QLS Spike~~	~~5(~~ ~~)~~	~~2µg/mL~~	~~50µL~~			

Extraction Time: 1405 Balance ID: B139298#2

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. ~~KD (Small or Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate).~~ 12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap (if Silica Clean). 16. Vial with Hexane.

A. Need Total Solids Y / N B. ~~Archive~~/Freeze Y / N

17441

XB89:01367

Reagent and Solutions Identification

(8082A) PCB – Soil /(Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) XB89

(8082A) PCB PSDDA (20ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Anhydrous Sodium Sulfate: (I#B441432 jar date 8/12/13) Neutral Glasswool: (I#B441137 + jar date 7/19/13) 1:1 Hexane/Acetone: (H#B401544 80:20 Hexane/Acetone: (H#B441442) Hexane: (I#B441497	Microwave CT 8/26/13
KD Station: Hexane: (I# B901147 Anhydrous Sodium Sulfate: (I#N/A + jar date) Neutral Glasswool: (I#N/A + jar date)	KD SP 08/27/13
Vialing Station: Hexane: (I# B901147) Concentrated Sulfuric Acid: (I# B400695 Tetrabutylammonium hydrogensulfate (TBAS): (I# B401454 Sodium Sulfite: (I# B400501 Silica Gel (SPE) Darts: (I#)	Vialing SP 8/30/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: XB89 Client ID: Anchor QEA, LLC

Parameter: PCB PSPDA Client Project: I & J Waterway RI/FS

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= A, B, C	YL 08/22/13
☐ Standing Water Homogenized (Shared samples)=	
☒ Clay/Clumps (Difficult to homogenize)= Like clay D, E, F	YL 08/22/13
☒ Rocks (%+size)? small & med (20%) A, B, C, small pebbles (<5%) D, F	YL 08/22/13
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= Sewage odor A, B, C, E,	YL 08/22/13
☒ Other (Details)= shell fragments (<5%) C,	YL 08/22/13
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions). GC analyst, (Centrifuge#1 used for all Centrifugations) Sample pre-screens indicate possible aroclor activity.	JH 8/23/13

3056F

Revision 009
08/14/12

XB89 : 01369

PCB Raw Data
Initial Calibration

ARI Job ID: XB89

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: 403S(PCB) 405S(Herb) 407S(TPH-D) 409S(HCID) 412S(PCP) 423S(Pest)
427S(Dir Inj) 428S(EPH) Other

Instrument: ~~FID-3A~~ FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 08/16/13 Internal Standard ID B1154 Expiration 07/23/14

Endrin/DDT Breakdown <15%?	YES / NO / NA	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
IB	B1237	04/30/14	AR1660	B182	04/30/14
AR1660	B1161		AR1242	B190	
AR1242	B163		AR1248	B191	
AR1248	B172		AR1254	B192	
AR1254	B173		AR2162	B193	
AR2162	B174		AR3268	B194	
AR3268	B175				
DDT	1991-2	05/16/13			
BD	B370	08/29/13			

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

Analyst: [signature] Date: 08/20/13

Reviewer: [signature] Date: 8/20/13

XB89:01371

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB1.m
Cal Date : 20-Aug-2013 09:58 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130816.b/ical-1.b/0816a008.d
Level 2: /chem2/ecd7.i/20130816.b/ical-1.b/0816a009.d
Level 3: /chem2/ecd7.i/20130816.b/ical-1.b/0816a011.d
Level 4: /chem2/ecd7.i/20130816.b/ical-1.b/0816a007.d
Level 5: /chem2/ecd7.i/20130816.b/ical-1.b/0816a012.d
Level 6: /chem2/ecd7.i/20130816.b/ical-1.b/0816a010.d
Level 7: /chem2/ecd7.i/20130816.b/ical-1.b/0816a017.d
Level 8: /chem2/ecd7.i/20130816.b/ddt-1.b/0816a024.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01047	+++++					0.01047	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00882	+++++					0.00882	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02581	+++++					0.02581	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02024	+++++					0.02024	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06803	+++++					0.06803	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02662	+++++					0.02662	0.000

XB89:01372

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB1.m
Cal Date : 20-Aug-2013 09:58 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02526	+++++					0.02526	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01676	+++++					0.01676	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01009	+++++					0.01009	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03326	+++++					0.03326	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01329	+++++					0.01329	0.000
7 Aroclor-1016(1)	0.02727	0.02647	0.02609	0.02457	0.02318	0.02306		
	+++++	+++++					0.02511	7.061
(2)	0.09064	0.08699	0.08698	0.08382	0.08035	0.08055		
	+++++	+++++					0.08489	4.785
(3)	0.03834	0.03562	0.03464	0.03269	0.03084	0.03087		
	+++++	+++++					0.03383	8.684
(4)	0.02596	0.02239	0.02104	0.01921	0.01780	0.01758		
	+++++	+++++					0.02066	15.464

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB1.m
Cal Date : 20-Aug-2013 09:58 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.04241	+++++	0.04241	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.02784	+++++	0.02784	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03930	+++++	0.03930	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05027	+++++	0.05027	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.05173	+++++	0.05173	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03215	+++++	0.03215	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.06302	+++++	0.06302	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.06473	+++++	0.06473	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06350	+++++	0.06350	0.000

XB89:01374

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB1.m
Cal Date : 20-Aug-2013 09:58 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.08778	0.07494	0.07293	0.07066	0.06277	0.06530		
	+++++	+++++					0.07240	12.191
(2)	0.08258	0.07398	0.07371	0.07255	0.06505	0.06797		
	+++++	+++++					0.07264	8.289
(3)	0.17652	0.16830	0.17459	0.17320	0.15548	0.16298		
	+++++	+++++					0.16851	4.773
(4)	0.09280	0.08807	0.09101	0.09110	0.08297	0.08745		
	+++++	+++++					0.08890	3.976
(5)	0.04110	0.03931	0.04018	0.03943	0.03565	0.03762		
	+++++	+++++					0.03888	5.030
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.09418	+++++					0.09418	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.21788	+++++					0.21788	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07113	+++++					0.07113	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08471	+++++					0.08471	0.000

XB89 01375

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB1.m
Cal Date : 20-Aug-2013 09:58 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06554	+++++					0.06554	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.23504	+++++					0.23504	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.20825	+++++					0.20825	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.17509	+++++					0.17509	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.44546	+++++					0.44546	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	744					744	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	707					707	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	829					829	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1224					1224	0.000

XB89-01376

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB1.m
Cal Date : 20-Aug-2013 09:58 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1077	1077	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1044	1044	0.000
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	0.89033	0.90412	0.94979	0.95768	0.94436	0.96967	+++++	+++++	0.93599	3.367
$ 13 Decachlorobiphenyl	1.22992	1.19167	1.21222	1.15232	1.04616	1.09258	+++++	+++++	1.15414	6.245

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB2.m
Cal Date : 20-Aug-2013 09:50 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd7.i/20130816.b/ical-2.b/0816a008.d
Level 2: /chem2/ecd7.i/20130816.b/ical-2.b/0816a009.d
Level 3: /chem2/ecd7.i/20130816.b/ical-2.b/0816a011.d
Level 4: /chem2/ecd7.i/20130816.b/ical-2.b/0816a007.d
Level 5: /chem2/ecd7.i/20130816.b/ical-2.b/0816a012.d
Level 6: /chem2/ecd7.i/20130816.b/ical-2.b/0816a010.d
Level 7: /chem2/ecd7.i/20130816.b/ical-2.b/0816a017.d
Level 8: /chem2/ecd7.i/20130816.b/ddt-2.b/0816a024.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01384	+++++	0.01384	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00800	+++++	0.00800	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02437	+++++	0.02437	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.00820	+++++	0.00820	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01693	+++++	0.01693	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01908	+++++	0.01908	0.000

XB69 01378

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB2.m
Cal Date : 20-Aug-2013 09:50 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03634	+++++					0.03634	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01209	+++++					0.01209	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01624	+++++					0.01624	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03391	+++++					0.03391	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07149	+++++					0.07149	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02836	+++++					0.02836	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01676	+++++					0.01676	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04624	+++++					0.04624	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03391	+++++					0.03391	0.000

XB89 01379

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB2.m
Cal Date : 20-Aug-2013 09:50 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04884	+++++					0.04884	0.000
7 Aroclor-1016(1)	0.02305	0.02128	0.02045	0.01794	0.01627	0.01583		
	+++++	+++++					0.01914	15.192
(2)	0.05242	0.04810	0.04605	0.04095	0.03708	0.03632		
	+++++	+++++					0.04349	14.781
(3)	0.10764	0.09745	0.09469	0.08630	0.08019	0.07738		
	+++++	+++++					0.09061	12.638
(4)	0.03416	0.03026	0.02859	0.02510	0.02281	0.02250		
	+++++	+++++					0.02723	16.863
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03166	+++++					0.03166	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04041	+++++					0.04041	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06762	+++++					0.06762	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06877	+++++					0.06877	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB2.m
Cal Date : 20-Aug-2013 09:50 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.05003	+++++							0.05003	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.11686	+++++							0.11686	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.23160	+++++							0.23160	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.10124	+++++							0.10124	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.15309	+++++							0.15309	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++				
	0.07625	+++++							0.07625	0.000
9 Aroclor-1260(1)	0.14613	0.13217	0.12715	0.11649	0.10118	0.10435				
	+++++	+++++							0.12124	14.209
(2)	0.11493	0.10597	0.10256	0.09442	0.08149	0.08357				
	+++++	+++++							0.09716	13.504
(3)	0.22124	0.20385	0.20015	0.18722	0.16505	0.17224				
	+++++	+++++							0.19162	10.947

XB89 01381

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB2.m
Cal Date : 20-Aug-2013 09:50 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.15053	0.14115	0.13672	0.12605	0.10976	0.11328		
	+++++	+++++					0.12958	12.420
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.23853	+++++					0.23853	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.22390	+++++					0.22390	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.18010	+++++					0.18010	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.46823	+++++					0.46823	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	700					700	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1134					1134	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	658					658	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	870					870	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 16-AUG-2013 16:24
End Cal Date : 16-AUG-2013 22:38
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd7.i/20130816.b/PCB2.m
Cal Date : 20-Aug-2013 09:50 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	963					963	0.000
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.07256	1.02935	1.03972	0.99536	0.95290	0.99255		
	+++++	+++++					1.01374	4.154
$ 13 Decachlorobiphenyl	1.39276	1.34165	1.35335	1.25639	1.11101	1.16551		
	+++++	+++++					1.27011	8.875

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130816.b/ical-2.b

ARI Job No.: IB Method: PCB2.m Instrument: ecd7.i Date: 16-AUG-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1602	0816a006.d	IB		1	NO MANUAL INTEGRATION
1624	0816a007.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1646	0816a008.d	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1708	0816a009.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1730	0816a010.d	1 PPM AR1660		1	NO MANUAL INTEGRATION
1752	0816a011.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1814	0816a012.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1836	0816a013.d	AR1242		1	NO MANUAL INTEGRATION
1858	0816a014.d	AR1248		1	NO MANUAL INTEGRATION
1920	0816a015.d	AR1254		1	NO MANUAL INTEGRATION
1942	0816a016.d	AR2162		1	NO MANUAL INTEGRATION
2004	0816a017.d	AR3268		1	NO MANUAL INTEGRATION
2026	0816a018.d	AR1660ICV		1	NO MANUAL INTEGRATION
2048	0816a019.d	AR1242ICV		1	NO MANUAL INTEGRATION
2110	0816a020.d	AR1248ICV		1	NO MANUAL INTEGRATION
2132	0816a021.d	AR1254ICV		1	NO MANUAL INTEGRATION
2154	0816a022.d	AR2162ICV		1	NO MANUAL INTEGRATION
2216	0816a023.d	AR3268ICV		1	NO MANUAL INTEGRATION
1602	0816a006.d	IB		1	NO MANUAL INTEGRATION
1624	0816a007.d	0.25PPMAR1660		1	NO MANUAL INTEGRATION

1646 0816a008.d 0.02PPMAR1660 1 NO MANUAL INTEGRATION

XD89-61365

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130816.b/ical-2.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1708	0816a009.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1730	0816a010.d	1 PPM AR1660		1	NO MANUAL INTEGRATION
1752	0816a011.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1814	0816a012.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1836	0816a013.d	AR1242		1	NO MANUAL INTEGRATION
1858	0816a014.d	AR1248		1	NO MANUAL INTEGRATION
1920	0816a015.d	AR1254		1	NO MANUAL INTEGRATION
1942	0816a016.d	AR2162		1	NO MANUAL INTEGRATION
2004	0816a017.d	AR3268		1	NO MANUAL INTEGRATION
2026	0816a018.d	AR1660ICV		1	NO MANUAL INTEGRATION
2048	0816a019.d	AR1242ICV		1	NO MANUAL INTEGRATION
2110	0816a020.d	AR1248ICV		1	NO MANUAL INTEGRATION
2132	0816a021.d	AR1254ICV		1	NO MANUAL INTEGRATION
2154	0816a022.d	AR2162ICV		1	NO MANUAL INTEGRATION
2216	0816a023.d	AR3268ICV		1	NO MANUAL INTEGRATION

XB89:01386

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130816.b/PCB1.m
Batch File: /chem2/ecd7.i/20130816.b/ical-1.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0816a007	0816a008	0816a009	0816a010	0816a011	0816a012
INJ.DATE:	16-AUG-2013	16-AUG-2013	16-AUG-2013	16-AUG-2013	16-AUG-2013	16-AUG-2013
INJ.TIME:	16:24	16:46	17:08	17:30	17:52	18:14

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.789	2.789	2.786	2.787	2.784	2.787	2.785	2.685-2.885	2.787	0.002
$ 1 Tetrachloro-m-xylene	5.738	5.737	5.736	5.734	5.734	5.735	5.736	5.636-5.836	5.736	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.091-6.291	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.744	7.644-7.844	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.523	6.423-6.623	+++++	+++++
7 Aroclor-1016	7.745	7.746	7.745	7.743	7.742	7.744	7.744	7.644-7.844	7.744	0.002
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.261	8.161-8.361	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.227	10.127-10.327	+++++	+++++
9 Aroclor-1260	12.043	12.042	12.043	12.043	12.043	12.043	12.043	11.943-12.143	12.043	0.000
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12.359	12.259-12.459	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.237	13.137-13.337	+++++	+++++
$ 13 Decachlorobiphenyl	14.590	14.589	14.590	14.590	14.589	14.589	14.590	14.490-14.690	14.590	0.000
* 12 IS-HBBP	14.850	14.849	14.850	14.849	14.849	14.849	14.849	14.749-14.949	14.849	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.190	10.140-10.240	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.764	10.714-10.814	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.284	11.234-11.334	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.640	10.540-10.740	+++++	+++++

Reviewer 1 _____ Date: 08/20/13
Reviewer 2 _____ Date: 8/20/13

1SG1.SBOX

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130816.b/PCB1.m
Batch File: /chem2/ecd7.i/20130816.b/ical-1.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	11.228	11.128-11.328	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.749	11.649-11.849	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

XB89:01388

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130816.b/PCB2.m
Batch File: /chem2/ecd7.i/20130816.b/ical-2.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0816a007	0816a008	0816a009	0816a010	0816a011	0816a012
INJ.DATE:	16-AUG-2013	16-AUG-2013	16-AUG-2013	16-AUG-2013	16-AUG-2013	16-AUG-2013
INJ.TIME:	16:24	16:46	17:08	17:30	17:52	18:14

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	3.190	3.190	3.189	3.187	3.187	3.188	3.187	3.087-3.287	3.188	0.001
$ 2 Tetrachloro-m-xylene	5.376	5.377	5.375	5.374	5.373	5.375	5.376	5.276-5.476	5.375	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	6.198	6.098-6.298	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.630	6.530-6.730	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.630	6.530-6.730	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	7.509	7.409-7.609	+++++	+++++
7 Aroclor-1016	6.630	6.633	6.630	6.628	6.629	6.630	6.630	6.530-6.730	6.630	0.002
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	10.032	9.932-10.132	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	12.480	12.380-12.580	+++++	+++++
9 Aroclor-1260	11.936	11.936	11.936	11.936	11.935	11.936	11.936	11.836-12.036	11.936	0.000
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	13.254	13.154-13.354	+++++	+++++
$ 13 Decachlorobiphenyl	14.617	14.617	14.618	14.618	14.618	14.618	14.617	14.517-14.717	14.618	0.000
* 12 IS-HBBP	15.214	15.213	15.213	15.213	15.214	15.214	15.213	15.113-15.313	15.213	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	10.308	10.258-10.358	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.708	10.658-10.758	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	11.014	10.914-11.114	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.484	11.384-11.584	+++++	+++++

Reviewer 1 [signature] Date: 08/20/13
Reviewer 2 [signature] Date: 8/20/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd7.i/20130816.b/PCB2.m
Batch File: /chem2/ecd7.i/20130816.b/ical-2.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	11.921	11.821-12.021	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.117	7.017-7.217	+++++	+++++

X589 : 01350

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a006.d
Data file 2: 20130816.b/ical-2.b/0816a006.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 16-AUG-2013 16:02
Report Date: 08/20/2013 12:55
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.734	-0.002	2498051	5.374	-0.001	4788862	41.2	39.2	4.8	Tetrachloro-m-xylene
14.590	0.000	1763605	14.618	0.000	3016029	38.7	37.3	3.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.9	98.1
Decachlorobiphenyl	96.8	93.2

JK 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5185527	0.6
Hexabromobiphenyl	3127538	3155881	0.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9633105	0.0
Hexabromobiphenyl	5043723	5093248	1.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	6.202	0.004	65108	39.1
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	6.616	-0.014	11227	3.8
Aroclor-1221	NS	---			----	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	6.616	-0.014	11227	5.7
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	9.459	0.071	31381	9.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	10.223	-0.004	14273	4.3	1	---			0.0
Aroclor-1254	2	10.635	0.020	10142	4.9	2	---			0.0
Aroclor-1254	3	10.727	-0.029	15037	3.7	3	---			0.0
Aroclor-1254	4	11.201	0.085	18380	4.4	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Total Col1Ave (4 peaks):				4.3	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	12.049	0.006	22674	7.9	1	---			0.0
Aroclor-1260	2	12.371	0.012	16620	5.8	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	13.561	-0.088	10978	1.6	3	---			0.0
Aroclor-1268	4	14.278	-0.007	10992	0.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

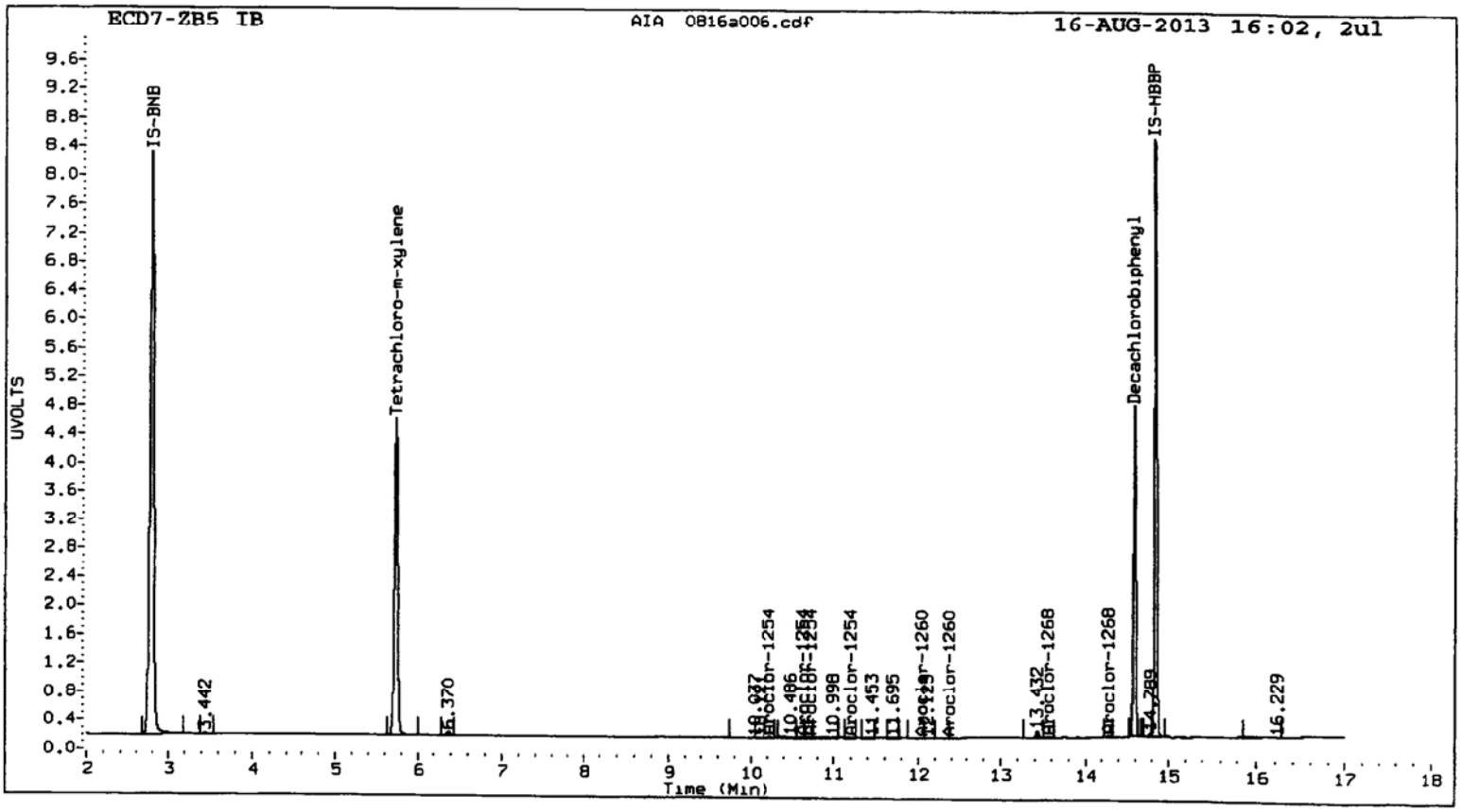
Total PCB Area Col1 (5.836 - 14.490) = 351932 Col1 Total PCB = 0.0 ppm*

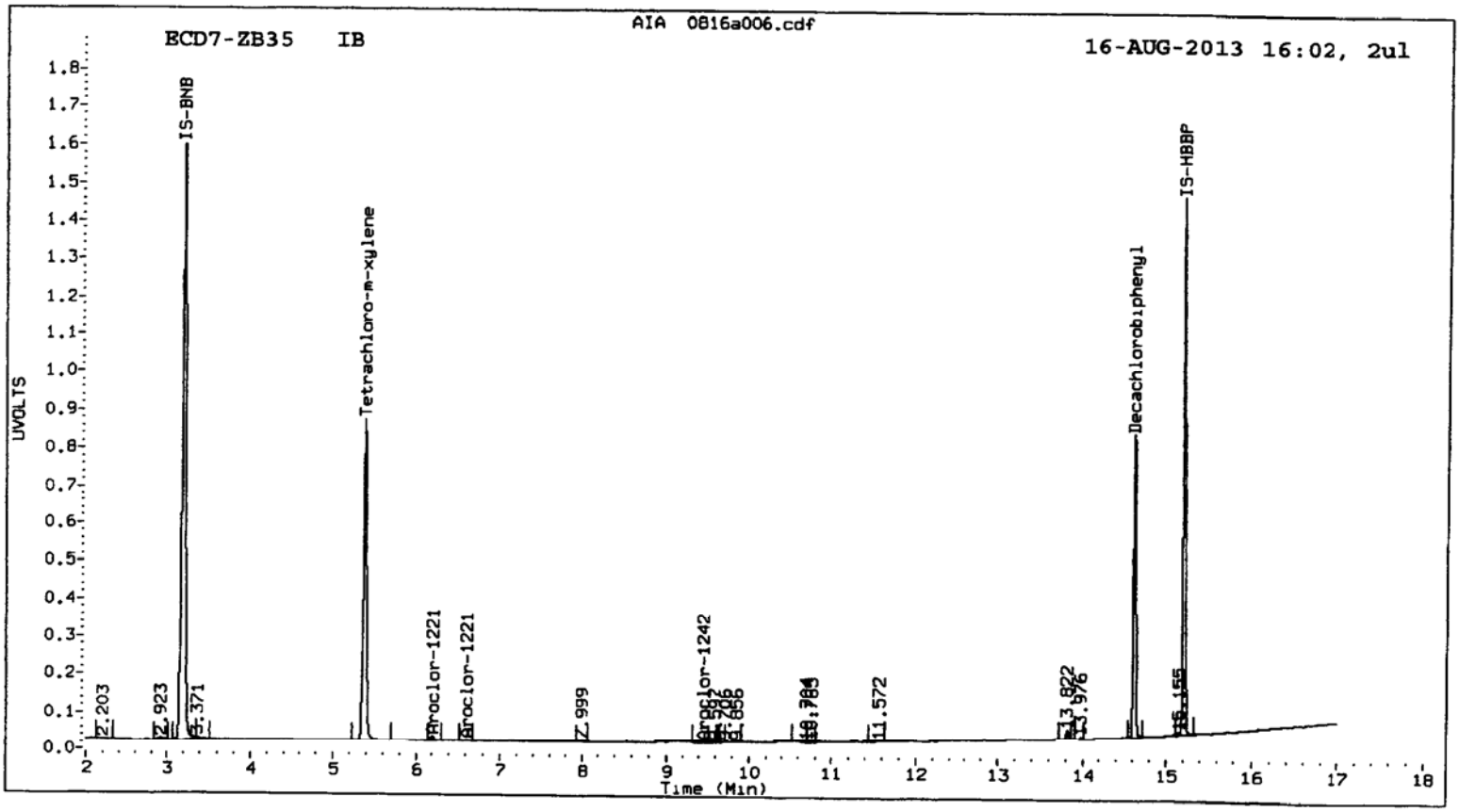
Total PCB Area Col2 (5.476 - 14.517) = 325118 Col2 Total PCB = 0.0 ppm*

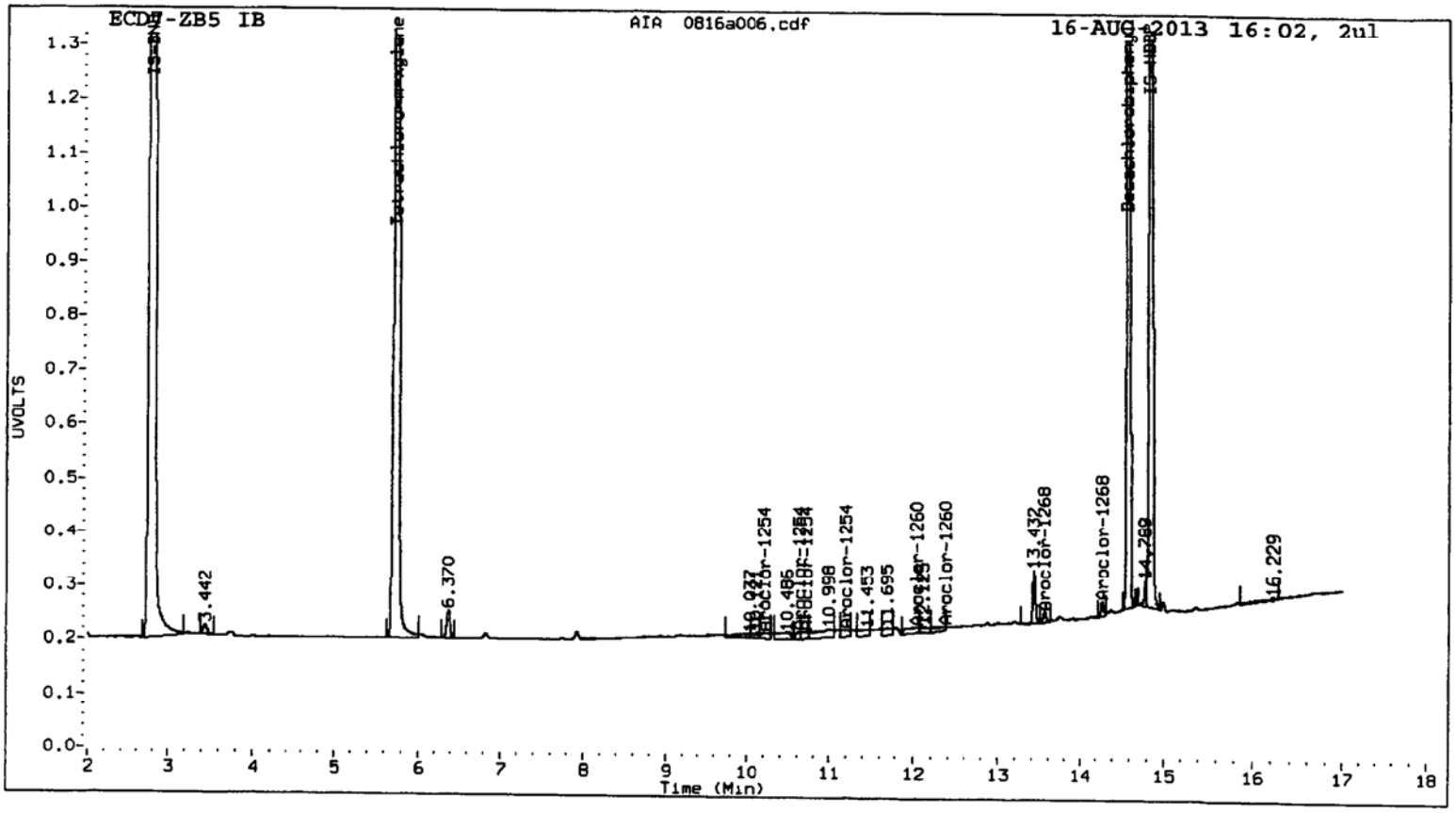
* Quantitated against AR1660 0.25ppm in Ical

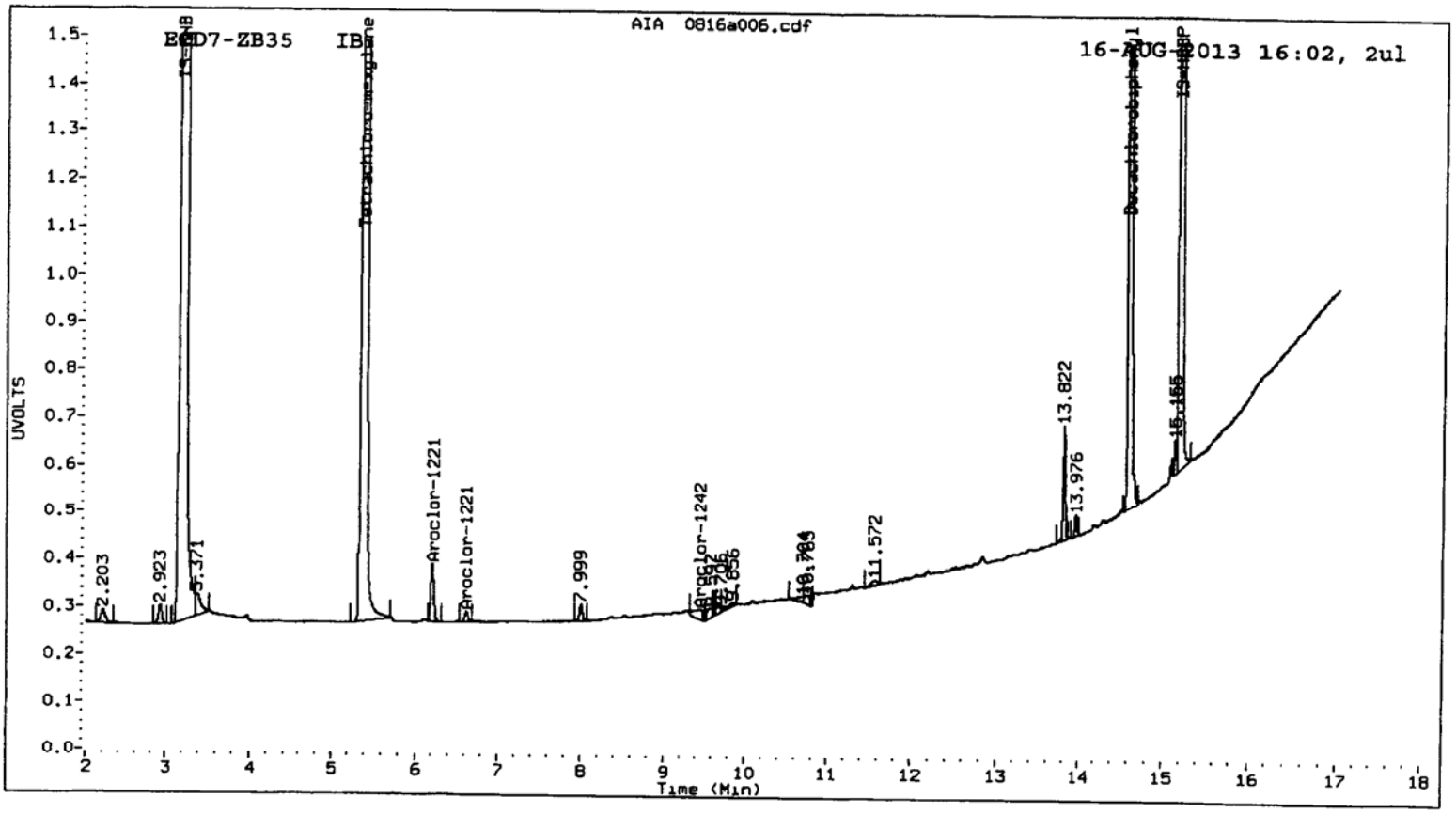
PCB-Form 10 Mod.

XB89:01393


ECD7-ZB5 IB
AIA 0816a006.cdf
16-AUG-2013 16:02, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1254
Aroclor-1260
Aroclor-1268
Time (Min)


ECD7-ZB35 IB
AIA 0816a006.cdf
16-AUG-2013 16:02, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1242
Time (Min)


ECD7-ZB5 IB
AIA 0816a006.cdf
16-AUG-2013 16:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
6.370
13.432
14.269
16.229


ECD7-ZB35 IB
AIA 0816a006.cdf
16-AUG-2013 16:02, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1242
2.203
2.923
3.371
7.999
11.572
13.822
13.976

XD80:61955

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a007.d
Data file 2: 20130816.b/ical-2.b/0816a007.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 16-AUG-2013 16:24
Report Date: 08/20/2013 12:55
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.738	0.002	1233532	5.376	0.000	2396990	20.5	19.6	4.1	Tetrachloro-m-xylene
14.590	0.000	900979	14.617	0.000	1584226	20.0	19.8	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	51.2	49.1
Decachlorobiphenyl	49.9	49.5

JK 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5152160	0.0
Hexabromobiphenyl	3127538	3127538	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9632630	0.0
Hexabromobiphenyl	5043723	5043723	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

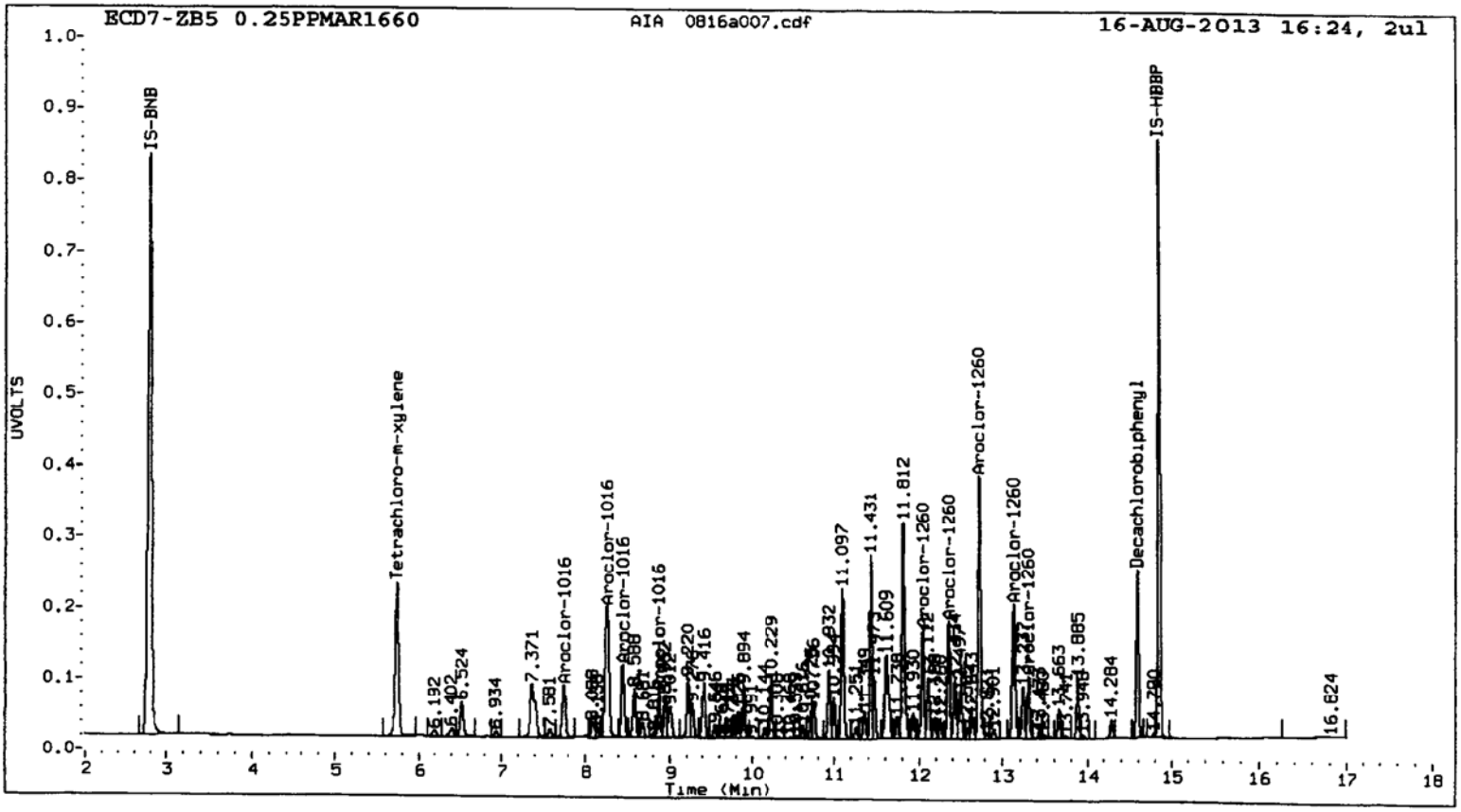
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.745	0.001	395593	244.7	1	6.630	0.001	539964	234.3
Aroclor-1016	2	8.265	0.000	1349619	246.9	2	7.510	0.001	1232826	235.4
Aroclor-1016	3	8.453	0.002	526351	241.6	3	8.322	0.001	2597732	238.1
Aroclor-1016	4	8.877	0.001	309362	232.5	4	8.922	0.001	755520	230.4
Total Col1Ave (4 peaks):					241.4	Total Col2Ave (4 peaks):				234.6 RPD = 3
Corrected Ave (3 peaks):					239.6	Corrected Ave (3 peaks):				233.4 RPD = 3
Aroclor-1260	1	12.043	0.000	690599	244.0	1	11.936	0.000	1836076	240.2
Aroclor-1260	2	12.360	0.001	709089	249.7	2	12.479	0.001	1488265	243.0
Aroclor-1260	3	12.730	0.000	1692812	257.0	3	12.749	0.001	2950891	244.3
Aroclor-1260	4	13.126	0.001	890394	256.2	4	13.310	0.000	1986677	243.2
Aroclor-1260	5	13.306	0.001	385334	253.5	NS	---			----
Total Col1Ave (5 peaks):					252.1	Total Col2Ave (4 peaks):				242.6 RPD = 4
Corrected Ave (4 peaks):					250.8	Corrected Ave (3 peaks):				242.1 RPD = 4

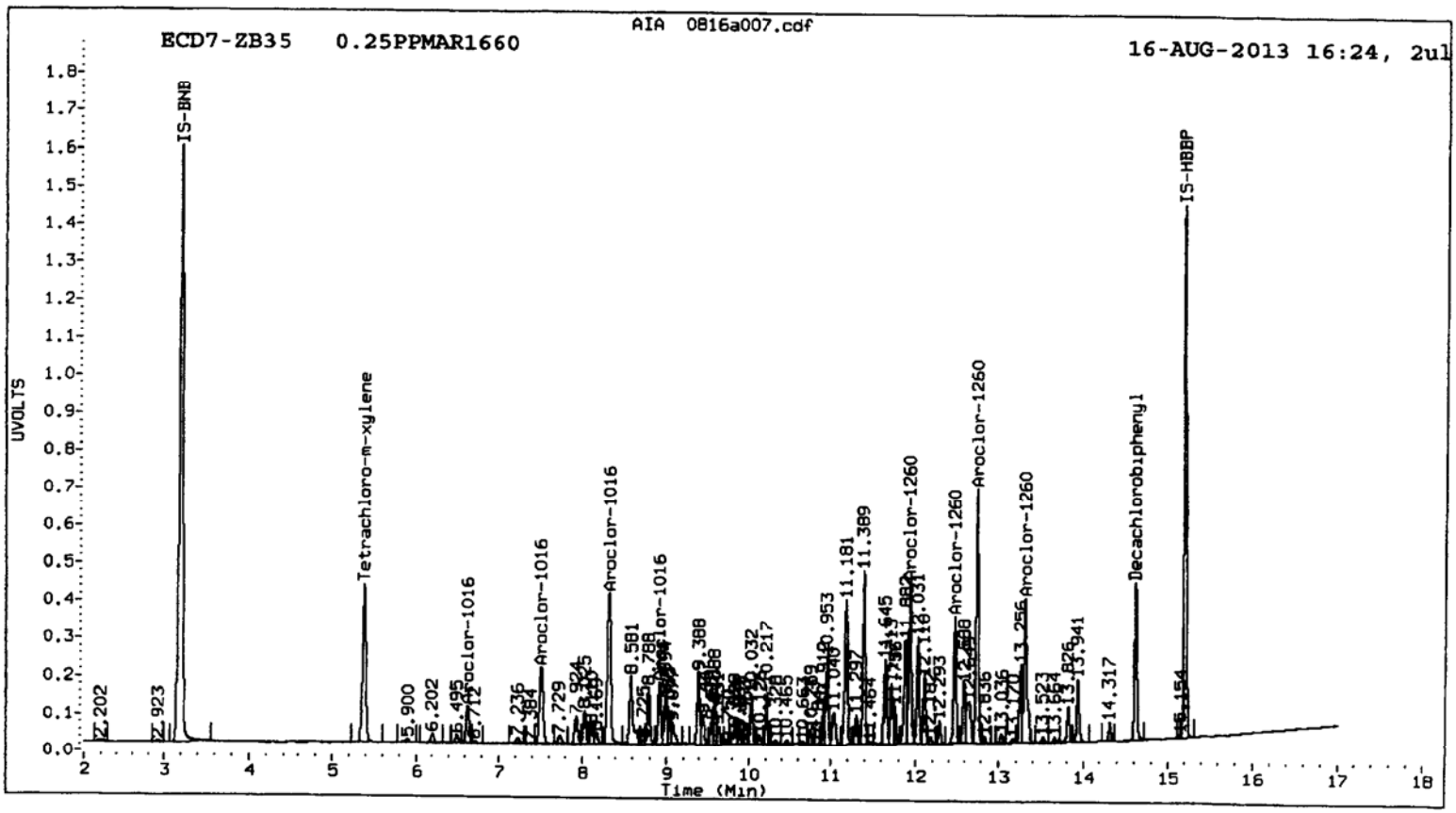
Total PCB Area Col1 (5.836 - 14.490) = 20172205 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 38209576 Col2 Total PCB = 0.5 ppm*

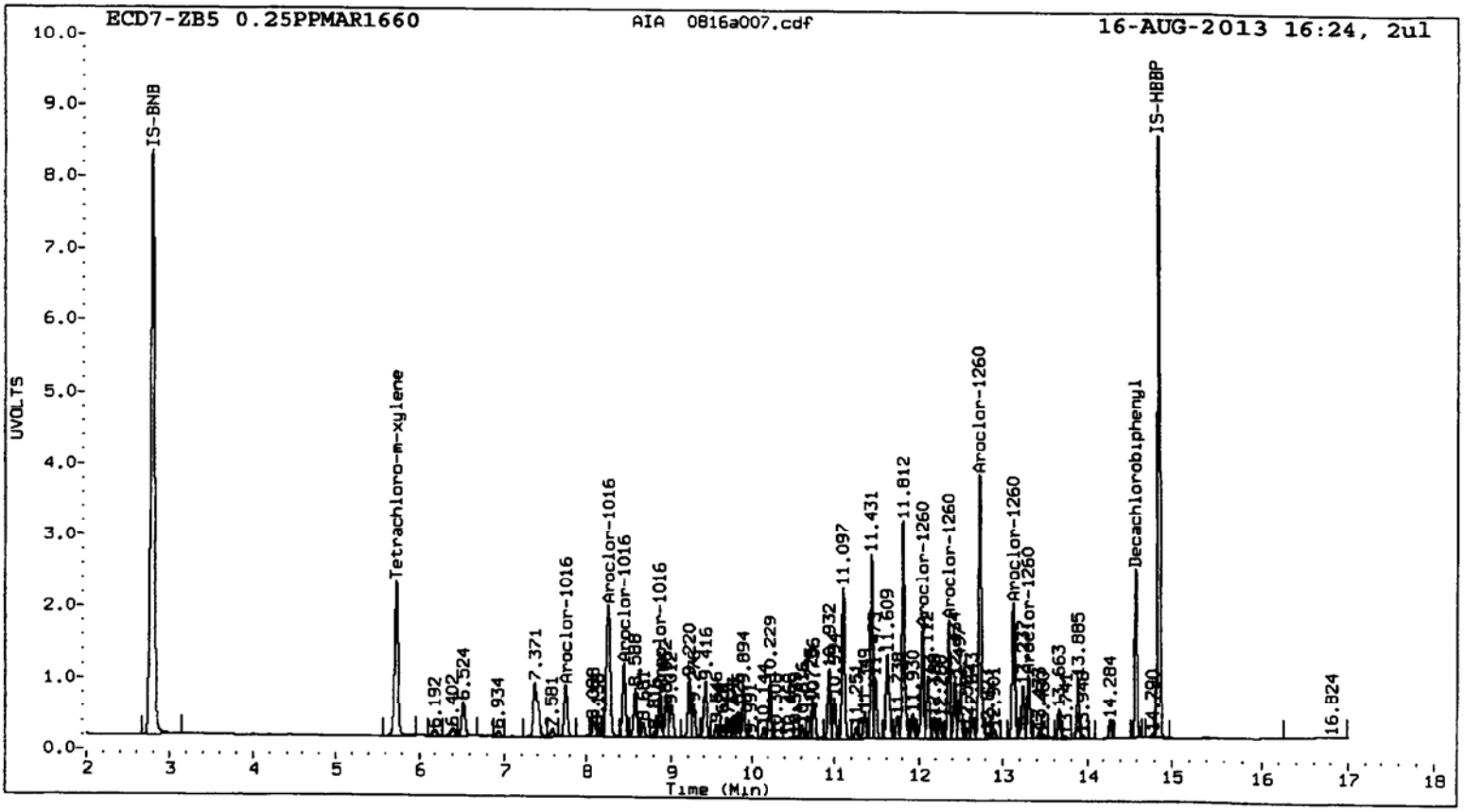
* Quantitated against AR1660 0.25ppm in Ical

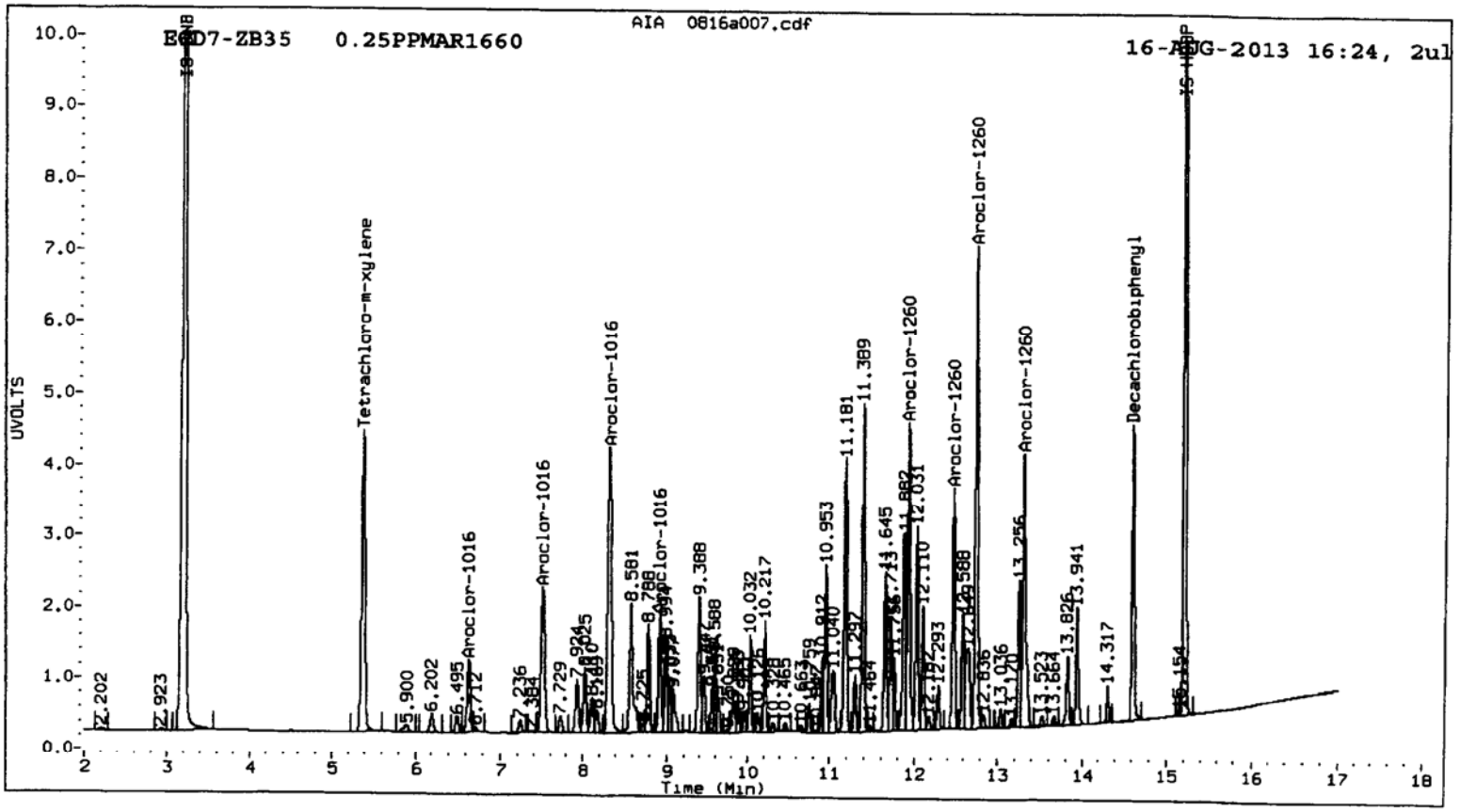
PCB-Form 10 Mod.


ECD7-ZB5 0.25PPMAR1660
AIA 0816a007.cdf
16-AUG-2013 16:24, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 0.25PPMAR1660
AIA 0816a007.cdf
16-AUG-2013 16:24, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

XD89:01399


ECD7-ZB5 0.25PPMAR1660
AIA 0816a007.cdf
16-AUG-2013 16:24, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 0.25PPMAR1660
AIA 0816a007.cdf
16-AUG-2013 16:24, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

XB89:01466

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a008.d
Data file 2: 20130816.b/ical-2.b/0816a008.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 16-AUG-2013 16:46
Report Date: 08/20/2013 12:55
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.737	0.001	93742	5.377	0.001	210118	1.5	1.7	10.6	Tetrachloro-m-xylene
14.589	-0.001	81052	14.617	0.000	146912	1.7	1.8	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	3.8	4.2
Decachlorobiphenyl	4.3	4.4

JL 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5264425	2.2
Hexabromobiphenyl	3127538	3295005	5.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9795148	1.7
Hexabromobiphenyl	5043723	5274126	4.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.746	0.003	35892	21.7	1	6.633	0.003	56451	24.1
Aroclor-1016	2	8.267	0.001	119296	21.4	2	7.511	0.002	128373	24.1
Aroclor-1016	3	8.453	0.002	50462	22.7	3	8.322	0.001	263577	23.8
Aroclor-1016	4	8.878	0.001	34169	25.1	4	8.922	0.001	83644	25.1
Total Col1Ave (4 peaks):					22.7	Total Col2Ave (4 peaks):				24.3 RPD = 7
Corrected Ave (3 peaks):					21.9	Corrected Ave (3 peaks):				24.0 RPD = 9
Aroclor-1260	1	12.042	-0.001	72313	24.3	1	11.936	0.000	192671	24.1
Aroclor-1260	2	12.359	0.000	68028	22.7	2	12.479	0.000	151545	23.7
Aroclor-1260	3	12.730	-0.001	145409	21.0	3	12.749	0.000	291707	23.1
Aroclor-1260	4	13.126	0.001	76446	20.9	4	13.310	0.000	198483	23.2
Aroclor-1260	5	13.304	0.000	33856	21.1	NS	---			----
Total Col1Ave (5 peaks):					22.0	Total Col2Ave (4 peaks):				23.5 RPD = 7
Corrected Ave (4 peaks):					21.4	Corrected Ave (3 peaks):				23.3 RPD = 8

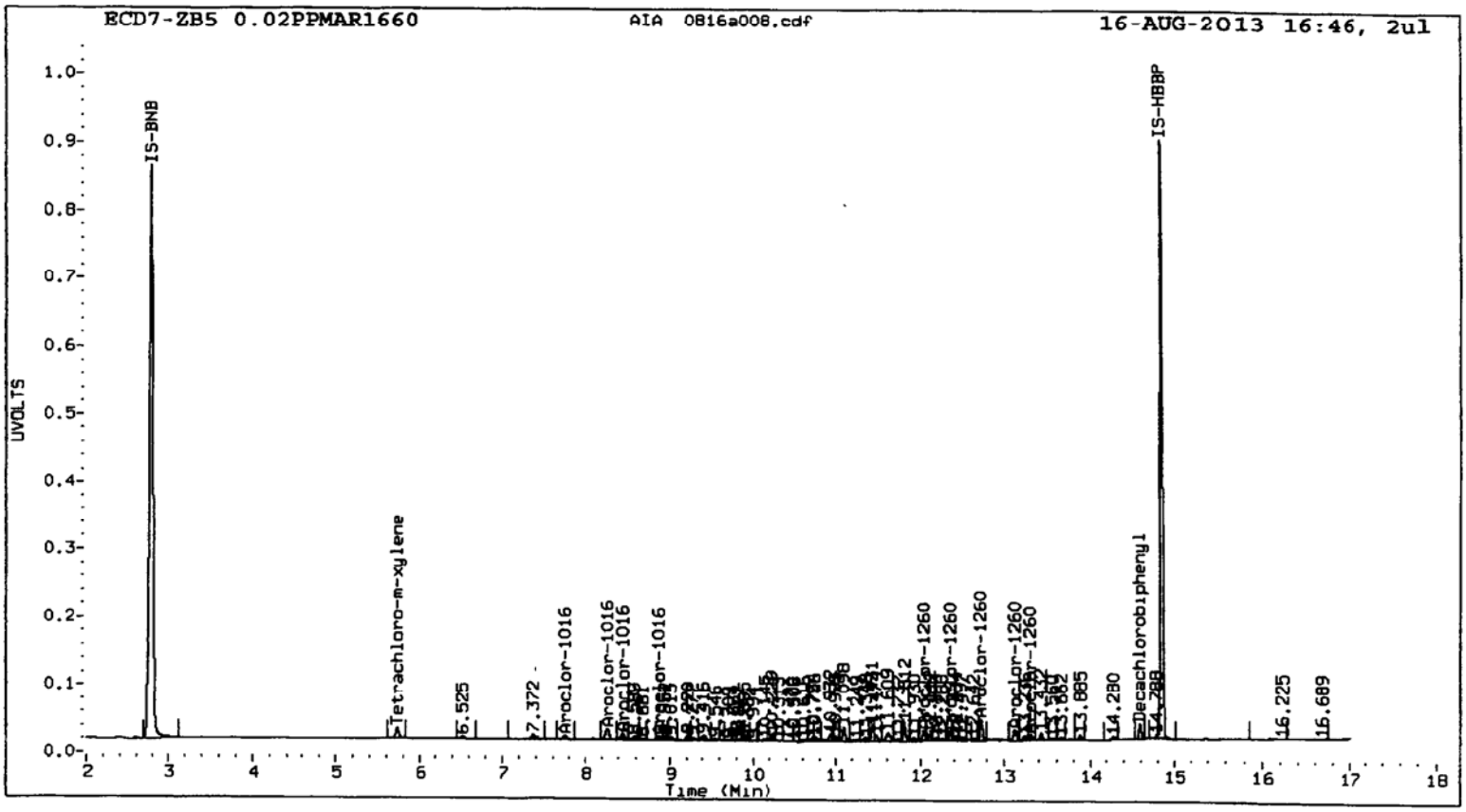
Total PCB Area Col1 (5.836 - 14.490) = 2275721 Col1 Total PCB = 0.1 ppm*

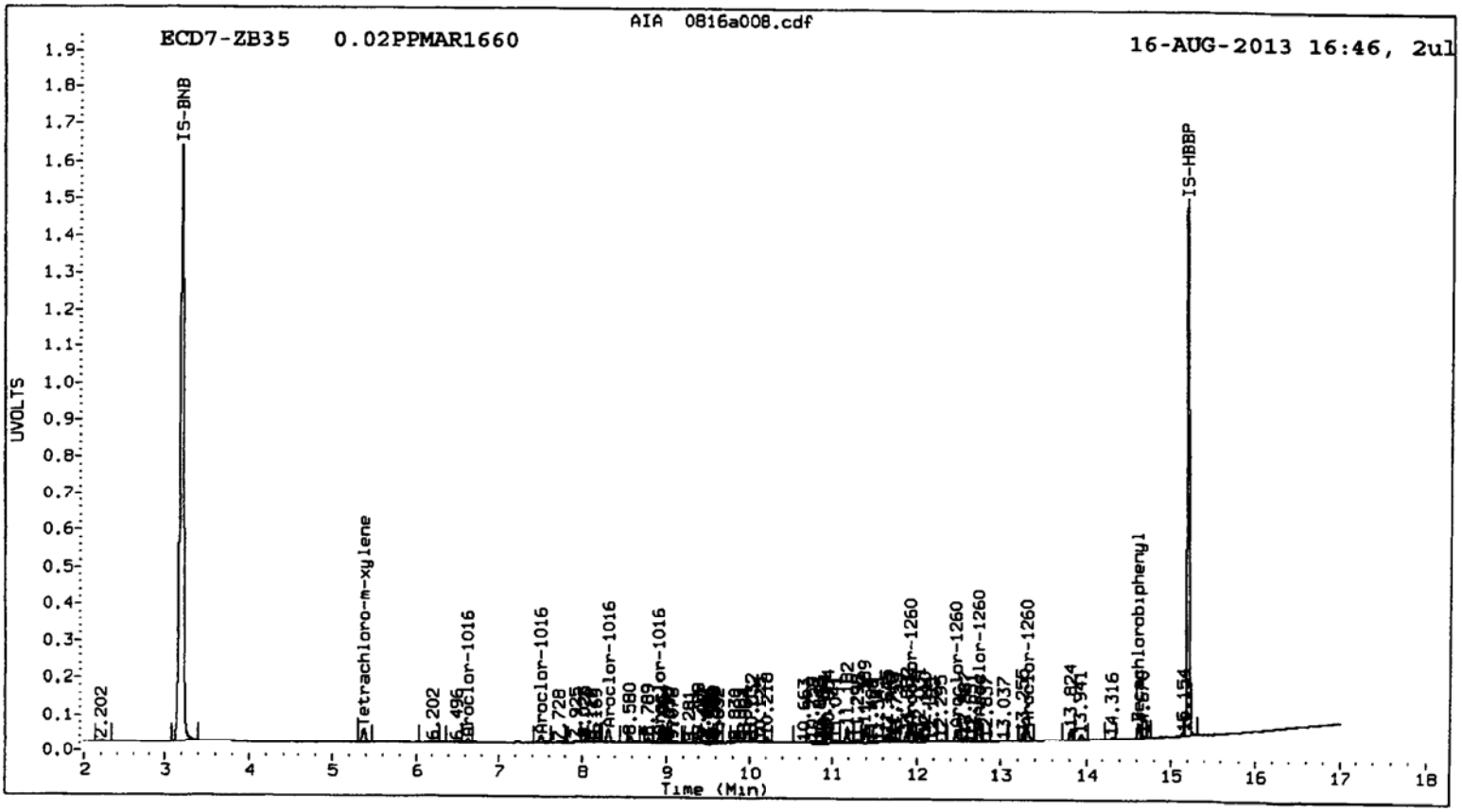
Total PCB Area Col2 (5.476 - 14.517) = 4342274 Col2 Total PCB = 0.1 ppm*

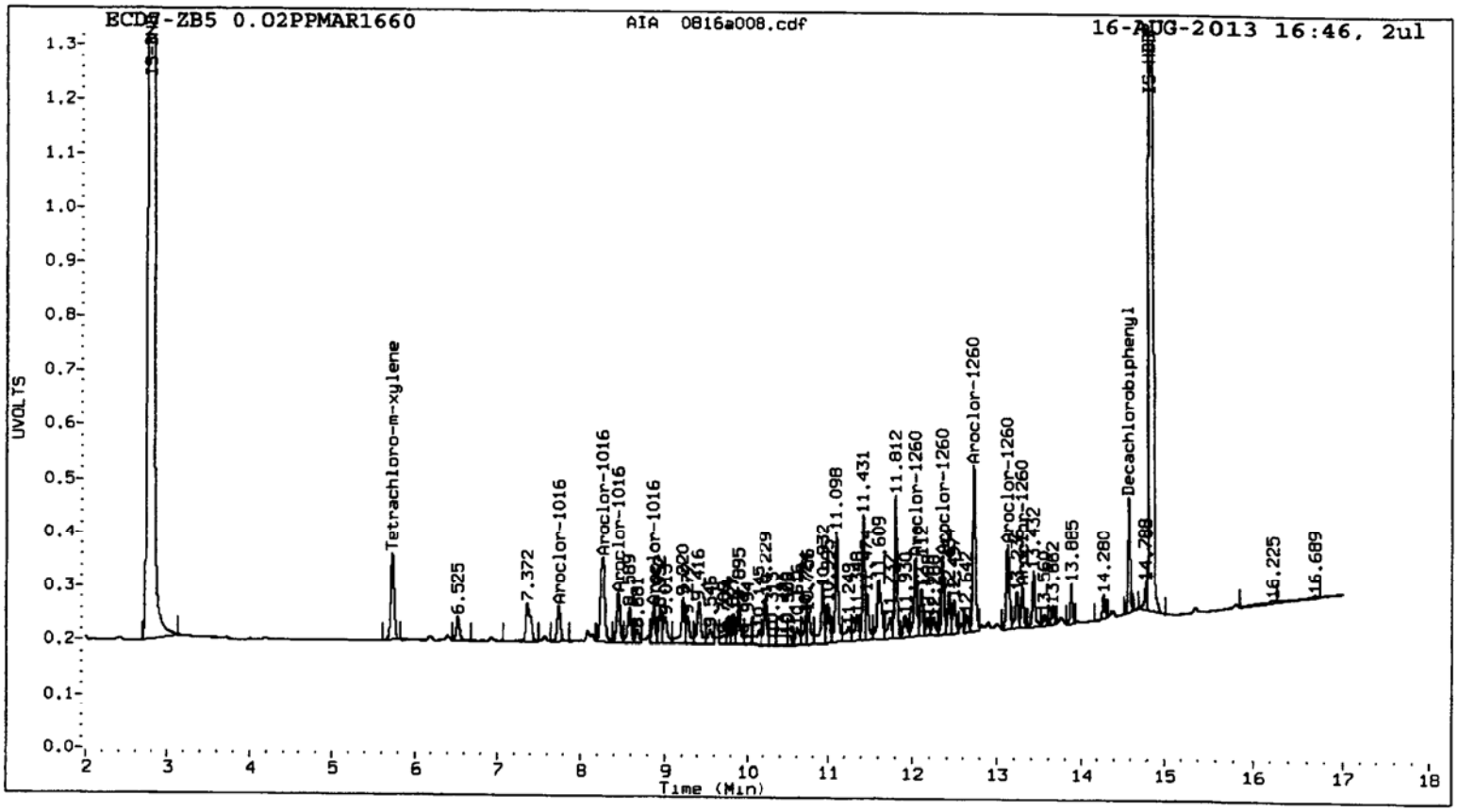
* Quantitated against AR1660 0.25ppm in Ical

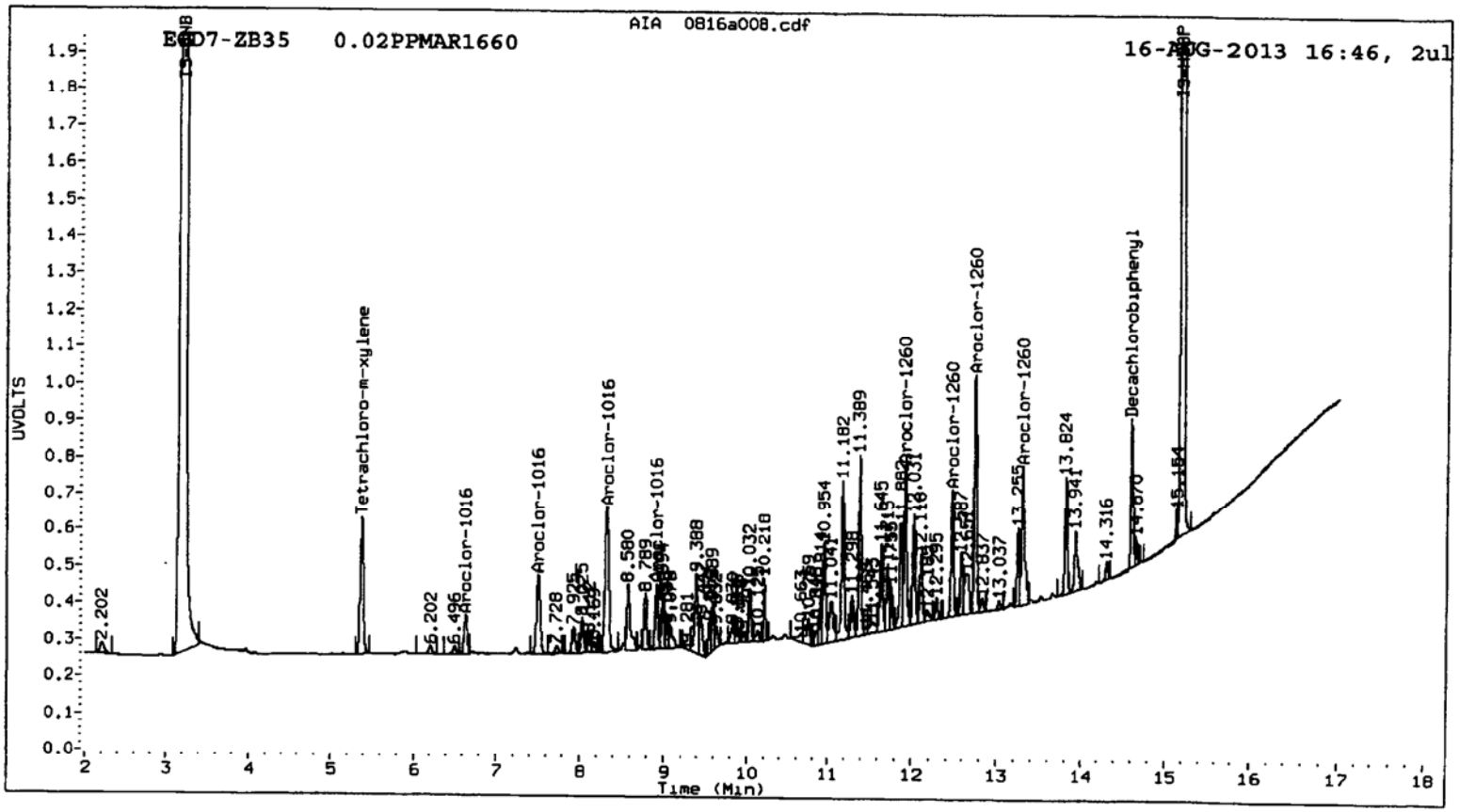
XB89:01402

PCB-Form 10 Mod.


ECD7-ZB5 0.02PPMAR1660
AIA 0816a008.cdf
16-AUG-2013 16:46, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)


ECD7-ZB35 0.02PPMAR1660
AIA 0816a008.cdf
16-AUG-2013 16:46, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
UVOLTS
Time (Min)


ECD7-ZB5 0.02PPMAR1660
AIA 0816a008.cdf
16-AUG-2013 16:46, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD7-ZB35 0.02PPMAR1660
AIA 0816a008.cdf
16-AUG-2013 16:46, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a009.d
Data file 2: 20130816.b/ical-2.b/0816a009.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 16-AUG-2013 17:08
Report Date: 08/20/2013 12:55
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.000	234112	5.375	-0.001	494735	3.9	4.1	5.0	Tetrachloro-m-xylene
14.590	0.000	192119	14.618	0.000	345828	4.1	4.2	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	9.7	10.2
Decachlorobiphenyl	10.3	10.6

08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5178793	0.5
Hexabromobiphenyl	3127538	3224361	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9612529	-0.2
Hexabromobiphenyl	5043723	5155247	2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

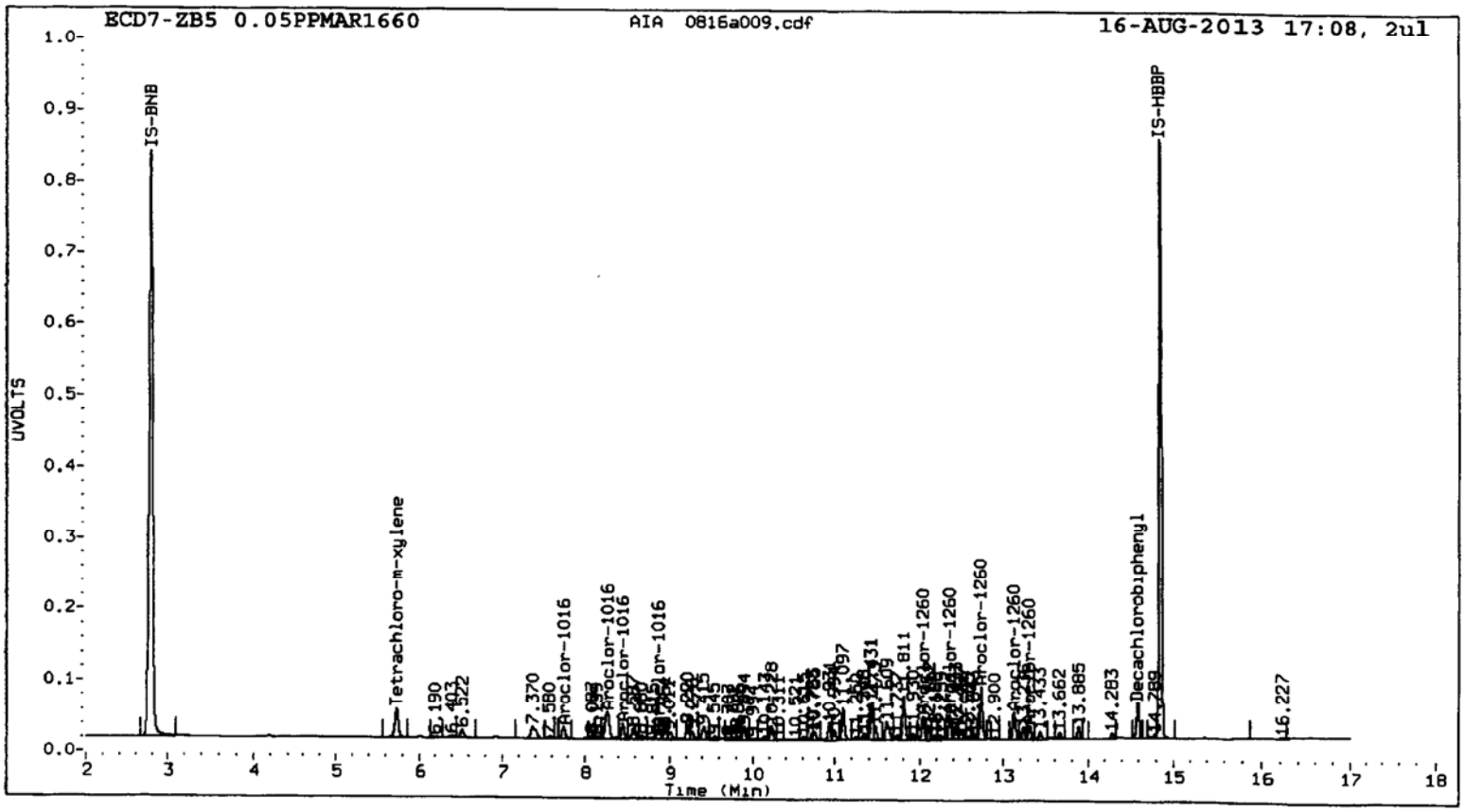
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.745	0.001	85680	52.7	1	6.630	0.001	127856	55.6
Aroclor-1016	2	8.266	0.001	281563	51.2	2	7.509	0.000	288987	55.3
Aroclor-1016	3	8.451	0.000	115286	52.6	3	8.320	-0.001	585464	53.8
Aroclor-1016	4	8.876	0.000	72465	54.2	4	8.921	0.000	181774	55.5
Total Col1Ave (4 peaks):					52.7	Total Col2Ave (4 peaks):				55.1 RPD = 4
Corrected Ave (3 peaks):					52.2	Corrected Ave (3 peaks):				54.9 RPD = 5
Aroclor-1260	1	12.043	0.000	151022	51.8	1	11.936	0.000	425863	54.5
Aroclor-1260	2	12.359	0.000	149084	50.9	2	12.479	0.000	341450	54.5
Aroclor-1260	3	12.730	0.000	339167	49.9	3	12.749	0.000	656811	53.2
Aroclor-1260	4	13.126	0.001	177485	49.5	4	13.309	0.000	454784	54.5
Aroclor-1260	5	13.305	0.001	79217	50.6	NS	---			----
Total Col1Ave (5 peaks):					50.5	Total Col2Ave (4 peaks):				54.2 RPD = 7
Corrected Ave (4 peaks):					50.2	Corrected Ave (3 peaks):				54.1 RPD = 7

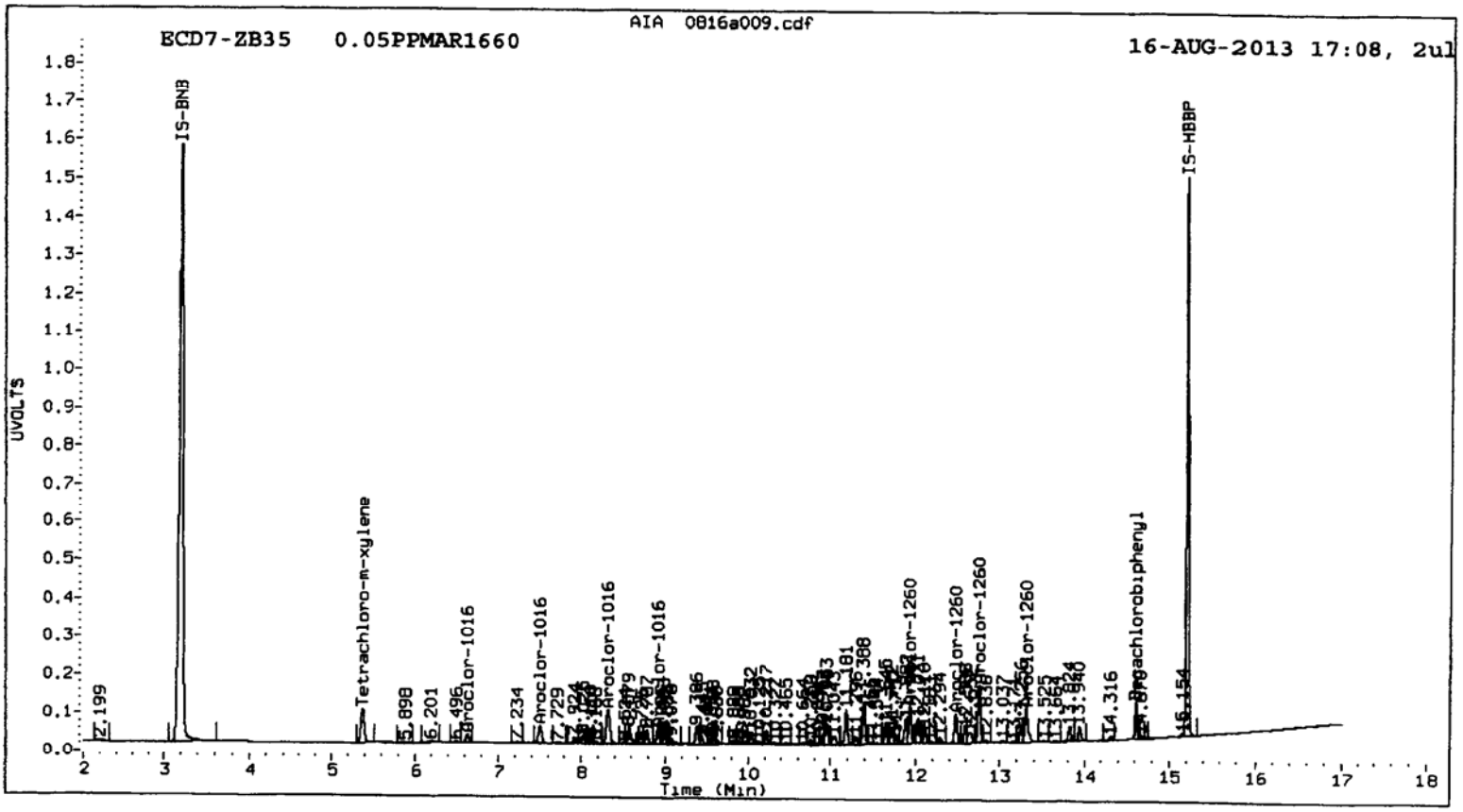
Total PCB Area Col1 (5.836 - 14.490) = 4617789 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 9209991 Col2 Total PCB = 0.1 ppm*

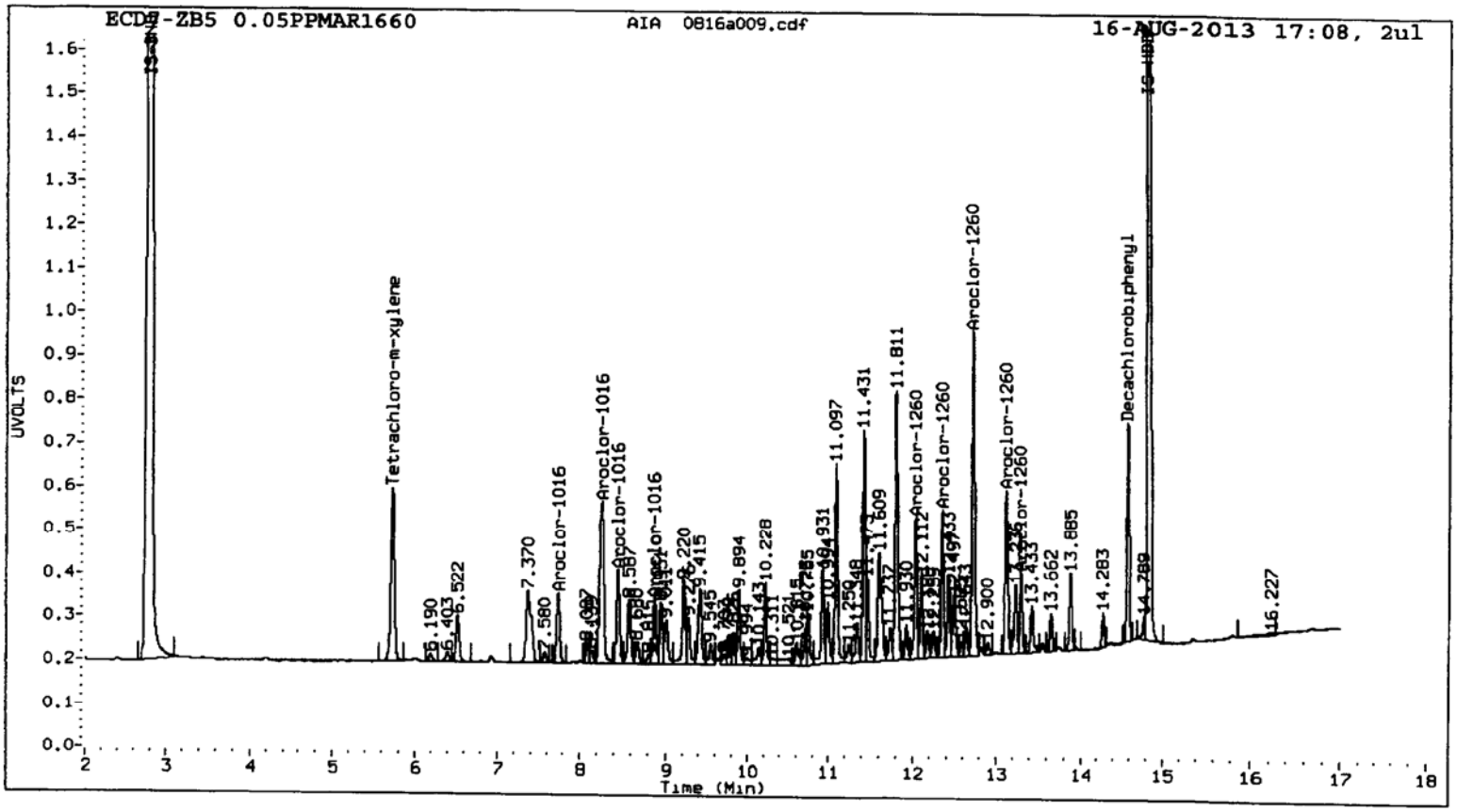
* Quantitated against AR1660 0.25ppm in Ical

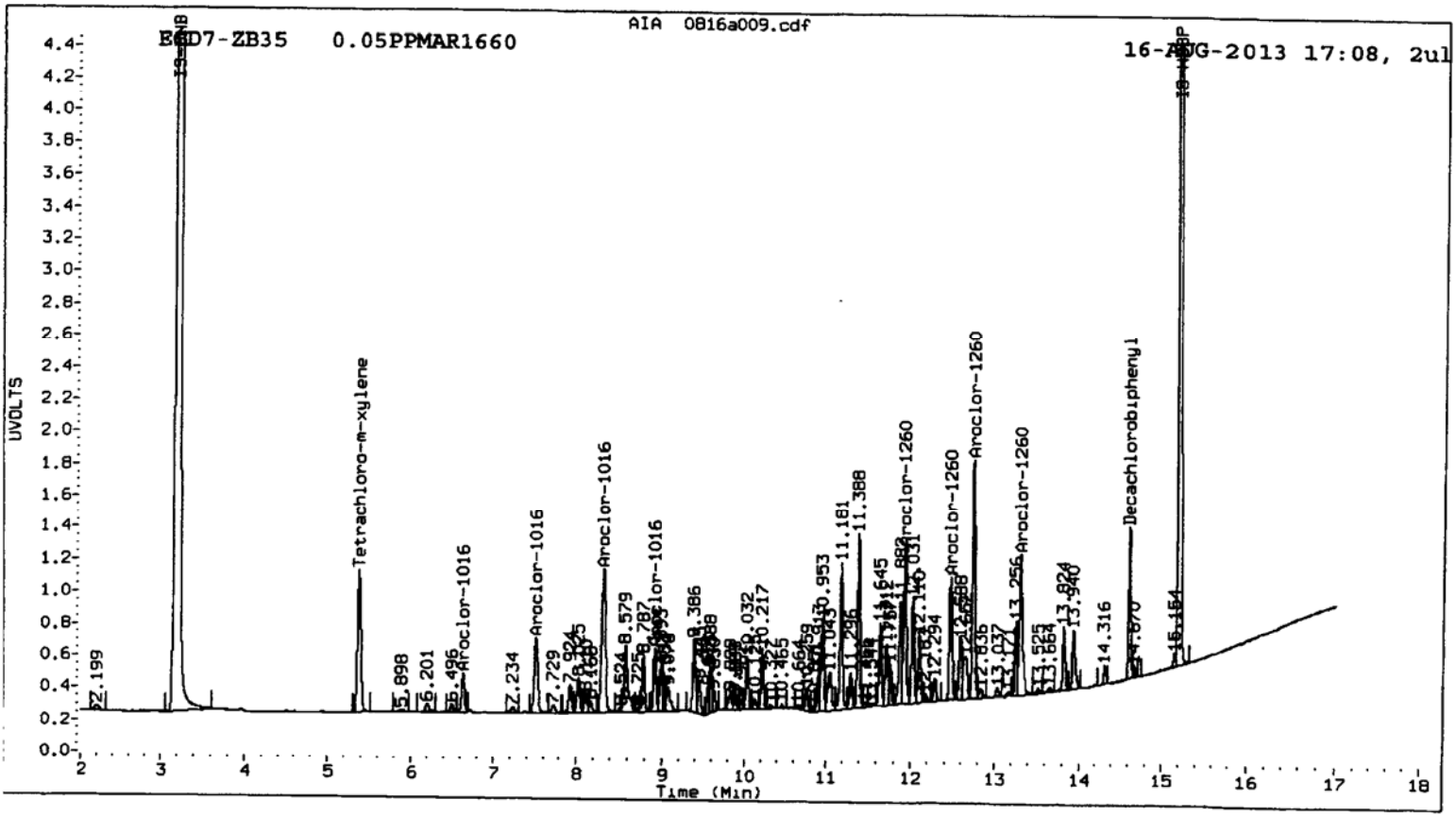
PCB-Form 10 Mod.


ECD7-ZB5 0.05PPMAR1660
AIA 0816a009.cdf
16-AUG-2013 17:08, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
UVOLTS
Time (Min)


AIA 0816a009.cdf
ECD7-ZB35 0.05PPMAR1660
16-AUG-2013 17:08, 2ul
IS-BNB
IS-HBBP
Tetrachloro-m-xylene
UVOLTS
Time (Min)

XB89:01409


ECD7-ZB5 0.05PPMAR1660
AIA 0816a009.cdf
16-AUG-2013 17:08, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD7-ZB35 0.05PPMAR1660
AIA 0816a009.cdf
16-AUG-2013 17:08, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

XB89:01416

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a010.d
Data file 2: 20130816.b/ical-2.b/0816a010.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1 PPM AR1660
Client ID:
Injection Date: 16-AUG-2013 17:30
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.734	-0.002	5360204	5.374	-0.002	9850884	82.9	78.3	5.6	Tetrachloro-m-xylene
14.590	0.000	3764707	14.618	0.001	6393386	75.7	73.4	3.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	207.2	195.8
Decachlorobiphenyl	189.3	183.5

JL 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5527850	7.3
Hexabromobiphenyl	3127538	3445693	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9924788	3.0
Hexabromobiphenyl	5043723	5485487	8.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

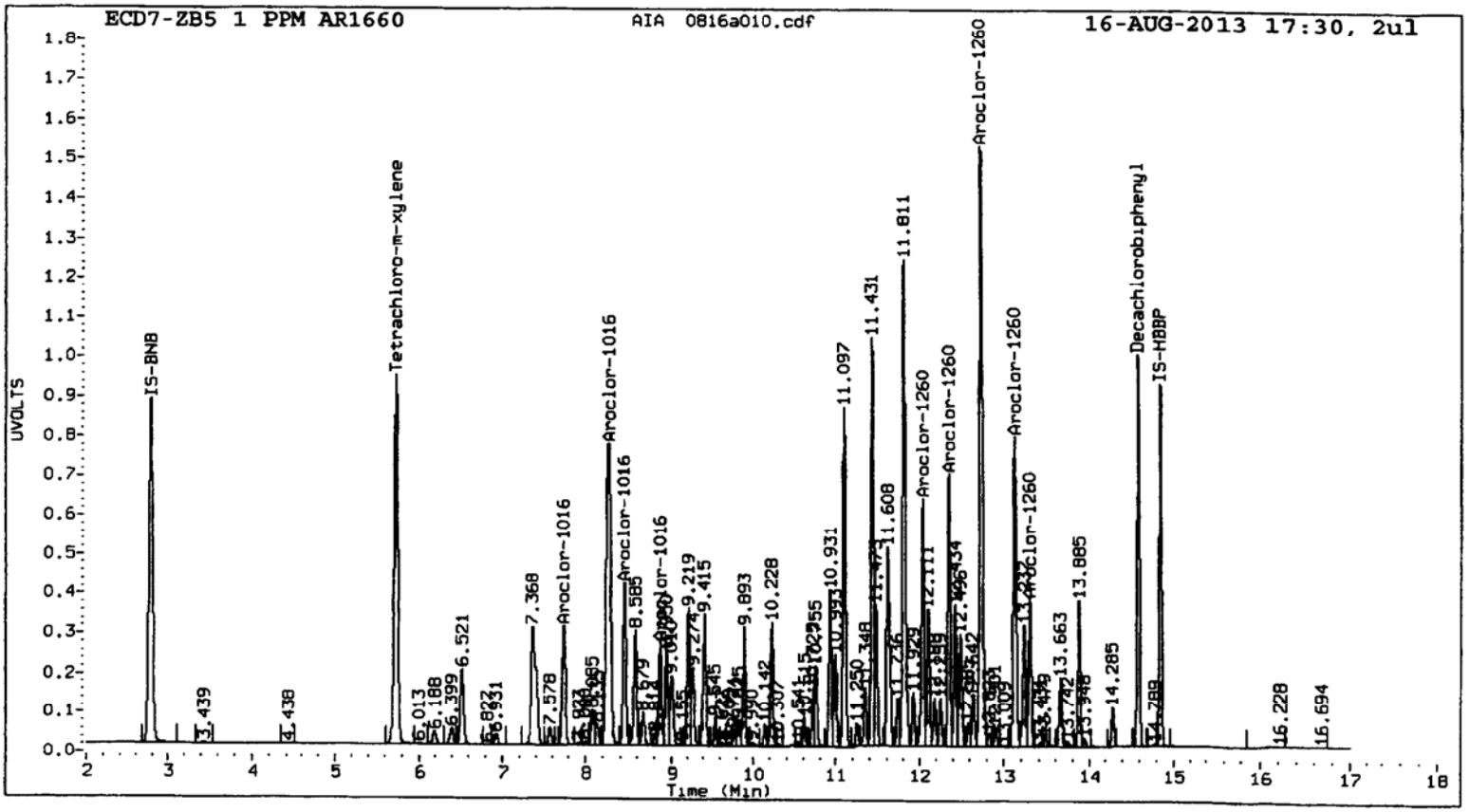
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.743	-0.001	1593567	918.5	1	6.628	-0.002	1963249	827.0
Aroclor-1016	2	8.264	-0.001	5565744	948.9	2	7.508	-0.001	4505939	835.2
Aroclor-1016	3	8.449	-0.002	2133220	912.4	3	8.319	-0.002	9599693	854.0
Aroclor-1016	4	8.875	-0.001	1214515	850.6	4	8.919	-0.001	2791561	826.2
Total Col1Ave (4 peaks):					907.6	Total Col2Ave (4 peaks):				835.6 RPD = 8
Corrected Ave (3 peaks):					893.9	Corrected Ave (3 peaks):				829.5 RPD = 7
Aroclor-1260	1	12.043	0.000	2812729	902.0	1	11.936	0.000	7155204	860.7
Aroclor-1260	2	12.359	0.000	2927415	935.7	2	12.479	0.000	5730060	860.1
Aroclor-1260	3	12.730	0.000	7019865	967.2	3	12.750	0.001	11810376	898.9
Aroclor-1260	4	13.127	0.002	3766664	983.7	4	13.310	0.001	7767121	874.2
Aroclor-1260	5	13.306	0.001	1620235	967.5	NS	---			----
Total Col1Ave (5 peaks):					951.2	Total Col2Ave (4 peaks):				873.4 RPD = 9
Corrected Ave (4 peaks):					943.1	Corrected Ave (3 peaks):				865.0 RPD = 9

Total PCB Area Col1 (5.836 - 14.490) = 81847427 Col1 Total PCB = 1.9 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 143171421 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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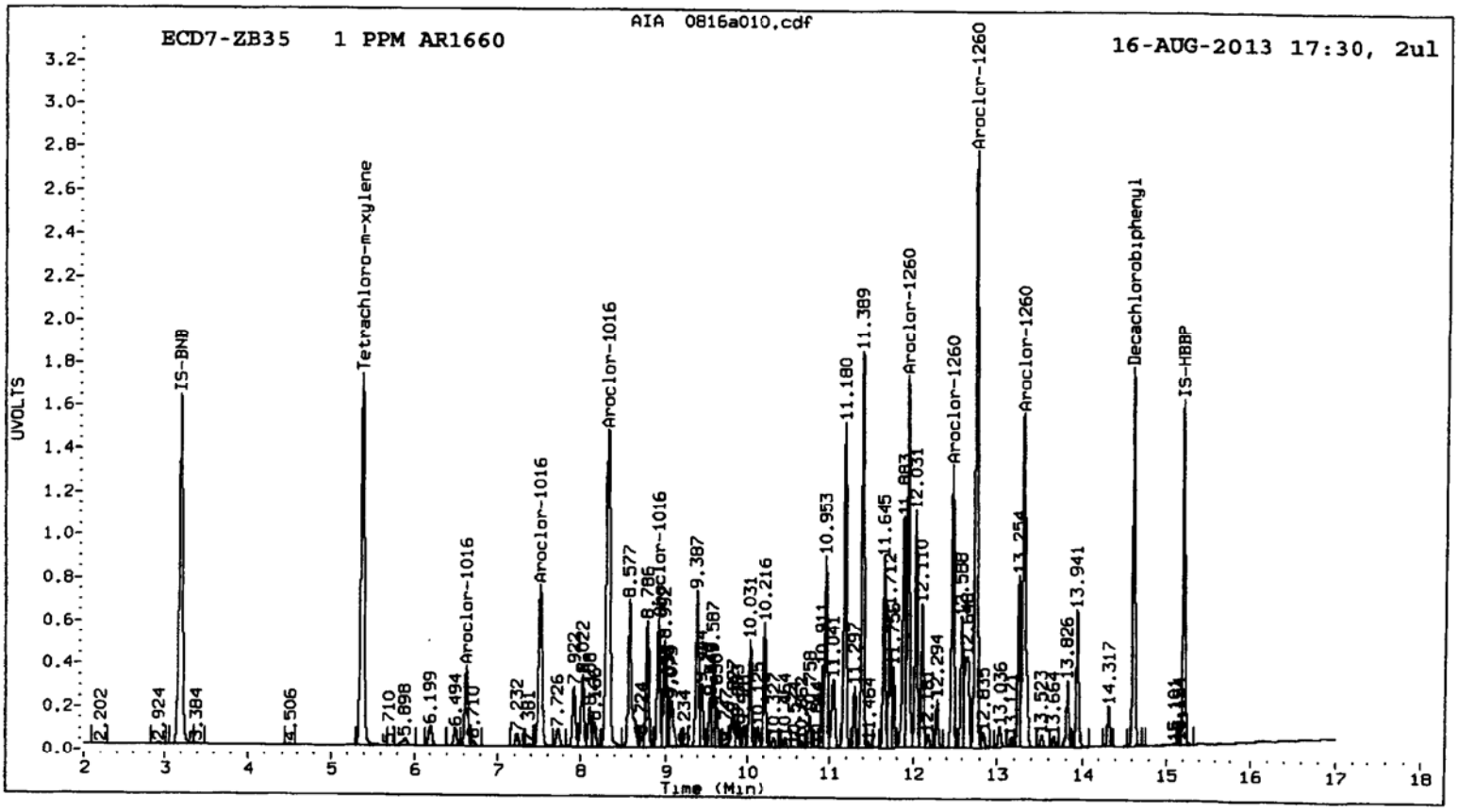
16-AUG-2013 17:30, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl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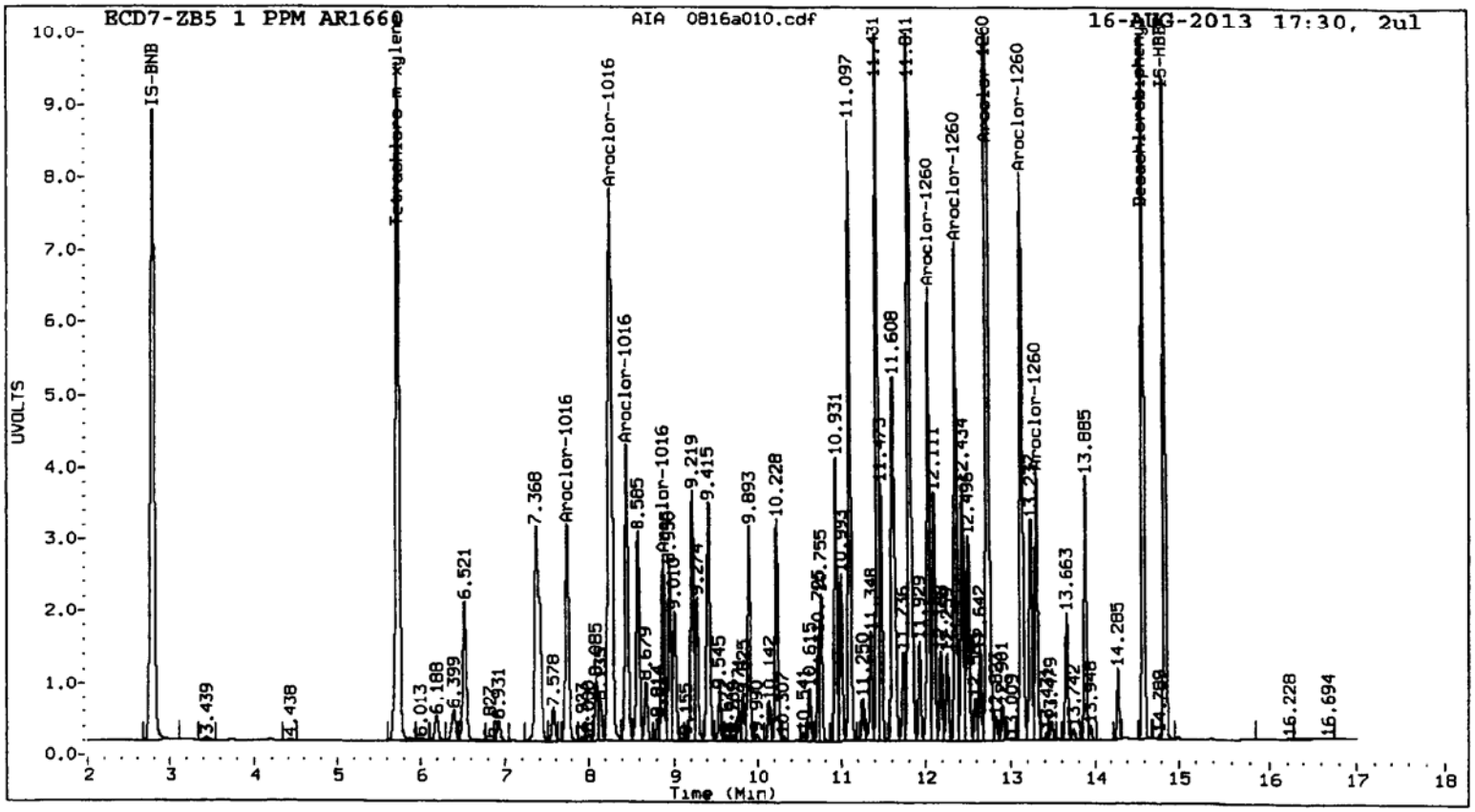
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBBP
Decachlorobiphenyl

XB88-01414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UVOLTS
Time (Min)
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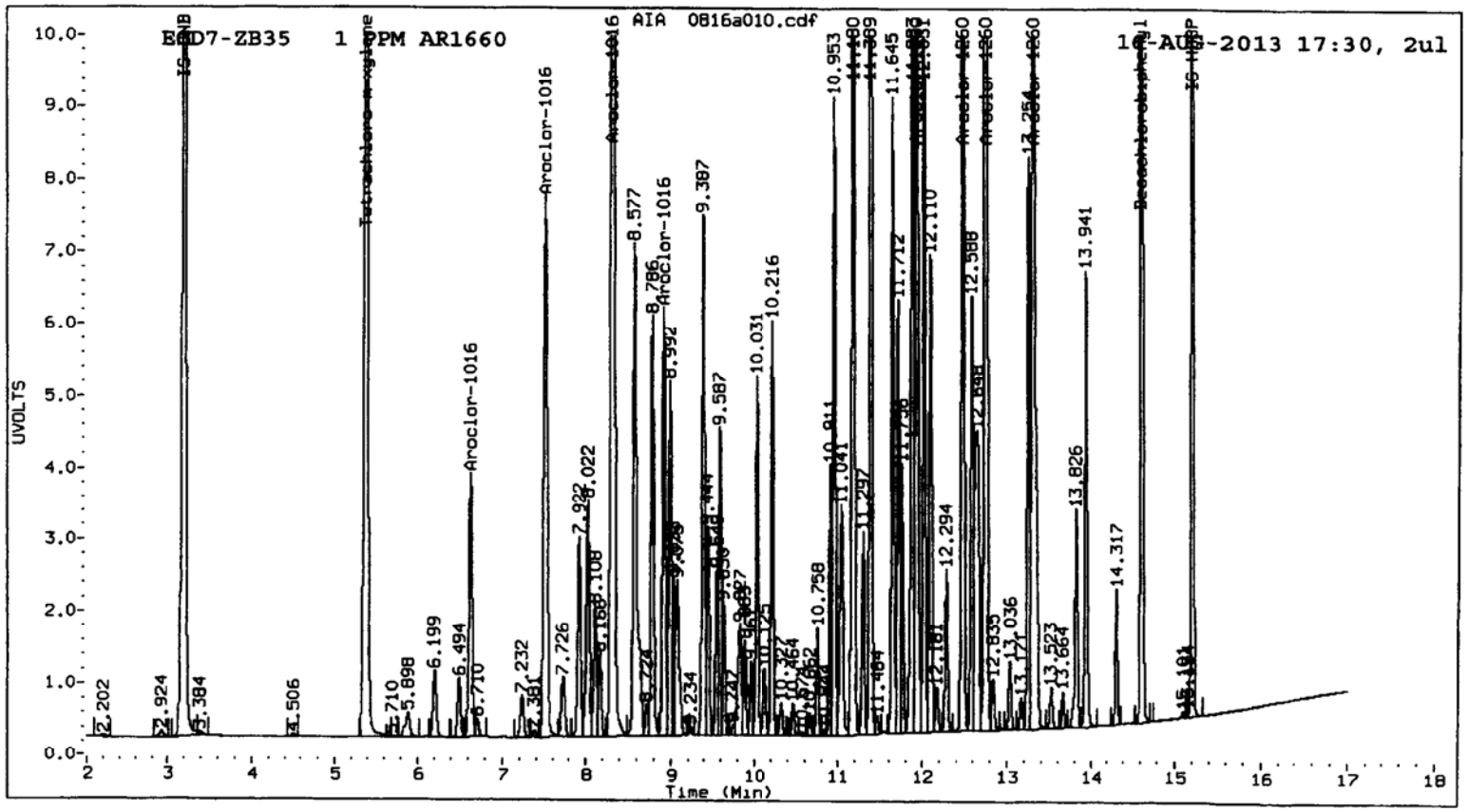
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBB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UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
IS-HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a011.d
Data file 2: 20130816.b/ical-2.b/0816a011.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 16-AUG-2013 17:52
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.734	-0.002	499928	5.373	-0.002	1013740	8.1	8.2	1.1	Tetrachloro-m-xylene
14.589	-0.001	397992	14.618	0.000	703150	8.4	8.5	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	20.3	20.5
Decachlorobiphenyl	21.0	21.3

08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5263584	2.2
Hexabromobiphenyl	3127538	3283177	5.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9750145	1.2
Hexabromobiphenyl	5043723	5195633	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

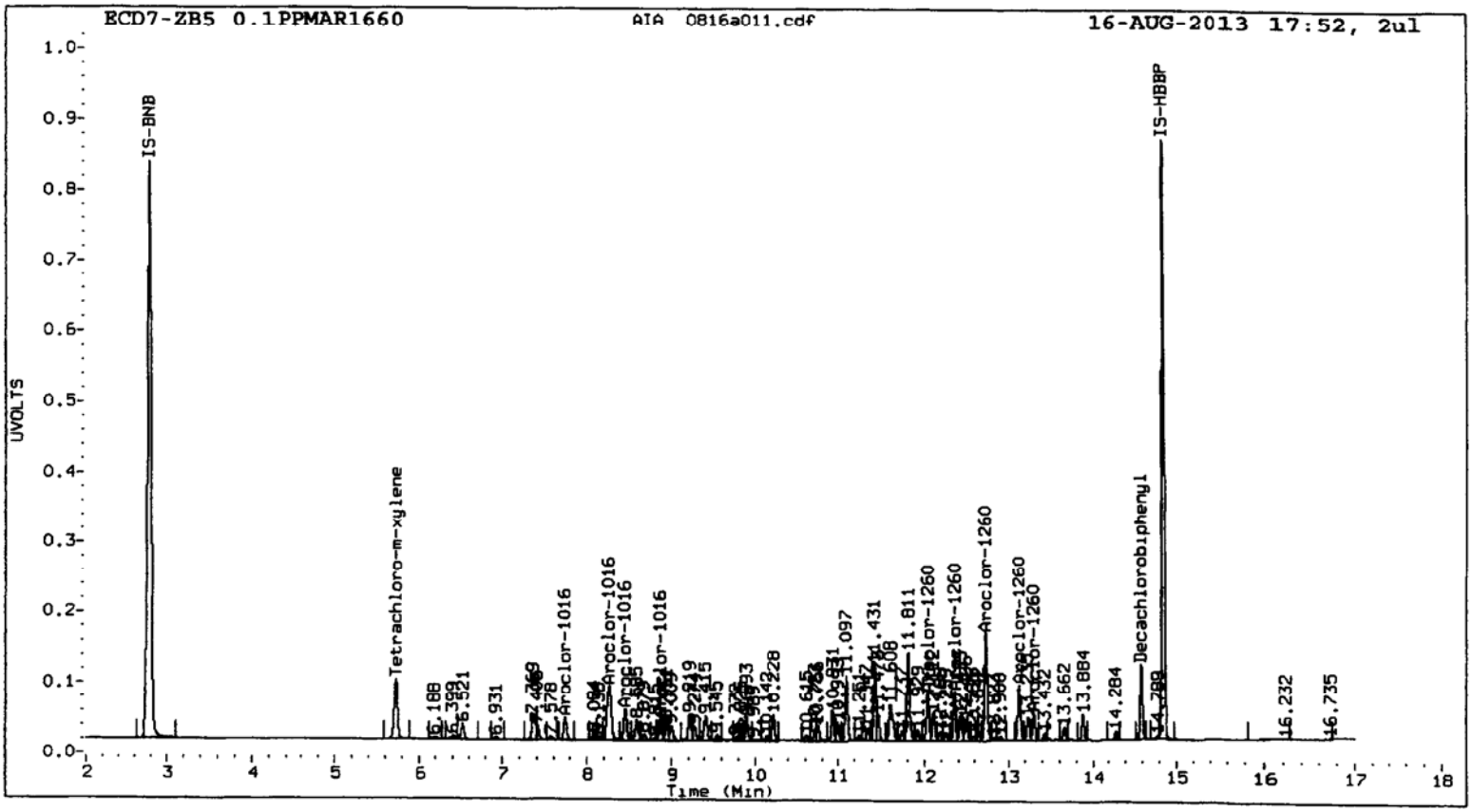
	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.742	-0.002	171681	103.9	1	6.629	-0.001	249197	106.8
Aroclor-1016	2	8.262	-0.003	572298	102.5	2	7.507	-0.001	561262	105.9
Aroclor-1016	3	8.450	-0.001	227910	102.4	3	8.320	-0.001	1154062	104.5
Aroclor-1016	4	8.875	-0.001	138435	101.8	4	8.920	-0.001	348434	105.0
Total Col1Ave (4 peaks):					102.6	Total Col2Ave (4 peaks):			105.6	RPD = 3
Corrected Ave (3 peaks):					102.2	Corrected Ave (3 peaks):			105.1	RPD = 3
Aroclor-1260	1	12.043	0.000	299306	100.7	1	11.935	0.000	825774	104.9
Aroclor-1260	2	12.359	0.000	302485	101.5	2	12.479	0.000	666079	105.6
Aroclor-1260	3	12.729	-0.001	716508	103.6	3	12.748	0.000	1299867	104.4
Aroclor-1260	4	13.126	0.001	373511	102.4	4	13.310	0.000	887959	105.5
Aroclor-1260	5	13.304	0.000	164879	103.3	NS	---			----
Total Col1Ave (5 peaks):					102.3	Total Col2Ave (4 peaks):			105.1	RPD = 3
Corrected Ave (4 peaks):					102.0	Corrected Ave (3 peaks):			104.9	RPD = 3

Total PCB Area Col1 (5.836 - 14.490) = 8781408 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 17502782 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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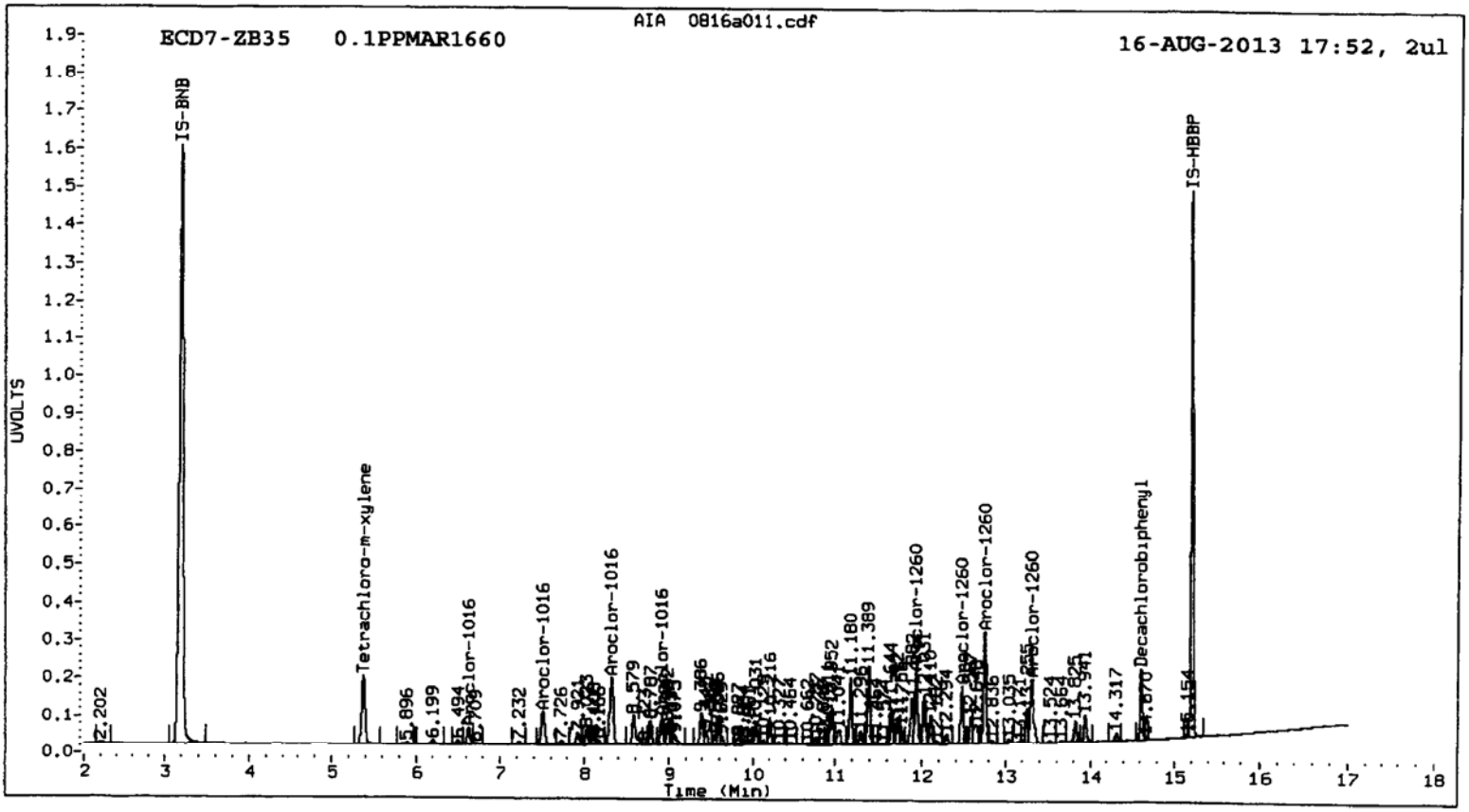
16-AUG-2013 17:52, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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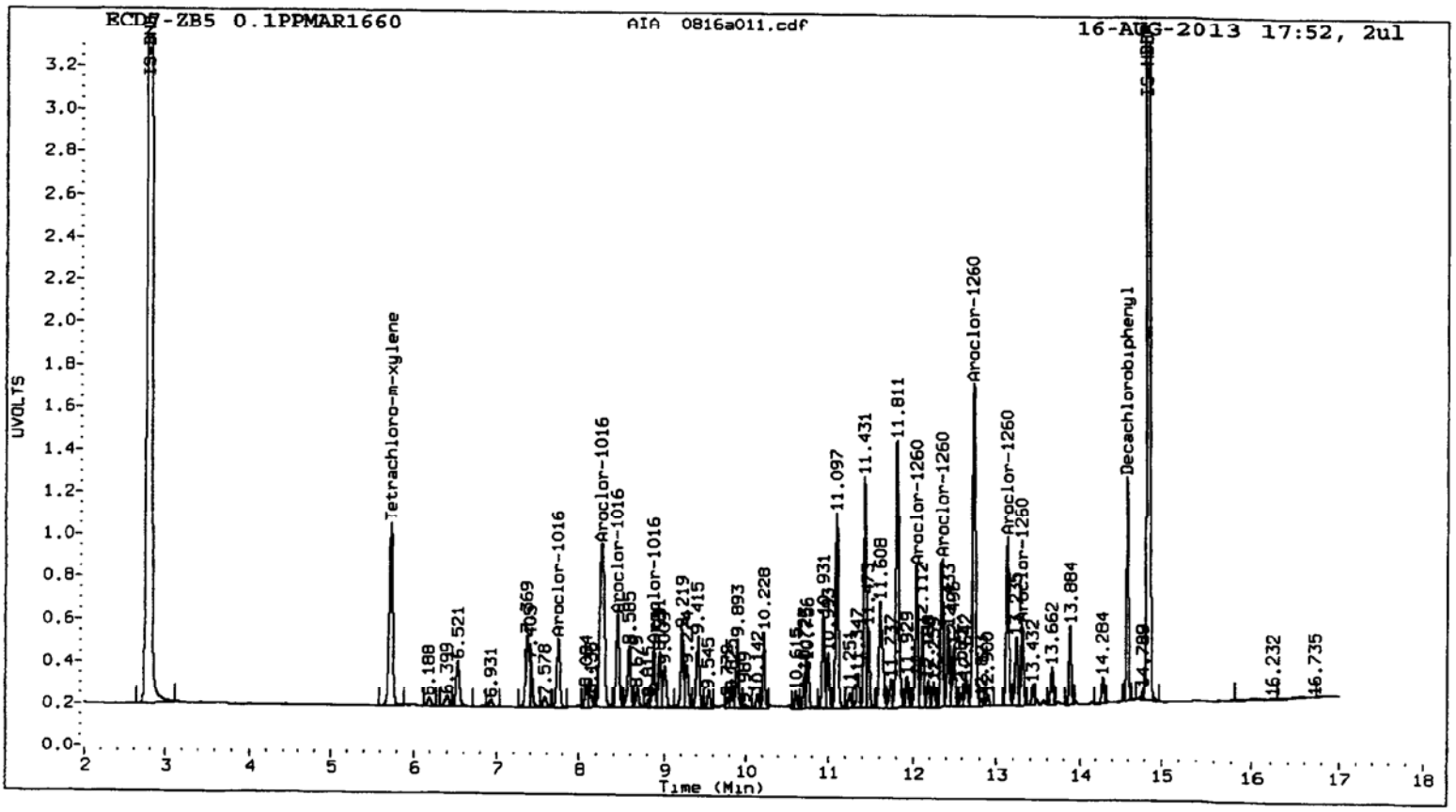
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

XB89:01419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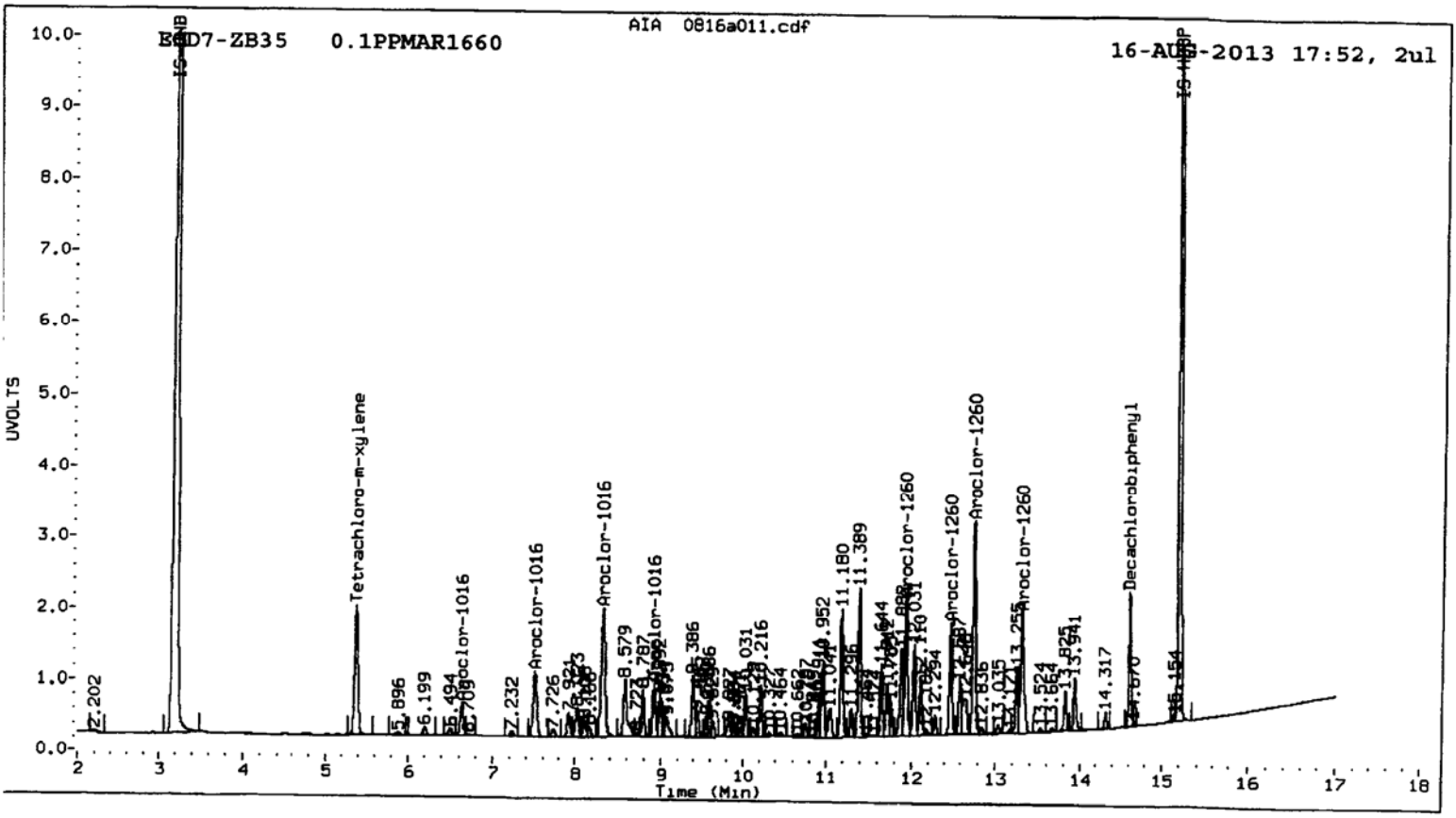
AIA 0816a011.cdf
16-AUG-2013 17:52, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl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16-AUG-2013 17:52, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

XB89:01420

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a012.d
Data file 2: 20130816.b/ical-2.b/0816a012.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 16-AUG-2013 18:14
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.735	-0.001	2530338	5.375	-0.001	4659263	40.4	37.6	7.1	Tetrachloro-m-xylene
14.589	-0.001	1821265	14.618	0.000	3040271	36.3	35.0	3.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	100.9	94.0
Decachlorobiphenyl	90.6	87.5

JK 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5358861	4.0
Hexabromobiphenyl	3127538	3481825	11.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9779170	1.5
Hexabromobiphenyl	5043723	5472977	8.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

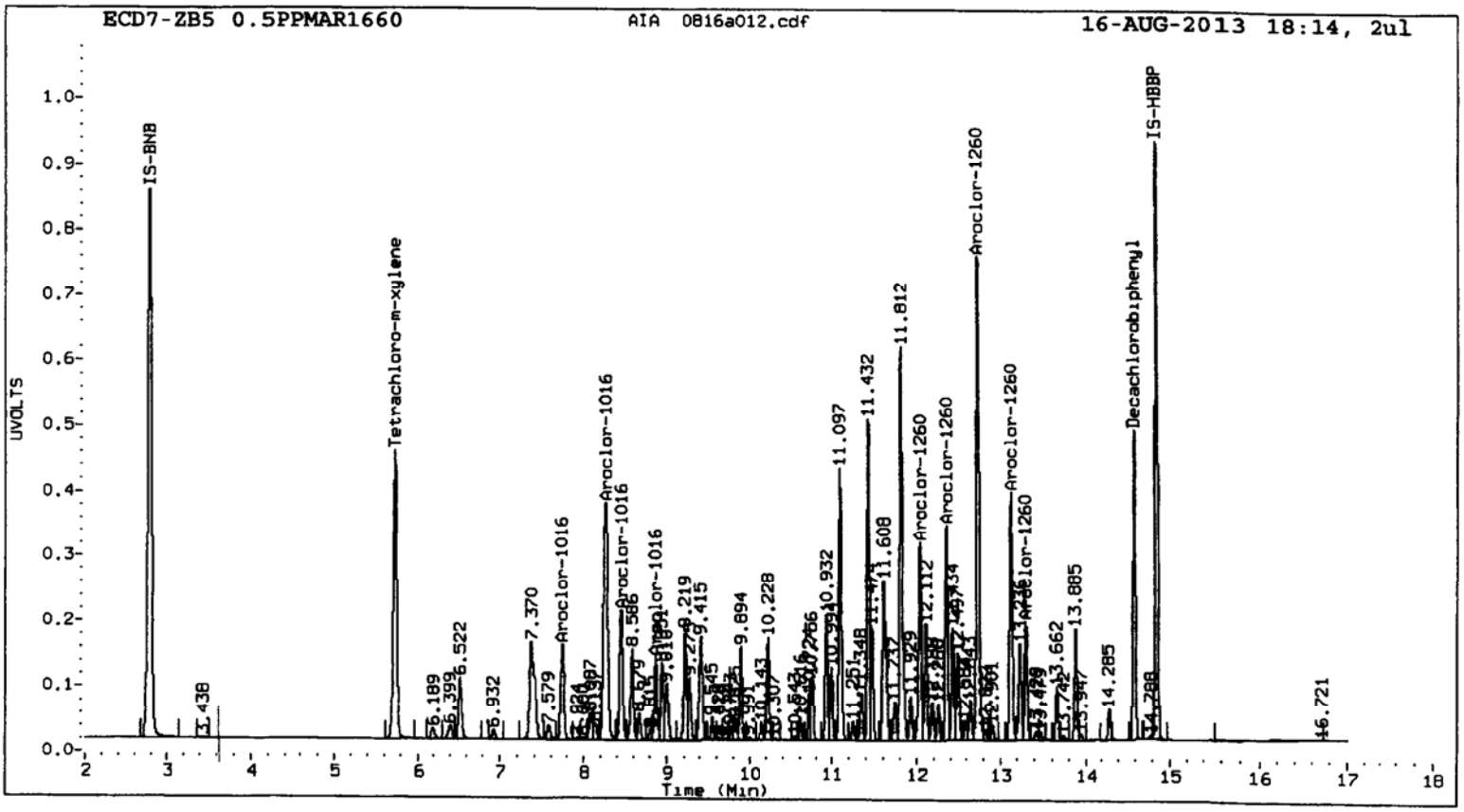
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.744	0.000	776240	461.5	1	6.630	0.000	994596	425.2
Aroclor-1016	2	8.265	0.000	2691071	473.2	2	7.509	0.000	2266090	426.3
Aroclor-1016	3	8.451	0.000	1033071	455.8	3	8.321	0.000	4901053	442.5
Aroclor-1016	4	8.876	0.000	596017	430.6	4	8.920	0.000	1393910	418.7
Total Col1Ave (4 peaks):				455.3		Total Col2Ave (4 peaks):			428.2	RPD = 6
Corrected Ave (3 peaks):				449.3		Corrected Ave (3 peaks):			423.4	RPD = 6
Aroclor-1260	1	12.043	0.000	1366005	433.5	1	11.936	0.000	3460952	417.3
Aroclor-1260	2	12.359	0.000	1415535	447.7	2	12.479	0.000	2787390	419.4
Aroclor-1260	3	12.730	0.000	3383525	461.3	3	12.749	0.000	5645694	430.7
Aroclor-1260	4	13.125	0.000	1805574	466.6	4	13.310	0.000	3754521	423.5
Aroclor-1260	5	13.304	0.000	775760	458.4	NS	---			----
Total Col1Ave (5 peaks):				453.5		Total Col2Ave (4 peaks):			422.7	RPD = 7
Corrected Ave (4 peaks):				450.3		Corrected Ave (3 peaks):			420.0	RPD = 7

Total PCB Area Col1 (5.836 - 14.490) = 39733786 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 70796360 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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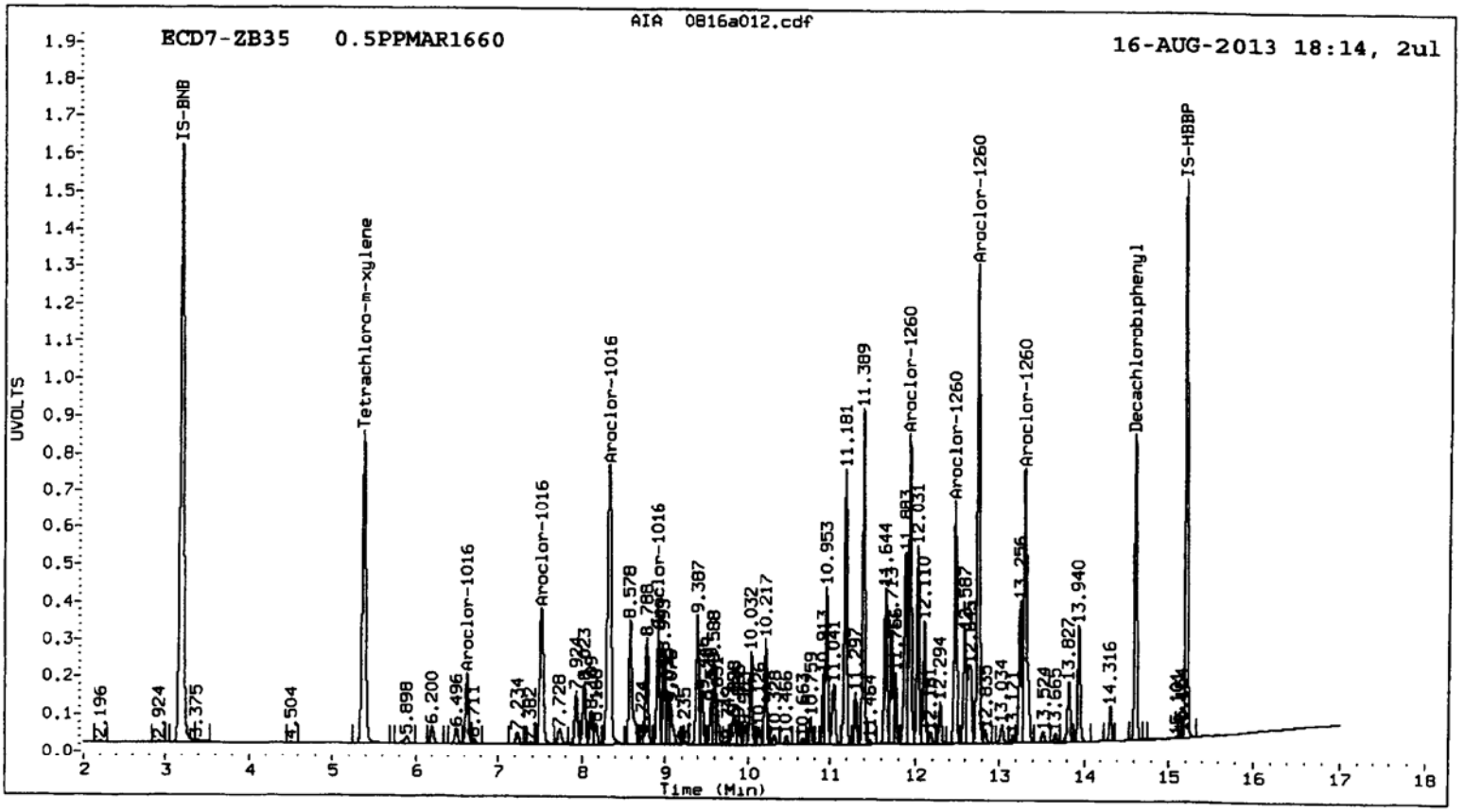
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
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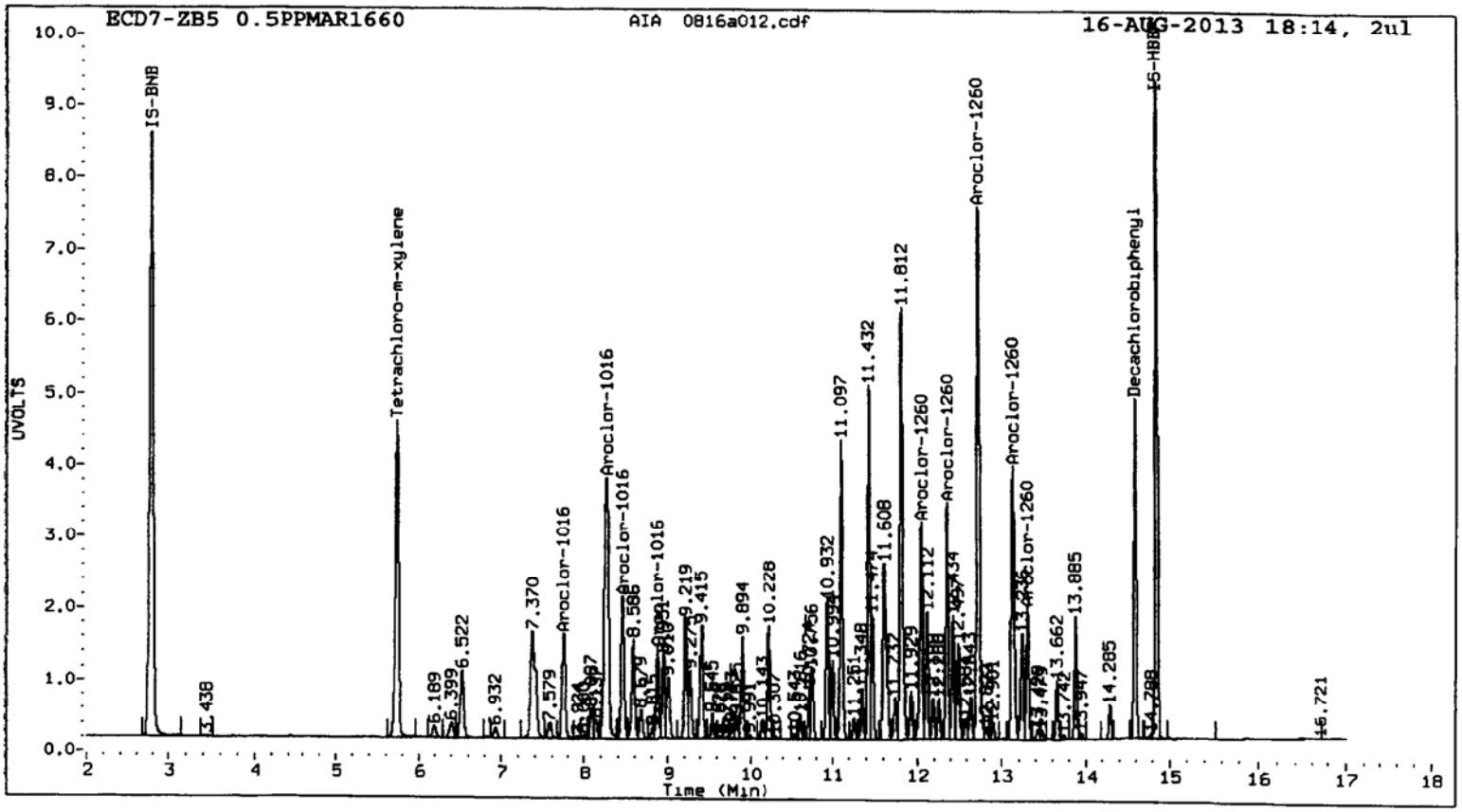
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

XB89:01424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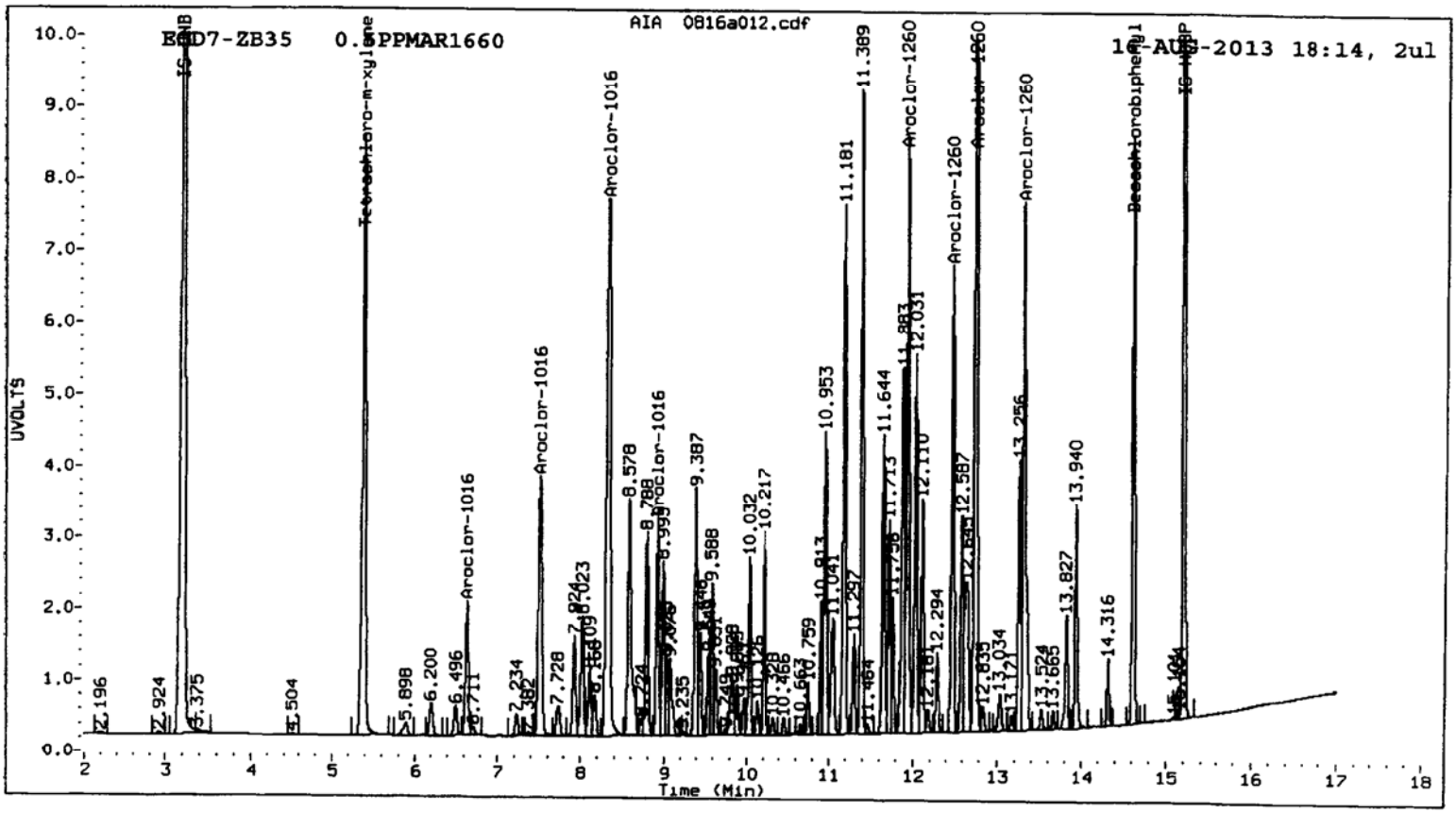
16-AUG-2013 18:14, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBB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UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a013.d
Data file 2: 20130816.b/ical-2.b/0816a013.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 16-AUG-2013 18:36
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.000	2709737	5.376	0.000	5013375	42.9	40.1	6.6	Tetrachloro-m-xylene
14.589	-0.001	2039985	14.617	-0.001	3416623	42.0	40.5	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	107.2	100.3
Decachlorobiphenyl	105.0	101.2

JK 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5400016	4.8
Hexabromobiphenyl	3127538	3365225	7.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9858115	2.3
Hexabromobiphenyl	5043723	5314232	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1242	1	7.744	0.000	341560	250.0	1	6.630	0.000	500187	250.0
Aroclor-1242	2	8.265	0.000	1148001	250.0	2	7.509	0.000	1044605	250.0
Aroclor-1242	3	8.451	0.000	449267	250.0	3	8.321	0.000	2202468	250.0
Aroclor-1242	4	9.415	0.000	426303	250.0	4	9.389	0.000	873681	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

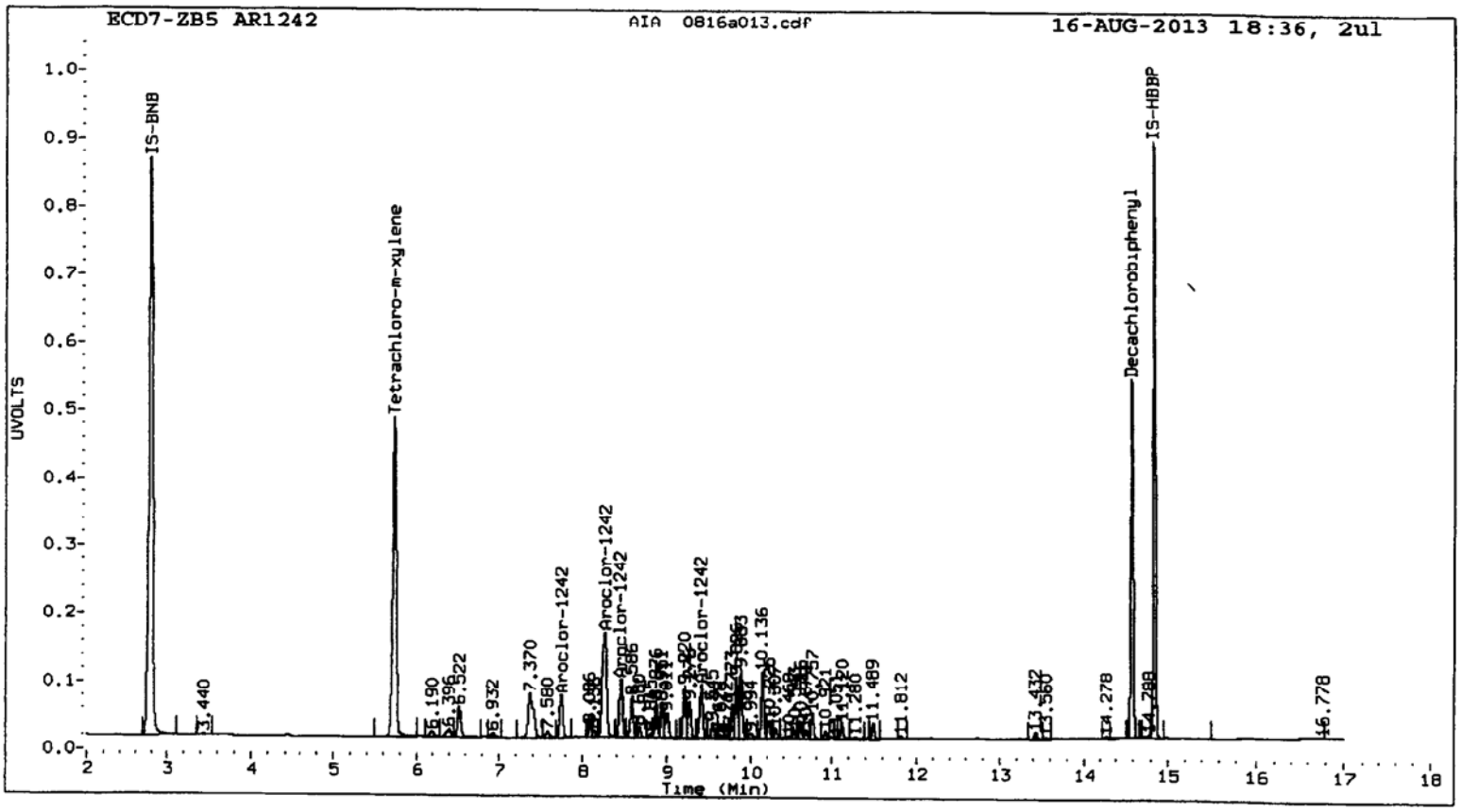
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.836 - 14.490) = 7966908 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 16175158 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89:01427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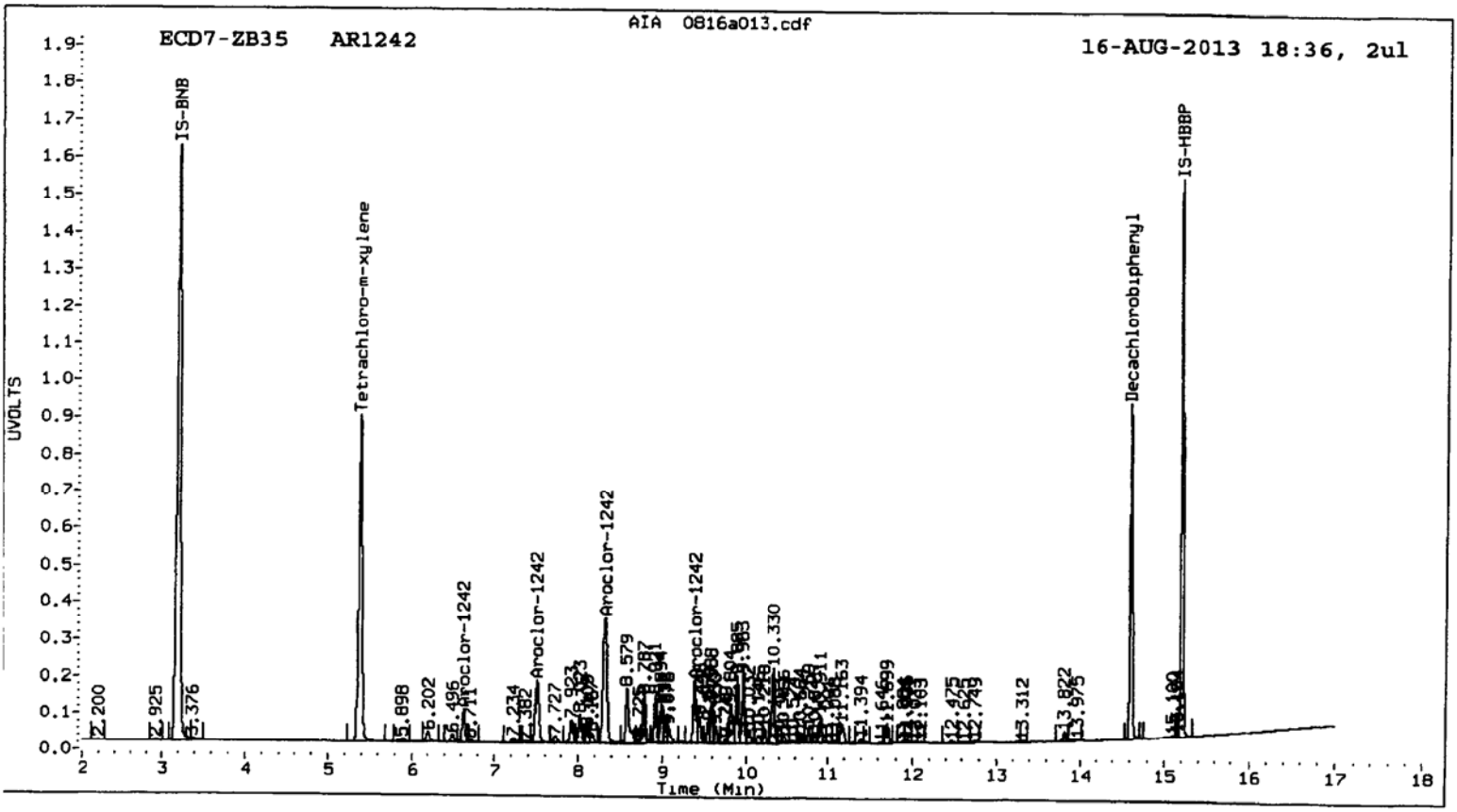
AIA 0816a013.cdf
16-AUG-2013 18:36, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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Aroclor-1242
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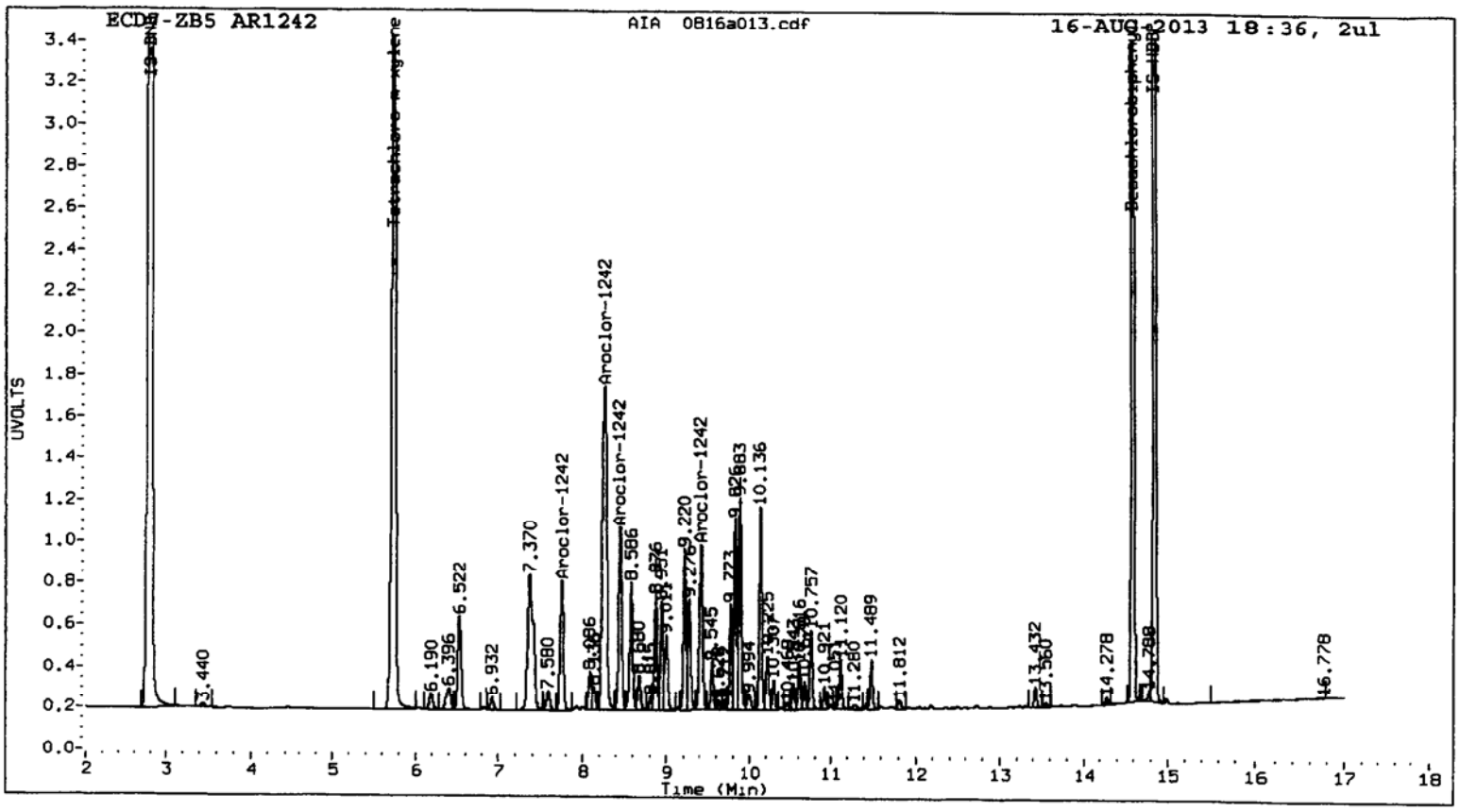
IS-HBBP
UVOLTS
Time (Min)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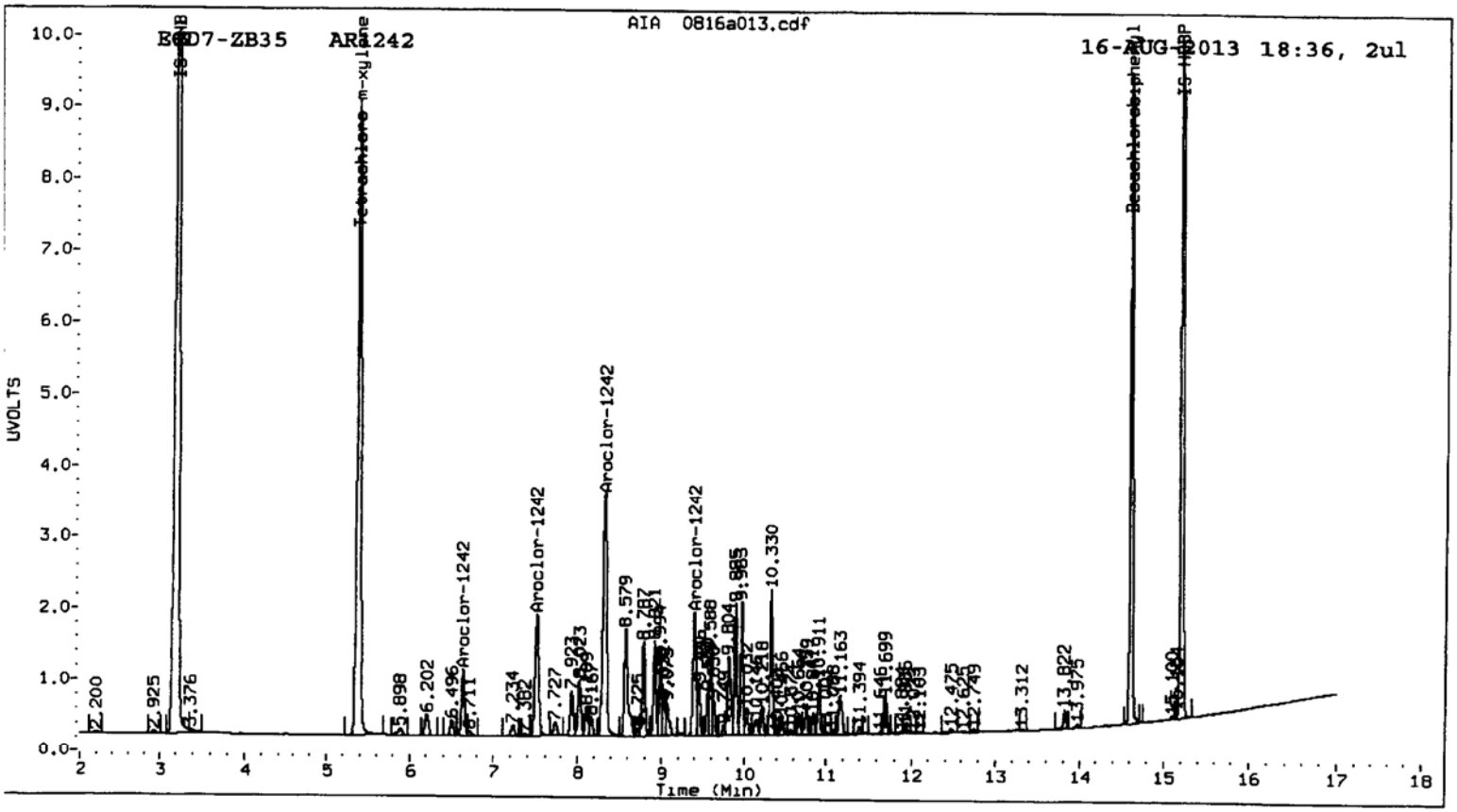
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl


ECD7-ZB35 AR1242
AIA 0816a013.cdf
16-AUG-2013 18:36, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl

XB89:01429

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a014.d
Data file 2: 20130816.b/ical-2.b/0816a014.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 16-AUG-2013 18:58
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.737	0.001	2481501	5.378	0.002	4672149	41.3	39.3	4.9	Tetrachloro-m-xylene
14.589	-0.001	1792654	14.618	0.001	3017785	39.2	37.8	3.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.2	98.3
Decachlorobiphenyl	97.9	94.4

JL 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5136414	-0.3
Hexabromobiphenyl	3127538	3172566	1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9373785	-2.7
Hexabromobiphenyl	5043723	5031942	-0.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	8.261	0.000	680739	250.0	1	7.509	0.000	491016	250.0
Aroclor-1248	2	8.877	0.000	446810	250.0	2	8.319	0.000	1354629	250.0
Aroclor-1248	3	9.416	0.000	630895	250.0	3	8.922	0.000	993469	250.0
Aroclor-1248	4	9.885	0.000	806915	250.0	4	10.330	0.000	1430648	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

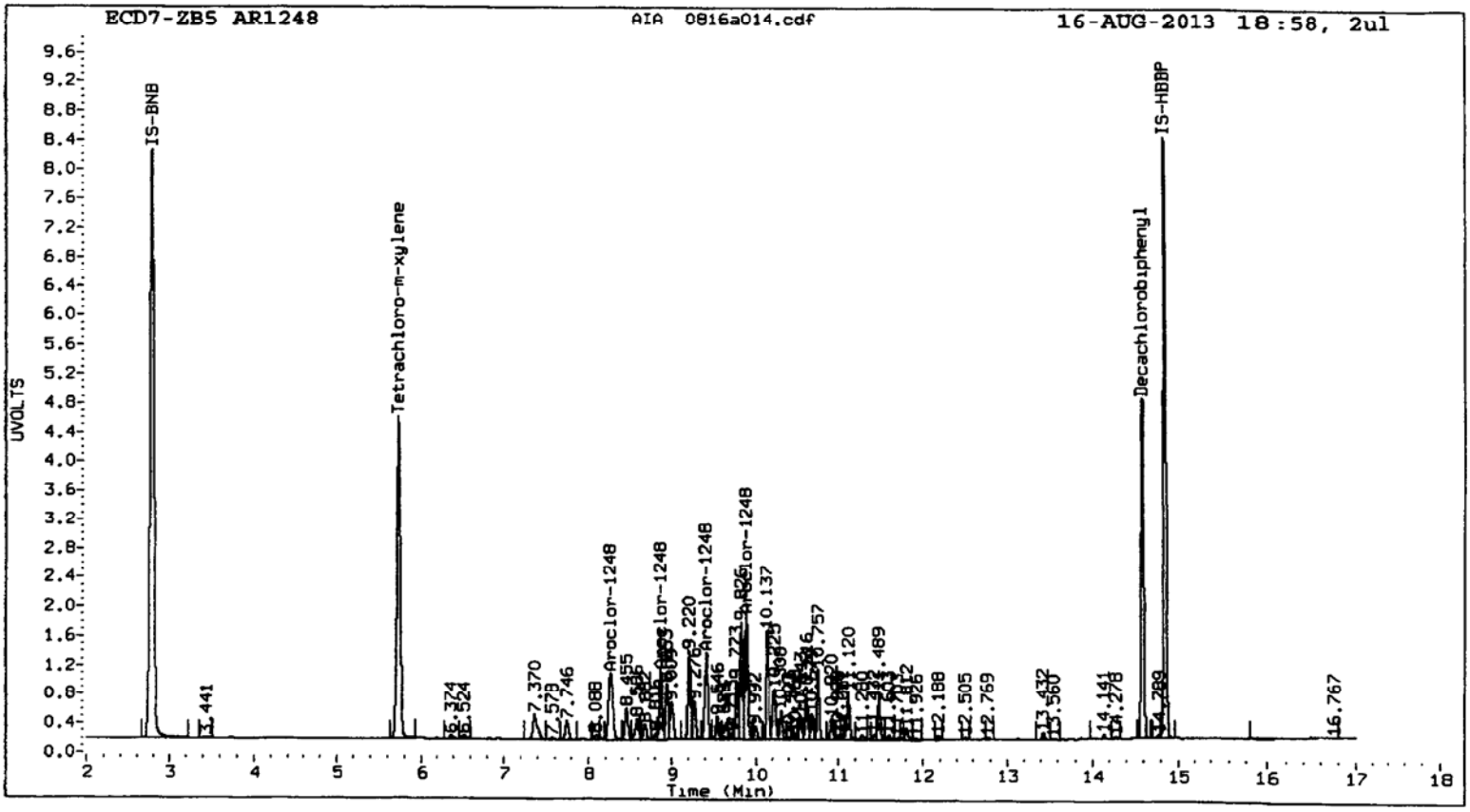
Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

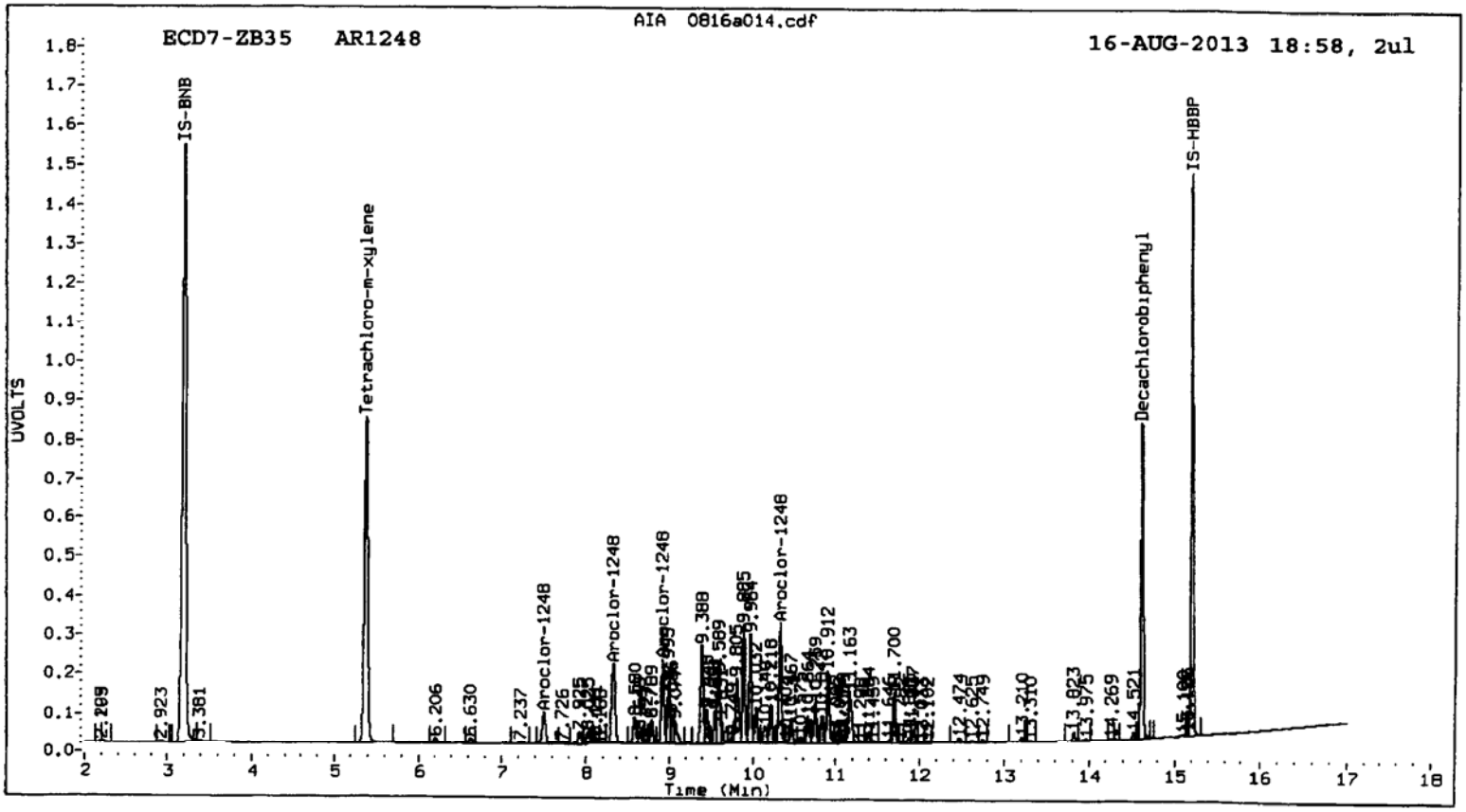
Total PCB Area Col1 (5.836 - 14.490) = 9659138 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 19093972 Col2 Total PCB = 0.3 ppm*

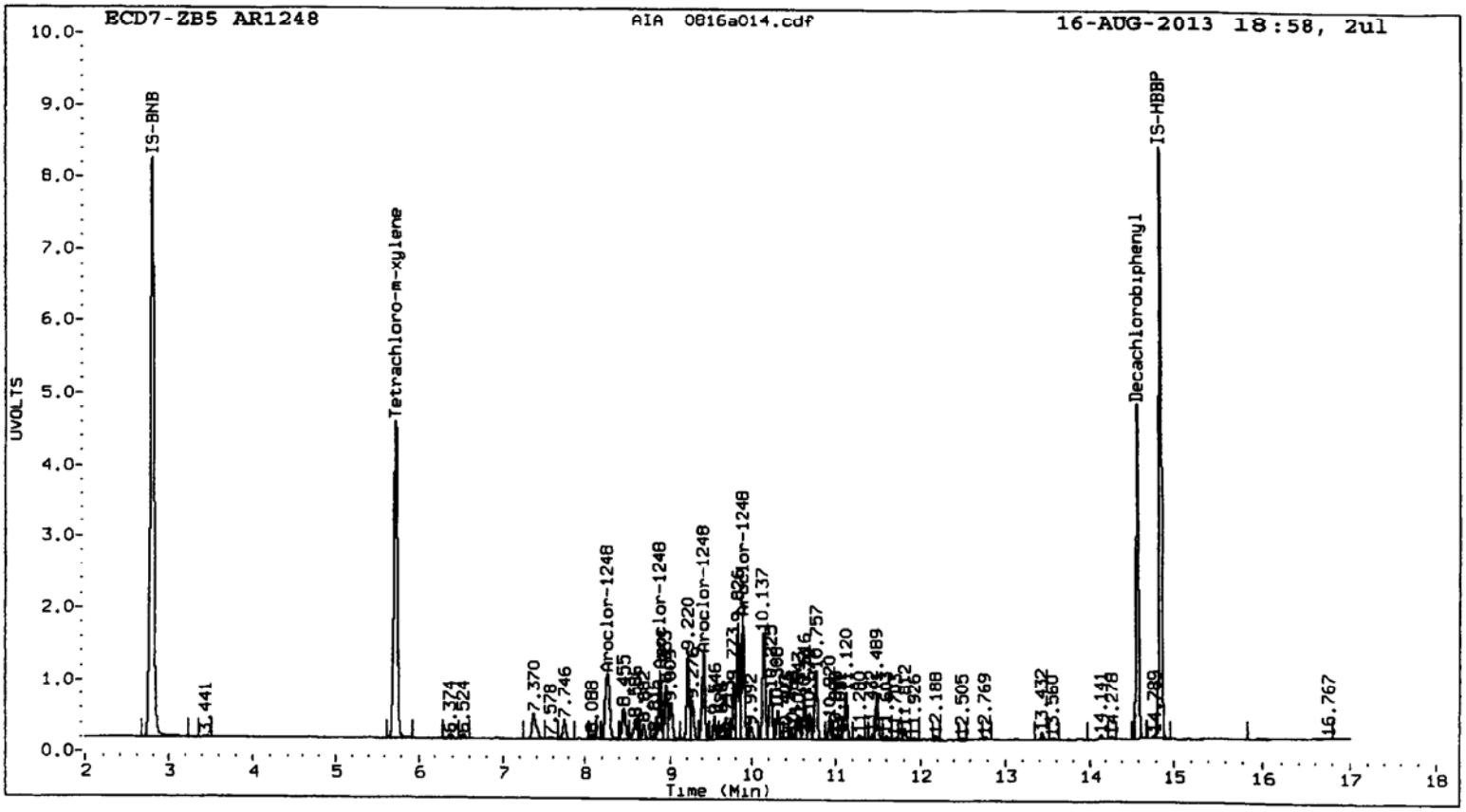
* Quantitated against AR1660 0.25ppm in Ical

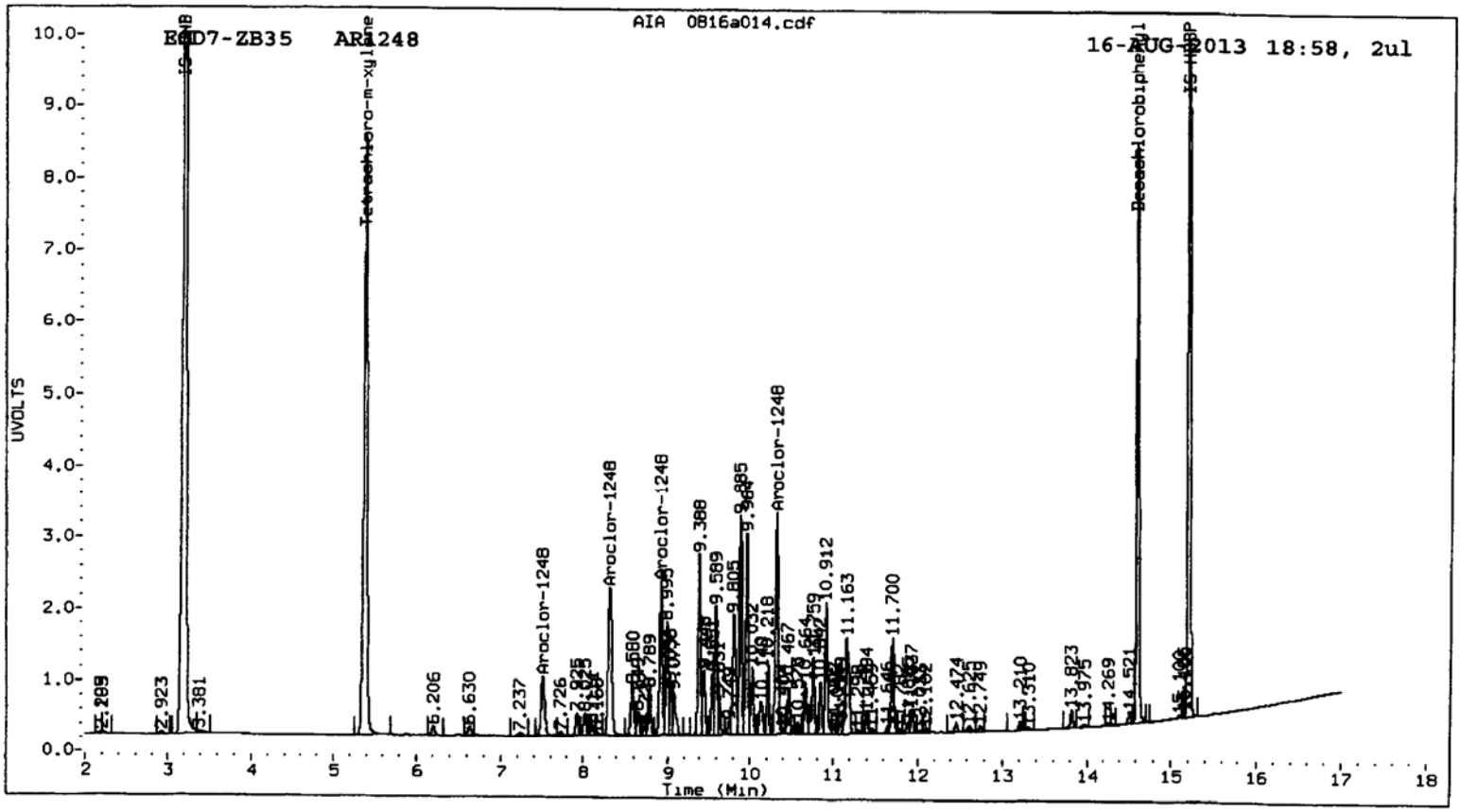
X889:01431


ECD7-ZB5 AR1248
AIA 0816a014.cdf
16-AUG-2013 18:58, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1248
AIA 0816a014.cdf
16-AUG-2013 18:58, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

XD69:01432


ECD7-ZB5 AR1248
AIA 0816a014.cdf
16-AUG-2013 18:58, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1248
AIA 0816a014.cdf
16-AUG-2013 18:58, 2ul
Tetrachloro-m-xylene
Aroclor-1248
UVOLTS
Time (Min)

XB89:01433

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a015.d
Data file 2: 20130816.b/ical-2.b/0816a015.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 16-AUG-2013 19:20
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.736	0.000	2596383	5.376	0.000	4884404	41.2	39.2	5.1	Tetrachloro-m-xylene
14.590	0.000	1878308	14.617	0.000	3168242	38.8	37.4	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.1	97.9
Decachlorobiphenyl	97.1	93.5

JR 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5382616	4.5
Hexabromobiphenyl	3127538	3353659	7.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9840275	2.2
Hexabromobiphenyl	5043723	5335172	5.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	ZB5 Col Peak#	RT	Shift	Area	Amount	ZB35 Col Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	10.227	0.000	870088	250.0	1	10.032	0.000	973659	250.0
Aroclor-1254	2	10.615	0.000	540737	250.0	2	10.217	0.000	1242497	250.0
Aroclor-1254	3	10.757	0.000	1059994	250.0	3	10.912	0.000	2079361	250.0
Aroclor-1254	4	11.116	0.000	1088824	250.0	4	11.166	0.000	2114857	250.0
Aroclor-1254	5	11.812	0.000	1068088	250.0	5	11.936	0.000	1538366	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

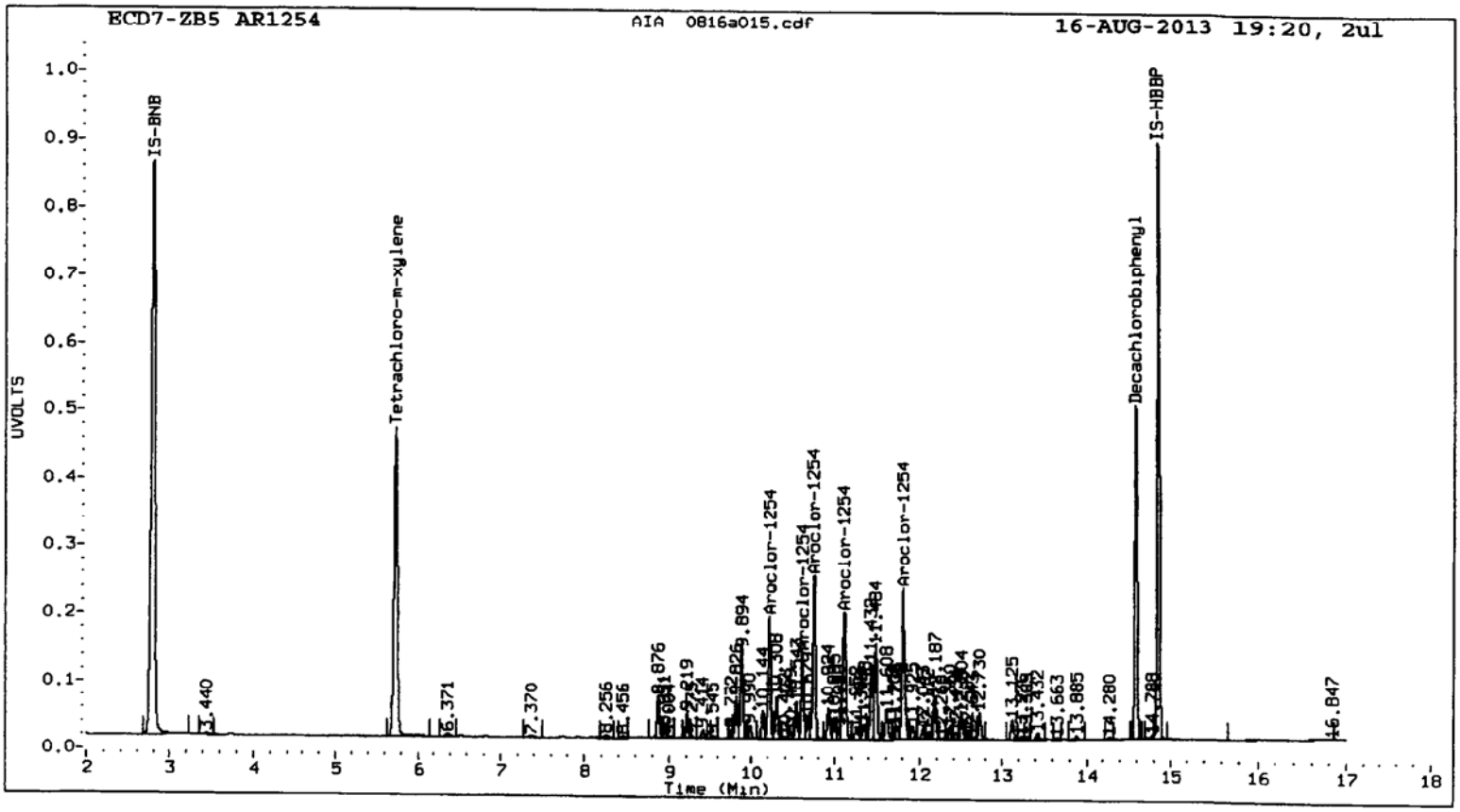
Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

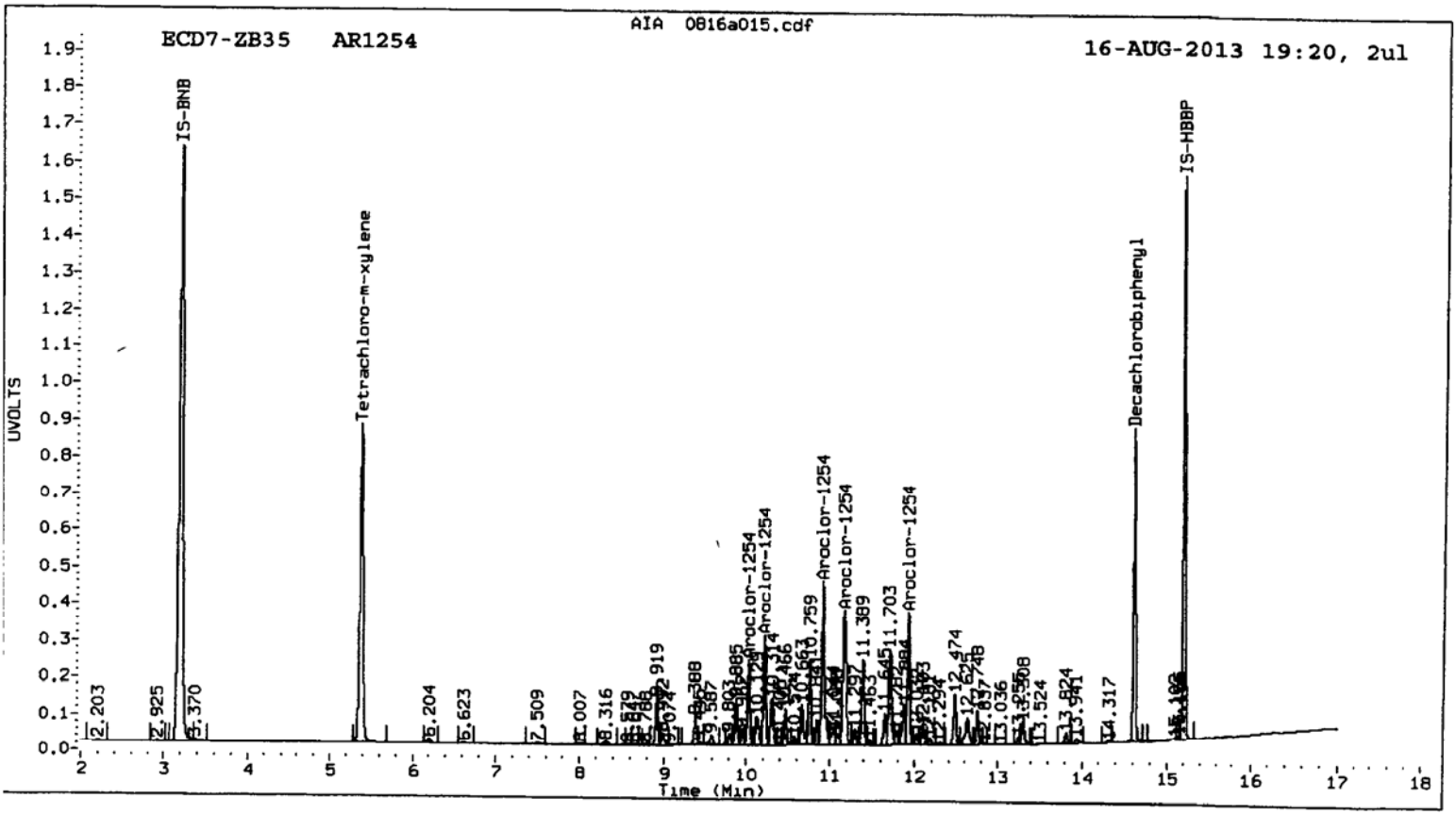
Total PCB Area Col1 (5.836 - 14.490) = 10660331 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 20435589 Col2 Total PCB = 0.3 ppm*

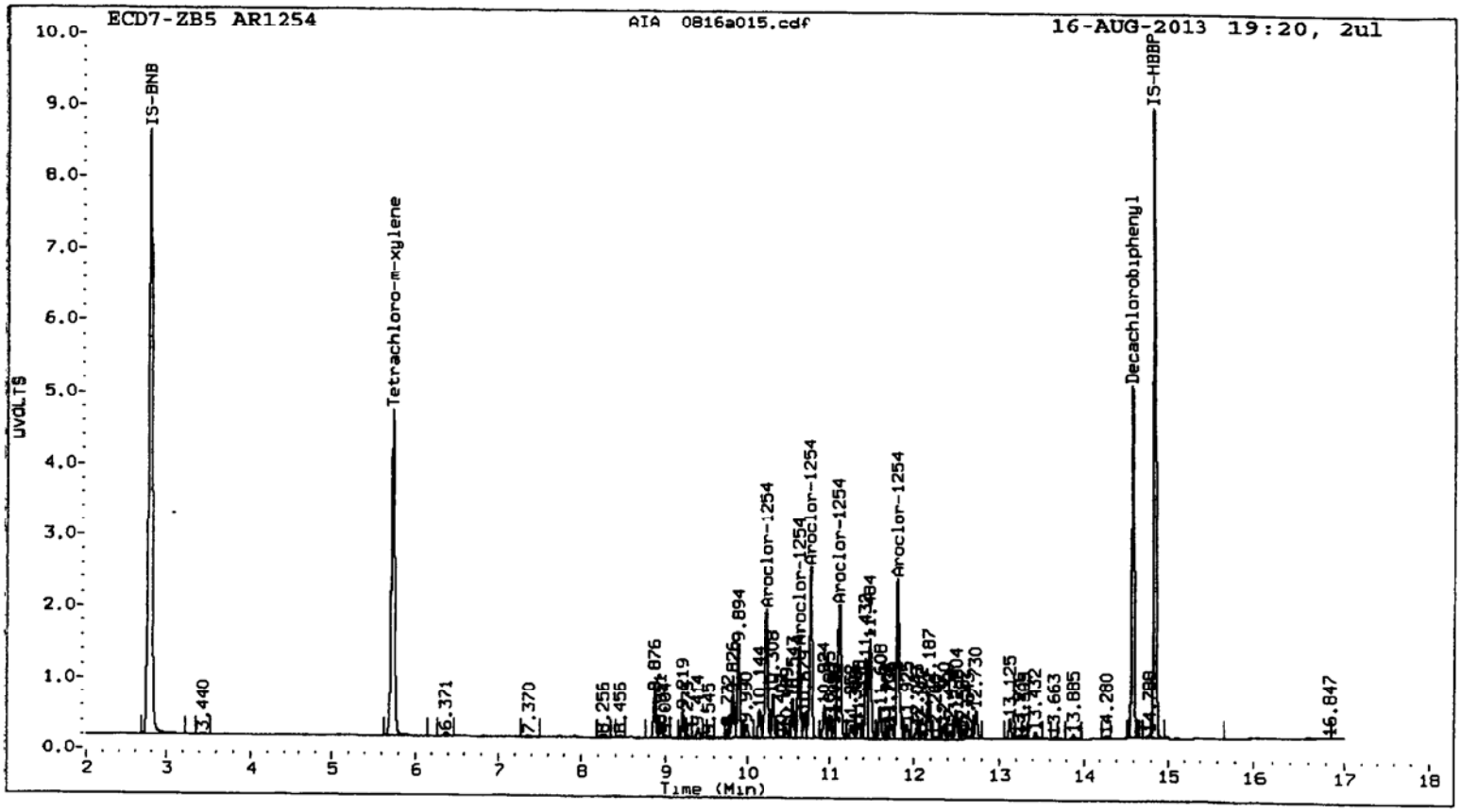
* Quantitated against AR1660 0.25ppm in Ical

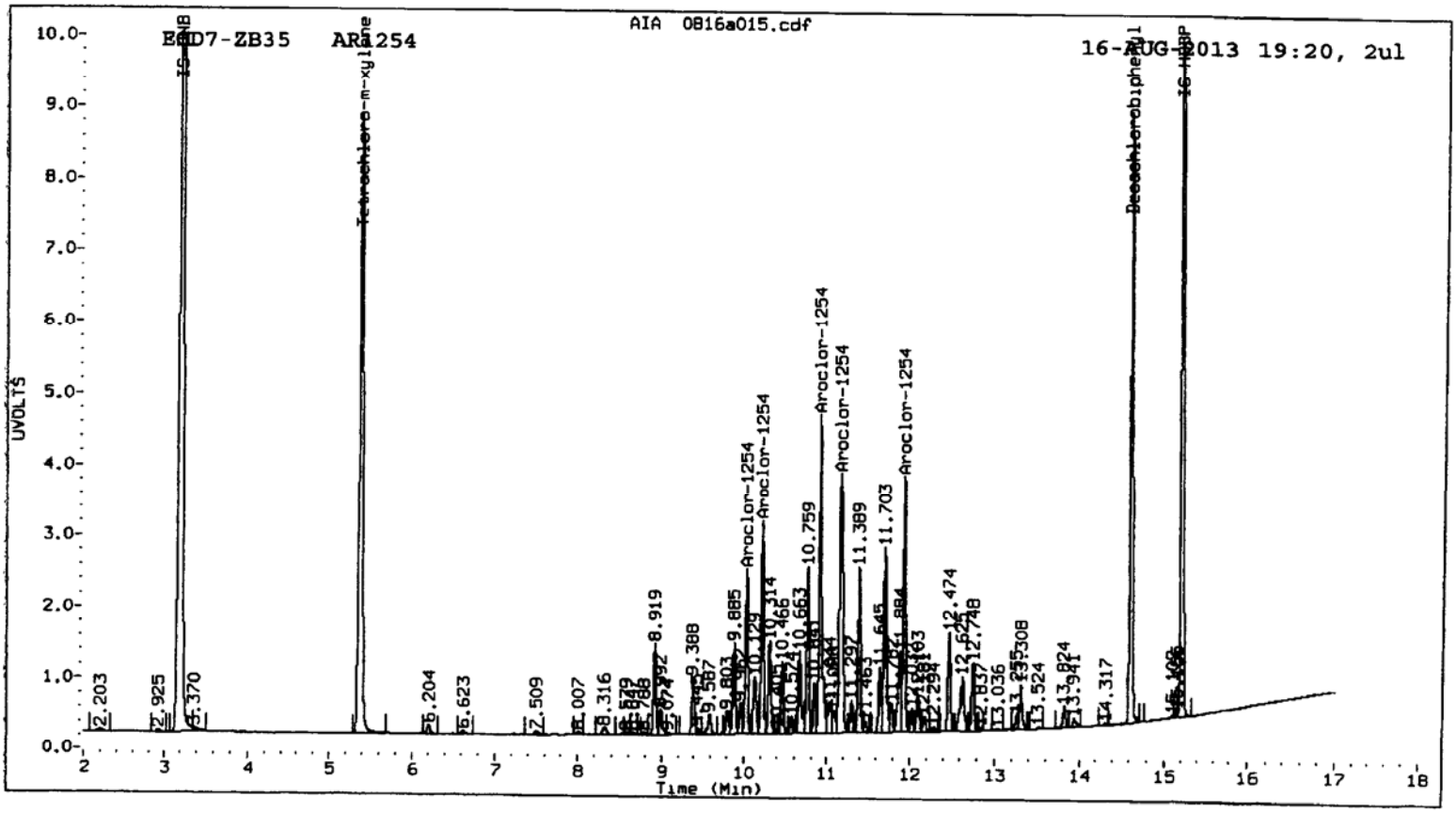
XB89:01435


ECD7-ZB5 AR1254
AIA 0816a015.cdf
16-AUG-2013 19:20, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1254
AIA 0816a015.cdf
16-AUG-2013 19:20, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

XB89:01436


ECD7-ZB5 AR1254
AIA 0816a015.cdf
16-AUG-2013 19:20, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1254
UVOLTS
Time (Min)


ECD7-ZB35 AR1254
AIA 0816a015.cdf
16-AUG-2013 19:20, 2ul
Aroclor-1254
UVOLTS
Time (Min)

XB89:01437

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a016.d
Data file 2: 20130816.b/ical-2.b/0816a016.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 16-AUG-2013 19:42
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	-0.001	2530995	5.376	0.000	4673081	43.6	41.0	6.1	Tetrachloro-m-xylene
14.590	0.000	1826075	14.617	0.000	3071469	39.9	38.4	3.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	108.9	102.4
Decachlorobiphenyl	99.7	96.1

JH 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	4964961	-3.6
Hexabromobiphenyl	3127538	3172575	1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8999005	-6.6
Hexabromobiphenyl	5043723	5034651	-0.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

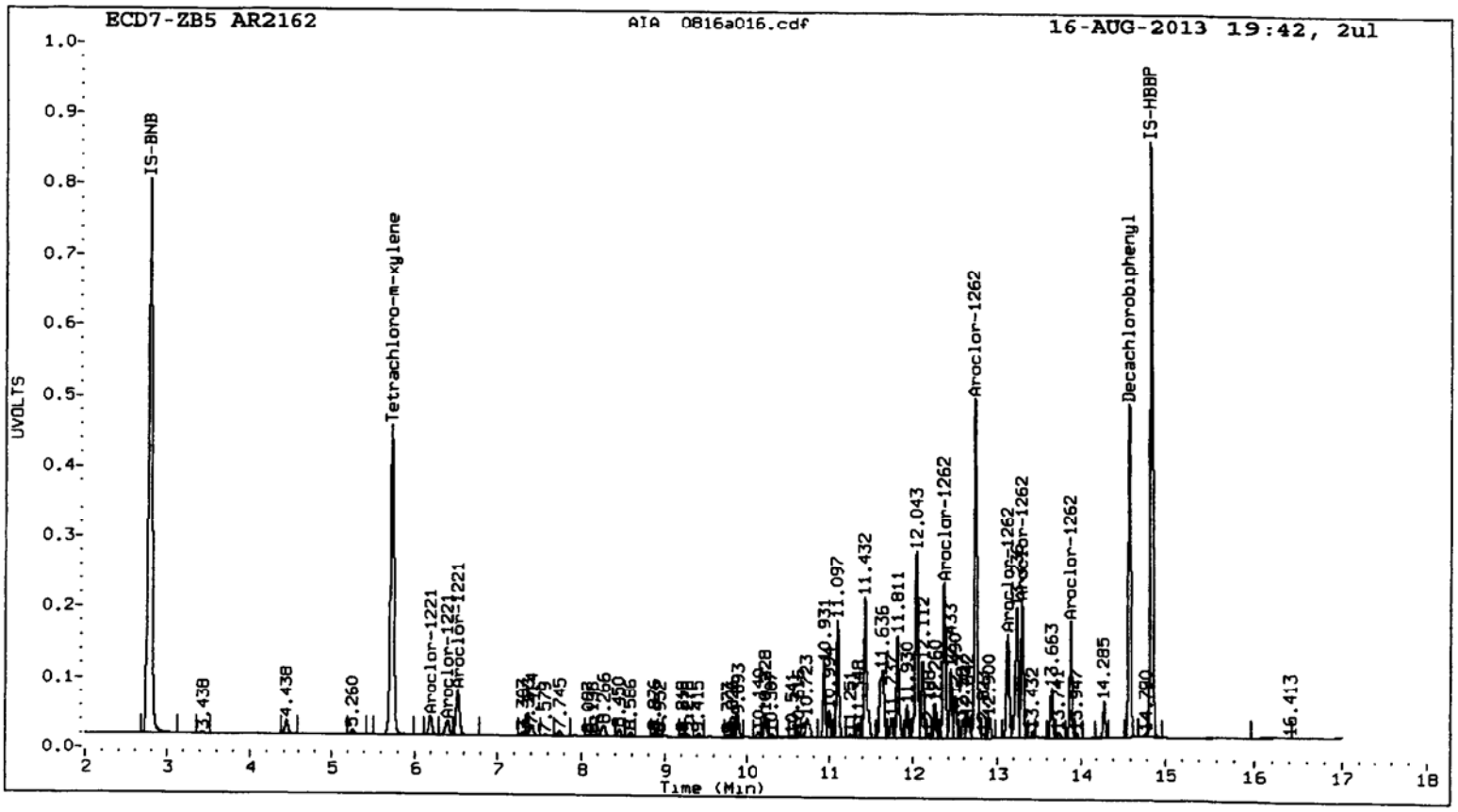
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1221	1	6.191	0.000	162498	250.0	1	6.198	0.000	389300	250.0
Aroclor-1221	2	6.400	0.000	136897	250.0	2	6.496	0.000	224885	250.0
Aroclor-1221	3	6.523	0.000	400428	250.0	3	6.630	0.000	685208	250.0
Aroclor-1221	NS	---			----	4	7.522	0.000	230510	250.0
	Total Col1Ave (3 peaks):			250.0		Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	12.359	0.000	933730	250.0	1	12.480	0.000	1838576	250.0
Aroclor-1262	2	12.730	0.000	2160127	250.0	2	12.748	0.000	3643887	250.0
Aroclor-1262	3	13.126	0.000	705160	250.0	3	13.255	0.000	1592852	250.0
Aroclor-1262	4	13.305	0.000	839889	250.0	4	13.312	0.000	2408598	250.0
Aroclor-1262	5	13.885	0.000	649815	250.0	5	13.941	0.000	1199602	250.0
	Total Col1Ave (5 peaks):			250.0		Total Col2Ave (5 peaks):			250.0	RPD = 0
	Corrected Ave (4 peaks):			250.0		Corrected Ave (4 peaks):			250.0	RPD = 0

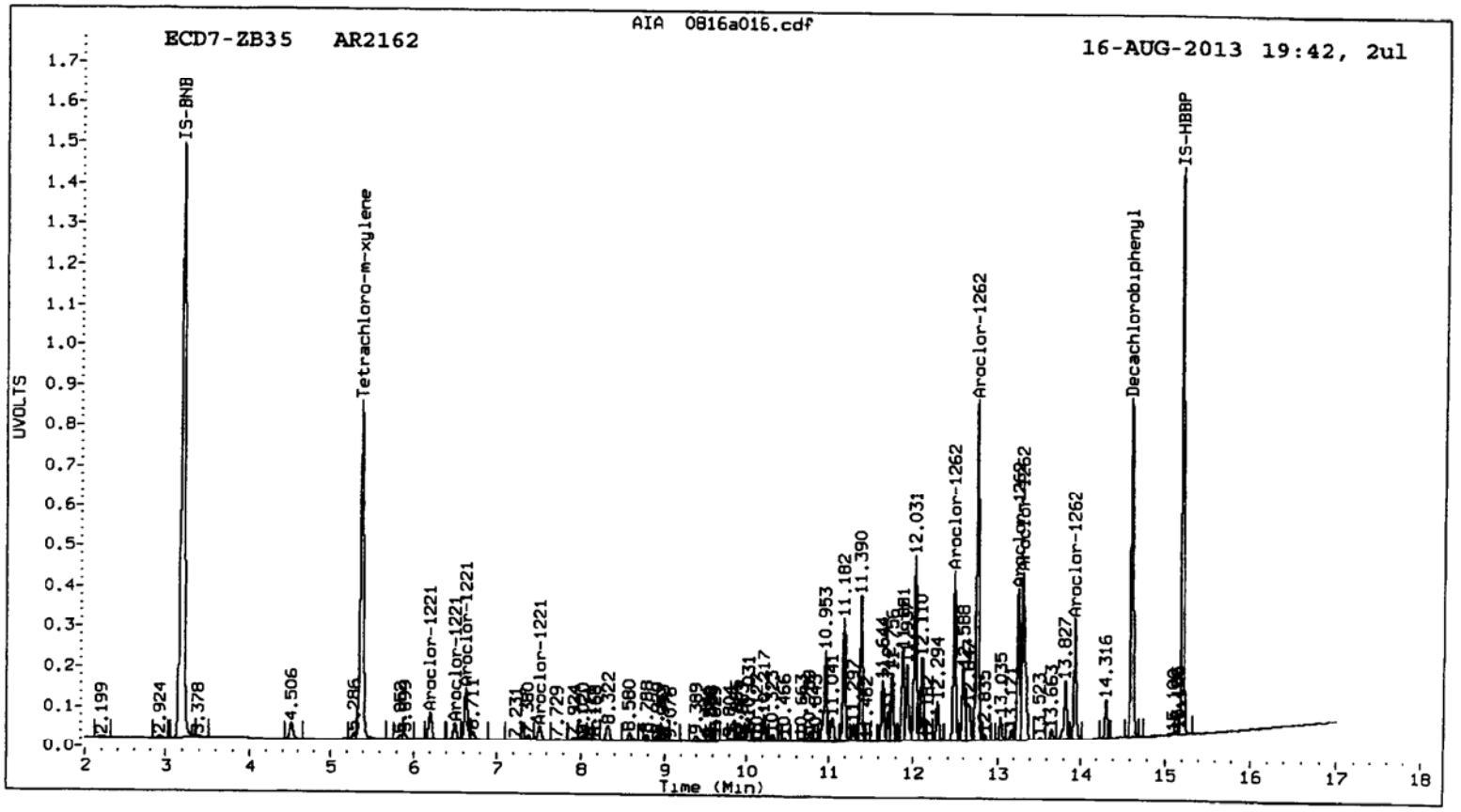
Total PCB Area Col1 (5.836 - 14.490) = 15654462 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 28850340 Col2 Total PCB = 0.4 ppm*

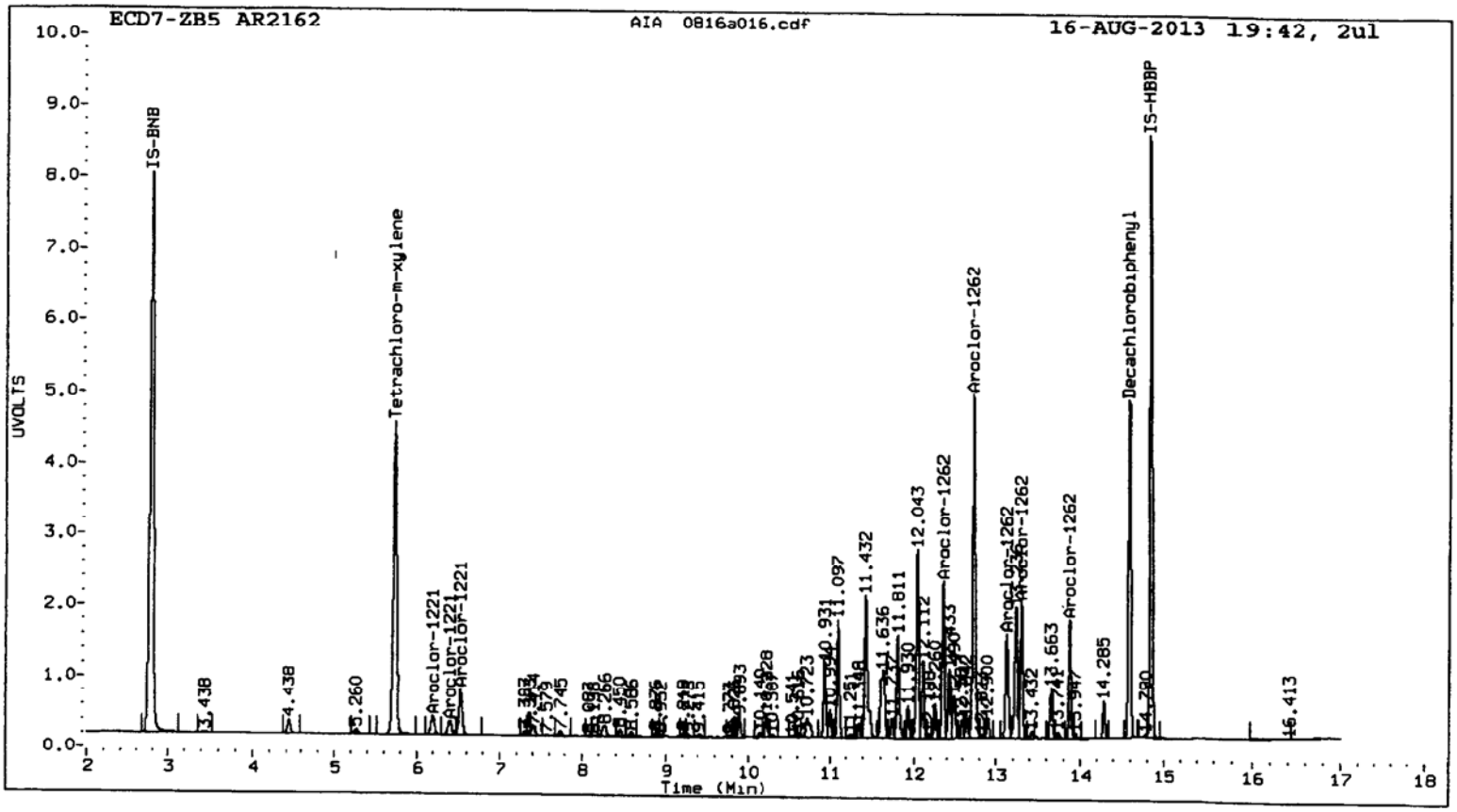
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 AR2162
AIA 0816a016.cdf
16-AUG-2013 19:42, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR2162
AIA 0816a016.cdf
16-AUG-2013 19:42, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP

XBB9:61441


ECD7-ZB5 AR2162
AIA 0816a016.cdf
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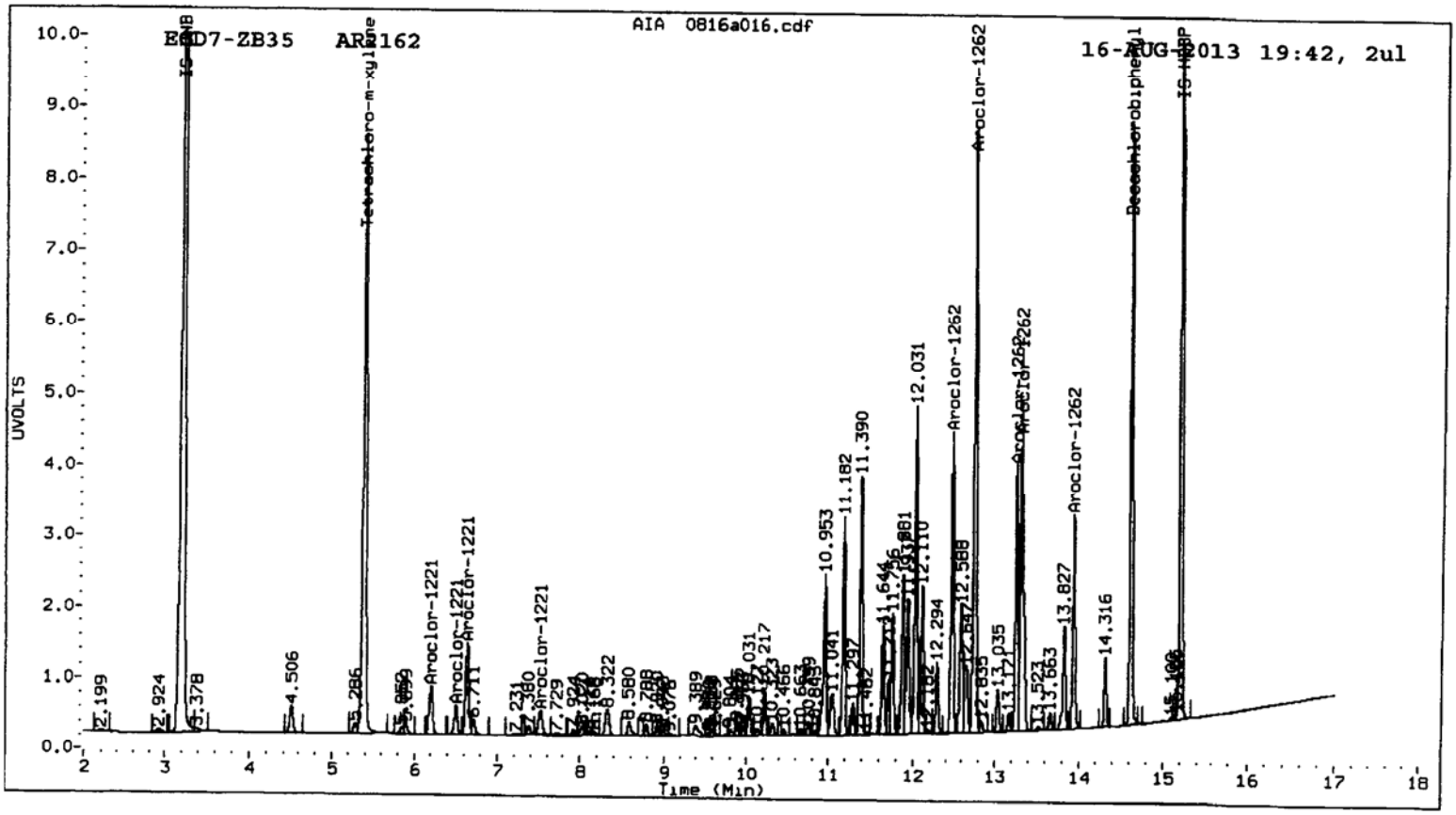
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
IS-HBBP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AIA 0816a016.cdf
16-AUG-2013 19:42, 2ul
UVOLTS
Time (Min)
Aroclor-1221
Aroclor-1262

XBBD:01442

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a017.d
Data file 2: 20130816.b/ical-2.b/0816a017.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 16-AUG-2013 20:04
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.000	2560256	5.376	0.000	4794399	41.7	39.6	5.3	Tetrachloro-m-xylene
14.590	0.000	2664723	14.617	0.000	4478329	56.1	53.8	4.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	104.3	98.9
Decachlorobiphenyl	140.2	134.4

08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5247271	1.8
Hexabromobiphenyl	3127538	3294036	5.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9564571	-0.7
Hexabromobiphenyl	5043723	5246838	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

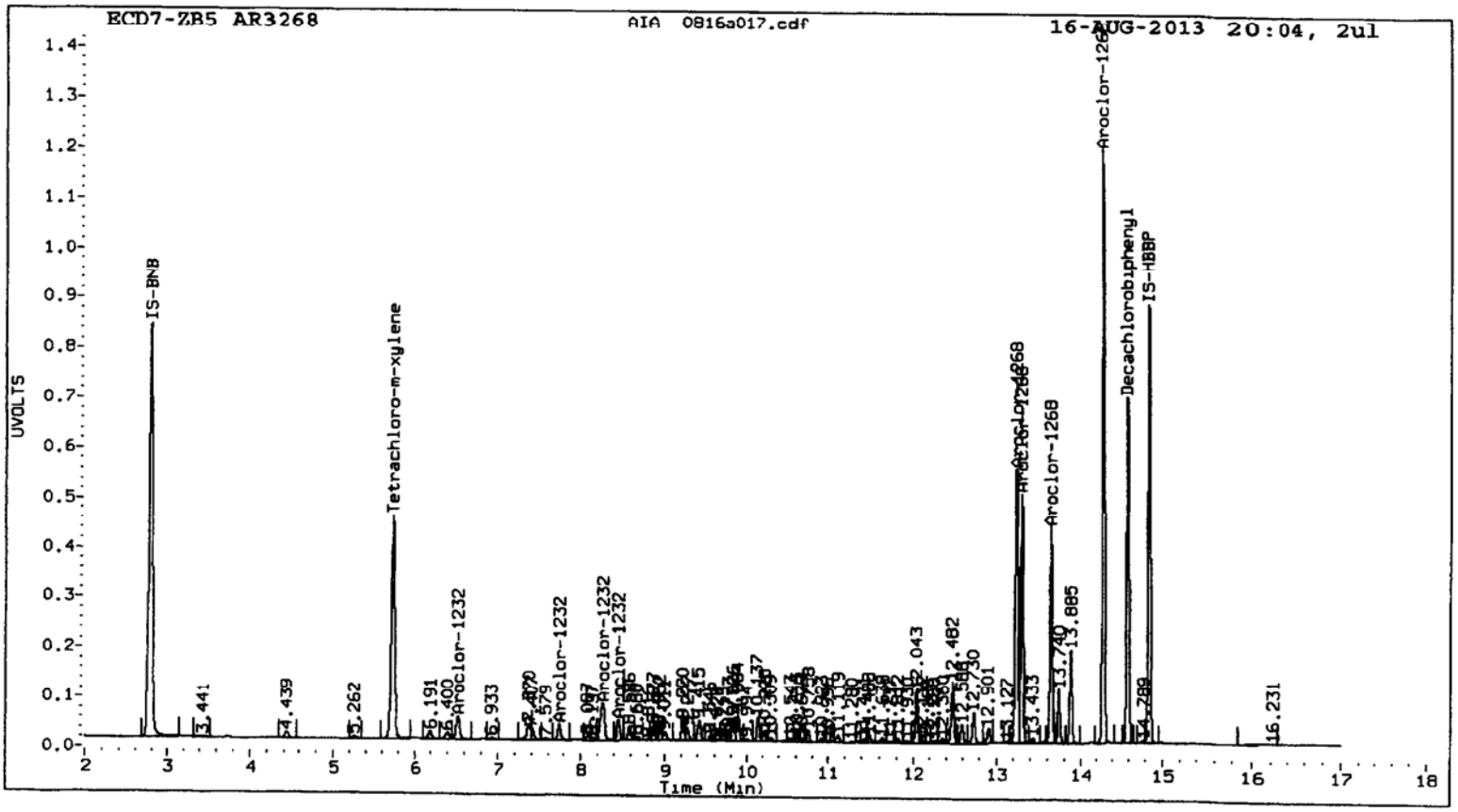
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	6.523	0.000	274877	250.0	1	6.630	0.000	505925	250.0
Aroclor-1232	2	7.745	0.000	165519	250.0	2	7.511	0.000	570307	250.0
Aroclor-1232	3	8.265	0.000	545329	250.0	3	8.320	0.000	1086085	250.0
Aroclor-1232	4	8.451	0.000	217988	250.0	4	8.921	0.000	361344	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	13.237	0.000	2419515	250.0	1	13.254	0.000	3911102	250.0
Aroclor-1268	2	13.303	0.000	2143726	250.0	2	13.317	0.000	3671199	250.0
Aroclor-1268	3	13.649	0.000	1802313	250.0	3	13.664	0.000	2952983	250.0
Aroclor-1268	4	14.285	0.000	4585546	250.0	4	14.316	0.000	7677320	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

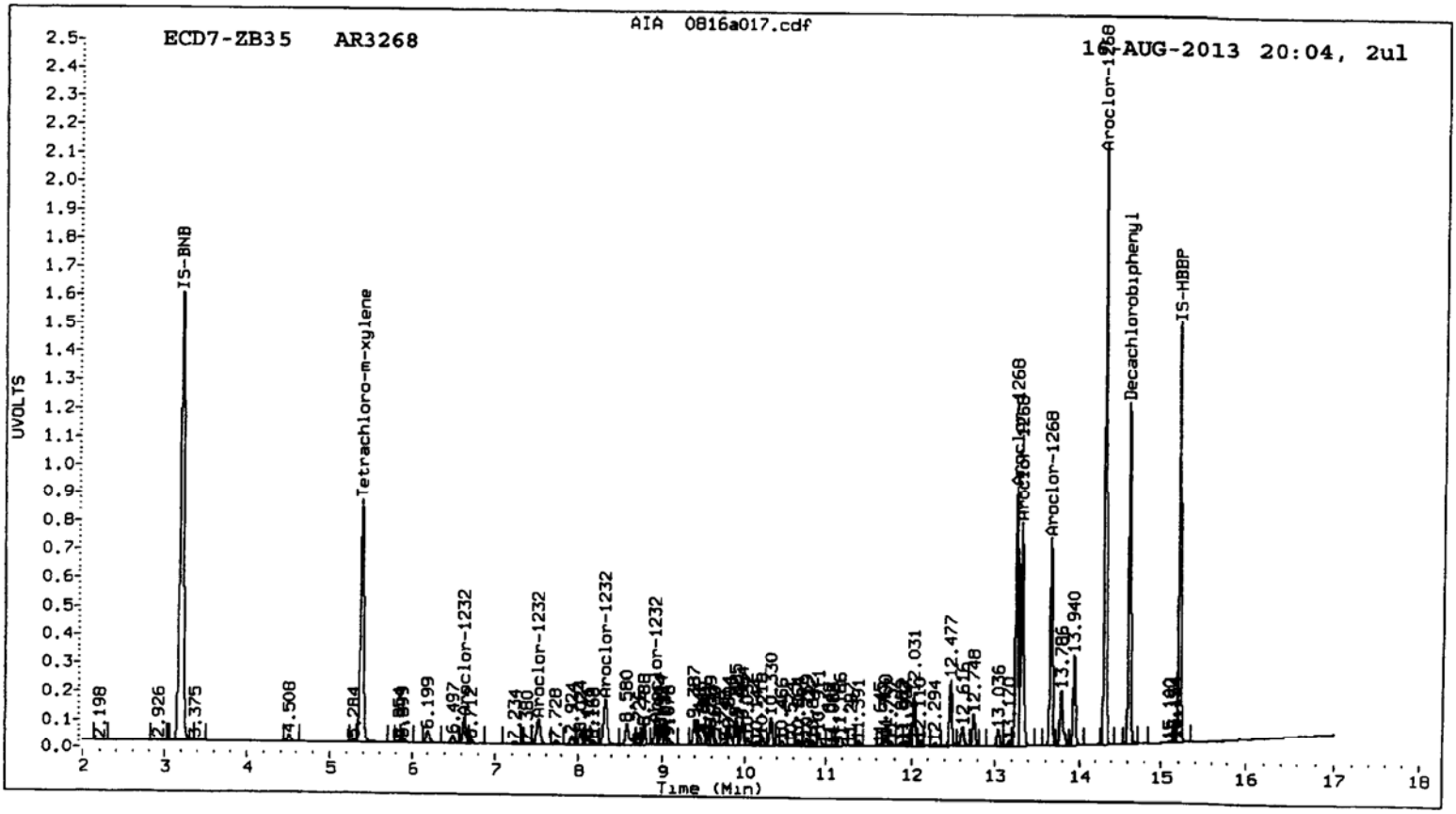
Total PCB Area Col1 (5.836 - 14.490) = 18443112 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 33305795 Col2 Total PCB = 0.4 ppm*

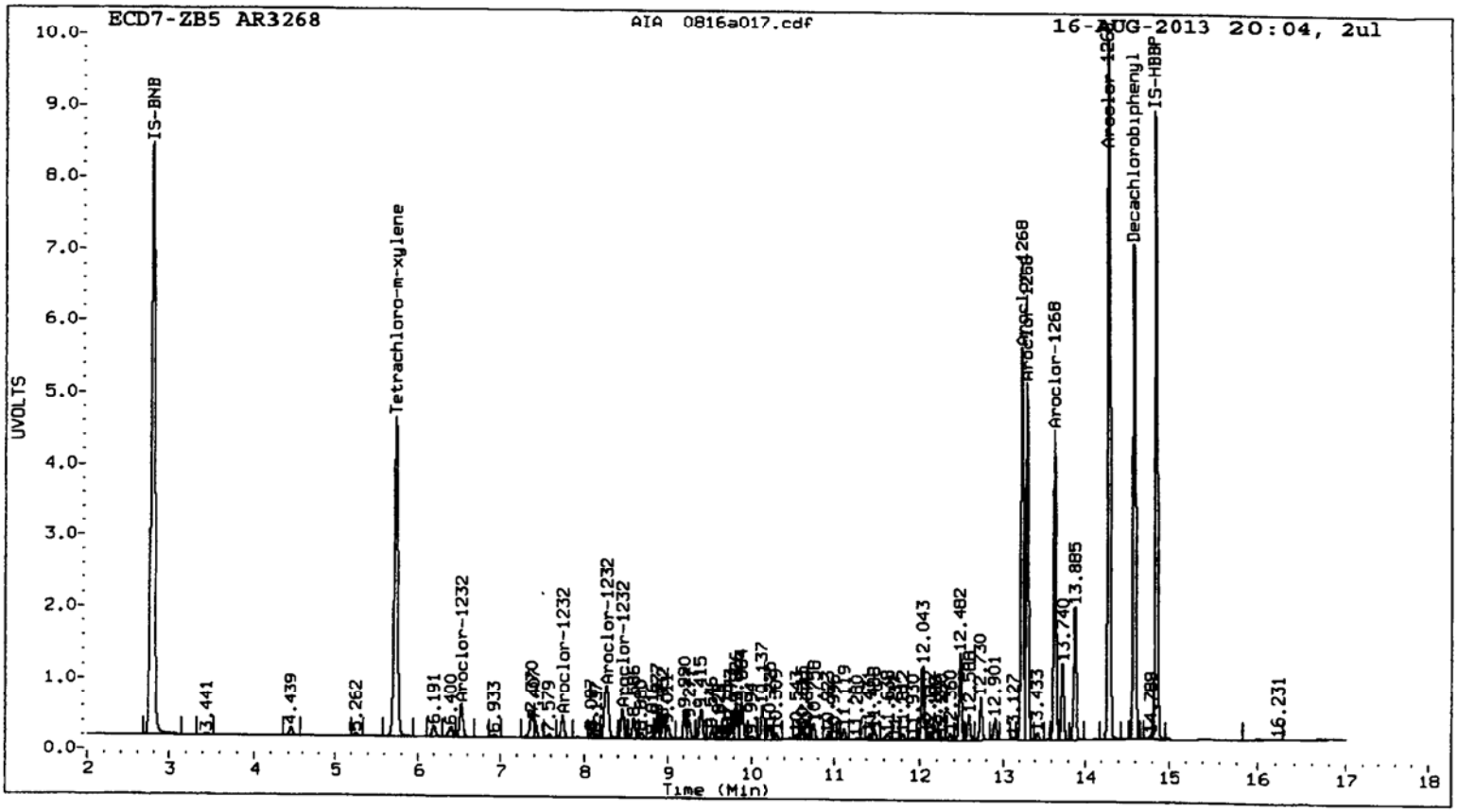
* Quantitated against AR1660 0.25ppm in Ical

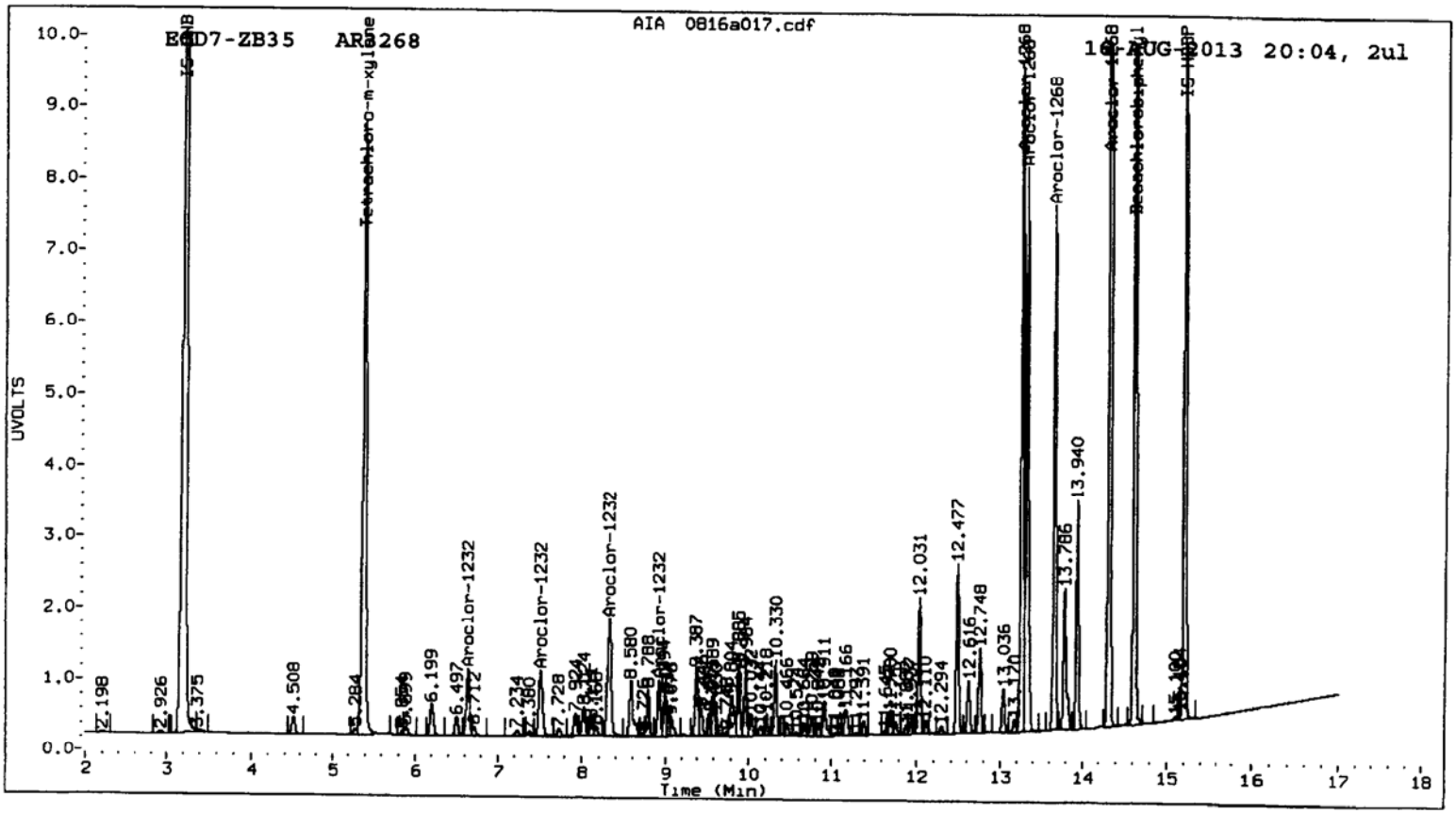
PCB-Form 10 Mod.


ECD7-ZB5 AR3268
AIA 0816a017.cdf
16-AUG-2013 20:04, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR3268
AIA 0816a017.cdf
16-AUG-2013 20:04, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

XD09:61446


ECD7-ZB5 AR3268
AIA 0816a017.cdf
16-AUG-2013 20:04, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
13.885
13.740
12.482
12.043
12.901
13.127
13.433
16.231
UVOLTS
Time (Min)


ECD7-ZB35 AR3268
AIA 0816a017.cdf
16-AUG-2013 20:04, 2ul
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1232
Aroclor-1268
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
13.940
13.786
12.477
12.031
12.748
12.616
UVOLTS
Time (Min)

XB89 01447

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a018.d
Data file 2: 20130816.b/ical-2.b/0816a018.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV
Client ID:
Injection Date: 16-AUG-2013 20:26
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.737	0.001	2500586	5.377	0.001	4670617	41.2	38.6	6.5	Tetrachloro-m-xylene
14.590	0.000	1835600	14.617	0.000	3114408	38.9	37.5	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.0	96.6
Decachlorobiphenyl	97.3	93.6

JL 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5185886	0.7
Hexabromobiphenyl	3127538	3268437	4.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9543295	-0.9
Hexabromobiphenyl	5043723	5237403	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.747	0.003	387971	238.4	1	6.632	0.002	564577	247.3	
Aroclor-1016	2	8.267	0.002	1304405	237.0	2	7.510	0.002	1204517	232.2	
Aroclor-1016	3	8.452	0.001	512046	233.5	3	8.322	0.001	2499742	231.3	
Aroclor-1016	4	8.877	0.001	295459	220.6	4	8.921	0.001	719425	221.4	
Total Col1Ave (4 peaks):					232.4	Total Col2Ave (4 peaks):				233.1	RPD = 0
Corrected Ave (3 peaks):					230.4	Corrected Ave (3 peaks):				228.3	RPD = 1
Aroclor-1221	1	6.191	0.000	56308	82.9	1	6.203	0.005	179746	108.8	
Aroclor-1221	2	6.400	0.001	88483	154.7	2	6.498	0.002	131117	137.4	
Aroclor-1221	3	6.524	0.001	301106	180.0	3	6.632	0.002	564577	194.2	
Aroclor-1221	NS	---			----	4	7.510	-0.012	1204517	1231.9	
Total Col1Ave (3 peaks):					139.2	Total Col2Ave (4 peaks):				418.1	RPD = 100*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				146.8	
Aroclor-1232	1	6.524	0.001	301106	277.1	1	6.632	0.002	564577	279.6	
Aroclor-1232	2	7.747	0.002	387971	592.9	2	7.510	-0.001	1204517	529.2	
Aroclor-1232	3	8.267	0.003	1304405	605.1	3	8.322	0.002	2499742	576.7	
Aroclor-1232	4	8.452	0.001	512046	594.2	4	8.921	0.000	719425	498.9	
Total Col1Ave (4 peaks):					517.3	Total Col2Ave (4 peaks):				471.1	RPD = 9
Corrected Ave (3 peaks):					488.1	Corrected Ave (3 peaks):				435.9	RPD = 11
Aroclor-1242	1	7.747	0.002	387971	295.7	1	6.632	0.002	564577	291.5	
Aroclor-1242	2	8.267	0.002	1304405	295.8	2	7.510	0.001	1204517	297.8	
Aroclor-1242	3	8.452	0.002	512046	296.7	3	8.322	0.000	2499742	293.1	
Aroclor-1242	4	9.416	0.001	465965	284.5	4	9.388	-0.001	897966	265.4	
Total Col1Ave (4 peaks):					293.2	Total Col2Ave (4 peaks):				287.0	RPD = 2
Corrected Ave (3 peaks):					292.0	Corrected Ave (3 peaks):				283.3	RPD = 3
Aroclor-1248	1	8.267	0.007	1304405	474.5	1	7.510	0.001	1204517	602.4	
Aroclor-1248	2	8.877	0.000	295459	163.7	2	8.322	0.002	2499742	453.1	
Aroclor-1248	3	9.416	0.000	465965	182.9	3	8.921	-0.001	719425	177.8	
Aroclor-1248	4	9.894	0.009	287072	88.1	4	10.330	0.000	44669	7.7	
Total Col1Ave (4 peaks):					227.3	Total Col2Ave (4 peaks):				310.3	RPD = 31
Corrected Ave (3 peaks):					144.9	Corrected Ave (3 peaks):				212.9	RPD = 38
Aroclor-1254	1	10.229	0.002	264209	78.8	1	10.033	0.001	468199	124.0	
Aroclor-1254	2	10.616	0.001	37988	18.2	2	10.218	0.001	489809	101.6	
Aroclor-1254	3	10.755	-0.001	118596	29.0	3	10.914	0.002	201373	25.0	
Aroclor-1254	4	11.098	-0.018	870441	207.4	4	11.182	0.016	1558875	190.0	
Aroclor-1254	5	11.812	-0.001	1234241	299.8	5	11.937	0.001	1562075	261.8	
Total Col1Ave (5 peaks):					126.7	Total Col2Ave (5 peaks):				140.5	RPD = 10
Corrected Ave (4 peaks):					83.4	Corrected Ave (4 peaks):				110.1	RPD = 28
Aroclor-1260	1	12.044	0.001	797668	269.7	1	11.937	0.002	1562075	196.8	
Aroclor-1260	2	12.361	0.002	794815	267.8	2	12.480	0.001	1574635	247.6	
Aroclor-1260	3	12.731	0.001	1896856	275.5	3	12.750	0.001	3256547	259.6	
Aroclor-1260	4	13.126	0.001	925080	254.7	4	13.311	0.001	2145083	252.9	
Aroclor-1260	5	13.306	0.001	469569	295.6	NS	---			----	
Total Col1Ave (5 peaks):					272.7	Total Col2Ave (4 peaks):				239.2	RPD = 13
Corrected Ave (4 peaks):					268.9	Corrected Ave (3 peaks):				232.4	RPD = 14
Aroclor-1262	1	12.361	0.002	794815	206.6	1	12.480	0.000	1574635	205.8	
Aroclor-1262	2	12.731	0.000	1896856	213.1	2	12.750	0.002	3256547	214.8	
Aroclor-1262	3	13.126	0.000	925080	318.3	3	13.256	0.001	955075	144.1	
Aroclor-1262	4	13.306	0.001	469569	135.7	4	13.311	-0.001	2145083	214.0	
Aroclor-1262	5	13.885	0.000	409289	152.8	5	13.940	-0.001	797234	159.7	
Total Col1Ave (5 peaks):					205.3	Total Col2Ave (5 peaks):				187.7	RPD = 9
Corrected Ave (4 peaks):					177.0	Corrected Ave (4 peaks):				180.9	RPD = 2
Aroclor-1268	1	13.237	0.000	402065	41.9	1	13.256	0.002	955075	61.2	

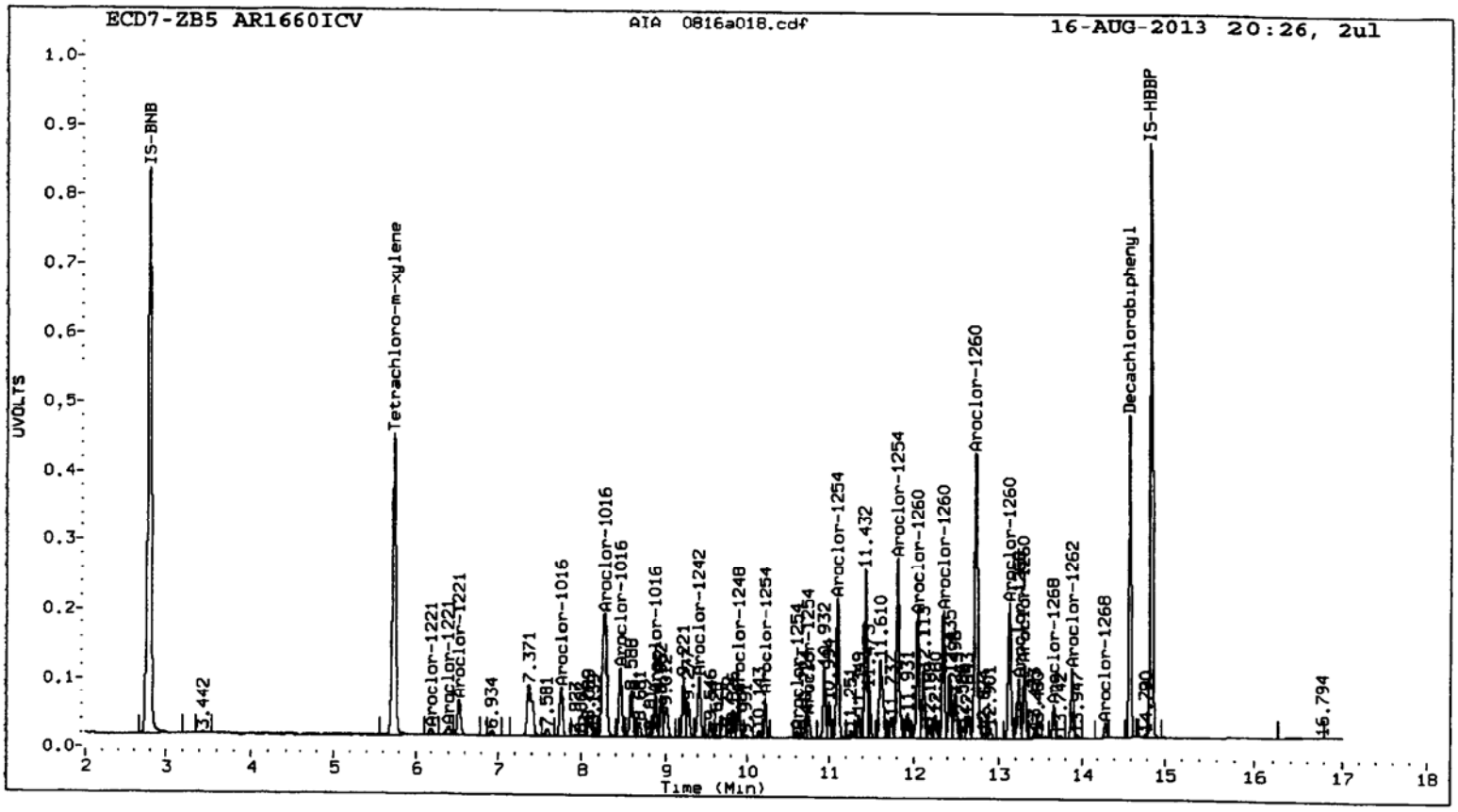
Aroclor-1268 2	13.306	0.002	469569	55.2	2	13.311	-0.006	2145083	146.3
Aroclor-1268 3	13.664	0.015	203394	28.4	3	13.664	0.000	31188	2.6
Aroclor-1268 4	14.285	-0.001	85633	4.7	4	14.317	0.000	148459	4.8
Total Col1Ave (4 peaks):				32.5	Total Col2Ave (4 peaks):			53.7	RPD = 49*
Corrected Ave (3 peaks):				25.0	Corrected Ave (3 peaks):			22.9	RPD = 9

Total PCB Area Col1 (5.836 - 14.490) = 20154886 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 37846088 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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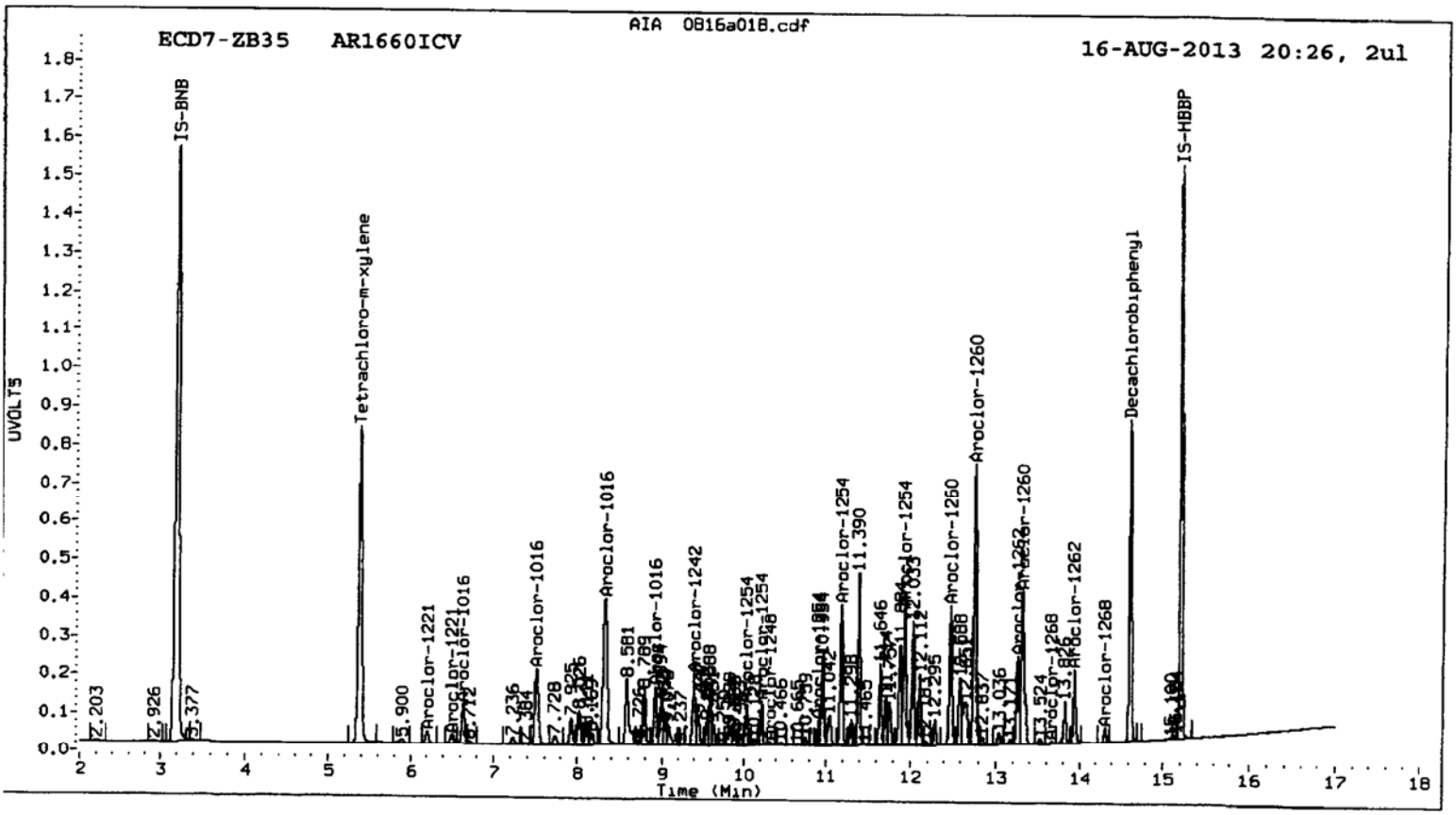
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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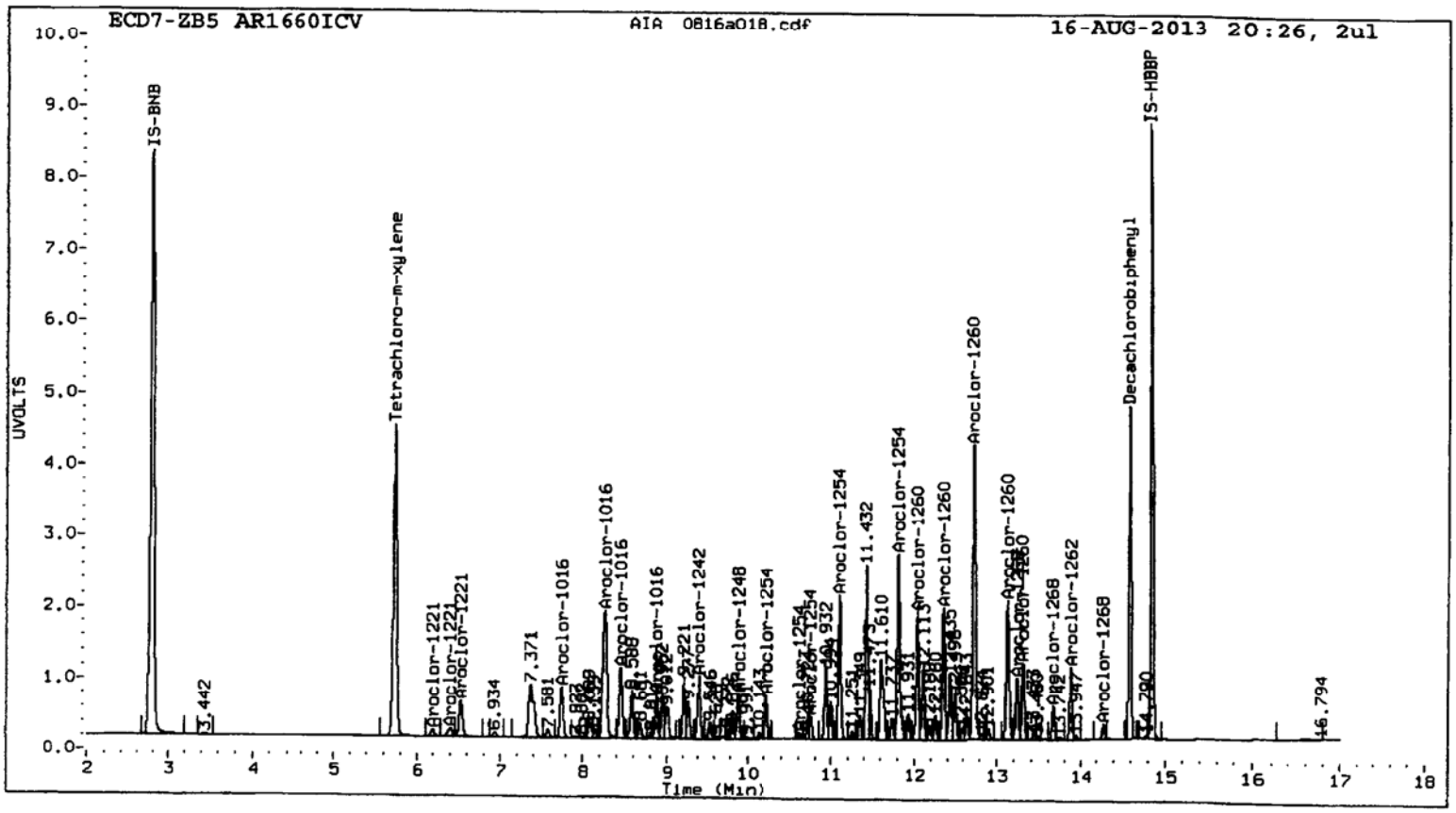
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

XB89:01451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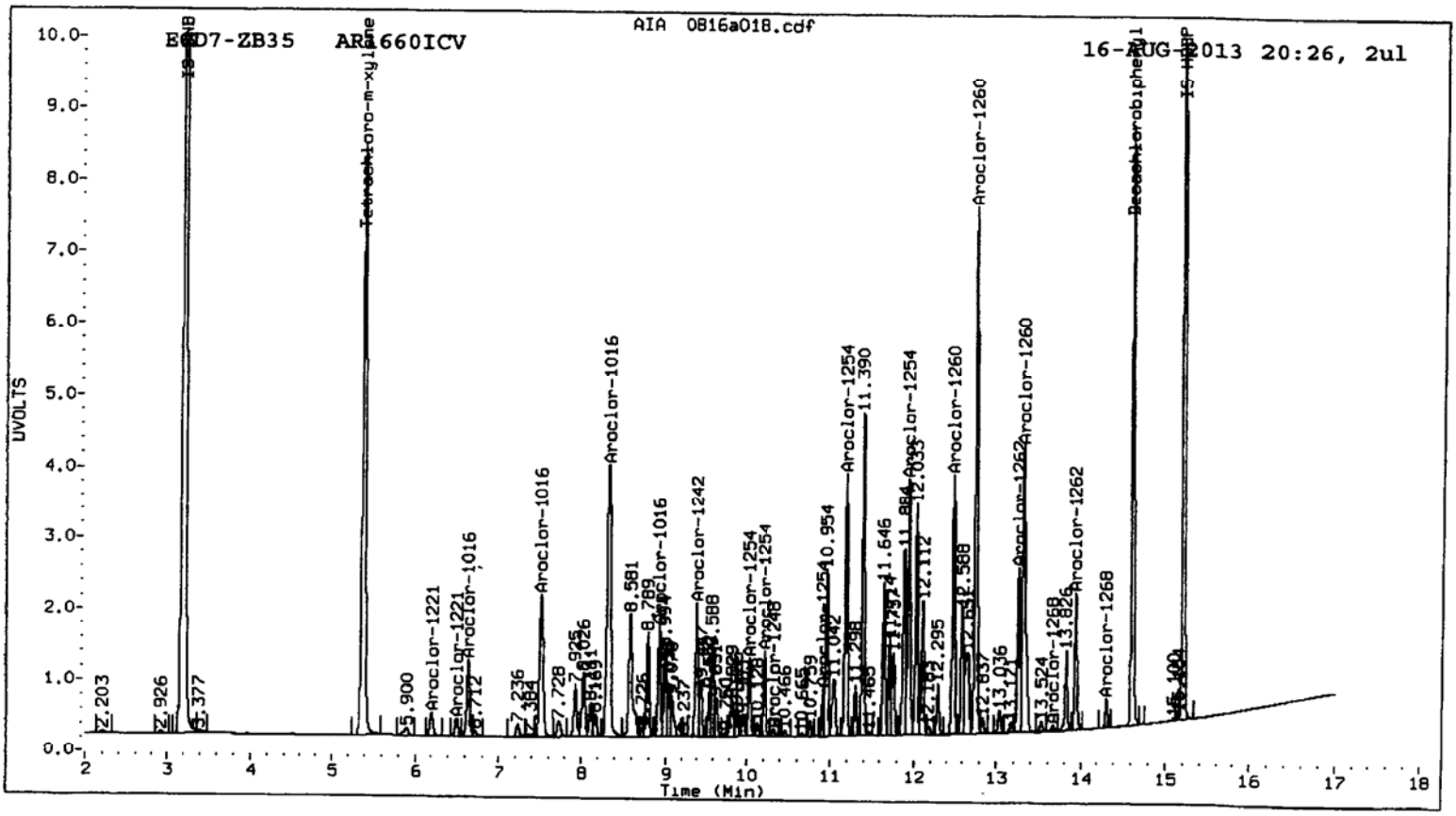
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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16-AUG-2013 20:26, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

XB89:01452

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a019.d
Data file 2: 20130816.b/ical-2.b/0816a019.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242ICV
Client ID:
Injection Date: 16-AUG-2013 20:48
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	-0.001	2514214	5.376	0.000	4751104	41.4	39.3	5.3	Tetrachloro-m-xylene
14.590	0.000	1811887	14.618	0.000	3061677	38.7	37.3	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.6	98.2
Decachlorobiphenyl	96.7	93.2

JK 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5186403	0.7
Hexabromobiphenyl	3127538	3247434	3.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9541523	-0.9
Hexabromobiphenyl	5043723	5172773	2.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount	
Aroclor-1016	1	7.745	0.001	302324	185.7	1	6.630	0.000	447908	196.2	
Aroclor-1016	2	8.264	-0.001	1006706	182.9	2	7.508	0.000	952939	183.7	
Aroclor-1016	3	8.451	0.000	398737	181.8	3	8.318	-0.003	1940630	179.6	
Aroclor-1016	4	8.876	0.000	245597	183.3	4	8.920	0.000	596697	183.7	
Total Col1Ave (4 peaks):					183.4	Total Col2Ave (4 peaks):				185.8	RPD = 1
Corrected Ave (3 peaks):					182.7	Corrected Ave (3 peaks):				182.3	RPD = 0
Aroclor-1221	1	6.189	-0.002	43671	64.3	1	6.202	0.004	154877	93.8	
Aroclor-1221	2	6.396	-0.004	74951	131.0	2	6.495	-0.001	103414	108.4	
Aroclor-1221	3	6.522	-0.001	231616	138.4	3	6.630	0.000	447908	154.1	
Aroclor-1221	NS	---			----	4	7.508	-0.014	952939	974.7	
Total Col1Ave (3 peaks):					111.3	Total Col2Ave (4 peaks):				332.8	RPD = 100*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				118.8	
Aroclor-1232	1	6.522	-0.001	231616	213.1	1	6.630	0.000	447908	221.9	
Aroclor-1232	2	7.745	0.000	302324	462.0	2	7.508	-0.003	952939	418.7	
Aroclor-1232	3	8.264	0.000	1006706	466.9	3	8.318	-0.002	1940630	447.8	
Aroclor-1232	4	8.451	0.000	398737	462.7	4	8.920	-0.001	596697	413.8	
Total Col1Ave (4 peaks):					401.2	Total Col2Ave (4 peaks):				375.6	RPD = 7
Corrected Ave (3 peaks):					379.3	Corrected Ave (3 peaks):				351.5	RPD = 8
Aroclor-1242	1	7.745	0.000	302324	230.4	1	6.630	0.000	447908	231.3	
Aroclor-1242	2	8.264	-0.001	1006706	228.3	2	7.508	-0.001	952939	235.6	
Aroclor-1242	3	8.451	0.001	398737	231.0	3	8.318	-0.003	1940630	227.6	
Aroclor-1242	4	9.415	0.000	386841	236.2	4	9.386	-0.002	794889	235.0	
Total Col1Ave (4 peaks):					231.5	Total Col2Ave (4 peaks):				232.4	RPD = 0
Corrected Ave (3 peaks):					229.9	Corrected Ave (3 peaks):				231.3	RPD = 1
Aroclor-1248	1	8.264	0.003	1006706	366.1	1	7.508	-0.001	952939	476.7	
Aroclor-1248	2	8.876	-0.002	245597	136.1	2	8.318	-0.001	1940630	351.9	
Aroclor-1248	3	9.415	-0.001	386841	151.8	3	8.920	-0.002	596697	147.5	
Aroclor-1248	4	9.884	-0.001	428029	131.3	4	10.329	-0.001	806671	138.5	
Total Col1Ave (4 peaks):					196.3	Total Col2Ave (4 peaks):				278.6	RPD = 35
Corrected Ave (3 peaks):					139.7	Corrected Ave (3 peaks):				212.6	RPD = 41*
Aroclor-1254	1	10.225	-0.002	179858	53.6	1	10.032	0.000	229561	60.8	
Aroclor-1254	2	10.616	0.001	119659	57.4	2	10.218	0.001	248335	51.5	
Aroclor-1254	3	10.757	0.000	204224	50.0	3	10.911	-0.001	430551	53.4	
Aroclor-1254	4	11.119	0.003	171130	40.8	4	11.164	-0.002	433146	52.8	
Aroclor-1254	5	11.812	0.000	90197	21.9	5	11.936	0.000	150890	25.3	
Total Col1Ave (5 peaks):					44.7	Total Col2Ave (5 peaks):				48.8	RPD = 9
Corrected Ave (4 peaks):					41.6	Corrected Ave (4 peaks):				45.8	RPD = 10
Aroclor-1260	1	12.043	-0.001	18895	6.4	1	11.936	0.001	150890	19.2	
Aroclor-1260	2	12.360	0.001	15103	5.1	2	12.474	-0.005	59695	9.5	
Aroclor-1260	3	12.730	0.000	18977	2.8	3	12.749	0.000	35448	2.9	
Aroclor-1260	4	13.125	0.000	10785	3.0	4	13.309	-0.001	22549	2.7	
Aroclor-1260	5	---			0.0	NS	---			----	
Total Col1Ave (4 peaks):					4.3	Total Col2Ave (4 peaks):				8.6	RPD = 66*
Corrected Ave (3 peaks):					3.6	Corrected Ave (3 peaks):				5.0	RPD = 32
Aroclor-1262	1	12.360	0.001	15103	4.0	1	12.474	-0.006	59695	7.9	
Aroclor-1262	2	12.730	0.000	18977	2.1	2	12.749	0.001	35448	2.4	
Aroclor-1262	3	13.125	-0.001	10785	3.7	3	13.309	0.054	22549	3.4	
Aroclor-1262	4	---			0.0	4	---			0.0	
Aroclor-1262	5	---			0.0	5	13.976	0.035	21492	4.4	
Total Col1Ave (3 peaks):					3.3	Total Col2Ave (4 peaks):				4.5	RPD = 32
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				3.4	
Aroclor-1268	1	---			0.0	1	13.309	0.055	22549	1.5	

Aroclor-1268 2	---	0.0	2	---			0.0
Aroclor-1268 3	---	0.0	3	---			0.0
Aroclor-1268 4	---	0.0	4	14.314	-0.002	10203	0.3
Col1Ave: <3 Quant Peaks			Col2Ave: <3 Quant Peaks				

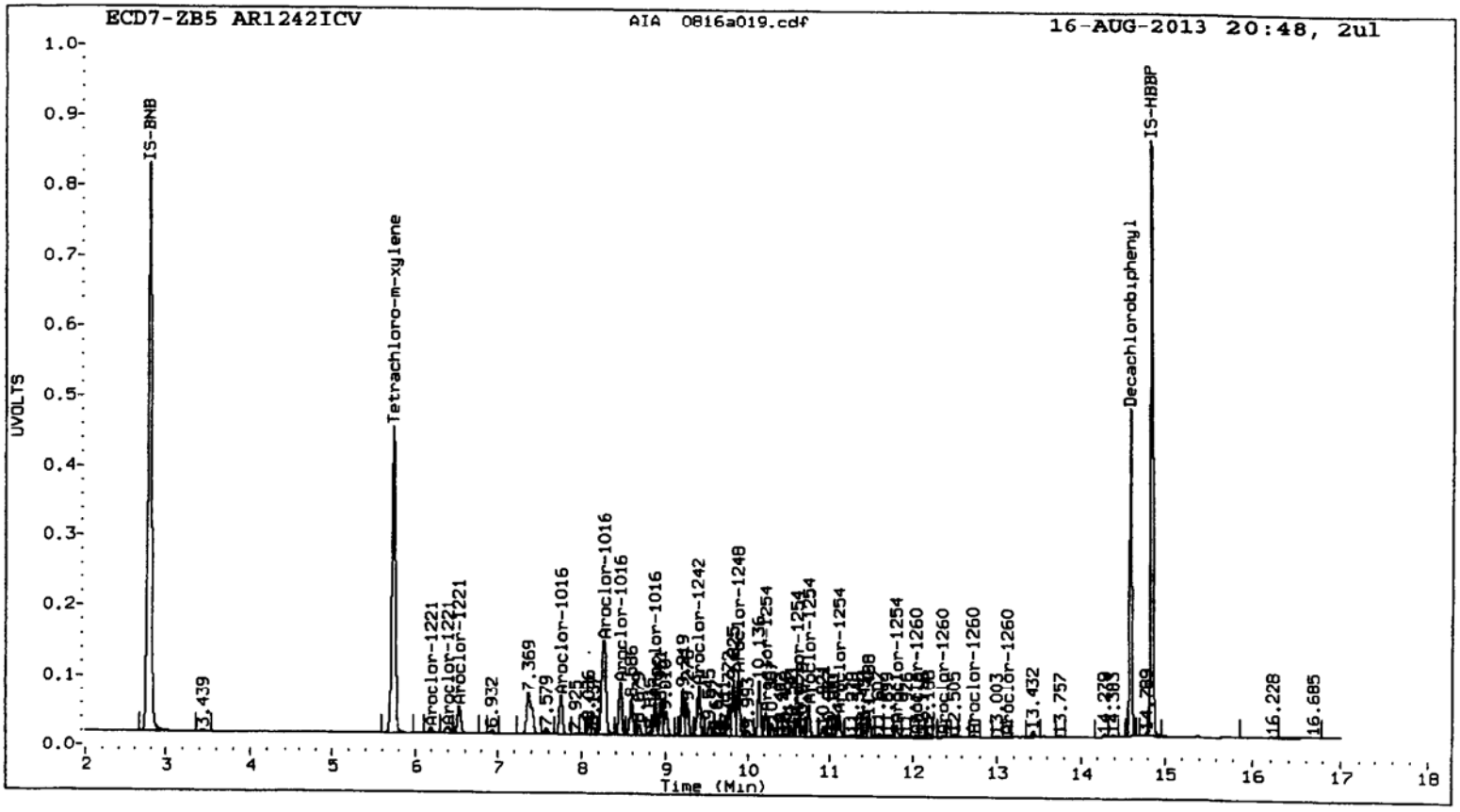
Total PCB Area Col1 (5.836 - 14.490) = 7926176 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 16045677 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89:01455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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
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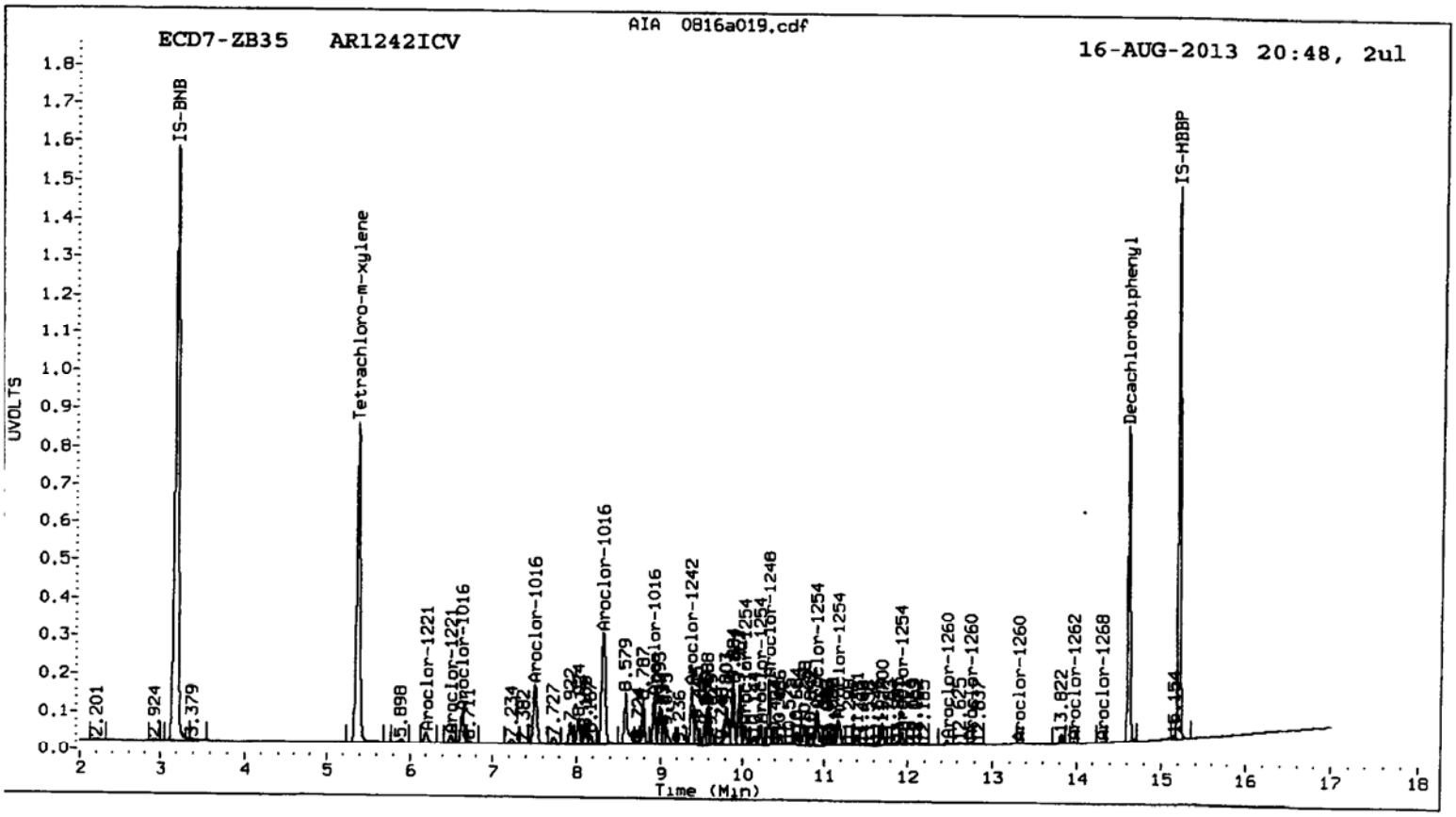
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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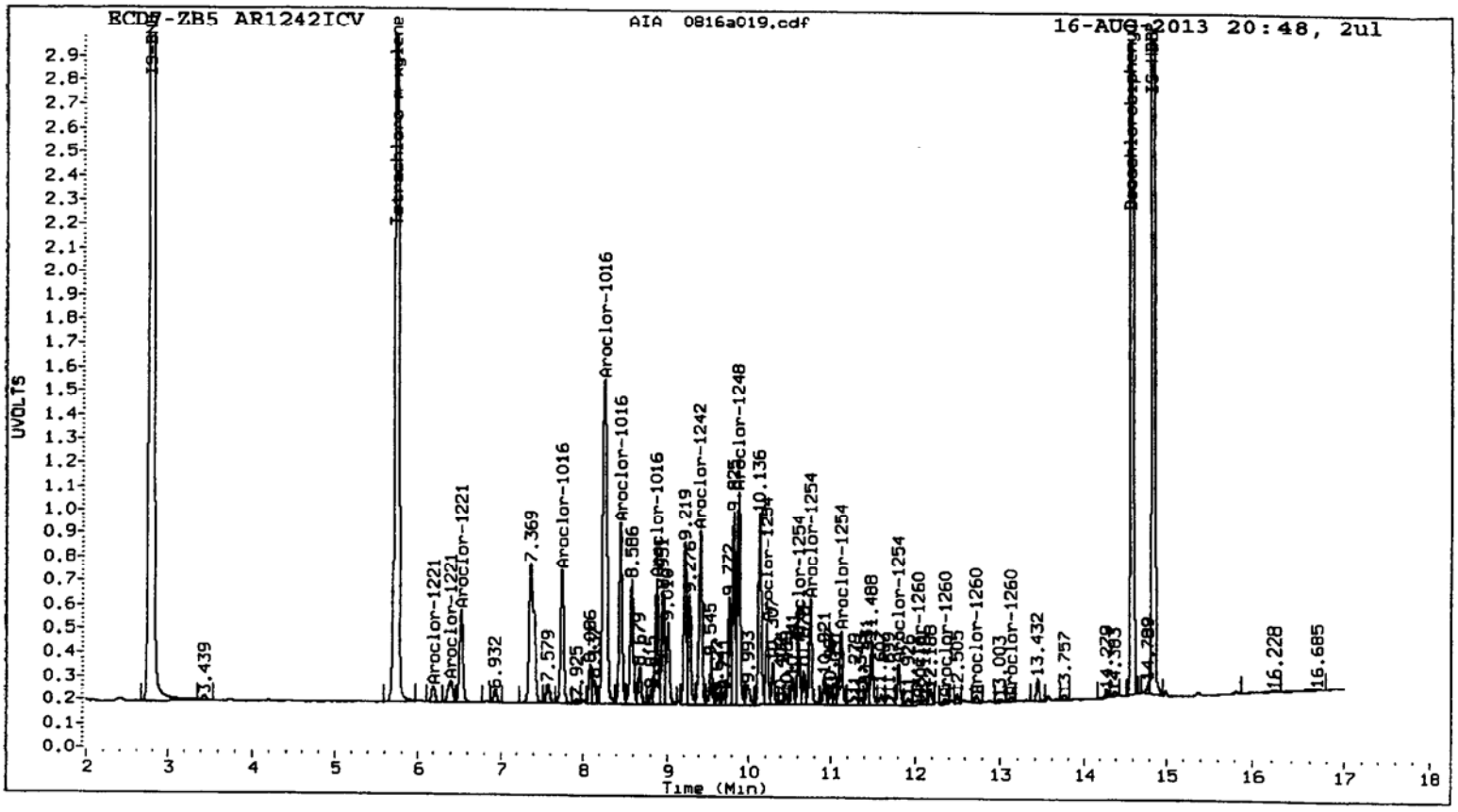
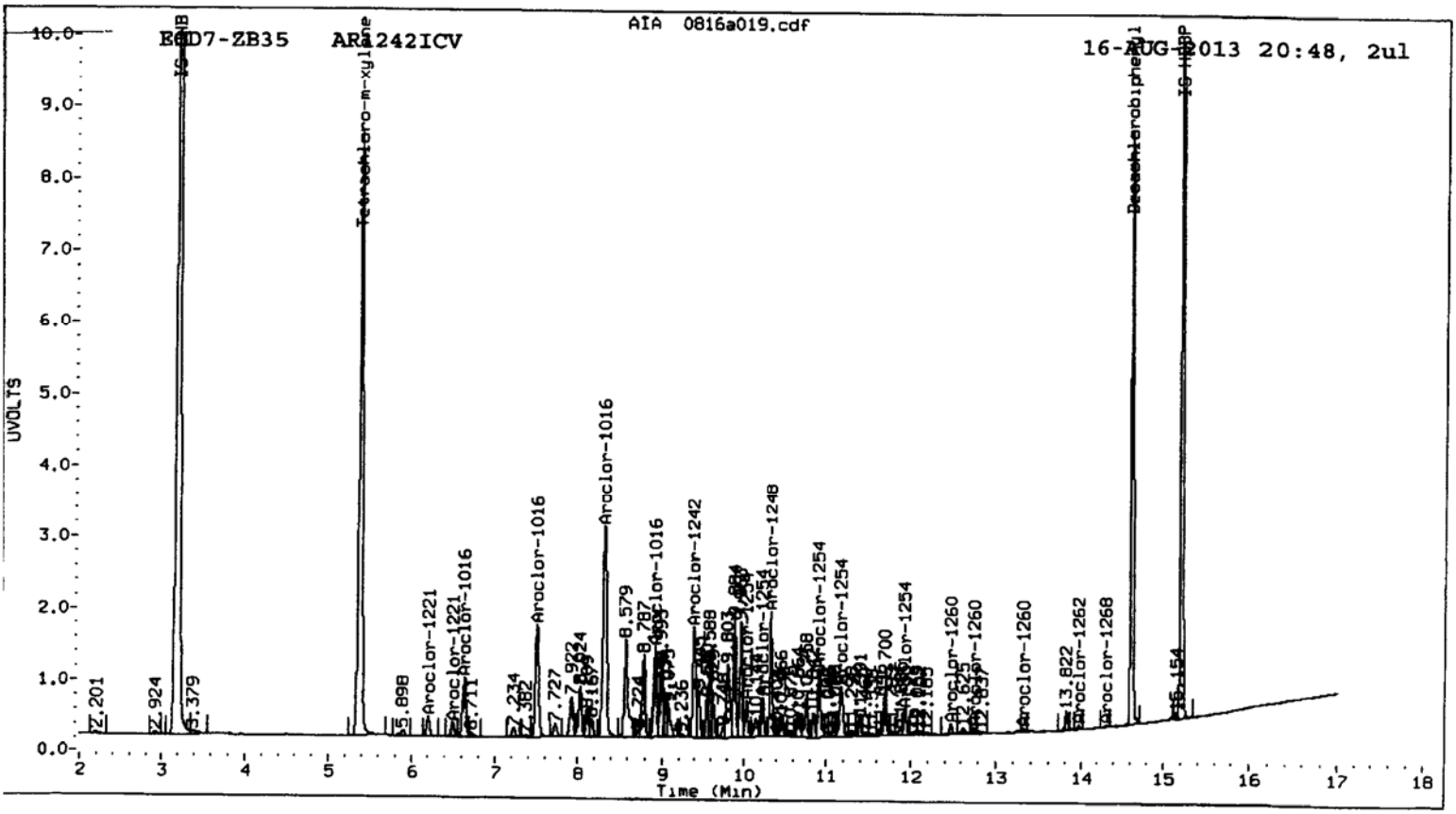
16-AUG-2013 20:48, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

XB89 01456


ECD7-ZB5 AR1242ICV
AIA 0816a019.cdf
16-AUG-2013 20:48, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260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16-AUG-2013 20:48, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a020.d
Data file 2: 20130816.b/ical-2.b/0816a020.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248ICV
Client ID:
Injection Date: 16-AUG-2013 21:10
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.737	0.001	2396353	5.376	0.000	4569969	39.5	37.5	5.2	Tetrachloro-m-xylene
14.590	0.000	1779620	14.618	0.001	2998415	37.1	35.8	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.6	93.7
Decachlorobiphenyl	92.8	89.4

08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5190835	0.8
Hexabromobiphenyl	3127538	3323969	6.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9624510	-0.1
Hexabromobiphenyl	5043723	5282715	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.745	0.002	151114	92.8	1	6.630	0.000	114699	49.8
Aroclor-1016	2	8.258	-0.007	676443	122.8	2	7.507	-0.001	525658	100.5
Aroclor-1016	3	8.454	0.003	240697	109.6	3	8.318	-0.003	1360888	124.8
Aroclor-1016	4	8.877	0.001	422462	315.1	4	8.921	0.000	948023	289.3
	Total Col1Ave (4 peaks):				160.1		Total Col2Ave (4 peaks):			141.1 RPD = 13
	Corrected Ave (3 peaks):				108.4		Corrected Ave (3 peaks):			91.7 RPD = 17
Aroclor-1221	1	---			0.0	1	6.204	0.005	80424	48.3
Aroclor-1221	2	6.372	-0.027	35588	62.2	2	6.498	0.002	19230	20.0
Aroclor-1221	3	6.523	0.000	48680	29.1	3	6.630	0.000	114699	39.1
Aroclor-1221	NS	---			----	4	7.507	-0.015	525658	533.1
	Col1Ave: <3 Quant Peaks						Col2Ave: 160.1			
Aroclor-1232	1	6.523	0.000	48680	44.8	1	6.630	-0.001	114699	56.3
Aroclor-1232	2	7.745	0.001	151114	230.7	2	7.507	-0.004	525658	229.0
Aroclor-1232	3	8.258	-0.007	676443	313.5	3	8.318	-0.002	1360888	311.3
Aroclor-1232	4	8.454	0.002	240697	279.0	4	8.921	-0.001	948023	651.8
	Total Col1Ave (4 peaks):				217.0		Total Col2Ave (4 peaks):			312.1 RPD = 36
	Corrected Ave (3 peaks):				184.8		Corrected Ave (3 peaks):			198.9 RPD = 7
Aroclor-1242	1	7.745	0.001	151114	115.1	1	6.630	0.000	114699	58.7
Aroclor-1242	2	8.258	-0.007	676443	153.2	2	7.507	-0.002	525658	128.9
Aroclor-1242	3	8.454	0.003	240697	139.3	3	8.318	-0.003	1360888	158.2
Aroclor-1242	4	9.415	0.000	577732	352.5	4	9.388	-0.001	1085896	318.3
	Total Col1Ave (4 peaks):				190.0		Total Col2Ave (4 peaks):			166.0 RPD = 13
	Corrected Ave (3 peaks):				135.9		Corrected Ave (3 peaks):			115.3 RPD = 16
Aroclor-1248	1	8.258	-0.003	676443	245.8	1	7.507	-0.002	525658	260.7
Aroclor-1248	2	8.877	0.000	422462	233.9	2	8.318	-0.001	1360888	244.6
Aroclor-1248	3	9.415	-0.001	577732	226.5	3	8.921	-0.001	948023	232.3
Aroclor-1248	4	9.886	0.000	738177	226.3	4	10.328	-0.001	1317503	224.2
	Total Col1Ave (4 peaks):				233.1		Total Col2Ave (4 peaks):			240.5 RPD = 3
	Corrected Ave (3 peaks):				228.9		Corrected Ave (3 peaks):			239.7 RPD = 2
Aroclor-1254	1	10.226	-0.001	348047	103.7	1	10.031	-0.001	405936	106.6
Aroclor-1254	2	10.616	0.001	236844	113.5	2	10.217	0.000	435663	89.6
Aroclor-1254	3	10.758	0.001	385186	94.2	3	10.911	-0.001	753898	92.7
Aroclor-1254	4	11.120	0.004	291402	69.4	4	11.165	-0.002	751809	90.9
Aroclor-1254	5	11.812	0.000	79812	19.4	5	11.937	0.001	139825	23.2
	Total Col1Ave (5 peaks):				80.0		Total Col2Ave (5 peaks):			80.6 RPD = 1
	Corrected Ave (4 peaks):				71.7		Corrected Ave (4 peaks):			74.1 RPD = 3
Aroclor-1260	1	12.043	0.000	15631	5.2	1	11.937	0.001	139825	17.5
Aroclor-1260	2	12.360	0.000	10985	3.6	2	12.474	-0.004	71899	11.2
Aroclor-1260	3	12.730	-0.001	22626	3.2	3	12.749	0.001	54643	4.3
Aroclor-1260	4	---			0.0	4	13.312	0.002	33489	3.9
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (3 peaks):				4.0		Total Col2Ave (4 peaks):			9.2 RPD = 79*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			6.5
Aroclor-1262	1	12.360	0.001	10985	2.8	1	12.474	-0.005	71899	9.3
Aroclor-1262	2	12.730	-0.001	22626	2.5	2	12.749	0.001	54643	3.6
Aroclor-1262	3	---			0.0	3	13.255	0.000	22253	3.3
Aroclor-1262	4	---			0.0	4	13.312	-0.001	33489	3.3
Aroclor-1262	5	---			0.0	5	13.944	0.003	12022	2.4
	Col1Ave: <3 Quant Peaks						Col2Ave: 4.4			
Aroclor-1268	1	---			0.0	1	13.255	0.001	22253	1.4
Aroclor-1268	2	---			0.0	2	13.312	-0.005	33489	2.3
Aroclor-1268	3	---			0.0	3	---			0.0

Aroclor-1268	4	---	0.0	4	---	0.0	
	Col1Ave: <3 Quant Peaks			Col2Ave: <3 Quant Peaks			

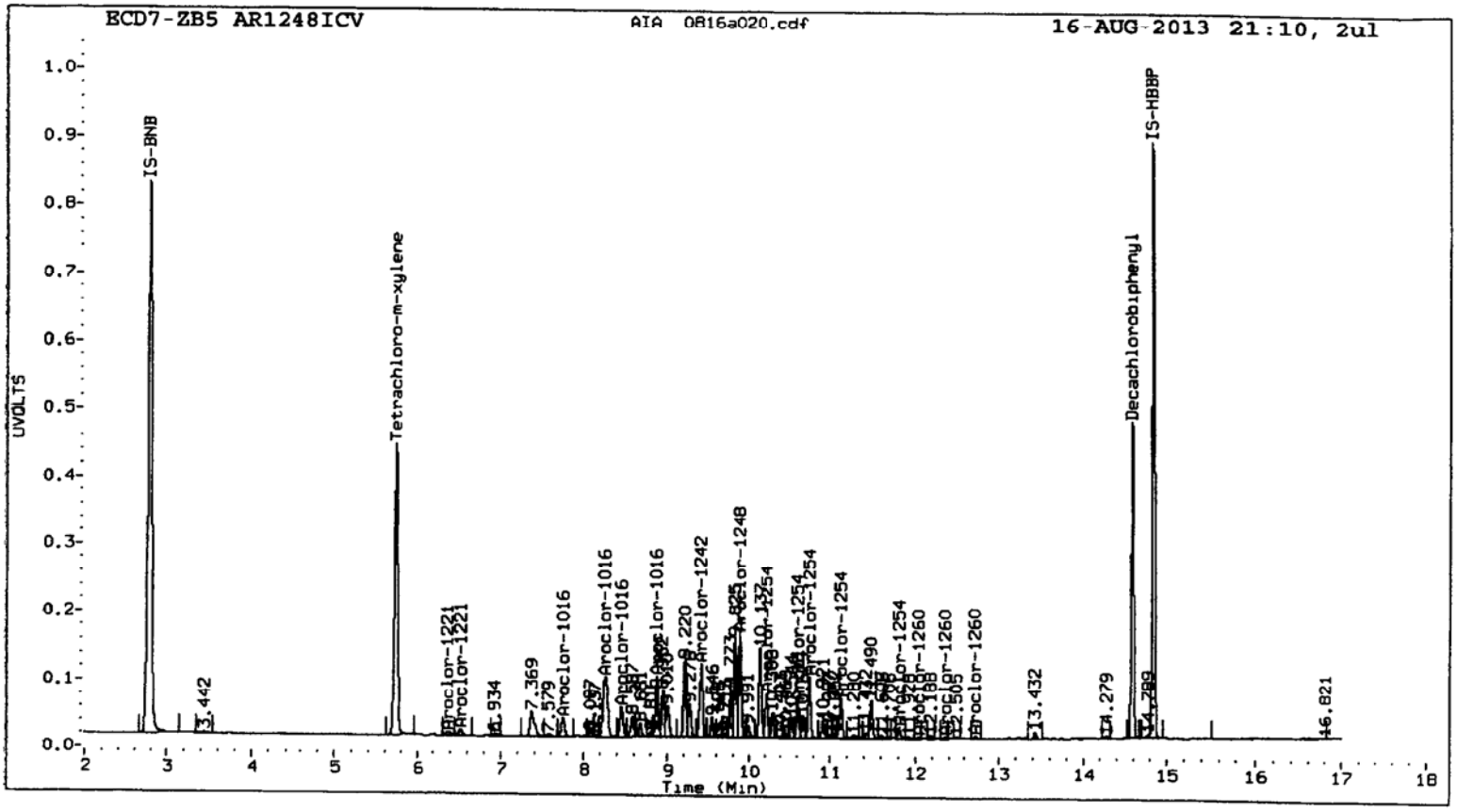
Total PCB Area Col1 (5.836 - 14.490) = 9169875 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 18402209 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89.01460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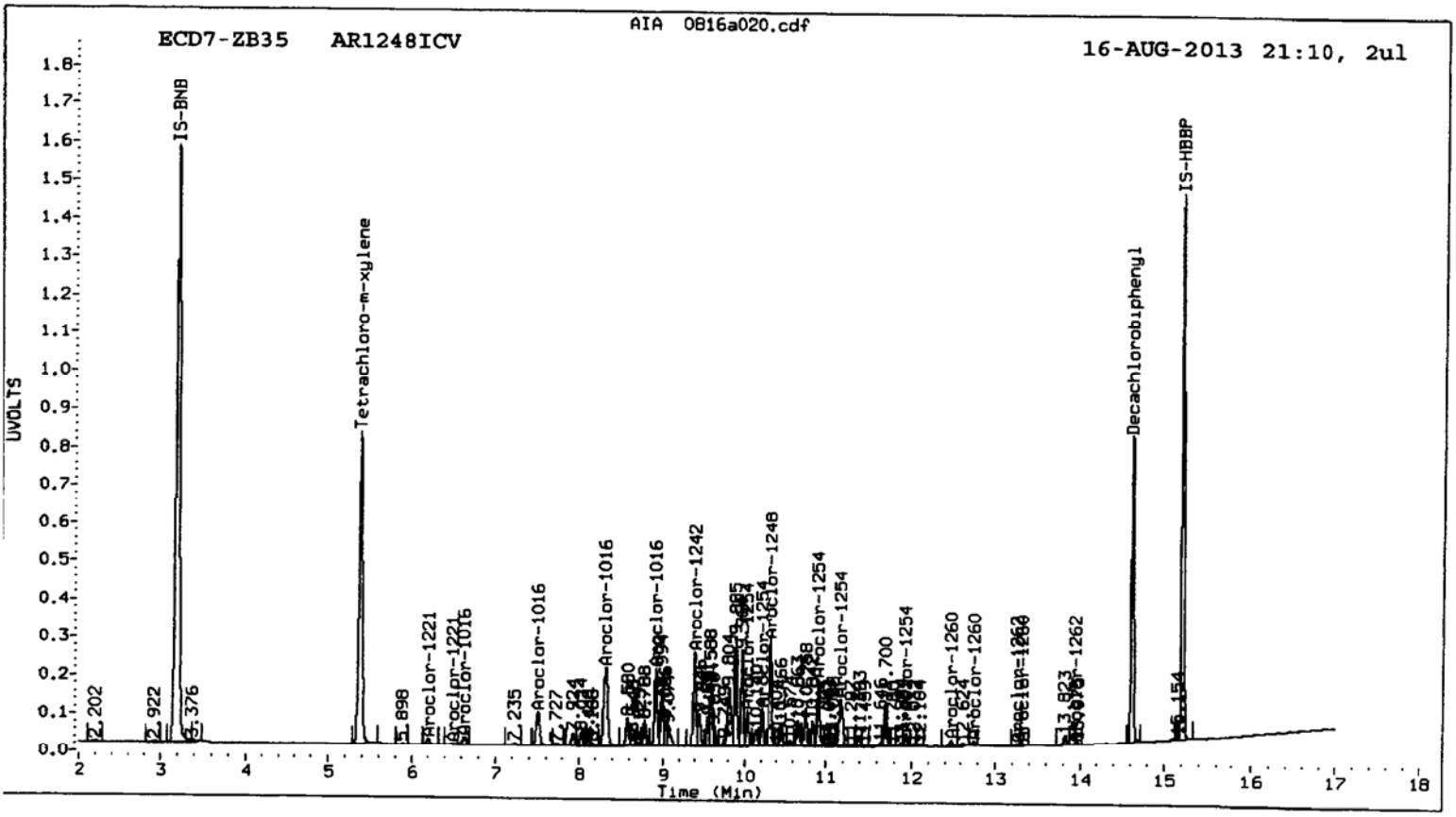
AIA 0816a020.cdf
16-AUG-2013 21:10, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260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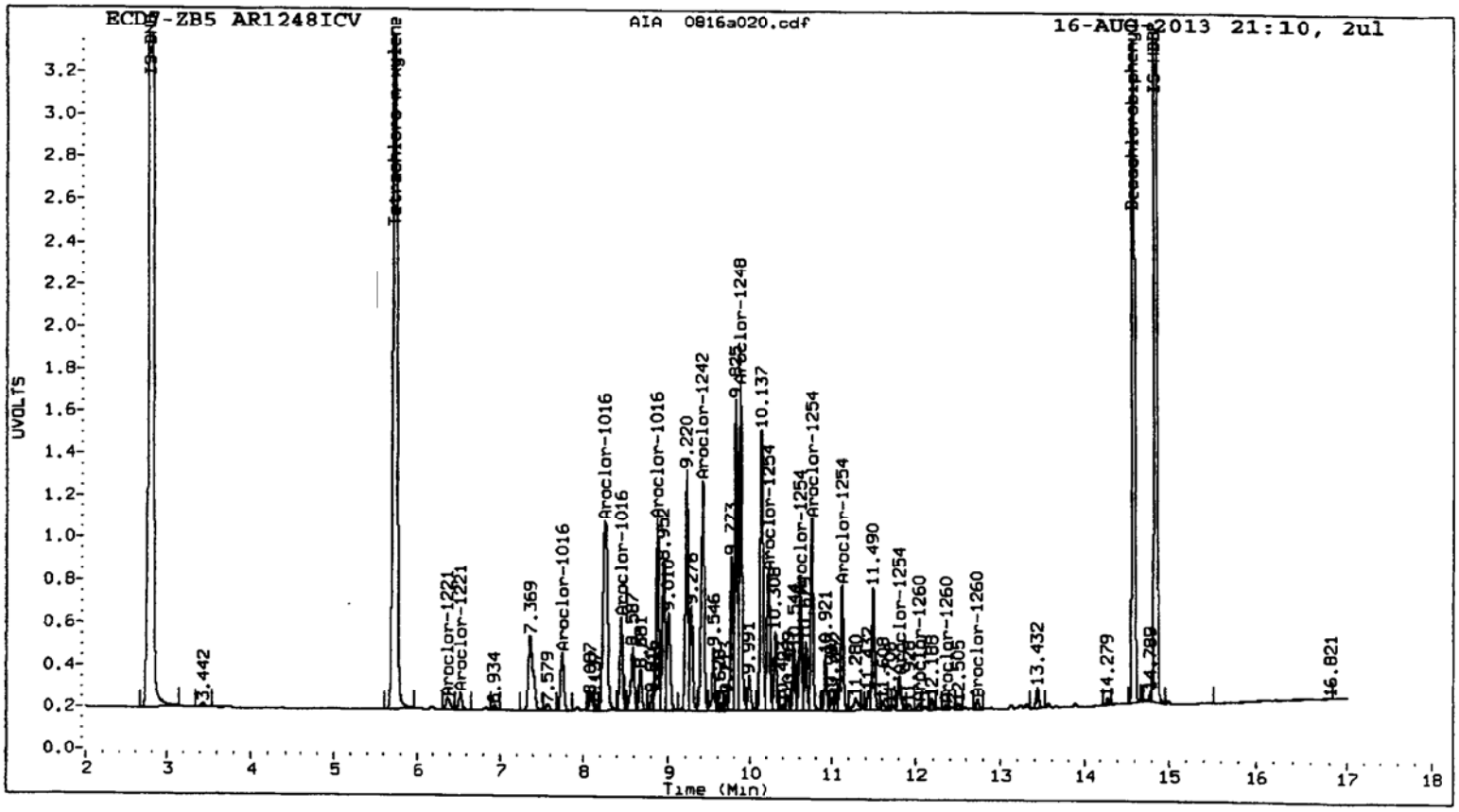
AIA 0816a020.cdf
16-AUG-2013 21:10, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260

XB89:01461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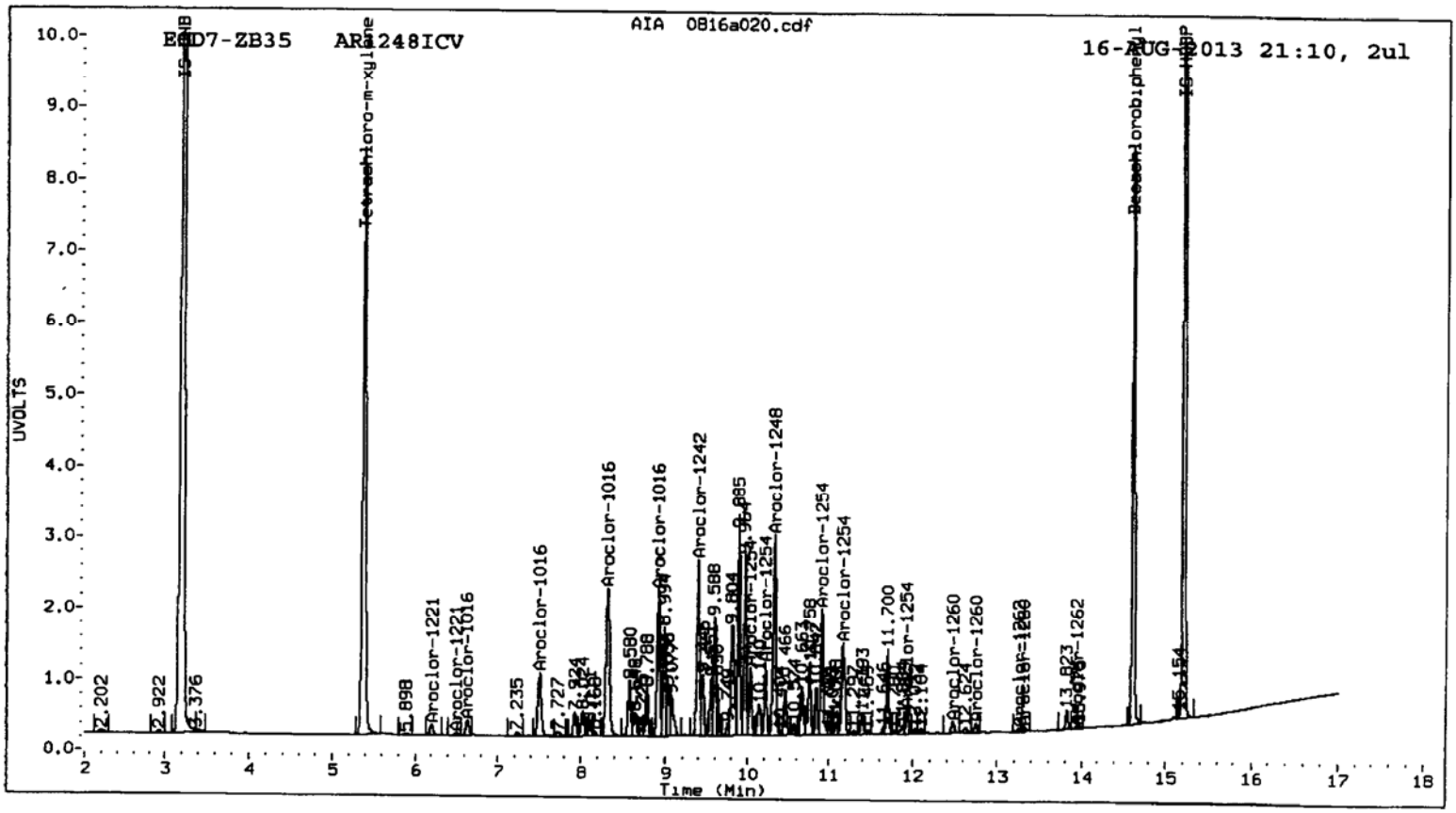
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260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16-AUG-2013 21:10, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260

XB89:01462

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a021.d
Data file 2: 20130816.b/ical-2.b/0816a021.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV
Client ID:
Injection Date: 16-AUG-2013 21:32
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	-0.001	2450813	5.376	0.000	4626716	40.7	38.5	5.5	Tetrachloro-m-xylene
14.590	0.000	1842030	14.618	0.000	3104861	38.3	36.8	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.7	96.3
Decachlorobiphenyl	95.7	91.9

JK 08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5148865	-0.1
Hexabromobiphenyl	3127538	3337044	6.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9480451	-1.6
Hexabromobiphenyl	5043723	5318679	5.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	6.623	-0.007	17790	7.8
Aroclor-1016	2	8.253	-0.013	21752	4.0	2	7.509	0.000	17699	3.4
Aroclor-1016	3	8.460	0.009	11654	5.4	3	8.315	-0.006	54555	5.1
Aroclor-1016	4	8.876	0.000	324634	244.1	4	8.919	-0.001	629841	195.1
	Total Col1Ave (3 peaks):				84.5	Total Col2Ave (4 peaks):				52.9 RPD = 46*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				5.5
Aroclor-1221	1	---			0.0	1	6.203	0.005	63466	38.7
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	6.623	-0.006	17790	6.2
Aroclor-1221	NS	---			----	4	7.509	-0.013	17699	18.2
	Col1Ave: <3 Quant Peaks					Col2Ave: 21.0				
Aroclor-1232	1	---			0.0	1	6.623	-0.007	17790	8.9
Aroclor-1232	2	---			0.0	2	7.509	-0.002	17699	7.8
Aroclor-1232	3	8.253	-0.012	21752	10.2	3	8.315	-0.005	54555	12.7
Aroclor-1232	4	8.460	0.009	11654	13.6	4	8.919	-0.002	629841	439.6
	Col1Ave: <3 Quant Peaks					Col2Ave: 117.2				
Aroclor-1242	1	---			0.0	1	6.623	-0.007	17790	9.2
Aroclor-1242	2	8.253	-0.013	21752	5.0	2	7.509	0.000	17699	4.4
Aroclor-1242	3	8.460	0.010	11654	6.8	3	8.315	-0.006	54555	6.4
Aroclor-1242	4	9.416	0.001	86622	53.3	4	9.388	-0.001	382673	113.9
	Total Col1Ave (3 peaks):				21.7	Total Col2Ave (4 peaks):				33.5 RPD = 43*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				6.7
Aroclor-1248	1	8.253	-0.008	21752	8.0	1	7.509	0.000	17699	8.9
Aroclor-1248	2	8.876	-0.001	324634	181.2	2	8.315	-0.005	54555	10.0
Aroclor-1248	3	9.416	0.000	86622	34.2	3	8.919	-0.003	629841	156.7
Aroclor-1248	4	9.893	0.008	661517	204.5	4	10.314	-0.016	720313	124.5
	Total Col1Ave (4 peaks):				107.0	Total Col2Ave (4 peaks):				75.0 RPD = 35
	Corrected Ave (3 peaks):				74.5	Corrected Ave (3 peaks):				47.8 RPD = 44*
Aroclor-1254	1	10.227	-0.001	970727	291.6	1	10.031	0.000	1074230	286.3
Aroclor-1254	2	10.616	0.000	625485	302.3	2	10.218	0.000	1381676	288.6
Aroclor-1254	3	10.756	0.000	1162671	286.7	3	10.912	0.000	2260731	282.1
Aroclor-1254	4	11.117	0.001	1221154	293.1	4	11.166	-0.001	2378330	291.8
Aroclor-1254	5	11.813	0.000	1173058	287.0	5	11.936	0.000	1704251	287.5
	Total Col1Ave (5 peaks):				292.1	Total Col2Ave (5 peaks):				287.3 RPD = 2
	Corrected Ave (4 peaks):				289.6	Corrected Ave (4 peaks):				286.1 RPD = 1
Aroclor-1260	1	12.041	-0.002	54130	17.9	1	11.936	0.000	1704251	211.4
Aroclor-1260	2	12.360	0.001	62557	20.6	2	12.474	-0.005	649180	100.5
Aroclor-1260	3	12.730	0.000	132185	18.8	3	12.749	0.000	355299	27.9
Aroclor-1260	4	13.125	0.000	129009	34.8	4	13.308	-0.002	242081	28.1
Aroclor-1260	5	---			0.0	NS	---			----
	Total Col1Ave (4 peaks):				23.0	Total Col2Ave (4 peaks):				92.0 RPD = 120*
	Corrected Ave (3 peaks):				19.1	Corrected Ave (3 peaks):				52.2 RPD = 93*
Aroclor-1262	1	12.360	0.001	62557	15.9	1	12.474	-0.006	649180	83.6
Aroclor-1262	2	12.730	0.000	132185	14.5	2	12.749	0.001	355299	23.1
Aroclor-1262	3	13.125	-0.001	129009	43.5	3	13.255	0.000	48608	7.2
Aroclor-1262	4	---			0.0	4	13.308	-0.005	242081	23.8
Aroclor-1262	5	---			0.0	5	13.974	0.033	28423	5.6
	Total Col1Ave (3 peaks):				24.7	Total Col2Ave (5 peaks):				28.6 RPD = 15
	Corrected Ave: < 3 Peaks					Corrected Ave (4 peaks):				14.9
Aroclor-1268	1	---			0.0	1	13.255	0.001	48608	3.1
Aroclor-1268	2	---			0.0	2	13.308	-0.009	242081	16.3
Aroclor-1268	3	---			0.0	3	---			0.0

XB89 01464

Aroclor-1268	4	---	0.0	4	---	0.0
	Col1Ave: <3 Quant Peaks			Col2Ave: <3 Quant Peaks		

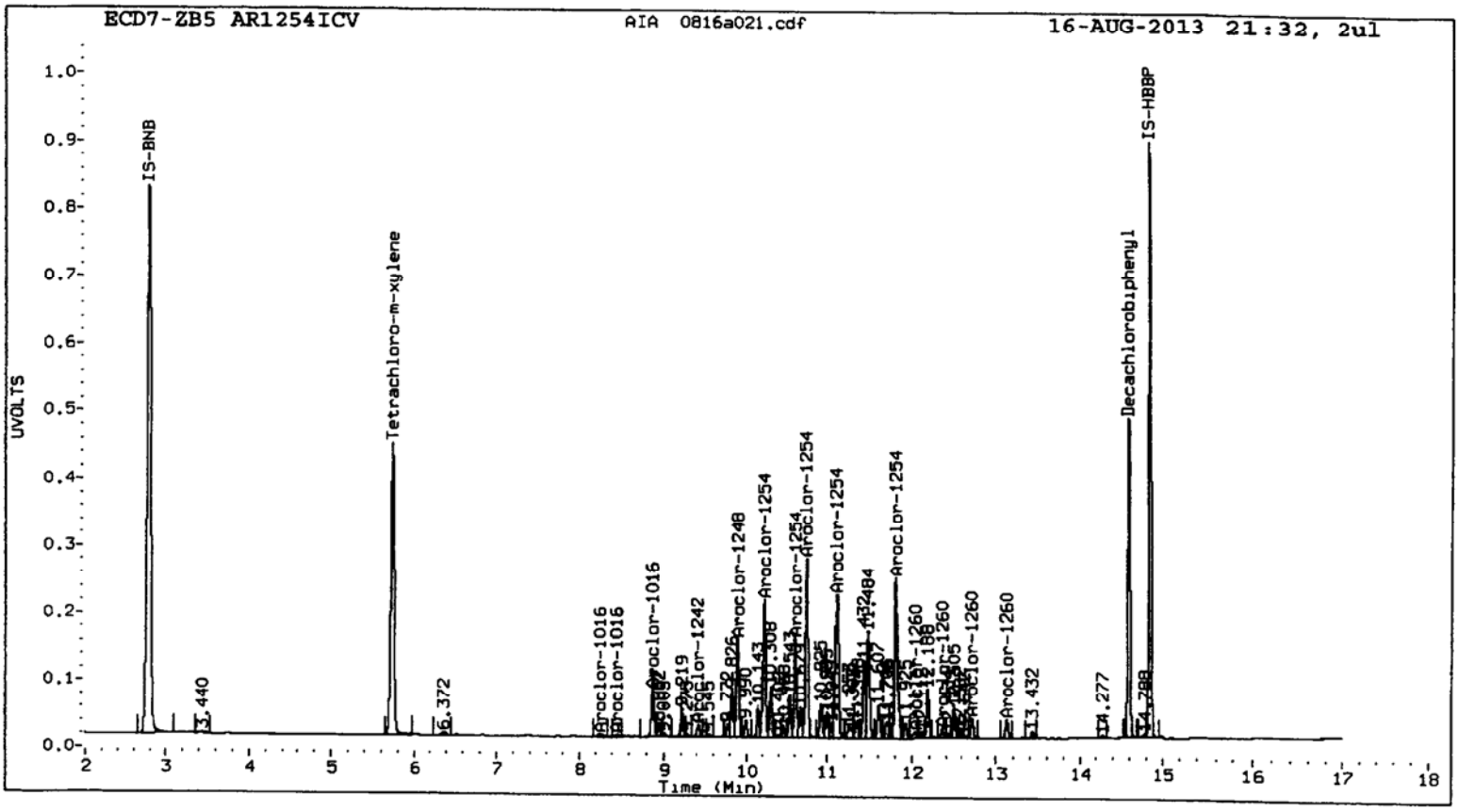
Total PCB Area Col1 (5.836 - 14.490) = 11745783 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 22542137 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89 01465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16-AUG-2013 21:32, 2ul
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Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
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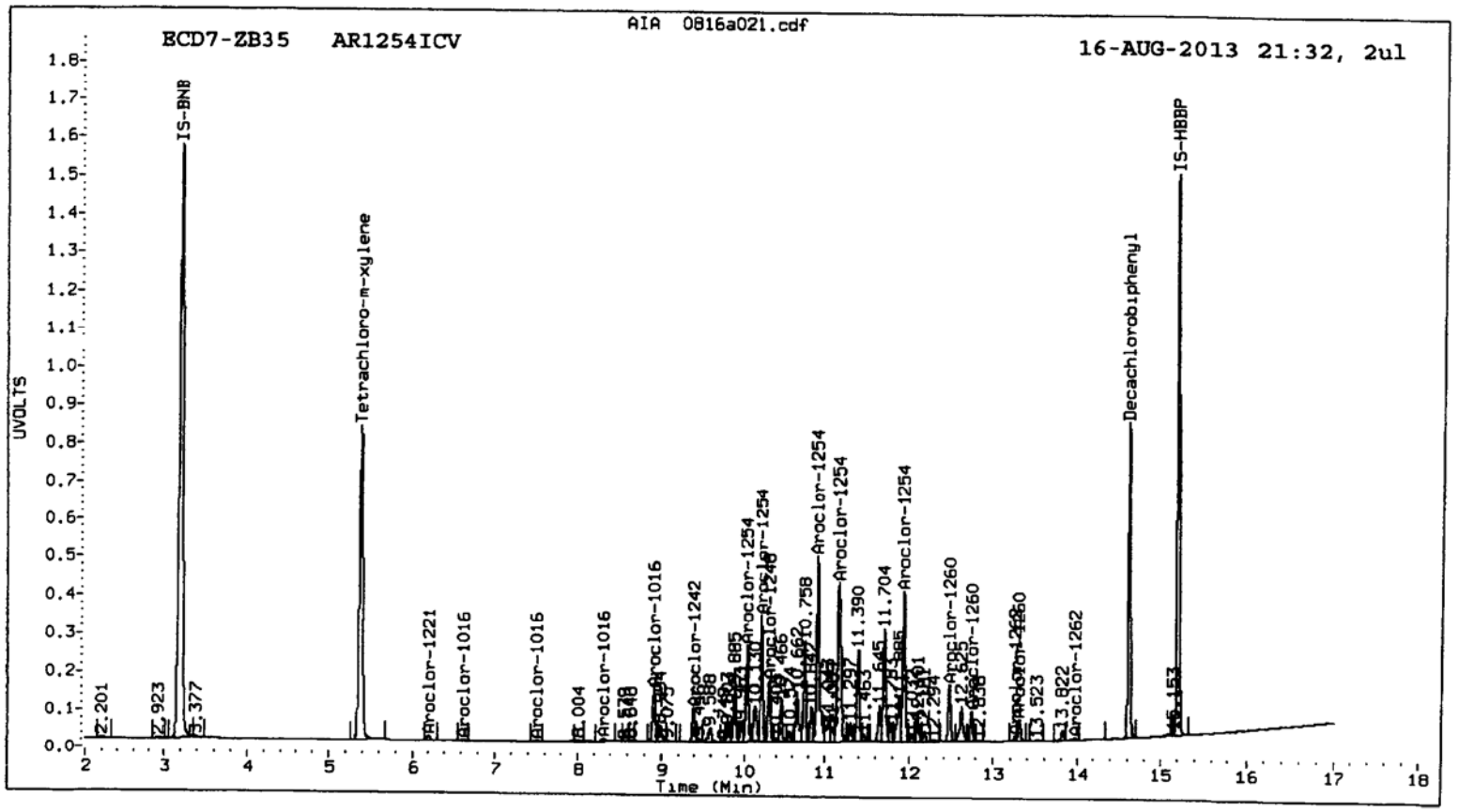
13.432
14.277
14.788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16-AUG-2013 21:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
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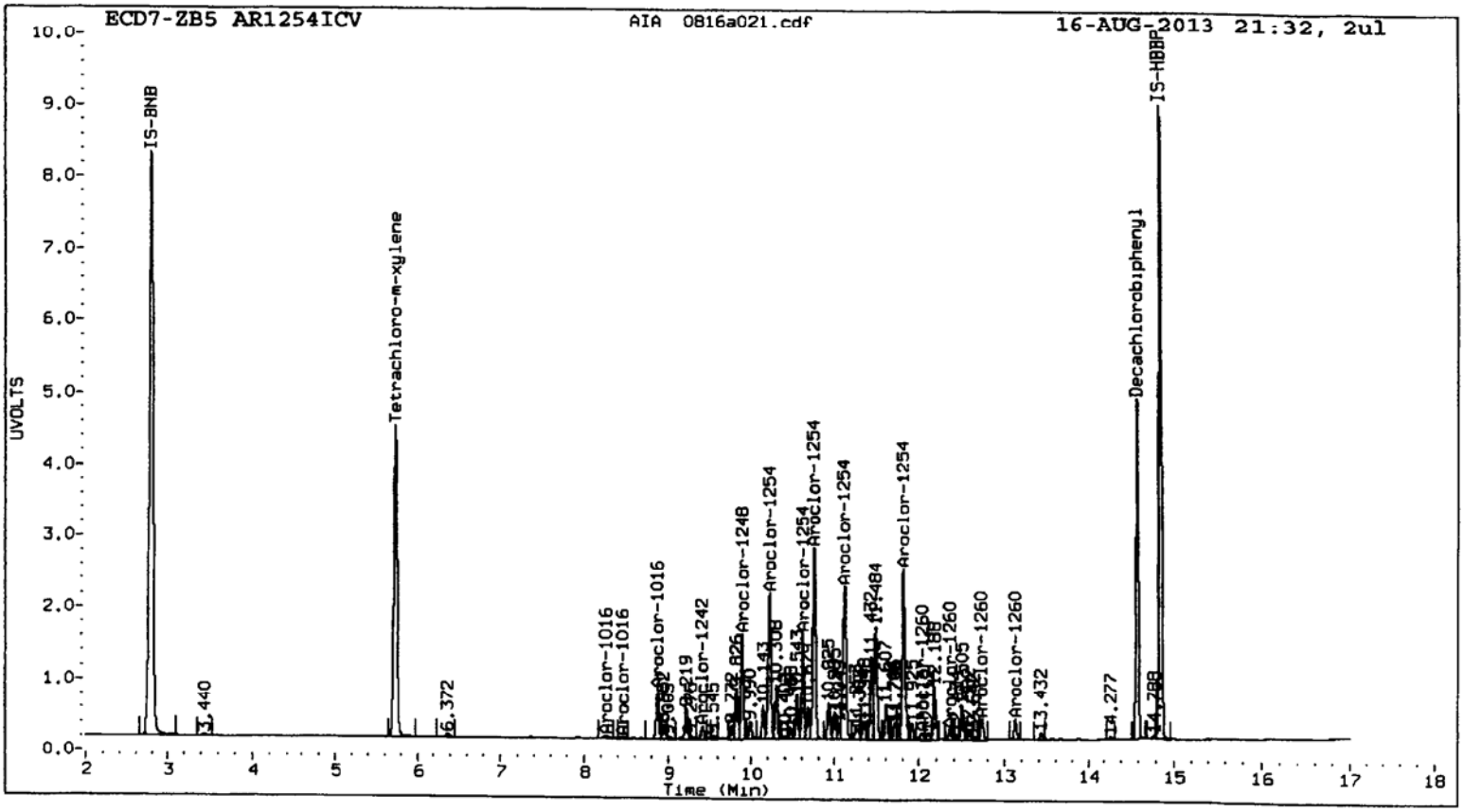
11.704
13.523
13.822
16.153

XB69 : 61466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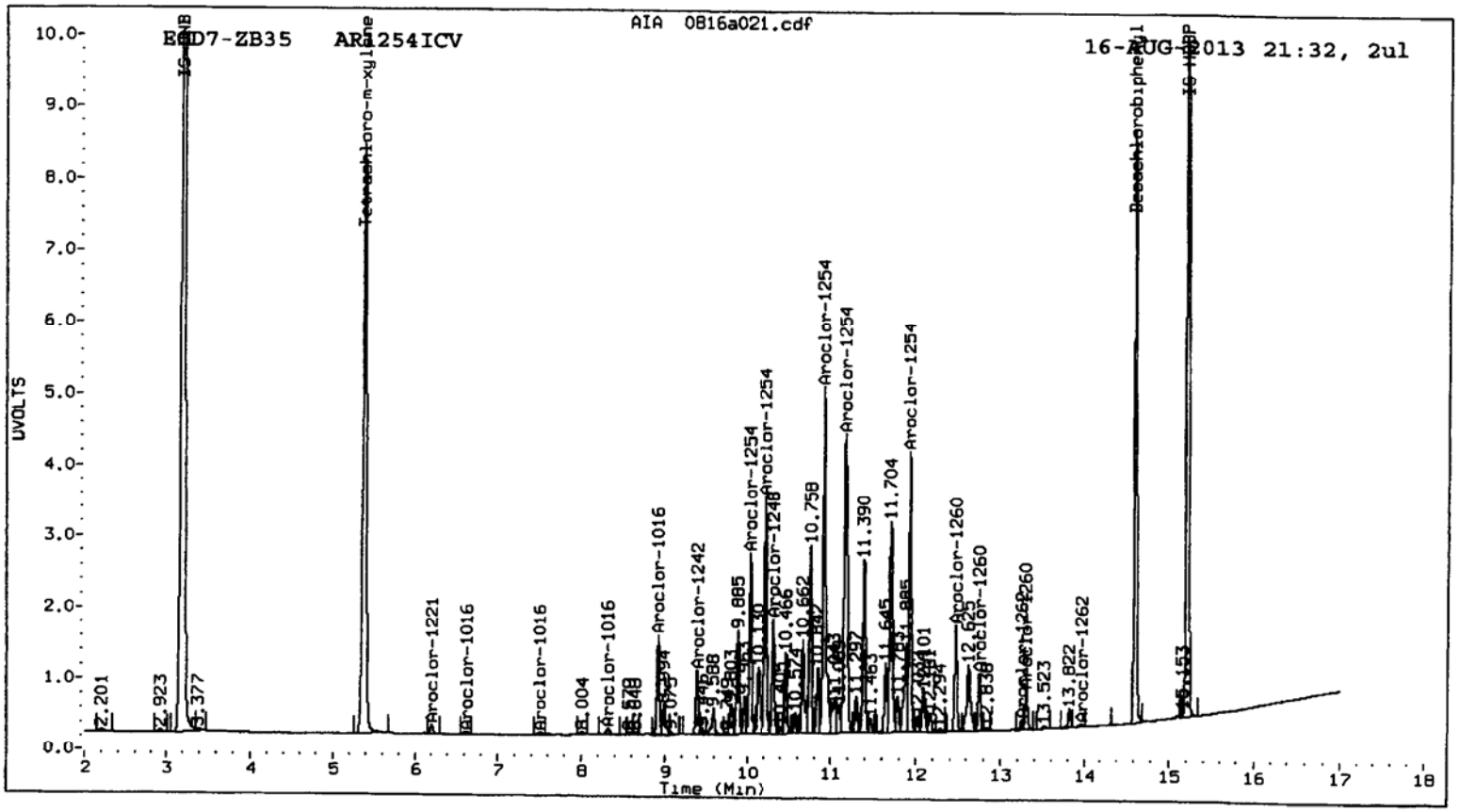
AIA 0816a021.cdf
16-AUG-2013 21:32, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
UVOLTS
Time (Min)


ECD7-ZB35 AR1254ICV
AIA 0816a021.cdf
16-AUG-2013 21:32, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
UVOLTS
Time (Min)

XB89:01467

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a022.d
Data file 2: 20130816.b/ical-2.b/0816a022.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162ICV
Client ID:
Injection Date: 16-AUG-2013 21:54
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.737	0.001	2555112	5.378	0.002	4768908	41.5	39.5	4.8	Tetrachloro-m-xylene
14.589	-0.001	1862198	14.618	0.000	3101793	38.8	37.1	4.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	103.7	98.8
Decachlorobiphenyl	96.9	92.8

08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5263832	2.2
Hexabromobiphenyl	3127538	3330081	6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9519994	-1.2
Hexabromobiphenyl	5043723	5261521	4.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.746	0.002	35624	21.6	1	6.632	0.002	725067	318.4	
Aroclor-1016	2	8.267	0.002	91002	16.3	2	7.524	0.016	222741	43.0	
Aroclor-1016	3	8.452	0.001	41936	18.8	3	8.323	0.002	216260	20.1	
Aroclor-1016	4	8.879	0.003	23996	17.6	4	8.920	0.000	59628	18.4	
	Total Col1Ave (4 peaks):				18.6	Total Col2Ave (4 peaks):				100.0	RPD = 137*
	Corrected Ave (3 peaks):				17.6	Corrected Ave (3 peaks):				27.2	RPD = 43*
Aroclor-1221	1	6.193	0.001	173941	252.4	1	6.201	0.003	415269	252.1	
Aroclor-1221	2	6.402	0.002	144818	249.4	2	6.497	0.001	241093	253.4	
Aroclor-1221	3	6.525	0.002	424882	250.2	3	6.632	0.002	725067	250.1	
Aroclor-1221	NS	---			----	4	7.524	0.002	222741	228.4	
	Total Col1Ave (3 peaks):				250.7	Total Col2Ave (4 peaks):				246.0	RPD = 2
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				243.5	
Aroclor-1232	1	6.525	0.002	424882	385.2	1	6.632	0.001	725067	360.0	
Aroclor-1232	2	7.746	0.001	35624	53.6	2	7.524	0.013	222741	98.1	
Aroclor-1232	3	8.267	0.003	91002	41.6	3	8.323	0.003	216260	50.0	
Aroclor-1232	4	8.452	0.001	41936	47.9	4	8.920	-0.001	59628	41.4	
	Total Col1Ave (4 peaks):				132.1	Total Col2Ave (4 peaks):				137.4	RPD = 4
	Corrected Ave (3 peaks):				47.7	Corrected Ave (3 peaks):				63.2	RPD = 28
Aroclor-1242	1	7.746	0.002	35624	26.7	1	6.632	0.002	725067	375.3	
Aroclor-1242	2	8.267	0.002	91002	20.3	2	7.524	0.015	222741	55.2	
Aroclor-1242	3	8.452	0.001	41936	23.9	3	8.323	0.002	216260	25.4	
Aroclor-1242	4	9.416	0.001	19276	11.6	4	9.389	0.001	90297	26.8	
	Total Col1Ave (4 peaks):				20.7	Total Col2Ave (4 peaks):				120.7	RPD = 142*
	Corrected Ave (3 peaks):				18.6	Corrected Ave (3 peaks):				35.8	RPD = 63*
Aroclor-1248	1	8.267	0.006	91002	32.6	1	7.524	0.015	222741	111.7	
Aroclor-1248	2	8.879	0.001	23996	13.1	2	8.323	0.004	216260	39.3	
Aroclor-1248	3	9.416	0.000	19276	7.5	3	8.920	-0.002	59628	14.8	
Aroclor-1248	4	9.895	0.009	123859	37.4	4	10.325	-0.005	68921	11.9	
	Total Col1Ave (4 peaks):				22.7	Total Col2Ave (4 peaks):				44.4	RPD = 65*
	Corrected Ave (3 peaks):				17.7	Corrected Ave (3 peaks):				22.0	RPD = 21
Aroclor-1254	1	10.229	0.002	141153	41.5	1	10.032	0.000	232450	61.7	
Aroclor-1254	2	10.616	0.001	26989	12.8	2	10.217	0.000	271394	56.4	
Aroclor-1254	3	10.723	-0.034	186092	44.9	3	10.953	0.041	1108736	137.8	
Aroclor-1254	4	11.098	-0.018	712268	167.2	4	11.182	0.015	1286510	157.2	
Aroclor-1254	5	11.812	0.000	656302	157.1	5	11.936	0.000	837373	140.7	
	Total Col1Ave (5 peaks):				84.7	Total Col2Ave (5 peaks):				110.8	RPD = 27
	Corrected Ave (4 peaks):				64.0	Corrected Ave (4 peaks):				99.1	RPD = 43*
Aroclor-1260	1	12.044	0.001	1167994	387.6	1	11.936	0.000	837373	105.0	
Aroclor-1260	2	12.360	0.001	964880	319.1	2	12.480	0.001	1894294	296.4	
Aroclor-1260	3	12.730	0.000	2119915	302.2	3	12.749	0.000	3578288	283.9	
Aroclor-1260	4	13.126	0.001	695052	187.8	4	13.313	0.003	2430158	285.1	
Aroclor-1260	5	13.305	0.001	858542	530.5	NS	---			----	
	Total Col1Ave (5 peaks):				345.4	Total Col2Ave (4 peaks):				242.6	RPD = 35
	Corrected Ave (4 peaks):				299.2	Corrected Ave (3 peaks):				224.7	RPD = 28
Aroclor-1262	1	12.360	0.001	964880	246.1	1	12.480	0.000	1894294	246.5	
Aroclor-1262	2	12.730	0.000	2119915	233.7	2	12.749	0.001	3578288	234.9	
Aroclor-1262	3	13.126	0.000	695052	234.8	3	13.254	-0.001	1636713	245.8	
Aroclor-1262	4	13.305	0.000	858542	243.5	4	13.313	0.000	2430158	241.4	
Aroclor-1262	5	13.884	0.000	647914	237.5	5	13.941	0.000	1191294	237.6	
	Total Col1Ave (5 peaks):				239.1	Total Col2Ave (5 peaks):				241.2	RPD = 1
	Corrected Ave (4 peaks):				237.4	Corrected Ave (4 peaks):				239.9	RPD = 1
Aroclor-1268	1	13.236	0.000	867839	88.7	1	13.254	0.000	1636713	104.3	

Aroclor-1268	2	13.305	0.002	858542	99.0	2	13.313	-0.004	2430158	165.0
Aroclor-1268	3	13.663	0.014	326508	44.8	3	13.664	0.000	111687	9.4
Aroclor-1268	4	14.285	-0.001	220224	11.9	4	14.317	0.000	391660	12.7

Total Col1Ave (4 peaks): 61.1 Total Col2Ave (4 peaks): 72.9 RPD = 18

Corrected Ave (3 peaks): 48.5 Corrected Ave (3 peaks): 42.2 RPD = 14

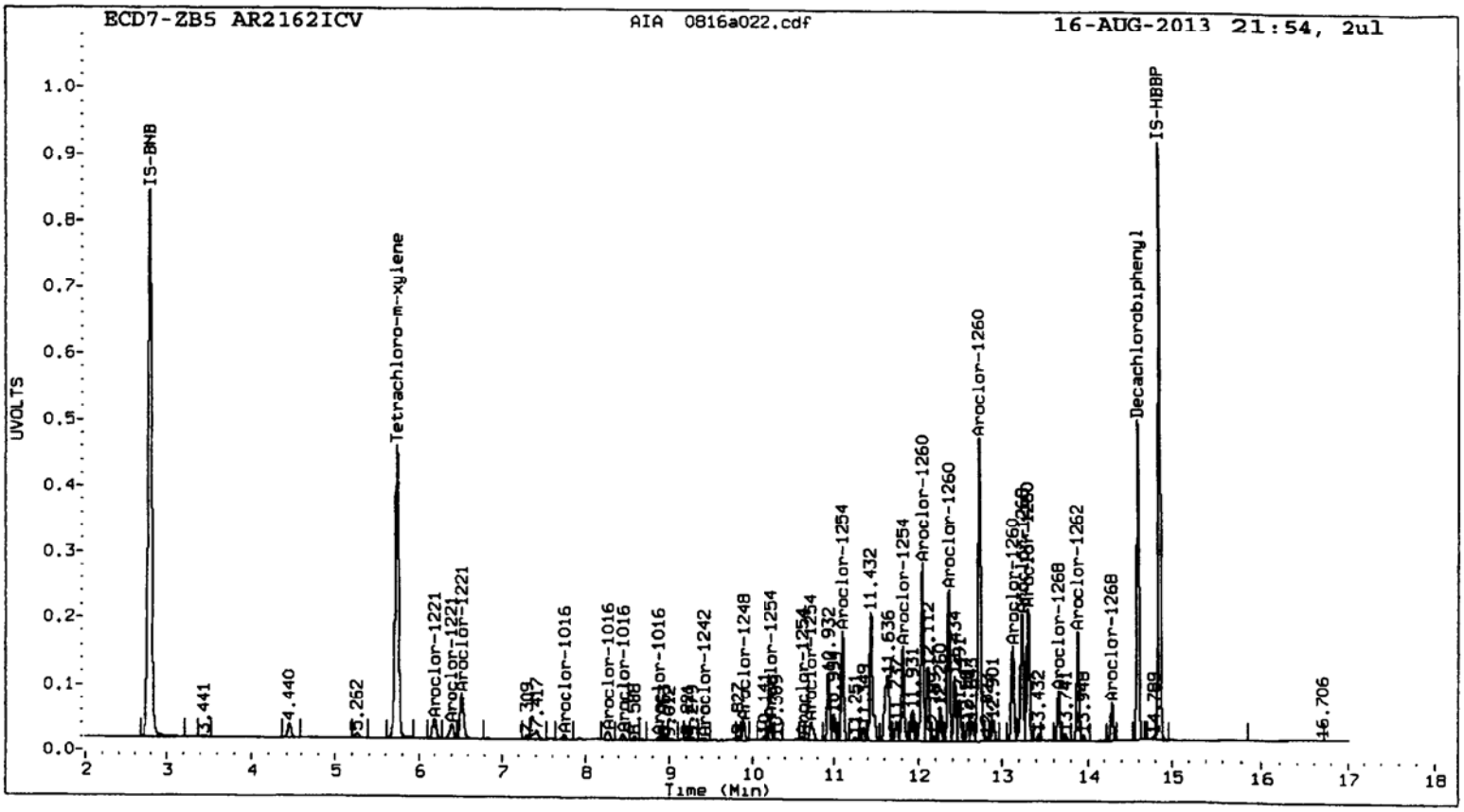
Total PCB Area Col1 (5.836 - 14.490) = 15620368 Col1 Total PCB = 0.4 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 28760863 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89:01470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16-AUG-2013 21:54, 2ul
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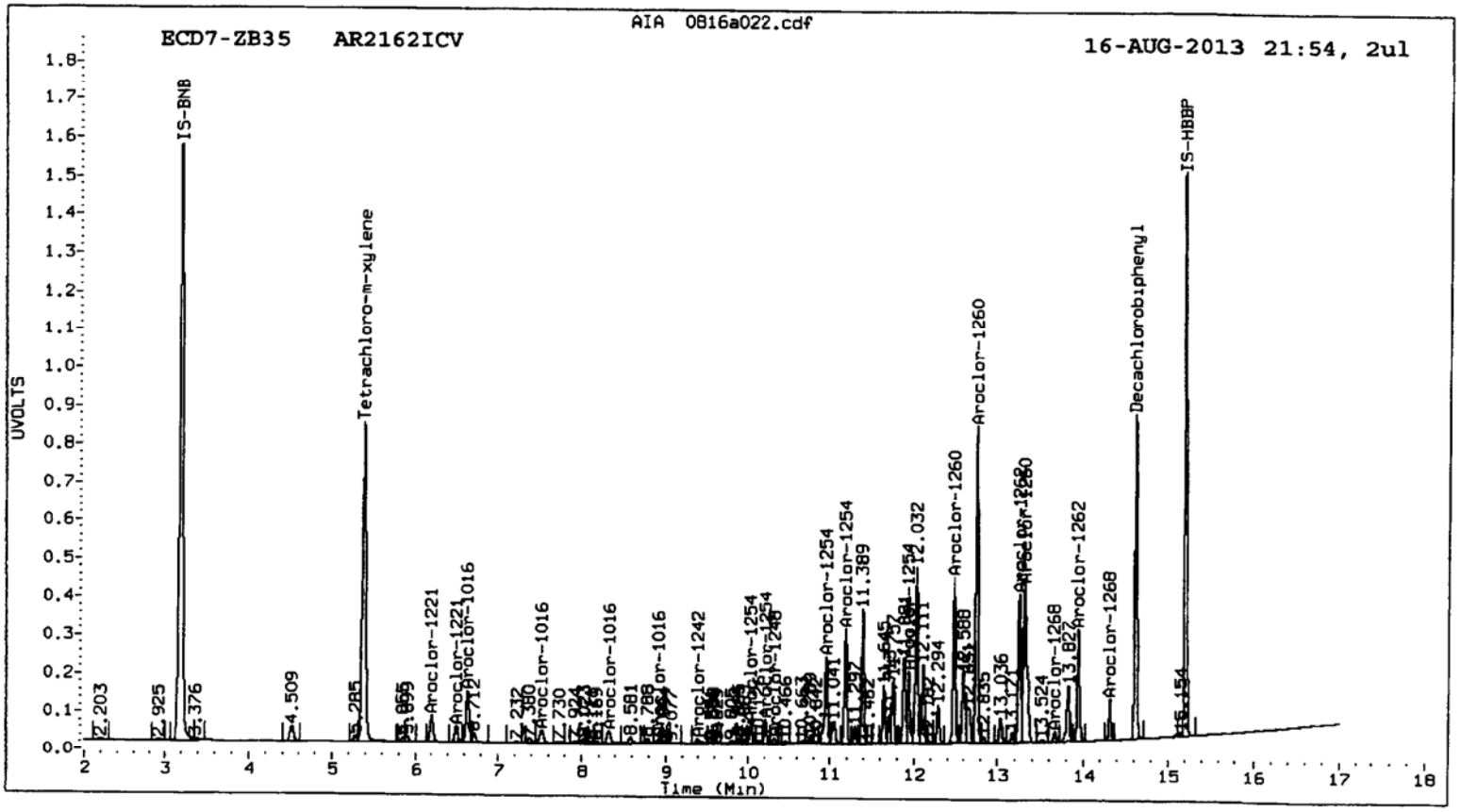
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
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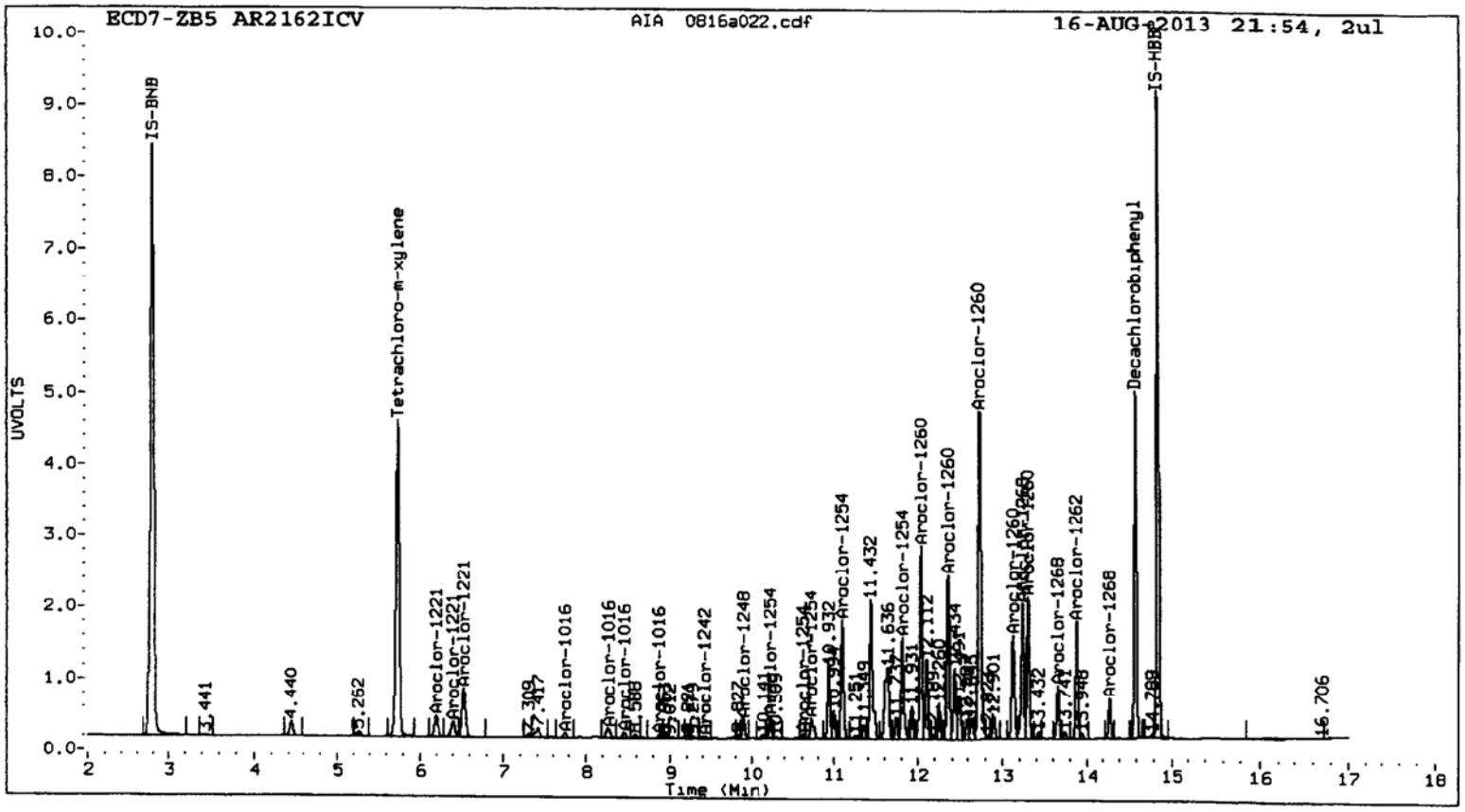
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

XB89:01471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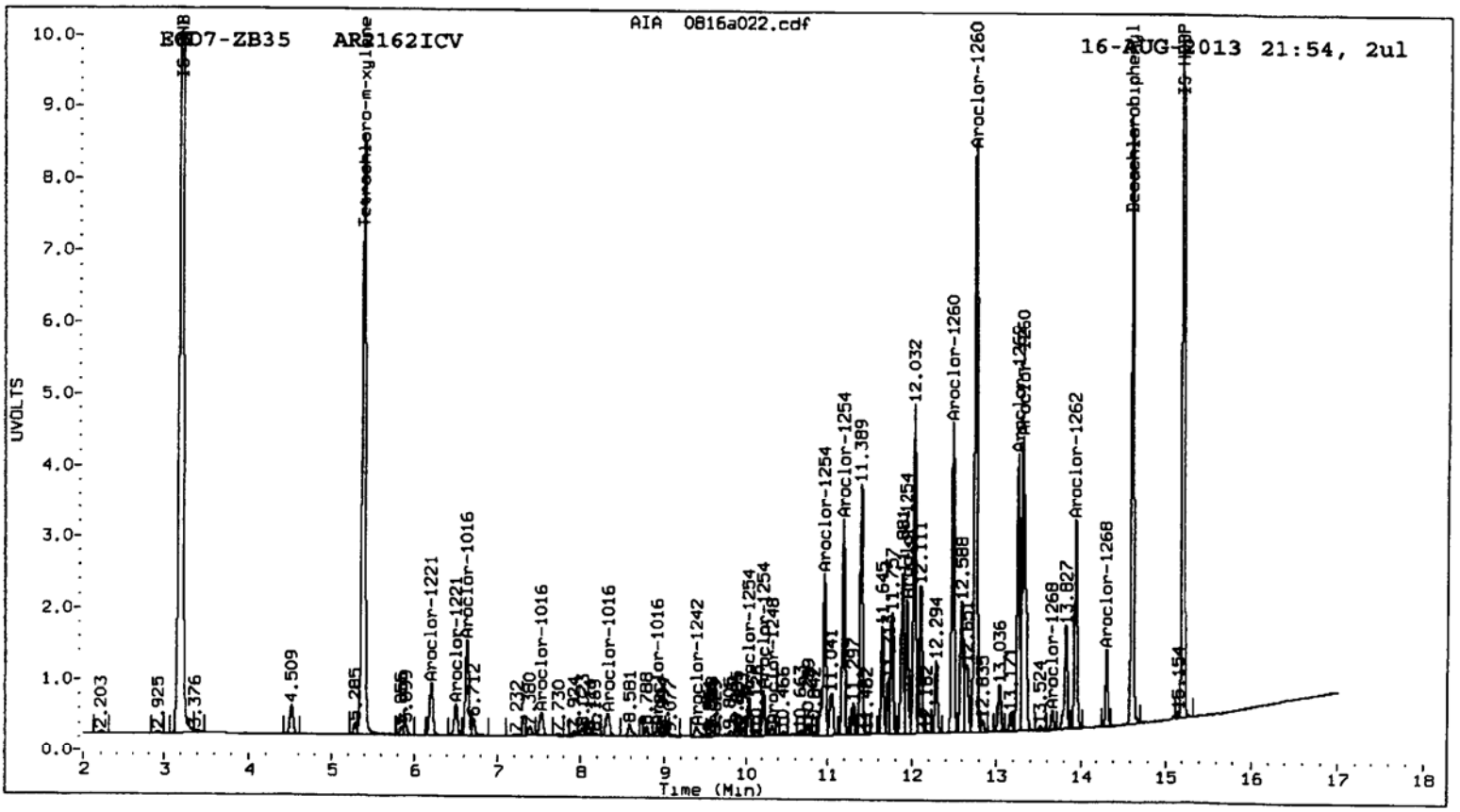
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
UVOLTS
Time (Min)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Tetrachloro-m-xylene
Decachlorobiphenyl
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Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
UVOLTS
Time (Min)

XB89:01472

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/ical-1.b/0816a023.d
Data file 2: 20130816.b/ical-2.b/0816a023.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268ICV
Client ID:
Injection Date: 16-AUG-2013 22:16
Report Date: 08/20/2013 12:56
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.736	0.000	2539670	5.376	0.000	4721010	41.0	38.8	5.5	Tetrachloro-m-xylene
14.589	-0.001	2532041	14.617	0.000	4202824	51.2	48.9	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.5	97.0
Decachlorobiphenyl	127.9	122.4

08/20/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5294864	2.8
Hexabromobiphenyl	3127538	3429330	9.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9606135	-0.3
Hexabromobiphenyl	5043723	5407995	7.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	7.745	0.001	181858	109.4	1	6.631	0.001	587166	255.5	
Aroclor-1016	2	8.264	-0.001	590284	105.1	2	7.510	0.002	622479	119.2	
Aroclor-1016	3	8.452	0.001	235722	105.3	3	8.322	0.001	1180169	108.5	
Aroclor-1016	4	8.877	0.001	127126	93.0	4	8.921	0.001	321571	98.3	
	Total Col1Ave (4 peaks):				103.2		Total Col2Ave (4 peaks):			145.4	RPD = 34
	Corrected Ave (3 peaks):				101.1		Corrected Ave (3 peaks):			108.7	RPD = 7
Aroclor-1221	1	6.192	0.000	100447	144.9	1	6.201	0.002	273511	164.5	
Aroclor-1221	2	6.400	0.001	101838	174.4	2	6.496	0.001	163620	170.4	
Aroclor-1221	3	6.524	0.001	318659	186.6	3	6.631	0.001	587166	200.7	
Aroclor-1221	NS	---			---	4	7.510	-0.012	622479	632.4	
	Total Col1Ave (3 peaks):				168.6		Total Col2Ave (4 peaks):			292.0	RPD = 54*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			178.5	
Aroclor-1232	1	6.524	0.001	318659	287.2	1	6.631	0.000	587166	288.9	
Aroclor-1232	2	7.745	0.000	181858	272.2	2	7.510	-0.001	622479	271.7	
Aroclor-1232	3	8.264	0.000	590284	268.2	3	8.322	0.002	1180169	270.5	
Aroclor-1232	4	8.452	0.000	235722	267.9	4	8.921	0.000	321571	221.5	
	Total Col1Ave (4 peaks):				273.9		Total Col2Ave (4 peaks):			263.1	RPD = 4
	Corrected Ave (3 peaks):				269.4		Corrected Ave (3 peaks):			254.6	RPD = 6
Aroclor-1242	1	7.745	0.000	181858	135.8	1	6.631	0.001	587166	301.2	
Aroclor-1242	2	8.264	-0.001	590284	131.1	2	7.510	0.001	622479	152.9	
Aroclor-1242	3	8.452	0.001	235722	133.8	3	8.322	0.001	1180169	137.5	
Aroclor-1242	4	9.416	0.002	203036	121.4	4	9.388	0.000	456172	134.0	
	Total Col1Ave (4 peaks):				130.5		Total Col2Ave (4 peaks):			181.4	RPD = 33
	Corrected Ave (3 peaks):				128.8		Corrected Ave (3 peaks):			141.4	RPD = 9
Aroclor-1248	1	8.264	0.004	590284	210.3	1	7.510	0.001	622479	309.3	
Aroclor-1248	2	8.877	-0.001	127126	69.0	2	8.322	0.002	1180169	212.5	
Aroclor-1248	3	9.416	0.001	203036	78.0	3	8.921	-0.001	321571	79.0	
Aroclor-1248	4	9.884	-0.001	220847	66.4	4	10.330	0.000	436207	74.4	
	Total Col1Ave (4 peaks):				105.9		Total Col2Ave (4 peaks):			168.8	RPD = 46*
	Corrected Ave (3 peaks):				71.1		Corrected Ave (3 peaks):			122.0	RPD = 53*
Aroclor-1254	1	10.226	-0.001	69435	20.3	1	10.031	0.000	96654	25.4	
Aroclor-1254	2	10.616	0.001	40938	19.2	2	10.218	0.001	100314	20.7	
Aroclor-1254	3	10.758	0.001	77521	18.6	3	10.912	0.000	154294	19.0	
Aroclor-1254	4	11.105	-0.011	87850	20.5	4	11.179	0.012	208869	25.3	
Aroclor-1254	5	11.811	-0.001	51232	12.2	5	11.936	0.000	78434	13.1	
	Total Col1Ave (5 peaks):				18.2		Total Col2Ave (5 peaks):			20.7	RPD = 13
	Corrected Ave (4 peaks):				17.6		Corrected Ave (4 peaks):			19.5	RPD = 10
Aroclor-1260	1	12.044	0.000	642273	207.0	1	11.936	0.000	78434	9.6	
Aroclor-1260	2	12.360	0.000	91111	29.3	2	12.478	0.000	1256429	191.3	
Aroclor-1260	3	12.730	0.000	446818	61.9	3	12.748	-0.001	833240	64.3	
Aroclor-1260	4	13.127	0.002	37704	9.9	4	13.317	0.007	4331909	494.5	
Aroclor-1260	5	13.304	-0.001	2536555	1522.0	NS	---			----	
	Total Col1Ave (5 peaks):				366.0		Total Col2Ave (4 peaks):			189.9	RPD = 63*
	Corrected Ave (4 peaks):				77.0		Corrected Ave (3 peaks):			88.4	RPD = 14
Aroclor-1262	1	12.360	0.001	91111	22.6	1	12.478	-0.001	1256429	159.0	
Aroclor-1262	2	12.730	0.000	446818	47.8	2	12.748	0.000	833240	53.2	
Aroclor-1262	3	13.127	0.001	37704	12.4	3	13.255	0.000	4178816	610.6	
Aroclor-1262	4	13.304	-0.001	2536555	698.5	4	13.317	0.005	4331909	418.6	
Aroclor-1262	5	13.884	-0.001	796318	283.4	5	13.941	0.000	1379803	267.7	
	Total Col1Ave (5 peaks):				212.9		Total Col2Ave (5 peaks):			301.8	RPD = 35
	Corrected Ave (4 peaks):				91.6		Corrected Ave (4 peaks):			224.6	RPD = 84*
Aroclor-1268	1	13.237	0.000	2598089	257.9	1	13.255	0.001	4178816	259.2	

Aroclor-1268 2	13.304	0.000	2536555	284.1	2	13.317	0.000	4331909	286.2
Aroclor-1268 3	13.649	0.000	1734898	231.2	3	13.665	0.001	2786164	228.8
Aroclor-1268 4	14.285	0.000	4167051	218.2	4	14.316	0.000	6980010	218.0

Total Col1Ave (4 peaks): 247.8 Total Col2Ave (4 peaks): 248.0 RPD = 0

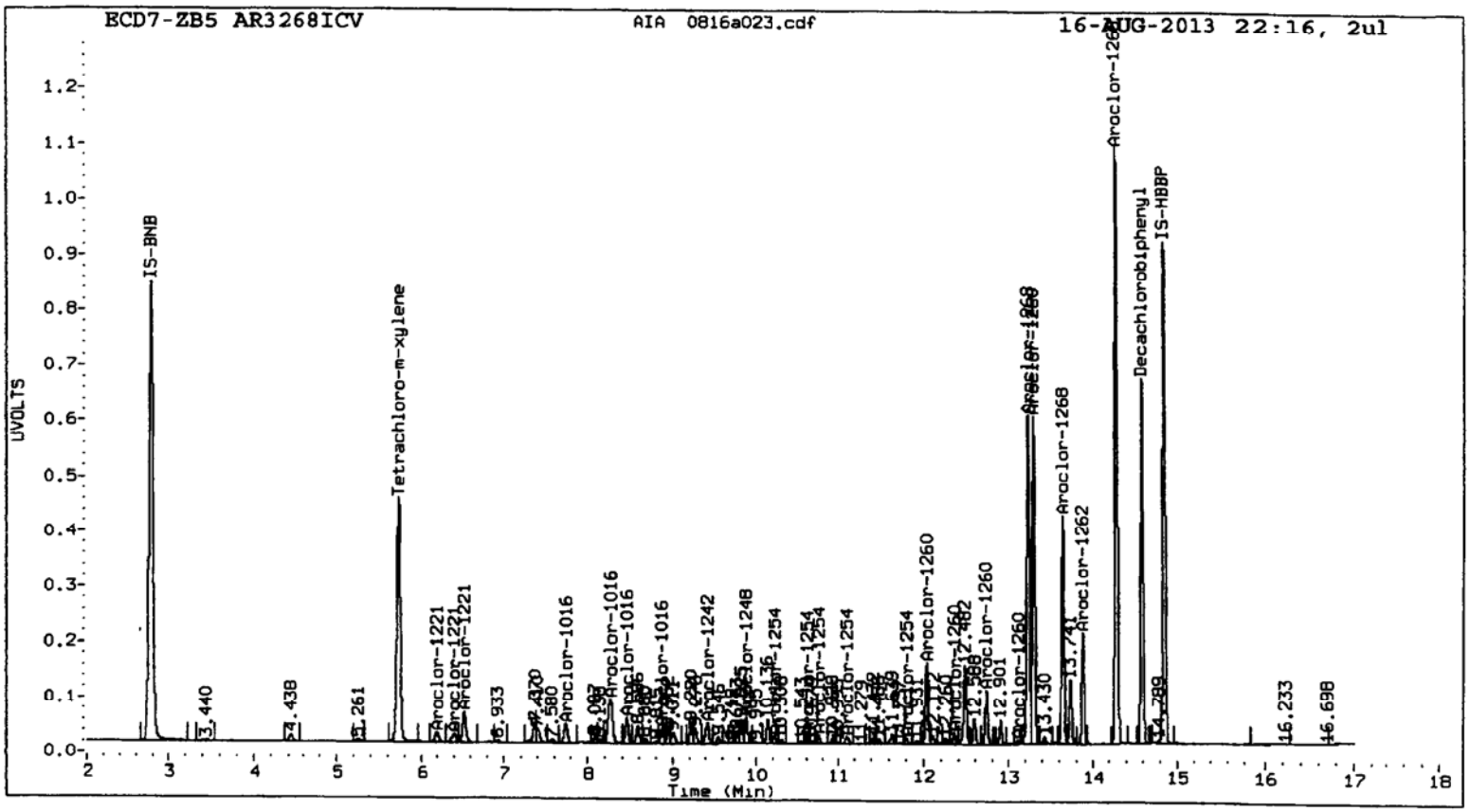
Corrected Ave (3 peaks): 235.7 Corrected Ave (3 peaks): 235.3 RPD = 0

Total PCB Area Col1 (5.836 - 14.490) = 19328896 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.476 - 14.517) = 34827871 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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AIA 0816a023.cdf
16-AUG-2013 22:16, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
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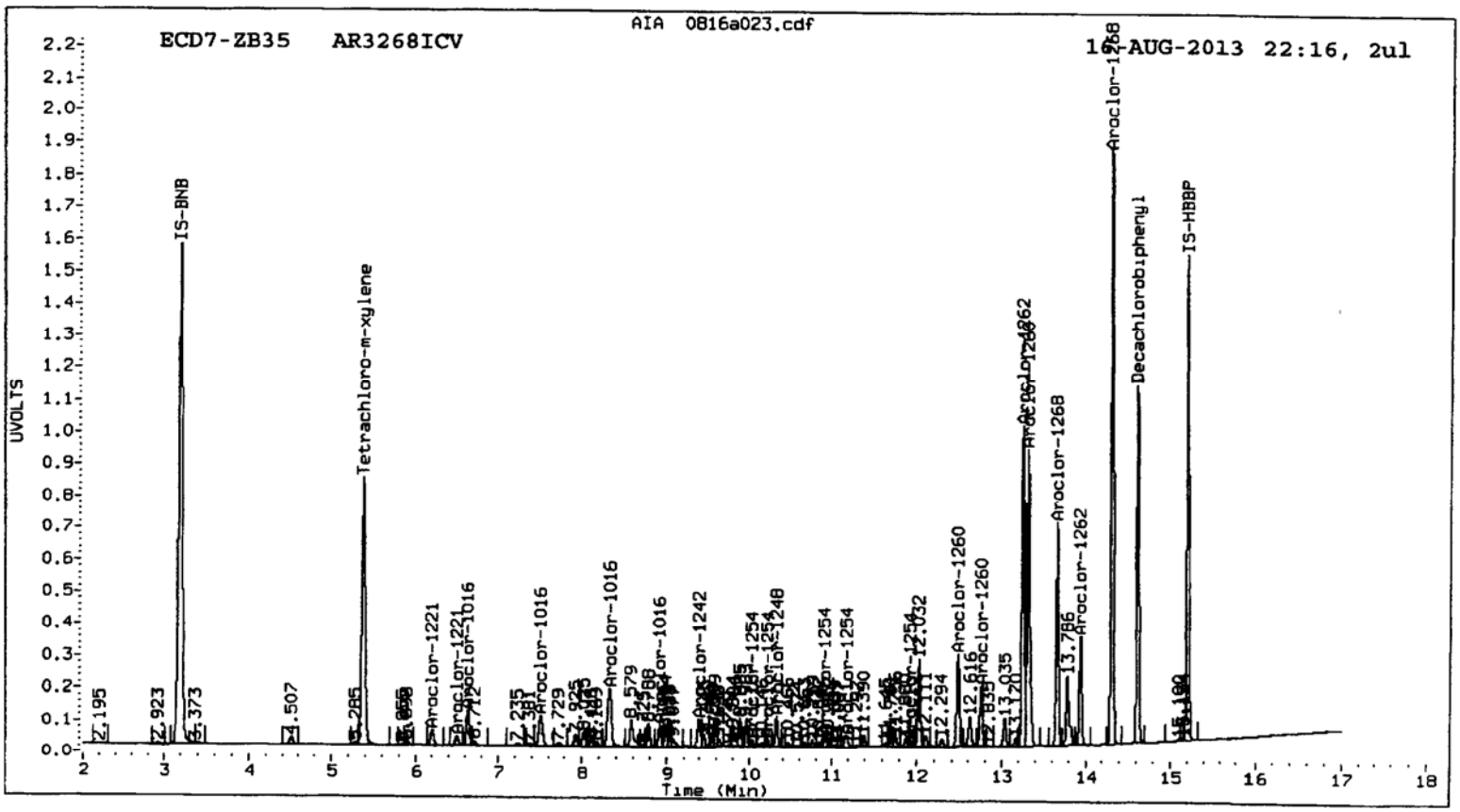
Aroclor-1262
Aroclor-1268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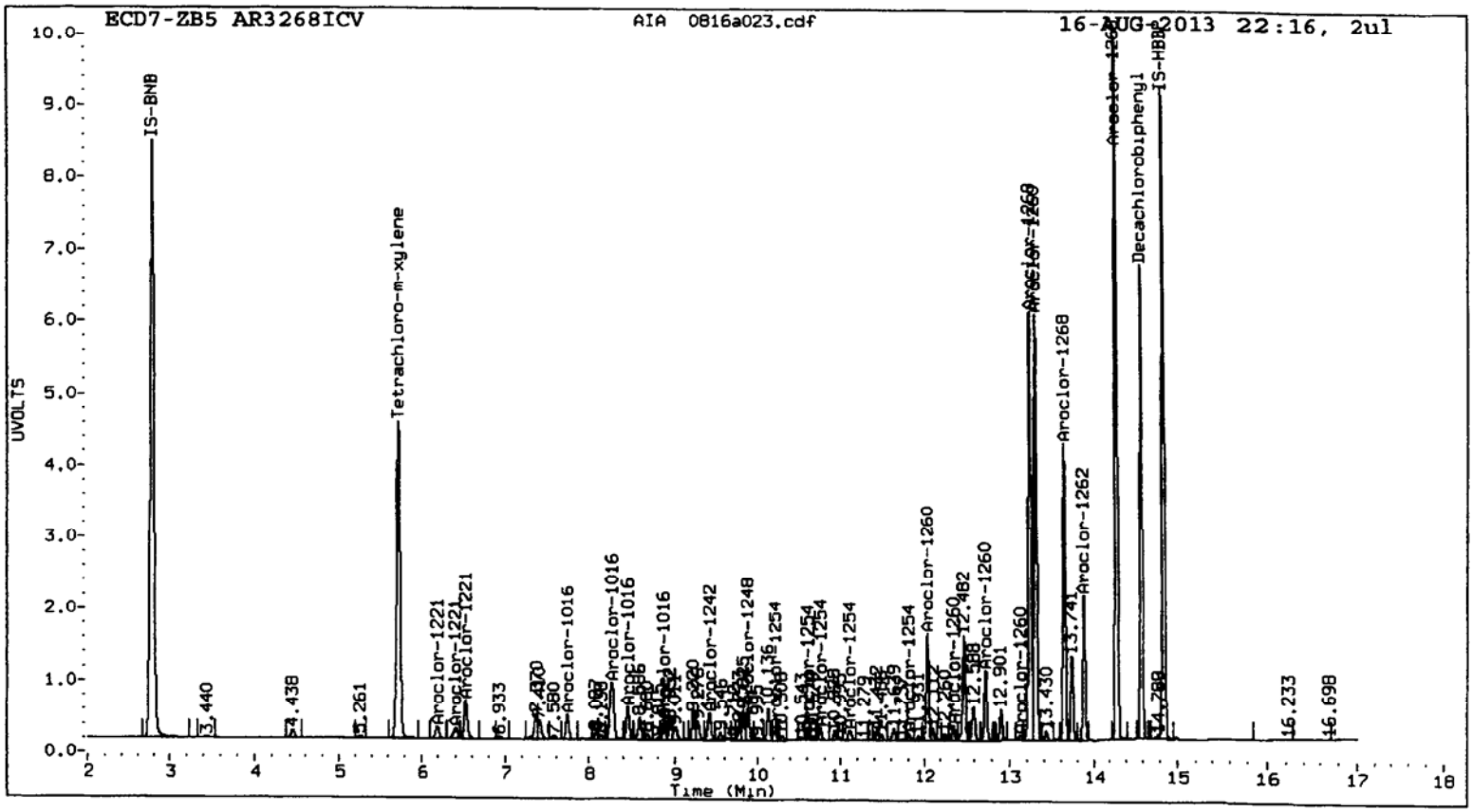
AIA 0816a023.cdf
16-AUG-2013 22:16, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

XB89:01478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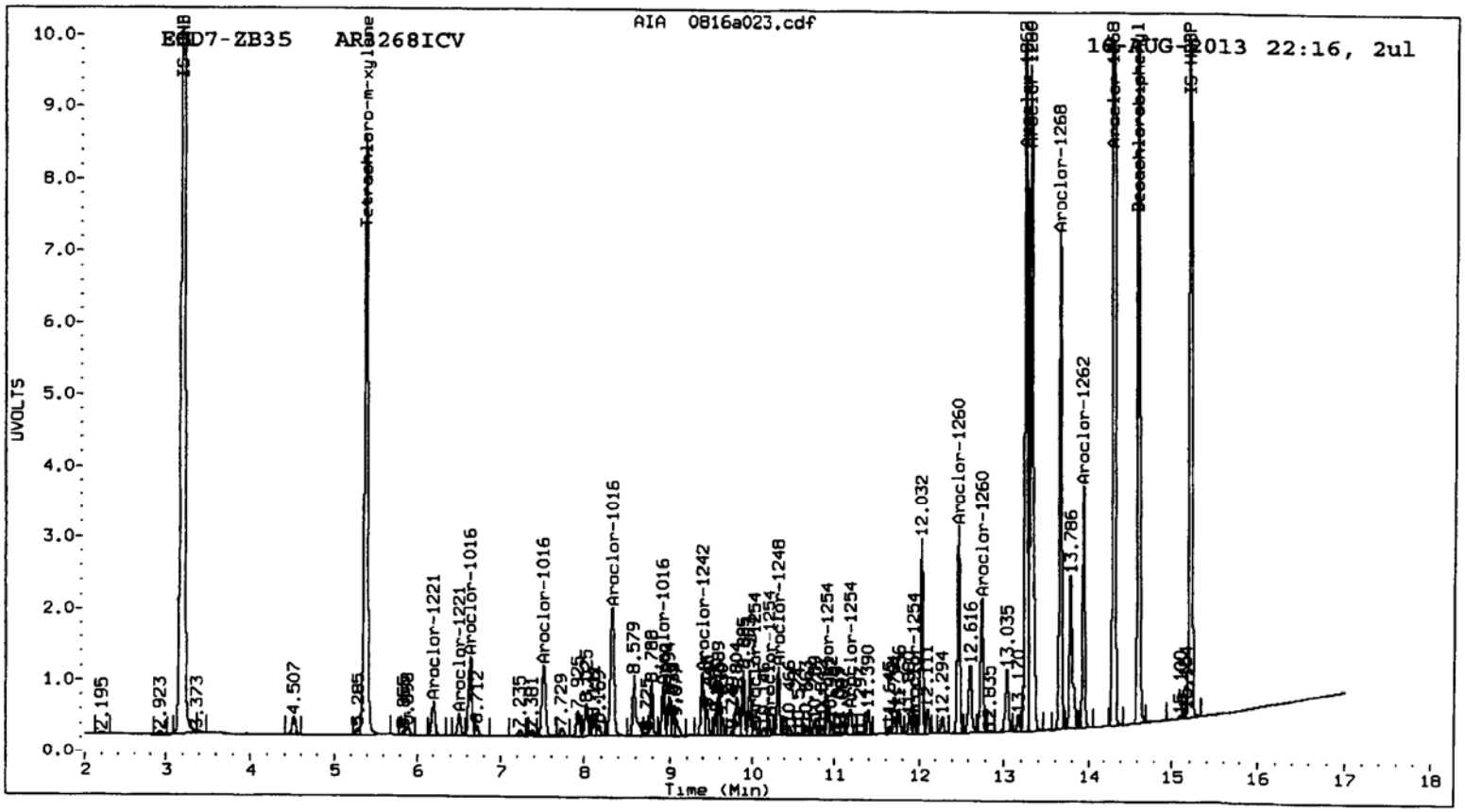
16-AUG-2013 22:16, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
UVOLTS
Time (Min)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16-AUG-2013 22:16, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
UVOLTS
Time (Min)

XB89:01477

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130816.b/ddt-1.b/0816a024.d ARI ID: DDT

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
10.190	0.000	4882640	10.308	0.000	8401090	0.100	0.100	0.0	2,4-DDE
10.764	0.000	4635566	10.708	0.000	13611841	0.100	0.100	0.0	2,4-DDD
11.284	0.000	5436510	11.484	0.000	20872556	0.100	0.200#	66.7*	2,4-DDT
10.640	0.000	8025141	11.014	0.000	7896403	0.100	0.100	0.0	4,4-DDE
11.228	0.000	7062896	11.484	0.000	20872556	0.100	0.200#	66.7*	4,4-DDD
11.749	0.000	6849984	11.921	0.000	11558428	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

XB89:01478

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD
Instrument: ecd7.i Data File: 20130816.b/ddt-1.b/0816a025.d
Analysis Date: 16-AUG-2013 23:00 Init. Calib. Date: 16-AUG-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	10.640	31183
4,4-DDD	11.230	344459
4,4-DDT	11.749	6837254

Col 1: 4,4-DDT Percent Breakdown = 5.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	11.015	11084
4,4-DDD/2,4-DDT	11.487	781137
4,4-DDT	11.921	12828296

Col 2: 4,4-DDT Percent Breakdown = 5.8 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

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

ARI Job ID: XB89

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: XB89 **Client ID:** Archer

METHOD: 8082A(PCB) 8151A(Herb) NW-TPH(TPH-D) NW-TPH(HCID) 8041A(PCP)
8081B(PEST) 8015B(Dir Inj) NW-EPH(EPH) 8082A(PBDE) Other

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 (ECD-7) ECD-8

Curve Date: 8/16/13 **Analysis Start Date:** 8/31/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / (Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	(Y) / N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA / < 5%
Surrogate Recovery in Control?	(Y) / N / ✓	MS / MSD Recovery in Control?	(Y) / N / ✓
Internal STD. within 50-200%?	NA / (Y) / N / ✓	MS / MSD RPD ≤30%?	NA / 10%
Manual Integrations?	(Y) / N / ✓	Samples Diluted?	Y / (N) / ✓
Integration Summary?	(Y) / N /	Special Analysis Request?	Y / N /

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

- DCB low in sample A, ~35%. Appears to be matrix. TCX OK. All other samples OK.

IS areas OK within +- 11% ✓

TCMX - if low would be bias down effect

Review 1) Analyst: [signature] **Date:** 9/2/13

Review 2) Reviewer: [signature] **Date:** 9/2/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd7.i/20130816.b/0831-1.b

ARI Job No.: XB89 Method: PCB1.m Instrument: ecd7.i Date: 31-AUG-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1817	0831a021.d	XB89MBS1	XB89MBS1	1	NO MANUAL INTEGRATION
1839	0831a022.d	XB89LCSS1	XB89LCSS1	1	NO MANUAL INTEGRATION
1901	0831a023.d	XB89LCSDS1	XB89LCSDS1	1	NO MANUAL INTEGRATION
1923	0831a024.d	XB89A	IJ13-SS-10	1	IS-HBBP, Decachlorobiphenyl,
1945	0831a025.d	XB89B	IJ13-SS-10	1	NO MANUAL INTEGRATION
2007	0831a026.d	XB89C	IJ13-SS-15	1	NO MANUAL INTEGRATION
2029	0831a027.d	XB89D	IJ13-VC-10	1	NO MANUAL INTEGRATION
2051	0831a028.d	XB89E	IJ13-VC-10	1	NO MANUAL INTEGRATION
2113	0831a029.d	XB89F	IJ13-VC-10	1	NO MANUAL INTEGRATION
2135	0831a030.d	XB89FMS	IJ13-VC-10	1	NO MANUAL INTEGRATION
2157	0831a031.d	XB89FMSD	IJ13-VC-10	1	NO MANUAL INTEGRATION

XB89 61482

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a019.d
Data file 2: 20130816.b/0831-2.b/0831a019.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 31-AUG-2013 17:33
Report Date: 09/02/2013 14:09
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.001	2570026	5.373	0.001	4686252	40.5	38.4	5.3	Tetrachloro-m-xylene
14.588	0.000	1875167	14.614	0.001	3059810	36.5	34.6	5.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.3	96.1
Decachlorobiphenyl	91.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5422646	5.2
Hexabromobiphenyl	3127538	3560697	13.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9623876	-0.1
Hexabromobiphenyl	5043723	5562760	10.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	8.258	0.000	704407	245.0	1	7.505	0.000	493143	244.6
Aroclor-1248	2	8.877	0.000	458756	243.1	2	8.315	0.000	1357394	244.0
Aroclor-1248	3	9.414	0.000	647075	242.9	3	8.918	0.000	991651	243.1
Aroclor-1248	4	9.884	0.000	823202	241.6	4	10.325	0.000	1424275	242.4

Total Col1Ave (4 peaks): 243.2 Total Col2Ave (4 peaks): 243.5 RPD = 0

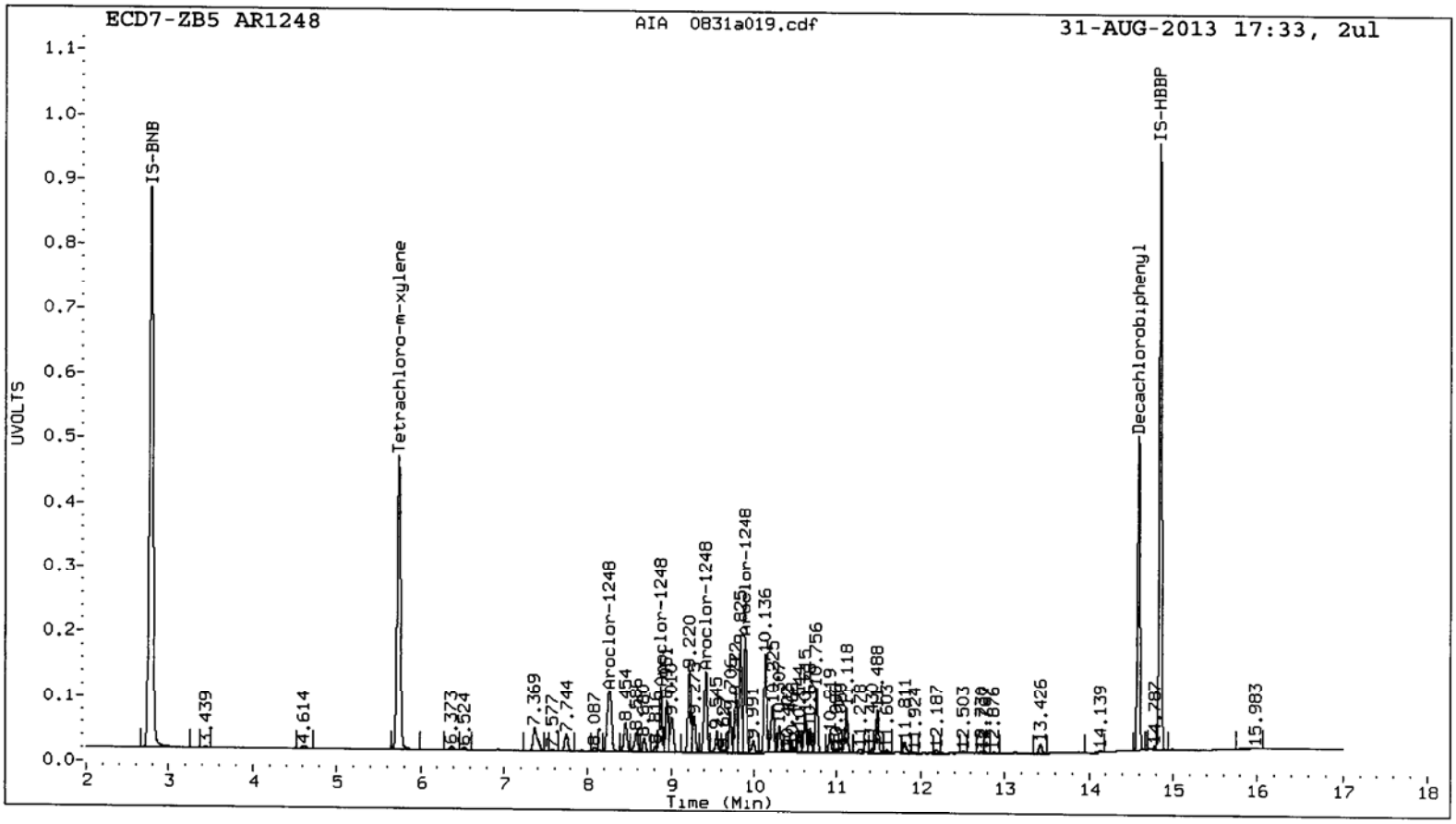
Corrected Ave (3 peaks): 242.5 Corrected Ave (3 peaks): 243.2 RPD = 0

Total PCB Area Col1 (5.835 - 14.488) = 10102820 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 19390088 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89:01484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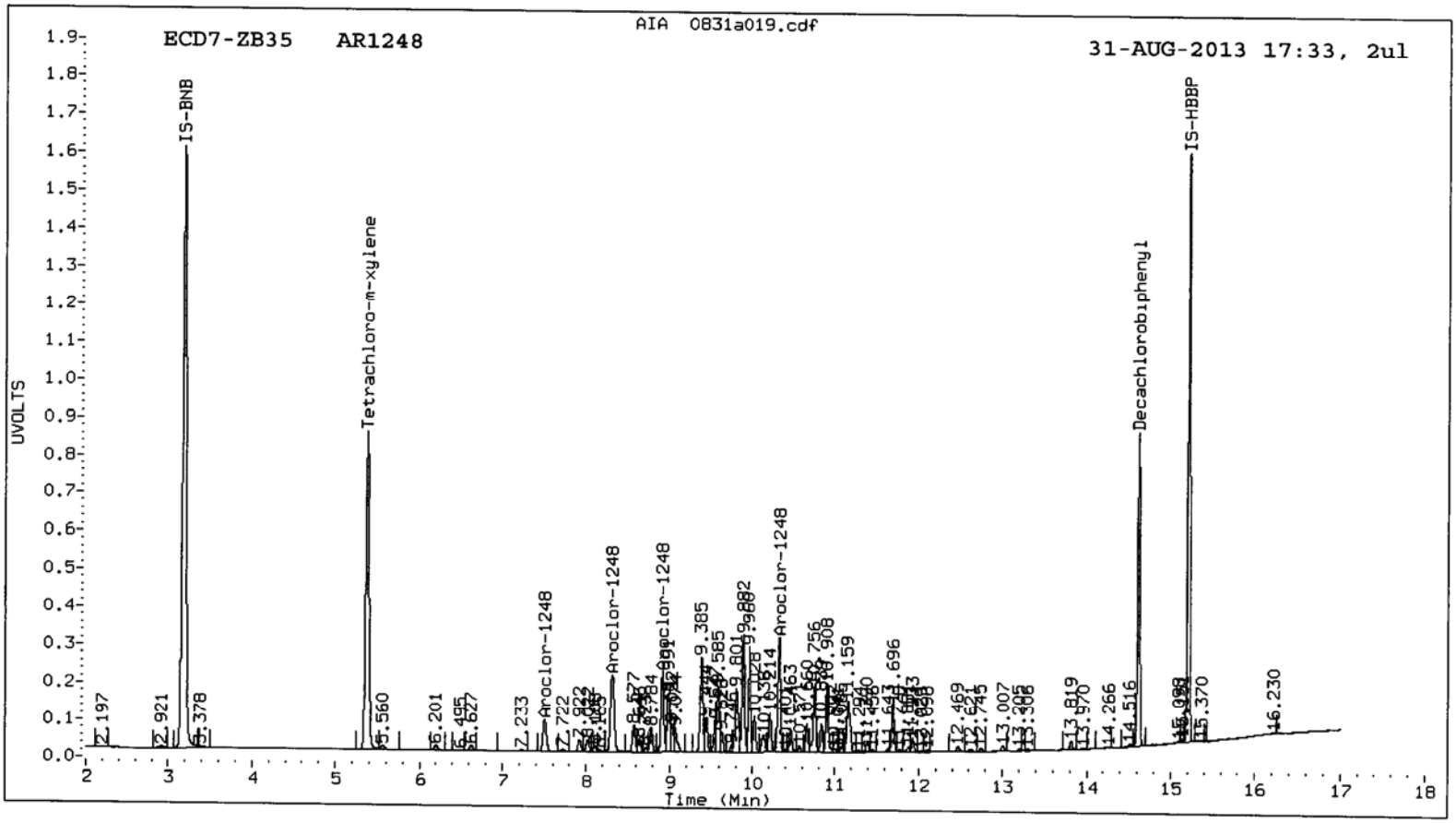
AIA 0831a019.cdf
31-AUG-2013 17:33, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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31-AUG-2013 17:33, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

XB89:01485

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a020.d
Data file 2: 20130816.b/0831-2.b/0831a020.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 31-AUG-2013 17:55
Report Date: 09/02/2013 14:09
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.733	-0.001	2572196	5.371	0.000	4669075	41.0	38.3	6.8	Tetrachloro-m-xylene
14.588	0.001	1931181	14.614	0.001	3147766	36.7	35.0	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.5	95.8
Decachlorobiphenyl	91.7	87.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5362678	4.1
Hexabromobiphenyl	3127538	3651110	16.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9619328	-0.1
Hexabromobiphenyl	5043723	5659022	12.2

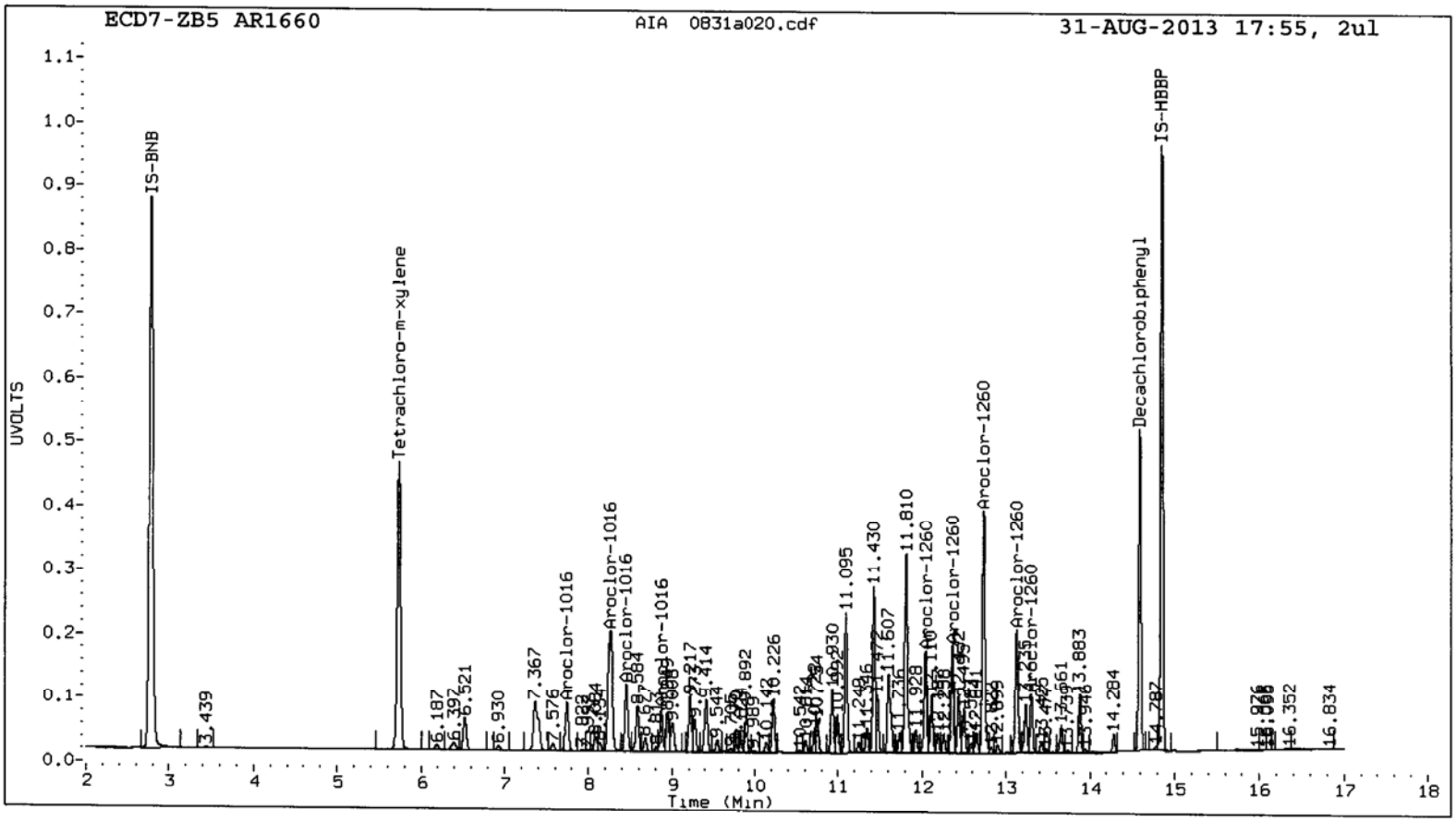
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.742	-0.003	405837	241.1	1	6.625	-0.001	546553	237.5
Aroclor-1016	2	8.262	-0.002	1378886	242.3	2	7.504	-0.001	1225312	234.3
Aroclor-1016	3	8.448	-0.001	536684	236.6	3	8.317	0.001	2576042	236.4
Aroclor-1016	4	8.874	-0.001	315413	227.7	4	8.917	0.000	747916	228.4
	Total Col1Ave (4 peaks):				236.9	Total Col2Ave (4 peaks):				234.2 RPD = 1
	Corrected Ave (3 peaks):				235.2	Corrected Ave (3 peaks):				233.1 RPD = 1
Aroclor-1260	1	12.041	0.001	706191	213.7	1	11.932	0.000	1809450	211.0
Aroclor-1260	2	12.359	0.001	725993	219.0	2	12.475	0.000	1471143	214.1
Aroclor-1260	3	12.729	0.001	1734250	225.5	3	12.745	0.000	2927676	216.0
Aroclor-1260	4	13.124	0.000	916668	225.9	4	13.306	0.001	1969332	214.8
Aroclor-1260	5	13.303	0.000	398141	224.4	NS	---			----
	Total Col1Ave (5 peaks):				221.7	Total Col2Ave (4 peaks):				214.0 RPD = 4
	Corrected Ave (4 peaks):				220.6	Corrected Ave (3 peaks):				213.3 RPD = 3

Total PCB Area Col1 (5.835 - 14.488) = 20642224 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 37746549 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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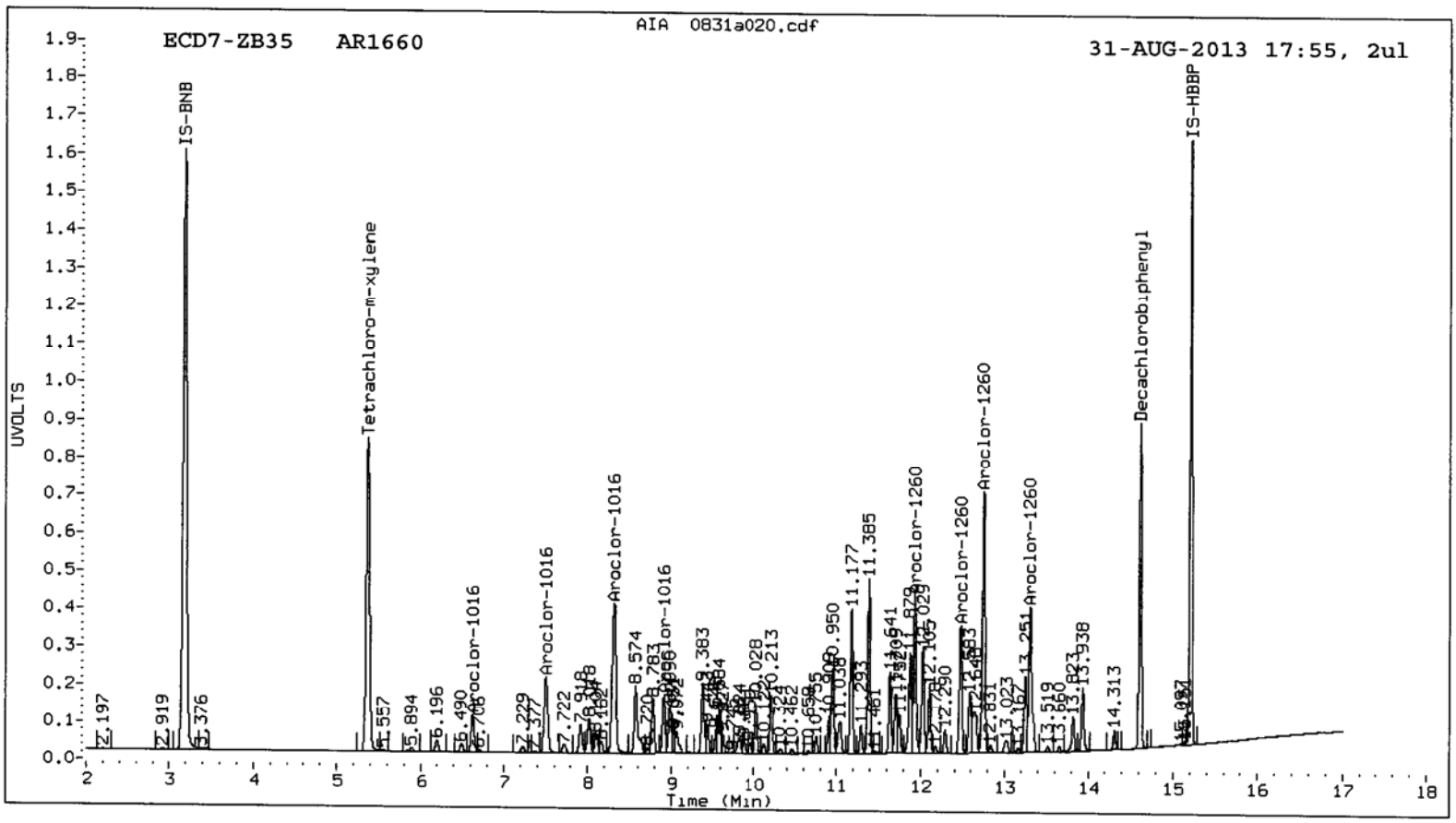
31-AUG-2013 17:55, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260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31-AUG-2013 17:55, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1016
Aroclor-1260

XB89:01488

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a021.d
Data file 2: 20130816.b/0831-2.b/0831a021.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89MBS1
Client ID: XB89MBS1
Injection Date: 31-AUG-2013 18:17
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.002	2287748	5.374	0.002	4100860	35.6	33.5	5.8	Tetrachloro-m-xylene
14.589	0.001	1899936	14.614	0.001	3070772	34.5	33.0	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	88.9	83.9
Decachlorobiphenyl	86.2	82.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5500293	6.8
Hexabromobiphenyl	3127538	3820680	22.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9648035	0.2
Hexabromobiphenyl	5043723	5867876	16.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

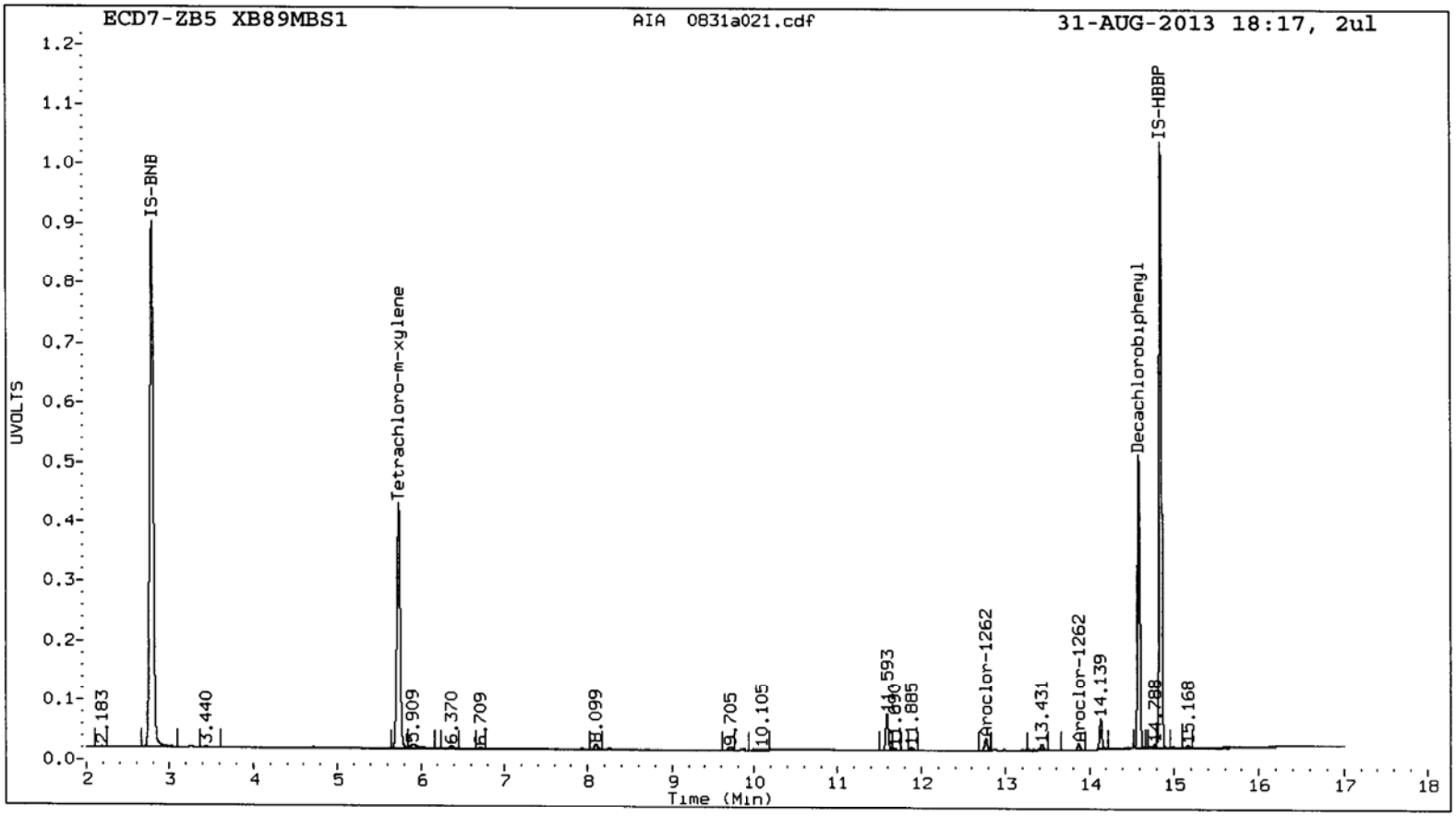
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	6.205	0.007	198769	119.1
Aroclor-1221	2	---			0.0	2	6.502	0.006	24166	25.1
Aroclor-1221	3	---			0.0	3	6.613	-0.017	20213	6.9
Aroclor-1221	NS	---			----	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: 50.3			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	10.264	0.050	13291	2.7
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	11.880	-0.052	477298	79.1
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	12.768	0.038	83729	8.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
Aroclor-1262	5	13.871	-0.014	38671	12.4	5	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	13.205	-0.049	204659	11.7
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	14.266	-0.051	82403	2.4
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.835 - 14.488) = 848718 Col1 Total PCB = 0.0 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 1275211 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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31-AUG-2013 18:17, 2ul
UVOLTS
Time (Min)
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Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1262
Aroclor-1262
2.183
3.440
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8.099
9.705
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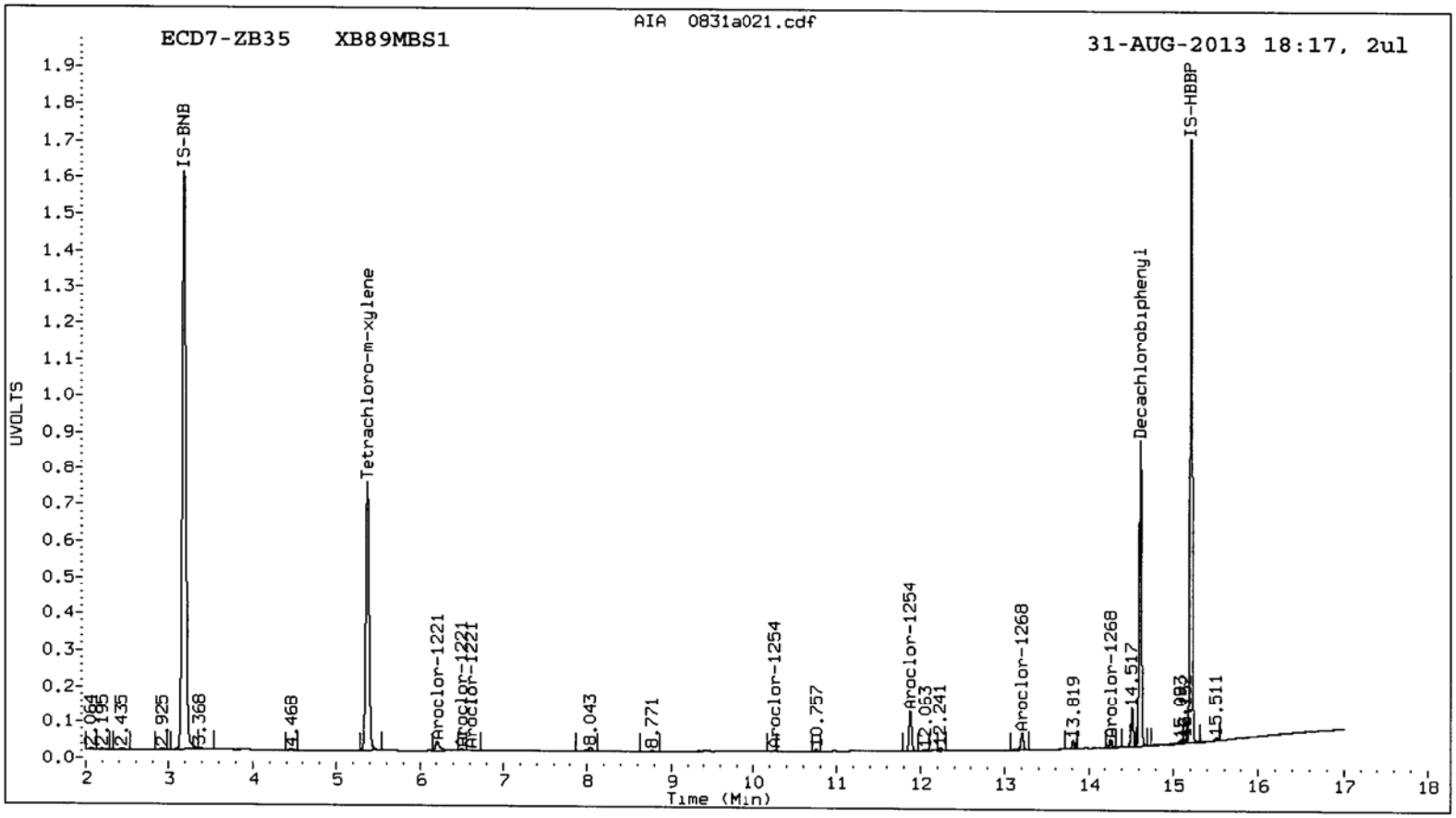
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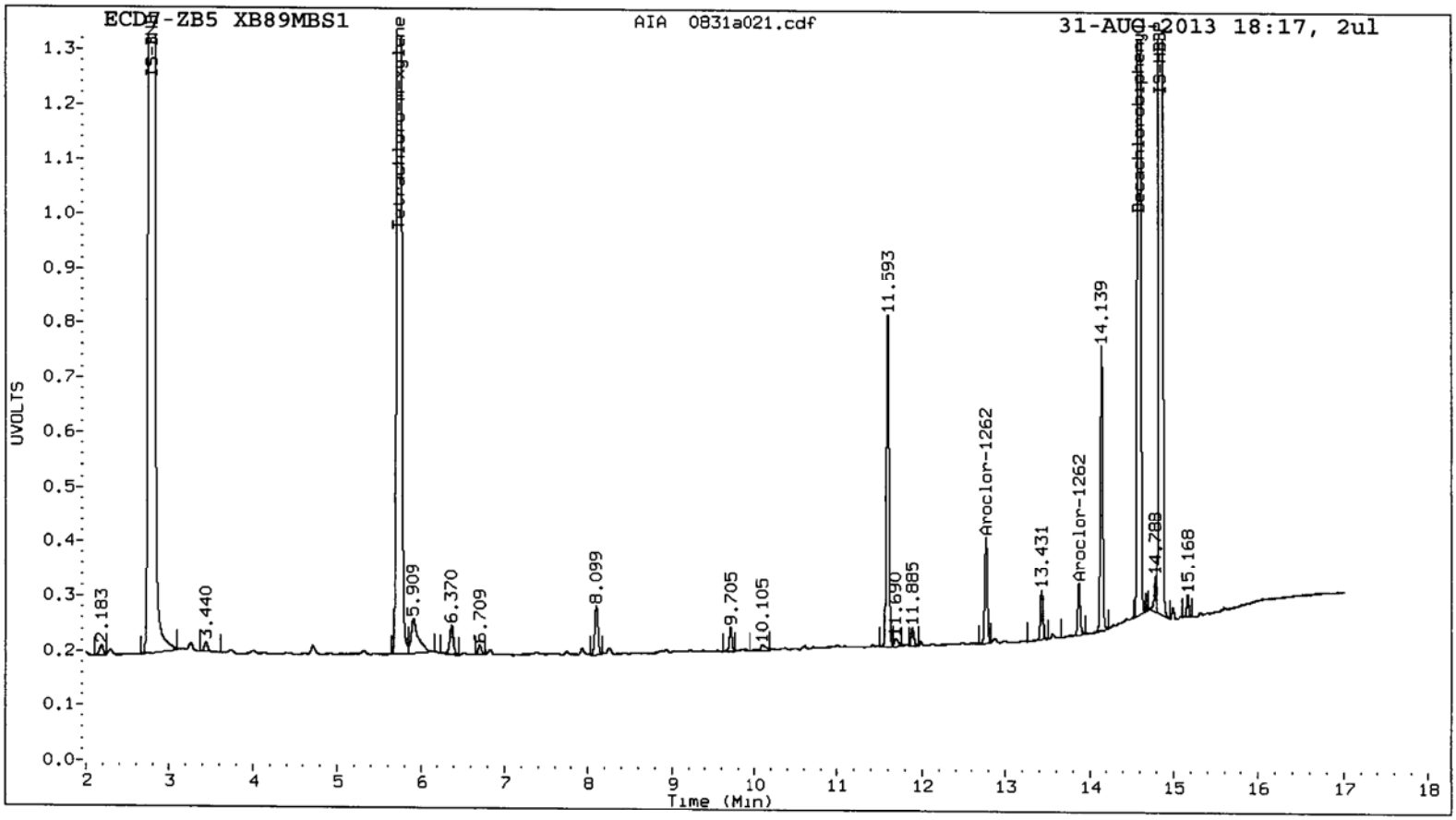
31-AUG-2013 18:17, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1254
Aroclor-1254
Aroclor-1268
Aroclor-1268
2.435
2.925
3.368
4.468
8.043
8.771
10.757
12.053
12.241
13.819
14.517
15.511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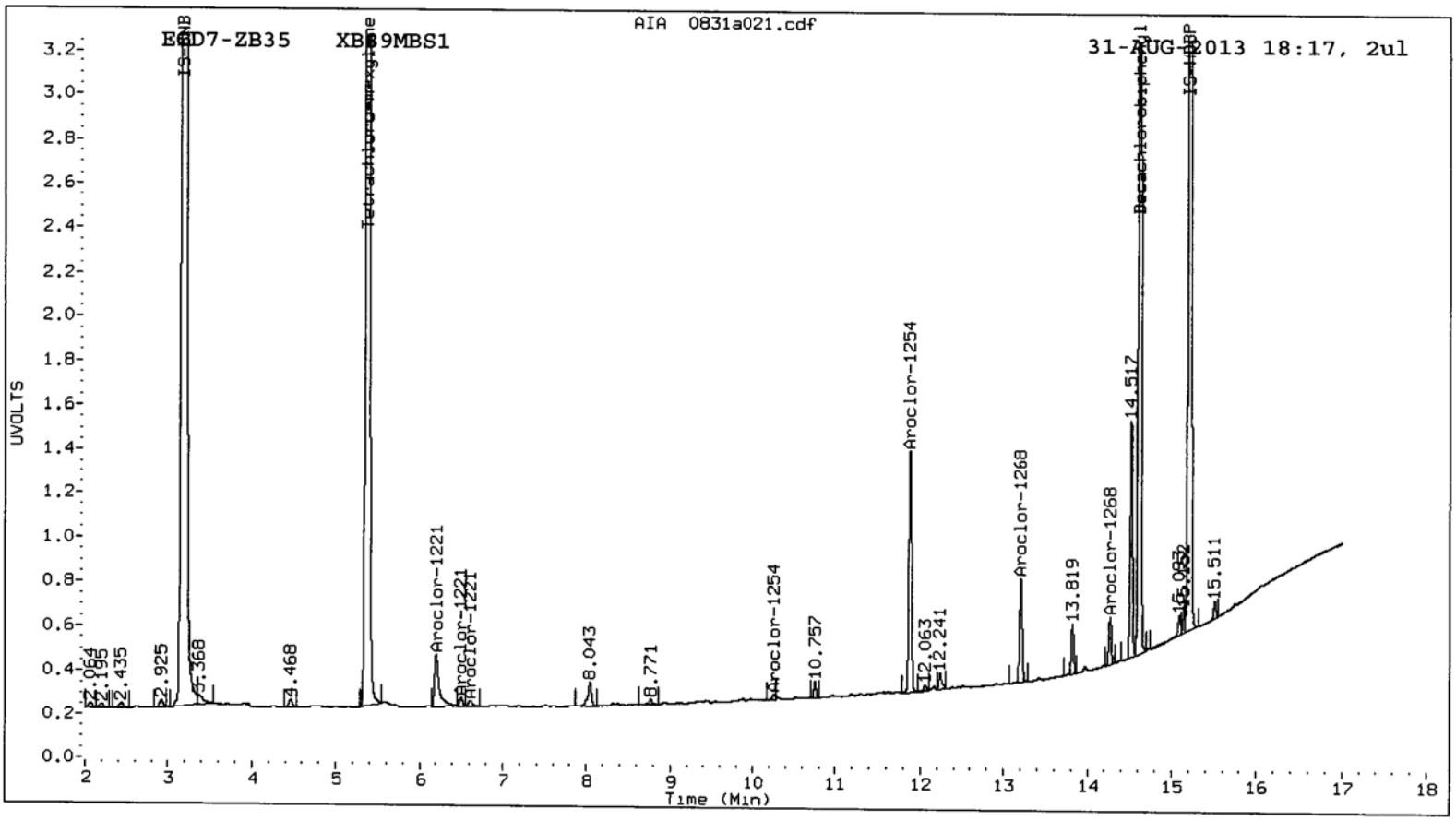
31-AUG-2013 18:17, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1262
Aroclor-1262
2.183
3.440
5.909
6.370
6.709
8.099
9.705
10.105
11.593
11.690
11.885
13.431
14.139
14.788
15.168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31-AUG-2013 18:17, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1254
Aroclor-1254
Aroclor-1268
Aroclor-1268
2.435
2.925
3.368
3.468
8.043
8.771
10.757
12.063
12.241
13.819
14.517
15.511

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a022.d
Data file 2: 20130816.b/0831-2.b/0831a022.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89LCSS1
Client ID: XB89LCSS1
Injection Date: 31-AUG-2013 18:39
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
5.734	-0.001	2231341	5.372	0.000	3941715	35.2	33.2	6.1	Tetrachloro-m-xylene
14.589	0.001	1918199	14.615	0.002	3134925	34.9	33.6	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	88.1	82.9
Decachlorobiphenyl	87.2	84.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5412329	5.0
Hexabromobiphenyl	3127538	3810325	21.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9382845	-2.6
Hexabromobiphenyl	5043723	5872347	16.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	7.743	-0.001	723396	425.9	1	6.626	0.000	891711	397.3	
Aroclor-1016	2	8.262	-0.002	2516020	438.1	2	7.505	0.000	2050923	402.1	
Aroclor-1016	3	8.449	0.000	971692	424.5	3	8.316	0.000	4474694	421.1	
Aroclor-1016	4	8.874	-0.001	563684	403.2	4	8.916	0.000	1285618	402.5	
Total Col1Ave (4 peaks):					422.9	Total Col2Ave (4 peaks):				405.7	RPD = 4
Corrected Ave (3 peaks):					417.9	Corrected Ave (3 peaks):				400.6	RPD = 4
Aroclor-1221	1	6.189	-0.003	92218	130.1	1	6.198	0.000	271777	167.4	
Aroclor-1221	2	6.399	0.000	127643	213.8	2	6.492	-0.003	229548	244.7	
Aroclor-1221	3	6.522	-0.001	502644	287.9	3	6.626	-0.004	891711	312.0	
Aroclor-1221	NS	---			----	4	7.505	-0.017	2050923	2133.3	
Total Col1Ave (3 peaks):					210.6	Total Col2Ave (4 peaks):				714.4	RPD = 109*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				241.4	
Aroclor-1232	1	6.522	-0.001	502644	443.2	1	6.626	-0.005	891711	449.2	
Aroclor-1232	2	7.743	-0.001	723396	1059.3	2	7.505	-0.006	2050923	916.5	
Aroclor-1232	3	8.262	-0.002	2516020	1118.3	3	8.316	-0.004	4474694	1050.0	
Aroclor-1232	4	8.449	-0.002	971692	1080.4	4	8.916	-0.005	1285618	906.7	
Total Col1Ave (4 peaks):					925.3	Total Col2Ave (4 peaks):				830.6	RPD = 11
Corrected Ave (3 peaks):					861.0	Corrected Ave (3 peaks):				757.4	RPD = 13
Aroclor-1242	1	7.743	0.000	723396	528.3	1	6.626	-0.001	891711	468.3	
Aroclor-1242	2	8.262	-0.001	2516020	546.7	2	7.505	0.000	2050923	515.7	
Aroclor-1242	3	8.449	0.000	971692	539.5	3	8.316	0.000	4474694	533.6	
Aroclor-1242	4	9.414	0.000	798861	467.4	4	9.383	0.000	1554570	467.4	
Total Col1Ave (4 peaks):					520.5	Total Col2Ave (4 peaks):				496.2	RPD = 5
Corrected Ave (3 peaks):					511.7	Corrected Ave (3 peaks):				483.8	RPD = 6
Aroclor-1248	1	8.262	0.004	2516020	876.9	1	7.505	0.001	2050923	1043.2	
Aroclor-1248	2	8.874	-0.002	563684	299.3	2	8.316	0.001	4474694	825.0	
Aroclor-1248	3	9.414	0.000	798861	300.4	3	8.916	-0.001	1285618	323.2	
Aroclor-1248	4	9.892	0.008	611094	179.7	4	10.323	-0.002	112360	19.6	
Total Col1Ave (4 peaks):					414.1	Total Col2Ave (4 peaks):				552.8	RPD = 29
Corrected Ave (3 peaks):					259.8	Corrected Ave (3 peaks):				389.3	RPD = 40
Aroclor-1254	1	10.227	0.002	648148	185.2	1	10.028	-0.001	952019	256.4	
Aroclor-1254	2	10.614	0.000	140865	64.8	2	10.213	-0.001	1104168	233.0	
Aroclor-1254	3	10.754	-0.002	404391	94.9	3	10.909	0.000	611775	77.1	
Aroclor-1254	4	11.096	-0.019	1764270	402.9	4	11.178	0.017	2963679	367.4	
Aroclor-1254	5	11.810	-0.001	2767446	644.2	5	11.932	0.000	3314652	564.9	
Total Col1Ave (5 peaks):					278.4	Total Col2Ave (5 peaks):				299.8	RPD = 7
Corrected Ave (4 peaks):					186.9	Corrected Ave (4 peaks):				233.5	RPD = 22
Aroclor-1260	1	12.041	0.001	1322058	383.4	1	11.932	0.000	3314652	372.4	
Aroclor-1260	2	12.358	0.000	1369599	395.9	2	12.475	0.001	2680069	375.8	
Aroclor-1260	3	12.728	0.000	3291243	410.1	3	12.746	0.002	5459224	388.1	
Aroclor-1260	4	13.123	0.000	1763548	416.5	4	13.307	0.002	3653078	384.1	
Aroclor-1260	5	13.303	0.000	758906	409.8	NS	---			----	
Total Col1Ave (5 peaks):					403.1	Total Col2Ave (4 peaks):				380.1	RPD = 6
Corrected Ave (4 peaks):					399.8	Corrected Ave (3 peaks):				377.4	RPD = 6
Aroclor-1262	1	12.358	-0.001	1369599	305.3	1	12.475	-0.005	2680069	312.4	
Aroclor-1262	2	12.728	-0.003	3291243	317.2	2	12.746	-0.002	5459224	321.1	
Aroclor-1262	3	13.123	-0.003	1763548	520.6	3	13.252	-0.003	1537760	206.9	
Aroclor-1262	4	13.303	-0.002	758906	188.1	4	13.307	-0.006	3653078	325.1	
Aroclor-1262	5	13.883	-0.002	690962	221.3	5	13.938	-0.003	1252437	223.8	
Total Col1Ave (5 peaks):					310.5	Total Col2Ave (5 peaks):				277.9	RPD = 11
Corrected Ave (4 peaks):					258.0	Corrected Ave (4 peaks):				266.1	RPD = 3
Aroclor-1268	1	13.234	-0.002	661036	59.0	1	13.252	-0.002	1537760	87.8	

Aroclor-1268	2	13.303	0.000	758906	76.5	2	13.307	-0.010	3653078	222.3
Aroclor-1268	3	13.660	0.012	353515	42.4	3	13.661	-0.003	99831	7.6
Aroclor-1268	4	14.283	-0.002	192820	9.1	4	14.314	-0.003	353732	10.3

Total Col1Ave (4 peaks): 46.8 Total Col2Ave (4 peaks): 82.0 RPD = 55*

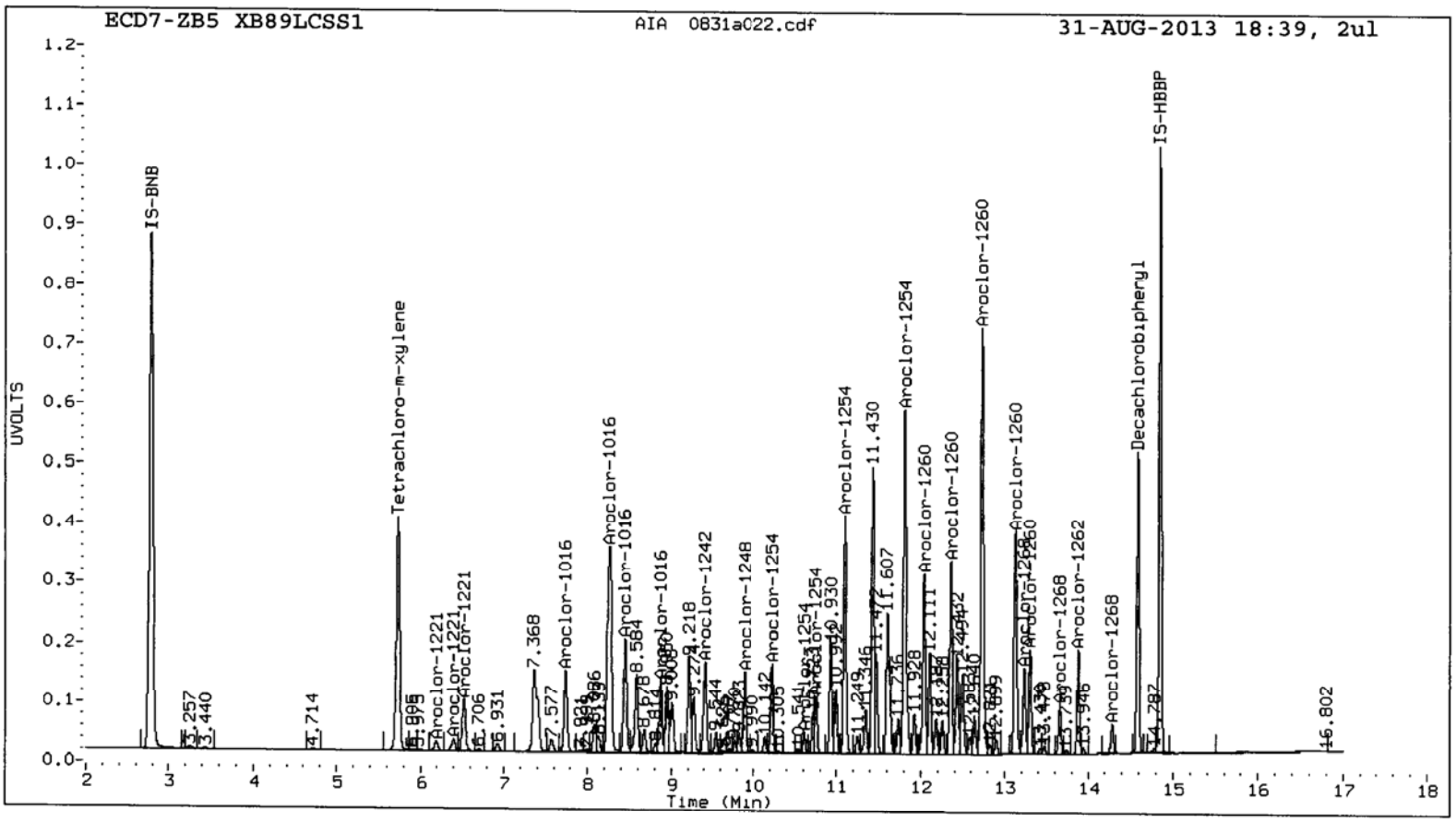
Corrected Ave (3 peaks): 36.8 Corrected Ave (3 peaks): 35.2 RPD = 4

Total PCB Area Col1 (5.835 - 14.488) = 38237185 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 67009886 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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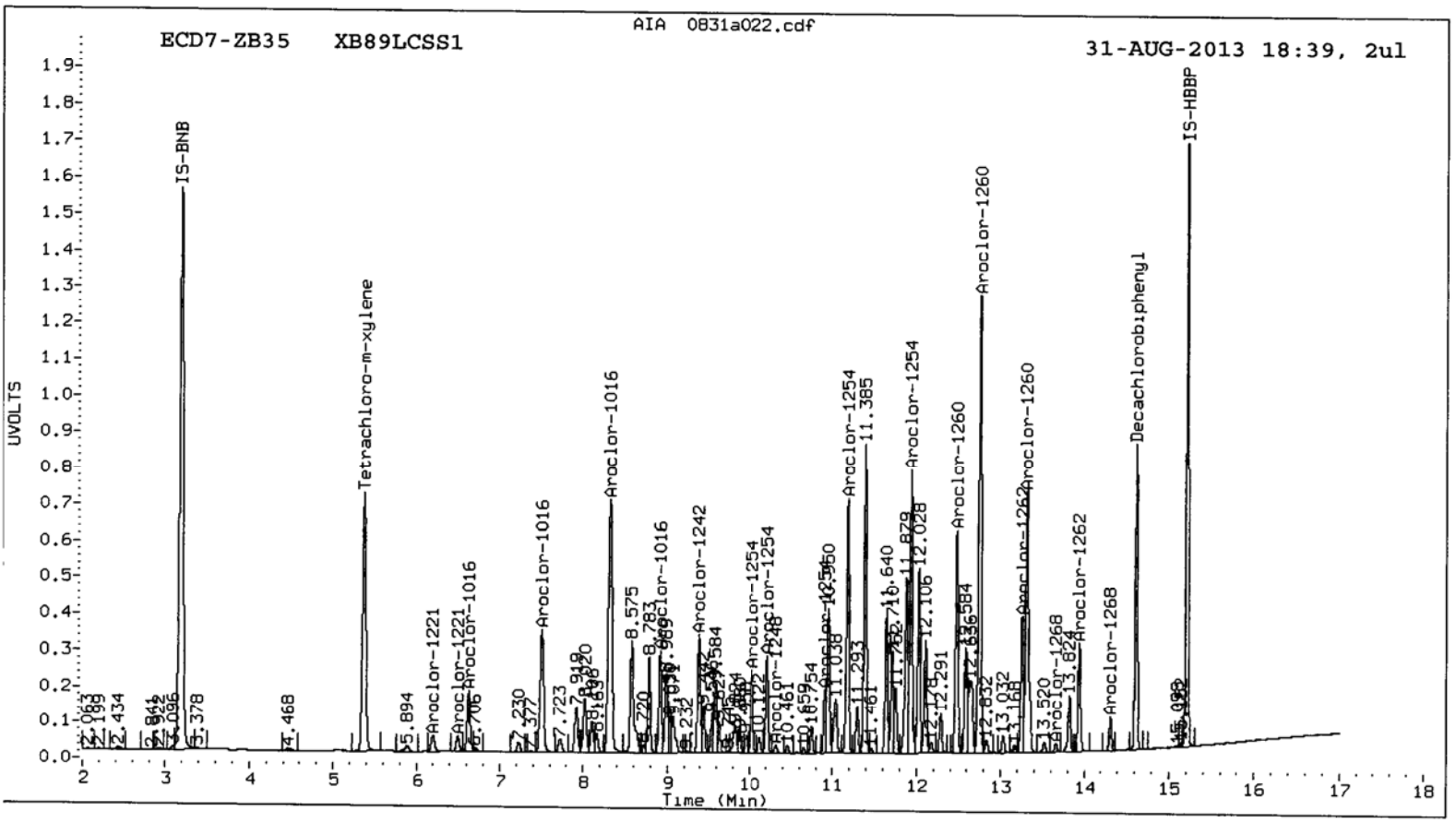
31-AUG-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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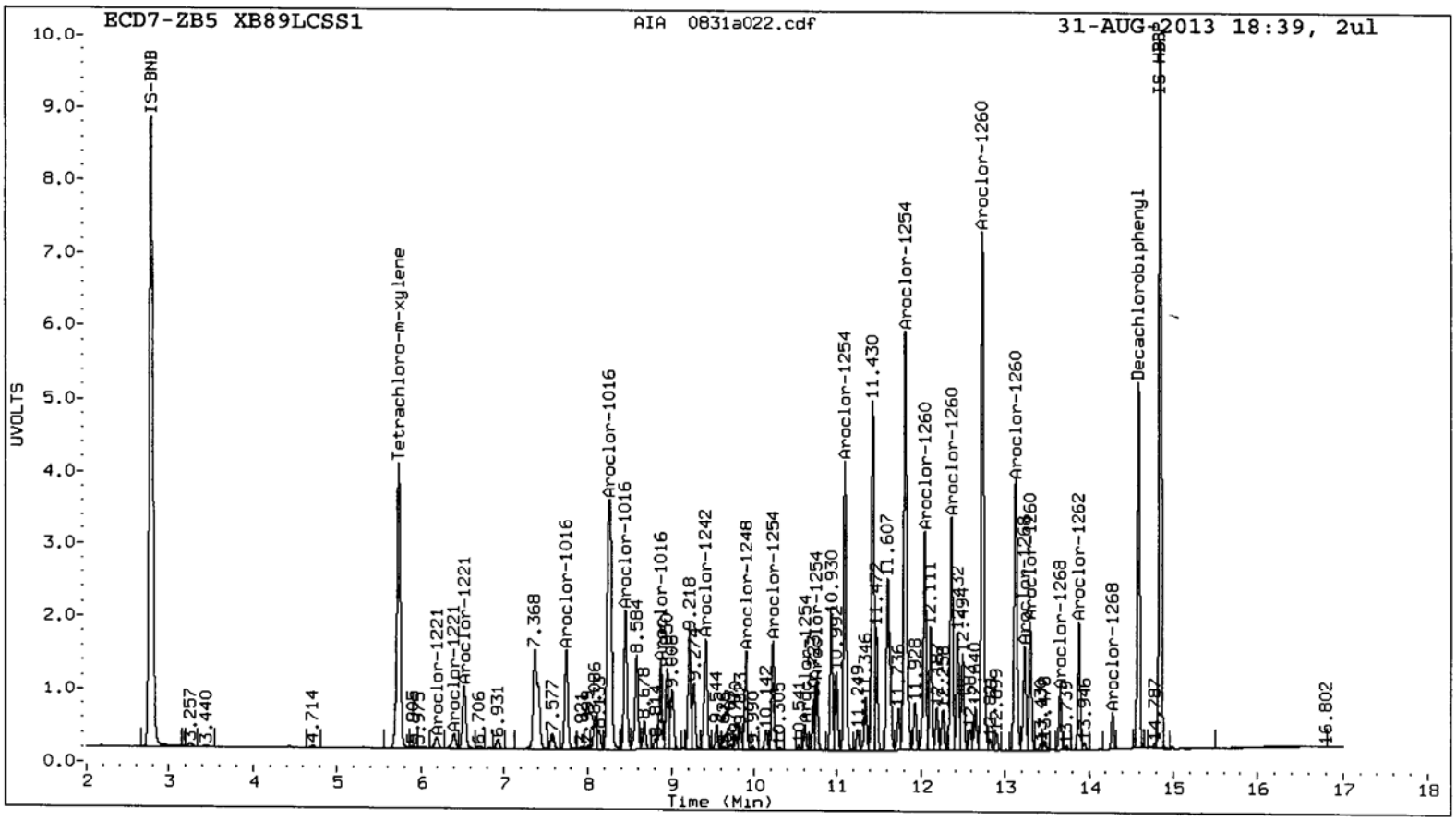
31-AUG-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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UVOLTS
Time (Min)
IS-BNB
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Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
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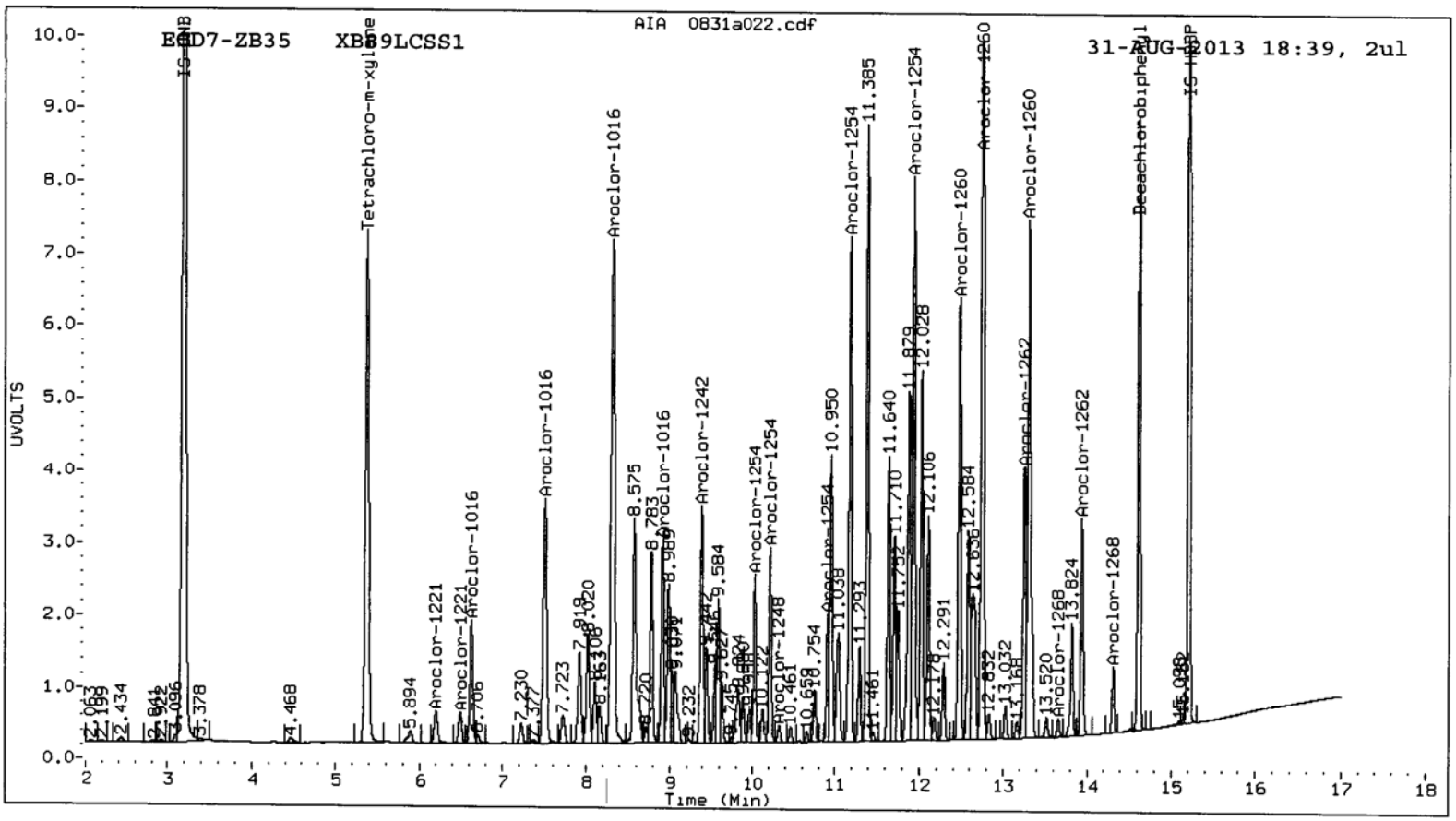
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS HBB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31-AUG-2013 18:39, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a023.d
Data file 2: 20130816.b/0831-2.b/0831a023.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89LCSDS1
Client ID: XB89LCSDS1
Injection Date: 31-AUG-2013 19:01
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.001	2175701	5.373	0.001	3899478	34.4	32.7	5.1	Tetrachloro-m-xylene
14.588	0.001	1858101	14.615	0.002	3015537	33.7	32.4	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	86.0	81.7
Decachlorobiphenyl	84.2	80.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5407586	5.0
Hexabromobiphenyl	3127538	3822038	22.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9420905	-2.2
Hexabromobiphenyl	5043723	5869656	16.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.745	0.000	707123	416.7	1	6.626	0.000	877082	389.2
Aroclor-1016	2	8.264	0.000	2455025	427.8	2	7.508	0.003	2015970	393.7
Aroclor-1016	3	8.451	0.002	947576	414.3	3	8.319	0.003	4379199	410.4
Aroclor-1016	4	8.876	0.001	550538	394.2	4	8.918	0.001	1263494	394.0
	Total Col1Ave (4 peaks):				413.2	Total Col2Ave (4 peaks):				396.8 RPD = 4
	Corrected Ave (3 peaks):				408.4	Corrected Ave (3 peaks):				392.3 RPD = 4
Aroclor-1221	1	6.189	-0.002	89779	126.8	1	6.198	0.000	263114	161.4
Aroclor-1221	2	6.402	0.003	124423	208.6	2	6.493	-0.003	207911	220.8
Aroclor-1221	3	6.522	-0.001	492258	282.2	3	6.626	-0.004	877082	305.7
Aroclor-1221	NS	---			----	4	7.508	-0.015	2015970	2088.5
	Total Col1Ave (3 peaks):				205.9	Total Col2Ave (4 peaks):				694.1 RPD = 108*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				229.3
Aroclor-1232	1	6.522	-0.002	492258	434.4	1	6.626	-0.004	877082	440.0
Aroclor-1232	2	7.745	0.000	707123	1036.4	2	7.508	-0.003	2015970	897.2
Aroclor-1232	3	8.264	0.000	2455025	1092.1	3	8.319	-0.001	4379199	1023.4
Aroclor-1232	4	8.451	0.000	947576	1054.5	4	8.918	-0.003	1263494	887.5
	Total Col1Ave (4 peaks):				904.4	Total Col2Ave (4 peaks):				812.0 RPD = 11
	Corrected Ave (3 peaks):				841.8	Corrected Ave (3 peaks):				741.6 RPD = 13
Aroclor-1242	1	7.745	0.001	707123	516.8	1	6.626	0.000	877082	458.7
Aroclor-1242	2	8.264	0.001	2455025	533.9	2	7.508	0.002	2015970	504.9
Aroclor-1242	3	8.451	0.002	947576	526.6	3	8.319	0.003	4379199	520.1
Aroclor-1242	4	9.413	0.000	781472	457.6	4	9.383	-0.001	1519232	454.9
	Total Col1Ave (4 peaks):				508.7	Total Col2Ave (4 peaks):				484.7 RPD = 5
	Corrected Ave (3 peaks):				500.3	Corrected Ave (3 peaks):				472.8 RPD = 6
Aroclor-1248	1	8.264	0.006	2455025	856.4	1	7.508	0.003	2015970	1021.3
Aroclor-1248	2	8.876	0.000	550538	292.6	2	8.319	0.004	4379199	804.1
Aroclor-1248	3	9.413	-0.001	781472	294.1	3	8.918	0.000	1263494	316.4
Aroclor-1248	4	9.893	0.008	596362	175.5	4	10.324	-0.001	111408	19.4
	Total Col1Ave (4 peaks):				404.7	Total Col2Ave (4 peaks):				540.3 RPD = 29
	Corrected Ave (3 peaks):				254.1	Corrected Ave (3 peaks):				380.0 RPD = 40
Aroclor-1254	1	10.227	0.002	631964	180.7	1	10.028	-0.001	930886	249.7
Aroclor-1254	2	10.614	0.000	138386	63.7	2	10.213	-0.001	1081116	227.2
Aroclor-1254	3	10.754	-0.002	393583	92.4	3	10.908	0.000	597453	75.0
Aroclor-1254	4	11.095	-0.019	1719370	393.0	4	11.178	0.016	2887128	356.5
Aroclor-1254	5	11.809	-0.001	2694475	627.8	5	11.932	-0.001	3225100	547.4
	Total Col1Ave (5 peaks):				271.5	Total Col2Ave (5 peaks):				291.2 RPD = 7
	Corrected Ave (4 peaks):				182.4	Corrected Ave (4 peaks):				227.1 RPD = 22
Aroclor-1260	1	12.041	0.000	1287666	372.3	1	11.932	0.000	3225100	362.5
Aroclor-1260	2	12.358	0.000	1335118	384.7	2	12.475	0.001	2612276	366.5
Aroclor-1260	3	12.728	0.001	3220006	400.0	3	12.746	0.001	5314094	378.0
Aroclor-1260	4	13.124	0.001	1717856	404.5	4	13.306	0.001	3560401	374.5
Aroclor-1260	5	13.304	0.000	740216	398.5	NS	---			----
	Total Col1Ave (5 peaks):				392.0	Total Col2Ave (4 peaks):				370.4 RPD = 6
	Corrected Ave (4 peaks):				388.9	Corrected Ave (3 peaks):				367.8 RPD = 6
Aroclor-1262	1	12.358	-0.001	1335118	296.7	1	12.475	-0.005	2612276	304.7
Aroclor-1262	2	12.728	-0.002	3220006	309.3	2	12.746	-0.003	5314094	312.7
Aroclor-1262	3	13.124	-0.002	1717856	505.5	3	13.251	-0.004	1537008	206.9
Aroclor-1262	4	13.304	-0.001	740216	182.9	4	13.306	-0.007	3560401	317.0
Aroclor-1262	5	13.883	-0.002	698288	223.0	5	13.938	-0.003	1216958	217.5
	Total Col1Ave (5 peaks):				303.5	Total Col2Ave (5 peaks):				271.8 RPD = 11
	Corrected Ave (4 peaks):				253.0	Corrected Ave (4 peaks):				260.5 RPD = 3
Aroclor-1268	1	13.234	-0.002	643803	57.3	1	13.251	-0.003	1537008	87.8

Aroclor-1268	2	13.304	0.000	740216	74.4	2	13.306	-0.011	3560401	216.7
Aroclor-1268	3	13.660	0.012	344885	41.2	3	13.660	-0.004	98075	7.4
Aroclor-1268	4	14.283	-0.002	188867	8.9	4	14.313	-0.004	346327	10.1

Total Col1Ave (4 peaks): 45.5 Total Col2Ave (4 peaks): 80.5 RPD = 56*

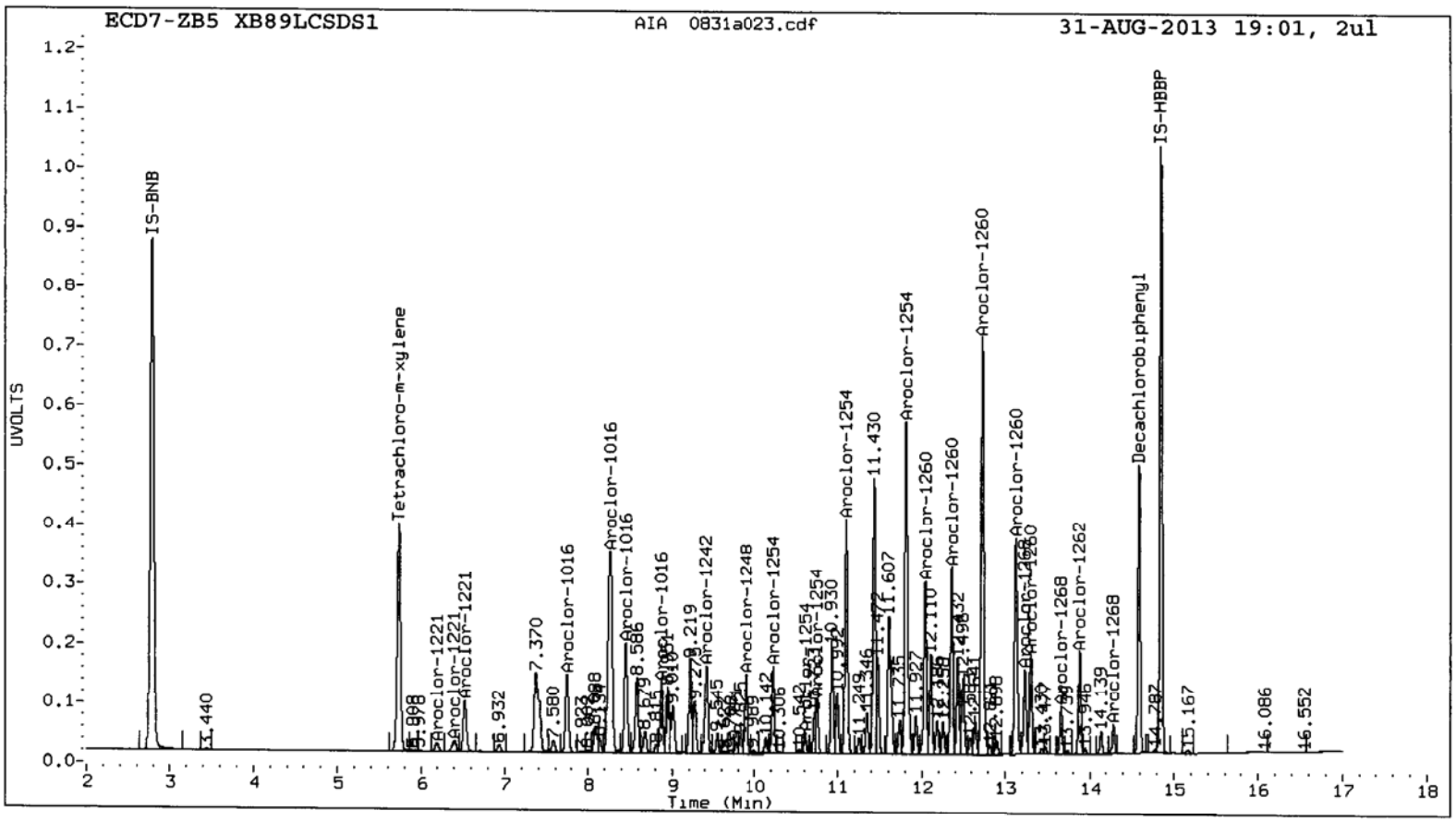
Corrected Ave (3 peaks): 35.8 Corrected Ave (3 peaks): 35.1 RPD = 2

Total PCB Area Col1 (5.835 - 14.488) = 37417515 Col1 Total PCB = 0.9 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 65529713 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.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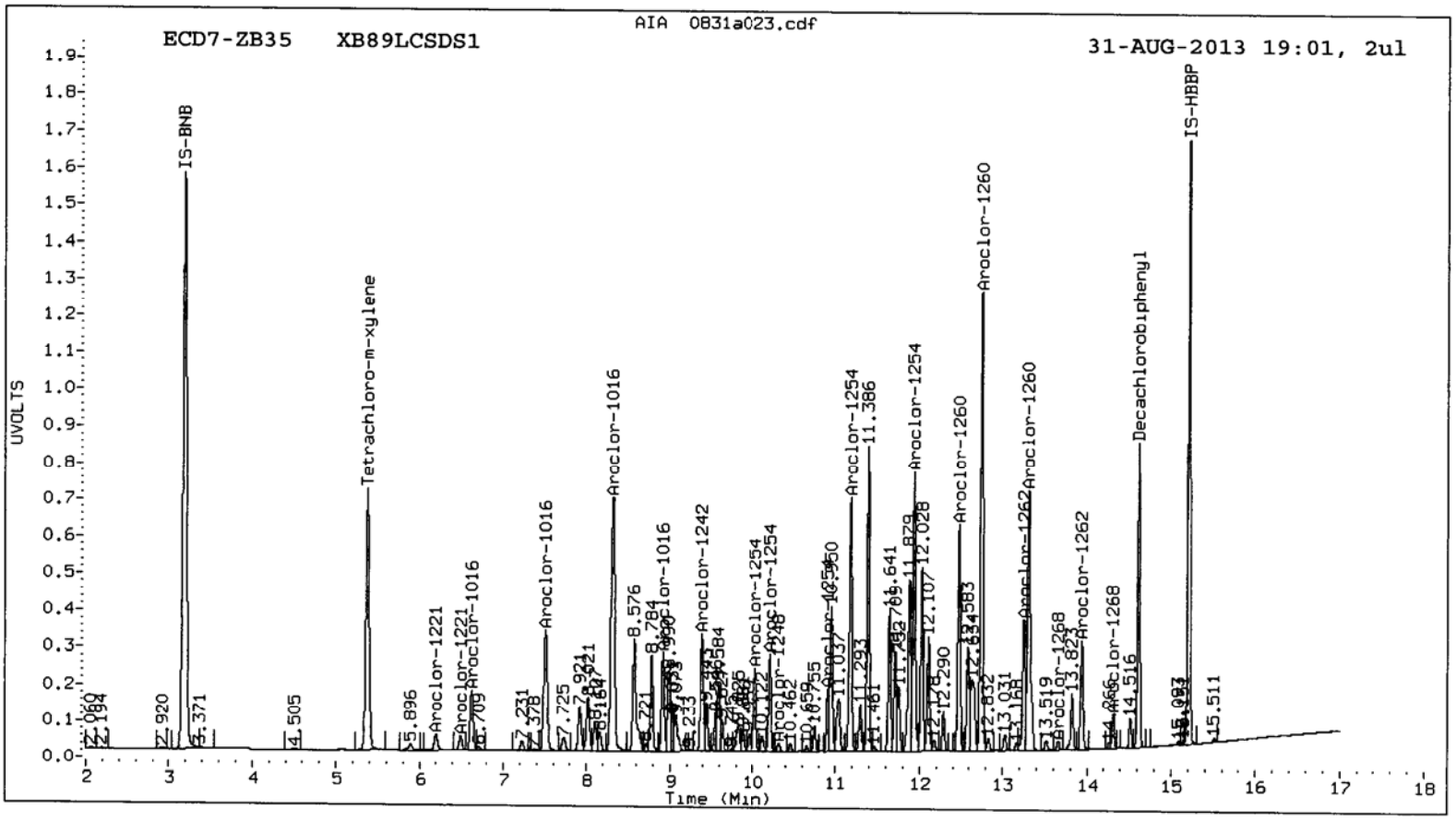
AIA 0831a023.cdf
31-AUG-2013 19:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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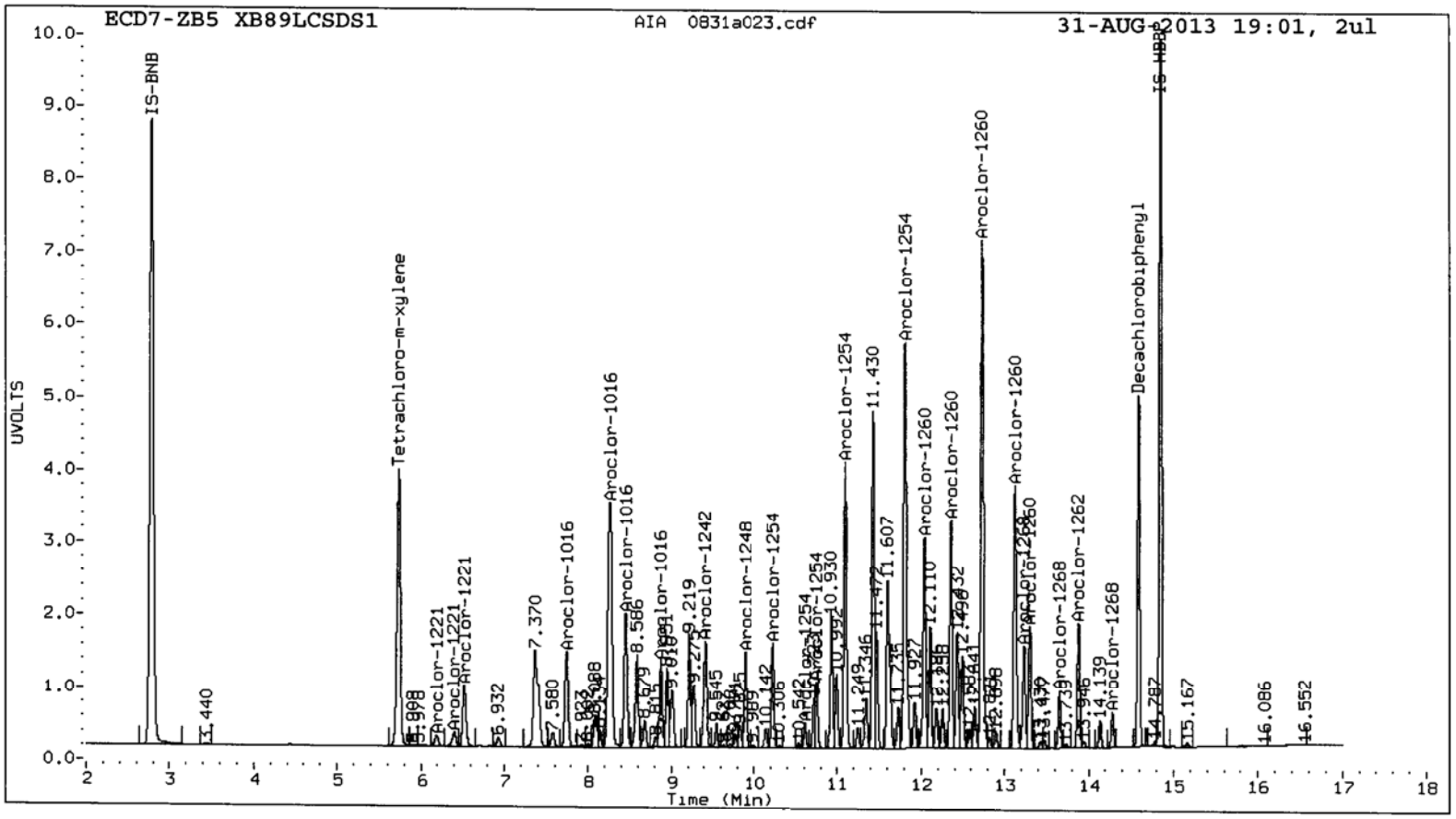
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

XB89:01562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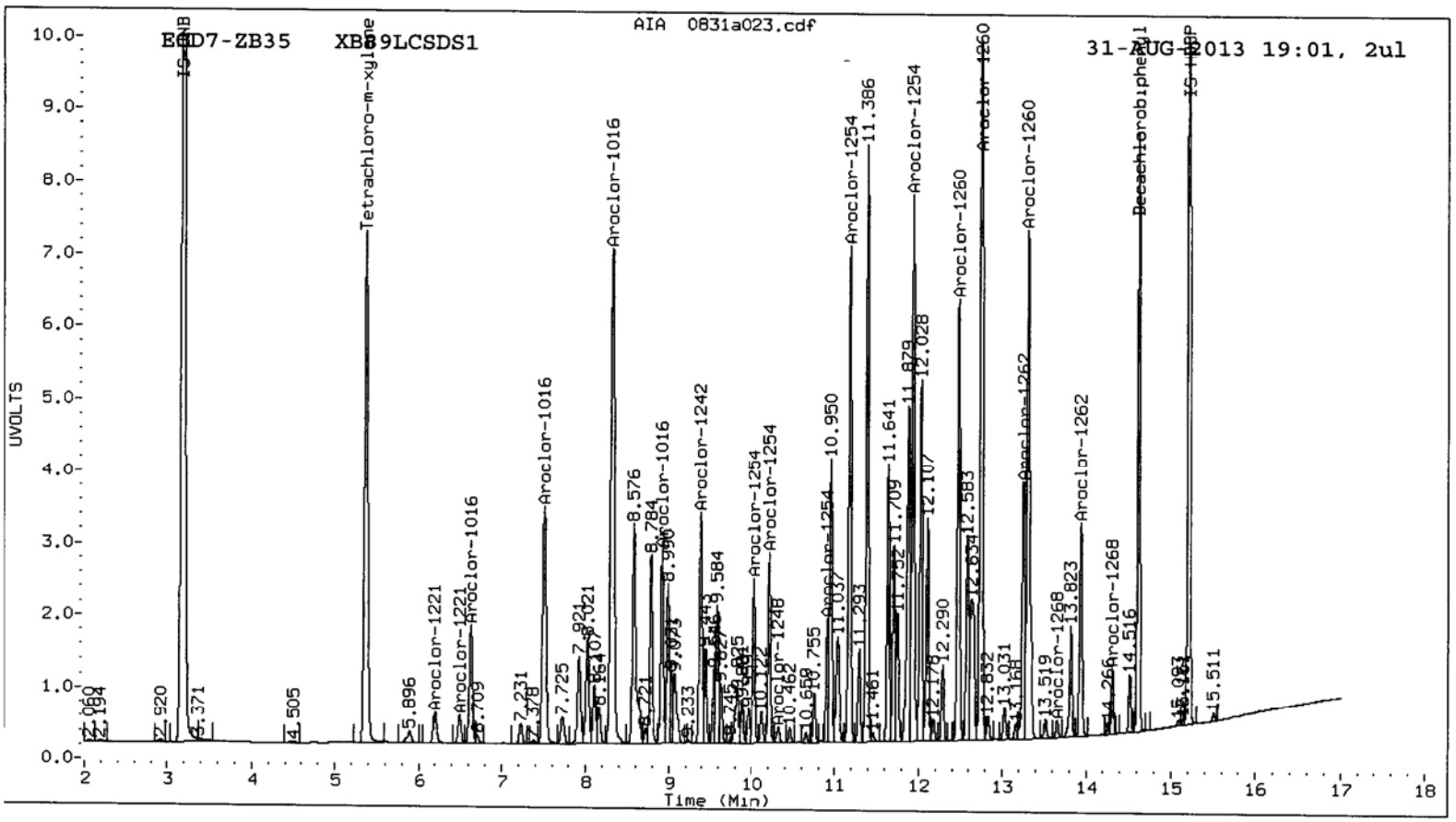
AIA 0831a023.cdf
31-AUG-2013 19:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBB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31-AUG-2013 19:01, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBB

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a024.d
Data file 2: 20130816.b/0831-2.b/0831a024.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89A
Client ID: IJ13-SS-102
Injection Date: 31-AUG-2013 19:23
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.732	-0.003	1713467	5.370	-0.001	3218530	26.0	28.7	9.6	Tetrachloro-m-xylene
14.588	0.001	630064	14.615	0.002	1229057	13.2	13.9	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	65.1	71.7
Decachlorobiphenyl	32.9	34.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5626101	9.2
Hexabromobiphenyl	3127538	3318600	6.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8860950	-8.0
Hexabromobiphenyl	5043723	5570144	10.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount	
Aroclor-1016	1	7.718	-0.026	211181	119.6	1	6.645	0.019	273349	129.0	
Aroclor-1016	2	8.264	0.000	74716	12.5	2	7.484	-0.021	139416	28.9	
Aroclor-1016	3	8.470	0.021	65548	27.5	3	8.327	0.011	118649	11.8	
Aroclor-1016	4	8.873	-0.002	138264	95.1	4	8.916	-0.001	204640	67.8	
Total Col1Ave (4 peaks):					63.7	Total Col2Ave (4 peaks):				59.4	RPD = 7
Corrected Ave (3 peaks):					45.1	Corrected Ave (3 peaks):				36.2	RPD = 22
Aroclor-1221	1	6.226	0.035	24054	32.7	1	6.194	-0.004	350428	228.5	
Aroclor-1221	2	6.415	0.016	32915	53.0	2	6.507	0.011	394942	445.9	
Aroclor-1221	3	6.497	-0.026	15340	8.5	3	6.645	0.015	273349	101.3	
Aroclor-1221	NS	---			----	4	7.484	-0.039	139416	153.6	
Total Col1Ave (3 peaks):					31.4	Total Col2Ave (4 peaks):				232.3	RPD = 152*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				161.1	
Aroclor-1232	1	6.497	-0.026	15340	13.0	1	6.645	0.014	273349	145.8	
Aroclor-1232	2	7.718	-0.027	211181	297.5	2	7.484	-0.027	139416	66.0	
Aroclor-1232	3	8.264	-0.001	74716	31.9	3	8.327	0.007	118649	29.5	
Aroclor-1232	4	8.470	0.019	65548	70.1	4	8.916	-0.006	204640	152.8	
Total Col1Ave (4 peaks):					103.1	Total Col2Ave (4 peaks):				98.5	RPD = 5
Corrected Ave (3 peaks):					38.4	Corrected Ave (3 peaks):				80.4	RPD = 71*
Aroclor-1242	1	7.718	-0.026	211181	148.4	1	6.645	0.018	273349	152.0	
Aroclor-1242	2	8.264	0.001	74716	15.6	2	7.484	-0.022	139416	37.1	
Aroclor-1242	3	8.470	0.022	65548	35.0	3	8.327	0.011	118649	15.0	
Aroclor-1242	4	9.413	-0.001	54533	30.7	4	9.384	0.001	112409	35.8	
Total Col1Ave (4 peaks):					57.4	Total Col2Ave (4 peaks):				60.0	RPD = 4
Corrected Ave (3 peaks):					27.1	Corrected Ave (3 peaks):				29.3	RPD = 8
Aroclor-1248	1	8.264	0.006	74716	25.1	1	7.484	-0.021	139416	75.1	
Aroclor-1248	2	8.873	-0.004	138264	70.6	2	8.327	0.012	118649	23.2	
Aroclor-1248	3	9.413	-0.001	54533	19.7	3	8.916	-0.002	204640	54.5	507
Aroclor-1248	4	9.891	0.006	263539	74.5	4	10.309	-0.016	290717	53.7	
Total Col1Ave (4 peaks):					47.5	Total Col2Ave (4 peaks):				51.6	RPD = 8
Corrected Ave (3 peaks):					38.5	Corrected Ave (3 peaks):				43.8	RPD = 13
Aroclor-1254	1	10.224	-0.001	305304	83.9	1	10.027	-0.001	256506	73.1	
Aroclor-1254	2	10.617	0.003	175307	77.5	2	10.215	0.001	526753	117.7	
Aroclor-1254	3	10.755	-0.001	380695	85.9	3	10.907	-0.001	525713	70.2	
Aroclor-1254	4	11.115	0.000	381915	83.9	4	11.162	0.000	653227	85.8	
Aroclor-1254	5	11.808	-0.003	413316	92.6	5	11.932	0.000	393784	71.1	
Total Col1Ave (5 peaks):					84.8	Total Col2Ave (5 peaks):				83.6	RPD = 1
Corrected Ave (4 peaks):					82.8	Corrected Ave (4 peaks):				75.0	RPD = 10
Aroclor-1260	1	12.041	0.000	42612	14.2	1	11.932	0.000	393784	46.6	
Aroclor-1260	2	12.355	-0.002	89092	29.6	2	12.469	-0.005	17462	2.6	
Aroclor-1260	3	12.728	0.000	126784	18.1	3	12.749	0.005	215538	16.2	
Aroclor-1260	4	13.125	0.001	57043	15.5	4	13.326	0.021	334230	37.0	
Aroclor-1260	5	13.299	-0.004	17956	11.1	NS	---			----	
Total Col1Ave (5 peaks):					17.7	Total Col2Ave (4 peaks):				25.6	RPD = 37
Corrected Ave (4 peaks):					14.7	Corrected Ave (3 peaks):				18.6	RPD = 23
Aroclor-1262	1	12.355	-0.004	89092	22.8	1	12.469	-0.011	17462	2.1	
Aroclor-1262	2	12.728	-0.003	126784	14.0	2	12.749	0.001	215538	13.4	
Aroclor-1262	3	13.125	-0.002	57043	19.3	3	13.254	-0.001	19613	2.8	
Aroclor-1262	4	13.299	-0.005	17956	5.1	4	13.326	0.013	334230	31.4	
Aroclor-1262	5	13.860	-0.025	141756	52.1	5	13.942	0.002	173944	32.8	
Total Col1Ave (5 peaks):					22.7	Total Col2Ave (5 peaks):				16.5	RPD = 32
Corrected Ave (4 peaks):					15.3	Corrected Ave (4 peaks):				12.4	RPD = 21
Aroclor-1268	1	13.237	0.001	43412	4.5	1	13.254	0.000	19613	1.2	

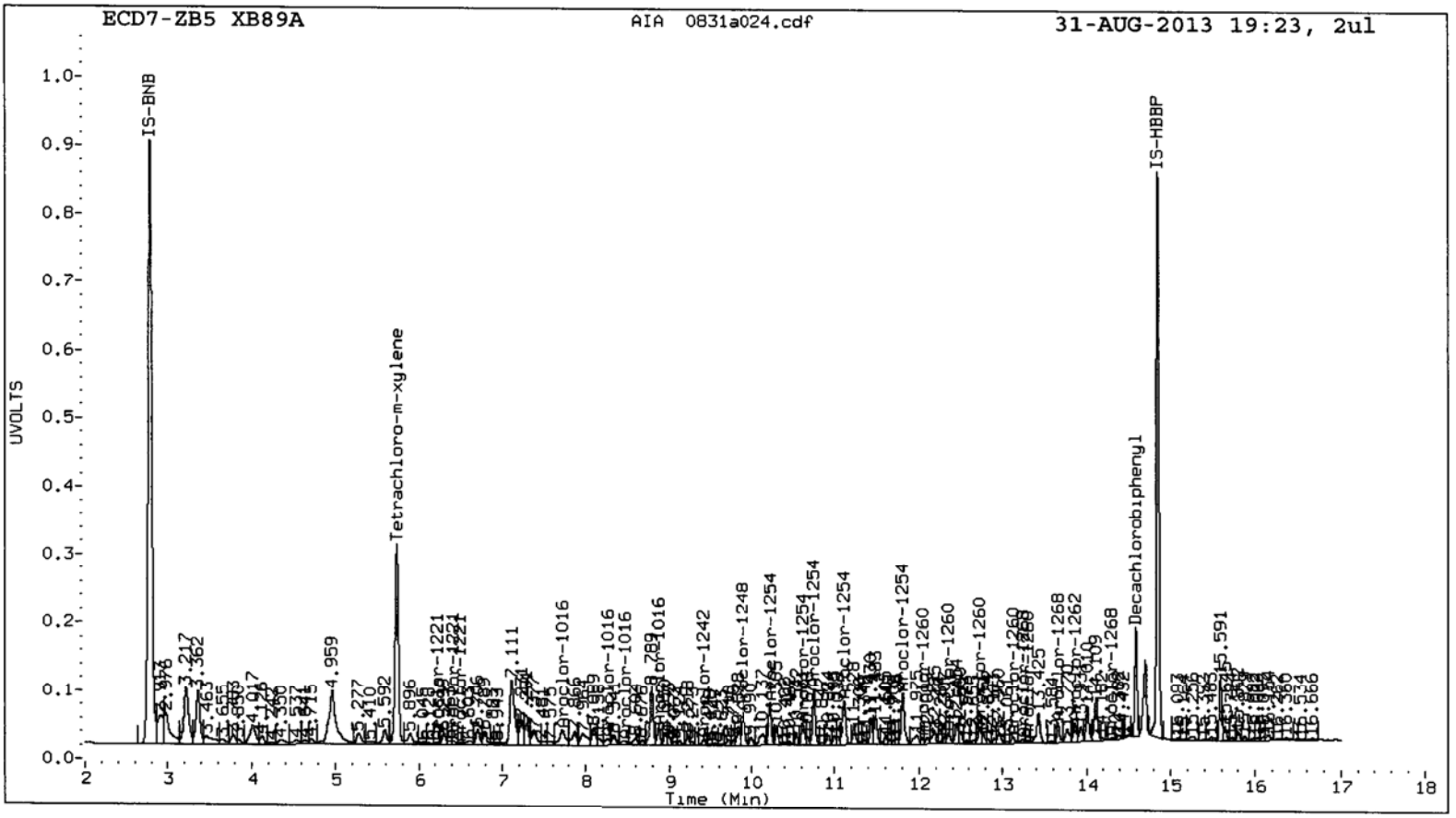
Aroclor-1268	2	13.299	-0.004	17956	2.1	2	13.326	0.009	334230	21.4
Aroclor-1268	3	13.659	0.011	145658	20.1	3	13.648	-0.016	177828	14.2
Aroclor-1268	4	14.299	0.014	13066	0.7	4	14.314	-0.002	16935	0.5
		Total Col1Ave (4 peaks):			6.8		Total Col2Ave (4 peaks):		9.3	RPD = 31
		Corrected Ave (3 peaks):			2.4		Corrected Ave (3 peaks):		5.3	RPD = 75*

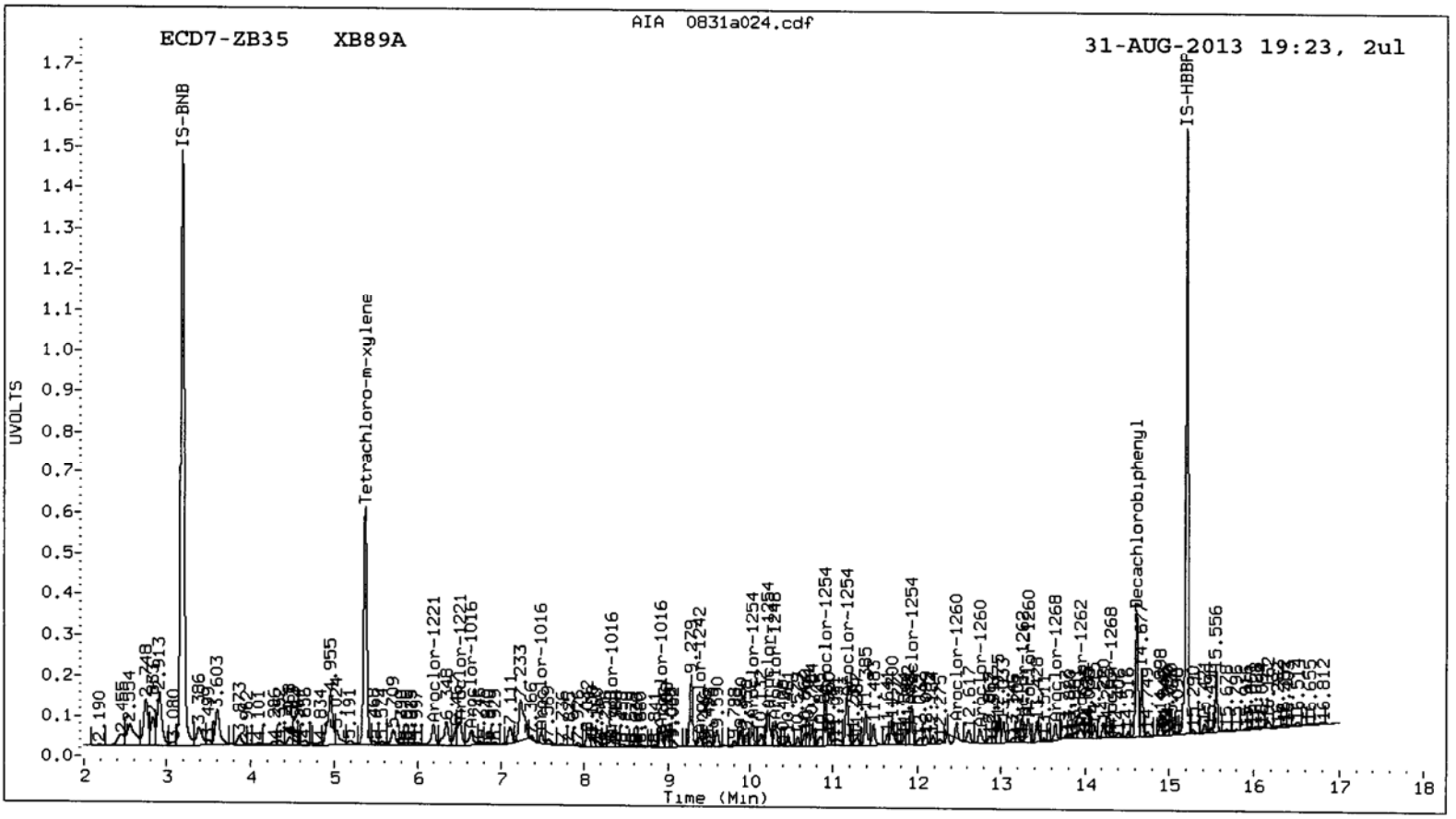
Total PCB Area Col1 (5.835 - 14.488) = 10740414 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 15400596 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD7-ZB5 XB89A
AIA 0831a024.cdf
31-AUG-2013 19:23, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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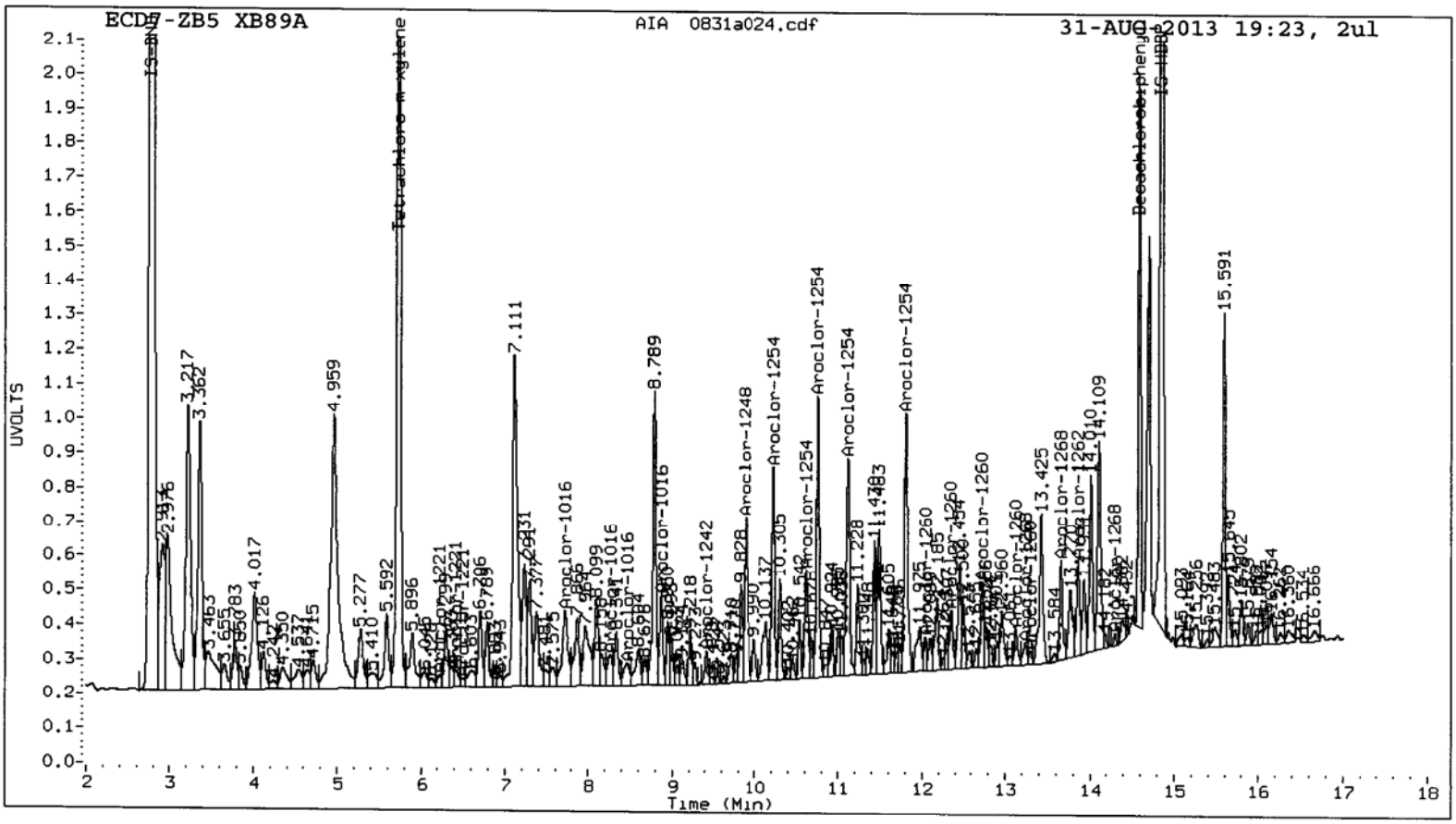
31-AUG-2013 19:23, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)

XB89 01567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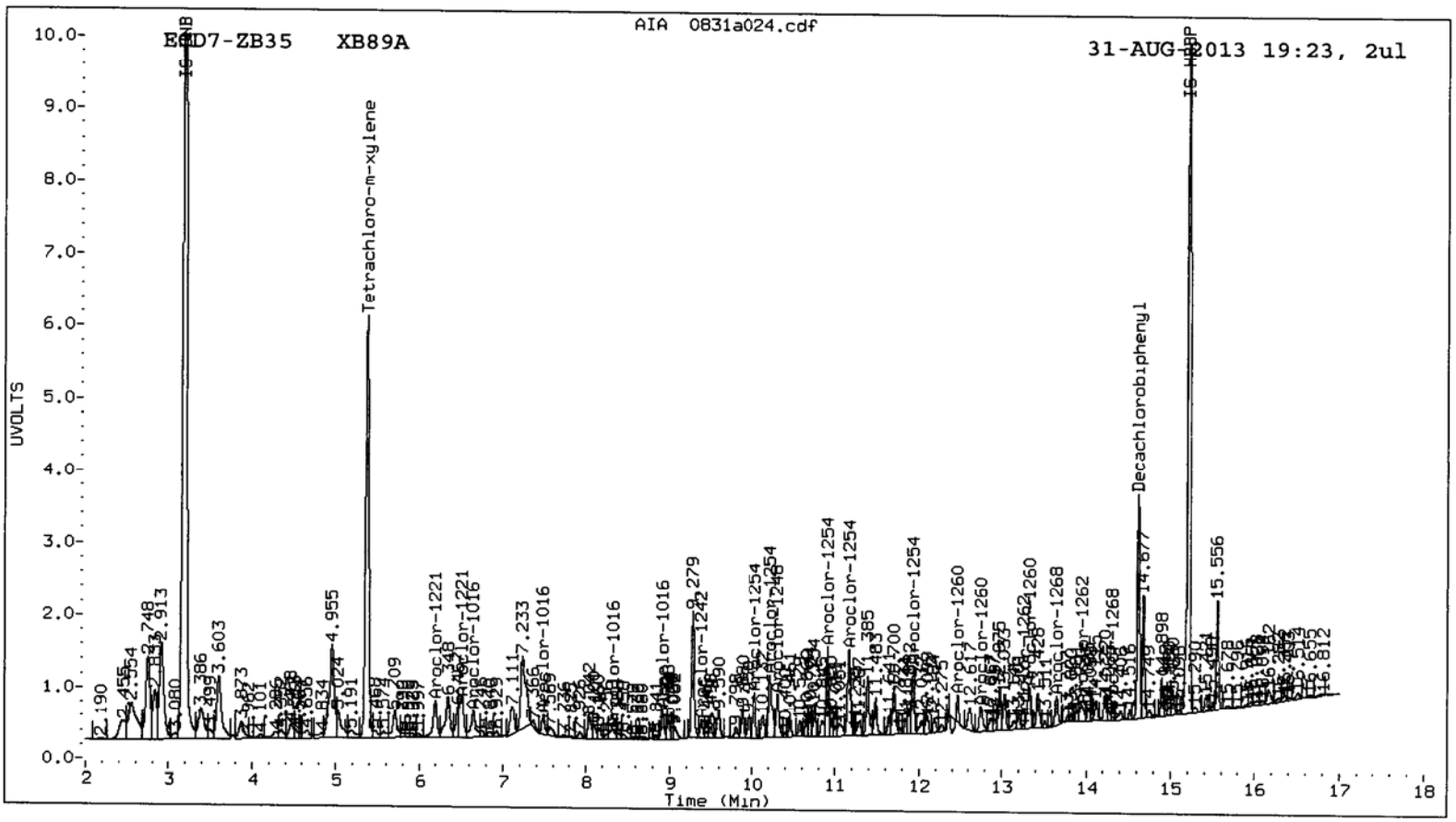
AIA 0831a024.cdf
31-AUG-2013 19:23, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
4.959
5.592
7.111
8.789
15.591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AIA 0831a024.cdf
31-AUG-2013 19:23, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
4.955
7.111
7.233
8.279
14.677
15.556

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a025.d
Data file 2: 20130816.b/0831-2.b/0831a025.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89B
Client ID: IJ13-SS-101
Injection Date: 31-AUG-2013 19:45
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.001	1980883	5.374	0.002	3538496	29.8	30.8	3.3	Tetrachloro-m-xylene
14.589	0.001	1287217	14.615	0.002	2212782	27.2	26.3	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	74.6	77.1
Decachlorobiphenyl	67.9	65.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5673503	10.1
Hexabromobiphenyl	3127538	3283893	5.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9054549	-6.0
Hexabromobiphenyl	5043723	5301174	5.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount	
Aroclor-1016	1	7.720	-0.024	197236	110.8	1	6.647	0.021	207763	95.9	
Aroclor-1016	2	8.261	-0.003	85285	14.2	2	7.489	-0.016	79645	16.2	
Aroclor-1016	3	8.454	0.005	66937	27.9	3	8.322	0.006	109742	10.7	
Aroclor-1016	4	8.875	0.000	208248	142.1	4	8.916	-0.001	371042	120.4	
Total Col1Ave (4 peaks):					73.7	Total Col2Ave (4 peaks):				60.8	RPD = 19
Corrected Ave (3 peaks):					50.9	Corrected Ave (3 peaks):				40.9	RPD = 22
Aroclor-1221	1	6.222	0.031	45414	61.1	1	6.197	-0.001	341143	217.7	
Aroclor-1221	2	6.371	-0.029	70206	112.2	2	6.505	0.009	678108	749.2	
Aroclor-1221	3	6.526	0.003	20310	11.1	3	6.647	0.017	207763	75.3	
Aroclor-1221	NS	---			----	4	7.489	-0.034	79645	85.9	
Total Col1Ave (3 peaks):					61.5	Total Col2Ave (4 peaks):				282.0	RPD = 128*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				126.3	
Aroclor-1232	1	6.526	0.003	20310	17.1	1	6.647	0.016	207763	108.4	
Aroclor-1232	2	7.720	-0.025	197236	275.5	2	7.489	-0.022	79645	36.9	
Aroclor-1232	3	8.261	-0.003	85285	36.2	3	8.322	0.002	109742	26.7	
Aroclor-1232	4	8.454	0.002	66937	71.0	4	8.916	-0.005	371042	271.2	
Total Col1Ave (4 peaks):					99.9	Total Col2Ave (4 peaks):				110.8	RPD = 10
Corrected Ave (3 peaks):					41.4	Corrected Ave (3 peaks):				57.3	RPD = 32
Aroclor-1242	1	7.720	-0.024	197236	137.4	1	6.647	0.020	207763	113.1	
Aroclor-1242	2	8.261	-0.002	85285	17.7	2	7.489	-0.017	79645	20.8	
Aroclor-1242	3	8.454	0.005	66937	35.5	3	8.322	0.006	109742	13.6	
Aroclor-1242	4	9.415	0.001	74841	41.8	4	9.384	0.001	199282	62.1	
Total Col1Ave (4 peaks):					58.1	Total Col2Ave (4 peaks):				52.4	RPD = 10
Corrected Ave (3 peaks):					31.6	Corrected Ave (3 peaks):				32.1	RPD = 2
Aroclor-1248	1	8.261	0.003	85285	28.4	1	7.489	-0.016	79645	42.0	404
Aroclor-1248	2	8.875	-0.001	208248	105.5	2	8.322	0.007	109742	21.0	
Aroclor-1248	3	9.415	0.000	74841	26.8	3	8.916	-0.002	371042	96.7	
Aroclor-1248	4	9.893	0.008	478749	134.3	4	10.310	-0.015	499019	90.3	
Total Col1Ave (4 peaks):					73.7	Total Col2Ave (4 peaks):				62.5	RPD = 17
Corrected Ave (3 peaks):					53.6	Corrected Ave (3 peaks):				51.1	RPD = 5
Aroclor-1254	1	10.225	0.000	648054	176.7	1	10.029	0.000	598076	166.9	
Aroclor-1254	2	10.615	0.001	467094	204.9	2	10.214	0.000	965294	211.1	
Aroclor-1254	3	10.756	0.000	866154	193.8	3	10.908	0.000	1284917	167.9	
Aroclor-1254	4	11.114	-0.001	944737	205.8	4	11.162	0.000	1685757	216.6	
Aroclor-1254	5	11.810	-0.001	1107212	245.9	5	11.932	0.000	1369388	241.9	
Total Col1Ave (5 peaks):					205.4	Total Col2Ave (5 peaks):				200.9	RPD = 2
Corrected Ave (4 peaks):					195.3	Corrected Ave (4 peaks):				190.6	RPD = 2
Aroclor-1260	1	12.041	0.000	66590	22.4	1	11.932	0.000	1369388	170.4	
Aroclor-1260	2	12.357	-0.001	105436	35.4	2	12.470	-0.004	454450	70.6	
Aroclor-1260	3	12.728	0.001	264826	38.3	3	12.746	0.002	455100	35.8	
Aroclor-1260	4	13.124	0.000	184755	50.6	4	13.315	0.010	565811	65.9	404
Aroclor-1260	5	13.303	0.000	23598	14.8	NS	---			----	
Total Col1Ave (5 peaks):					32.3	Total Col2Ave (4 peaks):				85.7	RPD = 91*
Corrected Ave (4 peaks):					27.7	Corrected Ave (3 peaks):				57.4	RPD = 70*
Aroclor-1262	1	12.357	-0.002	105436	27.3	1	12.470	-0.009	454450	58.7	
Aroclor-1262	2	12.728	-0.002	264826	29.6	2	12.746	-0.002	455100	29.7	
Aroclor-1262	3	13.124	-0.003	184755	63.3	3	13.252	-0.003	62049	9.2	
Aroclor-1262	4	13.303	-0.002	23598	6.8	4	13.315	0.003	565811	55.8	
Aroclor-1262	5	13.861	-0.024	114651	42.6	5	13.958	0.017	152903	30.3	
Total Col1Ave (5 peaks):					33.9	Total Col2Ave (5 peaks):				36.7	RPD = 8
Corrected Ave (4 peaks):					26.6	Corrected Ave (4 peaks):				31.2	RPD = 16
Aroclor-1268	1	13.241	0.004	36481	3.8	1	13.252	-0.002	62049	3.9	

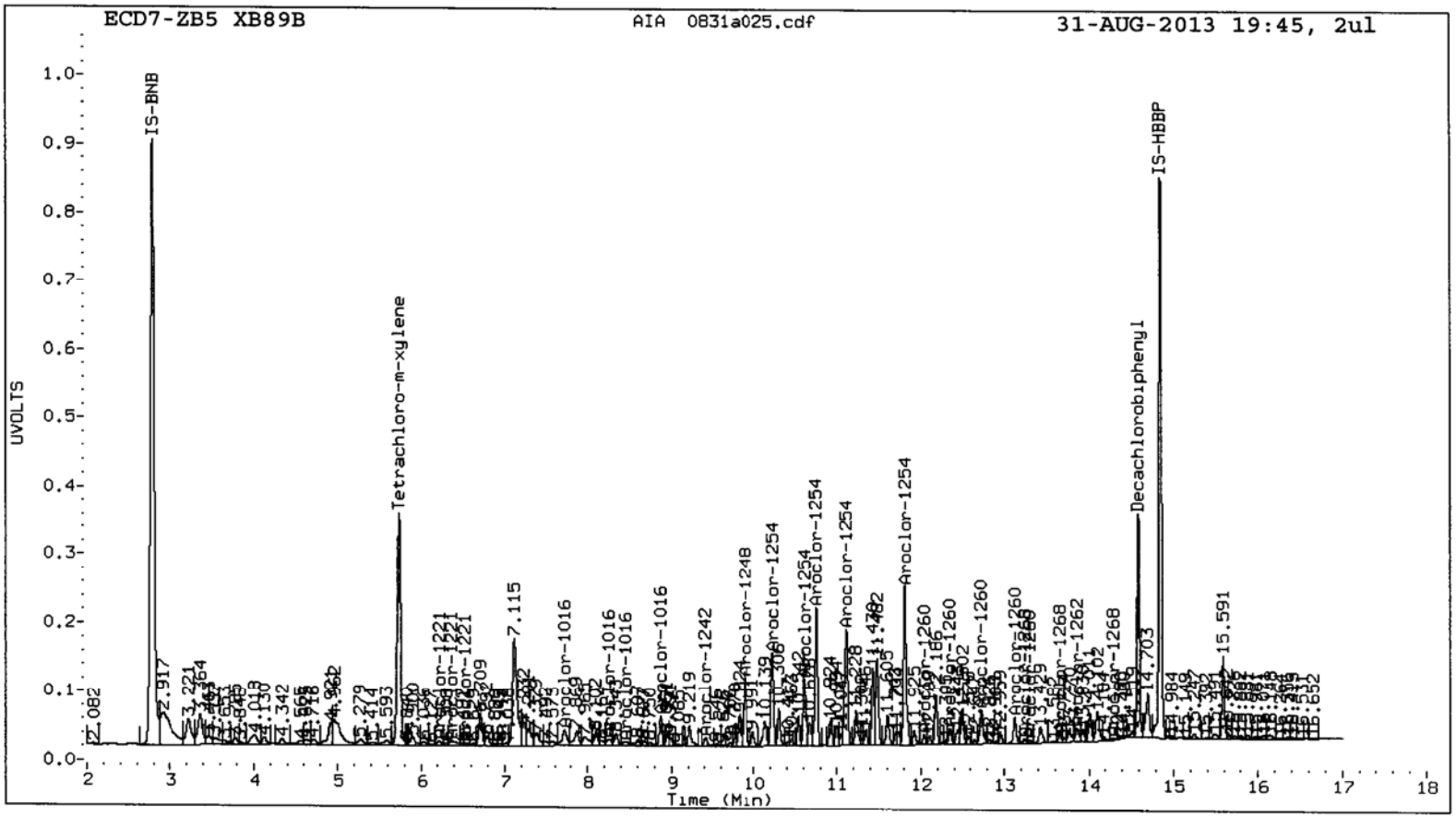
Aroclor-1268 2	13.303	0.000	23598	2.8	2	13.315	-0.002	565811	38.1
Aroclor-1268 3	13.658	0.010	57837	8.0	3	13.652	-0.012	46895	3.9
Aroclor-1268 4	14.295	0.010	13948	0.8	4	14.319	0.002	21749	0.7
Total Col1Ave (4 peaks):			3.8	Total Col2Ave (4 peaks):				11.7	RPD = 101*
Corrected Ave (3 peaks):			2.4	Corrected Ave (3 peaks):				2.9	RPD = 16

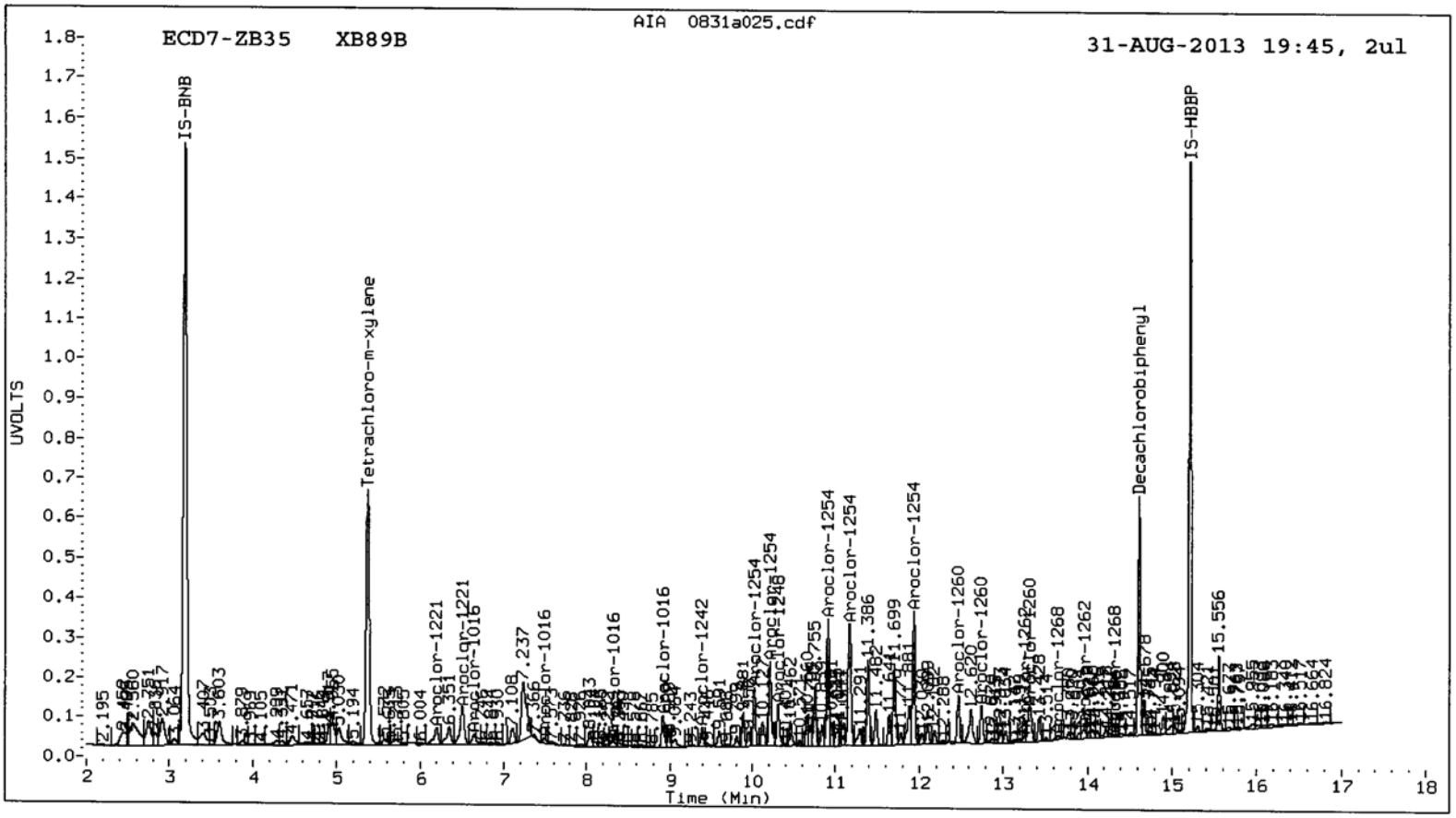
Total PCB Area Col1 (5.835 - 14.488) = 15089481 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 22867783 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89:01511


ECD7-ZB5 XB89B
AIA 0831a025.cdf
31-AUG-2013 19:45, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)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AIA 0831a025.cdf
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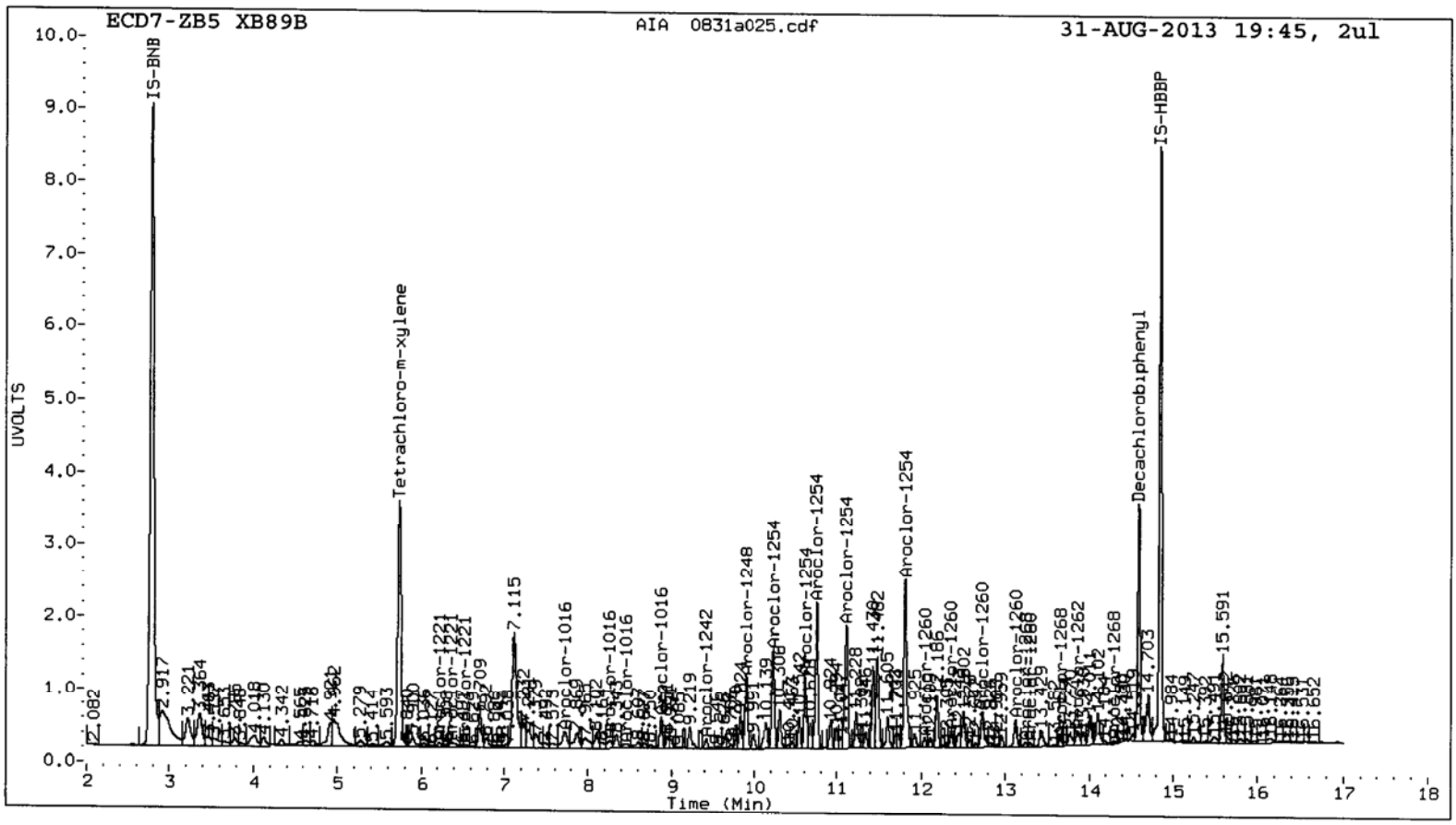
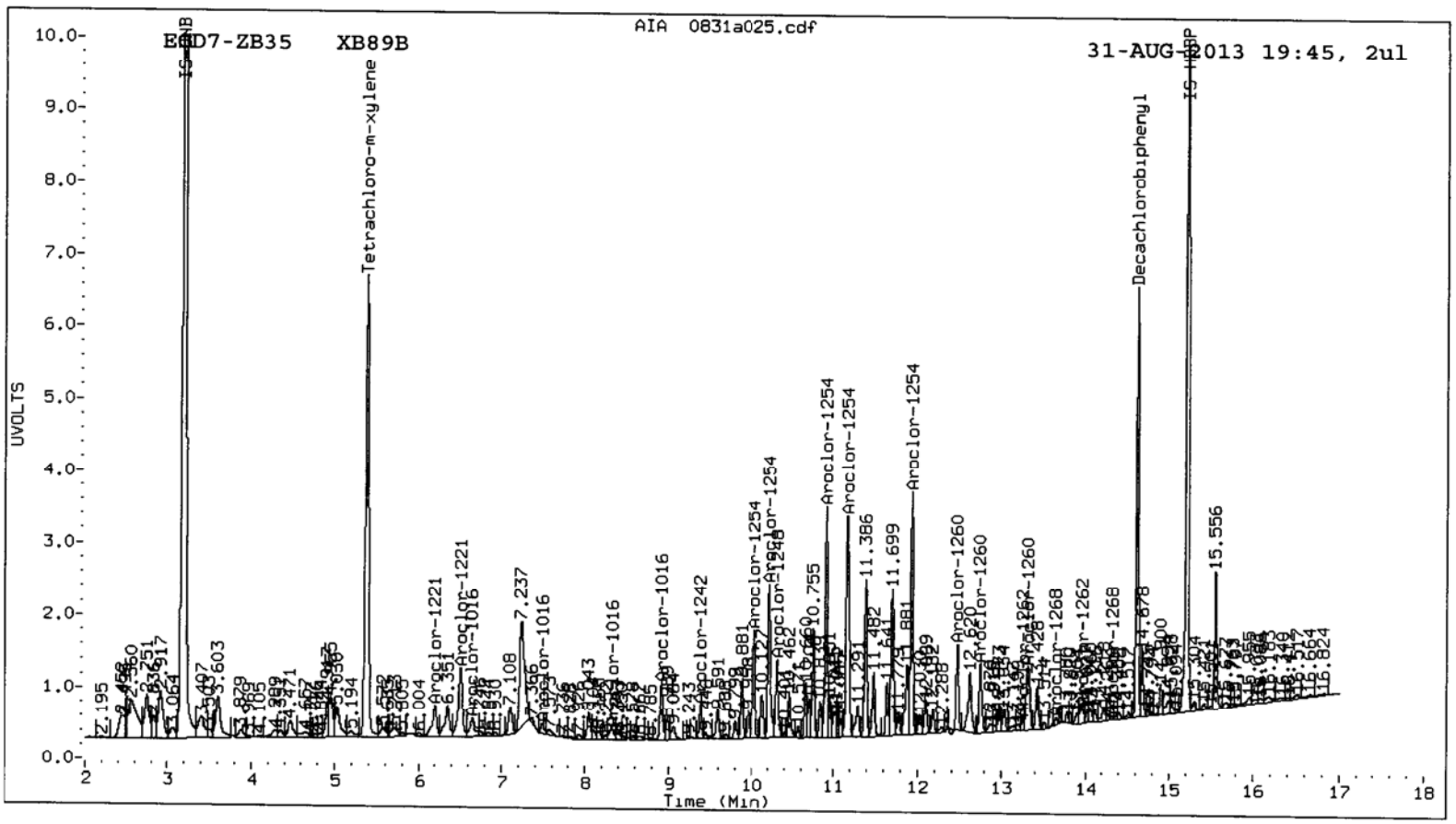
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
UVOLTS
Time (Min)


ECD7-ZB5 XB89B
AIA 0831a025.cdf
31-AUG-2013 19:45, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1254
Aroclor-1260
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1221
Aroclor-1268
Aroclor-1262
7.115
15.591
14.703
UVOLTS
Time (Min)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AIA 0831a025.cdf
31-AUG-2013 19:45, 2ul
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1254
Aroclor-1260
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1221
Aroclor-1268
Aroclor-1262
7.237
15.556
11.386
11.699
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a026.d
Data file 2: 20130816.b/0831-2.b/0831a026.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89C
Client ID: IJ13-SS-151
Injection Date: 31-AUG-2013 20:07
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.733	-0.001	1995447	5.371	0.000	3545613	29.7	30.3	2.0	Tetrachloro-m-xylene
14.589	0.001	1357923	14.616	0.003	2374875	27.2	27.1	0.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	74.1	75.6
Decachlorobiphenyl	68.0	67.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5751503	11.6
Hexabromobiphenyl	3127538	3460481	10.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9248061	-4.0
Hexabromobiphenyl	5043723	5528338	9.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.718	-0.026	178112	98.7	1	6.645	0.020	299132	135.2
Aroclor-1016	2	8.259	-0.005	62062	10.2	2	7.486	-0.019	33868	6.7
Aroclor-1016	3	8.474	0.025	43420	17.9	3	8.310	-0.006	135625	12.9
Aroclor-1016	4	8.875	0.000	108239	72.9	4	8.916	-0.001	198737	63.1
Total Col1Ave (4 peaks):					49.9	Total Col2Ave (4 peaks):				54.5 RPD = 9
Corrected Ave (3 peaks):					33.6	Corrected Ave (3 peaks):				27.6 RPD = 20
Aroclor-1221	1	6.225	0.034	22489	29.9	1	6.196	-0.002	259236	162.0
Aroclor-1221	2	6.368	-0.032	62715	98.9	2	6.509	0.013	330832	357.9
Aroclor-1221	3	6.529	0.006	16172	8.7	3	6.645	0.016	299132	106.2
Aroclor-1221	NS	---			----	4	7.486	-0.036	33868	35.7
Total Col1Ave (3 peaks):					45.8	Total Col2Ave (4 peaks):				165.5 RPD = 113*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				101.3
Aroclor-1232	1	6.529	0.006	16172	13.4	1	6.645	0.015	299132	152.9
Aroclor-1232	2	7.718	-0.027	178112	245.4	2	7.486	-0.025	33868	15.4
Aroclor-1232	3	8.259	-0.006	62062	26.0	3	8.310	-0.010	135625	32.3
Aroclor-1232	4	8.474	0.022	43420	45.4	4	8.916	-0.006	198737	142.2
Total Col1Ave (4 peaks):					82.6	Total Col2Ave (4 peaks):				85.7 RPD = 4
Corrected Ave (3 peaks):					28.3	Corrected Ave (3 peaks):				63.3 RPD = 76*
Aroclor-1242	1	7.718	-0.026	178112	122.4	1	6.645	0.019	299132	159.4
Aroclor-1242	2	8.259	-0.004	62062	12.7	2	7.486	-0.019	33868	8.6
Aroclor-1242	3	8.474	0.025	43420	22.7	3	8.310	-0.006	135625	16.4
Aroclor-1242	4	9.414	0.000	45810	25.2	4	9.384	0.001	117240	35.8
Total Col1Ave (4 peaks):					45.7	Total Col2Ave (4 peaks):				55.0 RPD = 18
Corrected Ave (3 peaks):					20.2	Corrected Ave (3 peaks):				20.3 RPD = 0
Aroclor-1248	1	8.259	0.001	62062	20.4	1	7.486	-0.018	33868	17.5
Aroclor-1248	2	8.875	-0.002	108239	54.1	2	8.310	-0.005	135625	25.4
Aroclor-1248	3	9.414	-0.001	45810	16.2	3	8.916	-0.002	198737	50.7
Aroclor-1248	4	9.892	0.007	252122	69.8	4	10.311	-0.014	271602	48.1
Total Col1Ave (4 peaks):					40.1	Total Col2Ave (4 peaks):				35.4 RPD = 12
Corrected Ave (3 peaks):					30.2	Corrected Ave (3 peaks):				30.3 RPD = 0
Aroclor-1254	1	10.225	0.000	284722	76.6	1	10.028	-0.001	278049	76.0
Aroclor-1254	2	10.620	0.005	245499	106.2	2	10.214	0.000	509997	109.2
Aroclor-1254	3	10.756	0.000	374278	82.6	3	10.908	0.000	537345	68.7
Aroclor-1254	4	11.115	0.001	382561	82.2	4	11.162	0.000	651103	81.9
Aroclor-1254	5	11.810	0.000	368316	80.7	5	11.932	-0.001	442860	76.6
Total Col1Ave (5 peaks):					85.7	Total Col2Ave (5 peaks):				82.5 RPD = 4
Corrected Ave (4 peaks):					80.5	Corrected Ave (4 peaks):				75.8 RPD = 6
Aroclor-1260	1	12.042	0.001	43720	14.0	1	11.932	0.000	442860	52.9
Aroclor-1260	2	12.356	-0.002	71118	22.6	2	12.471	-0.003	189677	28.3
Aroclor-1260	3	12.767	0.040	1267666	173.9	3	12.748	0.004	233220	17.6
Aroclor-1260	4	13.123	0.000	64889	16.9	4	13.326	0.021	401057	44.8
Aroclor-1260	5	13.303	0.000	16486	9.8	NS	---			----
Total Col1Ave (5 peaks):					47.4	Total Col2Ave (4 peaks):				35.9 RPD = 28
Corrected Ave (4 peaks):					15.8	Corrected Ave (3 peaks):				30.2 RPD = 63*
Aroclor-1262	1	12.356	-0.003	71118	17.5	1	12.471	-0.009	189677	23.5
Aroclor-1262	2	12.767	0.037	1267666	134.5	2	12.748	0.000	233220	14.6
Aroclor-1262	3	13.123	-0.003	64889	21.1	3	13.204	-0.051	1995921	285.3
Aroclor-1262	4	13.303	-0.002	16486	4.5	4	13.326	0.014	401057	37.9
Aroclor-1262	5	13.870	-0.014	424200	149.6	5	13.962	0.021	155668	29.5
Total Col1Ave (5 peaks):					65.4	Total Col2Ave (5 peaks):				78.2 RPD = 18
Corrected Ave (4 peaks):					44.4	Corrected Ave (4 peaks):				26.4 RPD = 51*
Aroclor-1268	1	13.242	0.005	33397	3.3	1	13.204	-0.050	1995921	121.1

304

Aroclor-1268 2	13.303	0.000	16486	1.8	2	13.326	0.010	401057	25.9
Aroclor-1268 3	13.657	0.008	53504	7.1	3	13.656	-0.008	67863	5.5
Aroclor-1268 4	14.297	0.012	13573	0.7	4	14.265	-0.051	634805	19.6
Total Col1Ave (4 peaks):			3.2	Total Col2Ave (4 peaks):				43.0	RPD = 172*
Corrected Ave (3 peaks):			1.9	Corrected Ave (3 peaks):				17.0	RPD = 159*

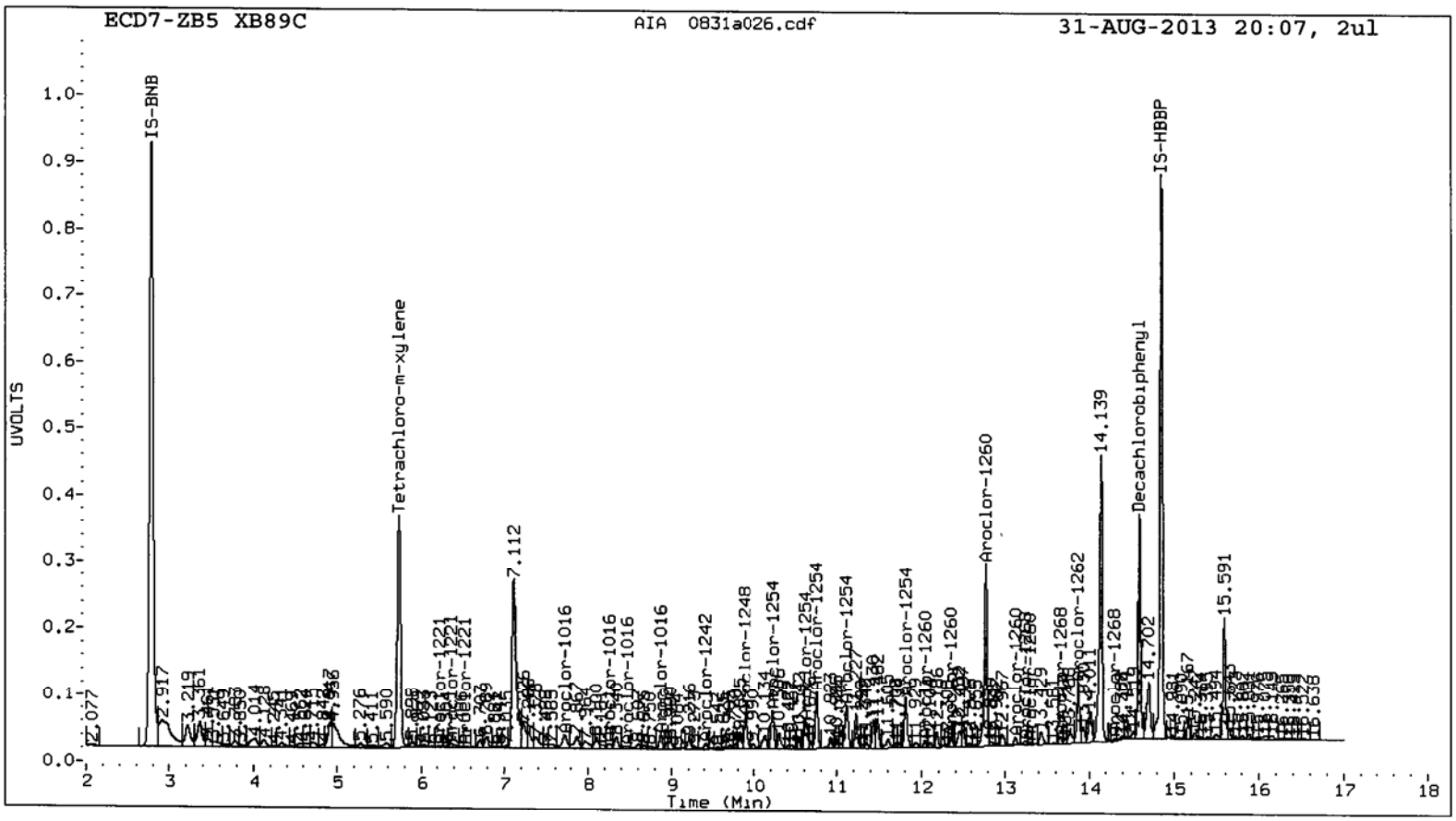
Total PCB Area Col1 (5.835 - 14.488) = 13127794 Col1 Total PCB = 0.3 ppm*

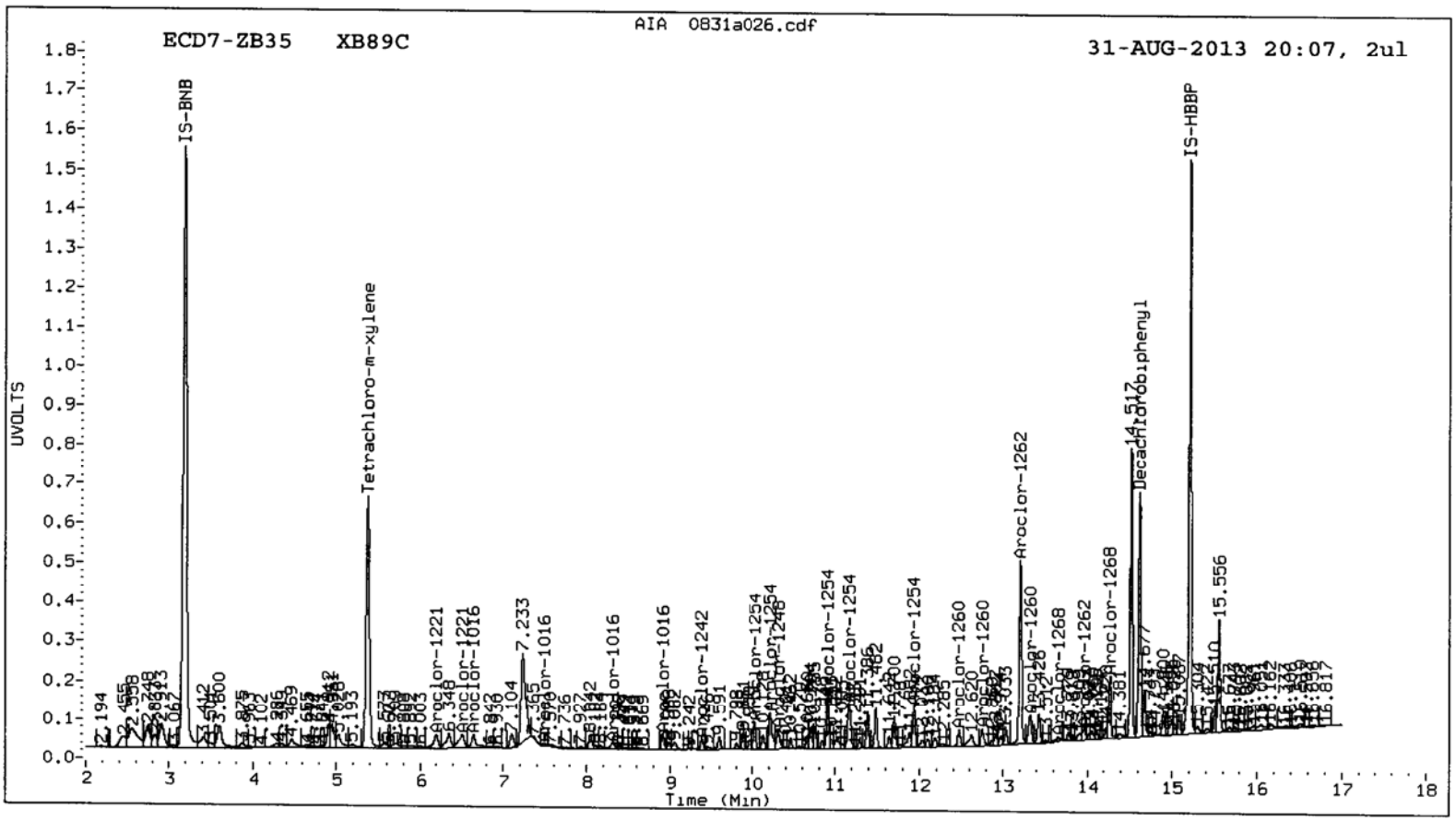
Total PCB Area Col2 (5.472 - 14.513) = 16866838 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89:01516


ECD7-ZB5 XB89C
AIA 0831a026.cdf
31-AUG-2013 20:07, 2ul
IS-BNB
Tetrachloro-m-xylene
7.112
Aroclor-1260
14.139
Decachlorobiphenyl
IS-HBBP
15.591
14.702
UVOLTS
Time (Min)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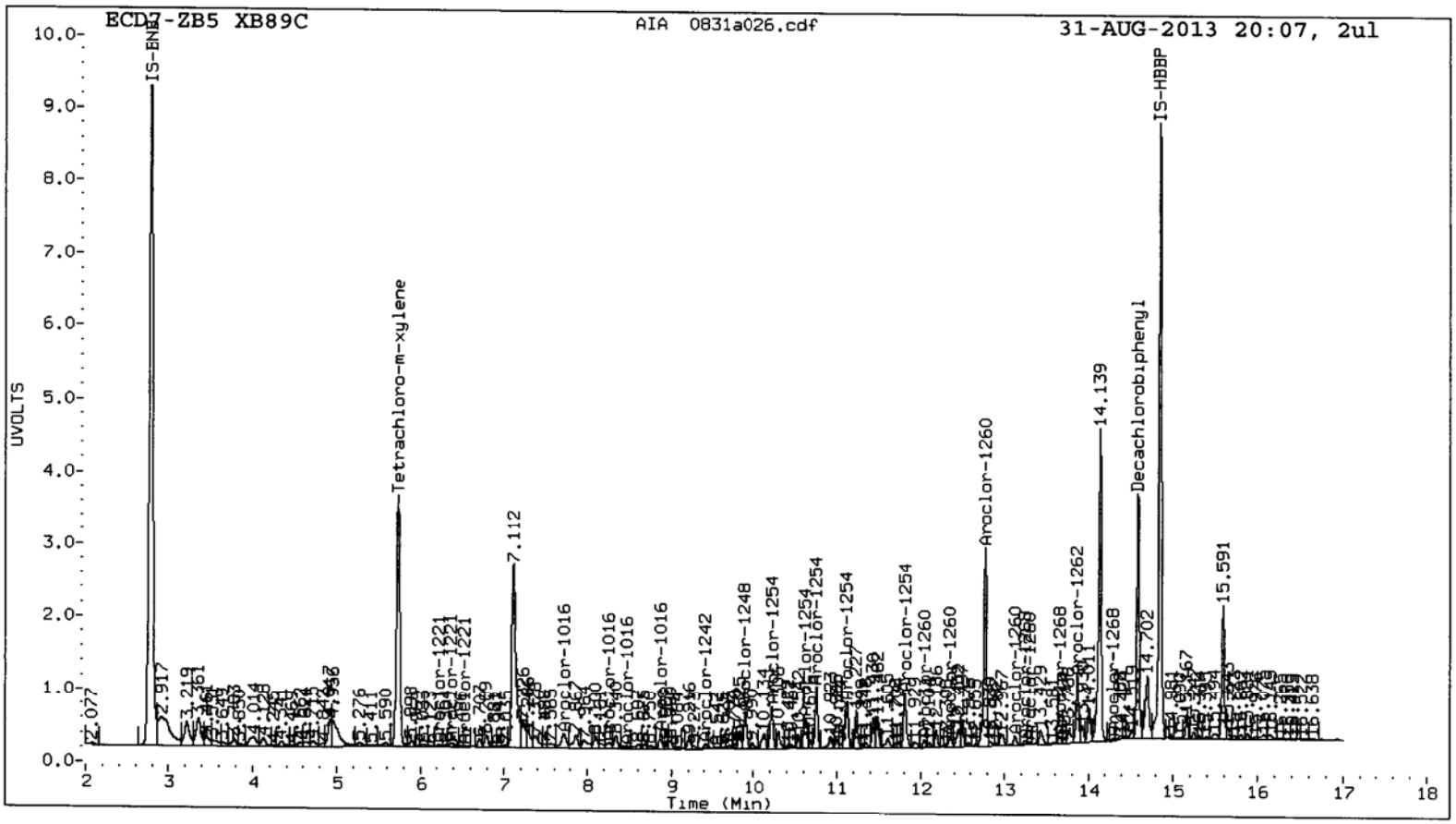
AIA 0831a026.cdf
31-AUG-2013 20:07, 2ul
IS-BNB
Tetrachloro-m-xylene
7.233
Aroclor-1260
14.517
Decachlorobiphenyl
IS-HBBP
15.556
UVOLTS
Time (Min)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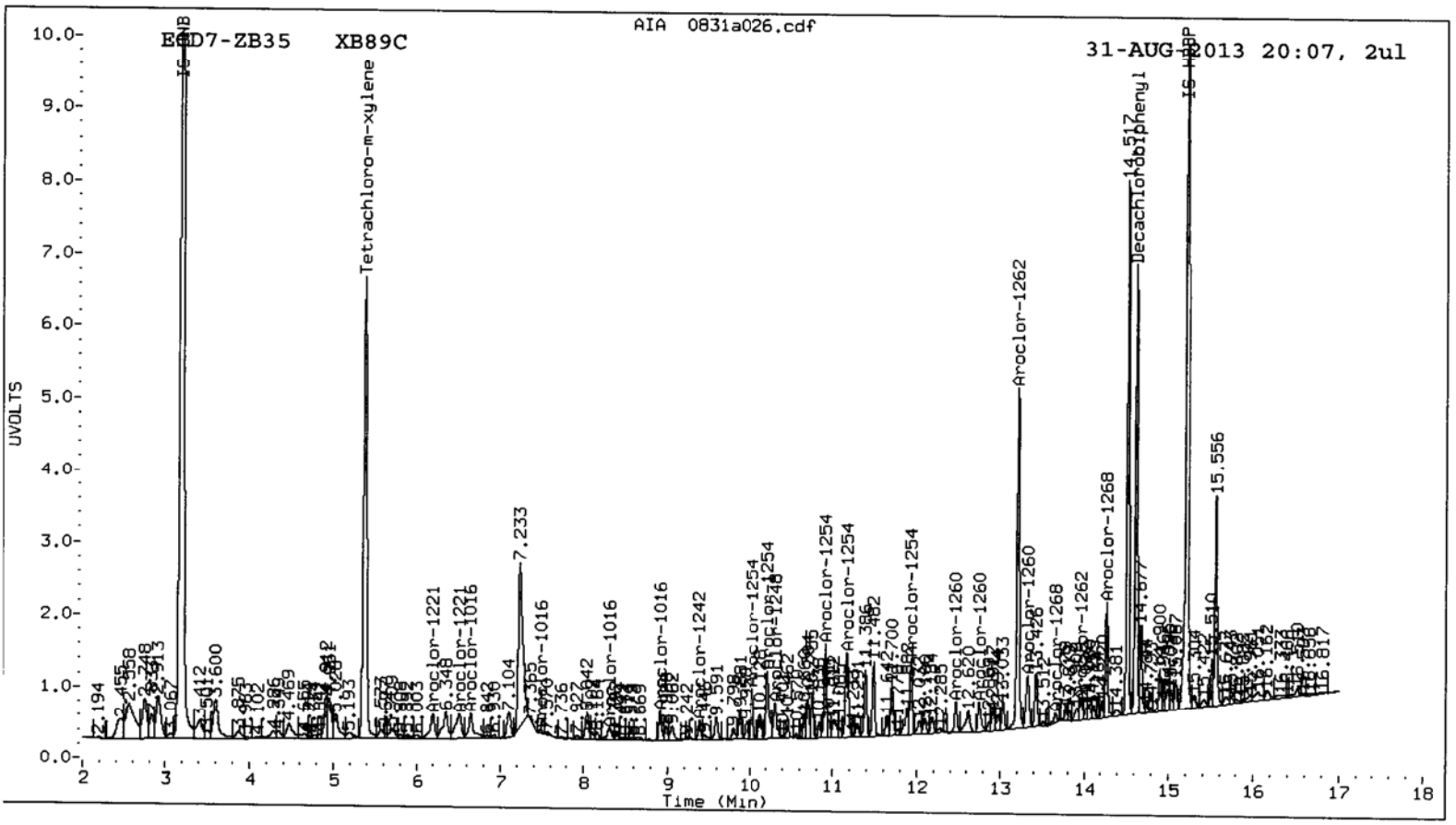
AIA 0831a026.cdf
31-AUG-2013 20:07, 2ul
IS-HBBP
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1260
Aroclor-1262
Aroclor-1268
7.112
14.139
15.591
UVOLTS
Time (Min)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AIA 0831a026.cdf
31-AUG-2013 20:07, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1262
Aroclor-1268
7.233
14.517
15.556
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a027.d
Data file 2: 20130816.b/0831-2.b/0831a027.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89D
Client ID: IJ13-VC-101-2-3.9
Injection Date: 31-AUG-2013 20:29
Report Date: 09/02/2013 14:09
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.001	2009742	5.373	0.002	3484928	31.1	30.8	1.2	Tetrachloro-m-xylene
14.588	0.001	1352083	14.614	0.001	2266549	31.3	28.7	8.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	77.8	76.9
Decachlorobiphenyl	78.3	71.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5519972	7.1
Hexabromobiphenyl	3127538	2993899	-4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8942957	-7.2
Hexabromobiphenyl	5043723	4974160	-1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.721	-0.024	119574	69.0	1	6.643	0.018	54294	25.4
Aroclor-1016	2	8.263	-0.001	34434	5.9	2	7.489	-0.016	15424	3.2
Aroclor-1016	3	8.456	0.007	25979	11.1	3	8.330	0.015	38474	3.8
Aroclor-1016	4	8.875	0.000	57513	40.3	4	8.916	-0.001	114097	37.5
	Total Col1Ave (4 peaks):				31.6	Total Col2Ave (4 peaks):			17.5	RPD = 58*
	Corrected Ave (3 peaks):				19.1	Corrected Ave (3 peaks):			10.8	RPD = 56*
Aroclor-1221	1	6.232	0.041	12422	17.2	1	6.199	0.001	200518	129.6
Aroclor-1221	2	6.369	-0.031	66263	108.8	2	6.505	0.009	120723	135.0
Aroclor-1221	3	6.554	0.031	21266	11.9	3	6.643	0.014	54294	19.9
Aroclor-1221	NS	---			----	4	7.489	-0.034	15424	16.8
	Total Col1Ave (3 peaks):				46.0	Total Col2Ave (4 peaks):			75.3	RPD = 48*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			55.4	
Aroclor-1232	1	6.554	0.031	21266	18.4	1	6.643	0.013	54294	28.7
Aroclor-1232	2	7.721	-0.024	119574	171.7	2	7.489	-0.022	15424	7.2
Aroclor-1232	3	8.263	-0.001	34434	15.0	3	8.330	0.010	38474	9.5
Aroclor-1232	4	8.456	0.005	25979	28.3	4	8.916	-0.006	114097	84.4
	Total Col1Ave (4 peaks):				58.3	Total Col2Ave (4 peaks):			32.5	RPD = 57*
	Corrected Ave (3 peaks):				20.6	Corrected Ave (3 peaks):			15.1	RPD = 30
Aroclor-1242	1	7.721	-0.023	119574	85.6	1	6.643	0.017	54294	29.9
Aroclor-1242	2	8.263	0.000	34434	7.3	2	7.489	-0.016	15424	4.1
Aroclor-1242	3	8.456	0.007	25979	14.1	3	8.330	0.014	38474	4.8
Aroclor-1242	4	9.413	-0.001	29063	16.7	4	9.384	0.000	58677	18.5
	Total Col1Ave (4 peaks):				30.9	Total Col2Ave (4 peaks):			14.3	RPD = 73*
	Corrected Ave (3 peaks):				12.7	Corrected Ave (3 peaks):			9.1	RPD = 33
Aroclor-1248	1	8.263	0.005	34434	11.8	1	7.489	-0.016	15424	8.2
Aroclor-1248	2	8.875	-0.001	57513	29.9	2	8.330	0.015	38474	7.4
Aroclor-1248	3	9.413	-0.001	29063	10.7	3	8.916	-0.002	114097	30.1
Aroclor-1248	4	9.892	0.008	111764	32.2	4	10.309	-0.016	134751	24.7
	Total Col1Ave (4 peaks):				21.2	Total Col2Ave (4 peaks):			17.6	RPD = 18
	Corrected Ave (3 peaks):				17.5	Corrected Ave (3 peaks):			13.5	RPD = 26
Aroclor-1254	1	10.225	0.000	145607	40.8	1	10.027	-0.002	144837	40.9
Aroclor-1254	2	10.616	0.002	130649	58.9	2	10.213	-0.002	231352	51.2
Aroclor-1254	3	10.756	0.000	187435	43.1	3	10.908	0.000	257926	34.1
Aroclor-1254	4	11.112	-0.003	174174	39.0	4	11.162	0.000	322597	42.0
Aroclor-1254	5	11.809	-0.001	185827	42.4	5	11.931	-0.002	230908	41.3
	Total Col1Ave (5 peaks):				44.8	Total Col2Ave (5 peaks):			41.9	RPD = 7
	Corrected Ave (4 peaks):				41.3	Corrected Ave (4 peaks):			39.6	RPD = 4
Aroclor-1260	1	12.031	-0.009	43432	16.0	1	11.931	-0.001	230908	30.6
Aroclor-1260	2	12.355	-0.003	38800	14.3	2	12.469	-0.005	120079	19.9
Aroclor-1260	3	12.726	-0.002	86980	13.8	3	12.750	0.005	177890	14.9
Aroclor-1260	4	13.125	0.002	36853	11.1	4	13.323	0.018	168027	20.9
Aroclor-1260	5	13.302	-0.001	18065	12.4	NS	---			----
	Total Col1Ave (5 peaks):				13.5	Total Col2Ave (4 peaks):			21.6	RPD = 46*
	Corrected Ave (4 peaks):				12.9	Corrected Ave (3 peaks):			18.6	RPD = 36
Aroclor-1262	1	12.355	-0.004	38800	11.0	1	12.469	-0.011	120079	16.5
Aroclor-1262	2	12.726	-0.004	86980	10.7	2	12.750	0.001	177890	12.4
Aroclor-1262	3	13.125	-0.001	36853	13.8	3	13.250	-0.005	46787	7.4
Aroclor-1262	4	13.302	-0.003	18065	5.7	4	13.323	0.011	168027	17.7
Aroclor-1262	5	13.858	-0.027	88196	36.0	5	13.977	0.036	60346	12.7
	Total Col1Ave (5 peaks):				15.4	Total Col2Ave (5 peaks):			13.3	RPD = 15
	Corrected Ave (4 peaks):				10.3	Corrected Ave (4 peaks):			12.3	RPD = 17
Aroclor-1268	1	13.237	0.000	30216	3.4	1	13.250	-0.004	46787	3.2

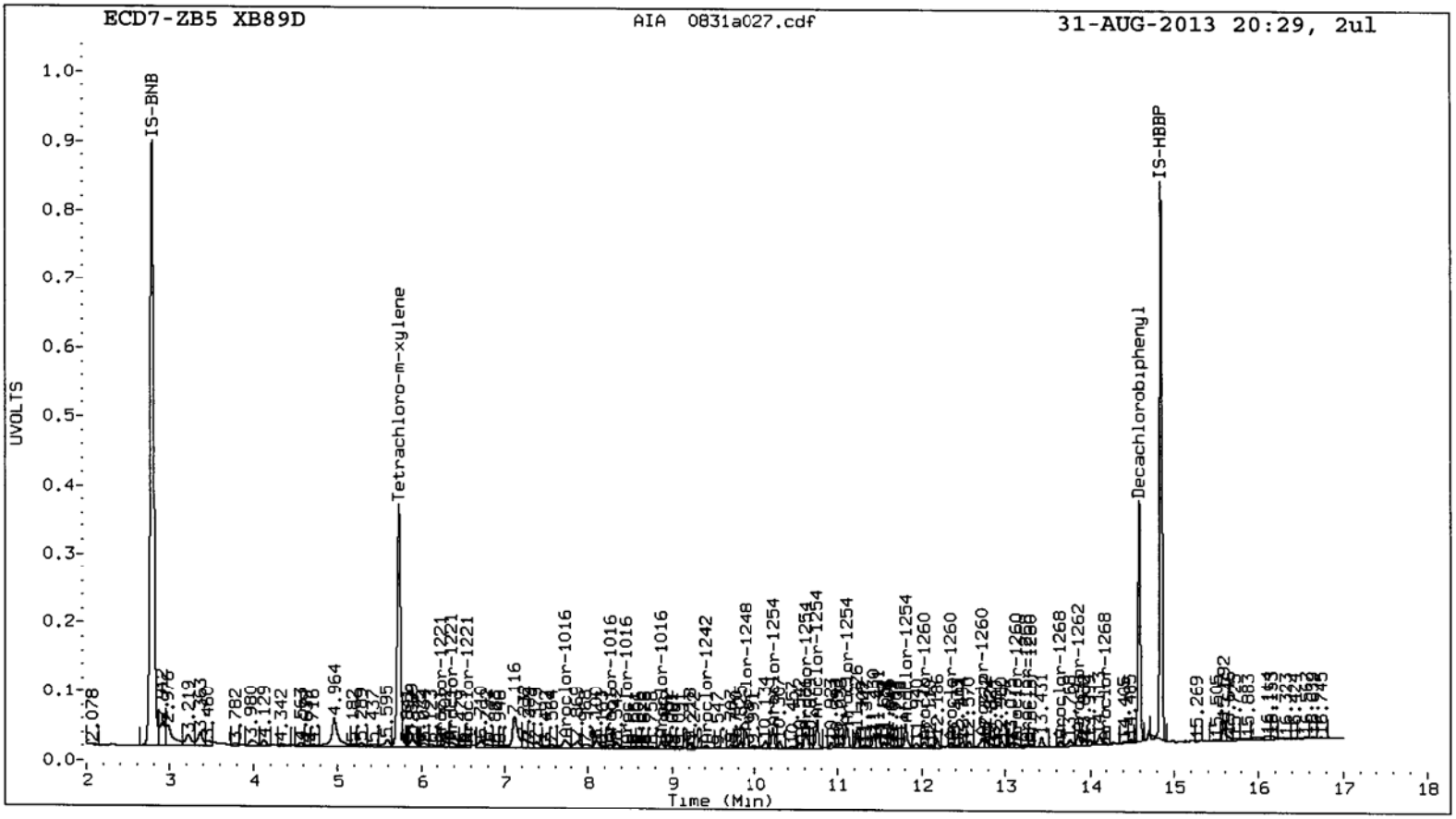
Aroclor-1268 2	13.302	-0.001	18065	2.3	2	13.323	0.007	168027	12.1
Aroclor-1268 3	13.653	0.004	40400	6.2	3	13.656	-0.008	49839	4.5
Aroclor-1268 4	14.187	-0.099	13377	0.8	4	14.312	-0.004	23934	0.8
Total Col1Ave (4 peaks):			3.2		Total Col2Ave (4 peaks):			5.1	RPD = 47*
Corrected Ave (3 peaks):			2.2		Corrected Ave (3 peaks):			2.8	RPD = 25

Total PCB Area Col1 (5.835 - 14.488) = 4946929 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 6940089 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89 01521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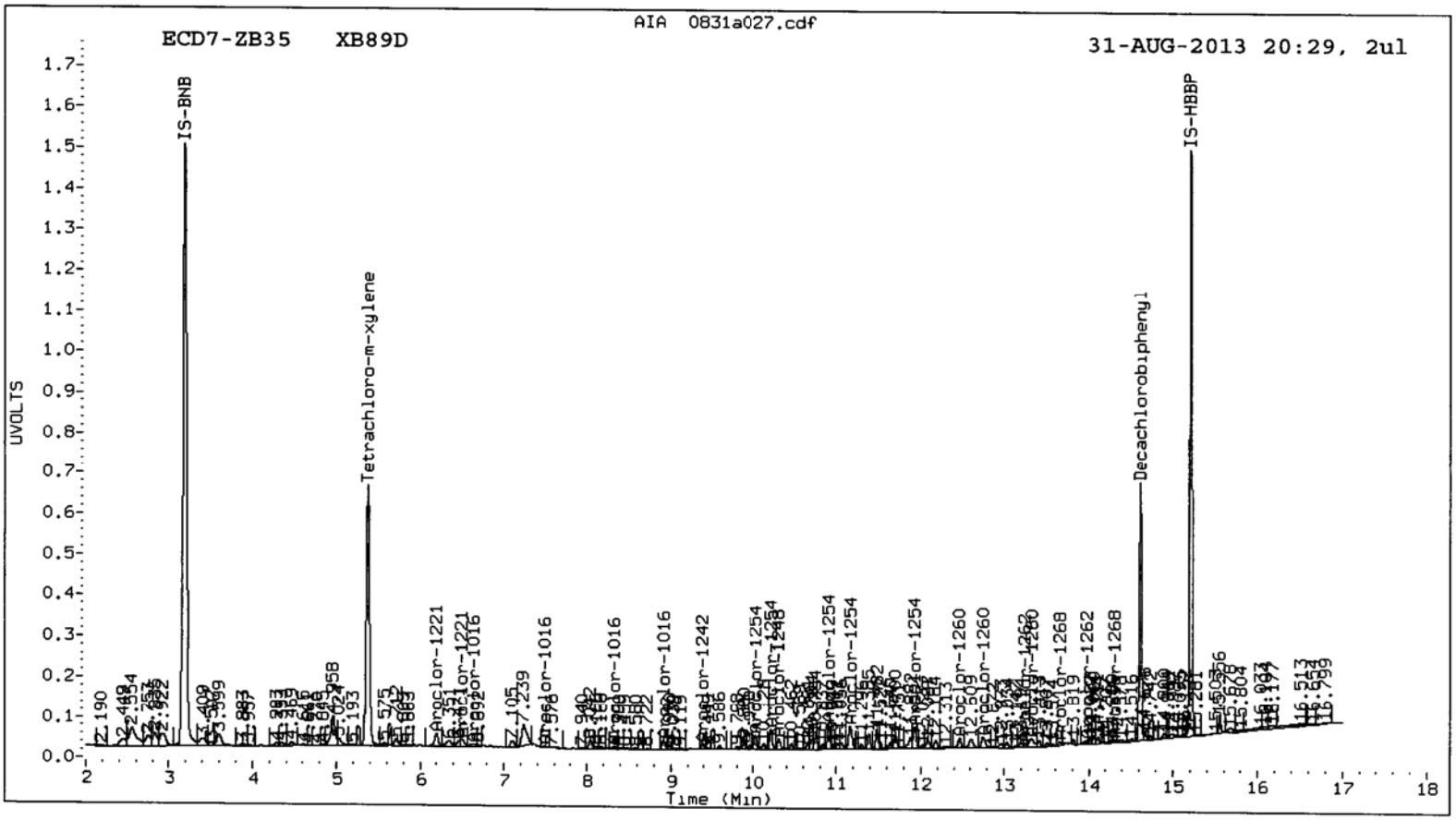
31-AUG-2013 20:29, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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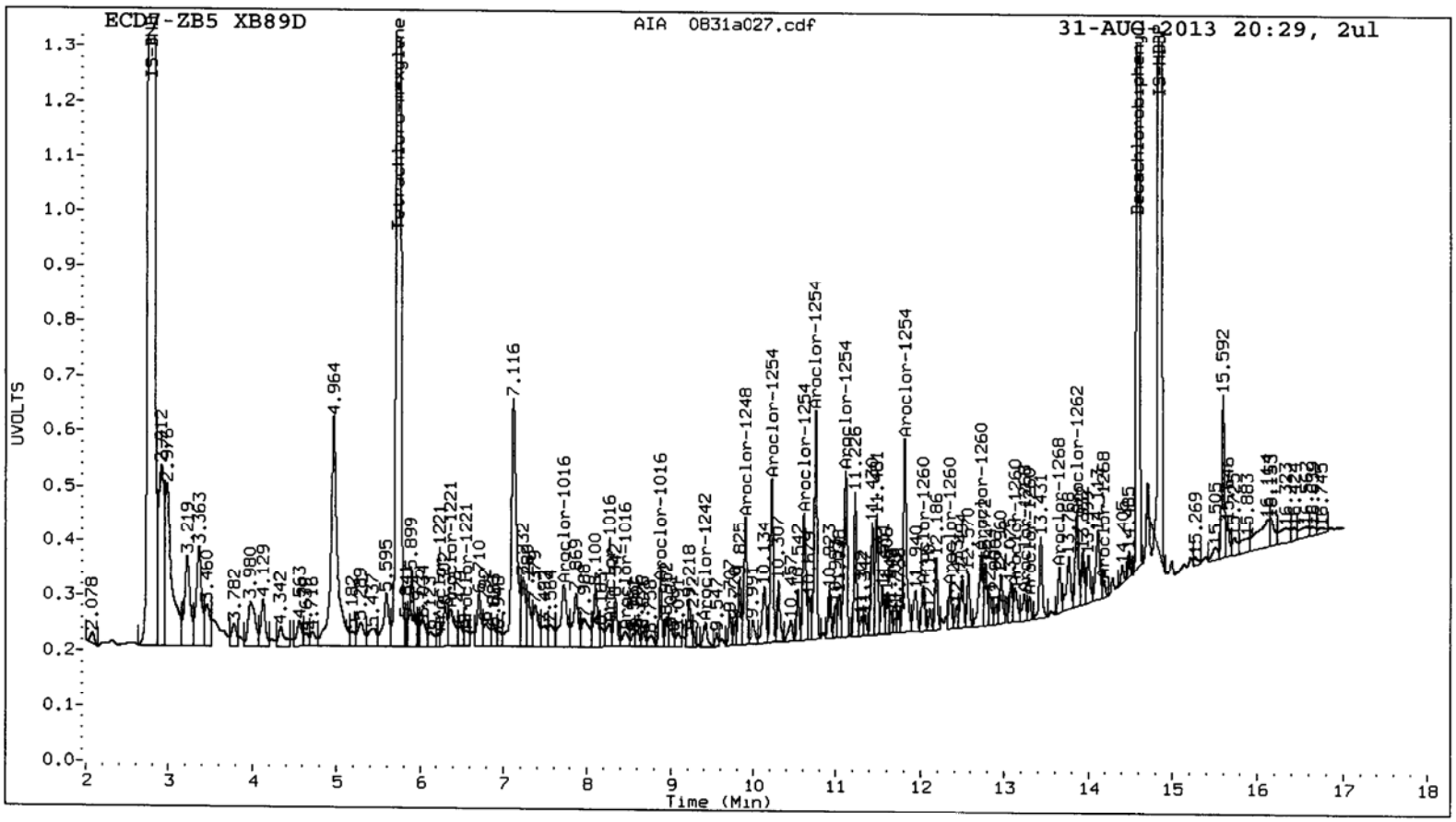
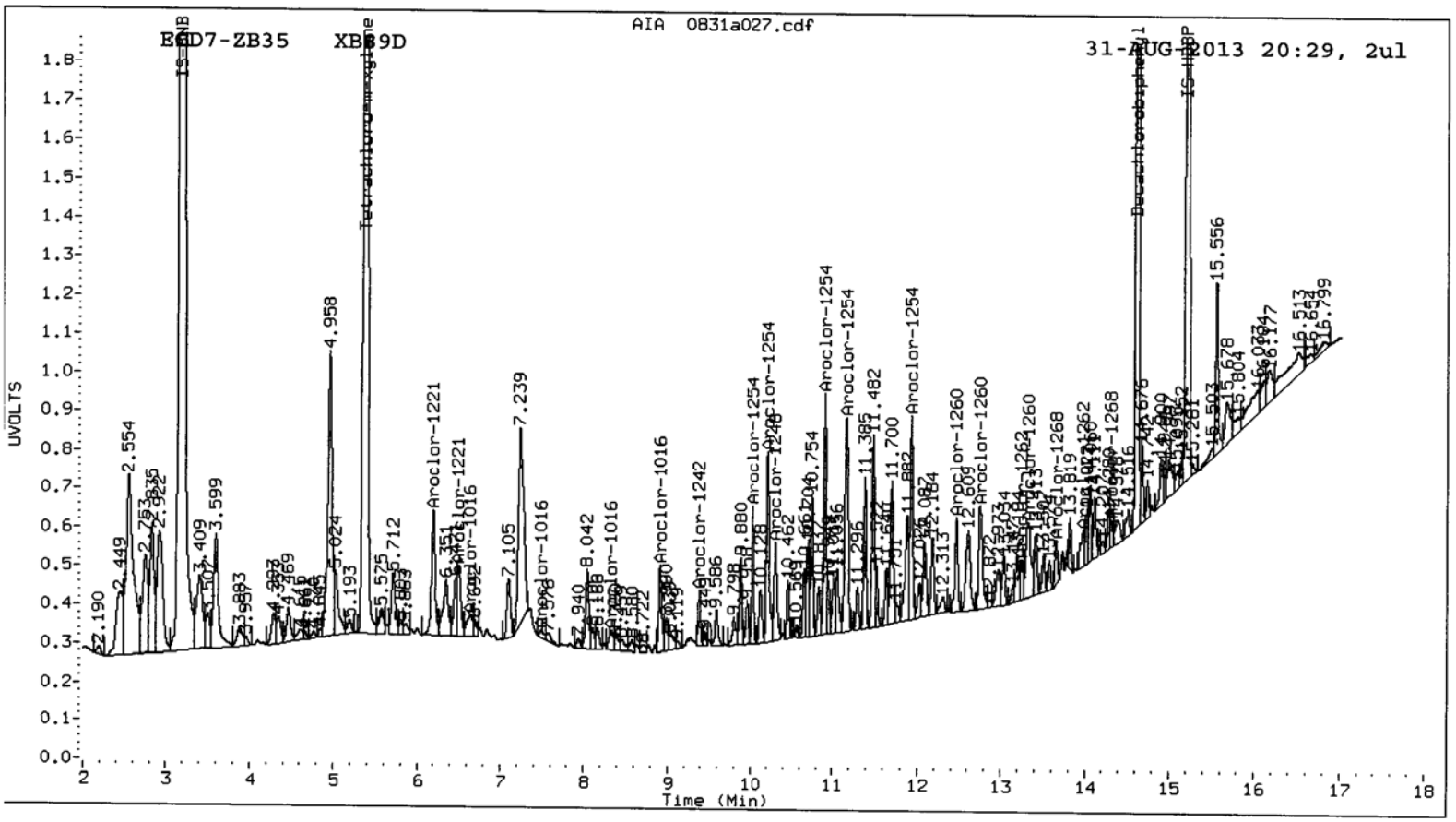
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB5 XB89D
AIA 0831a027.cdf
31-AUG-2013 20:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268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AIA 0831a027.cdf
31-AUG-2013 20:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a028.d
Data file 2: 20130816.b/0831-2.b/0831a028.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89E
Client ID: IJ13-VC-102-2-4
Injection Date: 31-AUG-2013 20:51
Report Date: 09/02/2013 14:10
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.001	1722210	5.373	0.002	2982194	28.5	28.2	1.1	Tetrachloro-m-xylene
14.590	0.002	1185807	14.616	0.003	1960599	27.1	25.7	5.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	71.2	70.4
Decachlorobiphenyl	67.7	64.3

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5169635	0.3
Hexabromobiphenyl	3127538	3033231	-3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8355715	-13.3
Hexabromobiphenyl	5043723	4799225	-4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.721	-0.023	90568	55.8	1	6.645	0.019	142893	71.5
Aroclor-1016	2	8.267	0.002	21943	4.0	2	---			0.0
Aroclor-1016	3	8.459	0.010	10133	4.6	3	8.341	0.025	19199	2.0
Aroclor-1016	4	8.875	0.000	10046	7.5	4	8.929	0.012	27610	9.7
	Total Col1Ave (4 peaks):				18.0	Total Col2Ave (3 peaks):				27.7 RPD = 43*
	Corrected Ave (3 peaks):				5.4	Corrected Ave: < 3 Peaks				
Aroclor-1221	1	6.122	-0.070	16842	24.9	1	6.200	0.002	249665	172.7
Aroclor-1221	2	6.368	-0.032	52269	91.7	2	6.500	0.005	142901	171.1
Aroclor-1221	3	6.619	0.096	26607	16.0	3	6.645	0.016	142893	56.1
Aroclor-1221	NS	---			----	4	---			0.0
	Total Col1Ave (3 peaks):				44.2	Total Col2Ave (3 peaks):				133.3 RPD = 100*
	Corrected Ave: < 3 Peaks					Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.619	0.096	26607	24.6	1	6.645	0.015	142893	80.8
Aroclor-1232	2	7.721	-0.023	90568	138.8	2	---			0.0
Aroclor-1232	3	8.267	0.002	21943	10.2	3	8.341	0.021	19199	5.1
Aroclor-1232	4	8.459	0.008	10133	11.8	4	8.929	0.007	27610	21.9
	Total Col1Ave (4 peaks):				46.4	Total Col2Ave (3 peaks):				35.9 RPD = 25
	Corrected Ave (3 peaks):				15.5	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.721	-0.022	90568	69.2	1	6.645	0.019	142893	84.3
Aroclor-1242	2	8.267	0.003	21943	5.0	2	---			0.0
Aroclor-1242	3	8.459	0.010	10133	5.9	3	8.341	0.025	19199	2.6
Aroclor-1242	4	9.387	-0.027	24798	15.2	4	9.382	-0.002	11010	3.7
	Total Col1Ave (4 peaks):				23.8	Total Col2Ave (3 peaks):				30.2 RPD = 24
	Corrected Ave (3 peaks):				8.7	Corrected Ave: < 3 Peaks				
Aroclor-1248	1	8.267	0.008	21943	8.0	1	---			0.0
Aroclor-1248	2	8.875	-0.001	10046	5.6	2	8.341	0.026	19199	4.0
Aroclor-1248	3	9.387	-0.028	24798	9.8	3	8.929	0.011	27610	7.8
Aroclor-1248	4	9.892	0.008	18308	5.6	4	10.302	-0.023	69426	13.6
	Total Col1Ave (4 peaks):				7.2	Total Col2Ave (3 peaks):				8.5 RPD = 15
	Corrected Ave (3 peaks):				6.4	Corrected Ave: < 3 Peaks				
Aroclor-1254	1	10.223	-0.002	36108	10.8	1	10.026	-0.003	38537	11.7
Aroclor-1254	2	10.634	0.020	78026	37.6	2	10.211	-0.003	95152	22.5
Aroclor-1254	3	10.762	0.006	90816	22.3	3	10.907	-0.001	52147	7.4
Aroclor-1254	4	11.105	-0.010	36009	8.6	4	11.167	0.005	66412	9.2
Aroclor-1254	5	11.804	-0.006	92601	22.6	5	11.893	-0.039	449415	86.0
	Total Col1Ave (5 peaks):				20.4	Total Col2Ave (5 peaks):				27.4 RPD = 29
	Corrected Ave (4 peaks):				16.1	Corrected Ave (4 peaks):				12.7 RPD = 23
Aroclor-1260	1	12.025	-0.016	185020	67.4	1	11.893	-0.039	449415	61.8
Aroclor-1260	2	12.377	0.020	46636	16.9	2	12.462	-0.013	96175	16.5
Aroclor-1260	3	12.722	-0.006	150382	23.5	3	12.771	0.026	583019	50.7
Aroclor-1260	4	13.154	0.031	22765	6.8	4	13.334	0.029	381312	49.1
Aroclor-1260	5	13.304	0.001	57661	39.1	NS	---			----
	Total Col1Ave (5 peaks):				30.7	Total Col2Ave (4 peaks):				44.5 RPD = 37
	Corrected Ave (4 peaks):				21.6	Corrected Ave (3 peaks):				38.8 RPD = 57*
Aroclor-1262	1	12.377	0.018	46636	13.1	1	12.462	-0.018	96175	13.7
Aroclor-1262	2	12.722	-0.009	150382	18.2	2	12.771	0.022	583019	42.0
Aroclor-1262	3	13.154	0.028	22765	8.4	3	13.248	-0.007	171773	28.3
Aroclor-1262	4	13.304	-0.001	57661	18.0	4	13.334	0.022	381312	41.5
Aroclor-1262	5	13.859	-0.026	388753	156.4	5	13.979	0.038	313617	68.6
	Total Col1Ave (5 peaks):				42.8	Total Col2Ave (5 peaks):				38.8 RPD = 10
	Corrected Ave (4 peaks):				14.4	Corrected Ave (4 peaks):				31.4 RPD = 74*
Aroclor-1268	1	13.236	-0.001	108774	12.2	1	13.248	-0.006	171773	12.0

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Aroclor-1268	2	13.304	0.001	57661	7.3	2	13.334	0.018	381312	28.4
Aroclor-1268	3	13.661	0.012	351658	53.0	3	13.646	-0.018	497141	46.0
Aroclor-1268	4	14.285	-0.001	56704	3.4	4	14.313	-0.003	100662	3.6

Total Col1Ave (4 peaks): 19.0 Total Col2Ave (4 peaks): 22.5 RPD = 17

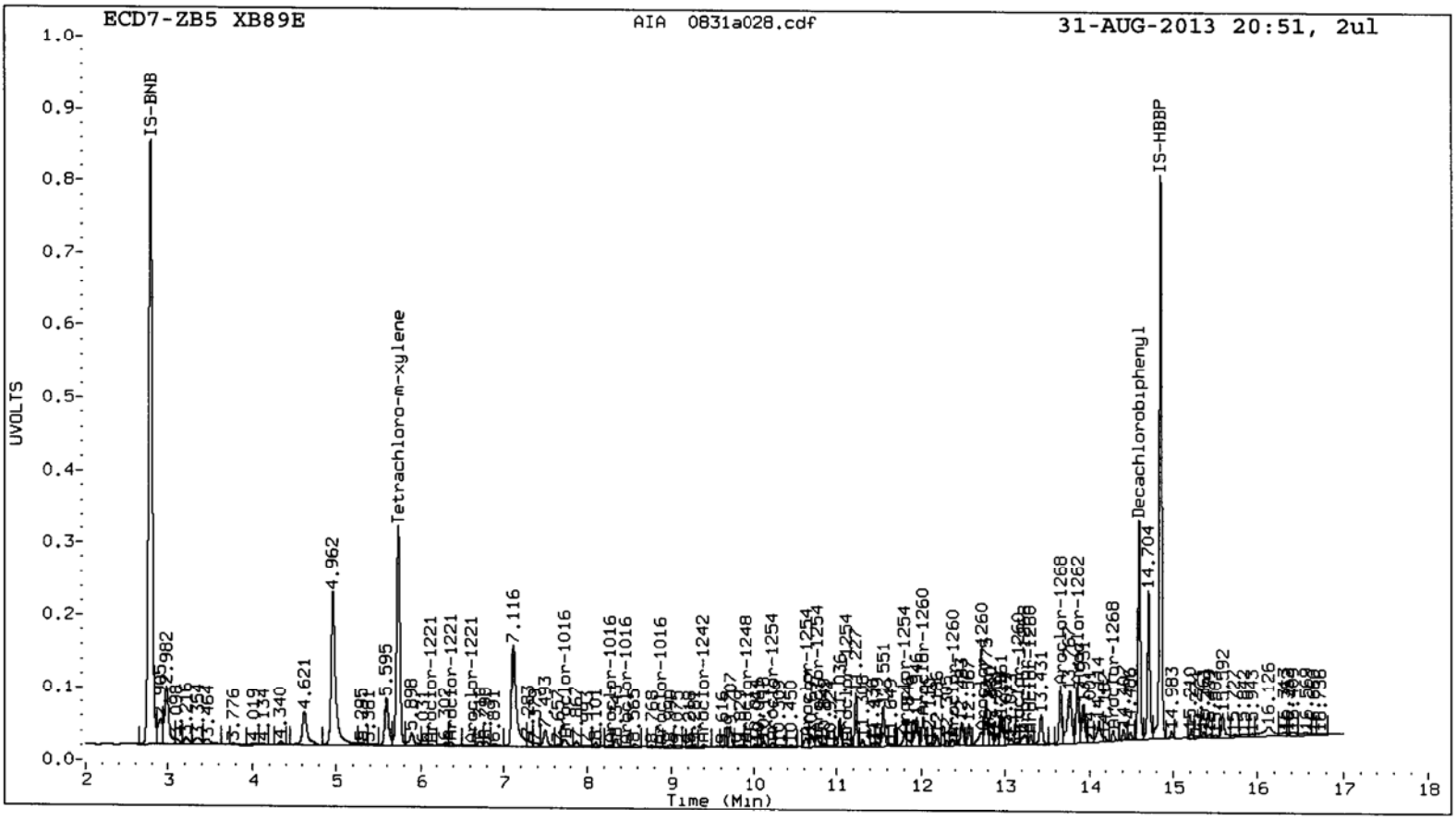
Corrected Ave (3 peaks): 7.6 Corrected Ave (3 peaks): 14.7 RPD = 63*

Total PCB Area Col1 (5.835 - 14.488) = 8119356 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 12493995 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89:01526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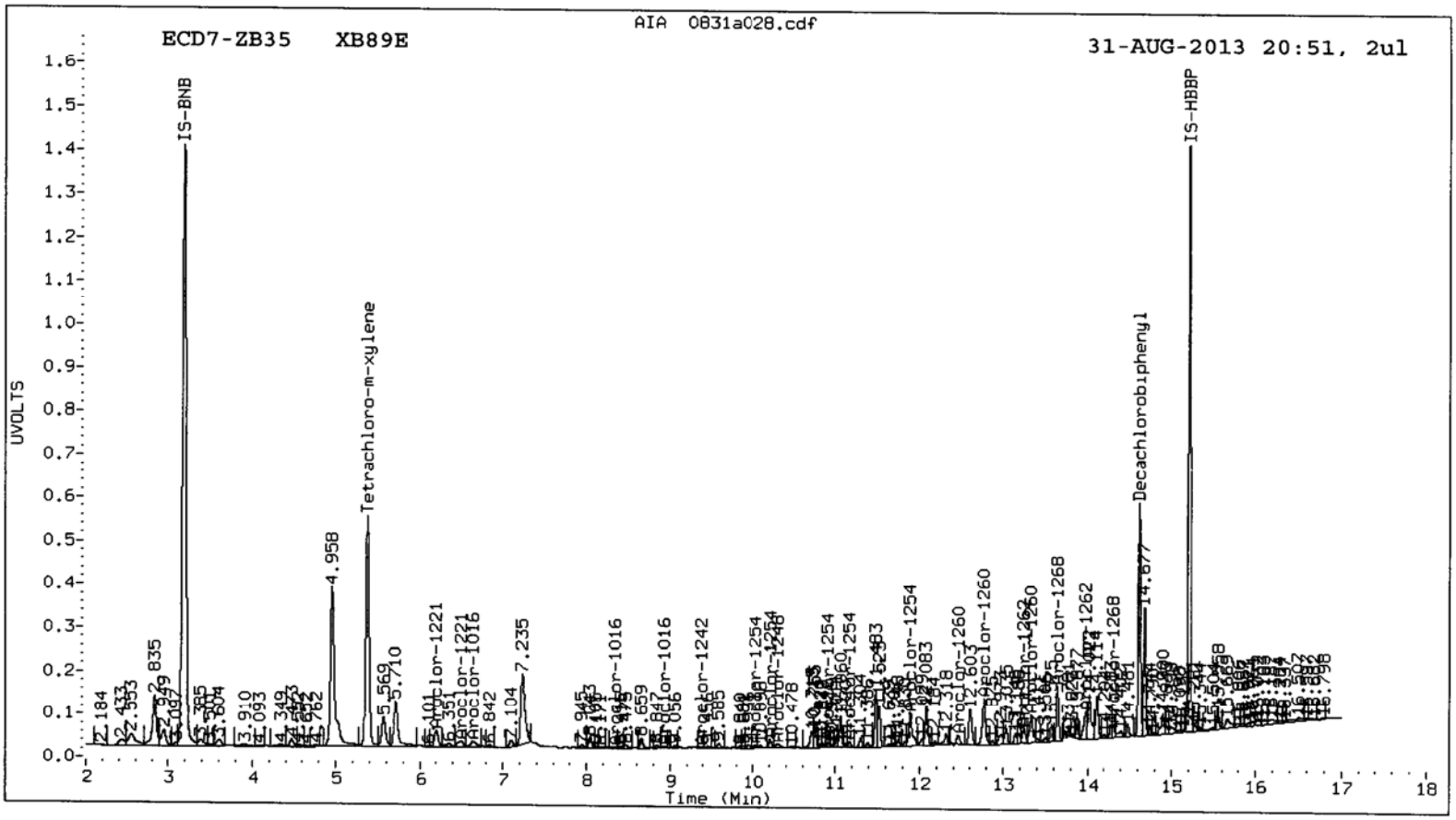
AIA 0831a028.cdf
31-AUG-2013 20:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
4.962
7.116
Decachlorobiphenyl
14.704
IS-HBBP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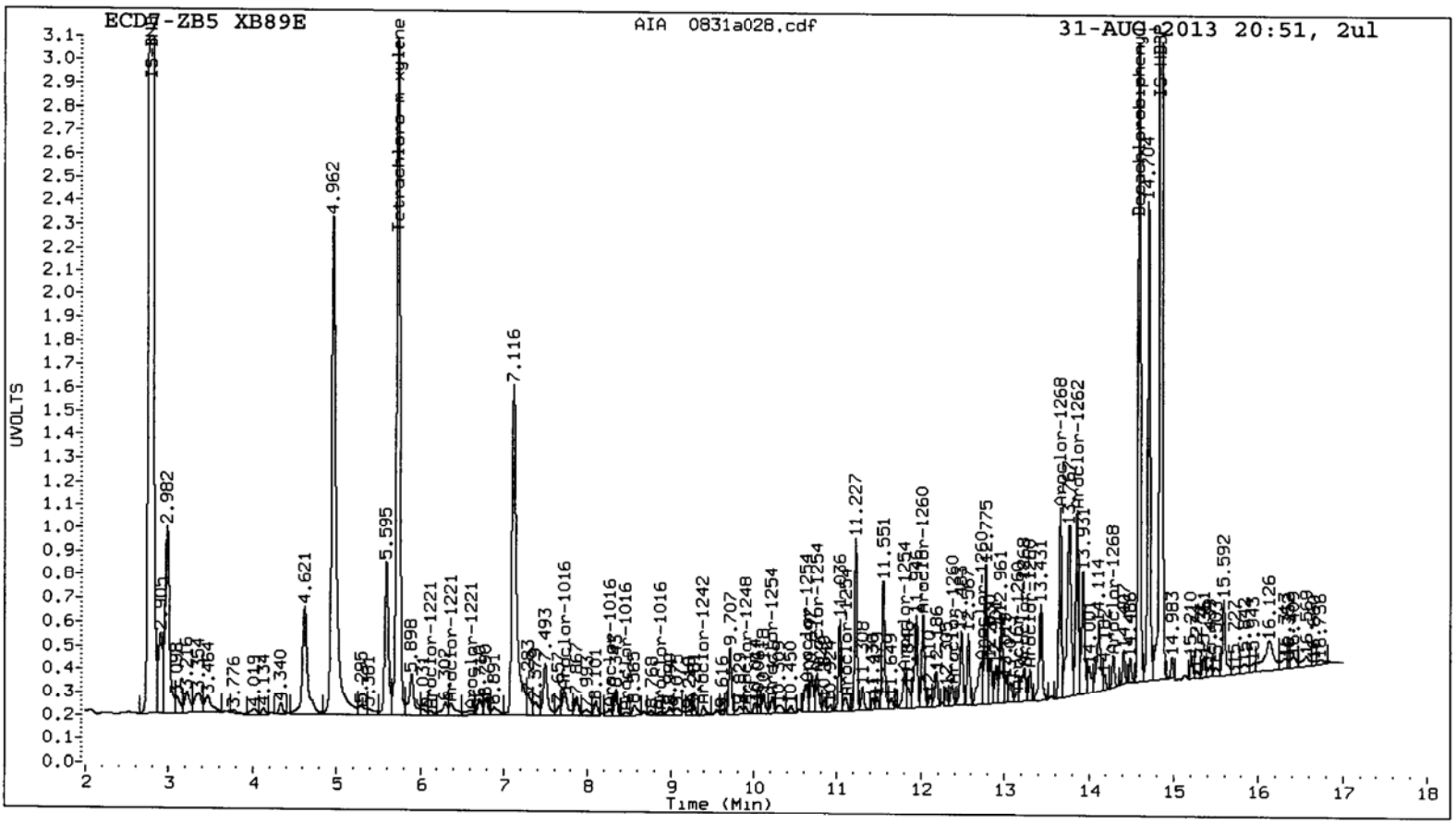
AIA 0831a028.cdf
31-AUG-2013 20:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
4.958
7.235
Decachlorobiphenyl
14.677
IS-HBBP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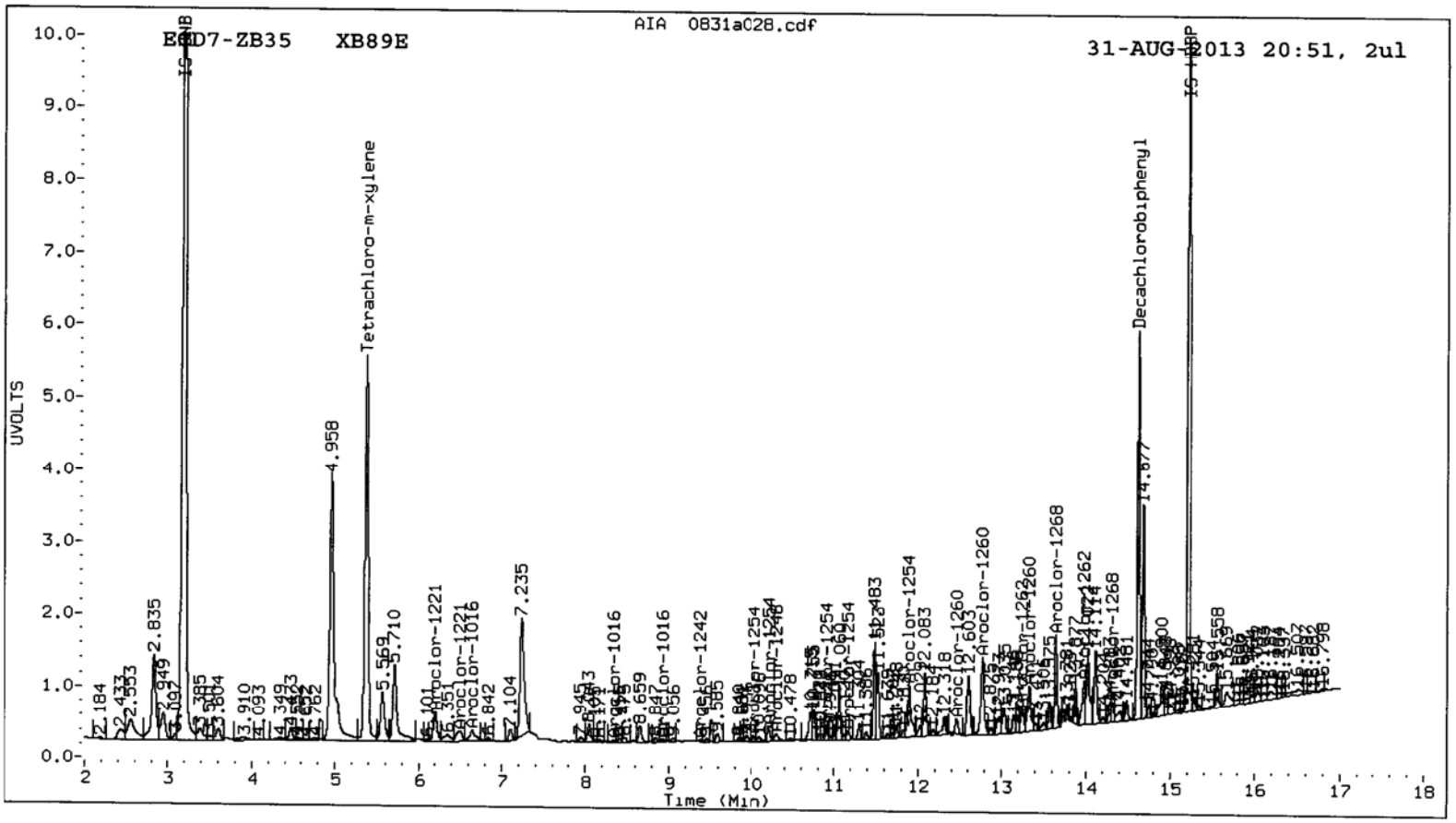
AIA 0831a028.cdf
31-AUG-2013 20:51, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
4.962
7.116
5.595
4.621
2.982
14.704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AIA 0831a028.cdf
31-AUG-2013 20:51, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
4.958
7.235
5.569
5.710
2.835
14.677

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a029.d
Data file 2: 20130816.b/0831-2.b/0831a029.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89F
Client ID: IJ13-VC-102-4-5.4
Injection Date: 31-AUG-2013 21:13
Report Date: 09/02/2013 14:10
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.737	0.003	1692890	5.374	0.002	2946438	26.5	26.4	0.6	Tetrachloro-m-xylene
14.588	0.000	1197232	14.614	0.001	1998266	27.8	25.2	10.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	66.3	65.9
Decachlorobiphenyl	69.6	62.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5456705	5.9
Hexabromobiphenyl	3127538	2981265	-4.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8818625	-8.5
Hexabromobiphenyl	5043723	5001071	-0.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.719	-0.025	116327	67.9	1	6.647	0.021	70386	33.4
Aroclor-1016	2	8.269	0.005	15540	2.7	2	7.572	0.067	37878	7.9
Aroclor-1016	3	8.479	0.030	15296	6.6	3	8.249	-0.067	16760	1.7
Aroclor-1016	4	8.855	-0.020	11312	8.0	4	8.941	0.024	20150	6.7
Total Col1Ave (4 peaks):					21.3	Total Col2Ave (4 peaks):				12.4 RPD = 53*
Corrected Ave (3 peaks):					5.8	Corrected Ave (3 peaks):				5.4 RPD = 6
Aroclor-1221	1	6.229	0.038	15832	22.2	1	6.198	0.000	198914	130.4
Aroclor-1221	2	6.370	-0.030	65660	109.1	2	6.521	0.025	98305	111.5
Aroclor-1221	3	6.554	0.031	18904	10.7	3	6.647	0.017	70386	26.2
Aroclor-1221	NS	---			----	4	7.572	0.049	37878	41.9
Total Col1Ave (3 peaks):					47.3	Total Col2Ave (4 peaks):				77.5 RPD = 48*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				59.9
Aroclor-1232	1	6.554	0.031	18904	16.5	1	6.647	0.016	70386	37.7
Aroclor-1232	2	7.719	-0.025	116327	169.0	2	7.572	0.061	37878	18.0
Aroclor-1232	3	8.269	0.005	15540	6.9	3	8.385	0.065	50376	12.6
Aroclor-1232	4	8.479	0.027	15296	16.9	4	8.941	0.020	20150	15.1
Total Col1Ave (4 peaks):					52.3	Total Col2Ave (4 peaks):				20.9 RPD = 86*
Corrected Ave (3 peaks):					13.4	Corrected Ave (3 peaks):				15.2 RPD = 13
Aroclor-1242	1	7.719	-0.024	116327	84.3	1	6.647	0.021	70386	39.3
Aroclor-1242	2	8.269	0.006	15540	3.3	2	7.572	0.066	37878	10.1
Aroclor-1242	3	8.479	0.030	15296	8.4	3	8.249	-0.067	16760	2.1
Aroclor-1242	4	---			0.0	4	9.458	0.075	21853	7.0
Total Col1Ave (3 peaks):					32.0	Total Col2Ave (4 peaks):				14.6 RPD = 74*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				6.4
Aroclor-1248	1	8.269	0.011	15540	5.4	1	7.572	0.067	37878	20.5
Aroclor-1248	2	8.855	-0.021	11312	6.0	2	8.249	-0.067	16760	3.3
Aroclor-1248	3	---			0.0	3	8.941	0.023	20150	5.4
Aroclor-1248	4	9.837	-0.048	16014	4.7	4	10.301	-0.024	25358	4.7
Total Col1Ave (3 peaks):					5.3	Total Col2Ave (4 peaks):				8.5 RPD = 45*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				4.5
Aroclor-1254	1	10.220	-0.005	12881	3.7	1	9.935	-0.094	17560	5.0
Aroclor-1254	2	10.610	-0.004	18423	8.4	2	10.214	0.000	12280	2.8
Aroclor-1254	3	10.760	0.004	12359	2.9	3	10.908	0.000	12992	1.7
Aroclor-1254	4	11.097	-0.018	10598	2.4	4	11.168	0.006	20232	2.7
Aroclor-1254	5	11.802	-0.008	43405	10.0	5	11.892	-0.041	108801	19.7
Total Col1Ave (5 peaks):					5.5	Total Col2Ave (5 peaks):				6.4 RPD = 15
Corrected Ave (4 peaks):					4.3	Corrected Ave (4 peaks):				3.1 RPD = 35
Aroclor-1260	1	12.023	-0.017	36925	13.7	1	11.892	-0.040	108801	14.4
Aroclor-1260	2	12.377	0.020	11242	4.2	2	12.461	-0.013	18115	3.0
Aroclor-1260	3	12.716	-0.011	43769	7.0	3	12.769	0.025	139855	11.7
Aroclor-1260	4	13.072	-0.052	14910	4.5	4	13.332	0.027	108019	13.3
Aroclor-1260	5	13.303	-0.001	10518	7.3	NS	---			----
Total Col1Ave (5 peaks):					7.3	Total Col2Ave (4 peaks):				10.6 RPD = 37
Corrected Ave (4 peaks):					5.7	Corrected Ave (3 peaks):				9.3 RPD = 48*
Aroclor-1262	1	12.377	0.018	11242	3.2	1	12.461	-0.018	18115	2.5
Aroclor-1262	2	12.716	-0.014	43769	5.4	2	12.769	0.021	139855	9.7
Aroclor-1262	3	13.072	-0.055	14910	5.6	3	13.247	-0.008	31079	4.9
Aroclor-1262	4	13.303	-0.002	10518	3.3	4	13.332	0.020	108019	11.3
Aroclor-1262	5	13.857	-0.028	89099	36.5	5	13.978	0.037	65957	13.8
Total Col1Ave (5 peaks):					10.8	Total Col2Ave (5 peaks):				8.4 RPD = 25
Corrected Ave (4 peaks):					4.4	Corrected Ave (4 peaks):				7.1 RPD = 47*
Aroclor-1268	1	13.237	0.001	12155	1.4	1	13.247	-0.007	31079	2.1

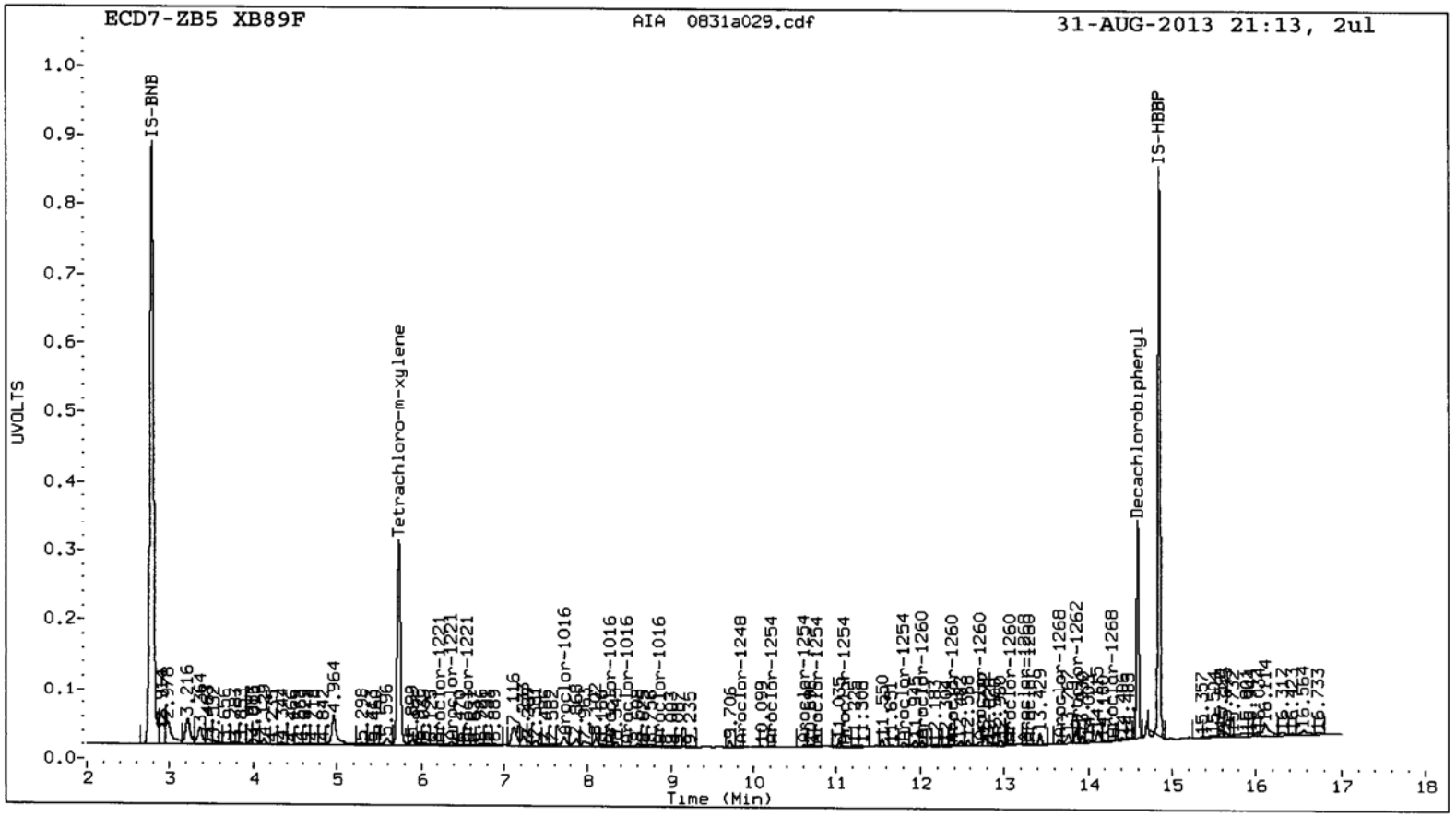
Aroclor-1268 2	13.303	-0.001	10518	1.4	2	13.332	0.015	108019	7.7
Aroclor-1268 3	13.659	0.010	34287	5.3	3	13.645	-0.019	42839	3.8
Aroclor-1268 4	14.284	-0.001	12392	0.7	4	14.280	-0.037	82483	2.8
Total Col1Ave (4 peaks):			2.2	Total Col2Ave (4 peaks):				4.1	RPD = 61*
Corrected Ave (3 peaks):			1.2	Corrected Ave (3 peaks):				2.9	RPD = 86*

Total PCB Area Col1 (5.835 - 14.488) = 2851469 Col1 Total PCB = 0.1 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 4207505 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89:01531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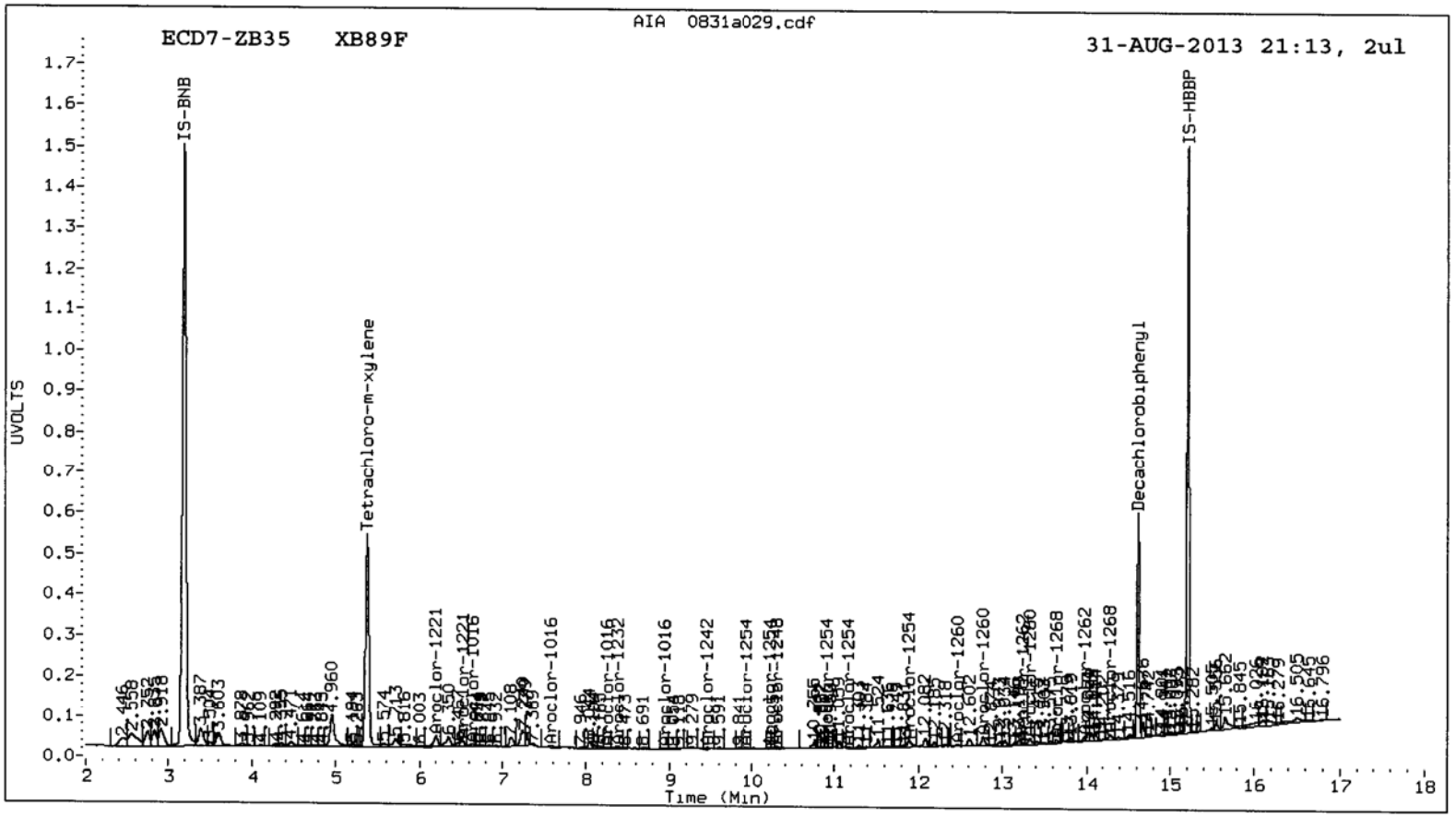
AIA 0831a029.cdf
31-AUG-2013 21:13, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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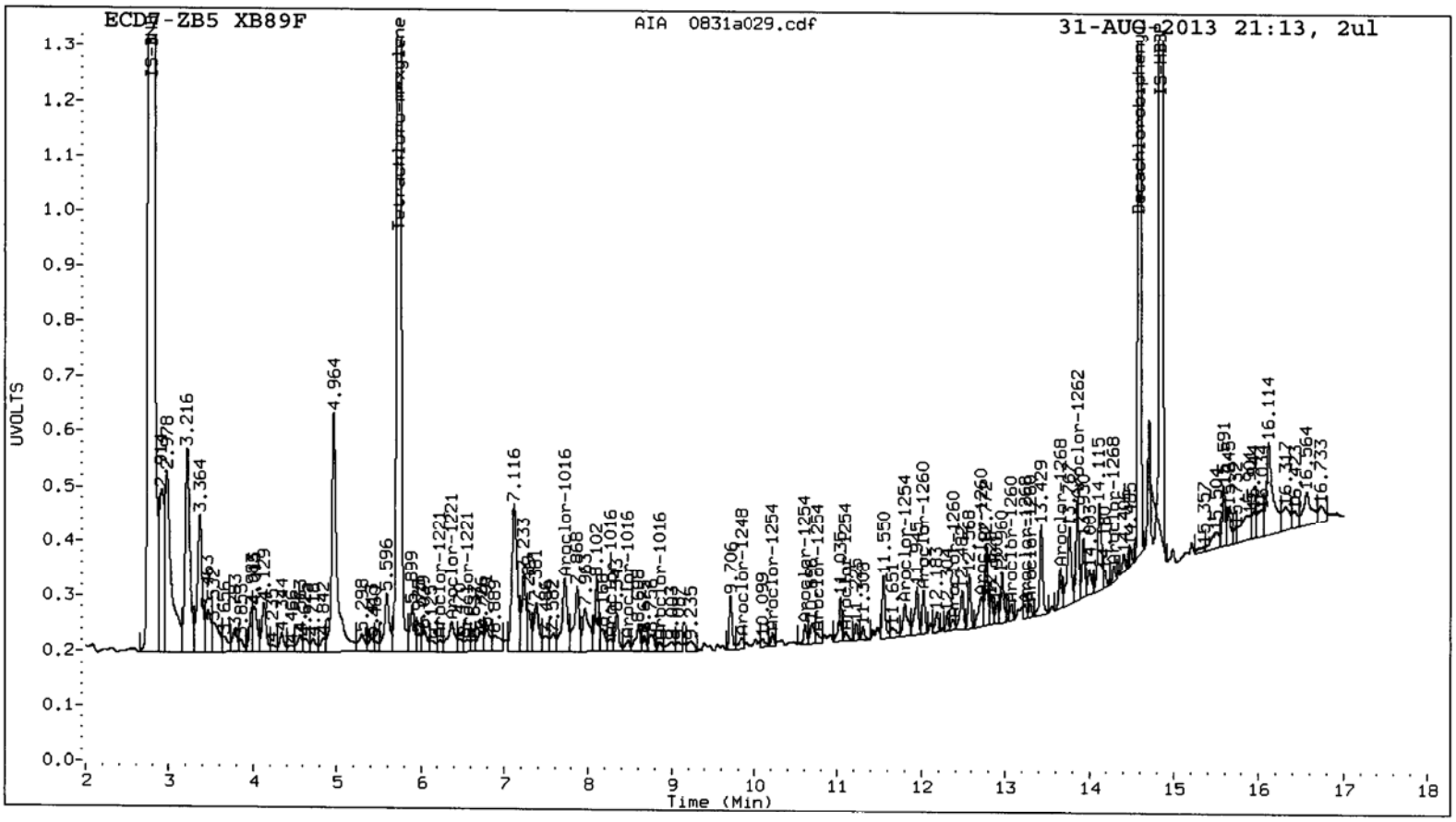
AIA 0831a029.cdf
31-AUG-2013 21:13, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)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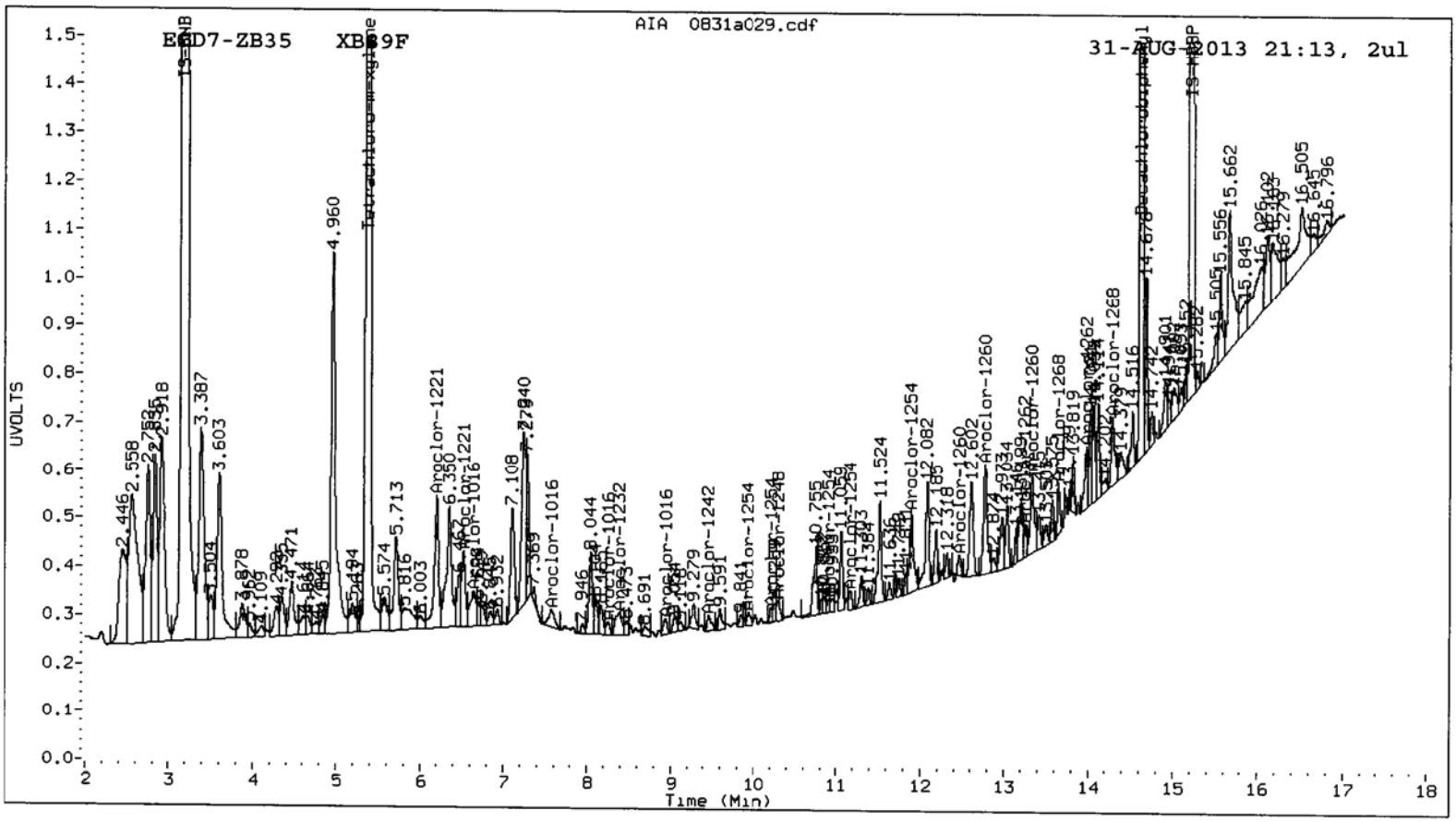
AIA 0831a029.cdf
31-AUG-2013 21:13, 2ul
UVOLTS
Time (Min)


ECD7-ZB35 XB89F
AIA 0831a029.cdf
31-AUG-2013 21:13, 2ul
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a030.d
Data file 2: 20130816.b/0831-2.b/0831a030.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89FMS
Client ID: IJ13-VC-102-4-5 MS
Injection Date: 31-AUG-2013 21:35
Report Date: 09/02/2013 14:10
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.001	1875315	5.373	0.001	3209723	30.7	29.9	2.9	Tetrachloro-m-xylene
14.588	0.000	1341995	14.617	0.004	2707915	30.2	34.7	14.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	76.8	74.6
Decachlorobiphenyl	75.4	86.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5215806	1.2
Hexabromobiphenyl	3127538	3083004	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8483459	-11.9
Hexabromobiphenyl	5043723	4909161	-2.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.743	-0.001	677161	413.7	1	6.627	0.001	734975	362.2
Aroclor-1016	2	8.265	0.001	2019376	364.9	2	7.505	0.000	1550756	336.3
Aroclor-1016	3	8.449	0.000	768060	348.2	3	8.318	0.002	3252223	338.5
Aroclor-1016	4	8.875	0.000	428784	318.3	4	8.918	0.001	884324	306.2
Total Col1Ave (4 peaks):					361.3	Total Col2Ave (4 peaks):				335.8 RPD = 7
Corrected Ave (3 peaks):					343.8	Corrected Ave (3 peaks):				327.0 RPD = 5
Aroclor-1221	1	6.189	-0.003	102708	150.4	1	6.197	-0.001	299921	204.3
Aroclor-1221	2	6.401	0.001	144319	250.9	2	6.493	-0.002	265253	312.8
Aroclor-1221	3	6.522	-0.002	454202	269.9	3	6.627	-0.003	734975	284.5
Aroclor-1221	NS	---			----	4	7.505	-0.017	1550756	1784.1
Total Col1Ave (3 peaks):					223.7	Total Col2Ave (4 peaks):				646.4 RPD = 97*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				267.2
Aroclor-1232	1	6.522	-0.002	454202	415.6	1	6.627	-0.003	734975	409.5
Aroclor-1232	2	7.743	-0.001	677161	1029.0	2	7.505	-0.006	1550756	766.4
Aroclor-1232	3	8.265	0.000	2019376	931.3	3	8.318	-0.002	3252223	844.0
Aroclor-1232	4	8.449	-0.002	768060	886.2	4	8.918	-0.003	884324	689.8
Total Col1Ave (4 peaks):					815.5	Total Col2Ave (4 peaks):				677.4 RPD = 18
Corrected Ave (3 peaks):					744.4	Corrected Ave (3 peaks):				621.9 RPD = 18
Aroclor-1242	1	7.743	0.000	677161	513.1	1	6.627	0.001	734975	426.9
Aroclor-1242	2	8.265	0.002	2019376	455.3	2	7.505	0.000	1550756	431.3
Aroclor-1242	3	8.449	0.000	768060	442.5	3	8.318	0.002	3252223	429.0
Aroclor-1242	4	9.413	0.000	592472	359.7	4	9.383	0.000	1039030	345.5
Total Col1Ave (4 peaks):					442.7	Total Col2Ave (4 peaks):				408.2 RPD = 8
Corrected Ave (3 peaks):					419.2	Corrected Ave (3 peaks):				400.4 RPD = 5
Aroclor-1248	1	8.265	0.006	2019376	730.3	1	7.505	0.001	1550756	872.4
Aroclor-1248	2	8.875	-0.001	428784	236.3	2	8.318	0.003	3252223	663.2
Aroclor-1248	3	9.413	-0.001	592472	231.2	3	8.918	0.000	884324	245.9
Aroclor-1248	4	9.892	0.007	448594	136.9	4	10.322	-0.003	86557	16.7
Total Col1Ave (4 peaks):					333.7	Total Col2Ave (4 peaks):				449.6 RPD = 30
Corrected Ave (3 peaks):					201.4	Corrected Ave (3 peaks):				308.6 RPD = 42*
Aroclor-1254	1	10.226	0.001	475530	141.0	1	10.027	-0.001	611409	182.1
Aroclor-1254	2	10.613	-0.001	117114	55.9	2	10.213	-0.001	731810	170.8
Aroclor-1254	3	10.754	-0.002	294757	71.7	3	10.908	0.000	391586	54.6
Aroclor-1254	4	11.096	-0.019	1225078	290.3	4	11.177	0.015	1985002	272.2
Aroclor-1254	5	11.810	0.000	1936333	467.7	5	11.932	-0.001	2184824	411.8
Total Col1Ave (5 peaks):					205.3	Total Col2Ave (5 peaks):				218.3 RPD = 6
Corrected Ave (4 peaks):					139.7	Corrected Ave (4 peaks):				169.9 RPD = 20
Aroclor-1260	1	12.040	0.000	927808	332.5	1	11.932	0.000	2184824	293.7
Aroclor-1260	2	12.358	0.001	936383	334.5	2	12.475	0.000	1712180	287.2
Aroclor-1260	3	12.728	0.000	2320755	357.4	3	12.745	0.001	3685497	313.4
Aroclor-1260	4	13.123	0.000	1181384	344.8	4	13.306	0.001	2426419	305.1
Aroclor-1260	5	13.303	0.000	517221	345.2	NS	---			----
Total Col1Ave (5 peaks):					342.9	Total Col2Ave (4 peaks):				299.9 RPD = 13
Corrected Ave (4 peaks):					339.3	Corrected Ave (3 peaks):				295.3 RPD = 14
Aroclor-1262	1	12.358	-0.001	936383	258.0	1	12.475	-0.005	1712180	238.8
Aroclor-1262	2	12.728	-0.002	2320755	276.4	2	12.745	-0.003	3685497	259.3
Aroclor-1262	3	13.123	-0.003	1181384	431.0	3	13.251	-0.004	1046970	168.5
Aroclor-1262	4	13.303	-0.002	517221	158.4	4	13.306	-0.006	2426419	258.3
Aroclor-1262	5	13.882	-0.003	569204	225.3	5	13.937	-0.004	837383	179.0
Total Col1Ave (5 peaks):					269.8	Total Col2Ave (5 peaks):				220.8 RPD = 20
Corrected Ave (4 peaks):					229.5	Corrected Ave (4 peaks):				211.1 RPD = 8
Aroclor-1268	1	13.235	-0.002	464201	51.2	1	13.251	-0.003	1046970	71.5

Aroclor-1268 2	13.303	0.000	517221	64.4	2	13.306	-0.010	2426419	176.6
Aroclor-1268 3	13.660	0.012	271705	40.3	3	13.660	-0.004	84928	7.7
Aroclor-1268 4	14.284	-0.002	138519	8.1	4	14.313	-0.004	308861	10.7
Total Col1Ave (4 peaks):				41.0	Total Col2Ave (4 peaks):			66.6	RPD = 48*
Corrected Ave (3 peaks):				33.2	Corrected Ave (3 peaks):			30.0	RPD = 10

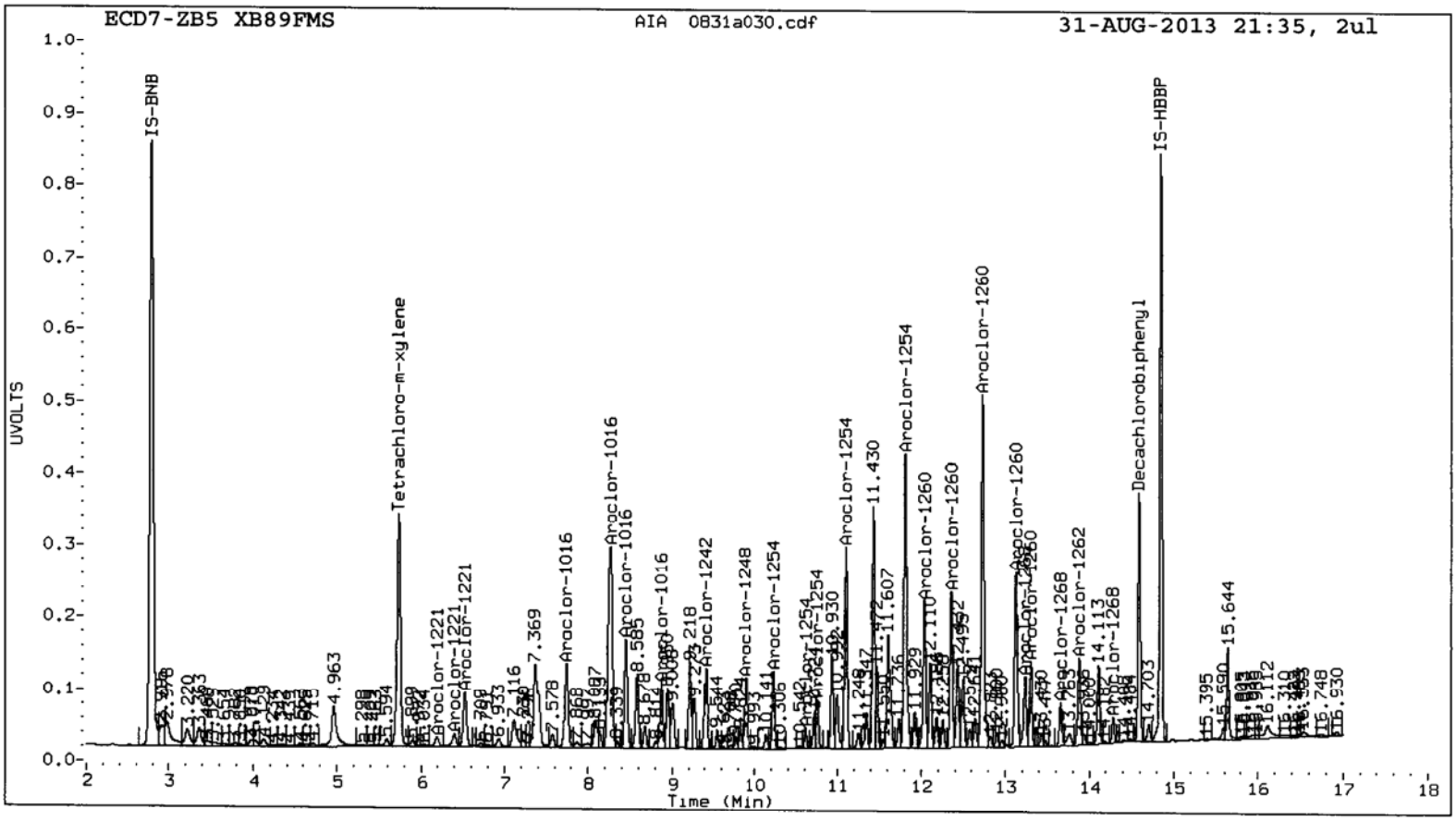
Total PCB Area Col1 (5.835 - 14.488) = 29972106 Col1 Total PCB = 0.7 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 47283587 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89:01536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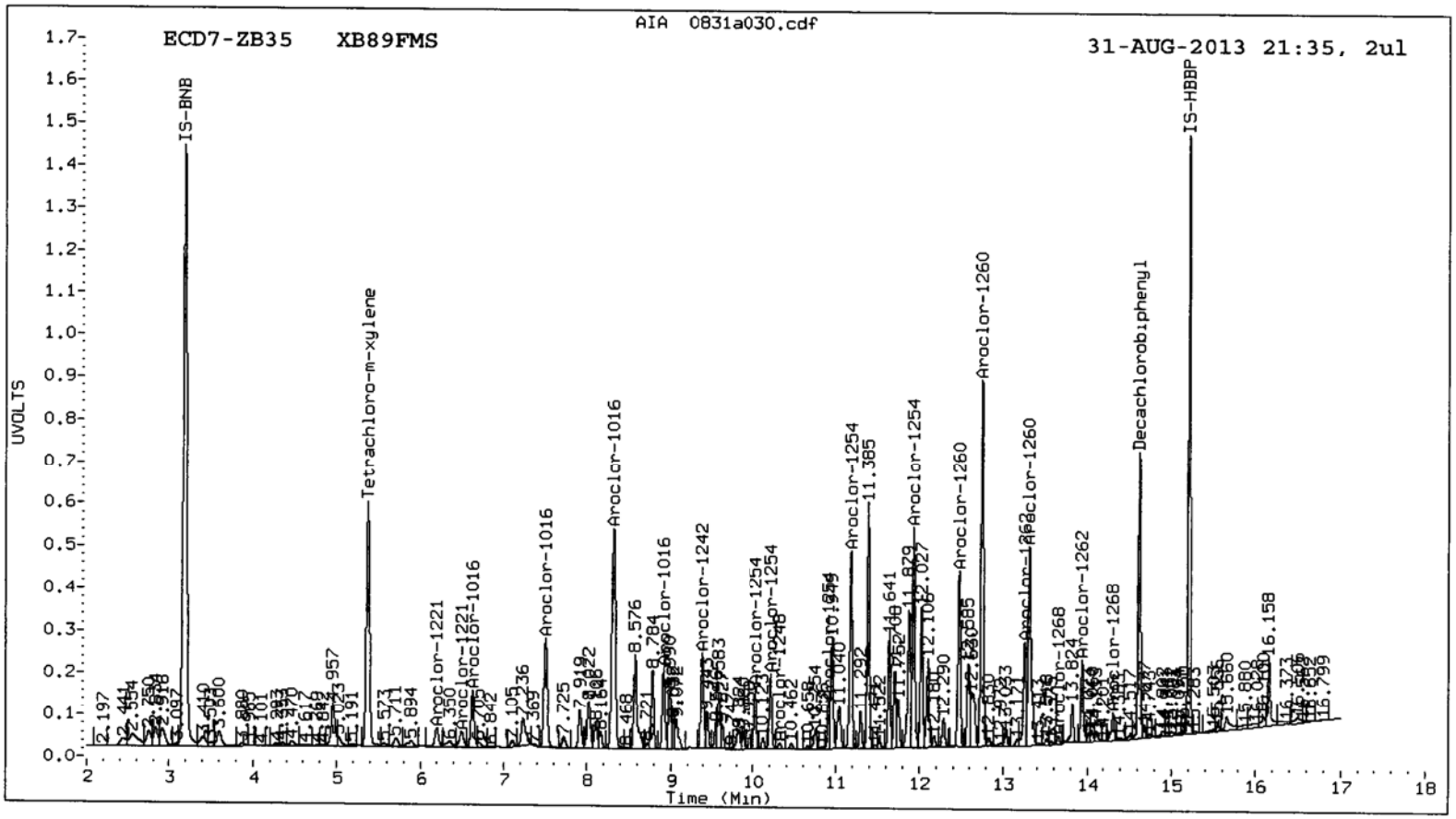
AIA 0831a030.cdf
31-AUG-2013 21:35, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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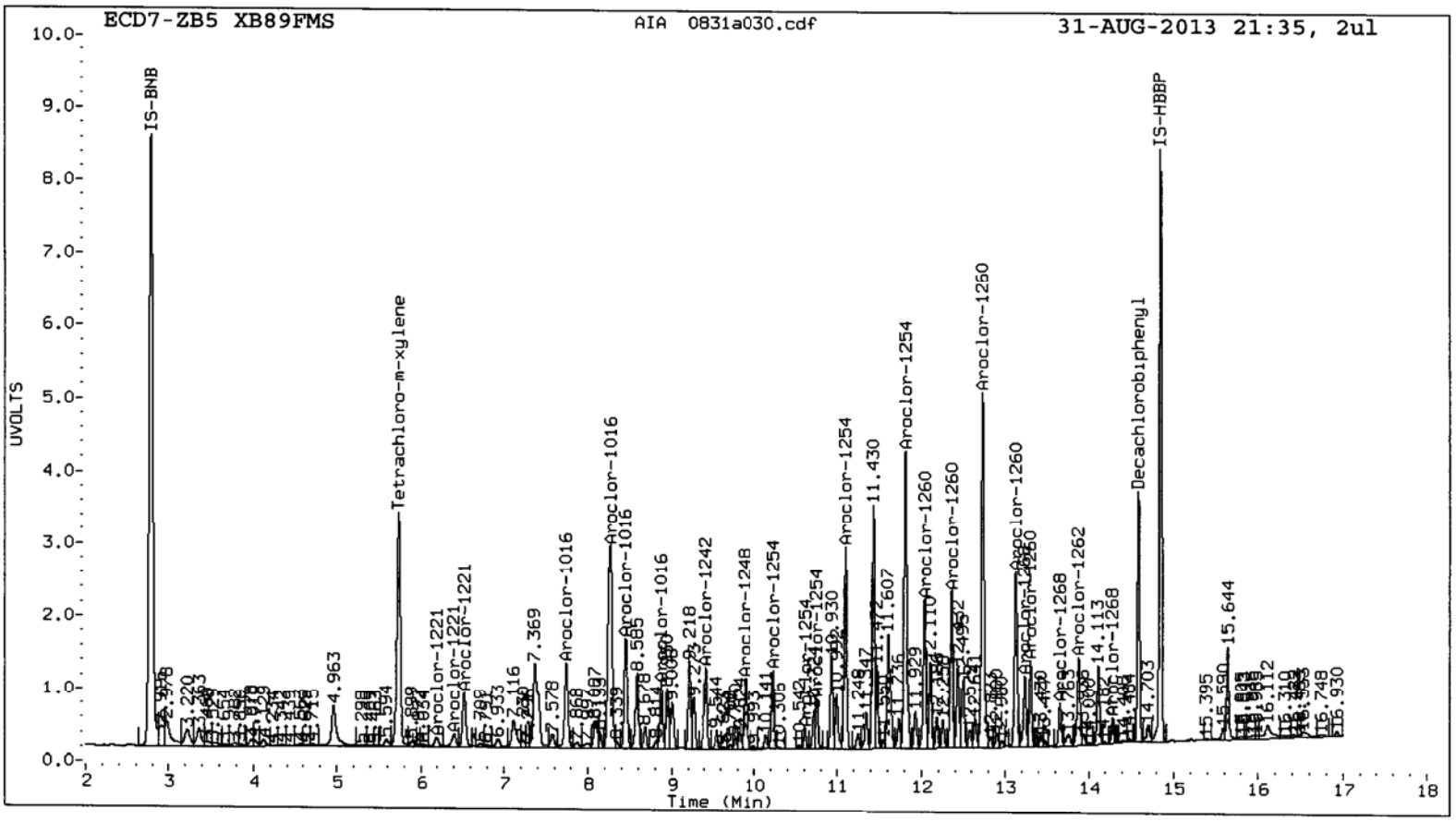
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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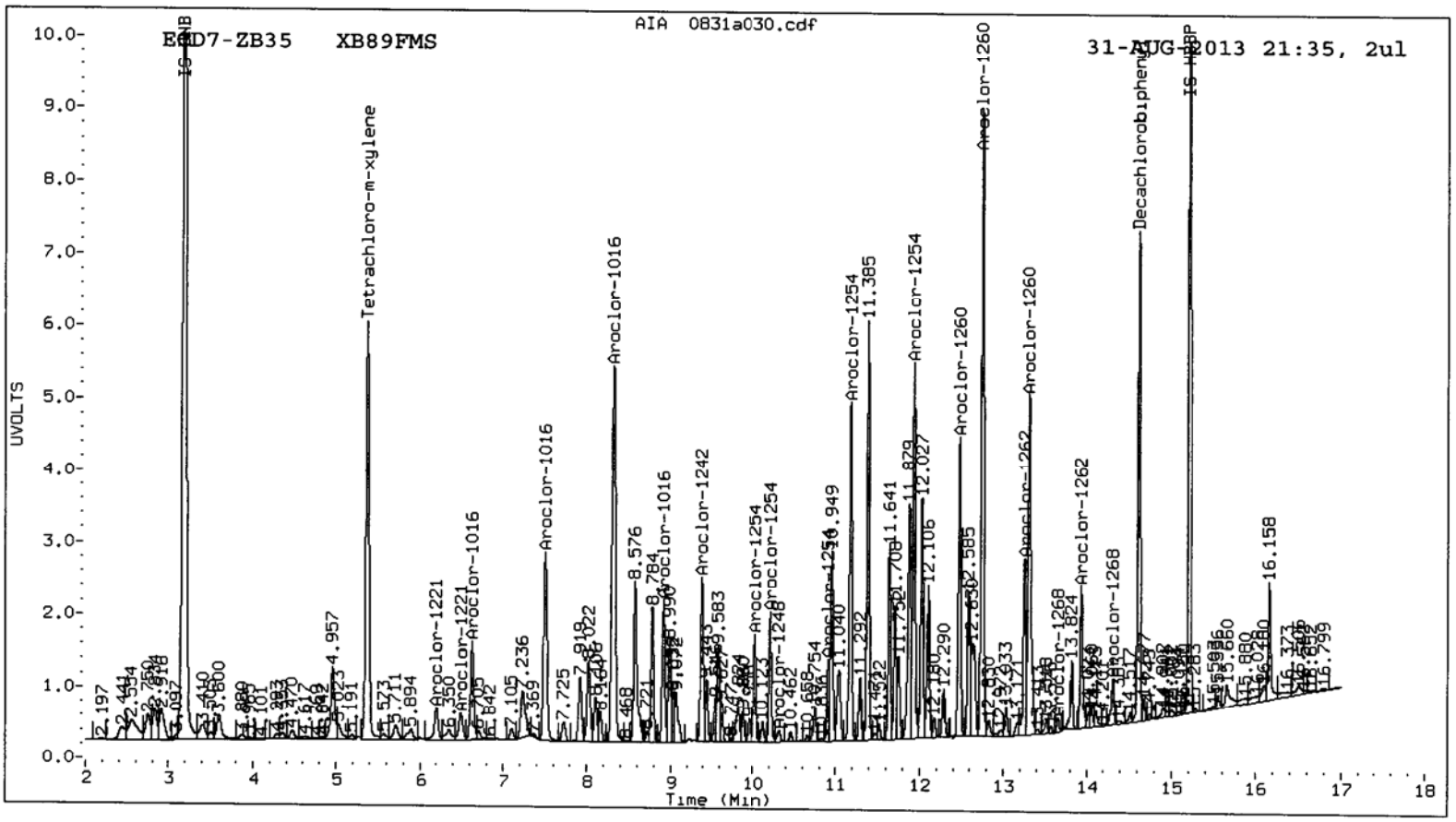
AIA 0831a030.cdf
31-AUG-2013 21:35, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP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31-AUG-2013 21:35, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

XB89:01538

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a031.d
Data file 2: 20130816.b/0831-2.b/0831a031.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: XB89FMSD
Client ID: IJ13-VC-102-4-5 MSD
Injection Date: 31-AUG-2013 21:57
Report Date: 09/02/2013 14:10
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.001	1935159	5.373	0.002	3288955	31.2	30.2	3.5	Tetrachloro-m-xylene
14.589	0.001	1408312	14.615	0.002	2354972	32.2	30.3	5.9	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	78.1	75.4
Decachlorobiphenyl	80.4	75.8

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5295978	2.8
Hexabromobiphenyl	3127538	3035925	-2.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	8607869	-10.6
Hexabromobiphenyl	5043723	4893180	-3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.743	-0.001	732992	441.0	1	6.627	0.001	764881	371.5
Aroclor-1016	2	8.264	-0.001	2145733	381.8	2	7.506	0.001	1625169	347.3
Aroclor-1016	3	8.450	0.001	827984	369.7	3	8.317	0.002	3442518	353.1
Aroclor-1016	4	8.876	0.000	454542	332.3	4	8.918	0.001	934036	318.7
Total Col1Ave (4 peaks):					381.2	Total Col2Ave (4 peaks):				347.7 RPD = 9
Corrected Ave (3 peaks):					361.3	Corrected Ave (3 peaks):				339.7 RPD = 6
Aroclor-1221	1	6.189	-0.002	120801	174.2	1	6.198	0.000	333952	224.2
Aroclor-1221	2	6.401	0.001	165510	283.4	2	6.494	-0.002	285570	331.9
Aroclor-1221	3	6.522	-0.001	478640	280.2	3	6.627	-0.003	764881	291.7
Aroclor-1221	NS	---			----	4	7.506	-0.016	1625169	1842.7
Total Col1Ave (3 peaks):					245.9	Total Col2Ave (4 peaks):				672.6 RPD = 93*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				282.6
Aroclor-1232	1	6.522	-0.001	478640	431.3	1	6.627	-0.003	764881	420.0
Aroclor-1232	2	7.743	-0.001	732992	1096.9	2	7.506	-0.005	1625169	791.6
Aroclor-1232	3	8.264	-0.001	2145733	974.6	3	8.317	-0.003	3442518	880.5
Aroclor-1232	4	8.450	-0.001	827984	940.8	4	8.918	-0.003	934036	718.0
Total Col1Ave (4 peaks):					860.9	Total Col2Ave (4 peaks):				702.5 RPD = 20
Corrected Ave (3 peaks):					782.3	Corrected Ave (3 peaks):				643.2 RPD = 20
Aroclor-1242	1	7.743	0.000	732992	547.0	1	6.627	0.001	764881	437.8
Aroclor-1242	2	8.264	0.000	2145733	476.5	2	7.506	0.001	1625169	445.4
Aroclor-1242	3	8.450	0.001	827984	469.8	3	8.317	0.001	3442518	447.5
Aroclor-1242	4	9.414	0.001	635030	379.7	4	9.383	0.000	1107041	362.8
Total Col1Ave (4 peaks):					468.3	Total Col2Ave (4 peaks):				423.4 RPD = 10
Corrected Ave (3 peaks):					442.0	Corrected Ave (3 peaks):				415.3 RPD = 6
Aroclor-1248	1	8.264	0.005	2145733	764.3	1	7.506	0.002	1625169	901.1
Aroclor-1248	2	8.876	-0.001	454542	246.7	2	8.317	0.002	3442518	691.9
Aroclor-1248	3	9.414	0.000	635030	244.1	3	8.918	0.000	934036	256.0
Aroclor-1248	4	9.892	0.007	478507	143.8	4	10.323	-0.002	90660	17.3
Total Col1Ave (4 peaks):					349.7	Total Col2Ave (4 peaks):				466.5 RPD = 29
Corrected Ave (3 peaks):					211.5	Corrected Ave (3 peaks):				321.7 RPD = 41*
Aroclor-1254	1	10.227	0.002	509304	148.7	1	10.028	0.000	651285	191.2
Aroclor-1254	2	10.614	-0.001	125202	58.8	2	10.214	0.000	779156	179.2
Aroclor-1254	3	10.754	-0.003	319063	76.5	3	10.909	0.001	421347	57.9
Aroclor-1254	4	11.096	-0.019	1323979	309.0	4	11.178	0.016	2160336	291.9
Aroclor-1254	5	11.810	0.000	2099236	499.4	5	11.933	0.000	2389080	443.8
Total Col1Ave (5 peaks):					218.5	Total Col2Ave (5 peaks):				232.8 RPD = 6
Corrected Ave (4 peaks):					148.3	Corrected Ave (4 peaks):				180.1 RPD = 19
Aroclor-1260	1	12.042	0.001	1011617	368.2	1	11.933	0.000	2389080	322.2
Aroclor-1260	2	12.358	0.001	1011163	366.8	2	12.476	0.002	1881365	316.6
Aroclor-1260	3	12.729	0.001	2525590	394.9	3	12.745	0.001	4025061	343.4
Aroclor-1260	4	13.124	0.001	1250730	370.7	4	13.307	0.002	2640640	333.2
Aroclor-1260	5	13.304	0.001	557797	378.1	NS	---			----
Total Col1Ave (5 peaks):					375.7	Total Col2Ave (4 peaks):				328.8 RPD = 13
Corrected Ave (4 peaks):					370.9	Corrected Ave (3 peaks):				324.0 RPD = 14
Aroclor-1262	1	12.358	-0.001	1011163	282.9	1	12.476	-0.004	1881365	263.2
Aroclor-1262	2	12.729	-0.001	2525590	305.5	2	12.745	-0.003	4025061	284.1
Aroclor-1262	3	13.124	-0.002	1250730	463.4	3	13.251	-0.004	1273240	205.6
Aroclor-1262	4	13.304	-0.001	557797	173.5	4	13.307	-0.006	2640640	282.0
Aroclor-1262	5	13.882	-0.003	604742	243.1	5	13.938	-0.003	895176	192.0
Total Col1Ave (5 peaks):					293.7	Total Col2Ave (5 peaks):				245.4 RPD = 18
Corrected Ave (4 peaks):					251.3	Corrected Ave (4 peaks):				235.7 RPD = 6
Aroclor-1268	1	13.235	-0.002	499956	56.1	1	13.251	-0.003	1273240	87.3

Aroclor-1268 2	13.304	0.001	557797	70.6	2	13.307	-0.010	2640640	192.8
Aroclor-1268 3	13.660	0.012	289647	43.6	3	13.659	-0.005	95676	8.7
Aroclor-1268 4	14.284	-0.001	146244	8.7	4	14.313	-0.003	333680	11.7
Total Col1Ave (4 peaks):				44.7	Total Col2Ave (4 peaks):			75.1	RPD = 51*
Corrected Ave (3 peaks):				36.1	Corrected Ave (3 peaks):			35.9	RPD = 1

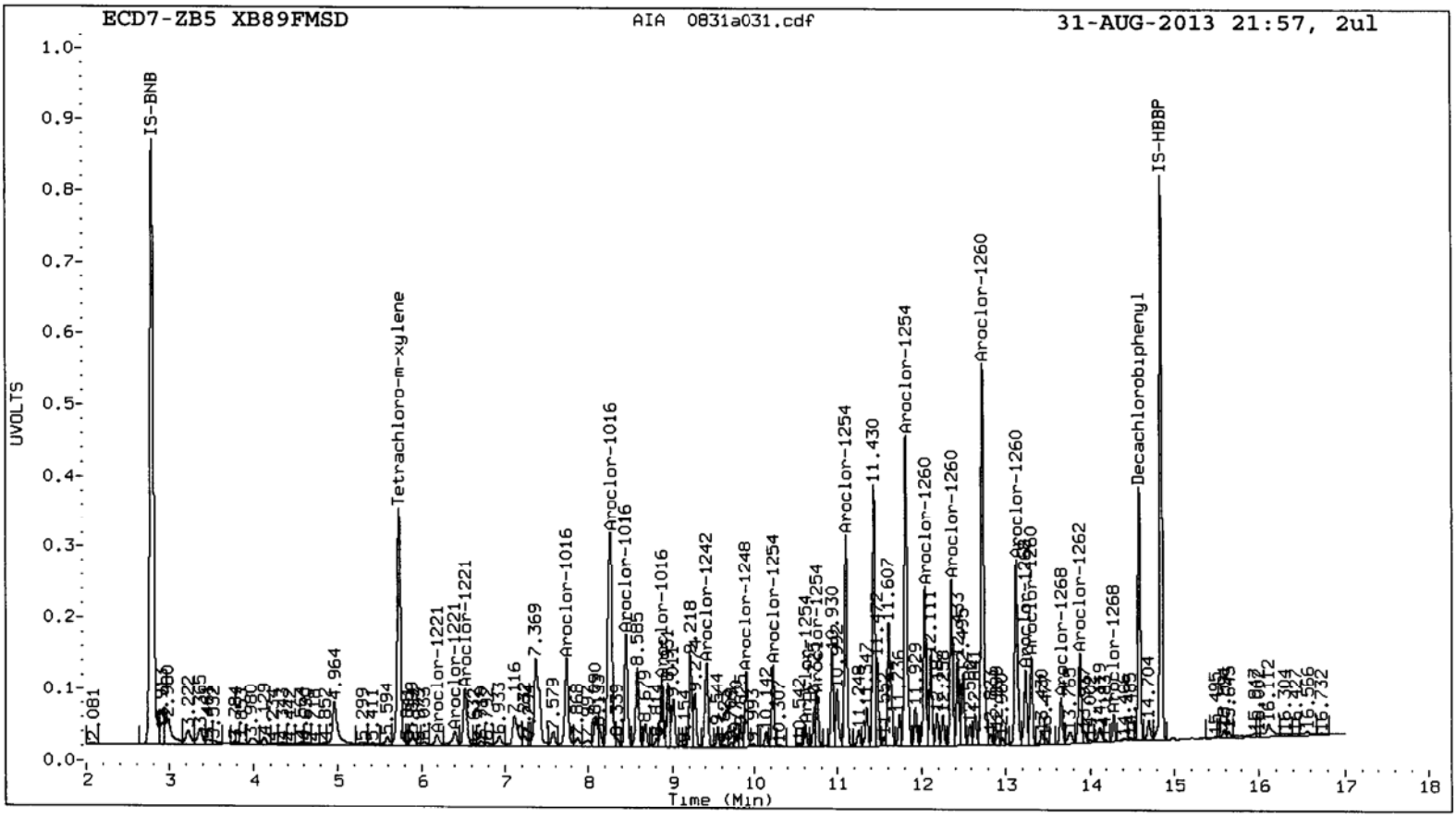
Total PCB Area Col1 (5.835 - 14.488) = 32083008 Col1 Total PCB = 0.8 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 50899364 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

XB89:01541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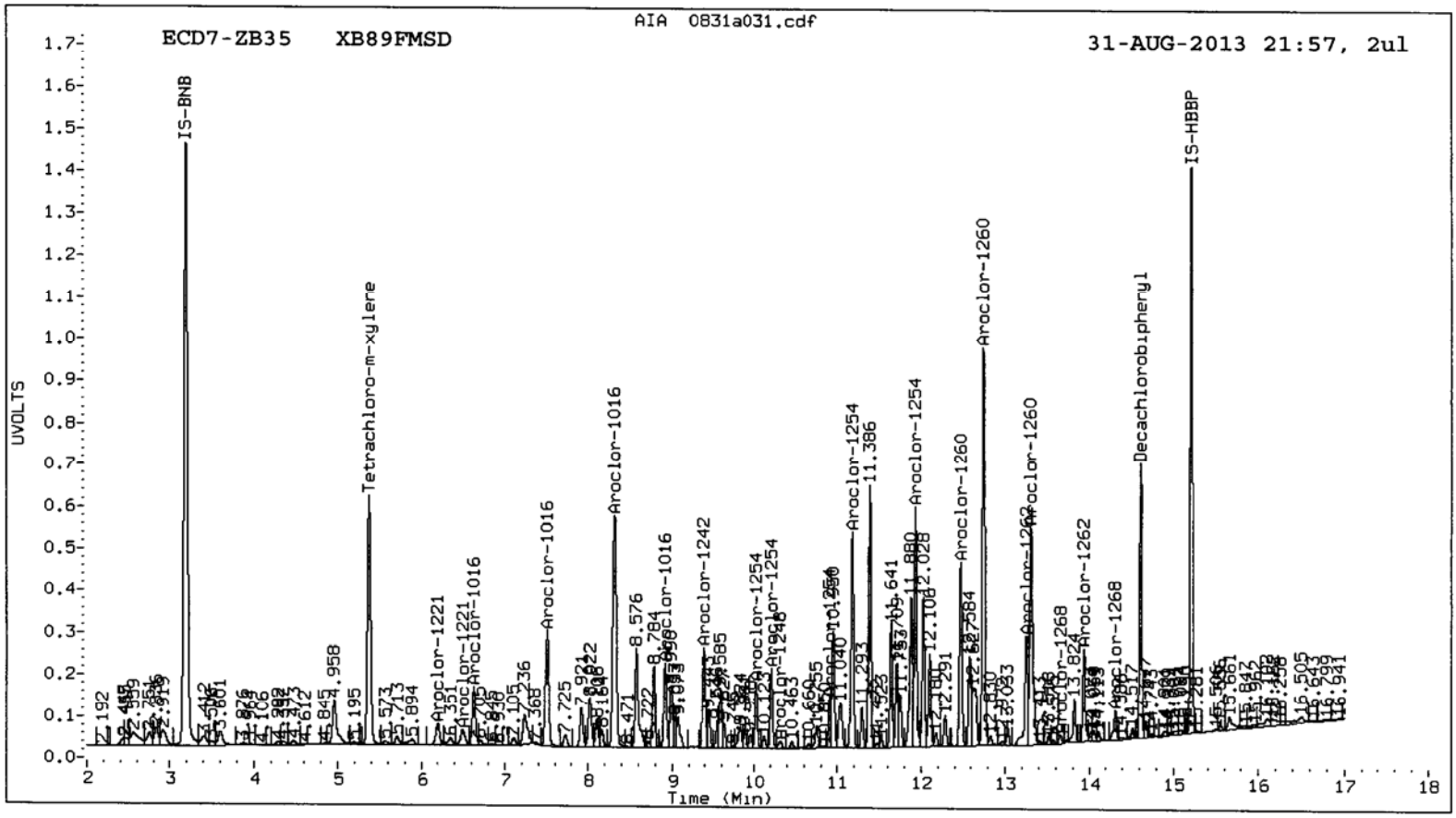
AIA 0831a031.cdf
31-AUG-2013 21:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
IS-HBBP
Decachlorobiphenyl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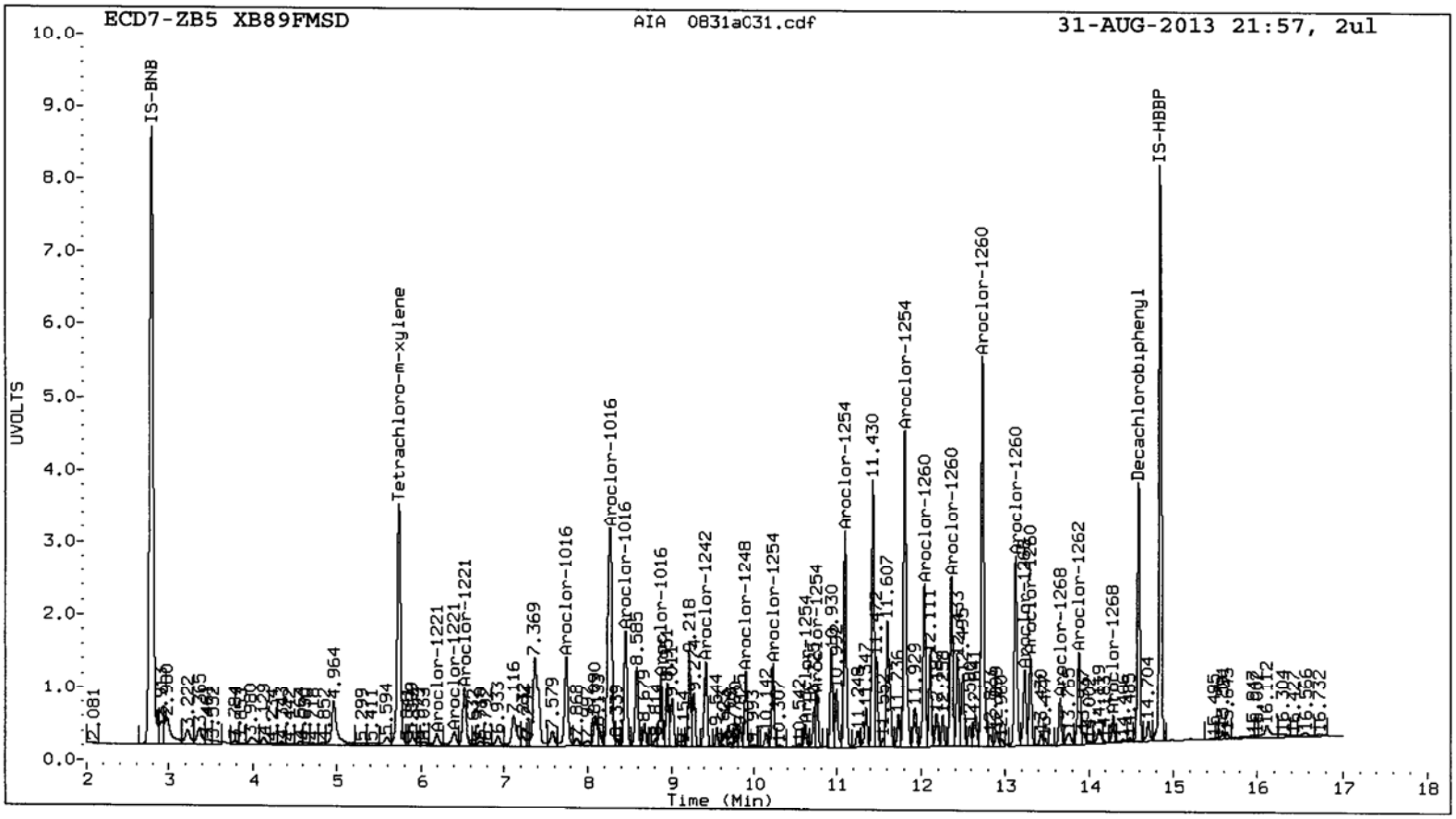
31-AUG-2013 21:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
IS-HBBP
Decachlorobiphenyl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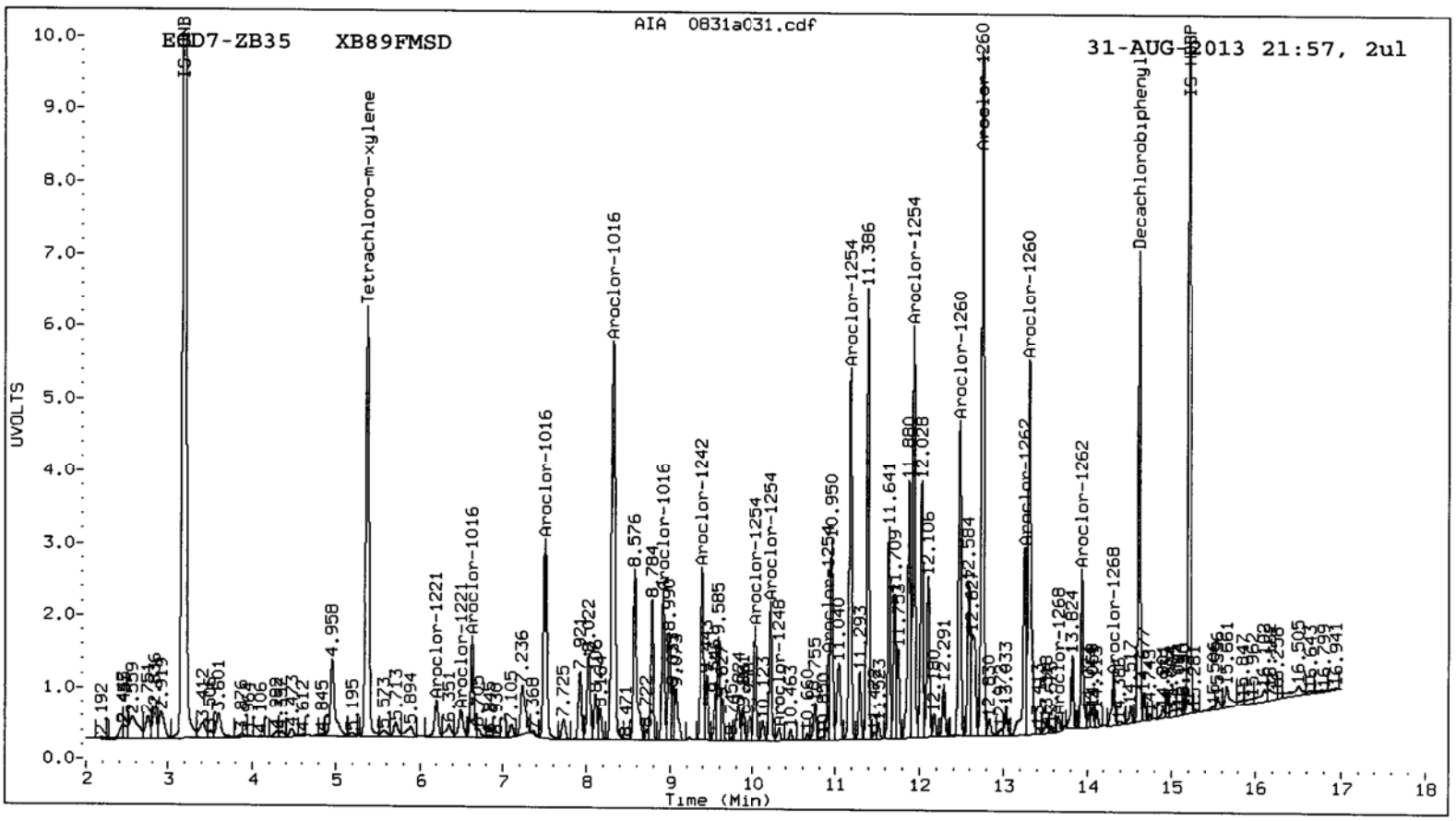
31-AUG-2013 21:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 XB89FMSD
AIA 0831a031.cdf
31-AUG-2013 21:57, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a032.d
Data file 2: 20130816.b/0831-2.b/0831a032.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 31-AUG-2013 22:19
Report Date: 09/02/2013 14:10
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.735	0.000	2547897	5.372	0.000	4560119	40.7	38.5	5.5	Tetrachloro-m-xylene
14.589	0.001	1728413	14.614	0.001	2790207	37.1	35.1	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	101.8	96.4
Decachlorobiphenyl	92.8	87.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5345601	3.8
Hexabromobiphenyl	3127538	3226090	3.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9336674	-3.1
Hexabromobiphenyl	5043723	5008712	-0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT (ZB5 Col)	Shift	Area	Amount	Peak#	RT (ZB35 Col)	Shift	Area	Amount
Aroclor-1254	1	10.225	0.000	840414	243.1	1	10.029	0.000	894320	242.0
Aroclor-1254	2	10.614	0.000	521889	243.0	2	10.214	0.000	1146162	243.1
Aroclor-1254	3	10.756	0.000	1014639	241.0	3	10.908	0.000	1897806	240.5
Aroclor-1254	4	11.115	0.000	1046403	241.9	4	11.162	0.000	1935201	241.1
Aroclor-1254	5	11.810	0.000	1010487	238.2	5	11.933	0.000	1381423	236.6

Total Col1Ave (5 peaks): 241.4 Total Col2Ave (5 peaks): 240.7 RPD = 0

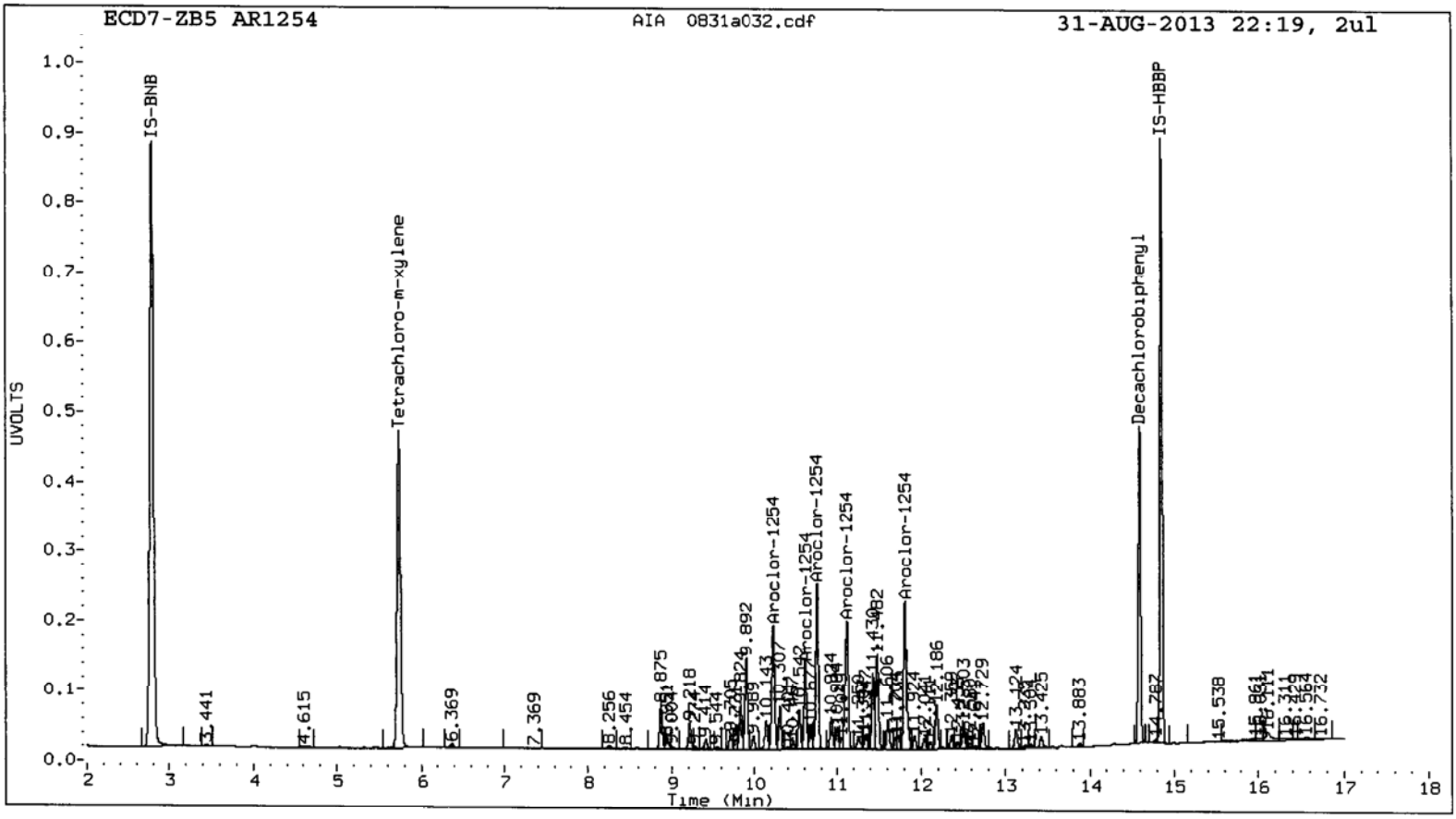
Corrected Ave (4 peaks): 241.0 Corrected Ave (4 peaks): 240.0 RPD = 0

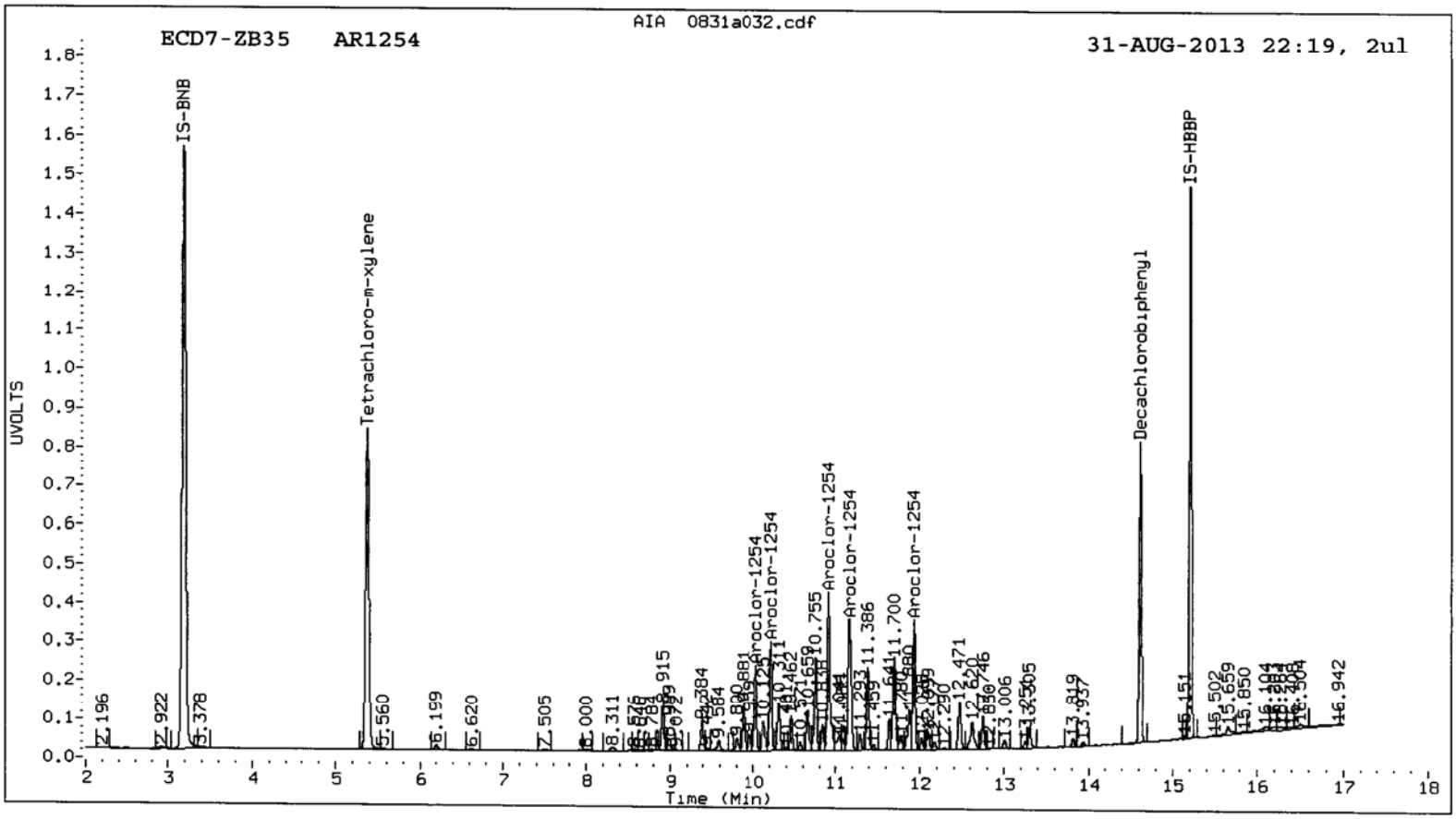
Total PCB Area Col1 (5.835 - 14.488) = 10282885 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 18723138 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

XB89 01545


ECD7-ZB5 AR1254
AIA 0831a032.cdf
31-AUG-2013 22:19, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


ECD7-ZB35 AR1254
AIA 0831a032.cdf
31-AUG-2013 22:19, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)

XDS9:01546

Analytical Resources Inc.
Dual Column 8082 PCB Quantitation Report

Data file 1: 20130816.b/0831-1.b/0831a033.d
Data file 2: 20130816.b/0831-2.b/0831a033.d
Method: /chem2/ecd7.i/20130816.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 31-AUG-2013 22:41
Report Date: 09/02/2013 14:10
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.736	0.001	2601188	5.373	0.001	4666545	41.0	38.4	6.5	Tetrachloro-m-xylene
14.588	0.000	1771751	14.615	0.002	2864547	37.1	35.2	5.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.4	95.9
Decachlorobiphenyl	92.8	88.0

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5152160	5427476	5.3
Hexabromobiphenyl	3127538	3308299	5.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	9632630	9597149	-0.4
Hexabromobiphenyl	5043723	5126934	1.6

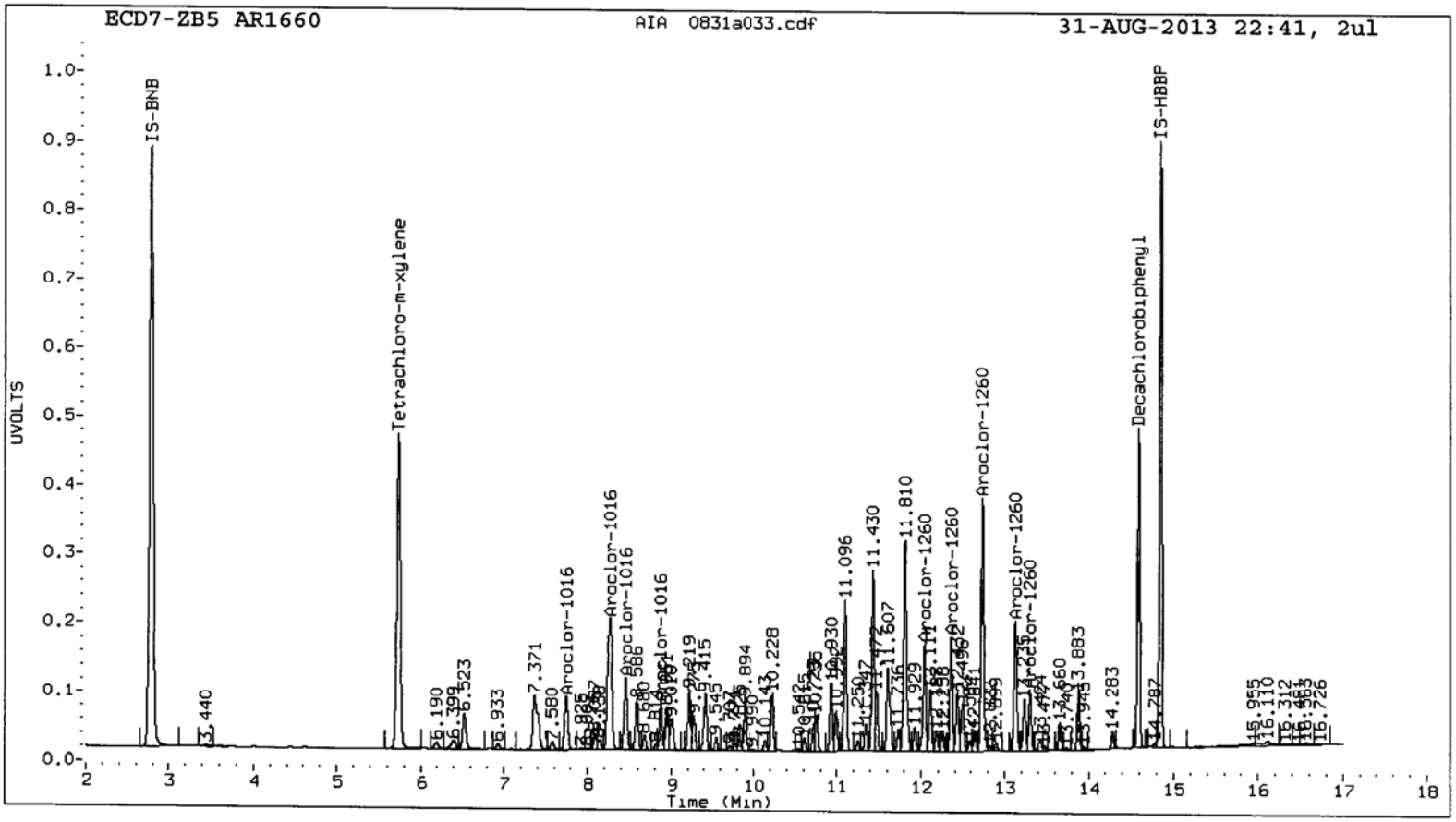
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 16-AUG-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	7.745	0.001	411462	241.6	1	6.627	0.002	546133	237.9
Aroclor-1016	2	8.265	0.001	1397431	242.6	2	7.506	0.001	1221068	234.1
Aroclor-1016	3	8.451	0.002	542330	236.3	3	8.318	0.002	2569853	236.4
Aroclor-1016	4	8.876	0.001	319110	227.6	4	8.918	0.001	743587	227.6
Total Col1Ave (4 peaks):					237.0	Total Col2Ave (4 peaks):				234.0 RPD = 1
Corrected Ave (3 peaks):					235.2	Corrected Ave (3 peaks):				232.7 RPD = 1
Aroclor-1260	1	12.042	0.001	697624	233.0	1	11.933	0.001	1772578	228.1
Aroclor-1260	2	12.358	0.001	712368	237.1	2	12.476	0.001	1425632	229.0
Aroclor-1260	3	12.728	0.001	1690192	242.5	3	12.745	0.001	2824633	230.0
Aroclor-1260	4	13.124	0.001	887962	241.5	4	13.306	0.001	1865621	224.7
Aroclor-1260	5	13.304	0.000	383639	238.6	NS	---			----
Total Col1Ave (5 peaks):					238.6	Total Col2Ave (4 peaks):				227.9 RPD = 5
Corrected Ave (4 peaks):					237.6	Corrected Ave (3 peaks):				227.2 RPD = 4

Total PCB Area Col1 (5.835 - 14.488) = 20478736 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (5.472 - 14.513) = 36928538 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical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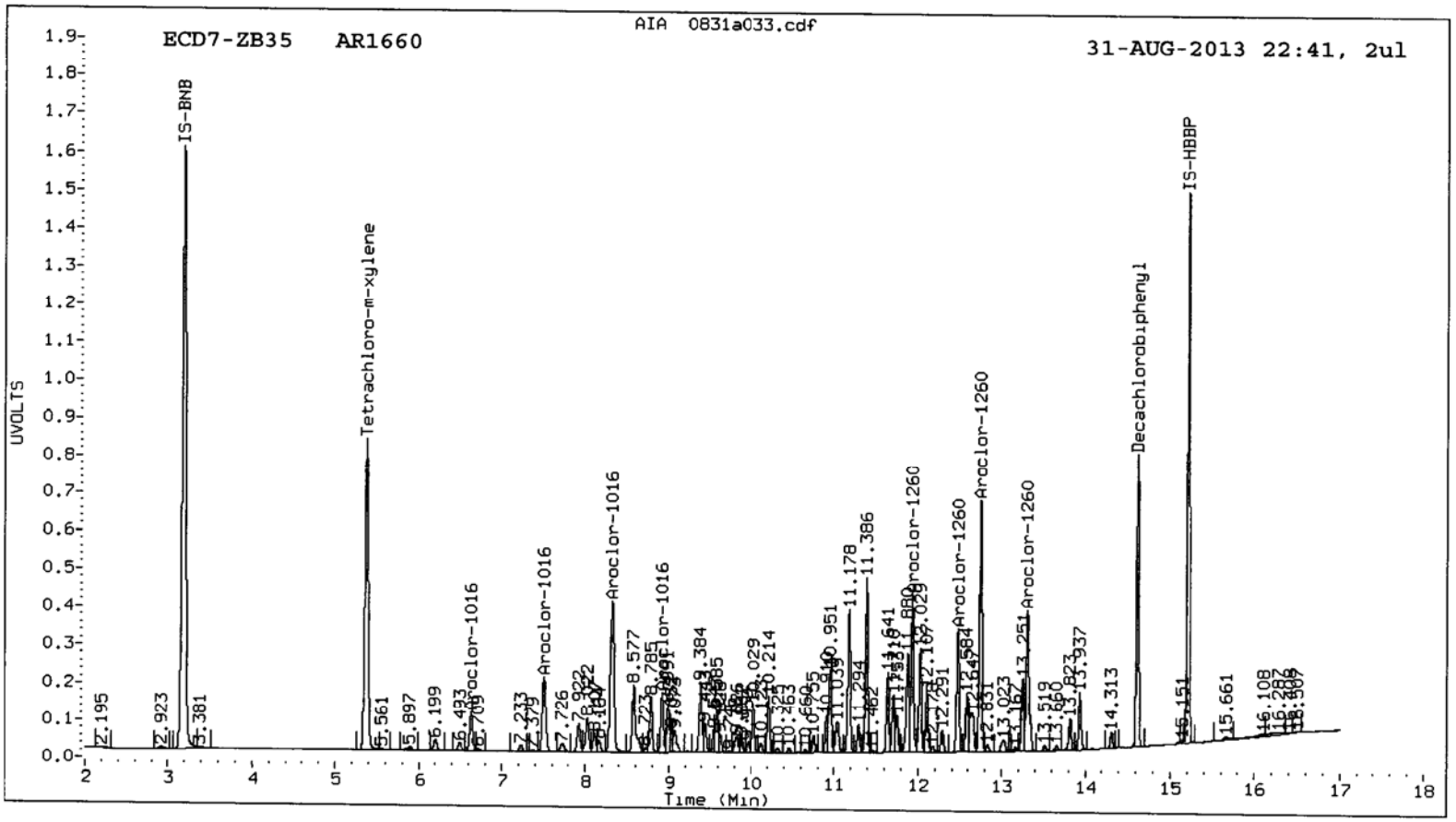
AIA 0831a033.cdf
31-AUG-2013 22:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


ECD7-ZB35 AR1660
AIA 0831a033.cdf
31-AUG-2013 22:41, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

XB89:61549

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: XB89

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: LB **Final Volume** 50.0 **Sample ID** XB89 Aspk, MBSPK

Date: 8-26-13 **Final Volume (Hg):** 50.0

	Prepcode:	SWC		
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:	B507		
	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	5mm	CVA	1.0	0.05	3007-18
Hg MBSPK	↓	CVA	1.0	0.10	↓
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.

XB89:01551

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: CB **Date:** 8-26-13 **Time:** 1110

Matrix: Soil **Block ID:** #5 **Block Temp:** 90°F **Thermometer:** RP 40

ARI Sample ID	Btl #	pH<2	Prep Code: SWC Initial Wt (g) ~~Vol~~ (mL)	Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Final Vol (mL)	Comments
CB 8/26/13 XB89 A	2	–	1.043	50.0			
" Adup	2	–	1.040				
" ASpk	2	–	1.047				
" B	2	–	1.005				
" C	2	–	1.003				
" D	1	–	1.028				
" E	1	–	1.079				
" F	1	–	1.086				
" MBI	–	–	–				
" MBISpk	–	–	–	50.0			
			CB				
			8-26-13				

Chemical/Reagent ID: HNO_3: mp2530 28272 H_2O_2: I8135 HCl: I8213 Tube lot #: 1303205

XB89 01552

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SnM
Analyst: CB
Bath Temp: 95°C
Start Time: 1130
Matrix: Soil
Date: 8-26-13
End Time: 1200

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
XB89 A	2	-	0.242	50.0	9/05 1	Y	
" A2p	2	-	0.239		1		
" A5pk	2	-	0.237		1		
" B	2	-	0.206		1		
" C	2	-	0.222		1		
" D	1	-	0.200		1		
" E	1	-	0.267		1		
" F	1	-	0.247		1		
" MB1	-	-	-		1		
" MB1spk	-	-	-	50 c.u	1	Y	

CB
8-26-13

Chemical/Reagent ID:

HNO_3: I8272
H_2SO_4: I8044
HCl: -
5% $K_2S_2O_8$: mp3525
5% $KMnO_4$: mp3527
Digest Tube Lot: 1303205

XB89:01553

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	XB89
Unacceptable Blank:	☐	Date of Event:	8-29-13
Unacceptable Duplicate:	☑	Client ID:	Anchor QEA
Unacceptable Spike:	☐	Method/Element:	ICP
Unacceptable Reference:	☐	Prep Code:	SWC

Details of Problem/Recommended Corrective Action:
ADUP/A: Cr ↑ RPD (Numbers attached)

Samples Affected:

Corrective Action Taken:

Analyst Initials: BA **Supervisor:**

Date: 8-29-13 **Date:** 8-30-13

5049F

Revision 007
6/11/10

XB89:01554

XB89

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)								
DUPLICATION:				SPIKE RECOVERY:				
	DUP	BKGD			SPIKE	BKGD		
VOLUME	100	100		VOLUME	100	100		
SAMP WT	1.04	1.043		SAMP WT	1.047	1.0430		
ELEMENT	DUP	BKGD	% RPD	ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	mg/L				mg/L	mg/L	mg/L	
Ag	0	0	#DIV/0!	Ag	0.505	0	0.5	101.0
Al			#DIV/0!	Al			2	0.0
As	0.04918	0.05023	1.82	As	2.078	0.05023	2	101.4
B			#DIV/0!	B			0.5	0.0
Ba			#DIV/0!	Ba			2	0.0
Be			#DIV/0!	Be			0.5	0.0
Ca			#DIV/0!	Ca			10	0.0
Cd	0.00229	0.0026	12.39	Cd	0.526	0.0026	0.5	104.7
Co			#DIV/0!	Co			0.5	0.0
Cr	0.311	0.1907	48.23	Cr	0.7019	0.1907	0.5	102.1
Cu	0.2407	0.2685	10.63	Cu	0 8489	0.2685	0.50	115.9
Fe			#DIV/0!	Fe			2	0.0
K			#DIV/0!	K			10	0.0
Mg			#DIV/0!	Mg			10	0.0
Mn			#DIV/0!	Mn			0.5	0.0
Mo			#DIV/0!	Mo			0.5	0.0
Na			#DIV/0!	Na			10	0.0
Ni	0.3351	0.2861	16.06	Ni	0.7969	0.2861	0.5	101.9
Pb	0.09877	0.1147	14.64	Pb	2.136	0.1147	2	101.0
Sb			#DIV/0!	Sb			2	0.0
Se			#DIV/0!	Se			2	0.0
Si			#DIV/0!	Si			10	0.0
Sn			#DIV/0!	Sn			0.5	0.0
Sr			#DIV/0!	Sr			0.5	0.0
Ti			#DIV/0!	Ti			2	0.0
Tl			#DIV/0!	Tl			2	0.0
V			#DIV/0!	V			0.5	0.0
Zn	0.6624	0.6942	4.40	Zn	1.226	0.6942	0.5	105.8

XB89: 61555

TABLE 6

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: XB89

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA)

Analysis Date: 8·30·13

	Analyst 8:30 DM	Peer 9-7-13	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	√	/	XC37 MB·SPK Hi RSD
Internal Standards	—	—	
Carry-over	—	—	
Method QC:			
CRI/CRA	√	/	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	√	/	
Matrix Spikes	√	/	
Matrix Duplicates	√	/	XB3C DUP Hi RPD
Method Blanks	√	/	
Data Distribution:			
Requested elements/isotope identified	√	/	
Correct samples identified for distribution	√	/	
Raw data match distributed data	√	/	
Data filename correct	√	/	
Narrative Comments: Notes on QC/QA:	√	/	See CAF

XB89:61557

Mercury Analysis Log

Analyst: DM Date: 8.30.13

Instrument: CETAC Page: 1 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
STD	0.0	TWM	1X			
"	0.1					
"	0.5					
"	1.0					
"	2.0					
"	5.0					
"	10.0					
ICV				8.01	%R=100	✓
ICB				-0.01		✓
CCV				4.23	%R=106	✓
CCB				-0.01		✓
CRA				0.10		✓
XB57	MB2	SPM		0.01		✓
"	PA			0.01		
"	PADUP			~~0.01~~ 0.02	DM 8.30.13 NO RPD detected	✓
"	PASPK			1.06	%R=108	✓
"	PA					
XC37	MB2			0.01		✓
"	PA			0.01		
"	PADUP			0.01	NO RPD detected	✓
"	PASPK			1.05	%R=105	✓
CCV		TWM		4.22	%R=106	✓
CCB		TWM		-0.00		✓
STD	0.0	SMM				
"	0.1					
"	0.5					
"	1.0					
"	2.0					
"	5.0					
"	10.0					

Chemical/Reagent ID:

10% $SnCl_2$: MP2539 14% NH_2OH/NaCl: MP2520

Standard ID:

Standard: 3040-6 (TWM)

3040-5 (SMM) ICV/CCV: 59-6

XB89:01558

Mercury Analysis Log

Analyst: DM
Instrument: CETAC

Date: 8-30-13
Page: 2 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments	
ICV	SMM	1X	8.31	Begin CLP %R=104	✓
ICB			-0.02		✓
CCV1			4.22	%R=106	✓
CCB1			-0.02		✓
CRA			0.11		✓
XCB3 MB1			-0.00		✓
" MB1SPK			2.17	%R=109	✓
" A			0.06		
" ADUP			0.05	No RPD Undetected	✓
" ASPK			1.19	%R=119	✓
" B					
XB75 MB1			-0.00		✓
" MB1SPK			2.12	%R=106	✓
" A			0.73		
CCV2			4.24	%R=106	✓
CCB2			-0.00		✓
XB75 ADUP			0.63	RPD=14.7	✓
" ASPK			1.68	%R=95	✓
" B					
" C					
" D					
" E					
" F					
" G					
" H					
" I					
CCV3			4.30	%R=108	✓
CCB3			-0.01		✓
XB75 J					
" K	↓	↓			

Chemical/Reagent ID:
10% $SnCl_2$: MP2539
14% NH_2OH/NaCl: MP2520

Standard ID:
Standard: 3040-5
ICV/CCV: 59.6

XB89 01559

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 8.30.13

Page: 3 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
XB75 L	5mm	1x		
XB76 MB1			0.00	✓
" MB1SPK			2.21	%R=111 ✓
" A			1.24	
" ADUP			0.84	RPD=98.4 High X
" ASPK			2.34	%R=110 ✓
" B				
" C				
CCV4			4.29	%R=107 ✓
CCB4			-0.02	✓
XB76 D				
" E				
" F				
" G				
" H				
" I				
" J				
" K				
" L				
XB89 MB1			-0.00	✓
CCV5			4.30	%R=108 ✓
CCB5			-0.01	✓
XB89 MB1SPK			2.15	%R=108 ✓
" A			0.32	
" ADUP			0.34	✓
" ASPK			1.47	%R=115 ✓
" B				
" C				
" D				
" E				

Chemical/Reagent ID:

10% $SnCl_2$: MP2539

14% NH_2OH/NaCl: MP2520

Standard ID:

Standard: 3040-5

ICV/CCV: 59-6

XB89:01560

Mercury Analysis Log

Analyst: DM

Instrument: CETAC

Date: 8-30-13

Page: 4 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
XB89 F	SMM	1X		
CCV6			4.30	%R=108 ✓
CCB6			-0.00	✓
XB76 A			1.24	
" ADUP			0.84	RPD = 38.4 High X
" ASPK			2.35	%R=110 ✓
CCV7			4.30	%R=108 ✓
CCB7			-0.01	END CLP ✓
XC52 MB			-0.00	✓
" MBSPK			2.17	%R=109 ✓
" A				
" B				
" C				
" D				
" E				
" F				
" G				
XC57 MB1			0.06	✓
CCV			4.32	%R=108 ✓
CCB			-0.00	✓
XC57 MBSPK			1.95	%R=98 HiRSD ✓
" A			0.32	
" ADUP			0.17	✓
" ASPK			1.28	%R=106 ✓
CCV			4.32	%R=108 ✓
CCB			-0.00	✓
		8-30-13 DM		

9-3-13

Chemical/Reagent ID:

10% $SnCl_2$: MP2539

14% NH_2OH/NaCl: MP2520

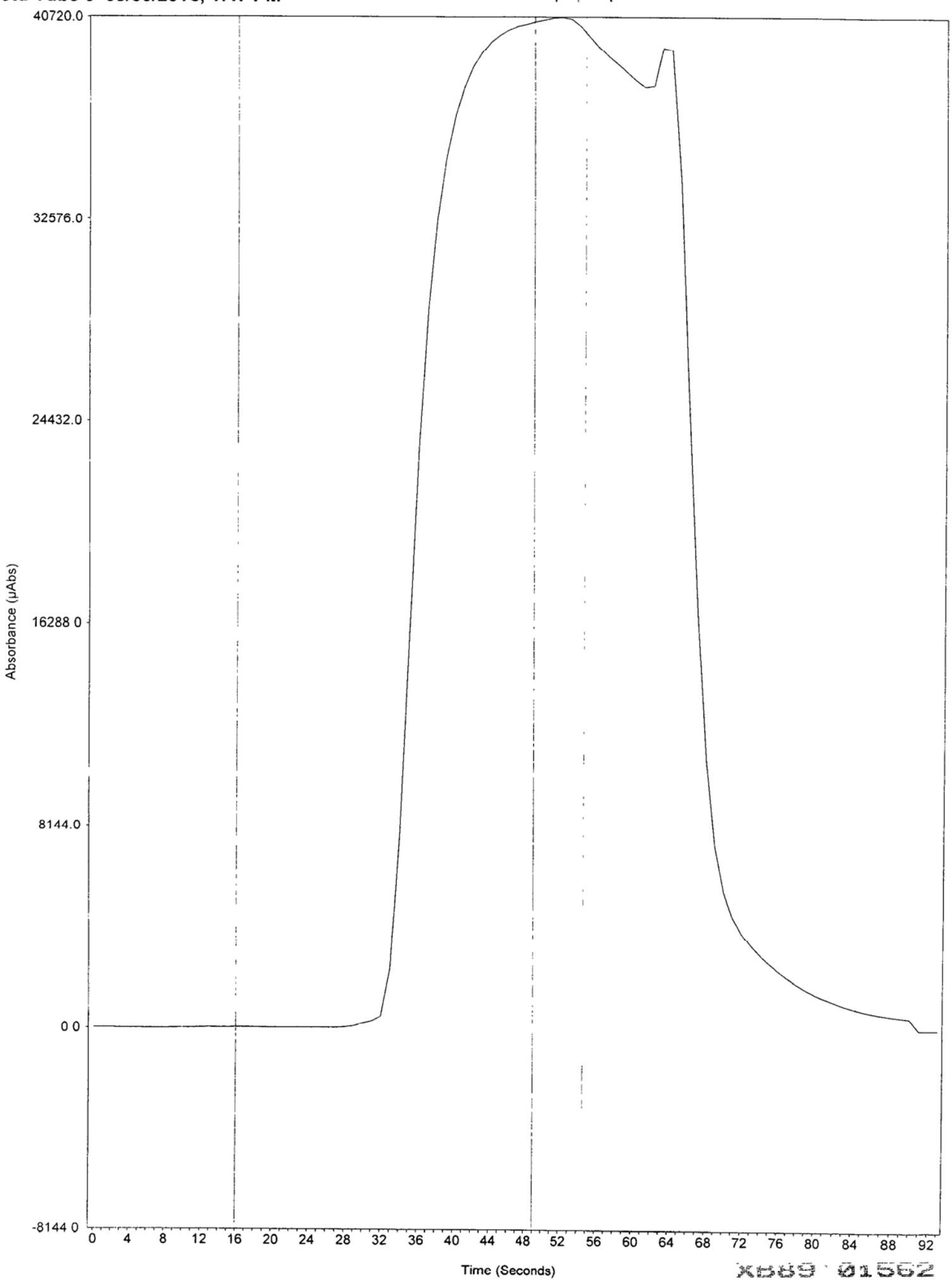
Standard ID:

Standard: 3340-5

ICV/CCV: 59.6

XB89 01561

Std Tube 6 08/30/2013, 1:47 PM



XB89 01562

CETAC Hg Analysis Report - 13083000.DB - Friday, August 30, 2013, 5:07:26 PM

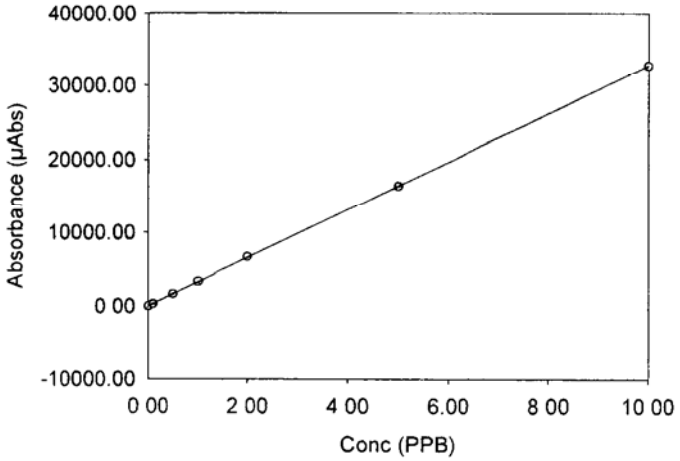
Analyst
Date Started Friday, August 30, 2013, 14:28:58
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	30-Aug-2013, 14:28	-0.00	2.30	-0.99	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	30-Aug-2013, 14:30	0.00	3.20	-19.40	1.00	
Standard #1	30-Aug-2013, 14:32	0 10	0.64	311.00	1.00	
Standard #2	30-Aug-2013, 14:34	0.50	0.19	1640.00	1 00	
Standard #3	30-Aug-2013, 14:35	1.00	0.16	3370 00	1.00	
Standard #4	30-Aug-2013, 14:37	2.00	0.22	6700.00	1.00	
Standard #5	30-Aug-2013, 14:38	5.00	0.14	16400.00	1.00	
Standard #6	30-Aug-2013, 14:40	10.00	0 34	32800.00	1.00	

SMM

Calibration Data



Int.	0 000
Slope	3280 998
Correlation	0.99998

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	30-Aug-2013, 14:47	8.31	0.31	27300.00	1.00	
ICB	30-Aug-2013, 14:49	-0.02	6.73	-57.50	1.00	

Begin CAP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	30-Aug-2013, 14:50	4.22	0.22	13800.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	30-Aug-2013, 14:52	-0.00	8.44	-15.80	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	30-Aug-2013, 14:54	0.11	0.43	367.00	1.00	
XC83 MB1 SMM	30-Aug-2013, 14:55	-0.00	30.20	-9 01	1.00	
XC83 MB1SPK SMM	30-Aug-2013, 14:57	2.17	0 26	7110 00	1.00	
XC83 A SMM	30-Aug-2013, 14:58	0.06	1.37	202.00	1 00	
XC83 ADUP SMM	30-Aug-2013, 15:00	0.08	2.19	253.00	1.00	
XC83 ASPK SMM	30-Aug-2013, 15:02	1.19	0.52	3910.00	1.00	
XC83 B SMM	30-Aug-2013, 15:03	0.13	1.31	417.00	1.00	
XB75 MB1 SMM	30-Aug-2013, 15.05	-0.00	15.70	-11.60	1.00	
XB75 MB1SPK SMM	30-Aug-2013, 15:06	2.12	0 25	6950 00	1.00	
XB75 A SMM	30-Aug-2013, 15:08	0.73	0.20	2390.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	30-Aug-2013, 15:10	4.24	0.29	13900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	30-Aug-2013, 15:11	-0.00	19.20	-7 52	1.00	

CETAC Hg Analysis Report - 13083000.DB - Friday, August 30, 2013, 5:07:26 PM

Analyst
Date Started Friday, August 30, 2013, 15:13:33
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
XB75 ADUP SMM	30-Aug-2013, 15:13	0.63	0.12	2080.00	1.00	
XB75 ASPK SMM	30-Aug-2013, 15.15	1.68	0.23	5510 00	1.00	
XB75 B SMM	30-Aug-2013, 15:16	0.13	0.45	428 00	1.00	
XB75 C SMM	30-Aug-2013, 15:18	0.05	1.66	172.00	1.00	
XB75 D SMM	30-Aug-2013, 15:19	0 13	1.78	438.00	1 00	
XB75 E SMM	30-Aug-2013, 15:21	0.08	0.44	252.00	1.00	
XB75 F SMM	30-Aug-2013, 15:23	0.05	1.39	180.00	1.00	
XB75 G SMM	30-Aug-2013, 15.24	0.93	0.25	3060 00	1.00	
XB75 H SMM	30-Aug-2013, 15 26	0 82	0 34	2680.00	1.00	
XB75 I SMM	30-Aug-2013, 15.28	0.10	0.26	328.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	30-Aug-2013, 15:29	4.30	0.31	14100 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	30-Aug-2013, 15:31	-0.01	7.67	-37.10	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
XB75 J SMM	30-Aug-2013, 15.33	0 07	0.20	217 00	1.00	
XB75 K SMM	30-Aug-2013, 15.34	0.05	0 87	169.00	1 00	
XB75 L SMM	30-Aug-2013, 15:36	0.27	0.33	871.00	1 00	
XB76 MB1 SMM	30-Aug-2013, 15:37	0.00	61 90	3.57	1.00	
XB76 ~~MBSPK~~ SMM MBSPK	30-Aug-2013, 15:39	2.21	0.21	7240.00	1.00	
XB76 A SMM	30-Aug-2013, 15:41	1.24	0 31	4060.00	1.00	
XB76 ADUP SMM 0.0 6.35 3	30-Aug-2013, 15:42	0 84	0.34	2760 00	1.00	Hi RSD
XB76 ASPK SMM	30-Aug-2013, 15:44	2.34	0.25	7680.00	1 00	
XB76 B SMM	30-Aug-2013, 15:45	0.15	0.54	495.00	1.00	
XB76 C SMM	30-Aug-2013, 15:47	0 08	2.23	265 00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	30-Aug-2013, 15:49	4.29	0.23	14100.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	30-Aug-2013, 15:50	-0.02	5.86	-57.40	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
XB76 D SMM	30-Aug-2013, 15:52	0.19	0.22	613.00	1.00	
XB76 E SMM	30-Aug-2013, 15:54	0.07	0 72	239 00	1.00	
XB76 F SMM	30-Aug-2013, 15:55	0.05	8 28	178.00	1 00	
XB76 G SMM	30-Aug-2013, 15:57	0.22	0.35	717.00	1 00	
XB76 H SMM	30-Aug-2013, 15:59	0.04	4.12	129.00	1.00	
XB76 I SMM	30-Aug-2013, 16:00	0.11	1 21	360.00	1.00	
XB76 J SMM	30-Aug-2013, 16:02	0.11	0.91	353.00	1 00	
XB76 K SMM	30-Aug-2013, 16 03	0 12	1.95	391.00	1 00	
XB76 L SMM	30-Aug-2013, 16:05	0.03	1.15	113.00	1.00	
XB89 MB1 SMM	30-Aug-2013, 16:07	-0.00	133.00	-7.71	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	30-Aug-2013, 16:08	4 30	0.21	14100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	30-Aug-2013, 16:10	-0.01	6 25	-41.20	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
XB89 MB1SPK SMM	30-Aug-2013, 16 12	2 15	0 18	7060.00	1.00	
XB89 A SMM	30-Aug-2013, 16:13	0.32	0.12	1060.00	1 00	
XB89 ADUP SMM	30-Aug-2013, 16:15	0.34	0.21	1100.00	1.00	
XB89 ASPK SMM	30-Aug-2013, 16:17	1.47	0.32	4830.00	1.00	
XB89 B SMM	30-Aug-2013, 16:18	0.29	0.34	956.00	1.00	
XB89 C SMM	30-Aug-2013, 16:20	0.25	0.11	821.00	1.00	
XB89 D SMM	30-Aug-2013, 16:21	0.23	0 27	741.00	1.00	

CETAC Hg Analysis Report - 13083000.DB - Friday, August 30, 2013, 5:07:26 PM

Analyst
Date Started Friday, August 30, 2013, 16.23:33
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
XB89 E SMM	30-Aug-2013, 16:23	0.86	0.20	2820.00	1.00	
XB89 F SMM	30-Aug-2013, 16:25	0.50	0.28	1650.00	1.00	
QC Standard	30-Aug-2013, 16:26	4.30	0.21	14100 00	1 00	
QC Blank	30-Aug-2013, 16:28	-0.00	44.60	-13.60	1.00	
XB76 A SMM	30-Aug-2013, 16.30	1.24	0.18	4050.00	1.00	
XB76 ADUP SMM	30-Aug-2013, 16.32	0.84	0 60	2750.00	1 00	- H; RPD
XB76 ASPK SMM	30-Aug-2013, 16:33	2.35	0.34	7700 00	1.00	
QC Standard	30-Aug-2013, 16:35	4.30	0.16	14100.00	1.00	
QC Blank	30-Aug-2013, 16:37	-0.01	3.86	-42 50	1.00	ENDCLP
XC52 MB SMM	30-Aug-2013, 16:38	-0.00	17.50	-16.40	1.00	
XC52 MBSPK SMM	30-Aug-2013, 16:40	2.17	0.35	7120.00	1.00	
XC52 A SMM	30-Aug-2013, 16:42	-0.01	13.40	-35.00	1 00	
XC52 B SMM	30-Aug-2013, 16 43	0.07	1.08	228.00	1 00	
XC52 C SMM	30-Aug-2013, 16:45	0.02	4.13	63.10	1 00	
XC52 D SMM	30-Aug-2013, 16:46	0 01	7.92	38.50	1.00	
XC52 E SMM	30-Aug-2013, 16:48	0.06	0.51	211.00	1.00	
XC52 F SMM	30-Aug-2013, 16 50	0.07	4.24	239.00	1 00	
XC52 G SMM	30-Aug-2013, 16:51	0.07	2.18	214 00	1 00	
XC37 MB1 SMM	30-Aug-2013, 16:53	0.06	3.75	192 00	1.00	
QC Standard	30-Aug-2013, 16:55	4.32	0.36	14200.00	1.00	
QC Blank	30-Aug-2013, 16:56	-0 00	27.70	-5.33	1.00	
XC37 MB1SPK SMM	30-Aug-2013, 16:58	1.95	8.08	6390.00	1.00	Q
XC37 A SMM	30-Aug-2013, 16:59	0 22	0.28	722 00	1.00	
XC37 ADUP SMM	30-Aug-2013, 17:01	0.17	0.70	542 00	1 00	
XC37 ASPK SMM	30-Aug-2013, 17:03	1.28	0.30	4190 00	1 00	
QC Standard	30-Aug-2013, 17:04	4.32	0.29	14200.00	1.00	
QC Blank	30-Aug-2013, 17:06	-0.00	22.80	-13.30	1.00	

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1 40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0 50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2.00 PPB
Calibration Standard #5 Conc.:	5.00 PPB
Calibration Standard #6 Conc.:	10.00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% . 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 .. 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: SmM Instrument: CETAC

Analyst: CB Date: 8-26-12

Bath Temp: 95°C Start Time: 1310 End Time: 1340

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	3040-5	0.01	↓	0.1	2
STD2	↓	0.05	↓	0.5	2
STD3	↓	0.10	↓	1.0	2
STD4	↓	0.20	↓	2.0	2
STD5	↓	0.50	↓	5.0	2
STD6	↓	1.00	↓	10.0	2
CRA	↓	0.01	↓	0.1	1
ICB/CCB	—	0.00	↓	0.0	3
ICV/LCS	5mL6	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	2

Chemical/Reagent ID:

HNO_3: I8272 H_2SO_4: I8044 HCl: —

5% $K_2S_2O_8$: mp2525 5% $KMnO_4$: mp2527

Prep Code: _____ Instrument: _____

Analyst: _____ Date: _____

Bath Temp: _____ Start Time: _____ End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ H_2SO_4: _____ HCl: _____

5% $K_2S_2O_8$: _____ 5% $KMnO_4$: _____

XBB9:01567

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm
Analyst: CB
Bath Temp: 95°C
Start Time: 1130
Matrix: Soil
Date: 8-26-13
End Time: 1200

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
XB89 A	2	-	0.242	50.0	9/cs	Y	
" A2e	2	-	0.239		1		
" A5ek	2	-	0.237		1		
" B	2	-	0.206		1		
" C	2	-	0.222		1		
" D	1	-	0.200		1		
" E	1	-	0.267		1		
" F	1	-	0.247		1		
" MB1	-	-	-		1		
" MB1SpK	-	-	-	50.0	1	Y	

CB
8-26-13

Chemical/Reagent ID:

HNO_3: I8272
H_2SO_4: I8044
HCl: -
5% $K_2S_2O_8$: M03525
5% $KMnO_4$: M03527
Digest Tube Lot: 1303205

XB89:01568

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 8-30-13

ICP2	Analyst BA 9-2-13	Peer 9-2-13	Comment
Logbooks			
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	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysis Notes and Actions	—	✓	

XB89:01569

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 8-28-13 Analysis Date: 8-30-13 Analyst: BA

LR Date: 6-10-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted. BA 8-30-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			B1559
		2			B1549
		3			B1550
		~~3~~4			B1551
		45			B1552
		ICV			B323
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		XC27 MB	SWC	2	
		XB89 E		5	
		F		2	
		XC27 ADUP			
		A			
		ASPK			Al, Fe, Mg, ~~Mn~~ STL
		B			
		MBSPK			
		CCV2			
		CCB2			End XB89
		XC52 MB	SWC	2	
		A			

XB89 : 01576

Analysis Begun

Start Time: 8/30/2013 9:22:22 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/30/2013 7:34:47 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130830
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: 8/30/2013 9:22:24 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2737582.8	11221.73	0.41%	100.0	%
ScR 361.383	310378.2	1320.79	0.43%	100.0	%
Ag 328.068†	-105.3	19.42	18.44%	[0.00]	mg/L
Al 308.215†	156.8	2.15	1.37%	[0.00]	mg/L
As 188.979†	-10.2	0.24	2.32%	[0.00]	mg/L
B 249.677†	-41.4	4.59	11.09%	[0.00]	mg/L
Ba 233.527†	38.1	2.40	6.30%	[0.00]	mg/L
Be 313.042†	645.8	10.10	1.56%	[0.00]	mg/L
Ca 317.933†	48.4	13.44	27.79%	[0.00]	mg/L
Cd 228.802†	216.9	2.34	1.08%	[0.00]	mg/L
Co 228.616†	-105.9	3.86	3.65%	[0.00]	mg/L
Cr 267.716†	-137.9	1.84	1.33%	[0.00]	mg/L
Cu 324.752†	2662.5	37.14	1.40%	[0.00]	mg/L
Fe 273.955†	2.2	1.40	64.98%	[0.00]	mg/L
K 766.490†	279.8	18.11	6.47%	[0.00]	mg/L
Mg 279.077†	44.9	2.63	5.86%	[0.00]	mg/L
Mn 257.610†	191.5	3.33	1.74%	[0.00]	mg/L
Mo 202.031†	65.1	0.85	1.30%	[0.00]	mg/L
Na 589.592†	-521.4	22.68	4.35%	[0.00]	mg/L
Na 330.237†	-55.6	5.00	9.00%	[0.00]	mg/L
Ni 231.604†	20.6	3.00	14.59%	[0.00]	mg/L
Pb 220.353†	-30.7	4.64	15.09%	[0.00]	mg/L
Sb 206.836†	24.7	2.78	11.27%	[0.00]	mg/L
Se 196.026†	-36.2	3.58	9.87%	[0.00]	mg/L
Si 288.158†	42.0	3.65	8.68%	[0.00]	mg/L
Sn 189.927†	-8.4	4.13	49.26%	[0.00]	mg/L
Sr 421.552†	243.4	36.33	14.93%	[0.00]	mg/L
Ti 334.903†	-79.2	9.39	11.86%	[0.00]	mg/L
Tl 190.801†	-24.8	1.74	7.02%	[0.00]	mg/L
V 292.402†	56.6	9.56	16.88%	[0.00]	mg/L
Zn 206.200†	-16.0	1.44	9.04%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 8/30/2013 9:26:39 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2763947.5	39409.48	1.43%	101.0	%
ScR 361.383	313590.3	246.05	0.08%	101.0	%
Ba 233.527†	50841.6	240.73	0.47%	[10]	mg/L
Cd 228.802†	225437.7	1657.59	0.74%	[10]	mg/L
Co 228.616†	348959.4	1142.63	0.33%	[10]	mg/L
Cr 267.716†	65902.1	290.74	0.44%	[10]	mg/L
Cu 324.752†	2702269.6	40690.80	1.51%	[10]	mg/L
Mn 257.610†	463270.4	2396.84	0.52%	[10]	mg/L
V 292.402†	1242180.4	7955.27	0.64%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 8/30/2013 9:28:41 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2756839.9	27260.68	0.99%	100.7	%
ScR 361.383	308509.1	4122.44	1.34%	99.40	%
Ag 328.068†	212938.6	1750.84	0.82%	[1.0]	mg/L
As 188.979†	13316.9	154.79	1.16%	[10]	mg/L
B 249.677†	66061.5	540.34	0.82%	[10]	mg/L
Be 313.042†	2651034.1	35001.55	1.32%	[5.0]	mg/L
Na 589.592†	657336.1	11689.11	1.78%	[50]	mg/L
Ni 231.604†	35759.4	405.44	1.13%	[10]	mg/L
Pb 220.353†	78802.2	884.89	1.12%	[10]	mg/L
Se 196.026†	14548.8	183.38	1.26%	[10]	mg/L
Sr 421.552†	4599386.9	73069.98	1.59%	[5]	mg/L
Tl 190.801†	17424.5	129.95	0.75%	[10]	mg/L
Zn 206.200†	36418.3	372.44	1.02%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 8/30/2013 9:31:15 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2786363.3	40402.23	1.45%	101.8	%
ScR 361.383	319253.4	1564.28	0.49%	102.9	%
Mo 202.031†	179034.8	2645.56	1.48%	[10]	mg/L
Sb 206.836†	28064.5	340.71	1.21%	[10]	mg/L
Si 288.158†	14983.2	138.48	0.92%	[10]	mg/L
Sn 189.927†	42191.5	752.45	1.78%	[10]	mg/L
Ti 334.903†	211590.3	652.03	0.31%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 8/30/2013 9:33:30 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2648145.6	4752.27	0.18%	96.73	%
ScR 361.383	316152.1	1468.28	0.46%	101.9	%
Al 308.215†	34541.2	224.29	0.65%	[30]	mg/L
Ca 317.933†	277787.5	2272.16	0.82%	[30]	mg/L
Fe 273.955†	131275.2	933.82	0.71%	[100]	mg/L
K 766.490†	202597.0	2125.02	1.05%	[100]	mg/L
Mg 279.077†	25511.2	223.27	0.88%	[30]	mg/L
Na 330.237†	2741.8	25.22	0.92%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	212900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1151	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1332	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6606	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	5084	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	530200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	9260	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22540	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	34900	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6590	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	270200	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1313	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2026	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	850.4	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	46330	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17900	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13150	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	27.42	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3576	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7880	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2806	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1455	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1498	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4219	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	919900	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21160	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1742	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	124200	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3642	0.00000	1.000000	

Analysis Begun

Start Time: 8/30/2013 9:36:43 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/30/2013 7:34:47 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Sample Information\CRISETb.sif
Batch ID:
Results Data Set: I2130830
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV

Autosampler Location: 7
Date Collected: 8/30/2013 9:36:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2774642.1	101.4	%	0.18				0.17%
ScR 361.383	311220.2	100.3	%	0.22				0.22%
Ag 328.068†	223001.7	1.048	mg/L	0.0081	1.048	mg/L	0.0081	0.77%
Al 308.215†	2442.8	2.088	mg/L	0.0113	2.088	mg/L	0.0113	0.54%
As 188.979†	2679.2	2.040	mg/L	0.0042	2.040	mg/L	0.0042	0.21%
B 249.677†	6707.1	1.014	mg/L	0.0056	1.014	mg/L	0.0056	0.55%
Ba 233.527†	5207.3	1.024	mg/L	0.0038	1.024	mg/L	0.0038	0.37%
Be 313.042†	531164.0	1.002	mg/L	0.0043	1.002	mg/L	0.0043	0.42%
Ca 317.933†	19608.7	2.118	mg/L	0.0094	2.118	mg/L	0.0094	0.44%
Cd 228.802†	23803.0	1.046	mg/L	0.0028	1.046	mg/L	0.0028	0.27%
Co 228.616†	34601.7	0.9897	mg/L	0.00322	0.9897	mg/L	0.00322	0.33%
Cr 267.716†	6863.0	1.041	mg/L	0.0055	1.041	mg/L	0.0055	0.52%
Cu 324.752†	281198.4	1.040	mg/L	0.0025	1.040	mg/L	0.0025	0.24%
Fe 273.955†	2806.2	2.131	mg/L	0.0116	2.131	mg/L	0.0116	0.54%
K 766.490†	41090.1	20.28	mg/L	0.111	20.28	mg/L	0.111	0.55%
Mg 279.077†	1731.4	2.043	mg/L	0.0089	2.043	mg/L	0.0089	0.43%
Mn 257.610†	45249.3	0.9771	mg/L	0.00504	0.9771	mg/L	0.00504	0.52%
Mo 202.031†	17899.3	0.9997	mg/L	0.00218	0.9997	mg/L	0.00218	0.22%
Na 589.592†	661526.5	50.32	mg/L	0.170	50.32	mg/L	0.170	0.34%
Na 330.237†	1453.6	53.00	mg/L	0.415	53.00	mg/L	0.415	0.78%
Ni 231.604†	3638.1	1.018	mg/L	0.0071	1.018	mg/L	0.0071	0.70%
Pb 220.353†	15913.0	2.020	mg/L	0.0047	2.020	mg/L	0.0047	0.23%
Sb 206.836†	5778.1	2.058	mg/L	0.0029	2.058	mg/L	0.0029	0.14%
Se 196.026†	2958.8	2.032	mg/L	0.0033	2.032	mg/L	0.0033	0.16%
Si 288.158†	3041.1	2.034	mg/L	0.0038	2.034	mg/L	0.0038	0.19%
Sn 189.927†	4159.7	0.9874	mg/L	0.00394	0.9874	mg/L	0.00394	0.40%
Sr 421.552†	923511.6	1.004	mg/L	0.0047	1.004	mg/L	0.0047	0.47%
Ti 334.903†	21338.3	1.007	mg/L	0.0039	1.007	mg/L	0.0039	0.38%
Tl 190.801†	3622.6	2.071	mg/L	0.0011	2.071	mg/L	0.0011	0.05%
V 292.402†	124731.5	1.008	mg/L	0.0071	1.008	mg/L	0.0071	0.70%
Zn 206.200†	3674.2	1.009	mg/L	0.0037	1.009	mg/L	0.0037	0.37%

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 8/30/2013 9:40:47 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 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	2821899.9	103.1	%	0.59				0.57%
ScR 361.383	321658.3	103.6	%	0.87				0.84%
Ag 328.068†	63.7	0.00030	mg/L	0.000025	0.00030	mg/L	0.000025	8.30%
Al 308.215†	-4.7	-0.00414	mg/L	0.003126	-0.00414	mg/L	0.003126	75.49%
As 188.979†	6.0	0.00447	mg/L	0.001832	0.00447	mg/L	0.001832	40.95%
B 249.677†	15.8	0.00240	mg/L	0.000973	0.00240	mg/L	0.000973	40.55%
Ba 233.527†	-0.3	-0.00006	mg/L	0.000601	-0.00006	mg/L	0.000601	>999.9%
Be 313.042†	-18.0	-0.00003	mg/L	0.000027	-0.00003	mg/L	0.000027	80.26%
Ca 317.933†	-0.5	-0.00006	mg/L	0.000215	-0.00006	mg/L	0.000215	384.96%
Cd 228.802†	-2.1	-0.00012	mg/L	0.000186	-0.00012	mg/L	0.000186	157.84%
Co 228.616†	-0.8	-0.00002	mg/L	0.000125	-0.00002	mg/L	0.000125	511.13%
Cr 267.716†	3.9	0.00060	mg/L	0.000373	0.00060	mg/L	0.000373	62.41%
Cu 324.752†	-63.6	-0.00024	mg/L	0.000173	-0.00024	mg/L	0.000173	73.47%
Fe 273.955†	2.3	0.00176	mg/L	0.000745	0.00176	mg/L	0.000745	42.20%
K 766.490†	20.8	0.01029	mg/L	0.036986	0.01029	mg/L	0.036986	359.41%
Mg 279.077†	-0.6	-0.00066	mg/L	0.009363	-0.00066	mg/L	0.009363	>999.9%
Mn 257.610†	-4.1	-0.00009	mg/L	0.000142	-0.00009	mg/L	0.000142	162.27%
Mo 202.031†	36.9	0.00206	mg/L	0.000391	0.00206	mg/L	0.000391	18.98%
Na 589.592†	79.1	0.00602	mg/L	0.002257	0.00602	mg/L	0.002257	37.50%
Na 330.237†	-5.9	-0.2138	mg/L	0.32779	-0.2138	mg/L	0.32779	153.34%
Ni 231.604†	-1.8	-0.00049	mg/L	0.001222	-0.00049	mg/L	0.001222	247.63%
Pb 220.353†	4.3	0.00054	mg/L	0.000551	0.00054	mg/L	0.000551	101.80%
Sb 206.836†	7.7	0.00273	mg/L	0.001550	0.00273	mg/L	0.001550	56.83%
Se 196.026†	0.4	0.00029	mg/L	0.001008	0.00029	mg/L	0.001008	343.43%
Si 288.158†	-1.9	-0.00128	mg/L	0.003680	-0.00128	mg/L	0.003680	287.96%
Sn 189.927†	2.0	0.00048	mg/L	0.000541	0.00048	mg/L	0.000541	112.47%
Sr 421.552†	-13.4	-0.00001	mg/L	0.000035	-0.00001	mg/L	0.000035	238.01%
Ti 334.903†	8.9	0.00042	mg/L	0.000234	0.00042	mg/L	0.000234	56.05%
Tl 190.801†	4.1	0.00233	mg/L	0.002707	0.00233	mg/L	0.002707	116.21%
V 292.402†	22.2	0.00018	mg/L	0.000237	0.00018	mg/L	0.000237	130.16%
Zn 206.200†	-0.4	-0.00011	mg/L	0.000306	-0.00011	mg/L	0.000306	267.83%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 8/30/2013 9:45:02 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	235.0 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	2788509.9	101.9	%	0.14				0.14%
ScR 361.383	314862.1	101.4	%	0.24				0.24%
Ag 328.068†	678.1	0.00319	mg/L	0.000275	0.00319	mg/L	0.000275	8.63%
Al 308.215†	59.5	0.05157	mg/L	0.006491	0.05157	mg/L	0.006491	12.59%
As 188.979†	69.0	0.05194	mg/L	0.002837	0.05194	mg/L	0.002837	5.46%
B 249.677†	141.7	0.02144	mg/L	0.000844	0.02144	mg/L	0.000844	3.94%
Ba 233.527†	19.0	0.00372	mg/L	0.000125	0.00372	mg/L	0.000125	3.36%
Be 313.042†	457.8	0.00086	mg/L	0.000040	0.00086	mg/L	0.000040	4.62%
Ca 317.933†	445.1	0.04807	mg/L	0.001423	0.04807	mg/L	0.001423	2.96%
Cd 228.802†	48.9	0.00189	mg/L	0.000056	0.00189	mg/L	0.000056	2.99%
Co 228.616†	106.7	0.00305	mg/L	0.000099	0.00305	mg/L	0.000099	3.25%
Cr 267.716†	37.3	0.00566	mg/L	0.000204	0.00566	mg/L	0.000204	3.60%
Cu 324.752†	519.1	0.00192	mg/L	0.000118	0.00192	mg/L	0.000118	6.13%
Fe 273.955†	69.9	0.05326	mg/L	0.000691	0.05326	mg/L	0.000691	1.30%
K 766.490†	1017.6	0.5023	mg/L	0.02696	0.5023	mg/L	0.02696	5.37%
Mg 279.077†	48.5	0.05701	mg/L	0.001967	0.05701	mg/L	0.001967	3.45%
Mn 257.610†	42.3	0.00092	mg/L	0.000092	0.00092	mg/L	0.000092	10.02%
Mo 202.031†	92.7	0.00517	mg/L	0.000101	0.00517	mg/L	0.000101	1.95%
Na 589.592†	6526.6	0.4964	mg/L	0.00323	0.4964	mg/L	0.00323	0.65%
Na 330.237†	15.7	0.5720	mg/L	0.21557	0.5720	mg/L	0.21557	37.69%
Ni 231.604†	30.0	0.00839	mg/L	0.001110	0.00839	mg/L	0.001110	13.24%
Pb 220.353†	158.4	0.02012	mg/L	0.000451	0.02012	mg/L	0.000451	2.24%
Sb 206.836†	143.2	0.05105	mg/L	0.001727	0.05105	mg/L	0.001727	3.38%
Se 196.026†	73.5	0.05048	mg/L	0.003742	0.05048	mg/L	0.003742	7.41%
Si 288.158†	87.7	0.05852	mg/L	0.003406	0.05852	mg/L	0.003406	5.82%
Sn 189.927†	43.1	0.01024	mg/L	0.000055	0.01024	mg/L	0.000055	0.54%
Sr 421.552†	863.3	0.00094	mg/L	0.000029	0.00094	mg/L	0.000029	3.11%
Ti 334.903†	103.1	0.00486	mg/L	0.000469	0.00486	mg/L	0.000469	9.65%
Tl 190.801†	85.3	0.04893	mg/L	0.000800	0.04893	mg/L	0.000800	1.63%
V 292.402†	356.2	0.00289	mg/L	0.000055	0.00289	mg/L	0.000055	1.90%
Zn 206.200†	35.0	0.00962	mg/L	0.000393	0.00962	mg/L	0.000393	4.08%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 8/30/2013 9:49:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	235.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2717176.8	99.25	%	0.340				0.34%
ScR 361.383	311922.4	100.5	%	0.30				0.30%
Ag 328.068†	-234.2	-0.00110	mg/L	0.000041	-0.00110	mg/L	0.000041	3.71%
Al 308.215†	233164.3	202.5	mg/L	0.38	202.5	mg/L	0.38	0.19%
As 188.979†	49.2	0.02522	mg/L	0.005946	0.02522	mg/L	0.005946	23.58%
B 249.677†	108.3	0.01640	mg/L	0.001805	0.01640	mg/L	0.001805	11.00%
Ba 233.527†	127.9	0.00040	mg/L	0.001210	0.00040	mg/L	0.001210	299.23%
Be 313.042†	-10.3	-0.00002	mg/L	0.000012	-0.00002	mg/L	0.000012	52.24%
Ca 317.933†	940309.4	101.5	mg/L	0.55	101.5	mg/L	0.55	0.54%
Cd 228.802†	14.2	-0.00187	mg/L	0.000174	-0.00187	mg/L	0.000174	9.31%
Co 228.616†	75.5	0.00214	mg/L	0.000125	0.00214	mg/L	0.000125	5.84%
Cr 267.716†	4.6	0.00023	mg/L	0.001204	0.00023	mg/L	0.001204	528.67%
Cu 324.752†	-2302.3	0.00038	mg/L	0.000135	0.00038	mg/L	0.000135	35.33%
Fe 273.955†	262305.2	199.8	mg/L	0.74	199.8	mg/L	0.74	0.37%
K 766.490†	44.3	0.02185	mg/L	0.013759	0.02185	mg/L	0.013759	62.96%
Mg 279.077†	88398.1	103.8	mg/L	0.67	103.8	mg/L	0.67	0.64%
Mn 257.610†	78.6	-0.00004	mg/L	0.000092	-0.00004	mg/L	0.000092	226.38%
Mo 202.031†	91.3	0.00377	mg/L	0.000329	0.00377	mg/L	0.000329	8.73%
Na 589.592†	314.1	0.02389	mg/L	0.002233	0.02389	mg/L	0.002233	9.35%
Na 330.237†	-19.5	-0.7078	mg/L	0.19250	-0.7078	mg/L	0.19250	27.20%
Ni 231.604†	4.3	0.00122	mg/L	0.001332	0.00122	mg/L	0.001332	109.23%
Pb 220.353†	-407.8	-0.00358	mg/L	0.000683	-0.00358	mg/L	0.000683	19.06%
Sb 206.836†	10.5	0.00364	mg/L	0.000605	0.00364	mg/L	0.000605	16.64%
Se 196.026†	48.6	0.02785	mg/L	0.005301	0.02785	mg/L	0.005301	19.03%
Si 288.158†	-14.4	-0.00961	mg/L	0.001774	-0.00961	mg/L	0.001774	18.46%
Sn 189.927†	-77.5	-0.00999	mg/L	0.000660	-0.00999	mg/L	0.000660	6.61%
Sr 421.552†	4867.2	0.00529	mg/L Conf	0.000039	0.00529	mg/L	0.000039	0.73%
Ti 334.903†	257.1	0.00351	mg/L	0.000115	0.00351	mg/L	0.000115	3.28%
Tl 190.801†	-36.1	0.00776	mg/L	0.001313	0.00776	mg/L	0.001313	16.91%
V 292.402†	1548.6	0.00045	mg/L	0.000479	0.00045	mg/L	0.000479	106.89%
Zn 206.200†	-1.1	-0.00212	mg/L	0.000259	-0.00212	mg/L	0.000259	12.19%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 8/30/2013 9:53:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	235.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2706657.8	98.87	%	0.256				0.26%
ScR 361.383	312673.4	100.7	%	0.33				0.33%
Ag 328.068†	227141.6	1.067	mg/L	0.0065	1.067	mg/L	0.0065	0.61%
Al 308.215†	233369.6	202.7	mg/L	0.49	202.7	mg/L	0.49	0.24%
As 188.979†	1406.0	1.044	mg/L	0.0060	1.044	mg/L	0.0060	0.58%
B 249.677†	50.8	0.00567	mg/L	0.000285	0.00567	mg/L	0.000285	5.02%
Ba 233.527†	5205.4	0.9988	mg/L	0.00843	0.9988	mg/L	0.00843	0.84%
Be 313.042†	521998.0	0.9843	mg/L	0.00821	0.9843	mg/L	0.00821	0.83%
Ca 317.933†	947681.7	102.3	mg/L	0.72	102.3	mg/L	0.72	0.70%
Cd 228.802†	23775.5	1.047	mg/L	0.0025	1.047	mg/L	0.0025	0.24%
Co 228.616†	33687.2	0.9651	mg/L	0.00225	0.9651	mg/L	0.00225	0.23%
Cr 267.716†	6594.6	1.000	mg/L	0.0044	1.000	mg/L	0.0044	0.44%
Cu 324.752†	279857.9	1.045	mg/L	0.0042	1.045	mg/L	0.0042	0.40%
Fe 273.955†	263992.7	201.1	mg/L	0.69	201.1	mg/L	0.69	0.34%
K 766.490†	-13.2	-0.00650	mg/L	0.013134	-0.00650	mg/L	0.013134	201.91%
Mg 279.077†	86008.6	101.0	mg/L	0.56	101.0	mg/L	0.56	0.55%
Mn 257.610†	43950.8	0.9471	mg/L	0.00327	0.9471	mg/L	0.00327	0.35%
Mo 202.031†	101.3	0.00427	mg/L	0.000211	0.00427	mg/L	0.000211	4.94%
Na 589.592†	214.6	0.01632	mg/L	0.001568	0.01632	mg/L	0.001568	9.61%
Na 330.237†	-4.1	-0.4355	mg/L	0.13707	-0.4355	mg/L	0.13707	31.47%
Ni 231.604†	3409.6	0.9537	mg/L	0.00690	0.9537	mg/L	0.00690	0.72%
Pb 220.353†	7300.1	0.9749	mg/L	0.00347	0.9749	mg/L	0.00347	0.36%
Sb 206.836†	2866.1	1.011	mg/L	0.0068	1.011	mg/L	0.0068	0.67%
Se 196.026†	1523.7	1.041	mg/L	0.0007	1.041	mg/L	0.0007	0.06%
Si 288.158†	-18.0	-0.00736	mg/L	0.001425	-0.00736	mg/L	0.001425	19.37%
Sn 189.927†	-81.7	-0.01038	mg/L	0.001210	-0.01038	mg/L	0.001210	11.65%
Sr 421.552†	4909.8	0.00534	mg/L Cont.	0.000060	0.00534	mg/L	0.000060	1.13%
Ti 334.903†	259.1	0.00335	mg/L	0.000397	0.00335	mg/L	0.000397	11.85%
Tl 190.801†	1628.4	0.9535	mg/L	0.00505	0.9535	mg/L	0.00505	0.53%
V 292.402†	123023.3	0.9824	mg/L	0.00457	0.9824	mg/L	0.00457	0.47%
Zn 206.200†	3454.1	0.9467	mg/L	0.00522	0.9467	mg/L	0.00522	0.55%

Sequence No.: 6
Sample ID: CV

Autosampler Location: 7
Date Collected: 8/30/2013 9:57:34 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2803309.1	102.4	%	0.06				0.06%
ScR 361.383	314474.4	101.3	%	0.48				0.47%
Ag 328.068†	222454.7	1.045	mg/L	0.0066	1.045	mg/L	0.0066	0.63%
Al 308.215†	2431.0	2.078	mg/L	0.0059	2.078	mg/L	0.0059	0.29%
As 188.979†	2672.4	2.035	mg/L	0.0032	2.035	mg/L	0.0032	0.16%
B 249.677†	6659.9	1.007	mg/L	0.0013	1.007	mg/L	0.0013	0.13%
Ba 233.527†	5237.6	1.030	mg/L	0.0056	1.030	mg/L	0.0056	0.54%
Be 313.042†	528489.9	0.9965	mg/L	0.00353	0.9965	mg/L	0.00353	0.35%
Ca 317.933†	19583.8	2.115	mg/L	0.0074	2.115	mg/L	0.0074	0.35%
Cd 228.802†	23741.3	1.043	mg/L	0.0018	1.043	mg/L	0.0018	0.17%
Co 228.616†	34606.0	0.9899	mg/L	0.00196	0.9899	mg/L	0.00196	0.20%
Cr 267.716†	6858.9	1.040	mg/L	0.0033	1.040	mg/L	0.0033	0.31%
Cu 324.752†	279207.2	1.033	mg/L	0.0031	1.033	mg/L	0.0031	0.30%
Fe 273.955†	2793.7	2.122	mg/L	0.0130	2.122	mg/L	0.0130	0.61%
K 766.490†	40919.0	20.20	mg/L	0.139	20.20	mg/L	0.139	0.69%
Mg 279.077†	1728.7	2.039	mg/L	0.0075	2.039	mg/L	0.0075	0.37%
Mn 257.610†	44972.9	0.9711	mg/L	0.00838	0.9711	mg/L	0.00838	0.86%
Mo 202.031†	17767.9	0.9923	mg/L	0.00384	0.9923	mg/L	0.00384	0.39%
Na 589.592†	655884.6	49.89	mg/L	0.326	49.89	mg/L	0.326	0.65%
Na 330.237†	1436.7	52.38	mg/L	0.209	52.38	mg/L	0.209	0.40%
Ni 231.604†	3642.2	1.019	mg/L	0.0009	1.019	mg/L	0.0009	0.09%
Pb 220.353†	15870.4	2.015	mg/L	0.0056	2.015	mg/L	0.0056	0.28%
Sb 206.836†	5756.2	2.050	mg/L	0.0034	2.050	mg/L	0.0034	0.17%
Se 196.026†	2949.9	2.026	mg/L	0.0065	2.026	mg/L	0.0065	0.32%
Si 288.158†	3023.5	2.023	mg/L	0.0072	2.023	mg/L	0.0072	0.36%
Sn 189.927†	4137.2	0.9820	mg/L	0.00399	0.9820	mg/L	0.00399	0.41%
Sr 421.552†	914357.7	0.9940	mg/L	0.00498	0.9940	mg/L	0.00498	0.50%
Ti 334.903†	21168.6	0.9991	mg/L	0.00607	0.9991	mg/L	0.00607	0.61%
Tl 190.801†	3616.0	2.067	mg/L	0.0069	2.067	mg/L	0.0069	0.33%
V 292.402†	124471.4	1.006	mg/L	0.0070	1.006	mg/L	0.0070	0.70%
Zn 206.200†	3680.4	1.011	mg/L	0.0040	1.011	mg/L	0.0040	0.40%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 8/30/2013 10:01:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2800363.1	102.3	%	0.26				0.25%
ScR 361.383	318684.6	102.7	%	1.06				1.03%
Ag 328.068†	76.9	0.00036	mg/L	0.000153	0.00036	mg/L	0.000153	42.40%
Al 308.215†	0.6	0.00050	mg/L	0.000547	0.00050	mg/L	0.000547	109.12%
As 188.979†	-0.3	-0.00026	mg/L	0.001473	-0.00026	mg/L	0.001473	561.14%
B 249.677†	18.2	0.00276	mg/L	0.000163	0.00276	mg/L	0.000163	5.89%
Ba 233.527†	2.0	0.00039	mg/L	0.000484	0.00039	mg/L	0.000484	123.13%
Be 313.042†	17.3	0.00003	mg/L	0.000012	0.00003	mg/L	0.000012	37.65%
Ca 317.933†	-6.6	-0.00072	mg/L	0.000443	-0.00072	mg/L	0.000443	61.64%
Cd 228.802†	-0.1	-0.00000	mg/L	0.000049	-0.00000	mg/L	0.000049	>999.9%
Co 228.616†	2.9	0.00008	mg/L	0.000208	0.00008	mg/L	0.000208	252.50%
Cr 267.716†	2.9	0.00043	mg/L	0.000211	0.00043	mg/L	0.000211	48.78%
Cu 324.752†	-20.5	-0.00008	mg/L	0.000154	-0.00008	mg/L	0.000154	202.42%
Fe 273.955†	2.2	0.00171	mg/L	0.001462	0.00171	mg/L	0.001462	85.71%
K 766.490†	20.7	0.01021	mg/L	0.005954	0.01021	mg/L	0.005954	58.32%
Mg 279.077†	3.2	0.00380	mg/L	0.004294	0.00380	mg/L	0.004294	112.84%
Mn 257.610†	2.0	0.00004	mg/L	0.000061	0.00004	mg/L	0.000061	137.83%
Mo 202.031†	33.9	0.00189	mg/L	0.000070	0.00189	mg/L	0.000070	3.72%
Na 589.592†	88.8	0.00675	mg/L	0.000734	0.00675	mg/L	0.000734	10.87%
Na 330.237†	-1.8	-0.06633	mg/L	0.210136	-0.06633	mg/L	0.210136	316.80%
Ni 231.604†	-1.5	-0.00042	mg/L	0.000386	-0.00042	mg/L	0.000386	91.83%
Pb 220.353†	-4.1	-0.00051	mg/L	0.000398	-0.00051	mg/L	0.000398	77.47%
Sb 206.836†	8.5	0.00305	mg/L	0.000561	0.00305	mg/L	0.000561	18.41%
Se 196.026†	0.8	0.00058	mg/L	0.002467	0.00058	mg/L	0.002467	427.99%
Si 288.158†	-0.6	-0.00037	mg/L	0.004417	-0.00037	mg/L	0.004417	>999.9%
Sn 189.927†	5.0	0.00120	mg/L	0.000777	0.00120	mg/L	0.000777	64.84%
Sr 421.552†	13.9	0.00002	mg/L	0.000018	0.00002	mg/L	0.000018	122.48%
Ti 334.903†	-0.2	-0.00001	mg/L	0.000135	-0.00001	mg/L	0.000135	>999.9%
Tl 190.801†	1.0	0.00058	mg/L	0.001341	0.00058	mg/L	0.001341	233.04%
V 292.402†	13.4	0.00011	mg/L	0.000069	0.00011	mg/L	0.000069	62.74%
Zn 206.200†	1.4	0.00038	mg/L	0.000402	0.00038	mg/L	0.000402	106.94%

Sequence No.: 8
Sample ID: XC27 MB SWC

Autosampler Location: 304
Date Collected: 8/30/2013 10:05:53 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XC27 MB SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC27 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2832032.5	103.5	%	0.30				0.29%
ScR 361.383	322692.9	104.0	%	0.15				0.15%
Ag 328.068†	45.0	0.00021	mg/L	0.000154	0.00042	mg/L	0.000308	72.89%
Al 308.215†	3.3	0.00284	mg/L	0.003206	0.00568	mg/L	0.006411	112.89%
As 188.979†	2.2	0.00169	mg/L	0.000855	0.00339	mg/L	0.001711	50.48%
B 249.677†	7.2	0.00109	mg/L	0.001054	0.00218	mg/L	0.002108	96.50%
Ba 233.527†	3.8	0.00075	mg/L	0.000899	0.00150	mg/L	0.001799	119.59%
Be 313.042†	-37.8	-0.00007	mg/L	0.000011	-0.00014	mg/L	0.000022	15.23%
Ca 317.933†	35.6	0.00385	mg/L	0.001291	0.00770	mg/L	0.002582	33.53%
Cd 228.802†	-1.9	-0.00009	mg/L	0.000024	-0.00019	mg/L	0.000049	25.78%
Co 228.616†	5.0	0.00014	mg/L	0.000129	0.00028	mg/L	0.000257	91.04%
Cr 267.716†	7.0	0.00107	mg/L	0.000758	0.00214	mg/L	0.001516	70.96%
Cu 324.752†	-44.1	-0.00016	mg/L	0.000093	-0.00033	mg/L	0.000185	56.83%
Fe 273.955†	6.3	0.00482	mg/L	0.001113	0.00965	mg/L	0.002226	23.07%
K 766.490†	-10.8	-0.00533	mg/L	0.027143	-0.01067	mg/L	0.054287	508.85%
Mg 279.077†	1.4	0.00170	mg/L	0.009022	0.00340	mg/L	0.018044	530.00%
Mn 257.610†	-1.6	-0.00003	mg/L	0.000041	-0.00007	mg/L	0.000083	121.91%
Mo 202.031†	-0.9	-0.00005	mg/L	0.000286	-0.00010	mg/L	0.000572	599.86%
Na 589.592†	58.7	0.00447	mg/L	0.000306	0.00893	mg/L	0.000612	6.85%
Na 330.237†	3.8	0.1378	mg/L	0.27227	0.2755	mg/L	0.54454	197.65%
Ni 231.604†	-3.1	-0.00086	mg/L	0.000438	-0.00171	mg/L	0.000875	51.17%
Pb 220.353†	1.3	0.00017	mg/L	0.000723	0.00034	mg/L	0.001447	425.83%
Sb 206.836†	-0.7	-0.00027	mg/L	0.001556	-0.00053	mg/L	0.003112	583.23%
Se 196.026†	-4.4	-0.00302	mg/L	0.004083	-0.00605	mg/L	0.008166	135.04%
Si 288.158†	10.1	0.00675	mg/L	0.002002	0.01350	mg/L	0.004004	29.66%
Sn 189.927†	2.0	0.00048	mg/L	0.000246	0.00097	mg/L	0.000492	50.80%
Sr 421.552†	-32.8	-0.00004	mg/L	0.000032	-0.00007	mg/L	0.000064	90.16%
Ti 334.903†	13.1	0.00062	mg/L	0.000375	0.00124	mg/L	0.000750	60.69%
Tl 190.801†	-2.0	-0.00117	mg/L	0.000119	-0.00235	mg/L	0.000237	10.10%
V 292.402†	34.0	0.00028	mg/L	0.000055	0.00055	mg/L	0.000111	19.97%
Zn 206.200†	10.7	0.00295	mg/L	0.000451	0.00590	mg/L	0.000902	15.28%

Sequence No.: 9
Sample ID: XB89 E SWC

Autosampler Location: 305
Date Collected: 8/30/2013 10:10:10 AM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: XB89 E SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XB89 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2808398.7	102.6	%	0.29				0.28%
ScR 361.383	314982.3	101.5	%	0.53				0.52%
Ag 328.068†	78.6	0.00041	mg/L	0.000090	0.00204	mg/L	0.000448	21.92%
Al 308.215†	59704.4	51.85	mg/L	0.240	259.2	mg/L	1.20	0.46%
As 188.979†	-41.3	0.02276	mg/L	0.001147	0.1138	mg/L	0.00573	5.04%
B 249.677†	439.6	0.06649	mg/L	0.001222	0.3325	mg/L	0.00611	1.84%
Ba 233.527†	11153.1	2.186	mg/L	0.0208	10.93	mg/L	0.104	0.95%
Be 313.042†	698.1	0.00127	mg/L	0.000014	0.00633	mg/L	0.000072	1.14%
Ca 317.933†	335999.4	36.29	mg/L	0.102	181.4	mg/L	0.51	0.28%
Cd 228.802†	45.2	0.00161	mg/L	0.000123	0.00807	mg/L	0.000617	7.64%
Co 228.616†	1018.6	0.02585	mg/L	0.000219	0.1292	mg/L	0.00110	0.85%
Cr 267.716†	657.4	0.09995	mg/L	0.000930	0.4997	mg/L	0.00465	0.93%
Cu 324.752†	41388.7	0.1555	mg/L	0.00078	0.7773	mg/L	0.00392	0.50%
Fe 273.955†	76566.7	58.32	mg/L	0.440	291.6	mg/L	2.20	0.75%
K 766.490†	11627.0	5.739	mg/L	0.0250	28.69	mg/L	0.125	0.44%
Mg 279.077†	21359.9	25.08	mg/L	0.101	125.4	mg/L	0.51	0.40%
Mn 257.610†	32626.9	0.7038	mg/L	0.00397	3.519	mg/L	0.0198	0.56%
Mo 202.031†	130.5	0.00681	mg/L	0.000325	0.03403	mg/L	0.001625	4.77%
Na 589.592†	318859.2	24.25	mg/L	0.092	121.3	mg/L	0.46	0.38%
Na 330.237†	680.1	25.24	mg/L	0.261	126.2	mg/L	1.31	1.04%
Ni 231.604†	457.8	0.1280	mg/L	0.00073	0.6402	mg/L	0.00366	0.57%
Pb 220.353†	559.7	0.08293	mg/L	0.000549	0.4146	mg/L	0.00275	0.66%
Sb 206.836†	6.0	0.00285	mg/L	0.001885	0.01426	mg/L	0.009425	66.11%
Se 196.026†	20.2	0.01184	mg/L	0.000622	0.05921	mg/L	0.003110	5.25%
Si 288.158†	1236.5	0.8253	mg/L	0.00986	4.126	mg/L	0.0493	1.19%
Sn 189.927†	16.1	0.00719	mg/L	0.000960	0.03595	mg/L	0.004798	13.35%
Sr 421.552†	2549543.8	2.772	mg/L	0.0090	13.86	mg/L	0.045	0.32%
Ti 334.903†	38316.7	1.808	mg/L	0.0068	9.039	mg/L	0.0338	0.37%
Tl 190.801†	-0.9	0.00710	mg/L	0.001071	0.03551	mg/L	0.005354	15.08%
V 292.402†	16903.9	0.1321	mg/L	0.00054	0.6604	mg/L	0.00270	0.41%
Zn 206.200†	998.4	0.2737	mg/L	0.00183	1.368	mg/L	0.0092	0.67%

Sequence No.: 10
Sample ID: XB89 F SWC

Autosampler Location: 306
Date Collected: 8/30/2013 10:14:27 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 F SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XB89 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2776042.0	101.4	%	0.29				0.29%
ScR 361.383	321125.2	103.5	%	0.30				0.29%
Ag 328.068†	-269.1	-0.00117	mg/L	0.000163	-0.00234	mg/L	0.000326	13.94%
Al 308.215†	123704.0	107.4	mg/L	0.37	214.8	mg/L	0.74	0.34%
As 188.979†	-118.4	0.06323	mg/L	0.005786	0.1265	mg/L	0.01157	9.15%
B 249.677†	1003.9	0.1518	mg/L	0.00140	0.3037	mg/L	0.00280	0.92%
Ba 233.527†	15511.0	3.025	mg/L	0.0092	6.049	mg/L	0.0184	0.30%
Be 313.042†	1121.0	0.00198	mg/L	0.000018	0.00397	mg/L	0.000035	0.89%
Ca 317.933†	992052.7	107.1	mg/L	0.35	214.3	mg/L	0.71	0.33%
Cd 228.802†	97.5	0.00261	mg/L	0.000249	0.00523	mg/L	0.000499	9.54%
Co 228.616†	2444.4	0.06088	mg/L	0.000548	0.1218	mg/L	0.00110	0.90%
Cr 267.716†	1494.3	0.2294	mg/L	0.00095	0.4588	mg/L	0.00191	0.42%
Cu 324.752†	71741.3	0.2741	mg/L	0.00170	0.5482	mg/L	0.00340	0.62%
Fe 273.955†	276657.4	210.7	mg/L	1.14	421.5	mg/L	2.28	0.54%
K 766.490†	26985.8	13.32	mg/L	0.100	26.64	mg/L	0.200	0.75%
Mg 279.077†	59412.5	69.72	mg/L	0.120	139.4	mg/L	0.24	0.17%
Mn 257.610†	99623.6	2.149	mg/L	0.0123	4.299	mg/L	0.0247	0.57%
Mo 202.031†	332.5	0.01715	mg/L	0.000477	0.03431	mg/L	0.000954	2.78%
Na 589.592†	642155.1	48.85	mg/L	0.216	97.69	mg/L	0.431	0.44%
Na 330.237†	1343.9	50.35	mg/L	0.157	100.7	mg/L	0.31	0.31%
Ni 231.604†	940.4	0.2630	mg/L	0.00249	0.5260	mg/L	0.00497	0.95%
Pb 220.353†	1923.5	0.2639	mg/L	0.00117	0.5277	mg/L	0.00235	0.44%
Sb 206.836†	23.9	0.01113	mg/L	0.002802	0.02226	mg/L	0.005603	25.17%
Se 196.026†	32.1	0.01601	mg/L	0.010874	0.03203	mg/L	0.021748	67.90%
Si 288.158†	2206.7	1.473	mg/L	0.0065	2.946	mg/L	0.0130	0.44%
Sn 189.927†	85.3	0.03014	mg/L	0.001211	0.06029	mg/L	0.002422	4.02%
Sr 421.552†	2892226.1	3.144	mg/L	0.0083	6.288	mg/L	0.0166	0.26%
Ti 334.903†	108686.9	5.128	mg/L	0.0176	10.26	mg/L	0.035	0.34%
Tl 190.801†	-30.9	0.01070	mg/L	0.002768	0.02141	mg/L	0.005537	25.87%
V 292.402†	40176.2	0.3091	mg/L	0.00074	0.6183	mg/L	0.00149	0.24%
Zn 206.200†	1633.7	0.4470	mg/L	0.00025	0.8939	mg/L	0.00050	0.06%

Sequence No.: 11
Sample ID: XC27 ADUP SWC

Autosampler Location: 307
Date Collected: 8/30/2013 10:18:45 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XC27 ADUP SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2820718.3	103.0	%	0.25				0.24%
ScR 361.383	321066.6	103.4	%	1.04				1.00%
Ag 328.068†	-456.0	-0.00199	mg/L	0.000177	-0.00399	mg/L	0.000354	8.87%
Al 308.215†	182773.5	158.7	mg/L	0.55	317.4	mg/L	1.11	0.35%
As 188.979†	-336.8	0.01248	mg/L	0.001613	0.02495	mg/L	0.003226	12.93%
B 249.677†	115.2	0.01723	mg/L	0.000908	0.03447	mg/L	0.001815	5.27%
Ba 233.527†	4145.9	0.7876	mg/L	0.01068	1.575	mg/L	0.0214	1.36%
Be 313.042†	1323.5	0.00228	mg/L	0.000036	0.00457	mg/L	0.000072	1.58%
Ca 317.933†	1090734.7	117.8	mg/L	0.50	235.6	mg/L	1.00	0.42%
Cd 228.802†	32.6	0.00044	mg/L	0.000235	0.00088	mg/L	0.000469	53.32%
Co 228.616†	3606.5	0.08824	mg/L	0.000660	0.1765	mg/L	0.00132	0.75%
Cr 267.716†	1603.2	0.2470	mg/L	0.00278	0.4940	mg/L	0.00555	1.12%
Cu 324.752†	59845.6	0.2301	mg/L	0.00094	0.4602	mg/L	0.00187	0.41%
Fe 273.955†	294558.0	224.4	mg/L	2.00	448.8	mg/L	4.00	0.89%
K 766.490†	14863.7	7.337	mg/L	0.0109	14.67	mg/L	0.022	0.15%
Mg 279.077†	53160.2	62.36	mg/L	0.313	124.7	mg/L	0.63	0.50%
Mn 257.610†	150224.8	3.241	mg/L	0.0258	6.482	mg/L	0.0516	0.80%
Mo 202.031†	115.5	0.00489	mg/L	0.000068	0.00978	mg/L	0.000135	1.38%
Na 589.592†	53314.7	4.055	mg/L	0.0034	8.111	mg/L	0.0067	0.08%
Na 330.237†	35.1	3.628	mg/L	0.0630	7.255	mg/L	0.1259	1.74%
Ni 231.604†	850.4	0.2378	mg/L	0.00570	0.4756	mg/L	0.01141	2.40%
Pb 220.353†	78.7	0.04409	mg/L	0.000939	0.08819	mg/L	0.001878	2.13%
Sb 206.836†	6.2	0.00796	mg/L	0.002601	0.01592	mg/L	0.005202	32.67%
Se 196.026†	43.3	0.02301	mg/L	0.006706	0.04602	mg/L	0.013413	29.15%
Si 288.158†	2904.0	1.938	mg/L	0.0229	3.877	mg/L	0.0458	1.18%
Sn 189.927†	-64.6	-0.00379	mg/L	0.001311	-0.00758	mg/L	0.002621	34.59%
Sr 421.552†	526187.1	0.5720	mg/L	0.00165	1.144	mg/L	0.0033	0.29%
Ti 334.903†	184035.4	8.688	mg/L	0.0411	17.38	mg/L	0.082	0.47%
Tl 190.801†	-27.8	0.01352	mg/L	0.003465	0.02705	mg/L	0.006931	25.62%
V 292.402†	63587.3	0.4951	mg/L	0.00270	0.9901	mg/L	0.00541	0.55%
Zn 206.200†	1792.6	0.4905	mg/L	0.00713	0.9809	mg/L	0.01426	1.45%

Sequence No.: 12
Sample ID: XC27 A SWC

Autosampler Location: 308
Date Collected: 8/30/2013 10:22:48 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XC27 A SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC27 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2794209.4	102.1	%	0.44				0.43%
ScR 361.383	318129.2	102.5	%	0.84				0.82%
Ag 328.068†	-425.4	-0.00185	mg/L	0.000024	-0.00370	mg/L	0.000049	1.32%
Al 308.215†	194273.2	168.7	mg/L	1.21	337.4	mg/L	2.41	0.72%
As 188.979†	-327.6	0.01809	mg/L	0.000261	0.03619	mg/L	0.000522	1.44%
B 249.677†	99.1	0.01479	mg/L	0.001491	0.02958	mg/L	0.002983	10.08%
Ba 233.527†	3875.9	0.7335	mg/L	0.00376	1.467	mg/L	0.0075	0.51%
Be 313.042†	1526.5	0.00267	mg/L	0.000039	0.00534	mg/L	0.000078	1.46%
Ca 317.933†	1171477.6	126.5	mg/L	0.78	253.0	mg/L	1.56	0.62%
Cd 228.802†	40.1	0.00066	mg/L	0.000224	0.00132	mg/L	0.000448	33.90%
Co 228.616†	3656.5	0.08969	mg/L	0.000532	0.1794	mg/L	0.00106	0.59%
Cr 267.716†	1585.4	0.2441	mg/L	0.00270	0.4882	mg/L	0.00541	1.11%
Cu 324.752†	65135.0	0.2500	mg/L	0.00117	0.5001	mg/L	0.00235	0.47%
Fe 273.955†	305151.2	232.4	mg/L	1.01	464.9	mg/L	2.01	0.43%
K 766.490†	16089.5	7.942	mg/L	0.0392	15.88	mg/L	0.078	0.49%
Mg 279.077†	58234.1	68.32	mg/L	0.457	136.6	mg/L	0.91	0.67%
Mn 257.610†	166304.8	3.588	mg/L	0.0170	7.176	mg/L	0.0341	0.47%
Mo 202.031†	126.7	0.00541	mg/L	0.000219	0.01081	mg/L	0.000438	4.05%
Na 589.592†	59379.8	4.517	mg/L	0.0393	9.033	mg/L	0.0787	0.87%
Na 330.237†	49.3	4.114	mg/L	0.0907	8.227	mg/L	0.1814	2.20%
Ni 231.604†	927.8	0.2595	mg/L	0.00314	0.5190	mg/L	0.00628	1.21%
Pb 220.353†	76.6	0.04627	mg/L	0.000264	0.09255	mg/L	0.000527	0.57%
Sb 206.836†	12.2	0.01009	mg/L	0.000590	0.02017	mg/L	0.001180	5.85%
Se 196.026†	35.1	0.01693	mg/L	0.001344	0.03385	mg/L	0.002688	7.94%
Si 288.158†	3244.9	2.166	mg/L	0.0197	4.332	mg/L	0.0394	0.91%
Sn 189.927†	-62.5	-0.00258	mg/L	0.000942	-0.00516	mg/L	0.001884	36.54%
Sr 421.552†	496456.4	0.5397	mg/L	0.00358	1.079	mg/L	0.0072	0.66%
Ti 334.903†	183851.3	8.678	mg/L	0.0530	17.36	mg/L	0.106	0.61%
Tl 190.801†	-38.0	0.00881	mg/L	0.001405	0.01762	mg/L	0.002811	15.95%
V 292.402†	63018.9	0.4900	mg/L	0.00310	0.9801	mg/L	0.00619	0.63%
Zn 206.200†	2135.7	0.5846	mg/L	0.00482	1.169	mg/L	0.0096	0.82%

Sequence No.: 13
Sample ID: XC27 ASPK SWC

Autosampler Location: 309
Date Collected: 8/30/2013 10:26:51 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XC27 ASPK SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC27 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2809460.6	102.6	%	0.37				0.36%
ScR 361.383	320623.4	103.3	%	0.43				0.42%
Ag 328.068†	110099.5	0.5173	mg/L	0.00120	1.035	mg/L	0.0024	0.23%
Al 308.215†	177260.6	153.9	mg/L	0.59	307.8	mg/L	1.19	0.39%
As 188.979†	2477.8	2.084	mg/L	0.0077	4.168	mg/L	0.0154	0.37%
B 249.677†	115.5	0.01673	mg/L	0.000751	0.03345	mg/L	0.001502	4.49%
Ba 233.527†	13837.2	2.696	mg/L	0.0042	5.393	mg/L	0.0084	0.16%
Be 313.042†	259041.4	0.4883	mg/L	0.00134	0.9765	mg/L	0.00267	0.27%
Ca 317.933†	1380027.3	149.0	mg/L	0.44	298.1	mg/L	0.89	0.30%
Cd 228.802†	12327.2	0.5348	mg/L	0.00142	1.070	mg/L	0.0028	0.26%
Co 228.616†	20827.3	0.5835	mg/L	0.00037	1.167	mg/L	0.0007	0.06%
Cr 267.716†	5096.9	0.7755	mg/L	0.00188	1.551	mg/L	0.0038	0.24%
Cu 324.752†	208315.1	0.7788	mg/L	0.00221	1.558	mg/L	0.0044	0.28%
Fe 273.955†	268992.2	204.9	mg/L	1.63	409.8	mg/L	3.26	0.80%
K 766.490†	36152.6	17.84	mg/L	0.099	35.69	mg/L	0.198	0.56%
Mg 279.077†	56620.8	66.44	mg/L	0.337	132.9	mg/L	0.67	0.51%
Mn 257.610†	203516.8	4.392	mg/L	0.0289	8.784	mg/L	0.0579	0.66%
Mo 202.031†	8372.5	0.4656	mg/L	0.00087	0.9313	mg/L	0.00174	0.19%
Na 589.592†	192881.6	14.67	mg/L	0.073	29.34	mg/L	0.146	0.50%
Na 330.237†	352.4	14.71	mg/L	0.025	29.42	mg/L	0.050	0.17%
Ni 231.604†	2625.9	0.7335	mg/L	0.00464	1.467	mg/L	0.0093	0.63%
Pb 220.353†	16074.5	2.074	mg/L	0.0018	4.148	mg/L	0.0037	0.09%
Sb 206.836†	24.7	0.00821	mg/L	0.002685	0.01641	mg/L	0.005369	32.72%
Se 196.026†	3036.9	2.078	mg/L	0.0037	4.157	mg/L	0.0075	0.18%
Si 288.158†	3103.2	2.074	mg/L	0.0084	4.147	mg/L	0.0168	0.41%
Sn 189.927†	-64.5	-0.00134	mg/L	0.001810	-0.00269	mg/L	0.003621	134.68%
Sr 421.552†	873575.3	0.9497	mg/L	0.00412	1.899	mg/L	0.0082	0.43%
Ti 334.903†	160017.5	7.549	mg/L	0.0309	15.10	mg/L	0.062	0.41%
Tl 190.801†	3352.2	1.946	mg/L	0.0032	3.893	mg/L	0.0064	0.17%
V 292.402†	120885.7	0.9606	mg/L	0.00099	1.921	mg/L	0.0020	0.10%
Zn 206.200†	3752.4	1.028	mg/L	0.0012	2.056	mg/L	0.0023	0.11%

Sequence No.: 14
Sample ID: XC27 B SWC

Autosampler Location: 310
Date Collected: 8/30/2013 10:30:55 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XC27 B SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC27 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2866304.6	104.7	%	0.47				0.45%
ScR 361.383	325899.4	105.0	%	1.32				1.26%
Ag 328.068†	-232.8	-0.00097	mg/L	0.000215	-0.00195	mg/L	0.000429	22.05%
Al 308.215†	138363.6	120.2	mg/L	1.57	240.3	mg/L	3.13	1.30%
As 188.979†	-329.4	-0.00356	mg/L	0.001331	-0.00712	mg/L	0.002662	37.38%
B 249.677†	526.6	0.07956	mg/L	0.001381	0.1591	mg/L	0.00276	1.74%
Ba 233.527†	4403.7	0.8448	mg/L	0.01624	1.690	mg/L	0.0325	1.92%
Be 313.042†	977.3	0.00166	mg/L	0.000039	0.00333	mg/L	0.000078	2.33%
Ca 317.933†	542499.5	58.59	mg/L	0.664	117.2	mg/L	1.33	1.13%
Cd 228.802†	29.5	0.00086	mg/L	0.000130	0.00173	mg/L	0.000259	15.01%
Co 228.616†	2813.5	0.06706	mg/L	0.000448	0.1341	mg/L	0.00090	0.67%
Cr 267.716†	1334.6	0.2058	mg/L	0.00152	0.4116	mg/L	0.00303	0.74%
Cu 324.752†	43757.8	0.1683	mg/L	0.00109	0.3366	mg/L	0.00218	0.65%
Fe 273.955†	223432.5	170.2	mg/L	2.03	340.4	mg/L	4.05	1.19%
K 766.490†	11669.4	5.760	mg/L	0.0921	11.52	mg/L	0.184	1.60%
Mg 279.077†	38408.6	45.05	mg/L	0.482	90.11	mg/L	0.963	1.07%
Mn 257.610†	106620.4	2.300	mg/L	0.0311	4.601	mg/L	0.0622	1.35%
Mo 202.031†	108.9	0.00531	mg/L	0.000364	0.01061	mg/L	0.000727	6.86%
Na 589.592†	39270.3	2.987	mg/L	0.0344	5.974	mg/L	0.0688	1.15%
Na 330.237†	10.5	2.501	mg/L	0.0887	5.003	mg/L	0.1773	3.54%
Ni 231.604†	707.4	0.1978	mg/L	0.00202	0.3956	mg/L	0.00404	1.02%
Pb 220.353†	117.2	0.04072	mg/L	0.000774	0.08145	mg/L	0.001548	1.90%
Sb 206.836†	-1.8	0.00457	mg/L	0.001917	0.00914	mg/L	0.003833	41.95%
Se 196.026†	21.6	0.01140	mg/L	0.001866	0.02279	mg/L	0.003731	16.37%
Si 288.158†	4326.9	2.888	mg/L	0.0414	5.776	mg/L	0.0827	1.43%
Sn 189.927†	-58.8	-0.00747	mg/L	0.000193	-0.01495	mg/L	0.000385	2.58%
Sr 421.552†	969808.3	1.054	mg/L	0.0141	2.109	mg/L	0.0283	1.34%
Ti 334.903†	165166.0	7.801	mg/L	0.0945	15.60	mg/L	0.189	1.21%
Tl 190.801†	-29.5	0.00530	mg/L	0.003822	0.01060	mg/L	0.007643	72.12%
V 292.402†	51884.6	0.4043	mg/L	0.00115	0.8086	mg/L	0.00230	0.28%
Zn 206.200†	1466.8	0.4022	mg/L	0.00499	0.8044	mg/L	0.00998	1.24%

Sequence No.: 15
Sample ID: XC27 MBSPK SWC

Autosampler Location: 311
Date Collected: 8/30/2013 10:34:58 AM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XC27 MBSPK SWC

Analyte	Back Pressure	Flow
All	235.0 kPa	0.75 L/min

Mean Data: XC27 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2817351.1	102.9	%	0.46				0.44%
ScR 361.383	319835.9	103.0	%	0.21				0.20%
Ag 328.068†	113441.1	0.5329	mg/L	0.00098	1.066	mg/L	0.0020	0.18%
Al 308.215†	2468.0	2.127	mg/L	0.0088	4.255	mg/L	0.0176	0.41%
As 188.979†	2832.3	2.124	mg/L	0.0113	4.248	mg/L	0.0226	0.53%
B 249.677†	5.6	0.00031	mg/L	0.000252	0.00062	mg/L	0.000503	81.00%
Ba 233.527†	10603.9	2.085	mg/L	0.0135	4.171	mg/L	0.0270	0.65%
Be 313.042†	260160.3	0.4906	mg/L	0.00241	0.9811	mg/L	0.00481	0.49%
Ca 317.933†	94940.4	10.25	mg/L	0.040	20.51	mg/L	0.081	0.39%
Cd 228.802†	12062.3	0.5237	mg/L	0.00179	1.047	mg/L	0.0036	0.34%
Co 228.616†	17870.6	0.5119	mg/L	0.00378	1.024	mg/L	0.0076	0.74%
Cr 267.716†	3543.8	0.5367	mg/L	0.00115	1.073	mg/L	0.0023	0.21%
Cu 324.752†	138691.8	0.5132	mg/L	0.00236	1.026	mg/L	0.0047	0.46%
Fe 273.955†	2841.2	2.161	mg/L	0.0042	4.322	mg/L	0.0085	0.20%
K 766.490†	20909.0	10.32	mg/L	0.058	20.64	mg/L	0.117	0.57%
Mg 279.077†	9161.3	10.77	mg/L	0.017	21.55	mg/L	0.035	0.16%
Mn 257.610†	23074.4	0.4984	mg/L	0.00281	0.9968	mg/L	0.00561	0.56%
Mo 202.031†	9017.0	0.5035	mg/L	0.00333	1.007	mg/L	0.0067	0.66%
Na 589.592†	133274.5	10.14	mg/L	0.009	20.27	mg/L	0.018	0.09%
Na 330.237†	293.4	10.54	mg/L	0.133	21.09	mg/L	0.265	1.26%
Ni 231.604†	1818.2	0.5076	mg/L	0.00292	1.015	mg/L	0.0058	0.58%
Pb 220.353†	16185.6	2.055	mg/L	0.0092	4.109	mg/L	0.0184	0.45%
Sb 206.836†	11.0	-0.00140	mg/L	0.000576	-0.00280	mg/L	0.001151	41.12%
Se 196.026†	3072.8	2.111	mg/L	0.0075	4.222	mg/L	0.0150	0.36%
Si 288.158†	-1.0	0.00171	mg/L	0.004058	0.00341	mg/L	0.008117	237.79%
Sn 189.927†	-18.5	-0.00347	mg/L	0.000605	-0.00693	mg/L	0.001210	17.45%
Sr 421.552†	462608.1	0.5029	mg/L	0.00092	1.006	mg/L	0.0018	0.18%
Ti 334.903†	97.8	0.00317	mg/L	0.000277	0.00634	mg/L	0.000554	8.73%
Tl 190.801†	3649.8	2.091	mg/L	0.0131	4.181	mg/L	0.0261	0.62%
V 292.402†	64094.6	0.5183	mg/L	0.00144	1.037	mg/L	0.0029	0.28%
Zn 206.200†	1876.2	0.5150	mg/L	0.00053	1.030	mg/L	0.0011	0.10%

Sequence No.: 16
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 8/30/2013 10:38:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2817846.4	102.9	%	0.33				0.32%
ScR 361.383	316442.2	102.0	%	0.39				0.38%
Ag 328.068†	224098.0	1.053	mg/L	0.0027	1.053	mg/L	0.0027	0.26%
Al 308.215†	2432.2	2.079	mg/L	0.0132	2.079	mg/L	0.0132	0.63%
As 188.979†	2679.8	2.040	mg/L	0.0037	2.040	mg/L	0.0037	0.18%
B 249.677†	6650.3	1.006	mg/L	0.0031	1.006	mg/L	0.0031	0.31%
Ba 233.527†	5285.7	1.039	mg/L	0.0079	1.039	mg/L	0.0079	0.76%
Be 313.042†	529908.7	0.9992	mg/L	0.00300	0.9992	mg/L	0.00300	0.30%
Ca 317.933†	19698.0	2.127	mg/L	0.0106	2.127	mg/L	0.0106	0.50%
Cd 228.802†	23769.0	1.044	mg/L	0.0038	1.044	mg/L	0.0038	0.36%
Co 228.616†	35550.2	1.017	mg/L	0.0036	1.017	mg/L	0.0036	0.36
Cr 267.716†	6876.7	1.043	mg/L	0.0048	1.043	mg/L	0.0048	0.46%
Cu 324.752†	280604.1	1.038	mg/L	0.0028	1.038	mg/L	0.0028	0.27%
Fe 273.955†	2781.0	2.112	mg/L	0.0098	2.112	mg/L	0.0098	0.46%
K 766.490†	41087.7	20.28	mg/L	0.186	20.28	mg/L	0.186	0.91%
Mg 279.077†	1738.6	2.051	mg/L	0.0087	2.051	mg/L	0.0087	0.42%
Mn 257.610†	44862.0	0.9687	mg/L	0.00260	0.9687	mg/L	0.00260	0.27%
Mo 202.031†	17760.2	0.9919	mg/L	0.00322	0.9919	mg/L	0.00322	0.32%
Na 589.592†	658870.8	50.12	mg/L	0.394	50.12	mg/L	0.394	0.79%
Na 330.237†	1437.5	52.40	mg/L	0.117	52.40	mg/L	0.117	0.22%
Ni 231.604†	3669.4	1.026	mg/L	0.0059	1.026	mg/L	0.0059	0.58%
Pb 220.353†	15930.7	2.023	mg/L	0.0080	2.023	mg/L	0.0080	0.39%
Sb 206.836†	5733.2	2.042	mg/L	0.0078	2.042	mg/L	0.0078	0.38%
Se 196.026†	2943.9	2.022	mg/L	0.0047	2.022	mg/L	0.0047	0.23%
Si 288.158†	3034.4	2.030	mg/L	0.0115	2.030	mg/L	0.0115	0.57%
Sn 189.927†	4121.7	0.9784	mg/L	0.00450	0.9784	mg/L	0.00450	0.46%
Sr 421.552†	916174.8	0.9960	mg/L	0.00516	0.9960	mg/L	0.00516	0.52%
Ti 334.903†	21206.8	1.001	mg/L	0.0023	1.001	mg/L	0.0023	0.23%
Tl 190.801†	3635.7	2.078	mg/L	0.0104	2.078	mg/L	0.0104	0.50%
V 292.402†	125307.1	1.013	mg/L	0.0038	1.013	mg/L	0.0038	0.37%
Zn 206.200†	3706.3	1.018	mg/L	0.0046	1.018	mg/L	0.0046	0.45%

Sequence No.: 17
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 8/30/2013 10:43:02 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 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	2833566.2	103.5	%	0.61				0.59%
ScR 361.383	324260.0	104.5	%	0.66				0.64%
Ag 328.068†	66.1	0.00031	mg/L	0.000159	0.00031	mg/L	0.000159	51.19%
Al 308.215†	-0.7	-0.00064	mg/L	0.004555	-0.00064	mg/L	0.004555	710.06%
As 188.979†	2.4	0.00180	mg/L	0.001141	0.00180	mg/L	0.001141	63.44%
B 249.677†	8.9	0.00136	mg/L	0.001171	0.00136	mg/L	0.001171	86.41%
Ba 233.527†	-0.0	-0.00000	mg/L	0.000536	-0.00000	mg/L	0.000536	>999.9%
Be 313.042†	-3.3	-0.00001	mg/L	0.000039	-0.00001	mg/L	0.000039	618.53%
Ca 317.933†	5.0	0.00054	mg/L	0.000891	0.00054	mg/L	0.000891	165.67%
Cd 228.802†	2.2	0.00009	mg/L	0.000081	0.00009	mg/L	0.000081	90.21%
Co 228.616†	0.6	0.00002	mg/L	0.000025	0.00002	mg/L	0.000025	155.13%
Cr 267.716†	1.5	0.00023	mg/L	0.000424	0.00023	mg/L	0.000424	181.37%
Cu 324.752†	11.9	0.00004	mg/L	0.000058	0.00004	mg/L	0.000058	133.06%
Fe 273.955†	7.0	0.00535	mg/L	0.000577	0.00535	mg/L	0.000577	10.78%
K 766.490†	15.3	0.00756	mg/L	0.026050	0.00756	mg/L	0.026050	344.43%
Mg 279.077†	0.1	0.00008	mg/L	0.007051	0.00008	mg/L	0.007051	>999.9%
Mn 257.610†	2.3	0.00005	mg/L	0.000093	0.00005	mg/L	0.000093	188.08%
Mo 202.031†	32.5	0.00182	mg/L	0.000573	0.00182	mg/L	0.000573	31.53%
Na 589.592†	111.6	0.00849	mg/L	0.000766	0.00849	mg/L	0.000766	9.02%
Na 330.237†	1.3	0.04806	mg/L	0.190430	0.04806	mg/L	0.190430	396.20%
Ni 231.604†	0.4	0.00010	mg/L	0.000726	0.00010	mg/L	0.000726	703.83%
Pb 220.353†	4.2	0.00053	mg/L	0.000588	0.00053	mg/L	0.000588	111.49%
Sb 206.836†	7.1	0.00253	mg/L	0.000671	0.00253	mg/L	0.000671	26.54%
Se 196.026†	-1.6	-0.00111	mg/L	0.004539	-0.00111	mg/L	0.004539	410.41%
Si 288.158†	-5.3	-0.00353	mg/L	0.005060	-0.00353	mg/L	0.005060	143.40%
Sn 189.927†	2.7	0.00064	mg/L	0.000411	0.00064	mg/L	0.000411	64.64%
Sr 421.552†	33.3	0.00004	mg/L	0.000008	0.00004	mg/L	0.000008	23.18%
Ti 334.903†	9.2	0.00043	mg/L	0.000255	0.00043	mg/L	0.000255	58.68%
Tl 190.801†	-3.6	-0.00208	mg/L	0.001346	-0.00208	mg/L	0.001346	64.74%
V 292.402†	19.7	0.00016	mg/L	0.000101	0.00016	mg/L	0.000101	62.95%
Zn 206.200†	0.0	0.00001	mg/L	0.000108	0.00001	mg/L	0.000108	>999.9%

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP) ICP-MS GFA CVA **Analysis Date:** 8-29-13

ICP 2	Analyst BA 8-29-13	Peer [illegible] 8-30-13	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	✓	✓	See log
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
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	✓	✓	
Matrix Duplicates	✓	✓	XB89
Method Blanks	✓	✓	
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	✓	✓	CAF - XB89

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 8-28-13 Analysis Date: 8-29-13 Analyst: BA

LR Date: 6-10-13 Page: 1 of 4

All corrections made by analyst unless otherwise noted. BA 8-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			B1559
		2			B1549
		3			B1550
		4			B1551
		5			B1552
		ICV			B323
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		XB72R MB1	TWC		
		BDUP		✓	
		B			
		BSPK		✓	
zzz		~~BPOST~~ zzzzzz			
		C			
		J			
		MB1SPK		✓	
		CCV2			
		CCB2			End XB72R
		XC05 MB1	TWC		
		XB99 MB	↓		

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 8-29-13 Analyst: BA

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. BA 8-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		XB99 A	TWC		
		XC05 A			
		E			
		J			
		L			
		M			
		MBKSPK		✓	
		XB99 MBSPK		✓	
		CCV3			
		CCB3			
		XC05 KDUP	TWC	✓	
		K			
		KSPK		✓	Ca, Fe STL
222		~~KPOST~~ 222222			
		N			
		CCV4			
		CCB4		Ba↑	End XC05
		XC15 MB1	TWC		
		CDUP		✓	
		C			
		CSPK		✓	Ca, Fe, Mg, Mn, Na STL
222		~~CPOST~~ 222222			
		MB1SPK			
		CCV5			Ba↑

XB89:01593

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 8-29-13 Analyst: BA

LR Date: — Page: 3 of 4

All corrections made by analyst unless otherwise noted. BA 8-29-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCB5			End XC15
		STD 2			
		STD 3			
		CCV 6			B, Ca↑
		CCB 6			
		XB89 MB1	SWC	2	
		ADUP		✓	Cr↑ RPD (CAF)
		A			
		ASPK		✓	
zzz		~~zzzzzz~~ ~~APOST~~			
		B			
		C			
		D			
	✓	E			Sr >LR (RR 5x)
		MB1SPK		✓	
		CCV7			Ca↑
		CCB7			End Pkg (XB89)
	✓	XC27 MB	SWC	2	CCV out
	✓	XB89 F			
	✓	XC27 ADUP		✓	
	✓	A			
	✓	ASPK		✓	Al, Fe, Mn STL
	✓	B			
	✓	MBSPK		✓	

XB89:01594

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 8-29-13 Analyst: BA

LR Date: — Page: 4 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCV8			Be, Ca, Fe, Na 589, Ni, Sc, Zn ↑
		CCB8			
		STD 3			
		STD 5			Sc R noisy !
		STD 5			↓
		BA			
		8-29-13			

XB69 : 01595

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	235.0 kPa	0.75 L/min

8/29/2013 9:06:22 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): -0.000 Slit adjustment: 0

Analysis Begun

Start Time: 8/29/2013 9:07:51 AM **Plasma On Time: 8/29/2013 8:18:33 AM**
Logged In Analyst: Metals **Technique: ICP Continuous**
Spectrometer: Optima 7300 DV, S/N 077C8121202 **Autosampler: ESI**

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130829
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 8/13/2012 7:13:22 AM**
IEC File: IEC061013A.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: B1 **Date Collected: 8/29/2013 9:07:57 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

BA
8/29/13

XB89:01596

Analysis Begun

Start Time: 8/29/2013 9:31:10 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 8/29/2013 8:18:33 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET.sif
Batch ID:
Results Data Set: I2130829
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: 8/29/2013 9:31:11 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2761292.8	16237.75	0.59%	100.0	%
ScR 361.383	320030.5	2216.72	0.69%	100.0	%
Ag 328.068†	-48.6	49.59	102.06%	[0.00]	mg/L
Al 308.215†	153.5	4.59	2.99%	[0.00]	mg/L
As 188.979†	-8.3	0.55	6.67%	[0.00]	mg/L
B 249.677†	-43.2	3.12	7.24%	[0.00]	mg/L
Ba 233.527†	38.9	2.92	7.52%	[0.00]	mg/L
Be 313.042†	611.1	10.74	1.76%	[0.00]	mg/L
Ca 317.933†	60.5	7.15	11.83%	[0.00]	mg/L
Cd 228.802†	215.5	2.95	1.37%	[0.00]	mg/L
Co 228.616†	-102.1	3.59	3.52%	[0.00]	mg/L
Cr 267.716†	-132.8	2.11	1.59%	[0.00]	mg/L
Cu 324.752†	2796.2	67.42	2.41%	[0.00]	mg/L
Fe 273.955†	5.4	1.09	20.24%	[0.00]	mg/L
K 766.490†	291.3	15.54	5.33%	[0.00]	mg/L
Mg 279.077†	43.6	3.32	7.61%	[0.00]	mg/L
Mn 257.610†	179.8	5.05	2.81%	[0.00]	mg/L
Mo 202.031†	69.5	0.82	1.18%	[0.00]	mg/L
Na 589.592†	-490.9	14.88	3.03%	[0.00]	mg/L
Na 330.237†	-61.3	3.95	6.45%	[0.00]	mg/L
Ni 231.604†	18.0	2.52	13.99%	[0.00]	mg/L
Pb 220.353†	-28.6	4.46	15.59%	[0.00]	mg/L
Sb 206.836†	28.1	6.38	22.70%	[0.00]	mg/L
Se 196.026†	-39.6	0.95	2.39%	[0.00]	mg/L
Si 288.158†	44.3	6.01	13.56%	[0.00]	mg/L
Sn 189.927†	-5.3	1.51	28.41%	[0.00]	mg/L
Sr 421.552†	280.2	16.75	5.98%	[0.00]	mg/L
Ti 334.903†	-83.0	4.47	5.39%	[0.00]	mg/L
Tl 190.801†	-26.9	2.68	9.93%	[0.00]	mg/L
V 292.402I	60.5	9.37	15.49%	[0.00]	mg/L
Zn 206.200†	-15.0	0.17	1.13%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 8/29/2013 9:35:26 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2778923.3	42927.37	1.54%	100.6	%
ScR 361.383	320820.9	1137.96	0.35%	100.2	%
Ba 233.527†	47967.1	46.45	0.10%	[10]	mg/L
Cd 228.802†	220411.2	3648.87	1.66%	[10]	mg/L
Co 228.616†	336681.6	6297.46	1.87%	[10]	mg/L
Cr 267.716†	63378.7	73.17	0.12%	[10]	mg/L
Cu 324.752†	2659216.2	47843.82	1.80%	[10]	mg/L
Mn 257.610†	448846.3	549.47	0.12%	[10]	mg/L
V 292.402†	1200563.4	20898.06	1.74%	[10]	mg/L

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: STD3 **Date Collected: 8/29/2013 9:37:28 AM**
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2761310.8	8147.84	0.30%	100.0	%
ScR 361.383	316142.3	2558.87	0.81%	98.79	%
Ag 328.068†	206349.4	504.86	0.24%	[1.0]	mg/L
As 188.979†	13299.2	32.57	0.24%	[10]	mg/L
B 249.677†	64421.9	644.79	1.00%	[10]	mg/L
Be 313.042†	2614836.6	38287.64	1.46%	[5.0]	mg/L
Na 589.592†	649443.1	6052.79	0.93%	[50]	mg/L
Ni 231.604†	34042.2	360.80	1.06%	[10]	mg/L
Pb 220.353†	77323.0	262.75	0.34%	[10]	mg/L
Se 196.026†	14742.9	70.67	0.48%	[10]	mg/L
Sr 421.552†	4588552.1	26964.84	0.59%	[5]	mg/L
Tl 190.801†	17395.8	43.87	0.25%	[10]	mg/L
Zn 206.200†	33971.2	264.81	0.78%	[10]	mg/L

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: STD4 **Date Collected: 8/29/2013 9:40:02 AM**
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2824155.8	10806.90	0.38%	102.3	%
ScR 361.383	323910.1	1331.93	0.41%	101.2	%
Mo 202.031†	177608.5	776.04	0.44%	[10]	mg/L
Sb 206.836†	28279.9	116.68	0.41%	[10]	mg/L
Si 288.158†	14596.6	83.25	0.57%	[10]	mg/L
Sn 189.927†	41429.6	217.35	0.52%	[10]	mg/L
Ti 334.903†	208482.9	1037.61	0.50%	[10]	mg/L

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: STD5 **Date Collected: 8/29/2013 9:42:17 AM**
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2643022.7	5865.09	0.22%	95.72	%
ScR 361.383	317459.9	707.33	0.22%	99.20	%
Al 308.215†	34728.8	84.49	0.24%	[30]	mg/L
Ca 317.933†	273764.6	665.00	0.24%	[30]	mg/L
Fe 273.955†	130301.7	626.06	0.48%	[100]	mg/L
K 766.490†	205400.6	722.03	0.35%	[100]	mg/L
Mg 279.077†	25066.7	45.42	0.18%	[30]	mg/L
Na 330.237†	2744.6	5.83	0.21%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	206300	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1158	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1330	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6442	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4797	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	523000	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	9125	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	22040	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	33670	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6338	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	265900	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1303	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2054	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	835.6	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	44880	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17760	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	12990	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	27.45	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3404	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7732	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2828	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1474	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1460	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4143	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	917700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	20850	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	1740	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	120100	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3397	0.00000	1.000000	

Analysis Begun

Start Time: 8/29/2013 9:46:47 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/29/2013 8:18:33 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET.sif
Batch ID:
Results Data Set: I2130829
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV

Autosampler Location: 7
Date Collected: 8/29/2013 9:46:49 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	237.0 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	2772909.6	100.4	%	0.64				0.64%
ScR 361.383	314218.2	98.18	%	0.584				0.60%
Ag 328.068†	219343.5	1.063	mg/L	0.0042	1.063	mg/L	0.0042	0.40%
Al 308.215†	2425.0	2.061	mg/L	0.0191	2.061	mg/L	0.0191	0.93%
As 188.979†	2704.2	2.062	mg/L	0.0108	2.062	mg/L	0.0108	0.53%
B 249.677†	6653.0	1.032	mg/L	0.0037	1.032	mg/L	0.0037	0.36%
Ba 233.527†	4962.3	1.034	mg/L	0.0044	1.034	mg/L	0.0044	0.43%
Be 313.042†	530533.7	1.014	mg/L	0.0074	1.014	mg/L	0.0074	0.73%
Ca 317.933†	19091.9	2.092	mg/L	0.0142	2.092	mg/L	0.0142	0.68%
Cd 228.802†	22971.0	1.032	mg/L	0.0082	1.032	mg/L	0.0082	0.79%
Co 228.616†	33524.4	0.9939	mg/L	0.00433	0.9939	mg/L	0.00433	0.44%
Cr 267.716†	6692.3	1.056	mg/L	0.0078	1.056	mg/L	0.0078	0.74%
Cu 324.752†	268337.6	1.009	mg/L	0.0041	1.009	mg/L	0.0041	0.40%
Fe 273.955†	2749.1	2.104	mg/L	0.0144	2.104	mg/L	0.0144	0.69%
K 766.490†	41537.7	20.22	mg/L	0.122	20.22	mg/L	0.122	0.60%
Mg 279.077†	1678.9	2.016	mg/L	0.0160	2.016	mg/L	0.0160	0.79%
Mn 257.610†	44776.7	0.9979	mg/L	0.00618	0.9979	mg/L	0.00618	0.62%
Mo 202.031†	17618.6	0.9919	mg/L	0.00793	0.9919	mg/L	0.00793	0.80%
Na 589.592†	657583.3	50.63	mg/L	0.157	50.63	mg/L	0.157	0.31%
Na 330.237†	1444.0	52.59	mg/L	0.357	52.59	mg/L	0.357	0.68%
Ni 231.604†	3526.2	1.036	mg/L	0.0067	1.036	mg/L	0.0067	0.64%
Pb 220.353†	15259.3	1.975	mg/L	0.0142	1.975	mg/L	0.0142	0.72%
Sb 206.836†	5967.0	2.109	mg/L	0.0085	2.109	mg/L	0.0085	0.40%
Se 196.026†	3017.3	2.045	mg/L	0.0085	2.045	mg/L	0.0085	0.41%
Si 288.158†	2995.4	2.057	mg/L	0.0137	2.057	mg/L	0.0137	0.67%
Sn 189.927†	4174.3	1.009	mg/L	0.0057	1.009	mg/L	0.0057	0.57%
Sr 421.552†	928004.9	1.011	mg/L	0.0040	1.011	mg/L	0.0040	0.40%
Ti 334.903†	21155.2	1.013	mg/L	0.0046	1.013	mg/L	0.0046	0.45%
Tl 190.801†	3644.5	2.087	mg/L	0.0114	2.087	mg/L	0.0114	0.55%
V 292.402†	122067.7	1.021	mg/L	0.0055	1.021	mg/L	0.0055	0.54%
Zn 206.200†	3498.2	1.030	mg/L	0.0066	1.030	mg/L	0.0066	0.64%

User canceled analysis.

Analysis Begun

Start Time: 8/29/2013 9:50:44 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/29/2013 8:18:33 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0829.sif
Batch ID:
Results Data Set: I2130829
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

BA
8/29/13

XB09:01600

Sequence No.: 2
Sample ID: ICB

Autosampler Location: 1
Date Collected: 8/29/2013 9:50:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	237.0 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	2783359.4	100.8	%	0.21				0.21%
ScR 361.383	319832.8	99.94	%	0.123				0.12%
Ag 328.068†	-31.7	-0.00015	mg/L	0.000077	-0.00015	mg/L	0.000077	50.36%
Al 308.215†	2.4	0.00204	mg/L	0.001209	0.00204	mg/L	0.001209	59.19%
As 188.979†	-1.8	-0.00137	mg/L	0.002919	-0.00137	mg/L	0.002919	212.67%
B 249.677†	24.6	0.00383	mg/L	0.000486	0.00383	mg/L	0.000486	12.69%
Ba 233.527†	2.2	0.00046	mg/L	0.000806	0.00046	mg/L	0.000806	174.37%
Be 313.042†	-9.7	-0.00002	mg/L	0.000034	-0.00002	mg/L	0.000034	180.51%
Ca 317.933†	-9.5	-0.00104	mg/L	0.001204	-0.00104	mg/L	0.001204	115.36%
Cd 228.802†	2.1	0.00010	mg/L	0.000120	0.00010	mg/L	0.000120	116.84%
Co 228.616†	-1.5	-0.00004	mg/L	0.000065	-0.00004	mg/L	0.000065	148.09%
Cr 267.716†	0.2	0.00003	mg/L	0.000903	0.00003	mg/L	0.000903	>999.9%
Cu 324.752†	-2.2	-0.00001	mg/L	0.000243	-0.00001	mg/L	0.000243	>999.9%
Fe 273.955†	-1.3	-0.00102	mg/L	0.000518	-0.00102	mg/L	0.000518	50.93%
K 766.490†	-12.0	-0.00582	mg/L	0.008542	-0.00582	mg/L	0.008542	146.72%
Mg 279.077†	0.9	0.00109	mg/L	0.002761	0.00109	mg/L	0.002761	252.58%
Mn 257.610†	5.8	0.00013	mg/L	0.000035	0.00013	mg/L	0.000035	27.37%
Mo 202.031†	39.6	0.00223	mg/L	0.000463	0.00223	mg/L	0.000463	20.80%
Na 589.592†	55.4	0.00426	mg/L	0.004340	0.00426	mg/L	0.004340	101.84%
Na 330.237†	0.9	0.03353	mg/L	0.250699	0.03353	mg/L	0.250699	747.60%
Ni 231.604†	1.6	0.00047	mg/L	0.000469	0.00047	mg/L	0.000469	100.29%
Pb 220.353†	1.0	0.00012	mg/L	0.000780	0.00012	mg/L	0.000780	627.58%
Sb 206.836†	7.0	0.00248	mg/L	0.000418	0.00248	mg/L	0.000418	16.90%
Se 196.026†	-2.0	-0.00133	mg/L	0.000900	-0.00133	mg/L	0.000900	67.89%
Si 288.158†	-1.8	-0.00121	mg/L	0.001698	-0.00121	mg/L	0.001698	139.95%
Sn 189.927†	0.7	0.00017	mg/L	0.001082	0.00017	mg/L	0.001082	635.39%
Sr 421.552†	12.2	0.00001	mg/L	0.000067	0.00001	mg/L	0.000067	501.38%
Ti 334.903†	9.5	0.00045	mg/L	0.000533	0.00045	mg/L	0.000533	117.76%
Tl 190.801†	2.9	0.00167	mg/L	0.001554	0.00167	mg/L	0.001554	93.33%
V 292.402†	7.5	0.00006	mg/L	0.000153	0.00006	mg/L	0.000153	240.19%
Zn 206.200†	1.1	0.00033	mg/L	0.000846	0.00033	mg/L	0.000846	256.37%

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 8/29/2013 9:55:01 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2817395.8	102.0	%	0.21				0.21%
ScR 361.383	321247.6	100.4	%	0.70				0.69%
Ag 328.068†	643.6	0.00312	mg/L	0.000130	0.00312	mg/L	0.000130	4.17%
Al 308.215†	59.6	0.05135	mg/L	0.005725	0.05135	mg/L	0.005725	11.15%
As 188.979†	64.2	0.04843	mg/L	0.001081	0.04843	mg/L	0.001081	2.23%
B 249.677†	141.2	0.02191	mg/L	0.000379	0.02191	mg/L	0.000379	1.73%
Ba 233.527†	14.2	0.00294	mg/L	0.000500	0.00294	mg/L	0.000500	16.98%
Be 313.042†	478.4	0.00091	mg/L	0.000016	0.00091	mg/L	0.000016	1.75%
Ca 317.933†	406.3	0.04452	mg/L	0.001732	0.04452	mg/L	0.001732	3.89%
Cd 228.802†	49.1	0.00197	mg/L	0.000067	0.00197	mg/L	0.000067	3.40%
Co 228.616†	101.5	0.00300	mg/L	0.000187	0.00300	mg/L	0.000187	6.22%
Cr 267.716†	30.6	0.00482	mg/L	0.000150	0.00482	mg/L	0.000150	3.11%
Cu 324.752†	488.1	0.00184	mg/L	0.000139	0.00184	mg/L	0.000139	7.58%
Fe 273.955†	67.3	0.05160	mg/L	0.000455	0.05160	mg/L	0.000455	0.88%
K 766.490†	1013.1	0.4932	mg/L	0.02072	0.4932	mg/L	0.02072	4.20%
Mg 279.077†	41.1	0.04917	mg/L	0.003448	0.04917	mg/L	0.003448	7.01%
Mn 257.610†	44.3	0.00099	mg/L	0.000043	0.00099	mg/L	0.000043	4.34%
Mo 202.031†	88.8	0.00500	mg/L	0.000307	0.00500	mg/L	0.000307	6.13%
Na 589.592†	6392.9	0.4922	mg/L	0.00294	0.4922	mg/L	0.00294	0.60%
Na 330.237†	16.0	0.5832	mg/L	0.07012	0.5832	mg/L	0.07012	12.02%
Ni 231.604†	36.3	0.01067	mg/L	0.001033	0.01067	mg/L	0.001033	9.69%
Pb 220.353†	152.0	0.01968	mg/L	0.000425	0.01968	mg/L	0.000425	2.16%
Sb 206.836†	145.3	0.05142	mg/L	0.000434	0.05142	mg/L	0.000434	0.84%
Se 196.026†	74.6	0.05060	mg/L	0.002521	0.05060	mg/L	0.002521	4.98%
Si 288.158†	82.7	0.05667	mg/L	0.002730	0.05667	mg/L	0.002730	4.82%
Sn 189.927†	41.0	0.00993	mg/L	0.000584	0.00993	mg/L	0.000584	5.88%
Sr 421.552†	893.1	0.00097	mg/L	0.000021	0.00097	mg/L	0.000021	2.16%
Ti 334.903†	126.7	0.00607	mg/L	0.000216	0.00607	mg/L	0.000216	3.56%
Tl 190.801†	88.2	0.05071	mg/L	0.001019	0.05071	mg/L	0.001019	2.01%
V 292.402†	360.1	0.00301	mg/L	0.000184	0.00301	mg/L	0.000184	6.10%
Zn 206.200†	33.0	0.00973	mg/L	0.000376	0.00973	mg/L	0.000376	3.87%

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 8/29/2013 9:59:17 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2770330.2	100.3	%	0.29				0.29%
ScR 361.383	319612.3	99.87	%	0.500				0.50%
Ag 328.068†	-294.7	-0.00142	mg/L	0.000186	-0.00142	mg/L	0.000186	13.09%
Al 308.215†	229497.7	198.2	mg/L	0.38	198.2	mg/L	0.38	0.19%
As 188.979†	40.5	0.01890	mg/L	0.001776	0.01890	mg/L	0.001776	9.40%
B 249.677†	124.5	0.01932	mg/L	0.000321	0.01932	mg/L	0.000321	1.66%
Ba 233.527†	123.6	0.00126	mg/L	0.000461	0.00126	mg/L	0.000461	36.52%
Be 313.042†	26.9	0.00005	mg/L	0.000010	0.00005	mg/L	0.000010	19.94%
Ca 317.933†	915788.9	100.4	mg/L	0.89	100.4	mg/L	0.89	0.89%
Cd 228.802†	13.7	-0.00182	mg/L	0.000398	-0.00182	mg/L	0.000398	21.88%
Co 228.616†	73.0	0.00215	mg/L	0.000157	0.00215	mg/L	0.000157	7.29%
Cr 267.716†	7.8	0.00079	mg/L	0.000145	0.00079	mg/L	0.000145	18.42%
Cu 324.752†	-2228.5	0.00043	mg/L	0.000238	0.00043	mg/L	0.000238	54.90%
Fe 273.955†	257757.8	197.8	mg/L	2.04	197.8	mg/L	2.04	1.03%
K 766.490†	17.4	0.00846	mg/L	0.005507	0.00846	mg/L	0.005507	65.07%
Mg 279.077†	85840.6	102.6	mg/L	0.47	102.6	mg/L	0.47	0.46%
Mn 257.610†	87.0	0.00023	mg/L	0.000199	0.00023	mg/L	0.000199	86.37%
Mo 202.031†	85.8	0.00351	mg/L	0.000587	0.00351	mg/L	0.000587	16.71%
Na 589.592†	354.6	0.02730	mg/L	0.003768	0.02730	mg/L	0.003768	13.80%
Na 330.237†	-6.1	-0.2184	mg/L	0.14367	-0.2184	mg/L	0.14367	65.79%
Ni 231.604†	-0.5	-0.00012	mg/L	0.001943	-0.00012	mg/L	0.001943	>999.9%
Pb 220.353†	-397.4	-0.00437	mg/L	0.001547	-0.00437	mg/L	0.001547	35.43%
Sb 206.836†	12.9	0.00445	mg/L	0.001822	0.00445	mg/L	0.001822	40.99%
Se 196.026†	42.5	0.02334	mg/L	0.002293	0.02334	mg/L	0.002293	9.82%
Si 288.158†	-12.7	-0.00871	mg/L	0.003452	-0.00871	mg/L	0.003452	39.64%
Sn 189.927†	-77.5	-0.01043	mg/L	0.000902	-0.01043	mg/L	0.000902	8.65%
Sr 421.552†	4883.2	0.00532	mg/L Cont.	0.000015	0.00532	mg/L	0.000015	0.28%
Ti 334.903†	250.2	0.00347	mg/L	0.000068	0.00347	mg/L	0.000068	1.97%
Tl 190.801†	-38.2	0.00622	mg/L	0.003343	0.00622	mg/L	0.003343	53.71%
V 292.402†	1465.6	0.00031	mg/L	0.000481	0.00031	mg/L	0.000481	154.27%
Zn 206.200†	-1.7	-0.00229	mg/L	0.000048	-0.00229	mg/L	0.000048	2.10%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 8/29/2013 10:03:32 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767849.9	100.2	%	0.11				0.11%
ScR 361.383	321598.0	100.5	%	0.16				0.16%
Ag 328.068†	220317.2	1.068	mg/L	0.0081	1.068	mg/L	0.0081	0.76%
Al 308.215†	230013.6	198.7	mg/L	0.44	198.7	mg/L	0.44	0.22%
As 188.979†	1390.5	1.033	mg/L	0.0032	1.033	mg/L	0.0032	0.31%
B 249.677†	52.0	0.00604	mg/L	0.000721	0.00604	mg/L	0.000721	11.95%
Ba 233.527†	4980.3	1.014	mg/L	0.0019	1.014	mg/L	0.0019	0.19%
Be 313.042†	512118.1	0.9790	mg/L	0.00151	0.9790	mg/L	0.00151	0.15%
Ca 317.933†	924406.1	101.3	mg/L	0.43	101.3	mg/L	0.43	0.42%
Cd 228.802†	23087.5	1.040	mg/L	0.0024	1.040	mg/L	0.0024	0.23%
Co 228.616†	32533.9	0.9661	mg/L	0.00195	0.9661	mg/L	0.00195	0.20%
Cr 267.716†	6402.9	1.010	mg/L	0.0042	1.010	mg/L	0.0042	0.41%
Cu 324.752†	273163.1	1.036	mg/L	0.0043	1.036	mg/L	0.0043	0.41%
Fe 273.955†	257186.1	197.4	mg/L	1.07	197.4	mg/L	1.07	0.54%
K 766.490†	-9.9	-0.00480	mg/L	0.023012	-0.00480	mg/L	0.023012	479.53%
Mg 279.077†	83556.3	99.87	mg/L	0.295	99.87	mg/L	0.295	0.30%
Mn 257.610†	42664.8	0.9490	mg/L	0.00410	0.9490	mg/L	0.00410	0.43%
Mo 202.031†	86.2	0.00348	mg/L	0.000591	0.00348	mg/L	0.000591	17.01%
Na 589.592†	192.4	0.01481	mg/L	0.003201	0.01481	mg/L	0.003201	21.62%
Na 330.237†	-2.8	-0.3959	mg/L	0.06806	-0.3959	mg/L	0.06806	17.19%
Ni 231.604†	3301.3	0.9699	mg/L	0.00518	0.9699	mg/L	0.00518	0.53%
Pb 220.353†	7124.8	0.9690	mg/L	0.00094	0.9690	mg/L	0.00094	0.10%
Sb 206.836†	2896.0	1.014	mg/L	0.0038	1.014	mg/L	0.0038	0.38%
Se 196.026†	1528.7	1.030	mg/L	0.0053	1.030	mg/L	0.0053	0.51%
Si 288.158†	-19.6	-0.00883	mg/L	0.004440	-0.00883	mg/L	0.004440	50.30%
Sn 189.927†	-82.2	-0.01095	mg/L	0.000259	-0.01095	mg/L	0.000259	2.37%
Sr 421.552†	4803.4	0.00523	mg/L	0.000016	0.00523	mg/L	0.000016	0.31%
Ti 334.903†	249.2	0.00314	mg/L	0.000080	0.00314	mg/L	0.000080	2.56%
Tl 190.801†	1627.4	0.9539	mg/L	0.00322	0.9539	mg/L	0.00322	0.34%
V 292.402†	118435.3	0.9787	mg/L	0.00673	0.9787	mg/L	0.00673	0.69%
Zn 206.200†	3302.5	0.9705	mg/L	0.00510	0.9705	mg/L	0.00510	0.53%

Cont.

Sequence No.: 6
Sample ID: CV 1

Autosampler Location: 7
Date Collected: 8/29/2013 10:08:36 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	237.0 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	2808640.1	101.7	%	0.38				0.37%
ScR 361.383	318771.4	99.61	%	0.241				0.24%
Ag 328.068†	217337.1	1.054	mg/L	0.0028	1.054	mg/L	0.0028	0.26%
Al 308.215†	2428.5	2.064	mg/L	0.0090	2.064	mg/L	0.0090	0.44%
As 188.979†	2687.9	2.049	mg/L	0.0108	2.049	mg/L	0.0108	0.53%
B 249.677†	6614.1	1.026	mg/L	0.0033	1.026	mg/L	0.0033	0.32%
Ba 233.527†	5065.8	1.056	mg/L	0.0031	1.056	mg/L	0.0031	0.29%
Be 313.042†	526392.1	1.006	mg/L	0.0076	1.006	mg/L	0.0076	0.75%
Ca 317.933†	19226.9	2.107	mg/L	0.0033	2.107	mg/L	0.0033	0.16%
Cd 228.802†	23371.2	1.050	mg/L	0.0051	1.050	mg/L	0.0051	0.49%
Co 228.616†	34522.1	1.024	mg/L	0.0036	1.024	mg/L	0.0036	0.35%
Cr 267.716†	6727.3	1.061	mg/L	0.0007	1.061	mg/L	0.0007	0.07%
Cu 324.752†	276090.0	1.038	mg/L	0.0028	1.038	mg/L	0.0028	0.27%
Fe 273.955†	2733.0	2.091	mg/L	0.0036	2.091	mg/L	0.0036	0.17%
K 766.490†	41146.6	20.03	mg/L	0.114	20.03	mg/L	0.114	0.57%
Mg 279.077†	1694.9	2.035	mg/L	0.0107	2.035	mg/L	0.0107	0.53%
Mn 257.610†	44343.6	0.9883	mg/L	0.00331	0.9883	mg/L	0.00331	0.33%
Mo 202.031†	17959.6	1.011	mg/L	0.0033	1.011	mg/L	0.0033	0.33%
Na 589.592†	654324.5	50.38	mg/L	0.143	50.38	mg/L	0.143	0.28%
Na 330.237†	1434.2	52.23	mg/L	0.285	52.23	mg/L	0.285	0.55%
Ni 231.604†	3563.0	1.047	mg/L	0.0052	1.047	mg/L	0.0052	0.50%
Pb 220.353†	15658.9	2.026	mg/L	0.0055	2.026	mg/L	0.0055	0.27%
Sb 206.836†	5901.1	2.086	mg/L	0.0124	2.086	mg/L	0.0124	0.59%
Se 196.026†	2988.5	2.026	mg/L	0.0055	2.026	mg/L	0.0055	0.27%
Si 288.158†	2983.8	2.049	mg/L	0.0094	2.049	mg/L	0.0094	0.46%
Sn 189.927†	4125.5	0.9973	mg/L	0.00058	0.9973	mg/L	0.00058	0.06%
Sr 421.552†	918152.8	1.000	mg/L	0.0017	1.000	mg/L	0.0017	0.17%
Ti 334.903†	20997.1	1.006	mg/L	0.0033	1.006	mg/L	0.0033	0.33%
Tl 190.801†	3647.4	2.088	mg/L	0.0106	2.088	mg/L	0.0106	0.51%
V 292.402†	120898.1	1.011	mg/L	0.0037	1.011	mg/L	0.0037	0.36%
Zn 206.200†	3527.9	1.039	mg/L	0.0004	1.039	mg/L	0.0004	0.04%

Sequence No.: 7
Sample ID: CB

Autosampler Location: 1
Date Collected: 8/29/2013 10:12:40 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	237.0 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	2838660.1	102.8	%	0.42				0.41%
ScR 361.383	325771.1	101.8	%	0.55				0.54%
Ag 328.068†	0.6	0.00000	mg/L	0.000257	0.00000	mg/L	0.000257	>999.9%
Al 308.215†	2.4	0.00202	mg/L	0.005586	0.00202	mg/L	0.005586	276.85%
As 188.979†	-1.7	-0.00128	mg/L	0.001222	-0.00128	mg/L	0.001222	95.42%
B 249.677†	19.3	0.00300	mg/L	0.000900	0.00300	mg/L	0.000900	29.97%
Ba 233.527†	-0.5	-0.00010	mg/L	0.000985	-0.00010	mg/L	0.000985	955.42%
Be 313.042†	38.9	0.00007	mg/L	0.000021	0.00007	mg/L	0.000021	28.16%
Ca 317.933†	-7.9	-0.00087	mg/L	0.001172	-0.00087	mg/L	0.001172	134.61%
Cd 228.802†	0.5	0.00003	mg/L	0.000136	0.00003	mg/L	0.000136	449.41%
Co 228.616†	-1.0	-0.00003	mg/L	0.000188	-0.00003	mg/L	0.000188	587.62%
Cr 267.716†	1.0	0.00016	mg/L	0.000377	0.00016	mg/L	0.000377	230.78%
Cu 324.752†	15.2	0.00006	mg/L	0.000155	0.00006	mg/L	0.000155	274.71%
Fe 273.955†	2.0	0.00155	mg/L	0.000152	0.00155	mg/L	0.000152	9.78%
K 766.490†	19.4	0.00943	mg/L	0.015089	0.00943	mg/L	0.015089	159.94%
Mg 279.077†	3.8	0.00451	mg/L	0.002154	0.00451	mg/L	0.002154	47.74%
Mn 257.610†	5.6	0.00013	mg/L	0.000080	0.00013	mg/L	0.000080	64.24%
Mo 202.031†	33.4	0.00188	mg/L	0.000143	0.00188	mg/L	0.000143	7.58%
Na 589.592†	57.8	0.00445	mg/L	0.002872	0.00445	mg/L	0.002872	64.60%
Na 330.237†	4.9	0.1793	mg/L	0.22451	0.1793	mg/L	0.22451	125.21%
Ni 231.604†	4.1	0.00121	mg/L	0.000927	0.00121	mg/L	0.000927	76.60%
Pb 220.353†	2.0	0.00026	mg/L	0.000743	0.00026	mg/L	0.000743	290.71%
Sb 206.836†	7.8	0.00278	mg/L	0.001664	0.00278	mg/L	0.001664	59.91%
Se 196.026†	-1.3	-0.00089	mg/L	0.002570	-0.00089	mg/L	0.002570	287.75%
Si 288.158†	-4.4	-0.00304	mg/L	0.002720	-0.00304	mg/L	0.002720	89.45%
Sn 189.927†	3.1	0.00075	mg/L	0.000551	0.00075	mg/L	0.000551	73.09%
Sr 421.552†	34.8	0.00004	mg/L	0.000029	0.00004	mg/L	0.000029	77.66%
Ti 334.903†	14.3	0.00069	mg/L	0.000100	0.00069	mg/L	0.000100	14.53%
Tl 190.801†	5.0	0.00286	mg/L	0.000694	0.00286	mg/L	0.000694	24.29%
V 292.402†	7.5	0.00006	mg/L	0.000068	0.00006	mg/L	0.000068	108.04%
Zn 206.200†	-1.5	-0.00044	mg/L	0.000639	-0.00044	mg/L	0.000639	145.35%

Sequence No.: 8
Sample ID: XB72R MB1 TWC

Autosampler Location: 304
Date Collected: 8/29/2013 10:16:55 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R MB1 TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XB72R MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2844259.1	103.0	%	0.37				0.36%
ScR 361.383	328317.9	102.6	%	0.43				0.42%
Ag 328.068†	-25.7	-0.00012	mg/L	0.000162	-0.00012	mg/L	0.000162	130.12%
Al 308.215†	-0.9	-0.00075	mg/L	0.003463	-0.00075	mg/L	0.003463	459.00%
As 188.979†	0.9	0.00069	mg/L	0.000420	0.00069	mg/L	0.000420	61.25%
B 249.677†	19.1	0.00296	mg/L	0.000975	0.00296	mg/L	0.000975	32.96%
Ba 233.527†	-1.6	-0.00034	mg/L	0.000505	-0.00034	mg/L	0.000505	149.27%
Be 313.042†	5.0	0.00001	mg/L	0.000009	0.00001	mg/L	0.000009	98.08%
Ca 317.933†	6.8	0.00075	mg/L	0.000111	0.00075	mg/L	0.000111	14.83%
Cd 228.802†	-1.3	-0.00006	mg/L	0.000288	-0.00006	mg/L	0.000288	453.37%
Co 228.616†	-4.2	-0.00012	mg/L	0.000086	-0.00012	mg/L	0.000086	69.20%
Cr 267.716†	-1.0	-0.00016	mg/L	0.000677	-0.00016	mg/L	0.000677	414.44%
Cu 324.752†	6.0	0.00002	mg/L	0.000113	0.00002	mg/L	0.000113	502.56%
Fe 273.955†	1.2	0.00090	mg/L	0.002071	0.00090	mg/L	0.002071	230.77%
K 766.490†	-6.0	-0.00293	mg/L	0.002454	-0.00293	mg/L	0.002454	83.70%
Mg 279.077†	-0.7	-0.00085	mg/L	0.001884	-0.00085	mg/L	0.001884	221.08%
Mn 257.610†	3.5	0.00008	mg/L	0.000089	0.00008	mg/L	0.000089	115.81%
Mo 202.031†	-0.9	-0.00005	mg/L	0.000242	-0.00005	mg/L	0.000242	495.90%
Na 589.592†	53.1	0.00409	mg/L	0.000295	0.00409	mg/L	0.000295	7.20%
Na 330.237†	8.8	0.3207	mg/L	0.08946	0.3207	mg/L	0.08946	27.90%
Ni 231.604†	1.2	0.00034	mg/L	0.000150	0.00034	mg/L	0.000150	44.41%
Pb 220.353†	-4.0	-0.00052	mg/L	0.000365	-0.00052	mg/L	0.000365	70.06%
Sb 206.836†	-0.4	-0.00013	mg/L	0.000702	-0.00013	mg/L	0.000702	548.61%
Se 196.026†	1.2	0.00080	mg/L	0.001326	0.00080	mg/L	0.001326	164.83%
Si 288.158†	4.4	0.00302	mg/L	0.003045	0.00302	mg/L	0.003045	100.96%
Sn 189.927†	-1.9	-0.00047	mg/L	0.001409	-0.00047	mg/L	0.001409	300.63%
Sr 421.552†	-16.0	-0.00002	mg/L	0.000024	-0.00002	mg/L	0.000024	134.76%
Ti 334.903†	7.1	0.00034	mg/L	0.000390	0.00034	mg/L	0.000390	114.76%
Tl 190.801†	0.3	0.00015	mg/L	0.001701	0.00015	mg/L	0.001701	>999.9%
V 292.402†	-8.5	-0.00007	mg/L	0.000082	-0.00007	mg/L	0.000082	114.45%
Zn 206.200†	6.2	0.00181	mg/L	0.000490	0.00181	mg/L	0.000490	27.05%

Sequence No.: 9
Sample ID: XB72R BDUP TWC

Autosampler Location: 305
Date Collected: 8/29/2013 10:21:12 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R BDUP TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R BDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2804684.6	101.6	%	0.51				0.51%
ScR 361.383	324708.3	101.5	%	0.52				0.51%
Ag 328.068†	-44.1	-0.00020	mg/L	0.000068	-0.00020	mg/L	0.000068	33.66%
Al 308.215†	426.0	0.3673	mg/L	0.00719	0.3673	mg/L	0.00719	1.96%
As 188.979†	23611.7	17.75	mg/L	0.099	17.75	mg/L	0.099	0.56%
B 249.677†	545.4	0.08466	mg/L	0.000923	0.08466	mg/L	0.000923	1.09%
Ba 233.527†	76.3	0.01591	mg/L	0.000957	0.01591	mg/L	0.000957	6.01%
Be 313.042†	4.2	-0.00000	mg/L	0.000022	-0.00000	mg/L	0.000022	>999.9%
Ca 317.933†	237133.7	25.99	mg/L	0.048	25.99	mg/L	0.048	0.19%
Cd 228.802†	1912.1	-0.01078	mg/L	0.001622	-0.01078	mg/L	0.001622	15.05%
Co 228.616†	35.3	0.00101	mg/L	0.000161	0.00101	mg/L	0.000161	15.97%
Cr 267.716†	40.6	0.00382	mg/L	0.000098	0.00382	mg/L	0.000098	2.56%
Cu 324.752†	598.0	0.00217	mg/L	0.000248	0.00217	mg/L	0.000248	11.45%
Fe 273.955†	1577.9	1.211	mg/L	0.0067	1.211	mg/L	0.0067	0.55%
K 766.490†	6485.7	3.158	mg/L	0.0156	3.158	mg/L	0.0156	0.49%
Mg 279.077†	24341.3	29.13	mg/L	0.091	29.13	mg/L	0.091	0.31%
Mn 257.610†	1292.5	0.02863	mg/L	0.000262	0.02863	mg/L	0.000262	0.92%
Mo 202.031†	74.0	0.00383	mg/L	0.000094	0.00383	mg/L	0.000094	2.46%
Na 589.592†	244452.5	18.82	mg/L	0.092	18.82	mg/L	0.092	0.49%
Na 330.237†	535.8	19.53	mg/L	0.185	19.53	mg/L	0.185	0.95%
Ni 231.604†	16.0	0.00470	mg/L	0.000627	0.00470	mg/L	0.000627	13.34%
Pb 220.353†	-2.9	-0.00032	mg/L	0.000660	-0.00032	mg/L	0.000660	203.71%
Sb 206.836†	6.5	0.00229	mg/L	0.001438	0.00229	mg/L	0.001438	62.92%
Se 196.026†	49.2	0.03194	mg/L	0.002426	0.03194	mg/L	0.002426	7.60%
Si 288.158†	32653.5	22.37	mg/L	0.214	22.37	mg/L	0.214	0.95%
Sn 189.927†	-44.8	-0.00866	mg/L	0.000840	-0.00866	mg/L	0.000840	9.71%
Sr 421.552†	130107.3	0.1418	mg/L	0.00020	0.1418	mg/L	0.00020	0.14%
Ti 334.903†	473.0	0.02047	mg/L	0.000245	0.02047	mg/L	0.000245	1.20%
Tl 190.801†	9.3	0.00537	mg/L	0.001079	0.00537	mg/L	0.001079	20.09%
V 292.402†	4489.4	0.03734	mg/L	0.000338	0.03734	mg/L	0.000338	0.91%
Zn 206.200†	3.0	0.00423	mg/L	0.000180	0.00423	mg/L	0.000180	4.27%

Sequence No.: 10
Sample ID: XB72R B TWC

Autosampler Location: 306
Date Collected: 8/29/2013 10:25:27 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R B TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R B TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2782723.0	100.8	%	0.15				0.15%
ScR 361.383	322809.6	100.9	%	0.25				0.25%
Ag 328.068†	-35.5	-0.00016	mg/L	0.000159	-0.00016	mg/L	0.000159	99.01%
Al 308.215†	484.2	0.4176	mg/L	0.01393	0.4176	mg/L	0.01393	3.34%
As 188.979†	24146.8	18.15	mg/L	0.057	18.15	mg/L	0.057	0.31%
B 249.677†	560.9	0.08707	mg/L	0.000324	0.08707	mg/L	0.000324	0.37%
Ba 233.527†	74.4	0.01550	mg/L	0.000153	0.01550	mg/L	0.000153	0.99%
Be 313.042†	24.3	0.00004	mg/L	0.000019	0.00004	mg/L	0.000019	52.64%
Ca 317.933†	244644.4	26.81	mg/L	0.037	26.81	mg/L	0.037	0.14%
Cd 228.802†	1953.3	-0.01113	mg/L	0.000836	-0.01113	mg/L	0.000836	7.51%
Co 228.616†	26.3	0.00074	mg/L	0.000207	0.00074	mg/L	0.000207	28.09%
Cr 267.716†	38.7	0.00345	mg/L	0.001315	0.00345	mg/L	0.001315	38.13%
Cu 324.752†	573.1	0.00207	mg/L	0.000112	0.00207	mg/L	0.000112	5.40%
Fe 273.955†	1634.8	1.254	mg/L	0.0071	1.254	mg/L	0.0071	0.56%
K 766.490†	6705.3	3.265	mg/L	0.0196	3.265	mg/L	0.0196	0.60%
Mg 279.077†	25021.3	29.94	mg/L	0.248	29.94	mg/L	0.248	0.83%
Mn 257.610†	1339.3	0.02967	mg/L	0.000019	0.02967	mg/L	0.000019	0.06%
Mo 202.031†	76.0	0.00393	mg/L	0.000258	0.00393	mg/L	0.000258	6.57%
Na 589.592†	253264.7	19.50	mg/L	0.059	19.50	mg/L	0.059	0.30%
Na 330.237†	546.9	19.93	mg/L	0.458	19.93	mg/L	0.458	2.30%
Ni 231.604†	14.5	0.00426	mg/L	0.000182	0.00426	mg/L	0.000182	4.27%
Pb 220.353†	-13.0	-0.00162	mg/L	0.000297	-0.00162	mg/L	0.000297	18.33%
Sb 206.836†	4.4	0.00155	mg/L	0.002364	0.00155	mg/L	0.002364	152.26%
Se 196.026†	51.5	0.03342	mg/L	0.006230	0.03342	mg/L	0.006230	18.64%
Si 288.158†	36553.8	25.04	mg/L	0.286	25.04	mg/L	0.286	1.14%
Sn 189.927†	-43.6	-0.00832	mg/L	0.000347	-0.00832	mg/L	0.000347	4.17%
Sr 421.552†	134366.6	0.1464	mg/L	0.00039	0.1464	mg/L	0.00039	0.27%
Ti 334.903†	519.5	0.02263	mg/L	0.000337	0.02263	mg/L	0.000337	1.49%
Tl 190.801†	7.8	0.00452	mg/L	0.002008	0.00452	mg/L	0.002008	44.43%
V 292.402†	4629.4	0.03850	mg/L	0.000160	0.03850	mg/L	0.000160	0.42%
Zn 206.200†	0.3	0.00388	mg/L	0.000606	0.00388	mg/L	0.000606	15.60%

Sequence No.: 11
Sample ID: XB72R BSPK TWC

Autosampler Location: 307
Date Collected: 8/29/2013 10:29:42 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R BSPK TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R BSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2786931.7	100.9	%	0.22				0.22%
ScR 361.383	320376.1	100.1	%	0.22				0.22%
Ag 328.068†	110601.7	0.5362	mg/L	0.00066	0.5362	mg/L	0.00066	0.12%
Al 308.215†	2810.3	2.419	mg/L	0.0037	2.419	mg/L	0.0037	0.15%
As 188.979†	26896.9	20.22	mg/L	0.017	20.22	mg/L	0.017	0.08%
B 249.677†	556.4	0.08532	mg/L	0.000397	0.08532	mg/L	0.000397	0.46%
Ba 233.527†	10282.7	2.143	mg/L	0.0047	2.143	mg/L	0.0047	0.22%
Be 313.042†	257044.6	0.4914	mg/L	0.00115	0.4914	mg/L	0.00115	0.23%
Ca 317.933†	336742.4	36.90	mg/L	0.123	36.90	mg/L	0.123	0.33%
Cd 228.802†	13660.3	0.5090	mg/L	0.00131	0.5090	mg/L	0.00131	0.26%
Co 228.616†	16821.1	0.4993	mg/L	0.00148	0.4993	mg/L	0.00148	0.30%
Cr 267.716†	3393.6	0.5317	mg/L	0.00164	0.5317	mg/L	0.00164	0.31%
Cu 324.752†	137436.5	0.5169	mg/L	0.00131	0.5169	mg/L	0.00131	0.25%
Fe 273.955†	4275.1	3.277	mg/L	0.0050	3.277	mg/L	0.0050	0.15%
K 766.490†	27616.1	13.45	mg/L	0.097	13.45	mg/L	0.097	0.72%
Mg 279.077†	34264.8	41.00	mg/L	0.038	41.00	mg/L	0.038	0.09%
Mn 257.610†	24399.5	0.5437	mg/L	0.00111	0.5437	mg/L	0.00111	0.20%
Mo 202.031†	82.3	0.00412	mg/L	0.000179	0.00412	mg/L	0.000179	4.34%
Na 589.592†	385954.9	29.71	mg/L	0.026	29.71	mg/L	0.026	0.09%
Na 330.237†	842.6	30.55	mg/L	0.118	30.55	mg/L	0.118	0.39%
Ni 231.604†	1707.9	0.5009	mg/L	0.00064	0.5009	mg/L	0.00064	0.13%
Pb 220.353†	15419.2	1.995	mg/L	0.0068	1.995	mg/L	0.0068	0.34%
Sb 206.836†	16.1	0.00050	mg/L	0.000458	0.00050	mg/L	0.000458	92.20%
Se 196.026†	3091.2	2.094	mg/L	0.0130	2.094	mg/L	0.0130	0.62%
Si 288.158†	33245.2	22.78	mg/L	0.040	22.78	mg/L	0.040	0.18%
Sn 189.927†	-50.5	-0.00905	mg/L	0.000342	-0.00905	mg/L	0.000342	3.77%
Sr 421.552†	596898.7	0.6504	mg/L	0.00130	0.6504	mg/L	0.00130	0.20%
Ti 334.903†	531.8	0.02226	mg/L	0.000227	0.02226	mg/L	0.000227	1.02%
Tl 190.801†	3568.8	2.047	mg/L	0.0029	2.047	mg/L	0.0029	0.14%
V 292.402†	66605.0	0.5568	mg/L	0.00056	0.5568	mg/L	0.00056	0.10%
Zn 206.200†	1716.1	0.5085	mg/L	0.00201	0.5085	mg/L	0.00201	0.39%

Sequence No.: 12
Sample ID: ~~XB72R BPOST TWC~~ 222222
BA 8/29/13
Dilution: 1.000000X

Autosampler Location: 308
Date Collected: 8/29/2013 10:33:43 AM
Data Type: Original

Nebulizer Parameters: XB72R BPOST TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R BPOST TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2772558.2	100.4	%	0.42				0.42%
ScR 361.383	321142.5	100.3	%	0.19				0.19%
Ag 328.068†	109721.0	0.5319	mg/L	0.00088	0.5319	mg/L	0.00088	0.16%
Al 308.215†	2853.7	2.456	mg/L	0.0186	2.456	mg/L	0.0186	0.76%
As 188.979†	26841.1	20.18	mg/L	0.067	20.18	mg/L	0.067	0.33%
B 249.677†	545.9	0.08369	mg/L	0.001276	0.08369	mg/L	0.001276	1.52%
Ba 233.527†	10295.4	2.146	mg/L	0.0204	2.146	mg/L	0.0204	0.95%
Be 313.042†	257055.7	0.4914	mg/L	0.00291	0.4914	mg/L	0.00291	0.59%
Ca 317.933†	335454.6	36.76	mg/L	0.132	36.76	mg/L	0.132	0.36%
Cd 228.802†	13720.4	0.5120	mg/L	0.00204	0.5120	mg/L	0.00204	0.40%
Co 228.616†	16915.6	0.5021	mg/L	0.00219	0.5021	mg/L	0.00219	0.44%
Cr 267.716†	3399.9	0.5328	mg/L	0.00186	0.5328	mg/L	0.00186	0.35%
Cu 324.752†	138724.2	0.5217	mg/L	0.00144	0.5217	mg/L	0.00144	0.28%
Fe 273.955†	4280.9	3.282	mg/L	0.0160	3.282	mg/L	0.0160	0.49%
K 766.490†	27722.0	13.50	mg/L	0.060	13.50	mg/L	0.060	0.45%
Mg 279.077†	34010.8	40.70	mg/L	0.143	40.70	mg/L	0.143	0.35%
Mn 257.610†	24414.6	0.5441	mg/L	0.00144	0.5441	mg/L	0.00144	0.26%
Mo 202.031†	84.6	0.00425	mg/L	0.000094	0.00425	mg/L	0.000094	2.21%
Na 589.592†	384529.7	29.60	mg/L	0.067	29.60	mg/L	0.067	0.22%
Na 330.237†	845.1	30.64	mg/L	0.094	30.64	mg/L	0.094	0.31%
Ni 231.604†	1705.1	0.5000	mg/L	0.00157	0.5000	mg/L	0.00157	0.31%
Pb 220.353†	15558.0	2.013	mg/L	0.0047	2.013	mg/L	0.0047	0.23%
Sb 206.836†	20.7	0.00212	mg/L	0.001094	0.00212	mg/L	0.001094	51.60%
Se 196.026†	3107.2	2.105	mg/L	0.0108	2.105	mg/L	0.0108	0.51%
Si 288.158†	36674.1	25.13	mg/L	0.126	25.13	mg/L	0.126	0.50%
Sn 189.927†	-54.9	-0.01012	mg/L	0.000125	-0.01012	mg/L	0.000125	1.24%
Sr 421.552†	598946.2	0.6527	mg/L	0.00151	0.6527	mg/L	0.00151	0.23%
Ti 334.903†	554.5	0.02337	mg/L	0.000087	0.02337	mg/L	0.000087	0.37%
Tl 190.801†	3598.3	2.064	mg/L	0.0193	2.064	mg/L	0.0193	0.93%
V 292.402†	66910.3	0.5593	mg/L	0.00012	0.5593	mg/L	0.00012	0.02%
Zn 206.200†	1712.0	0.5077	mg/L	0.00334	0.5077	mg/L	0.00334	0.66%

Sequence No.: 13
Sample ID: XB72R C TWC

Autosampler Location: 309
Date Collected: 8/29/2013 10:37:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R C TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R C TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2779697.7	100.7	%	0.44				0.44%
ScR 361.383	321321.6	100.4	%	0.70				0.70%
Ag 328.068†	-50.6	-0.00023	mg/L	0.000091	-0.00023	mg/L	0.000091	38.91%
Al 308.215†	753.4	0.6501	mg/L	0.00481	0.6501	mg/L	0.00481	0.74%
As 188.979†	25140.1	18.90	mg/L	0.160	18.90	mg/L	0.160	0.85%
B 249.677†	536.2	0.08324	mg/L	0.001207	0.08324	mg/L	0.001207	1.45%
Ba 233.527†	86.5	0.01799	mg/L	0.000769	0.01799	mg/L	0.000769	4.27%
Be 313.042†	14.3	0.00002	mg/L	0.000028	0.00002	mg/L	0.000028	164.45%
Ca 317.933†	248077.7	27.19	mg/L	0.125	27.19	mg/L	0.125	0.46%
Cd 228.802†	2039.8	-0.01131	mg/L	0.002480	-0.01131	mg/L	0.002480	21.92%
Co 228.616†	35.9	0.00100	mg/L	0.000101	0.00100	mg/L	0.000101	10.16%
Cr 267.716†	41.1	0.00382	mg/L	0.000171	0.00382	mg/L	0.000171	4.47%
Cu 324.752†	714.3	0.00262	mg/L	0.000377	0.00262	mg/L	0.000377	14.39%
Fe 273.955†	2144.1	1.645	mg/L	0.0062	1.645	mg/L	0.0062	0.38%
K 766.490†	6556.7	3.192	mg/L	0.0041	3.192	mg/L	0.0041	0.13%
Mg 279.077†	25249.8	30.22	mg/L	0.128	30.22	mg/L	0.128	0.42%
Mn 257.610†	1452.6	0.03219	mg/L	0.000234	0.03219	mg/L	0.000234	0.73%
Mo 202.031†	74.3	0.00383	mg/L	0.000198	0.00383	mg/L	0.000198	5.18%
Na 589.592†	223302.5	17.19	mg/L	0.101	17.19	mg/L	0.101	0.59%
Na 330.237†	481.4	17.55	mg/L	0.234	17.55	mg/L	0.234	1.33%
Ni 231.604†	12.0	0.00353	mg/L	0.001165	0.00353	mg/L	0.001165	32.97%
Pb 220.353†	3.2	0.00052	mg/L	0.000815	0.00052	mg/L	0.000815	155.36%
Sb 206.836†	3.0	0.00106	mg/L	0.000462	0.00106	mg/L	0.000462	43.78%
Se 196.026†	58.0	0.03785	mg/L	0.002324	0.03785	mg/L	0.002324	6.14%
Si 288.158†	36315.0	24.88	mg/L	0.043	24.88	mg/L	0.043	0.17%
Sn 189.927†	-43.2	-0.00816	mg/L	0.000858	-0.00816	mg/L	0.000858	10.51%
Sr 421.552†	135890.3	0.1481	mg/L	0.00045	0.1481	mg/L	0.00045	0.31%
Ti 334.903†	785.4	0.03536	mg/L	0.000469	0.03536	mg/L	0.000469	1.33%
Tl 190.801†	7.9	0.00463	mg/L	0.002196	0.00463	mg/L	0.002196	47.40%
V 292.402†	4855.4	0.04036	mg/L	0.000084	0.04036	mg/L	0.000084	0.21%
Zn 206.200†	2.6	0.00453	mg/L	0.000365	0.00453	mg/L	0.000365	8.05%

Sequence No.: 14
Sample ID: XB72R J TWC

Autosampler Location: 310
Date Collected: 8/29/2013 10:41:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R J TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R J TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2793747.8	101.2	%	0.40				0.40%
ScR 361.383	321696.0	100.5	%	0.27				0.27%
Ag 328.068†	-18.5	-0.00009	mg/L	0.000142	-0.00009	mg/L	0.000142	158.37%
Al 308.215†	72.0	0.06208	mg/L	0.011176	0.06208	mg/L	0.011176	18.00%
As 188.979†	5561.4	4.180	mg/L	0.0222	4.180	mg/L	0.0222	0.53%
B 249.677†	671.1	0.1042	mg/L	0.00034	0.1042	mg/L	0.00034	0.33%
Ba 233.527†	9.6	0.00207	mg/L	0.000252	0.00207	mg/L	0.000252	12.19%
Be 313.042†	24.4	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	43.44%
Ca 317.933†	162022.5	17.75	mg/L	0.019	17.75	mg/L	0.019	0.11%
Cd 228.802†	449.4	-0.00259	mg/L	0.000102	-0.00259	mg/L	0.000102	3.94%
Co 228.616†	7.9	0.00022	mg/L	0.000044	0.00022	mg/L	0.000044	19.81%
Cr 267.716†	22.2	0.00128	mg/L	0.000360	0.00128	mg/L	0.000360	28.20%
Cu 324.752†	192.7	0.00062	mg/L	0.000106	0.00062	mg/L	0.000106	17.00%
Fe 273.955†	507.8	0.3897	mg/L	0.00295	0.3897	mg/L	0.00295	0.76%
K 766.490†	9914.7	4.827	mg/L	0.0380	4.827	mg/L	0.0380	0.79%
Mg 279.077†	21197.6	25.37	mg/L	0.126	25.37	mg/L	0.126	0.50%
Mn 257.610†	2466.0	0.05482	mg/L	0.000077	0.05482	mg/L	0.000077	0.14%
Mo 202.031†	114.7	0.00623	mg/L	0.000291	0.00623	mg/L	0.000291	4.68%
Na 589.592†	432106.8	33.27	mg/L	0.174	33.27	mg/L	0.174	0.52%
Na 330.237†	939.5	34.23	mg/L	0.403	34.23	mg/L	0.403	1.18%
Ni 231.604†	3.0	0.00088	mg/L	0.000340	0.00088	mg/L	0.000340	38.77%
Pb 220.353†	-14.4	-0.00186	mg/L	0.001343	-0.00186	mg/L	0.001343	72.33%
Sb 206.836†	4.9	0.00163	mg/L	0.001460	0.00163	mg/L	0.001460	89.65%
Se 196.026†	8.4	0.00475	mg/L	0.003328	0.00475	mg/L	0.003328	70.04%
Si 288.158†	32213.6	22.07	mg/L	0.074	22.07	mg/L	0.074	0.33%
Sn 189.927†	-34.4	-0.00684	mg/L	0.000435	-0.00684	mg/L	0.000435	6.35%
Sr 421.552†	105991.3	0.1155	mg/L	0.00052	0.1155	mg/L	0.00052	0.45%
Ti 334.903†	167.2	0.00650	mg/L	0.000392	0.00650	mg/L	0.000392	6.02%
Tl 190.801†	5.6	0.00329	mg/L	0.002943	0.00329	mg/L	0.002943	89.56%
V 292.402†	169.7	0.00141	mg/L	0.000036	0.00141	mg/L	0.000036	2.57%
Zn 206.200†	-0.7	0.00324	mg/L	0.000455	0.00324	mg/L	0.000455	14.04%

Sequence No.: 15
Sample ID: XB72R MB1SPK TWC

Autosampler Location: 311
Date Collected: 8/29/2013 10:46:14 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB72R MB1SPK TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB72R MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2798433.1	101.3	%	0.07				0.07%
ScR 361.383	321503.9	100.5	%	0.27				0.27%
Ag 328.068†	110313.5	0.5347	mg/L	0.00081	0.5347	mg/L	0.00081	0.15%
Al 308.215†	2428.7	2.090	mg/L	0.0016	2.090	mg/L	0.0016	0.08%
As 188.979†	2802.0	2.105	mg/L	0.0070	2.105	mg/L	0.0070	0.33%
B 249.677†	18.8	0.00184	mg/L	0.000897	0.00184	mg/L	0.000897	48.81%
Ba 233.527†	10336.4	2.155	mg/L	0.0040	2.155	mg/L	0.0040	0.18%
Be 313.042†	256375.1	0.4901	mg/L	0.00122	0.4901	mg/L	0.00122	0.25%
Ca 317.933†	91725.8	10.05	mg/L	0.044	10.05	mg/L	0.044	0.44%
Cd 228.802†	11673.6	0.5184	mg/L	0.00177	0.5184	mg/L	0.00177	0.34%
Co 228.616†	17224.7	0.5113	mg/L	0.00122	0.5113	mg/L	0.00122	0.24%
Cr 267.716†	3451.5	0.5436	mg/L	0.00087	0.5436	mg/L	0.00087	0.16%
Cu 324.752†	137858.6	0.5186	mg/L	0.00050	0.5186	mg/L	0.00050	0.10%
Fe 273.955†	2742.2	2.101	mg/L	0.0024	2.101	mg/L	0.0024	0.11%
K 766.490†	20984.1	10.22	mg/L	0.077	10.22	mg/L	0.077	0.76%
Mg 279.077†	8827.0	10.56	mg/L	0.018	10.56	mg/L	0.018	0.17%
Mn 257.610†	22488.1	0.5013	mg/L	0.00094	0.5013	mg/L	0.00094	0.19%
Mo 202.031†	19.4	0.00093	mg/L	0.000103	0.00093	mg/L	0.000103	11.00%
Na 589.592†	133354.5	10.27	mg/L	0.012	10.27	mg/L	0.012	0.12%
Na 330.237†	294.6	10.57	mg/L	0.175	10.57	mg/L	0.175	1.66%
Ni 231.604†	1752.0	0.5138	mg/L	0.00180	0.5138	mg/L	0.00180	0.35%
Pb 220.353†	15662.8	2.026	mg/L	0.0100	2.026	mg/L	0.0100	0.50%
Sb 206.836†	17.9	0.00091	mg/L	0.000466	0.00091	mg/L	0.000466	51.27%
Se 196.026†	3064.9	2.078	mg/L	0.0078	2.078	mg/L	0.0078	0.37%
Si 288.158†	103.7	0.07343	mg/L	0.022280	0.07343	mg/L	0.022280	30.34%
Sn 189.927†	-25.7	-0.00528	mg/L	0.000351	-0.00528	mg/L	0.000351	6.64%
Sr 421.552†	466553.9	0.5084	mg/L	0.00050	0.5084	mg/L	0.00050	0.10%
Ti 334.903†	38.7	0.00090	mg/L	0.000334	0.00090	mg/L	0.000334	37.24%
Tl 190.801†	3635.2	2.085	mg/L	0.0084	2.085	mg/L	0.0084	0.40%
V 292.402†	62077.6	0.5192	mg/L	0.00132	0.5192	mg/L	0.00132	0.25%
Zn 206.200†	1757.2	0.5173	mg/L	0.00087	0.5173	mg/L	0.00087	0.17%

Sequence No.: 16
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 8/29/2013 10:50:15 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	237.0 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	2797236.8	101.3	%	0.56				0.55%
ScR 361.383	318110.1	99.40	%	0.223				0.22%
Ag 328.068†	219315.4	1.063	mg/L	0.0065	1.063	mg/L	0.0065	0.61%
Al 308.215†	2446.7	2.080	mg/L	0.0037	2.080	mg/L	0.0037	0.18%
As 188.979†	2697.0	2.056	mg/L	0.0150	2.056	mg/L	0.0150	0.73%
B 249.677†	6701.9	1.039	mg/L	0.0038	1.039	mg/L	0.0038	0.37%
Ba 233.527†	5132.2	1.070	mg/L	0.0060	1.070	mg/L	0.0060	0.56%
Be 313.042†	529575.2	1.012	mg/L	0.0040	1.012	mg/L	0.0040	0.39%
Ca 317.933†	19362.3	2.122	mg/L	0.0077	2.122	mg/L	0.0077	0.36%
Cd 228.802†	23450.8	1.054	mg/L	0.0057	1.054	mg/L	0.0057	0.54%
Co 228.616†	34708.3	1.029	mg/L	0.0061	1.029	mg/L	0.0061	0.60%
Cr 267.716†	6798.4	1.072	mg/L	0.0048	1.072	mg/L	0.0048	0.45%
Cu 324.752†	278890.4	1.049	mg/L	0.0035	1.049	mg/L	0.0035	0.33%
Fe 273.955†	2742.9	2.099	mg/L	0.0033	2.099	mg/L	0.0033	0.16%
K 766.490†	41890.5	20.39	mg/L	0.121	20.39	mg/L	0.121	0.59%
Mg 279.077†	1711.4	2.055	mg/L	0.0116	2.055	mg/L	0.0116	0.56%
Mn 257.610†	44493.0	0.9916	mg/L	0.00169	0.9916	mg/L	0.00169	0.17%
Mo 202.031†	18015.5	1.014	mg/L	0.0066	1.014	mg/L	0.0066	0.65%
Na 589.592†	665069.9	51.20	mg/L	0.232	51.20	mg/L	0.232	0.45%
Na 330.237†	1454.0	52.95	mg/L	0.086	52.95	mg/L	0.086	0.16%
Ni 231.604†	3611.2	1.061	mg/L	0.0051	1.061	mg/L	0.0051	0.48%
Pb 220.353†	15720.5	2.034	mg/L	0.0120	2.034	mg/L	0.0120	0.59%
Sb 206.836†	5915.1	2.091	mg/L	0.0151	2.091	mg/L	0.0151	0.72%
Se 196.026†	2997.1	2.032	mg/L	0.0143	2.032	mg/L	0.0143	0.71%
Si 288.158†	3052.8	2.096	mg/L	0.0215	2.096	mg/L	0.0215	1.03%
Sn 189.927†	4132.0	0.9988	mg/L	0.00812	0.9988	mg/L	0.00812	0.81%
Sr 421.552†	933820.1	1.018	mg/L	0.0036	1.018	mg/L	0.0036	0.35%
Ti 334.903†	21254.4	1.018	mg/L	0.0043	1.018	mg/L	0.0043	0.42%
Tl 190.801†	3665.1	2.099	mg/L	0.0162	2.099	mg/L	0.0162	0.77%
V 292.402†	122007.6	1.020	mg/L	0.0057	1.020	mg/L	0.0057	0.56%
Zn 206.200†	3546.6	1.044	mg/L	0.0031	1.044	mg/L	0.0031	0.30%

Sequence No.: 17
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 8/29/2013 10:54:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2830295.2	102.5	%	0.05				0.05%
ScR 361.383	326932.1	102.2	%	0.64				0.63%
Ag 328.068†	-25.7	-0.00012	mg/L	0.000110	-0.00012	mg/L	0.000110	88.19%
Al 308.215†	3.9	0.00336	mg/L	0.004613	0.00336	mg/L	0.004613	137.14%
As 188.979†	-1.3	-0.00094	mg/L	0.002004	-0.00094	mg/L	0.002004	213.96%
B 249.677†	15.1	0.00234	mg/L	0.000858	0.00234	mg/L	0.000858	36.62%
Ba 233.527†	-4.3	-0.00090	mg/L	0.000236	-0.00090	mg/L	0.000236	26.18%
Be 313.042†	51.8	0.00010	mg/L	0.000018	0.00010	mg/L	0.000018	17.83%
Ca 317.933†	-9.4	-0.00103	mg/L	0.001495	-0.00103	mg/L	0.001495	145.28%
Cd 228.802†	6.2	0.00029	mg/L	0.000129	0.00029	mg/L	0.000129	44.58%
Co 228.616†	3.1	0.00009	mg/L	0.000021	0.00009	mg/L	0.000021	22.75%
Cr 267.716†	0.3	0.00005	mg/L	0.000348	0.00005	mg/L	0.000348	735.33%
Cu 324.752†	86.4	0.00032	mg/L	0.000166	0.00032	mg/L	0.000166	51.10%
Fe 273.955†	0.2	0.00019	mg/L	0.002172	0.00019	mg/L	0.002172	>999.9%
K 766.490†	-0.0	-0.00000	mg/L	0.007885	-0.00000	mg/L	0.007885	>999.9%
Mg 279.077†	-3.2	-0.00383	mg/L	0.006124	-0.00383	mg/L	0.006124	159.78%
Mn 257.610†	5.7	0.00013	mg/L	0.000023	0.00013	mg/L	0.000023	18.04%
Mo 202.031†	30.3	0.00170	mg/L	0.000260	0.00170	mg/L	0.000260	15.29%
Na 589.592†	137.7	0.01060	mg/L	0.005090	0.01060	mg/L	0.005090	48.02%
Na 330.237†	8.9	0.3245	mg/L	0.17749	0.3245	mg/L	0.17749	54.70%
Ni 231.604†	1.5	0.00043	mg/L	0.000854	0.00043	mg/L	0.000854	198.11%
Pb 220.353†	6.1	0.00078	mg/L	0.000640	0.00078	mg/L	0.000640	81.67%
Sb 206.836†	4.6	0.00162	mg/L	0.001594	0.00162	mg/L	0.001594	98.31%
Se 196.026†	1.2	0.00079	mg/L	0.001613	0.00079	mg/L	0.001613	205.36%
Si 288.158†	24.8	0.01698	mg/L	0.007493	0.01698	mg/L	0.007493	44.12%
Sn 189.927†	1.6	0.00038	mg/L	0.000435	0.00038	mg/L	0.000435	116.02%
Sr 421.552†	57.5	0.00006	mg/L	0.000015	0.00006	mg/L	0.000015	24.67%
Ti 334.903†	7.7	0.00037	mg/L	0.000356	0.00037	mg/L	0.000356	97.44%
Tl 190.801†	0.0	0.00001	mg/L	0.002903	0.00001	mg/L	0.002903	>999.9%
V 292.402†	8.0	0.00007	mg/L	0.000119	0.00007	mg/L	0.000119	177.27%
Zn 206.200†	-1.1	-0.00033	mg/L	0.000679	-0.00033	mg/L	0.000679	203.34%

Sequence No.: 18
Sample ID: XC05 MB1 TWC

Autosampler Location: 312
Date Collected: 8/29/2013 10:58:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 MB1 TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC05 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2828266.8	102.4	%	0.49				0.48%
ScR 361.383	324753.8	101.5	%	0.39				0.39%
Ag 328.068†	-36.0	-0.00017	mg/L	0.000332	-0.00017	mg/L	0.000332	190.07%
Al 308.215†	4.1	0.00358	mg/L	0.006101	0.00358	mg/L	0.006101	170.18%
As 188.979†	-0.0	-0.00001	mg/L	0.001499	-0.00001	mg/L	0.001499	>999.9%
B 249.677†	14.4	0.00224	mg/L	0.000797	0.00224	mg/L	0.000797	35.54%
Ba 233.527†	2.5	0.00052	mg/L	0.000781	0.00052	mg/L	0.000781	150.94%
Be 313.042†	15.6	0.00003	mg/L	0.000008	0.00003	mg/L	0.000008	25.30%
Ca 317.933†	5.9	0.00065	mg/L	0.000837	0.00065	mg/L	0.000837	128.93%
Cd 228.802†	5.2	0.00024	mg/L	0.000066	0.00024	mg/L	0.000066	27.78%
Co 228.616†	-3.2	-0.00010	mg/L	0.000094	-0.00010	mg/L	0.000094	96.79%
Cr 267.716†	-6.8	-0.00108	mg/L	0.000271	-0.00108	mg/L	0.000271	25.12%
Cu 324.752†	110.2	0.00041	mg/L	0.000091	0.00041	mg/L	0.000091	21.89%
Fe 273.955†	-0.7	-0.00052	mg/L	0.000124	-0.00052	mg/L	0.000124	24.11%
K 766.490†	19.7	0.00957	mg/L	0.007397	0.00957	mg/L	0.007397	77.29%
Mg 279.077†	-1.7	-0.00199	mg/L	0.002471	-0.00199	mg/L	0.002471	124.09%
Mn 257.610†	5.8	0.00013	mg/L	0.000089	0.00013	mg/L	0.000089	68.10%
Mo 202.031†	-2.8	-0.00016	mg/L	0.000112	-0.00016	mg/L	0.000112	70.64%
Na 589.592†	70.8	0.00545	mg/L	0.001567	0.00545	mg/L	0.001567	28.76%
Na 330.237†	-1.0	-0.03524	mg/L	0.483635	-0.03524	mg/L	0.483635	>999.9%
Ni 231.604†	-0.1	-0.00004	mg/L	0.000640	-0.00004	mg/L	0.000640	>999.9%
Pb 220.353†	-1.6	-0.00021	mg/L	0.000267	-0.00021	mg/L	0.000267	127.81%
Sb 206.836†	3.8	0.00134	mg/L	0.000810	0.00134	mg/L	0.000810	60.38%
Se 196.026†	-1.3	-0.00087	mg/L	0.001192	-0.00087	mg/L	0.001192	137.19%
Si 288.158†	25.5	0.01744	mg/L	0.006746	0.01744	mg/L	0.006746	38.67%
Sn 189.927†	-1.0	-0.00023	mg/L	0.000334	-0.00023	mg/L	0.000334	142.82%
Sr 421.552†	-22.6	-0.00002	mg/L	0.000016	-0.00002	mg/L	0.000016	64.96%
Ti 334.903†	9.4	0.00045	mg/L	0.000426	0.00045	mg/L	0.000426	93.95%
Tl 190.801†	1.5	0.00089	mg/L	0.002504	0.00089	mg/L	0.002504	282.33%
V 292.402†	6.2	0.00005	mg/L	0.000172	0.00005	mg/L	0.000172	362.86%
Zn 206.200†	3.0	0.00089	mg/L	0.000141	0.00089	mg/L	0.000141	15.86%

Sequence No.: 19
Sample ID: XB99 MB TWC

Autosampler Location: 313
Date Collected: 8/29/2013 11:02:49 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB99 MB TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB99 MB TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2809312.2	101.7	%	0.27				0.26%
ScR 361.383	325553.6	101.7	%	0.51				0.50%
Ag 328.068†	-8.4	-0.00004	mg/L	0.000246	-0.00004	mg/L	0.000246	605.10%
Al 308.215†	-1.6	-0.00139	mg/L	0.000916	-0.00139	mg/L	0.000916	65.84%
As 188.979†	1.9	0.00141	mg/L	0.001298	0.00141	mg/L	0.001298	92.26%
B 249.677†	12.4	0.00193	mg/L	0.000356	0.00193	mg/L	0.000356	18.48%
Ba 233.527†	-1.1	-0.00022	mg/L	0.000312	-0.00022	mg/L	0.000312	140.44%
Be 313.042†	10.6	0.00002	mg/L	0.000017	0.00002	mg/L	0.000017	85.56%
Ca 317.933†	-7.2	-0.00078	mg/L	0.000311	-0.00078	mg/L	0.000311	39.59%
Cd 228.802†	4.7	0.00021	mg/L	0.000118	0.00021	mg/L	0.000118	56.83%
Co 228.616†	-1.6	-0.00005	mg/L	0.000116	-0.00005	mg/L	0.000116	247.22%
Cr 267.716†	2.4	0.00038	mg/L	0.000816	0.00038	mg/L	0.000816	213.61%
Cu 324.752†	107.5	0.00040	mg/L	0.000182	0.00040	mg/L	0.000182	45.08%
Fe 273.955†	-1.4	-0.00110	mg/L	0.000635	-0.00110	mg/L	0.000635	57.68%
K 766.490†	-6.9	-0.00336	mg/L	0.005499	-0.00336	mg/L	0.005499	163.84%
Mg 279.077†	-1.7	-0.00204	mg/L	0.009142	-0.00204	mg/L	0.009142	448.43%
Mn 257.610†	5.8	0.00013	mg/L	0.000048	0.00013	mg/L	0.000048	37.39%
Mo 202.031†	-4.5	-0.00025	mg/L	0.000224	-0.00025	mg/L	0.000224	89.14%
Na 589.592†	69.7	0.00537	mg/L	0.002657	0.00537	mg/L	0.002657	49.49%
Na 330.237†	10.4	0.3783	mg/L	0.44892	0.3783	mg/L	0.44892	118.67%
Ni 231.604†	1.2	0.00034	mg/L	0.001659	0.00034	mg/L	0.001659	481.73%
Pb 220.353†	-0.3	-0.00004	mg/L	0.000884	-0.00004	mg/L	0.000884	>999.9%
Sb 206.836†	-3.6	-0.00127	mg/L	0.000283	-0.00127	mg/L	0.000283	22.33%
Se 196.026†	0.3	0.00017	mg/L	0.001320	0.00017	mg/L	0.001320	774.60%
Si 288.158†	18.6	0.01275	mg/L	0.001889	0.01275	mg/L	0.001889	14.81%
Sn 189.927†	-1.5	-0.00035	mg/L	0.000280	-0.00035	mg/L	0.000280	79.51%
Sr 421.552†	-62.0	-0.00007	mg/L	0.000030	-0.00007	mg/L	0.000030	44.74%
Ti 334.903†	5.0	0.00024	mg/L	0.000566	0.00024	mg/L	0.000566	234.92%
Tl 190.801†	-0.6	-0.00032	mg/L	0.002175	-0.00032	mg/L	0.002175	672.59%
V 292.402†	-7.1	-0.00006	mg/L	0.000136	-0.00006	mg/L	0.000136	236.89%
Zn 206.200†	3.6	0.00105	mg/L	0.000250	0.00105	mg/L	0.000250	23.87%

Sequence No.: 20
Sample ID: XB99 A TWC

Autosampler Location: 314
Date Collected: 8/29/2013 11:07:04 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB99 A TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB99 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2767778.5	100.2	%	0.14				0.14%
ScR 361.383	319694.8	99.90	%	0.116				0.12%
Ag 328.068†	-38.6	-0.00018	mg/L	0.000095	-0.00018	mg/L	0.000095	53.42%
Al 308.215†	13819.9	11.94	mg/L	0.010	11.94	mg/L	0.010	0.08%
As 188.979†	52.3	0.04727	mg/L	0.000962	0.04727	mg/L	0.000962	2.03%
B 249.677†	499.3	0.07750	mg/L	0.000497	0.07750	mg/L	0.000497	0.64%
Ba 233.527†	964.5	0.1992	mg/L	0.00098	0.1992	mg/L	0.00098	0.49%
Be 313.042†	120.6	0.00022	mg/L	0.000013	0.00022	mg/L	0.000013	6.14%
Ca 317.933†	531902.6	58.29	mg/L	0.040	58.29	mg/L	0.040	0.07%
Cd 228.802†	8.7	0.00000	mg/L	0.000123	0.00000	mg/L	0.000123	>999.9%
Co 228.616†	267.9	0.00713	mg/L	0.000297	0.00713	mg/L	0.000297	4.17%
Cr 267.716†	163.7	0.02445	mg/L	0.000466	0.02445	mg/L	0.000466	1.90%
Cu 324.752†	20328.8	0.07709	mg/L	0.000493	0.07709	mg/L	0.000493	0.64%
Fe 273.955†	22745.8	17.46	mg/L	0.183	17.46	mg/L	0.183	1.05%
K 766.490†	24009.2	11.69	mg/L	0.068	11.69	mg/L	0.068	0.59%
Mg 279.077†	16767.2	20.05	mg/L	0.125	20.05	mg/L	0.125	0.62%
Mn 257.610†	114697.9	2.555	mg/L	0.0225	2.555	mg/L	0.0225	0.88%
Mo 202.031†	172.4	0.00894	mg/L	0.000101	0.00894	mg/L	0.000101	1.13%
Na 589.592†	1022826.3	78.75	mg/L	0.087	78.75	mg/L	0.087	0.11%
Na 330.237†	2222.8	81.05	mg/L	0.181	81.05	mg/L	0.181	0.22%
Ni 231.604†	111.1	0.03262	mg/L	0.002257	0.03262	mg/L	0.002257	6.92%
Pb 220.353†	762.6	0.1011	mg/L	0.00091	0.1011	mg/L	0.00091	0.90%
Sb 206.836†	15.5	0.00553	mg/L	0.001011	0.00553	mg/L	0.001011	18.27%
Se 196.026†	15.5	0.00733	mg/L	0.002780	0.00733	mg/L	0.002780	37.93%
Si 288.158†	35249.7	24.15	mg/L	0.165	24.15	mg/L	0.165	0.68%
Sn 189.927†	-51.3	-0.00747	mg/L	0.002455	-0.00747	mg/L	0.002455	32.85%
Sr 421.552†	277329.7	0.3022	mg/L	0.00138	0.3022	mg/L	0.00138	0.46%
Ti 334.903†	9712.8	0.4609	mg/L	0.00294	0.4609	mg/L	0.00294	0.64%
Tl 190.801†	13.3	0.00997	mg/L	0.002023	0.00997	mg/L	0.002023	20.30%
V 292.402†	4049.8	0.03292	mg/L	0.000157	0.03292	mg/L	0.000157	0.48%
Zn 206.200†	763.4	0.2278	mg/L	0.00054	0.2278	mg/L	0.00054	0.24%

Sequence No.: 21
Sample ID: XC05 A TWC

Autosampler Location: 315
Date Collected: 8/29/2013 11:11:20 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 A TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC05 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2689009.1	97.38	%	0.018				0.02%
ScR 361.383	313123.4	97.84	%	0.240				0.25%
Ag 328.068†	-278.4	-0.00135	mg/L	0.000171	-0.00135	mg/L	0.000171	12.71%
Al 308.215†	42.5	0.03654	mg/L	0.007305	0.03654	mg/L	0.007305	19.99%
As 188.979†	522.3	0.3673	mg/L	0.00291	0.3673	mg/L	0.00291	0.79%
B 249.677†	4174.7	0.6480	mg/L	0.00501	0.6480	mg/L	0.00501	0.77%
Ba 233.527†	1633.2	0.3413	mg/L	0.00257	0.3413	mg/L	0.00257	0.75%
Be 313.042†	46.1	0.00009	mg/L	0.000025	0.00009	mg/L	0.000025	28.24%
Ca 317.933†	2016123.6	220.9	mg/L	1.61	220.9	mg/L	1.61	0.73%
Cd 228.802†	2.5	-0.00208	mg/L	0.000255	-0.00208	mg/L	0.000255	12.22%
Co 228.616†	51.6	0.00146	mg/L	0.000108	0.00146	mg/L	0.000108	7.38%
Cr 267.716†	41.4	0.00304	mg/L	0.000785	0.00304	mg/L	0.000785	25.80%
Cu 324.752†	498.8	0.00196	mg/L	0.000046	0.00196	mg/L	0.000046	2.34%
Fe 273.955†	5343.7	4.101	mg/L	0.0418	4.101	mg/L	0.0418	1.02%
K 766.490†	110359.0	53.73	mg/L	0.132	53.73	mg/L	0.132	0.25%
Mg 279.077†	17732.2	21.20	mg/L	0.082	21.20	mg/L	0.082	0.38%
Mn 257.610†	80490.3	1.792	mg/L	0.0115	1.792	mg/L	0.0115	0.64%
Mo 202.031†	109.1	0.00324	mg/L	0.000077	0.00324	mg/L	0.000077	2.38%
Na 589.592†	862736.1	66.42	mg/L	0.212	66.42	mg/L	0.212	0.32%
Na 330.237†	1867.2	68.04	mg/L	0.061	68.04	mg/L	0.061	0.09%
Ni 231.604†	17.4	0.00511	mg/L	0.000253	0.00511	mg/L	0.000253	4.95%
Pb 220.353†	-30.9	-0.00421	mg/L	0.000786	-0.00421	mg/L	0.000786	18.68%
Sb 206.836†	13.9	0.00469	mg/L	0.002326	0.00469	mg/L	0.002326	49.63%
Se 196.026†	34.4	0.01135	mg/L	0.005639	0.01135	mg/L	0.005639	49.69%
Si 288.158†	26272.2	18.00	mg/L	0.046	18.00	mg/L	0.046	0.26%
Sn 189.927†	-73.0	0.00063	mg/L	0.000379	0.00063	mg/L	0.000379	60.40%
Sr 421.552†	1914031.2	2.086	mg/L	0.0056	2.086	mg/L	0.0056	0.27%
Ti 334.903†	555.9	0.00788	mg/L	0.000222	0.00788	mg/L	0.000222	2.82%
Tl 190.801†	31.8	0.01886	mg/L	0.002886	0.01886	mg/L	0.002886	15.30%
V 292.402†	200.1	0.00171	mg/L	0.000028	0.00171	mg/L	0.000028	1.63%
Zn 206.200†	16.2	0.00390	mg/L	0.000769	0.00390	mg/L	0.000769	19.73%

Sequence No.: 22
Sample ID: XC05 E TWC

Autosampler Location: 316
Date Collected: 8/29/2013 11:15:36 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 E TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC05 E TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2764772.0	100.1	%	0.20				0.20%
ScR 361.383	321101.0	100.3	%	0.51				0.50%
Ag 328.068†	-41.3	-0.00020	mg/L	0.000150	-0.00020	mg/L	0.000150	75.84%
Al 308.215†	46.9	0.04033	mg/L	0.004630	0.04033	mg/L	0.004630	11.48%
As 188.979†	8831.1	6.637	mg/L	0.0109	6.637	mg/L	0.0109	0.16%
B 249.677†	988.9	0.1535	mg/L	0.00126	0.1535	mg/L	0.00126	0.82%
Ba 233.527†	17.9	0.00390	mg/L	0.000548	0.00390	mg/L	0.000548	14.06%
Be 313.042†	31.8	0.00006	mg/L	0.000023	0.00006	mg/L	0.000023	38.77%
Ca 317.933†	276934.6	30.35	mg/L	0.086	30.35	mg/L	0.086	0.28%
Cd 228.802†	744.6	-0.00269	mg/L	0.000440	-0.00269	mg/L	0.000440	16.35%
Co 228.616†	9.7	0.00028	mg/L	0.000067	0.00028	mg/L	0.000067	24.21%
Cr 267.716†	22.3	0.00112	mg/L	0.001039	0.00112	mg/L	0.001039	93.07%
Cu 324.752†	316.2	0.00107	mg/L	0.000164	0.00107	mg/L	0.000164	15.28%
Fe 273.955†	185.3	0.1421	mg/L	0.00083	0.1421	mg/L	0.00083	0.59%
K 766.490†	7851.0	3.822	mg/L	0.0172	3.822	mg/L	0.0172	0.45%
Mg 279.077†	21809.4	26.10	mg/L	0.183	26.10	mg/L	0.183	0.70%
Mn 257.610†	2831.0	0.06290	mg/L	0.000606	0.06290	mg/L	0.000606	0.96%
Mo 202.031†	67.7	0.00341	mg/L	0.000138	0.00341	mg/L	0.000138	4.05%
Na 589.592†	236009.6	18.17	mg/L	0.053	18.17	mg/L	0.053	0.29%
Na 330.237†	510.7	18.61	mg/L	0.397	18.61	mg/L	0.397	2.13%
Ni 231.604†	9.9	0.00290	mg/L	0.001650	0.00290	mg/L	0.001650	56.89%
Pb 220.353†	-17.9	-0.00230	mg/L	0.000495	-0.00230	mg/L	0.000495	21.52%
Sb 206.836†	-1.6	-0.00068	mg/L	0.000481	-0.00068	mg/L	0.000481	70.47%
Se 196.026†	27.6	0.01709	mg/L	0.002130	0.01709	mg/L	0.002130	12.46%
Si 288.158†	28813.9	19.74	mg/L	0.176	19.74	mg/L	0.176	0.89%
Sn 189.927†	-44.7	-0.00829	mg/L	0.000780	-0.00829	mg/L	0.000780	9.42%
Sr 421.552†	131803.8	0.1436	mg/L	0.00036	0.1436	mg/L	0.00036	0.25%
Ti 334.903†	136.3	0.00396	mg/L	0.000370	0.00396	mg/L	0.000370	9.36%
Tl 190.801†	7.4	0.00422	mg/L	0.003563	0.00422	mg/L	0.003563	84.38%
V 292.402†	1013.9	0.00846	mg/L	0.000054	0.00846	mg/L	0.000054	0.64%
Zn 206.200†	-2.9	0.00196	mg/L	0.001547	0.00196	mg/L	0.001547	78.99%

Sequence No.: 23
Sample ID: XC05 J TWC

Autosampler Location: 317
Date Collected: 8/29/2013 11:19:51 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 J TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC05 J TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2736434.4	99.10	%	0.050				0.05%
ScR 361.383	318565.1	99.54	%	0.060				0.06%
Ag 328.068†	0.1	0.00000	mg/L	0.000125	0.00000	mg/L	0.000125	>999.9%
Al 308.215†	37.5	0.03233	mg/L	0.005035	0.03233	mg/L	0.005035	15.57%
As 188.979†	18.6	0.01159	mg/L	0.001244	0.01159	mg/L	0.001244	10.73%
B 249.677†	714.8	0.1110	mg/L	0.00124	0.1110	mg/L	0.00124	1.11%
Ba 233.527†	6.2	0.00141	mg/L	0.000266	0.00141	mg/L	0.000266	18.88%
Be 313.042†	14.0	0.00003	mg/L	0.000007	0.00003	mg/L	0.000007	28.27%
Ca 317.933†	195589.2	21.43	mg/L	0.051	21.43	mg/L	0.051	0.24%
Cd 228.802†	-1.8	-0.00016	mg/L	0.000235	-0.00016	mg/L	0.000235	145.23%
Co 228.616†	6.2	0.00018	mg/L	0.000033	0.00018	mg/L	0.000033	18.57%
Cr 267.716†	15.5	0.00025	mg/L	0.000321	0.00025	mg/L	0.000321	128.02%
Cu 324.752†	293.1	0.00100	mg/L	0.000067	0.00100	mg/L	0.000067	6.76%
Fe 273.955†	230.8	0.1771	mg/L	0.00277	0.1771	mg/L	0.00277	1.57%
K 766.490†	12059.1	5.871	mg/L	0.0289	5.871	mg/L	0.0289	0.49%
Mg 279.077†	20459.5	24.48	mg/L	0.111	24.48	mg/L	0.111	0.46%
Mn 257.610†	8887.5	0.1979	mg/L	0.00124	0.1979	mg/L	0.00124	0.63%
Mo 202.031†	46.7	0.00235	mg/L	0.000432	0.00235	mg/L	0.000432	18.40%
Na 589.592†	408390.8	31.44	mg/L	0.100	31.44	mg/L	0.100	0.32%
Na 330.237†	878.6	32.01	mg/L	0.432	32.01	mg/L	0.432	1.35%
Ni 231.604†	2.1	0.00062	mg/L	0.000809	0.00062	mg/L	0.000809	130.46%
Pb 220.353†	-14.4	-0.00186	mg/L	0.000861	-0.00186	mg/L	0.000861	46.26%
Sb 206.836†	1.1	0.00028	mg/L	0.001133	0.00028	mg/L	0.001133	398.60%
Se 196.026†	11.1	0.00638	mg/L	0.002131	0.00638	mg/L	0.002131	33.41%
Si 288.158†	25399.4	17.40	mg/L	0.057	17.40	mg/L	0.057	0.33%
Sn 189.927†	-40.8	-0.00807	mg/L	0.000114	-0.00807	mg/L	0.000114	1.41%
Sr 421.552†	136011.5	0.1482	mg/L	0.00040	0.1482	mg/L	0.00040	0.27%
Ti 334.903†	99.0	0.00292	mg/L	0.000280	0.00292	mg/L	0.000280	9.59%
Tl 190.801†	4.0	0.00234	mg/L	0.000630	0.00234	mg/L	0.000630	26.95%
V 292.402†	125.6	0.00107	mg/L	0.000181	0.00107	mg/L	0.000181	16.84%
Zn 206.200†	-0.7	0.00237	mg/L	0.000510	0.00237	mg/L	0.000510	21.54%

Sequence No.: 24
Sample ID: XC05 L TWC

Autosampler Location: 318
Date Collected: 8/29/2013 11:24:06 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 L TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC05 L TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2716367.3	98.37	%	0.253				0.26%
ScR 361.383	311350.1	97.29	%	0.055				0.06%
Ag 328.068†	-231.9	-0.00112	mg/L	0.000108	-0.00112	mg/L	0.000108	9.64%
Al 308.215†	120.5	0.1039	mg/L	0.00839	0.1039	mg/L	0.00839	8.07%
As 188.979†	99.6	0.05837	mg/L	0.002126	0.05837	mg/L	0.002126	3.64%
B 249.677†	2823.5	0.4383	mg/L	0.00465	0.4383	mg/L	0.00465	1.06%
Ba 233.527†	2452.8	0.5049	mg/L	0.00237	0.5049	mg/L	0.00237	0.47%
Be 313.042†	10.2	0.00002	mg/L	0.000031	0.00002	mg/L	0.000031	175.84%
Ca 317.933†	1322360.0	144.9	mg/L	0.81	144.9	mg/L	0.81	0.56%
Cd 228.802†	-11.9	-0.00161	mg/L	0.000176	-0.00161	mg/L	0.000176	10.88%
Co 228.616†	57.2	0.00162	mg/L	0.000037	0.00162	mg/L	0.000037	2.27%
Cr 267.716†	-1.2	-0.00060	mg/L	0.000488	-0.00060	mg/L	0.000488	81.57%
Cu 324.752†	-264.6	0.00162	mg/L	0.000294	0.00162	mg/L	0.000294	18.11%
Fe 273.955†	75515.1	57.95	mg/L	0.446	57.95	mg/L	0.446	0.77%
K 766.490†	47920.2	23.33	mg/L	0.068	23.33	mg/L	0.068	0.29%
Mg 279.077†	17647.8	21.07	mg/L	0.186	21.07	mg/L	0.186	0.88%
Mn 257.610†	146109.7	3.255	mg/L	0.0182	3.255	mg/L	0.0182	0.56%
Mo 202.031†	82.9	0.00276	mg/L	0.000058	0.00276	mg/L	0.000058	2.09%
Na 589.592†	919623.8	70.80	mg/L	0.179	70.80	mg/L	0.179	0.25%
Na 330.237†	1949.4	71.03	mg/L	0.667	71.03	mg/L	0.667	0.94%
Ni 231.604†	4.2	0.00124	mg/L	0.000763	0.00124	mg/L	0.000763	61.67%
Pb 220.353†	4.2	-0.00264	mg/L	0.000445	-0.00264	mg/L	0.000445	16.85%
Sb 206.836†	19.7	0.00685	mg/L	0.001007	0.00685	mg/L	0.001007	14.70%
Se 196.026†	25.3	0.00925	mg/L	0.005159	0.00925	mg/L	0.005159	55.79%
Si 288.158†	25215.8	17.28	mg/L	0.130	17.28	mg/L	0.130	0.75%
Sn 189.927†	-72.0	-0.00542	mg/L	0.000543	-0.00542	mg/L	0.000543	10.02%
Sr 421.552†	792966.7	0.8641	mg/L	0.00153	0.8641	mg/L	0.00153	0.18%
Ti 334.903†	451.8	0.00935	mg/L	0.000350	0.00935	mg/L	0.000350	3.75%
Tl 190.801†	14.2	0.01643	mg/L	0.001030	0.01643	mg/L	0.001030	6.27%
V 292.402†	680.5	0.00267	mg/L	0.000161	0.00267	mg/L	0.000161	6.05%
Zn 206.200†	7.7	0.00262	mg/L	0.000268	0.00262	mg/L	0.000268	10.24%

Sequence No.: 25
Sample ID: XC05 M TWC

Autosampler Location: 319
Date Collected: 8/29/2013 11:28:22 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 M TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC05 M TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2756533.3	99.83	%	0.492				0.49%
ScR 361.383	314668.8	98.32	%	0.432				0.44%
Ag 328.068†	-75.4	-0.00036	mg/L	0.000184	-0.00036	mg/L	0.000184	51.05%
Al 308.215†	520.0	0.4488	mg/L	0.00903	0.4488	mg/L	0.00903	2.01%
As 188.979†	123.4	0.09198	mg/L	0.000265	0.09198	mg/L	0.000265	0.29%
B 249.677†	1258.5	0.1953	mg/L	0.00364	0.1953	mg/L	0.00364	1.86%
Ba 233.527†	58.4	0.01167	mg/L	0.000822	0.01167	mg/L	0.000822	7.04%
Be 313.042†	59.4	0.00011	mg/L	0.000020	0.00011	mg/L	0.000020	18.44%
Ca 317.933†	171273.3	18.77	mg/L	0.049	18.77	mg/L	0.049	0.26%
Cd 228.802†	5.2	-0.00033	mg/L	0.000034	-0.00033	mg/L	0.000034	10.23%
Co 228.616†	18.6	0.00048	mg/L	0.000196	0.00048	mg/L	0.000196	41.31%
Cr 267.716†	43.4	0.00577	mg/L	0.000676	0.00577	mg/L	0.000676	11.73%
Cu 324.752†	618.7	0.00248	mg/L	0.000191	0.00248	mg/L	0.000191	7.70%
Fe 273.955†	6311.1	4.843	mg/L	0.0570	4.843	mg/L	0.0570	1.18%
K 766.490†	16081.7	7.829	mg/L	0.0757	7.829	mg/L	0.0757	0.97%
Mg 279.077†	11551.3	13.82	mg/L	0.112	13.82	mg/L	0.112	0.81%
Mn 257.610†	11806.3	0.2629	mg/L	0.00262	0.2629	mg/L	0.00262	1.00%
Mo 202.031†	35.5	0.00175	mg/L	0.000180	0.00175	mg/L	0.000180	10.26%
Na 589.592†	927970.0	71.44	mg/L	0.032	71.44	mg/L	0.032	0.04%
Na 330.237†	1985.3	72.35	mg/L	0.553	72.35	mg/L	0.553	0.76%
Ni 231.604†	5.0	0.00145	mg/L	0.002258	0.00145	mg/L	0.002258	155.35%
Pb 220.353†	-11.4	-0.00161	mg/L	0.000578	-0.00161	mg/L	0.000578	35.93%
Sb 206.836†	1.9	0.00059	mg/L	0.001896	0.00059	mg/L	0.001896	320.22%
Se 196.026†	10.6	0.00618	mg/L	0.001774	0.00618	mg/L	0.001774	28.69%
Si 288.158†	26513.7	18.16	mg/L	0.110	18.16	mg/L	0.110	0.60%
Sn 189.927†	-42.7	-0.00874	mg/L	0.001244	-0.00874	mg/L	0.001244	14.23%
Sr 421.552†	130791.1	0.1425	mg/L	0.00015	0.1425	mg/L	0.00015	0.10%
Ti 334.903†	934.8	0.04324	mg/L	0.000247	0.04324	mg/L	0.000247	0.57%
Tl 190.801†	5.4	0.00375	mg/L	0.003216	0.00375	mg/L	0.003216	85.74%
V 292.402†	1820.7	0.01492	mg/L	0.000064	0.01492	mg/L	0.000064	0.43%
Zn 206.200†	2.0	0.00335	mg/L	0.000568	0.00335	mg/L	0.000568	16.96%

Sequence No.: 26
Sample ID: XC05 MB1SPK TWC

Autosampler Location: 320
Date Collected: 8/29/2013 11:32:38 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 MB1SPK TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC05 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2779746.1	100.7	%	0.77				0.76%
ScR 361.383	319171.5	99.73	%	0.180				0.18%
Ag 328.068†	113323.8	0.5493	mg/L	0.00483	0.5493	mg/L	0.00483	0.88%
Al 308.215†	2485.6	2.139	mg/L	0.0043	2.139	mg/L	0.0043	0.20%
As 188.979†	2834.3	2.130	mg/L	0.0127	2.130	mg/L	0.0127	0.60%
B 249.677†	23.7	0.00258	mg/L	0.000686	0.00258	mg/L	0.000686	26.58%
Ba 233.527†	10650.7	2.220	mg/L	0.0054	2.220	mg/L	0.0054	0.25%
Be 313.042†	261804.4	0.5005	mg/L	0.00255	0.5005	mg/L	0.00255	0.51%
Ca 317.933†	93566.4	10.25	mg/L	0.014	10.25	mg/L	0.014	0.14%
Cd 228.802†	11891.9	0.5282	mg/L	0.00600	0.5282	mg/L	0.00600	1.14%
Co 228.616†	17608.4	0.5227	mg/L	0.00321	0.5227	mg/L	0.00321	0.61%
Cr 267.716†	3523.2	0.5548	mg/L	0.00122	0.5548	mg/L	0.00122	0.22%
Cu 324.752†	140560.9	0.5287	mg/L	0.00472	0.5287	mg/L	0.00472	0.89%
Fe 273.955†	2782.0	2.132	mg/L	0.0072	2.132	mg/L	0.0072	0.34%
K 766.490†	21452.7	10.44	mg/L	0.029	10.44	mg/L	0.029	0.28%
Mg 279.077†	9040.3	10.82	mg/L	0.031	10.82	mg/L	0.031	0.28%
Mn 257.610†	22842.7	0.5092	mg/L	0.00271	0.5092	mg/L	0.00271	0.53%
Mo 202.031†	20.0	0.00096	mg/L	0.000291	0.00096	mg/L	0.000291	30.24%
Na 589.592†	137158.7	10.56	mg/L	0.008	10.56	mg/L	0.008	0.08%
Na 330.237†	304.0	10.91	mg/L	0.210	10.91	mg/L	0.210	1.93%
Ni 231.604†	1800.4	0.5280	mg/L	0.00204	0.5280	mg/L	0.00204	0.39%
Pb 220.353†	15981.0	2.068	mg/L	0.0226	2.068	mg/L	0.0226	1.09%
Sb 206.836†	11.6	-0.00143	mg/L	0.000275	-0.00143	mg/L	0.000275	19.17%
Se 196.026†	3112.8	2.110	mg/L	0.0201	2.110	mg/L	0.0201	0.95%
Si 288.158†	95.2	0.06759	mg/L	0.012822	0.06759	mg/L	0.012822	18.97%
Sn 189.927†	-21.9	-0.00437	mg/L	0.000398	-0.00437	mg/L	0.000398	9.12%
Sr 421.552†	475562.4	0.5182	mg/L	0.00077	0.5182	mg/L	0.00077	0.15%
Ti 334.903†	26.1	0.00027	mg/L	0.000485	0.00027	mg/L	0.000485	177.96%
Tl 190.801†	3704.6	2.125	mg/L	0.0136	2.125	mg/L	0.0136	0.64%
V 292.402†	63501.0	0.5311	mg/L	0.00347	0.5311	mg/L	0.00347	0.65%
Zn 206.200†	1800.5	0.5300	mg/L	0.00215	0.5300	mg/L	0.00215	0.41%

Sequence No.: 27
Sample ID: XB99 MBSPK TWC

Autosampler Location: 321
Date Collected: 8/29/2013 11:36:39 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XB99 MBSPK TWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB99 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2766078.5	100.2	%	0.14				0.14%
ScR 361.383	319483.0	99.83	%	0.288				0.29%
Ag 328.068†	114035.2	0.5528	mg/L	0.00158	0.5528	mg/L	0.00158	0.29%
Al 308.215†	2493.2	2.145	mg/L	0.0074	2.145	mg/L	0.0074	0.35%
As 188.979†	2847.1	2.139	mg/L	0.0014	2.139	mg/L	0.0014	0.06%
B 249.677†	18.5	0.00177	mg/L	0.000929	0.00177	mg/L	0.000929	52.63%
Ba 233.527†	10679.9	2.226	mg/L	0.0173	2.226	mg/L	0.0173	0.78%
Be 313.042†	260601.1	0.4982	mg/L	0.00517	0.4982	mg/L	0.00517	1.04%
Ca 317.933†	93691.7	10.27	mg/L	0.067	10.27	mg/L	0.067	0.65%
Cd 228.802†	12007.5	0.5334	mg/L	0.00132	0.5334	mg/L	0.00132	0.25%
Co 228.616†	17773.4	0.5276	mg/L	0.00069	0.5276	mg/L	0.00069	0.13%
Cr 267.716†	3533.7	0.5565	mg/L	0.00263	0.5565	mg/L	0.00263	0.47%
Cu 324.752†	141764.1	0.5332	mg/L	0.00046	0.5332	mg/L	0.00046	0.09%
Fe 273.955†	2776.5	2.128	mg/L	0.0042	2.128	mg/L	0.0042	0.20%
K 766.490†	21493.6	10.46	mg/L	0.015	10.46	mg/L	0.015	0.15%
Mg 279.077†	9039.1	10.82	mg/L	0.037	10.82	mg/L	0.037	0.34%
Mn 257.610†	22861.8	0.5097	mg/L	0.00146	0.5097	mg/L	0.00146	0.29%
Mo 202.031†	20.8	0.00101	mg/L	0.000070	0.00101	mg/L	0.000070	6.94%
Na 589.592†	137799.3	10.61	mg/L	0.033	10.61	mg/L	0.033	0.31%
Na 330.237†	299.9	10.76	mg/L	0.063	10.76	mg/L	0.063	0.58%
Ni 231.604†	1802.3	0.5285	mg/L	0.00300	0.5285	mg/L	0.00300	0.57%
Pb 220.353†	16093.0	2.082	mg/L	0.0052	2.082	mg/L	0.0052	0.25%
Sb 206.836†	12.5	-0.00109	mg/L	0.000804	-0.00109	mg/L	0.000804	73.76%
Se 196.026†	3106.0	2.106	mg/L	0.0090	2.106	mg/L	0.0090	0.43%
Si 288.158†	53.2	0.03885	mg/L	0.006497	0.03885	mg/L	0.006497	16.72%
Sn 189.927†	-24.1	-0.00489	mg/L	0.000724	-0.00489	mg/L	0.000724	14.83%
Sr 421.552†	478042.2	0.5209	mg/L	0.00188	0.5209	mg/L	0.00188	0.36%
Ti 334.903†	42.8	0.00107	mg/L	0.000418	0.00107	mg/L	0.000418	39.02%
Tl 190.801†	3725.9	2.137	mg/L	0.0045	2.137	mg/L	0.0045	0.21%
V 292.402†	64193.5	0.5368	mg/L	0.00054	0.5368	mg/L	0.00054	0.10%
Zn 206.200†	1798.3	0.5293	mg/L	0.00341	0.5293	mg/L	0.00341	0.65%

Sequence No.: 28
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 8/29/2013 11:40:40 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2764425.1	100.1	%	0.02				0.02%
ScR 361.383	316778.3	98.98	%	0.637				0.64%
Ag 328.068†	224785.4	1.090	mg/L	0.0036	1.090	mg/L	0.0036	0.33%
Al 308.215†	2478.0	2.106	mg/L	0.0205	2.106	mg/L	0.0205	0.97%
As 188.979†	2723.5	2.077	mg/L	0.0045	2.077	mg/L	0.0045	0.22%
B 249.677†	6780.1	1.051	mg/L	0.0080	1.051	mg/L	0.0080	0.76%
Ba 233.527†	5236.8	1.091	mg/L	0.0071	1.091	mg/L	0.0071	0.65%
Be 313.042†	532301.7	1.018	mg/L	0.0075	1.018	mg/L	0.0075	0.73%
Ca 317.933†	19588.1	2.147	mg/L	0.0147	2.147	mg/L	0.0147	0.68%
Cd 228.802†	23822.1	1.070	mg/L	0.0028	1.070	mg/L	0.0028	0.26%
Co 228.616†	35493.7	1.052	mg/L	0.0012	1.052	mg/L	0.0012	0.11%
Cr 267.716†	6879.5	1.085	mg/L	0.0066	1.085	mg/L	0.0066	0.61%
Cu 324.752†	284509.4	1.070	mg/L	0.0022	1.070	mg/L	0.0022	0.20%
Fe 273.955†	2751.4	2.105	mg/L	0.0171	2.105	mg/L	0.0171	0.81%
K 766.490†	42581.4	20.73	mg/L	0.157	20.73	mg/L	0.157	0.76%
Mg 279.077†	1722.0	2.068	mg/L	0.0164	2.068	mg/L	0.0164	0.79%
Mn 257.610†	44657.5	0.9953	mg/L	0.00697	0.9953	mg/L	0.00697	0.70%
Mo 202.031†	18231.6	1.026	mg/L	0.0035	1.026	mg/L	0.0035	0.34%
Na 589.592†	678431.5	52.23	mg/L	0.451	52.23	mg/L	0.451	0.86%
Na 330.237†	1471.8	53.60	mg/L	0.277	53.60	mg/L	0.277	0.52%
Ni 231.604†	3670.7	1.079	mg/L	0.0077	1.079	mg/L	0.0077	0.71%
Pb 220.353†	15959.8	2.065	mg/L	0.0055	2.065	mg/L	0.0055	0.27%
Sb 206.836†	5987.9	2.116	mg/L	0.0069	2.116	mg/L	0.0069	0.33%
Se 196.026†	3031.9	2.055	mg/L	0.0086	2.055	mg/L	0.0086	0.42%
Si 288.158†	3078.2	2.114	mg/L	0.0218	2.114	mg/L	0.0218	1.03%
Sn 189.927†	4154.7	1.004	mg/L	0.0052	1.004	mg/L	0.0052	0.52%
Sr 421.552†	946232.6	1.031	mg/L	0.0071	1.031	mg/L	0.0071	0.69%
Ti 334.903†	21454.0	1.028	mg/L	0.0065	1.028	mg/L	0.0065	0.63%
Tl 190.801†	3737.4	2.140	mg/L	0.0045	2.140	mg/L	0.0045	0.21%
V 292.402†	124518.4	1.041	mg/L	0.0022	1.041	mg/L	0.0022	0.21%
Zn 206.200†	3584.6	1.055	mg/L	0.0092	1.055	mg/L	0.0092	0.87%

Sequence No.: 29
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 8/29/2013 11:44:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	237.0 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	2794938.1	101.2	%	0.33				0.33%
ScR 361.383	323067.5	100.9	%	1.13				1.12%
Ag 328.068†	2.7	0.00001	mg/L	0.000159	0.00001	mg/L	0.000159	>999.9%
Al 308.215†	-1.2	-0.00104	mg/L	0.003862	-0.00104	mg/L	0.003862	372.29%
As 188.979†	-1.5	-0.00111	mg/L	0.001222	-0.00111	mg/L	0.001222	109.80%
B 249.677†	17.8	0.00277	mg/L	0.000369	0.00277	mg/L	0.000369	13.34%
Ba 233.527†	0.7	0.00014	mg/L	0.000192	0.00014	mg/L	0.000192	137.82%
Be 313.042†	71.3	0.00014	mg/L	0.000022	0.00014	mg/L	0.000022	15.91%
Ca 317.933†	-8.9	-0.00098	mg/L	0.000586	-0.00098	mg/L	0.000586	60.01%
Cd 228.802†	9.4	0.00043	mg/L	0.000201	0.00043	mg/L	0.000201	46.49%
Co 228.616†	-3.3	-0.00010	mg/L	0.000182	-0.00010	mg/L	0.000182	184.65%
Cr 267.716†	-3.0	-0.00047	mg/L	0.000498	-0.00047	mg/L	0.000498	106.70%
Cu 324.752†	213.3	0.00080	mg/L	0.000211	0.00080	mg/L	0.000211	26.32%
Fe 273.955†	-1.2	-0.00090	mg/L	0.002319	-0.00090	mg/L	0.002319	257.98%
K 766.490†	-2.7	-0.00131	mg/L	0.012130	-0.00131	mg/L	0.012130	927.99%
Mg 279.077†	-0.4	-0.00042	mg/L	0.002506	-0.00042	mg/L	0.002506	595.14%
Mn 257.610†	11.8	0.00026	mg/L	0.000096	0.00026	mg/L	0.000096	36.31%
Mo 202.031†	27.6	0.00156	mg/L	0.000256	0.00156	mg/L	0.000256	16.48%
Na 589.592†	182.6	0.01406	mg/L	0.004278	0.01406	mg/L	0.004278	30.43%
Na 330.237†	7.4	0.2689	mg/L	0.31541	0.2689	mg/L	0.31541	117.31%
Ni 231.604†	-0.3	-0.00009	mg/L	0.000814	-0.00009	mg/L	0.000814	873.71%
Pb 220.353†	-0.9	-0.00011	mg/L	0.000267	-0.00011	mg/L	0.000267	235.10%
Sb 206.836†	2.5	0.00091	mg/L	0.001789	0.00091	mg/L	0.001789	196.02%
Se 196.026†	3.0	0.00202	mg/L	0.003636	0.00202	mg/L	0.003636	180.46%
Si 288.158†	19.0	0.01303	mg/L	0.005801	0.01303	mg/L	0.005801	44.52%
Sn 189.927†	3.2	0.00078	mg/L	0.000587	0.00078	mg/L	0.000587	75.66%
Sr 421.552†	65.0	0.00007	mg/L	0.000045	0.00007	mg/L	0.000045	63.79%
Ti 334.903†	11.2	0.00054	mg/L	0.000494	0.00054	mg/L	0.000494	91.94%
Tl 190.801†	3.6	0.00210	mg/L	0.000523	0.00210	mg/L	0.000523	24.92%
V 292.402†	17.1	0.00014	mg/L	0.000147	0.00014	mg/L	0.000147	104.32%
Zn 206.200†	-1.1	-0.00032	mg/L	0.000071	-0.00032	mg/L	0.000071	21.91%

Sequence No.: 30
Sample ID: XC05 KDUP TWC

Autosampler Location: 322
Date Collected: 8/29/2013 11:48:59 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 KDUP TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC05 KDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2728890.5	98.83	%	0.253				0.26%
ScR 361.383	314062.5	98.14	%	0.237				0.24%
Ag 328.068†	-208.0	-0.00101	mg/L	0.000162	-0.00101	mg/L	0.000162	16.07%
Al 308.215†	11.5	0.00975	mg/L	0.008190	0.00975	mg/L	0.008190	83.99%
As 188.979†	248.8	0.1734	mg/L	0.00327	0.1734	mg/L	0.00327	1.88%
B 249.677†	3896.6	0.6049	mg/L	0.00234	0.6049	mg/L	0.00234	0.39%
Ba 233.527†	2461.2	0.5045	mg/L	0.00286	0.5045	mg/L	0.00286	0.57%
Be 313.042†	61.6	0.00012	mg/L	0.000021	0.00012	mg/L	0.000021	17.77%
Ca 317.933†	1088915.1	119.3	mg/L	1.09	119.3	mg/L	1.09	0.91%
Cd 228.802†	2.6	-0.00175	mg/L	0.000016	-0.00175	mg/L	0.000016	0.92%
Co 228.616†	77.5	0.00223	mg/L	0.000066	0.00223	mg/L	0.000066	2.97%
Cr 267.716†	4.7	0.00067	mg/L	0.000739	0.00067	mg/L	0.000739	111.07%
Cu 324.752†	-530.5	0.00132	mg/L	0.000159	0.00132	mg/L	0.000159	12.09%
Fe 273.955†	95575.0	73.35	mg/L	0.394	73.35	mg/L	0.394	0.54%
K 766.490†	15713.6	7.650	mg/L	0.0212	7.650	mg/L	0.0212	0.28%
Mg 279.077†	23649.7	28.25	mg/L	0.111	28.25	mg/L	0.111	0.39%
Mn 257.610†	79659.8	1.774	mg/L	0.0073	1.774	mg/L	0.0073	0.41%
Mo 202.031†	89.1	0.00345	mg/L	0.000193	0.00345	mg/L	0.000193	5.61%
Na 589.592†	267949.3	20.63	mg/L	0.142	20.63	mg/L	0.142	0.69%
Na 330.237†	574.7	20.94	mg/L	0.202	20.94	mg/L	0.202	0.97%
Ni 231.604†	10.9	0.00321	mg/L	0.000142	0.00321	mg/L	0.000142	4.43%
Pb 220.353†	9.7	-0.00281	mg/L	0.000272	-0.00281	mg/L	0.000272	9.68%
Sb 206.836†	21.1	0.00734	mg/L	0.002777	0.00734	mg/L	0.002777	37.84%
Se 196.026†	22.4	0.00871	mg/L	0.004495	0.00871	mg/L	0.004495	51.58%
Si 288.158†	35144.4	24.08	mg/L	0.068	24.08	mg/L	0.068	0.28%
Sn 189.927†	-72.2	-0.00757	mg/L	0.000722	-0.00757	mg/L	0.000722	9.54%
Sr 421.552†	975810.7	1.063	mg/L	0.0041	1.063	mg/L	0.0041	0.38%
Ti 334.903†	297.7	0.00413	mg/L	0.000669	0.00413	mg/L	0.000669	16.18%
Tl 190.801†	5.2	0.01346	mg/L	0.002093	0.01346	mg/L	0.002093	15.55%
V 292.402†	583.5	0.00072	mg/L	0.000116	0.00072	mg/L	0.000116	16.15%
Zn 206.200†	65.2	0.02117	mg/L	0.000351	0.02117	mg/L	0.000351	1.66%

Sequence No.: 31
Sample ID: XC05 K TWC

Autosampler Location: 323
Date Collected: 8/29/2013 11:53:17 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 K TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC05 K TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2750377.6	99.60	%	0.284				0.28%
ScR 361.383	315150.7	98.48	%	0.229				0.23%
Ag 328.068†	-180.6	-0.00087	mg/L	0.000120	-0.00087	mg/L	0.000120	13.78%
Al 308.215†	9.7	0.00825	mg/L	0.001371	0.00825	mg/L	0.001371	16.63%
As 188.979†	243.1	0.1691	mg/L	0.00058	0.1691	mg/L	0.00058	0.34%
B 249.677†	3871.9	0.6010	mg/L	0.00483	0.6010	mg/L	0.00483	0.80%
Ba 233.527†	2442.0	0.5006	mg/L	0.00118	0.5006	mg/L	0.00118	0.24%
Be 313.042†	17.2	0.00003	mg/L	0.000033	0.00003	mg/L	0.000033	104.33%
Ca 317.933†	1083586.1	118.7	mg/L	0.74	118.7	mg/L	0.74	0.62%
Cd 228.802†	2.3	-0.00174	mg/L	0.000119	-0.00174	mg/L	0.000119	6.87%
Co 228.616†	72.4	0.00208	mg/L	0.000212	0.00208	mg/L	0.000212	10.17%
Cr 267.716†	-5.3	-0.00092	mg/L	0.000993	-0.00092	mg/L	0.000993	107.81%
Cu 324.752†	-539.2	0.00126	mg/L	0.000116	0.00126	mg/L	0.000116	9.16%
Fe 273.955†	95018.8	72.92	mg/L	0.816	72.92	mg/L	0.816	1.12%
K 766.490†	15536.9	7.564	mg/L	0.0356	7.564	mg/L	0.0356	0.47%
Mg 279.077†	23555.6	28.13	mg/L	0.134	28.13	mg/L	0.134	0.48%
Mn 257.610†	79209.8	1.764	mg/L	0.0166	1.764	mg/L	0.0166	0.94%
Mo 202.031†	74.7	0.00264	mg/L	0.000098	0.00264	mg/L	0.000098	3.71%
Na 589.592†	265987.8	20.48	mg/L	0.101	20.48	mg/L	0.101	0.50%
Na 330.237†	552.6	20.14	mg/L	0.351	20.14	mg/L	0.351	1.74%
Ni 231.604†	5.1	0.00149	mg/L	0.000831	0.00149	mg/L	0.000831	55.95%
Pb 220.353†	-1.5	-0.00424	mg/L	0.000081	-0.00424	mg/L	0.000081	1.92%
Sb 206.836†	16.6	0.00576	mg/L	0.000130	0.00576	mg/L	0.000130	2.26%
Se 196.026†	22.7	0.00894	mg/L	0.005676	0.00894	mg/L	0.005676	63.53%
Si 288.158†	34989.6	23.97	mg/L	0.139	23.97	mg/L	0.139	0.58%
Sn 189.927†	-72.2	-0.00763	mg/L	0.001008	-0.00763	mg/L	0.001008	13.21%
Sr 421.552†	965766.4	1.052	mg/L	0.0043	1.052	mg/L	0.0043	0.41%
Ti 334.903†	288.5	0.00374	mg/L	0.000282	0.00374	mg/L	0.000282	7.53%
Tl 190.801†	9.0	0.01554	mg/L	0.002464	0.01554	mg/L	0.002464	15.86%
V 292.402†	580.4	0.00071	mg/L	0.000171	0.00071	mg/L	0.000171	24.09%
Zn 206.200†	-1.9	0.00142	mg/L	0.000600	0.00142	mg/L	0.000600	42.33%

Sequence No.: 32
Sample ID: XC05 KSPK TWC

Autosampler Location: 324
Date Collected: 8/29/2013 11:57:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 KSPK TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC05 KSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2741666.1	99.29	%	0.143				0.14%
ScR 361.383	316429.4	98.87	%	0.230				0.23%
Ag 328.068†	114985.0	0.5574	mg/L	0.00086	0.5574	mg/L	0.00086	0.15%
Al 308.215†	2465.6	2.121	mg/L	0.0054	2.121	mg/L	0.0054	0.26%
As 188.979†	3112.1	2.325	mg/L	0.0023	2.325	mg/L	0.0023	0.10%
B 249.677†	3949.9	0.6121	mg/L	0.00255	0.6121	mg/L	0.00255	0.42%
Ba 233.527†	13018.0	2.705	mg/L	0.0113	2.705	mg/L	0.0113	0.42%
Be 313.042†	259629.6	0.4963	mg/L	0.00265	0.4963	mg/L	0.00265	0.53%
Ca 317.933†	1190775.4	130.5	mg/L	0.51	130.5	mg/L	0.51	0.39%
Cd 228.802†	11988.4	0.5306	mg/L	0.00108	0.5306	mg/L	0.00108	0.20%
Co 228.616†	17380.6	0.5159	mg/L	0.00200	0.5159	mg/L	0.00200	0.39%
Cr 267.716†	3471.1	0.5463	mg/L	0.00234	0.5463	mg/L	0.00234	0.43%
Cu 324.752†	143200.6	0.5418	mg/L	0.00085	0.5418	mg/L	0.00085	0.16%
Fe 273.955†	94910.7	72.84	mg/L	0.150	72.84	mg/L	0.150	0.21%
K 766.490†	37446.6	18.23	mg/L	0.146	18.23	mg/L	0.146	0.80%
Mg 279.077†	33521.0	40.06	mg/L	0.110	40.06	mg/L	0.110	0.28%
Mn 257.610†	99695.9	2.221	mg/L	0.0040	2.221	mg/L	0.0040	0.18%
Mo 202.031†	89.5	0.00330	mg/L	0.000220	0.00330	mg/L	0.000220	6.67%
Na 589.592†	405206.1	31.20	mg/L	0.165	31.20	mg/L	0.165	0.53%
Na 330.237†	868.7	31.50	mg/L	0.149	31.50	mg/L	0.149	0.47%
Ni 231.604†	1771.9	0.5196	mg/L	0.00124	0.5196	mg/L	0.00124	0.24%
Pb 220.353†	15820.5	2.043	mg/L	0.0083	2.043	mg/L	0.0083	0.41%
Sb 206.836†	26.3	0.00383	mg/L	0.000776	0.00383	mg/L	0.000776	20.27%
Se 196.026†	3156.3	2.133	mg/L	0.0027	2.133	mg/L	0.0027	0.13%
Si 288.158†	35798.0	24.53	mg/L	0.073	24.53	mg/L	0.073	0.30%
Sn 189.927†	-72.7	-0.00669	mg/L	0.002415	-0.00669	mg/L	0.002415	36.11%
Sr 421.552†	1443309.9	1.573	mg/L	0.0076	1.573	mg/L	0.0076	0.48%
Ti 334.903†	330.7	0.00466	mg/L	0.000275	0.00466	mg/L	0.000275	5.90%
Tl 190.801†	3605.7	2.078	mg/L	0.0051	2.078	mg/L	0.0051	0.24%
V 292.402†	64276.5	0.5335	mg/L	0.00126	0.5335	mg/L	0.00126	0.24%
Zn 206.200†	1768.1	0.5225	mg/L	0.00308	0.5225	mg/L	0.00308	0.59%

Sequence No.: 33
Sample ID: ~~XC05 KPOST TWC~~ ZZZZZZ
BA 8/29/13
Dilution: 1.000000X

Autosampler Location: 325
Date Collected: 8/29/2013 12:01:35 PM
Data Type: Original

Nebulizer Parameters: XC05 KPOST TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC05 KPOST TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2754284.9	99.75	%	0.531				0.53%
ScR 361.383	315125.6	98.47	%	0.225				0.23%
Ag 328.068†	113699.2	0.5512	mg/L	0.00192	0.5512	mg/L	0.00192	0.35%
Al 308.215†	2500.6	2.152	mg/L	0.0027	2.152	mg/L	0.0027	0.12%
As 188.979†	3108.8	2.322	mg/L	0.0088	2.322	mg/L	0.0088	0.38%
B 249.677†	3887.6	0.6024	mg/L	0.00347	0.6024	mg/L	0.00347	0.58%
Ba 233.527†	13215.2	2.747	mg/L	0.0109	2.747	mg/L	0.0109	0.40%
Be 313.042†	260574.9	0.4981	mg/L	0.00299	0.4981	mg/L	0.00299	0.60%
Ca 317.933†	1172077.7	128.4	mg/L	0.53	128.4	mg/L	0.53	0.42%
Cd 228.802†	11972.2	0.5299	mg/L	0.00281	0.5299	mg/L	0.00281	0.53%
Co 228.616†	17398.7	0.5164	mg/L	0.00264	0.5164	mg/L	0.00264	0.51%
Cr 267.716†	3495.6	0.5502	mg/L	0.00109	0.5502	mg/L	0.00109	0.20%
Cu 324.752†	143123.5	0.5414	mg/L	0.00190	0.5414	mg/L	0.00190	0.35%
Fe 273.955†	92355.9	70.88	mg/L	0.294	70.88	mg/L	0.294	0.42%
K 766.490†	37332.8	18.18	mg/L	0.062	18.18	mg/L	0.062	0.34%
Mg 279.077†	33254.4	39.74	mg/L	0.126	39.74	mg/L	0.126	0.32%
Mn 257.610†	97695.8	2.176	mg/L	0.0080	2.176	mg/L	0.0080	0.37%
Mo 202.031†	88.5	0.00327	mg/L	0.000357	0.00327	mg/L	0.000357	10.93%
Na 589.592†	403218.1	31.04	mg/L	0.080	31.04	mg/L	0.080	0.26%
Na 330.237†	864.4	31.34	mg/L	0.130	31.34	mg/L	0.130	0.41%
Ni 231.604†	1790.1	0.5250	mg/L	0.00169	0.5250	mg/L	0.00169	0.32%
Pb 220.353†	15781.8	2.038	mg/L	0.0043	2.038	mg/L	0.0043	0.21%
Sb 206.836†	34.6	0.00671	mg/L	0.002999	0.00671	mg/L	0.002999	44.70%
Se 196.026†	3167.5	2.141	mg/L	0.0088	2.141	mg/L	0.0088	0.41%
Si 288.158†	35112.1	24.06	mg/L	0.076	24.06	mg/L	0.076	0.32%
Sn 189.927†	-72.4	-0.00680	mg/L	0.001112	-0.00680	mg/L	0.001112	16.35%
Sr 421.552†	1428289.0	1.556	mg/L	0.0040	1.556	mg/L	0.0040	0.26%
Ti 334.903†	318.8	0.00427	mg/L	0.000049	0.00427	mg/L	0.000049	1.15%
Tl 190.801†	3607.6	2.079	mg/L	0.0008	2.079	mg/L	0.0008	0.04%
V 292.402†	64125.3	0.5324	mg/L	0.00224	0.5324	mg/L	0.00224	0.42%
Zn 206.200†	1779.4	0.5258	mg/L	0.00281	0.5258	mg/L	0.00281	0.54%

Sequence No.: 34
Sample ID: XC05 N TWC

Autosampler Location: 326
Date Collected: 8/29/2013 12:05:37 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC05 N TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC05 N TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2766372.7	100.2	%	0.33				0.33%
ScR 361.383	315833.2	98.69	%	0.687				0.70%
Ag 328.068†	-1.6	-0.00000	mg/L	0.000162	-0.00000	mg/L	0.000162	>999.9%
Al 308.215†	536.9	0.4635	mg/L	0.00698	0.4635	mg/L	0.00698	1.51%
As 188.979†	117.3	0.08726	mg/L	0.000114	0.08726	mg/L	0.000114	0.13%
B 249.677†	1261.7	0.1959	mg/L	0.00100	0.1959	mg/L	0.00100	0.51%
Ba 233.527†	55.9	0.01115	mg/L	0.000966	0.01115	mg/L	0.000966	8.66%
Be 313.042†	33.9	0.00006	mg/L	0.000007	0.00006	mg/L	0.000007	12.18%
Ca 317.933†	175569.2	19.24	mg/L	0.192	19.24	mg/L	0.192	1.00%
Cd 228.802†	10.1	-0.00008	mg/L	0.000056	-0.00008	mg/L	0.000056	70.51%
Co 228.616†	21.6	0.00057	mg/L	0.000202	0.00057	mg/L	0.000202	35.56%
Cr 267.716†	41.7	0.00548	mg/L	0.000514	0.00548	mg/L	0.000514	9.37%
Cu 324.752†	773.9	0.00307	mg/L	0.000182	0.00307	mg/L	0.000182	5.95%
Fe 273.955†	6341.4	4.867	mg/L	0.0166	4.867	mg/L	0.0166	0.34%
K 766.490†	16364.0	7.967	mg/L	0.0346	7.967	mg/L	0.0346	0.43%
Mg 279.077†	11663.1	13.95	mg/L	0.073	13.95	mg/L	0.073	0.52%
Mn 257.610†	12771.4	0.2844	mg/L	0.00190	0.2844	mg/L	0.00190	0.67%
Mo 202.031†	32.9	0.00160	mg/L	0.000416	0.00160	mg/L	0.000416	26.01%
Na 589.592†	948219.5	73.00	mg/L	0.495	73.00	mg/L	0.495	0.68%
Na 330.237†	2009.0	73.21	mg/L	0.412	73.21	mg/L	0.412	0.56%
Ni 231.604†	8.1	0.00238	mg/L	0.001499	0.00238	mg/L	0.001499	62.96%
Pb 220.353†	-3.3	-0.00055	mg/L	0.000205	-0.00055	mg/L	0.000205	36.99%
Sb 206.836†	4.6	0.00156	mg/L	0.000289	0.00156	mg/L	0.000289	18.55%
Se 196.026†	8.1	0.00442	mg/L	0.004583	0.00442	mg/L	0.004583	103.78%
Si 288.158†	27043.1	18.53	mg/L	0.096	18.53	mg/L	0.096	0.52%
Sn 189.927†	-38.5	-0.00770	mg/L	0.000366	-0.00770	mg/L	0.000366	4.75%
Sr 421.552†	132881.0	0.1448	mg/L	0.00142	0.1448	mg/L	0.00142	0.98%
Ti 334.903†	878.3	0.04049	mg/L	0.001396	0.04049	mg/L	0.001396	3.45%
Tl 190.801†	8.8	0.00571	mg/L	0.002405	0.00571	mg/L	0.002405	42.13%
V 292.402†	1862.2	0.01527	mg/L	0.000045	0.01527	mg/L	0.000045	0.30%
Zn 206.200†	7.1	0.00489	mg/L	0.000746	0.00489	mg/L	0.000746	15.23%

Sequence No.: 35
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 8/29/2013 12:09:53 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2776139.2	100.5	%	0.39				0.39%
ScR 361.383	317139.6	99.10	%	0.642				0.65%
Ag 328.068†	225938.7	1.095	mg/L	0.0087	1.095	mg/L	0.0087	0.79%
Al 308.215†	2493.8	2.120	mg/L	0.0201	2.120	mg/L	0.0201	0.95%
As 188.979†	2741.8	2.091	mg/L	0.0080	2.091	mg/L	0.0080	0.38%
B 249.677†	6839.3	1.061	mg/L	0.0124	1.061	mg/L	0.0124	1.17%
Ba 233.527†	5354.8	1.116	mg/L	0.0140	1.116	mg/L	0.0140	1.26%
Be 313.042†	537728.9	1.028	mg/L	0.0067	1.028	mg/L	0.0067	0.65%
Ca 317.933†	19844.2	2.175	mg/L	0.0234	2.175	mg/L	0.0234	1.08%
Cd 228.802†	23836.7	1.071	mg/L	0.0040	1.071	mg/L	0.0040	0.37%
Co 228.616†	35746.1	1.060	mg/L	0.0025	1.060	mg/L	0.0025	0.24%
Cr 267.716†	6953.7	1.097	mg/L	0.0111	1.097	mg/L	0.0111	1.01%
Cu 324.752†	285189.5	1.072	mg/L	0.0087	1.072	mg/L	0.0087	0.81%
Fe 273.955†	2751.4	2.105	mg/L	0.0150	2.105	mg/L	0.0150	0.71%
K 766.490†	42894.5	20.88	mg/L	0.116	20.88	mg/L	0.116	0.56%
Mg 279.077†	1743.9	2.094	mg/L	0.0157	2.094	mg/L	0.0157	0.75%
Mn 257.610†	44865.1	0.9999	mg/L	0.00463	0.9999	mg/L	0.00463	0.46%
Mo 202.031†	18278.2	1.029	mg/L	0.0040	1.029	mg/L	0.0040	0.38%
Na 589.592†	684492.5	52.70	mg/L	0.383	52.70	mg/L	0.383	0.73%
Na 330.237†	1473.0	53.64	mg/L	0.541	53.64	mg/L	0.541	1.01%
Ni 231.604†	3724.6	1.094	mg/L	0.0145	1.094	mg/L	0.0145	1.32%
Pb 220.353†	16065.3	2.079	mg/L	0.0065	2.079	mg/L	0.0065	0.31%
Sb 206.836†	5976.4	2.112	mg/L	0.0037	2.112	mg/L	0.0037	0.17%
Se 196.026†	3045.7	2.065	mg/L	0.0074	2.065	mg/L	0.0074	0.36%
Si 288.158†	3174.1	2.179	mg/L	0.0251	2.179	mg/L	0.0251	1.15%
Sn 189.927†	4177.0	1.010	mg/L	0.0052	1.010	mg/L	0.0052	0.51%
Sr 421.552†	950123.8	1.035	mg/L	0.0071	1.035	mg/L	0.0071	0.69%
Ti 334.903†	21585.2	1.034	mg/L	0.0053	1.034	mg/L	0.0053	0.51%
Tl 190.801†	3758.4	2.152	mg/L	0.0080	2.152	mg/L	0.0080	0.37%
V 292.402†	125352.8	1.048	mg/L	0.0083	1.048	mg/L	0.0083	0.79%
Zn 206.200†	3639.7	1.072	mg/L	0.0107	1.072	mg/L	0.0107	1.00%

Sequence No.: 36
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 8/29/2013 12:13:56 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 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	2801435.3	101.5	%	0.47				0.46%
ScR 361.383	322512.7	100.8	%	0.03				0.03%
Ag 328.068†	-5.1	-0.00002	mg/L	0.000184	-0.00002	mg/L	0.000184	740.92%
Al 308.215†	1.0	0.00083	mg/L	0.001451	0.00083	mg/L	0.001451	175.62%
As 188.979†	-1.2	-0.00091	mg/L	0.001299	-0.00091	mg/L	0.001299	142.56%
B 249.677†	24.0	0.00372	mg/L	0.000450	0.00372	mg/L	0.000450	12.10%
Ba 233.527†	1.4	0.00028	mg/L	0.000898	0.00028	mg/L	0.000898	315.89%
Be 313.042†	70.4	0.00013	mg/L	0.000025	0.00013	mg/L	0.000025	18.87%
Ca 317.933†	-2.0	-0.00022	mg/L	0.000170	-0.00022	mg/L	0.000170	78.55%
Cd 228.802†	10.0	0.00046	mg/L	0.000114	0.00046	mg/L	0.000114	24.83%
Co 228.616†	-2.3	-0.00007	mg/L	0.000032	-0.00007	mg/L	0.000032	46.87%
Cr 267.716†	-1.5	-0.00024	mg/L	0.000343	-0.00024	mg/L	0.000343	140.67%
Cu 324.752†	237.2	0.00089	mg/L	0.000301	0.00089	mg/L	0.000301	33.81%
Fe 273.955†	-0.7	-0.00058	mg/L	0.001321	-0.00058	mg/L	0.001321	228.61%
K 766.490†	1.7	0.00081	mg/L	0.008667	0.00081	mg/L	0.008667	>999.9%
Mg 279.077†	-2.5	-0.00297	mg/L	0.002512	-0.00297	mg/L	0.002512	84.47%
Mn 257.610†	17.1	0.00038	mg/L	0.000057	0.00038	mg/L	0.000057	14.93%
Mo 202.031†	28.7	0.00162	mg/L	0.000478	0.00162	mg/L	0.000478	29.59%
Na 589.592†	186.9	0.01439	mg/L	0.002421	0.01439	mg/L	0.002421	16.82%
Na 330.237†	0.6	0.02197	mg/L	0.097993	0.02197	mg/L	0.097993	445.97%
Ni 231.604†	-1.7	-0.00049	mg/L	0.000785	-0.00049	mg/L	0.000785	160.89%
Pb 220.353†	-4.4	-0.00058	mg/L	0.000473	-0.00058	mg/L	0.000473	82.13%
Sb 206.836†	5.1	0.00182	mg/L	0.001413	0.00182	mg/L	0.001413	77.59%
Se 196.026†	0.7	0.00050	mg/L	0.001240	0.00050	mg/L	0.001240	246.07%
Si 288.158†	48.6	0.03331	mg/L	0.003052	0.03331	mg/L	0.003052	9.16%
Sn 189.927†	1.7	0.00040	mg/L	0.000853	0.00040	mg/L	0.000853	213.45%
Sr 421.552†	73.8	0.00008	mg/L	0.000018	0.00008	mg/L	0.000018	22.23%
Ti 334.903†	8.0	0.00038	mg/L	0.000395	0.00038	mg/L	0.000395	103.69%
Tl 190.801†	0.4	0.00022	mg/L	0.001659	0.00022	mg/L	0.001659	738.77%
V 292.402†	36.6	0.00030	mg/L	0.000186	0.00030	mg/L	0.000186	61.14%
Zn 206.200†	0.6	0.00019	mg/L	0.000704	0.00019	mg/L	0.000704	368.03%

Sequence No.: 37
Sample ID: XC15 MB1 TWC

Autosampler Location: 327
Date Collected: 8/29/2013 12:18:11 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC15 MB1 TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC15 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2798909.2	101.4	%	0.49				0.48%
ScR 361.383	323372.5	101.0	%	0.53				0.53%
Ag 328.068†	32.3	0.00016	mg/L	0.000066	0.00016	mg/L	0.000066	42.48%
Al 308.215†	9.1	0.00788	mg/L	0.002984	0.00788	mg/L	0.002984	37.85%
As 188.979†	-0.9	-0.00069	mg/L	0.000929	-0.00069	mg/L	0.000929	135.48%
B 249.677†	20.4	0.00316	mg/L	0.001627	0.00316	mg/L	0.001627	51.44%
Ba 233.527†	-0.8	-0.00017	mg/L	0.000467	-0.00017	mg/L	0.000467	277.96%
Be 313.042†	21.8	0.00004	mg/L	0.000023	0.00004	mg/L	0.000023	54.31%
Ca 317.933†	6.3	0.00069	mg/L	0.000540	0.00069	mg/L	0.000540	78.45%
Cd 228.802†	3.9	0.00018	mg/L	0.000067	0.00018	mg/L	0.000067	37.54%
Co 228.616†	-2.0	-0.00006	mg/L	0.000190	-0.00006	mg/L	0.000190	316.84%
Cr 267.716†	-0.3	-0.00004	mg/L	0.000405	-0.00004	mg/L	0.000405	941.10%
Cu 324.752†	194.0	0.00073	mg/L	0.000195	0.00073	mg/L	0.000195	26.69%
Fe 273.955†	-3.0	-0.00228	mg/L	0.001025	-0.00228	mg/L	0.001025	44.90%
K 766.490†	26.1	0.01271	mg/L	0.018321	0.01271	mg/L	0.018321	144.15%
Mg 279.077†	-5.9	-0.00706	mg/L	0.007062	-0.00706	mg/L	0.007062	100.05%
Mn 257.610†	9.9	0.00022	mg/L	0.000031	0.00022	mg/L	0.000031	14.17%
Mo 202.031†	-0.1	-0.00001	mg/L	0.000126	-0.00001	mg/L	0.000126	>999.9%
Na 589.592†	116.3	0.00895	mg/L	0.001171	0.00895	mg/L	0.001171	13.08%
Na 330.237†	-2.1	-0.07804	mg/L	0.388459	-0.07804	mg/L	0.388459	497.79%
Ni 231.604†	1.9	0.00057	mg/L	0.001257	0.00057	mg/L	0.001257	222.31%
Pb 220.353†	1.3	0.00017	mg/L	0.000561	0.00017	mg/L	0.000561	329.01%
Sb 206.836†	-0.4	-0.00014	mg/L	0.001658	-0.00014	mg/L	0.001658	>999.9%
Se 196.026†	-2.8	-0.00191	mg/L	0.001111	-0.00191	mg/L	0.001111	58.08%
Si 288.158†	37.9	0.02594	mg/L	0.002549	0.02594	mg/L	0.002549	9.82%
Sn 189.927†	-0.7	-0.00016	mg/L	0.000816	-0.00016	mg/L	0.000816	496.96%
Sr 421.552†	-10.1	-0.00001	mg/L	0.000002	-0.00001	mg/L	0.000002	19.65%
Ti 334.903†	4.9	0.00023	mg/L	0.000077	0.00023	mg/L	0.000077	33.03%
Tl 190.801†	-1.4	-0.00083	mg/L	0.002574	-0.00083	mg/L	0.002574	311.76%
V 292.402†	20.2	0.00017	mg/L	0.000214	0.00017	mg/L	0.000214	127.46%
Zn 206.200†	6.2	0.00184	mg/L	0.000506	0.00184	mg/L	0.000506	27.53%

Sequence No.: 38
Sample ID: XC15 CDUP TWC

Autosampler Location: 328
Date Collected: 8/29/2013 12:22:27 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC15 CDUP TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC15 CDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2752523.6	99.68	%	0.262				0.26%
ScR 361.383	315522.0	98.59	%	0.377				0.38%
Ag 328.068†	-187.2	-0.00086	mg/L	0.000127	-0.00086	mg/L	0.000127	14.73%
Al 308.215†	64035.2	55.31	mg/L	0.161	55.31	mg/L	0.161	0.29%
As 188.979†	725.6	0.6113	mg/L	0.00421	0.6113	mg/L	0.00421	0.69%
B 249.677†	2971.3	0.4612	mg/L	0.00264	0.4612	mg/L	0.00264	0.57%
Ba 233.527†	1549.2	0.3116	mg/L	0.00148	0.3116	mg/L	0.00148	0.48%
Be 313.042†	595.7	0.00108	mg/L	0.000002	0.00108	mg/L	0.000002	0.19%
Ca 317.933†	864329.1	94.72	mg/L	0.585	94.72	mg/L	0.585	0.62%
Cd 228.802†	82.7	-0.00023	mg/L	0.000195	-0.00023	mg/L	0.000195	83.06%
Co 228.616†	1082.2	0.02796	mg/L	0.000302	0.02796	mg/L	0.000302	1.08%
Cr 267.716†	776.0	0.1203	mg/L	0.00031	0.1203	mg/L	0.00031	0.25%
Cu 324.752†	36245.3	0.1400	mg/L	0.00022	0.1400	mg/L	0.00022	0.16%
Fe 273.955†	122249.2	93.82	mg/L	0.382	93.82	mg/L	0.382	0.41%
K 766.490†	39126.5	19.05	mg/L	0.053	19.05	mg/L	0.053	0.28%
Mg 279.077†	55350.3	66.17	mg/L	0.342	66.17	mg/L	0.342	0.52%
Mn 257.610†	159686.8	3.557	mg/L	0.0137	3.557	mg/L	0.0137	0.38%
Mo 202.031†	203.8	0.01023	mg/L	0.000325	0.01023	mg/L	0.000325	3.18%
Na 589.592†	653449.1	50.31	mg/L	0.067	50.31	mg/L	0.067	0.13%
Na 330.237†	1393.3	51.40	mg/L	0.293	51.40	mg/L	0.293	0.57%
Ni 231.604†	367.2	0.1079	mg/L	0.00032	0.1079	mg/L	0.00032	0.29%
Pb 220.353†	360.7	0.05765	mg/L	0.000969	0.05765	mg/L	0.000969	1.68%
Sb 206.836†	13.7	0.00563	mg/L	0.001814	0.00563	mg/L	0.001814	32.19%
Se 196.026†	28.1	0.01377	mg/L	0.004498	0.01377	mg/L	0.004498	32.66%
Si 288.158†	24739.0	16.95	mg/L	0.024	16.95	mg/L	0.024	0.14%
Sn 189.927†	-48.8	-0.00347	mg/L	0.000643	-0.00347	mg/L	0.000643	18.56%
Sr 421.552†	528438.9	0.5758	mg/L	0.00083	0.5758	mg/L	0.00083	0.14%
Ti 334.903†	50066.2	2.393	mg/L	0.0049	2.393	mg/L	0.0049	0.20%
Tl 190.801†	-5.9	0.00925	mg/L	0.005806	0.00925	mg/L	0.005806	62.77%
V 292.402†	17806.9	0.1424	mg/L	0.00061	0.1424	mg/L	0.00061	0.43%
Zn 206.200†	596.7	0.1769	mg/L	0.00266	0.1769	mg/L	0.00266	1.50%

Sequence No.: 39
Sample ID: XC15 C TWC

Autosampler Location: 329
Date Collected: 8/29/2013 12:26:43 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC15 C TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC15 C TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2764249.3	100.1	%	0.21				0.21%
ScR 361.383	316300.4	98.83	%	0.403				0.41%
Ag 328.068†	-213.4	-0.00099	mg/L	0.000053	-0.00099	mg/L	0.000053	5.36%
Al 308.215†	64121.0	55.38	mg/L	0.366	55.38	mg/L	0.366	0.66%
As 188.979†	720.2	0.6078	mg/L	0.00219	0.6078	mg/L	0.00219	0.36%
B 249.677†	2968.6	0.4608	mg/L	0.00308	0.4608	mg/L	0.00308	0.67%
Ba 233.527†	1556.5	0.3131	mg/L	0.00272	0.3131	mg/L	0.00272	0.87%
Be 313.042†	591.1	0.00107	mg/L	0.000025	0.00107	mg/L	0.000025	2.38%
Ca 317.933†	873202.5	95.69	mg/L	1.118	95.69	mg/L	1.118	1.17%
Cd 228.802†	85.8	-0.00007	mg/L	0.000051	-0.00007	mg/L	0.000051	69.19%
Co 228.616†	1088.4	0.02811	mg/L	0.000151	0.02811	mg/L	0.000151	0.54%
Cr 267.716†	783.7	0.1215	mg/L	0.00176	0.1215	mg/L	0.00176	1.45%
Cu 324.752†	36108.7	0.1395	mg/L	0.00004	0.1395	mg/L	0.00004	0.03%
Fe 273.955†	122740.1	94.20	mg/L	0.928	94.20	mg/L	0.928	0.98%
K 766.490†	39147.6	19.06	mg/L	0.128	19.06	mg/L	0.128	0.67%
Mg 279.077†	55553.7	66.42	mg/L	0.553	66.42	mg/L	0.553	0.83%
Mn 257.610†	159722.7	3.558	mg/L	0.0275	3.558	mg/L	0.0275	0.77%
Mo 202.031†	206.4	0.01036	mg/L	0.000362	0.01036	mg/L	0.000362	3.50%
Na 589.592†	653775.7	50.33	mg/L	0.200	50.33	mg/L	0.200	0.40%
Na 330.237†	1396.7	51.53	mg/L	0.281	51.53	mg/L	0.281	0.55%
Ni 231.604†	370.1	0.1087	mg/L	0.00150	0.1087	mg/L	0.00150	1.38%
Pb 220.353†	351.2	0.05643	mg/L	0.000789	0.05643	mg/L	0.000789	1.40%
Sb 206.836†	12.9	0.00536	mg/L	0.001672	0.00536	mg/L	0.001672	31.18%
Se 196.026†	30.7	0.01552	mg/L	0.001882	0.01552	mg/L	0.001882	12.13%
Si 288.158†	41627.3	28.52	mg/L	0.248	28.52	mg/L	0.248	0.87%
Sn 189.927†	-51.0	-0.00390	mg/L	0.001469	-0.00390	mg/L	0.001469	37.62%
Sr 421.552†	529038.2	0.5765	mg/L	0.00320	0.5765	mg/L	0.00320	0.56%
Ti 334.903†	50477.6	2.413	mg/L	0.0153	2.413	mg/L	0.0153	0.63%
Tl 190.801†	-1.8	0.01163	mg/L	0.002441	0.01163	mg/L	0.002441	21.00%
V 292.402†	17858.4	0.1428	mg/L	0.00026	0.1428	mg/L	0.00026	0.18%
Zn 206.200†	596.9	0.1789	mg/L	0.00126	0.1789	mg/L	0.00126	0.71%

Sequence No.: 40
Sample ID: XC15 CSPK TWC

Autosampler Location: 330
Date Collected: 8/29/2013 12:30:59 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC15 CSPK TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC15 CSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2765416.7	100.1	%	0.32				0.32%
ScR 361.383	316332.0	98.84	%	0.240				0.24%
Ag 328.068†	113721.2	0.5513	mg/L	0.00273	0.5513	mg/L	0.00273	0.50%
Al 308.215†	66843.0	57.73	mg/L	0.098	57.73	mg/L	0.098	0.17%
As 188.979†	3601.6	2.770	mg/L	0.0108	2.770	mg/L	0.0108	0.39%
B 249.677†	2985.3	0.4622	mg/L	0.00021	0.4622	mg/L	0.00021	0.05%
Ba 233.527†	12461.2	2.586	mg/L	0.0216	2.586	mg/L	0.0216	0.84%
Be 313.042†	265008.1	0.5066	mg/L	0.00200	0.5066	mg/L	0.00200	0.39%
Ca 317.933†	986376.9	108.1	mg/L	0.26	108.1	mg/L	0.26	0.24%
Cd 228.802†	12374.8	0.5460	mg/L	0.00211	0.5460	mg/L	0.00211	0.39%
Co 228.616†	18701.2	0.5511	mg/L	0.00225	0.5511	mg/L	0.00225	0.41%
Cr 267.716†	4321.3	0.6786	mg/L	0.00090	0.6786	mg/L	0.00090	0.13%
Cu 324.752†	180692.4	0.6832	mg/L	0.00416	0.6832	mg/L	0.00416	0.61%
Fe 273.955†	123446.4	94.73	mg/L	0.275	94.73	mg/L	0.275	0.29%
K 766.490†	61600.7	29.99	mg/L	0.052	29.99	mg/L	0.052	0.17%
Mg 279.077†	64303.9	76.89	mg/L	0.105	76.89	mg/L	0.105	0.14%
Mn 257.610†	180682.2	4.025	mg/L	0.0058	4.025	mg/L	0.0058	0.14%
Mo 202.031†	207.3	0.01022	mg/L	0.000287	0.01022	mg/L	0.000287	2.81%
Na 589.592†	803177.4	61.84	mg/L	0.305	61.84	mg/L	0.305	0.49%
Na 330.237†	1709.8	62.75	mg/L	0.214	62.75	mg/L	0.214	0.34%
Ni 231.604†	2169.8	0.6365	mg/L	0.00293	0.6365	mg/L	0.00293	0.46%
Pb 220.353†	16412.8	2.135	mg/L	0.0071	2.135	mg/L	0.0071	0.33%
Sb 206.836†	23.9	0.00366	mg/L	0.001240	0.00366	mg/L	0.001240	33.90%
Se 196.026†	3141.1	2.124	mg/L	0.0043	2.124	mg/L	0.0043	0.20%
Si 288.158†	13445.0	9.214	mg/L	0.0177	9.214	mg/L	0.0177	0.19%
Sn 189.927†	-42.8	-0.00085	mg/L	0.001019	-0.00085	mg/L	0.001019	120.43%
Sr 421.552†	1015968.5	1.107	mg/L	0.0012	1.107	mg/L	0.0012	0.11%
Ti 334.903†	48919.6	2.337	mg/L	0.0035	2.337	mg/L	0.0035	0.15%
Tl 190.801†	3525.6	2.034	mg/L	0.0032	2.034	mg/L	0.0032	0.16%
V 292.402†	80165.7	0.6640	mg/L	0.00330	0.6640	mg/L	0.00330	0.50%
Zn 206.200†	2427.7	0.7145	mg/L	0.00451	0.7145	mg/L	0.00451	0.63%

Sequence No.: 41
Sample ID: ~~XC15 CPOST TWC~~ zzzzzz
Dilution: 1.000000X

BA 8/29/13

Autosampler Location: 331
Date Collected: 8/29/2013 12:35:03 PM
Data Type: Original

Nebulizer Parameters: XC15 CPOST TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC15 CPOST TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2743033.5	99.34	%	0.531				0.53%
ScR 361.383	317935.9	99.35	%	0.351				0.35%
Ag 328.068†	113585.2	0.5506	mg/L	0.00197	0.5506	mg/L	0.00197	0.36%
Al 308.215†	65027.6	56.16	mg/L	0.242	56.16	mg/L	0.242	0.43%
As 188.979†	3609.2	2.777	mg/L	0.0091	2.777	mg/L	0.0091	0.33%
B 249.677†	2893.9	0.4480	mg/L	0.00064	0.4480	mg/L	0.00064	0.14%
Ba 233.527†	12457.9	2.586	mg/L	0.0065	2.586	mg/L	0.0065	0.25%
Be 313.042†	263679.6	0.5040	mg/L	0.00632	0.5040	mg/L	0.00632	1.25%
Ca 317.933†	959477.1	105.1	mg/L	0.49	105.1	mg/L	0.49	0.46%
Cd 228.802†	12495.9	0.5515	mg/L	0.00270	0.5515	mg/L	0.00270	0.49%
Co 228.616†	18869.9	0.5561	mg/L	0.00194	0.5561	mg/L	0.00194	0.35%
Cr 267.716†	4306.7	0.6763	mg/L	0.00247	0.6763	mg/L	0.00247	0.36%
Cu 324.752†	181455.4	0.6860	mg/L	0.00100	0.6860	mg/L	0.00100	0.15%
Fe 273.955†	120697.0	92.62	mg/L	0.840	92.62	mg/L	0.840	0.91%
K 766.490†	60590.8	29.50	mg/L	0.024	29.50	mg/L	0.024	0.08%
Mg 279.077†	63022.2	75.36	mg/L	0.234	75.36	mg/L	0.234	0.31%
Mn 257.610†	176237.2	3.926	mg/L	0.0348	3.926	mg/L	0.0348	0.89%
Mo 202.031†	207.7	0.01028	mg/L	0.000657	0.01028	mg/L	0.000657	6.39%
Na 589.592†	783451.9	60.32	mg/L	0.162	60.32	mg/L	0.162	0.27%
Na 330.237†	1671.9	61.38	mg/L	0.275	61.38	mg/L	0.275	0.45%
Ni 231.604†	2173.1	0.6375	mg/L	0.00080	0.6375	mg/L	0.00080	0.13%
Pb 220.353†	16535.1	2.150	mg/L	0.0106	2.150	mg/L	0.0106	0.49%
Sb 206.836†	21.2	0.00273	mg/L	0.002179	0.00273	mg/L	0.002179	79.72%
Se 196.026†	3206.4	2.168	mg/L	0.0139	2.168	mg/L	0.0139	0.64%
Si 288.158†	41927.8	28.73	mg/L	0.077	28.73	mg/L	0.077	0.27%
Sn 189.927†	-50.9	-0.00303	mg/L	0.000374	-0.00303	mg/L	0.000374	12.33%
Sr 421.552†	1001827.7	1.092	mg/L	0.0050	1.092	mg/L	0.0050	0.45%
Ti 334.903†	49270.3	2.354	mg/L	0.0080	2.354	mg/L	0.0080	0.34%
Tl 190.801†	3560.9	2.054	mg/L	0.0101	2.054	mg/L	0.0101	0.49%
V 292.402†	80752.6	0.6690	mg/L	0.00180	0.6690	mg/L	0.00180	0.27%
Zn 206.200†	2405.1	0.7112	mg/L	0.00257	0.7112	mg/L	0.00257	0.36%

Sequence No.: 42
Sample ID: XC15 MB1SPK TWC

Autosampler Location: 332
Date Collected: 8/29/2013 12:39:07 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: XC15 MB1SPK TWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC15 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2793868.6	101.2	%	0.23				0.23%
ScR 361.383	323070.8	100.9	%	0.87				0.87%
Ag 328.068†	114418.6	0.5546	mg/L	0.00173	0.5546	mg/L	0.00173	0.31%
Al 308.215†	2483.5	2.137	mg/L	0.0235	2.137	mg/L	0.0235	1.10%
As 188.979†	2878.3	2.163	mg/L	0.0072	2.163	mg/L	0.0072	0.33%
B 249.677†	24.5	0.00268	mg/L	0.000559	0.00268	mg/L	0.000559	20.85%
Ba 233.527†	10873.7	2.267	mg/L	0.0192	2.267	mg/L	0.0192	0.85%
Be 313.042†	263761.9	0.5042	mg/L	0.00142	0.5042	mg/L	0.00142	0.28%
Ca 317.933†	95424.1	10.46	mg/L	0.048	10.46	mg/L	0.048	0.46%
Cd 228.802†	12015.1	0.5337	mg/L	0.00232	0.5337	mg/L	0.00232	0.43%
Co 228.616†	17949.3	0.5328	mg/L	0.00216	0.5328	mg/L	0.00216	0.41%
Cr 267.716†	3892.7	0.6131	mg/L	0.00572	0.6131	mg/L	0.00572	0.93%
Cu 324.752†	141522.3	0.5323	mg/L	0.00129	0.5323	mg/L	0.00129	0.24%
Fe 273.955†	3065.8	2.350	mg/L	0.0280	2.350	mg/L	0.0280	1.19%
K 766.490†	21609.3	10.52	mg/L	0.078	10.52	mg/L	0.078	0.74%
Mg 279.077†	9194.8	11.00	mg/L	0.125	11.00	mg/L	0.125	1.13%
Mn 257.610†	23599.8	0.5261	mg/L	0.00446	0.5261	mg/L	0.00446	0.85%
Mo 202.031†	20.6	0.00099	mg/L	0.000121	0.00099	mg/L	0.000121	12.21%
Na 589.592†	136885.8	10.54	mg/L	0.059	10.54	mg/L	0.059	0.56%
Na 330.237†	303.5	10.88	mg/L	0.090	10.88	mg/L	0.090	0.82%
Ni 231.604†	2133.0	0.6257	mg/L	0.00766	0.6257	mg/L	0.00766	1.22%
Pb 220.353†	16225.1	2.099	mg/L	0.0064	2.099	mg/L	0.0064	0.30%
Sb 206.836†	11.1	-0.00236	mg/L	0.001531	-0.00236	mg/L	0.001531	64.97%
Se 196.026†	3145.0	2.132	mg/L	0.0102	2.132	mg/L	0.0102	0.48%
Si 288.158†	46.0	0.03398	mg/L	0.006847	0.03398	mg/L	0.006847	20.15%
Sn 189.927†	-25.7	-0.00525	mg/L	0.000336	-0.00525	mg/L	0.000336	6.40%
Sr 421.552†	475481.8	0.5181	mg/L	0.00311	0.5181	mg/L	0.00311	0.60%
Ti 334.903†	41.4	0.00098	mg/L	0.000211	0.00098	mg/L	0.000211	21.54%
Tl 190.801†	3763.9	2.159	mg/L	0.0121	2.159	mg/L	0.0121	0.56%
V 292.402†	64502.3	0.5396	mg/L	0.00197	0.5396	mg/L	0.00197	0.37%
Zn 206.200†	1916.4	0.5641	mg/L	0.00488	0.5641	mg/L	0.00488	0.87%

Sequence No.: 43
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 8/29/2013 12:43:08 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2790142.7	101.0	%	0.34				0.34%
ScR 361.383	319272.3	99.76	%	0.380				0.38%
Ag 328.068†	226904.5	1.100	mg/L	0.0026	1.100	mg/L	0.0026	0.24%
Al 308.215†	2499.2	2.124	mg/L	0.0101	2.124	mg/L	0.0101	0.48%
As 188.979†	2754.3	2.100	mg/L	0.0049	2.100	mg/L	0.0049	0.23%
B 249.677†	6849.8	1.062	mg/L	0.0070	1.062	mg/L	0.0070	0.66%
Ba 233.527†	5355.7	1.116	mg/L	0.0039	1.116	mg/L	0.0039	0.35%
Be 313.042†	540187.5	1.033	mg/L	0.0090	1.033	mg/L	0.0090	0.87%
Ca 317.933†	20016.5	2.193	mg/L	0.0102	2.193	mg/L	0.0102	0.46%
Cd 228.802†	24005.5	1.079	mg/L	0.0040	1.079	mg/L	0.0040	0.37%
Co 228.616†	35954.4	1.066	mg/L	0.0045	1.066	mg/L	0.0045	0.42%
Cr 267.716†	6998.9	1.104	mg/L	0.0048	1.104	mg/L	0.0048	0.43%
Cu 324.752†	285952.8	1.075	mg/L	0.0023	1.075	mg/L	0.0023	0.22%
Fe 273.955†	2779.6	2.127	mg/L	0.0096	2.127	mg/L	0.0096	0.45%
K 766.490†	42945.4	20.91	mg/L	0.039	20.91	mg/L	0.039	0.19%
Mg 279.077†	1764.2	2.118	mg/L	0.0113	2.118	mg/L	0.0113	0.53%
Mn 257.610†	45191.4	1.007	mg/L	0.0063	1.007	mg/L	0.0063	0.62%
Mo 202.031†	18263.0	1.028	mg/L	0.0044	1.028	mg/L	0.0044	0.42%
Na 589.592†	681441.9	52.46	mg/L	0.114	52.46	mg/L	0.114	0.22%
Na 330.237†	1475.8	53.74	mg/L	0.166	53.74	mg/L	0.166	0.31%
Ni 231.604†	3755.6	1.103	mg/L	0.0057	1.103	mg/L	0.0057	0.52%
Pb 220.353†	16158.1	2.091	mg/L	0.0080	2.091	mg/L	0.0080	0.38%
Sb 206.836†	5996.4	2.119	mg/L	0.0059	2.119	mg/L	0.0059	0.28%
Se 196.026†	3053.9	2.070	mg/L	0.0163	2.070	mg/L	0.0163	0.79%
Si 288.158†	3106.5	2.133	mg/L	0.0118	2.133	mg/L	0.0118	0.55%
Sn 189.927†	4194.7	1.014	mg/L	0.0072	1.014	mg/L	0.0072	0.71%
Sr 421.552†	949521.4	1.035	mg/L	0.0026	1.035	mg/L	0.0026	0.25%
Ti 334.903†	21661.0	1.038	mg/L	0.0026	1.038	mg/L	0.0026	0.25%
Tl 190.801†	3769.7	2.158	mg/L	0.0100	2.158	mg/L	0.0100	0.46%
V 292.402†	126056.9	1.054	mg/L	0.0028	1.054	mg/L	0.0028	0.26%
Zn 206.200†	3699.2	1.089	mg/L	0.0056	1.089	mg/L	0.0056	0.51%

Sequence No.: 44
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 8/29/2013 12:47:12 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2827993.9	102.4	%	0.24				0.24%
ScR 361.383	323339.9	101.0	%	0.22				0.21%
Ag 328.068†	-9.4	-0.00005	mg/L	0.000074	-0.00005	mg/L	0.000074	162.98%
Al 308.215†	9.2	0.00794	mg/L	0.004192	0.00794	mg/L	0.004192	52.77%
As 188.979†	-1.2	-0.00089	mg/L	0.003126	-0.00089	mg/L	0.003126	352.04%
B 249.677†	19.4	0.00301	mg/L	0.000422	0.00301	mg/L	0.000422	14.01%
Ba 233.527†	-1.2	-0.00026	mg/L	0.000387	-0.00026	mg/L	0.000387	151.23%
Be 313.042†	89.1	0.00017	mg/L	0.000012	0.00017	mg/L	0.000012	7.10%
Ca 317.933†	3.5	0.00038	mg/L	0.001804	0.00038	mg/L	0.001804	474.69%
Cd 228.802†	9.1	0.00042	mg/L	0.000155	0.00042	mg/L	0.000155	37.03%
Co 228.616†	-1.5	-0.00004	mg/L	0.000054	-0.00004	mg/L	0.000054	119.46%
Cr 267.716†	-6.5	-0.00103	mg/L	0.000471	-0.00103	mg/L	0.000471	45.76%
Cu 324.752†	282.3	0.00106	mg/L	0.000097	0.00106	mg/L	0.000097	9.13%
Fe 273.955†	0.0	0.00000	mg/L	0.000413	0.00000	mg/L	0.000413	>999.9%
K 766.490†	39.5	0.01921	mg/L	0.011436	0.01921	mg/L	0.011436	59.54%
Mg 279.077†	1.7	0.00199	mg/L	0.003766	0.00199	mg/L	0.003766	189.54%
Mn 257.610†	16.0	0.00036	mg/L	0.000029	0.00036	mg/L	0.000029	8.18%
Mo 202.031†	29.2	0.00165	mg/L	0.000130	0.00165	mg/L	0.000130	7.90%
Na 589.592†	231.0	0.01779	mg/L	0.002920	0.01779	mg/L	0.002920	16.42%
Na 330.237†	-11.6	-0.4218	mg/L	0.01423	-0.4218	mg/L	0.01423	3.37%
Ni 231.604†	1.6	0.00046	mg/L	0.001072	0.00046	mg/L	0.001072	233.71%
Pb 220.353†	-2.5	-0.00032	mg/L	0.001039	-0.00032	mg/L	0.001039	320.52%
Sb 206.836†	7.9	0.00280	mg/L	0.001046	0.00280	mg/L	0.001046	37.35%
Se 196.026†	1.6	0.00109	mg/L	0.000102	0.00109	mg/L	0.000102	9.31%
Si 288.158†	15.1	0.01033	mg/L	0.001684	0.01033	mg/L	0.001684	16.31%
Sn 189.927†	3.1	0.00074	mg/L	0.000718	0.00074	mg/L	0.000718	97.29%
Sr 421.552†	98.1	0.00011	mg/L	0.000038	0.00011	mg/L	0.000038	35.35%
Ti 334.903†	1.1	0.00005	mg/L	0.000238	0.00005	mg/L	0.000238	465.78%
Tl 190.801†	3.0	0.00174	mg/L	0.001819	0.00174	mg/L	0.001819	104.51%
V 292.402†	13.7	0.00011	mg/L	0.000068	0.00011	mg/L	0.000068	61.36%
Zn 206.200†	0.2	0.00006	mg/L	0.000261	0.00006	mg/L	0.000261	427.73%

Analysis Begun

Start Time: 8/29/2013 12:55:11 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/29/2013 8:18:33 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0829.sif
Batch ID:
Results Data Set: I2130829
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: STD2

Date Collected: 8/29/2013 12:55:12 PM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2813686.5	6634.73	0.24%	101.9	%
ScR 361.383	326632.1	1532.22	0.47%	102.1	%
Ba 233.527†	52062.0	199.80	0.38%	[10]	mg/L
Cd 228.802†	225154.9	458.37	0.20%	[10]	mg/L
Co 228.616†	352861.4	1460.97	0.41%	[10]	mg/L
Cr 267.716†	66790.6	160.21	0.24%	[10]	mg/L
Cu 324.752†	2725323.8	5020.75	0.18%	[10]	mg/L
Mn 257.610†	456254.1	1339.30	0.29%	[10]	mg/L
V 292.402†	1254785.5	1635.98	0.13%	[10]	mg/L

Sequence No.: 2
Sample ID: STD3

Date Collected: 8/29/2013 12:57:16 PM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	235.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2746946.8	10690.69	0.39%	99.48	%
ScR 361.383	331579.2	22581.68	6.81%	103.6	%
Ag 328.068†	222396.2	1387.37	0.62%	[1.0]	mg/L
As 188.979†	13976.5	40.65	0.29%	[10]	mg/L
B 249.677†	64169.2	6205.09	9.67%	[10]	mg/L
Be 313.042†	2475077.2	319445.84	12.91%	[5.0]	mg/L
Na 589.592†	632495.6	86929.99	13.74%	[50]	mg/L
Ni 231.604†	34798.7	3461.79	9.95%	[10]	mg/L
Pb 220.353†	79410.9	483.34	0.61%	[10]	mg/L
Se 196.026†	15256.6	49.25	0.32%	[10]	mg/L
Sr 421.552†	4385817.1	570914.70	13.02%	[5]	mg/L
Tl 190.801†	18508.7	22.65	0.12%	[10]	mg/L
Zn 206.200†	34550.0	3363.76	9.74%	[10]	mg/L

Analysis Begun

Start Time: 8/29/2013 1:00:10 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 8/29/2013 8:18:33 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0829.sif
Batch ID:
Results Data Set: I2130829
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: CV 6

Autosampler Location: 7
Date Collected: 8/29/2013 1:00:11 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	237.0 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	2763574.8	100.1	%	0.52				0.52%
ScR 361.383	315693.1	98.64	%	0.758				0.77%
Ag 328.068†	230204.4	1.035	mg/L	0.0066	1.035	mg/L	0.0066	0.63%
Al 308.215†	2528.7	2.150	mg/L	0.0085	2.150	mg/L	0.0085	0.40%
As 188.979†	2772.7	2.013	mg/L	0.0172	2.013	mg/L	0.0172	0.85%
B 249.677†	7113.8	1.108	mg/L	0.0099	1.108	mg/L	0.0099	0.89%
Ba 233.527†	5460.5	1.048	mg/L	0.0049	1.048	mg/L	0.0049	0.47%
Be 313.042†	543438.3	1.098	mg/L	0.0016	1.098	mg/L	0.0016	0.15%
Ca 317.933†	20212.0	2.215	mg/L	0.0152	2.215	mg/L	0.0152	0.69%
Cd 228.802†	24117.2	1.061	mg/L	0.0085	1.061	mg/L	0.0085	0.80%
Co 228.616†	36266.6	1.026	mg/L	0.0105	1.026	mg/L	0.0105	1.03%
Cr 267.716†	7084.6	1.060	mg/L	0.0057	1.060	mg/L	0.0057	0.54%
Cu 324.752†	288671.1	1.059	mg/L	0.0046	1.059	mg/L	0.0046	0.44%
Fe 273.955†	2794.2	2.138	mg/L	0.0132	2.138	mg/L	0.0132	0.62%
K 766.490†	43505.7	21.18	mg/L	0.029	21.18	mg/L	0.029	0.14%
Mg 279.077†	1775.9	2.132	mg/L	0.0160	2.132	mg/L	0.0160	0.75%
Mn 257.610†	45657.9	1.001	mg/L	0.0032	1.001	mg/L	0.0032	0.32%
Mo 202.031†	18405.1	1.036	mg/L	0.0085	1.036	mg/L	0.0085	0.82%
Na 589.592†	693823.9	54.85	mg/L	0.294	54.85	mg/L	0.294	0.54%
Na 330.237†	1499.0	54.59	mg/L	0.454	54.59	mg/L	0.454	0.83%
Ni 231.604†	3808.1	1.095	mg/L	0.0064	1.095	mg/L	0.0064	0.58%
Pb 220.353†	16259.2	2.048	mg/L	0.0158	2.048	mg/L	0.0158	0.77%
Sb 206.836†	6030.7	2.132	mg/L	0.0207	2.132	mg/L	0.0207	0.97%
Se 196.026†	3074.0	2.014	mg/L	0.0167	2.014	mg/L	0.0167	0.83%
Si 288.158†	3128.9	2.148	mg/L	0.0127	2.148	mg/L	0.0127	0.59%
Sn 189.927†	4206.9	1.017	mg/L	0.0085	1.017	mg/L	0.0085	0.84%
Sr 421.552†	963708.3	1.099	mg/L	0.0041	1.099	mg/L	0.0041	0.37%
Ti 334.903†	21954.4	1.052	mg/L	0.0045	1.052	mg/L	0.0045	0.43%
Tl 190.801†	3796.0	2.043	mg/L	0.0212	2.043	mg/L	0.0212	1.04%
V 292.402†	127410.8	1.020	mg/L	0.0060	1.020	mg/L	0.0060	0.59%
Zn 206.200†	3728.3	1.079	mg/L	0.0044	1.079	mg/L	0.0044	0.41%

XB89:01646

Sequence No.: 2
Sample ID: CB 6

Autosampler Location: 1
Date Collected: 8/29/2013 1:04:15 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2795632.8	101.2	%	0.34				0.33%
ScR 361.383	323175.2	101.0	%	0.22				0.22%
Ag 328.068†	27.4	0.00012	mg/L	0.000086	0.00012	mg/L	0.000086	69.91%
Al 308.215†	3.5	0.00302	mg/L	0.001396	0.00302	mg/L	0.001396	46.21%
As 188.979†	1.8	0.00132	mg/L	0.001037	0.00132	mg/L	0.001037	78.84%
B 249.677†	63.0	0.00982	mg/L	0.001373	0.00982	mg/L	0.001373	13.99%
Ba 233.527†	1.1	0.00021	mg/L	0.000231	0.00021	mg/L	0.000231	110.64%
Be 313.042†	71.8	0.00014	mg/L	0.000064	0.00014	mg/L	0.000064	44.07%
Ca 317.933†	-1.5	-0.00017	mg/L	0.000597	-0.00017	mg/L	0.000597	361.76%
Cd 228.802†	6.9	0.00030	mg/L	0.000113	0.00030	mg/L	0.000113	37.51%
Co 228.616†	-3.0	-0.00008	mg/L	0.000024	-0.00008	mg/L	0.000024	29.07%
Cr 267.716†	-4.4	-0.00066	mg/L	0.000260	-0.00066	mg/L	0.000260	39.08%
Cu 324.752†	365.4	0.00134	mg/L	0.000119	0.00134	mg/L	0.000119	8.87%
Fe 273.955†	-2.1	-0.00162	mg/L	0.001678	-0.00162	mg/L	0.001678	103.52%
K 766.490†	39.2	0.01909	mg/L	0.011601	0.01909	mg/L	0.011601	60.77%
Mg 279.077†	-0.5	-0.00055	mg/L	0.002660	-0.00055	mg/L	0.002660	483.44%
Mn 257.610†	15.2	0.00033	mg/L	0.000086	0.00033	mg/L	0.000086	25.77%
Mo 202.031†	26.9	0.00151	mg/L	0.000322	0.00151	mg/L	0.000322	21.25%
Na 589.592†	159.9	0.01264	mg/L	0.002580	0.01264	mg/L	0.002580	20.42%
Na 330.237†	0.9	0.03142	mg/L	0.257467	0.03142	mg/L	0.257467	819.41%
Ni 231.604†	-1.8	-0.00052	mg/L	0.000917	-0.00052	mg/L	0.000917	175.45%
Pb 220.353†	-1.1	-0.00013	mg/L	0.000501	-0.00013	mg/L	0.000501	372.36%
Sb 206.836†	4.6	0.00165	mg/L	0.002899	0.00165	mg/L	0.002899	175.63%
Se 196.026†	5.4	0.00356	mg/L	0.004576	0.00356	mg/L	0.004576	128.68%
Si 288.158†	8.5	0.00580	mg/L	0.002690	0.00580	mg/L	0.002690	46.35%
Sn 189.927†	2.3	0.00056	mg/L	0.001081	0.00056	mg/L	0.001081	191.81%
Sr 421.552†	74.1	0.00008	mg/L	0.000037	0.00008	mg/L	0.000037	43.63%
Ti 334.903†	1.8	0.00009	mg/L	0.000087	0.00009	mg/L	0.000087	101.37%
Tl 190.801†	1.5	0.00081	mg/L	0.001214	0.00081	mg/L	0.001214	149.93%
V 292.402†	21.5	0.00017	mg/L	0.000172	0.00017	mg/L	0.000172	101.30%
Zn 206.200†	-0.1	-0.00004	mg/L	0.000807	-0.00004	mg/L	0.000807	>999.9%

Sequence No.: 3
Sample ID: XB89 MB1 SWC

Autosampler Location: 333
Date Collected: 8/29/2013 1:08:30 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 MB1 SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XB89 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2770512.7	100.3	%	0.47				0.47%
ScR 361.383	319468.2	99.82	%	0.335				0.34%
Ag 328.068†	21.4	0.00010	mg/L	0.000062	0.00019	mg/L	0.000124	64.50%
Al 308.215†	5.4	0.00468	mg/L	0.003013	0.00937	mg/L	0.006027	64.33%
As 188.979†	-2.0	-0.00140	mg/L	0.002018	-0.00281	mg/L	0.004036	143.72%
B 249.677†	32.2	0.00502	mg/L	0.001205	0.01004	mg/L	0.002410	24.01%
Ba 233.527†	-1.2	-0.00024	mg/L	0.000629	-0.00047	mg/L	0.001257	267.34%
Be 313.042†	48.4	0.00010	mg/L	0.000011	0.00020	mg/L	0.000023	11.52%
Ca 317.933†	63.1	0.00691	mg/L	0.000323	0.01383	mg/L	0.000645	4.67%
Cd 228.802†	4.2	0.00019	mg/L	0.000095	0.00039	mg/L	0.000190	49.20%
Co 228.616†	-6.8	-0.00019	mg/L	0.000166	-0.00039	mg/L	0.000332	85.92%
Cr 267.716†	-6.8	-0.00102	mg/L	0.000500	-0.00205	mg/L	0.000999	48.82%
Cu 324.752†	334.5	0.00123	mg/L	0.000077	0.00246	mg/L	0.000154	6.26%
Fe 273.955†	4.3	0.00327	mg/L	0.001434	0.00653	mg/L	0.002867	43.89%
K 766.490†	26.5	0.01291	mg/L	0.010325	0.02581	mg/L	0.020649	80.00%
Mg 279.077†	-0.3	-0.00041	mg/L	0.005208	-0.00082	mg/L	0.010417	>999.9%
Mn 257.610†	14.4	0.00032	mg/L	0.000063	0.00063	mg/L	0.000126	19.85%
Mo 202.031†	-4.0	-0.00022	mg/L	0.000166	-0.00045	mg/L	0.000331	74.42%
Na 589.592†	112.3	0.00887	mg/L	0.005176	0.01775	mg/L	0.010351	58.32%
Na 330.237†	4.0	0.1426	mg/L	0.34735	0.2852	mg/L	0.69470	243.57%
Ni 231.604†	1.3	0.00038	mg/L	0.000416	0.00076	mg/L	0.000833	110.17%
Pb 220.353†	-0.9	-0.00012	mg/L	0.001143	-0.00024	mg/L	0.002286	963.32%
Sb 206.836†	-2.6	-0.00089	mg/L	0.000138	-0.00179	mg/L	0.000277	15.46%
Se 196.026†	1.7	0.00109	mg/L	0.003768	0.00219	mg/L	0.007537	344.58%
Si 288.158†	10.2	0.00698	mg/L	0.001281	0.01397	mg/L	0.002563	18.35%
Sn 189.927†	-1.9	-0.00046	mg/L	0.000208	-0.00092	mg/L	0.000415	44.94%
Sr 421.552†	20.6	0.00002	mg/L	0.000026	0.00005	mg/L	0.000053	112.07%
Ti 334.903†	5.8	0.00028	mg/L	0.000721	0.00055	mg/L	0.001443	260.53%
Tl 190.801†	-0.7	-0.00037	mg/L	0.001154	-0.00075	mg/L	0.002309	308.57%
V 292.402†	12.6	0.00010	mg/L	0.000130	0.00019	mg/L	0.000259	134.93%
Zn 206.200†	22.8	0.00661	mg/L	0.000220	0.01322	mg/L	0.000440	3.33%

Sequence No:
Sample ID:

Autosampler Location: 334
Date Collected: 8/29/2013 1:12:46 PM
Data Type: Original

Parameters: XB89 ADUP SWC

Back Pressure	Flow
236.0 kPa	0.75 L/min

ADUP SWC

Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
2695446.7	97.62	%	0.190				0.19%
320043.2	100.0	%	0.30				0.30%
-460.8	-0.00201	mg/L	0.000032	-0.00401	mg/L	0.000063	1.58%
84803.7	73.25	mg/L	0.335	146.5	mg/L	0.67	0.46%
-34.6	0.04918	mg/L	0.002071	0.09836	mg/L	0.004142	4.21%
939.4	0.1463	mg/L	0.00179	0.2926	mg/L	0.00358	1.22%
4230.8	0.7993	mg/L	0.00193	1.599	mg/L	0.0039	0.24%
774.0	0.00148	mg/L	0.000021	0.00295	mg/L	0.000043	1.44%
2315893.3	253.8	mg/L	0.77	507.6	mg/L	1.53	0.30%
71.9	0.00229	mg/L	0.000130	0.00457	mg/L	0.000260	5.68%
1820.7	0.04587	mg/L	0.000149	0.09174	mg/L	0.000298	0.33%
2088.5	0.3110	mg/L	0.00152	0.6221	mg/L	0.00303	0.49%
64329.1	0.2407	mg/L	0.00035	0.4813	mg/L	0.00070	0.15%
151749.6	116.5	mg/L	0.47	232.9	mg/L	0.93	0.40%
23648.5	11.51	mg/L	0.063	23.03	mg/L	0.126	0.55%
46541.6	55.60	mg/L	0.293	111.2	mg/L	0.59	0.53%
57851.0	1.266	mg/L	0.0050	2.533	mg/L	0.0101	0.40%
236.4	0.00996	mg/L	0.000052	0.01992	mg/L	0.000103	0.52%
931932.2	73.67	mg/L	0.289	147.3	mg/L	0.58	0.39%
1956.4	72.01	mg/L	0.290	144.0	mg/L	0.58	0.40%
1166.0	0.3351	mg/L	0.00106	0.6702	mg/L	0.00213	0.32%
663.7	0.09877	mg/L	0.000302	0.1975	mg/L	0.00060	0.31%
21.4	0.00679	mg/L	0.003240	0.01358	mg/L	0.006480	47.73%
41.1	0.01295	mg/L	0.002154	0.02589	mg/L	0.004309	16.64%
5648.5	3.870	mg/L	0.0222	7.740	mg/L	0.0445	0.57%
-58.3	0.00755	mg/L	0.001517	0.01510	mg/L	0.003035	20.10%
2443006.7	2.785	mg/L	0.0104	5.570	mg/L	0.0208	0.37%
67813.0	3.231	mg/L	0.0135	6.462	mg/L	0.0271	0.42%
4.3	0.01773	mg/L	0.004080	0.03546	mg/L	0.008160	23.01%
28267.0	0.2179	mg/L	0.00063	0.4358	mg/L	0.00127	0.29%
2301.8	0.6624	mg/L	0.00495	1.325	mg/L	0.0099	0.75%

Sequence No.: 5
Sample ID: XB89 A SWC

Autosampler Location: 335
Date Collected: 8/29/2013 1:17:04 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 A SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XB89 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2687749.5	97.34	%	0.352				0.36%
ScR 361.383	321298.6	100.4	%	0.43				0.42%
Ag 328.068†	-228.3	-0.00096	mg/L	0.000228	-0.00192	mg/L	0.000456	23.80%
Al 308.215†	90141.5	77.86	mg/L	0.371	155.7	mg/L	0.74	0.48%
As 188.979†	-31.6	0.05023	mg/L	0.002192	0.1005	mg/L	0.00438	4.36%
B 249.677†	948.6	0.1477	mg/L	0.00050	0.2955	mg/L	0.00101	0.34%
Ba 233.527†	4538.3	0.8585	mg/L	0.00507	1.717	mg/L	0.0101	0.59%
Be 313.042†	812.8	0.00155	mg/L	0.000041	0.00310	mg/L	0.000083	2.67%
Ca 317.933†	2660423.3	291.5	mg/L	0.97	583.1	mg/L	1.95	0.33%
Cd 228.802†	80.5	0.00260	mg/L	0.000454	0.00519	mg/L	0.000909	17.49%
Co 228.616†	1850.3	0.04653	mg/L	0.000209	0.09307	mg/L	0.000417	0.45%
Cr 267.716†	1287.2	0.1907	mg/L	0.00111	0.3814	mg/L	0.00222	0.58%
Cu 324.752†	71923.4	0.2685	mg/L	0.00137	0.5371	mg/L	0.00273	0.51%
Fe 273.955†	153126.1	117.5	mg/L	0.44	235.0	mg/L	0.88	0.37%
K 766.490†	24417.8	11.89	mg/L	0.027	23.78	mg/L	0.055	0.23%
Mg 279.077†	47599.5	56.86	mg/L	0.220	113.7	mg/L	0.44	0.39%
Mn 257.610†	59220.3	1.296	mg/L	0.0058	2.593	mg/L	0.0115	0.44%
Mo 202.031†	232.4	0.00924	mg/L	0.000264	0.01849	mg/L	0.000528	2.86%
Na 589.592†	914667.8	72.31	mg/L	0.268	144.6	mg/L	0.54	0.37%
Na 330.237†	1935.0	71.25	mg/L	0.134	142.5	mg/L	0.27	0.19%
Ni 231.604†	995.5	0.2861	mg/L	0.00095	0.5722	mg/L	0.00190	0.33%
Pb 220.353†	782.0	0.1147	mg/L	0.00028	0.2294	mg/L	0.00056	0.25%
Sb 206.836†	11.7	0.00506	mg/L	0.001313	0.01012	mg/L	0.002625	25.95%
Se 196.026†	40.8	0.01069	mg/L	0.006642	0.02138	mg/L	0.013284	62.13%
Si 288.158†	5136.3	3.519	mg/L	0.0151	7.038	mg/L	0.0302	0.43%
Sn 189.927†	-61.9	0.00982	mg/L	0.001146	0.01965	mg/L	0.002291	11.66%
Sr 421.552†	2772750.4	3.161	mg/L	0.0110	6.322	mg/L	0.0220	0.35%
Ti 334.903†	69901.7	3.328	mg/L	0.0141	6.656	mg/L	0.0283	0.42%
Tl 190.801†	1.1	0.01615	mg/L	0.002692	0.03231	mg/L	0.005384	16.66%
V 292.402†	29485.2	0.2270	mg/L	0.00145	0.4540	mg/L	0.00289	0.64%
Zn 206.200†	2414.2	0.6942	mg/L	0.00233	1.388	mg/L	0.0047	0.34%

Sequence No.: 6
Sample ID: XB89 ASPK SWC

Autosampler Location: 336
Date Collected: 8/29/2013 1:21:22 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 ASPK SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XB89 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2698072.3	97.71	%	0.384				0.39%
ScR 361.383	313057.5	97.82	%	0.242				0.25%
Ag 328.068†	112259.1	0.5050	mg/L	0.00196	1.010	mg/L	0.0039	0.39%
Al 308.215†	95459.6	82.44	mg/L	0.038	164.9	mg/L	0.08	0.05%
As 188.979†	2792.4	2.078	mg/L	0.0075	4.155	mg/L	0.0151	0.36%
B 249.677†	1359.9	0.2108	mg/L	0.00154	0.4217	mg/L	0.00308	0.73%
Ba 233.527†	15417.8	2.946	mg/L	0.0046	5.893	mg/L	0.0092	0.16%
Be 313.042†	256416.6	0.5178	mg/L	0.00231	1.036	mg/L	0.0046	0.45%
Ca 317.933†	2995032.5	328.2	mg/L	0.50	656.4	mg/L	1.00	0.15%
Cd 228.802†	12110.5	0.5260	mg/L	0.00141	1.052	mg/L	0.0028	0.27%
Co 228.616†	18705.8	0.5233	mg/L	0.00181	1.047	mg/L	0.0036	0.35%
Cr 267.716†	4716.6	0.7019	mg/L	0.00527	1.404	mg/L	0.0105	0.75%
Cu 324.752†	229913.4	0.8489	mg/L	0.00595	1.698	mg/L	0.0119	0.70%
Fe 273.955†	174100.9	133.6	mg/L	0.35	267.2	mg/L	0.69	0.26%
K 766.490†	46384.1	22.58	mg/L	0.062	45.16	mg/L	0.124	0.27%
Mg 279.077†	73114.4	87.39	mg/L	0.169	174.8	mg/L	0.34	0.19%
Mn 257.610†	85593.2	1.874	mg/L	0.0033	3.749	mg/L	0.0065	0.17%
Mo 202.031†	345.5	0.01511	mg/L	0.000242	0.03022	mg/L	0.000485	1.60%
Na 589.592†	1079996.6	85.38	mg/L	0.249	170.8	mg/L	0.50	0.29%
Na 330.237†	2236.9	82.19	mg/L	0.297	164.4	mg/L	0.59	0.36%
Ni 231.604†	2775.7	0.7969	mg/L	0.00643	1.594	mg/L	0.0129	0.81%
Pb 220.353†	16827.4	2.136	mg/L	0.0061	4.272	mg/L	0.0123	0.29%
Sb 206.836†	43.5	0.01167	mg/L	0.002277	0.02333	mg/L	0.004555	19.52%
Se 196.026†	3058.7	1.986	mg/L	0.0142	3.973	mg/L	0.0284	0.71%
Si 288.158†	3991.4	2.737	mg/L	0.0135	5.474	mg/L	0.0271	0.49%
Sn 189.927†	1.6	0.02834	mg/L	0.001111	0.05667	mg/L	0.002221	3.92%
Sr 421.552†	3165809.6	3.609	mg/L	0.0054	7.218	mg/L	0.0108	0.15%
Ti 334.903†	77422.1	3.686	mg/L	0.0023	7.371	mg/L	0.0045	0.06%
Tl 190.801†	3324.4	1.809	mg/L	0.0005	3.618	mg/L	0.0010	0.03%
V 292.402†	89736.7	0.7081	mg/L	0.00324	1.416	mg/L	0.0065	0.46%
Zn 206.200†	4253.3	1.226	mg/L	0.0051	2.452	mg/L	0.0102	0.41%

Sequence No.: 7
Sample ID: ~~XB89 APOST SWC~~ zzzzzz
BA 8/29/13
Dilution: 2.000000X

Autosampler Location: 337
Date Collected: 8/29/2013 1:24:44 PM
Data Type: Original

Nebulizer Parameters: XB89 APOST SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 APOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2665157.7	96.52	%	0.181				0.19%
ScR 361.383	309801.5	96.80	%	0.117				0.12%
Ag 328.068†	117855.9	0.5302	mg/L	0.00076	1.060	mg/L	0.0015	0.14%
Al 308.215†	94609.8	81.71	mg/L	0.515	163.4	mg/L	1.03	0.63%
As 188.979†	2940.0	2.176	mg/L	0.0021	4.351	mg/L	0.0041	0.09%
B 249.677†	977.6	0.1512	mg/L	0.00142	0.3024	mg/L	0.00285	0.94%
Ba 233.527†	15788.8	3.019	mg/L	0.0114	6.038	mg/L	0.0229	0.38%
Be 313.042†	270036.5	0.5453	mg/L	0.00475	1.091	mg/L	0.0095	0.87%
Ca 317.933†	2859335.0	313.3	mg/L	1.40	626.7	mg/L	2.80	0.45%
Cd 228.802†	12785.4	0.5556	mg/L	0.00106	1.111	mg/L	0.0021	0.19%
Co 228.616†	19602.6	0.5493	mg/L	0.00032	1.099	mg/L	0.0006	0.06%
Cr 267.716†	4908.6	0.7314	mg/L	0.00387	1.463	mg/L	0.0077	0.53%
Cu 324.752†	223200.2	0.8238	mg/L	0.00351	1.648	mg/L	0.0070	0.43%
Fe 273.955†	157221.8	120.7	mg/L	0.89	241.3	mg/L	1.77	0.73%
K 766.490†	48541.0	23.63	mg/L	0.054	47.26	mg/L	0.108	0.23%
Mg 279.077†	60672.0	72.51	mg/L	0.239	145.0	mg/L	0.48	0.33%
Mn 257.610†	83698.0	1.833	mg/L	0.0117	3.666	mg/L	0.0235	0.64%
Mo 202.031†	231.8	0.00890	mg/L	0.000349	0.01780	mg/L	0.000698	3.92%
Na 589.592†	1096173.6	86.65	mg/L	0.356	173.3	mg/L	0.71	0.41%
Na 330.237†	2284.4	83.83	mg/L	0.333	167.7	mg/L	0.67	0.40%
Ni 231.604†	2848.0	0.8176	mg/L	0.00266	1.635	mg/L	0.0053	0.33%
Pb 220.353†	17006.2	2.159	mg/L	0.0023	4.318	mg/L	0.0045	0.11%
Sb 206.836†	26.0	0.00488	mg/L	0.003908	0.00977	mg/L	0.007815	80.01%
Se 196.026†	3297.5	2.144	mg/L	0.0075	4.287	mg/L	0.0149	0.35%
Si 288.158†	5349.3	3.667	mg/L	0.0162	7.335	mg/L	0.0323	0.44%
Sn 189.927†	-60.8	0.01197	mg/L	0.001855	0.02393	mg/L	0.003710	15.50%
Sr 421.552†	3362335.3	3.833	mg/L	0.0173	7.666	mg/L	0.0347	0.45%
Ti 334.903†	71290.0	3.393	mg/L	0.0184	6.785	mg/L	0.0367	0.54%
Tl 190.801†	3526.3	1.916	mg/L	0.0015	3.832	mg/L	0.0030	0.08%
V 292.402†	94954.6	0.7508	mg/L	0.00107	1.502	mg/L	0.0021	0.14%
Zn 206.200†	4309.1	1.242	mg/L	0.0050	2.485	mg/L	0.0100	0.40%

Sequence No.: 8
Sample ID: XB89 B SWC

Autosampler Location: 338
Date Collected: 8/29/2013 1:28:06 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 B SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2726623.4	98.74	%	0.116				0.12%
ScR 361.383	318254.3	99.44	%	0.563				0.57%
Ag 328.068†	5.2	0.00008	mg/L	0.000161	0.00017	mg/L	0.000322	191.15%
Al 308.215†	80082.9	69.17	mg/L	0.191	138.3	mg/L	0.38	0.28%
As 188.979†	-32.3	0.05494	mg/L	0.001850	0.1099	mg/L	0.00370	3.37%
B 249.677†	1373.9	0.2140	mg/L	0.00112	0.4280	mg/L	0.00224	0.52%
Ba 233.527†	2048.9	0.3763	mg/L	0.00267	0.7525	mg/L	0.00534	0.71%
Be 313.042†	675.9	0.00128	mg/L	0.000025	0.00257	mg/L	0.000049	1.92%
Ca 317.933†	1651417.7	181.0	mg/L	1.30	361.9	mg/L	2.61	0.72%
Cd 228.802†	80.8	0.00248	mg/L	0.000039	0.00495	mg/L	0.000077	1.56%
Co 228.616†	2043.8	0.05246	mg/L	0.000273	0.1049	mg/L	0.00055	0.52%
Cr 267.716†	1196.0	0.1775	mg/L	0.00003	0.3551	mg/L	0.00006	0.02%
Cu 324.752†	79957.2	0.2992	mg/L	0.00160	0.5984	mg/L	0.00321	0.54%
Fe 273.955†	187623.0	144.0	mg/L	1.81	288.0	mg/L	3.61	1.26%
K 766.490†	22339.0	10.88	mg/L	0.077	21.75	mg/L	0.153	0.70%
Mg 279.077†	64544.5	77.14	mg/L	0.381	154.3	mg/L	0.76	0.49%
Mn 257.610†	62777.5	1.375	mg/L	0.0146	2.749	mg/L	0.0292	1.06%
Mo 202.031†	262.5	0.01240	mg/L	0.000798	0.02479	mg/L	0.001596	6.44%
Na 589.592†	844392.7	66.75	mg/L	0.321	133.5	mg/L	0.64	0.48%
Na 330.237†	1789.2	65.75	mg/L	0.451	131.5	mg/L	0.90	0.69%
Ni 231.604†	1602.1	0.4604	mg/L	0.00263	0.9208	mg/L	0.00527	0.57%
Pb 220.353†	1158.6	0.1581	mg/L	0.00025	0.3161	mg/L	0.00051	0.16%
Sb 206.836†	19.6	0.00794	mg/L	0.001986	0.01587	mg/L	0.003973	25.02%
Se 196.026†	35.7	0.01339	mg/L	0.004357	0.02677	mg/L	0.008714	32.55%
Si 288.158†	3282.0	2.249	mg/L	0.0166	4.497	mg/L	0.0331	0.74%
Sn 189.927†	26.4	0.02196	mg/L	0.001077	0.04393	mg/L	0.002154	4.90%
Sr 421.552†	1264022.3	1.441	mg/L	0.0070	2.882	mg/L	0.0140	0.49%
Ti 334.903†	64739.8	3.090	mg/L	0.0164	6.180	mg/L	0.0327	0.53%
Tl 190.801†	-11.0	0.01345	mg/L	0.004521	0.02690	mg/L	0.009041	33.61%
V 292.402†	26356.5	0.2006	mg/L	0.00069	0.4012	mg/L	0.00138	0.34%
Zn 206.200†	3756.2	1.084	mg/L	0.0054	2.169	mg/L	0.0109	0.50%

Sequence No.: 9
Sample ID: XB89 C SWC

Autosampler Location: 339
Date Collected: 8/29/2013 1:32:09 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 C SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2710017.3	98.14	%	0.388				0.40%
ScR 361.383	316344.5	98.85	%	0.624				0.63%
Ag 328.068†	-323.3	-0.00140	mg/L	0.000182	-0.00279	mg/L	0.000364	13.04%
Al 308.215†	74241.5	64.12	mg/L	0.453	128.2	mg/L	0.91	0.71%
As 188.979†	-14.8	0.05376	mg/L	0.002579	0.1075	mg/L	0.00516	4.80%
B 249.677†	850.0	0.1324	mg/L	0.00119	0.2647	mg/L	0.00237	0.90%
Ba 233.527†	1903.2	0.3515	mg/L	0.00088	0.7030	mg/L	0.00176	0.25%
Be 313.042†	628.2	0.00119	mg/L	0.000019	0.00239	mg/L	0.000038	1.59%
Ca 317.933†	1745181.8	191.2	mg/L	1.66	382.5	mg/L	3.32	0.87%
Cd 228.802†	64.4	0.00187	mg/L	0.000045	0.00374	mg/L	0.000090	2.40%
Co 228.616†	1821.8	0.04686	mg/L	0.000316	0.09372	mg/L	0.000631	0.67%
Cr 267.716†	1102.5	0.1635	mg/L	0.00090	0.3269	mg/L	0.00180	0.55%
Cu 324.752†	61754.8	0.2314	mg/L	0.00104	0.4628	mg/L	0.00208	0.45%
Fe 273.955†	155494.4	119.3	mg/L	0.75	238.7	mg/L	1.51	0.63%
K 766.490†	20575.4	10.02	mg/L	0.088	20.03	mg/L	0.176	0.88%
Mg 279.077†	53070.4	63.42	mg/L	0.482	126.8	mg/L	0.96	0.76%
Mn 257.610†	60396.9	1.323	mg/L	0.0078	2.645	mg/L	0.0157	0.59%
Mo 202.031†	220.1	0.00988	mg/L	0.000240	0.01975	mg/L	0.000480	2.43%
Na 589.592†	847565.4	67.00	mg/L	0.430	134.0	mg/L	0.86	0.64%
Na 330.237†	1795.3	65.85	mg/L	0.465	131.7	mg/L	0.93	0.71%
Ni 231.604†	1251.9	0.3598	mg/L	0.00356	0.7195	mg/L	0.00712	0.99%
Pb 220.353†	1292.9	0.1749	mg/L	0.00071	0.3498	mg/L	0.00143	0.41%
Sb 206.836†	15.9	0.00636	mg/L	0.004365	0.01273	mg/L	0.008730	68.58%
Se 196.026†	38.7	0.01483	mg/L	0.001196	0.02965	mg/L	0.002392	8.07%
Si 288.158†	5567.7	3.815	mg/L	0.0237	7.629	mg/L	0.0474	0.62%
Sn 189.927†	-10.6	0.01379	mg/L	0.001448	0.02757	mg/L	0.002896	10.50%
Sr 421.552†	1462641.9	1.667	mg/L	0.0120	3.335	mg/L	0.0241	0.72%
Ti 334.903†	56612.6	2.699	mg/L	0.0179	5.398	mg/L	0.0357	0.66%
Tl 190.801†	-3.1	0.01430	mg/L	0.001485	0.02861	mg/L	0.002971	10.38%
V 292.402†	24904.1	0.1907	mg/L	0.00058	0.3813	mg/L	0.00117	0.31%
Zn 206.200†	3825.0	1.104	mg/L	0.0092	2.209	mg/L	0.0184	0.83%

Sequence No.: 10
Sample ID: XB89 D SWC

Autosampler Location: 340
Date Collected: 8/29/2013 1:36:12 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 D SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2747963.3	99.52	%	0.395				0.40%
ScR 361.383	320085.6	100.0	%	0.98				0.98%
Ag 328.068†	-270.8	-0.00112	mg/L	0.000102	-0.00224	mg/L	0.000204	9.09%
Al 308.215†	126074.3	108.9	mg/L	0.97	217.8	mg/L	1.94	0.89%
As 188.979†	-188.5	0.04188	mg/L	0.002982	0.08377	mg/L	0.005964	7.12%
B 249.677†	2339.0	0.3644	mg/L	0.00384	0.7288	mg/L	0.00769	1.05%
Ba 233.527†	8061.6	1.528	mg/L	0.0150	3.056	mg/L	0.0299	0.98%
Be 313.042†	1048.6	0.00197	mg/L	0.000037	0.00395	mg/L	0.000074	1.86%
Ca 317.933†	1481242.4	162.3	mg/L	1.02	324.6	mg/L	2.05	0.63%
Cd 228.802†	122.7	0.00450	mg/L	0.000111	0.00900	mg/L	0.000221	2.46%
Co 228.616†	2297.4	0.05439	mg/L	0.000299	0.1088	mg/L	0.00060	0.55%
Cr 267.716†	1896.0	0.2819	mg/L	0.00225	0.5637	mg/L	0.00450	0.80%
Cu 324.752†	64795.1	0.2440	mg/L	0.00206	0.4880	mg/L	0.00412	0.84%
Fe 273.955†	216802.7	166.4	mg/L	2.04	332.8	mg/L	4.08	1.23%
K 766.490†	32754.9	15.95	mg/L	0.127	31.89	mg/L	0.253	0.79%
Mg 279.077†	80857.9	96.65	mg/L	0.873	193.3	mg/L	1.75	0.90%
Mn 257.610†	98691.2	2.162	mg/L	0.0223	4.323	mg/L	0.0446	1.03%
Mo 202.031†	584.7	0.03077	mg/L	0.000540	0.06155	mg/L	0.001080	1.75%
Na 589.592†	836881.3	66.16	mg/L	0.510	132.3	mg/L	1.02	0.77%
Na 330.237†	1737.2	64.90	mg/L	0.989	129.8	mg/L	1.98	1.52%
Ni 231.604†	920.5	0.2645	mg/L	0.00110	0.5291	mg/L	0.00219	0.41%
Pb 220.353†	1139.3	0.1663	mg/L	0.00132	0.3325	mg/L	0.00264	0.79%
Sb 206.836†	16.2	0.00851	mg/L	0.001608	0.01701	mg/L	0.003216	18.91%
Se 196.026†	45.7	0.02086	mg/L	0.003515	0.04173	mg/L	0.007030	16.85%
Si 288.158†	3320.6	2.275	mg/L	0.0163	4.550	mg/L	0.0325	0.72%
Sn 189.927†	128.7	0.04574	mg/L	0.000926	0.09148	mg/L	0.001852	2.02%
Sr 421.552†	1874984.5	2.138	mg/L	0.0170	4.275	mg/L	0.0340	0.80%
Ti 334.903†	127415.1	6.098	mg/L	0.0545	12.20	mg/L	0.109	0.89%
Tl 190.801†	-13.4	0.01480	mg/L	0.003276	0.02960	mg/L	0.006551	22.13%
V 292.402†	42456.1	0.3264	mg/L	0.00356	0.6529	mg/L	0.00712	1.09%
Zn 206.200†	1695.1	0.4881	mg/L	0.00600	0.9762	mg/L	0.01200	1.23%

Sequence No.: 11
Sample ID: XB89 E SWC

Del

Dilution: 2.000000X

Autosampler Location: 341
Date Collected: 8/29/2013 1:40:15 PM
Data Type: Original

Nebulizer Parameters: XB89 E SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 E SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2819296.0	102.1	%	0.18				0.17%
ScR 361.383	324257.3	101.3	%	0.44				0.44%
Ag 328.068†	145.1	0.00075	mg/L	0.000049	0.00150	mg/L	0.000098	6.54%
Al 308.215†	150774.8	130.2	mg/L	0.36	260.5	mg/L	0.72	0.28%
As 188.979†	-112.6	0.05468	mg/L	0.005966	0.1094	mg/L	0.01193	10.91%
B 249.677†	1100.7	0.1714	mg/L	0.00060	0.3428	mg/L	0.00121	0.35%
Ba 233.527†	28533.7	5.463	mg/L	0.0387	10.93	mg/L	0.077	0.71%
Be 313.042†	1829.6	0.00357	mg/L	0.000009	0.00714	mg/L	0.000018	0.25%
Ca 317.933†	884868.6	96.97	mg/L	0.204	193.9	mg/L	0.41	0.21%
Cd 228.802†	140.2	0.00532	mg/L	0.000249	0.01065	mg/L	0.000498	4.68%
Co 228.616†	2495.2	0.06228	mg/L	0.000234	0.1246	mg/L	0.00047	0.38%
Cr 267.716†	1628.8	0.2440	mg/L	0.00095	0.4879	mg/L	0.00189	0.39%
Cu 324.752†	106851.1	0.3976	mg/L	0.00150	0.7952	mg/L	0.00300	0.38%
Fe 273.955†	184805.7	141.8	mg/L	0.69	283.7	mg/L	1.38	0.49%
K 766.490†	30587.8	14.89	mg/L	0.039	29.78	mg/L	0.077	0.26%
Mg 279.077†	54081.5	64.63	mg/L	0.176	129.3	mg/L	0.35	0.27%
Mn 257.610†	79539.9	1.742	mg/L	0.0059	3.484	mg/L	0.0118	0.34%
Mo 202.031†	261.0	0.01341	mg/L	0.000261	0.02682	mg/L	0.000521	1.94%
Na 589.592†	825846.9	65.28	mg/L	0.068	130.6	mg/L	0.14	0.10%
Na 330.237†	1717.5	63.67	mg/L	0.409	127.3	mg/L	0.82	0.64%
Ni 231.604†	1156.5	0.3323	mg/L	0.00252	0.6647	mg/L	0.00504	0.76%
Pb 220.353†	1391.8	0.2054	mg/L	0.00163	0.4107	mg/L	0.00325	0.79%
Sb 206.836†	7.4	0.00455	mg/L	0.002711	0.00909	mg/L	0.005423	59.64%
Se 196.026†	38.5	0.01975	mg/L	0.008018	0.03950	mg/L	0.016035	40.60%
Si 288.158†	2816.3	1.930	mg/L	0.0088	3.859	mg/L	0.0176	0.46%
Sn 189.927†	76.4	0.02740	mg/L	0.002047	0.05481	mg/L	0.004093	7.47%
Sr 421.552†	6512473.0	7.424	mg/L	0.0349	14.85	mg/L	0.070	0.47%
Ti 334.903†	95390.2	4.567	mg/L	0.0099	9.134	mg/L	0.0199	0.22%
Tl 190.801†	-16.8	0.00944	mg/L	0.004102	0.01889	mg/L	0.008203	43.44%
V 292.402†	42264.6	0.3270	mg/L	0.00181	0.6540	mg/L	0.00362	0.55%
Zn 206.200†	2479.2	0.7162	mg/L	0.00607	1.432	mg/L	0.0121	0.85%

Sequence No.: 12
Sample ID: XB89 MB1SPK SWC

Autosampler Location: 342
Date Collected: 8/29/2013 1:44:36 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: XB89 MB1SPK SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2805626.0	101.6	%	0.40				0.40%
ScR 361.383	324551.5	101.4	%	0.99				0.98%
Ag 328.068†	113058.2	0.5085	mg/L	0.00241	1.017	mg/L	0.0048	0.47%
Al 308.215†	2542.9	2.189	mg/L	0.0254	4.378	mg/L	0.0508	1.16%
As 188.979†	2825.4	2.020	mg/L	0.0038	4.040	mg/L	0.0076	0.19%
B 249.677†	19.3	0.00196	mg/L	0.000895	0.00391	mg/L	0.001790	45.73%
Ba 233.527†	10776.7	2.070	mg/L	0.0289	4.139	mg/L	0.0578	1.40%
Be 313.042†	257861.5	0.5208	mg/L	0.00569	1.042	mg/L	0.0114	1.09%
Ca 317.933†	94471.7	10.35	mg/L	0.082	20.71	mg/L	0.163	0.79%
Cd 228.802†	11830.2	0.5147	mg/L	0.00238	1.029	mg/L	0.0048	0.46%
Co 228.616†	17677.9	0.5007	mg/L	0.00163	1.001	mg/L	0.0033	0.33%
Cr 267.716†	3549.2	0.5303	mg/L	0.00435	1.061	mg/L	0.0087	0.82%
Cu 324.752†	138949.5	0.5100	mg/L	0.00272	1.020	mg/L	0.0054	0.53%
Fe 273.955†	2876.9	2.205	mg/L	0.0128	4.409	mg/L	0.0255	0.58%
K 766.490†	21410.3	10.42	mg/L	0.080	20.85	mg/L	0.160	0.77%
Mg 279.077†	9111.1	10.90	mg/L	0.102	21.81	mg/L	0.204	0.93%
Mn 257.610†	22713.1	0.4981	mg/L	0.00262	0.9962	mg/L	0.00524	0.53%
Mo 202.031†	19.0	0.00091	mg/L	0.000267	0.00181	mg/L	0.000533	29.42%
Na 589.592†	135710.1	10.73	mg/L	0.085	21.46	mg/L	0.171	0.80%
Na 330.237†	301.5	10.83	mg/L	0.214	21.65	mg/L	0.428	1.98%
Ni 231.604†	1820.8	0.5224	mg/L	0.00521	1.045	mg/L	0.0104	1.00%
Pb 220.353†	15941.8	2.008	mg/L	0.0076	4.017	mg/L	0.0151	0.38%
Sb 206.836†	11.1	-0.00137	mg/L	0.001495	-0.00274	mg/L	0.002990	109.31%
Se 196.026†	3082.7	2.019	mg/L	0.0025	4.039	mg/L	0.0051	0.13%
Si 288.158†	10.4	0.00944	mg/L	0.001421	0.01888	mg/L	0.002842	15.06%
Sn 189.927†	-26.6	-0.00549	mg/L	0.000252	-0.01098	mg/L	0.000504	4.59%
Sr 421.552†	472792.8	0.5390	mg/L	0.00326	1.078	mg/L	0.0065	0.60%
Ti 334.903†	115.2	0.00454	mg/L	0.000417	0.00909	mg/L	0.000835	9.19%
Tl 190.801†	3665.1	1.975	mg/L	0.0104	3.951	mg/L	0.0208	0.53%
V 292.402†	63389.0	0.5072	mg/L	0.00239	1.014	mg/L	0.0048	0.47%
Zn 206.200†	1833.2	0.5306	mg/L	0.00461	1.061	mg/L	0.0092	0.87%

Sequence No.: 13
Sample ID: CV 7

Autosampler Location: 7
Date Collected: 8/29/2013 1:48:37 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2793394.5	101.2	%	0.12				0.12%
ScR 361.383	318983.2	99.67	%	0.370				0.37%
Ag 328.068†	230050.6	1.035	mg/L	0.0012	1.035	mg/L	0.0012	0.12%
Al 308.215†	2525.3	2.147	mg/L	0.0125	2.147	mg/L	0.0125	0.58%
As 188.979†	2756.3	2.002	mg/L	0.0057	2.002	mg/L	0.0057	0.28%
B 249.677†	6925.0	1.078	mg/L	0.0039	1.078	mg/L	0.0039	0.37%
Ba 233.527†	5443.0	1.045	mg/L	0.0064	1.045	mg/L	0.0064	0.61%
Be 313.042†	544982.3	1.101	mg/L	0.0022	1.101	mg/L	0.0022	0.20%
Ca 317.933†	20304.4	2.225	mg/L	0.0031	2.225	mg/L	0.0031	0.14%
Cd 228.802†	24117.4	1.061	mg/L	0.0026	1.061	mg/L	0.0026	0.24%
Co 228.616†	36235.1	1.025	mg/L	0.0002	1.025	mg/L	0.0002	0.02%
Cr 267.716†	7102.1	1.063	mg/L	0.0024	1.063	mg/L	0.0024	0.23%
Cu 324.752†	288028.9	1.057	mg/L	0.0008	1.057	mg/L	0.0008	0.08%
Fe 273.955†	2816.4	2.155	mg/L	0.0049	2.155	mg/L	0.0049	0.23%
K 766.490†	43456.2	21.16	mg/L	0.102	21.16	mg/L	0.102	0.48%
Mg 279.077†	1782.5	2.140	mg/L	0.0108	2.140	mg/L	0.0108	0.51%
Mn 257.610†	45767.5	1.003	mg/L	0.0045	1.003	mg/L	0.0045	0.45%
Mo 202.031†	18202.6	1.025	mg/L	0.0023	1.025	mg/L	0.0023	0.22%
Na 589.592†	690847.4	54.61	mg/L	0.058	54.61	mg/L	0.058	0.11%
Na 330.237†	1487.6	54.17	mg/L	0.166	54.17	mg/L	0.166	0.31%
Ni 231.604†	3817.7	1.097	mg/L	0.0042	1.097	mg/L	0.0042	0.38%
Pb 220.353†	16225.2	2.044	mg/L	0.0038	2.044	mg/L	0.0038	0.19%
Sb 206.836†	5976.0	2.113	mg/L	0.0033	2.113	mg/L	0.0033	0.15%
Se 196.026†	3061.3	2.005	mg/L	0.0059	2.005	mg/L	0.0059	0.29%
Si 288.158†	3117.0	2.140	mg/L	0.0117	2.140	mg/L	0.0117	0.55%
Sn 189.927†	4200.6	1.015	mg/L	0.0056	1.015	mg/L	0.0056	0.55%
Sr 421.552†	960989.0	1.096	mg/L	0.0004	1.096	mg/L	0.0004	0.04%
Ti 334.903†	21889.4	1.049	mg/L	0.0018	1.049	mg/L	0.0018	0.18%
Tl 190.801†	3760.9	2.024	mg/L	0.0018	2.024	mg/L	0.0018	0.09%
V 292.402†	127602.0	1.021	mg/L	0.0009	1.021	mg/L	0.0009	0.09%
Zn 206.200†	3755.6	1.087	mg/L	0.0025	1.087	mg/L	0.0025	0.23%

Sequence No.: 14
Sample ID: CB 7

Autosampler Location: 1
Date Collected: 8/29/2013 1:52:41 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 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	2820035.1	102.1	%	0.53				0.52%
ScR 361.383	324614.3	101.4	%	0.24				0.24%
Ag 328.068†	-8.5	-0.00004	mg/L	0.000231	-0.00004	mg/L	0.000231	608.68%
Al 308.215†	10.7	0.00925	mg/L	0.000871	0.00925	mg/L	0.000871	9.41%
As 188.979†	-2.8	-0.00197	mg/L	0.000769	-0.00197	mg/L	0.000769	38.98%
B 249.677†	18.5	0.00288	mg/L	0.001463	0.00288	mg/L	0.001463	50.83%
Ba 233.527†	1.6	0.00030	mg/L	0.000202	0.00030	mg/L	0.000202	67.63%
Be 313.042†	62.6	0.00013	mg/L	0.000019	0.00013	mg/L	0.000019	14.96%
Ca 317.933†	6.2	0.00067	mg/L	0.001783	0.00067	mg/L	0.001783	264.32%
Cd 228.802†	5.0	0.00023	mg/L	0.000048	0.00023	mg/L	0.000048	20.72%
Co 228.616†	5.8	0.00016	mg/L	0.000025	0.00016	mg/L	0.000025	15.41%
Cr 267.716†	-11.9	-0.00179	mg/L	0.000170	-0.00179	mg/L	0.000170	9.49%
Cu 324.752†	245.6	0.00090	mg/L	0.000190	0.00090	mg/L	0.000190	21.15%
Fe 273.955†	2.1	0.00159	mg/L	0.000606	0.00159	mg/L	0.000606	38.17%
K 766.490†	9.4	0.00460	mg/L	0.007163	0.00460	mg/L	0.007163	155.72%
Mg 279.077†	-0.1	-0.00015	mg/L	0.005351	-0.00015	mg/L	0.005351	>999.9%
Mn 257.610†	16.7	0.00036	mg/L	0.000144	0.00036	mg/L	0.000144	39.40%
Mo 202.031†	25.8	0.00145	mg/L	0.000426	0.00145	mg/L	0.000426	29.34%
Na 589.592†	198.2	0.01567	mg/L	0.000590	0.01567	mg/L	0.000590	3.77%
Na 330.237†	10.4	0.3773	mg/L	0.21173	0.3773	mg/L	0.21173	56.12%
Ni 231.604†	-0.2	-0.00005	mg/L	0.001720	-0.00005	mg/L	0.001720	>999.9%
Pb 220.353†	-0.1	-0.00001	mg/L	0.000098	-0.00001	mg/L	0.000098	>999.9%
Sb 206.836†	7.5	0.00267	mg/L	0.001723	0.00267	mg/L	0.001723	64.54%
Se 196.026†	2.4	0.00159	mg/L	0.001816	0.00159	mg/L	0.001816	114.42%
Si 288.158†	7.6	0.00519	mg/L	0.001288	0.00519	mg/L	0.001288	24.81%
Sn 189.927†	-1.6	-0.00039	mg/L	0.000806	-0.00039	mg/L	0.000806	206.75%
Sr 421.552†	96.7	0.00011	mg/L	0.000009	0.00011	mg/L	0.000009	7.94%
Ti 334.903†	8.4	0.00040	mg/L	0.000255	0.00040	mg/L	0.000255	62.97%
Tl 190.801†	1.4	0.00076	mg/L	0.002281	0.00076	mg/L	0.002281	299.43%
V 292.402†	18.9	0.00014	mg/L	0.000148	0.00014	mg/L	0.000148	102.40%
Zn 206.200†	0.6	0.00016	mg/L	0.000746	0.00016	mg/L	0.000746	455.30%

Sequence No.: 15
Sample ID: XC27 MB SWC

Del

Dilution: 2.000000X

Autosampler Location: 343
Date Collected: 8/29/2013 1:56:56 PM
Data Type: Original

Nebulizer Parameters: XC27 MB SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC27 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2816465.4	102.0	%	0.16				0.16%
ScR 361.383	325630.7	101.7	%	0.49				0.48%
Ag 328.068†	-29.9	-0.00013	mg/L	0.000122	-0.00027	mg/L	0.000244	90.80%
Al 308.215†	13.0	0.01126	mg/L	0.002443	0.02252	mg/L	0.004885	21.69%
As 188.979†	-0.9	-0.00063	mg/L	0.000548	-0.00127	mg/L	0.001095	86.53%
B 249.677†	4.5	0.00070	mg/L	0.000477	0.00140	mg/L	0.000954	68.28%
Ba 233.527†	-1.2	-0.00023	mg/L	0.000648	-0.00046	mg/L	0.001297	284.71%
Be 313.042†	41.6	0.00008	mg/L	0.000033	0.00017	mg/L	0.000067	39.60%
Ca 317.933†	35.5	0.00389	mg/L	0.000923	0.00778	mg/L	0.001846	23.73%
Cd 228.802†	3.8	0.00017	mg/L	0.000126	0.00035	mg/L	0.000251	72.57%
Co 228.616†	-1.2	-0.00004	mg/L	0.000017	-0.00007	mg/L	0.000033	46.38%
Cr 267.716†	-6.2	-0.00093	mg/L	0.000807	-0.00185	mg/L	0.001615	87.23%
Cu 324.752†	267.6	0.00098	mg/L	0.000367	0.00196	mg/L	0.000734	37.36%
Fe 273.955†	4.0	0.00305	mg/L	0.001049	0.00609	mg/L	0.002097	34.42%
K 766.490†	48.5	0.02361	mg/L	0.035738	0.04722	mg/L	0.071476	151.36%
Mg 279.077†	0.9	0.00112	mg/L	0.003058	0.00224	mg/L	0.006117	272.68%
Mn 257.610†	12.9	0.00028	mg/L	0.000090	0.00056	mg/L	0.000180	31.92%
Mo 202.031†	-5.1	-0.00029	mg/L	0.000169	-0.00057	mg/L	0.000338	58.83%
Na 589.592†	114.4	0.00905	mg/L	0.003242	0.01809	mg/L	0.006483	35.83%
Na 330.237†	-0.5	-0.01771	mg/L	0.373910	-0.03542	mg/L	0.747820	>999.9%
Ni 231.604†	-0.4	-0.00012	mg/L	0.001929	-0.00025	mg/L	0.003858	>999.9%
Pb 220.353†	-0.5	-0.00007	mg/L	0.000665	-0.00014	mg/L	0.001330	963.06%
Sb 206.836†	-2.5	-0.00088	mg/L	0.001294	-0.00176	mg/L	0.002587	146.78%
Se 196.026†	3.3	0.00218	mg/L	0.002399	0.00436	mg/L	0.004797	110.03%
Si 288.158†	5.5	0.00378	mg/L	0.006865	0.00756	mg/L	0.013729	181.55%
Sn 189.927†	-1.4	-0.00034	mg/L	0.000646	-0.00067	mg/L	0.001291	192.52%
Sr 421.552†	-8.0	-0.00001	mg/L	0.000023	-0.00002	mg/L	0.000045	245.65%
Ti 334.903†	23.1	0.00111	mg/L	0.000674	0.00222	mg/L	0.001349	60.87%
Tl 190.801†	0.6	0.00034	mg/L	0.000953	0.00069	mg/L	0.001905	277.73%
V 292.402†	10.4	0.00008	mg/L	0.000136	0.00016	mg/L	0.000272	173.72%
Zn 206.200†	10.1	0.00291	mg/L	0.000959	0.00583	mg/L	0.001918	32.91%

Sequence No.: 16
Sample ID: XB89 F SWC

Del

Dilution: 2.000000X

Autosampler Location: 344
Date Collected: 8/29/2013 2:01:12 PM
Data Type: Original

Nebulizer Parameters: XB89 F SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XB89 F SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2796367.6	101.3	%	0.36				0.36%
ScR 361.383	329363.4	102.9	%	0.49				0.48%
Ag 328.068†	-278.5	-0.00116	mg/L	0.000082	-0.00232	mg/L	0.000164	7.09%
Al 308.215†	127500.8	110.1	mg/L	0.26	220.2	mg/L	0.53	0.24%
As 188.979†	-122.5	0.07117	mg/L	0.001802	0.1423	mg/L	0.00360	2.53%
B 249.677†	1046.8	0.1630	mg/L	0.00149	0.3260	mg/L	0.00297	0.91%
Ba 233.527†	16021.6	3.051	mg/L	0.0170	6.101	mg/L	0.0341	0.56%
Be 313.042†	1216.9	0.00233	mg/L	0.000035	0.00465	mg/L	0.000069	1.49%
Ca 317.933†	1025157.7	112.3	mg/L	1.79	224.7	mg/L	3.59	1.60%
Cd 228.802†	105.5	0.00293	mg/L	0.000183	0.00586	mg/L	0.000365	6.23%
Co 228.616†	2515.7	0.06172	mg/L	0.000112	0.1234	mg/L	0.00022	0.18%
Cr 267.716†	1544.5	0.2338	mg/L	0.00235	0.4676	mg/L	0.00470	1.01%
Cu 324.752†	73982.4	0.2803	mg/L	0.00148	0.5605	mg/L	0.00296	0.53%
Fe 273.955†	280927.9	215.6	mg/L	1.64	431.2	mg/L	3.29	0.76%
K 766.490†	28536.4	13.89	mg/L	0.013	27.79	mg/L	0.027	0.10%
Mg 279.077†	61229.1	73.13	mg/L	0.302	146.3	mg/L	0.60	0.41%
Mn 257.610†	101055.4	2.214	mg/L	0.0152	4.427	mg/L	0.0304	0.69%
Mo 202.031†	338.2	0.01755	mg/L	0.000239	0.03511	mg/L	0.000478	1.36%
Na 589.592†	670664.2	53.02	mg/L	0.484	106.0	mg/L	0.97	0.91%
Na 330.237†	1385.2	51.86	mg/L	0.205	103.7	mg/L	0.41	0.40%
Ni 231.604†	990.3	0.2846	mg/L	0.00165	0.5692	mg/L	0.00330	0.58%
Pb 220.353†	1971.7	0.2686	mg/L	0.00071	0.5372	mg/L	0.00143	0.27%
Sb 206.836†	22.1	0.01055	mg/L	0.000949	0.02110	mg/L	0.001898	8.99%
Se 196.026†	44.4	0.02274	mg/L	0.001773	0.04549	mg/L	0.003547	7.80%
Si 288.158†	2257.7	1.547	mg/L	0.0107	3.094	mg/L	0.0215	0.69%
Sn 189.927†	76.5	0.02887	mg/L	0.001728	0.05774	mg/L	0.003456	5.99%
Sr 421.552†	2996062.7	3.416	mg/L	0.0299	6.831	mg/L	0.0598	0.88%
Ti 334.903†	111840.8	5.355	mg/L	0.0214	10.71	mg/L	0.043	0.40%
Tl 190.801†	-24.7	0.01578	mg/L	0.003861	0.03155	mg/L	0.007722	24.47%
V 292.402†	40858.2	0.3109	mg/L	0.00091	0.6219	mg/L	0.00182	0.29%
Zn 206.200†	1671.9	0.4822	mg/L	0.00346	0.9644	mg/L	0.00691	0.72%

Sequence No.: 17
Sample ID: XC27 ADUP SWC

Del

Dilution: 2.000000X

Autosampler Location: 345
Date Collected: 8/29/2013 2:05:30 PM
Data Type: Original

Nebulizer Parameters: XC27 ADUP SWC

Analyte	Back Pressure	Flow
All	236.0 kPa	0.75 L/min

Mean Data: XC27 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2785266.2	100.9	%	0.39				0.39%
ScR 361.383	323810.9	101.2	%	0.75				0.74%
Ag 328.068†	-509.7	-0.00214	mg/L	0.000142	-0.00428	mg/L	0.000284	6.62%
Al 308.215†	191461.5	165.4	mg/L	1.07	330.7	mg/L	2.15	0.65%
As 188.979†	-351.2	0.02991	mg/L	0.001672	0.05982	mg/L	0.003343	5.59%
B 249.677†	123.3	0.01900	mg/L	0.002296	0.03799	mg/L	0.004592	12.09%
Ba 233.527†	4329.6	0.8028	mg/L	0.00557	1.606	mg/L	0.0111	0.69%
Be 313.042†	1461.6	0.00273	mg/L	0.000030	0.00546	mg/L	0.000059	1.09%
Ca 317.933†	1146512.9	125.6	mg/L	0.42	251.3	mg/L	0.85	0.34%
Cd 228.802†	45.2	0.00093	mg/L	0.000281	0.00185	mg/L	0.000562	30.32%
Co 228.616†	3750.7	0.09028	mg/L	0.000481	0.1806	mg/L	0.00096	0.53%
Cr 267.716†	1666.1	0.2531	mg/L	0.00271	0.5063	mg/L	0.00543	1.07%
Cu 324.752†	63007.5	0.2401	mg/L	0.00239	0.4801	mg/L	0.00479	1.00%
Fe 273.955†	301917.4	231.7	mg/L	0.96	463.4	mg/L	1.93	0.42%
K 766.490†	15916.9	7.749	mg/L	0.0767	15.50	mg/L	0.153	0.99%
Mg 279.077†	55452.8	66.21	mg/L	0.339	132.4	mg/L	0.68	0.51%
Mn 257.610†	154036.7	3.375	mg/L	0.0165	6.749	mg/L	0.0331	0.49%
Mo 202.031†	115.9	0.00486	mg/L	0.000666	0.00973	mg/L	0.001332	13.69%
Na 589.592†	56821.3	4.492	mg/L	0.0278	8.984	mg/L	0.0555	0.62%
Na 330.237†	42.0	4.012	mg/L	0.2538	8.024	mg/L	0.5076	6.33%
Ni 231.604†	902.9	0.2595	mg/L	0.00226	0.5190	mg/L	0.00452	0.87%
Pb 220.353†	79.1	0.04560	mg/L	0.001406	0.09121	mg/L	0.002811	3.08%
Sb 206.836†	2.1	0.00687	mg/L	0.002789	0.01375	mg/L	0.005578	40.56%
Se 196.026†	38.6	0.01812	mg/L	0.005471	0.03623	mg/L	0.010942	30.20%
Si 288.158†	3052.5	2.091	mg/L	0.0179	4.183	mg/L	0.0358	0.86%
Sn 189.927†	-70.2	-0.00466	mg/L	0.001342	-0.00932	mg/L	0.002685	28.82%
Sr 421.552†	558051.9	0.6362	mg/L	0.00340	1.272	mg/L	0.0068	0.53%
Ti 334.903†	192158.1	9.206	mg/L	0.0518	18.41	mg/L	0.104	0.56%
Tl 190.801†	-36.9	0.01051	mg/L	0.001178	0.02103	mg/L	0.002355	11.20%
V 292.402†	65959.5	0.5081	mg/L	0.00500	1.016	mg/L	0.0100	0.98%
Zn 206.200†	1849.1	0.5333	mg/L	0.00423	1.067	mg/L	0.0085	0.79%

Sequence No.: 18
Sample ID: XC27 A SWC

Dilution: 2.000000X

Dal

Autosampler Location: 346
Date Collected: 8/29/2013 2:09:33 PM
Data Type: Original

Nebulizer Parameters: XC27 A SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC27 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2787956.9	101.0	%	0.23				0.23%
ScR 361.383	323178.2	101.0	%	0.59				0.59%
Ag 328.068†	-496.4	-0.00208	mg/L	0.000058	-0.00417	mg/L	0.000117	2.81%
Al 308.215†	201868.0	174.4	mg/L	0.81	348.7	mg/L	1.62	0.47%
As 188.979†	-346.5	0.02941	mg/L	0.004859	0.05883	mg/L	0.009718	16.52%
B 249.677†	97.7	0.01500	mg/L	0.000212	0.03000	mg/L	0.000424	1.41%
Ba 233.527†	4014.6	0.7414	mg/L	0.00883	1.483	mg/L	0.0177	1.19%
Be 313.042†	1646.0	0.00311	mg/L	0.000038	0.00621	mg/L	0.000077	1.23%
Ca 317.933†	1220605.2	133.8	mg/L	0.44	267.5	mg/L	0.88	0.33%
Cd 228.802†	48.8	0.00101	mg/L	0.000188	0.00201	mg/L	0.000375	18.66%
Co 228.616†	3775.4	0.09114	mg/L	0.000288	0.1823	mg/L	0.00058	0.32%
Cr 267.716†	1646.8	0.2500	mg/L	0.00194	0.5000	mg/L	0.00389	0.78%
Cu 324.752†	68150.7	0.2593	mg/L	0.00059	0.5186	mg/L	0.00118	0.23%
Fe 273.955†	311429.9	239.0	mg/L	2.02	478.0	mg/L	4.05	0.85%
K 766.490†	17153.9	8.351	mg/L	0.0446	16.70	mg/L	0.089	0.53%
Mg 279.077†	60351.7	72.06	mg/L	0.251	144.1	mg/L	0.50	0.35%
Mn 257.610†	169786.4	3.720	mg/L	0.0220	7.439	mg/L	0.0440	0.59%
Mo 202.031†	117.5	0.00485	mg/L	0.000319	0.00970	mg/L	0.000638	6.58%
Na 589.592†	62661.2	4.953	mg/L	0.0249	9.907	mg/L	0.0499	0.50%
Na 330.237†	55.3	4.441	mg/L	0.1249	8.881	mg/L	0.2498	2.81%
Ni 231.604†	981.1	0.2820	mg/L	0.00291	0.5639	mg/L	0.00581	1.03%
Pb 220.353†	83.3	0.04833	mg/L	0.000615	0.09666	mg/L	0.001230	1.27%
Sb 206.836†	3.1	0.00713	mg/L	0.001206	0.01426	mg/L	0.002413	16.92%
Se 196.026†	39.9	0.01852	mg/L	0.004682	0.03704	mg/L	0.009365	25.28%
Si 288.158†	3169.5	2.172	mg/L	0.0139	4.343	mg/L	0.0277	0.64%
Sn 189.927†	-71.9	-0.00443	mg/L	0.000472	-0.00885	mg/L	0.000944	10.66%
Sr 421.552†	520391.6	0.5933	mg/L	0.00205	1.187	mg/L	0.0041	0.35%
Ti 334.903†	190278.9	9.115	mg/L	0.0301	18.23	mg/L	0.060	0.33%
Tl 190.801†	-34.4	0.01291	mg/L	0.003947	0.02582	mg/L	0.007894	30.58%
V 292.402†	64854.0	0.4990	mg/L	0.00201	0.9979	mg/L	0.00401	0.40%
Zn 206.200†	2194.6	0.6332	mg/L	0.00678	1.266	mg/L	0.0136	1.07%

Sequence No.: 19
Sample ID: XC27 ASPK SWC

Del

Dilution: 2.000000X

Autosampler Location: 347
Date Collected: 8/29/2013 2:13:37 PM
Data Type: Original

Nebulizer Parameters: XC27 ASPK SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC27 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2793268.8	101.2	%	0.58				0.58%
ScR 361.383	323099.2	101.0	%	0.18				0.18%
Ag 328.068†	115621.6	0.5202	mg/L	0.00300	1.040	mg/L	0.0060	0.58%
Al 308.215†	186022.3	160.7	mg/L	0.15	321.3	mg/L	0.29	0.09%
As 188.979†	2599.6	2.096	mg/L	0.0113	4.192	mg/L	0.0225	0.54%
B 249.677†	121.6	0.01819	mg/L	0.001654	0.03637	mg/L	0.003307	9.09%
Ba 233.527†	14408.9	2.741	mg/L	0.0470	5.483	mg/L	0.0941	1.72%
Be 313.042†	272399.5	0.5500	mg/L	0.00054	1.100	mg/L	0.0011	0.10%
Ca 317.933†	1451862.1	159.1	mg/L	0.86	318.2	mg/L	1.71	0.54%
Cd 228.802†	12719.6	0.5529	mg/L	0.00331	1.106	mg/L	0.0066	0.60%
Co 228.616†	21616.7	0.5985	mg/L	0.00391	1.197	mg/L	0.0078	0.65%
Cr 267.716†	5318.1	0.7980	mg/L	0.00673	1.596	mg/L	0.0135	0.84%
Cu 324.752†	218237.9	0.8089	mg/L	0.00371	1.618	mg/L	0.0074	0.46%
Fe 273.955†	277250.6	212.8	mg/L	1.51	425.5	mg/L	3.02	0.71%
K 766.490†	38715.5	18.85	mg/L	0.027	37.70	mg/L	0.053	0.14%
Mg 279.077†	62107.5	74.18	mg/L	0.349	148.4	mg/L	0.70	0.47%
Mn 257.610†	209405.4	4.588	mg/L	0.0283	9.177	mg/L	0.0566	0.62%
Mo 202.031†	8704.9	0.4880	mg/L	0.00270	0.9760	mg/L	0.00540	0.55%
Na 589.592†	205692.9	16.26	mg/L	0.047	32.52	mg/L	0.094	0.29%
Na 330.237†	369.2	15.41	mg/L	0.182	30.81	mg/L	0.365	1.18%
Ni 231.604†	2763.3	0.7933	mg/L	0.00812	1.587	mg/L	0.0162	1.02%
Pb 220.353†	16681.0	2.136	mg/L	0.0138	4.272	mg/L	0.0276	0.65%
Sb 206.836†	14.9	0.00483	mg/L	0.002008	0.00966	mg/L	0.004017	41.58%
Se 196.026†	3182.6	2.076	mg/L	0.0036	4.153	mg/L	0.0072	0.17%
Si 288.158†	3002.8	2.060	mg/L	0.0052	4.120	mg/L	0.0105	0.25%
Sn 189.927†	-69.6	-0.00194	mg/L	0.001605	-0.00388	mg/L	0.003209	82.74%
Sr 421.552†	928755.6	1.059	mg/L	0.0013	2.118	mg/L	0.0025	0.12%
Ti 334.903†	166868.4	7.990	mg/L	0.0210	15.98	mg/L	0.042	0.26%
Tl 190.801†	3510.3	1.920	mg/L	0.0105	3.840	mg/L	0.0210	0.55%
V 292.402†	126136.4	0.9921	mg/L	0.00339	1.984	mg/L	0.0068	0.34%
Zn 206.200†	3876.8	1.120	mg/L	0.0061	2.239	mg/L	0.0122	0.54%

Sequence No.: 20
Sample ID: XC27 B SWC

Dil

Dilution: 2.000000X

Autosampler Location: 348
Date Collected: 8/29/2013 2:16:55 PM
Data Type: Original

Nebulizer Parameters: XC27 B SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC27 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2832383.5	102.6	%	0.19				0.18%
ScR 361.383	325193.0	101.6	%	0.46				0.45%
Ag 328.068†	-293.3	-0.00119	mg/L	0.000101	-0.00239	mg/L	0.000203	8.48%
Al 308.215†	146024.0	126.1	mg/L	0.15	252.2	mg/L	0.29	0.12%
As 188.979†	-348.1	0.01159	mg/L	0.003140	0.02318	mg/L	0.006281	27.09%
B 249.677†	554.3	0.08621	mg/L	0.001600	0.1724	mg/L	0.00320	1.86%
Ba 233.527†	4652.4	0.8710	mg/L	0.00392	1.742	mg/L	0.0078	0.45%
Be 313.042†	1119.5	0.00207	mg/L	0.000017	0.00415	mg/L	0.000034	0.82%
Ca 317.933†	576142.6	63.14	mg/L	0.069	126.3	mg/L	0.14	0.11%
Cd 228.802†	37.1	0.00112	mg/L	0.000267	0.00224	mg/L	0.000535	23.90%
Co 228.616†	2942.5	0.06888	mg/L	0.000435	0.1378	mg/L	0.00087	0.63%
Cr 267.716†	1409.8	0.2145	mg/L	0.00132	0.4290	mg/L	0.00264	0.61%
Cu 324.752†	46358.8	0.1768	mg/L	0.00075	0.3536	mg/L	0.00151	0.43%
Fe 273.955†	234679.1	180.1	mg/L	0.61	360.2	mg/L	1.22	0.34%
K 766.490†	12652.3	6.160	mg/L	0.0189	12.32	mg/L	0.038	0.31%
Mg 279.077†	40449.8	48.29	mg/L	0.118	96.58	mg/L	0.236	0.24%
Mn 257.610†	111487.6	2.443	mg/L	0.0088	4.885	mg/L	0.0175	0.36%
Mo 202.031†	120.5	0.00594	mg/L	0.000269	0.01189	mg/L	0.000538	4.53%
Na 589.592†	41962.6	3.317	mg/L	0.0040	6.634	mg/L	0.0081	0.12%
Na 330.237†	23.9	3.130	mg/L	0.1288	6.259	mg/L	0.2575	4.11%
Ni 231.604†	761.1	0.2187	mg/L	0.00067	0.4374	mg/L	0.00133	0.30%
Pb 220.353†	121.4	0.04233	mg/L	0.001502	0.08467	mg/L	0.003004	3.55%
Sb 206.836†	5.4	0.00747	mg/L	0.002435	0.01493	mg/L	0.004870	32.61%
Se 196.026†	28.1	0.01469	mg/L	0.004709	0.02938	mg/L	0.009417	32.05%
Si 288.158†	4080.9	2.796	mg/L	0.0139	5.592	mg/L	0.0277	0.50%
Sn 189.927†	-66.4	-0.00908	mg/L	0.000631	-0.01817	mg/L	0.001261	6.94%
Sr 421.552†	1039835.4	1.185	mg/L	0.0005	2.371	mg/L	0.0009	0.04%
Ti 334.903†	174010.0	8.341	mg/L	0.0122	16.68	mg/L	0.024	0.15%
Tl 190.801†	-20.9	0.01230	mg/L	0.003098	0.02460	mg/L	0.006196	25.19%
V 292.402†	53897.5	0.4153	mg/L	0.00173	0.8306	mg/L	0.00346	0.42%
Zn 206.200†	1533.9	0.4433	mg/L	0.00415	0.8867	mg/L	0.00831	0.94%

Sequence No.: 21
Sample ID: XC27 MBSPK SWC

Del

Dilution: 2.000000X

Autosampler Location: 349
Date Collected: 8/29/2013 2:20:58 PM
Data Type: Original

Nebulizer Parameters: XC27 MBSPK SWC

Analyte	Back Pressure	Flow
All	237.0 kPa	0.75 L/min

Mean Data: XC27 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2794592.8	101.2	%	0.45				0.44%
ScR 361.383	325300.0	101.6	%	0.59				0.58%
Ag 328.068†	117463.6	0.5283	mg/L	0.00209	1.057	mg/L	0.0042	0.39%
Al 308.215†	2559.3	2.194	mg/L	0.0142	4.388	mg/L	0.0284	0.65%
As 188.979†	2952.0	2.109	mg/L	0.0107	4.218	mg/L	0.0214	0.51%
B 249.677†	10.7	0.00112	mg/L	0.000690	0.00225	mg/L	0.001380	61.35%
Ba 233.527†	11148.1	2.141	mg/L	0.0201	4.282	mg/L	0.0401	0.94%
Be 313.042†	270169.0	0.5457	mg/L	0.00318	1.091	mg/L	0.0064	0.58%
Ca 317.933†	98117.5	10.75	mg/L	0.056	21.50	mg/L	0.112	0.52%
Cd 228.802†	12410.8	0.5400	mg/L	0.00225	1.080	mg/L	0.0045	0.42%
Co 228.616†	18502.1	0.5241	mg/L	0.00245	1.048	mg/L	0.0049	0.47%
Cr 267.716†	3666.6	0.5479	mg/L	0.00203	1.096	mg/L	0.0041	0.37%
Cu 324.752†	144056.8	0.5286	mg/L	0.00179	1.057	mg/L	0.0036	0.34%
Fe 273.955†	2910.6	2.231	mg/L	0.0080	4.461	mg/L	0.0159	0.36%
K 766.490†	22054.4	10.74	mg/L	0.056	21.47	mg/L	0.111	0.52%
Mg 279.077†	9421.0	11.28	mg/L	0.056	22.55	mg/L	0.113	0.50%
Mn 257.610†	23500.4	0.5154	mg/L	0.00142	1.031	mg/L	0.0028	0.28%
Mo 202.031†	9352.7	0.5264	mg/L	0.00247	1.053	mg/L	0.0049	0.47%
Na 589.592†	139809.9	11.05	mg/L	0.044	22.10	mg/L	0.088	0.40%
Na 330.237†	302.9	10.87	mg/L	0.129	21.73	mg/L	0.259	1.19%
Ni 231.604†	1892.4	0.5430	mg/L	0.00155	1.086	mg/L	0.0031	0.29%
Pb 220.353†	16737.6	2.109	mg/L	0.0086	4.217	mg/L	0.0173	0.41%
Sb 206.836†	11.6	-0.00135	mg/L	0.001822	-0.00270	mg/L	0.003644	135.08%
Sc 196.026†	3236.1	2.120	mg/L	0.0046	4.240	mg/L	0.0092	0.22%
Si 288.158†	1.5	0.00345	mg/L	0.009838	0.00691	mg/L	0.019676	284.93%
Sn 189.927†	-26.8	-0.00550	mg/L	0.001127	-0.01100	mg/L	0.002254	20.48%
Sr 421.552†	484893.0	0.5528	mg/L	0.00188	1.106	mg/L	0.0038	0.34%
Ti 334.903†	103.1	0.00343	mg/L	0.000520	0.00686	mg/L	0.001040	15.16%
Tl 190.801†	3814.3	2.057	mg/L	0.0135	4.113	mg/L	0.0271	0.66%
V 292.402†	66133.9	0.5294	mg/L	0.00221	1.059	mg/L	0.0044	0.42%
Zn 206.200†	1913.9	0.5538	mg/L	0.00236	1.108	mg/L	0.0047	0.43%

Sequence No.: 22
Sample ID: CV 8

Autosampler Location: 7
Date Collected: 8/29/2013 2:24:59 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	236.0 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	2801176.7	101.4	%	0.31				0.30%
ScR 361.383	318255.4	99.45	%	0.179				0.18%
Ag 328.068†	232465.1	1.046	mg/L	0.0094	1.046	mg/L	0.0094	0.90%
Al 308.215†	2553.0	2.171	mg/L	0.0081	2.171	mg/L	0.0081	0.37%
As 188.979†	2813.7	2.043	mg/L	0.0019	2.043	mg/L	0.0019	0.09%
B 249.677†	7045.1	1.097	mg/L	0.0043	1.097	mg/L	0.0043	0.39%
Ba 233.527†	5511.0	1.058	mg/L	0.0037	1.058	mg/L	0.0037	0.35%
Be 313.042†	559641.3	1.130	mg/L	0.0111	1.130	mg/L	0.0111	0.99%
Ca 317.933†	20849.9	2.285	mg/L	0.0044	2.285	mg/L	0.0044	0.19%
Cd 228.802†	24517.7	1.079	mg/L	0.0022	1.079	mg/L	0.0022	0.20%
Co 228.616†	36026.0	1.019	mg/L	0.0045	1.019	mg/L	0.0045	0.45%
Cr 267.716†	7260.8	1.087	mg/L	0.0018	1.087	mg/L	0.0018	0.17%
Cu 324.752†	290709.1	1.066	mg/L	0.0057	1.066	mg/L	0.0057	0.53%
Fe 273.955†	2894.6	2.215	mg/L	0.0035	2.215	mg/L	0.0035	0.16%
K 766.490†	44154.9	21.50	mg/L	0.059	21.50	mg/L	0.059	0.27%
Mg 279.077†	1822.3	2.188	mg/L	0.0081	2.188	mg/L	0.0081	0.37%
Mn 257.610†	46743.0	1.025	mg/L	0.0043	1.025	mg/L	0.0043	0.42%
Mo 202.031†	18432.8	1.038	mg/L	0.0026	1.038	mg/L	0.0026	0.25%
Na 589.592†	703456.2	55.61	mg/L	0.290	55.61	mg/L	0.290	0.52%
Na 330.237†	1515.0	55.16	mg/L	0.300	55.16	mg/L	0.300	0.54%
Ni 231.604†	3903.4	1.122	mg/L	0.0046	1.122	mg/L	0.0046	0.41%
Pb 220.353†	16512.1	2.080	mg/L	0.0038	2.080	mg/L	0.0038	0.18%
Sb 206.836†	6032.5	2.132	mg/L	0.0024	2.132	mg/L	0.0024	0.11%
Se 196.026†	3112.8	2.039	mg/L	0.0037	2.039	mg/L	0.0037	0.18%
Si 288.158†	3173.8	2.179	mg/L	0.0104	2.179	mg/L	0.0104	0.48%
Sn 189.927†	4269.1	1.032	mg/L	0.0022	1.032	mg/L	0.0022	0.22%
Sr 421.552†	977683.1	1.115	mg/L	0.0025	1.115	mg/L	0.0025	0.22%
Ti 334.903†	22306.8	1.069	mg/L	0.0040	1.069	mg/L	0.0040	0.37%
Tl 190.801†	3797.7	2.044	mg/L	0.0038	2.044	mg/L	0.0038	0.18%
V 292.402†	129750.7	1.038	mg/L	0.0077	1.038	mg/L	0.0077	0.74%
Zn 206.200†	3873.9	1.122	mg/L	0.0038	1.122	mg/L	0.0038	0.34%

Sequence No.: 23
Sample ID: CB 8

Autosampler Location: 1
Date Collected: 8/29/2013 2:29:03 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	236.0 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	2803779.8	101.5	%	0.08				0.08%
ScR 361.383	325039.2	101.6	%	0.16				0.16%
Ag 328.068†	6.6	0.00003	mg/L	0.000066	0.00003	mg/L	0.000066	219.80%
Al 308.215†	7.6	0.00655	mg/L	0.005745	0.00655	mg/L	0.005745	87.77%
As 188.979†	-1.7	-0.00126	mg/L	0.001099	-0.00126	mg/L	0.001099	87.19%
B 249.677†	21.5	0.00335	mg/L	0.000849	0.00335	mg/L	0.000849	25.31%
Ba 233.527†	2.4	0.00047	mg/L	0.000799	0.00047	mg/L	0.000799	170.67%
Be 313.042†	93.9	0.00019	mg/L	0.000022	0.00019	mg/L	0.000022	11.46%
Ca 317.933†	2.2	0.00024	mg/L	0.000330	0.00024	mg/L	0.000330	135.45%
Cd 228.802†	8.2	0.00037	mg/L	0.000093	0.00037	mg/L	0.000093	25.37%
Co 228.616†	-2.3	-0.00007	mg/L	0.000081	-0.00007	mg/L	0.000081	123.47%
Cr 267.716†	-6.3	-0.00094	mg/L	0.001074	-0.00094	mg/L	0.001074	114.21%
Cu 324.752†	328.5	0.00121	mg/L	0.000108	0.00121	mg/L	0.000108	8.93%
Fe 273.955†	0.9	0.00066	mg/L	0.002574	0.00066	mg/L	0.002574	389.49%
K 766.490†	34.7	0.01689	mg/L	0.017018	0.01689	mg/L	0.017018	100.77%
Mg 279.077†	-3.4	-0.00401	mg/L	0.001465	-0.00401	mg/L	0.001465	36.54%
Mn 257.610†	21.6	0.00047	mg/L	0.000095	0.00047	mg/L	0.000095	20.15%
Mo 202.031†	30.9	0.00174	mg/L	0.000307	0.00174	mg/L	0.000307	17.59%
Na 589.592†	152.2	0.01203	mg/L	0.003296	0.01203	mg/L	0.003296	27.39%
Na 330.237†	0.1	0.00371	mg/L	0.279761	0.00371	mg/L	0.279761	>999.9%
Ni 231.604†	-1.4	-0.00040	mg/L	0.001443	-0.00040	mg/L	0.001443	358.92%
Pb 220.353†	-2.9	-0.00036	mg/L	0.000631	-0.00036	mg/L	0.000631	173.14%
Sb 206.836†	8.3	0.00296	mg/L	0.001386	0.00296	mg/L	0.001386	46.83%
Se 196.026†	-0.0	-0.00003	mg/L	0.004210	-0.00003	mg/L	0.004210	>999.9%
Si 288.158†	-0.5	-0.00035	mg/L	0.001261	-0.00035	mg/L	0.001261	363.88%
Sn 189.927†	-0.4	-0.00008	mg/L	0.000402	-0.00008	mg/L	0.000402	477.57%
Sr 421.552†	101.6	0.00012	mg/L	0.000036	0.00012	mg/L	0.000036	31.10%
Ti 334.903†	-7.9	-0.00038	mg/L	0.000533	-0.00038	mg/L	0.000533	139.65%
Tl 190.801†	2.0	0.00107	mg/L	0.000744	0.00107	mg/L	0.000744	69.40%
V 292.402†	11.5	0.00009	mg/L	0.000073	0.00009	mg/L	0.000073	82.14%
Zn 206.200†	-1.1	-0.00032	mg/L	0.000441	-0.00032	mg/L	0.000441	139.63%

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: XB89

8-27-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))*

DATE: 8/26813
ANALYST: KE 13:12 (A)

Instrumentation

Drying Ovens: 12
Muffle Furnace: 62790918520
Analytical Balance: 1123230597

Batch drying time

record times as mm/dd/yy hh:mm

8/26/2013 13:12	date/time in oven	KE
8/27/2013 5:54	date/time out	KE
elapsed hrs =	16.7	

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	8/26/13 12:44 KE	8/26/13 12:30 KE	8/27/13 6:11 KE					8/27/13 7:08 KE	8/27/13 8:02 KE				
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000					10.0000	10.0000				
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*					*Cal OK!*	*Cal OK!*				
SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.0663	1.0661			0.00		1.0661	1.0661	OK	0.00		
XB89 A2		6.8020	1.1127	3.6145			2.50	**43.97%**	3.3497	3.3399	OK	2.23	**109,761**	10.98%
XB89 A2 dup		6.8816	1.0456	3.6716			2.63	**45.00%**	3.3927	3.3833	OK	2.34	**109,787**	10.98%
							RPD =	2.30%				RPD =	0.02%	
XB89 A2 trp		7.1550	1.0645	3.8931			2.83	**46.44%**	3.6138	3.6056	OK	2.54	**101,640**	10.16%
							RSD =	2.75%				RSD =	4.39%	
XB89 B2		6.6582	1.1268	4.0195			2.89	**52.30%**	3.7952	3.7871	OK	2.66	**80,340**	8.03%
XB89 C2		9.5780	1.0776	5.8012			4.72	**55.57%**	5.5027	5.4929	OK	4.42	**65,268**	6.53%
XB89 D2		7.1282	1.1191	4.9821			3.86	**64.29%**						
XB89 E2		6.8013	1.1038	4.4217			3.32	**58.23%**						
XB89 F2		6.5562	1.0423	4.6026			3.56	**64.57%**						
XC04 A1		6.5209	1.1220	1.6470			0.53	**9.72%**	1.3432	1.3429	OK	0.22	**579,238**	57.92%
XC04 A1 dup		6.9391	1.0947	1.6512			0.56	**9.52%**	1.3246	1.3219	OK	0.23	**591,734**	59.17%
							RPD =	2.10%				RPD =	2.13%	

XB89:01670

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(3) 65209; 8-26-13 (W)
(2) 95780; 8-26-13 (W)
(A) (1) 8-27-13 (W)

Analyst: (W)	Date: 8-26-13	Oven ID: 012	Muffle ID: 627091852D		Balance ID: 1123230597
Time in Oven: 13:12		Time Out of Oven: 5:54		Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:	8-26-13 12:49	8-26-13 12:30	8-27-13 6:11				8-27-13 2:08	8-27-13 8:02	
Cal Weight (10.0000):	10.0000 (W)	10.0000 (W)	10.0000 (W)				10.0000 (A)	10.0000 (W)	

Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	1	Ø	1.0663	1.0661				1.0661	1.0661	
XB89 A2	2	6.8020	1.1127	3.6145			3.3497	~~3.35~~ (A)	3.3399	
A2	3	6.8816	1.0456	3.6716				3.3927	3.3833	
A2	4	7.1550	1.0645	3.8931				3.6138	3.6056	
B2	5	6.6582	1.1268	4.0195				3.7952	3.7871	
C2	6 (2)	~~6.8533~~	1.0776	5.8012			5.5027	~~5.40~~ (1)	5.4929	
D1	7	7.1282	1.1191	4.9821						
E1	8	6.8013	1.1038	4.4217						
F1	9	6.5562	1.0423	4.6026						
XC04 A1	10 (3)	~~6.5448~~	1.1220	1.6470				1.3432	1.3429	
A1	11	6.9391	1.0947	1.6512				1.3246	1.3219	

8-26-13 (W)

XB89 01137

3
8-27-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 8/26/2013

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* **ZnOAc PRES.** ANALYST: KE 13:36

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time			*TS (%) calculated as:*	*TVS (mg/kg dry wt) calculated as:*
record times as mm/dd/yy hh:mm			*Final dry wt (g) = (Dry Wt - Tare Wt)*	*Final ash wt (g) = (min ash wt - tare wt)*
8/26/2013 13:36	date/time in oven	KE	*TS = (Final Dry Wt)/ (grams Sample-Tare)*	*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
8/27/2013 5:54	date/time out	KE		*if ash wt > dry wt, "Chk for Err"*
elapsed hrs =	16.3			*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	8/26/13 13:30 KE	8/26/13 13:25 KE	8/27/13 6:18 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	(%)
Blank			1.1119	1.1118			0.00							
XB89 A1		6.0766	1.0666	3.4632			2.40	**47.84%**						
XB89 A1 dup		6.5099	1.0769	3.7631			2.69	**49.44%**						
							RPD =	3.30%				RPD =	NA	
XB89 A1 trp		6.5433	1.1380	3.8554			2.72	**50.27%**						
							RSD =	2.52%				RSD =	NA	
XB89 B1		7.8820	1.1249	4.4840			3.36	**49.71%**						
XB89 C1		7.2314	1.0994	4.3063			3.21	**52.30%**						
XC08 A3		6.3754	1.1301	5.2176			4.09	**77.93%**						
XC08 A3 dup		6.3664	1.0935	5.2389			4.15	**78.62%**						
							RPD =	0.88%				RPD =	NA	
XC08 B3		7.8979	1.1099	6.3928			5.28	**77.83%**						
XC08 C3		7.5861	1.1582	6.1308			4.97	**77.36%**						

XB89 : S16Z

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

ZnOAc Preserved

Analyst:	(W)	Date:	8-26-13	Oven ID:	012	Muffle ID:		Balance ID:	1123230597
Time in Oven:	13:36	Time Out of Oven:			5:54	Elapsed Time (> 12 Hrs):			

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		8-26-13 13:30	8-26-13 13:25	8-27-13 6:18						
Cal Weight (10.0000):		10.0000 (W)	10.0000 (D)	10.0000 (W)						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C 1	2	3	Dry Weight grams	Ash Weight 550°C 1	2	3
BLANK	1	Ø	1.1119	1.1118						
XB89 A1	2	6.0766	1.0666	3.4632						
" A1	3	6.5099	1.0769	3.7631						
" A1	4	6.5433	1.1380	3.8554						
B1	5	7.8820	1.1249	4.4840						
C1	6	7.2314	1.0994	4.3063						
XC08 A3	7	6.3754	1.1201	5.2176						
" A3	8	6.3464	1.0935	5.2389						
B3	9	7.8979	1.1099	6.3928						
C3	10	7.5861	1.1582	6.1308						

8-26-13 (D)

XB89 : 016973

Original Run Filename: OM_8-27-2013_12-11-41PM.OMN Created: 8/27/2013 12:11:41 PM
Original Run Author's Signature: [Ursula Walter]
Current Run Filename: 082713NH3B.omn Last Modified: 8/27/2013 1:01:46 PM
Current Run Author's Signature: [Ursula Walter]
Description: LACHAT1
ARI In-House Standards: 00139-01

Sample	Cup No.	Channel 1		Detection Time	MANUAL DILUTION FACTOR	
STD 1.0	S1	1	42.0371	8/27/2013@12:12:41 PM		
STD 0.8	S2	0.8	33.5083	8/27/2013@12:13:51 PM		
STD 0.5	S3	0.5	20.9759	8/27/2013@12:15:01 PM		
STD 0.2	S4	0.2	8.8591	8/27/2013@12:16:11 PM		
STD 0.05	S5	0.05	2.1554	8/27/2013@12:17:21 PM		
STD 0.02	S6	0.02	0.9139	8/27/2013@12:18:32 PM		
STD 0.01	S7	0.01	0.7662	8/27/2013@12:19:43 PM		
BLANK	S8	0	0.0529	8/27/2013@12:20:53 PM		
ICV ERA 040912	9	0.4839	20.4024	8/27/2013@12:22:03 PM		% R = 96.78
Known Conc:		0.5				
Calibration:		Table/Fig. : 1				
ICB	10	0.0016	0.2496	8/27/2013@12:28:00 PM		
Known Conc:		0				
LOW	11	0.0142	0.775	8/27/2013@12:33:56 PM		% R = 142.00
Known Conc:		0.01				
PREP BLK	12	0.0003	0.1944	8/27/2013@12:39:53 PM		
PREP CHK	13	10.1621	21.4141	8/27/2013@12:41:04 PM	20	% R = 101.62
						0.4 ml * 1000 ppm / 10 ml
XB89 A2	14	1.8554	15.6886	8/27/2013@12:42:15 PM	5	
XB89 A2 DUP	15	1.8422	15.5782	8/27/2013@12:43:25 PM	5	
XB89 A2 TRP	16	1.895	16.0191	8/27/2013@12:44:36 PM	5	

XB89 A2 MS	19	10.7498	22.6419	8/27/2013@12:45:46 PM	20	% R = 88.94
						0.4 ml * 1000 ppm / 10 ml
XB89 B2	20	1.385	29.1187	8/27/2013@12:46:57 PM	2	
XB89 C2	21	1.5337	32.2264	8/27/2013@12:48:08 PM	2	
~~KCL~~	~~8~~	~~0.0019~~	~~0.2646~~	8/27/2013@12:49:18 PM		
CCV	17	0.4852	20.4549	8/27/2013@12:50:29 PM		% R = 97.04
Known Conc:		0.5				
CCB	18	0.0009	0.2192	8/27/2013@12:56:26 PM		
Known Conc:		0				

Original Run Filename: OM_8-27-2013_12-11-41PM.OMN Created: 8/27/2013 12:11:41 PM
Original Run Author's Signature: [Ursula Walter]
Current Run Filename: 082713NH3B.omn Last Modified: 8/27/2013 1:01:46 PM
Current Run Author's Signature: [Ursula Walter]
Description: Default New Run

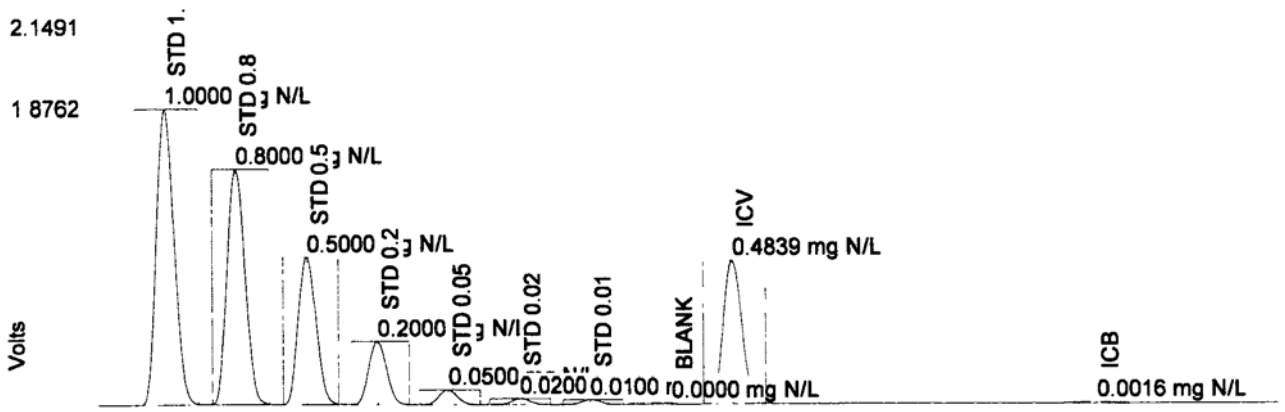
Sample	Cup No.	Channel 1 NH3 Conc. (mg N/L)	Channel 1 NH3 Area (V.s)	Detection Time	MDF
STD 1.0	S1	1.0000	42.0371	8/27/2013@12:12:41 PM	
STD 0.8	S2	0.8000	33.5083	8/27/2013@12:13:51 PM	
STD 0.5	S3	0.5000	20.9759	8/27/2013@12:15:01 PM	
STD 0.2	S4	0.2000	8.8591	8/27/2013@12:16:11 PM	
STD 0.05	S5	0.0500	2.1554	8/27/2013@12:17:21 PM	
STD 0.02	S6	0.0200	0.9139	8/27/2013@12:18:32 PM	
STD 0.01	S7	0.0100	0.7662	8/27/2013@12:19:43 PM	
BLANK	S8	0.0000	0.0529	8/27/2013@12:20:53 PM	
ICV	9	0.4839	20.4024	8/27/2013@12:22:03 PM	
Known Conc:		0.5000			
Calibration:		Table/Fig. : 1			
ICB	10	0.0016	0.2496	8/27/2013@12:28:00 PM	
Known Conc:		0.0000			
LOW	11	0.0142	0.7750	8/27/2013@12:33:56 PM	
Known Conc:		0.0100			
PREP BLK	12	0.0003	0.1944	8/27/2013@12:39:53 PM	
PREP CHK	13	10.1621	21.4141	8/27/2013@12:41:04 PM	20.00
XB89 A2	14	1.8554	15.6886	8/27/2013@12:42:15 PM	5.00
XB89 A2 DUP	15	1.8422	15.5782	8/27/2013@12:43:25 PM	5.00
XB89 A2 TRP	16	1.8950	16.0191	8/27/2013@12:44:36 PM	5.00
XB89 A2 MS	19	10.7498	22.6419	8/27/2013@12:45:46 PM	20.00
XB89 B2	20	1.3850	29.1187	8/27/2013@12:46:57 PM	2.00
XB89 C2	21	1.5337	32.2264	8/27/2013@12:48:08 PM	2.00
KCL	8	0.0019	0.2646	8/27/2013@12:49:18 PM	
CCV	17	0.4852	20.4549	8/27/2013@12:50:29 PM	
Known Conc:		0.5000			
CCB	18	0.0009	0.2192	8/27/2013@12:56:26 PM	
Known Conc:		0.0000			

XB89 : 01676

Author: UW

Date : 8/27/2013

Channel 1 - Set: 1 / 3



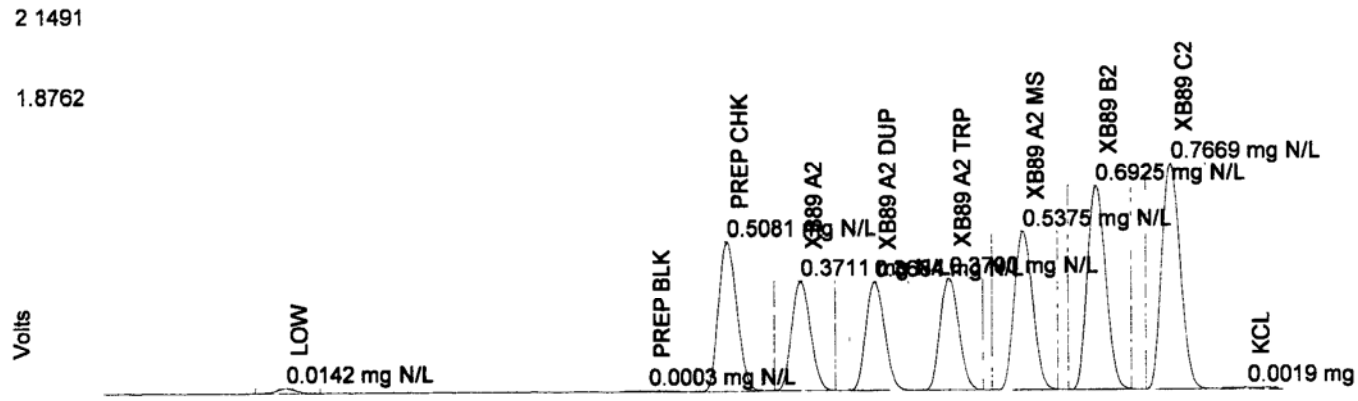
0.0000

117.9

Time : (s)

2511.8

Channel 1 - Set: 2 / 3



0 0000

2512.2

Time : (s)

4846 2

082713NH3B LACHAT1

XB89 : 01677

Channel 1 - Set: 3 / 3

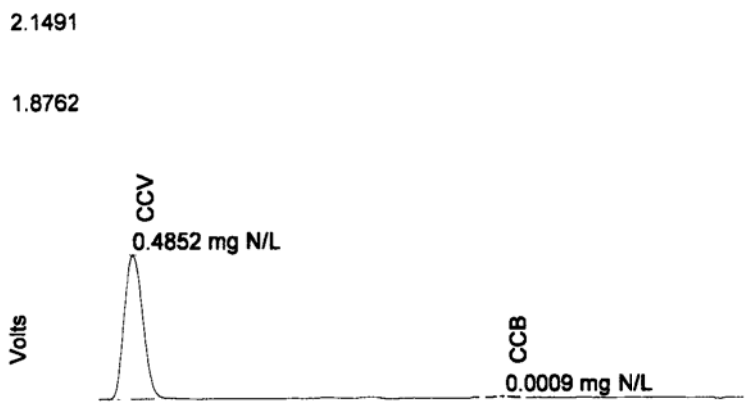
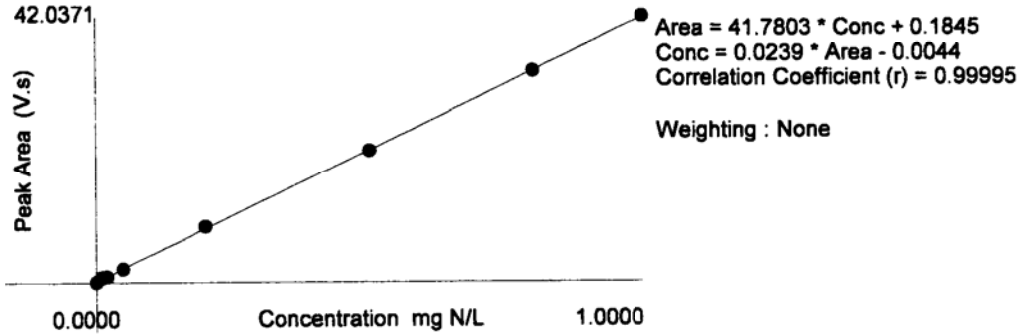


Table : 1 (NH3)

	Known Conc. (mg N/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg N/L)	Detection Date	Detection Time
1	1.0000	1	42.0371	0.9970	0.0	-0.2	1.0017	8/27/2013	12:12:41 PM
2	0.8000	1	33.5083	0.7953	0.0	0.3	0.7975	8/27/2013	12:13:51 PM
3	0.5000	1	20.9759	0.4966	0.0	0.5	0.4976	8/27/2013	12:15:01 PM
4	0.2000	1	8.8591	0.2111	0.0	-3.7	0.2076	8/27/2013	12:16:11 PM
5	0.0500	1	2.1554	0.0504	0.0	5.2	0.0472	8/27/2013	12:17:21 PM
6	0.0200	1	0.9139	0.0206	0.0	10.4	0.0175	8/27/2013	12:18:32 PM
7	0.0100	1	0.7662	0.0168	0.0	-27.2	0.0140	8/27/2013	12:19:43 PM
8	0.0000	1	0.0529	0.0034			-0.0031	8/27/2013	12:20:53 PM

Figure : 1 (NH3)



XB89 : 01678

KCl = 10205C

Soil Extraction Log

Parameter:

Date: 8-26-13

Analyst: W

Extraction Procedure: 4g sample + 40 ml KCl 2N, shaken 1hr, let settle + filtered.

Time	Sample ID	Sample Wt (grams)	Extract Vol (mL)	Spikes and Standards: Vol added (mL)	Conc of Std (mg/L)	Conc in Extract (mg/L)	Notes & Comments
13:08	P-Blk	-	40				
	P-CHk			0.4	1,000	10	ERA 040912
	XB89A2	4.27					
	A2dup	4.17					
	A7 mb	4.41					
	A2 mi	4.03		0.4	1,000	10	ARI 00139-01
	TL	4.10					
	C2	4.24					

8-26-13
W

XB89:01679

SULFIDE BENCHSHEET (Spectrophotometric, EPA 376.2)
Soils, sediments and solid phase samples

	Date Time	Analyst
Distillation	8/26/13 12:15	CDE
Finish	8/26/13 17:19	CDE

If distilled, specify Procedure: **PSEP**

ZnOAc: 10169c Balance: 19350128

1. Standardization of sodium thiosulfate titrant

Buret used for titrations: S2

Thiosulfate ID: **10187c**
Bi-iodate ID: **10096c**
Stock bi-iodate = **0.8116** grams to 1000 mL
Normality = **0.025**

Titration of bi-iodate with thiosulfate

mL bi-iodate =	3.00	3.00	3.00	
mL thiosulfate =	3.06	3.07	3.06	nthio
Normality thiosulfate = (mL bi-iodate*normbio) / mL thiosulfate =	0.024	0.024	0.024	**0.024**

2. Normality of Iodine

Iodine ID: **10151c**

Titration of Iodine with thiosulfate

mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	3.02	3.02	3.00	ni
Normality iodine = (mL thiosulfate*nthio) / mL iodine=	0.025	0.025	0.024	**0.025**

3. Standardization of Sodium Sulfide Stock

Stock ID = **00141-7**
Approx conc in 100ml
g Na2S = 0.7787 mg /mL = 1.040

Titration of standard with thiosulfate

mL Standard =	1.00	1.00	1.00	
mL iodine =	3.00	3.00	3.00	
mL thiosulfate =	1.04	1.04	1.04	stkconc (mg/mL)
Sulfide (mg/mL) = {[(mL iodine*ni)-(mL thio *nthio)]*16} / mL standard =	0.772	0.772	0.772	**0.772**

Intermediate Standard

Add 8.1 mL stk to 250 mL 0.01M NaOH = **0.025** mg/mL

mL required for for 0.025 mg/mL: 8.1

4. Calibration Standard Curve

spectrophotometer used:

Inter Std Volume (mL)	Final Volume (mL)	Calc Conc (mg S/L)	Absorbance @650 nm 1	Absorbance @650 nm 2	AVG ABS	mg/L
0.00	50	0.000	0.000		0.000	-0.002
0.10	50	0.050	0.031		0.031	0.046
0.25	50	0.125	0.083		0.083	0.128
0.50	50	0.250	0.162		0.162	0.252
1.00	50	0.500	0.322		0.322	0.504
2.00	50	1.001	0.637		0.637	0.999

RegressionData

intercept = 0.001
slope = 0.636
r = 1.0000

Comment: Calibration OK!

maxabs = 0.637

Calib Verif Std =	1.0	ml INT to	50	ml ZnOAc=	0.500	mg/l
Distillation Std =	1.0	ml stk to	100	=	7.72	mg/l

SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Abs @ 650 nm Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
ICB		na	na	1.00	0.000		-0.002	< 0.05	OK!
ICV		na	na	1.00	0.310		0.485	0.485	96.87%
Distilled samples									
Dist Blk	100.0	100%	100	1.00	0.004		0.004	< 0.05	OK!
Dist Chk	100.0	100%	100	10.00	0.528		0.827	8.273	107.13%
Soil Samples	**(grams)**	**% Solids**	**(mL)**		**Sample**	**Bkg**	**(mg/L)**	**mg/kg**	
XB89 A1	5.023	47.84%	100	100.00	0.518		0.812	3377.428	
XB89 A1 dup	5.021	47.84%	100	100.00	0.495		0.775	3228.326	RPD=4.51%
XB89 A1 trp	5.074	47.84%	100	100.00	0.480		0.752	3097.512	RSD=4.33%
XB89 A1 ms	5.049	47.84%	100	100.00	0.543		0.851	3522.659	45.42%
		Spike at	1.00	ml stock to	2.415	g dry wt =		319.726	mg/kg
XB89 B1	5.158	49.71%	100	100.00	0.468		0.733	2858.908	
XB89 C1	5.019	52.30%	100	100.00	0.436		0.683	2601.040	
XC08 A3	5.086	77.93%	100	1.00	0.004		0.004	< 1.263	
XC08 B3	5.273	77.83%	100	1.00	0.005		0.006	< 1.219	
Cal Blk		na	na	1.00	0.000		-0.002	< 0.05	OK!
CCV		na	na	1.00	0.316		0.494	0.494	98.76%
XB08 C3	5.036	77.36%	100	1.00	0.013		0.018	< 1.285	
Cal Blk		na	na	1.00	-0.002		-0.005	< 0.05	OK!
CCV		na	na	1.00	0.298		0.466	0.466	93.10%

XB89 : 01680

SULFIDE BENCHSHEET (Spectrophotometric, EPA 376.2)
Soils, sediments and solid phase samples

	Date Time	Analyst
Distillation	8-26-13 12:15	
Finish	8-26-13 17:19	

If distilled, specify Procedure: PSEP

ZnOAc: 10169 C Balance: 19350128

1. Standardization of sodium thiosulfate titrant

Buret used for titrations: S2

Thiosulfate ID: 10187 C
Bi-iodate ID: 10096 C
Stock bi-iodate = 0.3116 grams to 1000 mL
Normality =

Titration of bi-iodate with thiosulfate

mL bi-iodate =	3	3	3	
mL thiosulfate =	3.06	3.07	3.06	nthio
Normality thiosulfate = (mL bi-iodate*normbio) / mL thiosulfate =				

2. Normality of Iodine

Iodine ID: 10151 C

Titration of Iodine with thiosulfate

mL iodine =	3	3	3	
mL thiosulfate =	3.02	3.02	3.00	ni
Normality iodine = (mL thiosulfate*nthio) / mL iodine=				

3. Standardization of Sodium Sulfide Stock

Stock ID = 00141-7
Approx conc in 100ml
g Na2S = 0.7787 mg /mL = ≈1000

Titration of standard with thiosulfate

mL Standard =	1	1	1	
mL iodine =	3	3	3	
mL thiosulfate =	1.04	1.04	1.04	stkconc (mg/mL)
Sulfide (mg/mL) = {[(mL iodine*ni)-(mL thio *nthio)]*16} / mL standard =				

Intermediate Standard

Add 8.1 mL stk to 250 mL 0.01M NaOH =

mL required for for 0.025 mg/mL = mg/mL

4. Calibration Standard Curve

spectrophotometer used:

Inter Std Volume (mL)	Final Volume (mL)	Calc Conc (mg S/L)	Absorbance @650 nm 1	Absorbance @650 nm 2	AVG ABS	mg/L
0.00	50		0.000			
0.10	50		0.031			
0.25	50		0.083			
0.50	50		0.162			
1.00	50		0.322			
2.00	50		0.637			

RegressionData
intercept =
slope =
r =
Comment:
maxabs =

Calib Verif Std =	1.0	ml INT to	50	ml ZnOAc=		mg/l
Distillation Std =	1.0	ml stk to	100	=		mg/l

SAMPLE DATA

enter dilution as mL final/mL sample

SAMPLE ID	Distillation Data: SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Spectrophotometric Data: Dilution Factor	Abs @ 650 nm: Sample	Bkg	regressed Conc (mg S/L)	SAMPLE DATA: CORR CONC (ppm)	
ICB		na	na	1.00	0.000				
ICV		na	na	1.00	0.310				
Distilled samples									
Dist Blk	100.0	100%	100	1.00	0.004				
Dist Chk	100.0	100%	100	10.00	0.528				
Soil Samples	(grams)	% Solids	(mL)		Sample	Bkg	(mg/L)	mg/kg	
XB89 A1	5.023	47.84%	100	100x1.00	0.518				
A1 dup	5.021	~~0.00%~~	100	100x1.00	0.495				
A1 trp	5.074	~~0.00%~~	100	100x1.00	0.480				
A1 ms	5.049	~~0.00%~~	100	100x~~10.00~~	0.543				
		Spike at	1.00	ml stock to			g dry wt =		mg/kg
B1	5.158	49.71%	100	100x1.00	0.468				
C1	5.019	52.30%		100x1.00	0.436				
XC08 A3	5.096	77.93%		1.00	0.004				
B3	5.273	77.83%		1.00	0.005				
CCB				1.00	0.000				
CCV				1.00	0.316				
XC08 C3	5.036	77.36%	100	1.00	0.013				
CCB				1.00	-0.002				
CCV				1.00	0.298				

XB89:01681

SAMPLE DATA

enter dilution as mL final/mL sample

	Distillation Data			Spectrophotometric Data				SAMPLE DATA	
SAMPLE ID	SAMPLE SIZE	% Solids	TRAP VOLUME (ml)	Dilution Factor	Abs @ 650 nm Sample	Bkg	regressed Conc (mg S/L)	CORR CONC (ppm)	
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
				1.00					
Cal Blk		na	na	1.00					
CCV		na	na	1.00					

XB89:01682

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Sulfide Digestion Log

Balance ID: 19350128	Pretreatment Data							Sample Extraction Data						
Sample ID	Date	Sample Weight	Extract Method*	Acid	Required pH	mL DI Water	Observed mL acid	Date	Sample Weight	mL Acid Required	mL DI Water Required	Trap Volume (mL)	Spike ID	Spike Volume
Blank	NA	NA	PSEP	Mol+Al	<3	NA	NA	8-26-13	NA	NA	100	100	NA	NA
LCS													00141-7	1ml
XB89 A1									5.023		50		NA	NA
A1 +									5.021					
A1 + P									5.074					
A1 ms									5.049				00141-7	1ml
B1									5.158				NA	NA
C1									5.019					
XC08 A3									5.086					
B3									5.273					
C3									5.036					

8-26-13 cwl

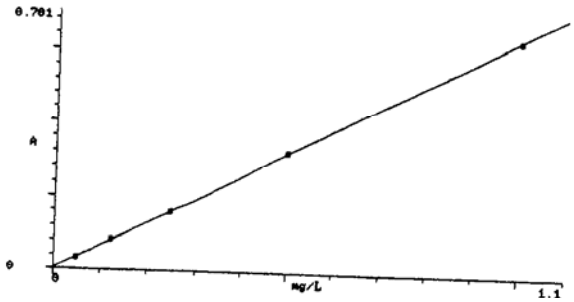
* Extract Methods: **PSEP** = PSEP; **9030A** = 9030A Acid Soluble; **9030AI** = 9030A acid insoluble; **AVS** = Acid Volatile; **Reactive** = SW-846 reactive

Analyst Name: CWC Date: 8-26-13 Time: 12:15

XB89 : 01683

TEST SETUP
GENESYS 10 v2.021 2G2G048006

Standard Curve	17:19 26Aug13
Test Name	SULFID
Date Standards Measured	26Aug13
Wavelength	650nm
Ref. Wavelength Correction	Off
Curve Fit	Linear
Number of Standards	6
Units	mg/L
ID# (0=OFF)	Off
Low/High Limits	0.050/1.000
Statistics	Off
Auto Print	On



Curve Fit	Linear
Slope	0.637
Intercept	0.00146
Std Dev	0.002
Corr Coeff	1.000

Conc. mg/L	Abs 650nm
0.000	0.000
0.050	0.031
0.125	0.083
0.250	0.162
0.500	0.322
1.000	0.637

8-26-13

TEST SETUP
GENESYS 10 v2.021 2G2G048006

Advanced A-%T-C	17:20 26Aug13
Test Name	SULFIDE[Saved]
Measurement Mode	Absorbance
Wavelength	650nm
Ref. Wavelength Correction	Off
Delay Time (min:sec)	0:00
ID# (0=OFF)	1
Low/High Limits	0.000/1.000
Statistics	Off
Auto Print	On

ID#	Abs 650nm
1	0.000
2	0.310
3	0.004
4	0.528
5	0.518
6	0.495
7	0.480
8	0.543
9	0.468
10	0.436
11	0.004
12	0.005
13	0.000
14	0.316
15	0.013
16	-0.002
17	0.298

XBB9 : 01684

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE:	8/26/2013
ANALYST:	KE 13:18

HCL 10% ID: _____

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID: _____

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.3840		13.3842	0.2 mg	
XB89 A2		+++-	13.3346	18.0996	15.9653	55.21%	
XB89 A2 dup		++++-	13.3602	18.9882	16.7418	60.09%	RPD = 8.46%
XB89 A2 trip		++++-	13.0956	19.6045	17.0137	60.20%	RSD = 4.87%
XB89 B2		++++-	13.4454	19.5220	17.3048	63.51%	
XB89 C2		+++++-	13.0223	19.9825	17.6659	66.72%	
XB89 D2		+++-	13.0188	19.4376	17.6549	72.23%	
XB89 E2		+-	12.9326	18.3260	16.4697	65.58%	
XB89 F2		+-	13.0065	20.1755	18.2488	73.12%	

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TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst 8-26-13 (N) 13:18 Date 8-26-13 (O) 8-26-13 (N)

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.3840	Ø	13.3842		
XB89 A2		+++-	13.3346	18.0996	15.9653		Very wet Soil + Rock
DUP A2		+++-	13.3602	18.9882	16.7418		
MS A2		+++-	13.0956	19.6045	17.0137		
B2		+++-	13.4454	19.5220	17.3048		
C2		+++-	13.0223	19.9825	~~17.6659~~ (1)	17.6659	
D1		++-	13.0188	19.4376	17.6549		Sand + Rock
E1		+-	12.9326	18.3260	16.4697		
F1		+-	13.0065	20.1755	18.2488		

XB89 : 01686

w
9-4-13

TOC, Solids Data Analysis

DATE: 9/3/2013
ANALYST: KE 5:58

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*
Balance ID:

Calibration Data

Cal Curve ID: 8/13/2013 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00136-09 *Curve Date:* 08/13/13
CalFact: 1.275E+05 *intercept:* 356790 *r2 :* 0.99788
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard Source: *ERA# 0409-12-01* *Conc:* 5,000 *ppm*
dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material Source: *NIST 8704* *Conc:* 33,510 *ppm*
Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition
9.4	14.6	17.1	15.8			14.2	23.9%	OK

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data: Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	Spike (µL Std)	Combustion Data: Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	1015	1,015	*101.50%*
Blank				1.00		40.0	-66.57	-67	*Blank OK*
NIST 1941B				1.00		1.0	27691	27,691	*92.61%*
XB89 A2				1.00		0.7	43012	43,012	*Range OK!*
XB89 A2 dup				1.00		0.7	42870	42,870	*RPD=0.3%*
XB89 A2 trp				1.00		0.7	37930	37,930	*RSD=7%*
XB89 A2 ms				1.00	10	0.7	75518	75,518	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.7*	*mg samp=*	*35,714*	*ppm*		*91%*	
XB89 B2				1.00		0.9	28281	28,281	*Range OK!*
XB89 C2				1.00		0.8	25836	25,836	*Range OK!*
XB89 D1				1.00		0.8	67483	67,483	*Range OK!*
~~XB89 E1~~			-	~~1.00~~		~~0.7~~	~~157361~~	~~157,361~~	~~*Offscale, dilute*~~
XB89 F1				1.00		0.8	49474	49,474	*Range OK!*
~~CCV~~			-	~~1.00~~		~~40.0~~	~~1302~~	~~1,302~~	~~*130.20%*~~
CCV				1.00		40.0	1050	1,050	*105.00%*
Blank				1.00		40.0	-68.42	-68	*Blank OK*

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
Silica Blanks 1				1.00		54.7	9.37	9	*Low Scale*
Silica Blanks 2				1.00		55.4	14.56	15	*Low Scale*
Silica Blanks 3				1.00		44.7	17.12	17	*Low Scale*
Silica Blanks 4				1.00		50.9	15.77	16	*Low Scale*
XB89 E1	22.5	222.8	89.90%	9.90		1.6	18022	178,331	*Range OK!*
XC37 A3	13.3	132.4	89.95%	9.95		1.6	13712	136,374	*Range OK!*
XC37 A3 dup	13.6	135.2	89.94%	9.94		1.6	7559	75,018	*RPD=31.8%*
XC37 A3 trp	13.4	132.8	89.91%	9.91		1.5	8783	86,917	*RSD=16.1%*
XC37 A3	13.3	132.4	89.95%	9.95		1.5	10395	103,354	*Range OK!*
XC37 A3 ms	13.3	132.4	89.95%	9.95	10	1.6	23494	233,753	*Range OK!*
Spike =	*0.025*	*mg C to*	*0.2*	*mg samp=*	*155,545*	*ppm*		*84%*	
NIST 1941B				1.00		1.0	29008	29,008	*97.02%*
CCV				1.00		40.0	1005	1,005	*100.50%*
Blank				1.00		40.0	-55.71	-56	*Blank OK*

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(1) 9-3-13 (W)

TOC Solids Sample Run Log
Apollo 9000

Set-Up Parameters MODE: NPOC				INLET: Boat Sampler	
Standards:	Source		Conc (ppm)	Analyst: (W)	
Calibration:	ARI – 00186-09		5000	Date: 9-3-13	
Verification:	ERA – 0409-12-01		5000 to 1000 for CVS	Time: 5:58	
SRM:	NBS (1941b) or 8704		Method: PSEP 1986-MOD	Balance ID	B146454145
Sample Sequence:					

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
NBS 1941 B			1.0			
XB89 A2			0.7			
dup A2			0.7			
dup A2			0.7			
ms A2			0.7	2500	10	
B2			0.9			
C2			0.8			
D1			0.8			
E1			0.7			Ascale Reset
F1			0.8			
CCV			40/40			
CCB			40			
SB 1			54.7			
2			55.4			
3			44.7			
4			50.9			
XB69 E1	22.5	222.8	1.6			
XC37 A3	13.3	132.4	1.6			
dup A3	13.6	135.2	1.6			
dup A3	13.4	132.8	1.5			
A3	13.3	~~220~~ (2)	1.5			
ms A3	13.3	132.4	1.6	2500	10	
NBS 1941 B			1.0			
CCV			40			
CCB			40			
			9-3-13 (W)			

(2) 132.4 - 9-3-13 (W)

XB89 01689

9-3-13 D

Detailed Analysis Report Print Date/Time: 2013/09/03 12:43:32

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030414
Timestamp: 2013/09/03 04:18
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1015.2318	40.6093	5534338	33.178	34.176	147

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030534
Timestamp: 2013/09/03 05:41
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-66.5682	-2.6627	17301	35.257	35.389	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030557
Timestamp: 2013/09/03 06:02
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27690.9980	27.6910	3887301	35.472	36.470	228

Sample ID: XB89 A2
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030634
Timestamp: 2013/09/03 06:38
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	43011.6484	30.1082	3838690	35.541	36.539	169

Sample ID: XB89 A2 DUP
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030647
Timestamp: 2013/09/03 06:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	42870.2852	30.0092	3826074	35.632	36.629	179

Sample ID: XB89 A2 TRIP
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030716
Timestamp: 2013/09/03 07:20
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	37930.0273	26.5510	3385167	35.829	36.823	197

Sample ID: XB89 A2 MS
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030724
Timestamp: 2013/09/03 07:27
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	75518.2188	52.8628	6739827	35.907	36.905	163

Sample ID: XB89 B2
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030736
Timestamp: 2013/09/03 07:40
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28281.0371	25.4529	3245165	35.926	36.924	171

Sample ID: XB89 C2
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030742
Timestamp: 2013/09/03 07:47
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25836.2363	20.6690	2635228	36.126	37.123	162

Sample ID: XB89 D1
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030749
Timestamp: 2013/09/03 07:54
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	67483.4688	53.9868	6883136	36.030	37.030	172

Sample ID: XB89 E1
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030810
Timestamp: 2013/09/03 08:15
Sample Type: Sample

9-3-13 (W) offsite result

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	157361.2188	110.1529	14044126	35.902	36.898	227

Sample ID: XB89 F1
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030818
Timestamp: 2013/09/03 08:21
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	49473.8828	39.5791	5046205	36.171	37.169	133

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030822
Timestamp: 2013/09/03 08:28
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1301.9877	52.0795	6996755	36.077	37.075	206

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030829
Timestamp: 2013/09/03 08:32
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning	Ending	Integration

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1050.3289	42.0132	5713329	36.215	37.213	148

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030833
Timestamp: 2013/09/03 08:36
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-68.4209	-2.7368	7852	36.223	36.147	120

Last Message: Low Sample Detected

Sample ID: Silica Blank 1
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030850
Timestamp: 2013/09/03 08:53
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9.3662	0.5123	65320	36.088	37.085	56

Sample ID: Silica Blank 2
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030857
Timestamp: 2013/09/03 08:59
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	14.5621	0.8067	102857	36.072	37.064	65

Sample ID: Silica Blank 3
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030909
Timestamp: 2013/09/03 09:11
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	17.1220	0.7654	97580	36.354	37.347	59

Sample ID: Silica Blank 4
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030916
Timestamp: 2013/09/03 09:18
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	15.7721	0.8028	102354	36.568	37.564	61

Sample ID: XB89 E1
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE
Mode: TOC
Filename: 09030939
Timestamp: 2013/09/03 09:45
Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	18021.5781	28.8345	3676307	39.995	41.643	300

Last Message: Max Integration Time Reached

Sample ID: XC37 A3
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Mode: TOC
Filename: 09030954
Timestamp: 2013/09/03 10:00

Operator ID: KE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	13711.6533	21.9386	2797105	44.534	46.103	300

Last Message: Max Integration Time Reached

Sample ID: XC37 A3 DUP Mode: TOC
Method: Boat Sampler Filename: 09031036
Cal. Curve: 081313 BOAT CURVE Timestamp: 2013/09/03 10:42
Operator ID: KE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	7559.3452	12.0950	1542067	46.910	47.906	94

Sample ID: XC37 A3 DUP Mode: TOC
Method: Boat Sampler Filename: 09031044
Cal. Curve: 081313 BOAT CURVE Timestamp: 2013/09/03 10:47
Operator ID: KE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8783.0723	13.1746	1679719	45.901	46.901	107

Sample ID: XC37 A3 [redacted] Mode: TOC
Method: Boat Sampler Filename: 09031053
Cal. Curve: 081313 BOAT CURVE Timestamp: 2013/09/03 10:56
Operator ID: KE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10394.9854	15.5925	1987990	44.685	45.673	101

Sample ID: XC37 A3 MS Mode: TOC
Method: Boat Sampler Filename: 09031133
Cal. Curve: 081313 BOAT CURVE Timestamp: 2013/09/03 11:36
Operator ID: KE Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23494.4414	37.5911	4792742	40.780	41.778	122

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 09031200
Cal. Curve: 081313 BOAT CURVE Timestamp: 2013/09/03 12:07
Operator ID: KE Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	29008.4141	29.0084	4055267	38.926	39.969	301

Last Message: Max Integration Time Reached

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 09031208
Cal. Curve: 081313 BOAT CURVE Timestamp: 2013/09/03 12:13
Operator ID: KE Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1004.6624	40.1865	5480436	38.730	39.726	147

XB89 : 01693

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: KE

Mode: TOC
Filename: 09031219
Timestamp: 2013/09/03 12:23
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-55.7055	-2.2282	72699	38.567	39.566	54

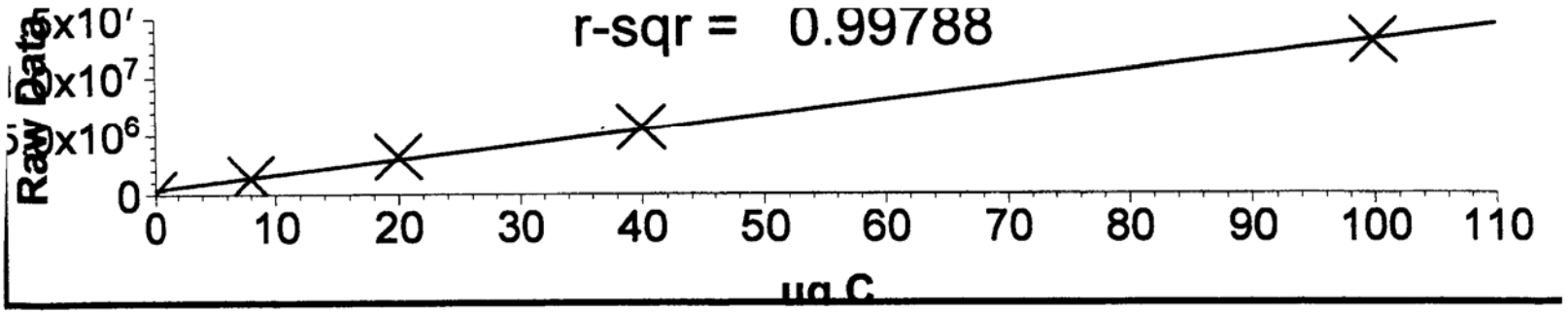
XB89:01694

Calibration Report Print Date/Time: 2013/08/13 18:24:44

Cal. Curve ID: 081313 BOAT CURVE
Created: 2013/08/13 17:11
Calibration Factor (m): 1.275e+05
Y Intercept (b): 356790
r-squared: 0.99788

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	64482	0.000	-2.293		2013/08/13 14:54
200 ppm	1326677	8.000	7.607		2013/08/13 15:30
500 ppm	3163671	20.000	22.015	Max Integrati	2013/08/13 15:57
1000 ppm	5678044	40.000	41.736		2013/08/13 16:33
2500 ppm	12970524	100.000	98.934		2013/08/13 17:10

XB89:01695


r-sqr = 0.99788
Raw Data
5x10'
2x10^7
1x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

XB89:01696

Detailed Analysis Report Print Date/Time: 2013/08/13 18:25:40

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131750
Timestamp: 2013/08/13 17:59
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27714.9473	24.9435	3536998	67.569	68.565	202

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131028
Timestamp: 2013/08/13 10:33
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	767.4015	30.6961	4514124	33.440	34.439	149

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131039
Timestamp: 2013/08/13 10:43
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	802.3360	32.0934	4708003	33.433	34.432	141

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131058
Timestamp: 2013/08/13 11:03
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	693.6705	27.7468	4104935	33.266	34.265	123

Last Message: Out of Calibration

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131136
Timestamp: 2013/08/13 11:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-37.3643	-1.4946	47860	35.555	35.709	120

Last Message: Low Sample Detected

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131147
Timestamp: 2013/08/13 11:57
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-16.8863	-0.6755	161508	36.324	37.919	120

Last Message: Low Sample Detected

XB89:01697

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 071513 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131245
Timestamp: 2013/08/13 12:50
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23539.8262	23.5398	3521238	50.610	51.609	224

Last Message: Out of Calibration

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131349
Timestamp: 2013/08/13 13:53
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			-15012	45.425	45.010	120

Last Message: Low Sample Detected

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131357
Timestamp: 2013/08/13 14:12
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			15815	44.055	43.522	120
2			-55955	43.545	42.585	120
3			8200	42.221	41.873	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: -10647 Std Dev: 39422 RSD: -370.28

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131416
Timestamp: 2013/08/13 14:28
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1117352	41.315	42.310	85
2			1134560	41.017	42.014	85
3			1140107	40.541	41.540	84

<<<Statistics>>> Mean: 1130673 Std Dev: 11865 RSD: 1.05

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131433
Timestamp: 2013/08/13 14:54
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			99654	40.011	41.008	63
2			28487	39.882	39.948	120
3			65304	40.325	41.325	56

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 64482 Std Dev: 35591 RSD: 55.19

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131459
Timestamp: 2013/08/13 15:30
Sample Type: TOC Standard

XBB9 01698

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1169757	41.578	42.577	112
2			1632388	48.023	50.646	300
3			1177885	51.940	52.936	115

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 1326677 Std Dev: 264785 RSD: 19.96

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131533
Timestamp: 2013/08/13 15:57
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			3149509	54.173	55.782	301
2			2845211	56.732	57.729	140
3			3496292	57.697	59.935	300

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 3163671 Std Dev: 325771 RSD: 10.30

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131602
Timestamp: 2013/08/13 16:16
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12155332	60.941	62.002	301
2			12255577	61.950	63.178	300

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 12205454 Std Dev: 70884 RSD: 0.58

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131617
Timestamp: 2013/08/13 16:33
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5802774	63.385	64.383	162
2			5628243	63.552	64.551	156
3			5603114	63.824	64.822	168

<<<Statistics>>> Mean: 5678044 Std Dev: 108748 RSD: 1.92

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131636
Timestamp: 2013/08/13 16:42
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12415252	64.307	65.306	198
2			-3394	64.802	64.621	16

Last Message: Canceled
<<<Statistics>>> Mean: 6205929 Std Dev: 8781309 RSD: 141.50

Sample ID: 2500 ppm
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD

Mode: TOC
Filename: 08131643
Timestamp: 2013/08/13 17:10
Sample Type: TOC Standard

XB89 01699

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			13139579	64.399	65.397	250
2			12680619	64.954	65.952	273
3			13091373	65.755	66.753	210

<<<Statistics>>> Mean: 12970524 Std Dev: 252219 RSD: 1.94

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131712
Timestamp: 2013/08/13 17:16
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1088.2834	43.5313	5906891	66.208	67.208	161

Sample ID: ICB/CCB BOAT
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131730
Timestamp: 2013/08/13 17:39
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-49.2956	-1.9718	105389	66.665	67.663	68

Sample ID: NBS 1941B
Method: Boat Sampler
Cal. Curve: 081313 BOAT CURVE
Operator ID: APD
Mode: TOC
Filename: 08131750
Timestamp: 2013/08/13 17:59
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27714.9473	24.9435	3536998	67.569	68.565	202

XB89:01700

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	XB89
Unacceptable Blank:	☐	Date of Event:	8-26-13
Unacceptable Duplicate:	☐	Client ID:	
Unacceptable Spike:	☒	Method/Element:	S
Unacceptable Reference:	☐	Prep Code:	

Details of Problem/Recommended Corrective Action:
Low M.S. Recovery of ≈ 45%

Samples Affected: XB89 A'

Corrective Action Taken: Sample concentration too high for spike concentration.

Data entered as-is.

Spike level low in comparison to the sample concentration [signature] 8/28/13

Analyst Initials: [signature]
Date: 8-26-13

Supervisor: [signature]
Date: 8/28/13

5049F

Revision 007
6/11/10

XB89 : 01701

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: XB89

Sample Number	IJ13-VC-102-2-4	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	99 89	99 17	98 48	97 38	93 97	83 14	67 35	51 75	43 53	36 14	31 21	21 36	14 78
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	28 4	19 5	11 7	8 5	6 1	3 1	1 3
Test Temperature	21 5"	3"	2'		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	45.23
Dry Wt & Tare	42.37
Wt Moisture	2 86
Wt Tare	1 88
Dry Soil	40 71
Moisture Content	0 070253009
Air Dry Total Sample	109 46
Oven Dry Total Samp	102 2821024
Air Dry Hydro Sample	65 17
Oven Dry Wt Hydro	60 89214368
Amount Plus #10	0 11
W (14 2) =	60 95770106

Sieve Analysis Portion						Hydrometer Analysis Portion							
Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing	Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
5"	9 99	0 00		0 00	100 00								
3"	9 99	0 00		0 00	100 00								
2"	9 99	0 00		0 00	100 00								
1 5"	9 99	0 00		0 00	100 00	1	52	4.0	78 85	7 8	37 50354	0 01345	1 001385
1	9 99	0 00		0 00	100 00	2	45	4 0	67 35	8 9	28 40827	0 01345	1 001385
3/4	9 99	0 00		0 00	100 00	5	35 5	4 0	51 75	10 5	19 47165	0 01345	1 001385
1/2	9 99	0 00		0 00	100 00	15	30 5	4 0	43 53	11 3	11 67325	0 01345	1 001385
3/8	9 99	0 00		0 00	100 00	30	26	4 0	36 14	12 0	8 519375	0 01345	1 001385
4	9.99	0 00		0 00	100 00	60	23	4 0	31 21	12 5	6 14592	0 01345	1 001385
10	10 1	0 11		0 11	99 89	250	17	4 0	21 36	13 5	3 12681	0 01345	1 001385
20	10 54	0 44	0 72	0 83	99 17	1440	13	4 0	14 78	14 2	1 33407	0 01345	1 001385
40	10 96	0 86	1 41	1 52	98 48								
60	11 63	1 53	2 51	2 62	97 38								
100	13 71	3 61	5 92	6 03	93 97								
200	20 31	10 21	16 75	16 86	83 14								

XDS3 : 5 1 /93

Sample Number	IJ13-VC-102-2-4	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	99 90	99 19	98 45	97 20	93 74	82 95	65 99	51 97	43 72	37 12	31 35	22 27	14 85
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	28 7	19 5	11 7	8 5	6 1	3 1	1 3
Test Temperature	21 5"	3"	2"		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	44 34
Dry Wt & Tare	41 48
Wt Moisture	2 86
Wt Tare	1 65
Dry Soil	39 83
Moisture Content	0 071805172
Air Dry Total Sample	116 81
Oven Dry Total Samp	108 9917287
Air Dry Hydro Sample	64 99
Oven Dry Wt Hydro	60 63602015
Amount Plus #10	0 11
W (14 2) =	60 69727893

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5"	10.75	0 00		0 00	100 00
3"	10.75	0 00		0 00	100 00
2"	10 75	0 00		0 00	100 00
1 5"	10.75	0 00		0 00	100 00
1	10 75	0 00		0 00	100 00
3/4	10 75	0 00		0 00	100 00
1/2	10.75	0 00		0 00	100 00
3/8	10 75	0 00		0 00	100 00
4	10.75	0 00		0 00	100 00
10	10 86	0 11		0 10	99 90
20	11.29	0 43	0 71	0 81	99 19
40	11 74	0 88	1 45	1 55	98 45
60	12 5	1 64	2 70	2 80	97 20
100	14 6	3 74	6 16	6 26	93 74
200	21.15	10 29	16 95	17 05	82 95

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	52.5	4	80 02	7 7	37 30537	0 01345	1 001385
2	44	4	65 99	9 1	28 668	0 01345	1 001385
5	35 5	4	51 97	10 5	19 47165	0 01345	1 001385
15	30 5	4	43 72	11 3	11 67325	0 01345	1 001385
30	26 5	4	37 12	12 0	8 490324	0 01345	1 001385
60	23	4	31 35	12 5	6 14592	0 01345	1 001385
250	17 5	4	22 27	13 4	3 117313	0 01345	1 001385
1440	13	4	14 85	14 2	1 33407	0 01345	1 001385

XB89 : 01764

Sample Number	IJ13-VC-102-2-4	100 00	100 00	100 00	100 00	100 00	100 00	100 00	100 00	99 95	99 84	99 15	98 56	97 42	94 13	83 60	67 16	51 60	42 59	36 85	31 12	22 93	14 74
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	28 4	19 5	11 7	8 5	6 1	3 1	1 3
Test Temperature	21 5"	3"	2"		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	42 5
Dry Wt & Tare	39 91
Wt Moisture	2 59
Wt Tare	1 65
Dry Soil	38 26
Moisture Content	0 06769472
Air Dry Total Sample	106 94
Oven Dry Total Samp	100 1698605
Air Dry Hydro Sample	65.17
Oven Dry Wt Hydro	61 03804651
Amount Plus #10	0 16
W (14 2) =	61 13569776

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5"	10 02	0 00		0 00	100 00
3"	10 02	0 00		0 00	100 00
2"	10.02	0 00		0 00	100 00
1 1/2"	10 02	0 00		0 00	100 00
1	10 02	0 00		0 00	100 00
3/4	10 02	0 00		0 00	100 00
1/2	10 02	0 00		0 00	100 00
3/8	10 02	0 00		0 00	100 00
4	10 07	0 05		0 05	99 95
10	10 18	0 16		0 16	99 84
20	10 6	0 42	0 69	0 85	99 15
40	10 96	0 78	1 28	1 44	98 56
60	11.66	1 48	2 42	2 58	97 42
100	13 67	3 49	5 71	5 87	94 13
200	20.11	9 93	16 24	16 40	83 60

Hydrometer Analysis Portion

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	52	4	78 62	7 8	37 50354	0 01345	1 001385
2	45	4	67 16	8 9	28 40827	0 01345	1 001385
5	35 5	4	51 60	10 5	19 47165	0 01345	1 001385
15	30	4	42 59	11 4	11 71551	0 01345	1 001385
30	26 5	4	36 85	12 0	8 490324	0 01345	1 001385
60	23	4	31 12	12 5	6 14592	0 01345	1 001385
250	18	4	22 93	13 3	3 107787	0 01345	1 001385
1440	13	4	14 74	14 2	1 33407	0 01345	1 001385

XB89 · 01705

Sample Number	IJ13-SS-102	100 00	100 00	100 00	100 00	100 00	94 89	87 72	84 44	76 07	67 05	59 50	55 07	49 90	43 50	35 78	35 15	33 47	30 55	28 45	25 94	16 32	10 04
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	28 1	18 1	10 8	7 8	5 6	3 0	1 3
Test Temperature	21 5"	3"		2"	1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	21 94
Dry Wt & Tare	18 39
Wt Moisture	3 55
Wt Tare	1 67
Dry Soil	16 72
Moisture Content	0 212320574
Air Dry Total Sample	216 7
Oven Dry Total Samp	189 6940799
Air Dry Hydro Sample	97 27
Oven Dry Wt Hydro	80 23455353
Amount Plus #10	62 50
W (14 2) =	119 6598129

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5"	10 3	0 00		0 00	100 00
3"	10 3	0 00		0 00	100 00
2"	10 3	0 00		0 00	100 00
1 5"	10 3	0 00		0 00	100 00
1	10 3	0 00		0 00	100 00
3/4	19 99	9 69		5 11	94 89
1/2	33.6	23 30		12 28	87 72
3/8	39.82	29 52		15 56	84 44
4	55.69	45 39		23 93	76 07
10	72.8	62 50		32 95	67 05
20	81.84	9 04	7 55	40 50	59 50
40	87.14	14 34	11 98	44 93	55 07
60	93.33	20 53	17 16	50 10	49 90
100	100 98	28 18	23 55	56 50	43 50
200	110.22	37 42	31 27	64 22	35 78

Hydrometer Analysis Portion

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	48 5	4	37 24	8 3	38 86242	0 01345	1 001385
2	46	4	35 15	8 8	28 14614	0 01345	1 001385
5	44	4	33 47	9 1	18 13124	0 01345	1 001385
15	40 5	4	30 55	9 7	10 79348	0 01345	1 001385
30	38	4	28 45	10 1	7 792311	0 01345	1 001385
60	35	4	25 94	10 6	5 642917	0 01345	1 001385
250	23 5	4	16 32	12 4	3 00101	0 01345	1 001385
1440	16	4	10 04	13 7	1 310715	0 01345	1 001385

XDOS: 61/69

Sample Number	IJ13-SS-101		100 00	100 00	100 00	100 00	100 00	100 00	94 93	91 23	84 58	73 95	61 40	49 33	38 01	29 48	23 98	23 30	22 07	21 25	20 43	18 80	11 85	7 77
			125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	31 5	20 1	11 7	8 3	6 0	3 1	1 3
Test Temperature		21 5"	3"		2"		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200						
Specific Gravity		2 65																						

Wet Wt & Tare	48.57
Dry Wt & Tare	42 14
Wt Moisture	6 43
Wt Tare	1 68
Dry Soil	40 46
Moisture Content	0 158922392
Air Dry Total Sample	235 76
Oven Dry Total Samp	210 9656238
Air Dry Hydro Sample	105
Oven Dry Wt Hydro	90 60140755
Amount Plus #10	54 95
W (14 2) =	122 5119767

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5"	10 22	0 00		0 00	100 00
3"	10 22	0 00		0 00	100 00
2"	10 22	0 00		0 00	100 00
1 5"	10 22	0 00		0 00	100 00
1	10 22	0 00		0 00	100 00
3/4	10.22	0 00		0 00	100 00
1/2	20.91	10 69		5 07	94 93
3/8	28 72	18 50		8 77	91 23
4	42.76	32 54		15 42	84 58
10	65 17	54 95		26 05	73 95
20	80.55	15 38	12 55	38 60	61 40
40	95.34	30 17	24 63	50 67	49 33
60	109 2	44 03	35 94	61 99	38 01
100	119 65	54 48	44 47	70 52	29 48
200	126.39	61 22	49 97	76 02	23 98

Hydrometer Analysis Portion

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	34	4	24 52	10 7	44 0477	0 01345	1 001385
2	32 5	4	23 30	11 0	31 50138	0 01345	1 001385
5	31	4	22 07	11 2	20 14521	0 01345	1 001385
15	30	4	21 25	11 4	11 71551	0 01345	1 001385
30	29	4	20 43	11 5	8 343551	0 01345	1 001385
60	27	4	18 80	11 9	5 982953	0 01345	1 001385
250	18.5	4	11 85	13 3	3 098233	0 01345	1 001385
1440	13.5	4	7 77	14 1	1 330206	0 01345	1 001385

XGSG-GTJ-J

Sample Number	IJ13-SS-151	100 00	100 00	100 00	100 00	100 00	100 00	92 65	84 83	75 76	65 97	54 90	44 08	33 64	26 06	21 13	20 81	19 40	17 99	16 93	12 70	9 52	6 35
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	31 3	20 1	11 8	8 4	6 2	3 1	1 3
Test Temperature	21 5"	3"	2"		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	55 37
Dry Wt & Tare	49 23
Wt Moisture	6 14
Wt Tare	1 68
Dry Soil	47 55
Moisture Content	0 129127234
Air Dry Total Sample	250.97
Oven Dry Total Samp	231 2691656
Air Dry Hydro Sample	105.75
Oven Dry Wt Hydro	93 65640715
Amount Plus #10	78 70
W (14 2) =	141 9673435

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5"	10 56	0 00		0 00	100 00
3"	10 56	0 00		0 00	100 00
2"	10 56	0 00		0 00	100 00
1 5"	10.56	0 00		0 00	100 00
1	10 56	0 00		0 00	100 00
3/4	10 56	0 00		0 00	100 00
1/2	27 55	16 99		7 35	92 65
3/8	45 64	35 08		15 17	84 83
4	66 63	56 07		24 24	75 76
10	89 26	78 70		34 03	65 97
20	104.97	15 71	11 07	45 10	54 90
40	120.34	31 08	21 89	55 92	44 08
60	135 16	45 90	32 33	66 36	33 64
100	145.92	56 66	39 91	73 94	26 06
200	152.92	63 66	44 84	78 87	21 13

Hydrometer Analysis Portion

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	36	4	22 57	10 4	43 36936	0 01345	1 001385
2	33.5	4	20 81	10 8	31 26519	0 01345	1 001385
5	31.5	4	19 40	11 1	20 07148	0 01345	1 001385
15	29.5	4	17 99	11 5	11 75761	0 01345	1 001385
30	28	4	16 93	11 7	8 402568	0 01345	1 001385
60	22	4	12 70	12 7	6 185991	0 01345	1 001385
250	17 5	4	9 52	13 4	3 117313	0 01345	1 001385
1440	13	4	6 35	14 2	1 33407	0 01345	1 001385

XB89:01708

Sample Number	IJ13-VC-101-2-3 9	100 00	100 00	100 00	100 00	100 00	100 00	95 73	95 73	93 80	89 65	83 41	76 20	66 80	54 00	42 58	36 51	27 38	22 82	19 56	15 65	10 43	7 82
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	31 6	21 0	12 4	8 9	6 4	3 2	1 4
Test Temperature	21 5"	3"	2"		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	57 05
Dry Wt & Tare	54.16
Wt Moisture	2 89
Wt Tare	1.67
Dry Soil	52 49
Moisture Content	0 055058106
Air Dry Total Sample	220
Oven Dry Total Samp	209 6517335
Air Dry Hydro Sample	72 64
Oven Dry Wt Hydro	68 84928855
Amount Plus #10	21 70
W (14 2) =	76 79829511

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5	10.48	0 00		0 00	100 00
3	10 48	0 00		0 00	100 00
2	10 48	0 00		0 00	100 00
1 5	10 48	0 00		0 00	100 00
1	10 48	0 00		0 00	100 00
3/4	10 48	0 00		0 00	100 00
1/2	19.43	8 95		4 27	95 73
3/8	19 43	8 95		4 27	95 73
4	23 47	12 99		6 20	93 80
10	32.18	21 70		10 35	89 65
20	36.97	4 79	6 24	16 59	83 41
40	42 51	10 33	13 45	23 80	76 20
60	49.73	17 55	22 85	33 20	66 80
100	59.56	27 38	35 65	46 00	54 00
200	68.33	36 15	47 07	57 42	42 58

Hydrometer Analysis Portion

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	36	4	41 73	10 4	43 36936	0 01345	1 001385
2	32	4	36 51	11 1	31 61881	0 01345	1 001385
5	25	4	27 38	12 2	21 00972	0 01345	1 001385
15	21 5	4	22 82	12 8	12 41186	0 01345	1 001385
30	19	4	19 56	13 2	8 916159	0 01345	1 001385
60	16	4	15 65	13 7	6 421168	0 01345	1 001385
250	12	4	10 43	14 3	3 220236	0 01345	1 001385
1440	10	4	7 82	14 7	1 357024	0 01345	1 001385

XEROX 6R 1599

Sample Number	IJ13-VC-102-4-5 4	100 00	100 00	100 00	100 00	100 00	94 23	90 36	88 60	87 26	84 92	79 48	75 53	71 02	61 53	49 54	43 87	38 78	33 06	24 16	20 34	15 26	11 44
		125000	75000	50000	37500	25000	19000	12500	9500	4750	2000	850	425	250	150	75	30 1	19 6	11 7	8 7	6 3	3 1	1 3
Test Temperature	21 5"	3"	2"		1 5"	1"	3/4"	1/2"	3/8"	4	10	20	40	60	100	200							
Specific Gravity	2 65																						

Wet Wt & Tare	60 01
Dry Wt & Tare	57 35
Wt Moisture	2 66
Wt Tare	1 68
Dry Soil	55 67
Moisture Content	0 04778157
Air Dry Total Sample	235 17
Oven Dry Total Samp	226 000228
Air Dry Hydro Sample	70.07
Oven Dry Wt Hydro	66 87462541
Amount Plus #10	34 09
W (14 2) =	78 75390878

Sieve Analysis Portion

Sieve Size	Weight of Soil + Tare	Total Weight of Soil		Percent Retained	Percent Passing
5	10 59	0 00		0 00	100 00
3	10 59	0 00		0 00	100 00
2	10 59	0 00		0 00	100 00
1 5	10 59	0 00		0 00	100 00
1	10 59	0 00		0 00	100 00
3/4	23.62	13 03		5 77	94 23
1/2	32 38	21 79		9 64	90 36
3/8	36 35	25 76		11 40	88 60
4	39 38	28 79		12 74	87 26
10	44.68	34 09		15 08	84 92
20	48.96	4 28	5 43	20 52	79 48
40	52 07	7 39	9 38	24 47	75 53
60	55 62	10 94	13 89	28 98	71 02
100	63.1	18 42	23 39	38 47	61 53
200	72 54	27 86	35 38	50 46	49 54

Hydrometer Analysis Portion

Time	Hydro Reading	Comp Correct	Percent Finer	"L"	D	K	a
1	42	4	48 32	9 4	41 2675	0 01345	1 001385
2	38 5	4	43 87	10 0	30 05644	0 01345	1 001385
5	34 5	4	38 78	10 6	19 62333	0 01345	1 001385
15	30	4	33 06	11 4	11 71551	0 01345	1 001385
30	23	4	24 16	12 5	8 691644	0 01345	1 001385
60	20	4	20 34	13 0	6 265364	0 01345	1 001385
250	16	4	15 26	13 7	3 145717	0 01345	1 001385
1440	13	4	11 44	14 2	1 33407	0 01345	1 001385

XBCS 9LL9

ANALYTICAL RESOURCES, INC.

ATTERBERG LIMIT DETERMINATION - ASTM D 4318

ARI Job No.: XB89 Set-Up Date: 8/28/13 Initials: ML JG Grooving Tool ID: 1458

Test Date: 8/29/13 Initials: JG Liq.Limit Device ID: 1388

	ARI Sample ID: A			ARI Sample ID: B			ARI Sample ID: C			ARI Sample ID: D			ARI Sample ID: E		
	Client Sample ID:			Client Sample ID:			Client Sample ID:			Client Sample ID:			Client Sample ID:		
	Sample Description: Black Silt w/ organics			Sample Description: Black Silt w/ organics			Sample Description: Black Silt w/ organics			Sample Description:			Sample Description: Silty-Clay		
	Through #40: ~~Y/N~~ Y			Through #40: ~~Y/N~~ Y			Through #40: ~~Y/N~~ Y			Through #40: ~~Y/N~~ N			Through #40: ~~Y/N~~ N		
	Crucible #: Snake			Crucible #: F			Crucible #: Violet			Crucible #: NO			Crucible #: Turin		
LIQUID LIMIT															
No. of Blows	17	25	31	33	28	20	17	33	29	21	34	29	16	28	31
Tare #	A1	A2	A3	B-1	B-2	B-3	C1	C2	C3	D-1	D-2	D-3	E1	E2	E3
Tare Wt.	2.66	2.66	2.65	2.62	2.62	2.63	2.62	2.62	2.64	2.64	2.61	2.64	2.63	2.65	2.65
Wet Wt. + Tare	9.63	11.72	10.31	10.19	14.56	19.79	14.55	13.27	13.22	20.55	15.94	18.68	15.21	15.20	15.77
Dry Wt. + Tare	6.97	8.48	7.62	7.90	11.01	14.53	10.84	10.04	10.08	14.24	11.81	13.65	10.15	10.44	10.83
PLASTIC LIMIT															
Tare #	A4	A5		B-4	B-5		C4	C5		D-4	D-5		E4	E5	
Tare Wt.	2.64	2.66		2.64	2.63		2.65	2.64		2.62	2.64		2.62	2.62	
Wet Wt. + Tare	7.01	8.61		4.95	5.53		9.34	7.88		4.29	3.31		6.07	7.34	
Dry Wt. + Tare	5.92	7.13		4.49	4.91		7.97	6.77		3.88	3.16		5.04	6.01	
ORGANIC LIQUID LIMIT			Natural Moisture Content			Natural Moisture Content			Natural Moisture Content			Natural Moisture Content			Natural Moisture Content
No. of Blows															
Tare #															
Tare Wt.															
Wet Wt. + Tare															
Dry Wt. + Tare															

*See page 3 of 4 for redos gc 9/5/13

1105F
Atterberg Limits Determination

Rev. 001
9/17/12

XB89 : 01711

ANALYTICAL RESOURCES, INC.

ATTERBERG LIMIT DETERMINATION - ASTM D 4318

ARI Job No.: XB89 Set-Up Date: 8/28/13 Initials: ML Grooving Tool ID: 1458

Test Date: 8/29/13 Initials: JC Liq.Limit Device ID: 1388

	ARI Sample ID: F			ARI Sample ID:			ARI Sample ID:			ARI Sample ID:			ARI Sample ID:		
	Client Sample ID:			Client Sample ID:			Client Sample ID:			Client Sample ID:			Client Sample ID:		
	Sample Description: Sandy Silt			Sample Description:			Sample Description:			Sample Description:			Sample Description:		
	Through #40: Y/N			Through #40: Y/N			Through #40: Y/N			Through #40: Y/N			Through #40: Y/N		
	Crucible #: WH			Crucible #:			Crucible #:			Crucible #:			Crucible #:		
LIQUID LIMIT															
No. of Blows	*		qc *												
Tare #	F-1	F-2	F-3 qc												
Tare Wt.	2.62	2.62	2.634												
Wet Wt. + Tare	17.04	12.37	13.19												
Dry Wt. + Tare	12.56	9.45	10.09												
PLASTIC LIMIT															
Tare #	F-4	F-5													
Tare Wt.	2.65	2.65													
Wet Wt. + Tare	6.12	7.71													
Dry Wt. + Tare	5.40	6.63													
ORGANIC LIQUID LIMIT			Natural Moisture Content			Natural Moisture Content			Natural Moisture Content			Natural Moisture Content			Natural Moisture Content
No. of Blows															
Tare #															
Tare Wt.															
Wet Wt. + Tare															
Dry Wt. + Tare															

* see page 3 of 4 and 4 of 4 for redos. qc 9/6/13

XB89:01712

1105F
Atterberg Limits Determination

Rev. 001
9/17/12

ANALYTICAL RESOURCES, INC.

ATTERBERG LIMIT DETERMINATION - ASTM D 4318

ARI Job No.: XB89 Set-Up Date: 8/28/13, 8/29/2/13 Initials: JC Grooving Tool ID: 1459

Test Date: 9/3/13, 9/5/13 Initials: JC Liq.Limit Device ID: 1389

	RE-DO	RE-DO	REDO	REDO	REDO
ARI Sample ID:	D	F	A	B	C
Client Sample ID:					
Sample Description:	SANDY SILT				
Through #40:	Y (N)	Y (N)	(Y)/N	(Y)/N	(Y)/N
Crucible #:	NO	WH			
LIQUID LIMIT					
No. of Blows	25	29 21 35	23	28 JQ	31
Tare #	RD-1	F-1 F-2 F-3	RA1	RB1 RB2	RC1
Tare Wt.	2.63	2.64 2.64 2.66	2.65	2.63	2.65
Wet Wt. + Tare	15.18	19.52 17.92 17.70	8.39	13.10	13,36
Dry Wt. + Tare	11.29	14.87 13.45 13.46	6.38	10.01	10.24
PLASTIC LIMIT					
Tare #	D-1 D-2			RB2 RB3	
Tare Wt.	2.61 2.64			2.64 2.63	
Wet Wt. + Tare	5.80 6.44			5.79 4.76	
Dry Wt. + Tare	5.06 5.54			5.16 4.32	
ORGANIC LIQUID LIMIT	Natural Moisture Content	Natural Moisture Content	Natural Moisture Content	Natural Moisture Content	Natural Moisture Content
No. of Blows					
Tare #					
Tare Wt.					
Wet Wt. + Tare					
Dry Wt. + Tare					

* See page 4 of 4 for F redos. jc 9/6/13

XB89 : 9/17/13

ANALYTICAL RESOURCES, INC.

ATTERBERG LIMIT DETERMINATION - ASTM D 4318

ARI Job No.: XB89 Set-Up Date: 8/28/13 Initials: JG Grooving Tool ID: 1458

Test Date: 9/5/13 Initials: JG Liq.Limit Device ID: 1388

	REDO ARI Sample ID: E	REDO ARI Sample ID: F	ARI Sample ID:	ARI Sample ID:	ARI Sample ID:
	Client Sample ID:	Client Sample ID:	Client Sample ID:	Client Sample ID:	Client Sample ID:
	Sample Description:	Sample Description:	Sample Description:	Sample Description:	Sample Description:
	Through #40: Y/N	Through #40: Y/N	Through #40: Y/N	Through #40: Y/N	Through #40: Y/N
	Crucible #:	Crucible #:	Crucible #:	Crucible #:	Crucible #:
No. of Blows	22	28			
Tare #	RE-1 RE-E	RE-1			
Tare Wt.	2.64	2.64			
Wet Wt. + Tare	18.12 NO	14.09			
Dry Wt. + Tare	12.01	10.84			
PLASTIC LIMIT					
Tare #	RE-2 RE-3				
Tare Wt.	2.64 2.63				
Wet Wt. + Tare	6.62 7.58				
Dry Wt. + Tare	5.48 6.26				
ORGANIC LIQUID LIMIT					
No. of Blows					
Tare #					
Tare Wt.					
Wet Wt. + Tare					
Dry Wt. + Tare					

Natural Moisture Content

XB89 : 9/17/14

ANALYTICAL RESOURCES, INC.

MOISTURE CONTENT DETERMINATION – ASTM D2216

ARI Job No.: XB89 **Tested by:** ML, JG

In Oven Date: 8/28/13 **Out Oven Date:** 8/29/13

ARI Sample ID	Tare #	Wt. Tare (g)	Wt. Wet Soil + Tare (g)	Wt. Dry Soil + Tare (g)	MC %
A	A	1.64	100.69	49.32	
~~B~~ ML					
B	B	1.63	129.16	70.79	
C	C	1.68	163.39	99.42	
D	D	1.68	100.70	64.20	
E-1	E-1	1.68	62.69	36.54	
E-2	E-2	1.68	70.94	41.42	
E-3	E-3	1.67	67.63	39.26	
F	~~[illegible]~~ F	1.68	142.71	97.66	

XB89:01715

1103F B
Moisture Content

Rev. 001
7/10/13

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB889 ARI Sample ID: E-1 Setup Date: 8/29/13 Technician: ML
Sample Description: silty-clay, ORGANIC DEBRIS, SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [~~✓~~] Whole Sample [ ]

Tare Number	E-1
Tare Weight (g)	~~10.39~~ 9.99
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	119.45
Hydro Test Sample Weight (g) (not including beaker weight)	65.17
Tare + Oven-Dried #10 Washed (g)	10.12
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	22.33

Hygroscopic Moisture Content	
Tare Number	E-1
Tare Weight (g)	1.66
Wet Soil + Tare (g)	42.5.23 JA
Dry Soil + Tare (g)	42.37

Hydro Beaker: DT Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JA
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [ ] Whole Sample [X]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JA

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
10:01:00	START			
10:02:00	1	52	4	21
10:03:00	2	45	4	21
10:06:00	5	35.5	4	21
10:16:00	15	30.5	4	21
10:31:00	30	26	4	21
11:01:00	60	23	4	21.5
14:11:00	250	17	4	21.5
10:01:00	1440	13	4	21
10:01:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 3 Technician: CSZ

Sieve Size	Cumulative Weight (g)	
Empty Tare	9.99	
2"		-20
1 1/2"		
1"		-20
3/4"		
1/2"		
3/8"		
#4		
#10	10.10	
#20	10.54	
#40	10.96	
#60	11.63	
#100	13.71	
#200	20.31	
Pan	22.58	

XB89:01716

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB89 ARI Sample ID: E-2 Setup Date: 8/28/13 Technician: ML
Sample Description: Silty - Clay, ORGANIC DEBRIS, SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [X] Whole Sample [ ]

Tare Number	E-2
Tare Weight (g)	10.74
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	127.55
Hydro Test Sample Weight (g) (not including beaker weight)	64.99
Tare + Oven-Dried #10 Washed (g)	10.85
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	23.21

Hygroscopic Moisture Content	
Tare Number	E-2
Tare Weight (g)	1.65
Wet Soil + Tare (g)	44.34
Dry Soil + Tare (g)	41.48

Hydro Beaker: CQ Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JA
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [X] Whole Sample [ ]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JA

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
10:08:00	**START**			
10:09:00	**1**	52.5	4	21
10:10:00	**2**	44	4	21
10:13:00	**5**	35.5	4	21
10:23:00	**15**	30.5	4	21
10:38:00	**30**	26.5	4	21
11:08:00	**60**	23	4	21.5
14:18:00	**250**	17.5	4	21.5
10:08:00	**1440**	13	4	21
10:08:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 4 Technician: CJZ

Sieve Size	Cumulative Weight (g)
Empty Tare	10.75
2"	
1 1/2"	
1"	
* 3/4"	
1/2"	
3/8"	
#4	
#10	10.86
#20	11.29
#40	11.74
#60	12.50
#100	14.60
#200	21.15
Pan	23.51

-25
~~-50~~
-0

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB89 ARI Sample ID: E-3 Setup Date: 6/29/13 Technician: ML
Sample Description: Silty Clay, ORGANIC DEBRIS, SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [✓] Whole Sample [ ]

Tare Number	E-3
Tare Weight (g)	10.01
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	116.95
Hydro Test Sample Weight (g) (not including beaker weight)	65.17
Tare + Oven-Dried #10 Washed (g)	10.12
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	21.48

Hygroscopic Moisture Content	
Tare Number	E-3
Tare Weight (g)	1.65
Wet Soil + Tare (g)	42.50
Dry Soil + Tare (g)	39.91

Hydro Beaker: DY Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JC
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [ ] Whole Sample [X]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JC

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
10:15:00	START			
10:16:00	1	52	4	21
10:17:00	2	45	4	21
10:20:00	5	35.5	4	21
10:30:00	15	30	4	21
10:45:00	30	26.5	4	21
11:15:00	60	23	4	21.5
14:25:00	250	18	4	21.5
10:15:00	1440	13	4	21
10:15:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 3 Technician: CSZ

Sieve Size	Cumulative Weight (g)	
Empty Tare	10.02	
2"		
1 1/2"		-25
1"		
3/4"		
1/2"		-25
3/8"		
#4	10.07	
#10	10.18	
#20	10.60	
#40	10.96	
#60	11.66	
#100	13.67	
#200	20.11	
Pan	21.68	

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB989 ARI Sample ID: A Setup Date: 8/28/13 Technician: ML
Sample Description: Black Silt with organics, SHELLS & SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [ ] Whole Sample [ ]

Tare Number	A
Tare Weight (g)	10.14
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	226.88
Hydro Test Sample Weight (g) (not including beaker weight)	97.27
Tare + Oven-Dried #10 Washed (g)	75.21
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	110.39

Hygroscopic Moisture Content	
Tare Number	A
Tare Weight (g)	1.67
Wet Soil + Tare (g)	21.94
Dry Soil + Tare (g)	18.39

Hydro Beaker: DS Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JC
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [ ] Whole Sample [X]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JC

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
9:33:00	**START**			
9:34:00	**1**	48.5	4	21
9:35:00	**2**	46	4	21
9:38:00	**5**	44	4	21
9:48:00	**15**	40.5	4	21
10:03:00	**30**	38	4	21
10:33:00	**60**	35	4	21.5
13:43:00	**250**	23.5	4	21.5
9:33:00	**1440**	16	4	21
9:33:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 3 Technician: ML, CSZ

Sieve Size	Cumulative Weight (g)	
Empty Tare	10.30	
2"		
1 1/2"		
1"		
3/4"	19.99	
1/2"	33.60	
3/8"	39.92	
#4	55.69	-20
#10	72.80	-20
#20	81.84	-20
#40	87.14	-20
#60	93.33	-20
#100	100.98	-20
#200	110.22	
Pan	111.21	

...39 : 01719

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB891 ARI Sample ID: B Setup Date: 8/29/13 Technician: ML
Sample Description: Biscuit Silt w/ organics, SHELLS & SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [~~✓~~] Whole Sample [ ]

Tare Number	B
Tare Weight (g)	10.12
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	245.88
Hydro Test Sample Weight (g) (not including beaker weight)	~~*99.18~~ 105.00 (gc)
Tare + Oven-Dried #10 Washed (g)	68.23
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	126.41

Hygroscopic Moisture Content	
Tare Number	B
Tare Weight (g)	1.68
Wet Soil + Tare (g)	48.57
Dry Soil + Tare (g)	42.14

Hydro Beaker: BF Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JC
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [X] Whole Sample [ ]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JC

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
9:40:00	**START**			
9:41:00	**1**	34	4	21
9:42:00	**2**	32.5	4	21
9:45:00	**5**	31	4	21
9:55:00	**15**	30	4	21
10:10:00	**30**	29	4	21
10:40:00	**60**	27	4	21.5
13:50:00	**250**	18.5	4	21.5
9:40:00	**1440**	13.5	4	21
9:40:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 4 Technician: CSZ

Sieve Size	Cumulative Weight (g)
Empty Tare	~~10.22~~
2"	
1 1/2"	
1"	
3/4"	
1/2"	20.91
3/8"	28.72
#4	42.76
#10	65.17
#20	80.55
#40	95.34
#60	109.20
#100	119.65
#200	126.39
Pan	127.16

-10 -10 -10 -10 -10

*curve fitting required. gc 9/10/13

XB89:01720

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB89 ARI Sample ID: C Setup Date: 8/28/13 Technician: MM
Sample Description: black silt with organics, SHELLS & SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [~~4~~] Whole Sample [ ]

Tare Number	C
Tare Weight (g)	10.52
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	261.49
Hydro Test Sample Weight (g) (not including beaker weight)	105.75
Tare + Oven-Dried #10 Washed (g)	91.65
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	153.02

Hygroscopic Moisture Content	
Tare Number	C
Tare Weight (g)	1.68
Wet Soil + Tare (g)	55.37
Dry Soil + Tare (g)	49.23

Hydro Beaker: DQ Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JC
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [ ] Whole Sample [X]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JC

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
9:47:00	**START**			
9:48:00	**1**	36	4	21
9:49:00	**2**	33.5	4	21
9:52:00	**5**	31.5	4	21
10:02:00	**15**	29.5	4	21
10:17:00	**30**	26	4	21
10:47:00	**60**	22	4	21.5
13:57:00	**250**	17.5	4	21.5
9:47:00	**1440**	13	4	21
9:47:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 3 Technician: CJZ

Sieve Size	Cumulative Weight (g)	
Empty Tare	10.56	
2"		
1 1/2"		
1"		
3/4"		-10
1/2"	~~27.55~~	-10
3/8"	45.64	-10
#4	66.63	-10
#10	89.26	-10
#20	104.97	
#40	120.34	
#60	135.16	
#100	145.92	
#200	152.92	
Pan	153.51	

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB889 ARI Sample ID: D Setup Date: 8/28/13 Technician: ML
Sample Description: Sandy- Silt, ORGANICS, SHELL FRAGMENTS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [✓] Whole Sample [ ]

Tare Number	D
Tare Weight (g)	10.39
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	230.39
Hydro Test Sample Weight (g) (not including beaker weight)	72.64
Tare + Oven-Dried #10 Washed (g)	33.89
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	68.77

Hygroscopic Moisture Content	
Tare Number	D
Tare Weight (g)	1.67
Wet Soil + Tare (g)	57.05
Dry Soil + Tare (g)	54.16

Hydro Beaker: DV Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JC
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [✓] Whole Sample [ ]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JC

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
9:54:00	START			
9:55:00	1	36	4	21
9:56:00	2	32	4	21
9:59:00	5	25	4	21
10:09:00	15	21.5	4	21
10:24:00	30	19	4	21
10:54:00	60	16	4	21.5
14:04:00	250	12	4	21.5
9:54:00	1440	10	4	21
9:54:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 4 Technician: CSZ

Sieve Size	Cumulative Weight (g)	
Empty Tare	10.48	
2"		
1 1/2"		
1"		
3/4"		
1/2"	19.43	-10
3/8"	19.43	-10
#4	23.47	
#10	32.18	
#20	36.97	
#40	42.51	
#60	49.73	
#100	59.56	
#200	68.33	
Pan	69.45	

XB889:01722

ANALYTICAL RESOURCES, INC.

Sieve/Hydrometer Particle Size Analysis - ASTM D421/422

ARI Job No.: XB89 ARI Sample ID: F Setup Date: 8/28/13 Technician: ML
Sample Description: Sandy Silt, SHELL FRAGMENTS, ORGANIC DEBRIS
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [Y] Whole Sample [ ]

Tare Number	F
Tare Weight (g)	10.53
Tare + Air-Dried Sample Weight (g) (before #10 preparation)	245.70
Hydro Test Sample Weight (g) (not including beaker weight)	70.07
Tare + Oven-Dried #10 Washed (g)	45.43
Tare + Oven-Dried #200 Washed (g) (inlcuding plus #10 material)	73.25

Hygroscopic Moisture Content	
Tare Number	F
Tare Weight (g)	1.68
Wet Soil + Tare (g)	60.01
Dry Soil + Tare (g)	57.35

Hydro Beaker: AM Calgon Batch #: 289 Calgon Date: 8/30/13 Technician: JA
Method of Size Reduction: Sample Splitter [ ] Quartering [ ] Stockpile [X] Whole Sample [ ]

Hydrometer Analysis

9/3/2013 Hydrometer #: 273802 Technician: JA

Time	Δ Time	Test Cylinder	Calgon Blank	Temp (°C)
10:22:00	START			
10:23:00	1	42	4	21
10:24:00	2	38.5	4	21
10:27:00	5	34.5	4	21
10:37:00	15	30	4	21
10:52:00	30	23	4	21
11:22:00	60	20	4	21.5
14:32:00	250	16	4	21.5
10:22:00	1440	13	4	21
10:22:00				

Sieve Analysis

Sieve Date: 9/6/13 Sieve Set #: 4 Technician: CSZ

Sieve Size	Cumulative Weight (g)	
Empty Tare	10.59	
2"		
1 1/2"		
1"		
3/4"	23.62	-20
1/2"	32.38	-20
3/8"	36.35	-20
#4	39.38	-20
#10	44.68	
#20	48.96	
#40	52.07	
#60	55.62	
#100	63.10	
#200	72.54	
Pan	73.33	